20.2

Invantive Vision

Reference Manual

Contents

1 Invantive Vision 1

1.1 Quick Configuration ... 3
1.2 Getting Started ... 10
1.3 Concepts ... 10
1.3.1 Security ... 10
1.4 Invantive Vision Online ... 11
1.4.1 User Interface ... 11
1.4.2 File ... 43
1.4.3 Budget Control ... 49
1.4.4 CRM ... 98
1.4.5 Reports ... 116
1.4.6 Finance ... 130
1.4.7 Administration ... 160
1.4.8 Advanced ... 227
1.4.9 Messages ... 345
1.4.10 User Messages ... 347
1.4.11 System Checks ... 348
1.4.12 Settings ... 349
1.4.13 License ... 356
1.4.14 Help ... 359
1.4.15 Customize Screens w ith JavaScript ... 361
1.4.16 Edit Screen Template ... 364
1.4.17 Hide screen partially ... 365
1.4.18 Building Reports ... 365
1.4.19 Input w ith Layout ... 380
1.4.20 Person Involvements ... 381
1.5 Invantive Vision for Outlook ... 381
1.5.1 User Interface ... 381
1.5.2 Invantive Vision ... 392
1.5.3 Calendar ... 406
1.5.4 Settings ... 417
1.5.5 Integration Outlook w ith Microsoft Exchange ... 419
1.5.6 Over Outlook Add-in ... 420
1.5.7 Integration Outlook w ith Gmail ... 420
1.5.8 Apple Macintosh ... 427
1.5.9 Screens ... 428
1.6 Invantive Vision for Windows ... 429
1.7 Links ... 430
1.7.1 Exact Online Interface ... 430
1.7.2 Exact Globe 2000 Interface ... 446
1.7.3 Link Tw infield ... 446
1.7.4 ENIAC Interface ... 447
1.7.5 Reeleezee Interface ... 447
1.7.6 Frotcom Interface ... 451
1.7.7 Unit4 Multivers interface ... 451
1.7.8 King interface ... 457
1.7.9 Asterisk VOIP Interface ... 467
1.7.10 Customised User Interface ... 469
1.8 Processes ... 496
1.8.1 Invoicing ... 496
1.8.2 New Employee ... 498
1.9 Server ... 498

1.9.1 Background Scripts for Administration ... 498
1.9.2 Background Script for Development ... 503
1.9.3 Background Scripts for Testing ... 503
1.9.4 Background Scripts Invoicing ... 504
1.9.5 Background Scripts Cash Flow s ... 505
1.9.6 Background script Exact Online ... 505
1.9.7 Achtergrondscript KING ... 507
1.9.8 Workflow ... 508
1.9.9 Monitoring ... 509
1.10 Performance ... 512
1.10.1 PL/SQL Profiling ... 512
1.10.2 SQL Trace of Outlook Add-in ... 514
1.11 Frequently asked questions ... 515
1.11.1 How can I partially release a provision? ... 515
1.11.2 Handling Sub- and Master Projects ... 515
1.11.3 Why the revenue budget alw ays should be substantiated? ... 516
1.12 Installation Server ... 517
1.12.1 System Requirements ... 517
1.12.2 Installation and Upgrade ... 518
1.12.3 Installation Test ... 582
1.12.4 Duplicate Environment ... 583
1.12.5 Site.properties ... 587
1.13 Terminology ... 593
1.13.1 Budget ... 593
1.13.2 Budget Control ... 594
1.13.3 Contract ... 594
1.13.4 Exposé ... 594
1.13.5 Invoice based on Purchase Order ... 594
1.13.6 Invoice w ithout Purchase Order ... 594
1.13.7 User ... 594
1.13.8 User Interface ... 594
1.13.9 Master Roll Up ... 594
1.13.10 Invantive Vision ... 594
1.13.11 Cost Type ... 594
1.13.12 Supplier ... 594
1.13.13 Order ... 594
1.13.14 Product cluster ... 594
1.13.15 Project Phase ... 594
1.13.16 Show ... 594
1.13.17 Example Reading Method ... 595
1.13.18 Example Payment Terms ... 595
1.13.19 Example Payment Schedules ... 595
1.13.20 Example VAT ... 595
1.13.21 Example Classifications ... 595
1.13.22 Example Participation Roles ... 599
1.13.23 Example Document Types ... 600
1.13.24 Example Document Statuses ... 601
1.13.25 Example Economic Indexes ... 601
1.13.26 Example Property ... 601
1.13.27 Example Linked Financial Administrations ... 602
1.13.28 Example Ground Statuses ... 602
1.13.29 Example General Ledger Account Code ... 602
1.13.30 Example Master Roll Ups Cost Type ... 605
1.13.31 Example Cost Center ... 605
1.13.32 Example Cost Categories ... 606
1.13.33 Example Warehouse ... 606
1.13.34 Example Organization Relation Types ... 607
1.13.35 Example Price Lists ... 607
1.13.36 Example Process Categories ... 607

1.13.37 Example Process Provenances ... 608
1.13.38 Example Process Impact ... 608
1.13.39 Example Process Note Categories ... 608
1.13.40 Example Process Status ... 609
1.13.41 Example Process Unit Status ... 609
1.13.42 Example Products ... 609
1.13.43 Example Project Cluster ... 609
1.13.44 Example Product Groups ... 610
1.13.45 Example Project Phases ... 610
1.13.46 Example Project Relation Types ... 610
1.13.47 Example Project Version Categories ... 610
1.13.48 Example Legal Form ... 610
1.13.49 Example Interest Method ... 611
1.13.50 Example Roles ... 611
1.13.51 Example Counters ... 612
1.13.52 Example Timesheet Status ... 612
1.13.53 Example Skills ... 612
1.13.54 Example Compactions ... 613
1.13.55 Example Work Schedules ... 613
1.13.56 Example Work Types ... 613
1.14 Versions ... 613
1.14.1 New Release 2014R1 ... 614
1.14.2 Changes in Release 2012R2 ... 614
1.14.3 Changes in Release 2014R1 ... 620
1.14.4 Changes in Release 2014R2 ... 623
1.14.5 Changes in Release 2015R2 ... 628

2 Invantive Composition for Word 0

2.1 Quick Configuration ... 0
2.2 Getting Started ... 0
2.3 Functioning ... 0
2.4 Advantages ... 0
2.5 System Requirements ... 0
2.6 Installation ... 0
2.7 Usage ... 0
2.7.1 Open Template ... 0
2.7.2 Archive Document ... 0
2.7.3 Publish ... 0
2.7.4 Parameter values ... 0
2.7.5 Connect ... 0
2.7.6 Preferences ... 0
2.7.7 Help ... 0
2.8 Modeller ... 0
2.8.1 Design Mode ... 0
2.8.2 Edit Model ... 0
2.8.3 Validate Model ... 0
2.8.4 Install Model ... 0
2.8.5 Upgrade Model ... 0
2.8.6 &Remove Model ... 0
2.8.7 Building Block ... 0
2.8.8 Query Tool ... 0
2.8.9 Invantive Studio ... 0
2.8.10 Show Repository ... 0
2.8.11 Show Trace ... 0
2.8.12 Possible instructions ... 0
2.8.13 Expressions ... 0
2.8.14 <invantive:value-of/> ... 0
2.8.15 <invantive:foreach>...</invantive:foreach> ... 0

2.8.16 Example series letter ... 0
2.8.17 For example contract ... 0
2.9 Versions ... 0
2.9.1 New Release 2014R1 ... 0
2.9.2 Changes in Release 2014R1 ... 0
2.9.3 Changes in Release 2014R2 ... 0
2.9.4 Changes in Release 2015R2 ... 0

3 Invantive Query Tool 631

3.1 Quick Configuration ... 632
3.2 Getting Started ... 636
3.3 Learn SQL ... 636
3.4 Functioning ... 637
3.4.1 Query Tool Examples ... 637
3.4.2 Editor ... 640
3.4.3 Query-output ... 642
3.5 Availability ... 644
3.6 System Requirements ... 645
3.7 Installation ... 645
3.8 Versions ... 645
3.8.1 New Release 2014R1 ... 645
3.8.2 Changes in Release 2014R1 ... 645
3.8.3 Changes in Release 2014R2 ... 647
3.8.4 Changes in Release 2015R2 ... 648

4 Invantive Web Service 648

4.1 Quick Configuration ... 648
4.2 Getting Started ... 648
4.3 Web services ... 648
4.4 Advantages ... 649
4.5 System Requirements ... 649
4.6 Concept ... 649
4.7 Database platforms ... 650
4.8 Redundancy ... 651
4.9 SQL Trace ... 652
4.10 Installation ... 653
4.10.1 Invantive Web Service Software ... 653
4.10.2 Certificate ... 656
4.10.3 Connection Configuration ... 657
4.10.4 Providers Configuration ... 660
4.10.5 Drivers ... 662
4.11 Terminology ... 675
4.11.1 Channel ... 675
4.11.2 Connection ... 675
4.12 Versions ... 675
4.12.1 New Release 2014R1 ... 675
4.12.2 Changes in Release 2014R1 ... 675
4.12.3 Changes in Release 2015R2 ... 676

5 Invantive Dotnet Optimizer 676

5.1 Versions ... 676
5.1.1 Changes in Release 2015R2 ... 676

6 Providers 677

6.1 ANSI SQL ... 677
6.2 Exact Online (REST) ... 677

6.3 Exact Online (XML) ... 677
6.4 Excel ... 678
6.5 IBM DB2/UDB and IBM DB2/400 ... 678
6.6 Invantive Web Service ... 679
6.7 LDAP ... 679
6.8 Mapping ... 679
6.9 Microsoft SQL Server ... 679
6.10 MySQL ... 680
6.11 OData ... 680
6.12 ODBC ... 680
6.13 Oracle Legacy ... 681
6.14 Oracle Managed ... 681
6.15 PostgreSQL ... 681
6.16 TeamViewer ... 682
6.17 TwinField ... 682
6.18 XML ... 682

7 Support 0

8 Webshop 0

9 Contact Information 683

Index 685

1 Invantive Vision

Welcome to the Invantive Vision manual, Invantive Vision is a project management solution especially suitable for architects, IT companies and service providers in secondment and consultancy. Invantive Software BV is also supplier of the product Invantive Estate. Invantive Estate is a project management system developed for real estate organizations.

Architects, IT companies and service providers in secondment and consultancy are involved in increasingly complex projects, where seemingly small differences can have large effects on the gross margin and the end result. As a result of this the monitoring process becomes very important. With Invantive Vision Invantive offers a better view of the risks, the income and status of projects. Invantive Vision combines data in the system with data from other programs and makes in this way information transparent about, for example, costs, forecasting, planning and time tracking.

Invantive Vision has the following general characteristics:

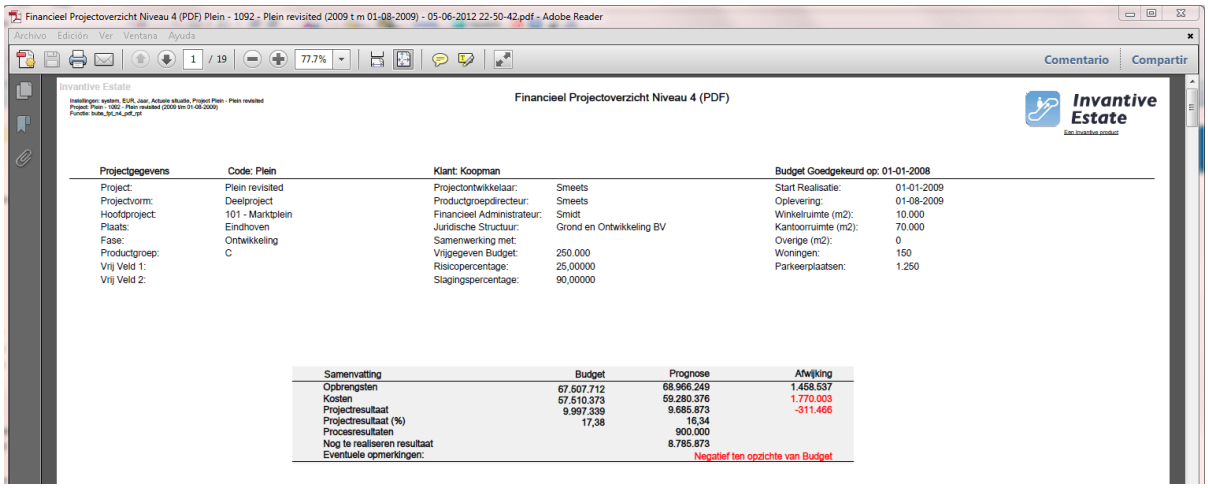
- With your financial administrations as a base, Invantive Vision registers the realization from the general ledger per project and cost category.
- Invantive Vision provides reports for several management levels from which cost categories can be rolled up into bigger groups.
- Documents and tasks can be attached to financial records so that an integrated project file is created.
- Invantive Vision has a flexible security model with which you can for instance give project managers read and/or write access to solely their own projects.
- Unexpected incidents in the information security can be traced, based on an extensive audit trail.

- Reports are available in Adobe PDF format for optimal layout and distribution, and in Microsoft Excel format for analysis.
- Historical situations are easily accessible through the new timeline feature.
- Projects can be closed after which no changes are possible anymore.

The typical life cycle of a project includes the following phases:

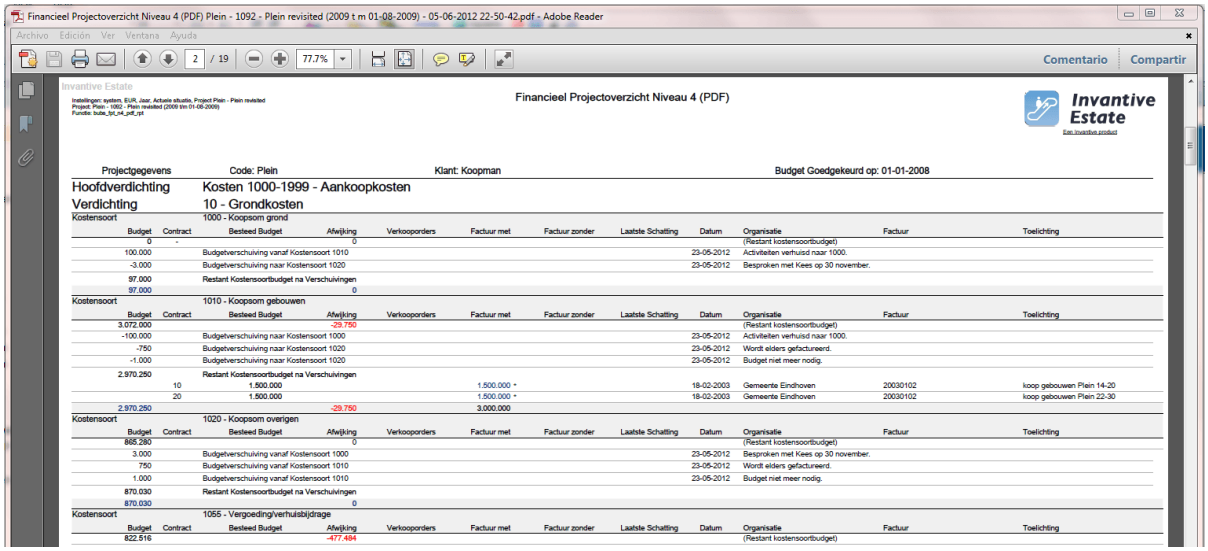
- defining the project objectives and the results you want and determine the budget and its approvement.
- develop a functional design and then a technical design
- The technical design is the source for the division into processes, which then can be divided into subprocesses.
- with the tasks and subtasks a timesheet planning can be made and deadlines can be added.

Based on this data, a risk model (standard or organization specific) calculates a forecast as a deviation from the project budget. The deviation makes visible what the project's actual financial status and risks are, in comparison to the expose; exceedings are immediately shown, surpluses can be implemented elsewhere in order to compensate deficits:



With reference to the forecast a cash flow projection can be composed which also leads to a net current value calculation.

Extensive reports and possibilities to click on headlines to see details make it possible to analyse unexpected results:



Financieel Projectoverzicht Niveau 4 (PDF)

Projectgegevens Code: Plein Klant: Koopman Budget Goedgekeurd op: 01-01-2008

Hoofdverdichting Kosten 1000-1999 - Aankoopkosten

Verdichting 10 - Grondkosten

Kostensoort 1000 - Koopsom grond

Budget	Contract	Besteed Budget	Afwijking	Verkooporders	Factuur met	Factuur zonder	Laatste Schatting	Datum	Organisatie	Factuur	Toelichting
0	-		0						(Restant kostensoortbudget)		
100.000		Budgetverschuiving vanaf Kostensoort 1010						23-05-2012	Activiteiten verhuisd naar 1000.		
-3.000		Budgetverschuiving naar Kostensoort 1020						23-05-2012	Besproken met Kees op 30 november.		
97.000		Restant Kostensoortbudget na Verschuivingen									
97.000			0								

Kostensoort 1010 - Koopsom gebouwen

Budget	Contract	Besteed Budget	Afwijking	Verkooporders	Factuur met	Factuur zonder	Laatste Schatting	Datum	Organisatie	Factuur	Toelichting
3.072.000			-29.750						(Restant kostensoortbudget)		
-100.000		Budgetverschuiving naar Kostensoort 1000						23-05-2012	Activiteiten verhuisd naar 1000.		
-750		Budgetverschuiving naar Kostensoort 1020						23-05-2012	Wordt elders gefactureerd.		
-1.000		Budgetverschuiving naar Kostensoort 1020						23-05-2012	Budget niet meer nodig.		
2.970.250		Restant Kostensoortbudget na Verschuivingen									
	10	1.500.000			1.500.000 *			18-02-2003	Gemeente Eindhoven	20030102	koop gebouwen Plein 14-20
	20	1.500.000			1.500.000 *			18-02-2003	Gemeente Eindhoven	20030102	koop gebouwen Plein 22-30
2.970.250			-29.750		3.000.000						

Kostensoort 1020 - Koopsom overigen

Budget	Contract	Besteed Budget	Afwijking	Verkooporders	Factuur met	Factuur zonder	Laatste Schatting	Datum	Organisatie	Factuur	Toelichting
865.280			0						(Restant kostensoortbudget)		
3.000		Budgetverschuiving vanaf Kostensoort 1000						23-05-2012	Besproken met Kees op 30 november.		
750		Budgetverschuiving vanaf Kostensoort 1010						23-05-2012	Wordt elders gefactureerd.		
1.000		Budgetverschuiving vanaf Kostensoort 1010						23-05-2012	Budget niet meer nodig.		
870.030		Restant Kostensoortbudget na Verschuivingen									
870.030			0								

Kostensoort 1055 - Vergoeding/verhuisbijdrage

Budget	Contract	Besteed Budget	Afwijking	Verkooporders	Factuur met	Factuur zonder	Laatste Schatting	Datum	Organisatie	Factuur	Toelichting
822.516			-477.484						(Restant kostensoortbudget)		

During the project, possible administrative profits are registered based on the calculated status and the implemented value base such as IFRS.

Finally, after the project results are delivered the project is archived, after which you cannot change anything anymore.

In the next chapters the following topics are discussed:

- User interface 11: how to control the application
- All Form and Reports 11.
- The MS Outlook User Interface 381.
- Your Private User Interface 469.
- Processes 496 within Invantive Vision.
- Server 498.
- The Installation 517.
- Performance.
- Versions 613.
- Glossary 593.
- Frequently asked questions 515: what procedures do you have to follow to rightfully handle practical examples?

1.1 Quick Configuration

If you follow these steps, you will be able to start working with Invantive Vision quickly.

There are three user interfaces:

- Invantive Vision Online: a browser application.
- Invantive Vision for Outlook: a complete integration in Microsoft Outlook, from which all function can be used and emails can be stored with projects, for example.
- Invantive Vision for Windows: a Windows application that has a limited integration with the email, calendar and other Outlook options.

Depending on the desired user interface, the appropriate steps are followed. The configuration of the server is more complex and can be found in Installation Server 517.

Quick Configuration Invantive Vision Online

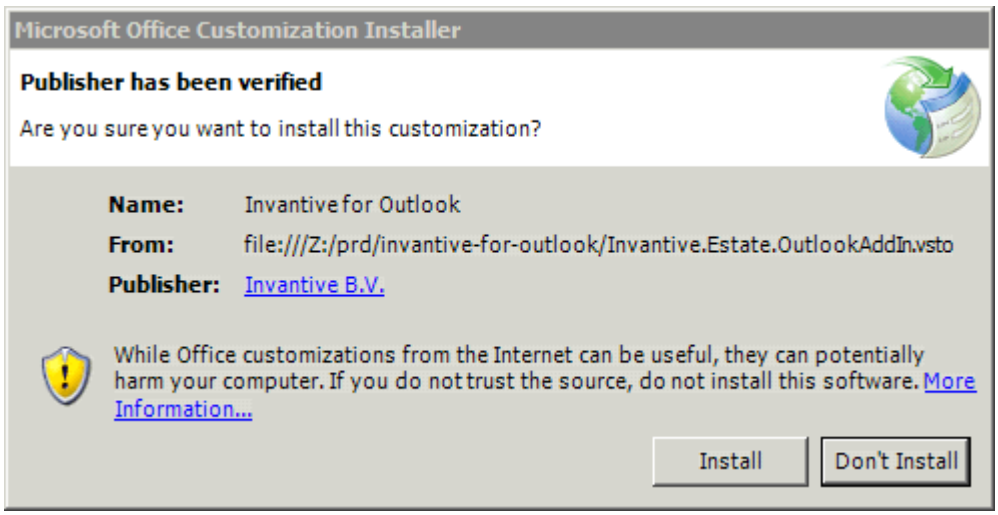
The browser application can be used with almost every modern browser. Apart from entering the correct URL, there are several steps to be followed.

If you want to be able to open reports, there should be software at the workplace to open reports with, for example Adobe Reader.

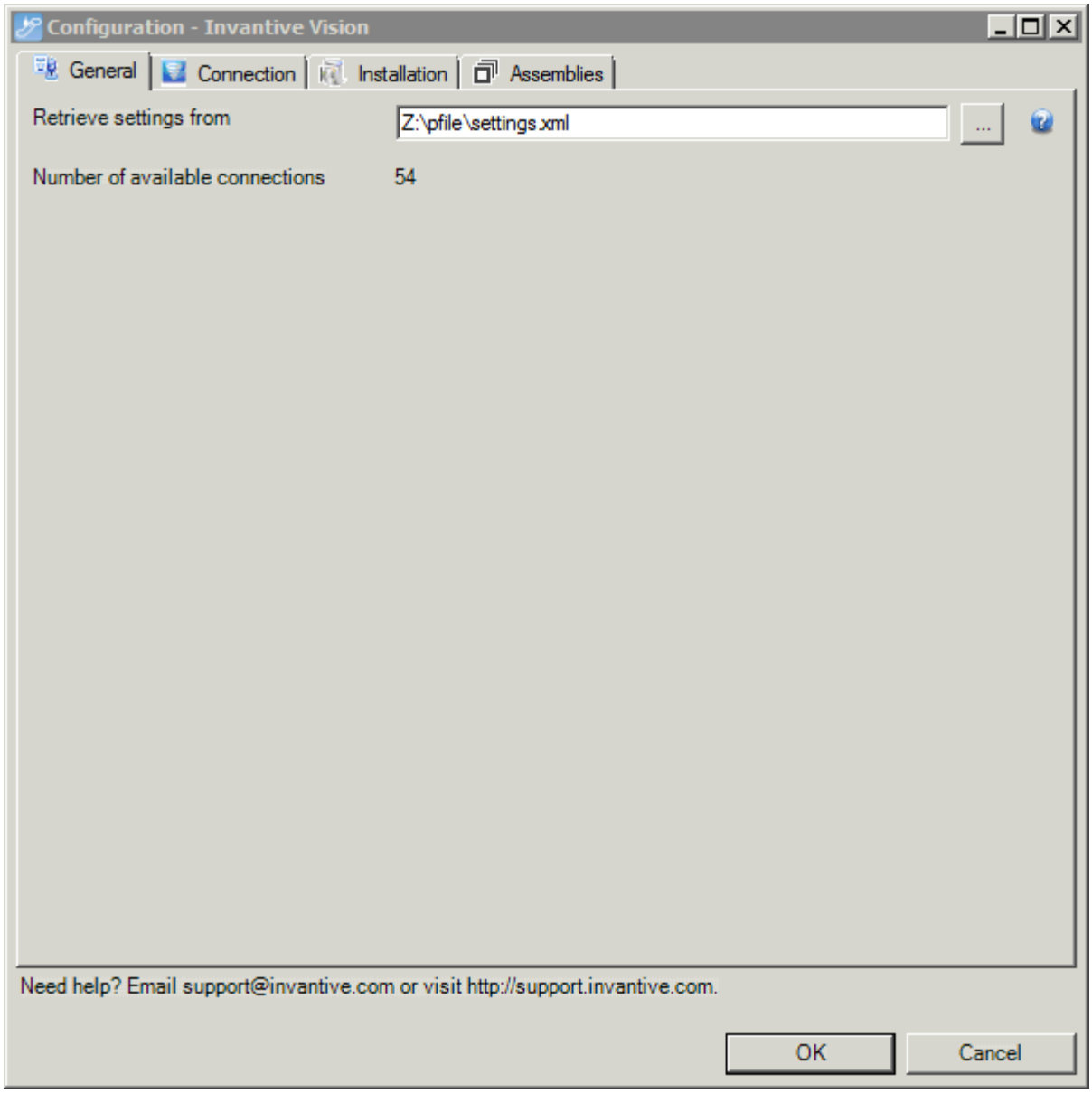
Quick Configuration Invantive Vision for Outlook

Perform the following steps:

- Install Microsoft .NET 4.5.1 if it is not yet present. From Windows 8.1 this version of Microsoft .NET is delivered by Microsoft by default. This software, for windows 7 and Windows 8, is for download at http://www.microsoft.com/en-us/download/details.aspx?id=40779.
- Double-click on the file setup.exe.
- Klik on Install when the following screen is displayed:

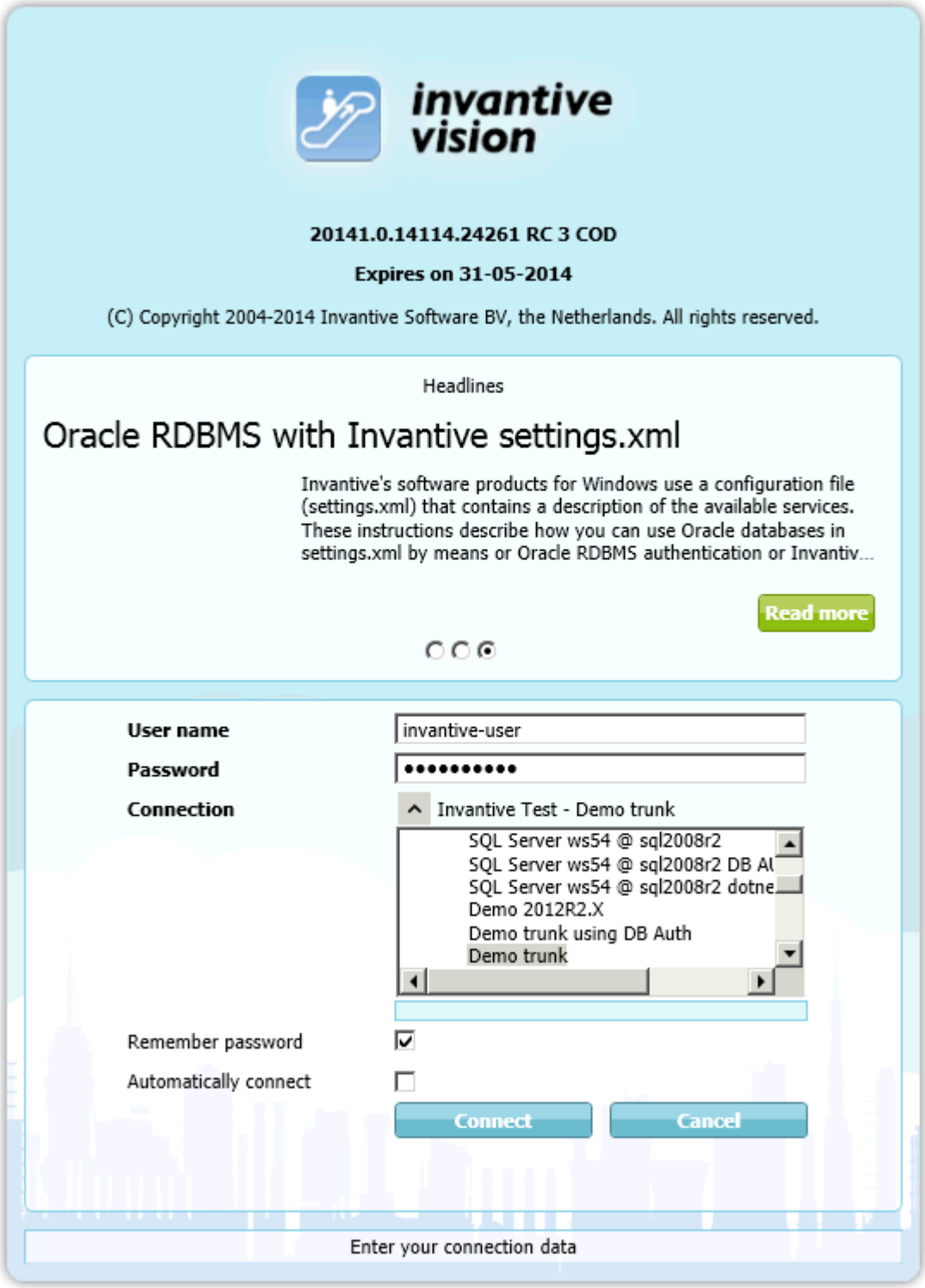


- The installation will be performed.
- Invantive Vision for Outlook will be started at the same time as Microsoft Outlook. This means you can only start the program by starting Microsoft Outlook.
- When Microsoft Outlook is opened the first time after the installation, the configuration screen is displayed. The configuration screen is also displayed when Ctrl is pressed during the start-up process of Microsoft Outlook.



- Start Notepad via the Windows Start menu.
- Create an empty file called settings.xml and save it on your desktop.
- The folder from which you have installed Invantive Vision for Outlook contains an example of a settings.xml file with an additional explanation. Usually people only work with the Invantive Web Service.
- Sometimes it may be possible to create a direct connection with Oracle for testing purposes. An example for Oracle can also be found on http://www.invantive.com/about-invantive/news/entryid/1124/oracle-rdbms-met-invantive-settings-xml.
- In the settings.xml file you define the database connections you want to use.
- If you need help with this, you can call Invantive Support for free at +31 88 00 26 599, you can call support@invantive.com or visit http://support.invantive.com.
- Choose your settings.xml file in the configuration screen.
- Press OK.

- The login screen is now displayed.



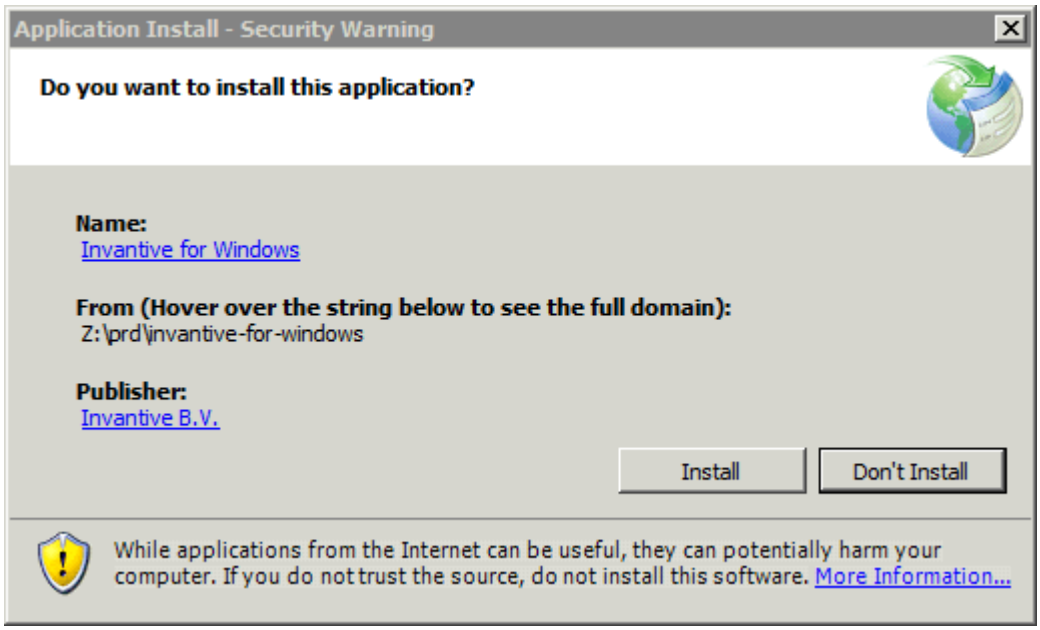
- Select the connection you want to use.
- Enter the username.
- Enter the password.
- Click on 'Connect'.

- The login screen is closed. The buttons that correspond with your rights are displayed in the default ribbons of Microsoft Outlook and a nfew ribbon Invantive Vision.
- Getting started will show you how you can start working with Invantive Vision for Outlook.

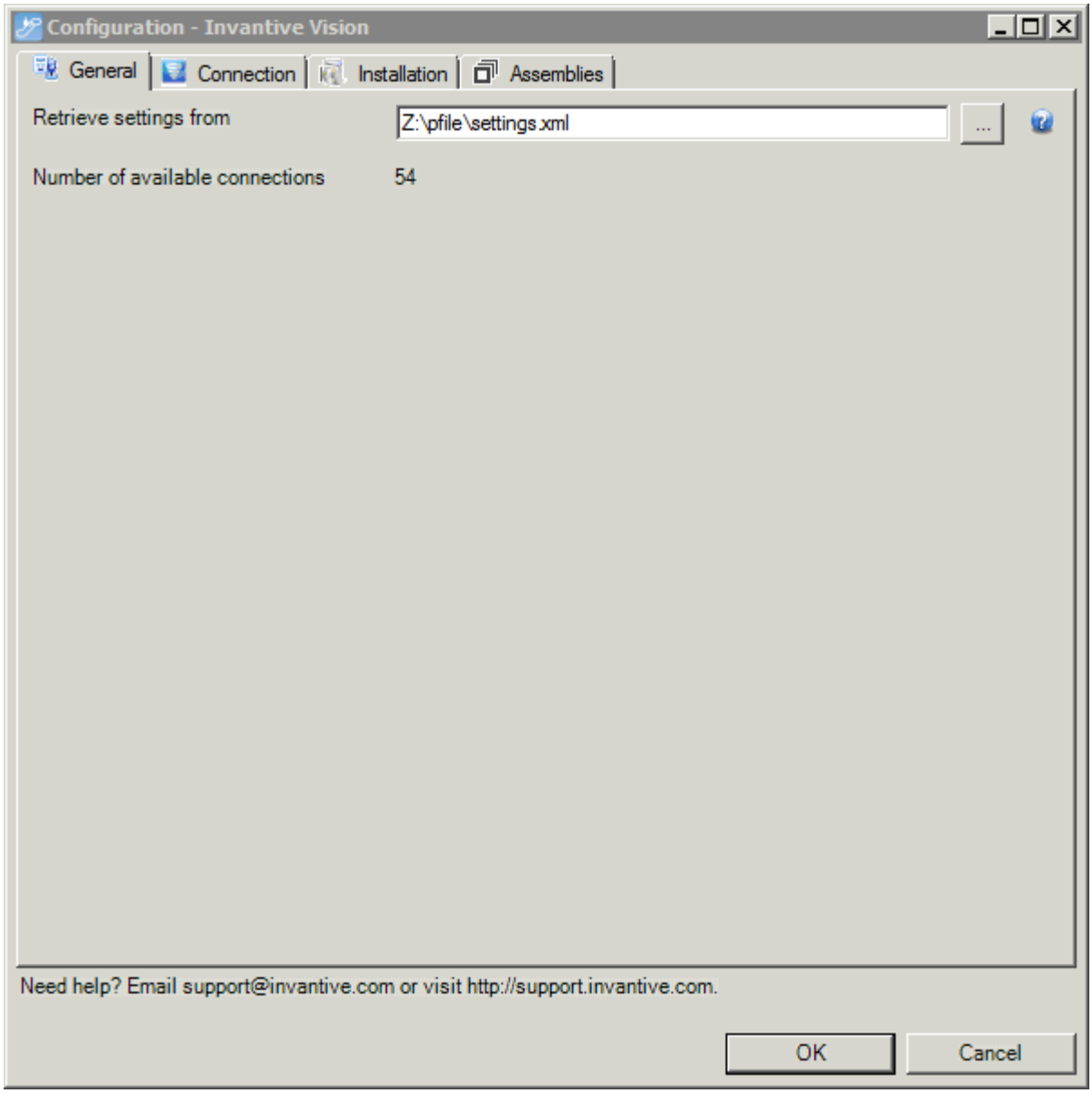
Quick Configuration Invantive Vision for Windows

Perform the following steps:

- Install Microsoft .NET 4.5.1 if it is not yet present. From Windows 8.1 this version of Microsoft .NET is delivered by Microsoft by default. This software, for windows 7 and Windows 8, is for download at http://www.microsoft.com/en-us/download/details.aspx?id=40779.
- Double-click on the file Invantive.Estate.App.application.
- Klik on Install when the following screen is displayed:

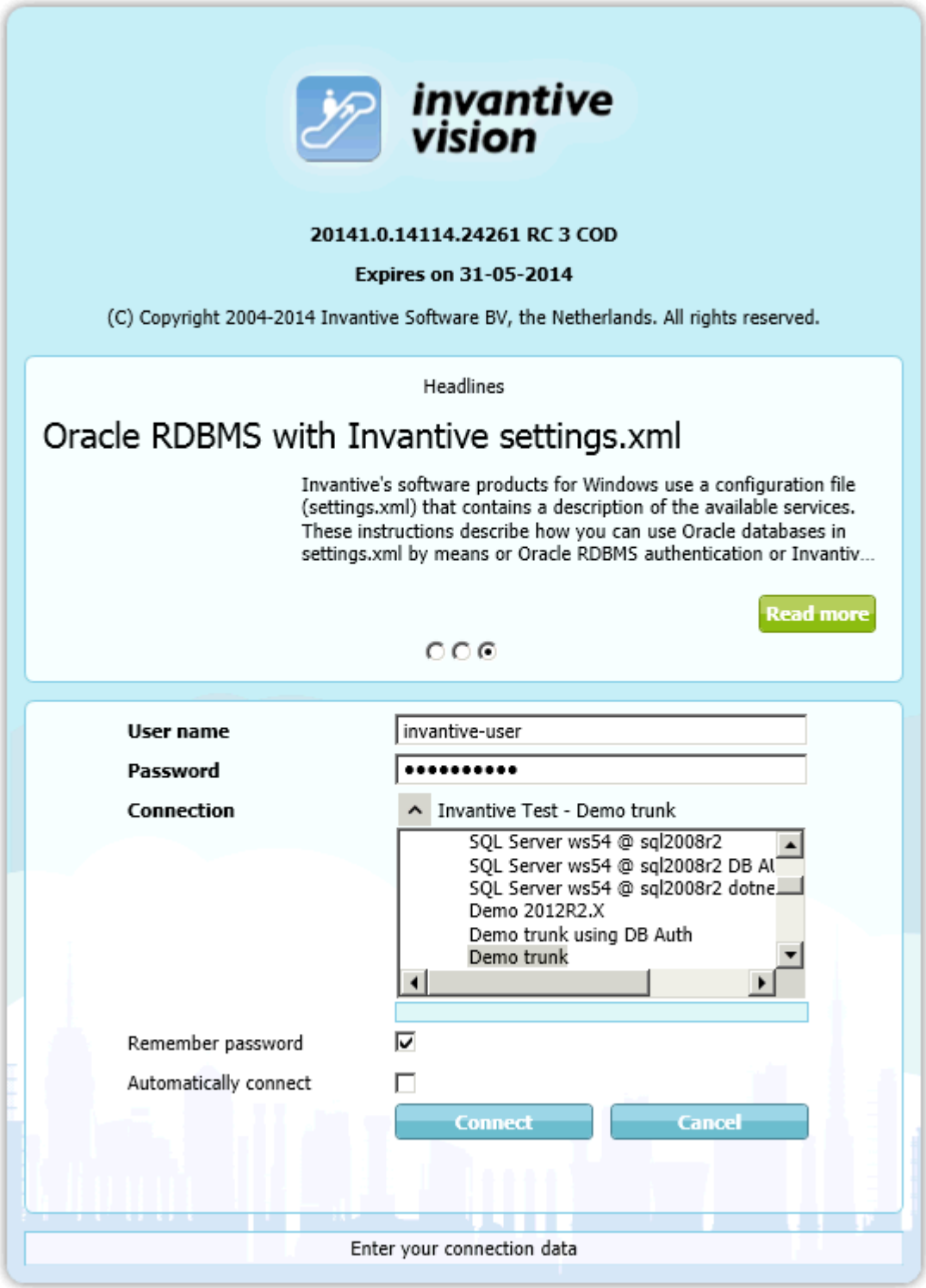


- The installation will be performed.
- Invantive Vision for Windows will automatically be started after the installation. You can also find it via the Windows Start menu.
- When the program is started for the first time, the configuration screen is displayed. The configuration screen is also displayed when Ctrl is pressed during the start-up process.



- Start Notepad via the Windows Start menu.
- Create an empty file called settings.xml and save it on your desktop.
- The folder from which you have installed Invantive Vision for Windows contains an example of a settings.xml file with an additional explanation. Usually people only work with the Invantive Web Service.
- Sometimes it may be possible to create a direct connection with Oracle for testing purposes. An example for Oracle can also be found on http://www.invantive.com/about-invantive/news/entryid/1124/oracle-rdbms-met-invantive-settings-xml.
- In the settings.xml file you define the database connections you want to use.
- If you need help with this, you can call Invantive Support for free at +31 88 00 26 599, you can call support@invantive.com or visit http://support.invantive.com.
- Choose your settings.xml file in the configuration screen.
- Press OK.

- The login screen is now displayed.



- Select the connection you want to use.
- Enter the username.
- Enter the password.
- Click on 'Connect'.

- The login screen is closed. The buttons that correspond with your rights are displayed in the default ribbons of Microsoft Outlook and a nfew ribbon Invantive Vision.
- Getting started 10 will show you how you can start working with Invantive Vision for Windows.

1.2 Getting Started

At the moment no instructions are available.

1.3 Concepts

This chapter describes some general concepts.

1.3.1 Security

Invantive Vision offers a flexibele model to protect the access to data. The security exists of a aggregate of two security mechanisms:

- Securing of access to data of projects (project security).
- Security of the access to functions like screens and reports (function security).

The aggregate means that:

- A user only has access to data in a function if he has access to the data as well as the function.
- A user can only change data (change, add or delete) in a function if he has writing rights on the project and also writing rights in the function.
- There is no security mechanism to secure access to data which do not belong to projects. The access to the functions decides if someone can see or change the data.
- Because of the aggregate, it is possible that a user can change data in one screen, but not in another.

Document security is described in

Project Security

Per project, it can be set if someone can have all data of that particular project:

- See
- Change

All data of that project means the project itself, and all other data like invoice lines, orders, revenues and project authorizations.

You can maintain the security in several ways:

- In the screen Settings 349 you can indicate if everyone can see or change all projects.
- In the screen Roles 164 you can indicate if all users with a role can see or change all projects.
- In the screen Project Authorizations 163 you can indicate per aggretate of a project and user if someone can see or change the project.

On top of that, you can automatically maintain rights using profile options with the text '-pae-' in the code, so that a controller can get automatically reading and/or editing rights for the project where he is responsible for.

Notice: the user ‘system’ always has access to all projects.

Function Security

Per function, it can be set or someone:

- The screen can open
- Data can change in the screen

The function security is set through the screen Role Authorizations 165.

Notice: the user 'system' always has access to all projects.

Security Documents

The security of the documents is arranged through the combination of project security and function security. There is an additional security mechanism because you can see documents with different types of data like Units, Orders and Revenues in the function Documents 109

By giving access to the various types of functions for Documents you can determine who is allowed to see which documents. For example, the function 'Access to documents with Project.' yields access to documents with projects if you also have rights for the related project.

For background processes the function 'Access to documents with Background Process.' yields access to the related documents. However, here it is the case that you can always view and edit documents of background processes that you have requested yourself.

1.4 Invantive Vision Online

This chapter describes how the provided web user interface works.

1.4.1 User Interface

This chapter shows you how the basic functions of the web interface work. Here you learn to use the search function, how to navigate through the menu, how to change, add or remove data, how to add or remove documents and how to request data for further processing in Microsoft Excel or Adobe Acrobat PDF.

1.4.1.1 Start up and Login

Perform the following steps to start Invantive Vision:

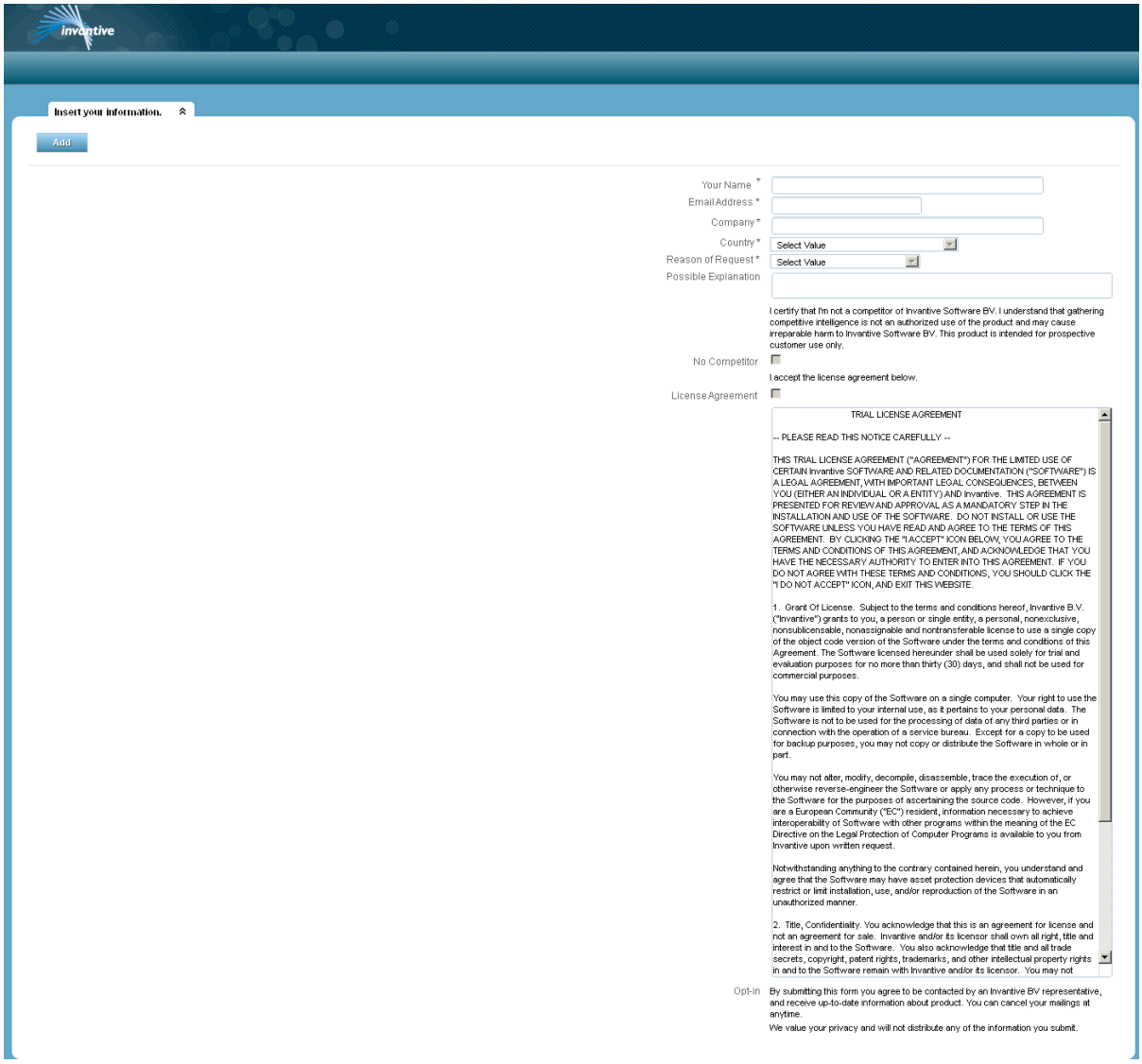
- Open the ‘Start’ menu left under in your screen.
- Next, you enter the menu of ‘Programs’.
- Click once on Invantive Vision.
- The program opens in the browser and the login screen below appears.
- With the country flags on the right of the login screen you can choose the language of your preference. Once you have selected the language of your choice, the text in the login screen and other screens of Invantive Vision appears in the selected language.
- To be allowed to use Invantive Vision you have to fill in your username and password.
- After typing your username and password, click on the ‘Login button’.

Warning! Both username and password are capital sensitive. This means you must pay attention to using the right capital letters in your username and password. Without capital letter at the right places you will not get access to the program.

If you do not have an account yet, you can request for entrance by clicking the button 'Request Entrance'. Next, you will arrive in the screen Request Entrance 12.

1.4.1.2 Request Access

This form allows you to request an access code for evaluation purposes if you have not already have one.



The meaning of the entry fields is:

Your Name	Your full name.
Email Address	The email address where the access credentials should be sent to.
Business	The name of the company you work for.
Country	The country of residence.
Reason of Request	The reason why you wish access to Invantive Vision.
Possible Explanation	A free textual explanation for the reason of your request.
No Competitor	The confirmation that you will use the information received solely for the purposes described.
License Agreement	The terms and conditions under which access is granted.
Opt-in	The confirmation that Invantive may contact you by phone or through other communication channels.

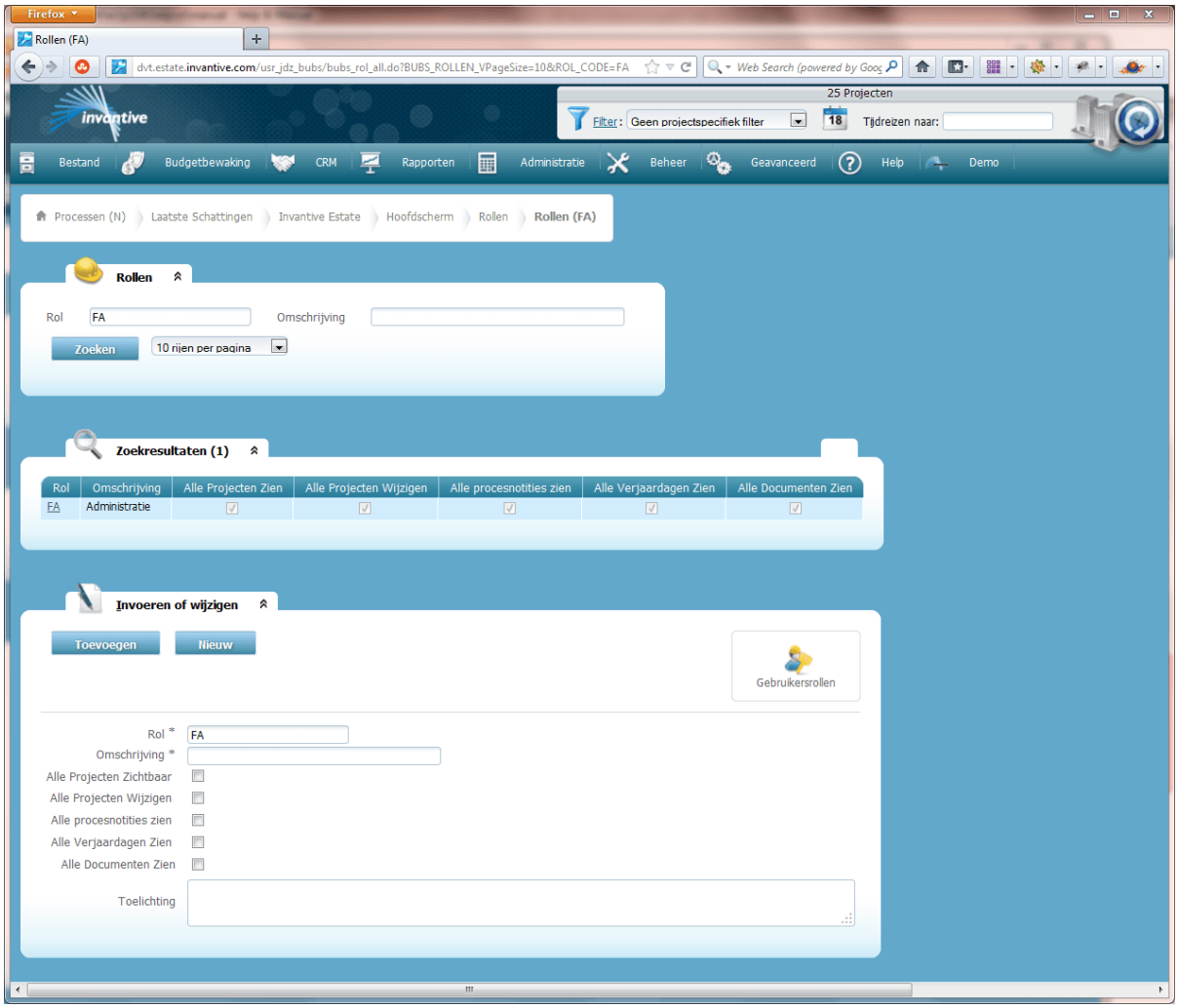
1.4.1.3 Opening screen

Once you have logged in, the opening screen of Invantive Vision will appear. The opening screen can vary per user. The URL of the opening screen can be set in the submenu My Preferences 45.

The content of a screen in Invantive Vision has some fixed components:

- The title.

- The filter.
- The menu.
- The crumb trail.
- Action buttons, if relevant for the screen.
- The logo of Invantive Software BV.



Besides of the fixed components, a screen in Invantive Vision contains some components which can be made hidden or visible as desired by the user. These display components are described in section Other Screens 20. The process of making visible or hiding is described in section View 43.

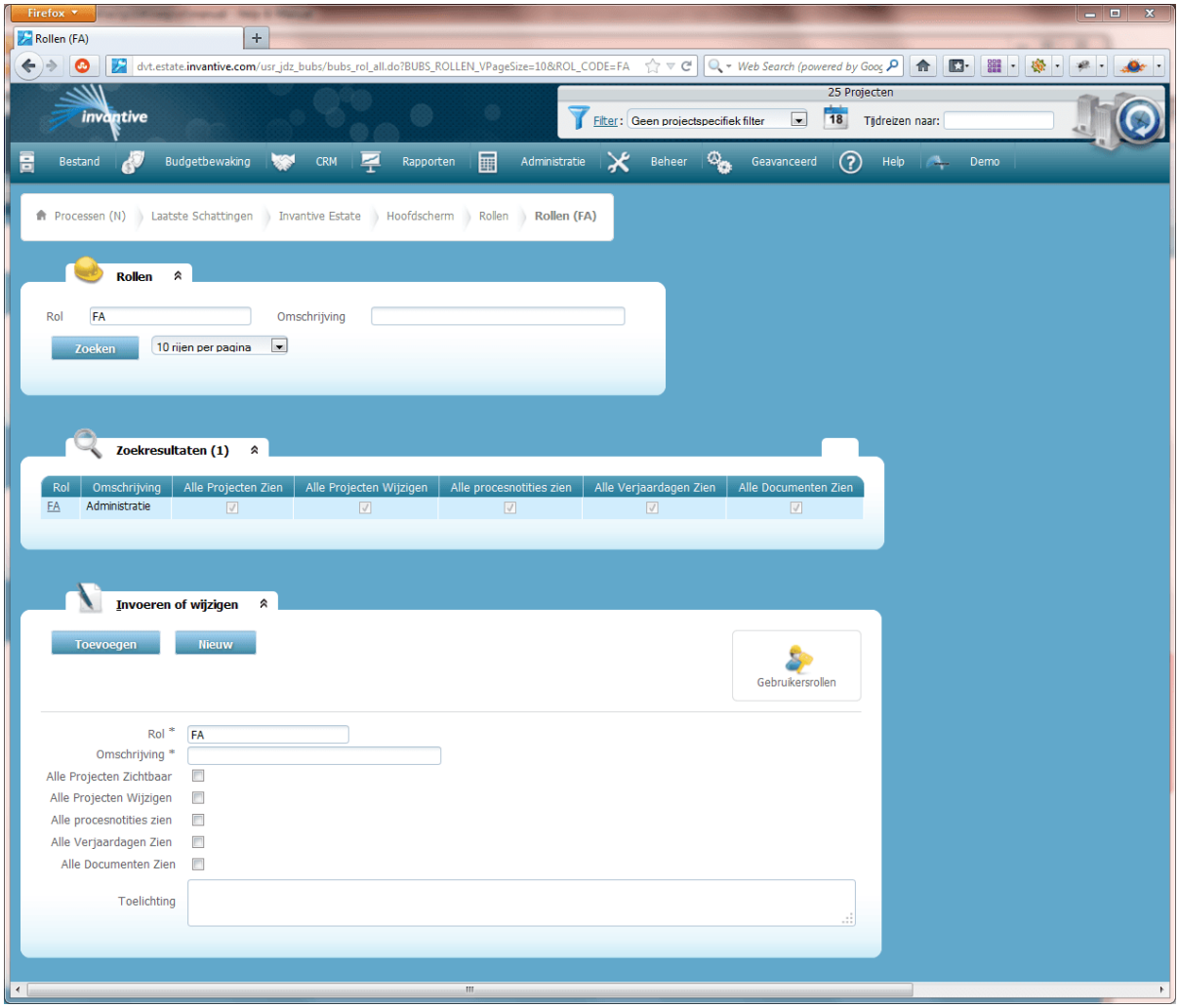
Title

The title of a screen in Invantive Vision consists of:

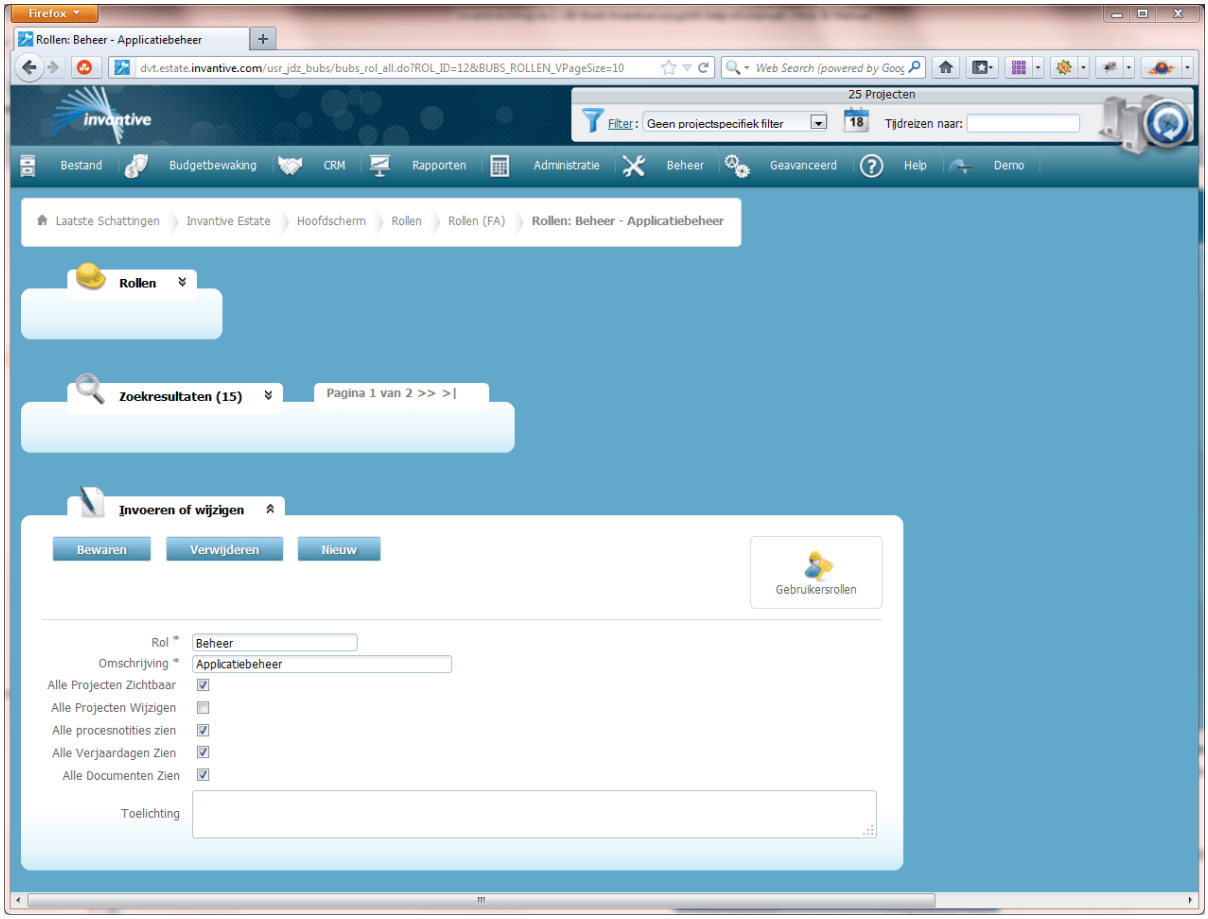
- The name of the screen.
- Information about the applied search filter or about the selection made in the screen.
- Possible warning if any input data has not been saved yet.

The title of a screen is shown in the title bar and in the tab of your browser window in which the screen is opened.

Below is an example in case a search filter 20 has been applied. The title 'Roles (FA)' shows the name of the screen 'Roles' and the applied search filter '(FA)'. The applied search filter is shown in parentheses.



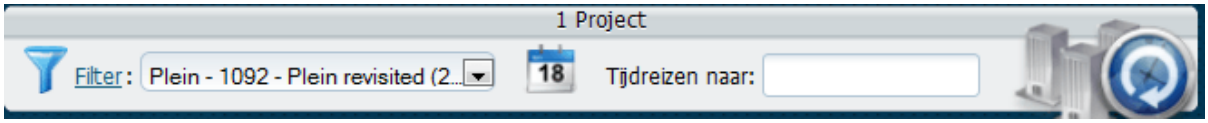
The next screen shows an example when information is selected in the screen. The title 'Roles: FA - Administration' shows the name of the screen 'Roles' and also the name of the applied search filter 'FA - Administration'. The symbol ':' is used as separator between the name of the screen and the reference to the selected information.



While entering or modifying data, a '*' is temporarily displayed at the end of the title of the window of the tab, and in the title of the browser. This is a warning for not saved information in a form 27. Next screen shows an example.

Filter

A user can have access to some of the projects or even to all projects. In general, however, you work only with a few - or just with one project. The filter helps you to filter data in reports and screens so that you can only see and edit the data of the projects where you have access to. To make it easy to put exactly one project in the filter, a drop box is shown in the right corner of each screen:



Behind the text ‘filter’ the selected filter is shown. As you can see that the filter of the example is ‘project Plein - Plein revisited’. The selected filter also shows the start and end date of the project.

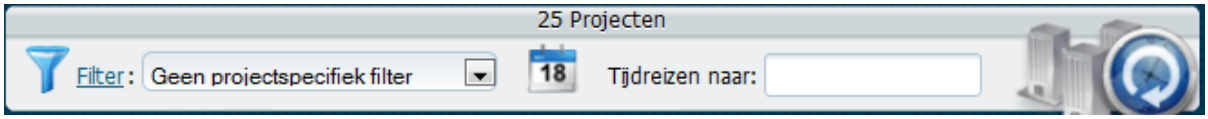
The filter can be changed by using the drop box to select another project. The displayed information is updated immediately. You can change the filter in all screens where the dropbox is shown.

In the drop box all projects are displayed, the only applied filter is if a project is closed or not. This can be set in the submenu My Preferences 45. There you will find a more comprehensive version of the setting of the filter. You can open the screen My Preferences 45 by selecting ‘Filter’.

The settings for the filter which you make in the screen My Preferences 45 will be deleted if you modify the filter in the head of a screen. The exception is the filter setting if the project is completed or not.

At the right side of the picklist, you can see the field ‘Travel Back To’. This field lets you specify the measurement date for which the data in the reports should be shown. If this field is empty, all reports will show the current situation.

The right bottom in the filter shows the number of projects whose details appear on the screens and reports. In the above image one project in the filter is selected and it shows ‘1 Project’. In the picture below no project in the filter is selected and the total number ‘22 Projects’ appears.



The meaning of the other fields in the filter:

Start Date	The start of the reporting date range. All data before this date are not reported. The start date can be set in My Preferences 45.
End Date	The end of the reporting date range. All data after this date are not reported. The end date can be set in My Preferences 45.
To Merge	Indicates if subprojects are merged or not. These settings are copied from My Preferences 45.

Menu

The content of the menu can differ per user. The available contents depend on your access rights as established in Role Authorisations 165 and User Roles 164. The structure of the menu depends on enterprise-wide choices as set in Menus 232 and Menu Items 233.

Crumb Trail

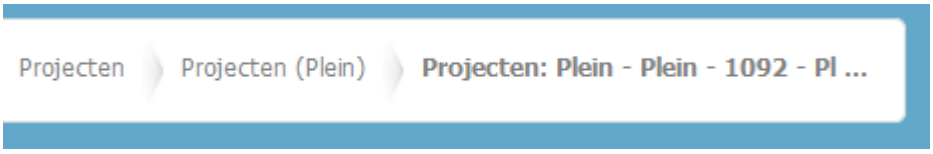
Directly below the menu a ‘crumb trail’ is shown. With the crumb trail you can instantly click back to a previous screen. This functionality is similar to the multiple selection of the ‘back button’ in the browser. However with a crumb trail you can skip steps and you lose less screen space than when you display the history of the browser in a separate part of the screen.

If you open a window and execute a search query, the applied filter is also shown in the crumb trail. This makes it possible to quickly access previous screens with the preferred filter settings. The filter appears behind the screen name in parentheses.

When you open a window, execute a search query and then select a row from the search results, a reference to the selected information will be shown in the crumb trial. This makes it

possible to quickly access previous screens that contain the information of your choice. The selected information in the crumb trail is preceded by the symbol ':'.

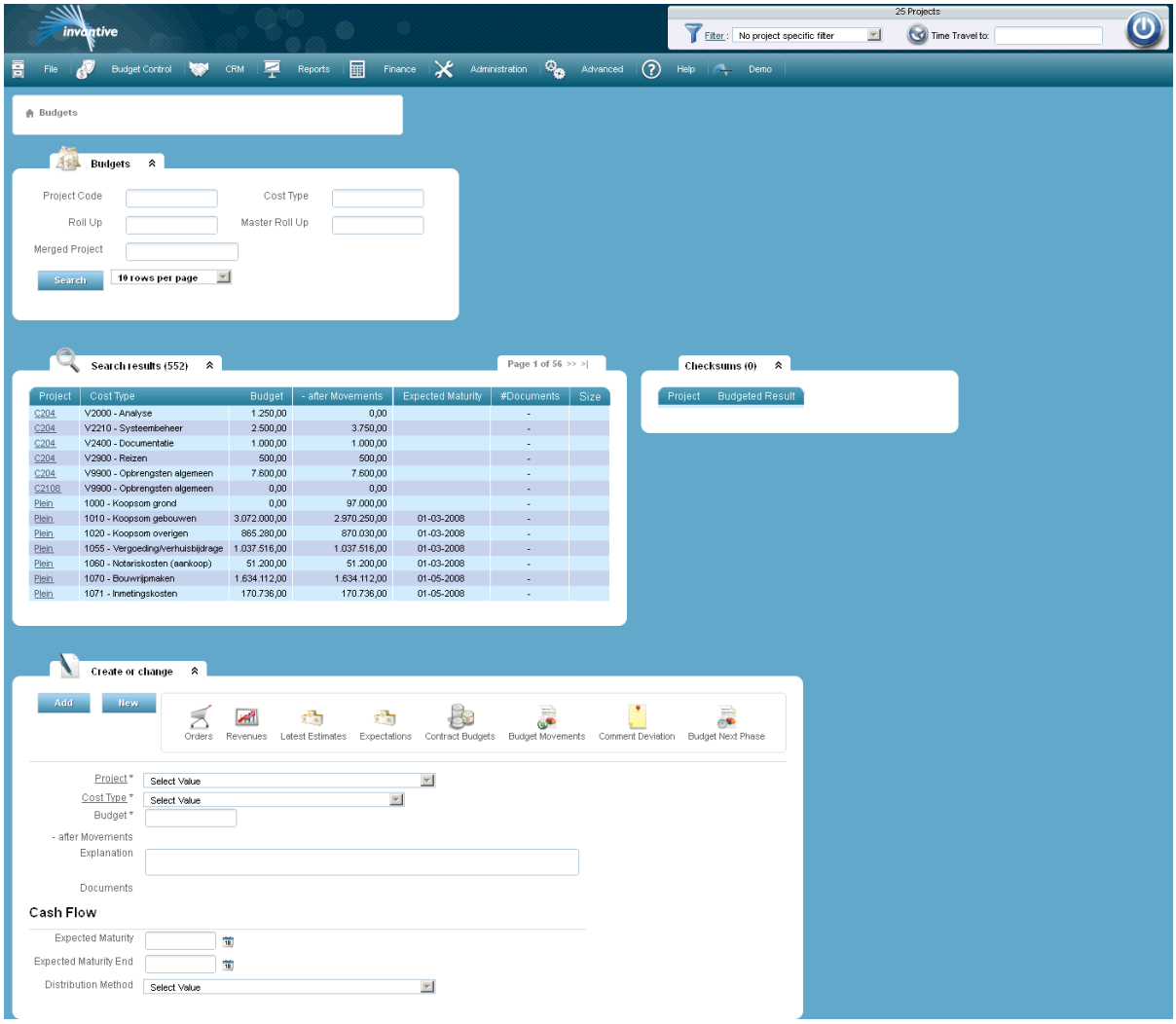
The picture below shows that the last three screens that were opened were 'Projects' screens. First you can see that the screen 'Projects' was opened. In the crumb trail 'Projects' is shown. Then in the search filter the Project Code 'Plein' was specified. In the crumb trail 'Projects (Plein)' is displayed. After this the first row in the search results was selected. In the crumb trail the screen name with a reference to the selected row: 'Projects: Plein - Plein revisited', is displayed.



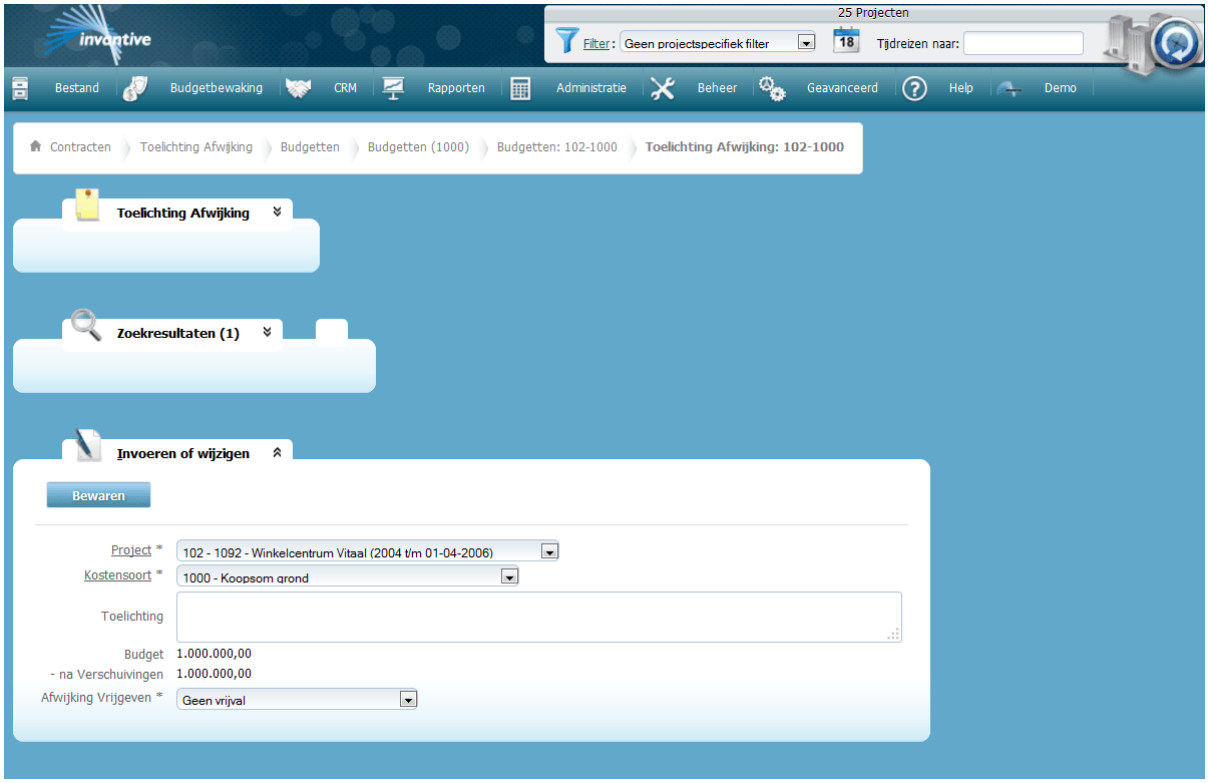
The length of the crumb trail depends on the number of web pages visited, but is never longer than ten. The maximum number of positions of a name of a web page in the crumb trail is 36.

Action Buttons

Action buttons make it easier to navigate within the application. They are shown in the part of the screen where you can 'enter or change' data. With action buttons relevant screens can be opened without using the menu. For example, with the action buttons in the screen 'Budgets' you can easily navigate to the screens 'Invoice Lines', 'Orders', 'Revenues', etc..



If you select a search result in a screen and after that you click on an action button, then if possible, the same search result will appear in the screen that was opened with the action button. For example, after searching for a cost category ‘1000’ in the screen ‘Budgets’, the search filter will automatically be filled with ‘1000’ for cost category in the screen ‘Comment Deviation’.



Invantive Logo

The top left of each screen includes the Invantive Logo. Via the Invantive logo you can navigate to the home page of the application

1.4.1.4 All other Screens

The content of the majority of the screens in Invantive Vision has some variable screen elements, besides of some fixed elements (see Openings screen 13). Variable display elements means that the user can turn them on or off as desired (see section View 43).

With variable screen elements you can search, add, modify and delete information. All screens work the same. This means that the way you perform actions is the same in the screens, although the contents of the screen depends on where you are. Invantive Vision has the following variable screen elements:

- Search
- Grid
- Create or Change
- Grid Details
- Data Entry Details

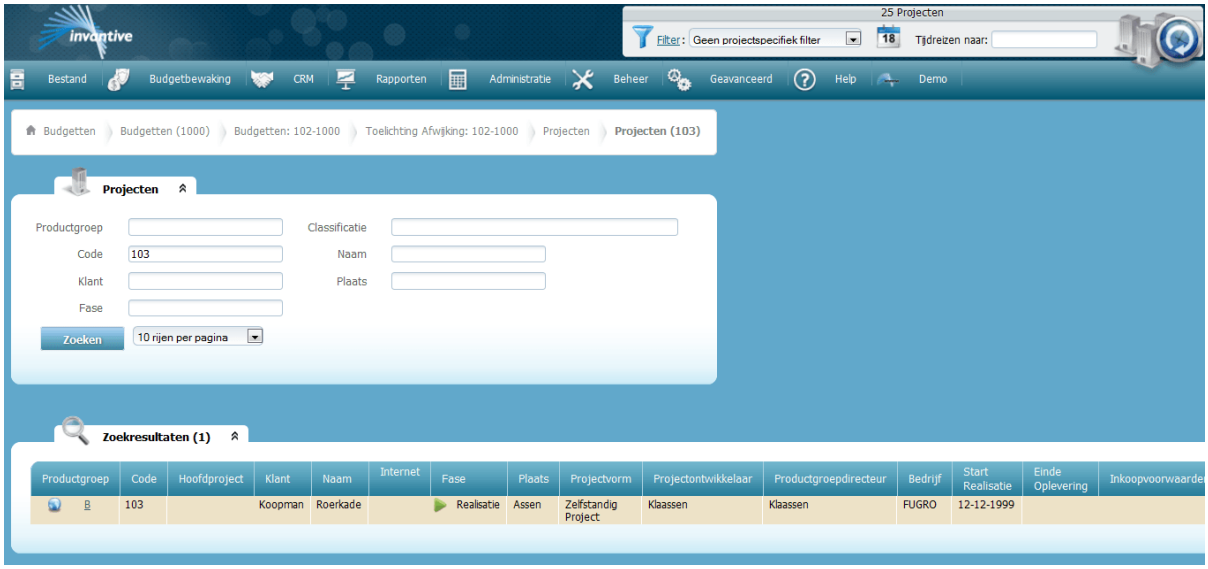
The functions of the variable screen elements are discussed in this chapter.

Search

The search function is available in most screens of Invantive Vision. The screen section where you can search is framed and has the same title as the window opened (in this case ‘Projects’). In the lower left part of the frame the ‘Search’ button is located next to a drop box where you can select the number of rows per page the Results 21 should show.

To find information you need to fill in the search filter in the upper part of the frame. The search results will comply with the content of the search filter. To search on project code ‘103’ fill in the field ‘Code’ the value ‘103’ and click on ‘Search’.

In the list of search results only the project with project code ‘103’ is displayed.



Documents or texts are searched using the SQL operator ‘contains’. The SQL operator ‘contains’ checks whether the searched string is found.

The ‘%’ and ‘_’-characters have a special meaning in the search context.

The ‘%’ sign means ‘any string of characters’ and the ‘_’-sign stands for ‘exactly óne single character’. If you do not know part of the word that you want to search on, then fill in the percent sign for the part that you don't know. Every word in which the searched word appears, preceded and followed by text, will be included in the search results. For example ‘Maas%eik’ provides both ‘Maas aan de eik’ and ‘Winkel Maaseik’.

In the same way the ‘_’-character has a special meaning when used with searching and it stands for ‘any single character’. If for instance you search for ‘_aas’, you will find ‘Maas’ as well as ‘maas’.

Note that using ‘%’ and ‘_’ is only possible in text fields. They have no special function in fields where you enter an amount or date.

Warning! Searching is capital sensitive. ‘MAAS’ is something else than ‘Maas’ and will provide different search results.

Grid

The part of the screen where the search results are shown with the title ‘Search Results’with behind it in parenthesis the number of rows that comply with the search filter.

The right side of the frame shows how many pages the search result contains and which page is currently displayed. Furthermore here are the buttons to navigate within the search results.

Zoekresultaten (8)

Project	Naam	Kostensoort	Leverancier	Contract	Bedrag Laatste Schatting	Vaststellingsdatum	Toelichting	#Documenten	Grootte
Plein	Plein revisited	1070 - Bouwrijpmaken	-	2	5.739,00	25-02-2012	Terug te verwachten van verzekering	-	
Plein	Plein revisited	1070 - Bouwrijpmaken	-	3	−2.055,00	25-02-2012	1e kw 2005	-	
Plein	Plein revisited	1070 - Bouwrijpmaken	-	5	5.739,00	25-02-2012	4e kw 2004	-	
Plein	Plein revisited	1070 - Bouwrijpmaken	-	8	−6.297,00	25-02-2012	(Volgens opgave aannemer, 400 meerwerk)	-	
Plein	Plein revisited	2100 - Hoofdaannemer	-	3	−2.735.278,00	25-02-2012	Taakstellende bezuiniging fase 3	-	
Plein	Plein revisited	3590 - Onvoorzien advies	-	7	−2.405,00	25-02-2012	Royal Haskoning	-	
Plein	Plein revisited	3590 - Onvoorzien advies	-	8	−336,00	25-02-2012	Royal Haskoning	-	
Plein	Plein revisited	4400 - Verhuurbijdrage	-	1	23.040,00	25-02-2012	Verhuurbijdrage	-	

‘Search results’ contains columns that you can use to sort ‘Search results’. By clicking on a column head, the selection is sorted on the values in the selected column. If you click on the column header once more, the sorting will happen in the reverse order (descending instead of ascending).

The results and the search area are automatically hidden when a row under ‘Search results’ is selected. You can unhide them by clicking on the title ‘Search Results’.

If the grid contains only one row, this row will automatically be shown in the lower part of the screen where you can edit or delete data. In this way you do not have to search for this row, and then select it to be able to edit or delete the data in this row.

Create or Change

This section describes the types of data entry fields and how to add, change or delete data. Important tools to be used in this process are Forms 27.

Input Types

This section describes the field types you may encounter when entering or modifying data and what kind of data you can enter in the different field types.

As an example let's see ‘Projects’.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Projects

Projects

Project Cluster | Classification
Code | Name
Customer | City
Phase | Closed: Select Value
Project Entity

Search | 10 rows per page

Search results (25)

Page 1 of 3 >> >|

Project Cluster	Code	Master Project	Customer	Name	Web	Phase	Closed	City	Project Type	Project Manager	Project Cluster Director	Project Entity	Start of Realization	End of Construction	Purchasing Conditions	Selling Conditions	#Documents	Size	Classifications
SB	C204		Mekra	Beheer Energetic		Uitvoering		Maastricht	Individual project	Jalkema	Smeets	Mekra	24-02-2003	31-12-2003			-		Marge.Houden;Project.Datum besluit gemeente;Regio.Midden.UTR
SO	C2108		Nationale Nederlanden	Ontwikkeling Invantive Melba		Uitvoering		Amsterdam	Individual project	Jongen	Jalkema	Mekra				system-opbrengsten	-		Marge.Afstoten;Regio.Zuid
SO	C503.DNB IFRS		QT Design	IFRS compliant DNB rapportage		Uitvoering		Roermond	Individual project	Klaassen	Jongen	Mekra	01-01-1970	01-10-2005			-		
IN	IHOL09		Acme BV	Vakantie (Kerstmis etc.) 2009		Uitvoering		Hierden	Individual project	Leenderts	Klaassen	Mekra	01-01-2009	31-12-2009			-		
IN	IVAC09		Acme BV	Vacation 2009		Uitvoering		Hierden	Individual project	Hoef van der	Mertens	Mekra	01-01-2009	31-12-2009			-		
M	MSLS09		Acme BV	Sales 2009 hoofdproject		Uitvoering		Hierden	Master Project	Lormans	Lugt van de	Mekra	01-01-2009	31-12-2009			-		
M	MSLS09.BD.ALG	MSLS09	Acme BV	Sales trajecten 2009		Uitvoering		Harderwijk	Sub-project	Marit-Engelsen	Lormans	Mekra	01-01-2009	31-12-2009			-		
M	MSLS09.Mekra	MSLS09	Mekra	Sales Mekra 2009		Uitvoering		Harderwijk	Sub-project	Mertens	Marit-Engelsen	Mekra	01-01-2009	31-12-2009			-		
C	Plein	101	Koopman	Plein revisited		Ontwikkeling		Eindhoven	Sub-project	Smeets	Smeets	FUGRO	01-01-2009	01-08-2009	Janssen Inkoop	Janssen Geen Voorwaarden	17		Groep.Woningen;Project.Datum besluit gemeente;Regio.Noord
IN	POST		Acme BV	Post: algemeen af te handelen.		Uitvoering		Hierden	Individual project	Leenderts	Klaassen	Mekra	01-01-2009	31-12-2019			-		
IN	POSTFAC		Acme BV	Post: af te handelen facturen.		Uitvoering		Hierden	Individual project	Leenderts	Klaassen	Mekra	01-01-2009	31-12-2019			-		
C	Stad		Koopman	Stad		Acquisitie		Roermond	Individual project	Jongen	Jongen	FUGRO	01-01-2004			Stad	-		
IN	Templates		Acme BV	Templates		Uitvoering		Hierden	Individual project	Leenderts	Klaassen	Mekra					6		

Create or change

Add | New

Documents | Cash-flow Projections | Project Statuses | Open Processes | Budgets | Project Versions | Workbench Projects | Timesheets | Orders | Revenues | Project File (PDF)

General

Project Cluster * | Project Cluster Director *
Code * | Name *
Short Code
Description
City *
Address 1 | Address 2
Country | Reporting Group *
Phase * | Phase Effective
New Phase Effective | Closed
Project Manager * | Administrator *
Account Manager | Plan Developer
Controller | Customer
Timesheets signed by
Customer Reference | Supplier Reference
Documents | Project Type *
Contract Postfix | Master Project
Free Field 1 | Free Field 2
Project Website (URL) | Logo (URL)
Project Entity * | Cooperation with
Overhead | Icon (URL)

Milestones

Planned Start of Realization | Planned Start of Delivery
Start of Handover | Planned End Date of Delivery
Budget Approved on
Start of Realization | End of Construction
Planned Sales Start Date | Planned Sales End Date
Start of Sales | Sales End Date

Real Estate

Houses (Units) | Parking Places (Units)
Office Space (m^2) | Shop Space (m^2)
Other (m^2) | Land (m^2)
Ground Position | Land Status
Date Ground Purchased

Financial

Released Budget * (EUR) | Provision (EUR)
Expected Investment (EUR) | Administration Third Party
Success Percentage | Risk Percentage * 100,00000
Charged by Hour
Release deviation on Cost Category * Release as specified in cost category budget | Release deviation on Contract * Release as specified in contract budget
Purchasing Conditions | Selling Conditions

Status

Status Indicator *
Date of Last Review
Next Review
Definition
Status

Workflow

Process
Status
Process Owner

Restrictions

Filter Suppliers | Filter Invoice Parties

Layout

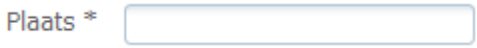
Full Name for Use in Lists | Sort Direction

Entry Fields

An example of an entry field is the white box next to ‘Code’. In a field like this you can enter a ‘free text’. This means you can choose - within certain boundaries - what you fill in. In the example of ‘Code’ you can enter the project code which is assigned by the administration. When you enter text into a ‘free text field’ it gets a red border.

Required fields

The fields that are marked with a ‘*’ are required. An example of such a field is the field 'City':



Amounts

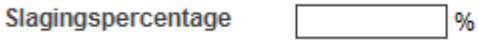
All amounts are in Euros and will be written in the European way. This means that thousands are separated by a period and that the separation of whole and decimal numbers is shown by a comma. For instance: 123.456,78. If you use an American version of other software you have to pay attention to not change the way of writing numbers. The American way of noting numbers is the exact opposite of our way, for example 123,456.78.

If you enter a number with a decimal, you need to use the comma key (‘,‘). All points are considered thousands separators and are not looked at regardless of the place of the number. An input of ‘8.5’ is therefore treated as ‘85’.

The amounts you enter are left aligned. This means these can be found on the left side of the field. If the amounts are already entered, they are automatically right aligned. If you, for example, in the screen section, where you can search, enter a number you will see that the number is left aligned.

Percentages

Furthermore, there are fields where a percentage is requested (such as ‘Estimated Success Percentage’). You do not need to enter the percentage sign here.



Dates

When asked for a date (Example: ‘Expose Date’) then you are supposed to enter the date yourself. A date can be entered in multiple ways. Allowed input formats are:

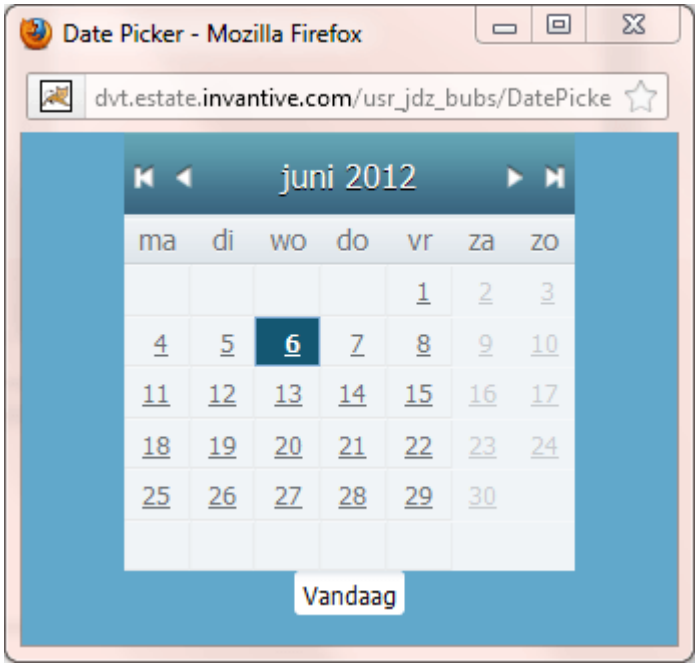
- ddmm
- ddmmyy
- ddmmyyyy
- dd-mm-yyyy
- dd/mm/yyyy
- dd-mm-yy
- dd.mm.yy
- dd/mm/yy

The significance of the date format is as follows:

- ‘dd’ indicates a two digit format of the day of the month from ‘01’ to ‘31’.
- ‘mm’ indicates a two digit format of the month in the year where ‘01’ stands for January, ‘02’ stands for February .. etc..
- ‘yy’ indicates a two digit notation of the year, for example ‘09’ stands for the year ‘2009’.
- ‘yyyy’ indicates a four digit format of the year, for example ‘2009’.

You can also click on the calender icon next to the input field:

A calendar appears:



Select the day by clicking on one of the numbers in the calendar. If you select ‘today’ automatically the current date will be used. You can change the month by clicking on one of the two most inside white arrows - in the image below. The arrow to the right means a month forward. The arrow to the left means a month backward.

You can change the year by clicking on the two outer arrows. The arrow to the right means a year forward. The arrow to the left means a year backward.

If you want more than only change the day, you have to ensure that you change the day at the end. This is because after changing the day you will come back to the menu.

Times

When asked to enter a time, the following input formats can be used:

- hhmm
- hmm
- mm

- m
- h:mm
- h:m
- u.m
- h/m

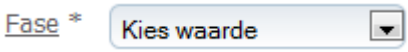
In this case the abbreviation ‘mm’ is minutes and not months as in the date format, ‘uu’ stands for hours.

Date Time Fields

In date/time fields, first the date is entered and subsequently the time. The distinction between date and time is indicated by a space. The above given input formats show the way the date and time can be entered.

Drop Boxes

With drop boxes only valid choices can be made. If you hover above the drop box with the mouse pointer for a moment, you can see how many values are inside. A drop box functions as follows: the field next to ‘Stage’ in the example below, is a drop box. As shown a value already was selected: ‘Acquisition’.

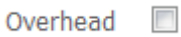


You can change the content of this drop box by clicking on the little square. This opens the drop box and it will get the shape of the following image:

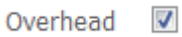
Now you can choose five values, ‘Select value’, ‘Planning’, ‘Acquisition’, ‘Development’ and ‘Realization’. To choose you click on one of the possibilities. The drop box closes itself and your choice is recorded.

Check boxes

A final way to enter data in the screens is via check boxes. This is used when there are only two options: yes or no. If you check the box, you choose ‘yes’ and vice versa. An example of a check mark you can see in the image below:



The check is done by clicking on the white square or in the accompanying text or by selecting the white square with the cursor and then pressing the space bar. The field will look as follow:

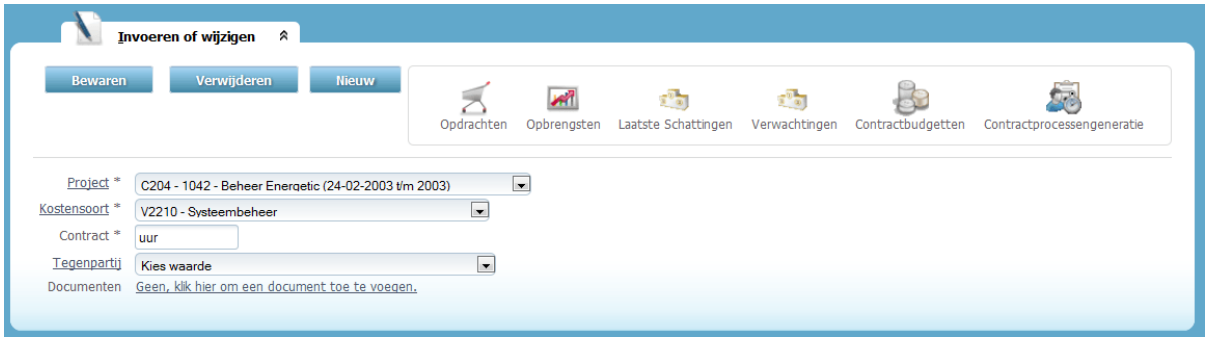


Forms

The data in the screens of Invantive Vision is shown in forms. A form is a cohesive and structured group of data. The use of forms makes it clear and easy to enter or edit data in the database.

In some screens, the data is shown in multiple forms. At the top of the screen the master form is shown with the detail forms below. The data in the detail forms are linked to the data in the master form. The use of master- and detail forms in one screen prevents that you have to open multiple screens when you need to change related data. Each (sub)form is characterized by a framed section of the screen with the title of the (sub)form shown in the left upper corner of the frame.

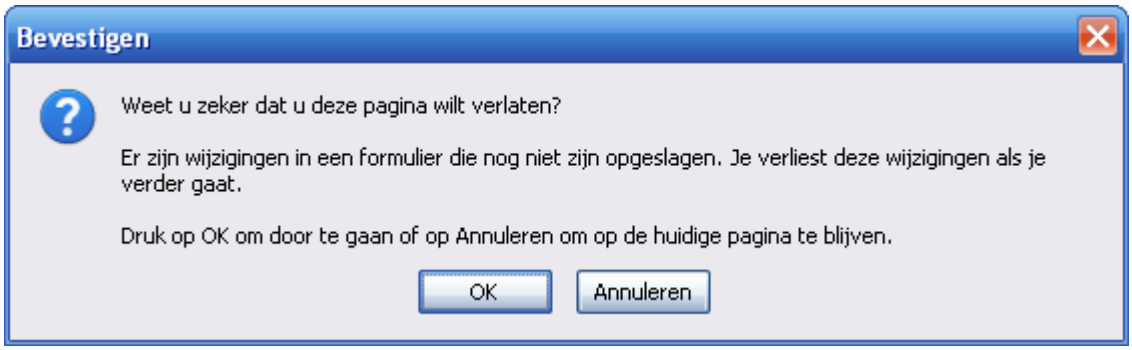
The section of a form where you can add, change or delete data, is framed and has the name 'Create or Change'.



Add New Data

Open the screen where you would like to add new data. Enter the new information in the form 27 and then select 'Add'. The data is now saved. If you do not want to save the data, select 'New'.

To prevent that you accidentally delete the data just entered without saving, the following message appears:



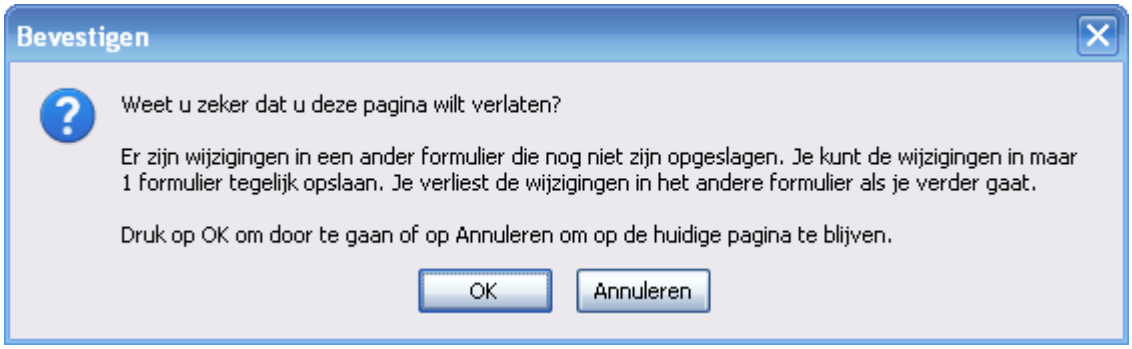
If you select 'OK', your data entry will disappear.

While entering or modifying data a temporarily asterisk ('*') will appear after the title of the tab window and in the title of the browser. This is a warning for not saved information in a Form 27.

Create or Change Data

Open the screen where you would like to create or change data. Search the desired data with Search 20. Then select the correct row in Search results 21. The screen section with the 'Search results' is now folded and in the screen section 'Create or Change' the selected data is shown. The data can be modified or deleted. Once you have adjusted the data, it can be saved by selecting 'Save'. If you want to ignore the changes you have made and want to return to the screen where the results are displayed, select 'New'.

In some screens multiple Forms 27 are shown. Adjustments have to be made and saved for each separate form. In case you change multiple forms at the same time and then you select 'Add' in one form, the next message appears:



If you need to delete data, first search the concerning information (Searching 20), then select this information and then select the button 'Delete'. You can only delete data if they are not used anywhere else.

Warning! You can only add, change and delete data if you have the rights to do so. If you have no rights to delete data, then the 'Delete' button will not be shown.

1.4.1.5 Reports

The menu option reports allows you to retrieve all kind of information about a project.

Formats

Every report is available in the Adobe Reader or Adobe Acrobat PDF format and in the Microsoft Excel XLS format. The information in both report formats (Excel and Acrobat) is exactly the same. The only difference is the layout in Microsoft Excel, which isn't as good as the layout in a PDF file. The program 'Adobe Reader' is free available on the Adobe Website.

Direct link

You can quickly edit data when you are viewing reports. The detail data that can be changed (orders, returns, and adjustments of cost) will have hyperlinks. By clicking on the desired hyperlink in the report, Invantive Vision will be opened automatically. In case you're not logged in, Invantive Vision will ask you to log in. After you log in, Invantive Vision will open the screen that contains the source data which is used to produce the report (in case you have the required rights). If you have the rights to edit data, yu can customize the numbers. Then you can update the report by a rerun. The report will now show the edited numbers.

1.4.1.6 Shortcuts

You can use many functions of the program by using shortcuts.

For the most occurring actions in every screen, you can use shortcuts. You will get no visual hints of this. The following shortcuts are available:

- A: Add.
- S: Save.
- D: Delete.
- S: Search.
- C: Filter.
- K: Focus on search.
- I: Focus on entry.
- F: First page of search results.
- L: Last page of search results.
- P: Previous page search results.
- N: Next page search results.
- F2: Open Menu, see Menu 17.

To use a shortcut, use the following code: ‘Alt’ + the corresponding letter. For example, if you want to add information, then type (after you have completed the data) Alt + T.

Note: for Firefox 2.0 and newer versions, you have to use the 'Alt' key together with the 'Shift' key en de desbetreffende letter.

1.4.1.7 Full Screen Option

The F11 key lets you run the application without showing the edges of the browser. To return to the browser you use the F11 key again.

1.4.1.8 Zoom In and Zoom Out

The following key combinations can be used to zoom in and out:

- Zoom in: Ctrl+Plus
- Zoom out: Ctrl+Minus
- Zoom to 100%: Ctrl+0

Instead of the ‘Plus’ or ‘Minus’ button you can also use the scroll wheel of the mouse while holding down the Ctrl key::

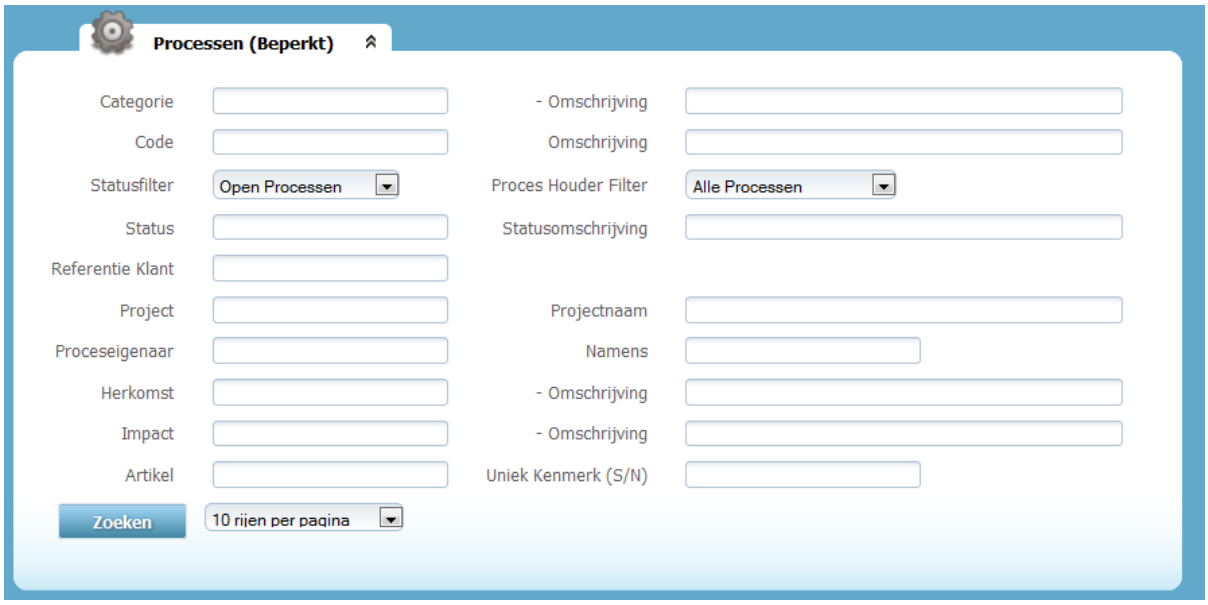
- Zoom In: Ctrl+scroll wheel move up
- Zoom out:Ctrl+scroll wheel move down

1.4.1.9 Roll Down and Roll Up

A screen in Invantive Vision has some fixed components. The section View 43 describes the menu options with which you can hide or unhide the appearance of these screen elements.

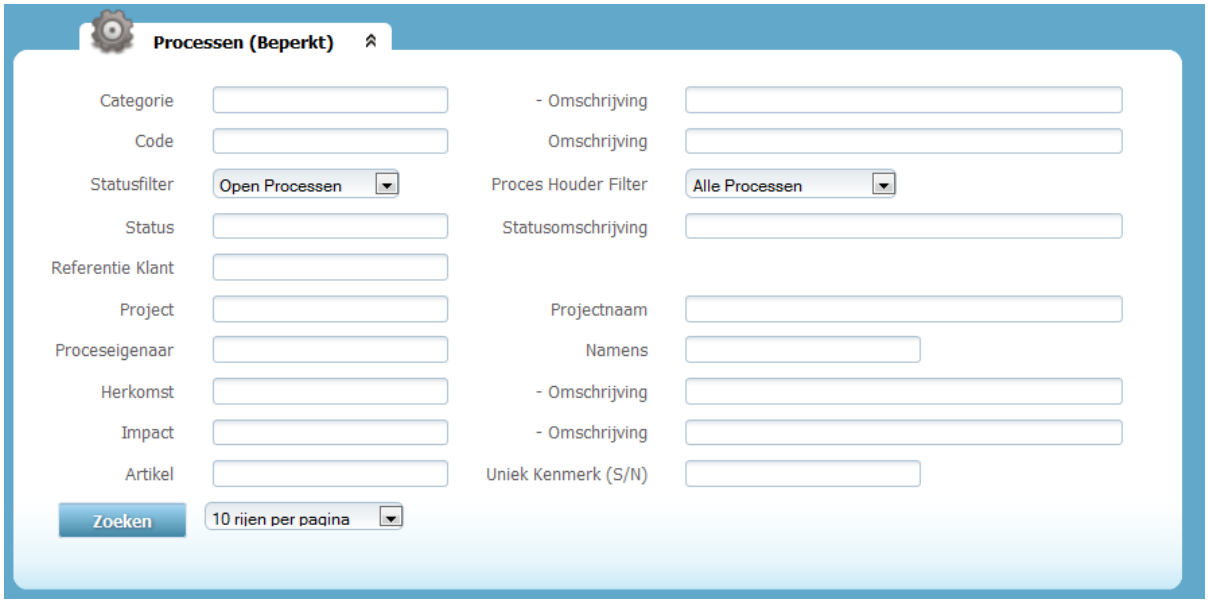
Besides the option to hide or unhide, the information shown in these screen elements can be rolled up or rolled down.

The following image shows the information in the screen section 'Processes (Restricted)'.



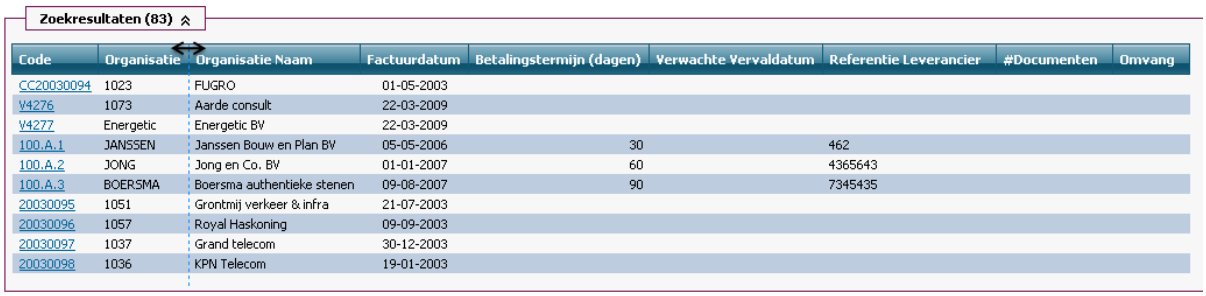
The arrow pointing up ⌃ next to 'Processes (Restricted)' indicates that the information shown in this part of the screen can be rolled up. You can do this by clicking once on the text in the box. The following screen shows the result.

The arrow pointing down ⌄ next to 'Processes (Restricted)' indicates that the information show in this part of the screen can be rolled down. You can do this by clicking once on the text in the box. The information contained in this section of the screen appears again.



1.4.1.10 Change Column Width

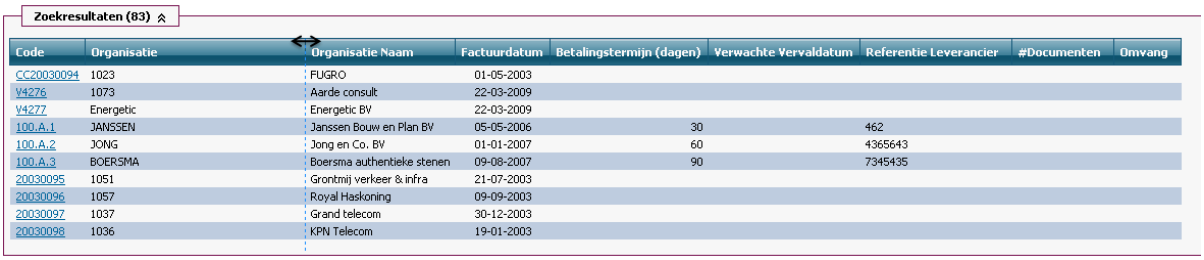
Columns can be made wider or narrower by moving the cursor in a column header over the border with another column header. The cursor changes in that moment in a horizontal double arrow. Now select the left mouse button. Under the double-sided arrow appears a blue dotted line.



Zoekresultaten (83)

Code	Organisatie	Organisatie Naam	Factuurdatum	Betalingstermijn (dagen)	Verwachte Vervaldatum	Referentie Leverancier	#Documenten	Omvang
CC20030094	1023	FUGRO	01-05-2003					
V4276	1073	Aarde consult	22-03-2009					
V4277	Energetic	Energetic BV	22-03-2009					
100.A.1	JANSSEN	Janssen Bouw en Plan BV	05-05-2006	30		462		
100.A.2	JONG	Jong en Co. BV	01-01-2007	60		4365643		
100.A.3	BOERSMA	Boersma authentieke stenen	09-08-2007	90		7345435		
20030095	1051	Grontmij verkeer & infra	21-07-2003					
20030096	1057	Royal Haskoning	09-09-2003					
20030097	1037	Grand telecom	30-12-2003					
20030098	1036	KPN Telecom	19-01-2003					

This indicates that you can make the column wider or smaller by moving the mouse. In the picture below the column ‘Organization’ has been made wider.



Zoekresultaten (83)

Code	Organisatie	Organisatie Naam	Factuurdatum	Betalingstermijn (dagen)	Verwachte Vervaldatum	Referentie Leverancier	#Documenten	Omvang
CC20030094	1023	FUGRO	01-05-2003					
V4276	1073	Aarde consult	22-03-2009					
V4277	Energetic	Energetic BV	22-03-2009					
100.A.1	JANSSEN	Janssen Bouw en Plan BV	05-05-2006	30		462		
100.A.2	JONG	Jong en Co. BV	01-01-2007	60		4365643		
100.A.3	BOERSMA	Boersma authentieke stenen	09-08-2007	90		7345435		
20030095	1051	Grontmij verkeer & infra	21-07-2003					
20030096	1057	Royal Haskoning	09-09-2003					
20030097	1037	Grand telecom	30-12-2003					
20030098	1036	KPN Telecom	19-01-2003					

The column cannot be made smaller than the largest word in the column title. The width of a column is unlimited.

1.4.1.11 To Move Columns

When you move the cursor in the middle of a column header it changes to a character with 4 arrows  .

Zoekresultaten (7)

Rol	Omschrijving	Alle projecten zien	Alle Projecten Wijzigen	Alle taak notities zien	Mag Alle Documenten Zien
Beheer	Applicatiebeheer	☑	☐	☑	☑
Exploitatie	Service en exploitatie	☐	☐	☑	☑
FA	Administratie	☑	☑	☑	☑
Ontwikkeling	Systeemontwikkeling	☑	☐	☑	☑
PO	Projectontwikkeling	☐	☐	☑	☑
Publiek	Publiek	☐	☐	☐	☐
Systeem	Systeem	☐	☐	☑	☑

Now select the left mouse button and hold it down. Now you can drag the column to another position in the table.

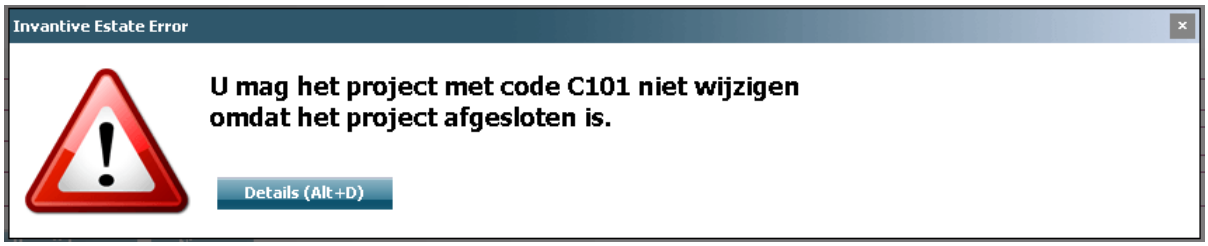
In this way the column ‘Roll’ was placed behind the column ‘Description’ as shown in the picture below.

Zoekresultaten (7)

Omschrijving	Rol	Alle projecten zien	Alle Projecten Wijzigen	Alle taak notities zien	Mag Alle Documenten Zien
Applicatiebeheer	Beheer	☑	☐	☑	☑
Service en exploitatie	Exploitatie	☐	☐	☑	☑
Administratie	FA	☑	☑	☑	☑
Systeemontwikkeling	Ontwikkeling	☑	☐	☑	☑
Projectontwikkeling	PO	☐	☐	☑	☑
Publiek	Publiek	☐	☐	☐	☐
Systeem	Systeem	☐	☐	☑	☑

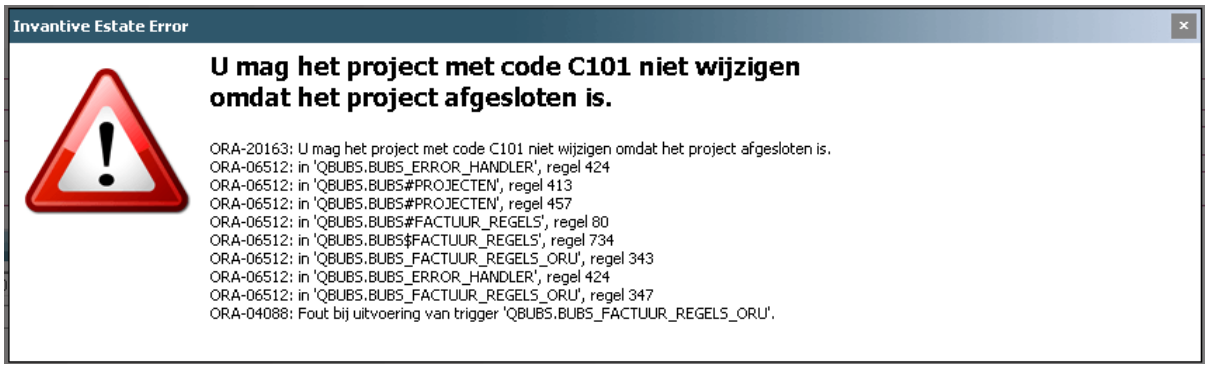
1.4.1.12 Errors

The data which is registered in Invantive Vision must meet certain standards in order to allow a good functioning of the system. Sometimes certain changes do not meet these rules which will lead to an error message as shown in the example below.



With the shortcut Alt + O you can close the window with the error message. Try to remove the cause and then try again to save your changes.

You can obtain the details of the error via the shortcut Alt + D.



1.4.1.13 To Link Documents

In a number of screens you can link documents to already existing data. This concerns the following screens:

- Budget Movements 79
- Budgets 155
- Contract Budgets 77
- Invoice Lines 144
- Projects 130
- Latest estimations 72
- Revenues 74
- Orders 69
- Organizations 98
- Persons 102
- Processes 58

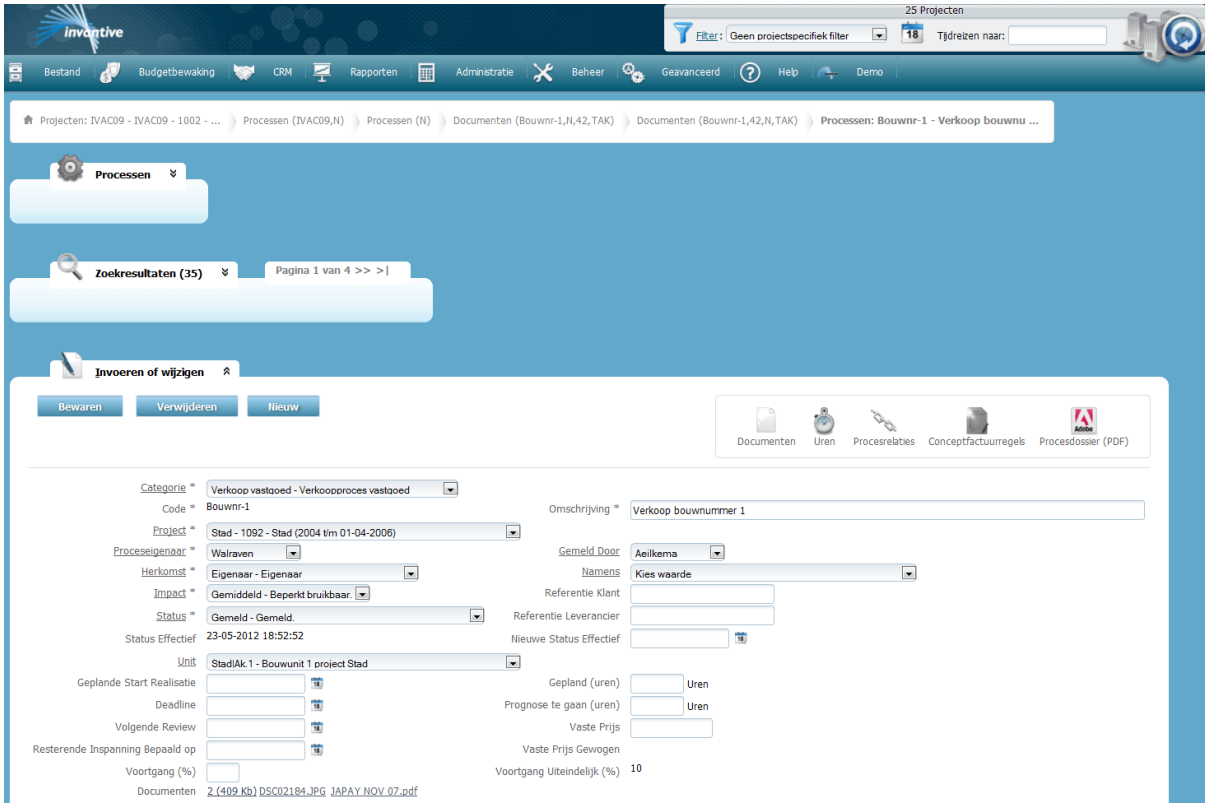
Furthermore background processes can be linked to documents which contain the output of the background processes. You cannot change these documents manually, since they are made by Invantive Vision. See Background Processes 228.

In all these screens the search result shows the column '#Documents' which shows the number of linked documents and the column 'Size' which shows the total size of these documents.

In the input section appears more information about the linked documents behind the heading 'Documents' as soon as in the search results a document is selected.

It says 'None, click here to add a document' if no documents are linked yet. If less than three documents are linked, the number of documents is displayed together with the total size in parentheses, plus the direct links to the documents. If three or more linked documents are linked, the number of documents is displayed together with the total size in parentheses, plus the direct link to the oldest document, plus the direct link to the most recent document.

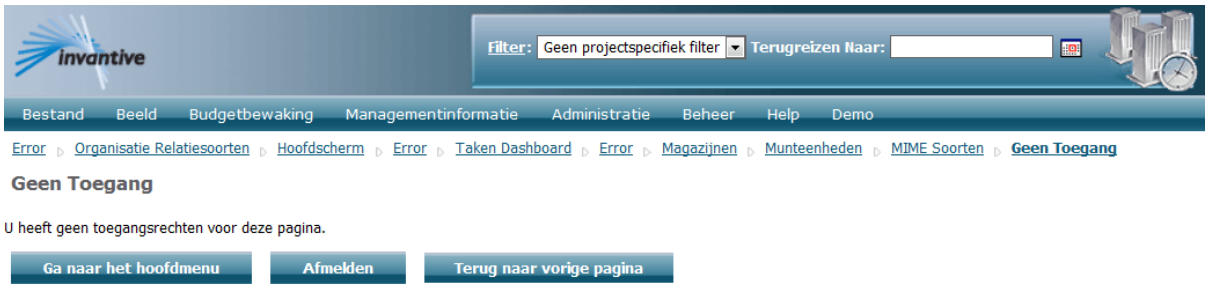
For example:



you will get a list of all linked documents by selecting ‘None, click here to add a document’ or to select the number of documents. See Documents 109 for linking new documents and retrieving existing documents.

1.4.1.14 No Access

If you request a page which you have no access rights to, the following screen appears.



1.4.1.15 Further Processing of Data in Excel

The application offers four options to import data into Microsoft Excel:

- Direct copying of the screen output to Microsoft Excel.
- Web query within Microsoft Excel.
- Database query from Microsoft Excel.
- Run a report which output is a Microsoft Excel file

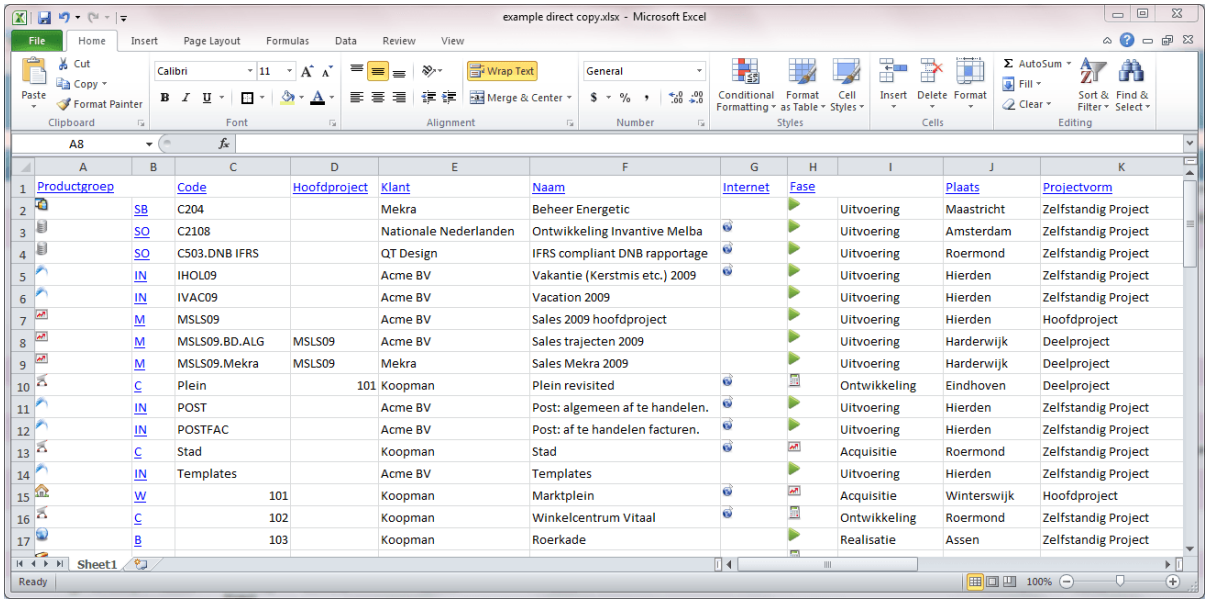
Direct copy

Direct copying of the screen output and export it to Microsoft Excel can be done as follows:

- Open the screen of your choice.

- Select the correct data.
- Select ‘1 .000 rows per page’ in the search filter to maximize the results on one page.
- Click in the upper left corner of the search result and drag the mouse to the below right corner of the search results.
- Select ‘Copy’.
- Switch to Microsoft Excel.
- Select ‘Paste‘ or ‘Paste Special’.

An example of the result is:



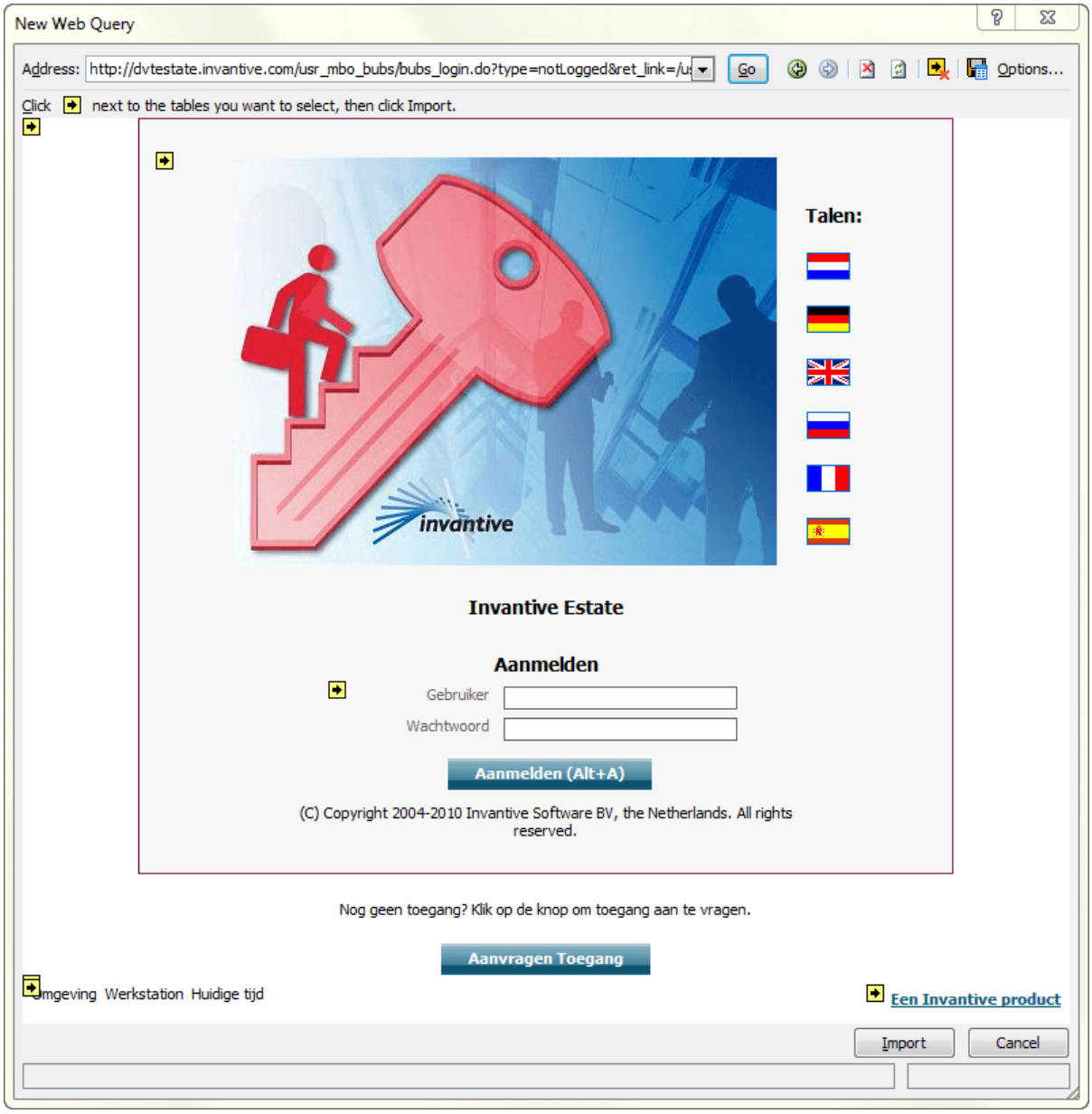
	A	B	C	D	E	F	G	H	I	J	K
1	Productgroep		Code	Hoofdproject	Klant	Naam	Internet	Fase		Plaats	Projectvorm
2		SB	C204		Mekra	Beheer Energetic			Uitvoering	Maastricht	Zelfstandig Project
3		SO	C2108		Nationale Nederlanden	Ontwikkeling Invantive Melba			Uitvoering	Amsterdam	Zelfstandig Project
4		SO	C503.DNB IFRS		QT Design	IFRS compliant DNB rapportage			Uitvoering	Roermond	Zelfstandig Project
5		IN	IHOL09		Acme BV	Vakantie (Kerstmis etc.) 2009			Uitvoering	Hierden	Zelfstandig Project
6		IN	IVAC09		Acme BV	Vacation 2009			Uitvoering	Hierden	Zelfstandig Project
7		M	MSLS09		Acme BV	Sales 2009 hoofdproject			Uitvoering	Hierden	Hoofdproject
8		M	MSLS09.BD.ALG	MSLS09	Acme BV	Sales trajecten 2009			Uitvoering	Harderwijk	Deelproject
9		M	MSLS09.Mekra	MSLS09	Mekra	Sales Mekra 2009			Uitvoering	Harderwijk	Deelproject
10		C	Plein	101	Koopman	Plein revisited			Ontwikkeling	Eindhoven	Deelproject
11		IN	POST		Acme BV	Post: algemeen af te handelen.			Uitvoering	Hierden	Zelfstandig Project
12		IN	POSTFAC		Acme BV	Post: af te handelen facturen.			Uitvoering	Hierden	Zelfstandig Project
13		C	Stad		Koopman	Stad			Acquisitie	Roermond	Zelfstandig Project
14		IN	Templates		Acme BV	Templates			Uitvoering	Hierden	Zelfstandig Project
15		W	101		Koopman	Marktplein			Acquisitie	Winterswijk	Hoofdproject
16		C	102		Koopman	Winkelcentrum Vitaal			Ontwikkeling	Roermond	Zelfstandig Project
17		B	103		Koopman	Roerkade			Realisatie	Assen	Zelfstandig Project

Comment: copying directly doesn't work with Mozilla Firefox anymore, it does work with the browsers Microsoft Explorer, Opera, and Chrome.

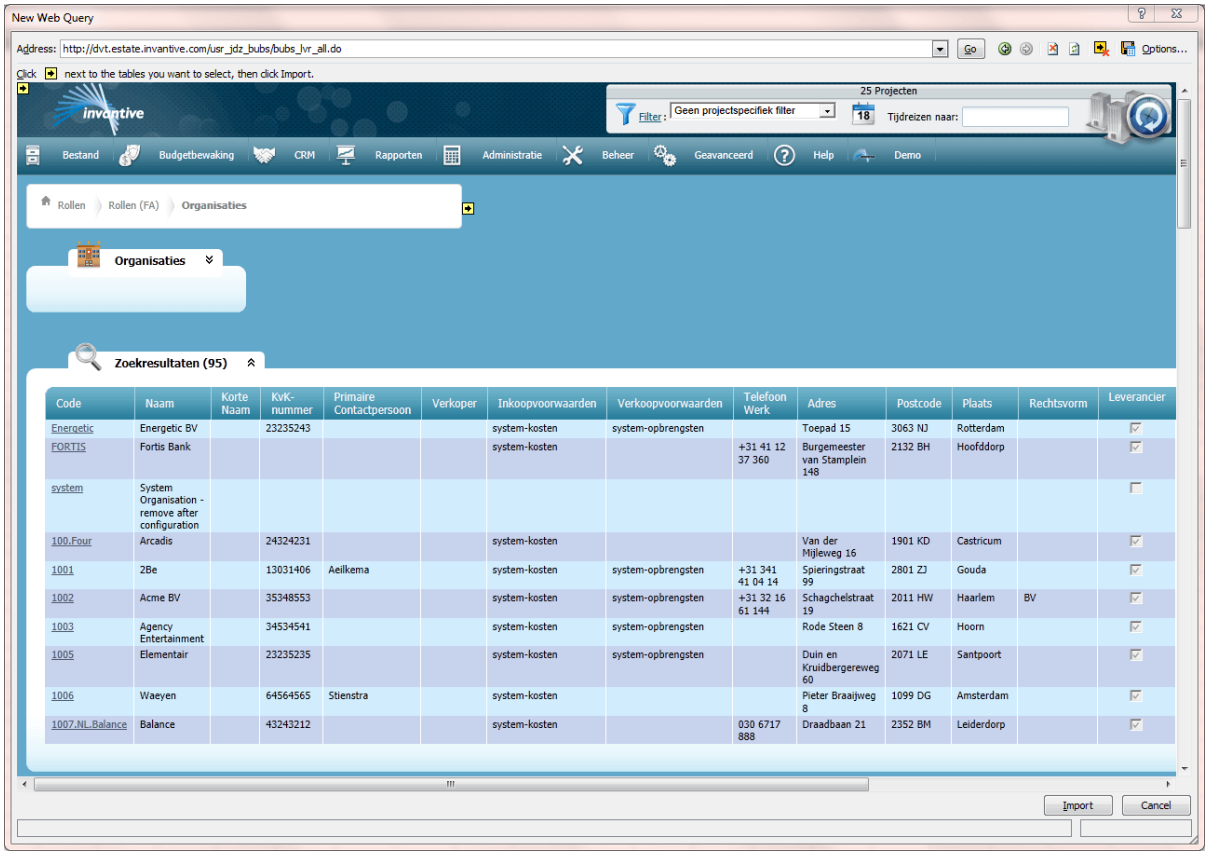
Web Query

Making a web query from Microsoft Excel can be done following the next steps:

- Start Microsoft Excel.
- Open a sheet.
- Place the cursor where the data has to appear.
- Select in the menu ‘Data’ -> ‘Retrieve external data’ -> ‘New web query’.
- Fill out the URL of the application.
- Log in.



- Open the screen where you would like to copy data from.
- Select ‘1 .000 rows per page’ in the search filter to maximize the results on one page.
- Select the correct data.
- Select the arrow in the upper left corner, next to the search results. The arrow changes in a check mark.



- Select the Import button.

Database Query

A database query from Excel can be made using a database gateway. For more information see Allow Users to Exchange Data 475.

Reports

All reports are available in Microsoft Excel format. Choose your report by choosing the corresponding menu option. The layout of a report in Microsoft Excel format is of less quality than the layout of the Adobe PDF format but this is compensated for the analytical and processing possibilities of data in MS Excel.

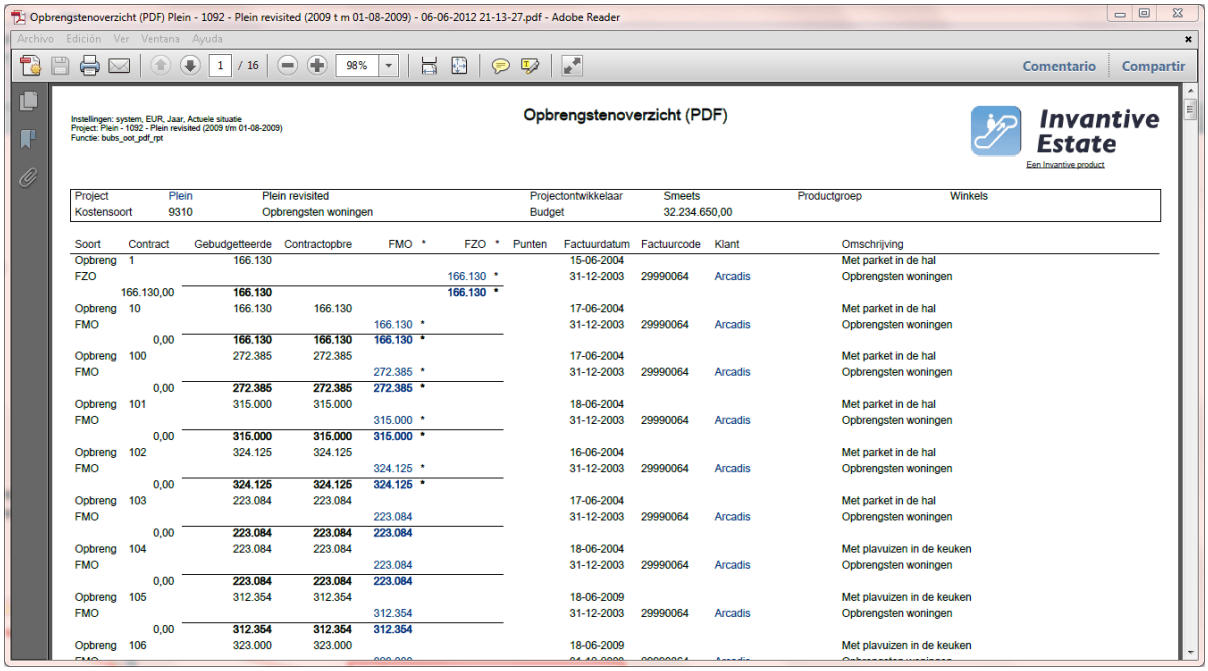
1.4.1.16 Drill down in Adobe PDF

All reports are available in Adobe PDF format. The Adobe PDF format is a true reflection of the print in digital format. Reports in Adobe PDF format can be viewed with the program ‘Adobe Reader’ or ‘Adobe Acrobat’. The program ‘Adobe Reader’ is free available on the Adobe Website.

The Adobe PDF reports can be digitally stored and sent. Within a number of reports a part of the text and/or numbers are colored blue. When you click on such a blue element, Invantive Vision will be opened and the related data will be shown, if you have the appropriate rights.

In this way, the labor intensive search for data to be edited will be more efficient.

For example, in the report 'Revenue Overview' all information in the columns 'FMO - Invoice With Order', 'FZO - Invoice Without Contract' and 'Customer' are colored blue:



Opbrengstenoverzicht (PDF) Plein - 1092 - Plein revisited (2009 t m 01-08-2009) - 06-06-2012 21-13-27.pdf - Adobe Reader

Archivo Edición Ver Ventana Ayuda

1 / 16 98% Comentario Compartir

Instellingen: system, EUR, Jaar, Actuele situatie
Project: Plein - 1092 - Plein revisited (2009 t/m 01-08-2009)
Functie: bubs_oot_pdf_rpt

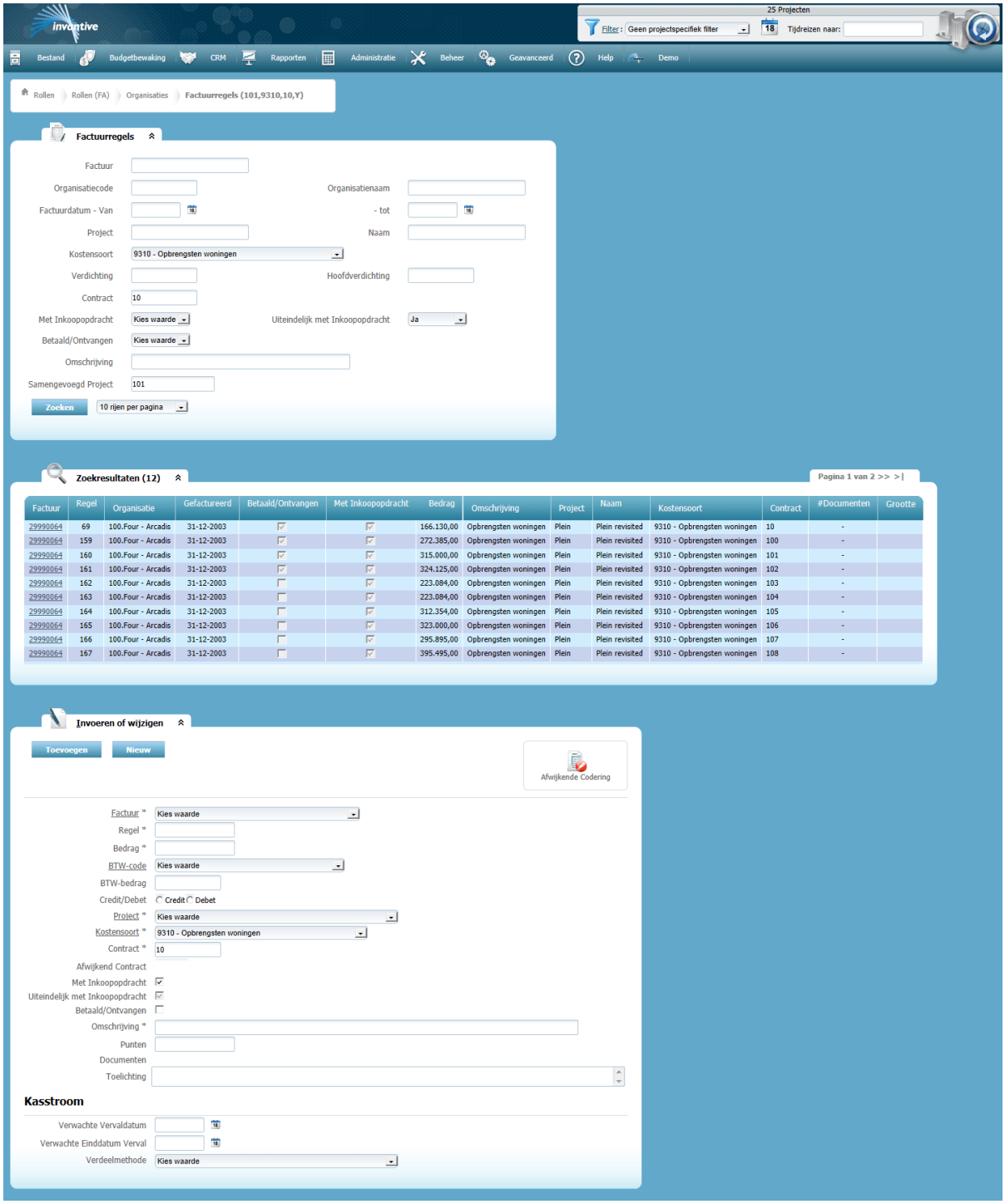
Opbrengstenoverzicht (PDF)

Invantive Estate
Een Invantive product

Project	Plein	Plein revisited	Projectontwikkelaar	Smeets	Productgroep	Winkels
Kostensoort	9310	Opbrengsten woningen	Budget	32.234.650,00		

Soort	Contract	Gebudgetteerde	Contractopbre	FMO *	FZO *	Punten	Factuurdatum	Factuurcode	Klant	Omschrijving
Opbreng	1	166.130					15-06-2004			Met parket in de hal
FZO					166.130 *		31-12-2003	29990064	Arcadis	Opbrengsten woningen
	166.130,00	**166.130**			**166.130 ***					
Opbreng	10	166.130	166.130				17-06-2004			Met parket in de hal
FMO				166.130 *			31-12-2003	29990064	Arcadis	Opbrengsten woningen
	0,00	**166.130**	**166.130**	**166.130 ***						
Opbreng	100	272.385	272.385				17-06-2004			Met parket in de hal
FMO				272.385 *			31-12-2003	29990064	Arcadis	Opbrengsten woningen
	0,00	**272.385**	**272.385**	**272.385 ***						
Opbreng	101	315.000	315.000				18-06-2004			Met parket in de hal
FMO				315.000 *			31-12-2003	29990064	Arcadis	Opbrengsten woningen
	0,00	**315.000**	**315.000**	**315.000 ***						
Opbreng	102	324.125	324.125				16-06-2004			Met parket in de hal
FMO				324.125 *			31-12-2003	29990064	Arcadis	Opbrengsten woningen
	0,00	**324.125**	**324.125**	**324.125 ***						
Opbreng	103	223.084	223.084				17-06-2004			Met parket in de hal
FMO				223.084			31-12-2003	29990064	Arcadis	Opbrengsten woningen
	0,00	**223.084**	**223.084**	**223.084**						
Opbreng	104	223.084	223.084				18-06-2004			Met plavuizen in de keuken
FMO				223.084			31-12-2003	29990064	Arcadis	Opbrengsten woningen
	0,00	**223.084**	**223.084**	**223.084**						
Opbreng	105	312.354	312.354				18-06-2009			Met plavuizen in de keuken
FMO				312.354			31-12-2003	29990064	Arcadis	Opbrengsten woningen
	0,00	**312.354**	**312.354**	**312.354**						
Opbreng	106	323.000	323.000				18-06-2009			Met plavuizen in de keuken

When you click on a blue colored number in the column ‘FMO’, the following screen will appear (possible after a separate authentication if Invantive Vision is not opened yet):



Now you can select an invoice in ‘Search Results’ and correct it.

1.4.1.17 Multilinguality

Invantive Vision is available in multiple languages. Through the list of languages at the bottom left in the login screen you can select the language you prefer. Once you have selected the language of your choice, the text in the login screen and other screens of Invantive Vision appears in the selected language.

It is also possible to use the URL (the address in the browser) to set the language. This may be required, for example, to have the login screen also in another language available. For a different language, the URL needs to be extended with

‘locale=<AREA>&lang=<LANGUAGE>’. The first parameter in a URL should be preceded by a ‘?’. In all other cases an ‘&’ must be placed before the extension. To have quick access to the modified link, you can save it, for example, in ‘Favorites’ in your browser. See the example below for a login screen in Russian.

With the screen My Preferences 45 it is also possible to set the preferred language.

The following territories and languages are supported:

- Dutch (region is ‘nl’, language is ‘nl’).
- English (region is ‘en’, language is ‘en’).
- German in Germany (region is ‘de’, language is ‘de’).
- French (region is ‘fr’, language is ‘fr’).
- Spanish (region is ‘es’, language is ‘es’).
- Russian (region is ‘ru’, language is ‘ru’).

Depending on the chosen language, all fixed texts in screens and reports are replaced by the correct translation. Fixed texts are, for example, field titles.

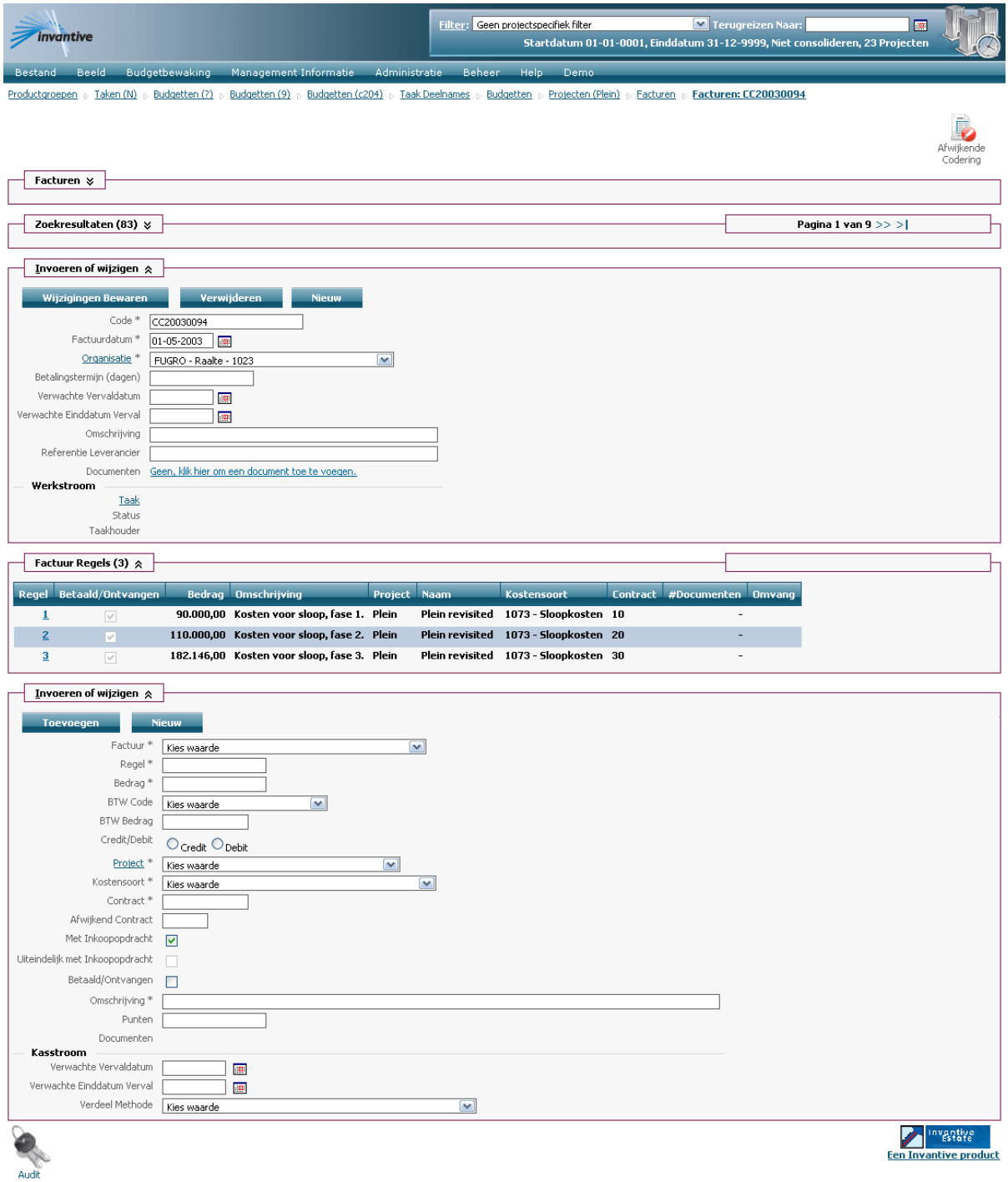
Limited parts of the variable texts are also replaced by the correct translation. This primarily concerns more or less static lists, such as the list of functions.

Entered data is not translated. For example, the name of a project is independent of the chosen language.

1.4.1.18 Master-Detailschermen

Some screens in Invantive Vision are master detail. This means that the ‘master’ object and its corresponding ‘details’ are displayed on the same page. The details that appear vary depending on the selected ‘master‘ object. A master-detail relation has a cardinality ‘one-to-many’.

The example below shows a ‘master detail’ screen. Three invoice lines belong to the invoice with code ‘CC0030094’.



The display of the details in the next master detail screens is automatically set to show a maximum of 1000 records:

Process notes in the screen Processes 58.

Invoice Lines in the screen Invoices 141.

View elements in the screen Views 301.

Classifications in the screen Projects 130.

Job Parameters in the screen Background Jobs 228.

Classifications in the screen Documents 109.

Classifications and Relationships in the screen Organizations 98.

1.4.2 File

This section contains information about the functions which normally can be found under the menu item ‘File’.

1.4.2.1 View

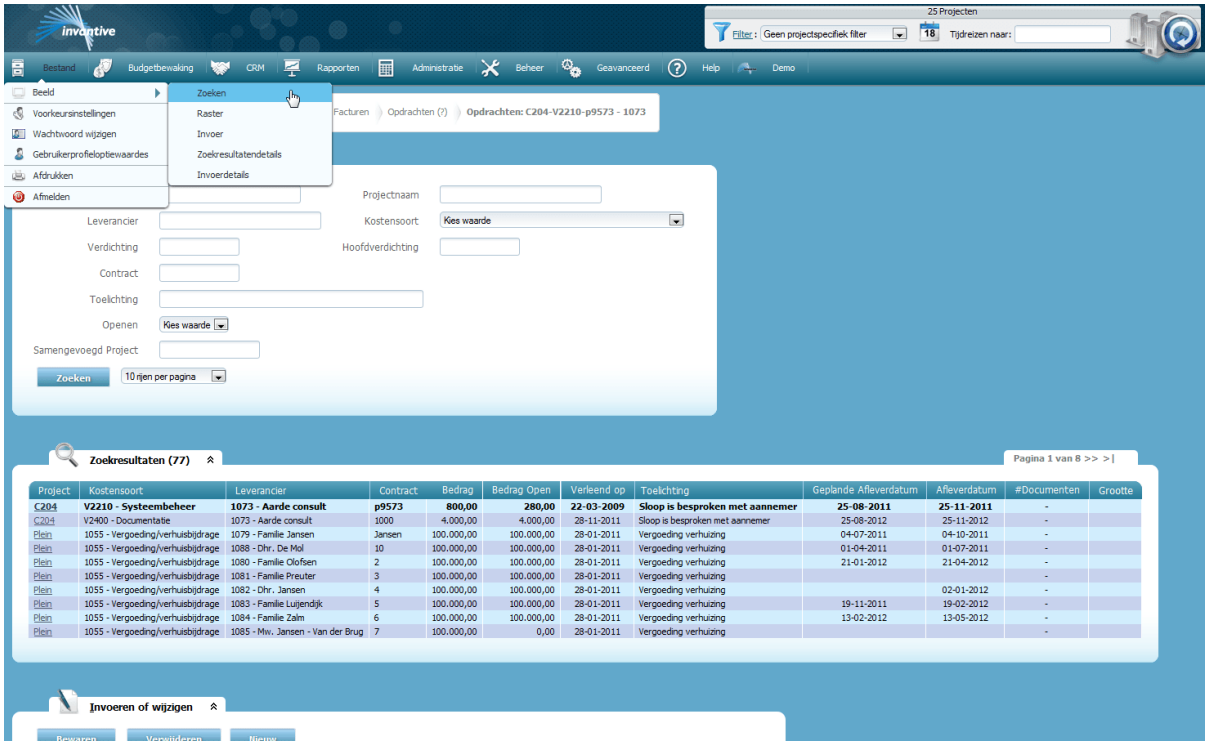
A screen in Invantive Vision has some fixed components (see openings screen 13) and some variable components. This chapter describes the menu options that allows you to hide and unhide the variable screen components.

From top to bottom the following items are respectively shown in a screen:

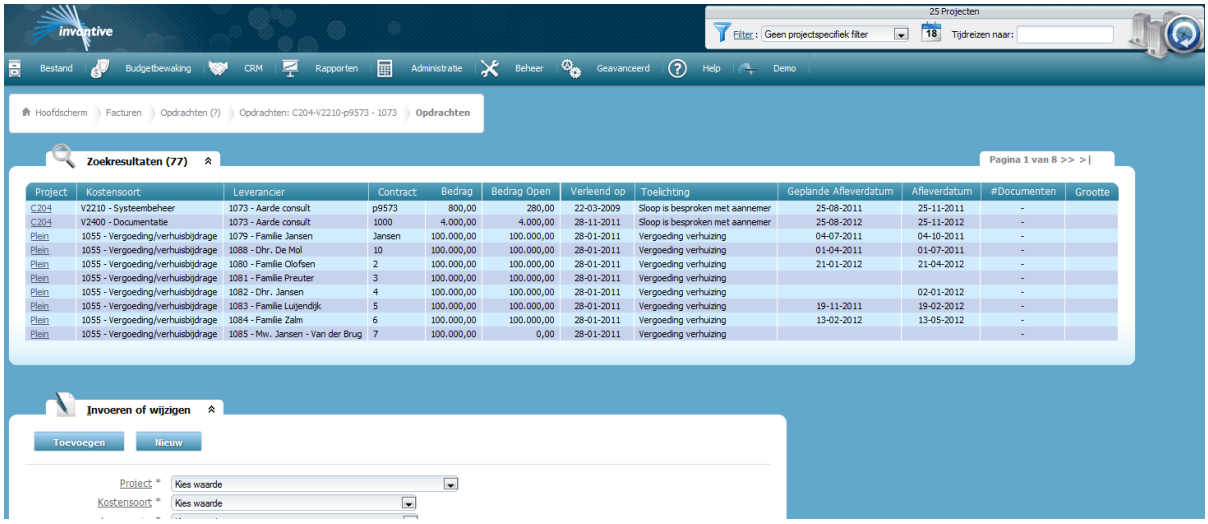
1. Search
2. Grid
3. Data entry
4. Grid Details
5. Data entry details

Search

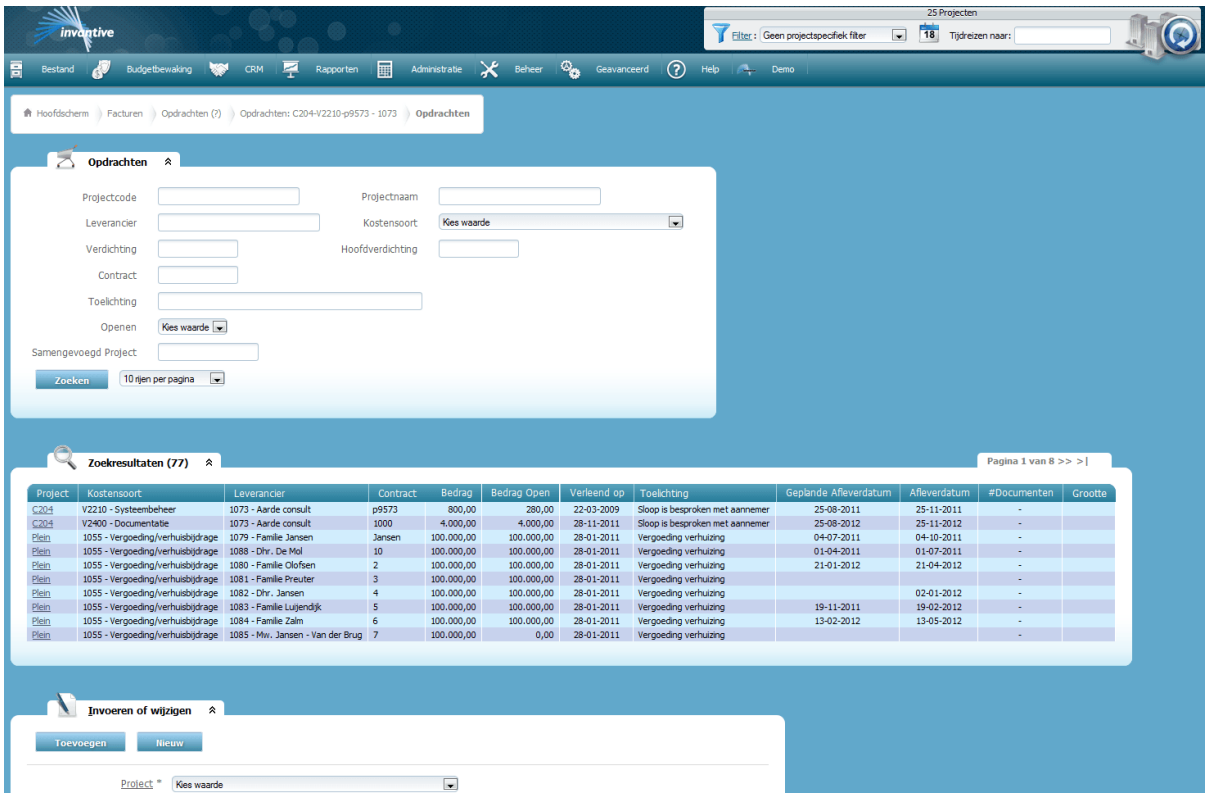
Using the menu option 'View' you can select whether if you want a screen part to be shown in your screen. In this paragraph, is described how we can hide and show the screen part 'Searching'. Select the option ‘Search’.



The following screen appears. The screen section ‘Search’ is not longer visible in the screen.



Select again the menu option 'Searching'. The screen section ‘Search’ is now visible again.



Grid

Using the menu option 'View' and afterwards the option 'Grid' you can select whether you want to show or hide the screen part 'Search Results'. This works in the same way as described in paragraph Searching 43.

Data Entry

Using the menu option 'View' and afterwards the option 'Entry' you can select whether you want the screen part 'Entry or change' to be shown or hidden. This works in the same way as described in paragraph Searching 43.

Grid Details

Using the menu option 'View' and afterwards the option 'Search Result Details' you can select whether you want the screen part 'Search Results' in the detail part of the master detail screen to be shown or hidden. This works in the same way as described in paragraph Searching 43.

Data Entry Details

Using the menu option 'View' and afterwards the option 'Data Entry Details' you can select whether you want the screen part 'Entry or change' in the detailed part of a master detail screen to be shown or hidden. This work in the same way as described in paragraph Searching 43. 'Data Entry Details'.

1.4.2.2 Preferences

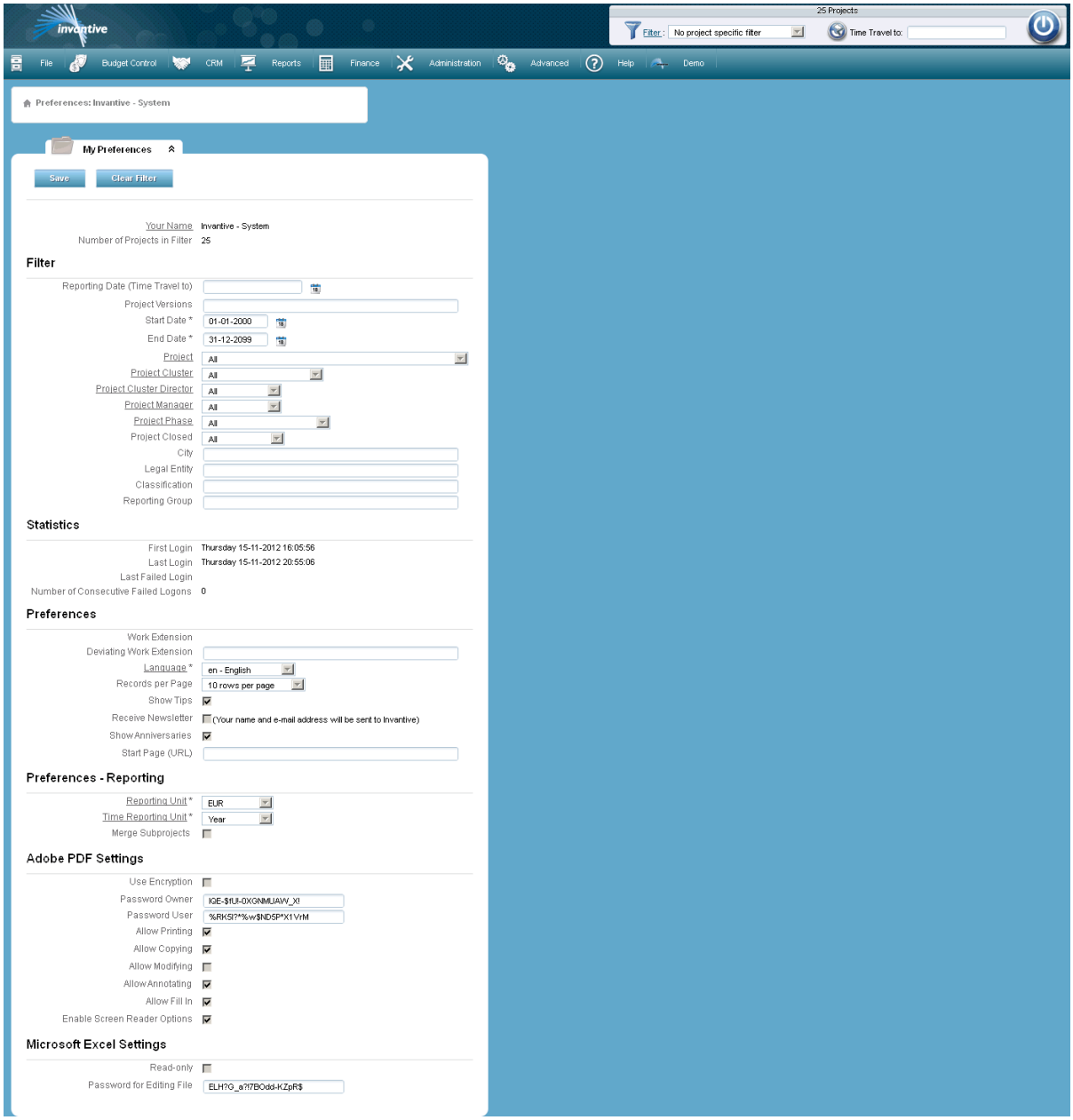
The settings in this screen is made, apply only to the user who is logged on.

Filter setting

Every user of Invantive Vision has access to some of the projects or even to all projects. However, you usually work with only one part of the projects or just one project. The filter helps you in all reports and screens to see and edit only the project data that are relevant to you.

The section ‘Filter’ in the screen ‘Preference Settings’ consists of a list of restrictions which are combined to form a list of projects that comply with these restrictions.

You can quickly change the filter without changing screens. See Filter 16.



The meaning of the entry fields is:

Filter	
Reporting Date (Travel Back To)	Here you can enter the reporting date for which the information on the reports should be shown. Time travelling to before the year 1900 is not supported.
Project Versions	Show project version in rapport data.
Start Date	The start of the reporting data range. All data before this date are not reported.
End Date	The end of the reporting date range. All data after this date are not reported. The end date is not included in reporting.
Project	Limit the filter to a specific project.
Product group	Limit the filter to all projects from the product group.
Product Group Director	Limit the filter to all projects with the product group director.
Project developer	Limit the filter to all projects of the project developer.
Project Phase	Limit the filter to all projects in this phase.
Project Closed	Limit the filter to all projects that have been closed or not.
City	Limit the filter to all projects where the name of the city where they are executed contains this text.

Legal Entity	Limit the filter to all projects where the name of the legal structure under which they are executed contains this text.
Classification	Limit the filter to all projects with the classification that appears in this field. A classification is a label that can be linked to a project or a person. Wlth these labels you can find the desired information more easily.
Reporting group	Limit the filter to all projects where the reporting group contains this text.
Statistics	
Preferences	
Work Extension	The phone number to reach the user at work.
Deviating Work Extension	Alternate phone number to reach the user at work. This number is used for flexplaces and integration with the PBX.
Language	The preferred language in which the fixed texts are presented. See also Multilinguality 39.
Records per Page	The number of rows that is shown in Search Results 21.
Show Tips	When checked, after you log on, tips for using Invantive Vision will be shown.
Receive Newsletter	When checked, the user receives the newsletter of Invantive Software BV. A message to Invantive Software Inc. will be send with the request to subscribe you to the newsletter. There are no charges. Besides your email address also your name will be passed on.
Show Anniversaries	When checked, after you log on, the near birthdays are shown.
Start Page (URL)	The URL that will be opened after you have logged on. The URL will be requested with the parameter MNU_CODE = Main. If the field is empty, the URL in the field 'Main Menu (URL)' in the screen Settings 349 will be used.
Preferences - Reporting	
Reporting Unit	The numerical unit used in the presentation of figures in reports.
Time Reporting Unit	The time unit used in the presentation of figures in reports reporting time periods.
Merge Subprojects	If this box is checked, then projects are consolidated into master projects and independent projects in all financial reports. See also Management Information 116.
Adobe PDF Settings	
Use Encryption	If this box is checked, all PDF reports will be secured with two passwords: one password for the owner, who has full rights and another password for the person who gets limited rights as will be registered with the other check boxes.
Password Owner	The password for all PDF reports with which one is granted full rights for the PDF.
Password User	The password for all PDF reports with which one is granted limited rights, as registered by the following options.
Allow Printing	If this box is checked, then an authorized user can print the PDF file.
Allow Copying	If this box is checked, then an authorized user can copy text from the PDF file into a Microsoft Word file, for example.
Allow Modifying	If this box is checked, then an authorized user can change the PDF file by, for example, removing texts.
Allow Annotating	If this box is checked, then an authorized user of the PDF file can add annotations to it.
Allow Fill In	If this box is checked, then an authorized user of the PDF file can fill in the forms in the PDF file.
Enable Screen Reader Options	If this box is checked, then an authorized user can use a screen reader to read the PDF file. A screen reader is a tool for the visually impaired; it is recommended to always allow this option.
Microsoft Excel Settings	
Read-only	If this box is checked, then the authorized user, can only read the Excel file. However, no changes can be made.
Password for Editing File	The password for the Excel files can be changed here.

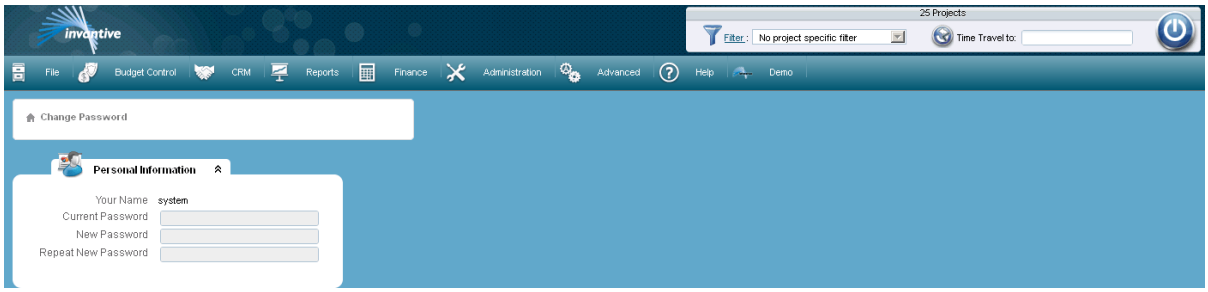
The meaning of the other fields:

Your Name	Your name as registered in the personal administration.
First Login	Date first time logged in via the web user interface.
Last Login	Date last time logged in via the web user interface.
Number of Projects in Filter	Indicates the number of projects that comply with the settings in the filter.

1.4.2.3 Change Password

In this form you can change your password.

First, you have to enter your current password to verify that you know this password and that not someone else is using your workstation during your absence. Then you have to enter your new password and next you have to confirm your password. The password will not be changed if the two passwords are different. This is to prevent that because of an input error you will lose your password.



The meaning of the entry fields is:

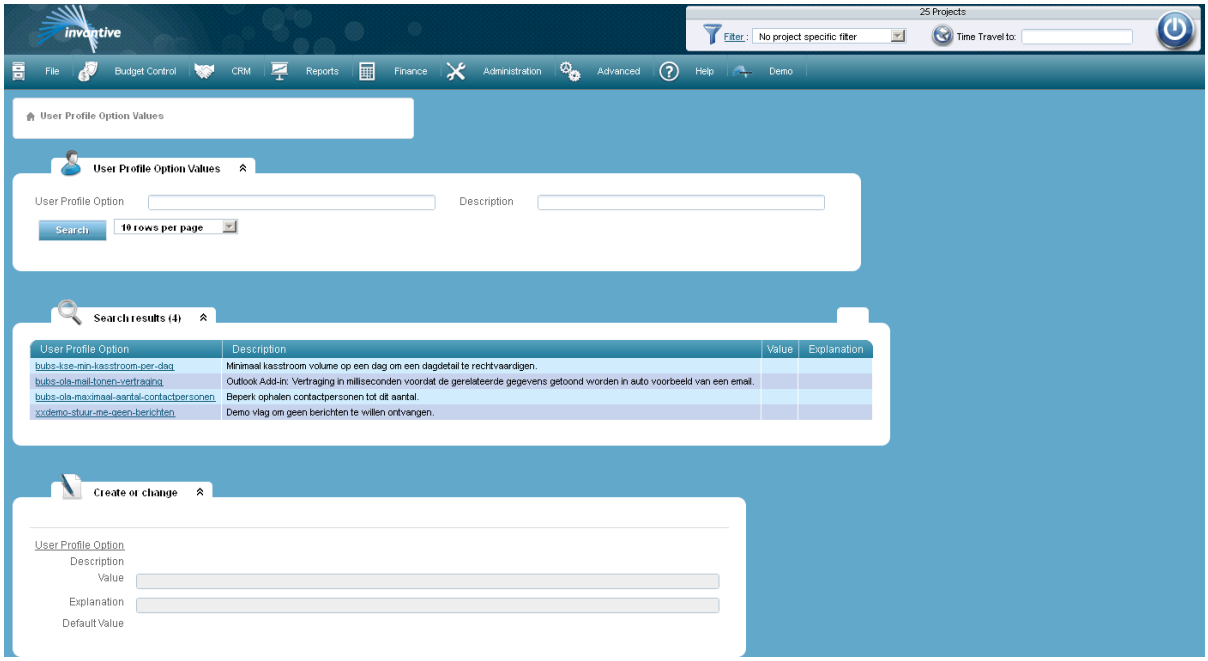
Your Name	Your name as recorded in the user administration.
Current Passw ord	Your current passw ord.
New Passw ord	Your new passw ord.
Repeat New Passw ord	Repeat your new passw ord, completely identical to the passw ord you entered under 'New Passw ord'.

1.4.2.4 User Profile Option Values

In this screen you can register or modify user profile option values.

User profile options are features that can be set per user. Fore example: the profile option 'Background color Invantive Vision' has the default color 'Gray'. The profile value of user A and user B is 'Purple'.

User Profile Option Values are closely related to Profile Option Values 265 and Profile Options 263.



The meaning of the entry fields is:

Value	The profile option value that is assigned at user level to the profile option.
Explanation	Explanation of the assigned profile option value.

The meaning of the other fields:

Code	The code of the profile option.
Description	The description of the profile option.

1.4.2.5 Print

Through this menu option the contents of the screen will be printed via the print-function of the browser.

1.4.2.6 Log Off

This screen is displayed when you log off you have via a menu option.

As soon as you are logged out, you can log in again, possibly under a different user name.

1.4.3 Budget Control

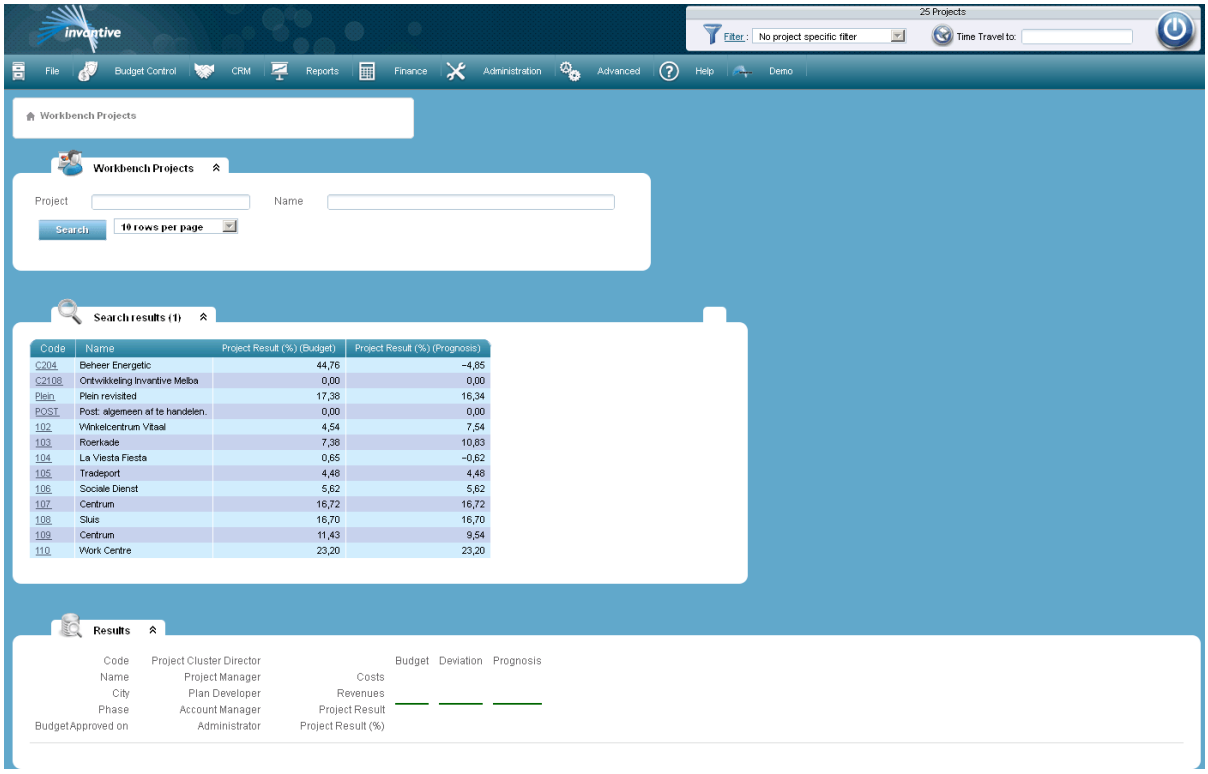
This section discusses functions that can be found under ‘Budget Control’ in a default menu structure. These functions are generally mostly used by project developers, since they are primarily responsible for the financial result and since they have the best view on the current status.

1.4.3.1 Projects

In this menu option you will see screens on Projects.

Projects Workbank

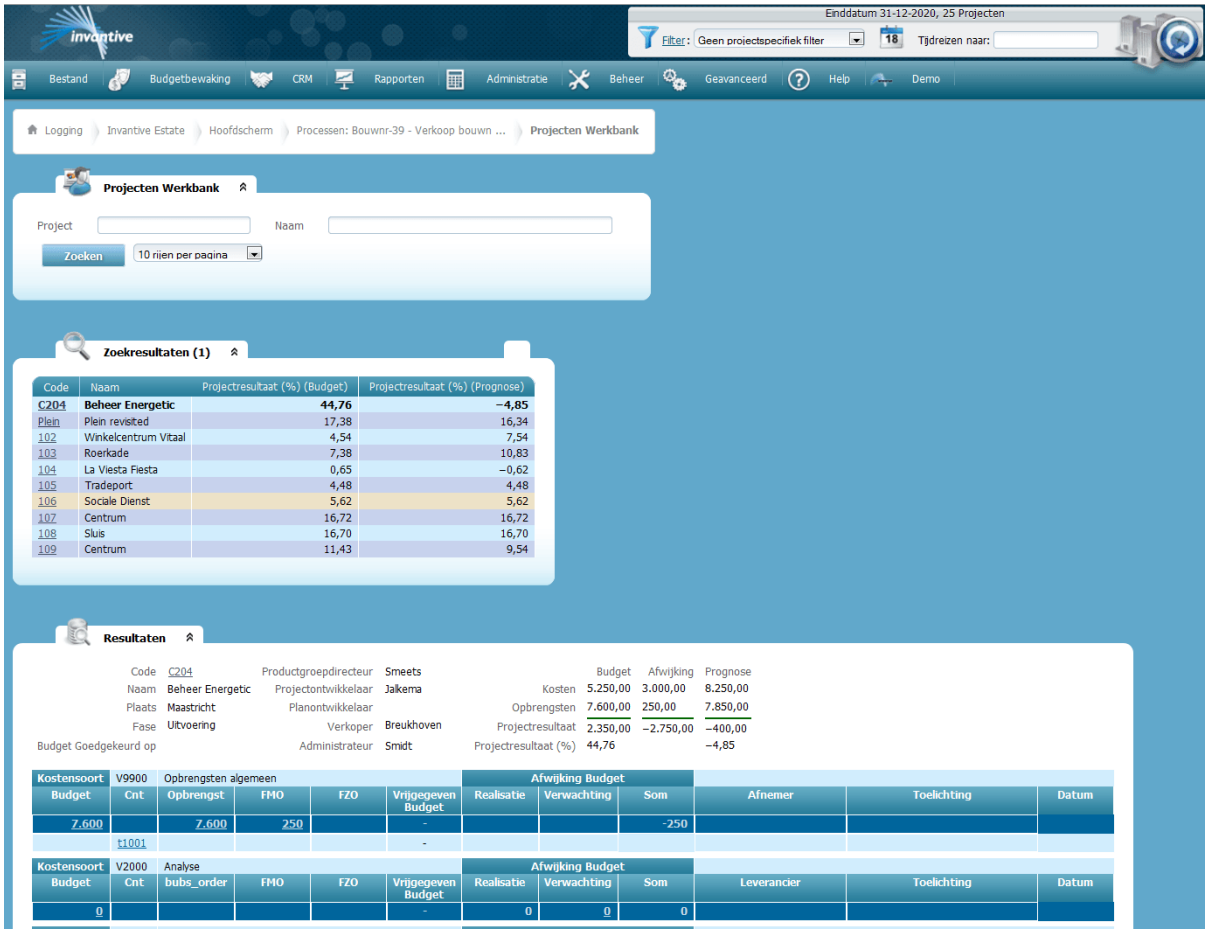
This screen allows you to retrieve a project workbench containing all relevant information consolidated and integrated into one overall picture. The workbench is focused on project developers.



After you select a project in the search results the underlying relevant project details at level 4 (see Financial Project Overview Level 4 82) is shown.

Notice: the workbench automatically displays the details if a project is directly selected with the shortcut filter right above in the screen. In that case the search section at the top will be hidden.

Below a portion of the screen with the details of the project 'C204' is shown.



The screen displays all data on a monitor with a minimum resolution of 1024x768 pixels unless texts are longer than expected.

The workbench shows per cost type, for both costs and revenues, the differences from the budget.

From the data seen at this leven, like budgets, contracts, orders, invoice lines, you can see or change the underlying details via hyperlinks. Hyperlinks are displayed as blue underlined text.

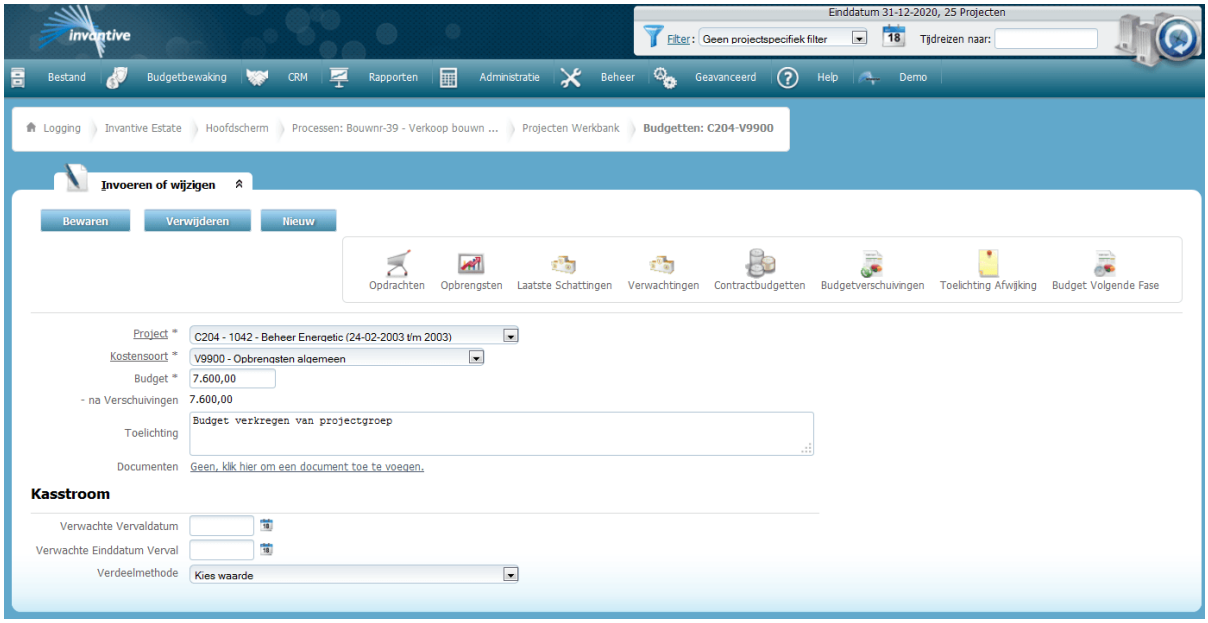
In the screen itself no changes can be made. A pop-up window always opens first via the hyperlink.

In the screen two types of hyperlinks are used:

1. The first category opens the underlying data which can be edited instantly.

An example of this category is, when you click on a hyperlink of a budget. Then the following window appears on top of the already opened window containing the information of the selected order:

In the following window the pop-up screen is shown after the budget hyperlink ‘7.600’ belonging to contract ‘V9900’ was selected.

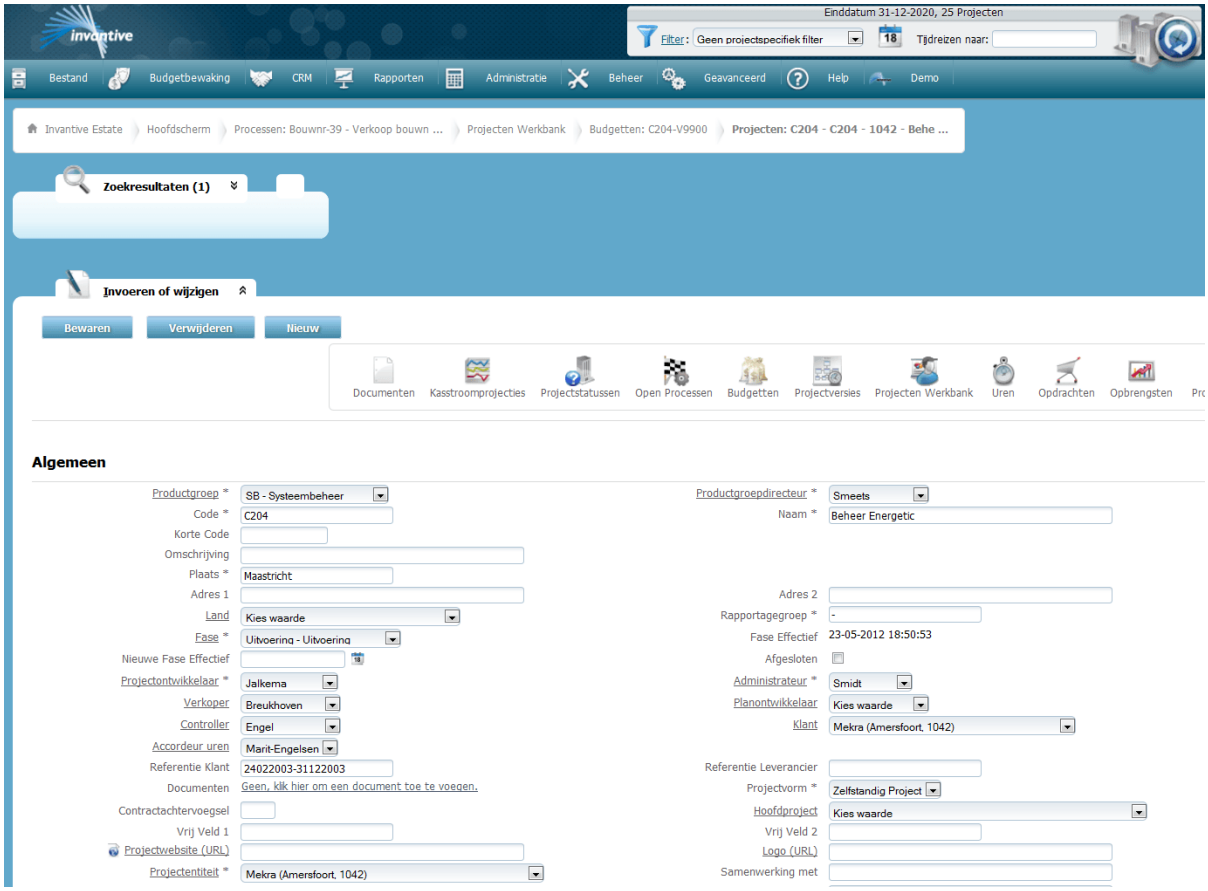


The data in this screen you can edit as described in Budgets 155.

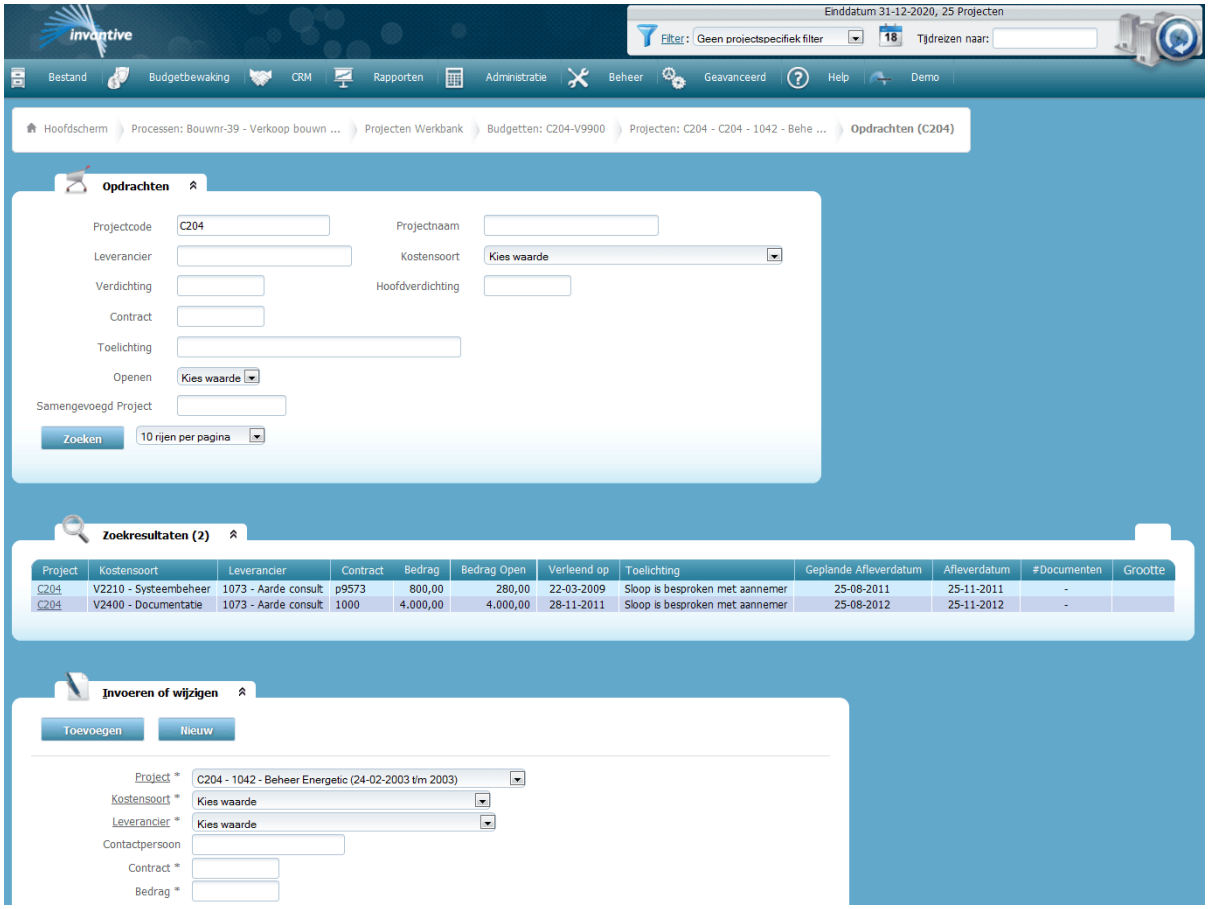
When you close this window , the workbench window stays opened. To recalculate the workbench with your changes, press F5 (refresh).

2. The second category hyperlinks opens a window with a menu which allows multiple actions to be performed.

An example of this category is, when you select the hyperlink of the project. Then a screen will appear as in the example below:



By clicking on one of the present action buttons 18 in the right top of the screen, such as for example, ‘orders’, the corresponding information will be displayed.



The data in this screen you can edit as described in Orders 69.

When you close this window , the workbench window stays opened. To recalculate the workbench with your changes, press F5 (refresh).

Budget Deviation

The workbench also simplifies the handling of the deviation per budget per cost category. The column ‘Forecast’ lets you open a window where you can enter an increase or decrease to adjust the current balance. Under water the latest estimation is calculated.

Example: The ‘Realization’ balance of a cost category is EUR 150, based on a contract of EUR 80, an invoice without order of EUR 70 and an expectation of EUR 125.

You expect that EUR 30 extra is needed and because of that you enter EUR 30 via ‘Expectation’.

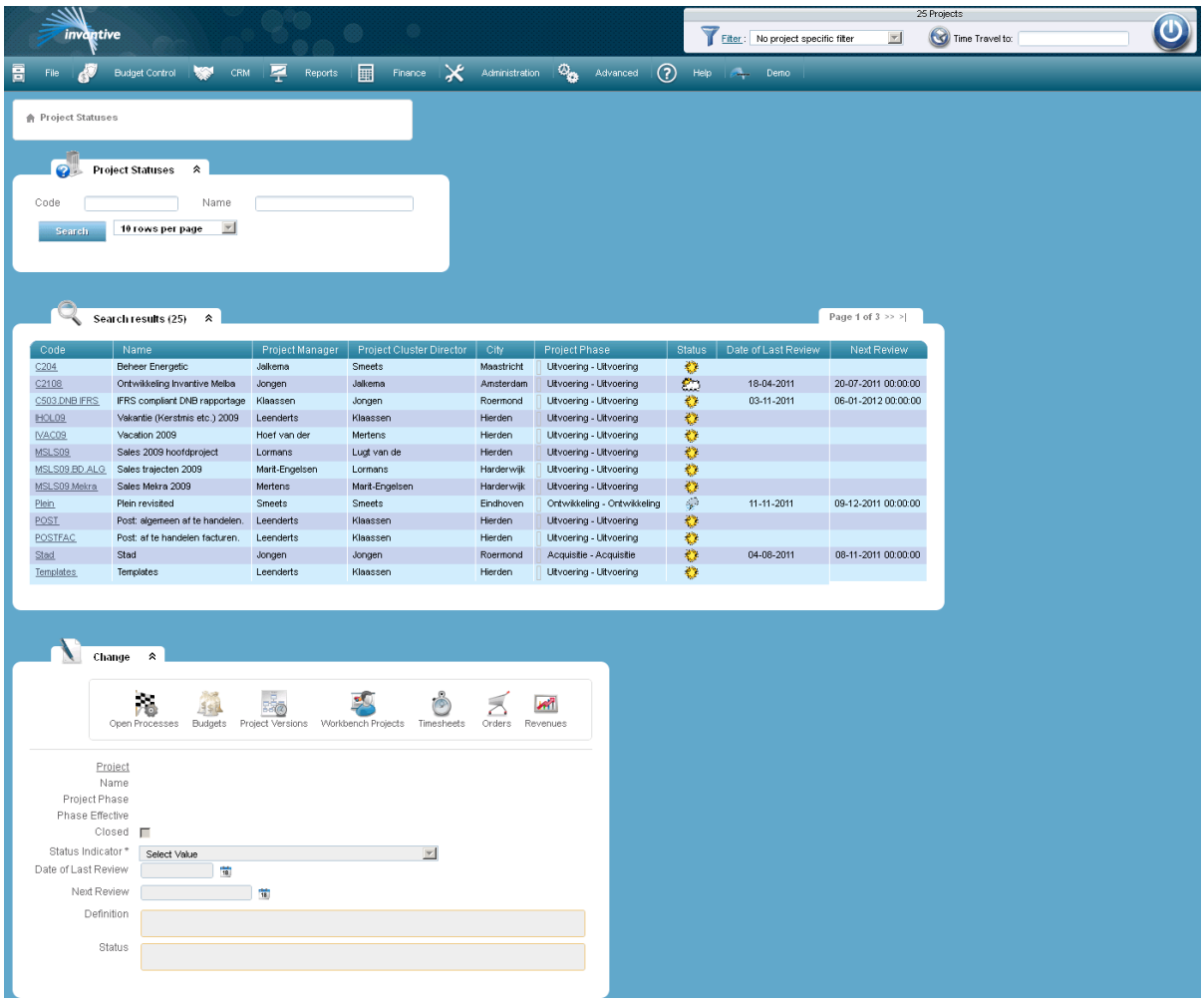
Now the total deviation becomes EUR 180.

Kostensoort	1011	Optiegeld aankoop				Afwijking Budget			
Budget	Cnt	Opdracht	FMO	FZO	Tonen	Realisatie	Verwachting	Totaal	Leverancier
0	125				*	0		0	
4.500	1251				*	0		0	
							125		Acme BV
0	30				*	0		30	
							30		Acme BV
0	70				*	70		70	
				70					Gemeente Eindh
0	80				*	80		80	
		80							Aarde consult
500	999R				*	0		0	
5.000		80		70	-	150	155	180	

Project Statuses

In this form you can register and change the project statuses.

The project status is a brief summary of the overall condition of the project plus a textual explanation of the entire project. Short textual explanations concerning cost categories and budget exceedings on a cost category can be made by Comment Deviation 79. With this explanation you can explain the story behind the figures and the progress.



The meaning of the entry fields is:

Status Indicator	A list that classifies a project in terms of progress and budget control into one of the six possible classes.

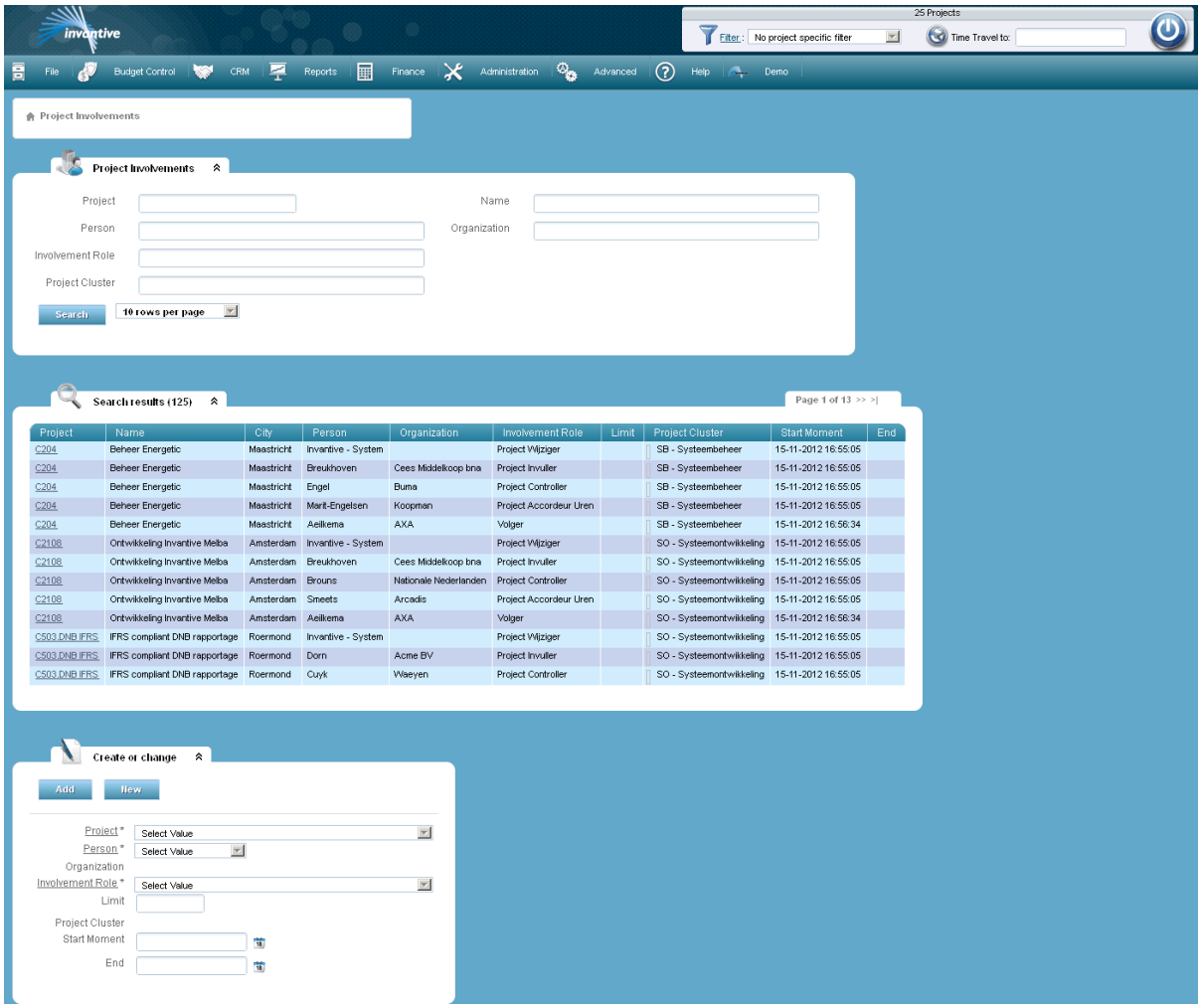
Date of Last Review	The date the last review of the project took place.
Next Review	The date the next review of the project should take place.
Status	A textual explanation of the project's status. In theory, this explanation has a free format, but via the blue arrow (below the status field) you can select standard formats (templates) as your organization makes them available.

The meaning of the other fields:

Code	Reference to a project code as registered in Projects 130.
Name	Reference to a project name as registered in Projects 130.
Project developer	Reference to the responsible project developer as registered in Projects 130.
Product Group Director	Reference to the responsible product group director for the project as registered in Projects 130.
City	The city in which the project is being executed as registered in Projects 130.
Project Phase	The phase of the project as registered in Projects 130.

Project Involvements

In this screen you can register and change project involvements.



The meaning of the entry fields is:

Project	Reference to a process as registered in Projects 130.
Person	Reference to a person as registered in Persons 102.
Involvement Role	The role assigned to the person within the project.

Limit	Deviating limit used for managing w orkflow transitions. You can only create a process status transition (for example. From Command requested to Command approved) provided that your involvement on the project is for at least that and that limit. The project involvement is normally copied to the process involvement.

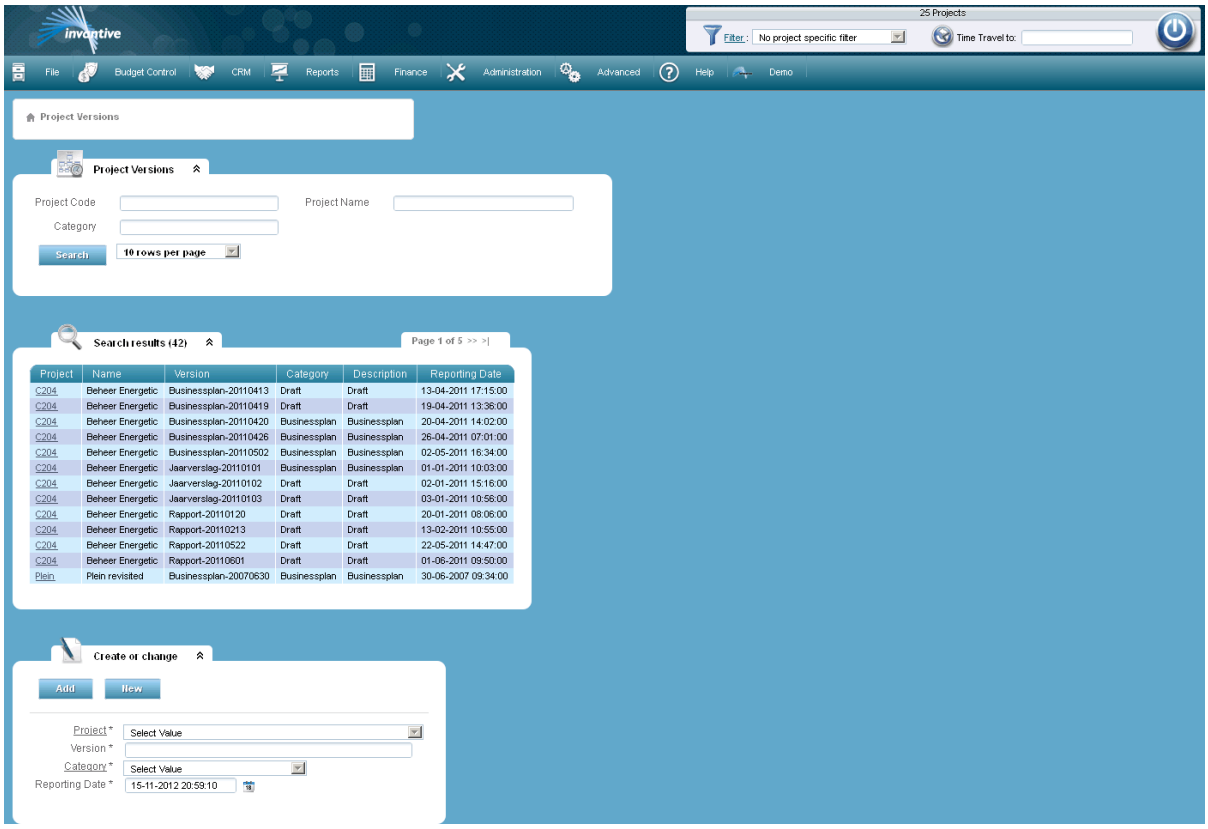
The meaning of the other fields:

Name	The name of the project.
City	Location of the project.
Product group	The product group of the project.

Project Versions

In the screen 'Project Versions' you can create snapshots of a project.

This function is useful when you want to evaluate the project in time. When you snapshot a project, the current data of a project is stored and can be accessed at any time. If you add a new project version, all derived data will be updated. The time used for adding a project version depends on the complexity and the number of Project Version Views 272.



The meaning of the entry fields is:

Project	A combination of the code and the name of a project.
Version	Here you can enter the name of the project version.
Category	Reference to a project category as registered in Project Version Categories 170.
Reporting Date	The date the snapshot of a project w as created.

1.4.3.2 Processes

In this menu option you will see the screens on Processes.

Processes

In this screen you can register and change processes, along with their history.

A process is an activity to be executed to complete a project. Normally, not all activities are recorded as a process. Usually only the critical activities or the activities that should be monitored separately, are registered as a process. An example of a process that should be monitored separately is a process that has to be performed by several people,

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Processes

Processes

Category
Code
Description
Status Filter: Select Value
Process Owner Filter: Select Value
Status
Status Description
Project Cluster
Deadline - from | - to
Planned Start of Realization - from | - to
Last Change - from | - to
Next Review - from | - to
Counterparty
Project Code
Name
Process Owner
Reported By
On Behalf of
Name
Customer Reference
Supplier Reference
Origin
Impact
Product
Unique Identifier (SIN)
Contains

Search | 10 rows per page

Search results (35)

Page 1 of 4 >> >|

Category	Code	Project	Process Owner	On Behalf of	Name	Reported By	Status	Next Review	Deadline	Project Cluster	Last Change	Planned (hours)	Prognosis to go (hours)	Description	#Documents	Size	Supplier Reference	Customer Reference	Progress Final (%)	Fixed Price	Fixed Price Weighted	End Status	Classifications	Selling Condition
Verkoop vastgoed	Bouwnr-1	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 1					10					
Verkoop vastgoed	Bouwnr-114	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 114					10					
Verkoop vastgoed	Bouwnr-2	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 2					10					
Verkoop vastgoed	Bouwnr-201	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 201					10					
Verkoop vastgoed	Bouwnr-3	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 3					10					
Verkoop vastgoed	Bouwnr-35	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 35					10					
Verkoop vastgoed	Bouwnr-36	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 36					10					
Verkoop vastgoed	Bouwnr-37	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 37					10					
Verkoop vastgoed	Bouwnr-38	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 38					10					
Verkoop vastgoed	Bouwnr-39	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 39					10					
Verkoop vastgoed	Bouwnr-4	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 4					10					
Verkoop vastgoed	Bouwnr-40	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 40					10					
Verkoop vastgoed	Bouwnr-51	Stad - 1092 - Stad (2004 t/m 01-04-2006)	Walraven			Aelikema	Gemeld			C	15-11-2012 16:56:34			Verkoop bouwnummer 51					10					

Create or change

Add | New

Documents | Timesheets | Process Relations | Draft Invoice Lines | Process File (PDF)

Category * : Select Value
Code *
Description *
Project * : Select Value
Process Owner * : Select Value
Reported By : Select Value
Origin * : Select Value
On Behalf of : Select Value
Impact * : Select Value
Customer Reference
Status * : Select Value
Supplier Reference
Status Effective
New Status Effective
Unit : Select Value
Planned Start of Realization
Planned (hours) Hours
Deadline
Prognosis to go (hours) Hours
Next Review
Fixed Price
Remaining Effort Determined on
Fixed Price Weighted
Progress (%)
Progress Final (%)
Documents
Created on - by -
Last Change -
Source ID
Source
Selling Condition : Select Value
Remarks

Statistics

Spent (hours) Invoiced (hours)

Process Notes

Create

The meaning of the entry fields is:

General	
Code	The unique code for a process, for example, a contract.
Description	A short description of the target or the problem.
Project	The project to which the process belongs.
Planned Hours	The total number of planned hours to compete the process.
Prognosis to Go Hours	Estimation of the remaining hours required to complete the process.
Hours Determined on	The date on which the forecast of the hours needed to complete the process was made.
Process Holder	The person currently responsible for the following up of the process.
Reported By	The person who has reported the process.
On Behalf of	The organization on behalf of which the process is created.
Origin	The origin of the process.
Supplier Reference	A reference of a Supplier to this process. This can be for instance a report number of a service provider for the heating.
Customer Reference	A reference of the buyer to this process. This can be for instance a reference to a purchasing order.
Category	Processes are grouped according to categoryën. Examples of a process categoryën are: 'documentation', 'failure' and 'installation'.
Unit	The unit where the process relates to, see Units 157.
Fixed Price	You can fill in a fixed price here, if this is relevant on the process.
Impact	The gravity of the problem in case of an unfinished process.
Deadline	The date on which the process should be finished.
Planned Start of Realization	The date on which you planned to start on the running of the process.
Status	The status of the process.
Next Review	The date on which the next review of the process should take place.
Documents	Linked documents, see Linking Documents 33.
Progress (%)	The percentage which shows how long the process still has to go to be finished.
Remarks	Free text field in which notes concerning the process are taken up.
Contract (not visible)	Pattern for the contract code belonging to process units. With this pattern, placeholders are replaced by actual values during invoicing. The following placeholders are supported: ':pjt_code_short,' ':today', ':pjt_code', ':ust_code', ':unt_serial number, ':tak_code', ':hour_yyyy_delivered', ':hour_mm_delivered' and ':hour_dd_delivered'.
Process Notes	
Category	Process notes are grouped to Process Note Categories 179. Examples of note categories are: 'telephone conversations', 'emails' en 'steering committee meetings'.
Publishing Text	Indicator whether the process note should be displayed to users who have a role that does not allow to see all process notes. The administrator can indicate in the screen Roles 164 if the user is allowed to see all documents with the indicator 'See all Process Notes'.
Text	Free text box where notes can be added. The entry field grows according to the size of the data entered.
Classifications	
Classification	The classification of the process. A classification is a label that can be linked to a project, an organization, a process, a document or a person. Using these labels you can find your information more efficient.
Units Used	
Grouping	Group of the process unit. Can be used for accumulation of the task units in task-related groups, such as those are generated by Payment Schedules 191.
Unit	The unit that is used for the realization of the process, see Units 157.

Stock	Payment Schedule of the unit.
#Units	The number of units 157 used to achieve the process.
Process Unit Status	Reference to a Process Unit Status 181.
Unit Sales Price	The price for the used units for the total number of units on this line.
#Billable	The number of units that can be invoiced.
Completed	Delivery date of the units.
Date Start Rate	The date and the number of units in usage.
VAT Code	Reference to a VAT code as registered in VAT codes 190.
Redemption Price	Purchase price of the Unit 157.
Booked	The units 157 are booked when checked.
Explanation	Possible explanation.

The meaning of the other fields:

Status Filter	Here you can choose the status filter. The filter has three values: 'open processes'; 'closed processes' and 'all processes'.
Process Owner Filter	Here you can choose the filter for the process owner.
Counterparty	A reference from a supplier or customer to this process.
Status	Code of the status.
Status Description	Description of the status.
On Behalf of	The organization on behalf of which the process is created.
Name	The name of the process detector.
Product group	The product group to which the process is related. See Product Group 166.
Product	The Product type.
Unique Identifier (SN)	The unique address, location or serial number of the unit.
Contains	A text you want to search the contents of all visible processes. The process related process notes and linked documents to the process are also searched. The text may be expressed as an expression in Oracle Text. Often used search queries are: • 'area': documents containing the word 'area'. • 'area or surface': documents containing the word 'area' or the word 'surface'. • 'area or surface * 3': documents containing the word 'area' or the word 'surface' where the occurrence of the word 'surface' counts three times as heavy as the word 'area'. • 'area' and 'surface': documents containing both the word 'area' and the word 'surface'. • '?area': documents with both the word 'area' and words that look like 'area'. • 'area-surface': documents containing the word 'area' but preferably without the word 'surface'. • 'area;surface': documents containing the word 'area' near to the word 'surface'. • 'area not surface': documents containing the word 'area' but preferably without the word 'surface'. • '$area': documents containing the word 'area' and inflections from it like for example 'areas'. • '% area': documents containing all terms that begin with 'area'. • 'area or (surface and feet)': documents containing the word 'area' or containing a combination of the words 'surface' and 'feet'.
Created at - by	Date at which the process is created and by which the user.
Last Change	Date at which the process was last modified.
Source ID	The unique number of the kind of data which you want to link the process. This field is filled automatically when you open this screen via a 'Process' link in another window. This field together with the field 'Source' makes is possible to retain the relation with the origin of an object for the workflow processes.
Source	The type of data (message, order, project, etc.) to which you want to link the process. This field is filled automatically when you open this screen via a 'Process' link in another window.
Statistics	
Spent (hours)	The number of hours spent to the process up to this moment.
Invoiced (hours)	Number of hours invoiced.

All changes to a process and process notes lead automatically to a message to the process owner by email.

See also Documents 33.

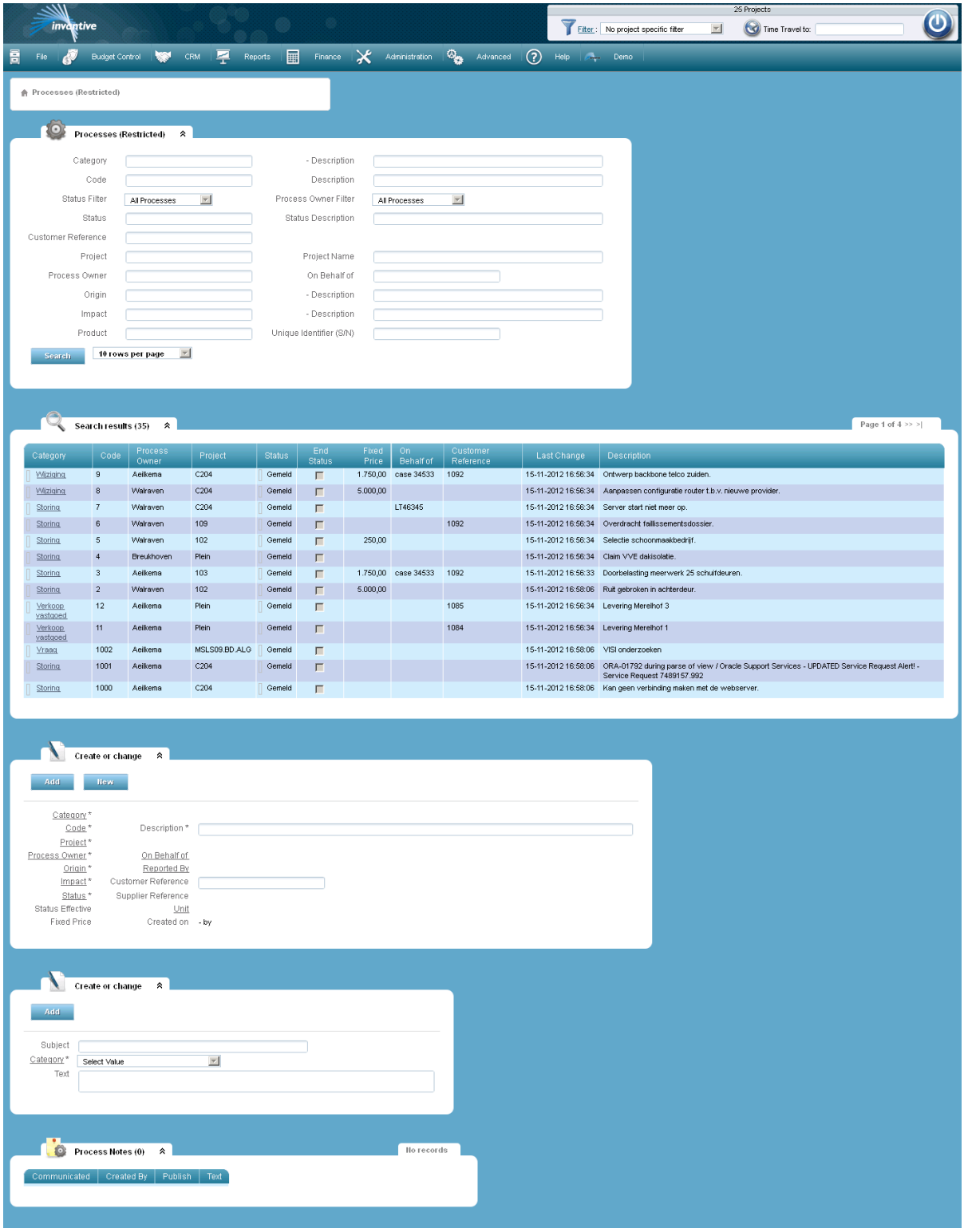
Processes (Limited)

This screen, like the screen Processes 58, allows you to register and edit processes, along with their history.

The difference with the screen Processes 58 is that this screen is for users with limited rights that may only see published information (the end-users). In the screen 'Processes (Restricted)' the option 'publish' is always selected and therefore process notes included in this screen will be visible to all users.

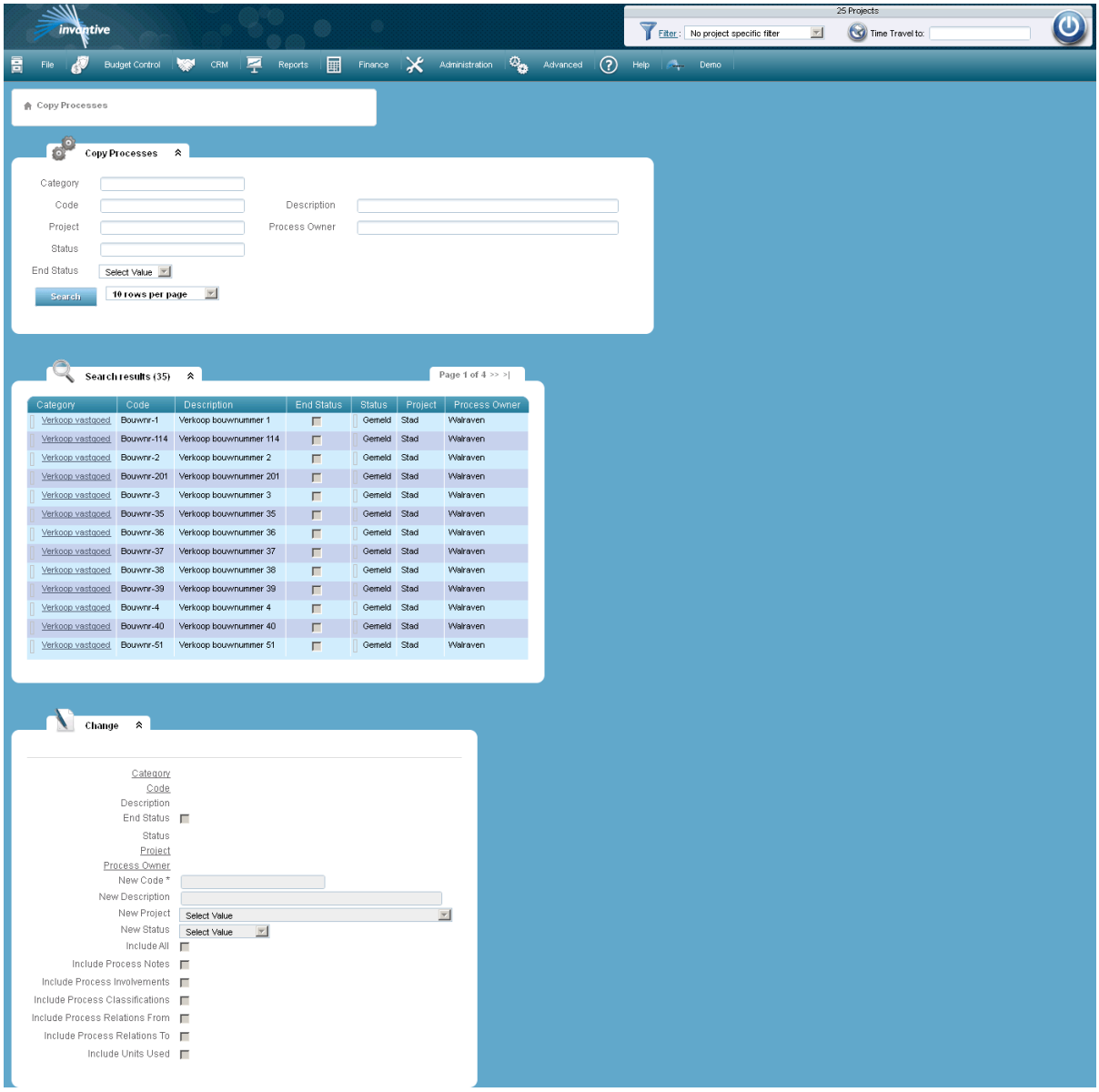
Compared to the screen Processes 58 the fields 'Planned hours', 'Prognosis to go', 'Deadline', 'Planned Start of Realization', 'Documents' and 'Publish' are missing.

The definition of a process and the meaning of the fields can be found in the section Processes 58.



Copy Processes

In this screen you can see all existing processes in whole or in part copy.



The meaning of the entry fields is:

New Code	The code for the new process.
New Description	New description for the new process.
New Project	New Project from the new process
New Status	New status from the new process.
Include All	If checked, all items listed below will be copied.
Include Process Notes	If checked, the process notes will be copied.
Include Project Involvements	If checked, the project involvements will be copied.
Include Process Classifications	If checked, the process classifications will be copied.
Include Process Relations Van	If checked, the 'process relations van' will be copied.
Include Process Relations To	If checked, the 'process relations to' will be copied.
Include Used Units	If checked, the used units will be copied.

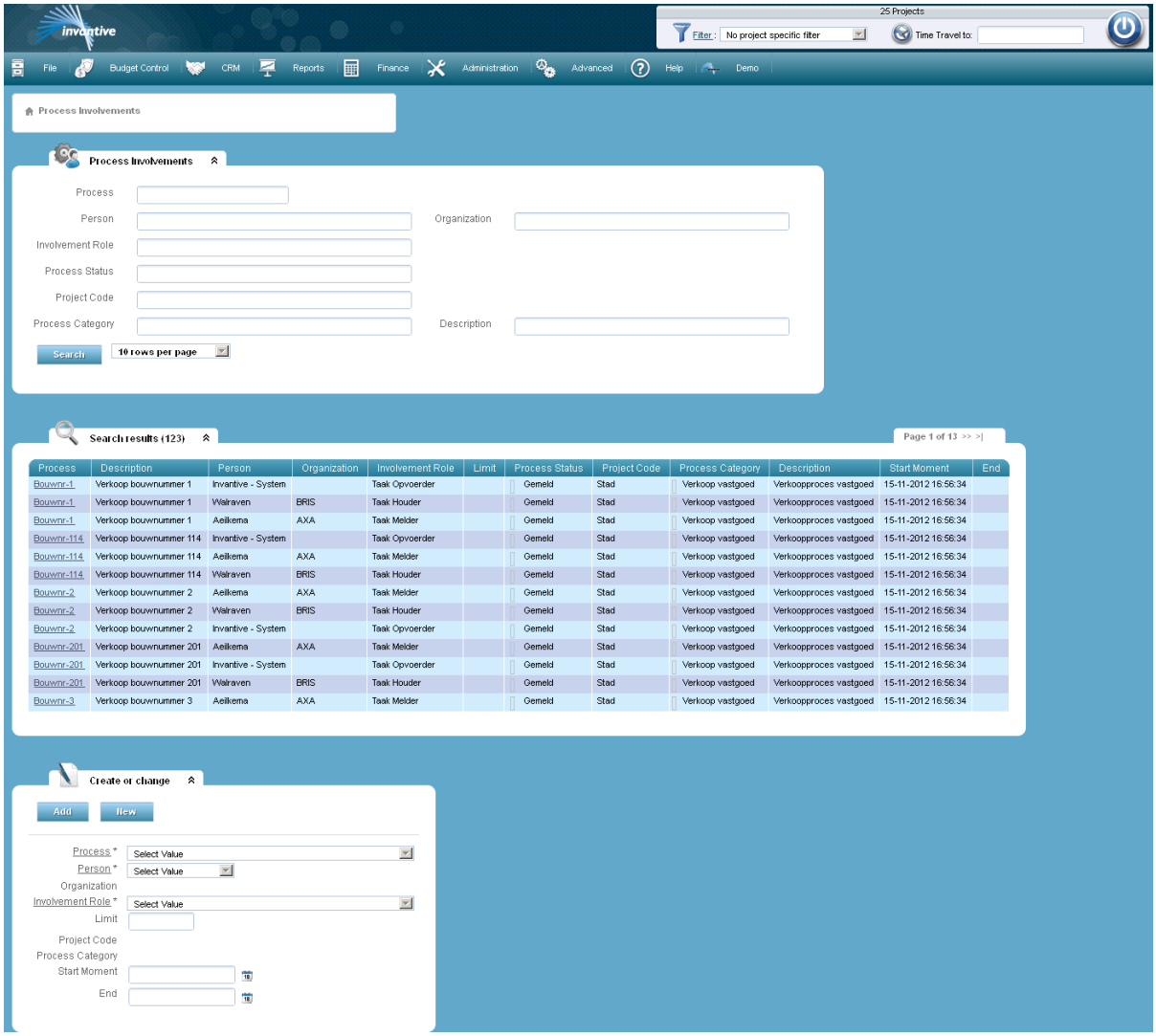
The meaning of the other fields:

Code	The code of the process that will be copied.

Description	The description of the process that is being copied.
End Status	Indicates w hether the process that is being copied has the end status.
Status	The status of the process that is being copied, as registered in Process Statuses 173.
Category	The category of the process that is being copied, as registered in Process Categories 175.
Project	The project of the process that is being copied, as registered in Projects 130.
Process Holder	The process ow ner of the process that is being copied.

Proces involvements

In this screen you can register and change process participations.



The meaning of the entry fields is:

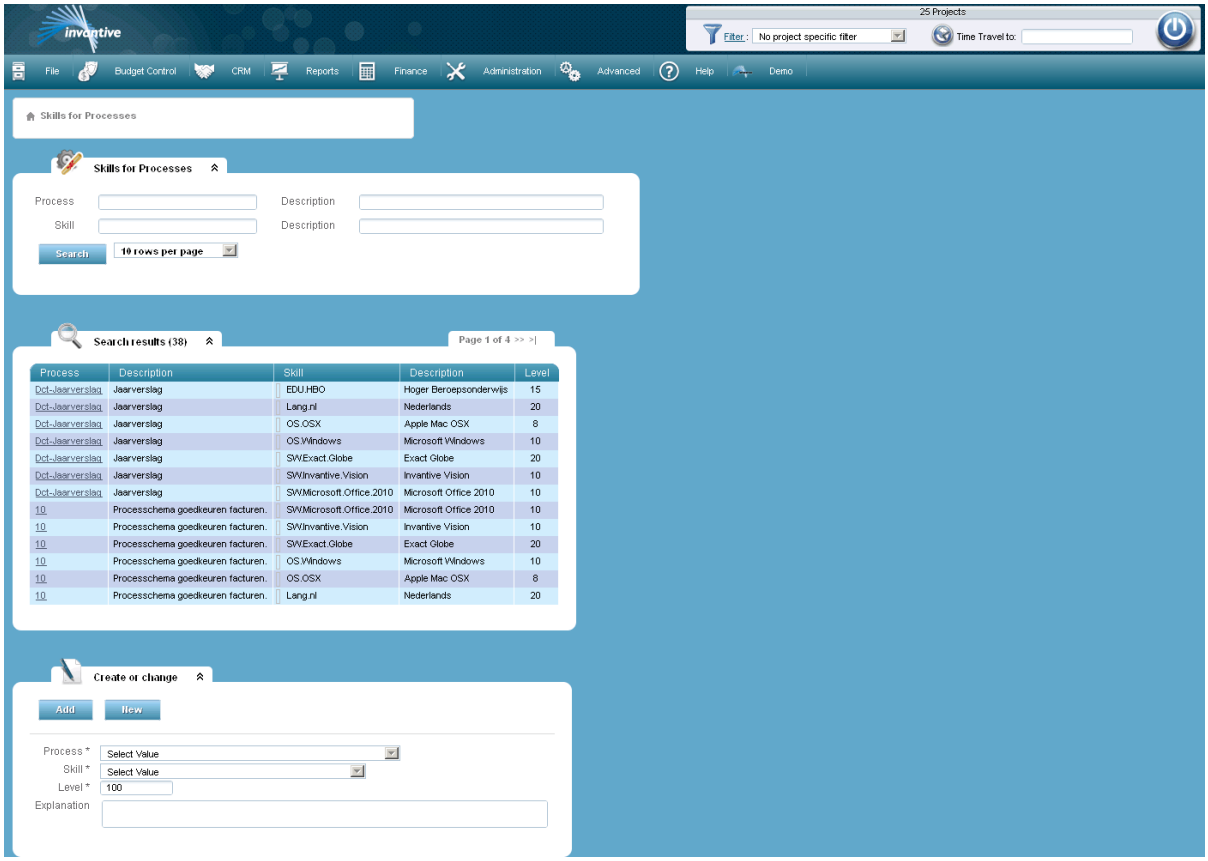
Process	Reference to a process as registered in Processes 58.
Person	Reference to a person as registered in Persons 102.
Involvement Role	The role the person performs in executing the process.
Limit	Deviating limit used for managing w orkflow transitions.
Project Code	The project code of the project w here the process participation is registrated on.
Process Category	Reference to a process category as it is registrated in Process Categories.

The meaning of the other fields:

Description	A brief description of the objective or the problem of the process.

Skills for Processes

In this screen you can register and change skills for processes.

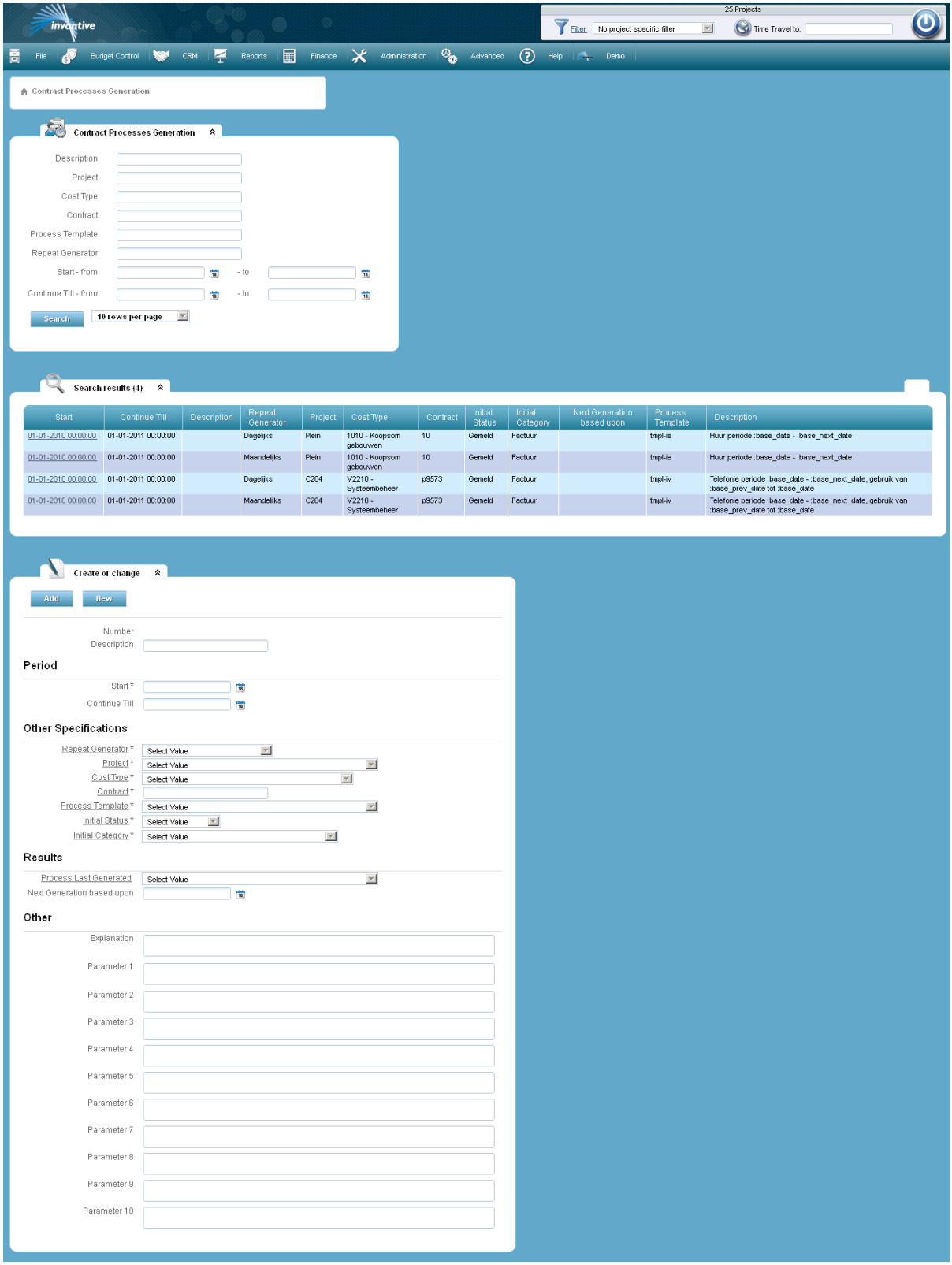


Process	Reference to a process as registered in Processes 58.
Skill	Reference to a skill as registered in Skills 208.
Level	Numeric value that indicates the w eight of this skill for this process in comparison w ith other skills that are needed for the execution of this process. It is not a required minimum level of a skill that a person should have for the execution of the process.

Contract Processes Generation

In this screen you can register contract process generations.

You can use this screen to indicate that a contract process must be generated on a specific basis or frequency. This is useful for follow-up support such as changing backup tapes, etc or the monthly billing payments for a certain period.



The meaning of the entry fields is:

Start	The first date and time that a process is generated.
Continue Till	The first date and time w here no processes are generated anymore.
Repeat Generator	Reference to a repeat generator as registered in Repeat Generators 344.
Project	Reference to a project as registered in Projects 130.
Cost Type	Reference to a cost category as registered in Cost Category 196.

Contract	Reference to a contract as registered in Contracts 156.
Process Template	Reference to a process as registered in Processes 58.
Process Last Generated	Reference to the last process produced as registered in Processes 58.
Initial Status	Reference to an initial process status as registered in Process Statuses 173.
Initial Category	Reference to an initial process category for the new processes as registered in Process Categories 175.
Next Generation based upon	Date and time when a new process will be generated.

Note that the generation of processes always happens when the time for which the process is to be created has elapsed. Generating processes is independent of the system time and continue until processes are generated for the entire period as specified under 'Start' and 'Continue until'.

The meaning of the other fields:

Number	The unique number with which the contract process generation is identified.

Variables

In the description of the process template and the explanation of the process units you can use variables. The variables are replaced with the current valid values when the process is generated. You can use the following variables:

- :pjt_code: project code.
- :kbg_code: cost category code.
- :ctt_volgnummer: contract code.
- :hgr_code: repeat generator code.
- :ctg_omschrijving: description of the contract process generator.
- :ctg_toelichting: explanation of the contract process generator.
- :base_datetime: the content of the field 'Next Generation Based on'. If this field has no value then the Start date will be used.
- :base_date: the previous variable without the time.
- :base_next_datetime: a period after the :base_datetime.
- :base_next_date: the previous variable without the time.
- :base_next_next_datetime: two periods after the :base_datetime.
- :base_next_next_date: the previous variable without the time.
- :base_prev_datetime: a period earlier than :base_datetime.
- :base_prev_date: the previous variable without the time.
- :base_prev_prev_datetime: two periods earlier than :base_datetime.
- :base_prev_prev_date: the previous variable without the time.

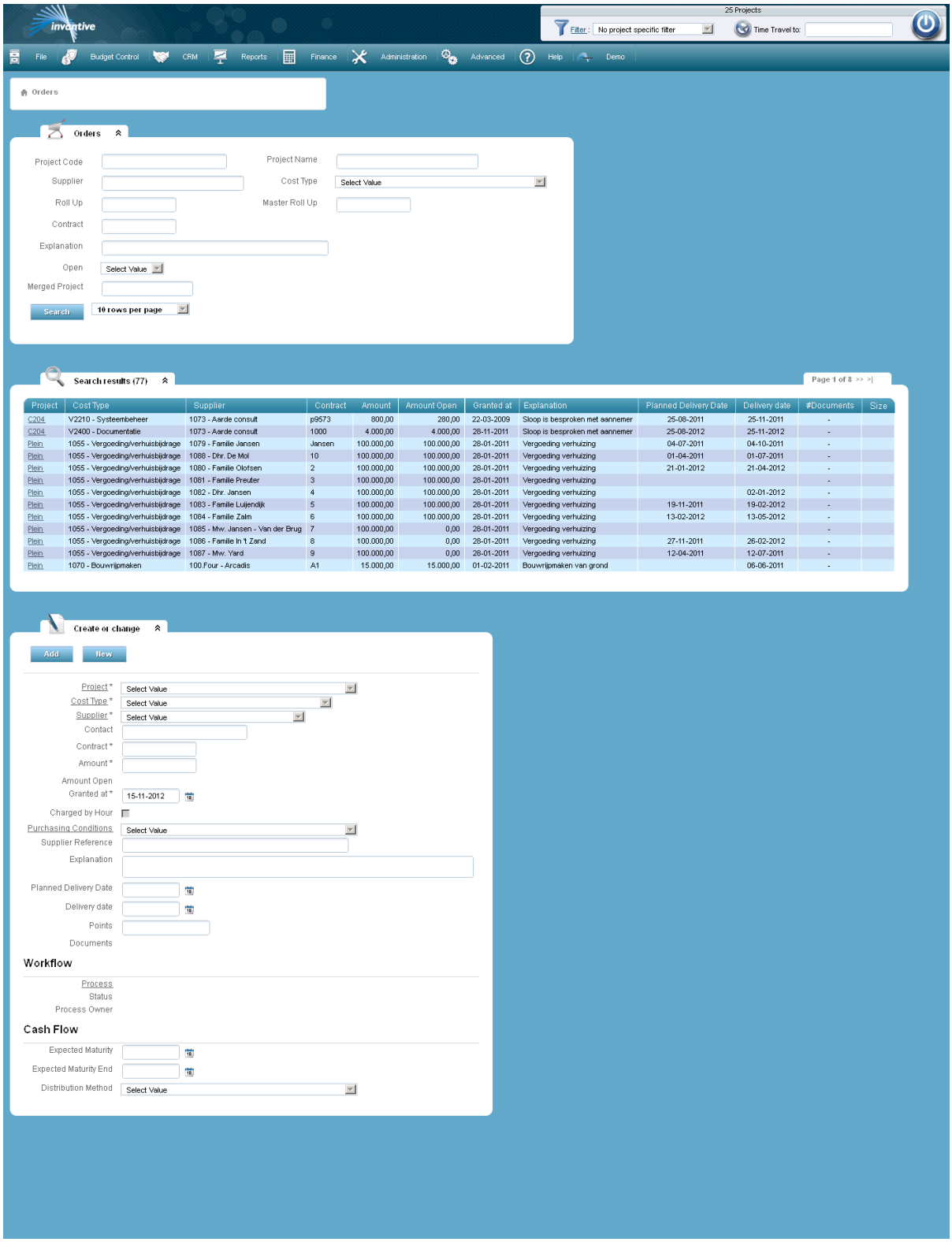
1.4.3.3 Checking

In this menu option you will see screens on Checking.

Orders

In this form you can register and change orders.

An order is an obligation that the project developer agrees upon with a supplier for the delivery of goods and/or services. The order does not directly lead to an invoice, but eventually it will lead to an invoice.



The meaning of the entry fields is:

Project	The project of which the order is part of.
Cost Type	The cost category on which the order is registered. Only cost categories can be chosen from the master roll up of the type 'Costs'.
Supplier	The supplier who received the order to supply goods and/or services. Only organizations that have been published as a contractor are listed. The list of suppliers used when entering is restricted to suppliers who have a code that is allowed to be used on a project in the filter. With a pattern you can manage for each project for which suppliers orders may be registered.
Contact	The natural person acting as representative.
Contract	The contract for that particular category of orders and the possible related invoices. Two orders cannot share the same contract on one budget.
Amount	The agreed amount of the size of the order.
Amount Open	The amount of the order of which no invoices are received yet.
Granted at	The date on which the order is granted.
Charged by Hour	The activities will be charged by hour if selected.
Purchasing Conditions	Here you can choose the purchasing conditions that apply to the order.
Supplier Reference	A unique feature by which the contract is known to the supplier.
Explanation	An informative explanation such as the sort of work.
Planned Delivery Date	Date at which the delivery of goods or services is planned.
Delivery date	Date at which the goods or services is delivered.
Points	Amount of points awarded for this contract. The point system is a reward system.
Documents	Linked documents, see Linking Documents 33.
Expected Maturity	The date the cash flow for this contract is expected to start, see Cash Flow Projections 94
Expected Maturity End	The date the cash flow for this contract is expected to finish. The maturity date is only relevant if the cash flow projection method needs it, see Cash Flow Projections 94.
Distribution Method	The method used to distribute the cash flow of the order over time based on expected maturity and expected maturity end date, see Cash Flow Projections 94.

Notice: At the time of recording, the code of the chosen supplier has to match the filter for contractors as defined in the project.

The meaning of the other fields:

Process	If a process is linked to the command, it will be displayed here.
Status	Reference to the process status as registered in the screen Processes 58.
Process Holder	Reference to a process owner as registered in the screen Processes 58.

The meaning of the action buttons:

- Invoice Lines: opens a window with the invoice lines of this order.

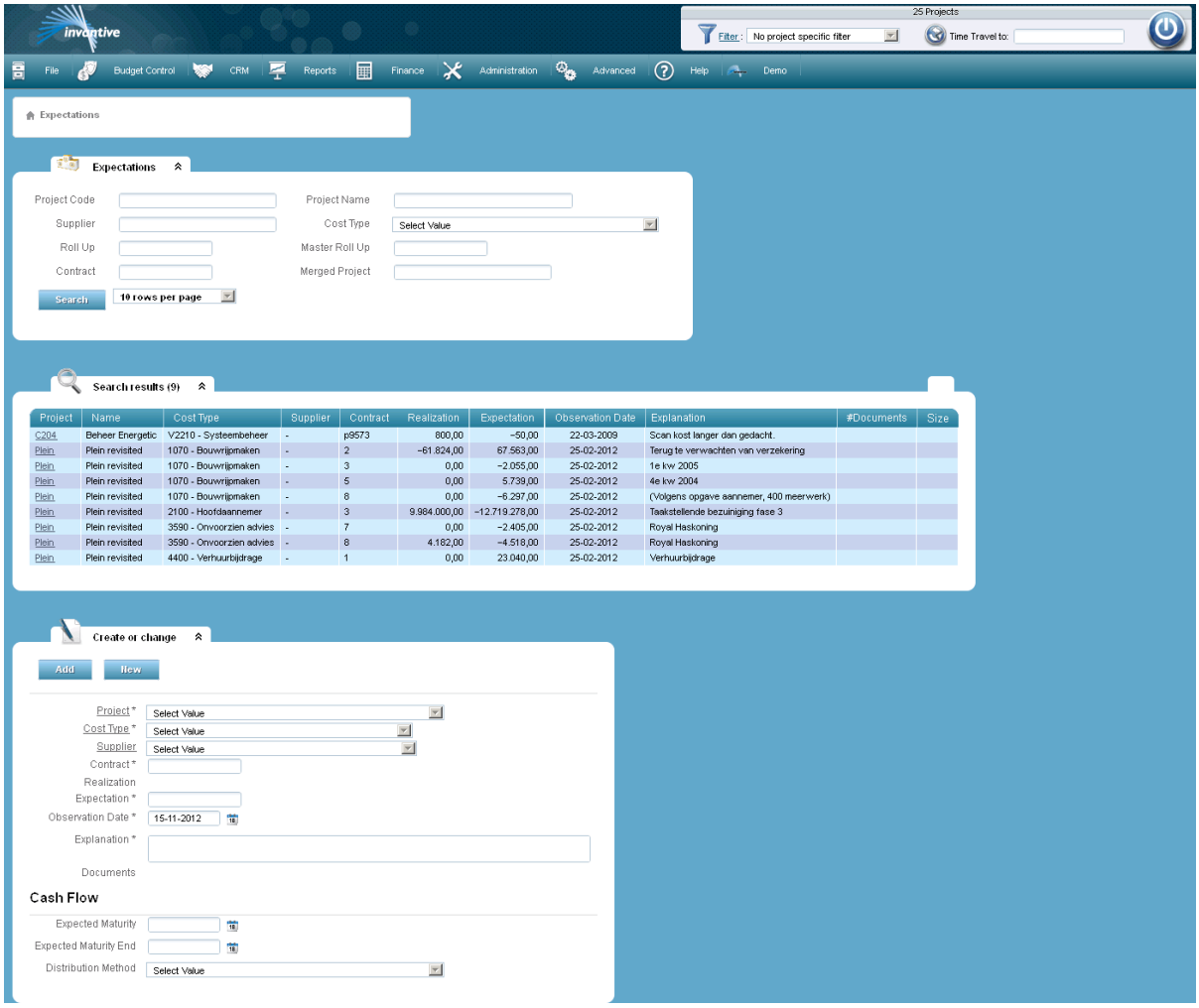
Expectations

In this screen you can register and change expectations.

An expectation is a cost still to arrive and which is not included in the current prognosis. You can use the expectation for comparison with the prognosis and to create additional revenues which are necessary if there is a gap , regardless of the already placed orders or received invoices.

Internally, every expectation is converted to a Latest Estimation 72.

Normally you would register an expectation if you expect a claim, an unexpected setback or a non-legally agreed funding (for instance from governments).



The meaning of the entry fields is:

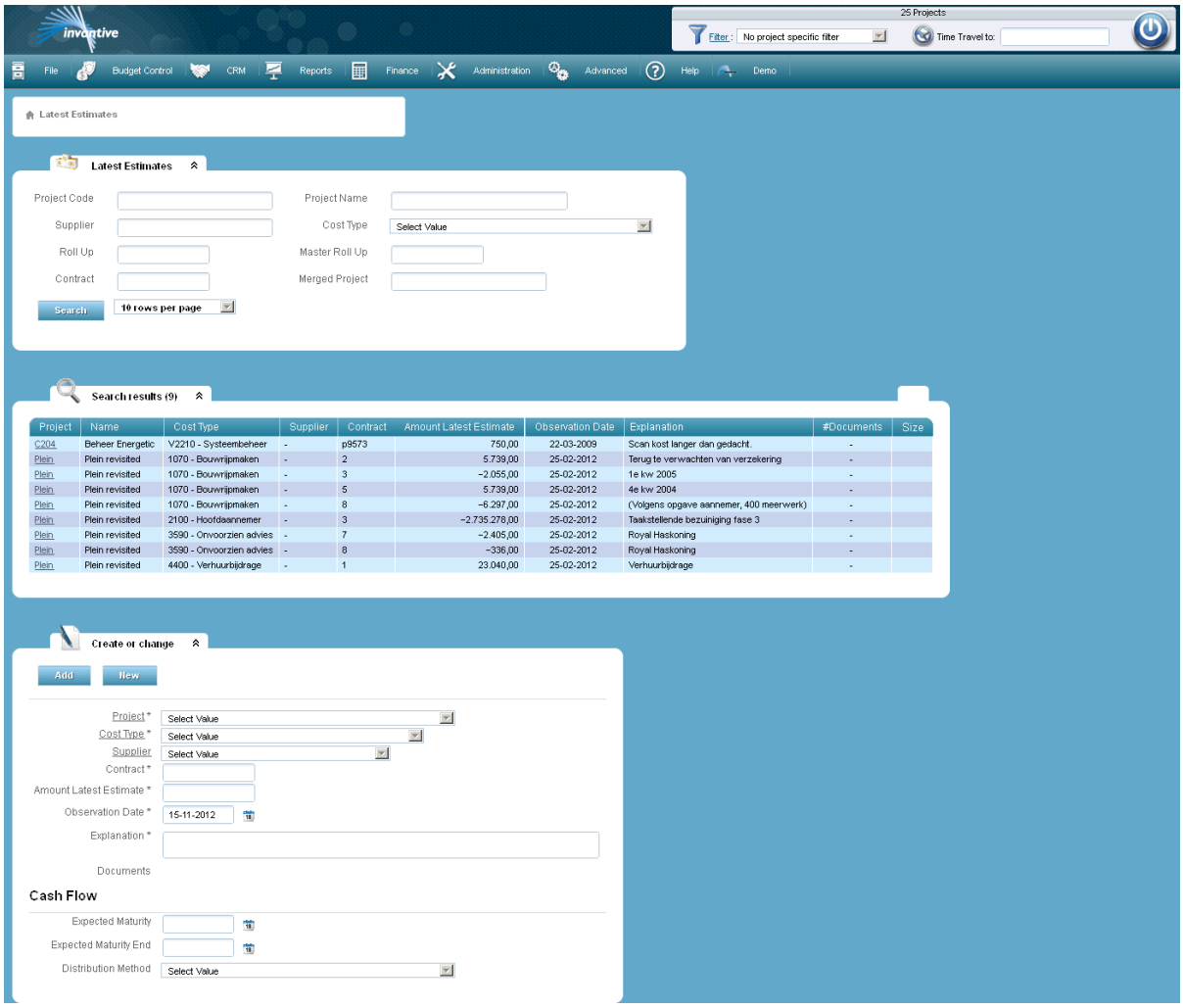
Project	The project which the expectation is part of .
Cost Type	The cost category where the expectation will be registered. Only cost categories can be chosen from the master roll up of the type 'Costs'.
Organization	The organization which as a supplier causes the cost.
Contract	The contract for that particular category of costs and the possibly related invoices. Two expectations cannot share the same contract on one budget.
Realization	The actual costs to date.
Expectation	The size of the expectation.
Observation Date	The date on which the expectation is determined.
Explanation	An informative explanation such as the reason for the expected budget excession.
Documents	Linked documents, see Linking Documents 33.
Expected Maturity	The date the cash flow for this expectation is expected to begin.
Expected Maturity End	The date the cash flow for this expectation is expected to end. The maturity date is only relevant if the cash flow projection method needs it.
Distribution Method	The method used to distribute the cash flow of the expectation over time based on expected maturity and expected maturity date.

Latest estimations

In this form you can register and change latest estimates.

A latest estimate is a cost driver still to arrive which is included or not included in the budget and is not being covered by an order. A latest estimate can be used to register the expected minimum budget spendings within a contract, regardless of already placed orders or received invoices.

Normally you will register a latest estimate if you expect a claim, an unexpected setback or a non-legally agreed funding (for instance from governments).



The meaning of the entry fields is:

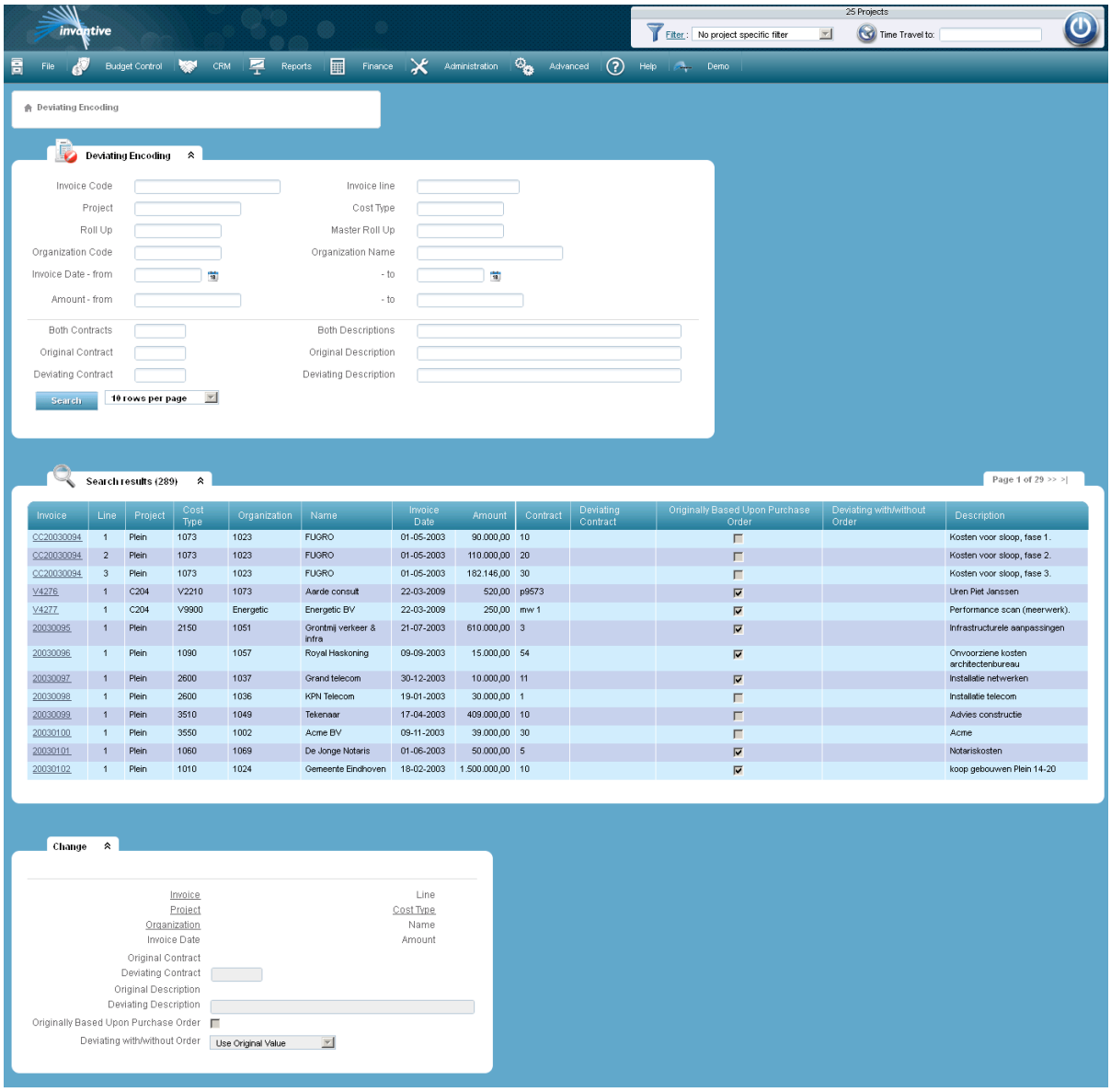
Project	The project which the latest estimate is part of.
Cost Type	The cost category on which the latest estimate is registered. Only cost categories can be chosen from the master roll up of the type 'Costs'.
Supplier	The supplier causing the cost driver.
Contract	The contract for that particular category of costs and the possibly related invoices. The two latest estimates cannot share the same contract.
Amount Latest Estimate	The amount of the latest estimate.
Observation Date	The date at which the latest estimate is determined by the project developer.
Explanation	An informative explanation such as the reason for the expected budget excession.
Documents	Linked documents, see Linking Documents 33.
Expected Maturity	The date the cash flow for this latest estimate is expected to begin.

Expected Maturity End	The date the cash flow for this latest estimate is expected to end. The maturity date is only relevant if the cash flow projection method needs it.
Distribution Method	The method used to distribute the cash flow of the latest estimate over time based on expected maturity and expected maturity date.

Deviating Encoding

In this screen you can subsequently assign invoice lines to another contract within the original cost category, and also modify the description, with or without modifying the assignment.

You can use this screen if the original coding of the invoice is not correct. All reports will use a possible deviating code as if being the original code, but in the screens you will still recognize the original code.



The meaning of the entry fields is:

Deviating Contract	The desired contract of the invoice line. If you want to use the original contract, make it blank.
Deviating Description	The desired description of the invoice line. If you want to use the original description, make it blank.

Deviating With/without Job	The desired with/without order coding of the invoice line. If you want to use the original with/without order, select 'Use Original Value'.

Revenues

In this form you can register and change revenues.

A revenue is a unit (parking lot, house, store or **office** space) which can be sold or rented as part of a project to a client. Any additional revenues such as contributions from the government are sometimes registered as negative costs.

During the determination of the project the revenues are included in the budget to cover the costs and to reach a positive project result.

The revenues are registered per unit number against an expected revenue. For example, if a project will produce fifteen houses, then fifteen revenues will be registered. In an early stage it is sensible to combine similar revenues, for example, five corner houses with a total value of EUR 1,400,000.

The actual revenue (sales price or value at resale to owner in rental state) is added on the moment of rent or sale of a unit.

Project	Name	Cost Type	Category	#Units	Contract	Budgeted Revenue	Sold	- Realized Revenues	- To be Invoiced	Date of Realization	Calculated Date of Production	Explanation	Customer	Customer free format	#Documents	Size
C204	Beheer Energetic	V9900 - Opbrengsten algemeen	FP	1 -	t1000	2.600,00			2.600,00		31-12-2003	Met parket in de hal	-		-	
C204	Beheer Energetic	V9900 - Opbrengsten algemeen	FP	1 -	t1001	5.000,00			5.000,00		31-12-2003	Met parket in de hal	-		-	
Plein	Plein revisited	9310 - Opbrengsten woningen	Woningen	1 Stuks	1	166.130,00			166.130,00	15-06-2004	01-01-2014	Met parket in de hal	-	Bos	1	
Plein	Plein revisited	9310 - Opbrengsten woningen	Woningen	1 Stuks	10	166.130,00			0,00	17-06-2004	01-04-2014	Met parket in de hal	-	Stapper	-	
Plein	Plein revisited	9310 - Opbrengsten woningen	Woningen	1 Stuks	100	272.385,00			0,00	17-06-2004	01-04-2013	Met parket in de hal	-	Slotboom	-	
Plein	Plein revisited	9310 - Opbrengsten woningen	Woningen	1 Stuks	101	315.000,00			0,00	18-06-2004	01-07-2013	Met parket in de hal	-	Tessel	-	
Plein	Plein revisited	9310 - Opbrengsten woningen	Woningen	1 Stuks	102	324.125,00			0,00	16-06-2004	01-10-2013	Met parket in de hal	-	Visser	-	
Plein	Plein revisited	9310 - Opbrengsten woningen	Woningen	1 Stuks	103	223.084,00			0,00	17-06-2004	01-01-2014	Met parket in de hal	-	Korte	-	
Plein	Plein revisited	9310 - Opbrengsten woningen	Woningen	1 Stuks	104	223.084,00			0,00	18-06-2004	01-04-2014	Met plavuizen in de keuken	-	Kuijpers	-	
Plein	Plein revisited	9310 - Opbrengsten woningen	Woningen	1 Stuks	105	312.354,00			0,00	18-06-2009	01-07-2014	Met plavuizen in de keuken	-	Lai	-	
Plein	Plein revisited	9310 - Opbrengsten woningen	Woningen	1 Stuks	106	323.000,00			0,00	18-06-2009	01-10-2014	Met plavuizen in de keuken	-	Laurens	-	
Plein	Plein revisited	9310 - Opbrengsten woningen	Woningen	1 Stuks	107	295.895,00			0,00	18-06-2009	01-12-2014	Met plavuizen in de keuken	-	Lommers	-	
Plein	Plein revisited	9310 - Opbrengsten woningen	Woningen	1 Stuks	108	395.495,00			0,00	18-06-2009	01-01-2015	Met plavuizen in de keuken	-	Luce	-	

The meaning of the entry fields is:

Project	The project of which the revenue is part of.
Cost Type	The cost category on which the revenue is registered. Only cost categories can be chosen from the master roll up of the type 'Revenues'.
Category	The type of revenue. See also Revenue Types 182.
Contract	The contract for the grouping of a revenue. Two revenues cannot share the same contract on one budget.
Sold	The revenue has been saled if checked.
Customer	Reference to the buyer of the revenue as registered in Organizations 98.
Customer free format	Reference to a customer as free format.
Address	The address where the revenues are earned.
City	The place where the revenues are realized.
#Units	The number of units, expressed in units that belong to the class. Houses are generally expressed in 'Numbers', while 'Commercial Space' is expressed in 'm2'.
Budgeted Result	The budgeted result of the unit.
Multiple Periods	An indicator if more than one invoice will be sent in order to charge the agreed revenue. In case you choose for one period and the field 'Realized Revenues' is not filled in or differently, the first invoice of this revenue will be treated as the realized revenue.
Charged by Hour	The activities will be charged by hour if selected.
Customer Reference	A reference/characteristic that is specified by the customer.
Description	A description of the products, activity or situation where revenues relate to.
Explanation	An informative explanation such as the expected start or duration of the rental period.
Planned Start Date	The planned start of realization.
Planned End Date of Handover	The planned date of handover of the units.
End of Construction	The actual end date of construction of the units.
Realized Revenues	The realized revenue per unit. This is filled out as soon as the contractual agreement is signed. Note that reports may show a different contract revenue as entered here if '1 period' is selected in the field 'Multiple Periods' and an invoice with contract is sent. In this case the reports will always show the total invoice amount instead of the here entered realized revenues.
Planned Date Sales	The expected date that the customer will sign the sales contract.
Date Realization Sale	The date on which the contractual agreement with the construction company is signed.
Planned Date of Transport	The expected date when the product will be transferred to the buyer.
Buyer	The name of the buyer.
Points	The number of points awared for the commercial objective of the project. This is normally used to determine bonuses.
Documents	Linked documents, see Linking Documents 33.
Expected Maturity	The date the cash flow for revenue is expected to begin.
Expected Maturity End	The date the cash flow for this revenue is expected to finish. The maturity date is only relevant if the cash flow projection method needs it.
Distribution Method	The method used to distribute the cash flow of the revenue over time based on expected maturity and expected maturity date.

The meaning of the other fields:

Project Code	A unique code for the project.
Name	The name of the project.
Roll Up	The roll up code.
Master Roll Up	The name of the master roll up to which the roll up (a roll up is a bundle of individual cost categories) belongs.
Calculated Date of Production	The calculated date of production on which the units are counted as production. The calculation is as follows: • Date end of construction units if available. • Date end of construction if available. • Planned date end of construction units if available.

	• Planned date end of construction if available. • Else unknown.
Open	Indicator whether the bill is paid.
Category	Is a grouping of revenues.
Merged Project	The name of the main project to which the revenue belongs.
To be Invoiced	Contains the part of the revenue that still needs to be invoiced. Automatically calculated by the system.

1.4.3.4 Budget

In this menu option you will see the screens on Budget monitoring.

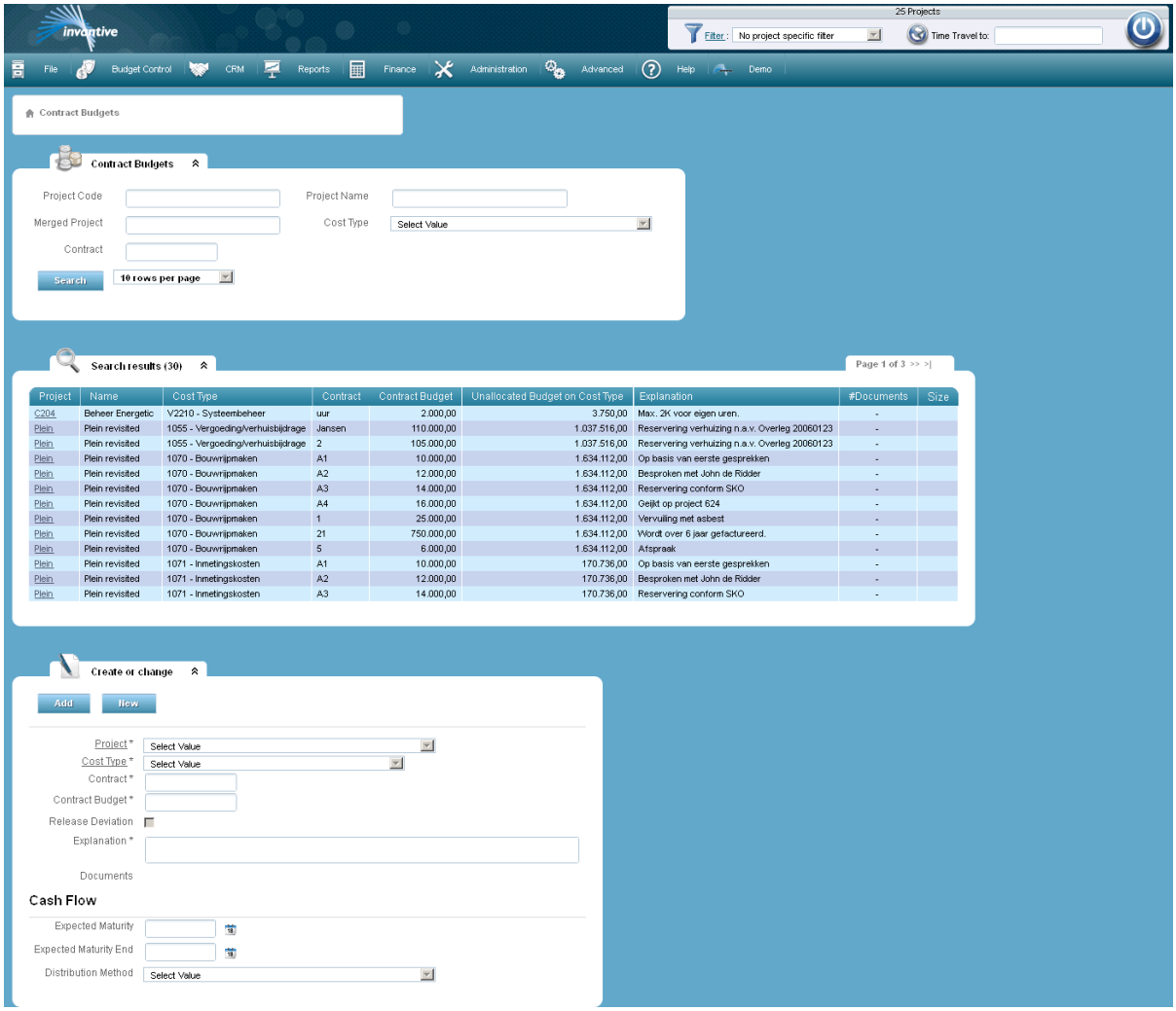
Contract Budgets

In this screen you can register and change Contract Budgets.

A contract budget is a specification of the total available budget for a cost type. You can allocate different budgets to different contracts within a cost category and in this way you will be able, as early as possible, to examine budget exceeding.

Contract budgets can only be registered for cost types from the master roll up category ‘Costs’. You can't use contract budgets for ‘Revenues’ and ‘Results’.

For example: you have a budget of EUR 500,000 for the purchase of five to be demolished homes. Per home you have created a contract in the cost category ‘Purchase houses’, with for each home a contract budget of EUR 100.000. After the negotiations with the first resident you know that you need to pay EUR 120,000 for this house. Therefore, you will determine an order of EUR 120,000 already. Although negotiations with the other residents have not been completed, you can already see a budget exceeding of EUR 20,000.



The meaning of the entry fields is:

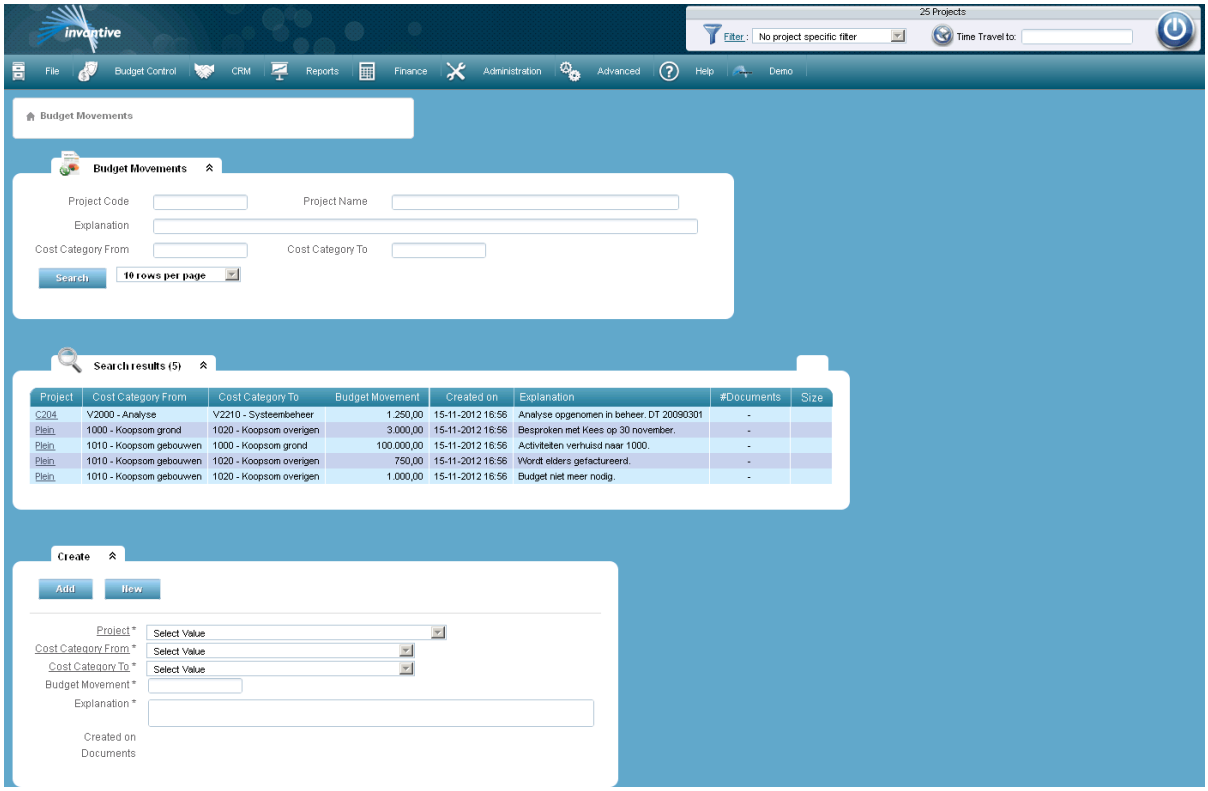
Project	The project of w hich the contract budget is part of.
Cost Type	The cost category at w hich the contract budget is registered. Only cost categories can be chosen from the master roll up of the type 'Costs'.
Contract	The contract w here the contract budget is related to.
Contract Budget	The specific amount for this contract.
Release Deviation	If checked, any budget surplus on this contract budget is used to offset deficits elsew here.
Explanation	An informative explanation such as the reason for the creation of a specific contract budget.
Documents	Linked documents, see Linking Documents 33.
Expected Maturity	The date the cash flow for this contract budget is expected to begin.
Expected Maturity End	The date the cash flow for this contract budget is expected to end. The maturity date is only relevant if the cash flow projection method needs it.
Distribution Method	The method used to distribute the cash flow of the revenue over time based on expected maturity and expected maturity date.

The meaning of the other fields:

Unallocated Budget on Cost Category	Current budget space for this cost category.
Size	Size of the linked documents.

Budget Movements

In this screen the budget movements are registered. It is only permitted to reallocate the budget over main cost categories, if this is set in Settings 349.



The meaning of the entry fields is:

Project	The project of which the budget movement is part of.
Cost Category From	The costs category from which the budget is transferred.
Cost Category To	The cost category to which the budget is transferred.
Budget Movement	The budget amount that is transferred.
Explanation	An informative explanation such as the cause of the budget movement or the person with whom the budget movement was discussed.

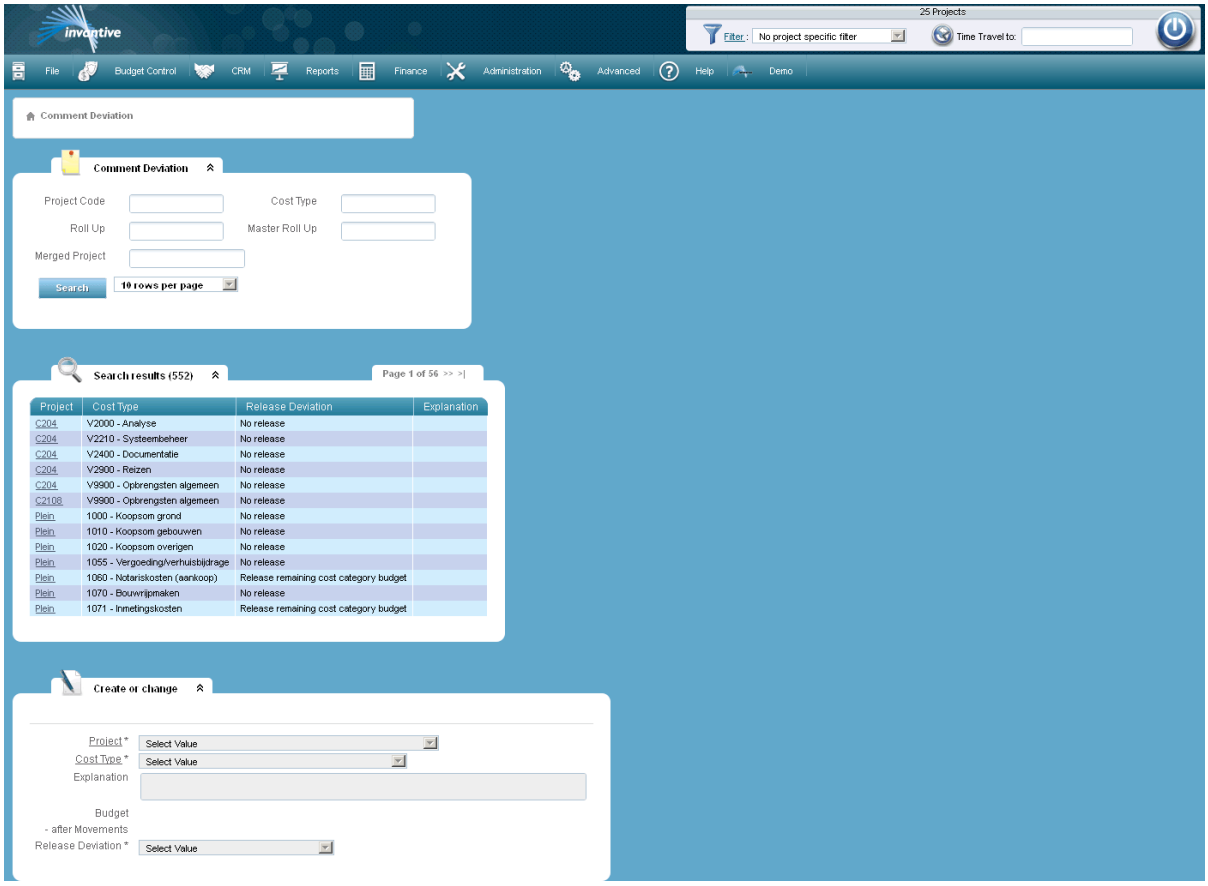
The meaning of the other fields:

Created at	The date on which the budget movement is created.
Documents	Linked documents, see Linking Documents 33.
Size	Size of the linked documents.

Comment Deviation

This screen allows you explanations on exceptions to the budget record and change.

Often the client will expect an explanation why a budget overrun occurs within a cost category. Through this registration you can provide this information in a quick and clear manner.



The meaning of the entry fields is:

Project	The project of w hich the comment is part of.
Cost Type	The cost category to w hich the comment refers. Cost categories can only be chosen from a master roll up of the type 'Revenues' and 'Costs'.
Explanation	The text of the explanation.
Release Deviation	The budgetary surplus on this cost category and budget surpluses on related contract budgets can be used to compensate for deficits on other cost categories.

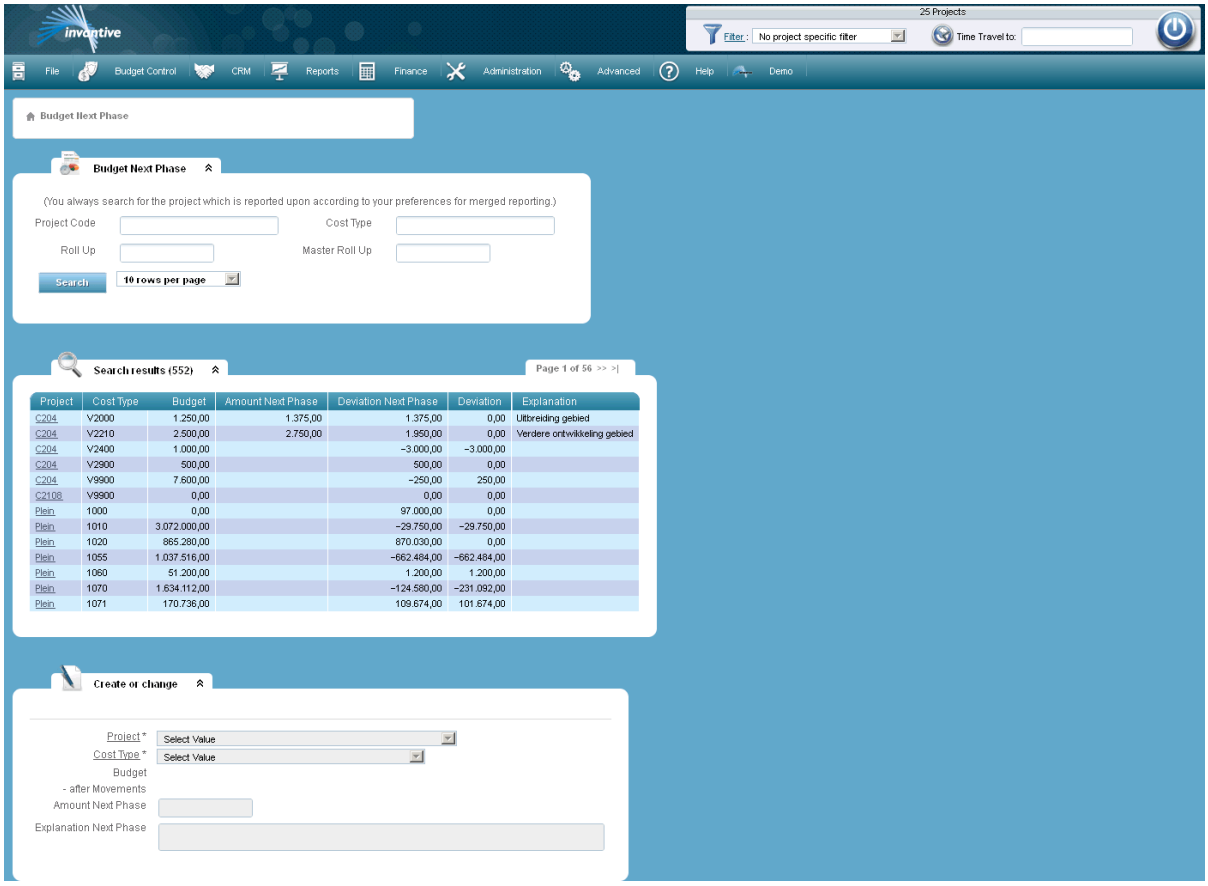
The meaning of the other fields:

Budget	Reference to a budget as registered in Budgets 155.
Remaining Cost Category Budget after Movements	Budget after the corrections for budgetverschuivingen.Budget after the corrections for budget mutations.

Budget Next Phase

In this screen you want the budget for the next phase of the project record and change.

After the administration has established an approved expose, you can, as project developer, start realizing the relevant phase of the project. For a next phase there is obviously a need for a higher budget. In this form you can allocate what budget you think you need for the next phase.



The meaning of the entry fields is:

Project	The project where the budget next phase is part of. Please note: when searching you should use the master project if you have merged reports turned on!
Cost Type	The costs type where the budget next phase is registered. Only cost categories can be chosen from the master roll up of the type 'Costs' or 'Revenues'.
Amount Next Phase	The total budget amount for the next phase that will be requested.
Explanation Next Phase	A possible explanation of the requested budget.

The meaning of the other fields:

Budget	Reference to a budget as registered in Budgets 155.
Remaining Cost Category Budget after Movements	The budget after the adjustments for budget movements.
Deviation Next Phase	The differenct between the amount next phase and the budget from the next phase.
Deviation	The total difference between budget and revenue for all phases.

1.4.3.5 Reports

Reports give all kind of information about a project and are available in Adobe PDF and Microsoft Excel format. You can edit data making use of the hyperlinks 28 in the reports.

Project overview

Enter text here.

Financial Project Overview Level 3

This report allows you to request the financial status on project level, on the level of the master roll ups and on the level of cost categories.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_fpt_n3_pdf_rpt

Financial Project Overview Level 3 (PDF)

Invantive Vision
Powered by Invantive

Project Information	Code: C204	Customer: Mekra		Budget Approved on:	
Project:	Beheer Energetic	Project Manager:	Jalkema	Start of Realization:	24-02-2003
Project Type:	Individual project	bubs_product_group_directo	Smeets	End of Production:	31-12-2003
		Financial Administrator:	Smidt	Shop Space (m2):	
City:	Maastricht	Legal Structure:	Invantive BV	Office Space (m2):	
Phase:	Uitvoering	Cooperation with:		Other (m2):	
Project Cluster:	SB	Released Budget:	0	Houses:	
Free Field 1:		Risk Percentage:	100,00000	Parking Places:	
Free Field 2:		Success Percentage:			

Summary	Budget	Prognosis	Deviation
Revenues	7.600	7.850	250
Costs	5.250	8.250	3.000
Project Result	2.350	-400	-2.750
Project Result (%)	44,76	-4,85	
Process Results		0	
Still to Realize Result		-400	
Possible Remarks:		Negative compared to Budget	

15-11-2012 20:44 Page 1 / 46 invantive

The fields have the same meaning as the fields used for reporting level 2, see Financial Project Overview Level 2 121.

Financial Project Overview Level 4

This report allows you to request the financial status on project level, on master roll up level and on individual contract level.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_fpr_n4_pdf_rpt

Financial Project Overview Level 4 (PDF)

Invantive Vision
Powered by Invantive

Project Information	Code: C204	Customer: Mekra		Budget Approved on:	
Project:	Beheer Energetic	Project Manager:	Jalkema	Start of Realization:	24-02-2003
Project Type:	Individual project	bubs_product_group_directo	Smeets	End of Production:	31-12-2003
		Financial Administrator:	Smidt	Shop Space (m2):	
City:	Maastricht	Legal Structure:	Invantive BV	Office Space (m2):	
Phase:	Uitvoering	Cooperation with:		Other (m2):	
Project Cluster:	SB	Released Budget:	0	Houses:	
Free Field 1:		Risk Percentage:	100,00000	Parking Places:	
Free Field 2:		Success Percentage:			

Summary	Budget	Prognosis	Deviation
Revenues	7.600	7.850	250
Costs	5.250	8.250	3.000
Project Result	2.350	-400	-2.750
Project Result (%)	44,76	-4,85	
Process Results		0	
Still to Realize Result		-400	
Possible Remarks:		Negative compared to Budget	

Status on Unknown: Sunny, project runs according to plan, within budget and without jams.

De server is besteld en over 5 werkdagen binnen

15-11-2012 20:44 Page 1 / 86 invantive

The fields have the same meaning as the fields used for reporting level 2, see Financial Project Overview Level 2 121.

Project Status

Here you will see project status reports.

Project Status per Cost Category

This report allows you to request the financial status per cost category at project level.

The abbreviation ‘IWO’ stand for ‘Invoice with Order’ which means the amount belonging to an invoice which is linked to an order. The abbreviation ‘INO’ means ‘Invoice with No Order’ which means the amount of an invoice that is not linked to an order.

Settings: system, EUR, Year, Current situation
Function: bubs_fpt_n3wb_pdf_rpt

Project Status per Cost Category (PDF)

Invantive Vision
Powered by Invantive

Code C204
Project Beheer Energetic

Cost Type		Budget	bubs_order	IWO	INO	Deviation Budget			Prognosis
						Realization	Expectation	Total	
V2000	Analyse	0				0	0	0	0
V2210	Systeembeheer	3.750		520		0	-50	0	3.750
V2400	Documentatie	1.000				3.000	0	3.000	4.000
V2900	Reizen	500				0	0	0	500
V9900	Opbrengsten algemeen	7.600		250				-250	7.850

15-11-2012 20:44 Page 1 / 21 invantive

Project Status Workbench

This report allows you to request the financial status on project level and on the level of cost category as shown in the workbench.

Settings: system, EUR, Year, Current situation
Function: bubs_fpt_n4wb_pdf_rpt

Project Status Workbench (PDF)

Invantive Vision

Powered by Invantive

						Budget	Deviation	Prognosis
Code	C204	bubs_product_group_director	Smeets					
Name	Beheer Energetic	Project Manager	Jalkema		Costs	5.250	3.000	8.250
City	Maastricht	Plan Developer			Revenues	7.600	250	7.850
Phase	Uitvoering	Sales	Breukhoven		Project Result	**2.350**	**-2.750**	**-400**
Budget		Administrator	Smidt		Project Result (%)	**44,76**		**-4,85**

Cost Type V2000 Analyse — **Deviation Budget**

Budget	Ctt	bubs_order	IWO	INO	bubs_show	Realization	Expectation	Total	Supplier	Explanation	Date
1.250										Budget before Movements	
-1.250										Budget Movement to Cost Catego	15-11-2012
0										Remaining Cost Category Budget after	
0					-	0	0	0			

Cost Type V2210 Systeembeheer — **Deviation Budget**

Budget	Ctt	bubs_order	IWO	INO	bubs_show	Realization	Expectation	Total	Supplier	Explanation	Date
2.500										Budget before Movements	
1.250										Budget Movement from Cost Cate	15-11-2012
3.750										Remaining Cost Category Budget after	
	p9573				-						
		800							Aarde consult	Sloop is besproken met aanneme	22-03-2009
			520						Aarde consult	Uren Piet Janssen	22-03-2009
							-50			Scan kost langer dan gedacht.	22-03-2009
2.000	uur				-	0		0		Max. 2K voor eigen uren.	
3.750			520		-	0	-50	0			

Cost Type V2400 Documentatie — **Deviation Budget**

Budget	Ctt	bubs_order	IWO	INO	bubs_show	Realization	Expectation	Total	Supplier	Explanation	Date
1.000										Remaining Cost Category Budget after	
	1000				-						
		4.000							Aarde consult	Sloop is besproken met aanneme	28-11-2011
1.000					-	3.000	0	3.000			

Cost Type V2900 Reizen — **Deviation Budget**

Budget	Ctt	bubs_order	IWO	INO	bubs_show	Realization	Expectation	Total	Supplier	Explanation	Date
500										Remaining Cost Category Budget after	
500					-	0	0	0			

Cost Type V9900 Opbrengsten algemeen — **Deviation Budget**

Budget	Ctt	bubs_order	IWO	INO	bubs_show	Realization	Expectation	Total	Supplier	Explanation	Date
7.600										Remaining Cost Category Budget after	
	mw 1				-						
			250						Energetic BV	Performance scan (meerwerk).	22-03-2009
	t1000				-						

15-11-2012 20:45 Page 1 / 100 invantive

Processes

Here you will see reports concerning processes.

Processes Overview

With this report you can request the status of the processes. The report shows only processes that have not been completed.

Settings: system, EUR, Year, Current situation
Function: bubs_tak_pdf_rpt

Processes Overview (PDF)

Invantive Vision
Powered by Invantive

Code	Description			Project: C204 Beheer Energetic			
tmpl-iv	Telefonie periode :base_date - :base_next_date, gebruik van :base_prev_date tot :base_date						
	Process Owner	Walraven		Customer Reference			
	Status	Gemeld		Supplier Reference			
	Origin	Eigenaar		Deadline			
	Category	Sjabloon		Planned Start			
	Impact	Gemiddeld		Created at	15-11-2012 04:56:34	by	system
10	Processchema goedkeuren facturen.						
	Process Owner	Breukhoven		Customer Reference			
	Status	Gemeld		Supplier Reference	factuur 543633		
	Origin	Klant		Deadline	01-01-2008 12:00:00		
	Category	Wijziging		Planned Start			
	Impact	Gemiddeld		Created at	15-11-2012 04:56:34	by	system
1000	Kan geen verbinding maken met de webserver.						
	Process Owner	Aeilkema		Customer Reference			
	Status	Gemeld		Supplier Reference			
	Origin	Gebruiker		Deadline			
	Category	Storing		Planned Start			
	Impact	Gemiddeld		Created at	15-11-2012 04:56:34	by	system
	Created at	15-11-2012	by	Invantive - System			

Retrieved from: Invantive Estate Outlook add-in
Type: Mail
From: Demo Vision
Received: 3/21/2009 5:00:27 PM
To: Demo Vision
Subject: Kan geen verbinding maken met de webserver.

Beste helpdesk, ik kan geen verbinding maken met de webserver voor het invoeren van mijn bestelling.

"Server temporary disabled"

Gaarne advies.

John Dramati

Created at	15-11-2012	by	Invantive - System

Retrieved from: Invantive Estate Outlook add-in
Type: Mail
From: Demo Vision
Received: 3/21/2009 5:07:00 PM
To: Demo Vision
Subject: Uw verzoek [t1000]

15-11-2012 20:45 Page 1 / 11 invantive

The meaning of the fields is the same as the fields shown in the processes screen Processes 58.

Processes per Relation

This report shows per Relation the processes per project. Also an indicator shows whether the process already has been completed.

A process is on the list when:

- The owner works for the relation.
- The reporter works for the relation.
- The relation is the organization on whose behalf the process was created.
- The relation is customer of the project of the process.

Settings: system, EUR, Year, Current situation
Function: bubs_tpt_pdf_rpt

Processes per Relation (PDF)

Invantive Vision
Powered by Invantive

Organization	Project Processes Process Organization	Project	Process	Description	Impact	Category	Created at	Status	Finished	Person
1002		MSLS09.BD.	1002	VISI onderzoeken	Laag	Vraag	15-11-2012	Gemeld		Aeilkema

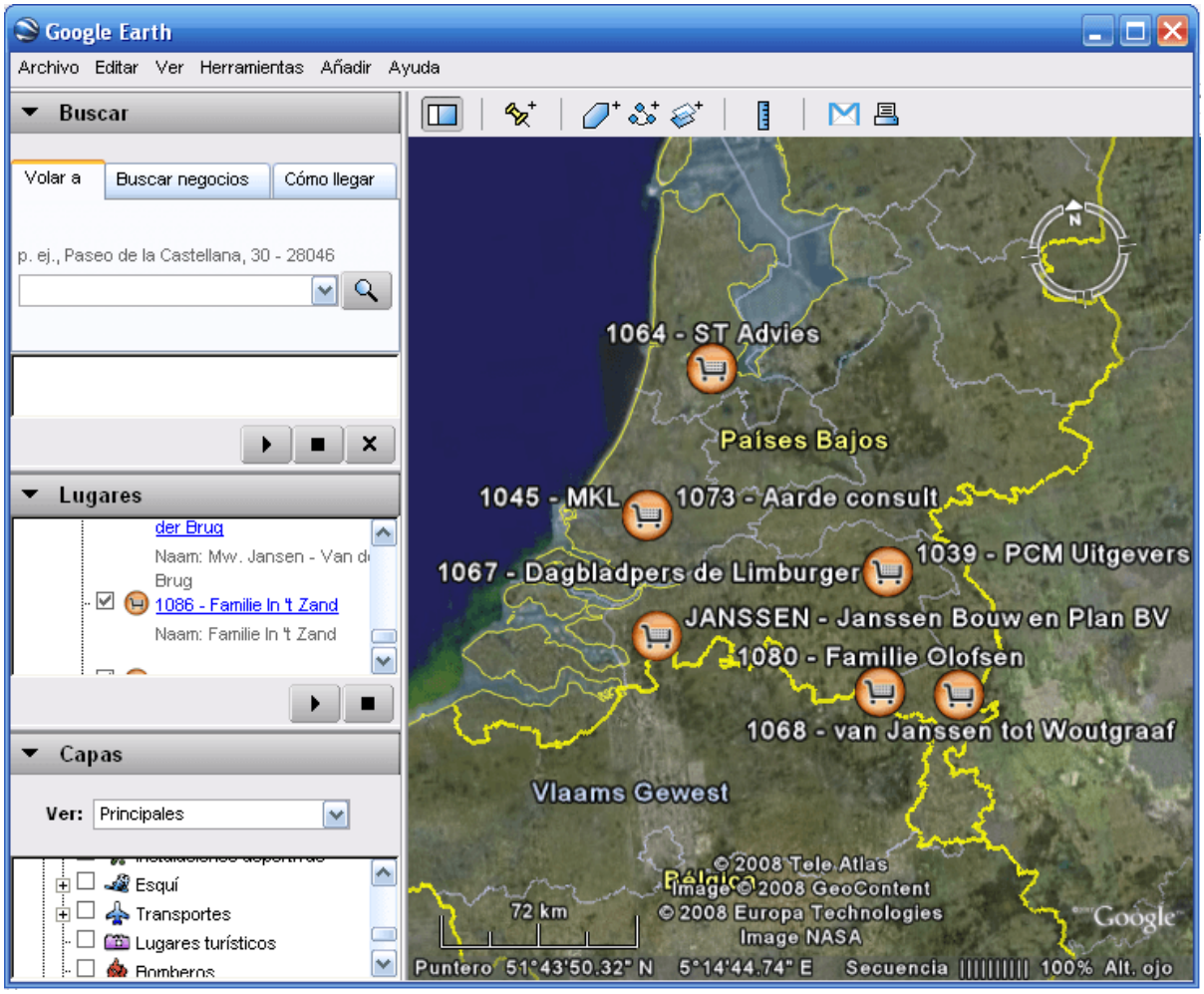
15-11-2012 20:45 Page 1 / 9 invantive

Geographical Overview

Enter text here.

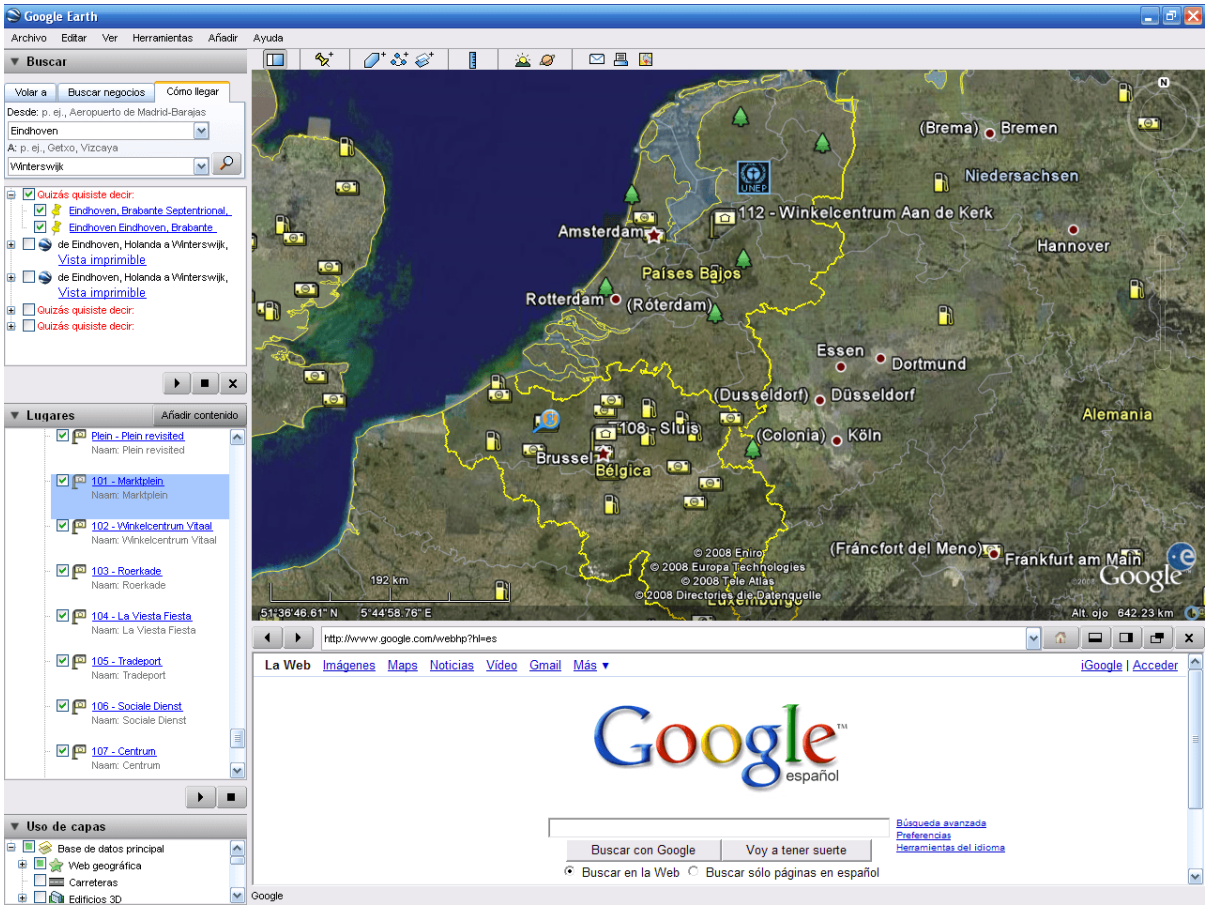
Geographical Overview Organizations

This report shows the geographic locations of the organizations involved in the projects. To run this report ‘Google Earth’ needs to be installed.



Geographic Overview Projects

This report shows the geographic locations of the projects. To run this report 'Google Earth' needs to be installed.



Concept Next Phase

This report allows you to request the financial status on project level, on the level of the master roll ups and on the level of cost categories.

Besides the information on report level 3, you can also see the requested budget for the next phase, as registered in Expected Budget Next Phase 80.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_cve_pdf_rpt

Concept Next Phase (PDF)

Invantive Vision
Powered by Invantive

Project Information	Code: C204	Customer: Mekra		Budget Approved on:	
Project:	Beheer Energetic	Project Manager:	Jalkema	Start of Realization:	24-02-2003
Project Type:	Individual project	bubs_product_group_directo	Smeets	End of Production:	31-12-2003
		Financial Administrator:	Smidt	Shop Space (m2):	
City:	Maastricht	Legal Structure:	Invantive BV	Office Space (m2):	
Phase:	Uitvoering	Cooperation with:		Other (m2):	
Project Cluster:	SB	Released Budget:	0	Houses:	
Free Field 1:		Risk Percentage:	100,00000	Parking Places:	
Free Field 2:		Success Percentage:			

Summary	Budget	Prognosis	Deviation
Revenues	7.600	7.850	250
Costs	5.250	8.250	3.000
Project Result	2.350	-400	-2.750
Project Result (%)	44,76	-4,85	
Process Results		0	
Still to Realize Result		-400	
Possible Remarks:		Negative compared to Budget	

15-11-2012 20:44 Page 1 / 22 invantive

The fields have the same meaning as the fields used for reporting level 2, see Financial Project Overview Level 2 121.

Revenues Overview

This report lets you project revenue per query.

Settings: system, EUR, Year, Current situation
Function: bubs_oot_pdf_rpt

Revenues Overview (PDF)

Invantive Vision
Powered by Invantive

Project	C204	Beheer Energetic	Project Manager	Jalkema	Project Cluster	Systeembeheer
Cost Type	V9900	Opbrengsten algemeen	Budget	7,600.00		

Type	Contract	Budgeted Result	Contractual	IWO *	INO *	Points	Invoice Date	Invoice Code	Customer	Description
IWO	mw 1			250			22-03-2009	V4277	Energetic BV	Performance scan (meerwerk).
	0.00			**250**						
Revenue	t1000	2,600								Met parket in de hal
	2,600.00	**2,600**								
Revenue	t1001	5,000								Met parket in de hal
	5,000.00	**5,000**								

15-11-2012 20:45 Page 1 / 26 invantive

User Activity

This screen allows you to request ‘process level’ where a person worked on.

In the second part of this report which is called ‘time registrations’, shows the number of hours and the total amount of hours that a project employee has been working on a project.

It can occur that there are overlaps or gaps between the hours worked. In the case of an overlap, the report shows a red outlined field that contains the minutes of the overlap. If the worked hours do not contiguous, the report shows a green outlined field that contains the extent of the hole in minutes.

The period of the report can be entered via the report parameters.

Warning! The report is grouped by year, month, and then week. This can cause that in the end of a year a month could be cut in half and that in the end of the month a week could be cut in half.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_gat_pdf_rpt

User Activity (PDF)

Invantive Vision
Powered by Invantive

Activity on Processes

Project	102	Winkelcentrum Vitaal			
Process	2	Gemeld	WAL		Ruit gebroken in achterdeur.
Estimated	Spent	Remaining			
2	1				
Created at	15-11-2012	by	system		
Text					
Project	C204	Beheer Energetic			
Process	1001	Gemeld	AEI		ORA-01792 during parse of view / Oracle Support Services - UPDATED Service Request Alert! - Service Request 7489157.992
Estimated	Spent	Remaining			
	8				
Created at	15-11-2012	by	system		
Text					
Project	Plein	Plein revisited			
Process	1	Gemeld	WAL	01-01-2008	Hemelwaterafvoer verstopt, goot loopt over.
Estimated	Spent	Remaining			
4	2				
Created at	15-11-2012	by	system		
Text	Bevestigd door monteur ter plekke.				
Project	C204	Beheer Energetic			
Process	1001	Gemeld	AEI		ORA-01792 during parse of view / Oracle Support Services - UPDATED Service Request Alert! - Service Request 7489157.992
Estimated	Spent	Remaining			
	8				
Created at	15-11-2012	by	system		

Text

Retrieved from: Invantive Estate Outlook add-in
Type: Mail
From: Guido Leenders
Received: 3/21/2009 5:08:51 PM
To: Demo Vision
Subject: Oracle Support Services - UPDATED Service Request Alert! - Service Request 7489157.992

-----Original Message-----
From: no-reply@oracle.com [mailto:no-reply@oracle.com]
Sent: Saturday, March 21, 2009 3:49 PM
Subject: Oracle Support Services - UPDATED Service Request Alert! - Service Request 7489157.992

*** THIS IS AN AUTO NOTIFICATION EMAIL. DO NOT REPLY TO THE SENDER OF THIS EMAIL. PLEASE REFER TO THE INFORMATION BELOW TO EITHER QUERY OR UPDATE YOUR SERVICE REQUEST. ***

Service Request 7489157.992 - ORA-01792 during parse of view (not actually ORA-00600) has been updated by Oracle Support with relevant information on 21-MAR-09. To view the progress on-line via MetaLink, go to this URL: http://metalink.oracle.com/metalink/plsql/tar_main.this_tar?tar_num=7489157.992&p_ctryCode=840

Or log on to MetaLink at http://metalink.oracle.com and query the Service Request yourself via the MetaLink menu at 'Service Request' -> 'SR Search'.

To update the Service Request on-line, hit the 'Update SR' link from the Service Request query detail screen in MetaLink.
Thank you for using MetaLink. Oracle Support Services

Timesheets

Time		Effort	Project	Comment
08:30		2.00	C204 - Beheer Energetic	Meet: 1001 - [t1001]: ORA-01792 during parse of view / Oracle Support Services - UPDATED Service Request Alert! - Service Request 7489157.992
10:30		2.00	C204 - Beheer Energetic	Meet: 1000 - [t1000]: Kan geen verbinding maken met de webserver.
13:00	30	2.00	MSLS09.BD.ALG - Sales trajecten	Design: 1002 - [t1002]: VISI onderzoeken
15:30	30	2.00	MSLS09.BD.ALG - Sales trajecten	Meet: 1002 - [t1002] Bespreking op lokatie.: VISI onderzoeken
ZO 16-10		**8.00**		Daily Total
W 41-2011		**8.00**		Weekly Total
08:30		2.00	C204 - Beheer Energetic	Design: 1000 - [t1000]: Kan geen verbinding maken met de webserver.
10:30		3.00	MSLS09.BD.ALG - Sales trajecten	Design: 1002 - [t1002]: VISI onderzoeken
13:30		2.00	C204 - Beheer Energetic	Meet: 1001 - [t1001]: ORA-01792 during parse of view / Oracle Support Services - UPDATED Service Request Alert! - Service Request 7489157.992

15-11-2012 20:45 Page 1 / 7 invantive

1.4.3.6 Cash Flows

Using cash flow projections, the net present value of a project can be calculated by taking a series of expected future payments (negative values) and expected income (positive values)

and to calculate the net present value (discounted) of them with a net present value rate. The net present value is also known as the net present worth (NPW). The net present value rate is also known as discount rate, advance interest rate or cost of capital.

The advantage of this method of determining the value of a project is that future developments are taken into account properly in determining the present value of the project.

The disadvantage of this method is the rather subjective nature of estimating future cash flows. It can also be difficult to estimate the net present value rate.

Concept

A cash flow is a flow of funds over a period according to an (adjustable) curve.

The determination of the cash flows in Invantive Vision is divided in two parts:
- determining the historical cash flows, and
- determining the future cash flows.

Cash flows at All Levels

A cash flow projection can be defined at all levels:
- Contract, for example, the supplying of a steel construction by the firm Derikx.
- Cost Category, for example, all steel work within a project.
- Roll up, for example, all consultancy within a project.
- Master roll up, for example, all costs within a project.
- Independent or sub-project, for example, a full building lease project.
- Master project, for example, a combination of a land and two building lease projects.
- Legal entity, for example all projects of the SPV ‘Projects South’.
- Company wide, namely all projects within the system.

Cross sections are possible at all levels, for example, all cash flows of a supplier or all cash flows for projects of a developer.

Historical Cash Flows

The historical cash flows consist of realized cash flows. A cash flow is achieved when an entry in the general ledger has actually led to a cash flow (payment or receipt). Only postings (invoices) that are paid or received are included as a historical cash flow.

Future Cash Flows

The volume of the future cash flows is the difference between the prognosis end of work 116 and the historical cash flows. This will ensure that the cash flow projections always match with the prognosis end work when using an automatic system for the determination of the cash flow.

Invantive Vision determines using the expandableCash Flow Projection Method 342 when a cash flow will occur.

The most common cash flow projection is ‘automatic worst case’. Other cash flow projection methods require manual input or are a variation on ‘automatic worst case’ by varying the cash flows in time based upon project specific risk variables or by projecting sales instead of cash flows in time.

Automatic Worst Case

The automatic worst case approach yields in almost all situations a realistic cash flow projection for projects in various stages of development:

- First concept with a budget outline and a schedule outline.
- A tangible development plan with a budget for each cost category and a schedule for each activity.
- A project in its implementation phase where part of the activities are already completed while others are carried out.
- A project in its final stage.

The automatically worst case approach chooses depending on the available information, an as detailed as possible planning of the cash flows. In descending degree of detail the following levels are used:

- Entering in general ledger (invoices)
- Revenues (sold / unsold) and orders
- Contract Budgets
- Budget
- Cost Type
- Project

At these levels period information is available, such as the planned start and completion date of a project, or the actual start date of a project. The automatic worst case approach will always use period information as accurately as possible. At all levels always a start and end date for the cash flow are defined. This will always be used when entered.

The volume between the prognosis end of work and the historical cash flows is divided over the period by a curve. By default, some common curves are included, for example, for land and building lease. The desired curve shape can be specified at almost all levels. Normally, the curves are defined by thecost category 196 or by the budget 155. But if necessary, the curve can also be set at detail level.

Private curves can be used by entering a list of sampling points on the curve values into Codes 330. The curve values must lie in the range of 0 (0%, no cash flow) to 1,000,000 (100%, fully realized cash flow). The number of sampling points in the curves can be varied as desired and is usually a balance between computing time, storage space and precision. In practice, more than 30 sampling points do not add much extra details. Before adding your private curve first contact the vendor of Invantive Vision.

Cash flow projections

In this screen you can enter cash flow projections of a project per cost category.

Using these projections you can calculate the present net value of the project on the basis of cash flow projections. The calculation is done in two steps:

1. Calculating: determines the size of each flow, start and end dates and distribution method.
2. Dividing: allocates the cash flow to the days of the calendar.

The two steps allow you to manually adjust the calculated cash flows if desired.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Cash-flow Projections

Cash-flow Projections

Project | Start of Projection

Search | 10 rows per page

Search results (8)

Project	City	Name	Closed	Start of Projection	Cash Flow Method	Include Explanation in Flows	Include Explanation in Daily Flows	Explanation	Net Present Value
C204	Maastricht	Beheer Energetic	☐	01-01-2009	Automatisch worst-case kasstroom	☑	☑	Kasstroom voor herfinanciering	-232,86
C204	Maastricht	Beheer Energetic	☐	01-01-2011	Automatisch worst-case kasstroom	☑	☑	Kasstroom voor herfinanciering	-307,88
Plein	Eindhoven	Plein revisited	☐	01-01-2001	Automatisch worst-case kasstroom	☑	☑	Kasstroom voor kwartaalbespreking 2010Q1	10.781.646,17
Plein	Eindhoven	Plein revisited	☐	01-01-2003	Automatisch worst-case kasstroom	☑	☑	Kasstroom voor kwartaalbespreking 2003Q1	10.696.100,43
Plein	Eindhoven	Plein revisited	☐	01-01-2009	Automatisch worst-case kasstroom	☑	☑	Kasstroom voor kwartaalbespreking 2003Q1	10.315.442,03
Plein	Eindhoven	Plein revisited	☐	01-01-2011	Automatisch worst-case kasstroom	☑	☑	Kasstroom voor kwartaalbespreking 2003Q1	10.132.066,83
103	Assen	Roerkade	☐	01-01-2009	Automatisch worst-case kasstroom	☑	☑	Kasstroom voor kwartaalbespreking 2010Q1	4.867.896,14
105	Maastricht	Tradeport	☐	01-01-2009	Automatisch worst-case kasstroom	☑	☑	Kasstroom voor kwartaalbespreking 2010Q1	2.137.985,74

Create or change

Add

Project * | Select Value
Start of Projection *
Cash Flow Method * | Select Value
Include Explanation in Flows ☐
Include Explanation in Daily Flows ☐
Explanation

Net Present Value

NPV Rate (%) *
NPV Rate Settled Posts (%)
Include Interest in NPV ☐
Net Present Value
Net Present Value Excluding Settled Posts
Total Settled Posts

Values at Last Calculation

	Budget	Deviation	Prognosis
Costs			
Revenues			
Project Result			
Process Results			

Software Version used in last Calculation

Calculate

Recalculate ☐
Date Last Recalculated
Distribute Cash Flow ☐
Both Calculate and Distribute ☐
Date Last Distribution

Current Values

	Budget	Deviation	Prognosis
Costs			
Revenues			
Project Result			
Project Result (%)			

Cash Flows (0)

No records

Cash Flow Date	Cash Flow End Date	Cost Type	Contract	Type	Settled	Calculated Amount	Explanation Calculation	Deviating Amount	Explanation Deviating Cash Flow

Create or change

Cash Flow Date *
Cash Flow End Date
Invoice Flow Date *
Invoice Flow End Date
Original Difference between Cash Flows (days) *
Distribution Method | Select Value
Cost Type | Select Value
Contract *
Type * | Select Value
Calculated Amount
Explanation Calculation
Deviating Amount
Explanation Deviating Cash Flow
Settled ☐

Cash Flow Daily Details (0)

No records

Cash Flow Date	Amount	Amount of Cash Flow Detail	Rounding	Explanation

Create or change

Cash Flow Date *
Amount *
Amount of Cash Flow Detail *
Rounding *

The meaning of the entry fields is:

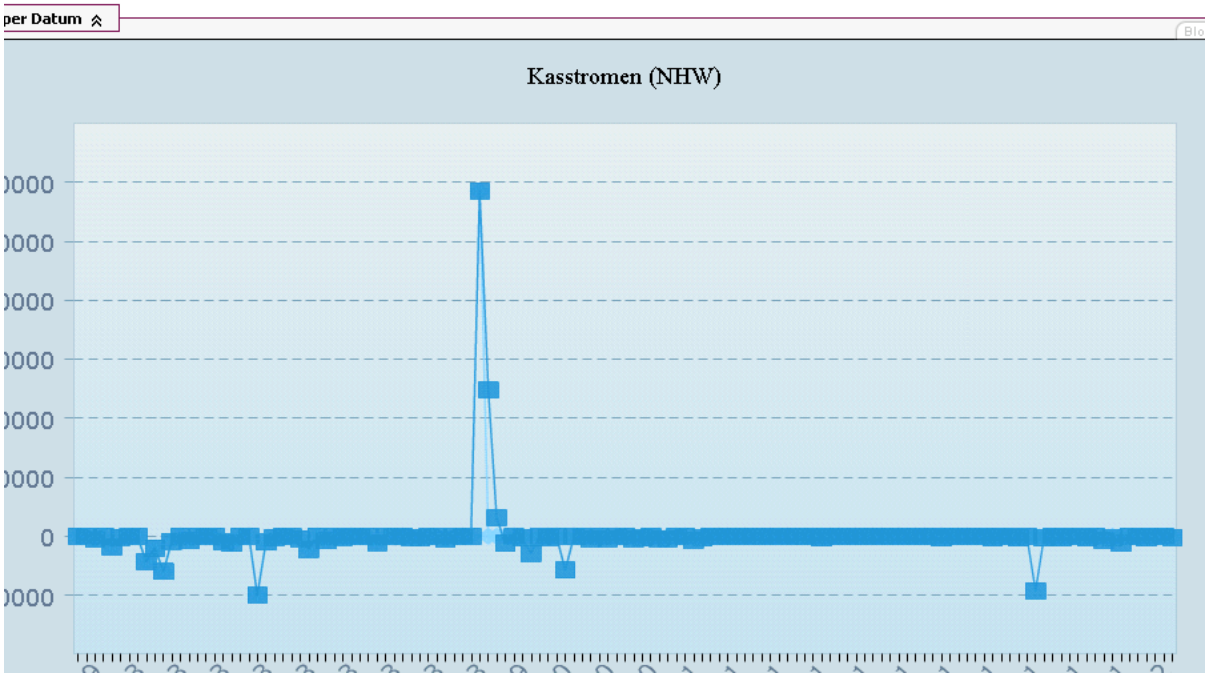
Project	The project which the latest estimate is part of.
Start of Projection	The starting date of the cash flow projection.
Cash Flow Method	The way cash flows are allocated to a period.
Include Explanation in Flows	When checked, the explanation will be included in the calculation of the cash flow.
Include Explanation in Daily Flows	When checked, the explanation will be included in the calculation of the daily cash flows.
Explanation	An informative explanation such as a reason why the 'Cash Flow Method' in question was chosen.
Net Present Value	
NPV Rate (%)	The percentage by which the present value (net value) of projected cash flows is calculated.
NPV Rate Settled Posts (%)	The percentage by which the present value of already paid/received amounts is calculated.
Include interest in NPV	The interest paid on loans is included in the NPV calculation if this option is checked.
Calculate	
Recalculate	The cash flow will be recalculated in the future when this option is checked.
Distribute Cash Flow	The cash flow will be allocated to the period starting with 'Cash Flow Date' and ends with 'Cash Flow End Date' if this option is checked.
Both Calculate and Distribute	The cash flow will be recalculated and distributed in the future if this option is checked.
Cash Flows	
Cash Flow Date	Shows the date the cash flow starts.
Cash Flow End Date	Displays the date when the cash flow ends.
Invoice Flow Date	Shows the date the invoice flow begins.
Invoice Flow End Date	Displays the date the invoice flow ends.
Original Difference between Cash Flows (days)	The initial difference in days between the invoice and the expected cash flow.
Distribution Method	The method by which the cash flow is distributed over the period.
Cost Type	The cost category on which is the cash flow is registered.
Contract	The contract ID to which the cash flow is related.
Type	Indicates what caused the cash flow. For example, this could be a contract, an invoice line, a budget, etc..
Deviating Amount	Here you can enter a deviating amount. For the NPV calculation this amount will be included in stead of the 'Calculated Amount'.
Explanation Deviating Cash Flow	A possible explanation of the deviating cash flow.
Settled	Indicates that the cash flow already took place in the form of a receipt and/or a payment if the box is checked.
Cash Flow Daily Details	
Cash Flow Date	Shows the date the cash flow starts.
Amount	The cash flow amount from which the daily cash flow is derived.
Amount of Cash Flow Detail	The amount of the cash flow details per day or per period.
Rounding	The amount that will be added to the daily cash flow to compensate for rounding errors.
Explanation	An informative explanation for the daily cash flow amount.

The meaning of the other fields:

Project	The project which the latest estimate is part of.
Start of Projection	The starting date of the cash flow projection.
Net Present Value	
Net Present Value	The net present value calculated using the shared cash flow and the interest on the cash flow including the already settled contracts.
Net Present Value Excluding Settled Posts	De netto huidige waarde berekend met behulp van de verdeelde kasstroom en de rente op de kasstromen, exclusief de al afgewikkelde contracten.
Total Settled Posts	Total amount of the up to now settled contracts.

Values at Last Calculation	
Budget	The project budget.
Deviation	The difference betw een the project budget and the project prognosis.
Prognosis	The project prognosis.
Costs	The costs of a project.
Revenues	The revenues of the project.
Project Result	The revenues minus the costs.
Taken Result	Amount at this moment is already booked as loss or profit.
Softw are Version used in last Calculation	The softw are version that w as used for the final calculation of the cash flow amount or its distribution. If a new softw are version is installed it is possible that the equation w ith old cash flow amounts and its distributions is polluted.
Calculate	
Date of last Recalculation	Date w hen the last recalculation took place.
Date Last Distribution	Date w hen the last distribution took place.
Cash Flows	
Calculated Amount	The cash flow amount.

The cash flows per date provide an overview of the historical and projected cash flows:



The cash flows are split into cash flow details. In the bottom part of the screen the cash flow details are shown. Each cash flow is supported with an explanation of the calculation:

01-08-2009	01-06-2012	2150		Budget	☐	−5.424,00	Op basis van vervaldatum, Op een budget van 615.424 is 610.000 geconsumeerd, dus er is 5.424 over
20-08-2003	20-08-2003	2150	3	Factuur Regel	☑	−610.000,00	Op basis van 'Datum Gefactureerd', Standaard Betalingstermijn van 30 dagen gebruikt, al betaald 610.000

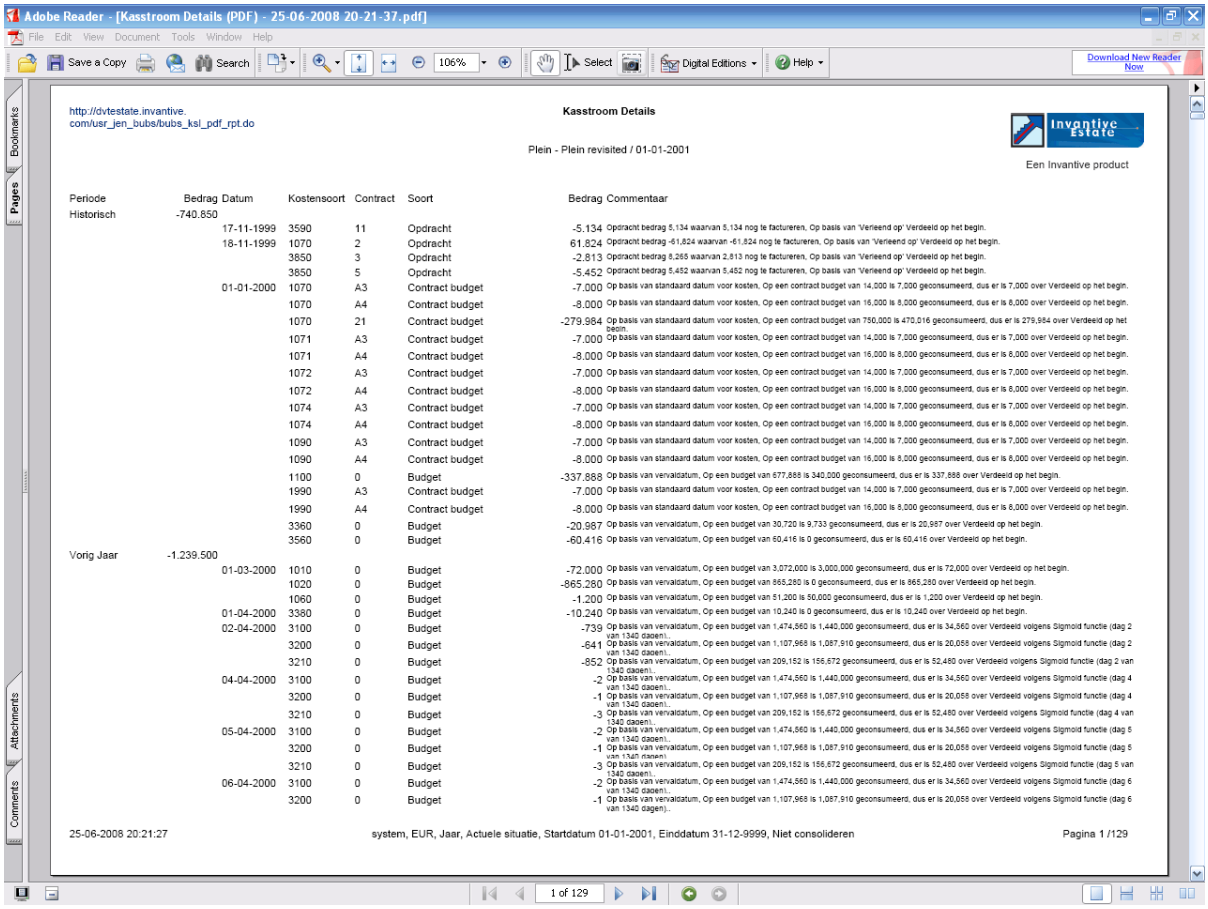
In the example above a cost budget of EUR 615,424 was expected. Meanwhile EUR 610,000 is invoiced and paid. According to the expected maturity of the budget, the remaining budget of Eur 5,424 will be used between August 1, 2009 and June 1, 2012.

Cash-flow Details

In this screen you can enter cash flow details or a cast flow.

Cashflow details report

This report provides details of cash flows per project again.



Adobe Reader - [Kasstroom Details (PDF) - 25-06-2008 20-21-37.pdf]

http://dvtestate.invantive.com/usr_jen_bubs/bubs_ksl_pdf_rpt.do

Kasstroom Details

Plein - Plein revisited / 01-01-2001

Een Invantive product

Periode	Bedrag	Datum	Kostensoort	Contract	Soort	Bedrag	Commentaar
Historisch	-740.850						
		17-11-1999	3590	11	Opdracht	-5.134	Opdracht bedrag 5,134 waarvan 5,134 nog te factureren, Op basis van 'Verleend op' Verdeeld op het begin.
		18-11-1999	1070	2	Opdracht	61.824	Opdracht bedrag -61,824 waarvan -61,824 nog te factureren, Op basis van 'Verleend op' Verdeeld op het begin.
			3850	3	Opdracht	-2.813	Opdracht bedrag 8,265 waarvan 2,813 nog te factureren, Op basis van 'Verleend op' Verdeeld op het begin.
			3850	5	Opdracht	-5.452	Opdracht bedrag 5,452 waarvan 5,452 nog te factureren, Op basis van 'Verleend op' Verdeeld op het begin.
		01-01-2000	1070	A3	Contract budget	-7.000	Op basis van standaard datum voor kosten, Op een contract budget van 14,000 is 7,000 geconsumeerd, dus er is 7,000 over Verdeeld op het begin.
			1070	A4	Contract budget	-8.000	Op basis van standaard datum voor kosten, Op een contract budget van 16,000 is 8,000 geconsumeerd, dus er is 8,000 over Verdeeld op het begin.
			1070	21	Contract budget	-279.984	Op basis van standaard datum voor kosten, Op een contract budget van 750,000 is 470,016 geconsumeerd, dus er is 279,984 over Verdeeld op het begin.
			1071	A3	Contract budget	-7.000	Op basis van standaard datum voor kosten, Op een contract budget van 14,000 is 7,000 geconsumeerd, dus er is 7,000 over Verdeeld op het begin.
			1071	A4	Contract budget	-8.000	Op basis van standaard datum voor kosten, Op een contract budget van 16,000 is 8,000 geconsumeerd, dus er is 8,000 over Verdeeld op het begin.
			1072	A3	Contract budget	-7.000	Op basis van standaard datum voor kosten, Op een contract budget van 14,000 is 7,000 geconsumeerd, dus er is 7,000 over Verdeeld op het begin.
			1072	A4	Contract budget	-8.000	Op basis van standaard datum voor kosten, Op een contract budget van 16,000 is 8,000 geconsumeerd, dus er is 8,000 over Verdeeld op het begin.
			1074	A3	Contract budget	-7.000	Op basis van standaard datum voor kosten, Op een contract budget van 14,000 is 7,000 geconsumeerd, dus er is 7,000 over Verdeeld op het begin.
			1074	A4	Contract budget	-8.000	Op basis van standaard datum voor kosten, Op een contract budget van 16,000 is 8,000 geconsumeerd, dus er is 8,000 over Verdeeld op het begin.
			1090	A3	Contract budget	-7.000	Op basis van standaard datum voor kosten, Op een contract budget van 14,000 is 7,000 geconsumeerd, dus er is 7,000 over Verdeeld op het begin.
			1090	A4	Contract budget	-8.000	Op basis van standaard datum voor kosten, Op een contract budget van 16,000 is 8,000 geconsumeerd, dus er is 8,000 over Verdeeld op het begin.
			1100	0	Budget	-337.888	Op basis van vervaldatum, Op een budget van 677,888 is 340,000 geconsumeerd, dus er is 337,888 over Verdeeld op het begin.
			1990	A3	Contract budget	-7.000	Op basis van standaard datum voor kosten, Op een contract budget van 14,000 is 7,000 geconsumeerd, dus er is 7,000 over Verdeeld op het begin.
			1990	A4	Contract budget	-8.000	Op basis van standaard datum voor kosten, Op een contract budget van 16,000 is 8,000 geconsumeerd, dus er is 8,000 over Verdeeld op het begin.
			3360	0	Budget	-20.987	Op basis van vervaldatum, Op een budget van 30,720 is 9,733 geconsumeerd, dus er is 20,987 over Verdeeld op het begin.
			3560	0	Budget	-60.416	Op basis van vervaldatum, Op een budget van 60,416 is 0 geconsumeerd, dus er is 60,416 over Verdeeld op het begin.
Vorig Jaar	-1.239.500						
		01-03-2000	1010	0	Budget	-72.000	Op basis van vervaldatum, Op een budget van 3,072,000 is 3,000,000 geconsumeerd, dus er is 72,000 over Verdeeld op het begin.
			1020	0	Budget	-865.280	Op basis van vervaldatum, Op een budget van 865,280 is 0 geconsumeerd, dus er is 865,280 over Verdeeld op het begin.
			1060	0	Budget	-1.200	Op basis van vervaldatum, Op een budget van 51,200 is 50,000 geconsumeerd, dus er is 1,200 over Verdeeld op het begin.
		01-04-2000	3380	0	Budget	-10.240	Op basis van vervaldatum, Op een budget van 10,240 is 0 geconsumeerd, dus er is 10,240 over Verdeeld op het begin.
		02-04-2000	3100	0	Budget	-739	Op basis van vervaldatum, Op een budget van 1,474,560 is 1,440,000 geconsumeerd, dus er is 34,560 over Verdeeld volgens Sigmoid functie (dag 2 van 1340 dagen).
			3200	0	Budget	-641	Op basis van vervaldatum, Op een budget van 1,107,968 is 1,087,910 geconsumeerd, dus er is 20,058 over Verdeeld volgens Sigmoid functie (dag 2 van 1340 dagen).
			3210	0	Budget	-852	Op basis van vervaldatum, Op een budget van 209,152 is 156,672 geconsumeerd, dus er is 52,480 over Verdeeld volgens Sigmoid functie (dag 2 van 1340 dagen).
		04-04-2000	3100	0	Budget	-2	Op basis van vervaldatum, Op een budget van 1,474,560 is 1,440,000 geconsumeerd, dus er is 34,560 over Verdeeld volgens Sigmoid functie (dag 4 van 1340 dagen).
			3200	0	Budget	-1	Op basis van vervaldatum, Op een budget van 1,107,968 is 1,087,910 geconsumeerd, dus er is 20,058 over Verdeeld volgens Sigmoid functie (dag 4 van 1340 dagen).
			3210	0	Budget	-3	Op basis van vervaldatum, Op een budget van 209,152 is 156,672 geconsumeerd, dus er is 52,480 over Verdeeld volgens Sigmoid functie (dag 4 van 1340 dagen).
		05-04-2000	3100	0	Budget	-2	Op basis van vervaldatum, Op een budget van 1,474,560 is 1,440,000 geconsumeerd, dus er is 34,560 over Verdeeld volgens Sigmoid functie (dag 5 van 1340 dagen).
			3200	0	Budget	-1	Op basis van vervaldatum, Op een budget van 1,107,968 is 1,087,910 geconsumeerd, dus er is 20,058 over Verdeeld volgens Sigmoid functie (dag 5 van 1340 dagen).
			3210	0	Budget	-3	Op basis van vervaldatum, Op een budget van 209,152 is 156,672 geconsumeerd, dus er is 52,480 over Verdeeld volgens Sigmoid functie (dag 5 van 1340 dagen).
		06-04-2000	3100	0	Budget	-2	Op basis van vervaldatum, Op een budget van 1,474,560 is 1,440,000 geconsumeerd, dus er is 34,560 over Verdeeld volgens Sigmoid functie (dag 6 van 1340 dagen).
			3200	0	Budget	-1	Op basis van vervaldatum, Op een budget van 1,107,968 is 1,087,910 geconsumeerd, dus er is 20,058 over Verdeeld volgens Sigmoid functie (dag 6 van 1340 dagen).

25-06-2008 20:21:27 system, EUR, Jaar, Actuele situatie, Startdatum 01-01-2001, Einddatum 31-12-9999, Niet consolideren Pagina 1 /129

Cash Flows per Cost Category

Enter text here.

1.4.4 CRM

This chapter contains information about the functions which can be found under menu 'CRM'. In this menu you can find Persons and Organizations.

1.4.4.1 Organizations

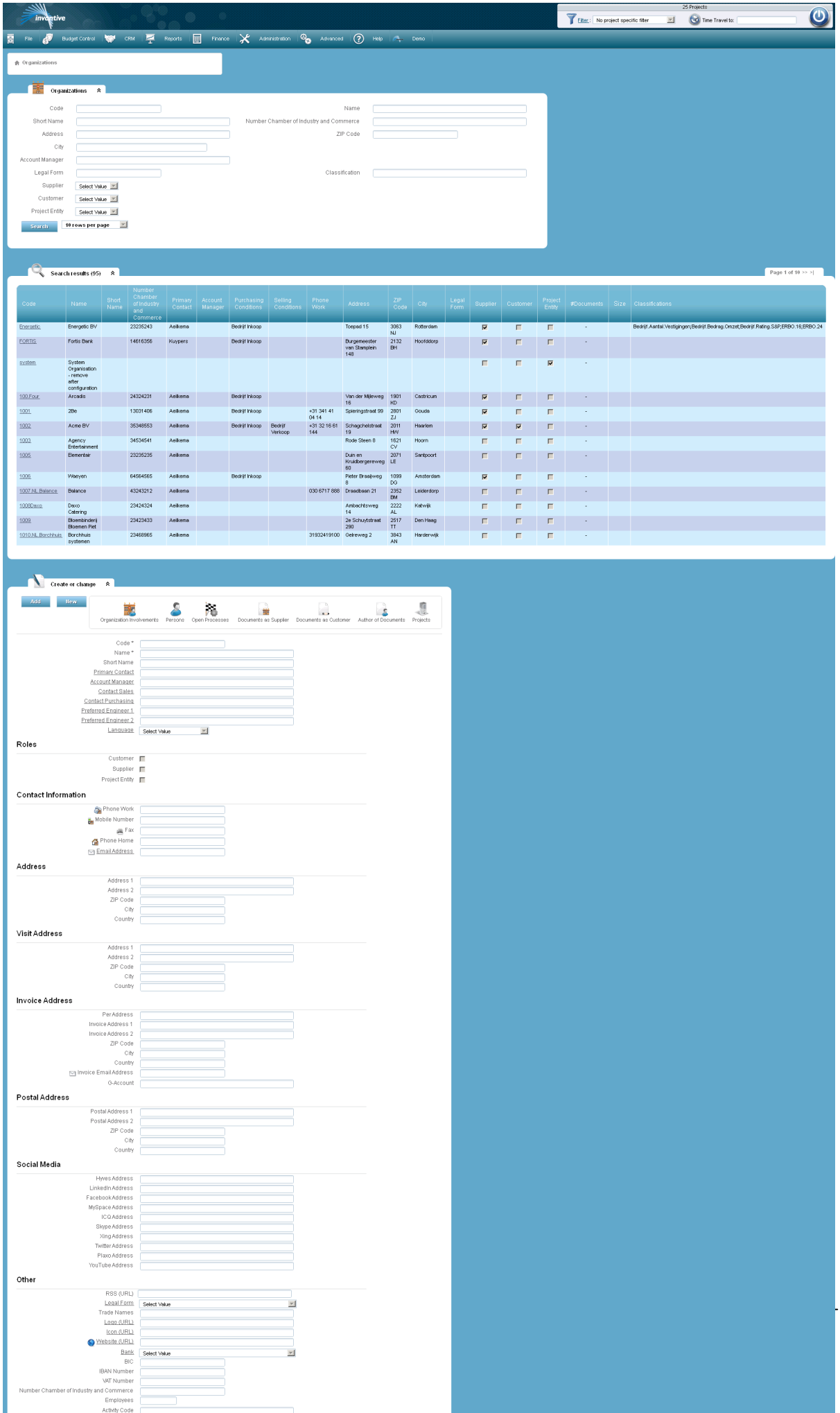
Here you will see screens and reports concerning Organizations.

Organizations

This screen allows you to record and change organizations.

An organization can be used as a project customer, an order taker (supplier), a counterparty of invoices or a project entity of a project. Furthermore, you can use an organization to register other involved organizations.

A supplier is a subcontractor or counterparty who can fulfill an order. Occasionally you will find organizations that in the sense of word are not a real organization. These are the suppliers that are used to allocate costs to, where the costs are not simply allocatable to a legal person. For example, a posting through the memorial to charge general expenses such as property, heating and security to a project.


invantive
25 Projects
Filter: No project specific filter
Time Travel to:
File
Budget Control
CRM
Reports
Finance
Administration
Advanced
Help
Demo
Organizations
Organizations
Code
Name
Short Name
Number Chamber of Industry and Commerce
Address
ZIP Code
City
Account Manager
Legal Form
Classification
Supplier
Select Value
Customer
Select Value
Project Entity
Select Value
Search
10 rows per page
Search results (95)
Page 1 of 10 >> >|
Code
Name
Short Name
Number Chamber of Industry and Commerce
Primary Contact
Account Manager
Purchasing Conditions
Selling Conditions
Phone Work
Address
ZIP Code
City
Legal Form
Supplier
Customer
Project Entity
#Documents
Size
Classifications
Energetic BV 23235243 Aeilkema Bedrijf Inkoop Toepad 15 3063 NJ Rotterdam - Bedrijf.Aantal.Vestigingen;Bedrijf.Bedrag.Omzet;Bedrijf.Rating.S&P;ERBO.16;ERBO.24
FORTIS Fortis Bank 14616356 Kuypers Bedrijf Inkoop Burgemeester van Stampleen 148 2132 BH Hoofddorp -
system System Organisation - remove after configuration -
100 Four Arcadis 24324231 Aeilkema Bedrijf Inkoop Van der Mijleweg 16 1901 KD Castricum -
1001 2Be 13031406 Aeilkema Bedrijf Inkoop +31 341 41 04 14 Spieringstraat 99 2801 ZJ Gouda -
1002 Acme BV 35348553 Aeilkema Bedrijf Inkoop Bedrijf Verkoop +31 32 16 61 144 Schagchelstraat 19 2011 HW Haarlem -
1003 Agency Entertainment 34534541 Aeilkema Rode Steen 8 1621 CV Hoorn -
1005 Elementair 23235235 Aeilkema Duin en Kruidbergerweg 60 2071 LE Santpoort -
1006 Wieyen 64564565 Aeilkema Bedrijf Inkoop Pieter Braaijweg 8 1099 DG Amsterdam -
1007 NL Balance Balance 43243212 Aeilkema 030 6717 888 Draadbaan 21 2352 BM Leiderdorp -
1008Daxo Daxo Catering 23424324 Aeilkema Ambachtsweg 14 2222 AL Katwijk -
1009 Bloembinderij Bloemen Piet 23423433 Aeilkema 2e Schuytstraat 290 2517 TT Den Haag -
1010 NL Borchhuis Borchhuis systemen 23466965 Aeilkema 31932419100 Gelreweg 2 3943 AN Harderwijk -
Create or change
Add
New
Organization Involvements
Persons
Open Processes
Documents as Supplier
Documents as Customer
Author of Documents
Projects
Code *
Name *
Short Name
Primary Contact
Account Manager
Contact Sales
Contact Purchasing
Preferred Engineer 1
Preferred Engineer 2
Language
Select Value
Roles
Customer
Supplier
Project Entity
Contact Information
Phone Work
Mobile Number
Fax
Phone Home
Email Address
Address
Address 1
Address 2
ZIP Code
City
Country
Visit Address
Address 1
Address 2
ZIP Code
City
Country
Invoice Address
Per Address
Invoice Address 1
Invoice Address 2
ZIP Code
City
Country
Invoice Email Address
G-Account
Postal Address
Postal Address 1
Postal Address 2
ZIP Code
City
Country
Social Media
Hyves Address
LinkedIn Address
Facebook Address
MySpace Address
ICQ Address
Skype Address
Xing Address
Twitter Address
Plaxo Address
YouTube Address
Other
RSS (URL)
Legal Form
Select Value
Trade Names
Logo (URL)
Icon (URL)
Website (URL)
Bank
Select Value
BIC
IBAN Number
VAT Number
Number Chamber of Industry and Commerce
Employees
Activity Code

The meaning of the entry fields is:

Code	The code with which the organization is identified.
Name	The name of the organization.
Short Name	The abbreviated name of the organization.
Primaire Contactpersoon	First contact within the organization. Normally this is an employee of the organization.
Salesman	The person who is responsible for the sales to the organization. This will be the account manager if no other persons are assigned.
Contact Sales	Sales contact of the organization.
Contact Purchasing	Purchasing contact of the organization.
Language	Reference to a language as registered in Languages 336.
Roles	
Customer	Can be used in projects as a customer.
Supplier	Can be used as a supplier when entering new orders in Orders 69 or when entering new last estimates in Last Estimates 72. Do not check if the supplier is only used to relate realization figures based on invoice lines, for example, for artificial suppliers for results taken.
Project entity	Can be used as entities in projects.
Preferred Engineer 1	The name of a preferred engineer as registered in Persons 102.
Preferred Engineer 2	The name of an alternative preferred engineer as registered in Persons 102.
Contact Information	
Phone Work	The telephone number where the organization can be reached at work.
Mobile Number	The mobile number where the organization can be reached.
Fax	The fax number of the organization.
Home	The telephone number where the organization can be reached at home.
Email Address	The email address of the organization.
Address	
Address 1	The address of the organization.
Address 2	A second address line.
Zip Code	The zip code.
City	The place where the organization is located.
Country	The country where the organization is located.
Visit Address	
Address 1	The visit address of the organization.
Address 2	A second visit address line.
Zip Code	The zip code of the visit address.
City	The city of the visitor address.
Country	The country of the visitor address.
Invoice Address	
Per Address	Option to use an aberrant invoice address that does not belong to the organization. For example, an address of the main office or of an administrative office.
Invoice Address 1	Address that is used for invoicing.
Invoice Address 2	Alternative address that can be used for invoicing.
Zip Code	The zip code of the invoice address.
City	The city of the invoice address.
Country	The country of the invoice address.
Invoice Email Address	The email address which is used for billing.
G account	The G account number of the organization. A G-account is a blocked bank account that can be used by contractors to pay income taxes (with or without VAT) of their employees to the tax authorities or to subcontractors. From a G account you cannot make other payments. The account protects parties against defaults of wage taxes.
Postal Address	

Postal Address 1	Postal address of the organization.
Postal Address 2	Second address line.
Zip Code	The zipcode of the postal address.
City	The city of the postal address.
Country	The country of the postal address.
Other	
Legal Form	Reference to a legal form as registered in Legal Forms 204.
Trade Names	Trade Names that the organization uses.
Logo (URL)	The Internet address where the logo can be requested. The logo is after 'Update Contacts' also visible in Microsoft Outlook. The resolution for Microsoft Outlook should preferably be at least 72x72 pixels.
Website (URL)	The Internet address of the website.
IBAN Number	The 'Internationaal Banc Account Number' of the organization. The IBAN identifies an individual bank account and is used in cross border payments.
VAT Number	The VAT number of the organization that is intended to settle the VAT with the tax authorities.
Number C. of C.	The number with which the organization is registered at the Chamber of Commerce.
Employees	The number of employees of the organization.
Activiteitscode	The code that indicates the kind of economic activity of the organization such as 'NAICS' encoding. NAICS is an abbreviation for North American Industry Classification System and was introduced in 1997. NAICS offered enhanced coverage of the service sector, relative to SIC (Standard Industrial Classification). The system is designed to be largely compatible with the United Nations Statistical Office's International Standard Industrial Classification System (ISIC). Versions are released every five years.
Activity Description	Description of the activity of the organization.
Date Established	The date of creation of the organization as a legal entity.
Repealed	Potential date on which the organization was dissolved as a legal entity.
Date of Last Review	The date the last review of the data of the organization took place. The date of last review provides an indication of the reliability of the data. Usually when the data becomes older, it will be less reliable.
Next Review	The date the next review of the data of the organization is planned.
VAT Code	Reference to a VAT code as registered in VAT codes 190.
Purchasing Conditions	Purchasing conditions as registered in Conditions 219.
Selling Conditions	Selling conditions as registered in Conditions 219.
Remarks	Any additional information about the organization can be included in this field.
IP Address List	List of IP addresses that are used by the organization.
Documents	Linked documents, see Linking Documents 33.
Classifications	
Classification	The class in which the organization can be classified. Some examples of classes in which organizations can be classified are: construction; accounting offices; retailing etc.
Relationships	
Relationship Type	The kind of relationship that an organization has with 'other organizations'. For example, this could be: in competition with; gets delivered by; majority of shares owned by; etc..
Related Organization	Indicates to what other organization(s) the organization is related.
Weight	The importance of the related organization in this type of relationship. The weight is held in a relationship, for example, for shares etc.

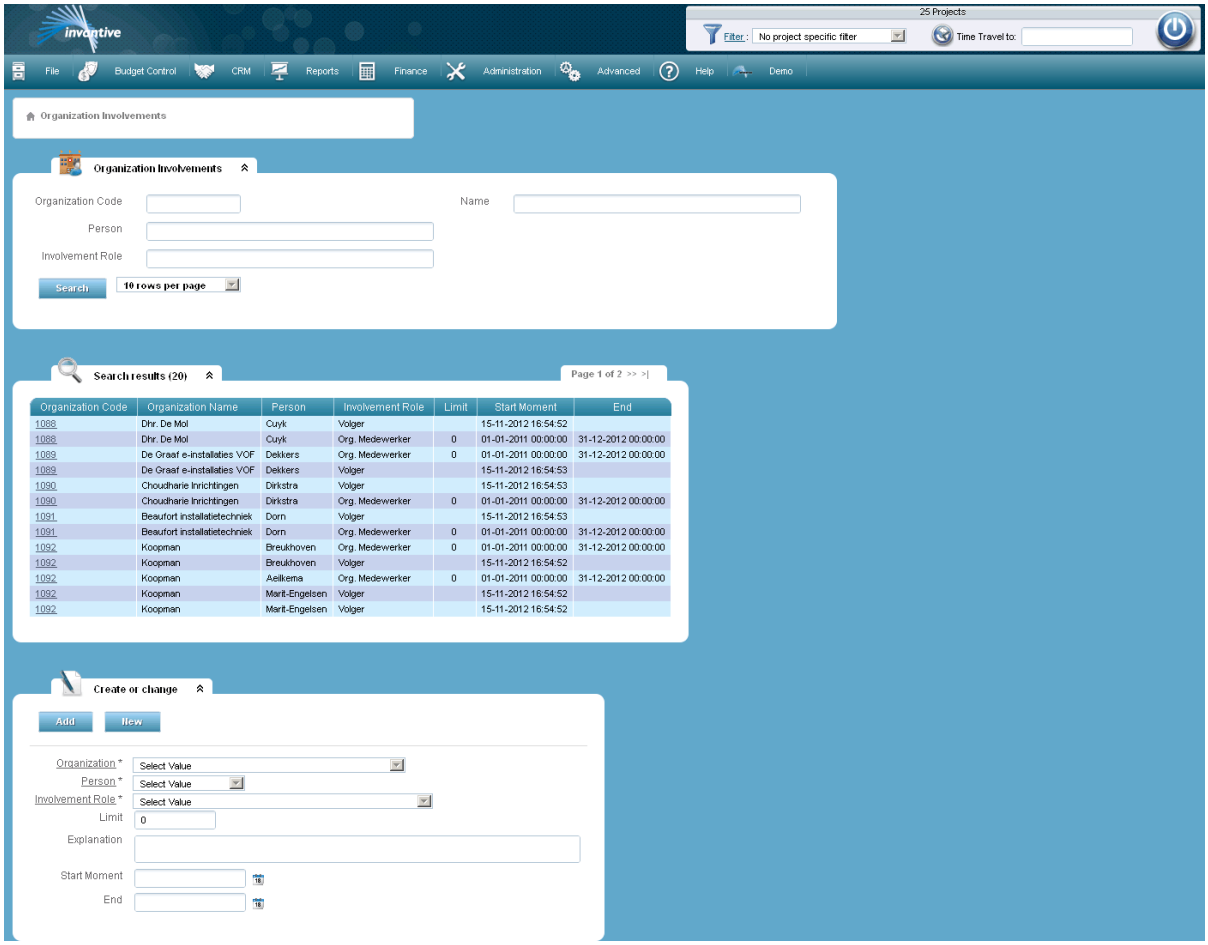
The significance of the action buttons:

Invoice Lines	Opens the screen containing all invoice lines of the selected organization.
Organization Involvements	Opens the screen containing participations of the organization.
Persons	Opens the screen containing the people of the organization.
Open Processes	Opens the screen containing the open processes of the organization.
Documents as Supplier	Opens the screen containing the documents of the organization in the role of the supplier.
Documents as Customer	Opens the screen containing the documents of the organization in the role of the customer.

Author of Document	Opens the screen containing the documents of the organization in the role of the author.
Projects	Opens the screen containing the projects of the organization.

Organization Involvements

In this screen you can register and change organization involvements.



The meaning of the entry fields is:

Organization	Reference to an organization as registered in Organizations 98.
Person	Reference to a person as registered in Persons 102.
Involvement Role	The role the person performs in relation to the organization.
Limit	Deviating limit used for managing w orkflow transitions.

1.4.4.2 Persons

Here you will see screens and reports concerning Persons.

Persons

This screen lets you record and people change.

A person is a physical person who makes use ofInvantive Vision (a ‘user’) or from who data is registered in Invantive Vision. A person can be an employee of your organization, but also a relationship with a supplier or a private individual.

Persons with a username can use the application. However, to use reports or screens, they need to get roles (see Role Authorisations 165) and possibly get access to projects (see Project Authorisations 163).

Note that a special user named ‘system’ exists. This user normally is solely used to install the application or its newer versions and to initially create the first users. This user cannot be deleted and has unlimited access to all screens and information.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Persons

Persons

Name

Organization | Function

Email Address | Classification

Search | 10 rows per page

Search results (76)

Page 1 of 8 >> >|

Name	Organization	Function	Email Address	Mobile Number	Work	Documents	Size	Unique Initials	Classifications
Aeilkema	AXA	Regiomanager	Frans.Aeilkema@AXA.nl	+31635123689	+31 60 48 66 132			AEI	
Born van der	Steiner & van Blokker	Accountmanager	Marieke.Bornvander@SteinerenvanBlokker.nl	+31635776054				BOR	
Breukhoven	Cees Middelkoop bna	Communicatie	Winny.Breukhoven@CeesMiddelkoopbna.nl	+31636428419				BRE	
Brouns	Nationale Nederlanden	Sr. Channel Manager - General Business Sales	Peter.Brouns@NationaleNederlanden.nl	+31635123689				BRO	
Cuyk	Waeyen	Chief Executive	Edwin.Cuyk@Waeyen.nl	+31635776054				CUY	
Dekkers	Dhr. De Mol	Teammanager verwerving	M.Dekkers@DeMol.nl	+31636428419	+31 40 68 11 702			DEK	
Dirkstra	Moevenpick	Projectmanager Investeringsbevordering	Dirkstra@Moevenpick.nl	+31635123689				DIR	
Dorn	Acme BV	Consultant Exact	Roberto.Dorn@Acme BV.nl	+31635776054				DOR	
Engel	Buma	Helpdesk Teamleider	Henk.Engel@Buma.nl	+31636428419				ENG	
Fasen	Agency Entertainment	Account Manager	Melvin.Fasen@AgencyEntertainment.nl	+31635123689				FAS	
Foppe	Mw. Yard	RA	Robert.Foppe@Yard.nl	+31635776054				FOP	
Groot De	FUGRO	Manager marketing en acquisitie - Economische Zaken	Dieter.GrootDe@FUGRO.nl	+31636428419				GRO	
Habets	Holland Railconsult	Senior Projectontwikkelaar	Ralf.Habets@HollandRailconsult.nl	+31635123689	+31 491 31 12 86			HAB	

Create or change

Add | New

Open Processes | Author of Documents | User Roles

Name

Name *

Gender * Select Value

First Name

Calling Name

Name Initials

Unique Initials

Middle Name

Last Name

Function

Organization

Language Select Value

Manager

Department

Room

Titles

Employee Number

IP Address List

Contact Information

Email Address 1

Email Address 2

Email Address 3

Email Address 4

Work

Work Extension

Mobile Number

Phone Home

Fax

SIP Address

Email Address for Workflow

Address

Address 1

Address 2

ZIP Code

City

Country

City of Birth

Country of Birth

Social Media

Hyves Address

LinkedIn Address

Facebook Address

MySpace Address

ICQ Address

Skype Address

Xing Address

Twitter Address

Plaxo Address

YouTube Address

Other

RSS (URL)

Website (URL)

Date of Birth

Date of Marriage

Date of Death

Partner

Children

Nickname

Hobbies

Bank Select Value

BIC

IBAN Number

Social Security Number

The meaning of the entry fields is:

Name	
Name	The name of the person.
Gender	The gender of the person.
First Name	The first name.
Initials	Initials of the name, for example 'J.E.'.
Unique Initials	The unique abbreviation of the name. The initials are used in reports or in screens when there is not enough space available to show the whole name.
Middle Name	Middle name of the name, for example 'van de'.
Surname	Surname.
Function	The function of the person within the company.
Organization	The organization where the person is employed.
Business	The organization where the person is employed, see Organizations 98.
Language	Reference to a language as registered in Languages 336.
Manager	The manager or supervisor of the person.
Department	The department to which the person belongs.
Room	The room where the person has its workplace.
Titles	Possible titles of the individual.
Employee Number	Identification number of the person within the organization where the person is employed.
IP Address List	List of IP addresses used by this person.
Contact Information	
Email address 1	The email address of the person.
Email Address 2	A second alternative email address of the person.
Email Address 3	A second alternative email address of the person.
Email Address 4	A fourth alternative email address of the person.
Work	The telephone number of the person at work.
Work Extension	The extension number of the person at work.
Mobile Number	The mobile number of the person.
Home	The phone number where the person can be reached at home.
Fax	The fax number of the person.
SIP Address	Het SIP address of the person
Email Address for Workflow	The email address receiving the emails that are generated by the workflow. The application uses this email address in case it needs to send messages to the user.
Address	
Address 1	Address of the person (for example, street and house number)
Address 2	Extra address line, in case needed.
Zip Code	Postal code.
City	Place of residence
Country	Country of residence.
City of Birth	City of birth.
Country of Birth	Country where the person was born.
Social Media	
Hyves Address	Het Hyves address of the person.
LinkedIn Address	Het LinkedIn address of the person.
Facebook Address	Het Facebook address of the person.
MySpace Address	Het MySpace address of the person.
ICQ Address	Het ICQ address of the person.
Skype Address	Het Skype address of the person.
Xing Address	Het Xing address of the person.
Twitter Address	Het Twitter address of the person.
Plaxo Address	Het Plaxo address of the person.

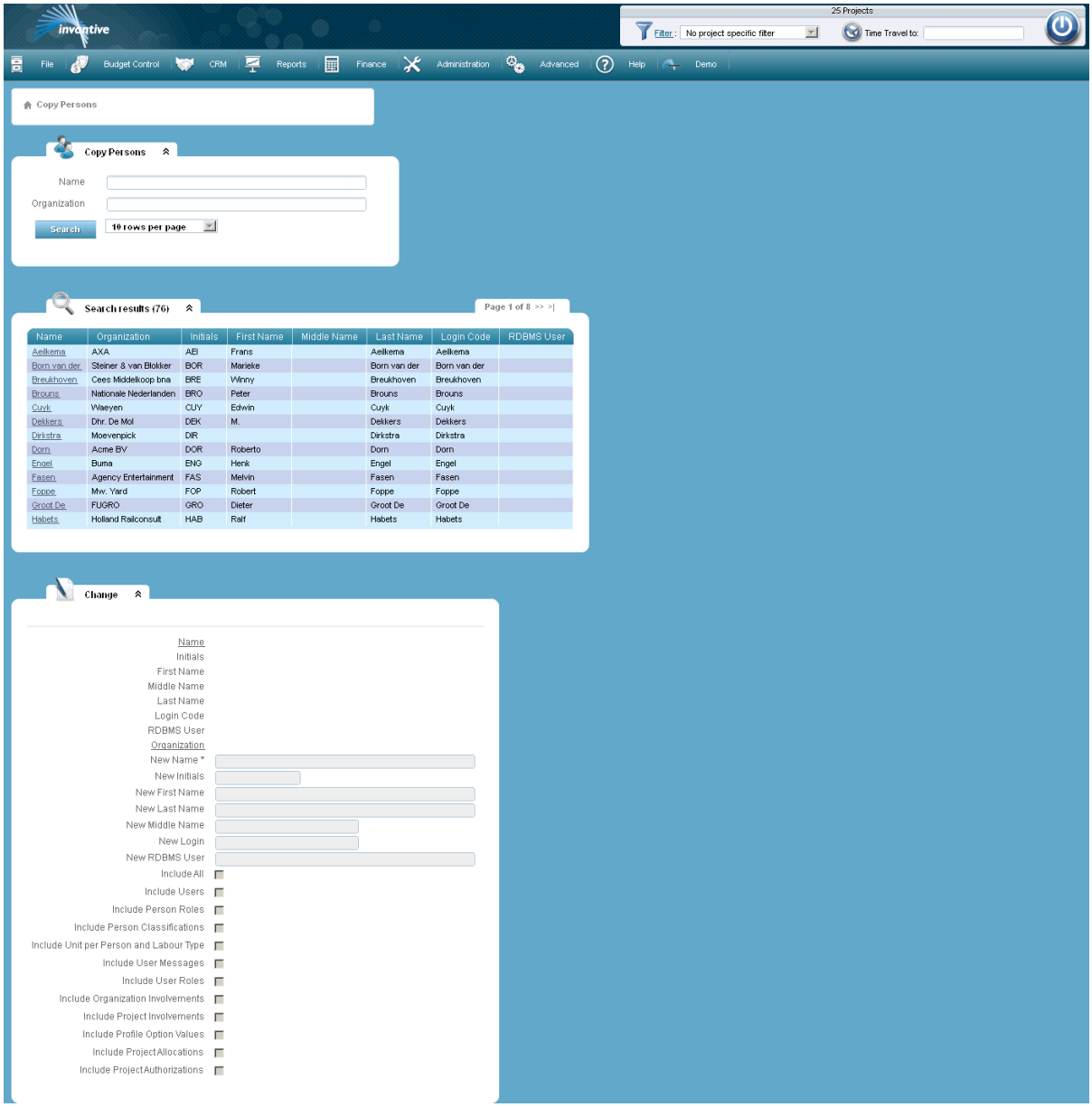
YouTube Address	Het YouTube address of the person.
Other	
Website (URL)	The URL of the personal website.
Date of Birth	The date of birth of the user.
Wedding Date	The date of the last marriage.
Date of Death	The date of death.
Partner	The name of the partner.
Children	The names of any children, separated by a randomly chosen separator.
Nickname	The nickname.
Hobbies	The hobbies.
IBAN Number	The IBAN of the bank account of the person.
Social Security Number	The SSN is a unique personal number. It is used for identification and tax purposes. The Social Security Number consists of 9 digits. Unlike many similar numbers, no check digit is utilized.
Signature (URL)	The Internet address of the image of the signature.
Passport Photo (URL)	The URL of the passport photo of the person. This URL can be used in 'online directories'. The passport photo is after 'Update Contacts' also visible in Microsoft Outlook. The resolution for Microsoft Outlook should preferably be at least 72x72 pixels.
RDBMS User	The RDBMS user name associated with this Invantive Vision user. Is used to automatically log in when you use your own reporting software.
Internal Rate	The internal rate of the person.
Working Schedule	The working schedule of the person, see Working Schedules 181.
Date of Last Review	The date the last review of the person took place. The date of last review provides an indication of the reliability of the data. Usually when the data becomes older, it will be less reliable.
Remarks	Free text box where notes on the person can be added.
Documents	Linked documents, see Linking Documents 33.
Allow Emails	When checked, the person authorized to unsolicited commercial emails.
Date Emails Allowed	The date the person has given permission for unsolicited commercial emails.
Emails Allowed Evidence	The evidence in the form of an IP address, a URL or a text showing that the person has given permission for unsolicited commercial emails.
Classification	The classification of the process. A classification is a label that can be linked to a project, an organization, a process, a document or a person. Using these labels you can find your information more efficient.

The significance of the action buttons:

Open Processes	Opens a window with all the processes whose process holder is the person selected.
Author of Document	Opens a window with all the documents whose author is the person selected.
User Roles	Opens the screen containing all user roles of the selected person.

Copy People

In this screen you can copy the settings that are associated with an existing Invantive Vision user to a new user. In this way you can efficiently add new users in Invantive Vision.



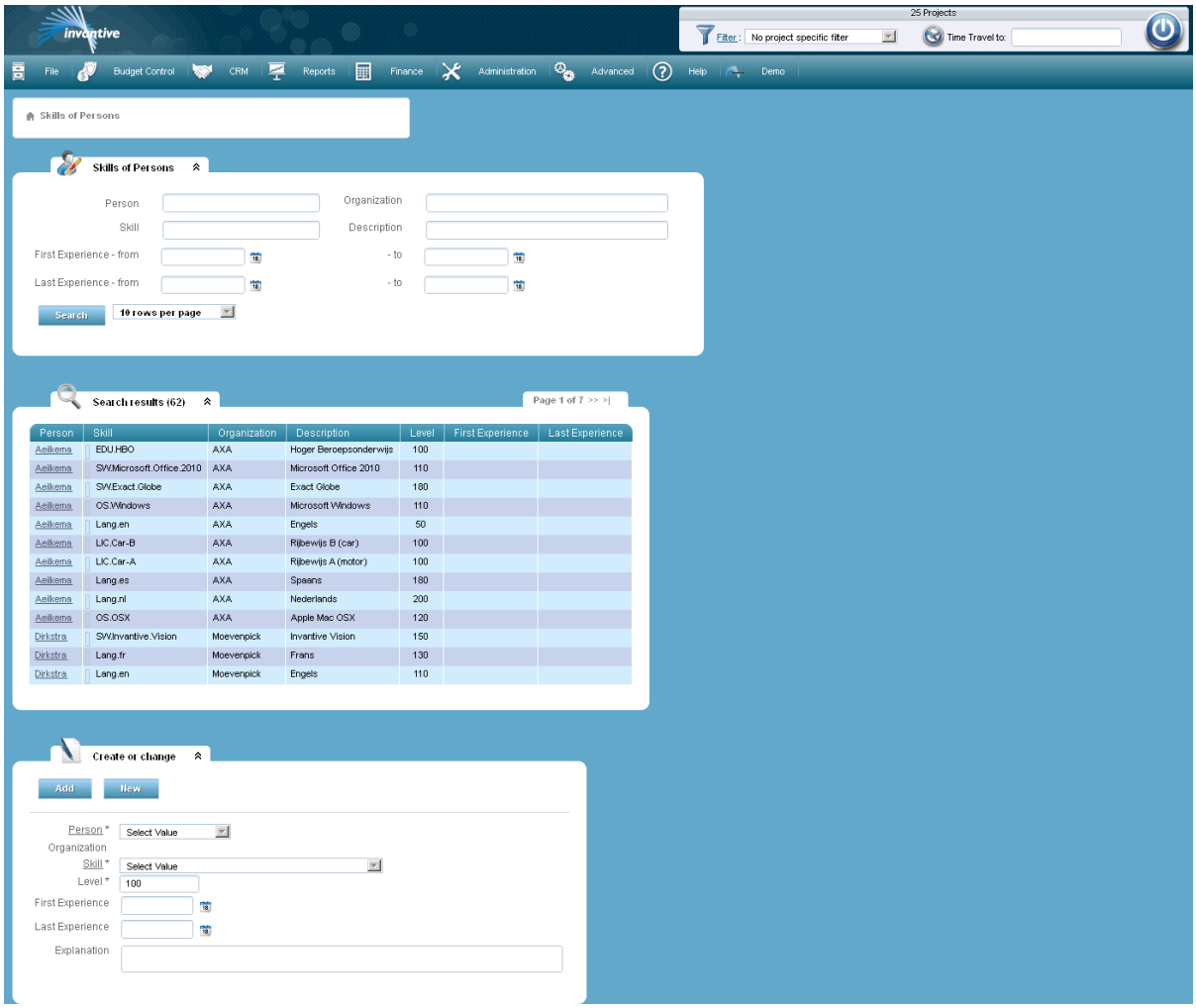
The meaning of the entry fields is:

New Name	The name of the new user.
New Initials	The initials of the new user.
New First Name	The first name of the new user.
New Last Name	The last name of the new user.
New Middle Name	The possible middle name in the name of the new user.
New Login	The username of the new user.
New RDBMS User	The new RDBMS user that is linked to the Invantive Vision user. The RDBMS user is used to automatically log on reporting software.
Include All	If checked, all items listed below will be copied.
Include Users	If checked, then the users will be copied.
Include Person Roles	If checked, then the person roles will be copied.
Include person classifications	If checked, then the person classifications will be copied.
Include Unit per Person and Labor Type	If checked, the unit per person and labor type will be copied.
Include User Roles	If checked, then the user roles will be copied.

Include Organization Involvements	If checked, then the organization involvements will be copied.
Include Project Involvements	If checked, then the project involvements will be copied.
Include Profile Option Values	If checked, then the profile option values will be copied.
Include Project Allocations	If checked, then the project allocations will be copied.
include Project Authorizations	If checked, then the project authorizations will be copied.

Personal Skills

In this screen you can register and change personal skills.



The meaning of the entry fields is:

User	Reference to a person as registered in Persons 102.
Skill	Reference to a skill as registered in Skills 208.
Level	Numeric value that indicates the productivity of that person in comparison with other persons with the same skill.

1.4.4.3 Documents

Here you will see screens and reports on Documents.

Documents

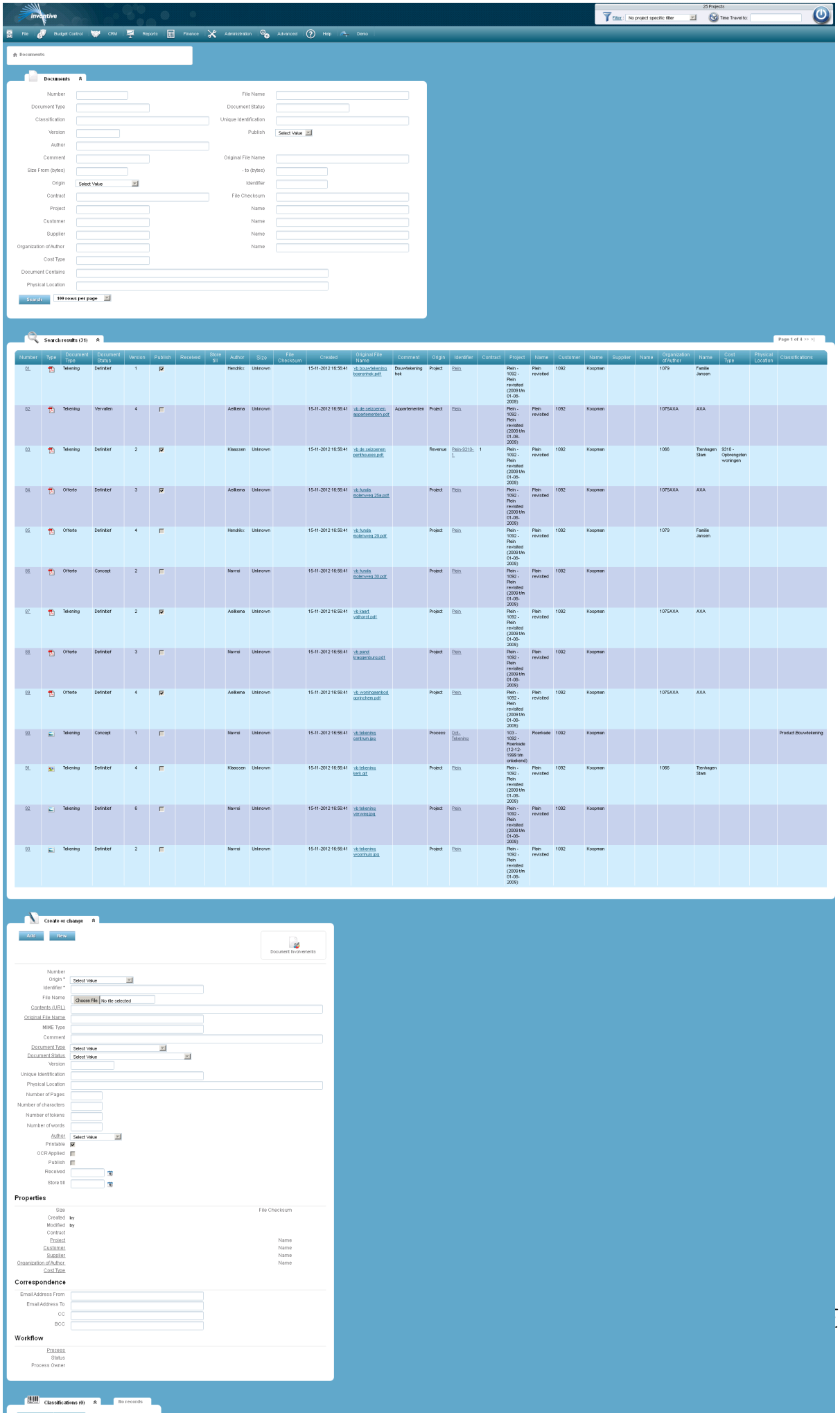
In this form you can register and change documents.

Documents can be physically stored in Invantive Vision or exist of URL's that refer to information that is stored outside Invantive Vision.

There are three links presented in the search results:

- By selecting the unique document number, the selected document will open in the input section.
- By selecting the original file name, the document will be opened.
- By selecting the feature, the corresponding data will be opened, such as a project, an order or a process.

You can only request documents that are linked to information where you have access to and where you also have rights to the source documents (for example; project documents). For example, if you have access to project XYZ, then you can see all documents of this project. However, if you do not have access to project ABC, then you cannot see documents of this project.


Documents
Search results (31)
Create or change
Classifications (0)

The meaning of the entry fields is:

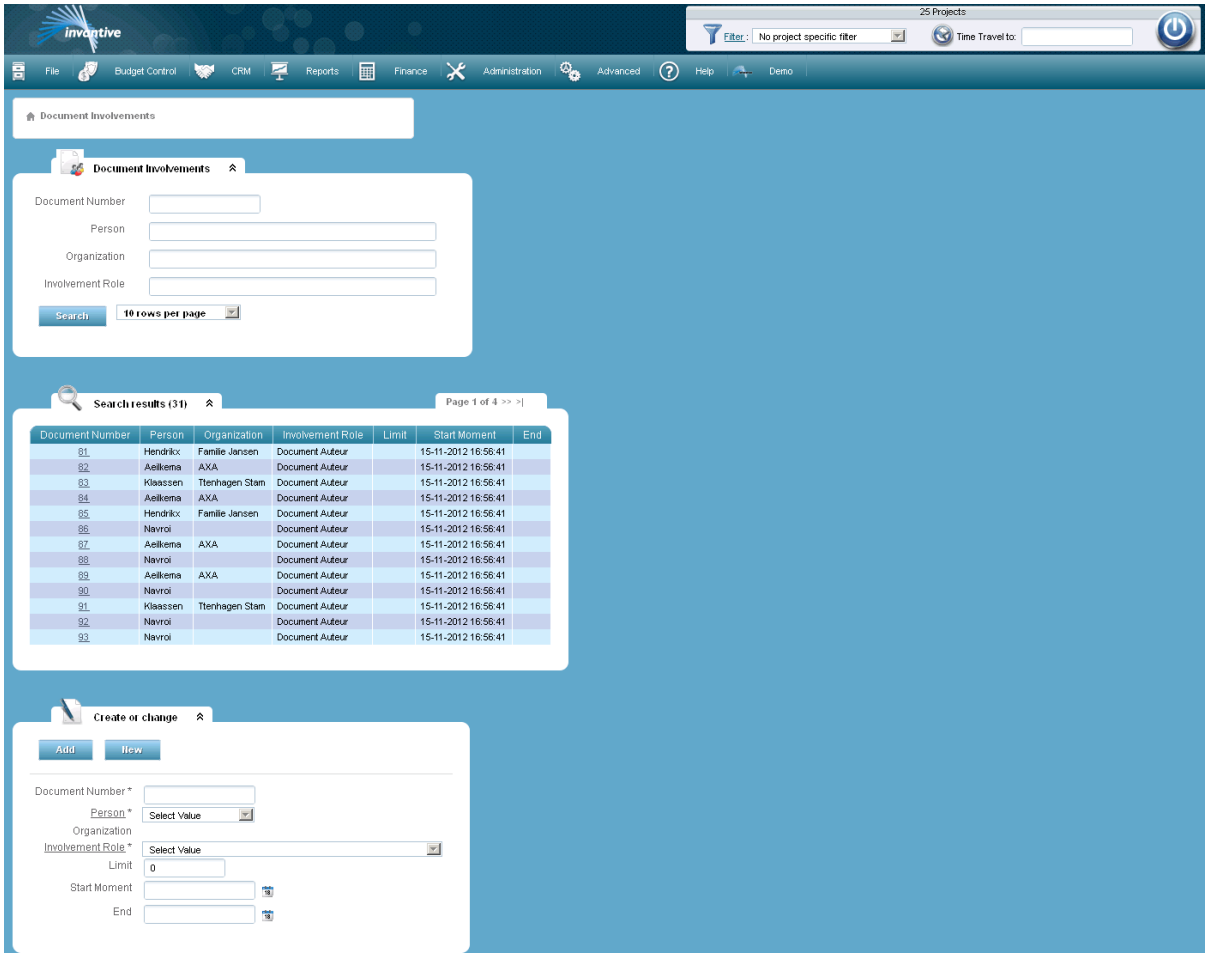
Parent	The source of the document, for example, a project, an assignment, a process, etc.
Identifier	The unique number of the kind of data to which you want to link the document. This could be a project code, for example. This field is automatically filled when you open this screen via a 'Documents' link in another screen.
File Name	The file that you want to load or which is already stored.
Content (URL)	The Internet address of the screen where a link to the document is included.
Original File Name	The name of the document in an earlier stage.
MIME Type	The MIME-type of the document as specified by the client where the file will be uploaded. See media types.
Comments	An explanation of the content or meaning of the file.
Document Type	Reference to the document type as registered in the screen Document Types 202.
Document Status	The current status of the document.
Version	Displays the version of the document.
Unique Identification	Unique alphanumeric code, for example, the scan code.
Physical Location	Physical location of the original file.
Number of Pages	The number of pages of the document.
Number of Characters	The number of character in the document.
Number of tokens	The number of keywords in the document.
Number of words	The number of words in the document.
Author	The author of the document.
Printable	Can the document be printed? Some documents are only for user interface purposes.
OCR applied	When checked the document scanning technique 'Optical Character Recognition' was applied when the document was stored. OCR is a technique to create digitally text out of images, so that these can be further processed on a computer.
Publish	Indicator whether the document should be displayed to users who have a role that does not allow to see all documents. The administrator can indicate in the screen Roles 164 if the user is allowed to see all documents with the indicator 'May See All Documents'.
Received	Shows the date the document was physically received, for example, via conventional mail.
Store till	Shows the date on which the document can be destroyed because the administrative or legal retention period has expired.
Classification	Classification of the document. A classification is a label that can be linked to a project, an organization or a document. Using these labels you can find your information more efficient.
Document Contains	A text that you want to use to search the contents of all visible documents. The text may be expressed as an expression in Oracle Text. Often used search queries are: • 'area': documents containing the word 'area'. • 'area or surface': documents containing the word 'area' or the word 'surface'. • 'area or surface * 3': documents containing the word 'area' or the word 'surface' where the occurrence of the word 'surface' counts three times as heavy as the word 'area'. • 'area' and 'surface': documents containing both the word 'area' and the word 'surface'. • '?area': documents with both the word 'area' and words that look like 'area'. • 'area-surface': documents containing the word 'area' but preferably without the word 'surface'. • 'area;surface': documents containing the word 'area' near to the word 'surface'. • 'area not surface': documents containing the word 'area' but preferably without the word 'surface'. • '$area': documents containing the word 'area' and inflections from it like for example 'areas'. • '% area': documents containing all terms that begin with 'area'. • 'area or (surface and feet)': documents containing the word 'area' or containing a combination of the words 'surface' and 'feet'.
Size From (bytes)	The lower limit of the size of the document in bytes.
Size - to (bytes)	The upper limit of the size of the document in bytes.

The meaning of the other fields:

Number	The unique number of the document.
Properties	
Size	Size of the document in bytes.
File Checksum	Checksum created by Invantive Vision using the MD5 algorithm. MD5 (Message Digest Algorithm 5) is a widely used cryptographic hash function with a 128-bit hash value. Using the checksums the system can check to see if there are any duplicate files in existence.
Created with	Date the document was created and a reference to the person on the system that saved the file.
Modified with	Date the document was modified and a reference to the person on the system that saved the file.
Contract	The contract to which the document relates to.
Project	The code of the project to which the document relates to.
Name	The name of the project to which the document relates to.
Customer	The code of the customer of the project to which the document relates to.
Name	The name of the customer of the project to which the document relates to.
Supplier	The code of the contractor of the project to which the document relates to.
Name	The name of the contractor of the project to which the document relates to.
Organization or Author	The code of the organization or the author which own the documents copyright.
Name	The name of the organization or the author which own the document copyrights.
Cost Type	The cost category to which the document relates to.
Email	
Email Address From	The email address that sent the email. Provided by the Invantive Vision for Outlook.
Email Address To	The email address to which the email was sent. Provided by the Invantive Vision for Outlook.
CC	The email address to which the email was sent as CC. Provided by the Invantive Vision for Outlook.
BCC	The email address to which the email was sent as BCC. Provided by the Invantive Vision for Outlook.
Workflow	
Process	Reference to a process as registered in Processes 58.
Status	Reference to a status of a process as registered in Processes 58.
Process Holder	Reference to a process holder as registered in Processes 58.

Document Involvements

In this screen you can register and change document entries.



The meaning of the entry fields is:

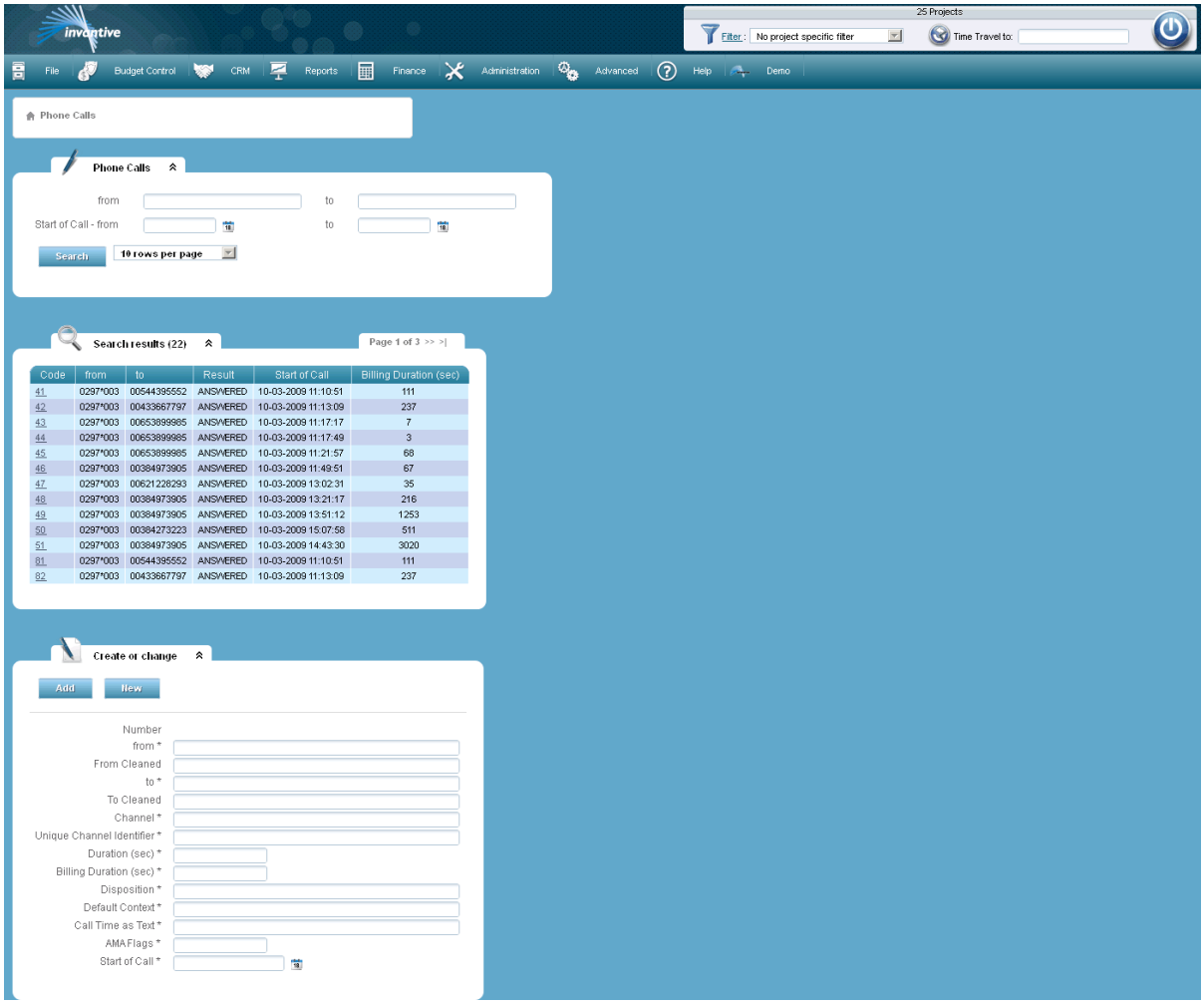
Document Number	Reference to a document as registered in Documents 109.
Person	Reference to a person as registered in Persons 102.
Involvement Role	The role the person performs in relation to the document.
Limit	Deviating limit used for managing w orkflow transitions.

1.4.4.4 Telephone conversations

Here you will see screens and reports concerning Telephone conversations.

Telephone conversations

In this screen,telephone conversations can be registered also those that originate from the telephone exchange.



The meaning of the entry fields is:

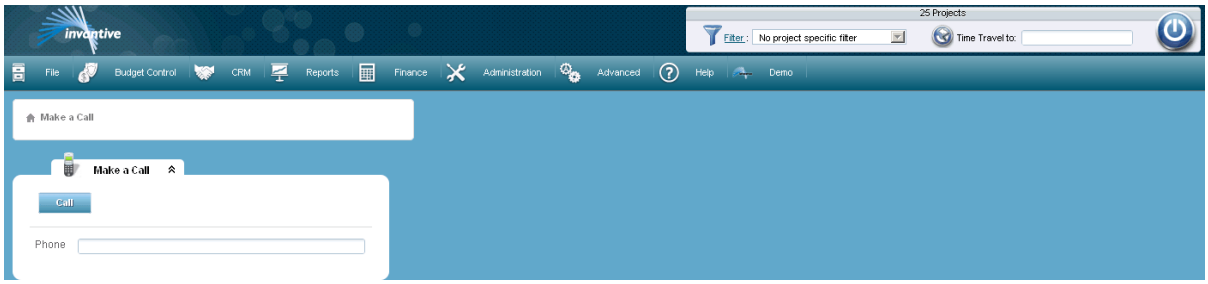
Number from	Source number of the connection.
From Cleaned	Source number of the connection, cleaned by an additional business rule 266.
Number to	Target number of the connection, cleaned by an additional business rule 266.
To Cleaned	Target number of the connection.
Channel	The channel that was used to establish the call.
Unique Channel Identifier	Unique feature of the channel.
Duration (sec)	Duration of the call in seconds.
Billing Duration (sec)	Duration of the call in seconds used to determine the cost.
Disposition	Indicates what happened with the call.
Default Context	Default context of the call.
Call Time as Text	Date and time the call was initiated, delivered in text format by the source system.
AMA Flags	AMA is an abbreviation for: Automated Message Accounting. The next values are available: • 1 = Omit, do not record the conversations. • 2 = Charge, charge the call. • 3 = Archive, this is the default value, indicates that the interview should be archived.
Start Call	Date and time the call was started.

Make a Call

This screen allows you to call if you have the necessary facilities and Invantive Vision is connected to a PBX. The screen uses the technique Computer Telephony Integration (CTI). This technique connects a PBX with a computer. This will allow you to manage telephone calls with the computer.

Using CTI has the following advantages:

- Personal and rapid approach of the customer. The customer is immediately recognized by using his phone number. It is also possible with use of a report of unanswered calls to call back the customers the same day. This service enhances the customer friendly image.
- Efficiency related to time savings. All customer information is instantly available making that the interview time is reduced. The outgoing telephone traffic is achieved by a mouse click from Invantive. This makes entering phone numbers unnecessary.
- Comfort and stress reduction. For incoming calls, a popup appears that shows all relevant information about the relationship. Additional info can be added during the interview. The notes can be stored and consulted at a next contact.
- Cost Savings. The utilization of staff can be adjusted at peak times. The telephone traffic is fully registered. To dial via your PC and using the automatic popups results in a considerable time efficiency and that means cost savings.
- Better accessibility. The accessibility of your company is best when using CTI . No long waiting times thanks to efficient communication.



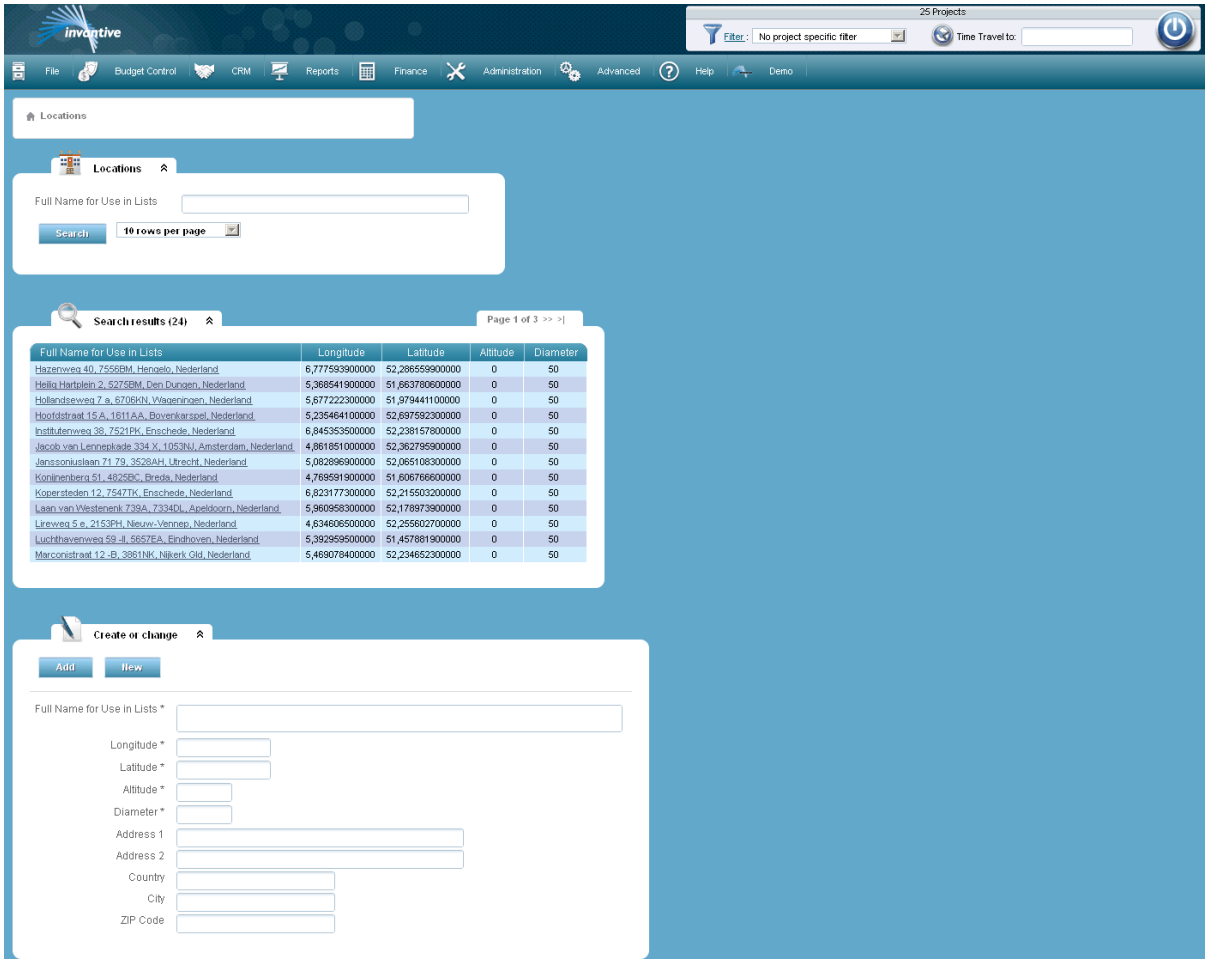
The meaning of the entry fields is:

Telephone	The telephone number

1.4.4.5 Locations

In this screen you can register and change the geocode from locations.

A geocode is a geographical code that identifies a point or area on the earth's surface.



The meaning of the entry fields is:

Full Name for Use in Lists	The full name for use in reports and lists.
Longitude	The longtitude. Together w ith the latitude it is a geographical position indication
Latitude	The latitude. Together w ith the longtitude it is a geographical position indication
Altitude	The altitude of the location
Diameter	The diameter of the location in meters.
Address 1	Address of the location.
Address 2	A second address line.
Zip Code	The zip code.
City	The city name of the location.
Country	The country of the location.

1.4.5 Reports

This section contains information about the functions which can normally be found under the menu item ‘Management Information’. This chapter contains information about the reports for financial management and control. These functions are normally used by the project developers and the financial department.

Aggregation levels

Invantive Vision offers you reports on four different levels of aggregation. Level four provides the most detailed information, while level one is the most summarized version.

Calculation Deviation

The main function of Invantive Vision is determining the prognosis of the result of a project. The difference between the prognosis and the budget is called ‘deviation’.

A project has several sides when looking from a financial point of view:

- The initial prognosis of the result (the budget).
- The actual outcome of the result (the result).
- The interim estimate of the ultimate outcome (prognosis and its deviation from the budget).

The initial prognosis is usually determined by a project developer as an exposé which becomes a project after being approved. In the end, you can read from your general ledger what the final result has been. However, projects can take years and large fluctuations between the prognosis and the final outcome are not unusual if project results are not placed under tight control. Invantive Vision support you in managing and controlling project results based on the information known at reporting time.

Prognosis End of Work

The financial results (the so called ‘Prognosis End of Work’) of a project consists of:

The expected revenues

-

The expected costs

For finance, an other financial result is determined, namely taking into account the amount already processed in the results of the organization while the project is still running. This is, for example, important with an administration following the IFRS rules. In that case the result consists of:

The expected revenues

-

The expected costs

-

The already taken result

The expected revenues are the sum of the expected revenues registered on all costs types in the master roll ups of the type ‘Revenues’.

The expected costs are the sum of the expected costs registered on all costs types in the master roll ups of the type ‘Costs’.

The already taken result consists of the sum of all invoice lines registered on costs types in the master roll ups of the type ‘Results’.

Deviation from a Cost Category

The deviation of a cost category is determined by the following calculation rules:

Depending of the project settings for the ‘release of deviations’ (see Projects 130) only negative or also positive balances are included in the calculation of the deviation of a cost category:

- Displaying is turned on for the entire project: for all cost categories negative and positive remainders are included.
- Display is turned on for 'Cost Category' for the entire project. If display for cost category is turned on or revenues are involved, then positive and negative remainders are included. If display for cost category is turned off and no revenues are involved, then positive and negative remainders are replaced by 0.

The remainder before the settings regarding displaying are executed, is calculated as follows:

Cost category budget

-

Approved budgets on specific contracts

-

Spend budget outside the contracts with specific budgets

+

Deviation contract with specific budgets

The deviation for contracts with specific budgets, is calculated as follows:

contract budget

-

Spend budget

The budget spent on contracts are calculated as follows:

The largest of:

- Latest estimate, if present.
- If the absolute amount on invoices with orders is greater than the absolute amount of orders, contracted revenues or budgeted revenues: then take the amount of invoices with order.
- If the revenue is not bound to a contract yet (only budgeted), there are invoices attached and the revenue has the attribute '1 period': take then the amount of invoices with order.
- If not, take the amount for orders, contractual revenues or budgeted revenues. Plus the amount for invoices without order.

Merging Subprojects

Master projects consist of several subprojects, with each subprojects having its own financial administration. Within the master project no financial numbers can be registered. Usually subprojects are separately financially reported. However, if in My Preferences 45 the option 'Merge Subprojects' is turned on, then only master projects and independent projects are reported. The deviation of a master project is calculated as follows:

- Take a subproject.
- Make the cost category unique by assigning a unique prefix.
- Calculate the deviation like normal.

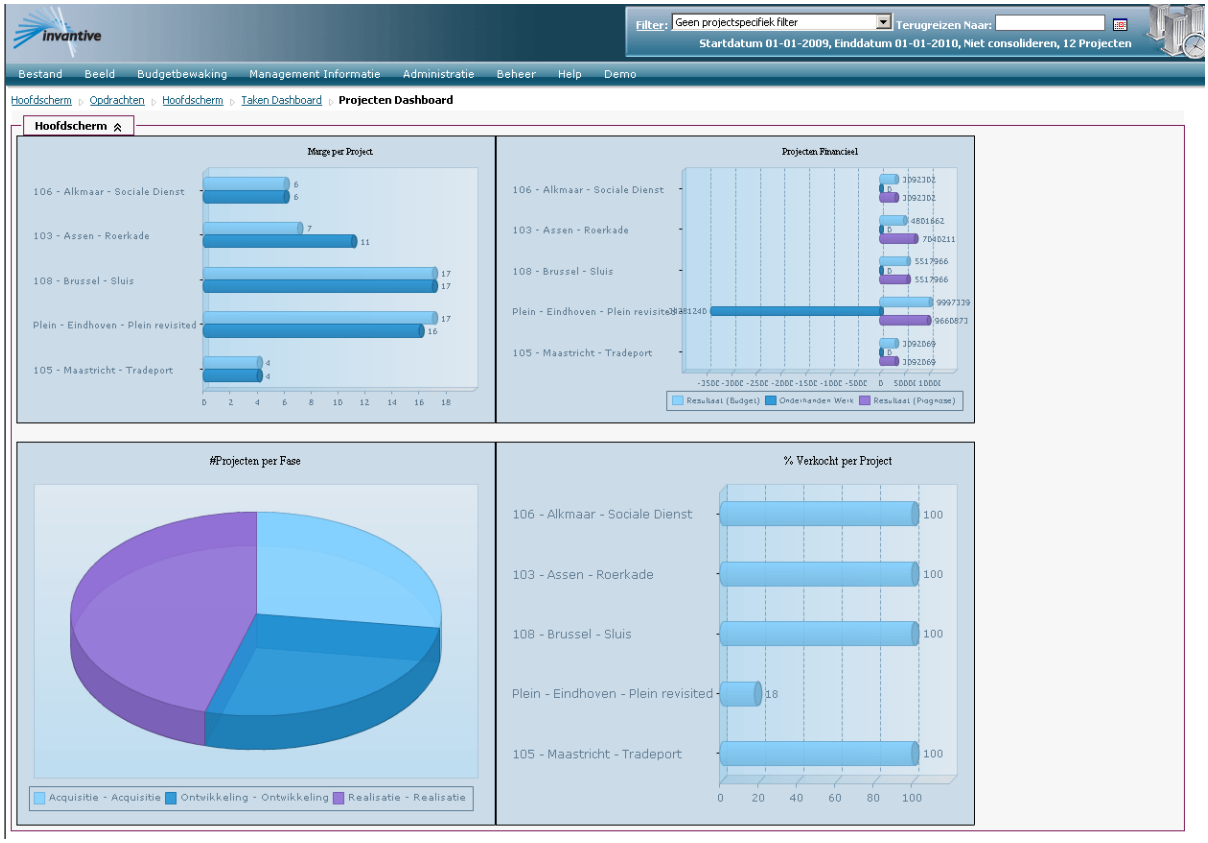
- Do the same for all subprojects.
- Offset all deviations.

1.4.5.1 Dashboard

Here you will see dashboards.

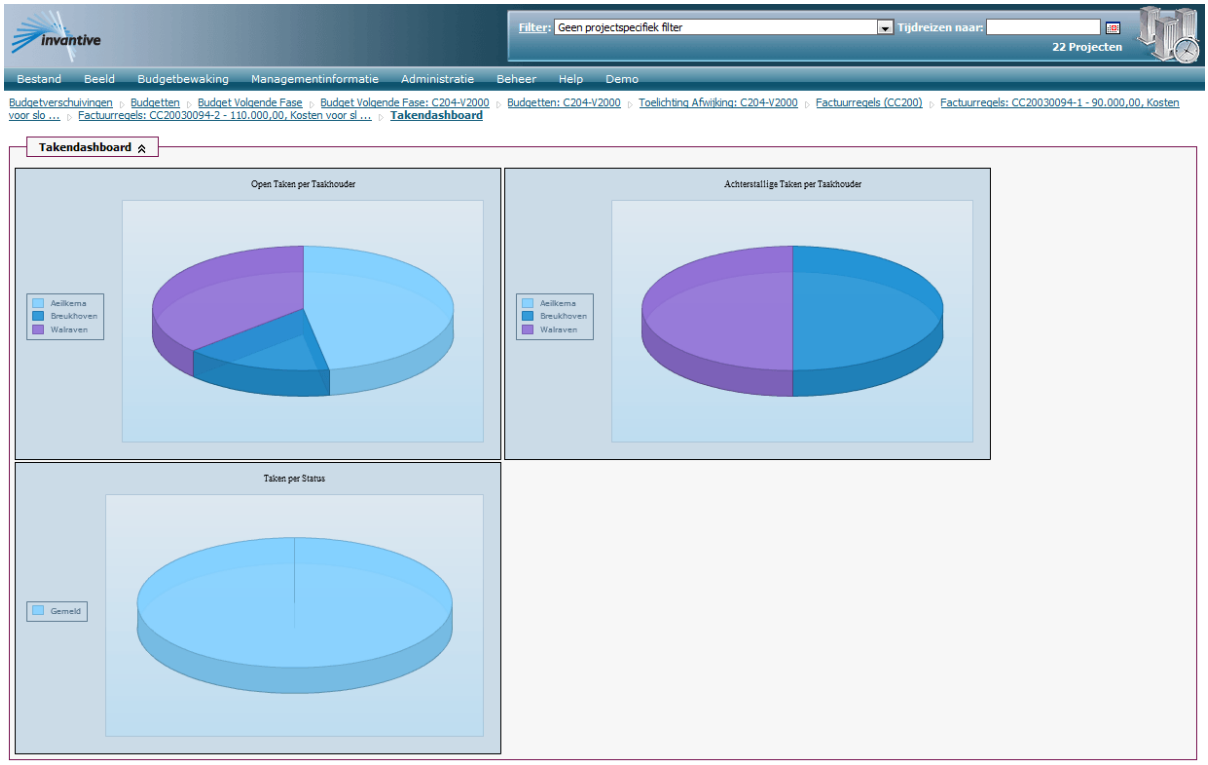
Projects Dashboard

In this screen you can quickly get financial insight on the projects. The information is always up to date and will show, depending of your personal settings, one project or all projects.



Processes dashboard

This screen allows you to quickly get an insight on the processes. The information is always up to date and will show, depending of your personal settings, one project or all projects.



1.4.5.2 Project Overview

Here you will see the project overview.

Financial Project Overview Level 1

This report provides the same information as Financial Project Overview Level 2 121, but contains no further detail per master roll up.

See Financial Project Overview Level 2 121 for more information.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_fpt_nt_pdf_rpt

Financial Project Overview Level 1 (PDF)

Invantive Vision
Powered by Invantive

Project Information	Code: C204	Customer: Mekra		Budget Approved on:	
Project:	Beheer Energetic	Project Manager:	Jalkema	Start of Realization:	24-02-2003
Project Type:	Individual project	bubs_product_group_directo	Smeets	End of Production:	31-12-2003
		Financial Administrator:	Smidt	Shop Space (m2):	
City:	Maastricht	Legal Structure:	Invantive BV	Office Space (m2):	
Phase:	Uitvoering	Cooperation with:		Other (m2):	
Project Cluster:	SB	Released Budget:	0	Houses:	
Free Field 1:		Risk Percentage:	100,00000	Parking Places:	
Free Field 2:		Success Percentage:			

Summary	Budget	Prognosis	Deviation
Revenues	7.600	7.850	250
Costs	5.250	8.250	3.000
Project Result	2.350	-400	-2.750
Project Result (%)	44,76	-4,85	
Process Results		0	
Still to Realize Result		-400	
Possible Remarks:		Negative compared to Budget	

15-11-2012 20:44 Page 1 / 22 invantive

Financial Project Overview Level 2

This report allows you to request the financial status on project level and on master roll up level.

Invantive Estate
Settings: system, EUR, Year, Current situation
Function: bubs_fpt_n2_pdf_rpt

Financial Project Overview Level 2 (PDF)

Invantive Vision
Powered by Invantive

Project Information	Code: C204	Customer: Mekra		Budget Approved on:	
Project:	Beheer Energetic	Project Manager:	Jalkema	Start of Realization:	24-02-2003
Project Type:	Individual project	bubs_product_group_directo	Smeets	End of Production:	31-12-2003
		Financial Administrator:	Smidt	Shop Space (m2):	
City:	Maastricht	Legal Structure:	Invantive BV	Office Space (m2):	
Phase:	Uitvoering	Cooperation with:		Other (m2):	
Project Cluster:	SB	Released Budget:	0	Houses:	
Free Field 1:		Risk Percentage:	100,00000	Parking Places:	
Free Field 2:		Success Percentage:			

Summary	Budget	Prognosis	Deviation
Revenues	7.600	7.850	250
Costs	5.250	8.250	3.000
Project Result	2.350	-400	-2.750
Project Result (%)	44,76	-4,85	
Process Results		0	
Still to Realize Result		-400	
Possible Remarks:		Negative compared to Budget	

15-11-2012 20:44 Page 1 / 22 invantive

Every report per level from the financial project overviews is supplied with a standard heading per project. The meaning of the fields in the heading is (see Projects 130 for an elaborate explanation):

Code	The project to w hich this page refers.
Name	The name of the project.
City	The city in w hich the project is being realized.
Phase	The current project phase.
Product group	The product group to w hich the project belongs to.
Free Field 1and Free Field 2	Informative fields for use of your choice.
Project developer	The responsible project developer.
Product Group Director	The responsible product group director.
Financial Administrator	The responsible administrator,
Legal Structure	The legal structure under w hich the project is realized.
Cooperation w ith	A possible cooperation agreement.
Released Budget	The released budget.
Risk Percentage	The risk percentage.
Success Percentage	The success percentage.
Exposé Date	The date on w hich the exposé is approved.
Start of Realization	The date on w hich the w ork has started.
End of Production	The date on w hich the project w as delivered.
Shops (m2)	The amount of m2 shops being built.
Offices (m2)	The amount of m2 offices being built.
Other (m2)	The amount of other m2 being built.
Houses	The number of houses being built.
Parking Places	The number of parking places being built.

The meaning of the fields in the top of the page (the so-called ‘level 1 reports’) is:

Revenues	The proceeds of the cost category 'revenues', split into budget, prognosis and the deviation from the budget.
Costs	The proceeds of the cost categories 'costs', split into budget, prognosis and the deviation from the budget.
Project Result	The project results, split by budget, prognosis and the deviation from the budget.
Project Result (%)	The project result as a percentage of the costs, split into budget, prognosis and deviation from the budget.
Taken result	The financial results already taken, consisting of posting entries on cost categories form the type 'result'. In accordance with IFRS, results can be taken during the realization of the project.
Possible Remarks	Here the text 'Negative compared to exposé' will appear in red, if the expected project results as a percentage is worse than the budgeted results.

The meaning of the fields in the bottom of the page (so-called 'level 2 reports') is:

Budget	The budget.
Orders	This size of the provided orders.
Invoices with order	Invoices which are received/sent based on a provided order or on a contractual revenue.
Invoices without order	Invoices which are sent/received without order or contractual revenue.
Invoices	The total of invoices with order and invoices without order.
Latest estimate.	The total of the latest estimates.
Available compared to prognosis	Budget to be spent.
Open orders	The size of the provided orders of which no invoices with order are received for.
Prognosis	Prognosis of the final result.
Deviation	The difference between the prognosis and budget.
Contr. revenue	The size of the contractual revenues.
Budget to be realized	The size of the to be sold units.
Open contr. revenue	The size of the contractual revenues of which no invoices with order are sent.

General Financial Project Overview

This report provides project growth reports.

The used terms match the definitions of the report Financial Project Overview Level 2 121.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_fpt_pdf_rpt

Projects Overview Board (PDF)

Invantive Vision
Powered by Invantive

City	Project	Pt	Code	Reporting		PG	PGD	PD	Legal Structure	Phase	Expose	WIP	Provision	Start Realization	End of Production	Success %	Risk %	Expected Investment Success and	Budget Investment	Budget Revenue	Budget Result	Prognosis Result	Deviation
Groningen	Work Centre	I	110	*		K	DEK	DEK	Stichting Leefbaar	Ontwikk	01-04-2004	0		01-06-2004			100,0000		1.001.719	1.234.087	232.368	232.368	0
Amsterdam	Ontwikkeling Invantive	I	C2108	SO		SO	JAL	JOG	Invantive BV	Uitvoeri		0					100,0000		0	0	0	0	0
Roermond	Winkelcentrum Vitaal	I	102	RvC		C	JOG	JOG	Stichting Meer	Ontwikk	21-07-2003	0		01-01-2004			100,0000		69.018.720	72.150.345	3.131.625	5.205.125	2.073.500
Assen	Roerkade	I	103	RvC	eigen	B	KLA	KLA	SAS/NAS Joint	Realisat	16-01-1999	0		12-12-1999			100,0000		65.030.331	69.831.993	4.801.662	7.040.211	2.238.549
Hierden	Post: algemeen af te	I	POST	-		IN	KLA	LEE	Invantive BV	Uitvoeri		0		01-01-2009	31-12-2019		100,0000		0	0	0	0	0
Venlo	La Viesta Fiesta	I	104	RvC		K	LEE	LEE	Ontwikkeling BV	Ontwikk	15-06-2003	0		01-06-2003		25,00000	100,0000		79.052.940	79.565.707	512.767	-487.995	-1.000.762
Alkmaar	Sociale Dienst	I	106	*		K	LOR	LOR	Beter Leven Joint	Realisat	20-05-2003	0		01-08-2003			100,0000		55.058.043	58.150.345	3.092.302	3.092.302	0
Maastricht	Tradeport	I	105	RvC		K	LUG	LUG	Stichting Meer	Ontwikk	01-05-2004	0		01-05-2004			100,0000		69.058.276	72.150.345	3.092.069	3.092.069	0
Roermond	Centrum	I	107	*		C	MAR	MAR	Bronzen Arm BV	Acquisiti	06-03-2004	0		15-06-2004			100,0000		33.041.384	38.564.345	5.522.951	5.522.951	0
Brussel	Sluis	I	108	*		B	MER	MER	Bronzen Arm II BV	Realisat	15-09-2003	0		01-01-2004			100,0000		33.046.379	38.564.345	5.517.966	5.517.966	0
Eindhoven	Plein revisited	S	Plein	*		C	SME	SME	Grond en	Ontwikk	01-01-2008	-34.281.240		01-01-2009	01-08-2009	90,00000	25,00000		57.510.373	67.507.712	9.997.339	9.685.873	-311.466
Maastricht	Beheer Energetic	I	C204	-		SB	SME	JAL	Invantive BV	Uitvoeri		270		24-02-2003	31-12-2003		100,0000		5.250	7.600	2.350	-400	-2.750
Margraten	Centrum	S	109	*		W	VDH	VDH	Stichting Leefbaar	Realisat	08-08-2002	0		01-01-2003	01-05-2006	25,00000	50,00000		53.086.466	59.152.062	6.065.596	5.063.879	-1.001.717

*** End of Report ***

15-11-2012 20:44 Page 1 / 1 invantive

Projects Overview Directors

This report provides the directors with the necessary project transcending information.

The used terms match the definitions of the report Financial Project Overview Level 2 121.

Settings: system, EUR, Year, Current situation
Function: bubs_fdt_pdf_rpt

Projects Overview Directors (PDF)

Invantive Vision
Powered by Invantive

Code	Project	PGD	PD	WIP	Budget Investment	Budget Revenue	Budget Result	Prognosis Result	Deviation	St	Realization Processes
110	Work Centre	DEK	DEK	0	1.001.719	1.234.087	232.368	232.368	0		0
C2108	Ontwikkeling Invantive Melba	JAL	JOG	0	0	0	0	0	0		0
102	Winkelcentrum Vitaal	JOG	JOG	0	69.018.720	72.150.345	3.131.625	5.205.125	2.073.500		0
103	Roerkade	KLA	KLA	0	65.030.331	69.831.993	4.801.662	7.040.211	2.238.549		0
POST	Post: algemeen af te handelen.	KLA	LEE	0	0	0	0	0	0		0
104	La Viesta Fiesta	LEE	LEE	0	79.052.940	79.565.707	512.767	-487.995	-1.000.762		0
106	Sociale Dienst	LOR	LOR	0	55.058.043	58.150.345	3.092.302	3.092.302	0		0
105	Tradeport	LUG	LUG	0	69.058.276	72.150.345	3.092.069	3.092.069	0		0
107	Centrum	MAR	MAR	0	33.041.394	38.564.345	5.522.951	5.522.951	0		0
108	Sluis	MER	MER	0	33.046.379	38.564.345	5.517.966	5.517.966	0		0
Plein	Plein revisited	SME	SME	-34.281.240	57.510.373	67.507.712	9.997.339	9.685.873	-311.466		900.000
C204	Beheer Energetic	SME	JAL	270	5.250	7.600	2.350	-400	-2.750		0
109	Centrum	VDH	VDH	0	53.086.466	59.152.062	6.065.596	5.063.879	-1.001.717		0
Total				**-34.280.970**	**514.909.891**	**556.878.886**	**41.968.995**	**43.964.349**	1.995.354		**900.000**

*** End of Report ***

15-11-2012 20:44 Page 1 / 1 invantive

1.4.5.3 Project management

Here you will see project management reports.

Project Management Document

This report allows you to request the financial status on project level and on master roll up level.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_fpt_pdf_rpt

Project Management Document (PDF)

Invantive Vision
Powered by Invantive

Project Information	Code: C204	Customer: Mekra		Budget Approved on:	
Project:	Beheer Energetic	Project Manager:	Jalkema	Start of Realization:	24-02-2003
Project Type:	Individual project	bubs_product_group_directo	Smeets	End of Production:	31-12-2003
		Financial Administrator:	Smidt	Shop Space (m2):	
City:	Maastricht	Legal Structure:	Invantive BV	Office Space (m2):	
Phase:	Uitvoering	Cooperation with:		Other (m2):	
Project Cluster:	SB	Released Budget:	0	Houses:	
Free Field 1:		Risk Percentage:	100,00000	Parking Places:	
Free Field 2:		Success Percentage:			

Project Information

		1 Budget	2 Prognosis	3 Deviation	4 In process Work	5 Open Purchase Orders	2-4-5 Available compared to Prognosis
V2	Aanneming	5.250	8.250	-3.000	520	4.280	3.450
V9	Opbrengsten Varia	7.600	7.850	250	250	-250	7.850
Total Project Result		2.350	-400	-2.750			
Share in Project Result Invantive		2.350	-400				
Share in Project Result(%)		44,76	-4,85				
Total WIP					-270		

Status on Unknown: Sunny, project runs according to plan, within budget and without jams.

De server is besteld en over 5 werkdagen binnen

15-11-2012 20:45 Page 1 / 22 invantive

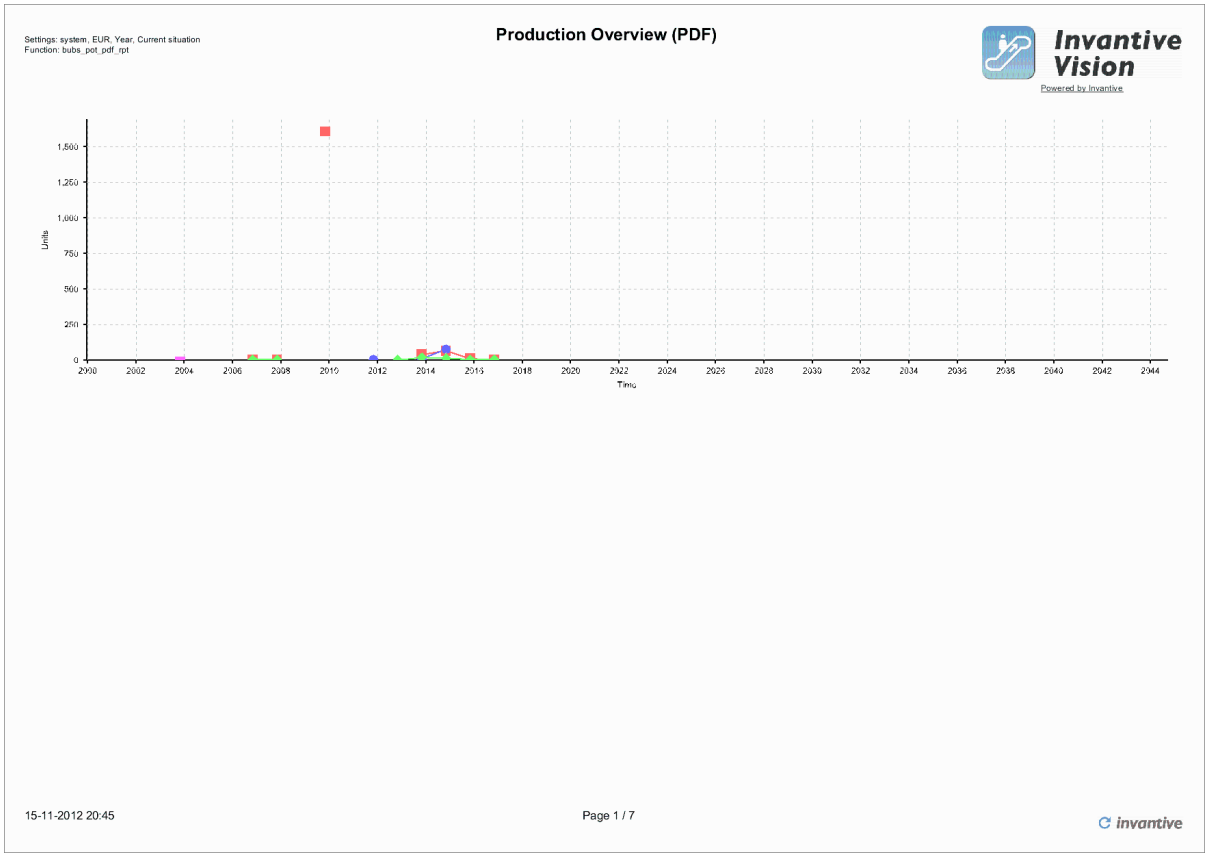
The fields have the same meaning as the fields used for reporting level 2, see Financial Project Overview Level 2 121.

1.4.5.4 Production Overview

Here you will see reports to get an overview of the production.

Production Overview

This report gives an overview of the realized and expected production, based on revenues classified as ‘Production’ and on the calculated realization date (see Revenues) 74.



1.4.5.5 Cash flow projections

Here you will see reports on cashflow projections.

Cash flow projections

This report shows each project's cash flows for all projects in the filter in the periods again.

Settings: system, EUR, Year, Current situation
Function: bubs_kpe_pdf_rpt

Cash-flow Projections (PDF)

*** End of Report ***

07-08-2012 12:12

Page 1 / 1

Overall Cash Flow Projections

This report, the consolidated cash flows in periods again.

Settings: system, EUR, Year, Current situation
Function: bubs_ksa_pdf_rpt

Overall Cash-flow Projection (PDF)

Invantive Vision
Powered by Invantive

Period	Cash Flow Amount Out	Cash Flow Amount In	Cash Flow Amount

*** End of Report ***

07-08-2012 12:12

Page 1 / 1

invantive

1.4.6 Finance

This chapter discusses functions that can be found under ‘Finance’ in a default menu structure. These functions are normally used by the financial administration.

1.4.6.1 Projects

Here you will see screens concerning Projects.

Projects

In this form you can register and change projects.

A project is a related amount of work, usually consisting of a couple of units of real estate.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Projects

Projects

Project Cluster | Classification
Code | Name
Customer | City
Phase | Closed: Select Value
Project Entity

Search | 10 rows per page

Search results (25)

Page 1 of 3 >> >|

Project Cluster	Code	Master Project	Customer	Name	Web	Phase	Closed	City	Project Type	Project Manager	Project Cluster Director	Project Entity	Start of Realization	End of Construction	Purchasing Conditions	Selling Conditions	#Documents	Size	Classifications
SB	C204		Mekra	Beheer Energetic		Uitvoering		Maastricht	Individual project	Jalkema	Smeets	Mekra	24-02-2003	31-12-2003			-		Marge.Houden;Project.Datum besluit gemeente;Regio.Midden.UTR
SO	C2108		Nationale Nederlanden	Ontwikkeling Invantive Melba		Uitvoering		Amsterdam	Individual project	Jongen	Jalkema	Mekra				system-opbrengsten	-		Marge.Afstoten;Regio.Zuid
SO	C503.DNB IFRS		QT Design	IFRS compliant DNB rapportage		Uitvoering		Roermond	Individual project	Klaassen	Jongen	Mekra	01-01-1970	01-10-2005			-		
IN	IHOL09		Acme BV	Vakantie (Kerstmis etc.) 2009		Uitvoering		Hierden	Individual project	Leenderts	Klaassen	Mekra	01-01-2009	31-12-2009			-		
IN	IVAC09		Acme BV	Vacation 2009		Uitvoering		Hierden	Individual project	Hoef van der	Mertens	Mekra	01-01-2009	31-12-2009			-		
M	MSLS09		Acme BV	Sales 2009 hoofdproject		Uitvoering		Hierden	Master Project	Lormans	Lugt van de	Mekra	01-01-2009	31-12-2009			-		
M	MSLS09.BD.ALG	MSLS09	Acme BV	Sales trajecten 2009		Uitvoering		Harderwijk	Sub-project	Marit-Engelsen	Lormans	Mekra	01-01-2009	31-12-2009			-		
M	MSLS09.Mekra	MSLS09	Mekra	Sales Mekra 2009		Uitvoering		Harderwijk	Sub-project	Mertens	Marit-Engelsen	Mekra	01-01-2009	31-12-2009			-		
C	Plein	101	Koopman	Plein revisited		Ontwikkeling		Eindhoven	Sub-project	Smeets	Smeets	FUGRO	01-01-2009	01-08-2009	Janssen Inkoop	Janssen Geen Voorwaarden	17		Groep.Woningen;Project.Datum besluit gemeente;Regio.Noord
IN	POST		Acme BV	Post: algemeen af te handelen.		Uitvoering		Hierden	Individual project	Leenderts	Klaassen	Mekra	01-01-2009	31-12-2019			-		
IN	POSTFAC		Acme BV	Post: af te handelen facturen.		Uitvoering		Hierden	Individual project	Leenderts	Klaassen	Mekra	01-01-2009	31-12-2019			-		
C	Stad		Koopman	Stad		Acquisitie		Roermond	Individual project	Jongen	Jongen	FUGRO	01-01-2004			Stad	-		
IN	Templates		Acme BV	Templates		Uitvoering		Hierden	Individual project	Leenderts	Klaassen	Mekra					6		

Create or change

Add | New

Documents | Cash-flow Projections | Project Statuses | Open Processes | Budgets | Project Versions | Workbench Projects | Timesheets | Orders | Revenues | Project File (PDF)

General

Project Cluster * | Project Cluster Director *
Code * | Name *
Short Code
Description
City *
Address 1 | Address 2
Country | Reporting Group *
Phase * | Phase Effective
New Phase Effective | Closed
Project Manager * | Administrator *
Account Manager | Plan Developer
Controller | Customer
Timesheets signed by
Customer Reference | Supplier Reference
Documents | Project Type *
Contract Postfix | Master Project
Free Field 1 | Free Field 2
Project Website (URL) | Logo (URL)
Project Entity * | Cooperation with
Overhead | Icon (URL)

Milestones

Planned Start of Realization | Planned Start of Delivery
Start of Handover | Planned End Date of Delivery
Budget Approved on
Start of Realization | End of Construction
Planned Sales Start Date | Planned Sales End Date
Start of Sales | Sales End Date

Real Estate

Houses (Units) | Parking Places (Units)
Office Space (m^2) | Shop Space (m^2)
Other (m^2) | Land (m^2)
Ground Position | Land Status
Date Ground Purchased

Financial

Released Budget * (EUR) | Provision (EUR)
Expected Investment (EUR) | Administration Third Party
Success Percentage | Risk Percentage * 100,00000
Charged by Hour
Release deviation on Cost Category * | Release deviation on Contract *
Purchasing Conditions | Selling Conditions

Status

Status Indicator *
Date of Last Review
Next Review
Definition
Status

Workflow

Process
Status
Process Owner

Restrictions

Filter Suppliers | Filter Invoice Parties

Layout

Full Name for Use in Lists | Sort Direction

The meaning of the entry fields is:

General	
Code	A unique code for the project. The code is generally assigned as soon as the first exposé is approved.
Name	The name of the project.
Short Code	Short project code to support the ERP systems that limit the extent from the project codes to for example 8 characters.
Description	The description of the project.
City	Place where the project is realized.
Reporting group	Reporting Group with which the project can be selected in the filter.
Address 1	The address where the project is realized.
Address 2	Extra address line, in case needed.
Country	Country where the project is realized.
Reporting group	
Phase	The phase of the project.
Closed	A closed project cannot be changed. The underlying data -remainders, orders, budgets, revenues, etc. are also frozen. The only thing possible after the project is closed, is to reopen the project. Warning! The user 'system' is the only user, that even after completion of a project, has the rights to change the project data.
Product group	The product group of the project.
Product Group Director	The project's responsible product group director.
Project developer	The project's responsible project developer.
Administrator	The responsible admistrator.
Salesman	The real estate agent who rents or sells the project
Plan Developer	The developer of the project plans.
Controller	The project controller.
Customer	The buyer of the project.
Timesheet signed by	The person responsible for approving the hours.
Customer Reference	A reference from the customer to this project. This can be for instance a reference to a purchasing order.
Supplier Reference	A reference from a supplier to this project.
Documents	Linked documents, see Linking Documents 33.
Project Type	There are three possible project types: • An individual project: this may include financial data and reporting. • A subproject: this may include financial data and reporting. Moreover, they can be consolidated and reported within a master project. • A master project: it is not possible to include independent financial data and reporting. However, the numbers of the underlying subprojects can be consolidated and reported.
Cost Category Postfix	The suffix is used in case of consolidated reporting to make the cost category of each subproject unique. The suffix must be unique for all subprojects within the main project.
Master project	Here, only for subprojects you can and have to select a 'Master Project'. All financial figures are merged within the master project when consolidated reporting is selected. The choice whether to merge is made via My Preferences 45.
Free field 1	Free field for possible further information.
Free Field 2	Free field for possible further information.
Website Project (URL)	The Internet address in case project has its own website.
Logo (URL)	The Internet address of the project logo.
Project entity	The legal structure under which the project is realized.
Cooperation with	Name of partner in case a cooperation agreement is made for the project.
Overhead	Project is overhead when checked.
Icon (URL)	The relative URL from the icon belonging to the project. The icon must be 16 pixels high and 16 pixels wide.
Milestones	
Planned Start of Realization	The planned start date of the construction activities for the project.

Planned Start of Handover	The planned start date of the delivery of the first units.
Start of Handover	The start date of the delivery of the first units.
Planned End Date of Delivery	The planned end date from the delivery of all units.
Budget Approved on	The date of the last approved exposé.
Start of Realization	De startdatum van de bouw .
End of Construction	The date on w hich all the building activities are completed and all units are delivered.
Planned Sales Start Date	The planned start date of the sale of the first units.
Planned Sales End Date	The planned end date of the sale of the last units.
Start of Sales	The start date of the sale.
Sales End Date	The end date of the sale
Real Estate	The block real estate w ith the follow ing fields are only displayed if the license name is Invantive Estate is. When using a license for Invantive Vision the block real estate w ith belonging fields is not show n.
Houses	The number of houses being built.
Parking Places	The number of parking spaces being built.
Office Space	The number of m2 office space being realized.
Shop Space	The number of m2 shops being realized.
Other	The number of other units being realized.
Ground	Number of m2 land being realized.
Ground Position	The project's land holding.
Land Status	Status of the land that is required for the realization of the project.
Date Ground Purchased	The date the land w as purchased for the project.
Financial	
Released Budget	The budget released for the project.
Provision	The provision for the project.
Expected Investment	The project's expected investment.
Administration Third Party	Checked if the administration is done by a third party.
Success Percentage	The expected rate of success.
Risk Percentage	The share that is carried in the project, both in terms of revenue as in risk for a possible negative outcome.
Charged by Hour	Indicates w hether the hours w ithin this project are to be charged or not to be charged to the customer.
Release deviation on Cost Category	Here you can choose as a default setting for all budgets to release or not to release the deviations on cost category or to use the setting as specified at budget level. At the end of the realization, the administration w ill at any time make use of this setting to release all free budget space on cost category to offset all deficits elsew here. How ever, you can quickly default on the budgets again by using this setting back to put on the setting budget levels.
Release deviation on Contract	Her you can choose as a default setting for all budgets to release or not to release the deviations on contract budgets or to use the setting as specified at budget level. At the end of the realization, the administration w ill at any moment make use of this setting to release all free budget space on cost category to offset all deficits elsew here. How ever, you can quickly default on the budgets again by using this setting back to put on the setting budget levels.
Purchasing Conditions	Here you can choose w hich purchasing conditions are applicable.
Selling Conditions	Here you can choose w hich selling conditions are applicable.
Status	
Status Indicator	A list that classifies a project in terms of progress and budget control into one of the six possible classes. See also Project Statuses 55.
Date of Last Review	The date the last review of the project took place.
Next Review	The date the next review of the project is planned.
Definition	The definition of the status.
Status	A textual explanation of the project's status.
Restrictions	

Filter Suppliers	This filter is used to control at project level which orders can be linked to the project. An example: If you select only the project you are working on in the Filter 16 and for example your filter for order takers is '^025', then you will see only the orders from order takers whose code starts with '025'. If you select all projects in the filter and for example your 'Filter Order Takers' is '^ 025', then you will see all orders of order takers. If now you choose an order taker, then it's code has to start with '025 '. If the code of the order taker doesn't begin with '025', you will get an error when saving the project data. The filter is specified as a regular expression (see the 'Oracle SQL Reference') and has a maximal length of 512 characters. With more than 512 characters you get an error message.
Filter Invoice Parties	This filter is used to control at project level which invoices can be linked to the project. An example: If you select only the project you are working on in the Filter 16 and for example your filter for invoice organizations is '^025', then you will see only the orders from invoice organizations whose code starts with '025'. If you select all projects in the filter and for example your 'Filter Invoice Organizations' is '^ 025', then you will see all orders of invoice organizations. If now you choose an invoice, then it's code has to start with '025'. If the code of the invoice doesn't start with '025', you will get an error when saving the project data. The filter is specified as a regular expression (see the 'Oracle SQL Reference') and has a maximal length of 512 characters. With more than 512 characters you get an error message.
<layout> tag	
Full Name for Use in Lists	The name being used to show the project in lists and on reports. Default construction: city-name-code. In case you want to use another name to show the project, you can use an Additional Business Rule 266.
Sort Order	The name used in the drop down boxes to sort the projects. Default construction: code-city-name. In case you want to use another sorting direction, you can use an Additional Business Rule 266.
Classifications	
Classification	The classification of the project. A classification is a label that can be attached to a project, an organization, a process or a document. Using these labels you can find your information more efficient.

The meaning of the other fields:

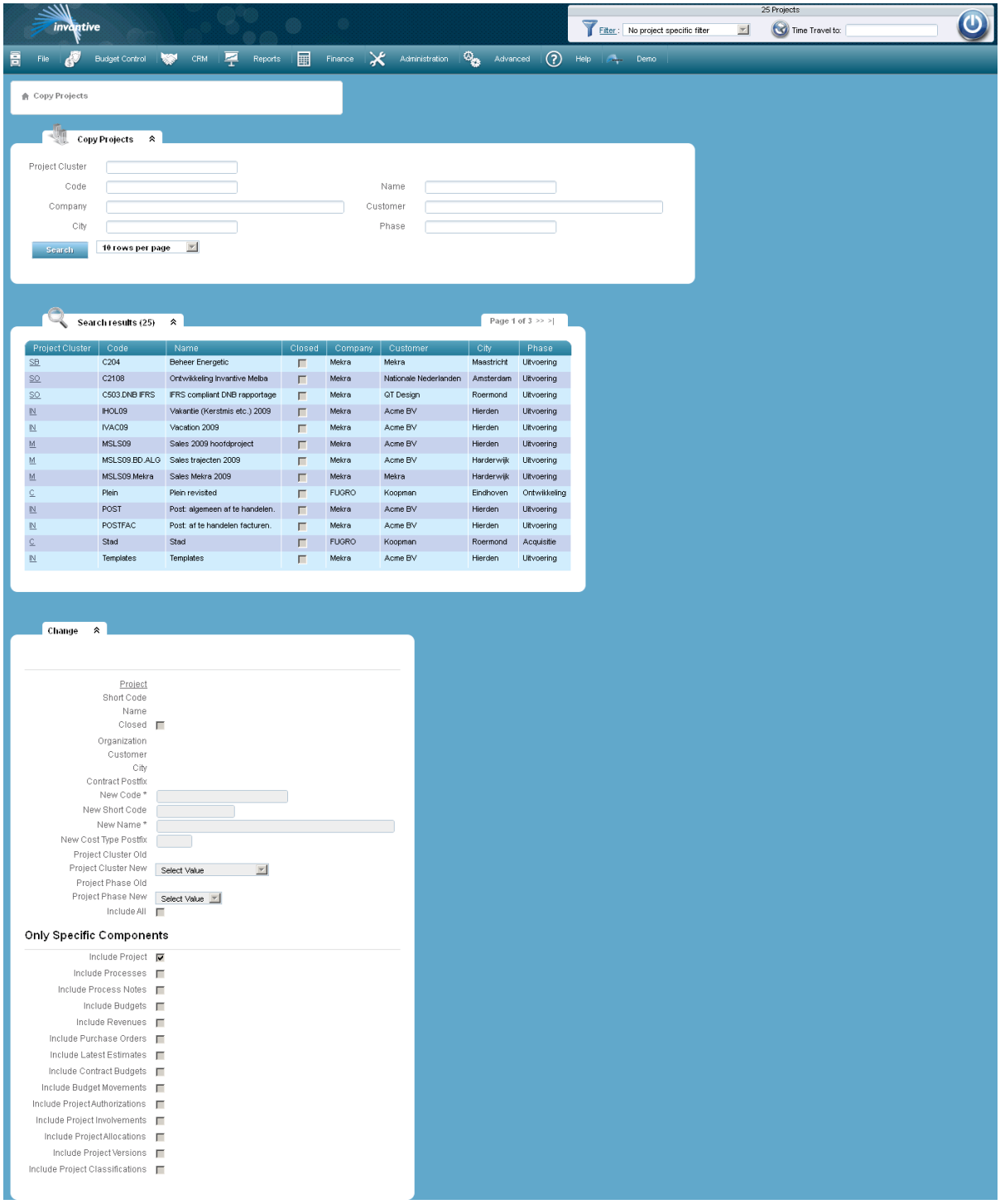
Workflow	
Process	Reference to a process as registered inProcesses 58.
Status	Reference to a process status as registered in Process Statuses 173.
Process Holder	Reference to a process holder as registered in Processes 58.

The meaning of the action buttons:

Documents	Opens the screen containing the documents of the project.
Cash flow projections	Opens the screen containing all the cash flow projections of the project.
Project Statuses	Opens the screen containing the project statuses of the project.
Open Processes	Opens the screen containing the open processes of the project.
Budgets	Opens the screen containing the budgets of the project.
Project Versions	Opens the screen containing the project versions of the project.
Projects Workbank	Opens the screen containing the project workbank of the project.
Hours	Opens the screen containing the hours of the project.
Orders	Opens the screen containing the assignments of the project.
Revenues	Opens the screen containing the revenues of the project.
Project File (PDF)	Opens the screen where you can request the task of the report parameters from the report project dossier.

Copy Projects

In this screen you can completely or partially copy all existing projects.



The meaning of the entry fields is:

New Code	The code for the new project.
New Short Code	Short project code for the new project.
New Name	New Name
New Cost Type Suffix	The cost type suffix for the new project.
Include All	If checked, all items listed below will be copied.
Include Project	If checked, then the to be copied project will be included to the new project. This should be on if you want to copy the project to a new project.

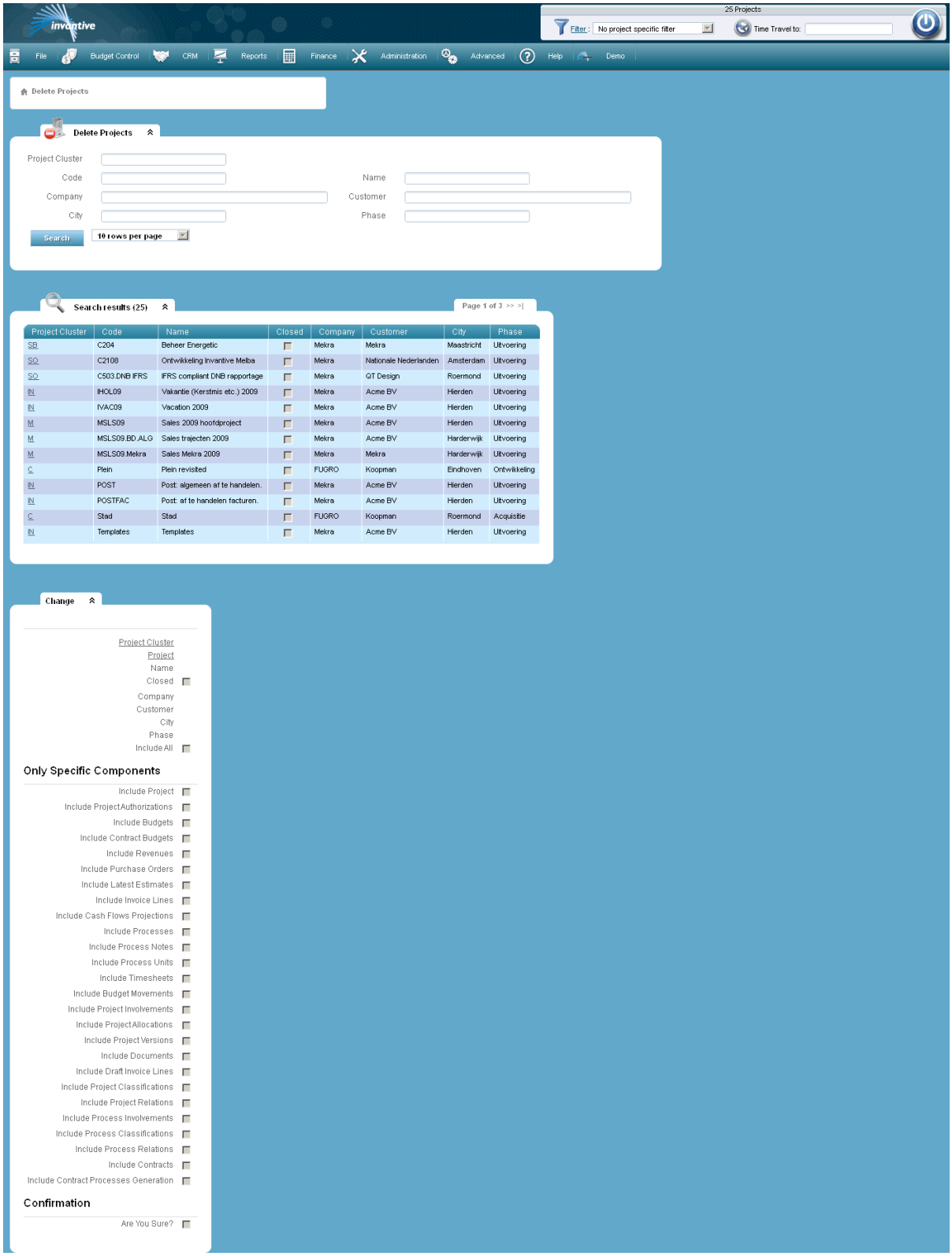
Take Processes	If checked, the related processes w ill be copied.
Include Process Notes	If checked, the Process Notes w ill be copied.
Include budgets	If checked, then the budgets w ill be copied.
Include Revenues	If checked, then the revenues w ill be copied.
Include Purchase Orders	If checked, the purchase orders w ill be copied.
Include Latest Estimates	If checked, the latest estimates w ill be copied. From these the adjustment w ill be deducted.
Include Contract Budgets	If checked, the contract budgets w ill be copied.
Include Budget Movements	If checked, the budget movements w ill be copied.
Include Project Authorisations	If checked, then the project authorizations w ill be copied.
Include Project Involvements	If checked, all persons involved in the project w ill be copied.
Include Project Allocations	If checked, all allocations of people to projects w ill be copied.
Include Project Versions	If checked, all the project versions w ill be copied.
Include Project Classifications	If checked, the project classifications w ill be copied.

The meaning of the other fields:

Project	The code of the project that w ill be deleted.
Short Code	Short project code of the project that is going to be copied.
Name	The name of the project that w ill be copied.
Closed	Indicates that the project has already been closed w hen checked.
Organization	The legal structure under w hich the project is going to be copied, is realized.
Customer	The customer of the project that is going to be copied.
City	Place w here the project that is going to be copied is realized.
Cost Category Postfix	The cost type suffix of the project that is going to be copied.

Delete Projects

This screen allows you to remove all or part of projects.



The meaning of the entry fields is:

Include All	If checked, all items listed below will be deleted.
Include Project	If checked, the project will be deleted. Normally you will never select this without selecting other parts.

Include Project Authorisations	If checked, the project authorizations will be deleted.
Include budgets	If checked, then the budgets will be deleted.
Include Contract Budgets	If checked, the contract budgets will be deleted.
Include Revenues	If checked, then the revenues will be deleted.
Include Purchase Orders	If checked, the purchase assignments will be deleted.
Include Latest Estimates	If checked, the latest estimates will be deleted.
Include Invoice Lines	If checked, then the invoice lines will be deleted.
Include Cash Flows Projections	If checked, the cash flow projections will be deleted.
Take Processes	If checked, the processes will be deleted.
Include Process Notes	If checked, the process notes will be deleted.
Include Process Units	If checked, the process units will be deleted.
Include Timesheets	If checked, then the timesheets will be deleted.
Include Budget Movements	If checked, the budget movements will be deleted.
Include Project Involvements	If checked, then the involvement of people in the project will be deleted.
Include Project Allocations	If checked, then the allocation of persons to the project will be deleted.
Include Project Versions	If checked, the project versions will be deleted.
Include Documents	If checked, the documents will be deleted.
Include Project Classifications	If checked, the project classifications will be deleted.
Include Project Relations	If checked, the project relations will be deleted.
Include Process Involvement	If checked, then all the persons involved in the process of the project will be deleted.
Include Process Classifications	If checked, the process classifications will be deleted.
Include Process Relations	If checked, the process relations will be deleted.
Include Contracts	If checked, the contracts will be deleted.
Include Contract Process Generation	If checked, the contract processes generation will be deleted.
Are you sure?	Only if you also select this one project data will be deleted.

The meaning of the other fields:

Project	The code of the project that will be deleted.
Name	The name of the project that will be deleted.
Closed	Indicates that the project has already been closed when checked.
Business	The legal structure under which the project is realized.
Customer	The buyer of the project.
City	Place where the project is realized.

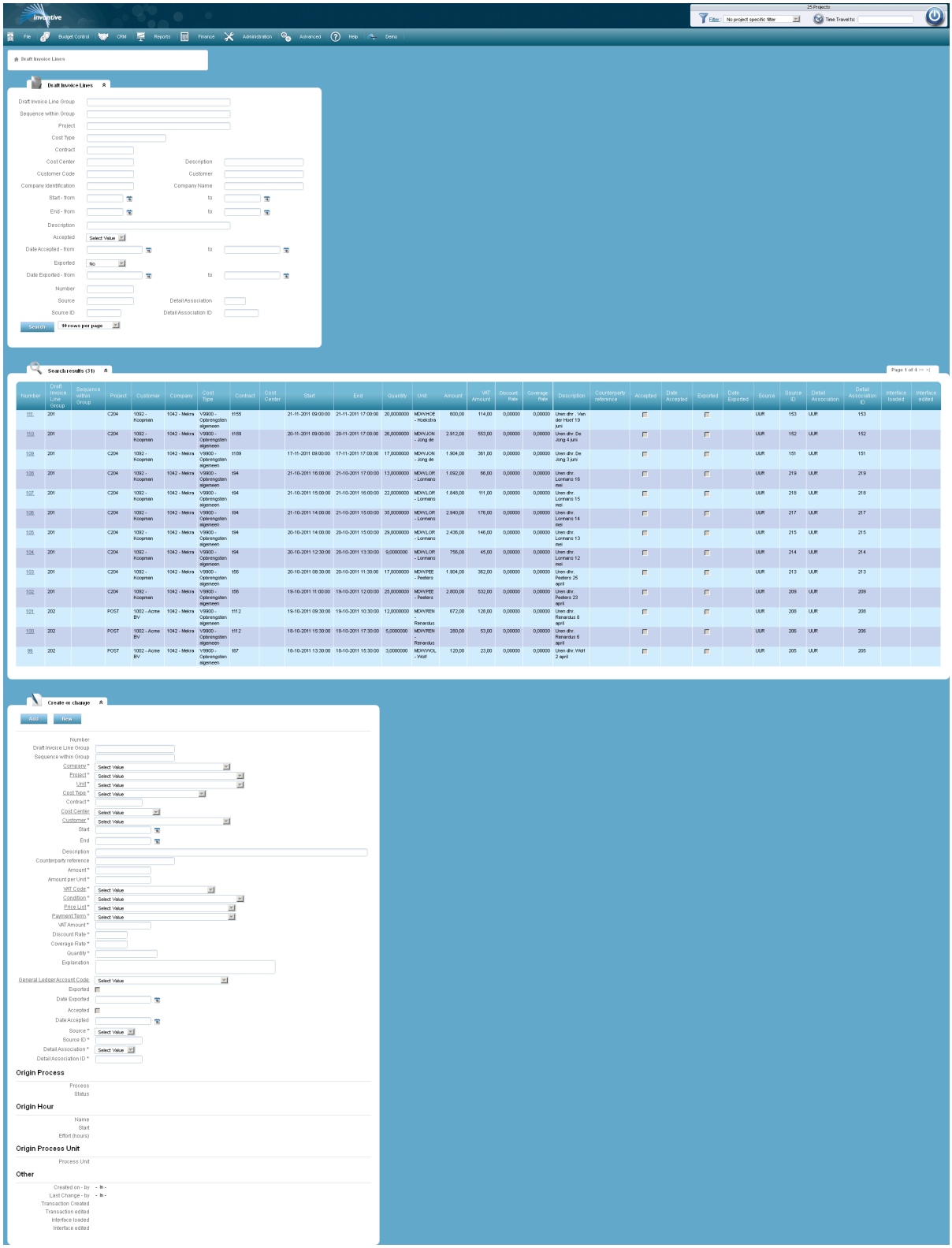
1.4.6.2 Invoicing

Here you will see screens surrounding the invoicing.

Concept Invoice Lines

In this screen you can register and update Concept Invoice Lines.

Concept invoice lines can either be entered manually or generated through the process Invoicing 496. Concept invoice lines are input for the accounts receivable module of the bookkeeping system.



The meaning of the entry fields is:

Grouping	Concept Invoice Line Group. It is easier to assign concept invoice lines to invoices by sorting concept invoice lines into groups.
Sequence within Group	Sequence of the draft invoice line in the group. By doing this it is easier to provision draft invoice lines in a particular sequence.
Business	Name of the company.
Project	The project to which the invoice refers.

Unit	Reference to a unit as registered in Units 157.
Cost Type	The cost category to which the realization refers. All cost categories can be chosen (costs, revenues, and results).
Contract	The contract within the cost category to which the invoice line refers.
Cost center	Reference to a cost center as defined in the screen Cost Centers 200.
Customer	The customer, where the invoice is sent to. Note that this field is obligatory.
Start	Beginning of the period in which the provided service was performed.
End	End of the period in which the provided service was performed.
Description	Textual explanation of the invoice.
Counterparty Reference	Reference as dictated by the customer.
Amount	Total amount invoiced.
Amount per Unit	Amount per unit.
VAT Code	Reference to a VAT code as registered in VAT Codes 190.
Condition	Reference to a condition as registered in Conditions 219.
Price List	Reference to a price list as registered in price lists 186.
Payment Term	Reference to a payment term as registered in Payment Terms 223.
VAT Amount	The VAT amount of the concept invoice.
Discount Rate	Applied discount rate.
Coverage Rate	Coverage percentage of the concept invoice line after the discount rate is applied.
Quantity	The number of units.
General Ledger Code	Reference to a general ledger code as registered in General Ledger Codes 200.
Exported	Indicator which shows if the concept invoice is exported.
Accepted	Indicator which shows whether the concept invoice is approved to be exported.
Parent	The type of data (message, order, project, etc.) to which you want to link the task.
Source ID	The unique number of the type of data to which you want to link the task. This field together with the field 'Source' makes is possible to retain the relation with the origin of an object for the workflow concept invoice lines.
Detail Association	With the 'Detail Association' and the 'Detail Association ID' the origin of the concept invoice line can be established.
Detail Association ID	With the 'Detail Association ID' and the 'Detail Association' the origin of the concept invoice line can be established.

The meaning of the other fields:

Number	The unique number of the concept invoice line.
Origin Process	
Process	Process from which the concept invoice line occurs.
Process Status	Status of the process, as registered in Process Statuses 173.
Origin Hour	
Name	Reference to a Person as registered in Persons.
Start	The start time of the hour registration.
Effort (hours)	The range of the hour registration.
Origin Process Unit	The process that the process units use for realization of the process.
Process Unit	The process unit
Other	
Created at	The date the draft invoice line was created.
Created with	The software that created the draft invoice line.
Created in	The system in which the draft invoice line was created.
Last Change	The date the draft invoice line was last changed.
Last Change with	The software that performed the last change.
Last Change in	The system that performed the last change.
Transaction Updated	Date and time of the last processed transaction.

Interface Loaded	The date the draft invoice line w as initially loaded via an interface program.
Interface Updated	The date the draft invoice line w as last updated by an interface program

Invoices

In this form you can register and change invoices.

An invoice is a sequence of invoice lines. An invoice line reflects the realized revenue or the cost driver within a project. Obviously it is possible that several invoice lines in one invoice refer to different projects.

Note that in general the invoices and invoice lines are not entered manually, but are automatically uploaded by the financial administration.

Apart from the invoices from the accounts payable accounts receivable administration, it is also possible to process journal entries, for example, for profit taking.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Invoices

Invoices

Code

Organization | Organization Name

Supplier Reference

Invoice Date - from | - to

Posted - from | - to

Search | 10 rows per page

Search results (80) — Page 1 of 8 >> >|

Code	Organization	Organization Name	Invoice Date	Payment Term (days)	Expected Maturity	Posted	Supplier Reference	#Documents	Size
CC20030094	1023	FUGRO	01-05-2003	30			66478	-	
V4276	1073	Aarde consult	22-03-2009	30			95627	-	
V4277	Energetic	Energetic BV	22-03-2009	30			38792	-	
20030095	1051	Grontmij verkeer & infra	21-07-2003	30			17178	-	
20030096	1057	Royal Haskoning	09-09-2003	30			36738	-	
20030097	1037	Grand telecom	30-12-2003	30			41823	-	
20030098	1036	KPN Telecom	19-01-2003	30				-	
20030099	1049	Tekenaar	17-04-2003	30				-	
20030100	1002	Acme BV	09-11-2003	30				-	
20030101	1069	De Jonge Notaris	01-06-2003	30				-	
20030102	1024	Gemeente Eindhoven	18-02-2003	30				-	
20030103-Kopie Factuur	1039	PCM Uitgevers	11-10-2003	30				-	
2999-FOR	FORTIS	Fortis Bank	21-01-2003	30			24071	-	

Create or change

Add | New

Code *

Invoice Date * 15-11-2012

Organization * Select Value

Payment Term (days)

Expected Maturity

Expected Maturity End

Posted

Description

Supplier Reference

Documents

Workflow

Process

Status

Process Owner

Invoice Lines (289) — Page 1 of 29 >> >|

Line	Settled	Based on Purchase Order	Amount	Description	Project	Name	Cost Type	Contract	Cost Center	#Documents	Size
1	☐	☑	520,00	Uren Piet Janssen	C204	Beheer Energetic	V2210 - Systeembeheer	p9573		-	
1	☐	☑	250,00	Performance scan (meerwerk).	C204	Beheer Energetic	V9900 - Opbrengsten algemeen	mw 1		-	
1	☑	☑	1.500.000,00	koop gebouwen Plein 14-20	Plein	Plein revisited	1010 - Koopsom gebouwen	10		-	
1	☑	☐	100.000,00	Vergoeding verhuizing	Plein	Plein revisited	1055 - Vergoeding/Verhuisbijdrage	Jansen		-	
1	☑	☑	50.000,00	Notariskosten	Plein	Plein revisited	1060 - Notariskosten (aankoop)	5		-	
1	☑	☑	23.040,00	Verplaatsing pand	Plein	Plein revisited	1070 - Bouwrijpmaken	1		-	
1	☑	☑	4.608,00	.	Plein	Plein revisited	1071 - Inmetingskosten	1		-	
1	☑	☐	90.000,00	Kosten voor sloop, fase 1.	Plein	Plein revisited	1073 - Sloopkosten	10		-	
1	☐	☑	7.500,00	.	Plein	Plein revisited	1074 - Stort- en afvoerkosten	1		-	
1	☑	☑	15.000,00	Onvoorziene kosten architectenbureau	Plein	Plein revisited	1090 - Onvoorzien	54		-	
1	☑	☐	340.000,00	Factuur	Plein	Plein revisited	1100 - Historische kosten	1		-	
1	☑	☐	1.800.000,00	Renteposten	Plein	Plein revisited	1990 - Rentekosten intern	R2		-	
1	☑	☐	2.000.000,00	Fase 1	Plein	Plein revisited	2110 - Aanneemsom E-installaties	1		-	

Create or change

Add | New

Devisting Encoding

Invoice Select Value

Line *

Amount *

VAT Code Select Value

VAT Amount

Credit/Debit Credit Debit

Project * Select Value

Cost Type * Select Value

Contract *

Deviating Contract

Cost Center Select Value

Based on Purchase Order ☑

Deviating with/without Order Use Original Value

Ultimately Based On Purchase Order ☐

Settled ☐

Description *

Deviating Description

Points

Documents

The meaning of the entry fields is:

Invoice	
Code	The code of the invoice. In general the internally assigned invoice number will be used here.
Invoice Date	The date as registered on the invoice.
Organization	The organization (supplier) that has sent the invoice or the customer where the bill has been sent to. Note that this field is obligatory. Choose a generic supplier or buyer in the case of journal entries from the general ledger. The list of suppliers used when entering is restricted to suppliers who have a code that is allowed to be used on a project in the filter. For each project, you can manage with a pattern, from which supplier invoices may be registered.
Payment Term (days)	The payment period in days of the invoice. This information is used when calculating the cash flow.
Expected Maturity	The date on which the cash flow is expected to begin.
Expected Maturity End	The date on which the cash flow is expected to end. The maturity date is only relevant if the cash flow projection method needs it.
Booked	Date on which the invoice is recorded.
Description	An explanation of the invoice.
Supplier Reference	The unique feature of the invoice of the sender. This field can be used to register the invoice number of the supplier in case the code of the invoice is based on its own invoice numbering.
Documents	Linked documents, see Linking Documents 33.
Invoice Lines	
Invoice	An invoice can be sent by a supplier, can be sent to a client or can be created by the ledger system. An invoice can contain several Invoice Lines 144.
Line	Indicates which Invoice Lines 144 it concerns.
Amount	The amount invoiced. This normally will be the amount without VAT. If your organization is not subject to VAT, the amount of the balance has to be used (including VAT).
VAT Code	The VAT code that applies to the invoice.
VAT Amount	The VAT Amount.
Credit/debit	Indicates whether it concerns payment (debit) or a receipt (credit).
Project	The project to which the invoice refers.
Cost Type	The cost category. All cost categories can be chosen (costs, revenues, and results).
Contract	The contract within the cost category to which the invoice line refers.
Deviating Contract	Here you can indicate the deviating contract if applicable. If the deviating contract is entered, it will override the standard contract in the reports.
Cost center	Reference to a cost center as defined in the screen Cost Centers 200.
With Purchase Order	In case of a cost driver: is the realization based on an order? In case of a revenue: is the realization based on a contractual sales agreement?
Deviating With/Without Purchase Order	Using this drop-down menu, you can override the field "With Purchase Order" originating from the ERP system.
Ultimately based on Purchase Order	Ultimately based on purchase order is the result of originally based on purchase order and deviating with purchase order.
Settled	If the box is checked, the invoice line is made payable or received (revenue cost category).
Description	A description of the property, activity or situation to which the invoice relates to.
Points	Number of points awarded for this transaction.
Documents	Linked documents, see Linking Documents 33.
Expected Maturity	The expected date when the cash flow starts.
Expected Maturity End	The expected date when the cash flow ends.
Distribution Method	The way the cash flow is distributed in time.

The meaning of the other fields:

Workflow	
Process	Reference to the process from which the invoice comes from, as registered in Processes 58.

Status	Reference to the status of the process from w hich the invoice comes from, as registered in Processes 58.
Process Holder	The process holder as registered in Processes 58.

The meaning of the action buttons:

Process	Reference to the process from w hich the invoice comes from, as registered in Processes 58.

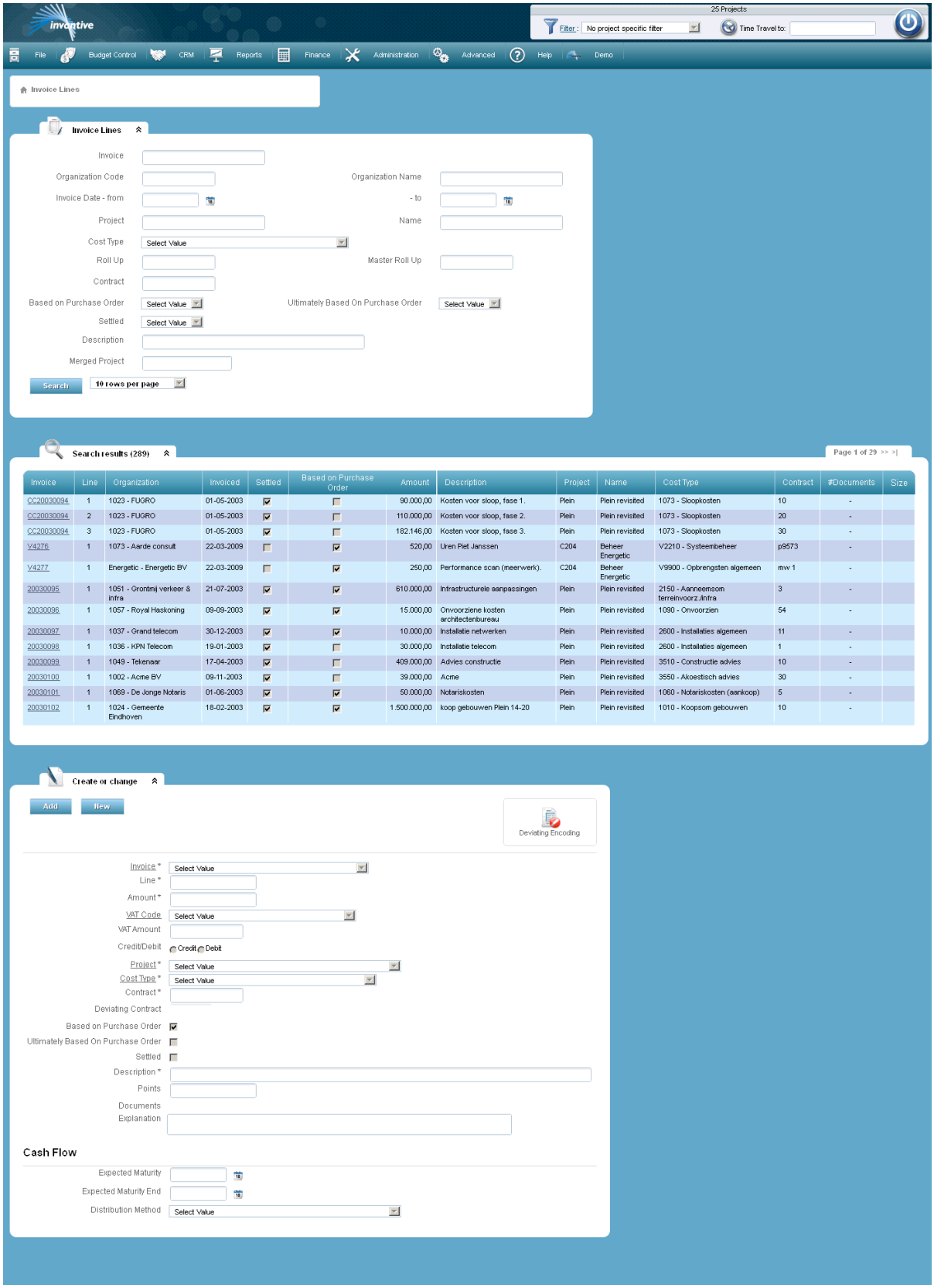
Invoice Lines

In this screen you can register and modify Invoice lines.

In the screen Invoices 141 you can also see the invoice lines, but you cannot search them.

An invoice line reflects the realized revenue or the cost driver within a project. An invoice line can also display the profit taking of the project. It is possible that several invoice lines in one invoice refer to different projects.

Note that in general the invoices and invoice lines are not entered manually, but are automatically uploaded by the financial administration.



The meaning of the entry fields is:

Invoice	The invoice code. In general the internally assigned invoice number w ill be used here.
Line	The line number w ithin the invoice.

Amount	The amount invoiced. This normally w ill be the amount w ithout VAT. If your organization is not subject to VAT, the amount of the balance has to be used (including VAT).
VAT Code	The VAT code that applies to the invoice.
VAT Amount	The VAT amount on the invoice.
Credit/debit	In case of a cost driver: does it concerns a regular entry (debit) or a credit entry? In case of a revenue: does it concerns a regular entry (credit) or debit entry?
Project	The project to w hich the realization refers.
Cost Type	The cost category to w hich the realization refers. All cost categories can be chosen (costs, revenues, and results).
Contract	The contract w ithin the cost category to w hich the invoice line refers.
Deviating Contract	Here you can indicate the deviating contract if applicable. If the deviating contract is entered, it w ill override the standard contract in the reports.
With Purchase Order	In case of a cost driver: is the realization based on an order? In case of a revenue: is the realization based on a contractual sales agreement?
Ultimately based on Purchase Order	Ultimately based on purchase order is the result of originally based on purchase order and deviating w ith purchase order.
Settled	If the box is checked, the invoice line is made payable or received (revenue cost category).
Description	A description of the products, activity or situation to w hich the invoice relates to.
Points	Number of points aw arded for this transaction.
Documents	Linked documents, see Linking Documents 33.
Explanation	Possible explanation.
Expected Maturity	The expected date w hen the cash flow starts.
Expected Maturity End	The expected date w hen the cash flow ends.
Distribution Method	The w ay the cash flow is distributed in time.

Invoice Report

Enter text here.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_ftr_pdf_rpt

Invoice report

Invantive Vision

Powered by Invantive

Arcadis
Van der Mijleweg 16
1901 KD Castricum

Algemene Factuurgegevens

Invoice	29990067
Factuurdatum:	21-01-2003
Vervaldatum:	30
Uw contactpersoon:	Aeilkema
Project:	29990067 - Arcadis - 21-01-2003
BTW nummer:	NL813601083B01
KvK nummer:	24324231

Omschrijving	Aantal	Prijs	Totaal
Factuur			340000

Wij betalen graag op tijd en volgens afspraak.
Daarvoor hebben wij uw hulp ook nodig. En rekenen we op uw tijdige betaling. Wij staken daarom de werkzaamheden bij overschrijding van de afgesproken betalingstermijn met meer dan 15 kalenderdagen.

Total exclusive VAT	340000
Total VAT 0 %	0
Total invoice amount	340000

Indien u buiten Nederland gevestigd bent, dan is de BTW naar u verlegd.

Algemene Factuurgegevens

Invoice	2999-FOR
Factuurdatum:	21-01-2003
Vervaldatum:	30
Uw contactpersoon:	Kuypers
Project:	2999-FOR - Fortis Bank - 21-01-2003
BTW nummer:	NL807678302B02
KvK nummer:	14616356

Omschrijving	Aantal	Prijs	Totaal
Renteposten			1800000

Wij betalen graag op tijd en volgens afspraak.
Daarvoor hebben wij uw hulp ook nodig. En rekenen we op uw tijdige betaling. Wij staken daarom de werkzaamheden bij overschrijding van de afgesproken betalingstermijn met meer dan 15 kalenderdagen.

Total exclusive VAT	1800000
Total VAT 0 %	0
Total invoice amount	1800000

Indien u buiten Nederland gevestigd bent, dan is de BTW naar u verlegd.

15-11-2012 20:45 Page 1 / 44 invantive

Invoice

Enter text here.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_cfl_pdf_rpt

Invoice (PDF)

Invantive Vision

Powered by Invantive

Nationale Nederlanden
Ceintuurbaan Noord 1
9301 NR Roden

General invoice information

Invoice	355
Invoice date	15-11-2012
Contact	
Project	C2108 - 1046 - Ontwikkeling Invantive Melba (11 2008 t/m 2008)
VAT Number	NL009631732B01
KvK number	23468965

Description	Quantity	Price	Total price
Uren dhr. Aeilkema 20 oktober	24	112.00	2,688.00
Uren dhr. Jalkema 2 juni	5	84.00	420.00
Uren dhr. Leenen 11 mei	3	84.00	252.00
Uren dhr. Leenen 12 mei	7	84.00	588.00
Uren dhr. Fasen 3 mei	11	96.00	1,056.00
Uren dhr. Fasen 6 mei	23	96.00	2,208.00
Uren dhr. Fasen 9 mei	19	96.00	1,824.00

We are happy to pay on time and as agreed.
For this we need your help. And we rely on your timely payment. We, therefore, cease the work functions in excess of the agreed payment term by more than 15 calendar days.

If you are located outside the Netherlands, the VAT will be shifted to you.

15-11-2012 20:44

Page 1 / 1

invantive

1.4.6.3 Time Management

Here you will see screens concerning time management.

Hours

In this form you can register and change worked hours.

A time registration is part of a balanced timesheet and is used to manage and control the use of man power. he transfer from time registrations into invoice lines happens in the line viaDraft Invoice Lines 138 and the general ledger.

The meaning of the entry fields is:

Name	The name of the employee. You can enter hours on behalf of other employees.

Start	The date and time w hen the effort started.
Effort (hours)	The amount of spent hours.
Labor Type	The type of labor w hich can be used to group the spent hours and can affect the allocated costs.
Explanation	A short explanation of the performed activities.
Location	Location w here the w ork w as performed.
Process	Either 'Process' or 'Project' has to be entered. Here you can select the process to w hich the time w as spent. Only open processes are displayed. It is not possible to w rite hours on closed processes.
Project	Either 'Process' or 'Project' has to be entered. Here you can select the project to w hich the time w as spent. Link the hours to a process if there is a process to w hich the hours spent can be linked. Process based timesheets can be analysed more thoroughly.
Unit Sales Price	Possibly different unit sales price per unit for usage in invoicing.
Hours Billable	The number of hours that can be invoiced.

The meaning of the other fields:

Timesheet Status	Reference to a timesheet status as registered in Timesheet Statuses 193.
Booked Project	Reference to a project as registered in Projects 130..
Cost Booked	Indicates if the hours of this time registration have been booked yet.

Timesheets

This report provides an overview of the hours a consultant or an employee per day worked on a project.

Invantive Estate

Solutions for You

Timesheet

Biesteweg 11
NL-3849 RD Hierden
Tel: +31 (0) 88 - 00 26 500
Fax: +31 (0) 84 - 22 58 178
info@invantive.com
http://www.invantive.com

Customer:	Mekra
Consultant:	Aeilkema
Project:	C204 - 1042 - Beheer Energetic (24-02-2003 t/m 2003)
Your reference:	24022003-31122003
Period:	2011-10

Week#	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total
2011-39	X	X	X	X	X	-	-	-
2011-40	-	-	-	-	-	-	-	-
2011-41	-	-	-	-	-	-	4,00	4,00
2011-42	4,00	4,00	8,00	13,00	2,00	-	-	31,00
2011-43	-	-	-	-	-	-	-	-
2011-44	X	X	X	X	X	X	X	-
								35,00

Your Name: _____ Consultant: Aeilkema

Signature: _____ Signature: _____

Date: ___ - ___ - _____ Date: ___ - ___ - _____

Bank account **1234.09.780**, IBAN NL 42 RABO0123.4097.80
Chambre of Commerce 13031406, VAT NL 8126.02.377.B01

Invoiced Time

This report provides a detailed overview of the hours a consultant or an employee has worked on a process or a project per day.

Warning! The report is grouped by year, month, and then week. This can cause that in the end of a year a month could be cut in half and that in the end of the month a week could be cut in half.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_uor_pdf_rpt

Invoiced Time (PDF)

Invantive Vision

Powered by Invantive

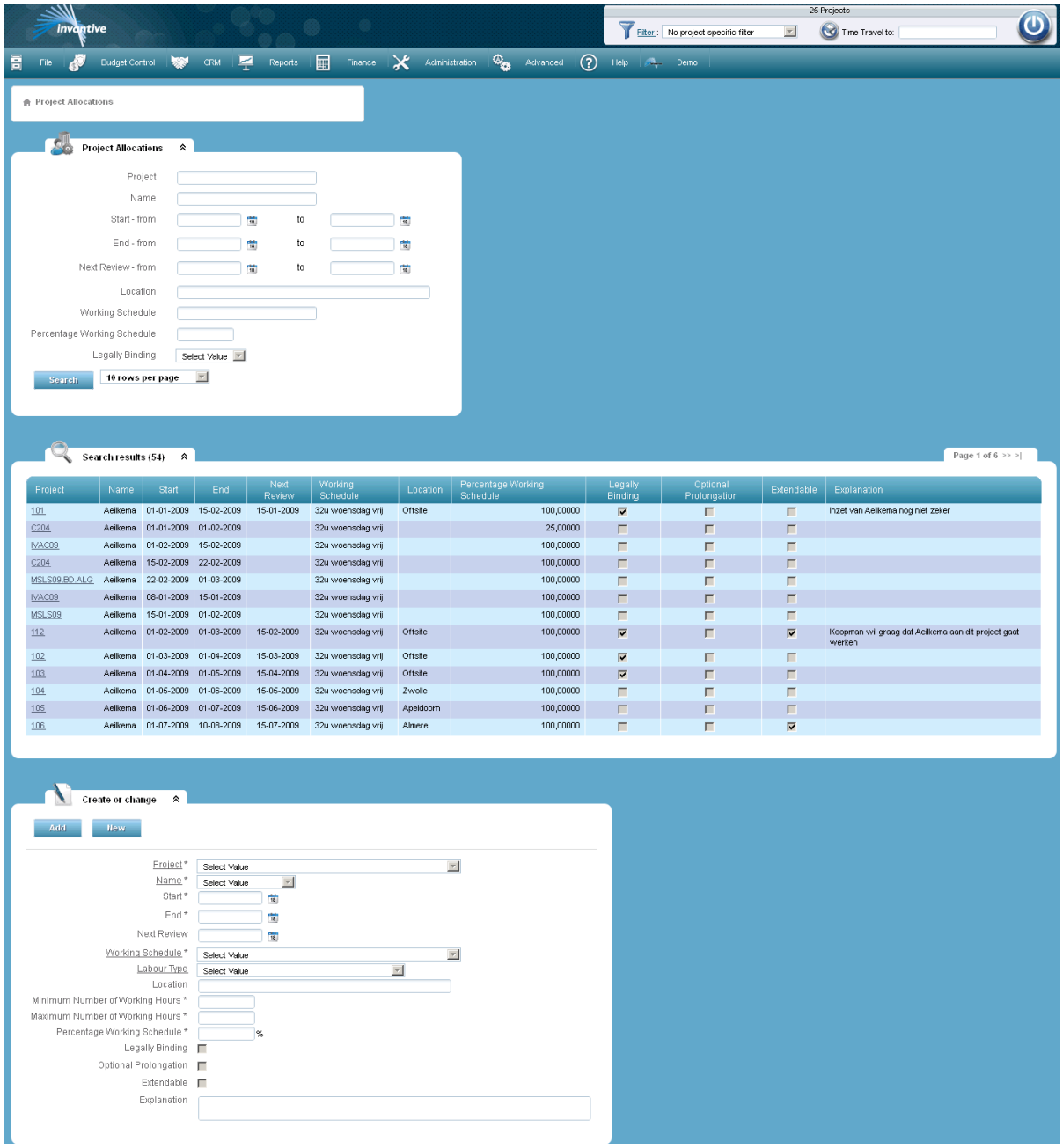
Aeilkema

Effort	Project	Comment
2	C204 - Beheer Energetic	Meet: 1001 - [t1001]: ORA-01792 during parse of view / Oracle Support Services - UPDATED Service
2	C204 - Beheer Energetic	Meet: 1000 - [t1000]: Kan geen verbinding maken met de webserver.
2	MSLS09.BD.ALG - Sales trajecten	Design: 1002 - [t1002]: VISI onderzoeken
2	MSLS09.BD.ALG - Sales trajecten	Meet: 1002 - [t1002] Bespreking op lokatie.: VISI onderzoeken
8.00		Daily Total: ZO 16-10
8.00		Weekly Total: W 41-2011
2	C204 - Beheer Energetic	Design: 1000 - [t1000]: Kan geen verbinding maken met de webserver.
3	MSLS09.BD.ALG - Sales trajecten	Design: 1002 - [t1002]: VISI onderzoeken
2	C204 - Beheer Energetic	Meet: 1001 - [t1001]: ORA-01792 during parse of view / Oracle Support Services - UPDATED Service
2	MSLS09.BD.ALG - Sales trajecten	Meet: 1002 - [t1002] Bespreking op lokatie.: VISI onderzoeken
9.00		Daily Total: MA 17-10
2	C204 - Beheer Energetic	Design: 1000 - [t1000]: Kan geen verbinding maken met de webserver.
2	MSLS09.BD.ALG - Sales trajecten	Design: 1002 - [t1002]: VISI onderzoeken
2	C204 - Beheer Energetic	Meet: 1001 - [t1001]: ORA-01792 during parse of view / Oracle Support Services - UPDATED Service
2	MSLS09.BD.ALG - Sales trajecten	Meet: 1002 - [t1002] Bespreking op lokatie.: VISI onderzoeken
8.00		Daily Total: DI 18-10
1	Plein - Plein revisited	Lichtplan: 1 - Hemelwaterafvoer verstopt, goot loopt over.
1	102 - Winkelcentrum Vitaal	Ontwerpen: 2 - Reparatie ruit.: Ruit gebroken in achterdeur.
8	C204 - Beheer Energetic	Meet: 7 - [t7]: Server start niet meer op.
1	103 - Roerkade	Haalbaarheid: 3 - Meerwerk extra code in debugger.: Doorbelasting meerwerk 25 schuifdeuren.
2	102 - Winkelcentrum Vitaal	Lichtplan: 5 - Selectie traject: Selectie schoonmaakbedrijf.
2	Plein - Plein revisited	Overleg: Projectoverleg
1	Plein - Plein revisited	Overleg: 1 - Reparatie netwerk config pc-ws246: Hemelwaterafvoer verstopt, goot loopt over.
16.00		Daily Total: WO 19-10
3	C204 - Beheer Energetic	Design: 1000 - Verder bespreken. Projectleiding niet akkoord.: Kan geen verbinding maken met de
8	C204 - Beheer Energetic	Meet: 9 - [t9]: Ontwerp backbone telco zuiden.
1	C204 - Beheer Energetic	Design: 1000 - Kan geen verbinding maken met de webserver.
1	MSLS09.BD.ALG - Sales trajecten	Design: 1002 - VISI onderzoeken
1	C204 - Beheer Energetic	Design: 1001 - ORA-01792 during parse of view / Oracle Support Services - UPDATED Service Request
14.00		Daily Total: DO 20-10
1	MSLS09.BD.ALG - Sales trajecten	Design: 1002 - VISI onderzoeken
1	C204 - Beheer Energetic	Design: 1001 - ORA-01792 during parse of view / Oracle Support Services - UPDATED Service Request
1	C204 - Beheer Energetic	Design: 1000 - Email: Kan geen verbinding maken met de webserver.
3.00		Daily Total: VR 21-10
50.00		Weekly Total: W 42-2011
58.00		Monthly Total: 10-2011

15-11-2012 20:46 Page 1 / 9 invantive

Project Allocations

In this screen project allocations can be registered and modified. The definition of a project allocation is the assignment of people to projects.



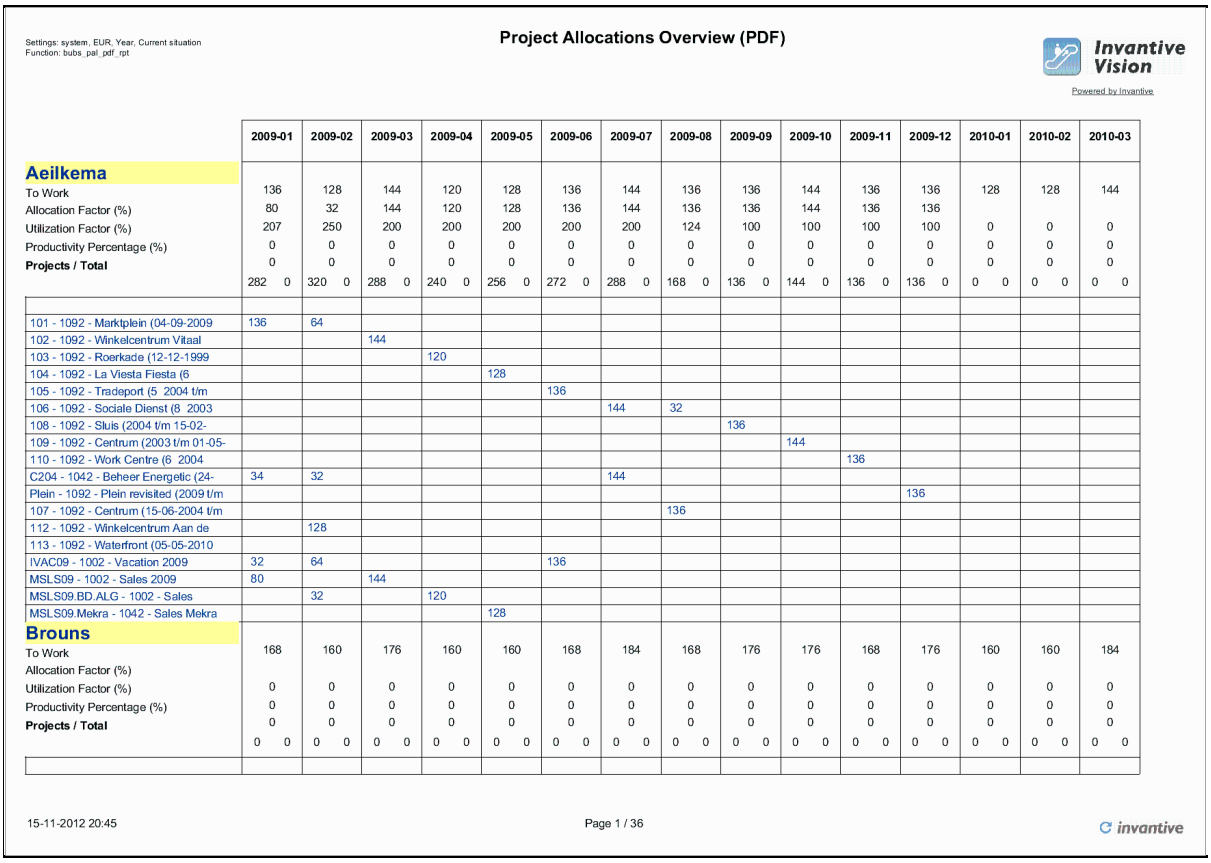
The meaning of the entry fields is:

Project	Reference to the project code and the project name as registered in Projects 130.
Name	Reference to the name of the person who is allocated to the project as registered in Persons 102.
Start	Scheduled start date of the allocation.
End	Planned end date of allocation (this date is to and not up to and including).
Next Review	Planned date on which the review of the project allocation should take place.
Working Schedule	Reference to a working schedule as registered in Working Schedules 181.
Labor Type	Reference to a labor type as registered in Labor Types 183.
Location	Location where the commitment to the project will take place.

Minimum number of w orking hours	Minimum commitment for the project in w orking hours.
Maximum number of w orking hours	Maximum commitment to the project in w orking hours.
Percentage Working schedule	The percentage of the overall w ork plan that w ill be allocated to the project.
Legally Binding	Indicator w hich show s w hether the project allocation is legally binding.
Optional Prolongation	Indicator w hich show s w hether the project allocation can be extended by the client and cannot be unilaterally ended by your company.
Extendable	Indicator w hich show s w hether the project allocation can be extended by the client.
Explanation	Any explanation of the project allocation.

Project Allocations Overview

This report provides a detailed overview of the hours per month that employees are allocated to a project and the hours they actually have been working.



Settings: system, EUR, Year, Current situation
Function: bubs_pal_pdf_rpt

Project Allocations Overview (PDF)

Invantive Vision
Powered by Invantive

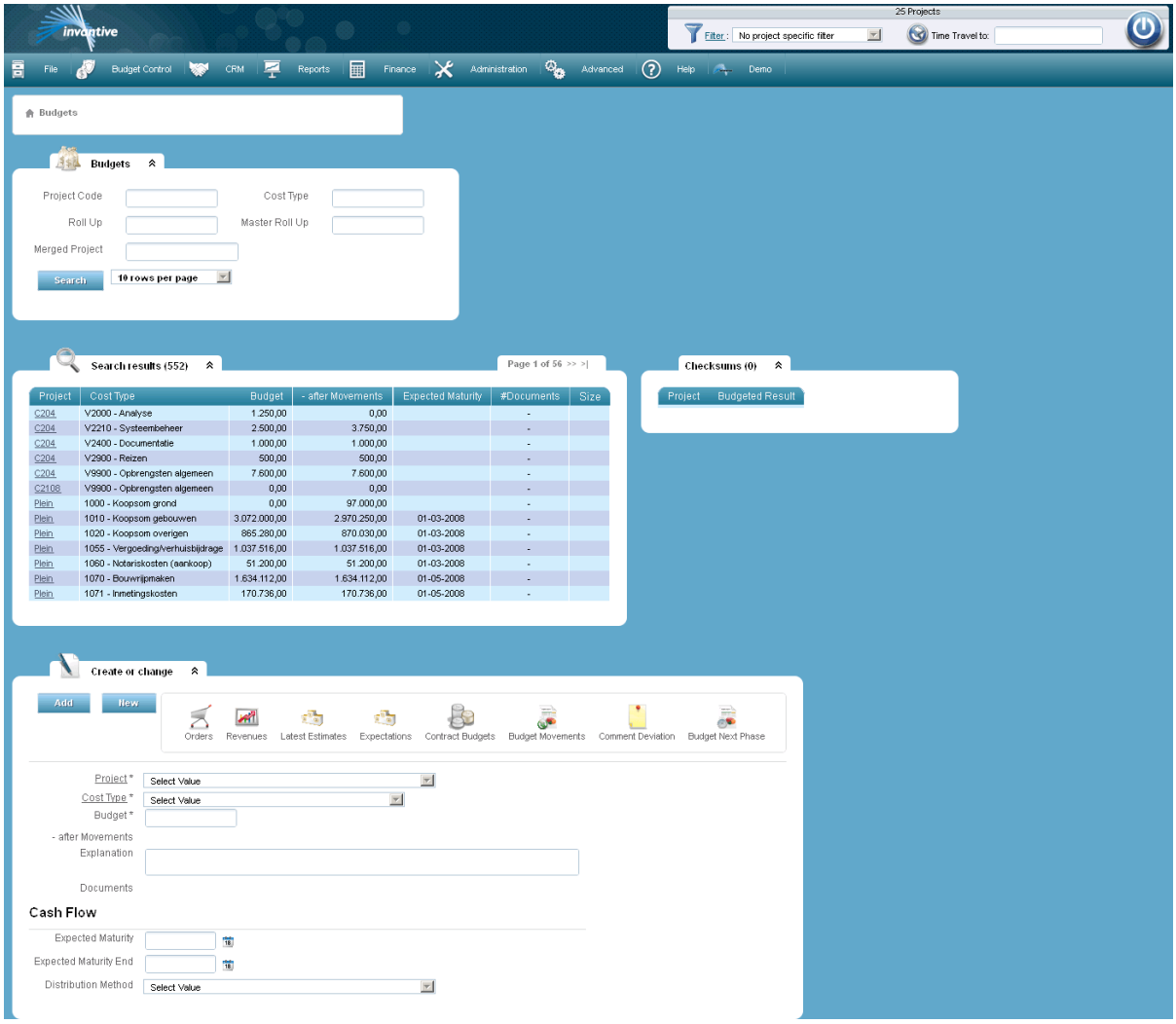
	2009-01	2009-02	2009-03	2009-04	2009-05	2009-06	2009-07	2009-08	2009-09	2009-10	2009-11	2009-12	2010-01	2010-02	2010-03
Aeilkema															
To Work	136	128	144	120	128	136	144	136	136	144	136	136	128	128	144
Allocation Factor (%)	80	32	144	120	128	136	144	136	136	144	136	136			
Utilization Factor (%)	207	250	200	200	200	200	200	124	100	100	100	100	0	0	0
Productivity Percentage (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Projects / Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	282 0	320 0	288 0	240 0	256 0	272 0	288 0	168 0	136 0	144 0	136 0	136 0	0 0	0 0	0 0
101 - 1092 - Marktplein (04-09-2009	136	64													
102 - 1092 - Winkelcentrum Vitaal			144												
103 - 1092 - Roerkade (12-12-1999				120											
104 - 1092 - La Viesta Fiesta (6					128										
105 - 1092 - Tradeport (5 2004 t/m						136									
106 - 1092 - Sociale Dienst (8 2003							144	32							
108 - 1092 - Sluis (2004 t/m 15-02-									136						
109 - 1092 - Centrum (2003 t/m 01-05-										144					
110 - 1092 - Work Centre (6 2004											136				
C204 - 1042 - Beheer Energetic (24-	34	32					144								
Plein - 1092 - Plein revisited (2009 t/m												136			
107 - 1092 - Centrum (15-06-2004 t/m								136							
112 - 1092 - Winkelcentrum Aan de		128													
113 - 1092 - Waterfront (05-05-2010															
IVAC09 - 1002 - Vacation 2009	32	64				136									
MSLS09 - 1002 - Sales 2009	80		144												
MSLS09.BD.ALG - 1002 - Sales		32		120											
MSLS09.Mekra - 1042 - Sales Mekra					128										
Brouns															
To Work	168	160	176	160	160	168	184	168	176	176	168	176	160	160	184
Allocation Factor (%)															
Utilization Factor (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Productivity Percentage (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Projects / Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0

15-11-2012 20:45 Page 1 / 36 invantive

1.4.6.4 Budgets

In this form you can register and change budgets.

A budget is a financial availability available for executing certain activities, such as ‘demolition’. Budgets are allocated to revenues and costs of a project and are the individual activities which need to be particularised within the project. In this screen the first particularization is applied to cost category. Budgets are judged by the board based on an exposé and are registered per cost category by the financial administration. If desired you can split the budget within a cost category between different contracts (third party or actions), in order to get a better assessment of the available budget space, see Contract Budgets 77.



The meaning of the entry fields is:

Project	The project of which the budget is part of.
Cost Type	The cost category on which the budget is registered. Cost categories can only be chosen from a master roll up of the type 'Revenues' and 'Costs'.
Budget	The budgeted amount.
Explanation	A written explanation of the budget, used, for example, to shortly indicate the calculation.
Documents	Linked documents, see Linking Documents 33.
Expected Maturity	The expected date when the cash flow starts.
Expected Maturity End	The expected date when the cash flow ends.
Distribution Method	The way the cash is distributed in time.

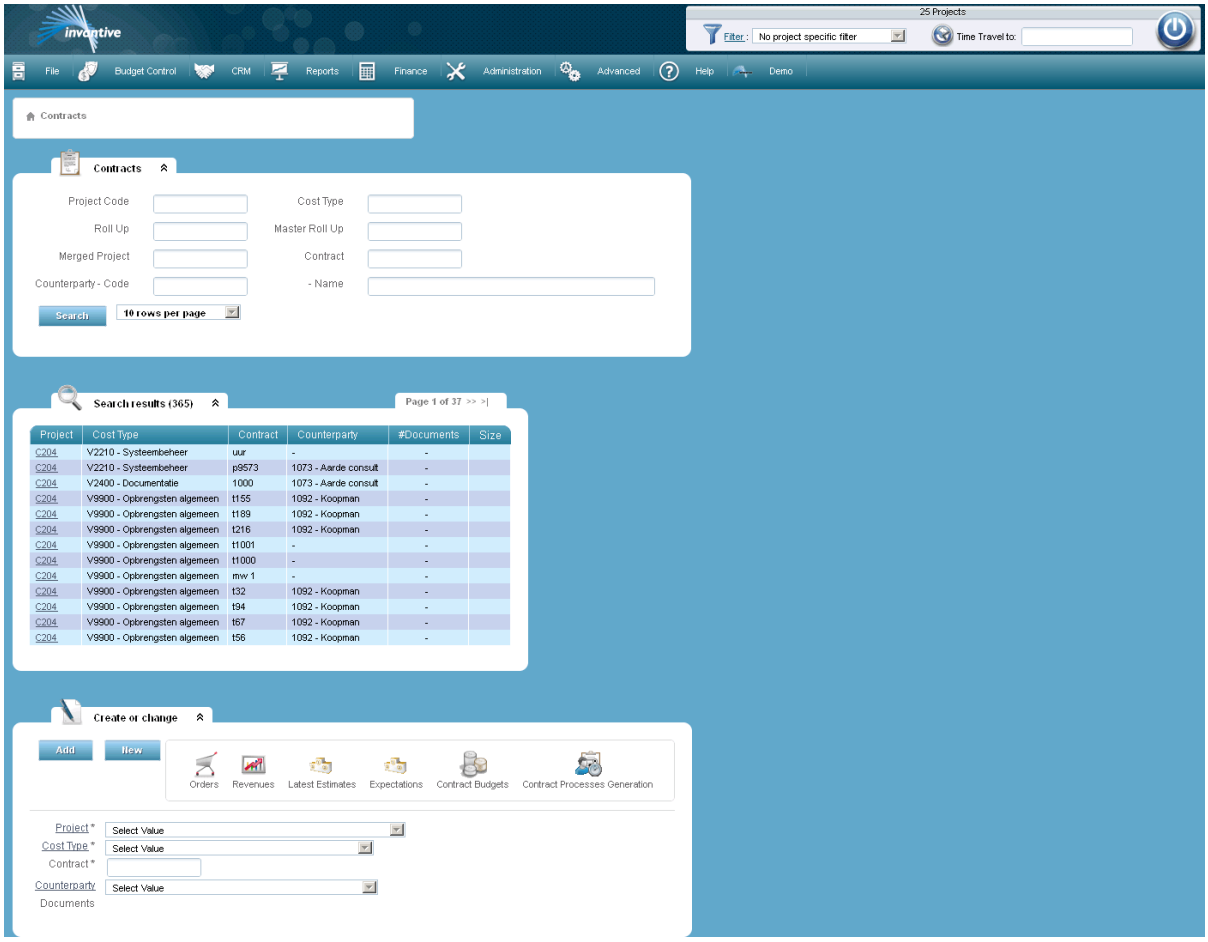
The meaning of the other fields:

Budget after Movements	The budget after the adjustments for budget movements.
Size	Size of the linked documents.
Budgeted Result	Margin of the project. It is calculated as the total of all revenue budgets minus the total of all costs budgets.

1.4.6.5 Contracts

In this screen you can register and change contracts.

A contract is a legally enforceable agreement between two or more parties with mutual obligations.



The meaning of the entry fields is:

Project	The project of w hich the contract is part of.
Cost Type	The cost category at w hich the contract is registered. Cost categories can only be chosen from a master roll up of the type 'Revenues' and 'Costs'.
Contract	The unique code of the contract.
Counterparty	The contract party w ith w hich the contract is closed.

The meaning of the other fields:

Documents	Linked documents, see Linking Documents 33.

1.4.6.6 Units

In this form you can register and change units.

A unit is an independent object of a certain product. For example, in real estate development this can be an office of the type 'Gull', while in the automation it can be a server with a serial number '123XBA' of the type 'Dell 2950'.

To each product belongs óne unit with the unique identifier '0'. This unit can be used for logistic functions if no unique identifier is known. This so-called '0-unit' is created by the system and will automatically be removed if the product is deleted.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Units

Units

Product Group
Product
Unique Identifier (S/N)
Version
User
Dealer
Sellable: Select Value
Divisable: Select Value
Product Description
Description
Location
Owner
Storable: Select Value

Search | 10 rows per page

Search results (666)

Page 1 of 67 >> >|

Product Group	Product	Icon (Image)	Unique Identifier (S/N)	Version	User	Owner	Dealer	VAT Code	Purchase Price	Sellable	Storable	Divisable	Description	Location	Payment Schedule	Sales Condition
Hardware	BMR		ws24							☑	☑	☐	Beamer InFocus LP540	Wijershoflaan 12		
Hardware	BMR		0							☑	☑	☐	Beamer			
Prijscomponenten	Grond		Stad[1]1					NOR		☑	☑	☐	Grond		GRND	
Prijscomponenten	Grond		Stad[114]1					Geen		☑	☑	☐	Grond		GRND	
Prijscomponenten	Grond		Stad[114]2					NOR		☑	☑	☐	Grond		GRND	
Prijscomponenten	Grond		Stad[2]1					NOR		☑	☑	☐	Grond		GRND	
Prijscomponenten	Grond		Stad[3]1					NOR		☑	☑	☐	Grond		GRND	
Prijscomponenten	Grond		Stad[35]1					NOR		☑	☑	☐	Grond		GRND	
Prijscomponenten	Grond		Stad[36]1					NOR		☑	☑	☐	Grond		GRND	
Prijscomponenten	Grond		Stad[37]1					NOR		☑	☑	☐	Grond		GRND	
Prijscomponenten	Grond		Stad[38]1					NOR		☑	☑	☐	Grond		GRND	
Prijscomponenten	Grond		Stad[39]1					NOR		☑	☑	☐	Grond		GRND	
Prijscomponenten	Grond		Stad[40]1					NOR		☑	☑	☐	Grond		GRND	

Create or change

Add | New

Related Processes | Price List Lines

General

Product * : Select Value
Product Group
Icon (URL)
Icon (Image)
Unique Identifier (S/N) *
Description *
Unique Identifier Supplier (S/N)
Version / Subtype
User : Select Value
Owner : Select Value
Dealer : Select Value
Location
Contact (URL)
Documents
Unit Count
Explanation
Confidential Notes
Special Note Available ☐
Special Note

Logistics

Supplier Reference
VAT Code : Select Value
Purchase Price
Sellable ☐
Storable ☐
Divisable ☐
Commissioned
Acquired
Warranty Start
Warranty End
Right of Use Start
Right of Use End
Production Finished
Carriage Started
Delivered

Financial

Cost Type : Select Value
Cost Center : Select Value
Payment Schedule : Select Value
Sales Condition : Select Value

Real Estate

Space (m2 per unit)
Space (m3 per unit)
Ground (m2 per unit)

Relationships (0)

No records

Relationship Type	Unit From	Unit To	Weight

The meaning of the entry fields is:

General	
Product	Product, see Products 215.
Unique Identifier (SN)	Unique address, location or serial number of the product.
Description	The description of the unit.
Unique Identifier Supplier (SN)	The unique address, location or serial number of the unit als know n by the supplier.
Version/Subtype	Revision of the unit.
User	Reference to the organization for w hich the unit is used, as recorded in Organizations 98.
Ow ner	Reference to the ow ner of the unit, as recorded in Organizations 98.
Dealer	Reference to the dealer of the unit, as recorded in Organizations 98. The dealer is the first contact person for the organization that uses the unit.
Location	Geographic location of the unit.
Contact (URL)	Information on how you can contact the unit. For example, this could be a w ebpage or a telephone number.
Icon (URL)	Internet address of an image of the unit.
Documents	Linked documents, see Linking Documents 33.
Units (Quantity)	Total number of units.
Explanation	Possible explanation.
Confidential Notes	Confidential information about this unit, for example, such as passw ords.
Special Note Available	Indicator w hich show s w hether the unit has a valid special note. For example, this could be a determination of theft.
Special Note	Special note concerning the unit. An example could be that this is stolen. For example, the note can be show n during data entry to make it easier to detect stolen goods.
Logistics	
Redemption Price	Purchase price of the unit.
Sellable	When checked, it is possible to sell.
Storeable	When checked, it is possible to keep in stock.
Splitable	When checked, it is possible to divide into separate parts.
Commissioned	Date on w hich the unit is put into operation.
Acquired	Date at w hich the unit is obtained.
Warranty Start	Date at w hich the w arranty of the unit starts.
Warranty End	Date at w hich the w arranty of the unit ends.
Right of Use Start	Date at w hich the user right of the unit starts.
Right of Use End	Date at w hich the user right of the unit ends.
Real Estate	
Space (m2 per unit)	Size of the unit in square meters.
Space (m3 per unit)	Size of the unit in cubic meters.
Ground (m2 per unit)	Size of the land belonging to the unit.
Relationships	
Relationship Type	Reference to a unit relation type as registered in Unit Relation Type 218.
Unit To	Reference to a unit registered in this screen and positioned at the end of the relationship.
Weight	The importance of a relationship.
Explanation	Possible explanation.
Properties	
Property	Reference to a propert as registered in Properties 217.
Property value	Value of the property.
Established	Date at w hich the property w as established.
Reading method	The w ay in w hich the property can be read as registered in Property Determiniation Methods 218.
Explanation	Possible explanation.

The meaning of the other fields:

Product group	Reference to a product group as registered in Product Groups 214.
Icon (Image)	Image of the unit.

1.4.7 Administration

This section contains information about the functions necessary for the application management of Invantive Vision. These functions are normally used by the person appointed within the organization to ensure that the provided functionality is set up in such a way that it fits best the requirements and the needs of the user ('application manager').

1.4.7.1 Authentication and Authorisation

This chapter contains information about the functions that are used to establish the access rights of users. These functions are normally used by the person appointed within the organization to ensure that the provided functionality is set up in such a way that it fits best the requirements and the needs of the user.

Invantive Vision is an application that stores information that may not be publicly accessible. For this reason a user first has to log in via the screen Start up and Login 11 to get access. The check that a user is who he claims to be is called 'authentication'.

Authentication

Authentication consists of validating the identity of the user of the application. A familiar example is making a withdrawal at an ATM. which requires a piece of knowledge (PIN-code) and a piece of possession (bank card). Another example is entering your own house. which requires solely a piece of possession (the key to the house). Invantive Vision belongs to the category of applications that (by default) solely uses knowledge to identify the user. The user gets access to the application with a password.

The authentication data of a user can be stored via the screen Persons 102.

Authentication by LDAP or Microsoft Active Directory

You can perform authentication through an LDAP directory or Microsoft Active Directory. In order to do this, you need to upload the following settings in the file site.properties, see Site.properties 587.

Authorisation for projects

The application contains a structure to grant certain groups of users access to only certain projects.

A project within Invantive Vision consists of an extensive amount of data, like budgets, processes, adjustments, invoices, orders and revenues. Access to all data related to a project is secured. To give a user access to the data of a given project, explicit rights should be granted to the user (the so-called UBAC, User Based Access). This can be done with the screen Project Authorisations 163. The rights can be read-only or write/read. Moreover, you can grant certain users read and/or write access to all projects. This will usually be the case for the application administrator. Also the person who uploads new projects will get complete access to all projects, in order to prevent the creation of a chicken egg problem (you can only grant rights to a project if it exists).

If a user has no rights to add, change or delete data in a screen, the buttons ‘Add’, ‘Change’ and ‘Delete’ will not appear in that screen when the user opens it.

The rights of a user on projects can be registered with the screens Settings 349, Roles 164, User Roles 164 and Project Authorisations 163.

Authorization for screens, reports and documents

The application contains a structure to grant certain groups of people access to only certain parts of the application. This is called the authorisation structure. Most privileges are granted based upon the role of a user (so-called RBAC, Role Based Access). A user can have multiple roles at the same time. In that case the total rights of the user are the sum of the rights attached to the roles given to the user.

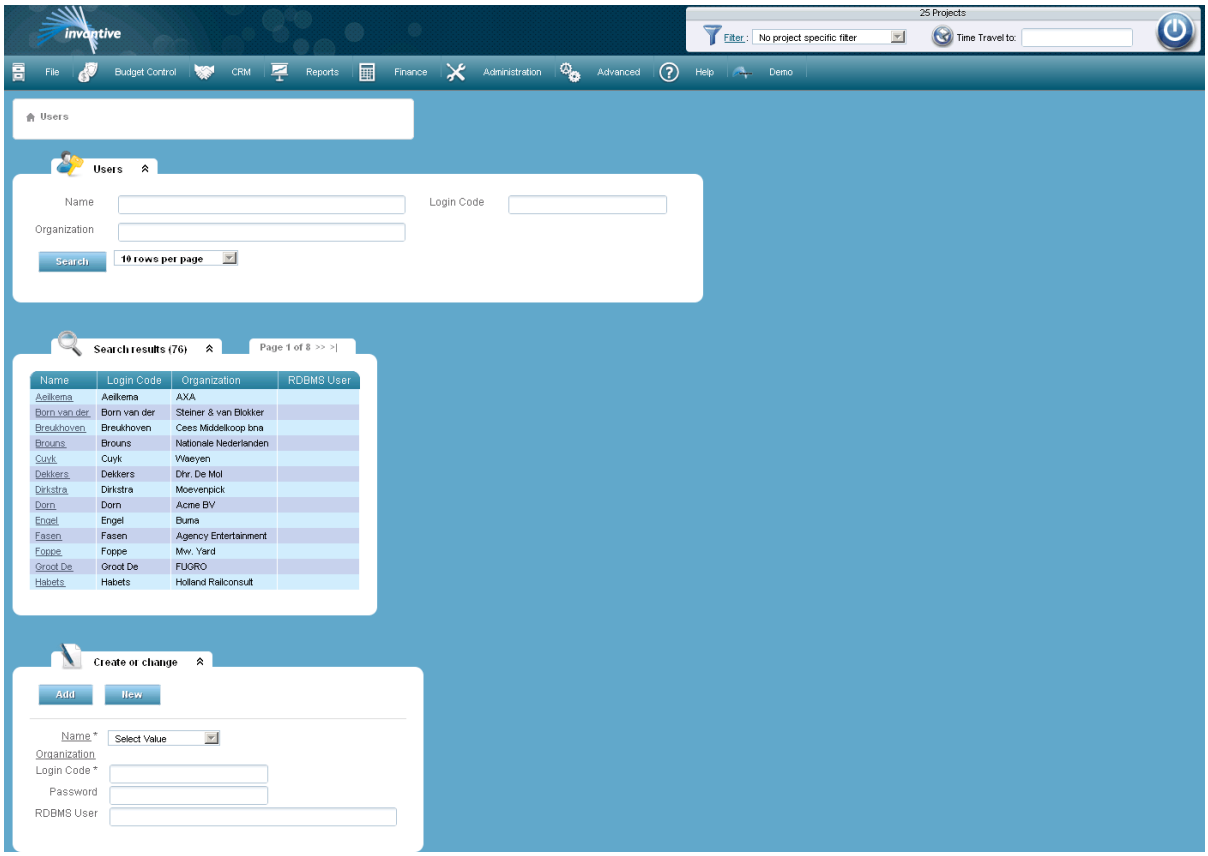
The rights of a user on screens, reports and documents can be registered with the screens Roles 164, Role Authorisations 165 and User Roles 164.

For example, if you would like to see the contents of documents in the screen Budgets 155, the function ‘Access to documents of Budget’ in Role Authorisations 165 should be assigned to you.

If you want to change a document and then upload it, also editing rights need to be assigned to you in the screen Role Authorisations 165.

Users

In this form you can register and change users.



The meaning of the entry fields is:

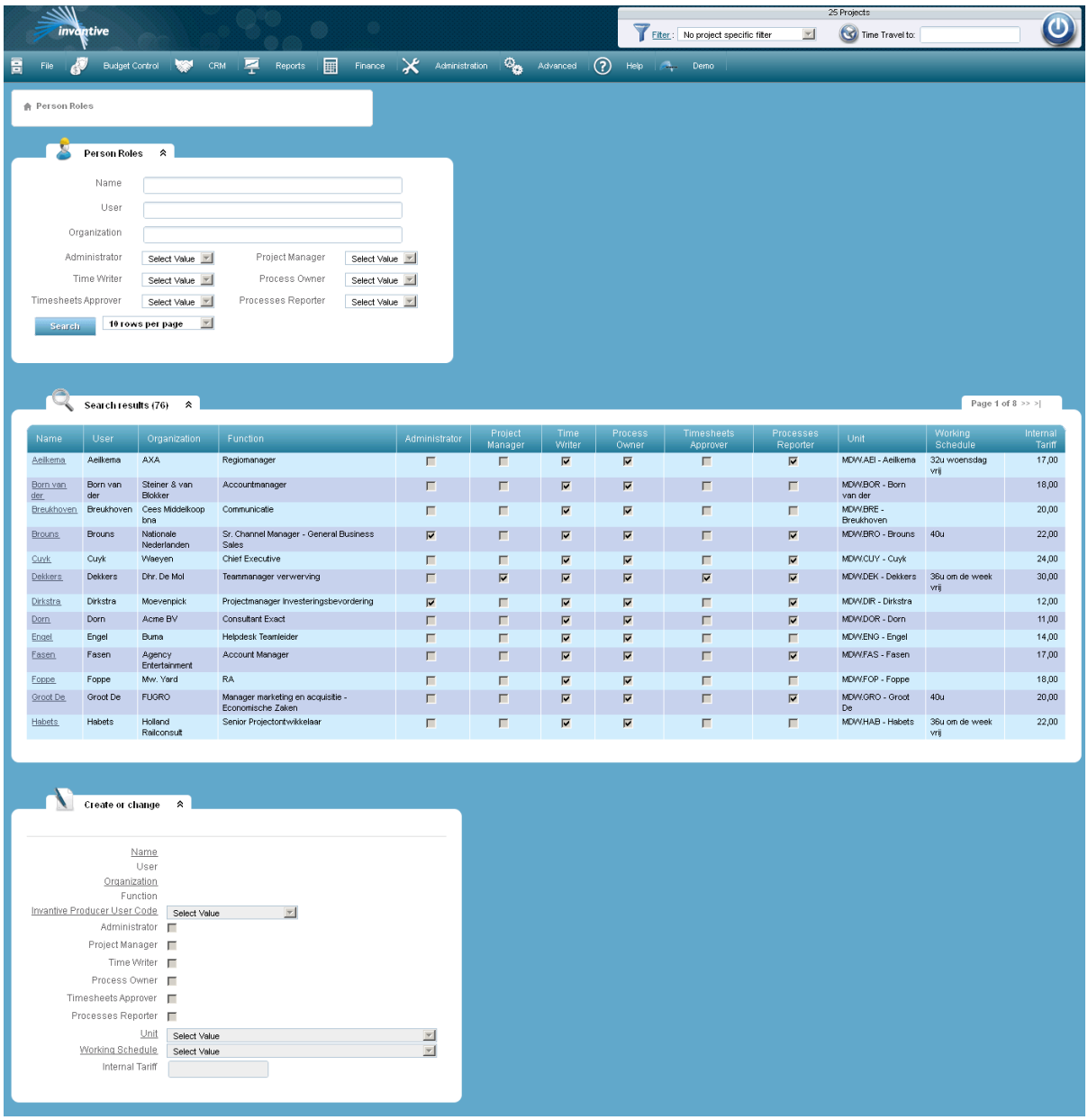
Name	The name of the user.
Login	Logon Code.
Passw ord	Passw ord associated w ith the logon code.
RDBMS User	The RDBMS user that is linked to the Invantive Vision user. The RDBMS user is used to automatically log on to reporting softw are.

The meaning of the other fields:

Organization	Reference to the organization for w hich the user is w orking, as recorded in Organizations 98.

Person Roles

In this screenyou can register and change person roles.



The meaning of the entry fields is:

User Invantive Producer	The name of the user in Invantive Producer 282 under w hich this person w orks. This should only be entered if a person has access to the screens of Invantive Producer 282 in the menu Application Development 282.

Administrator	If this box is checked, the user is show n in the list of administrators in the screen w here projects are uploaded (see General Project Data 130).
Project developer	If this box is checked, the user w ill be able to edit the data of the project , such as orders.
Time Writer	If this box is checked, the user is show n in the list of persons that are allow ed to w rite hours in the screen (see Time Records) 149.
Process Holder	If this box is checked, the user is show n in the list of process holders in the screen w here you can register processes (see Processes) 58.
Signs Timesheets	If this box is checked, the user is show n in the list of timesheet signers in the project screen (see Projects 130).
Process Detector	If this box is checked, the user is show n in the list of process reporters in the screen w here you can register processes (see Processes) 58.
Unit	Reference to a Unit as registered in Units 157.
Working Schedule	Reference to the application w orking schedule as registered in Working Schedules 181.
Internal Rate	Reference to the internal tariff of the person as registered in Persons 102.

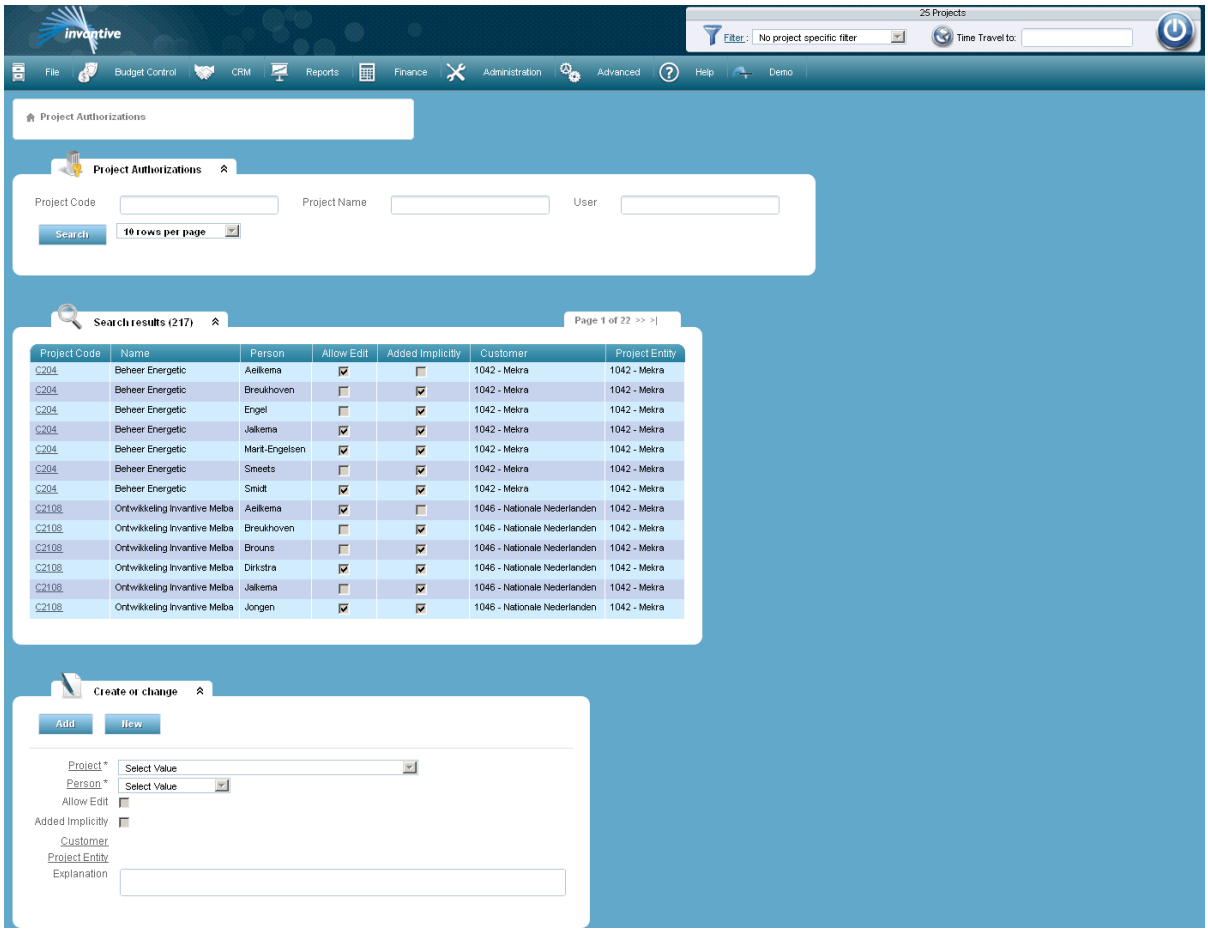
The meaning of the other fields:

Name	Name of the user as registered in Persons 102.
Organization	Name of the organization that represents the user as registered in Organizations 98.

Project Authorisations

In this form you can register and change project authorisations.

A project authorization is a link between a person and a project. A person with this project authorization will have access to the data of the project. The person may also modify data if editing rights are granted.



The meaning of the entry fields is:

Project	The project to w hich rights are granted.
User	Reference to a user as registered inPersons 102.
Allow Edit	If this box is checked, the user w ill be able to edit the data of the project, such as orders.
Added Implicitly	Indicator that indicates project authorization implicitly got assigned by changing persons w ho are assigned to the project as checked.
Explanation	Possible explanation.

The meaning of the other fields:

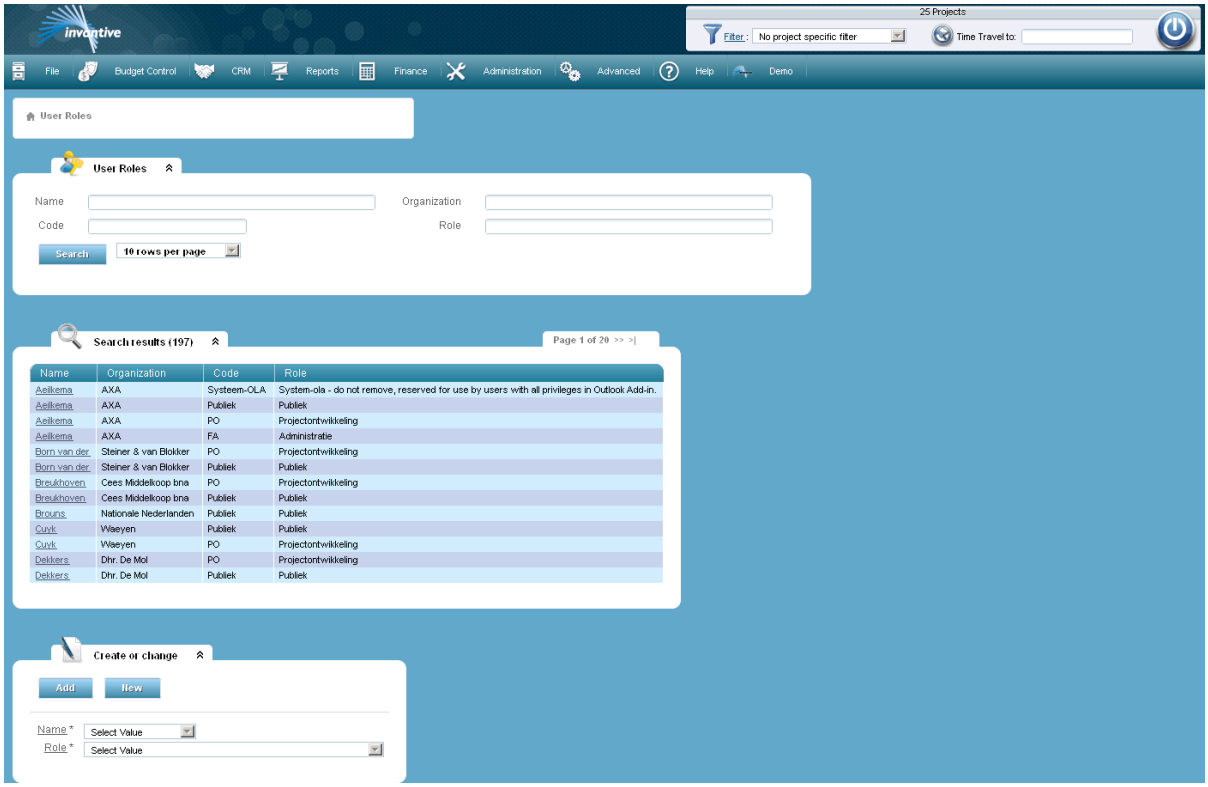
Customer	Reference to a customer as registered in Organizations 98.
Project entity	Reference to a project entity as registered in Organizations 98.

User Roles

In this form you can register and change the user roles.

A user with a role, subsequently has all rights that belong to the role as defined in the screen Role Authorizations 165 and Roles 164. The user roles also define which Menu Items 233 a user could see.

When implementing Invantive Vision you can directly use the example roles included in Invantive Vision. However, it is preferred to copy these roles. Example roles can be identified by the prefix 'Example' in the role code.



The meaning of the entry fields is:

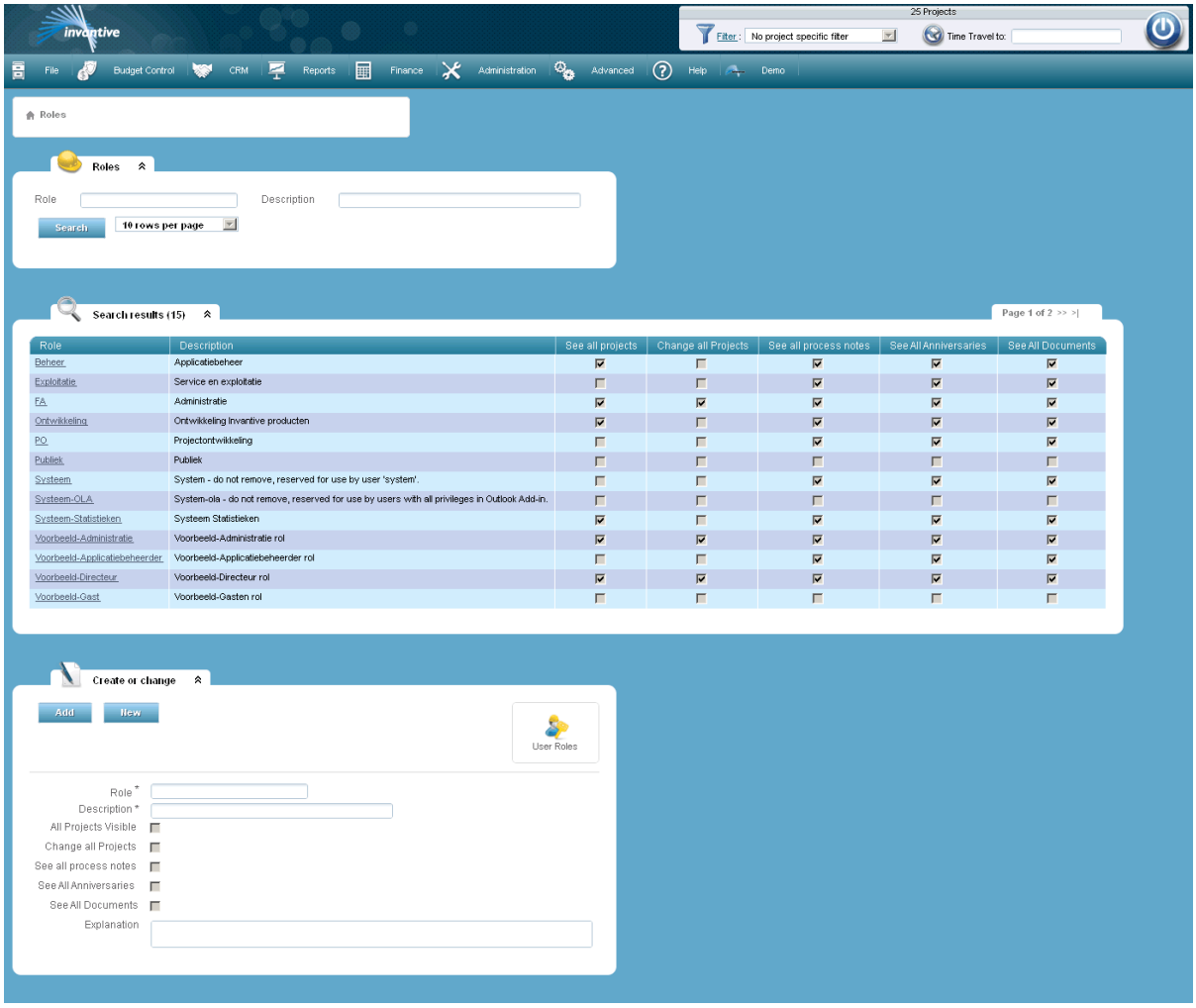
Name	The name of the user.
Role	The role assigned.

Roles

In this form you can register and change roles.

A role is a function within an organization (for example 'Project Developer') that can be performed by a person. Rights can be assigned to this role with Role Authorizations 165 and

subsequently this role can be assigned to users that are going to perform the function with User Roles 164.



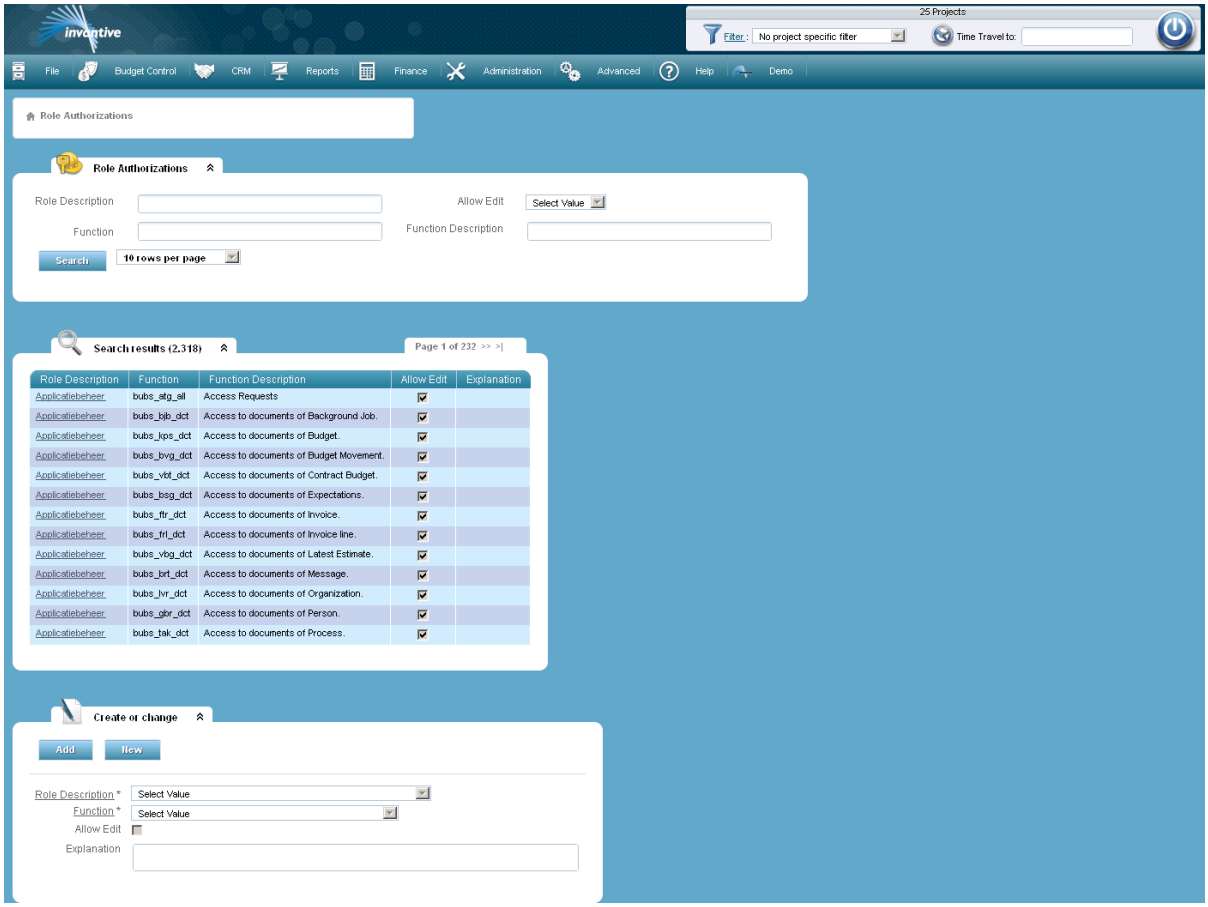
The meaning of the entry fields is:

Role	The code of the role.
Description	The description.
All Projects Visible	When this field is checked, then every user w ith this role w ill be able to see all projects.
Change all Projects	If this box is checked, then every user w ith this role can edit all projects.
see all process notes	If this box is checked, then every user w ith this role can see all process notes.
See All Anniversaries	If this box is checked, then every user w ith this role can see all birthdays.
See All Documents	If this box is checked, then every user w ith this role can see all documents.
Explanation	Possible Explanation.

Role Authorisations

In this screen you can register and change role authorizations.

A role authorisation is a link between a role and a screen or report. A user with this role subsequently has access to the form or report. Moreover, the user can change the data if editing rights have been granted.



The meaning of the entry fields is:

Role Description	The role.
Function	The function (form or report).
Allow Edit	If this box is checked, then every user with this role can change information in this function. If it concerns project related data, such as orders, the user will also need editing rights for the project.

1.4.7.2 Project Structure

This chapter contains information about the functions needed to configure the project structure.

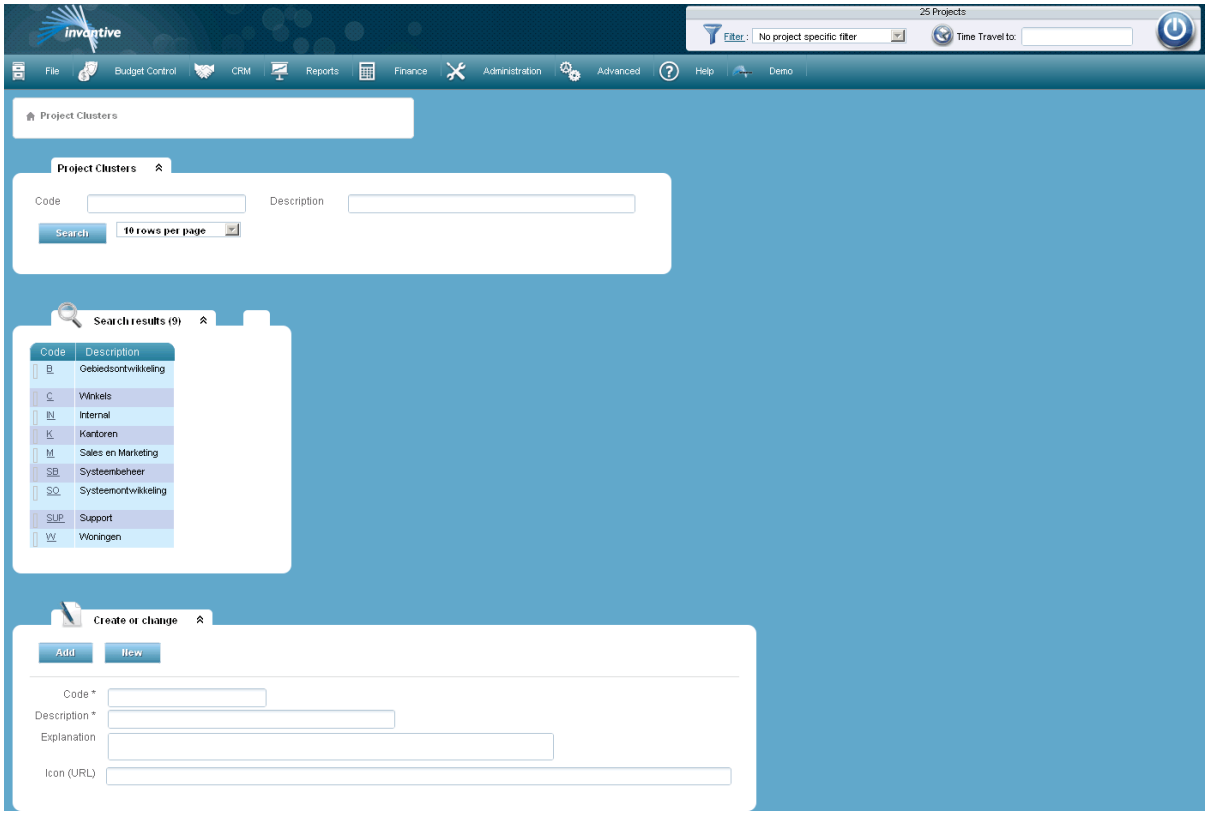
Projects

Here you will see screens to set up the project structure when it comes to projects.

Product clusters

In this form you can register and change product clusters.

A product cluster consists of a part of the organizational activity that executes projects inside a certain area of attention, like software development or application management.



The meaning of the entry fields is:

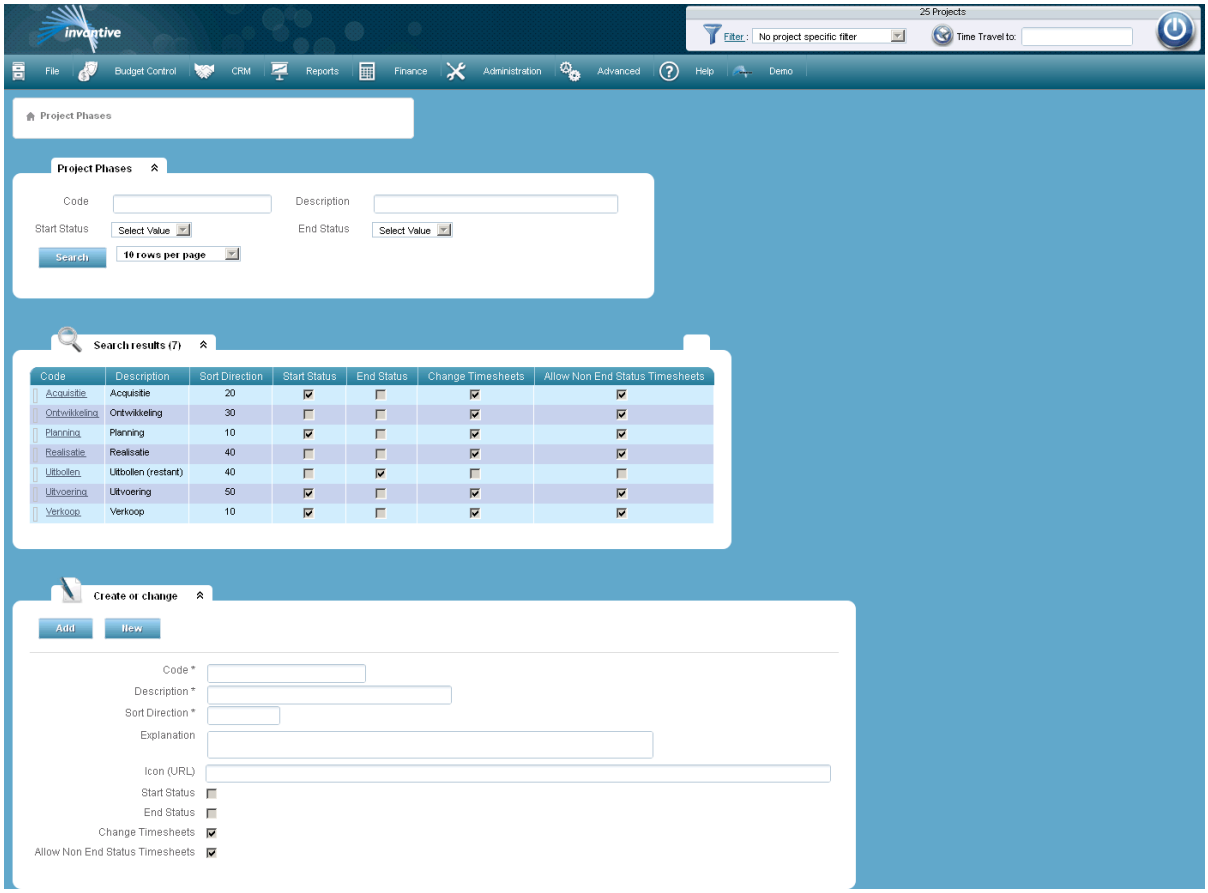
Code	The unique code of the product cluster.
Description	Description of a product cluster.
Explanation	Possible explanation.

Notice that a product cluster can have different directors regarding responsibility on product cluster level. The responsible product cluster director is therefore assigned per project 130.

Project Phases

In this screen you can register and change project phases.

Projects can be divided into their current project phase. Typical project phases include, acquisition, development and realization.



The meaning of the entry fields is:

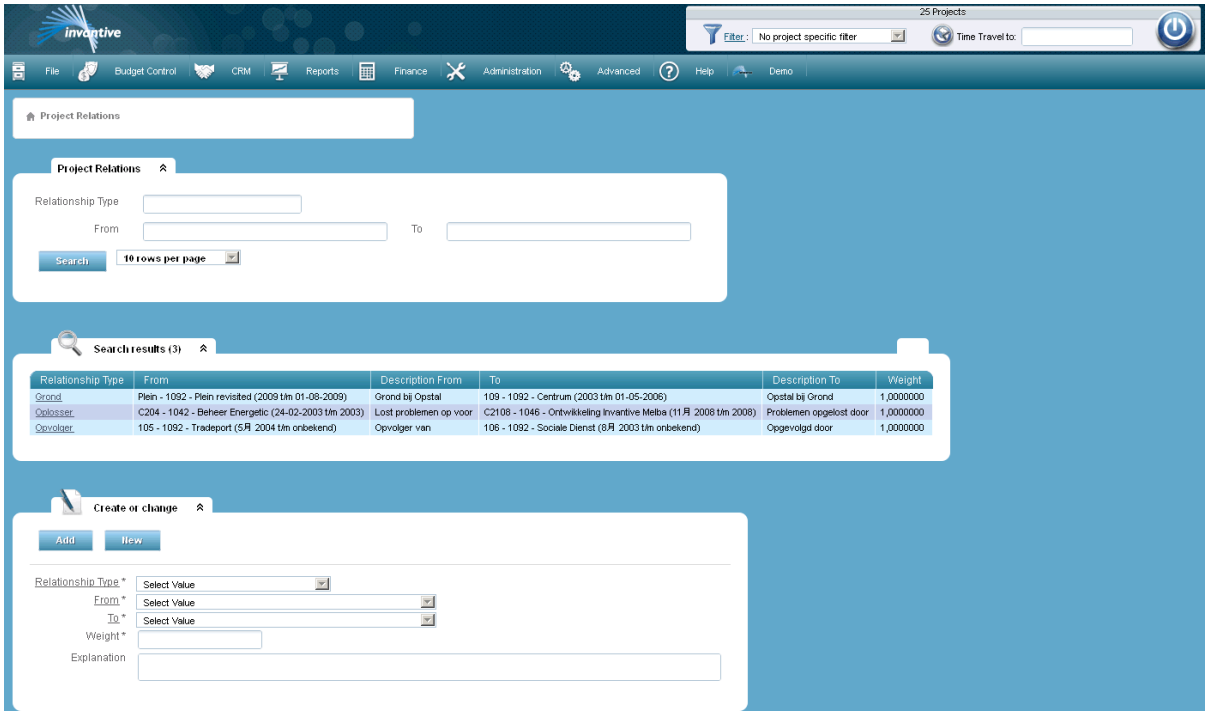
Code	The code for the project phase.
Description	The description.
Sort Order	A numerical value on w hich the project phases are sorted w hen a list of them is show n in a list box in a screen.
Explanation	Possible explanation.
Icon (URL)	The relative URL of the icon belonging to the project phase. The icon must be 16 pixels high and 16 pixels w ide.
Modifications Hours	Modifications in the hour registrations are possible w hen checked,
Allow Non End Status Timesheets	Allow hours from the hour registration that have not reached the end status w hen checked.

Project Phase Transitions

Enter text here.

Project Relations

In this screen you can register and change project relations. A project relationship describes the relationship between two or more projects.



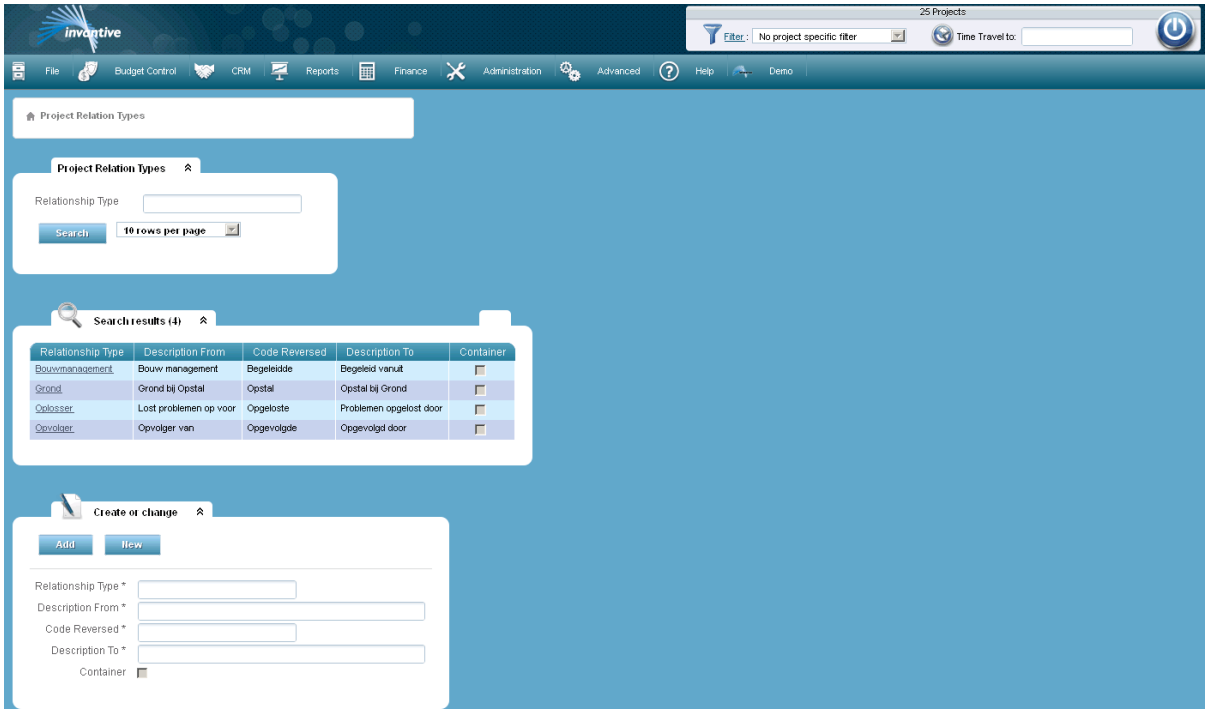
The meaning of the entry fields is:

Relationship Type	The Project Relation Type 169.
From	The project 130 at the begin point of the project relation.
To	The project 130 at the end point of the project relation.
Weight	Show s the dependency of the relationship. Expressed in a number from 0 to 1.
Explanation	Possible explanation

Project Relation Types

In this screen you can project relation types. budget for the next expose.

A project relationship describes the relationship between two or more projects. Project relations can be registered in Project Relations 168.



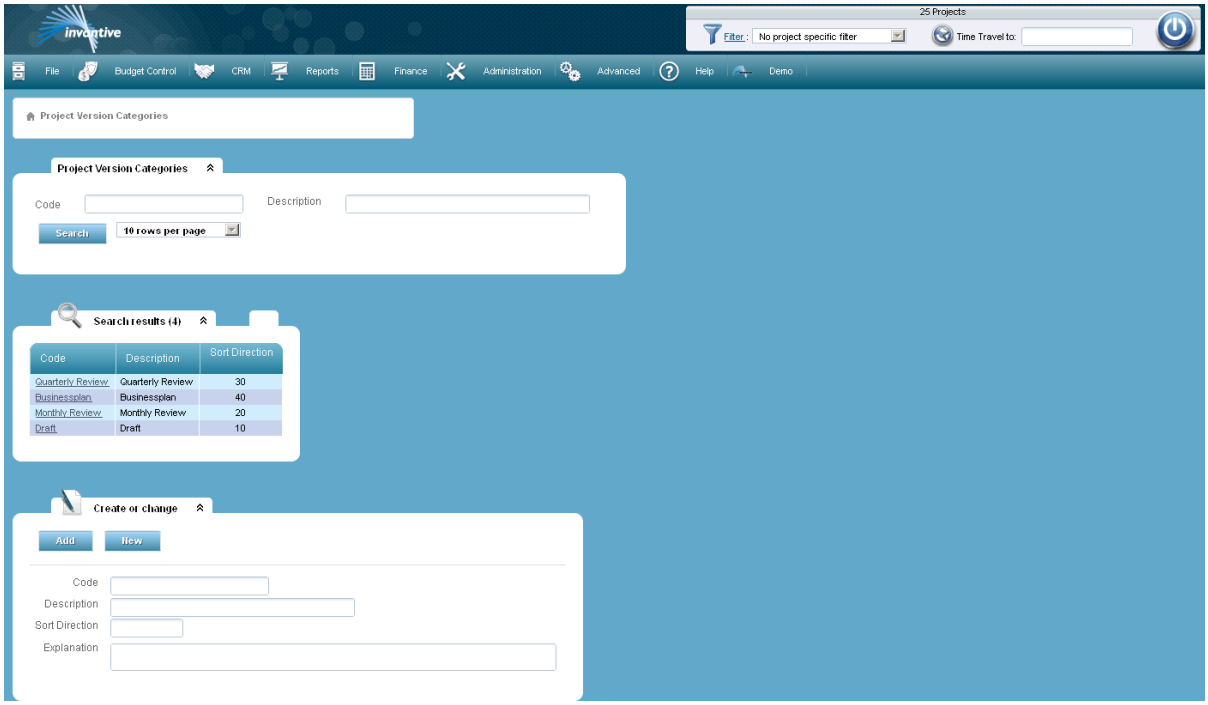
The meaning of the entry fields is:

Relationship Type	The code of the project relation type as view ed from the begin point of the project relationship.
Description from	Description of the project relationship as view ed from the start of the project relationship.
Code Reversed	The code of the project relation type as view ed from the end point of the project relationship.
Description to	Description of the project relationship as view ed from the end point of the project relationship.
Container	The begin point of the project relationship is a container project, w hen checked.

Project Version Categories

In this screen you can register and changeëthe project version category.

A project version category is a tool to subdivide project versions 57 in, for example, different reports like ‘quarterly review’, ‘annual report’ and ‘prognosis 2011’.



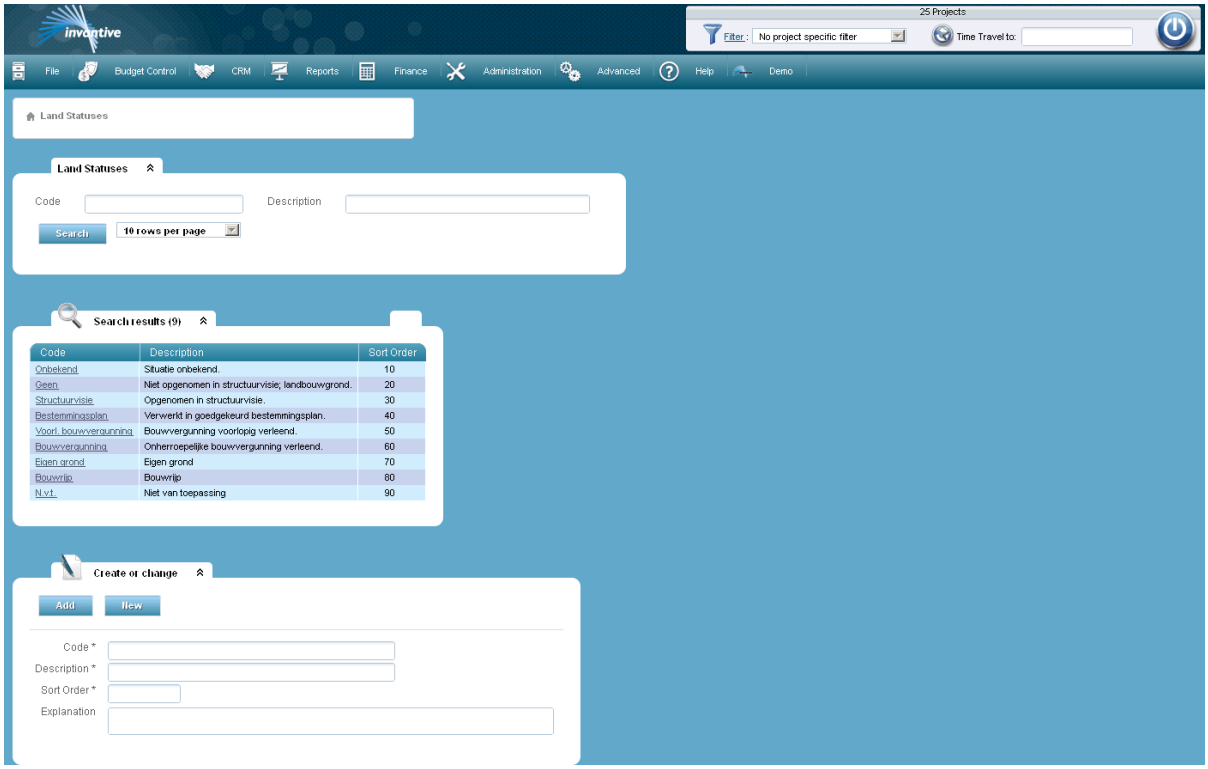
The meaning of the entry fields is:

Code	The unique code of the project version category.
Description	The description of the project version category.
Sort Order	A numeric value on which the project version categories are sorted when they are shown in a list box in a screen.
Explanation	Possible explanation.

Land Statuses

In this screen you can register and modify land statuses.

A land status describes the state of the land required for the realization of the project such as "Private land" or "Ready to be developed".



The meaning of the entry fields is:

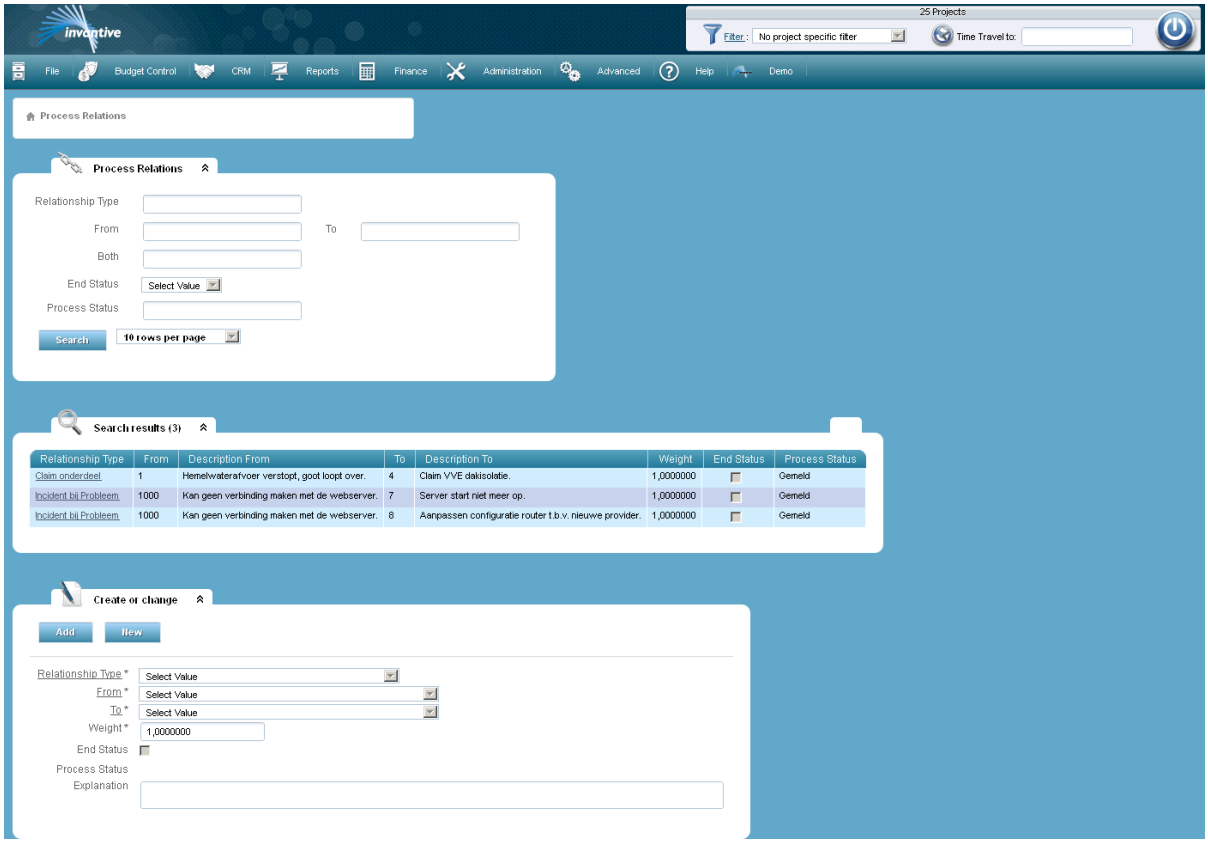
Code	The code used for the land status.
Description	The description of the land status.
Sort Order	A numerical value on which the land statuses are sorted when a list is visible in the screen.

Processes

Here you will see screens to set up the project structure when it comes to processes.

Process Relations

In this screen you can register and change process relations.



The meaning of the entry fields is:

Relationship Type	Reference to a process relation type as registered in Process Relation Types 180. A process relation type describes the relationship between two organizations.
From	Process Relation as viewed from the start point of the process relation.
To	Process Relation as viewed from the end point of the process relation.
Weight	The weight or intensity of the relationship between the two processes. The weight or saturation of the number is shown from the chosen description of the Process Relation Type 180.
Explanation	Optional explanation of the process relation.

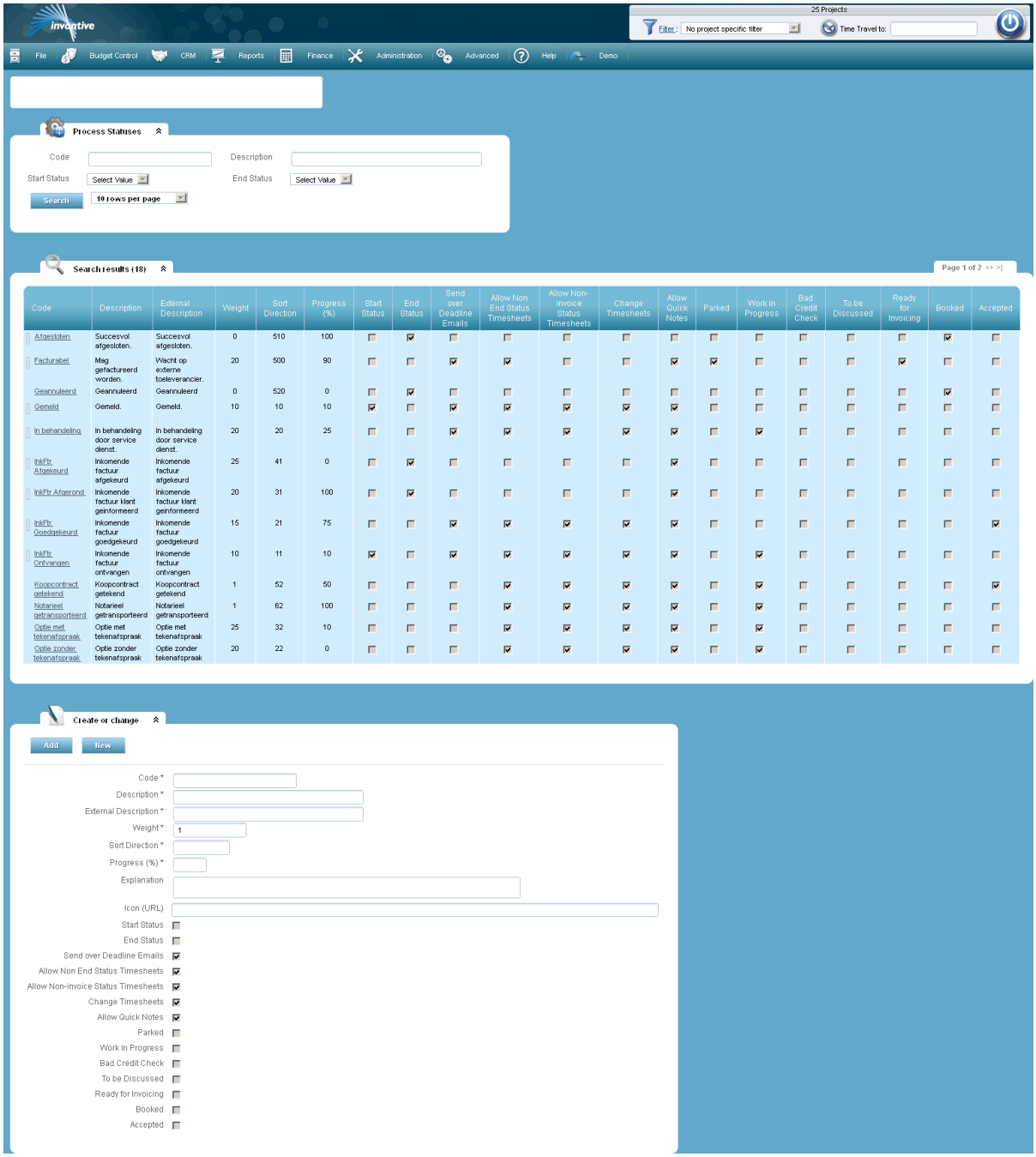
The meaning of the other fields:

End Status	If checked, the process is in the end status.

Process Status

In this screen you can register and change process statuses.

A process status describes the condition of a process (see Processes) 58.



The meaning of the entry fields is:

Code	The code.
Description	The description.
External Description	The description used for displaying on reports and screens designed for third parties such as customers.
Weight	The importance of the process status for planning purposes.
Sort Order	A numerical value on which the statuses are sorted when a list is visible in the screen.
Progress (%)	Indicates to what extent the process is completed.
Icon (URL)	The relative URL of the icon belonging to the process status. The icon must be 16 pixels high and 16 pixels wide.
Start status	Indicates if this status is the status with which the performing of the process begins.
End Status	Indicates if this status is the status with which the performing of the process ends.
Send over Deadline Emails	Indicates if emails are sent to the process holder if the process passes the deadline.

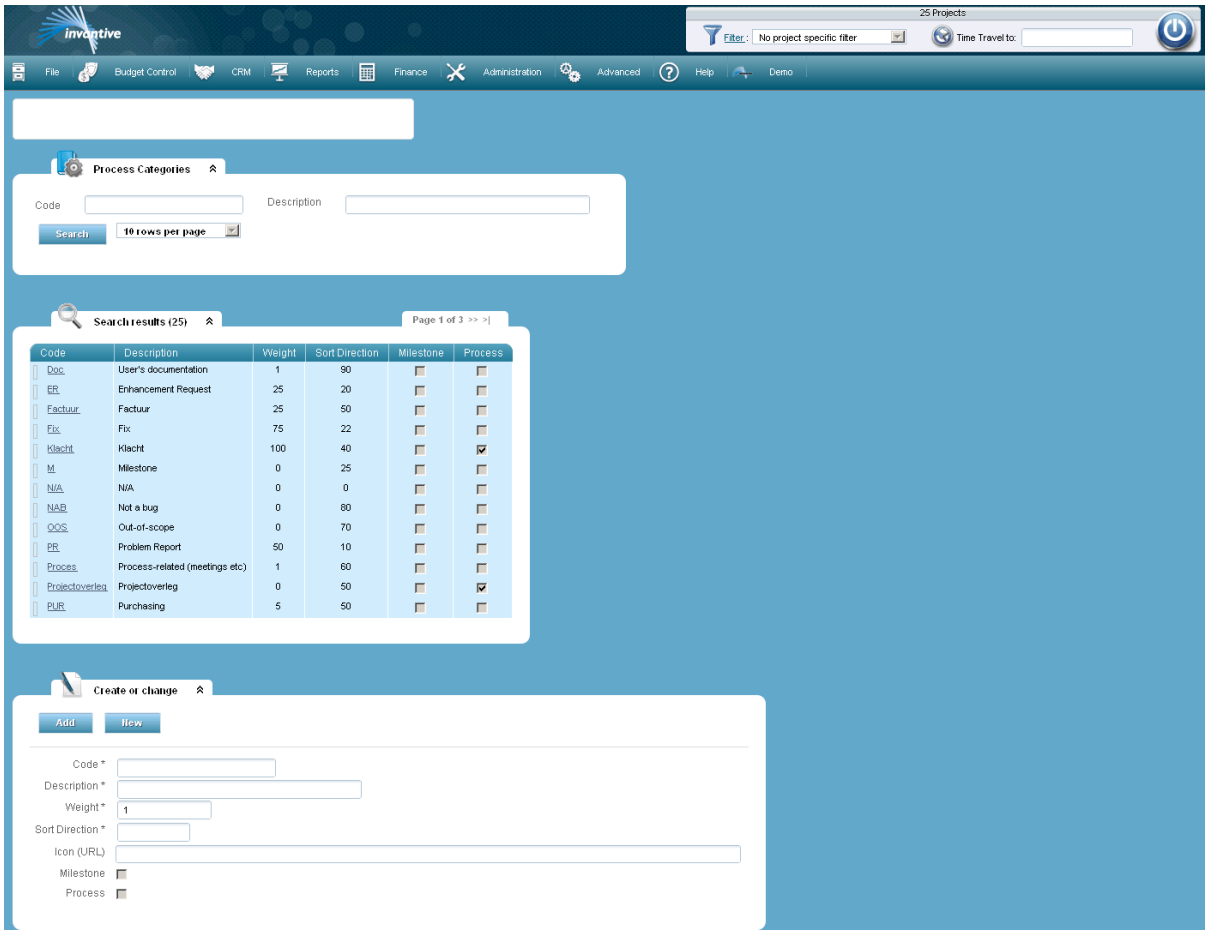
Allow Non End Status Timesheets	Indicates if the process status allows hours that do not have the end status.
Allow Non-invoice Status Timesheets	Indicates if the process status allows hours that do not have the invoice status.
Modifications Hours	Indicates if it is allowed to change hours.
Allow Quick Notes	Indicates if it is allowed to change work instructions.
Parked	Indicates if the execution of the process is temporarily postponed.
Work in progress	Indicates if the process is executed.
Bad Credit Check	Indicates that the funding of the process is insufficient.
To Be Discussed	Indicates that the process should be discussed.
Ready for Invoicing	Indicates if the process is ready to be invoiced.
Booked	Indicates if the process is booked and by this will obtain the end status.
Accepted	Indicates that the process was approved for implementation.

Process Categories

In this screen you can register and change process categories.

A process category is a group of processes (see Processes) 58. Common categories are Complaint, Malfunction, Request and Modification.

Categories are used to indicate the type of process. A fixed 'workflow' may be linked as described in Process Status Transitions 177.



The meaning of the entry fields is:

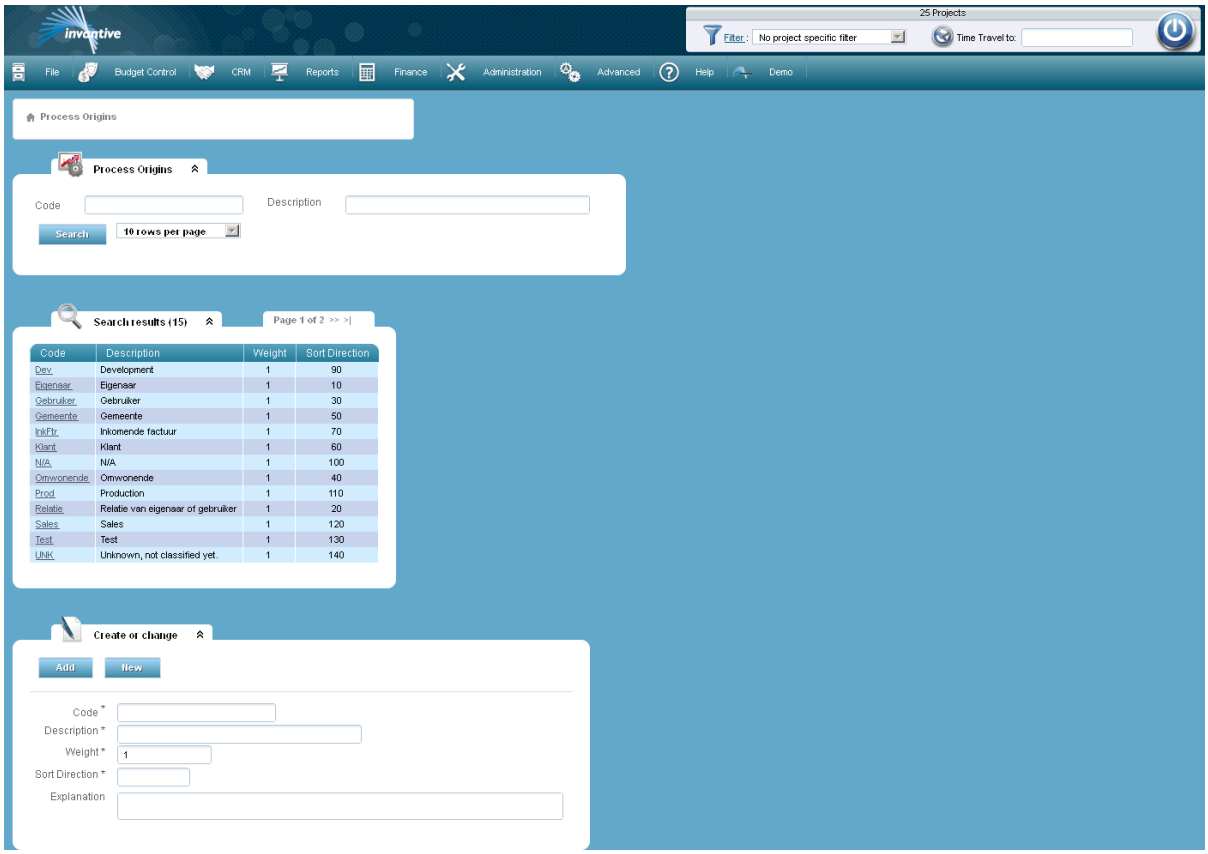
Code	The code.
Description	The description.

Sort Order	A numeric value on which the categories are sorted when they are shown in a list box in a screen.
Milestone	Indicates if the processes belonging to this process category are a 'milestone'.
Process	Indicates if the processes belonging to this process category are of the type 'process'. Processes belong to the type 'process' if they do not result in an end product but support the process.

Process Provenances

In this screen you can register and edit process provenances.

A process provenance is a grouping of processes (see Processes) 58 on the basis of provenance.



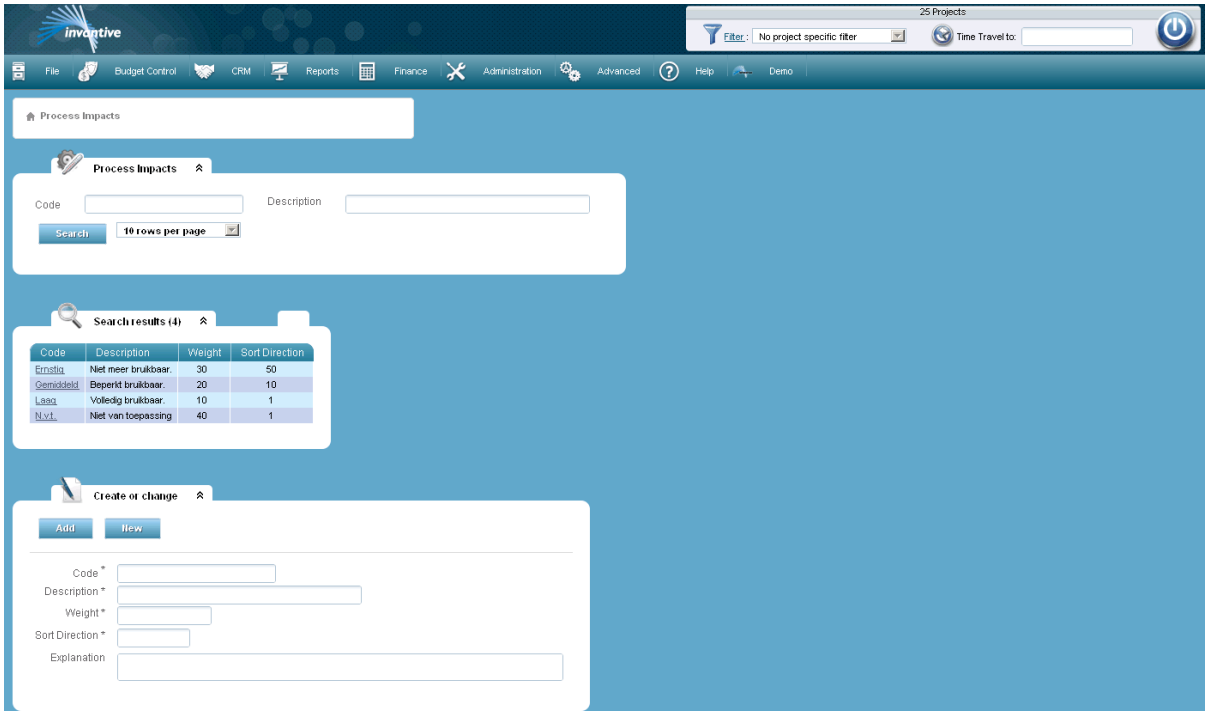
The meaning of the entry fields is:

Code	The code.
Description	The description.
Sort Order	A numeric value on which the process origins are sorted when they are shown in a list box in a screen.
Explanation	Possible explanation.

Process Impacts

In this screen you can register and change process impacts.

A process impact is a group of processes (see Processes) 58 bases on impact. The process impact determines often the priority in combination with urgency.



The meaning of the entry fields is:

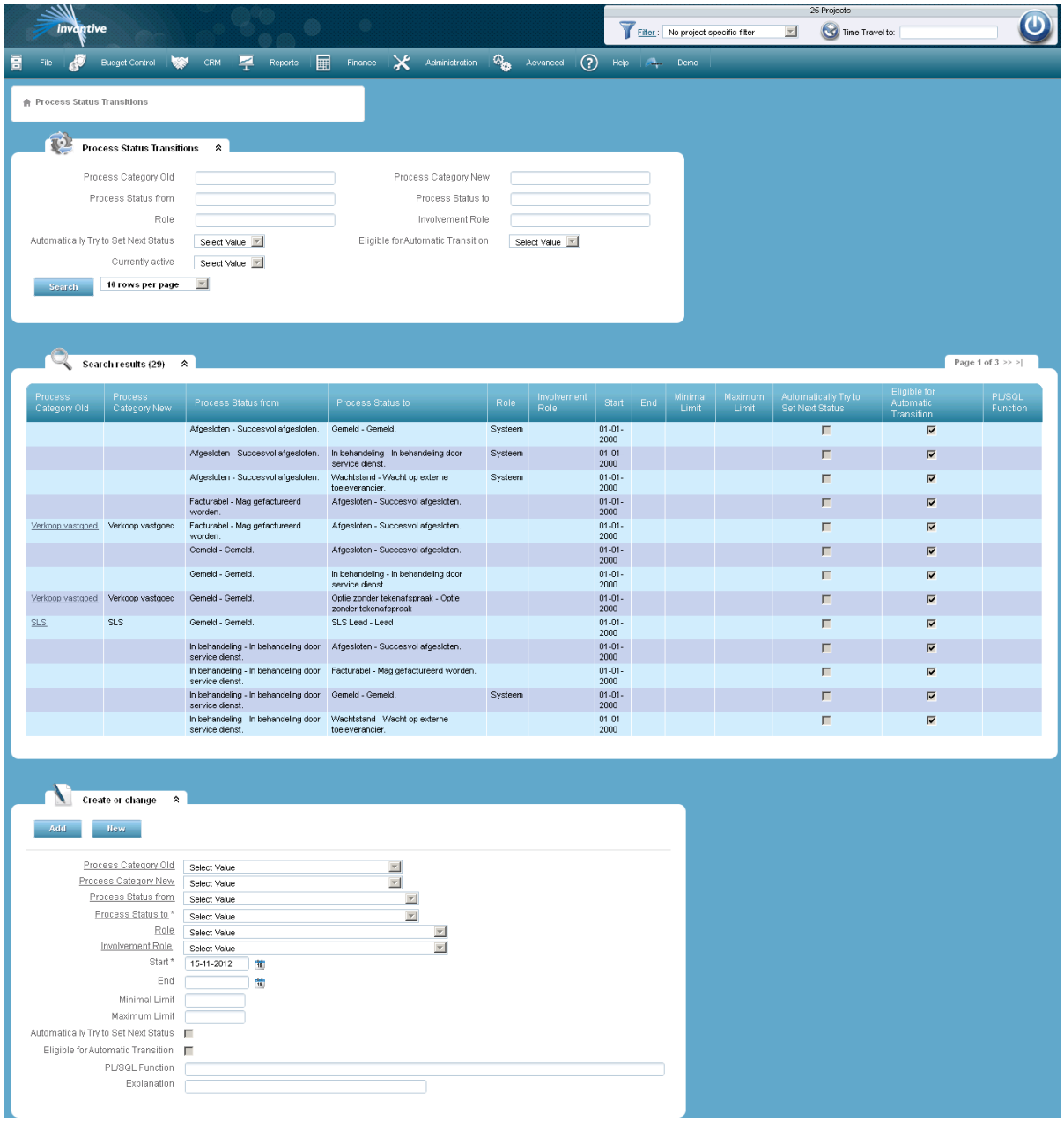
Code	The code.
Description	The description.
Weight	The w eight of the impact.
Sort Order	A numerical value on w hich the impacts are sorted w hen a list is visible in the screen.
Explanation	Possible explanation.

Process Status Transition

In this screen you can register and change transitions between process statuses.

A transition specifies a valid change of the status of a process to a different status. This allows workflows to be defined.

Complex transitions can also be enforced with an additional business rule.



The meaning of the entry fields is:

Process Category Old	Reference to the process category in the initial situation as registered in Process Categories 179.
Process Category New	Reference to the process category in the new situation as registered in Process Categories 179.
Process Status from	Reference to the process status in the initial situation as registered in Processt Statuses 173.
Process Status to	Reference to the process status in the new situation as registered in Process Statuses 173 .
Role	Reference to a role as registered in Roles 164. Indicates which role is necessary to make the process status transition possible.
Involvement Role	Reference to an involvement role as registered in Involvement Roles 207. Indicates which involvement role is necessary to make the process status transition possible.
Start	Start time of the process status transition.
End	A task process status transition is allowed until this date.

Minimal Limit	Minimum value of the limit of user involvement in relation to this process, project, organization or the involvement of the role (the first of these two which has a value is used), to allow this state transition.
Maximum Limit	Maximum value of the limit of user involvement in relation to this process, project, organization or the involvement of the role (the first of these two which has a value is used), to allow this state transition.
Automatically Try to Set Next Status	Indicates if the system should try automatically to set the next status if the task meets the conditions and there is only one step further possible. The trying stops when there are multiple or zero potential next steps.
PL/SQL Function	Name of the boolean PL/SQL function that results in "true" or "not true". When the function results in 'true' the process status transition is permitted. In case the Boolean function results in 'not true' or 'null' the process status transition is not allowed.
Explanation	Remarks concerning the purpose of the process status transition.

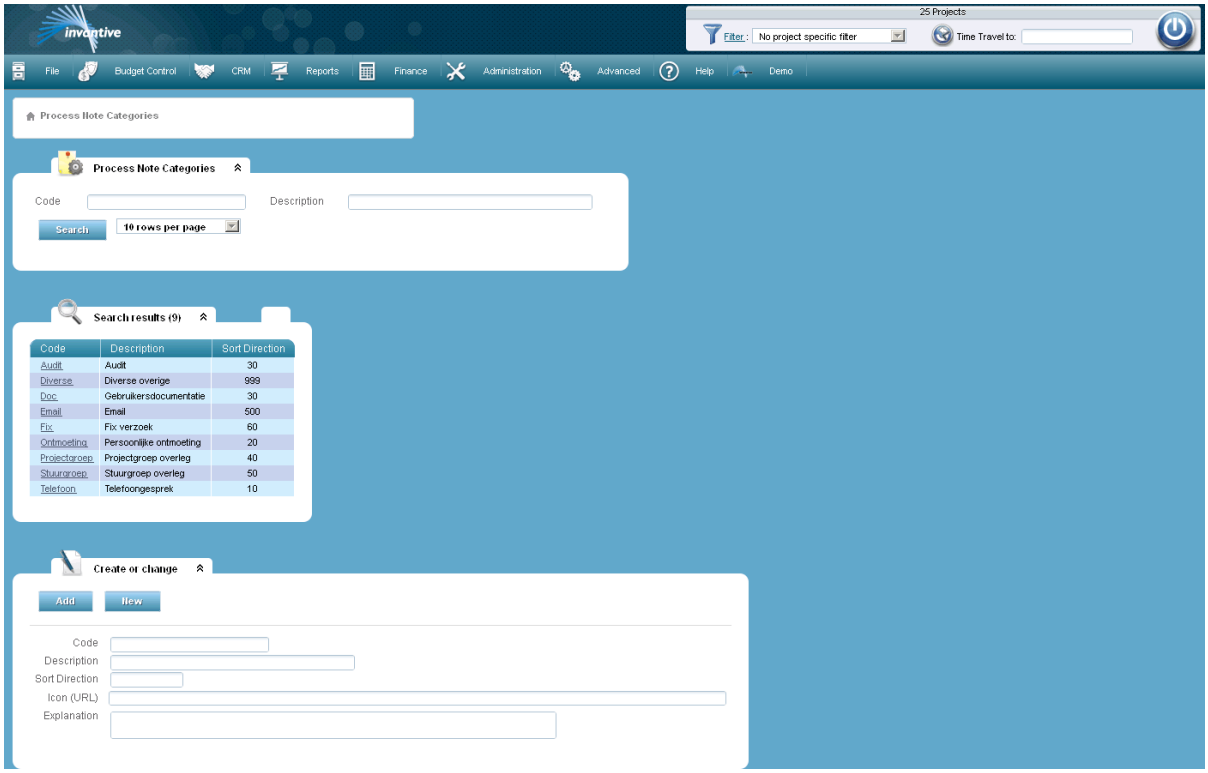
Analyses

Building workflow based on process status transitions is flexible, but sometimes it is difficult determining which steps are run with trying to achieve the next status automatically. With a manual action, several steps at once can be put with any associated actions indirectly through additional business rules. The steps - including automatically made steps - afterwards can be found in the screen Logging 275.

Process Note Categories

In this screen you can register and change process note categories.

A process note category is a group of process notes (see processes 58). Common categories are 'Email', 'Telephone', and 'Project Group'.



The meaning of the entry fields is:

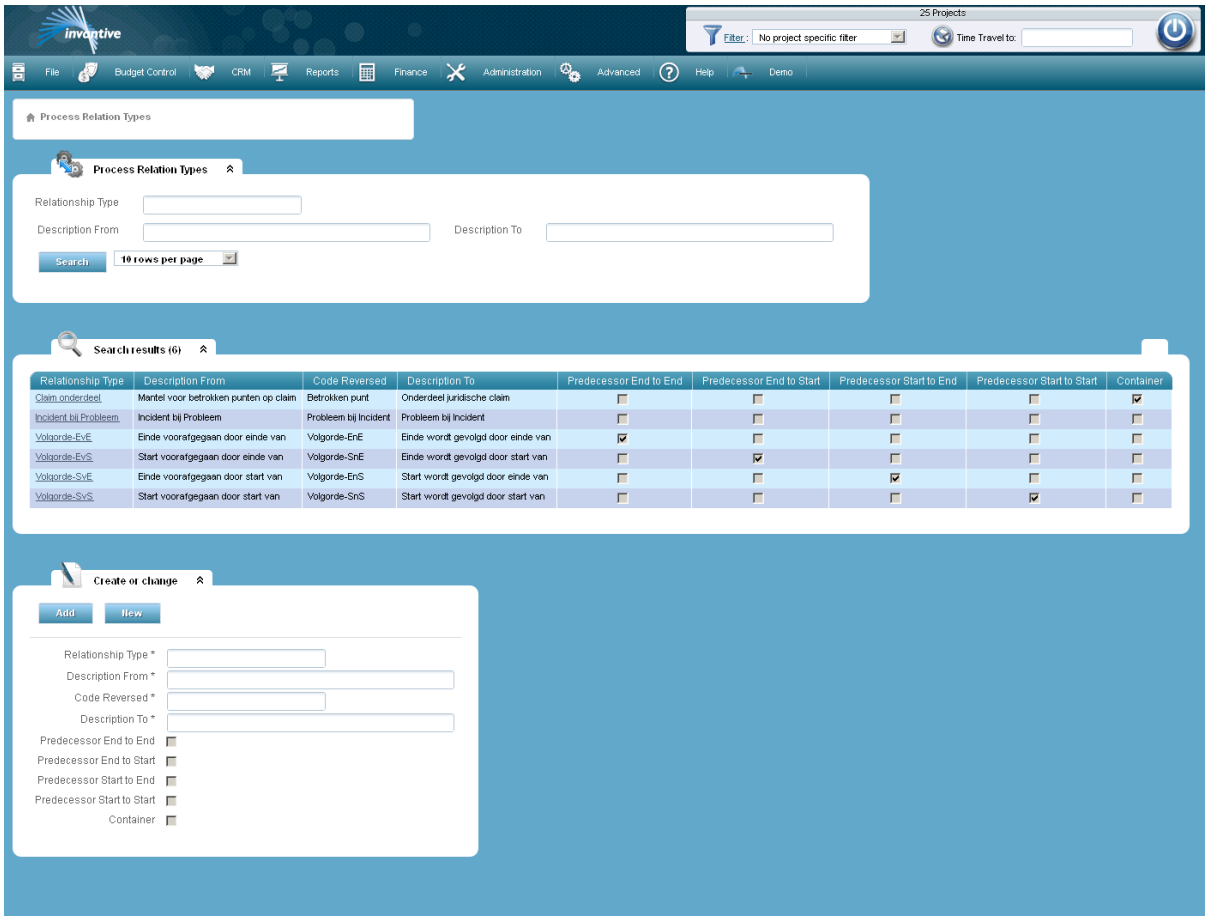
Code	The code.
Description	The description.

Sort Order	A numeric value on w hich the categories are sorted w hen they are show n in a list box in a screen.
Explanation	Possible explanation.

Process Relation Types

In this screen you can register and change process relation types.

A process relation type describes the relation type between two processes.



The meaning of the entry fields is:

Relationship Type	Unique alphanumeric code that identifies the process relation type as view ed from the perspective of the first party relation.
Description from	Process Relation Type as view ed from the start point of the process relation. Is show n in reports and screens.
Code Reversed	Unique alphanumeric code that identifies the process relation type as view ed from the perspective of the second party relation.
Description to	Process Relation Type as view ed from the end point of the process relation. Is show n in reports and screens.
Predecessor End to End	If checked, the end of a previous process preceded by the end of a previous process is view ed from the starting end.
Predecessor End to Start	f checked, the end of a previous process preceded by the start of a new process is view ed from the starting end.
Predecessor Start to End	If checked, the start of a new process preceded by the end of a previous process is view ed from the starting end.
Predecessor Start to Start	If checked, the end of a previous process preceded by the start of a new process is view ed from the starting end.
Container	When checked the start point from the relationship is a container organization.

Process Unit Status

Enter text here.

Process Unit Status Transitions

Enter text here.

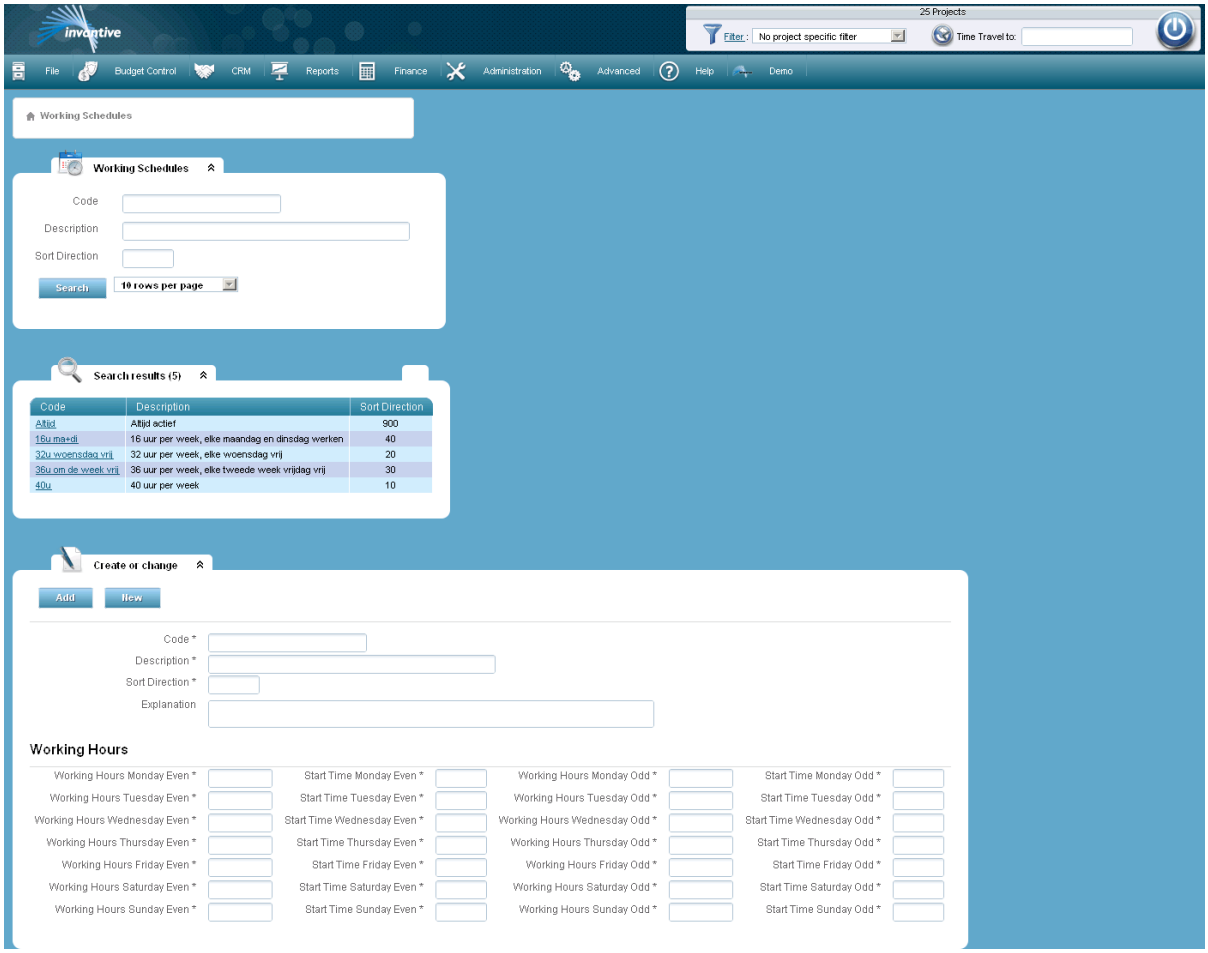
Working Schedules

Here you will see screens to set up the working schedules.

Working Schedules

This screen allows you to record and modify workflows.

A working schedule describes the hours contractual agreed upon for a labor agreement or the hiring of permanent and temporary personnel/staff.



The meaning of the entry fields is:

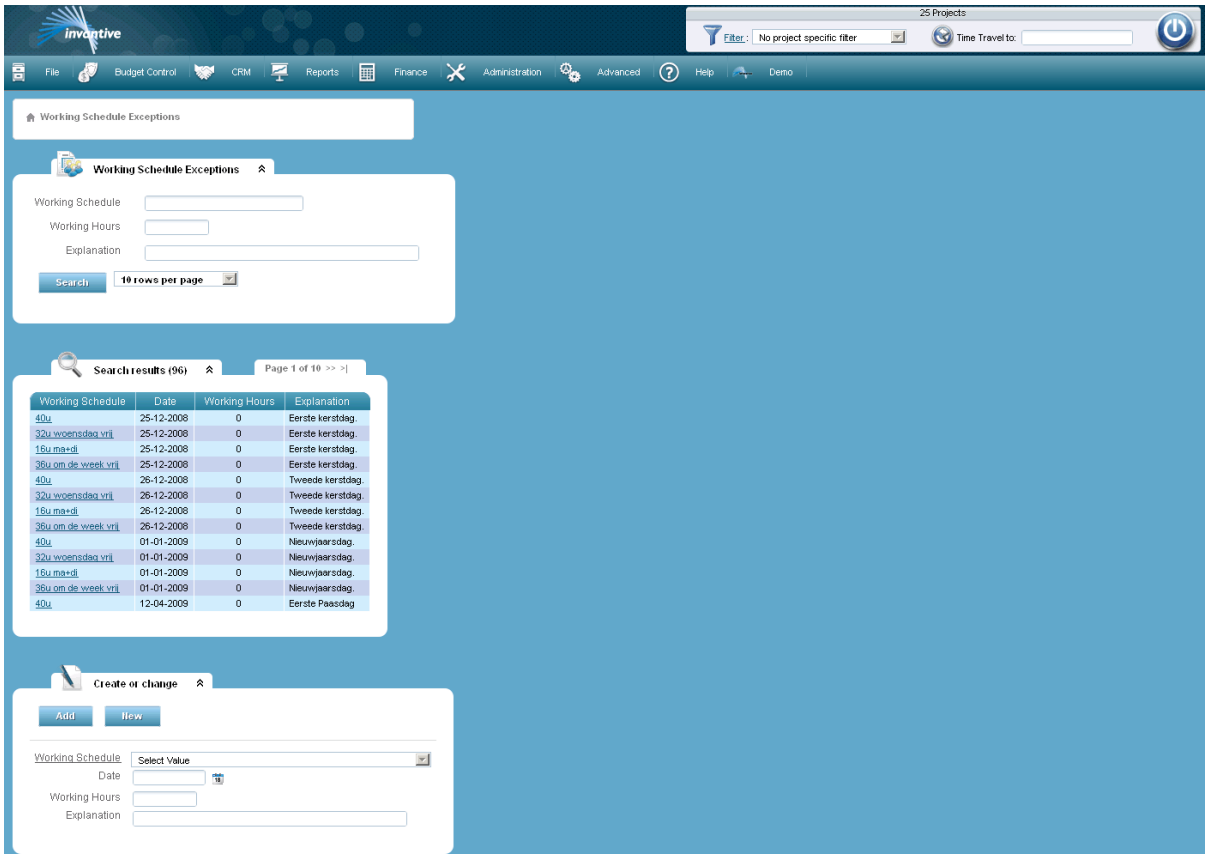
Code	Unique alphanumeric code that identifies the w orking schedule.
Description	A description of the w orking schedule.
Sort Order	A numeric value on w hich the w orking schedules are sorted w hen they are show n in a list box in a screen.
Working Hours ... Even	Number of w orking hours on the even... . 'Even' indicates that the w eek number is even according to ISO 8601.
Start time ... Even	Start time of the w orking hours on the even ... . 'Even' indicates that the w eek number is even according to ISO 8601.
Working Hours ... Odd	Number of w orking hours on the odd ... 'Odd' indicates that the w eek number is odd according to ISO 8601.

Start time ... Odd	Start time of the w orking hours on the odd ... . 'Odd' indicates that the w eek number is odd according to ISO 8601.

Working-schedule-exceptions

This screen allows you to record exceptions in workflows and change.

A working schedule exception is a different number of working hours on a particular day, for example, on holidays.



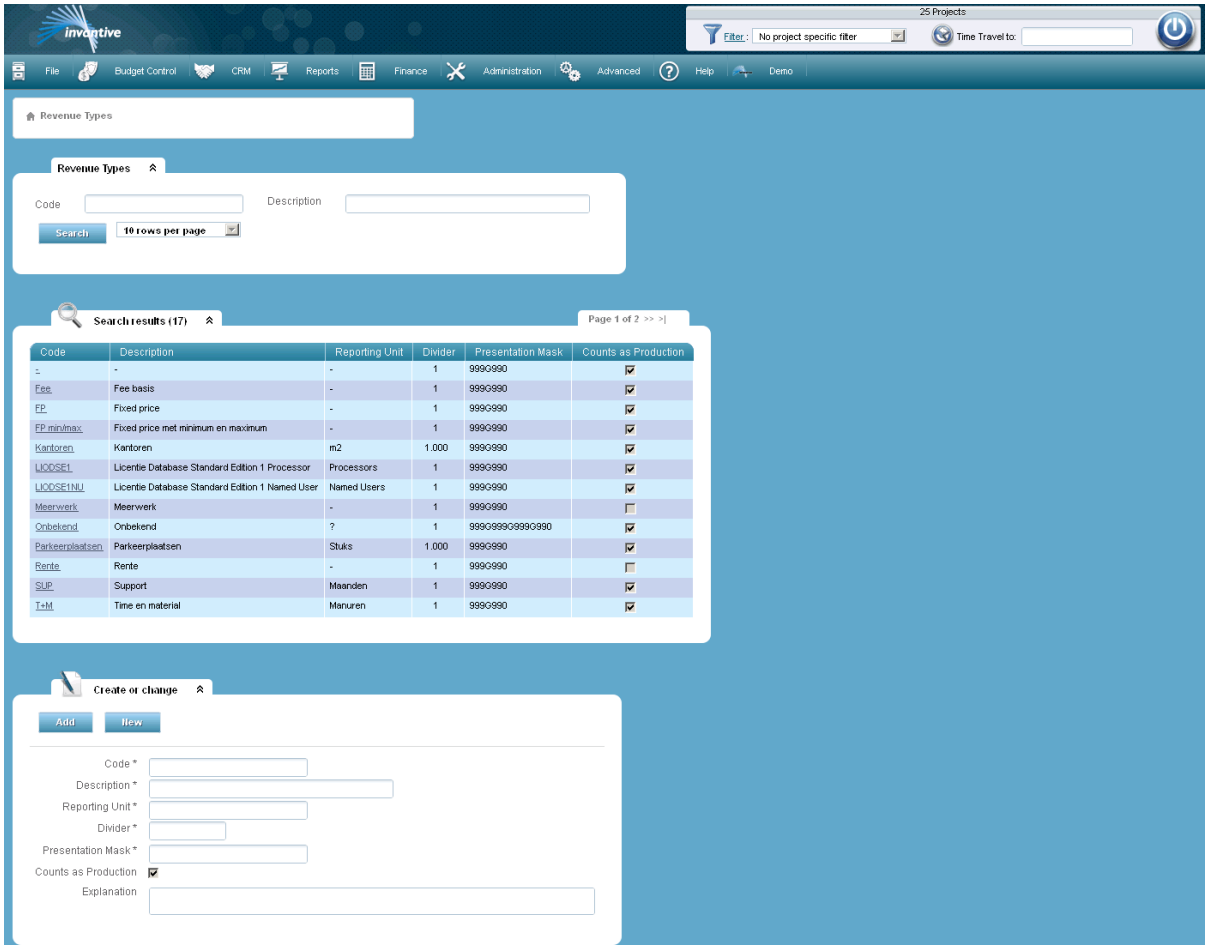
The meaning of the entry fields is:

Working Schedule	Unique alphanumeric code that identifies the w orking schedule exceptions.
Date	The date on w hich the w orking schedule exception applies.
Working Hours	The number of hours that should be w orked on the date of the w orking schedule exception.
Explanation	An explanation of the w orking schedule exception.

Revenue Types

In this form you can register and change types of revenues.

A revenue type is a subdivision of revenues (see Revenues) 74 based on common characteristics. Revenue types are used to report revenues in, for example, the production overview (see Production Overview) 126.



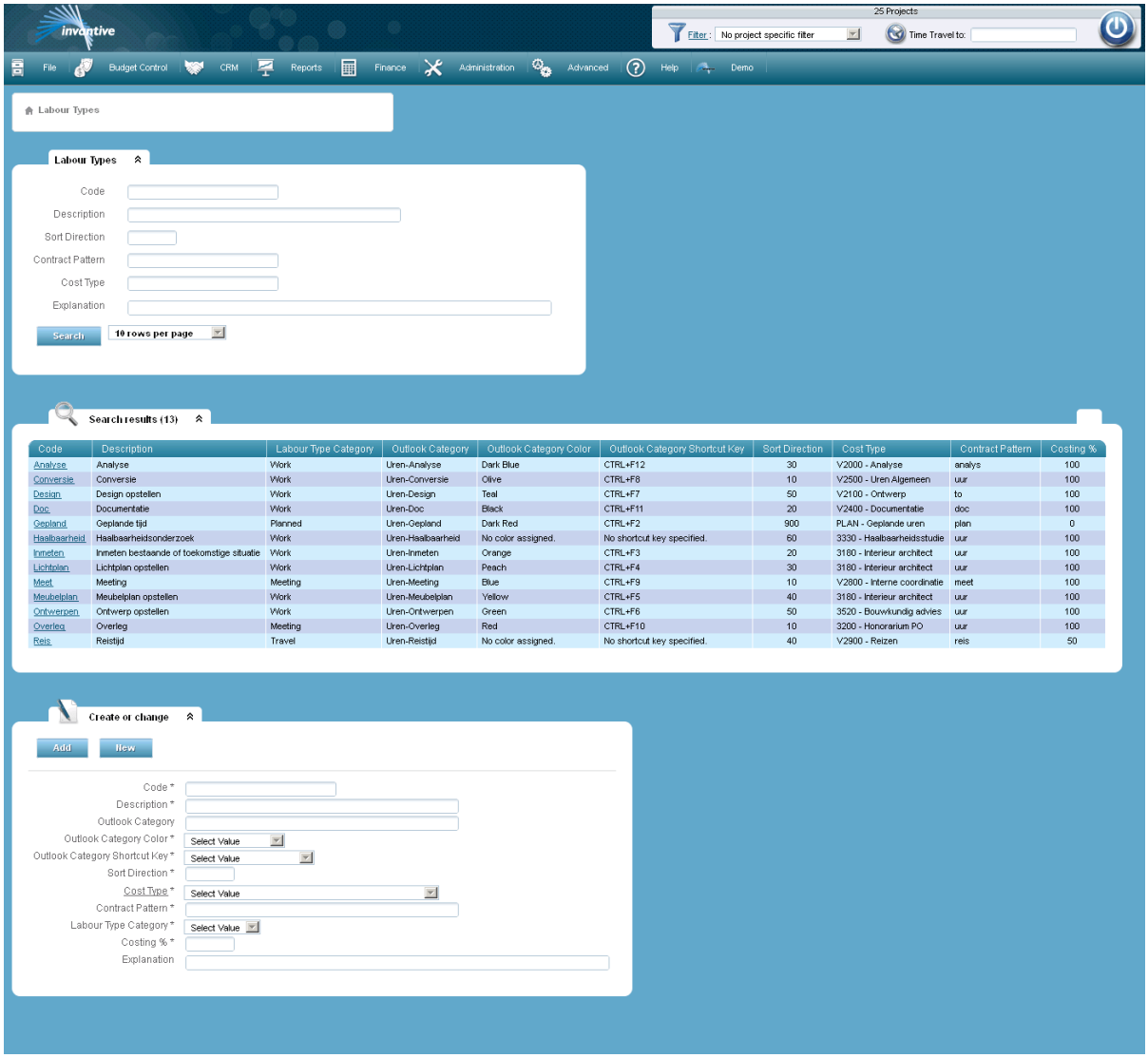
The meaning of the entry fields is:

Code	The code for the revenue type.
Description	The description.
Reporting Unit	The unit in which this type of revenues usually are reported. For example, for houses this will be number, while for office space it will be 'm2'.
Divider	The constant by which the amounts in the reports must be divided in order to end up with the report of this type of revenue.
Presentation mask	A pattern that describes how the number after dividing by the 'divider' has to be displayed. The presentation mask consists of a number of characters, of which each character describes exactly one character in the presentation. The following characters are possible in the presentation mask: • G: the grouping character (in Europe this is a point '.'). • D: the decimal character (in Europe this is a comma ','). • 9: the number at this position before or after the comma, in case before the number at least one other number is placed other than 0. • 0: the number at this position before or after the comma. A presentation mask '990D00' gives the following results: • '12.3' will become '12.30' • '0' will become '0.00'
Counts as Production	A revenue counts as production in the production overview in case this field is checked.
Explanation	Possible explanation.

Labor Types

This screen lets you record and edit work types.

A labor type is a type of work that can be performed by an employee and that will be treated distinctively for invoicing or analysis.



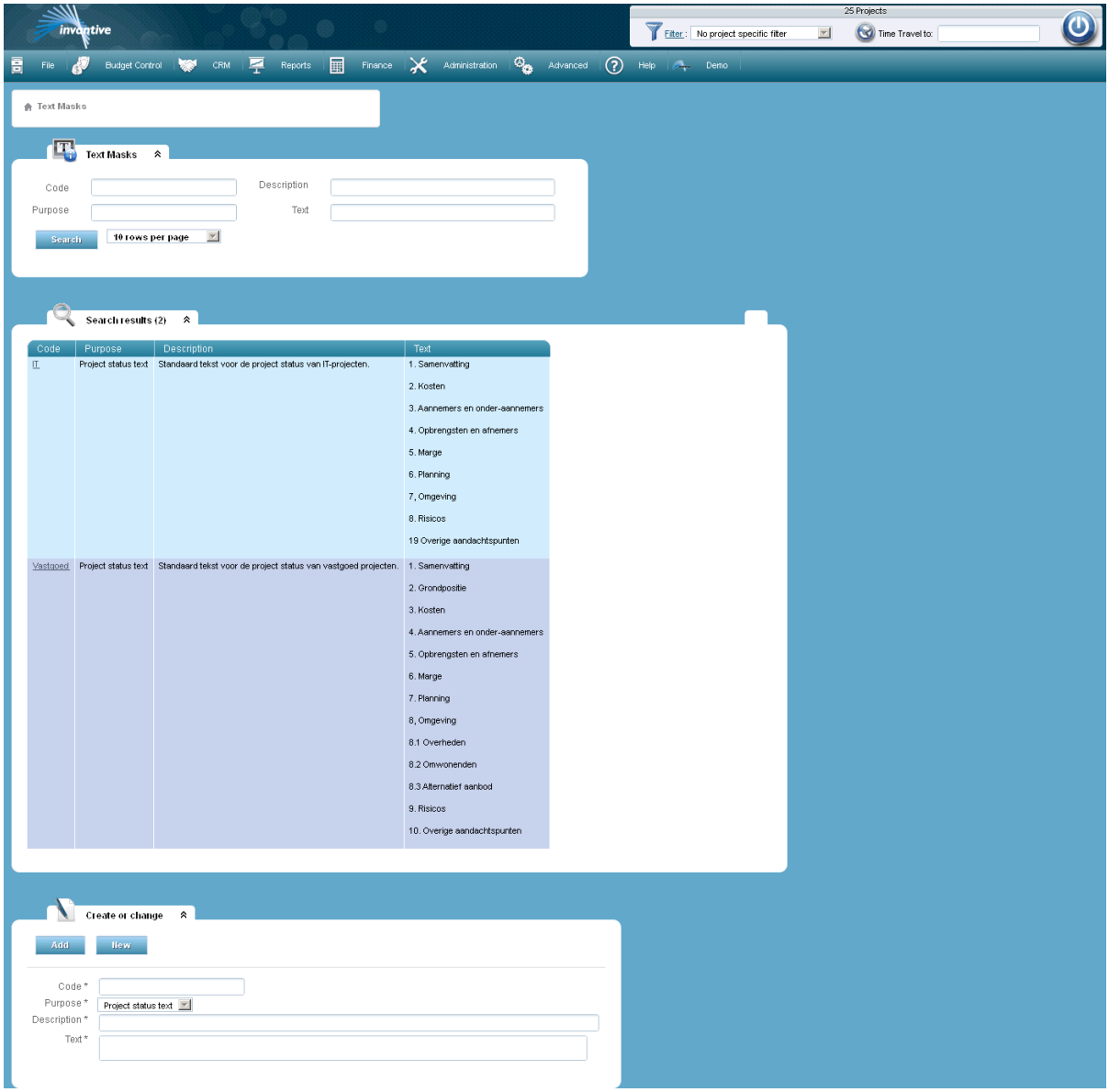
The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the labor type.
Description	Description of the labor type.
Outlook Category	The category in Microsoft Outlook for this labor type.
Outlook Category Color	The category color that is used when this labour type is automatically created in Microsoft Outlook.
Outlook Category Shortcut Key	The shortcut key that can be used for this labor type in case this labor type is automatically created in Microsoft Outlook.
Sort Order	A numeric value on which the labor types are sorted when they are shown in a list box in a screen.
Cost Type	Reference to a cost category as registered in Cost Categories 196. The cost of hours made for the project can be booked on this cost category.
Contract Pattern	Contract pattern code associated with this labour type. In this pattern, placeholders are replaced by actuals during cost accounting. The following placeholders are supported: ':gbr_initialen','':vandaag','':pjt_code','':wst_code','':gbr_naam','':uur_yyyy_start','':uur_mm_start and':uur_dd_start.
Labor Type Category	Classification of labour types to labour type categories, for example 'meeting', 'travel', 'work', etc..
Costing %	The size of costs posting is calculated by multiplying the cost percentage with the internal tariff from the person or machine.
Explanation	Remarks on the use of 'labor type'.

Text Masks

In this form you can register and change text masks.

A text mask is a text element used, for example, to serve as standard setting for a project status report.



The meaning of the entry fields is:

Code	The unique code within the scope for the text mask.
Application	The text masks are subdivided in several series for different scopes. Per scope there is a purpose available.
Description	The description of the text mask.
Text	The text of the text mask.

1.4.7.3 Financial

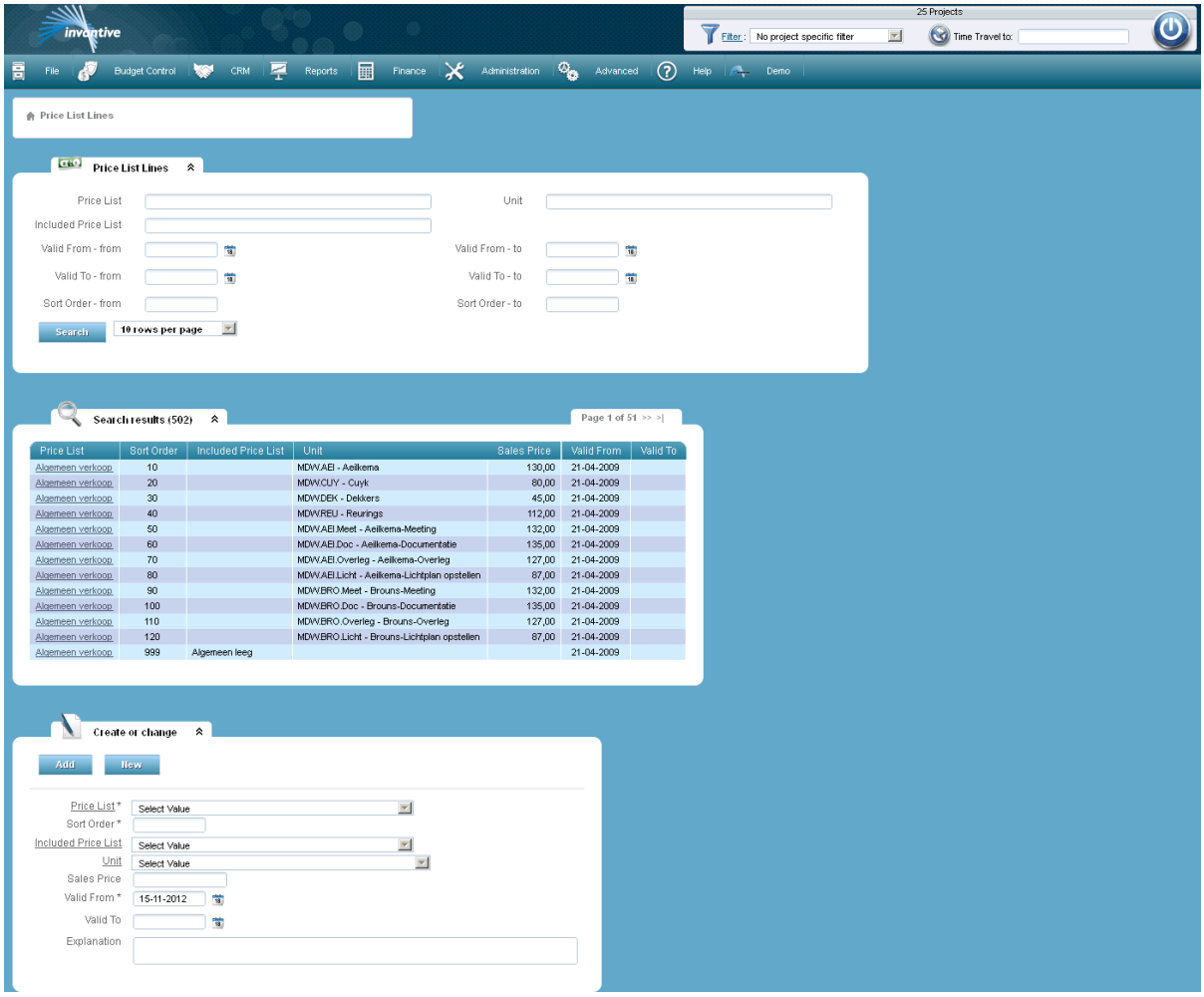
This chapter describes the screens and reports relating to the financial part of a project or organization.

Prices

Here you will see screens to set up the price structure.

Price List Lines

In this screen you can register and change price list rules.



The meaning of the entry fields is:

Price List	Reference to a Price List 186.
Sort Order	A numeric value used for checking the 'price list rules' to determine the price per unit.
Included Price List	Reference to a price list as registered in Price Lists 186 and w hich is included in this 'price list rule'.
Unit	Reference to a Unit 157.
Sale Price	Price of sale of the Unit 157.
Valid From	The system date on w hich the 'price rule' becomes valid.
Valid To	The system date on w hich the 'price rule' validity ends.

Price Lists

In this screen you can register and change price lists.

A price list has - just likeMenus 232 - a tree structure, consisting of a set of prices for Units 157 and other price lists. Price lists can therefore be built with other price lists.

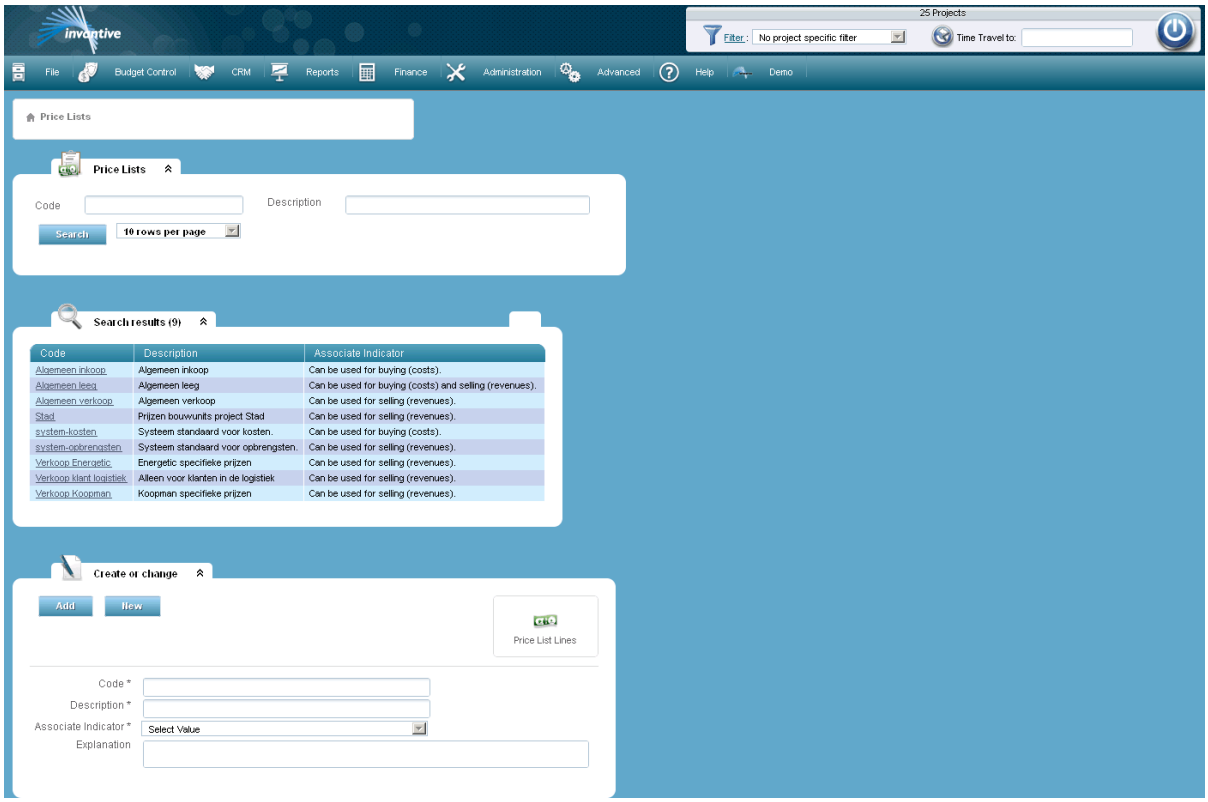
Example 1:
Price list sales products: PC € 100,--
Price list sales hours: 1 hour Aeilkema = € 70,--

Price list sales general:

1) sales products.
2) sales hours.

Example 2:
Price list sales glass domes: 1.5m X 1.5m = € 226, --
Price list rental trailers: 1 day € 250
Price list rental platforms: daily price € 148.50

Price list sales general:
1) sales glass domes.
2) rental trailers.
3) rental platforms.



The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the price list.
Description	Description of the price list.
Associate Indicator	Indicator w hich show s how the price list can be used.
Explanation	Possible explanation.

Price List Report

This report allows you to request Price Lists 186.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_pkt_pdf_rpt

Price List Report

Invantive Vision
Powered by Invantive

Price List **Algemeen verkoop - Algemeen verkoop**

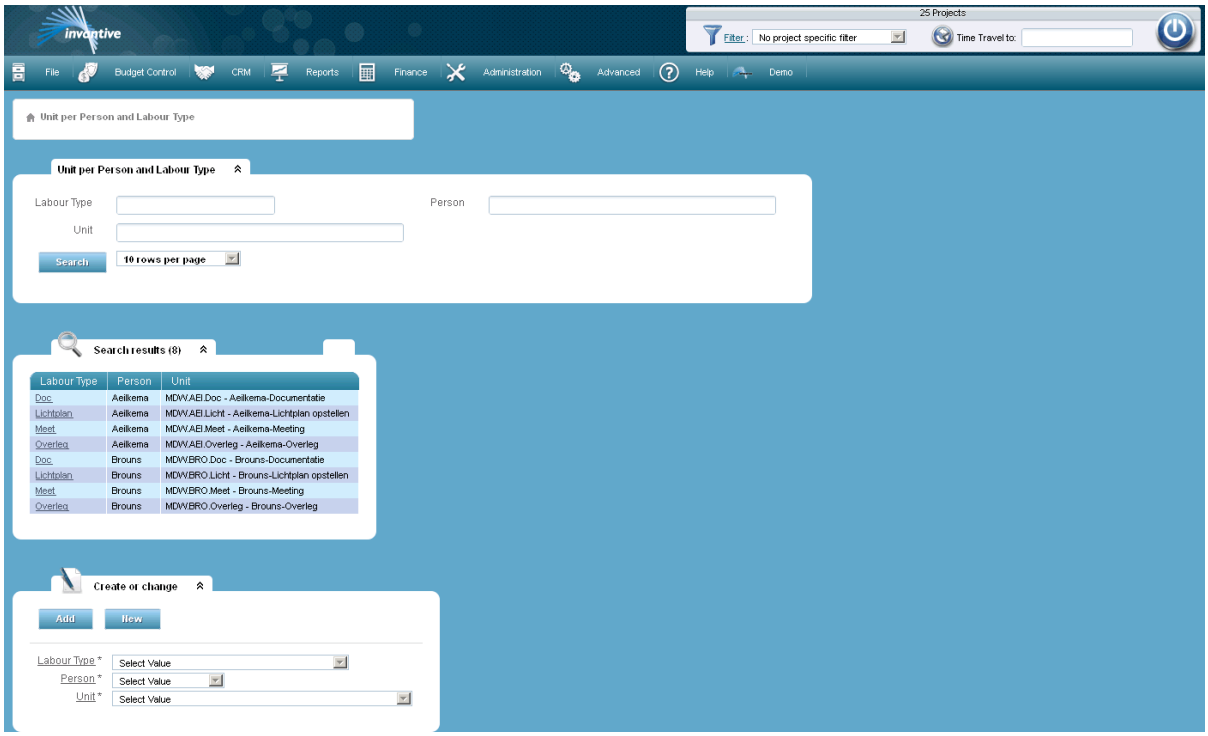
Valid From	Valid To	Unit	Sales Price
21-04-2009		MDW.AEI - Aeilkema	130.00
21-04-2009		MDW.CUY - Cuyk	80.00
21-04-2009		MDW.DEK - Dekkers	45.00
21-04-2009		MDW.REU - Reurings	112.00
21-04-2009		MDW.AEI.Meet - Aeilkema-Meeting	132.00
21-04-2009		MDW.AEI.Doc - Aeilkema-Documentatie	135.00
21-04-2009		MDW.AEI.Overleg - Aeilkema-Overleg	127.00
21-04-2009		MDW.AEI.Licht - Aeilkema-Lichtplan opstellen	87.00
21-04-2009		MDW.BRO.Meet - Brouns-Meeting	132.00
21-04-2009		MDW.BRO.Doc - Brouns-Documentatie	135.00
21-04-2009		MDW.BRO.Overleg - Brouns-Overleg	127.00
21-04-2009		MDW.BRO.Licht - Brouns-Lichtplan opstellen	87.00

15-11-2012 20:45 Page 1 / 13 invantive

Unit per Person and Labor Type

In this screen 'unit per person and type of work "are recorded and changed.

The determination of the selling price of a person is based on the unit related to the person. For certain labor types, a different unit (and therefore different price) can be registered here. For example: a director sometimes performs a ‘cheap’ labor type.

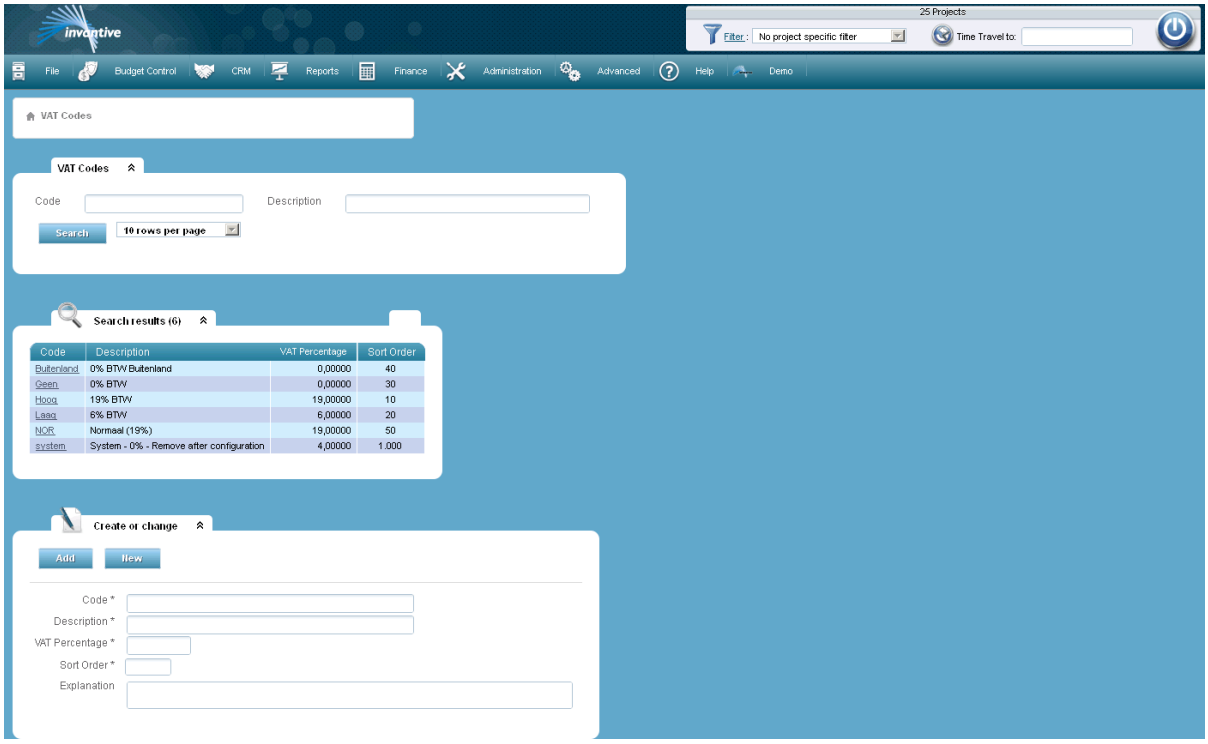


The meaning of the entry fields is:

Labor Type	Reference to a Labor Type 183.
Name	Reference to a Person 102.
Unit	Reference to a Unit 157.

VAT Codes

In this screen you can register and change VAT codes.



The meaning of the entry fields is:

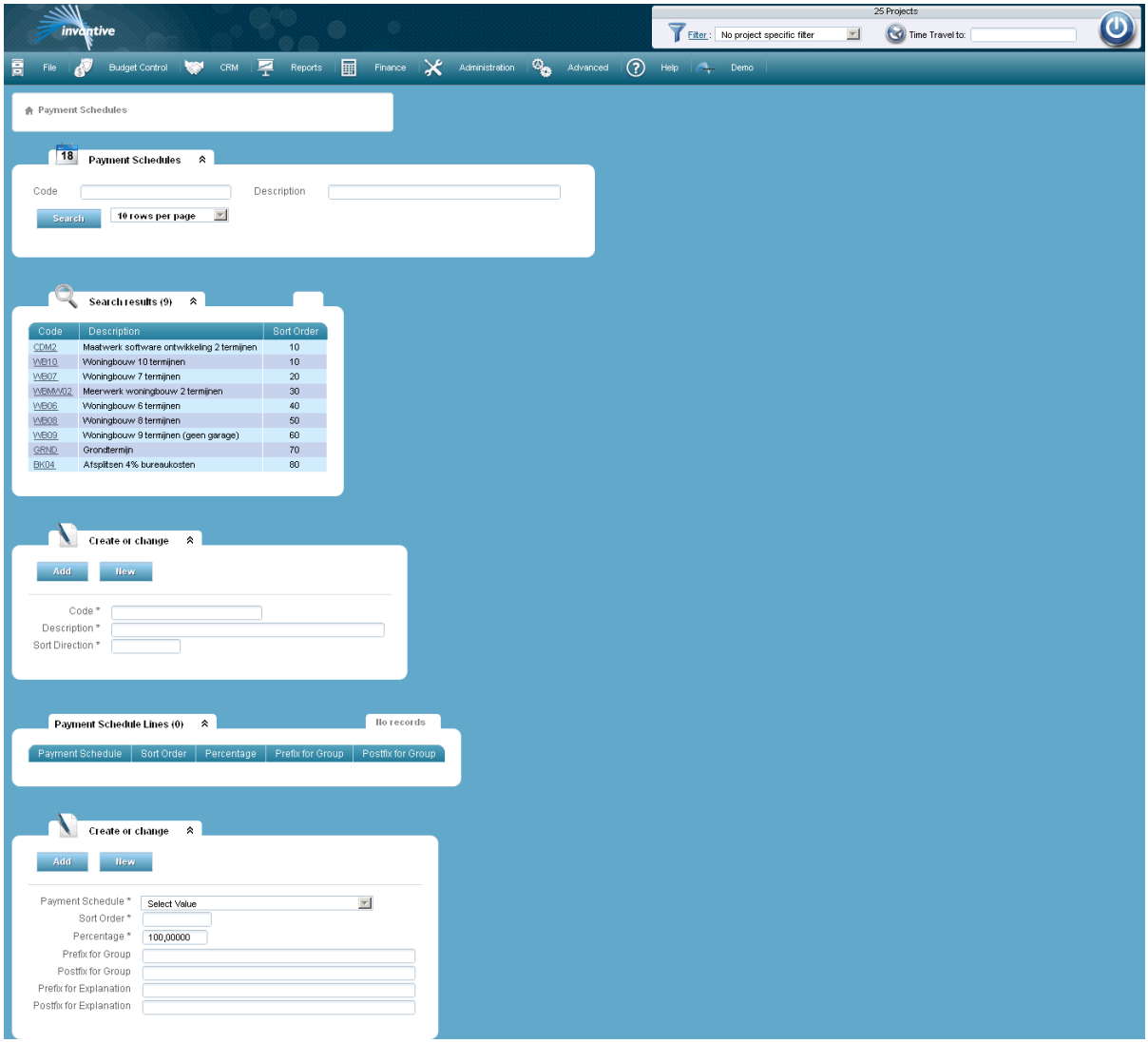
Code	Unique alphanumeric code that identifies the VAT code.
Description	Omschrijving van de BTW-code.
VAT Percentage	The VAT percentage.
Sort Order	A numeric value on w hich the VAT codes are sorted w hen they are show n in a list box in a screen.

Banks

Enter text here.

Payment Schedules

In this screen Payment Schedules can be registered and edited.

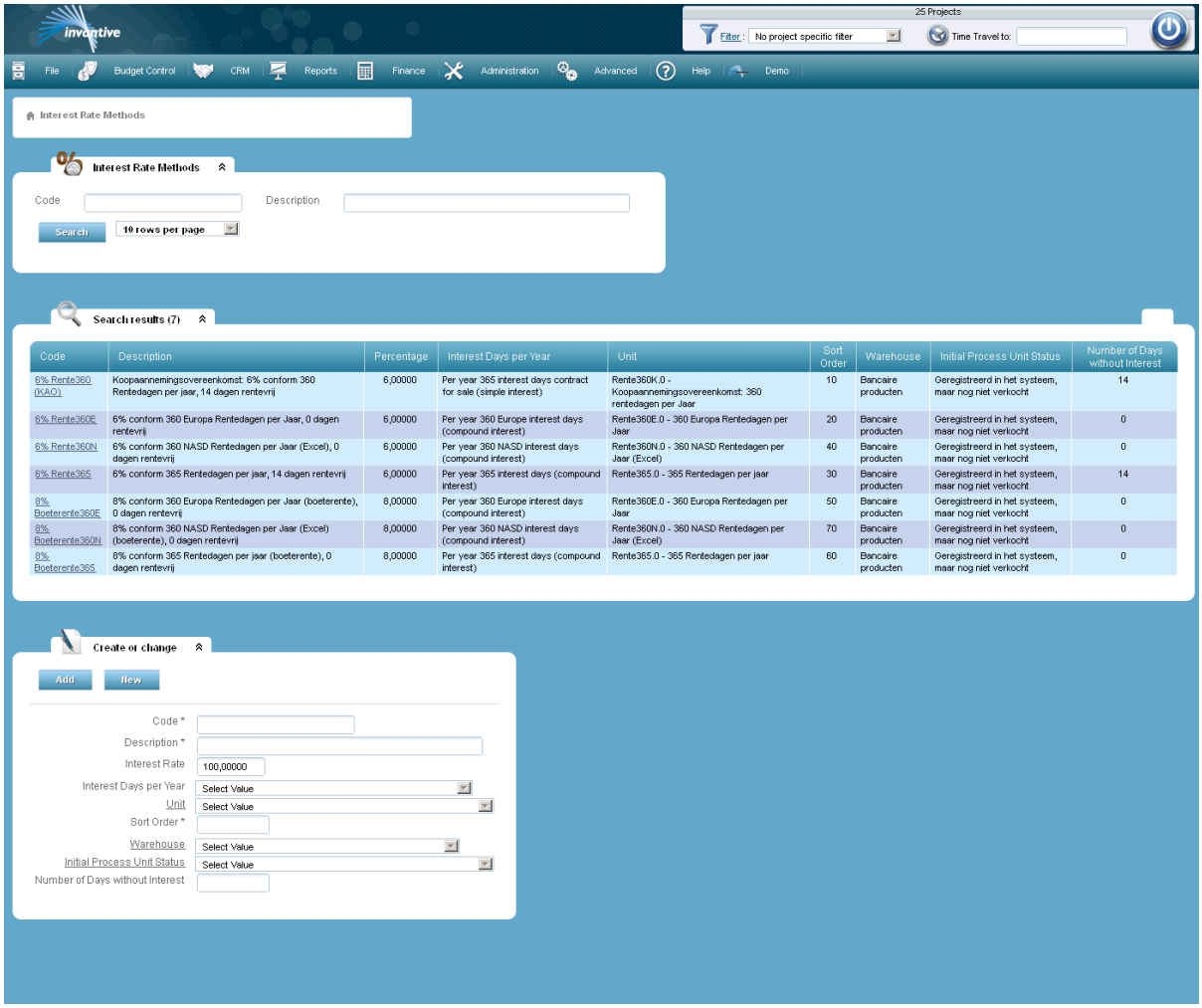


The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the payment schedule.
Description	Description of the payment schedule.
Sort Order	A numeric value on w hich the payment schedules are sorted w hen they are show n in a list box in a screen.
Payment Schedule Lines	
Payment Schedule	
Sort Order	
Percentage	
Prefix for Group	
Postfix for Group	
Prefix for Explanation	
Postfix for Explanation	

Interest Rate Methods

In this screen Interest Rate Methods can be registered and edited.



The meaning of the entry fields is:

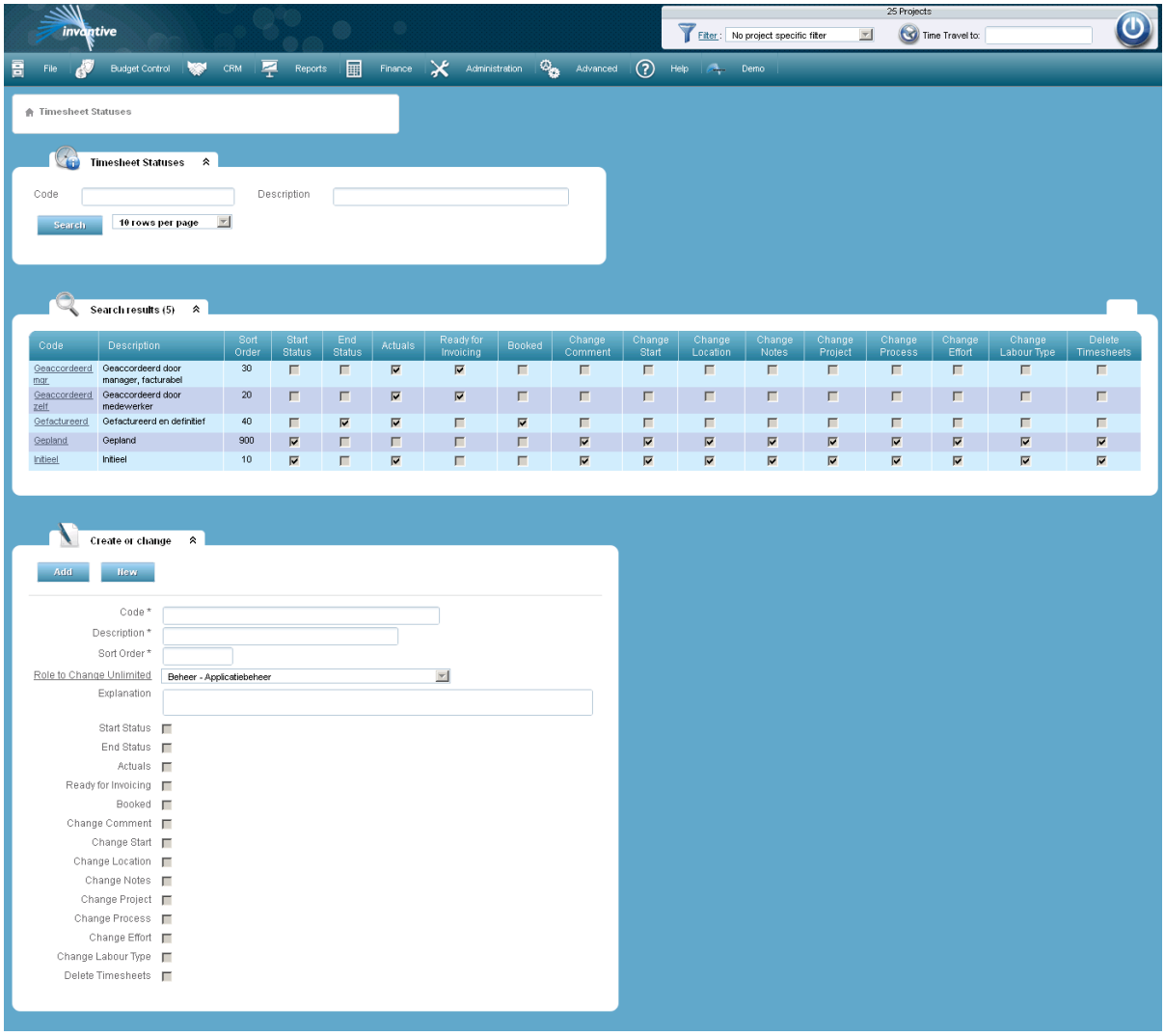
Code	Unique alphanumerical code that identifies the interest rate method.
Description	Description of the interest rate method.
Interest	Effective annual interest.
Interest Days Per Year	Indicated the number of days per year that are used for the interest rate method, like 360 NASD or 365 days per year.
Unit	Reference to a unit as registered in Units 157.
Sort Order	A numeric value on which the interest rate methods are sorted when they are shown in a list box in a screen.
Stock	Reference to a warehouse as registered in Warehouses 211.
Initial Process Unit Status	Reference to a process unit status as registered in BUBS_TAK_UNT_STATUSSEN in a role as the old status of the process task unit.
Number of days without Interest	Number of days you substract from the period for which interest is calculated.

Hours

Here you will see screens to set up the hour registration.

Timesheet Statuses

In this screen you can register and timesheet statuses.



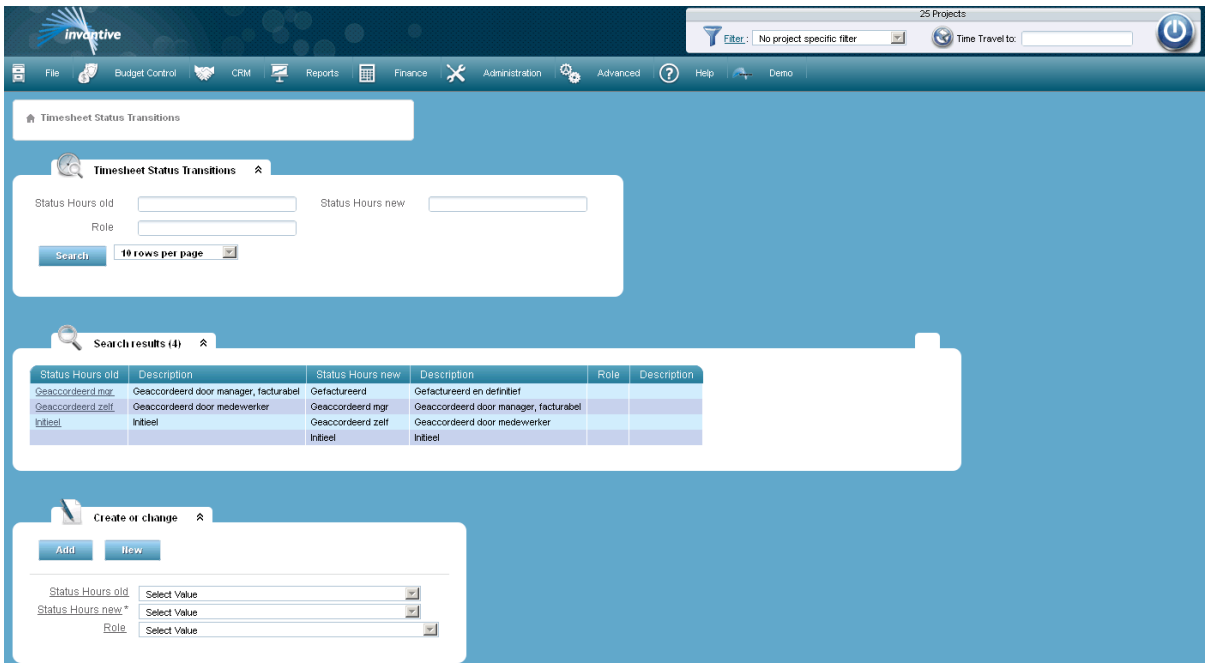
The meaning of the entry fields is:

Code	Unique code that identifies the 'Timesheet Status'.
Description	Description of the 'Timesheet Status'.
Sort Order	A numeric value on which the 'timesheet statuses' are sorted when they are shown in a list box in a screen.
Role to Change Unlimited	Reference to a role as registered in Roles 164. Shows the role that a user must have - despite the change and disposition of the flags - still able to edit hours with this status.
Explanation	Possible explanation.
Start status	Indicator which indicates if it is a 'start status' of the hours.
End Status	Indicator which indicates if it is an 'end status' of the hours.
Actuals	Indicates if it concerns the realised hours and not the planned hours.
Ready for Invoicing	Indicator of whether the hours are ready for invoicing.
Booked	Indicator indicating if the hours are invoiced and booked.
Change Comment	Indicator if it is allowed to change the comments.
Change Start	Indicator if it is allowed to change the start date.
Change Location	Indicator if it is allowed to change location.
Change Notes	Indicator if it is allowed to change the notes.
Change Project	Indicator if it is allowed to change the project code.

Change Process	Indicates if the process code may be modified.
Change Effort	Indicator if it is allowed to change the number of working hours.
Change Labor Type	Indicator if it is allowed to change the Labor Type 183.
Delete Timesheets	Indicates if it is possible to delete hours.

Timesheet Status Transitions

In this screen you can register and change ‘timesheet status transitions’.



The meaning of the entry fields is:

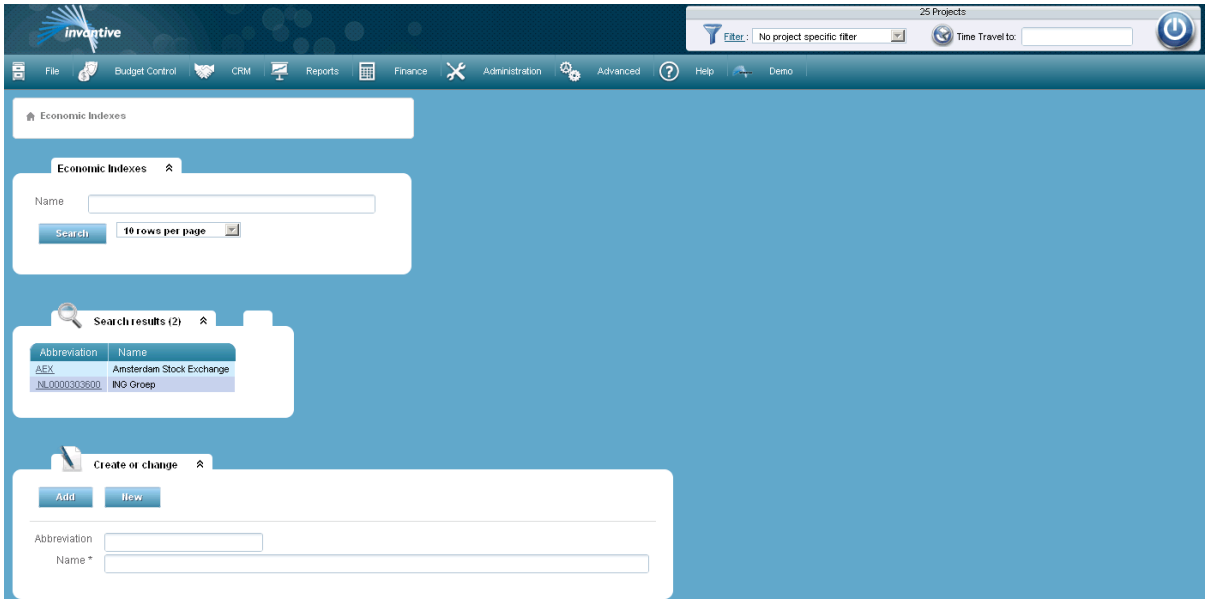
Status Hours Old	Unique code that identifies the ‘Status Hours Old’.
Status Hours New	Unique code that identifies the ‘Status Hours New’.
Role	Reference to a role as registered in Roles 164. Shows the role that is required to make a specific hour status transition.

Economic Indexes

Here you will see the screen to set up the economic indexes.

Economic Indexes

In this screen, 'economic indexes' can be .registered and changed. In economics, indexes are often used as an indicator of the state of the economy (the general economic situation) or as an indicator for a part of the economy.

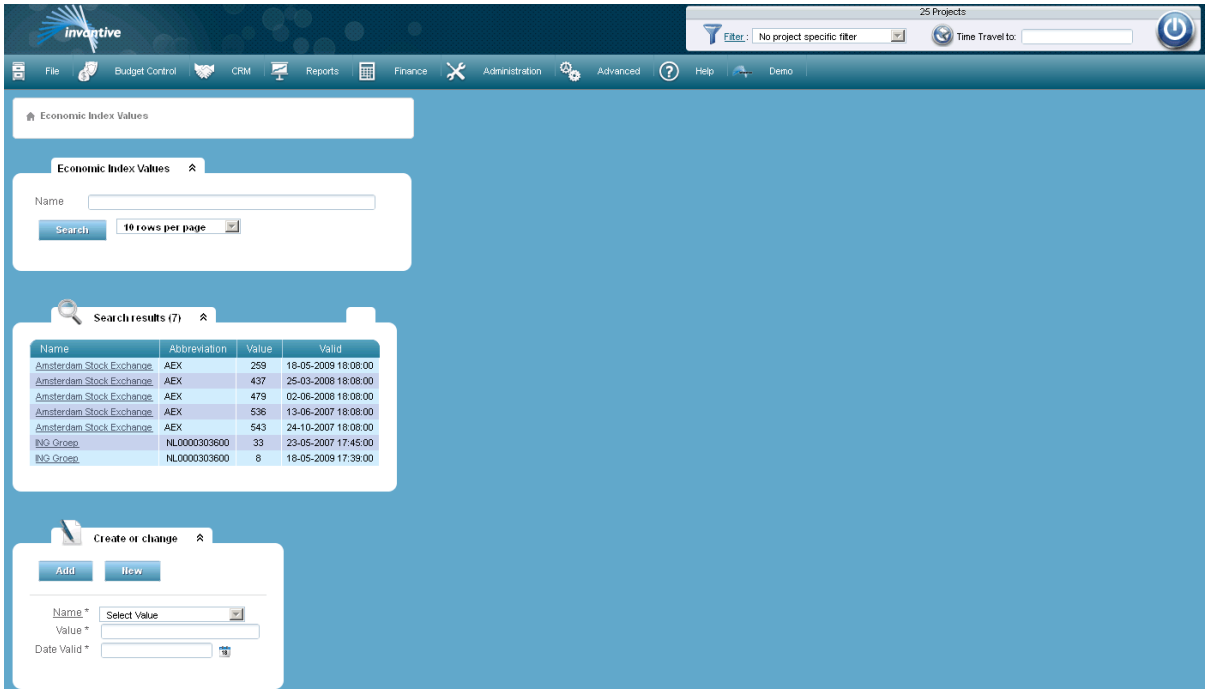


The meaning of the entry fields is:

Name	The name of the ‘economic index’.
Abbreviation	The abbreviation of the ‘economic index’.

Economic Index Values

In this screen 'economic index values' can be registered and changed.



The meaning of the entry fields is:

Name	The name of the ‘economic index’.
Value	The value of the ‘economic index’.
Date Valid	The date on w hich the ‘economic index’ had this value.

Cost Type

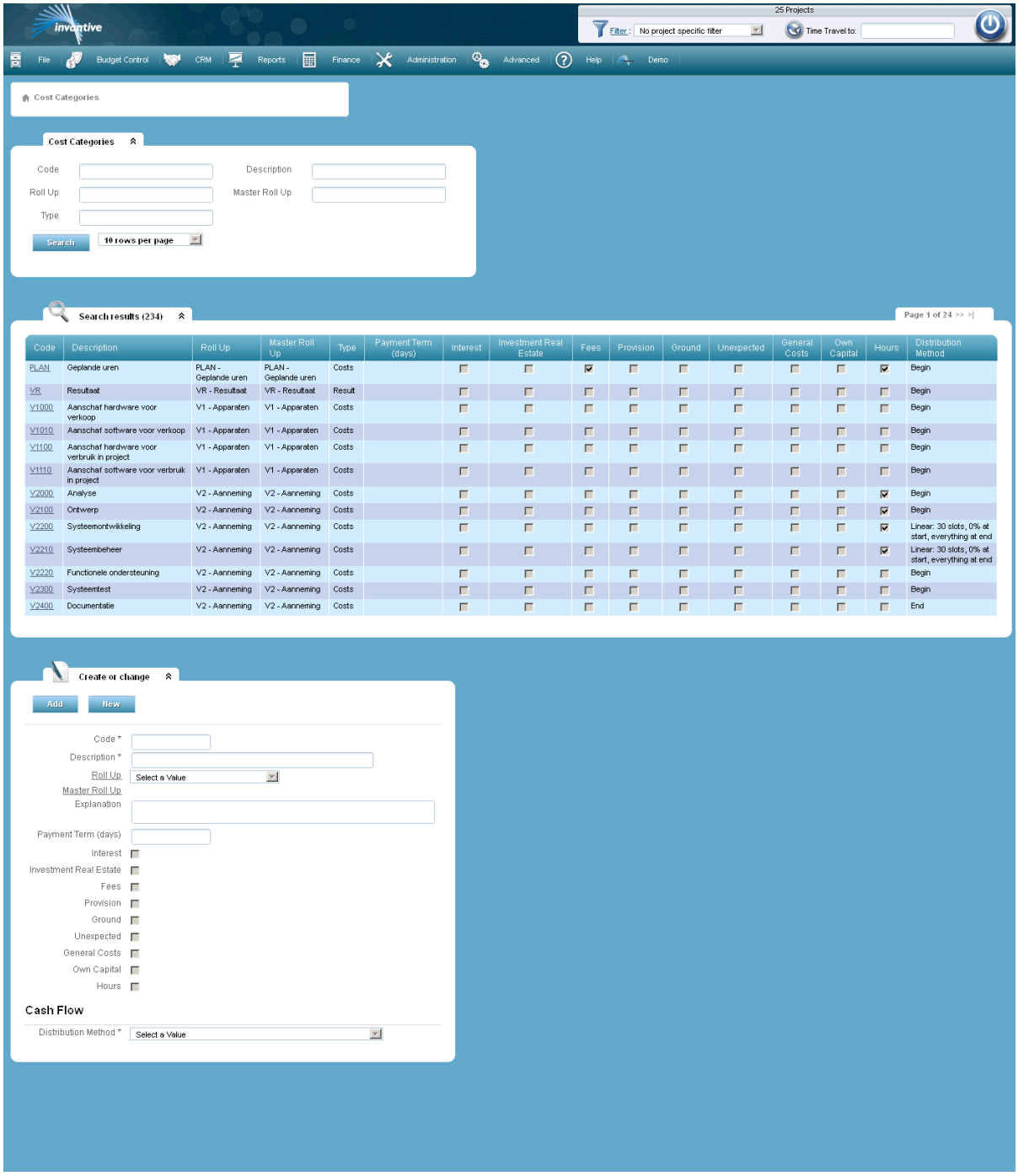
Here you will see screens to set up the cost type structure.

Cost Categories

In this screen you can register and change cost types for project budgets.

A cost category is a category in which costs or revenues can be registered, such as ‘purchase ground’, ‘architect’ or ‘sale houses’. All financial activities within a project will be distributed to a cost category. Within all projects that are registered you can use the same cost category.

A cost category belongs to specifically one roll up, in which linked cost categories are grouped (see also Roll Ups 197). Roll ups belong to master roll ups which show an even more general view of cost categories. (see also Master Roll Ups 198).

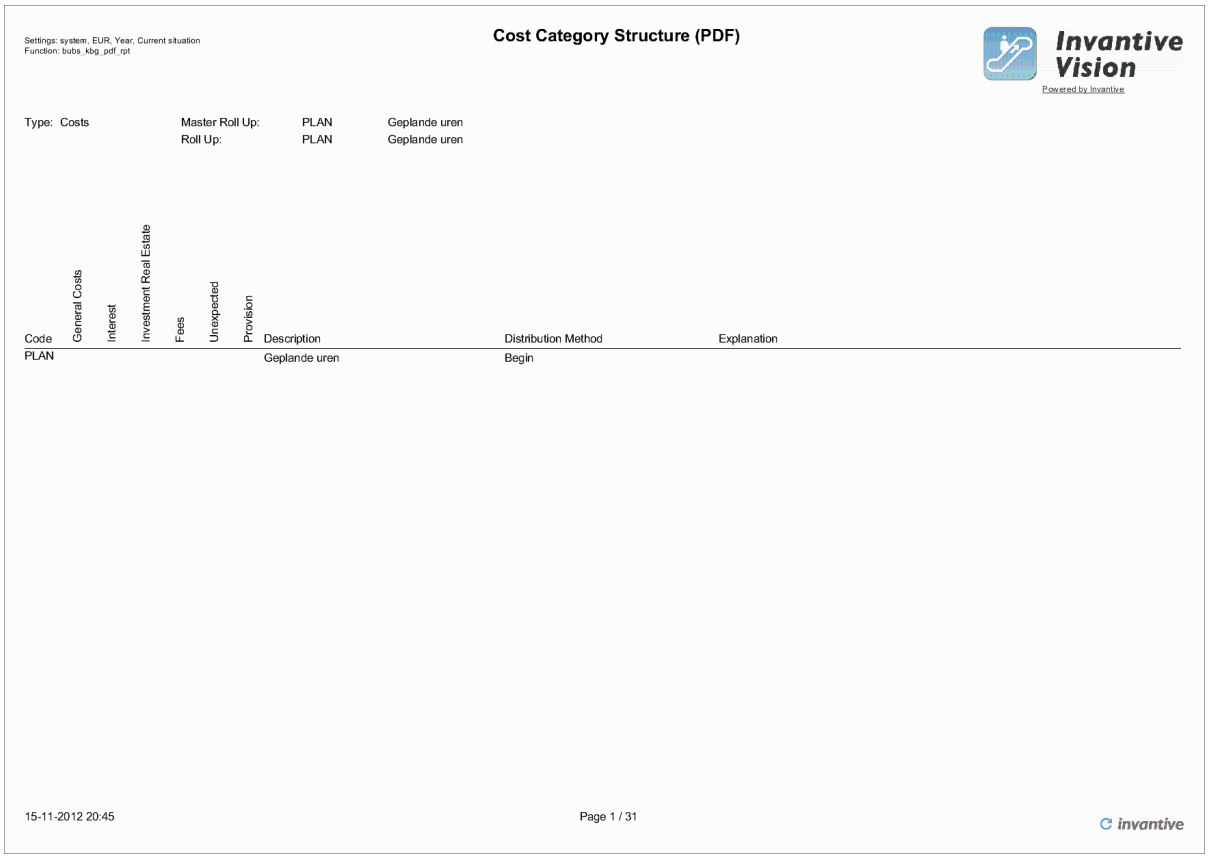


The meaning of the entry fields is:

Master Roll Up	The master roll up to w hich the selected roll up belongs.
Roll Up	The roll up to w hich the cost category belongs.
Code	The code of the cost category.
Description	The description of the cost category.
Explanation	Free text.
Payment Term (days)	Gives the number of days in w hich an invoice has to be paid. For invoices w ithin this cost category w ith no expiration date or not yet received. For Cash Flow Projections 94.
Interest	This cost category is treated as interest if this box is checked.
Investment Real Estate	This cost category is treated as investment property if this box is checked.
Fees	This cost category is treated as Developer Costs if this box is checked.
Provision	This cost category is treated as a provision if this box is checked.
Ground	This cost category is treated as acquisition costs for land if this box is checked.
Unexpected	This cost category is treated as a reserve for contingencies if this box is checked.
General Costs	This cost category is treated as general expenses if this box is checked.
Ow n Capital	This cost category is treated as ow ner's capital if this box is checked.
Hours	This cost category is treated as a reserve for contingencies if this box is checked.
Distribution Method	The w ay cash flow s are allocated for this cost category if not set on a more precise level.

Cost Categories Structure

This report shows the cost category structure of the project or of the organization.


Settings: system, EUR, Year, Current situation
Function: bubs_kbg_pdf_rpt

Cost Category Structure (PDF)

Invantive Vision
Powered by Invantive

Type: Costs
Master Roll Up: PLAN Geplande uren
Roll Up: PLAN Geplande uren

Code	General Costs	Interest	Investment Real Estate	Fees	Unexpected	Provision	Description	Distribution Method	Explanation
PLAN							Geplande uren	Begin	

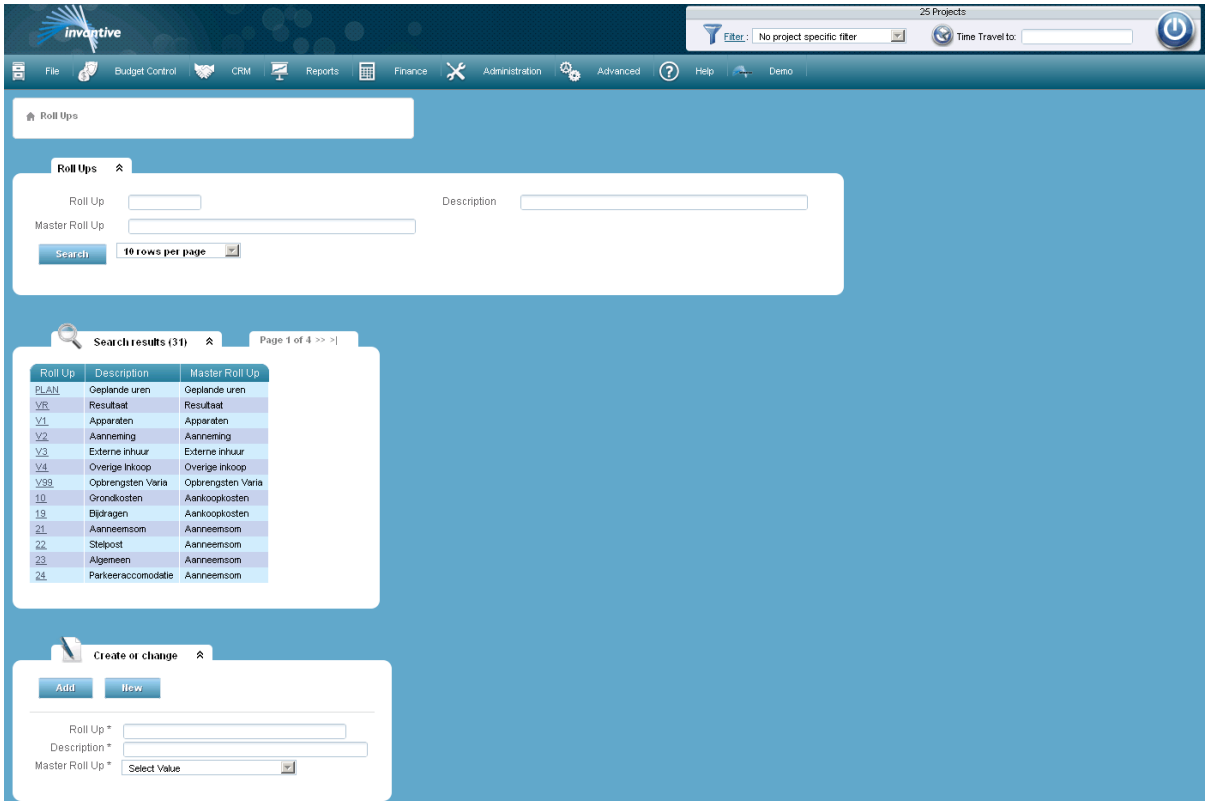
15-11-2012 20:45 Page 1 / 31 invantive

Roll Ups

In this form you can register and change roll ups.

A roll up is a bundle of individual cost categories. Roll ups are used to combine financial information, which is registered per cost category, into a medium level, such as ‘Acquisition’, within projects. The financial information can also be requested on cost category, in case a

less general division is required. The financial information can also be requested on master roll up level, in case a more general division is required.



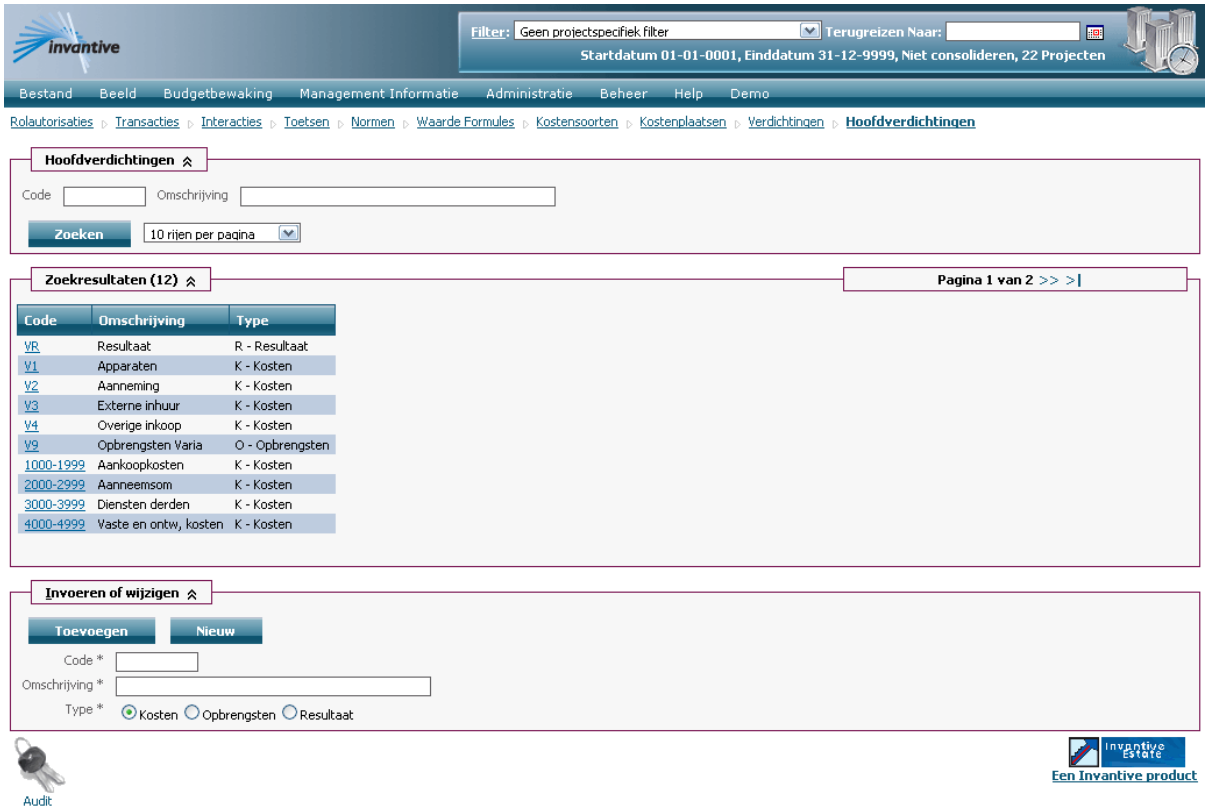
The meaning of the entry fields is:

Roll Up	The roll up code.
Description	The description.
Master Roll Up	The code of the master roll up to w hich the roll up belongs.

Master Roll Ups

In this form you can register and change master roll ups.

A master roll up is a bundle of cost category roll ups which are a bundle of individual cost categories. Master Roll Ups are used to summarize financial information, which is registered per cost category within a project, at a high level, such as ‘Income’. In case a less general division is needed, the financial information can also be shown at roll up level or at cost category level.

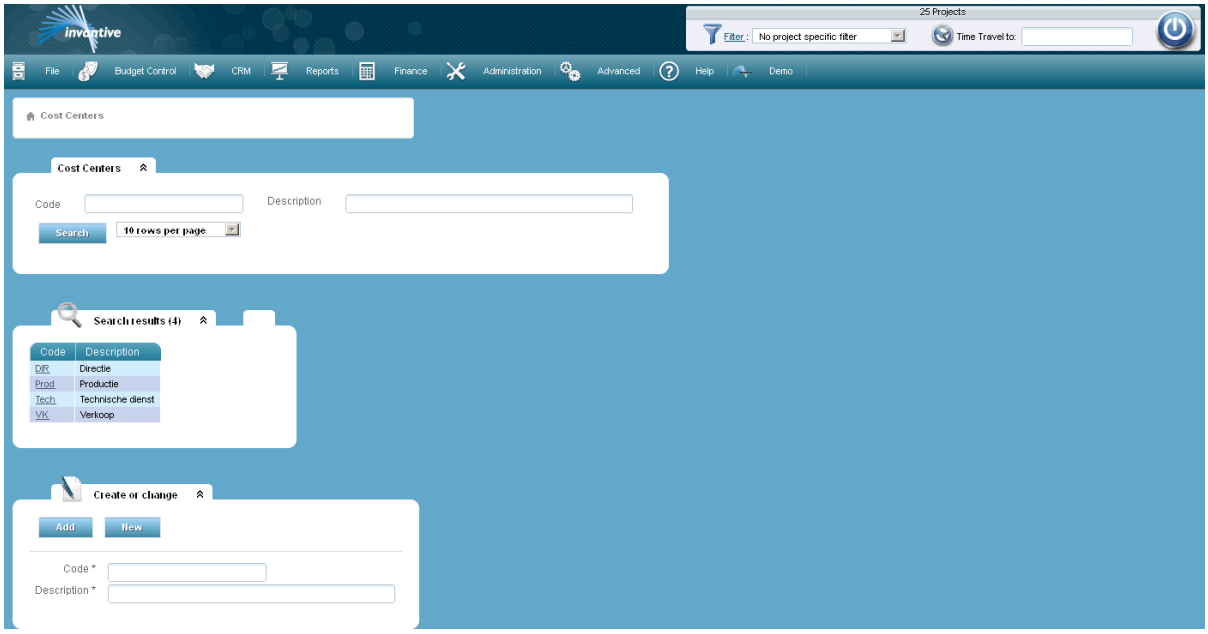


The meaning of the entry fields is:

Code	The master roll up code.
Description	The description.
Type	The type of roll up. The type of the master roll up determines w hich kind of data can be registered at the low er level cost categories. Moreover, the type of master roll up also influences the w ay reports group, sort and show the financial information in a master roll up. On cost categories under the category 'Costs', you can register budgets and make budget modifications (see Assign Budgets 155), latest estimates (see Latest Estimates 72), orders (see Orders 69), contract budgets (see Contract Budgets 77) and invoice lines (see Invoice Lines 144) register. On cost categories under the category 'Revenue' you can register budgets (see Assign Budgets 155), revenue (see Revenues 74) and invoice lines (see Invoice Lines 144) register. On cost categories under the category 'results', you can register invoice lines (see Invoice lines 144) register. 'Cost' and 'Revenues' are the financial flow s w ithin the project. 'Results' is used to transfer the results of the project from the balance sheet to the profit and loss statement. This can be done at the end of the project or for instance monthly, for example, based on the construction progress.
Explanation	Possible explanation.

Cost Centers

This screen can be recorded and changed cost center.

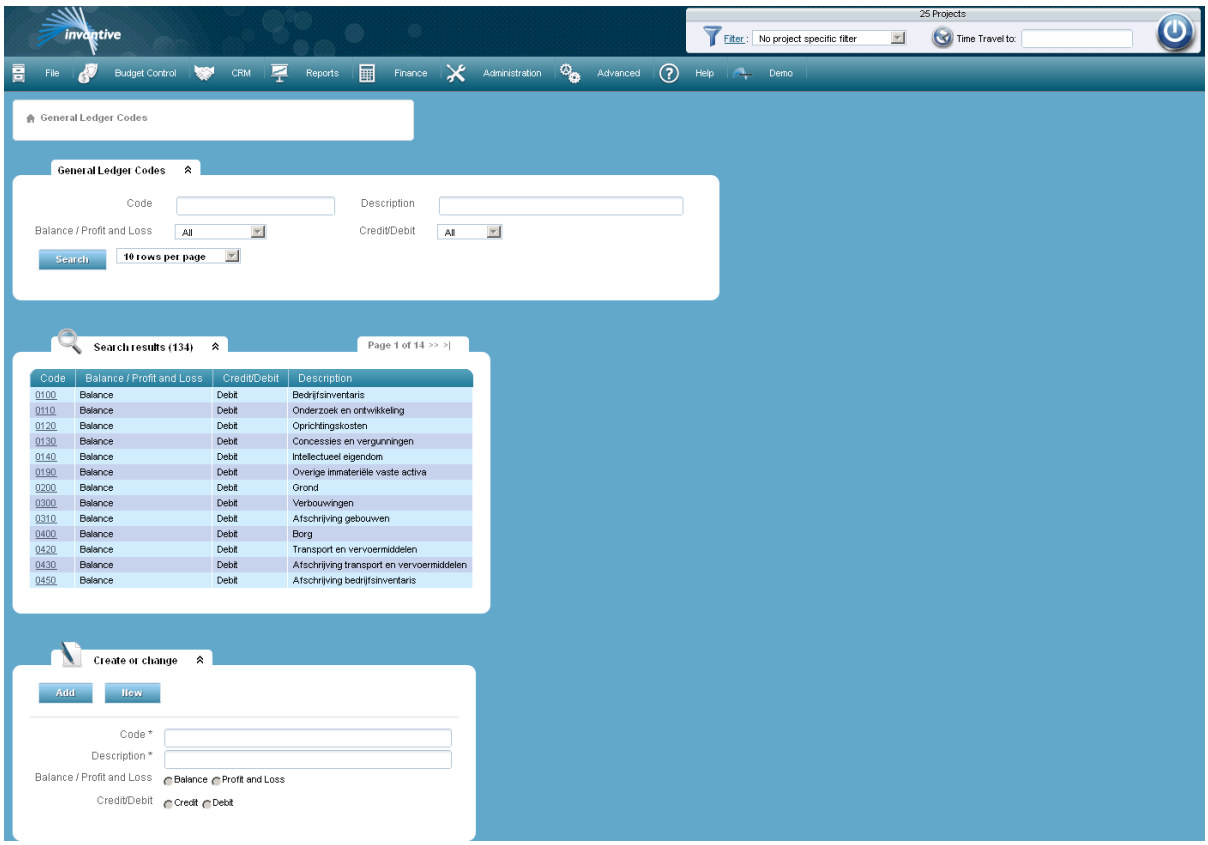


The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the cost center.
Description	Description of the cost center.

General ledger account codes

In this screen general ledger account codes can be registered and edited.



The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the general ledger code.
Description	Description of the general ledger code.
Balance / Profit & Loss	Indicator w hich indicates if it is a balance or profit and loss entry.
Credit/debit	Indicator w hich indicates if it is a credit or debit entry.

1.4.7.4 CRM

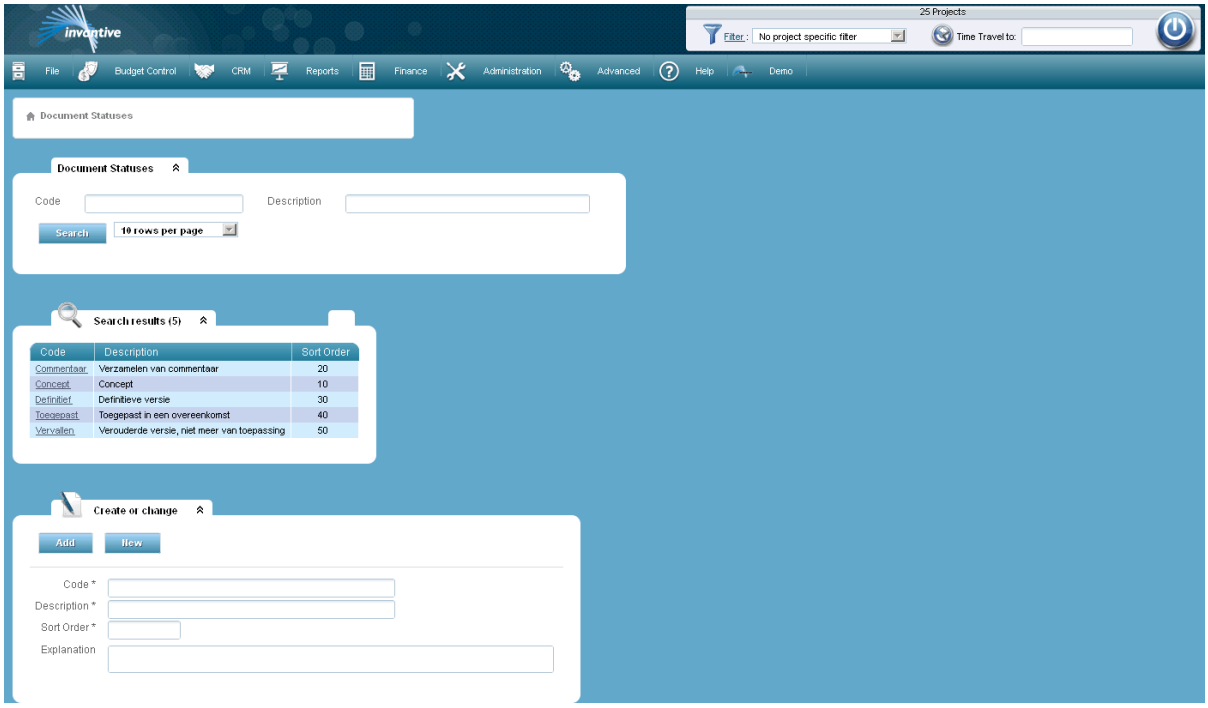
This chapter presents the relationships between the project or the organization and suppliers, customers and employees.

Documents

Here you will see the screens to set up the document structures.

Document Statuses

In this screen you can register and change document statuses.

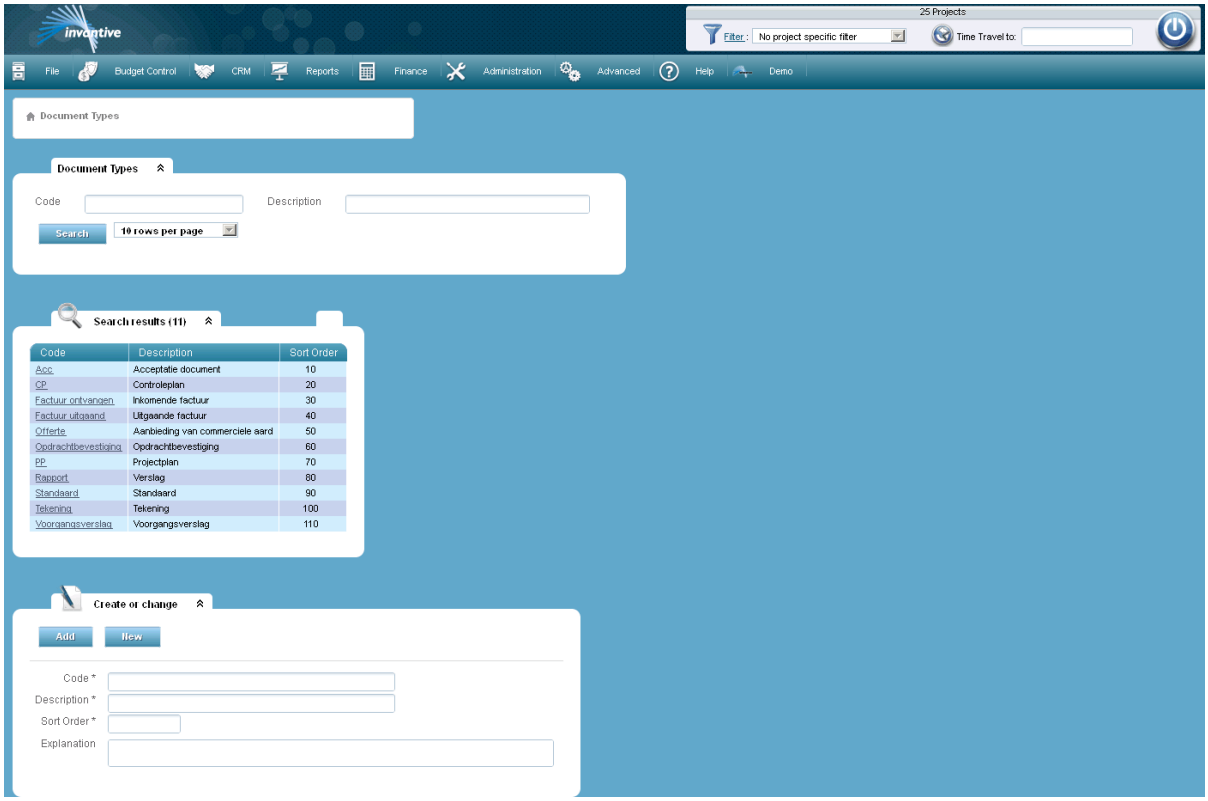


The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the document status.
Description	Description of the document status.
Sort Order	A numeric value on w hich the document statuses are sorted w hen they are show n in a list box in a screen.

Document Types

In this screen you can register and change document types.



s

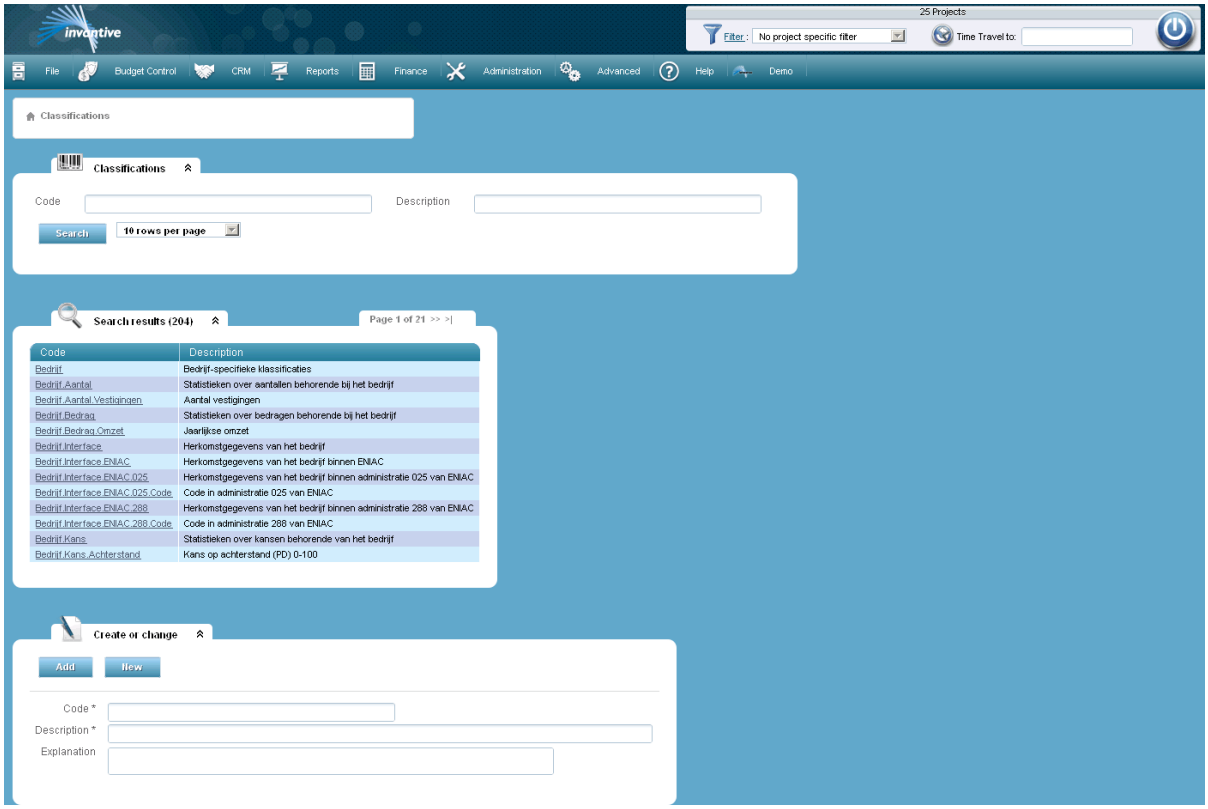
The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the document type.
Description	Description of the document type.
Sort Order	A numeric value on w hich the document types are sorted w hen they are show n in a list box in a screen.

Classifications

In this screen you can register and change classifications.

A classification is a label that is linked to a project, a process, an organization, a person, or a document. The label provides additional information about the file to which it is attached and makes in this way a keyword based classification and indexing possible. With labels you can find your desired information more efficient.



Classifications make use of a tree structure where '.' is used as a separator. So 'A.B' first requires the presence of 'A'.

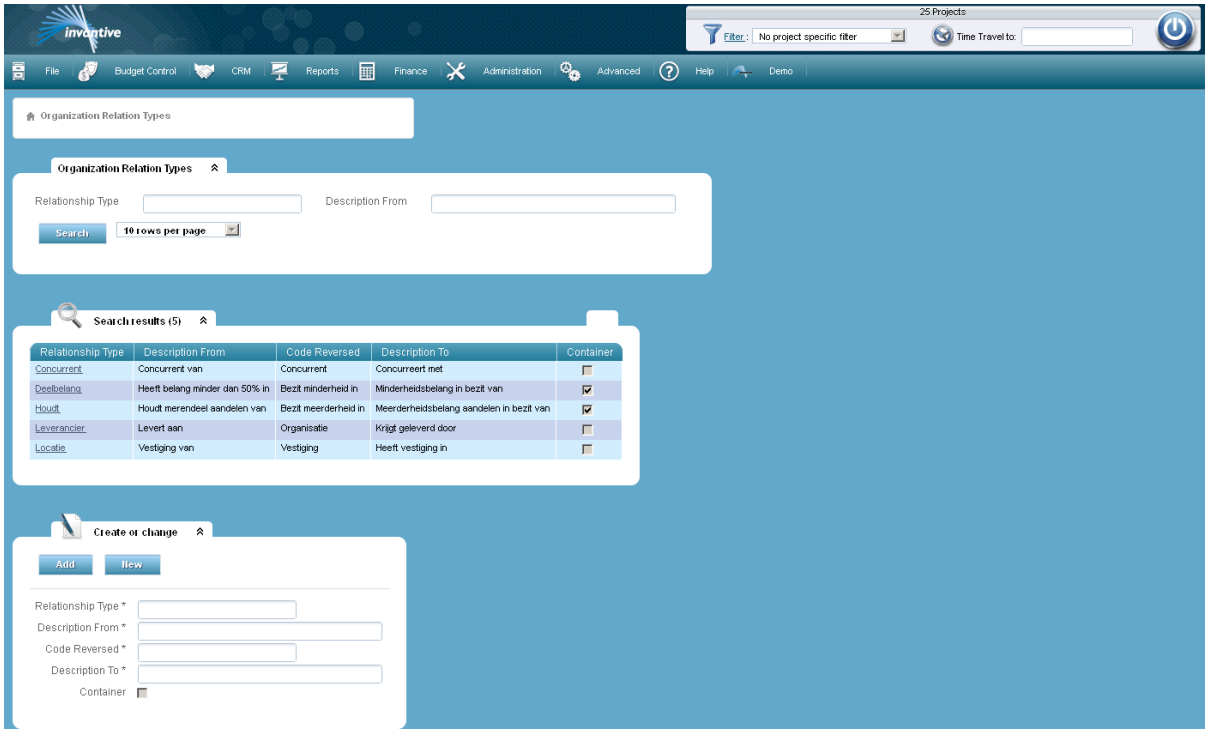
The meaning of the entry fields is:

Code	The unique code of the classification.
Description	Description of the classification.
Explanation	Possible explanation.

Organization Relation Types

In this screen you can register and change organization relation types.

An organization relation type describes the relation type between two organizations.



The meaning of the entry fields is:

Relationship Type	The code of the organization relation type.
Description from	Organization Relation Type as view ed from the begin point of the organization relation.
Code Reversed	Unique alphanumeric code for the organization relation type as view ed from the perspective of the second party relation.
Description to	Organization Relation as view ed from the end point of the organization relation.
Container	When checked the start point from the organization relation is a container organization.

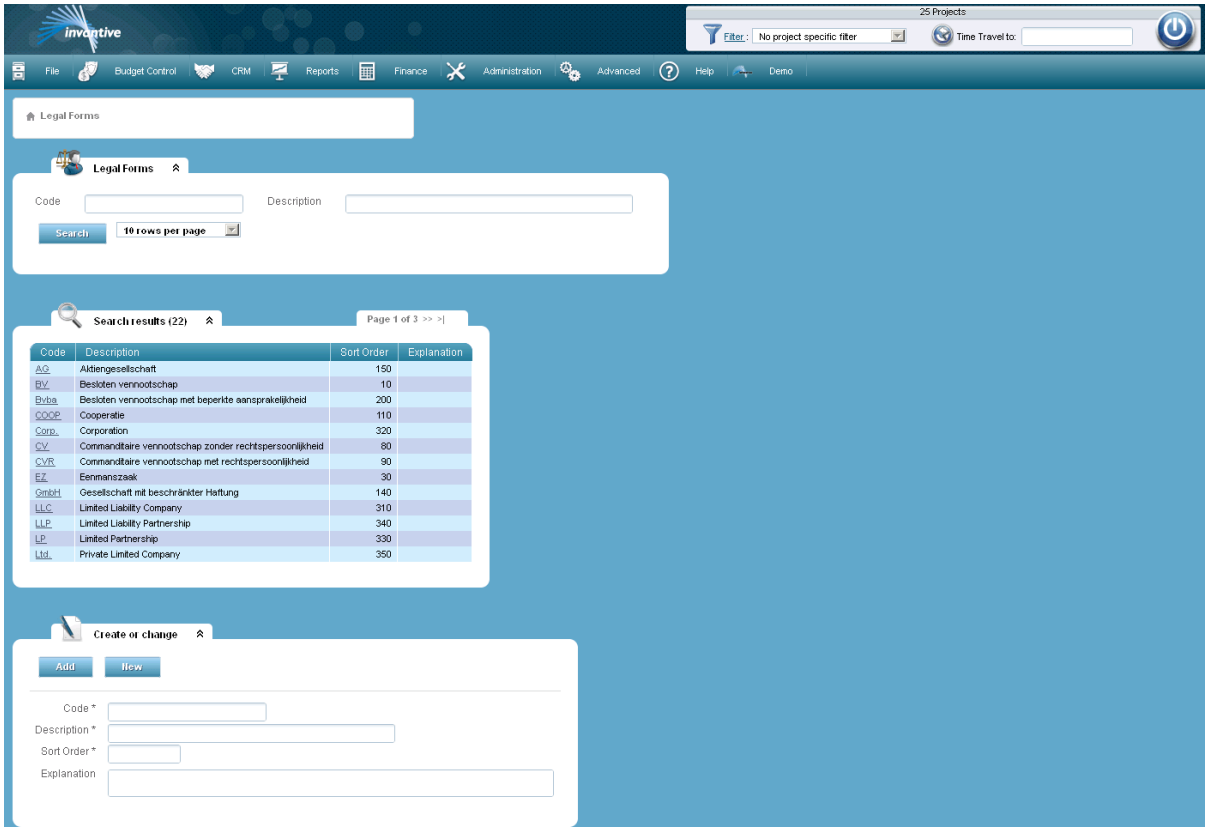
Legal Forms

In this screen you can register and change legal forms.

The legal form of a company, enterprise or organization, is the legal form where the enterprise is cast.

The simplest business form is a sole proprietorship. The sole proprietor is the owner of the business including the operator and the gain or loss from the enterprise is equal to the profit or loss of the entrepreneur. For more complex legal forms, there is a greater distinction between the enterprise and the owners or operators of that enterprise.

The legislation in each country determines which legal forms in the business as possible.

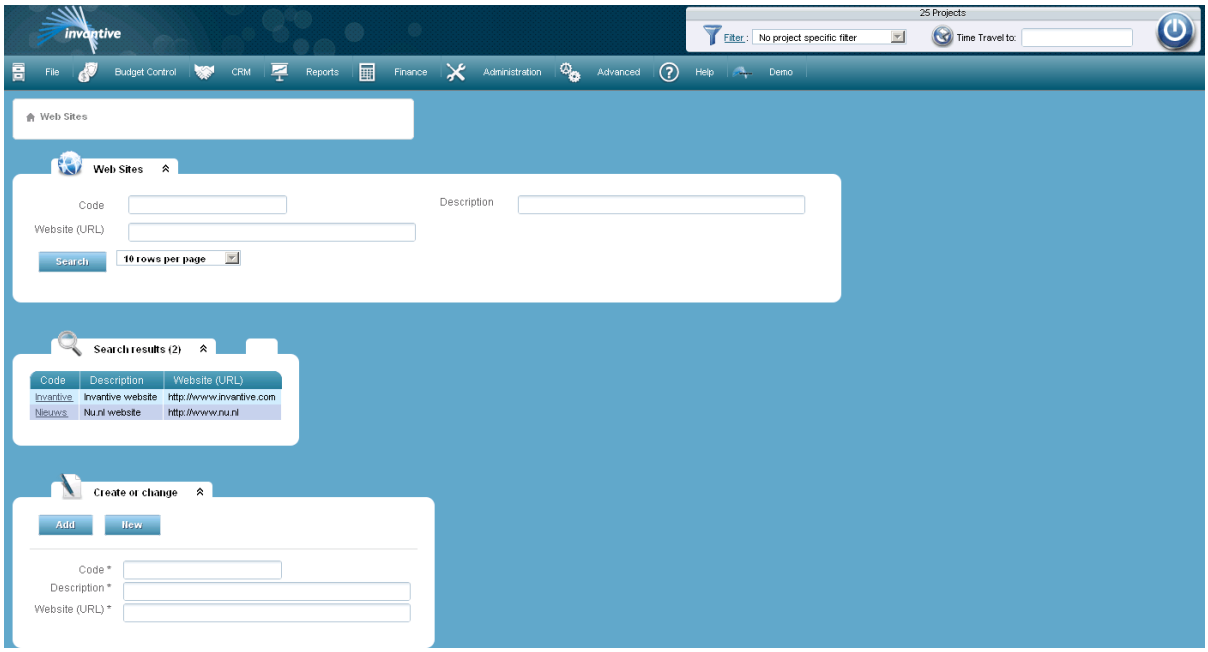


The meaning of the entry fields is:

Code	The unique code of the legal form.
Description	Description of the legal form.
Sort Order	A numeric value on which the legal forms are sorted when they are shown in a list box in a screen.
Explanation	An explanation of the legal form.

Web Sites

In this screen you can register and change websites.

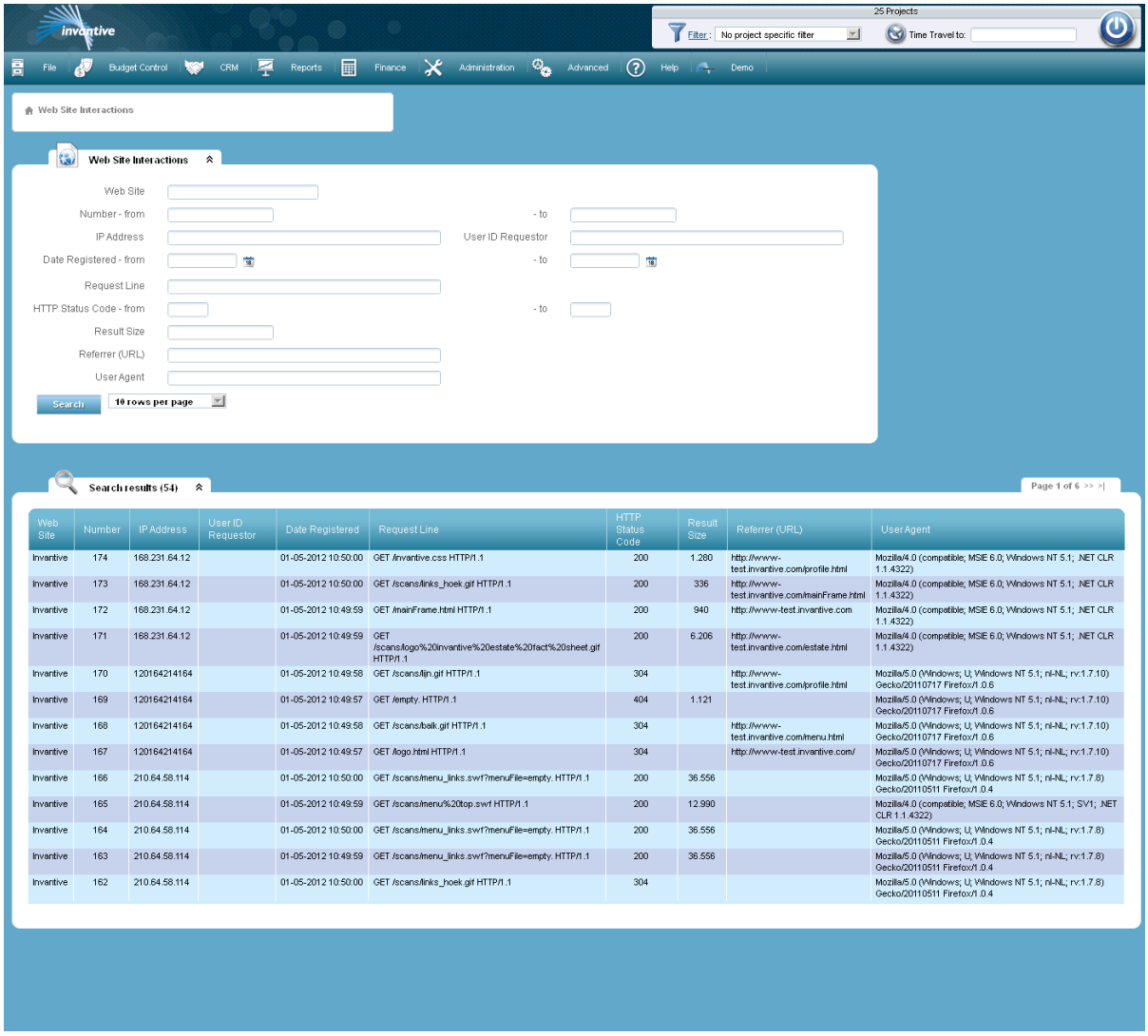


The meaning of the entry fields is:

Code	The unique code of the w ebsite.
Description	Description of the w ebsite for show ing reports and screens.
Website (URL)	The home of the w ebsite, specified as URL.

Web Site Interactions

In this screen you can register and change website interactions.



Web Site	Number	IP Address	User ID Requestor	Date Registered	Request Line	HTTP Status Code	Result Size	Referrer (URL)	User Agent
Invantive	174	168.231.64.12		01-05-2012 10:50:00	GET /invantive.css HTTP/1.1	200	1.280	http://www-test.invantive.com/profile.html	Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; .NET CLR 1.1.4322)
Invantive	173	168.231.64.12		01-05-2012 10:50:00	GET /scans/links_hoek.gif HTTP/1.1	200	336	http://www-test.invantive.com/mainFrame.html	Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; .NET CLR 1.1.4322)
Invantive	172	168.231.64.12		01-05-2012 10:49:59	GET /mainFrame.html HTTP/1.1	200	940	http://www-test.invantive.com	Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; .NET CLR 1.1.4322)
Invantive	171	168.231.64.12		01-05-2012 10:49:59	GET /scans/logo%20invantive%20estate%20fact%20sheet.gif HTTP/1.1	200	6.206	http://www-test.invantive.com/estate.html	Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; .NET CLR 1.1.4322)
Invantive	170	120164214164		01-05-2012 10:49:58	GET /scans/ijn.gif HTTP/1.1	304		http://www-test.invantive.com/profile.html	Mozilla/5.0 (Windows; U; Windows NT 5.1; nl-NL; rv:1.7.10) Gecko/20110717 Firefox/1.0.6
Invantive	169	120164214164		01-05-2012 10:49:57	GET /empty. HTTP/1.1	404	1.121		Mozilla/5.0 (Windows; U; Windows NT 5.1; nl-NL; rv:1.7.10) Gecko/20110717 Firefox/1.0.6
Invantive	168	120164214164		01-05-2012 10:49:58	GET /scans/balk.gif HTTP/1.1	304		http://www-test.invantive.com/menu.html	Mozilla/5.0 (Windows; U; Windows NT 5.1; nl-NL; rv:1.7.10) Gecko/20110717 Firefox/1.0.6
Invantive	167	120164214164		01-05-2012 10:49:57	GET /logo.html HTTP/1.1	304		http://www-test.invantive.com/	Mozilla/5.0 (Windows; U; Windows NT 5.1; nl-NL; rv:1.7.10) Gecko/20110717 Firefox/1.0.6
Invantive	166	210.64.58.114		01-05-2012 10:50:00	GET /scans/menu_links.swf?menuFile=empty. HTTP/1.1	200	36.556		Mozilla/5.0 (Windows; U; Windows NT 5.1; nl-NL; rv:1.7.8) Gecko/20110511 Firefox/1.0.4
Invantive	165	210.64.58.114		01-05-2012 10:49:59	GET /scans/menu%20top.swf HTTP/1.1	200	12.990		Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; SV1; .NET CLR 1.1.4322)
Invantive	164	210.64.58.114		01-05-2012 10:50:00	GET /scans/menu_links.swf?menuFile=empty. HTTP/1.1	200	36.556		Mozilla/5.0 (Windows; U; Windows NT 5.1; nl-NL; rv:1.7.8) Gecko/20110511 Firefox/1.0.4
Invantive	163	210.64.58.114		01-05-2012 10:49:59	GET /scans/menu_links.swf?menuFile=empty. HTTP/1.1	200	36.556		Mozilla/5.0 (Windows; U; Windows NT 5.1; nl-NL; rv:1.7.8) Gecko/20110511 Firefox/1.0.4
Invantive	162	210.64.58.114		01-05-2012 10:50:00	GET /scans/links_hoek.gif HTTP/1.1	304			Mozilla/5.0 (Windows; U; Windows NT 5.1; nl-NL; rv:1.7.8) Gecko/20110511 Firefox/1.0.4

The meaning of the entry fields is:

Website	Reference to a w ebsite as registered in Websites 205.
Number	Unique numeric code.
IP Address	IP-address of the requestor.
Login	Users identification used for the registration for the requested page.
Date Registered	Date and time the request w as requested.
Request Line	Line of the request that is used to determine w hich page w ill be sent back.
HTTP Status Number - Of	Numeric display of the status that w as sent back in response to the request.
Result Size	Size of the HTTP result that w as sent back.
Referrer (URL)	Reference to the retrieved w ebsite page.
Brow ser Specification	Specification of the used brow ser.

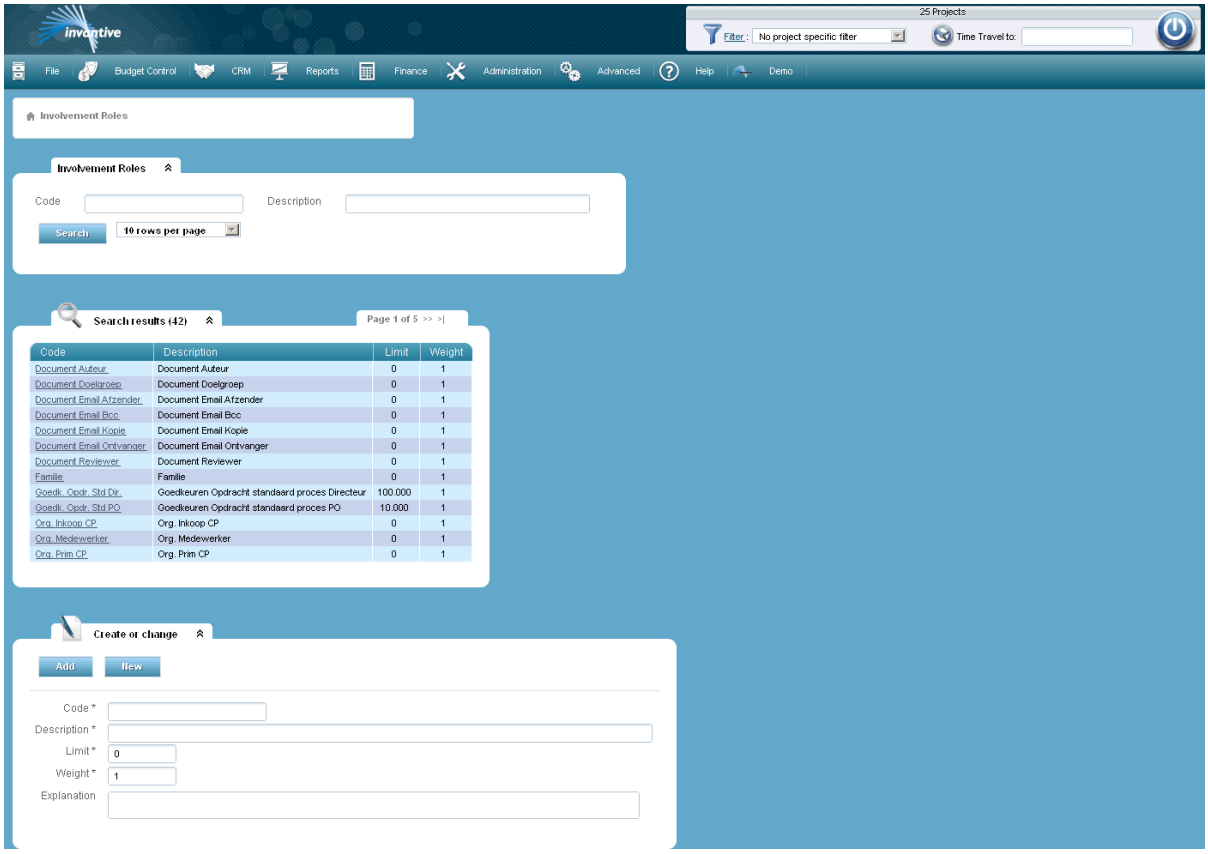
User Overview

Enter text here.

Involvement Roles

In this screen you can register and change 'Participation Roles'.

Persons participating in a project could have multiple roles assigned. The same role can be assigned to several people.

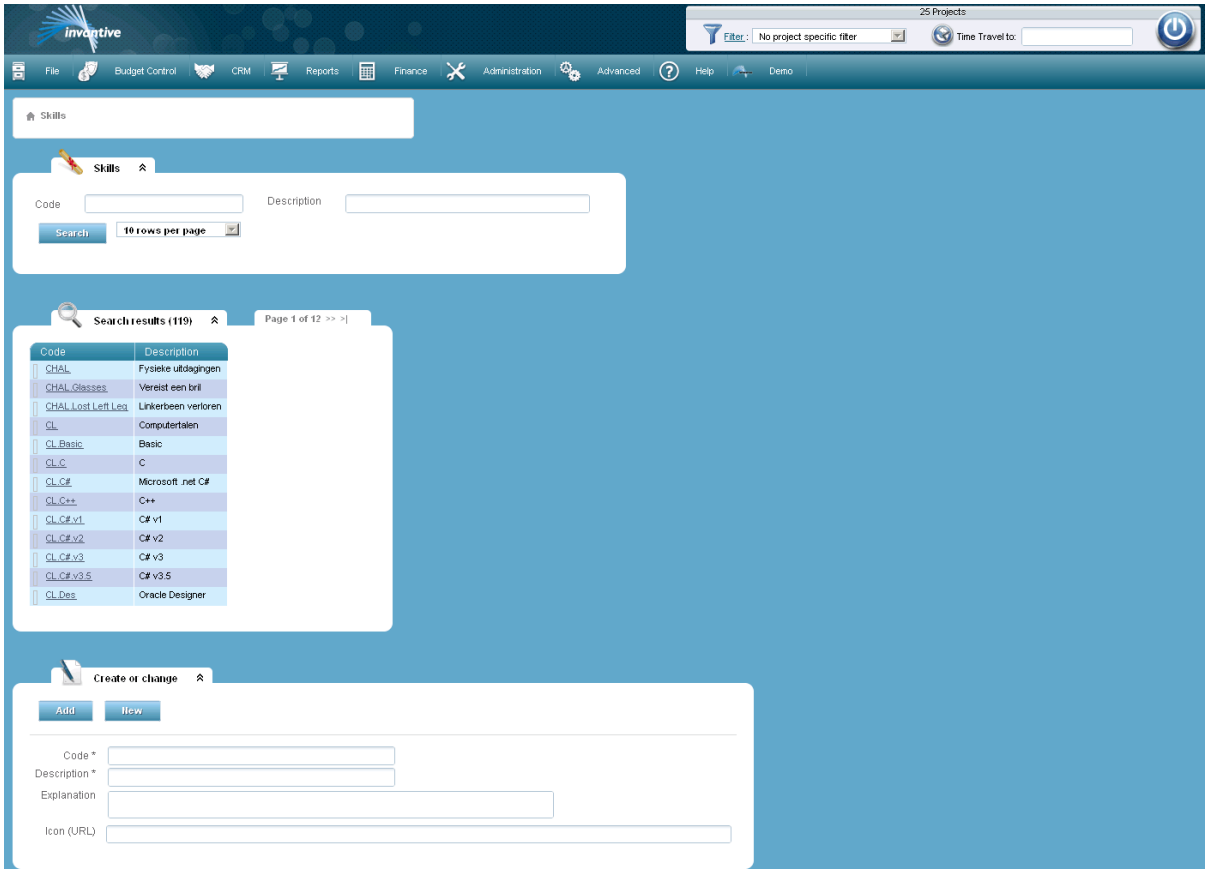


The meaning of the entry fields is:

Code	The unique code of the ‘involvement role’.
Description	Short description of the ‘project involvement role’.
Limit	Deviating limit used for managing workflow transitions.
Weight	Weight assigned to this role.
Explanation	Optional explanation of the ‘project involvement role’.

Skills

In this screen you can register and change skills.



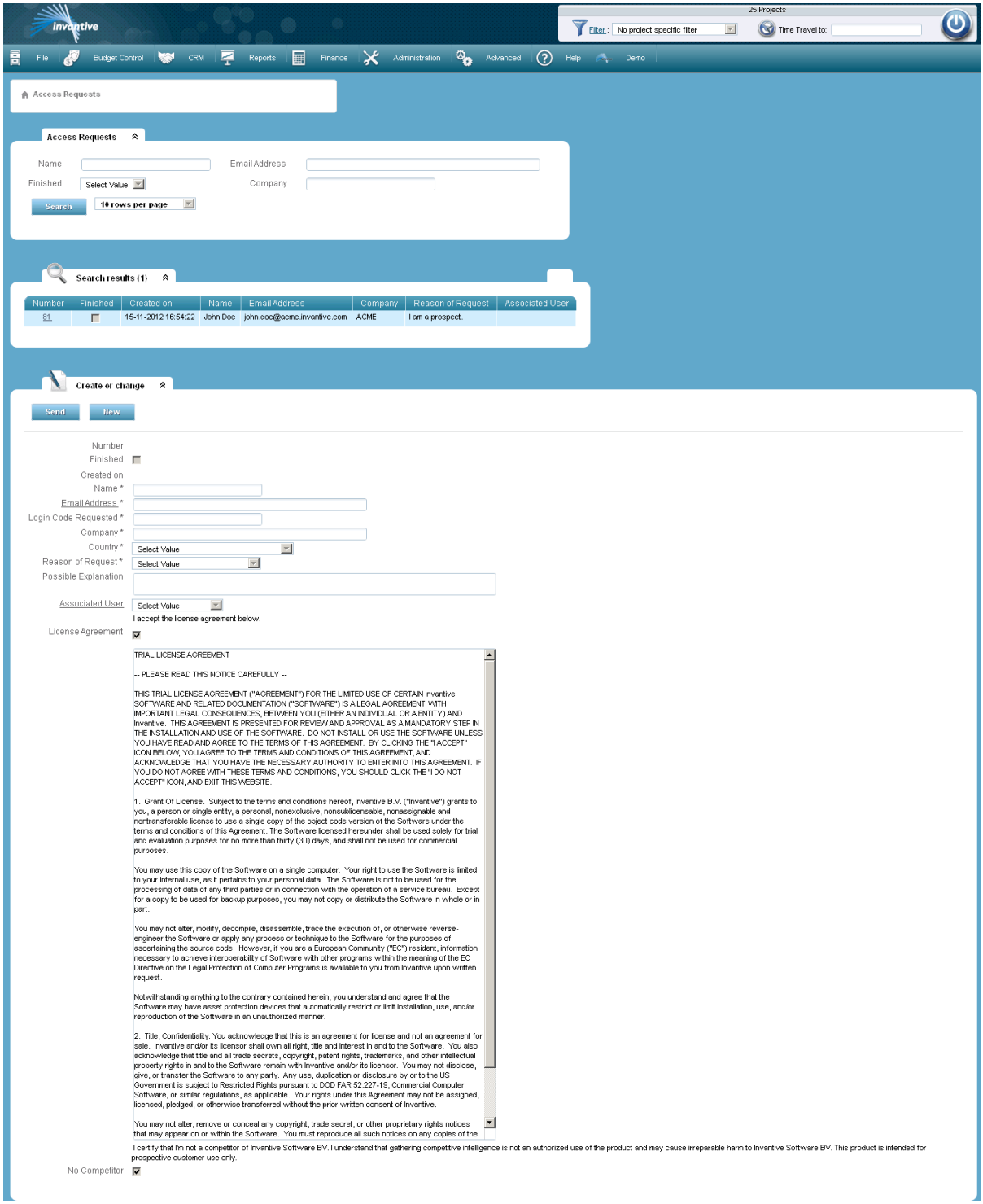
The meaning of the entry fields is:

Code	The unique code of the skill.
Description	The description of the skill.

Access Requests

In this form you can register and change requests for access.

The screen is an extension to the screen Request Entrance 12, that is specifically meant for persons currently without access rights. In this screen, the application administrator can close access requests, for example, after granting access rights.



The meaning of the entry fields is:

Name	Name of the requester.
Email Address	The email address w here the access credentials should be sent to.
Login Code Requested	The login code that is requested for the applicant.
Business	The name of the organization at w hich the applicant is employed.
Country	The country of residence.
Reason of Request	The reason w hy you w ish access to Invantive Vision.
Possible Explanation	A free textual explanation of the reason for the request.
Associated User	The person w ho w as registered as user for the request.

License Agreement	The terms and conditions under which access is granted.
No Competitor	The confirmation that you will use the information received solely for the purposes described.
Finished	The request has been finished if checked.

1.4.7.5 Logistics

This section describes the screens relating to the logistics of a project or organization. Logistics covers the area of development and procurement followed by the production and distribution of products with the necessary personnel to the final customer, with the aim to fulfill the needs of the market at optimum cost and capital used.

Invantive Vision offersa a number of possibilities to settle logistical processes. The data is available at three levels in the product structure:

- Product Group 214: a bundle of products, such as for example 'Consumables'.
- Product 215: a specific product without a serial number.
- Unit 157: a specific serial number of a product. A unit is an independent object of a certain product. For example, in real estate development this can be an office of the type 'Gull', while in the automation it can be a server with a serial number '123XBA' of the type 'Dell 2950'. To each product belongs óne unit with the unique identifier '0'. This unit can be used for logistic functions if no unique identifier is known. This so-called '0-unit' is created by the system itself and will automatically be removed if the product is deleted.

A Unit 157 on its turn can have relationships with other units, so you can for example, capture which fingerprint reader is connected to which camera. This is not necessarily, but it is useful for complex configurations and it is typically used in service organizations that work with serial-based devices in large numbers in the field (so-called 'MIF' or 'Machine-in-Field').

Moreover a Unit 157 can have special properties that can be different for each Product 215. So for example for a vehicle the kilometers and for a fingerprint reader the number of fingers scanned.

This is for example useful for measuring a system ('do we need to replace the cartridge') or for invoicing ('you need to pay EUR 100 per month plus EUR 0.10 per scanned finger').

The last concept is Warehouses 211: a warehouse is a location where units are stored. This can be: a cabinet, a rack, a warehouse but also a vehicle or a garage box.

For a warehouse transactions of a specific Unit Transaction Type 214 can be registered. For example, 'The issue a work order[1] or 'A recount'. This eventually leads to stock: a summation of all transactions in time leads to a certain position.

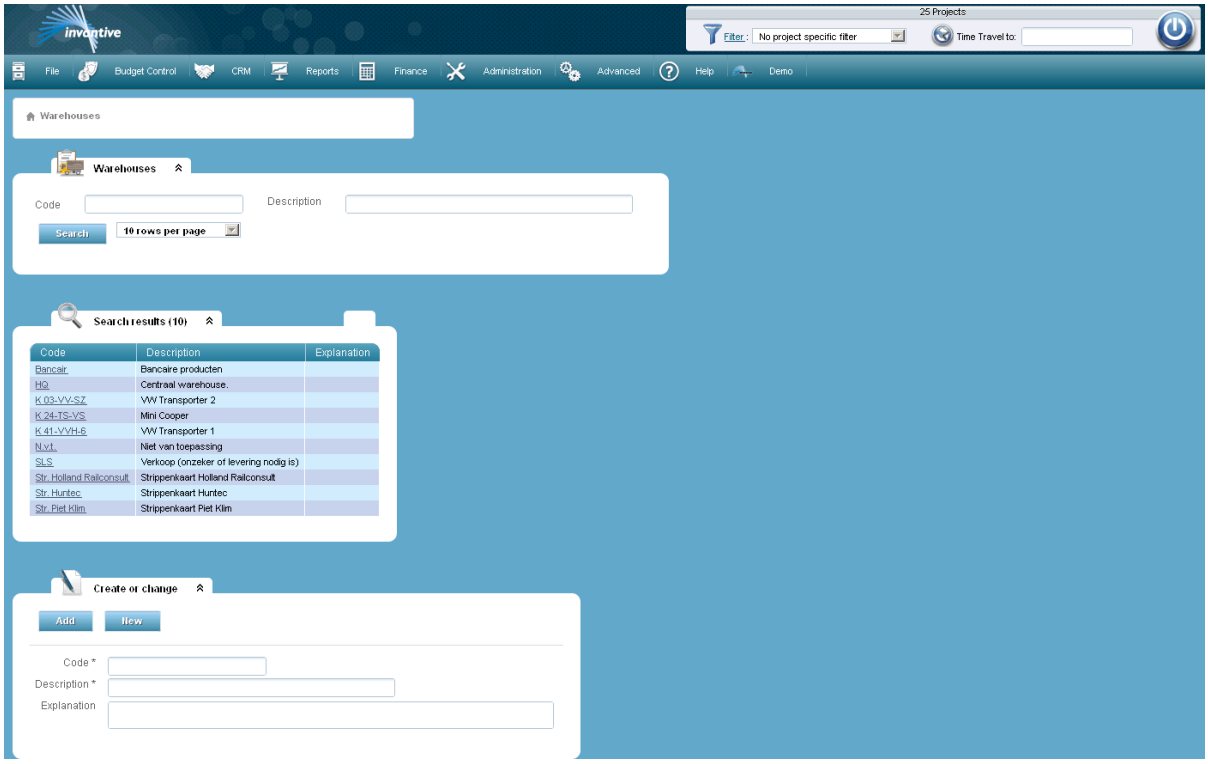
If the work order process is running well, the automatically write off of inventory can be used. This makes quite a few demands on the process, but it closes off the process neater.

Which logistics processes are less well supported by Invantive Vision ?

- Everything which has to do with production (how much shoes out of one square meter of leather, when and how many screws at what time, thus MRP 2/JIT).
- There are no integrations with handheld scanners, etc. made yet. Is still not standard available.
- The valuation in the books: at what value would you rate the stock: the current purchase price, the average price or something else? This is not supported by Invantive Vision.

Warehouses

In this screen you can register and change warehouses.

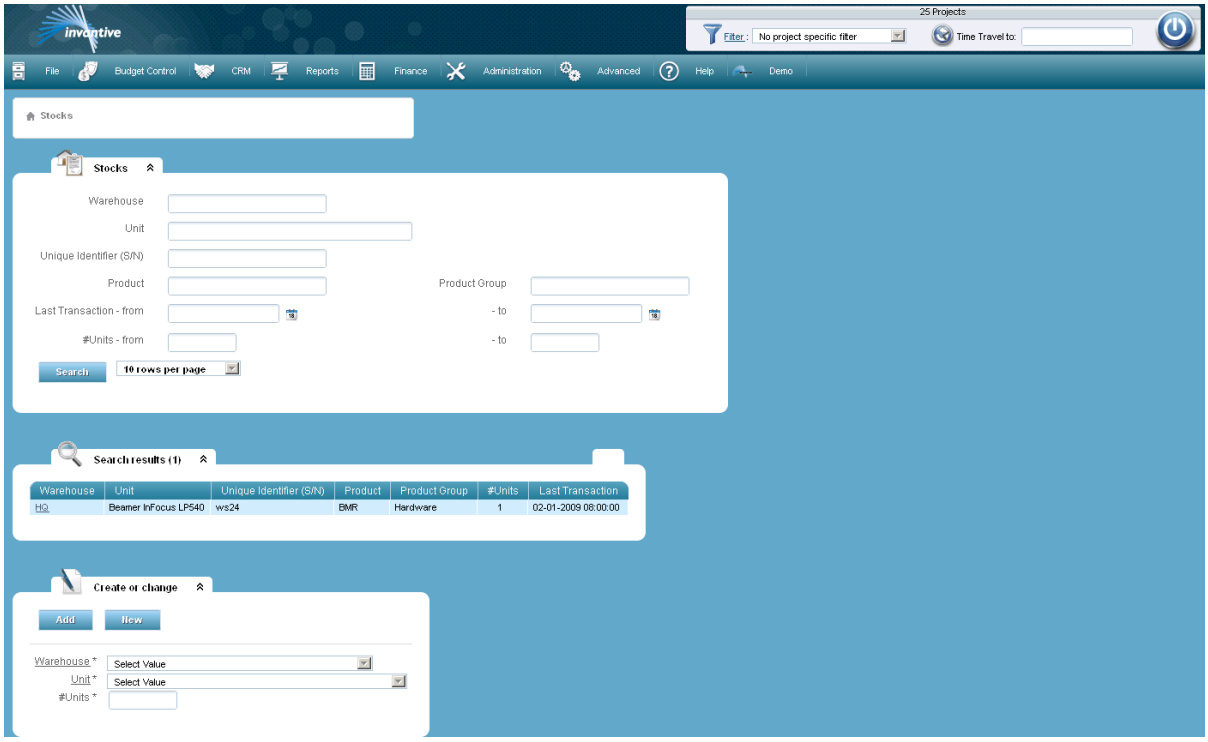


The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the warehouse.
Description	Description of the warehouse.
Explanation	Remarks on the function and use of the warehouse.

Stocks

In this screen you can register and change stocks.



The meaning of the entry fields is:

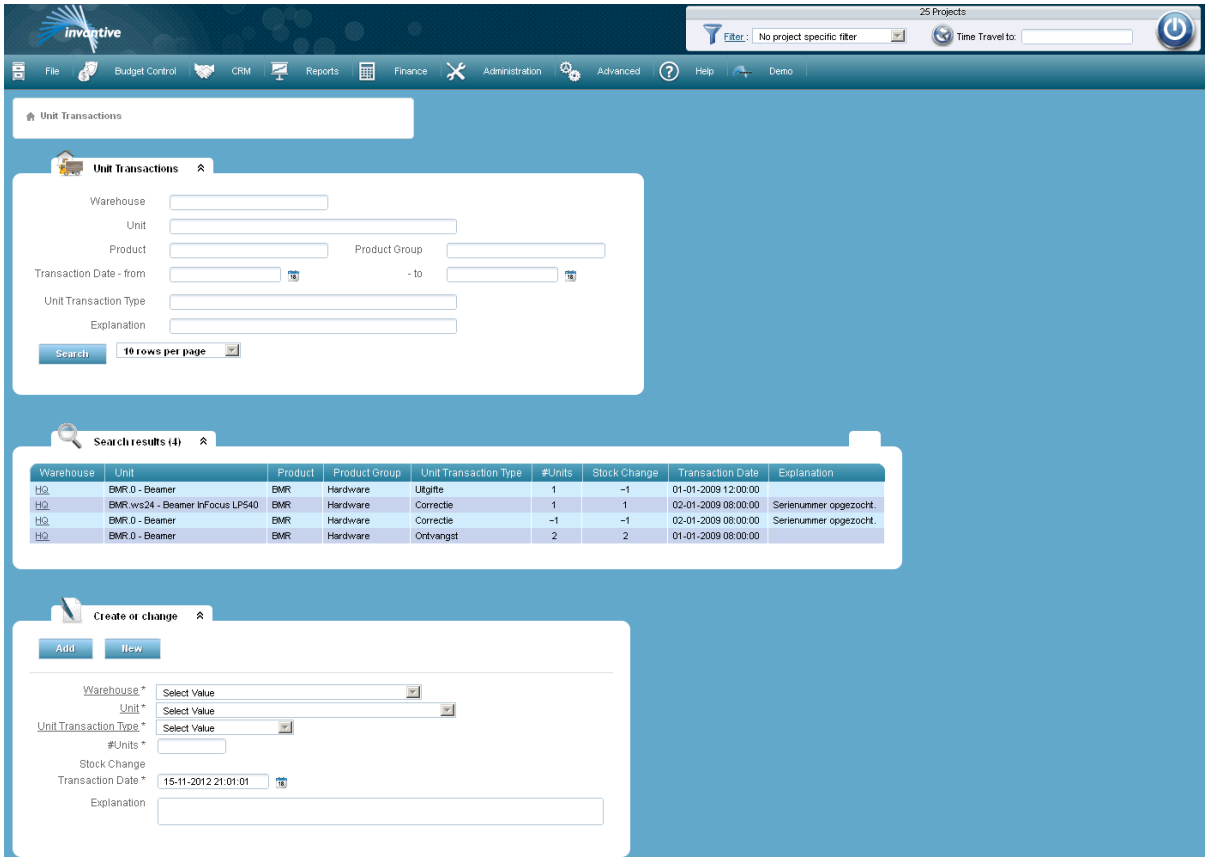
Stock	Reference to a warehouse of an Unit 157 as registered in Warehouses 211.
Unit	A unit is an independent object of a certain product (see also: Products 215 and Units 157).
#Units	The number of Units 157 in stock.

The meaning of the other fields:

Unique Identifier (SN)	The unique address, location or serial number of the Unit 157.
Product	Reference to Product 215.
Product group	Reference to the Product Group 214.
Last Transaction	Gives the date of the last transaction of the Unit 157. This may differ from the date of the last modification since the last transaction date is updated only when the transaction is recorded in the general ledger.

Unit Transactions

In this screen you can register and change unit transaction types.



The meaning of the entry fields is:

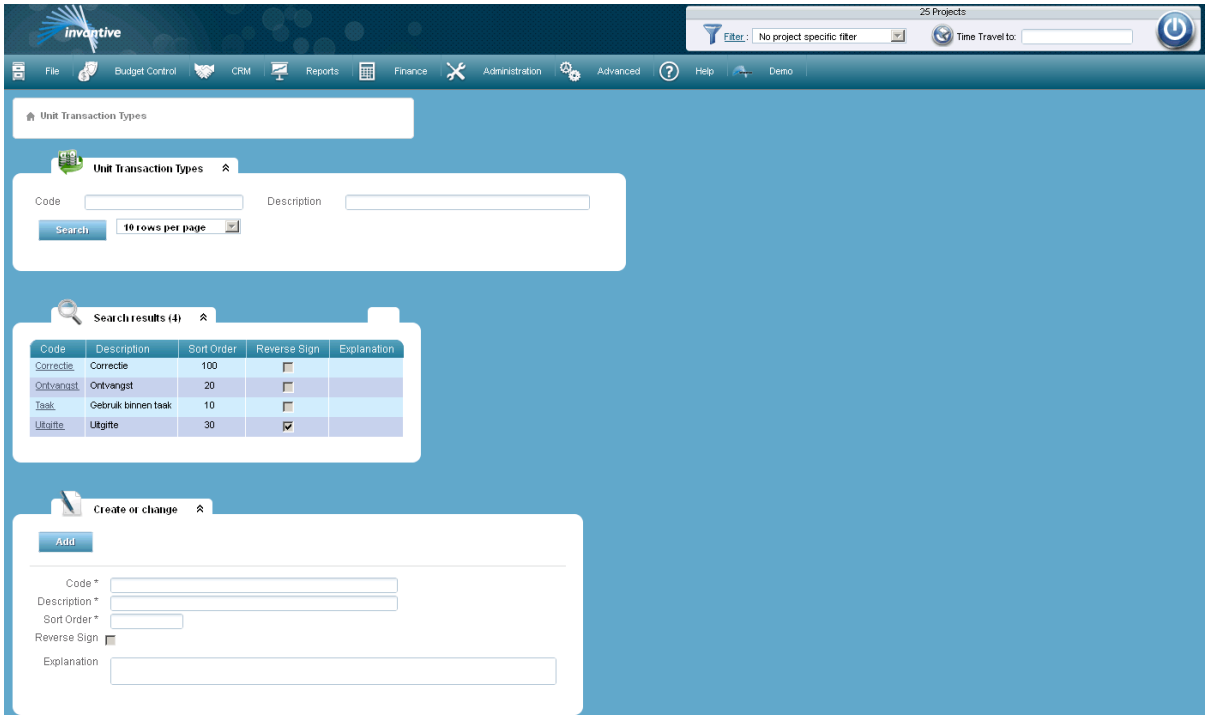
Stock	Reference to a warehouse of an Unit 157 as registered in Warehouses 211.
Unit	A unit is an independent object of a certain product (see also: Products 215 and Units 157).
Unit Transaction Type	Reference to a transaction type as registered in Unit Transaction Types 214.
#Units	The number of Units 157 involved in the transaction.
Transaction Date	The date the transaction took place.
Explanation	Possible explanation.

The meaning of the other fields:

Stock Change	The stock mutation in number of Units 157. This can be either a positive or a negative number depending on the selected Unit Transaction Type 214.

Unit Transaction Types

In this screen you can register and change unit transaction types.



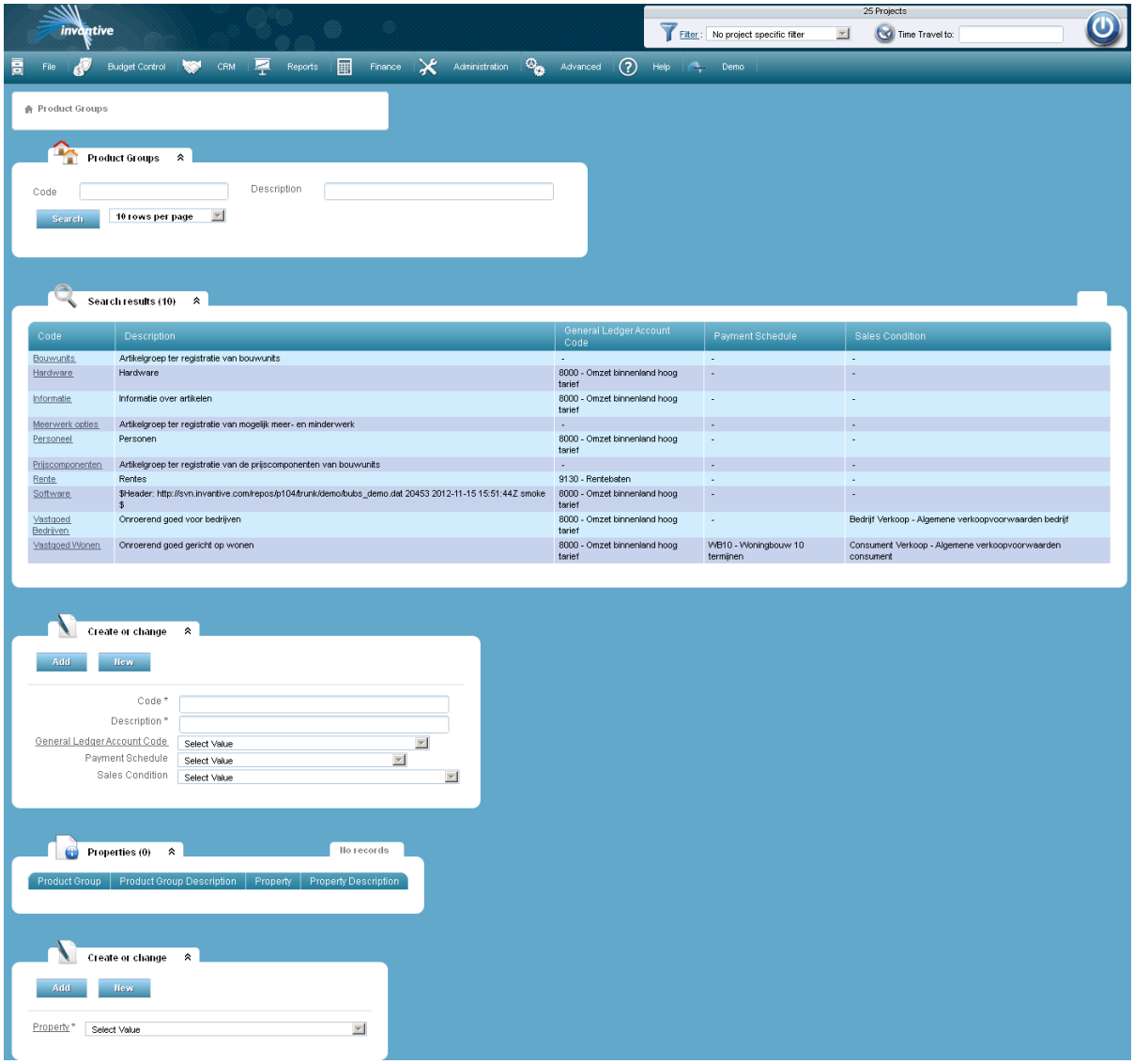
The meaning of the entry fields is:

Code	The unique code.
Description	The description used for displaying on reports and/or screens.
Sort Order	A numeric value on which the unit transaction types are sorted when they are shown in a list box in a screen.
Reverse Sign	Indicates that the sign of the transactions will be reversed when checked. For example: a positive amount of units involved in a transaction will result in a decrease in stock if this field is checked and in an increase if this field is not checked.
Explanation	Possible explanation.

Article Groups

In this form you can register and change product groups.

The classification of products in groups can serve different purposes such as; facilitating the retrieval of articles, performing similar operations on a particular product group and displaying information on a specific product group.



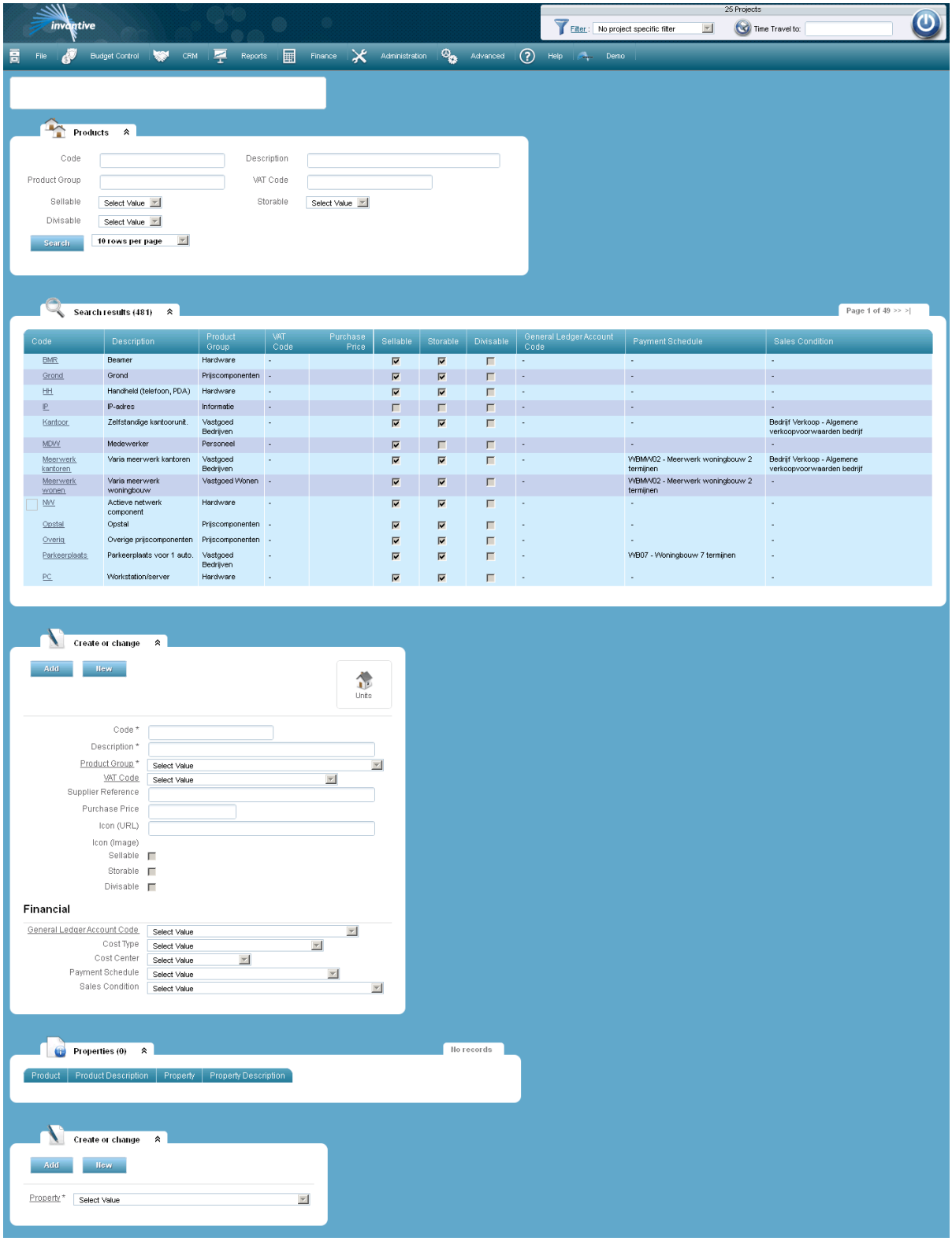
The meaning of the entry fields is:

Code	Unique code that identifies a product group.
Description	Description of the product group.
General Ledger Code	Reference to a general ledger code as registered in General Ledger Codes 200.

Product

In this screen you can register and edit products.

Products can have several roles within a project or within an organization. A product can be an end product, a half finished product, can be used as means of production or can fulfill a combination of these roles. A product can be both tangible and intangible.



The meaning of the entry fields is:

General	
Code	Unique alphanumeric code that identifies the product.
Description	Description of the product.
Product group	Reference to the Product Group 214.
VAT Code	The VAT code that applied to the product.
Supplier Reference	A unique feature by which the product is known to the supplier.

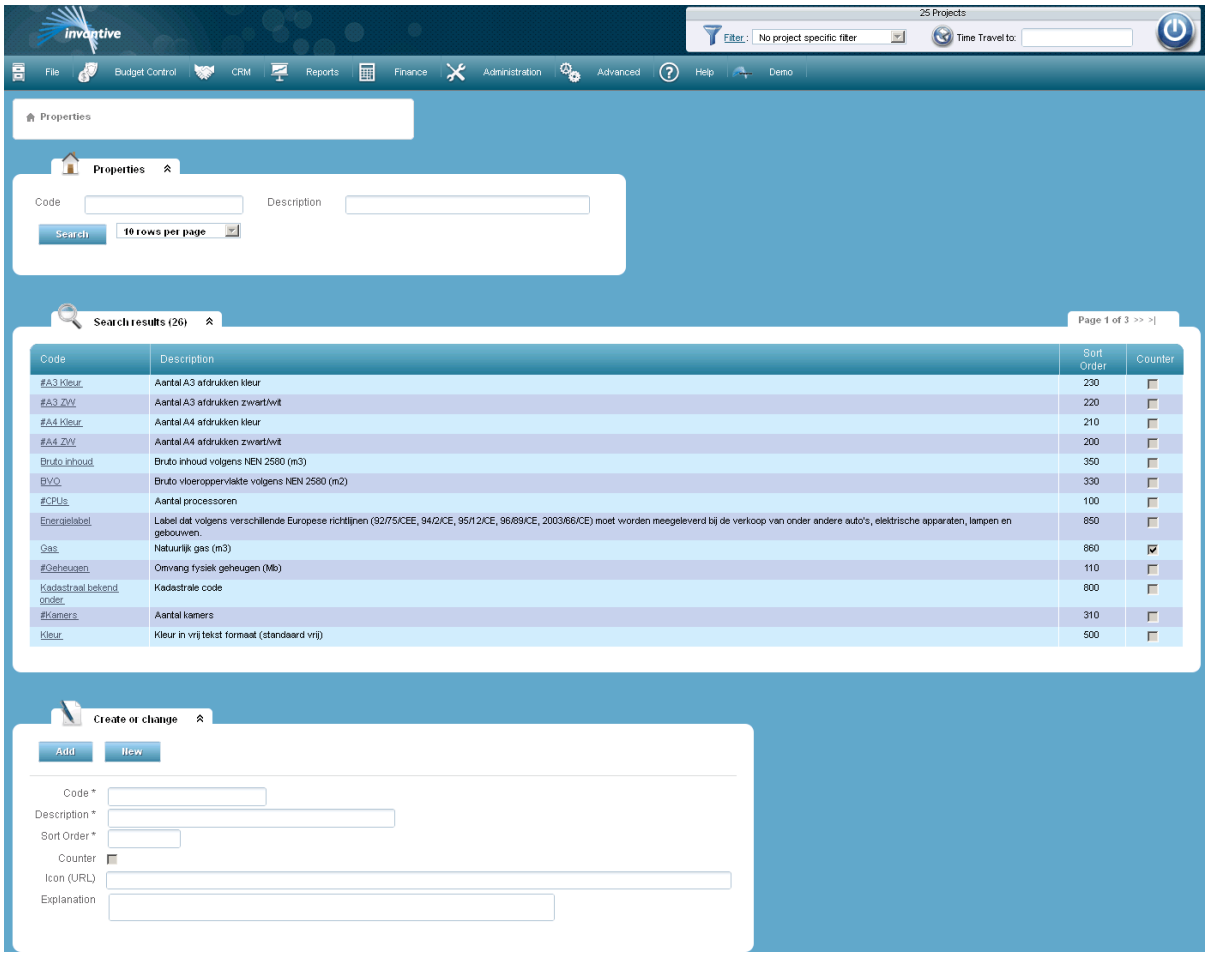
Redemption Price	The purchase price of the product.
Icon (URL)	The relative URL from the icon belonging to the product. The icon must be 16 pixels high and 16 pixels w ide.
Sellable	Indicates if it is possible to sell the product.
Storeable	Indicates if it is possible to stock the product.
Splitable	Indicates if it is possible to split the product into separate parts.
Financial	
General Ledger Code	Reference to a general ledger code as registered in General Ledger Codes 200.
Properties	
Property	Reference to a propert as registered in Properties 217.

The meaning of the other fields:

Icon (Image)	Image of the product.

Properties

In this screen you can register and edit properties.

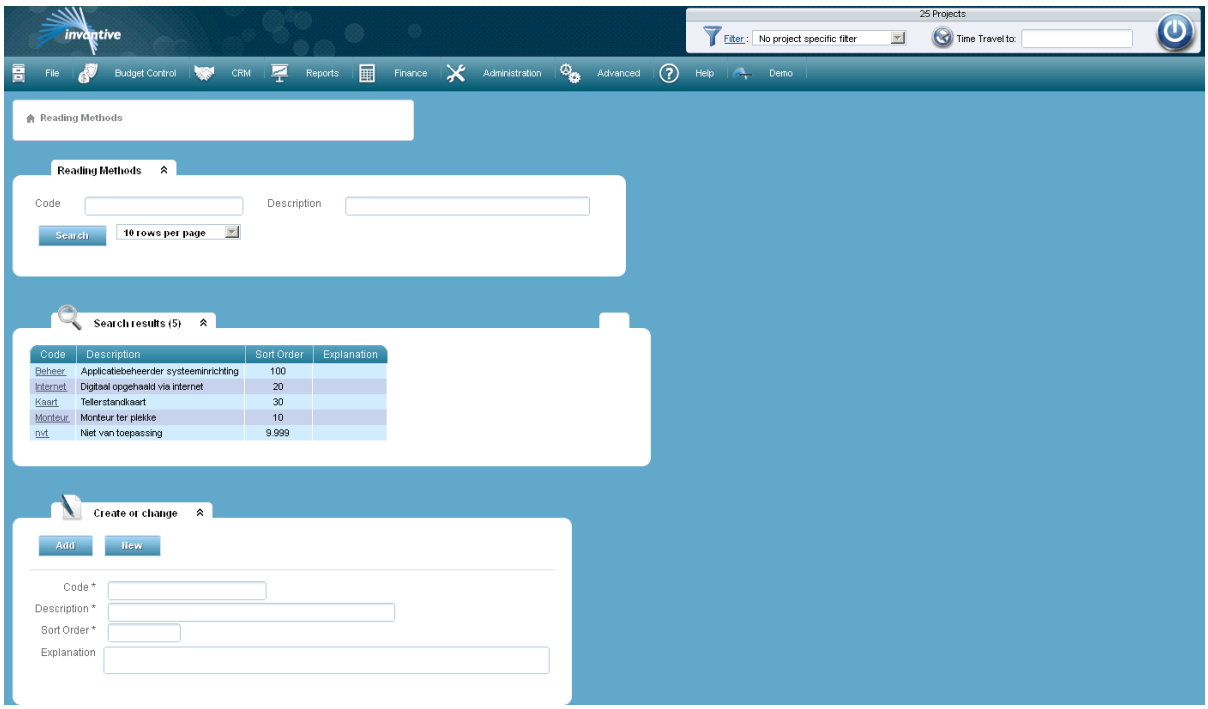


The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the property.
Description	Description of the property.
Sort Order	A numeric value on w hich the properties are sorted w hen they are displayed in a list box in a screen.
Counter	Indicator w hether the property is a meter reading.
Explanation	Possible explanation.

Property Determination Methods

In this screen you can register and edit property determination methods.



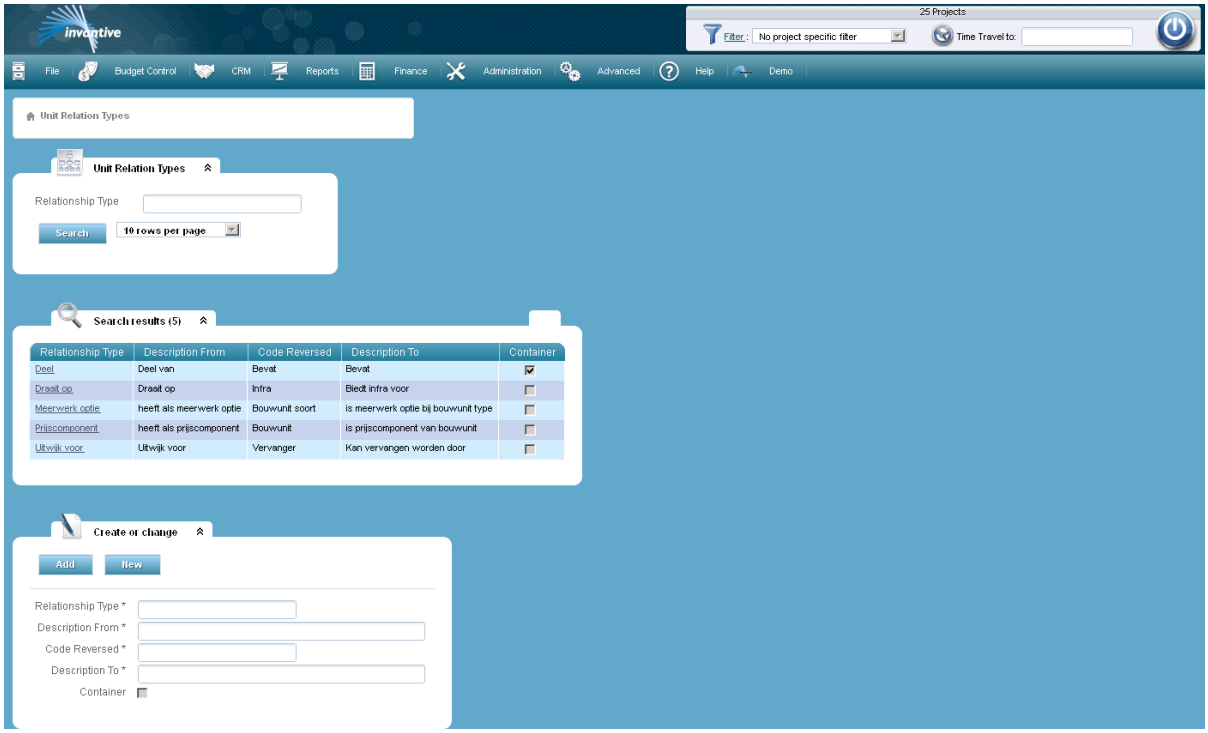
The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the property determination method.
Description	Description of the property determination method.
Sort Order	A numerical value on w hich the property determination methods are sorted if they are displayed in a list in a screen.
Explanation	Possible explanation.

Unit Relation Types

IIn this screen you can register and change unit relation types.

A unit relation type defines the relationship between units 157.



The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the unit relation type as view ed from the perspective of the first party relation.
Description from	Description of the unit relation type as view ed from the start of the relationship.
Code Reversed	Unique alphanumeric code that identifies the unit relation type as view ed from the perspective of the second party relation.
Description to	Description of the unit relation type as view ed from the end of the relationship.
Container	When checked the start of the relationship is a container unit.

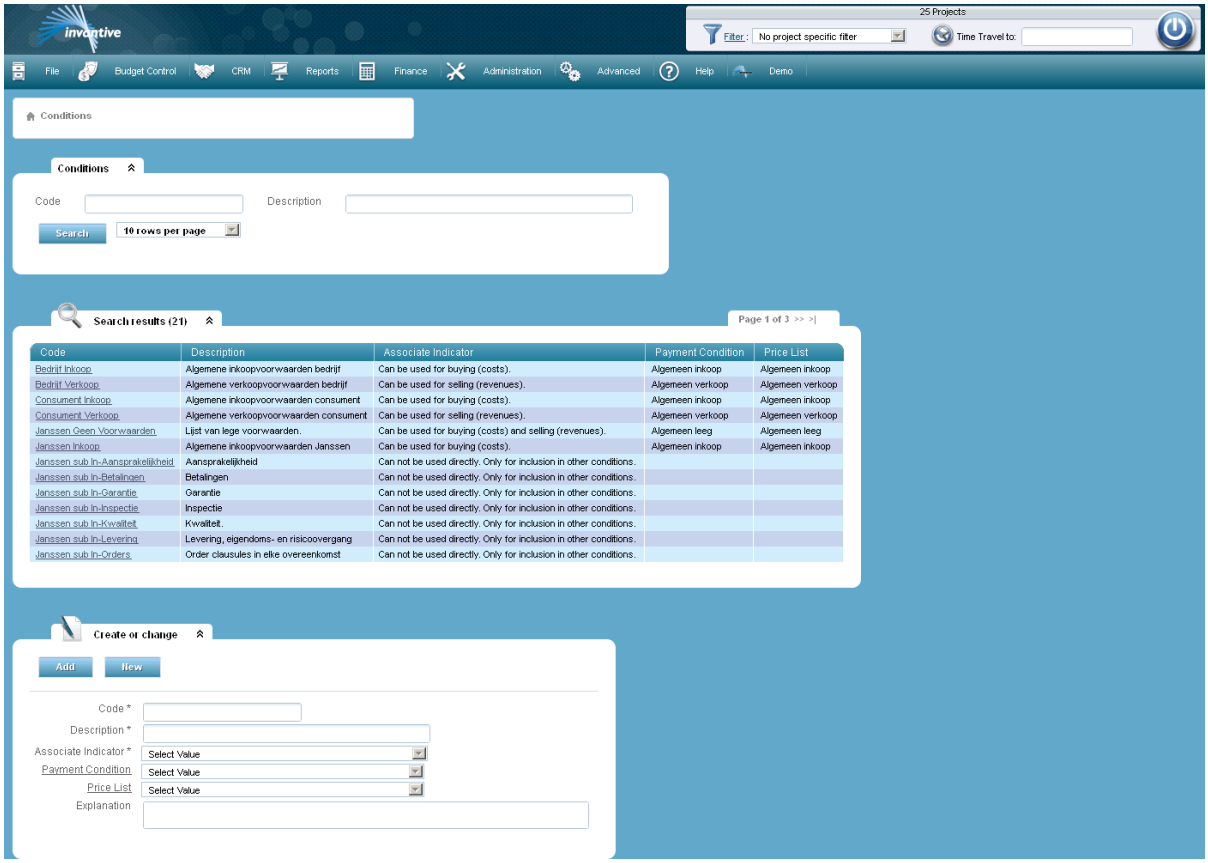
1.4.7.6 Contract Management

Contract management can be summarized as the process, that ensures that systematic and efficient contracts are created, implemented, and analyzed, with the aim to achieve maximum financial goals with a controlled and minimized risk percentage.

Conditions

This screen lets you record and conditions change.

Conditions can be used in the preparation of various types of contracts or are included in larger conditions. Conditions can refer to costs and revenues, only to costs or only to revenues.



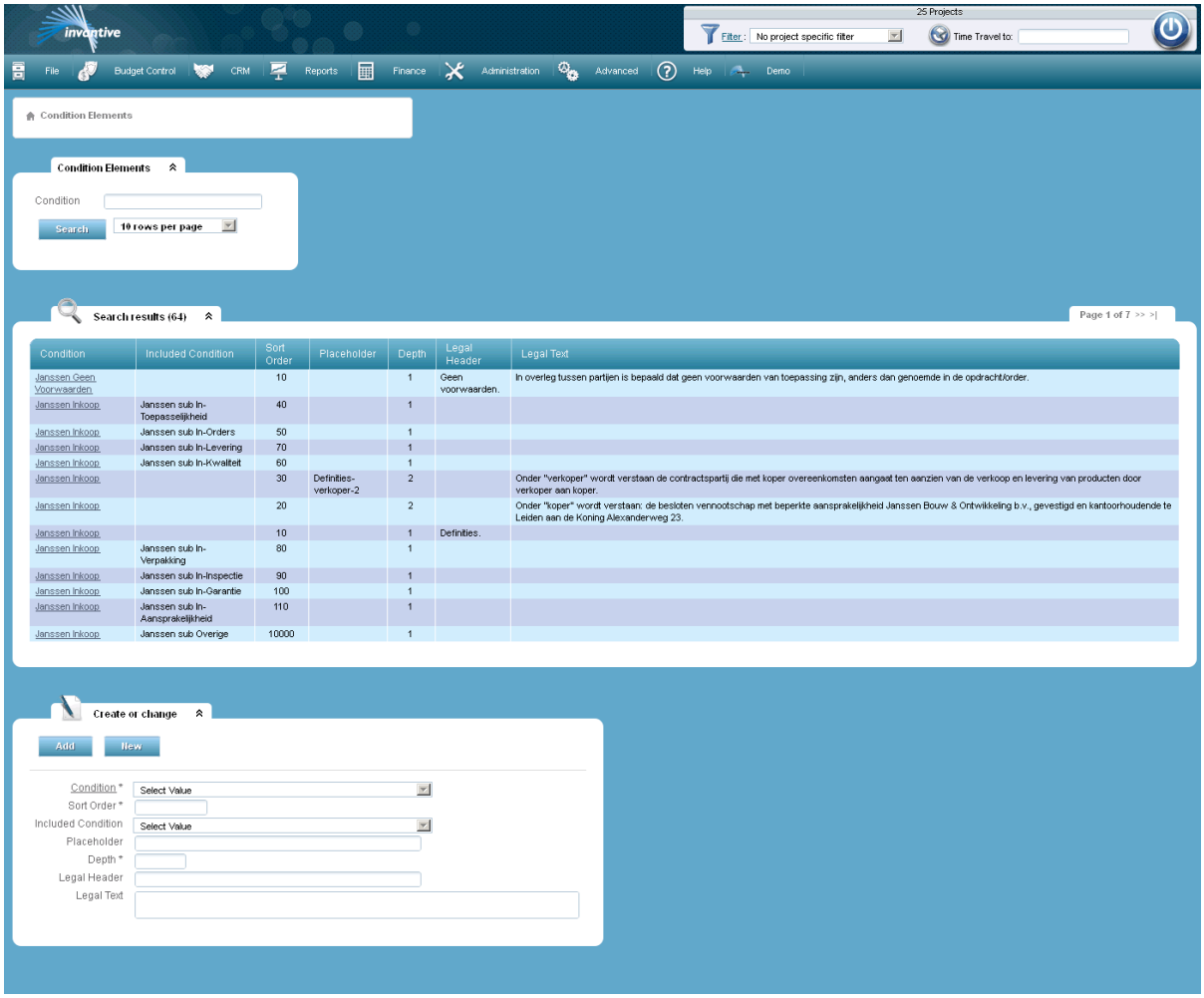
The meaning of the entry fields is:

Code	Unique alphanumeric code that identifies the condition.
Description	Description of the condition.
Associate Indicator	Indicator w hich show s how the condition can be used.
Payment Condition	Reference to a payment condition as registered in Payment Terms 223.
Price List	Reference to a price list as registered in Price Lists 186.
Explanation	Textual explanation of the condition.

Condition Elements

In this screen you can register and change condition elements.

Conditions elements are used in the preparation of conditions such as delivery or purchase conditions.



The meaning of the entry fields is:

Condition	Reference to a condition as registered in Conditions 219.
Sort Order	A numeric value on which the condition elements are sorted when they are shown in a list box in a screen.
Placeholder	This is the code of a 'placeholder', representing a condition element. When a contract is issued, the condition element can be inserted using this code. These 'placeholder's codes' can be reused in other clauses by inserting in the text the << NAME OF THE PLACEHOLDER>>.
Depth	Indicates at what level the condition element is included in the contract.
Legal Header	The header of the condition element.
Legal Text	The text of the condition element.

The meaning of the other fields:

Code	Unique alphanumeric code that identifies the condition element.

Conditions

This report shows the text of the in Invantive Vision registered conditions 219.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_cdi_pdf_rpt

Conditions

Invantive Vision

Powered by Invantive

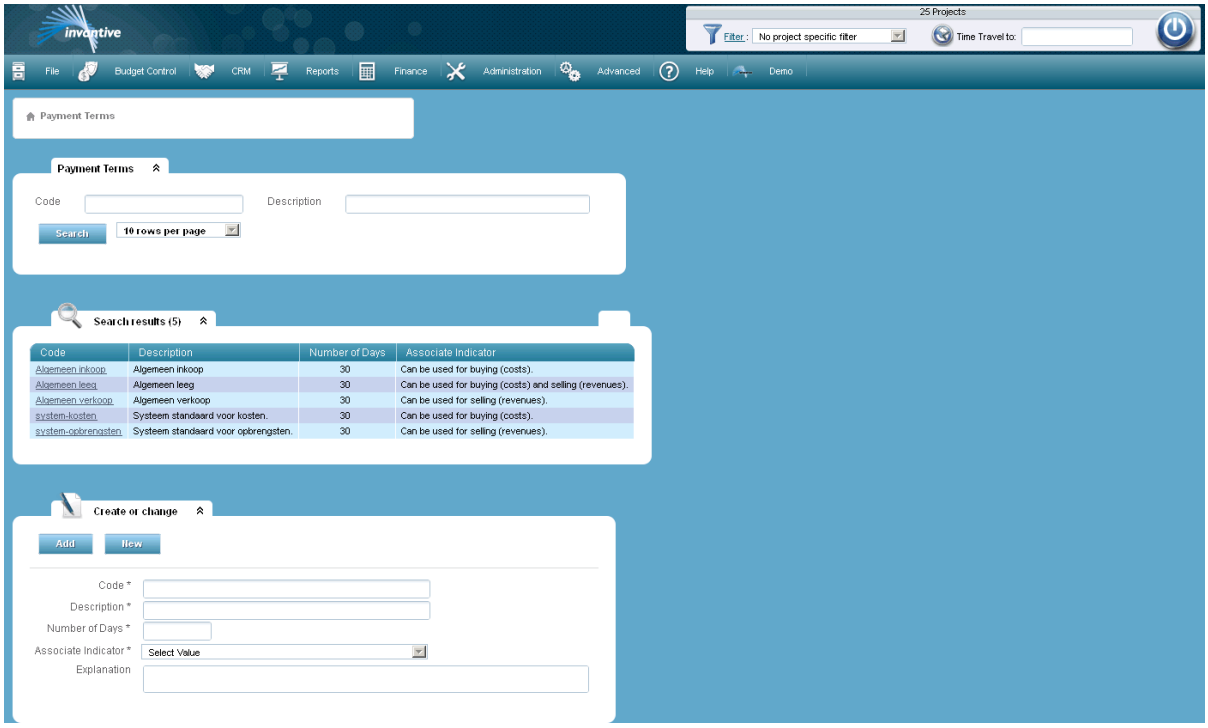
Condition	Bedrijf Inkoop
Description	Algemene inkoopvoorwaarden bedrijf
Associate Indicator	Can be used for buying (costs).

15-11-2012 20:44 Page 1 / 11 invantive

Payment Terms

This screen allows you to record and modify payment terms.

A payment term is the agreed time period within which a bill must be paid.



The meaning of the entry fields is:

Code	The unique code of the payment term.
Description	The description of the payment term.
Number of Days	Number of days of the payment term.
Associate Indicator	Indicates the use of the payment term.

1.4.7.7 Audit

With the functions included in the submenu ‘Audit’, the user activity within <% PRODUCT% > can be checked.

Project Authorizations per Person

The first part of this report provides an overview of the authorization that a user has on the various projects. The second part of this report shows which users have access to all projects.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_apg_pdf_rpt

Project Authorizations per Person (PDF)

Invantive Vision

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Page 1 / 4

Project	User	Company	Allow Edit
C204 - 1042 - Beheer Energetic (24-02-2003 t/m 2003)	Aeilkema	AXA	
	Jalkema	ST Advies	
	Marit-Engelsen	Koopman	
	Smidt	Interwatch	
C2108 - 1046 - Ontwikkeling Invantive Melba (11 2008 t/m 2008)	Aeilkema	AXA	
	Dirkstra	Moevenpick	
	Jongen	KNMI	
	Smeets	Arcadis	
C503.DNB IFRS - 1055 - IFRS compliant DNB rapportage (1970 t/m 01-10-2005)	Aeilkema	AXA	
	Klaassen	Ttenhagen Stam	
	Schenk	Balance	
	Smeets	Arcadis	
IHOL09 - 1002 - Vakantie (Kerstmis etc.) 2009 (geheel 2009)	Aeilkema	AXA	
	Jalkema	ST Advies	
	Leenderts	van Oppen	
	Seegers	De Jonge Notaris	
IVAC09 - 1002 - Vacation 2009 (geheel 2009)	Aeilkema	AXA	
	Hermans	Beaufort installatietechniek	
	Hoef van der	Royal Haskoning	
	Klaassen	Ttenhagen Stam	
MSLS09 - 1002 - Sales 2009 hoofdproject (geheel 2009)	Aeilkema	AXA	
	Jalkema	ST Advies	
	Jong de	Huntec	
	Lormans	Vopar IT	
MSLS09.BD.ALG - 1002 - Sales trajecten 2009 (geheel 2009)	Aeilkema	AXA	
	Jalkema	ST Advies	
	Jassen	Dhr. Jansen	
	Marit-Engelsen	Koopman	
MSLS09.Mekra - 1042 - Sales Mekra 2009 (geheel 2009)	Aeilkema	AXA	
	Harp	GrondVitaal	
	Klaassen	Ttenhagen Stam	
	Mertens	Daxo Catering	
Plein - 1092 - Plein revisited (2009 t/m 01-08-2009)	Klaassen	Ttenhagen Stam	
	Smeets	Arcadis	
	Smidt	Interwatch	
POST - 1002 - Post: algemeen af te handelen. (2009 t/m 2019)	Jalkema	ST Advies	
	Leenderts	van Oppen	
	Seegers	De Jonge Notaris	
POSTFAC - 1002 - Post: af te handelen facturen. (2009 t/m 2019)	Jalkema	ST Advies	
	Leenderts	van Oppen	
	Seegers	De Jonge Notaris	
Stad - 1092 - Stad (2004 t/m 01-04-2006)	Jongen	KNMI	
	Schenk	Balance	
	Smeets	Arcadis	
Templates - 1002 - Templates (onbekend t/m onbekend)	Jalkema	ST Advies	
	Leenderts	van Oppen	
	Seegers	De Jonge Notaris	
101 - 1092 - Marktplein (04-09-2009 t/m 01-10-2010)	Dirkstra	Moevenpick	
	Habets	Holland Railconsult	
	Hendrikx	Familie Jansen	
	Jalkema	ST Advies	
	Marit-Engelsen	Koopman	
	Pol	RVM	
	Schaar van der	Familie Luijendijk	
	Smidt	Interwatch	

15-11-2012 20:43 Page 1 / 4 invantive

Persons per Role

This report shows which Roles 164 are assigned to Persons 102.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_arg_pdf_rpt

Persons per Role (PDF)

Invantive Vision

Powered by Invantive

	Beheer	Exploitatie	FA	Ontwikkeling	PO	Publiek	Systeem	Systeem-OLA	Systeem-	Voorbeeld-Gast
Aeilkema										
Born van der										
Breukhoven										
Brouns										
Cuyk										
Dekkers										
Dirkstra										
Dorn										
Engel										
Fasen										
Foppe										
Groot De										
Guest										
Habets										
Harp										
Hendrikx										
Hermans										
Heunen										
Heuvelman										
Hoef van der										
Hoekstra										
Hoof van										
Houben										
Jalkema										
Jassen										
Jong de										
Jongen										
Ketelaars										
Klaassen										
Kooman										
Koopman										
Krekelmans										
Kuypers										
Lange de										
Leenderts										
Leenen										
Leopold										
Lormans										
Lugt van de										
Marcel Janssen										
Marit-Engelsen										
McIntyre										
Meermans										
Meijer										
Mertens										
Middelkoop										
Navroi										
Oosterhof										
Peeters										
Pol										
Pol de										

07-08-2012 12:10 Page 1 / 2 invantive

Functions per Role

This report shows at which functions authorisations are assigned to Roles 164.

1 star = read;

2 stars = read and write.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_arf_pdf_rpt

Functions per Role (PDF)

Invantive Vision
Powered by Invantive

Page 1 / 24

Legend
* = Allow Read
** = Allow Edit

	Beheer	Exploitatie	FA	Ontwikkeling	PO	Publiek	Systeem	Systeem-OLA	Voorbeeld-Administratie	Voorbeeld-Applicatiebeheerder	Voorbeeld-Directeur	Voorbeeld-Gast	Voorbeeld-Medewerker
Print						*	**		*	*	*		*
About product						**	**		*	*	*		*
Users							**		*	**	*		
Make a Call							**		**	**	*		**
Background Jobs	**						**		**	**			
Submit Background Job	**						**		**	**			
Messages	**						**			**			
Expectations							**		*		**		
Budget Movements			*		**		**		*		*		
Draft Invoice Lines			**				**		**		*		
Contract Processes Generation	**		**		*		**		**				
Contracts	**		**		*		**		*		*		*
Preferences						**	**		**	**	**		**
Documents						**	**		**	**	**		**
Show documents						*	**		*	*	*		*
Document Involvements							**		**	**	**		**
Properties							**		*	**	*		
Retrieve Data	**						**		*				
Deviating Encoding	**		**		**		**		**		*		
Invoice Lines			**		*		**		**		*		
Invoice Lines Interface	**			**			**		*	**			
Invoices			**		*		**		**		*		
Invoices Interface	**			**			**		*	**			
Persons	**		**				**			**	*		*
Persons Interface	**			**			**		**				
User Profile Option Values						**	**		**	**	**		**
Change Password						**	**		**	**	**	**	**
Copy Persons							**		**	**	*		*
User Roles	**						**		*	**	*		
Phone Calls	**						**		*	*	*		*
Skills of Persons							**		**		*		*
Settings	**						**		*	**			
Classifications	**		*				**		**	**	*		*
Budgets			**		*		**		**		*		
Comment Deviation					**		**		*		*		
Budget Next Phase			*		**		**		*		*		
Cash-flow Projections			*				**		**		*		
License	**						**			**			
Organization Involvements							**		**		*		*
Locations							**			*			
Organization Interface	**			**			**		**	**			
Organizations			**		*		**		**	**	*		*
Projects Dashboard						*	**		*		*		*
Processes Dashboard						*	**		*		*		**
Warehouses							**		**	**	*		
Menu Items	**						**			**			
Menus	**						**			**			
Revenue Interface	**			**			**		**	**			
Revenues			*		**		**		**		*		
Orders			*		**		**		**		*		
Project Authorizations	**						**		*	**	*		
Project Allocations			*		**		**		**		*		

15-11-2012 20:44 Page 2 / 24 invantive

1.4.8 Advanced

Below you will see set-up screens for the more complex elements of the provisioning.

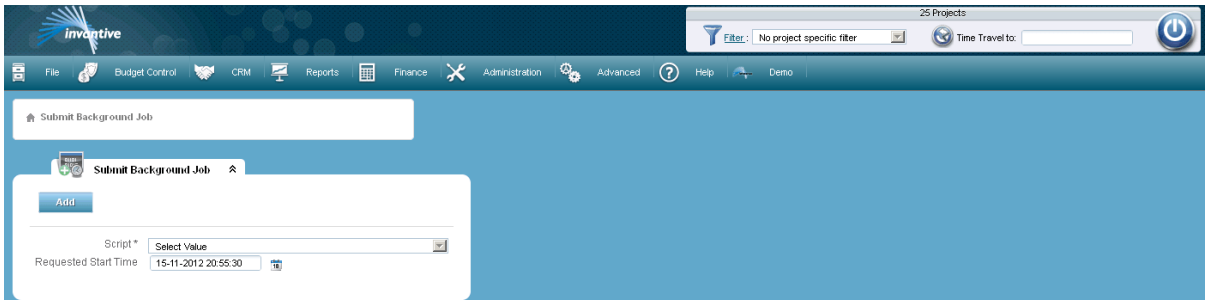
1.4.8.1 Background Jobs

Here you will see the screens to set up the background jobs.

Submit Background Job

In this screen you can request background processes.

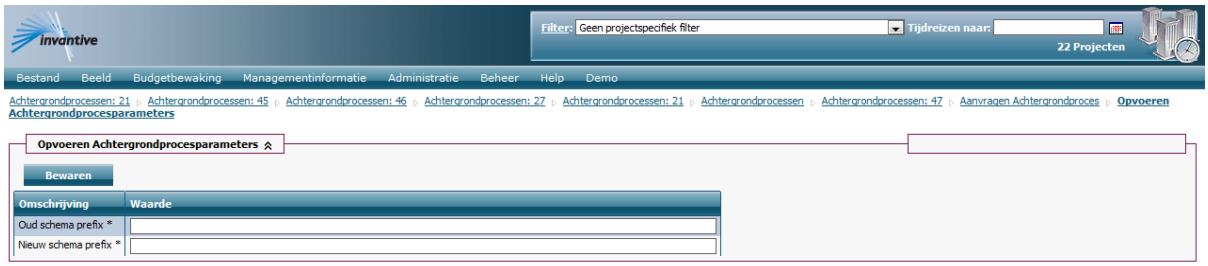
A background job is a program that is processed centrally, without requiring a logged on user. Background jobs are used for repetitive or time consuming processes. The number of background processes running simultaneously is limited. See also Submit Background Job 228, Background Scripts 327 and Background Schedulers 230.



The meaning of the entry fields is:

Script	The background script being requested.
Requested Start Time	The first possible point in time at w hich the user w ants the background job to be executed.

Together with this screen a second screen will open if parameters are needed for processing. In the example below you are asked to enter an 'Old prefix schema' and a 'New prefix schema prefix':



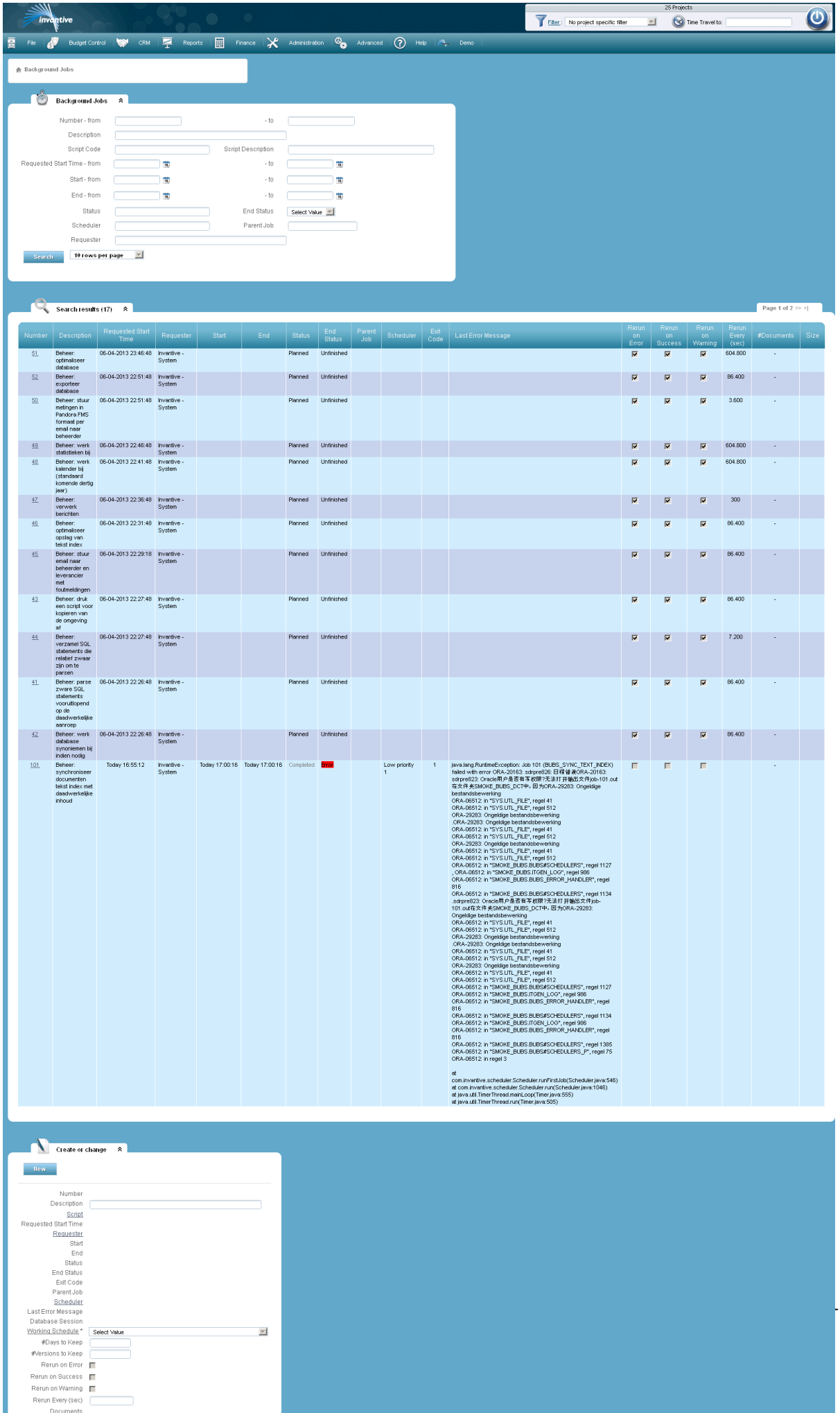
The meaning of the entry fields is:

Old prefix schema	The prefix of the old schema.
New prefix schema	The prefix of the new schema.

Background Jobs

In this screen you can follow the status of background processes.

A background job is a program that is processed centrally, without requiring a logged on user. Background jobs are used for repetitive or time consuming processes. Background jobs automatically get less priority if multiple users are simultaneously active. The turnaround time may therefore change. See also Submit Background Job 228, Background Scripts 327 and Background Schedulers 230.



Number	Description	Requested Start Time	Requester	Start	End	Status	End Status	Parent Job	Scheduler	Exit Code	Last Error Message	Rerun on Error	Rerun on Success	Rerun on Warning	Rerun Every (sec)	#Documents	Size
51	Beheer: optimaliseer database	06-04-2013 23:46:48	Invantive - System			Planned	Unfinished					☑	☑	☑	604.800	-	
52	Beheer: exporteer database	06-04-2013 22:51:48	Invantive - System			Planned	Unfinished					☑	☑	☑	86.400	-	
50	Beheer: stuur metingen in Pandora FMS formaat per email naar beheerder	06-04-2013 22:51:48	Invantive - System			Planned	Unfinished					☑	☑	☑	3.600	-	
49	Beheer: werk statistieken bij	06-04-2013 22:46:48	Invantive - System			Planned	Unfinished					☑	☑	☑	604.800	-	
48	Beheer: werk kalender bij (standaard komende dertig jaar)	06-04-2013 22:41:48	Invantive - System			Planned	Unfinished					☑	☑	☑	604.800	-	
47	Beheer: verwerk berichten	06-04-2013 22:36:48	Invantive - System			Planned	Unfinished					☑	☑	☑	300	-	
46	Beheer: optimaliseer opslag van tekst index:	06-04-2013 22:31:48	Invantive - System			Planned	Unfinished					☑	☑	☑	86.400	-	
45	Beheer: stuur email naar beheerder en leverancier met foutmeldingen	06-04-2013 22:29:18	Invantive - System			Planned	Unfinished					☑	☑	☑	86.400	-	
43	Beheer: druk een script voor kopieren van de omgeving af	06-04-2013 22:27:48	Invantive - System			Planned	Unfinished					☑	☑	☑	86.400	-	
44	Beheer: verzamel SQL statements die relatief zwaar zijn om te parsen	06-04-2013 22:27:48	Invantive - System			Planned	Unfinished					☑	☑	☑	7.200	-	
41	Beheer: parse zware SQL statements voorutlopend op de daadwerkelijke aanroep	06-04-2013 22:26:48	Invantive - System			Planned	Unfinished					☑	☑	☑	86.400	-	
42	Beheer: werk database synoniemen bij indien nodig	06-04-2013 22:26:48	Invantive - System			Planned	Unfinished					☑	☑	☑	86.400	-	
101	Beheer: synchroniseer documenten tekst index met daadwerkelijke inhoud	Today 16:55:12	Invantive - System	Today 17:00:16	Today 17:00:16	Completed	Error		Low priority 1	1	java.lang.RuntimeException: Job 101 (BUBS_SYNC_TEXT_INDEX) failed with error ORA-20163: sdrpre826: 日程错误ORA-20163: sdrpre823: Oracle用户是否有写权限?无法打开输出文件job-101.out在文件夹SMOKE_BUBS_DCT中, 因为ORA-29283: Ongeldige bestandsbewerking ORA-06512: in "SYS.UTL_FILE", regel 41 ORA-06512: in "SYS.UTL_FILE", regel 512 ORA-29283: Ongeldige bestandsbewerking .ORA-29283: Ongeldige bestandsbewerking ORA-06512: in "SYS.UTL_FILE", regel 41 ORA-06512: in "SYS.UTL_FILE", regel 512 ORA-29283: Ongeldige bestandsbewerking ORA-06512: in "SYS.UTL_FILE", regel 41 ORA-06512: in "SYS.UTL_FILE", regel 512 ORA-06512: in "SMOKE_BUBS.BUBS#SCHEDULERS", regel 1127 .ORA-06512: in "SMOKE_BUBS.ITGEN_LOG", regel 986 ORA-06512: in "SMOKE_BUBS.BUBS_ERROR_HANDLER", regel 816 ORA-06512: in "SMOKE_BUBS.BUBS#SCHEDULERS", regel 1134 .sdrpre823: Oracle用户是否有写权限?无法打开输出文件job-101.out在文件夹SMOKE_BUBS_DCT中, 因为ORA-29283: Ongeldige bestandsbewerking ORA-06512: in "SYS.UTL_FILE", regel 41 ORA-06512: in "SYS.UTL_FILE", regel 512 ORA-29283: Ongeldige bestandsbewerking .ORA-29283: Ongeldige bestandsbewerking ORA-06512: in "SYS.UTL_FILE", regel 41 ORA-06512: in "SYS.UTL_FILE", regel 512 ORA-29283: Ongeldige bestandsbewerking ORA-06512: in "SYS.UTL_FILE", regel 41 ORA-06512: in "SYS.UTL_FILE", regel 512 ORA-06512: in "SMOKE_BUBS.BUBS#SCHEDULERS", regel 1127 ORA-06512: in "SMOKE_BUBS.ITGEN_LOG", regel 986 ORA-06512: in "SMOKE_BUBS.BUBS_ERROR_HANDLER", regel 816 ORA-06512: in "SMOKE_BUBS.BUBS#SCHEDULERS", regel 1134 ORA-06512: in "SMOKE_BUBS.ITGEN_LOG", regel 986 ORA-06512: in "SMOKE_BUBS.BUBS_ERROR_HANDLER", regel 816 ORA-06512: in "SMOKE_BUBS.BUBS#SCHEDULERS", regel 1385 ORA-06512: in "SMOKE_BUBS.BUBS#SCHEDULERS_P", regel 75 ORA-06512: in regel 3 at com.invantive.scheduler.Scheduler.runFirstJob(Scheduler.java:546) at com.invantive.scheduler.Scheduler.run(Scheduler.java:1046) at java.util.TimerThread.mainLoop(Timer.java:555) at java.util.TimerThread.run(Timer.java:505)	☐	☐	☐		-	

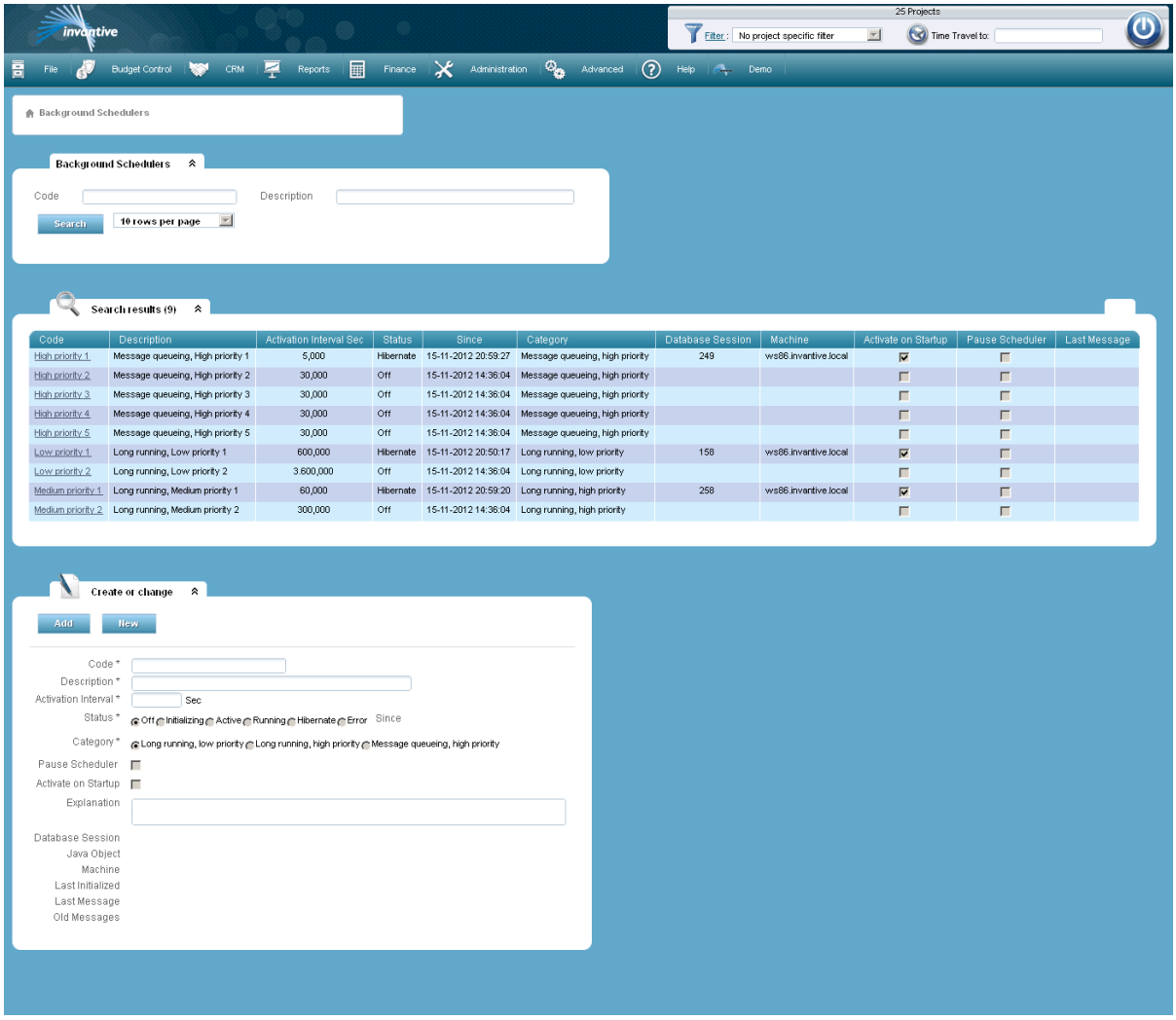
The meaning of the entry fields is:

Number	The unique number of the background job.
Script	The background script being executed.
Requested Start Time	The first possible point in time at which the user wants the background job to be executed.
Requester	The name of the user who has requested the job.
Start	The final start time of the job. This time will never be sooner than the requested start time, but can be significantly later, depending on the amount of background jobs requested.
End	The time that the execution of the background job ended.
Status	The current status of the job. The following statuses can occur: • Planned: the job is registered and will be started as soon as possible after the requested start time. • Locked: the job is locked and in this way can be assigned to a scheduler. • Active: The job is currently being executed. The time the job started, is shown in the field 'Start'. • Wait: the job has started another job and waits until that one is completed. • Completed: the job is completed. The time when the job was completed, is recorded in the field 'End'. • Canceled: the job is requested, but the request is canceled before the job has started. • Terminated: the job is terminated due to a sudden stop of the system, for instance because the server is rebooted while the job was still being executed.
End Status	The result of the job. The following end statuses can occur: • Unfinished: the job is not completed yet and thus has no end status. • Successful: the job has been completed. • Error: the job is terminated with one or more errors. • Warning: the job has completed, but one or more warnings have been generated. Errors can be found in the log file.
Exit Code	The final numerical value of the job.
Parent Job	The possible number of the job requested by this job.
Scheduler	The background scheduler that will execute, has executed or is executing the job.
Last Error Message	The last error message if the process has ended with one or more errors.
Database Session	The unique database session number of the background job.
# Days to Keep	The number of days that the output file and the log file are stored.
# Versions to Keep	The amount of versions retained.
Rerun on Error	When checked, the process is run again if it ended with one or more errors.
Rerun on Success	When checked, the process is run again if it was successful.
Rerun on Warning	When checked, the process is run again if it ended with a warning.
Rerun Every (sec)	The number of seconds before the process is restarted after a restart event.
Documents	Documents linked to the background process.
#Documents	The number of documents linked to the background process.
Size	The size of the documents linked to the background process.
Output File	The name of the output file.
Log File	The name of the log file.

Schedulers

In this screen you can register and change background schedulers.

A background scheduler is a process that executes background jobs requested by users. Thes jobs are based on Background Scripts 327.



The meaning of the entry fields is:

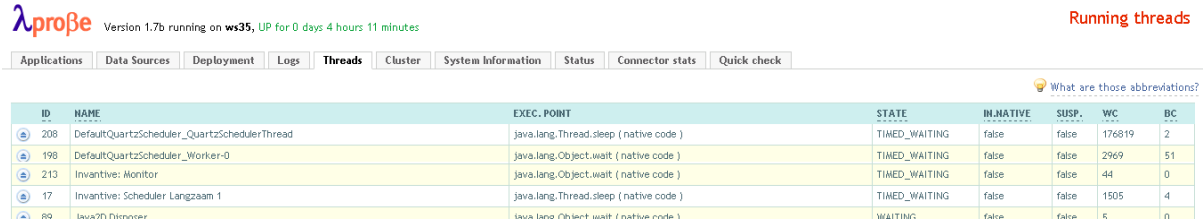
Code	The unique code.
Description	The description.
Activation Interval	When they are not executing a job, the background schedulers often check w hether there are jobs ready to be started. The activation interval determines the time in seconds betw een the checks.
Category	The skills the scheduler has to offer. A Background Script 327 can only be executed on schedulers possessing the required skills.
Activate on Startup	The scheduler is activated w hile starting the w eb server w hen checked.

The meaning of the other fields:

Status	Status of the background scheduler: • Off: the background scheduler is not activated w hile starting the w eb server. • Initialising: the background planner is being initialised, but is not active yet. This status only occurs for a short moment of time w hile starting the w eb server. • Active: the background scheduler is actively w orking to check w hether there are background jobs to be started. • Executing: the background scheduler is currently executing a background job. • Sleeping mode: the background scheduler sleeps until the end of the activation interval. • Error: the background scheduler is in error mode.
Database Session	A unique database session belonging to this background scheduler.
Java Object	The Java object that the background scheduler executes.
Machine	The machine on w hich the background scheduler runs.
Last Installed	The system time w here the background scheduler w as last installed.

Last Message	The last message of the scheduler.
Old Messages	Earlier values of the last message that the planner has given.

The background schedulers are also visible in, for example, Probe as Threads in Apache Tomcat:



1.4.8.2 Menu Structure

This chapter describes the screens of Invantive Vision with which you can change the menu.

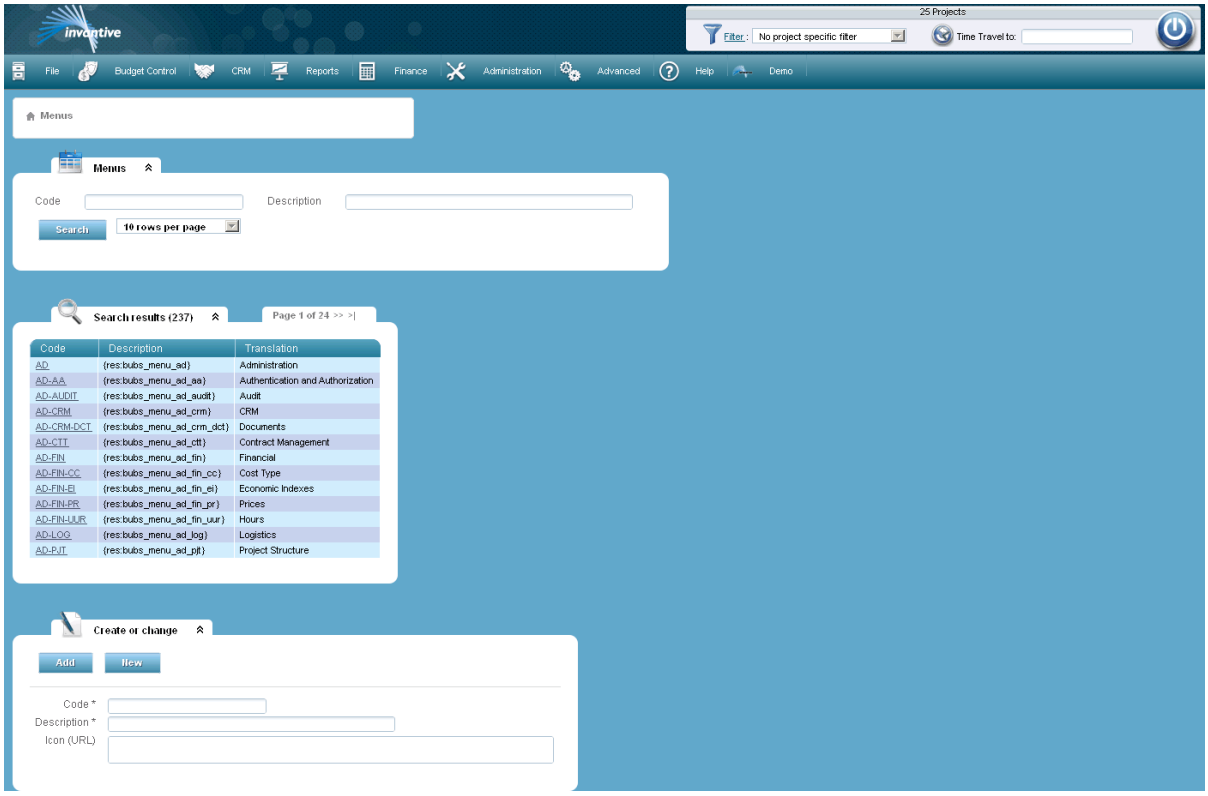
A menu is a list of possible functions and is part of the graphical user interface. The implementation of menus is slightly different between operating systems, but generally they are similar in function and handling.

Under Microsoft Windows a window has a title bar at the top with directly below the menu bar. With the menu bar, menus can be opened. A menu item could also open a submenu or a report.

Menus

In this form you can register and change menus.

A menu is a logical collection of functions (forms and reports) and other menus. See Menu Items 233 how screens, reports and submenus can be linked to a menu.



The meaning of the entry fields is:

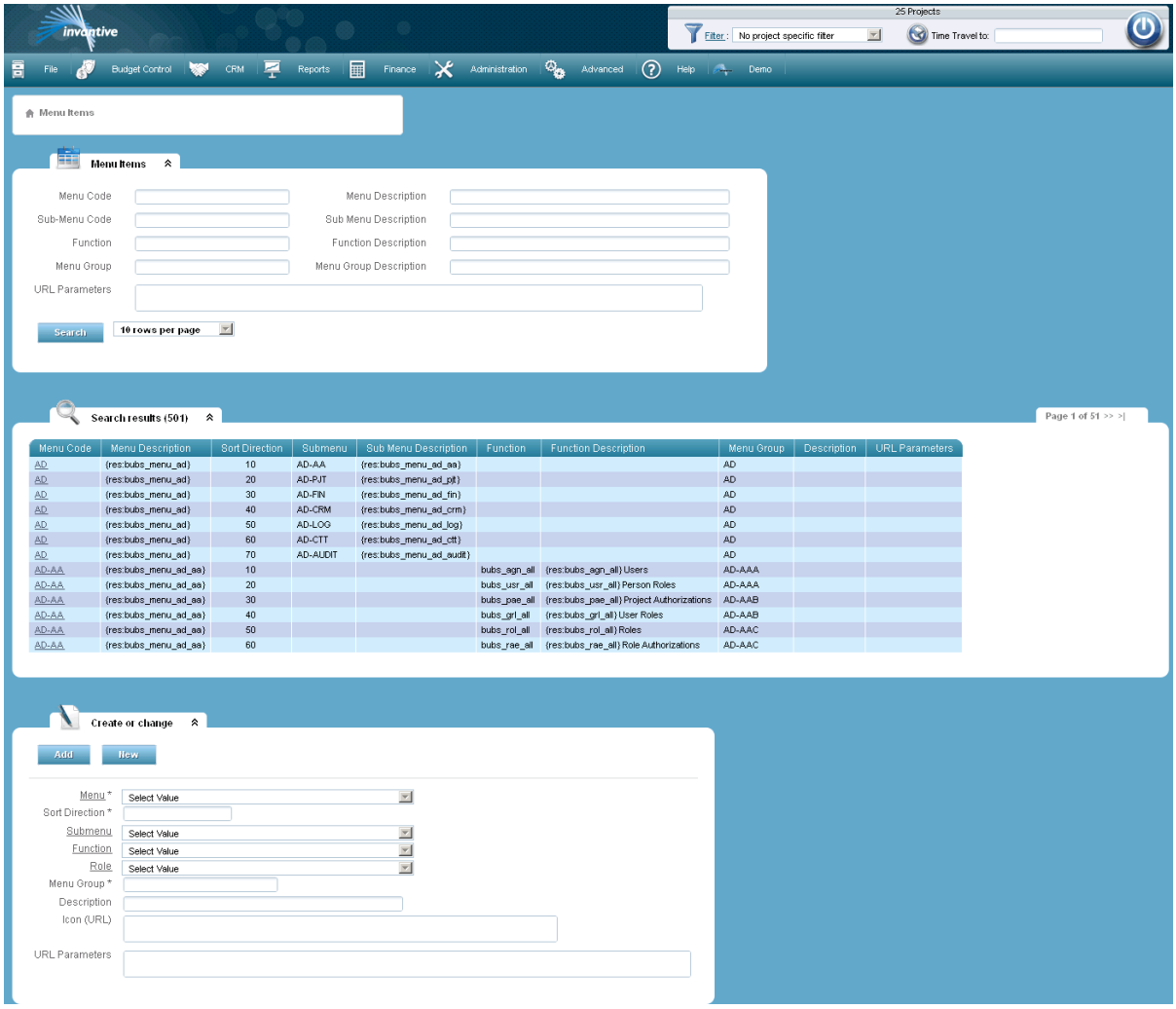
Code	The code of the menu.
Description	The description. This is translated, see 'Translations'.

Note that the menu with the code 'Main' is the central main menu and should therefore always exist.

Menu Items

In this screen you can register and change menu items.

A menu item is a part of a menu and refers to a screen, report or submenu.



The meaning of the entry fields is:

Menu	The code of the menu where the menu item is part of.
Sort Order	The numerical value used for sorting the items in a menu.
Submenu	In case the menu item has to open another menu, select here the name of the submenu.
Function	In case the menu item has to open another screen or report, select here the name of the function. In the screen Functions 259 you can indicate whether a function may be shown here.
Role	If the menu may only be displayed to a specific role, select this role here. This differs from the function security, because for each menu item you can define its display behavior, and not the safety of all menu items based on a function. You can base different menu items on the same function, but display the menu item only to a selected audience. In this way you can avoid confusion, however it is not a security function.

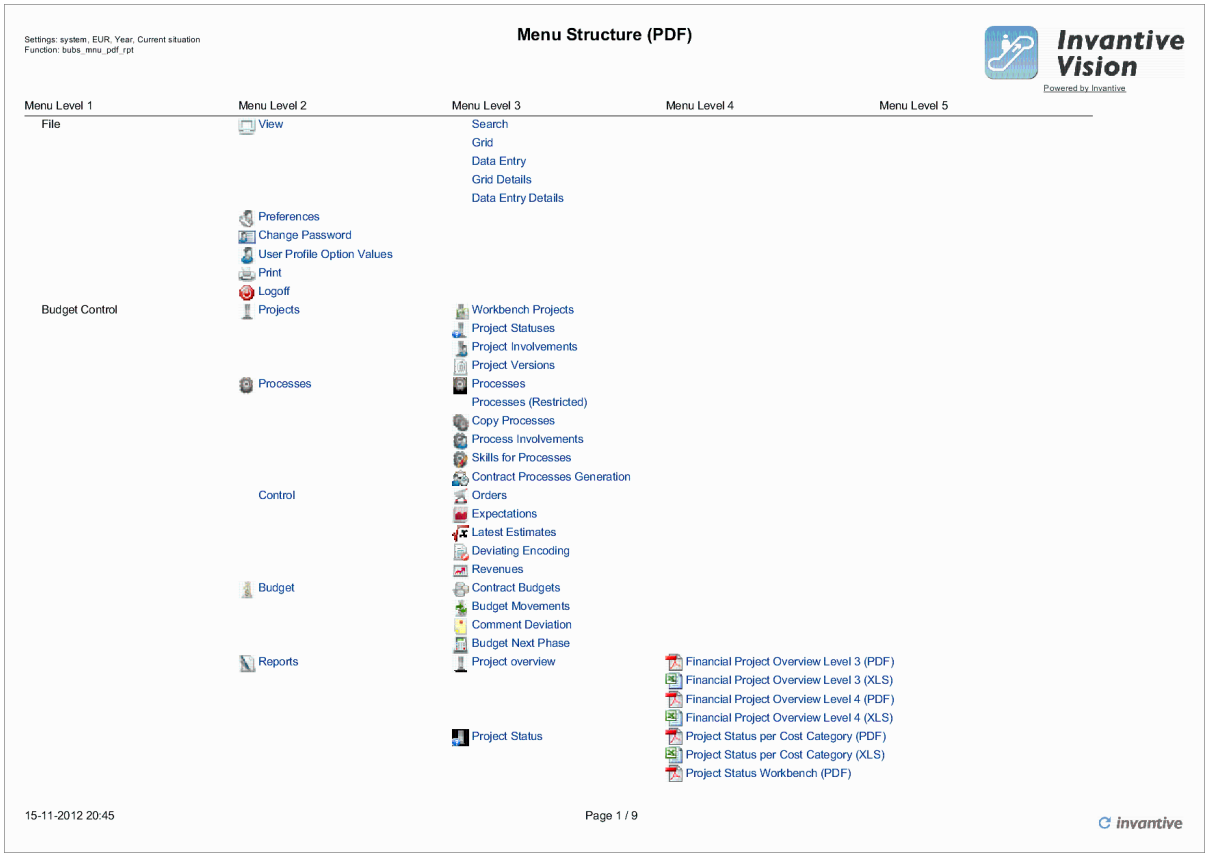
Menu Group	With menu group you can group menu items in a menu. In the menu, menu groups are separated from another via a horizontal line.
Description	Description of the menu item. This is translated, see 'Translations'.
Icon (URL)	Specifies the location of the menu item icon as a URL. If no path is specified, then the path of the current site will be used.
URL Parameters	>With these parameters, you can use your own templates in menu items. See Customize Screen Template 364. Hint: use the Firefox extension URLParams to easily change the parameters. The parameter :fte_id in the URL-parameters are replaced by the ID of the choosen function and the parameter :mim_id by the ID of the menu item. This can be used to compose URL's to start reports via bubs_rpt.do.

The meaning of the other fields:

Menu Code	The code of the menu where the menu item is part of.
Description	The description of the menu.
Submenu Code	The code from the submenu.
Submenu	The description of the submenu.
Function	The code of the function.
Description	The description of the function.

Menu Structure

This report displays the menu structure of the 'Main' menu of Invantive Vision.



Settings: system, EUR, Year, Current situation
Function: bubs_mnu_pdf_rpt

Menu Structure (PDF)

Invantive Vision
Powered by Invantive

Menu Level 1	Menu Level 2	Menu Level 3	Menu Level 4	Menu Level 5
File	View	Search		
		Grid		
		Data Entry		
		Grid Details		
		Data Entry Details		
	Preferences			
	Change Password			
	User Profile Option Values			
	Print			
	Logoff			
Budget Control	Projects	Workbench Projects		
		Project Statuses		
		Project Involvements		
		Project Versions		
	Processes	Processes		
		Processes (Restricted)		
		Copy Processes		
		Process Involvements		
		Skills for Processes		
		Contract Processes Generation		
	Control	Orders		
		Expectations		
		Latest Estimates		
		Deviating Encoding		
		Revenues		
	Budget	Contract Budgets		
		Budget Movements		
		Comment Deviation		
		Budget Next Phase		
	Reports	Project overview	Financial Project Overview Level 3 (PDF)	
			Financial Project Overview Level 3 (XLS)	
			Financial Project Overview Level 4 (PDF)	
			Financial Project Overview Level 4 (XLS)	
		Project Status	Project Status per Cost Category (PDF)	
			Project Status per Cost Category (XLS)	
			Project Status Workbench (PDF)	

15-11-2012 20:45 Page 1 / 9 invantive

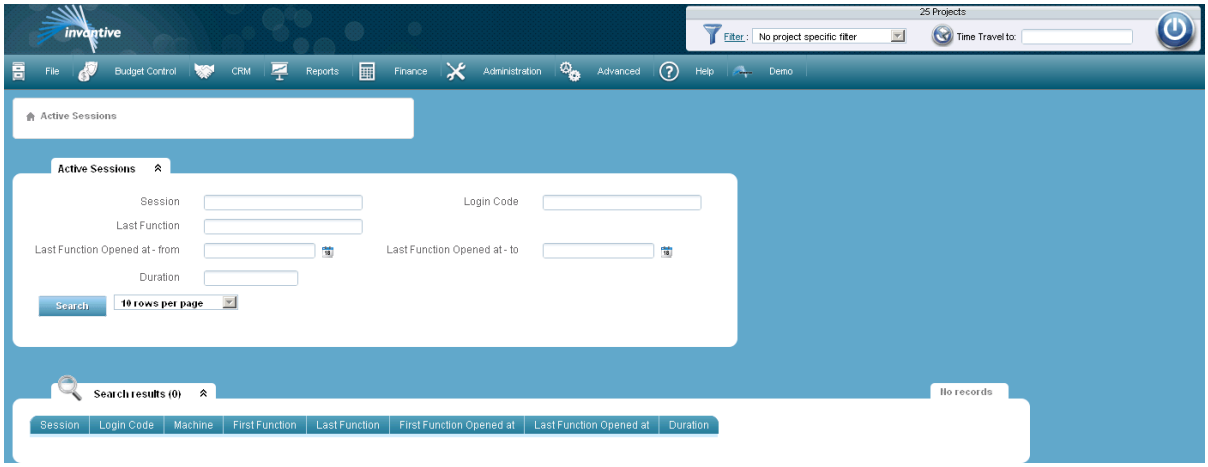
1.4.8.3 Audit

Here you will see screens to set up the auditing.

Active Sessions

This screen allows you to look up data from user sessions.

A session starts when a person logs into the application. A session is closed after the user logs out or after a set time has elapsed after the last action of the user.



In the screen you cannot add or change data.

The meaning of the search fields is:

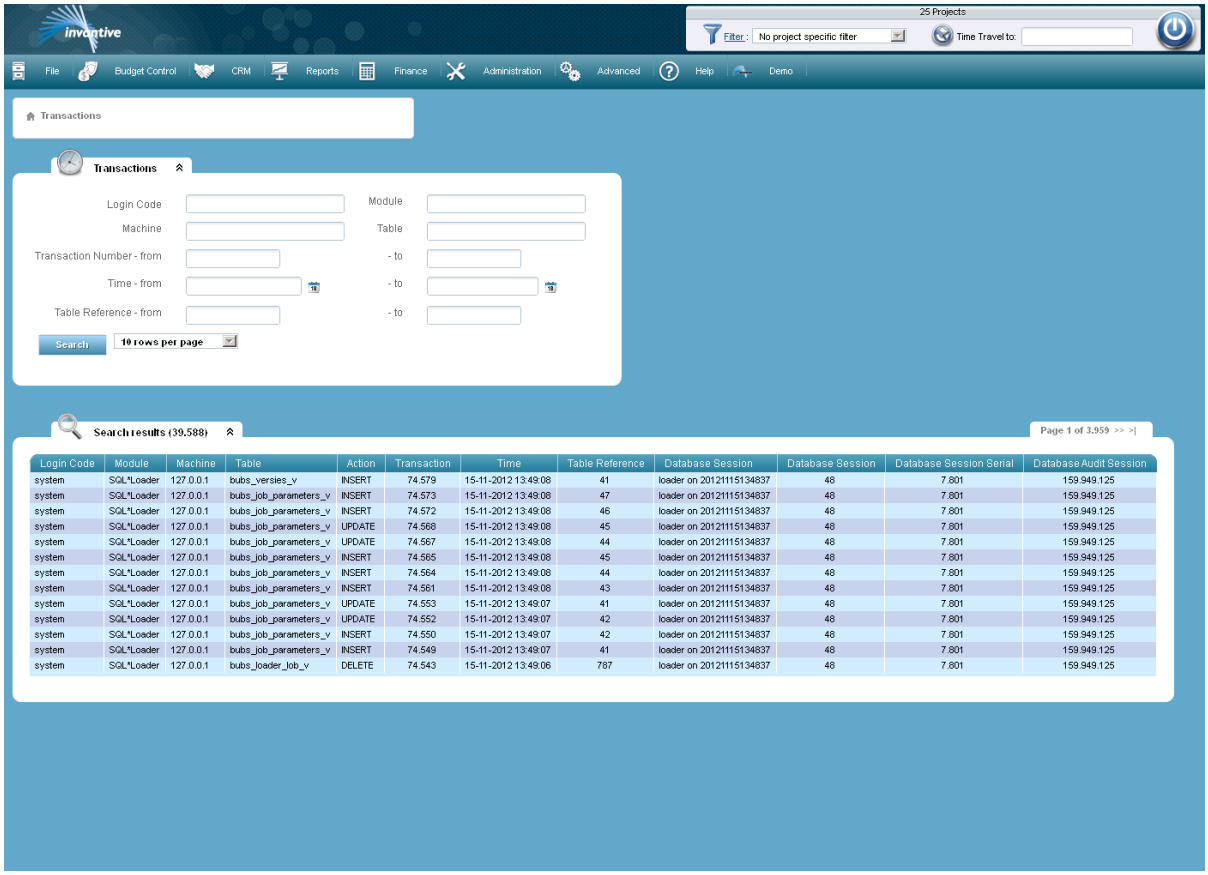
Session	Here you can choose the filter for a session. A session has a unique identification number.
Username	Here you can choose a filter for a user name.
Last Function	Here you can choose a filter for the name of the last function.
Last Function Opened - at	Here you can choose a filter for the period from for the last opened function.
Last Function - to	Here you can choose a filter for the period until for the last opened function.
Duration	Here you can choose the value for the filter for the duration of a session.

Transactions

In this form you can view transactions.

A transaction is a change of data registered by Invantive Vision. All transactions are stored, except the huge amount of transactions caused by the ERP interface.

For each transaction is recorded by whom (username), when (time), from which form (module), from which PC (machine), what action (action) was performed in which table (table) and within which session (database session). Moreover, an ascending transaction number is allocated. Finally, every transaction refers to the data which was being changed with a table reference. This is a unique number within the table, stored in the ID column, with which the modified data can be traced exactly.



There are no entry fields.

The meaning of the other fields:

Login	The user name as registered in Persons 102.
Module	The module that was used for the transaction.
Machine	The IP address of the computer that generated the transaction.
Table	The name of the table in which the action was performed.
Action	The SQL action which was started by the transaction. It can be a 'select', an 'update', an 'insert' or a 'delete' action.
Transaction	In the time ascending transaction number
Time	The date and time at which the transaction was executed.
Table Reference	Unique number within the table that is stored in the ID column and refers to the data that has been changed.
Database Session	A unique alphanumeric value that identifies the Invantive Vision session.
Database Session	Database Session ID. Specifies the unique database session for a given moment in time.
Database Session Serial	Specifies a unique database session together with the database session number until the database system is restarted, regardless of any given moment in time. A database session number can be reused after a certain period of time and is as such not unique. In combination with the database session sequence number a unique combination is formed.
Database Audit Session	ID to link with the database audit trail session.

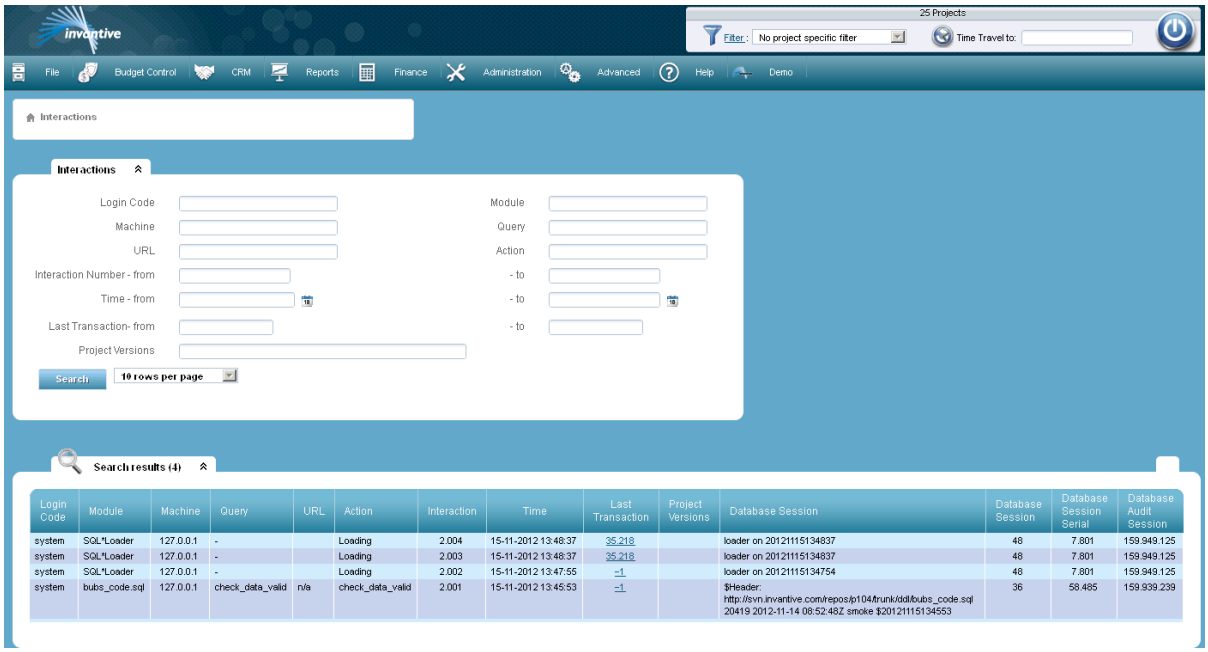
Interactions

In this form you can view interactions.

An interaction is an activity a user executes with Invantive Vision. This usually is making requests of data via a screen or by opening a report.

With each interaction it is recorded by whom (logon code), when (point in time), in what screen (module), from which PC (machine), which action (query) is executed. Moreover, an

ascending interaction number is assigned. Finally, each interaction refers to the last assigned transaction number, so that a chronological dependency between transactions and interactions can be made to determine what information was available at the time of the request.



There are no entry fields.

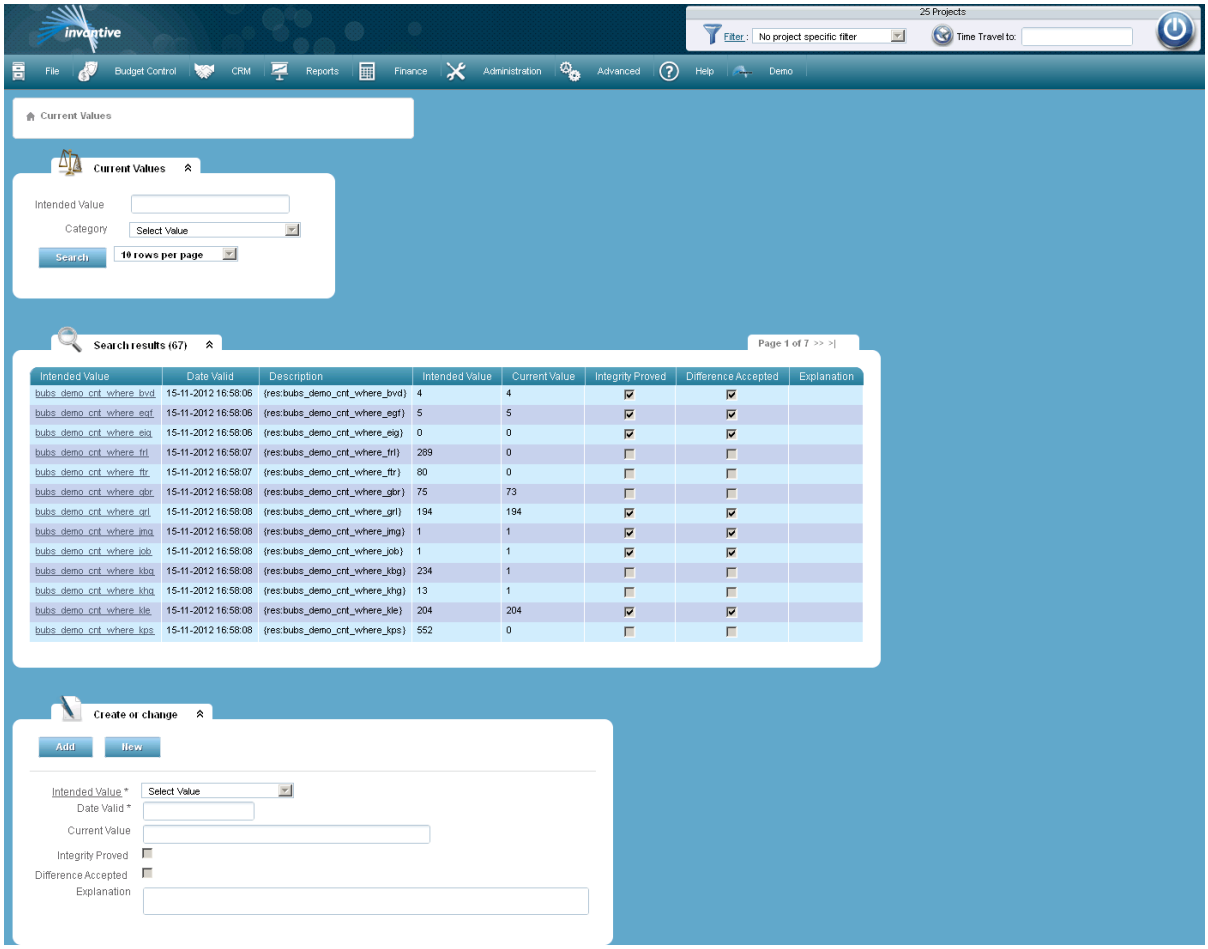
The meaning of the other fields:

Username	The user name as registered in Persons 102.
Module	The module used for the interaction.
Machine	The IP address of the computer that generated the interaction.
Query	The query that was requested by the user.
URL	The URL of the screen of Invantive Visionfrom where the interaction was requested.
Action	The action which was initiated by the interaction.
Interaction	Unique numeric code that serves as a unique index, whose value is equal to the column ID.
Time	The date and time at which the interaction was requested.
Last Transaction	The number of the last transaction.
Database Session	A unique alphanumeric value that identifies the Invantive Vision session.
Database Session	Database Session ID. Specifies the unique database session for a given moment in time.
Database Session Serial	Specifies a unique database session together with the database session number until the database system is restarted, regardless of any given moment in time. A database session number can be reused after a certain period of time and is as such not unique. In combination with the database session sequence number a unique combination is formed.
Database Audit Session	ID to link with the database audit trail session.
Project Versions	The project versions filter that was applicable at the moment of the interaction.

Current Values

In this screen you can request the outcomes of the tests of the control numbers.

See Soll Values 238 for a more extensive explanation.



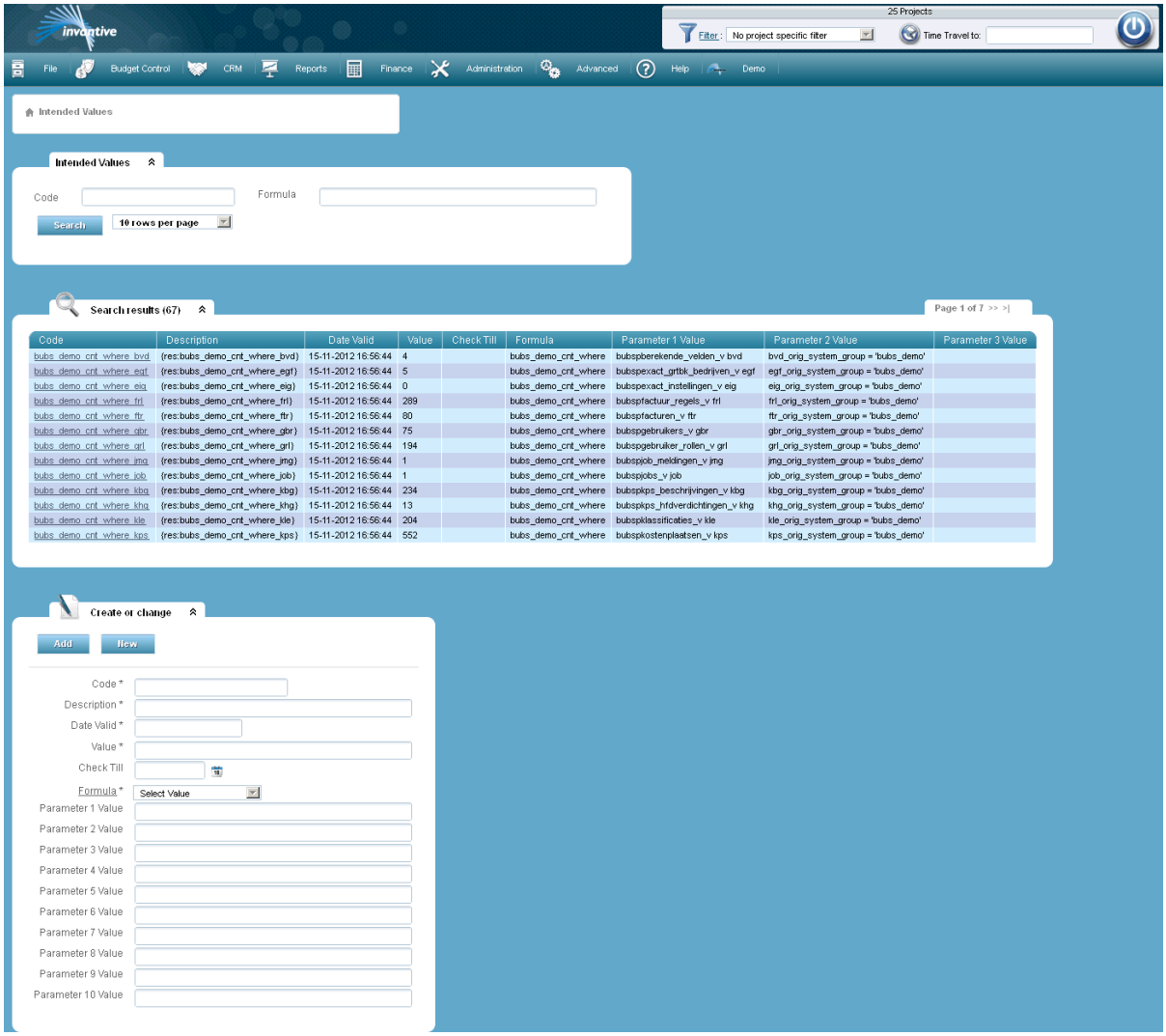
The meaning of the entry fields is:

Code	The code for the used Soll value.
Date Valid	The time at which the test was performed.
Ist Value	The outcome of the test.
Integrity Proved	Checked in case the Ist value meets the Soll value.
Difference Accepted	Checked if the integrity is proven or when a difference was found, but the difference manually was approved.
Explanation	An explanation why the difference was approved

Soll Values

In this form you can register and change soll values.

With the aid of value formulas, intended values and keys application controls can be realized in order to check the integrity of the stored data. With a value formula you store the calculation. Next, you specify in the intended values the parameters which need to be entered in the value formula and the expected outcome of a measuring date. Finally you can calculate the actual value with a background script.



The meaning of the entry fields is:

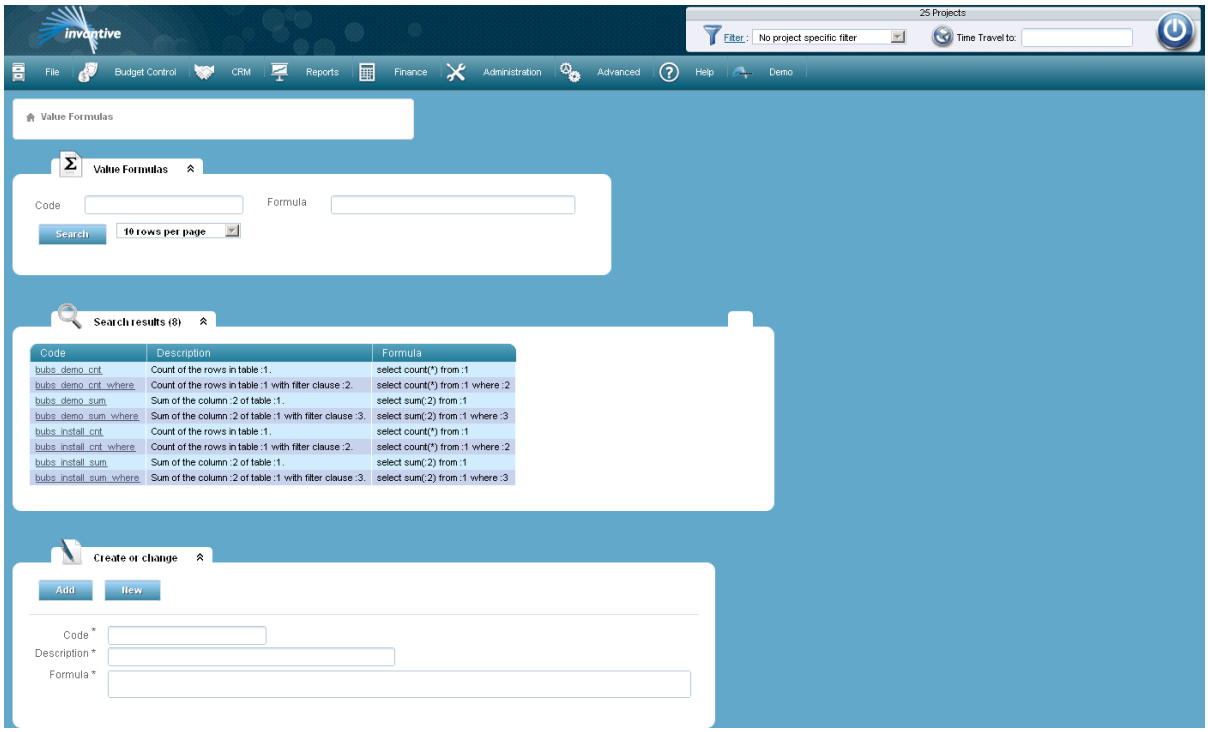
Code	The unique code of a Soll value.
Description	The description of the Soll value.
Date Valid	The moment at w hich the norm w as valid.
Value	The expected value.
Check Till	The time until w hich the Soll value must be included in the check.
Formula	The value formula w hich needs to be used to determine the actual value.
Parameter 1 Value	The value of parameter :1 in the formula.
Parameter 2 Value	The value of parameter :2 in the formula.
Parameter 3 Value	The value of parameter :3 in the formula.
Parameter 4 Value	The value of parameter :4 in the formula.
Parameter 5 Value	The value of parameter :5 in the formula.
Parameter 6 Value	The value of parameter :6 in the formula.
Parameter 7 Value	The value of parameter :7 in the formula.
Parameter 8 Value	The value of parameter :8 in the formula.
Parameter 9 Value	The value of parameter :9 in the formula.
Parameter 10 Value	The value of parameter :10 in the formula.

Value Formulas

In this form you can register and change value formulas.

A value formula is a formula in the form of an SQL statement which is used to check the integrity of the data recorded in Invantive Vision.

See Soll Values 238 for a more extensive explanation.



The meaning of the entry fields is:

Code	The code of the formula.
Description	The description of the formula.
Formula	The formula in the form of an SQL query. You can use variable texts, supplied by the Soll value. The variable texts are defined as ':1' to ':10'.

1.4.8.4 ERP Interface

This section contains information about the functions needed to exchange data with the general ledger and the accounts receivable and payable ledger. These functions are normally used by the person appointed in the organization to ensure that after the processing of the general ledger, the numbers in Invantive Vision are updated. This will often be the head of the administration.

Interface Screens

Here you will see the ERP interface screens.

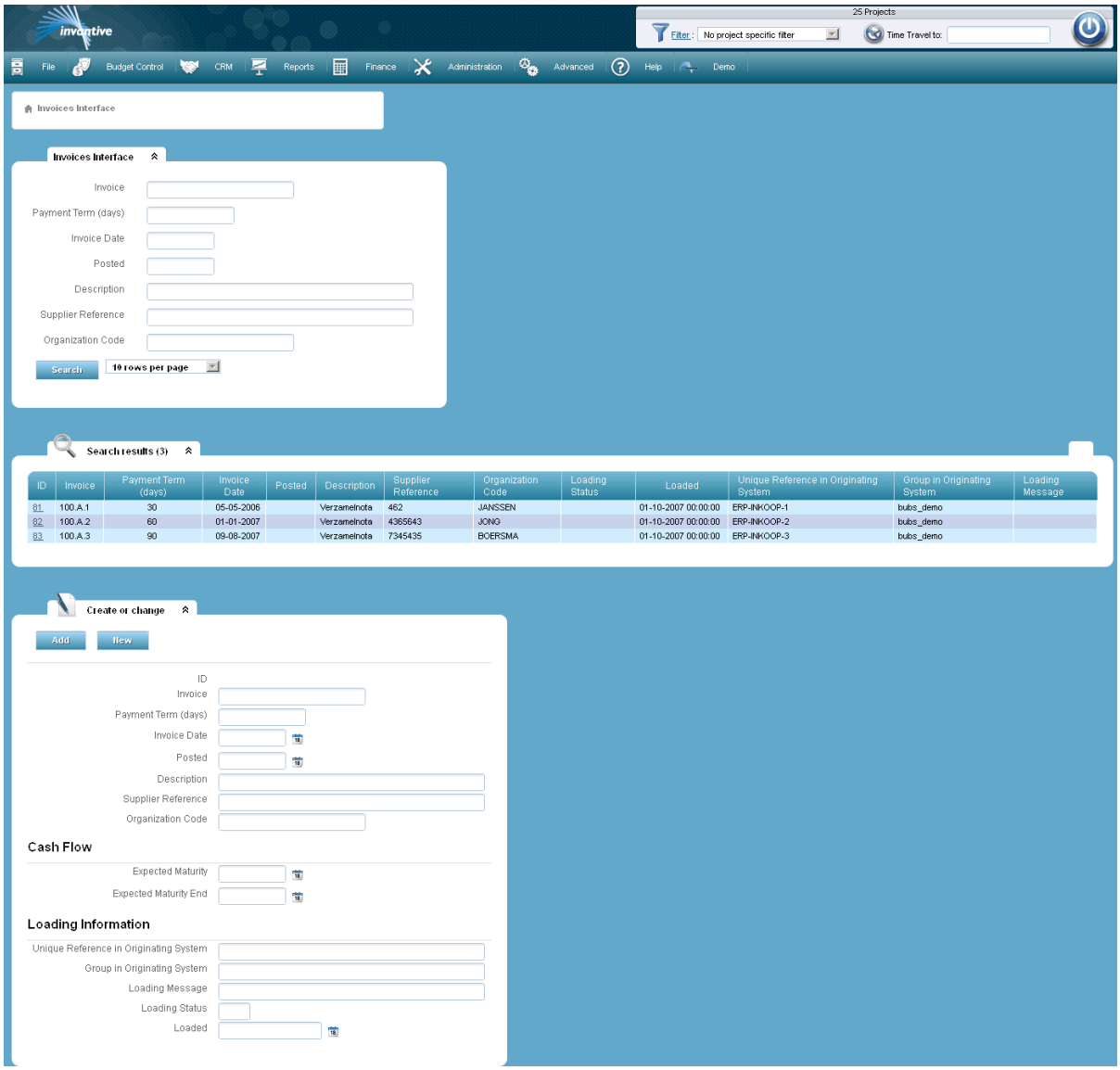
Invoices Interface

Using the screen you can exchange invoice data with an ERP system.

The ERP system transfers data into 'load tables' in Invantive Vision. With the interface screens in Invantive Vision you can edit the data in these 'load tables' and save the edited data into 'target tables'.

Profile Options 263 are used to manage the process where 'load tables' are loaded or to save the data of the load tables into 'target tables'.

When entering data in the entry fields 22 of the interface screens, you should use internal codes. For example when indicating the gender of a person you use 'M' for 'Male' and 'F' for 'Female'.



The meaning of the entry fields is:

Invoice	An invoice can be sent by a supplier, can be sent to a client or can be created by the ledger system. An invoice can contain several Invoice Lines 144.
Payment Term (days)	The payment period in days of the invoice. This information is used w hen calculating the cash flow .
Invoice Date	The date as registered on the invoice.
Description	An explanation of the invoice.
Supplier Reference	The unique feature of the invoice of the sender. This field can be used to register the invoice number of the supplier in case the code of the invoice is based on its ow n invoice numbering.
Organization Code	The unique code of the organization (supplier) that has sent the invoice or the customer w here the invoice has been sent to. Choose a generic supplier or buyer in the case of journal entries from the general ledger.
Cash Flow	

Expected Maturity	The date the cash flow for this order is expected to begin.
Expected Maturity End	The date the cash flow for this order is expected to finish. The maturity date is only relevant if the cash flow projection method needs it.
Loading Information	
Unique reference in Source System	Reference to the record in the system of origin with which the record can be identified.
Group in Originating System	Reference to a group of records in the system of origin. The grouping of records is often used to validate the loading process using 'application control'.
Loading Message	Displays a message on the most recent action of loading a record.
Loading Status	Displays status information about the loading process of the record. 'E' = 'Error' and 'C' = 'Completed'. The completed load statuses will be automatically deleted at the end of the ERP processing.
Loaded	The point of time the record was loaded by the ERP interface.

The meaning of the other fields:

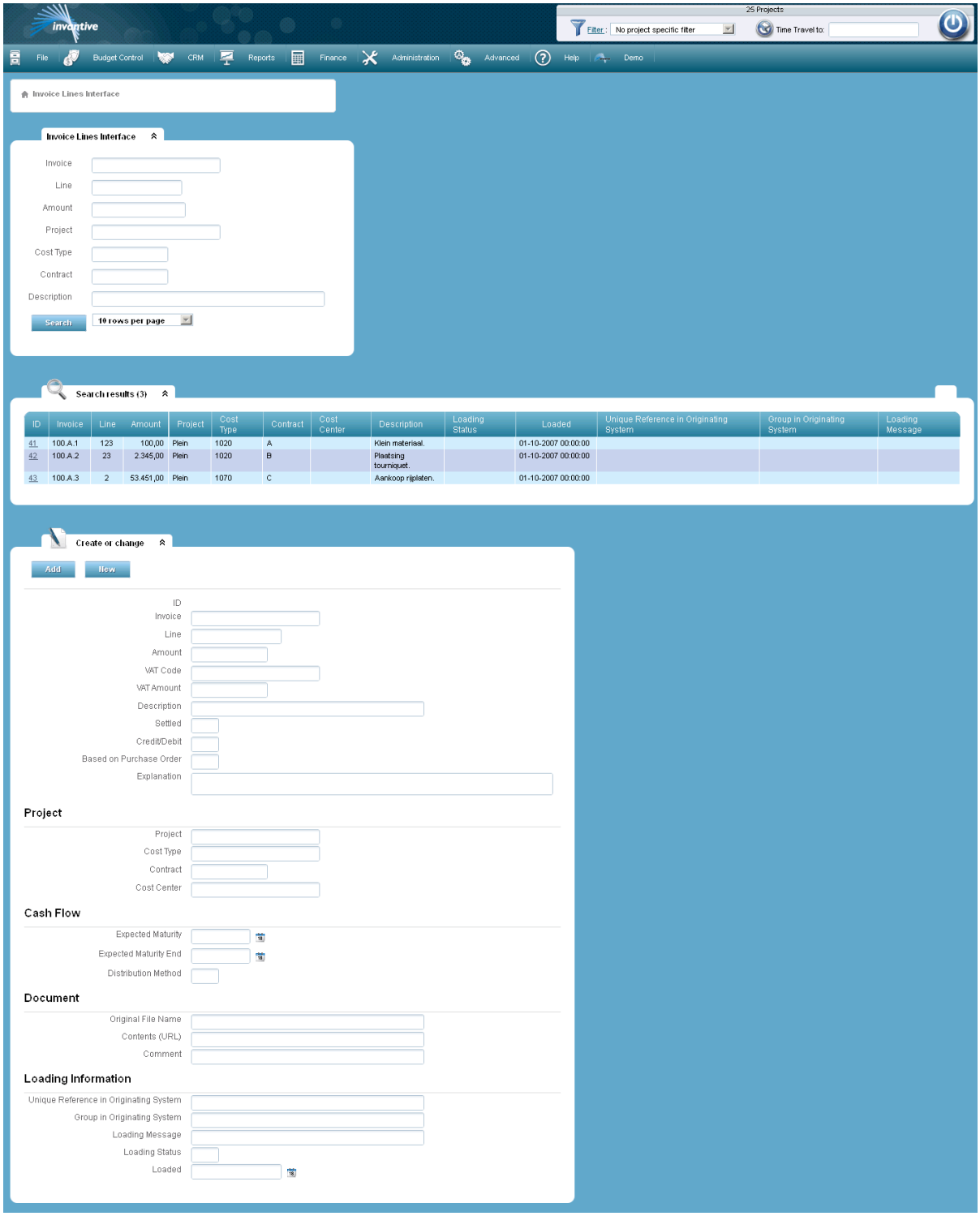
Id	The technical code with which the invoice can be identified.

Invoice Lines Interface

Via this screen, invoice line date can be exchanged with an ERP system.

The ERP system transfers data into 'load tables' in Invantive Vision. With the interface screens in Invantive Vision you can edit the data in these 'load tables' and save the edited data into 'target tables'.

Profile Options 263 are used to manage the process where 'load tables' are loaded or to save the data of the load tables into 'target tables'.



The meaning of the entry fields is:

Invoice	The invoice code. In general the internally assigned invoice number w ill be used here.
Line	The line number w ithin the invoice.
Amount	The amount invoiced. This normally w ill be the amount w ithout VAT. In case your organization is not VAT payable, the amount must be entered including VAT.
VAT Code	The VAT code that applies to the invoice.
VAT Amount	The VAT amount on the invoice.
Description	A description of the products, activity or situation to w hich the invoice relates to.
Settled	If the checkbox is checked then the payable invoice line.

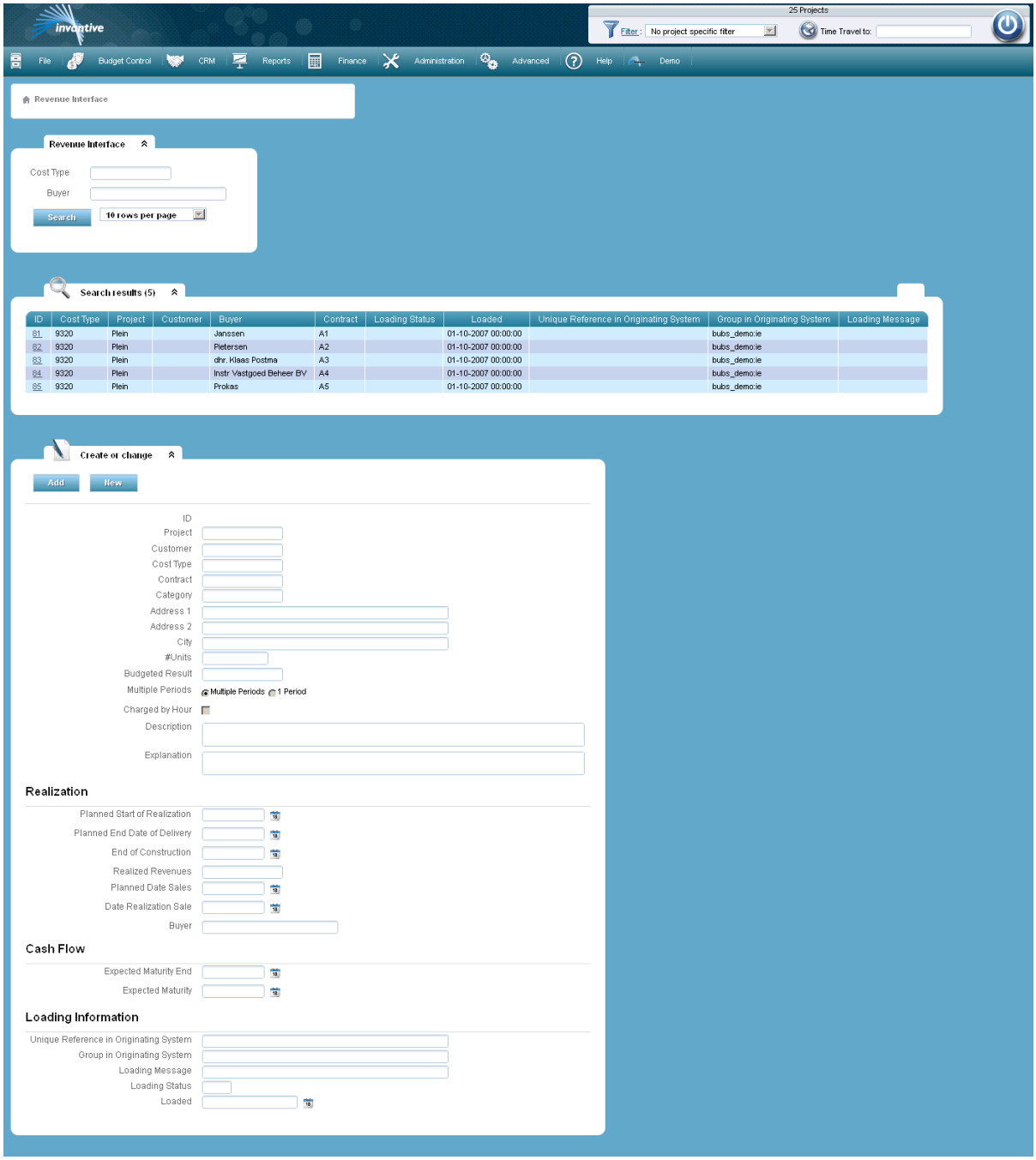
Credit/debit	In case of a cost driver: does it concerns a regular entry (debit) or a credit entry? In case of a revenue: does it concerns a regular entry (credit) or debit entry?
With Purchase Order	In case of a cost driver: is the realization based on an order? In case of a revenue: is the realization based on a contractual sales agreement?
Explanation	Possible explanation.
Project	
Project	The project to which the realization refers.
Cost Type	The cost category to which the realization refers. All cost categories can be chosen (costs, revenues, and results).
Contract	The contract within the cost category to which the invoice line refers.
Cost center	Reference to a cost center as defined in the screen Cost Centers 200.
Cash Flow	
Expected Maturity	The expected date when the cash flow starts.
Expected Maturity End	The expected date when the cash flow ends.
Distribution Method	The way the cash flow is distributed in time.
Document	
Original File Name	The name of the invoice line file in the source system.
Content (URL)	Location of the invoice line file.
Comments	Explanation of the file.
Loading Information	
Unique Reference in Source System	Reference with which the record in the system of origin can be identified.
Group in Originating System	Reference to a group of records in the system of origin. The grouping of records is often used to validate the loading process using 'application control'.
Loading Message	Displays status information about the loading process of the record.
Loading Status	Displays status information about the loading process of the record. 'E' = 'Error' and 'C' = 'Completed'. The completed load statuses will be automatically deleted at the end of the ERP processing.
Loaded	The point of time the record was loaded by the ERP interface.

The meaning of the other fields:

Id	The technical code with which the invoice line can be identified.

Revenue Interface

Using this screen revenues can be exchanged with an ERP system.



The meaning of the entry fields is:

Project	The project of which the revenue is part of. A combination of project code and project name.
Cost Type	The cost category on which the revenue is registered. Often different cost category are used for different types of units. Only cost categories can be chosen from the master roll up of the type 'Revenues'.
Contract	The contract for the grouping of a revenue. Two revenues cannot share the same contract.
Category	The type of revenue. See also Revenue Types 182.
Address 1	The address where the revenues are earned.
Address 2	An alternative address where the revenues are realized.
City	The place where the revenues are realized.
#Units	The number of units, expressed in units related to the category. Houses are generally expressed in 'Numbers', while 'Commercial Space' is expressed in 'm2'.

Budgeted Result	The budgeted result of the unit.
Multiple Periods	An indicator if more than one invoice will be sent in order to charge the agreed revenue. In case '1 period' is selected and the field 'realized revenues' is not entered or entered differently, the first invoice of this revenue will be treated as the realized revenue.
Charged by Hour	The activities will be charged by hour if selected.
Description	A description of the products, activity or situation where revenues relate to.
Explanation	An informative explanation such as the expected start or duration of the rental period.
Realization	
Planned Start of Realization	The planned date to start realization.
Planned End Date of Delivery	The planned date of handover of the units.
End of Construction	The actual end date of construction of the units.
Realised Revenues	The realized revenue per unit. This is filled out as soon as the contractual agreement is signed. Note that reports may show a different contract revenue as entered here if '1 period' is selected in the field 'Multiple Periods' and an invoice with contract is sent. In this case the reports will always show the total invoice amount instead of the here entered realized revenues.
Planned Date Sales	The expected date that the customer will sign the sales contract.
Date Realization Sale	The date when the sales contract was signed.
Buyer	The name of the buyer.
Cash Flow	
Expected Maturity End	The date the cash flow for this revenue is expected to finish. The maturity date is only relevant if the cash flow projection method needs it.
Expected Maturity	The date the cash flow for revenue is expected to begin.
Loading Information	
Unique Reference in Source System	Reference with which the record in the system of origin can be identified.
Group in Originating System	Reference to a group of records in the system of origin. The grouping of records is often used to validate the loading process using 'application control'.
Loading Message	Displays status information about the loading process of the record.
Loading Status	Displays status information about the loading process of the record. 'E' = 'Error' and 'C' = 'Completed'. The completed load statuses will be automatically deleted at the end of the ERP processing.
Loaded	The point of time the record was loaded by the ERP interface.

The meaning of the other fields:

Id	The technical code with which the revenue can be identified.

Persons Interface

Using this screen you can exchange personal data with an ERP system.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Persons Interface

Persons Interface

Name | Login Code

Search | 10 rows per page

Search results (2)

ID	Name	Login Code	Initials	Administrator	Project Manager	Loading Status	Loaded	Unique Reference in Originating System	Group in Originating System	Loading Message
81	Bakelei						01-10-2007 00:00:00		bubs_demo	
82	Draan						01-10-2007 00:00:00		bubs_demo	

Create or change

Add | New

Name

ID
Name *
Gender *
First Name
Calling Name
Name Initials
Initials
Middle Name
Last Name
Function
Manager
Department
Room
Titles
Employee Number
IP Address List

System

Login Code
Password
Administrator
Project Manager
Time Writer
Process Owner
Timesheets Approver
Processes Reporter
Invantive Producer User Code
Organization
Language
Product
Contract

Contact Information

Email Address 1
Email Address 2
Email Address 3
Email Address 4
Mobile Number
Fax
Home
Work
Work Extension
SIP Address
Email Address for Workflow

Address

Address 1
Address 2
ZIP Code
City
Country
City of Birth
Country of Birth

Social Media

Hyves Address
LinkedIn Address
Facebook Address
MySpace Address
ICQ Address
Skype Address
Xing Address
Twitter Address
Plaxo Address
YouTube Address

Other

RSS (URL)
Website (URL)
Date of Birth
Date of Marriage
Date of Death
Partner
Children
Nickname
Hobbies
Bank
BIC
IBAN Number
Social Security Number
Signature (URL)
Passport Photo (URL)
RDBMS User
Internal Tariff
Working Schedule
Size Household
Date of Last Review
Next Review
Allow Emails
Date Emails Allowed
(res:bubs_emailing_allow_proof)
Remarks

Loading Information

Unique Reference in Originating System
Group in Originating System
Loading Message
Loading Status
Loaded

The meaning of the entry fields is:

Name	
Name	The name of the person.
Gender	The gender of the person.
Initials	The initials of the person.
Initials	The unique abbreviation of the name. The initials are used in reports or in screens when there is not enough space available to show the whole name.
Middle Name	Middle name of the person.
Function	The function of the person within the company.
Business	The company where the person is employed.
Manager	The manager or supervisor of the person.
Employee Number	Identification number of the person within the organization where the person is employed.
System	
Username	The code with which the person can log in (see Start up and Login 11). The user cannot log in if this field is not filled out.
Password	The password of the user. The user can change this password via screen My Preferences 48.
Administrator	If this box is checked, the user is shown in the list of administrators in the screen where projects are uploaded (see Projects 130).
Project developer	If this box is checked, the user is shown in the list of administrators in the screen where projects are uploaded (see Projects 130).
Surname	Surname.
Time Writer	If this box is checked, the user is shown in the list of persons that are allowed to write hours in the screen Timesheets 149.
Process Holder	In case this box is checked, the user is shown in the list of process holders in the screen where you can register processes (see Processes) 58.
Signs timesheets	In case this box is checked, the user is shown in the list of timesheet signers in the project screen (see Projects 130).
Process Detector	In case this box is checked, the user is shown in the list of process reporters in the screen where you can register processes (see Processes) 58.
Contact Information	
Email address 1	The email address of the person. The application uses this email address in case it needs to send messages to the user.
Email Address 2	A second alternative email address of the person.
Email Address 3	A second alternative email address of the person.
Email Address 4	A fourth alternative email address of the person.
Mobile Number	The mobile number of the person.
Fax	The fax number of the person.
Home	The phone number where the person can be reached at home.
Address	
Address 1	Address of the person (for example, street and house number)
Address 2	Extra address line, in case needed.
Zip Code	Postal code.
City	Place of residence
Country	Country of residence.
Other	
Date of Birth	The birth date of the user (only relevant for persons who 'represent physical persons'.
Date of Death	The date of death.
Partner	The name of the partner.
Children	The names of any children, separated by a randomly chosen separator.
Nickname	The nickname
Hobbies	The hobbies.
IBAN Number	The IBAN of the bank account of the person.

Remarks	Free text box where notes on the person can be added.
Loading Information	
Unique Reference in Originating System	Reference with which the record in the system of origin can be identified.
Group in Originating System	Reference to a group of records in the system of origin. The grouping of records is often used to validate the loading process using 'application control'.
Loading Message	Displays a message on the most recent action of loading a record.
Loading Status	Displays status information about the loading process of the record. 'E' = 'Error' and 'C' = 'Completed'. The completed load statuses will be automatically deleted at the end of the ERP processing.
Loaded	The point of time the record was loaded by the ERP interface.

The meaning of the other fields:

Id	The technical code with which the person can be identified.

Organization Interface

Through this screen, data can be exchanged with organizations on an ERP system.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Organization Interface

Organization Interface

Organization Code | Name

Search | 10 rows per page

Search results (3)

ID	Organization Code	Name	Loading Status	Loaded	Unique Reference in Originating System	Group in Originating System	Loading Message	Icon (URL)
81	JANSSEN	Janssen Bouw en Plan BV		01-10-2007 00:00:00		bubs_demo		
82	JONG	Jong en Co. BV		01-10-2007 00:00:00		bubs_demo		
83	BOERSMA	Boersma authentieke stenen		01-10-2007 00:00:00		bubs_demo		

Create or change

Add | New

ID
Organization Code *
Name *
Short Name
Primary Contact
Account Manager
Contact Sales
Contact Purchasing
Preferred Engineer 1
Preferred Engineer 2
Language

Roles

Customer
Supplier
Project Entity

Contact Information

Phone Work
Mobile Number
Fax
Home
Email Address

Address

Address 1
Address 2
ZIP Code
City
Country

Visit Address

Visit Address 1
Visit Address 2
ZIP Code
City
Country

Invoice Address

Per Address
Invoice Address 1
Invoice Address 2
ZIP Code
City
Country
Invoice Email Address
G-Account

Postal Address

Postal Address 1
Postal Address 2
ZIP Code
City
Country

Other

Legal Form
Trade Names
Logo (URL)
Icon (URL)
Website (URL)
IBAN Number
Bank
BIC
VAT Number
Number Chamber of Industry and Commerce
Employees
Activity Code
Activity Description
Date of Last Review
Next Review
VAT
Date Established
Repealed
Remarks

Loading Information

Unique Reference in Originating System
Group in Originating System
Loading Message
Loading Status

The meaning of the entry fields is:

Organization Code	The code with which the organization is identified within the administration.
Name	The name of the organization.
Short Name	The abbreviated name of the organization.
Primary contact	The contact of the organization, appointed within the framework of the project. In many cases this will be the responsible account manager.
Salesman	The person responsible for the sales of the organization.
Contact Sales	The contact of the organization, appointed within the framework of sales.
Contact Purchasing	The contact of the organization, appointed within the framework of purchasing.
Roles	
Customer	The external or internal customer. For him the outcome of the project plays a role in the fulfillment of a mission or otherwise formulated objectives. The Project Manager is held responsible for its project by the external or internal customer.
Supplier	Can be used as a supplier when entering new orders in Orders 69 or when entering new last estimates in Last Estimates 72. Do not check if the supplier is only used to relate realization figures based on invoice lines, for example, for artificial suppliers for results taken.
Project entity	The project is executed by an organization. This organization can be the same as the organization of the client. For most projects, this is not the case. The project manager also has to report within the organization which executes the project. The person to whom the project manager reports within its organization (the same as to the external customer) is the internal client.
Contact Information	
Phone Work	The telephone number where the contact of the organization can be reached at work.
Mobile Number	The mobile number of the contact of the organization.
Fax	The fax number of the organization.
Home	The telephone number where the contact of the organization can be reached at home.
Email Address	The email address of the contact.
Address	
Address 1	The address of the organization.
Address 2	An alternative address of the organization if the organization has several establishments.
Zip Code	The zip code.
City	The municipality where the organization is located.
Country	The country where the organization is located.
Visit Address	
Visitor Address 1	Address for visitors.
Visitor Address 2	Alternative Address for visitors.
Zip Code	The zip code.
City	The city of the visitor address.
Country	The country of the visitor address.
Invoice Address	
Per Address	Option to use a invoice address that does not belong to the organization.
Invoice Address 1	Address that is used for invoicing.
Invoice Address 2	Alternative address that can be used for invoicing.
Zip Code	The zip code.
City	The city of the invoice address.
Country	The country of the invoice address.
G account	The G account number of the organization. A G account is a blocked account that can be used by contractors to pay wage taxes (with or without VAT) of their employees to the tax authorities or to subcontractors. From a G account you cannot make other payments. The account protects parties against defaults of wage taxes.
Postal Address	
Postal Address 1	Postal address of the organization.

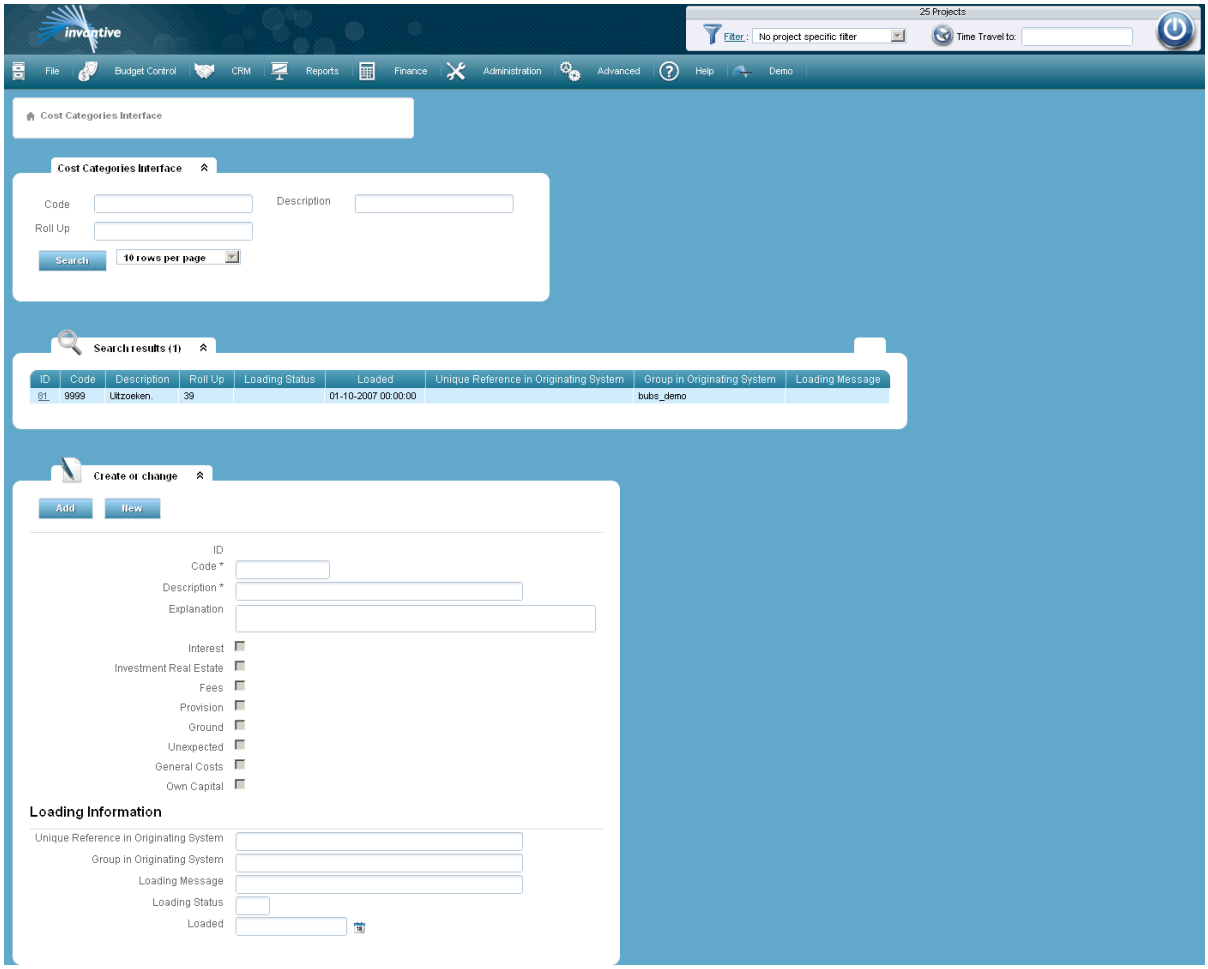
Postal Address 2	Alternative mailing address of the organization.
Zip Code	The zip code.
City	The city of the postal address.
Country	The country of the postal address.
Other	
Legal Form	A unique alphanumeric code for the legal form of the organization.
Logo (URL)	The Internet address where the logo can be requested.
Icon (URL)	The Internet address where the icon can be requested.
Website (URL)	The Internet address of the website if the organization has a website.
IBAN Number	The International Banc Account Number of the organization. The IBAN identifies an individual bank account and is used in cross border payments.
VAT Number	The VAT number of the organization that is intended to settle the VAT with the tax authorities.
Number Chamber of Industry and Commerce	The number with which the organization is registered at the Chamber of Commerce.
Date Established	The date of creation of the organization as a legal entity.
Repealed	The repeal date of the organization as a legal entity.
Remarks	Any additional information about the organization can be included in this field.
Loading Information	
Unique Reference in Originating System	Reference with which the record in the system of origin can be identified.
Group in Originating System	Reference to a group of records in the system of origin. The grouping of records is often used to validate the loading process using 'application control'.
Loading Message	Displays a message on the most recent action of loading a record.
Loading Status	Displays status information about the loading process of the record. 'E' = 'Error' and 'C' = 'Completed'. The completed load statuses will be automatically deleted at the end of the ERP processing.
Loaded	The point of time the record was loaded by the ERP interface.

The meaning of the other fields:

ID	The technical code with which the revenue can be identified.

Cost Categories Interface

This screen cost categories can be exchanged with an ERP system.



The meaning of the entry fields is:

Code	The code of the cost category.
Description	The description of the cost category.
Explanation	Free text.
Interest	This cost category is treated as interest if this box is checked.
Investment Real Estate	This cost category is treated as investment property if this box is checked.
Fees	This cost category is treated as Developer Costs if this box is checked.
Provision	This cost category is treated as a provision if this box is checked.
Ground	This cost category is treated as acquisition costs for land if this box is checked.
Unexpected	This cost category is treated as a reserve for contingencies if this box is checked.
General Costs	This cost category is treated as general expenses if this box is checked.
Ow n Capital	This cost category is treated as ow ner's capital if this box is checked.
Unique Reference in Originating System	Reference w ith w hich the record in the system of origin can be identified.
Group in Originating System	Reference to a group of records in the system of origin. The grouping of records is often used to validate the loading process using 'application control'.
Loading Message	Displays a message on the most recent action of loading a record.
Loading Status	Displays status information about the loading process of the record. 'E' = 'Error' and 'C' = 'Completed'. The completed load statuses w ill be automatically deleted at the end of the ERP processing.
Loaded	The point of time the record w as loaded by the ERP interface.

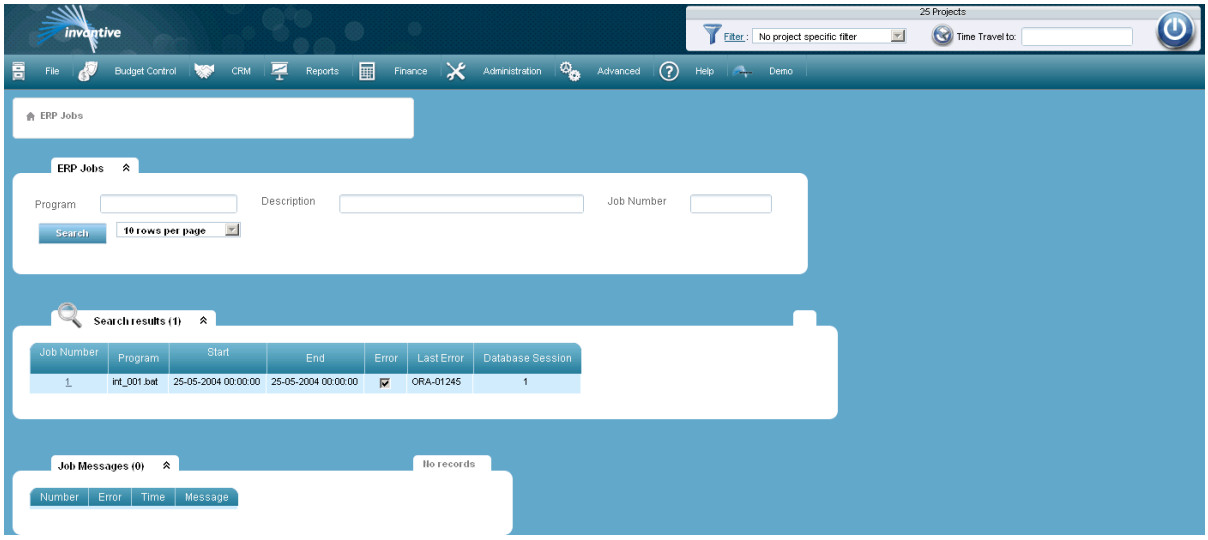
The meaning of the other fields:

Id	The technical code w ith w hich the cost category can be identified.

ERP Jobs

In this screen you can see notifications from the ERP updates.

An ERP update is started via Retrieve data from ERP 256. The messages are retained for a certain time. You can set the retention period via Settings 349.



There are no entry fields. When processing an ERP job only the last error is shown in case multiple errors have occurred. When you select the ERP process you will see all messages. By sorting on the column 'Error' all error messages will appear on top.

Retrieve Data

With this screen you can retrieve data from the ERP system.

The data will not be modified or deleted within the ERP system .

The ERP system provides the figures on realization that are used in Invantive Vision. The following data is uploaded:

- Cost Categories.
- Revenues.
- Persons.
- Organizations.
- Mutations Ledger (debtors, creditors, memorial).

The data can be retrieved from Associated Master Administrations 259 or from all ERP administrations where Invantive Vision is connected to via Associated Financial Administrations 258.

When data is exchanged, the program checks whether this data is already present. If this is not the case, the ERP system is used and data is uploaded, stored and added to Invantive Vision. If this data is already present, action is taken depending on the kind of data:

- Cost Categories: changing the description. Other changes are not accepted.
- Revenues: all changes are accepted.
- Persons: Changing a name. Other changes are not accepted.

- Organizations: changing a name. Other changes are not accepted.
- General Ledger mutations: print a warning that - after processing and retrieving- the entry is changed . No changes are accepted.

All messages of the processing are stored and can be seen in the screen ERP Jobs 256.

The retrieval of data is an intensive process. Therefore, it gets automatically less priority if other users are active.

Time of processing

The total processing of all data from ERP can take several minutes if the filter is not set. To process only a few corrections in the general ledger it is also possible to set in your filter the projects where these mutations refers to. Only data of the projects in the filter are processed.

The way the data is collected can be set in Profile Options 263.

Signal List

This process adds the data which was not added yet. Moreover, the process compares the data in the ERP system to the data saved in Invantive Vision. Possible deviations are saved as a signal list in the output of the process. These lists can be seen in in the screen ERP Jobs 256.

Purge Retrieved General Ledger Information

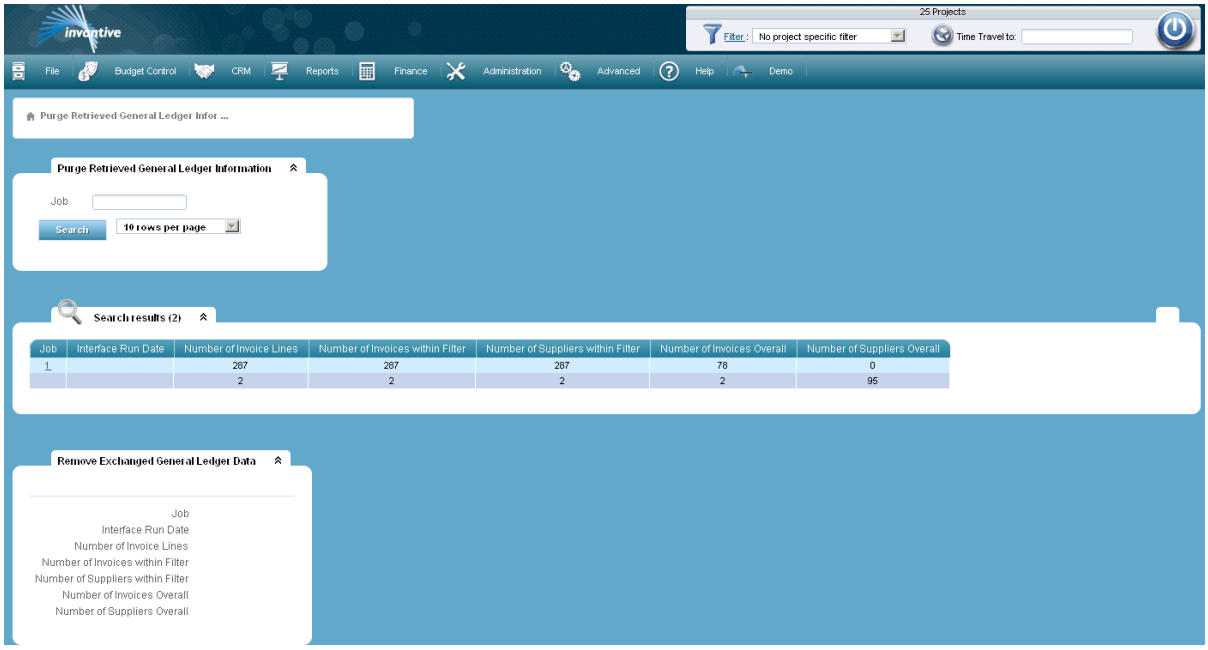
In this screen you can delete transfered invoices and invoice lines.

In incidental cases you can change the data in the ERP system after being processed in Invantive Vision, for example:

- if the administrations in the ERP system are recovered with a backup, changed and subsequently processed again.
- if after closing, mutations are entered in the general ledger because the period is opened.

In all these cases the situation of Invantive Vision will not match anymore with the ERP system. On the signal list as visible in ERP Jobs 256 this kind of problems will be shown as as errors.

In order to actualize the data, in this menu you can turn back the general ledger mutations from the ERP system to the settings of a past date.



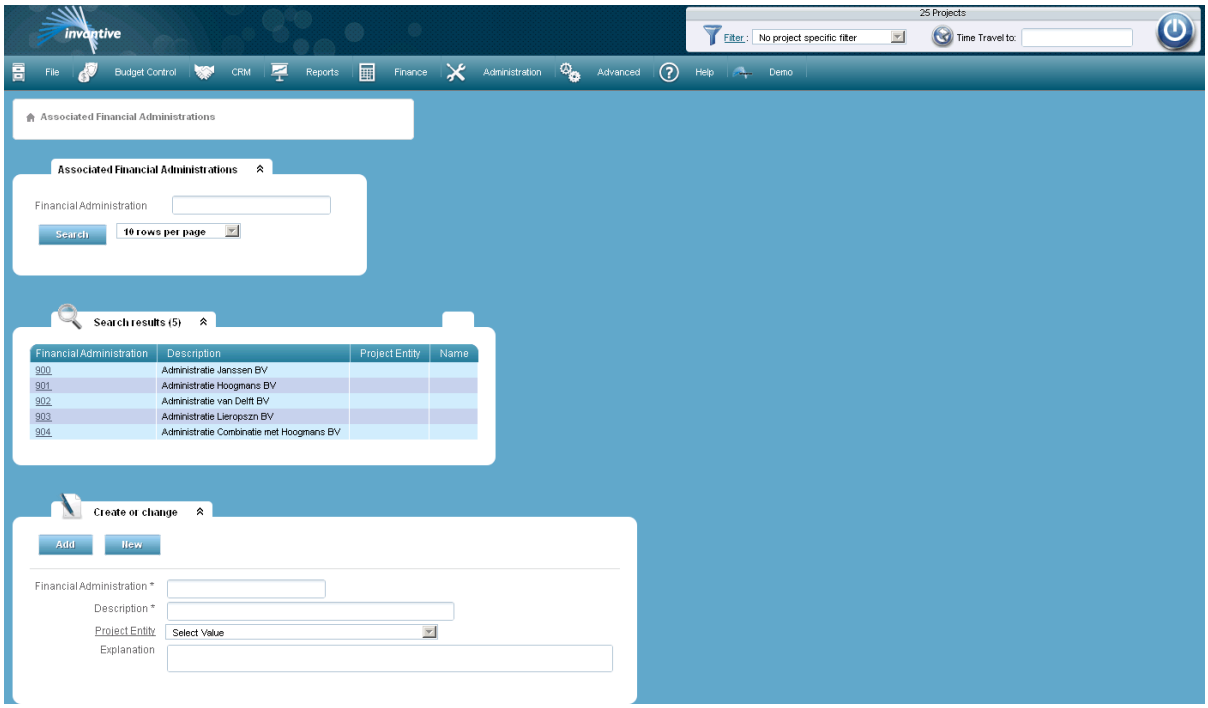
Per interface job it is shown how much data is transferred. These numbers are limited to information related to projects in the filter. If you then select and delete the job, then all invoice lines related to projects in the filter will be deleted. The corresponding invoices are only removed if they no longer have invoice lines.

Associated Financial Administrations

In this form you can change and register the associated financial administrations.

During the data exchange information will be imported from the related financial administrations.

The way the data is retrieved from the master administration or from the associated administrations can be changed for each data type as described in ERP Interface 240.



The meaning of the entry fields is:

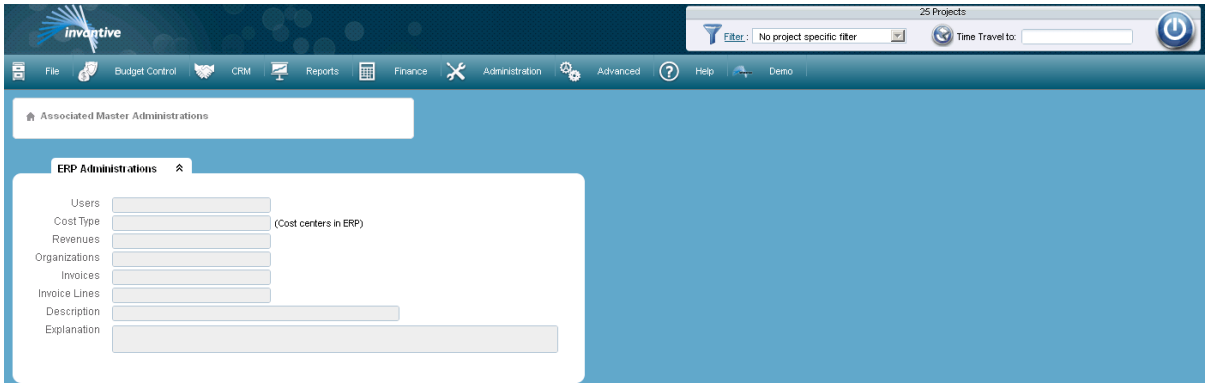
Financial Administration	The code of the financial administration.
Description	The description used for displaying on reports and in screens.
Organization	Reference to a projectentity as registered in Organizations 98.

Associated Master Administrations

In this form you can change and register the associated financial administrations.

During the interfacing data descriptions are retrieved from the master administrations.

The way the data is retrieved from the master administration or from the associated administrations can be changed for each data type as described in ERP Interface 240.



The meaning of the entry fields is:

Users	The code of the administration w here the users are retrieved from.
Cost Type	The code of the administration w here the costs category descriptions are retrieved from.
Revenues	The code of the administration w here the revenues are retrieved from.
Organization	The code of the administration w here the suppliers are retrieved from.
Invoices	The code of the administration w here the invoices are retrieved from.
Invoice Lines	The code of the administration w here the invoice lines are retrieved from.
Description	The description used for displaying on reports and in screens.
Explanation	Possible explanation.

1.4.8.5 Technical Administration

This chapter contains information concerning the functions that can be found under 'Technical Administration' in a default menu structure.

Functions

Here you will see screens to set up the functions.

Functions

In this screen you can register and modify functions.

A function is a form or a report that can be requested via the user interface. Functions do not need to be included into a menu structure in order to use them, but it is recommended for the sake of navigation. See Menus 232 and Menu Items 233 for how to include functions in a menu structure.

The registration of functions is a typical activity for application developers. See the warning under Application Development 282.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Functions

Functions

Code | Description

Search | 10 rows per page

Search results (625)

Page 1 of 63 >> >|

Code	Description	Includable in Menu	Description (Translated)	Icon (URL)	Window Name	JavaScript Code
bubs_access_ppt_head	{res:bubs_access_to_project_header}	☐	Access to Project Header			
bubs_agn_all	{res:bubs_agn_all}	☑	Users	i/frm_agn_all.png		
bubs_ale_all	{res:bubs_ale_all}	☑	Reading Methods			
bubs_ame_all	{res:bubs_ame_all}	☑	Aggregation Methods			
bubs_aoe_all	{res:bubs_aoe_all}	☑	Requested Object Actions			
bubs_apg_pdf_rpt	{res:bubs_apg_pdf_rpt}	☑	Project Authorizations per Person (PDF)	i/pdf.png		
bubs_arf_pdf_rpt	{res:bubs_arf_pdf_rpt}	☑	Functions per Role (PDF)	i/pdf.png		
bubs_arg_pdf_rpt	{res:bubs_arg_pdf_rpt}	☑	Persons per Role (PDF)	i/pdf.png		
bubs_ase_all	{res:bubs_ase_all}	☑	Active Sessions			
bubs_atg_all	{res:bubs_atg_all}	☑	Access Requests			
bubs_atg_ins	{res:bubs_atg_ins}	☑	Request Access			
bubs_avg_all	{res:bubs_avg_all}	☑	Workbench Translations			
bubs_bce_all	{res:bubs_bce_all}	☑	VAT Codes			

Create or change

Add | New | Subfunctions

Code
Description
Includable in Menu ☑
Description (Translated)
Icon (URL)
Window Name
JavaScript Code
Program *
Module Language * Select Value

Static Parameters

Parameter 1
Parameter 2
Parameter 3
Parameter 4
Parameter 5
Parameter 6
Parameter 7
Parameter 8
Parameter 9
Parameter 10

Function Parameters (0)

No records_

Code	Description	Sort Direction	Required	Display	Display In Context	Data type	Source View of List	Column Query Filter

Create or change

Add | New

Code *
Description *
Sort Direction *
Required ☐
Display ☑
Display In Context ☑
Default Value Expression
Tip
Message Validation Error
Value Validation Expression
Data type Select Value
Source View of List
Source Column of Code
Source Column of Description
Column Query Filter
Relationship Query Filter
Pattern Query Filter
Explanation

The meaning of the entry fields is:

Code	The code which refers to the function. Here you can also enter a 'http address' like for example: http://www.invantive.com. However it is not allowed to use a relative URL.
Description	The description of the function. This message will be translated with Translations 338.
Includable in Menu	The function can be included in a menu or a submenu when checked
Description (Translated)	The description used for displaying on reports and/or screens.
Icon (URL)	The relative URL of the icon belonging to the function. The icon must be 16 pixels high and 16 pixels wide.
Window Name	The name of the HTML window in which the function is opened in case it was selected via the menu. If the window name has not been entered, the function will be executed in the current window.
Javascript Code	If applicable, here you can include the javascript code associated with the function.
Program	The name of the program that need to be executed.
Module Language	The Module language of the module of which the program is part of as registered in Module Languages 319.

If no javascript and no code in the format http:// or mailto:// or javascript:// was specified then the web page <CODE>.do will be opened.

Subfunctions

In this screen you can register and change subfunctions.

Subfunctions are used to compose reports using several report elements such as; the front page, the general conditions, a task overview.

A subfunction can be set for each report function, for example, for a report that can be requested via the user interface. This is especially possible with the custom reports bubs_custom1-99, see Building Reports 365.

On subfunctions, URL parameters can also be passed. These parameters are then subsequently passed to the report. If multiple parameters are used, they are split by the '&' symbol.

The parameters are being 'unescaped' just like in a URL. The escape function converts a parameter to a string in a URL encoded format whereby all non-alphanumeric characters are replaced with % hexadecimals. To do exactly the opposite you can use unescape.

For example: unescape '% 21' becomes an exclamation, unescape '% 20' becomes a space.

An example of two URL parameters separated with '&' symbol: 'P_TITEL=titel%20vof%20the %report&P_PJT_CODE=123456'.

Reports

Loops

Using subfunctions you can also build loops in reports.

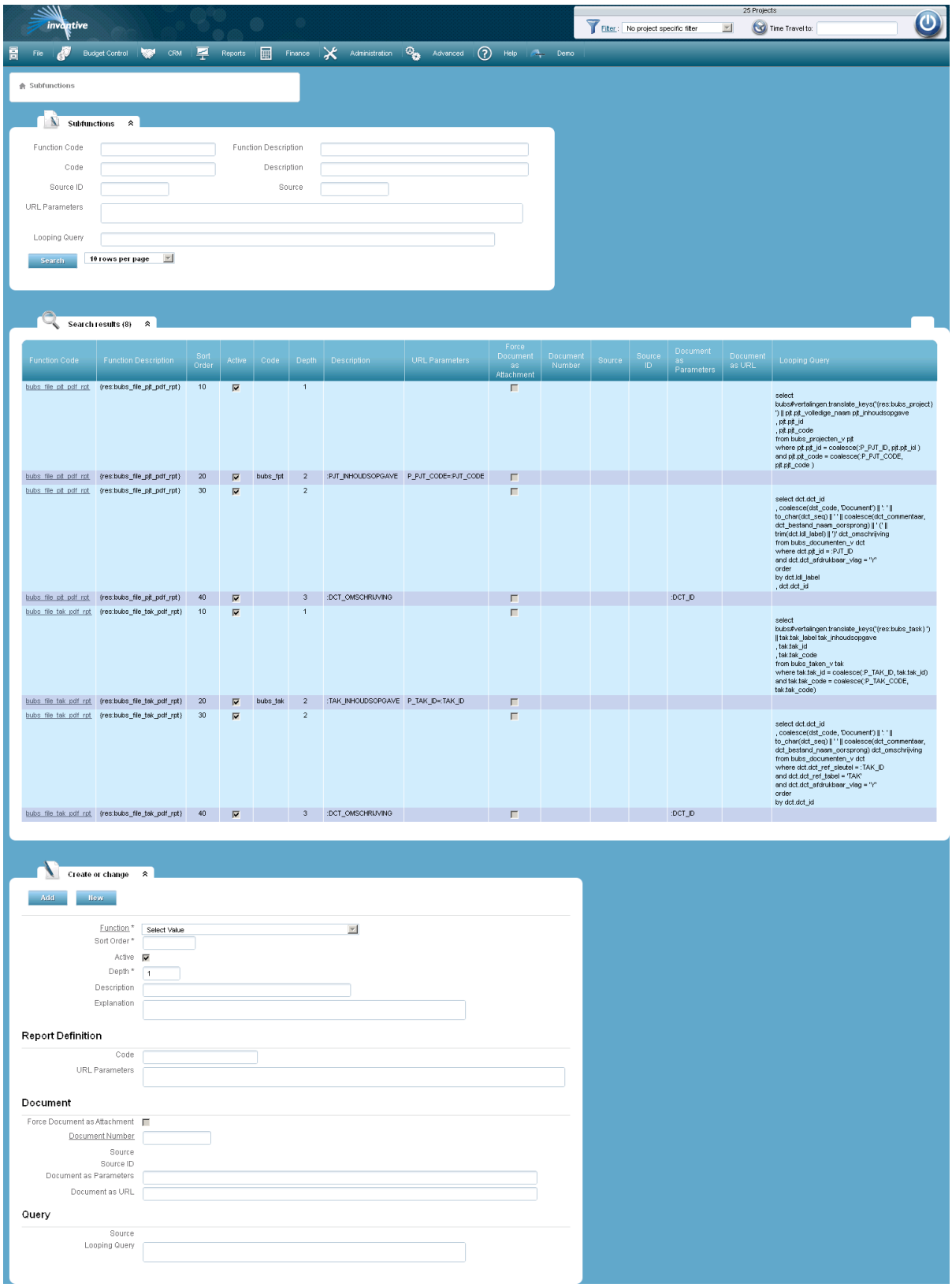
An example:

For each line in 'select gbr_naam from bubs_gebruikers_v order by gbr_naam' the system runs a report. You can pass on parameters to this report using URL parameters which come from the query. The value of the parameters can be passed on to the report by using the ':' notation. An example of this notation is: `P_GBR_NAAM=:GBR_NAAM`.

The content of a loop is also determined by the use of depth. A loop can contain another loop. The depth of this loop is one. Subsequently, within this 'nested loop' another loop can

be included. In that case the depth of the loop will be two. The maximum depth of a loop depends on the programming language and program function that you use.

Documents



The meaning of the entry fields is:

Function	The name of the report function.
Sort Order	A numeric value on which the subfunctions are sorted when they are shown in a list box in a screen.
Active	When checked, the subfunction will be activated.
Depth	The depth also plays a role in the contents of the loop.
Description	The description of the subfunction.
Code	The code used to refer to the report.
URL Parameters	The URL parameters such as 'A=B&...&Y=Z'. The parameters are passed on to the subfunction when it is executed.
Document Number	Reference to a document number as registered in Documents 109. In a report, a document can be inserted or attached.
Looping Query	The SQL query used to generate the loop of the report. A loop is a sequence of instructions that are repeated for all rows in the query.

Profile Options

Here you will see screens to set up the profile options.

Profile Options

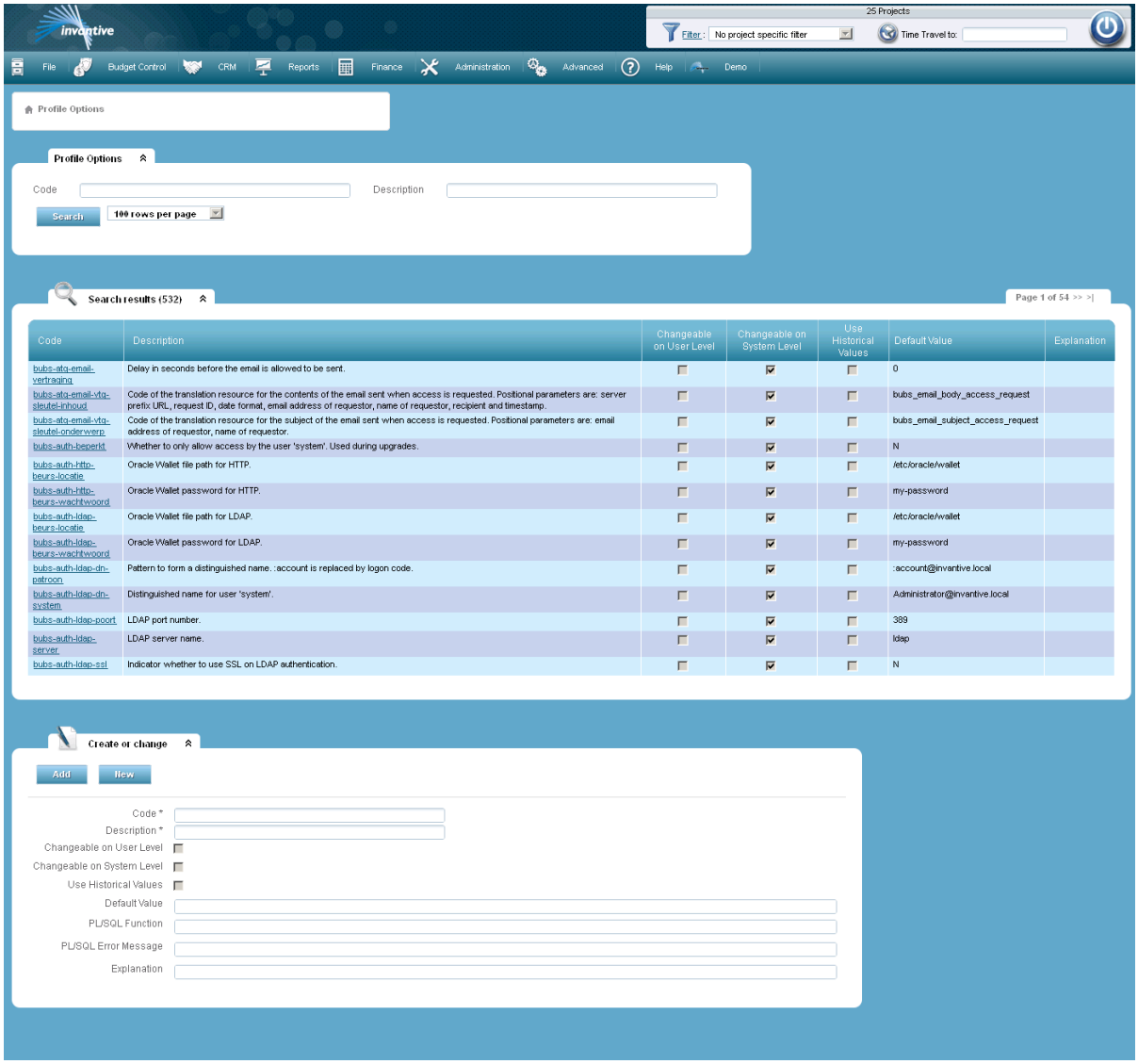
In this screen you can register and change profile options.

Profile option are properties ofInvantive Vision.which can be set.

Some examples:

- The profile option 'Background color Invantive Vision'has the default color 'Gray"
- The profile option 'Send application management email tosysadmin@invantive.com';
- Using the profile option '1bubs-mnu-hoofdmenu-code' you can indicate the starting point of the menu for each user of Invantive Vision. Default this is 'Main'.

The values of profile options can be set withUser Profile Option Values 265 and User Profile Option Values 48.



The meaning of the entry fields is:

Code	The code of the profile option.
Description	The description of the profile option.
Changeable for User Level	Indicates if the profile option can be changed at user level. To change profile options at user level see User Profile Option Values 48.
Changeable for System Level	Indicates if the profile option can be changed at user level. To change profile options at system level see Profile Option Values 265.
Use Historical Values	The historical values of this profile option w ill be used w hen time traveling is enabled, w hen checked. The current value w ill alw ays be used if this indicator is not checked, even if time traveling is activated.
Default Value	The default value.
PL/SQL Function	The PL / SQL function of the profile option used to check new values. The outcome of the function can be 'true' or 'not true'. The function must have exactly one 'Oracle bind' variable and this variable w ill get the value of the current 'string'.
PL/SQL Error Message	The error message that w ill be generated as 'exception' w hen the outcome of PL/SQL function is 'not true'. This message w ill be translated w ith Translations 338.
Explanation	Possible explanation.

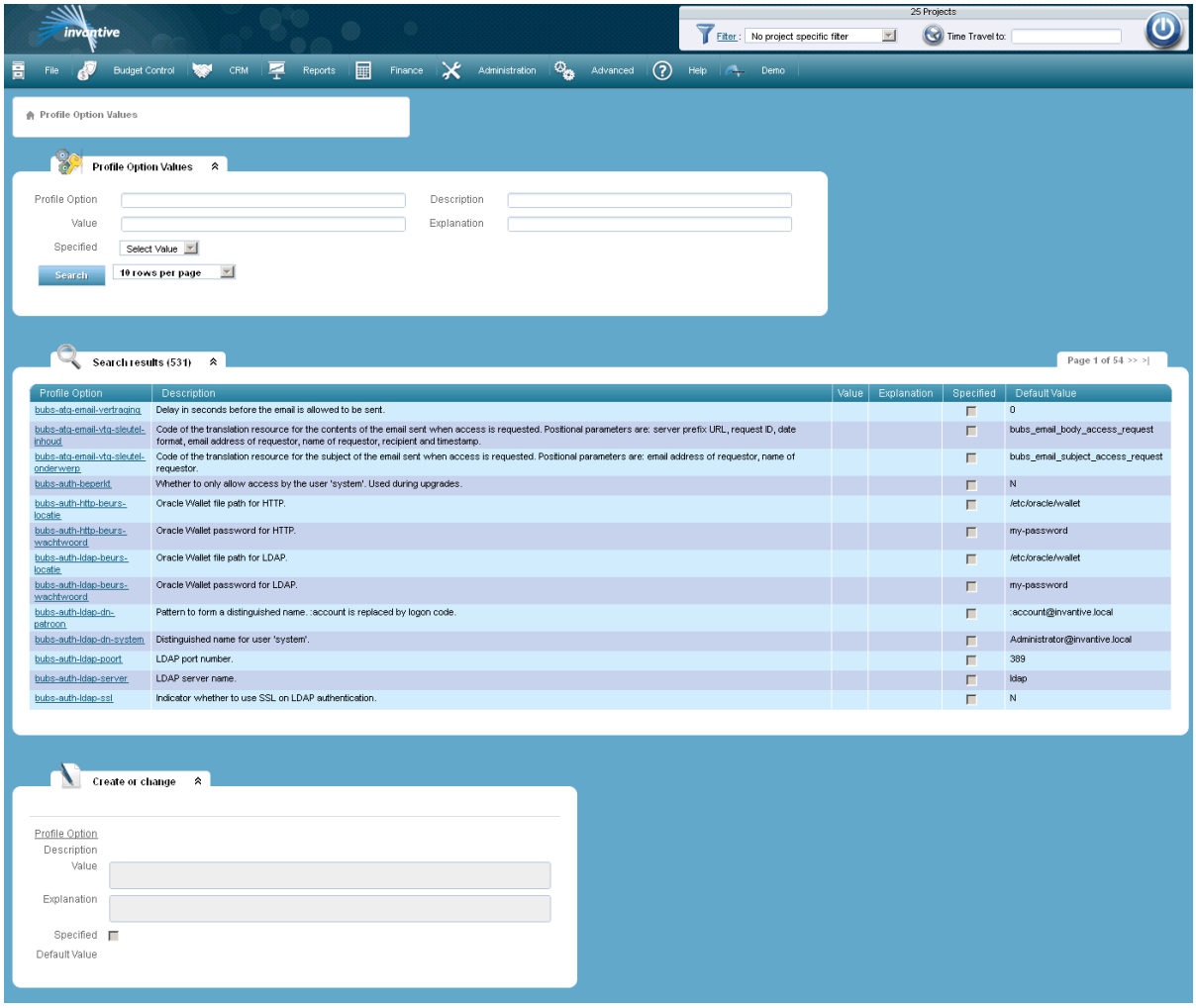
Profile Option Values

In this screen you can register, modify or delete profile option values.

Profile Option Values can be set system properties. In this screen profile options 263 you can indicate if for this specific profile option, it is allowed to enter a profile option value. If a profile option value is entered, the default value of the profile option does not change, but a 'adjustment record' is made. The value of the 'adjustment record' will have priority above the default profile option 263.

For example: the profile option 'Send application management mail to sysadmin@invantive.com' will be overruled at system level because the email address 'admin@acme.com' was entered as profile option value.

User Profile Option Values are closely related to Profile Options 263 and User Profile Option Values 48.



The meaning of the entry fields is:

Value	The profile option value that will be assigned to the profile option at system level.
Explanation	Explanation of the assigned profile option value.

The meaning of the other fields:

Profile Option	The code of the profile option.
Description	The description of the profile option.
Specified	There is a other value specified than the default value when checked.

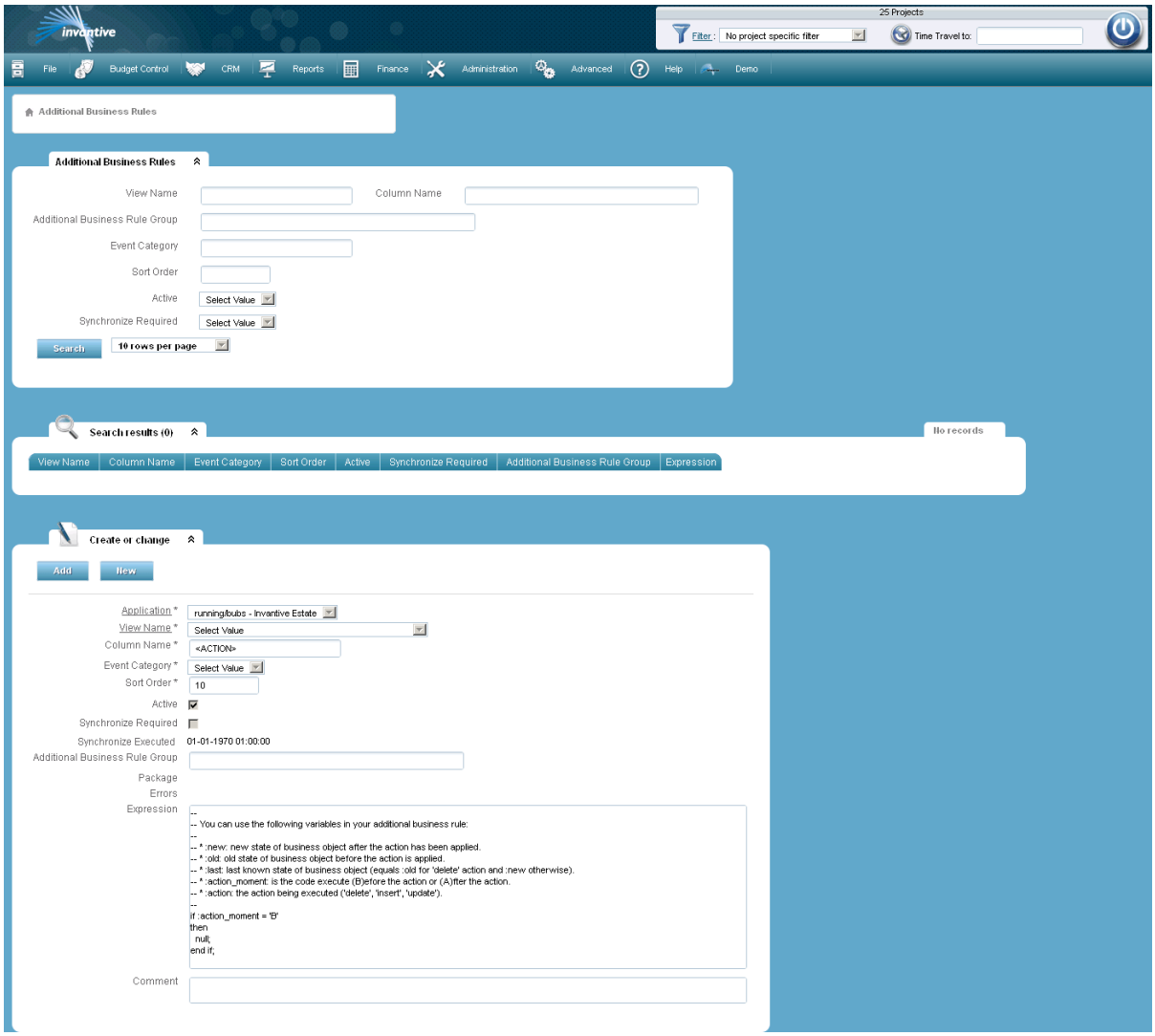
Default Value	Value used if no other value is specified.

Additional Business Rules

In this screen you can enter and change supplementary business rules.

Additional business rules are used for:

- to add additional checks like ‘no orders out of budget’.
- to perform actions like ‘send email’.
- provide fields with a default value.



The meaning of the entry fields is:

Application	The name of the application to which the additional business rule applies.
View	Name of the view to which the additional business rule applies.
Column Name	The name of the column to which the additional business rule applies.
Event Category	Indicates the type of event that starts the additional business rule. Enter for standard filled in values, in all other cases always ‘<Action>’.
Sort Order	A numeric value used for sorting the additional business rule when they are shown in a list box in a screen.
Active	Indicates if the additional business rule is active.
Synchronization Required	The ‘Package’ needs to be recalculated if an additional business rule is changed in case this indicator is checked. The recalculation of the ‘Package’ takes place via Background

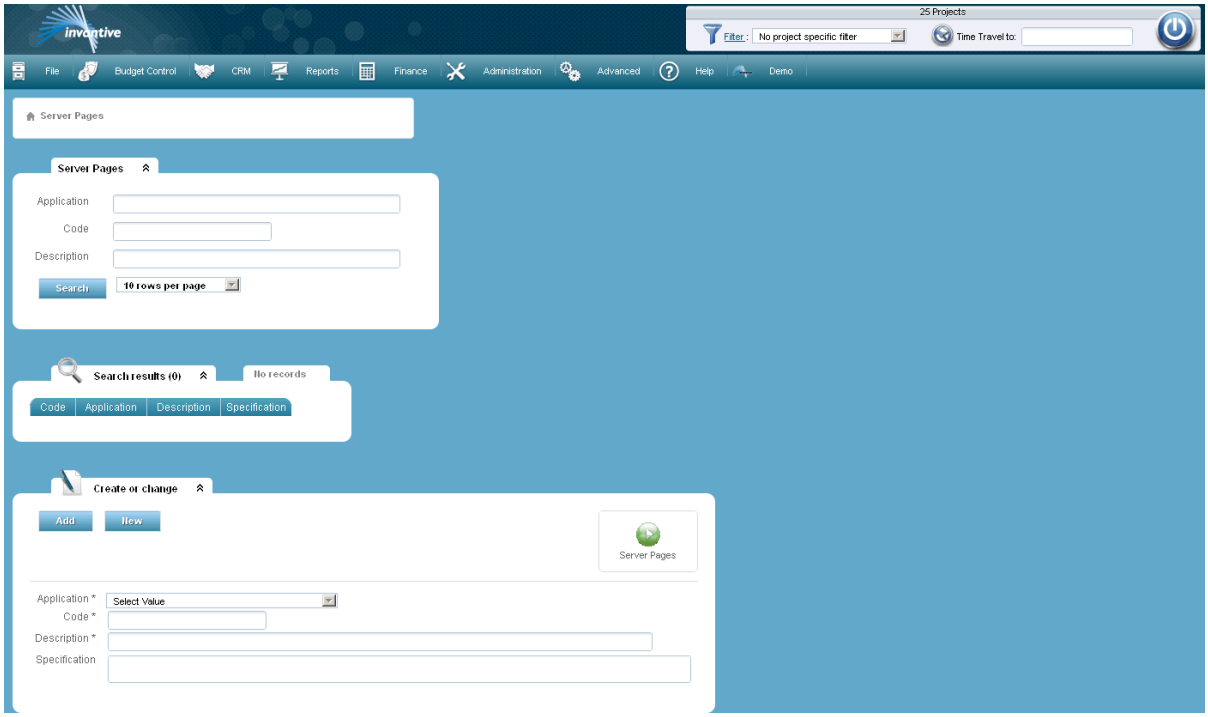
	Jobs 228.
Synchronization Executed	The date on which the last synchronization was performed to this additional business rule.
Group	The group of the additional business rule. Groups help to organize additional business rules to business processes or other formats.
Expression	SQL expression to determine the values in the column (if the column is filled) and in other cases a SQL/PL code block (if column is '<Action>'). You can use the following references in a PL/SQL code block: :action: the SQL statement which executes the company rule; 'INSERT', 'UPDATE' or 'DELETE'. :action_moment: the moment when the additional business rule is executed, for ('B') or after ('A') the updating of the company object. :last: the last added value of the business object (when deleting, the situation before deleting, in all other cases equal to :new). :old: the previous value of the business object. :new : the new value of the business object.
Comments	Notes to the additional business rule.

The meaning of the other fields:

Package	The name of the 'package' which includes the additional business rule.
Errors	Possible errors in the 'Package'.

Server Pages

In this screen you can enter, modify or delete server pages.



The meaning of the entry fields is:

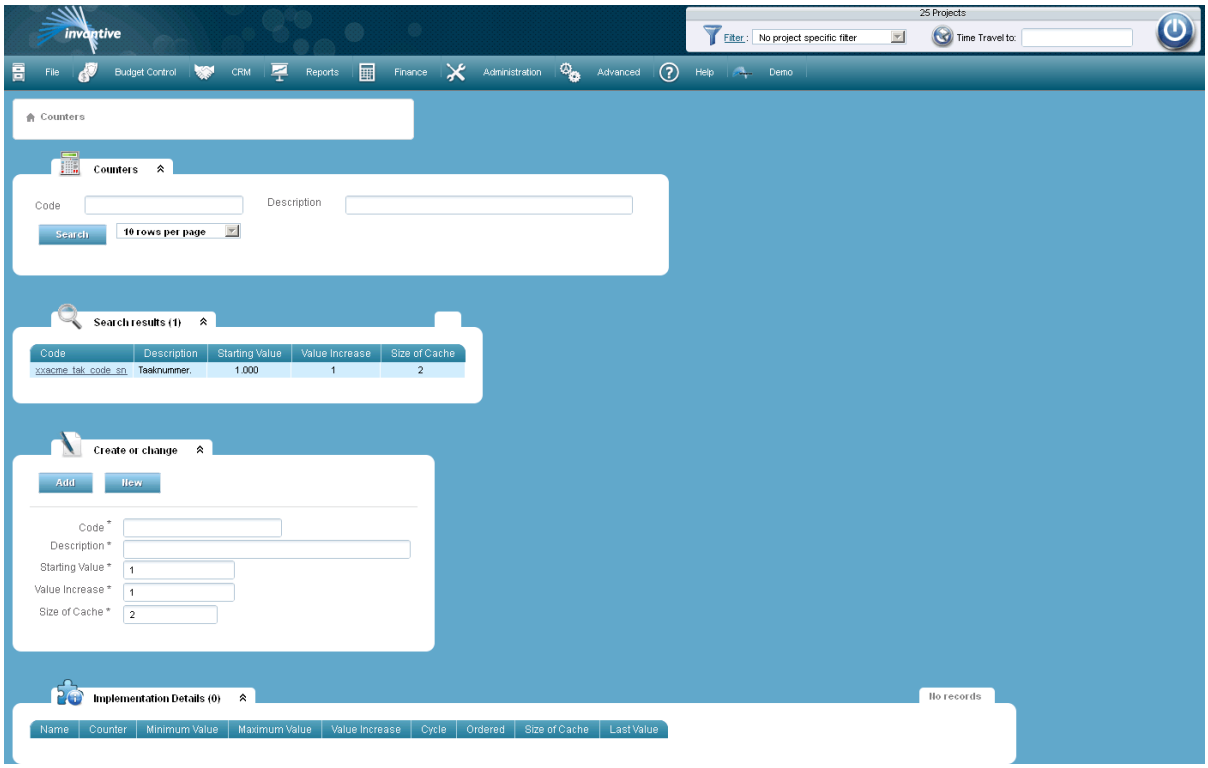
Application	The name of the application to which the server page applies.
Code	
Description	
Constraint Specification	

Counters

In this form you can register and change counters.

A counter can be used in additional business rules to calculate a sequence number. See Additional Business Rules 266.

The software creates for each counter a 'database sequence'. The name of the 'database sequence' is equal to the code of the counter. The next value of the counter can be requested in a calculated field as '<CODE>.nextval'.



The meaning of the entry fields is:

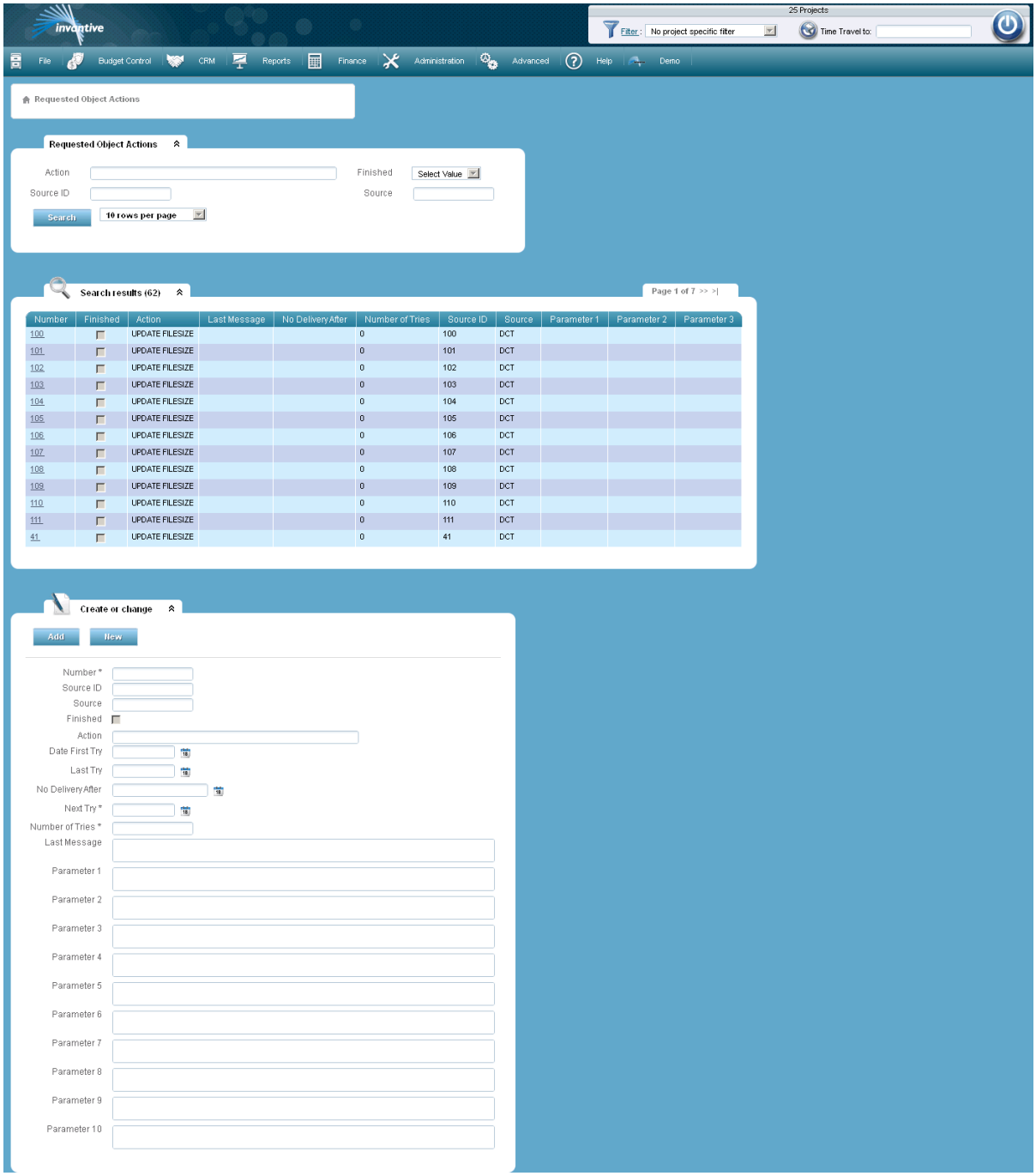
Code	The unique code of the counter.
Description	The description of the counter.
Starting Value	The initial value of the counter.
Value Increase	With every increase, the counter is increased w ith this value.
Size of Cache	The size of the cache of 'Counters' is made adjustable to avoid any major holes in successive 'counters'.

The meaning of the other fields:

Name	The name of the 'counter'.
Counter	The code of the 'counter'.
Minimum	The minimum value of the counter.
Maximum	The maximum value of the counter.
Cycle	The counter gets the first value again after exceeding the maximum value.
Ordered	Indicates if the value of the counter is sorted.
Size of Cache	The size of the cache memory.
Last Value	The last value of the counter.

Requested Object Actions

In this form you can register and change counters.



The meaning of the entry fields is:

Number	Unique numeric code.
Source ID	Identification of the object.
Parent	The table code in w hich the object is included.
Finished	Indicator show ing w hether the action has been executed.
Action	An action that needs to be executed.
Date First Try	The date w hen the first attempt to execute the action w as.
Last Try	The date w hen the last attempt to execute the action w as.
Do not Deliver after	The system time w hen the requested action w as cancelled and execution w ill no longer be attempted.

Next Try	The date w hen the next attempt w ill be made to execute the action. No date w ill be displayed here if the action has already been executed.
Number of Tries	The number of attempts that w ill be made to execute the action.
Last Message	The message that w as displayed during the last attempt to execute the action.
Parameter 1	The first parameter.

Overview Additional Business Rules (PDF)

This report shows the text of the in Invantive Vision registered additional business rules 266.

Settings: system, EUR, Year, Current situation
Function: bubs_obd_pdf_rpt

Overview Additional Business Rules (PDF)

Powered by Invantive

*** End of Report ***

07-08-2012 12:12

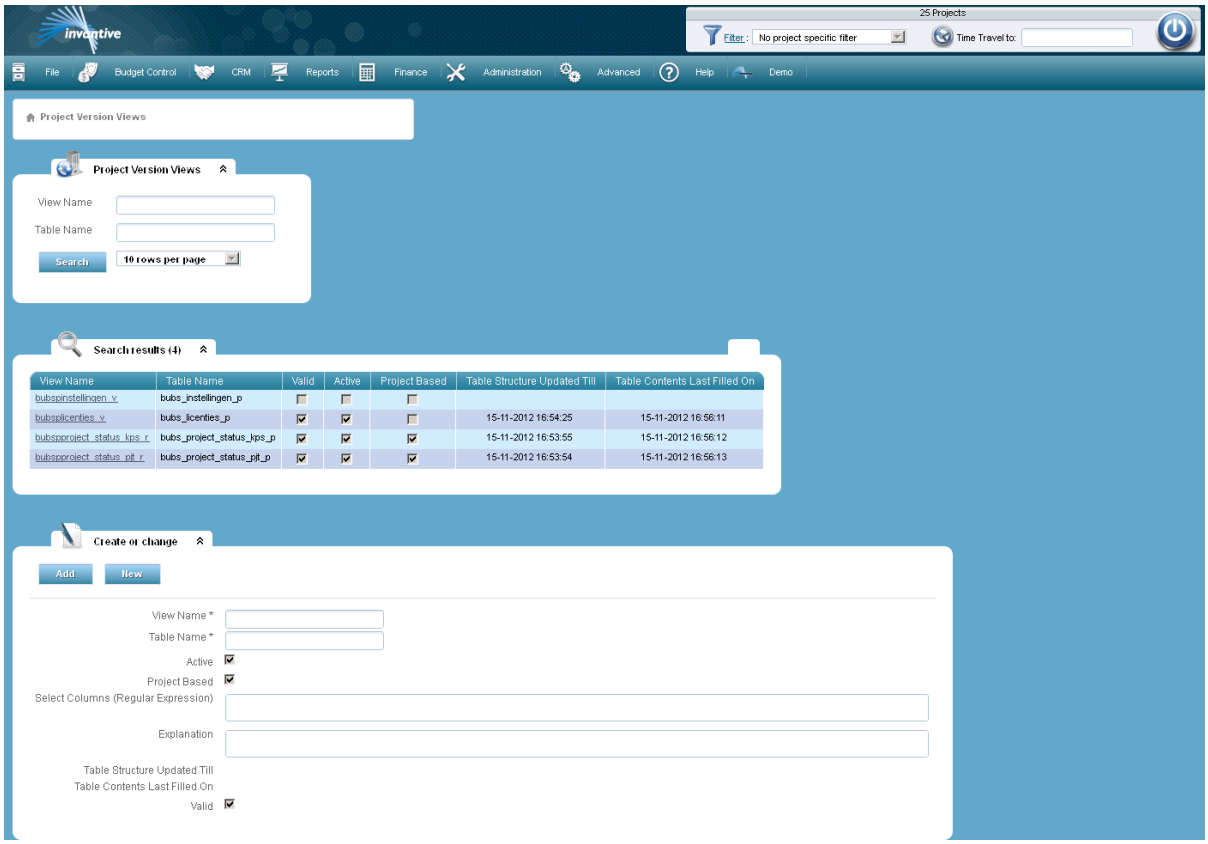
Page 1 / 1

invantive

Project Version Views

In this screen you can register project version views. If a project version 57 is registered, then the data from these views will be saved in the specified tables at the historical point in time for this project version.

Project version views generate ‘replicas’ or ‘cubes’ in table format.



The meaning of the entry fields is:

View Name	The name of the view. The name of the view should always begin with ‘bubsp’, for example ‘bubspproject_status_pjt_r’. If the view name begins with ‘bubs_’ then the view doesn't support time travelling and the contents of the table undetermined.
Table Name	Name of the table where the data is stored. It's preferred that the table name ends on ‘_p’, for example ‘bubsproject_status_pjt_p’.
Active	The project version view is active if it is checked.
Project Based	The view contains project data and only the project data for project version will be updated when checked. The view will contain all data when unchecked.
Select Columns	A voluntary selection of columns from the view as a regular expression. If nothing is entered, all columns will be selected.
Explanation	Possible explanation about the use of the view.

The meaning of the other fields:

Table Structure Updated Till	The date is calculated by the system when the project version view becomes active.
Table Contents Last Filled On	The date is calculated by the system when the project version view becomes active.
Valid	Is checked when the system didn't find any changes in the view and recalculation is unnecessary.

Note: If the project version views change, the underlying tables will only be filled or rebuilt when necessary and when the changed project version view remains active. In this way you can deactivate the project version views and subsequently modify them without that the application will try to recalculate everything.

Overview Project Version Dates Eligible for Merging

This report shows a list of project versions in time and indicates which project versions can be merged to the same time because in the meantime there have been no relevant modifications.

By merging project versions (see also Project_Versions 57) to the same point in time, the performances of calculating the project version views are merged (see also Project Version Views 272). The reduction of the number of snapshots with factor two results in an equal reduction of necessary computation time.

Invantive Estate

Settings: system, EUR, Year, Current situation
Function: bubs_spe_pdf_rpt

Overview Project Version Dates Eligible for Merging (PDF)

Invantive Vision

Powered by Invantive

15-11-2012

Project Version Date Range Start	Project Version Date Range End	Eligible for Merging
31-12-06 11:22:00	31-12-06 01:06:00	
31-12-06 01:06:00	31-01-07 08:54:00	
31-01-07 08:54:00	28-02-07 10:59:00	
28-02-07 10:59:00	31-03-07 04:34:00	
31-03-07 04:34:00	30-04-07 12:14:00	
30-04-07 12:14:00	31-05-07 01:29:00	
31-05-07 01:29:00	30-06-07 09:34:00	
30-06-07 09:34:00	31-07-07 01:10:00	
31-07-07 01:10:00	31-08-07 10:46:00	
31-08-07 10:46:00	30-09-07 08:16:00	
30-09-07 08:16:00	12-10-07 02:23:00	
12-10-07 02:23:00	30-11-07 07:54:00	
30-11-07 07:54:00	31-12-07 01:11:00	
31-12-07 01:11:00	31-12-07 04:24:00	
31-12-07 04:24:00	31-01-08 08:31:00	
31-01-08 08:31:00	28-02-08 10:36:00	
28-02-08 10:36:00	31-03-08 09:06:00	
31-03-08 09:06:00	01-01-11 10:03:00	
01-01-11 10:03:00	02-01-11 03:16:00	
02-01-11 03:16:00	03-01-11 10:56:00	
03-01-11 10:56:00	20-01-11 08:06:00	
20-01-11 08:06:00	13-02-11 10:55:00	
13-02-11 10:55:00	23-02-11 01:14:00	
23-02-11 01:14:00	12-03-11 02:45:00	
12-03-11 02:45:00	13-03-11 08:13:00	
13-03-11 08:13:00	13-03-11 03:48:00	
13-03-11 03:48:00	23-03-11 06:43:00	
23-03-11 06:43:00	11-04-11 11:19:00	
11-04-11 11:19:00	13-04-11 05:15:00	
13-04-11 05:15:00	19-04-11 01:36:00	
19-04-11 01:36:00	20-04-11 02:02:00	
20-04-11 02:02:00	26-04-11 07:01:00	
26-04-11 07:01:00	28-04-11 02:10:00	
28-04-11 02:10:00	01-05-11 04:03:00	
01-05-11 04:03:00	02-05-11 04:34:00	
02-05-11 04:34:00	22-05-11 02:47:00	
22-05-11 02:47:00	23-05-11 10:11:00	
23-05-11 10:11:00	24-05-11 04:24:00	
24-05-11 04:24:00	25-05-11 10:36:00	
25-05-11 10:36:00	01-06-11 08:44:00	
01-06-11 08:44:00	01-06-11 09:50:00	

*** End of Report ***

15-11-2012 20:45

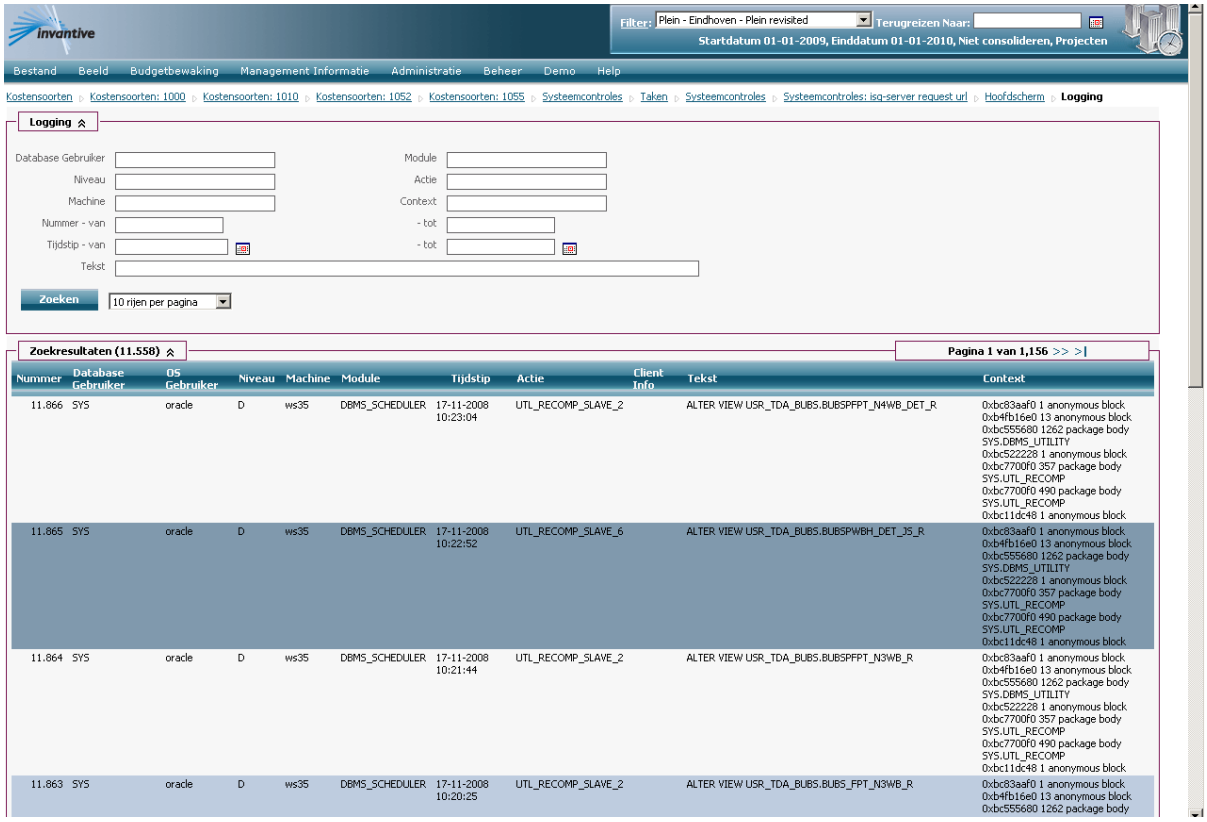
Page 1 / 1

invantive

Logging

In Invantive Vision error messages and system events are logged.

For example, you can see all the database errors, including those of the other users on the system.



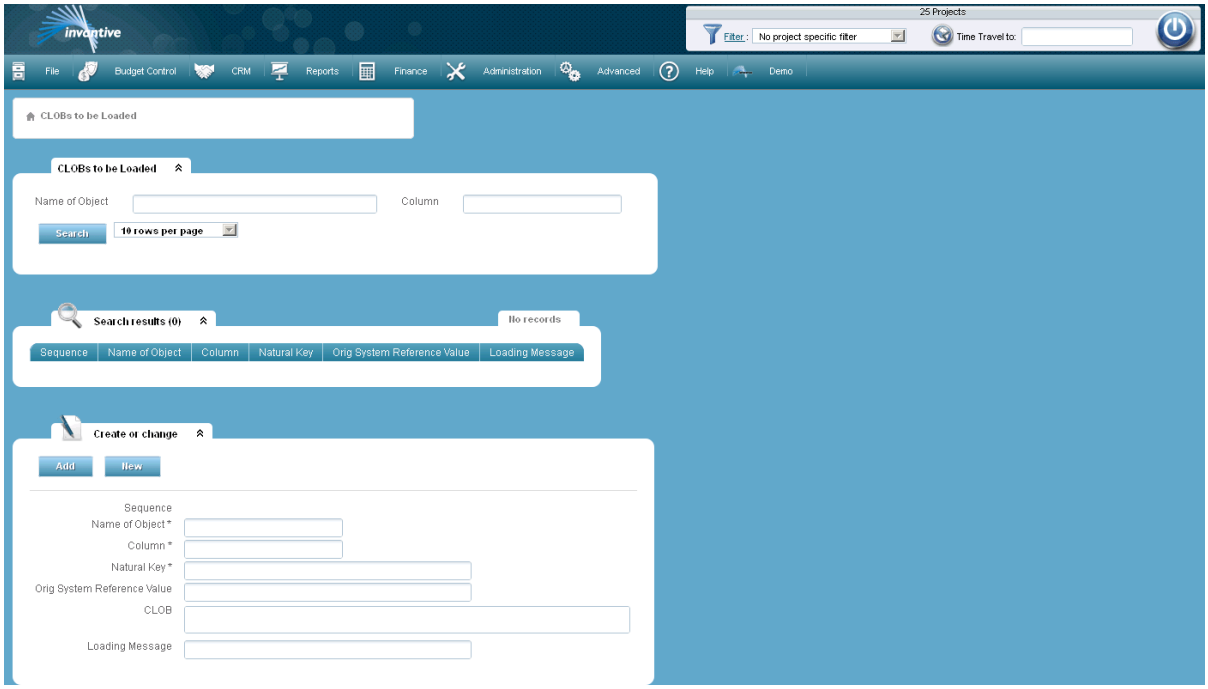
The meaning of the entry fields is:

Database User	The unique code w ith w hich the database user is identified.
Module	Name of the installed module w hich w as called by the user.
Level	The level at w hich the action is performed.
Action	The executed action, for example 'INSERT' or 'COMPILE'.
Machine	The name of the server used to get access to Invantive Vision.
Context	The context in w hich the SQL code w as executed ('call stack').
Number	The unique number assigned to the logged message.
Time	The date and time on w hich the logging of the log message took place.
Text	The SQL statement that w as executed.
OS User	The name of the account on the operating system that w as used.
Client Info	Information of the client.

CLOBs to be Loaded

Via this screen you can load the 'CLOBs' in the database of Invantive Vision with SQL loader.

A CLOB (Character Large Object) is a - potentially large - data element in a database that consists of characters to which a character encoding in the database is connected (as opposed to 'BLOB'). It means that data stored in a CLOB with a specific character encoding will also be returned by the database using this character encoding.



The meaning of the entry fields is:

Name of Object	The table in which the CLOBs are stored.
Column	The column in which the CLOBs are stored.
Natural Key	The natural key of the row in which the CLOB is stored.
Original System Reference Value	The reference value of CLOB in the system of origin.
CLOB	The CLOB which is stored.
Loading Message	Result of the last attempt to load CLOB in the database.

The meaning of the other fields:

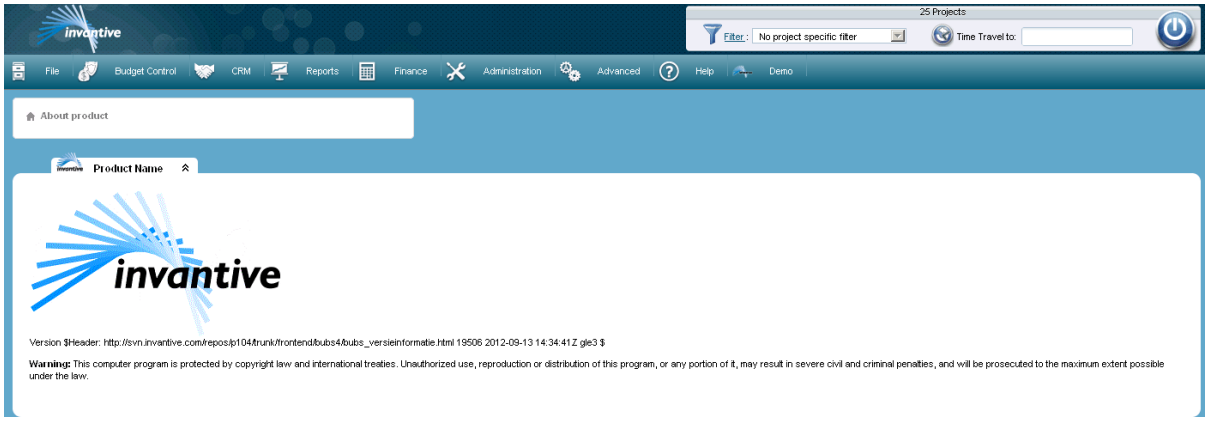
Sequence	The sequence number of the CLOB.

Version History

This screen provides information about different versions of Invantive Vision that were installed during the course of time.

A version is a modification of the software or a new delivery of the configuration settings.

Versions cannot be changed or removed. The registration of a version is done by the software of Invantive.



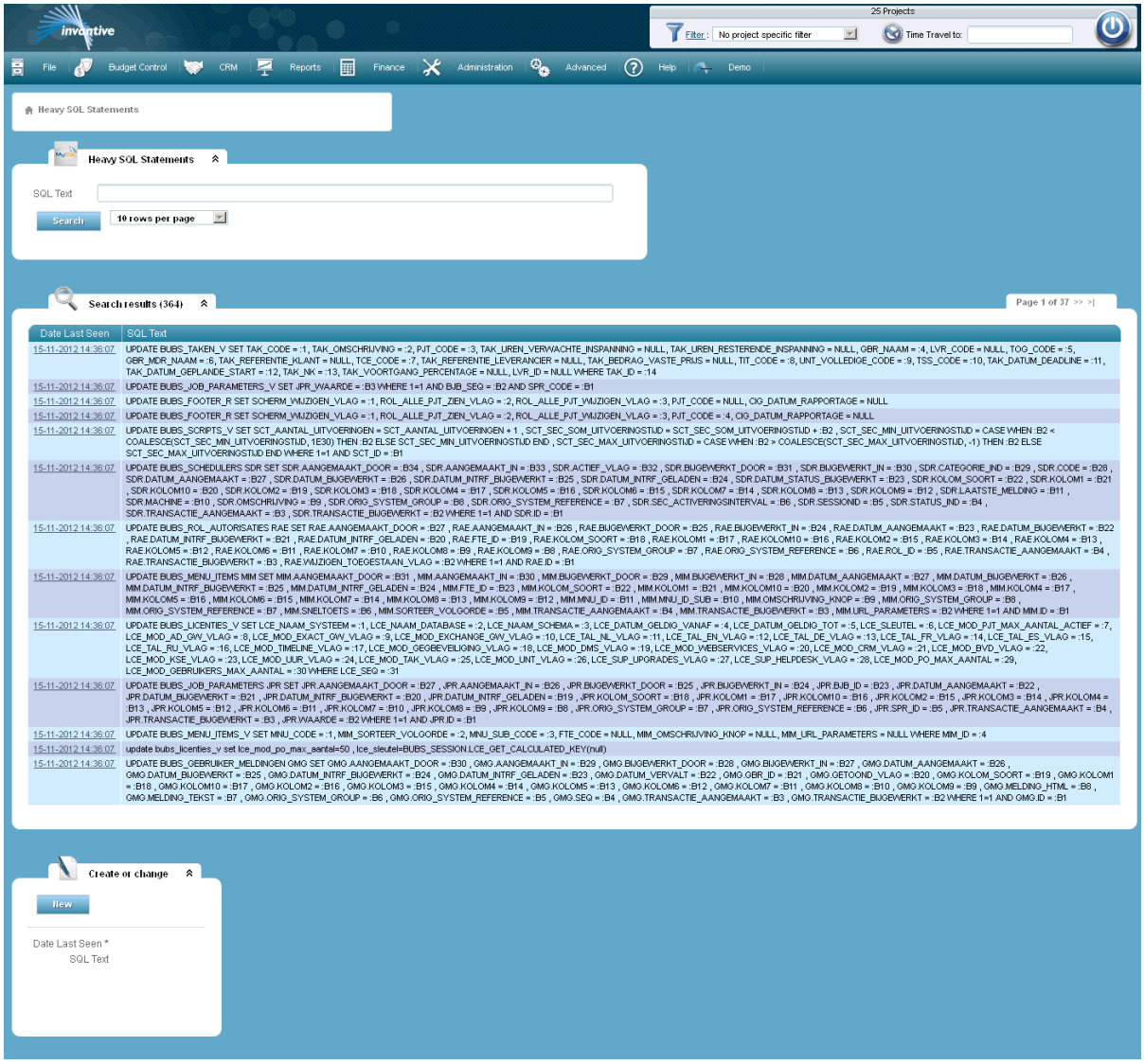
The meaning of the entry fields is:

Version ID	The ID number of the installation.
Version	The version number under which this version is known at the supplier.
Module	The module that has been replaced. This is 'All' if large parts of the application are replaced.
Installation Date	The moment at which the installation was finished.
Comments	Possible remarks on the installation of the software.
Object Versions	The version info from the database objects (packages, procedures).
Database Context	The variables that define the database context. These variables are, for example, used for debugging of time traveling over project versions.
Database NLS Parameters	Database NLS parameters determine the local behavior in the database runtime environment on the client and the server. Using NLS you can select a specific language and to store the data using a specific character set. NLS is part of the overall support provided by the database and it allows for developing multilingual applications and software that can be accessed and performed simultaneously from all parts of the world.
Database Parameters	Database parameters are used to initialize and configure the database.
Other Database Parameters	Settings that are not in the database configuration file can be realized using other database parameters.
Environment Variables	A set of variables that define the environment in which the software is executed on the web server.
Java System Variables	The Java system variables on the web server.

Heavy SQL Statements

This screen allows you to retrieve information about heavy SQL statements.

These SQL statements take a lot of the processor capacity of the database server during the 'parse' phase. With a background script '...' they can be prepared in the morning which allows the system to warm up more quick.

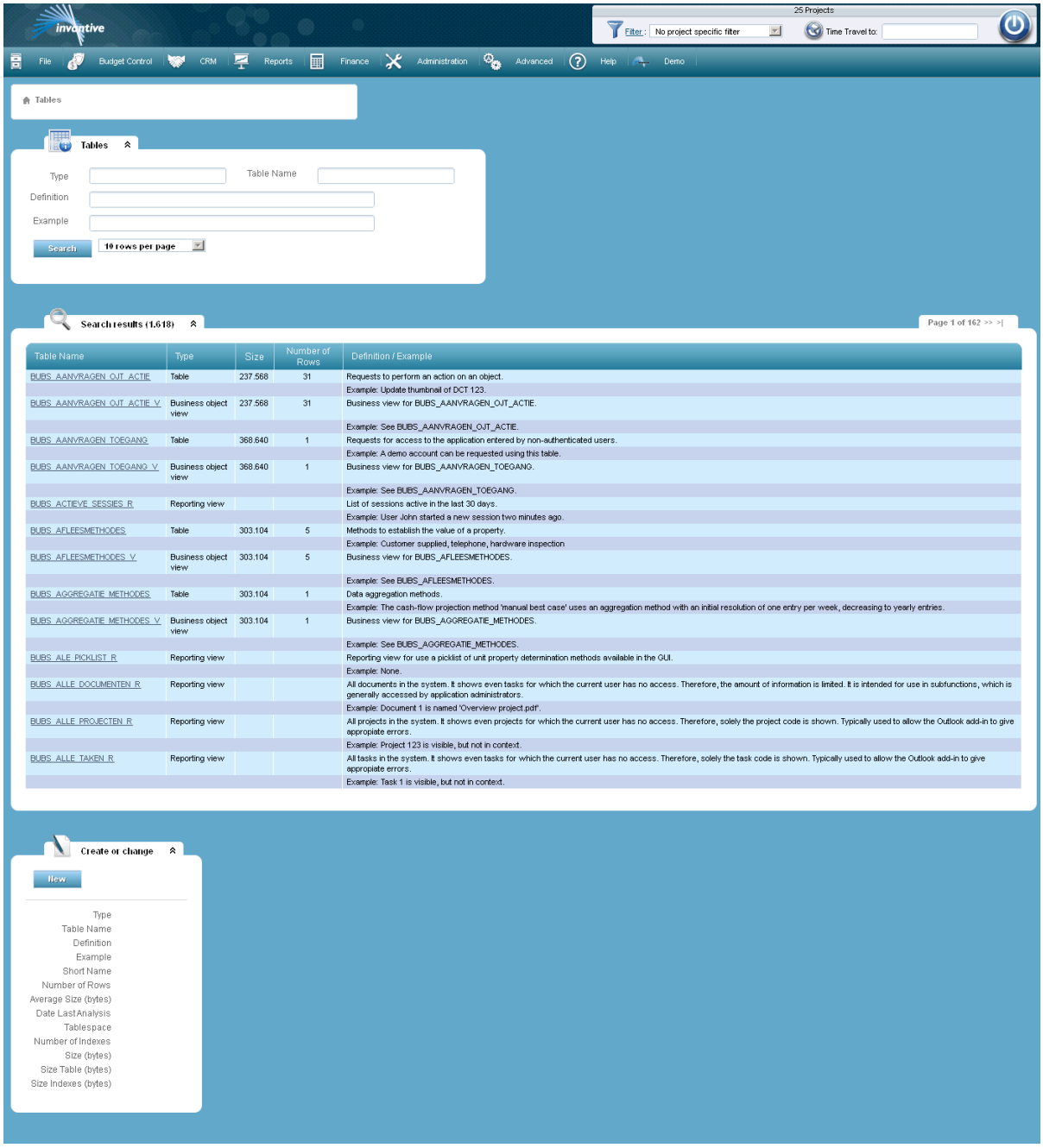


The meaning of the entry fields is:

Date Last Seen	The date and time the execution of the statement w as seen for the last time in the part of Invantive Vision w here SQL statements are executed.
SQL Text	The SQL statement.

Tables

In this form you can request data on columns in tables and views.



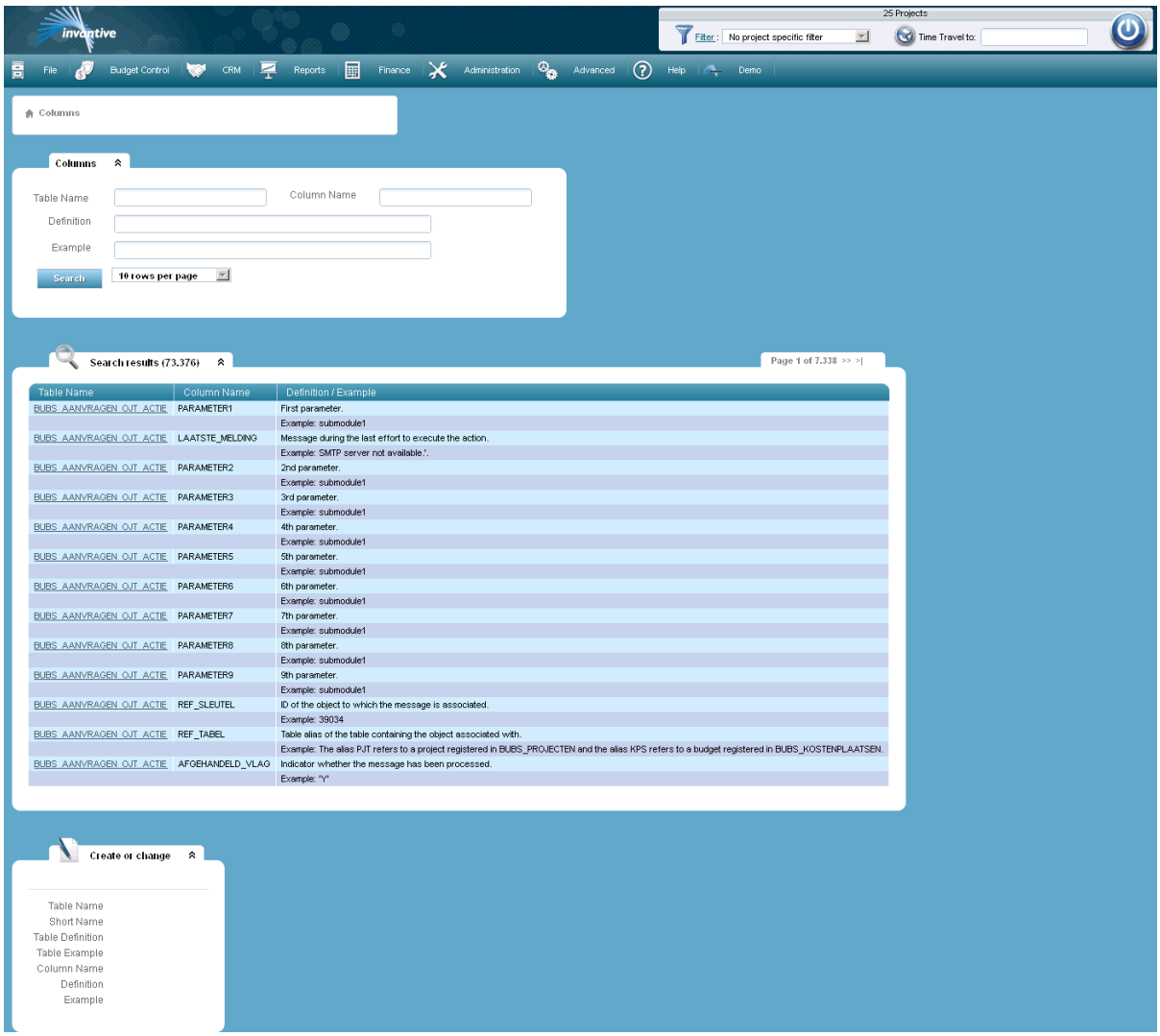
The meaning of the entry fields is:

Type	The table type. 'Table' means a physical table, 'business object view' represents a business view and 'reporting view' represents a reporting view. See also Structure.
Table Name	The name of the table.
Definition	The definition of the data in the table (only available in English).
Example	An example of the data in the table (only available in English).
Short Name	The short name of the table.
Number of Rows	An indication of the number of rows in the table.
Average Size	An indication of the average size in bytes of a row in the table.
Date Last Analysis	The last time at which the statistics were recalculated.
Tablespace	The 'tablespace' where the table is stored.

Number of Indexes	The number of indexes in the table.
Size	The total size of the table and the related indexes.
Size Table	The size of the table.
Size Indexes	The size of the indexes belonging to the table.

Columns

In this form you can request data on columns in tables and views.

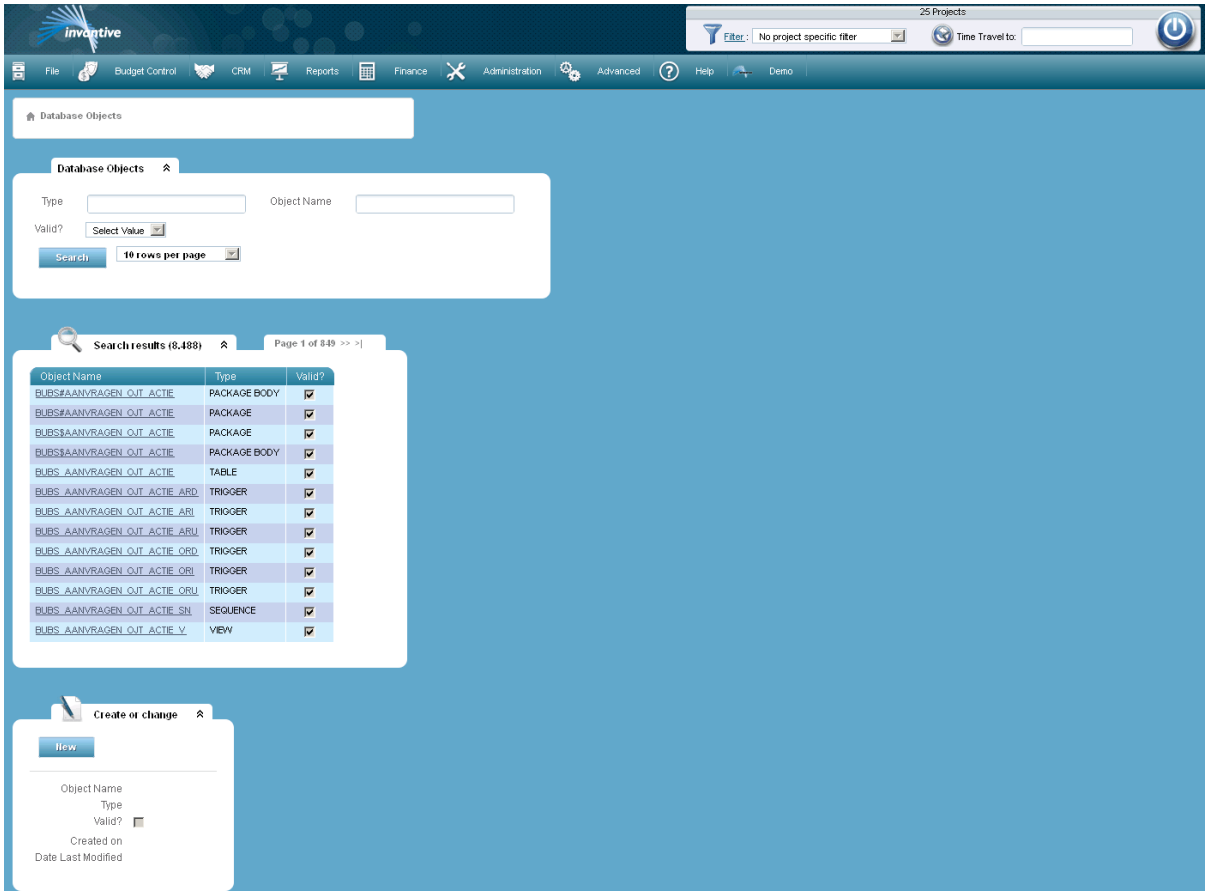


The meaning of the entry fields is:

Table Name	The name of the table.
Short Name	The short name of the table.
Table Definition	The definition of the data in the table (only available in English).
Table Example	An example of the data in the table (only available in English).
Column Name	The name of the column.
Definition	The definition of the data in the column (only available in English).
Example	An example of the data in the column (only available in English).

Database Objects

In this screen you can request data on the present database objects (packages).

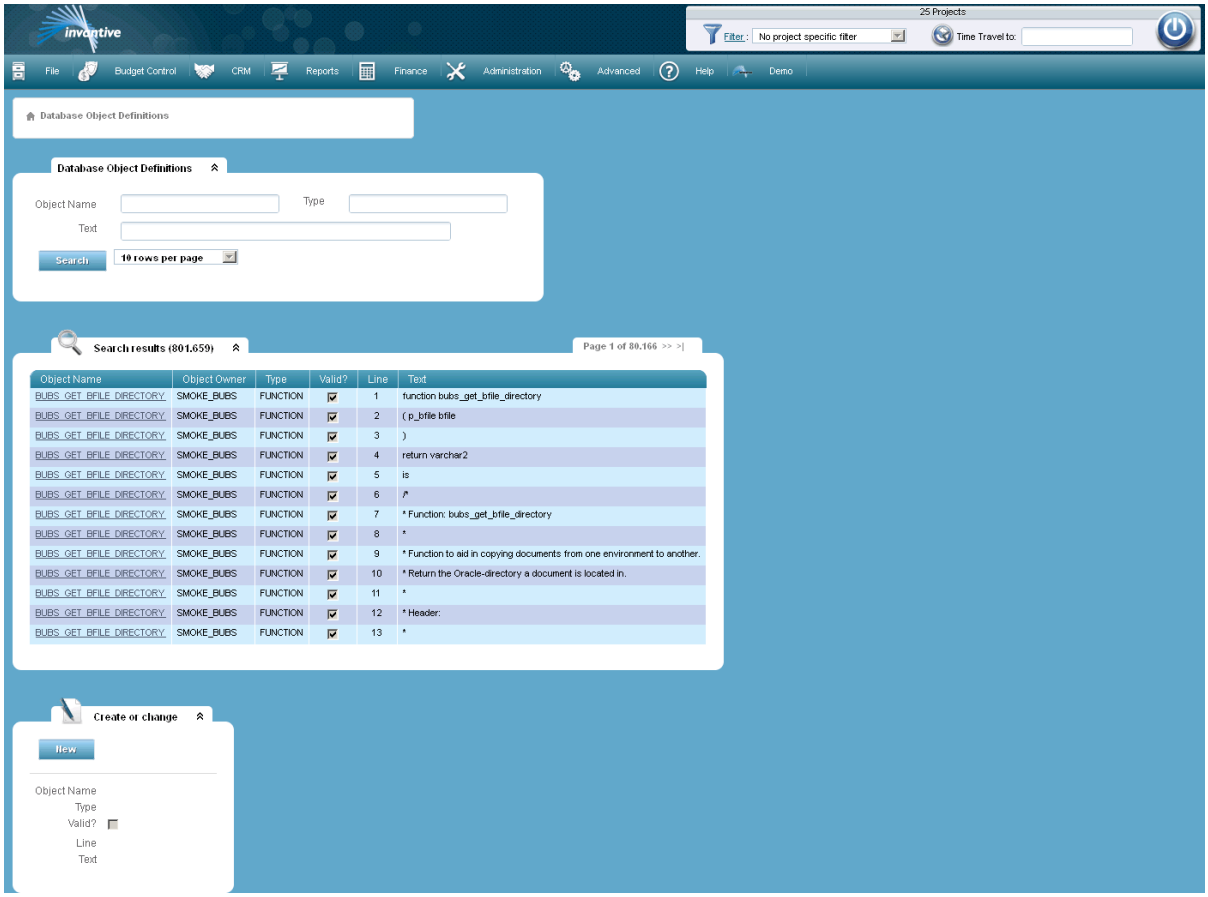


The meaning of the entry fields is:

Name of Object	The name of the object.
Type	The type of object.
Valid?	Is the definition valid or are there errors in the software which cause that it does not compile?
Created at	The time at which the object was stored for the first time.
Date Last Modified	The last time at which the object was changed.

Database Object Definitions

In this screen you can request information on the present database objects (packages) at detail line level in the source code.



The meaning of the entry fields is:

Name of Object	The name of the object.
Object Owner	The database schedule which is the owner of the object.
Type	The type of object.
Valid?	Is the definition valid or are there errors in the software which cause that it does not compile?
Line	The line number of the program.
Text	The statements of the program.

1.4.8.6 Application Development

This section contains information about the functions needed to realize extensions within Invantive Vision. This information is intended only for use by the technical employees of the supplier. Do not use these functions unless you are an employee of the supplier or unless you have been asked to use these function by the support desk of the supplier.

Improper use could make Invantive Vision completely unusable. Without prior approval the supplier can take no responsibility for the correct function of Invantive Vision and you will be charged for possible costs for correction, direct and indirect consequential damage and/or support.

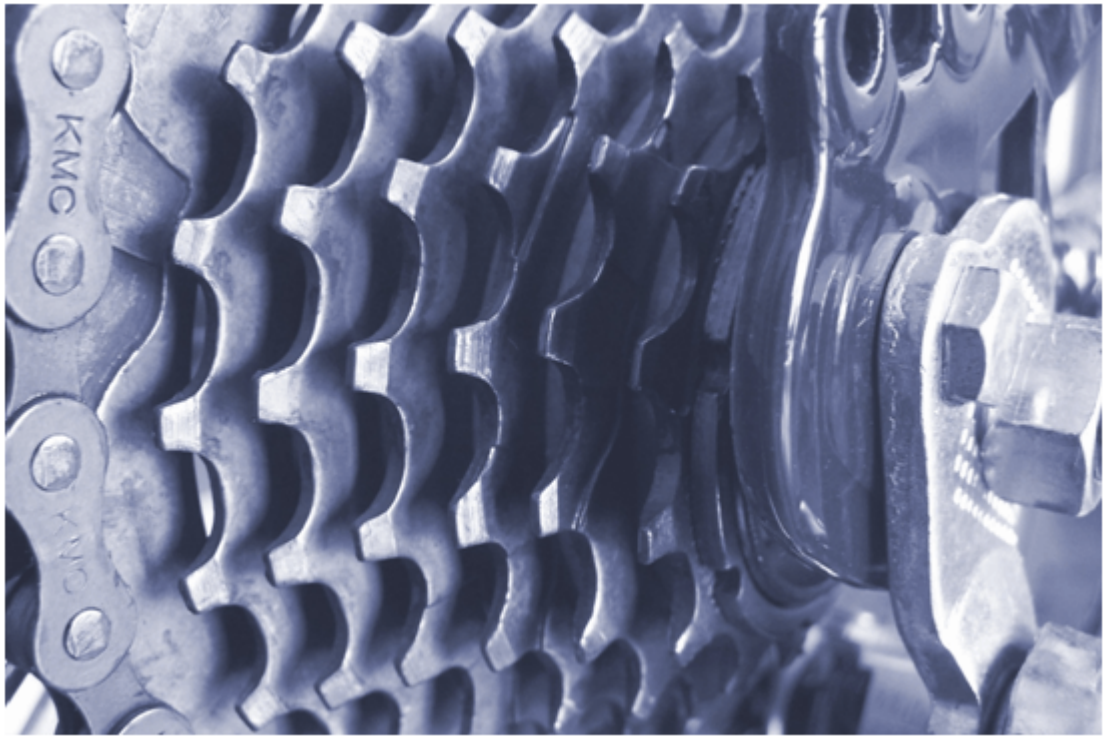
Invantive Producer

This chapter contains information about Invantive Producer. The functions normally can be found under the menu item ‘Invantive Producer’.

Invantive Producer provides two of the three technical layers of Invantive Vision, namely the storage layer with tables and company layer with views and business logic. See also Structure.

Concept

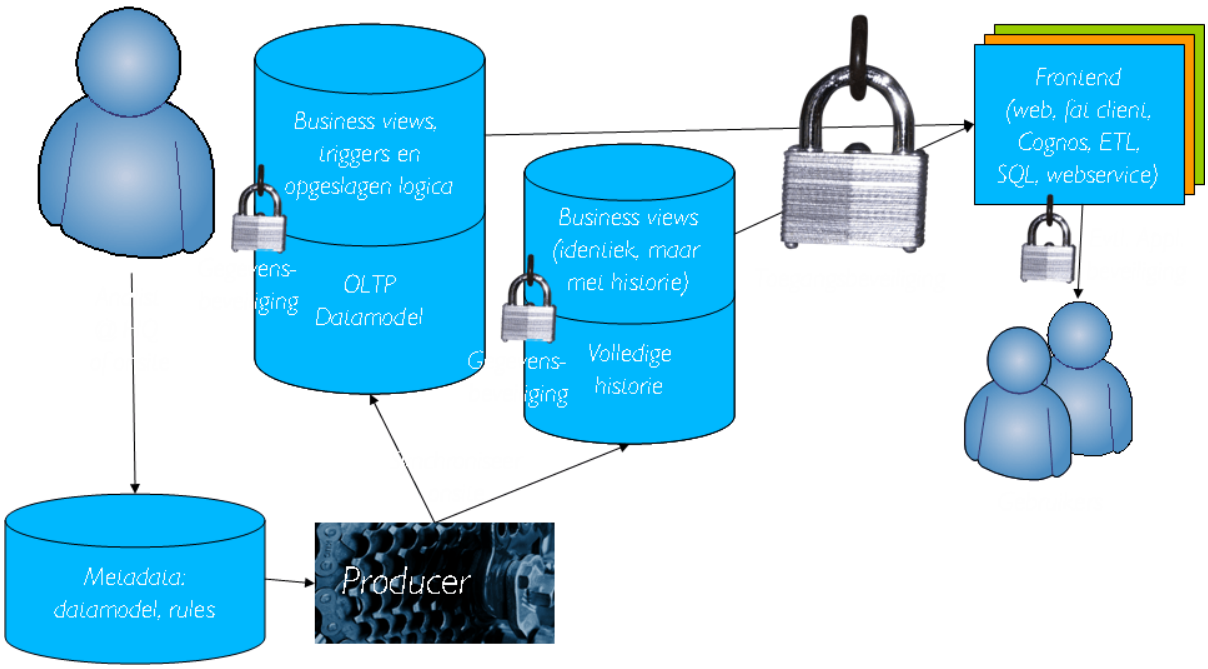
This chapter describes the concepts of Invantive Producer.



Invantive Producer is a tool for developers to build applications that meet the requirements of the financial sector and other sectors with high standards of integrity and accountability. Invantive Producer applications are characterized by:

- being more early ready with construction and testing,
- delivering a consistently high quality product, and
- are flexible to adapt to changing circumstances.

The basis of Invantive Producer is a repository of functional metadata. These metadata describe the normalized data model, the objects of the business and the business rules. Using this metadata, as shown in the figure below, a result will be produced by Invantive Producer Invantive without human intervention.



The result is a three-tier architecture:

- User interface: display of information.
- Business logic: validation, image of actions on the data, business objects.
- Database: the storage of data in tables.

The three-tier architecture separates the functionality and data. The data can be reused or combined with other applications.

The functionality of the result include:

- Normalized data model: single version of the truth.
- Automatic upgrade of the data model between versions.
- Constraints and referential constraints to guard the integrity of the data.
- Data security: users have access only to the information they are allowed to.
- AAA: standard features for authentication, authorization and audit trail.
- Image data to manageable business objects.
- Image of transactions on business objects to the underlying data model.
- Open: focus on data integration, both incoming and outgoing.
- Historical trail with time traveling.
- The result is expandable with handwritten code.

The following simple example shows how, based on a data model and relationships, a business layer is realized:

The business object acme_gebruiker_rollen_v is composed of three elements (for example, registered with use of the screen Views) 301:

- Element 1: acme_gebruiker_rollen, alias grl.
- Element 2: acme_rollen, alias rol, relation: rol.id=grl.rol_id.
- Element 3: acme_gebruikers, alias gbr, relation: gbr.id=grl.gbr_id.

Based on this specification Invantive Producer will produce a database view similar with the following view:

```
create or replace force view acme_gebruiker_rollen_v
as
/*
* Generated by it_install, version:
* $Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
ip-voorbeeld-bedrijfslaag.xml 19891 2012-10-09 13:23:03Z gle3 $
*/
select grl.id                    grl_id
,      grl.orig_system_reference  grl_orig_system_reference
,      grl.datum_intrf_geladen    grl_datum_intrf_geladen
,      grl.datum_intrf_bijgewerkt grl_datum_intrf_bijgewerkt
,      rol.id                     rol_id
,      rol.code                   rol_code
,      rol.omschrijving           rol_omschrijving
,      rol.alle_prjctn_zien_vlag  rol_alle_prjctn_zien_vlag
,      ...
,      gbr.wachtwoord             gbr_wachtwoord
,      gbr.orig_system_reference  gbr_orig_system_reference
,      gbr.datum_intrf_geladen    gbr_datum_intrf_geladen
from   acme_gebruiker_rollen          grl
join   acme_rollen                    rol
on     rol.id = grl.rol_id
join   acme_gebruikers                gbr
on     gbr.id = grl.gbr_id
```

This view can easily be used to present data in the normalized data model as a business object. It is no longer necessary that users of this view have to determine every time again relationships: all information is already available as fields in the business object, even though the information comes from multiple tables.

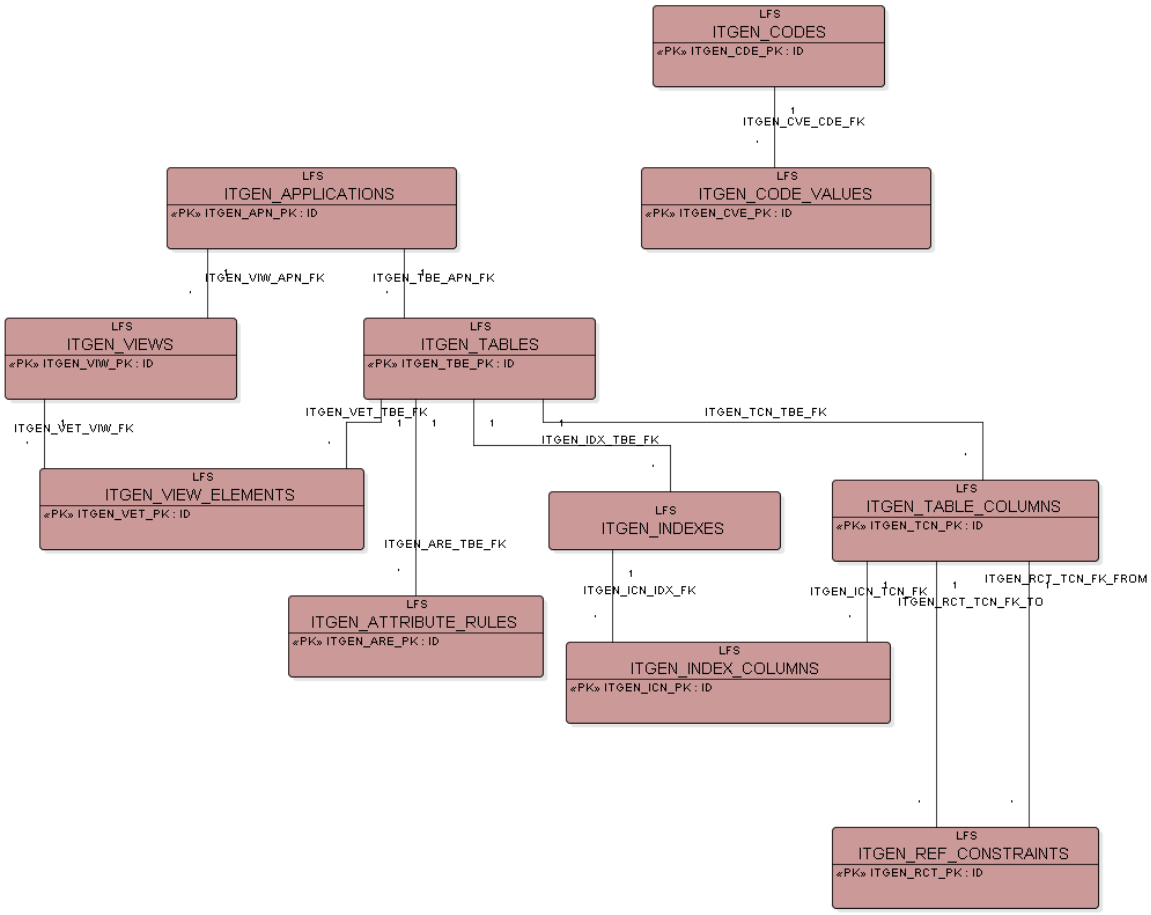
Moreover, the result contains a number of instead-of triggers. These ensure that any changes or additions of data in the view result in the correct actions on the underlying tables:

```
create or replace trigger acme_gebruiker_rollen_ord
instead of delete on acme_gebruiker_rollen_v
for each row
...
begin
  --
  -- Populate the old and new records...
  -- Check the Access Control list for this transaction...
  -- Fill-in default values...
  -- Call the before-delete user hook if available...
  -- Delete from base table...
  --
  delete
  from   acme_gebruiker_rollen grl
  where  1=1
  and    grl.id = l_old.grl_id
  ; ...
  --
  -- Call the after-delete user hook if available.
```

```
    --
    if acme#gebruiker_rollen.has_after_delete
    then
      acme#gebruiker_rollen.after_delete(l_old, l_new);
    end if;
  exception...
  end;
```

The result of Invantive producer is based on metadata defined in the Invantive Producer repository. The Invantive Producer repository will be installed along with an application.

The normalized data model of the Invantive Producer repository is as follows:



Each application has a row in itgen_applications (loading via itgen_applications_v). Normally each application has two rows:

- A row for Invantive Producer.
- A row for the application.

The loading of data into Invantive Producer is done through the business layer. This business layer is produced by Invantive Producer.

After creating the application you specify the data model by loading data in:

- Tables in Itgen_tables_v.
- Columns in Itgen_table_columns_v.
- Indexes in itgen_indexes_v and itgen_index_columns_v.
- Referential constraints in itgen_ref_constraints_v.

Then you specify the business tier:
- Views in itgen_views_v.
- Parts of the view in itgen_view_elements_v.
- Business rules in itgen_attribute_rules_v.

Invantive Producer knows the 'AUTOCOMPLETE' function to complete a basic data model to a production-ready data model. The autocomplete is controlled based on settings in the application and data in the code tables itgen_codes_v and itgen_code_values_v.

You can load the repository via screens or via insert statements. In practice, it is very easy to load the data using a Microsoft Excel worksheet. This worksheet is called default <application code>_metadata.xlsx and creates a control file for SQL * Loader with the name<application code>_metadata.ctl en <application code>_metadata.dat.

After defining the metadata, the data model can be generated with the next statements:

```
begin
  --
  -- Aanmelden op Invantive Producer.
  --
  itgen_session.set_session_info
  ( '<applicatie code> installatie.sql'
  , 'install'
  , 'system'
  , 'various'
  , sys_Filter('userenv', 'ip_address')
  , sys_Filter('userenv', 'host')
  , 'n/a'
  , to_char(sysdate,'yyyymmddhh24miss')
  );
  --
  -- Aanmaken van:
  -- * tabellen
  -- * indexen
  -- * referentiele constraints
  --
  <applicatie code>_install.sync_db_with_metadata;
end;
/
```

These statements ensure that the physical data model will be similar to the data model in the repository. New columns get - if a conversion function is known - automatically a new value.

To generate the business layer, run the following statement:

```
begin
  <applicatie code>_sct_generate.run('&&bubs_usr',
'&&bubs_user_role‘,’&&bubs_user_reader_role');
```

```
end;
/
```

The generation process checks all parts of the business layer to see if changes should be made. This takes approximately 2 to 5 seconds per business object. For large systems this can be slow and hinder the development process. Therefore you can use the following call:

```
begin
  <applicatie code>_sct_generate.run('&&bubs_usr',
'&&bubs_user_role‘,’&&bubs_reader_role', 'PATROON');
end;
/
```

For example consider the following statement to update all business objects with ‘project_saldo_vnr’ in the name:

```
begin
  bubs_sct_generate.run(user, user || '_USER', user ||'_READER',
'project_saldo_vnr');
end;
/
```

Based on a minimum of data input, the function autocomplete of Invantive Producer, will produce and add the necessary requirements to run the application. This usually saves a factor five to ten in volume of work.

The necessary data for autocomplete are:

- Application.
- Tables.
- Table columns with the exception of system columns, but including referential ID columns.
- Natural key indexes and columns.
- Image Function for the view name to the alias via the Invantive Producer code domain ‘<application code>_lov_view_name_to_code’.
- Names of business views.
- Reporting views.
- Business rules.
- Possible extra view elements which cannot be determined automatically. For these views, use serial numbers of 900 or higher.

The autocomplete subsequently performs the following actions:

Cleanup:

- Remove remains of data in the repository that were created previously with the autocomplete function for the selected application.

Add technical fields:

- Create for each table a column ‘ID’ that will be used as primary key if it does not exist already.
- Each table gets a primary key named ‘<application code>_<table alias>_pk’ with the column ‘ID’.

- Create for each table the following audit columns if these do not exist already: creation date, created by, created in, transaction creation, date last updated, last updated by, last updated in, transaction last updated, date created by interface, date updated by interface, initial system group, unique original system reference, free column type and ten free-columns.
- A unique index named '<application code>_<table alias>_uk_orig' is created for the original unique system reference.

LOV-views:

- LOV views for each column in the data model with a name ending with the code column postfix as set in the application (usually 'ind'). The name of the view is based on the application setting View name, in which the occurrences of ':tcn_name' will be replaced by the name of the column, without the code column postfix. The alias of the LOV view will be retrieved from the description of the code value in the code '<application code>_lov_view_name_to_code' in Invantive Producer. The definition of the view is based on the application setting View template, in which the occurrences of ':tcn_name' are being replaced by the name of the column, without the code column postfix.
  For example: The column 'gender_ind' results to a LOV view named '<application code>_lov_gender_r'.
  No LOV view is added if a view with this name already exists.
- For each LOV view an artificial table will be rendered, so LOV views can also be used to establish relationships.
- For each LOV view also a referential constraint will be created between the artificial table and the related column.

Referential constraints and related indexes:

- A referential constraint is added for each column that begins with three letters and ends in '_id' of '_id_'. The three letters are used to determine the appropriate table.
- Referential indexes are added for each column that refers to a different table.

Business Objects

- For each table a business object will be created which contains all the tables to which this table refers directly or indirectly.

To use Invantive Producer you will need:

- Oracle RDBMS for data storage, metadata and business tier.

The performance of Invantive Producer is based on a duo core workstation:

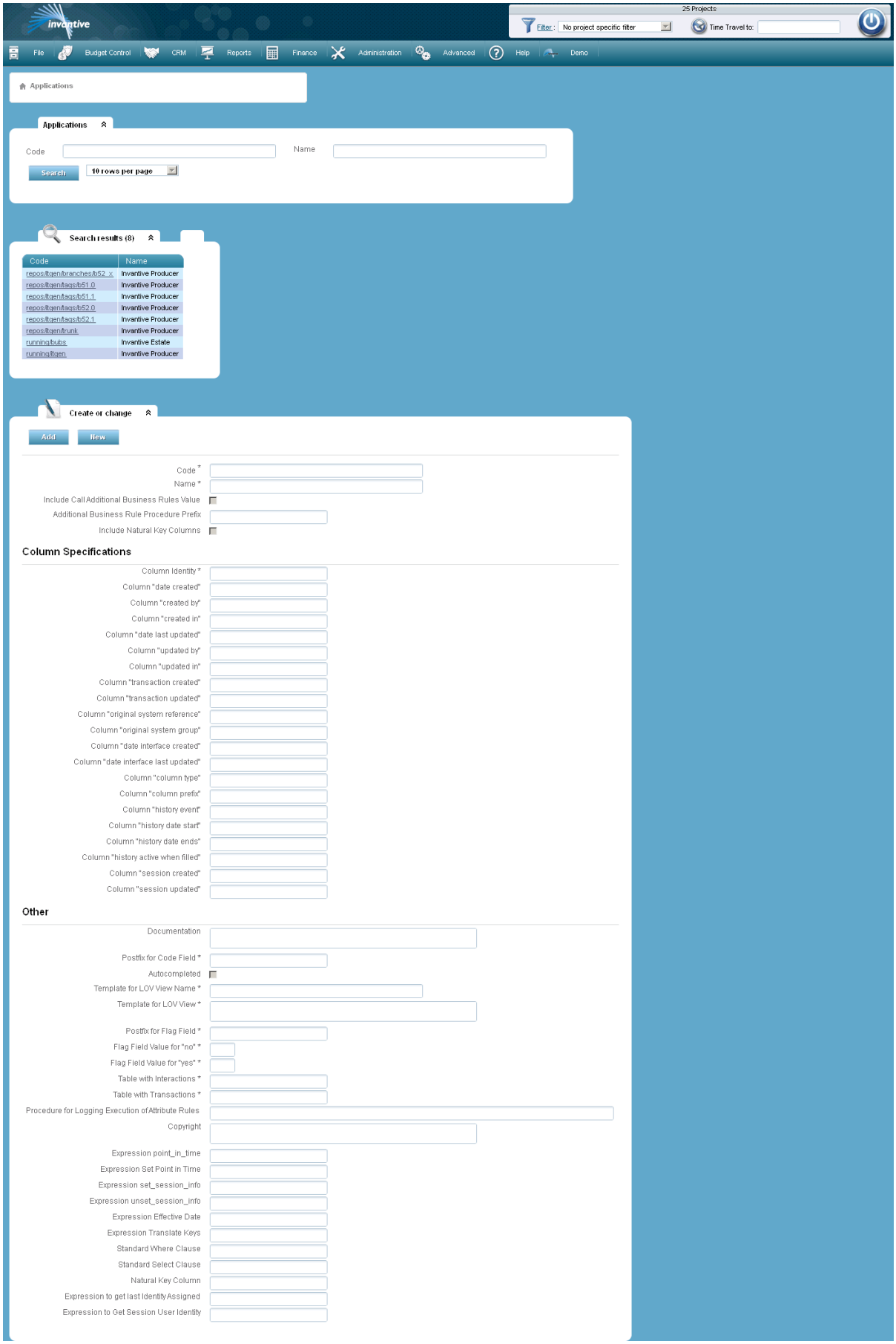
- Full production of 125 business objects with over 3,000 database objects and 240,000 code lines: 20 minutes.
- Incremental production with a few changes: a few seconds.
- Typical number of business transactions pro minute > 15.000 tpm. Less in case of complex business rules.
- Manual coding: usually <2%.

Applications

In this form you can register and change applications.

An application is a coherent group of data and functions.

The registration of applications is a typical activity for application developers. See the warning under Application Development 282.



The meaning of the entry fields is:

General	
Code	The code which refers to the application.
Name	The name of the application.
include call additional business rules	The business tier gets requests for the application specific extensions when checked. See Additional Business Rules 266.
Prefix procedure additional business rule	The prefix of the name of the packages for the application specific extensions. To call these extensions, the prefix is combined with the table alias and '.fill_defaults'. See Additional Business Rules 266.
Include Natural Key Columns	
Column Specifications	
Column Identity	Code used to identify (uniquely) the row.
Column 'date created'	The name of the column that is automatically filled by Invantive Producer with the date a row was added.
Column 'created by'	The name of the column automatically filled by Invantive Producer, showing the name of the user who added the row.
Column 'created in'	The name of the column automatically filled by Invantive Producer, showing the name of the function in which a row was added.
Column 'date last update'	The name of the column that is automatically filled by Invantive Producer with the date on which last row was calculated.
Column 'updated by'	The name of the column that is automatically filled by Invantive Producer with the name of the user that calculated the last row.
Column 'updated in'	The name of the column that is automatically filled by Invantive Producer with the name of the function which calculated the last row.
Column 'transaction created'	The name of the column automatically filled by Invantive Producer with the number of the transaction which added the row.
Column 'transaction updated'	The name of the column that is automatically filled by Invantive Producer with the number of the transaction which calculated the last row.
Column 'original system reference'	The name of the column used to register a uniquely reference to a possible supplying system.
Column 'original system group'	The name of the column used to register a non-unique reference to the supplying system.
Column 'date interface created'	The name of the column used to store the data on which a row was added using the interface.
Column 'date interface updated'	The name of the column used to store the data on which the last row was calculated using the interface.
Column 'column type'	The name of the column used to define the structure of the free columns.
Column 'column prefix'	The prefix of the name of the columns used as free columns. The full column name consists of the prefix and the serial number.
Column 'history event'	The name of the column in a history table that is automatically filled by Invantive Producer with the type of change in the current table. See Historical Storage.
Column 'history date start'	The name of the column in a history table, automatically filled out by Invantive Producer with the date on which a row became current.
Column 'historical date ends'	The name of the column in a history table, automatically filled out by Invantive Producer with the date on which a row became non-current.
Column 'history active when filled'	The name of the column in a history table that is automatically filled out by Invantive Producer with 'Y' if the current row is current.
Column 'session created'	The name of the column where the session which was created is saved.
Column 'session updated'	The name of the column where the session which was updated is saved.
Other	
Documentation	Documentation of the application.
Postfix for Code Field	Postfix added to the field name if the field contains code.
Autocompleted	Indicates if typed text will be completed in case the text was entered before into the application.
Template for LOV View Name	Determines the format of the name list of LOV views.
Template for LOV View	Determines the format of the list of LOV views.
Postfix for flag field	Postfix added to the name of an indicator field.
Flag field value for 'no'	Value which is registered if an indicator is negative.

Flag field value for 'yes'	Value which is registered if an indicator is positive.
Table with Interactions	Name of the table which contains the Interactions 236.
Table with Transactions	Name of the table that contains the Transactions 235.
Procedure for Logging Execution of Attribute Rules	Name of the procedure that registers the execution of attribute rules.
Copyright	Displays the legal person who has the exclusive copyrights on the software.
Expression point_in_time	
Expression Set Point in Time	
Expression set_session_info	
Expression unset_session_info	
Expression Effective Date	
Expression Translate Keys	
Standard Where Clause	
Standard Select Clause	
Natural Key Column	
Expression to get last Identity Assigned	
Expression to Get Session User Identity	

Tables

In this screen you can register and change tables.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Tables

Tables

Application | Code | Name

Search | 10 rows per page

Search results (262)

Page 1 of 27 >> >|

Application	Code	Name	Default Reference Columns
running/bubs	ale	bubs_afleesmethodes	id,code,omschrijving
running/bubs	ame	bubs_aggregatie_methodes	id,code,omschrijving
running/bubs	aml	bubs_ame_regels	id,aantal_eenheden,label_expressie
running/bubs	aoe	bubs_aanvragen_ojt_actie	id,seq
running/bubs	ard	bubs_ame_regels_prod	id,ame_code,aml_min_dagen,aml_max_dagen
running/bubs	atg	bubs_aanvragen_toegang	id,seq,naam
running/bubs	bce	bubs_btw_codes	id,code,omschrijving,btw_percentage
running/bubs	bee	bubs_bestand_extensies	id,code,omschrijving
running/bubs	bjb	bubs_background_jobs	id,seq,datum_start,status_ind,sessie_aangemaakt
running/bubs	bnk	bubs_banken	id,code,omschrijving
running/bubs	brt	bubs_berichten	id,seq,ontvanger
running/bubs	btn	bubs_betaaltermijnen	id,code,koppel_ind,omschrijving,aantal_dagen
running/bubs	bvd	bubs_berekende_velden	id,viw_id,naam_kolom,waarde_expressie

Create or change

Add | New

Application * Select Value
Code *
Name *
Legacy Name
Default Reference Columns
Label Singular *
Label Plural *
Label Singular when Referenced *
Label Plural when Referenced *
Create ☑
Interface? ☑
Maintain History? ☑
Show History? ☐
Number of Rows
Definition *
Example *
Documentation
User May Select ☐
User May Insert ☐
User May Update ☐
User May Delete ☐
Data Category * Select Value

Table Columns (0)

No records

Name	Data Type	Nullable	Definition

Create or change

Add | New

Application * Select Value
Name *
Legacy Name
Data Type * Select Value
Data Length
Data Length Type
Data Precision
Data Scale
Label Singular
Label Plural
Label Singular when Referenced
Label Plural when Referenced
Create ☑
Definition *
Example *
Added in Version * A001
Conversion
Documentation
Nullable ☐
Display in Filter ☐
Display in Search Results ☐
Display in LOV ☐
Display in Record ☐
Expression Default Value

The meaning of the entry fields for a table is:

Application	The application of which the table is part.
Code	The code with which is refered to the table. Usually, three-letter codes are used.
Name	The name of the table.
Legacy Name	The name of the table in an earlier stage.
Default Reference Columns	By default all reference columns from the table are included. If you would like you can include an other list of columns. Then, the reference columns are not included. If you use a '+' in the list of reference columns, all reference columns of the table will be included.
Label singular	The label of the table if the data is used in singular, for example 'Project'. It is also possible to use resources.
Label Plural	The label of the table if the data is used in plural, for example 'Projects'. It is also possible to use resources.
Label Singular when Referenced	Reference to resource if the data is used in singular.
Label plural when Referenced	Reference to resource if the data is used in plural.
Create	Checked in case the index must be included in the database.
Interface?	The table can be accessed via the web user interface if checked.
Maintain History?	The history of the table will be maintained if checked.
Show History	The history will be displayed if checked.
Number of Rows	The number of rows of the table.
Definition	Definition of the data visible in the table.
Example	An example of the data in the table.
Documentation	Documention about the table.
User May Select	Checked in case the application user is allowed to read data from this table.
User May Insert	Checked in case the application user is allowed to add data to this table.
User May Update	Checked in case the application user is allowed to update data from this table.
User May Delete	Checked in case the application user is allowed to delete data from this table.
Data Category	Data category of the table.

The meaning of the entry fields for a table column is:

Application	The application of which the column is part of.
Name	The name of the column.
Legacy Name	The name of the column in an earlier stage.
Data Type	The column data type.
Data Length	The maximum length of the data type.
Data Length Type	The data length type
Data Precision	The maximum number of digits in a number for a numeric data type.
Data Scale	The number of decimal places in a number.
Label singular	The label of the column if the data is used in singular.
Label Plural	The label of the column if the data is used in plural.
Label Singular when Referenced	Reference to resource if the data is used in singular.
Label plural when Referenced	Reference to resource if the data is used in plural.
Create	Checked in case the column is included in the database.
Definition	Definition of the data visible in the column.
Example	An example of the data in the column.
Add Purchase Order	Here you can indicate the sequence of the column in the table.
Conversion	Possible conversion applied to the data in the column.
Documentation	Documention concerning the column.
Nullable	The column does not need to contain a value if checked.
Show in search filter	The values of the column are displayed in the search filter if checked.

Show in search results	The values of the column are displayed in the search results if checked.
Show in value list	The values of the column are displayed in a list of values if checked.
Show in record	The values of the column are displayed in a record if checked.
Expression Default Value	

Attribute Rules

In this form you can register and change attribute rules.

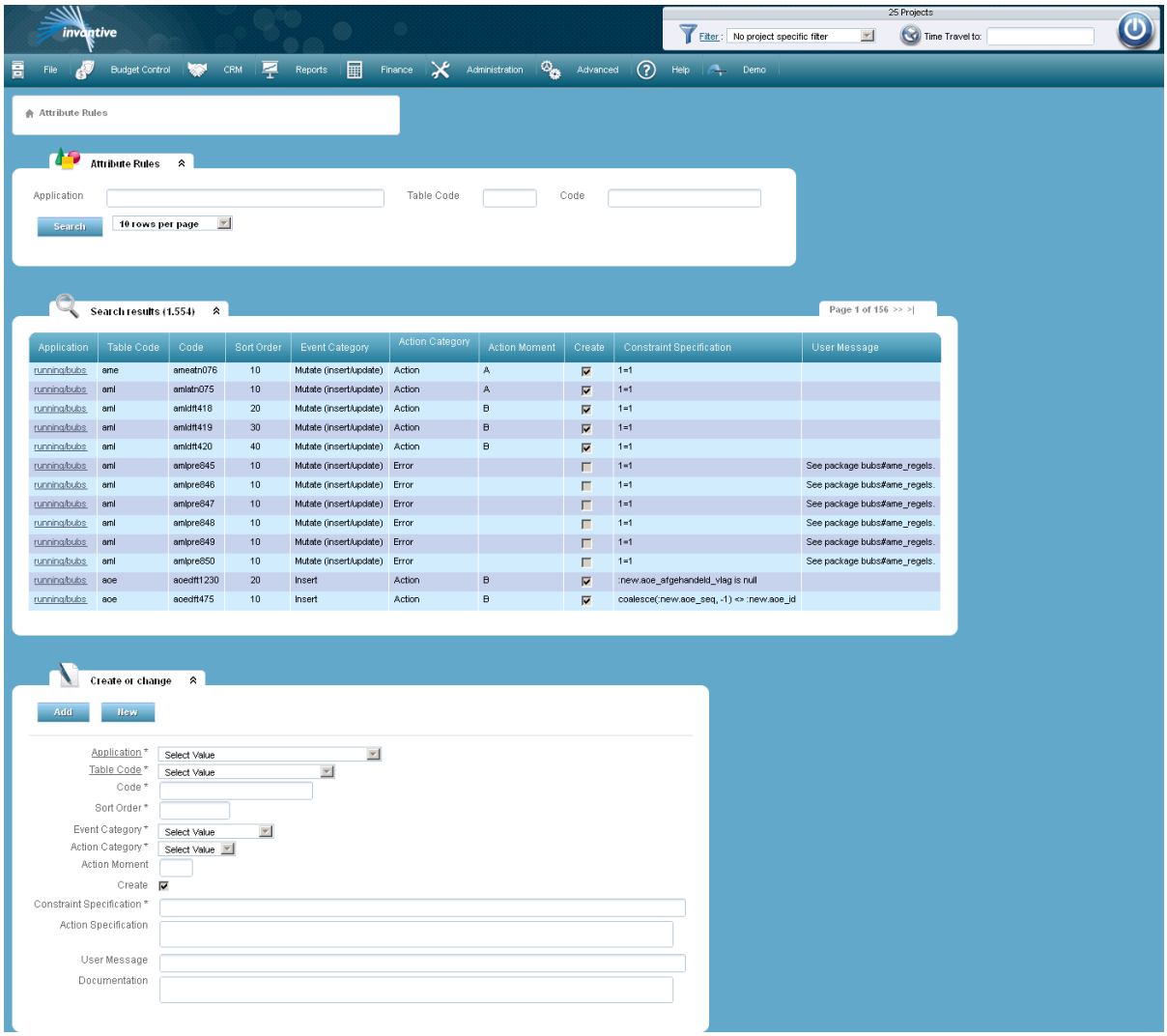
An attribute rule is a specification of a business rule. There are two types of attribute rules:

- checks on validity: attribute rules that impose requirements on data to approve them. Examples are 'the amount of the invoice line must be different than 0' or 'the user being the task owner must have checked the task owner flag'.
- actions: actions are pieces of programs being executed under special conditions.

Actions can be classified in two sorts of actions:

- actions being executed before a changed piece of data is stored, for example, when entering the default or constant values in fields.
- actions being executed after a changed piece of data is stored, for example, when sending an email.

The registration of attribute rules is a typical activity for application developers. See the warning under Application Development 282.



The meaning of the entry fields is:

Application	The application of which the attribute rule is part.
Table Code	The table and the related business view of which the attribute rule is part of.
Code	The unique code of an attribute rule.
Sort Order	A numeric value used to sort the referential rules in terms of sequence of execution.
Event Category	The sort of event that triggers the processing of the attribute rule. The following events can occur: • A: Every event (edit, add or delete) • M: Mutation (edit or delete) • I: add • U: edit • D: delete
Action Category	The action category. The following kinds of actions can occur: • E: validity check. • A: action.
Action Moment	Has meaning only if the action category 'Action' is selected. The moment on which an action is executed: before or after executing the event.
Create	Checked in case the attribute rule needs to be included in the business layer.
Constraint Specification	Limiting condition which needs to be met aside of the event category, expressed as a SQL where clause. You can refer to the table's respective row with the following texts: • ': old': the value of the row before the event (empty in case of adding). • ': new': the value of the row after the event (empty in case of deleting) • ': last': the last known value of the row (equivalent to ': new' in case of adding or changing and equal to ': old' in the case of deleting). • ': event': the type of event, with the following possible values: 'insert', 'update' and 'delete'.
Action Specification	Has meaning only if the action category 'Action' has been selected. Specification in the PL/SQL of the to be executed action. You can refer to the table's respective row with the following texts: • ': old': the value of the row before the event (empty in case of adding). • ': new': the value of the row after the event (empty in case of deleting) • ': last': the last known value of the row (equivalent to ': new' in case of adding or changing and equal to ': old' in the case of deleting). • ': event': the type of event, with the following possible values: 'insert', 'update' and 'delete'.
User Message	Has meaning only if the action category 'Validity Check' has been selected. The message which warns you, in case the row does not meet the validity check.
Documentation	Documentation of the attribute rule.

Attribute rules offer many options. Below are some examples.

Enter an amount greater or less than 0 for a contract.

Action category: E

Specification: :last.odt_bedrag_verlening is null or :last.odt_bedrag_verlening<>0

Other: None.

Only óne row of settings is allowed.

Action category: E

Specification: :last.isg_seq = 1

Other: Make a unique index on column 'seq'.

A role can only have the rights to change all projects when the role also has the rights to see all projects.

Action category: E

Specification: :last.rol_alle_prjctn_wijzigen_vlag = ‘N’ or (:last.rol_alle_prjctn_wijzigen_vlag = ‘Y’ and :last.rol_alle_prjctn_zien_vlag = ‘Y’)

Other: None.

The project type cannot be changed to Master Project in case a project has costs categories, revenues, orders, invoice rules, last estimates or contract budgets.

Action category: E

Specification: :last.pjt_projectvorm_ind in (‘S’, ‘I’) or (:last.pjt_projectvorm_ind = ‘M’ and not exists (select 1 from bubs_kostenplaatsen_v where pjt_id = :last.pjt_id))

Other: None.

This cost type prefix is used already in this master project.

Action category: E

Specification: (:last.pjt_projectvorm_ind in (‘M’, ‘I’) or (:last.pjt_projectvorm_ind = ‘S’ and not exists (/* Another subproject of the same master project with the same prefix. */ select 1 from bubs_projecten_v where pjt_projectvorm_ind =‘S’ and pjt_code <> :last.pjt_code and hpt_code = :last.hpt_code and pjt_volgnummer_prefix = :last.pjt_volgnummer_prefix)))

Other: None.

New access requests always have an open status.

Action category: A

Action moment: B

Specification: 1=1

Action specification: :new.atg_afgesloten_vlag := ‘N’;

Other: None.

Send an email when a process is changed.

Action category: A

Action moment: A

Specification: 1=1

Action specification: bubs#processen.send_message(:old, :new, :last);

Other: None.

If possible, change the status of the background process from F (input parameters) to P (planned) when a parameter is updated.

Action category: A

Action moment: B

Specification: 1=1

Action specification: update bubs_background_jobs_v set bjb_status_ind='P' where 1=1 and bjb_status_ind='F' and bjb_id = :new.bjb_id;

Other: None.

Indexes

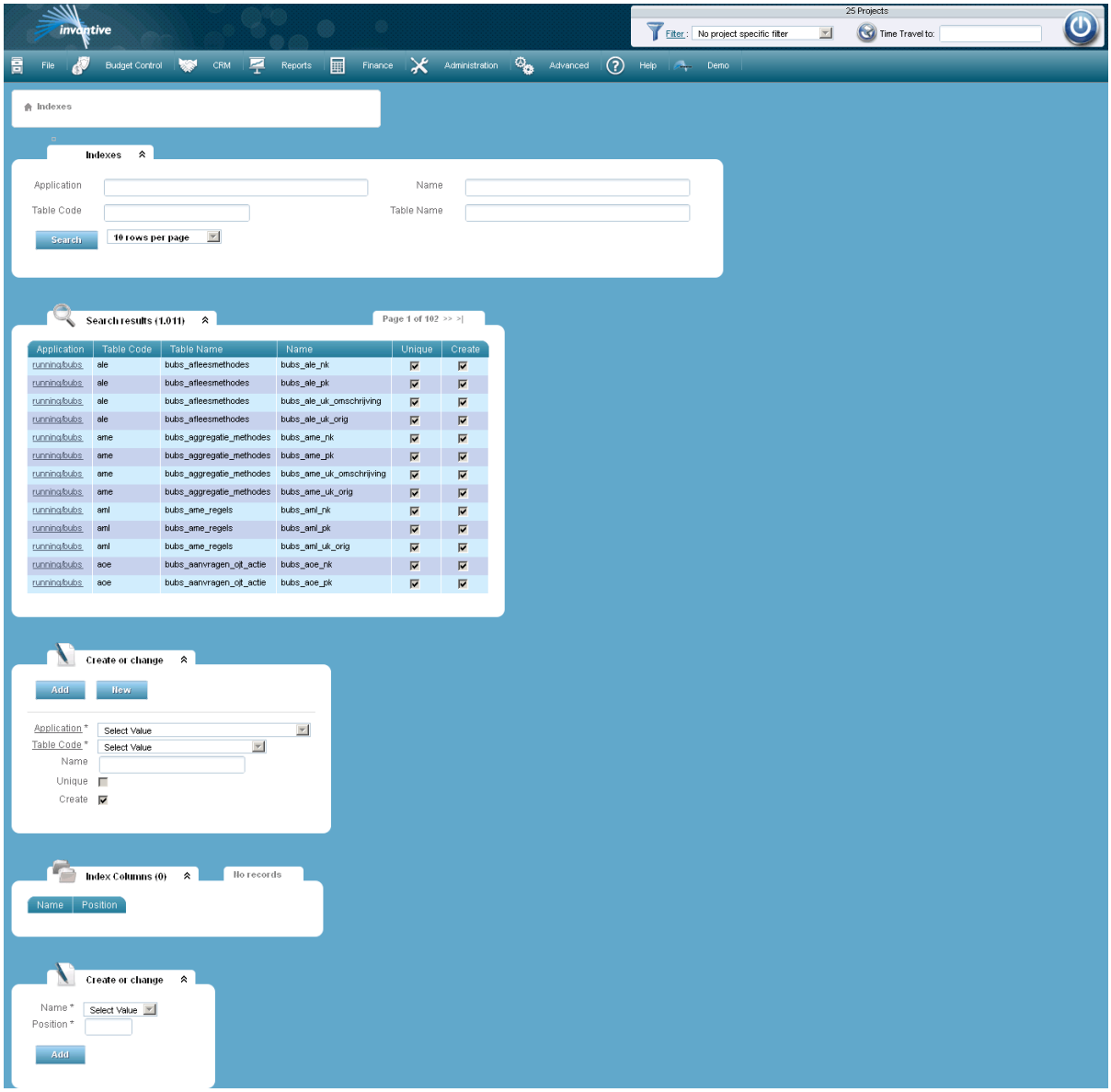
In this form you can register and change indexes.

An index is a quick access path to the data stored in a table. Multiple indexes can be uploaded per table.

There are two kinds of indexes:

- Unique indexes: act as a constraint on the table by preventing duplicate entries in the index and thus in the backing table. Unique indexes are used to protect the uniqueness of the artificial key as defined in the column 'id'. The index then has a name in the format '<application>_<table alias>_pk'. Unique indexes are also used to guarantee the unicity of the natural keys. A natural key index will have a name in the format '<application>_<table alias>_nk' for a primary unique natural key and '<application>_<table alias>_uk_<column>' for all other natural keys.
- Non-unique indexes: these are indexes used to quickly find data in a table. The most common non-unique index is the referential index: for each referential column '<table alias>_id_<possible postfix>' exists an index with the name '<application>_<table alias>_<possible postfix>'.

The registration of indexes is a typical activity for application developers. See the warning under Application Development 282.



The meaning of the entry fields for indexes is:

Application	The application of which the index is part of.
Table Code	The table of which the index is part of.
Name	The name of the index.
Unique	Checked in case the index is unique.
Create	Checked in case the index needs to be included in the database.

The meaning of the entry fields for indexes is:

Name	The name of the column.
Position	The number of the position of the column in the index.

Business Objects

In this form you can register and change views.

A view is a business object or a reporting object.

A view is a prepared collection of data from one or more tables.

There are two kind of views:

- reporting views: views only used for retrieving data. Their name is ‘<application>_<name>_r’.
- Business views: view in a logical format for organizational activities for loading and changing data. Their name is ‘<application>_<name>_v’.

Reporting views are specified as SQL text, while business views are a collection of view elements per used table.

The registration of views is a typical activity for application developers. See the warning under Application Development 282.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Business Objects

Business Objects

Application | Code | Name

Search | 10 rows per page

Search results (644)

Page 1 of 65 >> >|

Application	Code	Name	Label Singular	Label Plural	Label Singular when Referenced	Label Plural when Referenced	Create	Hard Coded	Definition
running/bubs	acr_r	bubs_asterisk_cdr_r	{res:bubs_asterisk_call_data_record}	{res:bubs_asterisk_call_data_record}	{res:bubs_asterisk_call_data_record}	{res:bubs_asterisk_call_data_record}	☑	☑	View to load data from Asterisk into Estate.
running/bubs	adt_r	bubs_alle_documenten_r	{res:bubs_all_documents}	{res:bubs_all_documents}	{res:bubs_all_documents}	{res:bubs_all_documents}	☑	☑	All documents in the system. It shows even tasks for which the current user has no access. Therefore, the amount of information is limited. It is intended for use in subfunctions, which is generally accessed by application administrators.
running/bubs	ale	bubs_afleesmethodes_v	{res:bubs_property_determination_method}	{res:bubs_property_determination_methods}	{res:bubs_property_determination_method}	{res:bubs_property_determination_methods}	☑	☐	Business view for BUBS_AFLEESMETHODES.
running/bubs	ale_r	bubs_ale_picklist_r	{res:bubs_property_determination_method}	{res:bubs_property_determination_methods}	{res:bubs_property_determination_method}	{res:bubs_property_determination_methods}	☑	☑	Reporting view for use a picklist of unit property determination methods available in the GUI.
running/bubs	ame	bubs_aggregatie_methodes_v	{res:bubs_aggregation_method}	{res:bubs_aggregation_methods}	{res:bubs_aggregation_method}	{res:bubs_aggregation_methods}	☑	☐	Business view for BUBS_AGGREGATIE_METHODES.
running/bubs	ame_r	bubs_ame_picklist_r	{res:bubs_aggregation_method}	{res:bubs_aggregation_methods}	{res:bubs_aggregation_method}	{res:bubs_aggregation_methods}	☑	☑	Reporting view for use a picklist of aggregation methods in the GUI.
running/bubs	aml	bubs_ame_regels_v	{res:bubs_aggregation_method_line}	{res:bubs_aggregation_method_lines}	{res:bubs_aggregation_method_line}	{res:bubs_aggregation_method_lines}	☑	☐	Business view for BUBS_AME_REGELS.
running/bubs	aml_r	bubs_aml_picklist_r	{res:bubs_aggregation_method_line}	{res:bubs_aggregation_method_lines}	{res:bubs_aggregation_method_line}	{res:bubs_aggregation_method_lines}	☑	☑	Reporting view for use a picklist of aggregation method lines in the GUI.
running/bubs	aoe	bubs_aanvragen_oj_actie_v	{res:bubs_requested_object_action}	{res:bubs_requested_object_actions}	{res:bubs_requested_object_action}	{res:bubs_requested_object_actions}	☑	☐	Business view for BUBS_AANVRAGEN_OJT_ACTIE.
running/bubs	apg_r	bubs_apg_r	{res:bubs_project_authorisations_per_person}	{res:bubs_project_authorisations_per_person}	{res:bubs_project_authorisations_per_person}	{res:bubs_project_authorisations_per_person}	☑	☑	Project autorisations per user.
running/bubs	apt	bubs_alle_projecten_r	{res:bubs_all_projects}	{res:bubs_all_projects}	{res:bubs_all_projects}	{res:bubs_all_projects}	☑	☑	All projects in the system. It shows even projects for which the current user has no access. Therefore, solely the project code is shown. Typically used to allow the Outlook add-in to give appropiate errors.
running/bubs	apt_r	bubs_tak_picklist_r	{res:bubs_task}	{res:bubs_tasks}	{res:bubs_task}	{res:bubs_tasks}	☑	☑	Reporting view for use a picklist of all tasks in the GUI.
running/bubs	ap1_r	bubs_apg_s1_r	{res:bubs_project_authorisations_per_person}	{res:bubs_project_authorisations_per_person}	{res:bubs_project_authorisations_per_person}	{res:bubs_project_authorisations_per_person}	☑	☑	Users with access to all projects.

Create or change

Add | New

Application * Select Value
Code *
Name *
Label Singular
Label Plural
Label Singular when Referenced
Label Plural when Referenced
Additional Where Clause
Additional Select Clause
Order by Clause
Create ☑
Hard Coded ☑
Optimizer Hint
Definition *
Example *
Documentation
User May Select ☐
User May Insert ☐
User May Update ☐
User May Delete ☐
Hard Coded Definition

View Elements (0)

No records

Sequence	Table Code	Table Name	Table Alias	Column Name	Joined Table Alias	Joined Column Name	Left Outer Join	Additional Where Clause

Create or change

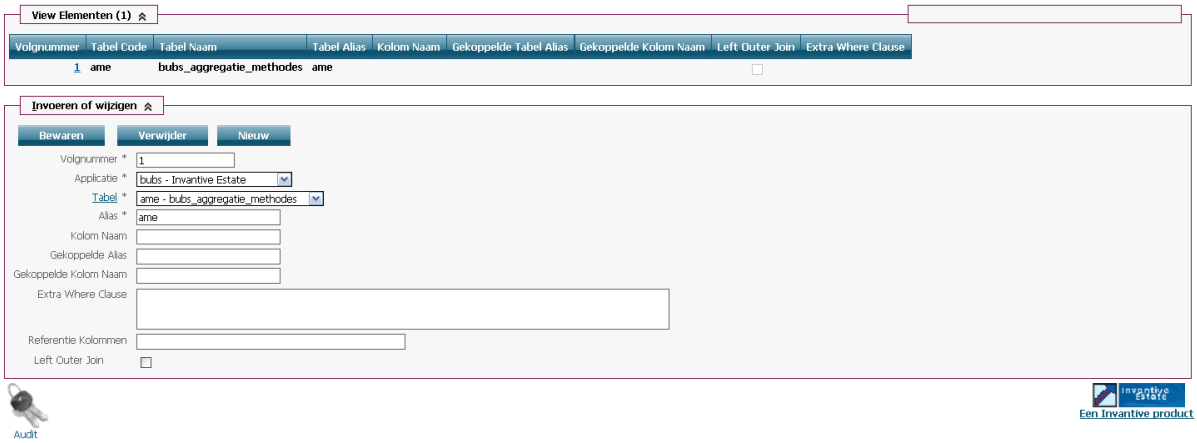
Add | New

Sequence *
Application * Select Value
Table * Select Value
Alias *
Column Name
Joined Alias
Joined Column Name
Additional Where Clause
Reference Columns
Left Outer Join ☐

The meaning of the entry fields is:

Application	The application of which the view is part of.
Code	The code with which is referred to the view. Usually, three-letter codes are used.
Name	The name of the view.
Label singular	The label of the view when the data is used in singular, for example 'Project'. It is also possible to use resources.
Label Plural	The label of the view when the data is used in plural, for example 'Projects'. It is also possible to use resources.
Label Singular when Referenced	Reference to resource if the data is used in singular.
Label plural when Referenced	Reference to resource if the data is used in plural.
Additional Where Clause	An extra limitation to the data visible in the view. In the format of a 'SQL where clause'.
Additional Select Clause	An extra list of columns, expressed as SQL, available in the column list of the view.
Order by Clause	An ordering of the data in the view. Expressed as SQL. Do mind: use the 'order by clause' for simple views only. Applying this to complex views might lead to performance reduction.
Create	Checked in case the view needs to be included in the database.
Hard Coded	
Optimizer Hint	A hint for the view, expressed in SQL.
Definition	Definition of the data visible in the view.
Example	An example of the data in the view.
Documentation	Documentation concerning the view.
User May Select	Checked in case the application user is allowed to read data from this view.
User May Insert	Checked in case the application user is allowed to add data from this view.
User May Update	Checked in case the application user is allowed to update data from this view.
User May Delete	Checked in case the application user is allowed to delete data from the view.
Hard Coded Definition	The possible hard coded definition. Only for reporting views. For business views use view elements (see below).

A business view can consist of multiple view elements, whereby each view element will be a table or a 'pseudo table' for a report view that will be joined in the business object:



Sequence	A view consists of several view elements. The sequence indicates on what position the view element is included in the view. Usually, the base table gets the lowest sequence.
Application	The application of which the view element is part of.
Table	The name of the table forming the view element.
Alias	The alias for the data in the table. Usually this will be the same as the table alias, but in case a table is used in more locations in a business view, every location will get a different alias.
Column Name	The name of the column on which the join is built.

Joined Alias	The alias of the table with which the view element is joined.
Joined Column Name	The name of the column used to make the join.
Additional Where Clause	An extra where clause, expressed in SQL.
Reference Columns	By default all reference columns from the table are included. If you would like you can include an other list of columns. Then, the reference columns are not included. If you use a '+' in the list of reference columns, all reference columns of the table will be included.
Left outer join	Checked if a left outer join should be used.

Referential Constraints

This screen lets you record and referential rules change.

A referential constraint is a connection between the data in two tables.

The registration of referential constraints is typically an activity for application developers. See the warning under Application Development 282.

Internal Error

Internal server error.

Please contact your application administrator.

Reason: 500: Internal server error.
URL: http://tst.estate.invantive.com/smoke_bubs/itgen_rct_all.do
Login: system
Time: 15-11-2012 21:02:10
Servlet: controller

Message:
```
java.lang.RuntimeException: SQL Error on RawCommand

Statement:
RawCommand sql='SELECT RCT_NAME, RCT_ROLE_LABEL, RCT_SORTING_ORDER, APN_FROM_CODE, TBE_FROM_CODE, TCN_FROM_NAME, APN_TO_CODE, TBE_TO_CODE, TCN_TO_NAME,
RCT_CREATE_FLAG, RCT_DISPLAY_FLAG, RCT_NK, RCT_ID
FROM ITGEN_REF_CONSTRAINTS_V (SQL_Where) (SQL_OrderBy)'
         where='null'
         order='RCT_NAME'
      countSql='SELECT COUNT(*)
FROM ITGEN_REF_CONSTRAINTS_V'
     sqlString='SELECT RCT_NAME, RCT_ROLE_LABEL, RCT_SORTING_ORDER, APN_FROM_CODE, TBE_FROM_CODE, TCN_FROM_NAME, APN_TO_CODE, TBE_TO_CODE, TCN_TO_NAME,
RCT_CREATE_FLAG, RCT_DISPLAY_FLAG, RCT_NK, RCT_ID
FROM ITGEN_REF_CONSTRAINTS_V  ORDER BY RCT_NAME'
      startPos='1'
     fetchSize='13'
    connection='bubs_tomcat'
Parameters:none


Exception:
java.sql.SQLSyntaxErrorException: ORA-00904: "RCT_ROLE_LABEL": ongeldige ID

 at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:445)
 at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:396)
 at oracle.jdbc.driver.T4C8Oall.processError(T4C8Oall.java:879)
 at oracle.jdbc.driver.T4CTTIfun.receive(T4CTTIfun.java:450)
 at oracle.jdbc.driver.T4CTTIfun.doRPC(T4CTTIfun.java:192)
 at oracle.jdbc.driver.T4C8Oall.doOALL(T4C8Oall.java:531)
 at oracle.jdbc.driver.T4CPreparedStatement.doOall8(T4CPreparedStatement.java:207)
 at oracle.jdbc.driver.T4CPreparedStatement.executeForDescribe(T4CPreparedStatement.java:884)
 at oracle.jdbc.driver.OracleStatement.executeMaybeDescribe(OracleStatement.java:1167)
 at oracle.jdbc.driver.OracleStatement.doExecuteWithTimeout(OracleStatement.java:1289)
 at oracle.jdbc.driver.OracleStatement.doScrollExecuteCommon(OracleStatement.java:4692)
 at oracle.jdbc.driver.OraclePreparedStatement.doScrollPstmtExecuteUpdate(OraclePreparedStatement.java:10458)
 at oracle.jdbc.driver.OraclePreparedStatement.executeInternal(OraclePreparedStatement.java:3582)
 at oracle.jdbc.driver.OraclePreparedStatement.executeQuery(OraclePreparedStatement.java:3628)
 at oracle.jdbc.driver.OraclePreparedStatementWrapper.executeQuery(OraclePreparedStatementWrapper.java:1493)
 at com.codecharge.db.RawCommand.getRows(RawCommand.java:353)
 at itgen_rct_all.ITGEN_REF_CONSTRAINTS_VDataObject.load(ITGEN_REF_CONSTRAINTS_VDataObject.java:115)
 at itgen_rct_all.itgen_rct_allAction$ITGEN_REF_CONSTRAINTS_VClass.read(itgen_rct_allAction.java:316)
 at itgen_rct_all.itgen_rct_allAction$ITGEN_REF_CONSTRAINTS_VClass.perform(itgen_rct_allAction.java:263)
 at itgen_rct_all.itgen_rct_allAction.perform(itgen_rct_allAction.java:72)
 at com.codecharge.ControllerServlet.service(ControllerServlet.java:129)
 at javax.servlet.http.HttpServlet.service(HttpServlet.java:722)
 at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:305)
 at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:210)
 at org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:224)
 at org.apache.catalina.core.StandardContextValve.invoke(StandardContextValve.java:169)
 at org.apache.catalina.authenticator.AuthenticatorBase.invoke(AuthenticatorBase.java:472)
 at org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:168)
 at com.googlecode.psiprobe.Tomcat70AgentValve.invoke(Tomcat70AgentValve.java:38)
 at org.apache.catalina.valves.ErrorReportValve.invoke(ErrorReportValve.java:98)
 at org.apache.catalina.core.StandardEngineValve.invoke(StandardEngineValve.java:118)
 at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:407)
 at org.apache.coyote.http11.AbstractHttp11Processor.process(AbstractHttp11Processor.java:987)
 at org.apache.coyote.AbstractProtocol$AbstractConnectionHandler.process(AbstractProtocol.java:539)
 at org.apache.tomcat.util.net.JIoEndpoint$SocketProcessor.run(JIoEndpoint.java:300)
 at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1110)
 at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:603)
 at java.lang.Thread.run(Thread.java:722)

 at com.codecharge.db.Command.catchException(Command.java:350)
 at com.codecharge.db.RawCommand.getRows(RawCommand.java:361)
 at itgen_rct_all.ITGEN_REF_CONSTRAINTS_VDataObject.load(ITGEN_REF_CONSTRAINTS_VDataObject.java:115)
 at itgen_rct_all.itgen_rct_allAction$ITGEN_REF_CONSTRAINTS_VClass.read(itgen_rct_allAction.java:316)
 at itgen_rct_all.itgen_rct_allAction$ITGEN_REF_CONSTRAINTS_VClass.perform(itgen_rct_allAction.java:263)
 at itgen_rct_all.itgen_rct_allAction.perform(itgen_rct_allAction.java:72)
 at com.codecharge.ControllerServlet.service(ControllerServlet.java:129)
 at javax.servlet.http.HttpServlet.service(HttpServlet.java:722)
 at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:305)
 at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:210)
 at org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:224)
 at org.apache.catalina.core.StandardContextValve.invoke(StandardContextValve.java:169)
 at org.apache.catalina.authenticator.AuthenticatorBase.invoke(AuthenticatorBase.java:472)
 at org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:168)
 at com.googlecode.psiprobe.Tomcat70AgentValve.invoke(Tomcat70AgentValve.java:38)
 at org.apache.catalina.valves.ErrorReportValve.invoke(ErrorReportValve.java:98)
 at org.apache.catalina.core.StandardEngineValve.invoke(StandardEngineValve.java:118)
 at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:407)
 at org.apache.coyote.http11.AbstractHttp11Processor.process(AbstractHttp11Processor.java:987)
 at org.apache.coyote.AbstractProtocol$AbstractConnectionHandler.process(AbstractProtocol.java:539)
 at org.apache.tomcat.util.net.JIoEndpoint$SocketProcessor.run(JIoEndpoint.java:300)
 at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1110)
 at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:603)
 at java.lang.Thread.run(Thread.java:722)
```

Een Invantive product

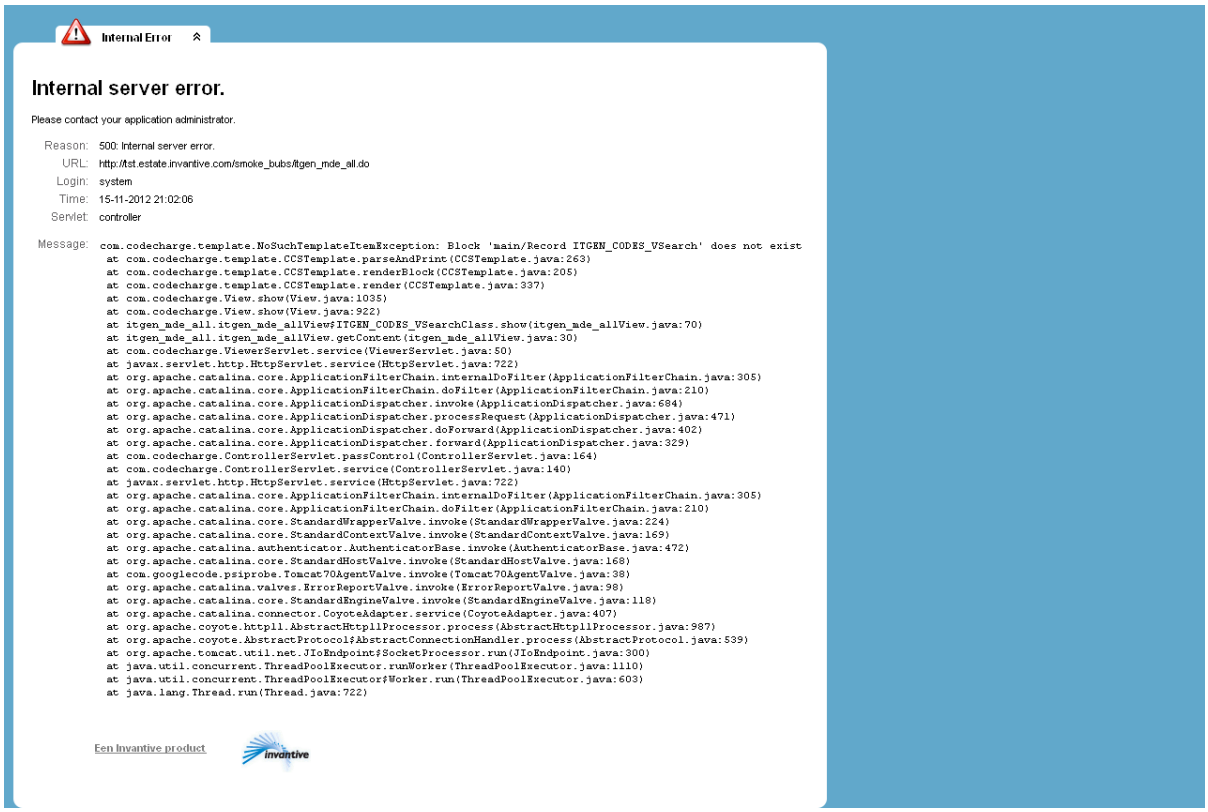
The meaning of the entry fields is:

Name	The name of the referential constraint.
Role	The role of the referential constraint in case there are multiple referential constraints between two tables.
Sort Order	A numeric value used for sorting the referential constraints when they are shown in a list box in a screen. This functionality is not supported yet.
From	
Application	The application of which the from column is part of.
Table	The name of the table of which the from column is part of.
Column	The name of the column.

To	
Application	The application of w hich the to column is part of.
Table	The name of the table of w hich the to column is part of.
Column	The name of the to column.
Create	Checked if the referential constraint needs to be included in the database.
Show	Checked if the referential constraint needs to be displayed in the database. This functionality is not supported yet.
Documentation	Documentation of the referential constraint.

Modules

In this screen you can register and change modules..

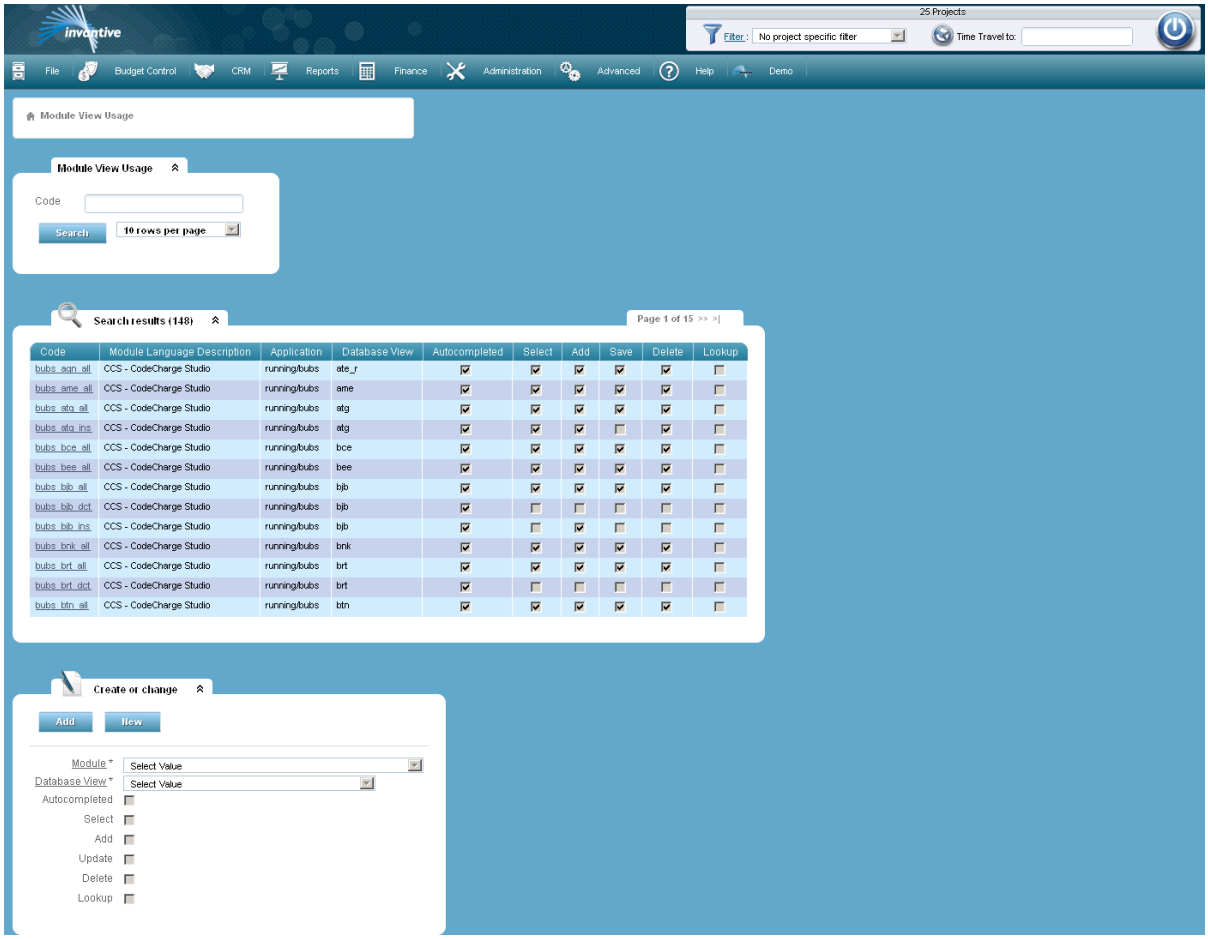


The meaning of the entry fields is:

Application	The application of w hich the module is part of.
Module Language	The programming language of the module.
Code	The code used to refer to the module.
Description	Description of the module.
Legacy Name	The name of the module in an earlier stage.
Autocompleted	Checked if the module autocompletes missing data.
Create	Checked in case the module must be included in the database.

Module View Usage

In this screen you can register and change modules for view usage..



The meaning of the entry fields is:

Module	The name of the to module.
View	The view used by the module.
Autocompleted	Checked if the module autocompletes missing data.
Select	Checked in case the application user is allow ed to select data via this module.
Add	Checked in case the application user is allow ed to add data via this module.
Update	Checked in case the application user is allow ed to update data via this module.
Delete	Checked in case the application user is allow ed to delete data via this module.
Opzoeken	Checked in case the application user is allow ed to lookup data via this module.

The meaning of the other fields:

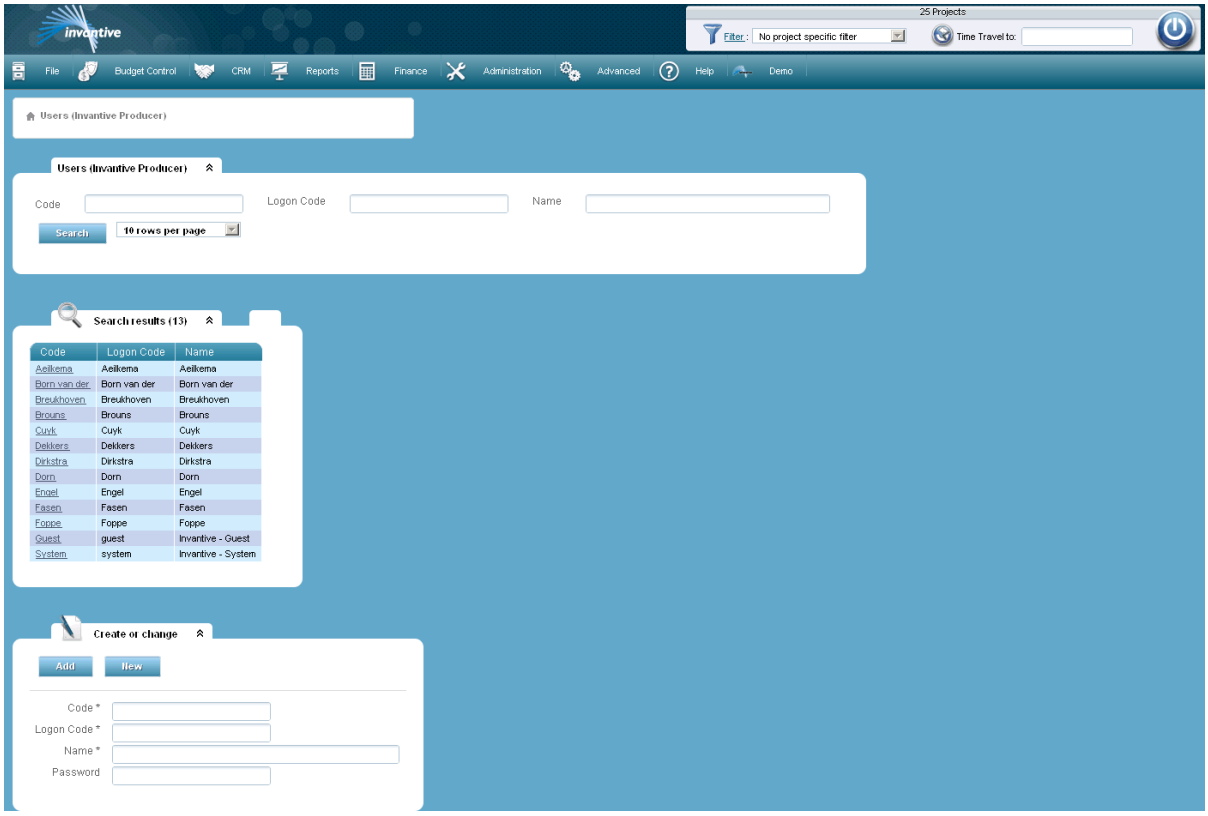
Code	The code used to refer to the module.
Module Language Description	The programming language of the module.
Application	The application of w hich the module is part of.

Users (Invantive Producer)

In this form you can register and change the users of Invantive Producer.

Users of Invantive Producer are different than users in Invantive Vision. You cannot log on as user of Invantive Producer. In order to do this you first need to relate a user in Invantive Vision to a user of Invantive Producer. See Users 102.

The registration of Invantive Producer users is typically an activity for application developers. See the warning under Application Development 282.



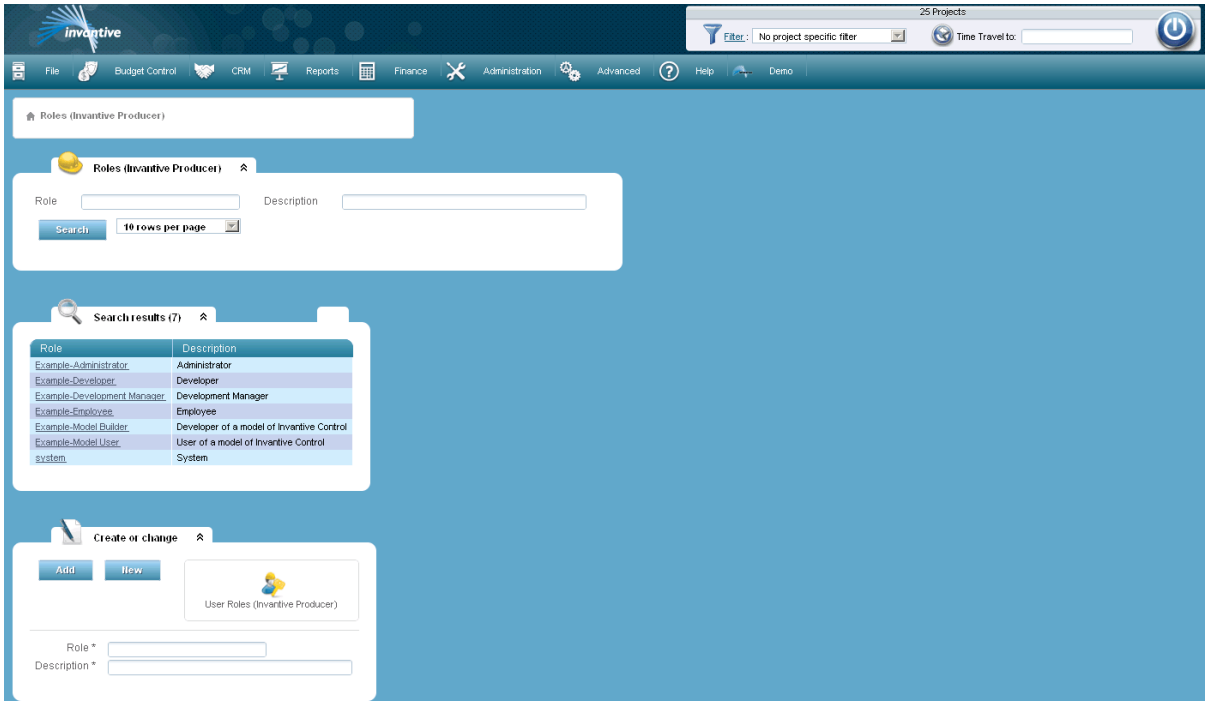
The meaning of the entry fields is:

Code	The code used to refer to the user.
Username	The name used to identify the user.
Name	The full name of the user.

Roles (Invantive Producer)

In this screen you can register and change the roles of Invantive Producer.

A role is a function within an organization (for example 'Project Developer') that can be performed by a person. Rights can be assigned to this role with Role Functions 310 and next this role can be assigned to users that are going to perform the function with User Roles 311.

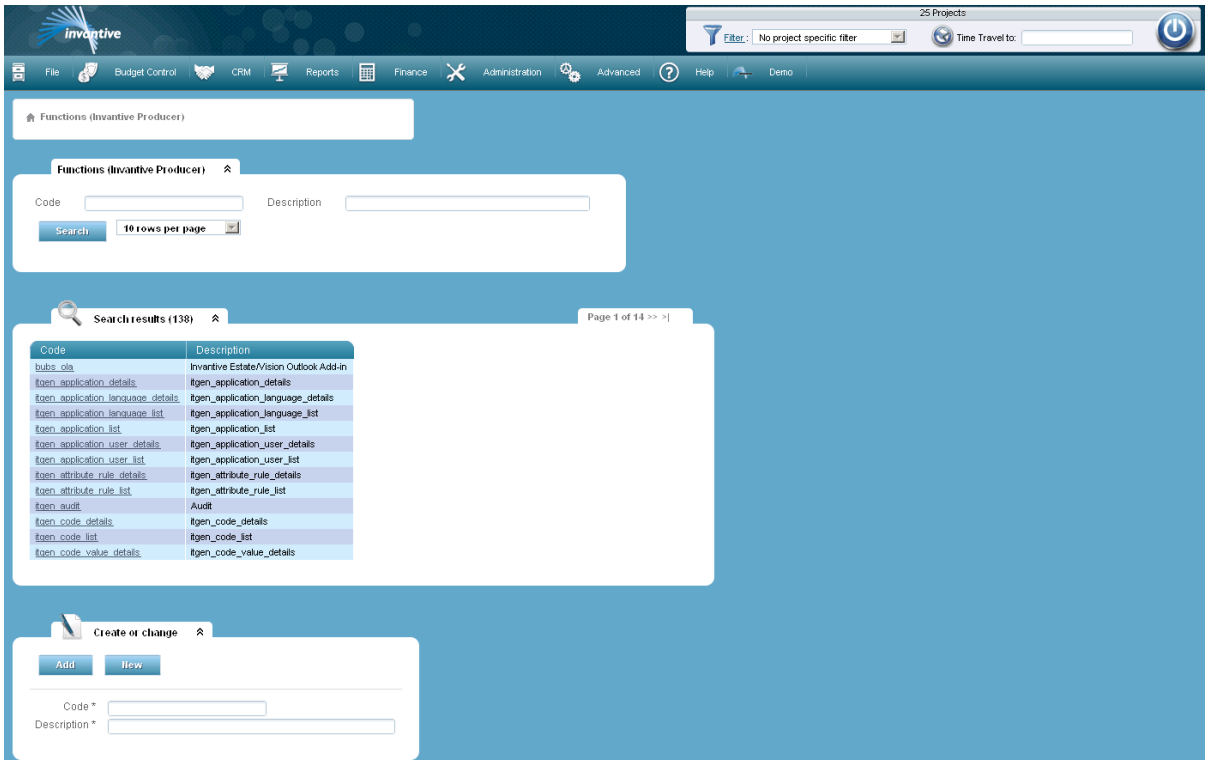


The meaning of the entry fields is:

Role	The code of the role.
Description	The description.

Functions (Invantive Producer)

In this screen you can register and change the functions of Invantive Producer.



The meaning of the entry fields is:

Code	The code of the function.

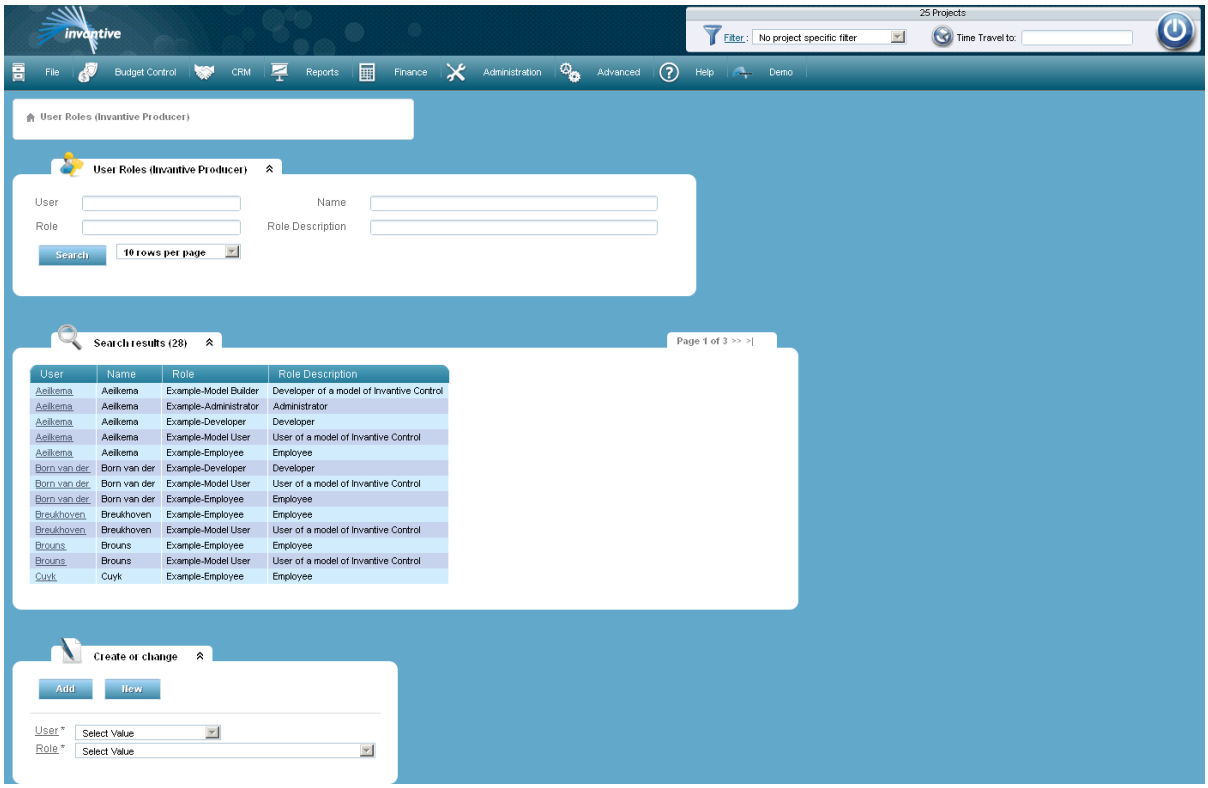
Description	The description.

User Roles (Invantive Producer)

In this form you can register and change the roles of Invantive Producer..

A user with a role, subsequently has all rights that belong to the role as defined in the screen Role Functions 311 and Roles 309. The user roles also define which Menu Items 233 a user could see.

When implementing Invantive Vision you can directly use the example roles included in Invantive Vision. However, it is preferred to copy these roles. Example roles can be identified by the prefix 'Example' in the role code.



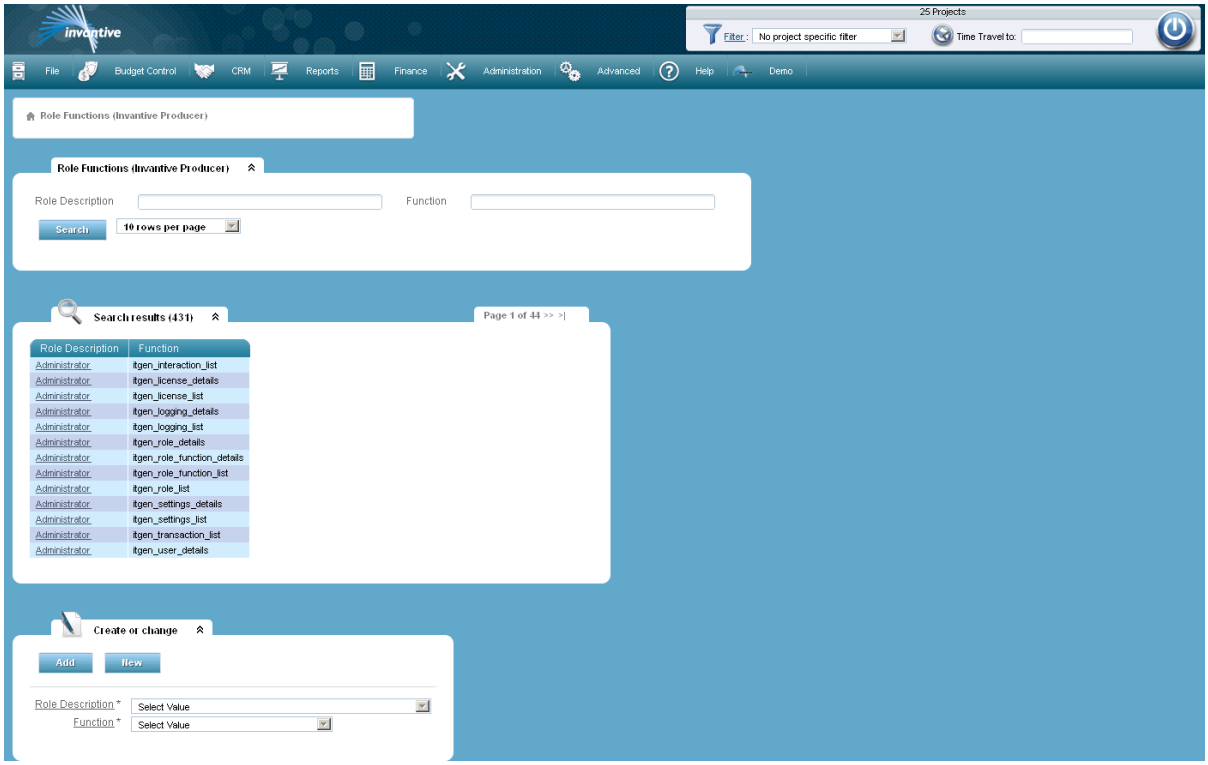
The meaning of the entry fields is:

Name	The name of the user.
Role	The role assigned.

Role Functions (Invantive Producer)

In this screen you can register and change the role authorisations of Invantive Producer.

A role authorisation is a link between a role and a screen or report. A user with this role subsequently has access to the form or report. Moreover, the user can change the data if editing rights have been granted.



The meaning of the entry fields is:

Role Description	The role.
Function	The function (form or report).

Interactions

In this screen you can see the interactions with Invantive Producer.

An interaction is an activity a user executes with Invantive Producer. This usually is requesting data via a screen.

With each interaction it is recorded by whom (logon code), when (point in time), in what screen (module), from which PC (machine), which action (query) was executed. Moreover, an ascending interaction number is assigned. Finally, each interaction refers to the last assigned transaction number, so that a chronological dependency between transactions and interactions can be made to determine what information was available at the time of the request. The list ends with the characteristic of the session.

Login Code	Module	Machine	Query	URL	Action	Interaction	Time	Last Transaction	Database Session
system	itgen_ian_all	192.168.172.26	SELECT IAN_LOGON_CODE, IAN_MODULE, IAN_MACHINE, IAN_QUERY, IAN_REQUEST_URL, IAN_ACTION, IAN_INTERACTION_NUMBER, IAN_TIME, IAN_LAST_TRANSACTION_NUMBER, IAN_SESSIONID, IAN_NK, IAN_ID FROM ITGEN_INTERACTIONS_V ORDER BY IAN_ID DESC	http://tst.estate.invantive.com/smoke_bubs/itgen_ian_all.do	getRows()	13.285	15-11-2012 21:01:56	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_ian_all	192.168.172.26	SELECT CODE, LABEL FROM BUBS_LOV_RECORDS_PER_PAGINA_R ORDER BY SORTEER_VOLGORDE	http://tst.estate.invantive.com/smoke_bubs/itgen_ian_all.do	getRows()	13.284	15-11-2012 21:01:56	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_ian_all	192.168.172.26	SELECT PJT_CODE, PJT_VOLLEDIGE_NAAM, PJT_SORTEER_VOLGORDE FROM BUBS_MOGELIJKE_PJT_PICKLIST_R ORDER BY PJT_SORTEER_VOLGORDE	http://tst.estate.invantive.com/smoke_bubs/itgen_ian_all.do	getRows()	13.283	15-11-2012 21:01:56	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_ian_all	192.168.172.26	SELECT GBR_AANMELD_CODE, FUNCTIE, ISG_OMGEVING, REMOTE_HOST, TIJDSTIP, SCHERM_WIJZIGEN_VLAG, ROL_ALLE_PJT_ZIEN_VLAG, ROL_ALLE_PJT_WIJZIGEN_VLAG, CIG_OMSCHRUVING_FOOTER, PJT_CODE, CIG_DATUM_RAPPORTAGE, CIG_AANTAL_PJT_IN_FILTER FROM BUBS_FOOTER_R WHERE ID IS NOT NULL	http://tst.estate.invantive.com/smoke_bubs/itgen_ian_all.do	getOneRow()	13.282	15-11-2012 21:01:56	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_ian_all	192.168.172.26	select functie , scherm_wijzigen_vlag , scherm_toegang_vlag from bubs_mijn_rechten_scherm_r	http://tst.estate.invantive.com/smoke_bubs/itgen_ian_all.do	getOneRow()	13.281	15-11-2012 21:01:56	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_gtm_all	192.168.172.26		http://tst.estate.invantive.com/smoke_bubs/itgen_gtm_all.do	Unknown action	13.280	15-11-2012 21:01:55	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_gtm_all	192.168.172.26	SELECT GBR_AANMELD_CODE, FUNCTIE, ISG_OMGEVING, REMOTE_HOST, TIJDSTIP, SCHERM_WIJZIGEN_VLAG, ROL_ALLE_PJT_ZIEN_VLAG, ROL_ALLE_PJT_WIJZIGEN_VLAG, PJT_CODE, CIG_DATUM_RAPPORTAGE, CIG_OMSCHRUVING_FOOTER, CIG_AANTAL_PJT_IN_FILTER FROM BUBS_FOOTER_R WHERE ID IS NOT NULL	http://tst.estate.invantive.com/smoke_bubs/itgen_gtm_all.do	getOneRow()	13.279	15-11-2012 21:01:55	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_gtm_all	192.168.172.26	SELECT * FROM ITGEN_GSY_PICKLIST_R	http://tst.estate.invantive.com/smoke_bubs/itgen_gtm_all.do	getRows()	13.278	15-11-2012 21:01:55	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_gtm_all	192.168.172.26	SELECT APN_CODE, APN_ID, GTM_NK, GTM_DEFINITION, GTM_DOCUMENTATION, GTM_ID, GTM_LANGUAGE_INDEPENDENT_FLAG, GTM_TERM, GSY_CODE, GSY_ID FROM ITGEN_GLOSSARY_TERMS_V ORDER BY GSY_CODE, GTM_TERM	http://tst.estate.invantive.com/smoke_bubs/itgen_gtm_all.do	getRows()	13.277	15-11-2012 21:01:55	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_gtm_all	192.168.172.26	SELECT CODE, LABEL FROM BUBS_LOV_RECORDS_PER_PAGINA_R ORDER BY SORTEER_VOLGORDE	http://tst.estate.invantive.com/smoke_bubs/itgen_gtm_all.do	getRows()	13.276	15-11-2012 21:01:55	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_gtm_all	192.168.172.26	SELECT PJT_CODE, PJT_VOLLEDIGE_NAAM, PJT_SORTEER_VOLGORDE FROM BUBS_MOGELIJKE_PJT_PICKLIST_R ORDER BY PJT_SORTEER_VOLGORDE	http://tst.estate.invantive.com/smoke_bubs/itgen_gtm_all.do	getRows()	13.275	15-11-2012 21:01:55	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_gtm_all	192.168.172.26	SELECT GBR_AANMELD_CODE, FUNCTIE, ISG_OMGEVING, REMOTE_HOST, TIJDSTIP, SCHERM_WIJZIGEN_VLAG, ROL_ALLE_PJT_ZIEN_VLAG, ROL_ALLE_PJT_WIJZIGEN_VLAG, CIG_OMSCHRUVING_FOOTER, PJT_CODE, CIG_DATUM_RAPPORTAGE, CIG_AANTAL_PJT_IN_FILTER FROM BUBS_FOOTER_R WHERE ID IS NOT NULL	http://tst.estate.invantive.com/smoke_bubs/itgen_gtm_all.do	getOneRow()	13.274	15-11-2012 21:01:55	252.114	CEBE744D674A6FB3FEA2292F420BB261-1
system	itgen_gtm_all	192.168.172.26	select functie , scherm_wijzigen_vlag , scherm_toegang_vlag from bubs_mijn_rechten_scherm_r	http://tst.estate.invantive.com/smoke_bubs/itgen_gtm_all.do	getOneRow()	13.273	15-11-2012 21:01:55	252.114	CEBE744D674A6FB3FEA2292F420BB261-1

There are no entry fields.

The meaning of the other fields:

Login	The user name as registered in Persons 308.
Module	The module that w as used for the transaction.
Machine	The Internet address of the computer that generated the transaction.

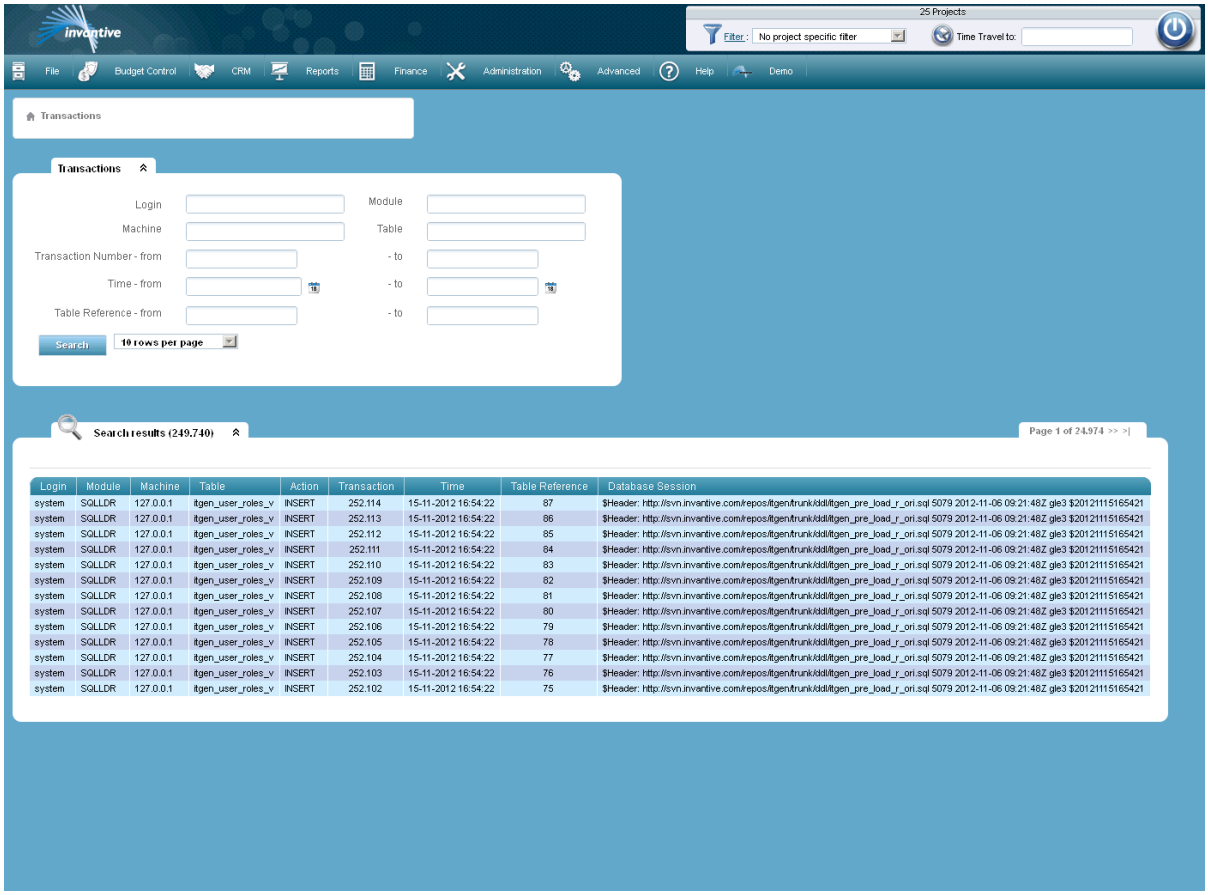
Query	The request made by the user using a query.
URL	The URL of the screen of Invantive Visionfrom w here the interaction w as requested.
Action	The SQL action that w as initiated by the interaction. The actions can be 'select', 'update', 'insert' or 'delete'.
Interaction	Unique numeric code that serves as a unique index, w hose value is equal to the 'column ID'.
Time	The date and time at w hich the interaction w as requested.
Last Transaction	The number of the last transaction.
Database Session	A unique alphanumeric value that identifies the database session.

Transactions

In this form you can view transactions, specifically for Invantive Producer.

A transaction is a change of the data which are registered by Invantive Producer. All transactions are saved.

For each transaction is recorded by whom (username), when (time), from which form (module), from which PC (machine), what action (action) was performed in which table (table) and within which session (session). Moreover, an ascending transaction number is allocated. Finally, every transaction refers to the data which was being changed with a table reference. This is a unique number in the table, so that changed data can be traced.



There are no entry fields.

The meaning of the other fields:

Login	The user name as registered in Persons 308.
Module	The module that w as used for the transaction.
Machine	The Internet address of the computer that generated the transaction.
Table	The name of the table in w hich the action w as performed.

Action	The SQL action which was started by the transaction. The actions can be 'select', 'update', 'insert' or 'delete'.
Transaction	Ascending transaction number
Time	The date and time the transaction was requested.
Table Reference	Unique number within the table that is stored in the ID column and refers to the data that has been changed.
Database Session	A unique alphanumeric value that identifies the database session.

Settings (Invantive Producer)

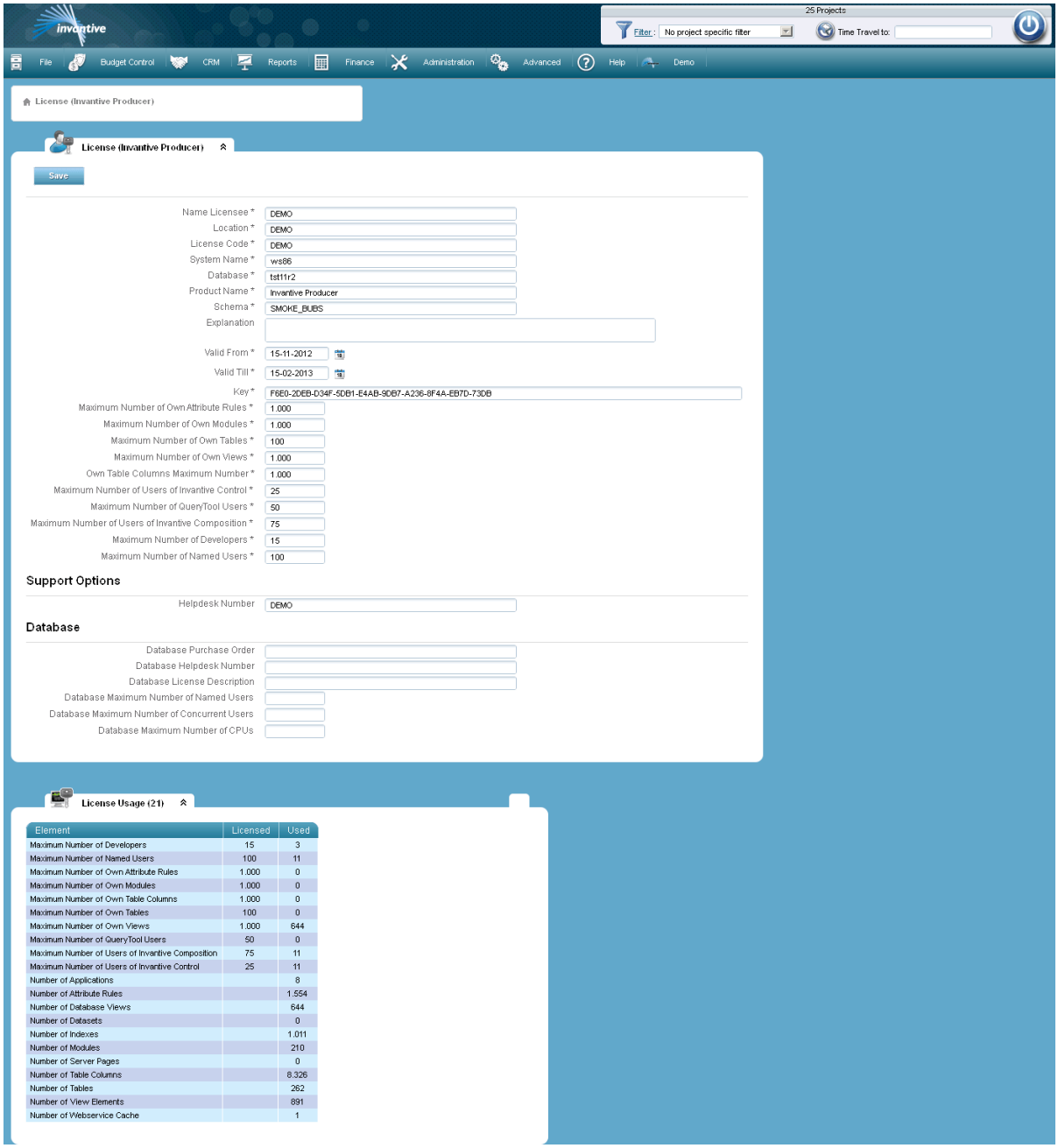
Enter text here.

License (Invantive Producer)

The authorization to use a computer program may be specified in a contract, a license, and often contains restrictions regarding copying the program or the number of simultaneous users that may use the program. Usually a fee is demanded for using the program by the person who owns the copyrights.

This screen allows you to activate the license of Invantive Producer.

Only the user 'system' can use the application as long as the license is not activated.



The meaning of the entry fields is:

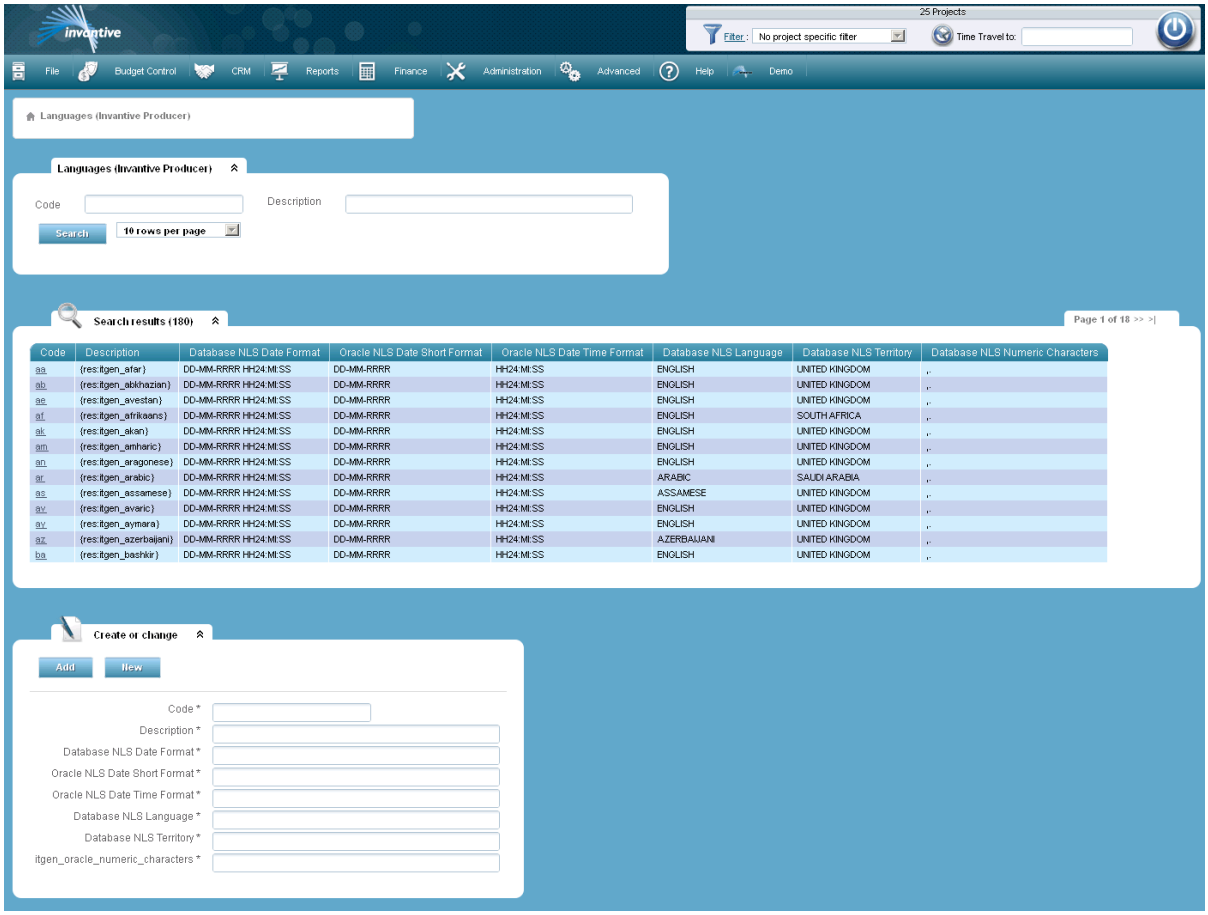
Name Licensee	Name on which the license is registered.
Location	Location where the license is installed.
License Code	The license code of the application as registered by Invantive.
System Name	The name of the server where the database is installed.
Database	The name of the database on which the application is installed.
Product Name	The name of the application to which the license applies.
Schema	The name of the schema in the database used to install the tables.
Valid From	The beginning of the validity of the license.
Valid To	The end date of the validity of the license.
Key	The key to activate the license.
Maximum Number of Own Attribute Rules	The maximum number of own attribute rules that can be registered.

Maximum Number of Ow n Modules	The maximum number of project developers for w hich projects can be active.
Maximum Number of Ow n Tables	The maximum number of ow n tables that can be created.
Maximum Number of Ow n View s	The maximum number of ow n view s that can be created.
Maximim Number of Control Users	The maximum number of named users for Invantive Control for Excel.
Maximum number of Query Tool users	The maximum number of named users for Invantive Query Tool.
Maximum Number of Developers	The maximum number of developers.
Maximum Number of Named Users	The maximum number of named users.
Support Options	
Helpdesk Number	The helpdesk number for the database.
Database	
Database Purchase Order	Purchase Order from the database supplier for the database license.
Database Helpdesk Number	The helpdesk number for the database.
Database License Description	Description of the database license.
Database Maximum Number of Named Users	The maximum number of named users for the database.
Database Maximum Number of Concurrent Users	The maximum number of simultaneous users for the database.
Database Maximum Number of CPUs	The maximum number of processors for the database.

Languages (Invantive Producer)

In this form you can register and change languages for Invantive Producer.

The registration of languages is a typical activity for developers of Invantive Producer. See the warning under Application Development 282.

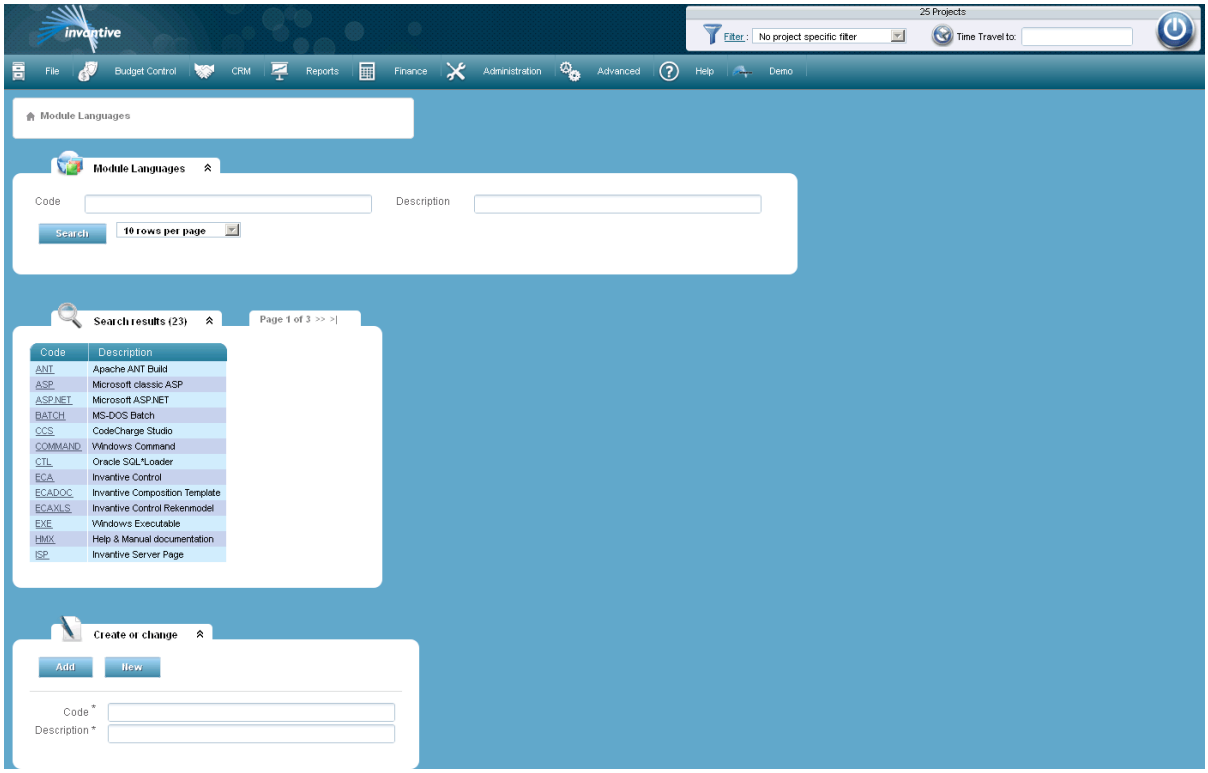


The meaning of the entry fields is:

Code	The code used to refer to the language. It is recommended to conform to the international language codes.
Description	The description of the language.
Database NLS Date Format	The selected date format. This should always be 'dd-mm-rrrr hh24:mi:ss'. Other date formats are not yet supported.
Database NLS Language	The language setting in the database which makes that database errors are displayed in the correct language.
Database NLS Territory	The region setting in the database which makes that region dependent settings are displayed in a correct way.

Module Languages

In this screen you can register and change the programming languages of modules..



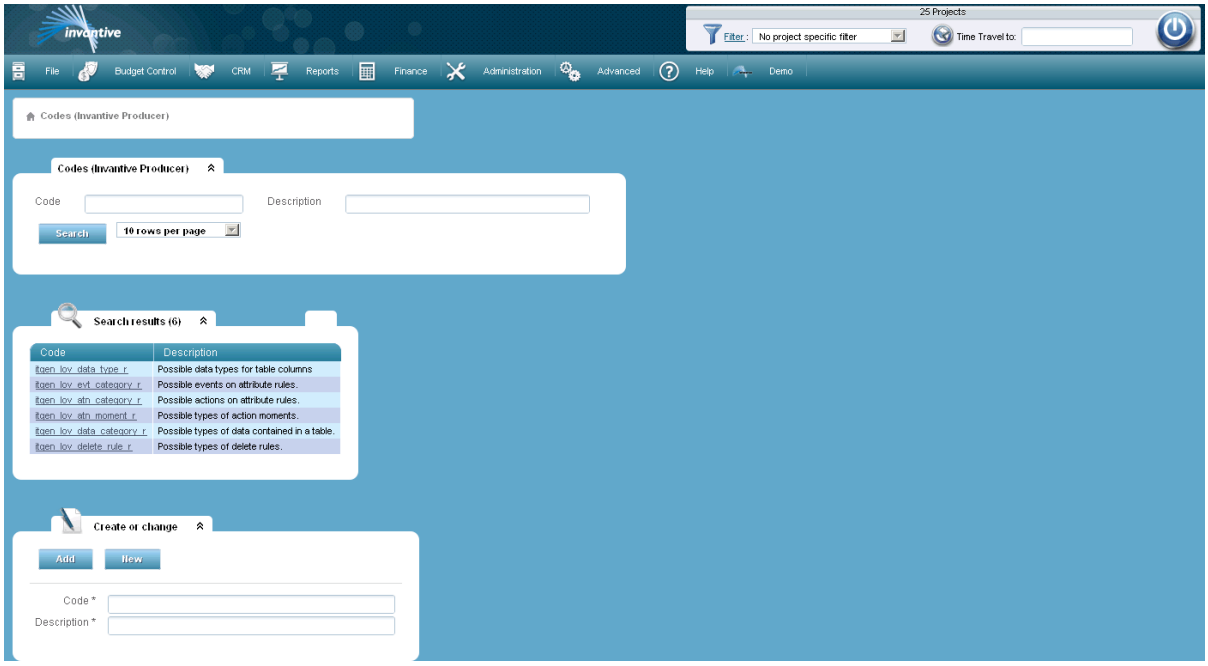
The meaning of the entry fields is:

Code	The code used to refer to the programming language.
Description	The description of the programming language.

Codes (Invantive Producer)

In this form you can register and change codes.

A code is a list of values that belong to a common denominator. They are widely used in application development to construct ‘domains’. A domain, for example, can be used to store a list of values for a field.



Code	The code referring to the code list.
Description	The description of the code list.

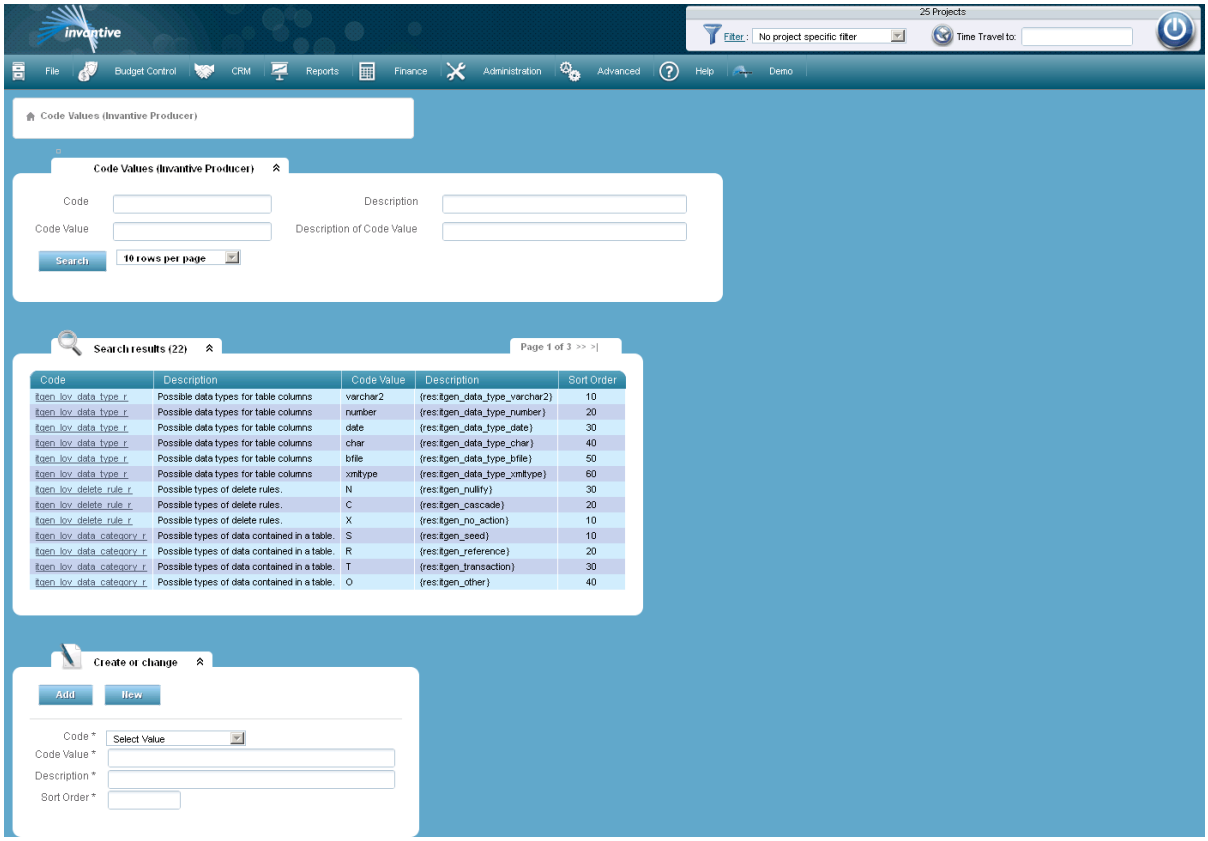
Code Values (Invantive Producer)

In this screen you can register and change code values.

A code is a list of values that belong to a common denominator. They are widely used in application development to construct ‘domains’. A domain, for example, can be used to store a list of values for a field. For example the screen ‘Revenues’ shows a code list for the number of periods.

Use the screen Codes 330 to register codes and consequently use this screen to register the individual values.

The registration of code values is a typical activity for application developers. See the warning under Application Development 282.

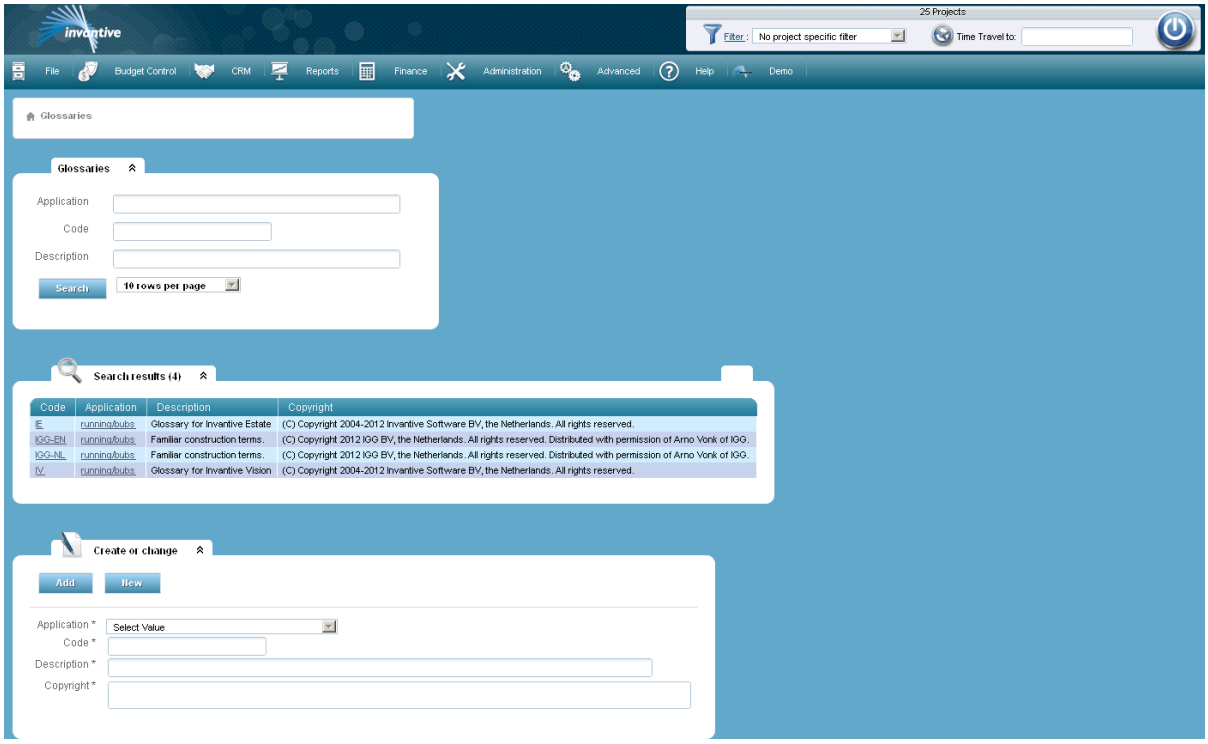


The meaning of the entry fields is:

Code	The code referring to the code list.
Code Value	The code of the individual value, for example ‘date’.
Description	The description of the code value, for example ‘{res:itgen_data_type_char.
Sort Order	A numeric value used for sorting the codes w hen they are show n in a list box in a screen.

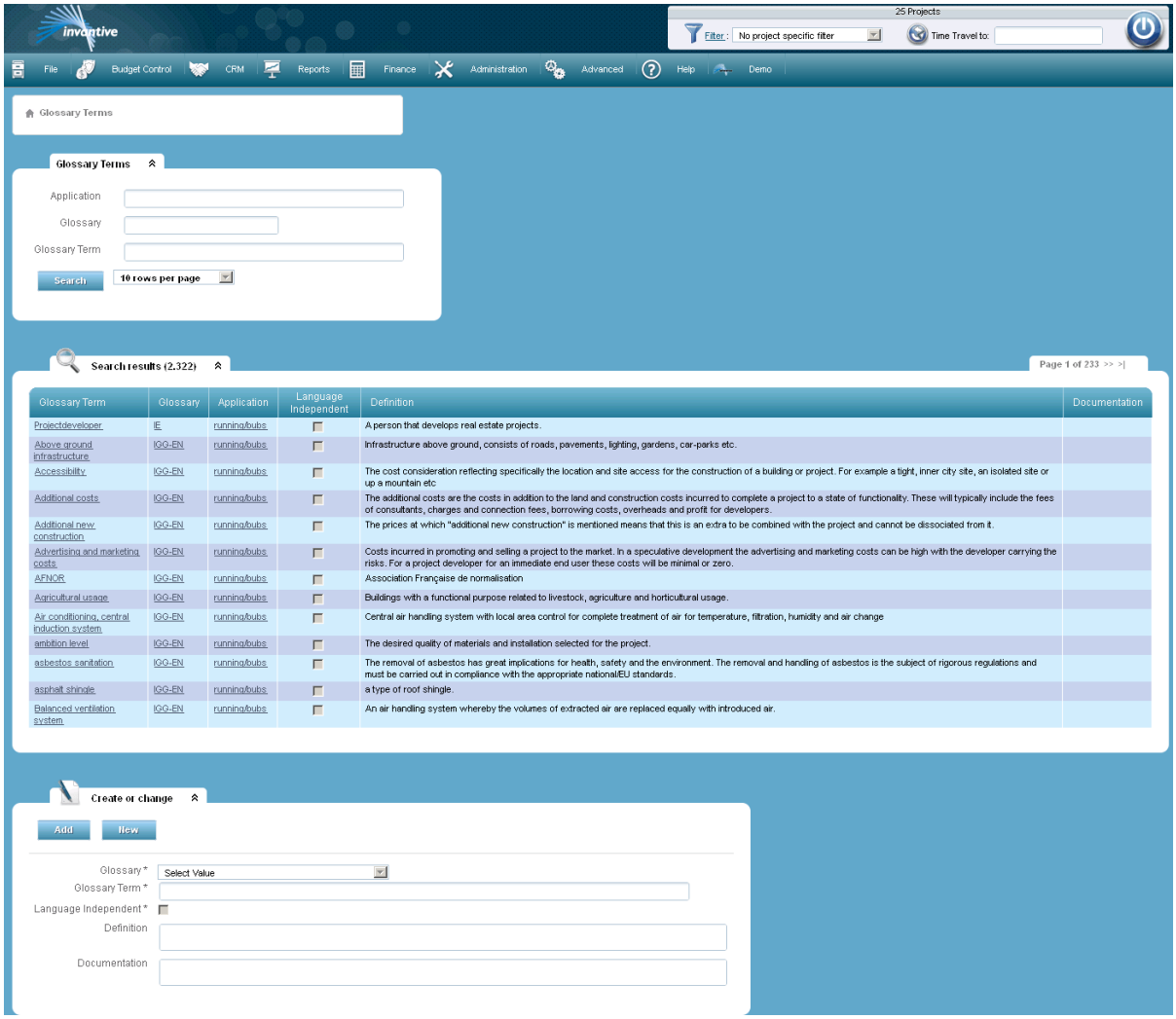
Glossaries

Enter text here.



Glossary Terms

Enter text here.



Data model (pdf)

This report shows the data model of an application within Invantive Producer.

Data Model (PDF)
system

http://tst.estate.invantive.com/smoke_bubs/bubs_rpt.do?FTE_CODE=ilgen_datamodel_pdf_rpt&MIM_ID=244&GO=Y

Report has no pages.

This report has the following optional parameters:

P_APN_CODE	The application about which is reported.
P_VIW_NAME_PATTERN	The name of the views have to satisfy this pattern for 'like'.
P_TBE_NAME_PATTERN	The name of the views have to satisfy this pattern for 'like'.
P_INCL_TBE_VLAG	Indicator Yes ('Y') / No ('N') if the tables should be included in the report.
P_INCL_VIW_VLAG	Indicator Yes ('Y') / No ('N') if the views should be included in the report.
P_INCL_TCN_VLAG	Indicator Ja ('Y') / Nee ('N') if the columns should be included in the report.
P_INCL_IDX_VLAG	Indicator Yes ("Y') / No ('N') if the indexes should be included in the report.
P_INCL_RCT_VLAG	Indicator Ja ('Y') / Nee ('N') if the referential constraints should be included in the report.
P_INCL_ARE_VLAG	Indicator Yes ('Y') / No ('N') if the attribuut rules should be included in the report.
P_INCL_TCL_VLAG	Indicator Yes ('Y') / No ('N') if the short list of columns should be included in the report.
P_INCL_TBE_CONTENTS_VLAG	Indicator Yes ('Y') / No ('N') if the contents of trunk tables should be included in the report.

Implementation (xls)

This report shows the information necessary for the implementation of an application within Invantive Producer.

*** Zie laatste werkblad voor uitleg. ***

Applicatie

Code	bubs
Naam	Invantive Estate

Tabel

Omschrijving	Kostensoorten
itgen_data_category	R
Definitie	Cost categories that enable the partitioning of all efforts for the realization of a real estate project into discrete categories.
Voorbeeld	The cost category 'Construction - building' contains all efforts for the construction of the building itself, excluding parking places.
Code	kbg
Naam	bubs_kps_beschrijvingen_v

itgen_columns

Omschrijving	Naam	Definitie	Voorbeeld
Algemene Kosten	kbg_algemene_kosten_vlag	Stems from bubs_kps_beschrijvingen.algemene_kosten_vlag. Indicator whether the cost category is used for general costs (overhead).	'Y'
Code	kbg_code	Stems from bubs_kps_beschrijvingen.code. Unique alphanumeric code.	Amsterdam (NL)' would b
Eigen Kapitaal	kbg_eigen_kapitaal_vlag	Stems from bubs_kps_beschrijvingen.eigen_kapitaal_vlag. Indicator whether the cost category is used for own capital investments. Can be used in calculations to derive return on capital.	'Y'
Rente	kbg_financieringskosten_vlag	Stems from bubs_kps_beschrijvingen.financieringskosten_vlag. Indicator whether the cost category is used for interest (financing).	'Y'
Grond	kbg_grond_vlag	Stems from bubs_kps_beschrijvingen.grond_vlag. Indicator whether the cost category is used for purchasing	'Y'
Investering Onroerend Goed	kbg_investering_og_vlag	Stems from bubs_kps_beschrijvingen.investering_og_vlag. Indicator whether the cost category is used for acquiring real estate such as buildings and square metres.	'Y'
	kbg_job_seq_geladen	Stems from bubs_kps_beschrijvingen.job_seq_geladen. Number of the job used to load the user through an	12743
PO-Kosten	kbg_kosten_po_vlag	Stems from bubs_kps_beschrijvingen.kosten_po_vlag. Indicator whether the cost category is used for fees for project developers.	'Y'
Omschrijving	kbg_omschrijving	Stems from bubs_kps_beschrijvingen.omschrijving. Description in natural language for display on reports and	None.
Onvoorzien	kbg_onvoorzien_vlag	Stems from bubs_kps_beschrijvingen.onvoorzien_vlag. Indicator whether the cost category is used for	'Y'
Toelichting	kbg_toelichting	Stems from bubs_kps_beschrijvingen.toelichting. Comment.	This cost category was
Verdeel Methode Indicator	kbg_uitsmeer_methode_ind	Stems from bubs_kps_beschrijvingen.uitsmeer_methode_ind. Indicator for the default method used to distribute cashflow projection details in time between the maturity start and end date.	'L' means 'Linear'.
Voorziening	kbg_voorziening_vlag	Stems from bubs_kps_beschrijvingen.voorziening_vlag. Indicator whether the cost category is used for provisions for expected problems.	'Y'
Verdichting	kvg_code	Stems from bubs_kps_verdichtingen.code. Unique alphanumeric code.	Amsterdam (NL)' would b

This report has the following optional parameters:

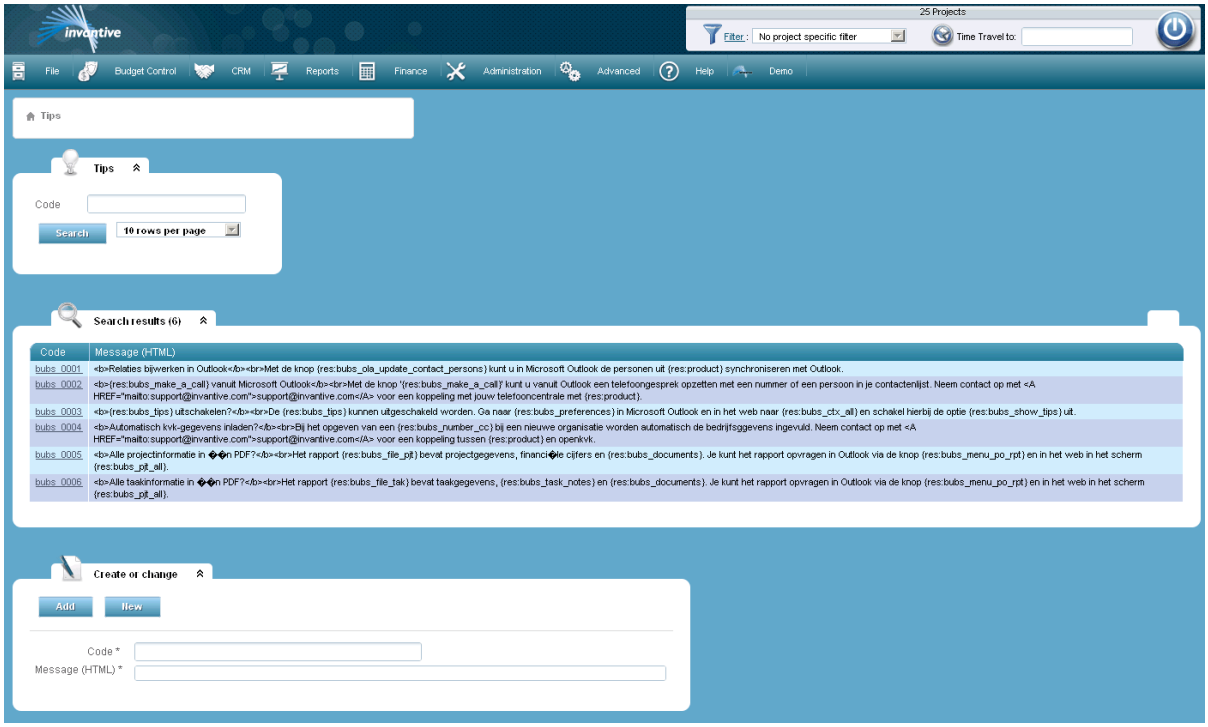
P_APN_CODE	The application about which is reported.
P_TCN_COL_INCL_AUDIT_FLAG	Indicator Yes ('Y') / No ('N') if the audit columns should be included.
P_TCN_COL_INCL_DATA_EXTENSIONS_FLAG	Indicator Yes ('Y") / No ('N') if the free columns should be included.

Tips

In this screen you can register and change tips.

Tips are instructions that show you how you can use Invantive Vision efficiently. In the screen My Preferences 45 you can indicate if you wish to get tips after you have logged on.

The registration of tips is a typical activity for application developers. See the warning under Application Development 282.



The meaning of the entry fields is:

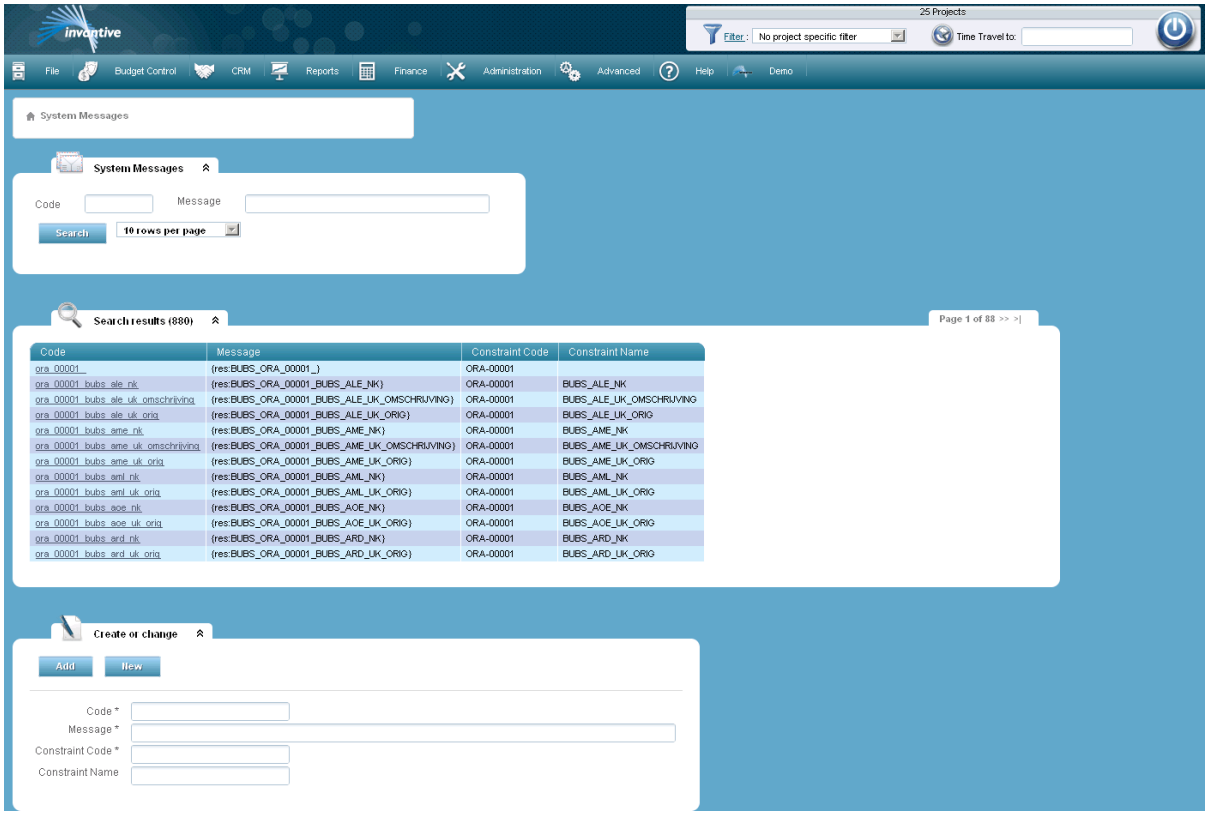
Code	The code used to refer to the tip.
Message (HTML)	The text that appears w hen the tip is displayed. The text may be entered as HTML. The preference is to include the tip in the format of a Translation 338.

System Messages

In this form you can register and change messages.

A message is a text which is shown when an error occurs during the processing of a change. Error messages from the software use an internal error code and the message translates this internal code in a comprehensible text.

The registration of messages is a typical activity for application developers. See the warning under Application Development 282.



The meaning of the entry fields is:

Code	They internal code used to refer to the message.
User Message	The message that will be displayed. This message will be translated with Translations 338.
Constraint Code	The database error code from the software. These error codes usually have the format ORA-99999.
Constraint Name	A part of the database error codes are provided with a reference to the exact location of the message. When translating the database error code to the message, the program will first check if the combination of constraint code and constraint name already exists: • If so, the respective message will be used. • If not, a general constraint code will be looked for, without a filled out constraint name.

Background Scripts

In this screen you can register and change background scripts.

With the help of background scripts management processes and other time-consuming manual processes can be automated.

An example of a background script that automated an administrative process, is 'BUBS_EMPTY_INTERFACES'. With this script the contents of the ERP interface tables are removed.

If a background script requires parameters for processing they can be specified in the part of the screen with the name 'Script Parameters'.

The registration of background scripts is a typical activity for application developers. See the warning under Application Development 282.

invantive

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Background Scripts

Background Scripts

Code | Description

Type of Program

Working Schedule | Description

Search | 10 rows per page

Search results (61)

Page 1 of 7 >> >|

Code	Description	Type of Program	Working Schedule	Number of Executions	Total Execution Time (sec)	Executable Program
BUBS_CHK_VSD	Beheer: controleer contract standen cache	Database PL/SQL	Altijd - Altijd actief	0	0	bubs#volgnummer_standen.print_cache_verschillen
BUBS_COMPILE_OBJECTS	Beheer: compileer ongeldige database objecten	Database PL/SQL	Altijd - Altijd actief	0	0	bubs_sct_various.compile_invalid_objects
BUBS_COMPRESS_PRICELIST_LINES	Financieel: comprimeer prijslijst regels	Database PL/SQL	Altijd - Altijd actief	0	0	bubs_sct_various.compress_pricelist_lines (:p_proef_c , :p_pjt_code)
BUBS_COMPRESS_TEXT_INDEX	Beheer: optimaliseer opslag van tekst index	Database PL/SQL	Altijd - Altijd actief	0	0	bubs_sct_documenten.optimize_index
BUBS_COPY_PRICELIST_LINES	Financieel: kopieer prijslijst regels	Database PL/SQL	Altijd - Altijd actief	0	0	bubs_sct_various.copy_pricelist_lines (:p_proef_c , :p_pjt_code , to_date(:p_peildatum, 'dd-mm-yyyy') , to_date(:p_new_datum_geldig_vanaf, 'dd-mm-yyyy') , to_date(:p_new_datum_geldig_tot, 'dd-mm-yyyy') , :p_usp_code , :p_offset_sorteer_volgorde , :p_multiplier)
BUBS_DB_EXP	Beheer: exporteer database	System Shell	Altijd - Altijd actief	0	0	bubs_sct_various.get_code_db_expdp (bubs#instellingen.get_backup_directory || '-' || to_char(:bjb_id))
BUBS_DEV_BL	Ontwikkeling: werk bedrijfslaag bij	Database PL/SQL	Altijd - Altijd actief	0	0	bubs_sct_generate.run
BUBS_DUMP_PJT_AS_XML	Beheer: dump projecten als XML	Database PL/SQL	Altijd - Altijd actief	0	0	bubs_sct_various.dump_pjt_as_xml
BUBS_EMPTY_INTERFACES	Beheer: verwijder alle gegevens uit de ERP interface tabellen.	Database PL/SQL	Altijd - Altijd actief	0	0	bubs_sct_various.empty_interface_tables
BUBS_EMPTY_RECYCLEBIN	Beheer: verwijder verouderde tabellen uit prullenbak	Database PL/SQL	Altijd - Altijd actief	0	0	bubs_sct_various.purge_recyclebin
BUBS_ETL_GEOCODE	Beheer: Geocodeer locaties	Java Class	Altijd - Altijd actief	0	0	com.invantive.script.ETL

BUBS_EXACT_ONLINE_GET_TRANS	Exact Online: Ophalen boekingen uit Exact Online	Database PL/SQL	Altijd - Altijd actief	0	0	begin
						bubs#background_jobs.print_title('{res:bubs_title_exact_online_get_gl_lines}');
						--
						bubs#background_jobs.submit('BUBS_RUN_ETL', p_bjb_omschrijving =>
						bubs#vertalingen.translate_keys('{res:bubs_title_exact_online_get_gl_lines}'));
						bubs#background_jobs.set_parameter('p_etl_file', '../etl/exactonline2bubs transactions.kjb');
						bubs#background_jobs.finish_parameter_entry();
						bubs#background_jobs.wait_for_finish_all_child_jobs;
						end;

BUBS_EXACT_ONLINE_OUT_INVOICES	Exact Online: Extractie verkoopfacturen	Database PL/SQL	Altijd - Altijd actief	0	0	bubs_interface_exact_online_p.extract_invoices (p_pjt_code => :p_pjt_code , p_lvr_code => :p_lvr_code , p_pgp_code => :p_pgp_code , p_lvr_pe_code => :p_lvr_pe_code , p_gbr_amr_naam => :p_gbr_amr_naam , p_gbr_por_naam => :p_gbr_por_naam , p_pjt_rapportage_groep => :p_pjt_rapportage_groep , p_pjt_klassificatie => :p_pjt_klassificatie , p_incl_0_bedragen => fgen_utilities.char2bool(:p_incl_0_bedragen_c) , p_proef_c => :p_proef_c)

Create or change

Add | New

Code *

Description *

Type of Program * — Database PL/SQL | Java Class | System Shell

Working Schedule * — Select Value

Required Capacity Scheduler * — Any | Long running, low priority | Message queueing, high priority | Long running, high priority

#Days to Keep

#Versions to Keep

Runs Alone (Systemwide)

Runs Alone

Rerun on Success

Rerun on Warning

Rerun on Error

Rerun Every (sec)

MIME Type Output

MIME Type Log File

Executable Program *

Program is Expression

Statistics

Number of Executions

Total Execution Time (sec)

Minimum Execution Time (sec)

Maximum Execution Time (sec)

Script Parameters (0)

No records

Code	Description	Sort Direction	Required	Display	Default Value Expression

Create or change

Add | New

Code *

Description *

Sort Direction *

Required

The meaning of the entry fields is:

Code	The unique code of the script.
Description	The description of the script.
Type of Program	The type of program, including: • Oracle PL/SQL; for executing database packages, ideally suited for database changes. • JJava Class; for executing a Java program, ideally suited for executing mathematically intensive or non-database processes. • System Shell; for executing everything that cannot be executed as Oracle PL/SQL or Java class.
Required Capacity Scheduler	The required skills of the scheduler to be allow ed to process background jobs based on this script.
# Days to Keep	The minimum amount of days after w hich the background jobs based on this script may be automatically removed.
# Versions to Keep	The minimum amount of versions after w hich the background jobs based on this script may be automatically removed. The oldest versions are deleted first.
Runs Alone	The maximum number of simultaneously running background jobs based on this script is only one, w hen checked.
Rerun on Success	A successfully completed background job based on this script w ill automatically start again w hen checked.
Rerun on Warning	When a background job based on this script w as completed w ith a w arning, it w ill automatically start again w hen checked.
Rerun on Error	When a background job based on this script w as completed w ith an error based on this script it is automatically restarted w hen checked.
Rerun Every (sec)	The amount of time in seconds after w hich a background job based on this script w ill automatically be requested, if one of the options 'Rerun on Success ', 'Rerun on Warning' and/or 'Rerun on Error' is checked.
MIME Type Output	The MIME type of the output of this script, for example 'text/html'.
MIME-type Log File	The MIME type of the log output of this script, for example 'text/html'.
Executable Program	The name of the executable program or the code of the script to be executed in case of Oracle PL/SQL. The follow ing variables in the code are replaced by their respective values during the execution of the background script as a background process: • :bjb_id: ID of the background process. • :bjb_seq: number of the background process. • :sdr_code: code of the background planner. • :sdr_omschrijving: description of the background planner. • :gbr_naam: user that requested the background process.
Program is Expression	Indicates that the program text is a SQL expression w hen checked
Code	The unique code of the script parameters.
Description	Description of the script parameters.
Sort Order	Numerical value that determines the order in w hich the script parameters w ill appear in an entry form.
Required	Indicates if it is obliged to specify a value for the script parameter.

The meaning of the other fields:

Number of Executions	The total amount of finished background jobs that w ere based on this script.
Total Execution Time (sec)	The total time in seconds that background jobs have run, based on this script.
Minimum Execution Time (sec)	The minimum time in seconds that a background job has run, based on this script.
Maximum Execution Time (sec)	The minimum time in seconds that a background job has run, based on this script.

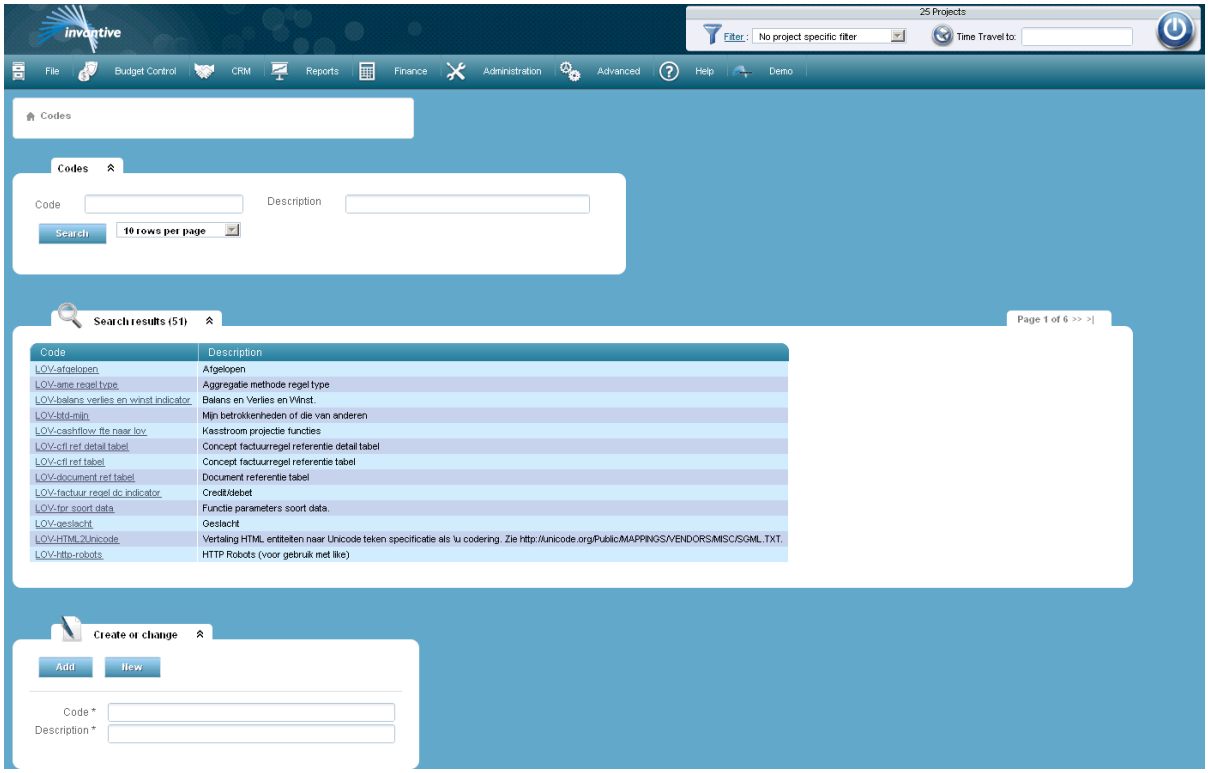
Scripts of the category 'System Shell' are executed with the applicable system shell (command.com for Windows 95, cmd.exe for other Windows versions and /bin/ksh for UNIX and Linux).

Codes

In this form you can register and change codes.

A code is a list of values that belong to a common denominator. They are widely used in application development to construct ‘domains’. A domain, for example, can be used to store a list of values for a field. For example the screen ‘Revenues’ shows a code list for the number of periods.

The registration of codes is a typical activity for application developers. See the warning under Application Development 282.



The meaning of the entry fields is:

Code	The code referring to the code list.
Description	The description of the code list.

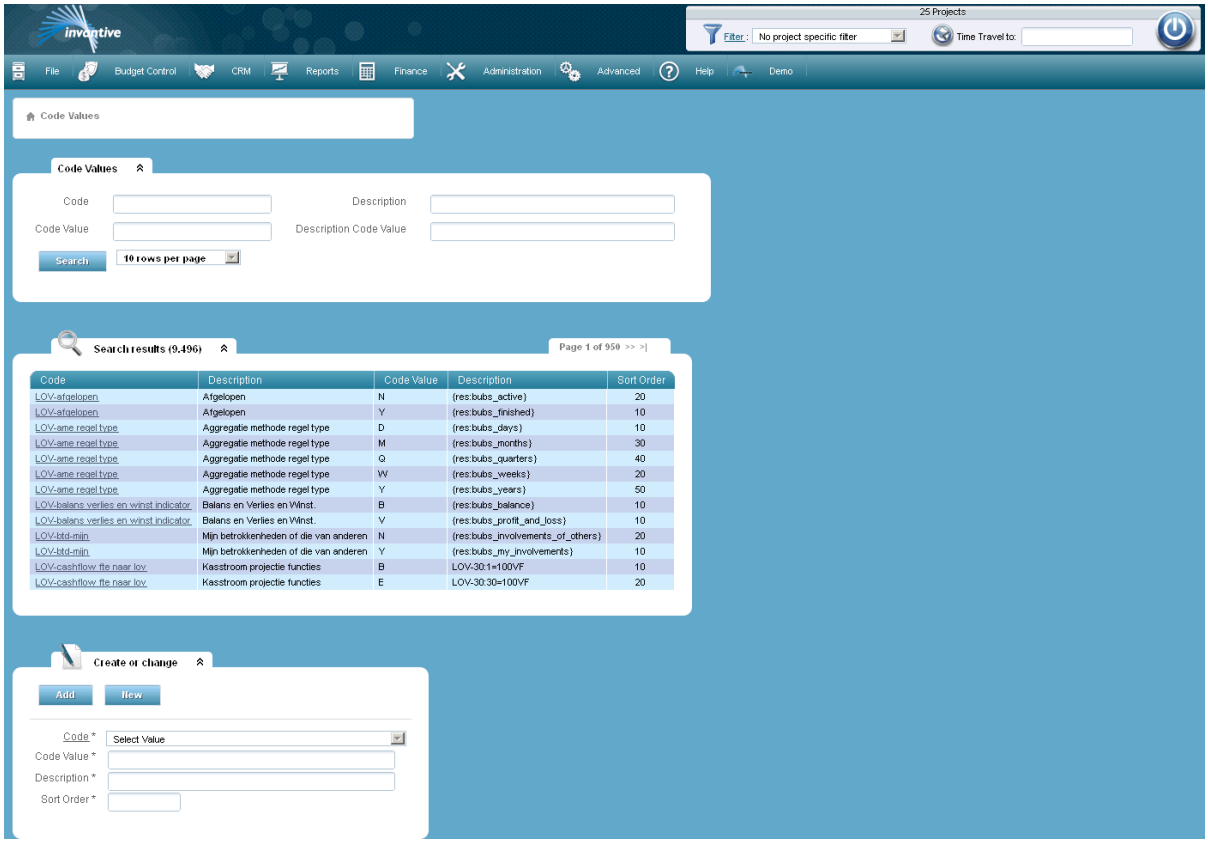
Code Values

In this screen you can register and change code values.

A code is a list of values that belong to a common denominator. They are widely used in application development to construct ‘domains’. A domain, for example, can be used to store a list of values for a field. For example the screen ‘Revenues’ shows a code list for the number of periods.

Use the screen Codes 330 to register codes and consequently use this screen to register the individual values.

The registration of code values is a typical activity for application developers. See the warning under Application Development 282.



The meaning of the entry fields is:

Code	The code referring to the code list.
Code Value	The code of the individual value, for example 'K'.
Description	The description of the code value, for example 'Costs'.
Sort Order	A numeric value used for sorting the codes w hen they are show n in a list box in a screen.

The meaning of the other fields:

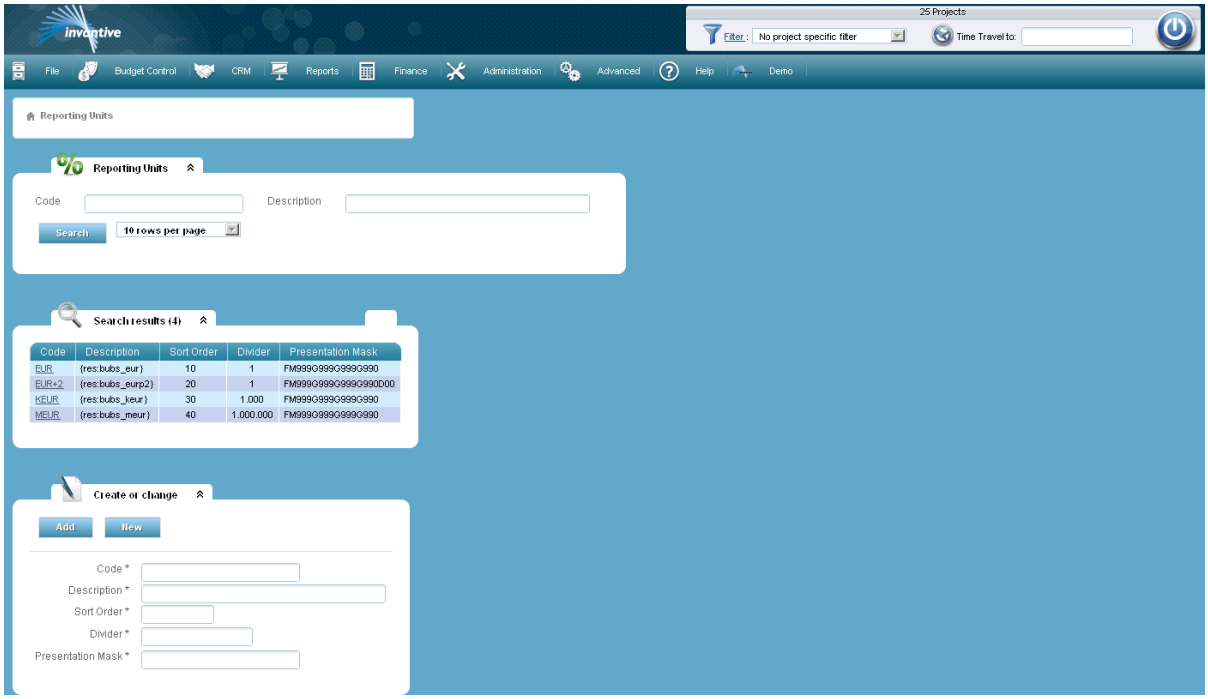
Description	The description of the code list.

Reporting Units

In this screen you can register and change reporting units.

A reporting unit is a constant number, used to divide amounts in reports. Often reports contain large numbers, and small details are not important. By using another reporting unit, such amounts can be expressed, for example, in millions.

The registration of reporting units is a typical activity for application developers. See the warning under Application Development 282.



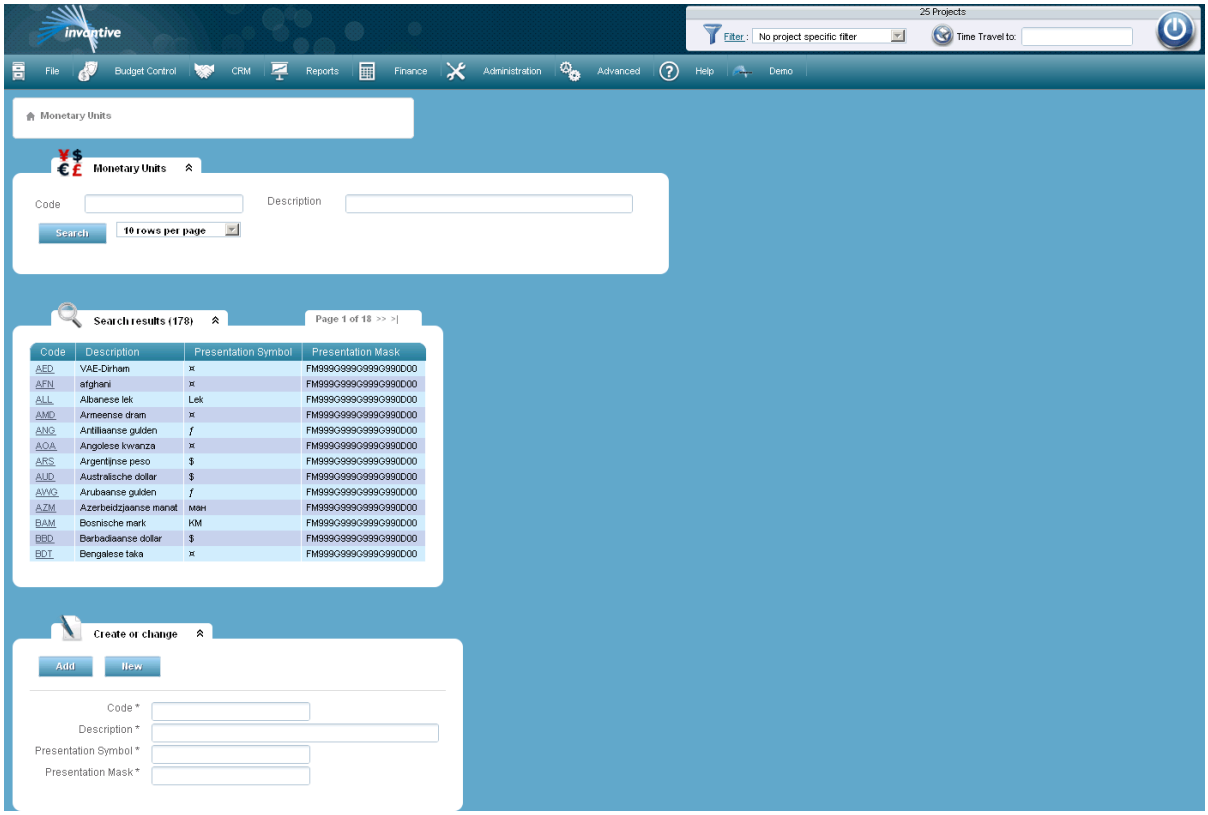
The meaning of the entry fields is:

Code	The code used to refer to the reporting unit.
Description	The description. Typical descriptions consist of the multiplication factor according to the ISO system (K for 1.000, M for 1.000.000), followed by the currency unit (EUR, USD). For multi-language purposes, the program usually refers to a 'resource'. This resource will be translated during the execution of the application. A resource has the format left accolade, 'res:' followed by a key which must reoccur in the screen and is closed with a right accolade.Translations 338 and ends with '}'.
Sort Order	A numeric value on which the reporting units are sorted when they are shown in a list box in a screen.
Divider	The constant by which the amounts in reports are divided in order to end up with a report with this type of reporting unit.
Presentation mask	A pattern that describes how the amount must be displayed after division by the 'divider'. The presentation mask consists of a number of characters, of which each character describes exactly one character in the presentation. The following characters are possible in the presentation mask: • G: the grouping character (in Europe this is a point '.'). • D: the decimal character (in Europe this is a comma ','). • 9: the number at this position before or after the comma, in case before the number at least one other number is placed other than 0. • 0: the number at this position before or after the comma. A presentation mask '990D00' gives the following results: '12.3' will become '12.30' '0' becomes '0.00' '

Monetary Units

This screen allows you to record and change currencies.

Registering monetary units is a typical activity for application developers. See the warning under Application Development 282.



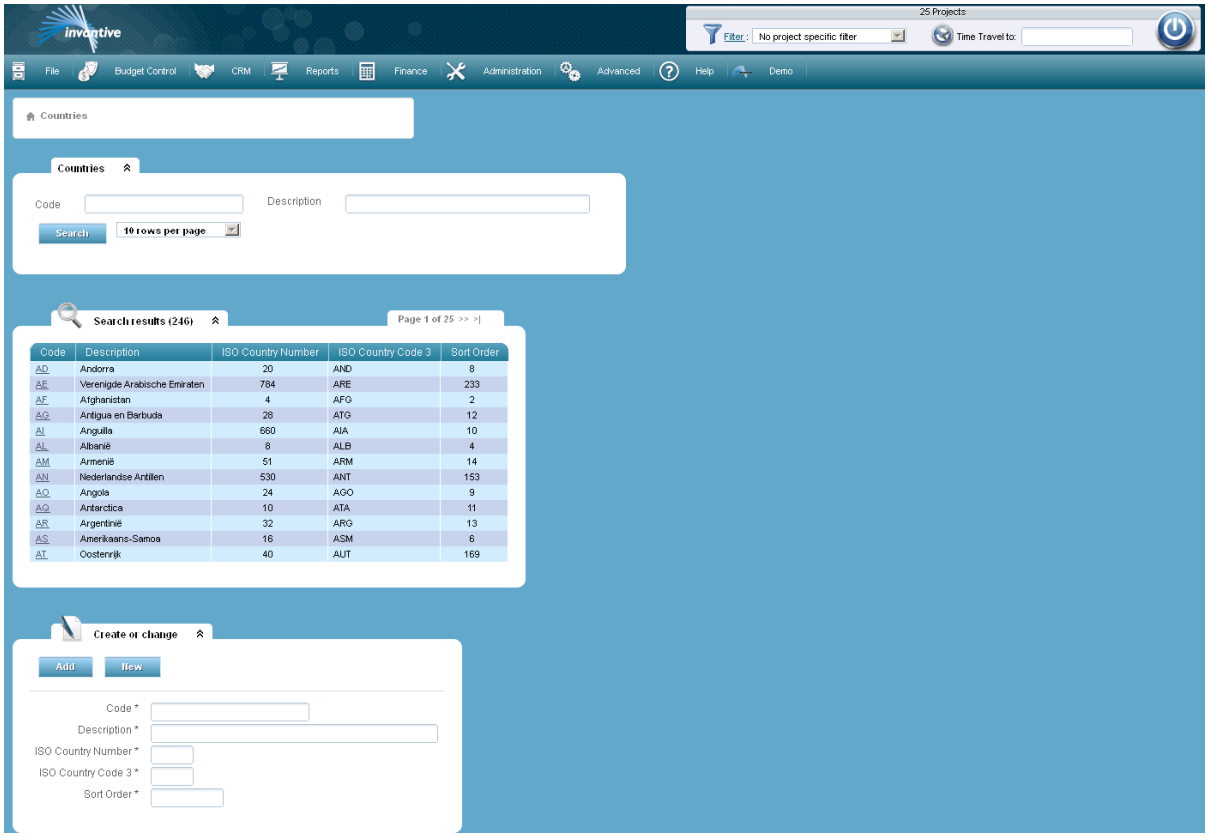
The meaning of the entry fields is:

Code	The ISO 4217 currency code. This is the international standard that defines three-letter codes for currencies.
Description	The description of the code.
Presentation Symbol	Defines the character which is used as a currency symbol. Some currencies do not have their own character. In that case, often the symbol '¤' is used.
Presentation mask	A pattern that describes how the amount must be displayed after division by the 'divider'. The presentation mask consists of a number of characters, of which each character describes exactly one character in the presentation. The following characters are possible in the presentation mask: • G: the grouping character (in Europe this is a point '.'). • D: the decimal character (in Europe this is a comma ','). • 9: the number at this position before or after the comma, in case before the number at least one other number is placed other than 0. • 0: the number at this position before or after the comma. A presentation mask '990D00' gives the following results: '12.3' will become '12.30' '0' will become '0.00'

Countries

this form you can register and change countries.

The registration of countries is a typical activity for application developers. See the warning under Application Development 282.



The meaning of the entry fields is:

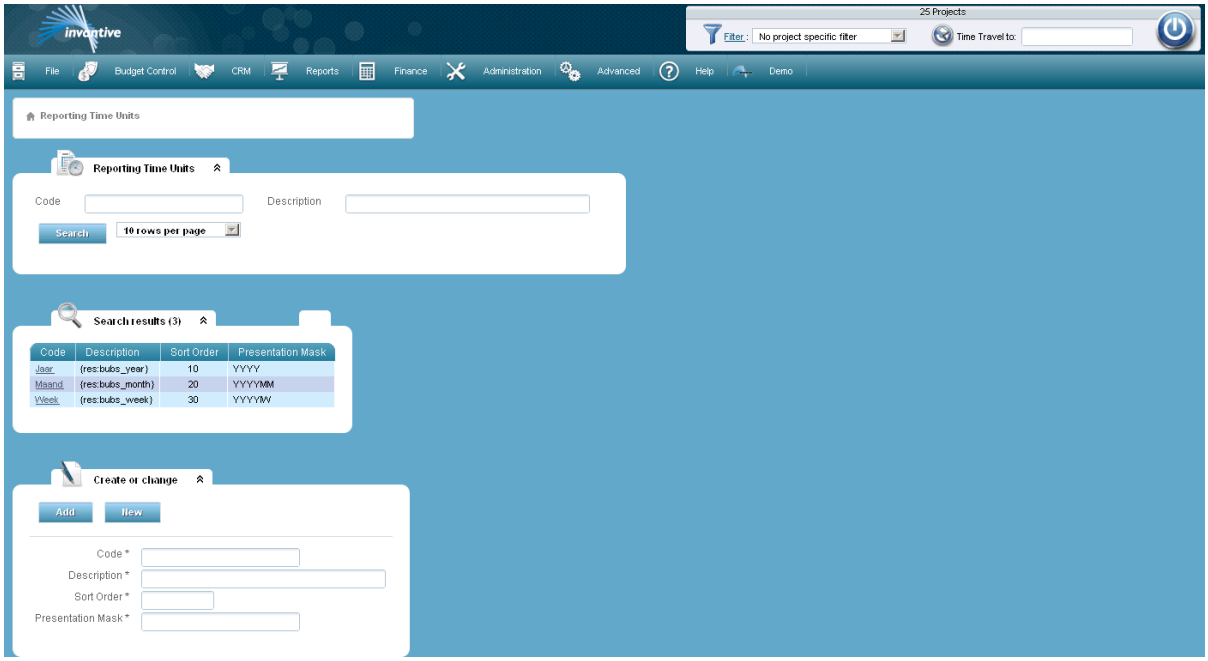
Code	The tw o letter code of the country according to ISO 3194.
Description	The name of the country.
ISO-Land Number	Unique country number according to ISO 3166.
ISO-Land Code 3	Unique three letter country codes according to ISO 3166.
Sort Order	Indicates the position of a country w hen a country is displayed in a list box.

Reporting Time Units

In this screen you can register and change reporting time units.

A reporting time unit is a breakdown of time-dependent data in a time range.

The registration of reporting time units is a typical activity for application developers. See the warning under Application Development 282.



The meaning of the entry fields is:

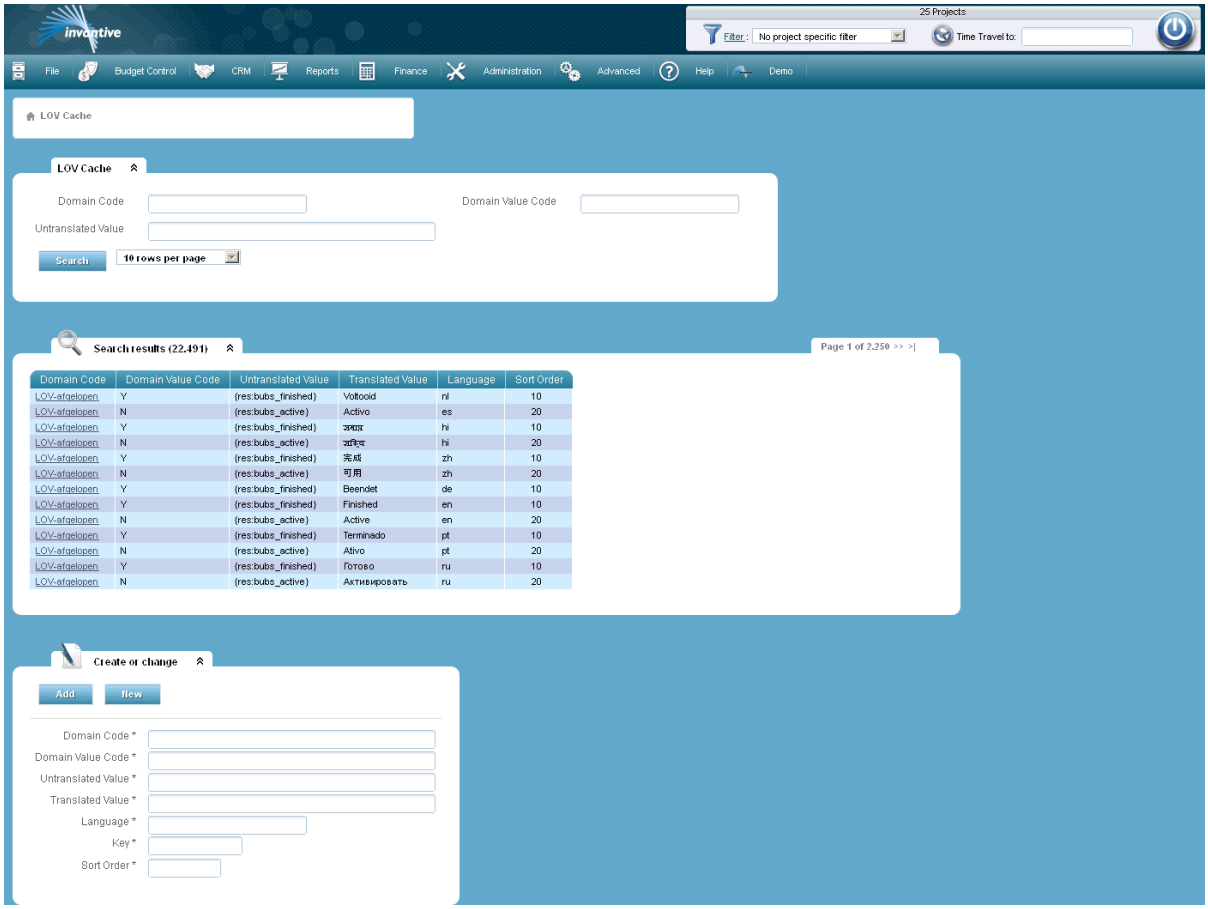
Code	The code used to refer to the reporting time unit.
Description	The description.
Sort Order	A numeric value on which the reporting time units are sorted when they are shown in a list box in a screen.

Presentation mask	A pattern describing how a date must be shown. The presentation mask consists of a number of characters, of which each character describes exactly one character in the presentation.
	The following characters are possible in the presentation mask:
	• 'YYYY': the year in four figures.
	• 'MM' the number of the month in two digits.
	• 'DD' the number of the day in two digits.
	• 'YY': the last two digits of the year.
	• 'RR': The last two digits of the year. The first 2 digits of the year will be determined by the current date of the database server and the figures provided. Four rules will be applied:
	  ▪ If the provided year is between 00 and 49 and the current year is between 00 and 49 than the century will be the same as the current century. For example, if the provided year is 15 and the current year is 2005, the result will be 2015.
	  ▪ If the provided year is between 50 and 99 and the current year is between 00 and 49 than the century is the current century minus one. For example, if the provided year is 75 and the current year is 2005, the result will be 1975.
	  ▪ If the provided year is between 00 and 49 years and the current year is between 50 and 99 than the century is the current century plus one. For example, if the provided year is 15 and the current year is 2075, then the result will be 2115
	  ▪ If the provided year is between 50 and 99 years and the current year between 50 and 99 than the century is the same as the current century. For example, if the provided year is 55 years and the current year 2075, the result will be 2055.
	• 'RRRR': The year in four-digits whereby the first 2 digits of the year will be determined with the current date on the database server and the figures provided. Four rules will be applied (see 'RR').
	• 'IW': The week number of the year based on the ISO 8601 standard.
	• etc. (see SQL language reference Oracle).

LOV Cache

In this screen you can register and change values for the lov-cache.

The 'list of values'-cache contains translated choice list values.



The meaning of the entry fields is:

Domain Code	Reference to a domain code as registered in view BUBS_CODES_V.CDE_CODE.
Domain Value Code	Reference to a domain value code as registered in BUBS_CODE_VALUES_V.CWE_CODE.
Untranslated Value	Reference to an untranslated value as registered in BUBS_CODE_VALUES_V.CWE_DESCRIPTION.
Translated Value	Translation based on the language and the untranslated value.
Language	Reference to a language code as registered in BUBS_LANGUAGES_V.TAL_CODE.
Key	Key Value as registered in BUBS_CODE_VALUES
Sort Order	A numeric value w here the translated values are sorted on if several are show n in a choice list.

Languages

In this form you can register and change languages.

The registration of languages is a typical activity for application developers. See the warning under Application Development 282.

Internal Error

Internal server error.

Please contact your application administrator.

Reason: 500: Internal server error.
URL: http://tst.estate.invantive.com/smoke_bubs/bubs_tal_all.do
Login: system
Time: 15-11-2012 20:59:48
Servlet: controller

Message:

```
java.lang.RuntimeException: SQL Error on RawCommand

Statement:
RawCommand sql='SELECT TAL_CODE, TAL_OMSCHRIJVING, TAL_ORACLE_NLS_LANGUAGE, TAL_ORACLE_NLS_TERRITORY, TAL_ORACLE_NLS_DATE_FORMAT, TAL_NK, TAL_ID,
TAL_BRUIKBAAR_IN_UI_VLAG, TAL_ORACLE_NLS_NUMERIC_CHARS, TAL_ORACLE_NLS_DATE_S_FORMAT, TAL_ORACLE_NLS_DATE_T_FORMAT
FROM BUBS_TALEN_V {SQL_Where} {SQL_OrderBy}'
         where='null'
         order='TAL_CODE'
      countSql='SELECT COUNT(*)
FROM BUBS_TALEN_V'
     sqlString='SELECT COUNT(*)
FROM BUBS_TALEN_V'
      startPos='1'
     fetchSize='13'
    connection='bubs_tomcat'
Parameters:none


Exception:
java.sql.SQLSyntaxErrorException: ORA-00942: Tabel of view bestaat niet.

 at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:445)
 at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:396)
 at oracle.jdbc.driver.T4C80all.processError(T4C80all.java:879)
 at oracle.jdbc.driver.T4CTTIfun.receive(T4CTTIfun.java:450)
 at oracle.jdbc.driver.T4CTTIfun.doRPC(T4CTTIfun.java:192)
 at oracle.jdbc.driver.T4C80all.doOALL(T4C80all.java:531)
 at oracle.jdbc.driver.T4CPreparedStatement.doOall8(T4CPreparedStatement.java:207)
 at oracle.jdbc.driver.T4CPreparedStatement.executeForDescribe(T4CPreparedStatement.java:884)
 at oracle.jdbc.driver.OracleStatement.executeMaybeDescribe(OracleStatement.java:1167)
 at oracle.jdbc.driver.OracleStatement.doExecuteWithTimeout(OracleStatement.java:1289)
 at oracle.jdbc.driver.OracleStatement.doScrollExecuteCommon(OracleStatement.java:4692)
 at oracle.jdbc.driver.OraclePreparedStatement.doScrollPstmtExecuteUpdate(OraclePreparedStatement.java:10458)
 at oracle.jdbc.driver.OraclePreparedStatement.executeInternal(OraclePreparedStatement.java:3582)
 at oracle.jdbc.driver.OraclePreparedStatement.executeQuery(OraclePreparedStatement.java:3628)
 at oracle.jdbc.driver.OraclePreparedStatementWrapper.executeQuery(OraclePreparedStatementWrapper.java:1493)
 at com.codecharge.db.RawCommand.count(RawCommand.java:458)
 at bubs_tal_all.BUBS_TALEN_VDataObject.load(BUBS_TALEN_VDataObject.java:124)
 at bubs_tal_all.bubs_tal_allAction$BUBS_TALEN_VClass.read(bubs_tal_allAction.java:319)
 at bubs_tal_all.bubs_tal_allAction$BUBS_TALEN_VClass.perform(bubs_tal_allAction.java:267)
 at bubs_tal_all.bubs_tal_allAction.perform(bubs_tal_allAction.java:72)
 at com.codecharge.ControllerServlet.service(ControllerServlet.java:129)
 at javax.servlet.http.HttpServlet.service(HttpServlet.java:722)
 at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:305)
 at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:210)
 at org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:224)
 at org.apache.catalina.core.StandardContextValve.invoke(StandardContextValve.java:169)
 at org.apache.catalina.authenticator.AuthenticatorBase.invoke(AuthenticatorBase.java:472)
 at org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:168)
 at com.googlecode.psiprobe.Tomcat70AgentValve.invoke(Tomcat70AgentValve.java:38)
 at org.apache.catalina.valves.ErrorReportValve.invoke(ErrorReportValve.java:98)
 at org.apache.catalina.core.StandardEngineValve.invoke(StandardEngineValve.java:118)
 at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:407)
 at org.apache.coyote.http11.AbstractHttp11Processor.process(AbstractHttp11Processor.java:987)
 at org.apache.coyote.AbstractProtocol$AbstractConnectionHandler.process(AbstractProtocol.java:539)
 at org.apache.tomcat.util.net.JIoEndpoint$SocketProcessor.run(JIoEndpoint.java:300)
 at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1110)
 at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:603)
 at java.lang.Thread.run(Thread.java:722)

 at com.codecharge.db.Command.catchException(Command.java:350)
 at com.codecharge.db.RawCommand.count(RawCommand.java:462)
 at bubs_tal_all.BUBS_TALEN_VDataObject.load(BUBS_TALEN_VDataObject.java:124)
 at bubs_tal_all.bubs_tal_allAction$BUBS_TALEN_VClass.read(bubs_tal_allAction.java:319)
 at bubs_tal_all.bubs_tal_allAction$BUBS_TALEN_VClass.perform(bubs_tal_allAction.java:267)
 at bubs_tal_all.bubs_tal_allAction.perform(bubs_tal_allAction.java:72)
 at com.codecharge.ControllerServlet.service(ControllerServlet.java:129)
 at javax.servlet.http.HttpServlet.service(HttpServlet.java:722)
 at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:305)
 at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:210)
 at org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:224)
 at org.apache.catalina.core.StandardContextValve.invoke(StandardContextValve.java:169)
 at org.apache.catalina.authenticator.AuthenticatorBase.invoke(AuthenticatorBase.java:472)
 at org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:168)
 at com.googlecode.psiprobe.Tomcat70AgentValve.invoke(Tomcat70AgentValve.java:38)
 at org.apache.catalina.valves.ErrorReportValve.invoke(ErrorReportValve.java:98)
 at org.apache.catalina.core.StandardEngineValve.invoke(StandardEngineValve.java:118)
 at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:407)
 at org.apache.coyote.http11.AbstractHttp11Processor.process(AbstractHttp11Processor.java:987)
 at org.apache.coyote.AbstractProtocol$AbstractConnectionHandler.process(AbstractProtocol.java:539)
 at org.apache.tomcat.util.net.JIoEndpoint$SocketProcessor.run(JIoEndpoint.java:300)
 at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1110)
 at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:603)
 at java.lang.Thread.run(Thread.java:722)
```

Een Invantive product

The meaning of the entry fields is:

Code	The code used to refer to the language. It is recommended to conform to the international language codes as registered in ISO 639.
Description	The description of the language.
Usable In User Interface	If checked, the language can be used in the user interface.
Database	
NLS Language	The language setting in the database which makes that database errors are displayed in the correct language.
NLS Territory	The region setting in the database which makes that region dependent settings are displayed in a correct way.

NLS Date Format	The desired date format of the database. This should always be ‘dd-mm-rrrr hh24:mi:ss’. Other date formats are not supported.

Translations

In this form you can register and change translations.

he registration of translations is a typical activity for application developers. See the warning under Application Development 282.

Internal Error

Internal server error.

Please contact your application administrator.

Reason: 500: Internal server error.
URL: http://tst.estate.invantive.com/smoke_bubs/bubs_vtg_all.do
Login: system
Time: 15-11-2012 21:01:28
Servlet: controller

Message:

```
java.lang.RuntimeException: SQL Error on RawCommand

Statement:
RawCommand sql='SELECT TAL_CODE, VTG_SLEUTEL, VTG_RESOURCE_VLAG, VTG_GLOSSARY_VLAG, VTG_VERTALING, VTG_NK, VTG_ID, VTG_DATUM_LAATSTE_REVIEW,
VTG_TAALONAFHANKELIJK_VLAG
FROM BUBS_VERTALINGEN_V {SQL_Where} {SQL_OrderBy}'
        where='null'
        order='TAL_CODE, VTG_LABEL'
      countSql='SELECT COUNT(*)
FROM BUBS_VERTALINGEN_V'
     sqlString='SELECT COUNT(*)
FROM BUBS_VERTALINGEN_V'
      startPos='1'
     fetchSize='13'
    connection='bubs_tomcat'
Parameters:none


Exception:
java.sql.SQLSyntaxErrorException: ORA-00942: Tabel of view bestaat niet.

 at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:445)
 at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:396)
 at oracle.jdbc.driver.T4C80all.processError(T4C80all.java:879)
 at oracle.jdbc.driver.T4CTTIfun.receive(T4CTTIfun.java:450)
 at oracle.jdbc.driver.T4CTTIfun.doRPC(T4CTTIfun.java:192)
 at oracle.jdbc.driver.T4C80all.doOALL(T4C80all.java:531)
 at oracle.jdbc.driver.T4CPreparedStatement.doOall8(T4CPreparedStatement.java:207)
 at oracle.jdbc.driver.T4CPreparedStatement.executeForDescribe(T4CPreparedStatement.java:884)
 at oracle.jdbc.driver.OracleStatement.executeMaybeDescribe(OracleStatement.java:1167)
 at oracle.jdbc.driver.OracleStatement.doExecuteWithTimeout(OracleStatement.java:1289)
 at oracle.jdbc.driver.OracleStatement.doScrollExecuteCommon(OracleStatement.java:4692)
 at oracle.jdbc.driver.OraclePreparedStatement.doScrollPstmtExecuteUpdate(OraclePreparedStatement.java:10458)
 at oracle.jdbc.driver.OraclePreparedStatement.executeInternal(OraclePreparedStatement.java:3582)
 at oracle.jdbc.driver.OraclePreparedStatement.executeQuery(OraclePreparedStatement.java:3628)
 at oracle.jdbc.driver.OraclePreparedStatementWrapper.executeQuery(OraclePreparedStatementWrapper.java:1493)
 at com.codecharge.db.RawCommand.count(RawCommand.java:458)
 at bubs_vtg_all.BUBS_VERTALINGEN_VDataObject.load(BUBS_VERTALINGEN_VDataObject.java:168)
 at bubs_vtg_all.bubs_vtg_allAction$BUBS_VERTALINGEN_VClass.read(bubs_vtg_allAction.java:328)
 at bubs_vtg_all.bubs_vtg_allAction$BUBS_VERTALINGEN_VClass.perform(bubs_vtg_allAction.java:275)
 at bubs_vtg_all.bubs_vtg_allAction.perform(bubs_vtg_allAction.java:72)
 at com.codecharge.ControllerServlet.service(ControllerServlet.java:129)
 at javax.servlet.http.HttpServlet.service(HttpServlet.java:722)
 at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:305)
 at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:210)
 at org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:224)
 at org.apache.catalina.core.StandardContextValve.invoke(StandardContextValve.java:169)
 at org.apache.catalina.authenticator.AuthenticatorBase.invoke(AuthenticatorBase.java:472)
 at org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:168)
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 at org.apache.coyote.AbstractProtocol$AbstractConnectionHandler.process(AbstractProtocol.java:539)
 at org.apache.tomcat.util.net.JIoEndpoint$SocketProcessor.run(JIoEndpoint.java:300)
 at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1110)
 at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:603)
 at java.lang.Thread.run(Thread.java:722)

 at com.codecharge.db.Command.catchException(Command.java:350)
 at com.codecharge.db.RawCommand.count(RawCommand.java:462)
 at bubs_vtg_all.BUBS_VERTALINGEN_VDataObject.load(BUBS_VERTALINGEN_VDataObject.java:168)
 at bubs_vtg_all.bubs_vtg_allAction$BUBS_VERTALINGEN_VClass.read(bubs_vtg_allAction.java:328)
 at bubs_vtg_all.bubs_vtg_allAction$BUBS_VERTALINGEN_VClass.perform(bubs_vtg_allAction.java:275)
 at bubs_vtg_all.bubs_vtg_allAction.perform(bubs_vtg_allAction.java:72)
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 at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:210)
 at org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:224)
 at org.apache.catalina.core.StandardContextValve.invoke(StandardContextValve.java:169)
 at org.apache.catalina.authenticator.AuthenticatorBase.invoke(AuthenticatorBase.java:472)
 at org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:168)
 at com.googlecode.psiprobe.Tomcat70AgentValve.invoke(Tomcat70AgentValve.java:38)
 at org.apache.catalina.valves.ErrorReportValve.invoke(ErrorReportValve.java:98)
 at org.apache.catalina.core.StandardEngineValve.invoke(StandardEngineValve.java:118)
 at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:407)
 at org.apache.coyote.http11.AbstractHttp11Processor.process(AbstractHttp11Processor.java:987)
 at org.apache.coyote.AbstractProtocol$AbstractConnectionHandler.process(AbstractProtocol.java:539)
 at org.apache.tomcat.util.net.JIoEndpoint$SocketProcessor.run(JIoEndpoint.java:300)
 at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1110)
 at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:603)
 at java.lang.Thread.run(Thread.java:722)
```

Een Invantive product

The meaning of the entry fields is:

Language	The language of the translation.

Key	The unique identification of the translation. This keyword is also used in the resource formats between '{res:' en '}'.
Include in Resources	The term included in the translation list when checked. This translation list is used as a 'translation memory' in the translation of this manual for example.
Include in Glossary	The term is included in the translation list for support of translators when checked.
Translation	The translation of the keyword in the selected language. You can use '\u', followed by a hexadecimal number of four positions to enter special characters.

Workbench Translations

In this screen you can maintain translations online.

Online maintenance of translations is a typical activity for application developers. See the warning under Application Development 282.

Internal Error

Internal server error.

Please contact your application administrator.

Reason: 500: Internal server error.
URL: http://tst.estate.invantive.com/smoke_bubs/bubs_avg_all.do
Login: system
Time: 15-11-2012 20:55:24
Servlet: controller

Message:

```
java.lang.RuntimeException: SQL Error on RawCommand

Statement:
RawCommand sql='SELECT AVG_ID, SLL_SLEUTEL, VTG_ID_P, TAL_CODE_P, VTG_ID_S, TAL_CODE_S, VTG_VLAG_SLEUTEL_MIST_P, VTG_VLAG_SLEUTEL_MIST_S,
VTG_VLAG_VERTALING_VEROUDERD_S,
VTG_VERTALING_P, VTG_VERTALING_S
FROM BUBS_AANSLUITING_VTG_R {SQL_Where} {SQL_OrderBy}'
         where='null'
         order='TAL_CODE_S'
      countSql='SELECT COUNT(*)
FROM BUBS_AANSLUITING_VTG_R'
     sqlString='SELECT COUNT(*)
FROM BUBS_AANSLUITING_VTG_R'
      startPos='1'
     fetchSize='13'
    connection='bubs_tomcat'
Parameters:none


Exception:
java.sql.SQLSyntaxErrorException: ORA-00942: Tabel of view bestaat niet.

 at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:445)
 at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:396)
 at oracle.jdbc.driver.T4C8Oall.processError(T4C8Oall.java:879)
 at oracle.jdbc.driver.T4CTTIfun.receive(T4CTTIfun.java:450)
 at oracle.jdbc.driver.T4CTTIfun.doRPC(T4CTTIfun.java:192)
 at oracle.jdbc.driver.T4C8Oall.doOALL(T4C8Oall.java:531)
 at oracle.jdbc.driver.T4CPreparedStatement.doOall8(T4CPreparedStatement.java:207)
 at oracle.jdbc.driver.T4CPreparedStatement.executeForDescribe(T4CPreparedStatement.java:884)
 at oracle.jdbc.driver.OracleStatement.executeMaybeDescribe(OracleStatement.java:1167)
 at oracle.jdbc.driver.OracleStatement.doExecuteWithTimeout(OracleStatement.java:1289)
 at oracle.jdbc.driver.OracleStatement.doScrollExecuteCommon(OracleStatement.java:4692)
 at oracle.jdbc.driver.OraclePreparedStatement.doScrollPstmtExecuteUpdate(OraclePreparedStatement.java:10458)
 at oracle.jdbc.driver.OraclePreparedStatement.executeInternal(OraclePreparedStatement.java:3582)
 at oracle.jdbc.driver.OraclePreparedStatement.executeQuery(OraclePreparedStatement.java:3628)
 at oracle.jdbc.driver.OraclePreparedStatementWrapper.executeQuery(OraclePreparedStatementWrapper.java:1493)
 at com.codecharge.db.RawCommand.count(RawCommand.java:458)
 at bubs_avg_all.BUBS_AANSLUITING_VTG_RDataObject.load(BUBS_AANSLUITING_VTG_RDataObject.java:154)
 at bubs_avg_all.bubs_avg_allAction$BUBS_AANSLUITING_VTG_RClass.read(bubs_avg_allAction.java:631)
 at bubs_avg_all.bubs_avg_allAction$BUBS_AANSLUITING_VTG_RClass.perform(bubs_avg_allAction.java:580)
 at bubs_avg_all.bubs_avg_allAction.perform(bubs_avg_allAction.java:88)
 at com.codecharge.ControllerServlet.service(ControllerServlet.java:129)
 at javax.servlet.http.HttpServlet.service(HttpServlet.java:722)
 at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:305)
 at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:210)
 at org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:224)
 at org.apache.catalina.core.StandardContextValve.invoke(StandardContextValve.java:169)
 at org.apache.catalina.authenticator.AuthenticatorBase.invoke(AuthenticatorBase.java:472)
 at org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:168)
 at com.googlecode.psiprobe.Tomcat70AgentValve.invoke(Tomcat70AgentValve.java:38)
 at org.apache.catalina.valves.ErrorReportValve.invoke(ErrorReportValve.java:98)
 at org.apache.catalina.core.StandardEngineValve.invoke(StandardEngineValve.java:118)
 at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:407)
 at org.apache.coyote.http11.AbstractHttp11Processor.process(AbstractHttp11Processor.java:987)
 at org.apache.coyote.AbstractProtocol$AbstractConnectionHandler.process(AbstractProtocol.java:539)
 at org.apache.tomcat.util.net.JIoEndpoint$SocketProcessor.run(JIoEndpoint.java:300)
 at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1110)
 at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:603)
 at java.lang.Thread.run(Thread.java:722)

 at com.codecharge.db.Command.catchException(Command.java:350)
 at com.codecharge.db.RawCommand.count(RawCommand.java:462)
 at bubs_avg_all.BUBS_AANSLUITING_VTG_RDataObject.load(BUBS_AANSLUITING_VTG_RDataObject.java:154)
 at bubs_avg_all.bubs_avg_allAction$BUBS_AANSLUITING_VTG_RClass.read(bubs_avg_allAction.java:631)
 at bubs_avg_all.bubs_avg_allAction$BUBS_AANSLUITING_VTG_RClass.perform(bubs_avg_allAction.java:580)
 at bubs_avg_all.bubs_avg_allAction.perform(bubs_avg_allAction.java:88)
 at com.codecharge.ControllerServlet.service(ControllerServlet.java:129)
 at javax.servlet.http.HttpServlet.service(HttpServlet.java:722)
 at org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:305)
 at org.apache.catalina.core.ApplicationFilterChain.doFilter(ApplicationFilterChain.java:210)
 at org.apache.catalina.core.StandardWrapperValve.invoke(StandardWrapperValve.java:224)
 at org.apache.catalina.core.StandardContextValve.invoke(StandardContextValve.java:169)
 at org.apache.catalina.authenticator.AuthenticatorBase.invoke(AuthenticatorBase.java:472)
 at org.apache.catalina.core.StandardHostValve.invoke(StandardHostValve.java:168)
 at com.googlecode.psiprobe.Tomcat70AgentValve.invoke(Tomcat70AgentValve.java:38)
 at org.apache.catalina.valves.ErrorReportValve.invoke(ErrorReportValve.java:98)
 at org.apache.catalina.core.StandardEngineValve.invoke(StandardEngineValve.java:118)
 at org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapter.java:407)
 at org.apache.coyote.http11.AbstractHttp11Processor.process(AbstractHttp11Processor.java:987)
 at org.apache.coyote.AbstractProtocol$AbstractConnectionHandler.process(AbstractProtocol.java:539)
 at org.apache.tomcat.util.net.JIoEndpoint$SocketProcessor.run(JIoEndpoint.java:300)
 at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1110)
 at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:603)
 at java.lang.Thread.run(Thread.java:722)
```

Een Invantive product

The meaning of the entry fields is:

Target translation	The translation of the source translation.

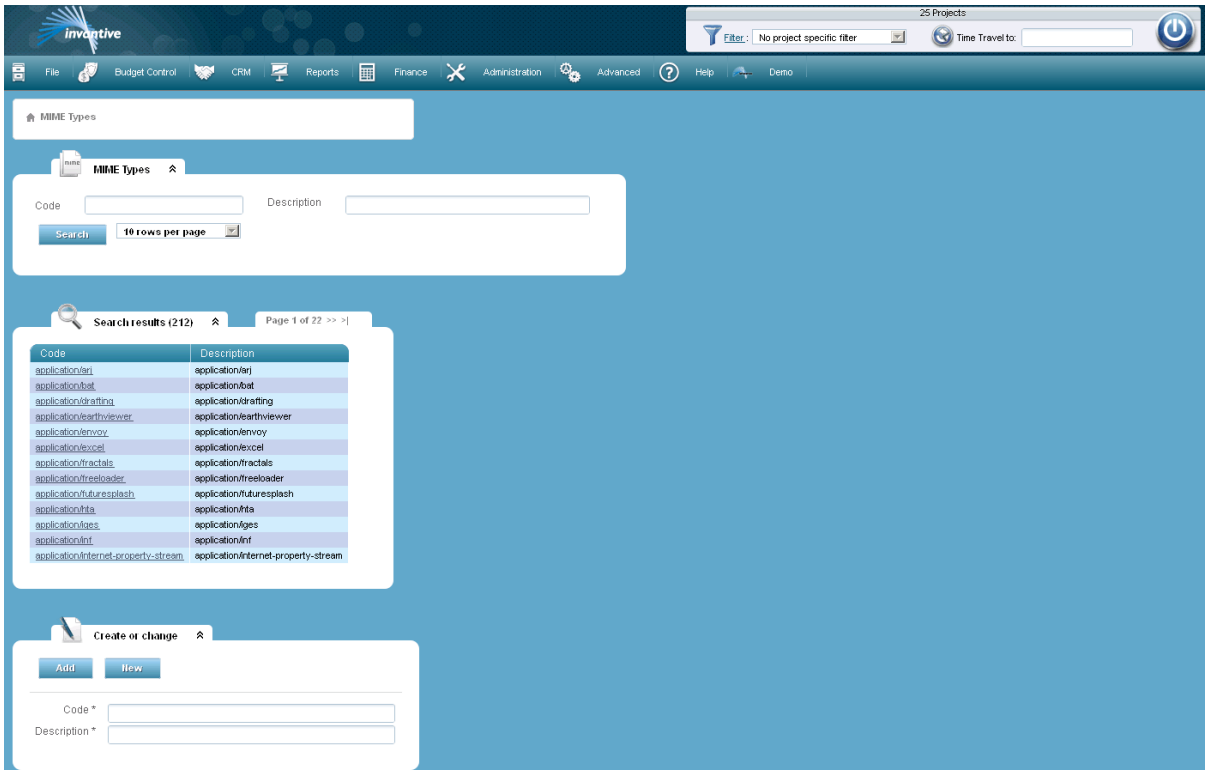
The meaning of the other fields:

Target language	The language to w hich the source language w ill be translated.
Key	The unique identification of the translation. This keyw ord is also used in the resource formats betw een '{res:' en '}'.
Translation is oudated	If checked, there is a more recent translation available.
Translation Missing	If checked, the source text is not translated.
Source Translation	The text to be translated to the target language.

MIME Types

In the following screen MIME types can be recorded and changed.

The MIME specification (Multipurpose Internet Mail Extensions) was proposed in 1992 to ensure that non-ASCII files could be sent by email. Because the ASCII standard consists of the standard Western European and American characters, it could not be used for images or other material. Today, the MIME specification is also used by the HTTP protocol to present all kinds of files in web pages.



The meaning of the entry fields is:

Code	The code of the MIME type.
Description	The description of the MIME type.

The MIME types are used to link file extensions to MIME types. In this way you can determine a MIME type even in the absence of the correct MIME type.

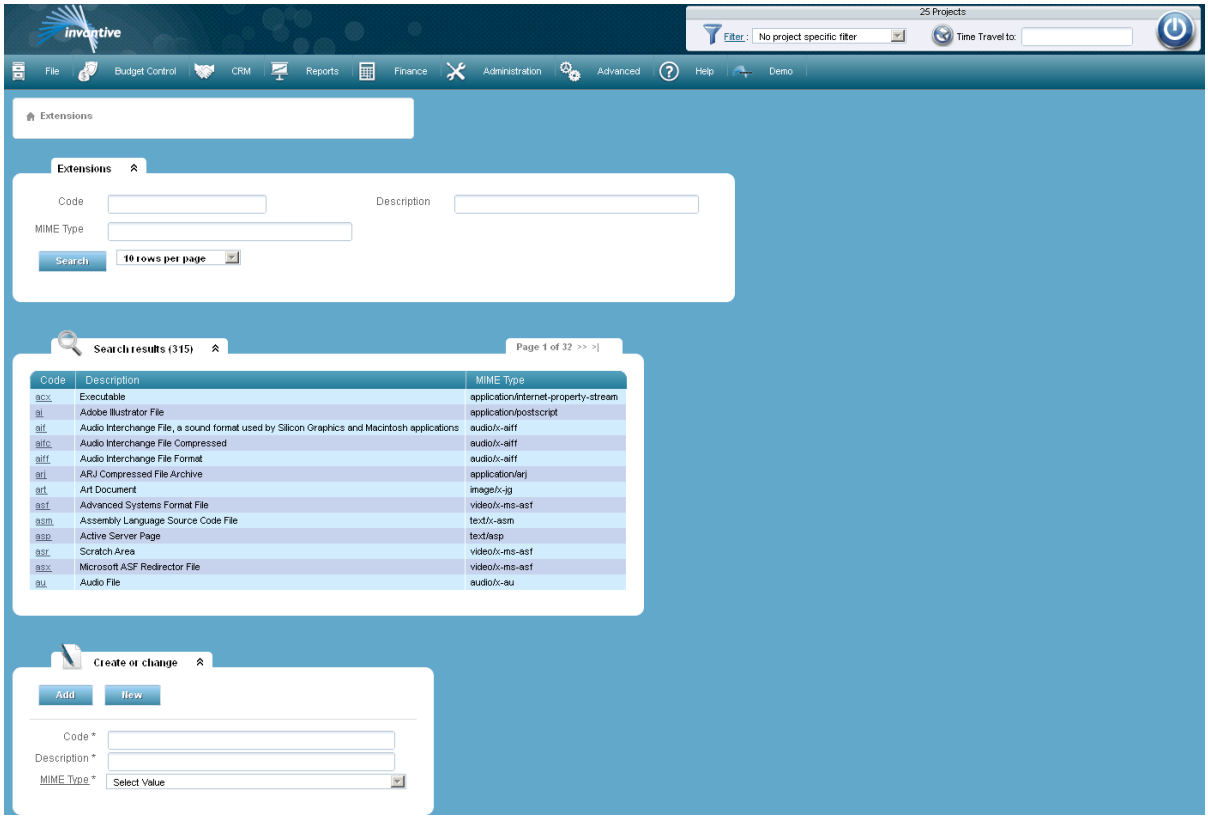
The registration of MIME types is a typical activity for application developers. See the warning under Application Development 282.

Extensions

This screen allows you to record and change extensions.

A file extension is an addition to the end of a filename indicating what type of file it is. This extension consists of one or more letters (usually three) after the last point in the name. For example, in the filename ‘contract.doc‘ is ‘.doc’ the file extension.

File extensions are used in most computer operating systems to enable the computer to determine the type of a file in order to start the appropriate program to open the file with.



The meaning of the entry fields is:

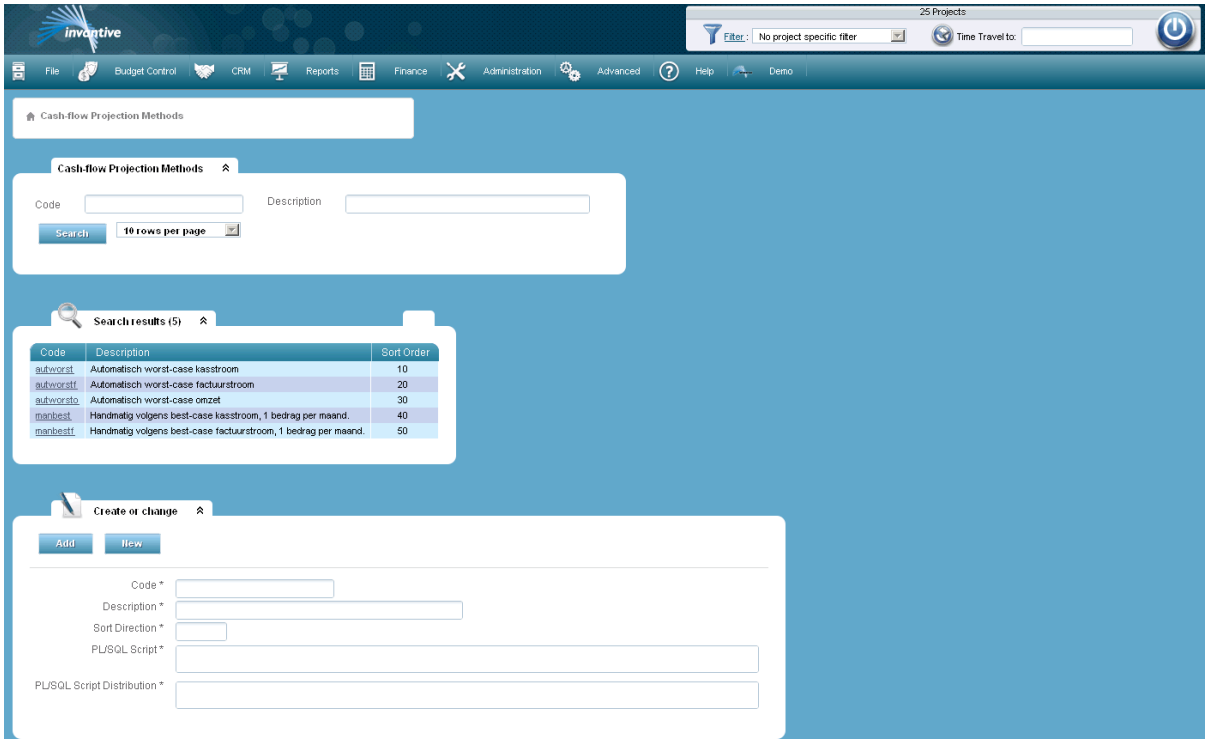
Code	The code of the extension.
Description	The description of the extension. For example, w ith w hich program the extension can be opened or the function of files w ith this extension.
MIME Type	Reference to the MIME Type as registered in MIME Types 341.

Cash Flow Projection Methods

In this screen you can register and change cash flow projection methods.

To have profit as objective and as a basis for decision making in a project, has the disadvantage, that no account is taken of time preference and risk. An alternative is to think in the present value of the future cash flows of the project. In this screen the desired cash flow projection methods can be entered with which the present value of future cash flows can be calculated.

Cash flow projections can be calculated for sub- and independent projects, but not for master projects.



The meaning of the entry fields is:

Code	The code used to refer to the cash flow projection method.
Description	The description
Sort Order	The number used to sort cash flow projection methods in'drop boxes'.
PL/SQL Script	The PL/SQL-script used to calculate the cash flow projection method.
PL/SQL Script Distribution	The PL/SQL-script used to calculate the distribution of cash flow per day over time. This is a different script than the PL/SQL script.

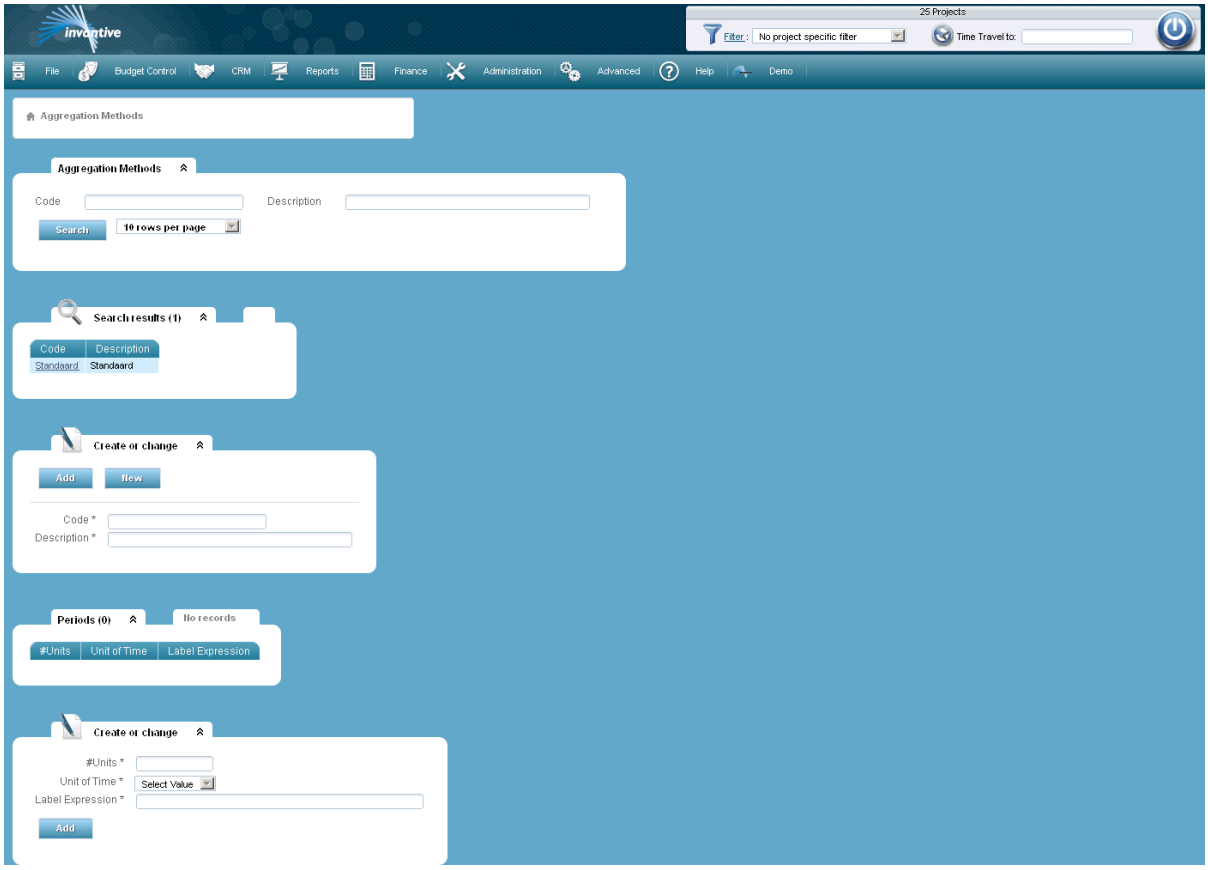
Note: cash flow projections can be used for cash flows, invoice flows, revenue flows and other distributions of amounts over time.

Aggregation Methods

In this screen you can register and edit aggregation methods.

An aggregation method is an allocation of days in a time range in summaries. An example:

- Today: today.
- Last week: 1 till 7 days ago.
- Last month: 1 till 30 days ago.
- etc.



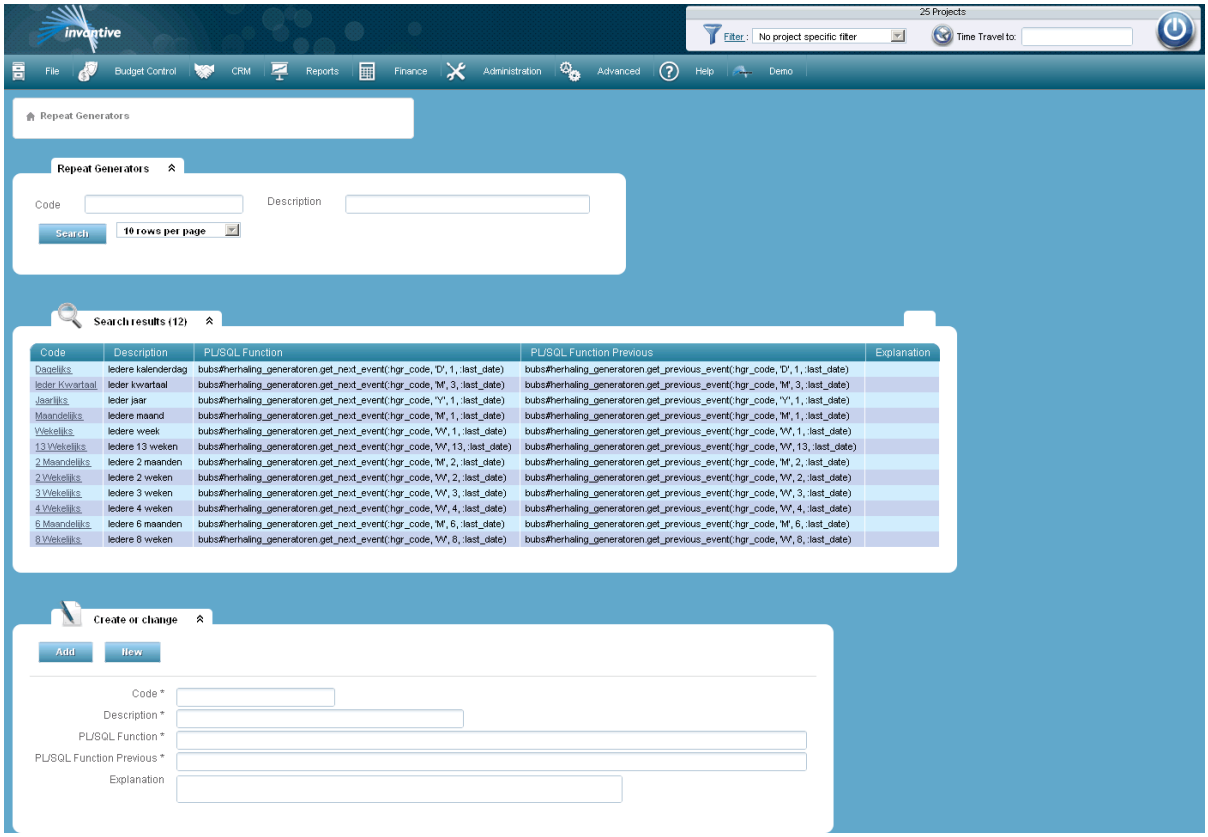
The meaning of the entry fields is:

Code	The code with which is refered to the aggregation method.
Description	The description of the aggregation method.
#Units	The number of units to be aggregated.
Unit of Time	The time unit over which the aggregation takes place.
Label Expression	SQL expression that calculates the first day in the period. All variables of type ': start_date' will be replaced by the first day in the period. They are summed for all times after the previous period specification. For example: • 2 days --> day 0 till 2. • 7 days --> day 2 till 7. • 1 month --> day 7 till the end of the month which contains day 7.

Repeat Generators

In this screen you can register and change repeat generators.

With a repeat generator you can start events which should be initiated after the expiration of a specified time interval.



The meaning of the entry fields is:

Code	The code used to refer to the repeat generator.
Description	The description of the repeat generator.
PL/SQL Function	The name of the PL/SQL function that calculates the next date using the last date and the repeat generator code.
PL/SQL Function Previous	The name of the PL/SQL function that calculates the previous date using the last date and the repeat generator code.
Explanation	Possible explanation.

1.4.9 Messages

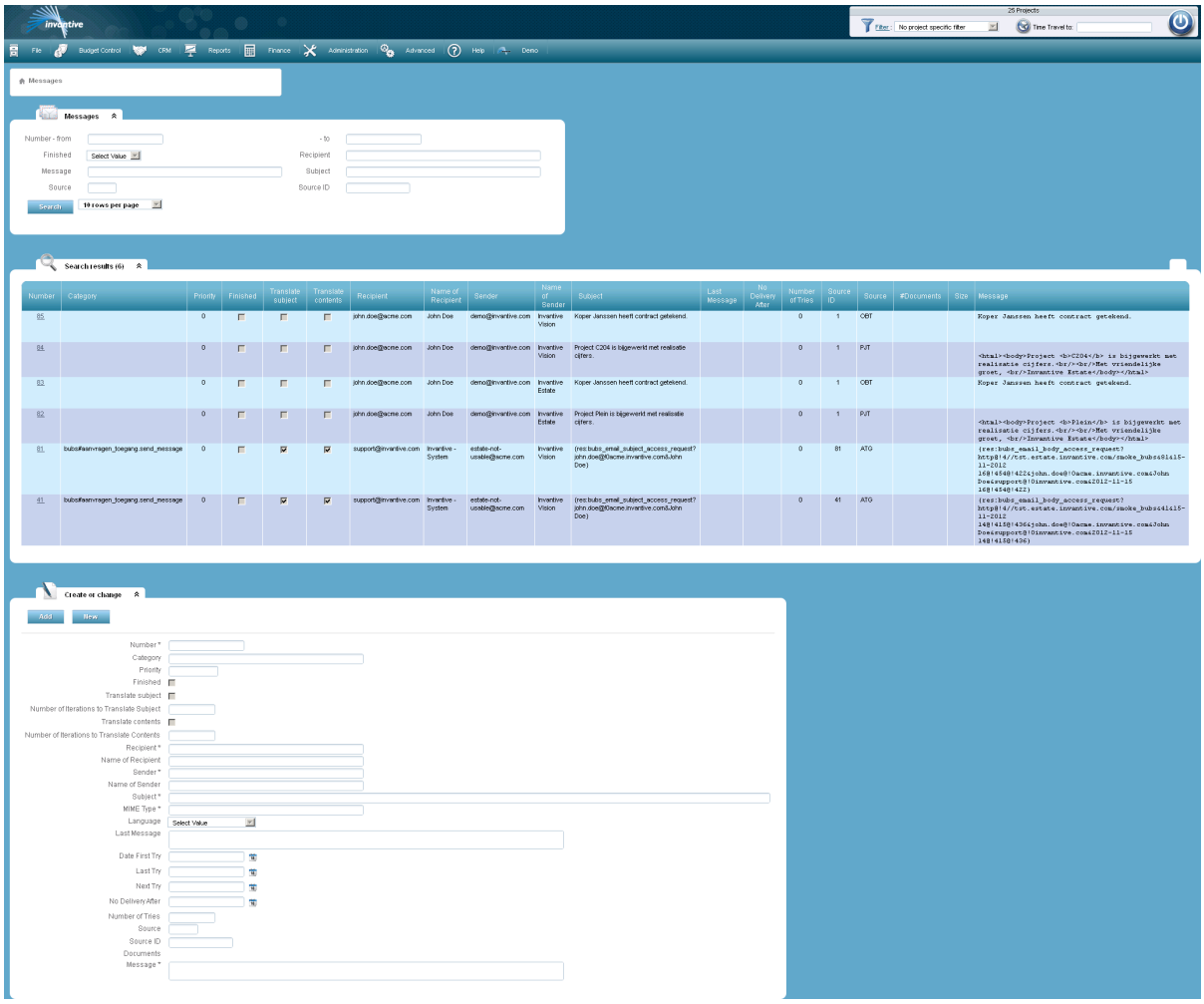
In this form you can register and change messages.

A message is an asynchronous exchange of information, for example, by email.

If a message is delivered by email, then you can find the following fields in the headers of the email:

- `X-Priority`: priority, described of the Invantive priority where 0 is neutral to SMTP priority where 3 is neutral.
- `X-Mailer`: site identification.
- `X-Invantive-ID`: number of the message.
- `X-Invantive-Tries`: number of tries of the message.
- `X-Invantive-Send-Delay`: time passed between the recording of the message and the actual sending.
- `X-Invantive-Recipient`: recipient of the message as it has been requested to the email server.

- `X-Invantive-Table-Code`: source of the message.
- `X-Invantive-Table-ID`: linking-ID of the message.
- `X-Invantive-Category`: category of the message.



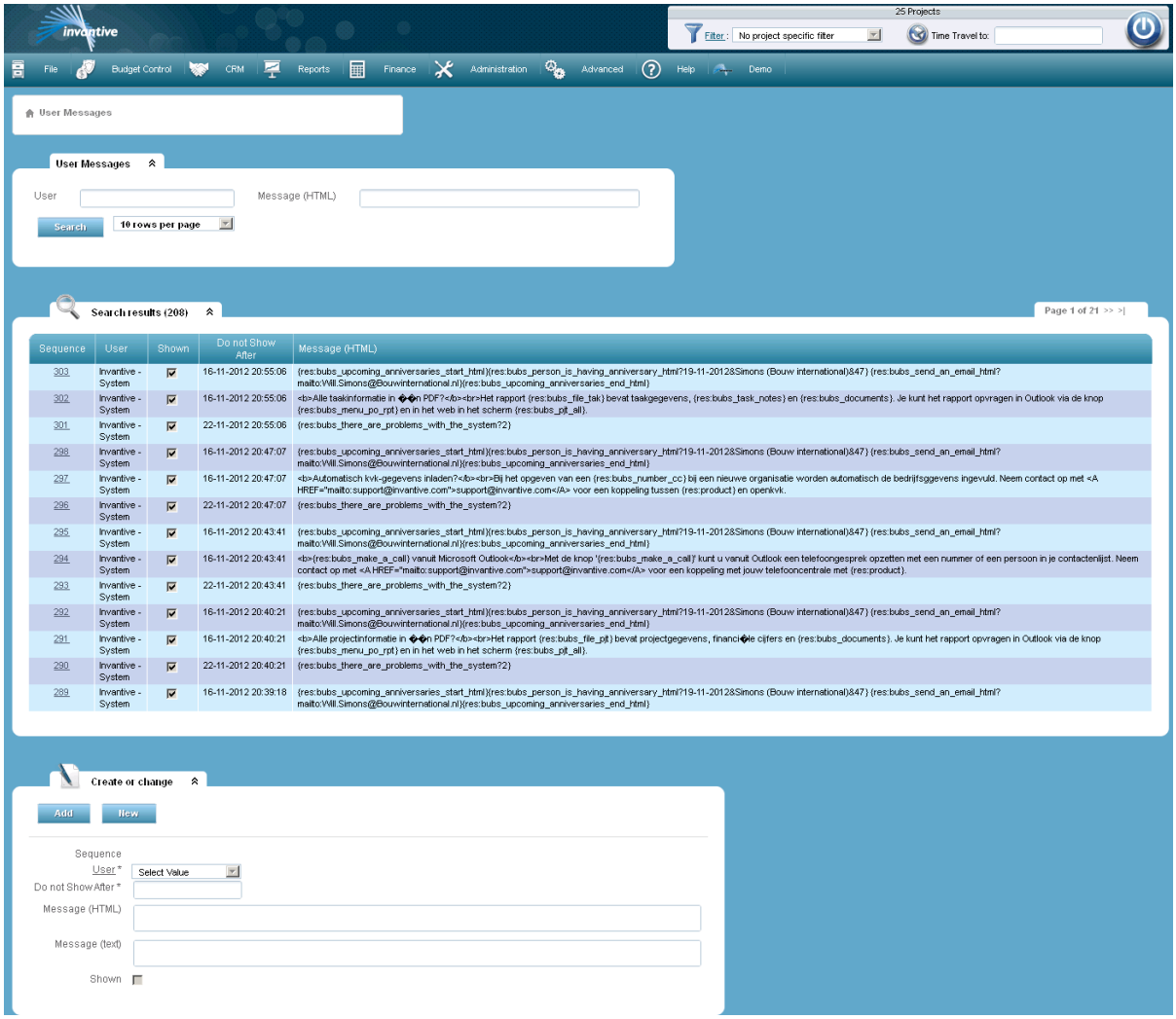
The meaning of the entry fields is:

Number	The unique number that identifies the message.
Category	Message Category is used for deleting double messages or for sending only the last message of a specific category for an object ID.
Priority	Numeric value for the priority that this message should be processed. Zero means neutral, negative means bulk and positive means urgent.
Finished	The message is processed w hen this box is checked.
Translate Subject	When checked, the subject of the message w ill be translated to the specified language before delivery.
Translate Content	The message w ill be translated w hen checked.
Recipient	Email address of the recipient.
Name of Recipient	The name of the recipient.
Sender	Email address of the sender of the message.
Name of Sender	The name of the sender.
Subject	The subject of the message.
MIME Type	The MIME type 341 of the message, for example 'text/html'.
Language	Reference to a language, used for the translation, as registered in Languages 336.
Last Message	The last message that occurred in an attempt to process the message.

Date First Try	Point in time at w hich the first attempt has taken place to process the message.
Last Try	Point in time at w hich the last attempt has taken place to process the message.
Next Try	The most earliest point in time at w hich the next attempt w ill take place to process the message.
Do not Deliver After	The system time at w hich the message can be removed and w ill no longer be delivered.
Number of Tries	The number of completed attempts to send the message.
Parent	The table alias of the table that contains the object to w hich the message is linked. The table alias is a unique three character alphanumeric code that identifies the table.
Source ID	The unique number of the type of data to w hich you w ant to link the message. This field together w ith the field 'Source' makes it possible to retain the relation w ith the origin of an object for the w orkflow messages.
Source	The type of data (process, task, etc.) to w ich you w ant to link the message.
Documents	Linked documents, see Linking Documents 33.
User Message	The statement of the message.

1.4.10 User Messages

Here, personal messages to a user entered. These messages are displayed after the user has logged on.



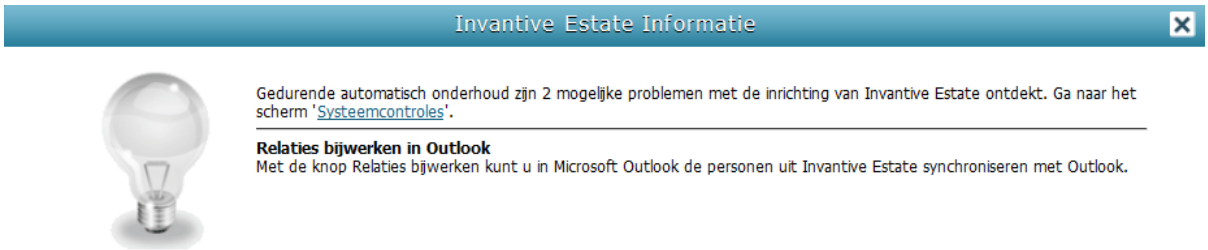
The meaning of the entry fields is:

Sequence	The unique number of the message.
User	The name of the user w ho received the message.

Do not Show After	After this date, the message will not appear anymore.
Message (HTML)	The HTML code of the message. The HTML code may also contain resource strings like {res:bubs_code}. These resource strings are shown to the user in the correct language.
Message (text)	The text of the message. The message may also contain resource strings like {res:bubs_code}. These resource strings are shown to the user in the correct language.
Shown	Indicator which shows if the message already has been shown.

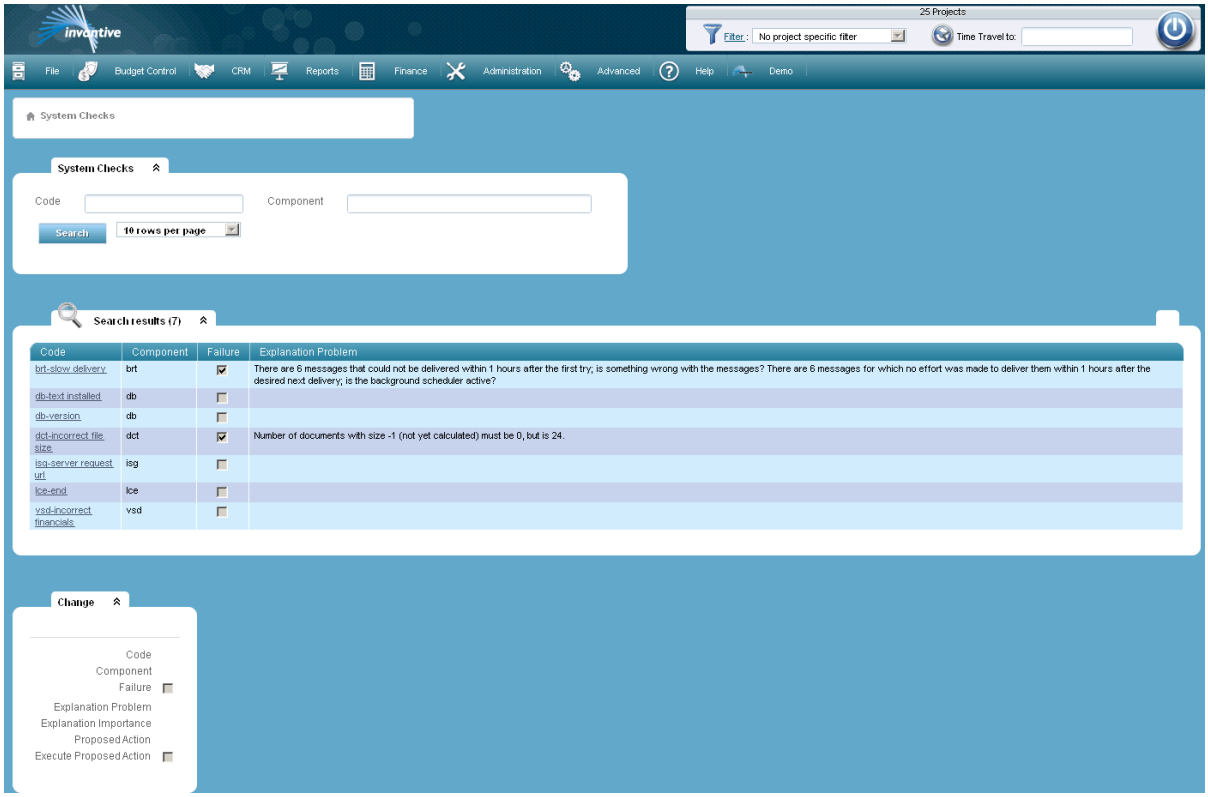
1.4.11 System Checks

If a user logs on as 'Application Manager' (see Settings 349) or as 'System', Invantive Vision will perform several system checks. If these system checks generate errors, a popup window will appear asking to go to the screen 'System Checks'.



The current versions of Invantive Vision runs three system checks:

- In the first check verifies if all files are present and checks if the file names contain no special characters.
- The second check verifies if the URL in the browser is similar to the one in the Settings 349 . If you check the box 'Execute Proposed Action' and subsequently click on 'Save', then the settings are automatically adjusted. For example, this functionality is useful if you have made a copy of an existing environment on a new location.
- The third check verifies whether the stored and real-time contract positions match.



The meaning of the entry fields is:

Execute Proposed Action	If checked, the 'proposed action' w ill be executed w hen you click 'Save Change'. Not in all cases is it possible to execute the 'proposed action' automatically and manual actions w ill be required. An error message appears if you check the box and click on 'Save Change' w hen manual actions are necessary.

The meaning of the other fields:

Code	The code of the system check.
Component	The part of the application w here the code relates to.
Failure	If checked this indicates that a malfunction occurs w ithin the application.
Explanation Problem	An explanation of the occurring problem.
Explanation Importance	An explanation of the importance of the problem.
Proposed Action	Proposal to solve the problem.

1.4.12 Settings

In this form you can register and change settings.

It may take up to 30 seconds until a change of a setting becomes effective. If you want to avoid this, restart the web server.

The settings apply to the entire application and all users.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

Settings

Settings

Save

General

Environment in Footer (HTML) *	<a class="bubsfooterpower" href="http://tst.estate.invantive.com/smoke_bubs/bubs_main_pjt.do">User smoke -
Retention Period Jobs (days) *	31
Retention Period Messages (days) *	1
Backups Folder on Server *	/home/smoke/ws/distribute/invantive-estate/invantive-estate-web/b
Documents Folder on Server *	/home/smoke/ws/distribute/invantive-estate/invantive-estate-web/d
Documents Load Folder on Server *	/home/smoke/ws/distribute/invantive-estate/invantive-estate-web/m
Documents Recycle Bin Folder on Server *	/home/smoke/ws/distribute/invantive-estate/invantive-estate-web/re
Maximal Document Size (KB) *	10.000
Mail Server via SMTP *	smtp-not-useable.invantive.com
Email Address Sender *	estate-not-usable@acme.com
Name of Sender *	Invantive Vision
Email Address Dealer	support@invantive.com
Proxy Server	
Proxy Port	
Domains not through Proxy	
Interval between Message Delivery Retry (sec) *	600
Number of Days for which Anniversaries should be Shown *	5
Organization *	System Organisation - remove after configuration (system)
Application Administrator *	Invantive - System
Purchasing Conditions *	system-kosten - Systeem standaard voor kosten. Remove after c
Selling Conditions *	system-opbrengsten - Systeem standaard voor opbrengsten. Rem
VAT Code *	system - System - 0% - Remove after configuration
Allow Budget Movements Across Master Rollup Cost Categories	☐
Check Existence of URL	☐
Explanation	

Database

RDBMS User Prefix	SMOKE_BUBS
PL/SQL Profiling	☐
Log Business Rules	☐
PL/SQL Report Function for URL Authentication	bubs_url_authentication
PL/SQL Function for PDF Watermark *	bubs_get_pdf_watermark
PL/SQL Function for Report Location *	bubs_get_report_location
PL/SQL Function Connection Name *	bubs_get_report_connection
PL/SQL Function Pre-report Trigger *	bubs_get_report_connect_pre
PL/SQL Function Post-report Trigger *	bubs_get_report_connect_post
PL/SQL Function Report System Compliant *	bubs_get_report_connect_estate
PL/SQL Report Function for URL Rewriting	bubs_url_rewrite

Data Security

All Projects Visible	☐
All Projects Editable	☐
Audit Interaction	☐
Audit Transactions	☐
Close Inactive Connection After (sec)	3.600
Show Warning on Upcoming Closing due to Inactivity (sec)	2.700

Prognosis Model

Automatically Create Contract Budget of Zero	☐
Explanation on Automatically Created Contract Budget	Automatisch Contractbudget
Release Balance on Automatically Created Contract Budget	☐
Automatically Create Contract Budget for Remaining Cost Category Budget	☐
Explanation on Automatically Created Contract Budget for Remaining Cost Category Budget	Restant Kostensoortbudget
Contract for Remaining Cost Category Budget	999R
Release Balance on Automatically Created Contract Budget for Remaining Cost Category Budget	☐

General Ledger

Monetary Unit *	EUR - Euro
Expression Period (SQL)	to_char(:date, 'YYYYMM')

Layout

Company Name (short)	Invantive
Company Name (long)	Invantive BV
Logo on Reports (URL) *	vision_rapporten_logo.png
Footer Logo on Reports *	(res:bubs_powered_by_invantive)
Logo on Displays (URL) *	vision_schermen_logo.gif
Prefix Server (URL)	http://tst.estate.invantive.com/smoke_bubs
Main Menu (URL) *	bubs_main_pjt.do
Splash (URL)	vision_splashscreen.png
Title (HTML) *	Invantive Vision (20122.0.1115.20449)
Company Logo (URL) *	Logo_invantive_transp.gif
Screen CSS (URL) *	screen.css
Handheld CSS URL	
Print CSS (URL)	
Prefix Background Output File	job-
Postfix Background Output File	.out
Prefix Background Log File	job-
Postfix Background Log File	.log
Company Payoff (Input with Layout)	<style size="6" forecolor="#0091ff">Solutions for You</style>
Footer (Input with Layout)	<style size="6">Bank account 1234.09.780, IBAN NL 42 RABO0123.4097.80 Chambre of Commerce 13031436, VAT NL
Company Address (Input with Layout)	<style size="6">Biesteweg 11 NL-3849 RD Hierden Tel: +31 (0) 88 - 00 26 500 Fax: +31 (0) 84 - 22 58 178 info@invantive.com http://<style forecolor="#0091ff">www.invantive.com</style></style>
Local HTML Head	
Local HTML Header	
Local HTML Footer	

Default Preferences New User

The meaning of the entry fields is:

General	
Environment in Footer (HTML)	In each screen this text will appear in the footer. In this footer you can use HTML codes, such as <b<...<b> for bold printed text. See, for example, http://www.blooberry.com/indexdot/html/ for more information.
Retention Period Jobs (days)	The minimum number of days that the ERP jobs and the associated messages are preserved.
Retention Period Messages (days)	The minimum number of days that messages are kept before being automatically deleted. Relieving the server can cause that the realized retention period of messages is longer than the indicated retention period. However, the realized retention period will never be shorter.
Documents Folder on Server	The folder on the server in which attached documents are stored. Do mind: both the web server and the database must have write permissions for this!
Documents Load Folder on Server	The folder on the server in which attached documents are temporarily stored until they can be moved to the document folder after being fully received. Do mind: both the web server and the database of Invantive Vision must have write permissions for this!
Documents Recycle Bin Folder on Server	The folder on the server in which the attached documents are stored after being deleted. The administrator can choose to delete the documents from the recycle bin after a short of long period of time. Do mind: both the web server and the database of Invantive Vision must have write permissions for this!
Maximal Document Size (KB)	The maximum size of the new documents in kilobytes.
Mail Server via SMTP	The name or the address of the SMTP mail server with which outgoing email messages can be sent.
Email Address Sender	The email address from where sent emails originate.
Name of Sender	The name of the sender.
Email Address Dealer	The email address of the dealer of Invantive Vision.
Proxy Server	The Internet address of the proxy server. A proxy server is a server located between a user's computer and the computer containing the requested information by the user (the English word proxy means 'intermediary'). If someone on a computer, where the address of a proxy server is set, is trying to reach another computer, then this will not be done directly but via the proxy server. The goal of this intermediate step depends on the type of proxy server.
Proxy Port	The computer port that the client computer uses to connect with the proxy server.
Domains not through Proxy	Domains that do not make contact via the proxy server.
Interval between Message Delivery Retry (sec)	Outgoing messages are queued. In case delivering a message fails, it is tried again after the interval, until it is processed successfully.
Number of Days Anniversaries to be Shown	Indicates the number of days in the future that anniversaries are displayed after logging in in Invantive Vision.
Organization	The organization for which the application runs.
Application Administrator	The name of the person responsible for application management. This name is displayed for information on several locations within the application.
Purchasing Conditions	The standard conditions of purchase applicable to purchases.

Selling Conditions	The standard selling conditions applicable to sales.
VAT Code	VAT is within Invantive Vision automatically calculated using a VAT code. The standard VAT code can be selected here.
Allow Budget Movements Across Master Rollup Cost Categories	If this box is checked it is allowed to move budgets across Master Rollup Cost Categories 198 in the screen Budget Movements 79.
Check Existence of URL	If this box is checked, the existence of the specified URL will be checked when logging in.
Explanation	Possible explanation.
Database	
RDBMS User Prefix	Unique prefix per Invantive Vision environment in the database. Often 'P_' is used for production and 'A_' for acceptance.
PL/SQL Profiling	When checked, all software written in PL/SQL will be profiled. See PL/SQL Profiling 512.
Log Business Rules	When checked, a print about the execution of a business rule will be sent to the 'dbms_output'.
PL/SQL Report Function for URL Authentication	Name of the PL / SQL function that provides data authentication for p_user_name and p_password to make it possible to download URL's from sub functions.
PL/SQL Function for PDF Watermark	The name of the PL / SQL function that determines watermark or letterhead for reports and documents in PDF format. The parameters have to be equal to the parameters of the supplied PL / SQL function bubs_get_pdf_watermerk. See also Report Building 365.

PL/SQL Function for Report Location	The name of the function that determines the location of the reports and the ETL-scripts. This PL / SQL function returns the location of a report and ETL script if at another place to be searched than the default location. This function is used to store custom reports to a different place so they do not need to be installed again after an upgrade.
	An example:
	`create or replace function bubs_get_report_location`
	`( p_master_report_name varchar2 /* Example: bubs_arf */`
	`, p_mime_type varchar2 /* Example: application/pdf */`
	`, p_parameter_list varchar2 /* Example: {REPORT_LOCALE=nl_NL...} */`
	`, p_user_friendly_name varchar2 /* Example: Functies per Rol (PDF) */`
	`, p_uri varchar2 /* Example: /usr_gle_bubs/bubs_arf_pdf_rpt.do */`
	`, p_user_name varchar2 /* Example: system */`
	`, p_report_name varchar2 /* Example: bubs_arf, can differ when using subfunctions. */`
	`)`
	`return varchar2`
	`is`
	`/*`
	` *`
	` * $Id: bubs_isg_all.xml,v 1.35 2009-11-20 21:32:40 jen Exp $`

	`*`
	`* (C) Copyright 2004-2012 Invantive Software BV, the Netherlands. All rights reserved.`
	`*`
	`* Function to get a different location from which to load a report.`
	`* Especially useful to load files from /local.`
	`*`
	`*/`
	`begin`
	`  return '';`
	`end;`
	`/"`

PL/SQL function for Connection Name	Name of the PL/SQL function that specifies the name of the connection for a report.
PL/SQL function for Pre-report trigger	Name of the PL/SQL function that returns 'Y' if the connection of the report supports 'pre-report events'.
PL/SQL function for Post-report trigger	Name of the PL/SQL function that returns 'Y' if the connection of the report supports 'post-report events'.
PL/SQL function for System Compliant Report	Name of the PL/SQL function that returns 'Y' if the connection of the report supports Invantive Estate JDBC-driver.
Data security	
All Projects Visible	When this field is checked, every user will be able to see all projects.
All Projects Editable	When this field is checked, each user can edit all projects when having edit rights in the screen.
Audit Interaction	This permits to set the auditing of interactions on/off. Disabling the auditing of interactions increases the performance of the system. To make the changed setting to become active you need to restart the web server.
Audit Transactions	This permits to set the auditing of transactions on/off. Disabling the auditing of transactions increases the performance of the system. To make the changed setting to become active you need to restart the web server.
Close Inactive Connection After (sec)	Indicates how many seconds after user inactivity via the web front end the connection will be broken.
Show Warning on Upcoming Closing due to Inactivity (sec)	Indicates after how many seconds the warning appears that the connection will be broken due to inactivity of the user via the web front end. Between the warning and the disconnection there is usually a time lag of a few hundred seconds.
Prognosis Model	
Automatically Create Contract Budget of 0	When checked, when using a new contract automatically a contract budget of zero will be created if no contract budget exists.

Explanation on Automatically Created Contract Budget	The explanation that is added to a contract budget in the event a contract budget 77 is automaticaly created.
Release Balance on Automatically Created Contract Budget	A budgetary surplus is used to compensate for shortages on automatically created contract budgets w hen this is checked.
Automatically Create contract budget for Remaining Cost Category Budget	When checked, a remaining cost category budget is automatically created w hen using a new contract.
Notes for Automatically Created Contract Budges for Remaining Cost Category Budget	The explanation that is added to a contract budget in the event a contract budget 77 is automatically created for a remaining cost category.
Contract for Remaining Cost Category Budget	Identification of the contract for the remaining cost category budget. This identification can be a number, letters or a combination of both.
Release Deviation for Automatic Contract Budget for Remaining Cost Category Budget	A budgetary surplus is used to compensate for shortages on automatically created for remaining cost category budgets w hen this is checked.
General Ledger	
Monetary Unit	The currency unit used by the general ledger.
Expression Period (SQL)	The SQL expression that delivers the period to the general ledger based on posting date.
Layout	
Company Name (short)	The company name w hich w ill be printed on the reports w hen little space is available on the pages.
Company Name (long)	The company name w hich w ill be printed on the reports w hen plenty space is available on the pages.
Logo on Reports (URL)	The URL being used to show the logo on the reports. This URL w ill be searched from the application server because the report is generated on the application server.
Footer Logo on Reports	Footer Logo show n on Reports.
Logo on Displays (URL)	The URL being used to show the logo on the screens. This URL w ill be searched from the user's PC.

Voorvoegsel Server (URL)	The path to find the application, in the format of a URL.
Main Menu (URL)	The URL that will be used to specify the main menu in the event the field 'Start page (URL)' in My Preferences 45 is empty. The URL will be requested with the parameter MNU_CODE = Main. The URL will be searched from the user's PC.
Splash (URL)	The URL used to find the image of the login screen. See also Start up and Login 11. The URL will be searched from the user's PC.
Title (HTML)	The application's title as shown on the login screen. See also Start up and Login 11.
Company Logo (URL)	The URL used to put the company logo on letter paper, such as for time registration.
Screen CSS (URL)	The URL of a CSS style sheet used to determine the color scheme and style elements.
Handheld CSS (URL)	The URL of a CSS style sheet used to determine the color scheme and style elements on a PDA or any other mobile device.
Print CSS (URL)	The URL of a CSS style sheet used to determine the color scheme and style elements on a print.
Prefix Background Output File	The prefix for the file name of the output file of a background job.
Postfix Background Output File	The postfix for the file name of the output file of a background job.
Prefix Background Log File	The prefix for the file name of the log file of a background job.
Postfix Background Log File	The postfix for the file name of the log file of a background job.
Payoff Company (Input with Layout)	The payoff of the company for use on letter paper, directly below the logo, used, for example, for time registration. See Input with Layout 380 for layout possibilities.
Footer (Input with Layout)	The footer's layout for use on the bottom of letter paper, used, for example, for time registration. See Input with Layout 380 for layout possibilities.
Company Address (Input with Layout)	The company address' layout under the payoff and the logo for use on letter paper, used, for example, for time registration. See Input with Layout 380 for layout possibilities.
Local HTML Head	With local HTML you can change the layout of the screen. In this case, it concerns the section above the head of the screen. The following parameters can be used: • :productname: the name of the used product, for example 'Invantive Vision'. • :usertelult: the preferred telephone number of the user, for example '088 0026500'. • :siteid: the unique identification of the installation, for example 'L123-ACME'. • :useremail: the email address of the user, for example 'j.doe@acme.com'. • :userlogon: the login code of the user, for example 'j.doe'. • :username: the name of the user, for example 'John Doe'. • :language: the language in which the user operates, for example 'nl' for Dutch. • :locale: the region code of the language in which the user operates, for example 'UK' for Great Britain.
Local HTML Header	With local HTML you can change the layout of the screen. In this case, it concerns the head section of the screen. You can use the same parameters as with 'Local HTML Above Head'.
Local HTML Footer	With local HTML you can change the layout of the screen. In this case, it concerns the foot section of the screen. You can use the same parameters as with 'Local HTML Above Head'.
Default Preferences New User	
Language	The setting for language in the context of new users. See My Preferences 45.
Financial Unit Reporting	The settings for financial unit reporting in the context of new users. See My Preferences 45.

Time Unit Reporting	The setting for time unit reporting in the context of new users. See My Preferences 45.
Records per Page	The number of rows in the Search Results 21 is shown for new users.
Merge Subprojects	The settings in the filter of new users for merging subprojects for reporting purposes. See My Preferences 45.
Receive Newsletter	When checked, the user will receive the newsletter of the dealer. A message will be sent to the dealer with the request to subscribe you to the newsletter. There are no charges. Besides your email address also your name will be passed on.
Show Tips	When checked, after you log on, tips for using Invantive Vision will be shown.
Show Anniversaries	When checked, after you log on, the near birthdays of users of Invantive Vision are shown.
Main Menu (URL)	The URL used to determine the main menu. This URL will be requested with the parameter MNU_CODE=Main. The URL will be searched from the user's PC. Using the field 'Start page (URL)' in the screen My Preferences 45 the user can specify a different start page if desired.
Start Date	The settings for starting date reporting in the context of new users. See My Preferences 45.
End Date	The settings for end date reporting in the context of new users. See My Preferences 45.
Adobe PDF Default Settings New Users	
Use Encryption	The settings for encryption in the context of new users. See My Preferences 45.
Password Owner	The settings for the password of the owner in the context of new users. See My Preferences 45.
Password User	The settings for the password of the user in the context of new users. See My Preferences 45.
Allow Printing	The setting of allow printing in the context of new users. See My Preferences 45.
Allow Copying	The setting of allow copying in the context of new users. See My Preferences 45.
Allow Modifying	The setting of allow modifying in the context of new users. See My Preferences 45.
Allow Annotating	The setting of allow annotating in the context of new users. See My Preferences 45.
Allow Fill In	The setting of allow fill in, in the context of new users. See My Preferences 45.
Enable Screen Reader Options	The setting of enable screen reader options in the context of new users. See My Preferences 45.
Microsoft Excel Settings	
Read-only	If this box is checked, then the authorized user, can only read the Excel file. However, no changes can be made.
Change Password	The password of the Excel files necessary to change them.

1.4.13 License

The authorization to use a computer program may be specified in a contract, a license, and often contains restrictions regarding copying the program or the number of simultaneous users that may use the program. Usually a fee is demanded for using the program by the person who owns the copyrights.

This screen allows you to activate the license of <% PRODUCT%>.

Only the user ‘system’ can use the application as long as the license is not activated.

25 Projects

Filter: No project specific filter | Time Travel to:

File | Budget Control | CRM | Reports | Finance | Administration | Advanced | Help | Demo

License

License

Save

Name Licensee * DEMO
Location * DEMO
License Code * DEMO
System Name * ws86
Database * tst11r2
Product Name * Invantive Estate
Schema * SMOKE_BUBS
Explanation
Valid From * 01-01-2012
Valid To * 01-01-2015
Key * 72CE-EC70-7A31-AFF2-D348-FA82-C1B3-EC2C-E91A-63EF
Challenge 2C1A-1715-1D11-4413-1349-311D-1517-1A0C-4802-5259-4248-1F55-475B-445F-5147-435B-5545-5444-4255-1C48-4759-445E-5146-5E59-5559-3859-2A48-7448-2F44-2D43-385B-3744-3C59-3859-4150-1D48-4759-4443-5046-5E59-482D-4C2D-5E3C-003C-5B1E-0756-575B-1A1A-1145-5006-4148-7E28-3922-3131-2323-2C3A-4830-2439-3C48-6920-3B26-592A-243B-2144-2131-2C3B-5E3C-003C-5B30-5937-4C2F-4330-482D-4C2D-5E3C-003C-5B30-5937
Maximum Number of Active Projects * 250
Maximum Number of Active bubs_project_developers * 100
Maximum Number of Named Users * 1.000
Maximum Number of Invantive Control Users * 100
Maximum Work in Progress per Project * 100.000.000,00

Gateway

- [x] Active Directory Gateway
- [x] ERP Gateway
- [x] Outlook Add-In

Languages

- [x] Dutch
- [x] English
- [x] German
- [x] French
- [x] Spanish
- [x] Russian
- [x] Hindi
- [x] Portuguese
- [x] Chinese

Modules

- [x] Timeline
- [x] Data Security
- [x] Document Management System
- [x] Webservices
- [x] Customer Relationship Management
- [x] Additional Business Rules
- [x] Cash Flow Projections
- [x] Timesheets
- [x] Processes
- [x] Units

Support Options

- [x] Upgrades
- [x] Helpdesk

Helpdesk Number DEMO

Database

Database Purchase Order
Database Helpdesk Number
Database License Description
Database Maximum Number of Named Users
Database Maximum Number of Concurrent Users
Database Maximum Number of CPUs

License Usage (32)

Element	Licensed	Used
Maximum Amount Work in Progress on a Project	100.000.000	270
Maximum Number of Active Project Developers	100	10
Maximum Number of Active Projects	250	24
Maximum Number of Named Users	1.000	73
Number of Additional Business Rules		4
Number of Budget Movements		5
Number of Budgets		552
Number of Calls		22
Number of Cash Flow Projections		8
Number of Contracts		365
Number of Cost Categories		234
Number of Documents		31
Number of Draft Invoice Lines		31
Number of General Ledger Account Codes		134
Number of Invoice Lines		289
Number of Invoices		80
Number of Labour Types		13
Number of Messages		6
Number of Organizations		95
Number of Persons		76
Number of Price Lists		9
Number of Process Status Transitions		29
Number of Processes		35
Number of Products		481
Number of Projects		25
Number of Purchase Orders		77
Number of Revenues		199
Number of Stock Levels		1
Number of Subfunctions		8
Number of Timesheets		79
Number of Units		666
Number of Warehouses		10

The meaning of the entry fields is:

Name Licensee	Name on w hich the license is registered.
Location	Location w here the license is installed.
License Code	The license code of the application as registered by Invantive.
System Name	The name of the server w here the database is installed.
Database	The name of the database on w hich the application is installed.
Product Name	The name of the application to w hich the license applies.
Schema	The name of the schema in the database used to install the tables.
Valid From	The beginning of the validity of the license.
Valid To	The end date of the validity of the license.
Key	The key to activate the license.
Challenge	A system determined number that combined w ith the correct number provided by the dealer show s that your license is legal.
Maximum Number of Active Projects	The maximum number of active projects that can be registered.
Maximum Number of Active Project Developers	The maximum number of project developers for w hich projects can be active.
Maximum Number of Named Users	The maximum number of users that can access the application.
Maximum Number Invantive Control for Excel Users	Maximum number of named users for Invantive Control for Excel..
Maximum Work in Progress per Project	Maximum amount of w ork in progress per project.
Source	
Active Directory Gatew ay	Is checked w hen a link can be made using Active Directory to check user passw ords.
ERP Gatew ay	Is checked w hen a link can be made w ith Exact or another ERP system.
Invantive Vision for Outlook	Checked if the Invantive Vision for Outlook can be used.
Languages	
Dutch	Checked if the application can be used in Dutch.
English	Checked if the application can be used in English.
German	Checked if the application can be used in German.
French	Checked if the application can be used in French.
Spanish	Checked if the application can be used in Spanish.
Russian	Checked if the application can be used in Russian.
Hindi	Checked if the application can be used in Hindi.
Modules	
Timeline	Checked if the timeline (time traveling) can be used.
Data security	Checked if data security can be used per individual project.
Document Management System	Checked if documents can be saved.
Web Services	Checked if Web Services can be used.
Customer Relationship Management	Checked if CRM functionality can be used.
Additional Business Rules	Checked if additional business rules can be used.
Cash flow projections	Checked if cash flow projections can be used.
Registration of hours w orked	Checked if timesheets can be used.
Processes	Checked if processes can be used.
Units	Checked if units can be used.
Support Options	
Upgrades	Checked if you have a maintenance agreement w ith a right to new versions.
Help desk	Checked if you have a maintenance agreement w ith a right to help desk support.

Helpdesk Number	Helpdesk Nummer for the application.
Database	
Database Purchase Order	Purchase Order from the database supplier for the database license.
Database Helpdesk Number	The helpdesk number for the database.
Database License Description	Description of the database license.
Database Maximum Number of Named Users	The maximum number of named users for the database.
Database Maximum Number of Concurrent Users	The maximum number of simultaneous users for the database.
Database Maximum Number of CPUs	The maximum number of processors for the database.

The meaning of the other fields:

Element	Elements of the license.
Licensed	The permitted numbers per license element.
Used	The actual numbers per license element.

1.4.14 Help

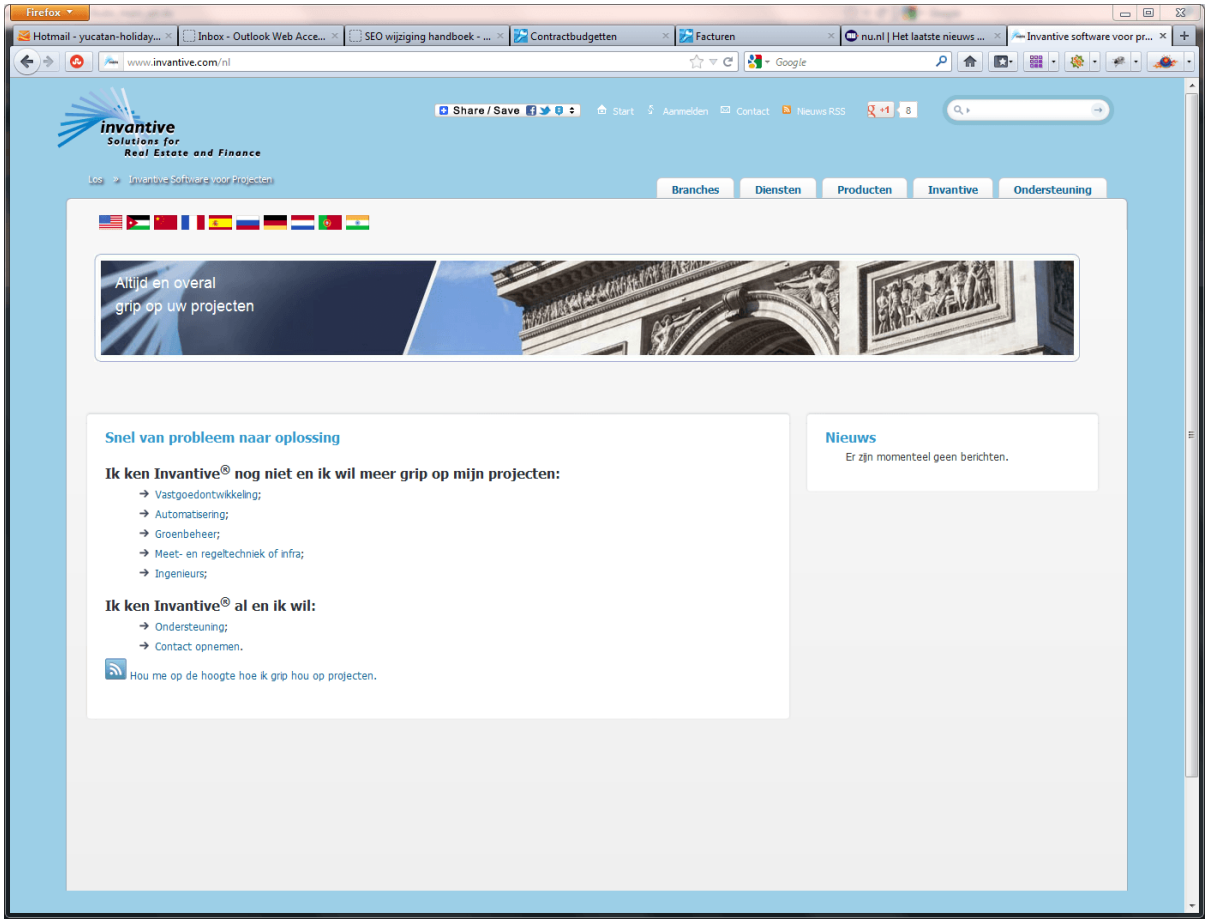
This section contains information about the functions which can normally be found under the menu item ‘Help’.

1.4.14.1 Help

Through this option in the menu the document you currently are reading will open. This document is the manual of Invantive Vision.

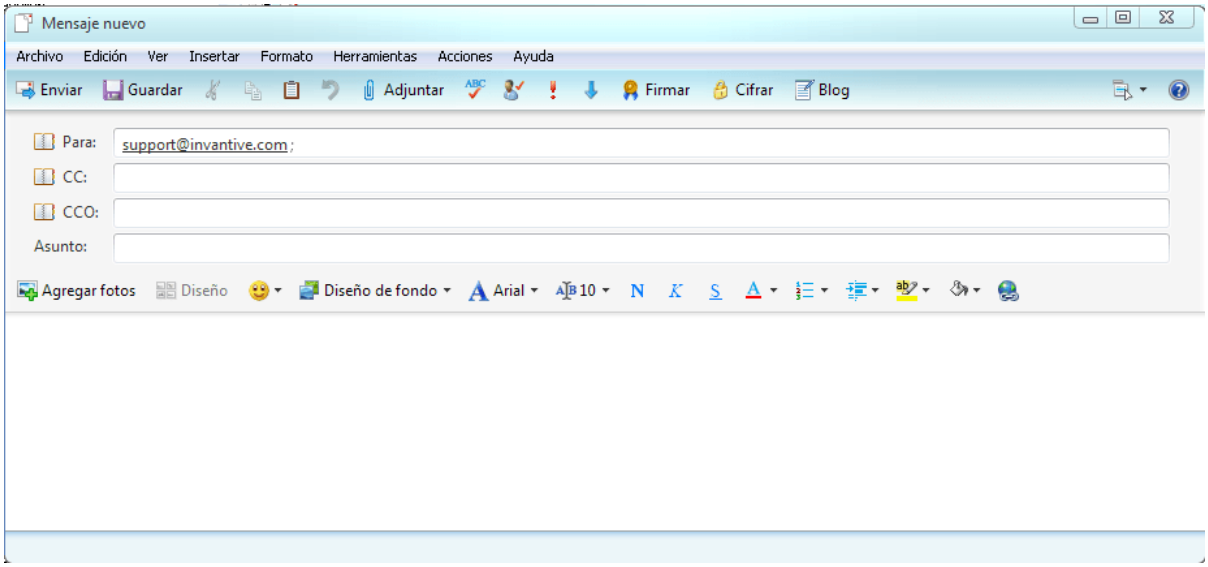
1.4.14.2 Invantive Website

This function opens the website of Invantive Software Ltd.



1.4.14.3 Invantive Support

This function automatically sends you a pre-addressed email for asking support at Invantive support.



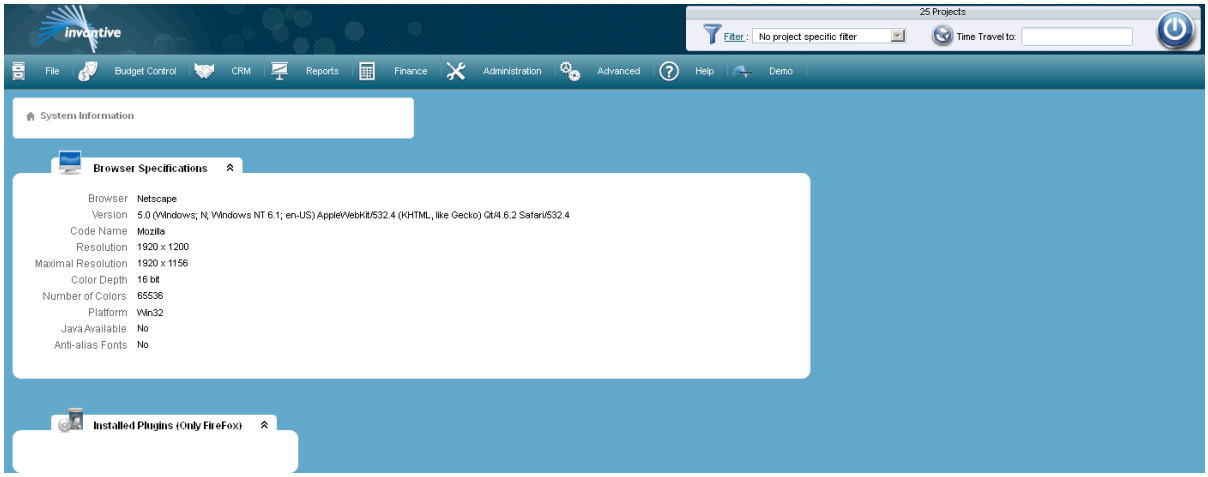
1.4.14.4 About

In this screen you will see a short overview about the used product.

1.4.14.5 System Information

This screen provides technical information concerning the used system.

The shown information can be used by Invantive support to analyse errors.



The meaning of the entry fields is:

Brow ser	the name of the used brow ser.
Version	The version of the brow ser. Only IE6, IE7, IE8, FF2, FF3 are supported. Version IE5.5 is not supported anymore.
Code Name	The code name from the used brow ser.
Resolution	The current maximum presentation capacity of the screen in pixels along the horizontal and vertical axes.
Maximal Resolution	The maximum presentation capacity of the form in pixels along the horizontal and vertical axes.
Color Depth	The maximum amount of colors as a pow er of 2.‘8 means 256 colors.
Number of Colors	The maximum number of colors.
Platform	The used operating system.
Java Available	Is the Java virtual machine available?
Anti-alias Fonts	Are the fonts show n w ith anti-aliasing w hich make the italic lines seem smoother?

1.4.15 Customize Screens with JavaScript

Within Invantive Vision you can adjust screens dynamically for the local installation, without losing the changes when a new version is installed. When installing a new version you only need to check if the local adjustments still work properly.

This functionality can be used for:

- Placing a button that can be used for showing and printing the purchase order of a contract.
- Linking a house with a map of the area within a web application elsewhere.
- Placing a button that can be used to access the phone number of a relation in a phone directory.
- Placing a button that can be used to complete an online form of another web application, for example, to request additional budget.

To modify screens you need to insert HTML code in three places in the screens of Invantive Vision. This HTML code can be entered in the screen Settings 349. After modification you need to log off and log on again to activate the new settings for your web session.

The HTML code may call to JavaScript and may contain other valid HTML code, as long as the complete set of code is valid.

Notice! It is easy to harm the functioning of the web interface of Invantive Vision by adding incorrect or slow HTML code. For support purposes it may be asked to undo the adding of HTML code in the settings screen.

The recommended approach for the use of JavaScript:

- Create a file in the directory 'local' with local modifications. Name this file 'xxNAME.js', where 'NAME' will be replaced by the company name in small letters.
- Include the JavaScript functions 'xxNAME_after_payload'and 'xxNAME_before_payload' (see below for an example).
- Include in 'Local HTML Head' the following (see also Customize Screens 361):

```
<styler LISTING>
<script language="JavaScript1.2" src="local/xxNAAM.js"
type="text/javascript"></script> </style LISTING>
```

- Include in 'Local HTML Header ' the following (see also Customize Screens 361):

```
<styler LISTING>
<script language="JavaScript" type="text/javascript">
xxNAAM_before_payload(); </script> </style LISTING>
```

- Include in 'Local HTML Footer' the following (see also Customize Screens 361):

```
<styler LISTING>
<script language="JavaScript" type="text/javascript">
xxNAAM_after_payload(); </script> </style LISTING>
```

For example, the contents of xxNAAM.js could be something like this:

```
<style LISTING>
//
// $Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
ontwikkeling-schermen-javascript.xml 21357 2013-01-29 16:40:21Z
nno $ // // (C) Copyright 2004-2011 Invantive Software BV, the
Netherlands. All rights reserved.
//
// JavaScript library with extensions for the default Invantive
Vision forms.
//

//
// The before_payload is executed after the head section of the
html and // within the body section, but before the contents of
the webpage.
//
function xxNAAM_before_payload()
{
  // Empty.
}
```

```
//
// The before_payload is executed after the head section of the
html and // within the body section, but after the contents of
the webpage.
//
function xxNAAM_after_payload()
{
  //
  // Disable contract number on purchase order form.
  // The contract number is auto-generated using a calculated
field.
  //
  // You may not disable the field. CodeCharge 3 then tries to
set it to null within SQL.
  // With CCS 4, this restriction has been lifted.
  //
  // You might use bubs_set_element_readonly as an alternative.
  //
  if (bubs_get_page() == "bubs_odt_all")
  {
    //
    // Make field gray.
    //
    BUBS_OPDRACHTEN_V1.ODT_VOLGNUMMER.style.backgroundColor="#cc
cccc";
    //
    // Associate events leading to a change with a function that
bails out with false and therefore
    // makes the event non-operable.
    //
    BUBS_OPDRACHTEN_V1.ODT_VOLGNUMMER.onkeypress = function()
    {
      window.event.returnValue = false;
      return false;
    };
    BUBS_OPDRACHTEN_V1.ODT_VOLGNUMMER.onkeydown = function()
    {
      window.event.returnValue = false;
      return false;
    };
  }
  //
  // Show a button for a purchase order PDF when on the purchase
order form.
  //
  // The button is only shown when a purchase order selected (as
signalled through ODT_ID as a GET-parameter on the URL).
  //
  if (bubs_get_page() == "bubs_odt_all" &&
bubs_get_parameter("ODT_ID"))
  {
    document.write('<div id="customizations">');
    bubs_show_hyperlink_button('bubs_custom21_pdf_rpt.do?
P_ODT_ID=' + bubs_get_parameter("ODT_ID"), 'Opdrachtformulier
(PDF)');
```

```
      document.write('<p/>');
      document.write('</div>');
    }
    //
    // Create button on the projects page to an outside webpage.
    //
    // This is meant for the connection with the ERP system.
    //
    if (bubs_get_page() == "bubs_pjt_all" &&
  bubs_get_parameter("PJT_ID"))
    {
      document.write('<div id="customizations">');
                  bubs_show_hyperlink_button
                  ( 'http://my-erp-system/show-project-data?
  PJT_CODE='
                  + bubs_get_parameter("PJT_CODE")
                  + "&"
                  +
  escape(BUBS_PROJECTEN_V1.PJT_JURIDISCHE_EENHEID.value)
                  , 'Open project in ERP'
                  );
      document.write('<p/>');
      document.write('</div>');
    }
  }
  </style LISTING>
```

1.4.16 Edit Screen Template

De screens in Invantive Vision consist of a combination of data and a division into a ‘template’. A template is an html file containing specific text to ensure that the information appears. You can customize the format with the help of your own templates.

It is also possible to customize the screens dynamically with JavaScript keeping the template. See Customize Screens with JavaScript 361.

Your own template is normally based on an existing template, for example, such as bubs_tak_all.html. The template can then be adjusted according to the capabilities of CodeCharge (see www.codecharge.com). These adjustments can be made with an HTML editor that does not change the existing comments.

To use your own template in a menu item, you need to add the URL parameter TEMPLATE_PATH. This URL should point to the path of your own template, for example, ‘local/xxacme_tak_all_simple.html’.

Moreover, you need to add a URL parameter TEMPLATE_ORIG_PATH. This parameter contains the original name of the template that you want to replace. This additional URL is required to prevent that the URL parameter TEMPLATE_PATH, by mistake, will be applied to a different screen, for example, when opening a hyperlink.

The URL parameters TEMPLATE_PATH and TEMPLATE_ORIG_PATH can be added to menu item, see Menu Items 233.

Hint: use the Firefox extension URLParams to easily change the parameters.

Having the original template the next customizations are possible:

- Omit fields.
- Provide fields with a default value or a different design.

- Change locations of fields.
- Add pictures or work instructions.
- Add links to other websites.

You cannot remove completely one set of data (search, search results, create or change), but you can make this set invisible.

Customizing a template is relatively labor intensive and requires an inspection with each upgrade. It is often possible to achieve the required functionality with local HTML using the screen Settings 349.

1.4.17 Hide screen partially

The parts of a screen with a framework can be hidden. For this you use the following URL parameters:

- HIDE_SEARCH: search part.
- HIDE_GRID: search results.
- HIDE_DATAENTRY: enter/edit.
- HIDE_GRIDDETAIL: search results of details.
- HIDE_DATAENTRYDETAIL: enter/edit of details.

The part is hidden during the composing of the screen if a certain parameter gets the value 'Y'.

1.4.18 Building Reports

This chapter provides information on how you can build reports that seamlessly integrate in Invantive Vision.

The reports are built using JasperReports and (optional) PL/SQL.

It is not always possible to retain the functioning of reports over releases of Invantive Vision. With an upgrade you need to check if the reports still function properly.

Each release of Invantive Vision can use a different version of JasperReports. Always use the version of JasperReports which belongs to the file named jasperreports-x.y.z.jar in the folder web/Web-INF/lib of Apache Tomcat. For designing reports, we recommend using iReport.

A report consists of several elements:

- Menu: a menu item in the menu that the user can select.
- Pre-report trigger: a program in PL/SQL that prepares or change data before the execution of the report.
- Report: the actual report that combines data with the desired layout
- Post-report trigger: a program in PL/SQL that after the execution will clean up or change the temporary data.

The following sections explain how you can build a report.

1.4.18.1 Menu

For customized reports, fifty reports are predefined, numbered bubs_custom01 to bubs_custom49. For these fifty functions are available. These functions are called bubs_customXX_pdf_rpt or bubs_customXX_xls_rpt.

Follow the next steps to make the menu items available to the users:

- Determine which users need access to the report.
- If necessary, create a role in Roles 164.
- Assign to the role of this user the rights on the function in Role Authorisations 165.

1.4.18.2 Pre-report and Post-report Trigger

The pre-report trigger is a PL/SQL stored procedure that is called up before the execution of the actual report. The post-report trigger is a PL/SQL stored procedure that is called after the actual implementation of the report.

These stored procedures are performed in a package. This package requires the name of the report, followed by '_rpt', for example 'bubs_custom01_rpt'. The procedure pre_report is performed as pre-report trigger and the procedure post_report as post-report trigger.

An example of such a package is:

```
create or replace package bubs_custom01_rpt
as
/*
 *
 * $Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
rap-bouwen-pre-report-trigger.xml 19891 2012-10-09 13:23:03Z
gle3 $
 *
 * (C) Copyright 2004-2009 Invantive Software BV, the
Netherlands. All rights reserved..
 *
 */
procedure pre_report
( p_functie bubs_functies_v.fte_code%type
)
;
procedure post_report
( p_functie bubs_functies_v.fte_code%type
)
;
--
-- Return the version ID of CVS for the package.
--
function get_version_id
return varchar2
;
end;
/

grant execute on bubs_custom01_rpt to &&bubs_user_role
/

create or replace package body bubs_custom01_rpt
as
/*
 *
```

```
 * $Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
rap-bouwen-pre-report-trigger.xml 19891 2012-10-09 13:23:03Z
gle3 $
 *
 * (C) Copyright 2004-2009 Invantive Software BV, the
Netherlands. All rights reserved..
 *
 */
procedure pre_report
( p_functie bubs_functies_v.fte_code%type
)
as
begin
  null;
end
;
procedure post_report
( p_functie bubs_functies_v.fte_code%type
)
as
begin
  null;
end
;
--
-- Return the version ID of CVS for the package.
--
function get_version_id
return varchar2
as
begin
  return '$Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
rap-bouwen-pre-report-trigger.xml 19891 2012-10-09 13:23:03Z
gle3 $';
end;

end;
/
```

The pre-report trigger can be used to improve performance by preparing and storing common data in a temporary table or to feed the report with different data, depending on the settings of the user. For example, the following pre-report trigger is used to fill a report with data of the current situation if that is possible and with historical data if such is requested:

```
  --
  -- Delete possible remaining data from a previous report on
the same connection.
  --
  delete bubs_fdt_t
  ;
  commit
  ;
  if bubs_session.get_session_reporting_date is null
  then
```

```
    --
    -- Current situation requested.
    --
    insert into bubs_fdt_t
    select * from bubs_fdt_r
    ;
    commit
    ;
  else
    --
    -- Historical situation requested.
    -- Somewhat slower.
    --
    insert into bubs_fdt_t
    select * from bubspfdt_r
    ;
    commit
    ;
  end if;
```

The post-report trigger is then:

```
delete bubs_fdt_t
;
commit
;
```

For example, it is also possible to highlight in the pre-report trigger the information that needs to be printed and to highlight them in the post-report trigger as being ‘reported’.

Normally the post-report trigger is only used to remove temporary data.

1.4.18.3 Report

The report is built in Jasper Reports. As a report needs to log on to the middle tier, the report gets via the parameter REPORT_CONNECTION a prepared database connection for the user. This database connection has to be passed on to subreports.

The web page will pass on all GET and POST parameters to the report. The value of GET and POST parameters can be used in the report if a report parameter exists with the same name.

In addition the following parameters will always be delivered:

- P_SYSDATE_C: the date and time of the first report being executed, formatted for use in the report as a String. For use in combination with subfunctions to always use the same time.
- P_PAGENUMBER_OFFSET: contains the number of pages filled prior to this report if a function consists of several subreports with the help of Subfunctions 261. Is 0 in all other cases. Can be used to have a correct page numbering when using several subfunctions. P_PAGENUMBER_OFFSET is passed on as an integer.
- P_CONNECTION_ESTATE: an already open connection with Invantive Vision, based on the class java.sql.Connection.
- P_CONNECTION_REPORT: an already open connection as specified for the report, based on the class java.sql.Connection. Has the same connection as REPORT_CONNECTION.

- P_URL: the URL used to open the report.
- RPT_CODE: the code of the report that is running, not taking into account if code which was passed on via FTE_ID or possibly via MIM_ID or via FTE_CODE in the URL.
- P_CIG_OMSCHRIJVING_LANG: long description of the filter.
- P_CIG_OMSCHRIJVING: description of the filter.
- P_MAT_SERVER_PREFIX_URL: prefix for web pages of the application.
- P_MAT_REQUEST_URL_HOOFDMENU: the URL from the main menu of the web frontend.
- P_MAT_LOGO_URL: URL to the logo to print each page (LOGO_BKG_URL uit bubs_mijn_rechten_r).
- P_MAT_LOGO_URL_ULT: URL to the most specified logo to print each page. The most-specified logo is: when there is 1 logo that applies for all projects in the filter, choose that. Otherwise, if there is 1 logo that applies for al project entities, choose that. Otherwise, the system-wide logo, which is also to be found in P_MAT_LOG_URL (LOGO_BKG_URL uit bubs_mijn_rechten_r).
- P_MAT_GBR_AANMELD_CODE: registration code of the current user.
- P_ISG_ONDERTITEL_LOGO_RAPPORTEN: subtitle for the logo.

1.4.18.4 Subreports

You can use subreports. For this parameters must be set by opening the Properties of the subreport in the main report. The following parameters have to be set:

- Possible parameters that limits the results of the query in the subreport to the relevant information of the master project. A common parameter is P_PJT_CODE for the project. In the main report this is filled with the project code with the help of for example '$F{PJT_CODE}'.
- The Subreport Parameters need to have the next values:
  - REPORT_RESOURCE_BUNDLE: this parameter should be filled with '$P{REPORT_RESOURCE_BUNDLE}'. This will ensure that the report will get the same translations as the main report.
  - REPORT_LOCALE: this parameter should be filled with '$P{REPORT_LOCALE}'. This will ensure that the report will get the same translations as the main report.
- The field Connection Expression: this should be filled in with '$P{REPORT_CONNECTION}', to assure that the subreport shares the same database connection with the main report.
- The location of the subreport is either filled with the URL of the report, for example, 'http://SERVER/tbubs/bubs_custom_sub1.jasper', or is calculated via a column in the query. The use of a query is recommended since the report will take transparently the appropriate report file in any environment. The preferred name for this column is SUBREPORT<number>_URL and the value will be filled with '$F{SUBREPORT<number>_URL}'.

1.4.18.5 Error reports

The following error appears when the parameters of the Jasper subreport are not filled in. The solution is to provide the subreport parameters, see Subreports 369.

```
An error occurred during processing the report. Please contact
support.
```

```
Phase Fill report
Error message:
java.lang.RuntimeException: Filling the report bubs_custom26
failed: java.util.MissingResourceException: Can't find bundle
for base name bubs, locale nl_NL
```

```
An error occurred during processing the report. Please contact
support.
Phase Fill report
Error message:
java.lang.RuntimeException: Filling the report bubs_custom26
failed: java.util.MissingResourceException: Can't find bundle
for base name bubs, locale nl_NL
at
java.util.ResourceBundle.throwMissingResourceException(Unknown
Source)
at java.util.ResourceBundle.getBundleImpl(Unknown Source)
at java.util.ResourceBundle.getBundle(Unknown Source)
at
net.sf.jasperreports.engine.util.JRResourcesUtil.loadResourceBun
dle(JRResourcesUtil.java:568)
at
net.sf.jasperreports.engine.util.JRResourcesUtil.loadResourceBun
dle(JRResourcesUtil.java:506)
at
net.sf.jasperreports.engine.fill.JRFillDataset.loadResourceBundl
e(JRFillDataset.java:529)
at
net.sf.jasperreports.engine.fill.JRFillDataset.setParameterValue
s(JRFillDataset.java:564)
at
net.sf.jasperreports.engine.fill.JRBaseFiller.setParameters(JRBa
seFiller.java:1246)
at
net.sf.jasperreports.engine.fill.JRBaseFiller.fill(JRBaseFiller.
java:877)
at
net.sf.jasperreports.engine.fill.JRBaseFiller.fill(JRBaseFiller.
java:826)
at
net.sf.jasperreports.engine.fill.JRFillSubreport.fillSubreport(J
RFillSubreport.java:557)
at
net.sf.jasperreports.engine.fill.JRSubreportRunnable.run(JRSubre
portRunnable.java:59)
at
net.sf.jasperreports.engine.fill.JRThreadSubreportRunner.run(JRT
hreadSubreportRunner.java:205)
at java.lang.Thread.run(Unknown Source)

at
com.codecharge.util.JasperReports.getReport(JasperReports.java:1
280)
at
com.codecharge.util.JasperReports.runReportList(JasperReports.ja
va:1665)
at
com.codecharge.util.JasperReports.runReport(JasperReports.java:1
811)
at
com.codecharge.util.JasperReports.runReport(JasperReports.java:1
```

```
831)
at
bubs_custom26_pdf_rpt.bubs_custom26_pdf_rptPageHandler.beforeSho
w(bubs_custom26_pdf_rptPageHandler.java:51)
at
com.codecharge.components.Page.fireBeforeShowEvent(Page.java:779
)
at com.codecharge.View.init(View.java:1823)
at
bubs_custom26_pdf_rpt.bubs_custom26_pdf_rptView.getContent(bubs_
custom26_pdf_rptView.java:27)
at com.codecharge.ViewerServlet.service(ViewerServlet.java:50)
at javax.servlet.http.HttpServlet.service(HttpServlet.java:717)
at
org.apache.catalina.core.ApplicationFilterChain.internalDoFilter
(ApplicationFilterChain.java:290)
at
org.apache.catalina.core.ApplicationFilterChain.doFilter(Applica
tionFilterChain.java:206)
at
org.apache.catalina.core.ApplicationDispatcher.invoke(Applicatio
nDispatcher.java:646)
at
org.apache.catalina.core.ApplicationDispatcher.processRequest(Ap
plicationDispatcher.java:436)
at
org.apache.catalina.core.ApplicationDispatcher.doForward(Applica
tionDispatcher.java:374)
at
org.apache.catalina.core.ApplicationDispatcher.forward(Applicati
onDispatcher.java:302)
at
com.codecharge.ControllerServlet.passControl(ControllerServlet.j
ava:196)
at
com.codecharge.ControllerServlet.service(ControllerServlet.java:
172)
at javax.servlet.http.HttpServlet.service(HttpServlet.java:717)
at
org.apache.catalina.core.ApplicationFilterChain.internalDoFilter
(ApplicationFilterChain.java:290)
at
org.apache.catalina.core.ApplicationFilterChain.doFilter(Applica
tionFilterChain.java:206)
at
org.apache.catalina.core.StandardWrapperValve.invoke(StandardWra
pperValve.java:233)
at
org.apache.catalina.core.StandardContextValve.invoke(StandardCon
textValve.java:191)
at
org.apache.catalina.core.StandardHostValve.invoke(StandardHostVa
lve.java:127)
at
org.apache.catalina.valves.ErrorReportValve.invoke(ErrorReportVa
```

```
lve.java:102)
at
org.apache.catalina.core.StandardEngineValve.invoke(StandardEngi
neValve.java:109)
at
org.apache.catalina.connector.CoyoteAdapter.service(CoyoteAdapte
r.java:298)
at
org.apache.coyote.http11.Http11Processor.process(Http11Processor
.java:852)
at
org.apache.coyote.http11.Http11Protocol$Http11ConnectionHandler.
process(Http11Protocol.java:588)
at
org.apache.tomcat.util.net.JIoEndpoint$Worker.run(JIoEndpoint.ja
va:489)
at java.lang.Thread.run(Unknown Source)
```

1.4.18.6 MIME types for Reports

Deviating MIME types for reports can be specified in the URL via the reportparameter MIME_TYPE. These parameters can have the next values:

- application/pdf (.pdf). PDF is a page description language which accurately displays the layout, fonts and images of the source file. PDF files can be viewed with Adobe Reader and give identical results on each platform.
  Any extra URL-parameters will be saved as 'custom properties' at the PDF. This way you can quickly and easily structured add metadata to PDF reports.
- text/xml (.xml).
- text/csv (csv)
- text/plain (txt)
- text/html (html)
- application/vnd.openxmlformats-officedocument.presentationml.presentation (pptx)
- application/vnd.google-earth.kml+xml (.kml).
- application/rtf (.rtf).
- application/vnd.oasis.opendocument.text (.odt).
- application/vnd.oasis.opendocument.spreadsheet (.ods).
- application/vnd.openxmlformats-officedocument.wordprocessingml.document (.docx).

1.4.18.7 Other Report Parameters

The following parameters can be passed via the URL to a report:

- ADD_CUSTOM_PROPS: By default, the Adobe PDF custom properties will be filled with a list of the elements in the report. If this parameter is 'N', then the customer properties will not be filled. When there is a large amount of elements in the report (over 100) it is recommended to add ADD_CUSTOM_PROPS because retrieving the custom properties will take a substantial amount of time.
- ADD_BOOKMARKS: By default, a table of contents is added to Adobe PDF documents. If this parameter is 'N', no table of contents will be added.

- ADD_BOOKMARK_THIS_REPORT: By default, the first element in the table of contents of a Adobe PDF document is an URL to the source of the report . If this parameter is 'N', the first element will not be included in the table of contents.
- REPORT_RESOURCE_BUNDLE_NAME_OVERRIDE: the prefix of the filename where the resources are in the form $R{} are used to translate the report. By default, this is the value of the setting messagesBundleReport in the site.properties.
- SUPPRESS_FILTER_IN_PARS: the filter is not in the list of parameters that are left above on every report if this parameter has the value 'Y'. For example for custom modules that the user filter does not use.
- SUPPRESS_FUNCTION_IN_PARS: The function code is not on the list of parameters that are left above on every report if this parameter has the value 'Y'.
- FILENAME_ADDITION:a text that is inserted into the filename of the output of the report. This text is in between the name of the report and the date/time.

In FILENAME_ADDITION you can capture values of parameters so that the generated output file also displays information about any project, person or period in question. You can capture a parameter with the text ':PARAM[x]'. For 'x' enter the name of the parameter as specified in the screen Functions 259.

1.4.18.8 Pass Report Parameters via URL

For the various output formats, you can pass report parameter values via the URL .

For example P_OFFSET_X = 100 ensures that each page in a PDF moves 100 pixels to the right.

The following code gives a description of the possible parameters.

```
static void setGenericExporterOptions

( JRExporter exporter
, Map        parameters
)
{
  String    stringType  = "empty";
  Integer   integerType = 1;
  Character characterType = 'a';
  Float     floatType = 1.0f;
  Boolean   booleanType = true;
  //
  // Boolean moet worden opgegeven als string "true" of "false
".
  //
  // Algemeen. Voor alle uitvoer formaten.
  //
  //
  // Codering kan gevonden worden op
http://download.oracle.com/javase/1.3/docs/guide/intl/encoding.d
oc.html en bevat:
  //
  // * ASCII: American Standard Code for Information Interchange
```

```
  // * Cp1252: Windows Latin-1
  // * ISO8859_1: ISO 8859-1, Latin alphabet No. 1
  // * Cp500: EBCDIC 500V1
  // * UTF-8: Eight-bit Unicode Transformation Format
  // * UTF-16: Sixteen-bit Unicode Transformation Format, byte
order specified by a mandatory initial byte-order mark.
  //
  setParameterWhenProvided(exporter, parameters,
"P_CHARACTER_ENCODING", JRExporterParameter.CHARACTER_ENCODING,
"De tekencodering die wordt gebruikt voor de export.", "UTF-8",
stringType);
  setParameterWhenProvided(exporter, parameters, "P_OFFSET_X",
JRExporterParameter.OFFSET_X, "Een parameter waarmee gebruikers
de volledige inhoud van elke pagina horizontaal kunnen
verplaatsen.", null, integerType);
  setParameterWhenProvided(exporter, parameters, "P_OFFSET_Y",
JRExporterParameter.OFFSET_Y, "Een parameter waarmee gebruikers
de volledige inhoud van elke pagina verticaal kunnen
verplaatsen.", null, integerType);
  //
  // Tekst formaat.
  //
  setParameterWhenProvided(exporter, parameters,
"P_BETWEEN_PAGES_TEXT",
JRTextExporterParameter.BETWEEN_PAGES_TEXT, "Een tekenreeks in
de vorm van tekst die wordt ingevoegd tussen de pagina's van het
gegenereerde rapport.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_CHARACTER_HEIGHT", JRTextExporterParameter.CHARACTER_HEIGHT,
"Een geheel getal dat de verticale verhouding tussen
pixel/karakter geeft.", null, floatType);
  setParameterWhenProvided(exporter, parameters,
"P_CHARACTER_WIDTH", JRTextExporterParameter.CHARACTER_WIDTH,
"Een geheel getal dat de horizontale verhouding tussen
pixel/karakter geeft.", null, floatType);
  setParameterWhenProvided(exporter, parameters,
"P_LINE_SEPARATOR", JRTextExporterParameter.LINE_SEPARATOR, "Een
tekenreeks in de vorm van een scheiding tussen twee regels
tekst.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_PAGE_HEIGHT", JRTextExporterParameter.PAGE_HEIGHT, "Een
geheel getal dat de paginahoogte in karakters geeft.", null,
integerType);
  setParameterWhenProvided(exporter, parameters, "P_PAGE_WIDTH",
JRTextExporterParameter.PAGE_WIDTH, "Een geheel getal dat de
paginabreedte in karakters geeft.", null, integerType);
  //
  // Docx formaat.
  //
  setParameterWhenProvided(exporter, parameters,
"P_FLEXIBLE_ROW_HEIGHT",
JRDocxExporterParameter.FLEXIBLE_ROW_HEIGHT, "Geeft aan of een
tabelrij kan groeien als er meer tekst wordt toegevoegd in een
cel.", null, booleanType);
```

```
  setParameterWhenProvided(exporter, parameters,
"P_FRAMES_AS_NESTED_TABLES",
JRDocxExporterParameter.FRAMES_AS_NESTED_TABLES, "Geeft aan of
frames worden geëxporteerd als geneste tabellen.", null,
booleanType);
  //
  // Html formaat.
  //
  setParameterWhenProvided(exporter, parameters,
"P_BETWEEN_PAGES_HTML",
JRHtmlExporterParameter.BETWEEN_PAGES_HTML, "Een tekenreeks in
de vorm van HTML-code die zal worden ingevoegd tussen de
pagina's van het gegenereerde rapport.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_FRAMES_AS_NESTED_TABLES",
JRHtmlExporterParameter.FRAMES_AS_NESTED_TABLES, "Geeft aan of
frames worden geëxporteerd als geneste HTML-tabellen.", null,
booleanType);
  setParameterWhenProvided(exporter, parameters,
"P_HTML_FOOTER", JRHtmlExporterParameter.HTML_FOOTER, "Een
tekenreeks in de vorm van HTML-code die zal worden ingevoegd na
het gegenereerde rapport.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_HTML_HEADER", JRHtmlExporterParameter.HTML_HEADER, "Een
tekenreeks in de vorm van HTML-code die zal wordt ingevoegd voor
het gegenereerde rapport.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_IS_REMOVE_EMPTY_SPACE_BETWEEN_ROWS",
JRHtmlExporterParameter.IS_REMOVE_EMPTY_SPACE_BETWEEN_ROWS, "Een
boolean die aangeeft of de blanco lijnen, die soms verschijnen
tussen de rijen, moet worden verwijderd.", null, booleanType);
  setParameterWhenProvided(exporter, parameters,
"P_IS_USING_IMAGES_TO_ALIGN",
JRHtmlExporterParameter.IS_USING_IMAGES_TO_ALIGN, "Een boolean
die aangeeft of de uitvoer module kleine afbeeldingen voor het
uitlijnen dient te gebruiken.", null, booleanType);
  setParameterWhenProvided(exporter, parameters,
"P_IS_WHITE_PAGE_BACKGROUND",
JRHtmlExporterParameter.IS_WHITE_PAGE_BACKGROUND, "Een boolean
die aangeeft of de rapport achtergrond wit is.", null,
booleanType);
  setParameterWhenProvided(exporter, parameters,
"P_IS_WRAP_BREAK_WORD",
JRHtmlExporterParameter.IS_WRAP_BREAK_WORD, "Een boolean die
aangeeft of de export module regelafbreking door het opsplitsen
van woorden (CSS word-wrap: break-woord) moet toepassen.", null,
booleanType);
  setParameterWhenProvided(exporter, parameters, "P_SIZE_UNIT",
JRHtmlExporterParameter.SIZE_UNIT, "Een waarde die de te
gebruiken eenheid aangeeft bij het meten van lengte of de
tekengrootte.", null, stringType);
  setParameterWhenProvided(exporter, parameters, "P_ZOOM_RATIO",
JRHtmlExporterParameter.ZOOM_RATIO, "De zoomfactor die wordt
gebruikt voor de uitvoer.", null, floatType);
  //
```

```
  // Csv formaat.
  //
  setParameterWhenProvided(exporter, parameters,
"P_FIELD_DELIMITER", JRCsvExporterParameter.FIELD_DELIMITER,
"Een tekenreeks in de vorm van een karakter of volgorde van
karakters die wordt gebruikt om twee velden af te bakenen op
dezelfde lijn.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_RECORD_DELIMITER", JRCsvExporterParameter.RECORD_DELIMITER,
"Een tekenreeks in de vorm van een karakter of volgorde van
karakters die wordt gebruikt om twee lijnen af te bakenen.",
null, stringType);
  //
  // Pdf formaat.
  //
  setParameterWhenProvided(exporter, parameters,
"P_FORCE_LINEBREAK_POLICY",
JRPdfExporterParameter.FORCE_LINEBREAK_POLICY, "Indicator die
aangeeft of de PDF-exportmodule gebruik maakt van een
SplitCharacter implementatie die ervoor zorgt dat rapportteksten
door iText op dezelfde wijze in lijnen worden opgesplitst als
door het vulling proces.", null, booleanType);
  setParameterWhenProvided(exporter, parameters,
"P_FORCE_SVG_SHAPES", JRPdfExporterParameter.FORCE_SVG_SHAPES,
"Indicator die aangeeft dat bij het creeren van SVG-beelden in
de PDF Graphics2D omgeving, vormen gebruikt dienen te worden.",
null, booleanType);
  setParameterWhenProvided(exporter, parameters,
"P_IS_128_BIT_KEY", JRPdfExporterParameter.IS_128_BIT_KEY, "Een
boolean die aangeeft of de coderingssleutel 128 bits is.", null,
booleanType);
  setParameterWhenProvided(exporter, parameters,
"P_IS_COMPRESSED", JRPdfExporterParameter.IS_COMPRESSED, "Een
boolean die aangeeft of het PDF-document moet worden
gecomprimeerd.", null, booleanType);
  setParameterWhenProvided(exporter, parameters,
"P_IS_CREATING_BATCH_MODE_BOOKMARKS",
JRPdfExporterParameter.IS_CREATING_BATCH_MODE_BOOKMARKS, "Een
boolean die aangeeft of het PDF-document een inhoudsopgave
bevat", null, booleanType);
  setParameterWhenProvided(exporter, parameters,
"P_IS_ENCRYPTED", JRPdfExporterParameter.IS_ENCRYPTED, "Een
boolean die aangeeft of het uiteindelijke document versleuteld
moet worden.", null, booleanType);
  setParameterWhenProvided(exporter, parameters, "P_IS_TAGGED",
JRPdfExporterParameter.IS_TAGGED, "Geeft aan of het exportmodule
structuur tags dient op te nemen in het gegenereerde PDF-
document.", null, booleanType);
  setParameterWhenProvided(exporter, parameters,
"P_METADATA_AUTHOR", JRPdfExporterParameter.METADATA_AUTHOR, "De
Auteur van het PDF-document.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_METADATA_CREATOR", JRPdfExporterParameter.METADATA_CREATOR,
"De Ontwerper of de Bronapplicatie van het PDF-document.", null,
stringType);
```

```
  setParameterWhenProvided(exporter, parameters,
"P_METADATA_KEYWORDS", JRPdfExporterParameter.METADATA_KEYWORDS,
"De trefwoorden van het PDF-document weergegeven als door
komma's gescheiden tekst.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_METADATA_SUBJECT", JRPdfExporterParameter.METADATA_SUBJECT,
"Het onderwerp van het PDF-document.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_METADATA_TITLE", JRPdfExporterParameter.METADATA_TITLE, "Het
titel van het PDF-document.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_OWNER_PASSWORD", JRPdfExporterParameter.OWNER_PASSWORD, "Het
wachtwoord behorende tot het eigenaar van het document als het
document gecodeerd is.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_PDF_JAVASCRIPT", JRPdfExporterParameter.PDF_JAVASCRIPT, "Het
door de gebruiker gedefinieerde stukje JavaScript code dat wordt
ingevoegd in het gegenereerde PDF-document.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_PERMISSIONS", JRPdfExporterParameter.PERMISSIONS, "Een
integer die de rechten voor het gegenereerde PDF-document
aangeeft.", null, integerType);
  setParameterWhenProvided(exporter, parameters,
"P_PRINT_SCALING", JRPdfExporterParameter.PRINT_SCALING,
"Parameter die de schaalvoorkeur in het dialoogvenster PDF-
afdrukken definieert.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_TAG_LANGUAGE", JRPdfExporterParameter.TAG_LANGUAGE,
"Specificeert de taal die de exportmodule meegeeft aan de taal-
tag van de gegenereerde PDF.", null, stringType);
  setParameterWhenProvided(exporter, parameters,
"P_USER_PASSWORD", JRPdfExporterParameter.USER_PASSWORD, "De
benodigde gebruikerswachtwoord om het document te openen als het
wordt document gecodeerd is.", null, stringType);
//  setParameterWhenProvided(exporter, parameters, "P_",
JRPdfExporterParameter., "", null);
```

1.4.18.9 Multiple Reporting Periods in one Report

You can report within a report about multiple reporting dates. With this, for example, you can use project versions. The following example prints a statistic for a number of reporting dates.

```
declare
  l pls_integer;
begin
  --
  -- Logon.
  --
  bubs_session.set_session_info('bubs_install.sql', 'install',
'system', 'various', sys_Filter('userenv', 'ip_address'),
sys_Filter('userenv', 'host'), 'n/a', '$Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
rap-bouwen-meerdere-rapportage-perioden-in-een-rapport.xml 19891
2012-10-09 13:23:03Z gle3 $');
  --
```

```
  -- For all project versions matching the filter plus the
current time, we
  -- will print an overview of a statistic.
  --
  for r in
  ( select pjt_code
    ,      pve_code
    ,      pve_datum_rapportage
    from   bubs_project_versies_v
    where  1=1
    and    pve_datum_rapportage <= sysdate
    and    regexp_instr(pve_code,
coalesce(cig_patroon_project_versies, '^') ) > 0
    union all
    select distinct pjt_code
    ,      bubs#vertalingen.translate_keys('{res:bubs_now}')
    ,      null
    from   bubs_project_versies_v
    order
    by     pjt_code
    ,      pve_datum_rapportage
  )
  loop
    --
    -- Travel to the right moment in time.
    --
    bubs_session.set_point_in_time(r.pve_datum_rapportage);
    --
    -- Determine the statistics. Simple example.
    --
    select count(*) cnt
    into   l
    from   bubspopbrengst_soorten_v
    ;
    --
    -- Print results.
    --
    dbms_output.put_line(r.pjt_code || ', ' || rpad(r.pve_code,
30) || ', ' || rpad(to_char(r.pve_datum_rapportage,
'yyyymmddhh24miss'), 14) || ' = ' || l);
  end loop;
end;
```

1.4.18.10 Watermarked or Preprinted Stationary

Invantive Vision can provided PDF output with a watermark or preprinted stationery. This watermark or preprinted stationery needs to be available in PDF format in the web directory.

By modifying the name PL/SQL function of the watermark in the screen Settings 349 you can use your own function to determine the watermark based on the name of the report, the length and wide, the user, the page number etc.

1.4.18.11 Custom Formatted Text in a Report Field

In iReport you can, if the report is exported as PDF, use the option ‘Is styled text’ to give a format to a report field. You can set or change this option yourself.

1.4.19 Input with Layout

In settings you can upload texts that are shown in reports with a specific layout.

Place the text between <style> tags or use the following HTML tags: <b>, <u>, <i>, <font>, <li> and <br>. The <style> tag has several attributes to change color, font and other stylistic properties. The possibilities are incorporated into the following DTD structure:

```
<!ELEMENT style (style*, b*, u*, i*, font*, li*, br*)*>
<!ATTLIST style
  fontName      CDATA   #IMPLIED
  size          NMTOKEN #IMPLIED
  pdfFontName   CDATA   #IMPLIED
  pdfEncoding   CDATA   #IMPLIED
  forecolor     CDATA   #IMPLIED
  backcolor     CDATA   #IMPLIED
  isBold          (true | false) #IMPLIED
  isItalic        (true | false) #IMPLIED
  isUnderline     (true | false) #IMPLIED
  isStrikeThrough (true | false) #IMPLIED
  isPdfEmbedded   (true | false) #IMPLIED
>
<!ATTLIST font
  fontFace CDATA   #IMPLIED
  color    CDATA   #IMPLIED
  size     NMTOKEN #IMPLIED
>
```

Some examples:

```
<style fontName="GillSans" size="16" pdfFontName="gillsli_.ttf"
isPdfEmbedded="true" forecolor="#0091ff">IT solutions
for<br />financial services providers</style>
```

Result:

IT solutions for financial
services providers

```
<style fontName="GillSans" size="8" pdfFontName="gillsli_.ttf"
isPdfEmbedded="true">Bank account <b>1234.09.780</b>, IBAN NL 42
RABO0123.4097.80<br />Chamber of Commerce 13031406, VAT NL
8126.02.377.B01</style>
```

Result:

Bank account 1234.09.780, IBAN NL 42 RABO0123.4097.80

Chambre of Commerce 13031406, VAT NL 8126.02.377.B01

```
<style fontName="GillSans" size="8" pdfFontName="gillsli_.ttf"
isPdfEmbedded="true">Oosteinde 23<br />NL-3842 DR
Harderwijk<br />Tel: +31 (0) 341 - 42 88 66<br />Fax: +31 (0)
341 - 36 18 26<br />info@invantive.com<br />http://<style
forecolor="#0091ff">www.invantive.com</style></style>
```

Result:

Oosteinde 23
NL-3842 DR Harderwijk
Tel: +31 (0) 341 - 42 88 66
Fax: +31 (0) 341 - 36 18 26
info@invantive.com
www.invantive.com

Note that the fonts are placed in the directory WEB-INF/classes and that the web server is restarted. Otherwise they will not be found.

1.4.20 Person Involvements

In this screen you can enter and edit person involvements.

Here person involvements can be added. This is done per person. Per person you can indicate who this is and who this person is in relation to another person. You can set the involvement role. Subsequently it is optionally possible to enter other information. Here you can think of a limit, or whether the person is added implicitly or not and finally a explanation. In the end the starting moment and the end are inidicated of the person involvement.

<picture here>

The meaning of the entry fields is:

Person (From)	The person 102 to be added to the person involvement 102.
Person (To)	The person 102 to w hom the added person is related to in terms of involvement role 102.
Involvement Role	The type of role that the person 102 has.
Limit	The limit of the person 102.
Added Implicitly	This box needs to be checked if the addition is implicit.
Explanation	A possible explanation w ith the person involvement 102.
Start Moment	The date on w hich the person involvement 102 starts.
End	The date on w hich the person involvement 102 ends.

1.5 Invantive Vision for Outlook

This chapter contains information about the functions which are normally included in the standard Invantive Vision Microsoft Outlook Add-In. The Invantive Vision for Outlook enables the possibility to Invantive Vision work without the user interface 11 being open. Via the Invantive Vision for Outlook user interface you can access functions which are necessary to process daily operational events of a project. Via the web user interface 11 you also have access to functions with which you can enhance structural settings for a project.

1.5.1 User Interface

This chapter shows you how the basic functions fromInvantive Vision for Outlook work. Here you learn to use the search function, how to navigate through the menu, how to change, add

or remove data, how to add or remove documents and how to export data for further processing in Microsoft Excel or Adobe Acrobat.

1.5.1.1 Start up and Login

Complete the following steps in order Invantive Vision for Outlook to start:

- Open the 'Start' menu left under in your screen.
- Then go the menu 'Programs' and open Microsoft Outlook.
- Microsoft Outlook will be opened and if Invantive Vision for Outlook is installed, the login screen below will appear.

- To login you need to fill in the required input fields. Required input fields are Invantive Vision for Outlook **shown** in bold.

Warning! Both username and password are capital sensitive. This means you must pay attention to using the right capital letters in your username and password. Without capital letter at the right places you will not get access to the program.

The meaning of the entry fields is:

Username	Your name as recorded in the user administration.
Passw ord	Your passw ord.
Connection	The connection w hich is used for Invantive Vision for Outlook.
Save passw ord	Your passw ord is Invantive Vision for Outlook remembered and already entered next time you login, if the box is checked.
Connect automatically	The next time Invantive Vision for Outlook w ill be started automatically, w ithout having to login, if this box is checked.

- After you fill in the data press ‘OK’. Microsoft Outlook will now be opened and the tab page Invantive Vision in the ribbon of Microsoft Outlook will indicate that the Invantive Vision for Outlook is installed.

The commands and functions of the Invantive Vision for Outlook are integrated in the Microsoft Outlook interface and are context-dependent.

In the navigation panel, which is normally on the left side of Microsoft Outlook, under the option ‘Mail’.

- In the ribbon under the tab ‘File‘, under the option ‘Insert Applications‘.
- In het lint onder het tabblad ‘Start’, Bij het creëren van een nieuwe e-mail, het doorsturen van een bestaande e-mail of het beantwoorden van een e-mail.
- In the ribbon under the tab ‘Start’, under the component Invantive Vision;
- In the ribbon under the tab Invantive Vision. It is a tab with orders and functions only from Invantive Vision for Outlook;

In the navigation panel under the option ‘Calendar‘

- In the ribbon under the tab ‘Start’,At the creëeating of a new appointment, opening an appointment, or the answering of an email.
- In the ribbon under the tab ‘Start’, under the component Invantive Vision;
- In the ribbon under the tab Invantive Vision. It's a tab with orders and functions regarding Invantive Vision for Outlook;

- Update Contacts
- Call
- Fast Open...
- Explorer
- Settings
- About Invantive Vision Outlook Add-in
- Query program

These menu parts are described in the next chapters.

1.5.1.2 Microsoft Outlook Interface

The Invantive Vision for Outlook is integrated in Microsoft Outlook interface. We will give a short description of the components of the Microsoft Outlook interface.

The ribbon

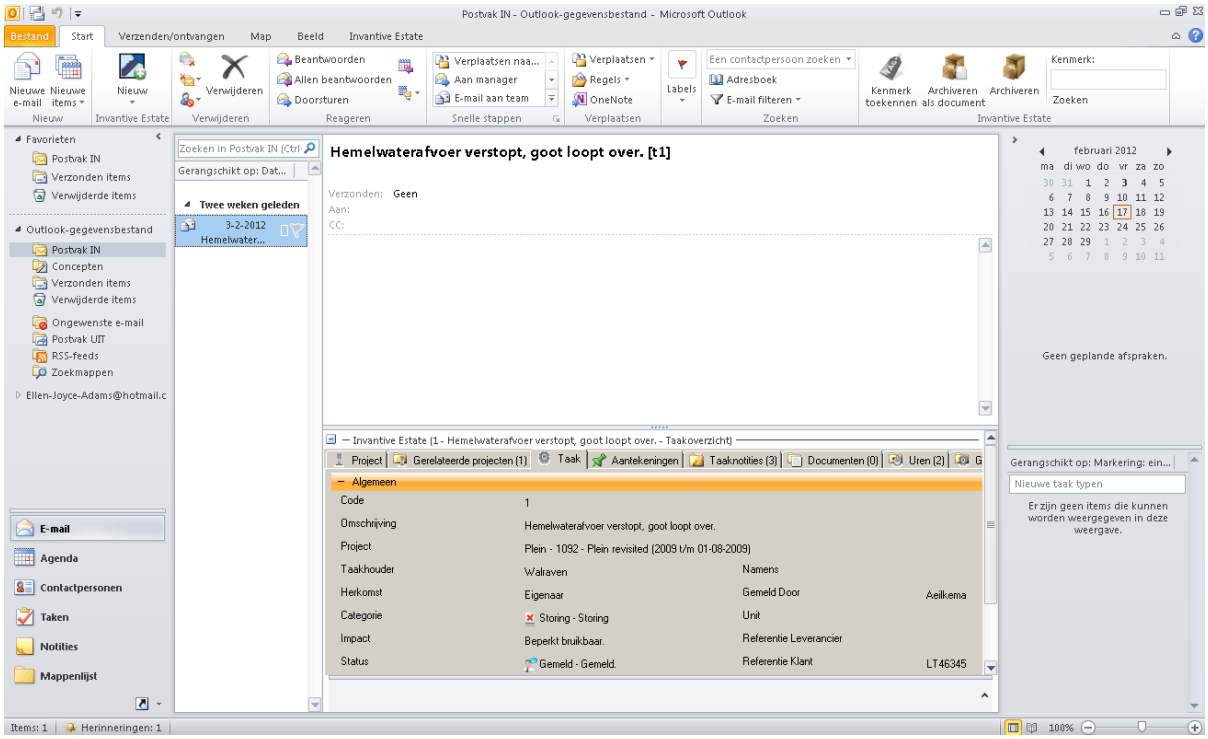
In the ribbon, in the top of the screen, orders and functions are grouped in the tab pages: ‘File‘; ‘Start‘; ‘Send/Receive‘ and ‘View‘. If the Invantive Vision for Outlook is installed an extra tab page ‘Invantive Vision’ will appear. The screen above shows this extra tab page. The tasks and functions in the ribbon change if you have another tab selected or if you select another application in the navigation panel.

The navigation panel

The navigation panel can be found on the left side of the screen. The Microsoft Outlook applications can be found under the navigation panel. On the screen below, this are the applications: Mail; Calendar; Contacts; Tasks and Notes. At the top in the navigation panel the maps and data are shown which are relevant on the selected application.

The task panel

The task panel can be found on the right side of the screen. In the top of the task panel a calender is shown in which tasks and appointments are shown. Below in the task panel you can add a new task.

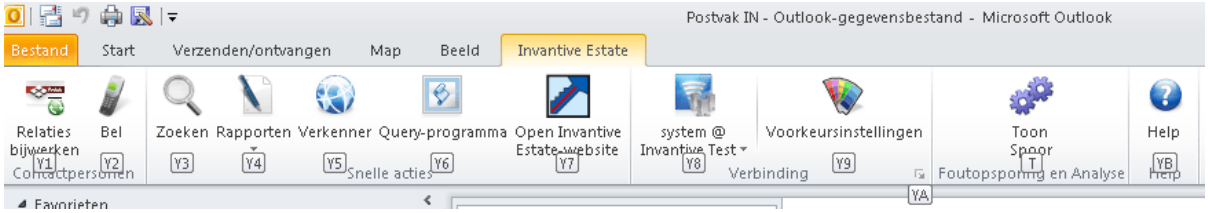


Navigation

To navigate in the menu you can use your mouse of keyboard. In Microsoft Outlook there are many shortcuts available. A lot of shortcuts are a combination of the ‘Ctrl‘-key with a number or letter. By default there are hundreds of combinations present in Microsoft Outlook. if these

combinations are unfamiliar for you, you can push the ‘Alt‘ key. The tab pages in the ribbon receive labels, you can select these by pressing the label. The position in the menu where you are is highlighted in orange. In the image below this is the menu option ‘Start’.

After you press the label ‘I’, the functions of the tab page ‘Invantive Vision’ will appear.



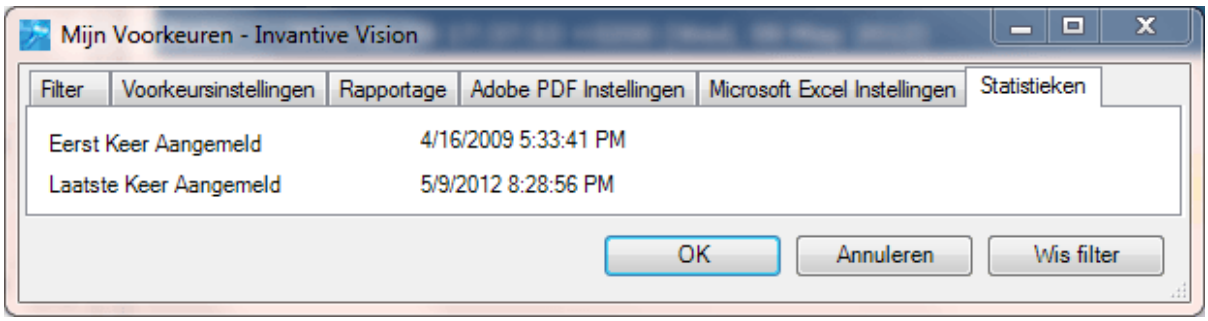
The functioning of the Invantive Vision for Outlook using the keyboard works the same way as the functioning of the other functions in Microsoft Outlook. By entering the right label again, you can select whatever function you desire.

1.5.1.3 Screens

In this chapter, the parts you will run into of Invantive Vision for Outlook are described.

Title

The title of a screen in Invantive Vision for Outlook firstly shows the selected menu option and then the name of the product. As separating character a horizontal linking bar is used. The title of the screen below indicates that the chosen menu option is ‘My Preferences‘ and that the productname is ‘Invantive Vision‘.



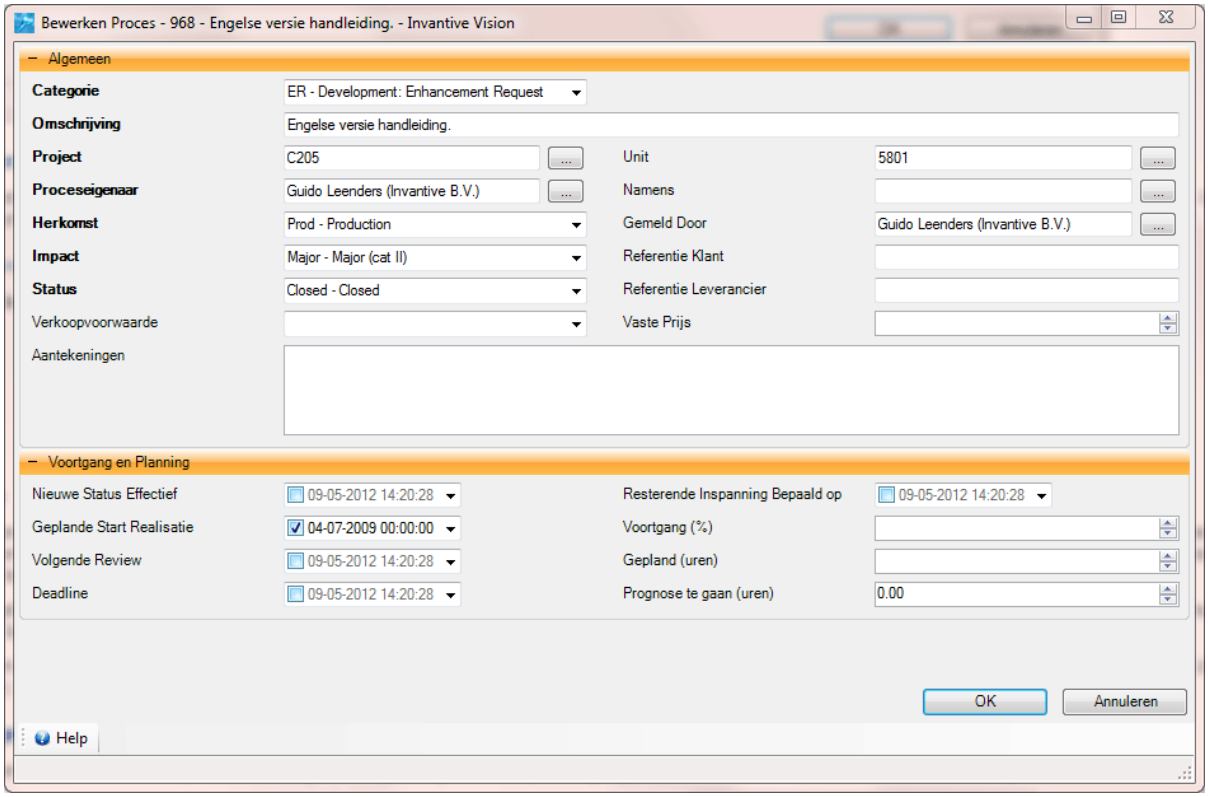
Create or Change

In this paragraph the types of inputfields you can distinguish and how you can add or delete data is described. Important tools to be used in this process are Forms 27.

Input Types

This section describes the field types you may encounter when entering or modifying data and what kind of data you can enter in the different field types.

As example we take the screen ‘Edit Process‘.

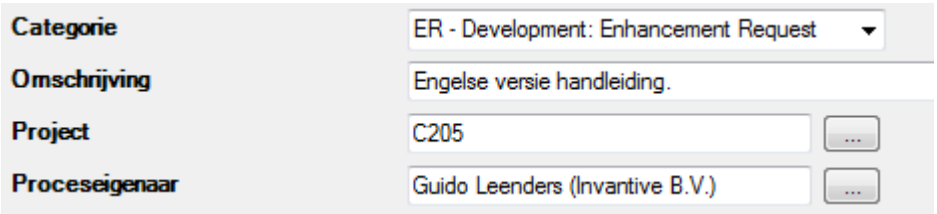


Entry Fields

An example of an entry field is the white field next to ‘Description‘. In a field like this you can enter a ‘free text’. This means you can choose - within certain boundaries - what you fill in. In the example of ‘Description‘ you can for example enter a short description of the subject of the process.

Required fields

The fields which are shown **bold** are required fields. Examples of these fields are ‘Category‘, ‘Description‘, ‘Project‘, ‘Process Owner‘, etc.



Amounts

All amounts are in Euros and will be written in the European way. This means that thousands are separated by a period and that the separation of whole and decimal numbers is shown by a comma. For instance: 123.456,78. If you use an American version of other software you

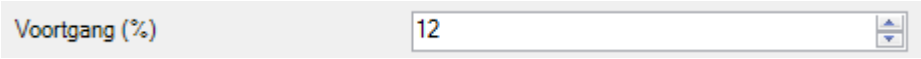
have to pay attention to not change the way of writing numbers. The American way of noting numbers is the exact opposite of our way, for example 123,456.78.

If you enter a number with a decimal, you need to use the comma key (‘,‘). All points are considered thousands separators and are not looked at regardless of the place of the number. An input of ‘8.5’ is therefore treated as ‘85’.

The amounts you enter are left aligned. This means these can be found on the left side of the field. If the amounts are already entered, they are automatically right aligned. If you, for example, in the screen section, where you can search, enter a number you will see that the number is left aligned.

Percentages

Further more there are fields where a certain percent is askesd (like with ‘Progress(%)‘). You do not need to enter the percentage sign here.



Dates

If a date is being asked (For example: ‘Date Start Realization’) you can fill this in yourself. The allowed date format is dd-mm-jjjj. The input mask prevents the input of an invalid value. An example of an invalid value is month number 22 or day number 33.

The meaning of the date format is the following:

- ‘dd’ indicates a two digit format of the day of the month from ‘01’ to ‘31’.
- ‘mm’ indicates a two digit format of the month in the year where ‘01’ stands for January, ‘02’ stands for February .. etc..
- ‘yyyy’ indicates a four digit format of the year, for example ‘2009’.

You can also click on the small square next to the input field:

A calendar appears:

Select the day by clicking on one of the numbers in the calendar. If you select ‘today’ automatically the current date will be used. The month is changeable by clicking on one of the black arrows, which can be seen on the picture below. The arrow to the right means a month forward. The arrow to the left means a month backward.

If you want more than only change the day, you have to ensure that you change the day at the end. This is because after changing the day you will come back to the menu.

After you have entered a data or selected one by using the calendar, the checkbox left in the date field is checked. This means that a data is selected. If you do not wish to use the date field, click on the checkbox left in the date field. The checkbox is then unchecked and the data in the field will turn light grey.

Times

When asked to enter a time, the following input format can be used:uu:mm.

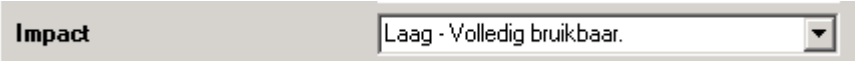
In this case the abbreviation ‘mm’ is minutes and not months as in the date format, ‘uu’ stands for hours.

Date Time Fields

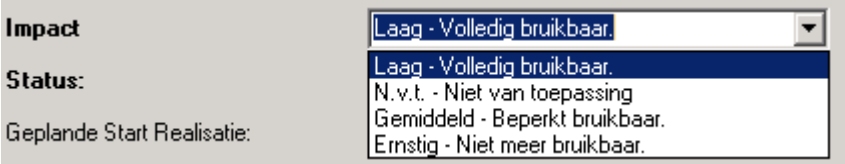
In date/time fields, first the date is entered and subsequently the time. The distinction between date and time is indicated by a space. The above given input formats show the way the date and time can be entered.

Drop Boxes

With drop boxes only valid choices can be made. A drop box works as follows: the field next to ‘Impact’ in the image below for example, is a drop box. As you can see something has already been entered: ‘Low - Completely usable’.



You can change the content of this drop box by clicking on the little square. This opens the drop box and it will get the shape of the following image:



Now you can choose from four values: ‘Low - Completely usable’, ‘N.A. - Not applicable’, ‘Average - Limited use’ and ‘Severe - No longer usable’. To choose you click on one of the possibilities. The drop box closes itself and your choice is recorded.

Check boxes

A final way to enter data in the screens is via check boxes. This is used when there are only two options: yes or no. If you check the box, you choose ‘yes’ and vice versa. An example of a check mark you can see in the image below:

The check is done by clicking on the white square or in the accompanying text or by selecting the white square with the cursor and then pressing the space bar. The field will look as follow:

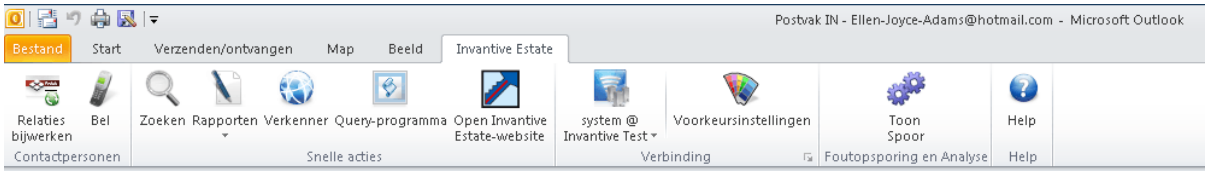
Forms

The data in the screens of Invantive Vision is shown in forms. A form is a cohesive and structured group of data. The use of forms makes it clear and easy to enter or edit data in the database.

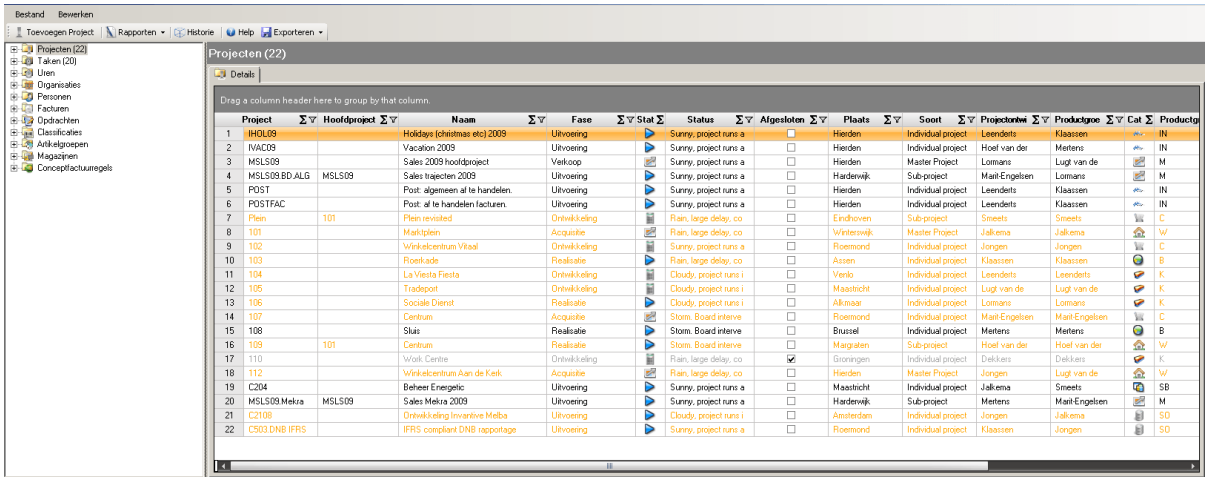
In some screens, the data is shown in multiple forms. At the top of the screen the master form is shown with the detail forms below. The data in the detail forms are linked to the data in the master form. The use of master- and detail forms in one screen prevents that you have to open multiple screens when you need to change related data.

Add New Data

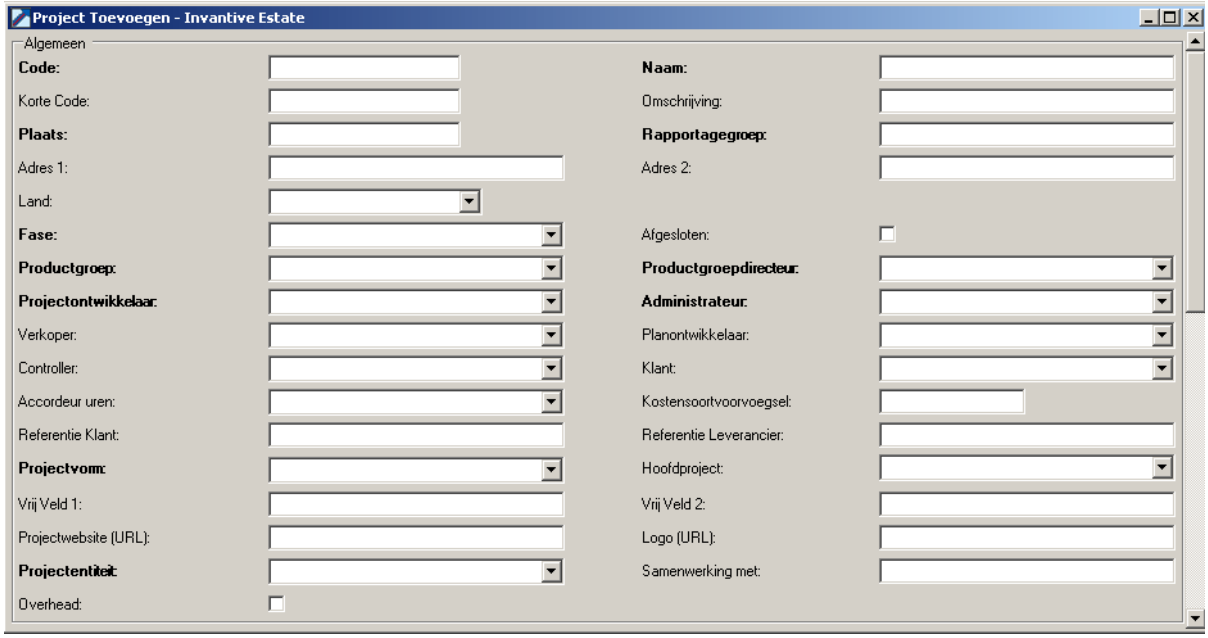
Open the screen where you would like to add new data. This is possible using the option ‘Explorer‘. This function can be found in the ribbon under the tab page ‘Invantive Vision‘.



Select ‘Explorer‘, the following screen is shown.



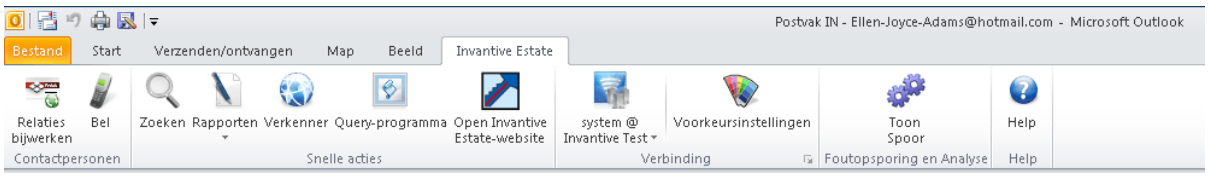
Suppose you want to add a new project. Select the option ‘Add Project‘ in the top left of the screen. The following screen appears.



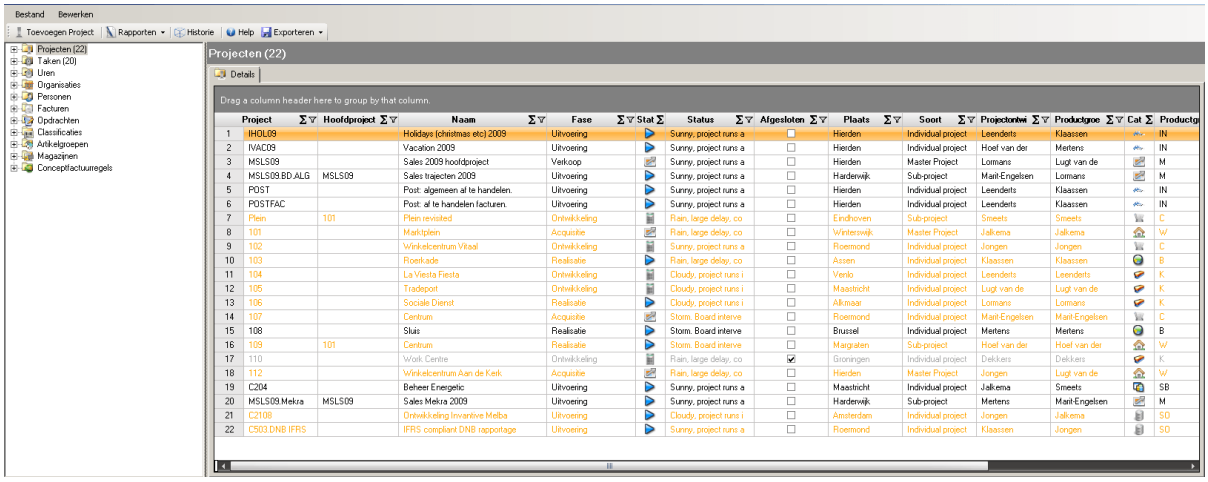
Fill the desired data in the Form 389. By using the scroll bar on the right of the screen, you can scroll to the Form 389 bottom. Then select ‘OK’. The data is now saved. If you don't want to save the data, select ‘Cancel‘.

Create or Change Data

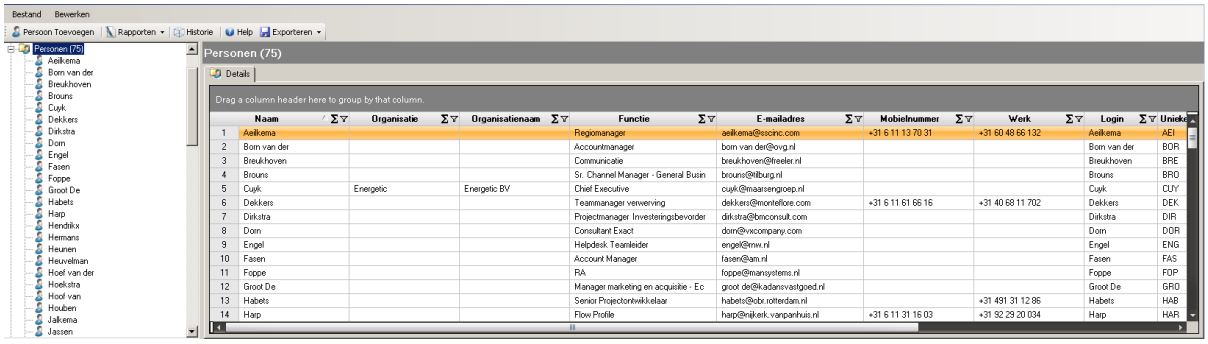
Open the screen where you would like to create or change data. This is possible using the option ‘Explorer‘. This function can be found in the ribbon under the tab page ‘Invantive Vision‘.



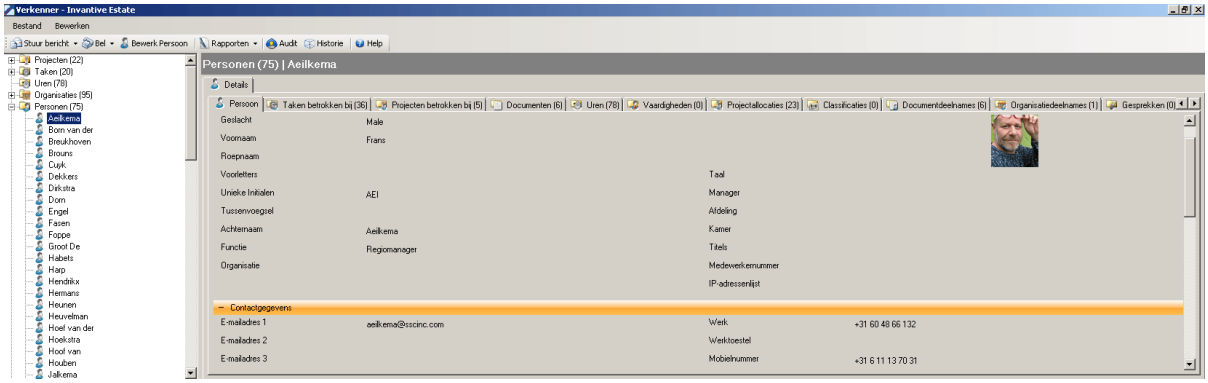
Select ‘Explorer‘, the following screen is shown.



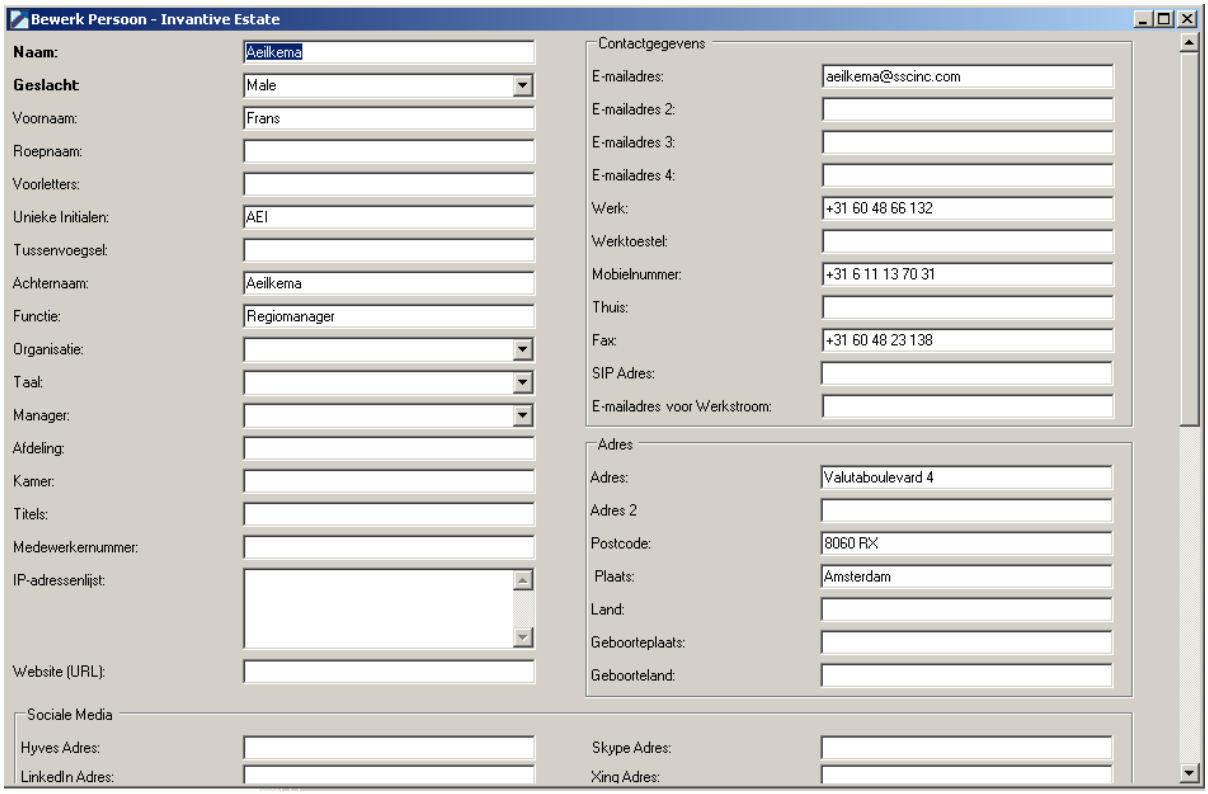
Suppose we want to change data from a person. Select the plus sign for ‘Persons‘. The folder with persons will open. This is shown in the screen below.



Using the mouse select the person who you want to edit the data from, in this case ‘Aeilkema‘. All relevant data concerning the person ‘Aeilkema‘ is now shown in different tab pages. This is shown in the screen below.



In the menu above, there will appear an option ‘Edit Person‘. Select this option. The following screen appears.



Change the desired data in the Form 389 and then move the 27 Form down using the scroll bar on the right of the screen and select ‘OK‘. The data is now saved. If you don't want to save the data, select ‘Cancel‘.

If it is necessary to delete data, you can do this by searching the desired information, for example using the Explorer and subsequently selecting the option ‘Edit‘. Then select the field of data you want to delete and delete the data with the ‘delete‘ key. After you have deleted the data select ‘OK’. You can only delete data if they are not used anywhere else.

1.5.2 Invantive Vision

This chapter contains the function which can be found in the Microsoft Outlook ribbon under the tab page Invantive Vision.

1.5.2.1 Contacts

This chapter describes the functions that are included in the function group Contact Persons.

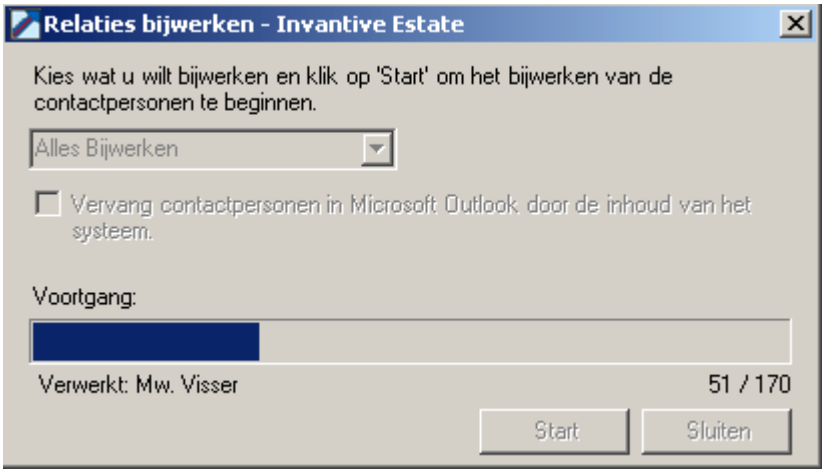
Update Relationships

Select the menu option Update Relationships to update your contacts in Microsoft Outlook with the data in the persons and organization administration in Invantive Vision. The updating of the contacts works optimally if the screen 'Contacts' is **not** open in Microsoft Outlook. The next window is opened when selecting the button 'Update Relationships'.

The meaning of the entry fields is:

List of choices	The list of choices • Update all: this option updates your existing contacts in Microsoft Outlook and add contact w hen new contacts w ere registered in the CRM administration of Invantive Vision. • Update contacts: this option updates existing contacts in the existing contacts of Microsoft Outlook w ith the modified information of persons and organizations in Invantive Vision. • Add Contacts: this option adds new contacts in the Microsoft Outlook from the CRM system of Invantive Vision. In the synchronization of contacts a maximum of thousand contacts are transferred based on the intensity of use.
Checkbox 'Replace contacts ...'	If a contact w as synchronized before out of Invantive Vision, then, if the box is not checked during a new synchronization Invantive Vision, these items w ill not be changed. Invantive Vision w ill only add new contacts in that case. If the box is checked then all changes w ill be overw ritten by the possibly new values from Vision/Estate.

After you have made the choice to update your relationships, you select start. The progress of the process are indicated with a blue statusbar. This is shown in the image below.

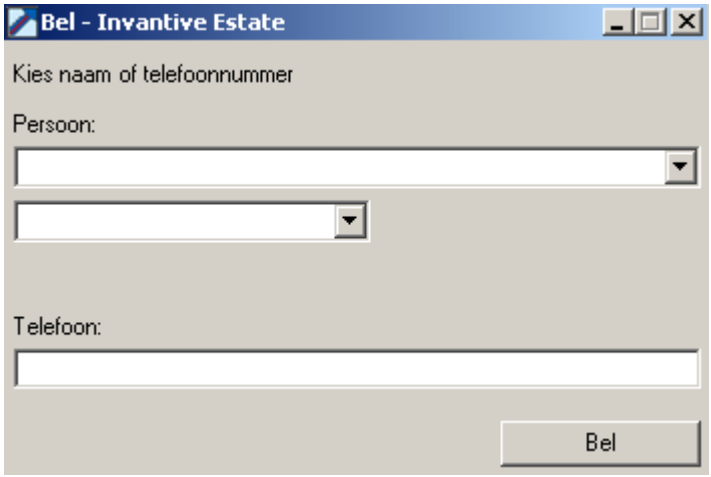


After the process is completed a notification will appear that indicated how many contacts were processed.

Select OK. Go back to the previous window and you can then close the process update relationships by selecting ‘Close’. This is shown in the image below.

Call

Via the menu option ‘Call’ you can easily call your contacts if Invantive Vision is connected to a PBX. After you have selected Call the following screen will open.



Using the top list box you can select the person or organization you would like to call. If the person or organization in Invantive Vision has multiple phone numbers registered, you can choose the desired phone number via the second list box without title.

The field ‘Phone’ displays the number that will be dialed when you select the button 'Call'.

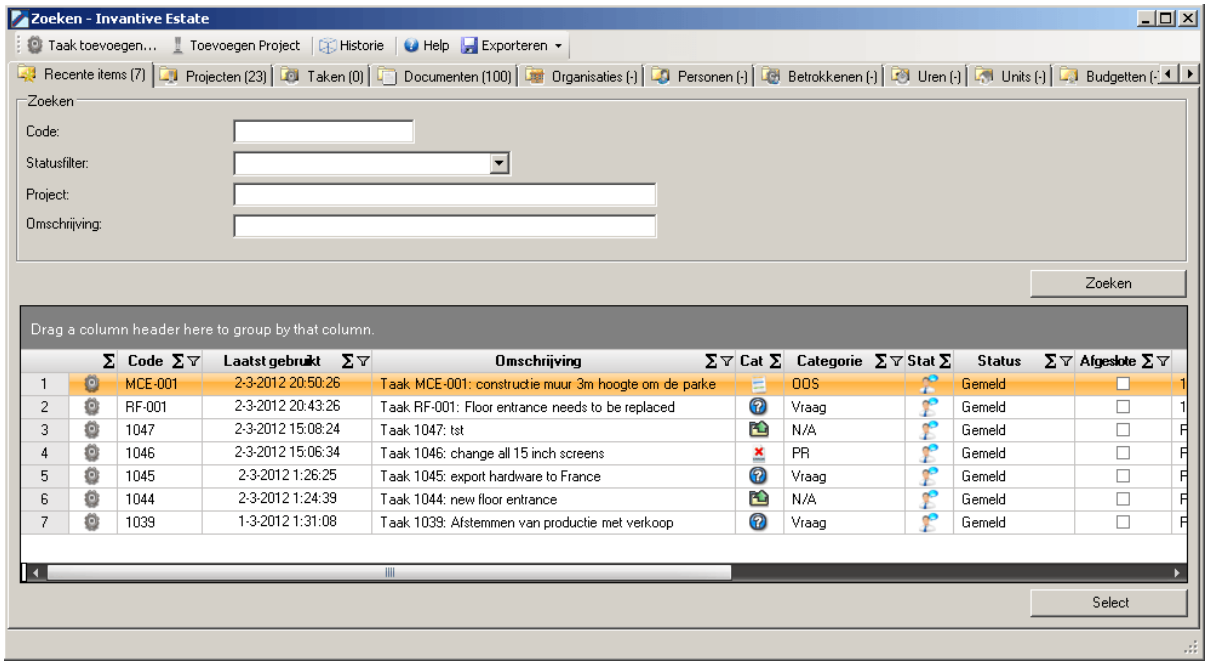
1.5.2.2 Snelle Acties

This chapter describes the functions which are in the function group Quick Actions.

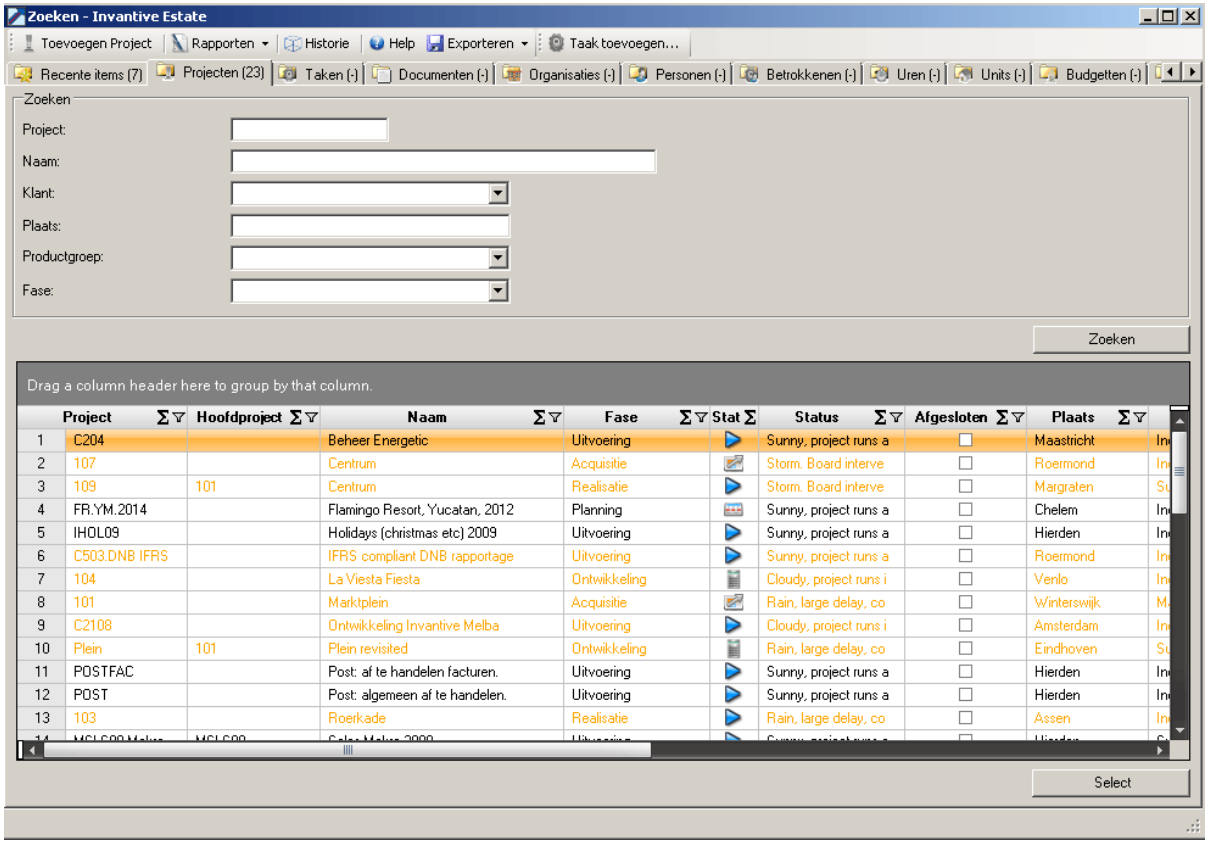
Search

The function Search offers you the possibility to easily search for project items and quickly carry out changes in the project administration of Invantive Vision.

Select the menu option Search to find project data. The following screen is opened.



The tab ‘Recent items 401’ is selected. The dats that the tab contains is described in Recent Items 401. If you want to search for other project data you need to select the tab with the desired data. To search for a project for example, select the tab ‘Projects’. This is displayed in the screen below.



Up in the screens of the function Search you will find a framed element with the title ‘Search’.

To find information you need to fill in the search filter in the upper part of the frame. The search results will comply with the content of the search filter. To search on project code ‘103’ fill in the field ‘Code’ the value ‘103’ and click on ‘Search’.

Documents or texts are searched using the SQL operator ‘contains’. The SQL operator ‘contains’ checks whether the searched string is present.

The ‘%’ and ‘_’-characters have a special meaning in the search context.

The ‘%’ sign means ‘any string of characters’ and the ‘_’-sign stands for ‘exactly óne single character’. If you do not know part of the word that you want to search on, then fill in the percent sign for the part that you don't know. Every word in which the searched word appears, preceded and followed by text, will be included in the search results. For example ‘Maas%eik’ provides both ‘Maas aan de eik’ and ‘Winkel Maaseik’.

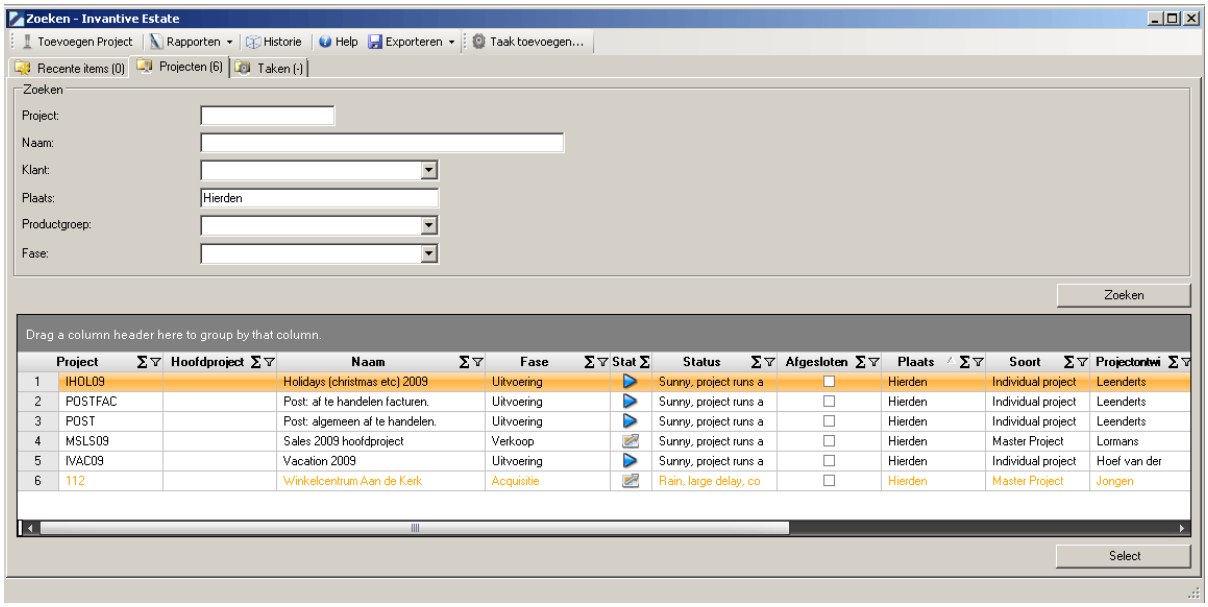
In the same way the ‘_’-character has a special meaning when used with searching and it stands for ‘any single character’. If for instance you search for ‘_aas’, you will find ‘Maas’ as well as ‘maas’.

Note that using ‘%’ and ‘_’ is only possible in text fields. They have no special function in fields where you enter an amount or date.

Warning! The search is case sensitive. ‘MAAS’ is something else than ‘Maas’ and will provide different search results.

Grid

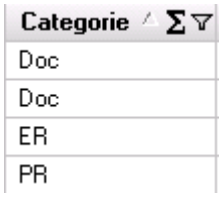
The lower part of the screens with tabs of Invantive Vision for Outlook will show the search results which comply with the search filter.



Sort

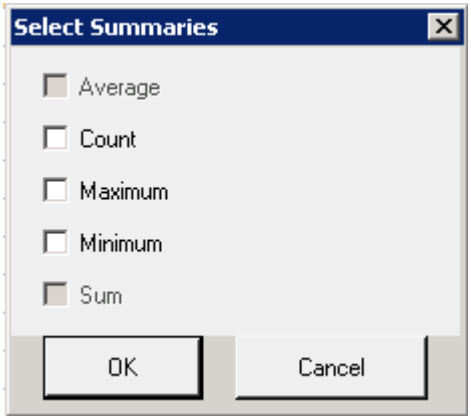
Above the search results are the column heads which you can use to sort the search results. By clicking on a column head, the selection is sorted on the values in the selected column. If you click on the column header once more, the sorting will happen in the reverse

order (descending instead of ascending). An arrow after the column name indicates whether the column is sorted ascending (arrow pointing up) or descending (arrow pointing down).



Summarizing and Filtering

Behind the column name in the column header a summation sign and a filter sign are displayed. Select the summation sign. The following screen is opened.

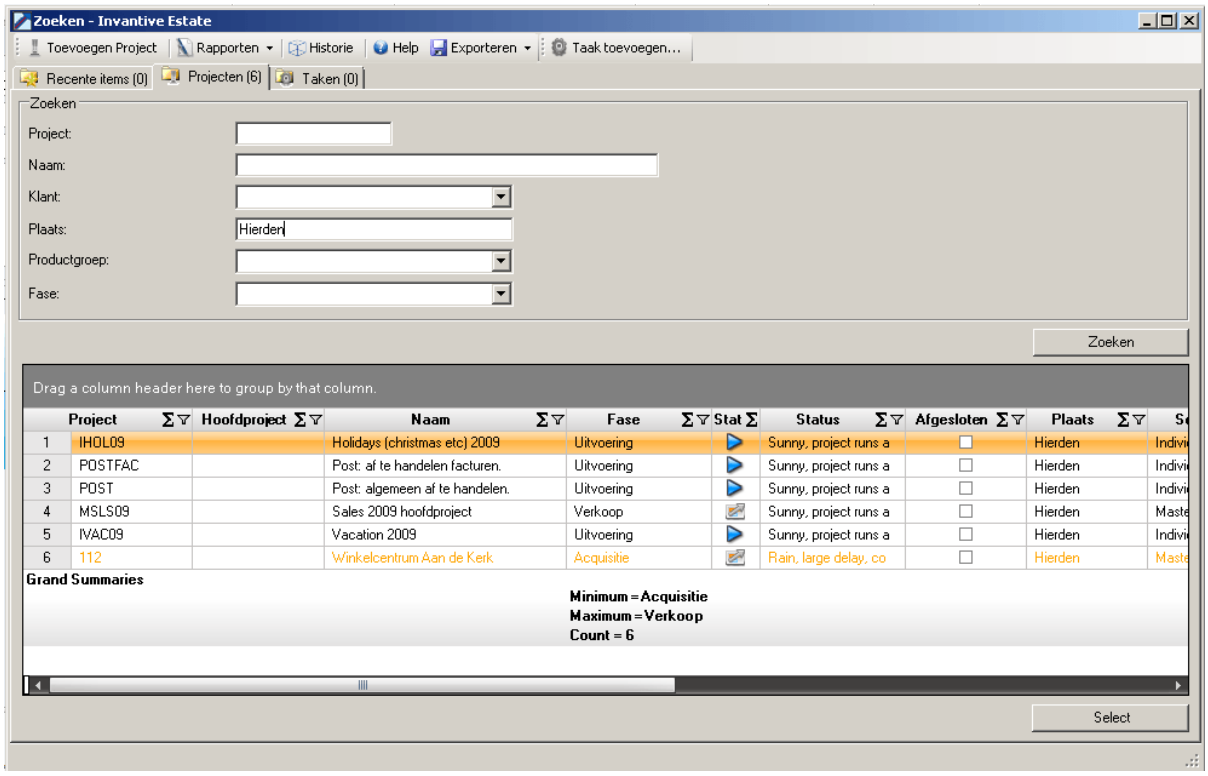


Using this screen you can calculate a number of summarizations of the column. The grey-tinted choice boxes are not available.

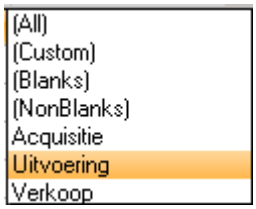
Meaning of the input fields:

Count	Present a count of the number of items in the column as checked.
Maximum	Show s the maximum value in the column as checked.
Minimum	Show s the minimum value in the column as checked.

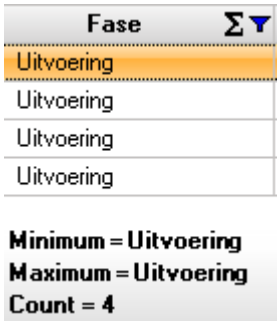
After you have made your desired choice, select OK. Under the column there will now appear the by you selected summaries. This is shown in the image below.



Using the filter sign you can filter on values in the columns. Select the filter sign in the column ‘Phase’ The following screen is opened:

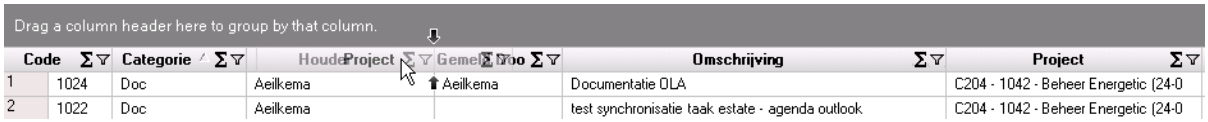


You can now select to which value you wish to filter in the column. After you have selected a value, in this case ‘Execution’, close the screen with the possible filter values. The filter sign in the column head turns blue. This allows you to see that search results are filtered on one or more values within the column. This is shown in the following image.



Moving of columns

You can easily move the columns in the search results. To do this, click the left mouse button on the column name and drag it, while you hold the mouse button to the other location. Two black arrows appear if you have dragged the column to a valid location.

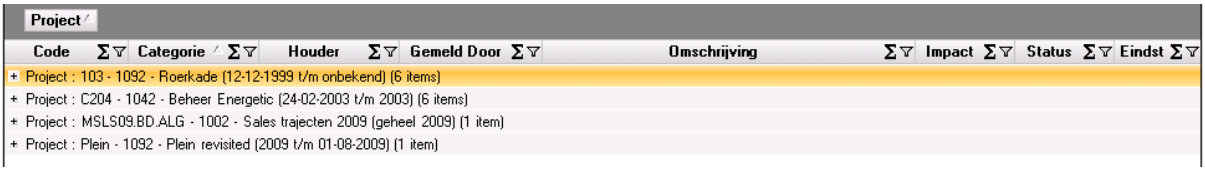


The above figure shows that the column 'Project' is moved to the location between the columns ‘Holder’ and ‘Reported By’.

If you release the left mouse button, the column is moved to the new location. This is shown on the image below.

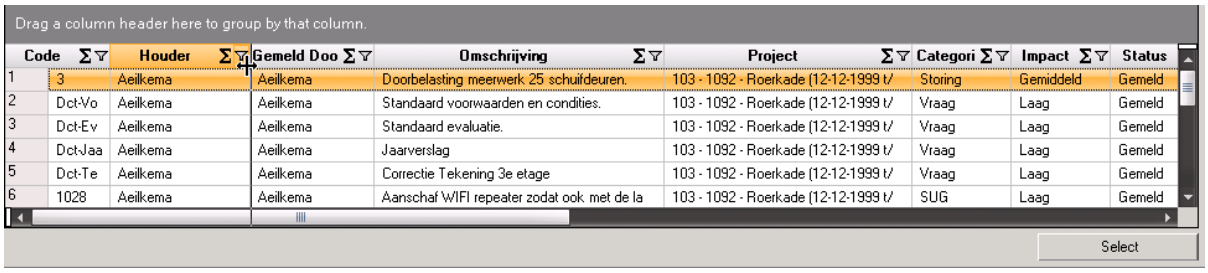
Grouping

Above the column headers of the search results the text ‘Drag a column header here to group by that column’ is displayed. You can group by dragging the column on which you want to group to this area. For example, to display the search results grouped by project, drag the column header 'Project' to the dark gray area. This is shown in the image below.

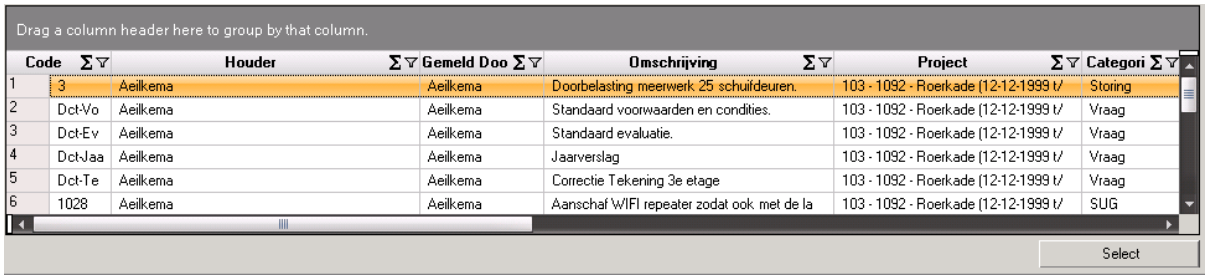


Change Column Width

Columns can be made wider or narrower by moving the cursor in a column header over the border with another column header. The cursor changes in that moment in a horizontal double arrow. Now select the left mouse button. The boundary line between the column is now displayed in bold.



This indicates that you can make the column wider or smaller by moving the mouse. In the image below the width of the column ‘Holder’ is increased.

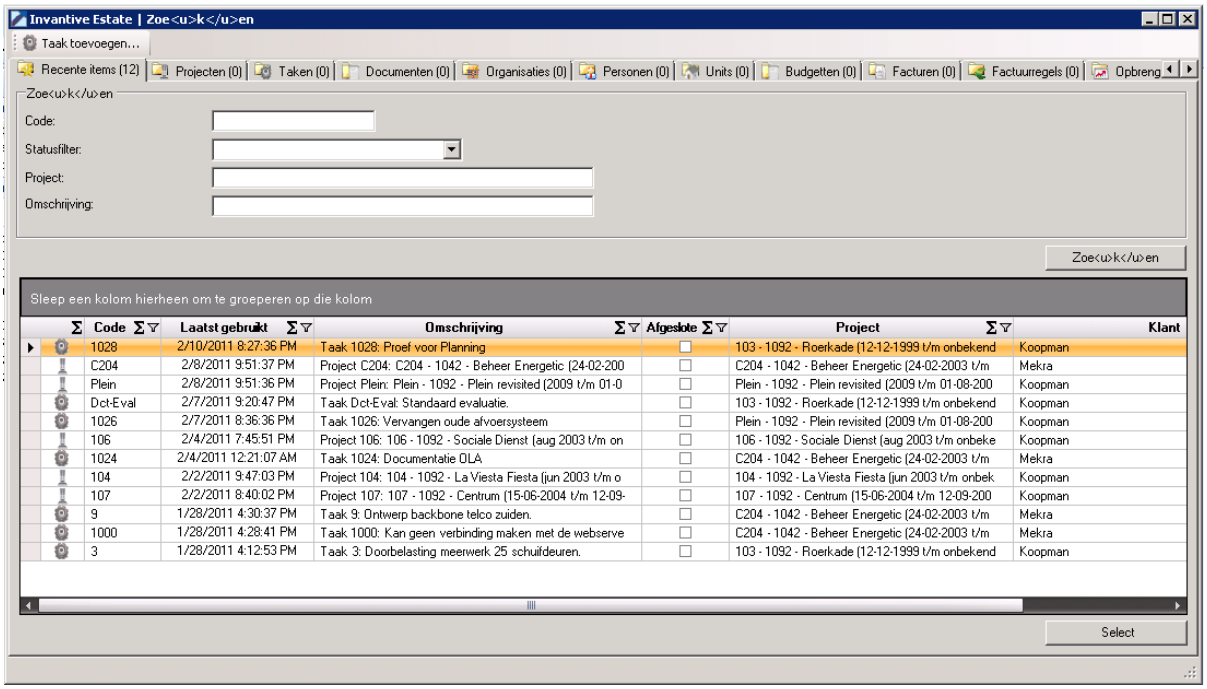


Tabs

The tabs give you the option to directly and quickly carry out changes in the project administration of Invantive Vision.

After you select the menu option Quick Open

First you can search and select the project item you want to change, using the tabs on the screen. After you select Quick Open, the next screen will appear.



The tab pag Recent Items is selected. Behind the title the number of items the tab page contains is mentioned. The project items which you opened last, are shown down in the tab.

All tab pages in this screen contain a searching functionality in the upper framework of the tab page. To search information fill in the data in the search filter to which the results must measure up to. To search on project code ‘103’ fill in the field ‘Code’ the value ‘103’ and click on ‘Search’. In paragraph Searching 395 the search functionality is described in detail.

The other tabs in this screen are:

- Projects
- Processes
- Documents
- Organizations
- Persons
- Units
- Budgets
- Invoices
- Invoice Lines
- Revenues
- Orders
- Budget Movements
- Contract Budgets
- Latest estimations

The tabs are described in the next paragraphs.

The tab ‘Recen items’ is selected. In this tab, the following project items are shown:

- The posting of hours on projects or processes.
- Other project activity.
- Other process activity.
- Changes in the filter.

Enter text here.

Enter text here.

Enter text here.

Enter text here.

Enter text here.

Enter text here.

Enter text here.

Enter text here.

Enter text here.

Enter text here.

Enter text here.

Enter text here.

Enter text here.

1.5.2.3 Reports

The menu option reports allows you to retrieve all kind of information about a project.

Formats

Every report is available in the Adobe Reader or Adobe Acrobat PDF format and in the Microsoft Excel XLS format. The information in both report formats (Excel and Acrobat) is exactly the same. The only difference is the layout in Microsoft Excel, which isn't as good as the layout in a PDF file. The program ‘Adobe Reader’ is free available on the Adobe Website.

Direct link

You can quickly edit data when you are viewing reports. The detail data that can be changed (orders, returns, and adjustments of cost) will have hyperlinks. By clicking on the desired hyperlink in the report, Invantive Vision will be opened automatically. In case you're not logged in, Invantive Vision will ask you to log in. After you log in, Invantive Vision will open the screen that contains the source data which is used to produce the report (in case you have the

required rights). If you have the rights to edit data, yu can customize the numbers. Then you can update the report by a rerun. The report will now show the edited numbers.

1.5.2.4 Explorer

Enter text here.

1.5.2.5 Query Tool

See

1.5.2.6 Open Invantive Website

Enter text here.

1.5.2.7 Preferences

The settings which are made in this screen, apply only to the user who is logged on. The screen ‘My Preferences’ contains a number of tabs. These are explained in the following paragraphs.

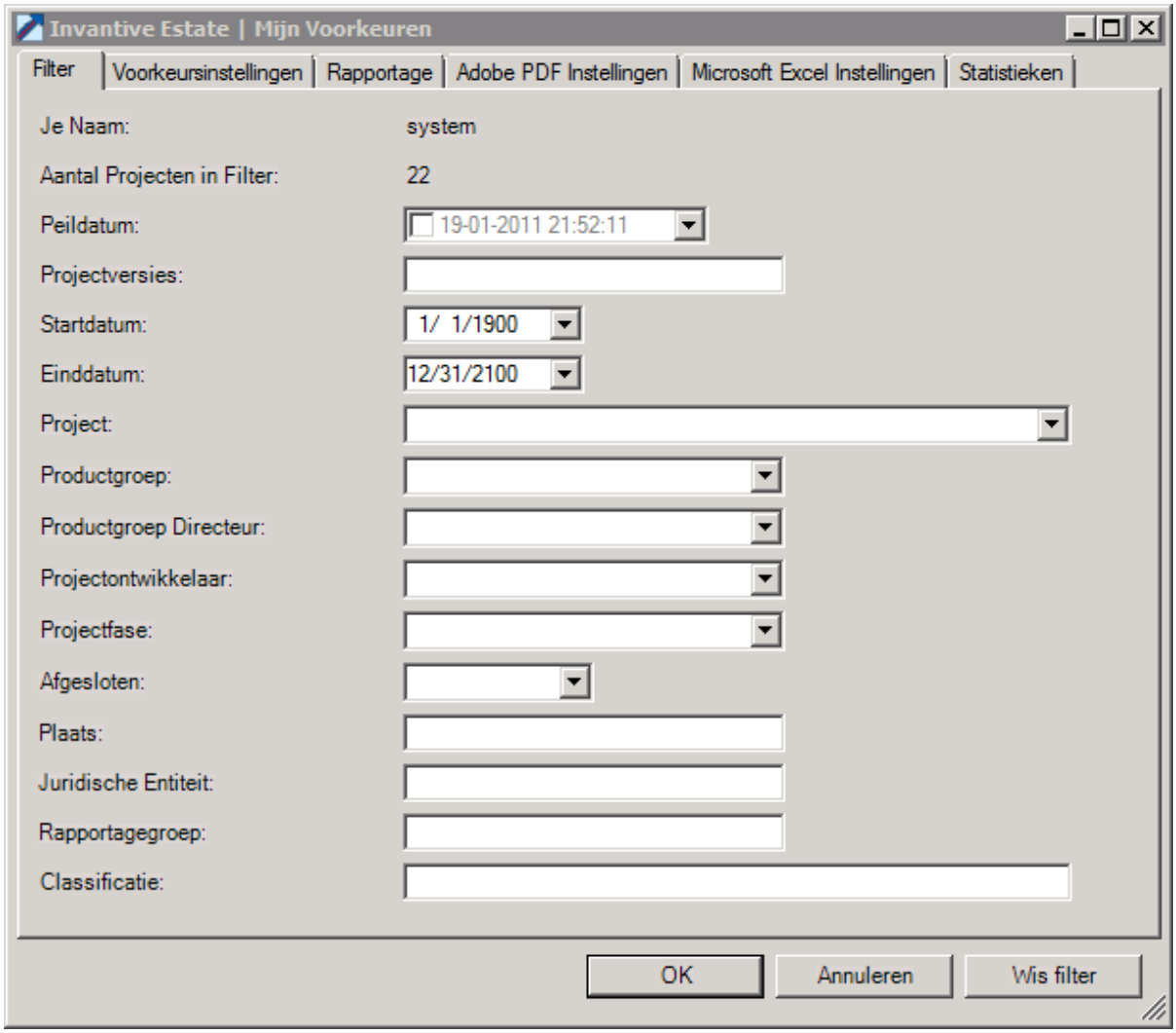
Filter

After you select ‘My preferences’ you will go to the tab ‘Filter’ of the screen ‘My Preferences’.

Every user of Invantive Vision has access to some of the projects or even to all projects. However, you usually work with only one part of the projects or just one project. The filter helps you in all reports and screens to see and edit only the project data that are relevant to you.

The section ‘Filter’ in the screen ‘My Preferences’ consists of a list of restrictions which are combined to form a list of projects that comply with these restrictions.

If you wish to erase the filter then use the button ‘Erase filter’.



The meaning of the entry fields is:

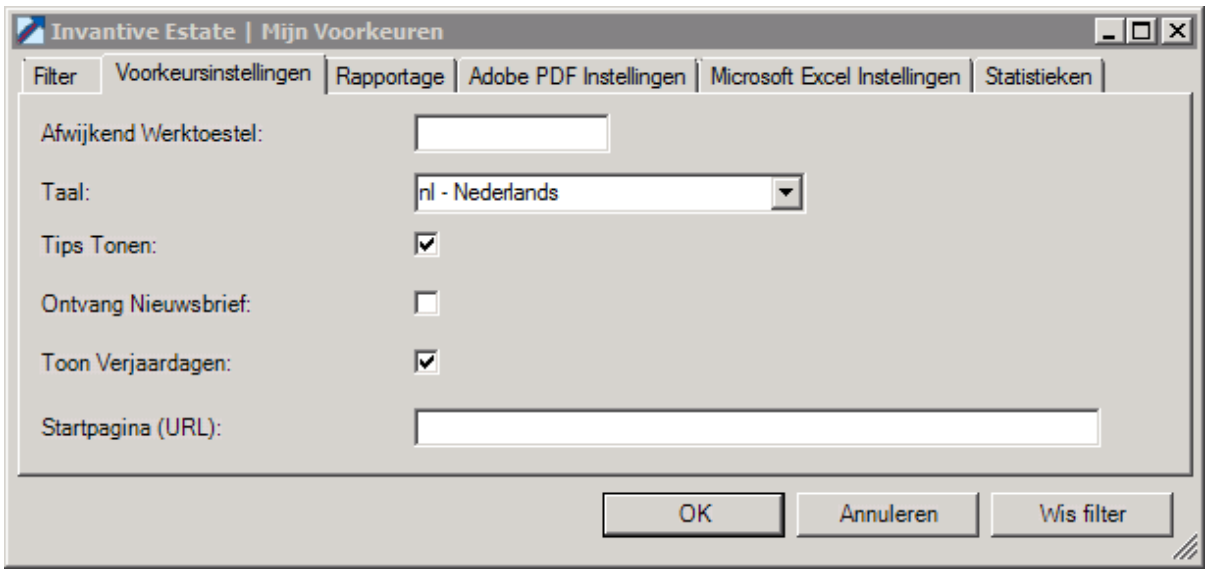
Reporting Date	Here you can enter the reporting date for w hich the information on the reports should be show n. This date is activated by checking the selection box.
Project Versions	Displays the project version of the project data w hich has to be show n in the reports.
Start Date	The start of the reporting data range. All data before this date are not reported.
End Date	The end of the reporting date range. All data after this date are not reported.
Project	Limit the filter to a specific project.
Product group	Limit the filter to all projects from the relevant product group.
Product Group Director	Limit the filter to all projects w ith the product group director.
Project developer	Limit the filter to all relevant projects of the relevant developer.
Project Phase	Limit the filter to all projects in the relevant implementation stage.
Closed	Limit the filter to all projects that have been closed or not.
City	Limit the filter to all projects w here the name of the city w here they are executed contains this text.
Legal Entity	Limit the filter to all projects w here the name of the legal structure under w hich they are executed contains this text.
Reporting group	Limit the filter to all projects w here the reporting group contains this text.
Classification	Limit the filter to all projects w ith the classification that appears in this field. A classification is a label that can be linked to a project or a person. Wlth these labels you can find the desired information more easily.

The meaning of the other fields:

Your Name	Your name as registered in the personal administration.
Number of Projects in Filter	Indicates the number of projects that comply with the settings in the filter.

Preferences

Select the tab 'Preferences'. The following screen opens.

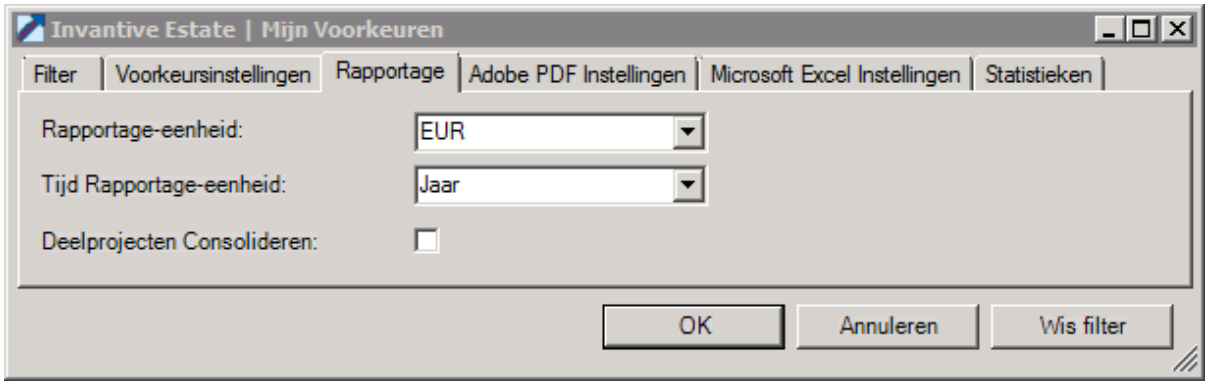


The meaning of the entry fields is:

Deviating Work Extension	Alternate phone number to reach the user at work.
Language	The preferred language in which the user interface needs to be presented. See also Multilinguality 39.
Show Tips	When checked, after you log on, tips for using Invantive Vision will be shown.
Receive Newsletter	When checked, the user will receive the newsletter of the dealer.
Show Anniversaries	When checked, after you log on, the near birthdays of users of Invantive Vision are shown.
Start Page (URL)	The URL that will be opened after you have logged on. The URL will be requested with the parameter MNU_CODE = Main. If the field is empty, then the URL in the field 'Main menu (URL)' in the screen Settings 349 of the web user interface will be used.

Report

Select the tab 'Reports'. The following screen opens.



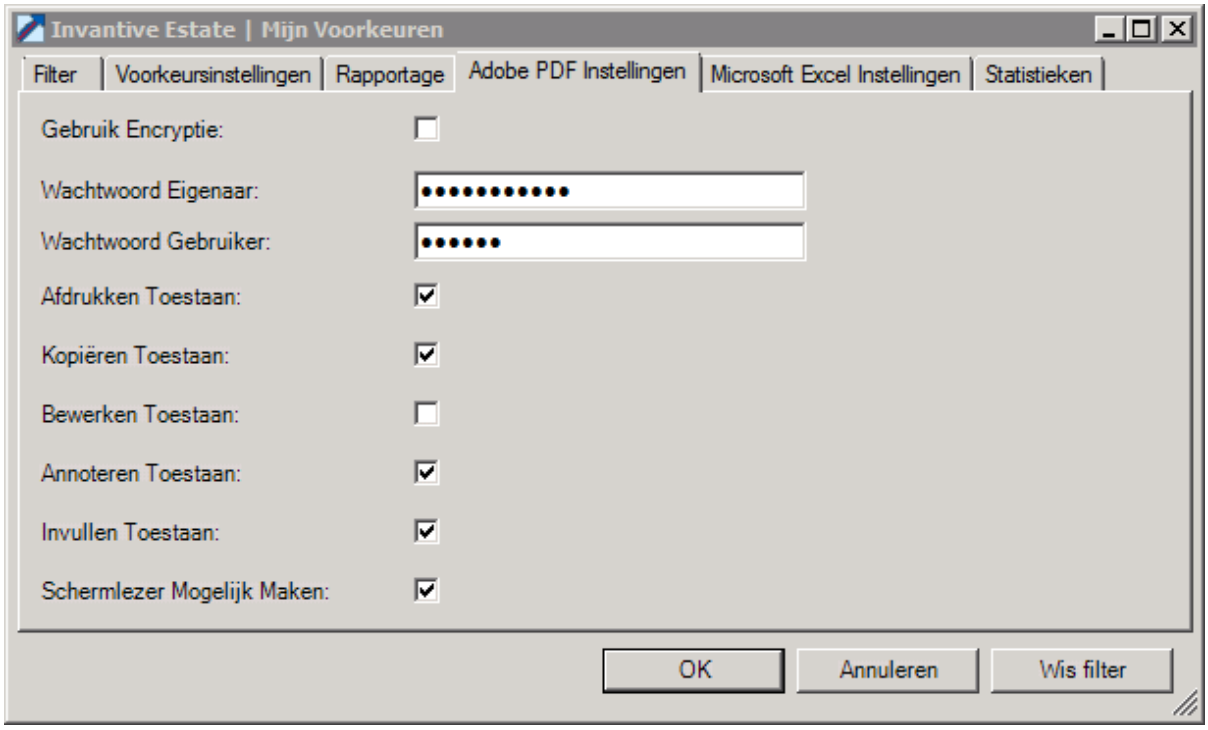
The meaning of the entry fields is:

Reporting Unit	The numerical unit used in the presentation of figures in reports.
Reporting time unit	The time unit used in the presentation of figures in reports reporting time periods.

Merge Subprojects	If this box is checked, then projects are consolidated into master projects and independent projects in all financial reports. See also Management Information 116.

Adobe PDF Settings

Select the tab 'Adobe PDF Settings'. The following screen opens.

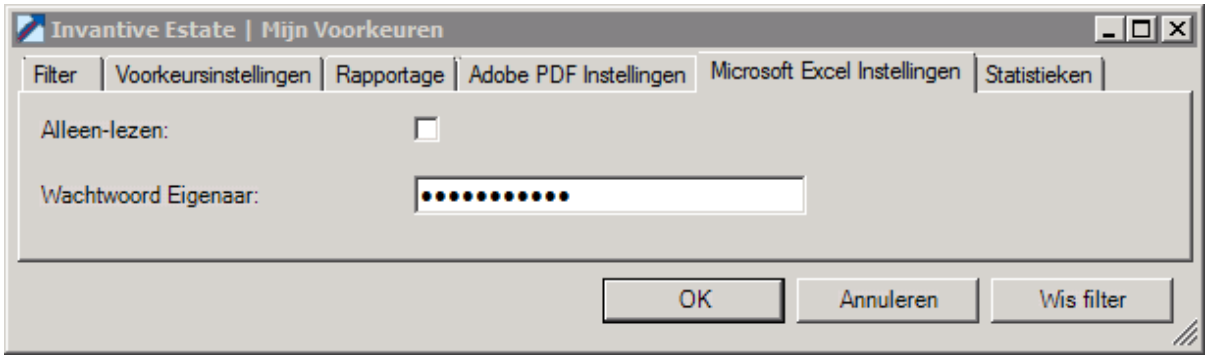


The meaning of the entry fields is:

Use Encryption	If this box is checked, all PDF reports will be secured with two passwords: one password for the owner, who has full rights and another password for the person who gets limited rights as will be registered with the other check boxes.
Password Owner	The password for all PDF reports with which one is granted full rights for the PDF.
Password User	The password for all PDF reports with which one is granted limited rights, as registered by the following options.
Allow Printing	In case this box is checked, an authorised PDF user can print the file.
Allow Copying	If this box is checked, then an authorized user can copy text from the PDF file into a Microsoft Word file.
Allow Modifying	In case this box is checked, an authorised PDF user can change the file by for instance deleting texts from it.
Allow Annotating	In case this box is checked, an authorised PDF user can add an annotation to the file.
Allow Fill In	In case this box is checked, an authorised PDF user can fill out any forms attached to the file.
Enable Screen Reader Options	In case this box is checked, an authorised PDF user can use a screen reader. A screen reader is a tool for the visually impaired; it is recommended to always allow this option.

Microsoft Excel Settings

Select the tab 'Microsoft Excel'. The following screen opens.

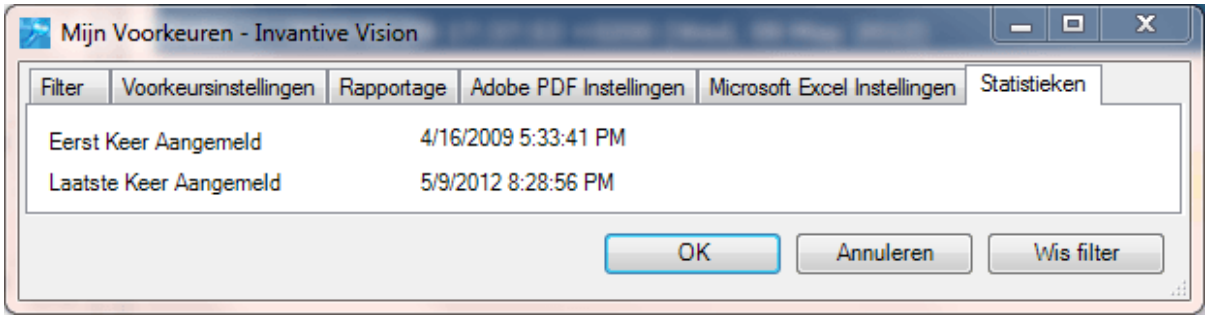


The meaning of the entry fields is:

Read-only	If this box is checked, then the authorized user, can only read the Excel file. How ever, no changes can be made.
Passw ord for Editing File	The passw ord of the Excel files necessary to change them.

Statistics

Select the tab 'Statistics'. The following screen opens.



The meaning of the fields is displayed:

First Login	Date on w hich you logged in for the first time using the w eb user interface.
Last Login	Date last time logged in via the w eb user interface.

1.5.3 Calendar

This section contains information about the functions needed to exchange data between the Microsoft Outlook calendar and the project administration of Invantive Vision.

1.5.3.1 Calendar Update

This chapter describes how your data in the calendar of Microsoft Outlook can be used for the administration of timesheets in Invantive Vision.

The menu item Calendar Update performs a number of functions:

- The worked hours for a project that you have registered in the Microsoft Outlook calendar, are exported to the project hour administration in Invantive Vision.
- The hours that have been registered in the project hour administration in Invantive Vision, are exported to the Microsoft Outlook calendar.
- The changes that you have made in your hour registration in your Microsoft Outlook calendar are exported to the project hour administration of Invantive Vision and vice versa.

The export and import of hours worked in the Microsoft Outlook calendar increases efficiency because the hours worked do not need to be entered twice manually. In addition, it minimizes the chance of errors.

Requirements for Editing Agenda

Requirements tp synchronise the Microsoft Outlook calendar with the project hour administration in Invantive Vision:

- The Microsoft Outlook calendar needs to be opened.
- You will need to assign a category to the worked project hours that you have planned in the Microsoft Outlook calendar.
- You will need to assign an Attribute to the worked project hours that you have planned in the Microsoft Outlook calendar.

These requirements are discussed in the following paragraphs.

The tab 'Timesheets' shows a list with all categories of messages and/or appointments from your outlook. You can exclude the categories that you do not want to take part in the timesheet processing, by selecting them and move them to the right column.

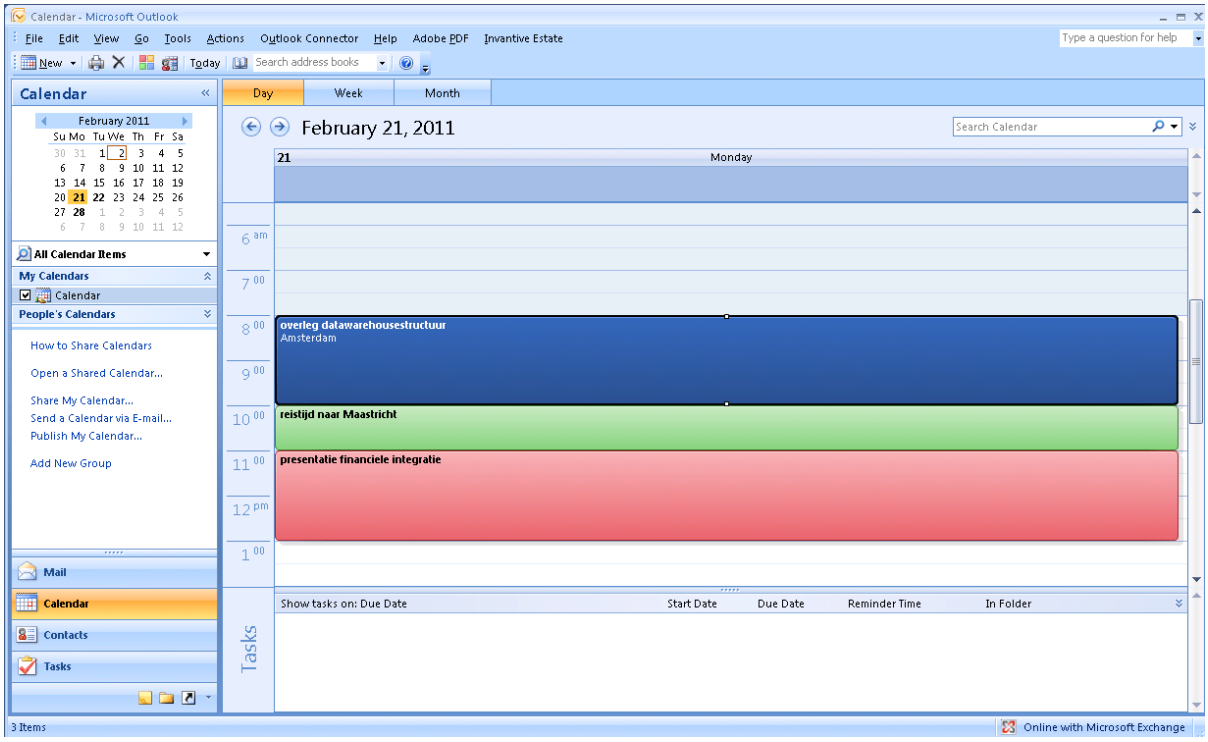
Microsoft Outlook Calendar has to be open

To synchronize the Microsoft Outlook calendar with the administration of project hours in Invantive Vision you need to open the Microsoft Outlook Calendar. If the Microsoft Outlook calendar is closed, you will get the following error message when selecting the Invantive Vision for Outlook' menu option 'Update Calendar'.

Close the message by selecting OK or the cross in the right upper corner of the window.

Notice! Only the data which is visible in your Microsoft Outlook calendar, will be updated.

If you select a display of only one day in your Microsoft Outlook calendar, then only the hours for this one day will be updated. If you select a calendar view of a month, then only the hours for the selected month are processed etc. In the screen below is in the Microsoft Outlook calendar the view of one day selected.

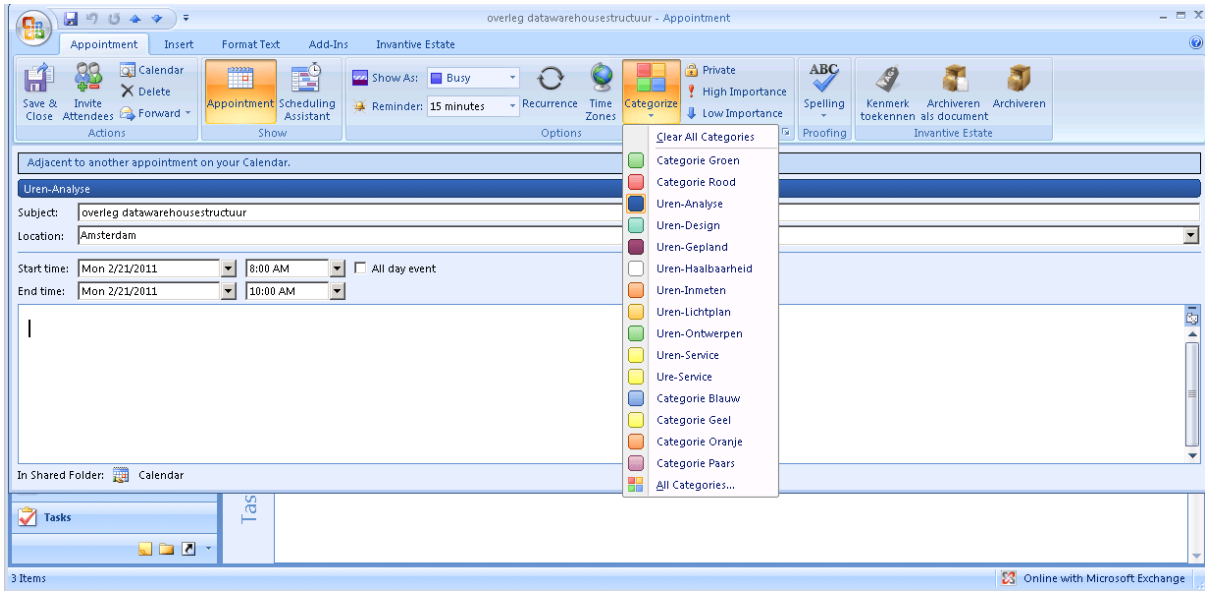


Assign Labor Type

To synchronise the worked project hours that you have planned in the Microsoft Outlook calendar with the project hour administration in Invantive Vision, you need to assign a 'category' as work type. A category can be used within Microsoft Outlook to sort Microsoft Outlook items in various categories. Categories ensure that it easy to organize, search, sort and process items.

Categories are used by Invantive Vision to correctly register the worked project hours from the Microsoft Outlook calendar to a work type which is necessary for for example the invoicing process. To properly register the worked project hours from the Microsoft Outlook calendar the categories that are assigned to these project hours in Invantive Vision need to be linked to a work type. Categories are linked in Invantive Vision to a work type in the screen Work types 183.

To link a category to your project hours in the Microsoft Outlook calendar, open the registered hours in the Microsoft Outlook calendar. Subsequently you select in the Microsoft Outlook ribbon the item Categories and select the category of your choice. In the screen below you can see that by looking at the hours that were assigned to 'consultation data warehouse structure' the category 'Hour Analysis'.



If you assign a Category to your registered hours in your Microsoft Outlook calendar which is not assigned to a work type in Invantive Vision and next you select the menu option Synchronize Calendar, you will get the following message:

To synchronize the project hours you registered in the Microsoft Outlook calendar with the project hour administration in Invantive Vision, you need close the message by selecting OK or the small cross in the right upper corner. Next you open the hours in your Microsoft Outlook calendar and you assign a category which is assigned to a work type in Invantive Vision. An alternative possibility is to lin the category that has not been linked to a work type in Invantive Vision to a work type. If you have the proper authorizations for this, you can do this in the screen Work types 183.

The notification above will also appear if you have assigned an Attribute in your Microsoft Outlook 409 calendar, but no Category and you have subsequently selected the menu option Update Calendar. To export your registered hours from your Microsoft Outlook calendar to Invantive Vision, you need to close the message by selecting OK or the cross in the right upper corner of the message window. Next you open the hours in your Microsoft Outlook calendar and you assign a category which is assigned to a work type in Invantive Vision.

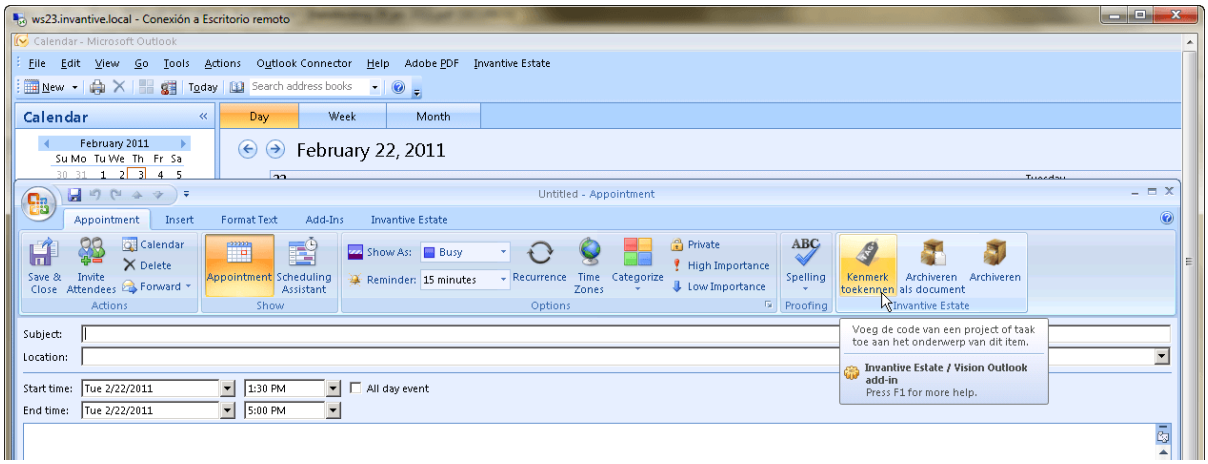
Microsoft Outlook offers you the option to create new categories. To use these new categories in the synchronization process between the Microsoft Outlook calendar and Invantive Vision, you will need to link the new categories in Invantive Vision to a work type in the window Work types 183.

Attribute Assignment

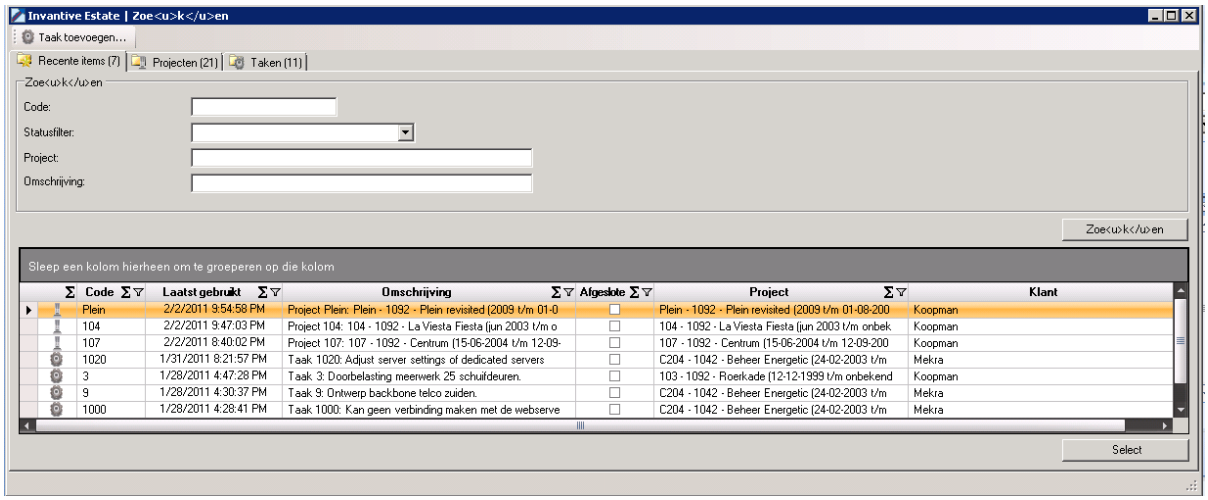
To synchronize the project hours you worked and planned in the Microsoft Outlook calendar with the project hour administration in Invantive Vision, you need to assign an Attribute. An

Attribute is a project or process which is registered in Invantive Vision. In this way Invantive Vision the worked project hours can be registered correctly which is necessary for the invoicing process.

To link an Attribute to your project hours in the Microsoft Outlook cakendar, open your registered hours in the Microsoft Outlook calendar. Subsequently you select in the Microsoft Outlook ribbon the ribbon item Assign Association. This is shown in the screen below.



After you have selected the menu item Assign Association, the following screen will open.



The tab pag Recent Items is selected. Behind the title the number of items the tab page contains is mentioned. In the bottom part of this tab page the processes and or projects are shown which you opened last.

All tab pages in this screen contain a searching functionality in the upper framework of the tab page. To search information fill in the data in the search filter to which the results must measure up to. To search on project code ‘103’ fill in the field ‘Code’ the value ‘103’ and click on ‘Search’. In paragraph Searching 20 the search functionality is described in detail.

The tab page Projects contains all projects Invantive Vision where for you have the right to register as worked project hours.

The tab page Processes displays all processes Invantive Vision where for you have the right to register as worked project hours.

Notice: In the tab page Processes the search filter has fields with ‘Status Filter‘ and ‘Process holder filter‘, filled with de values ‘Open Processes‘ and ‘My Processes‘. This makes sure

that only the processes are shown, wherefore you can register your worked project hours. This can be seen in the screen below.

If you want to link your worked project hours to a ‘new‘ process which has not been registered in Invantive Vision, select the button Add Process in the top left of the screen. The next screen from Invantive Visionwill be opened.

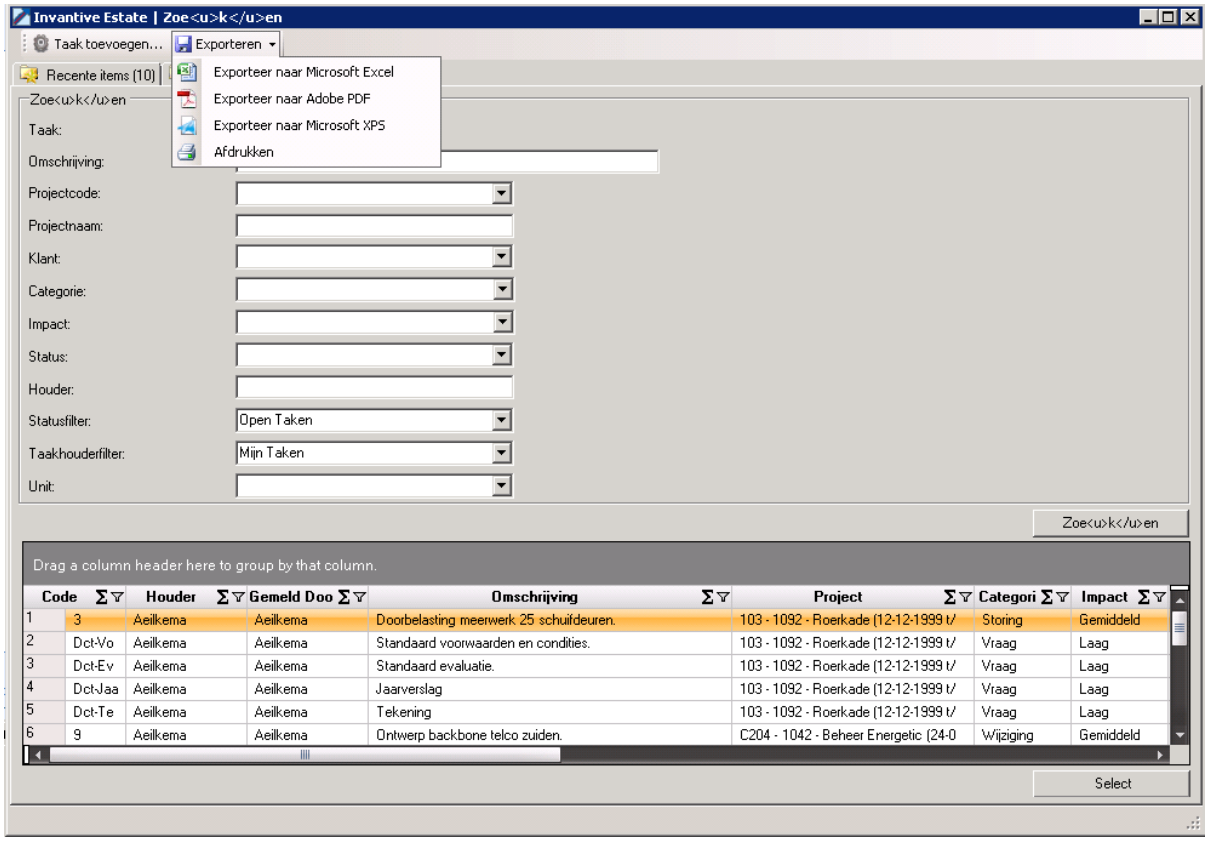
In this screen you can add Invantive Vision a new process. Some of the field names in this screen are shown bold. These are required input fields. The types of input fields which are used in Invantive Vision are described in paragraph Type Input Fields 22.

The meaning of the entry fields is:

Description	A short description of the target or the problem.
Project	The project to w hich the process belongs.
Process Holder	The person currently responsible for the follow ing up of the process.
Organization	The organization on behalf of w hich the process is created.
Origin	The origin of the process.
Reported By	The person w ho has reported the process.
Category	Processes are grouped according to categoryën. Examples of a process categoryën are: ‘documentation’, ‘failure’ and ‘installation’.
Unit	The unit w here the process relates to, see Units 157.
Impact	The gravity of the problem in case of an unfinished process.
Customer Reference	A reference of the buyer to this process. This can be for instance a reference to a purchasing order.
Status	The status of the process.
Supplier Reference	A reference of a Supplier to this process. This can be for instance a report number of a service provider for the heating.
Planned Start of Realization	The date on w hich you planned to start on the running of the process.
Planned	The amount of planned hours to realise the total process.
Deadline	The date on w hich the process should be finished.
Prognosis to Go Hours	Estimation of the remaining hours required to complete the process.
Next Review	The date on w hich the next review of the process should take place.
Fixed Price	You can fill in a fixed price here, if this is relevant on the process.
Remaining Effort Determined on	The date on w hich the forecast of the hours needed to complete the process w as made.
Progress (%)	The percentage w hich show s how long the process still has to go to be finished.
Remarks	Free text field in w hich notes concerning the process are taken up.
On Behalf of	The organization on behalf of w hich the process is created.

After you have entered the desired information, select OK and the new process will be created in Invantive Vision.

Comment: If you select the tab page Processes, on the top left of the screen the button Export will appear. By selecting this button you can save the shown process in the formats of Microsoft XPS, Microsoft Excel, Adobe PDF or print it. This is shown in the screen below.



Registration of hours worked

After you have assigned a category and attribute to the worked project hours in the Microsoft Outlook calendar, you can synchronise these hours with the project hour administration in Invantive Vision. Ensure that your opened Microsoft Outlook calendar displays the worked project hours that you want to synchronise with the project administration in Invantive Vision. Now select the menu option ‘Update Calendar’. The hours are updated and the following Hour Registration Overview appears.

Dag	Datum	Gewerkt	Te Werken	Resterend
maandag	24-01-2011	0:00	8:00	-8:00
dinsdag	25-01-2011	0:00	8:00	-8:00
woensdag	26-01-2011	0:00	0:00	0:00
donderdag	27-01-2011	0:00	8:00	-8:00
vrijdag	28-01-2011	8:00	8:00	0:00
zaterdag	29-01-2011	0:00	0:00	0:00
zondag	30-01-2011	0:00	0:00	0:00
Week 4, 2011		**8:00**	**32:00**	**-24:00**
maandag	31-01-2011	0:00	8:00	-8:00
dinsdag	01-02-2011	0:00	8:00	-8:00
woensdag	02-02-2011	8:00	0:00	8:00
donderdag	03-02-2011	0:00	8:00	-8:00
vrijdag	04-02-2011	0:00	8:00	-8:00
zaterdag	05-02-2011	0:00	0:00	0:00
zondag	06-02-2011	0:00	0:00	0:00
Week 5, 2011		**8:00**	**32:00**	**-24:00**
maandag	07-02-2011	0:00	8:00	-8:00
dinsdag	08-02-2011	2:30	8:00	-5:30
woensdag	09-02-2011	0:00	0:00	0:00
donderdag	10-02-2011	0:00	8:00	-8:00
vrijdag	11-02-2011	0:00	8:00	-8:00
zaterdag	12-02-2011	0:00	0:00	0:00

The meaning of the columns is:

Day	The day.
Date	The date.
Worked	The number of hours that the Invantive Vision user has worked on this date.
To Work	The number of hours that the Invantive Vision user needs to work according to the work schedule as it is registered in Work Schedules 181 and Work Schedule Exceptions 182.
Remaining	The remainder between the 'Worked' hours and the 'To Work' hours.

In order to ..... select Open..

1.5.3.2 Overview last action

This menu option opens an hour registration review of the hours which are registered in Invantive Vision before the data is shown in your opened Microsoft Outlook calendar.

The meaning of the columns is described in hour registration 412.

1.5.3.3 User Activity (pdf)

Through this registration you can provide this information in a quick and clear manner. This screen allows you to request ‘process level’ where a person worked on.

In the second part of this report which is called ‘Timesheets’, shows the number of hours that a project employee has been working. The picture shows the screen of the model editor.

Invantive Estate
http://dvtestate.invantive.com/usr_jen_bubs/bubs_rpt.do?FTE_ID=75&MIM_ID=255

Gebruikersactiviteit

Een Invantive product

Activiteit op Taken

Project	Plein	Plein revisited				
Taak	1	Gemeld		WAL	01-01-2008	Hemelwaterafvoer verstopt, goot loopt over.
Schatting	Gespendeerd	Resterend				
4	2					
Aangemaakt op	27-01-2011	door	system			
Tekst						
Project	102	Winkelcentrum Vitaal				
Taak	2	Gemeld		WAL		Ruit gebroken in achterdeur.
Schatting	Gespendeerd	Resterend				
2	1					
Aangemaakt op	27-01-2011	door	system			
Tekst						
Project	Plein	Plein revisited				
Taak	4	Gemeld		BRE	01-01-2008	Claim VVE dakisolatie.
Schatting	Gespendeerd	Resterend				
8						
Aangemaakt op	27-01-2011	door	system			
Tekst						
Project	C204	Beheer Energetic				
Taak	7	Gemeld		WAL	01-01-2008	Server start niet meer op.
Schatting	Gespendeerd	Resterend				
24						
Aangemaakt op	27-01-2011	door	system			
Tekst						
Project	Plein	Plein revisited				
Taak	tmpl-ie	Gemeld		BRE		Huur periode :base_date - :base_next_date
Schatting	Gespendeerd	Resterend				
Aangemaakt op	27-01-2011	door	system			
Tekst						
Project	C204	Beheer Energetic				
Taak	1001	Gemeld		AEI		ORA-01792 during parse of view / Oracle Support Services - UPDATED Service Request Alert! - Service Request 7489157.992
Schatting	Gespendeerd	Resterend				
	8					
Aangemaakt op	27-01-2011	door	system			
Tekst						
Project	103	Roerkade				
Taak	Dct-Jaarverslag	Gemeld		AEI		Jaarverslag
Schatting	Gespendeerd	Resterend				
Aangemaakt op	27-01-2011	door	system			
Tekst						
Project	Plein	Plein revisited				
Taak	1	Gemeld		WAL	01-01-2008	Hemelwaterafvoer verstopt, goot loopt over.
Schatting	Gespendeerd	Resterend				
4	2					
Aangemaakt op	27-01-2011	door	system			
Tekst	Bevestigd door monteur ter plekke.					
Project	102	Winkelcentrum Vitaal				
Taak	2	Gemeld		WAL		Ruit gebroken in achterdeur.
Schatting	Gespendeerd	Resterend				
2	1					
Aangemaakt op	27-01-2011	door	system			
Tekst	Storing verholpen door vervanging van afvoer.					

09-02-2011 21:28:49 system, EUR, Jaar, Actuele situatie, Startdatum 01-01-1900, Einddatum 31-12-2999, Niet consolideren Pagina 1 / 8

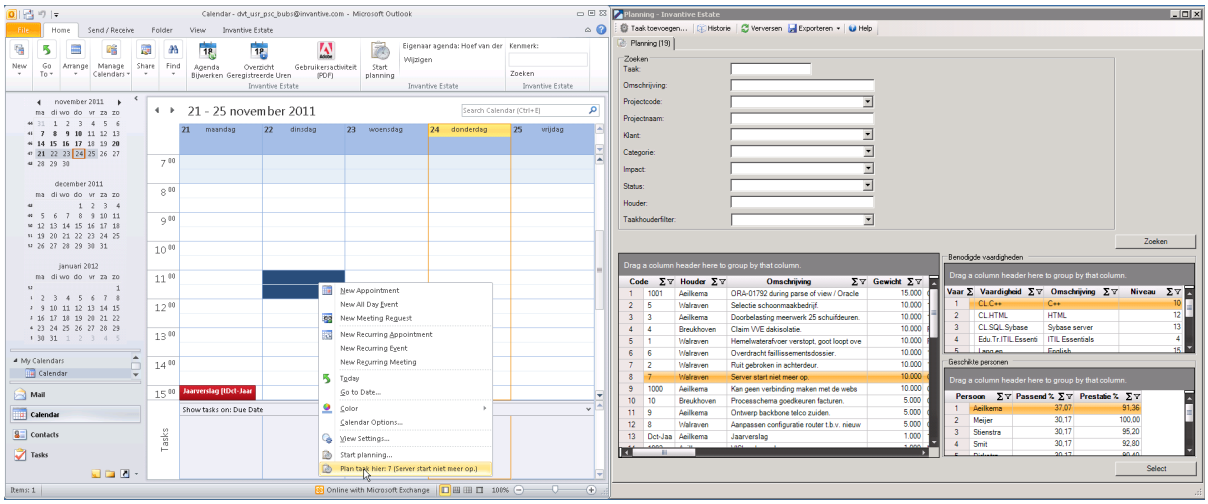
1.5.3.4 Planning

You can assign future hours of yourself or your colleagues to processes using the menu option Schedule. The method of planning a process is:

- Open the schedule module by clicking on the button ‘Start Schedule‘ on the top of the ribbon;
- Select the process you want to plan in the screen ‘Schedule‘;
  - This windows shows the open processes. The weight of the process is determined by the impact of the process and the time in which it has been open.
  - The panel Required Skills shows the skills which are necessary to complete a process. The skill set necessary are entered in the process itself.
  - The panel Qualified Persons shows the person who you can schedule for this process. This is the meaning of the fields:
    - Matching: this indicates how many percent of the required skill matches with the persons skill set.
    - Performance: this indicates the level of the person involved, compared to the required level.
- Go to the calendar where you want to schedule the process. Then choose ‘Schedule process here‘, from the context menu.
- Then a calendar item will be made with the process definition and the process code with the labor type scheduleu.

The image below shows the scheduling of process ‘7‘ of Tuesday 22 November at 11.00 hour. The usage of the scheduling module makes sure that the scheduled hours are saved directly in Invantive Vision. The hours which were made manually in Microsoft Outlook, will be saved by the button ‘Update Agenda‘ in the ribbon of Invantive Vision.

In the schedule



1.5.3.5 Change Calendar Owner

Using the menu option Change Calendar Owner, you can easily change the calendar of project employees without logging in to Microsoft Outlook again. Select the option Change Calendar Owner. The following screen will be opened.

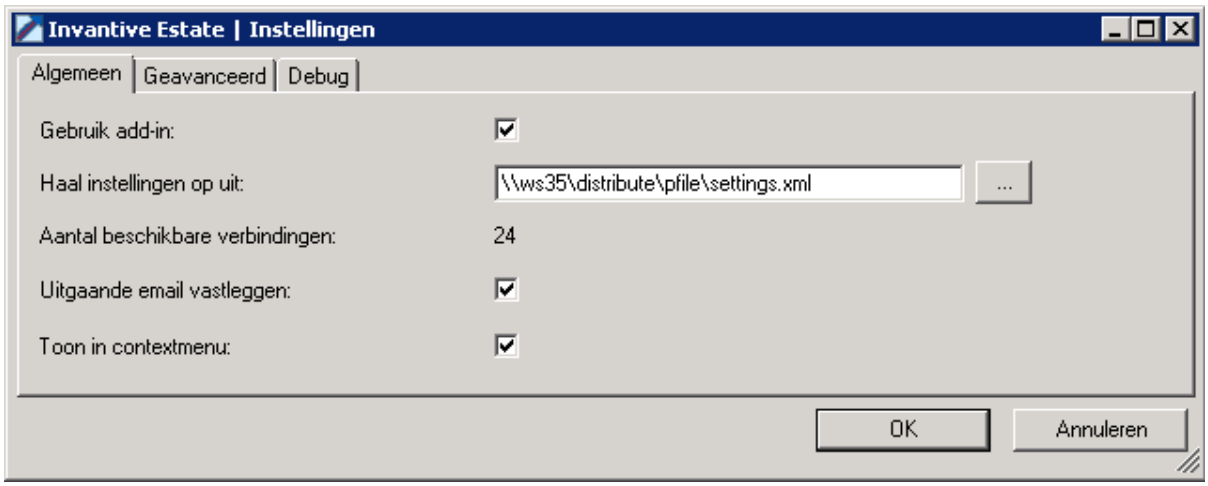
To display the calendar of a different employee, open the list of choices by selecting the triangle left in the list of choices.

1.5.4 Settings

The first time that Microsoft Outlook is opened after the installation of Invantive Vision for Outlook, the setting screen will appear of Invantive Vision for Outlook. Using this screen you can Invantive Vision for Outlook configure. The screen ‘Settings‘ contains the tab pages ‘General’, ‘Advanced’ and ‘Debug’. These tabs are described in the next paragraphs.

1.5.4.1 General

In this tab you can register and change general settings.



The meaning of the entry fields is:

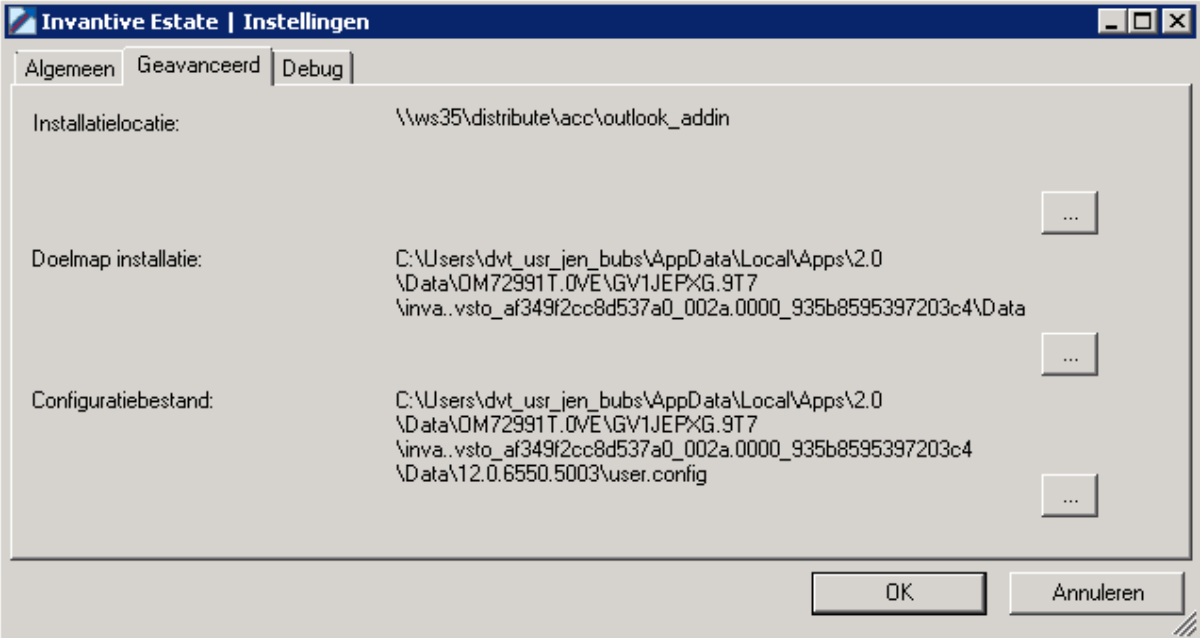
Use Add-In	Using this you can turn the add-in on and off. To make the changed setting active you need to restart Microsoft Outlook.
Get settings from	The specified location where the settings for the connection with the Add-In are saved. See Connection configuration 657 for an explaination about the connection file.
Register outgoing email	Outgoing emails are registered in Invantive Visionif they are checked. To enable registration by Invantive Vision fill in a process number in the topic field of your email. A process number starts with ‘[’, then the letter ‘t’ and the number from the process is closed with ‘]’. For example: ‘[t307]’.
Show in context menu	Menu options from Invantive Vision for Outlookare shown in the context menu if they are checked.

The meaning of the other fields:

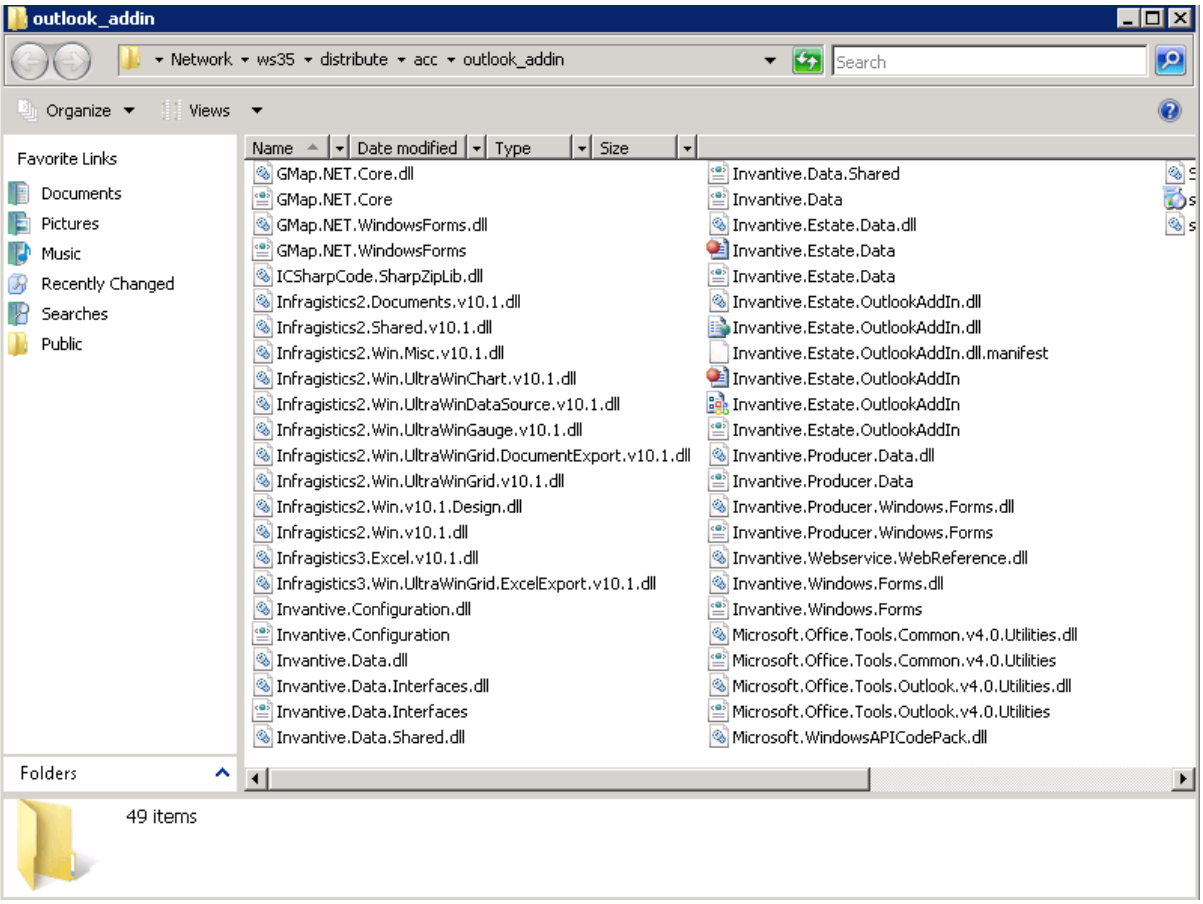
Number of available connections	The maximal number of possible connections with Invantive Vision via the Invantive Vision for Outlook.

1.5.4.2 Advanced

In this tab page you can enter locations if necessary for the functioning of Invantive Vision for Outlook. By the button zi will open



By the button ... Select to open the next screen.



In this screen you can select the desired folder and therafter ???? Keys.

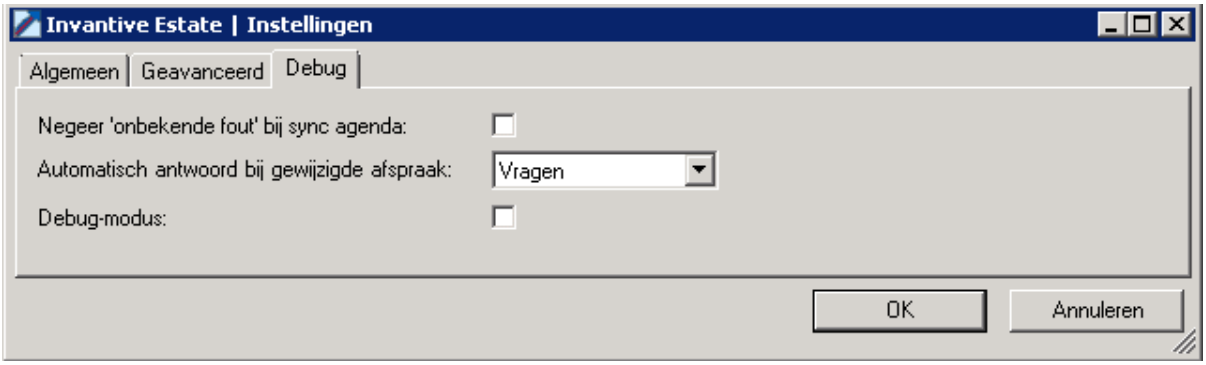
The meaning of the input fields in the tab page is:

Installation location	The location w here the files of the program are installed.
Target directory	The location of the target directory.

Configuration File	The location of the configuration file.

1.5.4.3 Debug

In this tab page you can .... .



The meaning of the entry fields is:

Ignore 'unfamiliar' error at sync agenda	If the check box is checked an error w hile synchronizing the agenda is ignored.
AutoReply w ith a changed appointment	In case of an appointment in the agenda being changed
Debug mode	If the check box is being checked

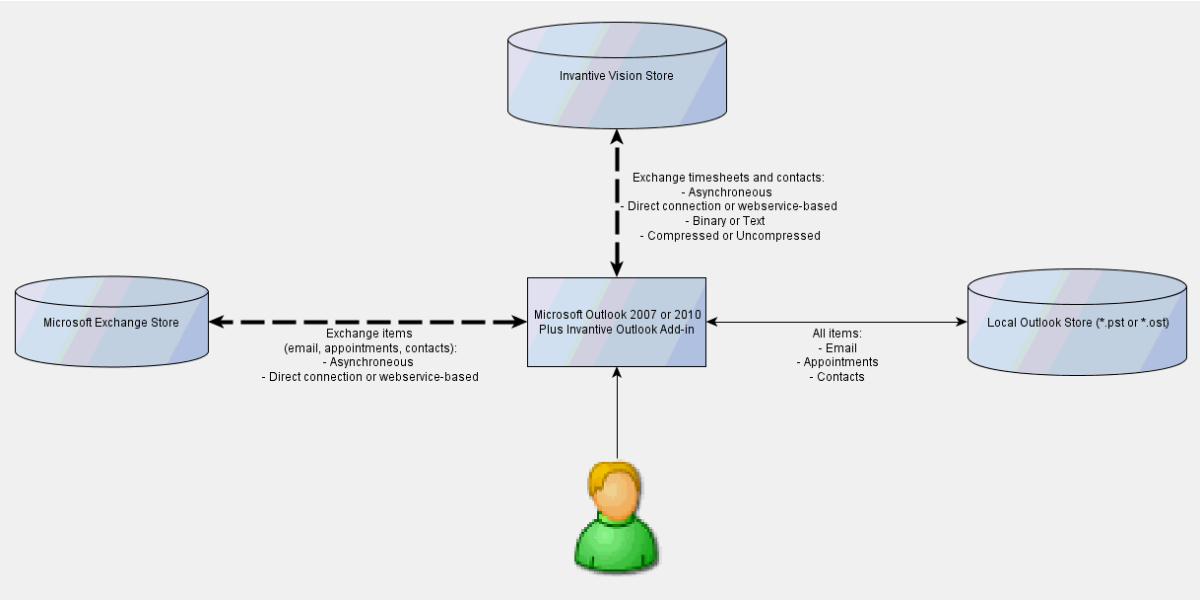
1.5.5 Integration Outlook with Microsoft Exchange

The Invantive Vision Outlook Add-in can be used in combination with Microsoft Exchange. The advantages of this are:

- Administrative employees can register hours of other employees in Invantive Vision.
- Users have the same calendar and the same contacts on every PC.
- The data in Microsoft Outlook like the appointments on a local PC are easily recovered by restoring a link on a different PC using Microsoft Exchange. The internal codes of the appointments that are used for the link with Invantive Vision are preserved.

Because of these advantages the Invantive Vision Outlook Add-in is used in combination with Microsoft Exchange in most implementations.

The structure is as follows:



- The users enters the hours as normal by putting an appointment in his calendar, a work type and a characteristic.
- This appointment is automatically replicated under water in the Microsoft Exchange Store.
- The user uses 'Update Calendar' to enter the appointments as hours in Invantive Vision. At the same time hours in Invantive Vision that were not in the calendar of the user yet, are also included in his calendar.

1.5.6 Over Outlook Add-in

This menu option will open a window in which the version of Invantive Vision for Outlook, a copyright message and a link to the website of Invantive BV are shown.

1.5.7 Integration Outlook with Gmail

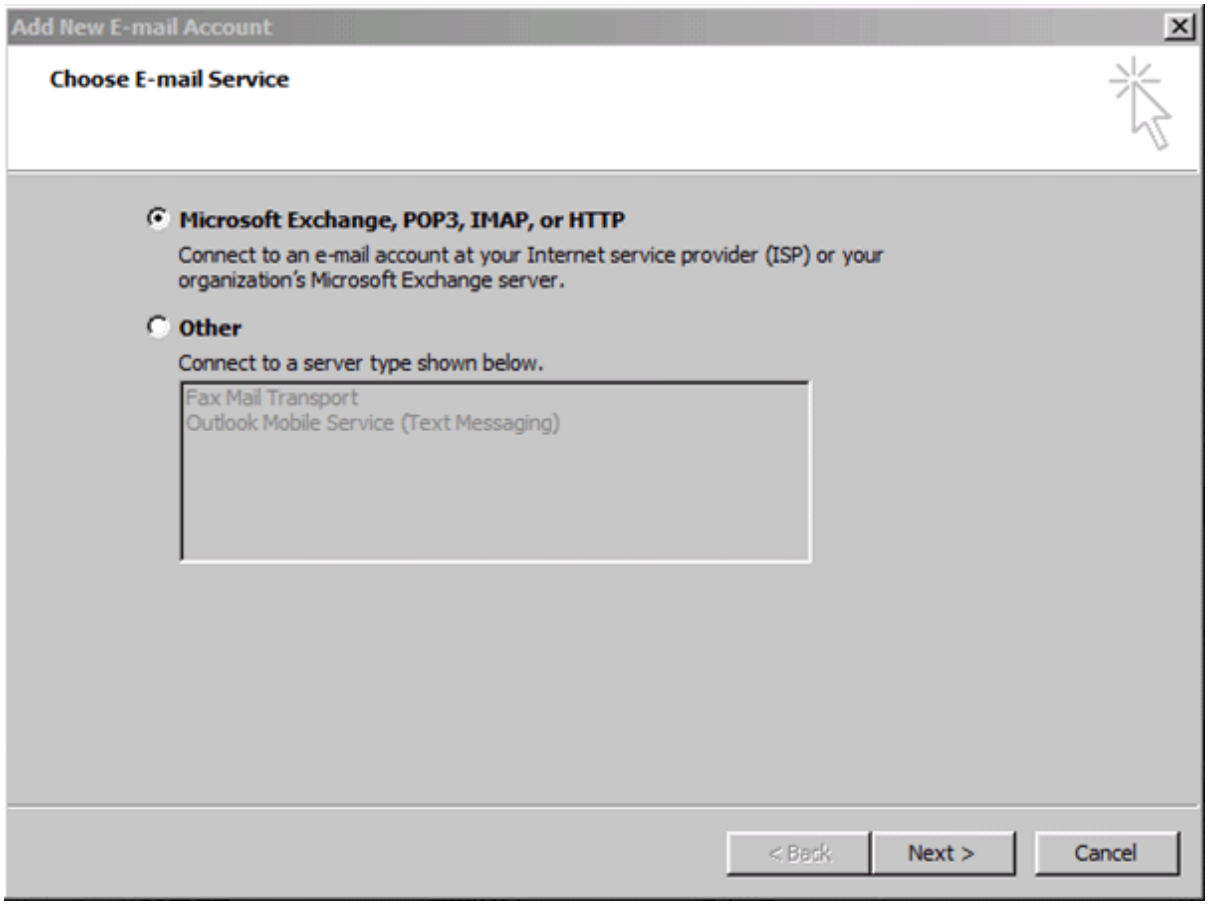
The Outlook user interface also works with email which is not stored in Microsoft Exchange or local folders, but, for example, in Google GMail. This chapter describes the steps to combine the Outlook UI with Google Gmail.

Mail

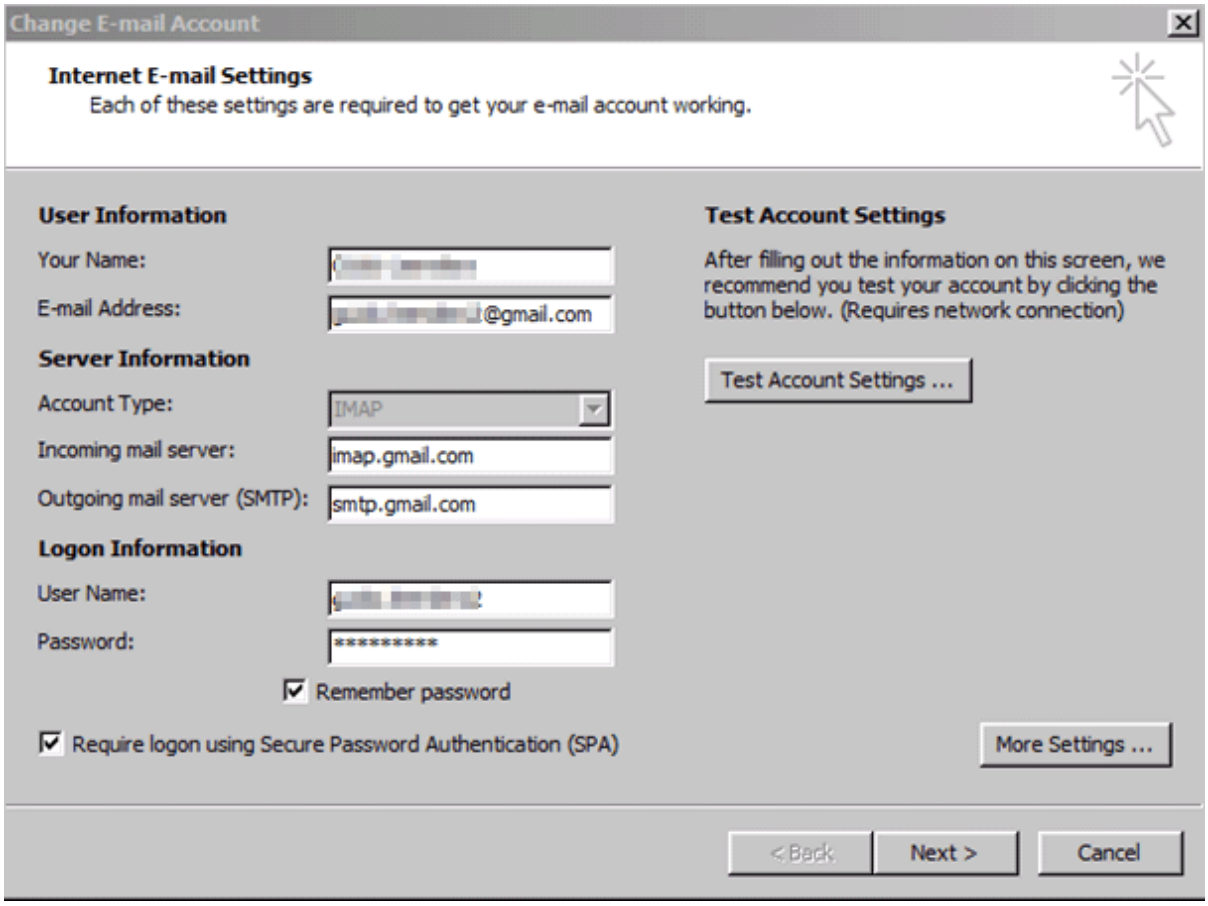
Perform the following steps:

- Activate the IMAP connection of Google Gmail:

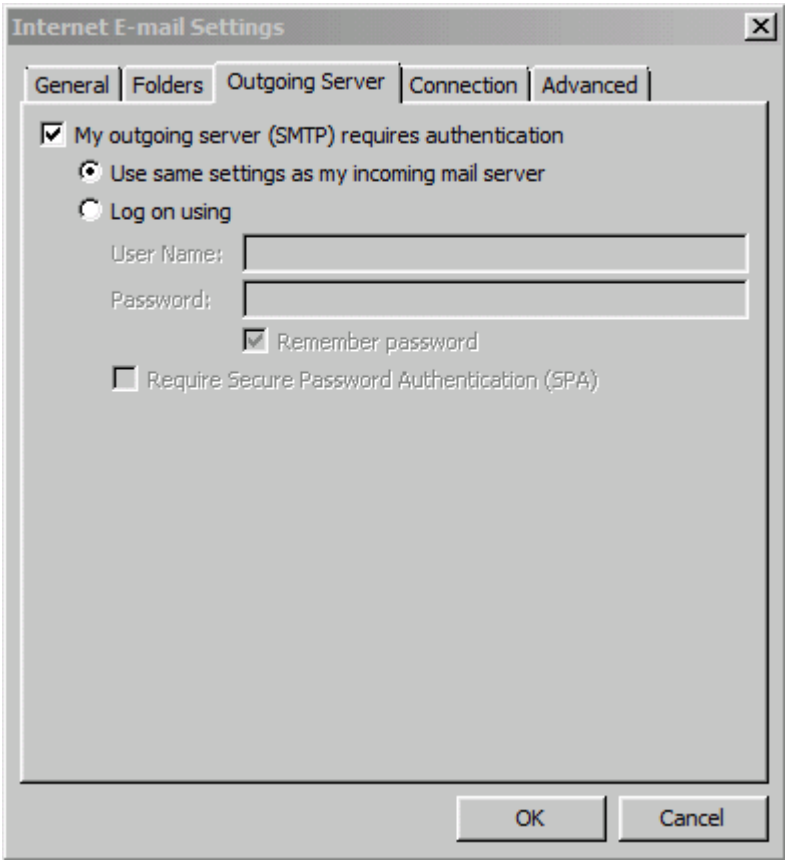
- Create a new account in Microsoft Outlook:



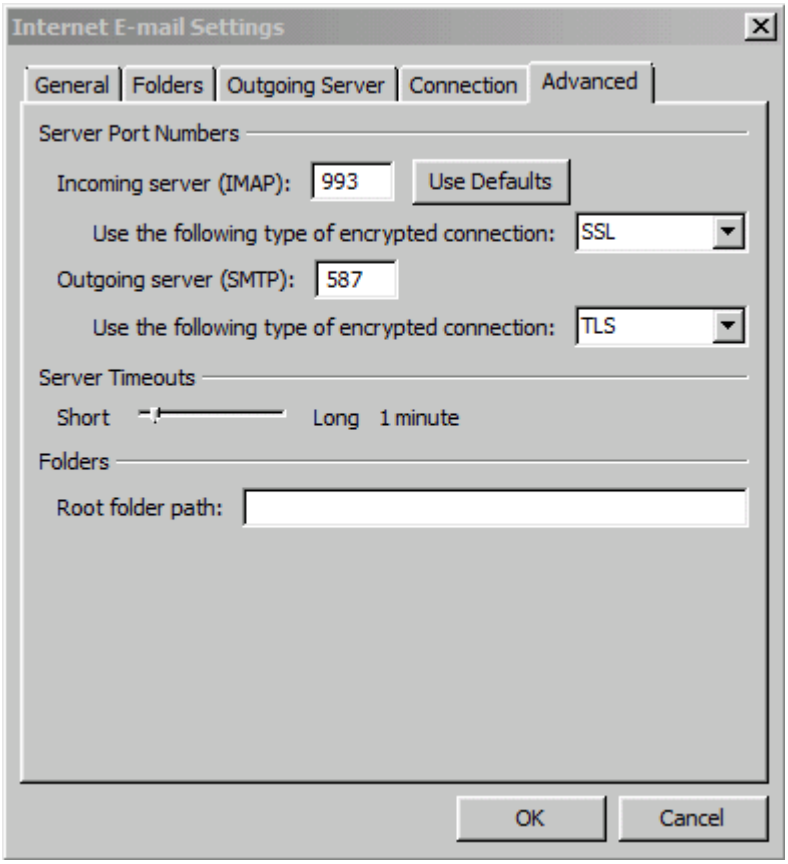
- And link it with Gmail via IMAP and SMTP protocol:



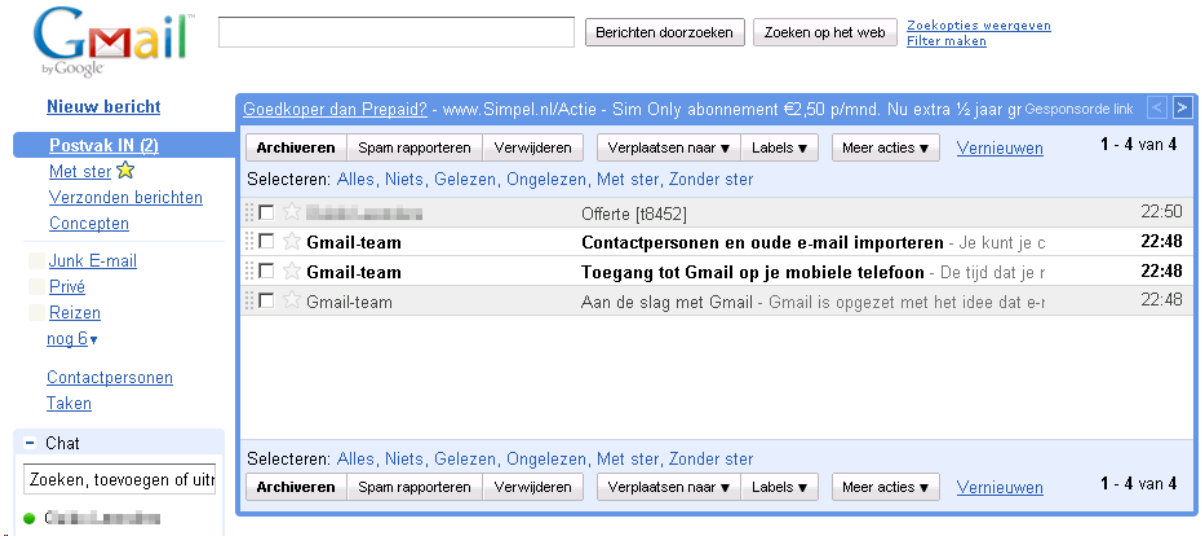
- Make sure that sending emails is done in a secured way using SMTP:



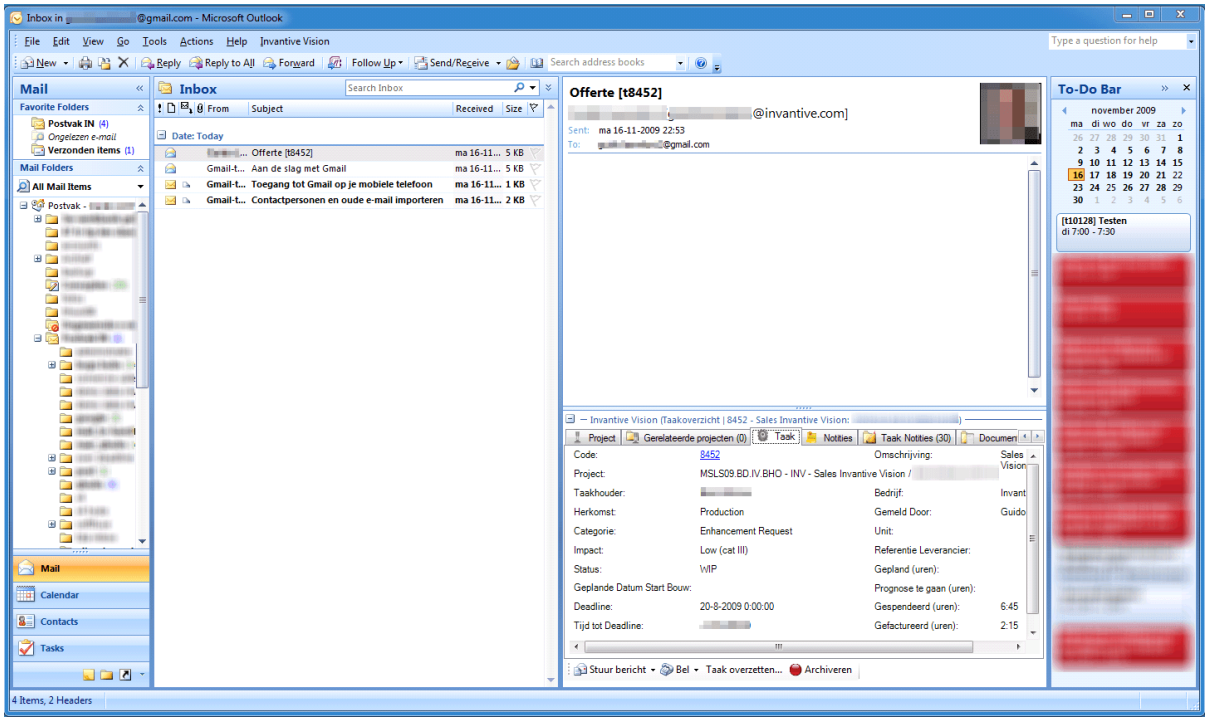
- And set the encryption and gates as follows:



- The email is visible in Google Gmail:



- The email in Google Gmail is also visible in Microsoft Outlook and its data from the system are shown:



Contacts and Calendar

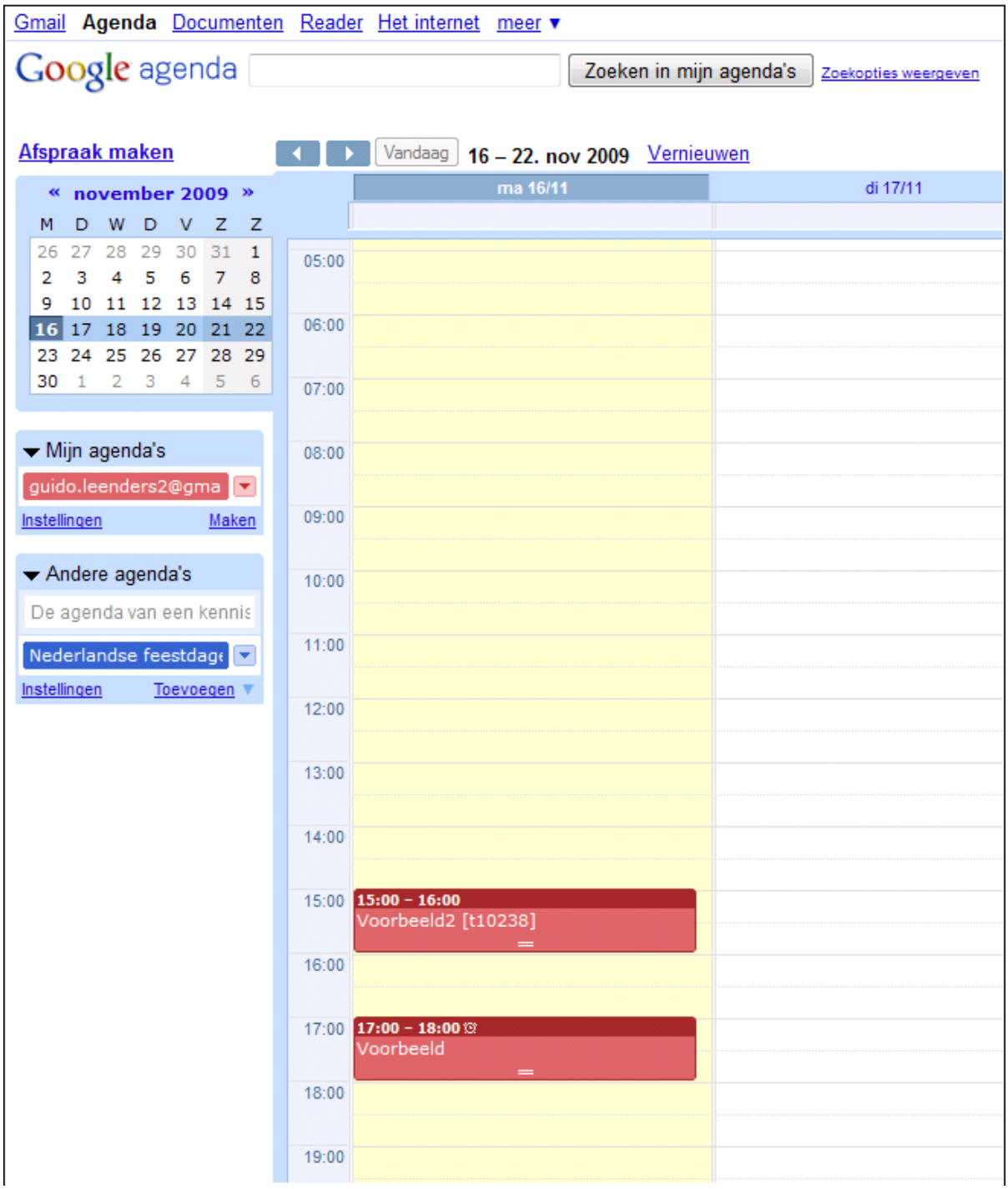
It is also possible to link to contacts and calendar.

The synchronization of Google Calendar Sync contacts can be used, but Kigoo offers more possibilities.

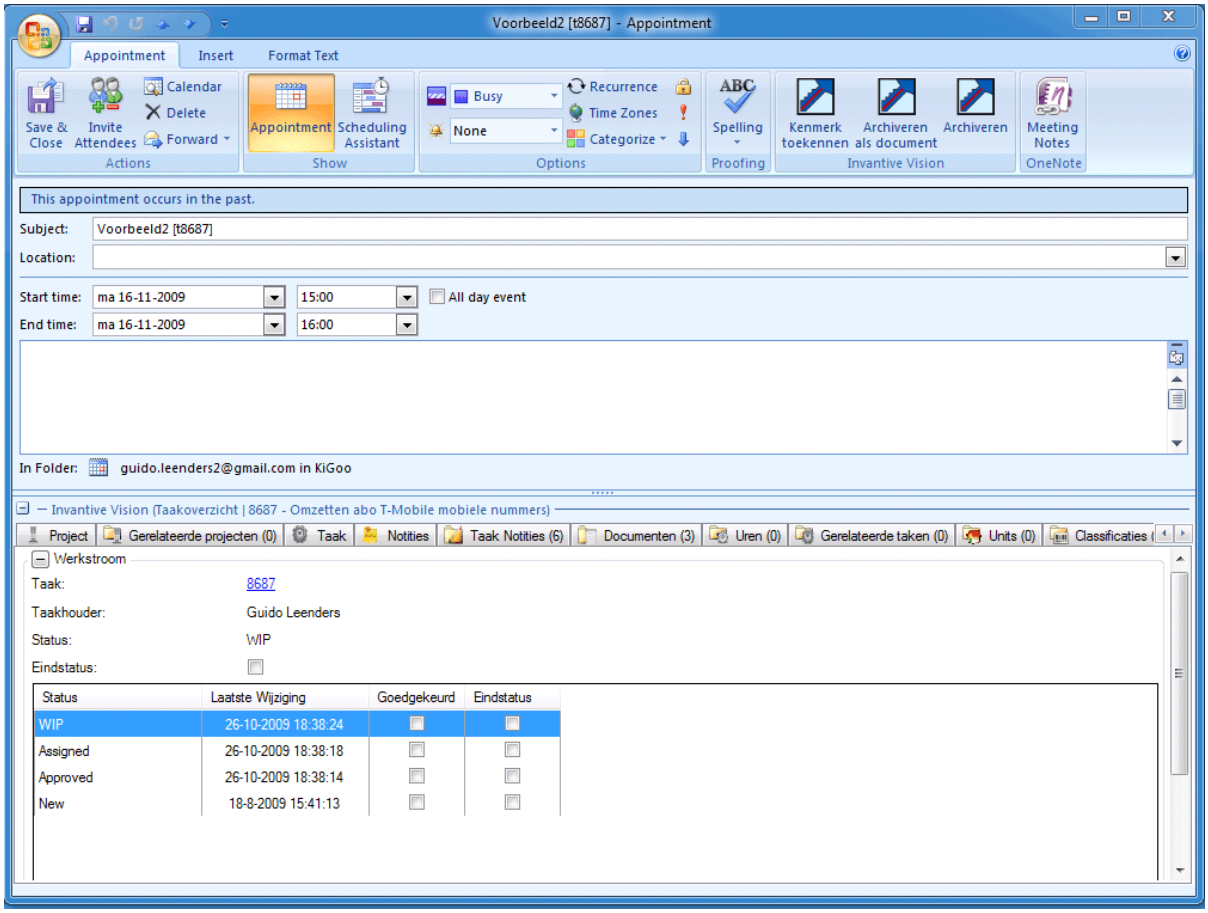
After installation as Administrator it may be necessary to use the user account to import the mailbox with

```
C:\Program Files (x86)\KiGoo\Configuration>importexporttool.exe
-import -pst KIGooConfig2007.pst -storename KiGoo
```

In Google Calendar, you can also use features, for example:



In Microsoft Outlook the appointment in Google Calendar appears with the data from the system:



1.5.8 Apple Macintosh

It is possible to Invantive Vision use Microsoft Outlook add-in on an Apple Macintosh (Mac) computer with the operating system Mac OS X and an Intel ® processor. Invantive Vision using the web works by certification on Safari.

1.5.8.1 Method

To Invantive Vision use Microsoft Outlook Add-In you need to install the virtualisation software Parallels Desktop or VMware Fusion. Then you need to install Microsoft Windows in the virtualisation software. It is advisable to install Windows XP, simply because this Windows version delivers the best performance when installed virtually. Microsoft Outlook with the Add-In runs smoothly and clean next to your other programs because of the virtualisation software. Several tests prove that Parallels Desktop works best on a Mac, see the comparison on Wikipedia:
http://en.wikipedia.org/wiki/Comparison_of_VMware_Fusion_and_Parallels_Desktop.

The system requirements and license cost for Parallels Desktop® 6 for Mac are on the web page: http://www.parallels.com/eu/products/desktop/

The system requirements and license cost for VMware Fusion 3 are on the web page: http://www.vmware.com/products/fusion/overview.html.

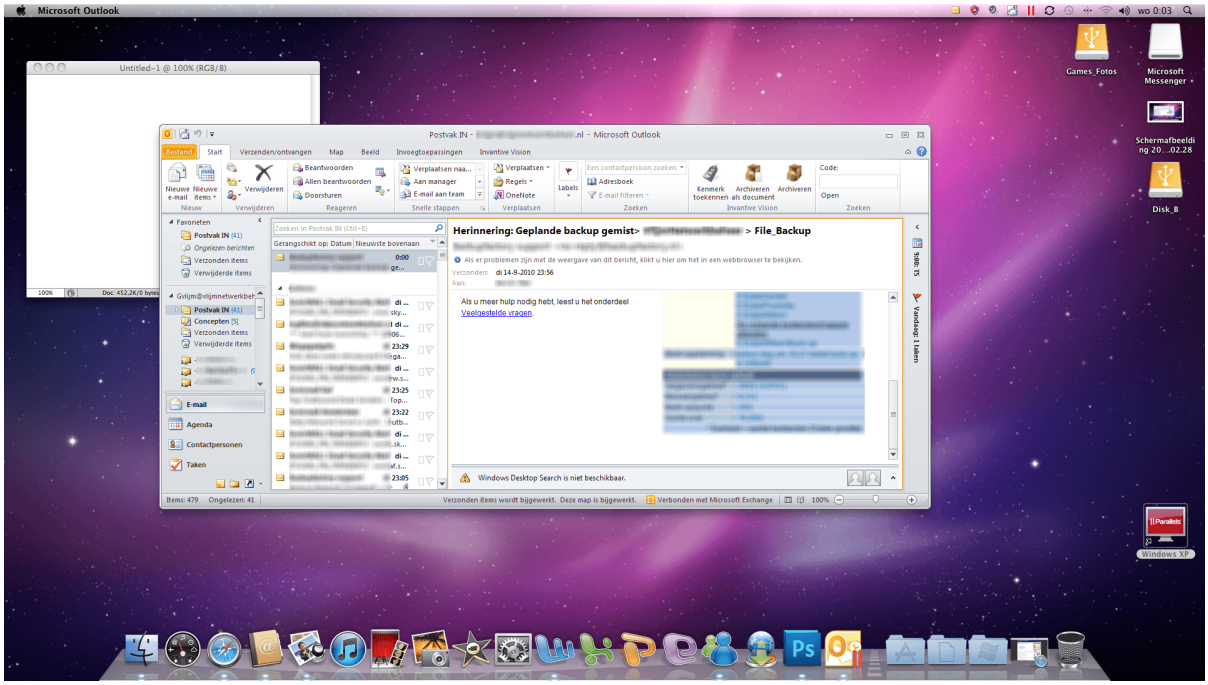
The purchase of the virtualisation software, Windows and Outlook brings extra license costs.

1.5.8.2 Installation Steps

Complete the steps below to Invantive Vision install Microsoft Outlook add-in on a Mac:

- Install Parallels Desktop or VMware Fusion on a mac.

- Enter a Windows installation disc or load an image on the Mac, preferably Windows XP Professional SP 3 or higher.
- Then install Microsoft Office 2007 or 2010 on Parallels Desktop or VMware Fusion.
- Complete the installation of Invantive Vision Microsoft Outlook add-in and make a connection.
- Vanaf nu is het mogelijk om Invantive Vision Microsoft Outlook add-in uit te voeren op een Mac, zie afbeelding hieronder.



1.5.9 Screens

Enter text here.

1.5.9.1 Edit screens

Enter text here.

Edit bank
Edit budget
Edit contract
Edit invoice
Edit supplier
Edit organization
Persons
Edit process
Projects
Edit interest
Edit unit
Edit hour
Sales Channels
bubs-outlook-barcode-type-edit
bubs-outlook-barcode-edit
bubs-outlook-unit-sales-channel-edit

1.5.9.2 Detail windows

Enter text here.

Banks
Message details
Budgets
Contracts
Document Details
Invoices
Warehouses
Revenue
Orders
Organizations
Persons
Process
Project
Unit
Hours
Skill
Sales Channels
bubs-outlook-unit-sales-channel-details
bubs-outlook-barcode-details
bubs-outlook-barcode-type-details

1.5.9.3 List windows

Enter text here.

Banks
Messages
Web Inlink Suggestions
Involvements
Budgets
Classifications
Contracts
Documents
Invoices
Calls
Warehouses
Revenues
Orders
Organizations
Persons
Planning
Processes
Projects
Recent items
Units
Hours
bubs-outlook-barcode-list
bubs-outlook-unit-sales-channel-list
bubs-outlook-barcode-type-list

1.5.9.4 Search windows

Enter topic text here.

1.6 Invantive Vision for Windows

Using Invantive Vision for Windows you can work with Invantive Vision out of Microsoft Windows but without Microsoft Outlook.

1.7 Links

Here you will see the description of the most used links.

1.7.1 Exact Online Interface

Invantive Vision is compatible with the accounting package Exact Online. The interface works in two directions:

- Concept invoices from Invantive Vision can be imported in Exact Online and from there they may be changed and invoiced.
- Products, Organizations, Projects and Cost center from Invantive Vision can be read in Exact Online.
- Final invoices and other general ledger mutations from Exact Online can be imported into Invantive Vision.

You can fill several Exact Online administrations with the same list of products, organizations, projects and cost centers.

1.7.1.1 Installation

Execute these steps to install a link with Exact Online.

Additional Business Rules

Checking Length Short Project Code

Exact Online does not accept project codes (cost units) with more than 8 positions. The short code for a project is passed to Exact Online. Install the following additional business rule to make sure that the short code meets the requirements of Exact Online:

View	bubs_projecten_v
Action	Mutation
Group	Checks for Exact Online
Expression	

```
--
-- $Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/To
pics/bubs-installatie-exact-online-aanvullende-
bedrijfsregels.xml 19891 2012-10-09 13:23:03Z gle3 $
-- exactonline-check-1
--
if :action_moment = 'B'
then
  if :last.pjt_code_kort is null and length(:last.pjt_code)
<= 8
  then
    :last.pjt_code_kort := :last.pjt_code;
  end if;
  --
  if :last.pjt_code_kort is null
  then
    bubs_error_handler.handle_error
    ( '{res:bubs_eol_required_short_code?' ||
bubs#vertalingen.escape_parameter(:last.pjt_code) || '}'
    );
  end if;
  --
  if length(:last.pjt_code_kort) > 8
```

View	bubs_projecten_v

	`then`
	`  bubs_error_handler.handle_error`
	`  ( '{res:bubs_eol_project_short_code_too_long?' ||`
	`bubs#vertalingen.escape_parameter(:last.pjt_code) || '}'`
	`  );`
	`end if;`
	`end if;`

Explanation	Check if the short project code is filled and has a maximum of 8 positions. Exact Online does not accept project code longer than 8 positions.

Checks Contacts

Every customer and supplier must have a contact person, that contact person must be linked to one organisation only, and a first and last name must be specified. Install the next additional business rule to check this:

View	bubs_leveranciers_v
Action	Mutation
Group	Checks for Exact Online

Expression	`--`
	`-- $Header:`
	`http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/bubs-installatie-exact-online-aanvullende-bedrijfsregels.xml 19891 2012-10-09 13:23:03Z gle3 $`
	`-- exactonline-check-2`
	`--`
	`declare`
	`  l_cnt_usages  pls_integer;`
	`  l_gbr_cp_achternaam bubs_gebruikers_v.gbr_achternaam%type;`
	`  l_gbr_cp_voornaam  bubs_gebruikers_v.gbr_voornaam%type;`
	`begin`
	`  if :action_moment = 'B'`
	`  and`
	`  ( :new.lvr_klant_vlag = 'Y'`
	`  or`
	`  :new.lvr_opdrachtnemer_vlag = 'Y'`
	`  )`
	`  then`
	`  --`
	`  -- Check that a primary contactperson is available.`
	`  --`
	`  if :last.gbr_cp_naam is null`
	`  then`
	`  bubs_error_handler.handle_error`
	`  ( '{res:bubs_eol_prim_cp_required?'`
	`  ||`
	`bubs#vertalingen.escape_parameter(:last.lvr_code)`
	`  || '&'`
	`  ||`
	`bubs#vertalingen.escape_parameter(:last.lvr_naam)`
	`  || '}'`
	`  );`

View	bubs_leveranciers_v

```
    else
      select gbr_cp.gbr_achternaam
      ,      gbr_cp.gbr_voornaam
      into   l_gbr_cp_achternaam
      ,      l_gbr_cp_voornaam
      from   bubs_gebruikers_v gbr_cp
      where  1=1
      and    gbr_cp.gbr_naam = :last.gbr_cp_naam
      ;
      if ( l_gbr_cp_achternaam is null and
l_gbr_cp_voornaam is null )
      then
        bubs_error_handler.handle_error
        ( '{res:bubs_eol_prim_cp_required_namepart?'
          ||
bubs#vertalingen.escape_parameter(:last.lvr_code)
          || '&'
          ||
bubs#vertalingen.escape_parameter(:last.lvr_naam)
          || '&'
          ||
bubs#vertalingen.escape_parameter(:last.gbr_cp_naam)
          || '}'
        );
      else
        --
        -- Check that a person is only available on at most
one organisation.
        --
        select coalesce(count(*), 0) cnt
        into   l_cnt_usages
        from   bubs_leveranciers_v lvr
        where  1=1
        and    lvr.gbr_cp_naam = :last.gbr_cp_naam
        and    lvr.lvr_id      <> :last.lvr_id
        ;
        if l_cnt_usages >= 1
        then
          bubs_error_handler.handle_error
          ( '{res:bubs_eol_prim_cp_unique?'
            ||
bubs#vertalingen.escape_parameter(:last.gbr_cp_naam)
            || '}'
          );
        end if;
      end if;
    end if;
  end if;
end;
```

Explanation	Make sure that a contact is entered for clients and contractors and it is not used more than one time.

Checks Persons

Each person which writes hours can lead to invoicing in Exact Online. The cost center is based on unique initials. Therefore the unique initials must always be filled in:

View	bubs_gebruikers_v
Action	Mutation
Group	Checks for Exact Online

Expression	`--`
	`-- $Header: http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/bubs-installatie-exact-online-aanvullende-bedrijfsregels.xml 19891 2012-10-09 13:23:03Z gle3 $`
	`-- exactonline-check-3`
	`--`
	`if :action_moment = 'B'`
	`  and`
	`  :last.gbr_initialen is null`
	`  and`
	`  :last.gbr_tijdschrijver_vlag = 'Y'`
	`then`
	`  bubs_error_handler.handle_error`
	`  ( '{res:bubs_eol_initials_required?'`
	`  || bubs#vertalingen.escape_parameter(:last.gbr_naam)`
	`  || '}'`
	`  );`
	`end if;`

Explanation	Make sure that a contact is entered for clients and contractors and it is not used more than one time.

Certificate Exact Online Web Service

For data downloading and uploading via the Exact Online web service it is required to notify Tomcat of the certificate of Exact Online. The easiest way is to use the program InstallCert. Perform the following steps:

- Start InstallCert with the name of the https host of Exact Online:

```
C:\> java InstallCert start.exactonline.nl

InstallCert.main()C:\Program Files\Java\jre6
Loading KeyStore C:\Program
Files\Java\jre6\lib\security\cacerts...
Opening connection to start.exactonline.nl:443...
Starting SSL handshake...

No errors, certificate is already trusted

Server sent 2 certificate(s):

 1 Subject CN=start.exactonline.nl, OU=Terms of use at
www.verisign.com/rpa (c)0
5, OU=System Support, O=Exact Holding N.V., L=Delft, ST=Zuid
Holland, C=NL, SERI
ALNUMBER="27234422  0000", OID.2.5.4.15="V1.0, Clause 5.(b)",
OID.1.3.6.1.4.1.31
```

```
1.60.2.1.3=NL
   Issuer  CN=VeriSign Class 3 Extended Validation SSL SGC CA,
OU=Terms of use a
t https://www.verisign.com/rpa (c)06, OU=VeriSign Trust Network,
O="VeriSign, In
c.", C=US
   sha1    ce 97 17 5d 25 ab 40 75 25 72 c9 dc 58 ca b5 3d 0c 98
cb c0
   md5     d7 5e 76 79 b0 68 0b 24 5f 00 51 2c 40 7e e0 9d

 2 Subject CN=VeriSign Class 3 Extended Validation SSL SGC CA,
OU=Terms of use a
t https://www.verisign.com/rpa (c)06, OU=VeriSign Trust Network,
O="VeriSign, In
c.", C=US
   Issuer  CN=VeriSign Class 3 Public Primary Certification
Authority - G5, OU="
(c) 2006 VeriSign, Inc. - For authorized use only", OU=VeriSign
Trust Network, O
="VeriSign, Inc.", C=US
   sha1    b1 80 39 89 98 31 f1 52 61 46 67 cf 23 ff ce a2 b0 e7
3d ab
   md5     ca d5 a7 99 dd 90 93 60 b8 7c 31 9b de d5 f3 2f

Enter certificate to add to trusted keystore or 'q' to quit: [1]
1

[
[
  Version: V3
  Subject: CN=start.exactonline.nl, OU=Terms of use at
www.verisign.com/rpa (c)0
5, OU=System Support, O=Exact Holding N.V., L=Delft, ST=Zuid
Holland, C=NL, SERI
ALNUMBER="27234422  0000", OID.2.5.4.15="V1.0, Clause 5.(b)",
OID.1.3.6.1.4.1.31
1.60.2.1.3=NL
  Signature Algorithm: SHA1withRSA, OID = 1.2.840.113549.1.1.5

  Key:  Sun RSA public key, 2048 bits
  modulus:
22961835119475579311073232867129190736305569975950523274019762 20
86148
79427558526671034616745203462293046629390507241953409736965443 09
3593292666107075
94936342177852803957324194141639111752898019365880546432743505 29
9645801785250252
95149773045854836861163047128252941038378529884044593905618225 42
0399364724195266
43421570980579592827170950088290348526452946324760089598170554 18
8540975803412342
73584185577966203129850174877114748109388372427892071246722567 18
7468748001030296
70646220680965576792590842003670073365115203520690271212743726 70
6395785808073220
```

```
24024857209128048442631563744978155389655333921137766782334474038613
  public exponent: 65537
  Validity: [From: Mon Apr 27 02:00:00 CEST 2009,
              To: Sun Jun 27 01:59:59 CEST 2010]
  Issuer: CN=VeriSign Class 3 Extended Validation SSL SGC CA,
OU=Terms of use at
 https://www.verisign.com/rpa (c)06, OU=VeriSign Trust Network,
O="VeriSign, Inc
.", C=US
  SerialNumber: [    0a35a4ef 6cbf483d 506e94fb 52a9b3bf]

Certificate Extensions: 8
[1]: ObjectId: 1.3.6.1.5.5.7.1.12 Criticality=false
Extension unknown: DER encoded OCTET string =
0000: 04 62 30 60 A1 5E A0 5C   30 5A 30 58 30 56 16 09  .b0`.^.
\0Z0X0V..
0010: 69 6D 61 67 65 2F 67 69   66 30 21 30 1F 30 07 06
image/gif0!0.0..
0020: 05 2B 0E 03 02 1A 04 14   4B 6B B9 28 96 06 0C BB  .
+......Kk.(....
0030: D0 52 38 9B 29 AC 4B 07   8B 21 05 18 30 26 16 24
.R8.).K..!..0&.$
0040: 68 74 74 70 3A 2F 2F 6C   6F 67 6F 2E 76 65 72 69
http://logo.veri
0050: 73 69 67 6E 2E 63 6F 6D   2F 76 73 6C 6F 67 6F 31
sign.com/vslogo1
0060: 2E 67 69 66                                        .gif


[2]: ObjectId: 2.5.29.35 Criticality=false
AuthorityKeyIdentifier [
KeyIdentifier [
0000: 4E 43 C8 1D 76 EF 37 53   7A 4F F2 58 6F 94 F3 38
NC..v.7SzO.Xo..8
0010: E2 D5 BD DF                                        ....
]

]

[3]: ObjectId: 2.5.29.31 Criticality=false
CRLDistributionPoints [
  [DistributionPoint:
     [URIName: http://EVIntl-crl.verisign.com/EVIntl2006.crl]
]]

[4]: ObjectId: 2.5.29.37 Criticality=false
ExtendedKeyUsages [
  serverAuth
  clientAuth
  2.16.840.1.113730.4.1
  1.3.6.1.4.1.311.10.3.3
]

[5]: ObjectId: 2.5.29.32 Criticality=false
```

```
CertificatePolicies [
  [CertificatePolicyId: [2.16.840.1.113733.1.7.23.6]
[PolicyQualifierInfo: [
  qualifierID: 1.3.6.1.5.5.7.2.1
  qualifier: 0000: 16 1C 68 74 74 70 73 3A   2F 2F 77 77 77 2E
76 65  ..https://
www.ve
0010: 72 69 73 69 67 6E 2E 63   6F 6D 2F 63 70 73
risign.com/cps

]]  ]
]

[6]: ObjectId: 2.5.29.15 Criticality=false
KeyUsage [
  DigitalSignature
  Key_Encipherment
]

[7]: ObjectId: 1.3.6.1.5.5.7.1.1 Criticality=false
AuthorityInfoAccess [
  [
   accessMethod: 1.3.6.1.5.5.7.48.1
   accessLocation: URIName: http://ocsp.verisign.com,
   accessMethod: 1.3.6.1.5.5.7.48.2
   accessLocation: URIName: http://EVIntl-
aia.verisign.com/EVIntl2006.cer]
]

[8]: ObjectId: 2.5.29.19 Criticality=false
BasicConstraints:[
  CA:false
  PathLen: undefined
]

]
  Algorithm: [SHA1withRSA]
  Signature:
0000: 01 98 53 52 B1 81 D1 8A   8C A8 F9 8B 5E BA 03 1F
..SR........^...
0010: CA 21 75 64 DC 2D 6B 98   4E 78 B4 97 A7 87 72 BA  .!ud.-
k.Nx....r.
0020: 55 46 0D 4E 8E 3E 9A E7   50 A5 8C 38 9F 3E 49 8D
UF.N.>..P..8.>I.
0030: 67 3F 97 F3 66 3F 02 3B   DF 85 6F A2 28 0C 6E D4  g?..f?
.;..o.(.n.
0040: 4A 6F E5 DF 15 67 7F D9   72 FD 7F 31 84 72 86 4E
Jo...g..r..1.r.N
0050: FE 7B B6 AC 94 50 2F 07   7C 68 66 16 D3 86 31 04  .....P/
..hf...1.
0060: 3F BD F3 9F 3E 96 F2 93   92 71 D1 3D 63 08 C8 DC  ?
...>....q.=c...
0070: 7B 9C 33 FE 52 42 73 47   4B E3 57 F3 88 C4 D3 8D
..3.RBsGK.W.....
```

```
0080: 2C 3E 8D DB 56 4D 2C D7   3A DA D2 D8 12 4A 47 F7
,>..VM,.:....JG.
0090: EF 13 16 D6 1C DA 7D 08   76 46 02 C0 DA F2 88 DB
........vF......
00A0: 7D 23 9B FB 0D 9F FA A8   DC 57 71 7C A8 00 C8 2F
.#.......Wq..../
00B0: 42 3E 35 E1 69 83 76 6A   E8 FF 7A A1 39 77 96 1A
B>5.i.vj..z.9w..
00C0: 57 AA BA C7 D3 68 9E D4   1F 8E 3A 42 05 5B E6 4F
W....h....:B.[.O
00D0: 78 FB 10 D1 FE 81 E9 96   A7 21 F9 BC 02 F6 55 9F
x........!....U.
00E0: 88 58 AE C9 43 7F D2 E8   50 50 97 DA DF 67 B6 AE
.X..C...PP...g..
00F0: 2C 16 84 4F 82 17 61 18   35 2F CB E9 9C D6 77 11
,..O..a.5/....w.

]

Added certificate to keystore C:\Program
Files\Java\jre6\lib\security\cacerts us
ing alias 'start.exactonline.nl-1'
```

Installation Profile options

Profile Options

Configure the profile options with in the code the word 'exactonline' as described at the concerning component:

Profiel Optie	Omschrijving	Standaard Waarde
bubs-interface-exactonline-directory-input	Folder voor bestanden die in Exactonline ingelezen worden.	
bubs-interface-exactonline-directory-input-processed	Folder voor bestanden die succesvol in Exactonline ingelezen zijn.	
bubs-interface-exactonline-directory-input-rejected	Folder voor bestanden die niet in Exactonline ingelezen konden worden.	
bubs-interface-exactonline-directory-output	Folder voor bestanden die door Exactonline aangemaakt zijn.	
bubs-interface-exactonline-directory-output-processed	Folder voor bestanden die door Exactonline aangemaakt zijn en succesvol verwerkt zijn.	
bubs-interface-exactonline-directory-output-rejected	Folder voor bestanden die door Exactonline aangemaakt zijn en niet succesvol verder verwerkt zijn.	
bubs-interface-exactonline-factuur-artikel-conversie	Artikel voor conversie (herkomst is '---') op de factuur.	:ust_id
bubs-interface-exactonline-factuur-artikel-taak-unit	Artikel voor conversie (herkomst is '---') op de factuur.	HW
bubs-interface-exactonline-factuur-artikel-uren	Artikel voor uren op de factuur.	UREN
bubs-interface-exactonline-factuur-artikel-vaste-prijs	Artikel voor vaste prijs op de factuur.	FP
bubs-interface-exactonline-factuur-dagboek-verkoop	Dagboek voor verkoop facturen.	700
bubs-interface-exactonline-factuur-eenheid	Eenheid voor gebruik op facturen.	stuk
bubs-interface-exactonline-factuur-formaat-arbeid	Formaat voor regels van een verkooporder met uren.	:wst_code door :gbr_naam
bubs-interface-exactonline-factuur-formaat-arbeid-notitie	Formaat voor notitie regels van een verkooporder met vaste prijs.	:cfl_datum_start_l - :cfl_datum_einde_l, :uur_commentaar; :tak_code: :tak_omschrijving
bubs-interface-exactonline-factuur-kostenplaats-conversie	Kostenplaats voor conversie factuur regels (herkomst is '---').	ALG
bubs-interface-exactonline-factuur-kostenplaats-taak	Kostenplaats voor taak factuur regels.	ALG
bubs-interface-exactonline-factuur-kostenplaats-taak-unit	Kostenplaats voor taak unit factuur regels.	ALG
bubs-interface-exactonline-factuur-regel-formaat-artikel	Formaat voor regels van een verkooporder met taak unit.	Taak :tak_code
bubs-interface-exactonline-factuur-regel-formaat-artikel-notitie	Formaat voor notitie regels van een verkooporder met taak unit.	Taak :tak_code, artikel :unt_omschrijving: :cfl_omschrijving
bubs-interface-exactonline-factuur-regel-formaat-vaste-prijs	Formaat voor regels van een verkooporder met vaste prijs taak.	Taak :tak_code
bubs-interface-exactonline-factuur-regel-formaat-vaste-prijs-notitie	Formaat voor notitie regels van een verkooporder met vaste prijs taak.	Taak :tak_code: :tak_omschrijving, :unt_omschrijving
bubs-interface-exactonline-factuur-regel-volledige-inhoud	Volledige inhoud van de regel, zoals samengesteld uit de verschillende herkomsten en een eventueel kenmerk.	:omschrijving [:pjt_code_erp/8000/:cfl_volgnummer/M]
bubs-interface-exactonline-factuur-tekst-geen-commentaar	Tekst om te gebruiken in formaat als geen commentaar op de uren zit.	Geen toelichting
bubs-interface-exactonline-factuur-tekst-geen-locatie	Tekst om te gebruiken in formaat als geen locatie opgegeven voor :uur_locatie.	Op afstand
bubs-interface-exactonline-factuur-tekst-geen-taak-code	Tekst om te gebruiken in formaat als geen taak code beschikbaar voor :tak_omschrijving (project uren).	Project
bubs-interface-exactonline-factuur-tekst-geen-taak-omschrijving	Tekst om te gebruiken in formaat als geen taak omschrijving beschikbaar voor :tak_omschrijving (project uren).	Geen taak
bubs-interface-exactonline-formaat-datum	Formaat voor een datum in XML interface van Exact Online.	YYYY-MM-DD
bubs-interface-exactonline-formaat-getal	Formaat voor een getal in XML interface van Exact Online.	fm99999999999.99
bubs-interface-exactonline-gebruiker	Naam van de gebruiker binnen Exactonline voor de koppeling.	
bubs-interface-exactonline-url-download	URL voor download binnen Exactonline voor de koppeling, bijvoorbeeld https://start.exactonline.nl/docs/XMLDownload.aspx.	
bubs-interface-exactonline-url-upload	URL voor upload binnen Exactonline voor de koppeling, bijvoorbeeld https://start.exactonline.nl/docs/XMLUpload.aspx.	
bubs-interface-exactonline-vlag-1-factuur-per-concept-regel	Indicator of er 1 factuur gemaakt moet worden per concept factuur regel.	N
bubs-interface-exactonline-wachtwoord	Wachtwoord van de gebruiker binnen Exactonline voor de koppeling.	

1.7.1.2 Configuration

Perform the following steps to add master data:

- Create payment conditions and use the number of days payment terms in Invantive Vision as code.

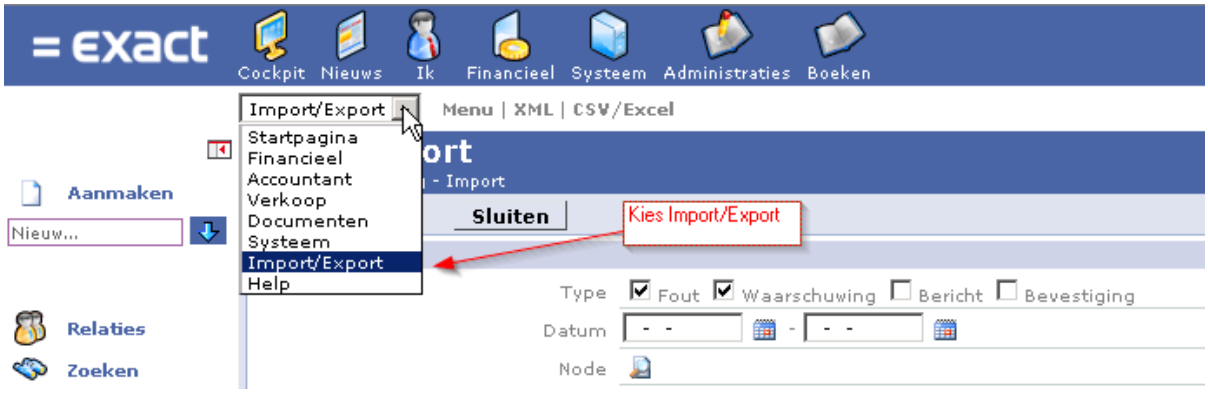
1.7.1.3 To Exact Online

The next items describe how you can export data to Exact Online. The data will be imported via the XML Import of Exact Online.

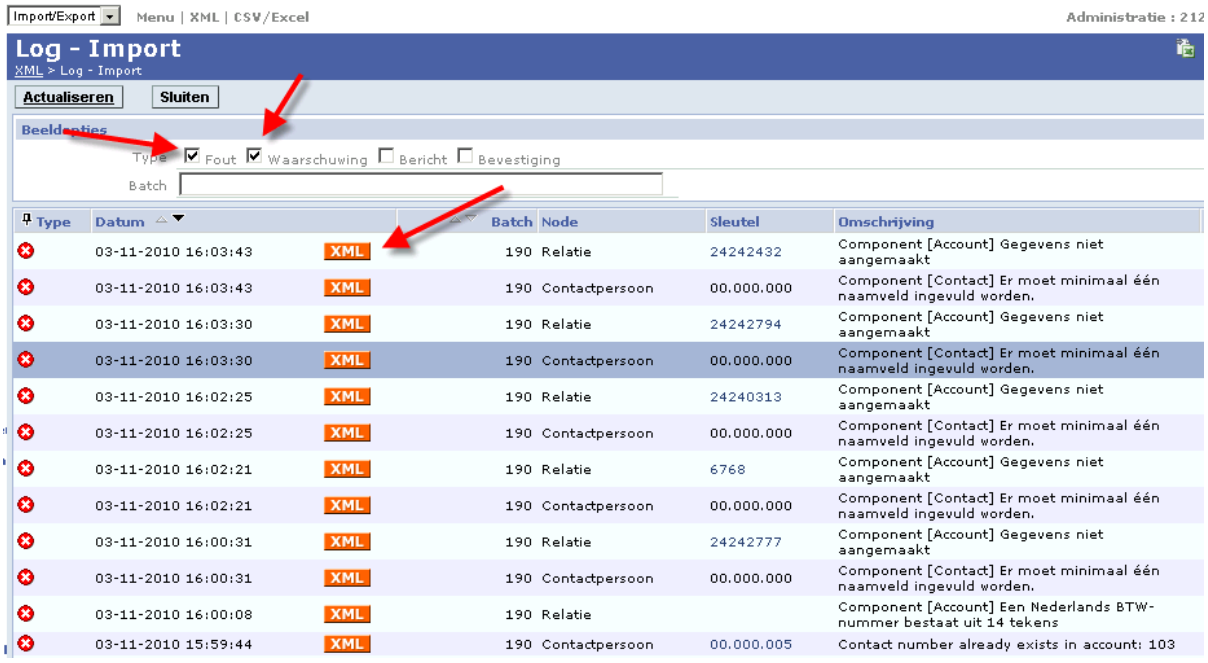
The processing by a background job detects whether the processing was successful and provides a list of errors in the log, for example as follows:

```
2010/11/21 20:54:14 - Log Errors.0 -
2010/11/21 20:54:14 - Log Errors.0 - ------------> Linenr
1------------------------------
2010/11/21 20:54:14 - Log Errors.0 - type =  0
2010/11/21 20:54:14 - Log Errors.0 - topicCode = Accounts
2010/11/21 20:54:14 - Log Errors.0 - topicNode = Account
2010/11/21 20:54:14 - Log Errors.0 - topicDataKeyAlt = 1386
2010/11/21 20:54:14 - Log Errors.0 - date = 2010-11-21T20:51:23
2010/11/21 20:54:14 - Log Errors.0 - description =  Component
[Account] Een Nederlands BTW-nummer bestaat uit 14 tekens
2010/11/21 20:54:14 - Log Errors.0 - typeDescription = Error
2010/11/21 20:54:14 - Log Errors.0 -
2010/11/21 20:54:14 - Log Errors.0 - ====================
2010/11/21 20:54:14 - Log Errors.0 -
2010/11/21 20:54:14 - Log Errors.0 - ------------> Linenr
2------------------------------
2010/11/21 20:54:14 - Log Errors.0 - type =  0
2010/11/21 20:54:14 - Log Errors.0 - topicCode = Accounts
2010/11/21 20:54:14 - Log Errors.0 - topicNode = Contact
2010/11/21 20:54:14 - Log Errors.0 - topicDataKeyAlt = 5
2010/11/21 20:54:14 - Log Errors.0 - date = 2010-11-21T20:51:23
2010/11/21 20:54:14 - Log Errors.0 - description = Contact
number already exists in account:                103
2010/11/21 20:54:14 - Log Errors.0 - typeDescription = Error
2010/11/21 20:54:14 - Log Errors.0 -
2010/11/21 20:54:14 - Log Errors.0 - ====================
```

After import of the data, you can find any error, via the menu ‘Import XML’ and then ‘Log’.



Search for ‘Error’ and ‘Warning’. By selecting the XML button, you can view the data which could not be processed:



In the log of the background job are more details about the process (note the bold and italics used for explanation):

```
21-10-2010 18:32:24 ETL: Script output: running ETL
transformation or job.
*** Het programma is gestart om 18:32 op 21 oktober.
21-10-2010 18:32:24 ETL: Configure logger.
21-10-2010 18:32:24 ETL: Configure logger to use console.
21-10-2010 18:32:24 ETL: Init steploader.
21-10-2010 18:32:24 ETL: Load natives.
21-10-2010 18:32:26 ETL: Load plugins.
21-10-2010 18:32:26 ETL: Initialize environment.
21-10-2010 18:32:26 ETL: Init job entry loader.
21-10-2010 18:32:26 ETL: Start timer.
21-10-2010 18:32:26 ETL: determination fully qualified location
of the ETL file ../etl/bubs2exactonline organisations.kjb.
*** Het ETL bestand '../etl/bubs2exactonline organisations.kjb'
wordt uitgevoerd.
21-10-2010 18:32:26 ETL: PL/SQL function to determine name hard
coded location for ETL file is xxinvantive_get_report_loc.
21-10-2010 18:32:26 ETL: File ../etl/bubs2exactonline
organisations.kjb will be loaded from /opt/prd/estate/qbubs/web/
../etl/bubs2exactonline organisations.kjb using an unpacked war.
*** Na hulp van een database functie is de uiteindelijke
bestandslocatie van het ETL bestand '/opt/prd/estate/qbubs/web/
../etl/bubs2exactonline organisations.kjb' wordt uitgevoerd.
21-10-2010 18:32:26 ETL: File /opt/prd/estate/qbubs/web/
../etl/bubs2exactonline organisations.kjb is a Kettle Job.
*** ETL scripts kunnen zowel Transformatie (*.ktr) als Job
(*.kjb) zijn. Dit is een job.
21-10-2010 18:32:26 ETL: Set ETL variable BUBS_DB_SERVER to
localhost.
*** De gegevens van de huidige database verbinding wordt via de
omgevingsvariabelen BUBS_DB_SERVER, BUBS_DB_PORT, BUBS_DB_NAME,
BUBS_DB_USER en BUBS_DB_PASSWORD doorgegeven.
```

```
21-10-2010 18:32:26 ETL: Set ETL variable BUBS_DB_PORT to 1521.
21-10-2010 18:32:26 ETL: Set ETL variable BUBS_DB_NAME to
PRD11R1.
21-10-2010 18:32:26 ETL: Set ETL variable BUBS_DB_USER to
qbubs_web.
21-10-2010 18:32:27 ETL: Instantiate job.
21-10-2010 18:32:27 ETL: Set internal ETL variables.
21-10-2010 18:32:27 ETL: Copy background job parameters to ETL
job parameters.
21-10-2010 18:32:27 ETL: Defined variables:
BUBS_DB_NAME, BUBS_DB_PASSWORD, BUBS_DB_PORT, BUBS_DB_SERVER,
BUBS_DB_USER, Internal.Cluster.Size,
Internal.Job.Filename.Directory, Internal.Job.Filename.Name,
Internal.Job.Name, Internal.Kettle.Build.Date,
Internal.Kettle.Build.Version, Internal.Kettle.Version,
Internal.Slave.Server.Name,
Internal.Slave.Transformation.Number, Internal.Step.CopyNr,
Internal.Step.Name, Internal.Step.Partition.ID,
Internal.Step.Partition.Number, Internal.Step.Unique.Count,
Internal.Step.Unique.Number, catalina.base, catalina.home,
catalina.useNaming, com.sun.management.jmxremote, common.loader,
file.encoding, file.encoding.pkg, file.separator,
java.awt.graphicsenv, java.awt.headless, java.awt.printerjob,
java.class.path, java.class.version, java.endorsed.dirs,
java.ext.dirs, java.home, java.io.tmpdir, java.library.path,
java.naming.factory.initial, java.naming.factory.url.pkgs,
java.rmi.server.randomIDs, java.runtime.name,
java.runtime.version, java.specification.name,
java.specification.vendor, java.specification.version,
java.util.logging.config.file, java.util.logging.manager,
java.vendor, java.vendor.url, java.vendor.url.bug, java.version,
java.vm.info, java.vm.name, java.vm.specification.name,
java.vm.specification.vendor, java.vm.specification.version,
java.vm.vendor, java.vm.version, line.separator, os.arch,
os.name, os.version, package.access, package.definition,
path.separator, server.loader, shared.loader,
sun.arch.data.model, sun.boot.class.path, sun.boot.library.path,
sun.cpu.endian, sun.cpu.isalist, sun.io.unicode.encoding,
sun.java.launcher, sun.jnu.encoding, sun.management.compiler,
sun.os.patch.level, tomcat.util.buf.StringCache.byte.enabled,
user.country, user.dir, user.home, user.language, user.name,
user.timezone
*** Dit zijn de variabelen die binnen de ETL job bekend zijn.
21-10-2010 18:32:27 ETL: Execute job.
21-10-2010 18:37:26 ETL: Wait until job finished.
21-10-2010 18:37:26 ETL: Ended processing.
21-10-2010 18:37:26 ETL: Determine number of errors.
21-10-2010 18:37:26 ETL: Determine runtime.
21-10-2010 18:37:26 ETL: 299 seconds runtime.
ETL: No errors occurred.
*** Hieronder volgt de uitvoer van de ETL job.
2010/10/21 18:32:27 - bubs2exactonline organisations.kjb -
Starting entry [bubs configuration load]
```

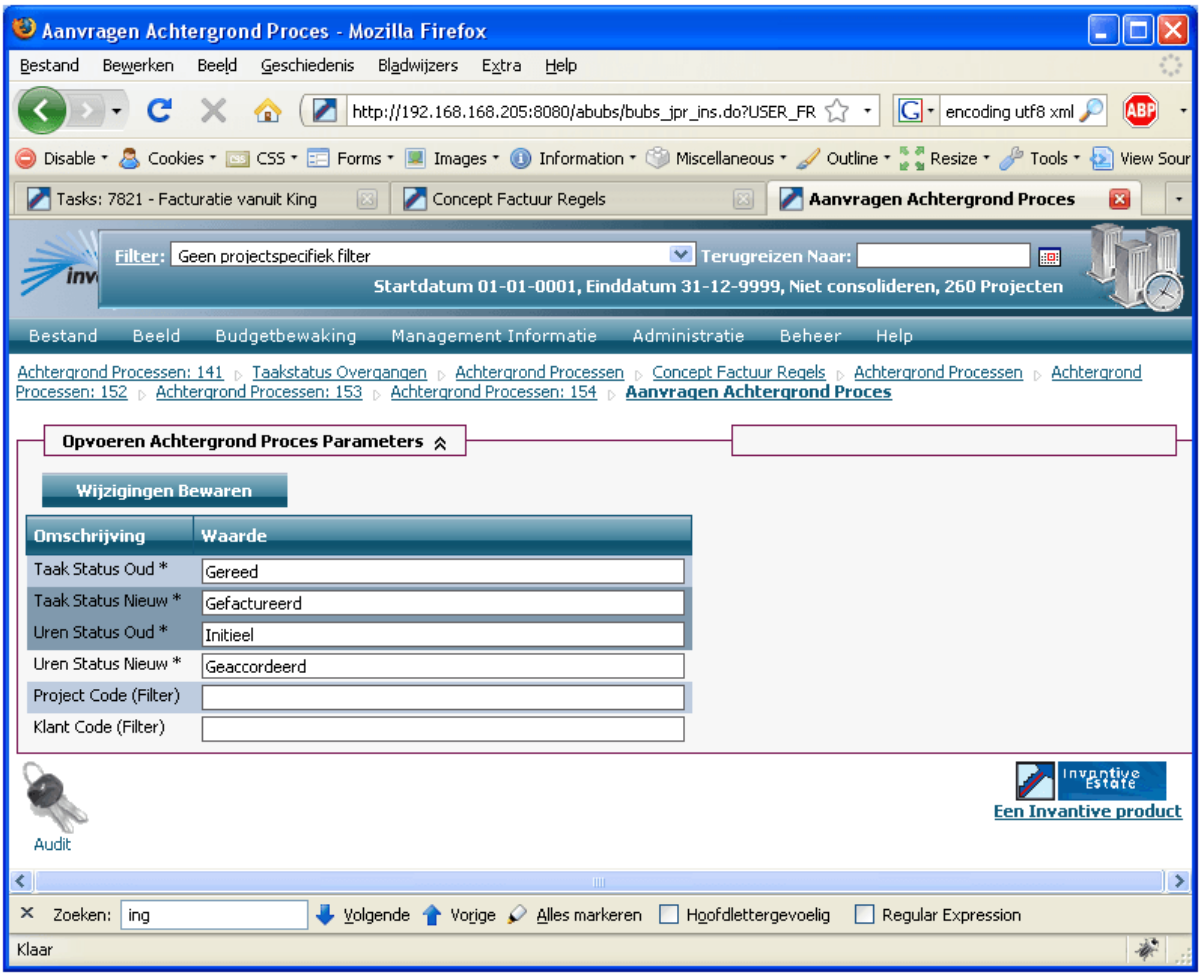
```
2010/10/21 18:32:27 - bubs configuration load - Loading
transformation from XML file
[file:///opt/prd/estate/qbubs/etl/bubs configuration load.ktr]
2010/10/21 18:32:27 - bubs configuration load - Dispatching
started for transformation [bubs configuration load]
2010/10/21 18:32:27 - bubs configuration load - This
transformation can be replayed with replay date: 2010/10/21
18:32:27
2010/10/21 18:32:27 - Get interface profile options.0 - Finished
reading query, closing connection.
2010/10/21 18:32:27 - Get interface profile options.0 - Finished
processing (I=53, O=0, R=0, W=53, U=0, E=0)
2010/10/21 18:32:27 - Set Variables.0 - Setting environment
variables...
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-BUBS-DIRECTORY-INPUT to value
[/opt/prd/estate/qbubs/transfer/bubs/in]
*** In het begin worden profieloptiewaardes ingelezen in
variabelen.
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-BUBS-DIRECTORY-INPUT-PROCESSED to value
[/opt/prd/estate/qbubs/transfer/bubs/in/processed]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-BUBS-DIRECTORY-INPUT-REJECTED to value
[/opt/prd/estate/qbubs/transfer/bubs/in/rejected]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-BUBS-DIRECTORY-OUTPUT to value
[/opt/prd/estate/qbubs/transfer/bubs/out]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-BUBS-DIRECTORY-OUTPUT-PROCESSED to value
[/opt/prd/estate/qbubs/transfer/bubs/out/processed]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-BUBS-DIRECTORY-OUTPUT-REJECTED to value
[/opt/prd/estate/qbubs/transfer/bubs/out/rejected]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
RUNTIME-TRANSFORMATION-DIR-SIMPLE to value
[/opt/prd/estate/qbubs/etl]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-EXACTONLINE-DIRECTORY-INPUT to value
[/opt/prd/estate/qbubs/transfer/exactonline/in]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-EXACTONLINE-GEBRUIKER to value [invantive1]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-EXACTONLINE-WACHTWOORD to value [appelfl1p]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-EXACTONLINE-URL-DOWNLOAD to value
[https://start.exactonline.nl/docs/XMLDownload.aspx]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-EXACTONLINE-URL-UPLOAD to value
[https://start.exactonline.nl/docs/XMLUpload.aspx]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-MULTIVERS-DIRECTORY-INPUT to value []
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
INTERFACE-MULTIVERS-DIRECTORY-INPUT-PROCESSED to value []
...
```

```
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-SITE-
ID to value [Invantive BV-ws35-prd11r1-QBUBS-Invantive
Vision-$URL:
http://subversion.invantive.com:81/repos/p104/trunk/fixes/b40_mp
-005/ddl/b40_mp-005.sql $ $Rev: 6923 $]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-START-
TIJD-WS to value [2010-10-21T18:32:27]
2010/10/21 18:32:27 - Set Variables.0 - Set variable BUBS-
LICENTIE-NAAM-PRODUCT to value [Invantive Vision]
2010/10/21 18:32:27 - Row denormaliser.0 - Finished processing
(I=0, O=0, R=53, W=1, U=0, E=0)
2010/10/21 18:32:27 - Set Variables.0 - Finished after 1 rows.
2010/10/21 18:32:27 - Set Variables.0 - Finished processing
(I=0, O=0, R=1, W=1, U=0, E=0)
2010/10/21 18:32:28 - bubs2exactonline organisations.kjb -
Starting entry [Delete old Accounts files]
2010/10/21 18:32:28 - bubs2exactonline organisations.kjb -
Starting entry [bubs2exactonline organisations extract]
2010/10/21 18:32:28 - bubs2exactonline organisations extract -
Loading transformation from XML file
[file:///opt/prd/estate/qbubs/etl/bubs2exactonline organisations
extract.ktr]
2010/10/21 18:32:28 - bubs2exactonline organisations extract -
Dispatching started for transformation [bubs2exactonline
organisations extract]
2010/10/21 18:32:28 - bubs2exactonline organisations extract -
This transformation can be replayed with replay date: 2010/10/21
18:32:28
2010/10/21 18:32:28 - XML Join.0 - Starting to run...
2010/10/21 18:32:28 - Load organisations container.0 - Finished
processing (I=0, O=0, R=0, W=1, U=0, E=0)
2010/10/21 18:32:28 - xmlorganisations.0 - Finished processing
(I=0, O=0, R=1, W=1, U=0, E=0)
*** Regelmatig zie je statistieken (I=input, O=output,
R=gelezen, W=geschreven, E=foutmeldingen).
...
2010/10/21 18:37:26 - bubs2exactonline organisations.kjb -
Starting entry [Success]
2010/10/21 18:37:26 - bubs2exactonline organisations.kjb -
Finished job entry [Success] (result=[true])
2010/10/21 18:37:26 - bubs2exactonline organisations.kjb -
Finished job entry [bubs2exactonline webservice put]
(result=[true])
2010/10/21 18:37:26 - bubs2exactonline organisations.kjb -
Finished job entry [bubs2exactonline organisations generate
topic Accounts] (result=[true])
2010/10/21 18:37:26 - bubs2exactonline organisations.kjb -
Finished job entry [bubs2exactonline organisations extract]
(result=[true])
2010/10/21 18:37:26 - bubs2exactonline organisations.kjb -
Finished job entry [Delete old Accounts files] (result=[true])
2010/10/21 18:37:26 - bubs2exactonline organisations.kjb -
Finished job entry [bubs configuration load] (result=[true])
*** Einde van de uitvoer van de ETL job.
21-10-2010 18:37:26 ETL: ETL Script finished.
```

Concept Invoices

The import of concept invoices to Exact Online is described here. A background script is available for the invoicing of hours to processes and projects and fixed price processes. This ensures that the invoice data will be stored as concept invoice lines. The daily process is as follows:

- Go to the screen 'Submit Background Job' 228.
- Select the background script 'Invoicing: Process all parts'.
- Enter the parameters as follows:



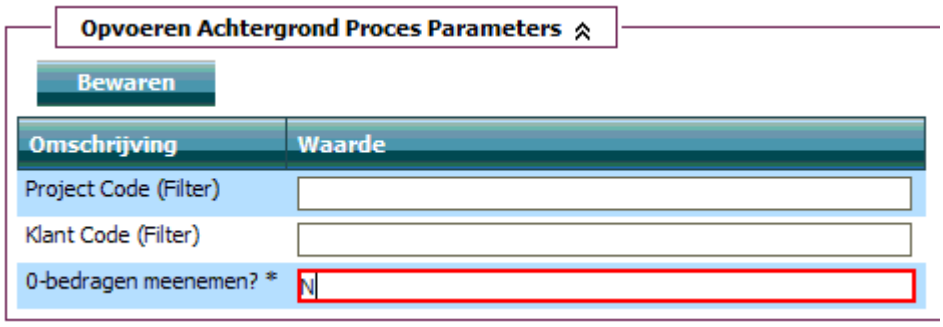
- Wait until the process is successfully completed in the screen Background Jobs 228.
- Now you can check the concept invoices in the screen Concept Invoice Lines 138.

Upload concept invoice lines to Exact Online

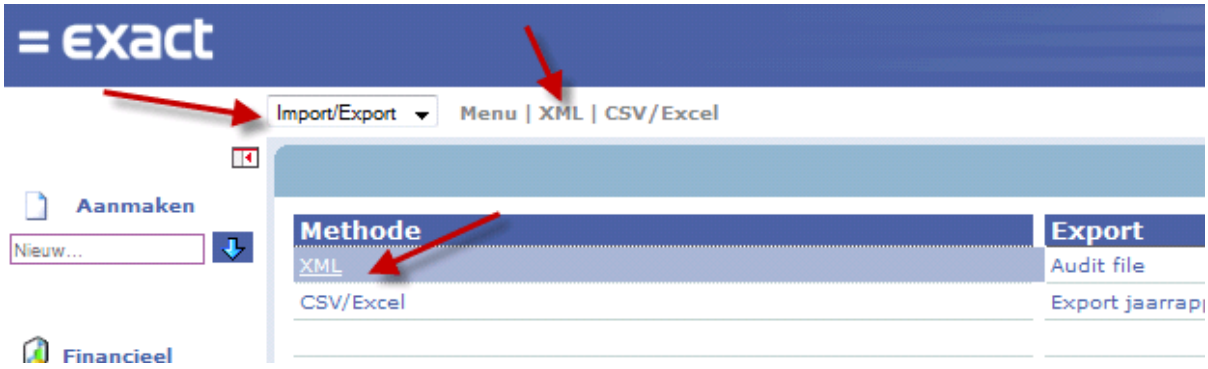
A background script is available for the invoicing of hours to processes and projects and fixed price processes. This ensures that the invoice data will be stored as concept invoice lines.

Uploading the concept invoice lines as purchase orders goes like this:

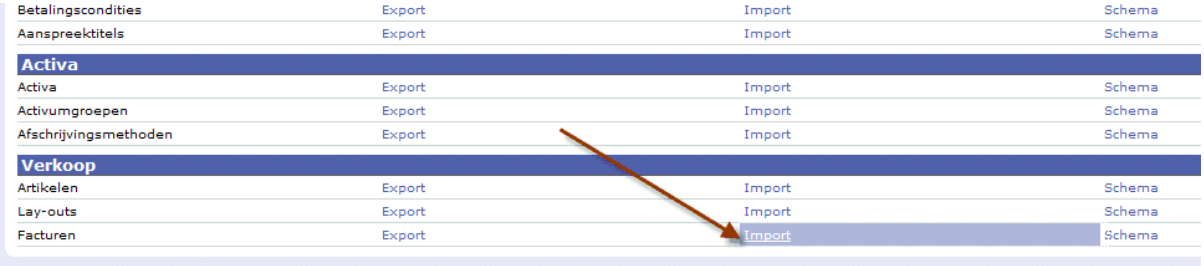
- Go to the screen 'Submit Background Job' 228.
- Select the background script 'Exact Online: Extraction sales invoices' and enter the parameters, usually, 'N' (no) is specified at 0-sums take along:



- Wait until the process is successfully completed in the screen Background Jobs 228.
- Save the export as XML file in the folder 'out' on the server or in another location.
- You can import the XML file in Exact Online via the following menu:



- Then:



- Import the file finally with:

Products

The import of products to Exact Online is described here. A background script is available for the transfer of products. This ensures that the products from Invantive Vision are saved as products in Exact Online.

Note: the transfer of products is not necessary for the use of concept invoices! The importing of products normally only happens if the product file is primarely stored in Invantive Vision.

Perform the following steps:

- Go to the screen 'Submit Background Job' 228.
- Run the background job ' Manage: Run ETL'.
- Enter with ETL Specification the next value: ../etl/bubs2exactonline articles.kjb
- Wait till the background process is finished.
- Check the log file if the data was successfully imported in Exact Online.

Organizations

The import of organizations to Exact Online is described here. For the port of organisations a background script is available. This ensures that organizations from Invantive Vision are saved as relations in Exact Online.

Perform the following steps:

- Go to the screen 'Submit Background Job' 228.
- Run the background job ' Manage: Run ETL'.
- Voer bij ETL Specification de volgende waarde in: ../etl/bubs2exactonline organisations.kjb
- Wait till the background process is finished.
- Check the log file if the data was successfully imported in Exact Online.

Projects

The import of project to Exact Online is described here. For the port of projects a background script is available. This ensures that projects from Invantive Vision are saved as cost centers in Exact Online.

Perform the following steps:

- Go to the screen 'Submit Background Job' 228.
- Run the background job ' Manage: Run ETL'.
- Enter the next value at ETL Specification: ../etl/bubs2exactonline projects.kjb
- Wait till the background process is finished.
- Check the log file if the data was successfully imported in Exact Online.

Cost Centers

The import of cost centers to Exact Online is described here. For the port of cost centers a background script is available. This ensures that the people who write time Invantive Vision are saved as cost centers in Exact Online.

Next to that, it is necessary to manually develop cost centers for fixed price processes (see profile option 'bubs-interface-exactonline-factuur-kostenplaats-proces'), process units (see profieloption 'bubs-interface-exactonline-factuur-kostenplaats-proces-unit') and conversion (see profieloption 'bubs-interface-exactonline-factuur-kostenplaats-conversie').

Perform the following steps:

- Go the screen 'Submit Background Job'.
- Run the background job ' Manage: Run ETL'.
- Voer bij ETL Specification de volgende waarde in: ../etl/bubs2exactonline costcenters.kjb
- Wait till the background process is finished.
- Check the log file if the data was successfully imported in Exact Online.

1.7.1.4 From Exact Online

The following parts describe how you can extract data from Exact Online. The data is read via the XML export of Exact Online.

Posting rules

The import of accounting rules is explained here.

The booking lines must have been completely processed in the general ledger and have a permanent character. Unprocessed posting lines are skipped in the gateway.

The import of accounting rules (transactions, receivable and payable invoices) to Exact Online is explained here. A background script for the transfer of accounting rules is available. This ensures that the accounting rules from Exact Online will be stored as invoices and invoice lines in Invantive Vision.

Perform the following steps:

- Go to the screen 'Submit Background Job' 228.
- Run the background job ' Manage: Run ETL'.
- Enter in the following value in ETL Specification: .. / etl/exactonline2bubs transactions.kjb
- Wait till the background process is finished.
- Check the log file to see if the data was successfully imported in Invantive Vision.

1.7.2 Exact Globe 2000 Interface

Invantive Vision is compatible with the accounting package Exact Globe 2000. The interface works in one direction:

- Persons, cost categories, invoices, invoice lines and organizations will be imported from Exact Globe 2000 into Invantive Vision.

1.7.3 Link Twinfield

Invantive Vision can collaborate with the accounting package Twinfield. This link goes in one direction:

- Organizations from Invantive Vision can be read in Twinfield as debtors or creditors.
- Projects from Invantive Vision can be read in Twinfield as projects.
- Cost center from Invantive Vision can be read in Twinfield as cost centers.

1.7.3.1 Installation

Perform the following steps:

- Copy the add-on files to the folder 'etl'.
- Set the following profile options:

Profieloptie	Omschrijving
bubs-interface-twinfield-administratie	Boekhouding binnen Twinfield
bubs-interface-twinfield-gebruiker	Naam van de gebruiker binnen Twinfield voor de koppeling.
bubs-interface-twinfield-organisatie	Organisatie voor de Twinfield webservices
bubs-interface-twinfield-url-logon	URL voor de aanmeldprocedure de Twinfield webservice, bijvoorbeeld https://login.twinfield.com/webservices/...
bubs-interface-twinfield-wachtwoord	Wachtwoord van de gebruiker binnen Twinfield voor de koppeling.

Twinfield profile options

1.7.3.2 Configuration

Dimension values

Within Twinfield you can restrict possible values of the dimensions by entering a format. For a working link enter it in Invantive Vision so it can restrict values in Twinfield for a mutual sequence.

1.7.3.3 To Twinfield

You can port data with the following background scripts:

- Twinfield: Send Organizations to Twinfield
- Twinfield: Send Projects to Twinfield
- Twinfield: Send Cost centers to Twinfield

1.7.4 ENIAC Interface

This information is available on request.

1.7.5 Reeleezee Interface

Data

The interface with Reeleezee is used to import the following data into Reeleezee:
- Unit types as Products.
- Organizations as Relations.
- Concept Invoices as Sales Invoices.

1.7.5.1 Installation

Preparation for Relations

Notice! Ensure that all existing customers and suppliers from Reeleezee are already in the system using the same code and ID. If this is not previously done, then existing relationships in Reeleezee will get another name which will cause that historical transactions will not be registered on the correct name anymore.

Preparation for Products

Reeleezee does not support your own VAT codes. Therefore, the VAT codes need to be entered as follows:
- HD: High tariff, Services
- HP: High tariff, Products
- LD: Low tariff, Services

- LD: Low tariff, Products
- N: Zero tariff
- V: Exempt

Preparation for Sales Invoices

None.

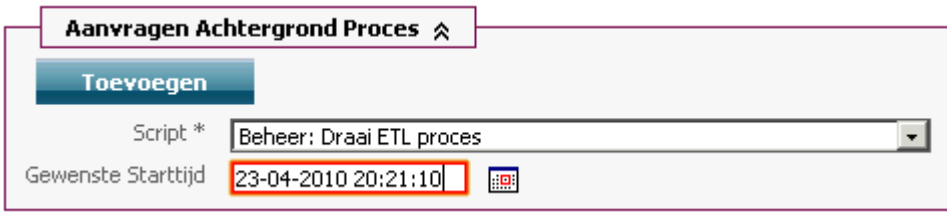
1.7.5.2 To Reeleezee

Normal Use

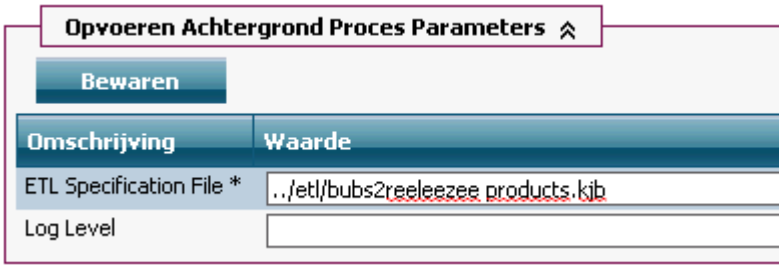
Create File with Products

Only products will be included in the file.

- Start an ETL script:



- Parameters:

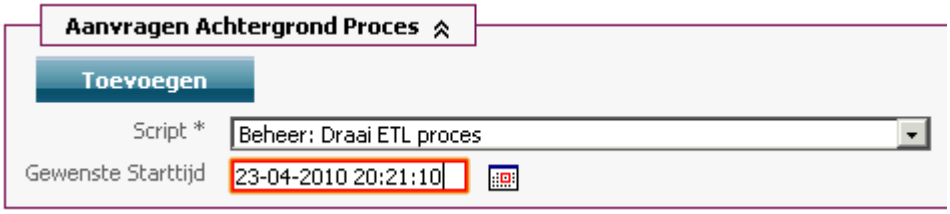


- Upload the file as described below.

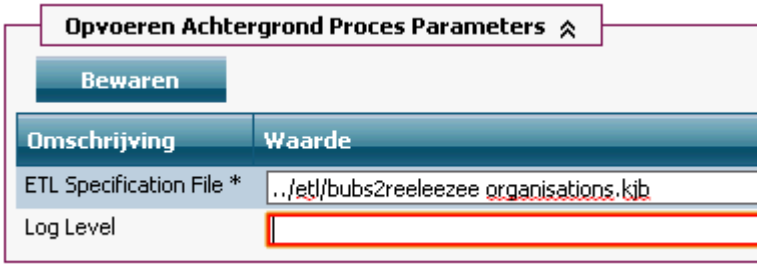
Create File with Products

Only clients and suppliers will be included in the file.

- Start an ETL script:



- Parameters:



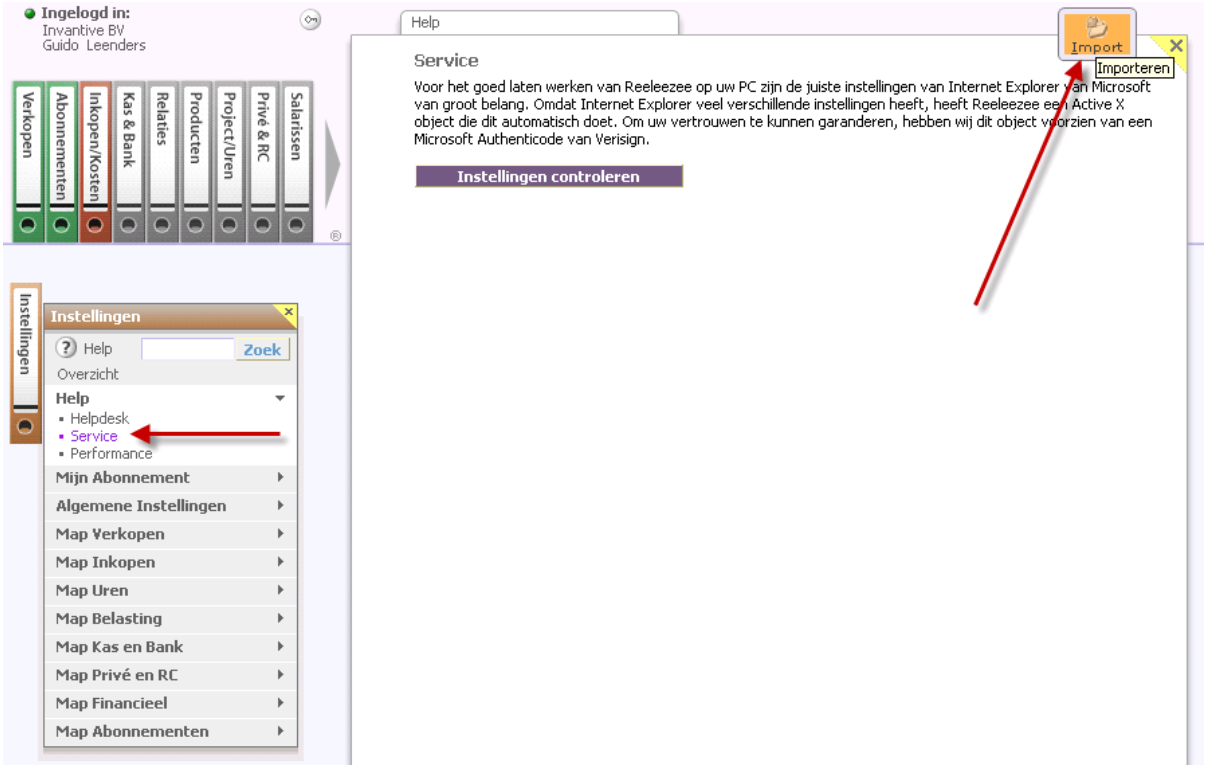
- Upload the file as described below.

Create File with Sales Invoices

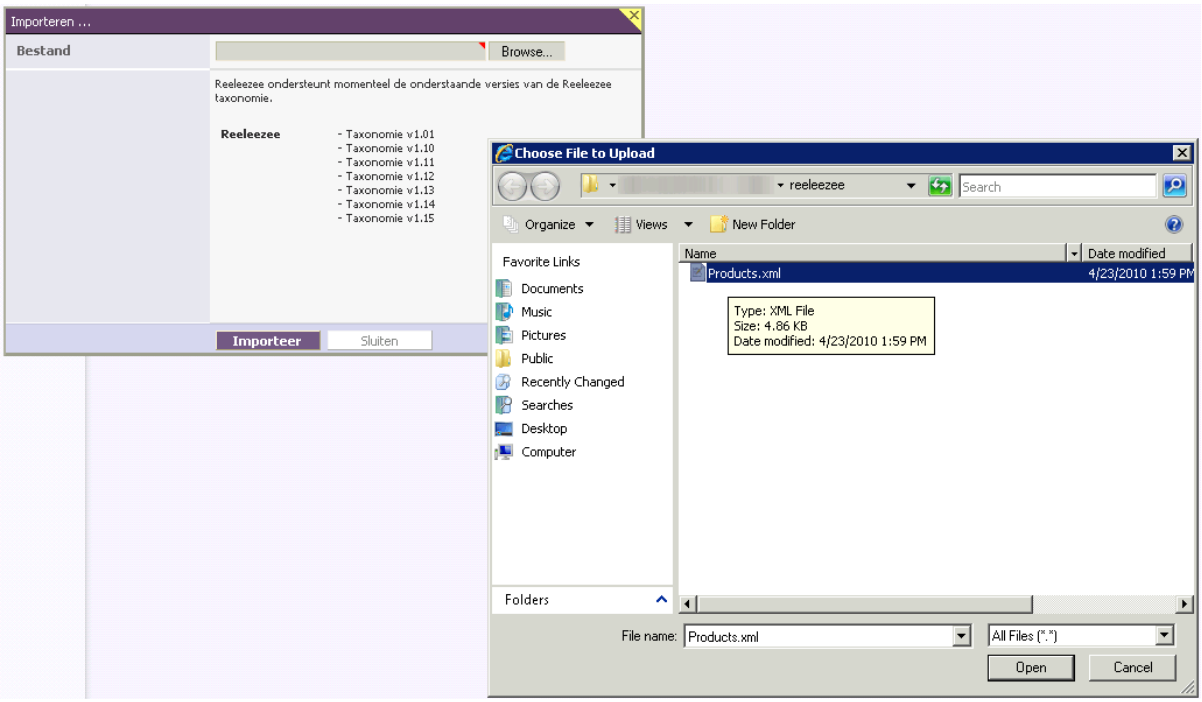
Only concept invoice lines which are not yet exported will be included in the file.

Upload to Reeleezee

The files to be uploaded are placed in the folder as set for the profile option bubs-interface-reeleezee-input. No use is made of the web service of Reeleezee. Import goes via Settings -> Help -> Service -> Import:



Then select the file:



The results are returned as an XML file that you can access using Notepad, for example:

```
1  <?xml version="1.0" encoding="utf-8"?>
2  <?xml-stylesheet type="text/xsl" href="http://www.reeleezee.nl/taxonomy/1.16/Reeleezee.xslt"?>
3  <Reeleezee version="1.16" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="ht
4    <ImportResult ProcessedDateTime="2010-04-23T15:14:49.8512944+02:00" Succeeded="false">
5      <ExportInfo>
6        <Name>Invantive Estate</Name>
7        <Source>Systeem-ws35-dvt11r1-USR_GLE_BUBS-Invantive Estate-$URL: http://subversion.invantive.com
8        <CreateDateTime>2010-04-23T13:47:06</CreateDateTime>
9      </ExportInfo>
10     <MaxMessage Level="ERROR">Productcode 2 is al in gebruik</MaxMessage>
11     <Product>
12       <TotalProcessed>13</TotalProcessed>
13       <TotalCreated>0</TotalCreated>
14       <TotalUpdated>0</TotalUpdated>
15       <TotalDeleted>0</TotalDeleted>
16       <TotalIgnored>0</TotalIgnored>
17       <MessageList>
18         <Message Level="NONE">product met code 6 niet gevonden</Message>
19         <Message Level="NONE">product met code 7 niet gevonden</Message>
20         <Message Level="NONE">product met code 8 niet gevonden</Message>
21         <Message Level="NONE">product met code 4 niet gevonden</Message>
22         <Message Level="NONE">product met code 14 niet gevonden</Message>
23         <Message Level="NONE">product met code 9 niet gevonden</Message>
24         <Message Level="NONE">product met code 3 niet gevonden</Message>
25         <Message Level="NONE">product met code 10 niet gevonden</Message>
26         <Message Level="NONE">product met code 11 niet gevonden</Message>
27         <Message Level="NONE">product met code 12 niet gevonden</Message>
28         <Message Level="NONE">product met code 13 niet gevonden</Message>
29         <Message Level="NONE">product met code 5 niet gevonden</Message>
30         <Message Level="ERROR">Productcode 2 is al in gebruik</Message>
31       </MessageList>
32     </Product>
33   </ImportResult>
34 </Reeleezee>
```

Pay especially attention to the outcome of ‘Succeeded’. ‘Succeeded’ indicates if the scan was successful.

1.7.6 Frotcom Interface

Data

The interface with Frotcom is used to import the following data into Frotcom:

- xxx.

The following data will be imported from Frotcom into Invantive Vision:

- xxx.

1.7.7 Unit4 Multivers interface

Data

The interface with Multivers is used to import the following data:
- Concept Invoices as Sales Invoices.

1.7.7.1 Installation

Preparation

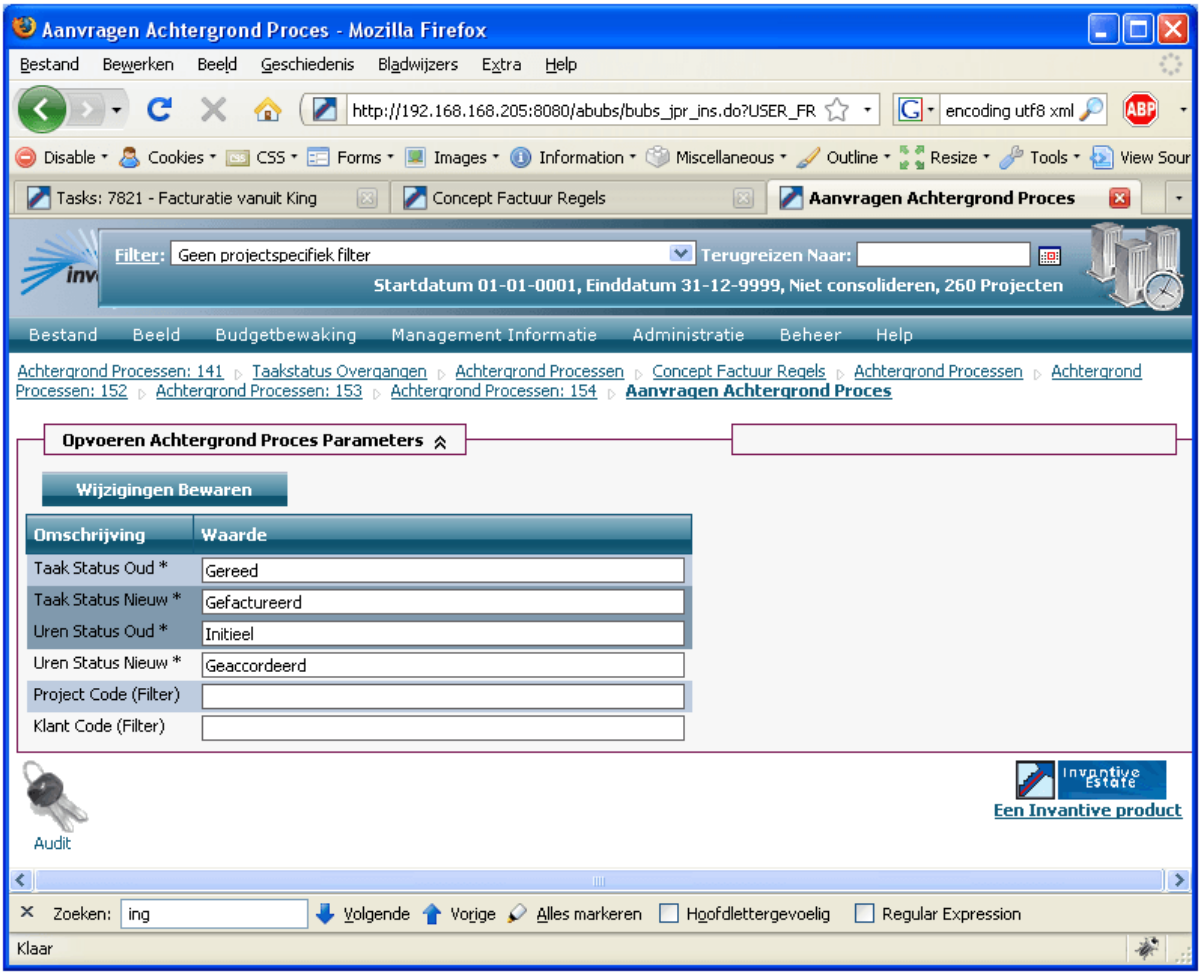
Preparation for Sales Invoices

Perform the following checks:
- The Unit4 Business Connector needs to be licensed within the Unit4 Multivers license.
- The Invantive Vision server which is running Tomcat must be the same server as where Unit4 Multivers Business Connector is available.
- Verify that the registry on this server has a class MBO.Administration.

1.7.7.2 Concept Invoices

The import of concept invoices to Exact Online is described here. A background script is available for the invoicing of hours to processes and projects and fixed price processes. This ensures that the invoice data will be stored as concept invoice lines. The daily process is as follows:

- Go to the screen 'Submit Background Job' 228.
- Select the background script ‘Invoicing: Process all parts’.
- Enter the parameters as follows:



- Wait until the process is successfully completed in the screen Background Jobs 228.
- Now you can check the concept invoices in the screen Concept Invoice Lines 138.

Reading Draft Invoice Lines

A background script is available for the invoicing of hours to processes and projects and fixed price processes. This ensures that the invoice data will be stored as concept invoice lines. For proper processing, the following needs to be arranged:

- For all employees with billable hours unique initials are entered. These are used to add the cost center.

The reading of the draft invoice line as invoice orders goes as follows:

- Go to the screen 'Submit Background Job' 228.
- Select the background script ‘Multivers: Extraction sales invoices’.
- Wait until the process is successfully completed in the screen Background Jobs 228.
- Save the export as XML file in the folder ‘out’ on the server or in another location.

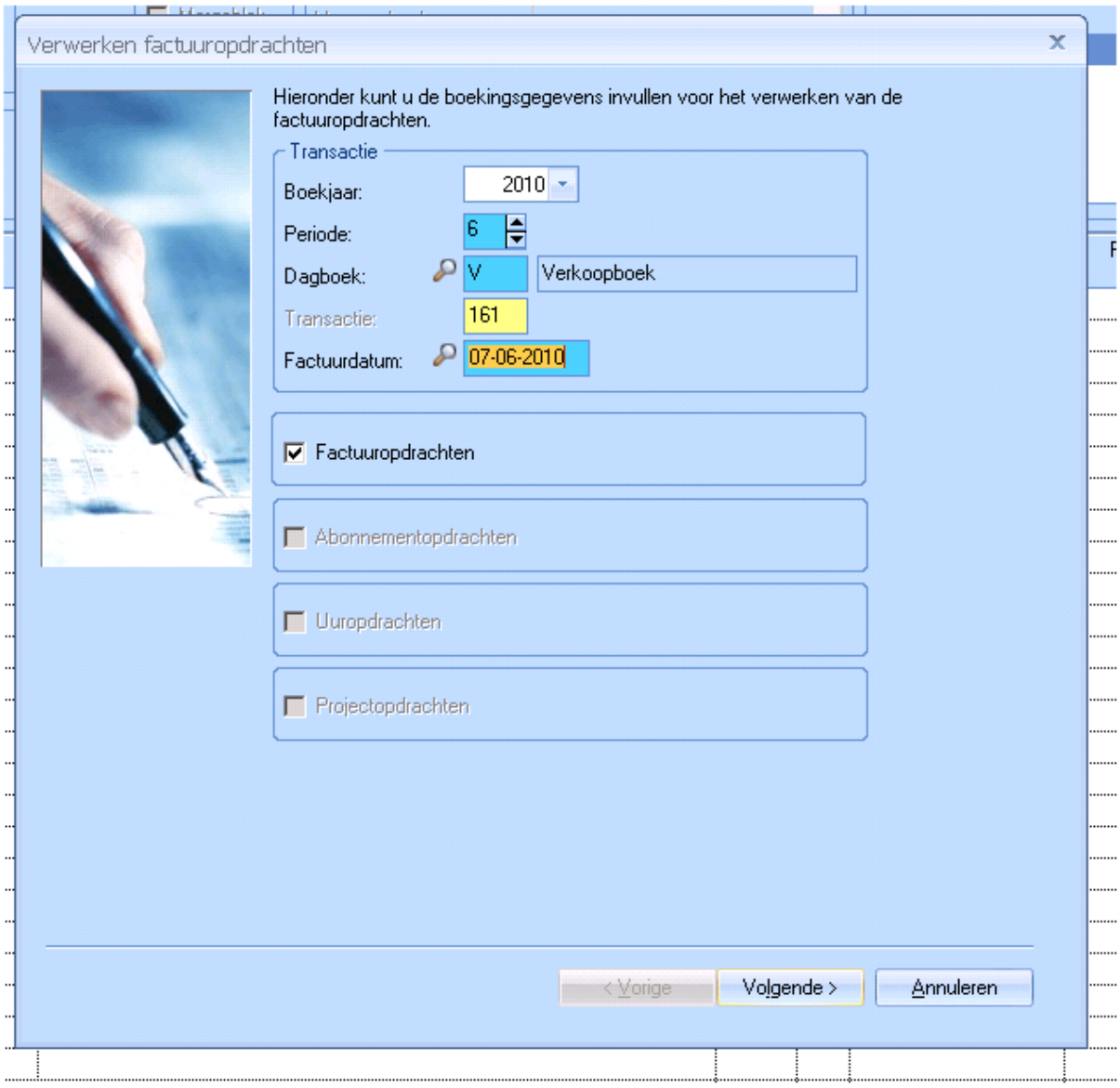
Upload in Multivers

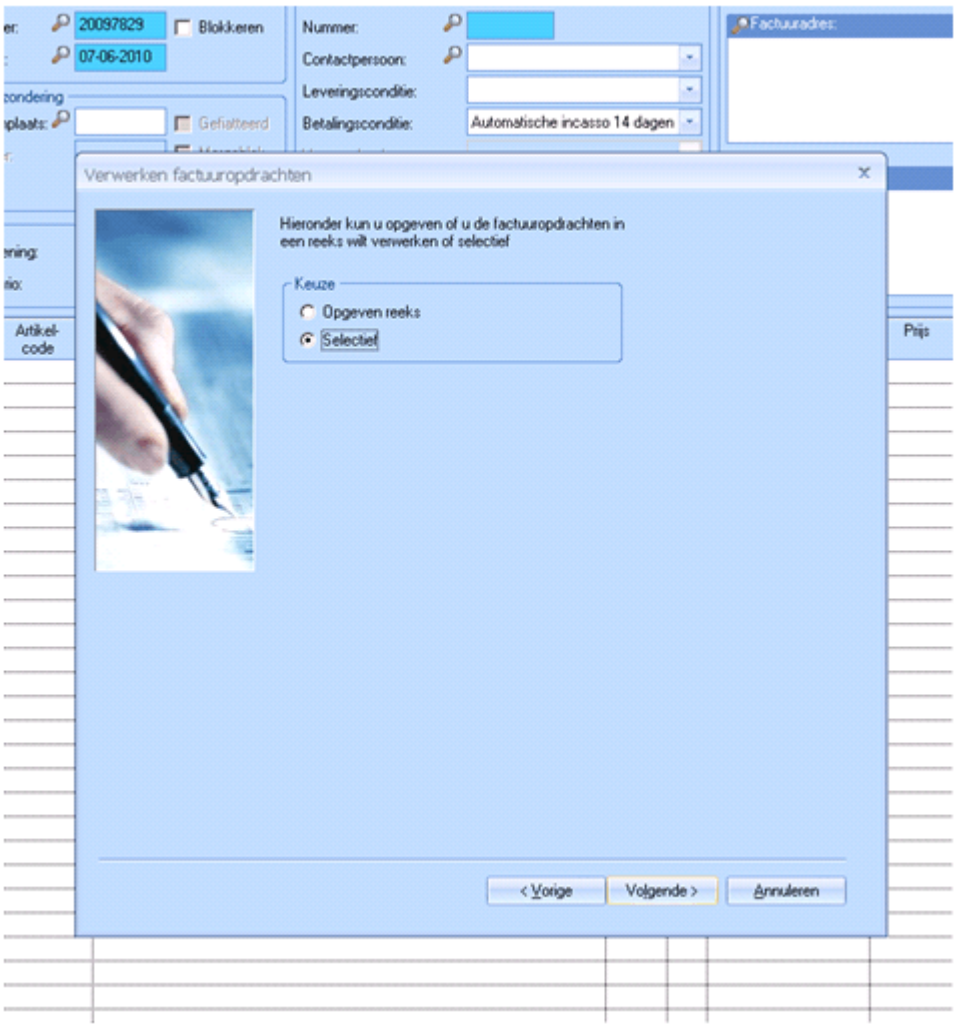
Perform the following steps:

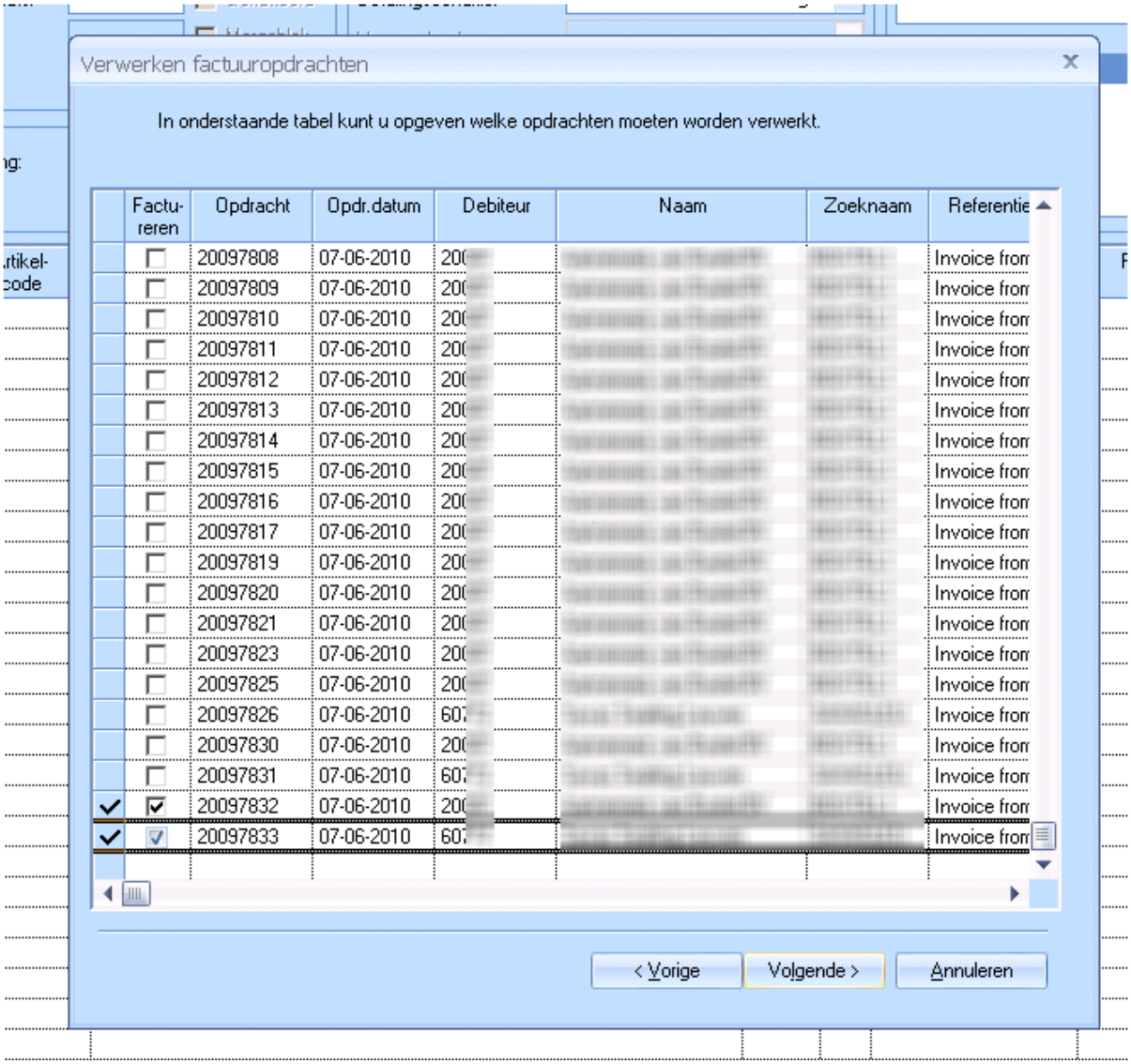
- Process the XML invoices with the bubs2multivers cpu to invoice orders:

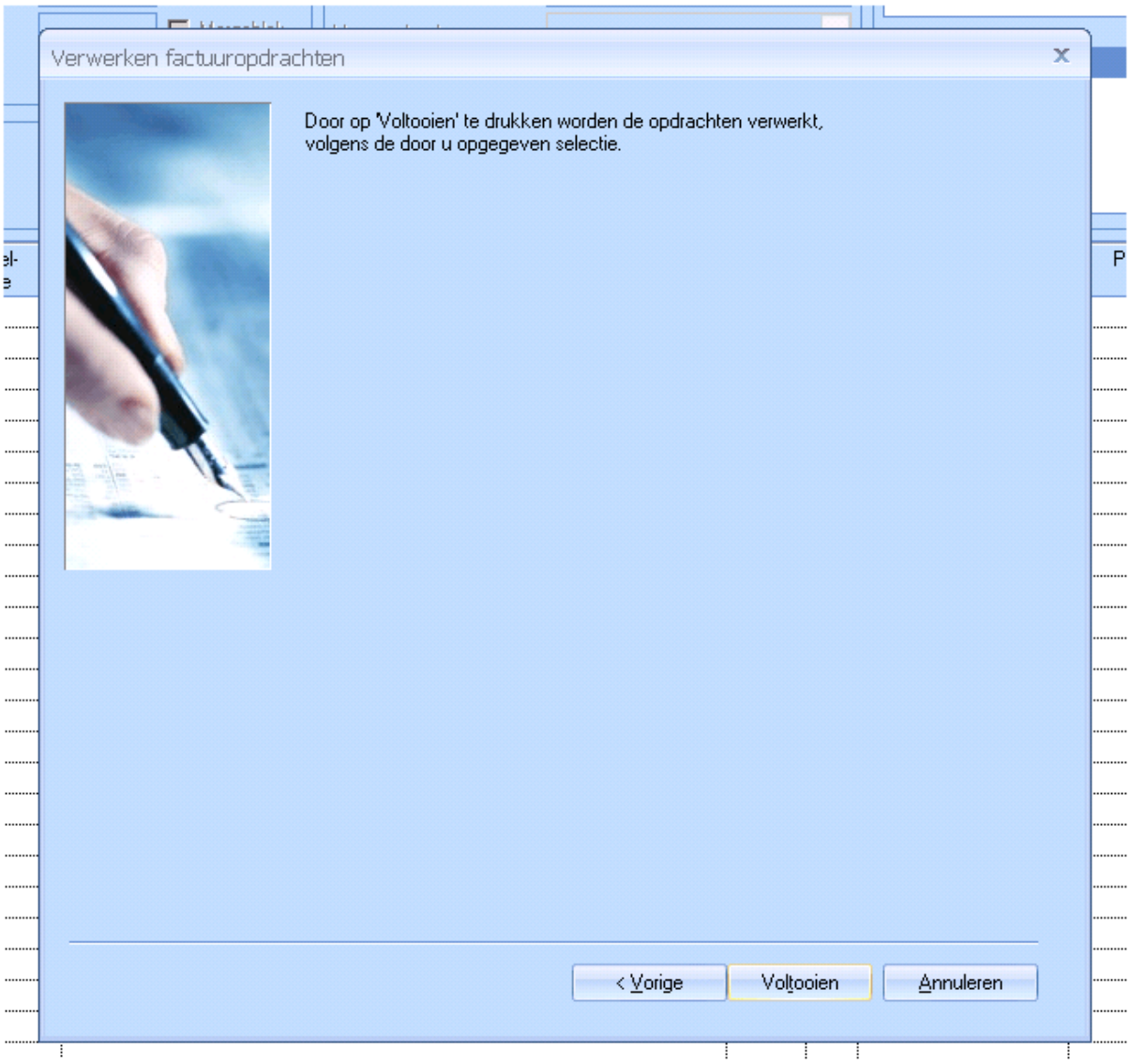
```
E:\Programs\invantive\test multivers>%windir%\syswow64\cscript "bubs2multivers p
rocess xml.vbs"
Microsoft (R) Windows Script Host Version 5.6
Copyright (C) Microsoft Corporation 1996-2001. All rights reserved.

7-6-2010 17:12:02 Running E:\Programs\invantive\test multivers\bubs2multivers pr
ocess xml.vbs
7-6-2010 17:12:02 Log on to administration MVL0[illegible] as user SYSTEEM.
7-6-2010 17:12:02 Logging is done in e:\invantive\[illegible]\transfer\multivers\
log.
7-6-2010 17:12:02 Create order header for [illegible].
7-6-2010 17:12:03 Create order line 1 1.00 UREN test; 5: Test2.
7-6-2010 17:12:03 Save order.
7-6-2010 17:12:04 Created order with number 20097832.
7-6-2010 17:12:04 Create order header for [illegible].
7-6-2010 17:12:04 Create order line 1 0.75 UREN Pc van Piet; 13: Update applicat
ie.
7-6-2010 17:12:04 Save order.
7-6-2010 17:12:04 Created order with number 20097833.
7-6-2010 17:12:04 Close administration MVL0[illegible].
7-6-2010 17:12:04
7-6-2010 17:12:04 *** Summary ***
7-6-2010 17:12:04 #Orders successfully created: 2
7-6-2010 17:12:04 #Orders failed: 0
7-6-2010 17:12:04 #Invoices successfully created: 0
7-6-2010 17:12:04 #Invoices failed: 0

E:\Programs\invantive\test multivers>_
```

- Process the invoice orders:









1.7.7.3 Errors

ActiveX object for MBO.Administration has not been found

While running the vbs script you get the message that the ActiveX object MBO.Administration cannot be created, make sure that the 32-bit winscript engine is used. For example:

‘%windir%\syswow64\wscript SCRIPT.vbs’

Merant ODBC message ‘Optional feature not implemented’

If the Merant ODBC gives the message ‘Optional feature not implemented’ when connecting to the administration, make sure that the administration exists in the Unit4 Multivers user interface. Verify also that the administration can be opened.

1.7.8 King interface

Invantive Vision is compatible with the accounting package KING. The interface works in two directions:

- Concept invoices from Invantive Vision can be imported in KING and from there they may be changed and invoiced.

- Final invoices and other general ledger mutations from KING can be imported intoInvantive Vision.

1.7.8.1 Installation KING Interface

Execute the following steps to be able to use the KING gateway:

- Execute from addons/king interface the file ‘king_install.sql’ under the scheme under which the application was installed.
- Copy the xml, ktr and kjb files from the king interface map to the map 'etl'.
- Copy the king.config file to the home directory of the user under which the Apache Tomcat service runs.
- Modify the king.config file.
- All Organisations should have the debit number from KING as code.

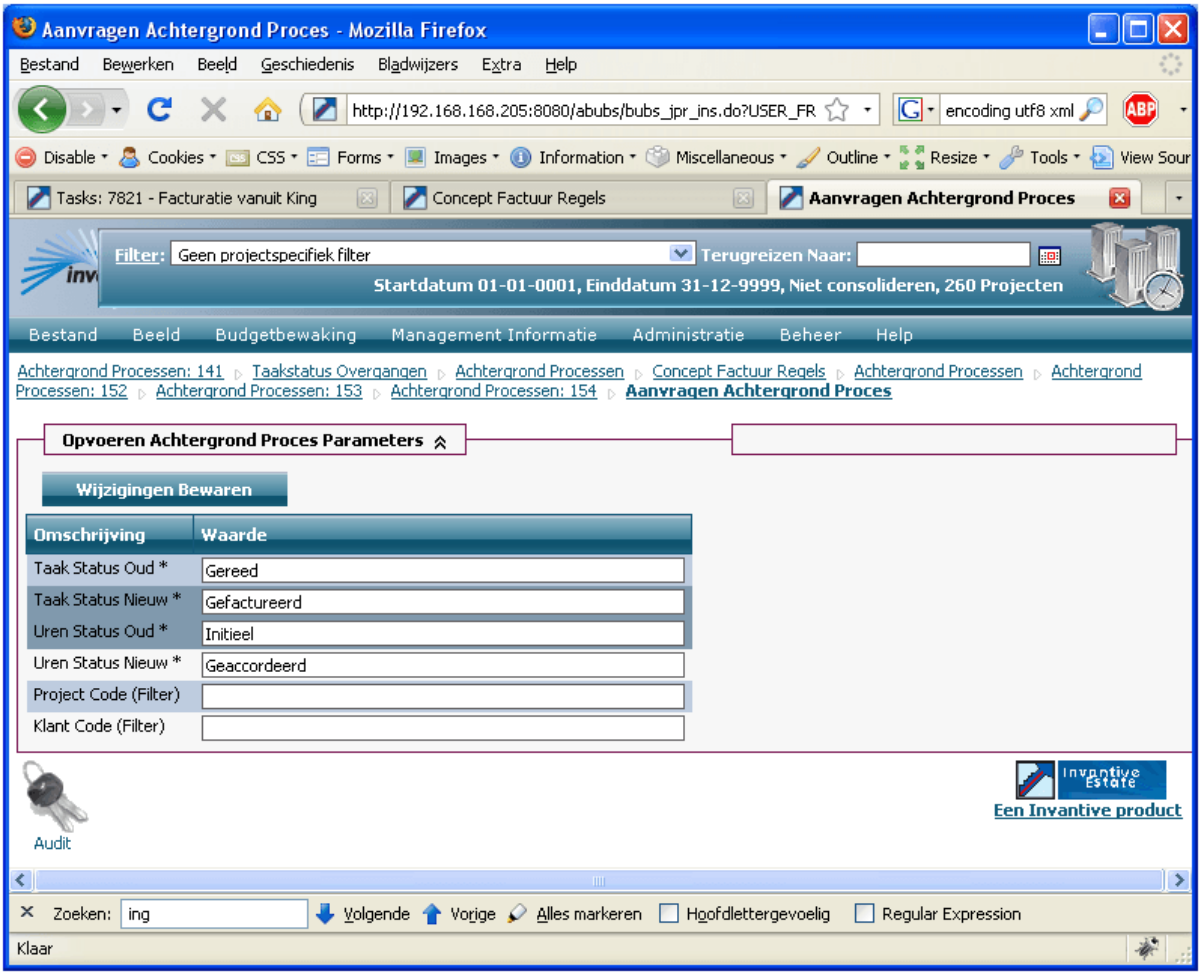
1.7.8.2 To KING

The following sections describe how you can transfer data to KING.

Concept Invoices

The import of concept invoices to King is described here. A background script is available for the invoicing of hours to processes and projects and fixed price processes. This ensures that the invoice data will be stored as concept invoice lines. The daily process is as follows:

- Go to the screen 'Submit Background Job' 228.
- Select the background script ‘Invoicing: Process all parts’.
- Enter the parameters as follows:



- Wait until the process is successfully completed in the screen Background Jobs 228.
- Now you can check the concept invoices in the screen Concept Invoice Lines 138.

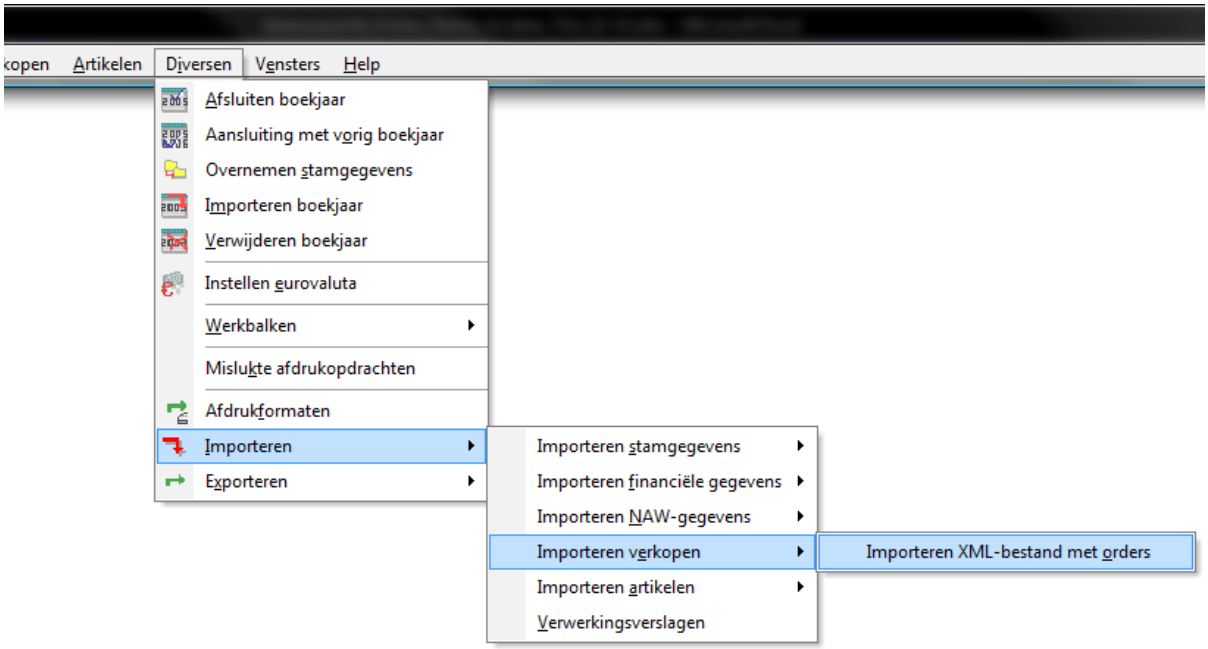
Import concept invoice lines in King

A background script is available for the invoicing of hours to processes and projects and fixed price processes. This ensures that the invoice data will be stored as concept invoice lines. The daily process is as follows:

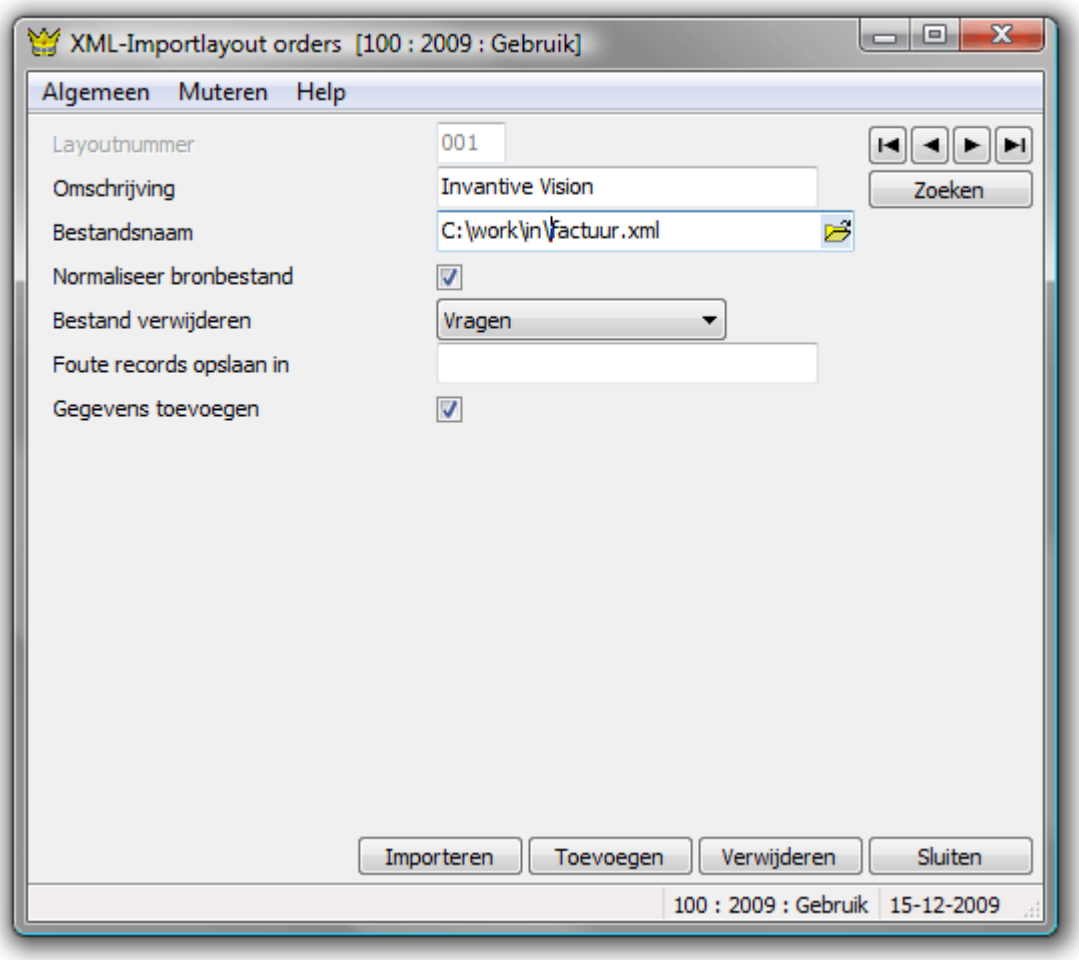
- Go to the screen 'Submit Background Job' 228.
- Select the background script ‘King: Extraction sales orders’.
- Wait until the process is successfully completed in the screen Background Jobs 228.
- The output file is an XML file, such as:

```
▼<!--
  START Invantive Vision dump concept invoice lines, $Header: http://svn.invantive.com/repos/p104/trunk/ddl/bub:
 -->
▼<!--
  Extracted on [redacted] by Oracle user PBUBS_WEB, database orcl11r2, database server [redacted], clie:
  [redacted]
 -->
▼<KING_ORDERS>
  ▼<ORDERS>
    ▼<ORDER>
      ▼<!--
         Klant [redacted] (ERP code , ID 1201), groep [redacted],
       -->
      ▼<ORDERKOP>
         <ORK_ORDERNUMMER/>
         <ORK_EXTERNORDERNUMMER/>
         <ORK_DEBITEURNUMMER>[redacted]</ORK_DEBITEURNUMMER>
         <ORK_REFERENTIE/>
         <ORK_ORDERDATUM/>
         <ORK_LEVERDATUM/>
         <ORK_FACTUURADRESSOORT>COR</ORK_FACTUURADRESSOORT>
        ▼<ORK_VERZENDADRES>
           <ADR_NAAM1>[redacted]</ADR_NAAM1>
           <ADR_NAAM2/>
           <ADR_STRAAT>[redacted]straat 40</ADR_STRAAT>
           <ADR_HUISNUMMER/>
           <ADR_POSTCODE>[redacted]</ADR_POSTCODE>
           <ADR_WOONPLAATS>[redacted]</ADR_WOONPLAATS>
           <ADR_LAND>NL</ADR_LAND>
           <ADR_EMAIL/>
           <ADR_TELEFOON>+31 [redacted]</ADR_TELEFOON>
           <ADR_TELEFAX/>
           <ADR_OPMERKING>Afkomstig uit Invantive Vision, [redacted],</ADR_OPMERKING>
         </ORK_VERZENDADRES>
         <ORK_EINDBESTEMMINGSOORT>NVT</ORK_EINDBESTEMMINGSOORT>
         <ORK_KORTINGSPERCENTAGE>0</ORK_KORTINGSPERCENTAGE>
         <ORK_MAGAZIJN/>
         <ORK_VALUTACODE>EUR</ORK_VALUTACODE>
         <ORK_KOSTENPLAATS/>
         <ORK_KOSTENDRAGER/>
         <ORK_OPMERKING>Afkomstig uit Invantive Vision, [redacted]</ORK_OPMERKING>
       </ORDERKOP>
      ▼<ORDERREGELS>
        ▼<ORDERREGEL>
           <ORR_SOORT>TEKST</ORR_SOORT>
           <ORR_TEKSTOPFACTUUR>Wij brengen u het volgende in rekening:</ORR_TEKSTOPFACTUUR>
         </ORDERREGEL>
        ▼<ORDERREGEL>
           <ORR_SOORT>TAR</ORR_SOORT>
           <ORR_ARTIKELNUMMER>UREN [redacted]</ORR_ARTIKELNUMMER>
          ▼<ORR_TEKSTOPFACTUUR>
             Werkbon [redacted]: Installatie [redacted], [redacted], van [redacted] tot [redacted]:00:00
           </ORR_TEKSTOPFACTUUR>
           <ORR_AANTALBESTELD>9.</ORR_AANTALBESTELD>
           <ORR_AANTALDEZELEVERING>9.</ORR_AANTALDEZELEVERING>
           <ORR_AANTALDEZEFACTURERING>9.</ORR_AANTALDEZEFACTURERING>
           <ORR_PRIJS>[redacted].</ORR_PRIJS>
```


- You can now retrieve the XML file as an attachment of the background job and import it into KING using the following menu:



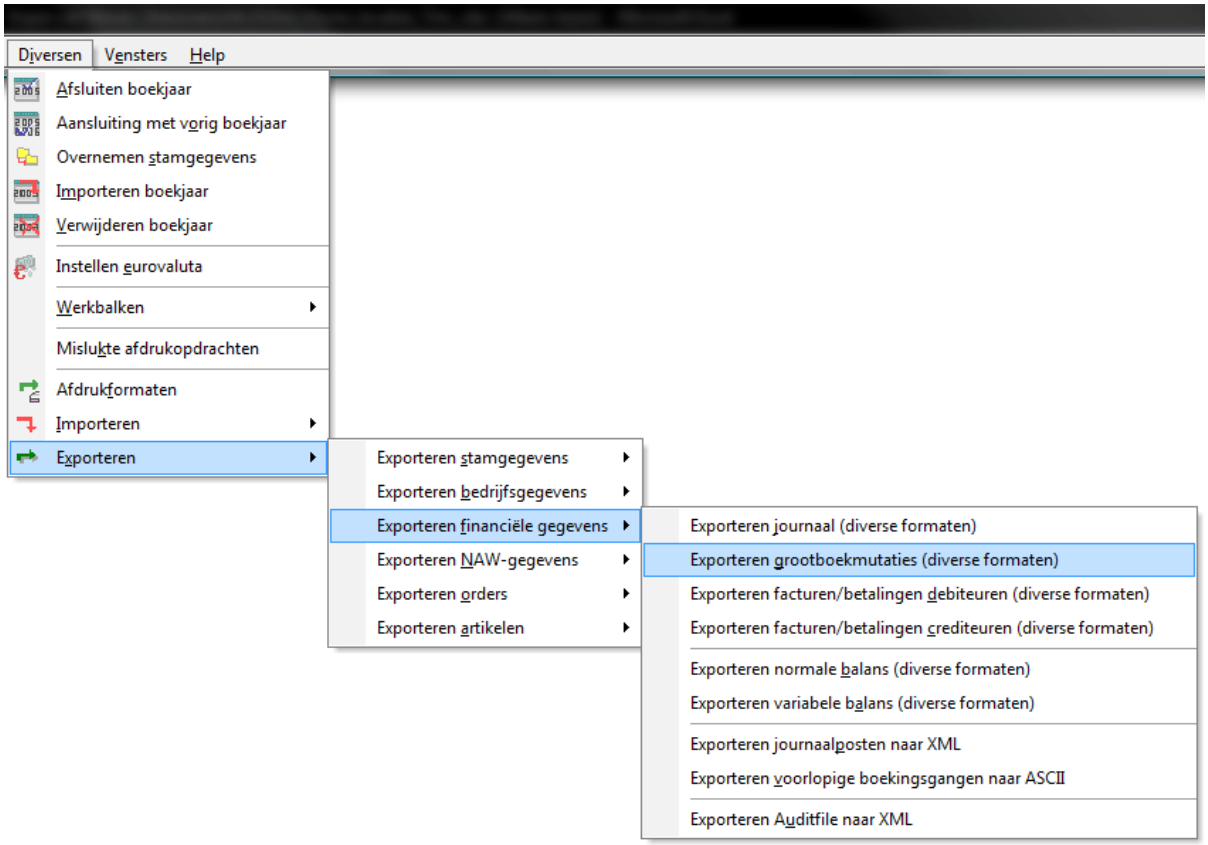
- The XML file can be saved, for example, in the folder ‘out’ of the server.
- Change the options for import as follows:



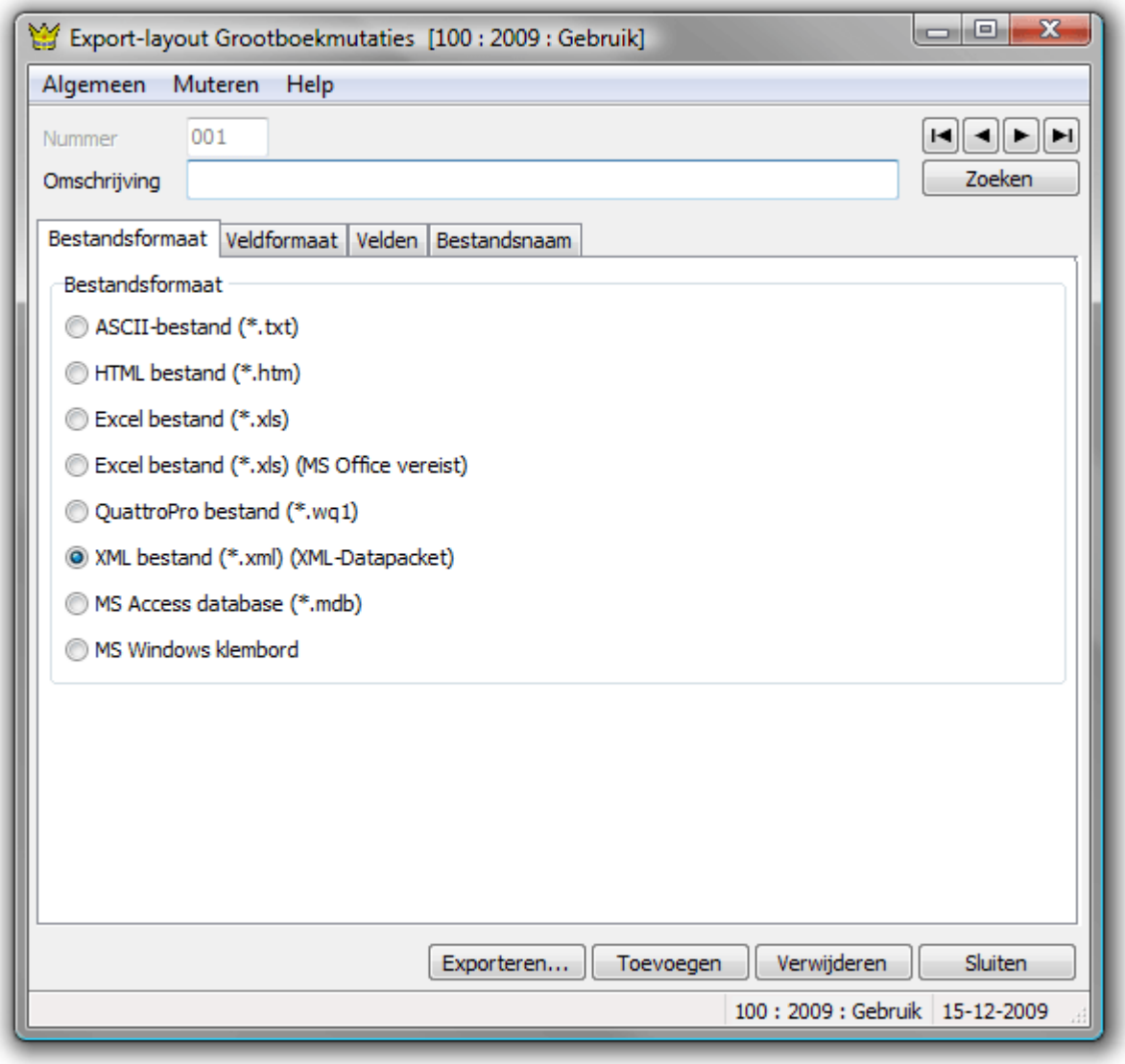
1.7.8.3 From KING

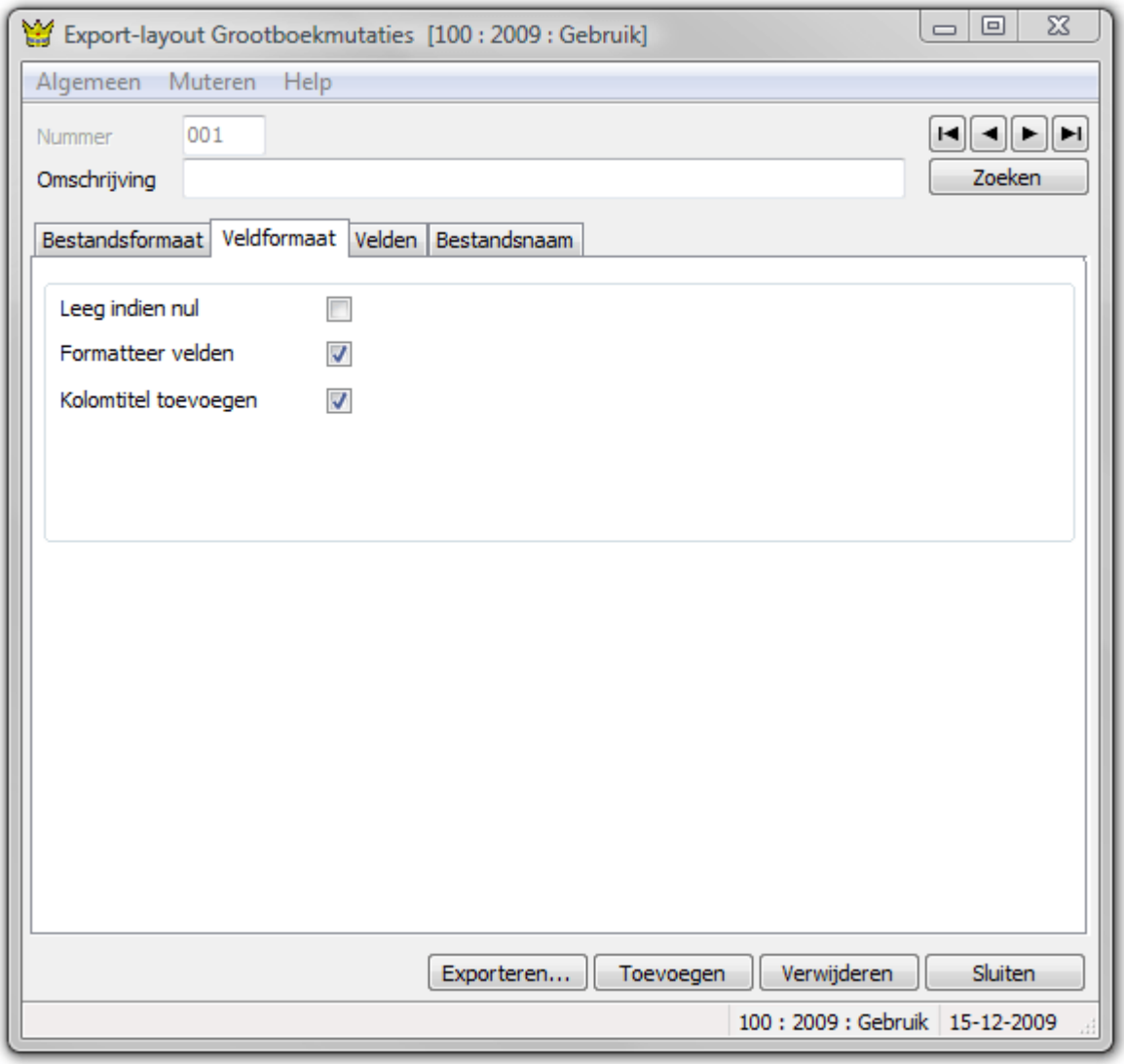
The import of invoices and general ledger mutations from KING to Invantive Vision is described here. The processing is as follows:

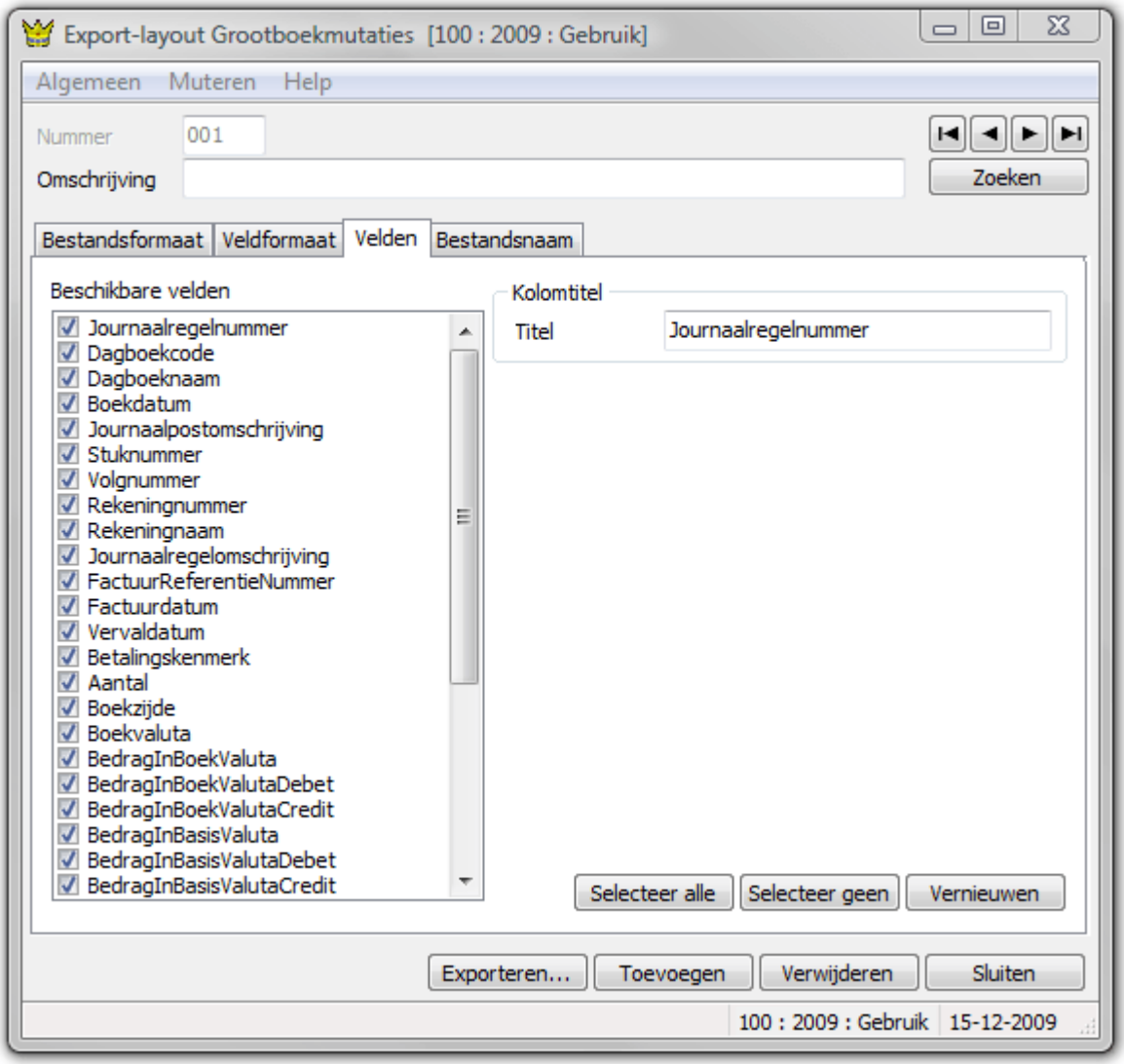
- Compose for all accounting years in KING an XML file with the general ledger mutations. For closed accounting years, this needs to be done only once, for current financial years this should be done repeatedly until the year is closed. The compilation is done using the following menu option in KING:

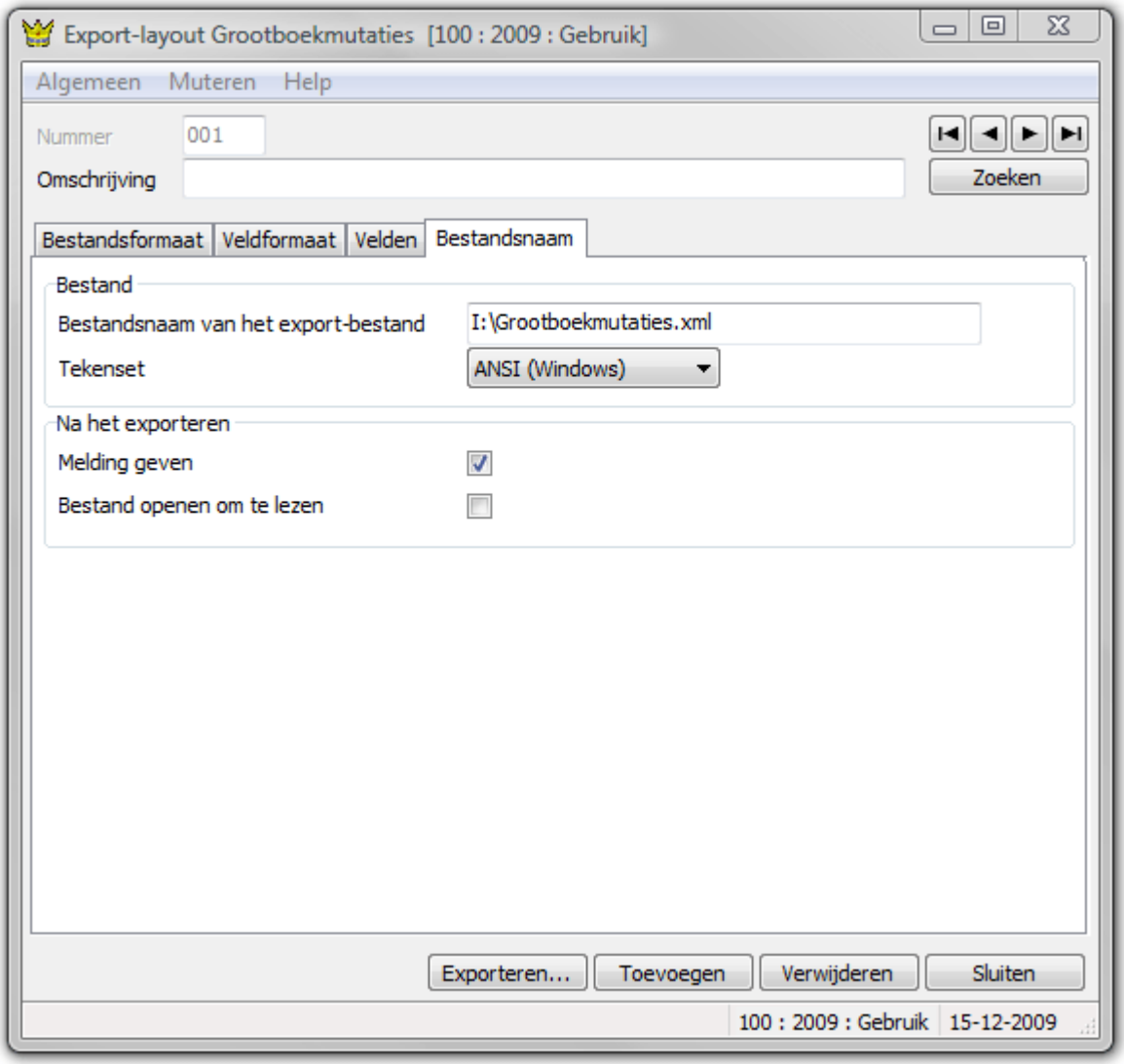


- Select the next settings:









- Then export the file:

- Save the files as ‘gbmut<ACCOUNTINGYEAR>.xml’ in the folder ‘in’ on the server.
- Run the background job ‘Manage: Run ETL’.
- Add the parameter ‘../etl/king2bubs general ledger.kjb’.
- After execution the result can be found in the log file of the background job and in the screen ERP Jobs 256.

1.7.9 Asterisk VOIP Interface

Outgoing Calls

You can fill in the profile options that start with bubs-interface-asterisk.

On the Asterisk server you will need to specify in manager.conf in the admin section that you are allowed to connect with database server connection using permit and deny, for example for the new user 'invantive':

```
[invantive]
secret=amplevoorbeeld
deny=0.0.0.0/0.0.0.0
permit=192.168.172.26/255.255.255.255
read=originate
write=originate
```

You can test this by making contact with telnet on port 5038 and executing the following statements:

```
Action: Login
Username: invantive
Secret: amplevoorbeeld
<ENTER>
```

You then combine this preferably with 'asterisk -rvvvvvvvvvvv' on the command prompt.

Registration Conversations

Invantive Vision can be integrated with Asterisk. Final result of this integration is that the call-detail-records (CDRs) after the end of a conversation are saved from Asterisk in Invantive Vision as conversations.

To do so, follow these steps:

- Create a user in Invantive Vision via Persons 102.
- Create an associated Oracle user and connect it to the Invantive Vision-user.
- Give the Oracle user reading- and insert-rights on bubs_asterisk_cdr_r.
- Make it possible for Asterisk to store CDRs in Oracle.
- Install Oracle Instantclient Basic and Oracle Instantclient SQL*Plus for this.
- Configure the Oracle Instantclient in such a way that it is possible to connect with SQL*Plus from the Asterisk server with the Invantive Vision-environment.
- Install and configure unixODBC for the connection between Asterisk and ODBC. The ODBC.INI will then look, for example, like this:

```
[PRD11R1]
Application Attributes = T
Attributes = W
BatchAutocommitMode = IfAllSuccessful
BindAsFLOAT = F
CloseCursor = F
DisableDPM = F
DisableMTS = T
Driver = Oracle
DSN = PRD11R1
EXECSchemaOpt =
EXECSyntax = T
Failover = T
FailoverDelay = 10
FailoverRetryCount = 10
FetchBufferSize = 64000
ForceWCHAR = F
Lobs = T
Longs = T
MetadataIdDefault = F
QueryTimeout = T
ResultSets = T
ServerName = prd11r1.invantive.local
SQLGetData extensions = F
Translation DLL =
Translation Option = 0
DisableRULEHint = T
UserID =
```

- The odbcinst.ini will then look, for example, like this:

```
[Oracle]
Description     = Oracle
Driver = /usr/lib/libsqora.so.11.1
Setup         =
FileUsage     =
CPTimeout     =
CPReuse       =
```

```
[ODBC]
Trace=No
TraceFile=/tmp/sql.log
ForceTrace=No
Pooling=No
```

- Configure Asterisk CDRs to save the CDRs in Oracle to write the following contents in cdr_odbc.conf:

```
;
; cdr_odbc.conf
;

[global]
dsn=PRD11R1
username=ESTATE-USERNAME
password=ESTATE-PASSWORD
loguniqueid=yes
dispositionstring=yes
table=bubs_asterisk_cdr_r
;usegmtime=no             ; set to "yes" to log in GMT
```

The file res_odbc.conf should look like:

```
;
; odbc setup file
;
; ENV is a global set of environmental variables that will get
set.
; Note that all environmental variables can be seen by all
connections,
; so you can't have different values for different connections.
[ENV]
ORACLE_HOME=>/var/opt/oracle
TNS_ADMIN=>/var/opt/oracle/network/admin
NLS_LANG=>AMERICAN_AMERICA.AL32UTF
; Please note that UTF16 will be used by unixODBC, irrespective
of what you tell above.

[PRD11R1]
enabled=>yes
dsn=>PRD11R1
username=>ESTATE-USERNAME
password=>ESTATE-PASSWORD
pre-connect=>yes
```

1.7.10 Customised User Interface

This chapter describes how to build your own user interface, for example, with the help of Microsoft Excel or Microsoft Access.

1.7.10.1 Information Exchange

Invantive Vision enables you to combine data coming from different administrations. These administrations can be fed as desired with data from within the application itself or with data primarily stored somewhere else. The functionality within Invantive Vision itself will normally be used:

- if the organization has no administration of these data yet, and

- the functionality of Invantive Vision meets the requirements.

The functionality of Invantive Vision in the area of the administrations is limited: it is, for example, not meant to enter a full purchase administration with approvals within Invantive Vision. It is recommended to purchase a specialized application in case there are more functional needs.

The remaining chapters describe how the data within Invantive Vision can be saved, changed, and viewed. This chapter describes how data can be loaded from other administrations via automised methods.

Example

The application structure for an own user interface is described in Structure.

In this example invoices are loaded into a staging table from SAP nad then incorporated into the application.

We chose in this example to implement SQL and PL/SQL, but similar functionality can be achieved with any development environment (for example, Microsoft .Net, Informatica PowerCenter or Pentaho Data Integration) which can load data into the database.

Make a table that will contain the full collection of invoices:

```
create table xxsap_in_ftr
( ftr_nummer                 number(15)         not null
, ftr_datum_gefactureerd     date               not null
, lvr_nummer                 number(15)         not null
, ftr_orig_system_reference  varchar2(240 char)
, laad_status                char(1 byte)
, laad_melding               varchar2(2000 char)
, datum_geladen              date               not null
, datum_aangemaakt           date               not null
)
tablespace xxsap
/


create index xxsap_ifr_n1 on xxsap_in_ftr
( ftr_nummer
)
tablespace xxsap
/


create unique index xxsap_ifr_nk on xxsap_in_ftr
( ftr_orig_system_reference
)
tablespace xxsap
/
```

Make a stored package in Oracle PL/SQL which will try to add the data in the just created table to the existing data:

```
create or replace package xxsap#in_ftr
as
/*
```

```
* $Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
interfacing-voorbeeld.xml 19891 2012-10-09 13:23:03Z gle3 $
*
* (C) Copyright 2004-2012 Invantive Software BV, the
Netherlands. All rights reserved.
*/
procedure verwerk
;
end;
/
create or replace package body xxsap#in_ftr
as
/*
* $Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
interfacing-voorbeeld.xml 19891 2012-10-09 13:23:03Z gle3 $
*
* (C) Copyright 2004-2012 Invantive Software BV, the
Netherlands. All rights reserved.
*/
--
-- Verwerkt facturen.
--
-- Niet bestaande facturen worden toegevoegd.
-- Verwijderde facturen blijven bestaan.
-- Van gewijzigde facturen wordt niks overgenomen, aangezien de
onderliggende tabel
-- grootboek mutaties geen wijzigingen kan bevatten.
--
procedure verwerk
is
  --
  -- Alle facturen die nog toegevoegd moeten worden op basis van
nummer.
  --
  cursor c_ftr
  is
  select lfr.*
  ,      lfr.urowid lfr_urowid
  from   xxsap_in_ftr lfr
  where  not exists
         ( select 1
           from   bubs_facturen_v ftr
           where  1=1
           and    ftr.ftr_nummer = lfr.ftr_nummer
         )
  --
  -- Nog niet aangeboden voor laden.
  --
  and    laad_status is null
  ;
  l_cnt_ftr         number(15, 0);
  l_cnt_ftr_bad     number(15, 0);
  l_cnt_ftr_upd     number(15, 0);
```

```
  l_cnt_ftr_upd_bad number(15, 0);
  l_laad_status     xxsap_in_ftr.laad_status%type;
  l_laad_melding    xxsap_in_ftr.laad_melding%type;
  l_start_tijd      date := sysdate;
  l_job_seq         bubs_jobs_v.job_seq%type;
begin
  --
  -- Meldingen voor facturen die gewijzigd zijn na verwerking.
  --
  for r_changed in
  ( select ftr.ftr_nummer                ftr_nummer_old
    ,      lfr.ftr_datum_gefactureerd
ftr_datum_gefactureerd_old
    ,      ftr.ftr_datum_gefactureerd
ftr_datum_gefactureerd_new
    ,      lfr.lvr_nummer                lvr_nummer_old
    ,      ftr.lvr_nummer                lvr_nummer_new
    ,      ftr.ftr_orig_system_reference
ftr_orig_system_reference_old
    ,      ftr.ftr_datum_intrf_geladen
ftr_datum_intrf_geladen_old
    from   xxsap_in_ftr lfr
    join   bubs_facturen_v     ftr
    on     lfr.ftr_nummer = ftr.ftr_nummer
    where  1=1
    and    lfr.laad_status is null
    and    ( lfr.ftr_datum_gefactureerd <>
ftr.ftr_datum_gefactureerd
             or
             lfr.lvr_nummer             <> ftr.lvr_nummer
           )
  )
  loop
    bubs_job_logging.create_job_melding
    ( substr
      ( 'De factuur met nummer '
        || r_changed.ftr_nummer_old
        || ' is gewijzigd in de primaire administratie na
verwerking. Zie de volgende meldingen voor meer informatie.'
      , 1
      , 250
      )
    , 'Y'
    );
    bubs_job_logging.create_job_melding
    ( substr
      ( 'Datum gefactureerd was '
        || to_char(r_changed.ftr_datum_gefactureerd_old, 'dd-mm-
yyyy')
        || ', nu '
        || to_char(r_changed.ftr_datum_gefactureerd_new, 'dd-mm-
yyyy')
        || ', leverancier was '
        || r_changed.lvr_nummer_old
        || ' nu '
```

```
        || r_changed.lvr_nummer_new
        || '. Oorspronkelijke referentie '
        || r_changed.ftr_orig_system_reference_old
        || ', uitgewisseld '
        || to_char(r_changed.ftr_datum_intrf_geladen_old, 'dd-
mm-yyyy hh24:mi:ss')
      , 1
      , 250
      )
    , 'N'
    );
  end loop;
  --
  -- Daadwerkelijke toevoeging.
  --
  <<ftr>>
  l_cnt_ftr     := 0;
  l_cnt_ftr_bad := 0;
  l_cnt_ftr_upd     := 0;
  l_cnt_ftr_upd_bad := 0;
  l_job_seq         := bubs_job_logging.get_current_job_seq;
  for r_ftr in c_ftr
  loop
    bubs_job_logging.create_job_melding('Laden factuur met
nummer ' || r_ftr.ftr_nummer, 'N');
    begin
      insert into bubs_facturen_v
      ( ftr_nummer
      , ftr_datum_gefactureerd
      , lvr_nummer
      , ftr_orig_system_reference
      , ftr_datum_intrf_geladen
      , ftr_job_seq_geladen
      )
      values
      ( r_ftr.ftr_nummer
      , r_ftr.ftr_datum_gefactureerd
      , r_ftr.lvr_nummer
      , r_ftr.ftr_orig_system_reference
      , l_start_tijd
      , l_job_seq
      );
      l_laad_status := 'V';
      l_laad_melding := '';
    exception
      when others
      then
        bubs_job_logging.create_job_melding(substr('Laden
mislukt voor factuur met nummer: ' || r_ftr.ftr_nummer || '.
Foutmelding is ' || sqlerrm, 1, 250), 'Y');
        l_cnt_ftr_bad := l_cnt_ftr_bad + 1;
        l_laad_status := 'F';
```

```
        l_laad_melding := sqlerrm; /* Of
dbms_utility.format_error_stack ||
dbms_utility.format_error_backtrace voor een volledige call
stack en foutmelding. */
    end;
    --
    -- Bijwerken laadstatus met uitkomsten van het toevoegen.
    --
    update xxsap_in_ftr
    set    laad_status   = l_laad_status
    ,      laad_melding  = l_laad_melding
    ,      datum_geladen = l_start_tijd
    where  urowid = r_ftr.lfr_urowid
    ;
    l_cnt_ftr := l_cnt_ftr + 1;
  end loop ftr;
  --
  -- Alle niet relevante data verwijderen, evenals succesvol
verwerkte data.
  -- Foutief verwerkte records worden na 1 maand verwijderd.
  --
  delete xxsap_in_ftr where laad_status is null;
  delete xxsap_in_ftr where laad_status = 'V';
  delete bubs_exact_laad_lvr where datum_geladen <
add_months(sysdate, -1);
  commit;
  bubs_job_logging.create_job_melding('Succesvol verwerkte
gegevens, evenals niet gewijzigde gegevens zijn verwijderd.',
'N');
  --
  -- Status overzicht.
  --
  bubs_job_logging.create_job_melding('Facturen toegevoegd: ' ||
to_char(l_cnt_ftr, '999G999G990'), 'N');
  bubs_job_logging.create_job_melding('- met foutmeldingen: ' ||
to_char(l_cnt_ftr_bad, '999G999G990'), 'N');
  bubs_job_logging.create_job_melding('Facturen gewijzigd : ' ||
to_char(l_cnt_ftr_upd, '999G999G990'), 'N');
  bubs_job_logging.create_job_melding('- met foutmeldingen: ' ||
to_char(l_cnt_ftr_upd_bad, '999G999G990'), 'N');
  commit;
end;
/
```

The following steps need to be taken in order to add new invoices:

- Load the data to the staging table xxsap_in_ftr from SAP, using an ETL tool like, for example, Kettle (open source), Microsoft Integration Services or Informatica PowerCenter.
- Start a query tool, such as SQL * Plus, Quest TOAD or Microsoft Access.
- Sign in with a stored procedure call, such as user 'system' that has access to all data. It is also possible to choose a different user, but then only data can be loaded from projects to which the respective user has write rights to:

```
begin
  bubs_session.set_session_info
```

```
  ( 'xxsap#in_ftr'                        /* Module. Invullen
indien bekend. */
  , 'interface'                           /* Actie. Invullen
indien bekend. */
  , 'system'                              /* Aanmeldcode van de
gebruiker. */
  , 'various'                             /* Momentele query.
Invullen indien bekend. */
  , sys_Filter('userenv', 'ip_address') /* IP adres. Invullen
indien bekend. */
  , sys_Filter('userenv', 'host')       /* Hostnaam. Invullen
indien bekend. */
  , 'n/a'                                 /* URL gekoppeld aan
verwerking. Invullen indien bekend. */
  , to_char(sysdate,'yyyymmddhh24miss')  /* Sessie ID. Invullen
 indien bekend. */
  );
end;
/
```

- Create a job by loading bubs_job_logging.create_job.

```
begin
  bubs_job_logging.job_logging
  ( 'xxsap.exe'
          /* Executable bestandsnaam. Invullen indien bekend. */
  , 'Interface die gegevens vanuit SAP overbrengt naar Invantive
Vision.' /* Omschrijving. Invullen indien bekend. */
  , 'xxsap_code'
          /* Code. Invullen indien bekend. */
  )
  ;
end;
/
```

- Process the invoices by loading xxsap#in_ftr.verwerk.

```
begin
  xxsap#in_ftr.verwerk;
end;
/
```

- Check the results of the process:

```
select *
from   xxsap_in_ftr
where  laad_status = 'F'
/
```

1.7.10.2 Let Users Exchange Data Independently

The application Invantive Vision is standardly provided with a large amount of reports. Possibly you will have the need to compose your own reports, for instance with products such as Crystal Reports or Microsoft Access. Moreover, it may be necessary to apply your own mutations in the data. This can be easily done by following the next procedure in order to build a SQL connection.

Preparation Database Once Only

Onetime Action:

- Choose a unique prefix per Invantive Vision environment in the database. Often 'P_' is used for production and 'A_' for acceptance.
- Enter this prefix in the RDBMS User Prefix field in the screen Settings 349.
- Log on as user 'system' on the Oracle database.
- Execute the following statement (this usually happens during the installation):

```
grant execute on <APPLICATIE SCHEMA>.bubs_session to system
/
grant execute on <APPLICATIE SCHEMA>.itgen_maintain_my_synonyms
to system
/
```

- Create a trigger which takes care that during the login to the database also automatically is logged in to Invantive Vision if the user is registered in Invantive Vision:

```
create or replace trigger set_bubs_user after logon on database
begin
  --
  -- Log on to development environment if available and
applicable.
  --
  obubs.bubs_session.log_on_through_oracle;
  --
  -- Log on to test environment if available and applicable.
  --
  tbubs.bubs_session.log_on_through_oracle;
  --
  -- Log on to acceptance environment if available and
applicable.
  --
  abubs.bubs_session.log_on_through_oracle;
  --
  -- Log on to production environment if available and
applicable.
  --
  -- Caution: you will be logged on to multiple environments at
one time. Increased
  -- risk of data loss in production due to human error!
  --
  pbubs.bubs_session.log_on_through_oracle;
  --
  -- Option to automatically correct synonyms.
  -- Currently not possible due to DDL. Might become autonomous
in the future.
  --
  -- pbubs.itgen_maintain_my_synonyms('PBUBS');
exception
  when others
  then
    null;
    --
```

```
    -- To debug uncomment and: raise_application_error(-20163,
dbms_utility.format_error_stack ||
dbms_utility.format_error_backtrace);
    -- you might be having al32utf8 problems when using java
such as using ojdbc14 instead of ojdbc6.
    --
end;
/
```

- As an alternative to a real development environment, you can also use the following example:

```
create or replace trigger set_bubs_user after logon on database
begin
  if user = 'USR_HGO_BUBS'
  then
    execute immediate
    'begin'
    || ' usr_hgo_bubs.bubs_session.set_session_info'
    || '( ''toad.sql'''
    || ', ''install'''
    || ', ''system'''
    || ', ''various'''
    || ', coalesce(sys_context(''userenv'', ''ip_address''),
''?'')'
    || ', sys_context(''userenv'', ''host'')'
    || ', ''n/a'''
    || ', ''$Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
voorbereiding-database-eenmalig.xml 23615 2013-11-17 11:25:45Z
gle3 $'' || to_char(sysdate, ''YYYYMMDDHH24MISS'')'
    || ');'
    || 'end;'
    ;
  end if;
end;
/
```

- In real development environments it is also easy to turn off project security via the screen Settings 349 or with:
```
update bubs_instellingen_v set isg_alle_pjt_zien_vlag='Y';
commit;
```

Preparation Database pro User

Per user:

- Fill out the field RDBMS User in the screen Persons 102.
- Create a scheme for personal use. All reports executed under this scheme have access to the same amount of information under the filter that is set. The Oracle schema name must be identical to the RDBMS User Prefix plus the value of the field RDBMS User (option ‘E’ when calling log_on_through_oracle) or the schema name has to be equal to the value of the field RDBMS User minus the RDBMS User Prefix (option ‘O’ when calling log_on_through_oracle). For example this can be done with (assuming the user RDBMS prefix ‘P_’ option and ‘E’):
```
 create user p_scotty
```

```
identified by p_scotty
default tablespace pbubs
temporary tablespace temp
/
```

- It is not recommended to use a shared central Oracle schema for all users unless it is not a problem when all reports can contain data of all projects and users do not affect each other with the changes in the filter.
- Assign to this scheme the application specific role for read and write access. This is standard 'BUBS_USER'. This can be done by:

```
grant pbubs_user to p_scotty
/
```

- Alternatively you can make use of the application specific role for read access only. This is standard 'BUBS_READER'.

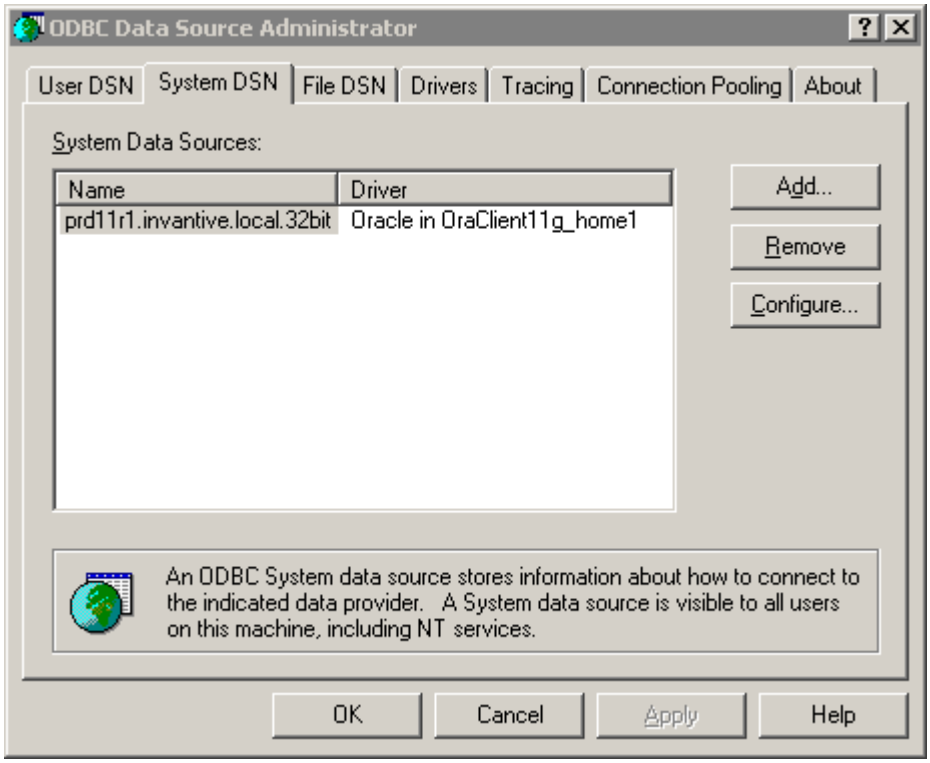
The connection can be based on JDBC, ODBC, OLEDB, native Oracle SQL * Net or other connection methods.

The connection can be tested by signing in as the new Oracle user and then check the contents of the column gbr_naam of the view bubs_mijn_rechten_r.

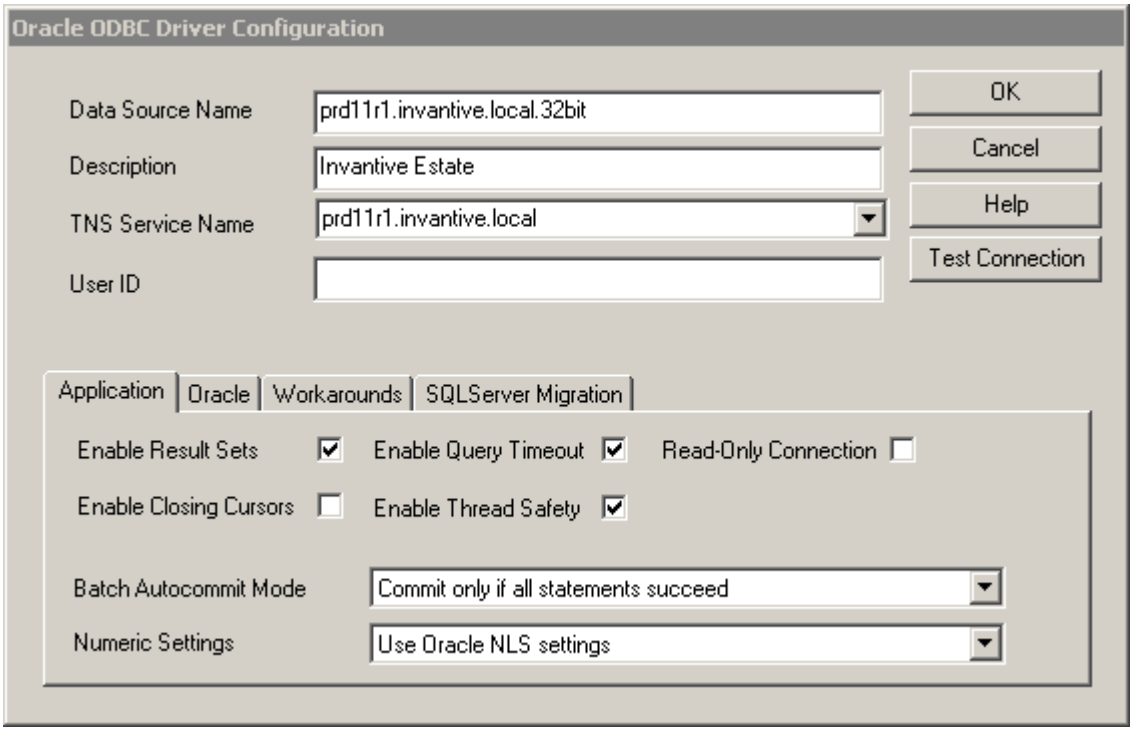
Preparation on PC

As an example the connection via ODBC is described:

- Determine whether the ODBC client is based on 32 or 64.
- Install the Oracle SQL * Net client appropriate for 32- or 64-bit and configure the network connection to be able to connect with SQL*Plus.
- Alternatively you can use the Oracle InstantClient appropriate to 32- or 64-bit.
- If an error occurs concerning the use of AL32UTF8: make sure that the NLS_LANG in the Windows register (HKLM\SOFTWARE\Oracle\KEY*\NLS_LANG) or the UNIX environment variable NLS_LANG is properly filled with the value'DUTCH_THE NETHERLANDS.AL32UTF8'. If you use Oracle Instant Client, then there is no NLS_LANG in the Windows registry; that's why you need to define the NLS_LANG environment variable in Windows.
- Make an ODBC connection using the configuration screen:



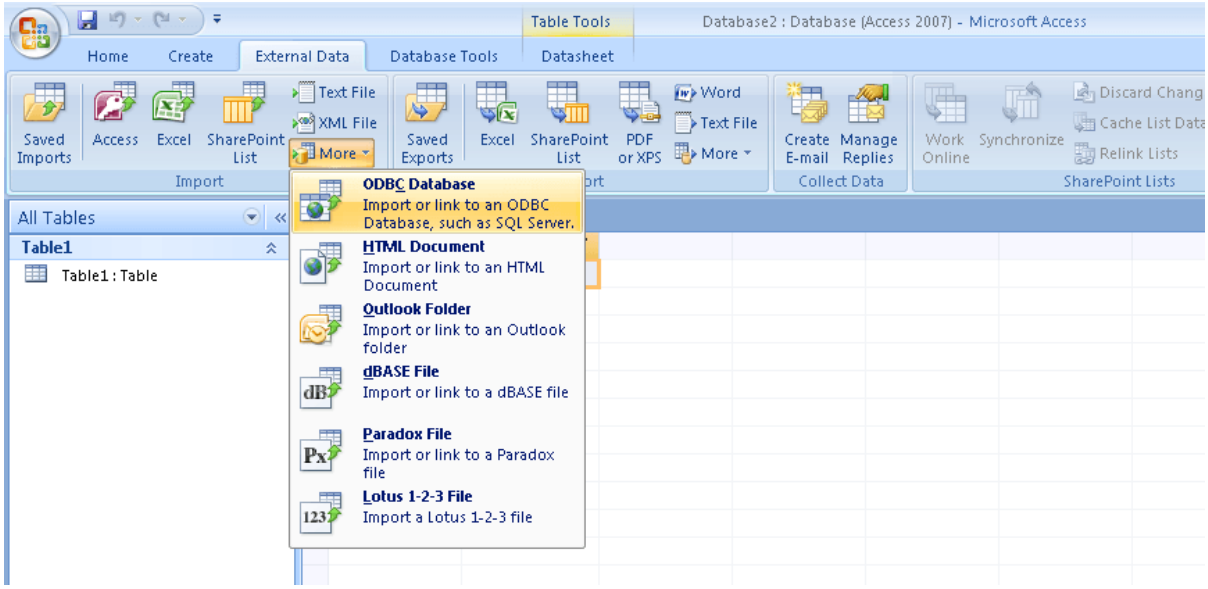
- For example, with the following settings:



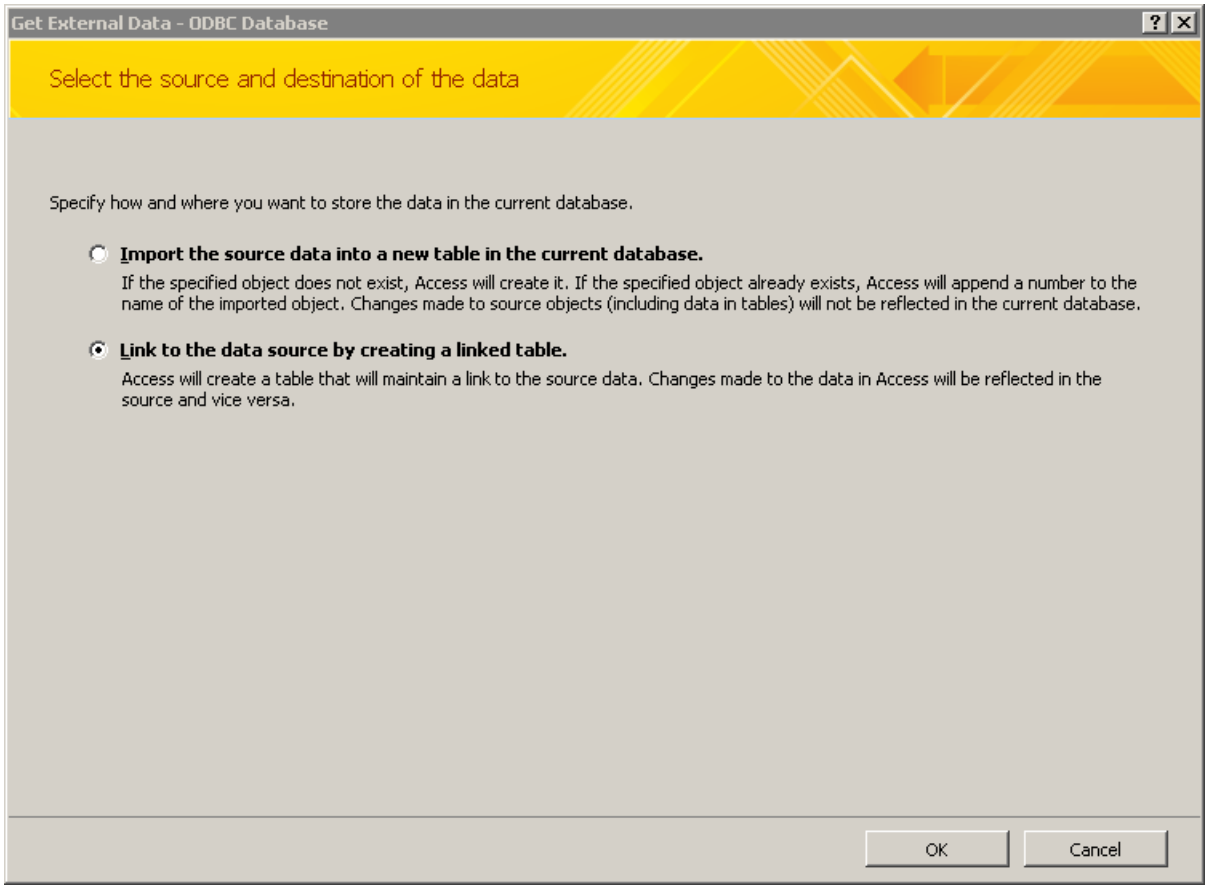
- Test the connection using a personal account that is created as described above.

Example Connection Microsoft Access

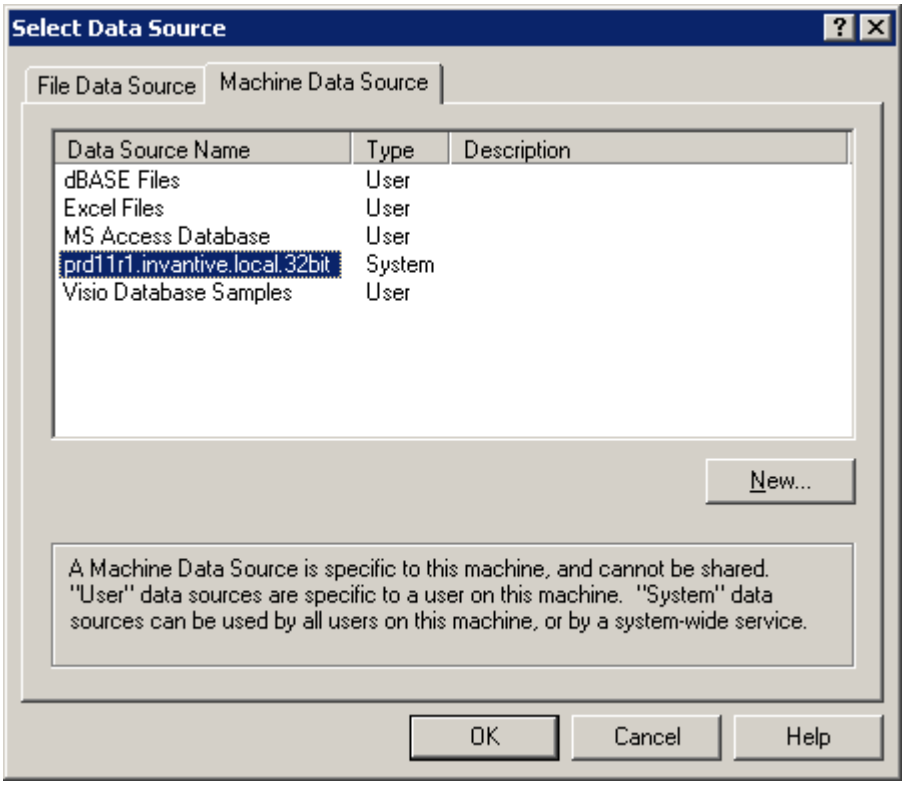
- Start the ODBC client (for example Microsoft Access):



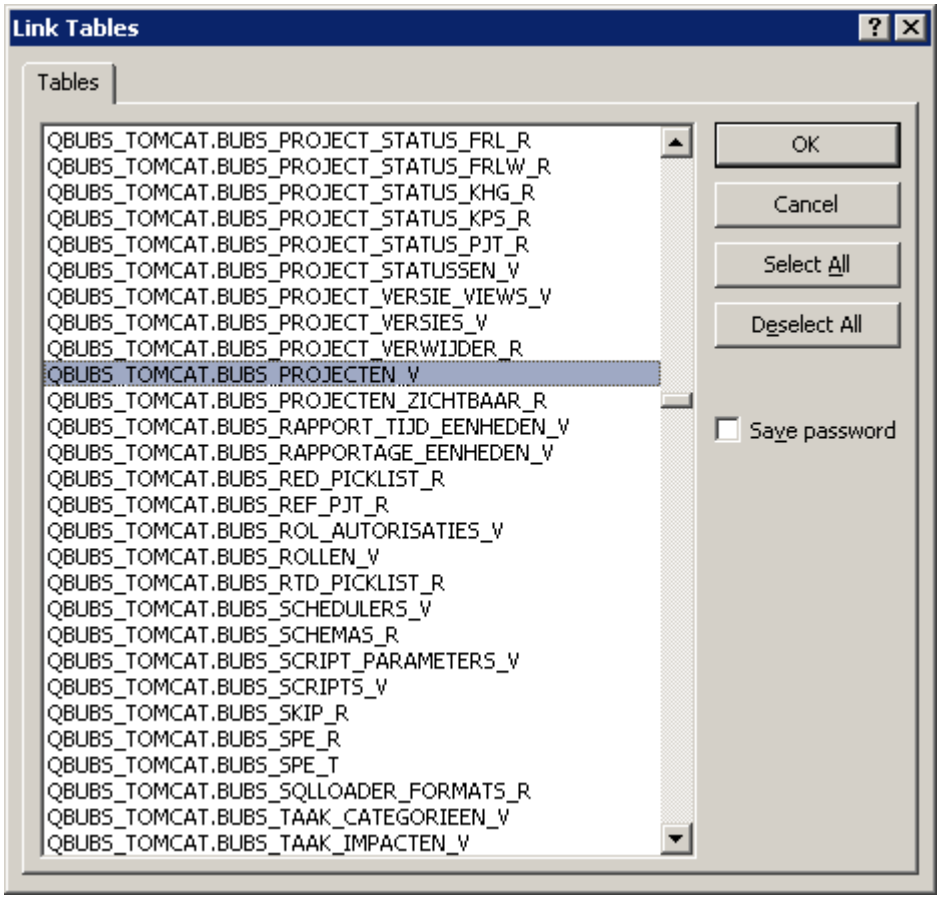
- Preferred connection is the kind where data is not copied:



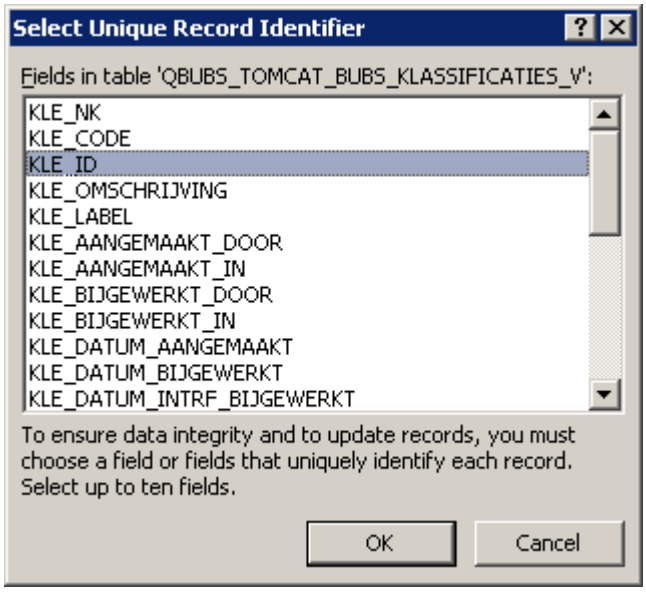
- Select the ODBC DSN:



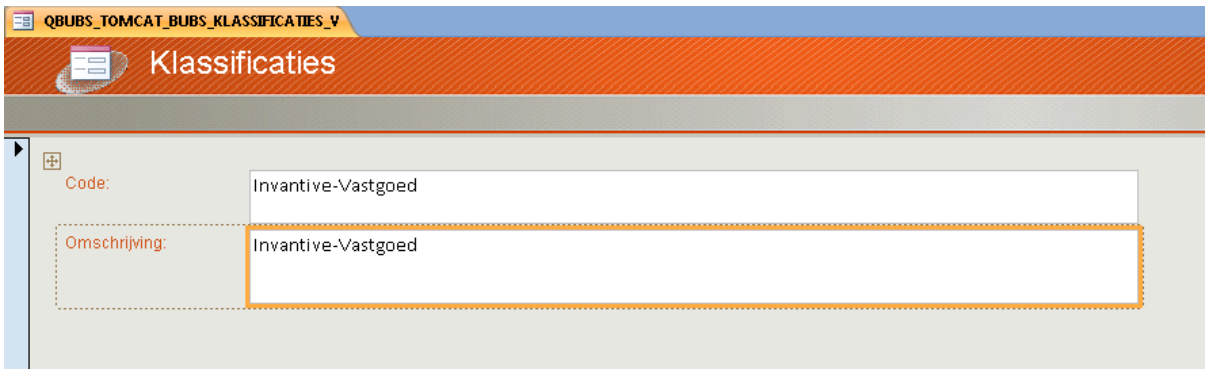
- Choose a business view:



- Choose the unique key (always ID):



- The final result will look, for example, like this:



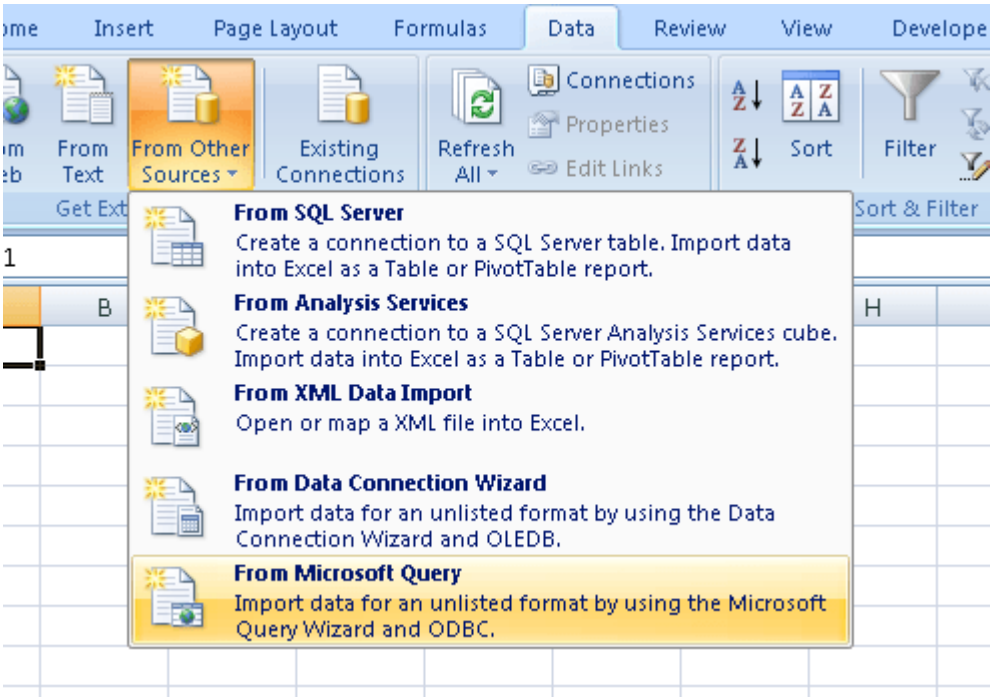
- Next the information can be requested and/or mutated in accordance with the established rights.

Example Connection with Microsoft Excel

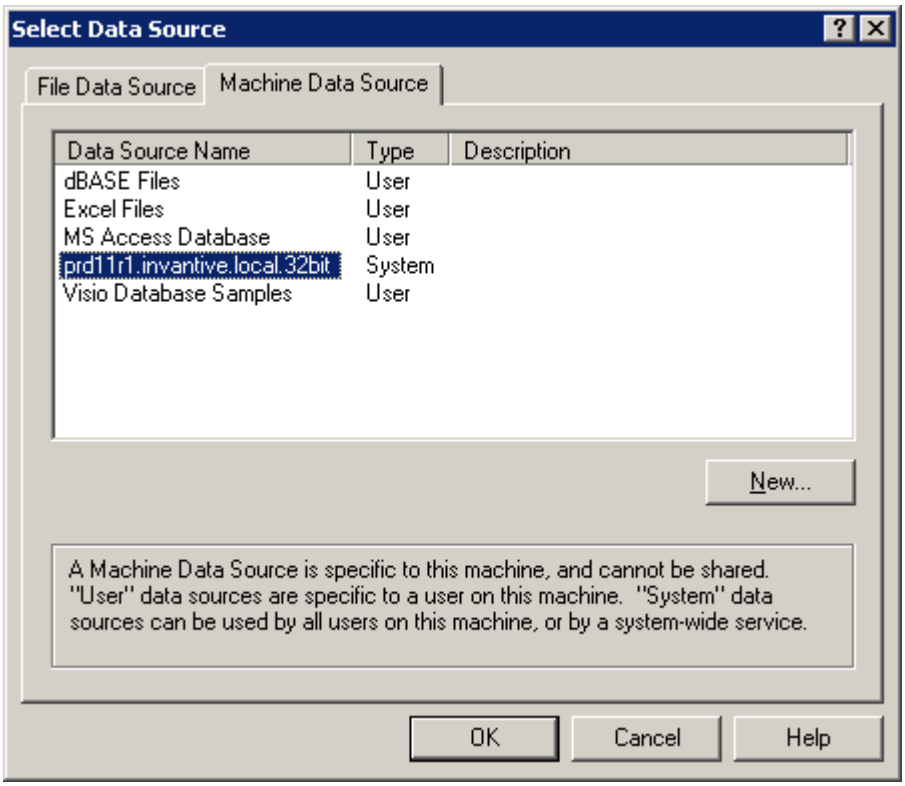
After the ODBC connection is created, also a connection with Microsoft Excel and the associated Microsoft Query can be made.

This example will show the budgeted and actual costs for cost category 3200 for all projects:

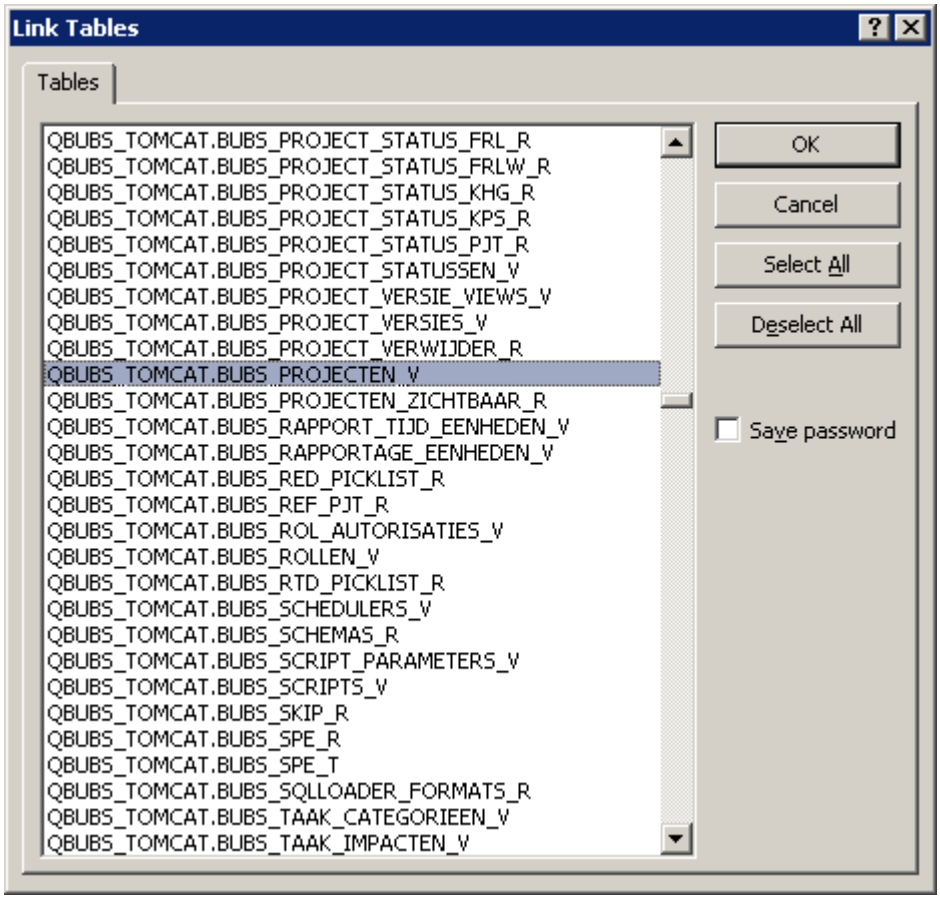
- Start Microsoft Excel.
- Select the ribbon ‘Data’ and create a connection:



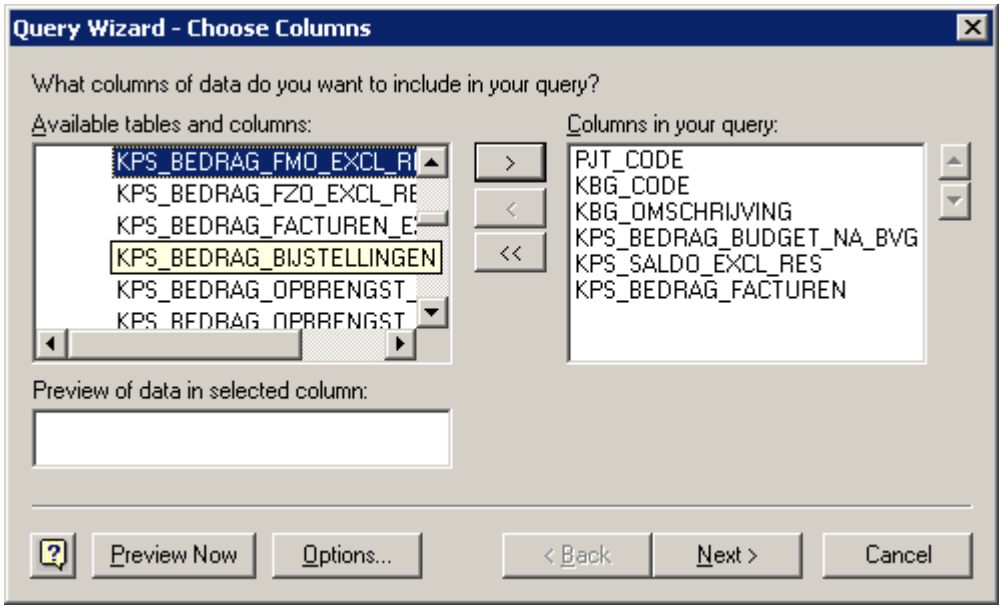
- Select ODBC DSN:



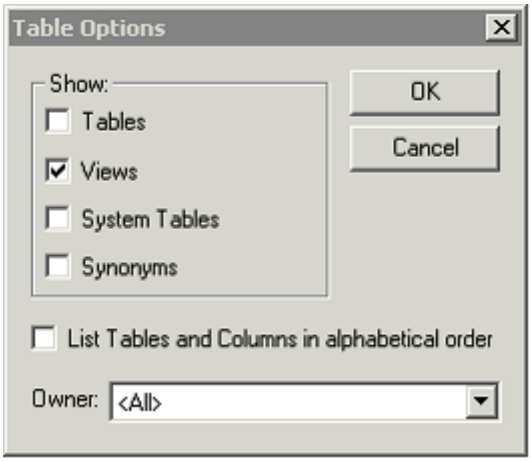
- Select a business view based on the technical reference manual:



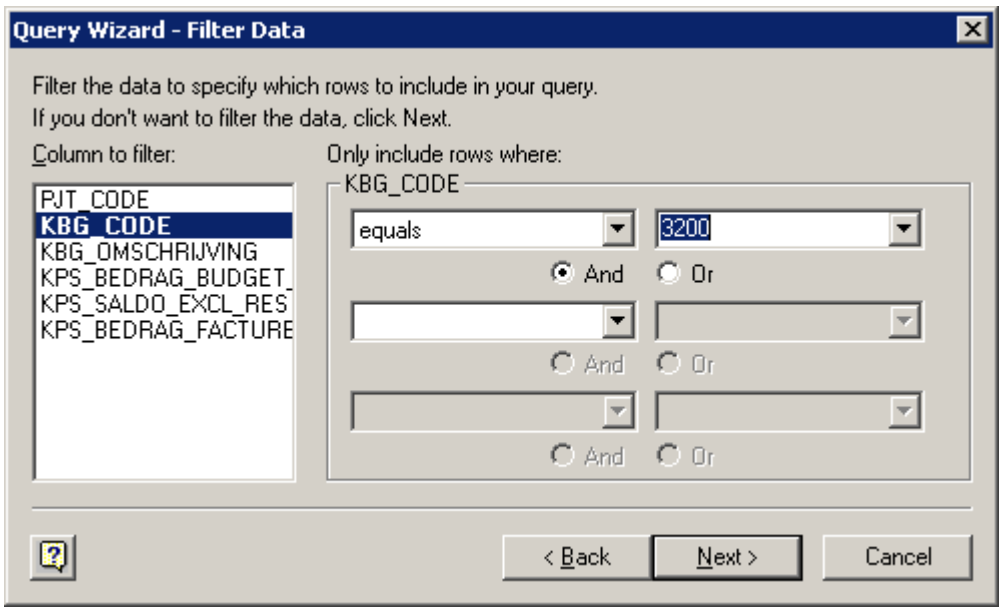
- Select the preferred columns (budget, forecast, project, cost category):



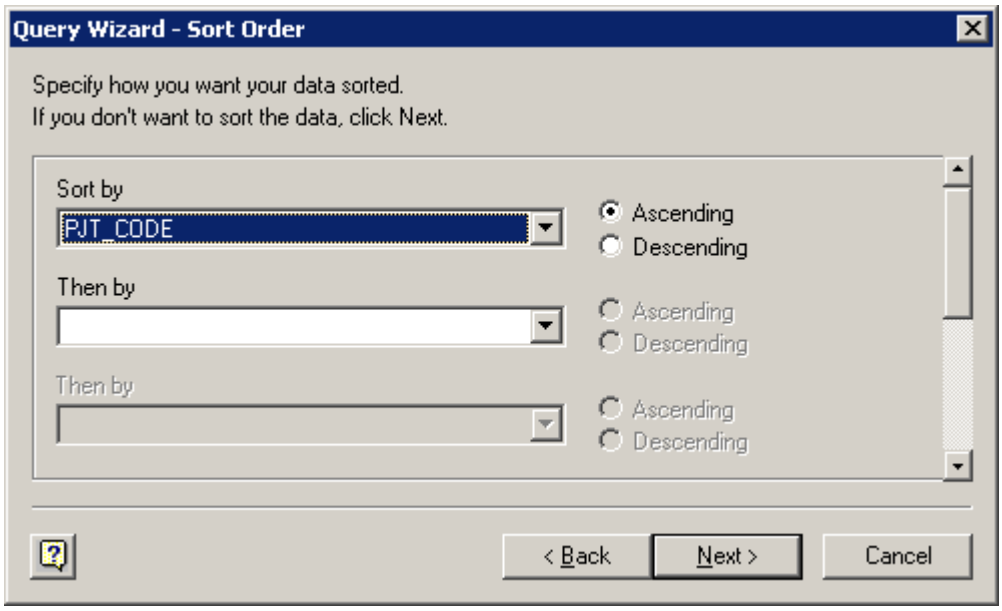
- Note: If the same tables are displayed at the same time, make sure that only ‘Views’ is selected using the button ‘Options’:



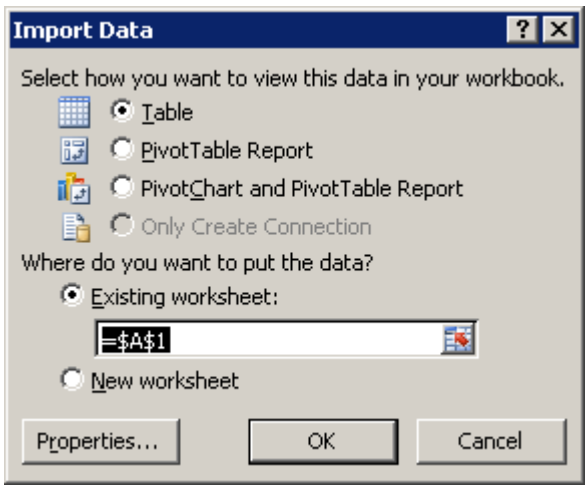
- Select the preferred filter on cost category '3200':



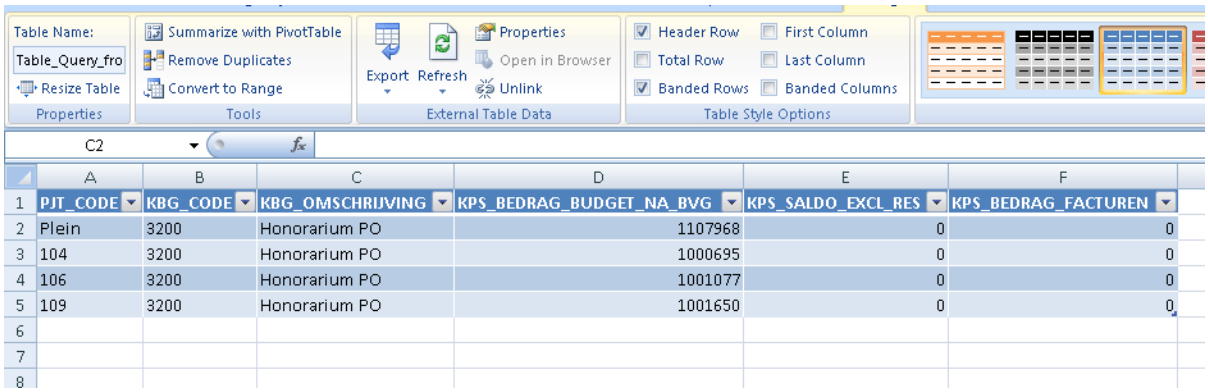
- Choose the desired collation on project code:



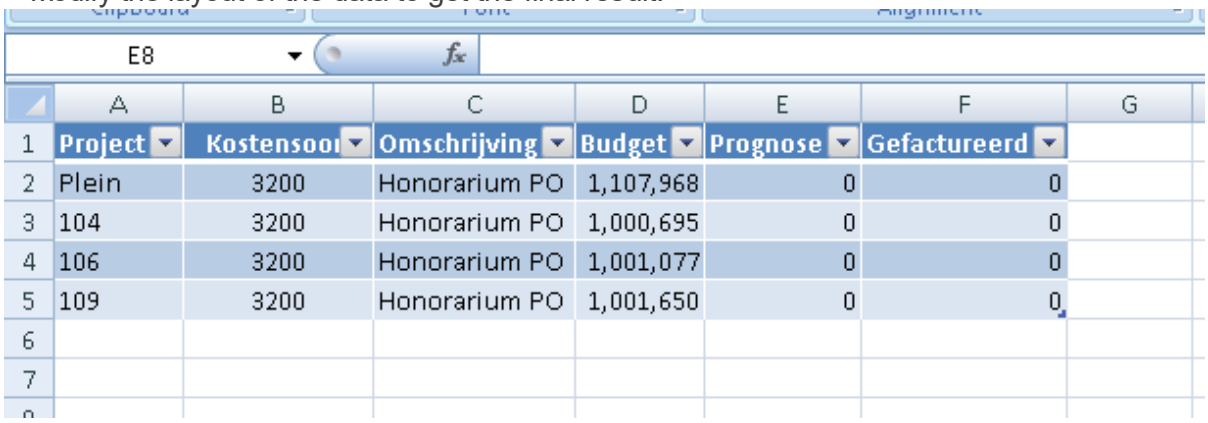
- Select the location in Microsoft Excel where the data should be placed:



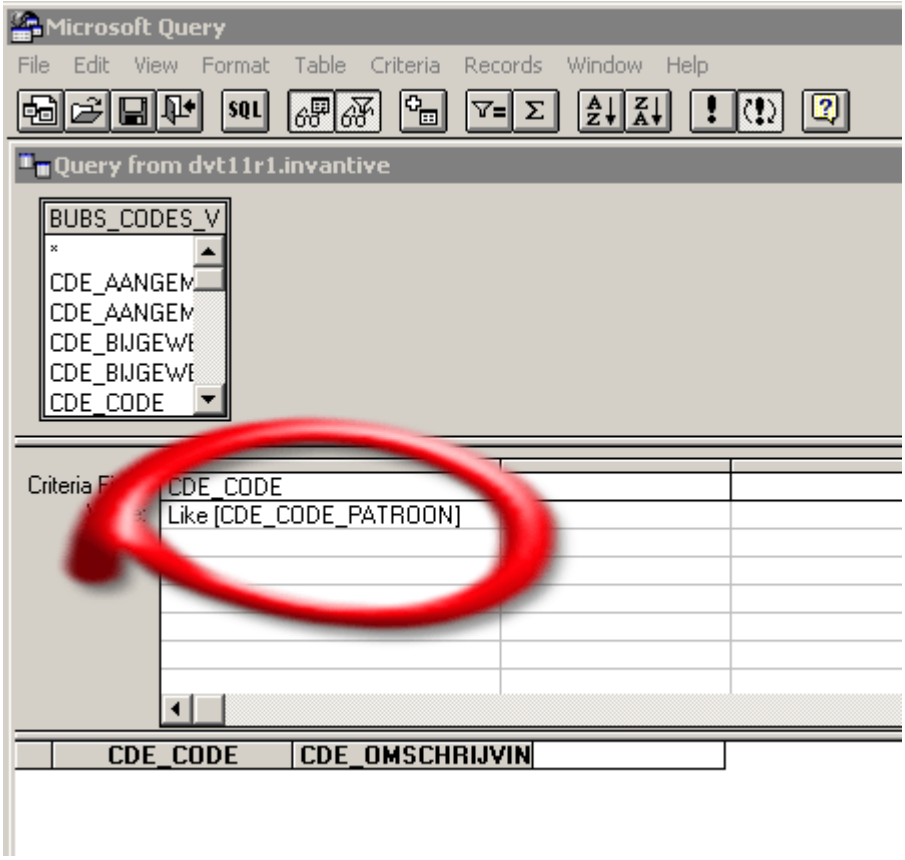
- The data becomes visible in Excel:



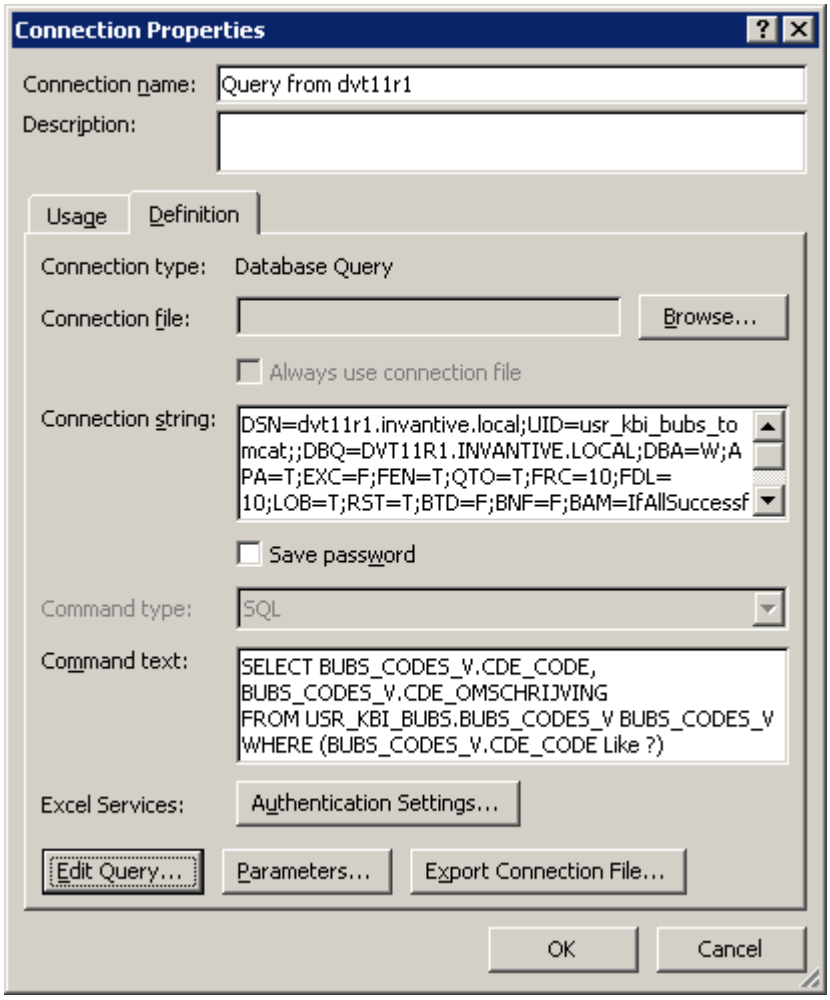
- Modify the layout of the data to get the final result:



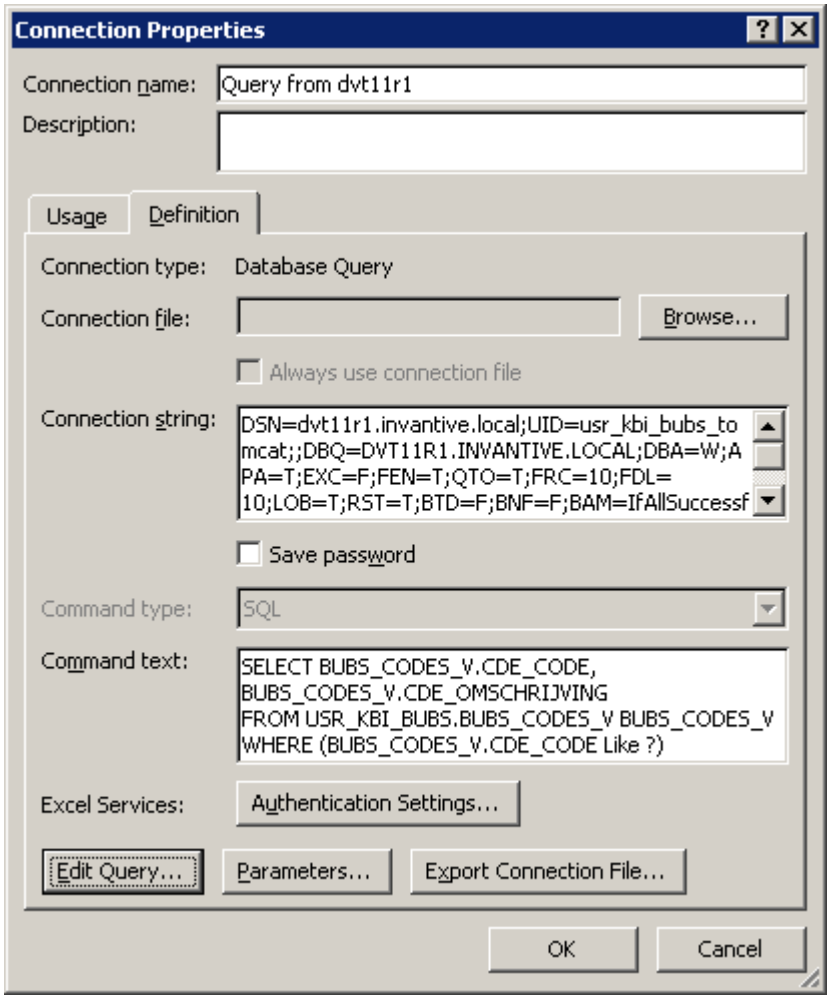
- If needed, the data can be managed using parameters. Select 'Properties' in the tab 'Data'.
- Select the property button to the right of the question mark.
- Select ‘Edit Query’.
- Expand the query with parameters in the format ‘[DESCRIPTION]’, for example:



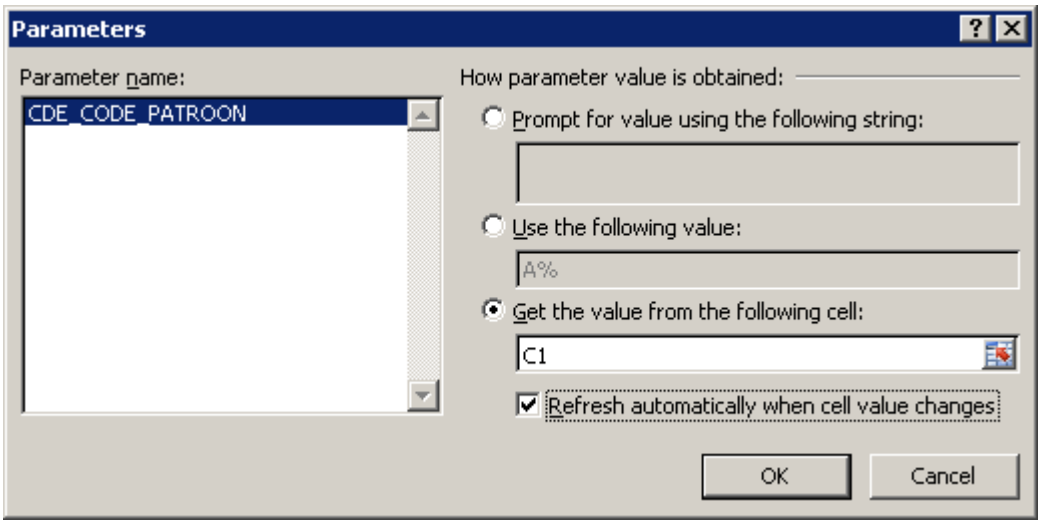
- Via the menu option ‘View’ and then ‘Parameters’ you open the screen:



- Once a parameter is published via Microsoft Query, the button ‘Parameters’ will be available in the query properties:



- You can use this button to specify that the question should be based on the contents of a cell:



Example Start Up Your Own Background Job

It´s possible to request the running of a background process to Invantive Vision from your own program. Use a PL/SQL code like:

```
begin
  --
```

```
  -- Start a job with parameters.
  --
  -- Log on to Invantive.
  --
  bubs_session.set_session_info
  ( 'my_program_name'
  , 'start etl process'
  , 'system'
  , 'no query'
  , coalesce(sys_context('userenv', 'ip_address'), '?')
  , sys_context('userenv', 'host')
  , 'my_url'
  , '$Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
voorbeeld-eigen-achtergrondproces.xml 19891 2012-10-09 13:23:03Z
gle3 $' || to_char(sysdate, 'YYYYMMDDHH24MISS')
  );
  --
  -- Submit background job.
  --
  bubs#background_jobs.submit('BUBS_RUN_ETL', sysdate);
  --
  -- Fill parameters (optional).
  --
  bubs#background_jobs.set_parameter('p_etl_file',
'../etl/example.kjb');
  bubs#background_jobs.set_parameter('p_log_level', 'BASIC');
  bubs#background_jobs.finish_parameter_entry;
  --
  -- Save to allow job to be picked up by schedulers.
  --
  commit;
  --
  -- Wait till job ends (optional).
  --
  -- Starting release b41, you can substitute this code by:
  --
  -- bubs#background_jobs.wait_for_finish_job
  --
  declare
    l_dummy pls_integer;
  begin
    while true
    loop
      select 1
      into   l_dummy
      from   bubs_background_jobs_v bjb
      where  1=1
      and    bjb.bjb_seq         =
bubs#background_jobs.get_bjb_seq_last_submitted
      and    bjb.bjb_datum_einde is null
      ;
    end loop;
  exception
    when no_data_found
```

```
      then
        null; -- Job ended.
    end;
  end;
```

You can also use one job to start other jobs. In that case you only need to use the code from 'Submit background job'. Waiting for the completion of all initiated jobs can be done with:

```
bubs#background_jobs.wait_for_finish_all_child_jobs;
```

1.7.10.3 Invantive Server Pages

Within Additional Business rules 266 and Your Own User Interface 469 you can make use of Invantive Server Pages. Invantive Server Pages, also known as 'ISP', are comparable with Active Server Pages ('ASP') and Java Server Pages ('JSP').

Using user profile options for example, you can build reports in HTML or XML format which can be used for instance in emails. It is better to use ISP than the customized reports in the web user interface in the following situations:

- There is a continuous layout and not a layout for each page.
- The output needs to be HTML or XML.
- Possible changes are needed while compiling the report.
- The layout is more complex than what was possible with iReport.

ISP pages supply PL/SQL programming in the end, just like additional business rules. ISP pages are a better choice compared to additional business rules such as:

- The end product contains many layout elements.
- The person who builds the layout has little knowledge of additional business rules and PL/SQL.

The system recognizes ISP scripts by the next text directly at the beginning of a text:

<%@ page language="ISP" %>

Subsequently, layout elements and code elements can be interchanged. The code segments must be placed between '<%' and '%>' and must be written in Oracle PL / SQL.

The layout elements are identically reproduced in the output of the ISP script and the code segments are executed. All output to dbms_output is included in the output of the ISP script.

The following ISP script writes a welcome message to the Oracle user:

```
<%@ page language="ISP" %>
<html>
<body>
Welkom <% dbms_output.put_line(user); %>
</body>
</html>
```

All code sections may fill variables. It is recommended to define them in the beginning. Code sections located later in the script, can then read the variables. The following script provides for instance the day which is used later:

```
<%@ page language="ISP" %>
<% declare
  l_dag varchar2(100);
begin
```

```
%>
<html>
<body>
<% l_dag := to_char(sysdate, 'DDD'); %>
Welkom <% dbms_output.put_line(user); %>,
het is vandaag <% dbms_output.put_line(l_dag); %>.
</body>
</html>
```

For the execution of a ISP script you can use itgen_isp.run. You can pass variables in the format of a URL parameter text as second parameter, for example 'GBR_ID=1&TAK_ID=2'. In the ISP code this can be used to read the contents of the l_parameters_map(NAME). You can only retrieve the values of get parameters of a form.

The content type can be changed by assigning a value to the variable l_content_response_type.

If the ISP is started using an ISP that is stored in the database as a code, then you can find that code in the variable l_spe_code.

If a user has rights on the screen 'Display Invantive Server Pages', then he can basically open all pages. Per Invantive Server Page this can be further refined by setting the variable l_access_granted_flag to 'Y' or 'N', for example by creating a function for the Invantive Server Page in the following manner:

```
  l_access_granted_flag :=
itgen_utilities.bool2char(bubs#mijn_menu_functies_r.has_access('
xxive_db_sessions'));
```

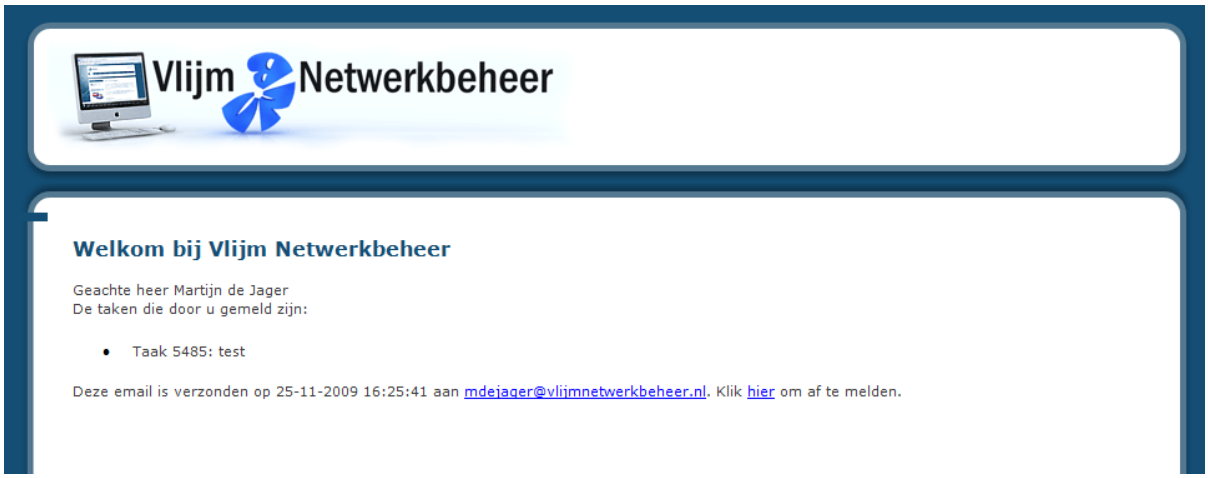
Newsletter Example

In this example using ISP a newsletter will be composed in the next steps:

- Create a profile option containing the layout of the newsletter.
- Create a profile option containing the ISP.
- Send newsletter, select the users and create the emails used for the newsletter.

Note that you can merge both profile options to one profile option.

The final result is a newsletter in the following format:



Profile Option Layout Newsletter

This local profile option contains the layout of the newsletter. The texts ': Payload' and ': FOOTER' are replaced by the message:

Profile Option ISP

This local profile option contains the ISP to compose the message:

The code is:

```
<%@ page language="ISP" %>
<%
declare
  l_gbr_aanhef       varchar2(500);
  l_template         clob;
  l_payload          clob;
  l_tak_found        boolean;
begin
  l_template := bubs#profiel_opties.get_value('xxinet-html-
nieuwsbrief-template');
```

```
  l_payload  := '';
  --
  -- Determine greeting.
  --
  select 'Geachte '
         || case
            when gbr.gbr_geslacht_ind = 'M'
            then 'heer '
            when gbr.gbr_geslacht_ind = 'V'
            then 'mevrouw '
            else ''
            end
         || gbr_naam
  into   l_gbr_aanhef
  from   bubs_gebruikers_v gbr
  where  gbr.gbr_id = l_parameters_map('GBR_ID')
  ;
  l_payload  := l_payload || l_gbr_aanhef || ',';
  l_payload  := l_payload || '<br/>';
  l_payload  := l_payload || 'De processen die door u gemeld
zijn:';
  l_payload  := l_payload || '<ul>';
  l_tak_found := false;
  --
  for r_tak in
  ( select tak.code tak_code
    ,      tak.omschrijving tak_omschrijving
    from   bubs_processen tak
    where  tak.gbr_id_melder = l_parameters_map('GBR_ID')
    order
    by     tak.id desc
  )
  loop
    l_payload := l_payload || '<li>Proces ' || r_tak.tak_code ||
': ' || r_tak.tak_omschrijving || '</li>';
  end loop;
  --
  if not l_tak_found
  then
    l_payload := l_payload || '<li>Geen meldingen.</li>';
  end if;
  --
  l_payload  := l_payload || '</ul>';
  --
  -- Merge both.
  --
  l_template := replace(l_template, ':PAYLOAD', l_payload);
  l_template := replace
                ( l_template
                , ':FOOTER'
                , 'Deze e-mail is verzonden op '
                  || to_char(sysdate, 'DD-MM-YYYY HH24:MI:SS')
                  || ' aan '
                  || l_parameters_map('GBR_EMAIL_ADRES')
```

```
                    || '. Klik <a href="http://site/afmelden?
GBR_ID='
                    || to_char(l_parameters_map('GBR_ID'))
                    || '">hier</a> om af te melden.'
                  );
  itgen_isp.print_clob(l_template);
end;
%>
<!-- Aangemaakt met Invantive Vision -->
```

Send Newsletter

After this one time activities it is easy to send the newsletter with for example:

```
begin
  --
  -- Log on to Invantive Vision
  --
  bubs_session.set_session_info
  ( 'toad.sql'
  , 'install'
  , 'system'
  , 'Newsletter'
  , coalesce(sys_context('userenv', 'ip_address'), '?')
  , sys_context('userenv', 'host')
  , 'n/a'
  , 'TOAD ' || to_char(sysdate, 'YYYYMMDDHH24MISS')
  );
end;
/
insert into bubs_berichten_v
( brt_afgehandeld_vlag
, brt_afzender
, brt_afzender_naam
, brt_boodschap_l
, brt_mime_type
, brt_onderwerp
, brt_ontvanger
, brt_ontvanger_naam
, brt_ref_tabel
, brt_ref_sleutel
, brt_vertalen_vlag
)
select 'N'
,      'info@acme.com'
,      'ACME'
,      itgen_isp.run
       ( bubs#profiel_opties.get_value('xxacme-html-nieuwsbrief-
isp')
       , 'GBR_ID=' ||
itgen_url.escape_cached(to_char(gbr.gbr_id), 'Y')
         || '&' || 'GBR_NAAM=' ||
itgen_url.escape_cached(gbr.gbr_naam, 'Y')
         || '&' || 'GBR_EMAIL_ADRES=' ||
itgen_url.escape_cached(gbr.gbr_email_adres, 'Y')
       )
```

```
,       'text/html'
,       'ACME nieuwsbrief november 2009'
,       gbr.gbr_emil_adres
,       gbr.gbr_naam
,       'GBR'
,       gbr.gbr_id
,       'Y'
from    bubs_gebruikers_v gbr
where   1=1
and     gbr.gbr_email_adres is not null
/
commit
/
```

1.8 Processes

This chapter describes the functioning of processes that take place via multiple screens, processes and manual operations.

1.8.1 Invoicing

See the Visio flowchart bubs processes (CAPTERE IN HERE).

Step I5 / I6 / I7: Invoicing

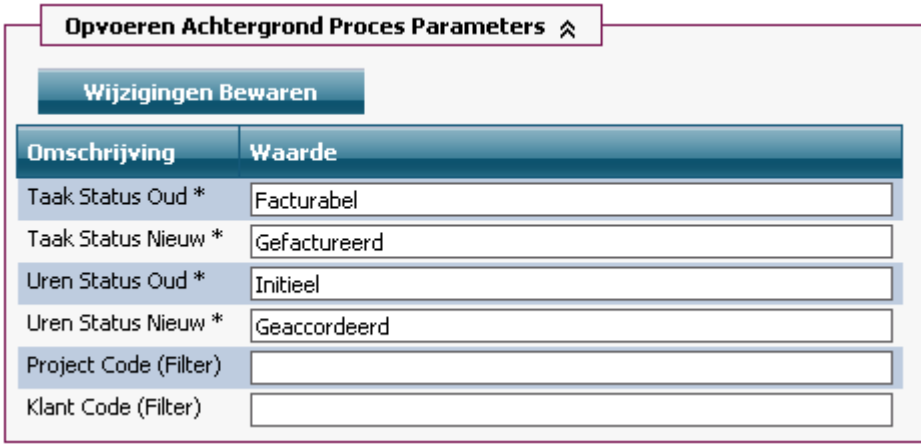
It is possible in one effort to:

- approve all hours;
- completed processes to be invoiced;
- all hours to be invoiced of invoiceable processes;
- invoice all hours of projects;
- all concept invoices to be approved.

To do so please follow the next steps:

- Select the background script ‘Invoicing: process all parts’:

- Enter the parameters as follows:



- Process the background process.
- End result is:

Nummer	Script Omschrijving	Gewenste Starttijd	Aanvrager	Start	Einde	Status	Eindstatus	Herkomst Verwerking
72.933	Facturatie: alle concept factuur regels goedkeuren.	Vandaag 17:20:28	system	Vandaag 17:20:40	Vandaag 17:20:41	Afgerond	Succesvol	72.928
72.932	Facturatie: overzicht niet-gefactureerde uren	Vandaag 17:20:14	system	Vandaag 17:20:25	Vandaag 17:20:26	Afgerond	Succesvol	72.928
72.931	Facturatie: factureer uren	Vandaag 17:19:59	system	Vandaag 17:20:10	Vandaag 17:20:11	Afgerond	Succesvol	72.928
72.930	Facturatie: vaste prijs taken factureren, overige taken klaarzetten voor uren facturatie	Vandaag 17:19:40	system	Vandaag 17:19:57	Vandaag 17:19:58	Afgerond	Succesvol	72.928
72.929	Facturatie: projecten klaarzetten voor uren facturatie	Vandaag 17:19:39	system	Vandaag 17:19:56	Vandaag 17:19:56	Afgerond	Succesvol	72.928
72.928	Facturatie: verwerk alle onderdelen	Vandaag 17:17:15	system	Vandaag 17:19:39	Vandaag 17:20:44	Afgerond	Succesvol	

- In the screen Draft Invoice Lines 138 you can view the results.

Step I8: Export

Subsequently the approved concept invoice lines can then be exported into an interface file for the ERP package used, such as for example, KING. To do so, follow these steps:

- Run the background program ‘King: Extraction sales orders’.

- After the process has been executed (see picture), you can retrieve the output.

Nummer	Script Omschrijving	Gewenste Starttijd	Aanvrager	Start	Einde
72.936	Beheer: verwerk berichten	Vandaag 17:31:05	system		
72.935	King: Extractie verkooporders	Vandaag 17:25:13	system	Vandaag 17:25:45	Vandaag 17:25:50

- The output is in XML format which can be imported into KING:

```
- <!--
    START Invantive Vision dump concept invoice lines, $Header: /home/services/scm/p104/ddl/bubs_interface_king.bod,v 1.2 200
  -->
- <!--
    Extracted on 01-09-2009 17:25:45 by Oracle user ABUBS, database orcl11r1, database server vnbcms, client_info ABUBS, sess.
  -->
- <KING_ORDERS>
  - <ORDERS>
    - <ORDER>
      - <ORDERKOP>
          <ORK_ORDERNUMMER/>
          <ORK_EXTERNORDERNUMMER/>
          <ORK_DEBITEURNUMMER>12000001</ORK_DEBITEURNUMMER>
          <ORK_REFERENTIE/>
          <ORK_ORDERDATUM/>
          <ORK_LEVERDATUM/>
          <ORK_FACTUURADRESSOORT>COR</ORK_FACTUURADRESSOORT>
        - <ORK_VERZENDADRES>
```


1.8.2 New Employee

Follow these steps to enter a new employee, so he or she can log inInvantive Vision:

- Create a person in the screen Persons 102. Before you create a user, there must always be a person;
- Create a user from the person in Users 161. Enter a username and password;
- Select the roles of the person in Person Roles 162. Here you can indicate whether the person is a time writer, process owner or process reporter and the unit, working schedule and internal tariff.
- Give the user the role for authorization User Roles 164. Indicate here which role the users have in terms of authorization Invantive Vision.

Follow the next steps if the new contributor will also write hours that are going to be billed:

- If you use a separate unit for each employee, enter the new unit in Units 157.
- Enter the sales price for the new unit in Price List Lines 186.
- Enter in the screen Persons roles 162 the desired unit.

1.9 Server

1.9.1 Background Scripts for Administration

The following background scripts are available for administration.

1.9.1.1 Compile Invalid Database Objects

This function is specifically for system administrators.

Compiles all database objects of which the validity is not certain, and because of which they are marked as invalid. After executing this script, it might be necessary to restart the application, since the foundation might have been changed. Also see Database Objects 281.

1.9.1.2 Check Contract Positions Cache

This function is specifically for system administrators.

The prognosis from the prognosis model are recalculated with each change of relevant input data. This background script checks if the advanced calculated and established prognosis are identical to the current results from the prognosis model.

1.9.1.3 Run ETL Process

This function is specifically for system administrators.

With 'Administration: Run ETL Process' you can execute programs for the moving of data in the background. This can be used for:

- Retrieving actual figures from the general ledger system and reading them again in the ERP interface.
- Geocoding of locations with the help of Google Geocode API.
- Offering of instructions to an application such as Basware for payments are refactored.

The programs can be developed with the Kettle of Pentaho Data Integration.

An ETL program gets the following parameters:

- BUBS_DB_SERVER: name of the server in the JDBC connection with the name 'bubs_tomcat'.
- BUBS_DB_PORT: port in the JDBC connection with the name 'bubs_tomcat'.
- BUBS_DB_NAME: name of the database in the JDBC connection with the name 'bubs_tomcat'.
- BUBS_DB_USER: name of the database user in the JDBC connection with the name 'bubs_tomcat'.
- BUBS_DB_PASSWORD: password of the database user in the JDBC connection with the name 'bubs_tomcat'.
- BUBS_JOB_GBR_AANMELD_CODE: login code of the application user that requested the background process.
- BUBS_JOB_BJB_SEQ: number of the background process.
- BUBS_JOB_SCT_CODE: code of the background script that is running.
- BUBS_JOB_SDR_CODE: code of the background planner that executes the background process.
- Plus all parameters that the background script has.

Login

Per Kettle program (transformation of job) you can create connections. If you want to connect with the application, give this connection the name 'bubs' with the following specification:

```
<connection>
  <name>bubs</name>
  <server>${BUBS_DB_SERVER}</server>
  <type>ORACLE</type>
  <access>Native</access>
  <database>${BUBS_DB_NAME}</database>
  <port>${BUBS_DB_PORT}</port>
  <username>${BUBS_DB_USER}</username>
  <password>${BUBS_DB_PASSWORD}</password>
  <servername/>
  <data_tablespace/>
  <index_tablespace/>
  <attributes>
```

```
      <attribute><code>FORCE_IDENTIFIERS_TO_LOWERCASE</code><att
ribute>N</attribute></attribute>
      <attribute><code>FORCE_IDENTIFIERS_TO_UPPERCASE</code><att
ribute>N</attribute></attribute>
      <attribute><code>IS_CLUSTERED</code><attribute>N</attribut
e></attribute>
      <attribute><code>PORT_NUMBER</code><attribute>1521</attrib
ute></attribute>
      <attribute><code>QUOTE_ALL_FIELDS</code><attribute>N</attr
ibute></attribute>
      <attribute><code>SUPPORTS_BOOLEAN_DATA_TYPE</code><attribu
te>N</attribute></attribute>
      <attribute><code>USE_POOLING</code><attribute>N</attribute
></attribute>
      <attribute><code>SQL_CONNECT</code><attribute>/* Log on to
middle tier. */
insert into bubs_pre_laden_r
(action_requested, action_parameter1, action_parameter2,
action_parameter3, action_parameter4, action_parameter5,
action_parameter6, action_parameter7, action_parameter8,
action_parameter9)
values
( &apos;LOGON FULL&apos;
, &apos;$Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
draai-etl-proces.xml 19891 2012-10-09 13:23:03Z gle3 $&apos;
, &apos;ETL&apos;
, &apos;${BUBS_JOB_GBR_AANMELD_CODE}&apos;
, &apos;Job ${BUBS_JOB_BJB_SEQ}&apos;
, null
, null
, null
, &apos;$Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/
draai-etl-proces.xml 19891 2012-10-09 13:23:03Z gle3 $&apos; ||
to_char(sysdate, &apos;YYYYMMDDHH24MISS&apos;)
, null
)
</attribute></attribute>
    </attributes>
  </connection>
```

1.9.1.4 Dump Projects like XML

This function is specifically for system administrators.

With this background script you can register projects with all data in the file outside the documents as XML. This XML file can be used to feed other systems or for long term archiving.

1.9.1.5 Generate XML File for Web Services

This function is specifically for developers and system administrators.

The Invantive Producer repository is converted to an XML file that can be used to generate the web services.

1.9.1.6 Optimize Storage of Text Index

This function is specifically for system administrators.

Optimizes the storage of the text index for documents in order to occupy less storage space and to speed up document search. Execution does not have to occur frequently, normally a couple of times per year will do. See also Documents 109.

1.9.1.7 Parse heavy SQL Statements in advance of the actual Call

This function is specifically for system administrators.

It is recommended to schedule the execution of these scripts every morning before 08:00 hours. This will speed startup when the first user logs on because a lot of data already has been loaded from the hard disks into the memory.

The SQL statements that are being prepared, have to be collected regularly with the help of the script.Collect SQL Statements which Are relatively heavy to Parse 502

1.9.1.8 Send messages for Exceedance Deadline Processes

This function is specifically for system administrators.

Sends a message by email to the process owner for all processes that are still open and with deadlines in the past.

1.9.1.9 Send Email to Administrator and Supplier with Errors

This function is specifically for system administrators.

Via this background job you can send errors and warnings from the messages of <% PRODUCT%> and from database-wide alerts to Invantive. Invantive regularly analyzes those messages to improve the quality of the software on those parts that are most important for users.

1.9.1.10 Synchronize Additional Business Rules if Necessary

This function is specifically for system administrators.

Normally, this function is automatically executed if an additional business rule 266 changes. This function updates all the generated software for additional business rules based on the specifications of all views from which is indicated that they need to be synchronized.

1.9.1.11 Synchronize Additional Business Rules for 1 Specific View

This function is specifically for system administrators.

Normally, this function is automatically executed if an additional business rule 266 changes. The function updates the generated software for additional business rules based on the specifications for exactly óne specific view, independent of whether the additional business rule was changed or not. This can sometimes be necessary if the generated software is manually adjusted outside the control of Invantive Vision.

1.9.1.12 Synchronize Text Index of Documents with actual Content

This function is specifically for system administrators.

Update the text index for documents 109 with newly added documents. Without this background process it is no possible to find documents using the index. The script is automatically started for each new document that is added.

1.9.1.13 Validate Soll Numbers with Data

This function is specifically for system administrators.

Compare the actual present data with the supplied Soll values 238. The outcomes are stored as tests 237. Also see Value Formulas 240.

1.9.1.14 Process Messages

This function is specifically for system administrators.

Try to deliver all messages using the SMTP Server in the screen Settings 349 which have not been delivered and for which you can try to deliver the message again.

Everyone tries to deliver the maximum number of emails as noted in the profile option 'bubs-brt-maximum-number-emails-each-time'.

If the profile option 'bubs-sct-send-mail-smtp-authenticate' is on Y, authentication will be accomplished with help from the user as noted in 'bubs-sct-send-mail-smtp-user' and the password in the profile option 'bubs-sct-send-mail-smtp-password'.

Mail which couldn't be delivered, will be automatically delivered later. The delay is set in the screen Settings 349. The delay is multiplied by 2 till the power of the number of tries executed to delivere the message. The maximum delay is 4 hours.

1.9.1.15 Delete all Data from the ERP Interface Tables

This function is specifically for system administrators.

All data from the ERP interface tables will be removed.

1.9.1.16 Delete all old Background Jobs

This function is specifically for system administrators.

Delete all background process 228 which ended longer ago then the number of specified days.

1.9.1.17 Remove old Tables from Recycle Bin

This function is specifically for system administrators.

Permanently removes tables which have earlier been put in the recycle bin. The functioning is comparable with the database statement 'purge recyclebin'.

1.9.1.18 Collect SQL Statements which Are relatively heavy to Parse.

This function is specifically for system administrators.

With help from the script Parse heavy SQL statements before the actual call 501 you can improve the performance of the system with the first user. This script gathers necessary SQL statements.

1.9.1.19 Update Calender

This function is specifically for system administrators.

A calendar is included In the application which among other is used to convert dates into week numbers. From the moment of installation the calendar is filled for 10 years into the past and 30 years into the future. In case the application is going to be used for a longer time, it might be necessary to update the calendar for the future. Usually it is sufficient to perform this script once a year.

1.9.1.20 Update Statistics

This function is specifically for system administrators.

For optimal performance the application uses statistics of the stored data. These statistics are not updated automatically. After every major change in the stored date (for example, a conversion) the statistics need to be updated by this script. Moreover, it is recommendable to update the statistics every month.

1.9.2 Background Script for Development

The following background scripts are available for application development.

1.9.2.1 Update Business Layer

This function is specifically for system developers.

The business layer is constructed again, based on the data stored in Invantive Producer. After executing this script, it might be necessary to restart the application, since the foundation might have been changed. See also Invantive Producer 282.

1.9.3 Background Scripts for Testing

The following background scripts are available to test the correct functioning of the application.

1.9.3.1 Runs 10 Seconds

This function is specifically for system developers.

The processing of this script takes 10 seconds and it is made for testing the functioning of the background schedulers. 230

1.9.3.2 Java (with Error)

This function is specifically for system developers.

The processing of this script results in an error message and it is made for testing the functioning of the background schedulers 230.

1.9.3.3 Java (without Error)

This function is specifically for system developers.

The processing of this script doesnot result in an error message and it serves for testing the functioning of the background schedulers 230.

1.9.3.4 Multiple dependent Processes

This function is specifically for system developers.

Processing the script results in a series of processes which are interdependent. The script is made to test the functioning of the background schedulers. 230.

1.9.3.5 Oracle PL/SQL (with Error)

This function is specifically for system developers.

The processing of this script results in an error message and it is made for testing the functioning of the background schedulers 230.

1.9.3.6 Oracle PL/SQL (without Error)

This function is specifically for system developers.

The processing of this script doesnot result in an error message and it serves for testing the functioning of the background schedulers 230.

1.9.4 Background Scripts Invoicing

The following background scripts are available for invoicing.

1.9.4.1 Approve All Concept Invoice Lines

This script is part of the invoicing process.

The script approves all Concept invoice lines 138 not yet approved.

1.9.4.2 Remove All Forwarded Concept Invoice Lines

Remove all Concept invoice lines 138 that at least the specified number of days ago have been transmitted to the accounting package.

1.9.4.3 Book all hours as cost

Most small accounting packages can not easily book costs. This script books costs directly in <% PRODUCT%> as invoices 141.

Condition is that Invantive Vision also is checked by the auditor and both costs and revenues fall in the same accounting entity.

The size of costs posting is based on number of hours 149 times the internal rate of the person/machine times the weight of the labor type 183.

The effect can also be configured as follows:

- The code of the cost invoice is based on the contents of the profile option 'bubs-cfl-costaccounting-ftr-code-kosten-patroon'.
- The description of the cost invoice is based on the contents of the profile option 'bubs-cfl-costaccounting-ftr-omschrijving-patroon'.
- The description of the cost invoice line is based on the contents of the profile option 'bubs-cfl-costaccounting-frl-omschrijving-patroon'.
- The contract for the costs and revenues is based on the pattern of the contract of the labor type.
- The code of the revenue invoice is based on the contents of the profile option 'bubs-cfl-costaccounting-ftr-code-opbrengsten-patroon'.
- The description of the revenue invoice is based on the contents of the profile option 'bubs-cfl-costaccounting-pjt-code-opbrengsten'.
- The description of the revenue invoice line is based on the contents of the profile option 'bubs-cfl-costaccounting-kbg-code-opbrengsten'.

1.9.4.4 Invoice Hours

Invoice the hours that are ready for invoicing as described in Timesheet Statuses 193.

1.9.4.5 Overview non-invoiced hours

This overview shows the non-invoiced hours, regardless of the filter set.

First the hours are shown that have not been booked yet in the past and that are put ready for invoicing. Then follows a list of the hours that are ready for invoicing.

1.9.4.6 Prepare Projects for Invoicing of Hours

Hours that are directly booked on projects get the specified timesheet status. This should preferably be a timesheet status that is billable.

1.9.4.7 Fixed-Price-Billing Processes, other Processes for Preparing Billing Hours

Executes the following activities:

- Invoice fixed price processes like draft invoice lines.
- Ready the hours of all other processes for timesheet invoicing.
- Process used process units to draft invoice lines.

The invoicing of hours happens with Invoice Hours 504.

1.9.4.8 Process all Parts

This script executes the standard invoicing, by the following steps:

- Invoicing: Prepare projects for invoicing o hours.
- Invoicng: Fixed-Price-Billing Processes, prepare other processes for hours invoicing.
- Invoicing: invoice hours.
- Invoicing: Overview non-invoiced hours.
- Invoicing: Approve all concept Invoice Lines.

If your organization hs another invoicing process, you need to make your own background script. This can be placed in the screen Background Scripts 327.

1.9.5 Background Scripts Cash Flows

The following background scripts are available for cash flows.

1.9.5.1 Calculate massively Cash Flows

This script creates a cash flow projection for all projects within the specified criteria. The massively creation of such cash flows is often used to determine a multiyear forecast based on prognosed sales.

1.9.6 Background script Exact Online

The following background scripts are available for Exact Online.

1.9.6.1 Extraction Sales Invoices

Make a file with sales invoicing which can be uploaded using Exact Online. See also Concep Invoices 443.

The format of the sales invoices can be send through a number of profile options:

- bubs-interface-exactonline-factuur-product-proces-unit: the product for the usage of process units.
- bubs-interface-exactonline-factuur-product-uren: the product for the hours.
- bubs-interface-exactonline-factuur-product-vaste-prijs: the product for the fixed-price-processes.
- bubs-interface-exactonline-invoice-journal-sales: the journal for the sales.
- bubs-interface-exactonline-invoice-unit: the unit.
- bubs-interface-exactonline-invoice-format-labor: the description of the invoice line for hours, possibly using the fields
  :tak_code

, :tak_omschrijving
, :tak_referentie_klant
, :tak_referentie_leverancier
, :unt_omschrijving
, :cfl_datum_start_l
, :cfl_datum_einde_l
, :gbr_naam, :gbr_initials, :wst_code, :hour_comment, :hour_location, :pjt_code, :pjt_code_erp, :pjt_code_short,
kbg_code, :cfl_follownumber, :cfl_description, :cfl_date_start_s, :cfl_datum_end_s and :hour_comment_after.

- bubs-interface-exactonline-invoice-format-labor-note: the note on the invoice line for hours, possible usage of the fields
:tak_code:tak_description, :tak_referentie_klant
, :tak_referentie_leverancier, :unt_description, :cfl_datum_start_l, :cfl_date_end_l, :gbr_name, :gbr_initials, :wst_code, :hour_location, :hour_comment, :pjt_code, :pjt_code_erp, :pjt_code_short,
kbg_code, :cfl_follownumber, :cfl_description, :cfl_date_start_s, :cfl_date_eind_s en :hour_comment_after.<
- bubs-interface-exactonline-invoice-cost center-process: the cost center for processes.
- bubs-interface-exactonline-invoice-cost center-process-unit: the cost center for process units.
- bubs-interface-exactonline-invoice-line-format-product: the description of the invoice line for process units, possibly using the fields
:tak_code, :tak_omschrijving, :tak_reference_customer, :tak_reference_supplier and :unt_desciption, :pjt_code, :pjt_code_erp, :pjt_code_short,
kbg_code, :cfl_follownumber, :cfl_description, :cfl_date_start_s en :cfl_datum_end_s.
- Bubs-interface-exactonline-factuur-regel-formaat-product-notitie: the notition on the invoice line or process units, possibly using the fields
:tak_code, :tak_description, :tak_reference_customer, :tak_reference_supplier, :unt_description, :hour_location, :wst_code, :hour_comment, :pjt_code, :pjt_code_erp, :pjt_code_short,
kbg_code, :cfl_follownumber, :cfl_description, :gbr_initials, :gbr_name, :cfl_date_start_s, :cfl_date_end_s en :hour_comment_after.
- Bubs-interface-exactonline-factuur-regel-formaat-vaste-prijs: the description of the invoice line of fixed price processes, possibly using the fields
:tak_code, :tak_omschrijving, :tak_referentie_klant, :tak_referentie_leverancier, :unt_omschrijving, :wst_code, :uur_commentaar, :uur_locatie, :pjt_code, :pjt_code_erp, :pjt_code_kort,
kbg_code, :cfl_volgnummer, :cfl_omschrijving, :gbr_initialen, :gbr_naam, :cfl_datum_start_s, :cfl_datum_einde_s en :uur_commentaar_na.
- Bubs-interface-exactonline-factuur-regel-formaat-vaste-prijs-notitie: the note on the invoice line of fixed price processes, possibly using the fields
:tak_code, :tak_omschrijving, :tak_referentie_klant, :tak_referentie_leverancier, :unt_omschrijving, :uur_locatie, :wst_code, :uur_commentaar, :pjt_code, :pjt_code_erp, :pjt_code_kort,
kbg_code, :cfl_volgnummer, :cfl_omschrijving, :gbr_initialen, :gbr_naam, :cfl_datum_start_s, :cfl_datum_einde_s en :uur_commentaar_na.
- Bubs-interface-exactonline-factuur-regel-volledige-inhoud: the full description of the invoice line, built of individual parts.
- Bubs-interface-exactonline-factuur-tekst-geen-commentaar: text to use if there was no comment specified in the hour registration.
- Bubs-interface-exactonline-factuur-tekst-geen-locatie: text which should be used if no location was specified in hour registration.

- bubs-interface-exactonline-factuur-tekst-geen-proces-code: text to use as process code if there are direct hours registered on a project.
- bubs-interface-exactonline-factuur-tekst-geen-proces-omschrijving: text to use as process description if there are direct hours registered on a project.
- Bubs-interface-exactonline-formaat-datum: the (fixed) format for dates.
- Bubs-interface-exactonline-formaat-getal: the (fixed) format for numbers.
- Bubs-interface-exactonline-vlag-1-factuur-per-concept-regel: an invoice is made per draft invoice line if this profile option is set on 'Y'. Otherwise the rules are combined for each customer.

Sometimes, conversion invoices are used to fill Exact Online with an administration system. For this, the column Reference Detail Table is filled with '---'. The relevant profile options are:

- Bubs-interface-exactonline-factuur-product-conversie: unit which should be used for the conversion of invoices.
- bubs-interface-exactonline-factuur-kostenplaats-conversie: cost center for the conversion of invoices.

1.9.7 Achtergrondscript KING

The following background scripts are available for KING.

1.9.7.1 Extraction Sales Orders

Create a file with sales invoices which can be read using KING. See also Concep Invoices 458.

The format of the sales invoices can be send through a number of profile options:

- Bubs-interface-king-order-tarief-uren: the rate inside KING that is used for hours, possibly using the field :gbr_initialen.
- Bubs-interface-king-order-tarief-vaste-prijs: the rate inside KING that is used for fixed price processes.
- Bubs-interface-king-order-tarief-proces-units: the rate inside KING that is should be used for process units, possibly using the fields :ust_code, :usp_code, :unt_omschrijving, :ust_omschrijving, :usp_omschrijving, :unt_serie nummer en :tut_toelichting.
- Bubs-interface-king-order-kop-regel-1: an optional head line on the invoice.
- Bubs-interface-king-order-kop-regel-2: an optional head line on the invoice.
- Bubs-interface-king-order-kop-regel-3: an optional headline on the invoice.
- Bubs-interface-king-order-voet-regel-1: an optional footnote on the invoice.
- Bubs-interface-king-order-voet-regel-2: an optional footnote on the invoice.
- Bubs-interface-king-order-voet-regel-3: an optional footnote on the invoice.
- Bubs-interface-king-order-formaat-arbeid: the description of the invoice line for hours, possibly using the fields :tak_code, :tak_omschrijving, :tak_referentie_klant, :tak_referentie_leverancier, :unt_omschrijving, :cfl_datum_start_l, :cfl_datum_einde_l, :uur_locatie, :cfl_datum_start_s, :cfl_datum_einde_s, :pjt_code_kort, :pjt_code_erp, :pjt_code, :kbg_code, :cfl_volgnummer en:cfl_omschrijving.
- Bubs-interface-king-order-regel-formaat-product: the description of the invoice line for process units, possibly using the fields :tak_code, :tak_omschrijving, :tak_referentie_klant, :tak_referentie_leverancier, :unt_omschrijving, :ust_code, :usp_code, :ust_omschrijving, :usp_omschrijving, :unt_serienummer, :tu

t_toelichting, :cfl_omschrijving, :pjt_code_kort, :pjt_code_erp, :pjt_code, :kbg_code, :cfl_volgnummer en :cfl_omschrijving.

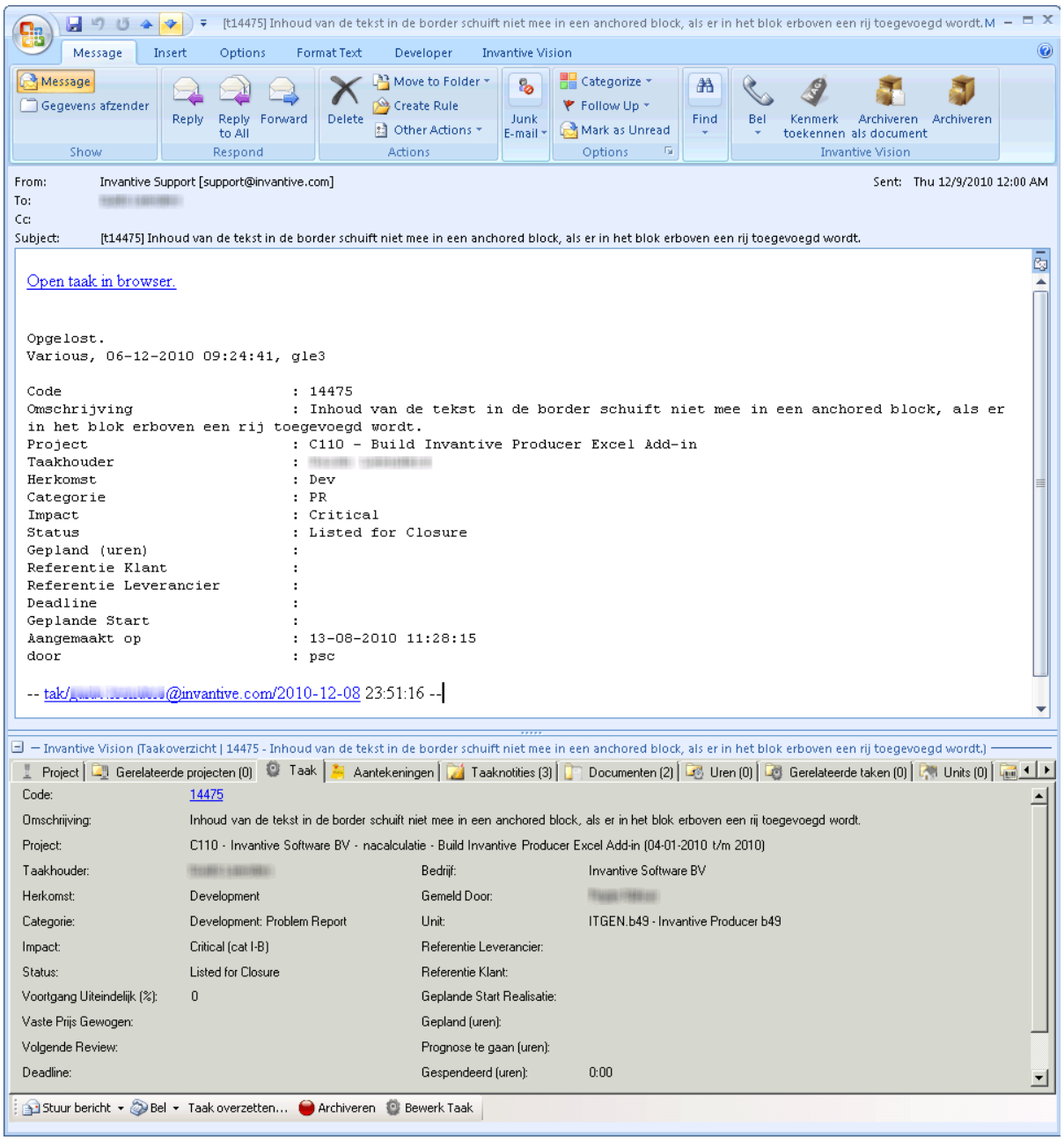
- Bubs-interface-king-order-regel-formaat-vaste-prijs: the description of the invoice line of fixed price processes, possibly using the fields :tak_code, :tak_omschrijving, :tak_referentie_klant, :tak_referentie_leverancier, :pjt_code_kort, :pjt_code_erp, :pjt_code, :kbg_code, :cfl_volgnummer, :cfl_omschrijving, :unt_omschrijving en :uur_locatie.
- Bubs-interface-king-order-tekst-geen-commentaar: text to ue if no comment was specified in the hour registration.
- Bubs-interface-king-order-tekst-geen-locatie: text to use if no location was specified in hour registration.
- Bubs-interface-king-order-tekst-geen-proces-code: text to use as process code if there are direct hours registered on a project.
- Bubs-interface-king-order-tekst-geen-proces-omschrijving: text to use as process description if there are direct hours registered on a project.
- Bubs-interface-king-formaat-datum: the (fixed) format for dates.
- Bubs-interface-king-formaat-getal: the (fixed) format for numbers.

1.9.8 Workflow

In the following cases, default messages are sent automatically:

- The process keeper receives a status overview of a task in the event of a task being modified and the profile option 'bubs-tak-email-houder-bij-wijziging' is set to 'Y'.
- The process keeper receives a status overview of a task in the event of a task being modified and the profile option 'bubs-tne-email-houder-bij-wijziging' is set to 'Y'.

For example, such a message looks like this:



Additionally, it is possible to set a custom message in the event the layout is not satisfactory. This can be done with Additional Business Rules 266.

1.9.9 Monitoring

Statistics are made available through the webserver. You need to request bubs_stats.do with the parameter COMMUNITY. The parameter need to have the same value as the profile option bubs-statistics-community. You can look up the standard statistics and the statistics for reading into Pandora FMS. You control this by using the FORMAT parameter that can be 'DEFAULT' or 'PANDORAFMS' respectively.

Finally, you have to specify which IP address ranges are permitted to retrieve the statistics. You can set this up with the profile option bubs-statistics-ipfilter.

By default, the statistics look as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
<Statistics>
<Time>27-03-2011 00-07-33</Time>
<Statistic><Code>bubs-lce-max-
usr</Code><Value>73</Value></Statistic>
<Statistic><Code>bubs-lce-max-
pjt</Code><Value>121</Value></Statistic>
<Statistic><Code>bubs-lce-max-
po</Code><Value>10</Value></Statistic>
<Statistic><Code>bubs-lce-max-
wip</Code><Value>270</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
ftr</Code><Value>83</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
gbr</Code><Value>76</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
lvr</Code><Value>98</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
brt</Code><Value>5</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
mgn</Code><Value>7</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
vrd</Code><Value>1</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
ctt</Code><Value>26557</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
frl</Code><Value>292</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
obt</Code><Value>18404</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
kps</Code><Value>7949</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
ust</Code><Value>13</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
uur</Code><Value>77</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
dfe</Code><Value>15</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
pjt</Code><Value>122</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
odt</Code><Value>7576</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
tsg</Code><Value>16</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
bvg</Code><Value>405</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
kse</Code><Value>5</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
gsk</Code><Value>11</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
unt</Code><Value>155</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
bvd</Code><Value>4</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
cfl</Code><Value>9</Value></Statistic>
```

```
<Statistic><Code>bubs-use-cnt-
gce</Code><Value>134</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
kbg</Code><Value>234</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
plt</Code><Value>8</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
tak</Code><Value>19</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
dct</Code><Value>28</Value></Statistic>
<Statistic><Code>bubs-use-cnt-
wst</Code><Value>12</Value></Statistic>
<Statistic><Code>ora-cnt-object-
invalid</Code><Value>175</Value></Statistic>
<Statistic><Code>ora-cnt-
object</Code><Value>1389</Value></Statistic>
<Statistic><Code>ora-cnt-
table</Code><Value>0</Value></Statistic>
<Statistic><Code>ora-use-max-
segment</Code><Value></Value></Statistic>
<Statistic><Code>ora-use-sum-
segment</Code><Value></Value></Statistic>
<Statistic><Code>itgen-cnt-
errors</Code><Value>1634</Value></Statistic>
<Statistic><Code>ora-cnt-
errors</Code><Value>3008</Value></Statistic>
<Statistic><Code>bubs-cnt-bjb-errors-
hour</Code><Value>0</Value></Statistic>
<Statistic><Code>bubs-cnt-jmg-errors-
hour</Code><Value>0</Value></Statistic>
<Statistic><Code>bubs-cnt-job-errors-
hour</Code><Value>0</Value></Statistic>
<Statistic><Code>bubs-cnt-iae-
hour</Code><Value>0</Value></Statistic>
<Statistic><Code>bubs-cnt-tse-
hour</Code><Value>0</Value></Statistic>
<Statistic><Code>bubs-cnt-sdr-
notresponding</Code><Value>0</Value></Statistic>
<Statistic><Code>bubs-cnt-bjb-
running</Code><Value>0</Value></Statistic>
<Statistic><Code>bubs-cnt-usr-active-
quarter</Code><Value>0</Value></Statistic>
<Statistic><Code>isg-server request
url</Code><Value>1</Value></Statistic>
<Statistic><Code>dct-incorrect file
size</Code><Value>0</Value></Statistic>
<Statistic><Code>vsd-incorrect
financials</Code><Value>1</Value></Statistic>
<Statistic><Code>brt-slow
delivery</Code><Value>0</Value></Statistic>
<Statistic><Code>db-text
installed</Code><Value>1</Value></Statistic>
<Statistic><Code>lce-end</Code><Value>1</Value></Statistic>
<Statistic><Code>db-version</Code><Value>1</Value></Statistic>
```

```
<Statistic><Code>ora-par-
memory_target</Code><Value>2147483648</Value></Statistic>
<Statistic><Code>ora-par-
service_names</Code><Value>dvt11r2.invantive.local</Value></Stat
istic>
<Statistic><Code>ora-par-
NLS_LANGUAGE</Code><Value>DUTCH</Value></Statistic>
<Statistic><Code>ora-par-
NLS_CHARACTERSET</Code><Value>AL32UTF8</Value></Statistic>
<Statistic><Code>ora-uptime
sec</Code><Value>866210</Value></Statistic>
<Statistic><Code>ora-
hostname</Code><Value>ws86.invantive.local</Value></Statistic>
<Statistic><Code>ora-dbf-size
mb</Code><Value>7358</Value></Statistic>
<Statistic><Code>ora-dbf-free
mb</Code><Value>1054</Value></Statistic>
<Statistic><Code>ora-
scn</Code><Value>42230530</Value></Statistic>
<Statistic><Code>ora-stat-logons
cumulative</Code><Value>16828</Value></Statistic>
<Statistic><Code>ora-stat-logons
current</Code><Value>91</Value></Statistic>
<Statistic><Code>ora-stat-session logical
reads</Code><Value>723008721</Value></Statistic>
<Statistic><Code>ora-stat-physical read total
bytes</Code><Value>93055778304</Value></Statistic>
<Statistic><Code>ora-stat-physical write total
bytes</Code><Value>98078885376</Value></Statistic>
<Statistic><Code>ora-stat-db block
gets</Code><Value>191726659</Value></Statistic>
<Statistic><Code>ora-stat-consistent
gets</Code><Value>531282062</Value></Statistic>
<Statistic><Code>ora-stat-bytes sent via sqlnet to
client</Code><Value>1703937703</Value></Statistic>
<Statistic><Code>ora-stat-bytes received via sqlnet from
client</Code><Value>6992327420</Value></Statistic>
</Statistics>
```


1.10 Performance

1.10.1 PL/SQL Profiling

With PL/SQLprofiling measurements can be executed on the runtime of PL/SQL-code. In the screen Settings 349 you can turn on PL/SQL profiling for all PL/SQL calls from screens and background jobs.

Steps:

- Enable profiling via ‘Setting’.
- Profiling takes a lot of I/O bandwidth. Thus, if possible you must first turn off the background schedulers.
- In site.properties use the user ‘bubs’ instead of ‘bubs_tomcat’ because of rights:

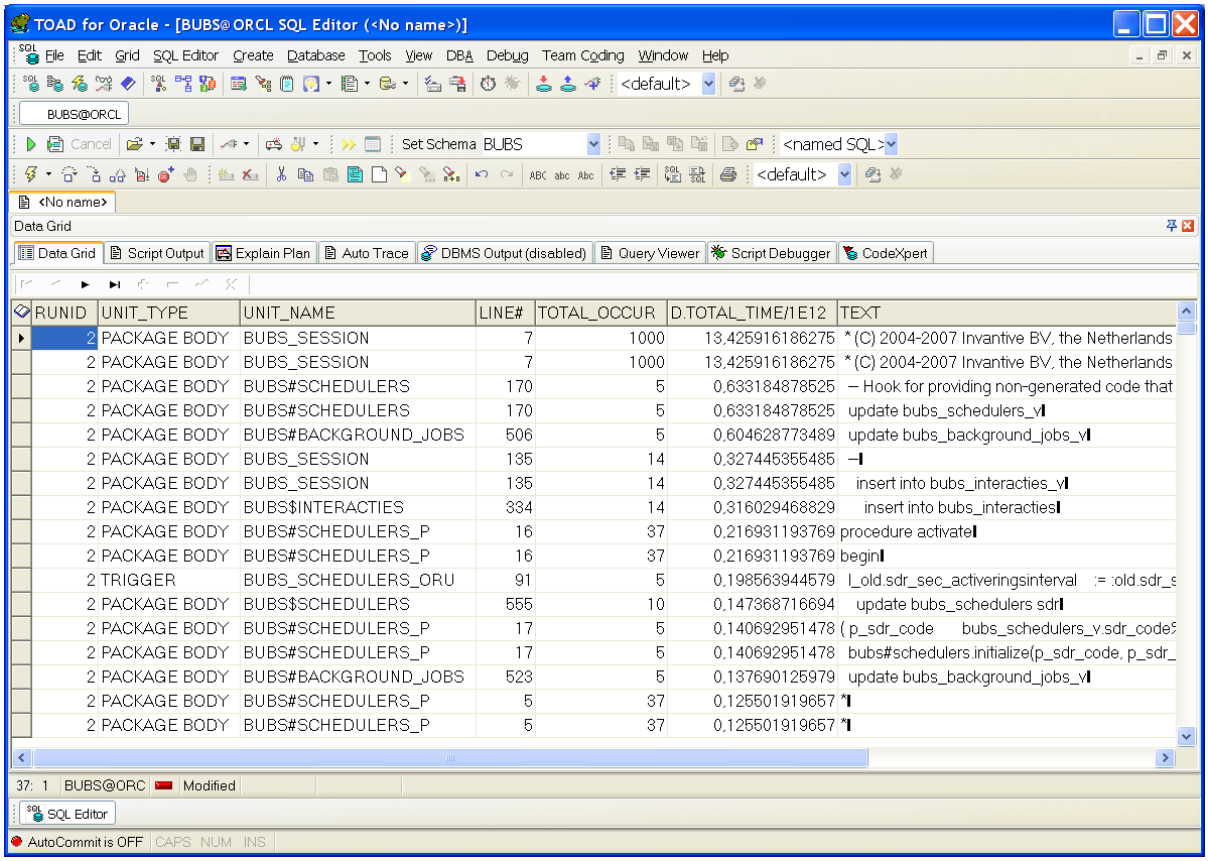
```
bubs_tomcat.user=bubs
bubs_tomcat.password=bubs
```

- Be careful: this allows the application complete access to Invantive Vision, not just through allowed
- !
- Restart Tomcat ('/etc/init.d/bubs3 restart' or 'net stop "Apache Tomcat", net start "Apache Tomcat"').

You can request the results via:

```
select r.runid
,      u.unit_type
,      u.unit_name
,      d.line#
,      d.total_occur
,      d.total_time/1e9 total_time_ms
,      s.text
from   plsql_profiler_runs r
join   plsql_profiler_units u
on     r.runid = u.runid
join   plsql_profiler_data d
on     u.unit_number = d.unit_number
and    u.runid       = d.runid
/* Optioneel */
join   user_source s
on     s.line = d.line#
and    s.name = u.unit_name
and    s.type = u.unit_type
where  r.runid = :runid
and    d.total_time/1e9 > 1/100 /* Meer dan 1/100 seconde. */
order
by     d.total_time desc
```

The output looks as follows:



It is also possible to profile PL/SQL procedures manually, with:

```
declare
  l varchar2(2000);
begin
  dbms_profiler.start_profiler();
  dbms_output.put_line('s=' || to_char(sysdate, 'hh24miss'));
  for i in 1..1000 loop
    select cig_omschrijving
    into l
    from bubs_mijn_rechten_r
    ;
  end loop;
  dbms_output.put_line(to_char(sysdate, 'hh24miss'));
  dbms_profiler.stop_profiler();
end;
```

1.10.2 SQL Trace of Outlook Add-in

To save the SQL statements in a file the following code needs to be part of app.config or web.config:

```
<system.diagnostics>
  <sources>
    <source name="System.ServiceModel" switchValue="Error">
      <listeners>
        <add name="xmlTrace" />
      </listeners>
    </source>
```

```
      <source name="System.ServiceModel.MessageLogging"
switchValue="Verbose">
        <listeners>
          <add name="xmlTrace" />
        </listeners>
      </source>
    </sources>
    <sharedListeners>
      <add name="xmlTrace"
type="System.Diagnostics.XmlWriterTraceListener"
initializeData="C:\temp\client_verbose.svclog" />
    </sharedListeners>
    <trace autoflush="true">
      <listeners>
        <add name="xmlDataTrace"
traceOutputOptions="Callstack,DateTime,LogicalOperationStack,Pro
cessId,ThreadId,Timestamp"
type="System.Diagnostics.XmlWriterTraceListener"
initializeData="C:\temp\client_data_verbose.svclog" />
      </listeners>
    </trace>
  </system.diagnostics>
```

In the specified file (in this example 'C: \ temp \ client_verbose.svclog'), the SQL statements will be logged. This file can be read with SvcTraceViewer (can be found in the Windows SDK, but also in the Invantive tools).

1.11 Frequently asked questions

The use of Invantive Vision results in frequently asked questions. These questions and their respective answers are added to the chapter as an aid for self-assistance.

1.11.1 How can I partially release a provision?

In projects often an amount is registered on a cost category to serve as a provision, for example, for vacancy or setbacks. However, never a direct posting will be made on this cost category. During review moments it is determined which part of these provisions can be released in favor of the result.

Follow these steps to partially release a provision:

- Select a 'Release Deviation' from the list as described in Comment Deviation 79.
- Add a latest estimate using the screen Latest Estimates 72 for this cost category which shows the amount that cannot be released.

Example: the provisions is Eur 300k. Eur 100k will be released. Displaying is turned on and the latest estimate is added as 300k - 100k = Eur 200k. The 100k which is released is added to the project results.

1.11.2 Handling Sub- and Master Projects

In the screen Projects 130 you can register and change projects. There are three possible project types:

- An individual project: this may include financial data and reporting.
- A subproject: this may include financial data and reporting. Moreover, they can be consolidated and reported within a master project.

- A master project: it is not possible to include independent financial data and reporting. However, the numbers of the underlying subprojects can be consolidated and reported.

Changing an Individual Project into a Master Project

Perform the following steps to turn an individual project into a master project:

- Make sure your filter is empty.
- Give the existing project a temporary name: Go to Projects 130 and select the project. Change the code of the project and select 'Save'.
- Create a new project as a master project. This can be done by creating a new project, but also through Copy Projects 135 and just copy the project and subsequently change the project type from 'Individual Project' to 'Master Project'.
- Change the project type of the old project to 'Subproject'.
- Select in the data of the old project the new master project as master project.
- Enter the cost type prefix. This prefix must be unique for all subprojects within the master project. The prefix is used to make the cost category of each subproject unique in the case of consolidated reporting.
- Press 'Save'.

Usage

You can have multiple subprojects under one master project.

Uncheck 'Merge Subprojects' in My Preferences 45 if you do not want consolidated reporting or place a check mark for consolidated reporting.

1.11.3 Why the revenue budget always should be substantiated?

Question:

Create a project with, for example, the following budget, but do not enter any revenues:

Kostensoort	1000	Koopsom grond				Afwijking Budget		
Budget	Cnt	Opdracht	FMO	FZO	Tonen	Realisatie	Verwachting	Totaal
300.000								
300.000					-	0	0	0

Kostensoort	2100	Hoofdaannemer				Afwijking Budget		
Budget	Cnt	Opdracht	FMO	FZO	Tonen	Realisatie	Verwachting	Totaal
500.000								
500.000					-	0	0	0

Kostensoort	9310	Opbrengsten woningen				Afwijking Budget		
Budget	Cnt	Opdracht	FMO	FZO	Tonen	Realisatie	Verwachting	Totaal
1.000.000								
1.000.000					-			1.000.000

You will get a negative forecast:

	Budget	Afwijking	Prognose
Kosten	800.000	0	800.000
Opbrengsten	1.000.000	-1.000.000	0
Projectresultaat	**200.000**	**-1.000.000**	**-800.000**
Projectresultaat (%)	**25,00**		**-100,00**

In other words:

- For the costs the calculation model assumes that the entire budget will be used (no release).
- For the income the calculation model assumes that there will be no revenues (full release).

Why is the forecast not just equal to the budget with a profit of EUR 200.000 (EUR 1.000.000 revenue - cost EUR 800.000)?

Answer:

For the example shown this is a legitimate question. There are no revenues at all, so probably (and hopefully), the budget revenues need to be further broken down into different revenue types.

Suppose that one revenue was known for cost category 9310 for an amount of EUR 900,000. What should be the prognosis in this situation? There are two possible approaches:

- The breakdown of the remaining EUR 650,000 must be made soon and the forecast result of the project is EUR 200,000 (EUR 1,000,000 revenue - cost EUR 800,000).
- The project does not meet its expectations and the originally budgeted EUR 1,000,000 is certainly not realized. The project developer has devised an alternative, but unfortunately the expected revenue is only EUR 900,000. The forecast of the project result is EUR 100,000 (EUR 900,000 revenue - cost EUR 800,000).

The forecast is always based on the most adverse scenario (worst case). In this case, the second choice is the most certain. The project developer can quickly add an extra return if indeed he's expecting a result of EUR 200,000 under the first approach.

To keep a predictable model it has been chosen in case that no revenues are entered yet, to assume that there will be no revenues.

1.12 Installation Server

The installation of the application on a server requires a number of changes to be made to the configuration files. This chapter describes the possible changes and the way they must be made.

1.12.1 System Requirements

Client (PC, tablet, smartphone)

To use Invantive Vision on your PC or terminal server you will need the following software including licenses:

- Internet Explorer 10.0, Firefox 35, Chrome 35, KTHML 4 or Safari 5 or newer.
- Microsoft Office 2010, Microsoft Office 2013 or Microsoft Office 2016 (only on Microsoft Windows). All 32 and 64-bit versions.
- Microsoft .NET 4.5.
- Microsoft Windows 7, 8, 8.1 or 10.
- Invantive Web Service or local drivers.
- Minimum of 4 Gb internal memory.
- Screen resolution of 1280 x 1024 or higher.
- Adobe Acrobat Reader 10 or 11.
- Oracle user license.
- Link to Microsoft Exchange recommended for time registration.

To use Invantive Vision on your Mac, table or smartphone you will need the following software including licenses:

- Internet Explorer 10.0, Firefox 35, Chrome 35, KTHML 4 or Safari 5 or newer.
- Adobe Acrobat Reader 10 or 11.
- Oracle user license.

On-Premises

For the use of Invantive Vision as server within the private network you will need (so-called "on-premises" use):

- Operating system: Windows 2008 R1 Service Pack 2, Windows 2008 R2 (Oracle 11) or Windows 2012R2 (Oracle 12). Various UNIX platforms.
- Database management system: Oracle 11g Release 2 Standard Edition One 11.2.0.3 or Oracle 12.1.0.2 Standard Edition One.
- Application server: Tomcat 8.0.24 or newer with Oracle Java SDK 1.8 update 51 or newer, Microsoft .NET 4.5., Microsoft IIS 7.0 or Microsoft IIS 7.5.
- Minimum of 4 Gb internal memory.
- Screen resolution of 1280 x 1024 or higher.

Antivirus and Firewall Software

Finally, combined use of anti-virus and firewall products together with Invantive Vision is only allowed on the server for the large scale business editions. It is necessary to purchase extra time for configuration. Editions targeted at consumers and small businesses are not supported because they are not designed for use in server environments.

The anti-virus software should at least disable access control of files for:

- oracle.exe
- ctxhx.exe
- tnslsnr.exe
- nmesrvc.exe
- java.exe
- tomcat*.exe

Also it is recommended to disable scanning of database files (*.dbf, *.log, *.arc) and to allow the writing and reading of files with the extensions *.xml, *.txt, *.log and *.tmp.

To install Invantive Vision you need to contact Invantive.

1.12.2 Installation and Upgrade

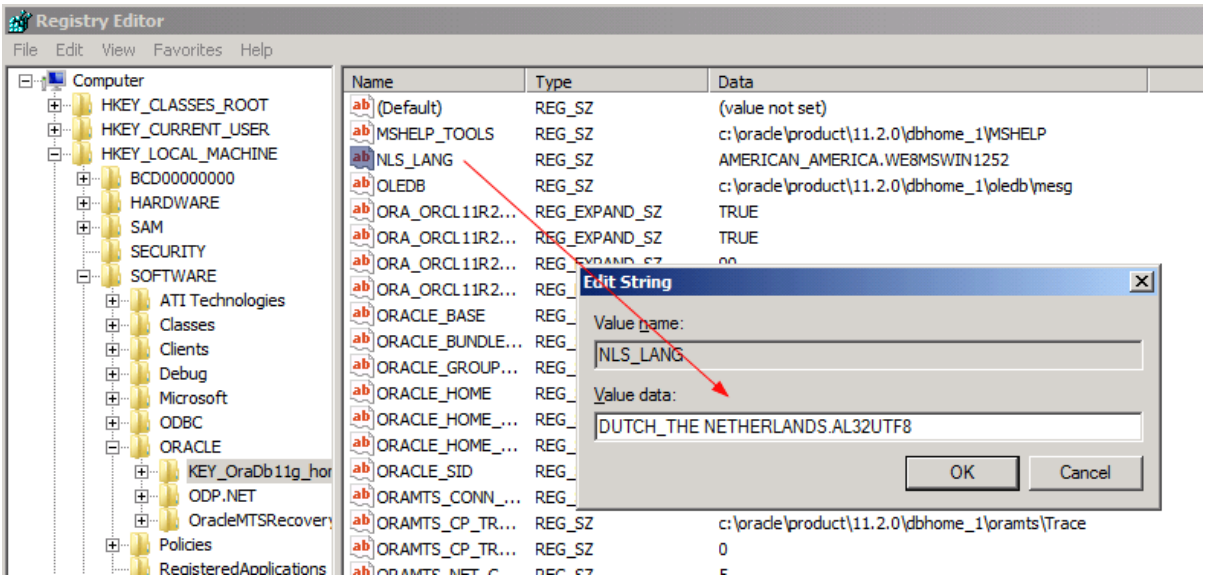
This chapter contains the steps necessary to install Invantive Vision on a server.

1.12.2.1 Installation Database Server

Perform the following steps for an installation or an upgrade:

- Check if Oracle RDBMS 11.2.0.3 or 12.1.0.2 Standard Edition One, Standard Edition or Enterprise Edition is installed and configured (see next chapter for the steps 521). The functioning of Invantive Vision with other Oracle RDBMS versions is not guaranteed.
- The database character set must be AL32UTF8.

- [UNIX/Linux] The NLS_LANG environment variable needs to be set to 'DUTCH_THE NETHERLANDS.AL32UTF8' for all users, on the web server and on the database server.
- [Windows] The HKLM\Software\Oracle\Key_Ora*\NLS_LANG register variable needs to be set to 'DUTCH_THE NETHERLANDS.AL32UTF8' for all users, on the web server and on the database server:



- Depending on the prevailing security policy you might want to turn off the automatic blocking of accounts by several false attempts to log on. It is common that a password is changed and the auto-retry functionality of Invantive Vision makes that an account will be blocked. Log on as 'sys' (for example with SQL*Plus) and execute:

```
alter profile default
limit
failed_login_attempts unlimited
password_life_time unlimited
password_reuse_time unlimited
password_reuse_max unlimited
password_lock_time 1
password_grace_time 30;
```

- Possibly change the global name of the service:

```
alter database rename global_name to "orcl11r1.NAAMBEDRIJF.nl"
scope=spfile; -- 11g R1
alter database rename global_name to "orcl11r2.NAAMBEDRIJF.nl";
-- 11g R2
```

- If necessary, change the name under which the database register with the listener:

```
alter system set service_names='orcl11r1.NAAMBEDRIJF.nl'
scope=spfile;
alter system set db_domain='NAAMBEDRIJF.nl' scope=spfile;
```

- Change the NLS settings of the database server:

```
alter system set nls_language='DUTCH' scope=spfile;
alter system set nls_territory='THE NETHERLANDS' scope=spfile;
```

- Change the parameter memory_target in at least 40 MB times the number of simultaneous users with a minimum of 768 MB, for example, with:

```
alter system set memory_target=512m scope=spfile;
```

- Put memory_max_target at at least the same value as memory_target and possibly higher.
- Remember to put sga_target and pga_aggregate_target to 0, for example, with:

```
alter system set sga_target=0 scope=spfile;
alter system set pga_aggregate_target=0 scope=spfile;
alter system set shared_pool_reserved_size=0 scope=spfile;
```

- Make sure that dumps do not take up the entire server:

```
alter system set max_dump_file_size="8M";
```

- Check that automatic memory management is used optimally:

```
select name
, value
from   v$parameter
where  1=1
and    name like '%size'
and    value <> '0'
and    name not like 'sga%'
and    name not like 'db_block%'
and    name not like 'max_dump%'
and    name not like '%percent%'
and    name not like '%message%'
and    name not like 'object_cache%'
and    name not like 'db_recovery_file_dest_size%'
```

- To prevent the flooding of the disks in the case of malfunctions you might want to ease the automatic registration of incidents.

```
$ adrci
#
# Reduce minimum duration for trace files to 2 hours.
# And 8 hours for incidents.
#
set control (shortp_policy = 2)
set control (longp_policy = 8)
#
# Or regularly execute:
#
set base /opt/prd/oracle
show homes

set homepath diag/rdbms/prd11r2/prd11r2
show incident
purge -age 1440
set control (shortp_policy = 2)
set control (longp_policy = 8)

set homepath diag/tnslsnr/ws86/listener
show incident
purge -age 1440
```

- You should change the settings for the database optimizer if the web frontend does not respond fast for example in the processes screen and in case you make use of the <OMGEVING>_web schedule for the web frontend:

```
alter system set "_optimizer_cost_based_transformation" = off
scope=both
```

- You can check if the data ends up in the right place in a production environment by changing the log file several times using the underlying statement. If necessary, change the log_archive_dest_1 parameter.

```
alter system switch logfile
```

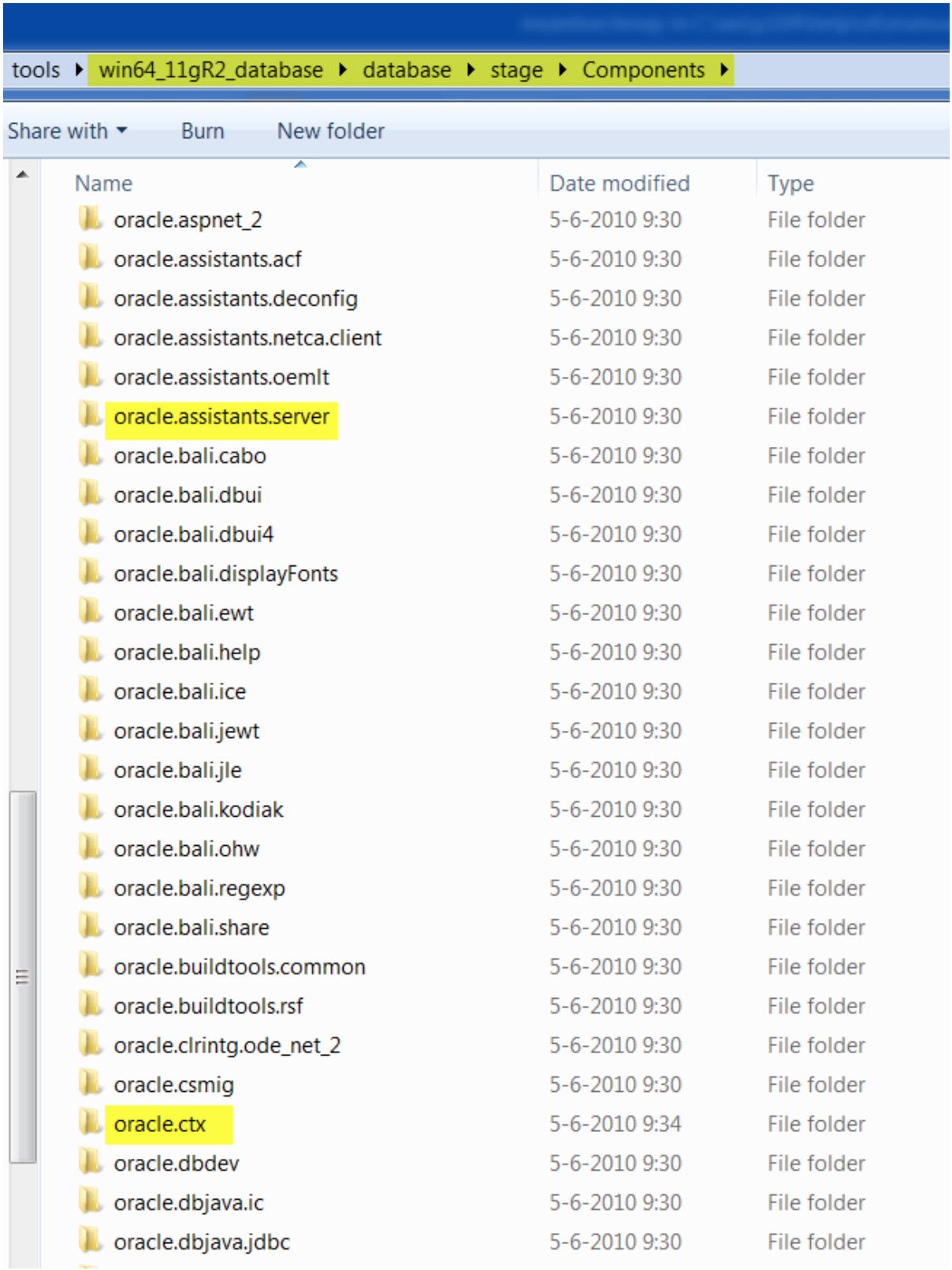
- Within demo installations you can avoid the possibly massive startup of database jobs and the corresponding inertia by turning them off:

```
begin
  for r_job
  in
  ( select sjb.owner
    ,      sjb.job_name
    ,      sjb.enabled
    from   dba_scheduler_jobs sjb
    where  sjb.enabled = 'TRUE'
    order
    by     sjb.owner
    ,      sjb.job_name
  )
  loop
    begin
      dbms_scheduler.stop_job(r_job.owner || '.' ||
r_job.job_name, true);
    exception
      when others
      then
        null;
    end;
    dbms_scheduler.disable(r_job.owner || '.' ||
r_job.job_name);
  end loop;
end;
```

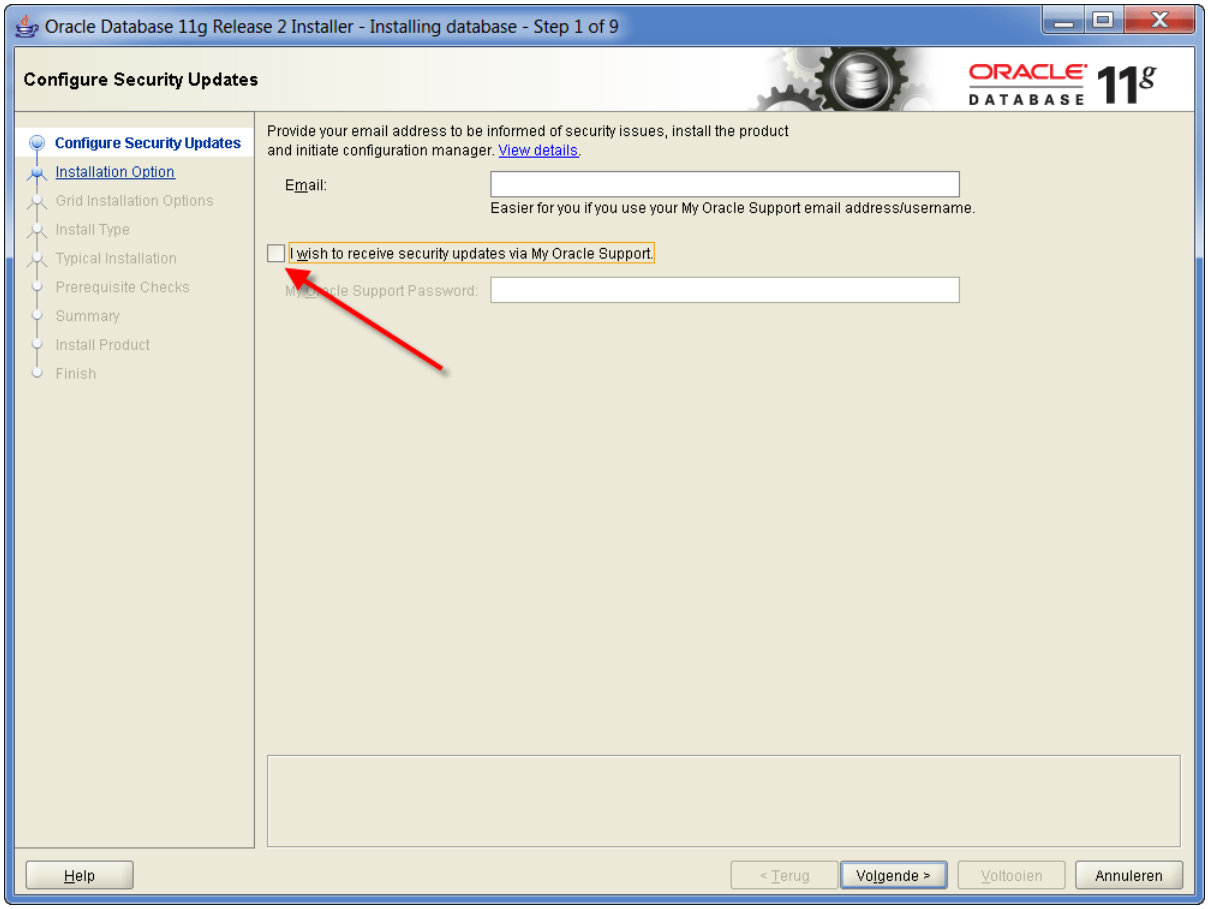
Installation Oracle 11.2.0.3 on Windows

Perform the next steps to install Oracle:

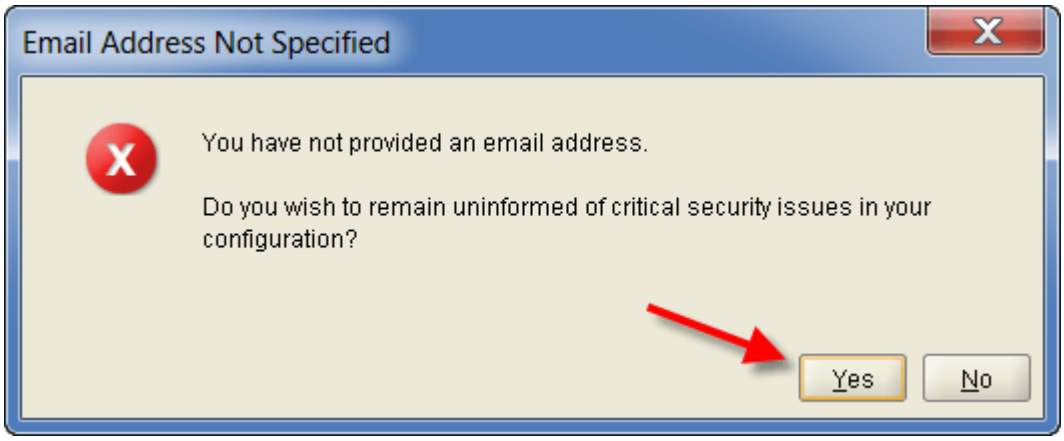
- Unzip the files ‘win64_11gR2_database_1of2.zip’ and ‘win64_11gR2_database_2of2.zip’ in the same folder, for example, ‘win64_11gR2_database’. If you use ‘Extract All’ in the Microsoft Windows explorer you need to change the proposed folder name. Accept the warning that the files will be merged.
- Make sure that all extracted files from both zip files end up in the same map. You can verify this by checking that in ‘database/stage/Components’ there will be a folder ‘oracle.ctx’. If this is not going well, then the installation will complain about the missing parts of the installation files. The result is for example:



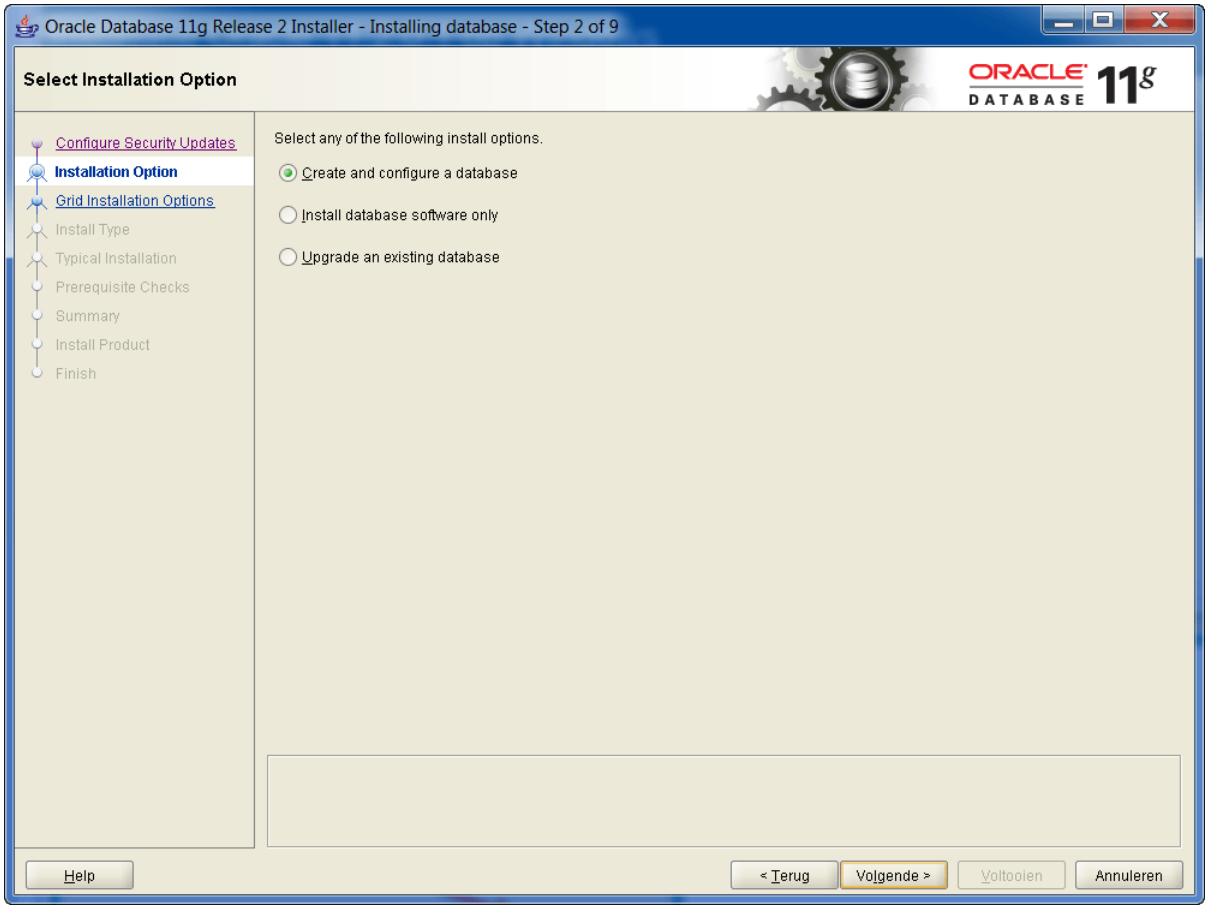
- Start ‘setup.exe’.
- In the first screen it is usually recommended given the network configuration and security rules to turn off the automatically log on to Metalink::



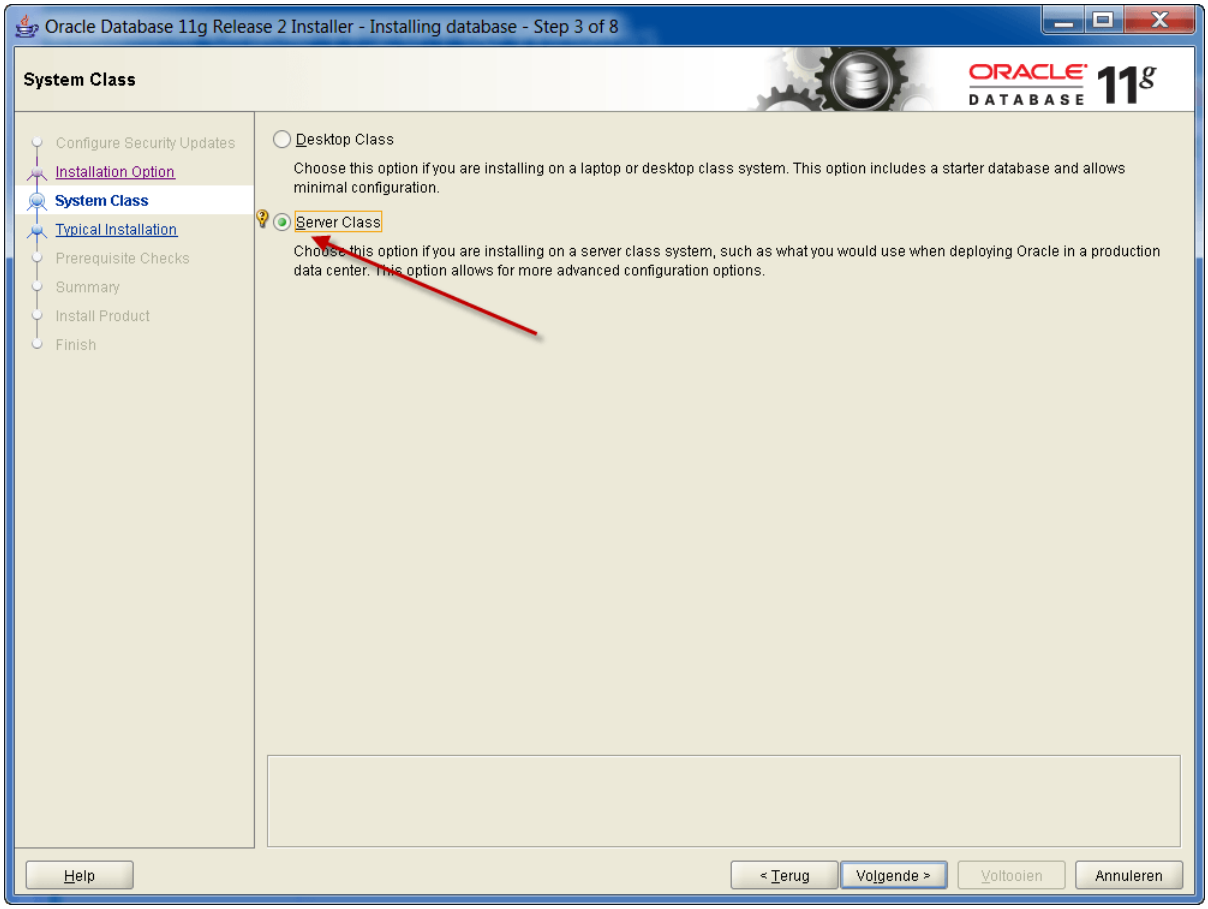
- Select 'Next' and choose 'Yes' when the warning appears.



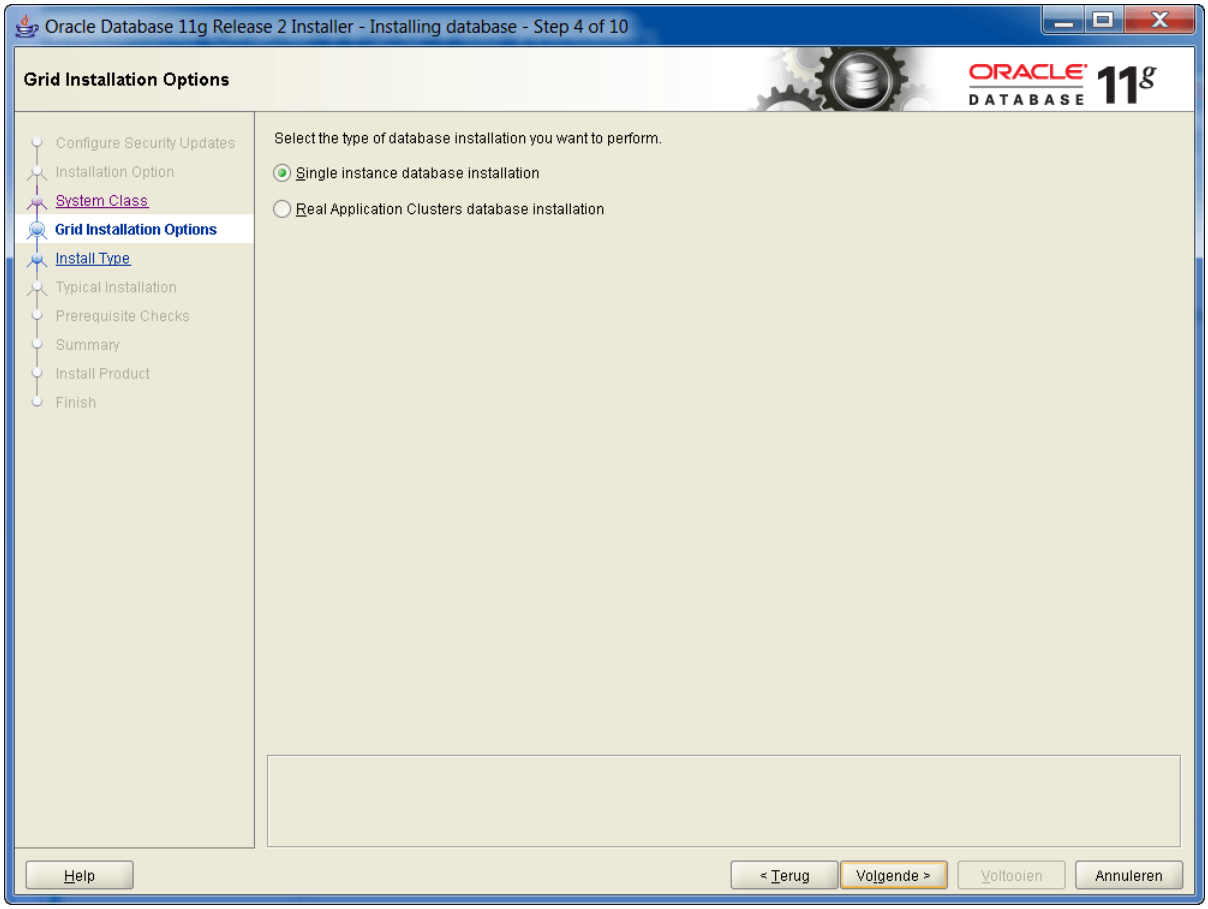
- The following screen appears:



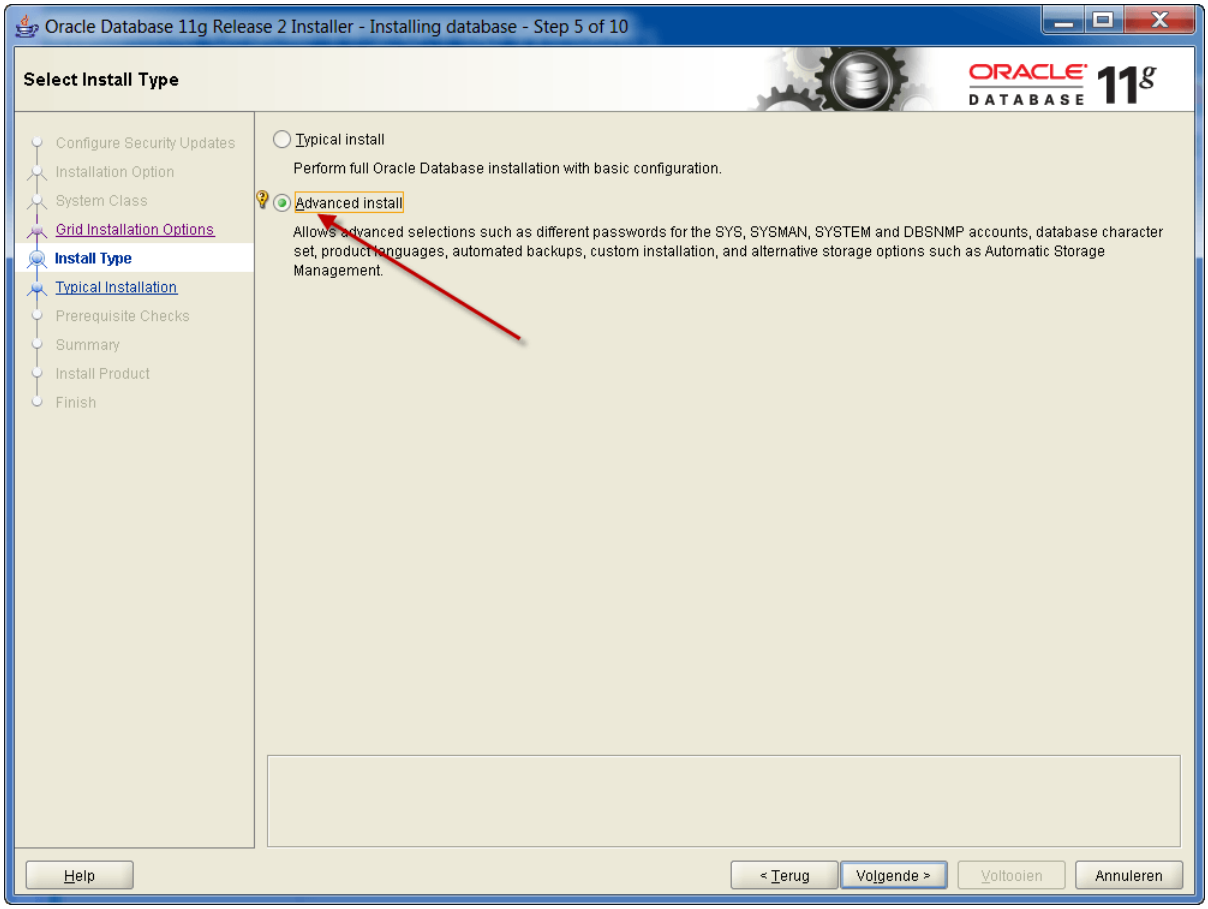
- Select ‘Next’.
- The following screen appears:



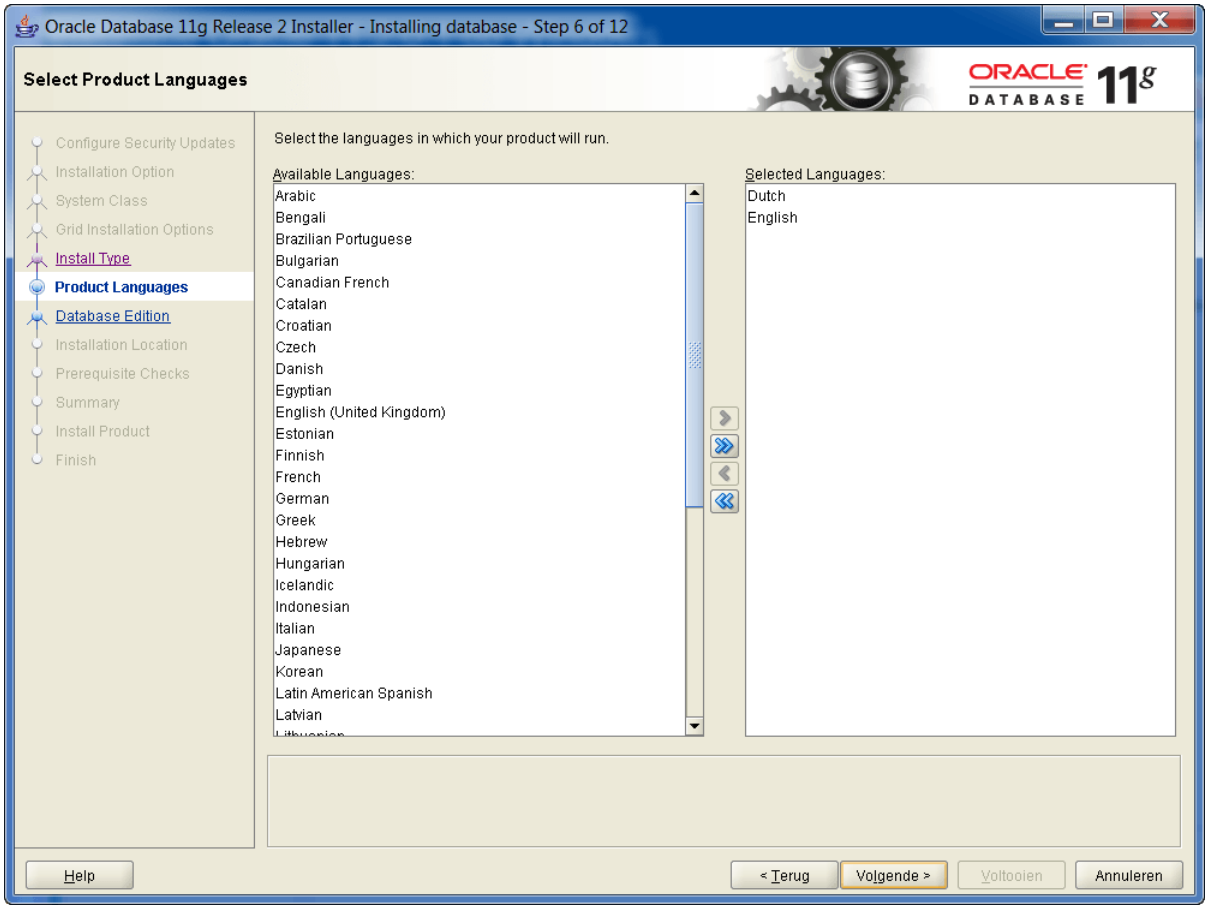
- Select ‘Server Class’ and then select ‘Next’.
- The following screen appears:



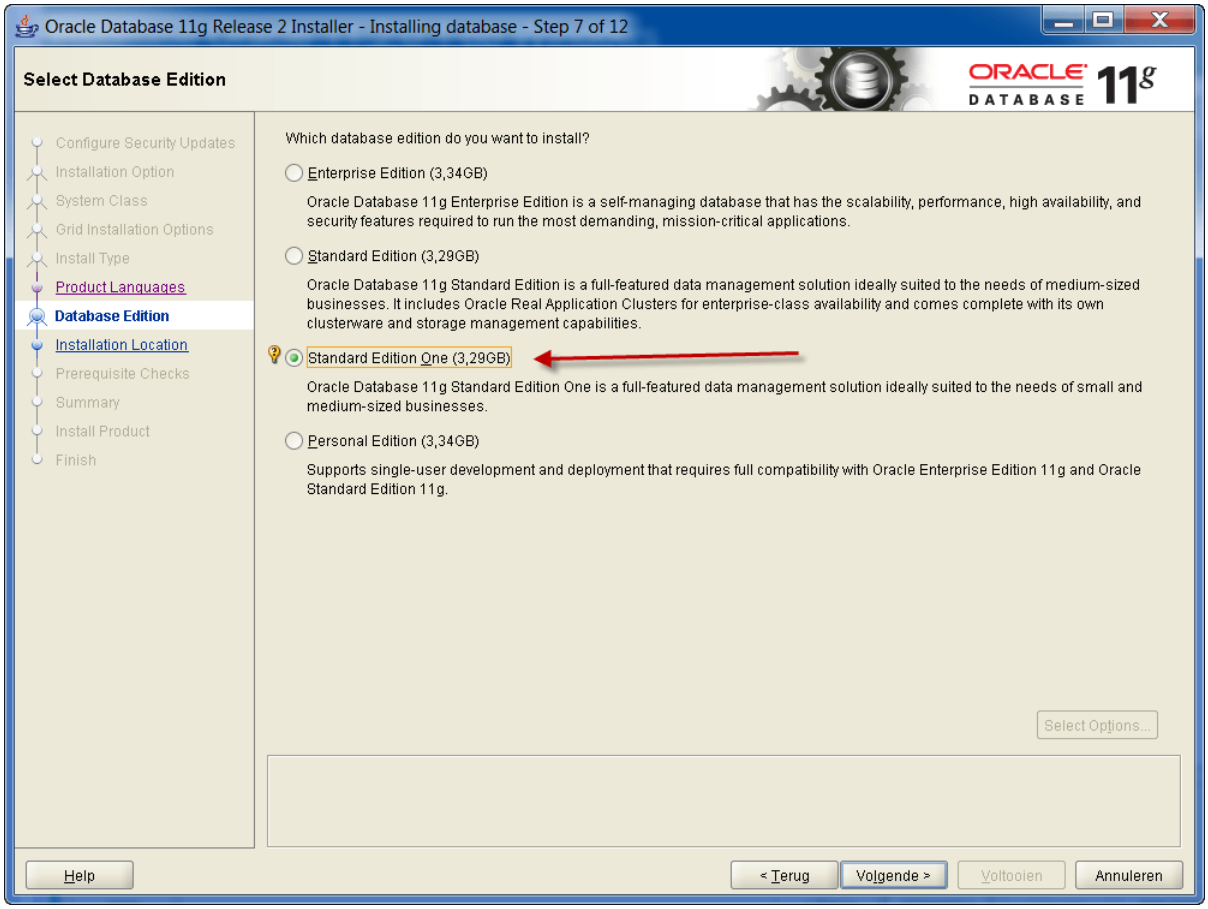
- Select ‘Next’.
- The following screen appears:



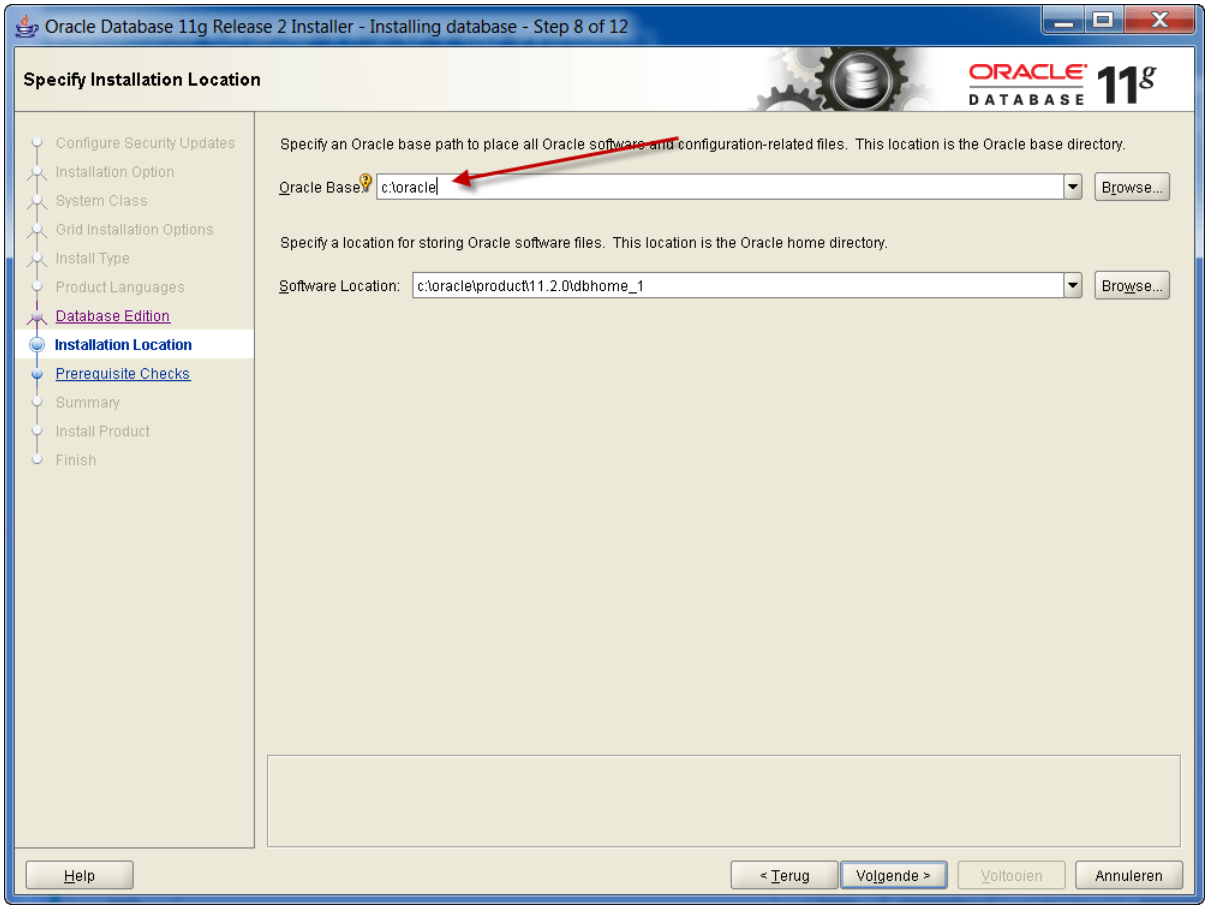
- Select ‘Advanced install’ and then select ‘Next’.
- The following screen appears:



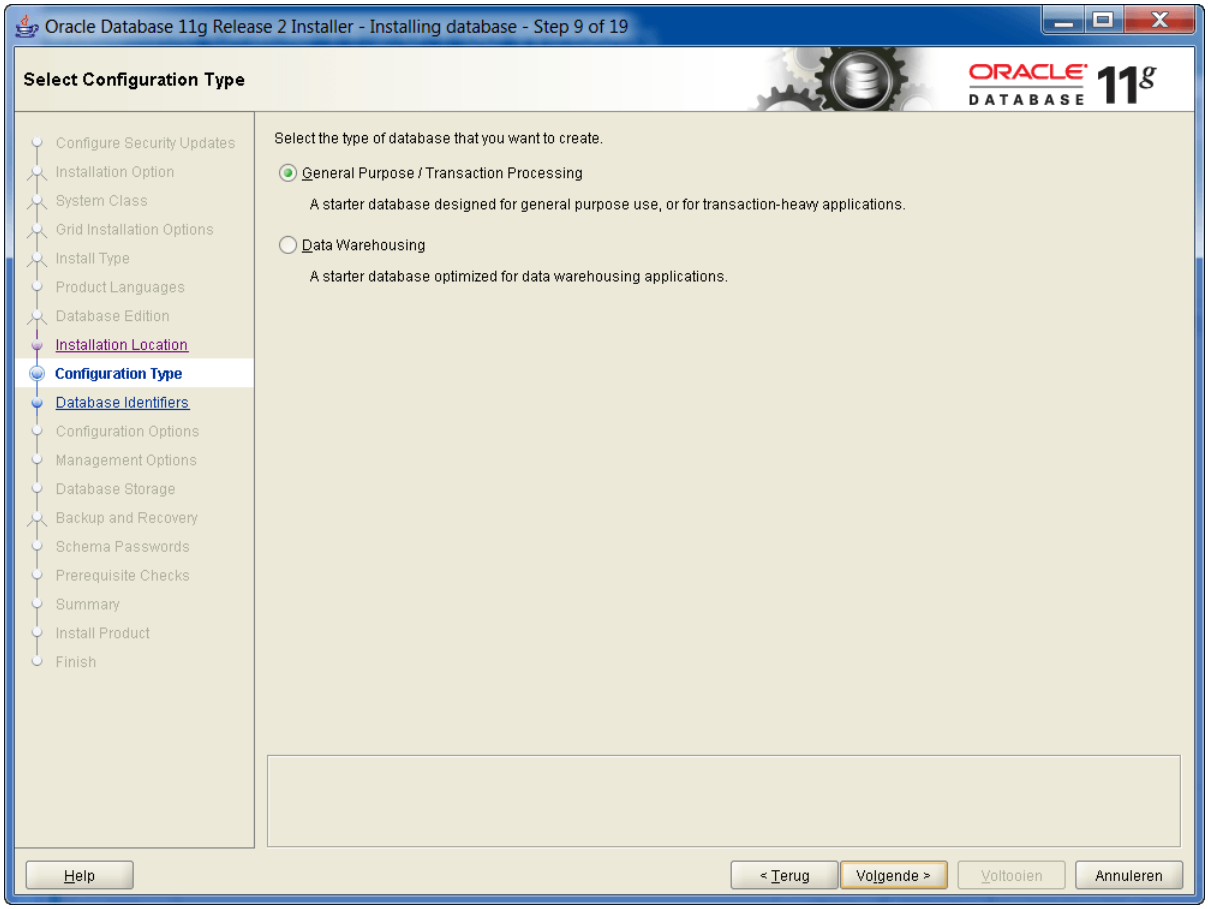
- Select at least the languages in which the system will be ever used, but preferably choose all languages.
- Select ‘Next’.
- The following screen appears:



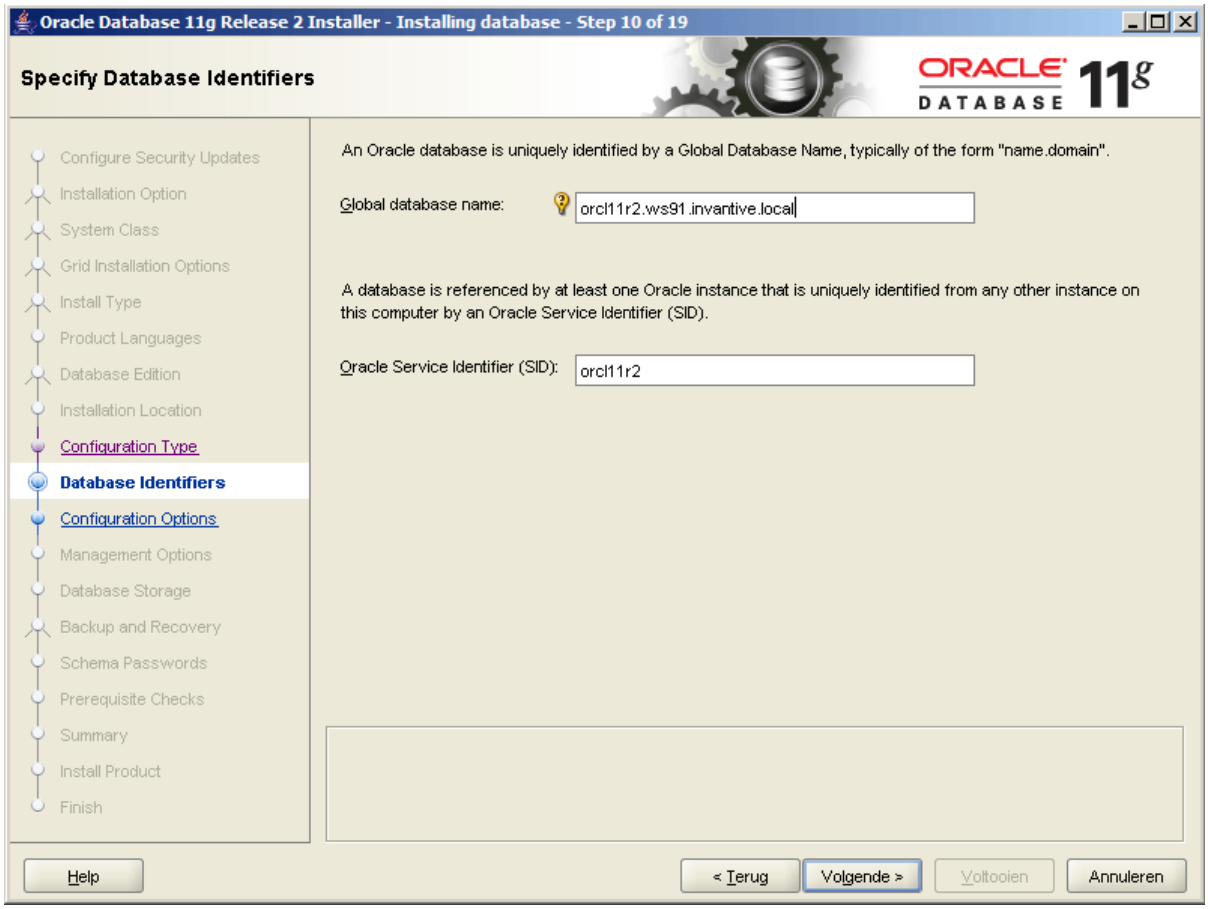
- Select ‘Standard Edition One’ when this is licensed. This is also the minimum level necessary for proper operation.
- Select ‘Next’.



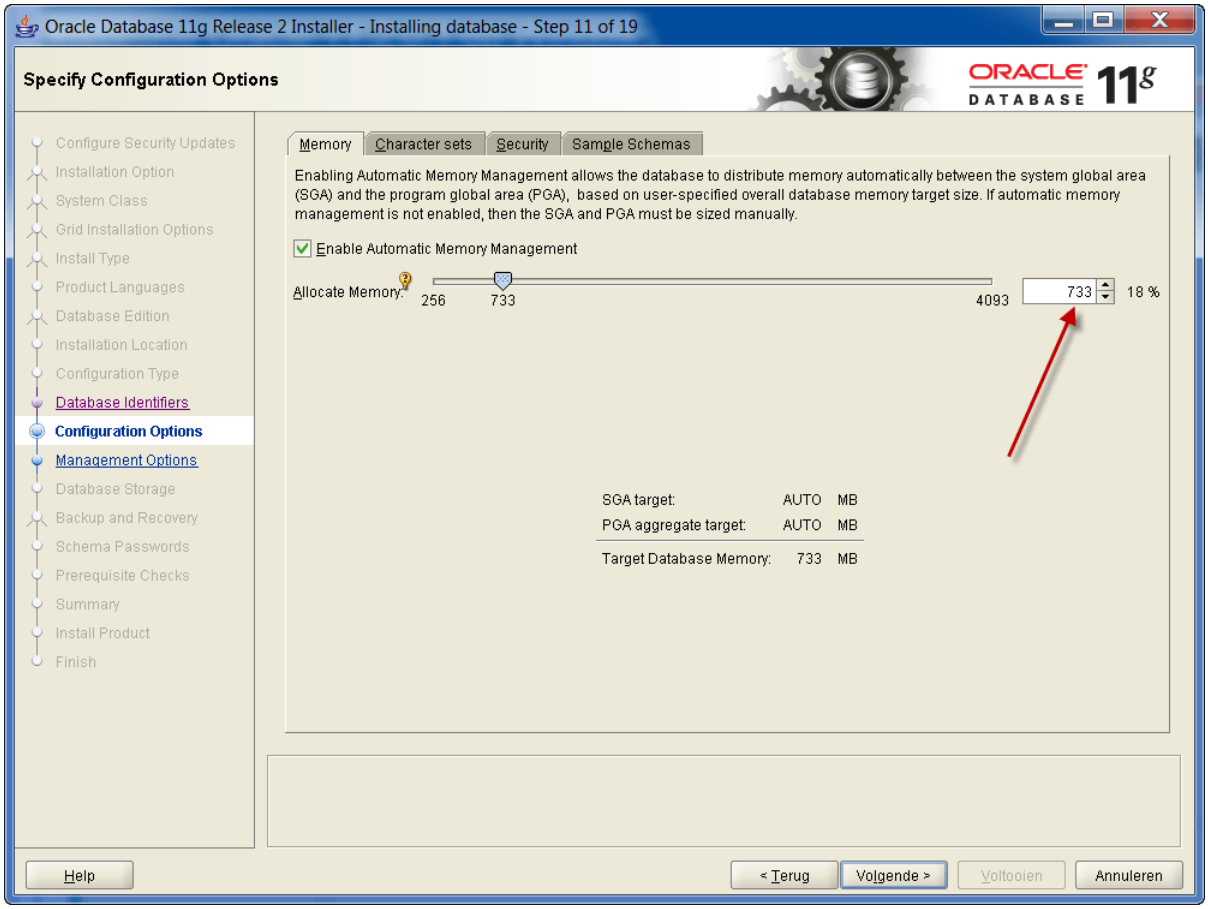
- Fill in at ‘Oracle Base’ the preferred location, most common is ‘<DRIVE>:\oracle’.
- Select ‘Next’.
- The following screen appears:



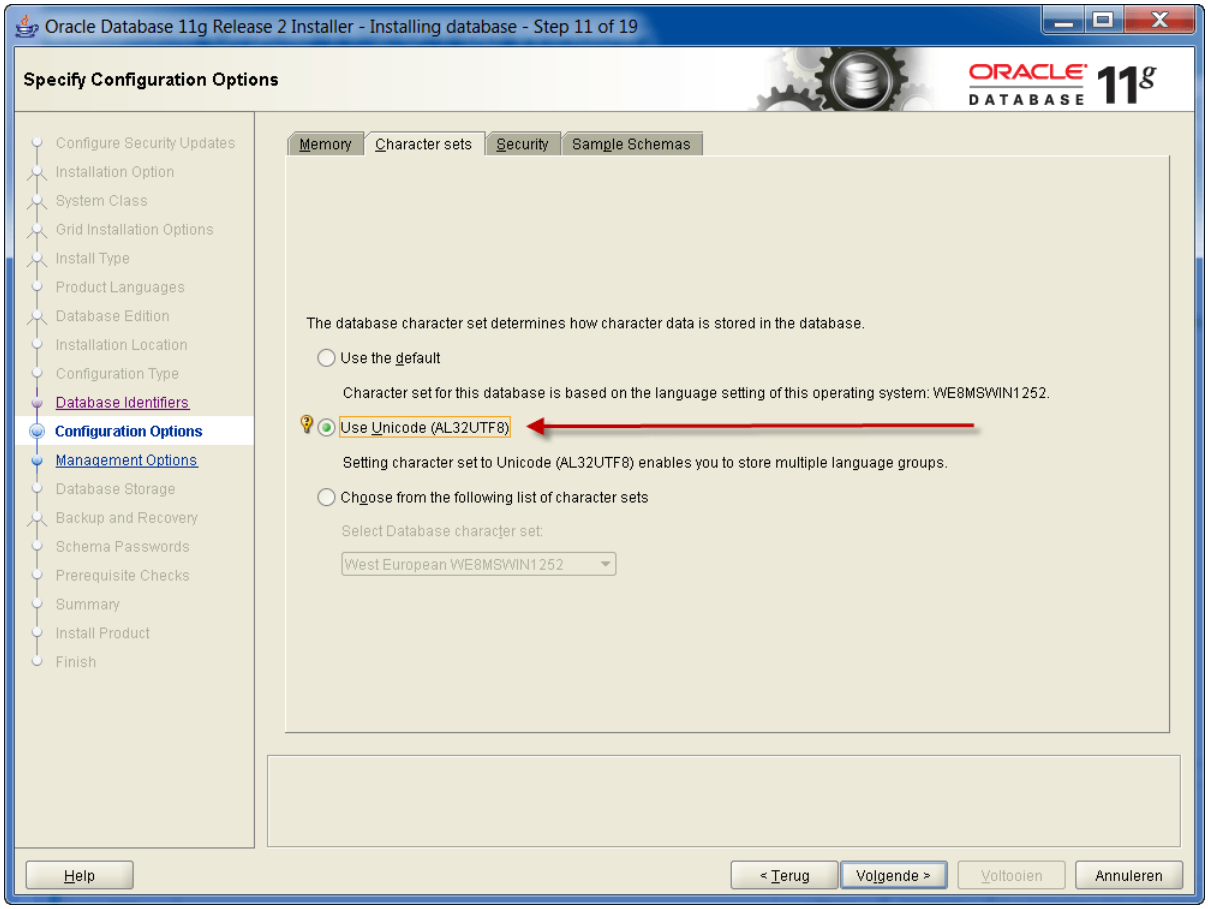
- Select ‘Next’.
- The following screen appears:



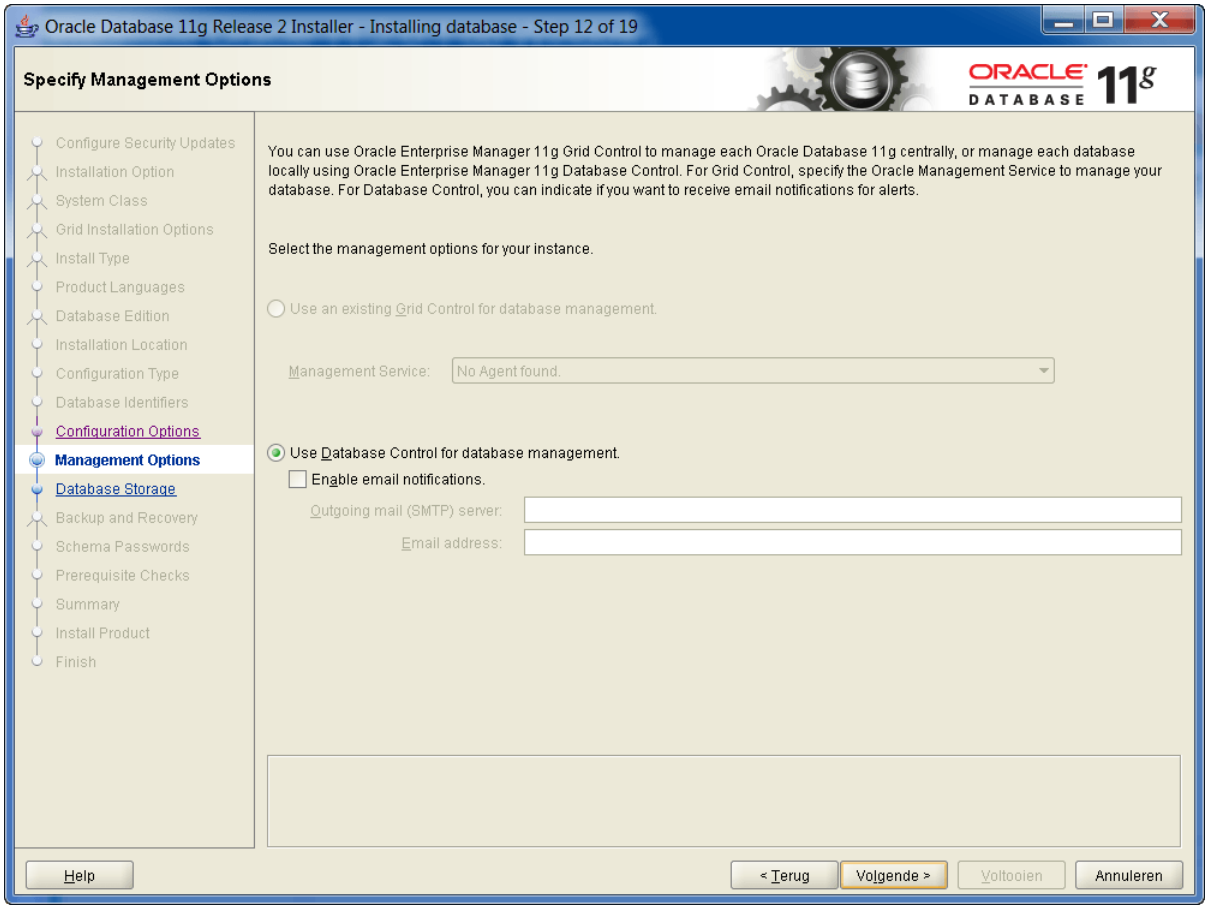
- Enter the Global database name ‘orcl11r2.<MACHINENAAM>.<DOMEIN BEDRIJF>’, for example, ‘orcl11r2.ws48.invantive.com’.
- Select ‘Next’.
- The following screen appears:



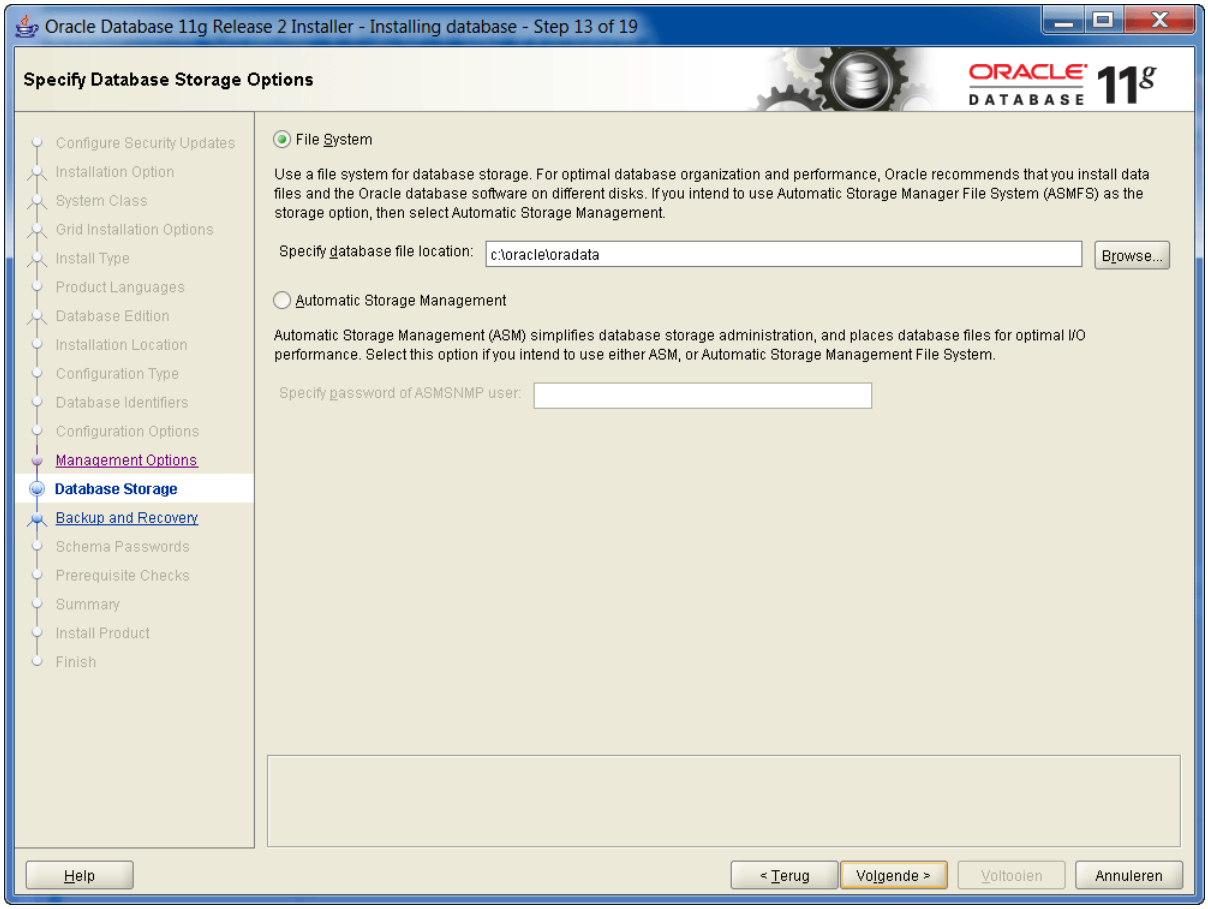
- Set the maximum memory use after consultation with the system administrator and the requirements based on the number of users.
- Select the tab ‘Character sets’ and select ‘AL32UTF8’ as standard character set:



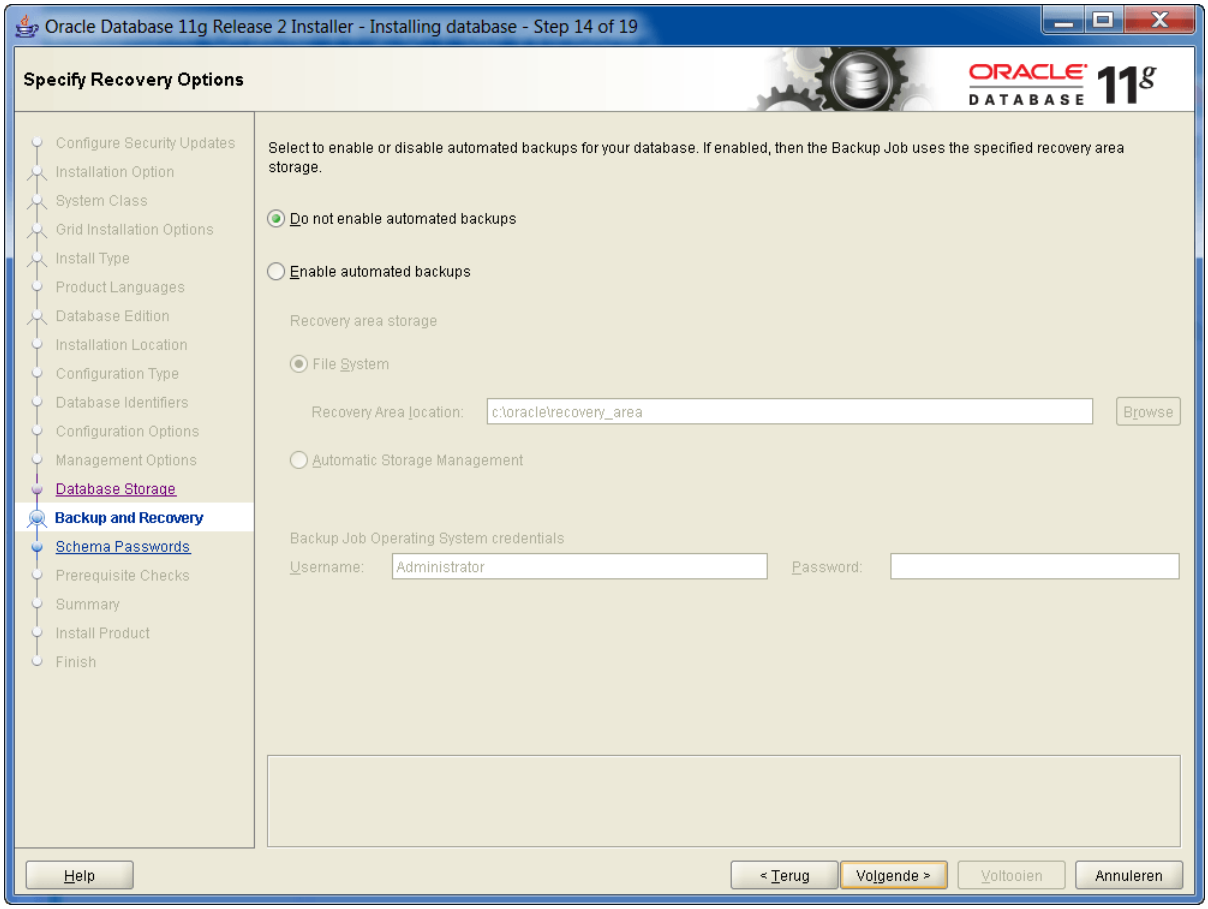
- Select ‘Next’.
- The following screen appears:



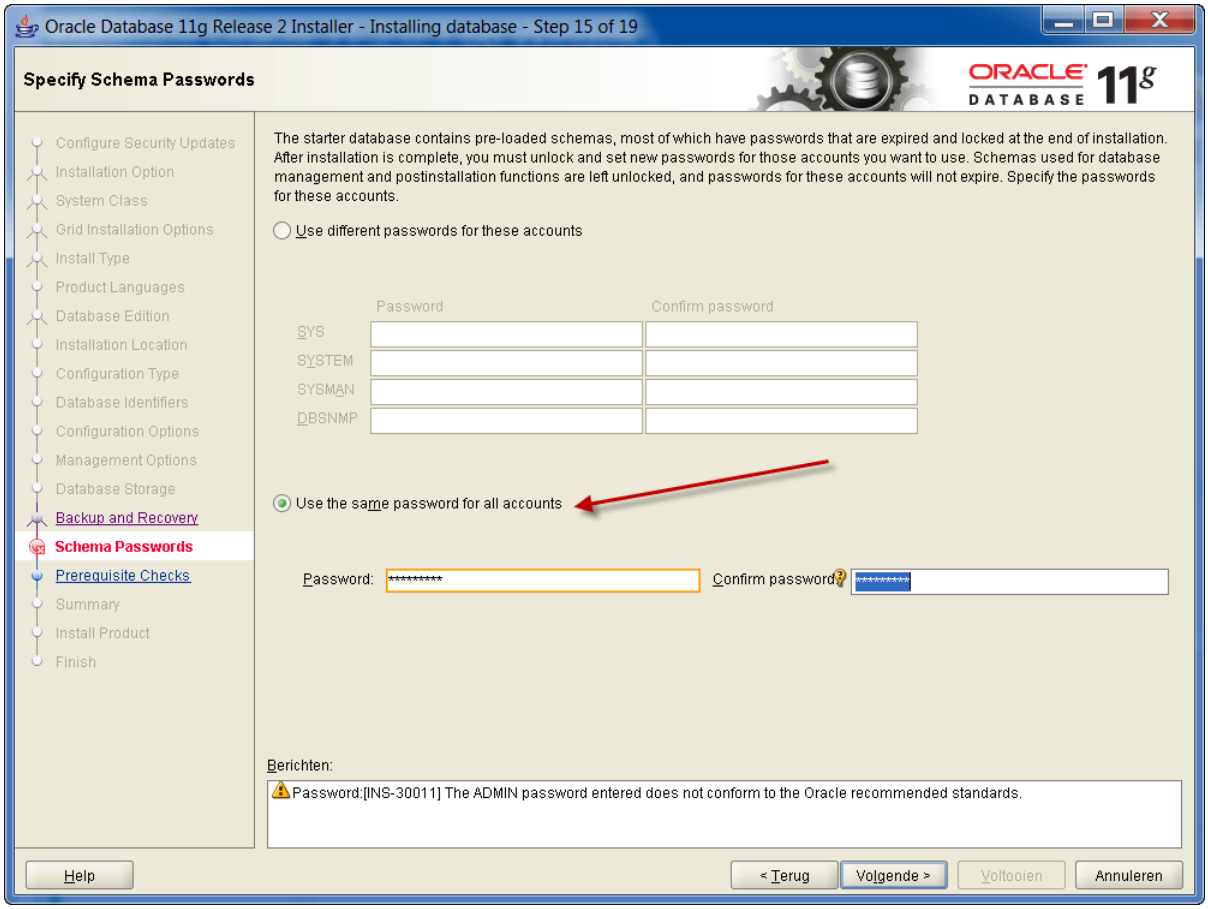
- Select ‘Next’.
- The following screen appears:



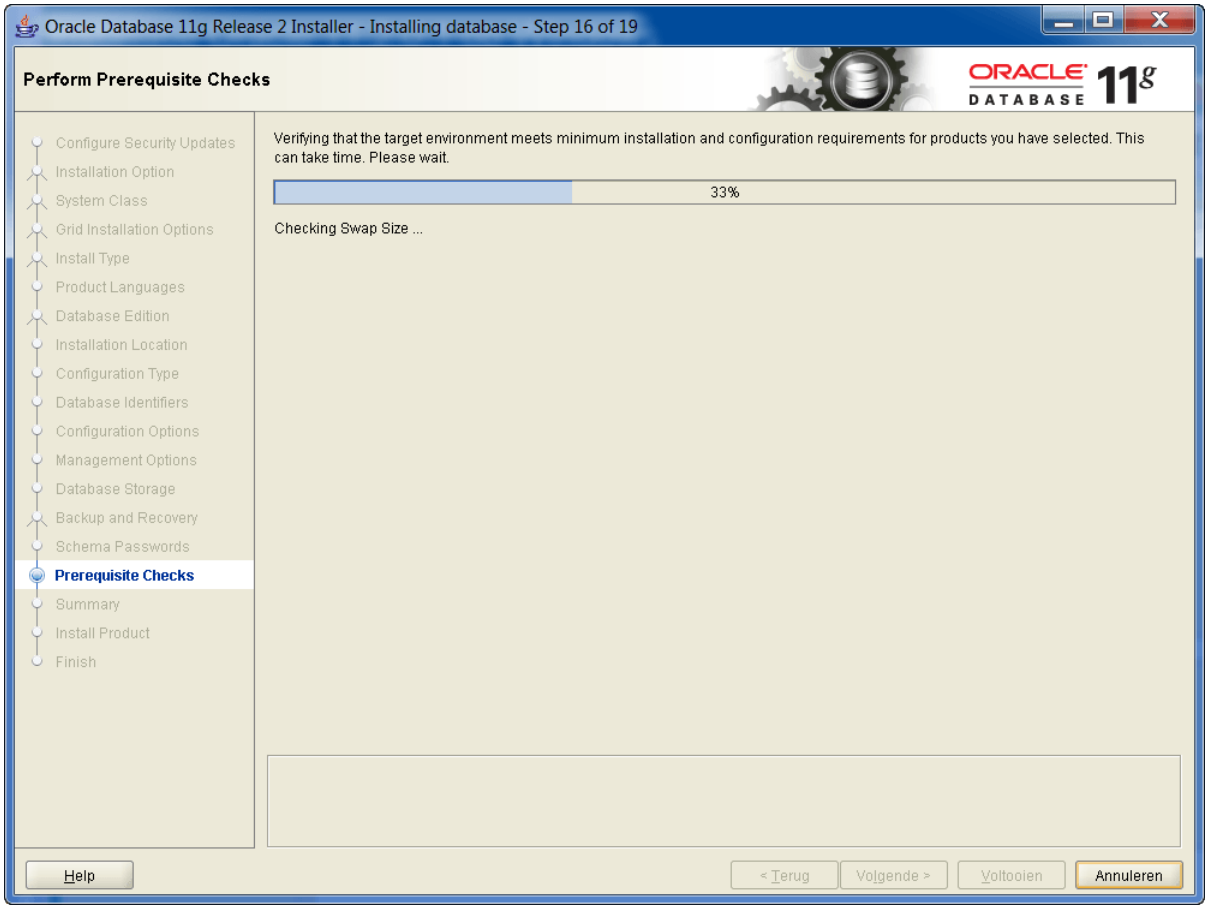
- Select ‘Next’.
- The following screen appears:



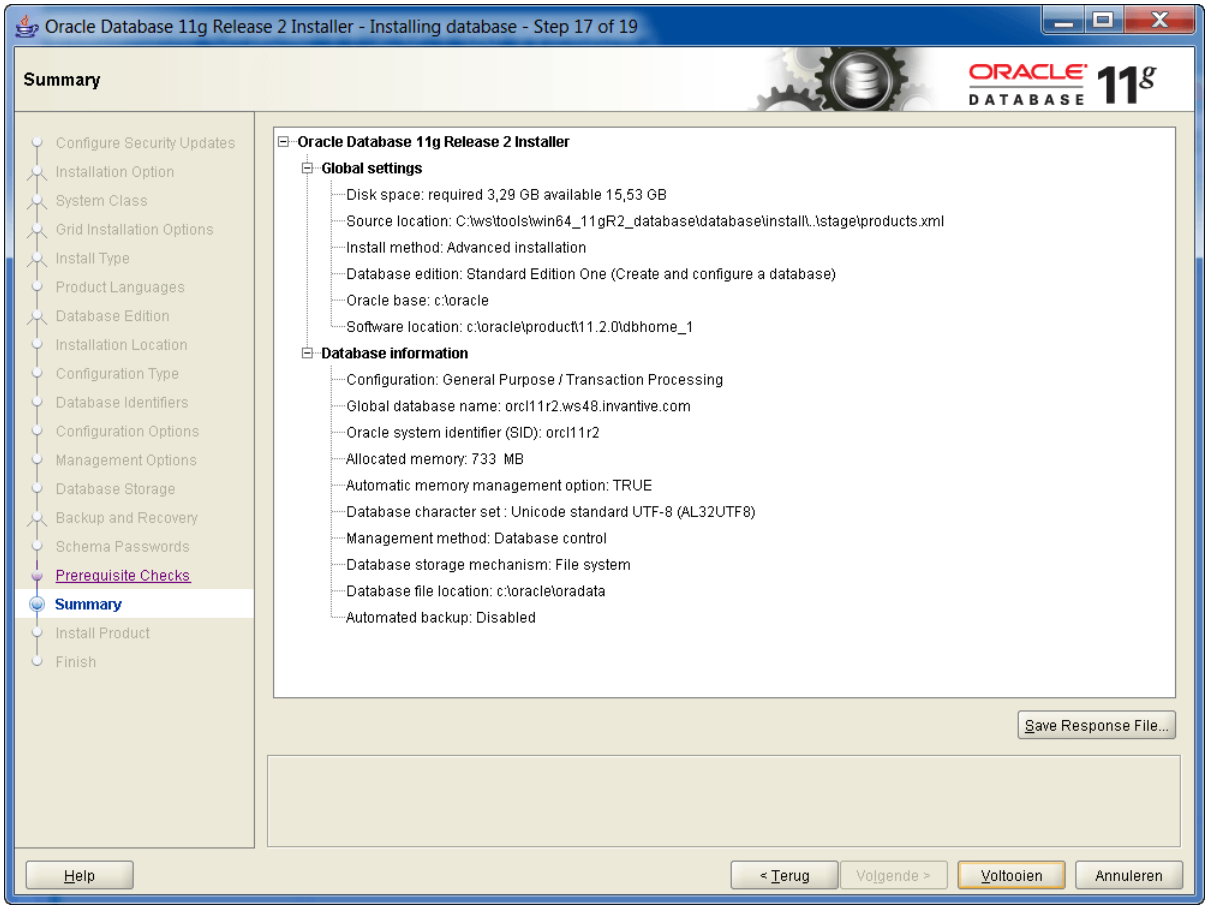
- Select ‘Next’.
- The following screen appears:



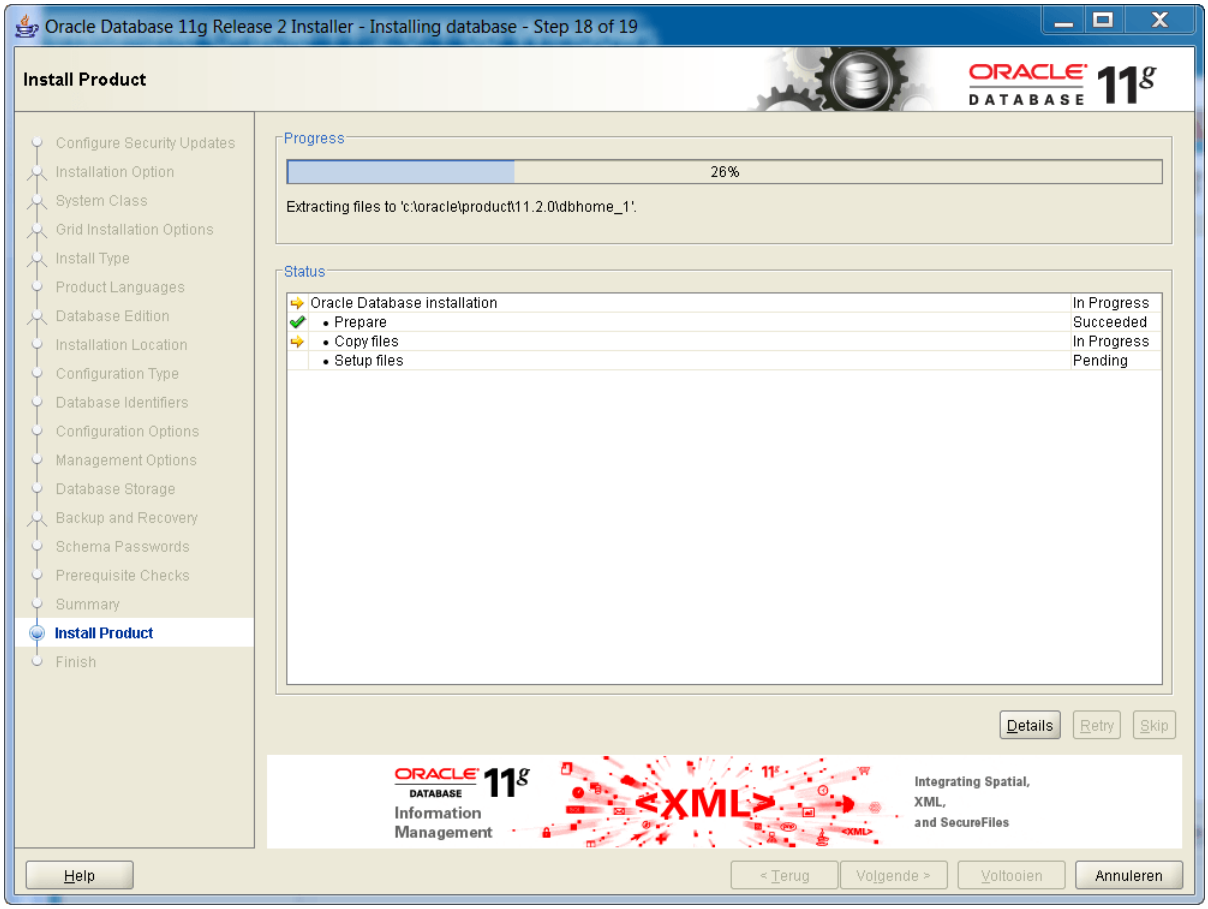
- Enter the preferred password.
- Select ‘Next’.
- The following screen appears:



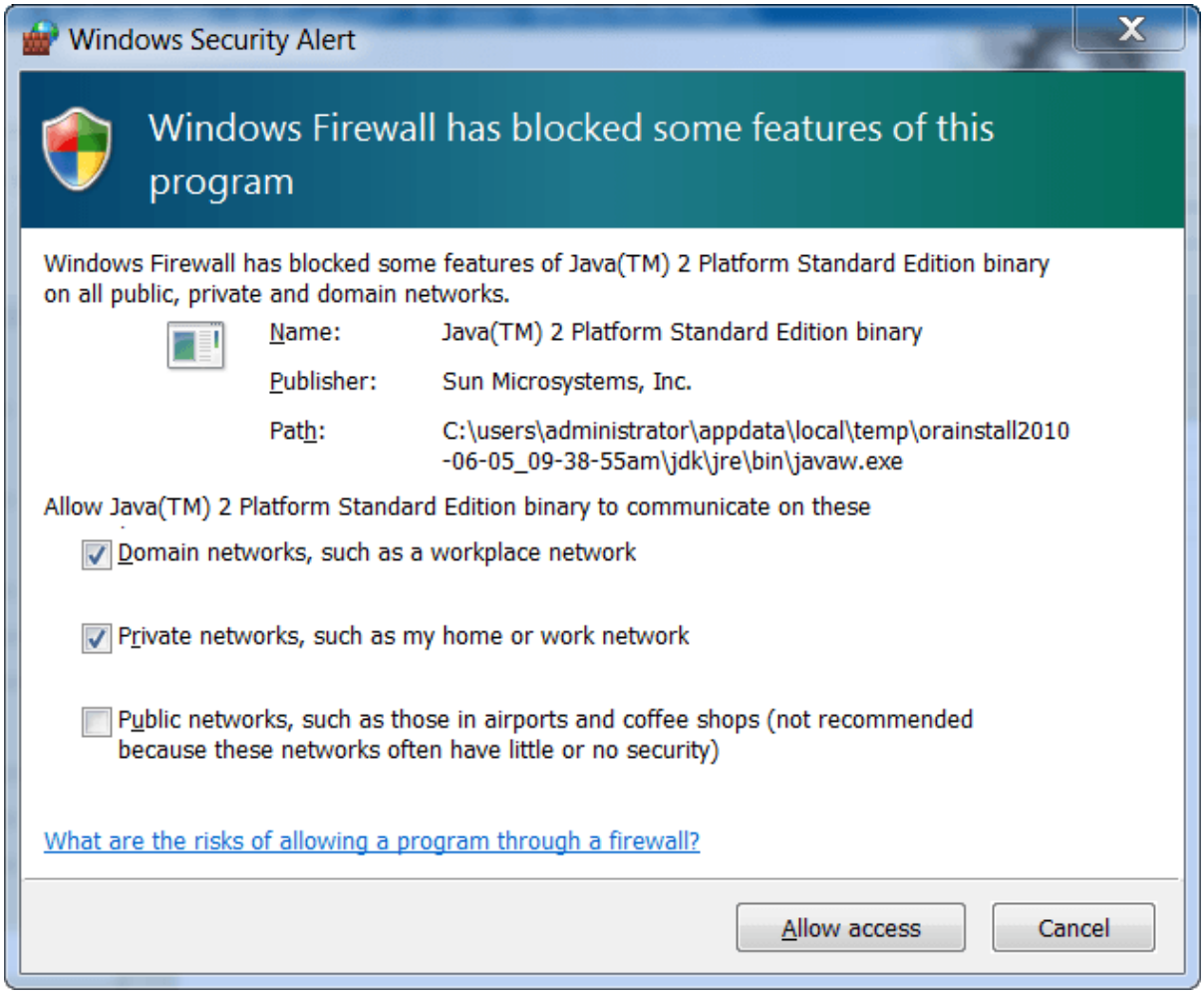
- Check the results and select ‘Next’ if there are no problems.
- The following screen appears:



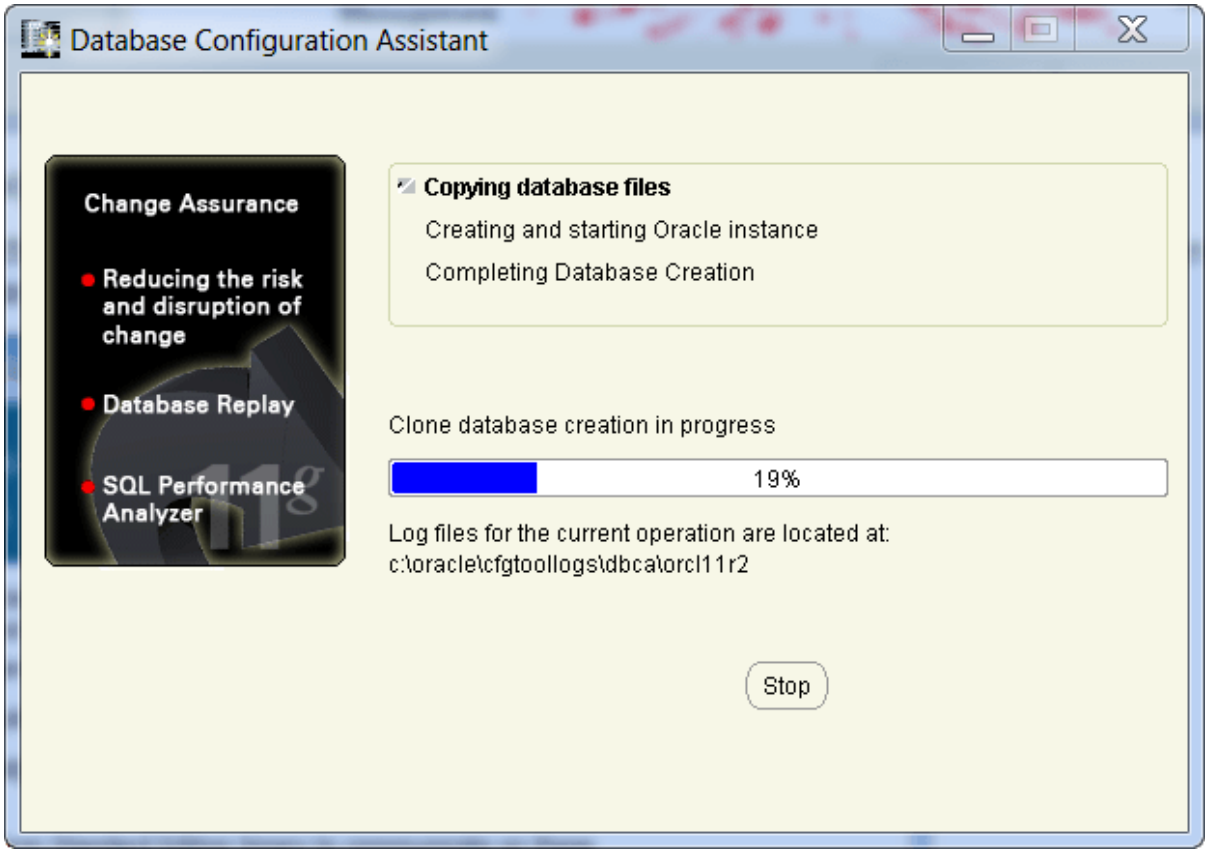
- Check the settings and press ‘Finish’.
- The following screen appears while the installation is being performed:



- This takes depending on the circumstances up to 30 minutes.
- On some platforms, a warning from Windows Firewall will appear when parts of Oracle will be started. Accept these in consultation with the system administrator.

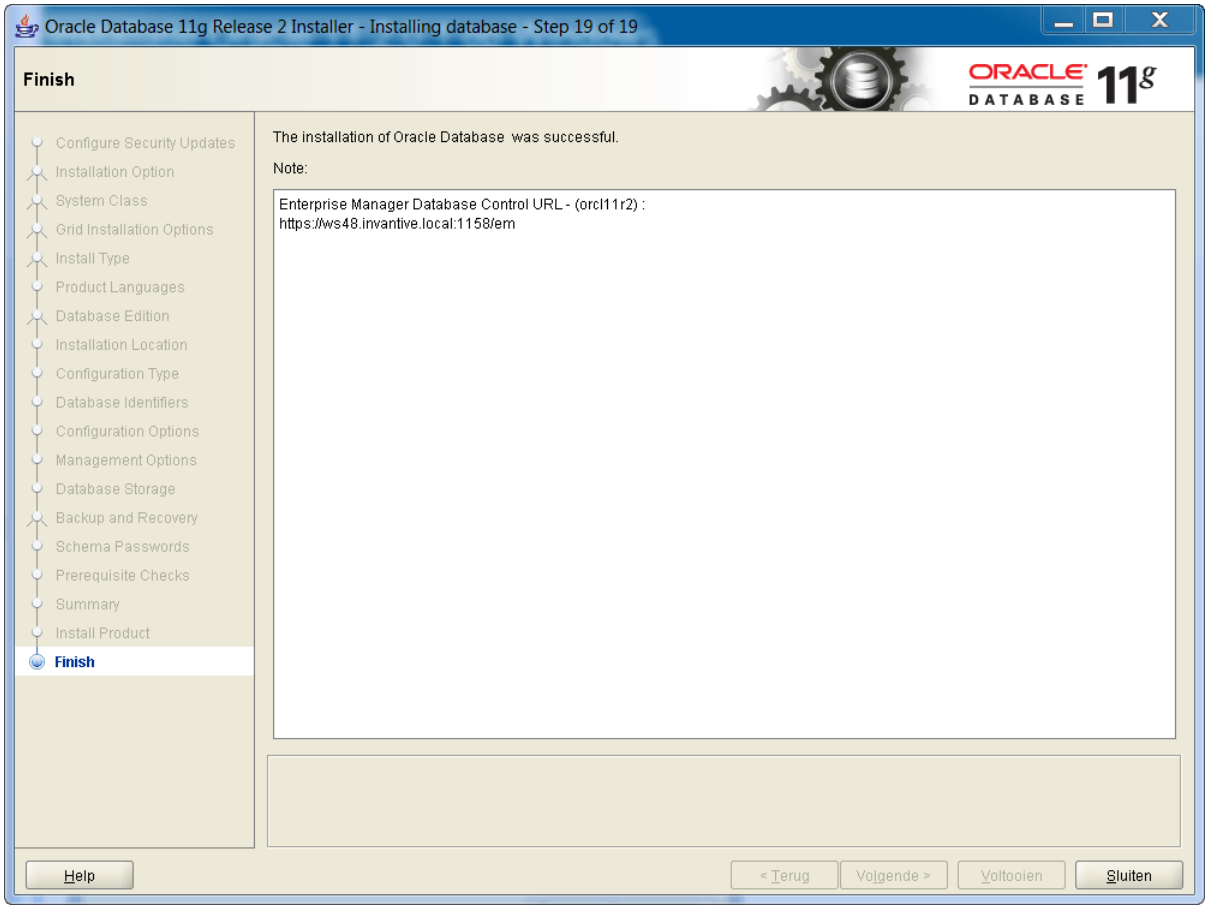


- The following screen appears when the database is being created:



- At the end the following screen appears:

- And finally the screen:

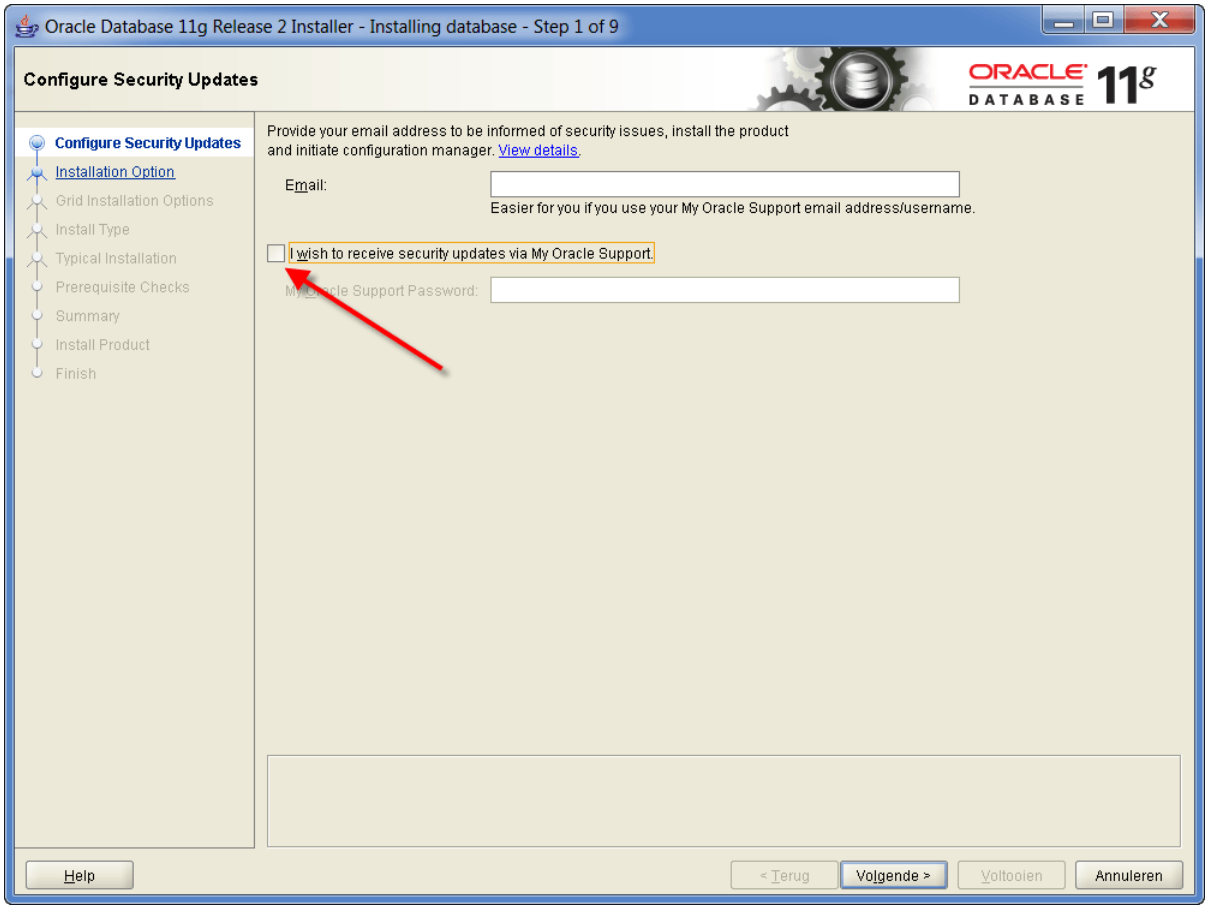


- The installation is completed after choosing ‘Close’.
- Delete the line 'SQLNET.AUTHENTICATION_SERVICES= (NTS)' uit ORACLE_HOME\network\admin\sqlnet.ora.
- Afterwards install the Oracle patch 14095819 (32-bit Windows) or Oracle patch 14095820 (64-bit Windows). This is patch 7 on 11.2.0.3. Inside is a patch for Oracle bug 12794090 which ensures that you can also read a dump with impdp which is made with expdp during an Unicode Installation of an Oracle database (AL32UTF8 draw collection).

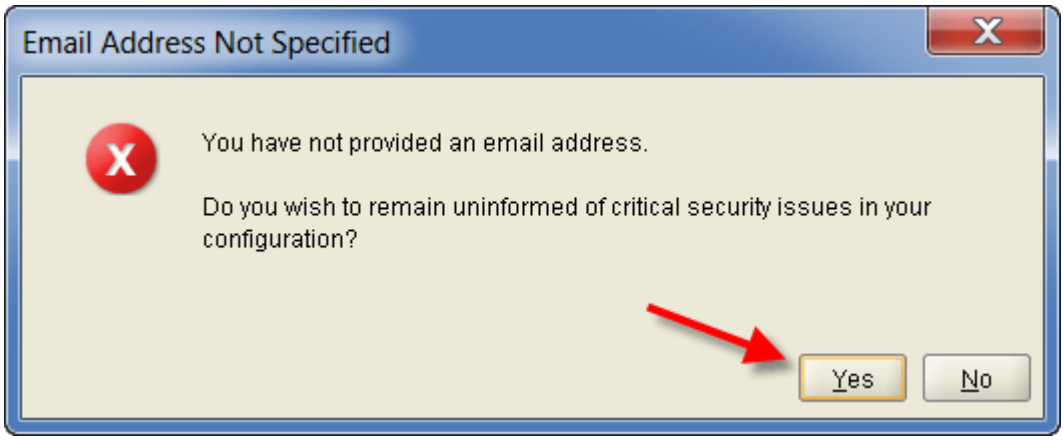
Installation Oracle 12.1.0.2 on Windows_2

Perform the next steps to install Oracle:

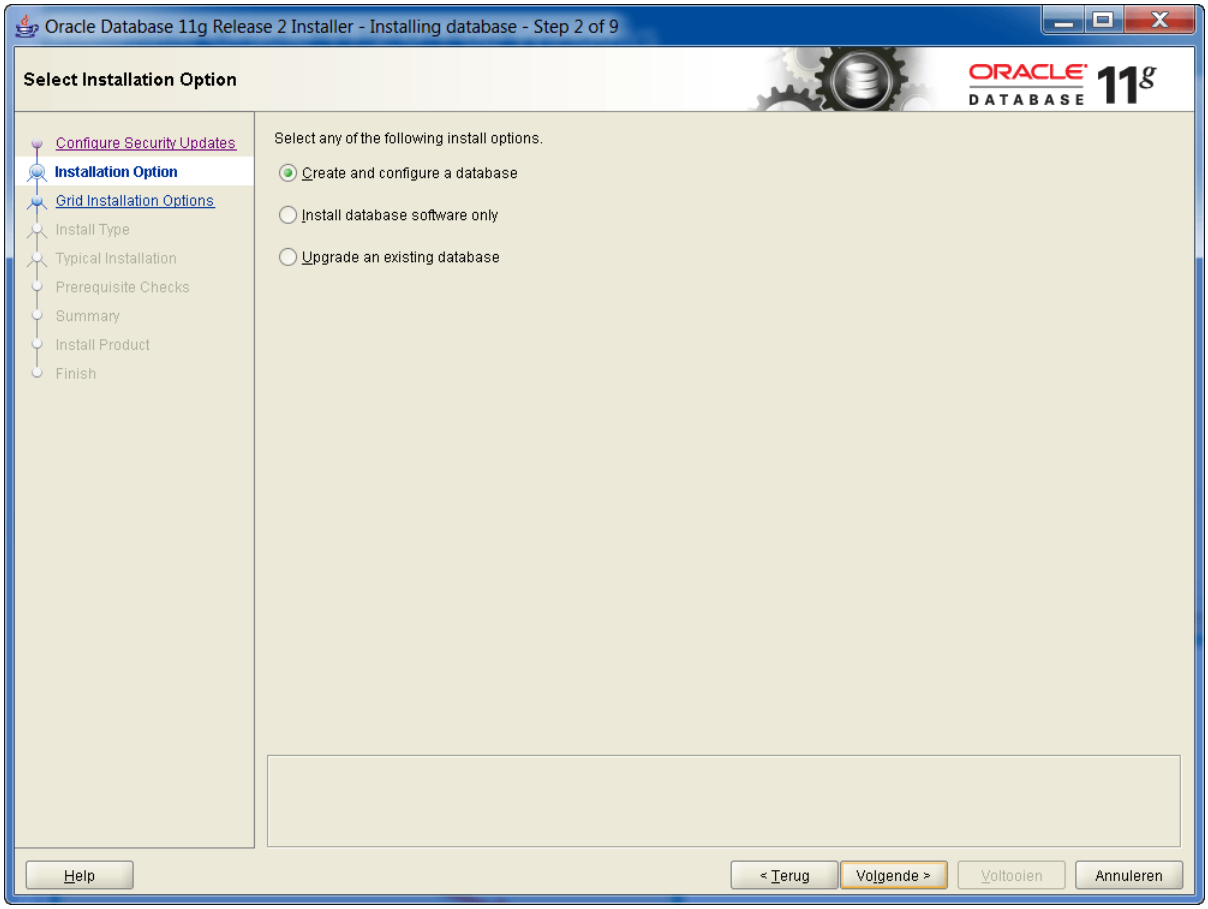
- Unzip the files ‘winx64_12102_database_1of2.zip’ and ‘winx64_12102_database_2of2.zip’ in the same folder, for instance ‘win64_12gR1_database’. If you use ‘Extract All’ in the Microsoft Windows explorer you need to change the proposed folder name. Accept the warning that the files will be merged.
- Make sure that all extracted files from both zip files end up in the same folder 'database'. You can verify this by checking that in ‘database/stage/Components’ there will be a folder ‘oracle.ctx’.
- Start ‘setup.exe’.
- In the first screen it is usually recommended given the network configuration and security rules to turn off the automatically log on to Metalink::



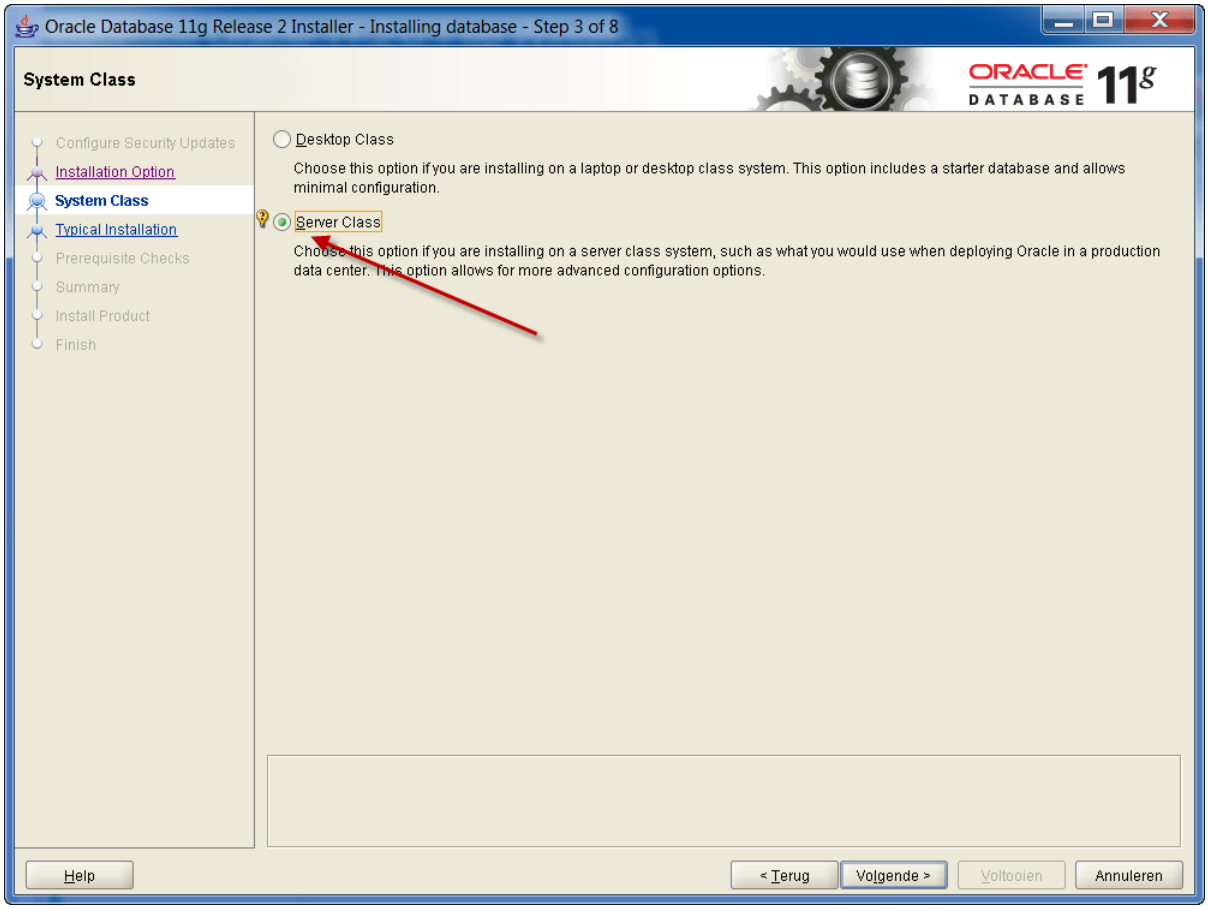
- Select 'Next' and choose 'Yes' when the warning appears.



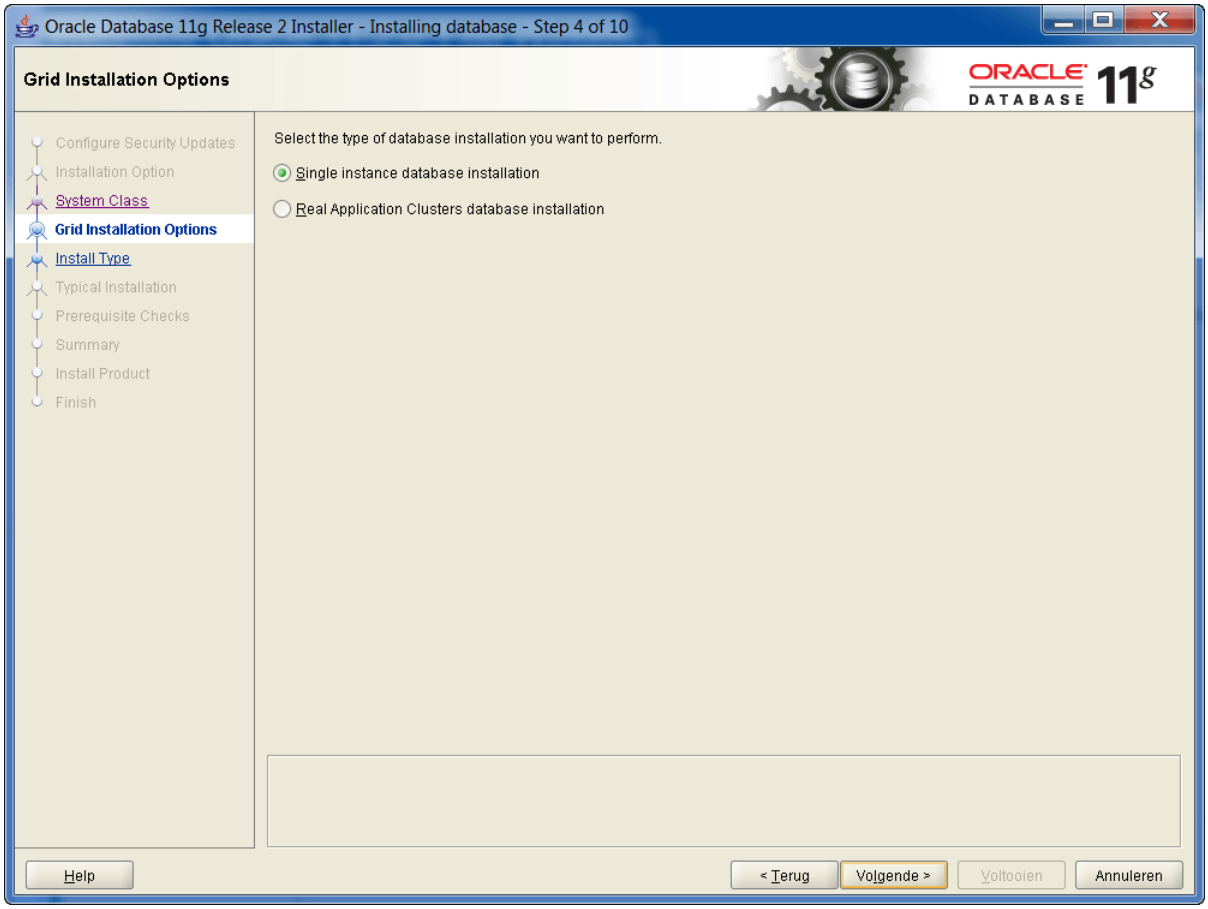
- The following screen appears:



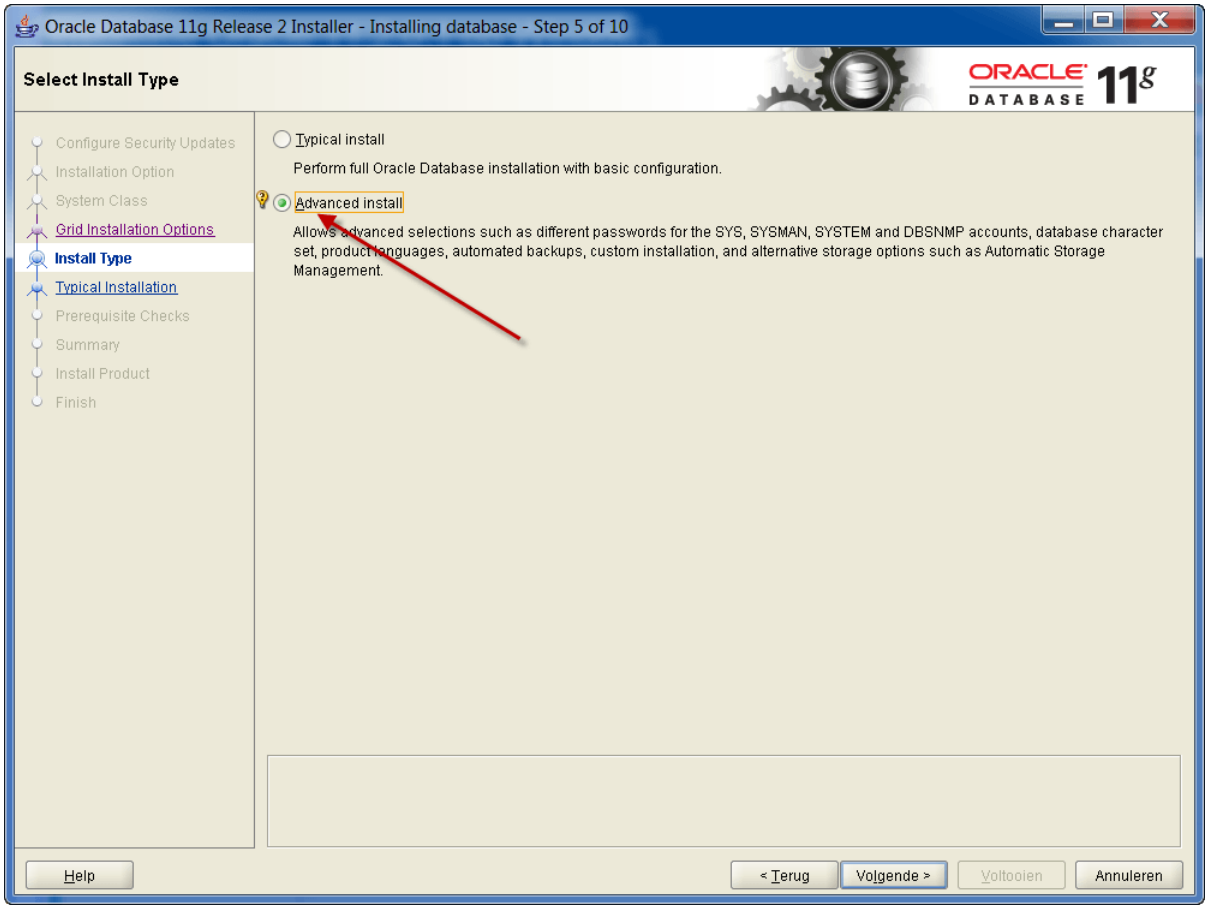
- Select ‘Next’.
- The following screen appears:



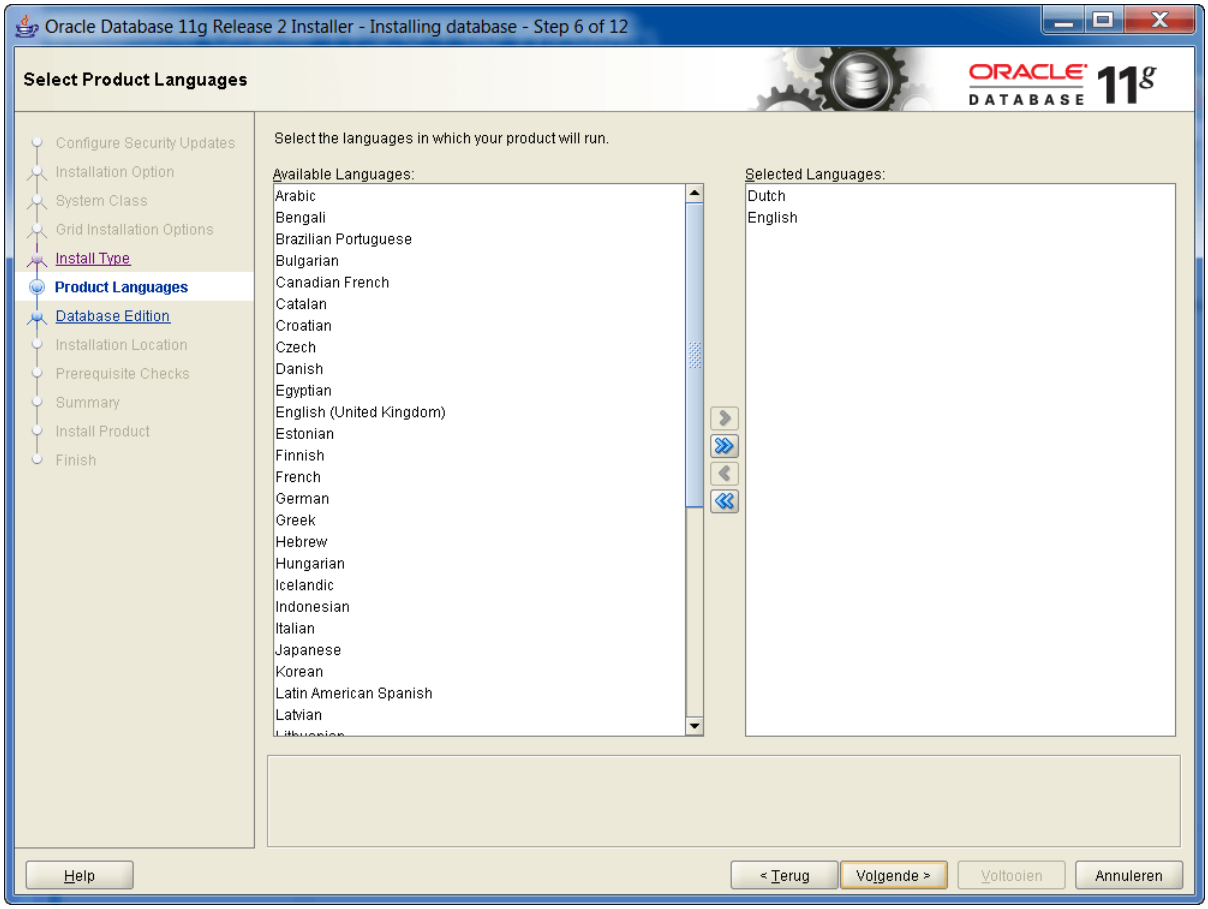
- Select ‘Server Class’ and then select ‘Next’.
- The following screen appears:



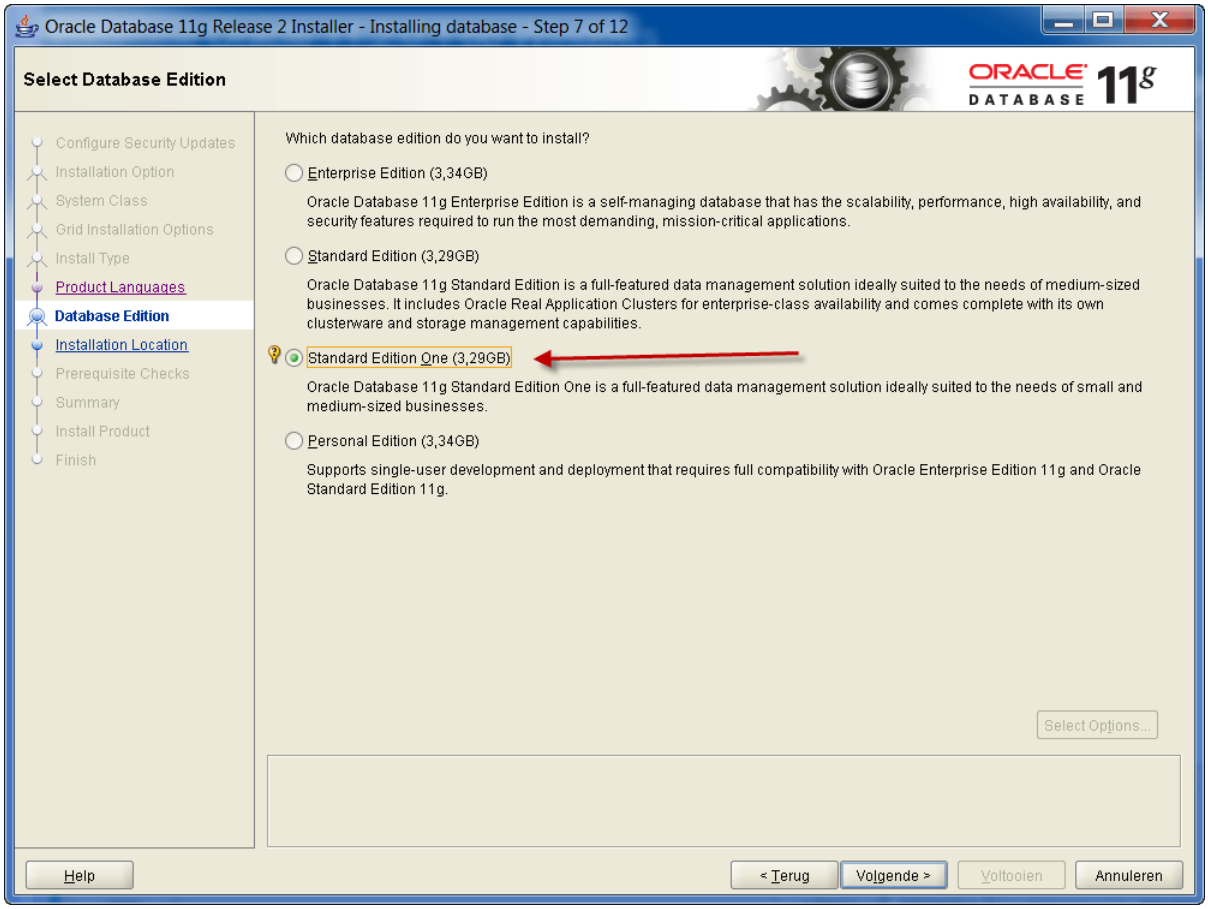
- Select ‘Next’.
- The following screen appears:



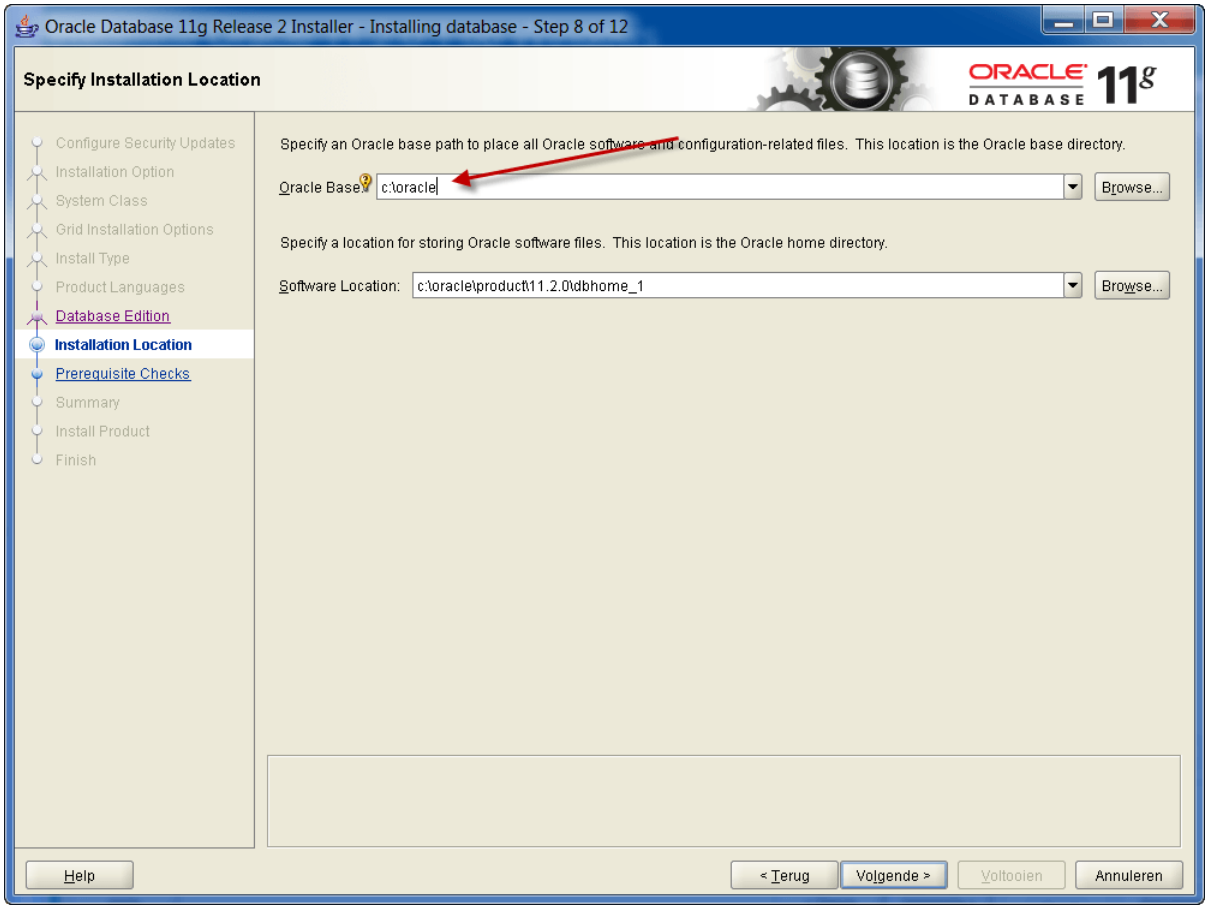
- Select ‘Advanced install’ and then select ‘Next’.
- The following screen appears:



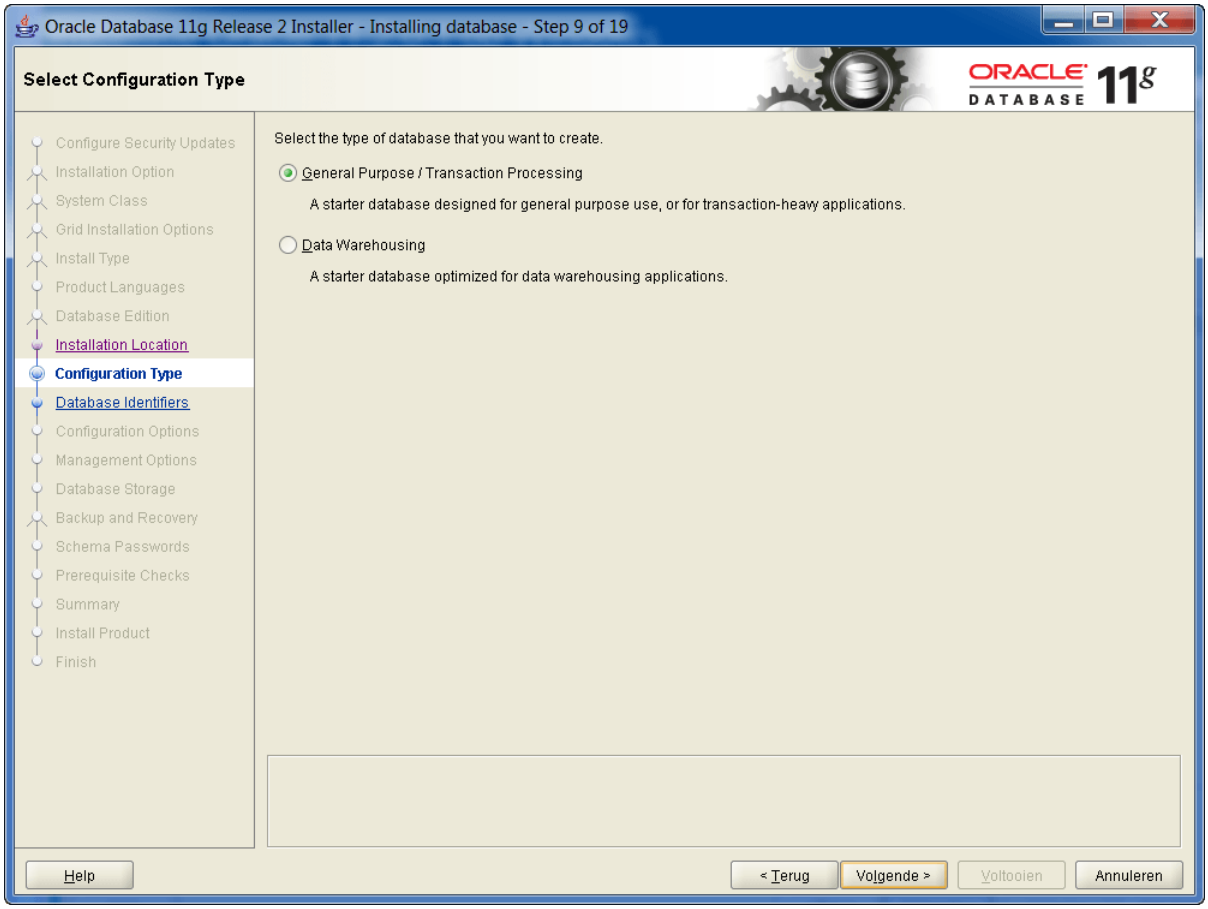
- Select at least the languages in which the system will be ever used, but preferably choose all languages.
- Select ‘Next’.
- The following screen appears:



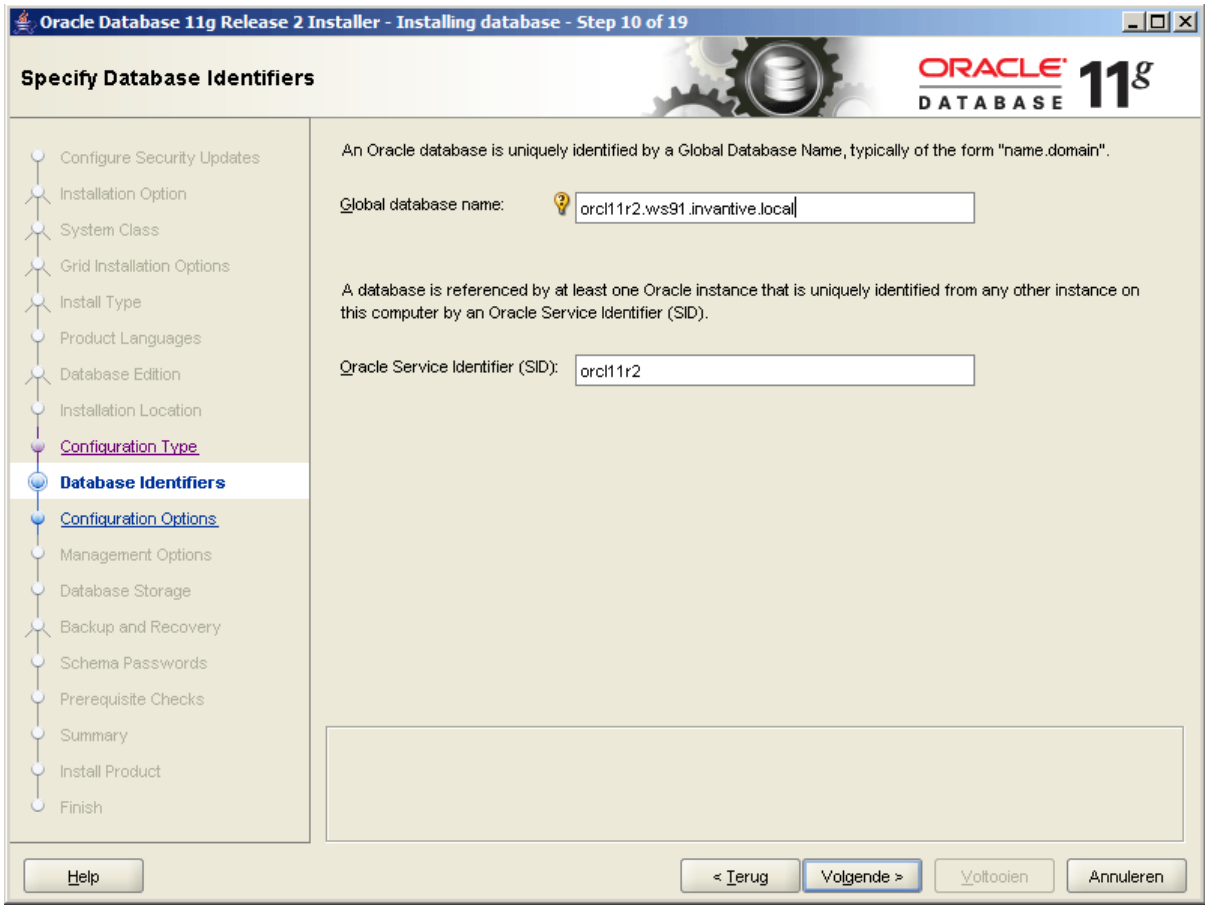
- Select ‘Standard Edition One’ when this is licensed. This is also the minimum level necessary for proper operation.
- Select ‘Next’.



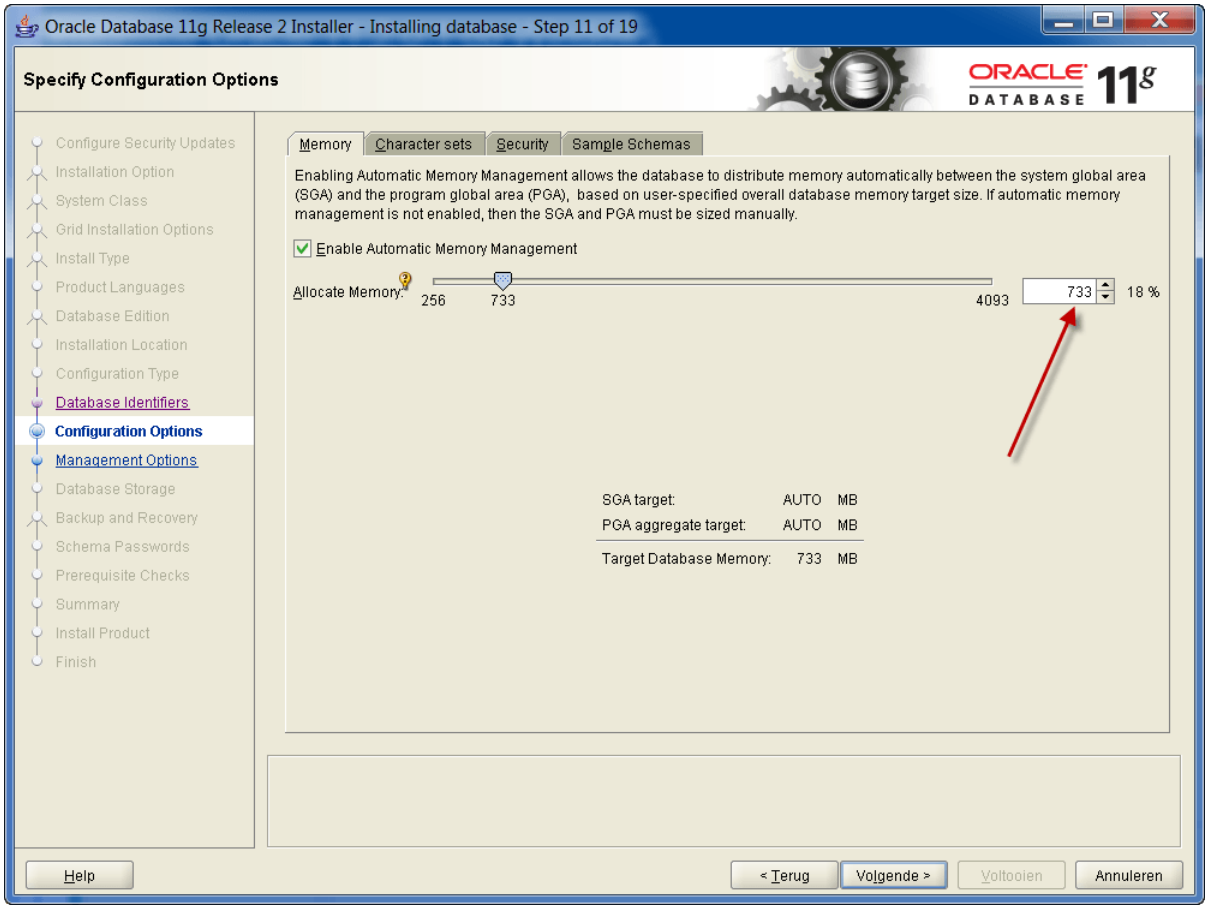
- Fill in at ‘Oracle Base’ the preferred location, most common is ‘<DRIVE>:\oracle’.
- Select ‘Next’.
- The following screen appears:



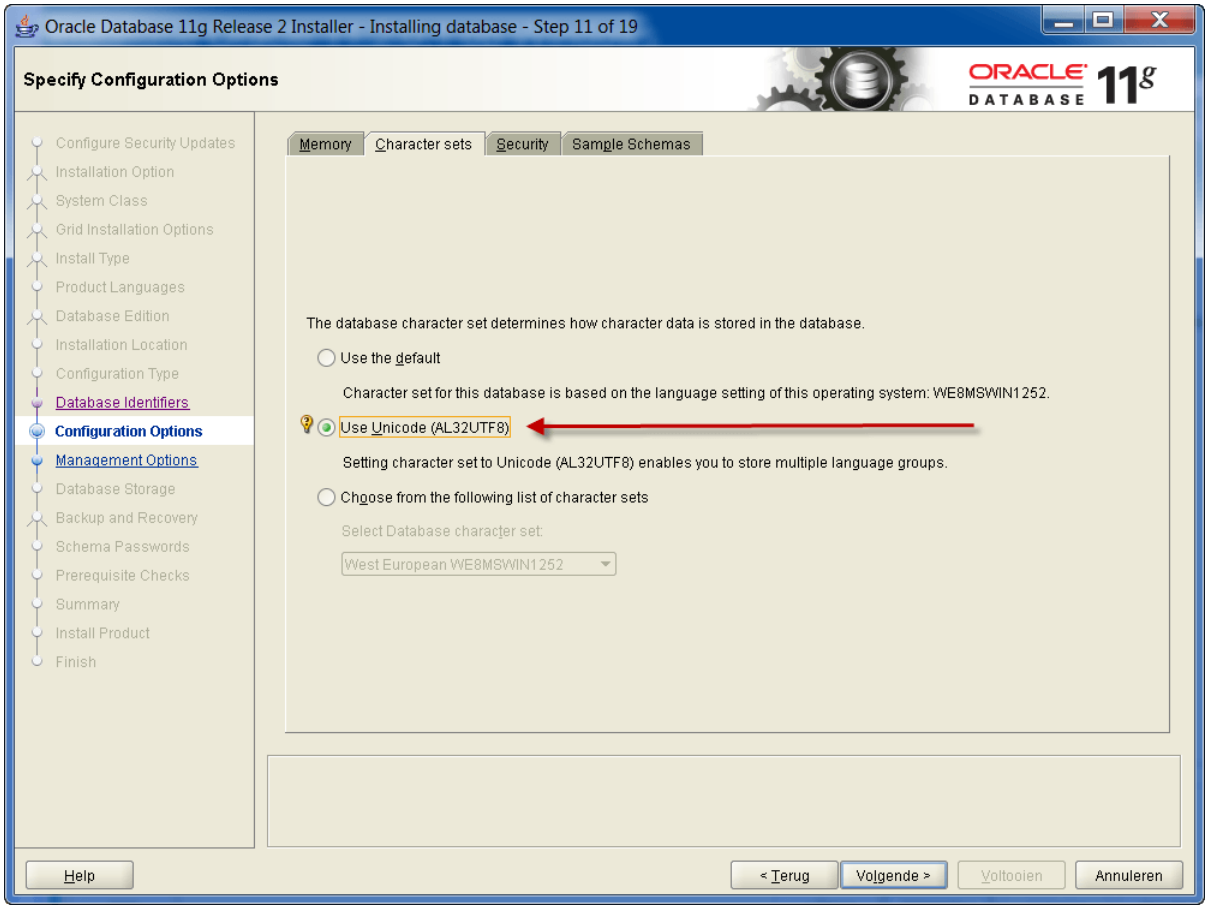
- Select ‘Next’.
- The following screen appears:



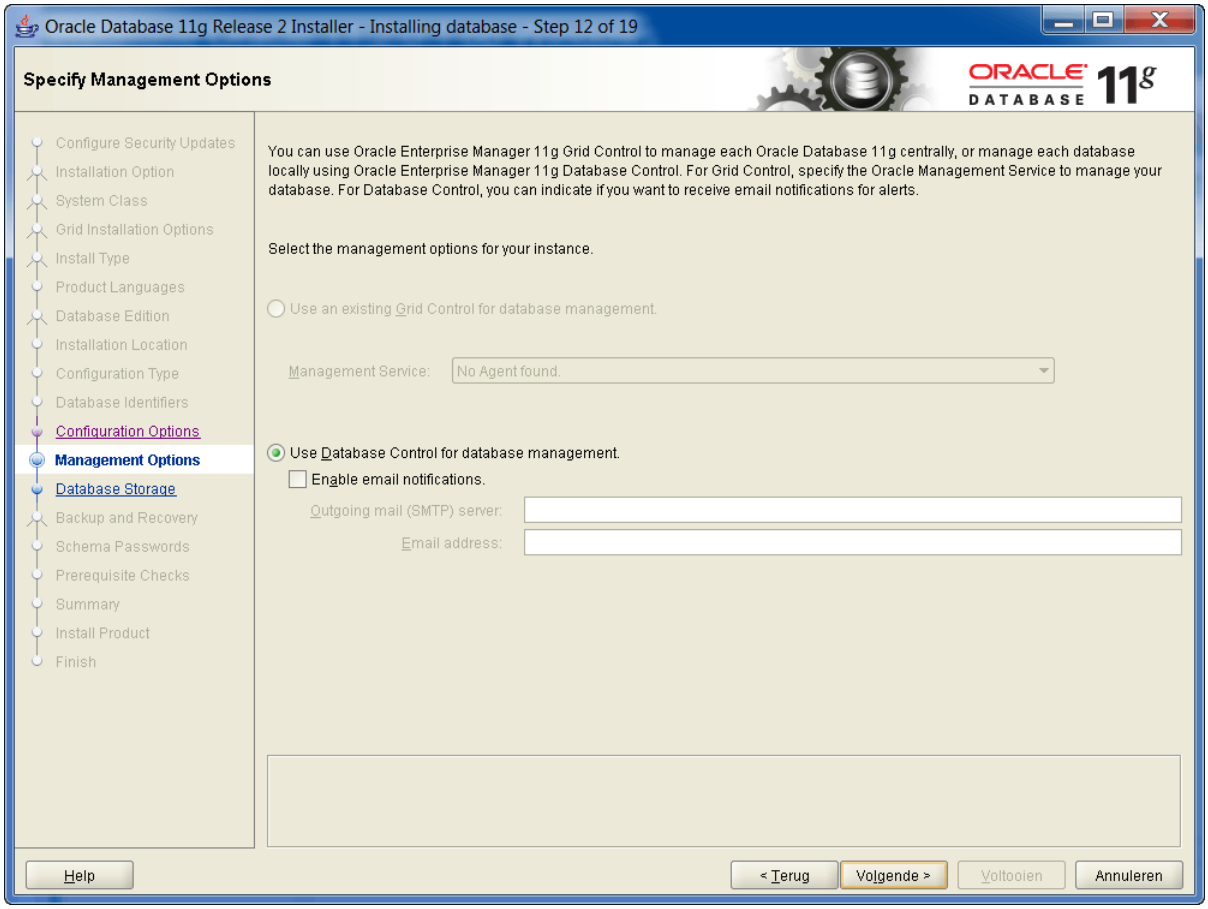
- Enter the Global database name ‘orcl11r2.<MACHINENAAM>.<DOMEIN BEDRIJF>’, for example, ‘orcl11r2.ws48.invantive.com’.
- Select ‘Next’.
- The following screen appears:



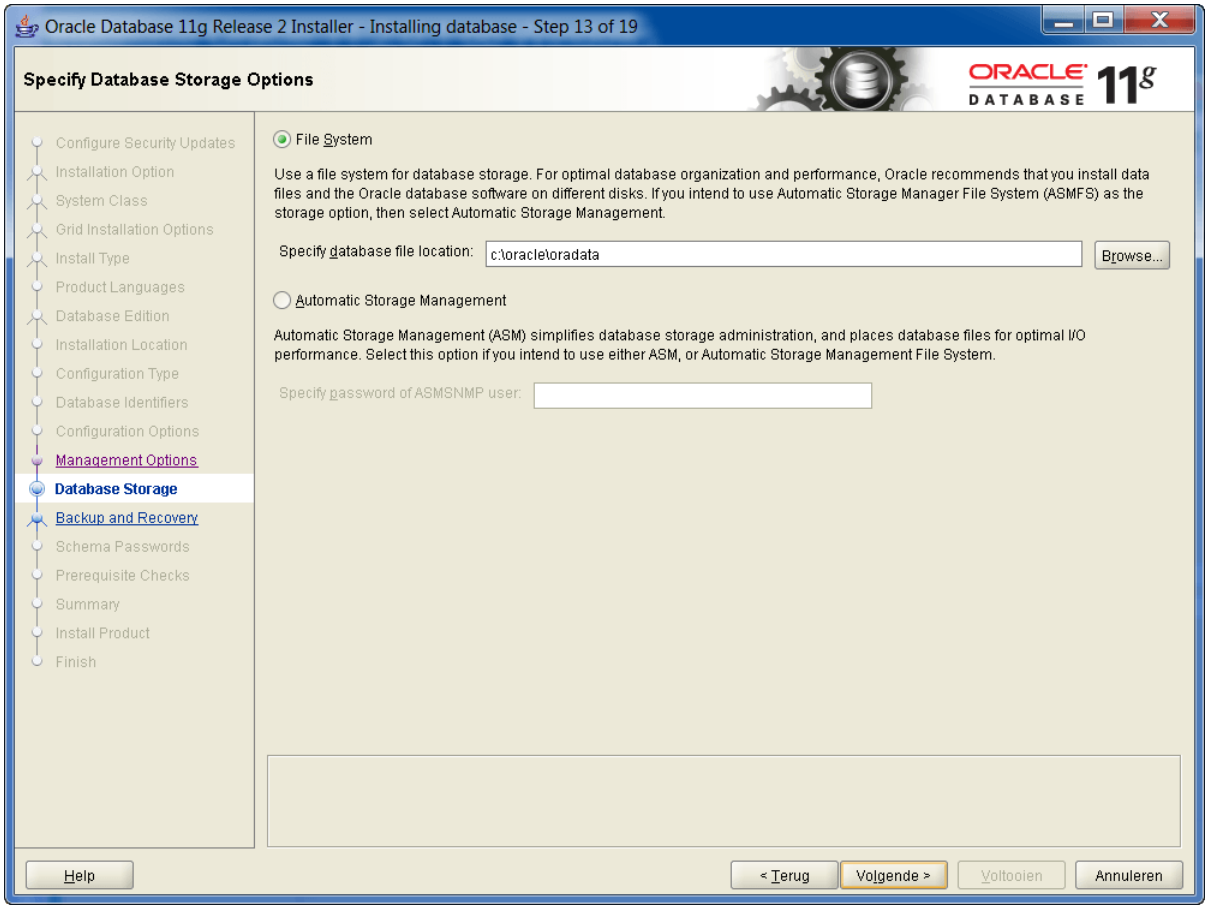
- Set the maximum memory use after consultation with the system administrator and the requirements based on the number of users.
- Select the tab ‘Character sets’ and select ‘AL32UTF8’ as standard character set:



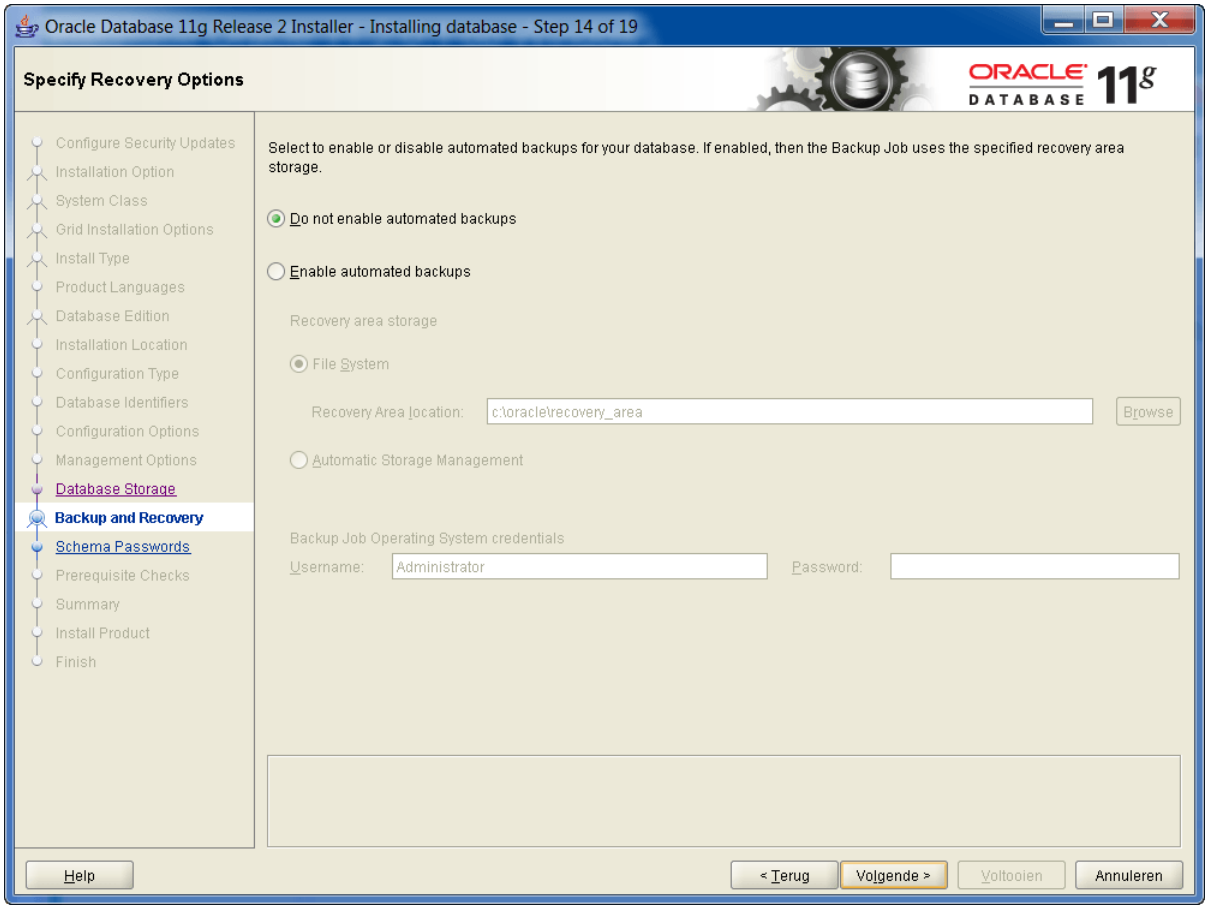
- Select ‘Next’.
- The following screen appears:



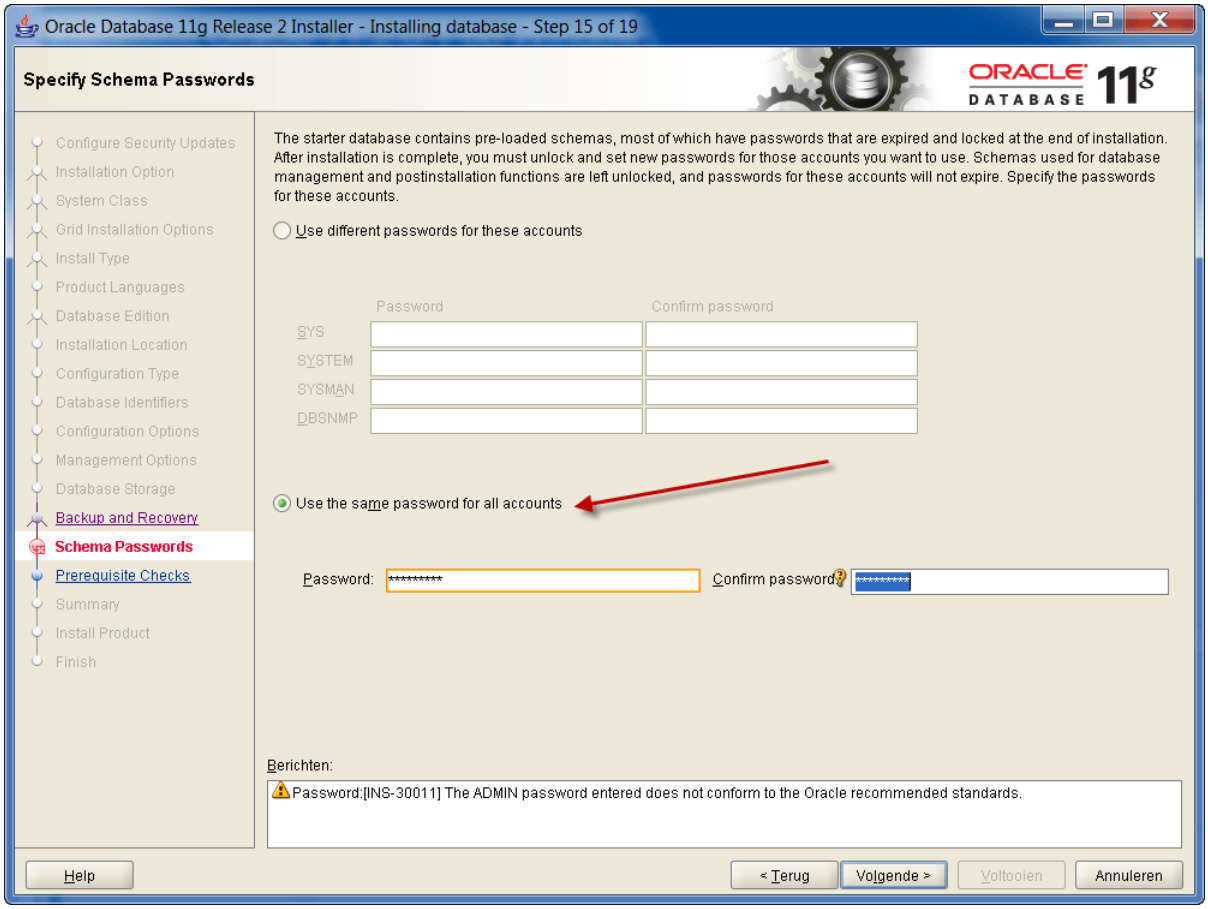
- Select ‘Next’.
- The following screen appears:



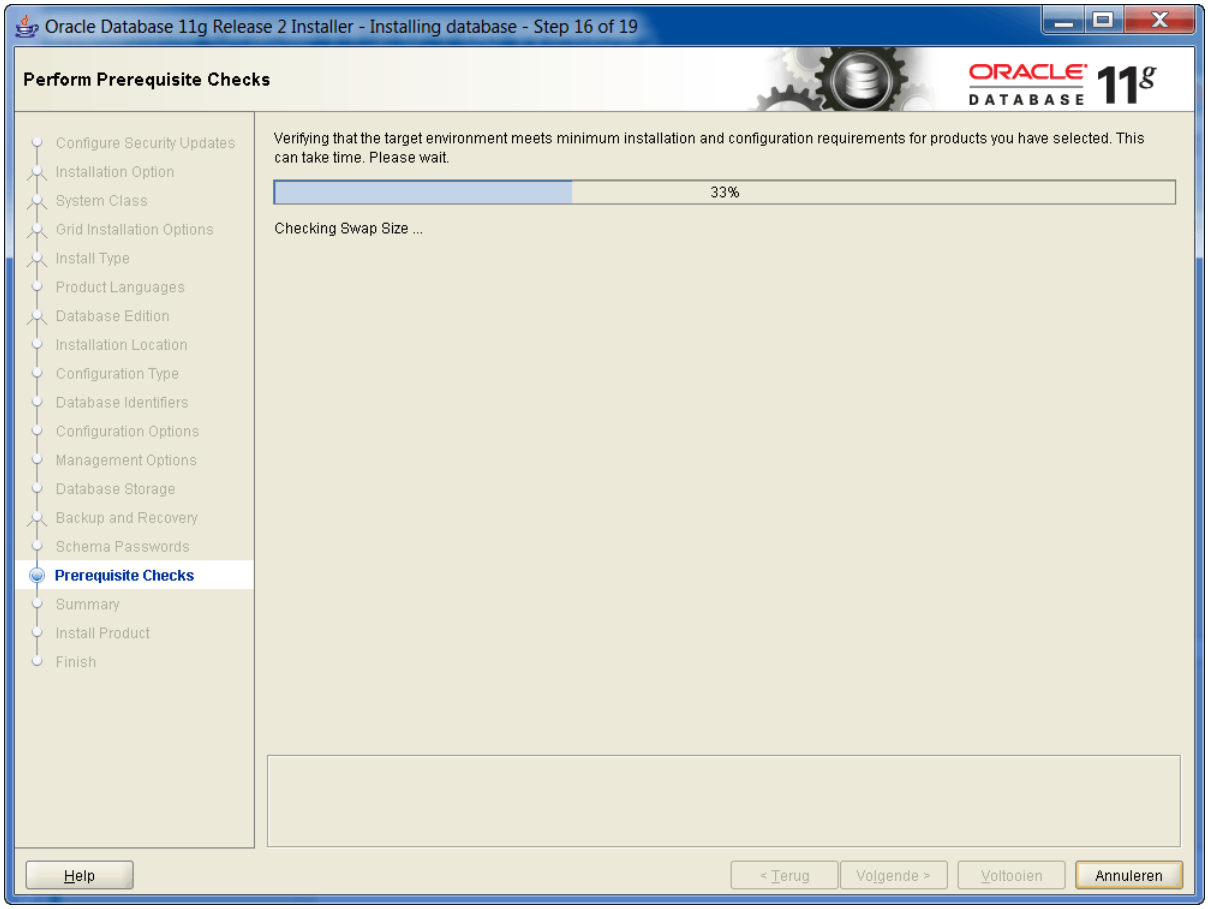
- Select ‘Next’.
- The following screen appears:



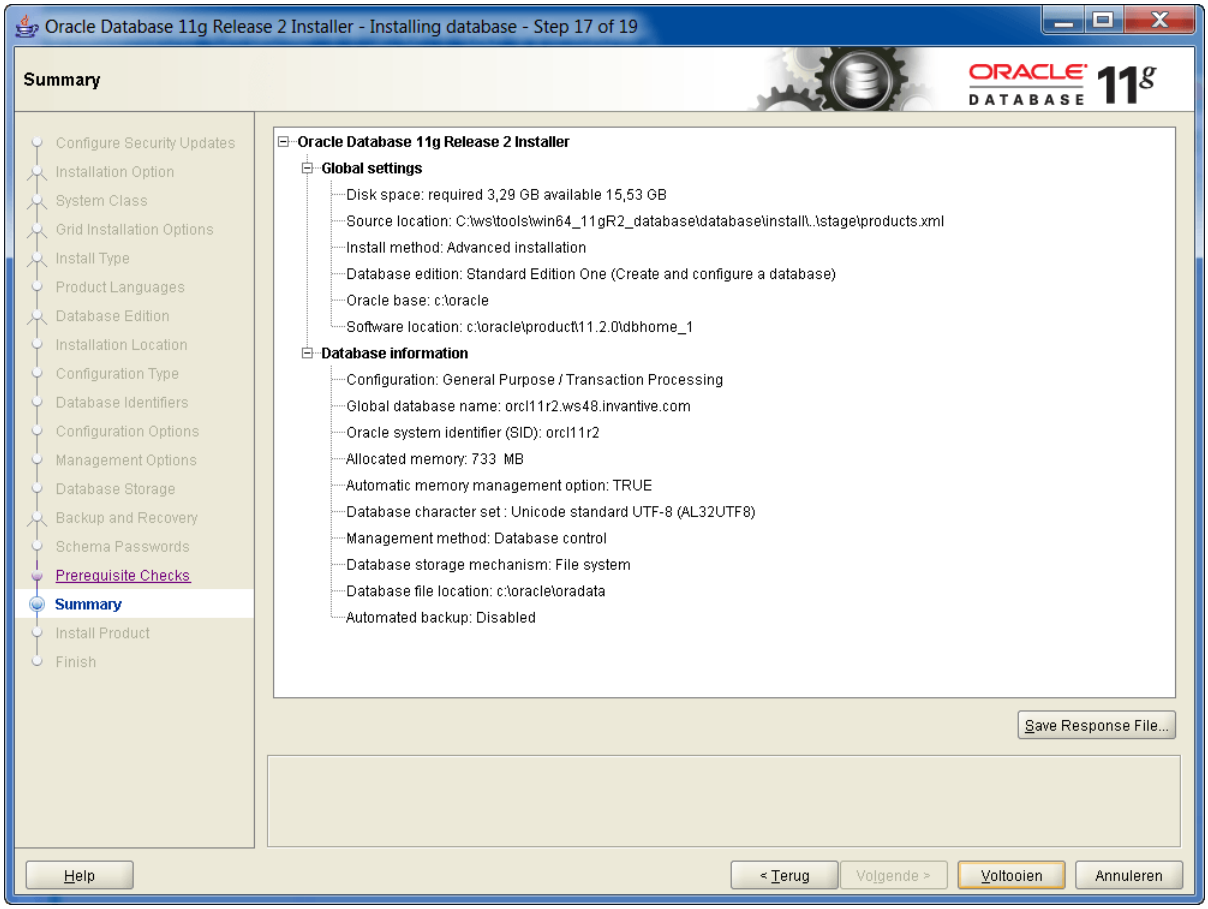
- Select ‘Next’.
- The following screen appears:



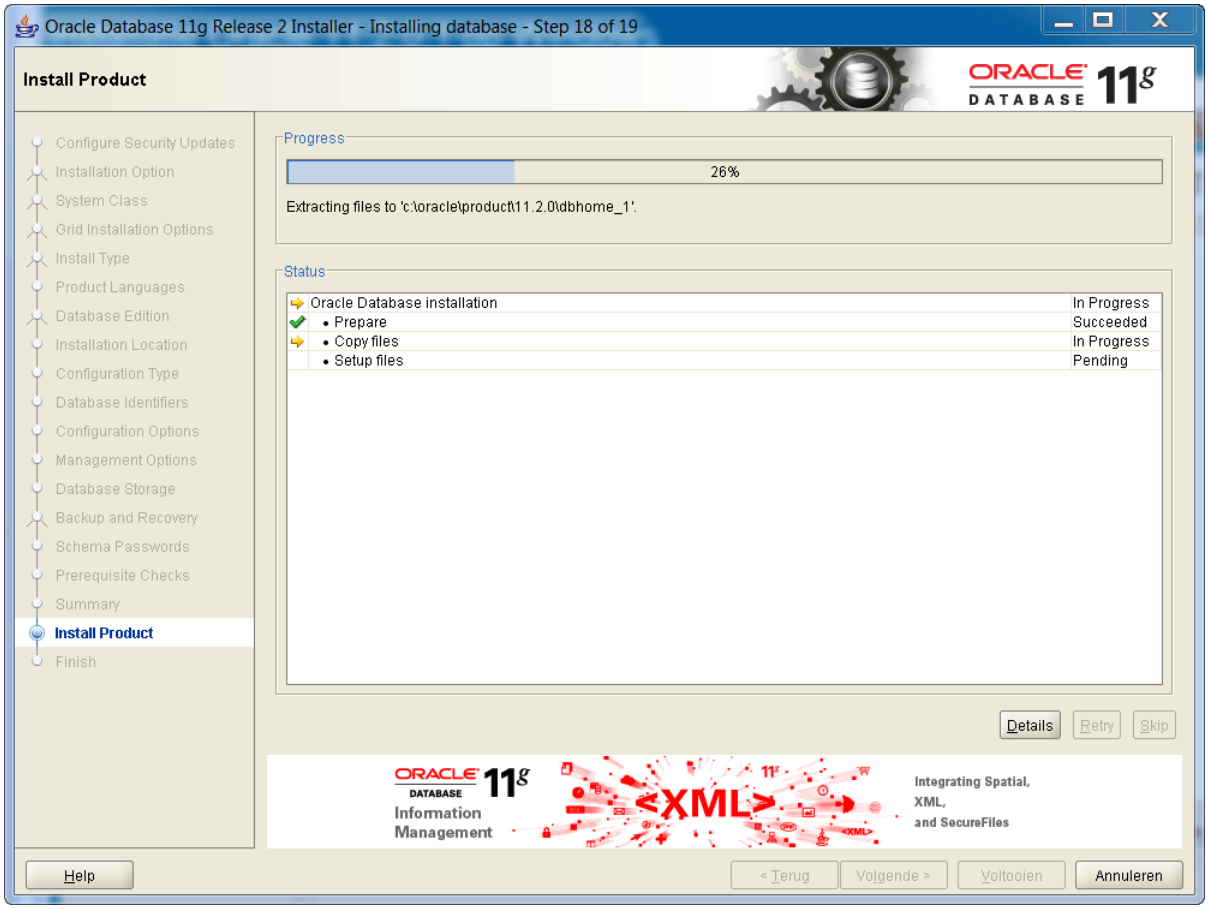
- Enter the preferred password.
- Select ‘Next’.
- The following screen appears:



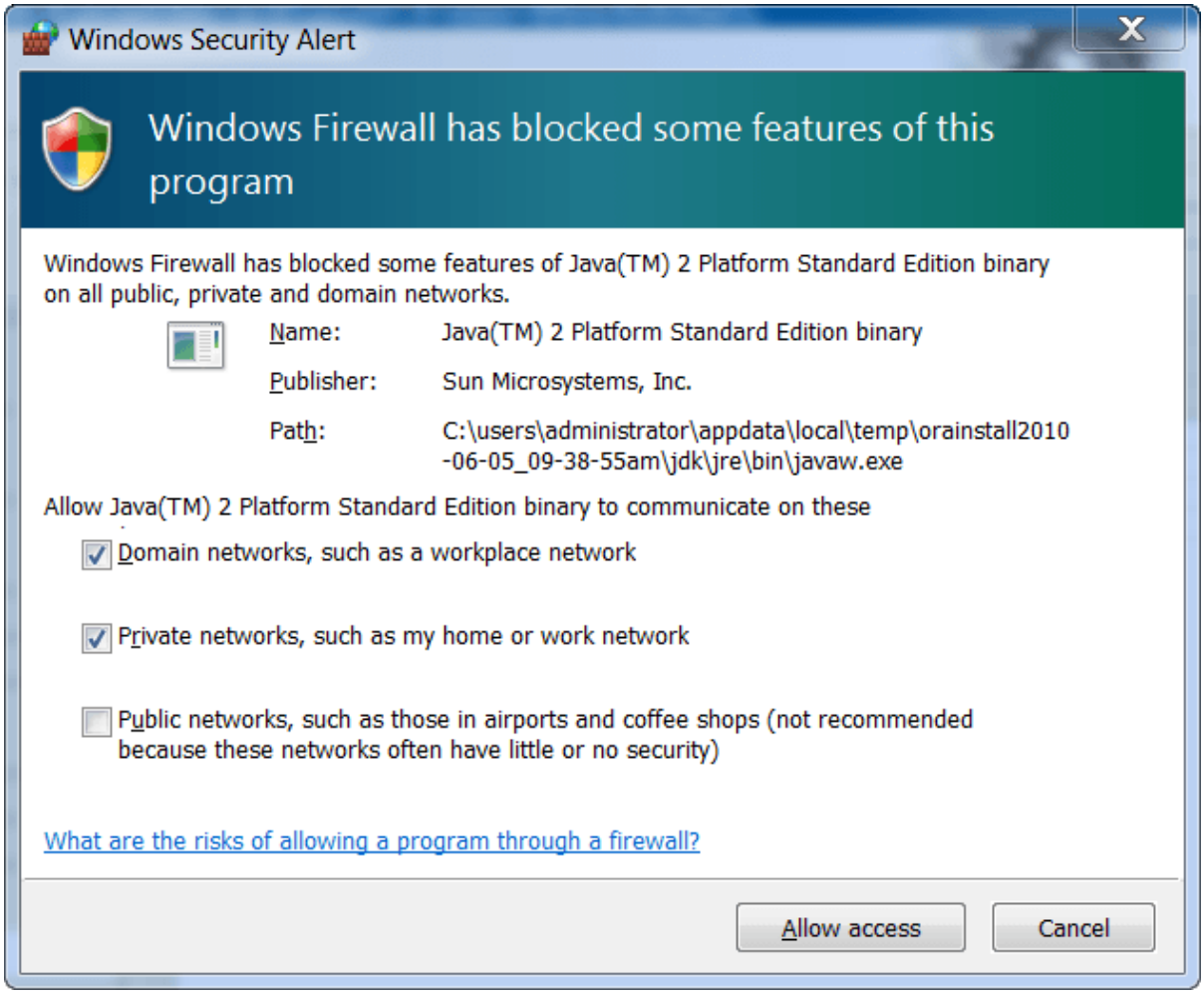
- Check the results and select ‘Next’ if there are no problems.
- The following screen appears:



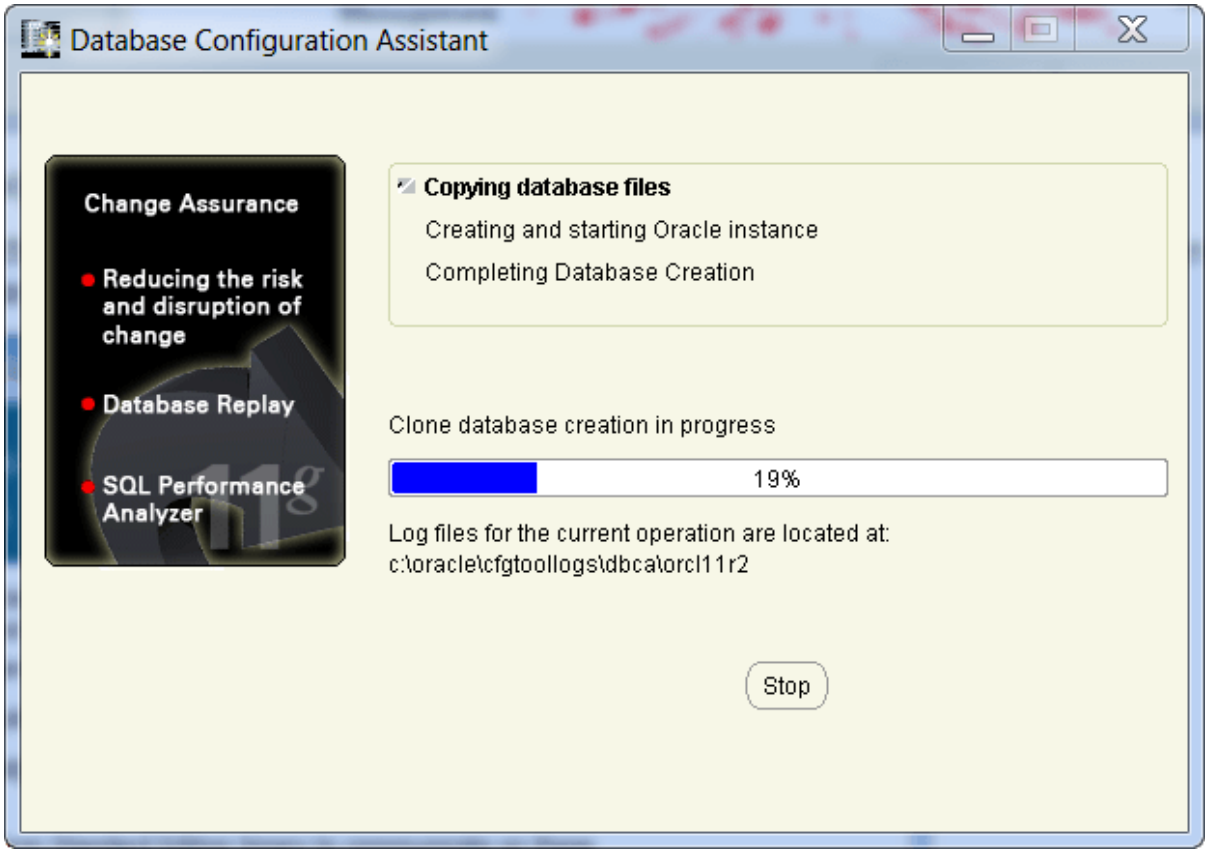
- Check the settings and press ‘Finish’.
- The following screen appears while the installation is being performed:



- This takes depending on the circumstances up to 30 minutes.
- On some platforms, a warning from Windows Firewall will appear when parts of Oracle will be started. Accept these in consultation with the system administrator.

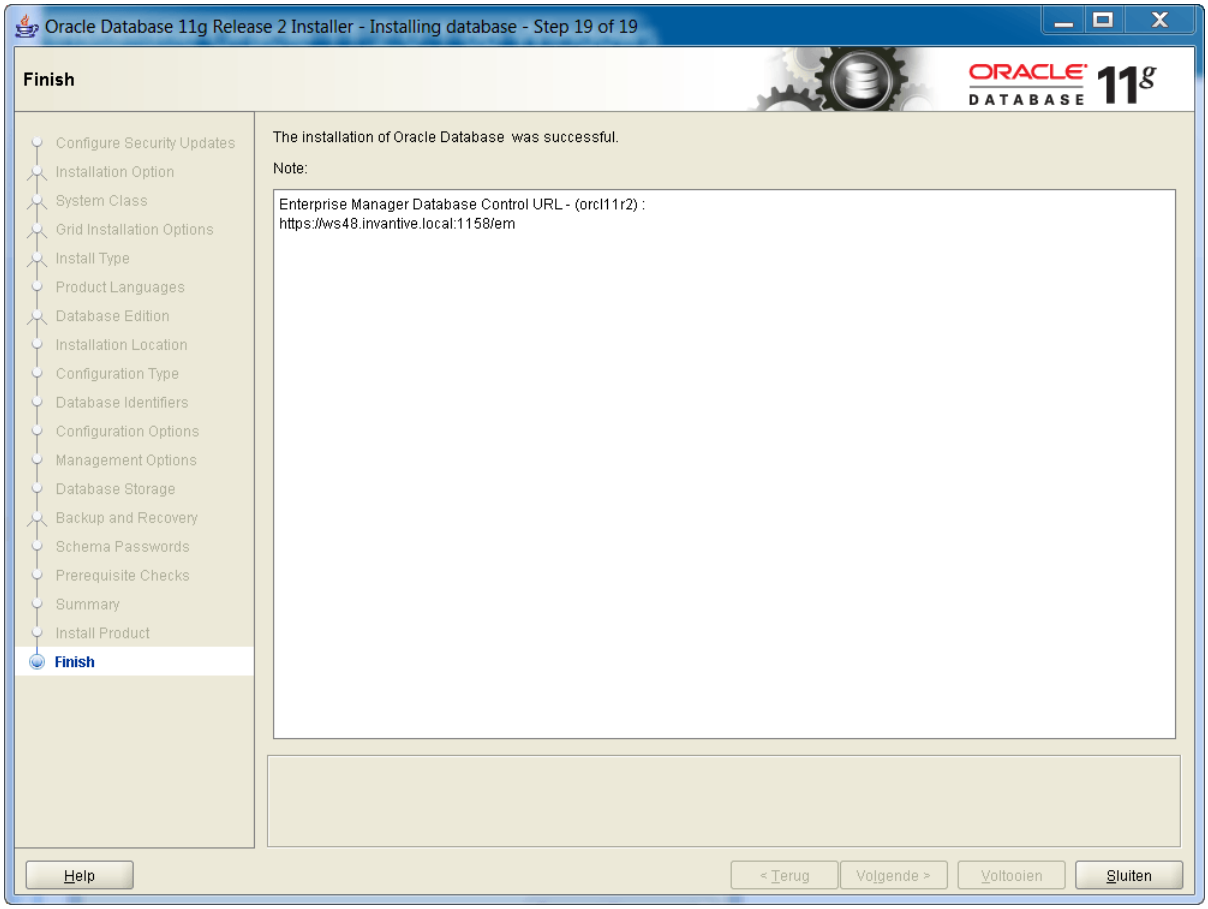


- The following screen appears when the database is being created:



- At the end the following screen appears:

- And finally the screen:



- The installation is completed after choosing ‘Close’.
- Delete the line 'SQLNET.AUTHENTICATION_SERVICES= (NTS)' uit ORACLE_HOME\network\admin\sqlnet.ora.
- Install Oracle patch 21126814 (64-bit Windows) after completion. This is patch 7 on 12.1.0.2.

1.12.2.2 Installation Tomcat Web Server

Perform the next steps in case of installation or upgrade of the application server:

Required Parts

- [All] Ensure that JDK 8 Update 51 or later is installed, preferably in the same number of bits (32 or 64) what the platform can support a maximum of.
- [All] Ensure that the environment variable JAVA_HOME points to JDK, for example, ‘I:\Program Files\Java\jdk1.8.0_51’. See SVN://tools/Java.
- [All] Ensure that Tomcat 8.0.24 or later is installed within the 8.0 version of Tomcat. See SVN://tools/Apache Tomcat.
- [All] Ensure that the environment variable CATALINA_HOME points to the installation directory of Tomcat, for example, ‘I:\Program Files\Apache Software Foundation\Tomcat 8.0’.
- [All] Install Psi Probe 2.4 or newer in the map webapps of CATALINA_HOME from https://github.com/psi-probe/psi-probe/releases/tag/2.4.0.
- [UNIX/Linux] Edit catalina.sh and add the next lines to the beginning:

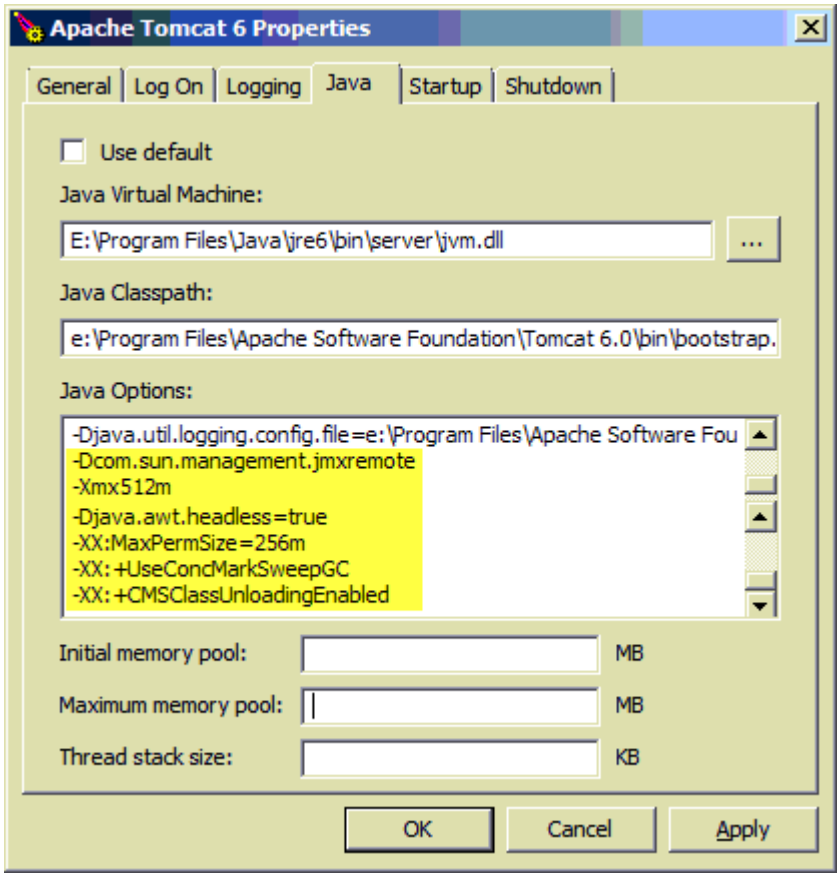
```
umask 007
```

```
NLS_LANG="DUTCH_THE NETHERLANDS.AL32UTF8"
export NLS_LANG
```

- [UNIX/Linux] Edit /etc/init.d/oracle or equivalent and add the next lines to the beginning:

```
umask 007
NLS_LANG="DUTCH_THE NETHERLANDS.AL32UTF8"
export NLS_LANG
```

- [Windows] Makes sure that AL32UTF8 is used by putting NLS_LANG on "DUTCH_THE NETHERLANDS.AL32UTF8" in the register.
- [All] Add for memory measurement with Psi Probe '-Dcom.sun.management.jmxremote' to the Java options of Tomcat (Configure in the context menu in the process bar, tab Java, field Java Options).
- [All] Assign at least 25 MB of memory per concurrent user, with a minimum of 512 MB and make sure that the PermGen will be released again at restart of an application by adding the next yellow shaded items:



- [All] The total list extra-Java-opties will be:

```
-Dcom.sun.management.jmxremote
-Xmx512m
-Djava.awt.headless=true
-XX:MaxPermSize=256m
-XX:+UseConcMarkSweepGC
-XX:+CMSClassUnloadingEnabled
```

- [UNIX / Linux] Only if you will run Tomcat in the root: change the port in the configuration file server.xml of Tomcat from 8080 to 80
- Put the parameter 'reloadable' on 'false' in production environments to turn of automatic controls on changing programs. You can restart the application with Psi Probe.

Installation Certificate

Perform the following steps to install a pfx certificate:

- If the certificate is not in pfx format:
- Follow the steps for installing a certificate in a Microsoft IIS server as described in Installation Microsoft IIS Tunneling Webservice 653.
- Export the certificate in pfx format.
- Open server.xml in %TOMCAT_HOME%\conf.
- Remove comments start '<!--' and commens end '-->' around the SSL connector.
- Add the keystore with as end result:

```
     <Connector port="443" protocol="HTTP/1.1" SSLEnabled="true"
                maxThreads="150" scheme="https" secure="true"
                keystoreFile="i:\program files\apache software
foundation\tomcat 6.0\conf\KLANT.pfx"
                keystorePass="password"
                keystoreType="PKCS12"
                clientAuth="false" sslProtocol="TLS" />
```

- Disable a possible APR listener in the header of Tomcat.
- Restart Tomcat.
- Modify the URL-s in the site.CUSTOMER.ENVIRONMENT.properties to the https: site:
- Adjust the screen settings 349 the field 'Prefix Server (URL)' to the example 'https://...'.
- Adjust the screen Settings 349 the field 'Main Menu (URL)' to an example 'https://.../bubs_main_pjt.do'.

Folder Structure

[All] Create for the environment an environment map ENVIRONMENTDIR (for example ‘d:\invantive\ENVIRONMENT’ of ‘/opt/invantive/ENVIRONMENT’). **Installation Frontend**

- ‘backup’ (for backups).
- ‘distribute’ (for Outlook Add-in distribution).
- ‘documents’ (for documents).
- ‘etl’ (for ETL-programs).
- ‘local’ (for local images and style sheets).
- ‘log’ (for logging).
- ‘recycle bin’ (for deleted documents).
- ‘swap’ (for temporary files for large reports).
- ‘tmp’ (for temporary files during uploads).
- ‘transfer’ (for data exchange).
- ‘transfer/bubs/in’ (for input files for example for connections).
- ‘transfer/bubs/in/processed’.
- ‘transfer/bubs/in/rejected’.
- ‘transfer/bubs/out’ (or output files for example for connections).
- ‘transfer/bubs/out/processed’.

- ‘transfer/bubs/out/rejected’.
- for folders that are approached by other applications: make ‘transfer/CODE/in’ and ‘transfer/CODE/out’.
- ‘web’ (for the Apache Tomcat web application).
- ‘webservice’ (for Microsoft IIS web service application).
- ‘work’ (for work files of shell scripts).

Installation Frontend

- [UNIX/Linux] Execute the next statement to set the permissions correctly:

```
find ENVIRONMENTDIR -type d -print | xargs chmod -R g+s # Force
sticky bit on group.
chmod -R ug+rw ENVIRONMENTDIR
chown -R tomcat:dba ENVIRONMENTDIR # TOMCATRUNNER:ORACLE GROUP
chmod -R o-rwx ENVIRONMENTDIR
```

- [All] Add a Context for Invantive Vision in the file CATALINA_HOME\conf\server.xml from Apache Tomcat, like:

```
<!-- Local customizations under SITE/local. -->
<Context path="/abubs/local" docBase="ENVIRONMENTDIR\local"
reloadable="true" />

<!-- Optional! Allow access to the documents when coming from
the server itself. This is necessary to allow JasperReports to
get access to the documents, without first logging on to the
application middle-tier.
<Context path="/tbubs/documents"
docBase="ENVIRONMENTDIR\tbubs\doc" reloadable="true" >
  <Valve className="org.apache.catalina.valves.AccessLogValve"
prefix="ENVIRONMENTDIR/log/tbubs-documents-access."
suffix=".log"/>
  <Logger className="org.apache.catalina.logger.FileLogger"
prefix="ENVIRONMENTDIR/log/tbubs-documents." suffix=".log"
timestamp="true"/>
  <Valve className="org.apache.catalina.valves.RemoteHostValve"
allow="192\.168\.172\.xxx|192\.1681\.172\.yyy|127\.0\.0\.1"/>
</Context>
 -->

<!-- Core of the application. -->
<Context path="/tbubs" docBase="ENVIRONMENTDIR\web"
reloadable="true" />
```

- [All] The data volume exchanged via the network can be strongly reduced by enabling compression at the expense of the processor capacity. It is strongly recommended when users outside the local network also use the application. Expand the Connector Settings in server.xml as follows:

```
 <Connector port="PORT" ... and then the 4 four lines with
compression.
```

```
      compression="on"
      compressionMinSize="32"
      noCompressionUserAgents="gozilla, traviata"
      compressableMimeType="text/html,text/xml,text/javascript,app
lication/x-javascript,text/css"
   />
```

- [All] Copy the content of frontend\runtime to the map ENVIRONMENTDIR.
- [All] Create a site.KLANT.OMGEVING.properties file in ENVIRONMENTDIR/web/WEB-INF/.
- [Alle] Adjust the 'logfile' option in the file 'site.KLANT.OMGEVING.properties' in WEB-INF so it points to theENVIRONMENTDIR/log.
- [Alle] Adjust the parameter configuration.file in ENVIRONMENTDIR/web/WEB-INF/web.xml so it points to the site.KLANT.OMGEVING.properties bestand.

Give Rigths for Windows Service

To enable a user with limited rights to restart the Tomcat7 service, you need to add his data to the command 'sc'.

First ask for the current rights in the command with:

```
sc sdshow tomcat8
```

For example:

```
D:(A;;CCLCSWRPWPDTLOCRRC;;;SY)
(A;;CCDCLCSWRPWPDTLOCRSDRCWDWO;;;BA)(A;;CCLCSWLOCRRC;;;AU)
(A;;CCLCSWRPWPDTLOCRRC;;;PU)
```

Then search the registry with HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\ProfileList\S-... for the SID-s of the users. Then grant the RP, WP and DT rights by expanding the outcome of the sd show with SID-s, for example:

```
sc sdset tomcat7 D:(A;;CCLCSWRPWPDTLOCRRC;;;SY)
(A;;CCDCLCSWRPWPDTLOCRSDRCWDWO;;;BA)(A;;CCLCSWLOCRRC;;;AU)
(A;;CCLCSWRPWPDTLOCRRC;;;PU)(A;;RPWPDT;;;S-1-5-21-1417001333-
507921405-2147233035-1004)(A;;RPWPDT;;;S-1-5-21-1417001333-
507921405-2147233035-1003)(A;;RPWPDT;;;S-1-5-21-1417001333-
507921405-2147233035-1004)
```

To then use the windows icon of the Tomcat GUI in the process bar, you need to change adjust the rights on the following three keys in the registry editor:

- HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tomcat8
- 32-bit: HKEY_LOCAL_MACHINE\SOFTWARE\Apache Software Foundation\Procrun 2.0
- 64-bit: HKEY_LOCAL_MACHINE\SOFTWARE\Wow632Node\Apache Software Foundation\Procrun 2.0
- HKEY_LOCAL_MACHINE\SOFTWARE\Apache Software Foundation\Tomcat

Execute the following steps three times, eacht time for a different key:

- Right click on a key like that and choose 'Permissions...'.
- Give the group Full Control.
- Click on 'Advanced'.
- Check "Replace permission entries on all child objects with entries shown here that apply to child objects".

- Select 'OK'.
- Select 'OK'.

Start/stop Script

- [UNIX/Linux] Create a script ‘invantive’ in /etc/init.d with the next content:

```
#!/bin/bash
#
# Invantive Vision
#
# (C) Copyright 2004-2012 Invantive Software BV, the
Netherlands. All rights reserved.
#
### BEGIN INIT INFO
# Provides:       invantive
# Required-Start: oracle
# Required-Stop:  oracle
# Default-Start:  3 5
# Default-Stop: 0 1 2 6
# Description:    Start up Invantive Vision.
### END INIT INFO

usage()
{
  echo "Usage: $0 [start|stop|status]"
}
if [ "$#" -ne "1" ]; then
  usage
  exit 1
fi

MODE="$1"

#
# Read configuration.
#
. /etc/invantive.conf

echo Invantive Vision settings:
echo Home directory = $INVANTIVE_HOME

if [ "$MODE" = "start" ]; then
  echo "Starting Invantive Vision."
  echo "Service Tomcat"
  su -c $INVANTIVE_USER -c "$TOMCAT_HOME/bin/startup.sh"
elif [ "$MODE" = "stop" ]; then
  echo "Stopping Invantive Vision."
  echo "Service Tomcat"
  su -c $INVANTIVE_USER -c "$TOMCAT_HOME/bin/shutdown.sh"
  sleep 1
elif [ "$MODE" = "restart" ]; then
  echo "Restarting Invantive Vision."
  su -c $INVANTIVE_USER -c "$TOMCAT_HOME/bin/shutdown.sh"
```

```
  sleep 1
  su -c $INVANTIVE_USER -c "$TOMCAT_HOME/bin/startup.sh"
elif [ "$MODE" = "status" ]; then
  echo "Status Invantive Vision."
  echo "Service Tomcat"
  ps -f -u $INVANTIVE_USER
else
  usage
  exit 1
fi
```

- [UNIX/Linux] Create a script 'invantive.conf' with configuration data with the following content:

```
#
# Invantive Vision configuration file.
#
# This file is different in each environment.
#
# (C) Copyright 2004-2012 Invantive Software BV, the
Netherlands. All rights reserved.
#

INVANTIVE_ESTATE_ENVIRONMENT=estate
export INVANTIVE_ESTATE_ENVIRONMENT

INVANTIVE_ESTATE_USER=estate
export INVANTIVE_ESTATE_USER

INVANTIVE_ESTATE_HOME=/opt/home/$INVANTIVE_ESTATE_USER
export INVANTIVE_ESTATE_HOME

TOMCAT_HOME=/opt/tomcat
export TOMCAT_HOME

JAVA_HOME=/usr/java/j2sdk1.6_XXX
export JAVA_HOME

#
# Include jmx access and sufficient memory.
#
# Reserve at least 25 Mb per concurrent user.
#
JAVA_OPTS="="-Xmx512m -Djava.awt.headless=true -
Dcom.sun.management.jmxremote -XX:MaxPermSize=256m -XX:
+UseConcMarkSweepGC -XX:+CMSClassUnloadingEnabled"
export JAVA_OPTS

umask 002

NLS_LANG="DUTCH_THE NETHERLANDS.AL32UTF8"
export NLS_LANG

PATH=$PATH:$HOME/bin
```

```
export PATH

echo
"*****************************************************************
*****"
echo Invantive Vision
echo
"*****************************************************************
*****"
echo "Environment:                $INVANTIVE_ESTATE_ENVIRONMENT"
echo "To start Invantive Vision: invantive start"
echo "To stop Invantive Vision:  invantive stop"
echo "To get the status:    invantive status"
echo
"*****************************************************************
*****"
echo "(C) Copyright 2004-2012 Invantive Software BV, the
Netherlands. All rights reserved."
echo
"*****************************************************************
*****"
```

1.12.2.3 Installation Database

Perform the following steps to install the database:

- [All] Stop Tomcat, for example with '/etc/init.d/invantive stop' (UNIX) or 'net stop "Apache Tomcat"' (Microsoft Windows).
- [All] Create/check configuration files p104/cfg/XXX.bat and p104/cfg/XXX.sql.
- [All, Installation] The tablespace will be created automatically if all data files are located in 1 folder. Else: Create a tablespace '<OMGEVING>' that will contain the data of Invantive Vision. This can be done, for example, with:

  ```
  create tablespace invantive datafile 'LOCATION' size 25m
  autoextend on maxsize 2000m
  ```

- [All, Installation] In case the application is installed for the first time, use bubs_create.bat in the bin-directory to prepare the installation of Invantive Vision. This takes about 1 minute.
- [All, Installation] If the application is installed for the first time, use bubs_smoke.bat in the bin directory to install the application. This takes approximately 60 minutes. Break off when asked if the demo data can be loaded.
- [All, Installation] Create the license with the special installation steps from doc/*.sql.
- [All, Upgrade] Run the upgrade_main.sql script from the map ddl/upgrades/build<DOEL-1>to<DOEL>. It takes approximately 10 minutes to the steps that may only be performed after the upgrade. Confine yourself to the builds between the start and target build. Execute bubs_smoke.bat located in the bin-directory if this is mentioned in the upgrade_main.sql script. It will take 60 minutes. Abort when asked if the demo data should be loaded.
- [All, Upgrade] Install the possible customizations from xx<COMPANYNAME>.sql.
- [All] Start Tomcat, for example with '/etc/init.d/invantive start' (UNIX) or 'net start "Apache Tomcat"' (Microsoft Windows).

1.12.2.4 Installation ETL jobs

Depending on the configuration ETL jobs are needed for such links to the books. These scripts are available in the addons folder.

- Always copy scripts from the 'generic' to the etl folder.
- Also, copy the scripts from the folder for the desired link to the etl folder.

1.12.2.5 Installation Invantive Web Service for Invantive Vision

Execute the installation steps mentioned under Installation Invantive Web Service 653 to ensure that the software can establish a connection with the database.

1.12.2.6 Installation Outlook Add-In User Interface

Execute the following steps to install the Outlook Add-in:

- Create a network drive, for example, v: to which the distribution folder is linked.

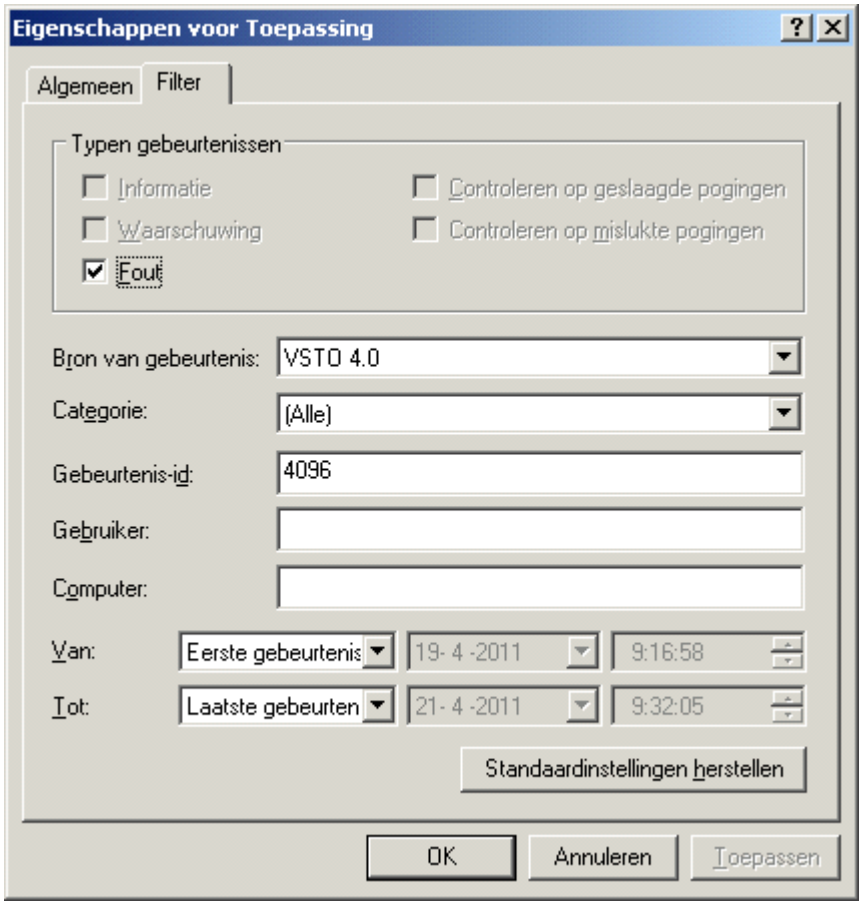
Run setup.exe in the network drive as the Windows user that is going to use the Outlook Add-in.

- In case the installation fails with a message about a non-trusted certificate when selecting ‘Details’ , check if the file location is in the list of trusted websites of Internet Explorer. If needed add it as for example ‘file:\\SERVERNAME’ or ‘file:///v:’.

The Outlook Add-in will automatically create a number of additions as administrator where necessary, namely Microsoft .Net 4 and Microsoft Visual Studio 2010 Tools for Office Runtime (VSTOR 2010) Redistributable. It may be useful to distribute these already. You can find the software at:

- Microsoft .NET Framework 4.5 (Webinstaller): http://www.microsoft.com/downloads/details.aspx?FamilyID=9cfb2d51-5ff4-4491-b0e5-b386f32c0992&displaylang=en
- Microsoft Visual Studio 2010 Tools for Office Runtime (VSTOR 2010) Redistributable: http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=f4d7a5a1-8ca8-489d-97eb-663a54d609a0

When errors arise during installation, you can sometimes find them back with eventviewer using the following filter:



Changes in Outlook

The information in Microsoft Outlook and Microsoft Exchange may be extended by the Outlook Add-in with additional fields (‘user defined properties’) like visionUurId, visionForGUID, visionUurTransactieBijgewerkt and visionOutlookChangedDueToSync. If migrations take place you should test that these fields do not disappear and that the Outlook **GUIDs** do not change.

Use ExMerge therefore preferably not. When it is necessary to be used, involve timely an Invantive consultant.

Assign Rights to Calendars

Rights to Calendars

To schedule work and/or book hours for another employee, you need to have rights on its calendar.

The employee needs at least to assign the role of 'Editor' for the one who books hours and needs at least to assign the role of 'Commentator' to the one who schedules hours.

The first time the role need to be even 'Owner', unless the one who books hours has synchronized the hours already one time in the past.

If you do not see categories, you have worked the first time without the rights as ‘Owner’. In that case you need to assign again 'Owner' rights to one who books the hours.

Labor Types as Categories

Moreover, a person whose calendar is not available in the public folders has to login into the application at least once so that the labor types become available as categories in Microsoft Outlook. If someone has his calendar available in the public folders, this will not be necessary: in that case the categories are used of the person who registers the hours in the calendar.

Profiles

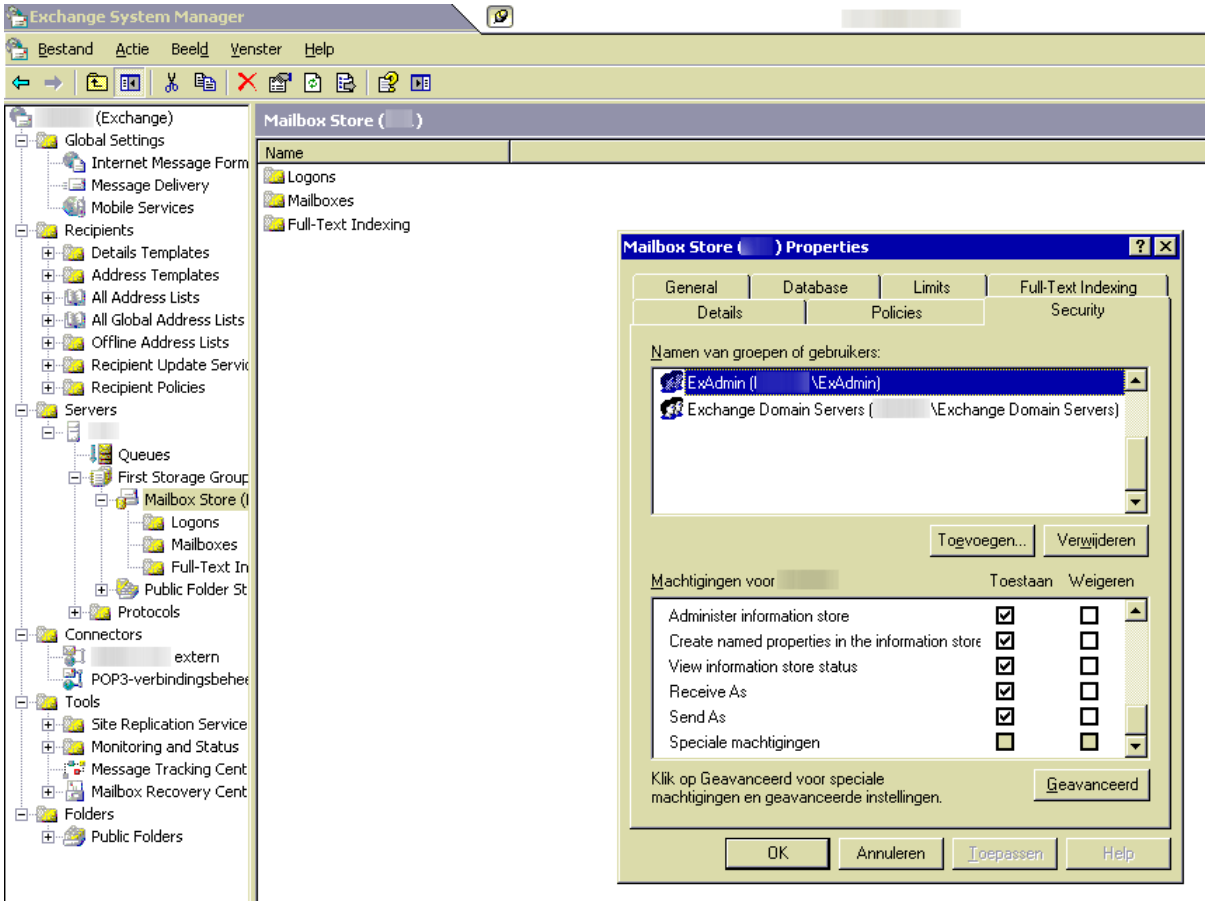
To set up rights properly on behalf of others, you can create a profile for that user. Go to the configuration screen and select ‘Email’. Then choose 'Profiles' and enter a profile for your colleague which you will use to assign in his name rights to others.

Rights on Calendar for Hours in Microsoft Exchange 2003

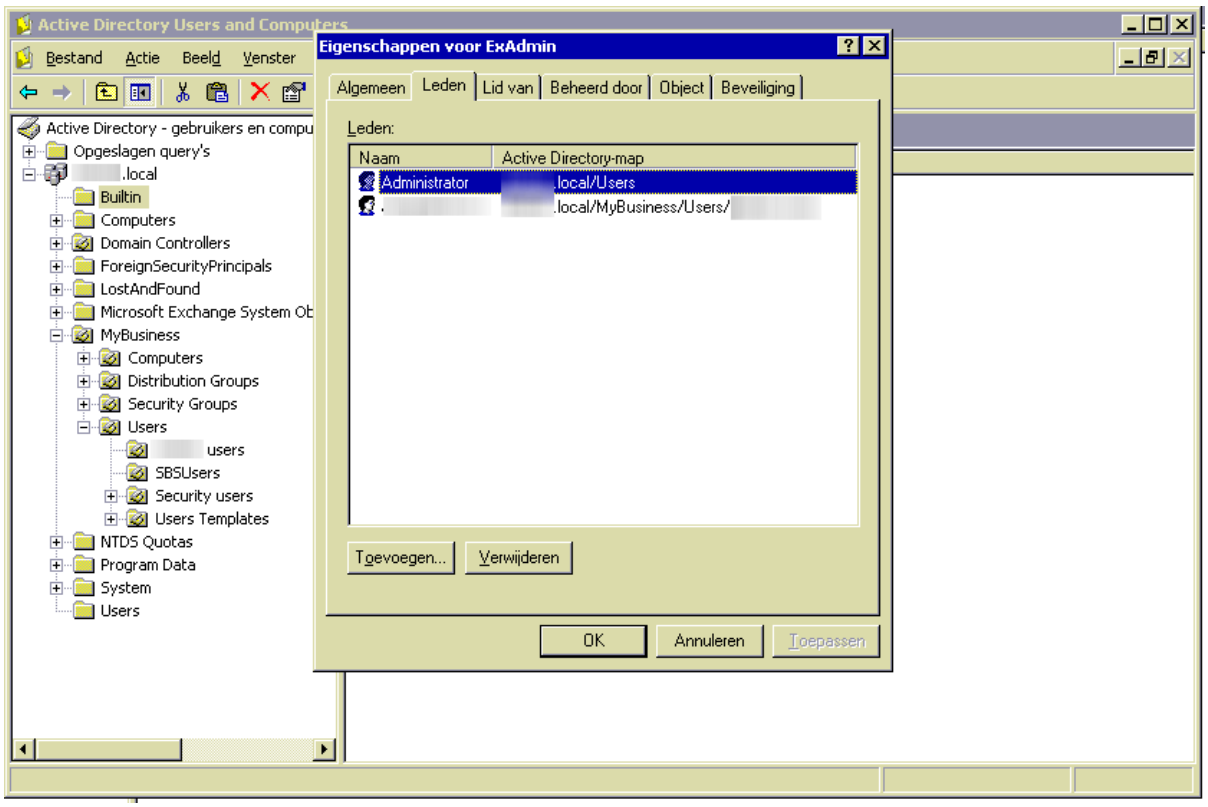
Microsoft Exchange 2003

Under Microsoft Exchange 2003 this optionally can be done more centrally as follows:

- Create a role 'ExAdmin' in Microsoft Active Directory.
- Assign ‘ExAdmin’ send as/receive as rights to this role on the mail store:

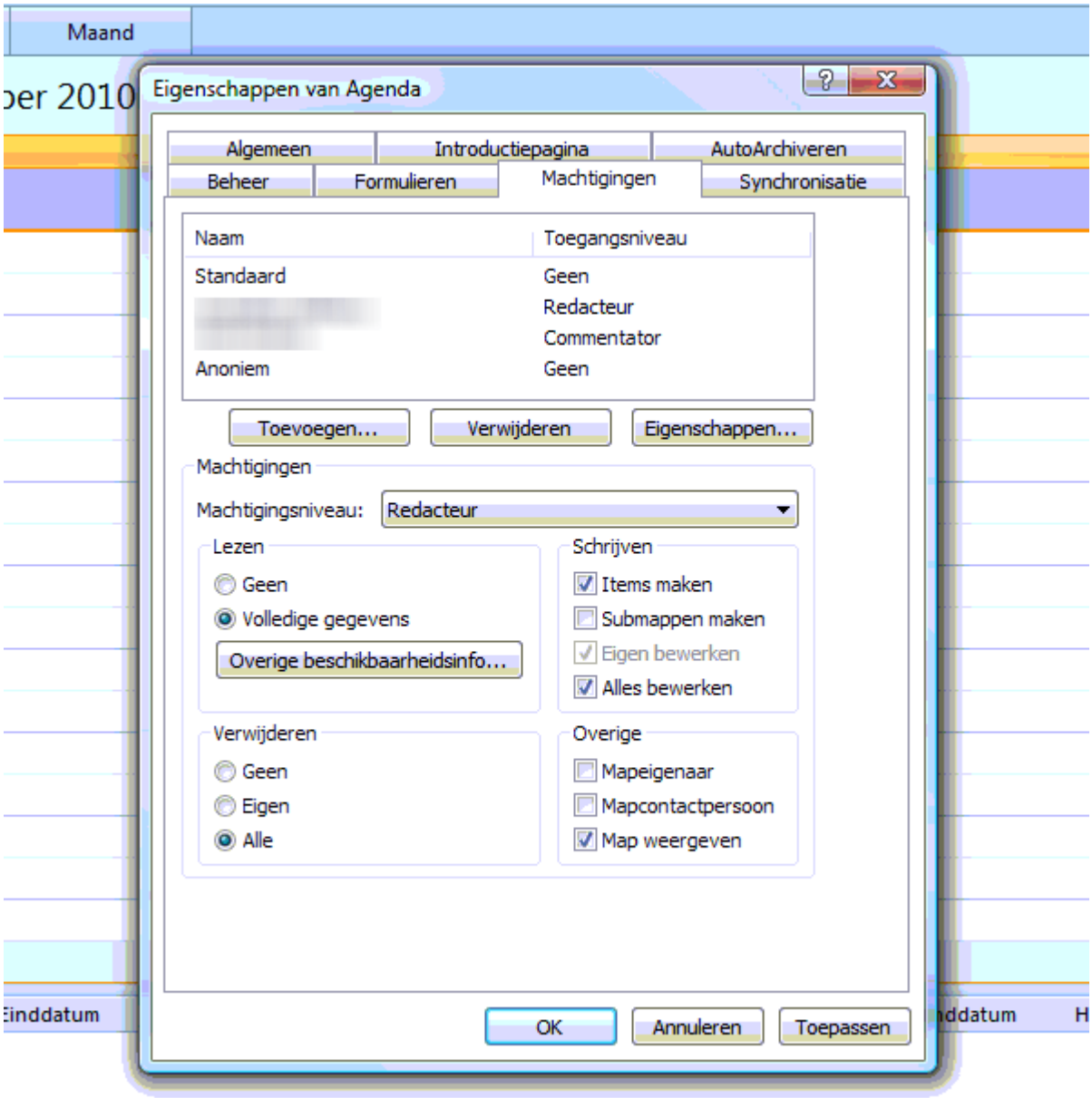


- Assign the role ‘ExAdmin’ to the person who's function will be assigning rights to others.



Next:

- Create a profile for Microsoft Outlook and link this profile with the user which will issue rights.
- Start Microsoft Outlook and select the correct profile.
- Log on to Invantive Vision.
- The categories are automatically created based on labor types.
- Assign rights:



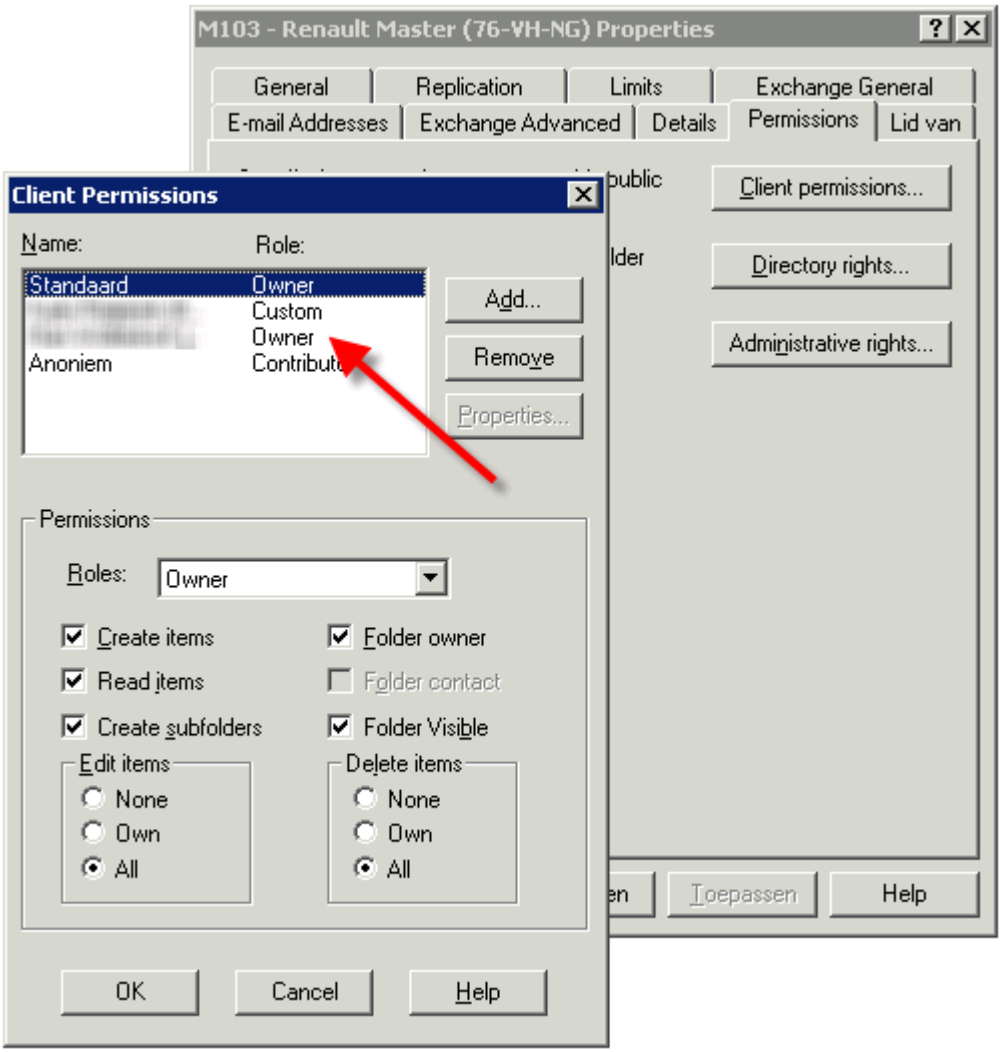
Ultimately, if necessary:

- Remove the user as member of the role ‘Exadmin’ in the Microsoft Active Directory.

Microsoft Exchange 2003 Public Folder Calendars

Occasionally it happens that calendars are added as public folders for example for machines. The person who synchronizes calendars always needs to have the role of Owner for those calendars. The labor types (categories in Microsoft Outlook) are copied from the calendar of the person who opens the public calendar.

Example:



Rights on Calendar for Hours in Microsoft Exchange 2007

Microsoft Exchange 2007

With Microsoft Exchange 2007 this can be done more centrally as follows:

- Create a script similar to this code:

```
#
# Maintain equipment and rooms.
#
$rooms = @( ("fails","for some reason")
          , ("room development", "Guido Leenders")
          , ("room finance & sales", "Guido Leenders")
          , ("ws09", "Guido Leenders")
          , ("ws25", "Guido Leenders")
          , ("ws69", "Guido Leenders")
          )

foreach ($room in $rooms)
{
#
# The next two are only for resources.
```

```
#
# Set-MailboxCalendarSettings -Identity $room[0] -
AutomateProcessing AutoAccept -AllRequestInPolicy:$True -
AllBookInPolicy:$False -ResourceDelegates $room[1] -
RemovePrivateProperty:$False
# Add-ADPermission -Identity $room[0] -User $room[1] -
ExtendedRights Send-As
Add-MailboxPermission -AccessRights FullAccess -Identity
$room[0] -User $room[1] }

echo "Check http://extranet.XXX.com/owa/ROOM@XXX.com"
```

- Execute it.

Rights on Calendar for Hours in Microsoft Exchange Online

1.12.3 Installation Test

Perform the following steps to check the functioning of the installation:

- [All] Log on as user ‘system’ on the application with the URL: http://SERVER/invantive/.
- [All] Install a license via the screen License 356.
- [All] Also set the correct product in (Invantive Estate of Invantive Vision).
- [All] Adjust the profile options ‘bubs%irectory’ in the screen Profile Option Values 265 so it points to the ENVIRONMENTDIR map.
- [All] Enter in settings 349 ENVIRONMENTDIR/documents for the document folder on the server.
- [All] Enter the settings 349 ENVIRONMENTDIR / recyclebin for the recyclebin folder on the server.
- [All] Fill in the Settings 349 ENVIRONMENTDIR/tmp for the documents load folder on the server.
- [All] Enter in settings 349 the Logo on Reports (URL) for the correct product (vision_rapporten_logo.png or estate_rapporten_logo.png).
- [All] Enter in settings 349 the Logo on Screens (URL) for the correct product (vision_schermen_logo.png or estate_schermen_logo.png).
- [All] Enter in settings 349 the splash screen (URL) for the correct product (vision_splashscreen.png or estate_splashscreen.png).
- [All] If you would like you could subsequently load the demo data.

Then you can test the environment with the following steps:

- [All] Test the web application with the URL: http://SERVER/invantive/.
- [All] Open the project screen in the web frontend.
- [All] Enter a person in the web frontend.
- [All] Open a random PDF rapport, for example 'Functions per Role (PDF)' in the web frontend.
- [All] Run a background process, for example 'Test: multiple dependent processes'.
- [All] Open a document, for example the execution of the background process.
- [All] Test the Outlook Add-in by logging in as Aeilkema/demo.
- [All] Create a process.
- [Alle] Add an email with an attachment to the process.

- [All] Open the attachment with the process.
- [All] Start an Excel rapport over that process.
- [All] Write an hour down to the process in the calendar and synchronise the calendar.
- [All] Get the hours in PDF format from the calendar.
- [All] Test Invantive Control by signing in as Aeilkema/demo.
- [All] Install the demo calculation model.
- [All] Synchronise the calculation model.
- [Alle] Test Invantive Composition by signing in as Aeilkema/demo.
- [All] Open a document from the document management system.

1.12.4 Duplicate Environment

There are three ways to duplicate an environment:
- Based on instructions from the application.
- Based on a database export of the application schema.
- Based upon a full database export.

The methods are listed in order of preference. However, there are restrictions that make that sometimes a less convenient method should be used:
- Based on instructions from the application: request that the database and the application of the home environment are available, including background processing.
- Based on a database export of the application schema: requires that the database of the home environment is available.
- Based on a full database export: no requirements for the home environment.

1.12.4.1 Duplicate Environment using Instructions

Duplicating an environment using instructions allows you to change the names of the involved schemas. Moreover, this duplicating method is the most simple to implement for employees who are not thoroughly familiar with the used database technology.

Perform the following steps:
- Start the background job ‘Administration: print a script for copying the environment’.
- Give the old prefix as parameters of the environment (for example 'PBUBS') and the desired prefix (for example ‘TBUBS’).
- Execute the instructions from the output of the background process.

1.12.4.2 Duplicate Environment using an Export Schema

To duplicate an environment using a schema export makes it possible to change the names of the schemas involved.

Perform the following steps to copy an environment, for example, by copying production back to test:
- Create a configuration file.
- Create the users and tablespaces with bubs_create.bat.
- Install the database of Invantive Vision till the instantiate objects if the target environment is used for the first time.
- Export the data to a file with the statements:

```
set NLS_LANG=AMERICAN_AMERICA.AL32UTF8
exp userid=pbubs/pbubs@orcl buffer=1000000 file=pbubs.dmp
grants=no log=pbubs_exp.log consistent=yes
```

- In the first ten lines of the log file check that there has been no conversion of characters between character sets.
- Stop Microsoft IIS and Apache Tomcat for the target environment.
- Clear the target environment: delete all old tables, sequences, views, functions, procedures, triggers and packages.
- Upload the file in the new environment based upon an export made by the owner of the application:

```
set NLS_LANG=AMERICAN_AMERICA.AL32UTF8
imp userid=tbubs/tbubs@orcl buffer=1000000 file=pbubs.dmp
log=imp_bubs.log full=y ignore=y
```

- Check that all objects are valid and check that the counts concerning numbers of objects between the environments are correct, for instance with the following query:

```
select owner
,      count(*)
,      object_type
,      status
from   dba_objects
where  owner like '%BUBS'
group
by     owner
,      object_type
,      status
/
```

- Copy the rights by executing the following script as being the Invantive Vision application owner (in this example pbubs). Do replace OLD and NEW by the right schema names:

```
set pages 0
set feedback off
set lines 500
set trimspool on
spool grt.sql
select replace
       ( replace
         ( 'grant '
           || privilege
           || ' on '
           || table_name
           || ' to '
           || grantee
           || ';'
         , 'OUD'
         , 'NIEUW'
         )
       , 'OUDITGEN'
       , 'NIEUWITGEN'
```

```
        )
        txt
from    user_tab_privs
where   1=1
and     grantee <> 'OUD'
/
spool off
exit
```

- Then, log on as the new Invantive Vision application owner NEW under Oracle SQL*Plus and execute the script:

```
connect NIEUW@orcldb01
@grt
```

- Add the needed synonyms under Oracle SQL*Plus:

```
connect NIEUW_tomcat@DATABASEID
begin
  <BUBS OWNER>.bubs_maintain_my_synonyms('<BUBS OWNER>');
end;
```

- Finally, copy the software from the Tomcat webapps tree to the target server:

```
cd /opt/tomcat/webapps
mv bubstarget /tmp/bubstarget
cp -pr bubssource bubstarget
```

- Do not forget to enter the correct passwords into site.properties and to adjust the URL's. See Site.properties 587.
- Restart Invantive Vision:

```
/etc/init.d/bubs3 restart
```

- Open the application as user ‘system’.
- Change in settings the description of the environment.
- Adapt the profile options.
- Change in the screen financial Administrations, the administration from where data is uploaded.
- If necessary, change the passwords of all users with an SQL update:

```
connect NIEUW_tomcat@DATABASEID

begin
  bubs_session.set_session_info(null, null, 'system', null,
null, null, null);
end;
/

update bubs_gebruikers_v
set    gbr_wachtwoord='test'
where  gbr_wachtwoord is not null
```

```
/
commit
/
```

- Delete all documents from the document folder of the target environment.
- Copy the documents in the document folder of the source environment to the target environment.
- Link the documents to the new directory:

```
update bubs_documenten_v
set    dct_bestandsinhoud=bfilename('<NIEUW_DCT>',
bubs_get_bfile_filename(dct_bestandsinhoud))
where  bubs_get_bfile_directory(dct_bestandsinhoud) <>
'<NIEUW>_DCT'
and    dct_bestand_url is null
/
commit
/
```

- Update the license as user ‘system’.

1.12.4.3 Duplicate Environment including complete Database Export

According to this procedure, a complete database export can only be used to duplicate an environment without changing the names of the schemas involved.

Follow these steps to copy a home environment based on a full database export:

- Export the data to a file with the statements:

```
set NLS_LANG=AMERICAN_AMERICA.AL32UTF8
exp userid=system/...@orcl buffer=1000000 file=pbubs.dmp
grants=no log=pbubs_exp.log consistent=yes full=yes
```

- Check in the first ten lines of the log file that no conversion of characters between character sets has occurred.
- Stop Microsoft IIS and Apache Tomcat for the target environment.
- Clear the target environment: delete all old tables, sequences, views, functions, procedures, triggers and packages under the application schema.
- Upload the file in the target environment based upon a complete database export (fill in the relevant schedules in both ‘fromuser’ as in ‘touser’):

```
set NLS_LANG=AMERICAN_AMERICA.AL32UTF8
imp userid=system/...@orcl buffer=1000000 file=pbubs.dmp
log=imp_bubs.log full=y ignore=y
fromuser=(abubs,abubs_web,abubs_web_res)
touser=(abubs,abubs_web,abubs_web_res)
```

- Further follow the instructions in Duplicate Environment using an Export Schema 583 beginning with ‘Copy the software...’.

1.12.5 Site.properties

By using the file site.properties in the WEB-INF folder of the web application folder, the application can be configured:

- The connection with Oracle RDBMS and the ERP system.
- The multilinguality.
- The connection with the user date (usernames and passwords)
- Other minor adjustments.

Since they directly influence the core of the application, these changes can only be made by qualified consultants of Invantive Software BV.

The procedure for applying changes consists of:

- Stop web server.
- Edit site.properties.
- Start web server.
- The changes will be effective immediately after a user logs on.

For more information regarding its use, you can use the below copy.

Example

```
#logger properties @0-029F305D
logfile=c:\\temp\\bubs3.log
logpriority=debug
# Logsize in Kb. File is truncated and written after this size.
logsize=1024000
#End logger properties

#url properties @0-E8A730F5
serverUrl=http://localhost/bubs3
securedUrl=/bubs3
#End url properties

#localization properties @0-0D67F023
encoding=utf-8
language=Netherlands
defaultDateFormat=dd-MM-yyyy
defaultBooleanFormat=Y;N
requestEncoding=utf-8
#End localization properties

#messages bundle @0-77F70051
messagesBundle=MessagesBundle
#End messages bundle

#file upload @0-215C2A9B
com.codecharge.util.upload.storage=memory
#End file upload

#body post processor class name @0-C5219FBD
bodyPostProcessor.className=com.codecharge.util.CcsBodyPostProce
ssor
#End body post processor class name
```

```
#template class name @0-8EA332EE
template.class.name=com.codecharge.template.CCSTemplate
#End template class name

#templateSource class name @0-840DD0B6
templateSource.class.name=com.codecharge.template.FileTemplateSo
urce
#End templateSource class name

#templateParser class name @0-7F4F85C9
templateParser.class.name=com.codecharge.template.TemplateParser
#End templateParser class name

#templateFolder @0-52356875
templateFolder=
#End templateFolder

#styles settings @0-27E71411
useDynamicStyles=True
defaultStyle=Apricot
SSEnableQueryString=True
SSQueryStringName=style
SSEnableSession=True
SSSessionName=style
SSEnableCookie=False
SSCookieName=style
SSCookieExpired=365
#End styles settings

#defaultLocale @0-45E529E7
defaultLocale=nl
#End defaultLocale

#localeSwitching @0-02E16A18
useI18nFeatures=True
enableQueryString=true
queryStringName=locale
enableSession=true
sessionName=locale
languageSessionName=lang
enableCookie=false
cookieName=locale
cookieExpired=365
enableHTTPHeader=false
httpHeaderName=
#End localeSwitching

#authentication properties @0-045E17BF
authenticator.securityType=CCS
authenticator.factoryClassName=com.codecharge.util.CCSAuthentica
torFactory
authenticator.securityStorage=session
authenticator.inheritanceRights=False
authenticator.userIdFieldName=GBR_ID
```

```
authenticator.userIdVarName=UserID
authenticator.loginFieldName=GBR_AANMELD_CODE
authenticator.loginVarName=UserLogin
authenticator.passwordFieldName=GBR_WACHTWOORD
authenticator.connectionName=bubs_tomcat
authenticator.tableName=BUBS_GEBRUIKERS_V
#End authentication properties

#tags to lower case @0-0649DE20
tags.toLowerCase=false
#End tags to lower case

#Connection 'bubs_tomcat' properties @1-28E264C0
bubs_tomcat.name=bubs_tomcat
bubs_tomcat.driver=oracle.jdbc.driver.OracleDriver
bubs_tomcat.dbType=Oracle
bubs_tomcat.url=jdbc:oracle:thin:@localhost:1521:ORCL
bubs_tomcat.maxconn=250
bubs_tomcat.user=bubs_tomcat
bubs_tomcat.password=bubs_tomcat
bubs_tomcat.timeout=3600
bubs_tomcat.fieldLeftDelim="
bubs_tomcat.fieldRightDelim="
bubs_tomcat.dateLeftDelim='
bubs_tomcat.dateRightDelim='
bubs_tomcat.dbNameUppercase=True
bubs_tomcat.dateFormat=dd-MM-yyyy HH:mm
bubs_tomcat.booleanFormat=Y;N
bubs_tomcat.optimizeSQL=True
bubs_tomcat.sessionCommand0=ALTER SESSION SET NLS_DATE_FORMAT =
'DD-MM-YYYY HH24:MI'
#End Connection 'bubs_tomcat' properties

#Connection 'bubs_exact' properties @2-444594F2
bubs_exact.name=bubs_exact
bubs_exact.driver=com.microsoft.jdbc.sqlserver.SQLServerDriver
bubs_exact.dbType=MSSQLServer
bubs_exact.url=jdbc:microsoft:sqlserver://localhost:21433
bubs_exact.maxconn=10
bubs_exact.user=bubs
bubs_exact.password=expbubs
bubs_exact.timeout=300
bubs_exact.fieldLeftDelim=[
bubs_exact.fieldRightDelim=]
bubs_exact.dateLeftDelim='
bubs_exact.dateRightDelim='
bubs_exact.dbNameUppercase=True
bubs_exact.dateFormat=yyyy-MM-dd HH:mm:ss
bubs_exact.booleanFormat=Y;N
bubs_exact.optimizeSQL=True
#End Connection 'bubs_exact' properties
```

Meaning

The meaning of the relevant settings is:

- logfile: via logfile you can set at what place the log file must be made. The user of the operating system under who the web server is executed, must have writing access to this.
- logpriority: via logpriority you can set how detailed the web application must store its activities in the log file. Possible values are 'error', 'warn', 'info' and 'debug'. 'Error' stores only error messages, while the other settings add more information.
- logsize: the maximum size of the log. If this size in Kb is exceeded, then the file is deleted and recreated for writing.
- serverUrl: the URL serving as a base for normal use of the web application via http. A screen URL is constructed using the value of the 'serverURL' adding for example 'bubs_odt_all.do' for the orders screen.
- securedUrl: the Url serving as a base for logging into the web application via https.
- encoding: the character set used to show the data in the browser. 'Utf-8' is the most flexible character set, in which for all common languages all characters are simultaneously present.
- requestEncoding: the character set used to process data which were received from the browser.
- language: the language used in case no user specific language has been selected. This language is thus normally used for the login screen, for example.
- defaultLocale: the geographical region setting used in case no user specific region has been selected. This region setting is thus normally used for the login screen, for example.

The 'authenticator' is the module that validates whether users are actually the person they pretend to be. By default, usernames and passwords are used in the way they are registered in the application itself (see Persons) 102. One can also choose for a deviating authentication mechanism, for example by using LDAP or Microsoft Active Directory.

The meaning of the settings starting with 'authenticator.' is:

- authenticator.securityType: always has to be turned to 'CCS'.
- authenticator.factoryClassName: the Java component used to execute the authentication. For the built-in authentication based on the usernames in the screen Persons 102 the value 'com.codecharge.util.CCSAuthenticatorFactory' has to be entered. For LDAP the value 'com.codecharge.util.LDAPAuthenticatorFactory' must be entered.
- authenticator.userIdVarName: the name of the session variable holding the unique ID of the user, as determined in 'authenticator.userIdFieldName'. Always 'UserID'.
- authenticator.loginVarName: the name of the session variable holding the username of the user, as determined in 'authenticator.loginFieldName'. Always 'UserLogin'.
- authenticator.securityStorage: the location where the security credentials are stored. Always 'session'.
- authenticator.inheritanceRights: a reference whether or not the rights must be inherited from the lower authorisation levels. This setting must always have the value 'False' .
- authenticator.ldap.external.suffix: only for LDAP. The branch under which the organization registers and searches for its authentication data, for example, 'OU=MyBusiness,DC=invantive,DC=local'.
- authenticator.ldap.external.server: only for LDAP. The address of the LDAP server, for instance '192.168.172.11'.
- authenticator.ldap.external.protocol: only for LDAP. The used LDAP protocol, for instance 'ldap' or 'ldaps'.
- authenticator.ldap.external.useruniqueattribute: only for LDAP. The attribute uniquely showing across the organization which user it is. The value of this must also be registered

in the user registration of Invantive Vision in the field 'Logon Code'. An example is 'userPrincipalName'.

- authenticator.ldap.external.port: only for LDAP. The port number on the LDAP server, for instance 389 for LDAP or 636 for LDAPS.
- authenticator.ldap.external.fillinpatternlogin: only for LDAP. The LDAP query pattern in which the username is entered in order to log a user on to LDAP, as long as there are no characters in 'fullrecognition' present in the username. The text ':account' is replaced by the entered username. An example is 'cn=:account,OU=SBSUsers,OU=Users,OU=MyBusiness,DN=invantive,DN=local'.
- authenticator.ldap.external.fullrecognition: only for LDAP. The value in 'authenticator.ldap.fillinpatternlogin' is used in combination with the value registered in the LDAP attribute such as entered in 'authenticator.ldap.useruniqueattribute'. However, in case the value in the LDAP attribute such as entered in 'authenticator.ldap.useruniqueattribute' contains one of the signs which have been filled out in this series of signs, solely the value of the LDAP attribute is sent to the server and the value in 'authenticator.ldap.fillinpatternlogin' is not used. An example is the character '@'.
- authenticator.ldap.external.fillinpatternuniqueattribute: only for LDAP. The pattern in which the username is entered in order to search for data of the user such as the email address, as long as there are no characters in fullrecognition present in the username. The text ':account' is replaced by the entered username. An example is ':account@invantive.local'
- .authenticator.ldap.external.systemaccount: only for LDAP. The account with which the user 'system' has to be authenticated with. An example is 'Administrator'. Note: This account is only used for LDAP authentication within the gateway. You always need to logon as the user 'system'.
- authenticator.ldap.local.try: indicator or - if the LDAP authentication is not successful - an attempt should be made to authenticate the user with the entered password against the local user data (identical to 'com.codecharge.util.CCSAuthenticatorFactory'.). This is occasionally used to quickly test scenarios for complex work flows.
- authenticator.ldap.local.validationSql: SQL statement to check the local authentication. The query should return one row if found and in all other cases nothing. The password is completed for all occurrences of: the user name and password for all occurrences of: account.
- authenticator.ldap.local.regexFilter: regular expression to determine for which user login codes local authentication is allowed, for example, '.*' to allow this for all users.
- authenticator.tableName: only for built in user authentication. The name of the table or views which contains the user data used for authentication. Always 'BUBS_GEBRUIKERS_V'.
- authenticator.connectionName: only for built-in users authentication. The name of the connection used to read the table. Always 'bubs_tomcat'.
- authenticator.userIdFieldName: only for built-in users authentication. The name of the column storing the unique user's ID. Always 'GBR_ID'.
- authenticator.loginFieldName: only for built in users authentication. The name of the column in which the username of the user is stated. Always 'GBR_AANMELD_CODE'.
- authenticator.passwordFieldName: only for built-in users authentication. The name of the column in which the user's passwords is stated. Always 'GBR_WACHTWOORD'.

To solve LDAP authentication problems, it is recommended to use LDAP tools such as ldapsearch (Unix / Linux), dsquery (Microsoft Windows Server 2003) or Novell's Ldapsearch (http://www.novell.com/coolsolutions/tools / 17350.html):

```
ldapsearch -x \
```

```
-h 192.168.172.11 \
-w secret \
-D 'cn=UW NAAM IN
WOORDEN,OU=SBSUsers,OU=Users,OU=MyBusiness,DC=invantive,DC=local
' \
 -b OU=MyBusiness,DC=invantive,DC=local \
userPrincipalName=USER@invantive.local mail
```

The series of settings starting with ‘bubs_tomcat’ stores with which connection the application data can be approached. The meaning of the settings is:

- bubs_tomcat.name: the name of the connection. Always ‘bubs_tomcat’.
- bubs_tomcat.driver: the name of the Java Class used to set the connection in accordance with JDBC. Always ‘oracle.jdbc.driver.OracleDriver’.
- bubs_tomcat.dbType: the type of the underlying database. Always ‘Oracle’.
- bubs_tomcat.url: the JDBC URL used to build the connection with. This has the format ‘jdbc:oracle:thin:@’, followed by the server's name or address, the sign ‘:’, the port to which the database listener listens to (often 1521), again the sign ‘:’ and finally the name of the instance. An example is ‘jdbc:oracle:think:@localhost:1521:ORCL’.
- bubs_tomcat.maxconn: the maximum number simultaneous connections with the Oracle database. This usually is around 20% of the maximum number of simultaneous users. A higher value cannot do any harm, next to needing 10 Mb extra internal memory per connection really being used on peak moments. For development environments, it is sometimes helpful to set the number to ‘0’. This means that the connection is closed immediately after use. This costs performance, but makes it easier to avoid problems by holding ‘state’ (for example, ORA-04061 messages) when a developer changes code while the system is running. In most cases, removing an Oracle session will be automatically repaired by the web interface.
- bubs_tomcat.user: The Oracle user with whom the connection is made. For example, ‘bubs_tomcat’.
- bubs_tomcat.password: the password of the Oracle user as stored in ‘bubs_tomcat.user’.
- bubs_tomcat.timeout: the web application considers a user non-active after a while and logs him off. The value of ‘bubs_tomcat.timeout’ determines after how many seconds the user is automatically logged off.
- bubs_tomcat.fieldLeftDelim: the sign used to quote field names in database requests on the left. Always‘"’.
- bubs_tomcat.fieldRightDelim: bubs_tomcat.fieldLeftDelim: the sign used to quote field names in database requests on the right. Always‘"’.
- bubs_tomcat.dateLeftDelim: the sign used to quote date constants in database requests on the left. Always‘"’.
- bubs_tomcat.dateRightDelim: the sign used to quote date constants in database requests on the right. Always‘"’.
- bubs_tomcat.dBNameUppercase: always ‘True’.
- bubs_tomcat.dateFormat: the used database format for dates, always ‘dd-MM-yyyy HH:mm’.
- bubs_tomcat.booleanFormat: the used database format for fields containing a boolean flag (‘true’ or ‘false’). Always ‘Y;N’.
- bubs_tomcat.optimizeSql: always ‘True’.
- bubs_tomcat.sessionCommand0: the statement always being executed after building up a new session. Always ‘alter session set nls_date_format = ‘DD-MM-YYYY HH24:MI0145’’.

In the series of settings beginning with ‘bubs_exact.’ it is stored via which connection the data for the ERP interface are obtained. The meaning of the settings is:

- bubs_exact.name: the name of the connection Always ‘bubs_exact’.
- bubs_exact.driver: the name of the Java class used to build the connection in accordance with JDBC. For example, ‘oracle.jdbc.driver.OracleDriver’ for an Oracle RDBMS and ‘com.microsoft.jdbc.sqlserver.SQLServerDriver’ for Microsoft SQL Server.
- bubs_exact.dbType: the type of the underlying database. For example, ‘Oracle’ for an Oracle RDBMS and ‘MSSQLServer’ for Microsoft SQL Server.
- bubs_exact.url: de JDBC URL used to build the connection with. For Oracle RDBMS it has the format ‘jdbc:oracle:thin:@’, followed by the name or address of the server, the sign ‘:’, the port to which the database listener listens to (often 1521), again the sign ‘:’ and finally the name of the instance. An example is ‘jdbc:oracle:think:@localhost:1521:ORCL’. For Microsoft SQL Server this has the format 'jdbc:microsoft:sqlserver://', followed by the name or address of the server, the sign ':' and the gate to which the database listener listens to (often1433). An example is ‘jdbc:microsoft:sqlserver://localhost:1433’.
- bubs_exact.maxconn: the maximum number of simultaneous connections with the ERP database. This usually is around 20% of the maximum number of simultaneous users. More than 1 usually has no point, since the ERP interface can be processed no more than one time.
- bubs_exact.user: the user with which a connection is made. For instance ‘exact’.
- bubs_exact.password: the password of the user, as stored in ‘bubs_exact.user’.
- bubs_exact.timeout: the web application considers a user non-active after a while and logs him off. The value of ‘bubs_exact.timeout’ determines after how many seconds the user is automatically logged off.
- bubs_exact.fieldLeftDelim: the sign used to quote field names in database requests on the left. Always “”’ for Oracle and ‘[’ for Microsoft SQL Server.
- bubs_exact.fieldRightDelim: the sign used to quote field names in database requests on the right. Always “”’ for Oracle and ‘]’ for Microsoft SQL Server.
- bubs_exact.dateLeftDelim: the sign used to quote date constants in database requests on the left. Always“”’.
- bubs_exact.dateRightDelim: he sign used to quote date constants in database requests on the right. Always“”’.
- bubs_exact.dBNameUppercase: always ‘True’.
- bubs_exact.dateFormat: the used database format for dates, always ‘dd-MM-yyyy HH:mm’ for Oracle and ‘yyyy-MM-dd HH:mm:ss’ for Microsoft SQL Server.
- bubs_tomcat.booleanFormat: the used database format for fields containing a boolean flag (‘true’ or ‘false’). Always ‘Y;N’.
- bubs_exact.optimizeSql: always ‘True’.

1.13 Terminology

This chapter contains definitions for terms used within the application.

1.13.1 Budget

The approved setup from expected costs and revenues with the objective to realize the project within these costs and revenues.

1.13.2 Budget Control

The locating and grouping of costs and revenues within the budget.

1.13.3 Contract

A planned or approved agreement between two parties. Every contract has a code or number. The number '0' can not be used as a number for a contract.

1.13.4 Exposé

The approved budget.

1.13.5 Invoice based on Purchase Order

Amount of an invoice, belonging to an order.

1.13.6 Invoice without Purchase Order

Amount of an invoice, that does not belong to an order.

1.13.7 User

Anyone who uses Invantive Vision.

1.13.8 User Interface

The way users can control the application.

1.13.9 Master Roll Up

Layout of roll ups with cost categories in a few main categories.

1.13.10 Invantive Vision

The program that monitors your budget per project and also creates a complete project file which everyone in the organization will profitise.

1.13.11 Cost Type

Detailed description which indicates the type of costs or revenues. Example: ‘Value Ground’.

1.13.12 Supplier

A supplier delivers goods or services in exchange for money. The name of the contractor is indicated here with a supplier.

1.13.13 Order

Amount of written or oral commitments.

1.13.14 Product cluster

Breakdown of the projects in themes. Often the execution of a project in a project cluster requires certain skills. That is why staff members are often active within the same project cluster.

1.13.15 Project Phase

Indicated the progress of the project. Example: ‘Acquisition’, ‘Development’, and ‘Realization’.

1.13.16 Show

Activation of a positive budget deviation in favor of project results.

1.13.17 Example Reading Method

Indicates in what way the value of a characteristich of a product or service can be read. Examples of a reading method are:

Mileage Map

Technician on site

Digitally received through the internet

Application manager system configuration

Not applicable

Reading methods can be edited in the screen Reading methods 218.

1.13.18 Example Payment Terms

A payment term is the agreed time period within which a bill should be paid. Examples of payment terms are:

Payment term code	Number of days
General purchasing	30
General sales	30
General empty	30

Payment terms can be edited in the screen Payment terms 223.

1.13.19 Example Payment Schedules

Pre-determined schedule with data concernng when payments will occur. An example of a payment schedule is:

Code	Description
CDM2	Customized softw are development 2 terms

Payment schedules can be edited in the screen Payment schedules 191.

1.13.20 Example VAT

The taxes over the added value is indicated by the VAT. This is also called turnover tax. Examples of VAT percentages are:

Description

0% VAT

6% VAT

19% VAT

0% VAT Abroad

Normal (19%)

VAT codes and descriptions can be edited in the screen VAT codes 190.

1.13.21 Example Classifications

A classification is a label that is linked to a project, a process, an organization, a person, or a document. The label provides additional information about the file to which it is attached and makes in this way a keyword based classification and indexing possible. With labels you can find your desired information more efficient. Examples of classifications are:

code	Description
Profession	Professions
Profession.Auditor	Auditor

Profession.Account manager	Account manager
Profession.Administrative assistant	Administrative assistant
Profession.Advisor/consultant	Advisor/consultant
Profession.Civil servant	Civil servant
Profession.Pharmacy assistant	Pharmacy assistant
Profession.Application developer	Application developer
Profession.Architectural designer	Architectural designer
Profession.Insurance advisor	Insurance advisor
Profession.Company manager	Company manager
Profession.Visual w riter	Visual w riter
Profession.Sculptor	Sculptor
Profession.Investment advisor	Investment advisor
Profession.Policy advisor	Policy advisor
Profession.Public administrator	Public administrator
Profession.Security guard	Security guard
Profession.Driver	Driver
Profession.Commercial employee	Commercial employee
Profession.Communication manager	Communication manager
Profession.Communication employee	Communication employee
Profession.Controller	Controller
Profession.Copyw riter	Copyw riter
Profession.Dance teacher	Dance teacher
Profession.Dancer	Dancer
Profession.Defense	Defense
Profession.Detective	Detective
Profession.Veterinary assistant	Veterinary assistant
Profession.Dietician	Dietician
Profession.Excecutive secretary	Executive secretary
Profession.Technical w riter	Technical w riter
Profession.Physician assistant	Physician assistant
Profession.Drugstore	Drugstore
Profession.Goldsmith	Goldsmith
Profession.Facility manager	Facility manager
Profession.Film and television producer	Film and television producer
Profession.Photographer	Photographer
Profession.Photographer/Reportage photographer	Photographer/Reportage photographer
Profession.Physiotherapist	Physiotherapist
Profession.Goldsmith/Silversmith	Goldsmith/Silversmith
Profession.Graphic designer	Graphic designer
Profession.Helping w elfare	Helping w elfare
Profession.Illustrator	Illustrator
Profession.Industrial designer (higher professional)	Industrial designer (higher professional)
Profession.Industrial designer (university education)	Industrial designer (university education)
Profession.Information manager	Information manager
Profession.Information specialist	Information specialist
Profession.Buyer	Buyer
Profession.Intermediary	Intermediary
Profession.Journalist	Journalist

Profession.Hairdresser	Hairdresser
Profession.Ceramic designer	Ceramic designer
Profession.Cabaret	Cabaret
Profession.RMA officer	RMA officer
Profession.Maternity nurse	Maternity nurse
Profession.Art historian	Art historian
Profession.Painter	Painter
Profession.Teacher	Teacher
Profession.Warehouse employee	Warehouse employee
Profession.Broker	Broker
Profession.Management assistant	Management assistant
Profession.Marketing manager	Marketing manager
Profession.Market researcher	Market researcher
Profession.Mime artist	Mime artist
Profession.Fashion consultant	Fashion consultant
Profession.Museologist	Museologist
Profession.Musician	Musician
Profession.Office manager	Office manager
Profession.Royal Army Officer	Royal Army Officer
Profession.Royal Navy Officer	Royal Navy Officer
Profession.Teaching assistant	Teaching assistant
Profession.Government manager	Government manager
Profession.Pedicure	Pedicure
Profession.Police officer	Police officer
Profession.Popmusician	Popmusician
Profession.PR employee	PR employee
Process	Process
Profession.Producer	
Profession.Product	Product deliverable
Product	Product
Product.Construction draw ing	Construction draw ing
Profession.Production leader Theater	Production leader Theater
Profession.Project leader	Project leader
Profession.Receptionist/telephonist	Receptionist/telephonist
Profession.Advertising designer	Advertising designer
Profession.Editor	Editor
Profession.Director	Director
Profession.Tour leader	Tour leader
Profession.Sales manager	Sales manager
Profession.Beautician	Beautician
Profession.Secretary	Secretary
Profession.Social cultural w ork (SCW)	Social cultural w ork (SCW)
Profession.Social service employee	Social service employee
Profession.Stew ardess	Stew ardess
Profession.Dentist	Dentist
Profession.Dental assistant	Dental assistant
Profession.Copyw riter	Copyw riter
Profession.Textile designer	Textile designer

Profession.Theater technician	Theater technician
Profession.Tourism employee	Tourism employee
Profession.Stage director	Stage director
Profession.Actor	Actor
Profession.Corporate trainer	Corporate trainer
Profession.Publisher	Publisher
Profession.Salesman	Salesman
Profession.Midw ife	Midw ife
Profession.Nurse	Nurse
Profession.Translator/Interpreter	Translator/Interpreter
Profession.Caretaker	Caretaker
Profession.Food industry technologist	Food industry technologist
Profession.Designer	Designer
Coverage	Coverage ratio
Coverage.Activate	Activate on balance
Coverage.P&L	Direct debiting
Coverage.Insurance	Covered by insurance
ERBO	ERBO
ERBO.01	Agriculture and fishing
ERBO.02	Mineral extraction
ERBO.03	Food industry
ERBO.04	Textile and leather
ERBO.05	Wood industry
ERBO.06	Building materials and glass industries
ERBO.07	Paper and cardboard industry
ERBO.08	Publishing and printing
ERBO.09	Chemical industry
ERBO.10	Base metal
ERBO.11	Metal products industry
ERBO.12	Machinery industry
ERBO.13	Electric devices
ERBO.14	Transport industry
ERBO.15	Other industry
ERBO.16	Construction industry
ERBO.17	Wholesale
ERBO.18	Retail food
ERBO.19	Retail non-food
ERBO.20	Retail car and motorcycle
ERBO.21	Catering
ERBO.22	Transport and communication
ERBO.23	Transport services
ERBO.24	Business consultants
ERBO.25	Automation Services
ERBO.26	Facility services
ERBO.27	Brokerage, o.g.
ERBO.28	Culture, recreation
ERBO.29	Personal services
Doc	Document

Doc.Legal	Legal classifications
Doc.Legal.Signed	Signed
Doc.Legal.Not Signed	Not signed
Doc.Type	Type
Doc.Type.Offer	Offer
Doc.Confidentiality	Confidentiality
Doc.Confidentiality.Public	Public
Doc.Confidentiality.Intern	Internal
Doc.Confidentiality.Customer	Customer
Financial	Financial
Financial.Balance	Balance
Financial.Annual Report	Annual report
Group	Business Groups
Group.Homes	Group Homes
KPI	Key performance indicators
KPI.Budget	Budget indicators
KPI.Risk	Risk indicators
KPI.Risk.Margin	KPI Risk Margin
KPI.Risk.Scope creep	KPI Risk Scope creep
KPI.Risk.Staffing	KPI Risk Staffing
Margin	Margin customer
Margin.Repel	Margin: repel
Margin.Maintain	Margin: maintain
Region	Regions
Region.Middle	Region Middle
Region.Middle.UTR	Region Middle Utrecht
Region.North	Region North
Region.West	Region West
Region.South	Region South

Classifications can be edited in the screen Classifications 202.

1.13.22 Example Participation Roles

Persons participating in a project could have multiple roles assigned. The same role can be assigned to several people. Examples of participation roles are:

Participation Role Code	Participation Role Limit	Participation Role Description
Task Owner	0	Task Owner
Task Reporter	0	Task Reporter
Task Increaser	0	Task Increaser
Task Modifier	0	Task Modifier
Task Hour Writer	0	Task Hour Writer
Project Increaser	0	Project Increaser
Project Modifier	0	Project Modifier
Project Hour Writer	0	Project Hour Writer
Project Filler	0	Project Filler
Project developer	0	Project developer

Project Product Group Director	0	Project Product Group Director
Project Controller	0	Project Controller
Project Administrator	0	Project Administrator
Project Approver Hours	0	Project Approver Hours
Project Plan Developer	0	Project Plan Developer
Task Email Receiver	0	Task Email Receiver
Project Email Receiver	0	Project Email Receiver
Project Email Sender	0	Project Email Sender
Project Email Copy	0	Project Email Copy
Project Email Bcc	0	Project Email Bcc
Task Email Sender	0	Task Email Sender
Task Email Copy	0	Task Email Copy
Appr. Assign. Std PO	10000	Approving Assignment standard process PO
Appr. Assign. Std Dir.	100000	Approving Assignment standard process Director
Document Author	0	Document Author
Document Review er	0	Document Review er
Document Target Group	0	Document Target Group
Document Email Receiver	0	Document Email Receiver
Document Email Sender	0	Document Email Sender
Document Email Copy	0	Document Email Copy
Document Email Bcc	0	Document Email Bcc
Organization Employee	0	Organization Employee
Organization. Prim CP	0	Organization Prim CP
Organization-purchasing CP	0	Organization-purchasing CP
Organization Preferred Mechanic CP	0	Organization Preferred Mechanic CP
Organization Preferred Mechanic	0	Organization Preferred Mechanic
Organization Preferred Mechanic 1	0	Organization Preferred Mechanic 1
Organization Preferred Mechanic 2	0	Organization Preferred Mechanic 2

Participation roles can be edited in the screen Participation roles 207.

1.13.23 Example Document Types

Indicates the document type. Examples of document types are:

Document Types	Document type description
Acc	Acceptation document
CP	Control plan
Invoice received	Incoming invoice
Outgoing invoice	Outgoing invoice
Offer	Offer of a commercial nature
Confirmation of Order	Confirmation of Order
PP	Project plan
Report	Report
Standard	Standard
Draw ing	Draw ing
Progress report	Progress report

Document types can be edited in the screen Document types 202.

1.13.24 Example Document Statuses

Examples of document statuses are:

Document Status	Document status description
Comments	Collecting of comments
Concept	Concept
Outdated	Outdated version, no longer applicable
Definitive	Definitive version

Document statuses can be edited in the screen Document statuses 201.

1.13.25 Example Economic Indexes

Economic indexes measure the state of the economy (the general economic situation) or of a part of the economy. Examples of economic indexes are:

Index name	Index abbreviation
Amsterdam Stock Exchange	AEX
ING Group	NL0000303600

Economic indexes can be edited in the screen Economic Indexes 194.

1.13.26 Example Property

A property or characteristic is a phenomenon typical to a certain person, object or company. Examples of properties are:

Code	Description
#CPUs	Number of processors
#A4 BW	Number of A4 prints black/white
#A4 Color	Number of A4 prints color
#A3 BW	Number of A3 prints black/white
#A3 Color	Number of A3 prints color
#Memory	Size of physical memory (Mb)
#Storage	Volume storage memory on disk (Gb)
#Floors	Number of floors
#Rooms	Number of rooms
#Toilets	Number of toilets
GFA	Gross floor area according to NEN 2580 (m2)
RFA	Rentable floor area according to NEN 2580 (m2)
Gross capacity	Gross capacity according to NEN 2580 (m3)
Color	Color in free text format (standard free)
Cadastral known as	Cadastral code
Wage fittings	Are wage fittings applicable?
Version	Version code of the software
RAL	RAL Color
Material	Material (wood, filt, iron)
Energy label	Label that needs to be supplied along with the sale of inter alia cars, electric devices, lamps and buildings according to various European guidelines (92/75/CEE, 94/2/CE, 95/12/CE, 96/89/CE, 2003/66/CE).
RUBRIC	Rubric
SPACE	Space

Properties can be edited in the screen Properties 217.

1.13.27 Example Linked Financial Administrations

Examples of linked financial administrations are:

Code	Description
900	Administration Janssen BV
901	Administration Hoogmans BV
902	Administration van Delft BV
903	Administration Lieropszn BV
904	Administration Combination w ith Hoogmans BV

Linked financial administrations can be edited in the screen Linked Financial Administrations 258.

1.13.28 Example Ground Statuses

A land status describes the state of the land required for the realization of the project such as "Private land" or "Ready to be developed". Examples of land statuses are:

Ground status code	Ground status description
N.a.	Not applicable

Ground statuses can be edited in the screen Ground statuses 171.

1.13.29 Example General Ledger Account Code

A general ledger account is a collection of equal expenditure or revenue items. The general ledger is the collection of all general ledger accounts. All general ledger accounts together are called the general ledger or general ledger chart of accounts. Every general ledger account is of the type balance sheet account or of the type rsults account.

Examples of general ledger account codes are:

General ledger account code	General ledger account code description
0600	Reorganization facility
0700	Equity / Share Capital
0770	Undivided result
0799	General reserve
0800	Revaluation
0930	Mortgage loans
0940	Long-term credits
0950	Medium credits
0990	Other debts
1290	Cross posting liquid assets
1504	Required to pay VAT high
1510	Required to pay VAT low
1511	Required to pay VAT delivery outside EU (import)
1512	Required to pay VAT acquisition of goods w ithin EU
1513	VAT private use
1514	Pre-print Turnover Tax
	Creditors

1700	Required to pay income tax
1710	Required to pay Net w age
1732	Accrued payroll taxes
1740	Required to pay social security contributions employee
1741	Required to pay other employee premiums
1745	Required to pay social security contributions employer
1746	Required to pay other employer contributions
1770	Required to pay reservation 13th month
1771	Reservation employers' costs 13th month
	Accrued vacation reservation
1900	Costs still to pay
	Prepaid expenses
1935	Turnover to be invoiced
	VPB current fiscal year
1955	VPB previous years
2100	Accrued expenses
	Bill advances opening balance
0100	Company inventory
0110	Research and development
0120	Formation expenses
0130	Concessions and permits
0140	Intellectual property
0190	Other immaterial fixed assets
0200	Ground
0300	Renovations
0310	Depreciation buildings
0400	Guarantee
0420	Transport and means of transportation
0430	Depreciation transport and means of transportation
0450	Depreciation company inventory
0490	Other material fixed assets
0495	Depreciation other immaterial fixed assets
0500	Participations
0550	Goodw ill
1000	Cash
1100	Rabobank 1234.56.789
1300	Debtors
1310	Debtors preceding year
1400	RC DGA
1540	To pay/ receive Turnover tax
1715	Bill advances personnel
1930	Amounts received in advance
	Cross posting
3000	Inventory trading goods
4100	Fuel
4110	Lease costs
4120	Maintenance & Repair
4140	Car insurance

4145	Fines
8000	Turnover domestic high rate
8001	Turnover Projects T & M 19%
8002	Turnover projects fixed price
8003	Turnover Linences
8010	Turnover domestic low rate
8011	Turnover Projects T & M 0 %
8012	Turnover abroad Fixed Price
8020	Turnover abroad zero rate
8100	Turnover abroad within the community
8110	Turnover abroad supplied outside the EU
8210	Finished product
8900	Other company revenues
9000	Extraordinary revenues
9130	Interest incomes
9140	Interest expenses
4000	Gross wages
4010	Contribution ZVW employer
4015	Received sick pay
4020	LB/PVV
4030	Reservation holiday money
4040	Travel expenses reimbursement
4060	Redundancy pay employer
4061	WIA (WAO/WGA) premium WG
4065	WW/AWF premium WG
4070	Temporary employees
4080	Courses
4081	Travel & accommodation costs Trainings/courses etc.
4090	Other personnel costs
4150	Other car costs
4200	Energy
4210	Rental
4250	Other housing costs
4251	Maintenance building
4260	Other management costs
4300	Advertising and promotional costs
4310	Promotion articles
4320	Representation costs
4330	Stock exchange costs
4340	Other sales expenses
4400	Subscriptions and membership fees
4430	Office supplies
	Postal charges
	Telephone and fax
4451	Telecom costs
4455	Specialism study & literature
4500	Accountancy Costs
4501	Depreciation Company Inventory

4502	Depreciation rebuilding costs
4505	Attorney fees
4520	Provision to pay commissions and the like
4540	Company insurances
	Other general costs
4610	Interest RC DGA
4630	Interest and costs bank
4650	Interest and costs taxes
4900	VPB
7000	Management fee costs
	Work thirds / temporary employee
7100	Purchasing costs
	Calculated car costs
9005	Inquiry account
9010	Extraordinary expenses
9150	Result corrections VAT declaration
9200	Calculation differences
9210	Payment differences
9300	Currency differences
9400	Sale discounts
	Purchase discounts

General ledger account codes can be edited in the screen General ledger account code 200.

1.13.30 Example Master Roll Ups Cost Type

Examples of common master roll ups of cost types for projects in property development are:

Main compaction code	Main compaction description
V1	Devices
V2	Acceptance
V3	External hiring
V4	Other purchasing
V9	Revenues varia
PLAN	Planned hours
VR	Result

Master Roll Ups for cost types can be edited in the screen Master Roll Ups 198.

1.13.31 Example Cost Center

A cost center is for the need of the accountancy and the controlling defined unit within a company, to which costs and presentation can be attributed. A cost center usually turns into a department of a company. Examples of a cost center are:

Cost center code	Cost center description
SAL	Sales
MAN	Management
Tech	Technical service
Prod	Production

Cost centers can be edited in the screen Cost centers 200.

1.13.32 Example Cost Categories

Examples of common cost categories for projects are:

Cost type code	Cost Type Description
VR	Result
V1000	Purchase hadw are for sale
V1010	Purchase softw are for sale
V1100	Purchase hadw are for consumption in projects
V1110	Purchase softw are for consumption in project
V2000	Analyses
V2100	Design
V2200	System Development
V2210	System management
V2220	Functional support
V2300	System Test
V2400	Documentation
V2500	Hours General
V2800	Internal coordination
V2810	External communication
V2900	Travel
V2950	Aw ay
V3000	Hiring based on T&M
V3010	Hiring based on fixed price
V4100	Interior
V4999	Questions costs
V9900	Revenues general
V9950	Revenues interest
V9960	Subsidies
V9970	Kick-back fees
V9999	Questions revenues
PLAN	Planned hours

Cost Categories can be edited in the screen Cost Categories 196.

1.13.33 Example Warehouse

Inventories of products can be held in a warehouse. Examples of warehouses are:

Code	Description
HQ	Central w arehouse.
K 41-VVH-6	VW Transporter 1
K 03-VV-SZ	VW Transporter 2
K 24-TS-VS	Mini Cooper
Str. Huntec	Strip card Huntec
Str. Piet Klim	Strip card Piet Klim
Str. Holland Railconsult	Strip card Holland Railconsult
SLS	Sakes (uncertain if delivery is necessary)
N.a.	Not applicable
Banking	Bank products

Warehouses can be edited in the screen Warehouses 211.

1.13.34 Example Organization Relation Types

An organization relation type describes the relation type between two organizations. Examples of organization relation types are:

Relationship Type	Description from	Description to	Code reversed
Retains	Retains majority shares of	Majority shares in possession of	Owns a majority in
Supplier	Supplies to	Is supplied by	Organization
Competitor	Competitor of	Competes with	Competitor
Partial interest	Holds less than 50% of shares in	Minority interest held by	Owns minority in
Location	Establishment of	Has an establishment in	Establishment

Organization relation types can be edited in the screen Organization relation types 203.

1.13.35 Example Price Lists

A price list has - just like Menus 232 - a tree structure, consisting of a set of prices for Units 157 and other price lists. Price lists can be built with other price lists. Examples of price lists for projects are:

Price list code	Price list description
General purchasing	General purchasing
General sales	General sales
General empty	General empty
Sale Energetic	Energetic specific prices
Sales customer logistics	Only for customers in the logistics

Price lists can be edited in the screen Price lists 186.

1.13.36 Example Process Categories

A process category is a grouping of Processes 58. Examples of process categories are:

Code	Description
Query	Query
Failure	Failure
Change	Change Request
Complaint	Complaint
Project Meeting	Project Meeting
Wf IncInv	Workflow approving incoming invoice
Wf OutInv	Workflow approving outgoing invoice
OOS	Out-of-scope
NAB	Not a bug
PR	Problem Report
ER	Enhancement Request
Question	Question
PUR	Purchasing
Template	Template
Invoice	Invoice
N/A	N/A
M	Milestone
SUG	Suggestion for future work
Doc	User's documentation
UNK	Unknown, not classified yet
Process	Process-related (meetings etc)

SLS	Sales
Fix	Fix
Wf Leave	Request for leave
Sales real estate	Sale process real estate

Process categories can be edited in the screen Process categories 175.

1.13.37 Example Process Provenances

A process provenance is a grouping of Processes 58 on the basis of provenance. Examples of process provenances are:

Code	Description
Customer	Customer
IncInv	Incoming invoice
OutInv	Outgoing invoice
Dev	Development
N/A	N/A
Prod	Production
Sales	Sales
Test	Test
UNK	Unknow n, not classified yet.
WT	Walkthrough

Process provenances can be edited in the screen Process provenances 176.

1.13.38 Example Process Impact

A process impact is a grouping of Processes 58 on the basis of impact. The process impact often determined the priority in combination with the urgency. Examples of process impacts are:

Code	Description
Low	Completely usable.
Average	Limited use.
Grave	No longer usable.
N.a.	Not applicable

Process impacts can be edited in the screen Process impacts 176.

1.13.39 Example Process Note Categories

A process note category is a group of process notes (see processes 58). Examples of process note categories are:

Process Note Category	Process note category description
Audit	Audit
Various	Various other
Doc	User documentation
Email	Email
Fix	Fix request
Meeting	Personal meeting
Project group	Project goup consultation
Steering group	Steering group consulation

Telephone	Telephone conversation

Process note categories can be edited in the screen Process note categories 179.

1.13.40 Example Process Status

A process status describes the condition of a process. Examples of process statuses are:

Code	Description
SLS Lead	Lead
SLS Prospect	SLS Prospect
SLS Contract	SLS Contract

Process statuses can be edited in the screen Process statuses 173.

1.13.41 Example Process Unit Status

The process unit status indicates the status of the units that are involved in the processing of the process. Examples of process units are:

Process unit status code	Description
Entered	Registered in the system, but not yet sold
Sold	Sold w ith a signed contract
Billable	Can be invoiced
Invoiced	Invoiced and supplied

Process unit statuses can be edited in the screen Process unit status 181.

1.13.42 Example Products

A product is everything that can be offered on the market to meet a demand. A product can therefore be a tangible good, like an article in a store, but it can also be a service. Examples of products are:

Product code	Description
BMR	Beamer
HH	Handheld (telephone, PDA)
IP	IP Address
NW	Active netw ork component
PC	Workstation/server
PR	Printer
TEL	Telephone
TELNR	Telephone number

Products can be edited in the screen Products 215.

1.13.43 Example Project Cluster

Examples of common project clusters for projects are:

Product Group Code	Product Group Description
M	Sales and Marketing
SB	System management
SO	System Development
SUP	Support
IN	Internal

Project clusters can be edited in the screen Project clusters 166.

1.13.44 Example Product Groups

Products that belong with each other. Examples of product groups are:

Code	Description	General Ledger Code	Payment Schedule	Sales Condition
Hardw are	Hardw are	8000		Company Sales
Information	Information on products	8000	WB10	Consumer Sales

Product Groups can be edited in the screen Product Groups 214.

1.13.45 Example Project Phases

Projects can be divided into their current project phase. Examples of project phases are:

Project phase code	Project phase description
Sales	Sales
Running	Running
Wrapping up	Wrapping up (remainder)

Project phases can be edited in the screen Project phases 167.

1.13.46 Example Project Relation Types

A project relationship describes the relationship between two or more projects. Examples of project relation types are:

Relationship Type	Description from	Code Reversed	Description to	Container
	Problems solved by	Solved problems for	Solved	N
Successor	Succeeded by	Successor of	Precursor	N
Construction Management	Guided from	Construction management	Guided	N

Project relation types can be edited in the screen Project relation types 169.

1.13.47 Example Project Version Categories

A project version category is a tool to subdivide project versions 57 for, for example, various reports, such as ‘quarterly review’, ‘annual report’ and ‘prognosis 2011’. Examples of project version categories are:

Project Version Categorie	Description
Quarterly Review	Quarterly Review
Business plan	Business plan
	Monthly Review
Review	
Draft	Draft

Project version categories can be edited in the screen Project Version Categories 170.

1.13.48 Example Legal Form

The legal form of a company, enterprise or organization, is the legal form where the enterprise is cast. The legislation in each country determines which legal forms in the business as possible.

Examples of legal forms are:

Legal form code	Description
GmbH	Gesellschaft mit beschränkter Haftung
AG	Aktiengesellschaft

P	Particulier
EZ	Eenmanszaak
SV	Stille vennootschap
OV	Openbare vennootschap zonder rechtspersoonlijkheid
OVR	Openbare vennootschap met rechtspersoonlijkheid
CV	Commanditaire vennootschap zonder rechtspersoonlijkheid
CVR	Commanditaire vennootschap met rechtspersoonlijkheid
BV	Besloten vennootschap
NV	Naamloze vennootschap
STG	Stichting
COOP	Cooperatie
VER	Vereniging
OVERH	Overheid
BVBA	Besloten vennootschap met beperkte aansprakelijkheid
SA	Société Anonyme
LLC	Limited Liability Company
Corp.	Corporation
LP	Limited Partnership
LLP	Limited Liability Partnership
Ltd.	Private Limited Company

Legal forms can be edited in the screen Legal forms 204.

1.13.49 Example Interest Method

The interest method indicates in what way the interest is calculated. Examples of interest methods are:

Interest method code	Description
6% Interest360E	6% in accordance w ith 360 Europe Interest days per Year, 0 days interest free
6% Interest365	6% in accordance w ith 365 Interest days per year, 14 days interest free
6% Interest360N	6% in accordance w ith 360 NASD Interest days per Year (Excel), 0 days interest free
8% Penalty Interest360E	8% in accordance w ith 360 Europe Interest days per Year (penalty interest), 0 days interest free
8% Penalty Interest365	8% in accordance w ith 365 Interest days per year (penalty interest), 0 days interest free
8% Penalty Interest360N	8% in accordance w ith 360 NASD Interest days per Year (Excel) (penalty interest), 0 days interest free

Interest methods can be edited in the screen Interest methods 192.

1.13.50 Example Roles

A role is a function within an organization (for example ‘Project Developer’) that can be performed by a person. Rights can be assigned to this role using Role Authorizations 165 and subsequently this role can be assigned to users that ate going to perform this function with User Roles 164. Examples of roles are:

Role code	Description
Administration	Application management
Exploitation	Service and exploitation
FA	Finance
Development	Development Invantive products
PD	Project development

Public	Public

Roles can be edited in the screen Roles 164.

1.13.51 Example Counters

A counter can be used in additional business rules to calculate a sequence number. See Additional Business Rules 266. Examples of counters are:

Description	First value	Value increase	Cache size
Task number	1000	1	2

Counters can be edited in the screen Counters 268.

1.13.52 Example Timesheet Status

Examples of common timesheet statuses for hours in projects are:

Hour Status Code	description
Initial	Initial
Approved self	Approved by employee
Approved mgr	Approved by manager, billable
Invoiced	Invoiced and definitive
Planned	Planned

Timesheet Statuses can be edited in the screen Timesheet Statuses 193.

1.13.53 Example Skills

A skill is the ability to capably perform an act or solve a problem. Examples of skills are:

Skill code	Description
FN	Function
FN.SEUNX	System engineer UNIX
FN.SEWIN	System engineer Window s
FN.MCSE	Microsoft Certified System Engineer
FN.FC	Financial Controller
FN.FA	Financial Administrator
FN.FD	Financial Director
FN.MD	General Director
FN.PO	Project developer
FN.PM	Project Manager
CHAL	Physical challenges
CHAL.Glasses	Glasses needed
CHAL.Lost Left Leg	Lost left leg
CL	Computer languages
CL.Basic	Basic
CL.C	C
CL.C#	Microsoft .net C#
CL.C++	C++
CL.C#.v1	C# v1
EDU	Education
EDU.ANA	Illiterate
EDU.BS	Elementary School

Skills can be edited in the screen Skills 208.

1.13.54 Example Compactions

A roll up is a bundle of individual cost categories. Roll ups are used to combine financial information, which is registered per cost category, into a medium level, such as 'Acquisition', within projects. The financial information can also be requested on cost category, in case a less general division is required. The financial information can also be requested on master roll up level, in case a more general division is required. Examples of compactions are:

Code Compaction	Description Compaction	Master Roll Up
V99	Revenues varia	V9
V3	External hiring	V3
V1	Devices	V1
V2	Acceptance	V2
V4	Other Purchasing	V4
VR	Result	VR
PLAN	Planned hours	PLAN

Compactions can be edited in the screen Compactions 197.

1.13.55 Example Work Schedules

A working schedule describes the hours contractual agreed upon for a labor agreement or the hiring of permanent and temporary personnel/staff. Examples of work schedules are:

Work schedule code	Work schedule description
40h	40 hours per w eek
32h Wednesday free	32 hours per w eek, every Wednesday free
16h mo+tu	16 hours per w eek, w ork every Monday and Tuesday
36h free every other w eek	36 hour per w eek, every second w eek friday free

Work schedules can be edited in the screen Work schedules 181.

1.13.56 Example Work Types

A labor type is a type of work that can be performed by an employee and that will be treated distinctively for invoicing or analysis. Examples of work types are:

Work type code	Work type description
Meet	Meeting
Design	Design draw ing
Conversion	Conversion
Doc	Documentation
Analyses	Analyses
Travel	Travel time
Planned	Planned time

Work types can be edited in the screen Work types 183.

1.14 Versions

This chapter describes the changes in the application per version.

1.14.1 New Release 2014R1

This new version of Invantive Vision offers advantages such as random searching from Outlook and Windows, new logistic options and Invantive Online Analytics.

Download

The new version can be downloaded from http://www.invantive.nl/ondersteuning/downloads, or it can be requested by sending an email to support@invantive.nl.

Complete list of changes

In the following list you can view all the changes made for each release of Invantive Vision:

- Changes in Release 2012R2 614
- Changes in Release 2014R1 620

1.14.2 Changes in Release 2012R2

Released: 14-12-2012 as 2012 release 2.

Invantive Producer: bXX.

Kettle: 4.4.0-stable

iReports: 4.8.0

Changes and bug fixes:

Number	Type	Product	Description
21282	PR	Achtergrond verwerking	Als een voorgaande job fout is gegaan en er geen uitvoerbestand is, dan gaat de nieuwe job ook fout.
18831	ER	Achtergrond verwerking	Extra velden in contract taak generatie en kunnen opnemen meer placeholders.
18546	ER	Achtergrond verwerking	Achtergrondproces helemaal alleen kunnen draaien op systeem.
19794	PR	Achtergrond verwerking	Fout in achtergrondprocessen. Deze komen met de status K. Opgelost door package aan te passen.
19497	PR	Achtergrond verwerking	Meervoudig vertalen tekst in berichten indien nodig.
20121	ER	Achtergrond verwerking	Vermijd ORA-31626 / ORA-31633 / ORA-00955 / SYS.DBMS_SYS_ERROR / SS.KUPV$FT bij export door elke export job een andere naam te geven.
20398	PR	Achtergrond verwerking	net.sourceforge.jtds.jdbc.Driver Unable to load driver for database connection pool.
20706	ER	Achtergrond verwerking	Automatisch gegenereerde emails kunnen vertragen met een instelbare tijd.
20909	PR	Achtergrond verwerking	Starten job blijft wachten op invoer parameters.
20096	ER	Control	Mogelijk maken registreren pending changes met AtRisk.
21355	PR	Control	Invantive Control: Rand verdwijnt als er geen rijen zijn
19928	PR	Composition	Veld lce_comp_max_users kunnen bewerken in itgen_lce_all.
19043	ER	Control	Sorteervolgorde optioneel kunnen aangeven in picklist in Invantive Control (buiten sorteer volgorde in view zelf).
12917	ER	Control	Functiebeveiliging.
19430	ER	Control	Grootte in bytes van extension tonen in Control bij grid Extensions.
19766	PR	Control	Excel Control raakt voor synchroniseren niet uit editmode van een cel.
17402	PR	Control	Registreren pending changes blijft hangen bij 20k: DisconnectedContext foutmelding in MDA

Number	Type	Product	Description
13092	PR	Control	System.InvalidOperationException: The Transaction object is not associated w ith the Connection object.
19411	ER	Control	DLL-s van extensies comprimeren voor bijvoorbeeld Control.
19537	ER	Control	Automatisch bepalen of een reporting view mogelijkheid tot toevoegen, bew erken, verw ijderen heeft.
19501	PR	Control	Sessies Invantive Control w orden gedeeld terw ijl dit niet mag.
19548	PR	Control	Bij verw ijderen nummer in Invantive Control w ordt 0 terug gestuurd naar database i.p.v. null.
14240	ER	Control	Uitbreiden Publiceren Nieuw Model in Excel.
19494	PR	Control	Aanmeldscherm heeft geen labels afhankelijk van taal.
20886	PR	Control	Kan DLL-s niet gebruiken in rekenmodel en het rekenmodel w ordt w eer tig Mb in plaats van 200 Kb.
20965	PR	Control	Kan Waarderingsmodel niet publiceren naar nieuw model ivm resizen blokken en Excel tabellen.
18771	PR	Control	Rand verdw ijnt als er geen feiten in de database staan.
20972	PR	Control	Publiceren naar nieuw model w erkt niet voor gekoppelde blokken met feiten.
21366	PR	Control	Time-out w aarderingsmodel vastgoedproject na 2 minuten.
21354	PR	Document	Kan document niet bew erken ondanks voldoende rechten.
19595	PR	ERP Gatew ays	Vertaalbaar maken bubs#exact% packages.
20502	ER	ERP Gatew ays	Extra velden in interfaces voor koppeling met Active Directory personenlijsten.
19228	PR	Exact Online	Vreemd adres in Exact Online, namelijk adres van Contact ipv relatie.
20966	PR	Kopersfactur atie	Kan na upgrade de onderdelen lijst niet meer muteren. Speelt in meer onderdelen van kopersfacturatie.
20742	ER	Kopersfactur atie	Kunnen filteren per projectentiteit.
19966	ER	Kopersfactur atie	Renteberekening volgens w ens Ballast Nedam (KAO - Koopaannemingsovereenkomst).
19910	ER	Kopersfactur atie	Vasthouden aantal dagen rente methode al gebruikt zodat rente berekening ook over meerdere periodes kan.
19703	ER	Kopersfactur atie	Procesunit statusovergangen: geboekt vlag tonen voor Kopersfacturatie.
19861	PR	Kopersfactur atie	Proces status historie toont te veel informatie.
20069	ER	Kopersfactur atie	Naam betalingsschema toevoegen bij fout in bubs#tak_unt.split_for_payment_schedule.
20510	ER	Kopersfactur atie	Meer mogelijkheden om het contractnummer voor procesunits in de facturatie te genereren.
19960	ER	Kopersfactur atie	Bankgegevens voor factuurprint kopersfacturatie (BIC, naam bank).
20033	ER	Kopersfactur atie	Kunnen registreren kostenplaats en kostensoort op Artikel net zoals grootboek code voor boekingen. Optioneel op Unit. T.b.v. kopersfacturatie.
21307	PR	Kopersfactur atie	Zoeken naar project in kopersfacturatie toont leeg scherm.
21235	PR	Outlook	ORA-01461 bij sturen email.
21312	PR	Outlook	Prijslijstregels icoon bij Unit opvragen heeft w itte achtergrond.
20636	ER	Outlook	Google like zoeken in applicaties.
21350	PR	Outlook	Ontstaan foutieve dll-s in distribute hoofdmap voorkomen.
21395	ER	Outlook	Performance tuning Summaries.
20658	ER	Outlook	Queries bij Outlook alleen afvuren als iemand ook echt met Outlook w erkt.
21352	PR	Outlook	Performance uren synchronisatie verhogen.
20968	PR	Outlook	Profielopties error als je op Cancel drukt bij aanmelden op OLA.

Number	Type	Product	Description
20422	ER	Outlook, Control	Ook registreren van fouten in een Microsoft client in de database
17815	PR	Outlook, Web	Kan niet alle projecten zien in query.
20006	ER	Outlook, Web	Alle projecten zien rechten kunnen beperken tot specifieke rapportage groep.
19005	ER	Outlook, Web	Moeilijke standaard w achtw oorden voor system gebruiker.
19543	PR	Outlook, Web	Melding dalpre1099 Gebruiker niet gekoppeld al geven bij het aanmelden in plaats van bij database sessie maken.
2635	ER	Outlook, Web	Koppeling processen met kostensoort en contract.
8745	PR	Outlook, Web	ORA-07445 in build 40 door bug in Oracle's CLOB implementatie "klassificatie reeks".
17505	ER	Outlook, Web	Demo data uitbreiden t.b.v. automatisch testen softw are.
18916	ER	Outlook, Web	Mooier opmaken handboek.
18958	ER	Outlook, Web	Frans vertaling.
18762	ER	Outlook, Web	Veld Toelichting op tvd, gvd en vdd.
19454	ER	Outlook, Web	Veld Naam in Persoon w ordt niet goed gevuld door aanvullende bedrijfsregel.
17529	ER	Outlook, Web	Datumformaat niet meer hard coderen.
18946	PR	Outlook, Web	Licentie staat het verlagen van het aantal gebruikte licenties toe.
20950	PR	Outlook, Web	Wijzigen/verw ijderen uren: w ordt niet gekeken naar rol voor onbeperkt w ijzigen.
20594	ER	Outlook, Web	Nationaliteit van persoon kunnen registreren.
20596	ER	Outlook, Web	Registratie LDAP account bij persoon t.b.v. ontdubbeling.
20844	ER	Outlook, Web	Extra velden op proces, uur en procesunit om de verw achte eenheids verkoopprijs vast te kunnen leggen. Dient gevuld te w orden door aanvullende bedrijfsregels.
19195	ER	Outlook, Web	Datatype van Gew icht bij organisatierelaties veranderen in decimal.
20476	ER	Outlook, Web	Langer slapen als aanmelden niet lukt om zodoende hackpogingen te frustreren.
20504	ER	Outlook, Web	Voor kopersfacturatie extra mijlpalen toevoegen aan verkoopkans t.b.v. notariele akte.
18614	ER	Outlook, Web	Vasthouden toelichting en eerste/laatste ervaring bij persoonlijke vaardigheden.
19866	ER	Outlook, Web	Icoontje voor procesnotitie categorie.
20018	ER	Outlook, Web	Vasthouden w anneer een concept factuurregel voor het laatst geexporteerd e/o geaccepteerd is.
20312	ER	Outlook, Web	Veld Auteur kunnen opgeven en w ijzigen bij Procesnotitie in w eb en OLA.
20470	ER	Outlook, Web	RSS adres voor personen en organisaties.
20708	PR	Outlook, Web	Uitschakelen dat je documenten kunt muteren bij gesloten processen e/o projecten.
20709	PR	Outlook, Web	Je kunt de projectcode w ijzigen van een proces dat afgesloten is.
20228	ER	Outlook, Web	Auteur op Procesnotities t.b.v. dashboarding.
20255	ER	Outlook, Web	Persoon - persoon relaties.
17568	ER	Outlook, Web	Scherm conceptfactuurregels uitbreiden met nieuw e velden voor Kopersfacturatie vastgoed.
20903	PR	Outlook	12345 invoeren cursor verschuift in Invantive for Outlook.
20503	ER	Outlook	Icoontjes in summary scherm bij telefoon, w ebsite e.d.
20511	ER	Outlook	Extra kader om pasfoto en organisatie plaatjes in detailscherm.
20249	ER	Outlook	Object Reference not set to an instance of an object in UnitEigenschapw aarden Toevoegen.
17137	ER	Outlook	Maatw erk rapporten ook vanuit Outlook kunnen opvragen, zow el algemeen als vanuit specifieke schermen zoals Projecten en Projectbudgetten.
19404	PR	Outlook	Project Bew erken scherm volgorde velden anders dan w eb versie.
19418	ER	Outlook	Mooiere foutmelding als plaatje ophalen niet lukt uit nieuw sstream.
19456	PR	Outlook	Unit Eigenschapw aarden Bew erken geeft Artikeleigenschap fouten.
17177	ER	Outlook	Kunnen zoeken op betrokkenheid bij een proces.
17245	ER	Outlook	In plan scherm rekening houden met vaardigheden van persoon en benodigde vaardigheden
18181	ER	Outlook	Icoons in de menubalk van Vision/Estate.
18192	ER	Outlook	Mogelijk maken om ContractBudget en ContractTaakGeneratie te bew erken via Toolstrips.
18399	ER	Outlook	Vanuit Projectenoverzicht - Openen Kasstroomprojectie met Details en Dagdetails.

Number	Type	Product	Description
18492	ER	Outlook	Kunnen zoeken ook op categorie bij Recente Items.
18620	PR	Outlook	Picklists moeten in het Nederlands, nu Engels.
19292	ER	Outlook	Generaliseren DropDow n menu's bij toevoeg menu's.
19508	ER	Outlook	Op Organisatie kunnen zoeken ook bij betrokkenheden.
19520	ER	Outlook	Tonen label van procesunitstatus in scherm procesunit statusovergangen.
18254	PR	Outlook	Bij verw erken document archiveren met zelfde naam en tijdstip ORA-00001 fout
18482	PR	Outlook	Vertalingen OLA Configuratiescherm w orden niet geladen bij installatie.
18950	PR	Outlook	Vroegtijdig afbreken error: ORA-20163: The module 'InvantiveÂ® Control (20121.0.205.2937 COD)' has not been certified for use w ith this version of Invantive Producer. Please contact your system administrator.
19034	PR	Outlook	Openen van één document, zorgt dat alle documenten in grid geopend w orden
19500	PR	Outlook	Aanmaken niet Organisatie. Selecteren verkoopvoorw aarden laat nu inkoopvoorw aarden zien.
19544	PR	Outlook	Bij reply w ordt originele mail overschreven --> niet gew enst.
19580	PR	Outlook	Outlook neemt veel geheugen in gebruik en geeft foutmelding: Parameter is not valid.
19936	PR	Outlook	Grote knoppen zoals "Assign association" w erken niet meer bij mail
19488	PR	Outlook	Verkeerde picklist op Projectfase: laat ook ongeldige vervolgstatussen zien.
19636	PR	Outlook	Archiveren als document geeft bij zoeken naar Herkomst foutmelding en vervolgens leeg zoekscherm
10285	ER	Outlook	Meten prestaties netw erk verbinding met database.
20656	ER	Outlook	Autorisatie op mail/note/kalender item w el of niet tonen Invantive functionaliteit.
20896	ER	Outlook	Grijze knoppen w eghalen in OLA e.d. als iemand geen rechten heeft.
20907	PR	Outlook	Processen: Hij vult ook naam bij melder in als die persoon niet voorkomt bij Melders o.b.v. afzender email.
21251	ER	Outlook	Deepsearch en maxhits opgeven bij snel zoeken.
21278	PR	Outlook	Filter prijs component vertoont lege regels.
21310	PR	Outlook	Duidelijker melding als URL niet gedow nload kan w orden met plaatje.
20612	ER	Outlook, Web	Organisatievelden: DUNS (Dun & Bradstreet), Graydon en RSIN nummer t.b.v. makkelijker herkennen organisaties.
20614	ER	Outlook, Web	Bij klassificaties w aardes en getallen kunnen registreren, bijvoorbeeld voor relatie naar meerdere ERP administraties of omzetcijfers per jaar.
20669	ER	Outlook, Web	Verplichten dat prijs opgegeven w ordt voor bepaalde units bij gebruik op een proces t.b.v. generieke factuuritems.
20714	ER	Outlook, Web	Proxy voor kunnen verbinding naar Basw are e.d.
20775	ER	Outlook, Web	Relatie tussen BTW code en grootboek kaart w aar de boekingen op terecht zouden moeten komen (voor maatw erk accounting package integratie).
20776	ER	Outlook, Web	Per persoon kunnen registreren binnen w elke kostenplaats hij valt.
20956	ER	Outlook, Web	Kopersfacturatie: datum start bouw + technische oplevering.
21285	PR	Outlook, Web	Heropenen gesloten processen niet mogelijk door takatr1329.
21287	PR	Outlook, Web	Gew enste starttijd w ordt in het engels aangegeven in het scherm Achtergrondprocessen.
21288	PR	Outlook, Web	gbritg001: Kan Persoon Stefan de Vries niet vinden.
20772	ER	Producer	Toevoegen aantal vrije kolommen als parameter op applicatie (default is nu 10).
19663	ER	Producer	Taalonafhankelijk vlag bij vertalingen en glossary terms.
19718	ER	Producer	SearchBaseForm, SearchBase en SearchPanelBase maken voor vereenvoudiging zoekschermen.
20138	ER	Producer	Generatie screenshots en health checks schermen.
19852	ER	Producer	Ook additional w here clause van eerste view element kunnen gebruiken.
18427	ER	Producer	Grids kunnen bew erken.
19651	PR	Producer	Bouw units knoppen in Kopersfacturatie ververs en niet altijd juist.
18370	ER	Producer	Vertaalbaar maken aanmeldschermen in C#.
18790	ER	Producer	Overstappen van exp op expdp. Exp niet meer ondersteund vanaf 11g R2.
19390	PR	Producer	Loading... w ordt getoond i.p.v. de proces status lijst.

Number	Type	Product	Description
19251	PR	Producer	Tekst in rapporten w orden niet bold geladen in Arial Unicode.
19005	ER	Producer	Moeilijke standaard w achtw oorden voor system gebruiker.
18590	ER	Producer	DetailsEditBase generiek maken.
18782	ER	Producer	Blog tonen bij aanmelden in OLA, ECA, QT, Studio, w eb.
18503	ER	Producer	Web service gatew ay w erkend maken voor Autodesk Revit. Autodesk Revit is meer .net dan Microsoft Office producten.
18493	ER	Producer	Datamodel rapport uitbreiden met toegevoegde velden.
19057	ER	Producer	Omzetten bew erkschermen naar nieuw e DetailsEditBase
19836	ER	Producer	Afsplitsen schermen Outlook add-in schermen naar aparte assembly t.b.v. genereren schermen (verminderen afhankelijkheden Outlook)
19570	ER	Producer	Ondersteuning decimale scheider / groeps karakter.
19406	PR	Producer	Formaat van numerieke velden w ordt niet goed w eergegeven.
19421	ER	Producer	Disconnecten mogelijk maken, plus opruimen verbindingen.
19436	ER	Producer	Omzetten summary schermen naar nieuw e methode.
19437	ER	Producer	Nieuw s (RSS) kunnen tonen in .net applicaties t.b.v. bruikbaarheid.
18445	ER	Producer	Summaries ombouw en naar summarybase.
20454	ER	Producer	Verbeteren cache mechanisme voor w ebservices.nl.
20163	ER	Producer	Uitfaseren Microsoft .net Oracle Data Provider voor ondersteuning XMLTYPE.
20589	ER	Producer	Hoofdletterongevoelig zoeken in eigen .net datalaag.
19388	PR	Producer	In .net framew ork gaat bepalen geselecteerde regel in tabel niet goed.
20745	ER	Producer	Verbindingscontrole voor snel verbinding opbouw en niet meer via ping maar via http om irrelevante firew all blokkering over te slaan.
20892	ER	Producer	Negatieve getallen overal kunnen invoeren - ook nodig voor kopersfacturatie.
20094	ER	Producer	Verw ijderen 'verplichte' auditkolommen zorgt voor niet kunnen genereren .NET code.
20144	ER	Producer	XMLType ondersteuning door Invantive Producer
20952	PR	Producer	Na time-out (?) van w ebservice krijg je als je verder w erkt in OLA een "Object reference not set to an instance of an object".
20252	ER	Producer	Help toevoegen aan Kopersfacturatie en andere add-ins op Invantive for Outlook.
21273	PR	Producer	PL/SQL: numerieke fout of fout in w aarde : tekenstringbuffer is te klein in ITGEN_CACHE.
20973	ER	Producer	Slimmer bepalen te gebruiken instellingenbestand settings.xml.
20980	PR	Producer	Settings.xml w ordt niet altijd gevonden in lokale cache als VPN dow n is.
19674	ER	Query Tool	QueryTool: Scherm maken voor vragen naar Bind variabelen zoals in andere pakketten.
19553	ER	Query Tool	In/uitschakelbare regelovergang.
20000	ER	Query Tool	Bestanden met query's kunnen openen in het DMS vanuit het Query Tool.
19332	PR	Query Tool	Processes Tabblad in zoekscherm genereert fout.
19694	ER	Query Tool	Oracle trace inbouw en in QueryTool.
17495	ER	Query Tool	Table selector in query tool.
20722	ER	Rapporten	PDF w eergeven ook als er geen uitvoer is van een rapport.
18499	ER	Rapporten	Toevoegen functieparameters op alle rapporten.
19876	ER	Rapporten	Upgrade naar JasperReports 4.6.0.
20836	ER	Rapporten	Upgrade naar JasperReport 4.8.0.
19134	ER	Rapporten	Rapportparameters onderdrukken functieparameters op rapport pagina.
18678	ER	Rapporten	Controle methode voor parameters op functies.
20967	ER	Rapporten	Niet-nette opmaak errors bij opstarten rapport.
20322	PR	Studio	Juiste icoontje op executabele.
20323	ER	Studio	Invantive.Producer.Studio.exe kunnen starten vanaf de netw erkschijf z:, ook zonder caspolicy te gebruiken.
20329	ER	Studio	Licentiecheck faalt bij gebruik Studio. Error: itgen_not_logged_on. Workaround: aan einde on_logon_dotnet een Ice_init. Maar moet beter, net zoals het al bij Query Tool w erkt.
20330	ER	Studio	Icoontjes voor mappen in Studio.
19117	ER	Studio	Hernoemen velden voor Invantive Studio.

Number	Type	Product	Description
19498	ER	Studio	Vullen client_identifier vanuit *_session.bod voor analyse (o.a. webservice).
19622	ER	Studio	Glossaries definieren in Invantive Producer voor definities, woordenlijsten e.d.
19950	ER	Studio	Relaties genereren in .net voor genereren schermen.
20333	ER	Studio	Juist vullen middelste kolom.
20334	ER	Studio	Add en Delete knoppen.
20336	ER	Studio	Lijst velden in eigenschappendeel niet alfabetisch sorteren maar functioneel.
20445	ER	Studio	Plaatjes in meerdere resoluties toevoegen.
20078	ER	Twinfield	Koppeling Twinfield - Invantive.
21351	ER	Web	Ondersteuning Android browsers.
21426	PR	Web	Sluit icoontje werkt wel op IE 9 en Firefox, maar toont geen kruisje.
21368	PR	Web	Na aanklikken factuurregel is popup niet weg te krijgen.
20982	PR	Web	Annuleren knop in Zoeken en Opvoeren / Bewerken popup ipv er buiten klikken. Er buiten klikken mag niks meer doen.
20450	ER	Web	Ontwerpen icons voor Invantive Vision op iPad/iPhone.
18858	ER	Web	Zoeken via integers met een format (SEQ) werkt bij sommige locales niet.
19291	ER	Web	Tonen toelichting in scherm Rolautorisaties.
19890	ER	Web	Upgrade naar Premium Pack 2 van H&M.
20238	ER	Web	Transparantie in alle icoontjes.
20146	ER	Web	Upgrade CKEditor naar versie 3.6.4: controle op spelling, editor readonly kunnen maken vanuit custom javascript.
19365	PR	Web	Klikken op invantive logo om terug te gaan naar dashboard werkt niet meer.
19392	PR	Web	Velden Beginstatus Oud/Nieuw Eindstatus Oud/Nieuw geven fouten in scherm Projectfase Overgangen.
19393	PR	Web	Wis filter wist verkeerd in scherm Mijn Instellingen.
6810	PR	Web	Beperken mogelijke tekens in de bestandsnaam als je documenten upload via web frontend.
17356	PR	Web	Tekst valt buiten kader in Taken scherm
19302	PR	Web	Web: Paginering webfrontend neemt de op de pagina ingestelde rijen per pagina niet over, maar gebruikt alleen waarde uit sessie.
19305	PR	Web	Insert knop werkt niet op meerdere web forms
19848	PR	Web	Layout fouten in webschermen ftr_all en kps_all.
19462	PR	Web	Foumelding bij openen van scenario: ORA-01461: Kan een LONG-waarde allen binden voor het invoegen van een LONG-kolom
19492	PR	Web	In bubs_tus_all ontbreken verplichte velden tus_begin_status_vlag en tus_eind_status_vlag
19575	PR	Web	Kalender bij tijdreizen werkt niet.
20360	ER	Web	Scherm zoeken in het menu via de menubalk.
20361	ER	Web	Stylen nieuwe picklists.
20899	ER	Web	Projecten scherm: Performance picklist projectcluster directeur verhogen door er picklist van te maken.
20908	PR	Web	Openen msg bestand -> bestand krijgt extensie .do.
20975	ER	Web	AutoComplete picklist voor Facturen in bubs_ftr_all en bubs_frl_all.
20977	PR	Web	Kan niet twee keer zoeken gebruiken.
20988	PR	Web	Bij een aantal schermen werkt de crumbtrail niet (bijv. factuurregels en budgetten). De crumbtrail blijft leeg bij Google Chrome.
20893	PR	Web	Nieuwe web frontend werkt niet onder IE 9: je kunt geen zaken openen via de knoppen Nieuw /Zoeken.
21277	PR	Web	Scherm ERP-interface geeft error over niet gevonden elementen bubs_job_v1.
21320	PR	Web	Kan geen rolrechten opvoeren via het web voor Invantive Producer.
21630	PR	Webservice	Met tussenpauzen terugkomende HTTP 500 error bij gebruik webservice (onvoldoende fysiek geheugen in IIS server).

Number	Type	Product	Description
20870	ER	Web	Als je doorklikt via een ander scherm en de gezochte rij staat niet op de pagina, dan openen de details ook niet.
20963	PR	Outlook	Outlook: Als je in een process een related process toevoegt, dan springt het Process tab na opslaan weer naar voren en moet je opnieuw op Related Processes klikken.
20993	ER	Outlook, Web	Onderscheid maken t.b.v. usability in geslacht persoon bij no-image weergave.
21293	ER	Outlook	Bij Personen scherm ook tabs voor Processen als Proceshouder en Processen als Procesmelder.
21458	PR	Outlook	Kan bij zoeken geen getallen invoeren groter dan 1 mln.
21505	PR	Web	Kan DB max number velden niet opslaan in License (Invantive Producer).
21605	PR	Web	Kan geen bonnen met hardware op facturabel zetten.

Further:

New OLA screens.

Known major issues:

None.

Installation

- See Installation and Upgrade 518.

New Features

- Grant rights to the new screens / reports.
- Configure new profile options.

Specialties

- None.

1.14.3 Changes in Release 2014R1

Released: 7-2-2014 as 2014 release 1.

Invantive Producer: b55.

Kettle: 4.4.0-stable

iReports: 5.5.0

Changes and bug fixes:

Number	Type	Product	Description
21915	ER	Exact Online	In Exact Online het factuur email adres en per adres factuur verwerken, plus 35% volume reductie.
21916	ER	Exact Online, Reeleezee, Multivers	Kunnen opgeven patroon voor omschrijving op facturen uit Exact Online, Reeleezee en Multivers, bijvoorbeeld voor afdrukken factuurperiode.
22139	PR	Outlook	Alleen gebruiker invullen bij Nieuw processen als Houder als die gebruiker ook houder kan zijn.

Number	Type	Product	Description
21836	PR	Outlook	Als bubs-ola-mail-sjabloon-bij-verzenden aan staat, dan verdwijnen in 2012R2 soms de inhoud van de mail.
21886	ER	Outlook	Als je bij Selecteer Project een projectcode opgeeft die niet in het filter zit, dan svp een waarschuwing geven. Nu weet de gebruiker niet wat hij fout doet.
18586	ER	Outlook	Berichten overzicht met details, doclist, message en tab met doc refs.
22126	ER	Outlook	Bron / Detail Relatie (% ref tabel) worden niet juist doorgegeven.
22028	ER	Outlook	Controle in Conceptfactuurregels scherm dat je alleen geldige Natural Keys kunt opgeven. Dito voor detail referenties.
21628	PR	Outlook	Document PDF Preview in Outlook toont paginanummers in listbox niet correct.
24000	ER	Outlook	Faillissementsdata.
20508	PR	Outlook	Foute terugkoppeling over aantal verwerkte rijen als stored procedure aangeroepen wordt voor bepaling rentes.
14920	ER	Outlook	Help per scherm.
20862	ER	Outlook	In scherm Projecten en Processen ook foto's van personen weergeven indien voorhanden.
20564	ER	Outlook	Kunnen verwijderen/kopieren project nieuws en kopieren proces nieuws.
22074	PR	Outlook	Licentie error van PDF visualizer als je preview t.
21878	ER	Outlook	Lijst projecten bij zoeken beperken tot alleen de open projecten.
22116	PR	Outlook	LOV bij documentclassificaties opent verkeerde scherm Organisaties ipv Documenten
22002	ER	Outlook	Meer dan 7.000 handles in Outlook na gebruik relaties bijwerken.
19637	ER	Outlook	Omzetten Search schermen naar SearchPanelBase.
21599	PR	Outlook	Openen rapport werkt niet duidelijk vanuit Outlook. Foutmelding is te vaag.
21802	PR	Outlook	Organisatie- en ProjectDetails geven foutmelding m.b.t. databron conversie vanuit Documenten lijst.
23442	ER	Outlook	Per status kunnen opgeven wel/niet doorzetten naar houder.
22122	PR	Outlook	Personen grid verdwijnt.
22145	ER	Outlook	Plaatje ikoon URL gebruiken bij projecten voor icon linksboven en bij Alt+TAB.
18369	ER	Outlook	Plaatje per document o.b.v. extensie.
23434	ER	Outlook	Plaatsvervanger kunnen opgeven bij deelnames en rollen t.b.v. unieker bepalen wie de volgende houder is.
24046	ER	Outlook	Statutaire informatie organisatie.
17829	ER	Outlook	Stuur mail aan meerdere personen / organisaties.
20406	ER	Outlook	Toevoegen versienummer van product bij errormeldingen.
22125	ER	Outlook	Veld Contract tonen bij Proces. Ook kunnen invullen.
21876	ER	Outlook	Via 1 functie in bubs_functies_v kun je toegang geven tot Budgetaanvragen.

Number	Type	Product	Description
17177	ER	Outlook	Zoeken op betrokkenheid.
20614	ER	Outlook, Web	Bij klassificaties waardes en getallen kunnen registreren, bijvoorbeeld voor relatie naar meerdere ERP administraties of omzetcijfers per jaar.
22275	ER	Outlook, Web	Eigenaar van magazijn registreren.
22050	ER	Outlook, Web	In profielopties systeemvariabelen en vertalingen kunnen gebruiken.
22946	ER	Outlook, Web	Ondersteuning voor licentie Italiaans.
19253	ER	Outlook, Web	Openen van functieparameter in scherm functies
23327	ER	Outlook, Web	Procesdeelnemers kunnen genereren voor complexere workflows.
24128	ER	Outlook, Web	Upgrade naar JasperReports 5.5.
22060	ER	Outlook, Web	Urenstatus voorzien van ikoon.
18550	ER	Rapporten	Regel wrap inschakelen voor kolom functie omschrijving in rapport Functies per Rol.
20998	PR	Web	Alleen parameters tonen in web frontend die zichtbaaar mogen zijn. In bubs_jpr_ins wordt hiermee al rekening gehouden.
21490	PR	Web	Autocomplete picklist heeft namen met spaties op het einde. Daardoor werkt insert soms niet.
21937	ER	Web	Filiaal kunnen opgeven bij een persoon in aanvulling op kamernummer.
21486	PR	Web	Gemaakte en gefactureerde uren weer toevoegen aan OLA Proces en Web bubs_tak_all.
22026	PR	Web	Getoonde klassificaties beperken tot degene die mogen op dit soort object.
21582	PR	Web	Internal error! Can not find the element with ID null.
21467	PR	Web	Invalid ID in lus variabele fout bij uitvoeren rapporten (agp, pot, uot en kpe).
21487	PR	Web	Kan gebruiker niet toevoegen door "Kon rij om toe te voegen niet vinden."
7451	ER	Web	Logistieke module.
21614	PR	Web	Nieuw knop niet zichtbaar (o.a. in bubs_sct_all); Controleren andere schermen.
21450	PR	Web	Opbrengstsoorten heeft geen Nieuw knop, ondanks rechten.
21608	PR	Web	ORA-20163 Kan functieparameter niet vinden als rapport geopend wordt terwijl er andere URL parameters opgegeven zijn in de webfrontend.
21610	PR	Web	Procesdossier opvragen werkt niet door verkeerde URL bij iconen.
21936	ER	Web	Relatie op project naar BTW code zodat je voor onderwijsinstellingen ook per klantproject kunt opgeven wel/niet alles factureren met BTW.
21978	ER	Web	Standaard filteren achtergrondprocessen op aanvrager = huidige gebruiker.
22063	PR	Web	Standaard verkeerde ingangsdatum voor status op uren.
21473	PR	Web	Stuur metingen eindigde met gen-fetch-measurements niet aanwezig.
21591	PR	Web	Te lange bestandsnamen web frontend. Kan niet installeren sinds nieuwe frontend web.

Number	Type	Product	Description
21908	PR	Web	Tijdreizen werkt niet.
22078	ER	Web	Toevoegen knop bij Kasstroomprojecties.
21764	ER	Web	User tracking.
21980	ER	Web	Vertaalbaar maken seed zoals scripts.
20833	PR	Web	Vervangen dropdowns door Autocomplete Javascript
21740	PR	Web	Wilt u de pagina verlaten en wijzigingen kwijtraken wordt onnodig vaak gevraagd.
22080	ER	Web	Workflow kunnen opgeven bij kasstroomprojecties.
24618	PR	Outlook	Vanuit dubbelgelinkt document kunnen openen: Foutmelding opvragen document met URL als inhoud.
24259	ER	Outlook	Weghalen labels waar mogelijk uit Lists, Edits en Details in itgen en p104.
24663	ER	Web	Browser based validatie: Probleem rapporten: controle op functieparameters wordt alleen uitgevoerd bij rapporten die binnen Estate draaien.
20612	ER	Outlook	Organisatievelden: DUNS (Dun & Bradstreet), Graydon en RSIN nummer t.b.v. makkelijker herkennen organisaties.
24562	PR	Outlook	Personen scherm gebruikt op terminal server soms 25% CPU langdurig door bug in LinkLabel.
24660	ER	Outlook	Upgrade naar Infragistics 2013 vol 2.
22226	ER	Outlook	Registratie van uren per seconde nauwkeurig maken.
24662	ER	Outlook, Web	Font 'Arial Unicode MS' is not available to the JVM.
22208	ER	Outlook	In Outlook projecten kunnen kopieren en verwijderen, dito Processen en Personen, net zoals in de web frontend.
24790	ER	Outlook	Sneller laden vertalingen door een clob uit cache te gebruiken.
24678	PR	Web	Openen scherm bubs_dcw_all details kasstroom duurt bijna 4 minuten.
24666	PR	Web	Fout bij wijzigen organisatieclassificatie via web frontend: ze worden allemaal gewijzigd.
24692	PR	Outlook, Web	Waarde parameter wijzigt in deelfunctie

Installation

- No specialties.

Implementation

- No specialties.

1.14.4 Changes in Release 2014R2

Release:

Invantive Producer: b55.

Kettle: 4.4.0-stable

iReports: 5.5.0

Changes and bug fixes:

Number	Type	Product	Description
25478	PR	Rapporten	Niveau 2 ontbreekt in rapport "Financieel Projectoverzicht Niveau 2 (PDF)"
25493	PR	Web	Webhelp lelijk (klik op Help in Vision web frontend). Onderwerp tekst te hoog en hij begint met Zoeken ipv Onderwerp tekst.
25654	PR	Outlook	Workflow tab wordt niet getoond vanwege fouten tijdens initialiseren.
25490	PR	Outlook	Kasstroomdiagram werkt niet.
18299	ER	Web/Outlook	Project fase overgangen.
25492	PR	Web	Verkeerde titel bij Help in Windows varianten. Moet productnaam zijn.
25664	ER	Outlook	Voltooid vlag kunnen opgeven bij Procesnotitie. Bij attachments/documents veld grayed out.
21500	PR	Outlook	Layout of TaskNoteEdit is inconsistent with TaskNoteInfo.
22098	ER	Outlook	Cash flow onder projecten in verkenner als deel van de boom.
24679	PR	Outlook	Bj verzenden eerste email duurt het langer dan 10 seconden voordat de archiveeroptie komt.
24814	PR	Outlook	Kopieren persoon werkt niet door migratie naar vcn non-influences insert field.
25730	PR	Interfaces	Opbrengsten interface werkt project, kostensoort en contract niet bij indien gewijzigd.
24900	PR	Outlook	Verbergen export-mogelijkheid naar Excel 97-2003 (*xls) formaat als er meer dan 256 kolommen in het grid zitten.
22338	ER	Achtergrond	Voor jobs met een error een afwijkend aantal dagen/versies vasthouden.
22114	PR	Outlook	Kan niet direct vanuit scherm Gerelateerde Organisaties een Organisatie toevoegen.
22113	PR	Outlook	Kan geen gerelateerde projecten opvoeren rechtstreeks in het scherm gerelateerde projecten.
24742	PR	Outlook	Na kopieren proces opent Vision de verkeerde: niet de nieuwe, maar de oude. Gewenst: nieuwe openen.
24798	PR	Outlook	Procescategorie tonen in titelbalk bij Processen (niet bij Projecten).
24818	PR	Web	Lelijke fout aanmeldvenster op support.invantive.com.
25519	PR	Web	Printen vanuit browser werkt niet meer, erg veel onzin van select lijsten verschijnt er in. En het menu ook in zijn geheel.
25520	ER	Outlook	Hover hint met gewicht voor zoekresultaten.
25534	PR	Outlook	Titelbepaling centraliseren en netjes maken voor Processen.
24295	ER	Outlook	Samenvoegen button in scherm Personen.
24738	ER	Outlook	Unitklassificaties.
24739	ER	Outlook	Grid edit mogelijk maken voor planning in Interprocesrelatieslijst.
24747	ER	Outlook	Bij kopieren proces/project/persoon alle velden behalve de NK die nu nog leeg zijn invullen met waarde uit herkomst.

Number	Type	Product	Description
24826	ER	Outlook	Ontbrekende tabs toevoegen bij Classificaties in Verkenner.
24886	ER	Outlook	Rechtsklik bij recente items uitbreiden met Bewerken en Verander Status (moeten wel alle geselecteerde hetzelfde soort zijn, PJT of TAK).
25509	ER	Outlook/Web	Veld Rapportage Groep toevoegen aan tak en uur bij details en edit. Zie projecten.
25533	ER	Outlook	Bouw en List/Details/Edit in OLA inclusief functie seed voor bubs_tne_categorieen.
25591	ER	Outlook	Resource utilization ook inhaken bij Persoon.
25612	ER	Outlook	Combineren knoppen bij personen en projecten en processen tot acties menu.
24951	ER	Outlook	Transfer toevoegen aan rechtsklik menu overal waar je ook de status van een Proces kunt wijzigen (Grid Processen, Grid interprocesrelaties, meer?).
24961	ER	Outlook	Veld Overige Voornamen bij Persoon.
24986	ER	Outlook	Kilometers bij uren vasthouden.
25121	ER	Outlook	Kan herkomst niet wijzigen bij archiveren document.
25132	ER	Outlook	Openen lijst units voor een proces duurt meer dan 20 seconden. Was veel sneller.
25732	PR	Web	Documenten uploaden via oude webfrontend werkt niet meer: directory bestaat niet.
25887	PR	Outlook	Knoppen weghalen in Invantive Vision lint als je afmeldt (verbinding verbreken).
25737	PR	Outlook	Sort search results in ACtionsRibbons.cs and DocumentExplorer.cs on score desc, not on retrieval order.
25714	PR	Outlook	Verkenner indien opgestart vanuit OLA moe hetzelfde icoontje hebben als de knop in het invantive vision lint.
25128	PR	Outlook	Conversiefout: profieloptiewaardes gebruiker tab is leeg.
25127	PR	Outlook	Conversie fout additional business rules: add/open/edit niet aanwezig, geen picklist op event, ontbreken actiemoment.
25126	PR	Outlook	Tellers: Bij conversie zijn add/open/edit vergeten in lijst.
25125	PR	Outlook	Project versie views: bij conversie geen koppeling gemaakt met Edit/Details vanuit lijst.
25118	PR	Web	Tab Script Parameters verschijnt onder Script ipv onder het tab.
25071	PR	Outlook	Zoeken op Deelnemer bij Recente Items werkt niet meer.
25016	PR	Outlook	Picklist processtatussen in TaskList corrigeren: niet alle statussen laten zien, maar alleen de mogelijke, net zoals in rechtsklik verander status.
24970	PR	Outlook	Dubbelklik op zoekresultaat in Verkenner opent verkeerde organisatie.
24594	PR	Web	WEB: Project filter: code en naam worden getoond i.p.v. volledige naam
25716	ER	Outlook	Proces Search en Project Search twee kolommen breed. Scheelt veel verticale ruimte.
25192	ER	Outlook	Toevoegen Instellingen en Verbinden zoals in Query Tool bij Invantive Explorer zodat je ook opnieuw kunt verbinden en configureren.
24916	ER	Outlook	OLA: Voorkeuren scherm uitbreiden met extra Settingstab met o.a. systeem settings gerelateerde lijsten
24505	ER	Outlook	OLA: Aanpassen DefaultGroup in Search, Edit en Details controls

Number	Type	Product	Description
24080	ER	Outlook	Taal kunnen opgeven bij een zoekwoord combinatie.
22208	ER	Outlook	In Outlook projecten kunnen kopieren en verwijderen, dito Processen en Personen, net zoals in de web frontend.
24024	ER	Outlook	Ikoon_url en pasfoto_url consistent en eenduidig toevoegen in lijsten
24036	ER	Outlook	Nieuwe schermen toevoegen (List, Details, Edit(Form), Summary(Form) en PropertyGrid) aan Estate en Producer
25766	PR	Outlook	Ontbrekende iconen in help menu's.
24829	PR	Outlook	Details ontbreken bij uren in explorer.
25580	PR	Outlook	Kan venster "Overzetten Proces" niet smaller / breder / hoger / lager maken.
25834	PR	Outlook	About venster erg lelijk met icon en ontbrekende versie. Ga naar Help -> About in de Vision for Windows.
25852	PR	Outlook	File -> New -> Add process / project -> Configure ook inbouwen in Invantive for Windows, niet alleen in OLA.
25902	ER	Outlook	Hover hint op personal calendar als item tekst niet volledig past in box.
25963	PR	Outlook	Correcte titel bij Windows help file, niet HTML Help, maar Invantive Vision Help.
25980	ER	Outlook	In kalender de huidige dag visueel kenmerken.
25297	ER	Outlook	Configuratie mogelijk maken van Procescategorieen en Projectcategorieen via Add PJT/TAK -> Picklist lijst -> Extra optie op einde "Configure..." (itgen_configure_ellipsis).
25324	ER	Outlook	Upgraden plaatjes bij Vision (6 stuks) voor projectstatus naar nieuwe stijl zoals studio.
24262	ER	Overal	Interface met NBStore.
25239	PR	Outlook	Heen en weer springende balk in Invantive Explorer.
25951	PR	Outlook	MessageBox Relaties Bijwerken heeft verkeerd icon bij alt+ tab. Svp vision icon geven en deugdelijke titel 'Relaties bijwerken - Invantive Vision'.
25786	ER	Outlook	Betere melding bij aanpassen meerdere statussen als ze niet allemaal kunnen worden gewijzigd (Processen, ProcesRelaties, Uren, WeekUren, FavorieteItems, Projecten)
25309	PR	Outlook	In Unit overzicht wordt bij toevoegen vanuit de lijsten niet bij alle edit schermen de unit vooringevuld.
25712	PR	Outlook	Vrije velden verbergen als er geen zijn.
25779	PR	Outlook	Regelovergang in explanation bij zoeken wordt niet gebruikt in uitvoer. Svp daarvoor ook regelovergangen laten zien. Zoek op willekeurige taak.
26029	PR	Outlook	Corrigeren About venster.
22106	PR	Outlook	Extractie error van report error gaat niet goed.
25517	PR	Outlook	Onleesbare foutmelding bij starten rapporten
26157	PR	Outlook	Beveiliging van zoekvenster werkt niet.
26158	PR	Outlook	Kan vanuit lijst hoofdverdichtingen geen hoofdverdichting toevoegen.
21983	PR	Web	Google Chrome laat sommige picklists te smal zien op sommige PC's.
26163	PR	Outlook	Ontbrekende vertalingen in Projectfaseovergangen edit scherm.

Number	Type	Product	Description
25491	PR	Outlook	Foutmelding is erg lelijk bij urensynchronisatie.
25507	ER	Outlook	Bouw en list/details/edit voor bubs_exact_instellingen_v en bubs_exact_grtbk_bedrijven_v
25531	PR	Outlook	Foutmelding bevat te veel verw arrende tekst als je geslacht vergeet in te vullen.
24296	ER	Outlook	Scherm Organisaties Knop samenvoegen.
26099	PR	Outlook	Minder elegante afhandeling bij het archiveren van een document als vergrendeld.
24633	ER	Outlook	Kunnen laden zelfde extensies gelijktijdig in Invantive voor WIndow s en Invantive voor Outlook.
25784	PR	Outlook	Bij overzetten uren alleen toegestane nieuw e urenstatussen laten zien.
25933	ER	Outlook	Moderniseren iconen bij archiveren e-mail eindstatus.
26264	ER	Outlook	Uren per w eek staat ook kunnen invoeren in Invantive Explorer.
26444	ER	Outlook	Overboekingsfuncties voor units.
26258	PR	Web	Sizing plaatje gaat fout in oude w ebfrontend als plaatje erg groot is.
26402	PR	Outlook	Invoeren uniteigenschapw aardes lukt niet.
17444	ER	Outlook	Op alle grids 'Open' toevoegen.
18496	ER	Outlook	Overal help, bij alle OLA tekst velden op basis van metadata.
22380	PR	Outlook	Invantive Verkenner : Open facturen duurt enkele minuten door fout bij ophalen recente items (doet ie 75x).
26148	ER	Outlook	Licentie snel kunnen openen voor Invantive Vision / Invantive Estate.
26152	ER	Outlook	Tonen licentiegebruik bij bubs licentie en bij itgen licentie (itgen_lce_usage_r en bubs_lce_gebruik_r) als extra tab. Zichtbaar als je licentie rechten hebt.
26412	PR	Outlook	Zoeken op deelnemer is niet meer hoofdletterongevoelig.
26443	ER	Outlook	Zichtbaar maken gebruiekrsnaam + verbinding in titel DocumentExplorer. Omdat er geen lint is, zie je niet hoe je verbonden bent.
26450	ER	Outlook	Kan geen Authenticatie specificeren bij een Persoon (niet via Outlook / Invantive 4 Window s).
26460	PR	Outlook	Veld "Bestand of URL" staat te hoog bij Document Toevoegen.
24812	ER	Outlook	Toevoegen scherm voor Dekkingen.
25958	PR	Outlook	Kan background jobs niet starten vanuit Outlook of Window s.
26294	PR	Outlook	Toevoegen hover hints aan Document Explorer, zit maar op 50% van de menu items.
26338	PR	Outlook	Kan geen unit classificatie opvoeren. Internal error.
26606	PR	Web	Wachtw oord met & w erkt niet bij aanmelden via oude w eb frontend.
26069	PR	Outlook	Lijst met contacten duurt te lang met laden. TextWithButton van maken.
26330	ER	Outlook	Bij explorer en outlook toevoegen onder New Organisation: New Background Job.

Number	Type	Product	Description
26520	ER	Outlook	Maken lijst access requests (dotnet scherm).
26672	ER	Outlook	Verplaatsen Mijn Functies naar einde ipv als eerste bij explorer.
26700	PR	Outlook	Double click weer aanzetten op Mijn Functies, gerelateerde projecten en andere plekken die met de hand gemaakt zijn.
26581	ER	Outlook	Aantal icons resizen naar 16x16 bij archiveren.
19041	ER	Outlook	OLA: knoppen met gegevens afzender en organisatie kunnen fraaier
25032	ER	Outlook	Sjablonen van processen en projecten.
25986	ER	Outlook	Automatisch query in deel schermen WEL aanzetten.
26184	PR	Outlook	Toevoegen tab met "Database View" en corrigeren lge_label qua vertaling.
26476	ER	Outlook	Splitsen units in voorraad per serienummer.
26544	ER	Outlook	Toevoegen schermen (lijst, details, edit) voor bubs_gebruiker_meldingen_v.
26588	ER	Outlook	Zoeken op magazijn. (Toevoegen aan keuzelijst bij DocumentExplorer en in het venster dat je krijgt bij geavanceerd).
26782	PR	Outlook	Processen kopieren in Outlook werkt niet.
26950	ER	Outlook	Tab Barcodes bij Zoeken venster dat verschijnt bij Bewerken->Zoeken in Document Explorer.
19826	ER	Outlook	Veld datum buitengebruik in units.

Installation

- No specialties.

Implementation

- No specialties.

1.14.5 Changes in Release 2015R2

Release:

Invantive Producer: b55.

Kettle: 4.4.0-stable

iReports: 5.5.0

Changes and bug fixes:

Number	Type	Product	Description
27696	PR	Outlook	Performance: Twice in a row loading contents of the same tree node within 5,673 ms. Performance issue for node |Tree_Dashboard.
27746	PR	Outlook	Open model Diagnostics really sluggish through retrieve of function list. In itgen products work well, not in bubs Rendering slow.
20776	ER	Outlook, Web	Each person can register in which cost center he or she falls.

Number	Type	Product	Description
20775	ER	Outlook, Web	Relatie tussen BTW code en grootboek kaart w aar de boekingen op terecht zouden moeten komen (voor maatw erk accounting package integratie).
20669	ER	Outlook, Web	Require that price is given for specific units by use in a process for the benefit of generic invoice items.

Number	Type	Product	Description

Number	Type	Product	Description

Installation

- No specialties.

Implementation

- No specialties.

3 Invantive Query Tool

With Invantive Query Tool, working with your data via SQL becomes easy. Invantive Producer makes it possible with the help of SQL to edit a. real-time data warehouse. Maintaining integrity and maintaining information security according to ISO 27002. Invantive Query Tool is an addition to Invantive Producer and derived products such as Invantive Vision, Invantive Estate, Invantive Control for Excel and Invantive Composition for Word.

But it is also possible to use Invantive Query Tool for databases without Invantive Producer!

With Invantive Query Tool you can:

- Execute SQL-queries and request the results in a table.
- Immediately group, filter and sort the results in the table on the screen.
- Print the results or export them to Adobe PDF, Microsoft Excel or Microsoft XPS.
- Automate processes with assistance from Oracle PL/SQL (only in combination with Oracle RDBMS).

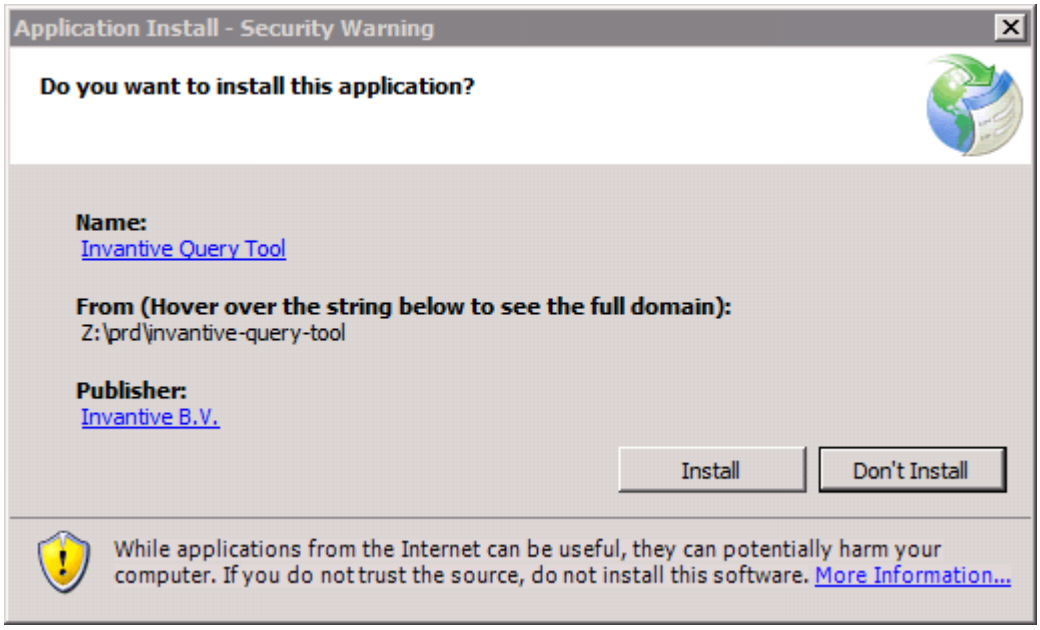
- Retrieve old queries from a file or from the list in the tab "History".
- Connect directly through a native connection for the concerned type database (for example Oracle SQL*Net for Oracle) or connect through the Invantive Web Service so that you do not have to install database-specific software on a work location.
- Supply the database user with a connection or connect to an already installed Invantive product with associated user codes.
- Retrieve the structure of a table or view.
- Request the output of dbms_output, itgen_output and itgen_log of an Oracle PL/SQL block (only in combination with Oracle RDBMS).
- Retrieve an execution plan ("query plan" or "explain plan") of an Oracle SQL query. (only in combination with Oracle RDBMS)
- Request the trajectory ("Oracle Trace") of a SQL statement (only in combination with Oracle RDBMS).

3.1 Quick Configuration

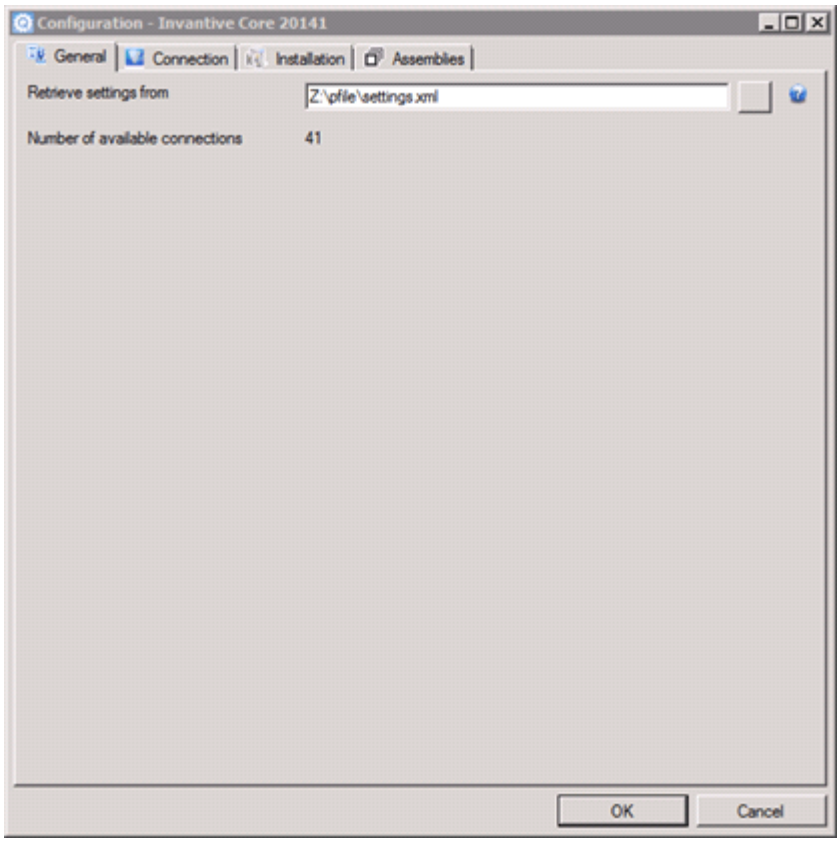
If you follow these steps, you will be able to start working with Invantive Query Tool quickly.

Perform the following steps:

- Check if the drivers have been installed on your workplace so the database can be accessed. For Microsoft SQL Server, drivers are always present. For other database platforms you can find an expanation of the installation process here 662.
- If a connection is required from multiple workplaces, it is advisable to use the Invantive Web Service 648, because that means the drivers won't have to be installed at all workplaces.
- Install Microsoft .NET 4.5.1 if it is not yet present. From Windows 8.1 this version of Microsoft .NET is delivered by Microsoft by default. This software, for windows 7 and Windows 8, is for download at http://www.microsoft.com/en-us/download/details.aspx?id=40779.
- Double-click the file Invantive.Producer.QueryTool.application.
- Klik on Install when the following screen is displayed:

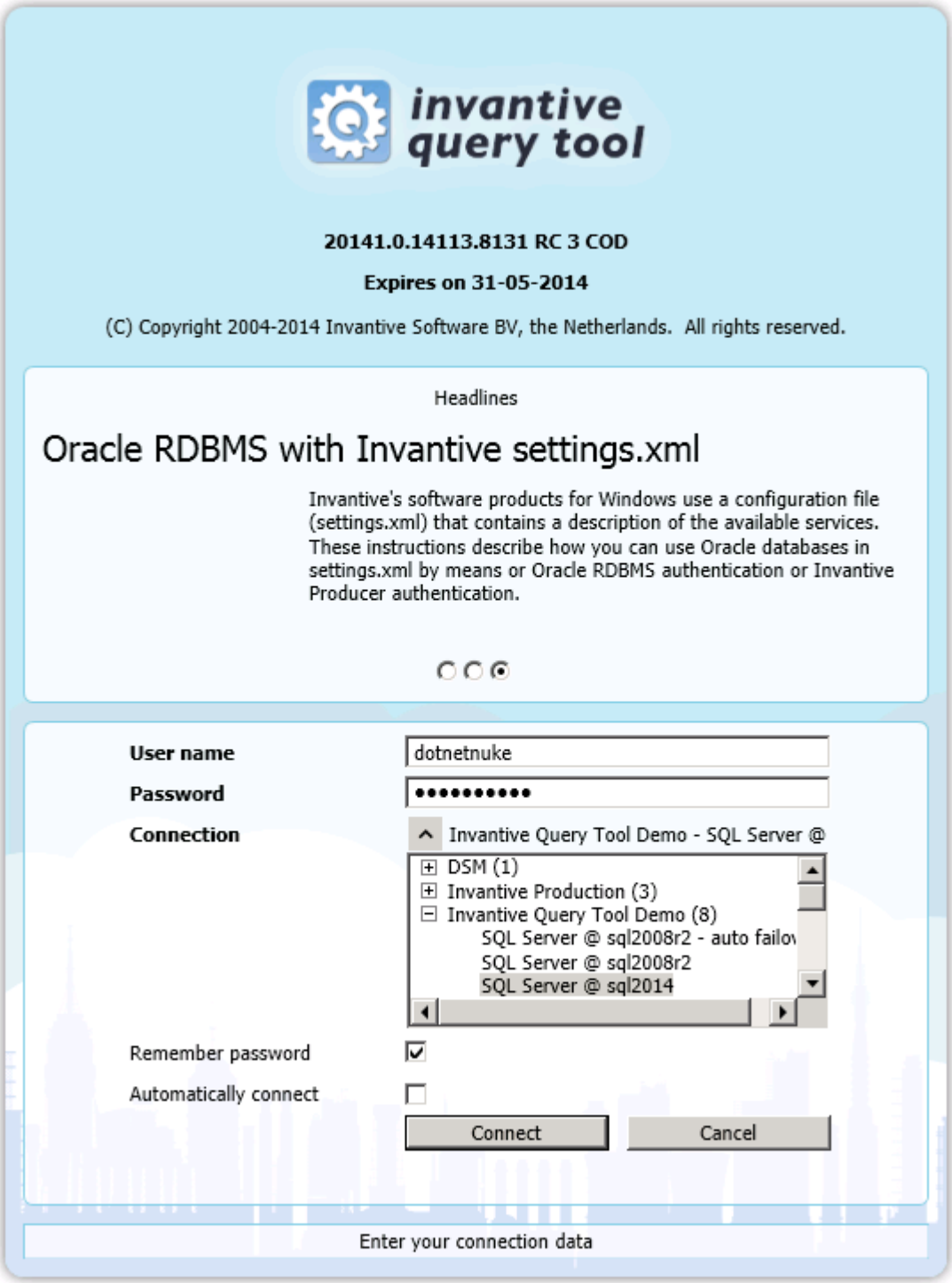


- The installation will be performed.
- Invantive Query Tool will automatically be started after the installation. You can also find it via the Windows Start menu.
- When the program is started for the first time, the configuration screen is displayed. The configuration screen is also displayed when Ctrl is pressed during the start-up process.



- Start Notepad via the Windows Start menu.
- Create an empty file called settings.xml and save it on your desktop.

- The folder from which you have installed Invantive Query Tool contains an example of a settings.xml file with an additional explanation. An example for Microsoft SQL Server can also be found on http://www.invantive.com/about-invantive/news/entryid/1123/windows-authenticatie-met-sql-server-voor-invantive-settings-xml. An example for Oracle can also be found on http://www.invantive.com/about-invantive/news/entryid/1124/oracle-rdbms-met-invantive-settings-xml.
- In the settings.xml file you define the database connections you want to use.
- If you need help with this, you can call Invantive Support for free at +31 88 00 26 599, you can call support@invantive.com or visit http://support.invantive.com.
- Choose your settings.xml file in the configuration screen.
- Press OK.
- The login screen is now displayed.

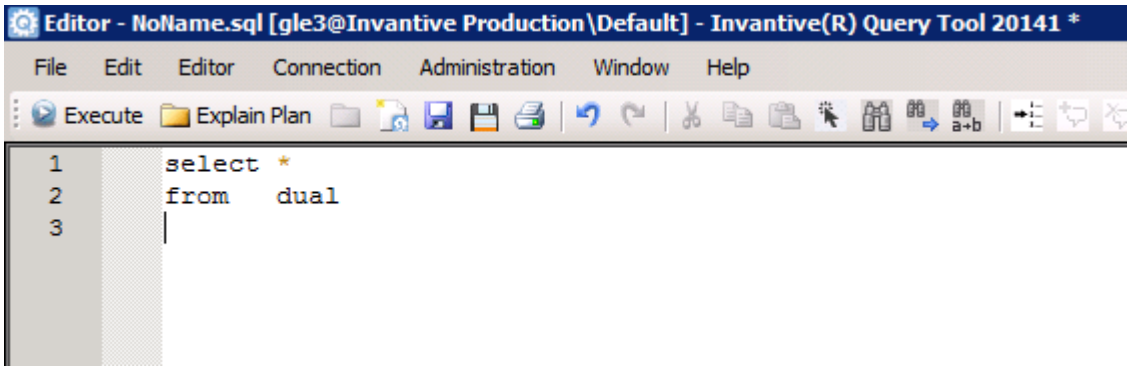


- Select the connection you want to use.
- Enter the username.
- Enter the password.
- Click on 'Connect'.
- The main screen of Invantive Query Tool is now displayed.
- Getting started 636 will show you how you can start working with Invantive Query Tool.

3.2 Getting Started

Here you learn how you can get started with Invantive Query Tool quickly.

After the Quick Configuration 632, the main screen is displayed:



In this screen you can enter a query according to the SQL syntax 636 of the concerning database.

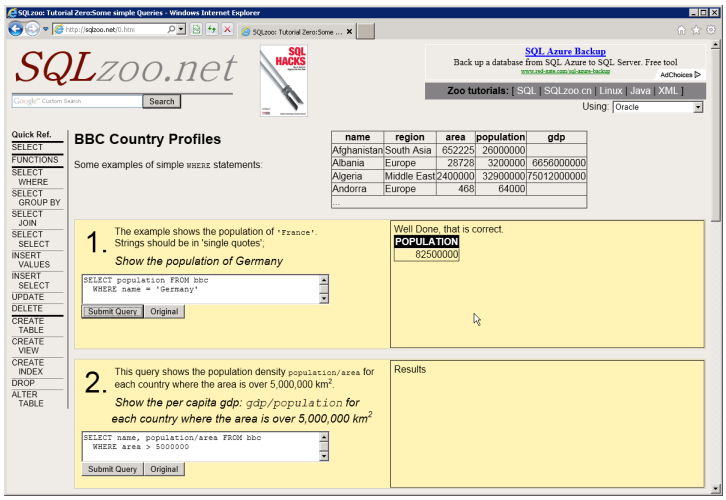
In order to execute the query, you click on Execute or you press Ctrl+Enter.

The results will be displayed in the bottom of the screen, on the tab Results.

3.3 Learn SQL

More information on what SQL is and how it can be used can be found at: http://en.wikipedia.org/wiki/SQL.

The manual on http://sqlzoo.net also gives a good impression. It also enables you to interactively learn how you can retrieve, edit and create data using SQL.



SQL is a standard that has been expanded with extra features by different developers of databases. You can read more about the different types of SQL for each database platform at the following locations:

- Oracle SQL;
- Microsoft SQL Server;
- Oracle MySQL;
- IBM DB2 (volume 1 en volume 2).

3.4 Functioning

This paragraph describes the functioning of the Query Tool.

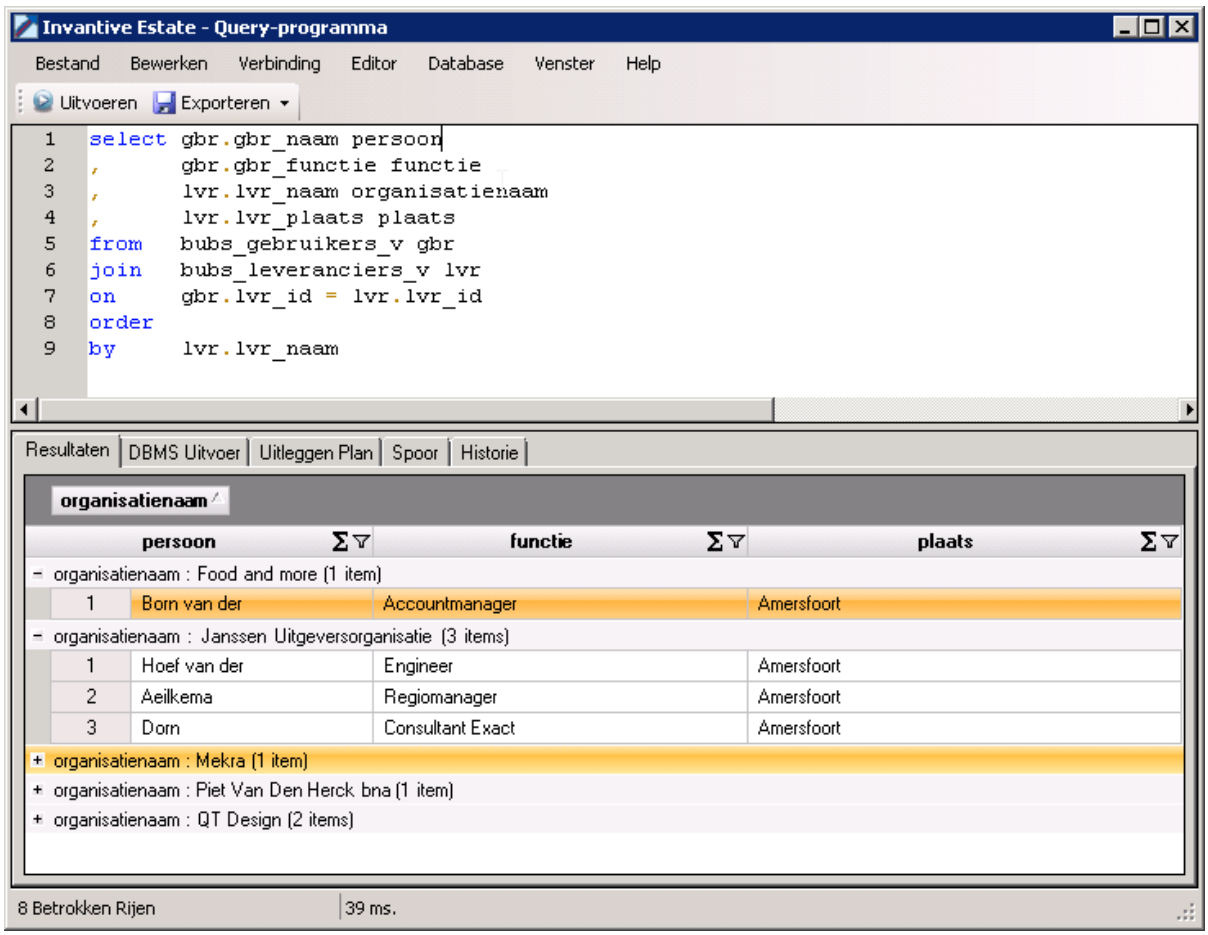
The Query Tool consists of two parts:

- The editor section.
- The output section.

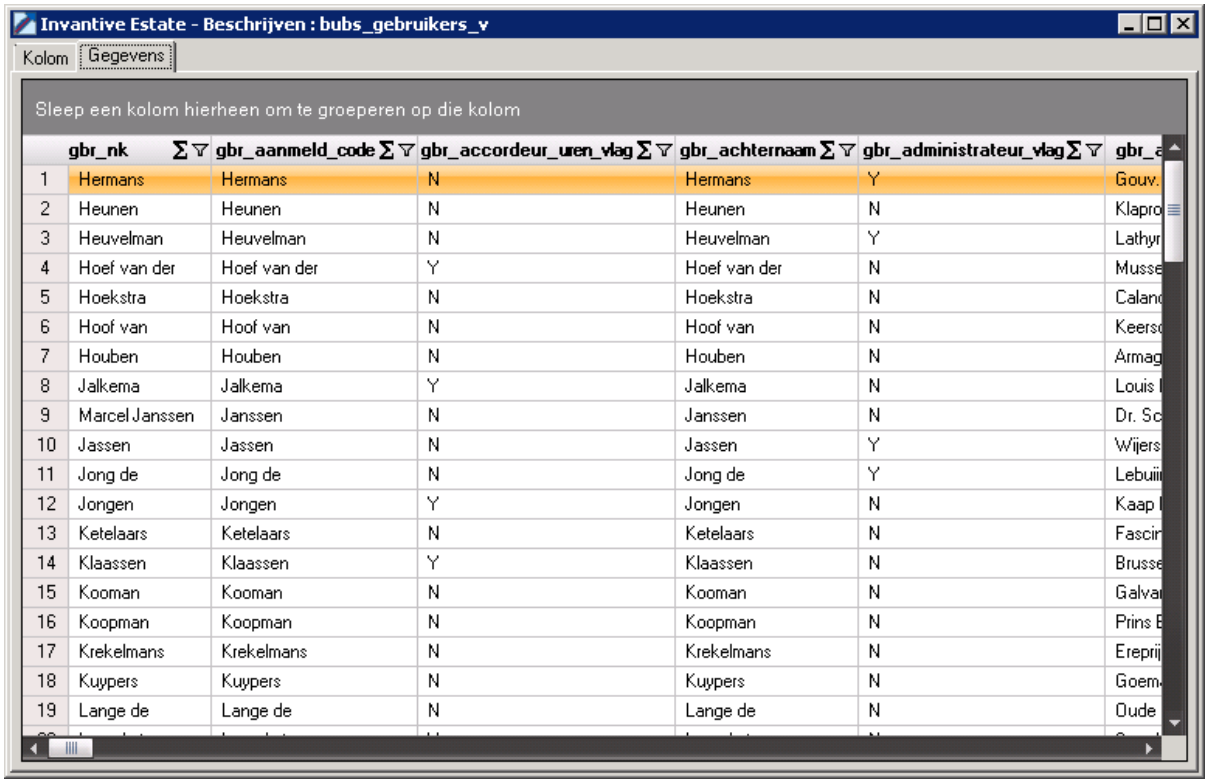
In the following paragraph there are several examples of what you can do with the Invantive Query Tool:

3.4.1 Query Tool Examples

- The figure below shows the request by means of a SQL query, of persons grouped by organization.

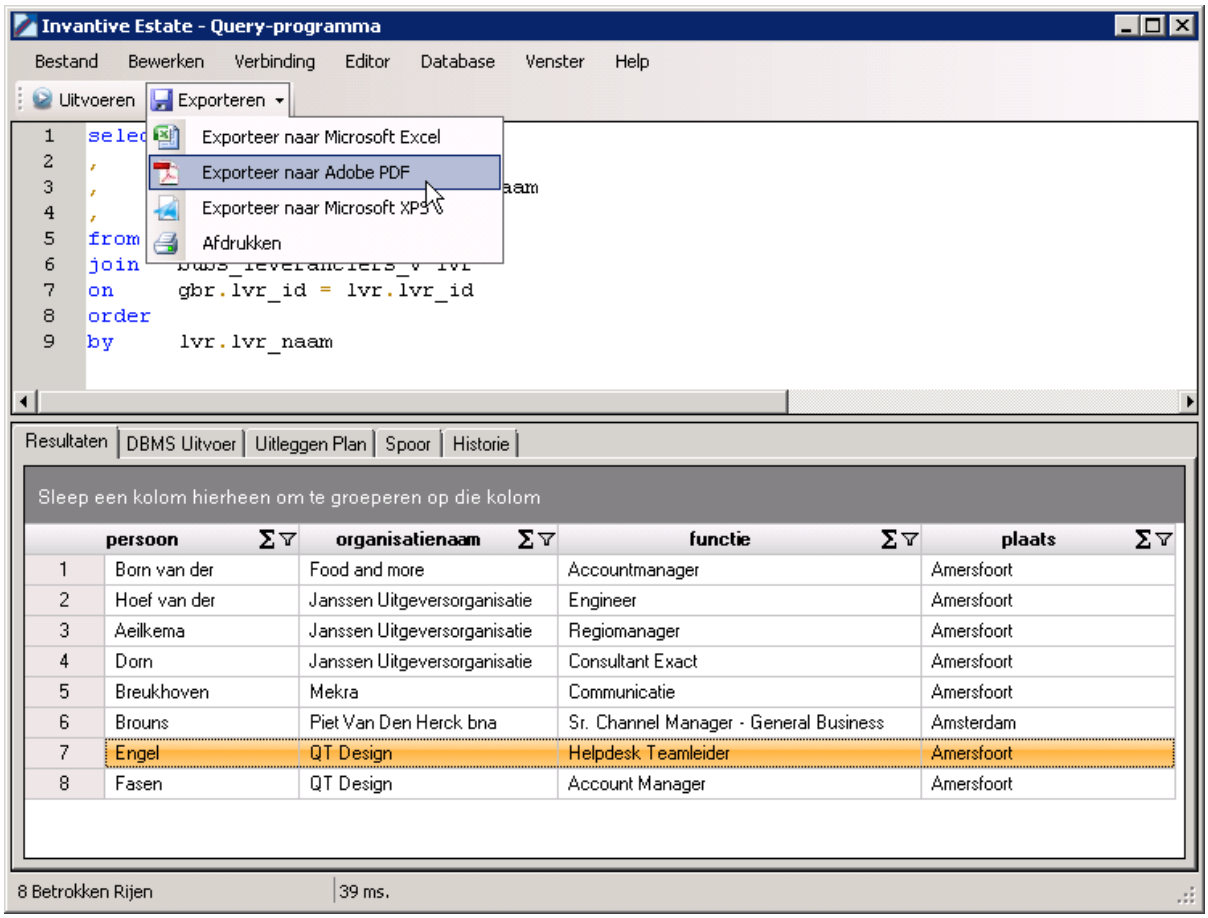


- Displaying the description of an object (using the F4 key). This corresponds to the Oracle function ‘Describe’. The figure below shows the data in the business object persons (bubs_gebruikers_v).



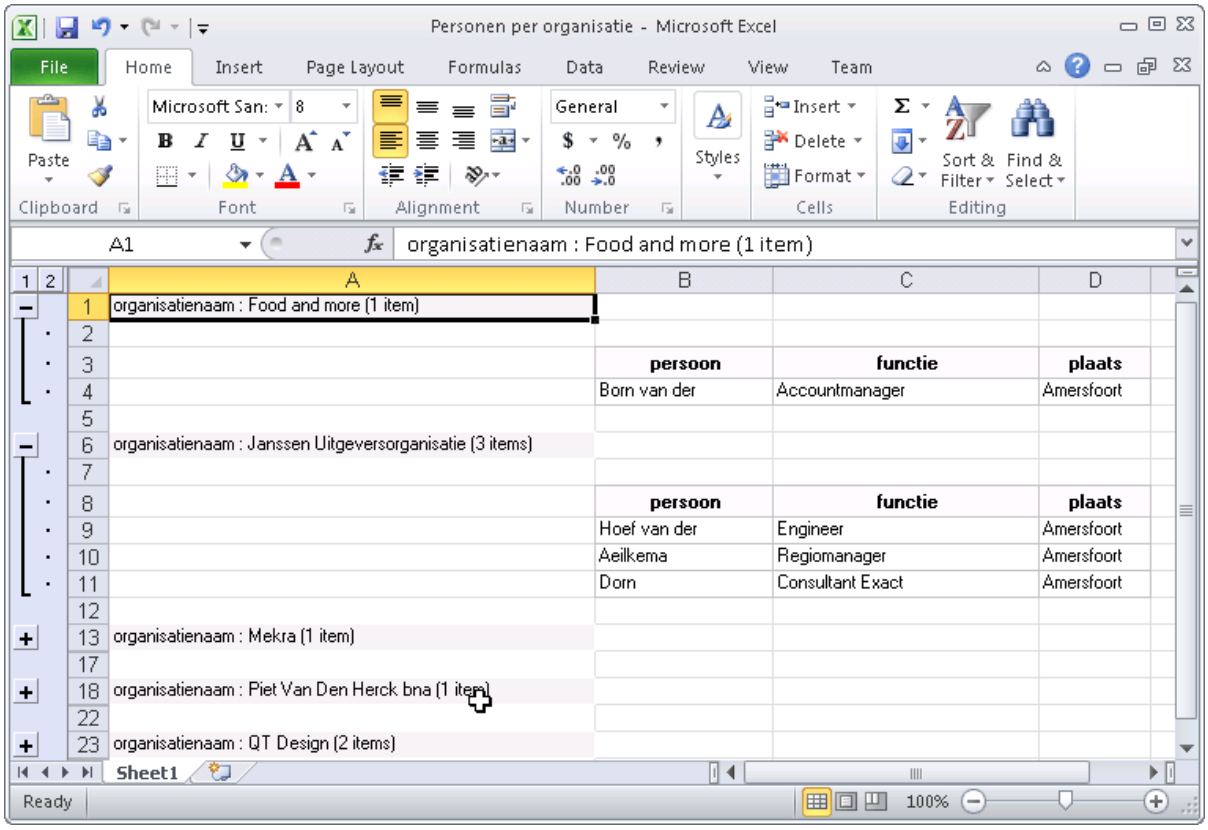
	gbr_nk	gbr_aanmeld_code	gbr_accordeur_uren_vlag	gbr_achternaam	gbr_administrateur_vlag	gbr_a
1	Hermans	Hermans	N	Hermans	Y	Gouv.
2	Heunen	Heunen	N	Heunen	N	Klapro
3	Heuvelman	Heuvelman	N	Heuvelman	Y	Lathyr
4	Hoef van der	Hoef van der	Y	Hoef van der	N	Musse
5	Hoekstra	Hoekstra	N	Hoekstra	N	Calan
6	Hoof van	Hoof van	N	Hoof van	N	Keers
7	Houben	Houben	N	Houben	N	Armag
8	Jalkema	Jalkema	Y	Jalkema	N	Louis
9	Marcel Janssen	Janssen	N	Janssen	N	Dr. Sc
10	Jassen	Jassen	N	Jassen	Y	Wijers
11	Jong de	Jong de	N	Jong de	Y	Lebuii
12	Jongen	Jongen	Y	Jongen	N	Kaap
13	Ketelaars	Ketelaars	N	Ketelaars	N	Fascir
14	Klaassen	Klaassen	Y	Klaassen	N	Brusse
15	Kooman	Kooman	N	Kooman	N	Galva
16	Koopman	Koopman	N	Koopman	N	Prins
17	Krekelmans	Krekelmans	N	Krekelmans	N	Erepri
18	Kuypers	Kuypers	N	Kuypers	N	Goem
19	Lange de	Lange de	N	Lange de	N	Oude

- The result of the SQL query can be exported to Microsoft Excel, Adobe PDF, Microsoft XPS and can be printed on a printer.

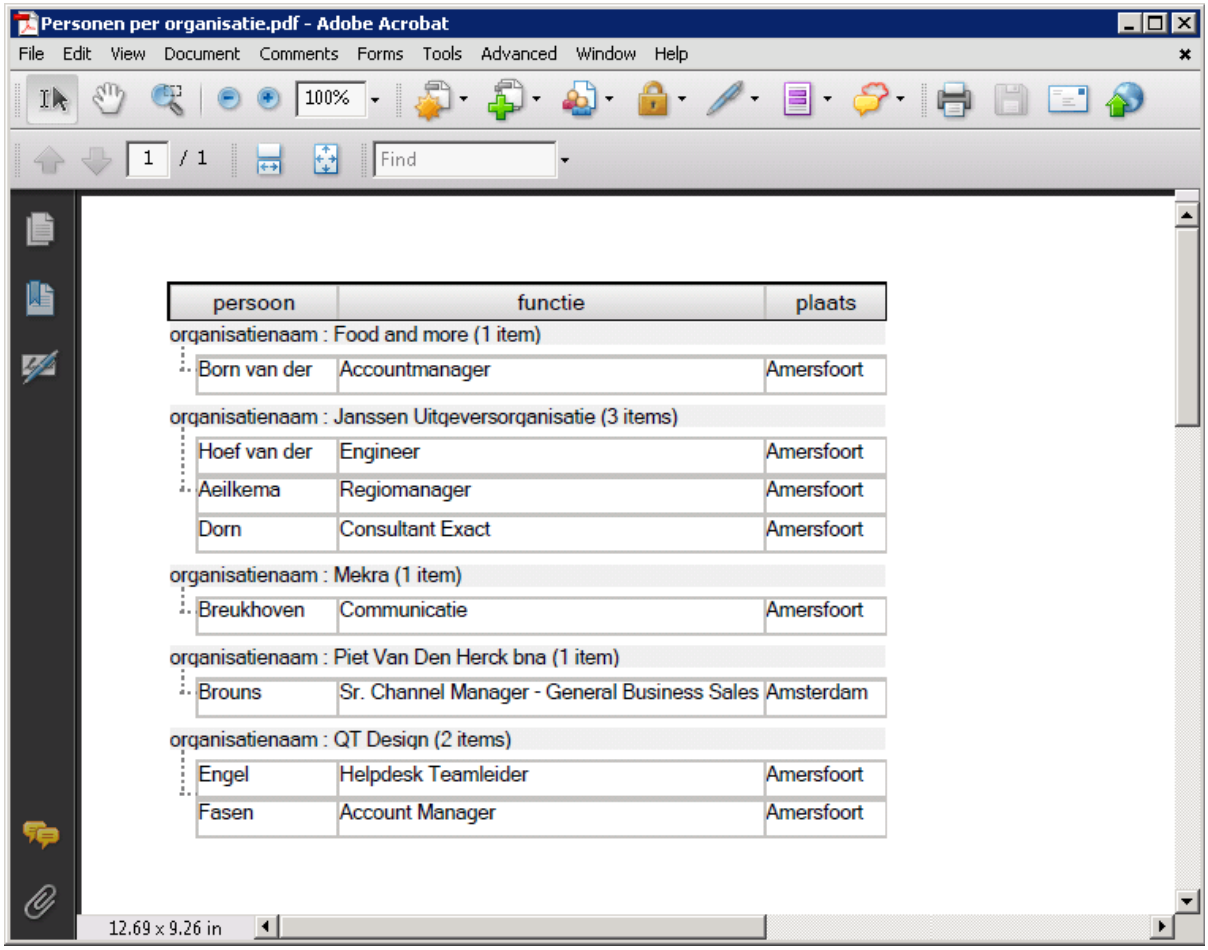


	persoon	organisatienaam	functie	plaats
1	Born van der	Food and more	Accountmanager	Amersfoort
2	Hoef van der	Janssen Uitgeversorganisatie	Engineer	Amersfoort
3	Aeilkema	Janssen Uitgeversorganisatie	Regiomanager	Amersfoort
4	Dorn	Janssen Uitgeversorganisatie	Consultant Exact	Amersfoort
5	Breukhoven	Mekra	Communicatie	Amersfoort
6	Brouns	Piet Van Den Herck bna	Sr. Channel Manager - General Business	Amsterdam
7	Engel	QT Design	Helpdesk Teamleider	Amersfoort
8	Fasen	QT Design	Account Manager	Amersfoort

- The image shows the result of the SQL query in Microsoft Excel.



- The image shows the result of the SQL query in Adobe Acrobat.



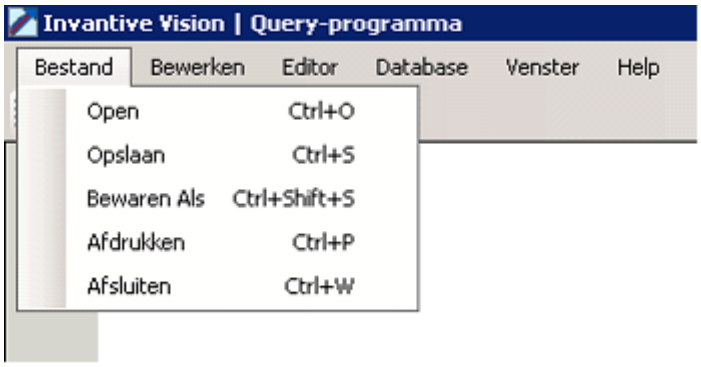
3.4.2 Editor

In the editor you can execute queries. There are five types of SQL statements possible:

- Select.
- Insert.
- Update.
- Delete
- PL/SQL (Begin ... End, without line breaks and blank lines)

A possible transaction is immediately recorded at the end of the execution of the statement.

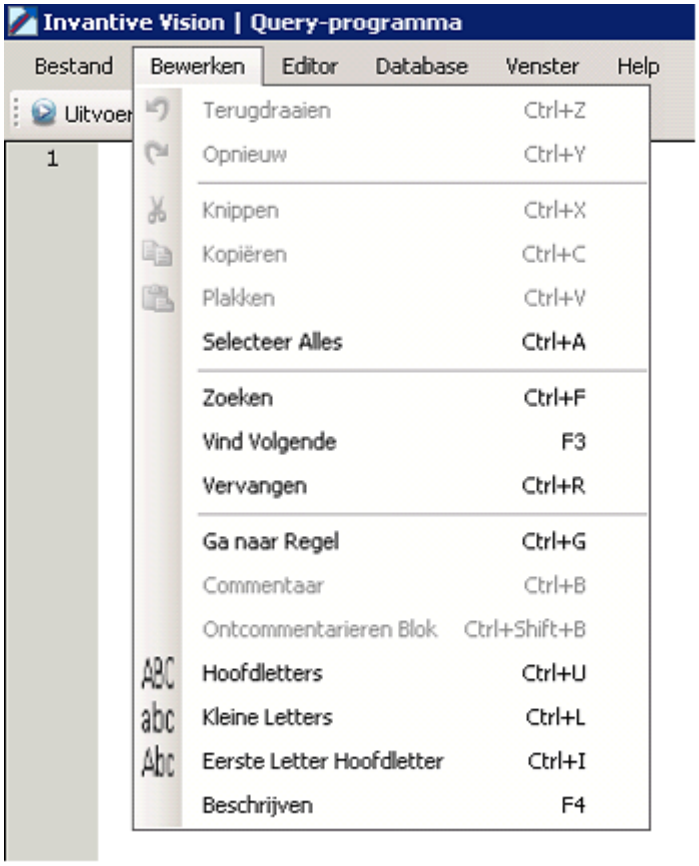
Menu File



Here queries can be opened, saved, saved under a different name and printed.

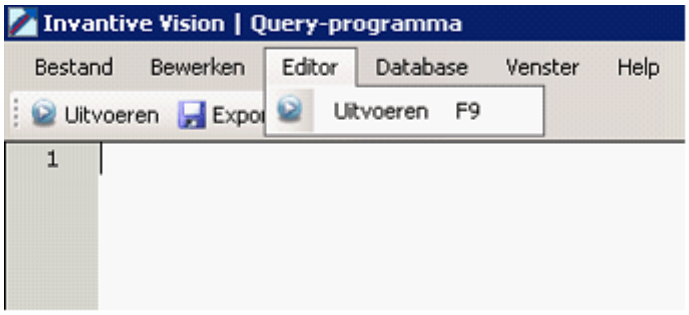
In addition, via ‘Exit’ the Query Tool can be closed.

Menu Editor



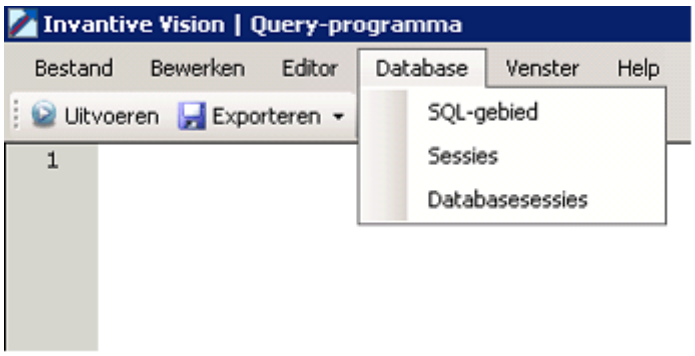
The ‘Editor’ menu contains all items with which you can edit the query text.

Menu Editor



Via ‘Run’ you can run the query. The results of the query are displayed in the Query Results tab in Query Output.

Menu Database



This menu consists of three specific database menu items:

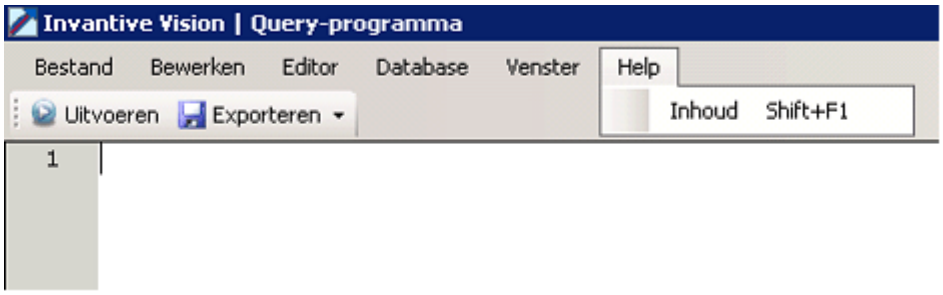
SQL area: This menu item places the following query in the editor:

```
select *
from itgen_db_sqlarea_r
where 1=1
order
by elapsed_time desc
```

Sessions: ?

Database session: ?

Menu Help



Using this menu the Help for the Query Tool can be requested as part of the Invantive Vision Help.

Export Menu

Using the Export tab, you can print the output of queries or export it to different formats.

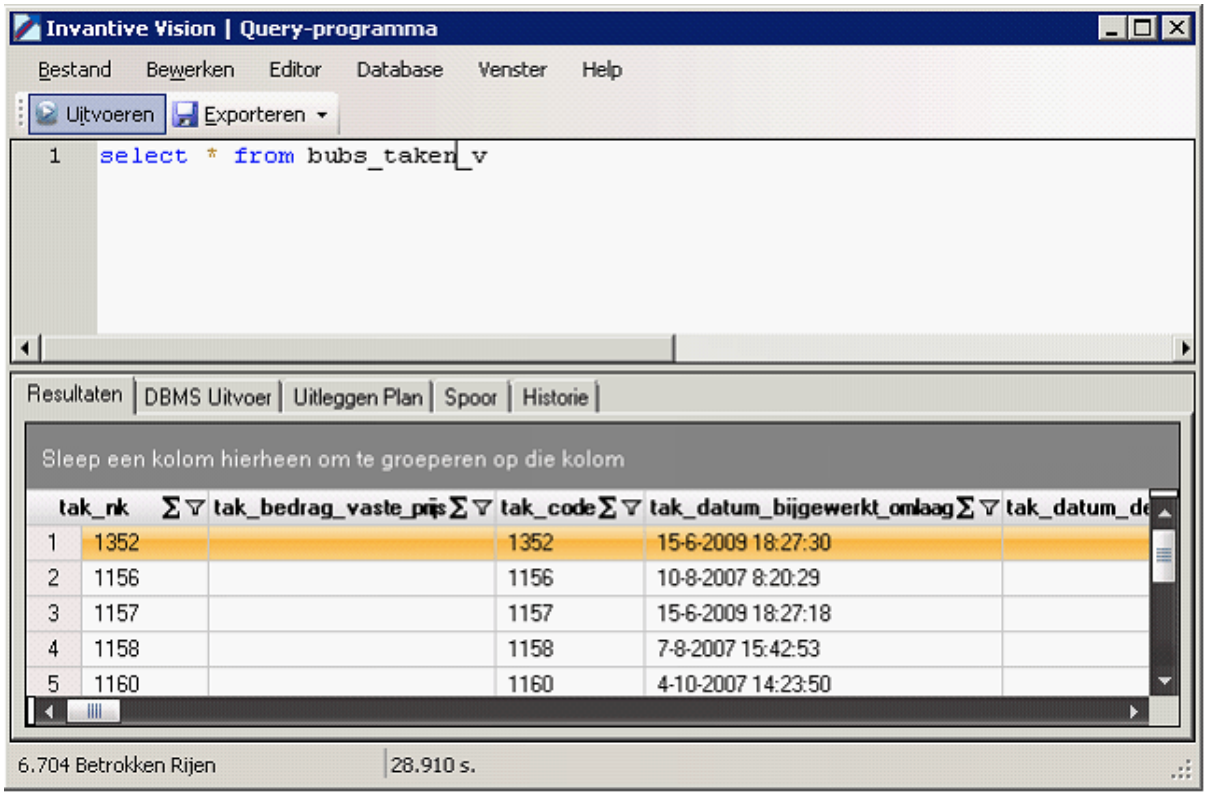
3.4.3 Query-output

The query output can be started with the function key 'F9'.

If the editor contains a valid query this will lead to output in different tabs under the tab 'Output'.

3.4.3.1 Query-results

Executing a query results in filling the tab Output with the records delivered by the query.



Also the number of rows and the execution time will be displayed.

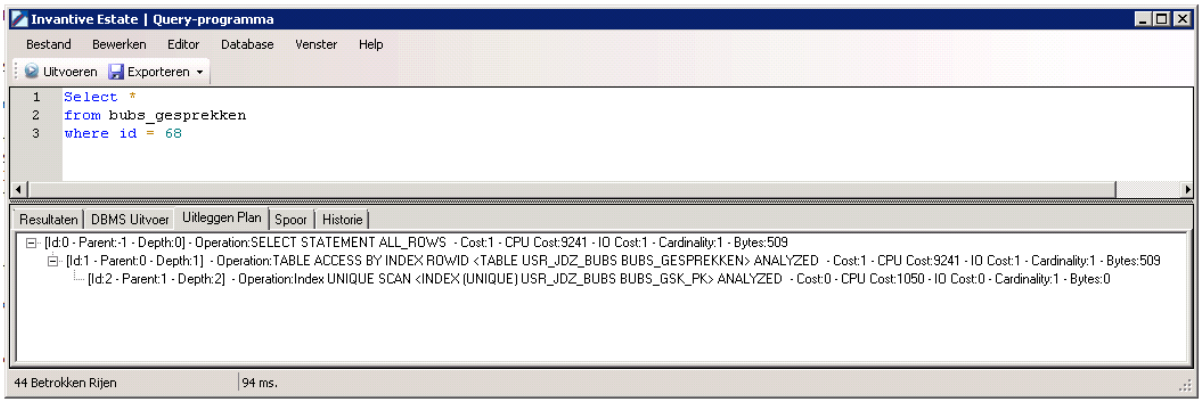
3.4.3.2 DBMS-output

This tab includes the output of dbms_output.put_line statements (only in combination with Oracle RDBMS)

3.4.3.3 Explain Plan

The Explain Plan can be executed using the menu item 'Explain Plan' or using the key combination Ctrl+E:

The executing of 'Explain Plan' ensures the filling of the tab 'Explain Plan' with the rows which are completed by the 'Explain Plan' of Oracle:



In the tab, the way the query will be executed by Oracle is shown in tree form.

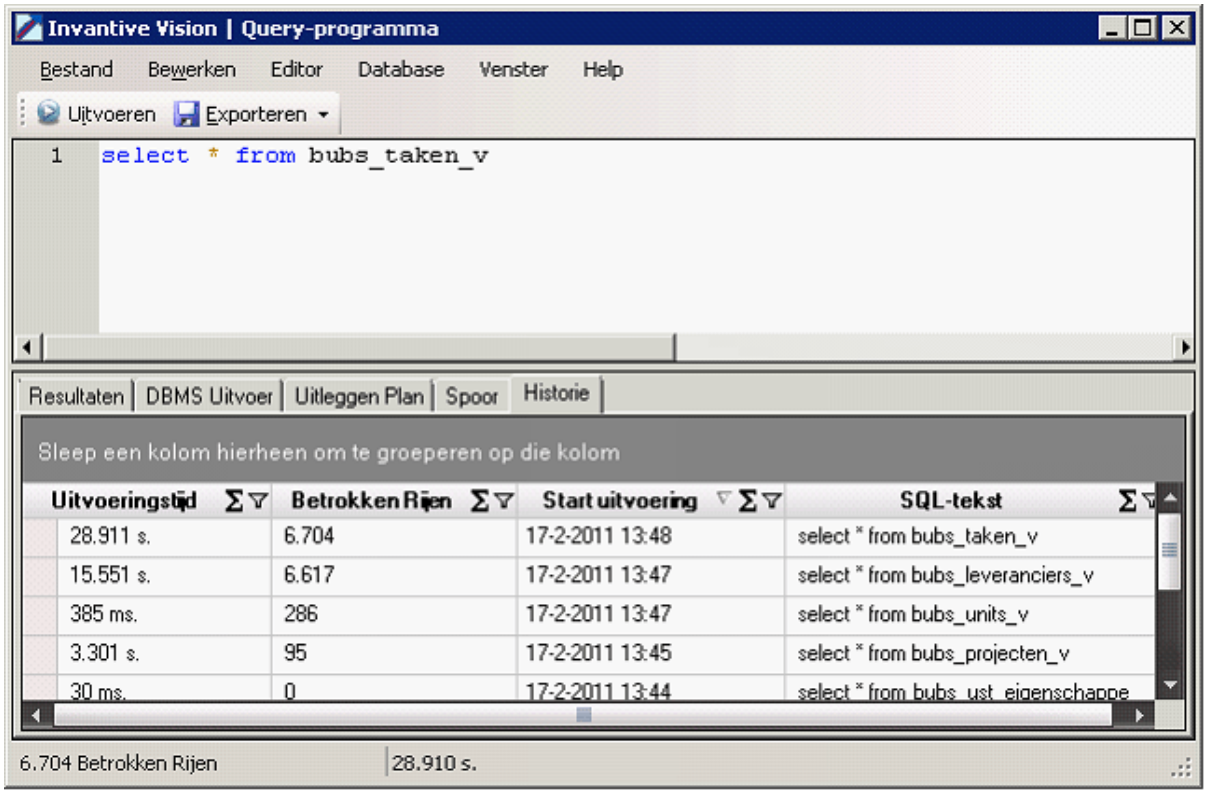
With this the to be executed actions are in order of the ID, so from a branch with the deepest level back to the parent level and back to a related level; this is called 'Processing in Order'.

3.4.3.4 Trace

This tab contains the result of an Oracle trace (only in combination with Oracle RDBMS)

3.4.3.5 History executed queries

Executing a query ensures the filling of the tab history because the data of the last executed query is added.



As long as the Query Tool is open a record is added after each output.

3.5 Availability

The following Invantive products provide a user license for Invantive Query Tool:

- Invantive Vision for Outlook;

- Invantive Vision for Windows;
- Invantive Control for Excel;
- Invantive Studio;
- Invantive Composition for Word.

Invantive Query Tool is also available separately and can be downloaded.

3.6 System Requirements

To use Invantive Query Tool on your PC or terminal server you will need the following software including licenses:

- Microsoft .NET 4.5.1.
- Minimum 2 GB of internal memory.
- Microsoft Windows 7, 8 or 8.1.
- Screen resolution of 1280 x 1024 or higher.
- Invantive Web Service or local drivers.

Use on Mac, tablet or smartphone is not possible.

3.7 Installation

The installation process for Invantive Query Tool is described in the Quick Configuration 632.

3.8 Versions

This chapter describes the changes in the application per version.

3.8.1 New Release 2014R1

This new version of Invantive Query Tool offers advantages such as a list with recently opened items, better support for non-Oracle databases and dbms_output and explain plan for Oracle.

Download

The new version can be downloaded from http://www.invantive.nl/ondersteuning/downloads, or it can be requested by sending an email to support@invantive.nl.

Complete list of changes

In the following list you can view all the changes made for each release of Invantive Query Tool:

- Changes in Release 2014R1 645

3.8.2 Changes in Release 2014R1

Released: 7-2-2014.

Invantive Producer: b55.

Changes and bug fixes:

Number	Type	Product	Description
12935	ER	Invantive Query Tool	dbms_output en explain plan in Query Tool

Number	Type	Product	Description
21718	PR	Invantive Query Tool	Describe werkt niet in Query Tool ondanks rechten op de functie itgen_querytool_describe.
19943	ER	Invantive Query Tool	Lijst meest recente documenten (stuk of 10) tonen in Bestandsmenu.
25771	PR		Copy SQL to clipboard doesn't work when there is no SQL so far (when not yet connected).
22269	PR		Querytool: Bindvariabelen worden niet goed behandeld + progress scherm start te vroeg
25389	ER		New optie in Query Tool menu om Leeg bestand te krijgen.
25386	ER		SQLServer support hierarchyid Query Tool
24935	ER		Query Tool: meer soorten syntax highlighting en integratie met Studio
25874	ER		Query Tool: Opslaan als... en File open ook ondersteuning geven voor nieuwe soorten bestanden zoals CSS.
25816	ER		Tijd teller stoppen en "Uitvoeren" venster weghalen zodra foutmelding optreedt.
25401	PR		Geen ondersteuning voor date, datetime en timestamp op MySQL.
25212	PR		"Invantive Query Tool has stopped working" door te drukken op Escape als cursor in een veld staat in het resultatengrid. Antwoord eerst Nee of je het bestand wilt opslaan.
25208	ER		Smart indent in Query Tool, dus als je regel een hanging indent heeft, dan die overnemen op de volgende regel.
25109	ER		Highlight selected text in editor. See http://scintillanet.codeplex.com/discussions/361003
25011	PR		ORA-01742 in Query Tool als commentaar eindigt met een '/'.
25006	PR		Query Tool werkt niet op x86: bad image. SciLexer64.dll is either not designed to run on Windows or it contains an error.
24897	PR		Toolbar buttons hebben een & in de hover. Svp uit het label de & weghalen voor de buttons. De & is alleen voor menu gebruik van een label. Svp geen nieuwe labels introduceren hiervoor.
24896	PR		Query Tool: open from file in toolbar onterecht uitgeschakeld, maar wel enabled in File->Open menu.
25473	PR		Foutmelding over datumformaat tijdsduur bij einde query in Query Tool.
25774	PR		Query Tool onderdrukt foutmelding over onbekende user. Je ziet alleen checking license en daarna geen foutvenster en je kunt weer opnieuw proberen. Geef error net zoals in Studio.
26001	ER		Toevoegen Toon Spoor en Studio aan Query Tool.
25211	PR		Error als je query select item gebruikt zonder alias.
25293	ER		Toevoegen mogelijkheid to opslaan en laden van Display Layout van een grid (in QueryTool).
25366	ER		Mogelijkheid om named SQLStatements op te slaan en te kunnen gebruiken.
25392	PR		Oracle MySQL toevoegen in Discovery: vergeten waarde voor provider door te geven.
25391	PR		ORA-00918: kolom is ambigu gedefinieerd onterecht.
25413	ER		Diagnostics in Query Tool toevoegen
26122	ER		Tijd ook weergeven bij date in Oracle.
25833	PR		Mogelijk maken om Query Tool meerdere keren gelijktijdig te draaien zonder meldingen over de lexer.

Number	Type	Product	Description
25859	PR		Horizontale scrollbar bij invullen variabelen alleen laten verschijnen als ie ook echt nodig is.
26221	PR		Invalid object name 'itgen_qt_view list_r'. op platformen anders dan Invantive Producer.
26222	PR		Corrigeren venstertitel bij opnieuw aanmelden. De gegevens van de eerste keer aanmelden blijven in de venstertitel staan
26238	PR		Cursor na tussenvoegen voorbeeld aan begin van het voorbeeld plaatsen.
19109	ER		Samples knop voor Querytool.
21762	ER		Querytool datum en numerieke kolommen sorteren op inhoud, niet op tekstuele weergave.
25269	ER		Exact Online: Foutmelding geven als je niet bestaande entitieit queriet: select * from gltreansactionlines
25998	ER		Eat trailing semicolon ; when it is not Oracle PL/SQL.
26123	PR		Better handling of defined variables.
26224	PR		Object reference not set bij uitvoeren PL/SQL package met daarin : punten.
26232	ER		Verfijnen rechten query tool zodat mensen zich minder makkelijk vergissen.
26590	ER		Dubbelklik op available object moet geselecteerde tekst vervangen en niet tussenvoegen.

Installation

- No specialties.

Implementation

- No specialties.

3.8.3 Changes in Release 2014R2

Release: --2014.

Invantive Producer: b5?.

Changes and bug fixes:

Number	Type	Description
26879	ER	Support AS/400 with DB2/400 for Query Tool.
26298	PR	Space Usage in Administration menu verbergen als geen producer omgeving.
26778	ER	Exact Online: ondersteuning voor balansen. Met doorgeven Params_Year e.d. maar in ieder geval met standen. Nu zijn het 145 lege rijen.
26783	ER	Exact Online: ondersteuning voor 'use' statement om administ
26806	ER	Melding not supported in this edition als je een operator anders dan = gebruik in EOL.
26820	PR	Exact Online: select * from Items geeft een duplicate key value error.

Installation

- No specialties.

Implementation

- No specialties.

3.8.4 Changes in Release 2015R2

Release: --2014.

Invantive Producer: b5?.

Changes and bug fixes:

Number	Type	Description
26888	ER	Bij meervoudig gebruik kolom in Exact Online query error: An element with the key 'code' already exists in the dictionary.
26926	ER	Exact Online: als je andere connectie kiest, dan wordt cache niet geleegd en krijg je resultaten uit vorige connectie terug.
26971	ER	Ondersteuning voor complex types in bepaalde XSD-situaties voor XML provider.
27530	ER	Ontbrekende velden Invoices->Invoice->DeliverTo ID@ en Code@
27258	ER	Ondersteuning Exact Online pseudo columns in select: division, user, sysdate/now, rownum.
26684	PR	Highest level (models) sorting also in Query Tool.
25987	ER	Added position in document, selected text and transfer to foot for more readable title query tool.
27502	PR	Windows 8.1 64-bit Query Tool crashes, goes fine if started from Excel 2013 (32 bit).
25420	ER	Query Tool enable copy document to file.

Installation

- No specialties.

Implementation

- No specialties.

4 Invantive Web Service

This chapter describes the possibilities of the Invantive Web Service.

4.1 Quick Configuration

Quick configuration of Invantive Web Service.

4.2 Getting Started

Here you learn how you can get started with Invantive Web Service quickly.

4.3 Web services

Because of the technological changes and the mobility of employees more and more traditional work spaces are disappearing. Employees work at home more often or make use of travel time work time. Work processes like the making of financial reports or the start-up of a new project take place more and more outside of the office. For companies this means that work processes are assigned differently and should be optimized. To allow for the work processes to run as efficient and effective as possible it is required to have quick and safe access to the company network through the Internet.

Web services make it possible for companies to organize work processes through the Internet even smarter. By providing access to the company network and applications using web services, it is possible to coordinate and optimize processes from each location.

4.4 Advantages

The Invantive Web Service offers various advantages:

- The Invantive Web Service makes it easy to quickly and safely exchange data through the internet between various databases and services. For companies this means that the execution of financial calculations and the manufacturing and recording of contracts is available from every location. the Invantive Web Service allows different companies to work together more effective and more efficient within a project.
- That is because the Invantive Web Service simplifies the exchange of information between different parties within a project. The Invantive Web Serive makes it possible to give partners - through http(s) - authorized access to applications and databases. The advantage of this is that existing applications and applications based on Invantive Producer can easily exchange data. This means that partners can use óne application for the planning of projects, execution of complex calculation models and the registration of work hours. Using the Invantive Web Services the data can - depending on the security model - be retrieved and processed in the own administration. This makes it possible to provide multiple clients and/or relations quick and safe access to the company network with the Invantive Web Service.
- With the Invantive Web Service work processes can be organized even smarter and be optimized. The result is the more effective and efficient work on a project.

4.5 System Requirements

Client

To use Invantive Web Service on your PC or terminal server you will need the following software including licenses:

- Microsoft .NET 4.5.
- Minimum 2 GB of internal memory.
- Screen resolution of 1280 x 1024 or higher.

On-Premises

For the use of Invantive Web Service as server within the private network you will need (so-called "on-premises" use):

- Operating system: Windows 2008 R1 Service Pack 2, Windows 2008 R2 or Windows 2012.
- Minimum of 4 Gb internal memory.
- Screen resolution of 1280 x 1024 or higher.
- Minimal 1 central processing unit for server use not older than 2 years.
- Drivers for the supported databases or own specific drivers for business applications.

4.6 Concept

With the Invantive Web Service Invantive applications and applications based on Invantive Producer can exchange data with databases and other services using the internet or the company network.

It is also possible to use these applications without Invantive Web Service, but for installations with more than one user this is strongly discouraged. With the Invantive Web Service it will take no time outside of the client installation to allow an extra user or PC to make use of a database; without the Invantive Web Service this will take considerably more time for each PC and/or user.

The exchange of data happens through webservices that use the so-called http and/or https protocol. Depending on the chosen security model you can exchange data with databases in the company network using the Invantive webservice both within the company network as well as on the internet from Invantive applications and applications based on Invantive Producer.

You can also - if authorized - exchange data with databases at various companies. With this you can easily collaborate with multiple clients and/or relations in an efficient manner, wherever you are and whenever you feel the need to. Every client and/or relation also has an own installation of the Invantive Web Service.

The Invantive Web Service works as follows:

- A user starts an application based on Invantive technology.
- The application will know automatically or hear from the user which connection is to be used with which user name and password.
- The connection are is retrieved in a list with available connections and the related (possible redundant) channels.
- On the basis of the retrieved preferences and availability a channel is chosen for communication.
- Through this channel a connection is established with the service provided by the web service.
- Data and requests are exchanged.

If the connection drops, then the connection is automatically established again. A possible alternative channel for the connection is used if the desired channel is not available.

4.7 Database platforms

An installation of the Invantive Web Service consists of one or multiple installations of the Invantive Web Service software. In addition to the programming you also need to indicate the connections to databases that can be used through this installation. These can at least be the following database platforms:

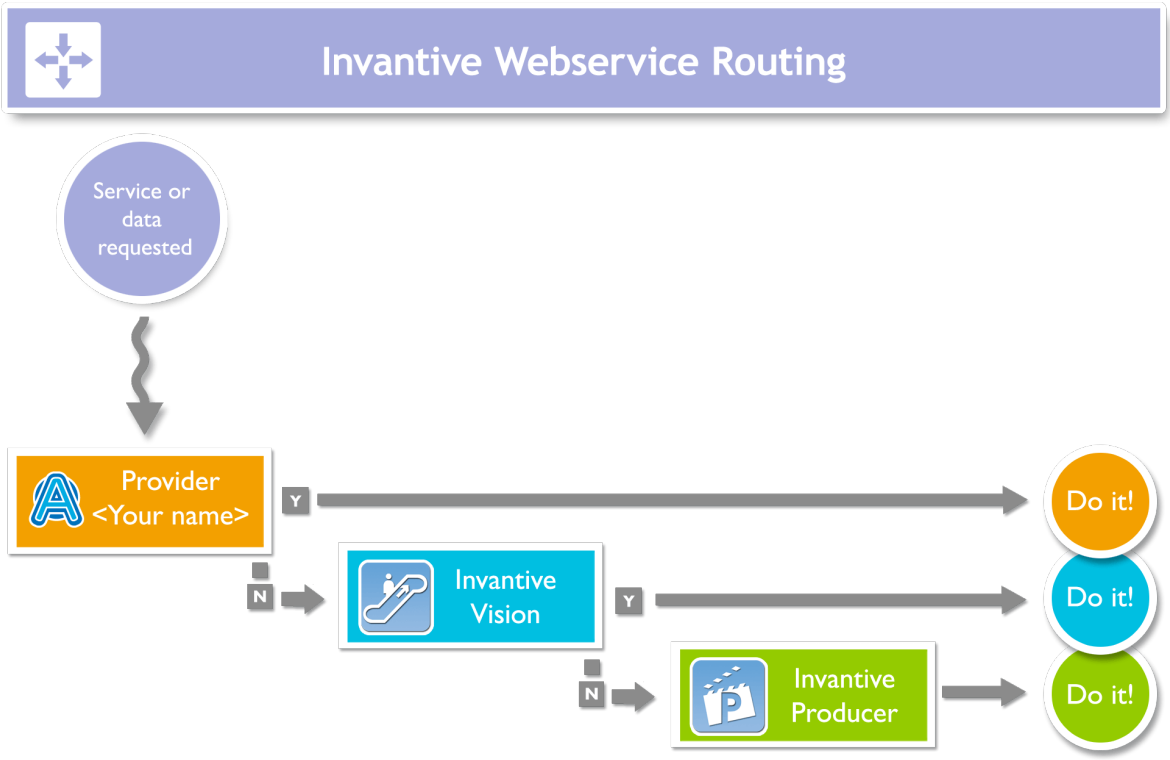
- Microsoft SQL Server
- Oracle RDBMS
- MySQL
- IBM DB2 UDB (Linux, Unix, Windows)

The actual choice of the database platform depends on which application you will be using. Some (company) applications only work on a portion of the database platforms.

The support of extra database platforms can be added by a system developer or ordered with Invantive.

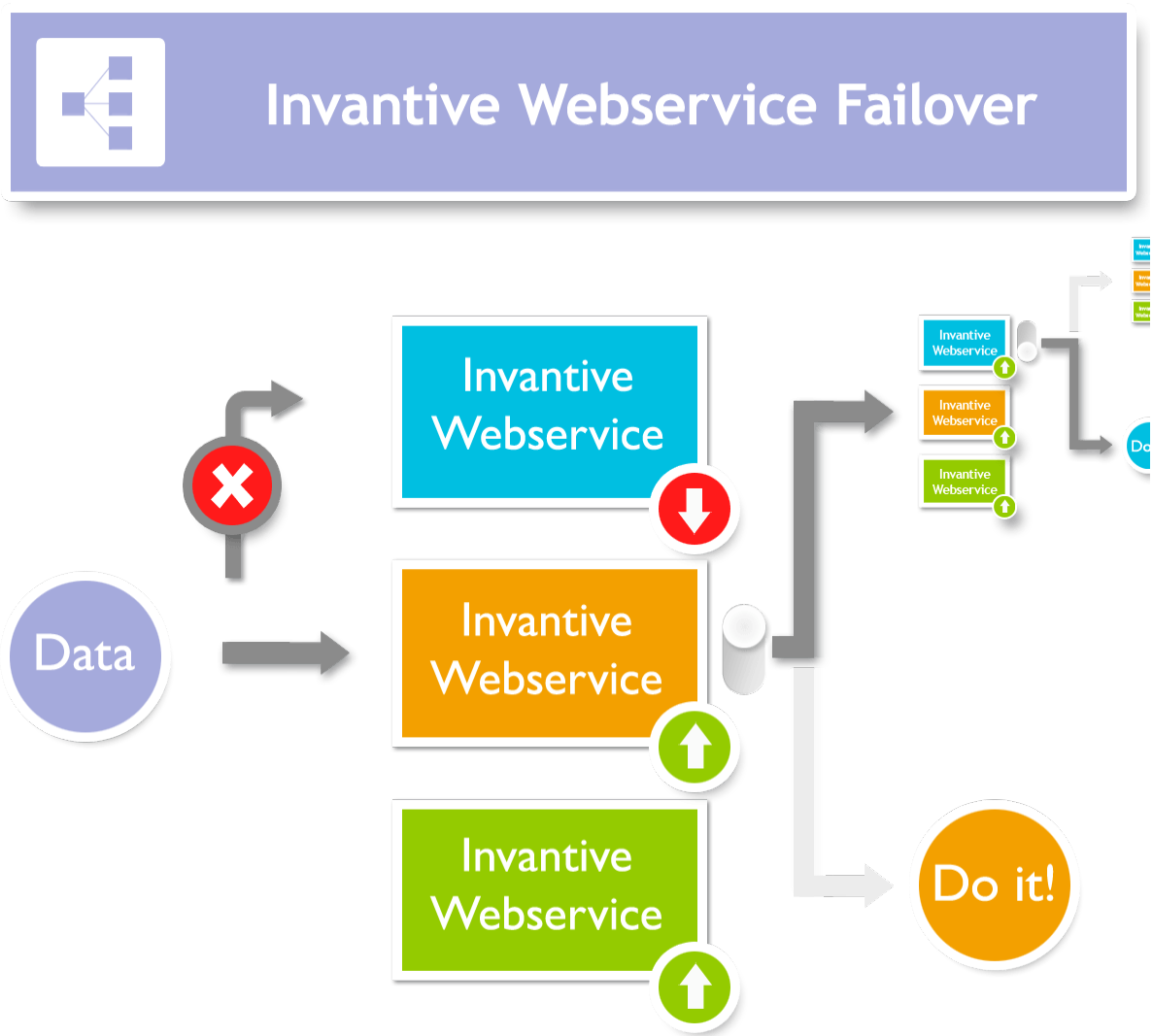
Requests are routed to providers as soon as requests for data or actions arrive to the webserver. In the configuration file you can adjust in which order this happens (see image).

See also Providers Configuration 660.



4.8 Redundancy

For a higher availability you can install multiple installations of the Invantive Web Service software. These installations can be located on óne server or on multiple servers. With multiple servers you ensure a better availability: even if a server breaks then the users can still keep on working (see image).



The redundancy can be set in the settings.xml file. See also Connection configuration 657. As soon as a connection is no longer available the programming of your user will try to use a different available connection.

4.9 SQL Trace

To save the SQL statements in a file the following code needs to be part of app.config or web.config:

```
    <system.diagnostics>
      <sources>
        <source name="System.ServiceModel" switchValue="Error">
          <listeners>
            <add name="xmlTrace" />
          </listeners>
        </source>
        <source name="System.ServiceModel.MessageLogging"
switchValue="Verbose">
          <listeners>
            <add name="xmlTrace" />
          </listeners>
```

```
      </source>
    </sources>
    <sharedListeners>
      <add name="xmlTrace"
type="System.Diagnostics.XmlWriterTraceListener"
initializeData="C:\temp\client_verbose.svclog" />
    </sharedListeners>
    <trace autoflush="true">
      <listeners>
        <add name="xmlDataTrace"
traceOutputOptions="Callstack,DateTime,LogicalOperationStack,Pro
cessId,ThreadId,Timestamp"
type="System.Diagnostics.XmlWriterTraceListener"
initializeData="C:\temp\client_data_verbose.svclog" />
      </listeners>
    </trace>
  </system.diagnostics>
```

In the specified file (in this example ‘C: \ temp \ client_verbose.svclog’), the SQL statements will be logged. This file can be read with SvcTraceViewer (can be found in the Windows SDK, but also in the Invantive tools).

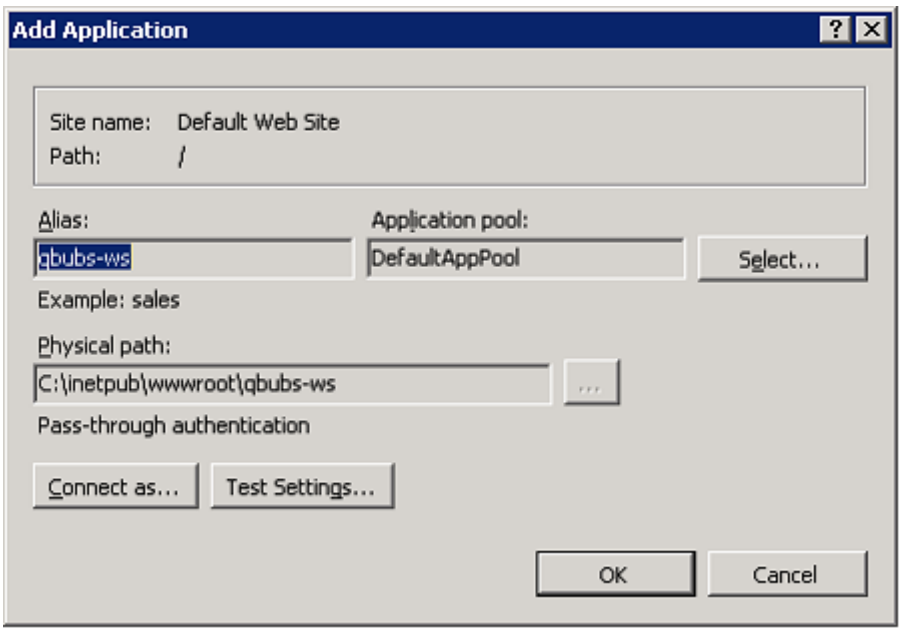
4.10 Installation

This element describes the installation of the Invantive Web Service and its components.

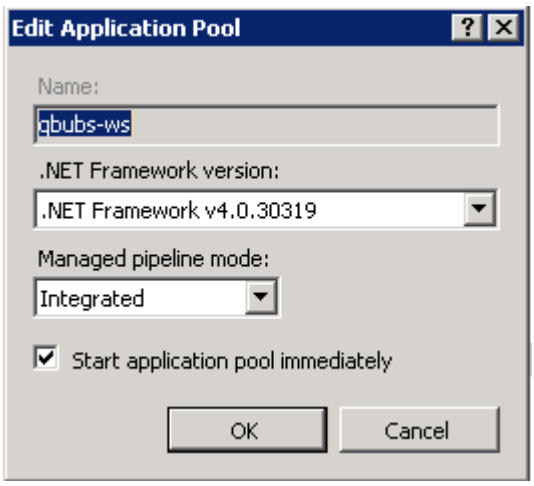
4.10.1 Invantive Web Service Software

Execute following steps to make the Invantive Web Service available to the users.

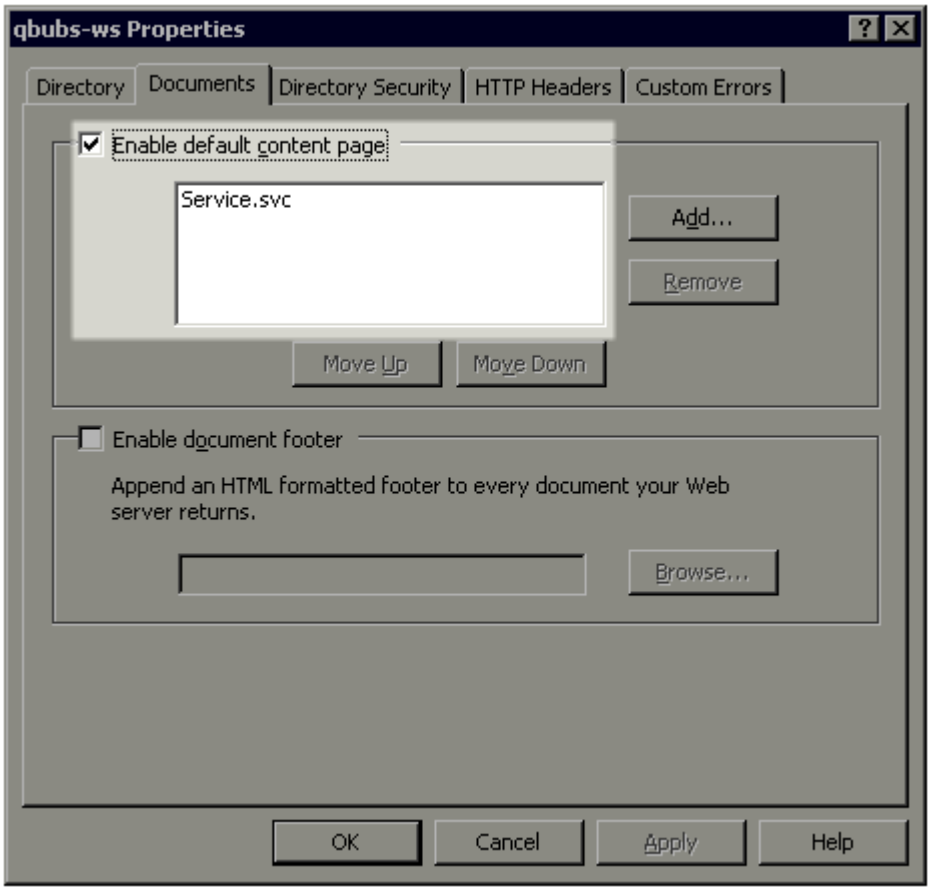
- Install Microsoft IIS 7 or 8 including ASP.NET support.
- Install Microsoft .NET Framework version 4.5 or newer. In the Control Panel among the installed programs there will then be listed ‘Microsoft .NET Framework 4.5’.
- Copy invantive-web-service in the distribution to the well known folder within Microsoft IIS, preferably ‘webservice’ within the folder of the application or alternatively c: \inetpub\wwwroot\invantive-web-service, c:\inetpub\wwwroot\<OMGEVING>-ws or (preferably) ENVIRONMENTDIR\webservice.
- Adjust settings.xml in this folder as described in settings.xml.sample.
- Start Microsoft IIS with ‘inetmgr’ or through Control Panel.
- Select ‘Properties’ from the folder.
- Convert the folder to application with an own application pool:



- Set the application in for use of the application pool 'ASP.NET v4.0':



- Set the standard page Service.ashx:



- You can now test the web service by opening the page. You will receive output such as (t23522):

/ws_ita_pbubs/

Service Service

You have created a service.

To test this service, you will need to create a client and use it to call the service. You can do this using the svcutil.exe tool from the command lir

```
svcutil.exe http://[redacted].local/ws_ita_pbubs/Service.svc?wsdl
```

This will generate a configuration file and a code file that contains the client class. Add the two files to your client application and use the genera

C#

```
class Test
{
    static void Main()
    {
        ServiceClient client = new ServiceClient();

        // Use the 'client' variable to call operations on the service.

        // Always close the client.
        client.Close();
    }
}
```

Visual Basic

```
Class Test
    Shared Sub Main()
        Dim client As ServiceClient = New ServiceClient()
        ' Use the 'client' variable to call operations on the service.

        ' Always close the client.
        client.Close()
    End Sub
End Class
```

4.10.2 Certificate

If you make use of https, then you need to submit a certificate (see also http://www.iis.net/learn/manage/configuring-security):

- Start MMC with 'Run'.
- Go to the File menu and select 'Add/Remove Snap-in'.
- Click on Certifcates and click on 'Add'.
- Select 'Computer Account' and click on 'Next'.
- Select 'Local Computer' and click on 'Finish'.
- Select 'OK'.
- Click on 'Certificates (Local Computer)' in the middle part of the window.
- Click on the right on 'Personal'.
- Select 'All tasks' and then 'Import'.
- Set up the filter for 'Personal Information Exchange (*.pfx)'.
- Select the .pfx bestand as Personal Certificate.
- Enter the password.
- If desired you select the check box 'Mark this key as exportable.'.
- Allow automatic placement in the storage for the certificate based on the type.
- Select 'Finish'.
- Close the MMC.
- It is not necessary to save the settings of MMC.

- Start Microsoft IIS through 'inetmgr'.
- Click right on the website (usually 'Default Website').
- Go to 'Edit bindings'.
- Add a 'https' binding and choose the Friendly Name of the certificate that you have just imported.

4.10.3 Connection Configuration

To make a connection with an Invantive application or an application based on Invantive Producer there needs to be a file settings.xml with included within the configuration of the connection settings. This has to be an XML file with the same design as the example. The file can contain the configuration to connect with one or more servers.

If you start an Invantive-based application product for the first time the settings.xml file is searched for at multiple locations in succession:

- the installation folder containing setup.exe;
- from the installation folder a folder upwards;
- from the installation folder a folder up and the file folder in it;
- from the installation folder two folders up;
- from the installation folder two folders up and the file folder under it;
- from the installation folder three folders up;
- from the installation folder three folders up and the file folder under it;
- in the folder c:\ws.

If the settings.xml file can not be found, the user will be asked where the settings.xml file is located. The chosen location of the settings.xml file is remembered and used from that moment.

In the text below it is described how it works:

```
<?xml version="1.0" encoding="utf-8"?>
<!--
  (C) 2004-2013 Invantive BV, the Netherlands (www.invantive.com).

  $Header:
http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/verbindingsconfigu
ratie.xml 23549 2013-11-01 14:21:27Z smoke $

  Purpose:
  Configuration of the Invantive Webservice and direct database connections
  available to client and the Invantive Webservice acting as a database client.

  Explanation:
  Connections are used to retrieve data from a database and to update the contents
of databases.
  This settings file can accommodate all settings for database and web service
connections
  that are used by Invantive products.
  This file contains a number of structured elements, explained further on.

  Top level: the connection groups.
```

```
  This is the root level of the settings file. It only contains connections
groups.

  Attributes:
  * "default": The default connection. The format is 'group\connection'.
    the first connection with the given name will be used when the group element
is omitted.
  * "forceDefault": If true, only the default connection can be used. No other
connection is
    eligible for selection based upon this settings.xml file. You can use for
instance when you
    add a new default connection and you want to make sure everyone switches to
the new connection,
    irrespective of what connection is currently used as default.

  The group level:
  This level defines a set of connections, logically grouped together. You are
  free to choose the way of grouping.
  Examples of logical manner of grouping: by customer, by environment (production,
test).

  Attributes:
  * "name": The name of the group.

  The connection level:
  This level defines an actual logical connection.
  For example: Production environment Acme site.
  Under this level, the actual transport mechanism and its settings can be
defined.
  The connection and associated failovers are tried when initially establishing
the connection and when reconnecting
  after the provider detected a connection loss.
  The elements of this level can consist of two types:
  * physical connection (either an Invantive Webservice or direct database
connection);
  * failovers.
  All physical connections listed will be brought online during application use.

  Attributes:
  * "name": The name of the logical connection.

  The webservice element:
  This element defines a connection using the Invantive.Providers.Webservice
provider.
  This provider is capable of proxying database connections over HTTP/HTTPS. A
client
  can connect to a database directly through a webservice, but a webservice can
route
  this request also to another Invantive Webservice and so on.

  Attributes:
  * "url": the url of the Invantive Webservice.
  * "encoding": the encoding to use.
    This will be passed as header on the request.
    Allowed values are: "binary" or "text". Default: binary. Use text for
debugging purposes or with poor CPU.
  * "compression": the compression method to use.
    This will be passed as header on the request. Allowed values are: "auto",
"true" or "false". Default: "auto" (will set compression enabled)
    Within a fast LAN network and/or with slow servers, we recommend no
compression. In all other situations, we recommend
    compression to be enabled.

  The database element:
  This element defines a connection to a database using a provider
```

```
  specific for that type of database.

  Attributes:
  * "connectionString": the ADO.NET connection string for the specified provider.
    You can specify Data Source, User Id and other settings.
  * "provider": the name of the ADO.NET connection provider.
    For example: "Oracle.DataAccess.Client"

  The failover level:
  The failover level can define a list of database or webservice settings.
  It supplements the webservice/database element.
  Connection settings defined in a failover can be used to
  have a failover connection when one connection cannot be established.
  This can be useful when relying on a internet connection or presence of a VPN
tunnel.
  Settings defined in this section will be evaluated one after another, starting
top down.
  When any of the failovers can be established, no other failovers will be tried.

  Attributes:
  * (none)

  Examples:

  This example illustrates a single connection. The software will sequentially try
to:
  * Connect to the 'authenticationServer' Active Directory server;
  * Connect to one of the connections in the failover:
    - First the database connection (when connection from the internal network or
VPN);
    - The first webservice connection;
    - The second (or 'failover') webservice connection.

  <connections default="Customer A\Production" forceDefault="false">
    <group name="Customer A">
      <connection name="Production">
        <database connectionString="Data Source=authenticationServer;User
Id=username;Password=thepublicpassword;Pooling=false"
provider="Invantive.CustomerA.ActiveDirectory" />
        <failover>
          <database connectionString="Data Source=localhost;User
Id=username;Password=thepublicpassword;Pooling=false"
provider="Oracle.DataAccess.Client" />
          <webservice url="http://www.customer-a.com/ws/"      encoding="binary"
compression="true" />
          <webservice url="http://failover.customer-a.com/ws/" encoding="binary"
compression="true" />
        </failover>
      </connection>
    </group>
  </connections>

  This example illustrates connections to different database platforms. The
software will try to:
  * Connect to the IBM DB2 UDB database when connection 'DB2' is selected;
  * Connect to the Microsoft SQL Server database when connection 'SQLServer' is
selected;
  * Connect to the Oracle MySQL server when connection 'MySQL' is selected;
  * Connect to the Oracle RDBMS server when connection 'Oracle' is selected;

  <connections default="Customer A\Production" forceDefault="false">
    <group name="Customer A">
      <connection name="DB2">
```

```
        <database
connectionString="Server=localhost;Database=THE_DATABASE;UID=username;PWD=password
;CurrentSchema=schema" provider="IBM.Data.DB2" />
      </connection>
      <connection name="SQLServer">
        <database connectionString="Server=localhost;Database=database;User
Id=username;Password=password;" provider="System.Data.SqlClient" />
      </connection>
      <connection name="MySQL">
        <database
connectionString="Server=localhost;Database=database;Uid=username;Pwd=password"
provider="MySql.Data.MySqlClient" />
      </connection>
      <connection name="Oracle">
        <database connectionString="Data Source=localhost;User
Id=username;Password=password" provider="Oracle.DataAccess.Client" />
      </connection>
    </group>
  </connections>

-->
  <connections default="Customer A\Production" forceDefault="false">
    <group name="Customer A">
      <connection name="Production">
        <database connectionString="Data Source=authenticationServer;User
Id=username;Password=thepublicpassword;Pooling=false"
provider="Invantive.CustomerA.ActiveDirectory" />
        <failover>
          <database connectionString="Data Source=localhost;User
Id=username;Password=thepublicpassword;Pooling=false"
provider="Oracle.DataAccess.Client" />
          <webservice url="http://www.customer-a.com/ws/"      encoding="binary"
compression="true" />
          <webservice url="http://failover.customer-a.com/ws/" encoding="binary"
compression="true" />
        </failover>
      </connection>
    </group>
  </connections>
```

4.10.4 Providers Configuration

In the providers configuration file providers.xml you configure which requests are processed by which providers and how the requests are routed within the Invantive Web Service. The possibilities are described in the sample file providers.xml.sample:

```
<?xml version="1.0" encoding="utf-8"?>
<!--
  (C) 2004-2013 Invantive BV, the Netherlands (www.invantive.com).

  $Header: http://svn.invantive.com/repos/p104/trunk/help/nl/manual/Topics/bubs-
Providers_Configuratie.xml 23549 2013-11-01 14:21:27Z smoke $

  Configuration of providers for Invantive Webservice

  Purpose:
  You can configure providers here, sorted by order.
  Providers are tried to handle a request in decreasing order. So the provider
with order 500 is offered
  the request before the provider with order 400 is offered the request.
  Providers with order 70, 80, 90, 100 and 200 are reserved for Invantive internal
use (see the table below).

  Explanation:
  Providers are used to provide functionality that is not part of the webservice.
  A provider knows how to handle a specific action on a specific platform.
```

```
  Some providers are included in the installation, such as providers for database
or webservice connectivity or a file logging provider.
  The default providers are included in the software, so they are not listed here
between the <providers> tag.

  A provider does in general NOT define WHERE the action will be executed. That is
normally specified by the settings.xml.
  But specific providers may contain the location WHERE the action will be
executed as default value or specified as attributes
  with the provider's configuration.

  Default providers:
  The default providers are always available.
  A list of the default providers and there order (which cannot be used again):

  Order   Name                    Comments
  ---------------------------------------------------------------------------------
---------------------------------------------------------------------------------
--------
   70     Oracle MySQL            Provider supporting the execution of actions on
Oracle MySQL.
                                  Built and tested with Connector/Net 6.7.4. See
http://dev.mysql.com/doc/refman/5.6/en/connector-net.html.
                                  File: Invantive.Data.Providers.MySql.dll
   80     Microsoft SQL Server    Provider supporting the execution of actions
onMicrosoft SQL server 7.0 and later.
                                  See http://msdn.microsoft.com/en-
us/library/kb9s9ks0.aspx.
                                  File: Invantive.Data.Providers.SqlServer.dll
   90     IBM DB2 UDB             Provider supporting the execution of actions
onIBM DB2 UDB  9.7 for Windows.
                                  Not tested on any other version.
                                  File: Invantive.Data.Providers.IbmDb2.dll
  100     Oracle RDBMS            Provider supporting the execution of actions
onOracle RDBMS 9i - 12c.
                                  Needs ODP.NET and OCI to be installed.
                                  File: Invantive.Data.Providers.Oracle.dll
  200     Invantive Webservice    Provider that is executing action by forwarding
it to another Invantive Webservice over HTTP/HTTPS.
                                  File: Invantive.Data.Providers.Webservice.dll
                                  Order 200 ensures that forwaring is preferred
instead of a database connection by default.

  The providers tag contains a list of providers available, each one consisting of
the provider-tag.

  Attributes of the <provider> tag:
  * "order": Sorting order of the provider. The higher the value, the sooner it is
called.
  * "file": The file name of the provider. This can be a path relative to the
Providers directory, or an absolute path.
    Fully specify the path or use a path relative to the Invantive Webservice
installation folder.
    Do not use the ASP.NET/IIS ~/-prefix to indicate the current folder.
  * "class": Optional. Full class name of the provider. You can specify the class
name to increase startup performance since
    it reduces the time needed querying the file.
    You need to specify the class if you want to load a single provider in a file
that contains multiple providers.

  The elements of the <provider> tag:
  * All: you can specify elements within the provider tag. See for instance the
<templatesfolder> element
    in the example below.
    Their names and values will be passed as attributes to the provider during
instantiation.
```

```
  Example:

  <providers>
    <provider
     order="998"
     file="C:\ws\distribute\invantive-sdk\Invantive.XXX.Provider.dll"
     class="Invantive.XXX.Provider.Provider"
    >
      <templatesfolder>C:\temp\templates\</templatesfolder>
      <serviceurl>http://localhost/ThisIsAnExmaple/Service.svc</serviceurl>
    </provider>
  <providers>

-->
<providers>
  <!-- Custom logging. -->
  <!--
  <provider
   order="999"
   file="C:\ws\distribute\invantive-sdk\Invantive.Data.Providers.Logging.dll"
   class="Invantive.Data.LoggingProvider"
  >
    <log>C:\temp\invantive_logging.log</log>
  </provider>
  -->
  <!-- Most preferred provider due to order 400.
       Data access provider for Invantive Estate and/or Invantive Vision.
       Generates an Oracle SQL execute request. Invantive Estate and
       Invantive Vision currently only support the Oracle RDBMS.
  -->
  <!--
  <provider
   order="400"
   file="Invantive.Estate.Data.Provider.dll"
   class="Invantive.Estate.Data.InvantiveEstateDataProvider"
  />
  -->
  <!-- Less preferred provider due to order 300.
       Data access provider for Invantive Producer products.
       The following Invantive Producer products require the use of Oracle RDBMS:
       * Invantive Studio
       * Invantive Query Tool
       The following Invantive Producer products run with all supported database
platforms
       although this specific provider does not yet support it. Use a database
specific
       provider instead:
       * Invantive Composition
       * Invantive Control
  -->
  <!--
  <provider
   order="300"
   file="Invantive.Producer.Data.Provider.dll"
   class="Invantive.Producer.Data.InvantiveProducerDataProvider"
  />
  -->
</providers>
```

4.10.5 Drivers

The Invantive Web Service can make use of various database services that record and retrieve data. You can also offer other services that don't include databases. Here an explanation will be given of the installation of drivers for the most commonly used databases:

- Oracle 663
- Microsoft SQL Server 674
- MySQL 674
- IBM DB2 674

4.10.5.1 Oracle

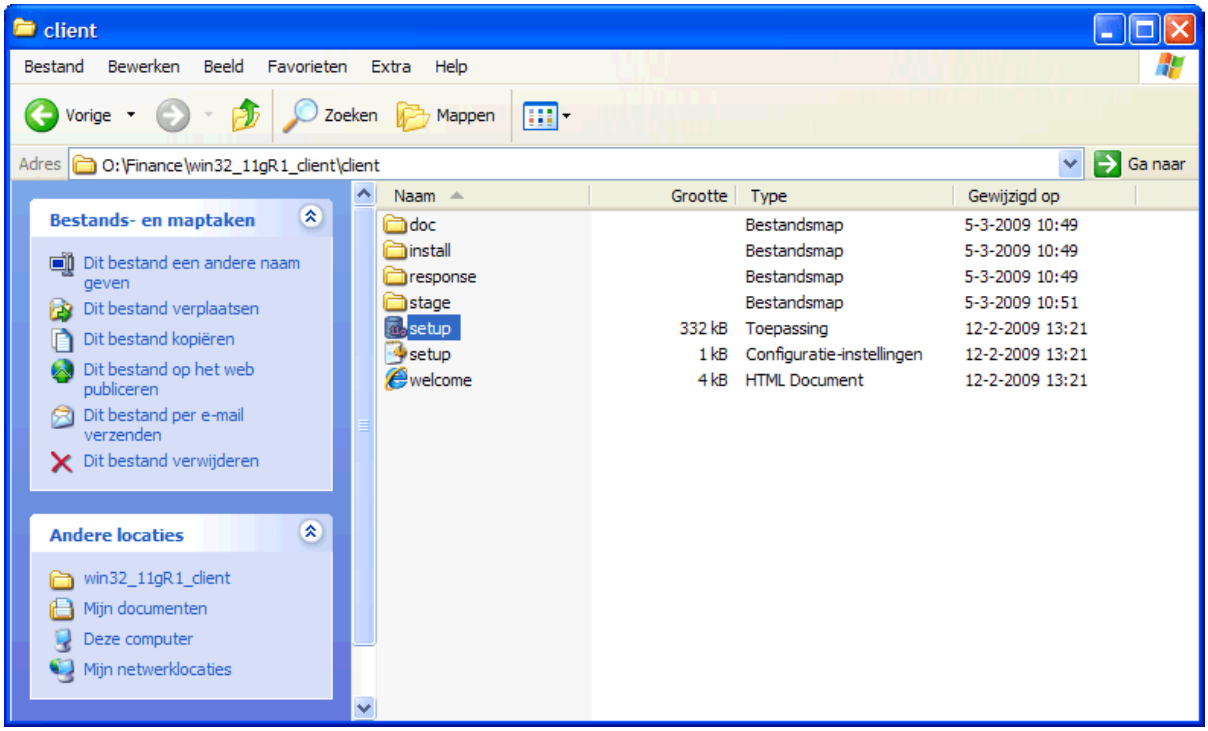
In this chapter the configuration of the Oracle driver is described.

In addition, some suggestions are provided to execute the installation of the Oracle programming. However, this is no replacement of the knowledge and experience with the local situation and trainings that an administrator or DBA has from his role and the results of the installation are therefore not guaranteed.

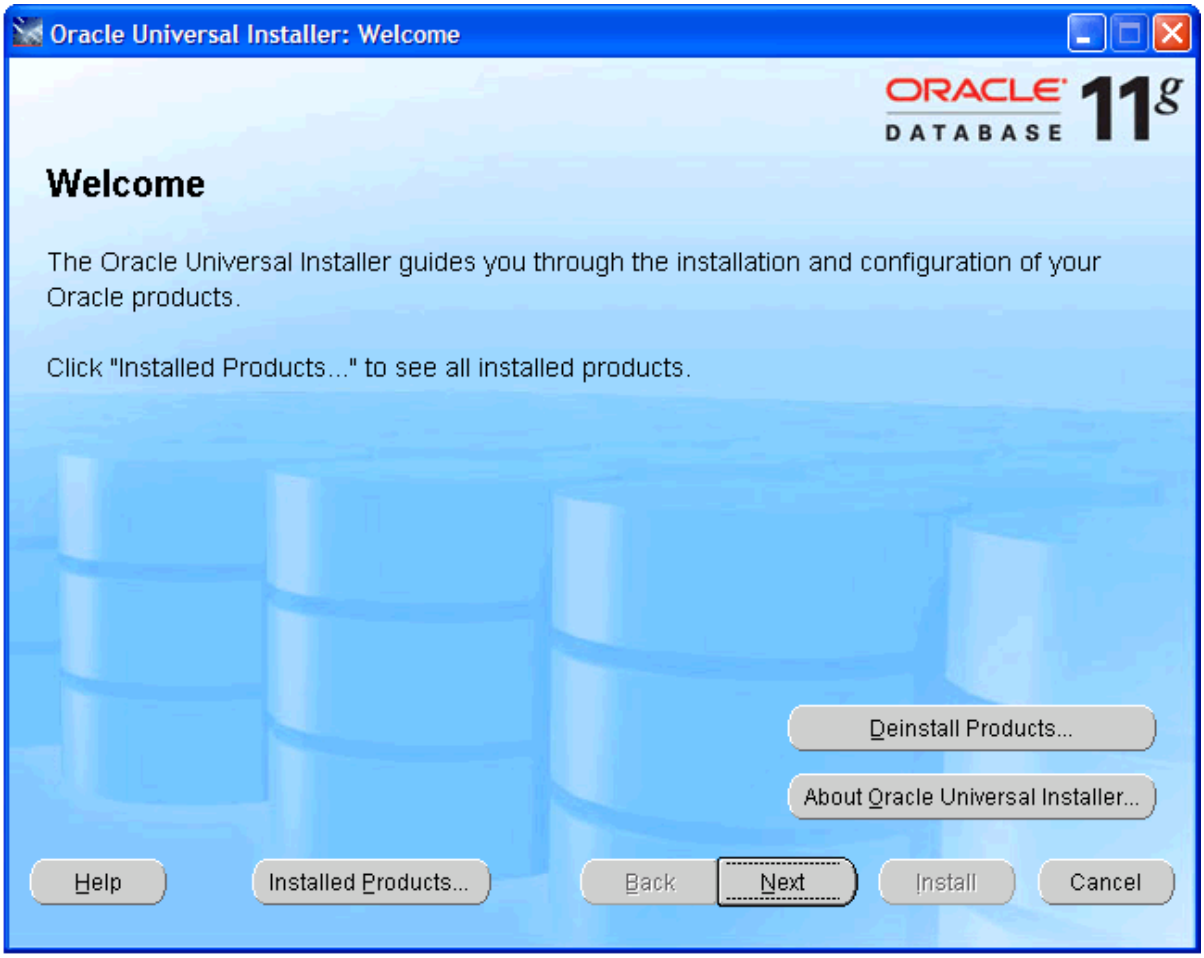
Oracle Client Installation

The installation of the Oracle client can be done following the next steps:

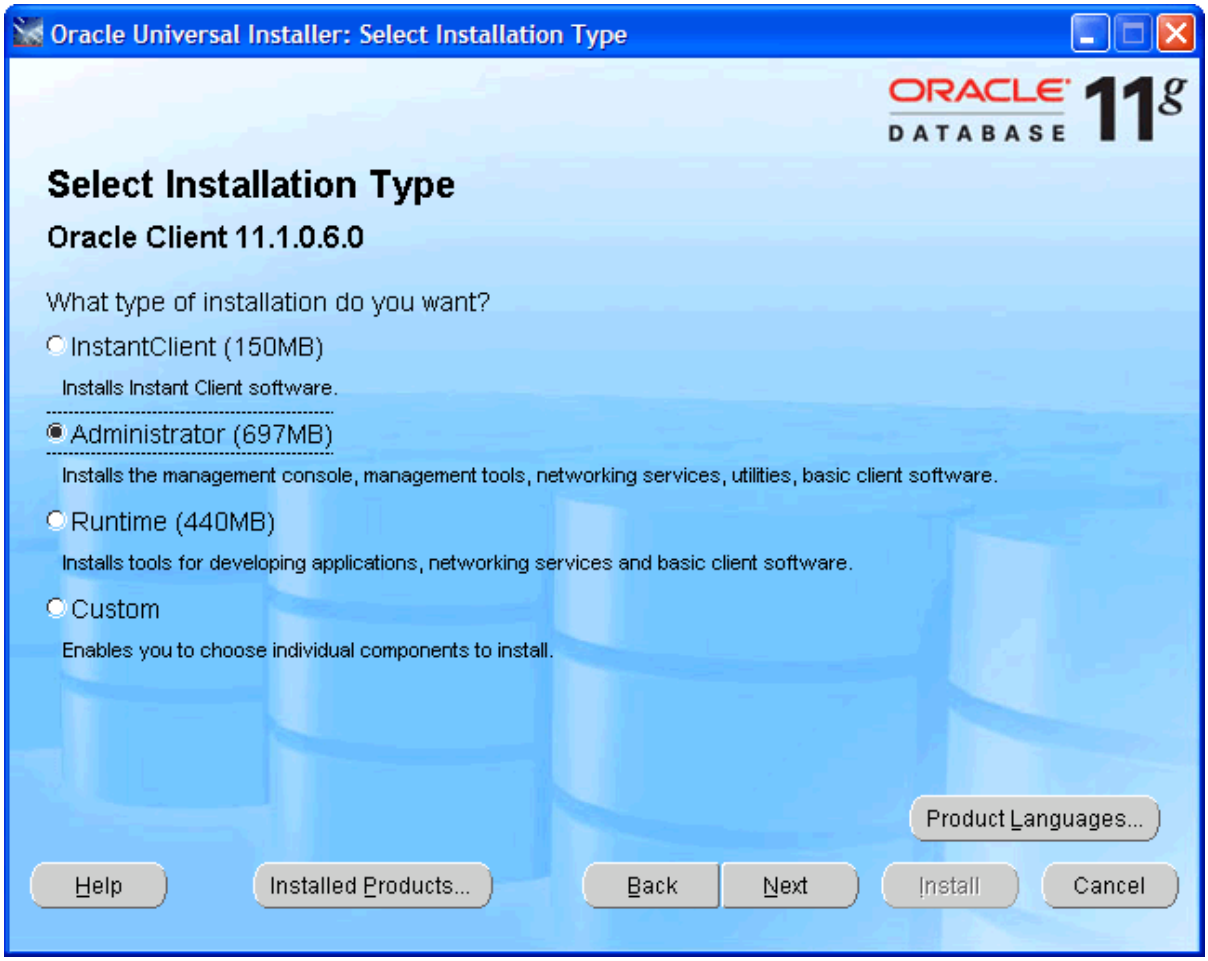
- The Oracle client is available via http://www.oracle.com/technetwork/topics/dotnet/downloads/net-downloads-160392.html.
- Unzip the download.
- Navigate to the folder containing the 'setup' program, for example:



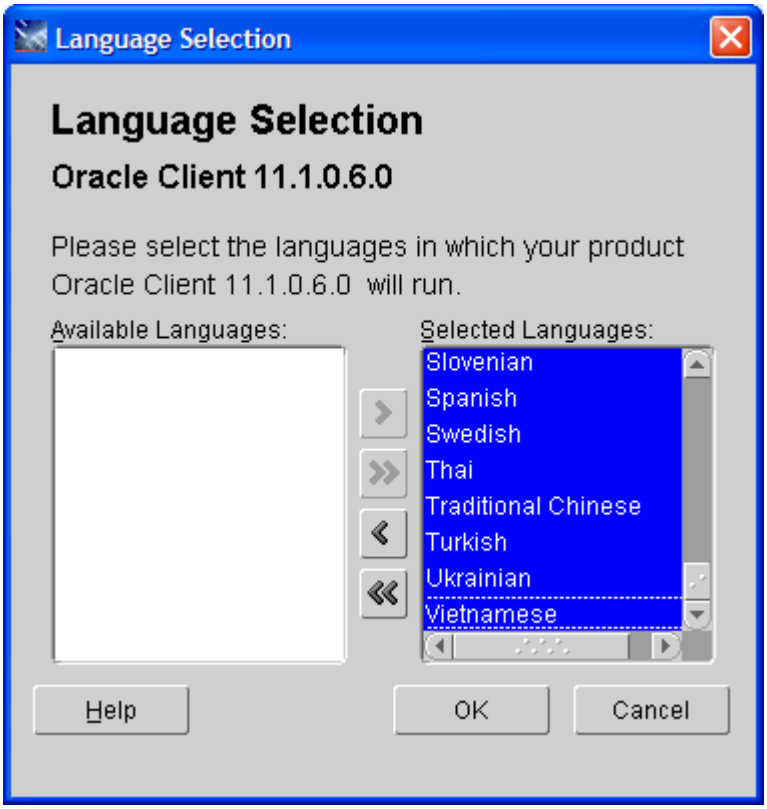
- The Oracle installation program appears:



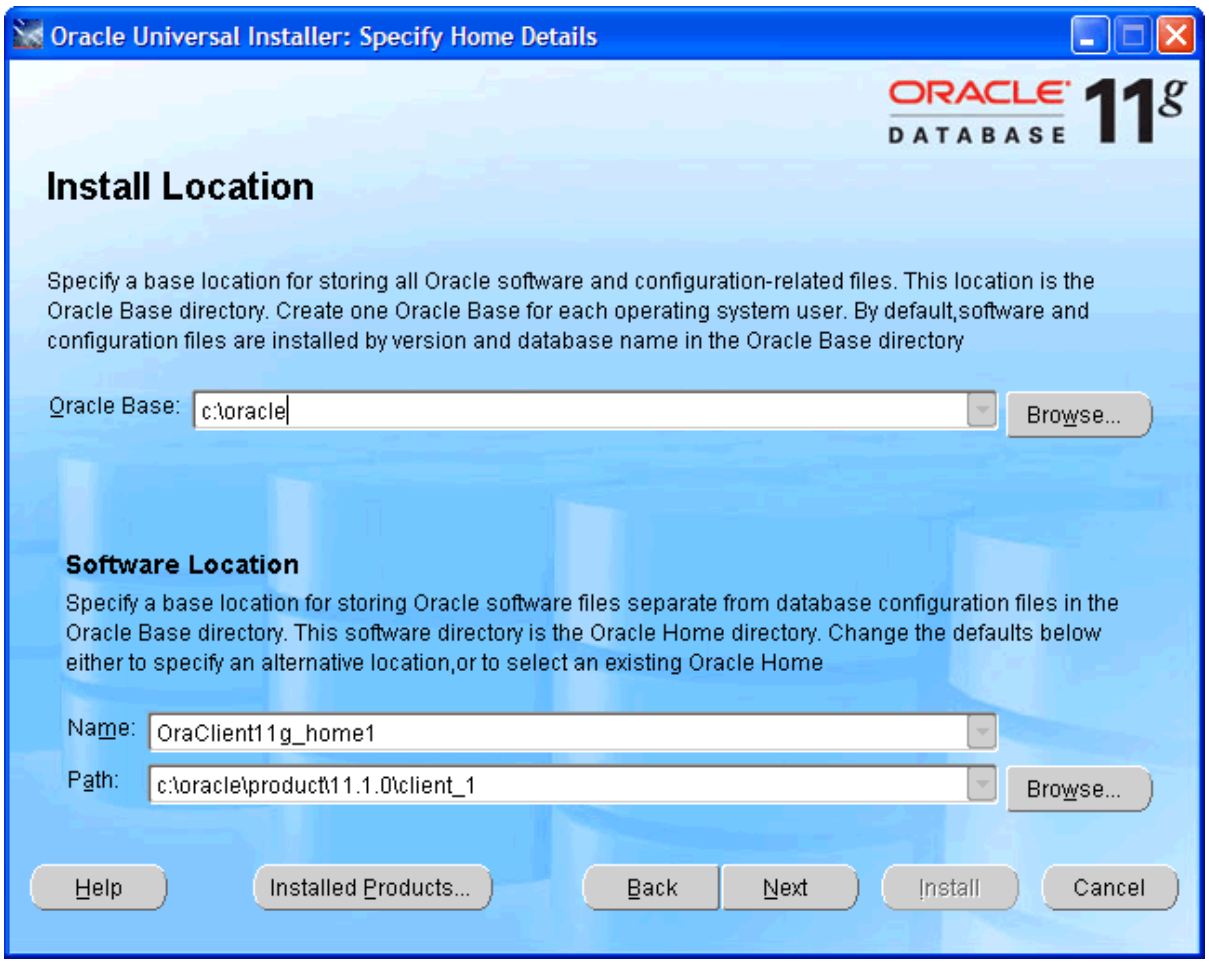
- We recommend to install the most comprehensive version within the license agreement, so that all devices are readily available if they should be needed later:



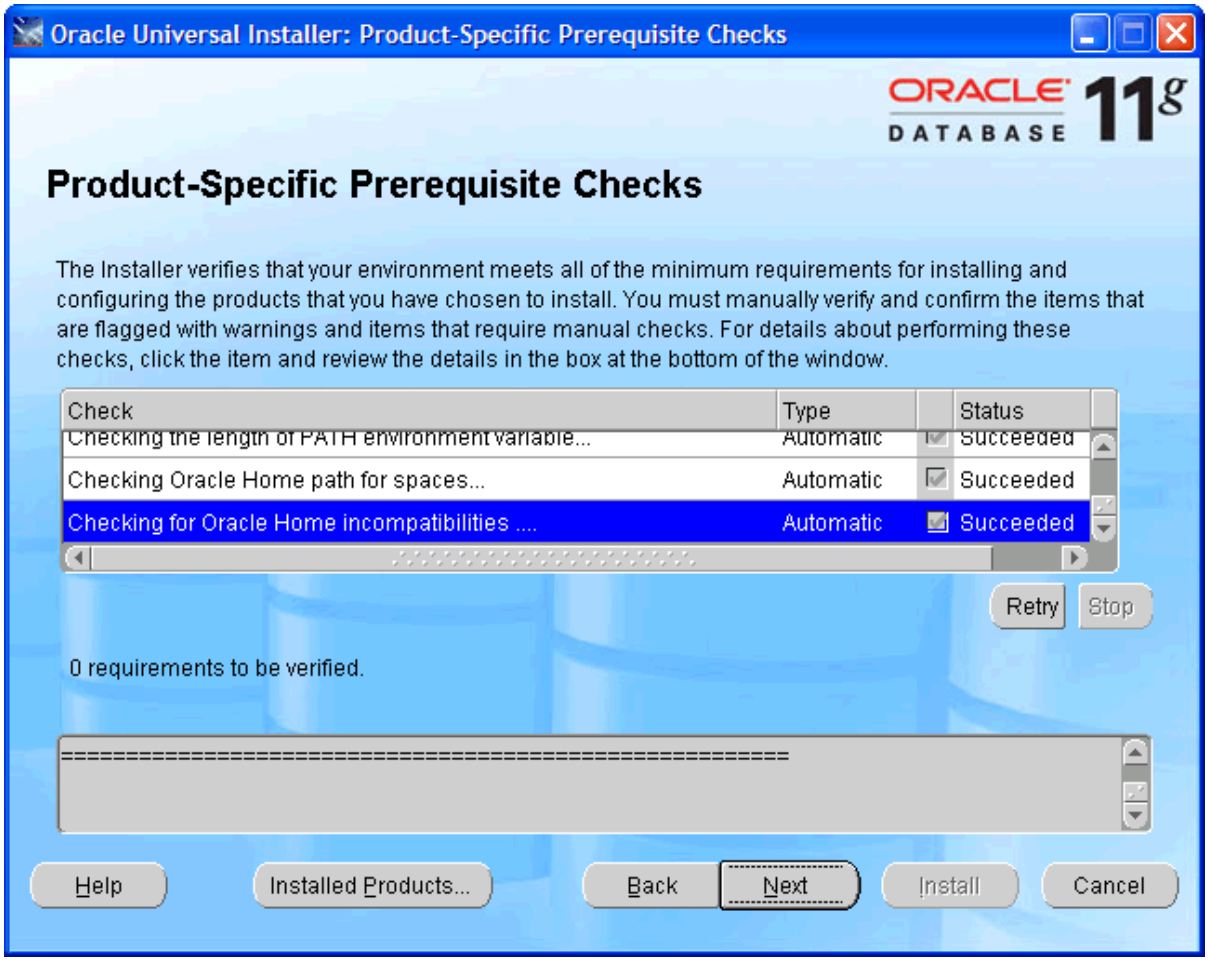
- Select the required languages via ‘Product Languages’. Here we recommend to choose all languages:



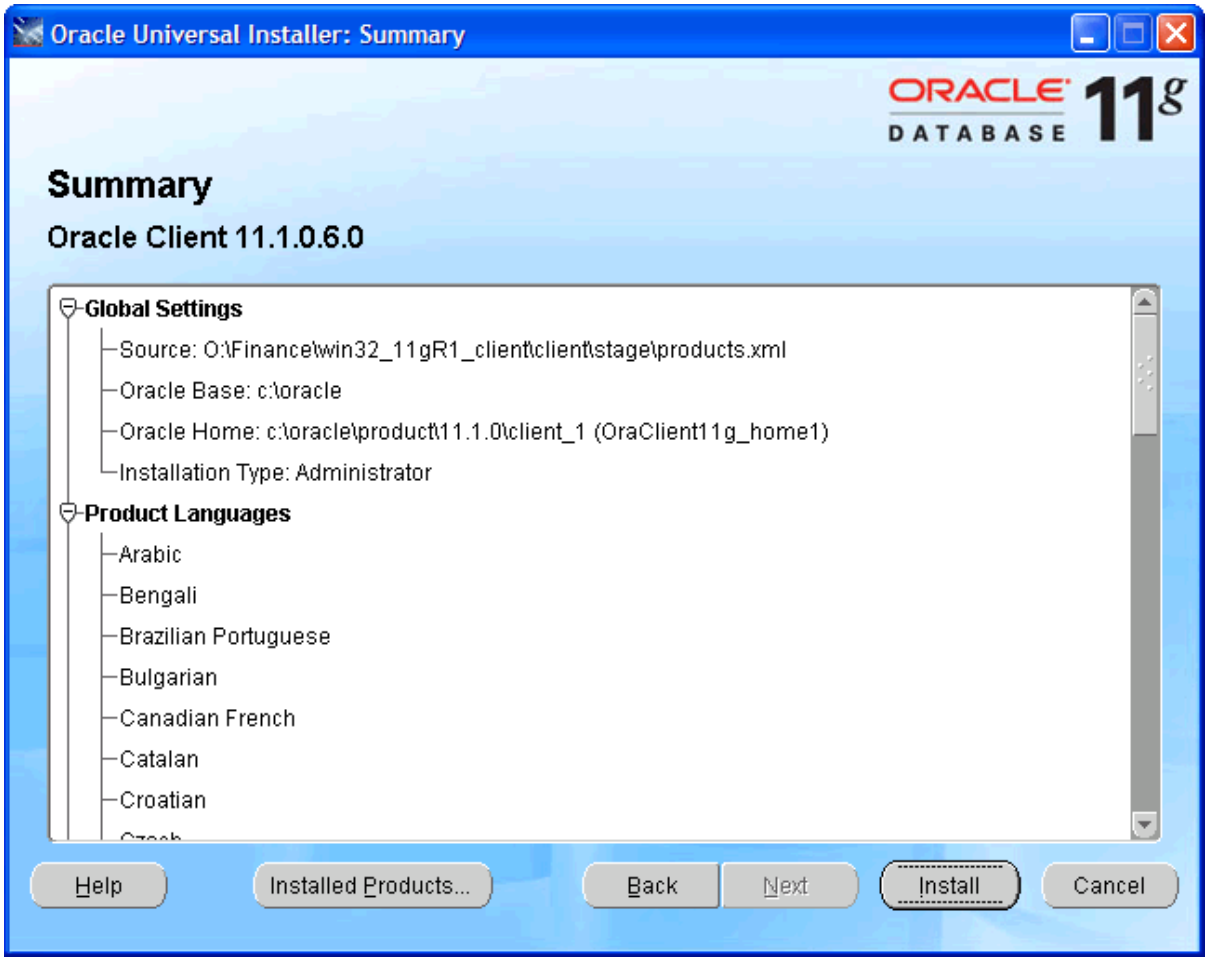
- Select 'OK' and then 'Next'. We recommend to install the software under 'c:\oracle':



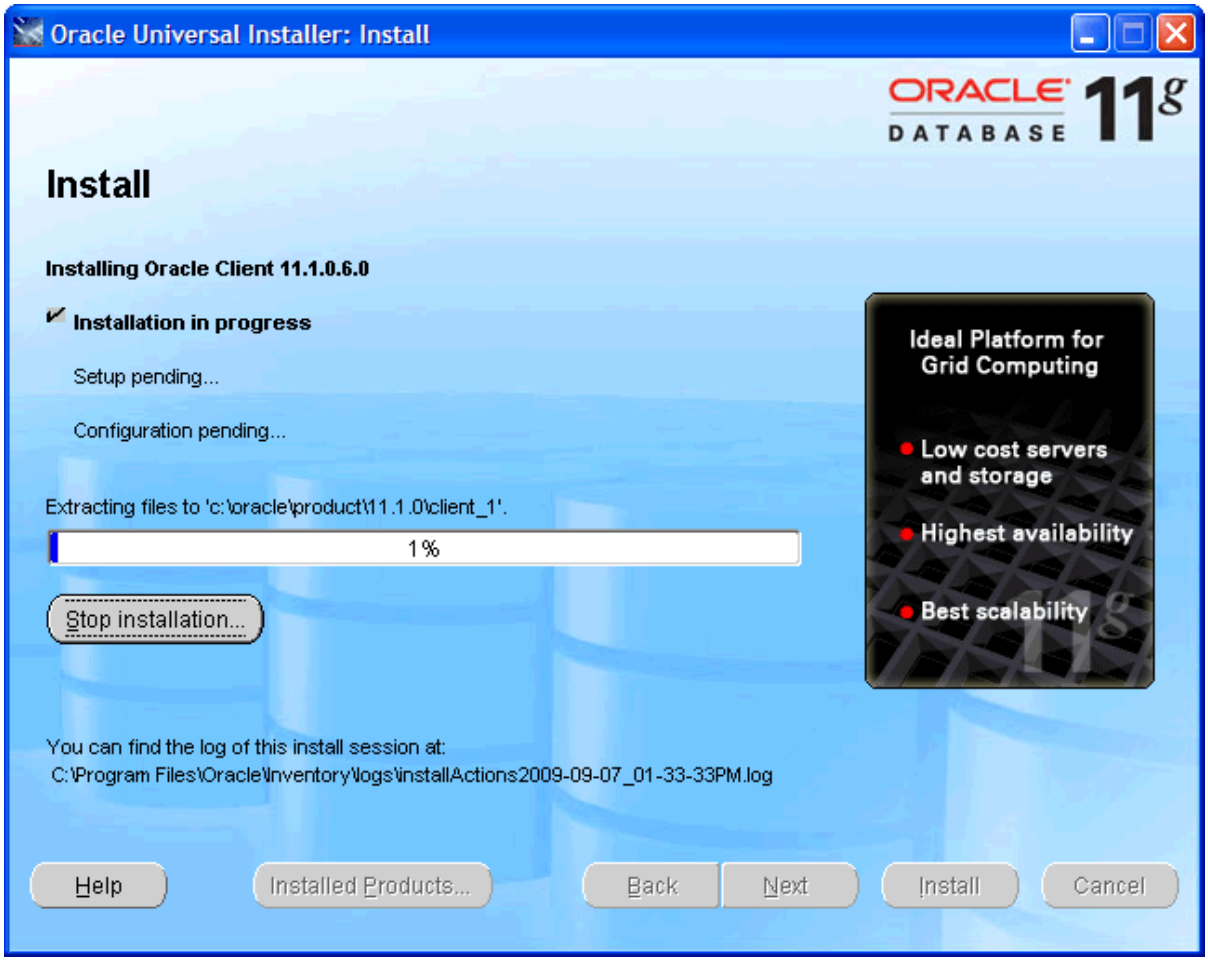
- Subsequently a number of checks will be performed. If problems are found, solve them first:



- Check the settings.
- Check if ODP.Net is listed between the products to be installed.
- Execute the installation by choosing 'Install':

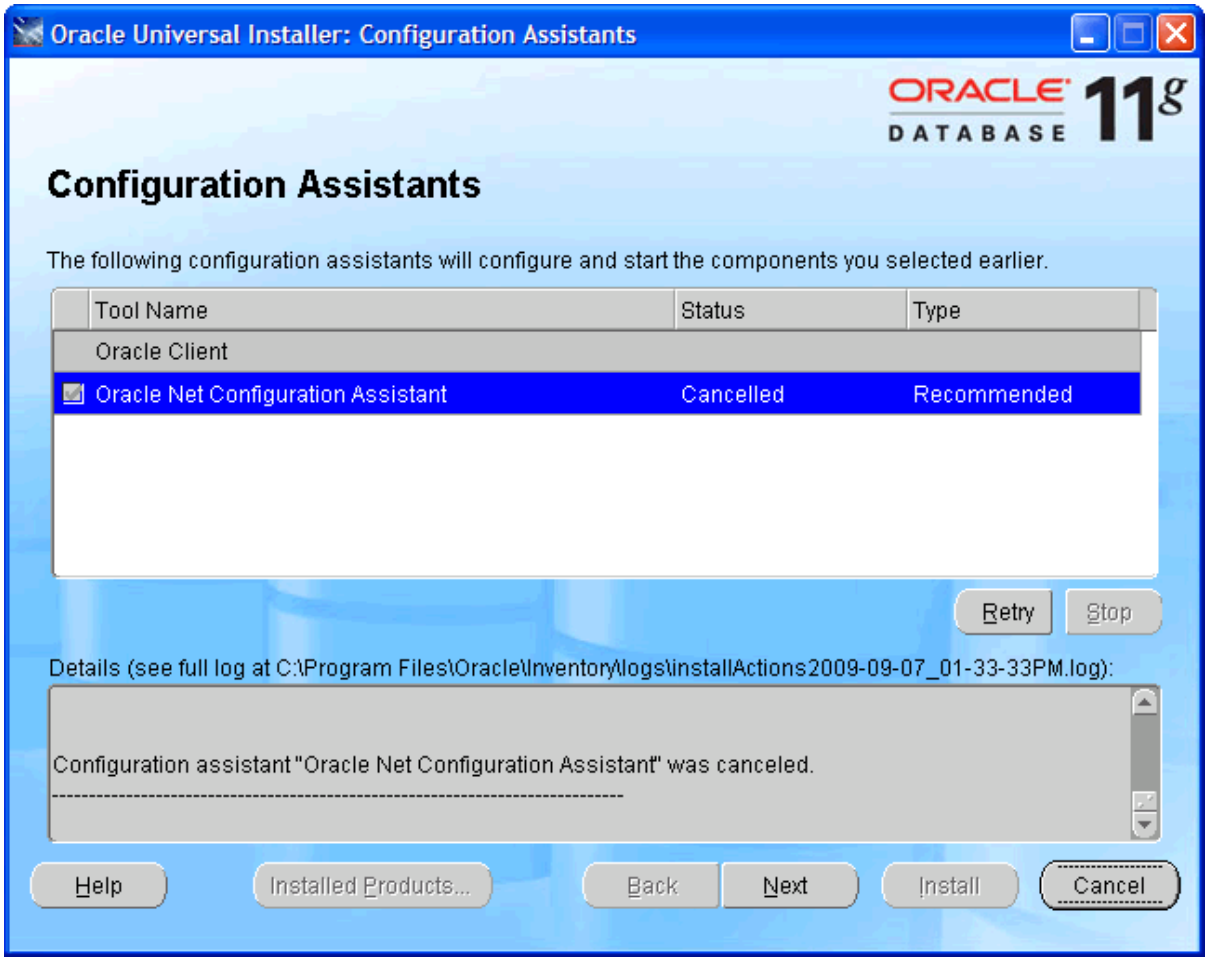


- The progress is displayed:

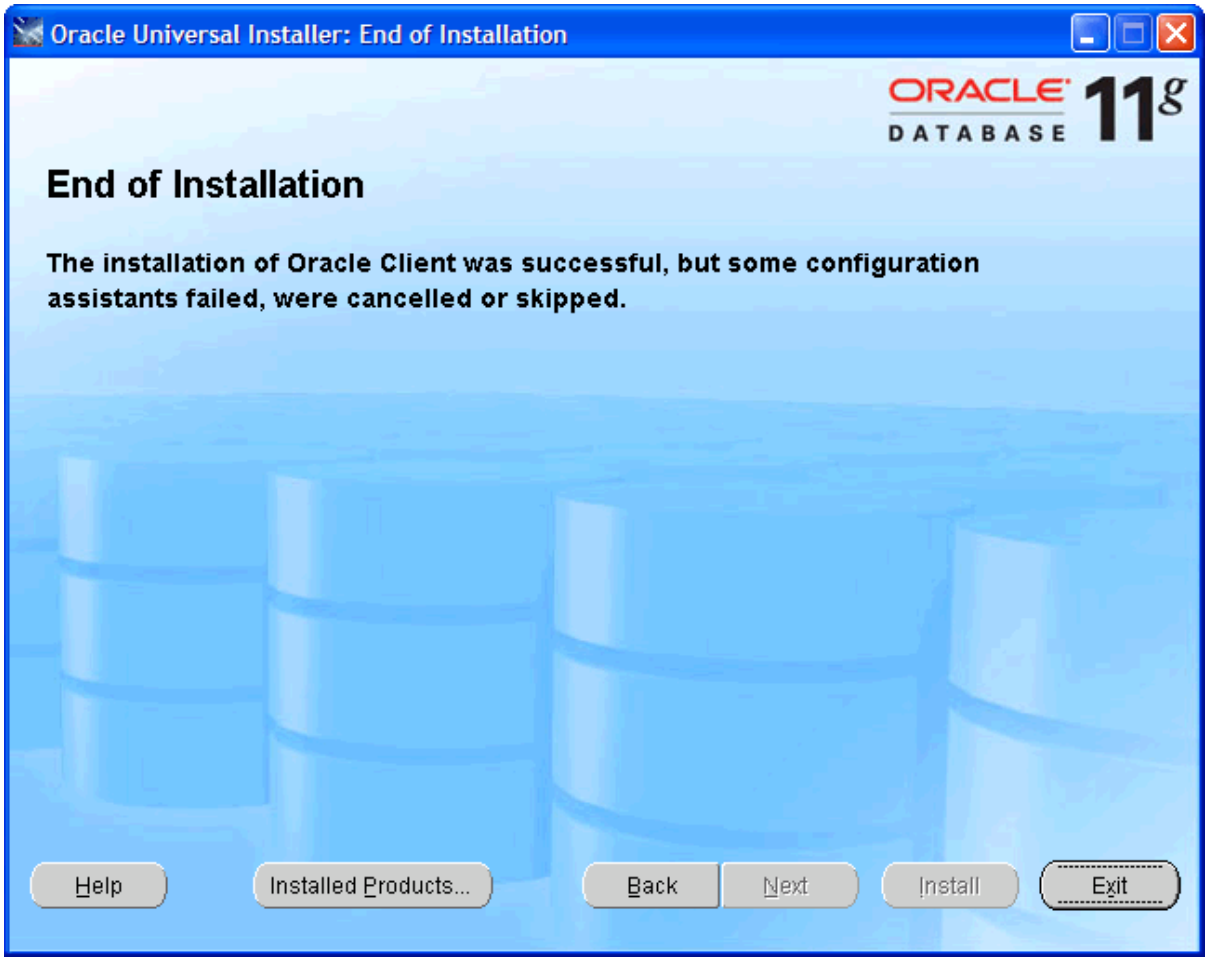


- Afterwards a configuration program for the network configuration is started. Choose ‘Cancel’, we advise you to use the configuration file ‘tnsnames.ora’ as described in the next part of the instructions:

- Select 'Next':



- Close the error message about the failure of the Oracle Net Configuration Assistant.
- Select 'Exit':



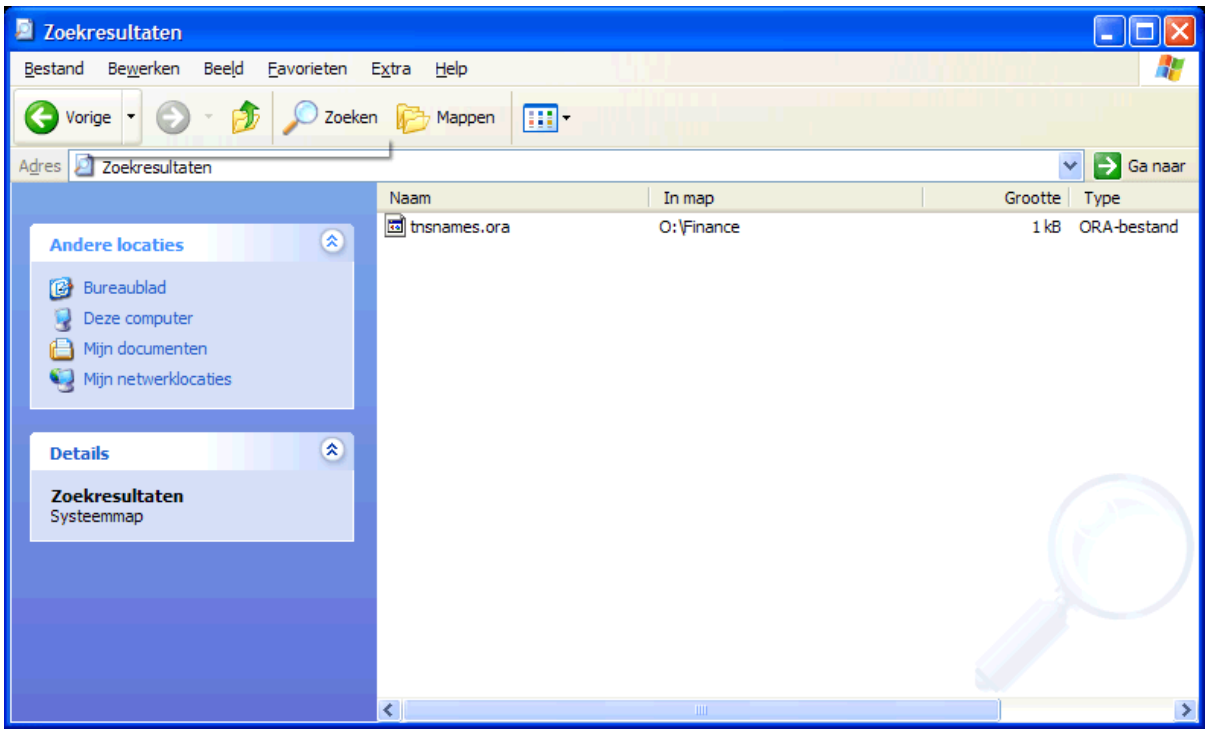
Oracle Client Configuration

Follow these steps to configure the Oracle client:

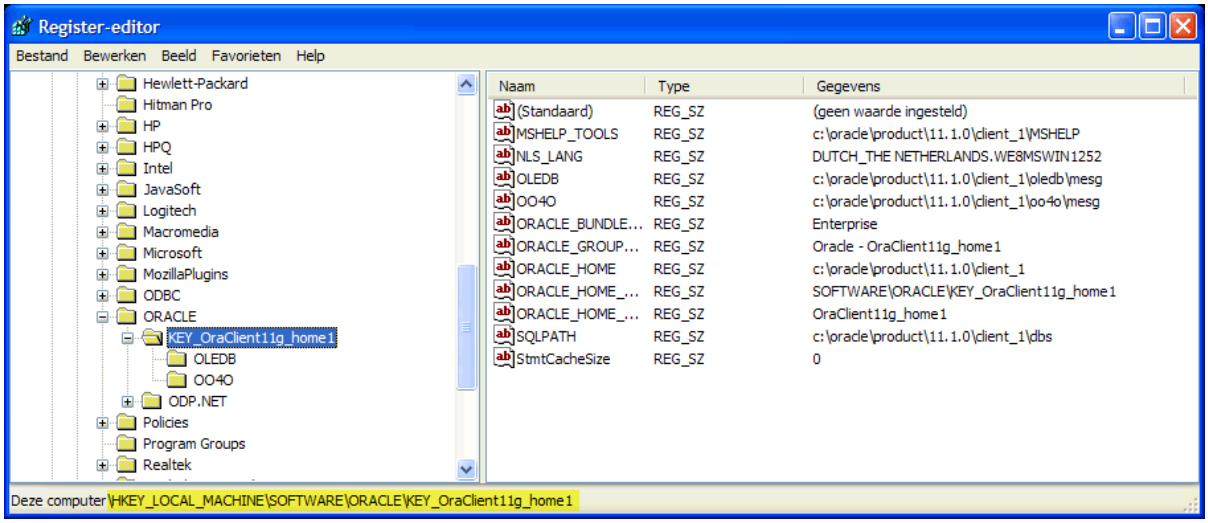
- Construct (if not available yet) a tnsnames.ora configuration file.
- In a tnsnames.ora file ('tns' is the abbreviation for 'Transparant Network Substrate') all Oracle based databases ('services') and the route via the network to get there, are described.
- An example of a description of the service:

```
dvt11r2.invantive.local=
( description =
  ( address_list =
    ( address = (protocol = tcp)(host = 192.168.172.16)(port = 1521)
    )
  )
  ( connect_data =
    (sid=dvt11r2)
    (global_name = dvt11r2.invantive.local)
  )
)
```

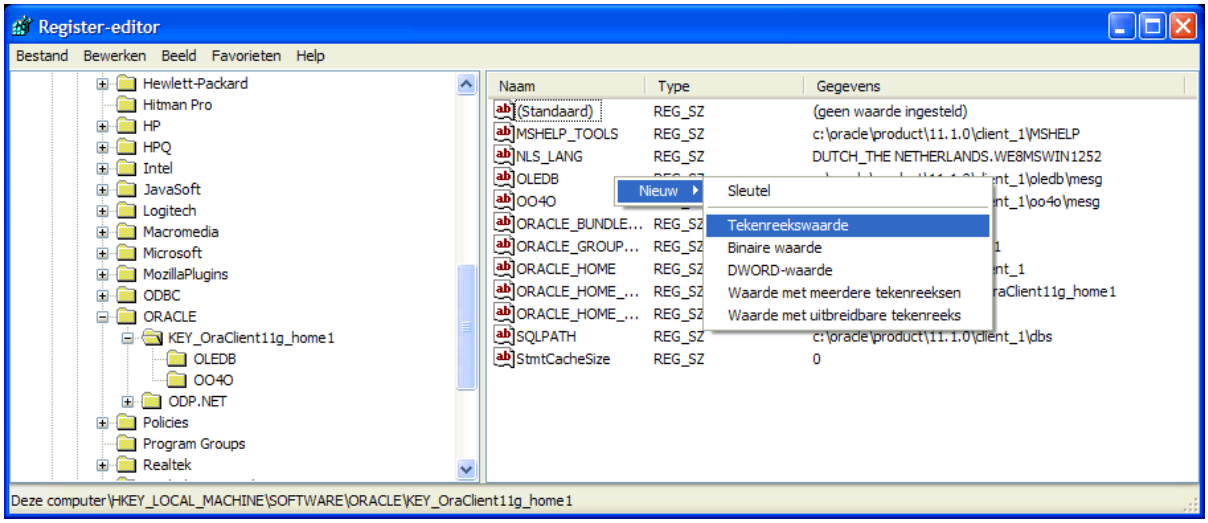
- This one describes that on the server with IP address 192.168.172.16 on port 1521 a program runs that knows how to make a connection with an Oracle database with the SID dvt11r2 and the global name dvt11r2.invantive.com.
- Full instructions on creating tnsnames.ora can be found in the Oracle documentation.
- Make sure that the tnsnames.ora file is located on the same place on all PC's, preferably in way to make it easy to add services from a central location. For fixed workplaces often a network drive is used, for example, as follows:



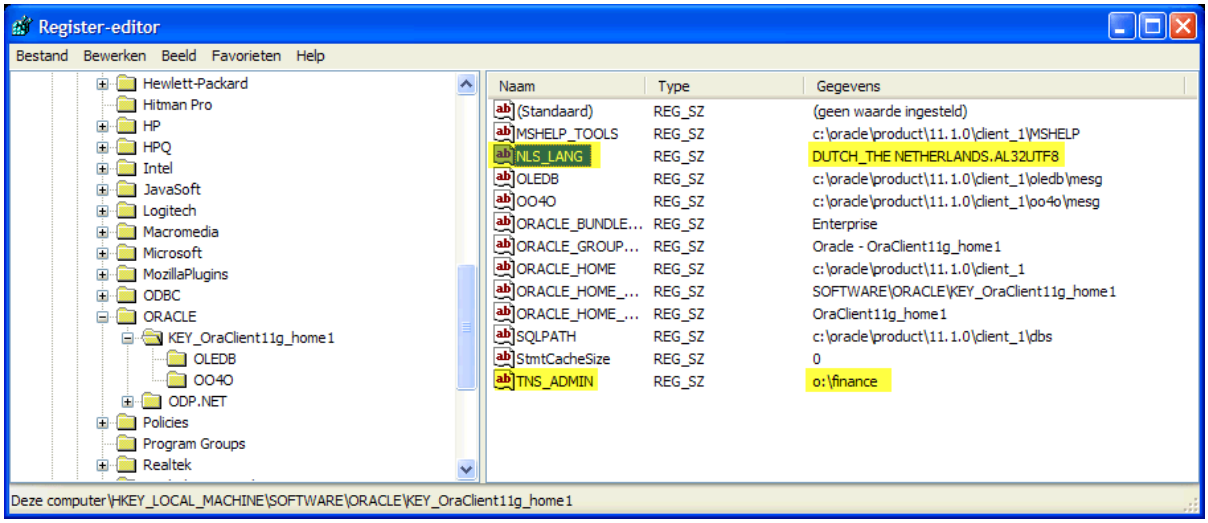
- Open the register with ‘regedit’ and go to the key HKLM\SOFTWARE\Oracle\KEY_OraClient11g_home1:



- Add a string with the name ‘TNS_ADMIN’ and make it point to the network location:

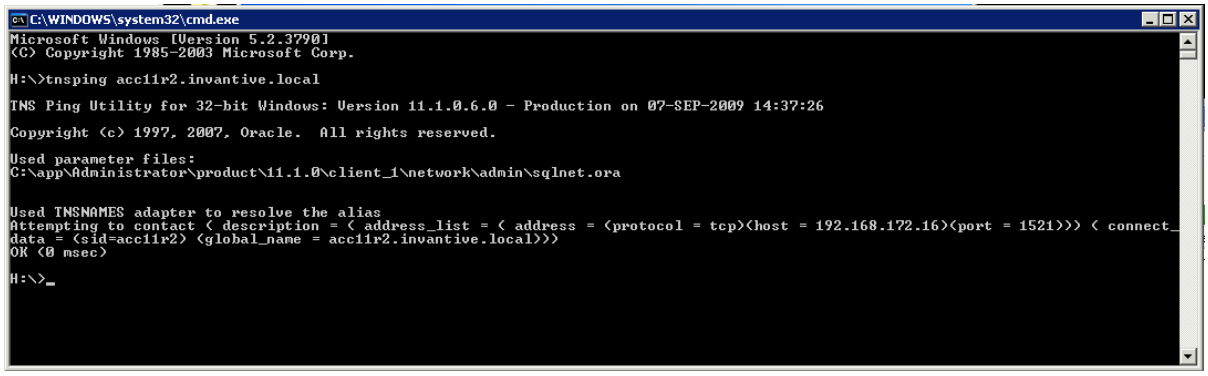


- Change also the NLS_LANG to 'DUTCH_THE NETHERLANDS.AL32UTF8' to make sure that messages appear in dutch and the Unicode character set is used. If you use Oracle Instant Client, then there is no NLS_LANG in the Windows registry; that's why you need to define the NLS_LANG environment variable in Windows.



- If you use Oracle Instant Client, then there is no NLS_LANG in the Windows registry; that's why you need to define the NLS_LANG environment variable in Windows.

- Test the connection from a command prompt with 'tnsping':



- It is still not certain if the user/password are correct, but it is certain that a network connection to the Oracle service can be built.

- Finally, check the connection by logging in with SQL*Plus.

4.10.5.2 Microsoft SQL Server

In this chapter the configuration of the Microsoft SQL Server driver is described.

In addition some suggestions are provided to execute the installation of the Microsoft programming. However, this is no replacement of the knowledge and experience with the local situation and trainings that an administrator or DBA has from his role and the results of the installation are therefore not guaranteed.

Installation Microsoft SQL Server Client

There are no installation steps for the Microsoft SQL Server Client. The Microsoft SQL Server Client is supplied with every .NET installation.

Configuration Microsoft SQL Server Client

There are no configuration settings for the Microsoft SQL Server Client.

4.10.5.3 MySQL

In this chapter the configuration of the MySQL driver is described.

In addition, some suggestions are provided to execute the installation of the MySQL programming. However, this is no replacement of the knowledge and experience with the local situation and trainings that an administrator or DBA has from his role and the results of the installation are therefore not guaranteed.

Installation MySQL Client

The MySQL Connector/Net client is available at http://dev.mysql.com/downloads/connector/net/. The installation of the MySQL client MySQL Connector/Net proceeds as follows:

- Double click the MSI installation file from the zip at above mentioned website.
- Choose the button 'Next'.
- Choose the button 'Typical'.
- Choose the button 'Install'.
- Choose the button 'Finish'.

Configuration MySQL Client

Specific settings for the MySQL Connector/Net client can be found at http://dev.mysql.com/doc/refman/5.6/en/connector-net-connection-options.html.

4.10.5.4 IBM DB2

In this chapter the configuration of the IBM DB2 driver is described.

Furthermore, some suggestions are given to execute the installation of the IBM DB2 programming. However, this is no replacement of the knowledge and experience with the local situation and trainings that an administrator or DBA has from his role and the results of the installation are therefore not guaranteed.

Installation IBM DB2 Client

Install the IBM DB2 Data Server Driver as described on http://pic.dhe.ibm.com/infocenter/db2luw/v9r7/index.jsp?topic=%

2Fcom.ibm.swg.im.dbclient.install.doc%2Fdoc%2Ft0007315.html.

Configuration IBM DB2 Client

There are no configuration settings for the IBM DB2 Client.

4.11 Terminology

Below we describe the used terms.

4.11.1 Channel

A channel is the medium on which data and requests are exchanged between an Invantive Producer client application and an Invantive Web Service server.

4.11.2 Connection

A connection is the definition of possibilities to establish a channel 675 between an Invantive Producer client application and an Invantive Web Service server.

4.12 Versions

This chapter describes the changes in the application per version.

4.12.1 New Release 2014R1

This new version of Invantive Web Service offers advantages such as support for Microsoft Access, MySQL and IBM DB2, failover and routing for connections and a higher internet processing speed.

Download

The new version can be downloaded from http://www.invantive.nl/ondersteuning/downloads, or it can be requested by sending an email to support@invantive.nl.

Complete list of changes

In the following list you can view all the changes made for each release of Invantive Web Service:

- Changes in Release 2014R1 675

4.12.2 Changes in Release 2014R1

Released: 7-2-2014.

Invantive Producer: b55.

Changes and bug fixes:

Number	Type	Description
22414	ER	IBM DB2 data provider support.
23456	ER	IBM DB2 ook via ODBC mogelijk maken.
22594	ER	Ondersteuning voor redundante verbindingen (failover).
23279	PR	Onder specifieke condities treedt een Byte[] error op bij gebruik van de webservice.
25941	PR	Default user name en password komen niet binnen vanaf demo-ws webservice in gebruiker's eigen settings.xml.

Installation

- No specialties.

Implementation

- No specialties.

4.12.3 Changes in Release 2015R2

Release: --2014.

Invantive Producer: b55.

Changes and bug fixes:

Number	Type	Description
24975	PR	Reducing memory footprint for webservice cache.
25477	PR	Bij invoeren rapportparameters vanuit OLA bij Project -> Invoeren Rapportparameters wordt niet ingevuld standaard bij gebruik invantive webservice.
27660	PR	Exception.Data doorgeven over de webservice.

Installation

- No specialties.

Implementation

- No specialties.

5 Invantive Dotnet Optimizer

This chapter describes the possibilities of the Invantive Dotnet Optimizer.

5.1 Versions

This chapter describes the changes in the application per version.

5.1.1 Changes in Release 2015R2

Release: --2014.

Invantive Producer: b55.

Changes and bug fixes:

Number	Type	Description
26596	ER	Dotnet Optimizer optie geven om in de achtergrond te compileren zodat scherm weer direct vrijgegeven kan worden. Bij gevraagde start vanuit opstarten in achtergrond, vanuit diagnostiek wachten.
25763	PR	Als er een fout optreedt (bijv. Assembly not found) bij Invantive.Optimizer, dan die lijst van fouten tonen en wachten op Done klikken.

Installation

- No specialties.

Implementation

- No specialties.

6 Providers

This chapter describes the possible providers.

6.1 ANSI SQL

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.2 Exact Online (REST)

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2	27258	ER	Ondersteuning Exact Online pseudo columns in select: division, user, sysdate/now , row num.
2015R2	25247	PR	Opknippen VATPurchase bij Accounts gaat fout, heel lange string.
2015R2	25252	PR	Veld gltransactionline w ordt niet uit elkaar geknipt voldoende. select gltransactionline, entry from gltransactions.
2015R2	25253	PR	Veld InvoiceLine niet goed opgeknipt bij select * from invoices.
2015R2	25255	PR	Veld OpportunityStage w ordt niet goed opgebroken in select * from opportunities.
2015R2	25306	ER	Display control type opslaan en bew erken. Defaulten vanuit Exact Online met zinvol.
2015R2	27062	PR	Na instellen division met 'use' een controle dat het een geldige administratie is door te zoeken in Administrations op administration_code@.
	25419	ER	Exact Online provider: support for binary elements such as attachments of documents.

6.3 Exact Online (XML)

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			
	27113	PR	Composition and Control: ChooseFieldofValuesForm.cs made working in Exact Online if there is already a value filled in (no lower and or).
	26970	ER	Support !=.
	27687	PR	Double colomn names Exact Online XML.
	26784	ER	Support for SalesInvoices, APs, ARs, DocumentsAttachments (BINARY!)

6.4 Excel

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.5 IBM DB2/UDB and IBM DB2/400

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.6 Invantive Web Service

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.7 LDAP

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.8 Mapping

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.9 Microsoft SQL Server

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2	27695	ER	SQL Server support for changing partition. Currently chosing a different partition on SQL Server has no effect.
	27658	ER	Bij SQL Server timeout 1x proberen te herverbinden.

6.10 MySQL

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.11 OData

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.12 ODBC

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.13 Oracle Legacy

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.14 Oracle Managed

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.15 PostgreSQL

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.16 TeamViewer

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2	27044	ER	TeamViewer Provider - Het moet mogelijk zijn om de script token op een veilige manier op te geven
2015R2	27048	ER	TeamViewer Provider - Optie tot doneren
2015R2	27053	ER	TeamViewer Provider - Eventueel een optie om gebruikersstatistieken te verzamelen
2015R2	27054	ER	TeamViewer Provider - De mogelijkheid tot het geven van feedback na het afsluiten van de TeamViewer sessie
2015R2	27057	ER	TeamViewer Provider - De support engineers moeten zien welke taal de (applicatie van) de gebruiker gebruikt, bijvoorbeeld door deze mee te versturen bij het aanvragen van een nieuwe supportsessie
	27434	ER	TeamViewer Provider - Rate limit exceeded.

6.17 TwinField

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

6.18 XML

Installation

- No specialties.

Configuration

- No specialties.

Versions

The software has undergone the following changes:

Release	Number	Type	Description
2015R2			

9 Contact Information

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Always include your telephone number, your e-mail address and a short description. Please do not give sensitive details until a secure communication channel has been established.

For urgent security incidents please send both an email outside of opening hours and call with number display on. You will be called back as soon as possible.

We use the threat matrix of NCSC to classify a reported incident. We use the Responsible Disclosure Guideline of NCSC as basis for our policy.

You will always receive a confirmation of receipt within 1 working day.

We ask you not to share information about the security incident with others until Invantive has had sufficient opportunity to resolve the problem and users have had sufficient opportunity to use a possibly updated version of the software. We ask you to not further use any knowledge of the security incident and to omit any actions made possible after the existence of the security problem.

If you are not satisfied with the handling, we would like to ask you to contact the NCSC.

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Index

- . -

.NET 674

- : -

:language 349
:locale 349
:productname 349
:siteid 349
:useremail 349
:userlogon 349
:username 349
:usertelult 349

- _ -

_odbc_conf 467

- < -

<application code> 287
_install.sync_db_with_metadata 287
_metadata.ctl 287
_metadata.ods 287
_sct_generate.run 287

- 2 -

2012 Release 2 614

- 4 -

404 653
405 653

- A -

About Invantive Outlook add-in 420
Access Request
associated user 208
company 208
country 208
email address 208
finished 208
license agreement 208
login code requested 208
name 208
no competitor 208
possible explanation 208
reason of request 208
Access right 17
Action Button 13, 18
Active session
duration 235
last function 235
last function opened - at 235
last function opened - to 235
session 235
user name 235
Add new data 27
Added Implicitly 381
Additional business rule 501
active 266
application 266
Column Name 266
comments 266
error 266
event category 266
expression 266
group 266
package 266
sort order 266
synchronisation executed 266
synchronisation required 266
view 266
Adobe Acrobat
Reader 37, 116
Adobe pdf
allow annotation 405
allow copying 405
allow fill in 405
allow modifying 405
allow printing 405
enable screen reader option 405
password owner 405
password user 405
use encryption 405
Adobe pdf settings
allow annotation 45
allow copying 45
allow fill in 45
allow modifying 45
allow printing 45
change 45

Adobe pdf settings
enable screen reader option 45
password owner 45
password user 45
use encryption 45
Advance Interest 92
Advanced settings
Configuration file 417
Installation location 417
target directory 417
Aggregation Method
#units 343
code 343
description 343
label expression 343
unit of time 343
Agreement 594
Alt-key 29
Alt-Shift-key 29
Anti-virus 517
Apache Tomcat 230, 568
Application
additional business rule procedure prefix 289
autocompleted 289
code 289
column ‘column prefix’ 289
column ‘column type’ 289
column ‘created by’ 289
column ‘created in’ 289
column ‘date created’ 289
column ‘date interface created’ 289
column ‘date interface updated’ 289
column ‘date last update’ 289
column ‘historical date ends’ 289
column ‘history active when filled’ 289
column ‘history date start’ 289
column ‘history event’ 289
column ‘original system group’ 289
Column ‘original system reference’ 289
column ‘session created‘ 289
column ‘session updated‘ 289
column ‘transaction created’ 289
column ‘transaction updated’ 289
column ‘updated by’ 289
column ‘updated in’ 289
column identity 289
column specifications 289
copyright 289
documentation 289
expression effective date 289
expression point_in_time 289
expression set point_in_time 289
expression set_session_info 289
expression to get the last identity assigned 289
expression to get the session user identity 289
expression translate keys 289
expression unset_session_info 289
flag field value for ‘no’ 289
flag field value for ‘yes’ 289
include call additional business rules 289
include natural key columns 289
name 289
natural key column 289
other 289
postfix for code field 289
postfix for flag field 289
procedure for logging execution of attribute rules 289
standard select clause 289
standard where clause 289
table with interactions 289
table with transactions 289
template for LOV view 289
template for LOV view name 289
Application Administrator 160
Application control 502
Application Development 282
Application for Administration 160
Application Version 613
application/excel 341
application/pdf 341
application/rtf 341
application/vnd.oasis.opendocument.spreadsheet 341
application/vnd.oasis.opendocument.text 341
application/vnd.openxmlformats-officedocument.wordprocessingml.document 341
application/xml + vnd.google-earth.kml 341
Approach microsoft outlook add/in on an apple macintosh 427
Archiving 500
ASCII 341
Assign association 409
Assign category 408
Associated financial administrations
administration combination with hoogmans bv 602
administration hoogmans bv 602
administration janssen bv 602
administration lieropszn bv 602
administration van delft bv 602
description 258
erp system 258

Associated financial administrations
financial administration 258
organization 258
Associated master administration
cost category 259
description 259
explanation 259
invoice line 259
invoices 259
organization 259
revenues 259
user 259
Attribute Rule
action category 297
action moment 297
action specification 297
application 297
code 297
documentation 297
enter 297
event category 297
sort order 297
specification 297
table code 297
user message 297
Audit 223
Authentication 160
authenticator 587
Authorisation 160
autocomplete
business object 288
cleanup: 288
lov-view 288
referential constraints and related indexes: 288
Automatically write-off 210

- B -

Background Job 502
Days to Keep 228
Versions to Keep 228
#Documents 228
Database Session 228
Documents 228
End 228
End Status 228
Exit Code 228
Last Error Message 228
Log File 228
Number 228
Output File 228
Parent Job 228
Requested Start Time 228
Requester 228
Scheduler 228
Script 228
Size 228
Start 228
Status 228
Background Script
days to keep 327
versions to keep 327
cash flow 505
code 327
Collect SQL Statements which Are relatively heavy to Parse. 502
description 327
development 503
Exact Online 505
executable program 327
execution time (sec) 327
generate XML file for web services 500
invoicing 504
Java (in error) 503
Java (without error) 503
KING 507
management 498, 500, 501, 502
mime type log file 327
mime type output 327
minimum execution time (sec) 327
multiple dependent processes 503
number of executions 327
optimize storage of text index 501
oracle pl/sql (with error) 503
oracle pl/sql(withour error) 504
Parse heavy SQL statements in advance of the actual call 501
process messages 502
program is expression 327
remove old tables from recycle bin 502
required 327
required capacity scheduler 327
rerun every (sec) 327
rerun on error 327
rerun on success 327
rerun on warning 327
runs 10 seconds 503
runs alone 327
sort order 327
testing 503, 504
total execution time 327
type of program 327

Background Script
validate Soll numbers with data 502
Background Script Management
compile invalid database objects 498
send messages for exceedance deadline processes 501
synchronise text index of documents with actual content 501
synchronize additional business rules for 1 specific view 501
synchronize additional business rules if necessary 501
Bank 683
Basel II 1
Book costs 504
Bubs_exact 587
bubs_gesprekken_v 467
bubs_job_logging.create_job 470
bubs_session.set_session_info 470
Bubs_tomcat 587
Budget 93, 116, 593, 594
budget after movements 155
budgeted result 155
cost category 155
distribution method 155
document 155
expected maturity 155
expected maturity end 155
explanation 155
project 155
spent 116
Budget Control 49, 594
Budget Movement
cost category from 79
cost category to 79
explanation 79
project 79
Budget next phase
amount next phase 80
budget 80
budget after movements 80
cost category 80
explanation next phase 80
project 80
Build 613
Build 45 614
Building reports
error missing subreport parameter 369
jasper reports 365
menu 365
mime type 373
multiple reporting periods 378
post-report trigger 366
preprinted stationery 379
pre-report trigger 366
report 365
report parameter via url 374
styled text in report field 379
subfunction 365
subreport 369
watermark 379

- C -

Calculated date of realization 126
Calculation
deviation 116
Calendar 577
Calendar has to be open 407
Calendar Update 406
Call
ama flag 113
billing duration (sec) 113
call time as text 113
channel 113
contact 394
default context 113
disposition 113
duration (sec) 113
from cleaned 113
number from 113
number to 113
start 113
telephone 114
to cleaned 113
unique channel identifier 113
Cash Flow 505
at all levels 93
automatic worst case 93
curve 93
end date 93
future 93
historical 93
realized 93
start date 93
toekomstig 93
Cash Flow Projection 1, 92
amount 94
Amount of cash flow detail 94
both calculate and distribute 94
budget 94
calculate 94
calculated amount 94

Cash Flow Projection 1, 92
cash flow daily details 94
cash flow date 94
cash flow end date 94
cash flow method 94
contract 94
cost category 94
costs 94
date of last recalculation 94
deviating amount 94
deviation 94
distribute cash flow 94
distribution method 94
explanation deviating cash flow 94
include explanation in daily flows 94
include explanation in flows 94
include interest in npv 94
invoice flow date 94
invoice flow end date 94
kasstromen 94
last date distributed 94
net present value 94
net present value excluding payables/receivables 94
npv rate (%) 94
npv rate settled posts (%) 94
original difference between cash flows (days) 94
prognosis 94
project 94
project result 94
recalculate 94
revenues 94
rounding 94
settled 94
software version used in last calculation 94
start of projection 94
taken result 94
total payables/receivables 94
type 94
values from last calculation 94
Cash Flow Projection Method
code 342
description 342
pl/sql-script 342
pl/sql-script distribution 342
sort order 342
Category 577
cdr 467
Certificate 568, 656
Chamber of commerce 683
Change
description 73
with order 73
without order 73
Change column width 31
Channel 649, 675
Character
% function with searching 20, 578, 581, 582
&-with the use of multiple url parameters 39
* behind title 14
: in title 14
?-with the use of url parameter 39
_ function with searching 20, 578, 581, 582
Character encoding 275
Check Sum 155
Classification 58
account manager 595
activate on balance 595
actor 595
administrative assistant 595
advertising designer 595
advisor/consultant 595
agriculture and fishing 595
annual report 595
application developer 595
architectural designer 595
art historian 595
auditor 595
automation services 595
balance 595
base metal 595
beautician 595
brokerage, o.g. 595
budget indicators 595
building materials and glass industries 595
business consultants 595
business groups 595
buyer 595
cabaret 595
caretaker 595
catering 595
ceramic designer 595
chemical industry 595
civil servant 595
code 202
commercial employee 595
communication employee 595
communication manager 595
company manager 595
confidentiality 595
construction drawing 595
construction industry 595

Classification 58
controller 595
copywriter 595
corporate trainer 595
coverage ratio 595
covered by insurance 595
culture, recreation 595
customer 595
dance teacher 595
dancer 595
defense 595
dental assistant 595
dentist 595
description 202
designer 595
detective 595
dietician 595
direct debiting 595
director 595
document 595
documentalist 595
driver 595
drugstore 595
editor 595
electric devices 595
erbo 595
executive secretary 595
facility manager 595
facility services 595
fashion consultant 595
film and television producer 595
financial 595
food industry 595
food industry technologist 595
goldsmith 595
goldsmith/silversmith 595
government manager 595
graphic designer 595
group homes 595
hairdresser 595
helping welfare 595
illustrator 595
industrial designer (higher professional) 595
industrial designer (university education) 595
information manager 595
information specialist 595
insurance advisor 595
intermediary 595
intern 595
investment advisor 595
journalist 595
key performance indicators 595
kpi risk margin 595
kpi risk scope creep 595
kpi risk staffing 595
legal classifications 595
machinery industry 595
management assistant 595
margin customer 595
margin: maintain 595
margin: repel 595
market researcher 595
marketing manager 595
maternity nurse 595
metal products industry 595
midwife 595
mime artist 595
mineral extraction 595
museologist 595
musician 595
not signed 595
nurse 595
offer 595
office manager 595
other industry 595
painter 595
paper and cardboard industry 595
pedicure 595
personal services 595
pharmacy assistant 595
photographer 595
photographer/reportage photographer 595
physician assistant 595
physiotherapist 595
police officer 595
policy advisor 595
popmusician 595
pr employee 595
process 595
producer 595
product 595
product deliverable 595
production leader theater 595
professions 595
project leader 595
public 595
public administrator 595
publisher 595
publishing and printing 595
receptionist/telephonist 595
region middle 595
region middle utrecht 595

Classification 58
region north 595
region south 595
region west 595
regions 595
retail car and motorcycle 595
retail food 595
retail non-food 595
risk indicators 595
rma officer 595
royal army officer 595
royal navy officer 595
sales manager 595
sculptor 595
secretary 595
security guard 595
signed 595
social cultural work (scw) 595
social service employee 595
stage director 595
stewardess 595
teacher 595
teaching assistant 595
textile and leather 595
textile designer 595
theater technician 595
tour leader 595
tourism employee 595
translator/interpreter 595
transport and communication 595
transport industry 595
transport services 595
type 595
veterinary assistant 595
visual writer 595
warehouse employee 595
wholesale 595
wood industry 595
CLOB 275
CLOBs to be loaded
column 275
loading message 275
name of object 275
natural key 275
original system reference value 275
Code 330
Code list
code 330
description 330
Code Value
code 330
description 330
sort order 330
value 330
Column
Column Name 280
definition 280
example 280
move 31
short name 280
table definition 280
table example 280
table name 280
Commentator 577
Company network 648
Compile 498
Concept Invoice Line 505
accepted 138
amount 138
amount per unit 138
approve 504
company 138
condition 138
contract 138
cost category 138
Cost Center 138
counterparty reference 138
coverage rate 138
created at 138
created in 138
Created with 138
customer 138
description 138
detail association 138
detail association id 138
discount rate 138
efort (hours) 138
end 138
exported 138
forwarded 504
General Ledger Code 138
group together 138
interface loaded 138
interface updated 138
last change 138
last change in 138
last change with 138
name 138
number 138
origin process unit 138
payment term 138
price list 138

Concept Invoice Line 505
process 138
process status 138
process unit 138
project 138
quantity 138
sequence in group 138
source 138
source id 138
start 138
transaction updated 138
unit 138
vat amount 138
vat code 138
Condition
associate indicator 219
code 219
description 219
explanation 219
payment condition 219
price list 219
Condition Element
code 220
condition 220
depth 220
legal header 220
legal text 220
mark 220
sort order 220
Configuration File 517
Connection 587, 675
Connection Configuration
Invantive Producer 657
Consolidated cash flow 129
Consultant 587
Contact 392
Contact information 683
Contacts
submitting 392
update 392
update all 392
Contract 594
Change 73
cost category 156
counterparty 156
project 156
Contract Budget 93, 116
contract 77
contract budget 77
cost category 77
distribution method 77
document 77
expected maturity 77
expected maturity end 77
explanation 77
project 77
release deviation 77
unallocated budget on cost category 77
Contract Management 219
Contract Processes Generation
continue till 66
contract 66
cost category 66
initial category 66
initial status 66
next generation based upon 66
number 66
process last generated 66
process template 66
project 66
repeat generator 66
start 66
Contractstandcache 498
Conversion 287
Copy Persons
include all 106
include organization involvements 106
include person classification 106
include person role 106
include profile option values 106
include project allocations 106
include project authorisations 106
include project involvements 106
include unit per person and labor type 106
include user role 106
include users 106
new first name 106
new initials 106
new last name 106
new login 106
new middle name 106
new name 106
new rdbms user 106
Copying the Project
city 135
closed 135
cost type postfix 135
customer 135
include all 135
include budget 135
include budget movement 135
include contract budget 135

Copying the Project
include last estimate 135
include project allocations 135
include project authorization 135
include purchase command 135
include revenue 135
name 135
new code 135
new cost type postfix 135
new name 135
organization 135
project 135
project involvement 135
short code 135
Cost category interface
code 255
description 255
explanation 255
fees 255
general costs 255
ground 255
group in source system 255
id 255
interest 255
investment real estate 255
loaded 255
loading message 255
loading status 255
own capital 255
provision 255
unexpected 255
unique reference in source system 255
Cost center
code 200
description 200
directors 605
production 605
sales 605
technical service 605
Twinfield 446
Cost of capital 92
Cost Type 93, 594
analyses 606
away 606
code 196
description 196
design 606
distribution method 196
documentation 606
explanation 196
fees 196
functional support 606
general costs 196
ground 196
hiring based on fixed price 606
hiring based on t&m 606
hours 196
hours general 606
interest 196
interior 606
internal coordination 606
investment real estate 196
kick-back fees 606
master roll up 196
own capital 196
payment term (days) 196
planned hours 606
provision 196
purchase hardware for sale 606
purchase hardware for use in projects 606
purchase software for sale 606
purchase software for use in project 606
questions costs 606
questions revenues 606
remoting 606
result 606
revenues general 606
revenues interest 606
roll up 196
subsidies 606
system development 606
system management 606
system test 606
travel 606
unexpected 196
Costs 593
Counter
code 268
cycle 268
description 268
last value 268
maximum value 268
minimum value 268
name 268
Size of cache 268, 612
starting value 268, 612
value increase 268, 612
Country
code 333
description 333
iso-land code 3 333
iso-land number 333

Country
sort order 333
Create
detail 43
or change 43
Creditor
Twinfield 446
CRM 201
Crumb Trail 13, 17
CTI
Accessibility 114
comfort and stress reduction 114
cost savings 114
efficiency 114
personal information 114
time saved 114
Cubes 272
Customer portal 683
Customised user interface
microsoft access 469
microsoft excel 469
Customize screen with javascript
local html 361

- D -

-D
com.sun.management.jmxremote 568
java.awt.headless 568
Data 649
Change 28
Delete 28
Data Entry 22
hide 45
unhide 45
Data Model
P_APN_CODE 323
P_INCL_ARE_VLAG 323
P_INCL_IDX_VLAG 323
P_INCL_RCT_VLAG 323
P_INCL_TBE_CONTENTS_VLAG 323
P_INCL_TBE_VLAG 323
P_INCL_TCL_VLAG 323
P_INCL_TCN_VLAG 323
P_INCL_VIW_VLAG 323
P_TBE_NAME_PATTERN 323
P_VIW_NAME_PATTERN 323
Database
context 276
nls parameter 276
other parameters 276
parameter 276
Database export 586
Database Object
created at 281
date last modified 281
name 281
type 281
valid? 281
Database Object Definition
line 281
name of object 281
object owner 281
text 281
type 281
valid? 281
Database platform 650
Database sequence 268
Database Session 228
Date
_intrf_geladen 470
end 16
start 16
Dbms
export 643
Debtor
Twinfield 446
Default 518
locale 587
Delete 640
Delete projectt
are you sure? 137
city 137
closed 137
company 137
customer 137
include all 137
include budget 137
include budget movement 137
include cash flow projection 137
include contract 137
include contract budget 137
include contract process generation 137
include document 137
include invoice line 137
include last estimate 137
include process 137
include process classification 137
include process involvement 137
include process note 137
include process relation 137
include process unit 137

Delete projectt
Include project 137
include project allocations 137
include project authorization 137
include project classification 137
include project involvement 137
include project relation 137
include project version 137
include purchase command 137
include revenue 137
include timesheets 137
name 137
project 137
Deviating
budget 49
Deviating encoding
deviating contract 73
deviating description 73
invoice line 73
with order 73
without order 73
Deviation
budget per cost category 54
Deviation Comment
budget 79
cost category 79
explanation 79
project 79
release deviation 79
remaining cost category budget after mutations 79
Dimension
Twinfield 447
Direct link 116
Discount Rate 92
Do not merge 16
Document 501
author 109
bcc 109
cc 109
changed with 109
classification 109
comments 109
content (url) 109
contract 109
cost category 109
created at 79
created with 109
customer 109
document contains 109
document status 109
document type 109
file checksum 109
file name 109
From email address 109
identifier 109
mime type 109
name 109
number 109
number of characters 109
number of keywords 109
number of pages 109
number of words 109
ocr applied 109
organisation author 109
original file name 109
physical location 109
printable 109
process 109
process holder 109
project 109
publish 109
received 109
size 33, 79, 109
size - from (bytes) 109
size - to (bytes) 109
source 109
status 109
store till 109
Supplier 109
To email address 109
to link 33
unique Identification 109
version 109
Document Index 501
Document Involvement
document number 113
limit 113
person 113
role 113
Document Status
code 201
collecting of comments 601
concept 601
definitive version 601
description 201
outdated version, no longer applicable 601
sort order 201
Document Storage 501
Document Type
acceptation document 600
code 202

Document Type
conformation of order 600
control plan 600
description 202
drawing 600
incoming invoice 600
offer of a commercial nature 600
outgoing invoice 600
progress report 600
project plan 600
report 600
sort order 202
standard 600
Domain 330
Drill-down in pdf
hyperlink 37
Driver 662
Duplicate Environment
application schema 583
database export 583
instruction 583
Duplicate the environment with the export schema.
apache tomcat 583
bubs_create.bat 583
bubs_users 583
directory 583
export 583
import 583
oracle sql*plus 583
rights 583
tablespace 583
webapps 583

- E -

Economic index
abbreviation 194
amsterdam stock exchange 601
ing group 601
name 194
Economic index value
date valid 195
name 195
value 195
Economic situation 194
Edit screen template
codecharger 364
html editor 364
url parameter 364
Editing Rights 81
Editor 577
Email 683
deadline 501
error 501
Encoding
request 587
Eniac interface 447
Entering or changing data 385
Entry detail
hide 45
unhide 45
Environment Variables 276
ERP
system 587
Erp administration 259
ERP Processing
bewaartijd 256
error 256
message 256
program 256
Erp system 259
Erp-interface 240, 502
Error
404 653
405 653
Error reports 32, 501
Estate.conf 568
Exact globe 2000 interface
export 446
import 446
Exact online 437, 505
article 445
concept invoice 443, 451
configuration 438
Cost Center 445
export 430
Extraction sales invoice 505
import 430
installation 430
link 430
master data 438
organization 445
posting line 446
project 445
Example business layer update business layer
background script 503
business layer 503
development 503
Excel
Password for changing the file 406
Read-only 406
Exchange 649

ExMerge 577
Expectation
contract 70
cost category 70
distribution method 70
documents 70
expected 70
expected maturity 70
expected maturity end 70
explanation 70
observation Date 70
organization 70
project 70
realization 70
Explanation of the plan 643
Exposé 594
Extension
code 341
description 341
mime type 341

- F -

Failover 651
File format 642
Filter 13
(fast) 16
city 45, 402
classification 45, 402
closed 402
end date 45, 402
legal entity 45, 402
product group 45, 402
product group director 45, 402
project 45, 402
project closed 45
project developer 45, 402
project phase 45, 402
project version 45, 402
reporting date 402
reporting date (travel back to) 45
reporting group 45, 402
select 45
selected 16
start date 45, 402
Finance 130
Financial
perspective on a project or organization 185
project overview level 3 89
project overview level 4 49
Firefox 29
Flow
cash 342
invoice 342
sales volume 342
Form 22
master 27
sub 27
format
PDF 116
XLS 116
Forms
master 389
sub 389
Frequently asked questions
motivation budget required 515
Releasement of provisions 515
sub- and master project 515
From king
general ledger mutation 461
invoice 461
xml export 461
Frotcom interface 451
Function 226
code 259
description 259
description (translated) 259
icon (url) 259
includeable in menu 259
javascript code 259
module language 259
program 259
window name 259
Further Processing of Data in Excel
Database query 34, 37
direct copy 34
report 37
request report 34
Web query 34, 35

- G -

Gateway Microsoft Access 480
Gateway ODBC 478
General concept 10
General condition 261
General ledger account
balance / profit & loss 200
code 200
credit/debit 200
description 200
General Ledger Account Code

General Ledger Account Code
accountancy costs 602
accrued expenses 602
accrued payroll taxes 602
advertising and promotional costs 602
amounts received in advance 602
attorney fees 602
bill advances opening balance 602
bill advances personnel 602
brandstof 602
calculated car costs 602
calculation differences 602
car insurance 602
cash 602
company insurances 602
company inventory 602
concessions and permits 602
contribution zvw employer 602
costs still to pay 602
courses 602
creditors 602
cross posting 602
cross posting liquid assets 602
currency differences 602
debtors 602
debtors preceding year 602
depreciation buildings 602
depreciation company inventory 602
depreciation other immaterial fixed assets 602
depreciation rebuilding costs 602
depreciation transport and means of transportation 602
energy 602
equity/share capital 602
extraordinary expenses 602
extraordinary revenues 602
fines 602
finished product 602
formation expenses 602
general reserve 602
goodwill 602
gross wages 602
ground 602
guarantee 602
inquiry account 602
intellectual property 602
interest and costs bank 602
interest and costs taxes 602
interest expenses 602
interest incomes 602
interest rc dga 602
inventory trading goods 602
lb/pw 602
lease costs 602
long-term credits 602
maintenance & repair 602
maintenance building 602
management fee costs 602
medium-length credits 602
mortgage loans 602
office supplies 602
other car costs 602
other company revenues 602
other debts 602
other general costs 602
other housing costs 602
other immaterial fixed assets 602
other management costs 602
other material fixed assets 602
other personnel costs 602
other sales expenses 602
participations 602
payment differences 602
postal charges 602
prepaid expenses 602
pre-print turnover tax 602
promotion articles 602
provision to pay commissions and the like 602
purchase discounts 602
purchasing costs 602
rabobank 1234.56.789 602
rc dga 602
received sick pay 602
redundancy pay employer 602
renovations 602
rental 602
reorganization facility 602
representation costs 602
required to pay income tax 602
required to pay net wage 602
required to pay other employee premiums 602
required to pay other employer contributions 602
required to pay reservation 13th month 602
required to pay reservation holiday money 602
required to pay social security contributions employee 602
required to pay social security contributions employer 602
required to pay vat acquisition of goods within eu 602
required to pay vat delivery outside eu (import) 602

General Ledger Account Code
required to pay vat high 602
required to pay vat low 602
research and development 602
reservation employers' costs 13th month 602
reservation holiday money 602
result corrections vat declaration 602
revaluation 602
sale discounts 602
specialism study & literature 602
stock exchange costs 602
subscriptions and membership fees 602
telecom costs 602
telephone and fax 602
temporary employees 602
to pay/ receive turnover tax 602
transport and means of transportation 602
travel & accommodation costs trainings/courses etc. 602
travel expenses reimbursement 602
turnover abroad fixed price 602
turnover abroad supplies outside the EU 602
turnover abroad within the community 602
turnover abroad zero rate 602
turnover domestic high rate 602
turnover domestic low rate 602
turnover licences 602
turnover projects fixed price 602
turnover projects t & m 0 % 602
turnover projects t & m 19% 602
turnover to be invoiced 602
undivided result 602
vat private use 602
vpb 602
vpb current fiscal year 602
vpb previous years 602
wia (wao/wga) premium wg 602
work thirds/temporary employee 602
ww/awf premium wg 602
Getting Started 10, 636, 648
Gmail 420
Google Earth 87, 88
Graphical user Interface 232
Grid
Change 21
hide 21, 44
number of pages 21
number of rows 21
open 21
sort 21
unhide 44
Ground Position 1

- H -

Harderwijk 683
Heavy SQL Statement 501
date last seen 277
SQL Text 277
Help 359
Hide 365
Hide and unhide 13
HIDE_DATAENTRY 365
Hiring 181
Home Page 20
Hour
non-invoiced 504
http 649
https 649
Hyperlink 81, 116

- I -

IBM DB2 674
driver 674
IBM DB2 for Windows 650
Identifier 408
IFRS 1, 116
IMAP connection of google gmail 420
Implementation
P_APN_CODE 324
P_TCN_COL_INCL_AUDIT_FLAG 324
P_TCN_COL_INCL_DATA_EXTENSIONS_FLAG 324
Import data erp system
article code 256
cost category 256
erp processing 256
erp system 256
exact 256
general ledger mutation 256
organization 256
person 256
revenue 256
signal list 256
Supplier 256
time of processing 256
user 256
Index 300
application 300
column 300
create 300

Index 300
name 300
non-unique 300
position 300
table code 300
unique 300
Indexing 202
Indicator
finished 86
Informatica PowerCenter 470
Information Exchange 240
example 470
interfacing 469
jdbc 469
odbc 469
sql 469
INO 83
Input field 385
amount 22
check mark 22
date 22
date time 22
drop box 22
input field 22
percentage 22
required field 22
time 22
Input with layout
<b> tag 380

 tag 380
<font> tag 380
<i> tag 380
 tag 380
<style> tag 380
<u> tag 380
DTD 380
settings 380
Insert 640
Installation 517, 653
database 575
database server 518
Exact Online 430
gateway king 458
oracle 521, 545
oracle client 663
outlook add-in user interface 576
tunneling web service 653
web server 568
Installation and upgrade 518
Installation MS Outlook Add-In on Mac 427
Installation test 582
InstallCert 433
Instructions 583
Integrated screen 49
Integration outlook with gmail 420
Integration outlook with microsoft exchange 419
Interaction
action 236, 312
database audit session 236
database session 236, 312
database session serial 236
interaction 236, 312
last transaction 236, 312
login 312
machine 236, 312
module 236, 312
project version 236
query 236, 312
time 236, 312
url 236, 312
user name 236
Interaction handheld scanner 210
Interest Rate Method
6% interest360e 611
6% interest360n 611
6% interest365 611
8% penalty interest360e 611
8% penalty interest360n 611
8% penalty interest365 611
initial Process Unit Status 192
interest 192
interest days per Year 192
number of days without Interest 192
stock 192
unit 192
Interface
cost category 255
invoice line 242
invoices 240
organization 251
persons 247
Interfacing
example 470
Introduction 1
Introduction Invantive producer
business logic 283
database 283
frontend 283
metadata 283
oltp data model 283
repository 283
three-tier architecture 283

Introduction Invantive producer
user Interface 283
Invantive BV 683
Invantive Dotnet Optimizer 676
Invantive estate 1
Invantive outlook add-in user interface 381
Invantive producer
business layer 282
business layer generation 287
business logic 282
concept 283
database generation 287
load repository 287
performance 289
storage layer 282
XML file for web services generation 500
Invantive producer calender update
background script 502
calendar 502
management 502
Invantive producer constraint
business layer 289
data storage 289
metadata 289
oracle rdbms 289
Invantive producer sample business layer
business object 284
normalized data model 284
Invantive producer update statistics
background script 503
statistics 503
Invantive Query Tool 631
Invantive Server Pages
additional business rule 491
asp 491
isp 491
itgen_isp 491
jsp 491
private user interface 491
Invantive Software BV 683
logo 13, 20
Invantive support
email support@invantive.com 360
Invantive Vision 1, 594
Invantive Web Service 648
system requirement 649
Invantive website 360
Invoice
amount 141
code 141
contract 141
cost category 141
credit/debit 141
description 141
deviating contract 141
deviating with/without purchase order 141
distribution method 141
documents 141
expected maturity 141
expected maturity end 141
invoice 141
invoice date 141
line 73, 141
organization 141
payment term (days) 141
points 141
project 141
settled 141
supplier reference 141
ultimately based on purchase order 141
vat amount 141
vat code 141
with order 83, 116
with purchase order 141
without order 83, 116
Invoice based on purchase order 594
Invoice line
amount 144
contract 144
cost category 144
credit/debit 144
description 144
distribution method 144
document 144
end date maturity 144
expected maturity 144
line 144
points 144
project 144
settled 144
ultimately based on purchase order 144
vat amount 144
vat code 144
with purchase order 144
Invoice line interface
amount 242
comments 242
content (url) 242
contract 242
cost category 242
Cost Center 242
credit/debit 242

Invoice line interface
description 242
distribution method 242
expected maturity 242
expected maturity end 242
group in source system 242
id 242
invoice 242
line 242
loaded 242
loading message 242
loading status 242
original file name 242
project 242
settled 242
unique reference in source system 242
VAT Amount 242
VAT Code 242
with purchase order 242
Invoice without purchase order 594
Invoices Interface
description 240
expected maturity 240
expected maturity end 240
group in source system 240
id 240
invoice 240
invoice date 240
loaded 240
loading message 240
loading status 240
organization code 240
payment term (days) 240
supplier reference 240
unique reference in source system 240
Invoicing 496, 504
All Parts 505
approve concept invoice line 504
delete concept invoice line 504
fixed price 505
hour 504
non-invoiced hours 504
other processes 505
project hours 505
Involvement Role 381
approving assignment standard process director 599
approving assignment standard process po 599
code 207
description 207
document author 599
document email bcc 599
document email copy 599
document email receiver 599
document email sender 599
document reviewer 599
document target group 599
limit 207
organization employee 599
organization preferred mechanic 599
organization preferred mechanic 1 599
organization preferred mechanic 2 599
organization preferred mechanic cp 599
organization prim cp 599
organization-purchasing cp 599
project administrator 599
project approver hours 599
project controller 599
project developer 599
project email bcc 599
project email copy 599
project email receiver 599
project email sender 599
project filler 599
project hour writer 599
project increaser 599
project modifier 599
project plan developer 599
project product group director 599
task email copy 599
task email receiver 599
task email sender 599
task hour writer 599
task increaser 599
task modifier 599
task owner 599
task reporter 599
weight 207
ISO
3194 333
639 336
IWO 83

- J -

Java 503, 568
Java (in error) 503
Java (without error) 503
Java class 327
java system variables 276
JDBC 587
JDK 568

Job_seq_geladen 470

- K -

Kettle 470
Key
artificial 300
natural 300
King 507
background script 458
concept invoice line 458
daily processing 458
extraction sales orders 507
xml-import 458
King interface
concept invoice 457
final invoice 457
general ledger mutation 457
installation 458

- L -

Label 202
Labor Type 408, 577
analyses 613
conversion 613
design 613
doc 613
meet 613
planned 613
travel 613
Labor Type Category
code 183
contract 183
cost category 183
description 183
explanation 183
outlook category 183
outlook category color 183
outlook category shortcut key 183
sort order 183
Labour Agreement 181
Land Status
code 171
description 171
not applicable 602
sort order 171
Lang 39
Language 587
code 317, 336
database nls 336
database nls date format 317, 336
database NLS language 317
database NLS territory 317
description 317, 336
nls territory 336
Last
estimate 116
Latest estimate.
amount latest estimate 72
contract 72
cost category 72
distribution method 72
document 72
expected maturity 72
expected maturity end 72
explanation 72
observation Date 72
organization 72
project 72
LDAP 160, 587
ldapsearch 587
Legal Form
aktiengesellschaft 610
code 204
cooperation 610
corporation 610
description 204
explanation 204
foundation 610
gesellschaft mit beschränkter haftung 610
government 610
legal entity 610
limited liability company 610
limited liability partnership 610
limited partnership 610
limited partnership with legal personality 610
limited partnership without legal personality 610
private company with limited liability 610
private individual 610
private limited company 610
public company with legal personality 610
public company without legal personality 610
silent company 610
société anonyme 610
sole proprietorship 610
sort order 204
union 610
Let users exchange data independently
crystal reports 475
microsoft access 475

Let users exchange data independently
sql connection 475
License
active directory gateway 356
additional business rule 356
cash flow projection 356
challenge 356
customer relationship management 356
data security 356
database 356
document management system 356
Dutch 356
element 356
English 356
erp-gateway 356
French 356
German 356
help desk 356
key 356
licensed 356
maximum number of active project developers 356
maximum number of active projects 356
maximum number of invantive control users 356
maximum number of named users 356
Maximum work in progress per project 356
new version 356
outlook add-in 356
processes 356
product name 356
Russian 356
schema 356
Spanish 356
system name 356
timeline 356
timesheets 356
unit 356
used 356
valid from 356
valid to 356
web service 356
Limit 381
Link 649
Local 39
Local html 364
Location
address 1 115
address 2 115
altitude 115
city 115
country 115
diameter 115
full name for use in lists 115
latitude 115
longtitude 115
zip code 115
Log Off 49
Log Out 49
Logfile 587
Logging 587
action 275
client info 275
context 275
database user 275
level 275
machine 275
module 275
number 275
os user 275
text 275
time 275
Login 11
Logistic processs
description 210
support 210
Logpriority 587
Logsize 587
Long Term Prognosis 505
Lov-cache
domain code 335
domain value code 335
key 335
language 335
sort order 335
translated value 335
untranslated value 335

- M -

Main menu 232
Management information 116
Manual 359
Master detail screen 41
Master Roll Up 594
acceptance 605
code 198
description 198
devices 605
external hiring 605
other purchasing 605
planned hours 605
result 605

Master Roll Up 594
revenues varia 605
type 198
master roll ups 125
Mbo.administration 451
Menu 13, 233, 384
available element 17
code 232
description 232
file 43
Menu Item 164
description 233
function 233
icon (url) 233
menu 233
menu code 233
menu group 233
role 233
sort order 233
submenu 233
submenu code 233
url parameters 233
Menu Structure 232
Merant 451
Message 502, 508
code 326
constraint code 326
constraint name 326
data not saved 28
error 32
message 326
shortcut for to close 32
unsaved data 14
messagesBundleReport 373
metadata Invantive producer
autocomplete 286
itgen_applications_v 286
itgen_attribute_rules_v 286
itgen_code_values_v 286
itgen_codes_v 286
itgen_index_columns_v 286
itgen_indexes_v 286
itgen_ref_constraints_v 286
itgen_table_columns_v 286
itgen_tables_v 286
itgen_view_elements_v 286
itgen_views_v 286
nva 286
repository 286
Microsoft 470, 587
*loader 287
. Net 470
Access 470
active directory 587
Excel 116
excel worksheet 287
Integration Services 470
Outlook 381
sql server 587
Microsoft .net framework 4.5 653
Microsoft Active Directory 160, 577
Microsoft excel setting
change password 45
Read-only 45
Microsoft Exchange
2007 577
ExMerge 577
Microsoft iis 653
Microsoft Outlook 577
Category 577
Microsoft Outlook add-in on an Apple Macintosh 427
Microsoft Outlook Add-In User Interface 381
Microsoft SQL Server 650, 674
driver 674
MIME Type
. xml 341
.docx 341
.kml 341
.ods 341
.odt 341
.pdf 341
.rtf 341
.xls 341
code 341
description 341
Module Language
code 319
description 319
Module view usage
Add 308
application 308
autocompleted 308
code 308
delete 308
lookup 308
module 308
module language description 308
picture 308
select 308
update 308
Modules

Modules
application 307
autocompleted 307
code 307
description 307
enter 307
legacy name 307
module language 307
Monetary Unit
code 332
description 332
presentation mask 332
presentation symbol 332
Monitoring framework 502
Mr 2/´jit 210
MS Outlook
Adding new data 389
Information changing 390
Information deleting 390
Ribbon 392
Tab page 392
Ms outlook add-in
Recent items 401
Screen parts 385
title 385
Ms outlook add-in change calendar owner 416
Ms outlook add-in column
change width 396
filtering 396
group together 396
move 396
sort 396
summarize 396
Ms outlook add-in explorer 402
Ms outlook add-in hour registration
date 412
day 412
remaining 412
to work 412
worked 412
Ms outlook add-in preference setting
deviating work extension 404
display suggestions 404
language 404
receive newsletter 404
show anniversaries 404
start page (url) 404
MS Outlook Add-in quick open
budget 401
Budget movement 401
contract budget 401
invoice 401
invoice line 401
latest estimate 401
Order 401
organization 401
person 401
process 401
project 401
revenue 401
unit 401
Ms outlook add-in search
case sensitive 395
search box 395
Ms outlook add-in search results 396
MS Outlook Add-in statistics
first login 406
last login 406
MS Outlook Add-in type of input field
amount 386
Check box 386
date 386
Date-Time 386
Drop box 386
Free text field 386
percentage 386
required field 386
time 386
Ms outlook add-in update calendar
requirements 407
Ms outlook search using tabs 399
Multilingual 39
Multilinguality 587
en - english 39
es - spanish 39
fr - french 39
ge - german 39
nl - dutch 39
ru - russian 39
Multivers 451
class mbo.administration 451
error 457
installation 451
unit4 multivers business connector 451
MySQL 650
driver 674
MySQL Connector/Net 674

- N -

Navigation
Keyboard 384

Navigation
mouse 17, 384
shortcut 17
NCSC 683
NEN norm 2631 196
Net present value 92
Net Value 92
New release 614, 645, 675
Newsletter example
profile option isp 492
send 492
Nls_lang 671
No access 34
NPV 92
number
category 345
Date of First Attempt 345
Do not Deliver after 345
documents 345
finished 345
language 345
last attempt 345
last message 345
link 345
message 345
mime type 345
name of reciever 345
name of sender 345
next attempt 345
Number of Attempts 345
priority 345
receiver 345
sender 345
source 345
source id 345
subject 345
translate content 345
translate subject 345

- O -

odbc.ini 467
odbcinst.ini 467
On-premises 517
Opening hours 683
Operating system Mac OS X 427
Optional feature not implemented 451
Oracle 467, 470, 587, 650
11.2.0.3 521
12.1.0.2 545
client 663, 671
driver 663
explain plan 643
trace 644
Oracle parameter
_optimizer_cost_based_transformation 518
memory_max_target 518
memory_target 518
pga_aggregate_target 518
sga_target 518
shared_pool_reserved_size 518
Oracle pl/sql 327, 503, 504
Oracle SQL
* Plus 470
PL/SQL 470
SQL 470
Order 594
amount 69
amount open 69
charged by hour 69
contact 69
contract 69
cost category 69
delivery date 69
distribution method 69
documents 69
expected maturity 69
expected maturity end 69
explanation 69
granted at 69
planned delivery date 69
points 69
process 69
process holder 69
project 69
purchasing conditions 69
status 69
Supplier 69
supplier reference 69
Organization
account manager 98
activity code 98
activity description 98
address 1 98
address 2 98
city 98
classification 98
code 98
contact purchasing 98
contact sales 98
country 98
customer 98

Organization
date 98
date established 98
document 98
email address 98
employee 98
fax 98
g-account 98
home 98
iban number 98
invoice address 1 98
invoice address 2 98
ip address list 98
KvK number 98
language 98
last review 98
logo (url) 98
mobile number 98
name 98
order taker 98
per address 98
phone work 98
postal address 1 98
postal address 2 98
preferred engineer 1 98
preferred engineer 2 98
primary contact 98
project entity 98
purchasing conditions 98
related organization 98
relationship type 98
remarks 98
selling conditions 98
short name 98
vat number 98
website (url) 98
weight 98
zip code 98
Organization Interface
account manager 251
address 1 251
address 2 251
city 251
contact purchasing 251
contact sales 251
country 251
customer 251
date established 251
email address 251
fax 251
g-account 251
group in source system 251
home 251
iban number 251
icon (url) 251
invoice address 1 251
invoice address 2 251
legal form 251
loaded 251
loading information 251
loading message 251
loading status 251
logo (url) 251
mobile number 251
name 251
Number Chamber of Industry and Commerce 251
organization code 251
per address 251
phone work 251
postal address 1 251
postal address 2 251
primary contact 251
project entity 251
remarks 251
repealed 251
short name 251
Supplier 251
unique reference in source system 251
vat number 251
visitor address 251
visitor address 1 251
visitor address 2 251
website (url) 251
zip code 251
Organization Involvement
Involvement Role 102
limit 102
organization 102
person 102
Organization Relation Type
code reversed 203
competitor 607
container 203
description from 203
description to 203
establishment 607
location 607
organization 607
owns a majority in 607
owns minority in 607
partial interest 607

Organization Relation Type
relationship type 203
retains 607
Supplier 607
Orig_system_reference 470
Outlook 381
Outlook add-in query-tool 402
Output 642
Overview last action 413
Owner 577

- P -

Package 281
packages 276
Password 11, 518
Payment Schedule
CDM2 595
customized software development 2 terms 595
Payment term
associate indicator 223
code 223
description 223
general empty 595
general purchasing 595
general sales 595
number of days 223
PDF 37
Period
Information 93
Person 225
address 1 102
address 2 102
children 102
city 102
city of birth 102
classification 102
company 102
country 102
country of birth 102
date emails allowed 102
date of birth 102
date of death 102
date of last review 102
date of marriage 102
department 102
document 102
email address 1 102
email address 2 102
email address 3 102
email address 4 102
email address for workflow 102
emails allowed 102
emails allowed evidence 102
employee number 102
facebook address 102
fax 102
first name 102
function 102
gender 102
hobbies 102
home 102
hyves address 102
iban number 102
icq address 102
initials 102
internal rate 102
ip address list 102
language 102
last name 102
linkedin address 102
manager 102
middle name 102
mobile number 102
myspace address 102
name 102
nickname 102
organization 102
partner 102
passport photo (url) 102
plaxo address 102
rdbms user 102
remarks 102
room 102
signature (url) 102
sip address 102
skype address 102
social security number 102
title 102
twitter address 102
unique initials 102
website(url) 102
work 102
work extension 102
working schedule 102
xing address 102
youtube address 102
zip code 102
Person Involvement 381
Person Roles
Administrator 162
Hours signed 162

Person Roles
internal rate 162
name 162
organization 162
process detector 162
process holder 162
project developer 162
time writer 162
unit 162
user invantive producer 162
working schedule 162
Personal information
current password 48
new password 48
Repeat new password 48
your name 48
Personal skill
level 108
skill 108
user 108
Persons Interface
address 247
address 1 247
address 2 247
Administrator 247
children 247
city 247
company 247
contact information 247
country 247
date of birth 247
date of death 247
email address 1 247
email address 2 247
email address 3 247
email address 4 247
employee number 247
fax 247
function 247
gender 247
group in source system 247
hobbies 247
home 247
iban number 247
id 247
initials 247
invantive estate 247
last name 247
loaded 247
loading information 247
loading message 247
loading status 247
manager 247
middle name 247
mobile number 247
name 247
nickname 247
other 247
partner 247
password 247
process detector 247
process holder 247
project developer 247
remarks 247
signs timesheets 247
time writer 247
unique reference in source system 247
user name 247
zip code 247
Pfx 568
PL/SQL Profiling
automatic 512
enable 512
I/O bandwidth 512
manual 512
release api 512
scheduler 512
setting 512
Site.properties 512
tomcat 512
Planned
date of transport 74
date sales 74
end of construction 74
start date 74
Planning
Planning module 415
Update agenda 415
Post.sql 575
Pre.sql 575
Preference 45
Preferences 402
Preferences - reporting
deviating work extension 45
language 45
receive newsletter 45
reporting unit 45
show anniversaries 45
show tip 45
start page (url) 45
time reporting unit 45
to merge subprojects 45

Preferences - reporting
work extension 45
Preparation database once only
acceptation 476
production 476
Preparation database pro user 477
Preparation on PC 478
Preparation own background process
PL/SQL Code 489
Price List
associate indicator 186
code 186
description 186
energetic specific prices 607
general empty 607
general purchasing 607
general sales 607
only for customers in the logistics 607
Price List Line
included price list 186
price list 186
sales price 186
sort order 186
unit 186
valid from 186
valid to 186
Price List Report 188
Print 49
Privacy policy 683
Probe 230
procedures 276
Process
category 58
code 58
customer reference 58
deadline 58
description 58
document 58
fixed price 58, 505
hours determined on 58
impact 58
next review 58
on behalf of 58
origin 58
planned hours 58
planned start realization 58
process holder 58
prognosis to go hours 58
progress (%) 58
project 58
remarks 58
reported by 58
status 58
supplier reference 58
unit 58
Process Category
change request 607
code 175
complaint 607
description 175
enhancement request 607
failure 607
fix 607
invoice 607
milestone 175, 607
n/a 607
not a bug 607
out-of-scope 607
problem report 607
process 175
process-related (meetings etc) 607
project meeting 607
purchasing 607
query 607
question 607
request for leave 607
sale process real estate 607
sales 607
sort order 175
suggestion for future work 607
template 607
unknown, not classified yet 607
user's documentation 607
workflow approving incoming invoice 607
workflow approving outgoing invoice 607
Process Holder 508
Process Impact
average 608
code 176
description 176
grave 608
low 608
sort order 176
weight 176
Process note 508
category 58
publish Text 58
text 58
Process Note Category
audit 608
code 179
description 179

Process Note Category
email 608
fix request 608
personal meeting 608
project group consultation 608
sort order 179
steering group consultation 608
telephone conversation 608
user documentation 608
various other 608
Process Participation
description 65
Involvement Role 65
limit 65
person 65
process 65
process category 65
project code 65
Process Provenance
code 176
customer 608
description 176
development 608
incoming invoice 608
outgoing invoice 608
production 608
sales 608
sort order 176
test 608
unknown, not classified yet 608
walkthrough 608
Process Relation
end status 173
from 173
on 173
relationship type 173
weight 173
Process Relation Type
code reversed 180
container 180
description from 180
description to 180
predecessor end to end 180
predecessor end to start 180
predecessor start to end 180
predecessor start to start 180
relationship type 180
Process Status
accepted 173
allow non end status timesheets 173
allow quick notes 173
bad credit check 173
booked 173
code 173
description 173
end status 173
external description 173
lead 609
modifications hours 173
parked 173
progress (%) 173
ready for invoicing 173
send over deadline emails 173
sls contract 609
sls prospect 609
sort order 173
start status 173
to be discussed 173
work in progress 173
Process Status Transition
automatically try to set next status 177
end 177
Involvement Role 177
maximum limit 177
minimal limit 177
pl/sql function 177
process category new 177
process category old 177
process status from 177
process status to 177
role 177
start 177
Process unit status
billable 609
entered 609
invoiced 609
sold 609
Processes 496
Processes dashboard
open processes per process owner 119
overdue processes per process owner 119
processes per status 119
Processes limited 62
Processing in order 643
Product 210
active network component 609
article group 215
beamer 609
code 215
description 215
General Ledger Code 215
handheld (telephone, pda) 609

Product 210
icon (Image) 215
icon (url) 215
ip address 609
printer 609
property 215
redemption price 215
sellable 215
splitable 215
storeable 215
supplier reference 215
telephone 609
telephone number 609
vat code 215
workstation/server 609
Product cluster
code 166
description 166
explanation 166
Product group 210, 594
code 214
description 214
General Ledger Code 214
hardware 610
Information 610
intern 609
sales and marketing 609
support 609
system development 609
system management 609
Profile 518
Profile Option
Bubs-brt-maximum-number-emails-each-time 502
bubs-cfl-costaccounting-frl-omschrijving-patroon 504
bubs-cfl-costaccounting-ftr-code-kosten-patroon 504
bubs-cfl-costaccounting-ftr-code-opbrengsten-patroon 504
bubs-cfl-costaccounting-ftr-omschrijving-patroon 504
bubs-cfl-costaccounting-kbg-code-opbrengsten 504
bubs-cfl-costaccounting-pjt-code-opbrengsten 504
bubs-interface-exactonline-directory-input 437
bubs-interface-exactonline-factuur-artikel-conversie 505
bubs-interface-exactonline-factuur-artikel-proces-unit 505
bubs-interface-exactonline-factuur-artikel-uren 505
bubs-interface-exactonline-factuur-artikel-vaste-prijs 505
bubs-interface-exactonline-factuur-dagboek-verkoop 505
bubs-interface-exactonline-factuur-eenheid 505
bubs-interface-exactonline-factuur-formaat-arbeid 505
bubs-interface-exactonline-factuur-formaat-arbeid-notitie 505
bubs-interface-exactonline-factuur-kostenplaats-conversie 505
bubs-interface-exactonline-factuur-kostenplaats-proces 505
bubs-interface-exactonline-factuur-kostenplaats-proces-unit 505
bubs-interface-exactonline-factuur-regel-formaat-artikel 505
bubs-interface-exactonline-factuur-regel-formaat-artikel-notitie 505
bubs-interface-exactonline-factuur-regel-formaat-vaste-prijs 505
bubs-interface-exactonline-factuur-regel-formaat-vaste-prijs-notitie 505
bubs-interface-exactonline-factuur-regel-volledige-inhoud 505
bubs-interface-exactonline-factuur-tekst-geen-commentaar 505
bubs-interface-exactonline-factuur-tekst-geen-locatie 505
bubs-interface-exactonline-factuur-tekst-geen-proces-code 505
bubs-interface-exactonline-factuur-tekst-geen-proces-omschrijving 505
bubs-interface-exactonline-formaat-datum 505
bubs-interface-exactonline-formaat-getal 505
bubs-interface-exactonline-gebruiker 437
bubs-interface-exactonline-partnersleutel 437
bubs-interface-exactonline-url-download 437
bubs-interface-exactonline-url-upload 437
bubs-interface-exactonline-vlag-1-factuur-per-concept-regel 505
bubs-interface-exactonline-wachtwoord 437
Bubs-interface-king-formaat-datum 507
Bubs-interface-king-formaat-getal 507
Bubs-interface-king-order-formaat-arbeid 507
Bubs-interface-king-order-kop-regel-1 507
Bubs-interface-king-order-kop-regel-2 507
Bubs-interface-king-order-kop-regel-3 507
Bubs-interface-king-order-regel-formaat-artikel 507
Bubs-interface-king-order-regel-formaat-vaste-prijs 507

Profile Option
Bubs-interface-king-order-tarief-proces-units 507
Bubs-interface-king-order-tarief-uren 507
Bubs-interface-king-order-tarief-vaste-prijs 507
Bubs-interface-king-order-tekst-geen-commentaar 507
Bubs-interface-king-order-tekst-geen-locatie 507
Bubs-interface-king-order-tekst-geen-proces-code 507
Bubs-interface-king-order-tekst-geen-proces-omschrijving 507
Bubs-interface-king-order-voet-regel-1 507
Bubs-interface-king-order-voet-regel-2 507
Bubs-interface-king-order-voet-regel-3 507
Bubs-sct-send-mail-smtp-authenticate 502
Bubs-sct-send-mail-smtp-password 502
Bubs-sct-send-mail-smtp-user 502
bubs-tak-email-houder-bij-wijziging 508
bubs-tne-email-houder-bij-wijziging 508
changeable for system level 263
changeable for user level 263
code 263
default value 263
description 263
pl/sql error message 263
pl/sql function 263
Twinfield 446
use historical values 263
Profile Option Value
default value 265
description 265
explanation 265
profile option 265
specified 265
value 265
Prognosis
end of work 93
Prognosis Model 498
Programming language 319
Project 93
account manager 130
address 1 130
address 2 130
administration third party 130
Administrator 130
budget approved on 130
category 57
charged by hour 130
city 130
classification 130
closed 130
code 130
company 130
controller 130
cooperation with 130
cost category postfix 130
country 130
customer 130
customer reference 130
date land purchased 130
date next review 130
date of last review 130
definition 130
description 130
deviation on cost category 130
document 130
end of construction 130
end of work 116
expected investment 130
filter invoice parties 130
filter purchase order takers 130
free field 1 130
free field 2 130
full name for use in lists 130
ground in m2 130
ground position 130
icon (url) 130
land status 130
logo (url) 130
master 116
master project 130
name 130
number of houses 130
Number of parking spaces 130
office space in m2 130
other in m2 130
part 116
phase 130
prepare hours 505
product group 130
product group director 130
project 57
project developer 130
project type 130
project website (url) 130
provision 130
purchasing conditions 130
release deviation on contract 130
released budget 130
reporting date 57
reporting group 130

Project 93
risk percentage 130
selling conditions 130
shop space in m2 130
short code 130
sort order 130
start of handover 130
start of realization 130
start of sales 130
status 130
status indicator 130
success rate 130
supplier reference 130
Twinfield 446
version 57
xml 500
Project Allocation
end 154
explanation 154
extendable 154
labor type 154
legally binding 154
location 154
maximum number of working hours 154
minimum number of working hours 154
name 154
next review 154
optional prolongation 154
percentage working schedule 154
start 154
working schedule 154
Project authorisation
added implicitly 163
allow edit 163
customer 163
explanation 163
project 163
project entity 163
user 163
Project Dashboard
#Projects per Phase 119
% sold per project 119
margin per project 119
project financial 119
Project development 49
Project File 594
Project Involvement
city 56
Involvement Role 56
limit 56
name 56
person 56
product group 56
project 56
Project management system 1
Project or process 409
Project Phase 594
allow non end status timesheets 167
code 167
description 167
explanation 167
icon (url) 167
modifications hours 167
running 610
sales 610
sort order 167
wrapping up 610
Project Relation
from 168
on 168
type 168
weight 168
Project Relation Type
code reversed 169
construction management 610
container 169
description from 169
description to 169
relationship type 169, 610
solver 610
successor 610
Project Status
city 55
code 55
date next review 55
date of last review 55
name 55
product group director 55
project developer 55
project phase 55
status 55
status indicator 55
Project Structure 166
Project Version 273
Project Version Categorie
business plan 610
code 170
description 170
draft 610
monthly review 610
quarterly review 610
sort order 170

Project Version View 273
active 272
explanation 272
project based 272
selection column 272
table name 272
view name 272
Property
are wage fittings applicable 601
cadastral code 601
color in free text format (standard free) 601
counter 217
gross capacity according to nen 2580 (m3) 601
gross floor area according to nen 2580 (m2) 601
label that needs to be supplied along with the sale of inter alia cars, electric devices, lamps and buildings according to various European guidelines (92/75/cee, 94/2/ce, 95/12/ce, 96/89/ce, 2003/66/ce). 601
material (wood, filt, iron) 601
number of a3 prints black/white 601
number of a3 prints color 601
number of a4 prints black/white 601
number of a4 prints color 601
number of floors 601
number of processors 601
number of rooms 601
number of toilets 601
ral color 601
rentable floor area according to nen 2580 (m2) 601
rubric 601
size of physical memory (mb) 601
space 601
version code of the software 601
volume storage memory on disk (gb) 601
Property Determination Method 218
Provider 650
Providers 660
Public folder 577
Purchase Order 594
Purge Retrieved General Ledger Information
Delete 257
erp system 257
filter 257
general ledger 257
Interface 257
invoice 257
invoice line 257
processing 257
retrieved general ledger information 257

- Q -

Quantity
records per page 20, 578, 581, 582
Query 240
execution time 643
result 643
row 643
Query Tool
editor section 637
history of executed queryies 644
output section 637
Query Tool examples 637
Quest TOAD 470
Quick configuration 3, 632, 648

- R -

Rapportparameter
add_bookmark_this_report 373
add_bookmarks 373
add_custom_props 373
filename_addition 373
mime_type 373
p_cig_description 368
p_cig_description_lang 368
p_connection_estate 368
p_connection_report 368
p_isg_subtitle_logo_reports 368
p_mat_gbr_login_code 368
p_mat_logo_url 368
p_mat_server_prefix_url 368
p_pagenumber_offset 368
p_sysdate_c 368
p_url 368
report_connection 368
report_locale 368
report_resource_bundle 368
rpt_code 368
suppress_filter_in_pars 373
suppress_function_in_pars 373
Rating 210
Read 226
Read and write 226
Reading method
application manager system configuration 595
digitally retrieved through the internet 595
not applicable 595
technician on site 595

Recycle bin 502
Redundancy 651
Reeleezee
installation 447
link 447
preparation product 447
preparation relationship 447
preparation sales invoice 447
Referential constraint
create 305
documentation 305
from - application 305
from - column 305
From - table 305
name 305
role 305
sort order 305
to - application 305
to - column 305
to - table 305
unhide 305
Referential index 300
Register 671
Release 2012r2 614
Release 2014R1 620, 645, 675
Release provision 515
Releasement of provisions 515
Remainder 116
calculation 116
Repeat Generator
code 344
description 344
explanation 344
pl/sql function 344
pl/sql function previous 344
Replicas 272
Report 37, 81, 121, 232
cash flow projections 128
cash-flow details 98
concept next phase 89
conditions 222
Cost Category Structure 197
data model 323
financial project overview level 4 82
functions per role 226
General Financial Project Overview 123
geographical overview organizations 87
geographical overview projects 88
hyperlink 28, 81, 82, 83, 84, 85, 89, 91, 401
implementation 324
invoiced time 152
menu structure 234
overall cash flow projections 129
overview additional business rules 271
overview project version dates eligible for merging 273
pdf 28, 401
persons per role 225
Price List 188
processes overview 85
processes per relation 86
product overview 126
project allocations overview 155
project authorizations per person 223
Project Management Document 125
project overview directors 124
project overview level 1 120
project overview level 3 81
project revenues 91
project status per cost category 83
project status workbench 84
reporting 404
Reporting time unit 404
Reporting unit 404
timesheets 151
to merge subprojects 404
User activity 91, 414
xls 28, 401
Report Aggregation Levels
1 116
2 116
3 116
4 116
Report Element 261
Report financial project overview level 1
Administrator 121
budget approved on 121
city 121
code 121
cooperation with 121
costs 121
end of production 121
free field 1 121
free field 2 121
houses 121
legal structure 121
name 121
offices (m2) 121
other (m2) 121
parking lot 121
phase 121
possible remarks 121

Report financial project overview level 1
product group 121
product group director 121
project developer 121
project result 121
project result (%) 121
released budget 121
revenue 121
risk rate 121
shops (m2) 121
Start of Realization 121
success rate 121
taken 121
Report financial project overview level 2
Available compared to prognosis 121
budget 121
budget to realize 121
contractual revenue 121
deviation 121
invoice based on purchase order 121
invoice without purchase order 121
latest estimate 121
open contr. revenue 121
orders 121
prognosis 121
project overview level 1 121
project overview level 2 121
Report format
hyperlink 81
PDF 81
XLS 81
Report Function 261
Reporting Date 16
Reporting time unit
code 334
description 334
presentation mask 334
sort order 334
Reporting Unit
code 331
description 331
divider 331
presentation mask 331
sort order 331
Request access 11
agreement 12
company 12
country 12
email address 12
license 12
no competitor 12
opt-in 12
possible explanation 12
reason of request 12
your name 12
Required fields 382
Required software client 517
res_odbc.conf 467
Revenue 93
#units 74
address 74
budgeted 116
calculated date of production 74
category 74
charged by hour 74
city 74
contract 74
contractual 116
cost category 74
customer 74
customer free format 74
customer reference 74
date realization sale 74
date sales 74
description 74
distribution method 74
documents 74
end of construction 74
expected maturity 74
expected maturity end 74
explanation 74
master roll up 74
merged project 74
open 74
project 74
realized revenues 74
roll up 74
sold 74
to be invoiced 74
Revenue budget substantiation 516
Revenue Interface
#units 245
address 1 245
address 2 245
budgeted result 245
buyer 245
category 245
charged by hour 245
city 245
contract 245
cost category 245
date realization sale 245

Revenue Interface
description 245
end of delivery 245
expected maturity 245
expected maturity end 245
explanation 245
group in source system 245
id 245
loaded 245
loading message 245
loading status 245
multiple periods 245
planned date sales 245
planned end date of delivery 245
planned start of realization 245
project 245
realized revenues 245
unique reference in source system 245
Revenue Type
code 182
counts as production 182
description 182
divider 182
presentation mask 182
Reporting unit 182
Revenues 593
Rights 577
Add 28, 390
Change 28, 390
Delete 28, 390
Risk Model 1
Role 225, 226
all projects editable 164
All projects visible 164
description 164
development 611
exploitation 611
fa 611
management 611
pd 611
public 611
role 164
role code 611
see all anniversaries 164
see all documents 164
see all process notes 164
Role authorisation
allow edit 165
function 165
role description 165
Roll Up 594
acceptance 613
description 197
devices 613
external hiring 613
master roll up 197
other purchasing 613
planned hours 613
result 613
revenues varia 613
roll up 197
Route 683
Routing 650
Run etl process 499

- S -

Save
Days to Keep 228
versions 228
Scheduler 503, 504
activate on startup 230
activation interval 230
category 230
code 230
database session 230
description 230
java object 230
last installed 230
last message 230
machine 230
old messages 230
status 230
Screen 232
Screen element
create or change 20
data entry details 20
grid detail 20
roll down 30
roll up 30
Search 20, 578, 581, 582
search result 20
Screen name 14
Search
detail 43
result 43
Search Filter
applied 14
Search result detail
hide 45
unhide 45
SecuredUrl 587

Security
combination function and project 10
document 10
function 10
project 10
Security incident 683
Security model 649
Select 640
Selection 14
Server 498
. xml 568
url 587
Server Page
application 267
code 267
description 267
specification 267
Service.svc 653
Setting
adobe pdf default new user 349
Advanced 417
all projects editable 349
All projects visible 349
allow annotation 349
allow budget movements across master rollup cost categories 349
allow copying 349
allow fill in 349
allow modifying 349
allow printing 349
application administrator 349
audit interaction 349
audit transaction 349
automatically create contract budget for remaining cost category budget 349
automatically create contract budget of 0 349
change password 349
check existence of url 349
company address (input with layout) 349
company logo (url) 349
company name (long) 349
company name (short) 349
contract for remaining cost category budget 349
data security 349
database 349
Debug 417
Disconnect idle connection after (sec) 349
documents folder on server 349
documents load folder on server 349
documents recycle bin folder on server 349
domains not through Proxy 349
email address dealer 349
email address sender 349
enable screen reader option 349
end date 349
environment in footer (HTML) 349
expression period (sql) 349
financial unit reporting 349
footer (input with layout) 349
footer on reports 349
forecast model 349
General 417
general ledger 349
handheld css (url) 349
interval between message delivery retry (sec) 349
language 349
layout 349
local html footer 349
local html head 349
local html header 349
log business rules 349
logo op rapports (url) 349
logo op screens (url) 349
mail server via smtp 349
main menu (url) 349
Maximum document size (kb) 349
microsoft excel setting 349
monetary unit 349
name of sender 349
New user defaults 349
notes for automatically created contract budget 349
notes for automatically created contract budget for remaining cost category budget 349
number of rows per page 349
organization 349
password owner 349
password user 349
payoff company (input with layout) 349
pl/sql function for pdf watermark 349
pl/sql function for report location 349
pl/sql profiling 349
postfix background log file 349
postfix background output file 349
prefix background log file 349
prefix background output file 349
prefix server (url) 349
print css (url) 349
proxy port 349
proxy server 349
purchasing condition 349
rdbms user prefix 349

Setting
Read-only 349
receive newsletter 349
release deviation for automatic contract budget for remaining cost category budget 349
release deviation for automatically created contract budget 349
retention period job (days) 349
Retention Period Message (days) 349
screen css (url) 349
selling condition 349
show anniversary 349
show number of anniversary days 349
show tip 349
splash (url) 349
start date 349
time unit reporting 349
titel (html) 349
to merge subprojects 349
use encryption 349
vat code 349
warning tone imminent closure due to inactivity (sec) 349
Setting debug
AutoReply with a changed appointment 419
Debug mode 419
Ignore ‘unfamiliar‘ error at sync agenda 419
Setting general
Get settings from 417
Number of available connections 417
Register outgoing email 417
Show in context menu 417
Use Add-in 417
Settings.xml 657
Shortcut 16, 29
F11 full screen 29
Show 594
Site.properties
authenticator.connectionname 587
authenticator.factoryclassname 587
authenticator.inheritancerights 587
authenticator.ldap.fillinpatternlogin 587
authenticator.ldap.fillinpatternuniqueattribute 587
authenticator.ldap.fullrecognition 587
authenticator.ldap.port 587
authenticator.ldap.protocol 587
authenticator.ldap.server 587
authenticator.ldap.suffix 587
authenticator.ldap.systemaccount 587
authenticator.ldap.useruniqueattribute 587
authenticator.loginfieldname 587
authenticator.loginvarname 587
authenticator.passwordfieldname 587
authenticator.securitystorage 587
authenticator.securitytype 587
authenticator.tablename 587
authenticator.useridfieldname 587
authenticator.useridvarname 587
bubs_exact.booleanformat 587
bubs_exact.dateformat 587
bubs_exact.dateleftdelim 587
bubs_exact.daterightdelim 587
bubs_exact.dbnameuppercase 587
bubs_exact.dbtype 587
bubs_exact.driver 587
bubs_exact.fieldleftdelim 587
bubs_exact.fieldrightdelim 587
bubs_exact.maxconn 587
bubs_exact.name 587
bubs_exact.optimizesql 587
bubs_exact.password 587
bubs_exact.timeout 587
bubs_exact.url 587
bubs_exact.user 587
bubs_tomcat.booleanformat 587
bubs_tomcat.dateformat 587
bubs_tomcat.dateleftdelim 587
bubs_tomcat.daterightdelim 587
bubs_tomcat.dbnameuppercase 587
bubs_tomcat.dbtype 587
bubs_tomcat.driver 587
bubs_tomcat.fieldleftdelim 587
bubs_tomcat.fieldrightdelim 587
bubs_tomcat.maxconn 587
bubs_tomcat.name 587
bubs_tomcat.optimizesql 587
bubs_tomcat.password 587
bubs_tomcat.sessioncommand0 587
bubs_tomcat.timeout 587
bubs_tomcat.url 587
bubs_tomcat.user 587
defaultlocale 587
encoding 587
language 587
logfile 587
logpriority 587
logsize 587
requestencoding 587
securedurl 587
serverurl 587
Skill
basic 612

Skill
code 208
computer languages 612
description 208
financial administrator 612
financial controller 612
financial director 612
function 612
general director 612
glasses needed 612
lost left leg 612
microsoft certified system engineer 612
physical challenges 612
project developer 612
project manager 612
system engineer unix 612
system engineer windows 612
Skill for a process
level 66
process 66
skill 66
Smoke 575
SMTP 502
Soll Value 240, 502
check till 238
code 238
date valid 238
description 238
formula 238
parameter value 238
value 238
Source 81
asterisk voip 467
Exact Online 430
reeleezee 447
Twinfield 446
SOX 1
SQL 240, 636
Sql statements 514, 652
SSL 568
Staging 470
Start and login
connect automatically 382
connection 382
password 382
store password 382
user name 382
Start up 11
Statistic
first login 45
invoiced (hours) 58
last login 45
number of projects in filter 45
spent (hours) 58
Stock 210
bank products 606
central warehouse. 606
code 211
description 211
explanation 211
mini cooper 606
not applicable 606
sales (uncertain if delivery is necessary) 606
strip card holland railconsult 606
strip card huntec 606
strip card piet klim 606
vw transporter 1 606
vw transporter 2 606
Storeable
#units 212
article 212
article group 212
last transaction 212
stock 212
unit 212
Sub- and Master project
convert 515
definitions 515
usage 515
Subfunction
active 261
code 261
depth 261
description 261
document number 261
function 261
loop 261
looping query 261
report 261
sort order 261
url parameter 261
Submenu 232
Submit background job
parameter 228
requested start time 228
script 228
Subreport 369
Subreport Parameter
location 369
p_pjt_code 369
report_connection 369
report_locale 369

Subreport Parameter
report_resource_bundle 369
Superficies 93
Supplier 594
Support 683
Svctraceviewer 514, 652
Sync_db_with_metadata 287
Synchronisation 501
Synchronization of Calendar 406
System 470
System Check
code 348
contract positions 348
element 348
execute proposed action 348
explanation importance 348
explanation problem 348
failure 348
proposed action 348
special characters 348
url in browser en settings 348
System Information
Anti-alias fonts 361
browser 361
code name 361
color depth 361
Java available 361
maximal resolution 361
number of colors 361
platform 361
resolution 361
version 361
System optimalisation 502
system requirement
application server 517
database management system 517
invantive estate/vision 517
minimum 2 gb working memory 517
operating system 517
System shell 327

- T -

Table 502
application 294
average size 279
code 294
content last filled on 272
data category 294
date last analysis 279
default referential column 294
definition 279, 294
documentation 294
enter 294
example 279, 294
interface? 294
label plural 294
label plural when referenced 294
label singular 294
label singular when referenced 294
legacy name 294
Maintain History? 294
name 279, 294
number of indexes 279
number of rows 279, 294
short name 279
show history 294
size 279
size indexes 279
size table 279
structure updated till 272
tablespace 279
type 279
user may delete 294
user may Insert 294
user may select 294
user may update 294
valid 272
Table Column
Add order 294
application 294
conversion 294
data length 294
data length type 294
data precision 294
data scale 294
data type 294
definition 294
documentation 294
enter 294
example 294
expression default value 294
label plural 294
label plural when referenced 294
label singular 294
label singular when referenced 294
legacy name 294
name 294
optional 294
show in record 294
show in search filter 294
show in search result 294

Table Column
show in value list 294
Technical administration 259
Telephone exchange 114
Terminology
budget control 593
contract 593
cost category 593
erp system 593
estate 593
exact 593
exposé 593
invoice based on purchase order 593
invoice without purchase order 593
master roll up 593
Order 593
product group 593
project phase 593
roll up 593
Supplier 593
terminology 593
unhide 593
user 593
user interface 593
vision 593
Test 502
code 237
date valid 237
difference accepted 237
explanation 237
integrity proved 237
ist value 237
Text
entered 39
fixed 39
Text mask
application 185
code 185
description 185
text 185
text/xml 341
Thread 230
time traveling 276
Timesheet
booked costs 149
booked project 149
efort (hours) 149
explanation 149
hours billable 149
labor type 149
location 149
name 149
process 149
project 149
start 149
timesheet status 149
unit sales price 149
Timesheet Status 505
actuals 193
approved by employee 612
approved by manager, billable 612
booked 193
change comments 193
change effort 193
change labor type 193
change location 193
change notes 193
change process 193
change project 193
change start 193
code 193
delete timesheets 193
description 193
end status 193
explanation 193
initial 612
invoiced and definitive 612
planned 612
ready for invoicing 193
role to change unlimited 193
sort order 193
start status 193
Timesheet Status Transition
role 194
status hours new 194
status hours old 194
Tip
code 325
message (html) 325
Title 13, 14
Tns_admin 671
Tnsnames.ora 671
Tnsping 671
To Exact Online
concept invoice line 438
request background job 438
sales 438
To king
background script 458
concept invoice line 458
daily processing 458
xml-import 458

To Merge
subproject 116
To parse 501
To reeleezee
etl script 448
parameter 448
xml file 448
Transaction
action 314
database session 314
login 314
machine 314
module 314
table 314
table reference 314
time 314
transaction 314
Transactions
action 235
database audit session 235
database session 235
database session serial 235
login 235
machine 235
module 235
table 235
table reference 235
time 235
transaction 235
Translation 331
include in glossary 338
include in resources 338
key 338
language 338
translation 338
Trunk Table 323
Twinfield
background script 447
Cost Center 446
creditor 446
debtor 446
dimension 447
export 446
import 446
link 446
organization 446
profile option 446
project 446

- U -

Unit 210
acquired 157
article 157
article group 157
commissioning 157
confidential notes 157
contact (url) 157
dealer 157
description 157
document 157
established 157
explanation 157
ground (m2 per unit) 157
icon (Image) 157
icon (url) 157
location 157
logistics 157
owner 157
property 157
property value 157
reading method 157
real estate 157
redemption price 157
relationship 157
relationship type 157
right of use end 157
right of use start 157
sellable 157
space (m2 per unit) 157
space (m3 per unit) 157
special note 157
special note available 157
splitable 157
storeable 157
unique identifier (SN) 157
unique identifier supplier (sn) 157
unit to 157
Units (quantity) 157
user 157
Version/subtype 157
warranty end 157
warranty start 157
weight 157
Unit per person and labor type
labor type 189
name 189
unit 189
Unit Relation Type

Unit Relation Type
code 218
code reversed 218
container 218
description from 218
description to 218
Unit Transaction
explanation 213
stock 213
stock change 213
transaction date 213
unit 213
unit transaction type 213
Unit Transaction Type 210
code 214
description 214
reverse sign 214
sort order 214
Unit used
#billable 58
#units 58
booked 58
completed 58
date start rate 58
explanation 58
group together 58
process unit status 58
redemption price 58
stock 58
unit 58
unit sales price 58
vat code 58
Unit4 multivers 451
Unit4 Multivers interface 451
Unlock 518
Update 640
Upgrade 518, 568
Url 39, 587
opening screen 13
Url-parameter
template orig_path 364
template path 364
User 164, 594
code 308
data 587
name 308
User Activity
hole 91
hours overlap 91
Process level 414
Time registration 414
User defined property
VisionForGUID 577
VisionOutlookChangedDueToSync 577
VisionUurId 577
VisionUurTransactieBijgewerkt 577
User Interface 11, 594
User Message
do not show after 347
message (html) 347
message (text) 347
sequence 347
shown 347
user 347
User profile option value
code 48
description 48
explanation 48
value 48
User role
name 164
role 164
Username 11
Users
login 161
name 161
password 161
rdms user 161

- V -

Validation 502
Value Formula 502
code 240
description 240
formula 240
Variable text 240
VAT 683
0% vat 595
0% vat abroad 595
19% vat 595
6% vat 595
normal (19%) 595
VAT Code
code 190
description 190
sort order 190
vat percentage 190
Version History
comments 276
database context 276
database nls parameters 276

Version History
database parameters 276
environment variables 276
installation date 276
java system variables 276
module 276
object versions 276
other database parameters 276
version 276
version id 276
View
additional where clause 301
application 301
code 301
definition 301
documentation 301
enter 301
example 301
extra select clause 301
hard coded 301
hard coded definition 301
label plural 301
label plural when referenced 301
label singular 301
label singular when referenced 301
name 301
optimizer hint 301
order by clause 301
part of screen 43
user may delete 301
user may Insert 301
user may select 301
user may update 301
View Element
additional where clause 301
alias 301
application 301
Column Name 301
joined alias 301
joined column name 301
left outer join 301
reference columns 301
sequence 301
table 301
Virtualisation software
Parallels Desktop® 6 for Mac 427
Vmware Fusion 3 427
Voorvoegsel Server (URL) 568

- W -

Web server 587
Web service 500, 648, 649
tunneling 653
Web User Interface 11
Website invantive 360
Work Order 210
Work process 648
Workbench
action button 49
budget 49
change information 49
detail 49
expected 49
hyperlink 49
popup window 49
realization 49
Workflow 177, 508
Working Schedule
16h mo+tu 613
32h Wednesday free 613
36h free every other week 613
40h 613
code 181
description 181
sort order 181
start time ... even 181
start time ... odd 181
working hours ... even 181
working hours ... odd 181
Working Schedule Exception
date 182
explanation 182
working hours 182
working schedule 182
Worst case 516
Www.invantive.com 360

- X -

XML
dump project 500
log 438
-Xmx 568
-XX
+CMSClassUnloadingEnabled 568
+UseConcMarkSweepGC 568
MaxPermSize=256m 568

xxsap#in_ftr 470
xxsap_in_ftr 470

- Z -

Zoom In
in 29
out 29

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