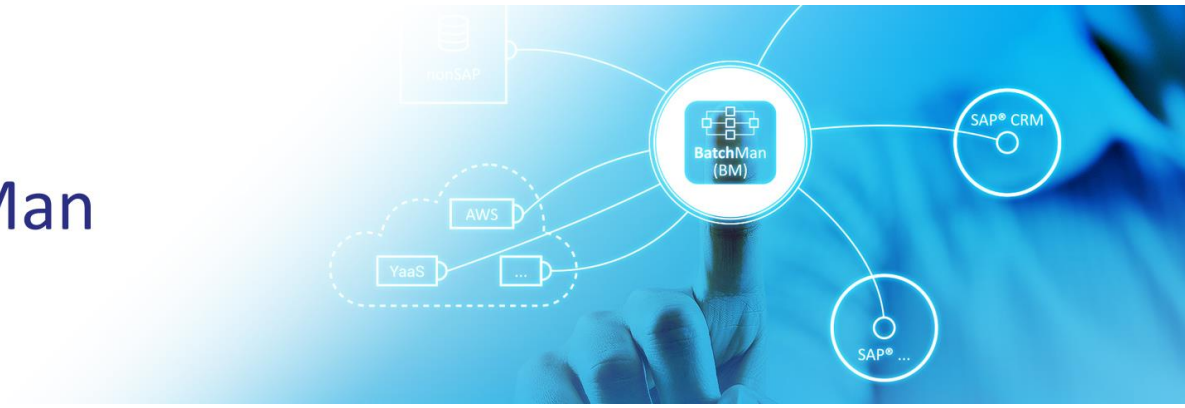
BatchMan



Automation & Monitoring of Business Processes in SAP & nonSAP

Installation Manual

Product Info & Support

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Release:	BatchMan 5.1
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Contents

1. Introduction

BatchMan is imported in your system via SAP transport orders.

All objects of the BatchMan Development are deposited in the 5H and /btcman/ name range (registered and reserved by SAP). Conflicts with SAP R/3 standard developments or your own developments will not occur in the client name range. Modifications in the SAP standard are not done.

Please read this manual carefully, so that installation is done correctly and trouble-free.

2. Technical Prerequisites

BatchMan, the HONICO processing management system, can run on the following platforms:

Hardware:
All systems certified by SAP

Operating System:
All systems certified by SAP

SAP-Release:
SAP 7.0 and higher

Data base:
All systems certified by SAP.

Frontend-Software:
All systems certified by SAP. Please observe the corresponding SAPGUI requirements.

Required disc space:

OS **ca. 15 MB** in **/usr/sap/trans/data** and **/usr/sap/trans/cofiles**

DB The free space requirement is **ca. 20 – 30 MB** during the installation.
The memory usage/storage allocation on the DB expands during operation should not exceed 15 GB. Therefore, regular archiving within BatchMan is required.

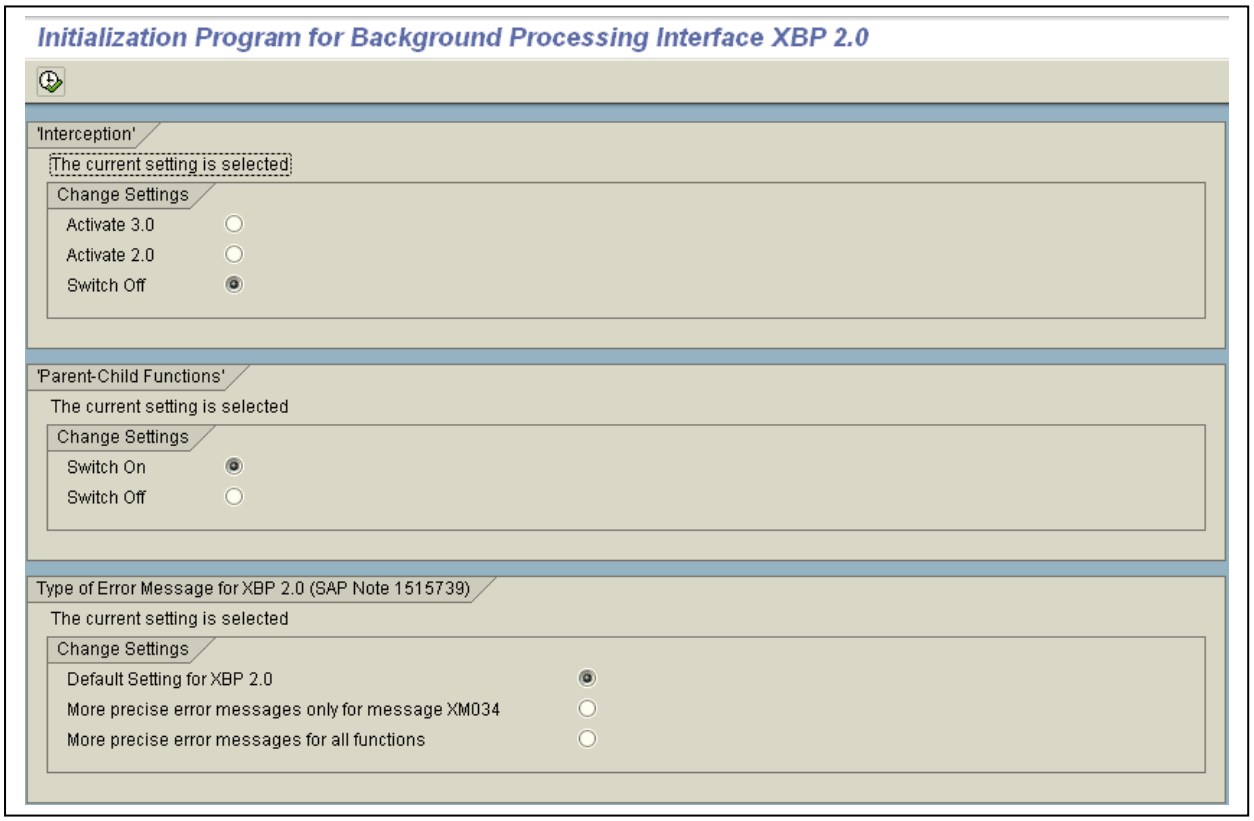
2.1. XBP Interface

BatchMan 5 is using the XBP interface >= release 2.0 in job scheduling.

For BatchMan only the “Parent Child Function” is to be activated in the standard mode. This function activates the writing of the relationships between the jobs into the SAP tables and is generally not critical for performance.

The “Interception” may be needed for user jobs.

These functions are activated via transaction SE38 or SA38 by using ABAP report INITXBP2 (from a SAP_Basis 7.02 system here).



Over time, SAP will keep providing new functions for this interface.
Such as in the bottom section where messages of the XBP interface version 2.0 can be refined.

3. Installing the System Environment

BatchMan requires one (or several) SAP system(s) for installation. These SAP systems must be installed with an ABAP kernel. BatchMan is imported in the SAP Basis ABAP System via transport orders.
Before the installation you must specify how the scheduling of processes should be done in the connected different systems.

An independent BatchMan can be installed on each SAP system.

A second option exists: Installing BatchMan as master system on an SAP system; and installing the additional SAP systems as client of the master system.
Via the client, only certain functions that simplify some functions are made available. Included are mainly:

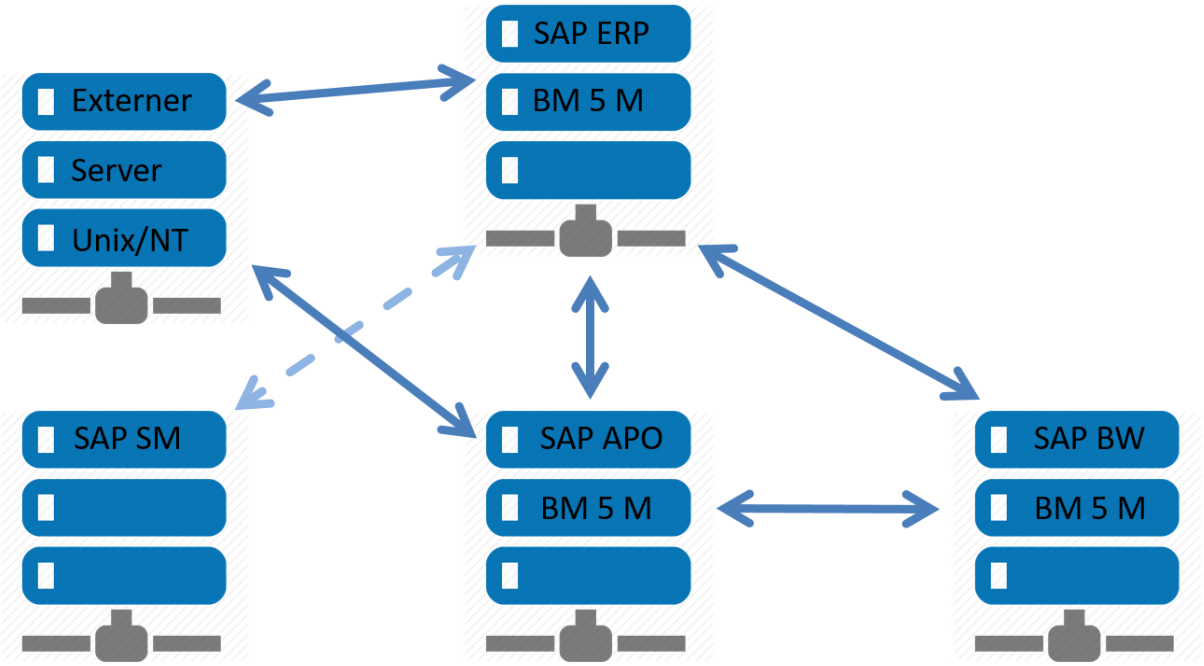
- Search queries
- Tools for executing certain functions
- Formatting of runtime results

Each master system can behave like a client towards another master system.

The communication and thus the calling of functions is done via the SAP-internal RFC communication.
Should scheduling of jobs and processes be done in one client of an arbitrary SAP system from a master system, then two R/3 connections are necessary. One connection to the client and one connection back from the client to the master. This is for return information/report of the processing status.
Should scheduling of jobs and processes be done in several clients of an SAP system from the master system, then one connection is necessary per client (Client). Only one connection is necessary for the return information/report of the processing status.

3.1. Option 1 – BatchMan Installed in All Systems in Full Version

Each system is a master system and executes scheduling and monitoring independently. Triggering of dependent processes within the system environment is done via BatchMan checkpoints.
The communication of the systems is realized via RFC functions.



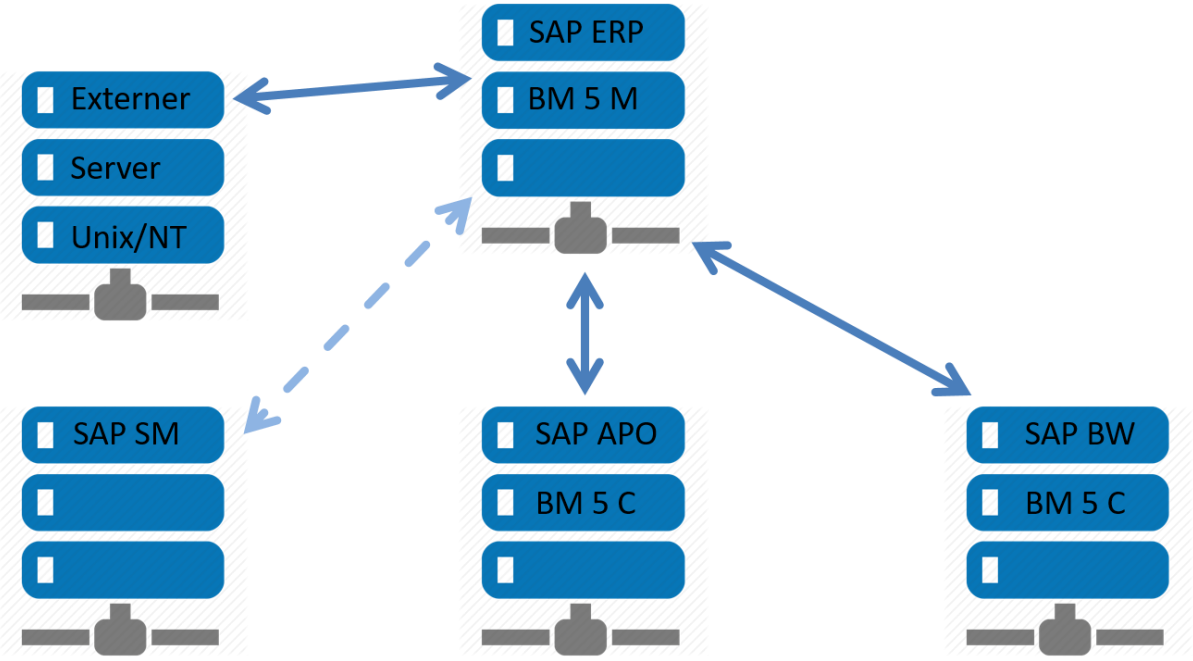
The SAP Solution Manager does not have a controlling function within the system environment.

Each SAP system can be set up as ‚single point of control'; and display the monitoring from the other SAP systems equivalent to the local monitoring.

The BatchMan installation will generate a certain load in each system.

3.2. Option 2 – BatchMan Installed on SAP ERP System in Full Version

BatchMan is installed as master system in the SAP ERP system. In the dependent BW and APO SAP systems, BatchMan is installed as client system.
Communication of the systems is realized via RFC functions.



The SAP Solution Manager does not have a controlling function within the system environment.

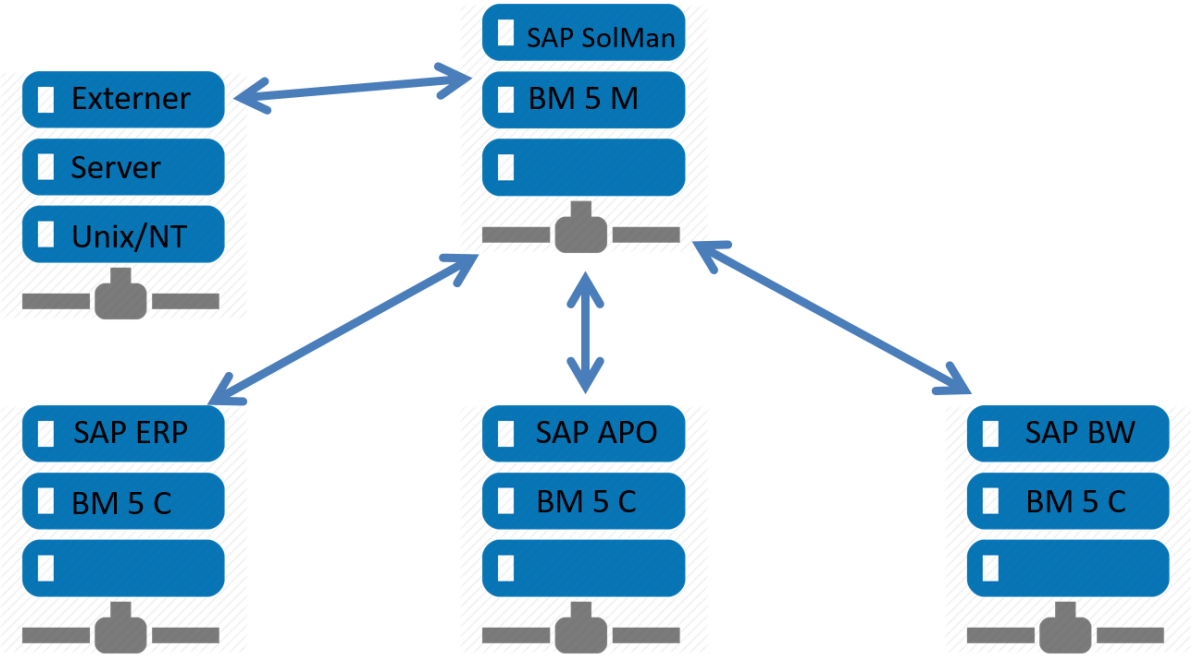
All master data is maintained centrally here. Therefore, dependencies between the individual processes in the connected systems must be considered in the master system.

The scheduling of all processing tasks is done in the master system; and monitoring is only possible in the master system. This way the master system becomes ‚single point of scheduling and monitoring'.

The load that is additionally generated by BatchMan in the SAP ERP system is naturally higher in a central installation than in a decentralized installation (option 1).
Therefore you must think carefully about the available options, meaning where the central BatchMan should be installed. If a system already has performance problems, then this system should not carry the central BatchMan.
In case of only two (or also three) SAP systems, this option could nevertheless be the better one.

3.3. Option 3 – BatchMan Installed in SAP Solution Manager System as Full Version

BatchMan is installed as master system in the SAP Solution Manager system. On the dependent ERP, BW and APO SAP systems, BatchMan is installed as client system.
Communication of the systems is realized via RFC functions.



The SAP Solution Manager has controlling functions within the system environment in this case and becomes the central scheduling and monitoring system.
The BatchMan scheduler does not need additional performance on the client SAP systems in this case.

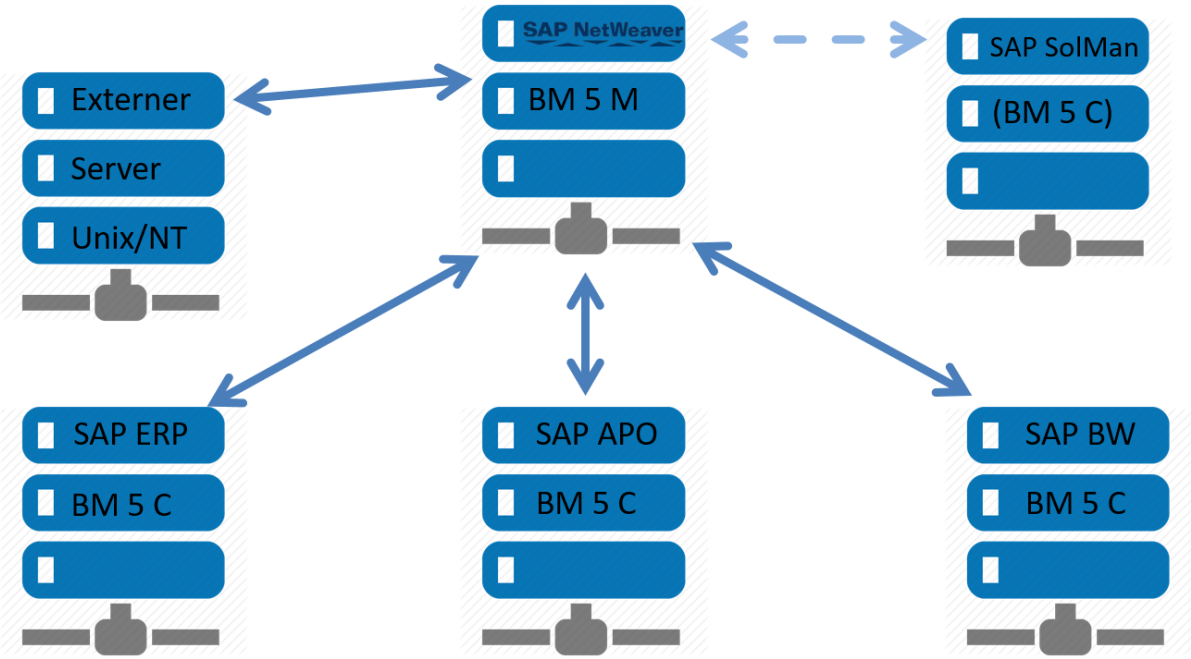
All master data is maintained centrally here. You must, however, consider the dependencies between the individual processes in the connected systems in the master system.

Scheduling of all processing tasks is managed from the master system. Monitoring is only possible in the master system. The master system thus becomes ‚single point of scheduling and monitoring'.

The load that is additionally generated through BatchMan in the SAP Solution Manager System is naturally higher in a central installation than in a decentralized installation (option 1).
This load should not be a problem for the system, because the solution manager is generally only used for the maintenance of connected SAP systems; and because productive processes within the data processing do not run in this system.
In case of a central installation of more than two or three SAP system, this option should be preferred (not the second option).

3.4. Option 4 – BatchMan installed on SAP NetWeaver System as Full Version

BatchMan is installed on SAP NetWeaver as the master system. BatchMan is installed as a client system on the dependent ERP, BW and APO SAP systems.
The communication of the systems is realized by means of RFC functions.



SAP NetWeaver has a controlling function within the system landscape and becomes the central scheduling and monitoring system.

This means that the BatchMan Scheduler does not require any additional performance on the client SAP systems.

All master data are maintained centrally. Thus, the dependencies between the individual processes in the connected systems on the master system have to be considered.

The scheduling of all processing processes takes place from the master system. Monitoring is only possible in this. This makes the master system the 'single point of scheduling and monitoring'.

The load generated by BatchMan on SAP NetWeaver is higher for a central installation than for a decentralized installation (option 1), but is lower overall.
As SAP NetWeaver generally only supports the maintenance of the connected SAP systems and there are no productive processes within the DP running on this system, this load should be easily handled by the system.
For a central installation of more than two or three SAP systems, this option is preferable to the second option.

4. Copying Transports / Loading the Buffers / Importing the Transports

4.1. Copying the Transports

The BatchMan transports differ according to:

- BatchMan Master Transport
  Import this transport into 1 SAP-client of the required BM master system

- BatchMan Client Transport
  Import this transport into 1 SAP-client of the desired BM client system

- BatchMan Transport for additional SAP clients
  If you use BatchMan Master or Client in additional SAP-clients, import this transport into the additional required SAP-clients in the BM Master or BM client system

Copy the appropriate files of the above mentioned paths to the **SAP directories:**

/usr/sap/trans/data	(R*-Files) and
/usr/sap/trans/cofiles	(K*-Files)

Please pay attention to upper and lower case letter use in reference/dependence to your system settings. When you copy via FTP, you must select mode BIN (BINARY).
TIME REQUIRED: CA. 5 MINUTES
Attention! Remove the write protection indicator/character for all K* files after copying to the directory /usr/sap/trans/cofiles.
(Example UNIX: chmod 755 K900629.AP2)

4.2. Import with TMS

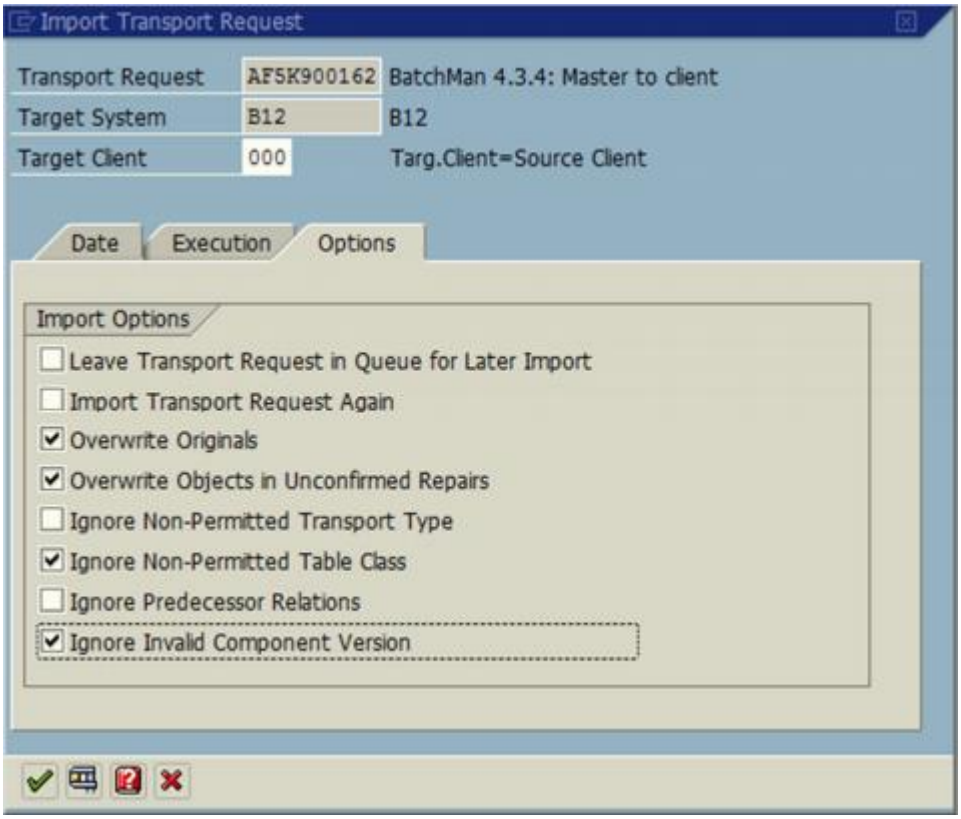
Attention: Please pay attention to the settings of your system environment. Transport paths could be configured that trigger an automatic further transport of orders. If you are not transport administrator yourself, you should contact the transport administrator to guarantee trouble-free installation.

Transaction **STMS**: Select *Import*.
Select the R/3 system where BatchMan should be installed. Go up to the import queue of the selected R/3 system.
You must place the three transports manually in the queue.

- Via *Extras* → other request → *Add* , the three transports are added to the import queue.
- Enter the number of the desired order and select *Continue*.
- Confirm the confirmation prompt.

If the transports are displayed in their queue, you can **import** them **in advance**.

- Position the cursor on the order that should be imported. In the menu, select *Order* → *Import*. Confirm the information about the risks of imports done in advance.
- You get to the dialog window transport order import, where you can specify the target **client** in which the order should be imported.
- Always set the import option "ignore impermissible table class" for all transports which are imported into a SAP client> '001'
- If this option is available, also set "Ignore non-matching component version"



4.3. Checks after the Import

You must check the import protocols/logs of the individual steps for errors (SE01 or STMS).
Based on the fact that the BatchMan system transport contains the all dictionary objects, alerts are issued during import.

It is not critical if the transports are finished with RC = 4.

In case of other errors (RC = 8) you must contact the Hotline (s. transaction J5HIN)!

5. Central System / Master System

The communication (this refers to scheduling and feedback of processes) in BatchMan takes place via RFC connections. A so-called **default connection** must be present per master system.
This default connection is used internally in the master system for several parallel function retrievals.
If a central installation is carried-out on an SAP system according to Option 3.3, and no processes are scheduled on this system, an RFC connection and both users from the following sections are still required.

6. Create User

6.1. System User (Master and Client)

BatchMan uses one user to realize the communication between the systems. This user is used for displaying the results of the search query, undertakes tasks for scheduling, monitoring, and returning of the results (runtimes and logs).

Background- or system user: (example BM_BATCH)
Used for scheduling jobs and processes, that means that every scheduling task is done via this user! He must have the necessary authorizations in the target system.
Log on in the target system is not possible with this user.

A remote login call will occur when you call functions in which changes are saved for the user. If the user destination exists, it will be used as login. If it does not exist or if the PW has become obsolete, then the login mask will be displayed.

This one user must be created for every system and every client. Call the transaction SU01 (or via the central user administration CUA). The names should be kept the same on the individual systems. This is not mandatory, but quite helpful.

By importing the authorization transports, the appropriate BatchMan profiles and roles are imported as well.

Trusted Systems
If the SAP systems are connected via ‘trusted systems’ in a system landscape, then there is mutual trust between the SAP systems. In this case, the service user is not required. Functions are called-up by the logged-on dialog user. The authorization object ’S_RFCACL’ must be assigned to every user in the ‘trusted system’ who is intended to remotely call-up a ‘trusted system’. Of course, the user himself must also exist.
The authorization object ’S_RFCACL’ is not contained in the BatchMan roles!

The role for the BM_BATCH system user is: /BTCMAN/BATCH_USER

Authorizations that are required to carry out the scheduling tasks are already included in this role. However, it is very likely that the background user will need additional permissions. This should then be done via a customer-specific role.

6.2. BatchMan User

Since BatchMan user only work in the master system, maintenance of BM user authorizations must be done only there as well.
Appropriate BatchMan authorizations for the working dialog user have to be assigned according to the user's tasks. Five authorizations objects exist in BatchMan:

J_5H	BatchMan: General authorizations for displaying, changing, executing functions
J_5H_CHECK	BatchMan: Checkpoint authorizations Changing checkpoints
J_5H_CPT	BatchMan: Authorization for Cockpit which menu points are visible
J_5H_MONI	BatchMan: Monitoring authorization display- and editing authorizations for monitoring
J_5H_OBJN	BatchMan: Object authorization which objects may be changed within the name convention

The following items (derived from above items) are available:

/BTCMAN/ALL	Full authorization
/BTCMAN/ARCHIV	Archiving complete
/BTCMAN/ARCH_EXPORT	Archiving Export
/BTCMAN/ARCH_IMPORT	Archiving Import
/BTCMAN/BATCH_USER	Role for the batch user
/BTCMAN/CHKP_ALL	Checkpoints - all authorizations
/BTCMAN/CPT_ALL	Cockpit authorization
/BTCMAN/CPT_USER	Cockpit for user jobs + scheduled appointments
/BTCMAN/DISPLAY	Display - General
/BTCMAN/FREIGABE	Execute and release
/BTCMAN/MAINTENANCE	Maintenance - general
/BTCMAN/MONITER_ADMINISTRTOR	Monitoring - Administrator authorization
/BTCMAN/MONITER_DISPLAY	Monitoring - Display Authorization
/BTCMAN/OBJ_ALL	Object authorization for all objects
/BTCMAN/REPORTING	Reporting
/BTCMAN/SETUP	Setup BatchMan
/BTCMAN/TABELLEN_ALL	able maintenance all
/BTCMAN/TABELLEN_CHANGE	Table change
/BTCMAN/TABELLEN_DISPLAY	Table display
/BTCMAN/TCODE	Transaction codes
/BTCMAN/TOOLS	Tools
/BTCMAN/TRANSFER	File transfer on OS level
/BTCMAN/TRANSPORT	Transport - master data via TMS
/BTCMAN/TRANS_ALL	Transport - Export + Import
/BTCMAN/TRANS_EXPORT	Transport - Export master data to file
/BTCMAN/TRANS_IMPORT	Transport - Export master data from file
/BTCMAN/USERJOBS_ALL	User jobs - All (administrator)
/BTCMAN/USERJOBS_USER	User jobs - individual user
/BTCMAN/XMI	XBP authorization

These roles are already created for use in the following roles

/BTCMAN/BATCHMAN_01	BatchMan: User requirements
/BTCMAN/BATCHMAN_05	BatchMan: Display and Reporting
/BTCMAN/BATCHMAN_07	BatchMan: Master data maintenance
/BTCMAN/BATCHMAN_09	BatchMan: Administrator (without BatchMan Setup)
/BTCMAN/BATCHMAN_10	BatchMan: Administrator

For first tests, we recommend to use profile **/BTCMAN/ALL**. This is included in role **/BTCMAN/BatchMan_10**.

Attention: Please logoff and logon to activate these authorizations.

7. Setting-up RFC Connections Master System

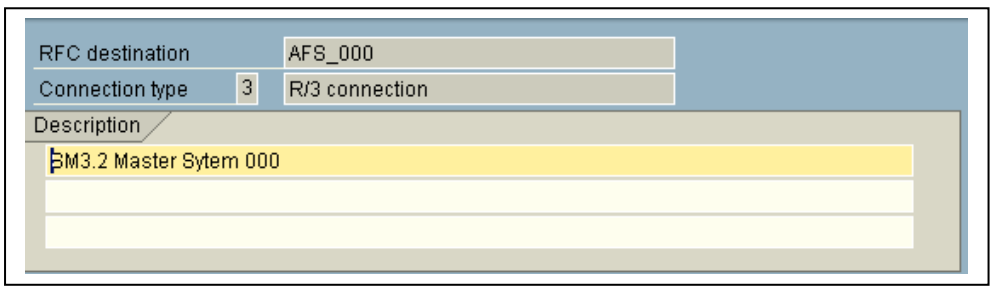
The setups for the RFC connections have to be repeated for each client for/in which (a) scheduling should be done from the master system.
One of the defined connections must be defined as a so-called 'default' connection in Section 10. This always points to the master system itself. The internal BatchMan processes run on this connection (process scheduling).

In a local installation with multiple clients, one RFC connection must be created per client. One of the connections (on which most of the processes run) is used as the 'default connection'.

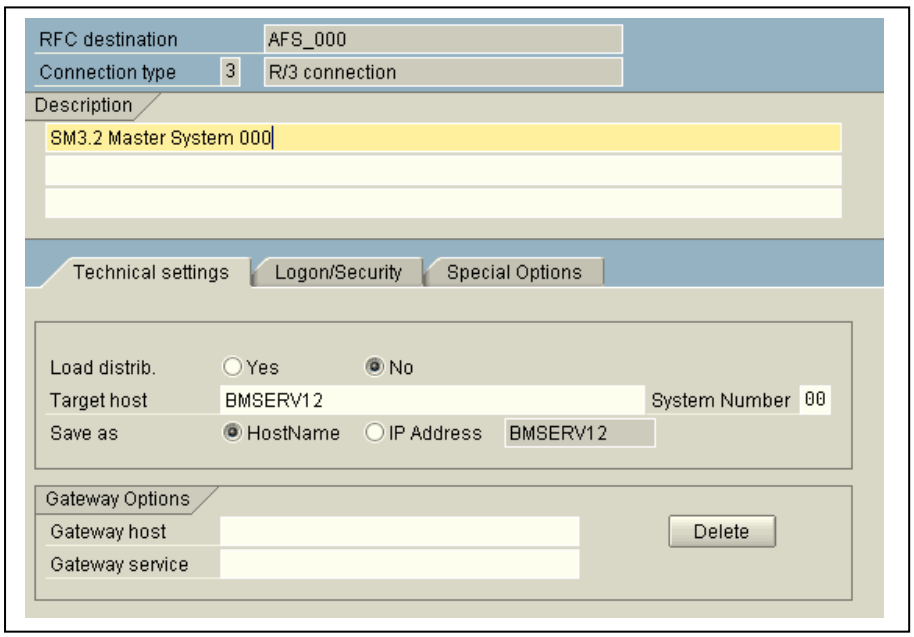
The call-ups of transaction SM59 are shown here first. Section 10 shows how these functions can also be retrieved from BatchMan. Please read right to the end - because the functions shown there include simplifications.

7.1. Create R/3 Connection Master System

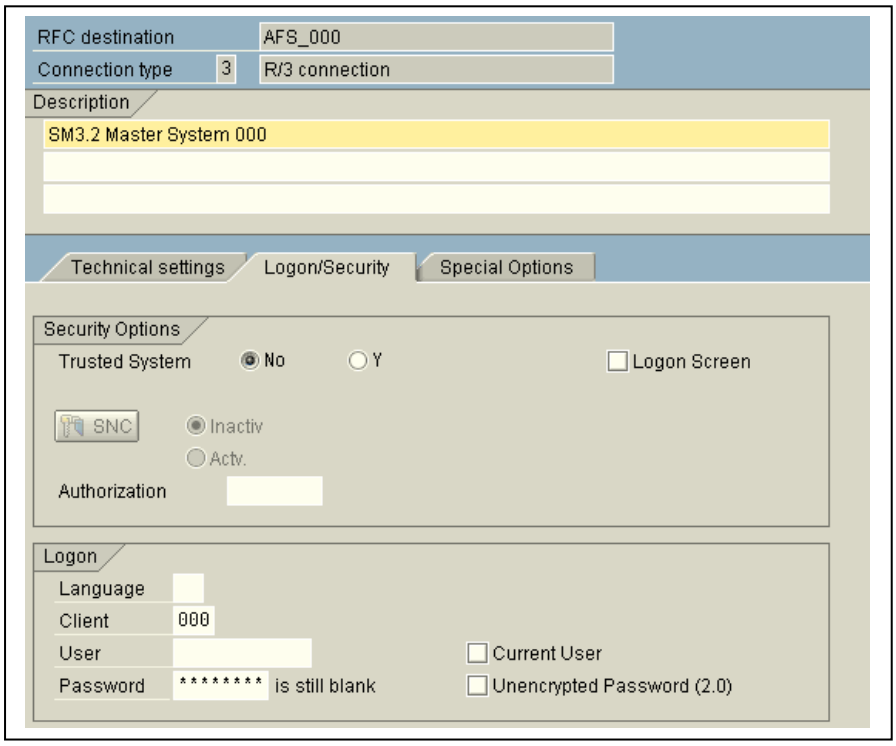
Although the names of the RFC connections can be chosen at random, and can consist of a total length of 32 characters, they should be specified according to certain name conventions.
1) Compliance with certain naming conventions. The naming conventions <SID>_<MANDANT> (e.g. P01_100) or BM_<SID>_<MANDANT> (e.g. BM_P01_100) have proven themselves here.
2) The length should not exceed 14 characters. Normal jobs report back to the master system (default connection). A variant is created for the /BTCMAN/C_STP program on the client system for this purpose. Variant names can (currently) not exceed a length of 14 characters.
Like the proposed naming already suggests), you have to create one RFC connection per SAP System and client – of course only for the clients in which jobs and processes should be scheduled also. Please call transaction SM59 for this purpose.



An R/3 connection to client '000' is created here for the SAP System AFS (Solution Manager 3.20).



The target machine (either as host name or as IP address) has to be specified in the technical setting. The system number has to be entered as well.

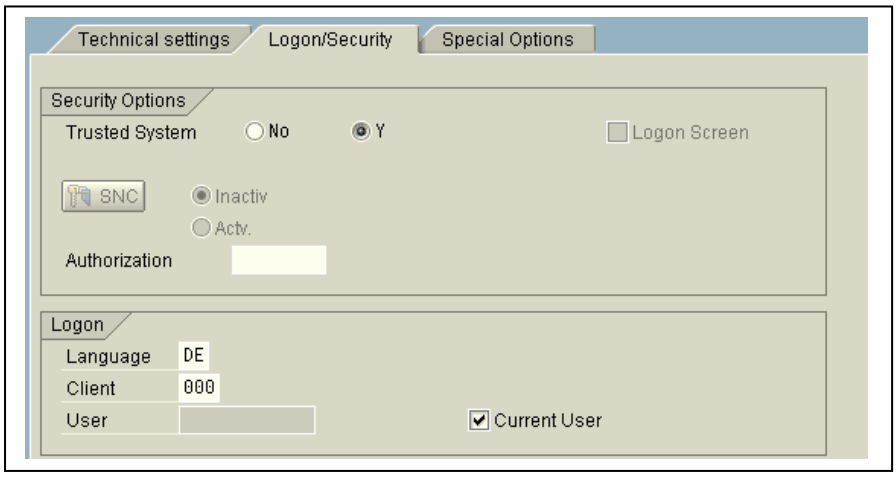


In the setup for logon/security, only the client and the language have to be maintained. Data for user and his PW should remain EMPTY/BLANK.

If the systems are setup among each other as trusted systems, the option ‚Yes' should be selected. A PW is not necessary anymore in this case.
After setting the flag ‚Current user', the user is suppressed/out of sight; and the logged on user is always used.

Trusted Systems

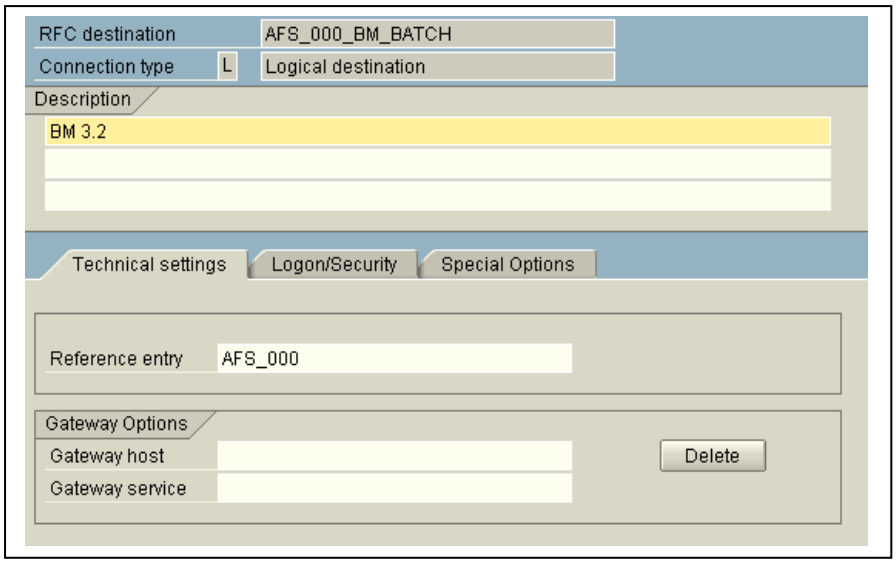
If the systems have been created as trusted systems, the 'Yes' option is selected. A PW is then no longer needed.
After setting the flag 'Current user', the user is masked and only the logged-on user is shown.



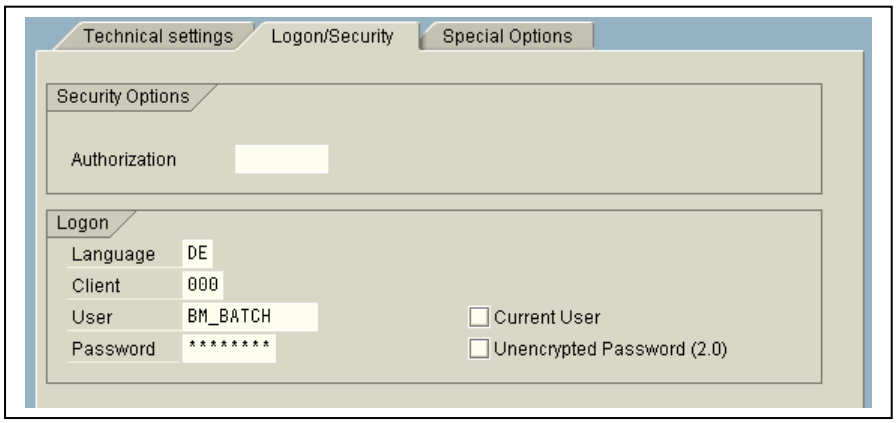
7.2. Create Logical Connection Master System

Although the names of the RFC connections can be chosen at random, and can consist of a total length of 32 characters, they should be specified according to certain name conventions. Name convention <SID>_<MANDANT>_<USER> (e.g. P01_100_BM_BATCH) or BM_<SID>_<MANDANT>_<USER> (z.B. BM_P01_100_ BM_BATCH) has been proven to be the best.

An appropriate local destination must be created for the BatchMan system user. While the technical data of the target system is included in the R/3 connections, the user-specific data (User, Client, PW) is included in the logical destination.



It is important to fill the reference entry with the appropriate R/3 connections.



Login information for language, client, user and password has to be deposited in the login data. Here the language does not only have the meaning that the entered user logs on with this language. Through the background-/ system user, all scheduling is done also. While the language can be specified/setup in the steps, this is not possible in the scheduling of processes. Consequently, the processes are started with the language that is specified here.

In the service user, the search query is displayed in the language that is specified here (analog).

Please note: The password distinguish between capitalization/upper case user and lower case use starting with SAP Basis Release 7.00! In lower SAP Basis Release Versions, the setup is always UPPER CASE/CAPITALIZED, even if entered with lower case. This must be considered in connections SAP BASIS < 7.00 to SAP BASIS >= 7.00.

Trusted Systems

If the R/3 connections were created as ‘Trusted system’, no logical destinations are required.

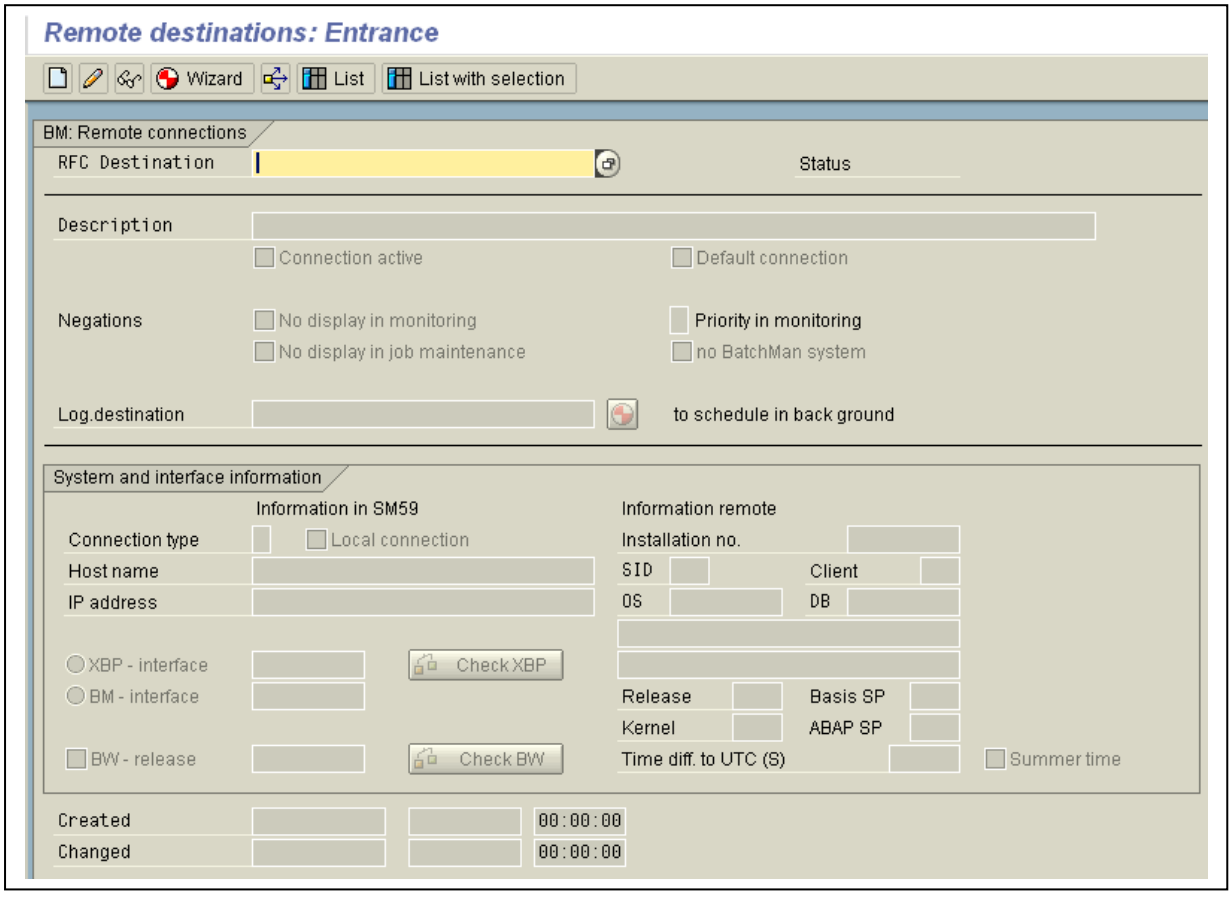
8. Announce RFC Connections in BatchMan

The above setting for the users and RFC connections have to be repeated for each client, in which scheduling should be done from a master system.
Local installation with several clients has to be done the same way.

In addition to the RFC connections required by BatchMan, more RFC connections exist/are created in the SM59. Therefore, BatchMan contains a table in which all RFC connections are announced that are relevant for BatchMan. All R/3 connections must be included in this table.

BatchMan function tree (Transaction J5HEN) → Customizing → Technical customizing → Remote Connections/ Targets Remote

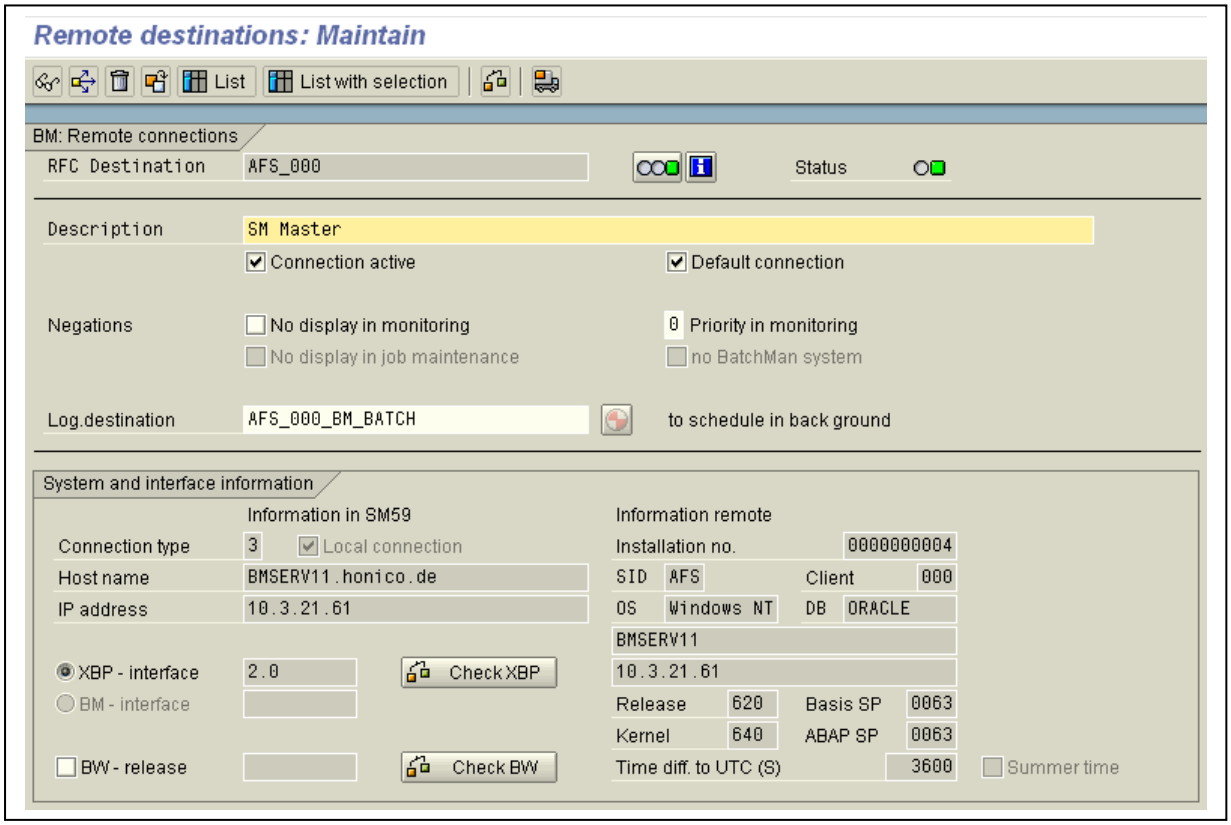
Only the R/3 connections are announced, to which the logical connections are assigned then.



Via the search query, the appropriate R/3 connections can be selected from all the existing RFC connections.

During creation of the BatchMan table, a check is performed whether the RFC connection exists in transaction SM59. If not, transaction SM59 is triggered and the values must be maintained according to Section 7.1.

Example for the master system:



The master system should be set up as ‚Default connection' with one client.

Via the flag ‚Connection active', the RFC destination within BatchMan is activated. This way it is also possible to deactivate the scheduling for this RFC connection.

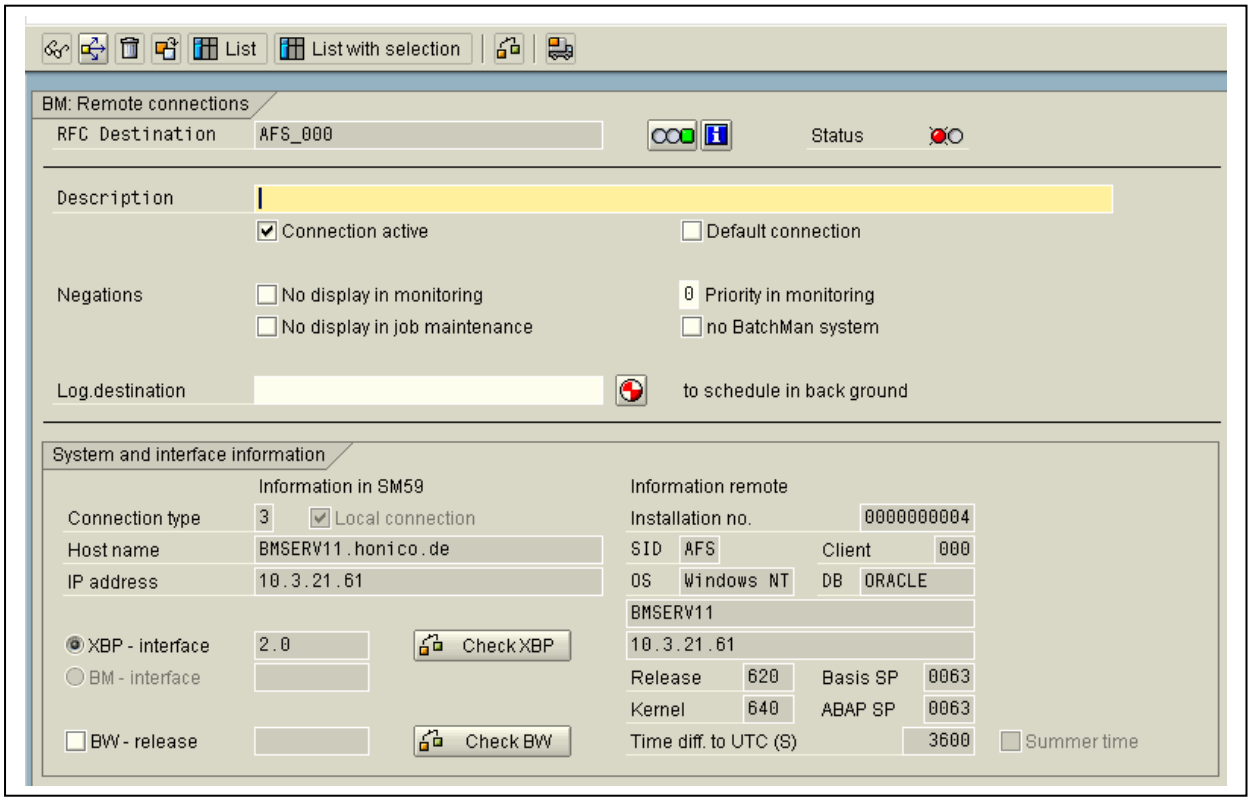
In the field for the ‚Log. destination', the logical connections defined in section 7.2 must be entered. If these were maintained properly, then only the logical connection with R/3 connection as reference entry is displayed when the search query is called.
At the latest, the remote information is read when an entry is saved. Analog, the XBP version is read also. This is important information to know which functions are available at the XBP interface.
Should BW processes be started in the target system, then the BW interface has to be activated and the BW version has to be read-out via the button ‚Check BW'.

The field for ‚No monitoring' should be activated in a master system, because monitoring can not take place in the client systems.
In case of multiple master systems, the flag should only be deactivated for the master systems. Via ‚Priority', the sequence for monitoring is specified in the initial screen/view.

If the 'No display in job maintenance' flag is set, this connection is not offered in the target systems selection in job maintenance. This value selection connection is available for selection in all other lists.
Connections on which no maintenance (and therefore no scheduling) of processes are planned must be masked. For example, the connections to the Quality System on a production system (exactly the opposite is applicable there).

Masked connections are required for Quality Assurance following a system copy of production. The connection is changed there with the mass change.

Establishment of a remote connection

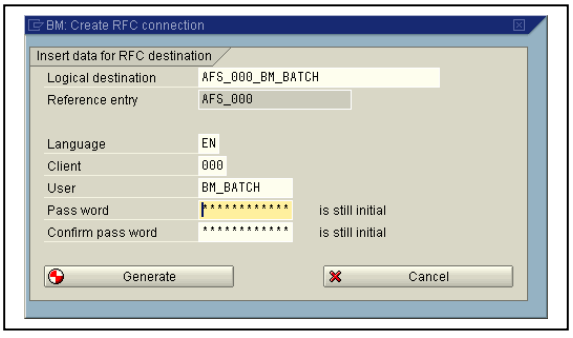


First system information is already being read remotely. The connection is set to active by default. Logical connection has not yet been set up.

Quick setup of the logical destinations is initiated with the 'Generate' button  .

Specify the names of the logical destinations. Fill in remaining fields in the input mask.

'Generate' button

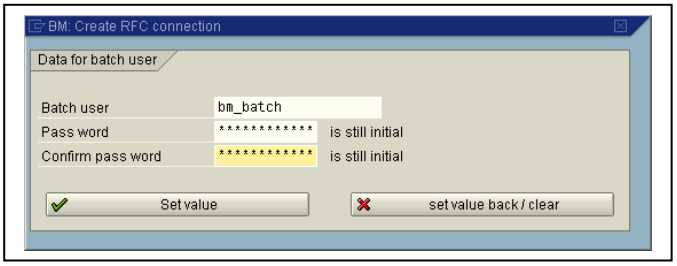


Besides this, it is possible to generate users and passwords via the 'Edit → Default values' menu function.

Setting users and passwords

'Set value' button

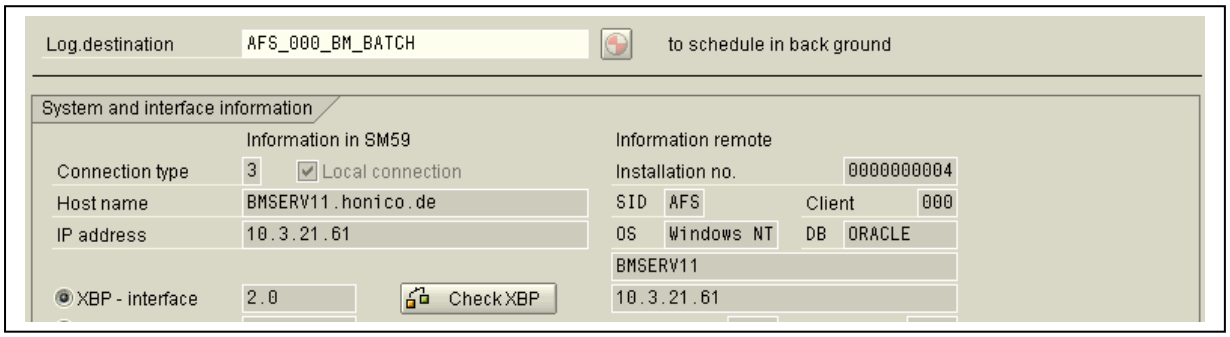
If the window is re-opened, the PWs will have been set and the text 'is still initial' does not appear any more.



Caution: The 'set value back / clear' button clears the fields!

If the 'Generate' buttons  are now clicked sequentially for logical destination, the logical destinations are set up without an additional popup (in SM59).

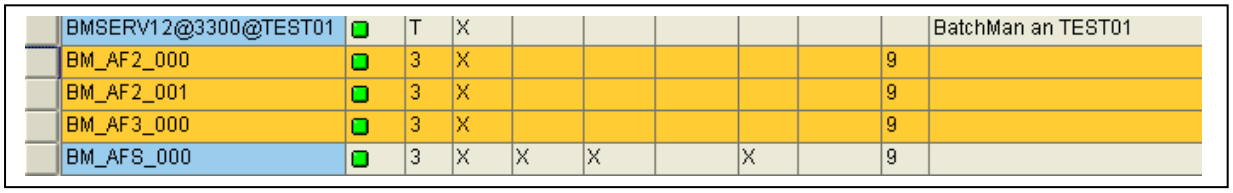
After saving, the information (XBP version and SAP Installation Number) is then completed remotely.



The advantage of 'default values' becomes clear when not only one, but a whole series of remote connections must be set up.
Setting up remote connections in BatchMan **without** logical destinations.

Open the list with one of the 

buttons. Select connections which do not have an 'X' in the "Dialog' or "Batch' columns.



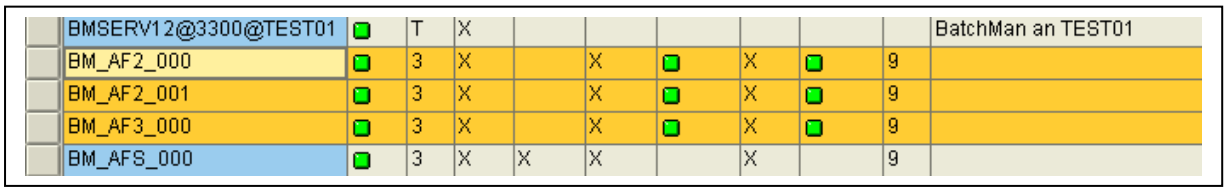
BMSERV12@3300@TEST01		T	X							BatchMan an TEST01
BM_AF2_000		3	X						9	
BM_AF2_001		3	X						9	
BM_AF3_000		3	X						9	
BM_AFS_000		3	X	X	X		X		9	

The 

button creates the logical destinations for the batch user.

The 

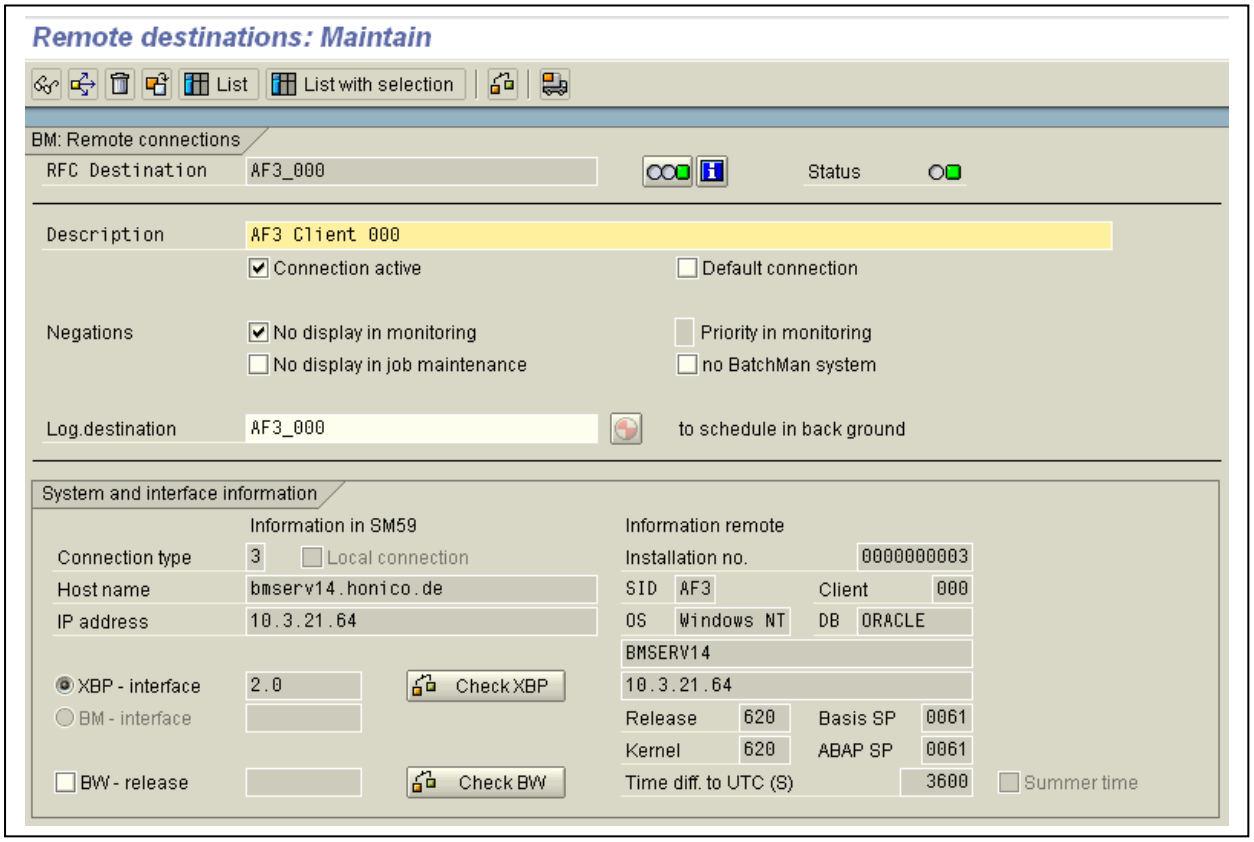
button can be used to check immediately whether log-on is possible for all logical destinations in the target system.



BMSERV12@3300@TEST01		T	X							BatchMan an TEST01
BM_AF2_000		3	X		X		X		9	
BM_AF2_001		3	X		X		X		9	
BM_AF3_000		3	X		X		X		9	
BM_AFS_000		3	X	X	X		X		9	

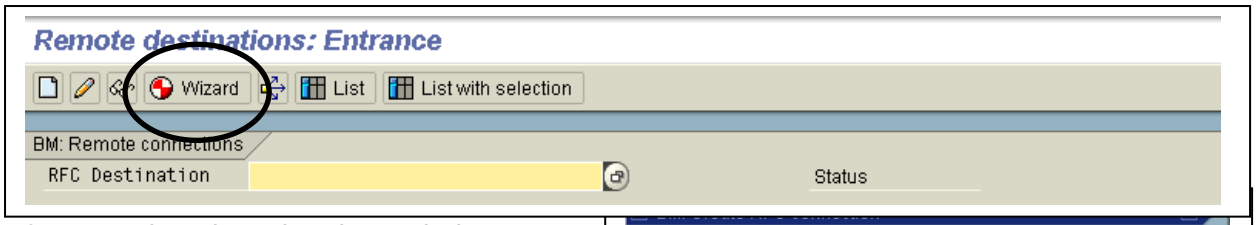
Trusted Systems

No logical destinations are required for 'Trusted Systems'. Section 7.2 therefore does not apply. All accesses are performed with the logged-on user.
The R/3 connections are entered as logical connections because the logical connections are required in some BatchMan programs.

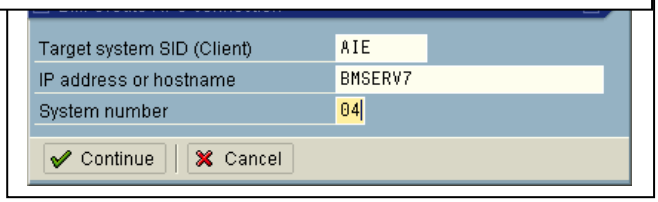


Wizard for the creation of remote connections

If remote connections must be created for a system with many clients, we recommend using the wizard. It is absolutely necessary to have imported at least the BatchMan Client transport. Besides this, the required users must be created in all clients.



After opening the wizard, a window pops up, requesting the technical parameters of the target system.

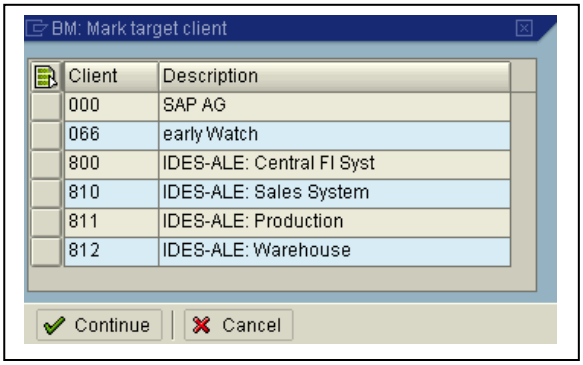


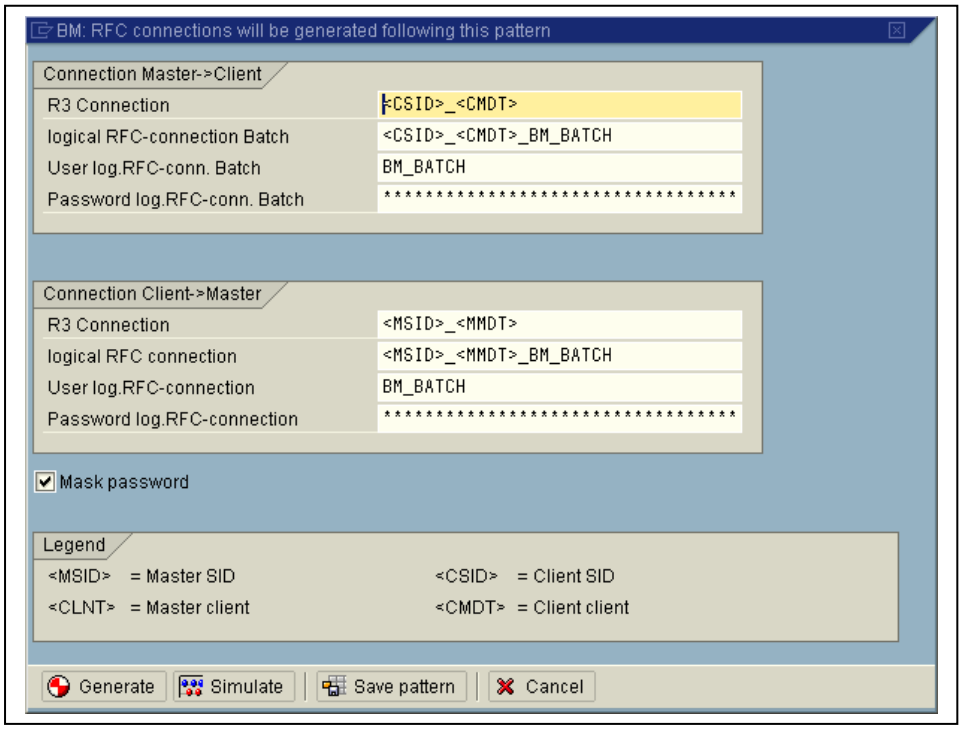
If the target system is local, then the local client is used to obtain the following information. If the target system is remote, then target system authentication is required.

A list of target system clients is displayed.

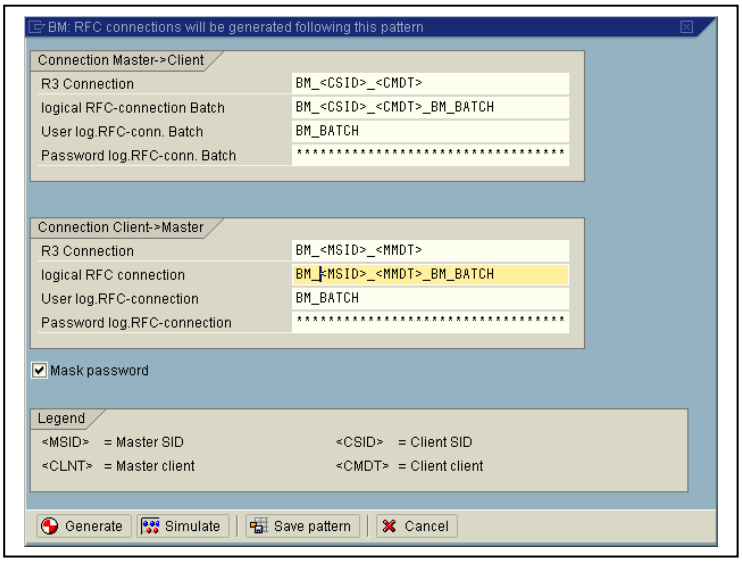
Selection of the target system clients that must be taken over

Continue



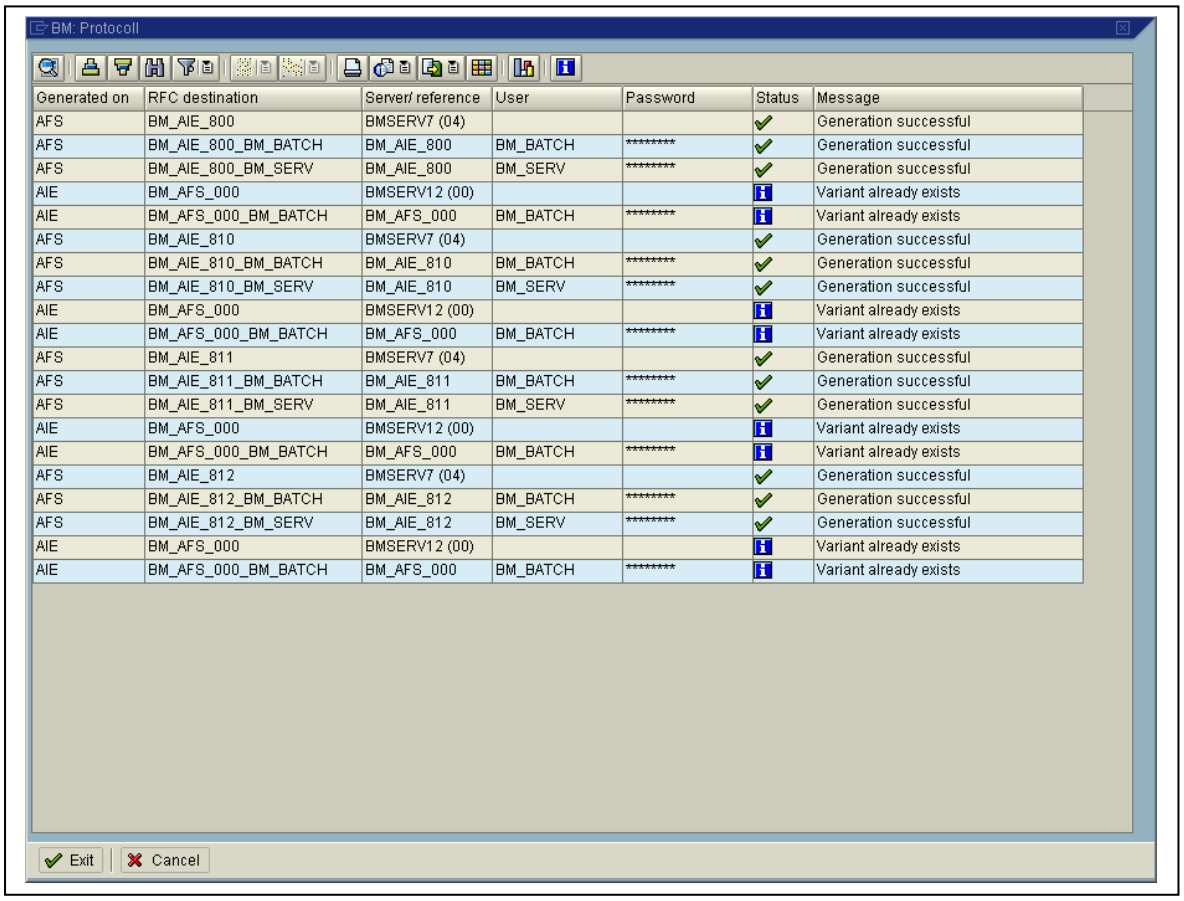


The set variables and patterns correspond to the conventions suggested by BatchMan. If the RFC connections are already allocated to <SID>_<MANDT>, 'BM' can be entered in front of all connections. These new patterns can be saved as a default.



The 'SIMULATE' button verifies with the target system whether all entries can be created.

The 'GENERATE' button creates all entries, provided there are no error messages.

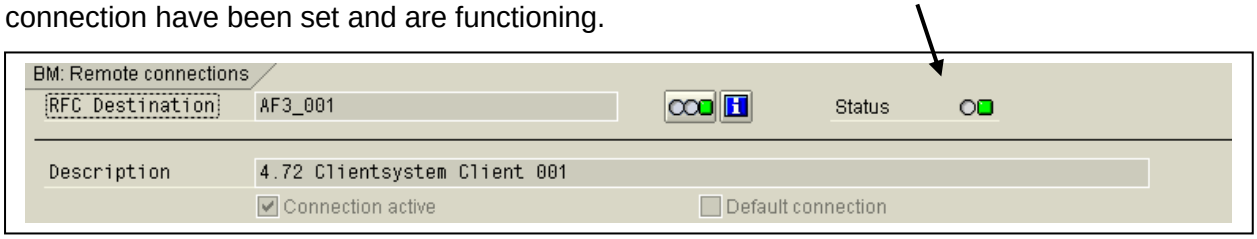


Generated on	RFC destination	Server/ reference	User	Password	Status	Message
AFS	BM_AIE_800	BMSERV7 (04)			✓	Generation successful
AFS	BM_AIE_800_BM_BATCH	BM_AIE_800	BM_BATCH	********	✓	Generation successful
AFS	BM_AIE_800_BM_SERV	BM_AIE_800	BM_SERV	********	✓	Generation successful
AIE	BM_AFS_000	BMSERV12 (00)			i	Variant already exists
AIE	BM_AFS_000_BM_BATCH	BM_AFS_000	BM_BATCH	********	i	Variant already exists
AFS	BM_AIE_810	BMSERV7 (04)			✓	Generation successful
AFS	BM_AIE_810_BM_BATCH	BM_AIE_810	BM_BATCH	********	✓	Generation successful
AFS	BM_AIE_810_BM_SERV	BM_AIE_810	BM_SERV	********	✓	Generation successful
AIE	BM_AFS_000	BMSERV12 (00)			i	Variant already exists
AIE	BM_AFS_000_BM_BATCH	BM_AFS_000	BM_BATCH	********	i	Variant already exists
AFS	BM_AIE_811	BMSERV7 (04)			✓	Generation successful
AFS	BM_AIE_811_BM_BATCH	BM_AIE_811	BM_BATCH	********	✓	Generation successful
AFS	BM_AIE_811_BM_SERV	BM_AIE_811	BM_SERV	********	✓	Generation successful
AIE	BM_AFS_000	BMSERV12 (00)			i	Variant already exists
AIE	BM_AFS_000_BM_BATCH	BM_AFS_000	BM_BATCH	********	i	Variant already exists
AFS	BM_AIE_812	BMSERV7 (04)			✓	Generation successful
AFS	BM_AIE_812_BM_BATCH	BM_AIE_812	BM_BATCH	********	✓	Generation successful
AFS	BM_AIE_812_BM_SERV	BM_AIE_812	BM_SERV	********	✓	Generation successful
AIE	BM_AFS_000	BMSERV12 (00)			i	Variant already exists
AIE	BM_AFS_000_BM_BATCH	BM_AFS_000	BM_BATCH	********	i	Variant already exists

Lines with an i in the "Status' column are no error messages, but only notes.

Possible connection maintenance errors

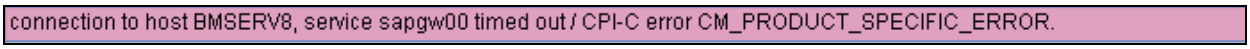
There is a status icon in the remote connection display, which shows whether all functions for a connection have been set and are functioning.



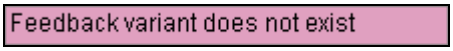
A detailed display of problems can be opened with the  button. If no errors occurred, the icon is GREEN; in case of errors or problems it is RED.

Examples of errors:

Check the license for the relevant system – compare Section 16.



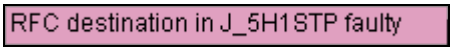
The RFC connection is faulty, e.g. the target system cannot be reached.



A feedback variant on the target system has not been maintained – compare Section 10.

Check user name and password in the relevant remote connection.

The user is blocked in the target system.



The RFC connection entered in the /BTCMAN/C_STP variant is faulty.

The RFC connection entered in the /BTCMAN/C_STP variant indicates the wrong client.

9. Setting-up Client System

This connection is used for the active feedback/confirmation of processes (at the moment only of the jobs). This way the time until the start of subsequent processing can and will be minimized.
While an independent/own R/3 connection plus the logical connections are necessary from the master system to each client system per client, only one R/3 connection plus one logical connection are necessary for the feedback/confirmation from/of processing. The feedback/confirmation always goes to the master system.
In case of a purely local installation, sections 9.1 and 9.2 can be ignored because the RFC connections are already defined.
In case of a master system installation with multiple connected clients, the feedback/confirmation should go to the main client.

Although the names of the RFC connections can be chosen at random, and can consist of a total length of 32 characters, they should be specified according to certain name conventions. Name convention for the R/3 and <SID>_<CLIENT>_<USER> (e.g. P01_100_BM_BATCH) have been proven to be the best for the logical connection.

Trusted Systems
For 'Trusted Systems' you need only the R/3 destinations.

9.1. Create R/3 Connection Client System

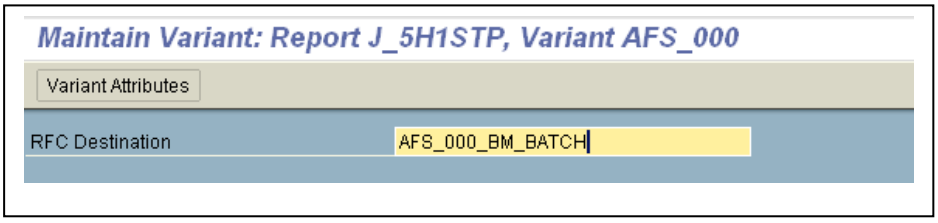
Analog to section 7.1 Create R/3 Connection Master System

9.2. Create Logical Connection Client System

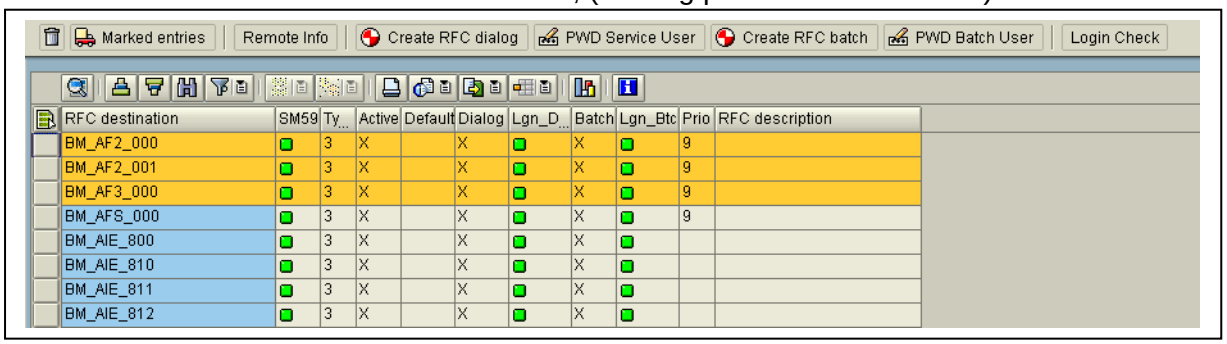
Only one logical connection with the background- or system user is needed for the feedback/confirmation from client system to master system.
Create action analog to section 7.2 Create Logical Connection Master System

10. Create Variant for Feedback/Confirmation

Report /BTCMAN/C_STP is used for feedback/confirmation to the master system.
You must create a variant for this report per (for each) system and client. If processes are also to be started on the master system in the client, variants must be created for individual clients for this system.
The name of the variant should be R/3 connection from section 7.1. The logical connection from section 7.2 must be entered in the variant as value for the RFC connection/ destination.

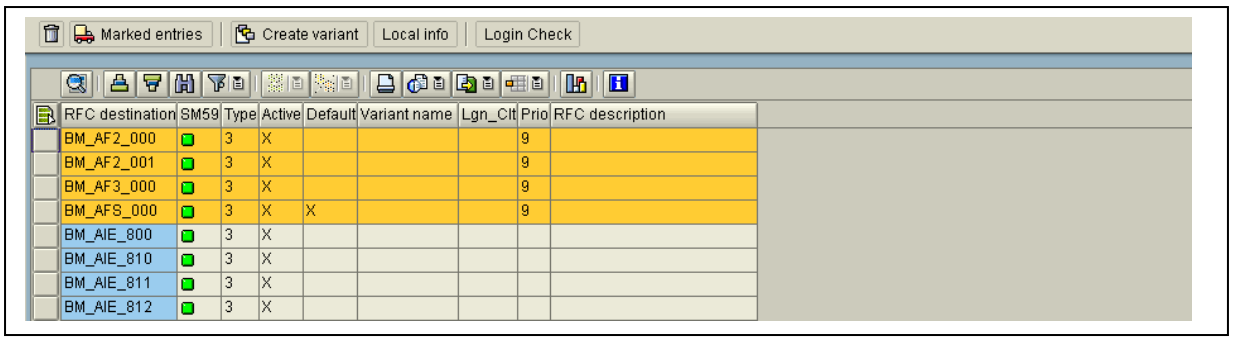


Creation from the list of remote connections; (starting point Section 8 status).



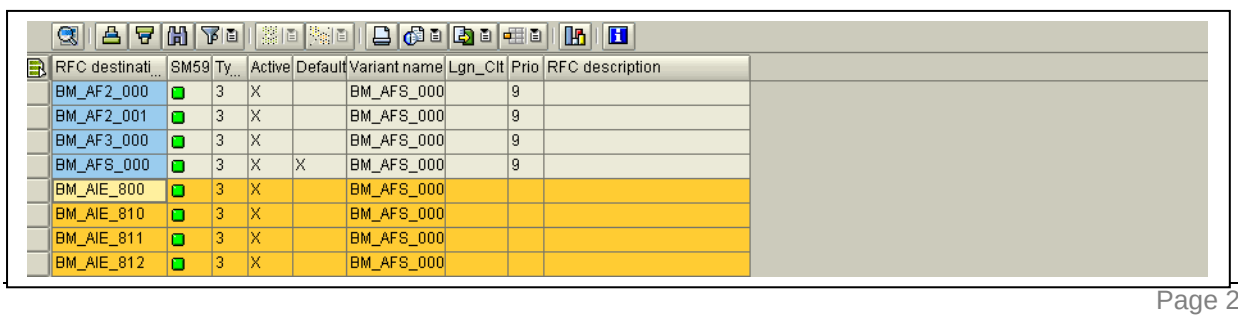
The 

button calls-up a variant in the list which reads information from the client system. The master destination (‘default connection”) must then be selected too.



Besides the feedback variants (Section 11), the 

button also creates the destination (Section 10).
Similarly, variants are created for the destinations which were created with the wizard.



11. Setting-up BatchMan Customizing

BatchMan is set up according to client specifications/requirements in BatchMan Setup.

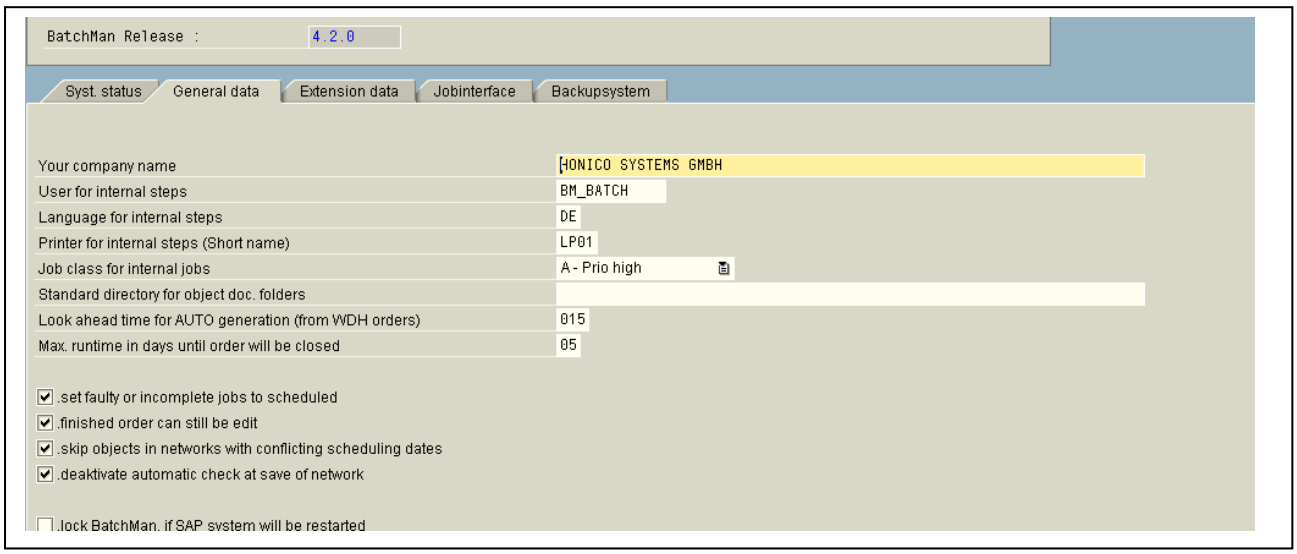
BatchMan function tree (transaction J5HEN) → Customizing → Setup Program → Setup Parameter. Calling transaction SA38 with the report **/BTCMAN/M_SET** can be used as alternative or call directly the transaction J5HIN.

Skip to the setup items via the individual tabs. When introducing BatchMan, initially only the tabs 'General data' and 'Extension data' need be set up.

When all settings have been completed, save via  .

The settings are saved in a BatchMan table and a new Include is generated with the values. After that, BatchMan can be started.

11.1. General Data



Meaning of the individual parameter:

Company name: Your company name. It is included in the lists in the header.

User for internal steps: The user who has the authorization to create and execute the job in SAP. We recommend the batch/ system user.
This user is used in the last step of each job (program /BTCMAN/C_STP) to take care of internal control tasks. This step is automatically inserted by BatchMan.

Language for internal steps: Language in internal BatchMan control steps.

Printer for internal steps: Printer in internal BatchMan control steps.

Job class for internal jobs: BatchMan uses own jobs for the start of individual orders; or for the waiting of events within an order. This parameter affects the job class.

Standard directory for object doc. folders: In addition to an internal documentation in jobs and networks within BatchMan, link for an external documentation can be deposited also. This external documentation should be deposited centrally in a server. This central directory can be set up as standard directory, which is opened during the search for external documentation.

RFC connection to Solution Manager: The job documentation of the Solution Manager can also be used for storing the job documentation. The relevant destination is to be entered here.

Look ahead time for AUTO generation (from WDH orders): Time period in the future for which the master jobs generates AUTO orders from the WDH orders (in minutes).

Max.runtime in days until an order will be closed: The master job checks for active orders, if actions should be executed for these orders. Orders should always be closed/finished for performance reasons (status finished or aborted). This function changes operator orders in status active or faulty to finished after the specified time period has expired.

Set faulty or incomplete jobs to 'scheduled': With this indicator you can specify what should happen if an order was scheduled, the data in the BatchMan objects, however, have become invalid. These could be printers that are not available anymore, user, or variants. If the indicator is active ‚**X'**, then the objects are scheduled and the order can start. The non-active strings, however, will not be started. If the indicator is not active ‚**blank**', then the order will not be started / released.

Finished order can still be edited: This indicator controls if an order, whose jobs and processes already ran, can be further edited/processed. An/one editing step is the repeating of a job. The acceptable parameters are **blank** (job may not be repeated) **a**nd **X** (job may be repeated).

Skip objects in networks with conflicting scheduling dates: If this parameter is set on active (X), then the period dates of the jobs within a network are considered when the daily order (type STD) is released. The jobs are emptied/skipped (color of jobs turn to PINK), and then executed.
If it is not active (blank), then the period dates of the jobs within a networks are not considered. That means that only the periodicity of the network is valid. The jobs are executed with all defined steps.

Example: Network 1 should run from Monday until Friday (automatic scheduling) and contains tree jobs A, B, and C.

Job A should run daily as well.
Job B should run on Monday, Wednesday and Friday.
Job C should run on Tuesday and Wednesday.

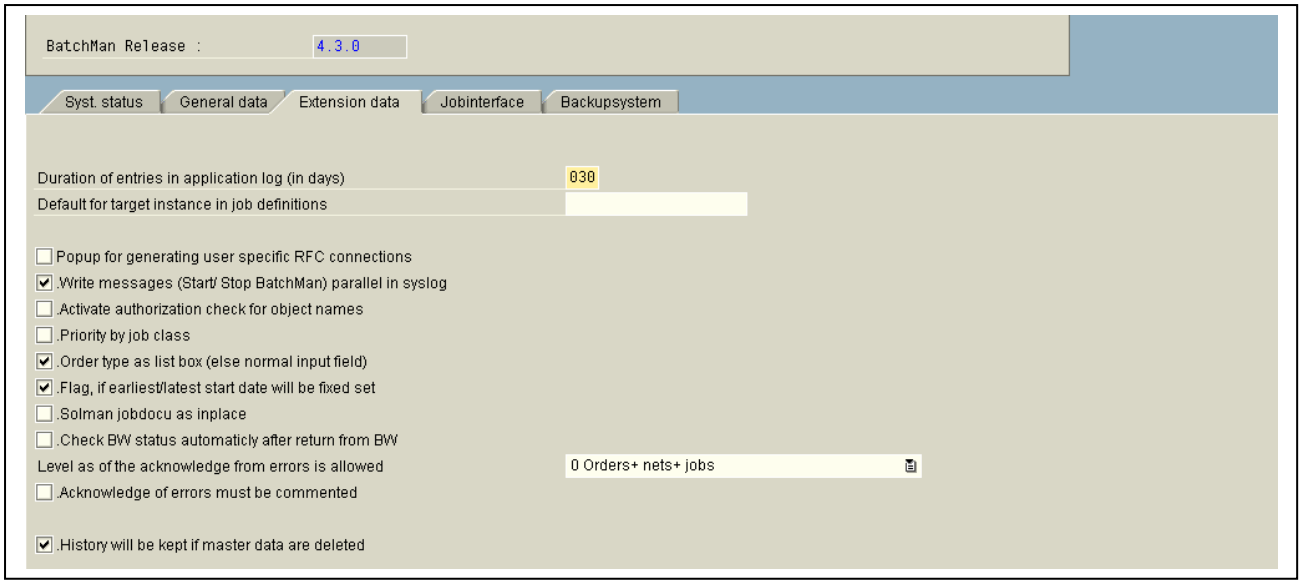
The period values are maintained appropriately in all three jobs.

X – active The network is executed daily from Monday to Friday. Job A is also executed with all defined steps daily. Job B is only executed with all defined steps on Monday, Wednesday and Friday. On Tuesday and Thursday, Job is B is executed empty. The same is valid for job C.
|_| -not active Network 1 is executed daily from Monday to Friday and all three jobs (standard) as well, since the period values of the job are not valid in the network.

Deactivation of automatic network testing during saving: For networks containing many objects (sub-networks and jobs), testing can take longer. When the network is tested, all objects it contains are also tested. Automatic testing can be de-activated in order to avoid a change test run for every change.

Lock BatchMan, if SAP system will be restarted - Standard inactive - empty (active- ‚X'):
Specification if BatchMan should be stopped after an SAP data base stop. In this case, the start time is read internally from the DB host for each master job run. If this time deviates from the time saved in BatchMan, then BatchMan is stopped.
Before this parameter is activated, BatchMan should be stopped and immediately restarted once, so that the last start time of the data base is saved in BatchMan.
This makes it possible, for example, to generate a data base copy from the productive system to the quality system if the parameter is activated. After the Q-System starts, BatchMan stops.
Restrictions: Jobs that are scheduled at a start time (date + time) and have reached this start time will start. The jobs that are scheduled on event (standard in BatchMan) and have reached/received event, also start. Here it is only possible to stop the SAP scheduler (transaction SM61).

11.2. Extension data



Duration of entries in application log (in days): Standard is 30 days. Starting with BatchMan 3.2, the application log is used internally for depositing occurring aborts, errors, messages or information items. This application log must be reorganized regularly. Entries from the application log can be deleted if the expiration date expired already.
The parameter determines how the expiration date is calculated; and thus the time period how long an entry should remain in the application log before it may be deleted.

For the deleting of the entries (at least the BatchMan entries) in the application log, an additional job must be included/inserted in the existing Reorg processes. One run per week should be sufficient.

Report	**SBAL_DELETE**
Object:	**J_5H**
Sub-object:	*** (Stern)**
External number/ Identification:	*** (Stern)**
Protocol/Problem class	**1**
To Datum:	Today minus 30 days (via dyn. date variable or TVARV)

With this run/execution you can also delete all other entries from SAP which have exceeded the expiration date.

Default for destination instance in job definitions: When creating jobs, this setting causes the system to fill the field for the destination instance automatically with the value defined in the setup. The application is mainly intended for the application of the default server group <SAP_DEFAULT_BTC> (also see SAP Note 786412). This default server group is designed by SAP to allow jobs without any destination instance to run only for certain instances.
Since BatchMan uses a separate logic to distribute jobs when scheduling, the default server group must be stored on all BatchMan job definitions. The server group is to be maintained in transaction SM61 .

Display popup for creating user-specific RFC connections: A lot of information is read remotely by the two default users. In some functions this is not possible for reasons of authorization and evidence duties (who changed what). The login screen is opened and the user must authenticate himself in the system. In order to avoid this being necessary for each call-up, another logical connection can be saved per system client and user. If this is needed, the parameter must be activated.

Write messages (Start/ Stop BatchMan) parallel in Syslog: The stopping and starting of BatchMan is normally only recorded in the application log. Via an activated flag, a message is also recorded in the Syslog. This way, external monitoring tools can react on this entry.

Activate authorization check for object names: In BatchMan, an additional authorization check can be executed for steps, jobs, networks orders. Authorizations for all objects are included in the standard package. Detailed explanations for object authorization checks and examples can be found in the BM4_e_CustomerNumbers_YYMM.pdf.

Prioritizing by job class: By default, processes are set and sorted by date and time into the internal scheduler table (FIFO – principle). If the flag is active, then the system first displays the job class (priority) as order type as a list box (otherwise a normal entry field): Appearance of the order maintenance.

Display order types arten as List box (otherwise normal Input field): Appearance of order maintenance.

Flag, if earliest/ latest start date will be set fixed: This flag is used in order to set the date in the start criteria of jobs/network INITIAL to a fixed date entry when an order is released. Together with the moving/shifting of X (work-) days now TVARV's must not be used anymore to execute a job or network in an order only on the following day. Detailed explanations for this can be found in the BatchMan User Manual in the sections about start criteria of jobs or networks.
Attention for BatchMan clients who update from a BatchMan Release < 3.2. First you need to change all orders from the INDIV/ AUTO logic to the WDH/ AUTO logic, before you set this parameter on active (**‚X'**).

Call SolMan job docu. as inplace: When this flag is activated, the system displays the job documentation within the master data maintenance (inplace). Using the internal links is not possible. If the flag is not set, the system displays it in a web browser. Using the internal links is possible here.

SolMan jobdocu – read only: When calling job documentation in SolMan, there is no update carried out from BatchMan master data maintenance. For this, a system for maintaining jobs (Q system) can be used, where the job documentation is also updated. In the second system (P system), the job documentation is only displayed.

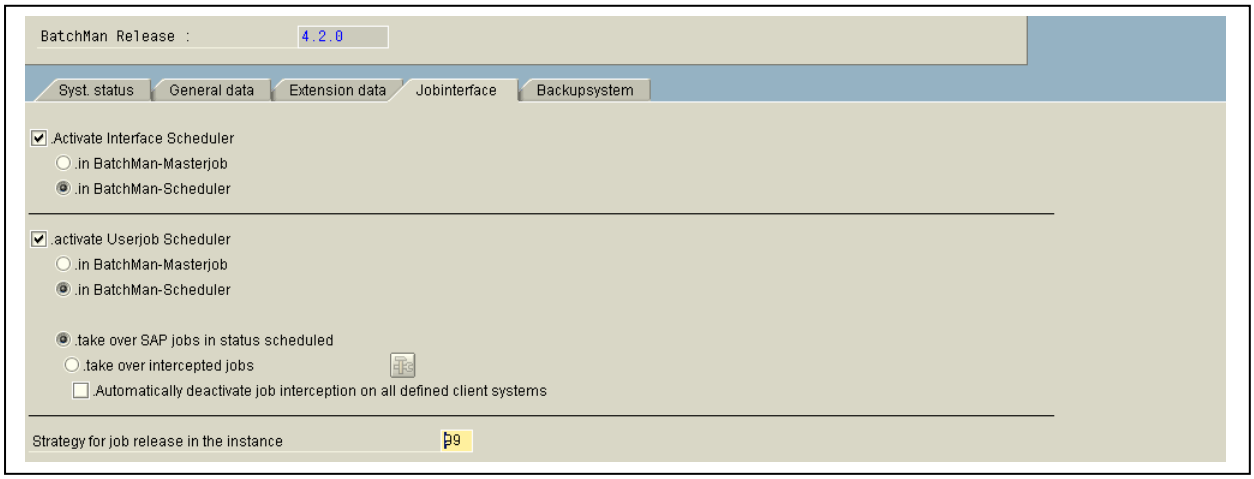
Automatically check BW status upon return from BW monitor: Each time you return from the BW monitor, the system will check the status of the BW processes. If this should be prevented, then this flag should be set.

Level from which it is allowed to acknowledge errors and **error acknowledgment must be commented**.

Here, the relevant level is set in BatchMan monitor upon error acknowledgement and indicates whether this acknowledgement also must be commented (1 line is enough).

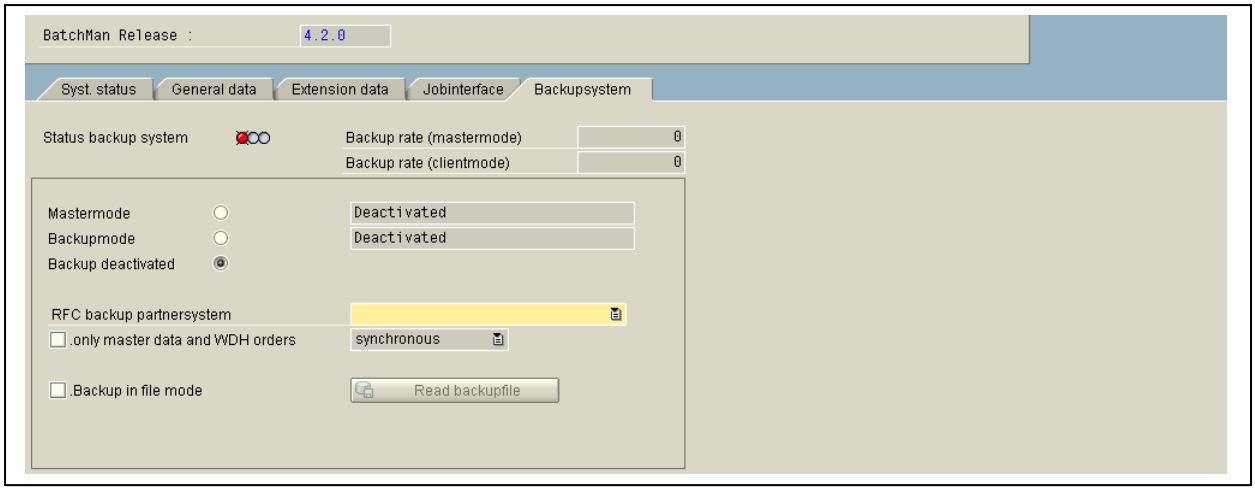
History will be kept if master data are deleted: During the creating and changing process of a master data object (network, job or step) change documents are written which field was changed by whom and on which day.
If this parameter is BLANK, all previous entries are deleted when a master data object is deleted, and only one entry is created with the information who changed it and when.
If the parameter is activated (‚X'), all entries are kept.

11.3. Jobinterface



Detailed description of the function and settings in the Interface Manual BM4_e_InterfaceHB_YYMM.doc

11.4. Backup System

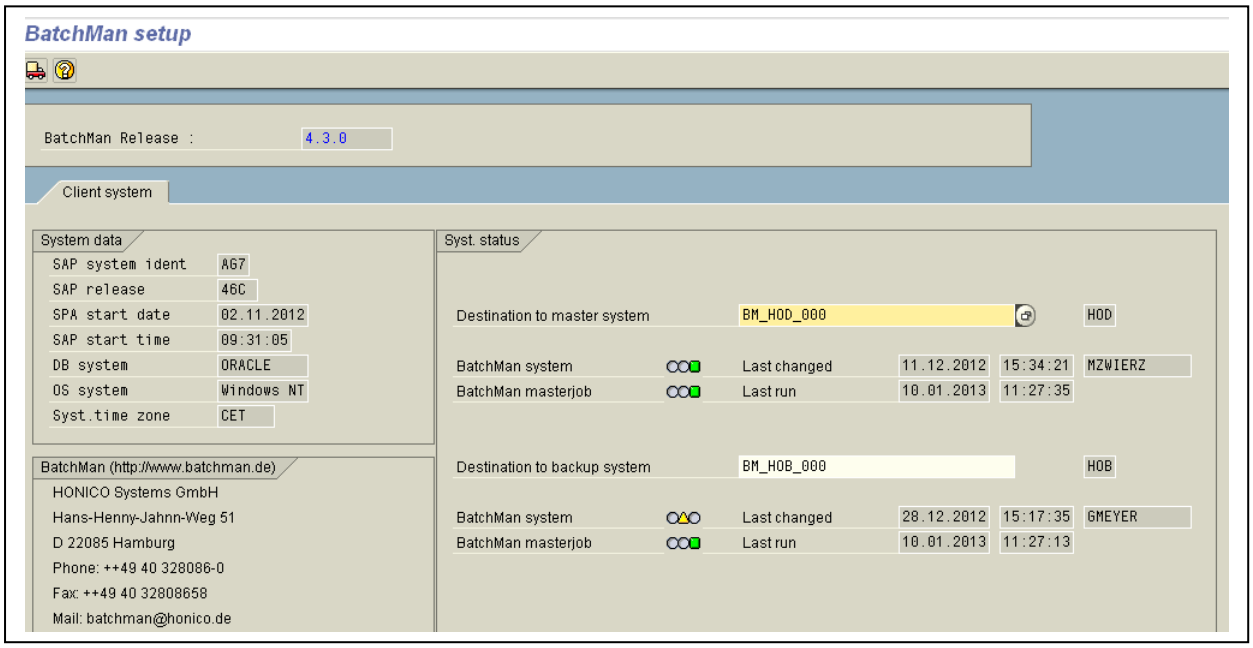


Detailed description of the function and settings in the Backup Manual BM4_e_Backup_yymm.pdf

12. Setup of BatchMan Customizing (Client)

A BatchMan client system is created via the settings in BatchMan Setup.

Call-up with transaction SA38 / SE38 and execution of program **/BTCMAN/C_SEC** or call directly transaction J5HIN



The setting which must be made in the client system is the announcement of the logical connection to both to master and to backup system (from Section 9.2, or for 'Trusted systems' of the R/3 connection (from Section 9.1) to the master /. backup system.
The connection can be searched for and selected from SM59.

When this setting has been completed, save via  .

The connection is used internally by some programs to generate an alarm/message. Since this function has not been implemented in the client system (Customizing), it is generated via the master system.

Client setup must only be executed once per SAP system, even if multiple clients exist in the Client system.
If the connection works, information is read from the master system and is displayed.

13. Schedule Control Jobs

You must schedule two jobs in each master system:

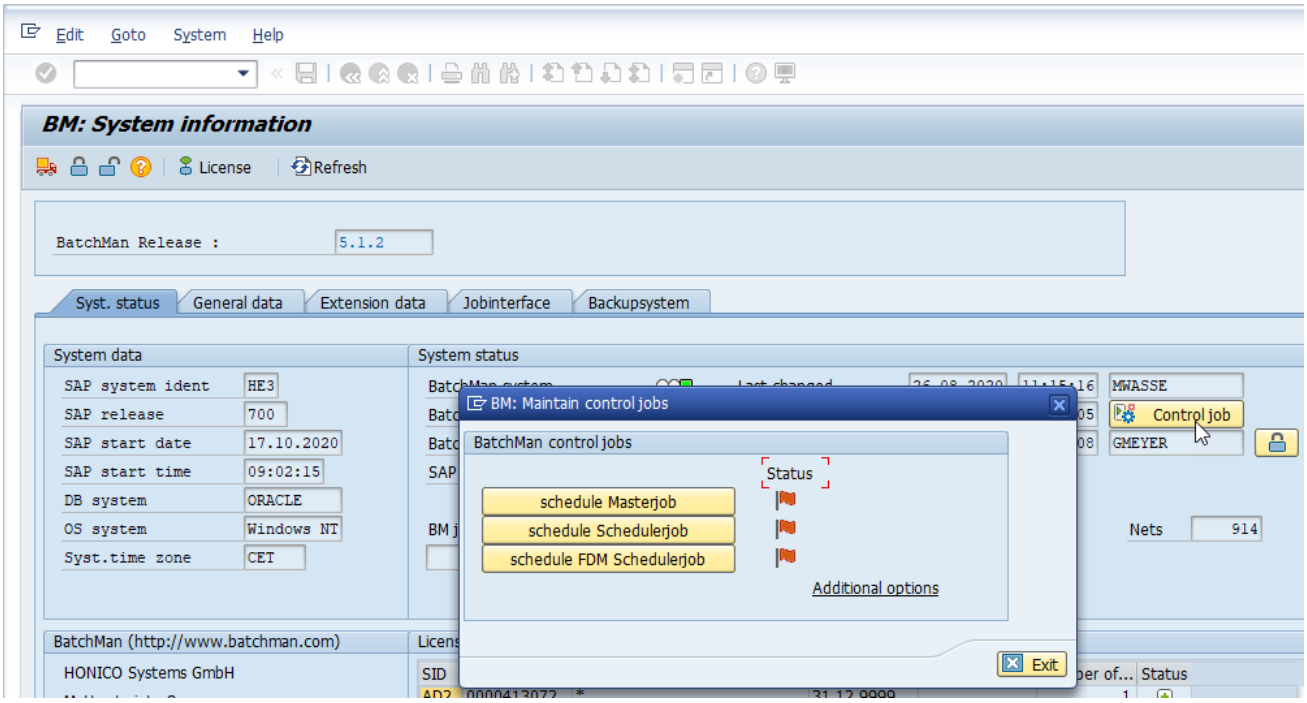
BATCHMAN_MASTERJOB:
The BatchMan master job is, among other things, responsible for the start release of jobs and networks in case that a predecessor did not do it. It is also responsible for the monitoring of files (file-dependent job start), fort he triggering of an alert; and for generating the daily STD-orders if function SHIFT PLAN is used.
The report /BTCMAN/M_MST is executed as periodic background job in this case. The periodicity lies between 3-5 minutes. BM_BATCH should be used as background user.

BATCHMAN_SCHEDULER:
The BatchMan scheduler is responsible for the actual scheduling of jobs and processes. This job calls up a function module (internally). Since this function module is executed as dialog process and not in batch, it runs only briefly and does not produce a log that can be evaluated.
Report /BTCMAN/M_MSS is executed as periodic background job in this case. The periodicity is limited to 1 minute. BM_BATCH should be used as background user.

You can basically schedule control jobs in every client. You should, however, schedule them in the particular client in which you create and release most jobs; and which is set up as ‚Default connection'.

Creating of jobs is done either with the normal SAP scheduling for background jobs via SM36. Create both jobs there. Please observe the name conventions, because some functions are set up on these names within BatchMan.

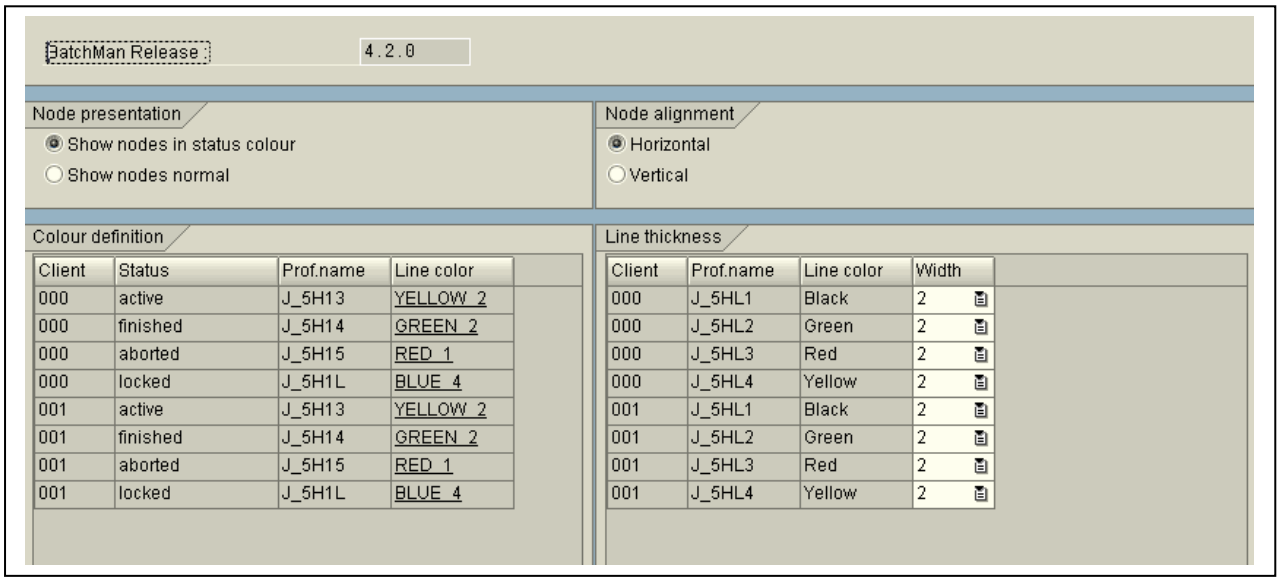
You can also conveniently schedule the BatchMan control job using the "Control job" button



14. BatchMan Graphics Settings

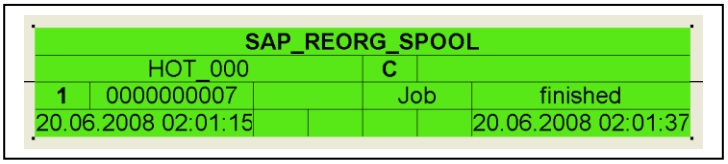
A BatchMan graph is set according to customer preferences via settings. These are general settings per system.

BatchMan function tree(Transaction J5HEN) → Customizing → Setup Programs → Graphic profiles maintenance

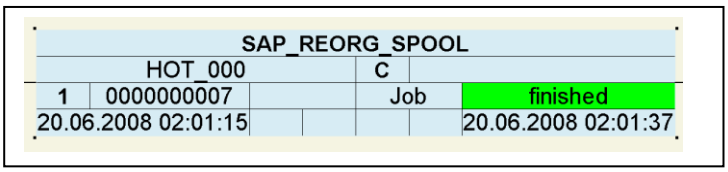


Node presentation

Display nodes in status color: The node is displayed completely in the status color.

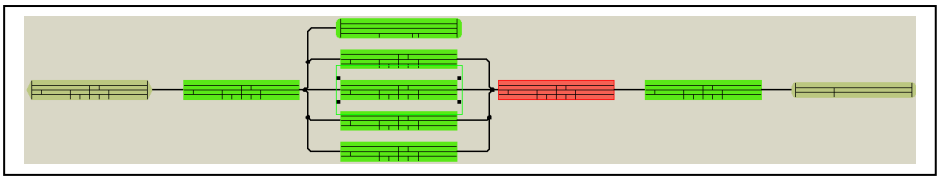


Display nodes normal: Only the status field is displayed in color.

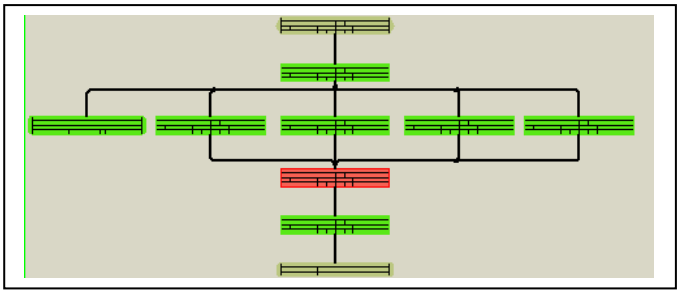


Node alignment

Horizontal



Vertical

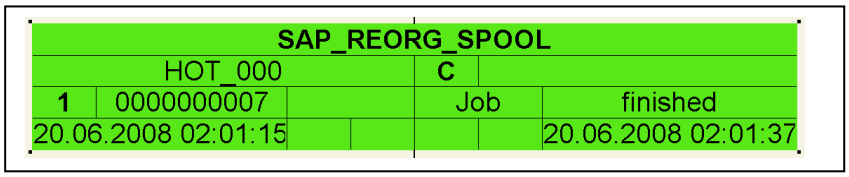


Line thickness (client-dependent)

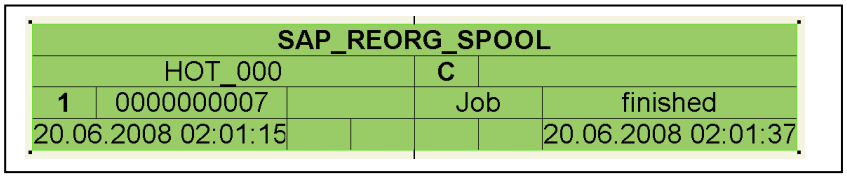
The thickness of connecting lines can be set here.

Definition of color (client-dependent)
Changing node colors

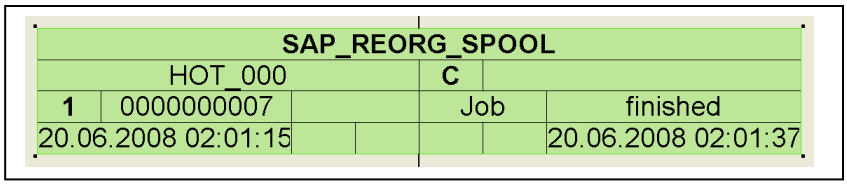
Finished ➔ GREEN_2
(Delivery status)



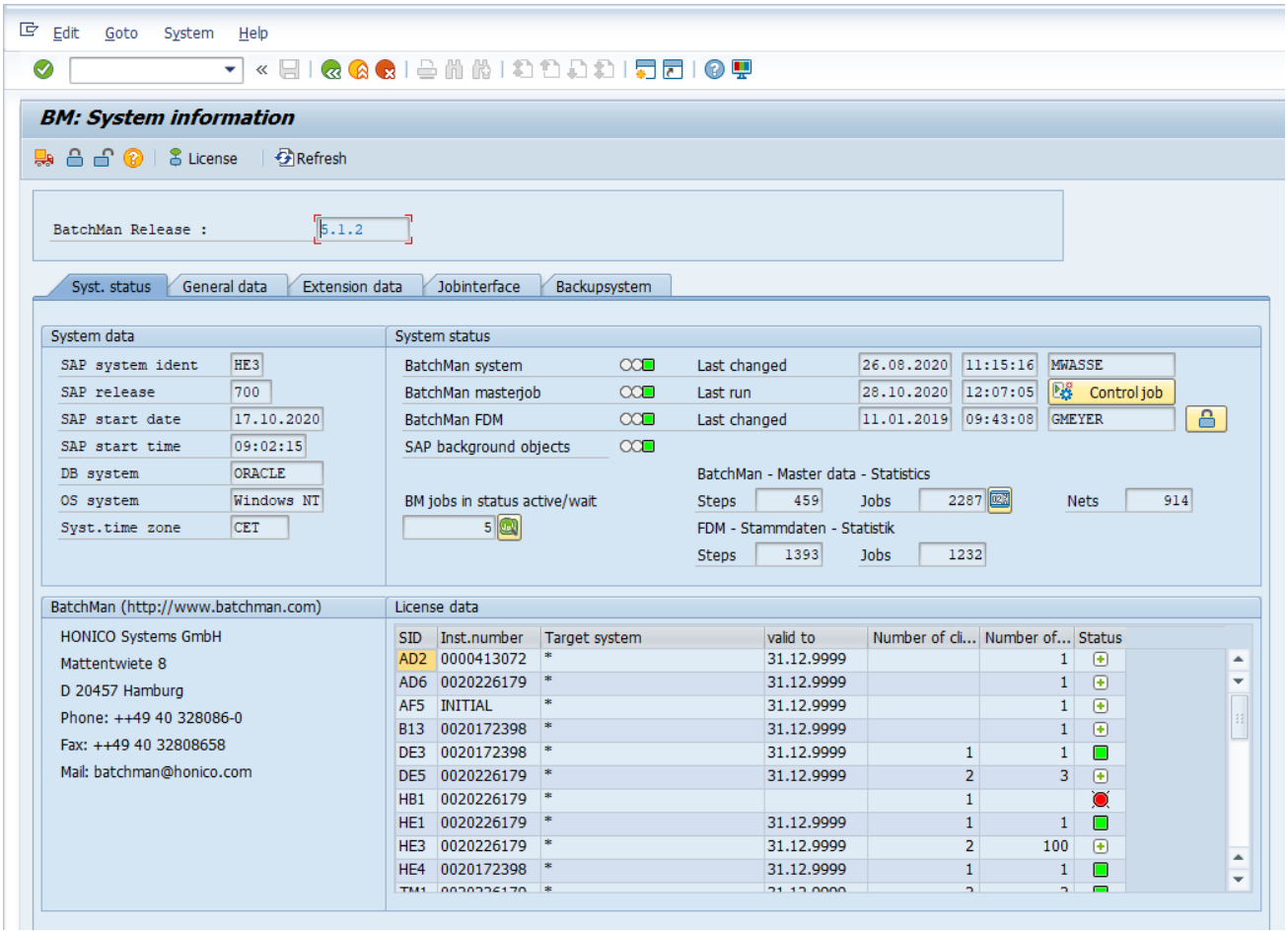
Finished ➔ GREEN_3



Finished ➔ GREEN_1



15. BatchMan Start (System Information)



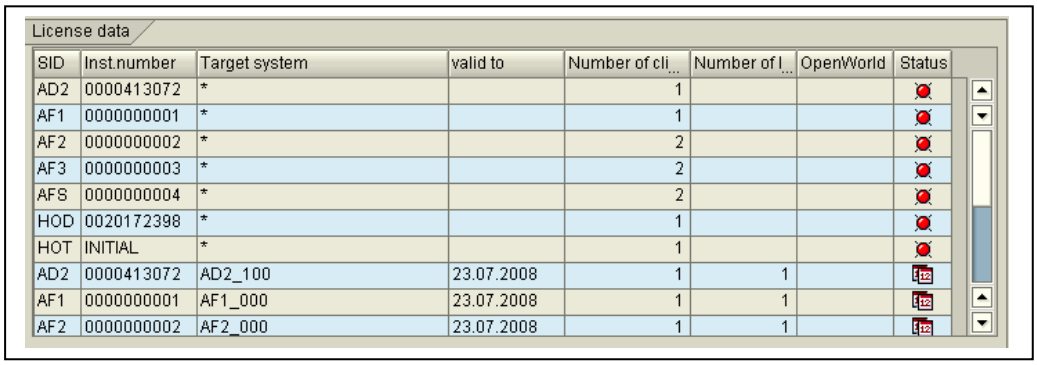
BatchMan function tree (Transaction J5HEN) → Customizing → Setup programs → System information or directly with transaction **J5HIN**

Starting BatchMan.
The traffic lights behind 'BatchMan System' turn GREEN. The traffic lights behind 'BatchMan System' turn GREEN when the Master job has completed it first run-through.

Stopping BatchMan.
The traffic lights behind 'BatchMan System' turn RED. The traffic lights behind 'BatchMan System' turn RED after 15 minutes.
Both control jobs recognize that BatchMan has stopped, and do not start any further actions.

16. BatchMan Licenses

Licensing data is shown at the bottom left in the figure in Item 17. The data is established from the current settings of the maintained remote connection.



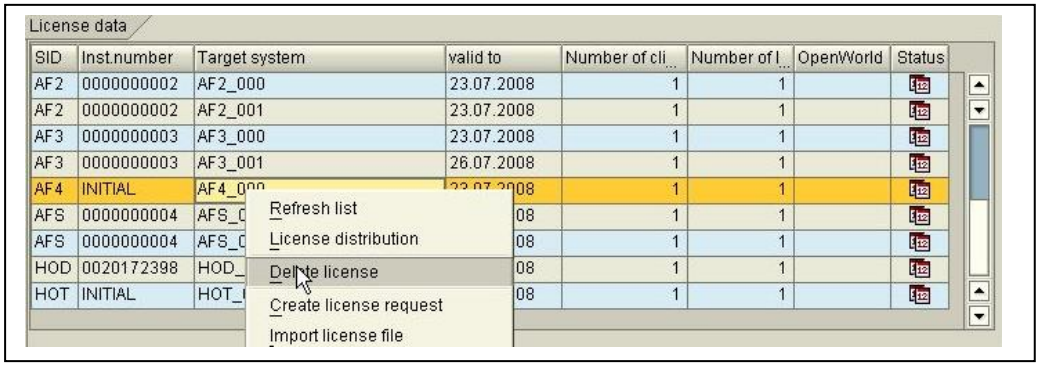
The list of licenses allows working with pop-up menus (right-hand mouse button).

The totals of fixed licenses which are required are shown in the top part of the list. The number of clients and the status per system and SAP Installation Number is always established.

If no licenses have been imported yet, the status is  .

Generated temporary licenses are displayed in the bottom part. They can be recognized by the  icon in the Status column. The duration of validity of temporary licenses it is indicated. A new temporary license is automatically generated when a remote connection is defined.

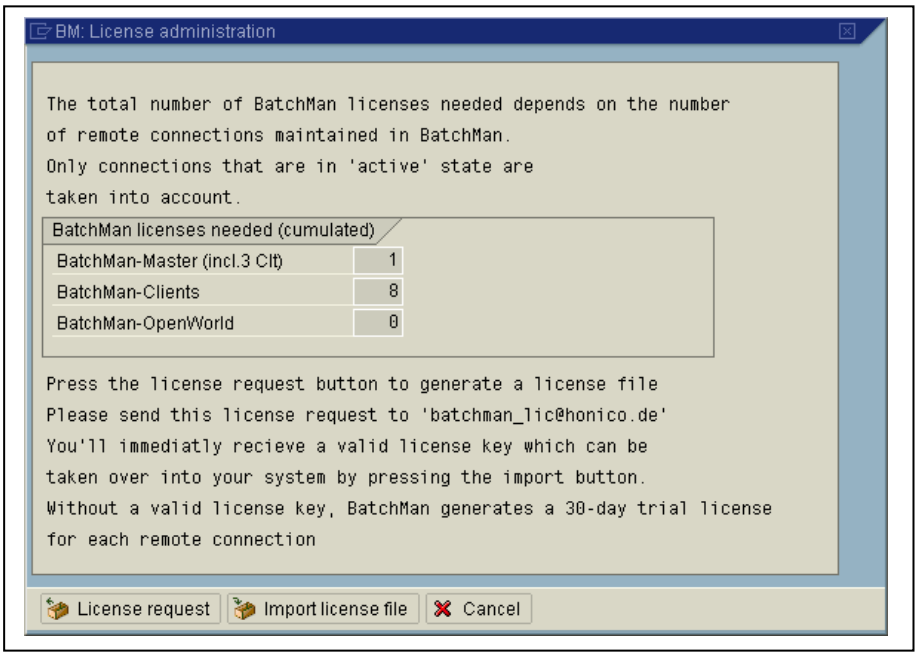
Temporary licenses are generated for 60 days. If a temporary license is no longer needed, it can be deleted via the pop-up menu (right mouse button).



16.1. Submitting a License Request

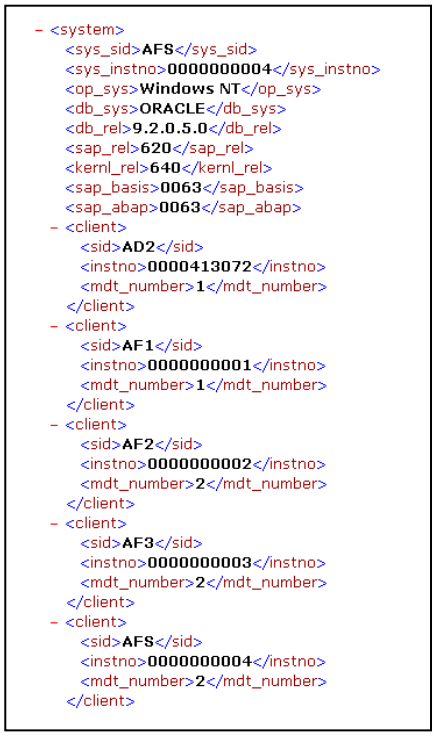
A license request can be filed with the 

button or via the popup menu (right mouse button). In both cases another screen pops up with information regarding the required licenses, containing the information where the license request should be sent to (batchman_lic@honico.de) .



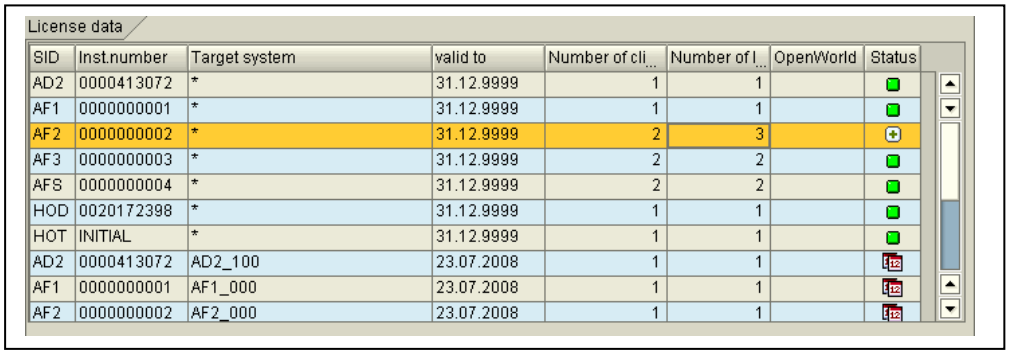
After clicking on the 'License request' button, an input window pops up, requesting the location where the license request should be saved. The default directory is the SAPGUI.

After the save location has been selected, an XML file is created, which is mailed to batchman_lic@honico.de in order to obtain a license.
This file contains some information about the requesting system (OS, DB with release), as requested from our customers on the printed requests. We only use this information in order to be able to enquire from customers with similar constellations whether they are experiencing or have experienced the same problems (and how they have been solved).
After this, the information is appended to the licenses in the same way as the top part of the list.



16.2. Importing a License File

After a request, a license file is returned to the requestor by us via E-mail. Save the attachment to the E-mail. Then click on the ‘License” button and then on the ‘Import license file’ button; or import the menu item ‘Import license file’ via the popup menu (right-hand mouse button) into the license list.
It is queried in the directory. Select the directory where the file from the reply E-mail was saved – a double click on the license file is required (or click on the file so that it is taken over as file name and then click on ‘Open’). The file is then loaded and the license display is refreshed.



SID	Inst.number	Target system	valid to	Number of cli...	Number of l...	OpenWorld	Status
AD2	0000413072	*	31.12.9999	1	1		
AF1	0000000001	*	31.12.9999	1	1		
AF2	0000000002	*	31.12.9999	2	3		
AF3	0000000003	*	31.12.9999	2	2		
AFS	0000000004	*	31.12.9999	2	2		
HOD	0020172398	*	31.12.9999	1	1		
HOT	INITIAL	*	31.12.9999	1	1		
AD2	0000413072	AD2_100	23.07.2008	1	1		
AF1	0000000001	AF1_000	23.07.2008	1	1		
AF2	0000000002	AF2_000	23.07.2008	1	1		

The information contained in the license file is assigned to the individual systems (SAP Ident and Installation Number). If insufficient licenses for a system (clients) are on hand, the status remains RED. If the number of clients is equal to the number of licenses, the status is GREEN. If additional licenses are available, the status is displayed as  (here, for System AF2).

Temporary licenses remain in the list, but can be deleted from the list with the popup menu (right-hand mouse button).

16.3. Request for additional Licenses

If additional SAP systems are linked to BatchMan, a temporary license is created per remote connection that is being created. After that a new license must be requested. According to Sections 16, the license is always requested and allocated for a complete BatchMan master system, including all clients.
Here, the license can always be created for a system or an installation number and is valid for all systems with the same system number or installation number.

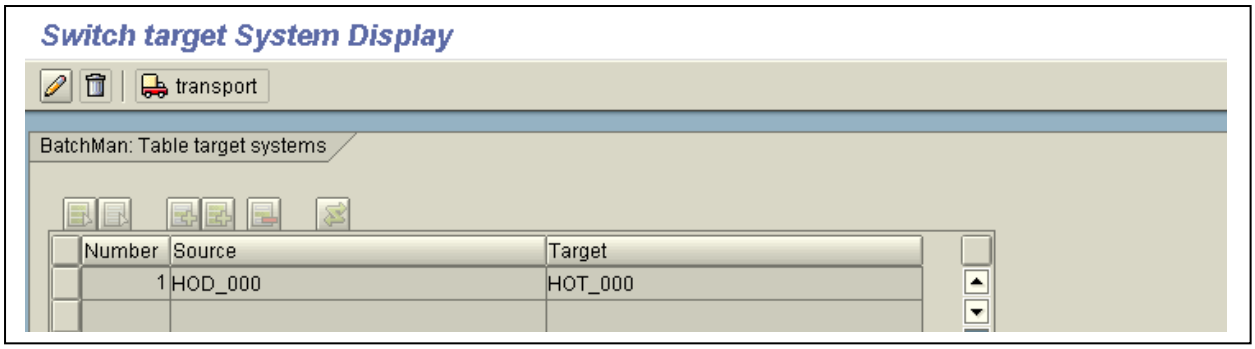
17. System Copy

If BatchMan is only used on one system landscape (e.g. an ERP/ECC system with development, quality and production systems, then all systems of this landscape are contained in the license.
If this system (original) is copied, BatchMan is also copied. The RFC connections must be implemented in the job processes on the copied system (copy). The default system must be changed in the BatchMan remote connections.

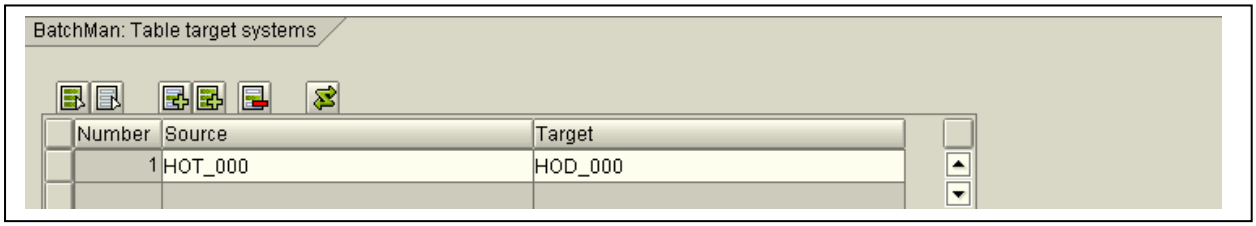
We recommend the use of at least two systems for BatchMan in a multiple system landscape. One BatchMan master system for Production and one more for Development and Quality systems.
If a BatchMan master system (original) is copied, the RFC connections must be implemented in the job processes after the copy. The default system must be changed in the BatchMan remote connections.

There are many options for RFC connections (Tables RFCDES and /BTCMAN/M_REMOTE):
1) Backing up the tables on the copy before importing the original system as transport. The tables are re-imported after the import.
2) Exclusion of the two tables during copying.
3) Creation of the RFC connection on the original system; masking of 'Job maintenance' in the BatchMan remote connections; resetting the flag on the copy.

One common task is to implement target systems in job maintenance after the copy:
BatchMan function tree (Transaction J5HEN) → Customizing → Extended customizing → Implementation table for RFC target systems
In this table entries can be defined, regarding which target system must be implemented into which one (here Development (HOD) to Test system (HOT)).

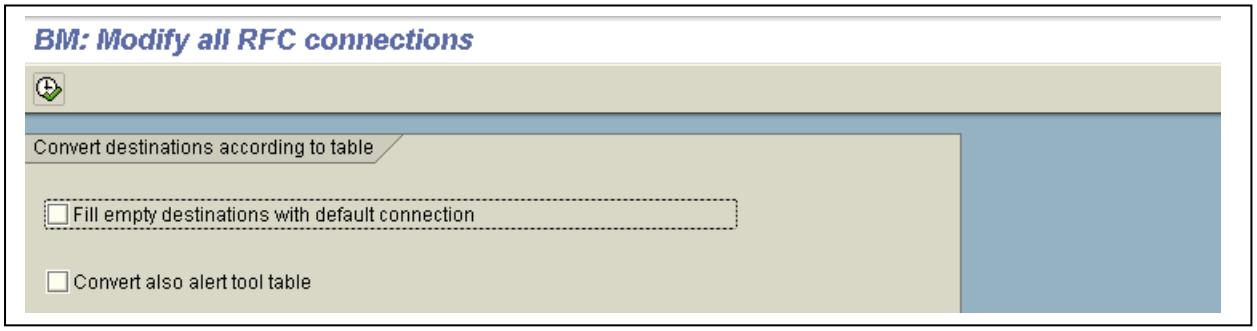


Entries can be transported to another system via transport where they can be defined exactly the other way round.



Entries are reversed with the  button.

Implementation of target systems is accomplished with the /BTCMAN/M_RFC program. You can call-up this function under:
BatchMan function tree (Transaction J5HEN) → Mass changes → Implementation target systems (WHD instructions/networks/jobs. The program implements all connections in one run, i.e. jobs, networks and WDH instructions!



Besides the implementation of target systems, empty connections can be engaged by the default connection.
Additionally, RFC connections can be implemented in the definition of Alert Tools (Type script), if required. This is only necessary if alarming of the copy must be generated on a different server than the original. Normally this is not necessary.

This function can also be used for implementation when job processes are defined on the development or quality system and are then transported to the production system via *Transport instruction* or *Transport master data via file.*

Setup must always be performed after the copy. The current system is entered into the BatchMan master table; the Include program and the variant for feedback are adapted in the step definition.

Client system
When copying a client system, the BatchMan remote connections for the system must be checked as to whether everything is correct for the entry of the copied system. If not, adaptations must be applied according to the error messages.
Setup of the client must be performed on the copied client system.