Qlik Gold Client®

System Build Plus
User Guide
8.7

061413.2

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Introduction

This document serves as a guide for configuring and using System Build Plus in Qlik Gold Client.

System Build Plus Overview

Qlik Gold Client has the ability to export only system table data and repository from a system to build a new "shell" SAP system using the System Build Plus feature in the Repository Replicator. System Build Plus leverages SAP's system copy processes with a scheduling interface to exclude all application data from a system copy. This process allows for the creation of a "shell" system using SAP's Software Provisioning Manager software with the export files generated by Gold Client Solutions System Build Plus. The end result is a target system that only has the system table data and repository information from the source system not any application data. After the "shell" system is created, Qlik Gold Client Client Construct and Data Echo can be used to populate the new target system with master and transactional data.

Gold Client Solutions has an authorization object which can be used to allow certain users access to this feature.

Prerequisites

Download the latest version of the R3 tools from the SAP Marketplace and install on the target system in the SAP executable directory.

These programs are database specific and include the following files:

R3ldctl
R3load
R3szchk

Due to ABAP Security changes with Qlik Gold Client version 8.7.4, the following Logical File Paths need to be defined in transaction FILE:

/HTG/SBP - Directory for the System Build Plus export files
/HTG/SBPTOOLS - Directory the R3 tools program are located
/HTG/SBPWORK - SAP System work directory

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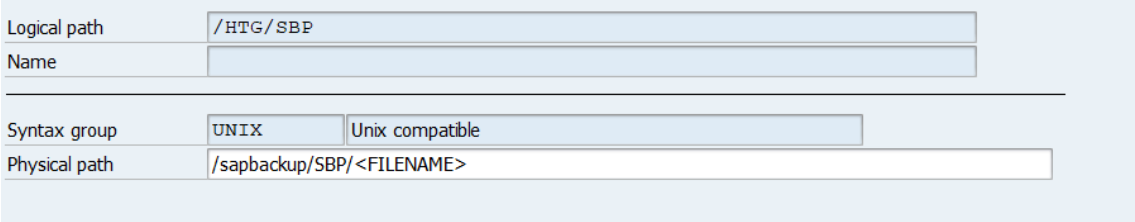
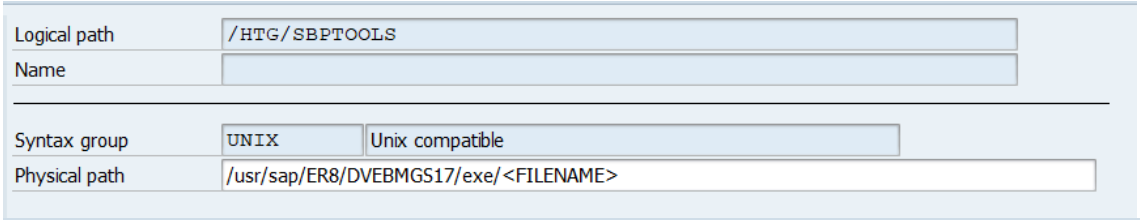
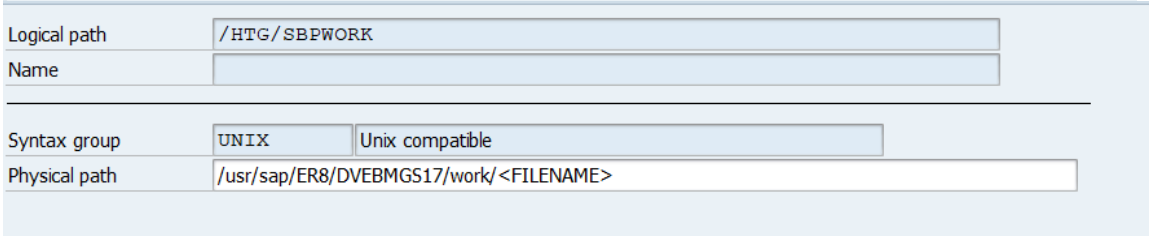
Examples:







The following subdirectories need to be created in the System Build Plus export directory:

<SBP export directory path>/ABAP
<SBP export directory path>/ABAP/DATA
<SBP export directory path>/ABAP/DB
<SBP export directory path>/ABAP/DB/<DB TYPE>

Oracle – <DB TYPE> = ORA
SQL Server - <DB TYPE> = MSS
DB6 - <DB TYPE> = DB6
DB4 - <DB TYPE> = DB4
DB2 - <DB TYPE> = DB2
MaxDB - <DB TYPE> = ADA
HANADB - <DB TYPE> = HDB

System Build Plus

The System Build Plus feature can be accessed from the main screen of Gold Client Solutions (Fig 1.0). By selecting the System Build Plus button the Gold Client System Build Plus main screen will be displayed (Fig 1.1).

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Figure 1.0

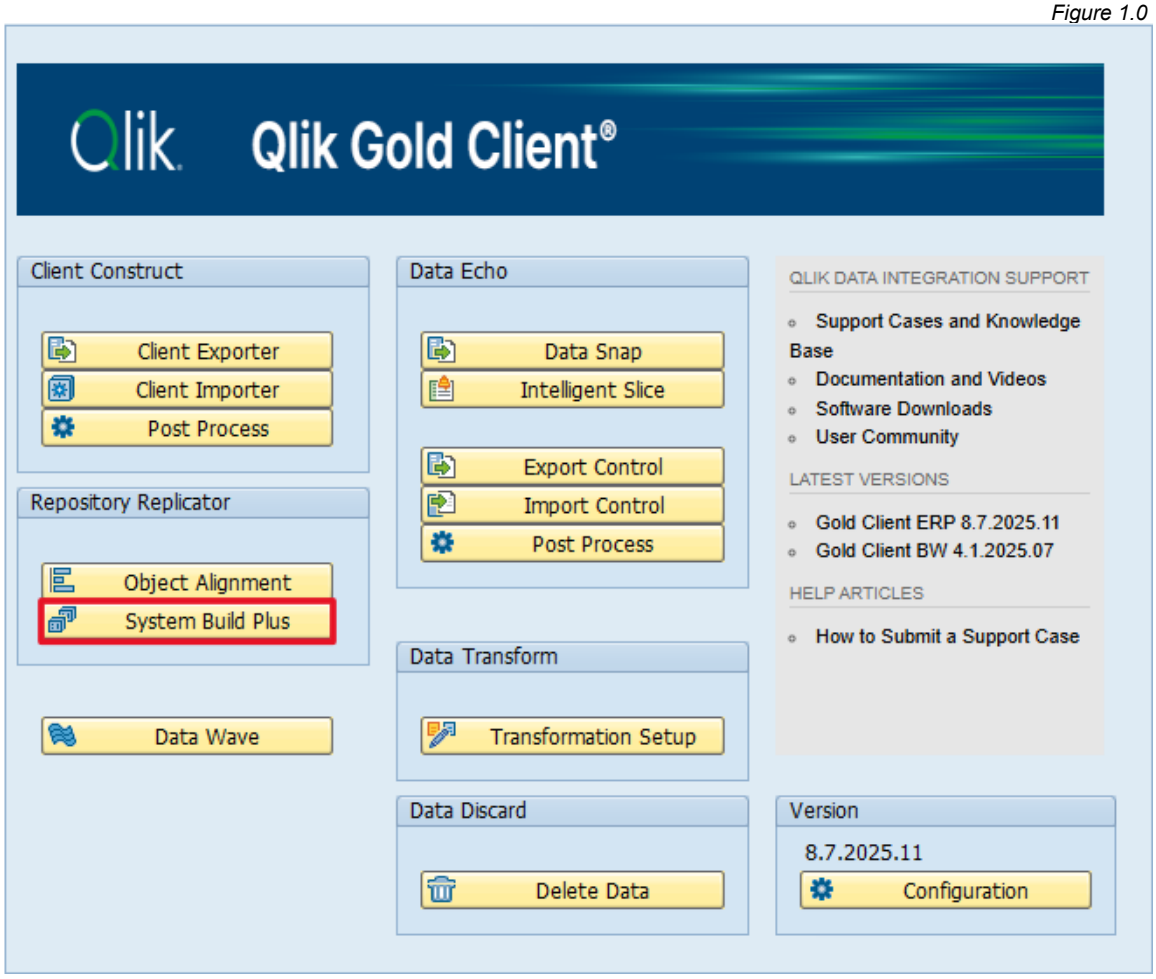
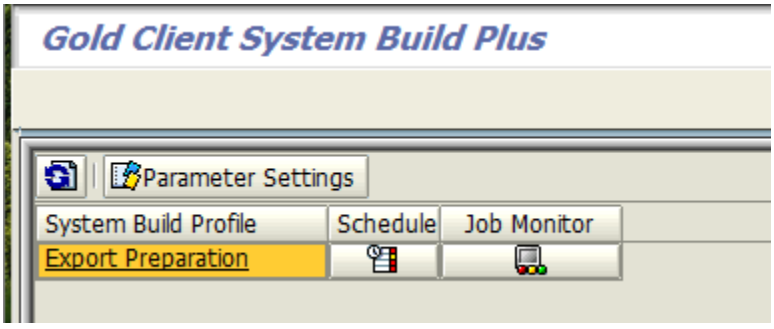


Figure 1.1



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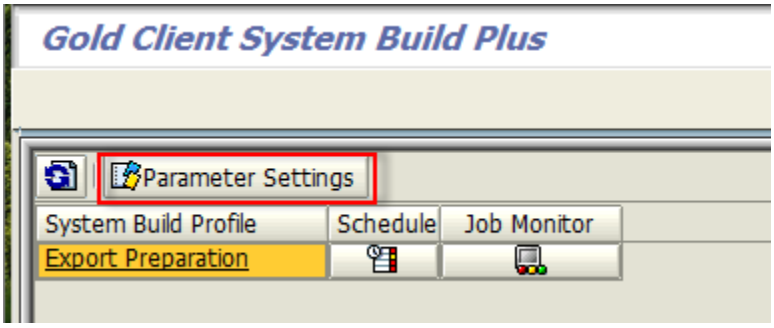
System Build Plus – Setting Parameters

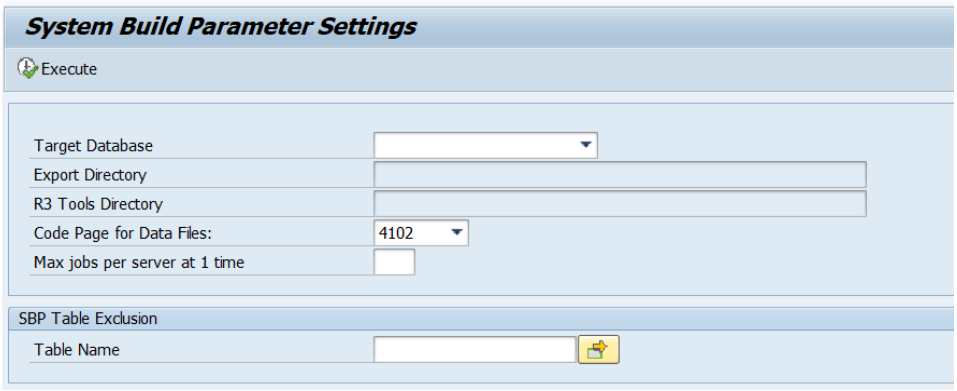
The first step in the System Build Plus process is to setup the Parameter Settings by clicking this button (Fig 2.0).

Figure 2.0



All fields in the System Build Parameter Settings screen are required (Fig 2.1).

Figure 2.1



Target Database: Select the database that the target system will use

Export Directory: All export files created by the System Build Plus process will be saved in the designated directory. The SAP user using Gold Client must have read/write/delete permissions to the Export Directory in their S_DATASET authorization. As of Gold Client versoin 8.7.4, this field is automatically populated with the directory defined in Logical File Path /HTG/SYSBLD.

R3 Tools Directory: The location of the the R3* programs that System Build Plus uses. As of Gold Client versoin 8.7.4, this field is automatically populated with the directory defined in Logical File Path /HTG/SYSBLD_TOOLS.

Code Page for Data Files: Default value is based on SAP Transaction SNLS in the Current Application Server field. The following code pages are assigned to each entry:

1100 Non-Unicode

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4102 Unicode: AIX, HP-UX, Solaris SPARC, Linux (PPC/zSeries only)
4103 Unicode: Windows X86_64
4203 Unicode: Windows Linux, Solaris x64, Tru64/DEX OSF

Max jobs per server at 1 time: Enter the number parallel jobs that System Build Plus will use during the export process. This number should not be set higher than the number of CPUs available on your export system.

SBP Table Exclusion: System Build Plus automatically excludes all SAP Application tables (Delivery Class "A" in SE11) from the export process. The only exception is the USR* tables (to allow for successful logon after the target system is created). If there are additional non-Application tables (STXH and STXL for example), they can defined in this list and System Build Plus will not include them in the export process. Excluding some system tables could impact the usage of the target system.

Click the Execute button to save the parameter settings.

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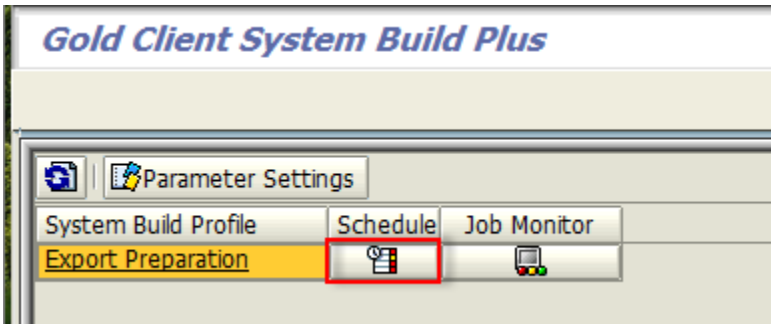
System Build Plus – Scheduling the Process

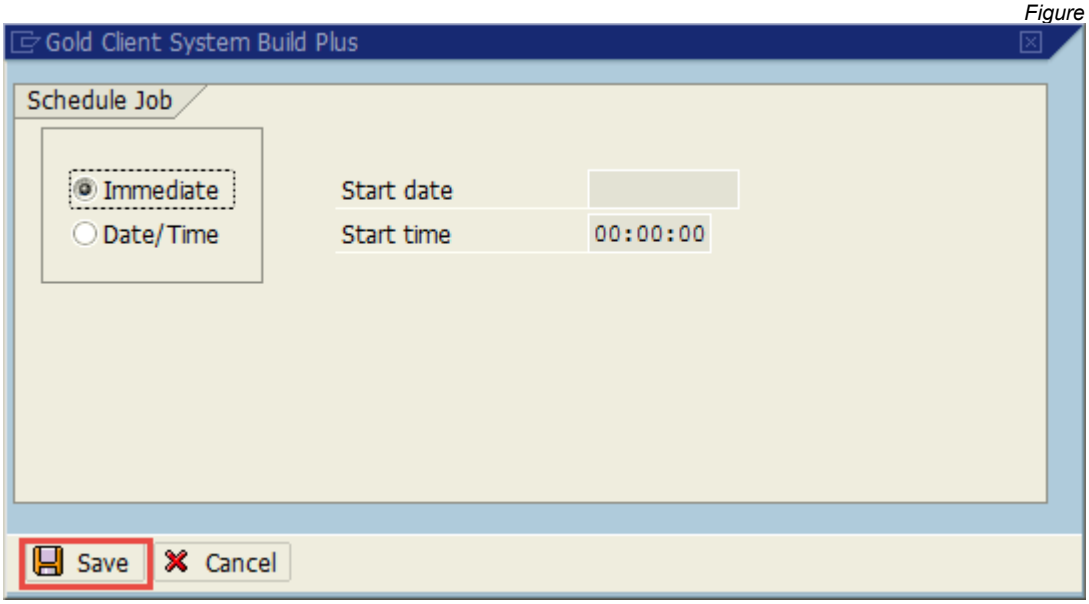
The System Build process is started by clicking on the Schedule button for the Export Preperation profile (Fig 3.0).

Figure 3.0



The Export Preperation process can be scheduled immediately or at a date/time in the future (Fig 3.1). Clicking the Save button schedules the job.

Figure 3.1



Job AU_SYSBLD_M00 can be monitered using the Job Monitor button (Fig 3.2). This job will submit a series of jobs to execute the various System Build events.

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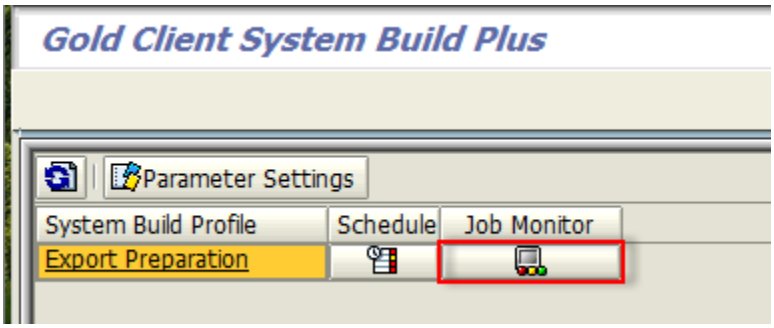
Figure 3.2



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System Build Plus – Export "Events"

Clicking on the Export Preperation profile (Fig 4.0) will list all System Build events (Fig 4.1).

Figure 4.0

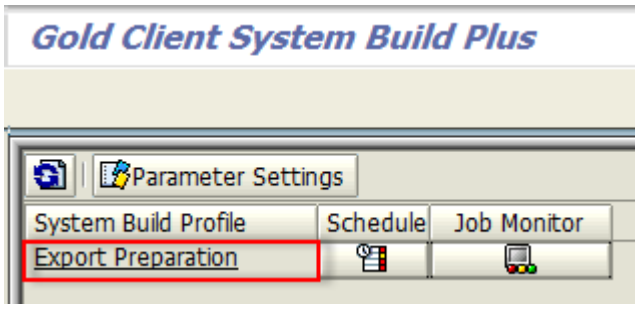
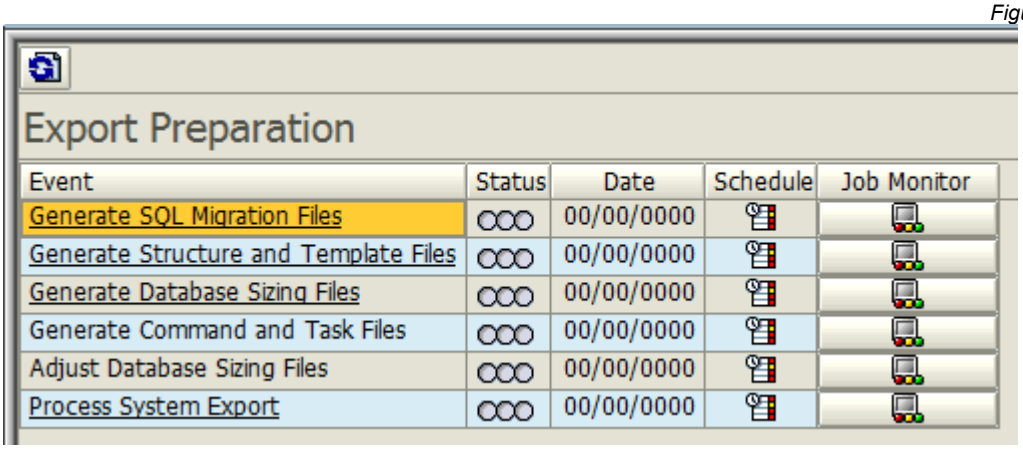
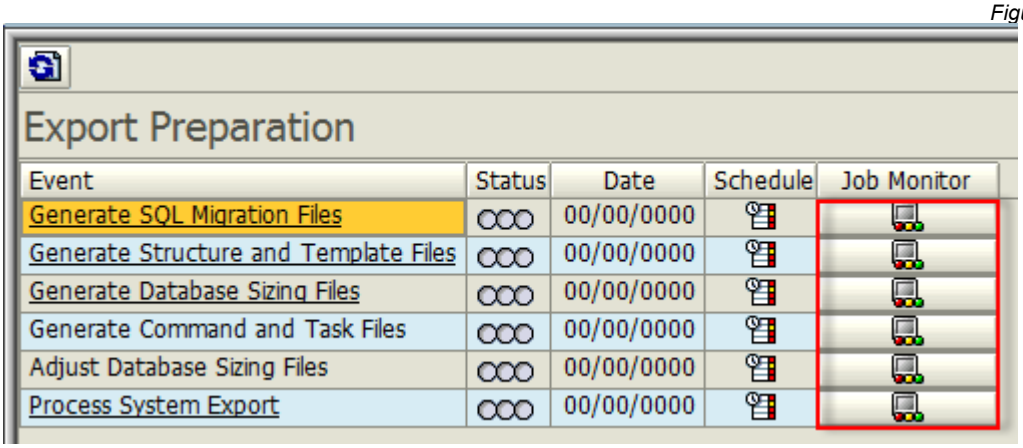


Figure 4.1



The Export events will run in order to complete the System Build export process. The Status column will change to reflect current status (green = complete, yellow = active, red = canceled). The Job Monitor button can be used as a shortcut to see the specfic background job for each event (Fig 4.2).

Figure 4.2



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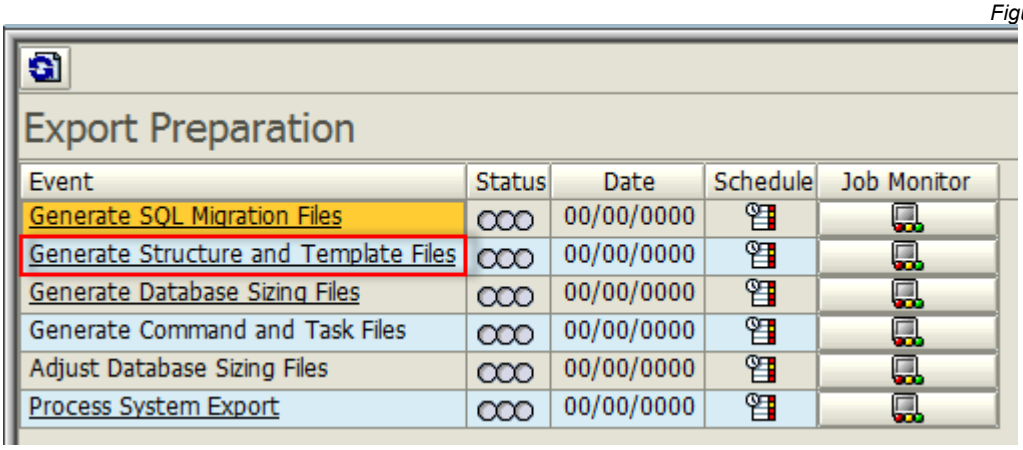
Generate SQL Migration Files
This event is executed with job AU_SYSBLD_ZDDL. This job generates the SQL file in the Export Directory that contains DDL statements for database objects in the source system. Standard SAP Program SIMGR_CREATE_DDL is used in this process to create these SQL files.

Generate Structure and Template Files
This event is executed with job AU_SYSBLD_LDCTL. This job generates structure (*.STR) and template (*.TPL) files in the Export Directory. Standard SAP utlity R3ldctl reads the technical settings for table/indexes in SAP data dictionary to create these STR and TPL files.

Clicking on the Generate Structure and Template Files event name (Fig 4.3) will display log file R3ldctlExport.log.

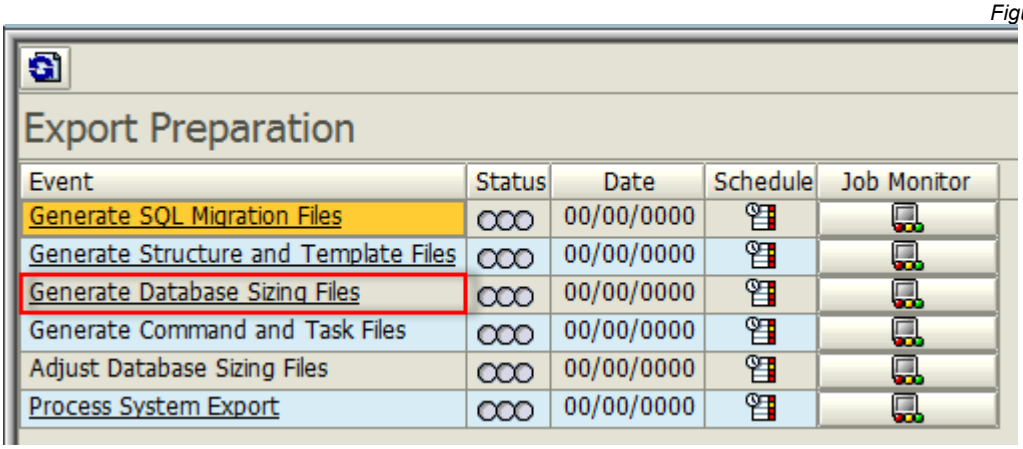
Figure 4.3



Generate Database Sizing Files
This event is executed with job AU_SYSBLD_SZCHK. This job generates database object size (*.EXT) files. Standard SAP utlity R3ldctl reads the database structure files to generate these EXT files.

Clicking on the Generate Database Sizing Files event name (Fig 4.4) will display log file R3szchkExport.log.

Figure 4.4



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Generate Command and Task Files
This event is executed with job AU_SYSBLD_LTSK. This job generates command (*.CMD) files which contain information about file locations and package sizes. The job also generates task (*.TSK) files which contain a joblist for the System Export process (R3load). Standard SAP utility R3load generates these CMD and TSK files.

Adjust Database Sizing Files
This event is executed with job AU_SYSBLD_MODFL. This job modifies the DBSIZE.XML file and the database object size (*.EXT) files to accommodate for smaller table sizes for the shell export.

Process System Export
This event is executed with a series of jobs starting with AU_SYSBLD_PG*. These jobs execute the command files to create the data dump files (*.001, *.002, etc.) These files are highly compressed binary files created by standard SAP utlility R3load.

The Process System Export jobs will not release until all previous events have completed sucessfully.

Clicking on the Process System Export event name (Fig 4.5) will display a Package View screen (Fig 4.6). Each AU_SYSBLD_PG* job will create a Package to export the related table data for each Package.

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Figure 4.5

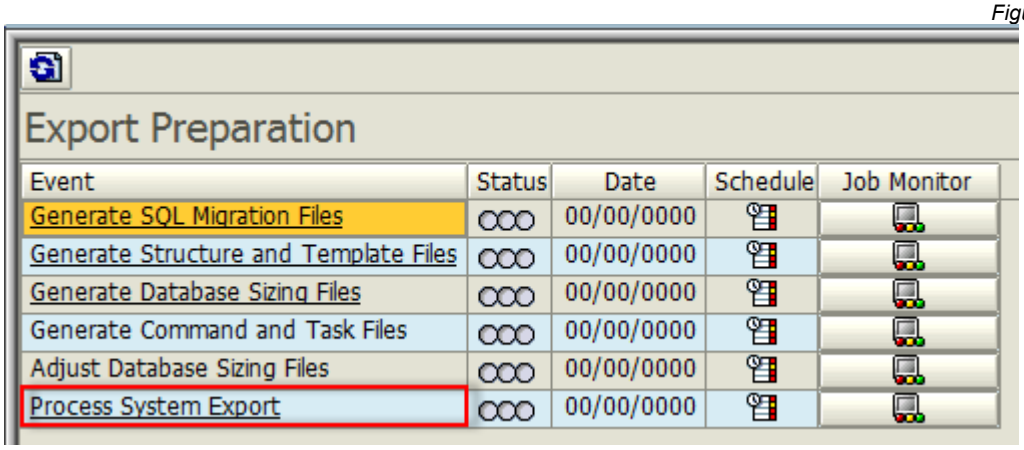
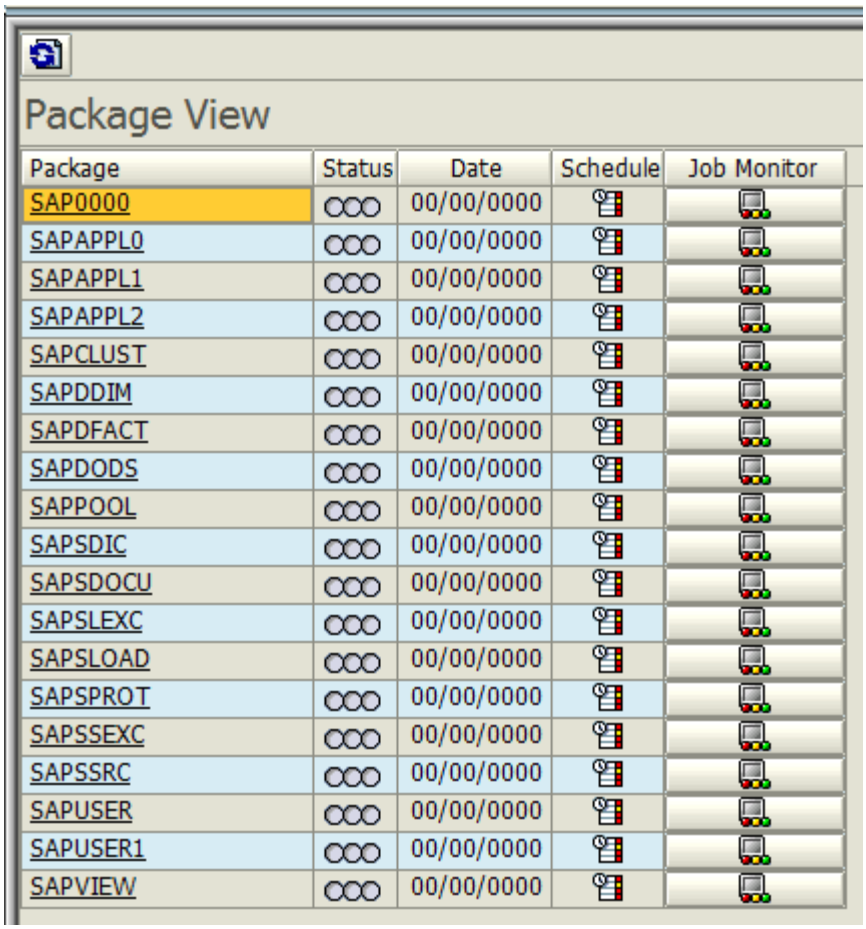


Figure 4.6



Clicking on the Package name will display the Package log file. Once all Export Preparation Event jobs complete sucessfully, the contents of the Export Directory can be copied to the target server for the SAP System Install Process.

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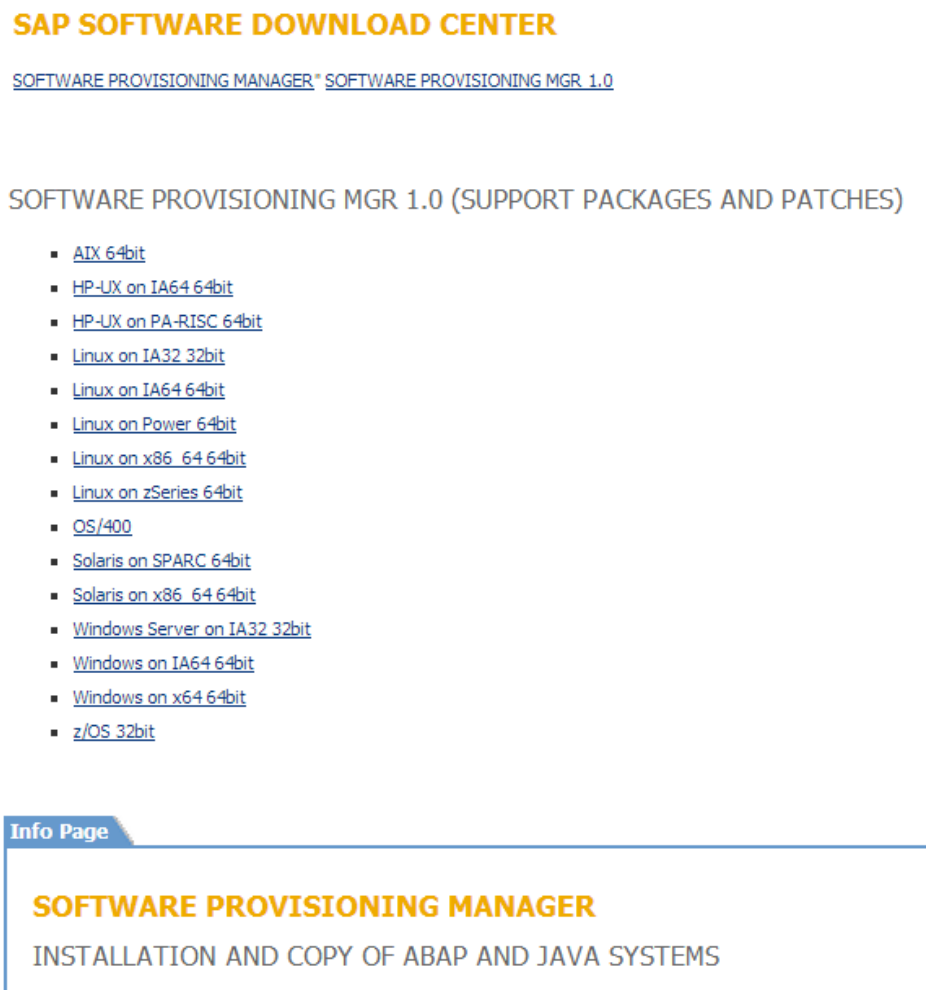
SAP System Install Process

Download the latest version of the Software Provisioning Manager (SWPM) and R3 tools from the SAP Marketplace and install on the target system



Start the Software Provisioning Manager (SWPM) on the target server by running the SAPINST program.

Note: The following screens are from an HP-UX/Oracle installation (other OS/DB platforms may differ).

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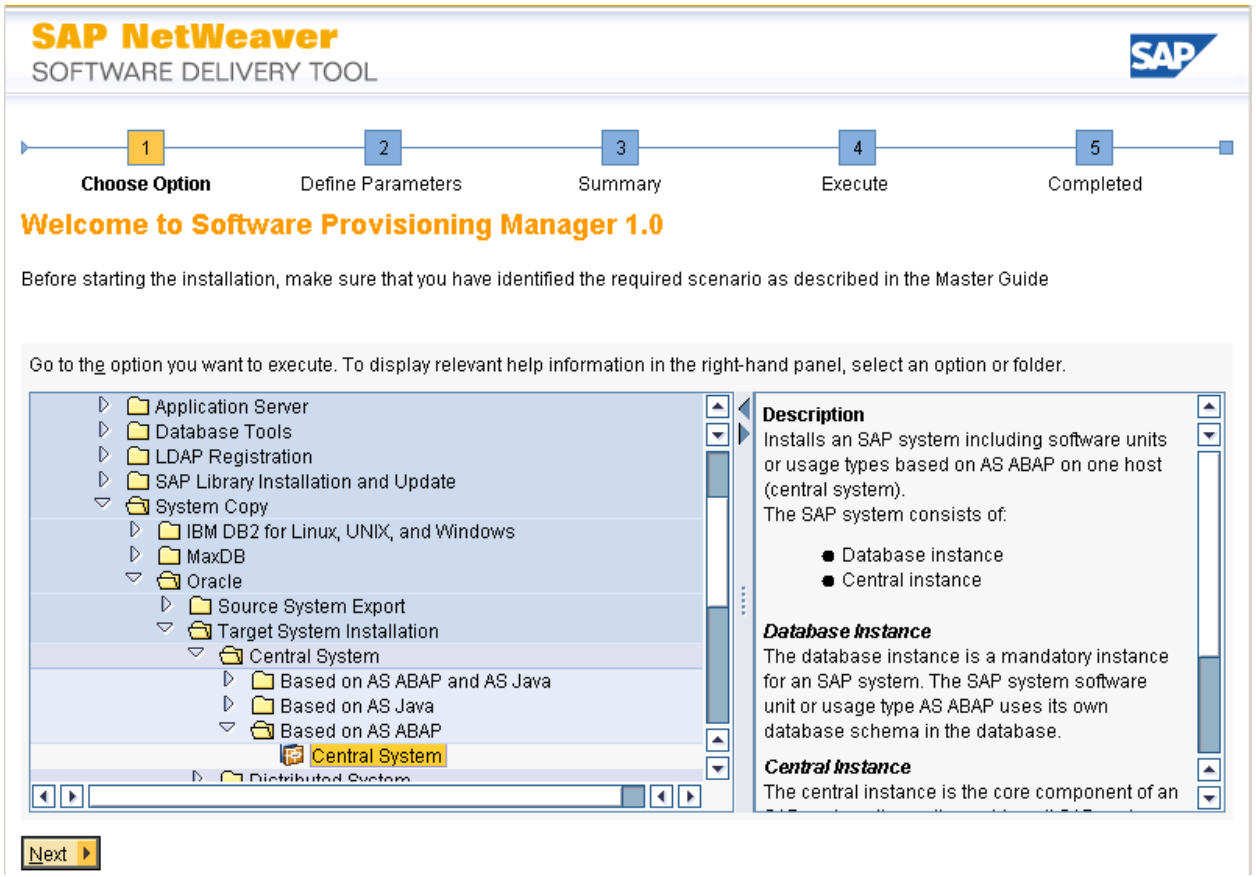

The menu path selected in this example was:

SAP NetWeaver 7.0 including Enhancement Pack 3
Software Life-Cycle Options
System Copy
Oracle
Target System Installation
Central System
Based on AS ABAP
Central System

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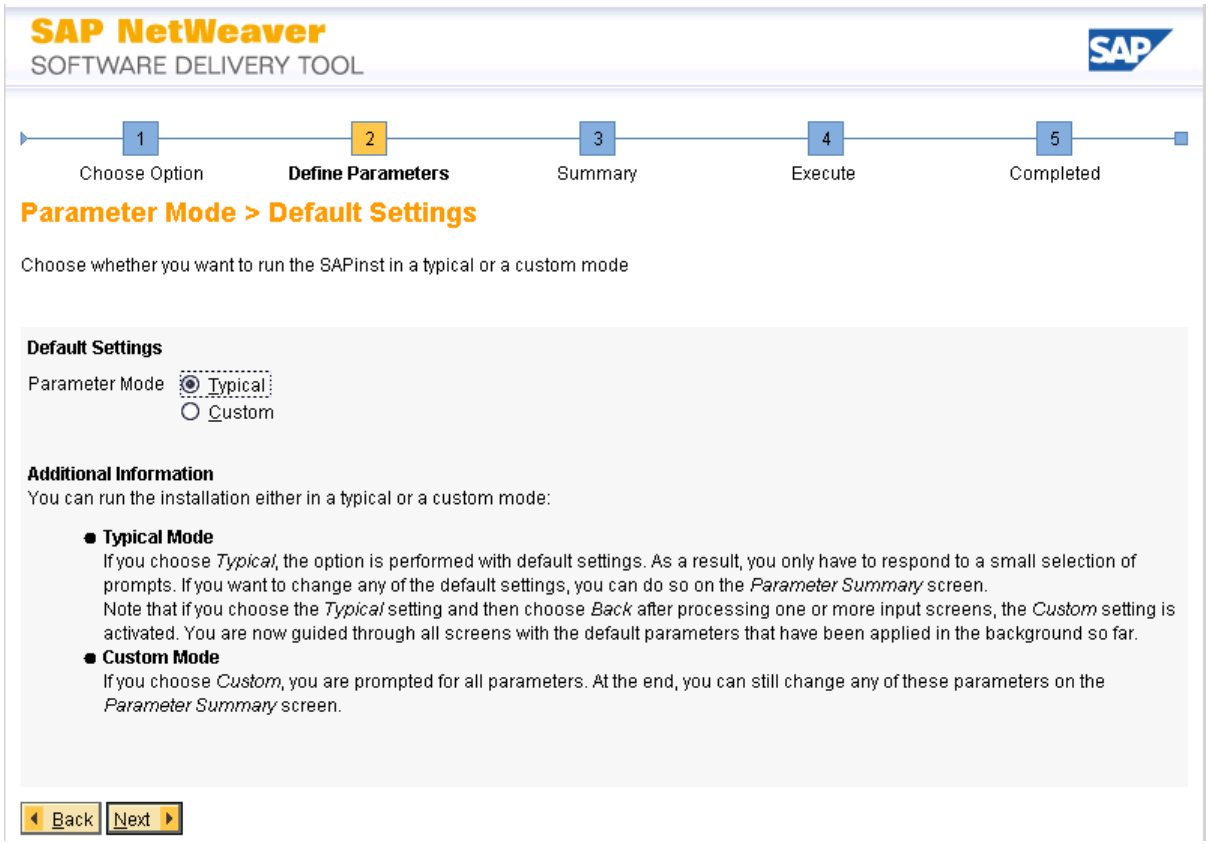

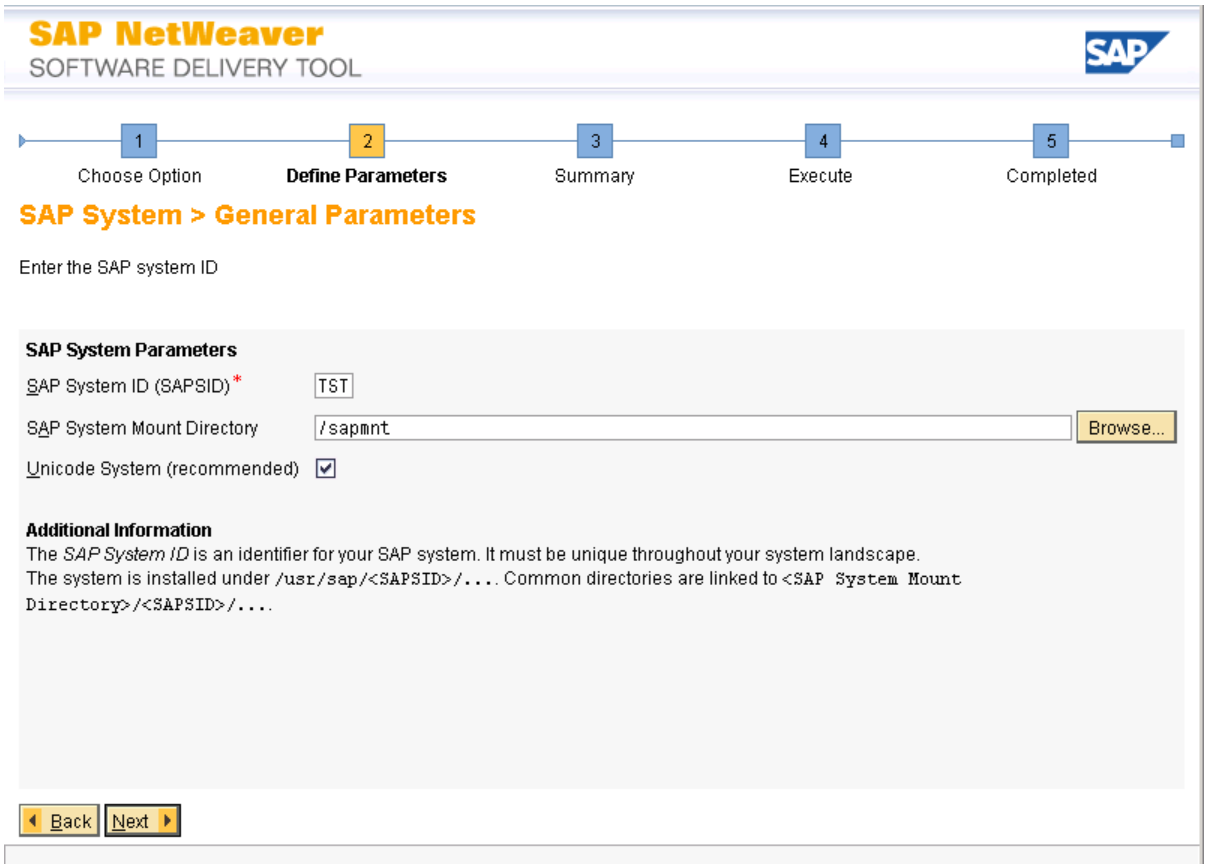

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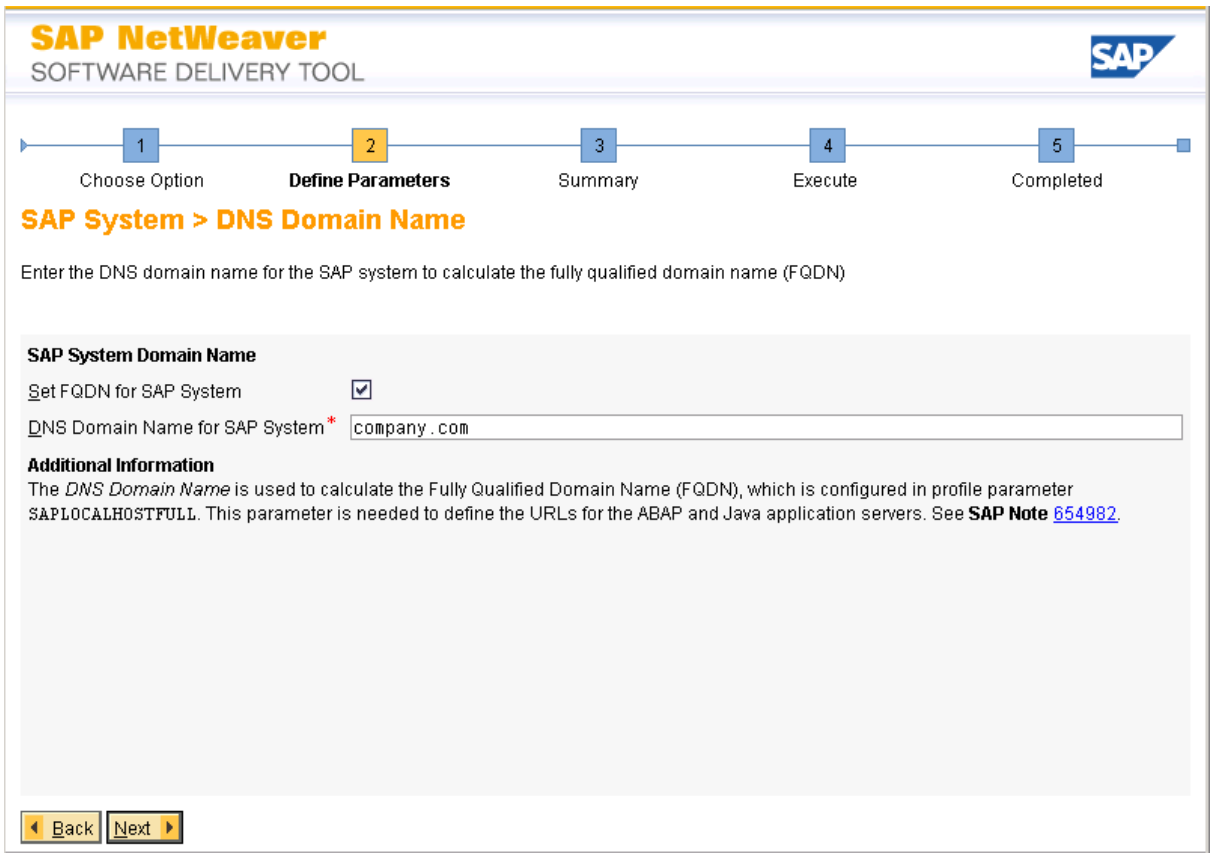

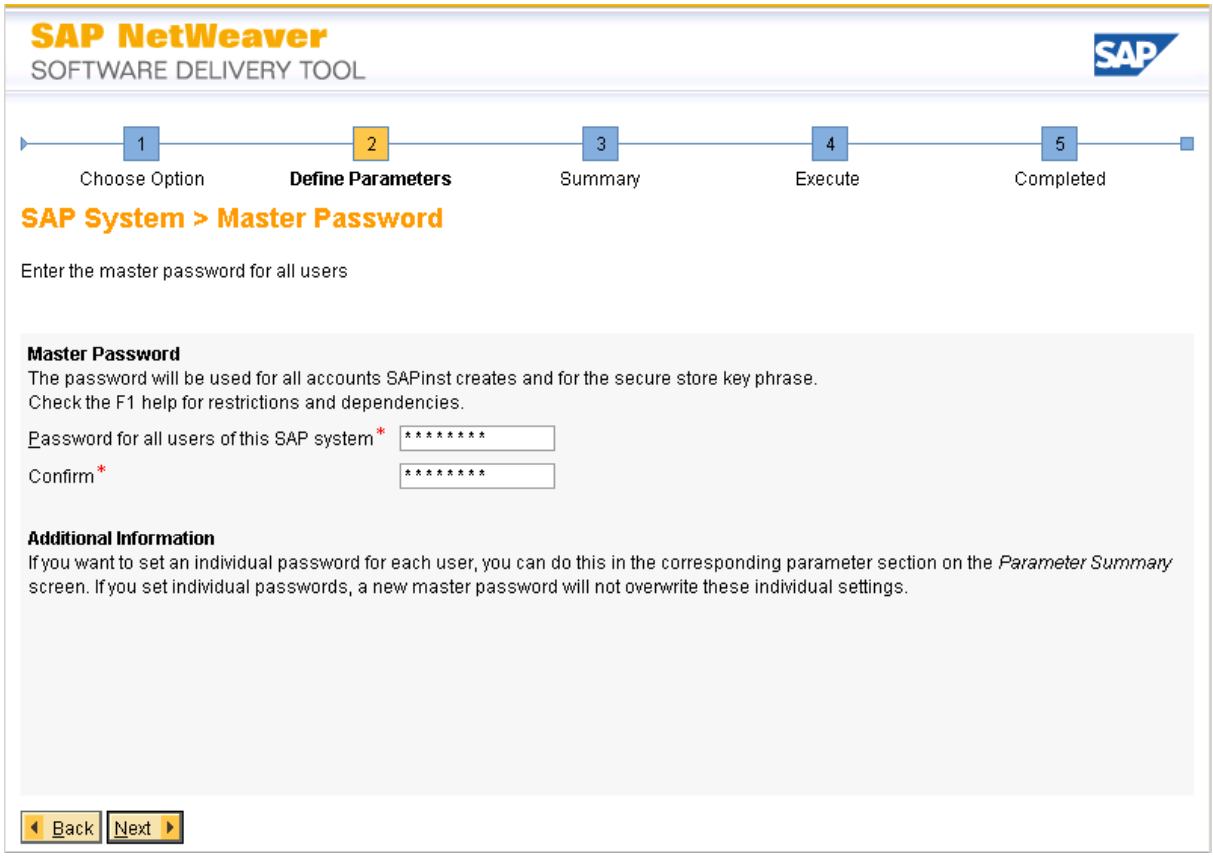

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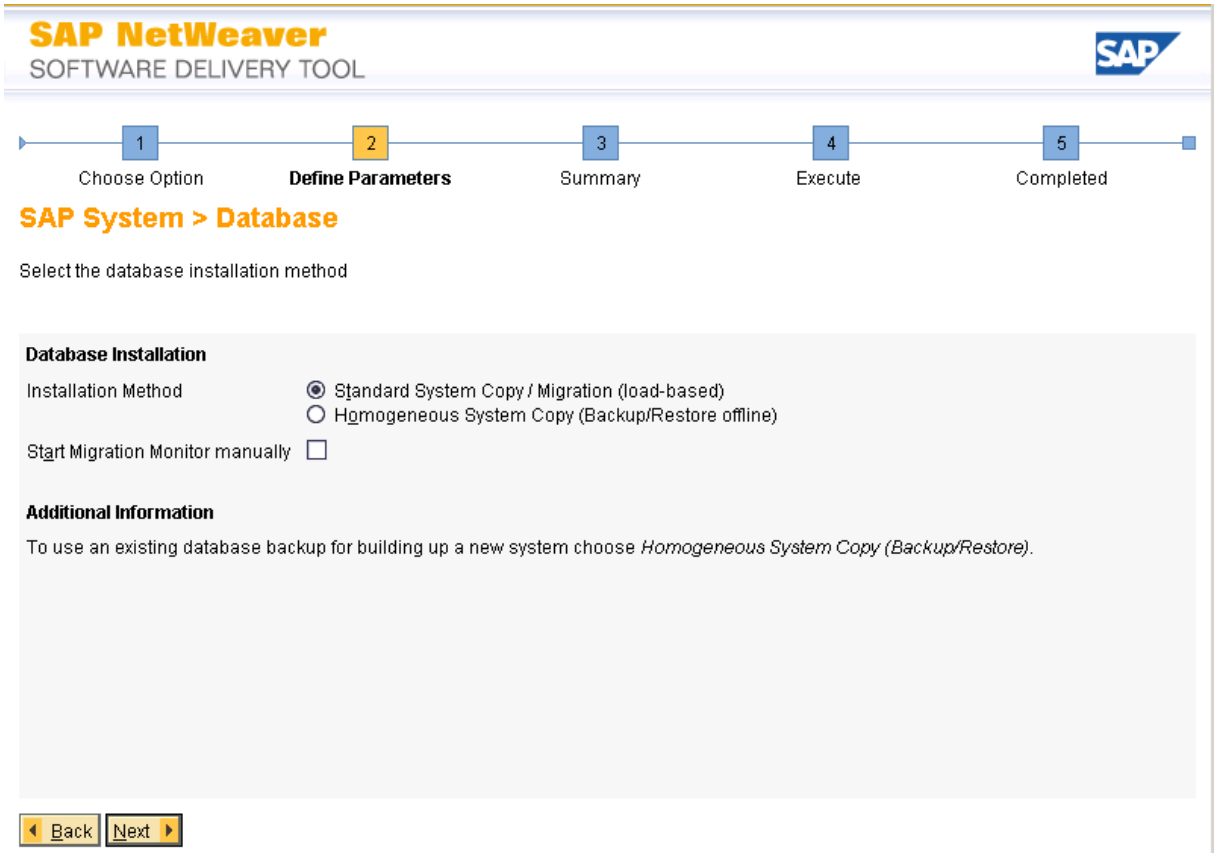

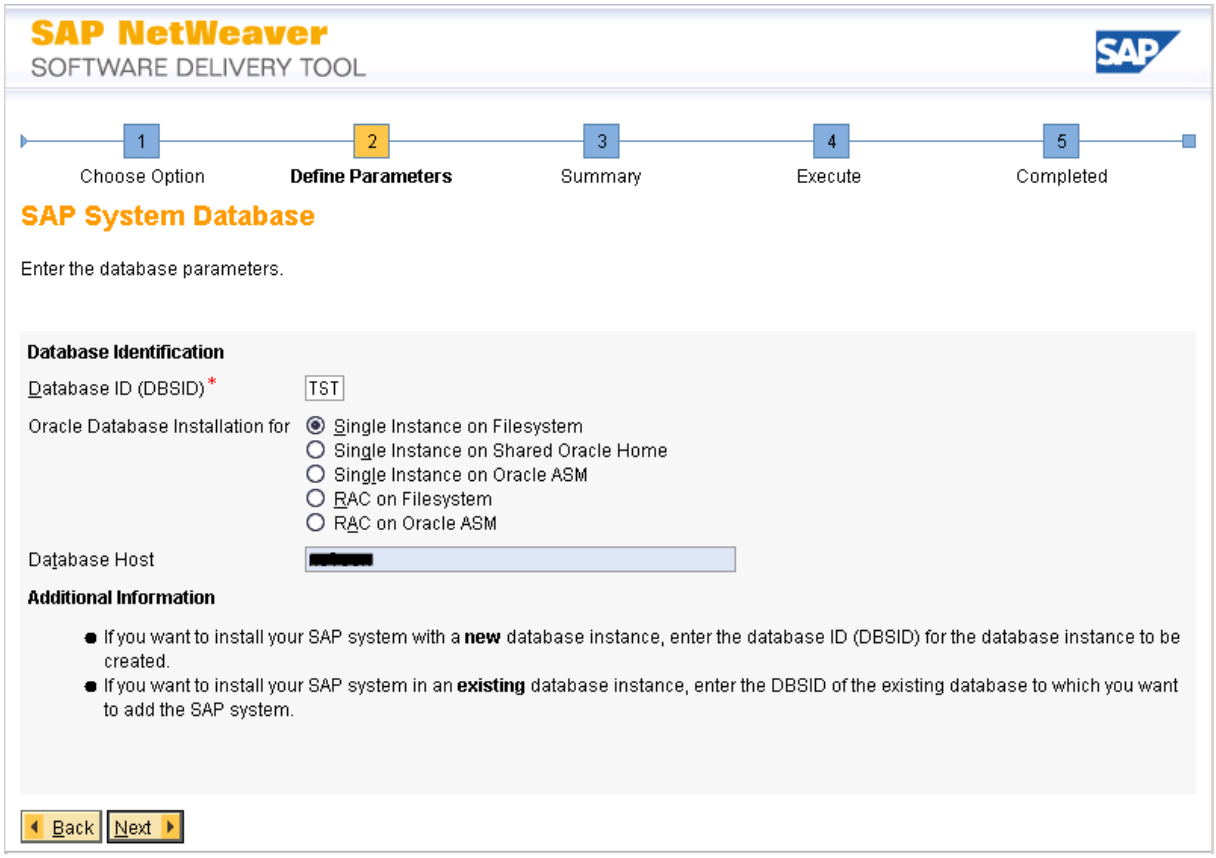

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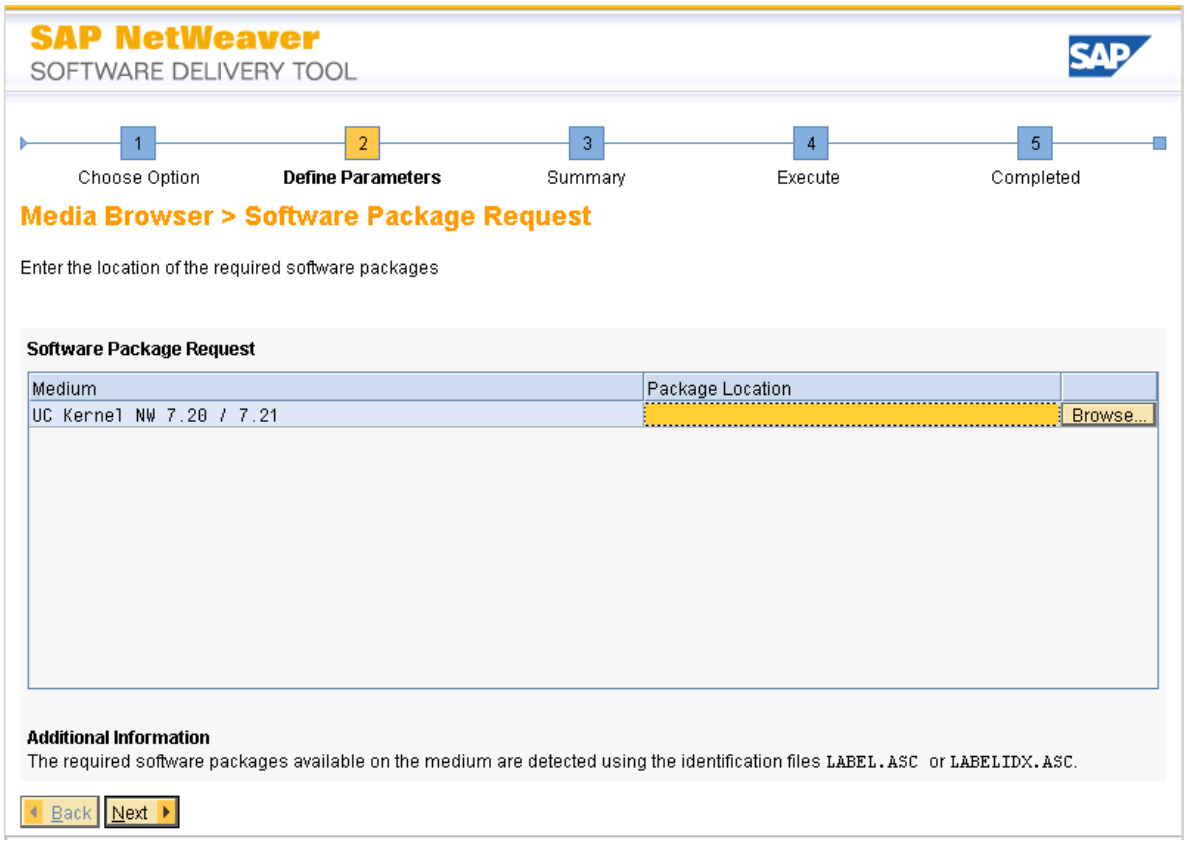

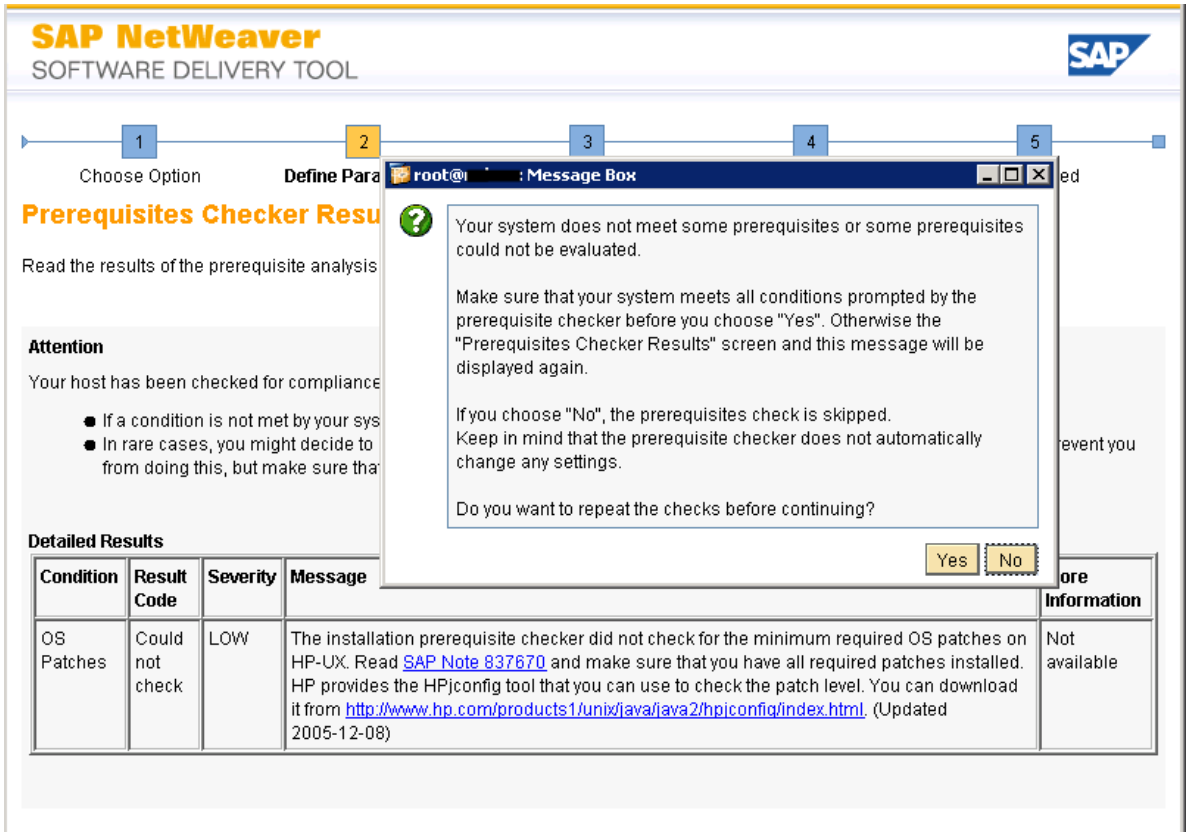

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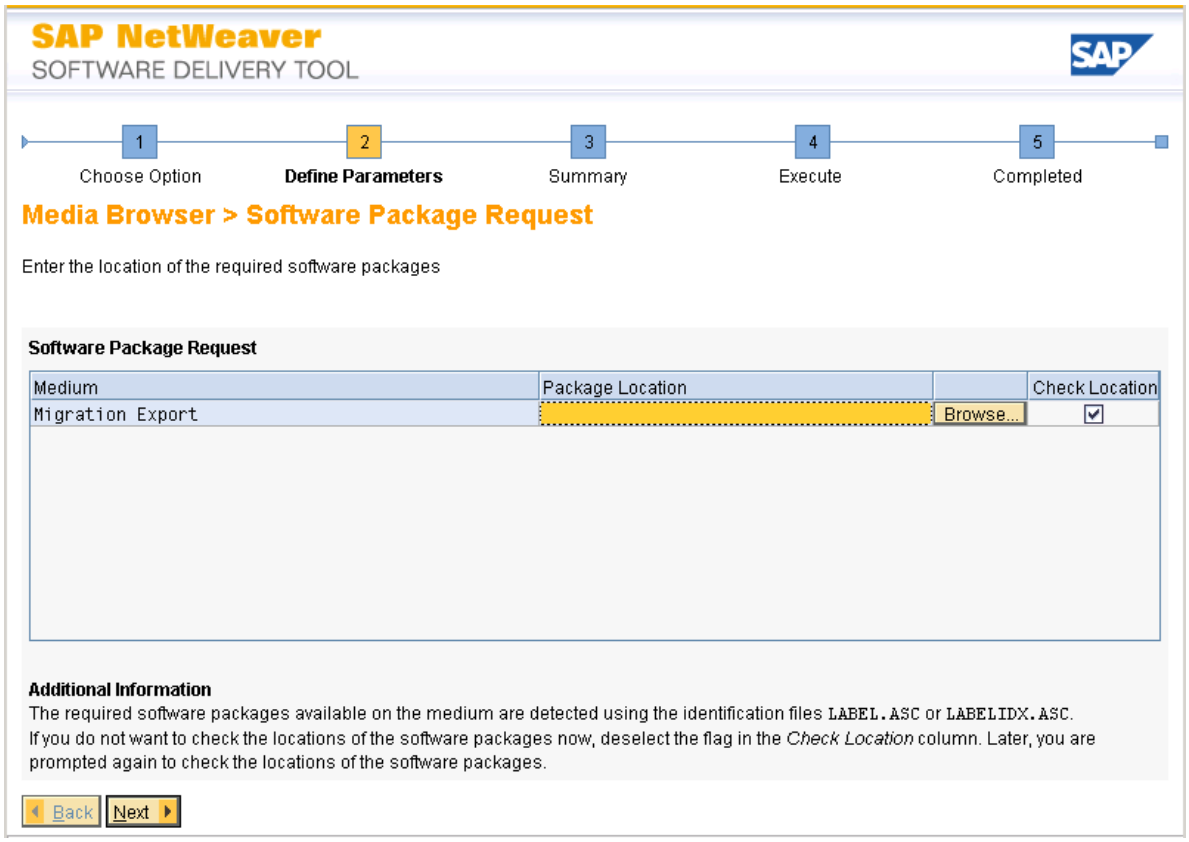

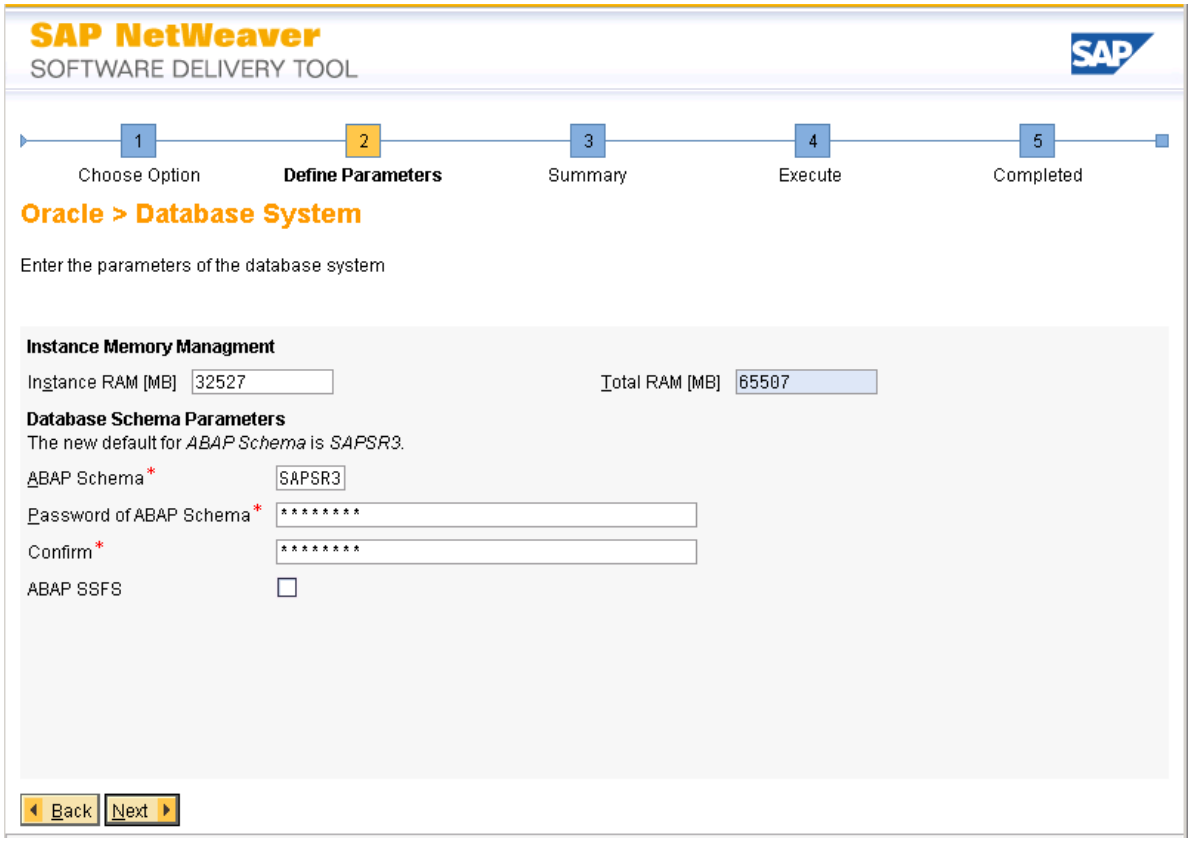

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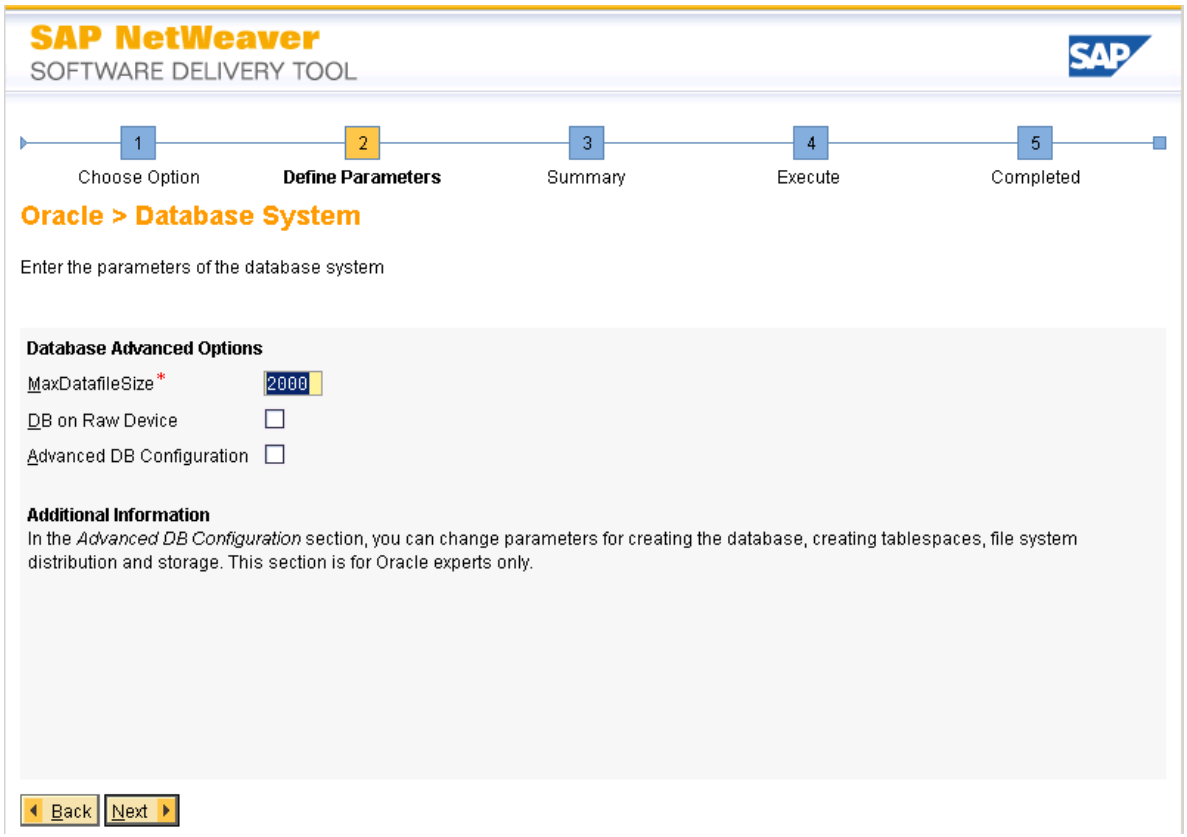

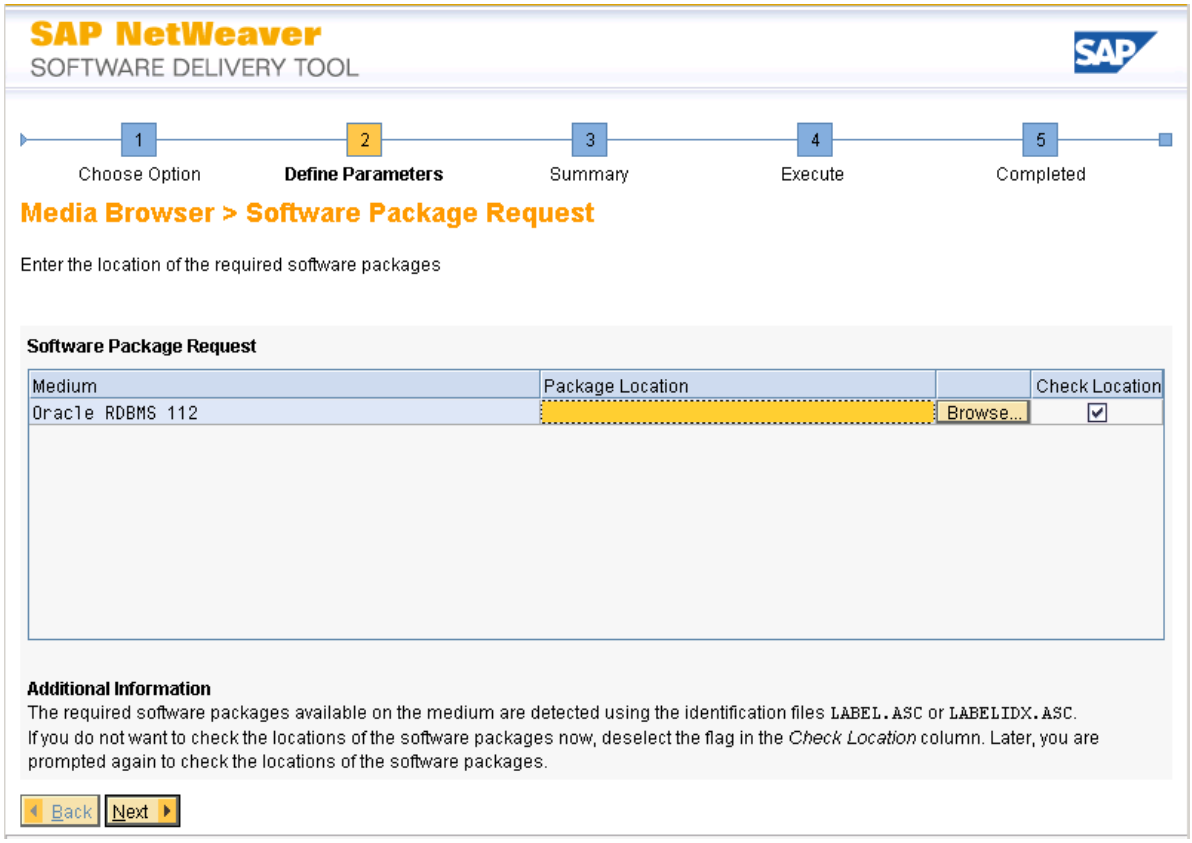

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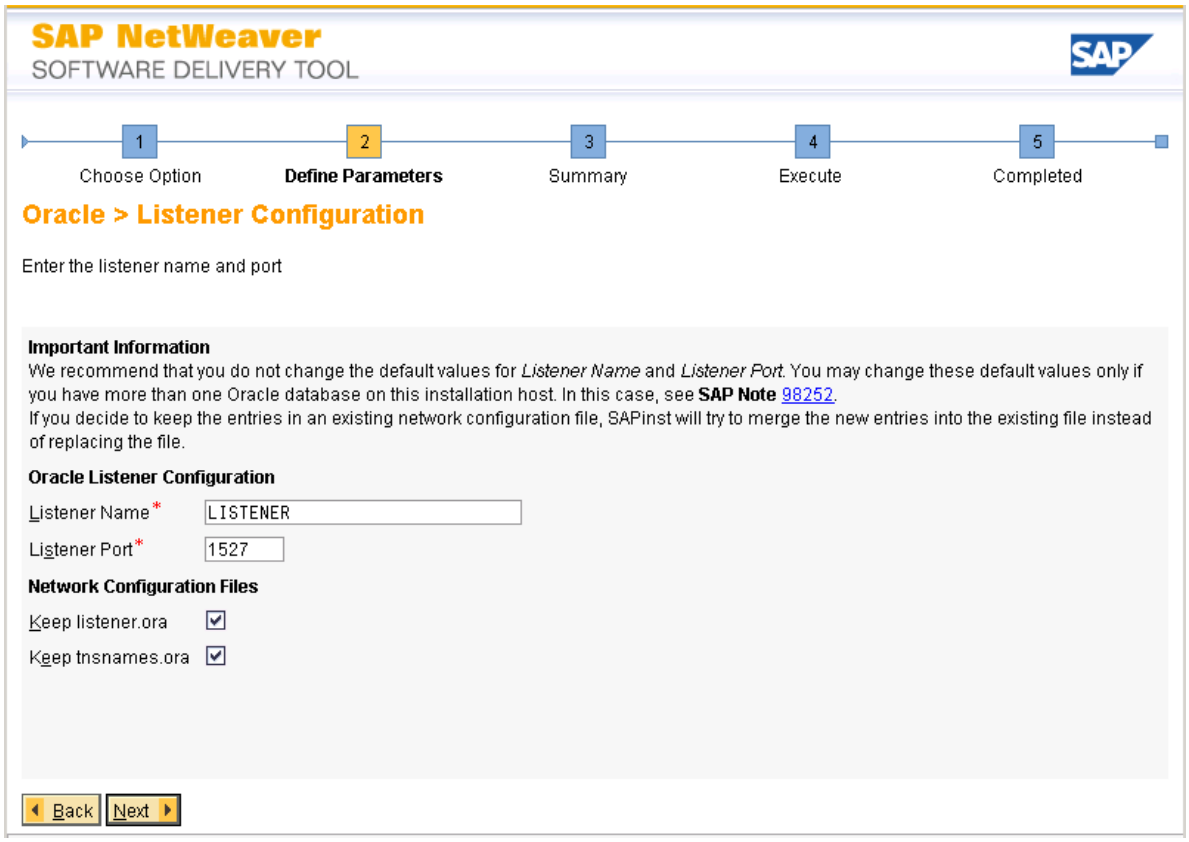

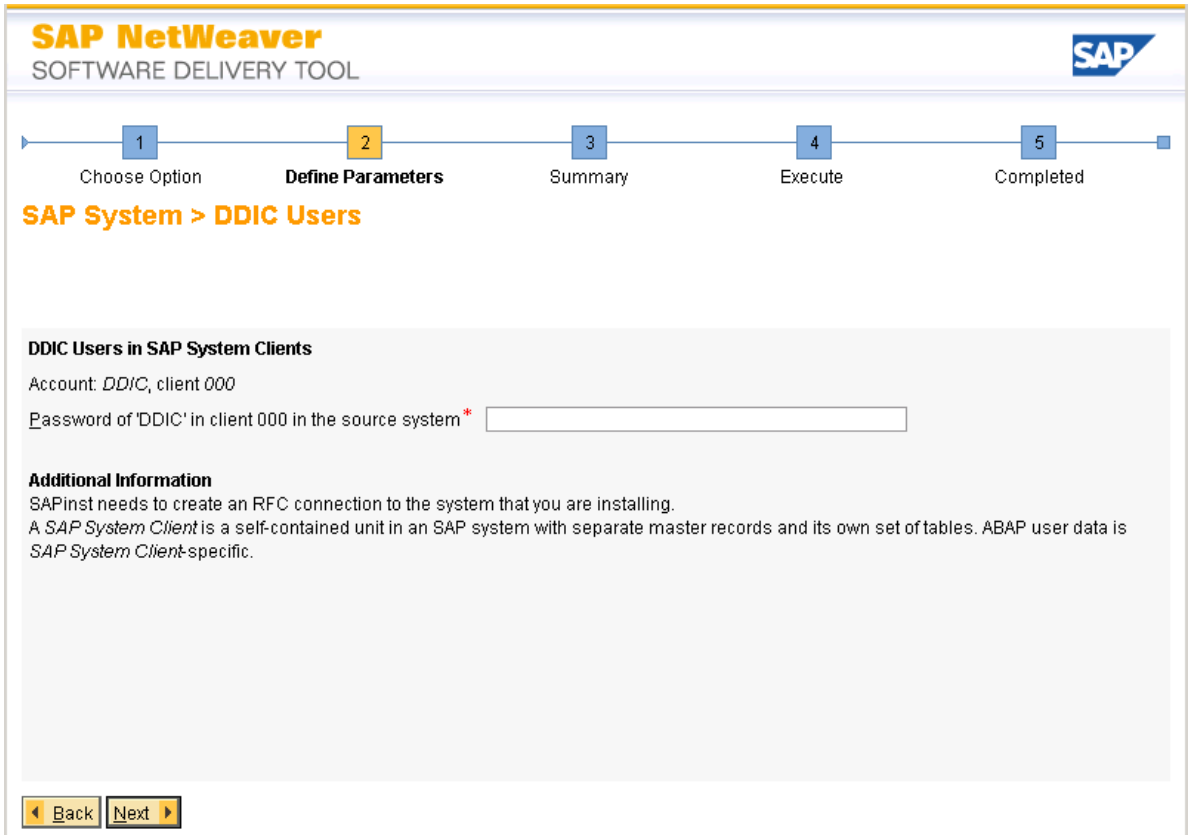

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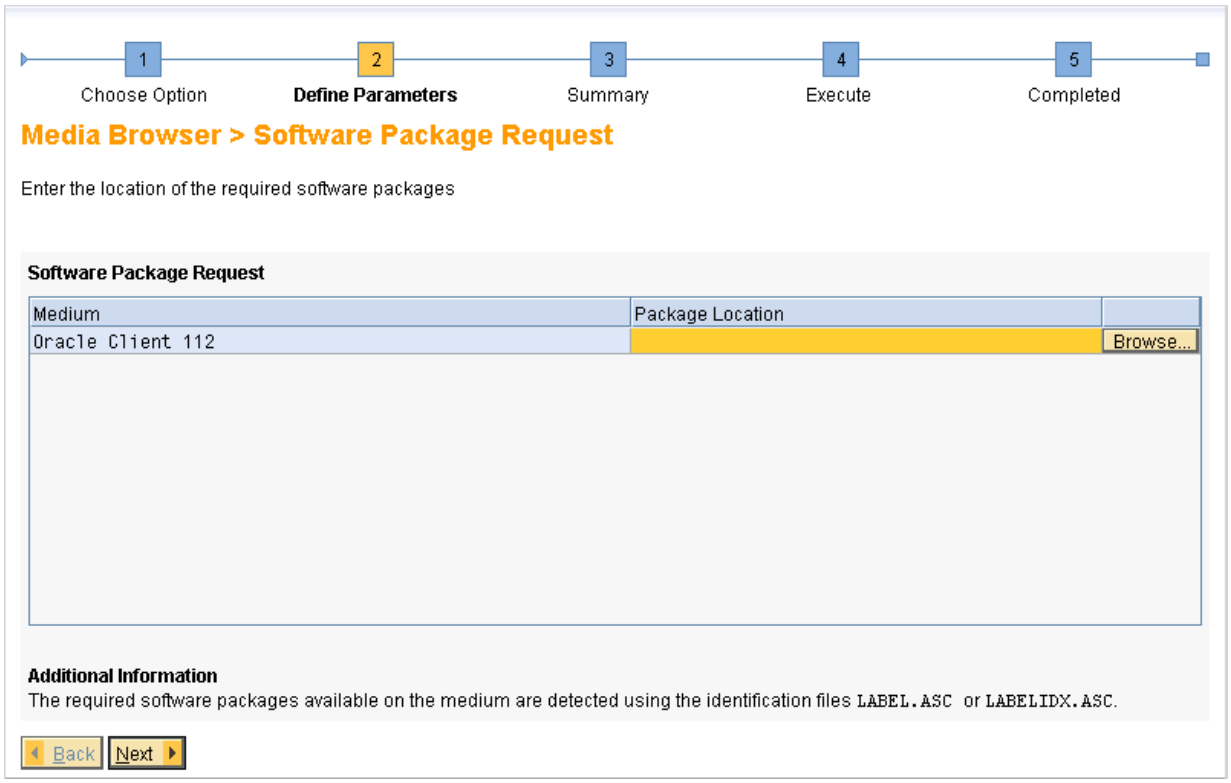

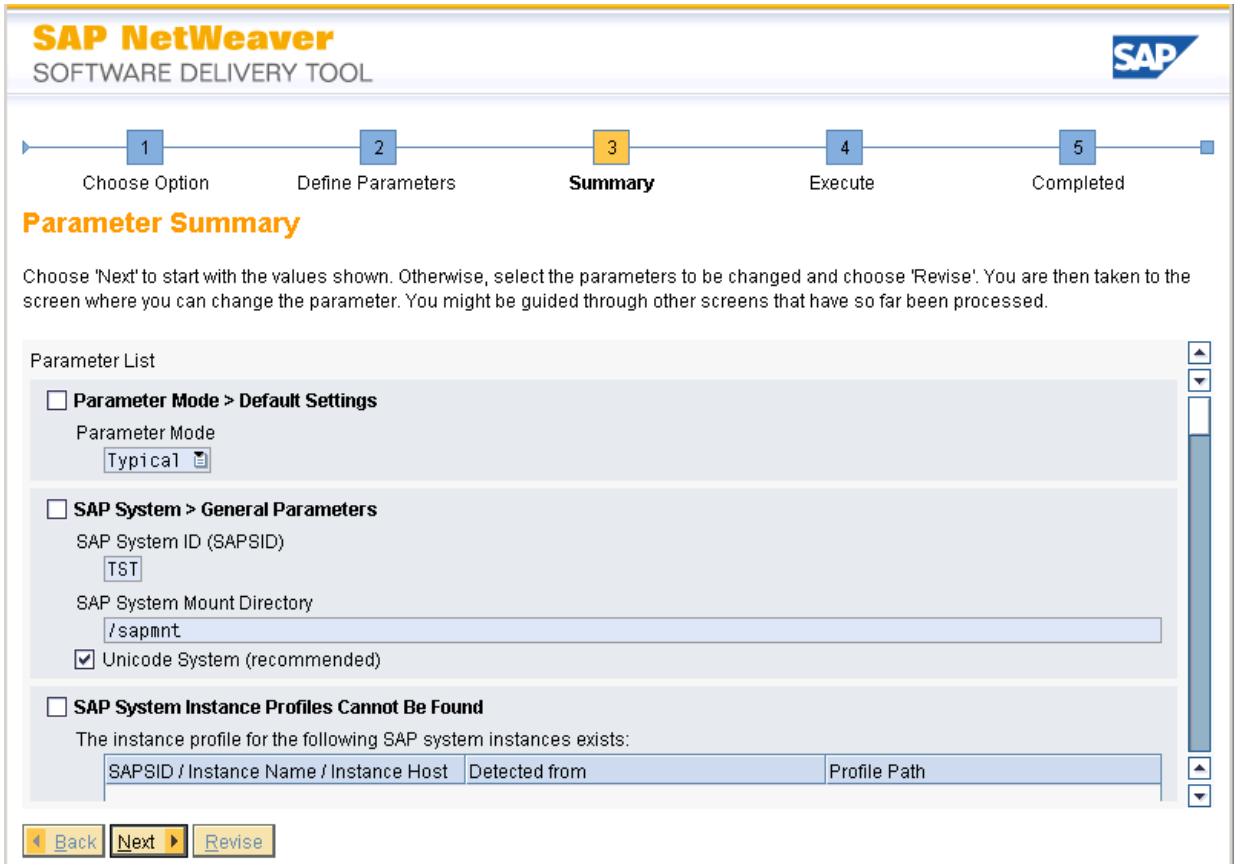

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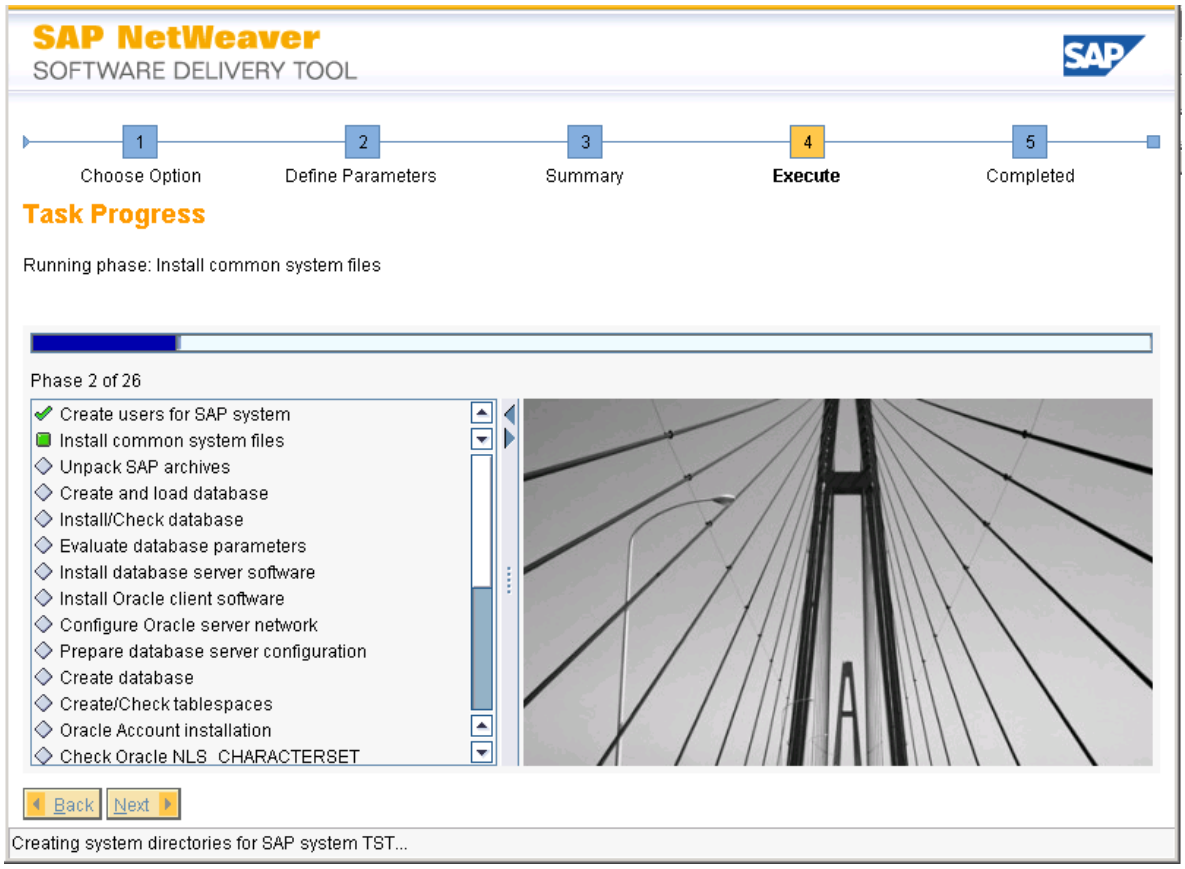

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Post SAP System Install Process

When the installation is complete, Basis will need to import a SAP_USER profile from the source system or another system if needed. The USR* tables were the only user info copied with System Build lus to allow for an Basis logon once the target system was created. SAP Users, Authorizations, and Adresses will need to copied with the SAP_USER profile before business users access the system. Transaction SCC8 can be used in the source system to save the SAP_USER profile to a transprot which can be imported into the target system.

Standard Post Installation steps need to completed by Basis once the system is created. Some of the items could include (based on your SAP environment and procedures):

- Setup keys in transactions STRUST, SMT1, STRUSTSSO2
- Setup logon groups with transactions SMLG, RZ12
- Lock/Unlock or setup users in transaction SU01
- Update transaction SLICENSE if needed
- Check transasction SECSTORE if needed
- Check Queue with transaction SMQ1, SMQ2, SMQS, SMQR
- Update domain email address in transaction SCOT
- Check Workflow RFC in transaction SWU3
- Check printer status and setup
- Run transactoin SGEN

Switch Framework

Inconsistencies in the Switch Framework may occur after the System Build target system is created. To resolve these inconsistences:

- Run transaction SFW5 in the target system
- Highlight the entry with the inconsistency and select menu item System Settings -> Activate Restart
- If additional services are listed in the pop-up screen, select all and click Activate Again button

S4 Support

System Build Plus generates export files using R3load programs. SAP's Java based Software Provisioning Manager (SWPM) is used to install a new system with these export files. If the source system has a HANA DB running NW 7.52 or higher, an SWPM error message occurs preventing the install from proceeding. Only SAP S/4HANA 1709 and earlier versions are SWPM supported with the R3load process. Refer to OSS Note 2684423 for more information.

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Support Information

Qlik Analytics (ISR) Ltd. can be contacted either by telephone or via email. Any support related issue regarding problems with or use of the Gold Client software and process can be reported for resolution.

If our offices are closed, or staff is unable to directly respond to a support request, we will respond within 24 hours of the initial call. Problems related to the export or import processing may require code enhancements. If a code enhancement or fix is required, resolution time may vary.

As per the maintenance agreement, any repairs or enhancements to the Gold Client software will immediately be deployed to all customers up-to-date with their maintenance contract. It is the choice of the customer as to if and when such enhancements are implemented. In addition, customers may request a planning session with Qlik to review changes in the software and how the changes might impact their environment.

We can also be contacted to discuss application or feasibility of using the Gold Client process to resolve a current challenge the project team faces. When this is required, a planning session can be scheduled in advance to ensure proper participation by both Qlik and the client.

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