

Qlik Connector for use with SAP NetWeaver

Installation guide for release 7.0.3

Published: November, 2019

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General configuration

This document covers the following releases:

Qlik Connector 7.0.3 for use with SAP NetWeaver

Release: November, 2019

The purpose of this document is to guide you through the installation and configuration of the Qlik Connector for use with SAP NetWeaver. For information about how to use the connectors, please consult the online help:

[Qlik Connector for use with SAP NetWeaver](#)

Installing the connectors

The Qlik Connector for use with SAP NetWeaver is installed with the *QlikSAP_x64Setup.exe*, which is the 64-bit (x64) installation package for Windows. The package can be installed on Qlik Sense or QlikView systems.

It is also required to import SAP transports. Please see the SAP Transport section for more information.

Prerequisites

See the online help

Backwards compatibility

For a new connector release, it is recommended that you always update both the client and SAP systems. There is backward compatibility to the SAP code, so it is possible to install the new release of the connector on the client without installing the corresponding SAP transports. In that case, however, new functionality and bug fixes that are dependent on changes in the SAP code are not available.

The following table shows the current backwards compatibility of the components of the connector package.

Connectors	Client	SAP transport (data extraction)
SQL connector	7.0.3	6.1.2 or later
BEx connector	7.0.3	6.1.2 or later
Query connector	7.0.3	5.80 SR2 or later
Report connector	7.0.3	5.80 SR2 or later
Extractor connector	7.0.3	5.80 SR2 or later
BAPI connector	7.0.3	5.80 SR2 or later
InfoProvider connector	7.0.3	6.5.0 or later

Installation package

Do the following:

1. Download the *QlikSAP_x64Setup.exe* file from the Qlik download site.

The Qlik connectors are obtained from www.qlik.com. Log on with a registered customer or partner account, select Services > Customer Downloads and then select the **Qlik Connectors** tab.

2. Double-click the *QlikSAP_x64Setup.exe*.

The Qlik Connectors installation wizard starts.

3. Select **I agree...** and then click **Install**.

4. If User Account Control (UAC) is disabled, the installation starts.
If UAC is enabled, the **User Account Control** dialog is displayed.
Click **Yes** to start the installation.

5. When the installation has completed, click **Close**.

A folder structure is created for Qlik Sense and QlikView.

QlikView: C:\Program Files\Common Files\QlikTech\Custom Data

Qlik Sense: C:\Program Files\Common Files\Qlik\Custom Data

The folders contain all files required to use the connectors.

Installing and updating the license

See the online help.

Check the version of the installed release

To check the release version, look at the Details tab on the Properties for one of the connector *dll* or *exe* files. If the release version is not correct, manually delete all sub folders of *C:\Program Files\Common Files\QlikTech\Custom Data* and *...Qlik\Custom Data*. Uninstall the 'Qlik Connector for SAP x64' from the 'Control panel' in Windows. Then install the connector package again.

SAP Installation

All the connectors except OLAP and DSO use Qlik objects in the SAP system for communicating between the client and the SAP parts of the connectors and for extracting data. The Qlik connector objects are stored in two SAP packages: /QTQVC/QTDEV and /QTQVC/QTDEV_BW (for the BEx and InfoProvider connectors). All objects are prefixed with the Qlik-reserved namespace at SAP, /QTQVC/. This makes the objects unique for Qlik.

After the objects have been imported into an SAP system, it is possible to import a Qlik deletion transport to remove them (if they should not be used anymore).

Qlik also provides roles that must be assigned to the SAP user ID to authorize it for use with the connectors. The SAP connector roles contain the required authorization objects. Authorization objects may be checked both by the Qlik SAP connector objects and by standard SAP objects called from the Qlik objects. The Qlik roles are not mandatory, and you can copy or modify the Qlik roles if necessary. You can also create your own authorizations.

The Qlik objects and roles are distributed to customers in SAP transports. There are two types of Qlik SAP connector transports. One type contains the Qlik SAP connector objects such as ABAP programs, function modules and dictionary objects (used for data extraction), and the other contains the Qlik SAP connector roles (used for user profile).

The transports are imported into the SAP system with the SAP transport management system.

See section 'Import transports'.

Qlik SAP connectors and SAP user IDs

Creating and maintaining an SAP User ID

Create one or more SAP user IDs that will be used for back-end jobs for Qlik and for administration tasks in the SAP system. These users are not intended as Qlik end-users, so only a limited number of SAP users should be created. Creating multiple users increases traceability and enables you to give them different authorizations.

Do the following:

1. In the SAP system, go to transaction SU01.
2. Click **Create (F8)**.
3. Give the user a name and a password.
4. On the **Logon data** tab, assign the user to **User Type: Service**.
5. Click **Save**.

If the installation is an upgrade from a previous version and any of the Qlik roles have been updated, update all users assigned to that role:

1. Go to transaction *PFCG*.
2. Enter the role name and click **Change Role**.

3. On the **User** tab, enter the name of the user(s) created above.
4. Click **User comparison**.
5. Click **Complete comparison**.
6. Click **Save**.

After SAP user IDs have been created, each of the Qlik Connectors for SAP can be configured. See [below](#).

SAP Transports

The SAP transports are found on the Qlik download site. Download and extract the file '703 SAP transports.zip'. The zip file has the following content:

- ▼ 703 SAP transports
 - ▼ BW systems
 - Basis 700-72x
 - Basis 730-73x
 - Basis 740-75x
 - Basis 740-75x (not HANA)
 - ▼ ERP & BW systems
 - Basis 700-71x
 - Basis 720-740 SP07
 - Basis 740 SP08-75x

The transports must be imported in the correct order:

1. Data extraction transports
2. Role transports (user profile)

The Data extraction transport is cross-client. It must be imported into the base client. The Role transports are client-specific and must be imported into all clients where they will be used.

See **Import transports**

Transports for release 7.0.3

ERP & BW systems

These transports contain the objects for the SQL, Report, SAP Query, BAPI, and Extractor Connectors.

SAP BASIS system 7.00 – 7.1x

For these systems, the following transports must be installed in the SAP system:

Type	Connector v. 7.0.3
Data extraction	E6DK901019
User profile	E6DK901010

SAP BASIS system 7.20 – 7.40 SP07

For these systems, the following transports must be installed in the SAP system:

Type	Connector v. 7.0.3
Data extraction	E66K900163
User profile	E66K900154

SAP BASIS system 7.40 SP08 – 7.5x

For these systems, the following transports must be installed in the SAP system:

Type	Connector v. 7.0.3
Data extraction	H6AK900045
User profile	E66K900154

OLAP and DSO/ODS Connectors

Although a data extraction transport is not needed, a user profile transport must be installed in the Business Warehouse SAP system. The role *QTQVCBWACCESS* in this transport contains the authorizations needed to use the connectors.

- SAP BASIS 7.00 - 7.1x (E6DK900818)
- SAP BASIS 7.20 - 7.3x (E66K900076)
- SAP BASIS 7.40 - 7.5x (H7TK900185)

BW systems

These transports contain the objects for the BEx and InfoProvider Connectors.

To use the BEx and InfoProvider Connectors, the data transport for the SQL, Report, SAP Query, BAPI, and Extractor Connectors (see 'ERP & BW systems' above) must also be imported. That transport must be imported before the BEx and InfoProvider Connectors transport is imported.

SAP BASIS system 7.00 – 7.2x

For these systems, the following transports must be installed in the SAP system:

Type	Connector v. 7.0.3
Data extraction	B7TK900151
User profile	E6DK901010 or E66K900154
User profile BW	E6DK900818 or E66K900076

User profile may already be imported. See SQL, Report, SAP Query, BAPI, and Extractor Connectors.

User profile BW may already be imported. See OLAP and DSO/ODS.

SAP BASIS system 7.30 – 7.3x

For these systems, the following transports must be installed in the SAP system:

Type	Connector v. 7.0.3
Data extraction	B7DK900211
User profile	E66K900154
User profile BW	E66K900076

User profile may already be imported. See **Error! Reference source not found.**

User profile BW may already be imported. See OLAP and DSO/ODS Connectors.

SAP BASIS system 7.40 – 7.5x

For non-HANA systems, see next section.

For these systems, the following transports must be installed in the SAP system:

Type	Connector v. 7.0.3
Data extraction	H7TK900218
User profile	E66K900154
User profile BW	H7TK900185

User profile may already be imported. See SQL, Report, SAP Query, BAPI, and Extractor Connectors.

User profile BW may already be imported. See OLAP and DSO/ODS.

SAP BASIS system 7.40 – 7.5x (not HANA)

For these systems, the following transports must be installed in the SAP system:

Type	Connector v. 7.0.3
Data extraction	SM7K900059
User profile	E66K900154
User profile BW	H7TK900185

User profile may already be imported. See SQL, Report, SAP Query, BAPI, and Extractor Connectors.

User profile BW may already be imported. See OLAP and DSO/ODS.

Import the appropriate Data extraction transports into the base client (client independent).

Import the appropriate User profile transports (if necessary) into every client where they will be used (client dependent).

Import transports

It is recommended that the transports are imported into the SAP system by SAP Basis experts.

There is normally no need to delete the Qlik objects from a previous release before import, since the objects from the latest transport overwrites the previous ones.

Depending of SAP basis, the following options might need to be selected in transaction **STMS**:





Import Transport Request

Transport Request: E66K900163 Package /QTQVC/QTDEV release 7.0.3 for basis >= 7.
 Target System: H6Q H6Q
 Target Client: 000 Targ.Client=Source Client

Date Execution **Options**

Import Options

- Leave Transport Request in Queue for Later Import
- Import Transport Request Again
- Overwrite Originals
- Overwrite Objects in Unconfirmed Repairs
- Ignore Non-Permitted Transport Type
- Ignore Non-Permitted Table Class
- Ignore Predecessor Relations
- Ignore Invalid Component Version

After import, check the transport log like below.

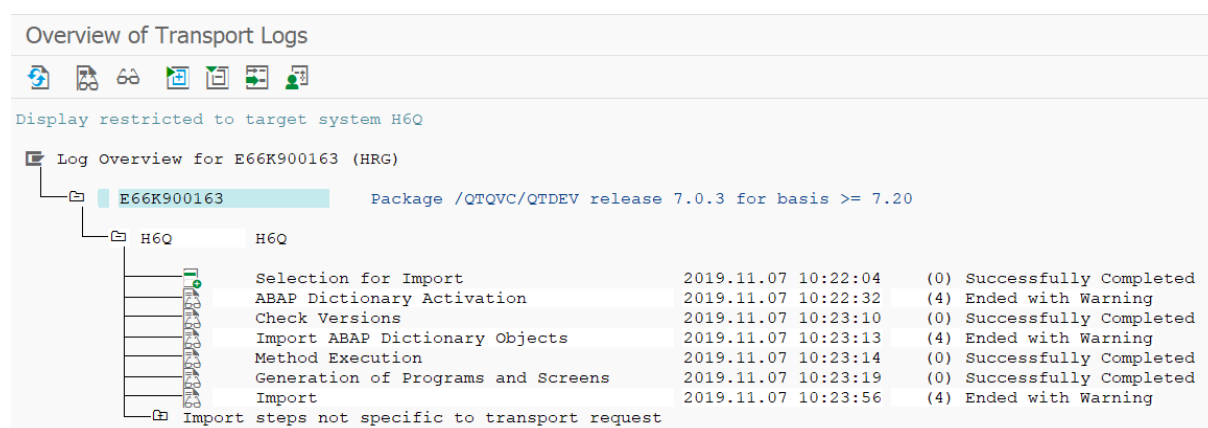
Import Queue: System H6Q

Requests for H6Q: 0 / 34 2019.11.07 10:23:46

Number	Request	RC	Owner	Short Text	St
1	E66K900104	▲	HRG	Transport layer	
2	E66K900107	▲	HRG	Package /QTQVC/QTDEV	
3	E6DK900932	▲	HRG	ZBAPI_GET_TEST_TABLES	
4	E6DK900943	▲	HRG	Package /QTQVC/QTDEV release 6.6.0 for basis >= 6.40	
5	E66K900111	▲	HRG	Package /QTQVC/QTDEV release 6.6.0 for basis >= 7.20	
6	E6DK900939	▲	HRG	Test BAPI	
7	E6DK900944	▲	HRG	Create test data	
8	E6DK900823	▲	HRG	QTQVCACCESS1	
9	E6DK900952	▲	HRG	Package ZQV_01	
10	E6DK900953	▲	HRG	Package ZQV_02	
11	E6DK900954	▲	HRG	Transport table entries	
12	E6DK900956	▲	HRG	Create test data pgm	
13	E6DK900958	▲	HRG	Create test data	
14	E6DK900960	▲	HRG	ZBAPI_GET_TEST_TABLES	
15	E6DK900962	▲	HRG	BAPI test	
16	E66K900114	▲	HRG	Change transport layer	
17	E66K900113	▲	HRG	Package /QTQVC/QTDEV release 7.0.0 for basis >= 7.20	
18	E66K900116	▲	HRG	Package /QTQVC/QTDEV release 7.0.0 for basis >= 7.20	
19	H6DK900007	▲	HRG	Software component QTQVC	
20	H6DK900011	▲	HRG	Package /QTQVC/QTDEV	
21	H6DK900004	▲	HRG	Namespace /QTQVC/	
22	H6DK900015	▲	HRG	Package /QTQVC/QTDEV	
23	H6DK900018	▲	HRG	Package /QTQVC/QTDEV	
24	H6DK900016	▲	HRG	Qlik roles	
25	E66K900141	▲	HRG	Package /QTQVC/QTDEV release 7.0.1 for basis >= 7.20	
26	E66K900148	▲	HRG	Package /QTQVC/QTDEV release 7.0.1 for basis >= 7.20	
27	E6DK900989	▲	HRG	ZQV_01 och ZQV_02	
28	E6DK900990	▲	HRG	Transport table entries	
29	E6DK900994	▲	HRG	ZQV_01 and ZQV_02	
30	E6DK901003	▲	HRG	Extend ZBAPI_GET_TEST_TABLES	
31	E66K900151	▲	HRG	Package /QTQVC/QTDEV release 7.0.2 for basis >= 7.20	
32	E66K900154	▲	HRG	QTQVCACCESS Release 7.0.2 and above	
33	E66K900158	▲	HRG	Package /QTQVC/QTDEV release 7.0.2 for basis >= 7.20	
34	E66K900163	▲	HRG	Package /QTQVC/QTDEV release 7.0.3 for basis >= 7.20	

Put the cursor on the transport and press the 'Logs' button .

The log example below illustrates a successful import. Warnings normally do not indicate a problem, but if the log lists errors, they must be corrected.



Overview of Transport Logs

Display restricted to target system H6Q

Log Overview for E66K900163 (HRG)

E66K900163 Package /QTQVC/QTDEV release 7.0.3 for basis >= 7.20

Step	Time	Status
Selection for Import	2019.11.07 10:22:04	(0) Successfully Completed
ABAP Dictionary Activation	2019.11.07 10:22:32	(4) Ended with Warning
Check Versions	2019.11.07 10:23:10	(0) Successfully Completed
Import ABAP Dictionary Objects	2019.11.07 10:23:13	(4) Ended with Warning
Method Execution	2019.11.07 10:23:14	(0) Successfully Completed
Generation of Programs and Screens	2019.11.07 10:23:19	(0) Successfully Completed
Import	2019.11.07 10:23:56	(4) Ended with Warning

Import steps not specific to transport request

Passing through a Message server

If passing through a Message server, an entry may have to be added in the 'services' file (C:\Windows\System32\drivers\etc\services). Add sapmsxxx 36nn/tcp, where xxx is the system ID and nn is the system number. If it is the last line in the file, add a new line break after the entry.

As an alternative to updating the 'services' file, you can enter the Message server Port number directly, instead of the System ID, when creating the connector connection. The Port number is of the form 36nn where nn is the system number.

Passing through a Firewall

If there is a firewall between the connector and the SAP system, port 33nn must be open (where nn = system number of the SAP system).

Error handling

When a connector error occurs, check the corresponding log file. Note that some connectors create more than one log file for the same job.

Connector log files

The log files are located in the log directories for the individual connectors. The path to the log files for QlikView is:

C:\ProgramData\QlikTech\Custom Data\QvxxxConnector\Log

For Qlik Sense it is:

C:\ProgramData\Qlik\Custom Data\QvxxxConnector\Log

The xxx represents the connector-specific name, such as QvBexConnector.

BAPI connector configuration

Assign roles to Qlik SAP user

Authorizations are required to use the BAPI connector. Qlik provides two roles that contain the necessary authorizations. It is possible to assign different roles to different users, depending on need, or both roles can be assigned to one user. The roles are:

QTQVCADMIN

There are some Qlik transactions in the SAP GUI. Most of them require that this role is assigned to the user.

QTQVCACCESS

To be used by a connector back-end user for doing extraction jobs from Qlik.

To assign role(s) to a user ID, do the following:

1. In the SAP system, go to transaction *SU01*.
2. Enter User ID and click **Change (Shift + F6)**.
3. On the **Roles** tab, add the desired roles.
4. Click **Save**.

If the installation is an upgrade from a previous version and any of the Qlik roles have been updated, please see

Creating and maintaining an SAP User ID.

A BAPI might check authorization objects that are not part of the Qlik roles. In that case, they can be added to the role *QTQVCACCESS* or added to an additional customer developed role that is assigned to the Qlik SAP user.

BEx query connector configuration

Assign roles to Qlik SAP user

Authorizations are required to use the BEx query connector. Qlik provides three roles that contain the necessary authorizations. It is possible to assign different roles to different users dependent of need, or all roles can be assigned to one user. The roles are:

QTQVCADMIN

There are some Qlik transactions in the SAP GUI. Most of them require that this role is assigned to the user.

QTQVACCESS

To be used by a connector back-end user for doing extraction jobs from Qlik.

QTQVCBWACCESS

To be used by OLAP, DSO/ODS, BEx and InfoProvider Connectors back-end user for doing extraction jobs on an SAP BI/BW system.

To assign role(s) to a user ID, do the following:

1. In the SAP system, go to transaction *SU01*.
2. Enter User ID and click **Change (Shift + F6)**.
3. On the **Roles** tab, add the desired role(s).
4. Click **Save**.

If the installation is an upgrade from a previous version and any of the Qlik roles have been updated, please see

Creating and maintaining an SAP User ID.

DSO connector configuration

Assign roles to Qlik SAP user

Authorizations are required to use the DSO connector. Qlik provides a role that contains the necessary authorizations. The role is:

QTQVCBWACCESS

To be used by OLAP, DSO/ODS, BEx and InfoProvider Connectors back-end user for doing extraction jobs from SAP BI/BW system from Qlik.

To assign role(s) to a user ID, do the following:

1. In the SAP system, go to transaction *SU01*.
2. Enter User ID and click **Change (Shift + F6)**.
3. On the **Roles** tab, add the desired roles.
4. Click **Save**.

If the installation is an upgrade from a previous version and any of the Qlik roles have been updated, please see

Creating and maintaining an SAP User ID.

Extractor connector configuration

Assign roles to Qlik SAP user

Authorizations are required to use the Extractor connector. Qlik provides three roles that contain the necessary authorizations. It is possible to assign different roles to different users depending on needs, or all roles can be assigned to one user. The roles are:

QTQVCEXTRACTOR

To be used by Extractor Connector Back-end user for doing extraction jobs from Qlik.

QTQVCEXTRADM

This role is used to activate and generate the extractors in an SAP system. It can also be used to test Extractors in the SAP system and to monitor Extractor jobs.

QTQVCEXTRSETUP

This role can be used to create, delete, and verify the setup of the logical system in an SAP system for later use by the Extractor Connector. It can also be used for administration tasks like migrating Extractors and the Extractor Environment.

To assign role(s) to a user ID, do the following:

1. In the SAP system, go to transaction *SU01*.
2. Enter User ID and click **Change (Shift + F6)**.



3. On the **Roles** tab, add the desired roles.
4. Click **Save**.

If the installation is an upgrade from a previous version and any of the Qlik roles have been updated, please see

Creating and maintaining an SAP User ID.

Install Qlik SAP Network Server

A service is required when using the Extractor connector. The main reasons to use a service are to support parallel loads and be able to use Extractors containing many fields (field character sum greater than 1000).

 SrvService.exe	2017-05-29 08:54	Application	878 KB
 SrvService_Console.bat	2017-05-02 09:40	Windows Batch File	1 KB

These service files are installed in:

C:\Program Files\Common Files\QlikTech\Custom Data\QvSAPConnector.

NOTE: The Service setup file is installed in the folder above and **not** in the folder C:\Program Files\Common Files\Qlik\Custom Data\QvSAPExtractorConnector (even though only Qlik Sense is used).

Do the following:

1. Start a new command prompt using **Run as administrator** and enter the path to the folder of *SrvService_Console.bat*.
2. At the command prompt, start *SrvService_Console.bat*.
3. Install the service by selecting option 2: *Install Server Service*.
4. Once installed, select option 3: *Start Service*.

The service can optionally be started from the Microsoft Management Console (MMC). In MMC, the service is called Qlik SAP Network Server.

It is only possible to have one service per SAP environment running, to avoid a mismatch. For example, if a customer has different Develop, Test and Production environments, it is recommended that you have one service per environment. However, they cannot be installed on the same server. The servers must have different IP addresses.

The service must be stopped during an upgrade of the connectors, and the file *SrvService.exe* should be replaced with the new version before starting the service again.

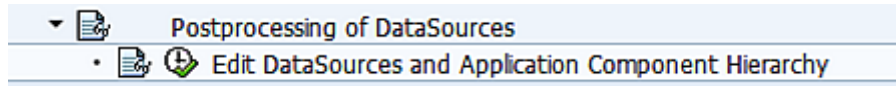
NOTE: The Qlik SAP Network Server Service is from release 7.0.0, for security reasons, limiting the connections from incoming client so only localhost clients are allowed by default. However, this restriction can be adjusted by altering the settings file (C:\ProgramData\QlikTech\Custom Data\QvSAPConnector\settings.config), see Qlik Online Help or the settings file for details on how to do this.

Extractor configuration in SAP

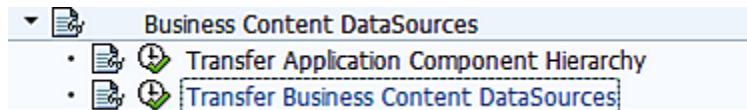
A series of standard extractors are delivered within SAP for data transfer to the SAP Business Information Warehouse. If BI/BW is not used, proceed as follows to activate a series of processes within SAP:

Do the following:

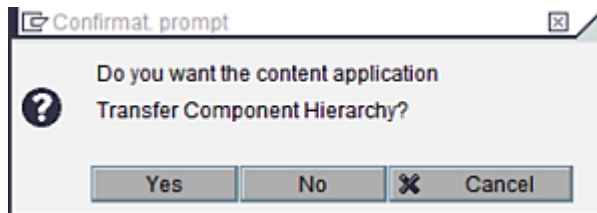
1. In some cases, the set up must be performed from the customizing side, which is reached through the *SPRO* transaction and the **Activate Business Functions** menu.
2. In the SAP system, go to transaction *SBIW* to transfer and activate the BI/BW DataSources.



3. Check that the tree hierarchy and data sources are activated.
4. If this is not the case, transfer the Application Component Hierarchy and then the Business Content DataSources.



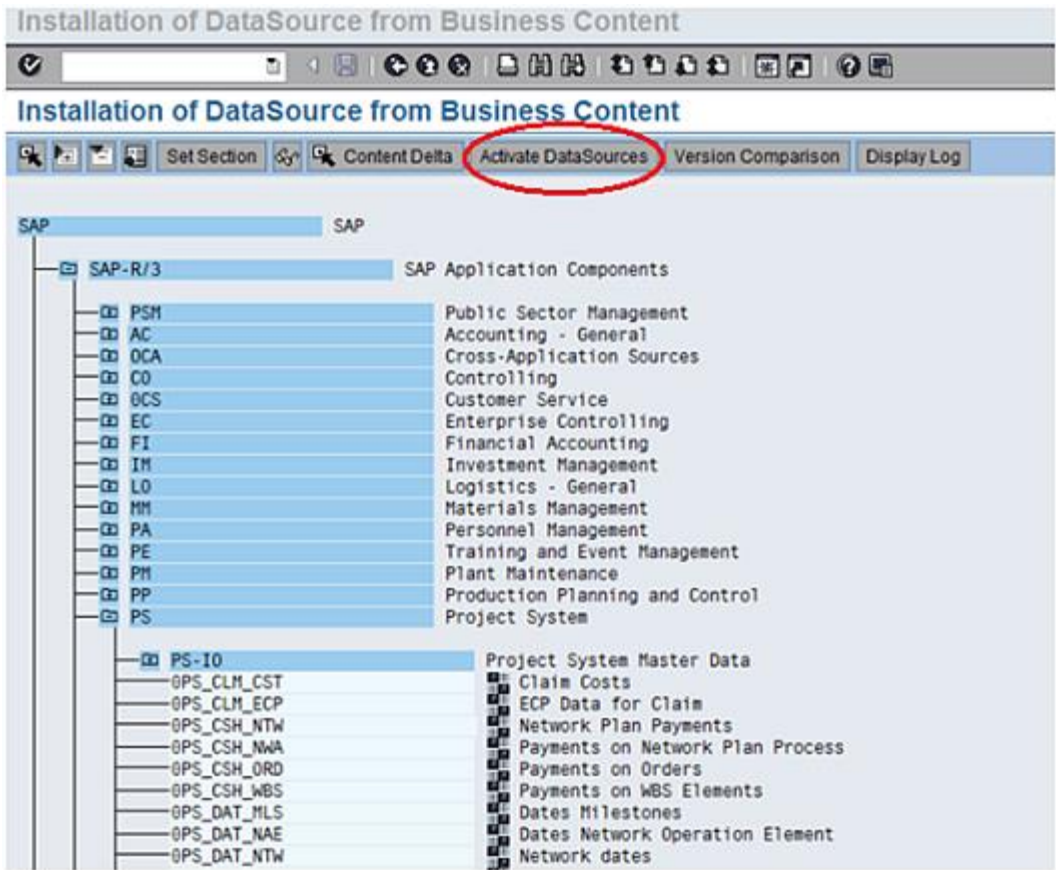
5. Transfer Application Component Hierarchy:



Click **Yes**.

6. Transfer Business Content DataSources:

Start by activating the tree hierarchy and then activate each data source to be used.



Temporary changes in SAP system configuration

Some changes to the SAP system configuration are necessary to make it possible to create the Extractor Environment (described in the next section). The SAP system configuration can be restored after the Extractor Environment has been created.

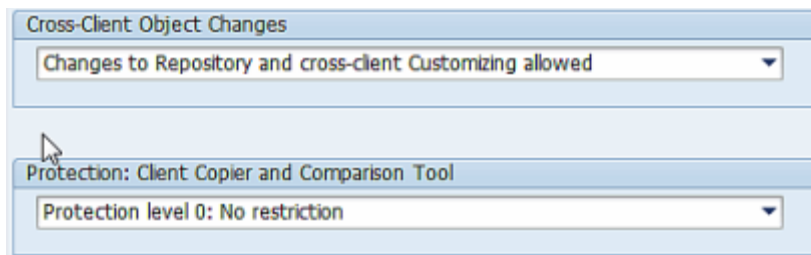
Do the following:

1. In the SAP system, go to transaction SCC4.
2. Select **Client**.
3. Change the system to reflect the following options:

Changes and Transports for Client-Specific Objects

- Changes without automatic recording
- Automatic recording of changes
- No changes allowed
- Changes w/o automatic recording, no transports allowed

Select one of the first two options.



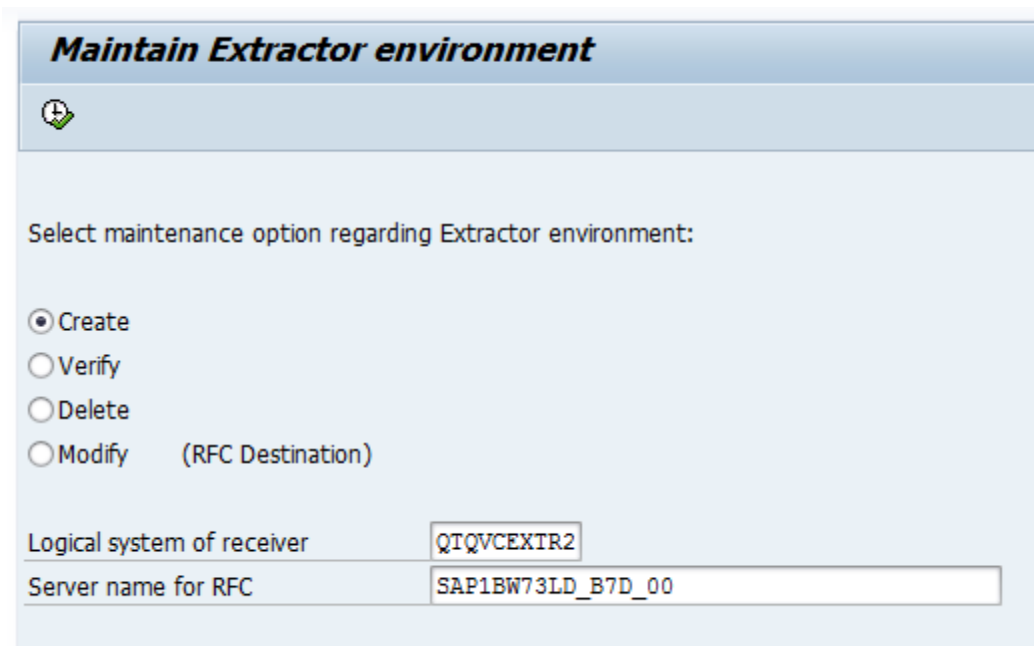
4. Go to transaction SE03. Double-click **Set System Change Option** under **Administration**.
5. Check that the following options are set to Modifiable:
 - **Global Setting**
 - **Local Developments** (No Automatic Transport)
 - **Customer Name Range**

Creating the Extractor Environment in the SAP system

The Extractor Environment must be created before the Extractor connector can be used. It is possible to have many Extractor Environments (one per Logical system). In that case, repeat the 'Create' procedure and use a different name in the field 'Logical system of receiver'.

Do the following:

1. In the SAP system, go to transaction `/n/QTQVC/EXTRACTOR_ADM` and select the **Create** option.



2. Select a Logical system of receiver name.

When selecting a Logical system name, it must be one word like QTQVCEXTR1 and not QTQVC_EXTR1. To prevent a mismatch, fill the whole field with 10 characters.

3. Select a Server name for RFC.

Select the server that the Extractor Connector will use for the RFC Communication. The user can look up possible servers in the SAP system cluster (same as in transaction SM51) under Server Name,

and select one of them to enter in the field Server Name for RFC.

4. Press the 'Execute' button.
5. When finished, restore the SAP configuration changes made in the previous section.

Create

- Creates the logical system of the receiver.
- Creates the RFC connection (same name as the logical system).
- Creates the partner profile of type LS (same name as the logical system).
- Creates the Basic IDoc type for data transfer. The name is hard-coded like "ZSQAQTQVCEXTR1".

Verify

- Verifies that all necessary components of the Extractor environment are configured.

Delete

- Deletes all components in the Extractor environment.

Modify

- Modifies the RFC Destination.

In this transaction, the RFC Destination used for RFC communication is created or modified. The following information is applicable to both the **Create** and **Modify** options.

You must select a server that the Extractor Connector will use for the RFC communication. The user can look up possible servers in the SAP system cluster (same as in transaction *SM51*) under **Server Name**, and select one of them to enter in the field **Server Name for RFC**:

Server Name	Host Name
SAPDBW73LD_B7D_00	SAPDBW73LD
SAP1BW73LD_B7D_00	sap1bw73ld
SAP2BW73LD_B7D_00	sap2bw73ld

If the Central instance is part of the list, it can also be selected. The selected server should have dialog processes.

In this example the Gateway Host (*SAP1BW73LD.RDLund.qliktech.com*) and Gateway Service (*sapgw00*) of the selected server are used when the RFC Destination is created or modified. Check the result in transaction *SM59* under TCP/IP connections:

RFC Destination QTQVCEXTR2

Connection Test Unicode Test

RFC Destination

Connection Type TCP/IP Connection Description

Description

Description 1

Description 2

Description 3

Administration Technical Settings Logon & Security Unicode Special Options

Activation Type

Start on Application Server Registered Server Program

Start on Explicit Host

Start on Front-End Work Station

Registered Server Program

Program ID

Start Type of External Program

Default Gateway Value

Remote Execution

Remote Shell

Secure Shell

CPI-C Timeout

Default Gateway Value

Specify Timeout Defined Value in Seconds

Gateway Options

Gateway Host

Gateway service

The Windows part of the connector will always use the Gateway Host and Gateway Service of the selected server when registering the Program ID of the RFC Destination (starting up the 'listener').

It is possible to change to another server anytime. The RFC Destination can easily be updated with the Gateway Host and Gateway Service of the new server and the connector will automatically use the new settings when starting up the 'listener'.

The RFC Destination can be updated in the transaction `/n/QTQVC/EXTRACTOR_ADM` by using the option **Modify** or by using the SAP transaction `SM59`.

If connecting through an SAP Router, the RFC Connection in SAP needs to be manually changed in transaction SM59. The 'Gateway Host' needs to be changed to:

```
/H/addr.to.SAPRouter/H/addr.to.SAPsystem
```

The 'Gateway service' value can be kept if correctly set in /N/QTQVC/EXTRACTOR_ADM. If the server is changed in SAP, the Service Qlik *SAP Network Server* must be restarted.

The SAP parameter SAPLOCALHOSTFULL must contain the correct value for each server. Log on directly to each SAP server and check the value in transaction RZ11. SAPLOCALHOSTFULL should contain the Fully Qualified Domain Name of the server.

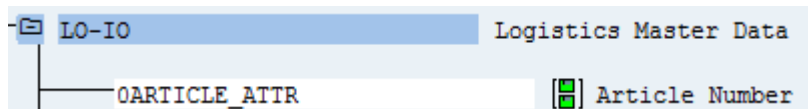
Activating Extractors

The Extractors must be activated in the SAP system before they can be used by the connector.

Note that in a SAP BW system, the Extractor source must be generated as Export DataSource before it can be activated in this transaction.

Finding Extractors:

1. In the SAP system, go to transaction *RSA6*.
2. Select a DataSource/Extractor in the transaction by high-lighting it and copying the technical name (using **Ctrl+Y** on the keyboard). This can also be done manually.



3. Go to transaction */n/QTQVC/ACTIVATE*.

Activate / generate Extractor (DataSource)

Logical system of receiver: Language: Transfer Method: tRFC IDoc

Extractor name:

FIELDNAME	DESCRIPTION	SELECT
AECLK	Stock Transfer Net Change Costing	X
AENAM	Name of Person Who Changed Object	X
AESZN	Document change number (without document management system)	X
ATTYP	Material Category	X
BEGRU	Authorization Group	X
BEHVO	Container requirements	X
BFLME	Generic Material with Logistical Variants	X
BISMT	Old material number	X
BLANZ	Number of sheets (without Document Management system)	X
BLATT	Page number of document (without Document Management system)	X
BMATN	Number of firm's own (internal) inventory-managed material	X
BRAND_ID	Brand	X
BREIT	Width	X
BRGEW	Gross Weight	X
BSTME	Purchase Order Unit of Measure	X
BWSCL	Source of Supply	X
BWVOR	Procurement rule	X
CADKZ	CAD Indicator	X
CARE_CODE	Care Codes (such as Washing Code, Ironing Code, etc.)	X
CMETH	Quantity Conversion Method	X
COLOR	Characteristic Value for Colors of Variants	X

Timestamp:

4. Enter the name of the **Logical system of receiver** or select it from the drop-down menu.
5. Select a **Language**.
6. Paste the selected Extractor name in the **Extractor name** field or select an Extractor from the drop-down menu.
7. Click **Get Extractor**.
8. Select the field(s) to activate (X) or select all fields.
9. Choose transfer method **tRFC** or **IDoc**.
10. Click **Activate Extractor**.

Migrate Extractor Environment

When the Extractor environment has been created, it is possible to migrate it to other SAP systems in the landscape by using the SAP transport management system. This functionality can be used by customers who do not want to change the SAP configuration in production systems. Instead the Extractor environment can be created in a development system and migrated to the production system.

Do the following:

1. Create the Extractor environment in the unlocked source system with the existing transaction `/N/QTQVC/EXTRACTOR_ADM`.
2. Then check the database table `RSBASIDOC` in the source system with transaction `SE16`. Enter the name of the Extractor Environment Logical System and click **Execute**.

The screenshot shows two SAP screens. The top screen is titled "Data Browser: Table RSBASIDOC: Selection Screen". It has a toolbar with icons for navigation and a "Number of Entries" field. Below the toolbar are two rows of input fields: "SLOGSYS" with an empty field and "to" with an empty field; "RLOGSYS" with the value "QTQVCEXT51" and "to" with an empty field. The bottom screen is titled "Table RSBASIDOC Display". It has a "Check Table..." button. Below the button are several input fields: "SLOGSYS" with "T90CLNT090", "RLOGSYS" with "QTQVCEXT51", "OBJSTAT" with "ACT", "BIDOCTYP" with "ZSQEQTQVCEXT51", "TSIDOC3X" with "0", "TSPREFIX" with "QE", "SRCTYPE" with "3", "SAPREL" with "700", "TSTPNM" with "HRG", "TIMESTMP" with "20.140.806.084.201", "SBWBCRL" with "710", and "RBWBCRL" with "30B".

3. Then enter the name of the TSPREFIX (Transfer structure prefix), from the source system, in the same table in the target system and click **Execute**.

Data Browser: Table RSBASIDOC: Selection Screen

Number of Entries

SLOGSYS	<input type="text"/>	to	<input type="text"/>
RLOGSYS	<input type="text"/>	to	<input type="text"/>
OBJSTAT	<input type="checkbox"/>	to	<input type="checkbox"/>
BIDOCYTP	<input type="text"/>	to	<input type="text"/>
TSIDOC3X	<input type="checkbox"/>	to	<input type="checkbox"/>
TSPREFIX	QE	to	<input type="text"/>
SRCTYPE	<input type="checkbox"/>	to	<input type="checkbox"/>
SAPREL	<input type="checkbox"/>	to	<input type="checkbox"/>
TSTPNM	<input type="text"/>	to	<input type="text"/>
TIMESTMP	<input type="text"/>	to	<input type="text"/>
SBWBCRL	<input type="checkbox"/>	to	<input type="checkbox"/>
RBWBCRL	<input type="checkbox"/>	to	<input type="checkbox"/>
Width of Output List	250		
Maximum No. of Hits	200		

If a record is found with the same TSPREFIX in the target system, the transport function cannot be used. A workaround is to create a new Extractor environment in the source system to get another TSPREFIX that is not already used in the target system.

4. If the prerequisite above is fulfilled, then execute the transaction `/N/QTQVC/MIGRATE_ENV` in the source system to put the Extractor environment into a transport.
5. Migrate and import the transport into the correct client in the Target system.
6. After the import, execute the transaction `/N/QTQVC/CONNECT_ENV` in the target system. Enter **Logical system of receiver**, **User name** and **Transfer structure prefix** (found above in the source system) and click **Execute**.

Store a Connection to QV

Logical system of receiver

User name

Transfer structure prefix

7. Go to transaction `WE21` (under Transactional RFC) in the target system and generate a new port name and save it. The RFC destination should contain the Extractor Environment Logical System name.

Port

Description

Version

IDoc rec.types SAP Release 3.0/3.1

IDoc record types SAP Release 4.x

RFC destination

- Go to transaction *WE20* and find the partner profile for the **Partner Type** LS and the Extractor Environment Logical System name.

Partner profiles

Partner No. QlikView generated

Partn. Type Logical system

Post processing: permitted agent Classification

Ty. User

Agent Håkan Rönningberg

Lang. English

Outbound parmtrs.

Partner Role	Message Type	Message va...	Me
	RSINFO		
	RSEND		

Inbound parmtrs.

Partner Role	Message Type	Message va...	Me
	RSRQST		

Partner list (left pane):

- MDM55 MDM
- MDM_001 MDM
- MDM_002 MDM
- MDM_003 MDM
- MDM_004 MDM
- MDM_005 MDM
- MDM_006 MDM
- MDM_007 MDM
- MDM_008 MDM
- MDM_009 MDM
- MDM_010 MDM
- MDM_MIGRAT MDM
- MDS_00_800 Master Data Ma
- OMOCLNT800
- P13CLNT800 P13 Client 800
- PFS_ID_M Logical System
- PFS_ID_T Logical System
- PRODUCTION Productive syst
- PS_02_200 PS_02_200
- QTQVCEXT51 QlikView gener.**
- QTQVCEXT77 QlikView gener.
- QTQVCEXT88 QlikView gener.
- QTQVCEXTR1 QlikView gener.
- QTQVCEXTR2 QlikView gener.
- QWBCLNT705 QWBCLNT705
- REC_00_800 DMJ Client 800
- RPMCLNT800 xRPM client 800
- RPM_00_800
- SALES Sales system (c
- SAPQ30800 Q30 800
- SEMCLNT800 ..

- Double-click the **Message Type** *RSINFO*.

Partner profiles: Outbound parameters

Partner No. QlikView generated

Partn. Type Logical system

Partner Role

Message Type

Message code

Message function Test

Outbound Options | Message Control | Post Processing: Per

Receiver port Transactional RFC

Pack. Size

Queue Processing

10. Assign the port name which was generated for **Receiver port**, click **Enter** and **Save**.
11. Do the same for the **Message Type** *RSEND*.
12. Finally perform the **Modify** option in the transaction `/n/QTQVC/EXTRACTOR_ADM` to update the Gateway Host and Gateway Service of the RFC connection used by the Logical system.

The Extractor environment is ready to use.

Migrate activated Environment

Use this functionality to migrate activated Extractors within the system landscape by utilizing the SAP transport management system.

In the source system in the SAP system landscape, put the activated Extractors that should be migrated into the database table `/QTQVC/EXTRACT`.

Do the following:

1. Use the transaction `/QTQVC/MIGRATE_PREP`:

Put activated Extractors into migration table

Logical system of receiver Language Transfer Method tRFC IDoc

Put selected Extractors into migration table in:

or

EXTRACTOR	DESCRIPTION	SELECT	
/QTQVC/VBAK_VBRP	Billing	X	
0ARTICLE_ATTR	Article		
0BILL_CAT_TEXT	Billing Category	X	
0BILL_TYPE_TEXT	Billing Type		
0COMP_CODE_ATTR	Company code	X	
0COMP_CODE_TEXT	Company Code		
0CO_AREA_ATTR	Controlling Area	X	
0CO_PC_ACT_02	Ending Inventory Material Valuation Rec.	X	
0CO_PC_ACT_05	Material Valuation Record Prices	X	
0CURTYPE_TEXT	Currency Type	X	
0CUSTOMER_TEXT	Customer		
0CUST_GROUP_TEXT	Customer Group		
0CUST_SALES_TEXT	Customer	X	
0DISTR_CHAN_TEXT	Distribution Channel	X	
0DIVISION_TEXT	Division	X	
0DOC_CATEG_TEXT	Document cat.	X	
0EC_PCA_1	Profit Center: Account Transaction Data		
0EC_PCA_3	Profit Center: Actual Line Items	X	
0FI_AP_3	Vendors: Line Items	X	
0FI_AR_3	Customers: Line Items	X	

- In the same system in the SAP system landscape, create a Transport request containing activated Extractors for the specific Logical system. Perform step 1 in the transaction `/QTQVC/MIGRATE_EXTR`:

Migrate Activated Extractors

Step 1. Create Transport Request in first system in landscape. Do not create a new Transport Request if there already is one which is not migrated.

Logical system of receiver
Transport Owner
Target System

Customizing Request:

Step 2. Migrate Transport Request and import in correct client in next system in landscape.

Step 3. Check that Extractor environment with the Logical system name used in step 1 is created in this system. In SAP BW systems the Extractor source needs to be generated as Export DataSource, before activated.

Step 4. Execute this transaction in the same system and press the button below:

For Logical system



Step 5. Repeat step 2 to step 4 for each subsequent system in landscape.

3. Perform step 2 and step 3 described in this transaction dialog.
4. Execute the same transaction `/QTQVC/MIGRATE_EXTR` in the SAP system where step 2 and step 3 were performed. Then perform step 4:

Migrate Activated Extractors

Step 1. Create Transport Request in first system in landscape. Do not create a new Transport Request if there already is one which is not migrated.

Logical system of receiver	<input checked="" type="checkbox"/>
Transport Owner	HRG
Target System	<input checked="" type="checkbox"/>

Create Transport Request
Customizing Request:

Step 2. Migrate Transport Request and import in correct client in next system in landscape.

Step 3. Check that Extractor environment with the Logical system name used in step 1 is created in this system. In SAP BW systems the Extractor source needs to be generated as Export DataSource, before activated.

Step 4. Execute this transaction in the same system and press the button below:

Upload and activate Extractors	For Logical system	<input style="width: 90%;" type="text" value="QTQVCENTR1"/>
<input style="width: 100%;" type="text"/>		
<input style="width: 100%;" type="text"/>		

Step 5. Repeat step 2 to step 4 for each subsequent system in landscape.

5. Then perform step 5 in each system in the SAP system landscape.

General rules

The database table `/QTQVC/EXTRACT` will contain the activated extractors from the latest execution of the transaction `/QTQVC/MIGRATE_PREP`. That is, the transaction overwrites the previous content in the table for a Logical system. Therefore, it is important to execute the transaction `/QTQVC/MIGRATE_PREP` before executing the transaction `/QTQVC/MIGRATE_EXTR` which creates the Transport request. When the Transport request is created, it is not allowed to change the content of the database table `/QTQVC/EXTRACT` until the Transport request has been migrated. No new Transport request should be created until the last one has been used in all affected systems in the landscape.

However, the database table `/QTQVC/EXTRACT` is using Logical system as key, so it is possible to put activated extractors for a different Logical system in the table and to create a separate Transport request in parallel for that Logical system.

When the Extractors are uploaded and activated in the target system in the landscape there is a check that an Extractor is not already activated. If so, there will be a warning in the log file, the activation of the Extractor is skipped and the program continues with the next Extractor from the Transport request. If the user wants to

change the used fields of an activated extractor by using this functionality, the Extractor must be manually deactivated in each system before uploading and activation takes place.

RFC connection error messages that can occur after configuration

ERROR registration of tp <program id> from host <external host> not allowed

An RFC connection fails when an external program / application tries to register a program in the gateway with the error message:

```
LOCATION SAP-Gateway on host <hostname>/sapgw,nr>  
ERROR registration of tp <program id> from host <external host> not allowed
```

This indicates that the gateway does not allow the program identified by <program id> to be registered from the host <external host>.

Cause

There are two possible reasons:

- Parameter "gw/acl_mode = 1" has been set but the "reg_info" file has not been set. This is the default value for NEW INSTALLATIONS for NetWeaver 7.0x since December 2012 (including 7.20) and for NetWeaver 7.3X since August 2012.
- There is a "reg_info" file that does not allow the registration of that external program.

Resolution

Update the "reg_info" file from the SAP gateway that appears in the error message ("SAP-Gateway on host <hostname> / sapgw<nr>") creating a line that allows this registration. The location of the "reg_info" file is specified by parameter "gw/reg_info" and should contain lines like:

```
#VERSION=2  
P TP=<program ID> HOST=<external host> CANCEL=internal,<external host> ACCESS=*  
...  
# the following lines should be the LAST lines in the reginfo  
#  
P TP=* HOST=<LIST> CANCEL=<LIST> ACCESS=<LIST>  
P TP=* HOST=local
```

Following recommendations from SAP Note 1408081 :Basic settings for reg_info and sec_info and settings for ACCESS clause from SAP Note 1592493 : GW: Problems during reginfo configuration

Then, reload the new settings via transaction SMGW

And try to register the program again.

Illegal parameter value (function=SAP_CMACCPTP /parameter=handle / value=548

For an error message like:

“illegal parameter value (function=SAP_CMACCPTP /parameter=handle / value=548”.

Solution:

Add a line to the “reg_info” file (the location of the "reg_info" file is specified by parameter "gw/reg_info"):

```
P TP=QTQVCEXTR1 HOST=<Servername>,<FQDN Servername> ACCESS=<SAP Servername>,<FQSN  
SAP Servername>,internal CANCEL=internal
```

Troubleshooting of the Extractor connector

Some good guidelines for testing the Extractor connector:

1. Start with a clean system. No Extractor jobs should be running (check in transaction SM51). From the connector make sure to remove any active status records (see the online help about how to do this).
2. Restart the Extractor Connector Service.
3. Execute one Extractor job at a time. When an error occurs, check the Extractor connector log (named like QvSAPExtr_20160830_122350.txt) and the service log (named like SrvService_20160614_091022.txt or Server_20160516_111212.txt) and analyze the error. (see **Connector log files**).
The service log is located on the server where the service is running.
4. Also, check the corresponding SAP extraction job log. Prefix the job name from the Extractor connector log with 'BI' like BIREQU_QTQVCEXTR1_20160420125150. Check job log for this job name in transaction SM37.
5. Continue like above and try to resolve one error at a time.

InfoProvider connector configuration

Assign roles to Qlik SAP user

Authorizations are required to use the InfoProvider connector. Qlik provides three roles that contain the necessary authorizations. You can assign different roles to different users, depending on need, or both roles can be assigned to one user. The roles are:

QTQVCADMIN

There are some Qlik transactions in the SAP GUI. Most of them require that this role is assigned to the user.

QTQVCACCESS

To be used by a connector back-end user for doing extraction jobs from Qlik.

QTQVCBWACCESS

To be used by OLAP, DSO/ODS, BEx and InfoProvider Connectors back-end user for doing extraction jobs from SAP BI/BW system from Qlik.

To assign role(s) to a user ID, do the following:

1. In the SAP system, go to transaction *SU01*.
2. Enter User ID and click **Change (Shift + F6)**.
3. On the **Roles** tab, add the desired roles.
4. Click **Save**.

If the installation is an upgrade from a previous version and any of the Qlik roles have been updated, please see

Creating and maintaining an SAP User ID.

OLAP connector configuration

Assign roles to Qlik SAP user

Authorizations are required to use the OLAP connector. Qlik provides a role that contain the necessary authorizations. The role is:

QTQVCBWACCESS

To be used by OLAP, DSO/ODS, BEx and InfoProvider Connectors back-end user for doing extraction jobs from SAP BI/BW system from Qlik.

To assign role(s) to a user ID, do the following:

1. In the SAP system, go to transaction *SU01*.
2. Enter User ID and click **Change (Shift + F6)**.
3. On the **Roles** tab, add the desired roles.
4. Click **Save**.

If the installation is an upgrade from a previous version and any of the Qlik roles have been updated, please see

Creating and maintaining an SAP User ID.

Report connector configuration

Assign roles to Qlik SAP user

Authorizations are required to use the Report connector. Qlik provides two roles that contain the necessary authorizations. You can assign different roles to different users, depending on need, or both roles can be assigned to one user. The roles are:

QTQVCADMIN

There are some Qlik transactions in the SAP GUI. Most of them require that this role is assigned to the user.

QTQVCACCESS

To be used by a connector back-end user for doing extraction jobs from Qlik.

To assign role(s) to a user ID, do the following:

1. In the SAP system, go to transaction *SU01*.
2. Enter User ID and click **Change (Shift + F6)**.
3. On the **Roles** tab, add the desired roles.
4. Click **Save**.

If the installation is an upgrade from a previous version and any of the Qlik roles have been updated, please see

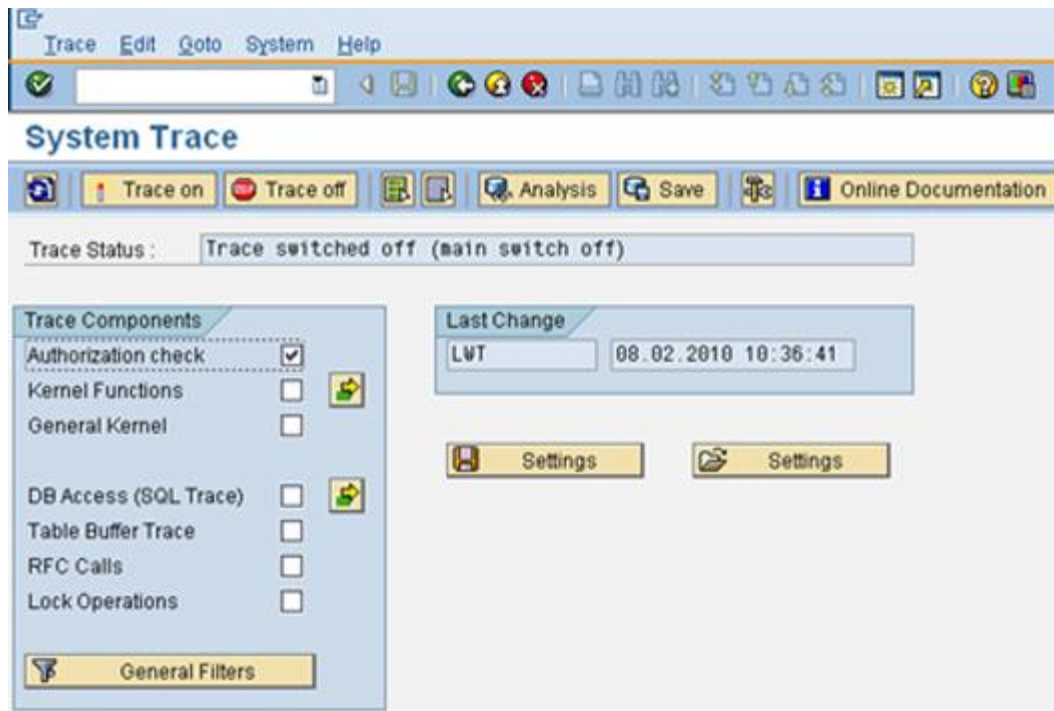
Creating and maintaining an SAP User ID.

A Report might check authorization objects that are not part of the Qlik roles. In that case, they can be added to the role *QTQVCACCESS* or added to an additional customer-developed role that is assigned to the Qlik SAP user.

To detect missing authorization, an authorization trace can be performed on each Report to be used.

Do the following:

1. In the SAP system, go to transaction *ST01*.
2. Start an authorization trace.



3. Run the report with a user that has sufficient access.
The results show the authorization objects used.
4. Add the missing authorization objects to one of the roles which are assigned to the Qlik SAP user.

SAP query connector configuration

Assign roles to Qlik SAP user

Authorizations are required to use the SAP query connector. Qlik provides two roles that contain the necessary authorizations. You can assign different roles to different users, depending on need, or both roles can be assigned to one user. The roles are:

QTQVCADMIN

There are some Qlik transactions in the SAP GUI. Most of them require that this role is assigned to the user.

QTQVCACCESS

To be used by a connector back-end user for doing extraction jobs from Qlik.

To assign role(s) to a user ID, do the following:

1. In the SAP system, go to transaction **SU01**.
2. Enter User ID and click **Change (Shift + F6)**.
3. On the **Roles** tab, add the desired roles.
4. Click **Save**.

If the installation is an upgrade from a previous version and any of the Qlik roles have been updated, please see

Creating and maintaining an SAP User ID.

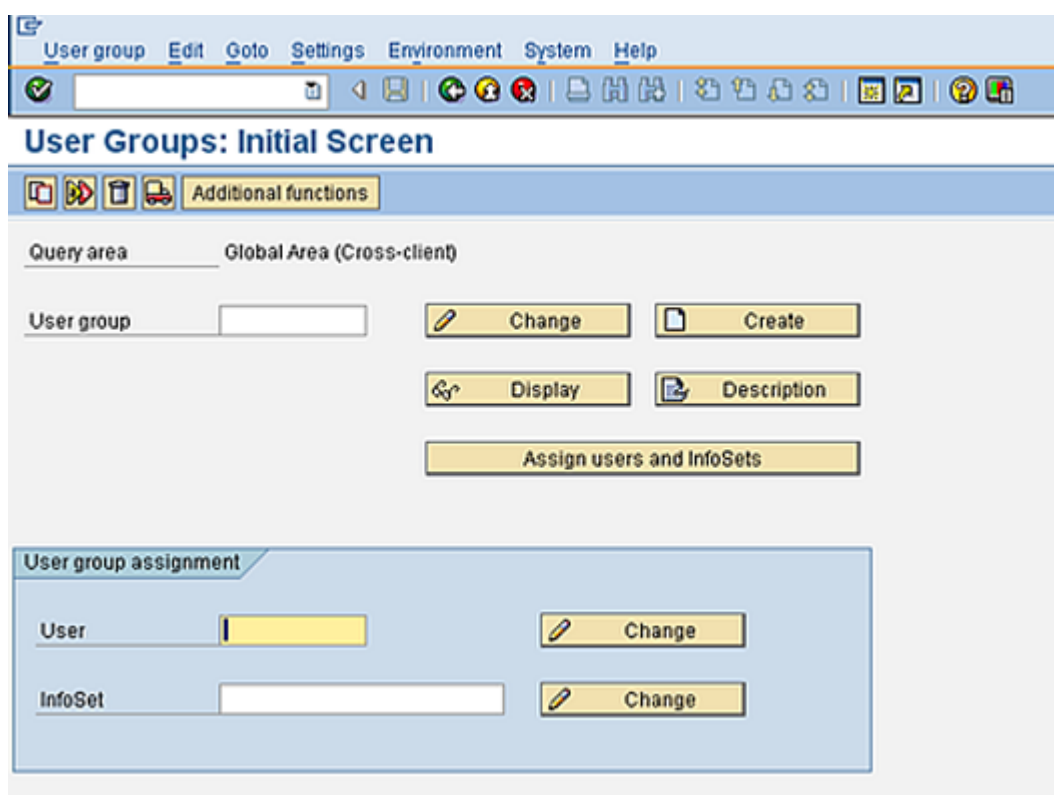
An SAP query might check authorization objects which are not part of the Qlik roles. In that case, they can be added to the role *QTQVACCESS* or added to an additional customer developed role which is assigned to the Qlik SAP user.

In most cases, the connector log reveals the missing authorization object. If not, the Infoset definition or logical database definition must be checked.

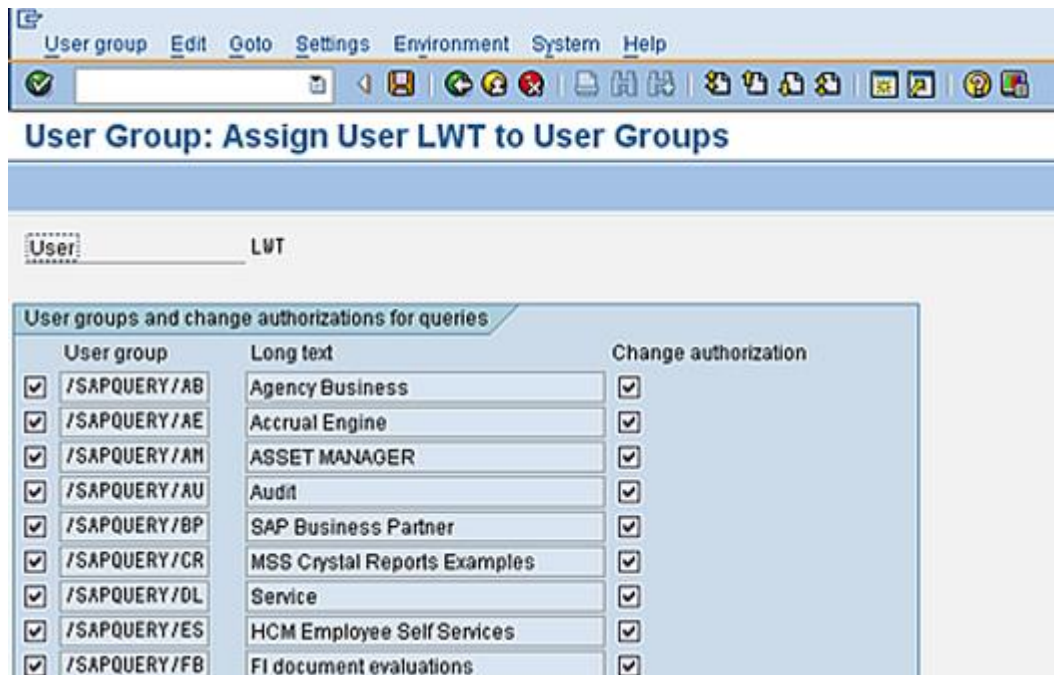
In addition, go to transaction *SQ03* and provide the user with access to the relevant SAP query user groups. All queries in the user groups assigned are available via the SAP query connector.

Do the following:

1. In the SAP system, go to transaction *SQ03*.
2. Enter the user ID in the **User** field.



3. Click **Change**.
4. Check all the **User group** boxes that the download user should have access to.



5. Click **Save**.

SQL query connector configuration

Assign roles to Qlik SAP user

Authorizations are required to use the SQL connector. Qlik provides two roles that contain the necessary authorizations. You can assign different roles to different users, depending on need, or both roles can be assigned to one user. The roles are:

QTQVCADMIN

There are some Qlik transactions in the SAP GUI. Most of them require that this role is assigned to the user.

QTQVACCESS

To be used by a connector back-end user for doing extraction jobs from Qlik.

To assign role(s) to a user ID, do the following:

1. In the SAP system, go to transaction *SU01*.
2. Enter User ID and click **Change (Shift + F6)**.
3. On the **Roles** tab, add the desired roles.
4. Click **Save**.

If the installation is an upgrade from a previous version and any of the Qlik roles have been updated, please see

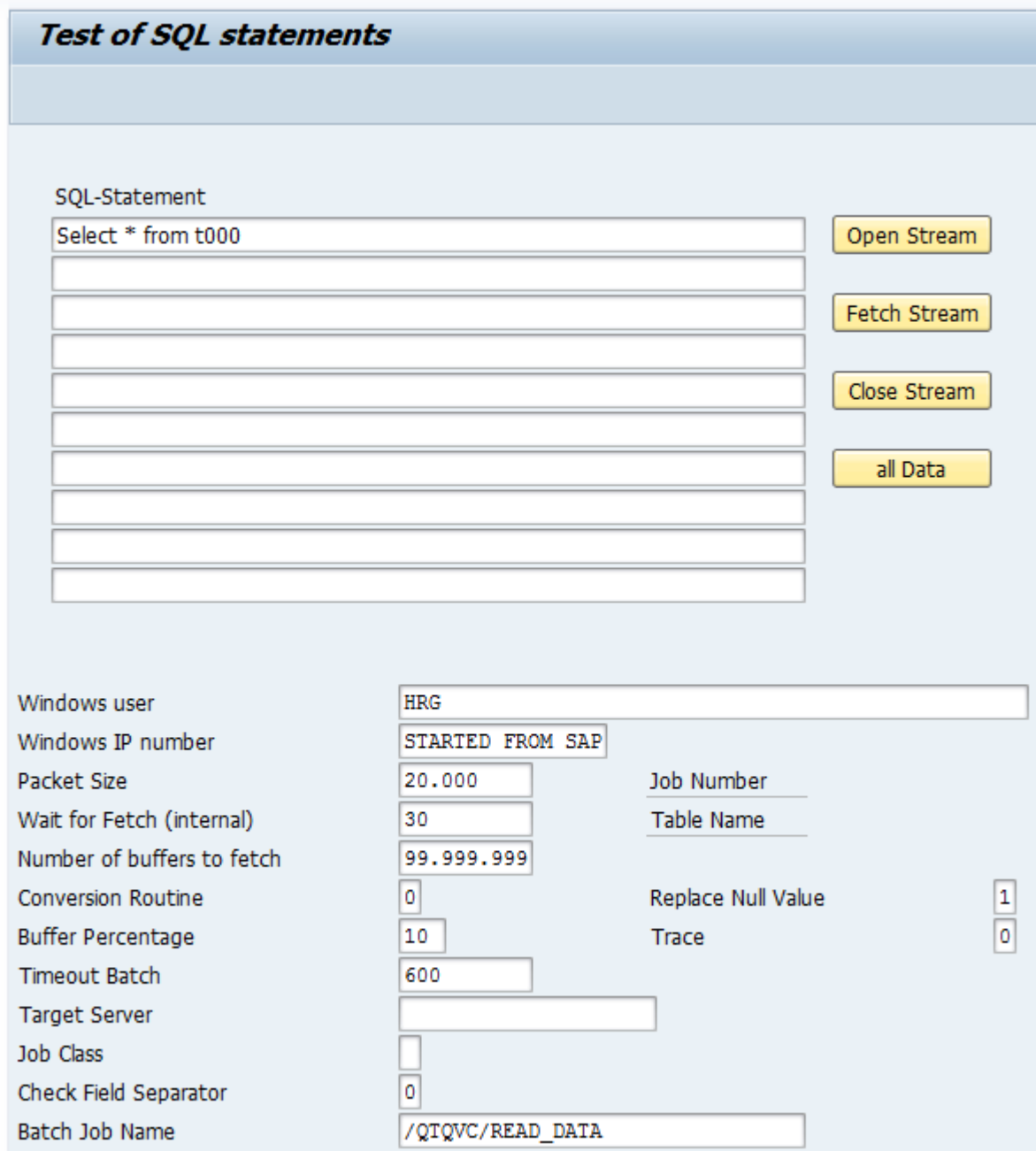
Creating and maintaining an SAP User ID.

Testing SQL statements

The `/n/QTQVC/SQL` transaction allows testing of **SQL SELECT** statements. After installing the transports and creating a user, test that everything has been correctly installed.

Do the following:

1. Log on with Qlik SAP user ID and execute the transaction `/n/QTQVC/SQL`.



Test of SQL statements

SQL-Statement
Select * from t000

Open Stream

Fetch Stream

Close Stream

all Data

Windows user: HRG

Windows IP number: STARTED FROM SAP

Packet Size: 20.000

Wait for Fetch (internal): 30

Number of buffers to fetch: 99.999.999

Conversion Routine: 0

Buffer Percentage: 10

Timeout Batch: 600

Target Server:

Job Class:

Check Field Separator: 0

Batch Job Name: /QTQVC/READ_DATA

Job Number:

Table Name:

Replace Null Value: 1

Trace: 0

2. Enter the **SQL** statement.
3. Click **Open Stream** to start the job.

Then either:

- a. Click **Fetch Stream** to display one page of the result. Click the **Back** arrow. Click **Close Stream** to end the job.

or:

- b. Click **all Data** to execute the complete job and get the run-time statistics.



About Qlik

Qlik is on a mission to create a data-literate world, where everyone can use data to solve their most challenging problems. Only Qlik's end-to-end data management and analytics platform brings together all of an organization's data from any source, enabling people at any skill level to use their curiosity to uncover new insights. Companies use Qlik to see more deeply into customer behavior, reinvent business processes, discover new revenue streams, and balance risk and reward. Qlik does business in more than 100 countries and serves over 48,000 customers around the world.

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