Qlik Connector for use with SAP NetWeaver -- Release Notes Summary

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Release Notes Summary 5.6 - 7.0.4

This document contains a summary of important information, new functionality and bug fixes, starting from release 5.6.0 and onwards. The affected release is written in each bullet. If a bullet is dependent of importing an SAP transport, it is marked with '**Requires SAP transport update'** (this feature is available from release 6.1.0 and forward).

Important information

General

- **7.0.4**. There are no new SAP transports for release 7.0.4. It is recommended to use the SAP transports for release 7.0.3.
- **7.0.4**. The Qlik SAP Connectors for Qlik Sense has been upgraded to conform to the changes in Qlik Sense September 2020 (see JQuery note in the Release Notes for Qlik Sense for more details). If you use Qlik Sense September 2020 and Qlik Connectors for use with SAP NetWeaver you need to upgrade the connector package to version 7.0.4. Previous versions of the connector package are not supported by Qlik Sense September 2020.
- **7.0.3**. Starting from this release the SAP transports are no longer part of the connector installation package. They can be downloaded from the download site as a separate package.
- **7.0.2**. SAP basis 6.40 is no longer supported.
- **7.0.0**. Changing the field selection in Add Data -> Tables -> Edit this table -> Select data from source does not work in Sense: June 2017 release. The issue is resolved in later releases of Qlik Sense (from June 2017 patch 1). This is valid for all Qlik Sense connectors.
- **6.5.1**. The SAP transports are the same as in release 6.5.0, so if upgrading from that release, there is no need to import SAP transports.
- **6.5.0**. A Release Notes Summary (this document) starting from release 5.6.0 is available in PDF format at the download site.
- **6.4.0**. An installation guide in PDF format is available at the download site. It describes the installation and configuration of the connectors in a chronological, easy-to-use format.
- **6.3.1**. The SAP transports are the same as for release 6.3.0 so there is no need to reimport them if upgrading from that release.
- **6.2.0.** Qlik Sense version 3.0 or higher is required to use the SQL and BEx query connectors.
- **6.2.0.** The SAP transports are the same as for release 6.1.2 so there is no need to reimport them if upgrading from that release.
- **6.2.0.** Note that the Qlik SAP SQL Connector and the Qlik SAP BEx Connector have a new procedure for updating the license while the other connectors are still using the old procedure. By following the steps below, the license for all connectors will be updated at the same time: Start e.g. Qlik SAP OLAP Connector. The license update dialog 'Registration' appears. Insert the license details in the dialog and press 'OK'. Now all the Qlik SAP Connectors will have the correct license.
- **6.1.1.** When upgrading from connector version 6.1.0 to 6.1.1, it is not necessary to import the SAP data transport for the BEx connector again. It is the same for both versions.

However the data transport for the other connectors must be imported into all systems (including the systems where the BEx connector is used).

The role transports are the same as in release 6.1.0. No need to import them again.

- **6.0.0.** Re-Certification of our SAP connector issued by SAP.
- **6.0.0.** In the application ReLoadSAPDD.qvw for the ScriptBuilder there was an issue with the parsing of the select statement of the table DD03L. It caused the application to "freeze". It was related to changes of the SQL connector in release 5.80 SR4. It is now fixed.
- **6.0.0.** Release 5.30 will no longer be supported and not possible to download.
- **6.0.0.** SAP transports for SAP basis below 6.40 no will longer be provided.
- **6.0.0.** v6.00 and higher will only support 64-bit Windows platforms for installation.
- **5.9.0.** In a small number of isolated cases a connector has been found to 'freeze'. The problem can occur when calling the Windows-API GetUserName(). For those few customers affected there now is a parameter called "TraceWinUserName" which can be set to '0' ("OFF") in the connection string. The default value is 1 ("ON"). If set to '0' the Windows-API will be bypassed and the result is that the Windows user name will not be saved (not mandatory) in the corresponding job record in the database table /QTQVC/STATUS.
- **5.8.0.** Changes in the Qlik Roles: In the Access roles / profiles there are changes to the Qlik authorization objects /QTQVC/DIS and /QTQVC/AUT. To be able to get the descriptions of the authorization fields, new field names are created in the SAP Connector namespace (/QTQVC/). In /QTQVC/AUT the field 'ADMIN' is changed to /QTQVC/ADM and in /QTQVC/DIS the field 'ZQVCTAB' is changed to /QTQVC/TAB.

BAPI Connector

- **7.0.4**. In this release QlikView will still use the legacy BAPI connector (dll file).
- **7.0.4** If a BAPI has multiple output, the connector now can handle that in one execution (Qlik Sense). In this release, the feature is available in 'Data load editor'. In 'Add data' the BAPI is executed as many times as the number of output selected
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- **6.6.0** The new connector GUI for release 6.6.0 has an improved search functionality to find a BAPI. It is now possible to enter a search string which will return all BAPI modules where the

search string is part of the BAPI name or description.

When using backwards compatibility (6.6.0 GUI but SAP transports of an older connector release) the new functionality will not be used and the search will work as in the used connector version of the SAP transport.

- **6.6.0** BAPI Test connection dialog is rendered in background when clicking on test connection button, using Data load editor in Sense: June 2017 and September 2017 releases. Click on Cancel to see test connection dialog.

BEx Connector

- **7.0.4**. Customers using SSO could occasionally encounter an error during loading of data. Now working as designed.
- **6.0.0**. In the connection dialog, do not change the **Server Type** once you start to edit the remaining fields as a connection error may result. If this happens, close the **Connect…** dialog and restart the script editor.

Extractor Connector

- **6.1.0. (Requires SAP transport update).** If upgrading from a previous release of Qlik Connector for SAP, please note that some additional setup is necessary in the SAP system. For all Logical systems use the option 'Modify' in transaction /n/QTQVC/EXTRACTOR_ADM. See instructions in the manual under: **SAP > 6.1 > Connector configuration > SAP Extractor connector user configuration > Setting up Qlik extractor administration**.

InfoProvider Connector

- **7.0.0**. When using backwards compatibility: The checkboxes for 'Load texts' and 'Load attributes' are available in the select dialog even though the functionality is not supported by the SAP transports (v6.5 or v6.6). Install the SAP transports for version 7.0 to enable the functionality.

SQL Connector

- **6.1.0**. When upgrading from a previous connector version to 6.1, you are required to replace Provider 'QvSAPConnector.dll' with 'QvSAPSqlConnector.exe' in any existing connection string that has been generated by previous versions of the SQL connector, like:

  Old connection string for QlikView: **CUSTOM CONNECT TO "Provider=QvSAPConnector.dll;…**

  New connection string for QlikView: **CUSTOM CONNECT TO "Provider=QvSAPSqlConnector.exe;…**

  This is a one-time process and enables Qlik to support both QlikView and Qlik Sense with a single connector build.

  Connections in Qlik Sense should be stored in a so-called "Data connection." For more information about this, please consult the online help for Qlik Sense.

New functionality

General

- **6.3.0. (Requires SAP transport update)** New functionality to delete records from the Qlik database tables in the background. It is suitable to use when deleting large number of records. Please see the online help for detailed information.
- **6.2.0.** Release contains important updates to the user interface (UI) to ensure compliance and support for Qlik Sense 3.0.

Existing script created in older versions of the connector continues to be supported in this release. However, to maintain a seamless UI experience, it is recommended that all customers using Qlik Sense 3.0 or higher maintain a minimum SAP connector release version of 6.2.0.

- **6.1.0.** The PDF manual is replaced by <u>online documentation</u>. The online documentation can also be called from Help links inside the connectors' dialogs.
- **5.8.3.** Backwards compatibility towards SAP code starting from the SAP code of release 5.80 SR2. That makes it possible to install the Windows part of the connectors for a new release without installing the corresponding SAP transports. However, new functionality dependent on changes in the SAP code cannot be used unless the transports are updated.
- **5.8.2.** New authorization object added for authority check in all RFC enabled function modules.
- **5.8.2.** SAP transports for SAP basis 720-73x available in MSI package.
- **5.8.0.** Each job started for a connector is now logged in the database table /QTQVC/STATUS.
- **5.7.1.** Modified logon dialog requires testing a connection prior to creating the connection string within the script.
- **5.7.1.** Transport version check with custom error messages to prevent mismatch between Windows and SAP installation files.
- **5.6.0.** Connector Log files can now be read during execution of the script.

BAPI Connector

- **7.0.0**. **(Requires SAP transport update)** In Qlik sense it is now possible to enter language in the GUI. A BAPI is created with a language code. To be able to lookup a BAPI, the correct language code must be entered. If no language code is entered, the connector uses the following priority to decide which language to use:
  1. SAP user default logon language, if set.
  2. System language.
  3. If no system language can be found: English.
  To lookup BAPI's in all available language codes, enter 'ALL' as language.
  The language functionality is only valid for the lookup function. It is always possible to enter the full name of a BAPI in any language directly in the GUI, without using the lookup.
- **6.6.0.** The BAPI connector is now available in Qlik Sense.
- **6.6.0**. If a BAPI has multiple output, the connector now can handle that in one execution (only available in Qlik Sense).
- **6.6.0.** It is now possible to call a BAPI that has no output (only available in Qlik Sense).
- **6.6.0** The new connector GUI for release 6.6.0 has an improved search functionality to find a BAPI. It is now possible to enter a search string (can contain one or more * as wildcard) which will return all BAPI modules where the search string is part of the BAPI name or description (only available in Qlik Sense) **(Requires SAP transport update).**
- **5.8.1.** Now possible to lookup BAPI's from the connector dialog.
- **5.7.0.** An example of how to synchronize Publisher jobs with SAP BW process chains using the BAPI connector is added to the manual.
- **5.7.0.** New BAPI connector: The reason for developing a connector for BAPIs and remote-enabled Function Modules is to make it easier to re-use existing programs developed by SAP.

BEx Connector

- **7.0.2.** Single sign-on (SSO) is now supported between Qlik Sense and SAP BW. SSO is enabled through Server-side trust and is implemented with the use of Secure Network Communication and SAP Cryptolib.

- **7.0.2.** With Qlik SAP Connectors package v7.0.2 an update of the BEx connector has been made in which data type mapping has been added. In earlier versions of the BEx connector the data from SAP came in fields with 'unknown' data type and it was up to Qlik to set a suitable type based on the content. With 7.0.2 the data types of the BEx query fields are read and the information is used in the Qlik client to interpret the data correctly. The data types that are affected are: Floating point numbers (FLTP), Decimal numbers (DEC), Numerical characters (NUMC), Quantity (QUAN), Currency (CURR), Date (DATE), Time (TIMS) and Integer (INT4). The unaffected data types are: Currency (CUKY), Unit (UNIT) and Character (CHAR). This change might affect existing Qlik scripts that have custom code that uses the data from a BEx extraction. To preserve the old behavior of the BEx connector after an upgrade to 7.0.2 there is a **new connection string property called BEX_LEGACY (Bex Legacy Data Types) that can be set for the connection.** For scripts created after an upgrade to 7.0.2 the recommendation is to not use the 'BEx Legacy Data Types' connection string property. The fact that a field is data type mapped does not necessarily mean that the output will change in Qlik when upgrading to 7.0.2, it is dependent on the content previously extracted from SAP. Example: 0CALMONTH previously came in the format 0MMYYYY but to be able extract NUMC fields with data type mapping they are now extracted in their SAP internal format. This affects the output of 0CALMONTH to be extracted as 0YYYYMM instead which means that any load script logic to map the outcome to a calendar field in Qlik needs to be adjusted. **It is strongly recommended to test any existing scripts in a test environment before upgrading a production environment**.
  (Requires SAP transport update).
- **6.6.0.** Text fields for all selected dimensions are now added when adding data in Qlik Sense.
- **6.5.0.** Hierarchy version variables are now supported.
- **6.4.0.** Supports queries on Transient providers.
- **6.4.0. (Requires SAP transport update)** Improved memory handling in the SAP part of the connector has increased the capacity of big BEx queries. There is still, however, a maximum limit to the number of rows that can be downloaded, depending on the memory settings in each SAP system.
- **6.3.0. (Requires SAP transport update)** The BEx Connector is now available in Qlik Sense.
- **6.3.0. (Requires SAP transport update)** The BEx Connector performs a consistency check when a query is performed. If the query contains errors, an error message is displayed. The check is also performed at reload before the query is extracted to avoid a dump in SAP.
- **6.3.0. (Requires SAP transport update)** A validity check is performed for each Characteristic Value used.
- **6.3.0.** Because the Bex Connector .exe file has been renamed from QvBexConnector.exe to QvSAPBexConnector.exe, scripts must be changed when they are moved to the new connector. Either edit the connection strings or create new strings.
- **6.1.2.** Variables maintained in the Default Values section in BEx Query Designer are now available in the variables section in the BEx connector select window. Those variables were previously not included for use in the connector.
- **6.1.0. (Requires SAP transport update)** Descriptions for InfoProviders are now displayed in the same manner as for Queries.
- **6.0.0.** Improved error handling when there is a 'dump' in an SAP program.
- **5.9.0.** New BEx connector: A new connector to retrieve BEx queries is now available. To use the new BEx connector, the SAP Basis must be 7.00 or higher. The purpose of the connector is to enable extraction of data from BEx queries in SAP BW. Both the BEx and the OLAP connectors can be used to extract data from BEx queries to QlikView. The difference is the functionality in SAP that is used for query execution. The BEx connector utilizes the BEx

query execution functionality that uses the BICS (BI Consumer Services). The OLAP connector formulates an MDX-query and sends it to the MDX interface (MDX BAPI). The use of BICS enables the BEx connector to support time dependency in query variables and attributes. It also enables all built in SAP query optimization alternatives to be used. BICS also offers faster query execution than MDX resulting in faster loading of data from SAP to QlikView.

Extractor Connector

- **7.0.1. (Requires SAP transport update)** In QlikView it is now possible to delete a 'Delta init' from the connector GUI. See the online help for more information.
- **6.6.0.** Two new Connection string properties: ReplaceNullValue and ReplaceNullValueChar. If ReplaceNullValue=true (default) and there are null values in the data, they are replaced with blank spaces.
  Set ReplaceNullValueChar='x' to replace null values with another character than blank space. It is necessary to replace null values in the data, otherwise the connector will fail.
- **6.6.0.** The Qlik Network Server has a redesigned logging functionality. It is now possible to change log levels during runtime and to capture meta data and data rows (for TRFC method only).
  See the online help for more details.
- **6.5.0.** The Extractor connector is available in Qlik Sense.
- **6.5.0.** The Qlik SAP Network Server Service is in release 6.5.0, for security reasons, limiting the connections from incoming client so only localhost clients are allowed by default. However, this restriction can be adjusted by altering the settings file (C:\ProgramData\QlikTech\Custom Data\QvSAPConnector\settings.config). See Qlik Online Help or the settings file for details on how to do this.
- **6.4.0. (Requires SAP transport update)** Supports resending the most recent Delta extraction job. This is applicable both for the tRFC and IDoc transfer methods. Use UPDMODE 'R'. See the online help for more information.
- **6.4.0. (Requires SAP transport update)** Supports resending any extraction job that was successful in SAP and that used the IDoc transfer method. Previously, only jobs where the reload failed in the Windows part of the connector could be resent.
- **6.3.2. (Requires SAP transport update)** The Extractor Connector connects to a Gateway Host (server) in SAP specified in the RFC connection used. The number of possible characters that can be used for the name of the Gateway Host is increased from 39 to 255.
- **6.3.0. (Requires SAP transport update)** The Extractor Connector cancels an SAP extraction job when the corresponding connector job is aborted. Please see the online help for detailed information.
- **6.3.0. (Requires SAP transport update)** The SAP Extractor Connector discovers and prevents multiple Services from pointing to the same SAP system.
- **6.1.2.** New optional parameter "SocketTimeout" is used to fine tune the timeout triggered by the first connection to the Qlik SAP Network Server. Default value is 900 (seconds). The parameter can be added to the connection string. (Example: SocketTimeout=500).
- **6.1.0.** Bad performance has been observed in clustered Publisher environments on servers where the Extractor Connector service 'Qlik SAP Network Server' is not running. This was due to a small default buffer size when sending data packages between the Publisher server where the Extractor job was executed and the Service. Now the default buffer size has been increased. It is also possible to manually adjust the buffer size. Use the parameter 'TCPBufSize' (please see the online help for more information).
- **5.9.0.** Now possible to create up to 140 different logical systems.

- **5.9.0.** Improved handling of 'Logon groups' when using 'Message Server Host' to create the connection string. FQDN (Fully Qualified Domain Name) is used to connect to the SAP server. It is fetched from the SAP parameter SAPLOCALHOSTFULL, which must be maintained in the SAP system.
- **5.8.4.** Now possible to use the SAP transport system and migrate the Extractor environment between systems. It is no longer necessary to unlock the Target system.
- **5.8.3.** Records for failed ongoing jobs (job status 'S') can now be either deleted or job status set to 'A' (aborted) from the connector instead of from the SAP GUI. Be careful not to delete ongoing successful jobs as they are also shown in the new connector window.
- **5.8.3.** Improvements when using 'Message Server Host' and 'Group' in the 'Setup SAP Connection' dialogue. (5.8.3).
- **5.8.3.** Improved automatic resend functionality for tRFC transfer method.
- **5.8.2.** Now possible to migrate activated extractors between SAP systems using the SAP Transport Management System.
- **5.8.2.** Language code is used when deactivating extractors.
- **5.8.2.** Now possible to use extractors with '/' in the extractor name and field name.
- **5.8.1.** Now possible to deactivate multiple extractors simultaneously in a logical system.
- **5.8.1.** Now possible to restrict an authorization role on a logical system.
- **5.8.0.** Now possible to use a new transfer method with tRFC packages which will allow parallel jobs and remove the 1000 characters per row limitation. Probably also Also provides a potential performance improvement compared to the IDoc transfer method.
- **5.8.0.** Improvement: better error messages in SAP in the Activation screen if activation fails and in Extractor environment administration screen if error occurs when creating Extractor environment for a Logical system.
- **5.7.1.** Drop down on the SAP Extractor screen within SAP facilitates searching for activated extractors.
- **5.7.1.** Addition of field descriptions to the generated scripts.
- **5.7.1.** Ability to resend single IDocs.
- **5.6.0.** New Extractor connector provides makes it easier to use the predefined data sources developed by SAP with their BW systems as the target. These data sources can be found in SAP ERP and other SAP systems. The advantage is that minimal skills with and knowledge of the table structure in the SAP ERP system are required. Also combines tables for different purposes, such as when using the SQL connector. Another advantage is that several of the data sources/extractors include a delta mechanism, which is helpful when developing the QlikView script.

InfoProvider Connector

- **7.0.0. (Requires SAP transport update)** Extended functionality to be used in systems with SAP BASIS >= 740 (with HANA). The InfoProvider Connector now supports data extraction from:
  DataStore Object (Advanced) (ADSO),
  CompositeProvider (HCPR),
  Open ODS View (FBPA).
- **7.0.0. (Requires SAP transport update)** It is now possible to load the InfoObject Text and Attribute data associated with an InfoProvider.
- **7.0.0.** The handling of Data Types in the InfoProvider Connector has changed to improve the data interpretation in Qlik and to better resemble the Data Types in SAP. This will affect the display of fields with the type Date, Time and Decimal Numbers which are now handled according to the data type they are set to in SAP. This could affect association to fields from

other sources in Qlik, or if Date and Time functions are used in the load script. It is therefore advised to review any existing scripts for possible implications before upgrading the connector.

- **7.0.0. (Requires SAP transport update)** The Qlik role QTQVCBWACCESS has been extended to allow extraction of the new InfoProvider types. The authorization objects S_ADMI_FCD and S_RS_ADSO are new. As always, the Qlik roles are suggestions. The roles can be modified according to customer needs.
- **6.4.0. (Requires SAP transport update)** A new InfoProvider Connector can download SAP MultiProviders and Cubes.

OLAP Connector

- **5.7.1.** Variable selection parameter improvement in selection dialog.
- **5.7.0.** Now caches metadata to improve response times when working with the Script design screen.
- **5.7.0.** Possible to re-enter Script design screen with "old" script values preserved by clicking on the hammer icon next to the script. This will only work with QlikView 11 SR1 (or later) or QlikView 10 SR4 (or later). This makes it possible to make changes to existing scripts without re-doing from scratch.
- **5.6.0.** Slicing parameters D and S re-introduced. D is now default, which indicates no slicing will be done. If removed automatic slicing will be used which has been improved for speed. "S" can be used to indicate a specific characteristic for slicing if automatic slicing fails.
- **5.6.0.** Lookup function for variables in BEx Queries makes it easier to get correct values and format.

Report Connector

- **5.8.1.** Auto detect of column positions now possible for some reports (reports with optimized column width).
- **5.8.1.** Improved error messaging for missing spool files.
- **5.8.0.** Now possible to execute reports without variants and enter selection parameters (Select Options). Multiple field filters possible and include and exclude with <,>,<>,=,<=,>= and between supported.

SAP Query Connector

- **5.9.0.** Now possible to limit the number of displayed queries. One or many User groups can be selected and only the assigned queries are displayed.
- **5.8.0.** Now possible to execute queries with variants and enter selection parameters (Select Options). Multiple field filters possible and include and exclude with <,>,<>,=,<=,>= and between supported.
- **5.8.0.** Improvement: field names can be up to 70 characters. Previous maximum was 28.
- **5.7.0.** Now caches metadata to improve response times when working with the Script design screen.

SQL Connector

- **7.0.1. (Requires SAP transport update)** New functionality to select CDS views. At present there is no UI syntax support for the new CDS view functionality. A SAP HANA system with SAP basis 740 SP08 or higher, is required to use the functionality. See the online help under SQL connector for more information.

- **6.5.0.** A new connection string property is available:
  SocketBufferSize for setting the underlying Network Interface (or TCP/IP) socket buffer size in bytes. Default value is 32768.
- **6.5.0.** Some technical adjustments have been made to the Connection String Properties below. They now work like:
  FLTPLegacy: Turns on/off the legacy handling of FLTP data type. When turned on, FLTP values are transferred as text and it is up to Qlik to interpret the content. This will send FLTP values in scientific notation to Qlik.
  TIMSLegacy: Turns on/off the legacy handling of TIMS data type. When turned on, TIMS values are transferred as DUAL's.
  NulldateLegacy: Now sends the data type DATS values as DUAL's as in the legacy SQL connector.
- **6.4.0.** Two new connection string properties are available:
  FLTPLegacy for setting the transfer format for floating point data to either string values with scientific notation or decimal format.
  TIMSLegacy for setting the transfer format for date-time values when writing to QVDs.
- **6.3.2.** New Connection String Properties.
  In release 6.1 the SQL connector changed how some SAP data types are treated. For backward compatibility, there are now two new Connection String Properties available.
  MixedMode (0 or false / 1 or true. Default/off = 0 or false.)
  When MixedMode is enabled, the NUMC and CHAR data types are sent as UNKNOWN instead of ASCII, and it is up to Qlik to decide what their content is. A numeric string with a maximum length of 14 characters will be interpreted as numeric in Qlik (the same behavior as in the legacy connector).
  NulldateLegacy (0 or false / 1 or true. Default/off = 0 or false.)
  When NulldateLegacy is enabled, the property Nulldate behaves as it did in the legacy connector, returning an empty value when Nulldate is enabled and returning "0000-00-00" when Nulldate is disabled.
  When NulldateLegacy is disabled, null is returned when Nulldate is enabled and 0 (displays as 1899-12-30) is returned when Nulldate is disabled.
  It is recommended that you do not use NulldateLegacy for new development.
  The connection string property DataTypeLegacyMode is now deprecated. It was not meant for public use and is no longer needed.
- **6.1.2. (Requires SAP transport update)** Significant performance improvement for reload times.
- **6.1.2. (Requires SAP transport update)** The parameter RemoveThousandSeparator is not used anymore. Thousand separators are always removed before sending the data from SAP to Qlik. If the parameter is present in old scripts, it will not be used.
- **6.1.2. (Requires SAP transport update)** New 'wideselect' functionality. SAP database fields with a column width exceeding 800 characters cannot be extracted by the current SQL connector. With the 'wideselect' functionality there is no limitation to column width. It is possible to extract one wide field column at a time together with a number of associated key fields. Please see the online help for more information.
  The advanced properties "RemoveAllBlanks" and "ReplaceNullValue" do not have any effect on fields loaded with Wideselect. To handle blank field values and/or null values coming from the SAP system, it is recommended to use QlikView's built-in script functions in a preceding load statement, regardless if you use Wideselect or a regular Select statement.
- **6.1.0. (Requires SAP transport update)** The SQL connector is available in Qlik Sense.

- **6.1.0. (Requires SAP transport update)** The SAP data types CHAR (character) and NUMC (numeric character) were previously interpreted (in the Qlik script) as 'numeric' if they contained only digits. Leading zeroes were removed. (0000141000 became 141000).
  Now they are always interpreted as 'text'. Leading zeroes are kept. These data types are not often used in calculations, but if they are the new behavior might require script changes since calculations expect numeric values.
  Please consult the QlikView/Sense [online help](#) for information about how to work with number and text formatting in QlikView/Sense.
- **6.1.0.** The parameters 'Log', 'Logpath' and 'LogFile' have been removed. The path to the log is specified in the [online help](#) and the name of the log cannot be changed. To configure the log settings, please see the [SQL log topic](#) in the online help.
- **6.1.0. (Requires SAP transport update)** It is now possible to specify how many buffers of data to fetch from SAP. This can be used as a preview. The parameter FetchBuffers is used. It can be combined with the parameter PacketSize which determines how many rows there should be in each buffer. To fetch one buffer with 100 rows, set the parameters like:
  FetchBuffers=1
  PacketSize=100
- **5.8.1.** Improved handling of delay times when waiting for SAP to start the data extraction job.
- **5.8.1.** Improved log file messages on response wait.
- **5.7.1.** Configuration parameter for BatchJobName added to connection string to allow modification of the default job name /QTQVC/READ_DATA.
- **5.7.1.** Configuration parameter for RemoveThousandSeparator added to connection string.
- **5.7.1.** Configuration parameter for ReplaceNullvalue added to connection string.
- **5.7.0.** Special value 999 for the Bufferpercentage parameter can now be used to force the Connector to use 10% of the available shared memory, not only a percentage of free shared memory. This should be used if the Connector starts to show deteriorating performance.
- **5.7.0.** With Row-Based security it is now possible to use position-based wildcard (+) when defining table scope. A + character represents any character in that position. ZAP+++++++++++++++++++++++++. This would give access to all tables starting with ZAP. Z+++ would give access to all tables starting with Z and having 1-4 characters in the name. +++A would give access to all tables with 4 characters ending with A. ++++ would give access to all tables with 4 characters or less. If wildcards are used in Table name, it is not possible to have any value conditions on the field level in the affected tables. Thus, the field name always must contain a star (*) together with wildcard in Table name.
- **5.7.0.** Security enhancements: it is no longer possible to update QTQVC using SM30 or SE16.
- **5.7.0.** Logging activated for QTQVC tables.
- **5.6.0.** A new SUBSELECT statement makes it possible to do a sub-select on Cluster tables. This will make it a lot easier to do delta loads with tables like BSEG, KONV and CDPOS.

Bug fixes

General
Jira issue ID: SAP-1834

Description: Not able to connect with special characters in password. **(7.0.2)**.

BAPI Connector
Jira issue ID: SAP-1590

Description: In a backwards compatibility configuration that has an old transport version but a newer Qlik SAP Connector version, there were reports that the Test Connection failed. Only valid for QlikView. **(7.0.0).**

Jira issue ID: SAP-1643

Description: Table input is not working as expected. An error occurs when entering data into a table in a BAPI. Only valid for Qlik Sense. **(7.0.0).**

Jira issue ID: SAP-1434

Description: Not possible to create a new connection or to use an existing one. The error occurs if both the Windows part and the SAP part of the connectors are upgraded to release 6.5.0. A workaround is to use the Windows part of 6.5.0 against SAP transports of an older release (Backwards compatibility). **(6.5.1).**

Jira issue ID: Unknown

Description: Reduction of size for the generated script from the wizard for the BAPI connector. **(5.8.0).**

Jira issue ID: Unknown

Description: Output parameters will now get data into QlikView. **(5.8.0).**

BEx Connector
Jira issue ID: SAP-1983

Description: Values of characteristic InfoObjects in BEx queries built on InfoSets can be cut of due to an incorrect value of the field length in the metadata. **(7.0.3 Requires SAP transport update).**

Jira issue ID: SAP-1985

Description: Extraction of BEx queries fails with an ABAP dump after upgrading SAP BW to 7.5 Service Pack 14. The same issue can also cause the select dialog in in Qlik to fail. **(7.0.3 Requires SAP transport update).**

Jira issue ID: SAP-1771

Description: Some key figures are interpreted as text due to the country specific settings of the global variables in the script in Sense.
A bug regarding 'Time' fields could result in truncated times in Qlik. **(7.0.2 Requires SAP transport update).**

Jira issue ID: SAP-1895

Description: SAP Bex connector No_Processing error. **(7.0.2 Requires SAP transport update).**

Jira issue ID: SAP-1613

Description: There was an issue with the parsing of BEx Dimension names containing the word FROM that caused the script execution to fail with an MDX Error. **(7.0.0).**

Jira issue ID: SAP-1534
Description: Dumps occurred when using the BEx connector in a BW/4HANA system. The error is now resolved. **(7.0.0. Requires SAP transport update)**.

Jira issue ID: SAP-1481
Description: Navigational attributes having a '=' sign in the technical name caused the connector to fail. The error is now resolved **(6.6.0. Requires SAP transport update)**.

Jira issue ID: SAP-1161
Description: If a BEx hierarchy variable contained hierarchy names with special characters, it could be incorrectly parsed by the connector at script execution. This resulted in a dump in SAP. **(6.5.0).**

Jira issue ID: SAP-1315
Description: An SAP change to the BAPI BAPI_MDPROVIDER_GET_MEASURES in SAP BW 7.5 resulted in a mismatch between technical names and description for the BEx query measures. The solution is to import an SAP note into the affected SAP system. **(6.5.0).**

Jira issue ID: SAP-1132
Description: If a hierarchy contain text nodes that have keys with more characters than the character setting of the InfoObject, the values get cut off by the connector. **(6.4.0. Requires SAP transport update.)**

Jira issue ID: SAP-1160
Description: When a query contains a hierarchy version variable, the available versions are not available for selection in the select data dialog. **(6.4.0. Requires SAP transport update.)**

Jira issue ID: SAP-973
Description: InfoObjects with more than one compounded characteristic could cause variable value checks to fail if used in variable. Queries containing one or more of these types of InfoObjects as dimensions could also result in the user getting an incorrect result from the query execution (most likely 0 records where there should be data). The error is now resolved. **(6.3.2. Requires SAP transport update.)**

Jira issue ID: SAP-1024
Description: The Characteristic value check can give a false error message indicating that the length of the value is wrong. This can occur for alphanumeric values. It is now working as expected. **(6.3.2. Requires SAP transport update.)**

Jira issue ID: SAP-1070
Description: Load scripts with consecutive select statements within the same LIB CONNECT were failing when executed in Qlik Sense. The error is now resolved. **(6.3.2).**

Jira issue ID: SAP-968
Description: Queries with variables built on InfoObjects with compounded characteristics caused the variable check functionality to fail even though the entered variable values were correct. This prohibited the user from creating the load script even though all values were correct. This error is now

resolved. An ability to bypass the check-functionality has also been added so that the user can create the script even though the variable values can't be verified. **(6.3.1. Requires SAP transport update.)**

Jira issue ID: SAP-648
Description: Queries on Composite providers failed when @ appeared in the dimension name. The error is now resolved. **(6.3.0. Requires SAP transport update.)**

Jira issue ID: SAP-468
Description: If currency and/or unit fields were used in a load statement in the Qlik script and the query returned zero rows, the reload failed. The error is now resolved. **(6.3.0. Requires SAP transport update.)**

Jira issue ID: SAP-949
Description: If text fields were used in a load statement in the Qlik script and the query returned zero rows, the reload failed if the corresponding text fields were not present in SAP. The error is now resolved. **(6.3.0. Requires SAP transport update.)**

Jira issue ID: Unknown
Description: If the SAP BW system contained inconsistencies in query and InfoProvider tables, it could cause the connector to display error messages or crash. The metadata read of query data is now carried out without evaluation of consistency to prevent these problems. **(6.1.2).**

Jira issue ID: Unknown
Description: The dimensions are now called in the order they appear in the Qlik script. This gives the user the ability to control the compounding behavior of compounded InfoObjects that previously could prevent the user from extracting the uncompounded variant of an InfoObject. **(6.1.2).**

Jira issue ID: SAP-467
Description: The field length for compounded InfoObjects has been extended to prevent the risk of truncated data. Previously, if the compounded value had a field length that exceeded the length of the main InfoObject, the exceeding characters were cut off when the field data was loaded to QlikView. **(6.1.2. Requires SAP transport update).**

Jira issue ID: Unknown
Description: The handling of non-navigational attributes and their texts has been improved so that the data extracted is not affected by the display setting of the main InfoObject. Previously, not all requested fields were extracted if the display setting of the main InfoObject was 'Text' or 'Key'. **(6.1.2).**

Jira issue ID: Unknown
Description: The SAP structure BAPI6111STT is not available in SAP basis 7.00, causing syntax errors. It is not used anymore by the connector. **(6.1.0. Requires SAP transport update).**

Jira issue ID: Unknown
Description: It is now allowed to have all dimensions as free characteristics in the BEx Query. Previously this would cause SAP to dump. **(6.1.0. Requires SAP transport update.)**

Jira issue ID: Unknown
Description: Now possible to extract texts from SAP systems using a multibyte character set like Chinese or Korean. **(6.1.0).**

Jira issue ID: Unknown

Description: Now possible to run multiple load statements using only one connection string. **(6.0.0).**

Jira issue ID: Unknown

Description: The Server Type 'Message Server' in the connection dialog can now be used without problems. **(6.0.0).**

DSO Connector

Jira issue ID: SAP-1434

Description: Not possible to create a new connection or to use an existing one. The error occurs if both the Windows part and the SAP part of the connectors are upgraded to release 6.5.0. A workaround is to use the Windows part of 6.5.0 against SAP transports of an older release (Backwards compatibility). **(6.5.1)**.

Extractor Connector

Jira issue ID: SAP-1967

Description: The second row in the textual description of the Extractor or Hierarchy in the select dialog in Qlik Sense is only partly visible. **(7.0.3)**.

Jira issue ID: SAP-1799

Description: Error message in the Qlik SAP Network Server service log: max no of nnn conversations exceeded. **(7.0.1)**.

Jira issue ID: SAP-1594

Description: During a long running job when using the Qlik Sense version of the connector, a timeout was triggered after 600 seconds even though a higher value was configured. This issue has now been sorted and the correct timeout value is used. **(7.0.0)**.

Jira issue ID: SAP-1638

Description: There was a rare error reported when using the Qlik Sense version of the connector. The error message said, "Did not receive start packet," and the job failed. **(7.0.0)**.

Jira issue ID: SAP-1492

Description: In some rare cases, it was reported in the log file that the settings.config for the Qlik Network Server could not be found. It was an 'api' for file reading that could not find the target file. The way this works has now been changed and the issue is fixed. **(6.6.0)**.

Jira issue ID: SAP-1135

Description: Hierarchies in which the entire hierarchy is time dependent are now supported. Previously, the different time slices of the hierarchy were concatenated in Qlik. Now the slices are individually extracted. **(6.4.0. Requires SAP transport update.)**

Jira issue ID: Unknown

Description: For some customers running QlikView Publisher, the connector occasionally hung when starting a new extraction job and thereby triggered a timeout. This was due to a deadlock condition in one of the included DLLs. This has now been resolved. **(6.1.2).**

Jira issue ID: Unknown

Description: For customers running QlikView Publisher: When a timeout was triggered (as in the previous point), the notification was not propagated. This prevented the failed task restarting properly. This issue has now been fixed. **(6.1.2).**

Jira issue ID: Unknown

Description: When a script contains multiple connection strings (for example, one for each job), an error was sometimes raised from SAP, the "100 conversations exceeded". This error prevented the Extractor Connector Service 'Qlik SAP Network Server' from accepting new extraction jobs. This has now been fixed. **(6.1.2).**

Jira issue ID: Unknown

Description: A code addition to the Extractor Connector in the previous version contained a bug that caused the Extractor Connector Service 'Qlik SAP Network Server' to hang when running parallel jobs on the same logical system. The workaround was to run the extraction jobs in sequence. This has now been fixed. **(6.1.2).**

Jira issue ID: Unknown

Description: Sometimes data packets got stuck in SAP and never reached the connector. This was often related to Message Server Host connection. New functionality will ensure that this does not happen. **(6.1.0. Requires SAP transport update.)**

Jira issue ID: Unknown

Description: When extracting hierarchies with both data and text, the connector sometimes failed to finish the job correctly. This was more likely to happen when many texts were extracted. The error is now corrected. **(6.1.0).**

Jira issue ID: Unknown

Description: The Windows-API getaddrinfo() can cause the connector to 'freeze'. This can occur when entering a host name in the 'Network Server Host' field in the connection dialogue. The solution is to enter an IP-number instead of a host name. Then the Windows-API will not be used. **(5.9.0).**

Jira issue ID: Unknown

Description: When using the IDOC method for the connector (extracting hierarchies) there was a timing issue between SAP and QlikView SAP Network Server. SAP was sending data packets before the job was properly registered. This resulted in lost packages and the reload failed. This is now corrected. **(5.8.4).**

Jira issue ID: Unknown

Description: SAP connection through Message Server host failed after upgrading from 5.80 SR2 to 5.80 SR3. Problem occurred because customers use many different naming conventions for their SAP servers. New solution implemented to cover all kinds of server names. **(5.8.4).**

Jira issue ID: Unknown

Description: Status table record now gets job status changed to 'A' (aborted) when a job is cancelled due to a timeout. **(5.8.3).**

Jira issue ID: Unknown

Description: Extractors with rows containing more than 1000 characters could get corrupt contents in fields. This is now corrected**. (5.8.3).**

Jira issue ID: Unknown

Description: A serious error sometimes occurred when the maximum number of 100 conversations was exceeded. This will not happen anymore. **(5.8.3).**

Jira issue ID: Unknown

Description: Timeouts now work in all cases. **(5.8.2).**

Jira issue ID: Unknown

Description: Deletion of corresponding port in SAP when logical system environment is deleted. **(5.8.1).**

Jira issue ID: Unknown

Description: Now possible to use hierarchies with space in the name. **(5.8.0).**

Jira issue ID: Unknown

Description: Better handling of load balancing of background jobs. **(5.6.2).**

Jira issue ID: Unknown

Description: Improved logging, especially avoiding huge log files for long-running jobs. **(5.6.2).**

Jira issue ID: Unknown

Description: Authorization role extended to be able to handle resend functionality. **(5.6.2).**

Jira issue ID: Unknown

Description: Hierarchy bug introduced in SR1 now fixed. **(5.6.2).**

Jira issue ID: Unknown

Description: Timeout parameters adjusted. **(5.6.1).**

Jira issue ID: Unknown

Description: Better control implemented to avoid parallel jobs on the same logical system. **(5.6.1).**

Jira issue ID: Unknown

Description: Problems with using Extractor Connector via Message server fixed. **(5.6.1).**

InfoProvider Connector

Jira issue ID: SAP-2262

Description: Info Provider Data preview is not working in select dialog. **(7.0.4).**

Jira issue ID: SAP-2012

Description: Conditions that are set on Navigational Attributes are ignored in the data extraction if the InfoProvider type is HCPR or FBPA. **(7.0.3. Requires SAP transport update)**.

Jira issue ID: SAP-2053

Description: Message server connection jobs failed with an error message: Timeout reached while waiting for clearance of shared buffer. **(7.0.3. Requires SAP transport update)**.

Jira issue ID: SAP-1860
Description: The connector is not considering SAP authorizations for InfoProviders used. See online help for instructions about how to set up the authorizations. **(7.0.2. Requires SAP transport update)**.

Jira issue ID: SAP-1890
Description: InfoProvider connector connection string property TimeOutFetch is not reflected in the connector. **(7.0.2).**

Jira issue ID: SAP-1805
Description: InfoProvider - Impossible to create Between condition in Qlik Sense Sept 2018. **(7.0.2).**

Jira issue ID: SAP-1957
Description: Error when creating script for InfoObjects with XXL text. **(7.0.2. Requires SAP transport update)**.

Jira issue ID: SAP-1737
Description: Qlik SAP InfoProvider connector v7.0: Missing InfoProviders in the select dialog box. **(7.0.1. Requires SAP transport update)**.

Jira issue ID: SAP-1741
Description: Navigational attributes from InfoObjects with custom namespaces are incorrectly entered into the script, causing the data load to fail. **(7.0.1. Requires SAP transport update)**.

Jira issue ID: SAP-1762
Description: Decimal separator can be lost when data is transferred to Qlik.
There are three possible ways of setting up decimal notation for an SAP user:
1.234.567,89
1,234,567.89
1 234 567,89
If a user has chosen the decimal notation '1 234 567,89' this error can occur. **(7.0.1. Requires SAP transport update)**.

Jira issue ID: SAP-1509
Description: Key figures of the SAP data type DEC having decimals were displayed without decimals by the connector. Decimals are now displayed as expected. **(6.6.0. Requires SAP transport update)**.

OLAP Connector

Jira issue ID: SAP-1434
Description: Not possible to create a new connection or to use an existing one. The error occurs if both the Windows part and the SAP part of the connectors are upgraded to release 6.5.0. A workaround is to use the Windows part of 6.5.0 against SAP transports of an older release (Backwards compatibility). **(6.5.1).**

Jira issue ID: Unknown

Description: When using "D" parameter, the connector could, in some cases, stop retrieving records when it reached the stated PartitionSize parameter value, but it did not display an error message. Now the connector uses the subset functionality to continue reading records beyond the partition size limit. **(5.6.2).**

Jira issue ID: Unknown
Description: In some cases, optimization preparations timed out for large infocubes. By default, certain optimizations will not be done, but can be turned on with a new parameter "O" to be added in same place as the "D" parameter (Direct, no slicing needed). **(5.6.1).**

Jira issue ID: Unknown
Description: Authorization object S_TABU_LIN added to role QTQVCBWACCESS. Only necessary in specific cases. **(5.6.1).**

Jira issue ID: Unknown
Description: Comments generated for Key Figure names are sometimes wrapped over two lines, causing script execution to fail. **(5.6.0).**

Jira issue ID: Unknown
Description: Several adjustments to slicing algorithm to better handle large cubes. **(5.6.0).**

Online help

Jira issue ID: SAP-1423
Description: The contextual help links for the Sense BEx, SQL and InfoProvider SAP connectors from the SAP Connectors 6.5 package all point to help files for version 6.4. The contextual help links appear in the top right corners of the "Add data"/"Create new connection"/"Select data" dialog boxes. The contextual help links for the SAP Extractor connection, which was added in v6.5, work correctly **(6.5.1)**.

Report Connector

Jira issue ID: SAP-1833
Description: Report Connector does not reset variables when getting next report. Some variables are not reset before getting the next report. This will corrupt the auto detect handling and result in wrong column sizes. The easy workaround is to close the selection dialog and start fresh with the next report. **(7.0.2).**

Jira issue ID: SAP-1590
Description: In a backwards compatibility configuration that has an old transport version but a newer Qlik SAP Connector version, there were reports that the Test Connection failed. **(7.0.0).**

Jira issue ID: SAP-1434
Description: Not possible to create a new connection or to use an existing one. The error occurs if both the Windows part and the SAP part of the connectors are upgraded to release 6.5.0. A workaround is to use the Windows part of 6.5.0 against SAP transports of an older release (Backwards compatibility). **(6.5.1).**

Jira issue ID: SAP-972

Description: Trying to open the Report Connector Select dialog would result in QlikView freezing. This degrade has now been fixed. The issue did not happen on Windows 7 but on most other Windows versions. **(6.3.1).**

SAP Query Connector

Jira issue ID: SAP-1429

Description: Data that has a string value such as "0E12345" was interpreted by QlikView as the number "0" using scientific notation formatting. **(7.0.0).**

Jira issue ID: SAP-1590

Description: In a backwards compatibility configuration that has an old transport version but a newer Qlik SAP Connector version, there were reports that the Test Connection failed. **(7.0.0).**

Jira issue ID: SAP-1434

Description: Not possible to create a new connection or to use an existing one. The error occurs if both the Windows part and the SAP part of the connectors are upgraded to release 6.5.0. A workaround is to use the Windows part of 6.5.0 against SAP transports of an older release (Backwards compatibility). **(6.5.1).**

Jira issue ID: SAP-923

Description: Connecting through a SAP Router caused the load to fail. This has now been fixed. **(6.3.2).**

Jira issue ID: Unknown

Description: If the Query returns no rows the script is aborted. Only affects scripts with multiple jobs in sequence. They will now run as expected. **(5.8.4).**

SQL Connector

Jira issue ID: SAP-1889

Description: Message server jobs were failing after upgrading to SAP Connector release 7.0.1. **(7.0.2. Requires SAP transport update).**

Jira issue ID: SAP-1738

Description: Error message: This Open SQL statement uses additions that can only be used when the fixed point arithmetic flag is activated (such as CASE expressions or host variables in expressions). Reason: The SQL connector is using an ABAP statement called SYNTAX-CHECK to check the syntax of the SQL statement. It seems that SAP has changed the behavior of the SYNTAX-CHECK. In some basis versions, an activated 'fixed point arithmetic flag' is required for some SQL statements. The SQL connector is generating a temporary Report to execute the SQL statement and the 'fixed point arithmetic flag' is not activated when the SYNTAX-CHECK is performed for this Report. **(7.0.1. Requires SAP transport update).**

Jira issue ID: SAP-1731

Description: SUBSELECT with * is not working in the SAP SQL connector. **(7.0.1. Requires SAP transport update).**

Jira issue ID: SAP-1739

Description: WIDESELECT does not work in connector release 7.0. The error message: 'SAP.Middleware.Connector.RfcAbapMessageException: Field catalog not found' can occur. **(7.0.1).**

Jira issue ID: SAP-1762

Description: Decimal separator can be lost when data is transferred to Qlik.

There are three possible ways of setting up decimal notation for an SAP user:

1.234.567,89

1,234,567.89

1 234 567,89

If a user has chosen the decimal notation '1 234 567,89' this error can occur. **(7.0.1. Requires SAP transport update).**

Jira issue ID: SAP-1432

Description: Intermittent failure of an SQL statement, giving a syntax error. This very unusual error has only been observed in a DB6 database. The cause of the error has been found and corrected. **(6.6.0). Requires SAP transport update).**

Jira issue ID: SAP-1457

Description: In previous connector versions, the SAP data type TIMS, containing blank values was displayed like 00:00:00. It is now possible to get the same behavior, by setting the connection string property TIMSLegacy=true. **(6.6.0).**

Jira issue ID: SAP-1479

Description: Error when multiple JOINS were used in the same statement is now resolved. JOIN statements where the same fieldname occurs in different tables are now working as expected. **(6.6.0).**

Jira issue ID: SAP-1499

Description: Connector failure when using 'IN' in a select statement. The failure only occurs if a single character like a comma is in position 60 in a row of the statement. A workaround is to make the row shorter than 60 characters. The error is now resolved. **(6.6.0. Requires SAP transport update).**

Jira issue ID: SAP-1059

Description: A degrade occurring only in release 6.3 could cause a very limited number of SQL statements to fail (for example, some statements containing a JOIN). The error is now resolved. **(6.3.2).**

Jira issue ID: SAP-626

Description: When the 'Row-based access control' was used, an error sometimes occurred if a WHERE clause was used in the SQL statement. This happened in a very limited number of cases. The error is now resolved. **(6.3.0. Requires SAP transport update.)**

Jira issue ID: SAP-721

Description: The Windows part of the connector froze when a faulty SQL statement was used in the script. The error is now resolved. **(6.3.0. Requires SAP transport update.)**

Jira issue ID: Unknown

Description: Keys that depends on leading/trailing spaces in the entries were incorrectly trimmed. The spaces are now preserved in the SQL Connector. Note that it is necessary to set the System Variable 'Verbatim' to 1 in the script to prevent the trimming when loading the data. **(6.2.0).**

Jira issue ID: Unknown

Description: An extraction of an empty field of the SAP data type String (STRG) could cause the field content of another extracted field to become corrupt. This did not happen when the String field was the last one of the extracted fields or if the String field had content. The error is now corrected. **(6.1.2. Requires SAP transport update.)**

Jira issue ID: Unknown

Description: Usage of SAP system variables like SY-DATUM could cause errors. It is now working as expected. **(6.1.2. Requires SAP transport update.)**

Jira issue ID: Unknown

Description: SAP 'conversion routines' used for numeric fields could cause errors. The solution, in the connector, is not to apply conversion routines for numeric fields when sending the data from SAP. Formatting can instead be applied in QlikView or Qlik Sense. **(6.1.2. Requires SAP transport update.)**

Jira issue ID: Unknown

Description: SAP fields of the datatype FLTP (Floating point) could get erroneous values in Qlik if decimal notation 'comma' was used in SAP. This is now corrected. **(6.1.2. Requires SAP transport update.)**

Jira issue ID: Unknown

Description: A small number of customers had experienced problems with parsing of the conditions 'IN' and 'BETWEEN' in select statements. The issue has now been resolved. **(6.1.2).**

Jira issue ID: Unknown

Description: No specific formatting enforced for Date & Time types. Formatting is now entirely controlled from QlikView or Qlik Sense. **(6.1.2).**

Jira issue ID: Unknown

Description: The implication of Date & Time changes is that data is always sent as numeric values and when using advanced property NullDate=0, the value "00000000" is now interpreted as 12/30/1899, a numeric value, as compared to "0000-00-00," a string before. Further, if the date field contains other values, such as strings, they will also be interpreted as NULL values. Before, they were sent as strings. It is possible to display null values as a selectable value by using the QlikView/Qlik Sense variable "NullDisplay". **(6.1.2).**

Jira issue ID: Unknown

Description: A small number of customers had experienced an issue with the parameter 'TimeOutFetch' which had caused a trigger to terminate the job before completion in some cases. The workaround would be to put a high value in the parameter. The issue has now been resolved and the parameter is now working as expected. **(6.1.1).**

Jira issue ID: Unknown

Description: There was a performance degrade in release 6.1.0. The issue has now been resolved. **(6.1.1. Requires SAP transport update.)**

Jira issue ID: Unknown

Description: There was a limitation of 800 characters for field width. This is now increased to 8192 characters. **(6.1.0. Requires SAP transport update.)**

Jira issue ID: Unknown
Description: Row based security bug fixed. An error could occur when using many values in the same value field. **(6.1.0. Requires SAP transport update.)**

Jira issue ID: Unknown
Description: Now possible to combine a SELECT COUNT statement with select of field name(s). **(6.0.0. Requires SAP transport update.)**

Jira issue ID: Unknown
Description: Error message 'QVX_UNEXPECTED_END_OF_DATA: Fetch aborted, due to wrong number of rows received'. Code changes have been made to prevent this very rare error. **(5.8.4).**

Jira issue ID: Unknown
Description: Long field names could be truncated causing a dump when using a JOIN statement. **(5.8.2).**

Jira issue ID: Unknown
Description: All JOIN variants supported in ABAP OPEN SQL now possible from QlikView. **(5.7.0).**

Jira issue ID: Unknown
Description: Admin Authorization role reduced to avoid unnecessary access rights. **(5.6.2).**

Jira issue ID: Unknown
Description: Better control mechanism built in to check for lost records. **(5.6.1).**

Jira issue ID: Unknown
Description: Wildcard character * was not possible to use in WHERE clause. **(5.6.1).**

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