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This manual is a reference guide intended to clarify usage. If data in the sample images match data in your system, the similarity is coincidental.

Important Safety and Usage Information

Intended Use and Limitations: This software, developed by Invantive, is designed to support a variety of business and information technology data processing functions, such as accounting, financial reporting and sales reporting. It is important to note that this software is not designed, tested, or approved for use in environments where malfunction or failure could lead to life-threatening situations or severe physical or environmental damage. This includes, but is not limited to:

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1 SQL Driver for OS

Use the "Search" option in the left menu to search for a specific term such as the table or column description. When you already know the term, please use the "Index" option. When you can't find the information needed, please click on the Chat button at the bottom or place your question in the [user community](#). Invantive Support or other users will try to help you.

Access data through the operating system.

The OS driver covers 13 tables and 162 columns.

OS Clients

Invantive UniversalSQL is available on many user interfaces ("clients" in traditional server-client paradigm). All Invantive UniversalSQL statements can be exchanged with a close to 100% compatibility across all clients and operating systems (Windows, MacOS, Linux, iOS, Android).

The clients include Microsoft Excel, Microsoft Power BI, Microsoft Power Query, Microsoft Word and Microsoft Outlook. Web-based clients include Invantive Cloud, Invantive Bridge Online as OData proxy, Invantive App Online for interactive apps, Online SQL Editor for query execution and Invantive Data Access Point as extended proxy.

For technical users there are command-line editions of Invantive Data Hub running on iOS, Android, Windows, MacOS and Linux. Invantive Data Hub is also often used for enterprise server applications such as ETL.

Specifications

The SQL driver for OS does not support partitioning.

An introduction into the concepts of Invantive UniversalSQL such as databases, data containers and partitioning can be found in the [Invantive UniversalSQL grammar](#).

The configuration can be changed using various attributes from the database definition, on log on and during use. A full list of configuration options is listed in the [driver attributes](#) ¹.

The catalog name is used to compose the full qualified name of an object like a table or view. The schema name is used to compose the full qualified name of an object like a table or view. On OS the comparison of two texts is case sensitive by default.

Changes and bug fixes on the OS SQL driver can be found in the [release notes](#). There is currently no specific section on the [Invantive forums](#) for OS. Please reach out to other users of OS by leaving a question or contact request.

Driver code for use in settings.xml: `os`

Alias: `os`

Recommended alias: `os`

Updated 28-07-2024 17:47 using Invantive UniversalSQL version 24.1.6-BETA+4856.

2 SQL Driver Attributes for OS

The SQL driver for OS has many attributes that can be finetuned to improve handling in scenarios with unreliable network connections to the OS server or high volumes of data. Also, many drivers have driver-specific attributes to finetune actual behaviour or handle data not matching specifications.

The OS driver attributes are assigned a default value which seldom requires change. However, changes can be applied when needed on four levels, which are reflected in the table below by separate checkmarks:

- Connection string: the connection string from the settings*.xml file and applied during log on.
- Set SQL statement: a set SQL-statement to be executed once connection has been established.
- Log on: value to be specified interactively by user during log on in a user interface.

The connection string for OS can be found in the settings*.xml file used for the database. The reference manuals contain instructions how to relocate the settings*.xml files. Settings*.xml files are typically located in the %USERPROFILE%\invantive folder in most deployment scenarios. Each data container of a database in the connection string can have a `connectionString` element specifying the name and values of attributes. Both name and value must be properly escaped according to XML-semantics. Actual application of the value is solely done during log on. A new connection must be established to change the value of a driver attribute using a connection string.

The set SQL statement can be executed after log on. The syntax is: `set NAME VALUE`, or for a distributed database: `set NAME@ALIAS VALUE`. In some scenarios you may need to enclose the driver attribute name in square brackets to escape it from parsing, for instance when a reserved SQL keyword is part of the name. The new value takes effect straight after execution of the set-statement. The set-statement can be executed as often as needed during a session.

Driver attributes that can be interactively set to a value are typically presented in the log on window. Depending on the platform and design decisions of the user interface designer, some or all of the available driver attributes can have been made available.

The OS driver can be configured using the following attributes:

Code	Description	Origin	Default Value	Set from Connection String	Set from Set SQL-Statement	Set from Driver's File	Set from Log On
analysis-enforce-row-uniqueness	Enforce rows to be unique for software analysis. A fingerprint is calculated from the whole row of data when the primary key column is unknown.	Shared	False	✓	✓	✓	
bulk-delete-page-size-rows	Number of rows to delete per batch when bulk deleting.	Shared	10000	✓	✓	✓	
bulk-insert-page-size-bytes	Approximate maximum size in bytes of batch when bulk inserting.	Shared	10000000	✓	✓	✓	
bulk-insert-page-size-rows	Number of rows to insert per batch when bulk inserting.	Shared	10000	✓	✓	✓	
force-case-sensitive-identifiers	Consider identifiers as case-sensitive independent of the platform capabilities.	Shared	False	✓	✓	✓	
forced-casing-identifiers	Forced casing of identifiers. Choose from: Unset, Lower, Upper and Mixed.	Shared		✓	✓	✓	

Code	Description	Origin	Default Value	Set from Connection String	Set from Set SQL-Statement	Set from Drivers File	Set from Log On
invantive-sql-compress-sparse-arrays	Whether to compress sparse arrays in result sets during compression.	SQL Engine V1	True	✓	✓	✓	
invantive-sql-correct-invalid-date	Whether to correct dates considered invalid since they are before 01-01-1753. When nullable, they are removed. Otherwise they are replaced by 01-01-1753.	SQL Engine V1	False	✓	✓	✓	
invantive-sql-execution-profile-disk-path	{res:itgen_pae_invantive_sql_execution_profile_disk_path}	SQL Engine V1	c:\temp\profiles	✓	✓	✓	
invantive-sql-execution-profile-to-disk	{res:itgen_pae_invantive_sql_execution_profile_to_disk}	SQL Engine V1	True	✓	✓	✓	
invantive-sql-forward-filters-to-data-containers	Whether to forward filters to data containers.	SQL Engine V1	True	✓	✓	✓	
invantive-sql-share-byte-arrays	Whether to share the memory used by identical byte arrays in result sets during compression.	SQL Engine V1	True	✓	✓	✓	
invantive-sql-share-strings	Whether to share the memory used by identical strings in result sets during compression.	SQL Engine V1	True	✓	✓	✓	
invantive-sql-shuffle-fetch-results-data-containers	Whether to shuffle results fetched from data containers.	SQL Engine V1	False	✓	✓	✓	
invantive-use-cache	Whether to cache the results of a query.	SQL Engine V1	True	✓	✓	✓	
log-native-calls-to-disk-max-events	Maximum number of call events to register from last activation.	Shared		✓	✓	✓	
log-native-calls-to-disk-max-seconds	Maximum number of seconds to register calls from last activation.	Shared		✓	✓	✓	
log-native-calls-to-disk-on-error	Registers native calls to data container backend as disk files when the call raised an error.	Shared	False	✓	✓	✓	
log-native-calls-to-disk-on-success	Registers native calls to data container backend as disk files when the call raised no error.	Shared	False	✓	✓	✓	
log-native-calls-to-trace	Log native calls to data container backend on the trace.	Shared	False	✓	✓	✓	
max-url-length-accepted	The maximum accepted URL length before raising an error.	Shared	8000	✓	✓	✓	
max-url-length-desired	The maximum desired URL length.	Shared	8000	✓	✓	✓	
maximum-length-identifiers	Non-default maximum length in characters of identifier names.	Shared		✓	✓	✓	
partition-slot-based-rate-limit-length-ms	Total length in milliseconds across all slots of a partition-based rate limit.	Shared	60000	✓		✓	

Code	Description	Origin	Default Value	Set from Connection String	Set from Set SQL-Statement	Set from Driver's File	Set from Log On
partition-slot-based-rate-limit-slots	Number of slots per partition-based rate limit. Null means no slot-based rate limit.	Shared		✓		✓	
pre-request-delay-ms	Pre-request delay in milliseconds per request.	Shared	0	✓	✓	✓	
requested-page-size	Preferred number of rows to exchange per round trip; only effective on limited platforms such as AFAS Online.	Shared		✓	✓	✓	
requests-parallel-max	Maximum number of parallel data requests from individual partitions on the data container.	Shared	32	✓	✓	✓	
slot-based-rate-limit-length-ms	Total length in milliseconds across all slots of a slot-based rate limit.	Shared	60000	✓		✓	
slot-based-rate-limit-slots	Number of slots of a slot-based rate limit. Null means no slot-based rate limit.	Shared		✓		✓	
standardize-identifiers-casing	Rewrite all identifiers to the recommended standard platform-specific casing when changing a data model on a case-dependent platform.	Shared	True	✓	✓	✓	
standardize-identifiers	Rewrite all identifiers to the preferred standards as configured by standardize-identifiers-casing and maximum-length-identifiers.	Shared	True	✓	✓	✓	

3 csv_split_row: OS Split Row as CSV

Catalog: FileSystem

Label: Split Row as CSV

Retrieve: true

Parameters of Table Function

The following parameters can be used to control the behaviour of the table function `csv_split_row`. A value must be provided at all times for required parameters, but optional parameters in general do not need to have a value and the execution will default to a pre-defined behaviour. Values can be specified by position and by name. In both cases, all parameters not specified will be evaluated using their default values.

Value specification by position is done by listing all values from the first to the last needed value. For example: a ``select * from table(value1, value2, value3)`` on a table with four parameters will use the default value for the fourth parameter and the specified values for the first three.

Value specification by name is done by listing all values that require a value. For example with ``select * from table(name1 => value1, name3 => value3)`` on the same table will use the

default values for the second and fourth parameters and the specified values for the first and third.

Name	Data Type	Required	Default Value	Documentation
csv	string	<input checked="" type="checkbox"/>		Text in comma-separated format to split into individual columns.
max_entries_per_row	int32	<input type="checkbox"/>		Maximum number of individual columns to return from the text. Remaining content is included in the last columns. Defaults to null (no limit).

Columns of Table Function

The columns of the table function `csv_split_row` are shown below. Each column has an SQL data type.

Name	Data Type	Label	Required	Documentation
text_content_1	string	CSV Text Content #{0}		
text_content_10	string	CSV Text Content #{0}		
text_content_11	string	CSV Text Content #{0}		
text_content_12	string	CSV Text Content #{0}		
text_content_13	string	CSV Text Content #{0}		
text_content_14	string	CSV Text Content #{0}		
text_content_15	string	CSV Text Content #{0}		
text_content_16	string	CSV Text Content #{0}		
text_content_17	string	CSV Text Content #{0}		
text_content_18	string	CSV Text Content #{0}		
text_content_19	string	CSV Text Content #{0}		
text_content_2	string	CSV Text Content #{0}		
text_content_20	string	CSV Text Content #{0}		
text_content_21	string	CSV Text Content #{0}		
text_content_22	string	CSV Text Content #{0}		
text_content_23	string	CSV Text Content #{0}		
text_content_24	string	CSV Text Content #{0}		
text_content_25	string	CSV Text Content #{0}		
text_content_26	string	CSV Text Content #{0}		
text_content_27	string	CSV Text Content #{0}		
text_content_28	string	CSV Text Content #{0}		
text_content_29	string	CSV Text Content #{0}		
text_content_3	string	CSV Text Content #{0}		
text_content_30	string	CSV Text Content #{0}		
text_content_31	string	CSV Text Content #{0}		
text_content_32	string	CSV Text Content #{0}		
text_content_33	string	CSV Text Content #{0}		

Name	Data Type	Label	Required	Documentation
text_content_34	string	CSV Text Content #{0}		
text_content_35	string	CSV Text Content #{0}		
text_content_36	string	CSV Text Content #{0}		
text_content_37	string	CSV Text Content #{0}		
text_content_38	string	CSV Text Content #{0}		
text_content_39	string	CSV Text Content #{0}		
text_content_4	string	CSV Text Content #{0}		
text_content_40	string	CSV Text Content #{0}		
text_content_41	string	CSV Text Content #{0}		
text_content_42	string	CSV Text Content #{0}		
text_content_43	string	CSV Text Content #{0}		
text_content_44	string	CSV Text Content #{0}		
text_content_45	string	CSV Text Content #{0}		
text_content_46	string	CSV Text Content #{0}		
text_content_47	string	CSV Text Content #{0}		
text_content_48	string	CSV Text Content #{0}		
text_content_49	string	CSV Text Content #{0}		
text_content_5	string	CSV Text Content #{0}		
text_content_50	string	CSV Text Content #{0}		
text_content_6	string	CSV Text Content #{0}		
text_content_7	string	CSV Text Content #{0}		
text_content_8	string	CSV Text Content #{0}		
text_content_9	string	CSV Text Content #{0}		

4 directories: OS File System Directories

Catalog: FileSystem

Label: File System Directories

Retrieve: true

Parameters of Table Function

The following parameters can be used to control the behaviour of the table function `directories`. A value must be provided at all times for required parameters, but optional parameters in general do not need to have a value and the execution will default to a pre-defined behaviour. Values can be specified by position and by name. In both cases, all parameters not specified will be evaluated using their default values.

Value specification by position is done by listing all values from the first to the last needed value. For example: a ``select * from table(value1, value2, value3)`` on a table with four parameters will use the default value for the fourth parameter and the specified values for the first three.

Value specification by name is done by listing all values that require a value. For example with ``select * from table(name1 => value1, name3 => value3)`` on the same table will use the

default values for the second and fourth parameters and the specified values for the first and third.

Name	Data Type	Required	Default Value	Documentation
all_directories	boolean	<input checked="" type="checkbox"/>		Whether to recurse into folders. Defaults to false.
path	string	<input checked="" type="checkbox"/>		Root of folder structure to search.
search_pattern	string	<input checked="" type="checkbox"/>		Directory name match pattern. Use '*' to signal text of arbitrary length and '?' as any single character.

Columns of Table Function

The columns of the table function directories are shown below. Each column has an SQL data type.

Name	Data Type	Label	Required	Documentation
directory_path	string	Directory Path	<input checked="" type="checkbox"/>	

5 file_actions: OS File Actions

Catalog: FileSystem

Label: File Actions

Documentation:

File actions executed.

Retrieve: true

Table Columns

The columns of the table file_actions are shown below. Each column has an SQL data type.

Name	Data Type	Label	Required	Documentation
action	string	Action	<input checked="" type="checkbox"/>	Type of action.
duration_ms	int32	Duration (ms)	<input type="checkbox"/>	Duration of action in milliseconds.
exception_code	string	Exception Code	<input type="checkbox"/>	The message code of the error.
exception_message	string	Exception Message	<input type="checkbox"/>	The text of the error.
file_path_source	string	File Name and Path for Source	<input type="checkbox"/>	File path of source for action.
file_path_target	string	File Name and Path for Target	<input type="checkbox"/>	File path of target for action.
has_exception	boolean	Has Exception	<input type="checkbox"/>	Whether an exception occurred during execution.
start_time	datetime	Start Time	<input type="checkbox"/>	Start time of action.

6 file_copy_actions: OS File Copy Actions

Catalog: FileSystem

Label: File Copy Actions

Documentation:

Copies a file on file system.

Retrieve: false

Table Columns

The columns of the table file_copy_actions are shown below. Each column has an SQL data type. A new non-null value must be provided for every required column at all times during insert.

Name	Data Type	Label	Required	Documentation
create_directory	boolean	Create directory	<input type="checkbox"/>	Whether to create the directory when non-existing.
file_path_source	string	File Name and Path for Source	<input checked="" type="checkbox"/>	Path of file to copy.
file_path_target	string	File Name and Path for Target	<input checked="" type="checkbox"/>	Path of new file.
ignore_error	boolean	Ignore Error	<input type="checkbox"/>	Whether to ignore an error.
overwrite_existing	boolean	Overwrite Existing	<input type="checkbox"/>	Whether to overwrite an existing file.

7 file_delete_actions: OS File Delete Actions

Catalog: FileSystem

Label: File Delete Actions

Documentation:

Deletes specific files on file system.

Retrieve: false

Table Columns

The columns of the table file_delete_actions are shown below. Each column has an SQL data type. A new non-null value must be provided for every required column at all times during insert.

Name	Data Type	Label	Required	Documentation
file_path	string	Filename and Path	<input checked="" type="checkbox"/>	Path of file to delete.

8 file_info: OS File Metadata Properties

Catalog: FileSystem

Label: File Metadata Properties

Retrieve: true

Parameters of Table Function

The following parameters can be used to control the behaviour of the table function `file_info`. A value must be provided at all times for required parameters, but optional parameters in general do not need to have a value and the execution will default to a pre-defined behaviour. Values can be specified by position and by name. In both cases, all parameters not specified will be evaluated using their default values.

Value specification by position is done by listing all values from the first to the last needed value. For example: a ``select * from table(value1, value2, value3)`` on a table with four parameters will use the default value for the fourth parameter and the specified values for the first three.

Value specification by name is done by listing all values that require a value. For example with ``select * from table(name1 => value1, name3 => value3)`` on the same table will use the default values for the second and fourth parameters and the specified values for the first and third.

Name	Data Type	Required	Default Value	Documentation
<code>ignore_errors</code>	boolean	<input type="checkbox"/>		Whether to ignore errors when accessing the file. Defaults to false.
<code>path</code>	string	<input checked="" type="checkbox"/>		Relative or absolute path to the file.

Columns of Table Function

The columns of the table function `file_info` are shown below. Each column has an SQL data type.

Name	Data Type	Label	Required	Documentation
<code>created_utc</code>	datetime	Created (UTC)	<input type="checkbox"/>	
<code>created</code>	datetime	Created	<input type="checkbox"/>	
<code>directory_name</code>	string	Directory Name	<input type="checkbox"/>	
<code>exception_code</code>	string	Exception Code	<input type="checkbox"/>	The message code of the error.
<code>exception_message</code>	string	Exception Message	<input type="checkbox"/>	The text of the error.
<code>extension</code>	string	Extension	<input type="checkbox"/>	
<code>is_archive</code>	boolean	Is Archive File	<input type="checkbox"/>	
<code>is_compressed</code>	boolean	Is Compressed File	<input type="checkbox"/>	
<code>is_content_indexed</code>	boolean	Is Content Indexed File	<input type="checkbox"/>	
<code>is_device</code>	boolean	Is Device File	<input type="checkbox"/>	
<code>is_directory</code>	boolean	Is Directory	<input type="checkbox"/>	
<code>is_encrypted</code>	boolean	Is Encrypted File	<input type="checkbox"/>	
<code>is_existing</code>	boolean	Is Existing	<input type="checkbox"/>	
<code>is_hidden</code>	boolean	Is Hidden File	<input type="checkbox"/>	
<code>is_integrity_stream</code>	boolean	Is Integrity Stream File	<input type="checkbox"/>	
<code>is_normal</code>	boolean	Is Normal File	<input type="checkbox"/>	

Name	Data Type	Label	Required	Documentation
is_offline	boolean	Is Offline File	<input type="checkbox"/>	
is_reparse_point	boolean	Is Reparse Point File	<input type="checkbox"/>	
is_scrub_data	boolean	Is Scrub Data File	<input type="checkbox"/>	
is_sparse	boolean	Is Sparse File	<input type="checkbox"/>	
is_system	boolean	Is System File	<input type="checkbox"/>	
is_temporary	boolean	Is Temporary File	<input type="checkbox"/>	
is_writable	boolean	Is Writable File	<input type="checkbox"/>	
last_access_utc	datetime	Last Access (UTC)	<input type="checkbox"/>	
last_access	datetime	Last Access	<input type="checkbox"/>	
last_write_utc	datetime	Last Write (UTC)	<input type="checkbox"/>	
last_write	datetime	{res:itgen_last_write	<input type="checkbox"/>	
length	int64	File Size (bytes)	<input type="checkbox"/>	
name	string	Name	<input type="checkbox"/>	

9 file_move_actions: OS File Move Actions

Catalog: FileSystem

Label: File Move Actions

Documentation:

Moves specific files on file system.

Retrieve: false

Table Columns

The columns of the table file_move_actions are shown below. Each column has an SQL data type. A new non-null value must be provided for every required column at all times during insert.

Name	Data Type	Label	Required	Documentation
file_path_source	string	File Name and Path for Source	<input checked="" type="checkbox"/>	Path of source file to move.
file_path_target	string	File Name and Path for Target	<input checked="" type="checkbox"/>	Path of target file.

10 file_rename_actions: OS File Rename Actions

Catalog: FileSystem

Label: File Rename Actions

Documentation:

Renames specific files on file system.

Retrieve: false

Table Columns

The columns of the table `file_rename_actions` are shown below. Each column has an SQL data type. A new non-null value must be provided for every required column at all times during insert.

Name	Data Type	Label	Required	Documentation
<code>file_path_source</code>	string	File Name and Path for Source	<input checked="" type="checkbox"/>	Path of file to rename.
<code>file_path_target</code>	string	File Name and Path for Target	<input checked="" type="checkbox"/>	Path of file after rename.

11 files: OS File System Files

Catalog: FileSystem

Label: File System Files

Documentation:

Scan file system for files matching the specifications.

Retrieve: true

Parameters of Table Function

The following parameters can be used to control the behaviour of the table function `files`. A value must be provided at all times for required parameters, but optional parameters in general do not need to have a value and the execution will default to a pre-defined behaviour. Values can be specified by position and by name. In both cases, all parameters not specified will be evaluated using their default values.

Value specification by position is done by listing all values from the first to the last needed value. For example: a ``select * from table(value1, value2, value3)`` on a table with four parameters will use the default value for the fourth parameter and the specified values for the first three.

Value specification by name is done by listing all values that require a value. For example with ``select * from table(name1 => value1, name3 => value3)`` on the same table will use the default values for the second and fourth parameters and the specified values for the first and third.

Name	Data Type	Required	Default Value	Documentation
<code>all_directories</code>	boolean	<input checked="" type="checkbox"/>		Whether to recurse into folders. Defaults to false.
<code>path</code>	string	<input checked="" type="checkbox"/>		Root of folder structure to search.
<code>search_pattern</code>	string	<input checked="" type="checkbox"/>		File name match pattern. Use <code>**</code> to signal text of arbitrary length and <code>'?'</code> as any single character.

Columns of Table Function

The columns of the table function files are shown below. Each column has an SQL data type.

Name	Data Type	Label	Required	Documentation
file_path	string	Filename and Path	<input checked="" type="checkbox"/>	

12 read_file_text: OS File Text Contents

Catalog: FileSystem

Label: File Text Contents

Retrieve: true

Parameters of Table Function

The following parameters can be used to control the behaviour of the table function `read_file_text`. A value must be provided at all times for required parameters, but optional parameters in general do not need to have a value and the execution will default to a pre-defined behaviour. Values can be specified by position and by name. In both cases, all parameters not specified will be evaluated using their default values.

Value specification by position is done by listing all values from the first to the last needed value. For example: a ``select * from table(value1, value2, value3)`` on a table with four parameters will use the default value for the fourth parameter and the specified values for the first three.

Value specification by name is done by listing all values that require a value. For example with ``select * from table(name1 => value1, name3 => value3)`` on the same table will use the default values for the second and fourth parameters and the specified values for the first and third.

Name	Data Type	Required	Default Value	Documentation
encoding	string	<input type="checkbox"/>		Character encoding, defaults to UTF8, alternative names listed in code page table on https://docs.microsoft.com/en-us/dotnet/api/system.text.encoding?view=netframework-4.8 .
ignore_errors	boolean	<input type="checkbox"/>		Whether to ignore errors when accessing the file. Defaults to false.
path	string	<input checked="" type="checkbox"/>		Relative or absolute path to the file.
record_separator	string	<input type="checkbox"/>		Record separator is a text signaling the start of a new record. Defaults to platform-specific new line.
separate_on_record	boolean	<input type="checkbox"/>		Separates file contents into records based upon the record separator when true. Returns full file contents as one large string when false. Defaults to false.

Columns of Table Function

The columns of the table function `read_file_text` are shown below. Each column has an SQL data type.

Name	Data Type	Label	Required	Documentation
<code>file_contents</code>	string	File Contents	<input type="checkbox"/>	
<code>file_path</code>	string	Filename and Path	<input checked="" type="checkbox"/>	
<code>is_existing</code>	boolean	Is Existing	<input checked="" type="checkbox"/>	

13 read_file: OS File Binary Contents

Catalog: FileSystem

Label: File Binary Contents

Retrieve: true

Parameters of Table Function

The following parameters can be used to control the behaviour of the table function `read_file`. A value must be provided at all times for required parameters, but optional parameters in general do not need to have a value and the execution will default to a pre-defined behaviour. Values can be specified by position and by name. In both cases, all parameters not specified will be evaluated using their default values.

Value specification by position is done by listing all values from the first to the last needed value. For example: a ``select * from table(value1, value2, value3)`` on a table with four parameters will use the default value for the fourth parameter and the specified values for the first three.

Value specification by name is done by listing all values that require a value. For example with ``select * from table(name1 => value1, name3 => value3)`` on the same table will use the default values for the second and fourth parameters and the specified values for the first and third.

Name	Data Type	Required	Default Value	Documentation
<code>ignore_errors</code>	boolean	<input type="checkbox"/>		Whether to ignore errors when accessing the file. Defaults to false.
<code>path</code>	string	<input checked="" type="checkbox"/>		Relative or absolute path to the file.

Columns of Table Function

The columns of the table function `read_file` are shown below. Each column has an SQL data type.

Name	Data Type	Label	Required	Documentation
<code>file_contents</code>	byte[]	File Contents	<input type="checkbox"/>	
<code>file_path</code>	string	Filename and Path	<input checked="" type="checkbox"/>	

Name	Data Type	Label	Required	Documentation
is_existing	boolean	Is Existing	<input checked="" type="checkbox"/>	

14 regexp_split_row: OS Split Row on Regular Expression

Catalog: FileSystem

Label: Split Row on Regular Expression

Retrieve: true

Parameters of Table Function

The following parameters can be used to control the behaviour of the table function `regexp_split_row`. A value must be provided at all times for required parameters, but optional parameters in general do not need to have a value and the execution will default to a pre-defined behaviour. Values can be specified by position and by name. In both cases, all parameters not specified will be evaluated using their default values.

Value specification by position is done by listing all values from the first to the last needed value. For example: a ``select * from table(value1, value2, value3)`` on a table with four parameters will use the default value for the fourth parameter and the specified values for the first three.

Value specification by name is done by listing all values that require a value. For example with ``select * from table(name1 => value1, name3 => value3)`` on the same table will use the default values for the second and fourth parameters and the specified values for the first and third.

Name	Data Type	Required	Default Value	Documentation
regex	string	<input checked="" type="checkbox"/>		Regular expression to use.
row	string	<input checked="" type="checkbox"/>		Text to split into individual columns using a regular expression.

Columns of Table Function

The columns of the table function `regexp_split_row` are shown below. Each column has an SQL data type.

Name	Data Type	Label	Required	Documentation
input_text	string	Original Input		Original input.
regular_expression	string	Regular Expression		Regular expression used to split.
success	boolean	Success		Could content be split.
text_content_1	string	RE Text Content #{0}		Split content of the text file.
text_content_10	string	RE Text Content #{0}		Split content of the text file.
text_content_11	string	RE Text Content #{0}		Split content of the text file.
text_content_12	string	RE Text Content #{0}		Split content of the text file.
text_content_13	string	RE Text Content #{0}		Split content of the text file.
text_content_14	string	RE Text Content #{0}		Split content of the text file.

Name	Data Type	Label	Required	Documentation
text_content_15	string	RE Text Content #{0}		Split content of the text file.
text_content_16	string	RE Text Content #{0}		Split content of the text file.
text_content_17	string	RE Text Content #{0}		Split content of the text file.
text_content_18	string	RE Text Content #{0}		Split content of the text file.
text_content_19	string	RE Text Content #{0}		Split content of the text file.
text_content_2	string	RE Text Content #{0}		Split content of the text file.
text_content_20	string	RE Text Content #{0}		Split content of the text file.
text_content_21	string	RE Text Content #{0}		Split content of the text file.
text_content_22	string	RE Text Content #{0}		Split content of the text file.
text_content_23	string	RE Text Content #{0}		Split content of the text file.
text_content_24	string	RE Text Content #{0}		Split content of the text file.
text_content_25	string	RE Text Content #{0}		Split content of the text file.
text_content_26	string	RE Text Content #{0}		Split content of the text file.
text_content_27	string	RE Text Content #{0}		Split content of the text file.
text_content_28	string	RE Text Content #{0}		Split content of the text file.
text_content_29	string	RE Text Content #{0}		Split content of the text file.
text_content_3	string	RE Text Content #{0}		Split content of the text file.
text_content_30	string	RE Text Content #{0}		Split content of the text file.
text_content_31	string	RE Text Content #{0}		Split content of the text file.
text_content_32	string	RE Text Content #{0}		Split content of the text file.
text_content_33	string	RE Text Content #{0}		Split content of the text file.
text_content_34	string	RE Text Content #{0}		Split content of the text file.
text_content_35	string	RE Text Content #{0}		Split content of the text file.
text_content_36	string	RE Text Content #{0}		Split content of the text file.
text_content_37	string	RE Text Content #{0}		Split content of the text file.
text_content_38	string	RE Text Content #{0}		Split content of the text file.
text_content_39	string	RE Text Content #{0}		Split content of the text file.
text_content_4	string	RE Text Content #{0}		Split content of the text file.
text_content_40	string	RE Text Content #{0}		Split content of the text file.
text_content_41	string	RE Text Content #{0}		Split content of the text file.
text_content_42	string	RE Text Content #{0}		Split content of the text file.
text_content_43	string	RE Text Content #{0}		Split content of the text file.
text_content_44	string	RE Text Content #{0}		Split content of the text file.
text_content_45	string	RE Text Content #{0}		Split content of the text file.
text_content_46	string	RE Text Content #{0}		Split content of the text file.
text_content_47	string	RE Text Content #{0}		Split content of the text file.
text_content_48	string	RE Text Content #{0}		Split content of the text file.
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text_content_5	string	RE Text Content #{0}		Split content of the text file.
text_content_50	string	RE Text Content #{0}		Split content of the text file.
text_content_6	string	RE Text Content #{0}		Split content of the text file.

Name	Data Type	Label	Required	Documentation
text_content_7	string	RE Text Content #{0}		Split content of the text file.
text_content_8	string	RE Text Content #{0}		Split content of the text file.
text_content_9	string	RE Text Content #{0}		Split content of the text file.

15 write_file: OS Write File

Catalog: FileSystem

Label: Write File

Retrieve: false

Table Columns

The columns of the table write_file are shown below. Each column has an SQL data type. A new non-null value must be provided for every required column at all times during insert.

Name	Data Type	Label	Required	Documentation
creation_date_time_utc	datetime	Requested Creation Date/Time (UTC)	<input type="checkbox"/>	
file_contents	byte[]		<input type="checkbox"/>	
file_path	string	Filename and Path	<input checked="" type="checkbox"/>	
modified_date_time_utc	datetime	Requested Modified Date/Time (UTC)	<input type="checkbox"/>	

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