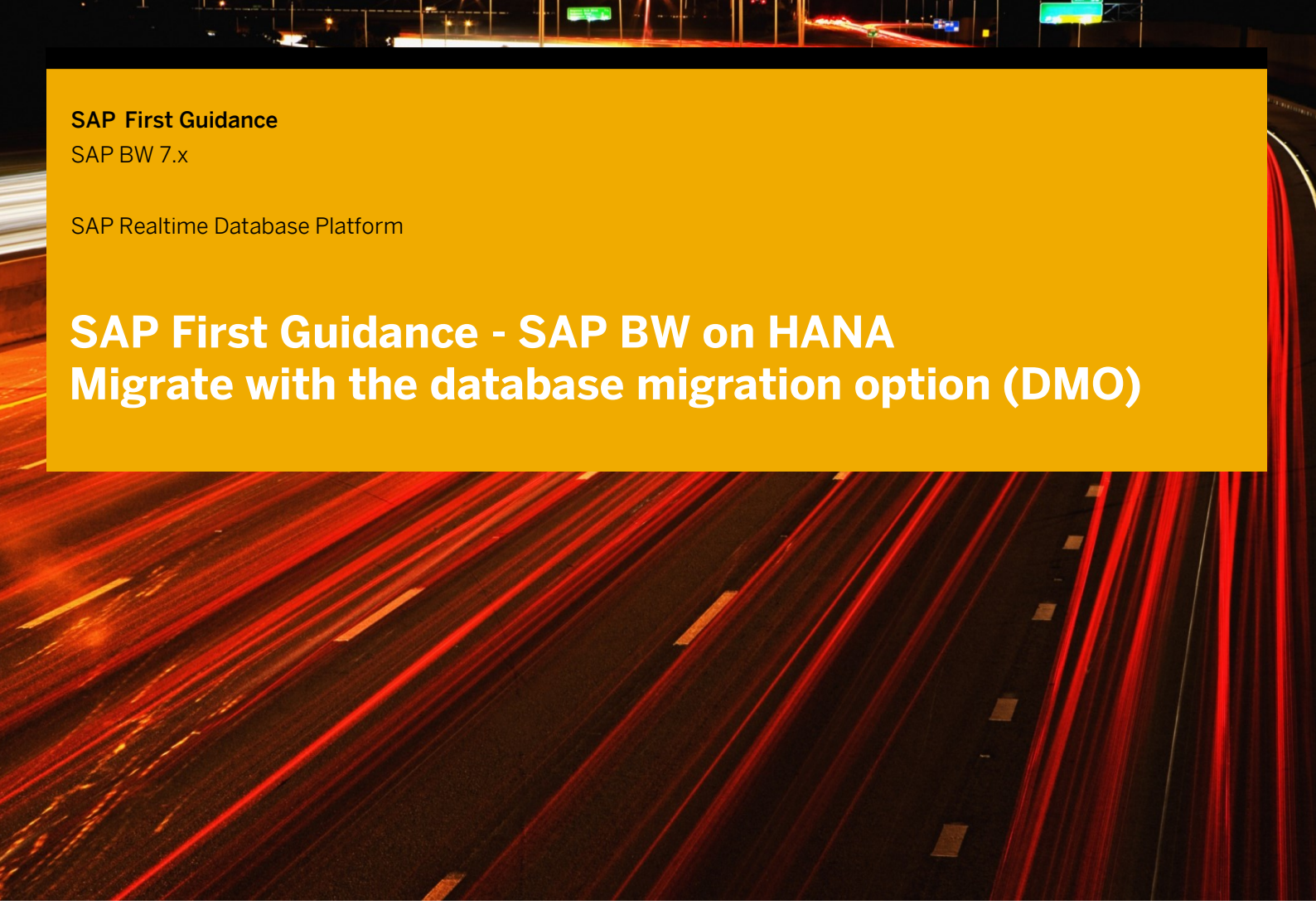


SAP First Guidance
SAP BW 7.x

SAP Realtime Database Platform

SAP First Guidance - SAP BW on HANA
Migrate with the database migration option (DMO)

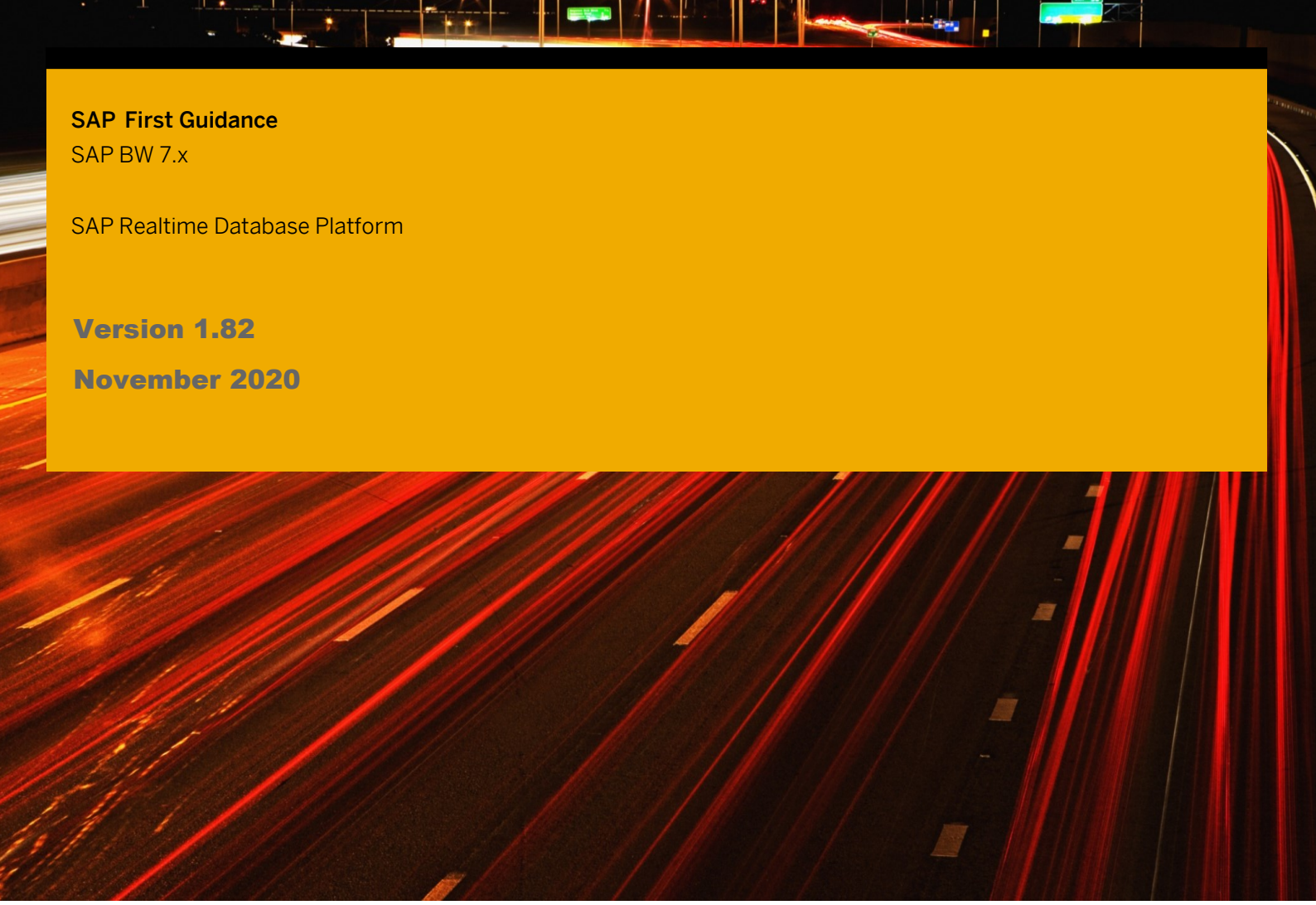
Applicable Releases:

SAP BW 7.0x SP27/SP10
SAP BW 7.3x SP07/SP03
SAP BW 7.40 SP02
and higher

DMO is an option of SUM for combined update and migration including unicode conversion: update an existing SAP system to a higher software release and migrate to SAP HANA database including UC migration.
As the technical SUM steps are the same, this “SAP First Guidance” document should make all customer-specific documentation obsolete. It is the complementary documentation to the existing Notes and SUM/DMO Upgrade Guides.
The document is “work in progress” and it not intended to be exhaustive, although it does contain everything you need to successfully migrate your existing BW System Release 7.0x running on any DB to BW on HANA 7.31 or higher, using the database migration option (DMO) as part of the software update manager (SUM) provided by the SL toolset.

For more Information please contact roland.kramer@sap.com

THE BEST RUN SAP



SAP First Guidance

SAP BW 7.x

SAP Realtime Database Platform

Version 1.82

November 2020

THE BEST RUN SAP

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Document History

Document Version	Description
1.00	First internal release (only SUM run)
1.10	SAPHostAgent 7.20 enablement, MSSQL for DMO, corrections
1.20	Further Improvements SUM/DMO, updates, corrections
1.30	First external release including DMO and Basis/BW-PCA
1.31	SPUMG, split off ASCS, further additions/corrections
1.40	DMO SP09 update, guide splitted, further additions/corrections
1.42	Further Updates, Additions for Pre/Post Migration Steps for DMO
1.43	Additions/Updates, SP10 usage, SL Monitor App, corrections
1.50	BW 7.40 SP06 as Target, further additions/corrections
1.51	Including 7.30 switch upgrade, further additions/corrections
1.52	Corrections March 2014 - WDEUMH Workshop
1.55	05.2014 BW 7.40 SP07 as Target, further additions/corrections
1.56	06.2014 additions/corrections - WNABWH/WDEUMH Workshops
1.57	iOS7 App removed, SUM SP11 Host agent adaption
1.58	Adding HANA/ABAP Post Steps after DMO, SUM SP12 update for ASE
1.60	SUM/DMO 1.0 SP13, 7.40 SP10 as Target, several updates/additions
1.61	Further corrections for Oracle as Source Database
1.70	New UI5 modus, SUM/DMO 1.0 SP13/SP14 adaption
1.71	Manual BW Pre-and Post-Upgrade and Migration Tasks removed
1.72	Review with Upgrade Development October 2015, adding 7.50
1.73	Update Q1/2016, adding SUM/DMO 1.0 SP16, 7.50 Implications
1.74	Update Q2/2016
1.75	Update Q4/2016
1.79	Update 08/2017
1.82	Update Q3/2020, new SUM/DMO notation

Typographic Conventions

Type Style	Description
Example Text	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Cross-references to other documentation
Example text	Emphasized words or phrases in body text, graphic titles, and table titles
`Example text`	File and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
`Example text`	User entry texts. These are words or characters that you enter in the system exactly as they appear in the documentation.
`<Example text>`	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
`EXAMPLE TEXT`	Keys on the keyboard, for example, `F2` or `ENTER`.

Icons

Icon	Description
	Caution
	Note or Important
	Example
	Recommendation or Tip

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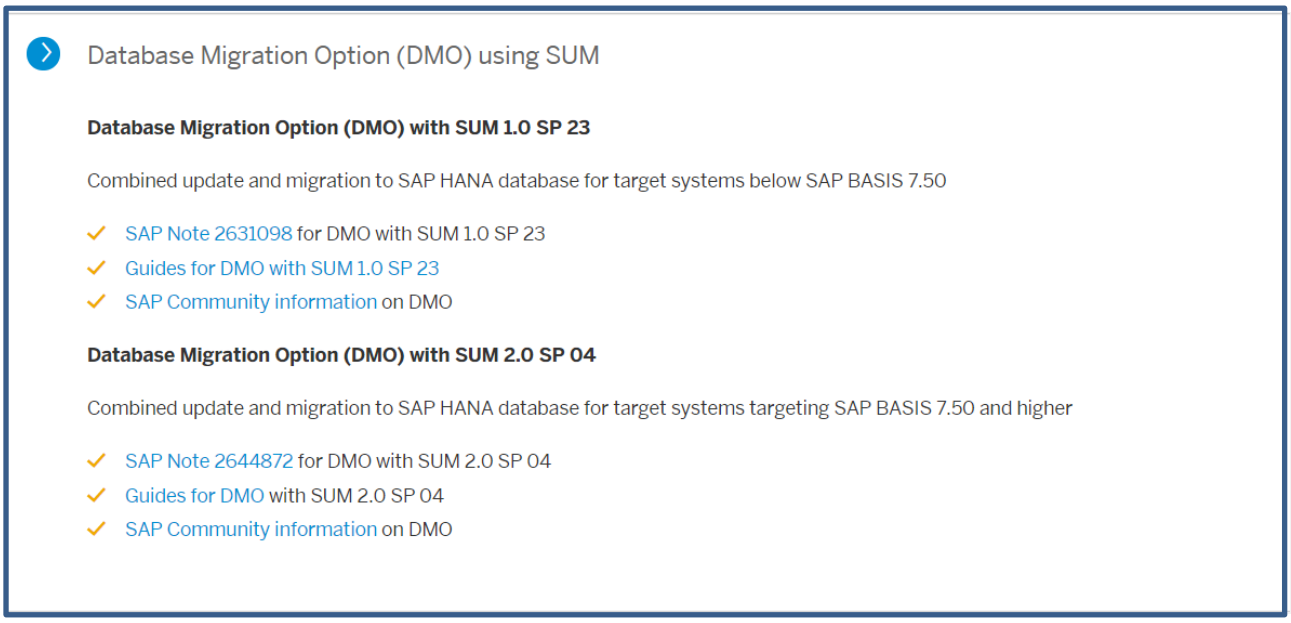
1. Database migration option (DMO)

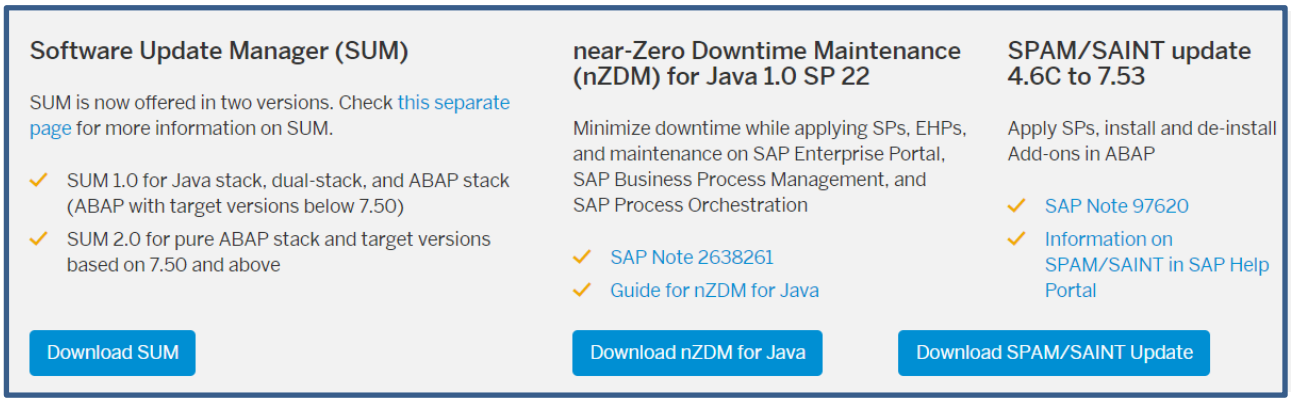
The official SUM/DMO Documentation for SPx, please consult these guides first!
https://support.sap.com/en/tools/software-logistics-tools.html



Database Migration Option (DMO) with SUM 2.0 SP 04

Combined update and migration to SAP HANA database for target systems targeting SAP BASIS 7.50 and higher

- SAP Note 2644872 for DMO with SUM 2.0 SP 04
- Guides for DMO with SUM 2.0 SP 04
- SAP Community information on DMO



1.1 Prerequisites

Prepare the SAPHostAgent and SUM/DMO per the following Notes:

Note 1589311 - Replacements of outdated tools via SL Toolset

Note 927637 - Web service authentication in sapstartsrv as of Release 7.00

Note 2284028 - SUM SL Common UI: Troubleshooting problems with the new SUM UI

- run `saphostexec.exe -install` from the extracted SAP Agent 7.21 source directory.
  add parameter to the file `/usr/sap/hostctrl/exe/`**`host_profile`**
  `service/admin_users = dasadm <sid>adm`

- run this option when you upgrade to an newer Version (at least ≥ 148):
  `/usr/sap/hostctrl/exe/>./`**`saphostexec -upgrade -archive`**
  `/data/software/SAPHOSTAGENT40_40-20009394.SAR`

- run the command with root user `/usr/sap/<SID>/SUM/abap/`**`SUMSTART confighostagent`** to
  create the file **`sumstart.conf`**
  `/usr/sap/hostctrl/exe/operations.d/`**`sumstart.conf`**

  - Always check for the latest Version!

  Patch 54 for 7.22 available since October 2021

- Adding additional users working with the UI5 interface by adding user in the following line of the mentioned file:

```
Name:SUMStart
Authorization:$[SID:#required#tolower]adm
Command:/data/sap/HBT/SUM/abap/SUMSTART upgrade
Username: $[SID:#required#tolower]adm dmoadm
Workdir: /data/sap/HBT/SUM/abap/
ResultConverter: flat
```

- Optional: Enable SSL for the SAPHostAgent (Port 1129).
  http://help.sap.com/saphelp_nw74/helpdata/en/8d/12f7b9244b44219bd14d619d3a2123/content.htm?frameset=/en/f9/50aeeb64604e818b24626d287b63b0/frameset.htm&current_toc=/en/21/98c443122744efae67c0352033691d/plain.htm&node_id=19
  As an alternative, copy the files as fallback from the directory `/usr/sap/<SID>/DVEBMGS<nr>/sec`
  to **`/usr/sap/hostctrl/exe/sec`**

- Restart the SAPHostAgent
  `/usr/sap/hostctrl/exe/>./`**`saphostexec -restart`**

- To reset or check the DMO procedure, use the following step-by-step procedure:
  - Start `SAPup` in scroll mode

```
cd /usr/sap/<SID>/SUM/abap/bin
./SAPup <option> gt=scroll (httpserver0/set allpwd/set procpar)
2) Choose the option "Back"
   Back
Exit
   Cleanup and start fresh.
[Exit]: 01
```

- To reset the Upgrade/DMO process run (replaces the old ABAP Report **`upgreset`**)
  Note 1790486 - SAP_ABA is in an undefined state that is not safe to be upgraded
  `cd /usr/sap/<SID>/SUM/abap/bin`
  `./SAPup reset prepare`
  delete the directory **`/usr/sap/<SID>/SUM/`** and start from scratch with the SUM sar file unpack.

- Changing Process Parameters during runtime using UI browser access:
  `./SAPup set procpar gt=scroll`

- Additional DMO/SUM options can be maintained in the file
  `/usr/sap/<SID>/SUM/bin/SAPup_add.par`
  `/ORA/update_spacestat = 0`

- To enable a SUM with DMO run for the migration only scenario, add to file SAPup_add.par the following line, before you start the Software Update Manager:
  `migration_only = 1`

http://scn.sap.com/community/bw-hana/blog/2015/03/17/dmo-optimizing-system-downtime

Please refer always to the official DMO/SUM guide for details.

2. DMO - Conceptional Overview

DMO in a Nutshell

Scenario:

- You want to migrate your existing SAP ABAP system to the SAP HANA database
- Your SAP release needs to be upgraded prior to migration

Use the database migration option (DMO) of the Software Update Manager (SUM);
it combines SAP upgrade and database migration to SAP HANA in one tool!

Benefits:

- Migration steps are simplified
- System update, Unicode Conversion, and database migration are combined in one tool
- Business downtime is reduced
- The source database remains consistent, so a fast fallback is possible

DMO general introduction - http://scn.sap.com/docs/DOC-49580

SUM/DMO technical runtime consideration

Depending on the Start and Target Release, the technical procedure for the upgrade part is partly different.

While the release change from 7.30 to 7.40 is a technical upgrade (as type of an exchange upgrade), the release change from 7.0x to 7.40 is and EHP installation/upgrade which includes much more packages and intensive and time-consuming additional phases, which not be seen during the so called "switch upgrade" to 7.40. Despite the technical upgrade procedure, from a SAP BW application stand point everything is counted as an upgrade, which means application specific pre/post upgrade steps maintained by the Upgrade task lists and/or the ASU toolbox.

DMO technical background

DMO: technical background

DMO: optimizing system downtime...

DMO: comparing pipe and file mode for R3load

SUM: introduction to shadow system

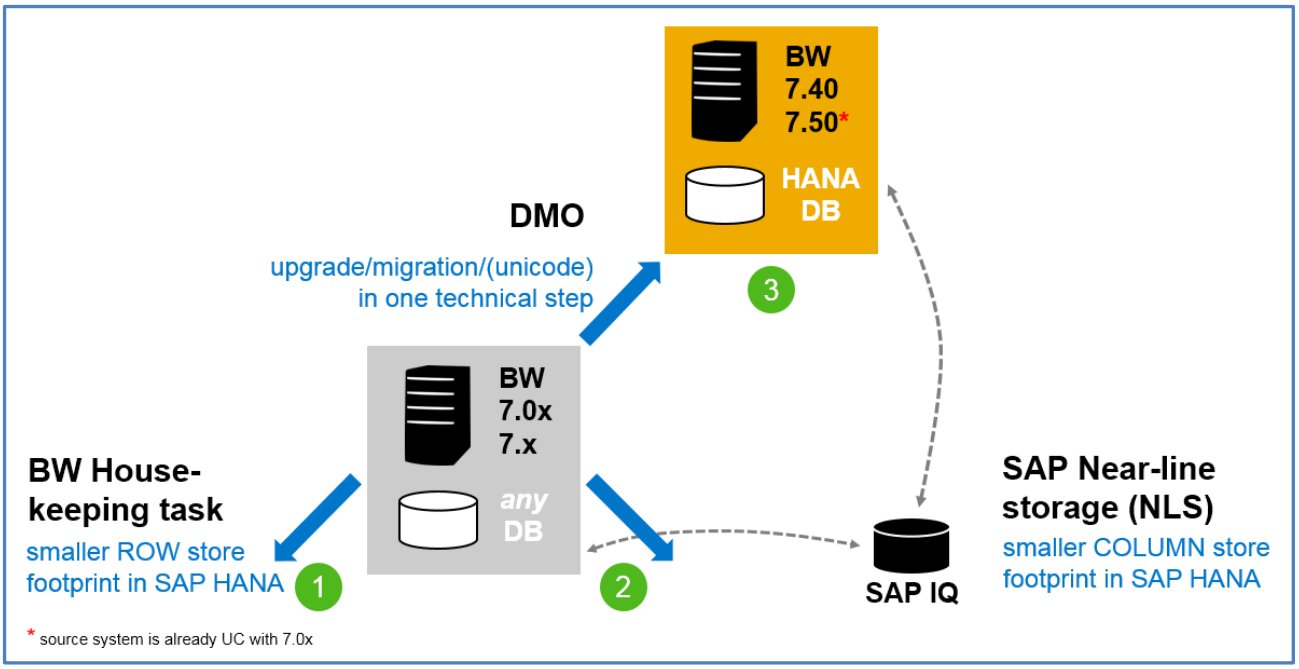
Optimizing DMO Performance

SUM: SL Common UI available with SP12

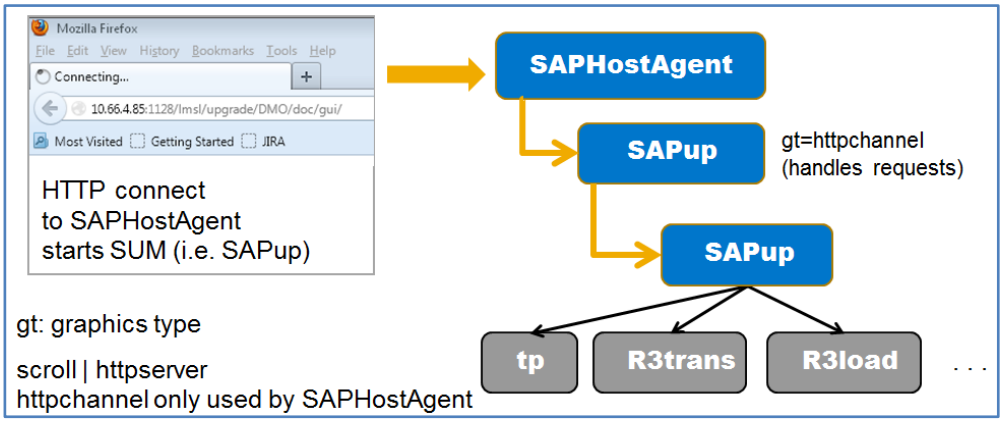
SUM: New SL Common UI available for AS ABAP scenarios

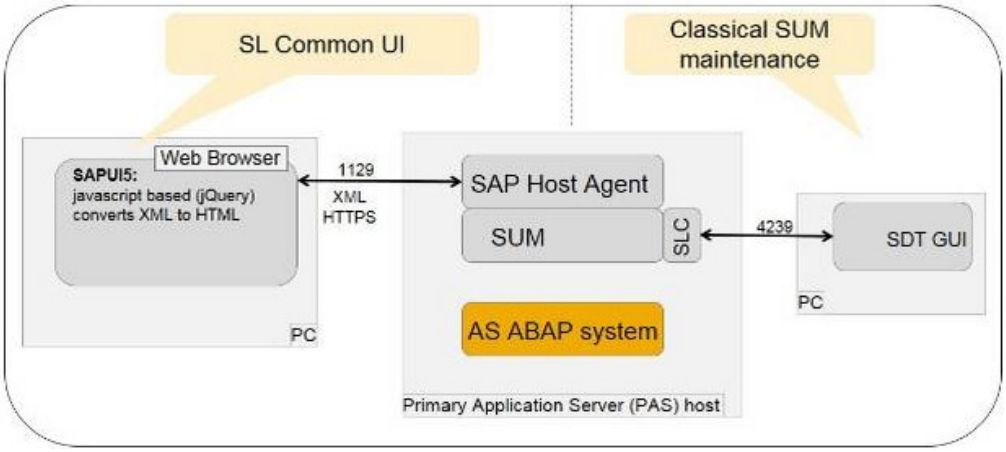
SUM: Upgrade was never being easier ...

DMO in Interaction with SAP-NLS

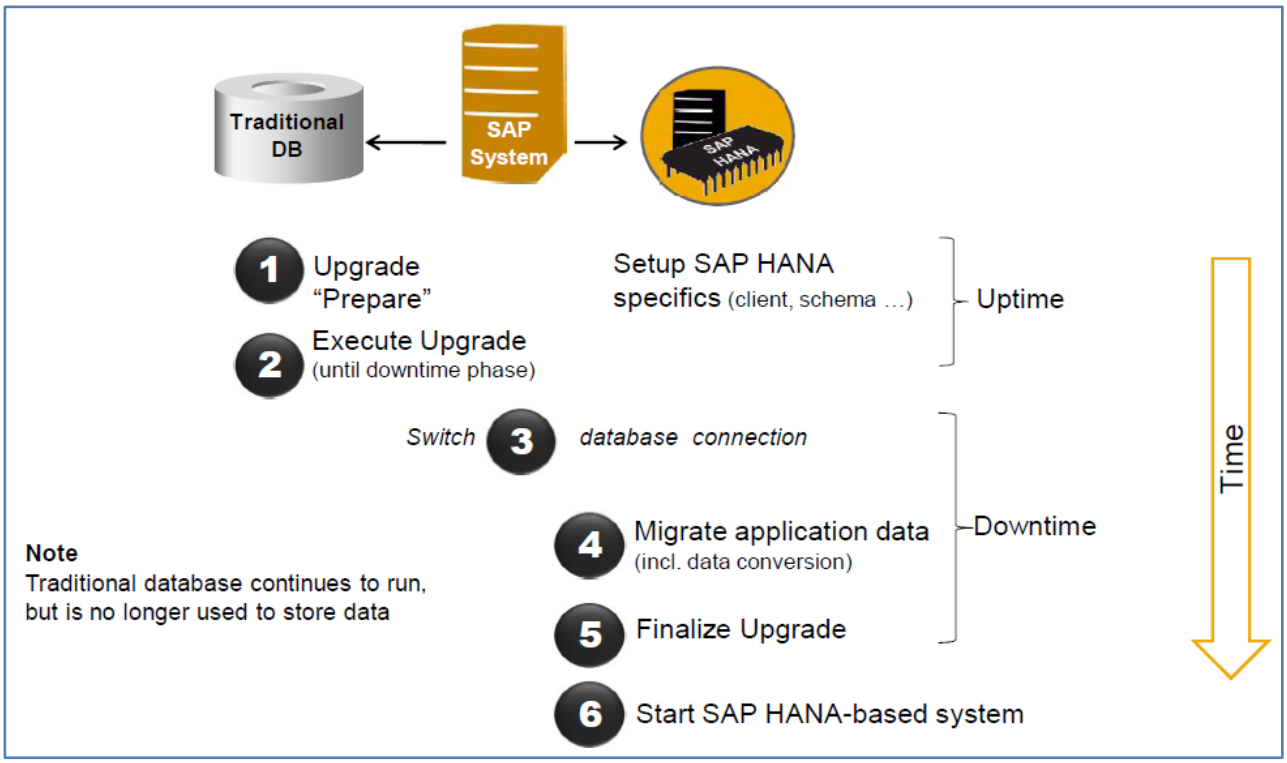


DMO in Interaction with the New SAPHostAgent

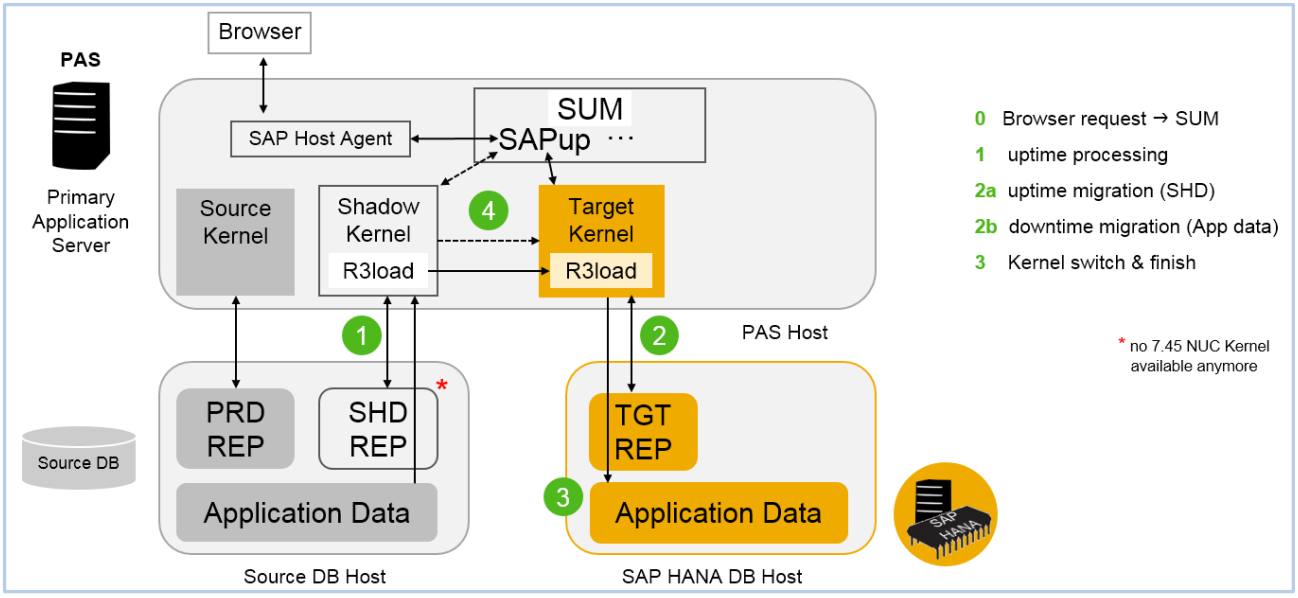




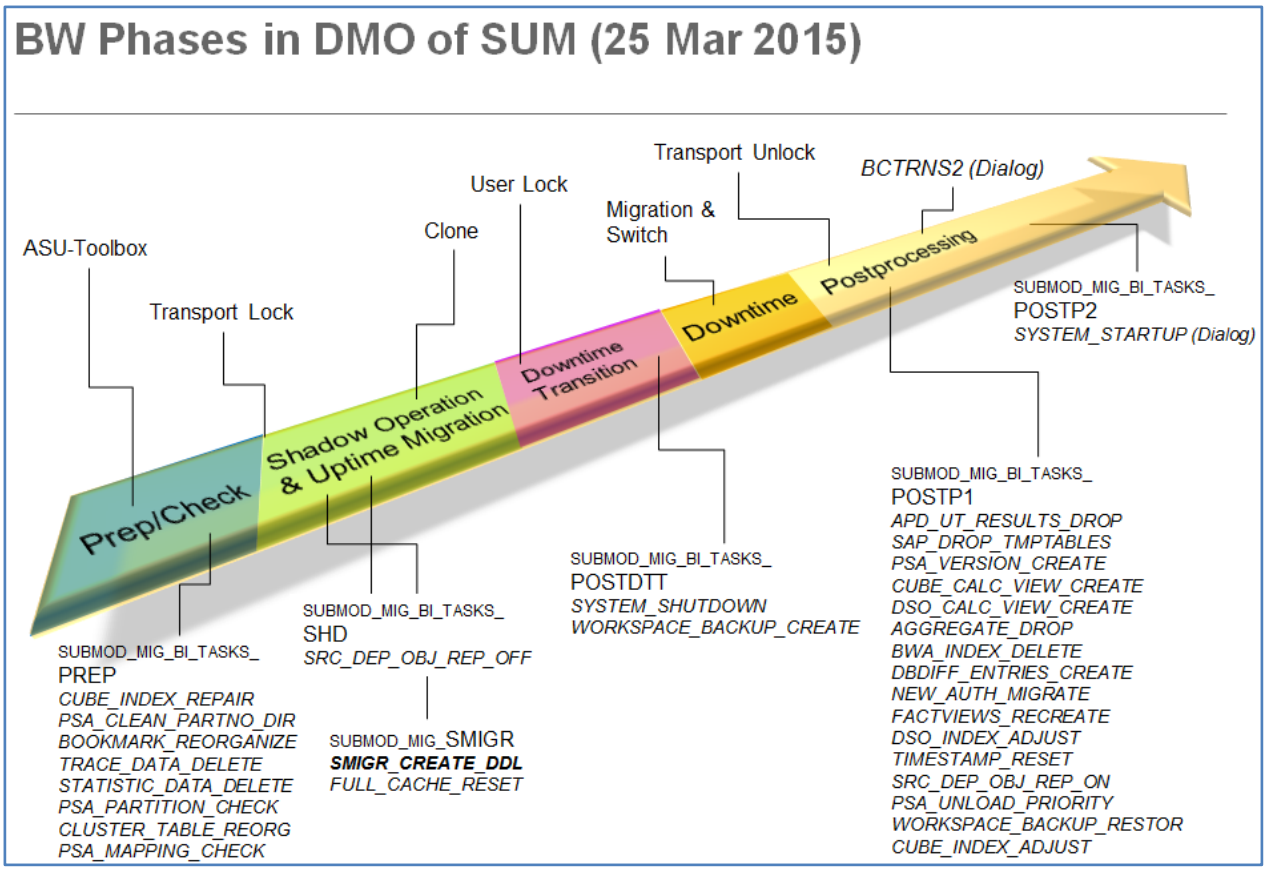
DMO Milestones during the Procedure



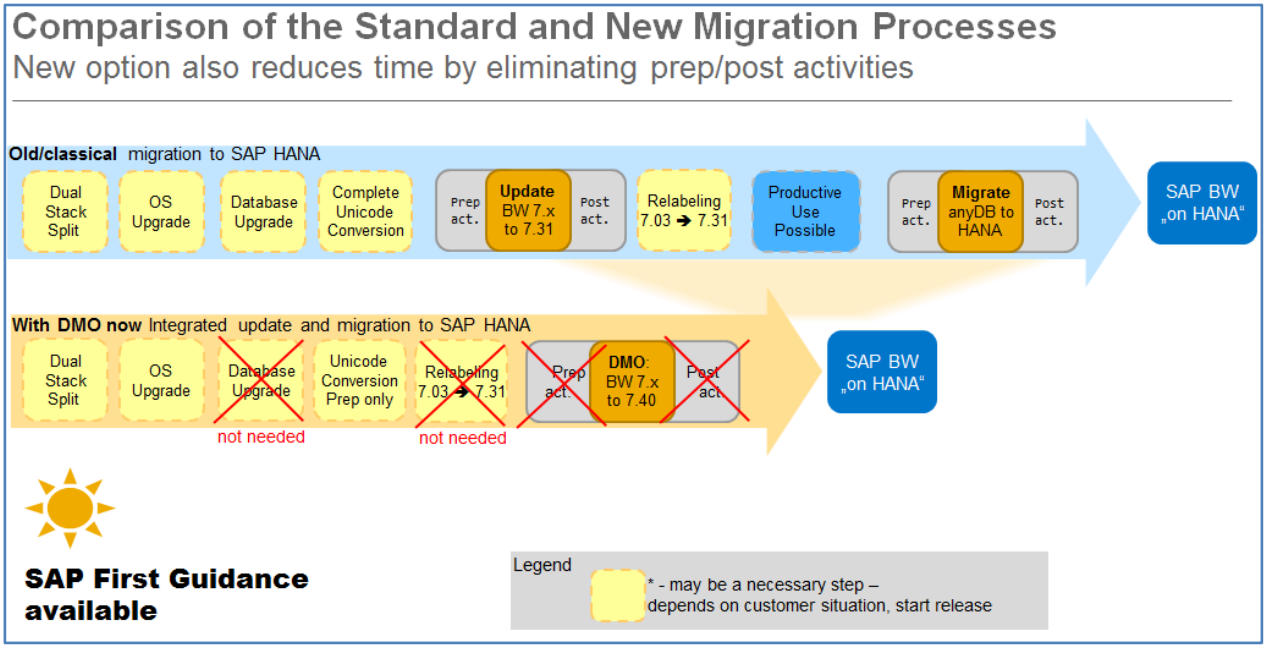
DMO Procedure: In-Place Upgrade and Migration



BW Phases in the Overall DMO Process

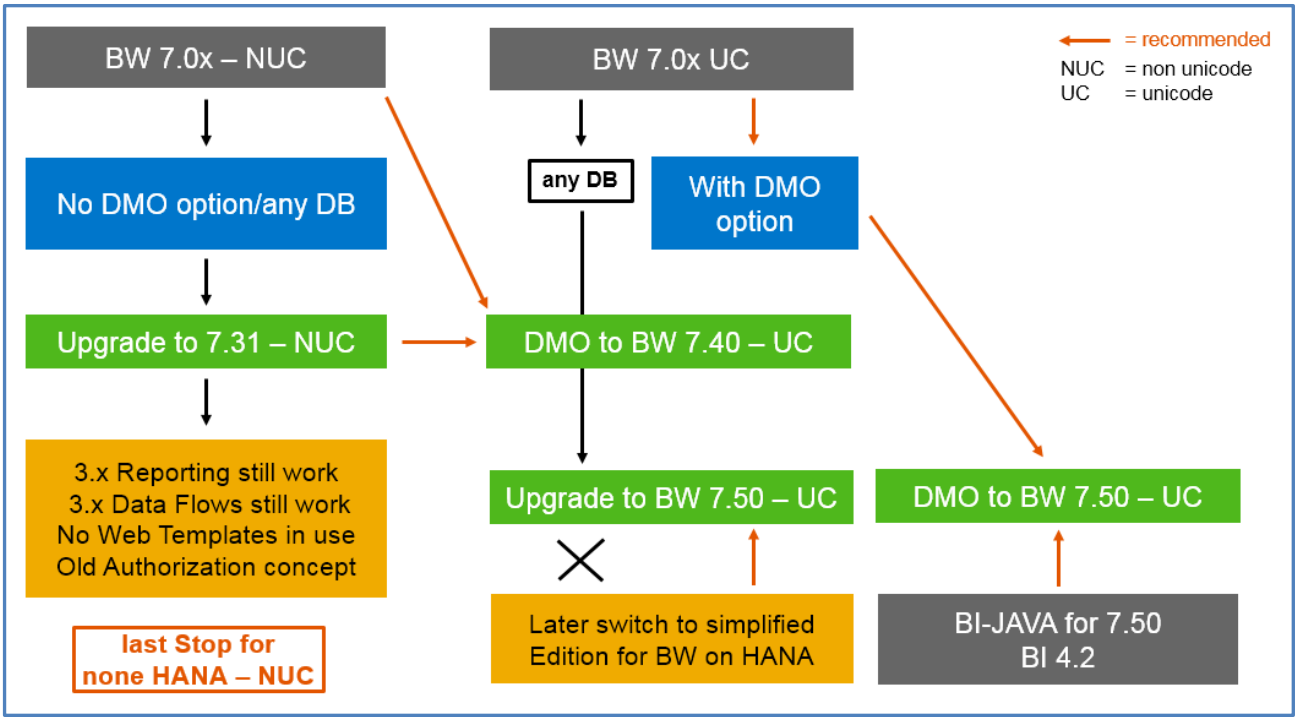


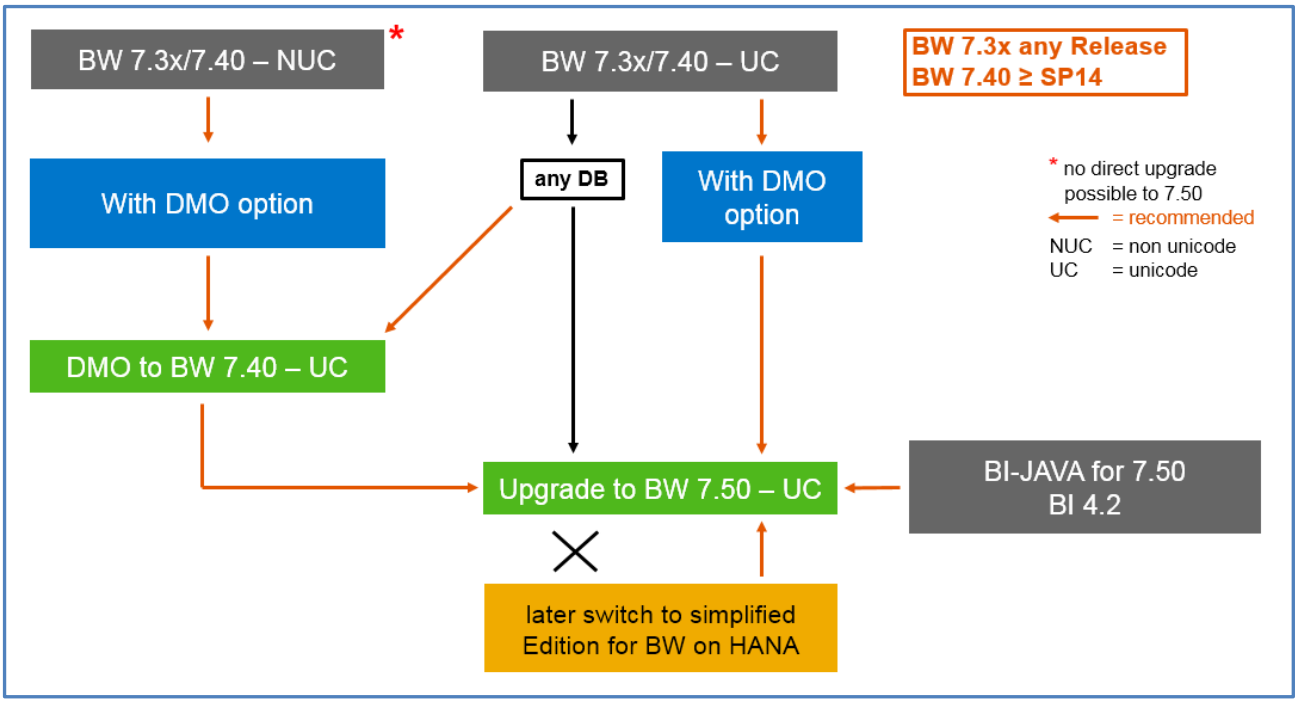
DMO - Comparison Standard and New Process



2.1 DMO - Interaction with SAP BW 7.50

Since there is no 7.45 non unicode Kernel anymore, the DMO option cannot be used to directly migrate system to SAP BW 7.50 on HANA directly. Furthermore 7.50 is completely unicode, which also impacts the direct upgrade of non-unicode System based on 7.0x or 7.3x/7.40.





Blog:

Downtime minimization when upgrading BW systems

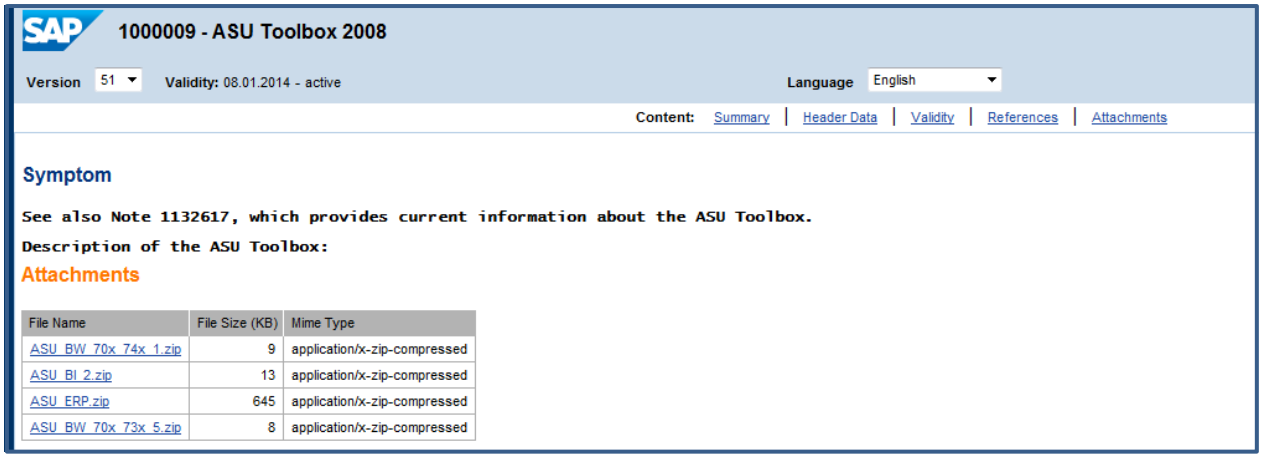
3. Step by Step – DMO Option

3.1 Application Specific Preparation Steps

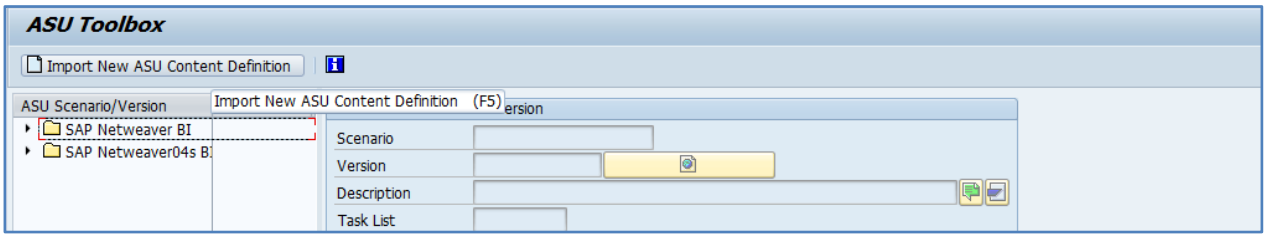
Interaction ASU Toolbox with DMO Procedure

To save time, you can already start working with the Application-Specific Upgrade (ASU) toolbox in the original system. Check for the latest XML file in SAP Note 1000009 - ASU Toolbox 2008

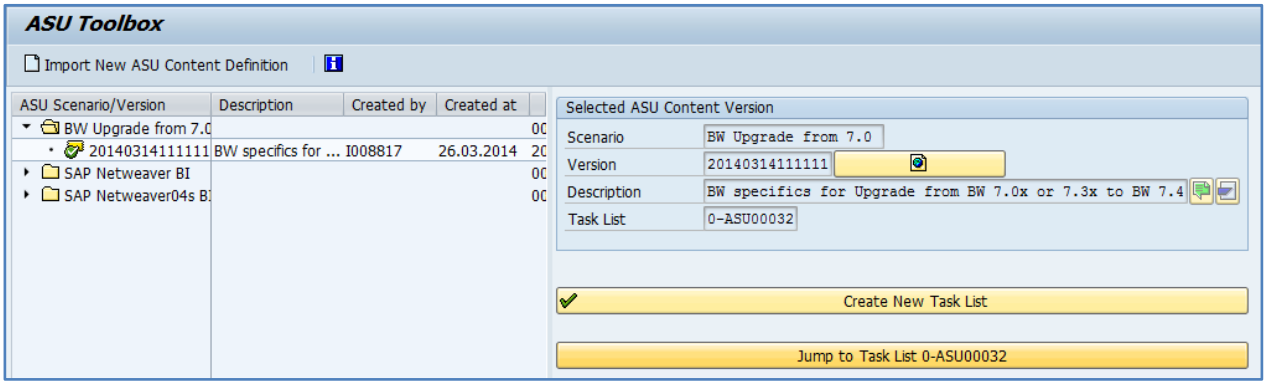
To use the ASU toolbox, download the latest XML file from the attachment section of the SAP Note. The reminder for the ASU toolbox appears in the extraction phase.



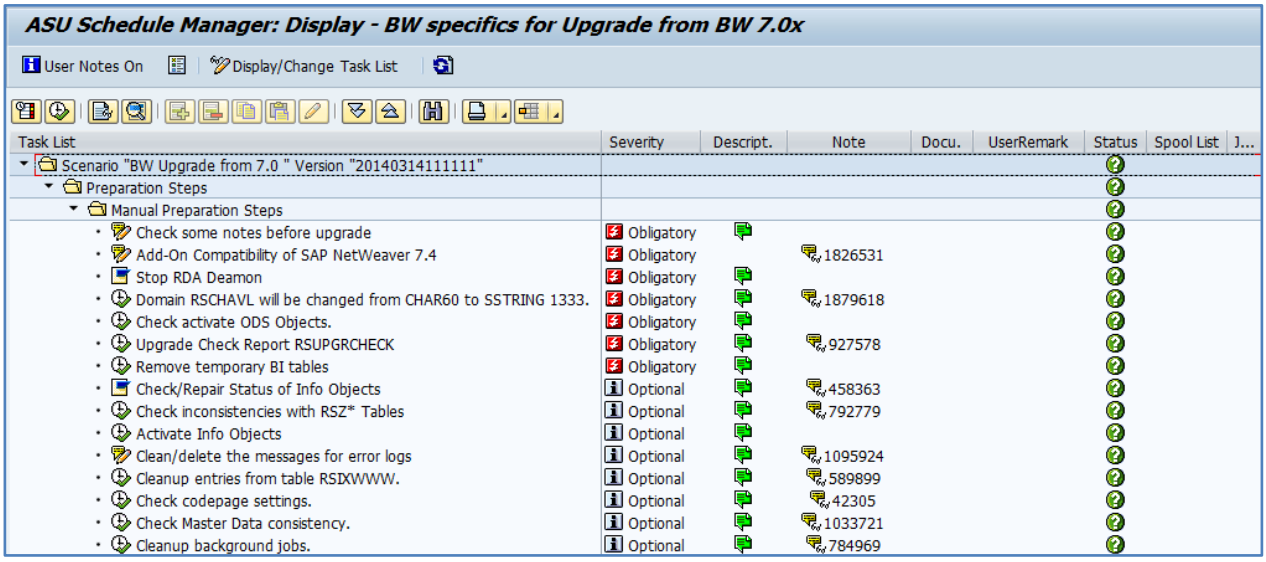
Start transaction /ASU/START and opload the XML file and create a new task list.



Create a new Task List and Jump to Task List 0-ASU000xx



Check and execute the tasks before the technical DMO procedure starts. This will save time during the runtime of the DMO procedure.



Notes for the BW-Specific Upgrade Phases

These Notes must/should be checked before the DMO process for BW based systems is started.

Note 1751237 - Add. info about the update/upgrade to SAP NetWeaver 7.4 (incl. SPs and SRs)

Note 912369 - FINB_TR_DEST, after import failures, transport errors

Note 150315 - BW-Authorizations for Remote-User in BW and OLTP (profile S_BI-WHM_RFC)

Note 1908075 - BW on SAP HANA SP6: Landscape redistribution (at least Rev. ≥ 60 for HANA needed)

Note 1891393 - Automated Configuration scripts for HANA Landscape (contains HDB script for reorg)

Note 1720495 - Invalid deimplementation of obsolete notes by SNOTE tool

Note 1668882 - Note Assistant: Important notes for SAP_BASIS 730,731,740 (check after the Upgrade)

Note 1867494 - Upgrading application server ABAP running on an SAP HANA DB

Note 1879618 - Pre-upgrade measures for upgrade/update to 7.4 (included in 7.01 SP14 and higher)

Note 1941711 - Dump: INSERT_PROGRAM_NAME_BLANK during After-Import processing of SXCI / SXSD

Note 1954122 - Dump in report RSPRGCTWM during upgrade

Note 1990326 - Error: Retcode 1024: SQL-error "288-cannot use duplicate table name

Note 1981718 - R3load: support for CDS views and some fixes

Note 1764085 - Error Update records still exist - Please process during phase JOB_RSVBCHCK_D

Note 2082301 - Executing RSUPGRCHECK may display inconsistent MultiProvider

Note 2229248 - Long runtime in background job "RSUPGRCHECK" during SAP EHP upgrade

Note 2182306 - 730SP14: PSA Version create step in DMO tool hangs

Note 2017638 - Corrections to SAP_UPDATE_DBDIFF and RS_BW_POST_MIGRATION

Note 1730806 - Potential data loss for write-optimized DSO

These Notes are still valid for the changeability of BW objects during upgrade.

Note 851449 - Changeability of BW objects during the upgrade

Note 780710 - Upgrade already running - you are not able to change objects

Note 458024 - BW objects cannot be processed (upgrade is running)

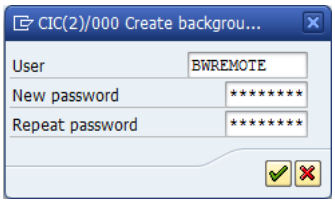
Note 337950 - Queries (and other objects) cannot be edited

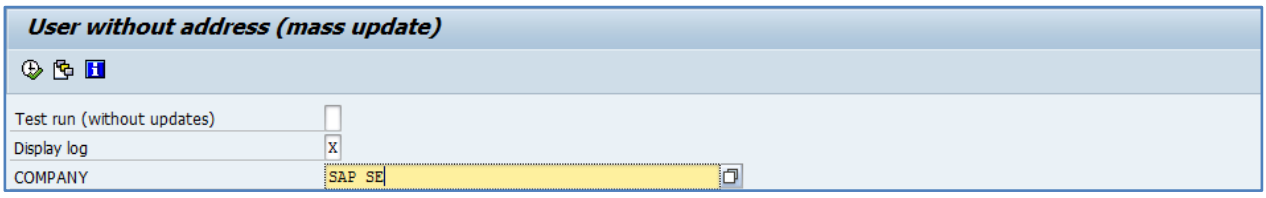
BW backend processing with DMO Procedure

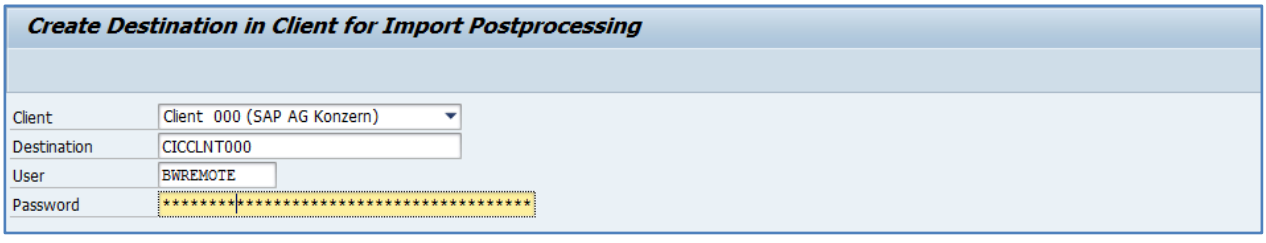
To create the user for BW backend processing, use transaction RSBWREMOTE to create the user **`bwremote`**. To enable the usage of the tasks lists during the SUM/DMO procedure you must setup in transaction RSTPRFC the RFC destinations for the BW clients for import post processing.

https://help.sap.com/viewer/93bea049296a41508d972e117149f784/7.5.13/en-US/4a795f6749196b70e10000000a42189c.html

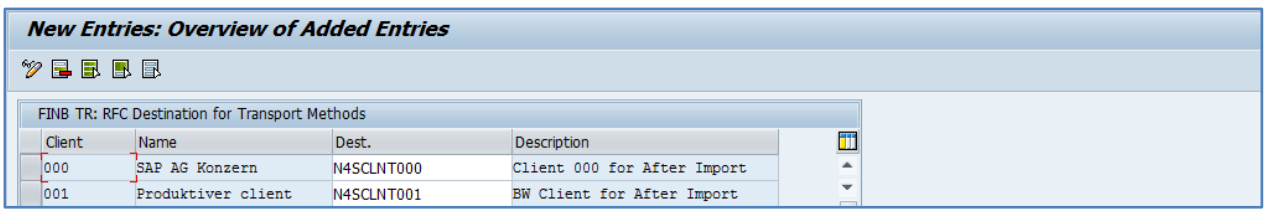
Transaction SPRO ➔ F5 ➔ Business Intelligence ➔ Transport Settings ➔ Create Destination for ...







Furthermore, make sure that the password you choose here is the correct one. In advance check with Transaction SU01 the correct password. At the end of the DMO procedure the program RS_UPG_TOOL_HMW is also using this destination. The password of BWREMOTE must be correct.



After this use the Transaction FINB_TR_DEST to create RFC Destinations for Transport Methods. This will prevent additional errors in the Phase MAIN_NEWBAS/XPRAS_AIMMRG.

Additional Notes for optimizing the phase MAIN_NEWBAS/XPRAS_AIMMRG:
Note 1649901 - Time-critical processes in BW upgrade/Support Package import

Note 1668456 - DTP: Error msg RSO851 during upgrade or Content installation

Note 1701115 - Error in phase XPRA_* during sp update: Job RDDEXECL fails with SYNTAX_ERROR

Note 1801400 - Error FINB_TR 032 during upgrade in phase XPRAS_AIMMRG

Note 1813468 - Web Dynpro: Conversion for non-printable chars (NON-UNICODE)

Note 1835882 - Error in XPRAS_AIMMRG phase during EHP installation for BADI Multiple active imp.

Note 1894463 - Upgrade terminates with error RS0 871 or RS0 876

Note 1975065 - Termination in XRPA RS_TCO_ACTIVATION_XPRA in non-SAP-BW systems

Note 2279019 - Dump SYNTAX_ERROR during MAIN_NEWBAS / XPRAS_AIMMRG phase

Note 2769345 - "No field was selected from communication structure" occurs during the ERP upgrade

Note 2890515 - SYNTAX ERROR in MAIN_NEWBAS/XPRAS_AIMMRG phase of upgrade

Note 2986755 - Activation of BC Set end up in recursion when there are follow on BC Sets

Note 2997112 - Error reported in XPRAS_AIMMRG during report RSD_XPRA_REPAIR_0TCTIOBJVL_740

3.2 Unicode preparations for the DMO Procedure

Note 2631098 - Database Migration Option (DMO) of SUM 1.0 SP23

Note 1968508 - Release Change & Single Code Page Conversion to Unicode with DMO

The mentioned SAP Note above contains an unicode conversion guide together with the DMO procedure.

If your Source System based on SAP BW is already on unicode (UC) you can skip this Chapter. Nevertheless, running the reports mentioned in the following SAP Notes is for your reference.

Note 1784377 - Checking pool tables and cluster tables

Note 1807959 - Improved versions of reports SDBI_POOL_CHECK and SDBI_CHECK_BCD_NUMBERS

Note 2462824 - DMO: "sql error -10802" occurred during phase PARCONV_UPG

Note 2227432 - How to: Declustering and depooling with NW 7.4 SP03 and higher on databases other than SAP HANA

In all other Systems based on SAP BW 7.0x and BW 7.3x must run the Transaction SPUMG first to prepare the existing data for the unicode conversion. For these Systems, the complete and successful preparation with SPUMG is a mandatory step.

The Transaction SPUMG is a complete set of preparation modules which can run independently from the other preparation steps. SAP BW contains only one Code page and almost all the ABAP coding (might include customer coding) is already UC enabled since NetWeaver Release 6.20 and onwards.

The Reason for this is the fact, that existing data must be prepared for the conversion while the new data which comes with the upgrade process must be merged within the DMO process to enable the UC conversion during the parallel export and import phase with R3load.

The following Notes contains detailed Guides for the usage of SPUMG for every NetWeaver Release based on 7.0x and 7.3x. These guides are optional, as a specific guide for DMO is attached to SAP Note 1968508

Note 1051576 - Conversion of Single Code Page Systems to Unicode

Note 2108396 - SUM DMO with Unicode Conversion: R3load requirements

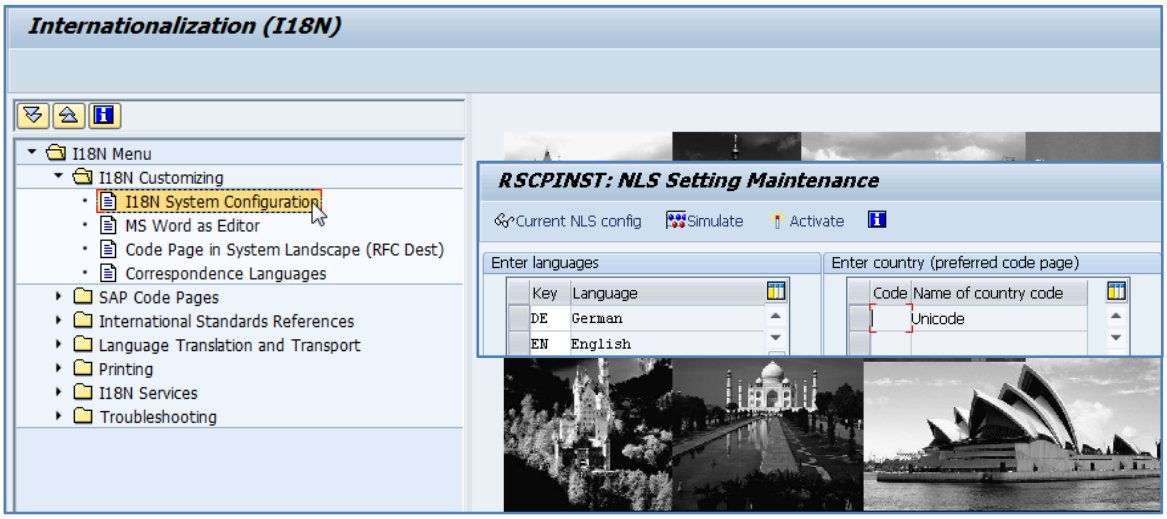
check for corrections of SPUMG and additional preparation steps

Note 662215 - SPUMG and SUMG in Basis Release 6.20, 6.40 and 7.0X

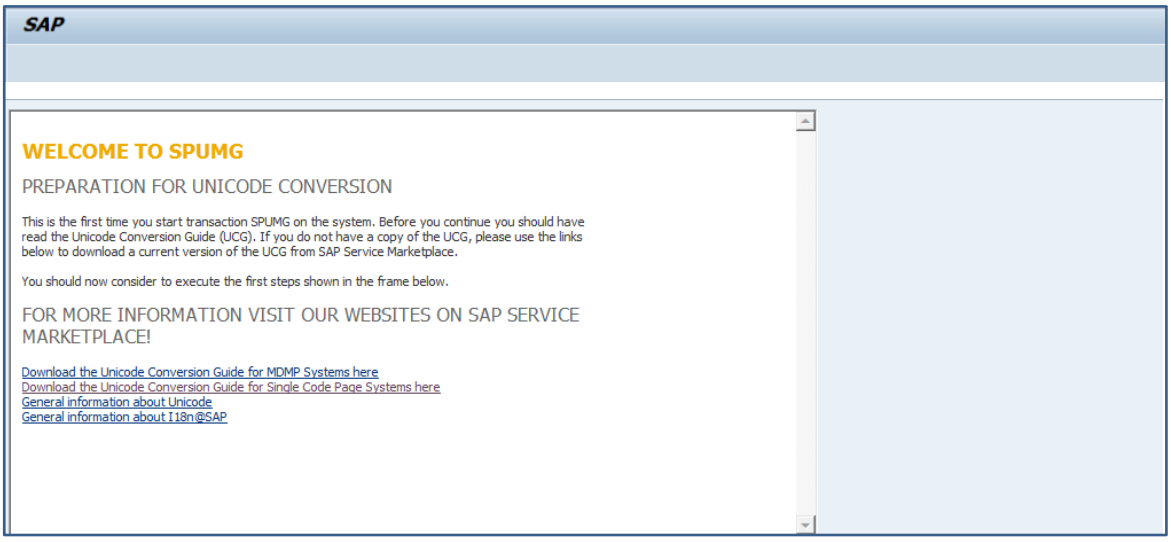
Note 1457258 - Correction instruction for the Additional Preparation Steps

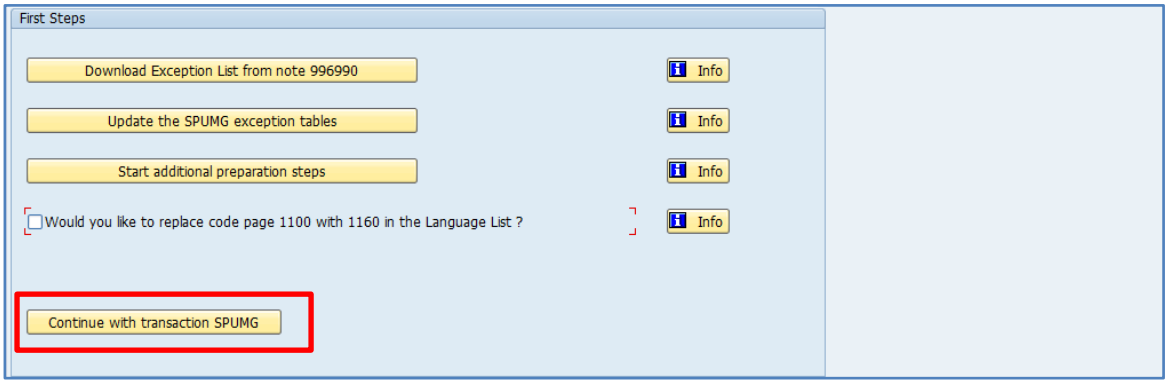
Note 1319517 - Unicode Collection Note

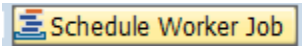
In addition, check with Transaction I18N the RSCPINST settings



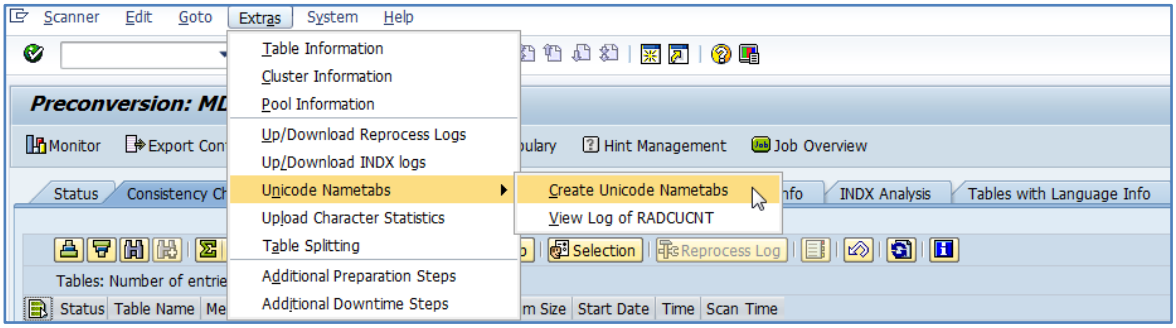
Starting Transaction SPUMG the first time (follow the first steps)





SPUMG after running the pre-checks (UMG-PIMG_WORKER_JOB_1) 

Running the "Create Unicode Nametabs" Job (UMG_PMIG_NTAB_JOB)



Additional troubleshooting Notes

Note 765475 - Unicode Conversion: Troubleshooting (contain a troubleshooting guide)

Note 837173 - RADCUCNT in Unicode Conversion: Collective Note

Note 932779 - Unicode conversion - analysis of nametab problems

Note 1933582 - Data has errors after conversion of cluster table or pool table

Note 2183530 - Extended log of RADCUCNT report in SUM DMO with Unicode conversion

3.3 The DMO Procedure in Detail

Phase Extraction (1)

After you start the Software Update Manager (SUM), specify the correct **`stack.xml`** file.

Please note: the following directories are selected by default.
- SUM root directory: `/usr/sap/<SID>/SUM`
- Download directory: `/usr/sap/<SID>/download`

If you want to use a different location for the SUM directory, you must specify this in the Instance Parameter **`DIR_PUT`** and restart the server. Otherwise the Parameter will be set automatically.

If the path to the SUM directory is longer than 25 characters, you can move the SUM directory to a shorter path as well.

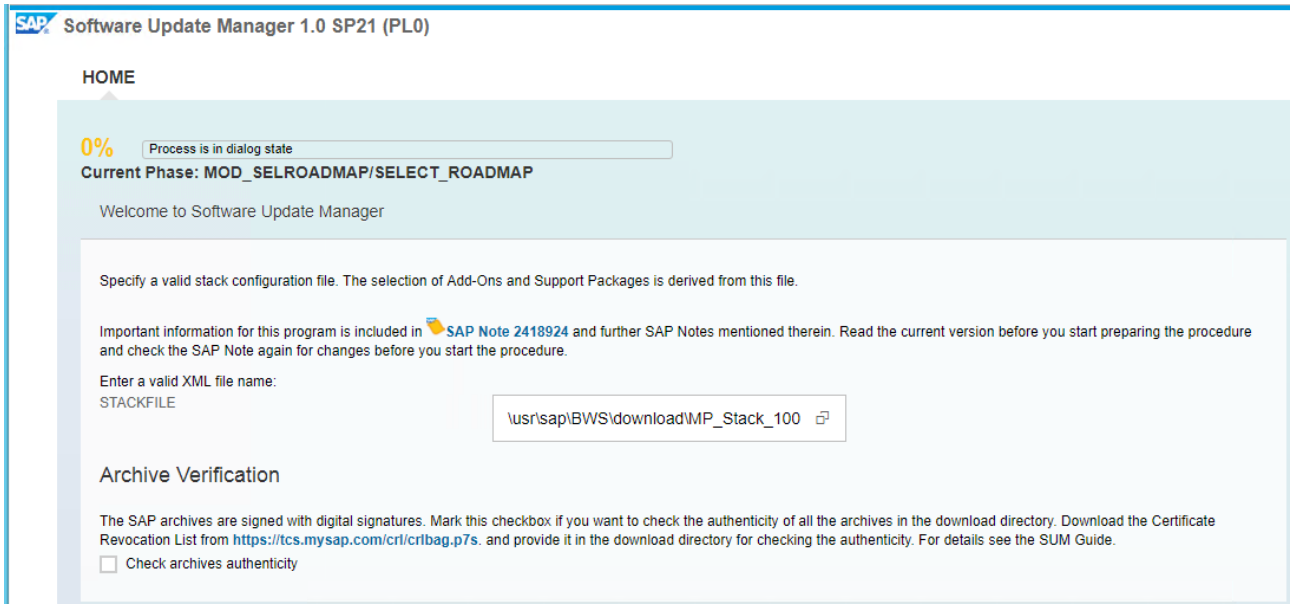
The Download Directory is the location where the **`stack.xml`** is resided including all additional needed files during the SUM/DMO process. On Win64 based systems remain to the default download directory to avoid ACL errors in the phase **`EHP_INCLUSION`**.

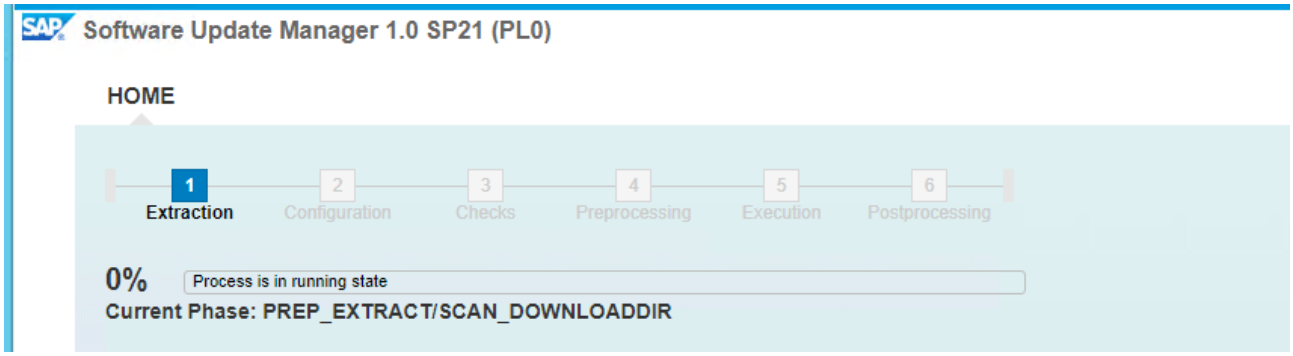
Unpack the SUM 2.0 SP04 or higher file as follows:

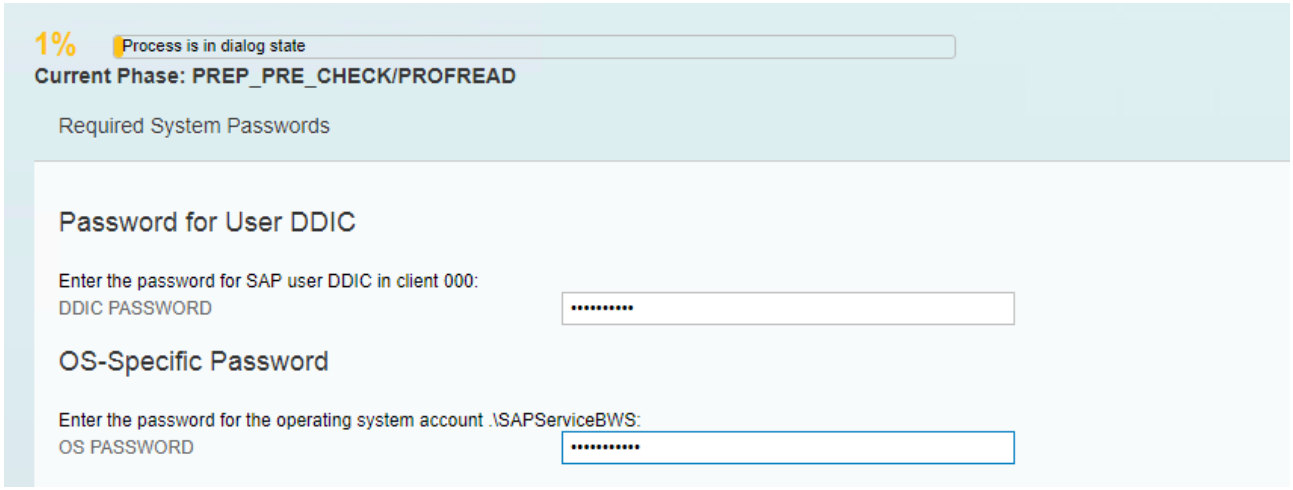
`/usr/sap/<SID>/`**`SAPCAR -xvf SUM20SP04_2-80002456.SAR`**

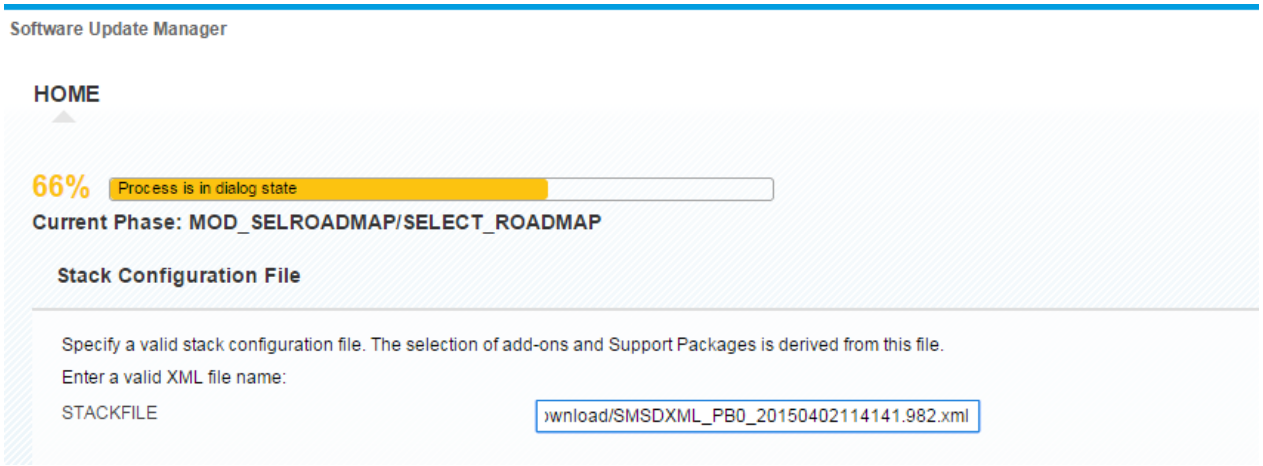
Start the SUM/DMO UI with the following URL:

Example:
http://<server>.wdf.sap.corp:1128/lmsl/sumabap/<SID>/doc/slui/









Phase: 1 0% select STACK CONFIGURATION FILE

Location of the **`stack.xml`** file:

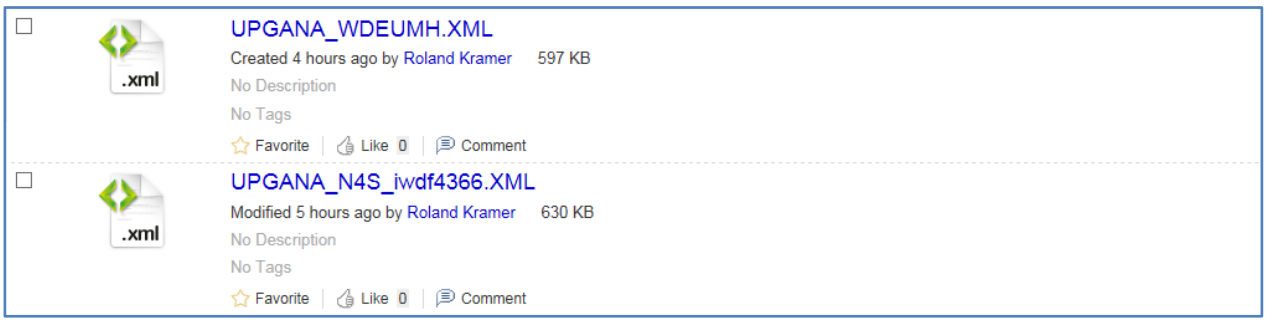
`/usr/sap/<SID>/download/SMSDXML_<SID>_<date><time>.xxx.xml`
`/usr/sap/HBD/download/SMSDXML_HBD_20150609151427.762.xml` (path valid also for Win64)

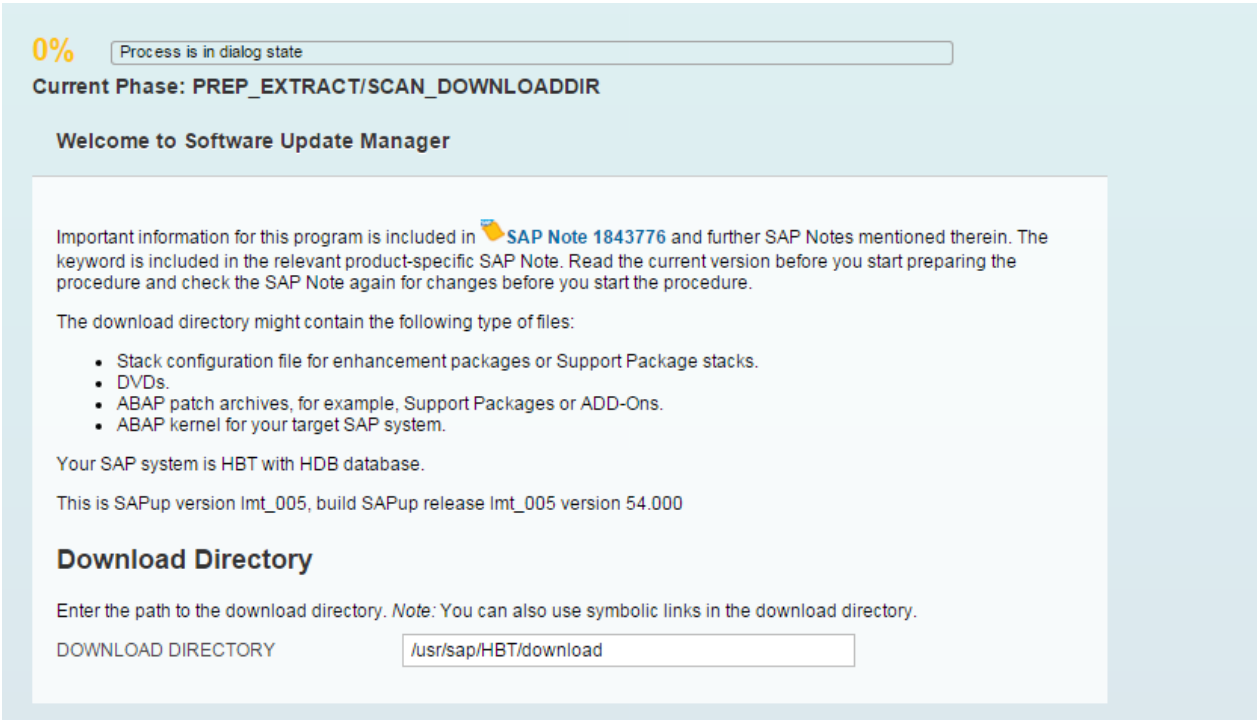
By selecting the **`stack.xml`** you define the download directory, where all necessary files, support packages, updates, etc. can be found for the following phases. The **`stack.xml`** cannot be loaded from a local destination.

In addition, provide any updated files here as well, e.g. SAPCryptoLib, ST-A/PI, Kernel, etc. which are not collected by the **`stack.xml`**.

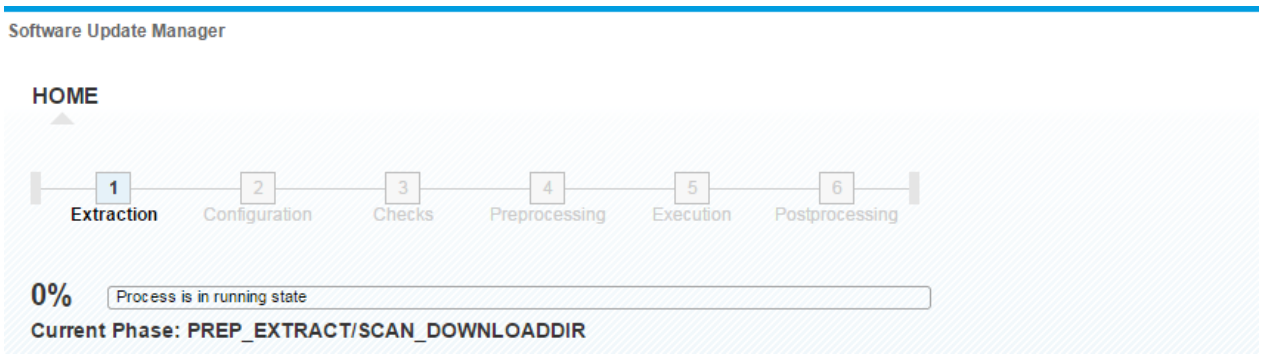
If you already have executed several SUM/DMO runs you can place the existing UPGANA.xml files into the `download` directory as well. This allows the DMO process to calculate the different Phases more precisely, especially the comparison between long and short runtimes Phases (e.g. TABIM_UPG vs. xyz)

Phases marked with "R3trans depending" are directly performance relevant, so make sure that you specified the maximum R3trans process possible, or move the CI (temporary) to the HANA server before you start the DMO process - http://scn.sap.com/docs/DOC-59250

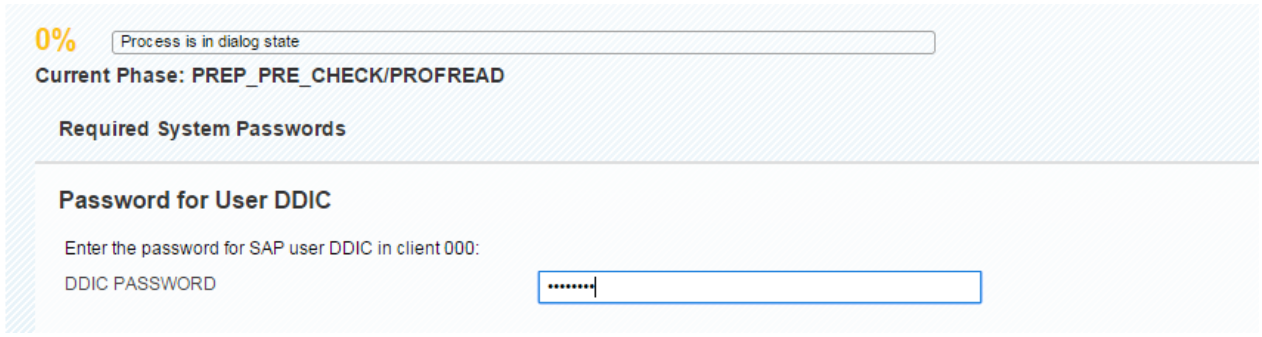




Phase: 2 0% PREP_EXTRACT/SCAN_DOWNLOADDIR

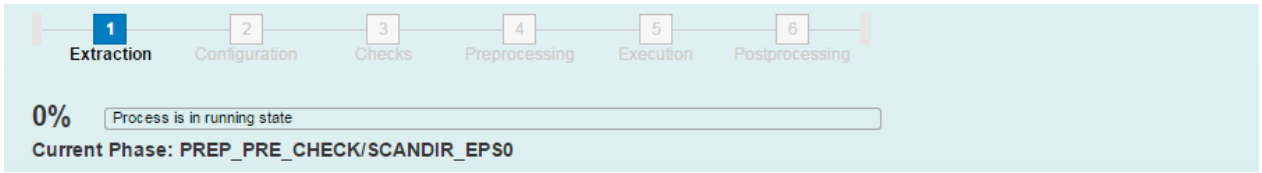


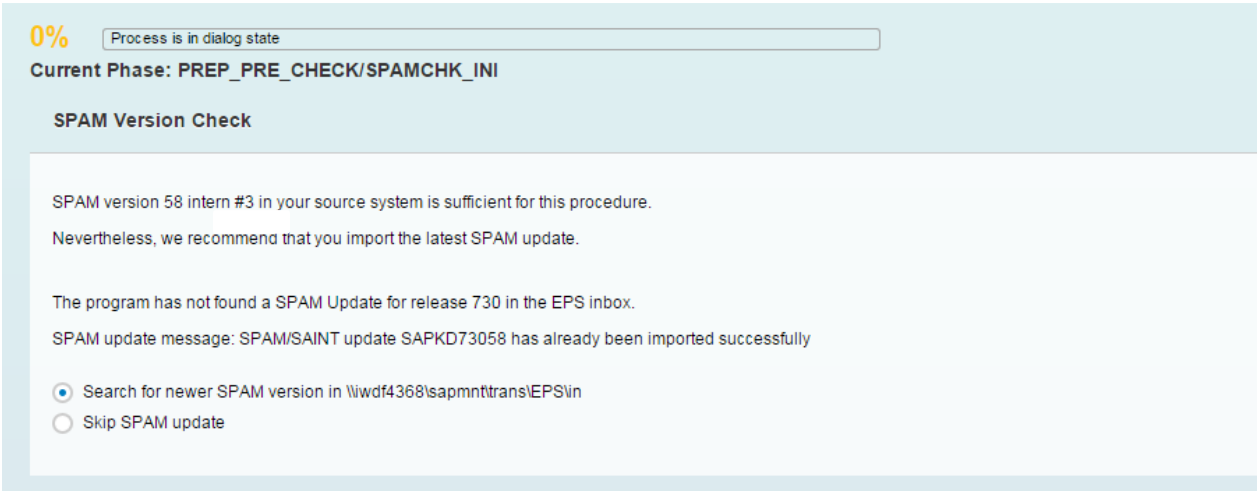
In this phase the download directory must be already available, as all needed files are extracted to **`/usr/sap/trans/EPS/in`**



Phase: 3 0% PREP_PRE_CHECKPROFREAD

For a better overview you can always open the "TASKLIST" on the right side of the UI.





Phase: 4 0% PREP_PRE_CHECK/SPAMCHK_INI

In case you didn't apply the latest SAPM update, yet you will be asking to install the latest Version for your NetWeaver Release. Current Version is 0061 (06/2016).

Note 1828915 - Upgrade stops in MOD_INSTNR_PRE phase

Note 1933892 - Checks after phase MAIN_NEWBAS/JOB_RSINDCHK were negative!

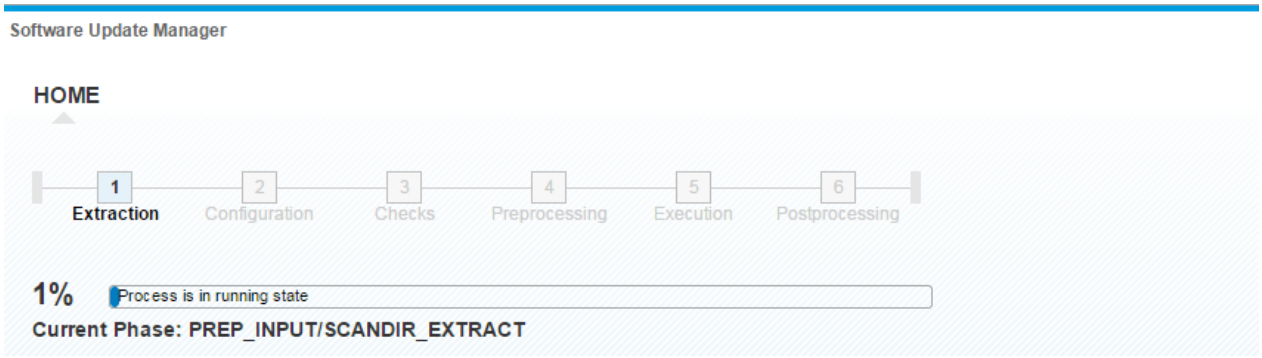
Note 2144370 - Error in SUM phase MAIN_SHDIMP/SUBMOD_SHDIMP/SHADOW_IMPORT_INC

Note 2050846 - Error in phase MAIN_SHDINST/SUBMOD_SHDALIASCRE/EU_CLONE_CRE_SHDVIEWS using DMO option of SUM

If there is NetWeaver 7.30 as Start for the DMO procedure, the NetWeaver 7.40 SR1 export DVD must be available in the download location. Please Note, that the MOPz process only selects only the delta files after the availability of the NetWeaver 7.40 SR1. The created stack.xml file will recognize this correctly.

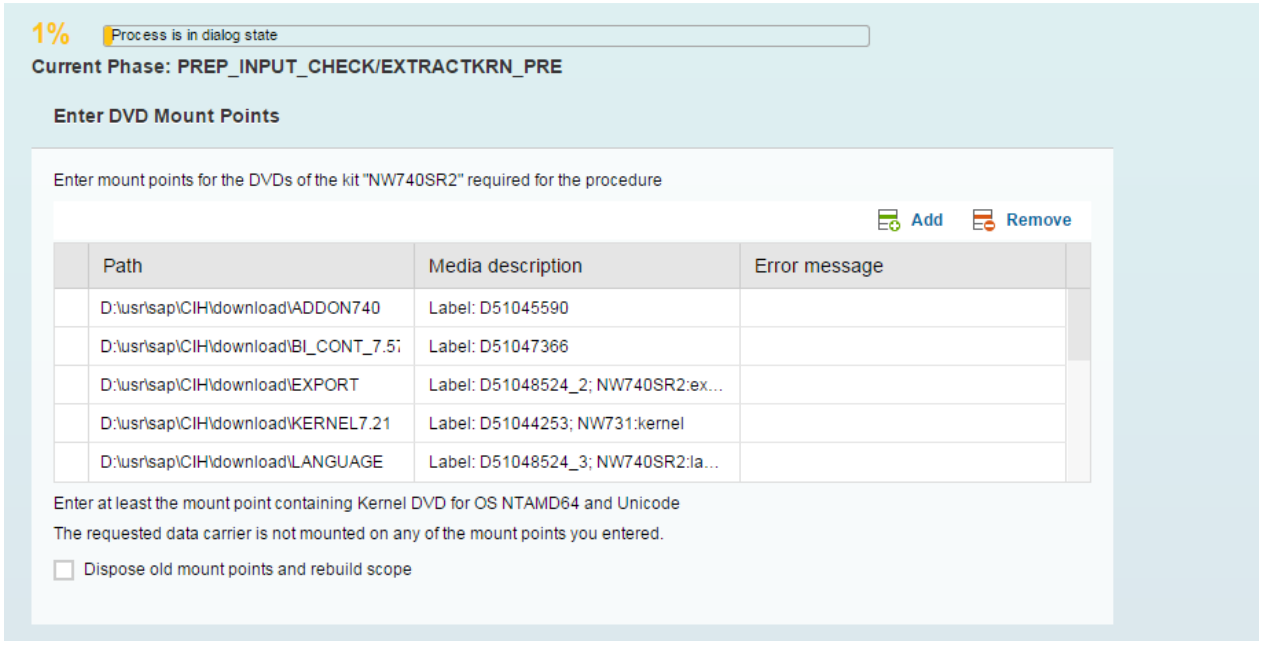
If you are running the DMO procedure between 7.40 SR1 (based on SP05) and 7.40 SR2 (based on SP08) you have to create for the RDBMS Oracle and DB6 an additional table space called PSAP<SID>740X for the exchange of the complete ABAP source. In this context you also have to consider the SAP Note

Note 1819182 - Tables (TTREE*) remain in old exchange table space



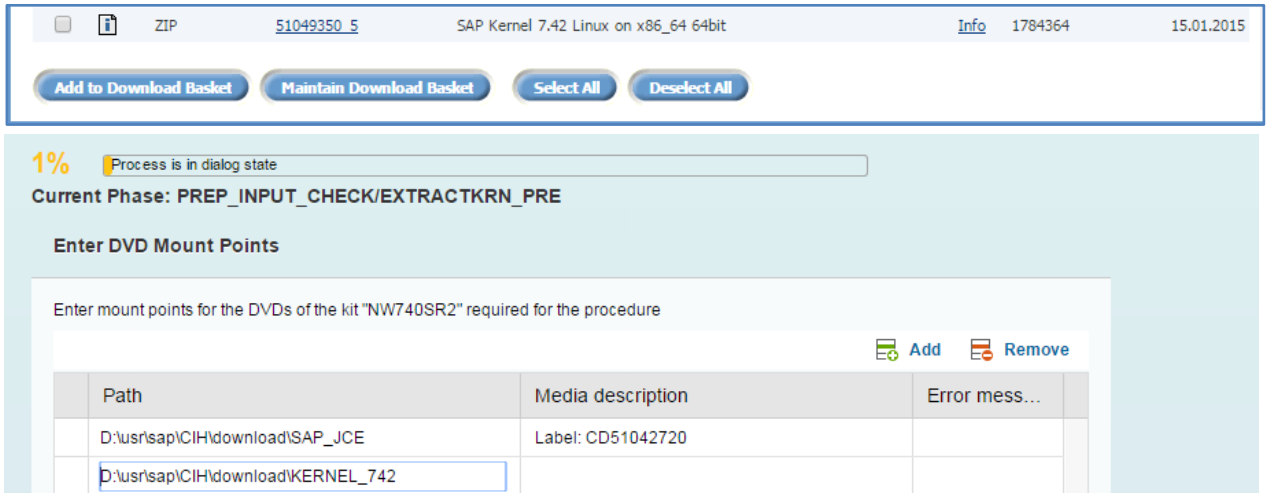
Phase: 5 1% PREP_INPUT/SCANDIR_EXTRACT

In this phase the download directory is checked for the Kernel archives. You can also copy newer *.SAR packages to the directory. The SUM/DMO process will always recognize the latest file and, if your source kernel is higher than in the scan directory.

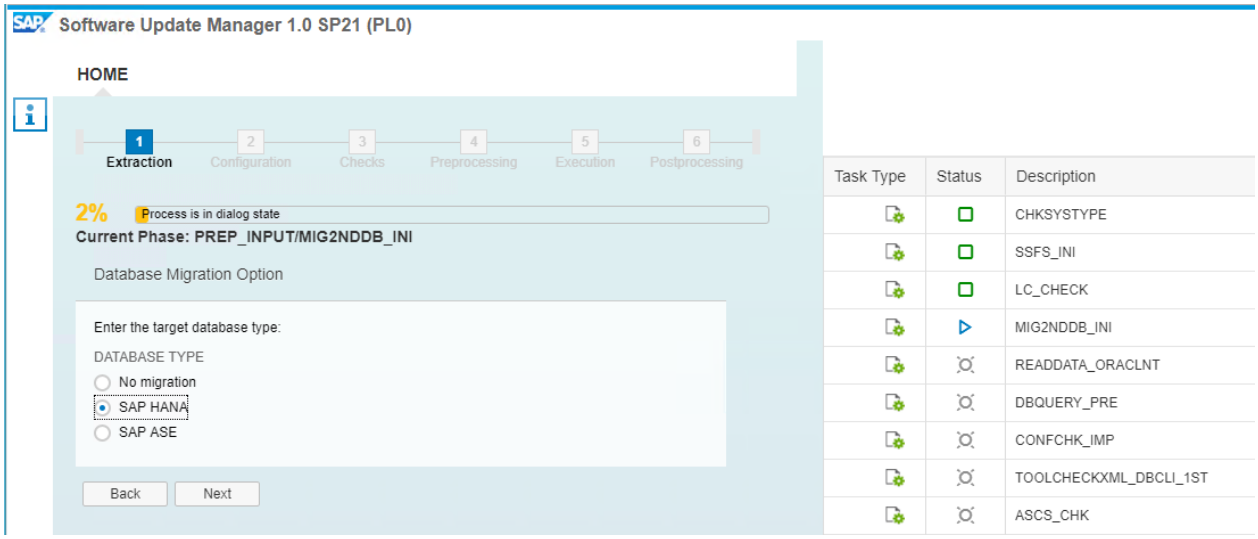


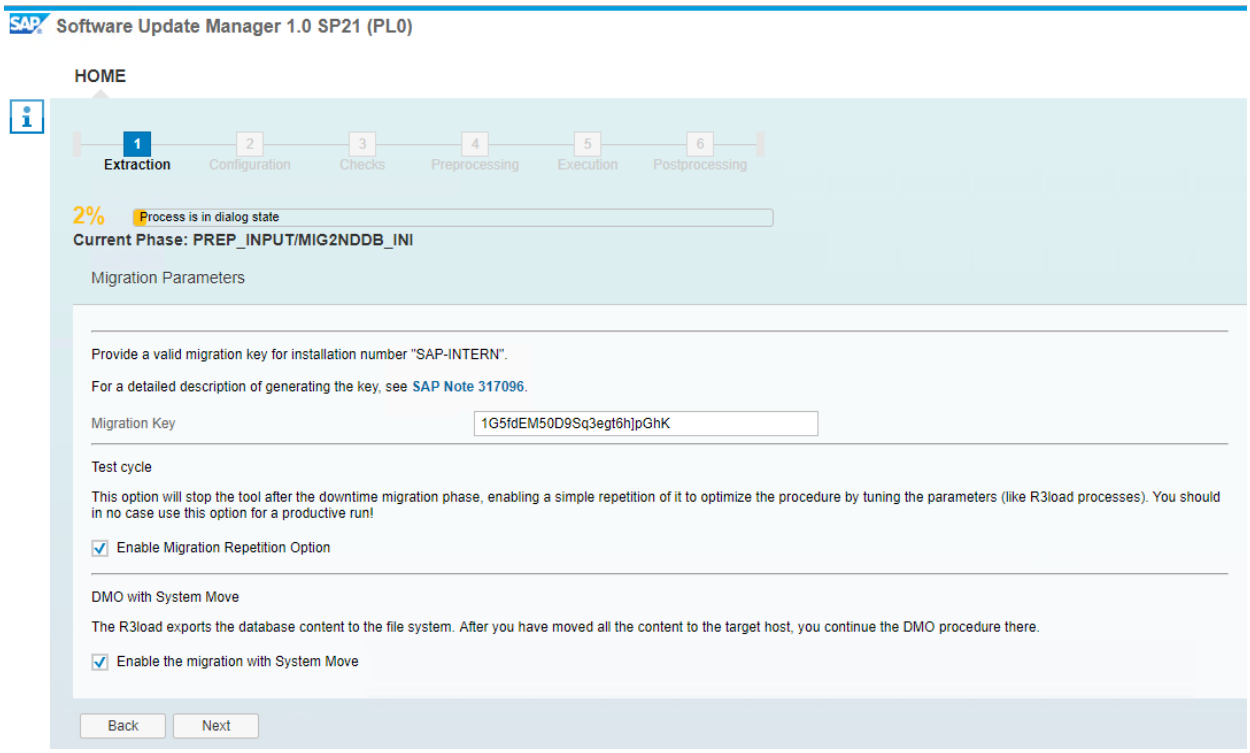
Phase: 6 1% PREP_INPUT/EXTRACTKRN_PRE

In this case the DVD for the Kernel 7.42 is not found in the SUM/download directory.



Phase: 7 1% PREP_INPUT/EXTRACTKRN_PRE - Kernel 7.42 DVD





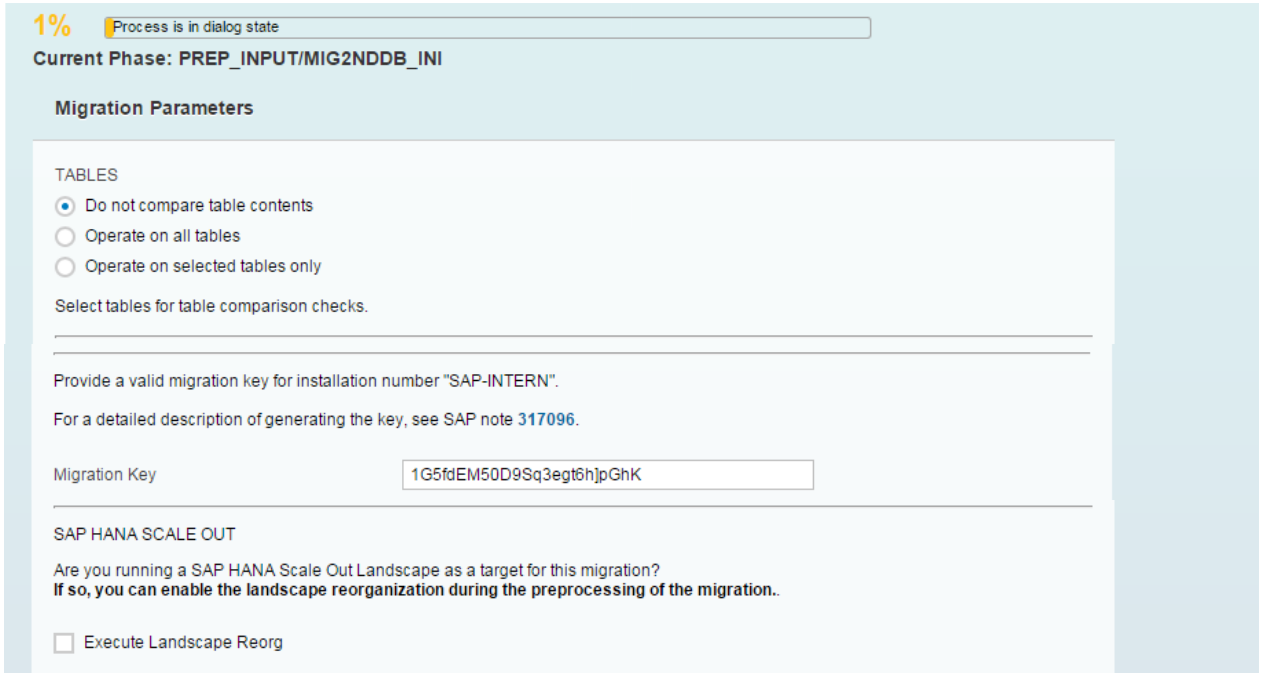
Phase: 8 1% PREP_INPUT/MIG2NDDB_INI - choose DMO

Check the log MIG2NDDB_INI.LOG to make sure your database is supported for the DMO procedure.
Note 1134948 - ABAP Migration Key for special installation numbers

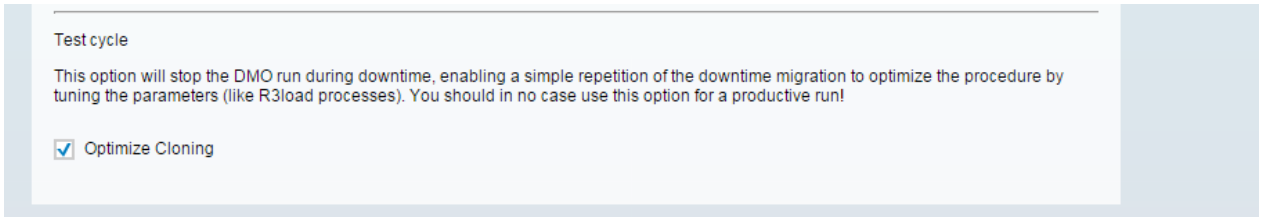
Migration key `1G5fdEM504qSq3egt6h]pGhK` for instance number **`SAP-INTERN`** lasts until 2020/12/31

The CHECKS.LOG can be checked by clicking "LOGS" on the right side of the UI.

Leave the Option Execute Landscape Reorg unticked, if you are running on a single HANA node, otherwise allow DMO to prepare the Landscape reorg.

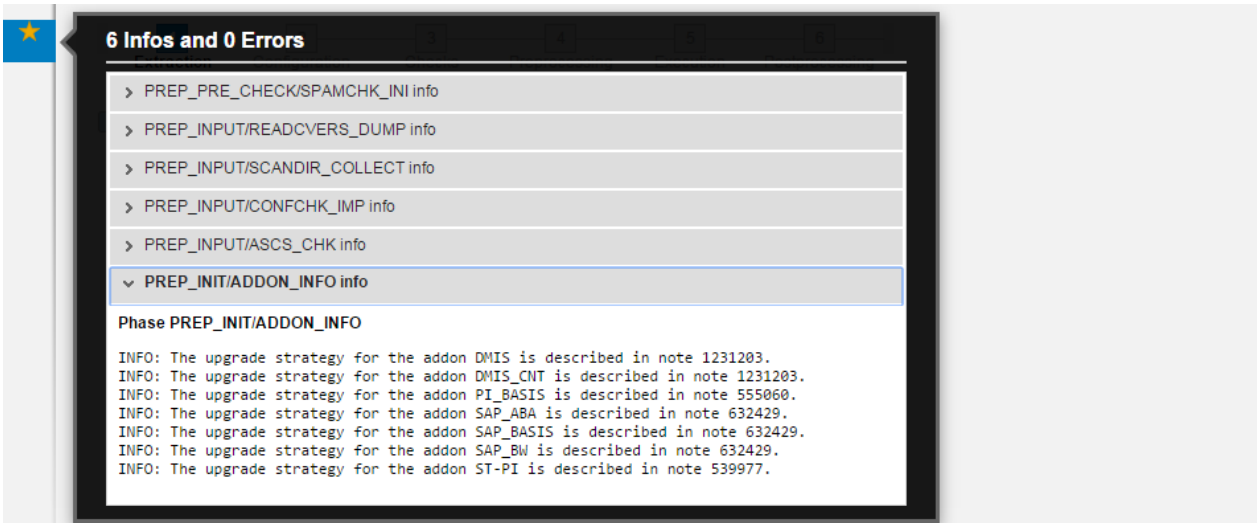


New with SUM SP14 - Introduce Test cycle option

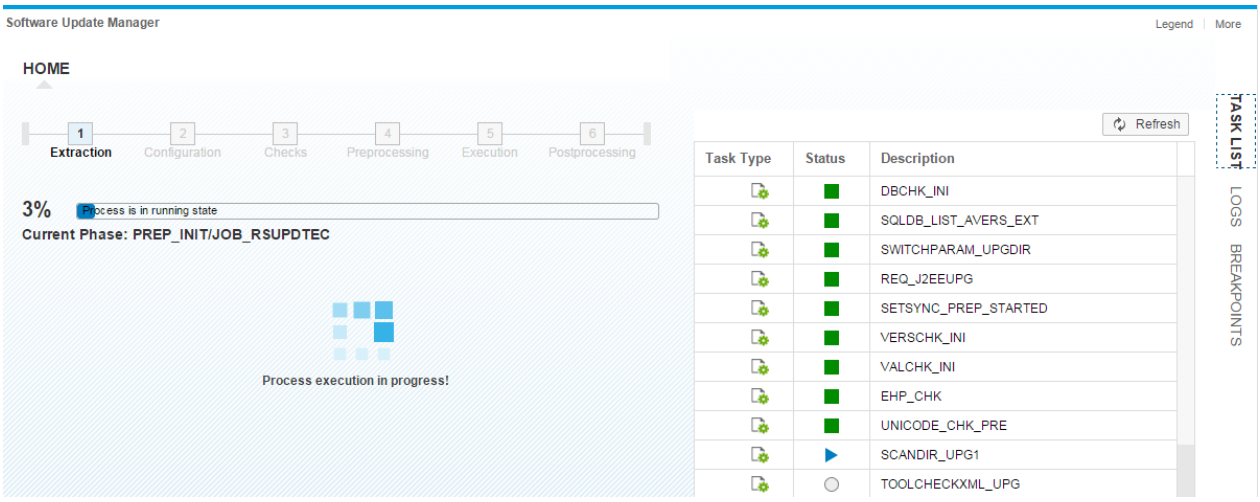


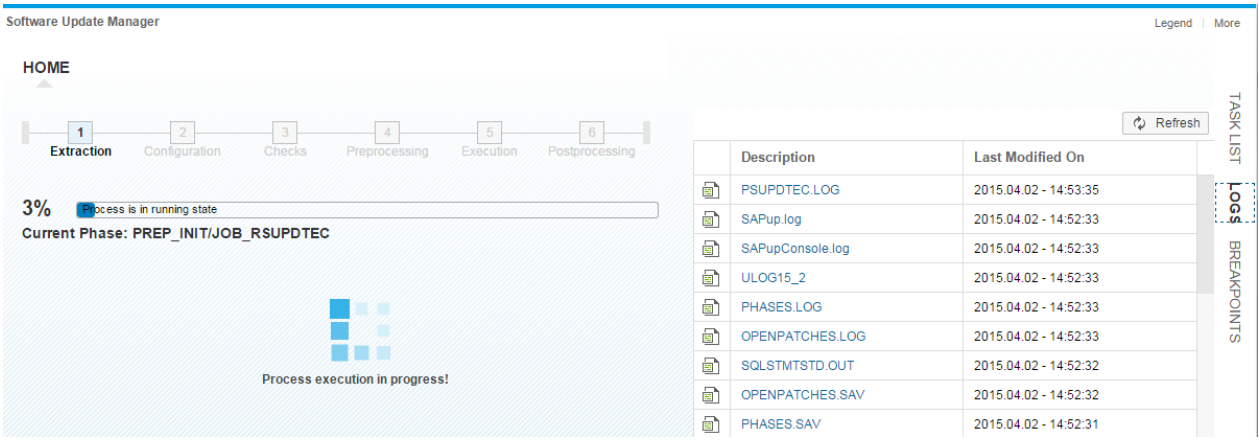
Phase: 9 1% PREP_INPUT/MIG2NDDB_INI - DMO choose options

By pressing refresh in the Browser, the overlaying CHECKS window will disappear, and you are back in the COCKPIT monitor. This is also suitable, when you have the following Pop-Up due to inactivity of the screen.

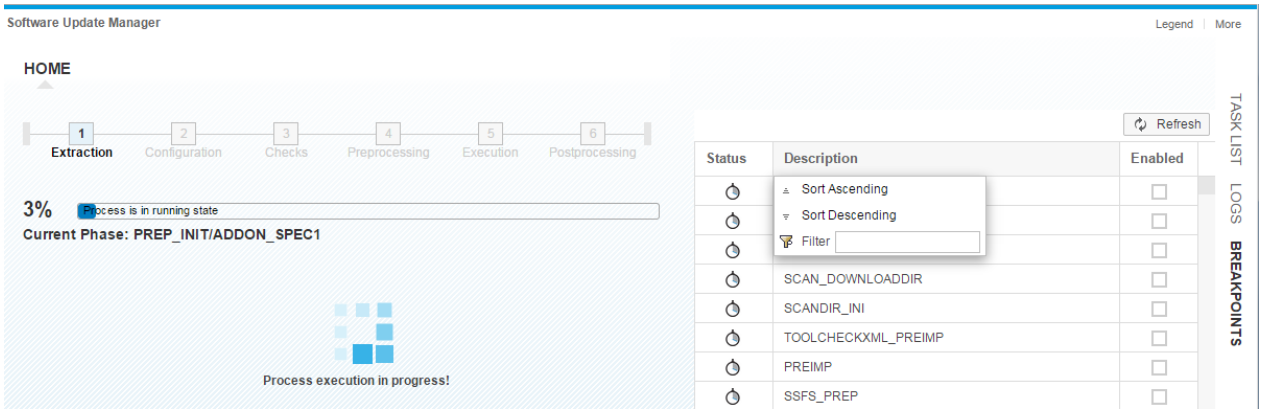


An error in the file CHECKS.log appears as a red flag in the “old UI”.



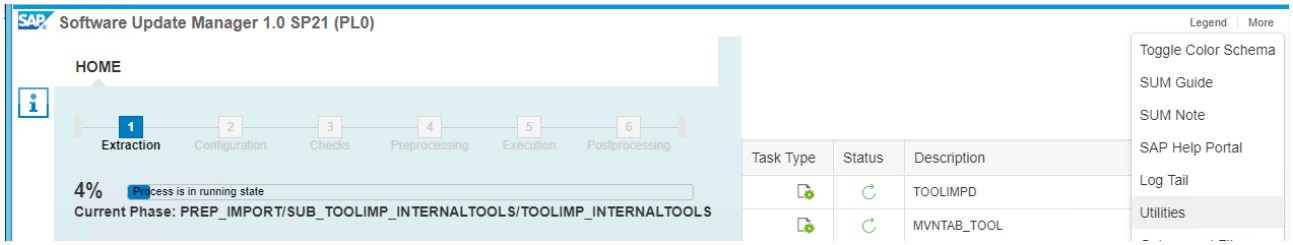


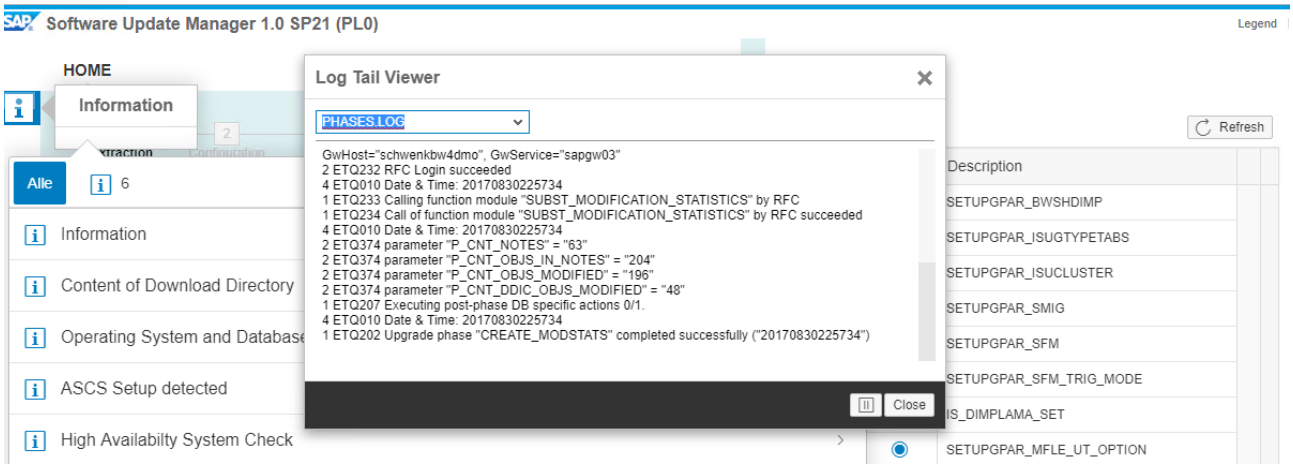
Setting explicit Breakpoints can be optimized by clicking into the column header and use the search.



By hoover the Mouse Pointer over the Phase Bar, automatically you will see the overall rumtime estimate of the DMO procedure (file **`SAPupStat.log`** constantly updated).

You can always open the current phase list on the right side of the UI for details.





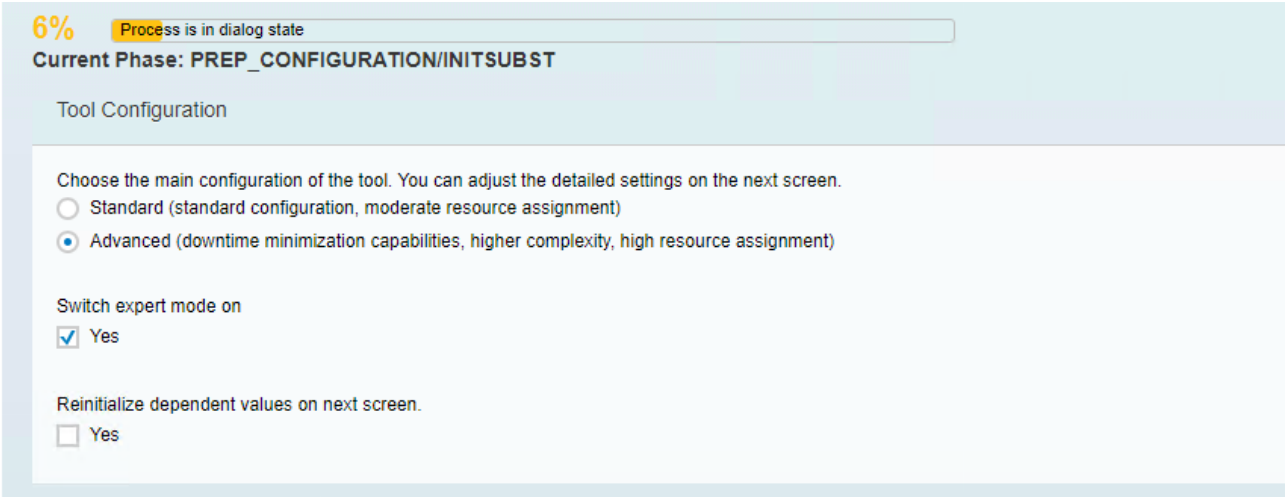
Legend details

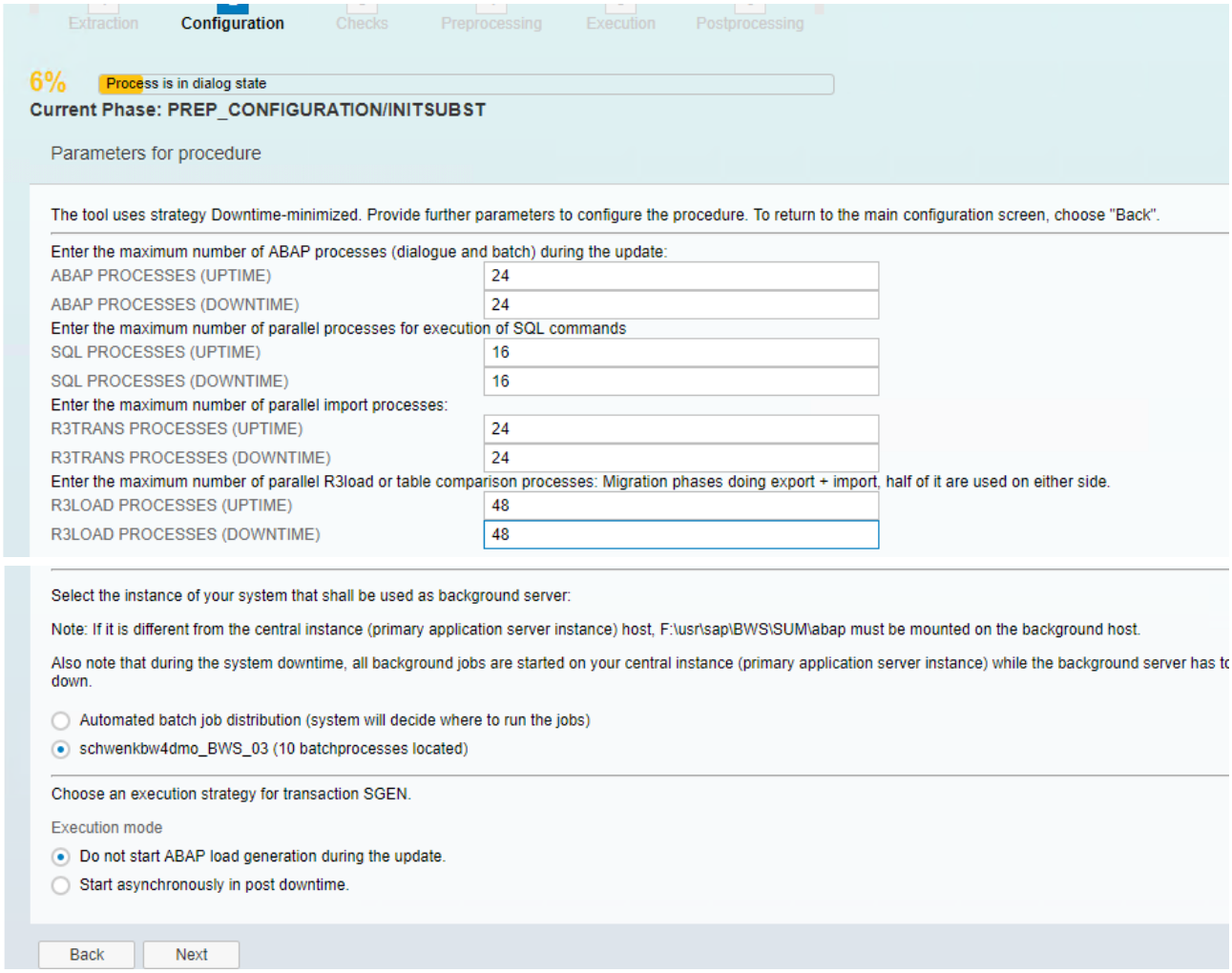
Status Icons		Type Icons		Breakpoint Status Icons		Log Formats	
Icon	Meaning	Icon	Meaning	Icon	Meaning	Icon	Meaning
	Initial Status		Process		Breakpoint is before the curren...		CSV
	Running status		Task		Breakpoint is at the current step		Generic Log Format
	Error status		Service		Breakpoint is after the current s...		HTML
	Waiting for user input		Technical Roadmap				Text
	Finished status						XML
	Aborted status						
	Skipped status						
	Action required status						
	Breakpoint status						

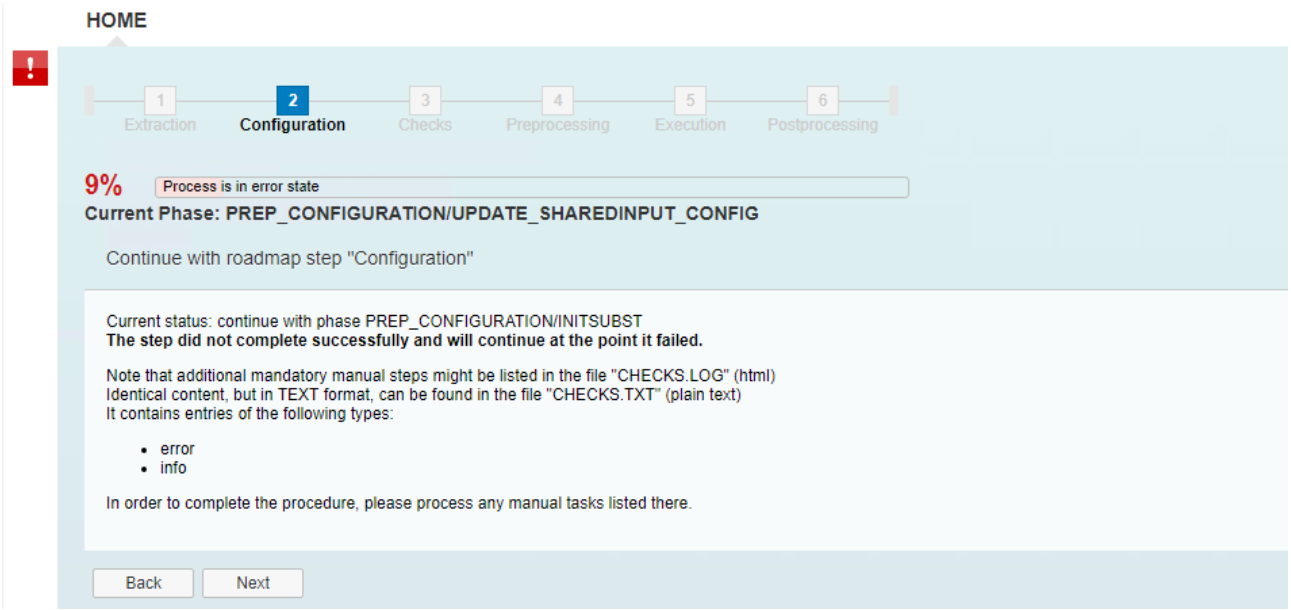
The new functionality Log Tail Viewer allows you to watch some important SAPup log permanently. Clicking on the active task opens the current Phase List Log.

PREP_INIT/ADDON_INFO TEXT

```
INFO: The upgrade strategy for the addon BI_CONT is described in note 1000822.
INFO: The upgrade strategy for the addon BI_CONT_XT is described in note 632429.
INFO: The upgrade strategy for the addon CPMBPC is described in note 1142913.
INFO: The upgrade strategy for the addon CTS_PLUG is described in note 632429.
INFO: The upgrade strategy for the addon DMIS is described in note 1231203.
INFO: The upgrade strategy for the addon FINBASIS is described in note 438520.
INFO: The upgrade strategy for the addon FSAPPL is described in note 983007.
INFO: The upgrade strategy for the addon FSCM_CCD is described in note 632429.
INFO: The upgrade strategy for the addon FSPOT is described in note 632429.
INFO: The upgrade strategy for the addon HANABPC is described in note 632429.
INFO: The upgrade strategy for the addon MDG_FND is described in note 632429.
INFO: The upgrade strategy for the addon PI_BASIS is described in note 555060.
INFO: The upgrade strategy for the addon POASBC is described in note 1511393.
INFO: The upgrade strategy for the addon SAP_ABA is described in note 632429.
INFO: The upgrade strategy for the addon SAP_BASIS is described in note 632429.
INFO: The upgrade strategy for the addon SAP_BS_FND is described in note 632429.
INFO: The upgrade strategy for the addon SAP_BW is described in note 632429.
INFO: The upgrade strategy for the addon SAP_GWFND is described in note 632429.
INFO: The upgrade strategy for the addon SAP_UI is described in note 632429.
INFO: The upgrade strategy for the addon SEM-BW is described in note 186299.
INFO: The upgrade strategy for the addon ST-A/PI is described in note 69455.
INFO: The upgrade strategy for the addon ST-PI is described in note 539977.
INFO: The upgrade strategy for the addon WEBCUIF is described in note 632429.
INFO: The upgrade strategy for the addon PCAI_ENT is described in note 632429.
INFO: The upgrade strategy for the addon
```





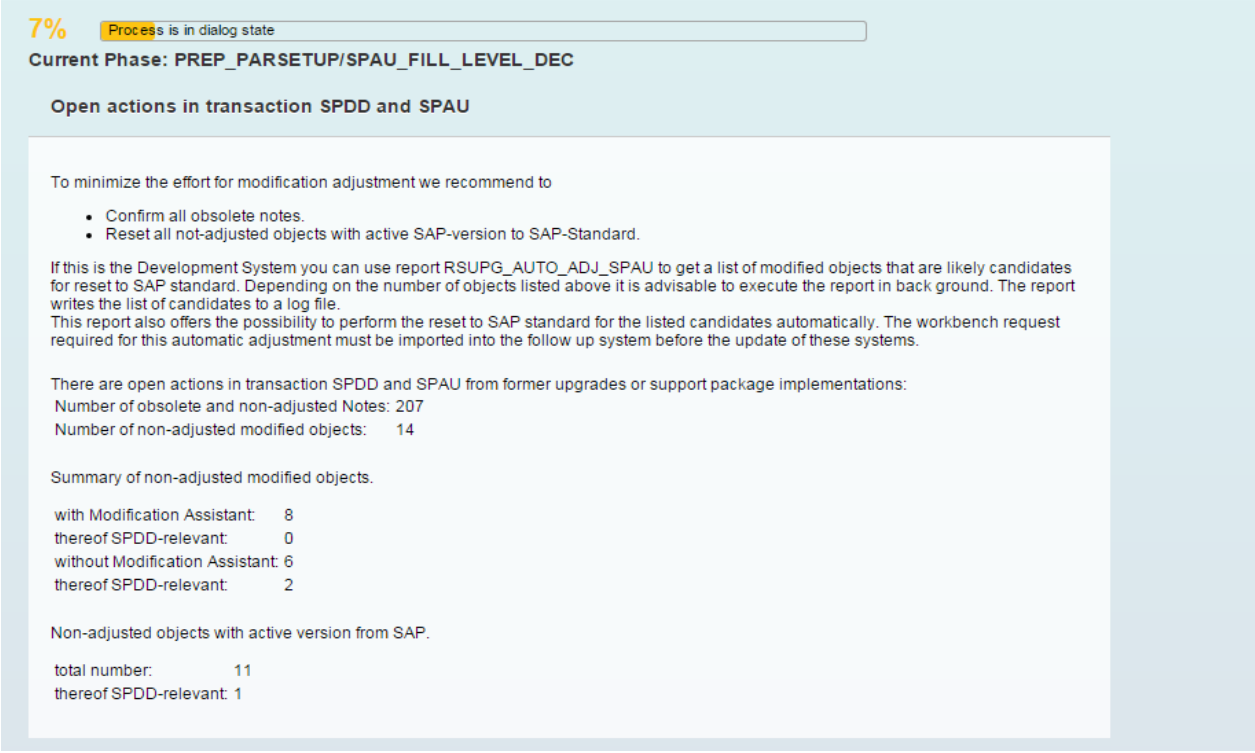


Phase 9: PREP_CONFIGURATION/UPDATE_SHAREDINPUT_CONFIG

The SAP Notes listed below contain corrections that are essential for a correct execution of the procedure. You can only continue with the procedure after you have implemented the SAP Notes.

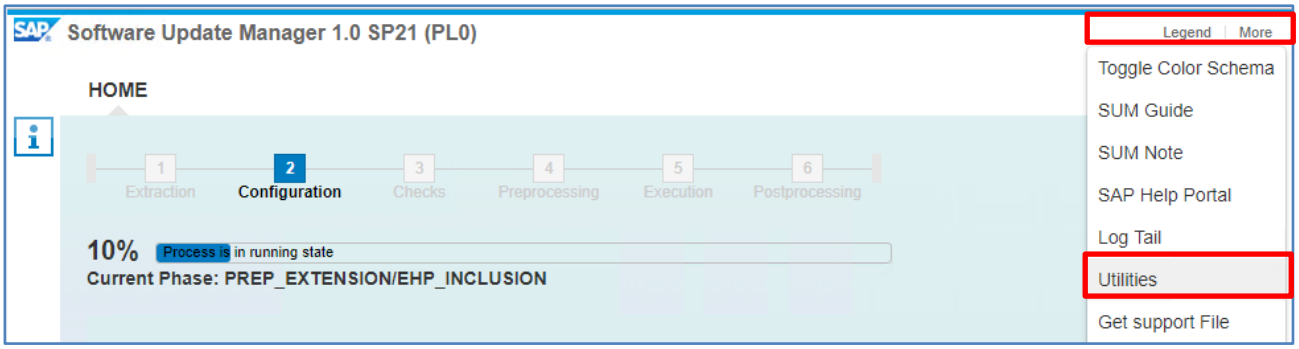
Use the Note Assistant to download the following SAP Notes and implement them if applicable. You can ignore notes that are classified as "cannot be implemented" or "obsolete" by the Note Assistant.

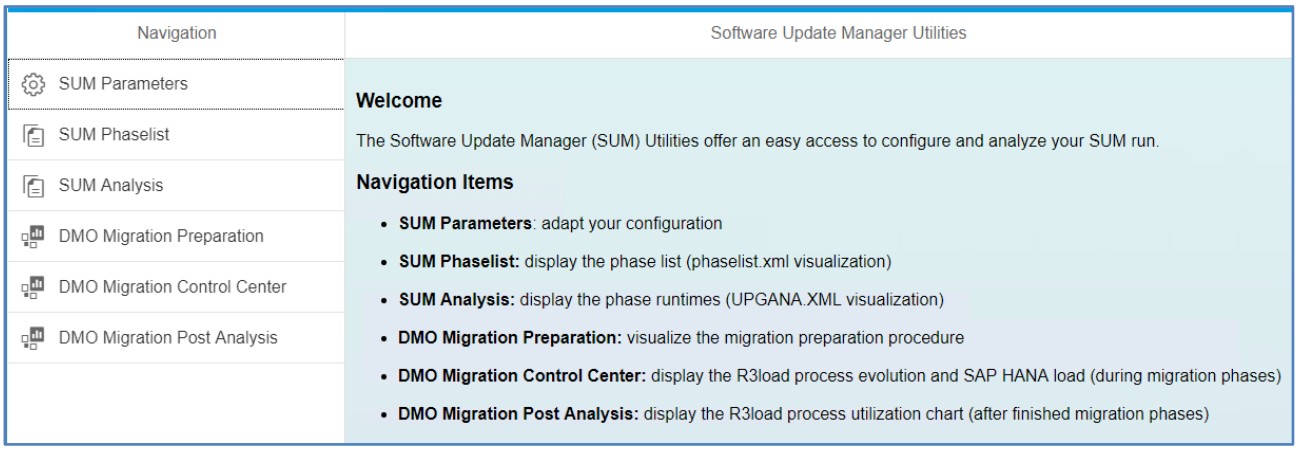
0001488040
0001680583
0001696748
0001797462
0001861585
0002045835
0002294460
0001994245
0002091348
0002311092
0001667685
0002344014
0002408559
0002122333

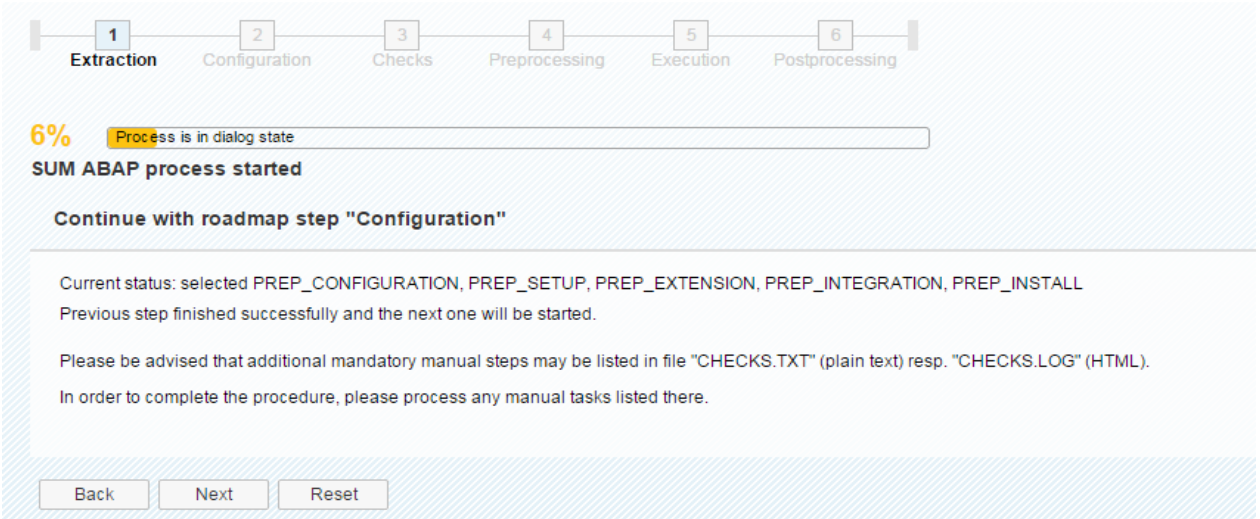


Phase: 10 6% - PREP_PARSETUP/SPAU_FILL_LEVEL_DEC

The SUM utility UI can be opened via the drop-down menu in the upper right corner.

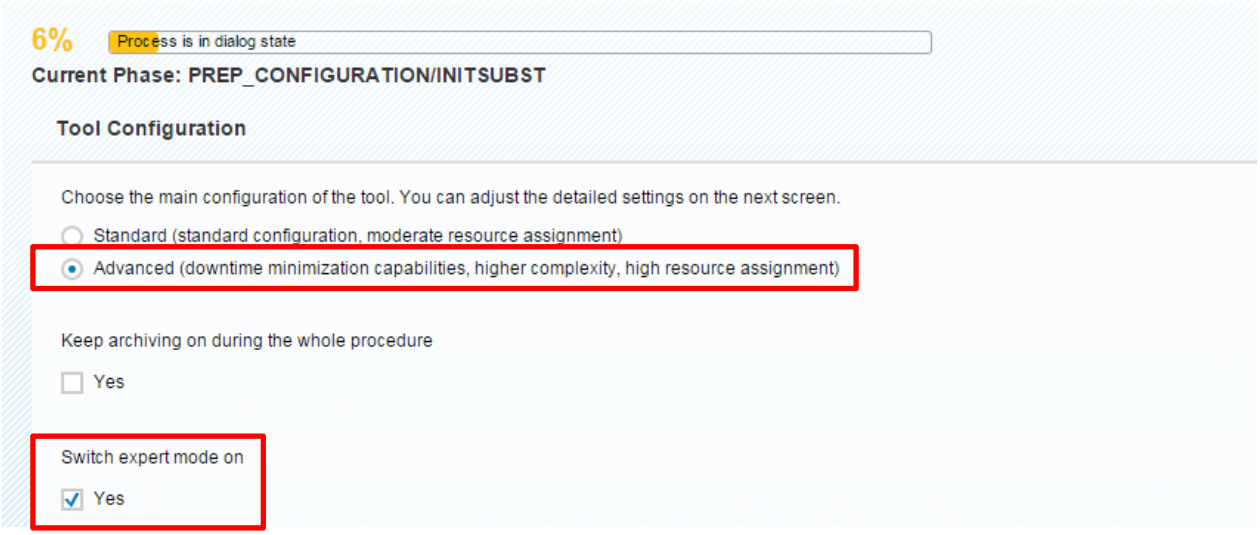




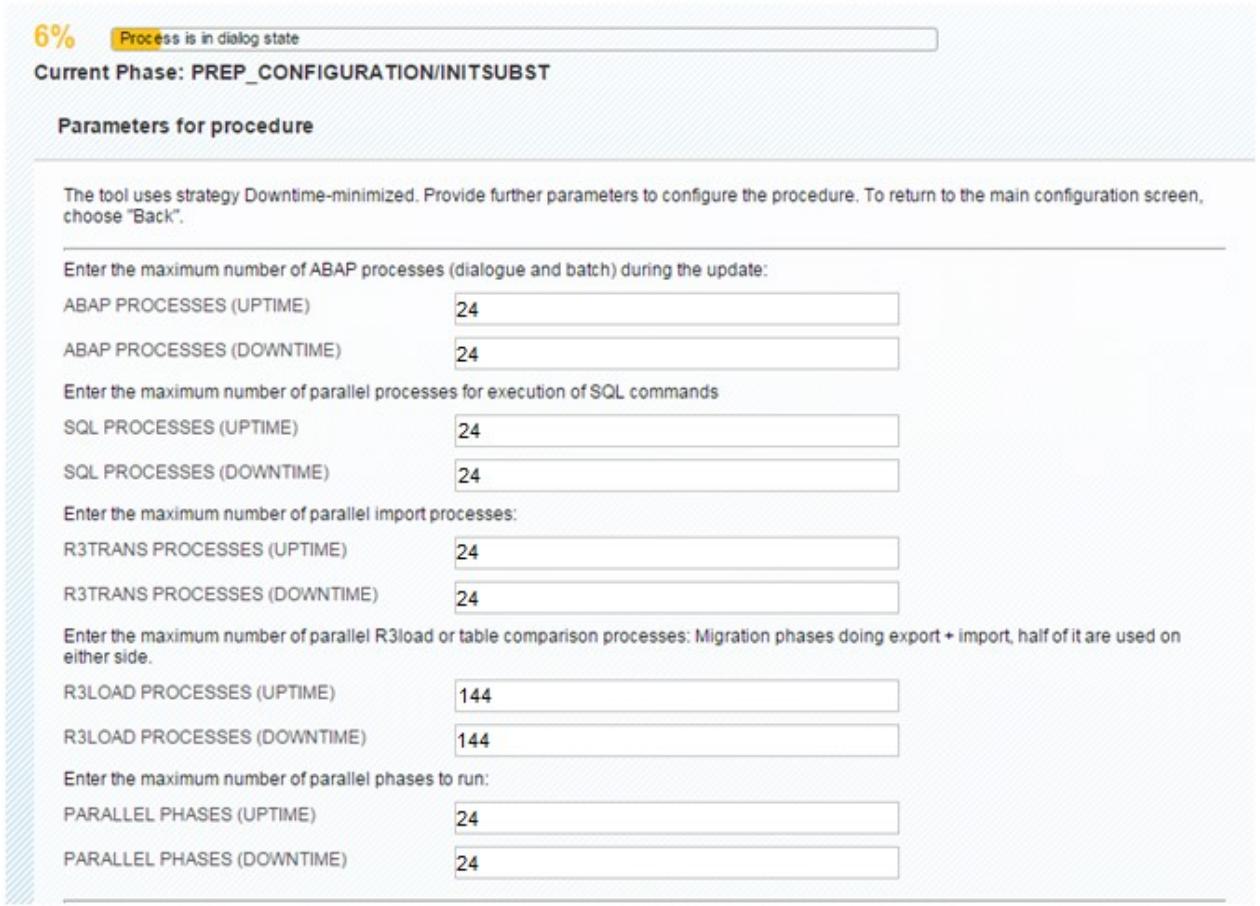


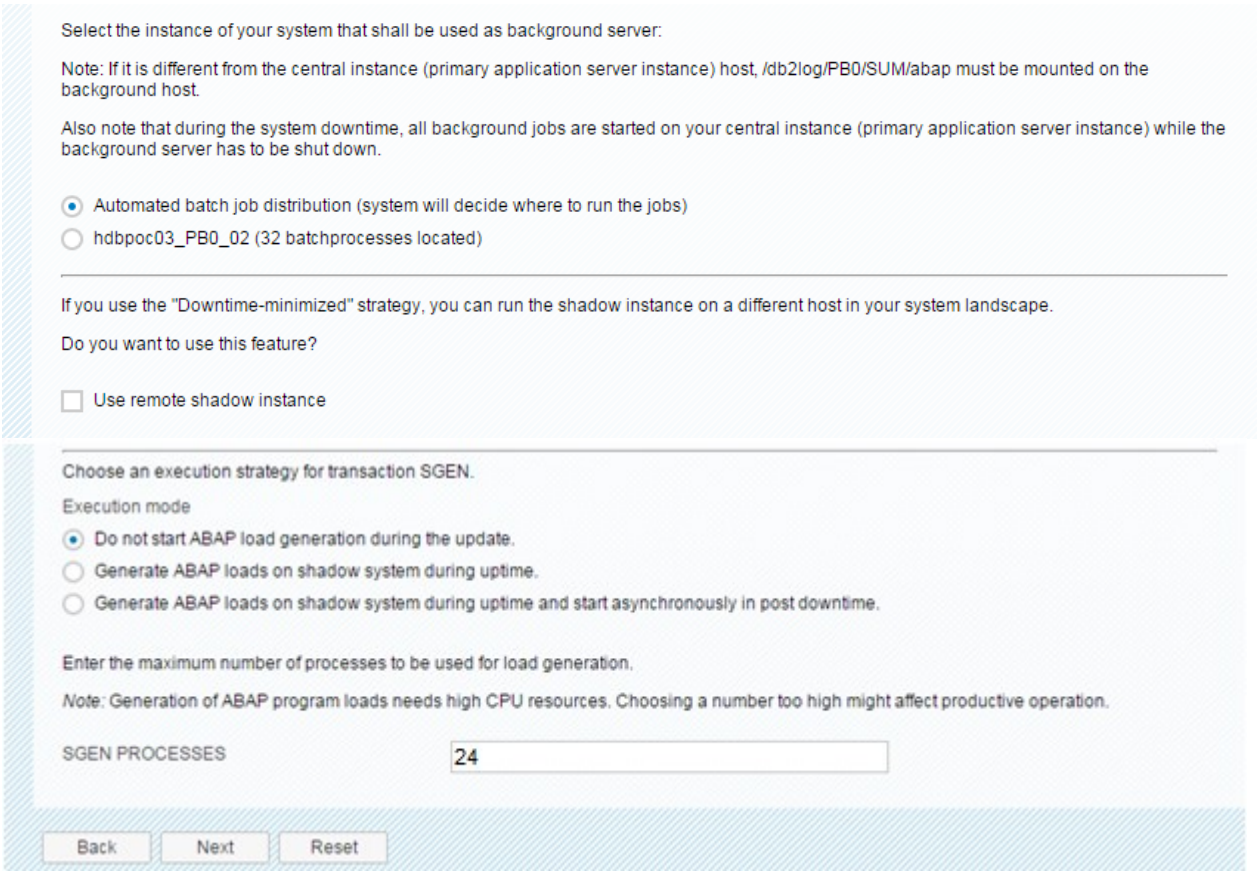
Phase: 11 6% PREP_CONFIGURATION/INITSUBST - END (1)

Phase Configuration (2)



Check here with the latest finding mentioned in the Blog - http://scn.sap.com/community/bw-hana/blog/2015/03/17/dmo-optimizing-system-downtime



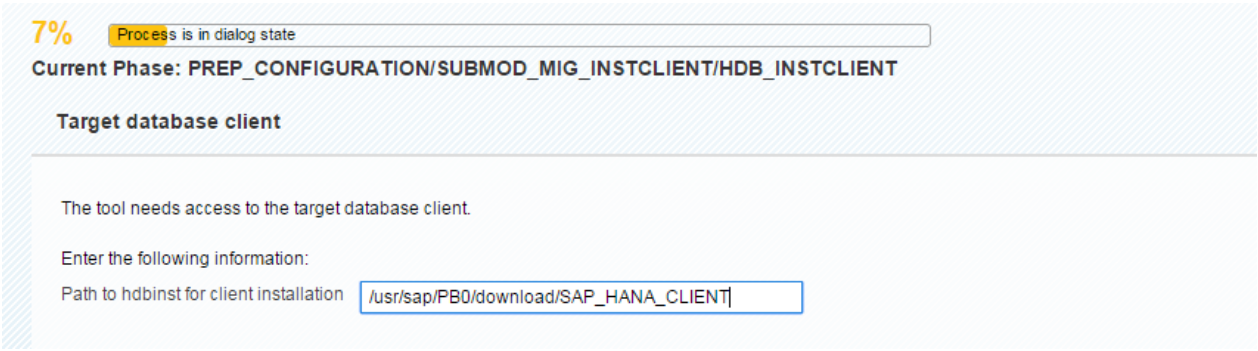


Phase: 12 6% PREP_CONFIGURATION/INITSUBST - tool configuration

Even if you try to change the settings in the next screen, it will go back to these settings. However, the selected option (Advanced and Switch expert mode on) is the most effective way to get the maximum on the available resources for the Upgrade/DMO process.

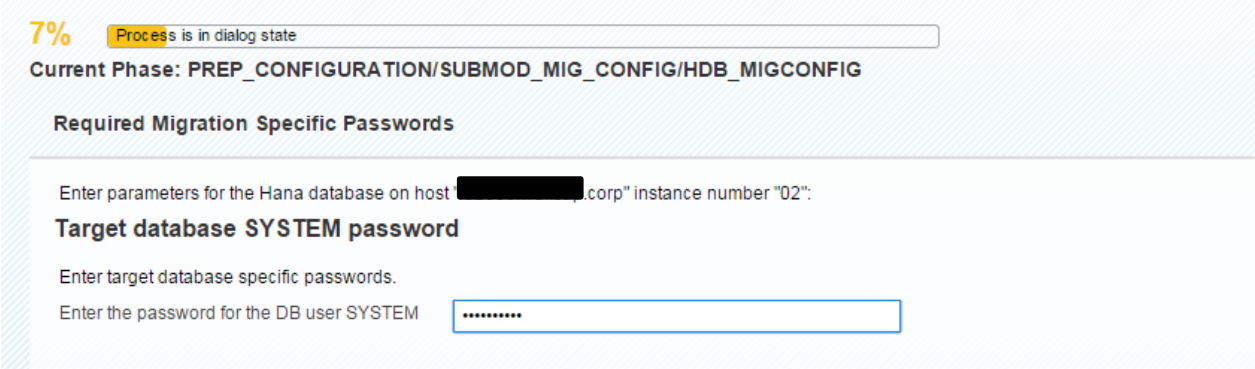
As with a BW upgrade the “business downtime” is more relevant than the “technical downtime”. The “Downtime-minimized” strategy is not from concern here. So, the Advanced/Standard strategy is the right choice.

Please Note that the Parameters have a massive influence of the time-consuming phase during the SUM/DMO procedure. The seen values might not fit to your environment (increase them accordantly).

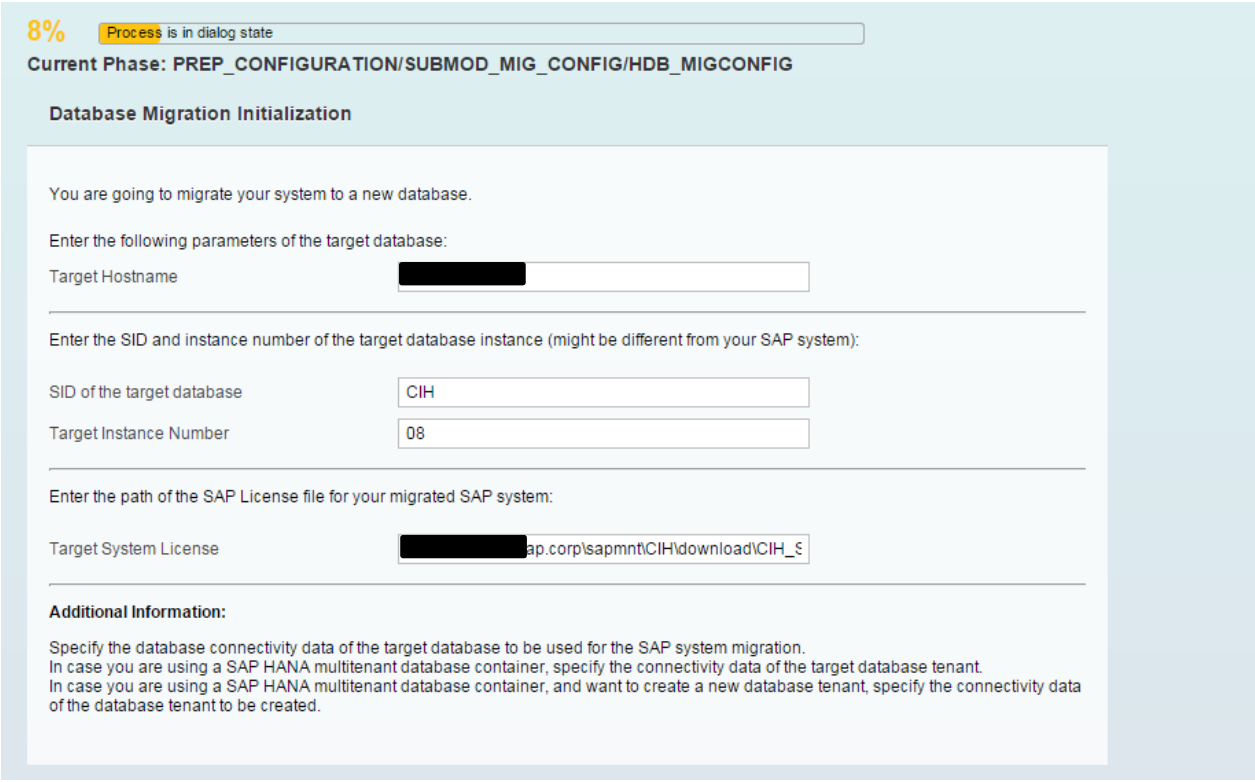


Phase: 13 7% PREP_CONFIGURATION/SUBMOD_MIG_INSTCLIENT/HDB_INSTCLIENT

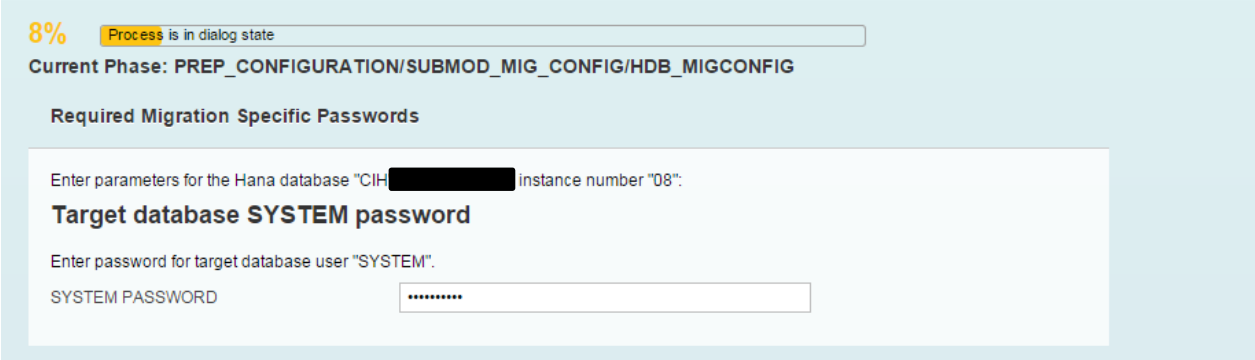
SAP HANA 1.0 database client
Error! Hyperlink reference not valid.
\\[redacted].wdf.sap.corp\sapmnt\CIH\download\SAP_HANA_CLIENT



Phase: 14 7% PREP_CONFIGURATION/SUBMOD_MIG_INSTCLIENT/HDB_INSTCLIENT



Phase: 15 8% PREP_CONFIGURATION/SUBMOD_MIG_CONFIG/HDB_PREPARE

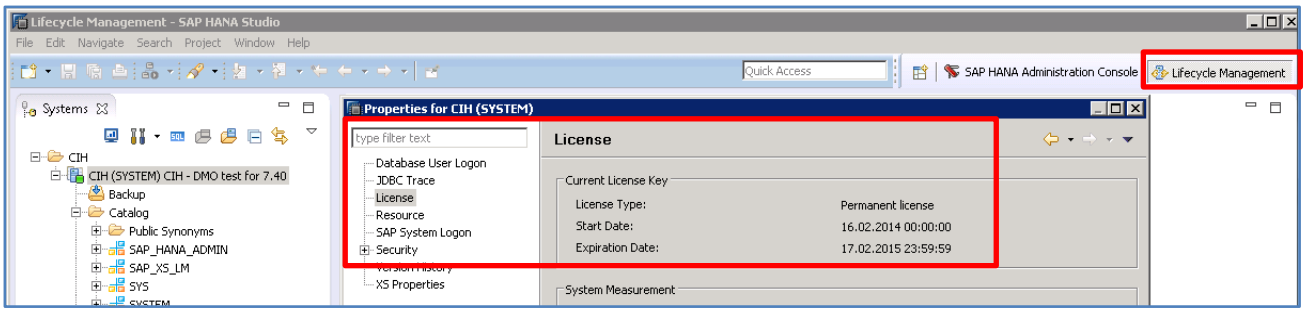


Phase: 16 8% PREP_CONFIGURATION/SUBMOD_MIG_CONFIG/HDB_MIGCONFIG

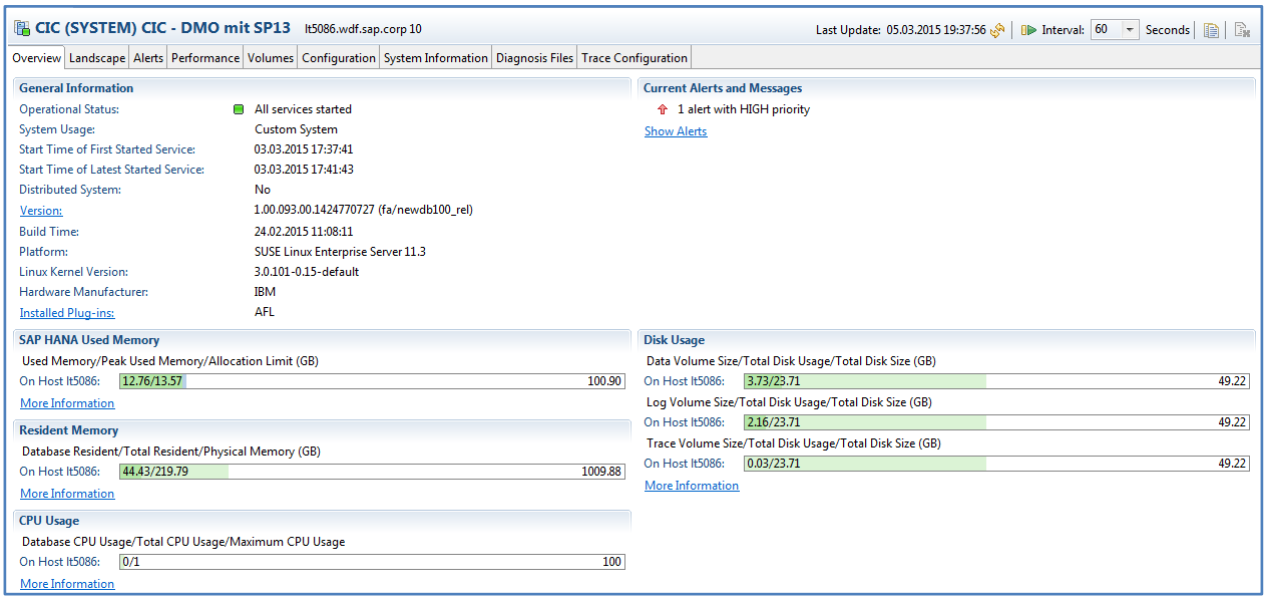
SAP HANA 1.0 License
Error! Hyperlink reference not valid.

\\[redacted].wdf.sap.corp\sapmnt\CIH\download\CIH Standard 15.06.2016.txt

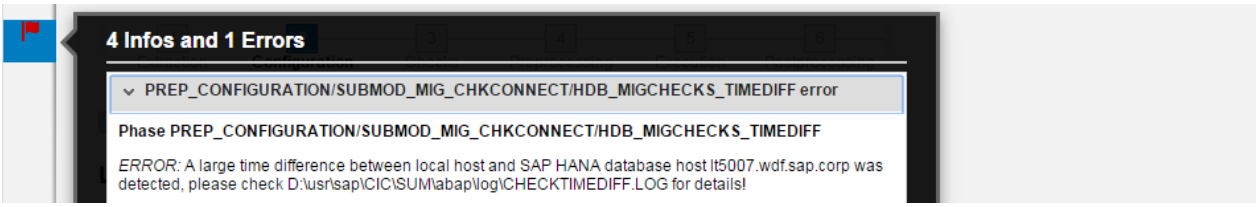
Get a migration key for anyDB to HDB - see internal Note (SAP Employees)
Note 1134948 - ABAP Migration Key for special installation numbers



Phase: 17 - SAP HANA Studio - Lifecycle Management

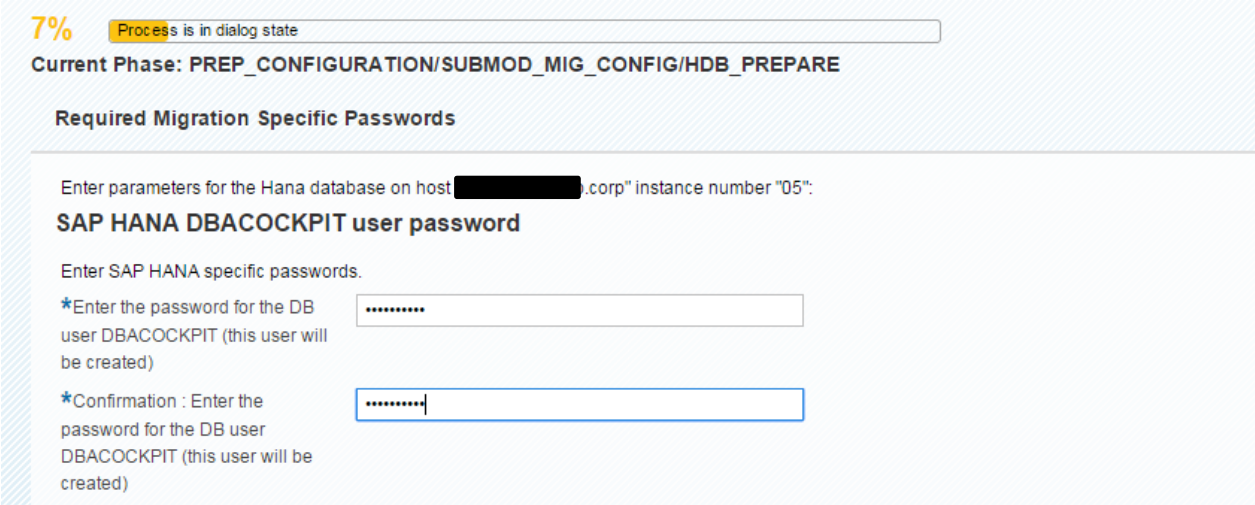


Phase: 18 - SAP HANA Studio - HDB Connection

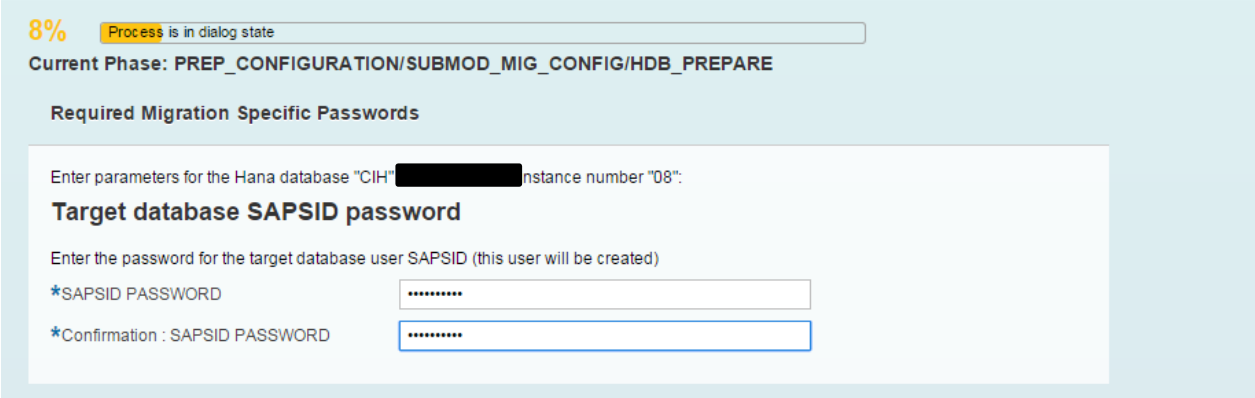


Errors during the Phases will be shown with a red flag in the left upper corner of the UI. Precede with the error messages before the end of the phase is reached.

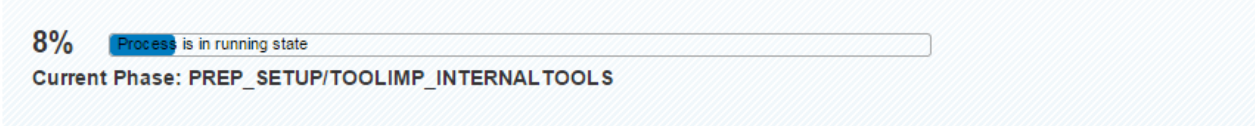
By clicking on the symbol the message become visible, clicking again will go back to the main UI.



Phase: 19 8% PREP_CONFIGURATION/SUBMOD_MG_CONFIG/HDB_PREPARE - DBACOCKPIT



Phase: 20 8% PREP_CONFIGURATION/SUBMOD_MG_CONFIG/HDB_PREPARE - SAPSID



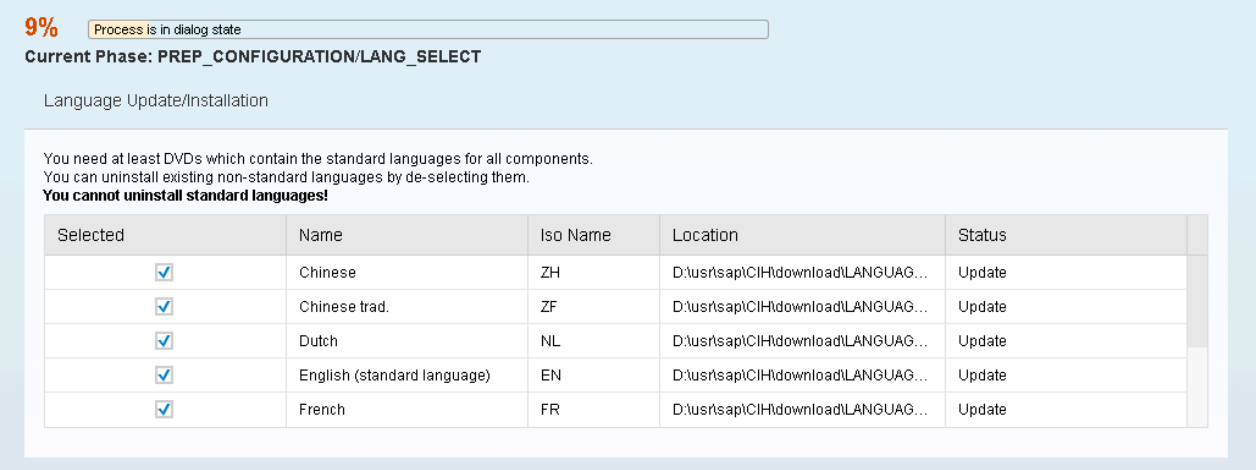
Note 1551454 - Illegal system time zone - use UTC only

Note 1932132 - SAP HANA: Large time difference between application server and HANA database

Note 2086087 - SAP DMO migration HDB_MIGCHECKS_TIMEDIFF

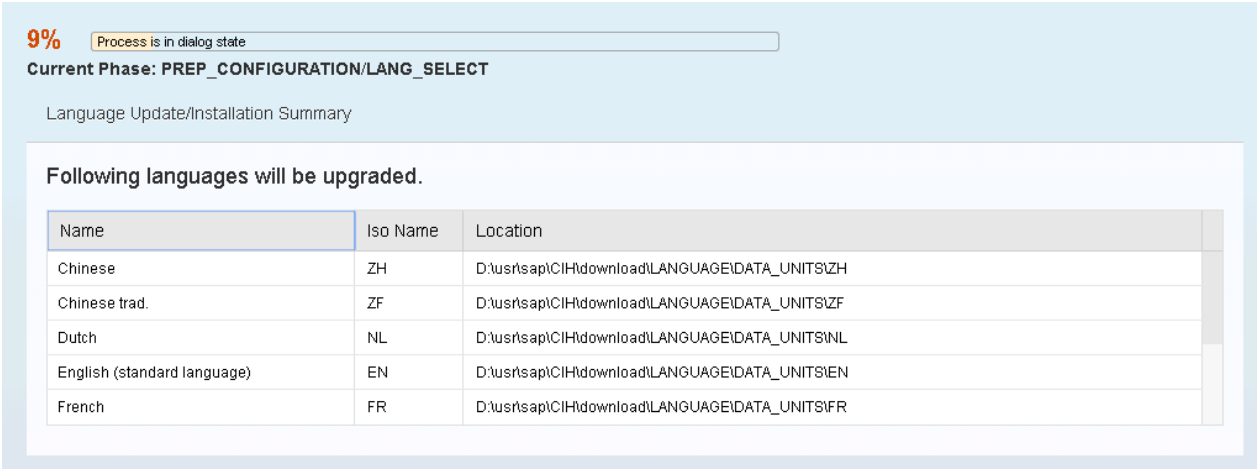
Note 2137138 - Timezone name incorrect after DST switch

```
indexserver.ini    ➔ use_startup_timezone = false
.sapenv.csh        ➔ set TZ=CET     #add this at the end of the file
```



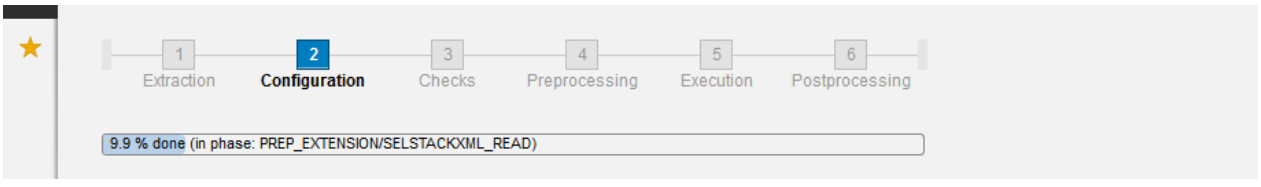
Phase: 21 9% PREP_CONFIGURATION/LANG_SELECT

If you have additional languages installed in your system, the language DVD must also be present in the download directory. You can deinstall additional languages in this phase, but not the default languages which are DE and EN. The language files will also be extracted by default to the DVD 51047454.

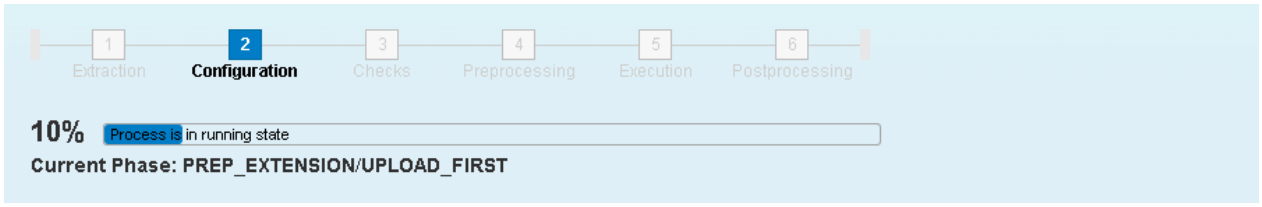


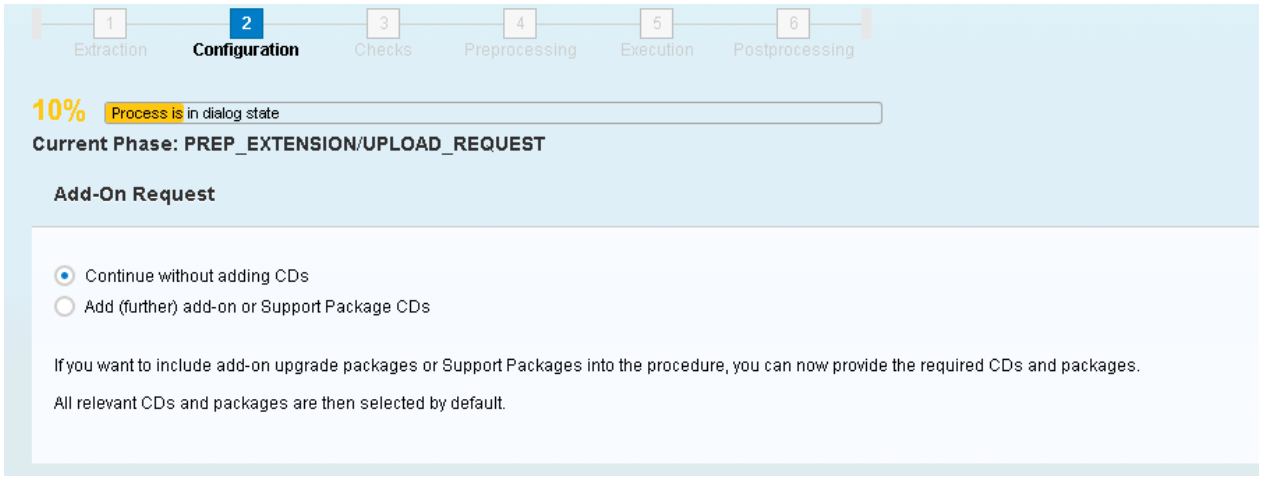
Phase: 22 9% PREP_CONFIGURATION/LANG_SELECT

By hoover the Mouse Pointer over the Phase Bar, automatically you will see the overall rumtime estimate of the DMO procedure (file **`SAPupStat.log`** constantly updated).

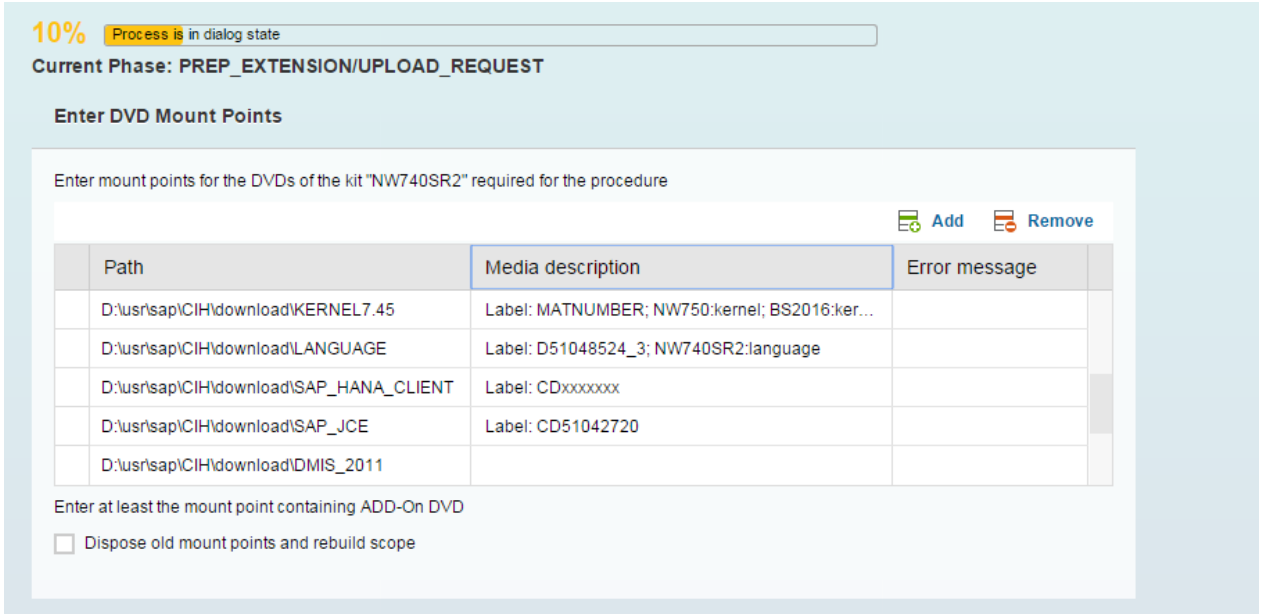


If you run the DMO process on a system based on copy, make sure you applied a valid license; otherwise an error will occur in this phase.



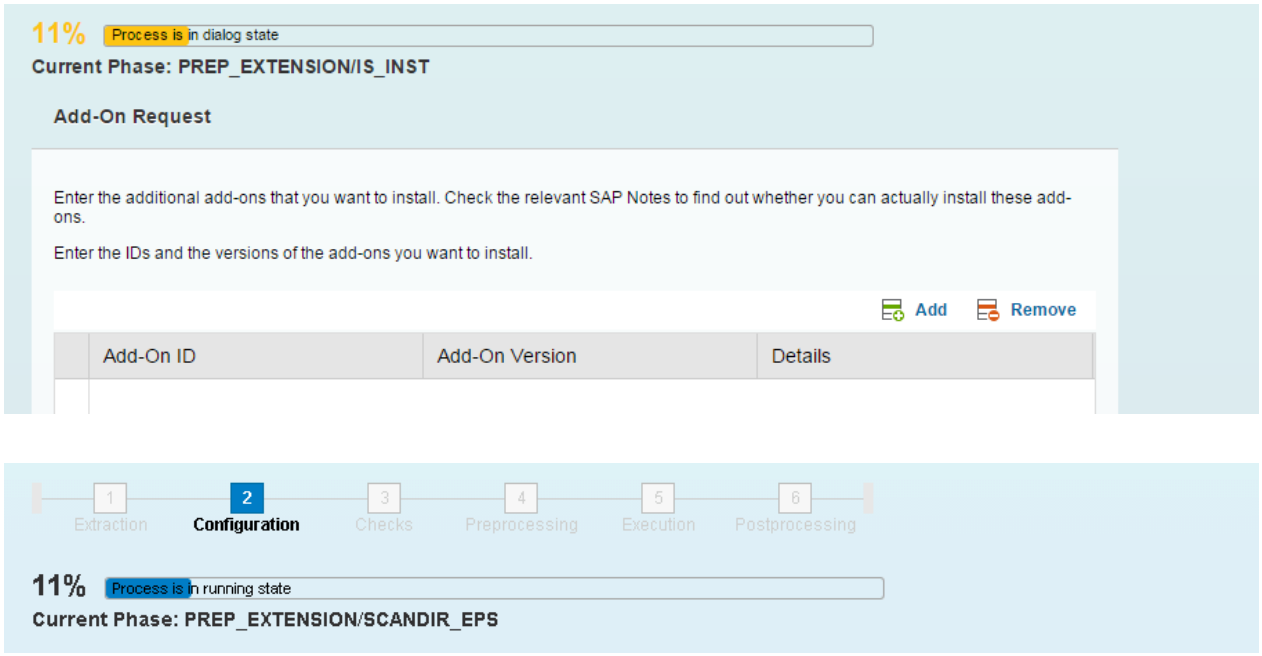


Phase: 23 10% PREP_EXTENSION/UPLOAD_REQUEST



Phase: 24 10% PREP_EXTENSION/IS_INST

Phase: 25 11% PREP_EXTENSION/EHP_INCLUSION



Note 1083365 - Upgrade behavior of Addon ST-A/PI

Password Vendor Key KEEP (SUM/DMO): 2902571

Note 1678780 - Installation or upgrade of BI_CONT/BI_CONT_XT 7x7

Password (SUM/DMO): 3668936

Note 1943931 - Installation/Upgrade for the ABAP Add-On BI_CONT / BI_CONT_XT 757

Password (SUM/DMO): 3821837, 5156796

Note 1577503 - Upgrade to DMIS 2011_1 in the system switch upgrade

Password (SUM/DMO): 4690407

Note 1577441 - Installation and delta upgrade of DMIS 2011_1_1_731

Password (SUM/DMO): 4690407

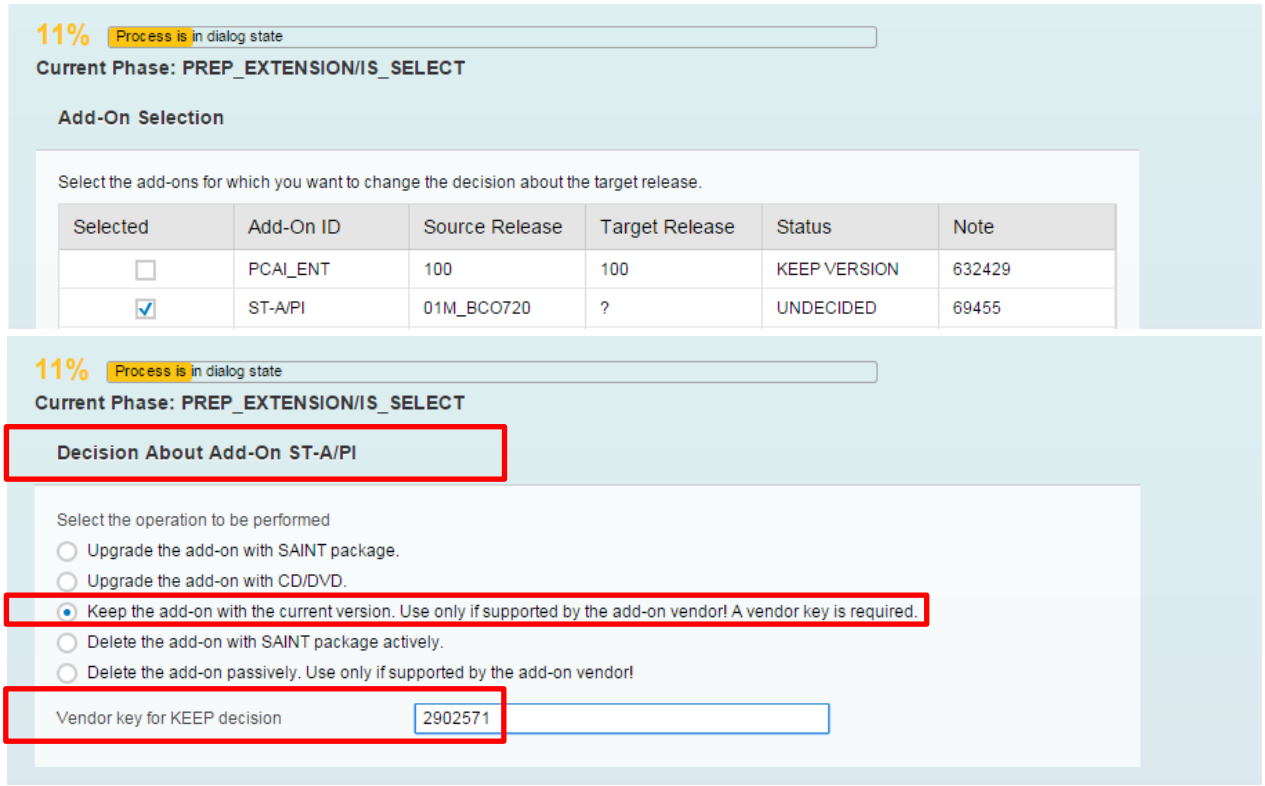
Note 1577504 - Upgrade to DMIS_CNT 2011_1 in the system switch upgrade

Password (SUM/DMO): 6855059

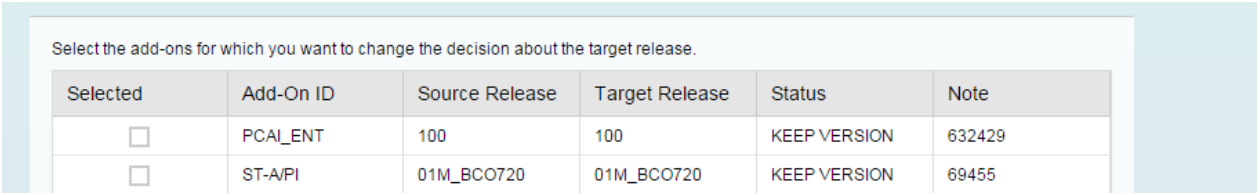
Please Note that the MOPz process is not reflecting the latest Version of the ST-A/PI Add-On when the stack.xml is created. Update to the latest Version first, before you create the stack.xml and start DMO.

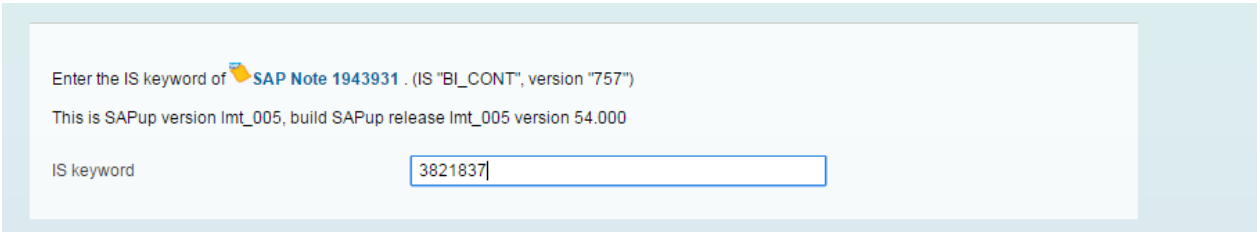
(Use the Installation instead of Exchange-Upgrade package)

Full Update	Exchange Update	Add-On	Version	
SAPKITAB8M	SAPK-01RB8INSSA	ST-A/PI	01S_710	(until 7.30)
SAPKITAB9Q	**SAPK-01RB9INSSA**	ST-A/PI	01S_731	(from 7.31 to 7.50)

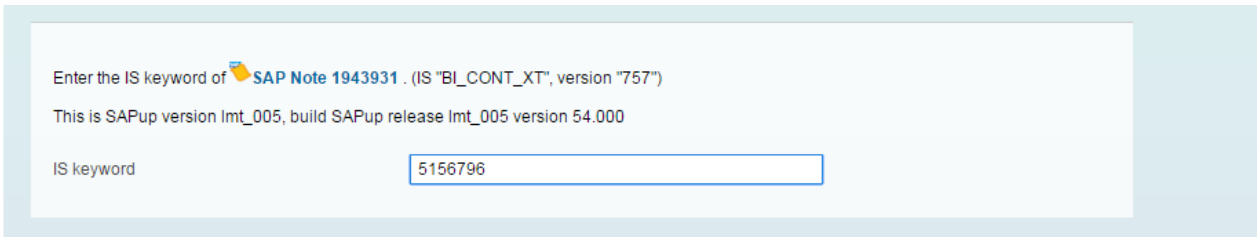


Phase: 26 11% PREP_EXTENSION/IS_SELECT - ST-A/PI

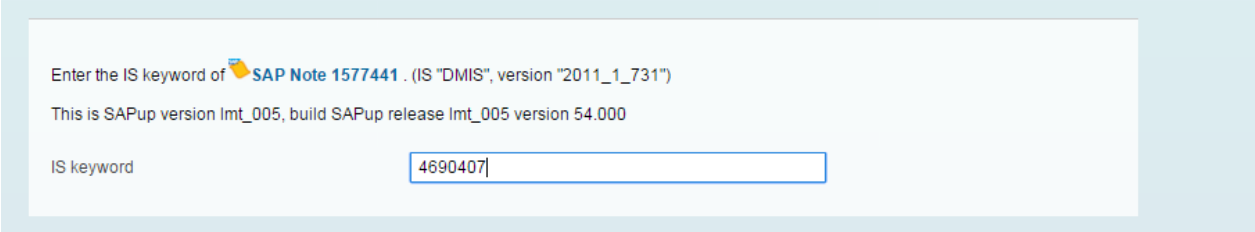




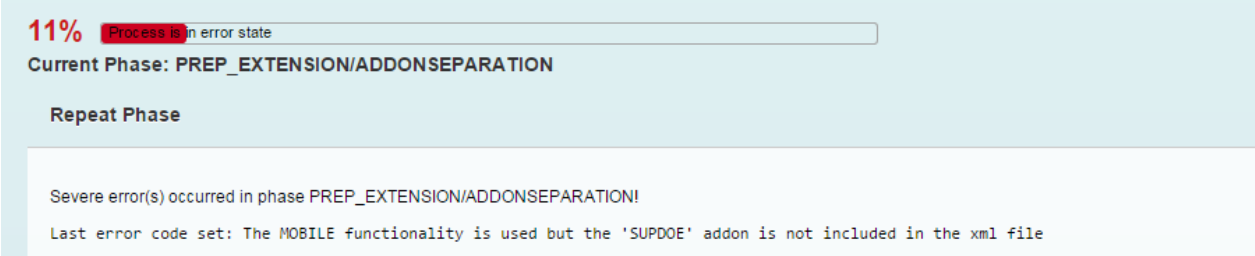
Phase: 27 11% PREP_EXTENSIONS/IS_SELECT - BW_CONT



Phase: 2811% PREP_EXTENSIONS/IS_SELECT - BW_CONTXT



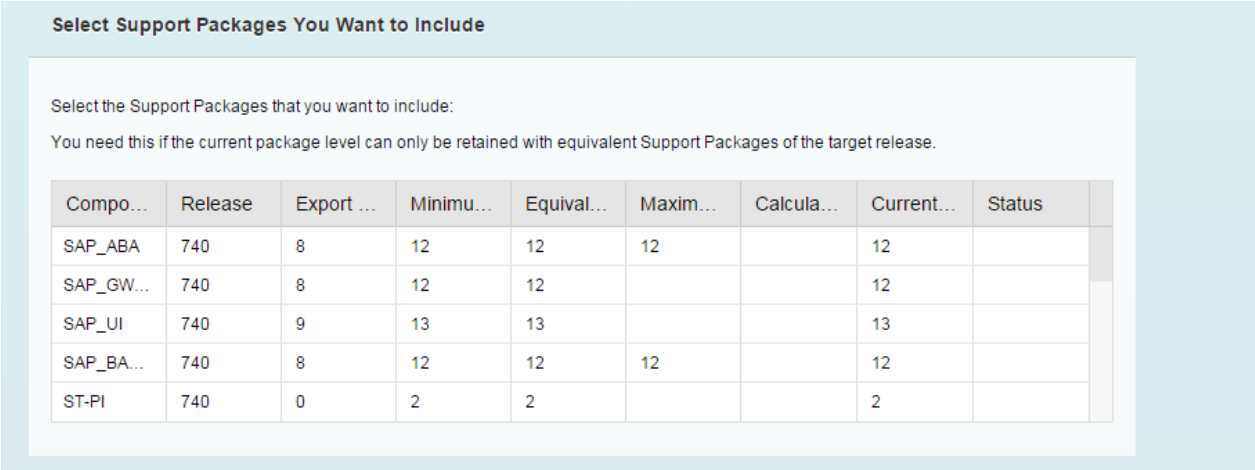
Phase: 29 11% PREP_EXTENSIONS/IS_SELECT - DMIS 2011_1_731



Phase: 30 11% PREP_EXTENSION/ADDONSEPARATION

If you come along this error message, you must add the SPUDOE Add-On (K-731AHINSUPDOE.SAR) to the stack.xml despite if it was in use or not. Update your stack.xml with the additional Add-On needed.
Note 1651470 - Release strategy for the ABAP add-on SUPDOE

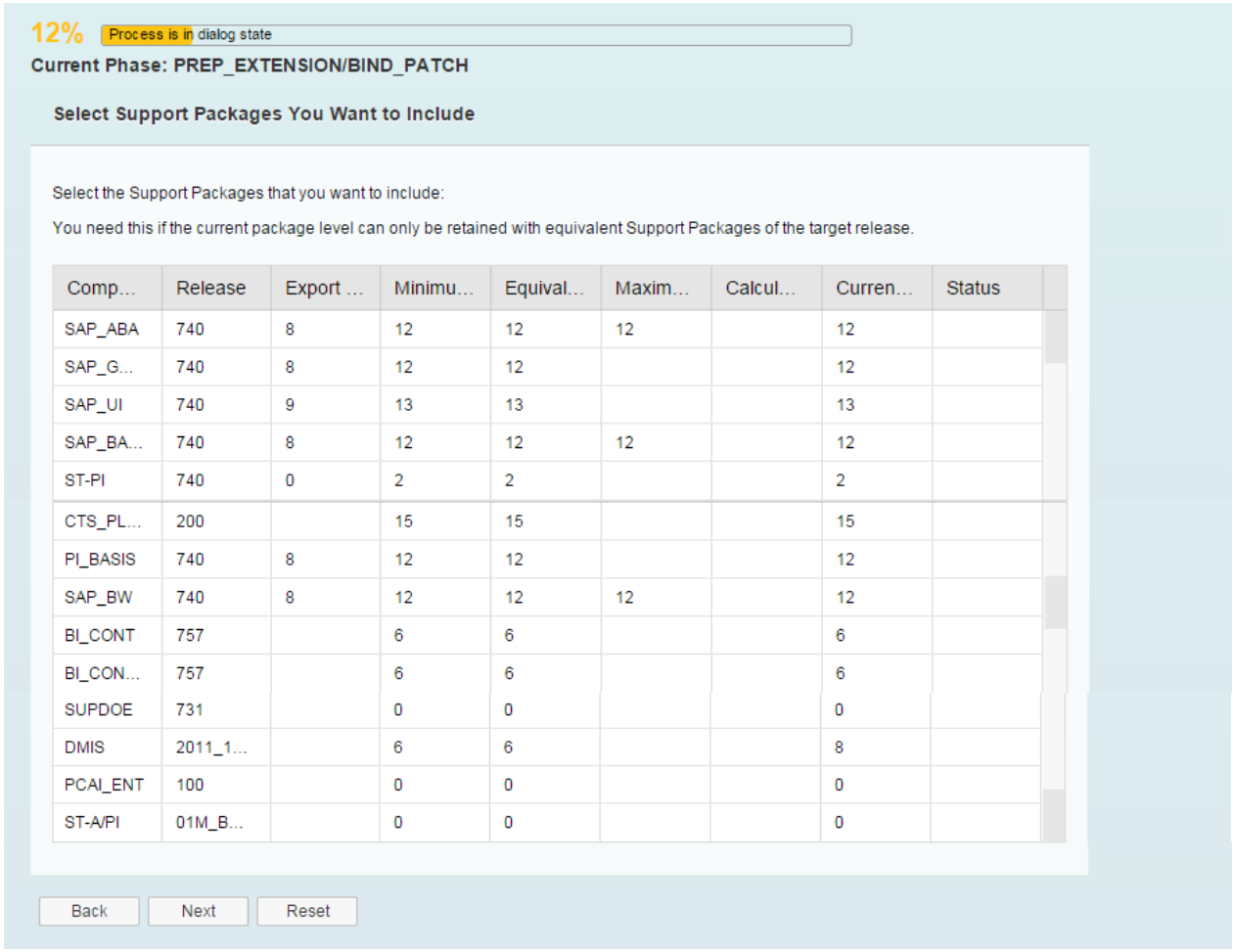
Phase: 31 11% PREP_EXTENSIONS/IS_SELECT - PCAI_ENT



Depending on the number of available files in the download directory this can be a time-consuming phase.

On Win64 based system make sure, that the directory /sapmnt/<SID>/download is read/write accessible from the **<sid>adm** and **SAPService<SID>** to prevent errors and switch off the virus scanner during this phase.

With the Advantage of the Service Releases SR2 ≤≥ SP08, only the Delta to the latest Support Stack must be calculated.

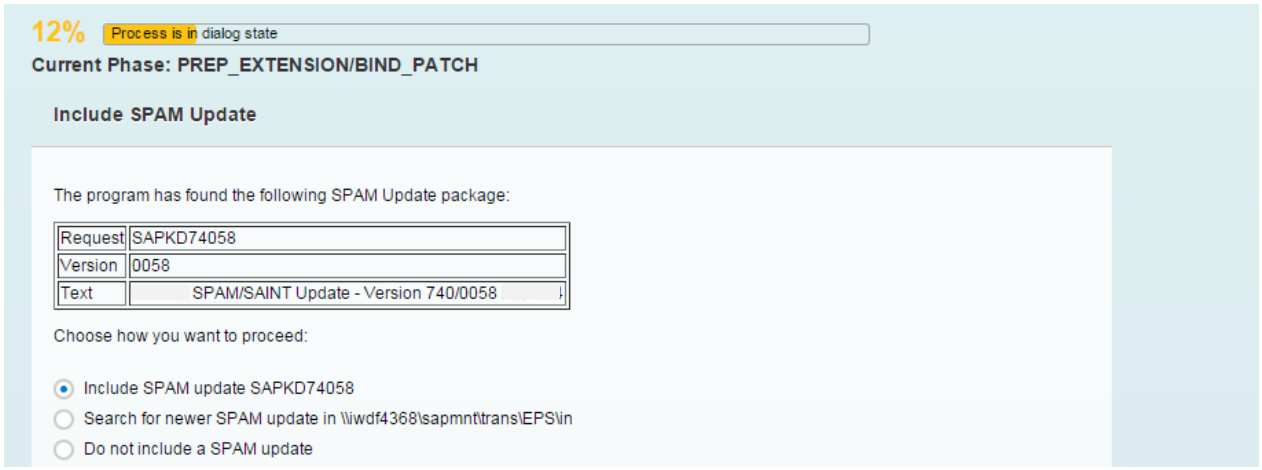


Phase: 33 12% PREP_EXTENSIONS/BIND_PATCH

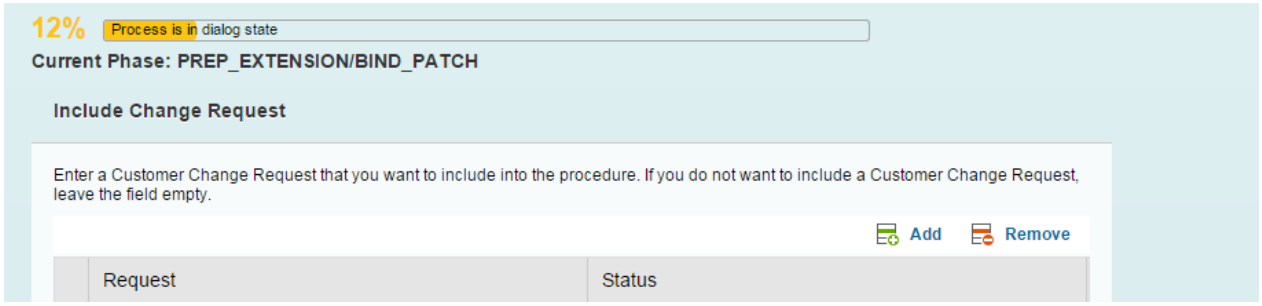
Furthermore, also the current SAPCryptoLib package `SAPCRYPTOLIBP_8xxx-200xxxxx.SAR` must be added to the download directory (where the stack.xml is provided) manually.

As the PCAI_ENT Add-On (BW-PCA "License") also has a deinstallation option, you should deinstall this Add-On to avoid follow up errors.

In case of additional Support Packages, e.g. ST-PI 2008_1_700/710 you should take over the calculated level. This will include the additional updates.

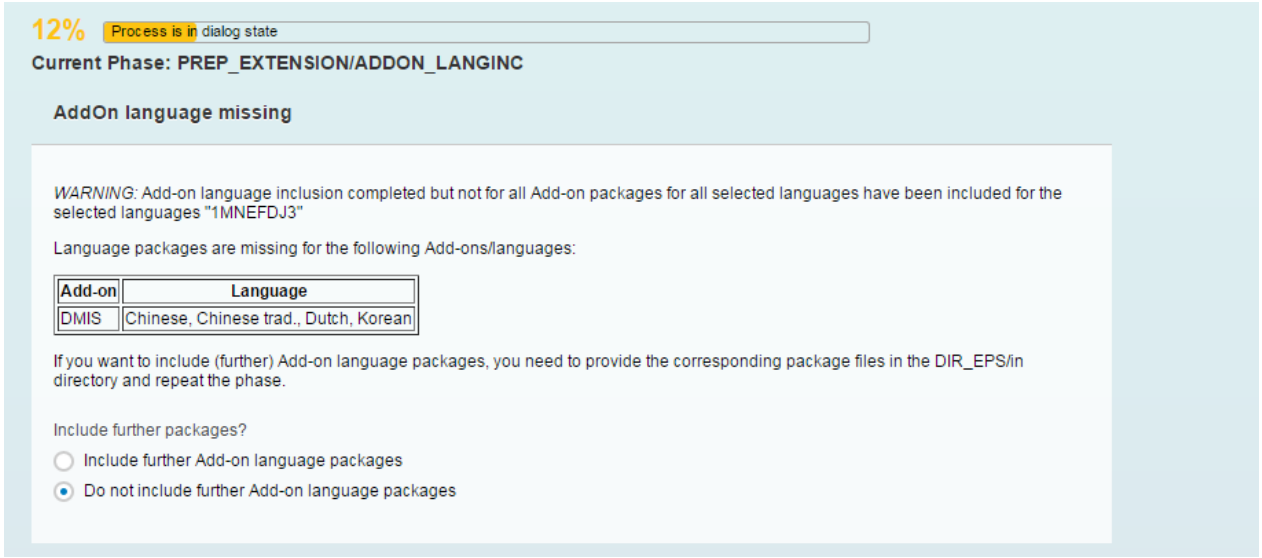


Phase: 34 12% PREP_EXTENSIONS/BIND_PATCH - SPAM update



Phase: 35 12% PREP_EXTENSIONS/BIND_PATCH - include change request

The Report `SCWN_TRANSPORT_NOTES` allow you to add SAP Notes as transports, instead of having this interaction screen. See more details here - [Note 1788379 - Transport of SAP NOTES]

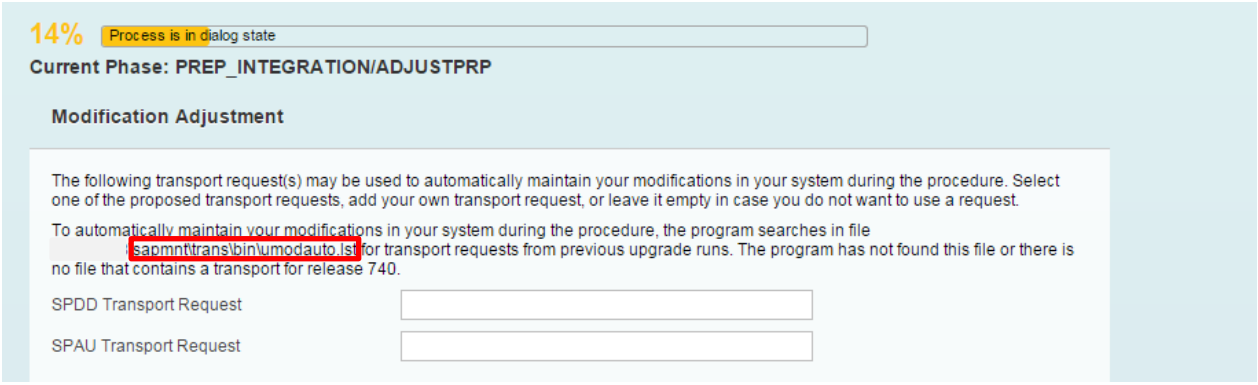


Phase: 36 12% PREP_EXTENSIONS/ADDON_LANGINC - DMIS Add-On decision

Phase: 37 13% PREP_EXTENSIONS/CONFLICT_CHECK - Note 889596

If errors occur, the Report RSSPAM_PREPARE_UC is started by preparation report UMG_ADD_PREP_STEP and its only action is to delete the contents of table OCSCMPLOBJ.

This table is used by the Support Package Manager and by the Add-On Installation Tool to save formatted object lists for add-on conflict verification during the import of Support Packages. Since the contents of the table depend on the type of character encoding used (UNICODE, non-UNICODE), the contents must be deleted prior to a UNICODE conversion.



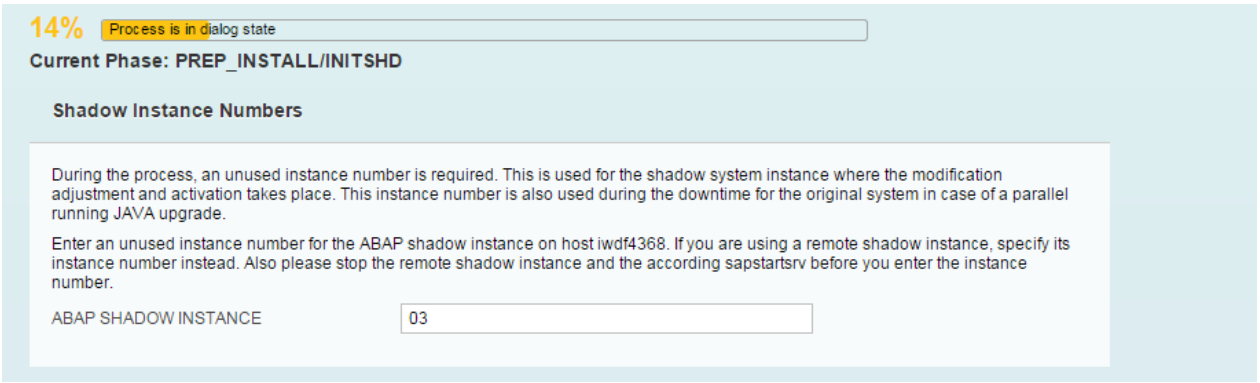
Phase: 38 14% PREP_INTERACTION/ADJUSTTPRP

If you prepare the file `\\server\sapmnt\trans\bin\umodauto.lst` then you have to provide the entries in the following format before you enter the phase.

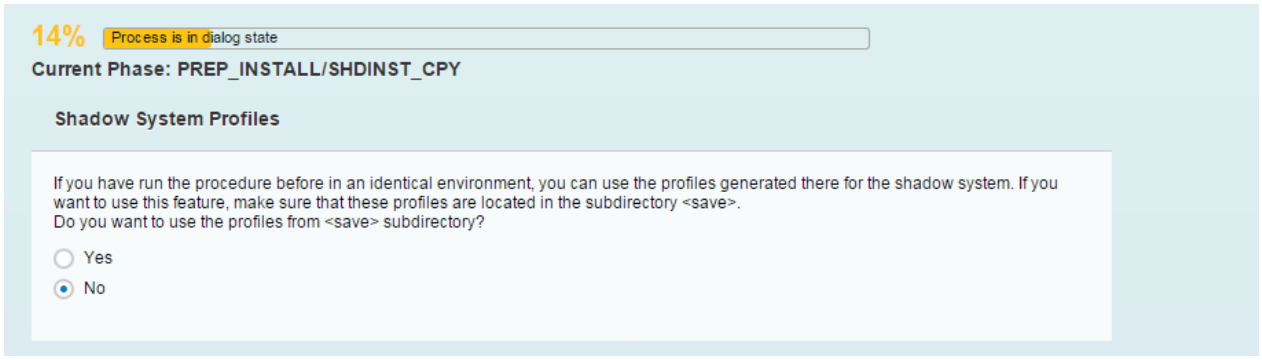
`SPDD/SPAU 740 trcorr`, for example

`SPAU 740 CIHK900031`

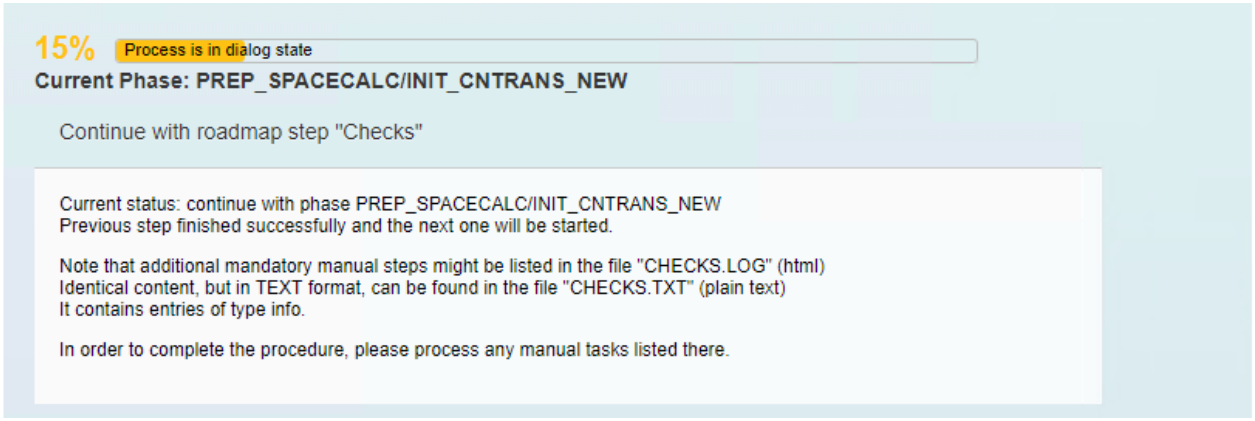
If the transport was created for a different SP, you have to tick the option box in addition.



Phase: 39 14% PREP_INSTALL/INITSHD - advanced option

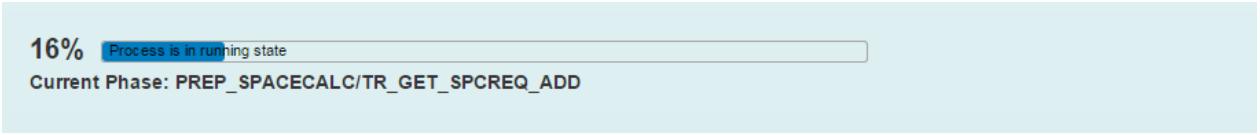


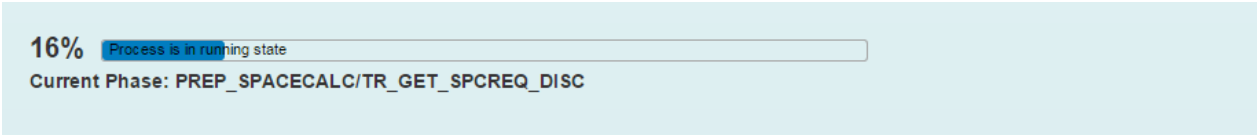
Phase: 40 14% PREP_INSTALL/SHD INST_CPY

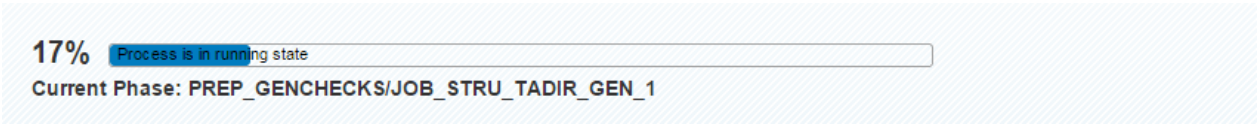


Phase: 41 15% PREP_INSTALL/JOB_FILL_TPF_CHK_PHASES - END (2)

Phase Checks (3)

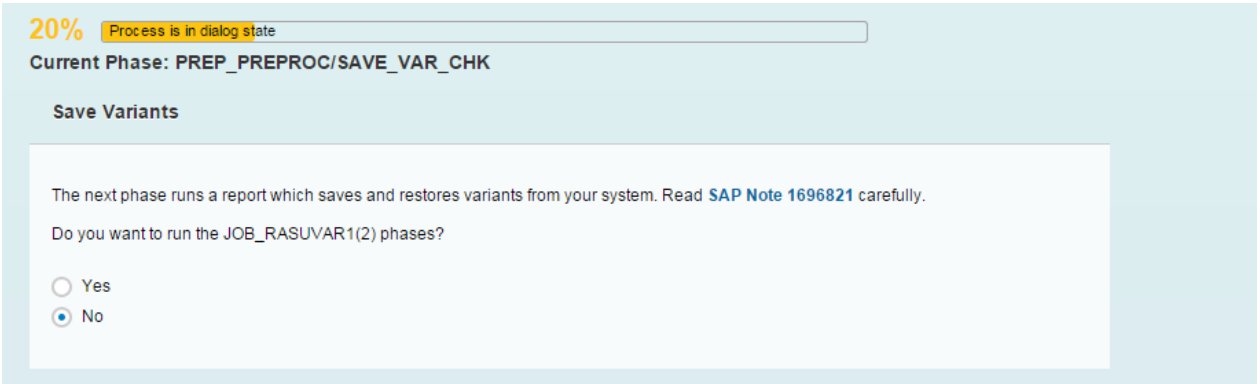




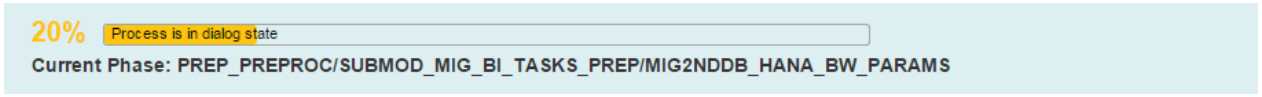


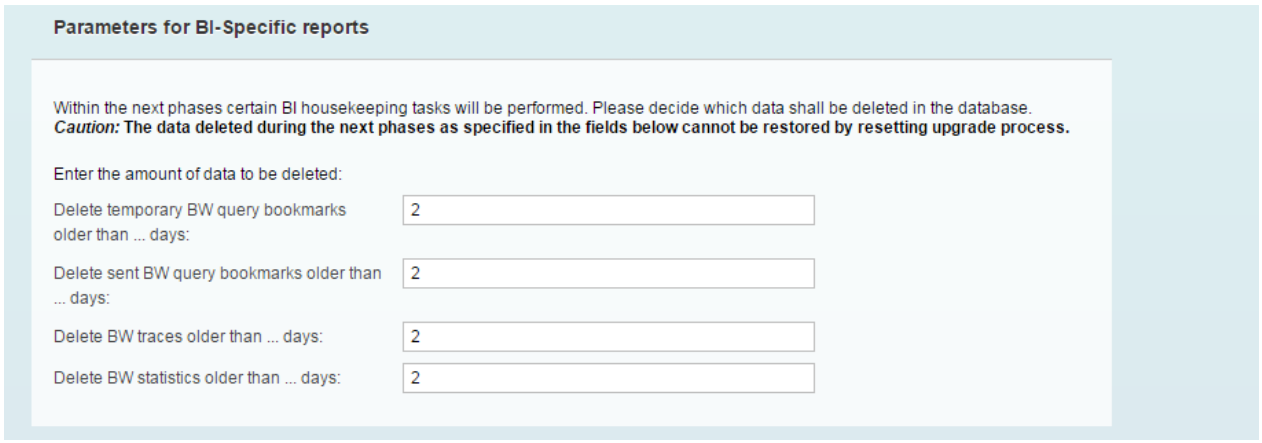
Phase: 42 17% PREP_GENCHECKS/JOB_RSUPGRCHECK_PRE

Phase: 43 18% PREP_GENCHECKS/JOB_TS_UGR41 - report RSUGRCHECK

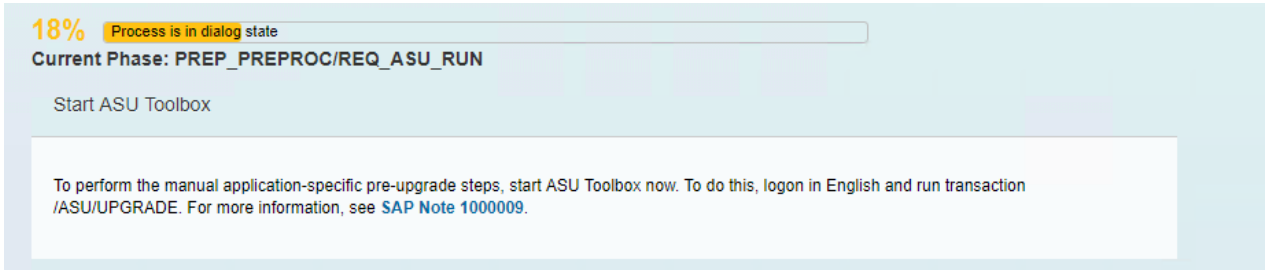


Phase: 44 20% PREP_PREPROC/SAVE_VAR_CHK - save variants

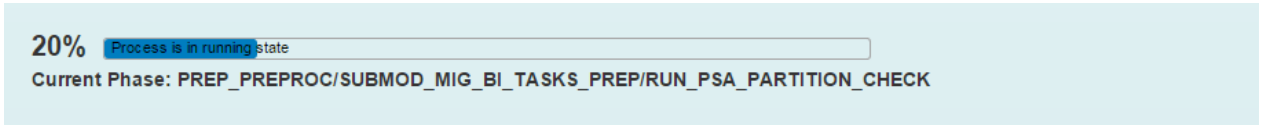


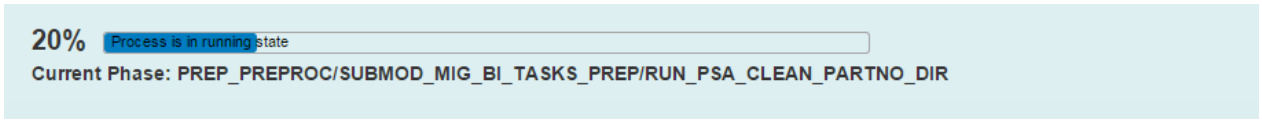


Phase: 45 20% PREP_PREPPROC/SUBMOD_MIG_BI_TASKS_PREP/MIG2NDDB_HANA_BW_PARAMS



Furthermore in this Phase and in the next Phases additional cleaning Tasks are running, which are part of the pre migration task list - **`SAP_BW_BEFORE_MIGRATION`**



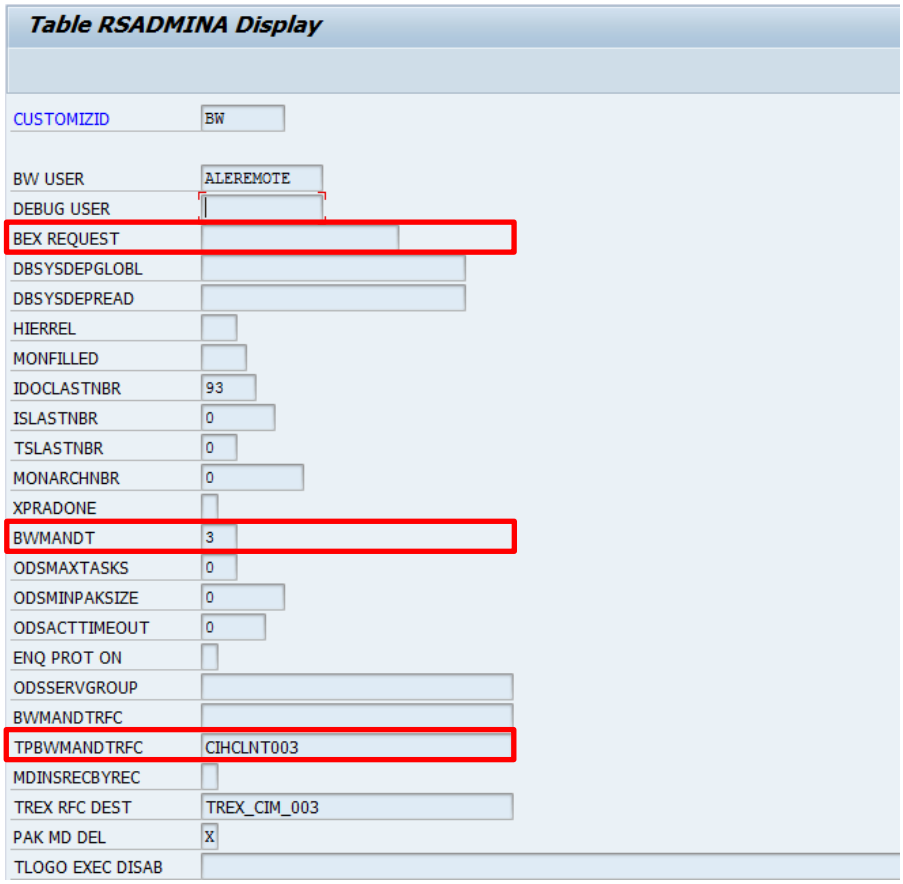


Phase: 46 20% SUBMOD_MIG_BI_TASKS_PREP/RUN_PSA_*

Note 2182306 - 730SP14: PSA Version create step in DMO tool hangs

Depending on the size of the source database these Phases can be very time intensive. Cleaning out the PSA beforehand can save a lot of time in advance, Reports RSAR_PSA_CLEANUP_DIRECTORY and RSAR_PSA_CLEANUP_DEFINITION

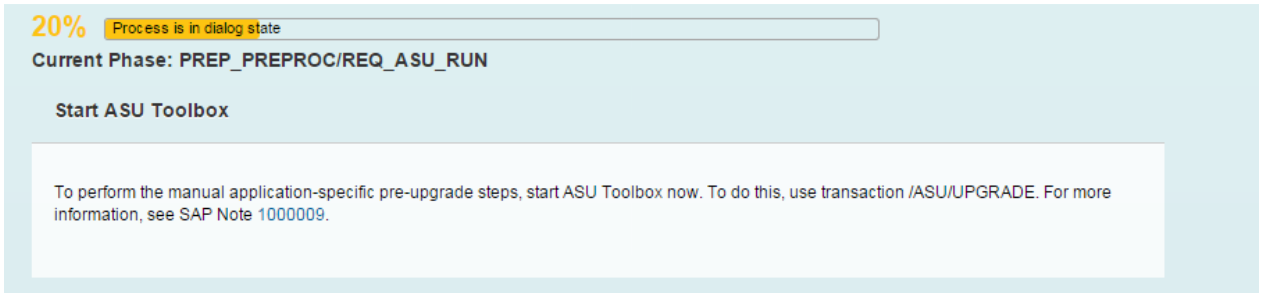
Note 2026343 - SP34: Performance improvement of PSA Housekeeping tasks
Note 2026853 - PSA: Dump in RSAR_PSA_CLEANUP_DIRECTORY - PSA table are more than 2 billion rec.
Note 2062928 - SP34: Incorrect behavior during Extraction of data from DataSource (PSA) using DTP
Note 2129477 - 730SP14: Selection Option unavailable for the report RSAR_PSA_CLEANUP_DEFINITION
Note 2132264 - SP35: Incorrect error messages shown report 'RSAR_PSA_CLEANUP_DIRECTORY/_MS
Note 2190948 - 730SP14: DMO/Housekeeping Task 'PSA_MAPPING_CHECK' inac. older version of PSAs
KBA Note 1909069 - error DA093 & RSM1156 during PSA/changelog deletion



Phase: 47 - Edit table RSADMINA - select BEX REQUEST to delete

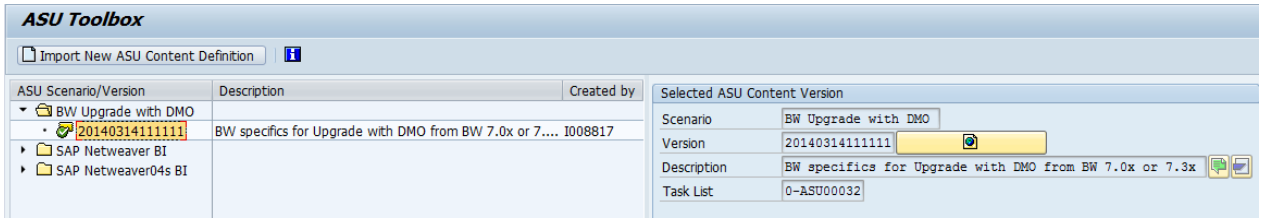
Check that the table RSADMINA (transaction SE16) the entry BEX REQUEST is removed.
Later in the process the correct entry TPBWMANDTRFC to logon on will be used as well.
In case of Oracle and DB6 you also must create additional temporary table spaces.
Example for DB6:

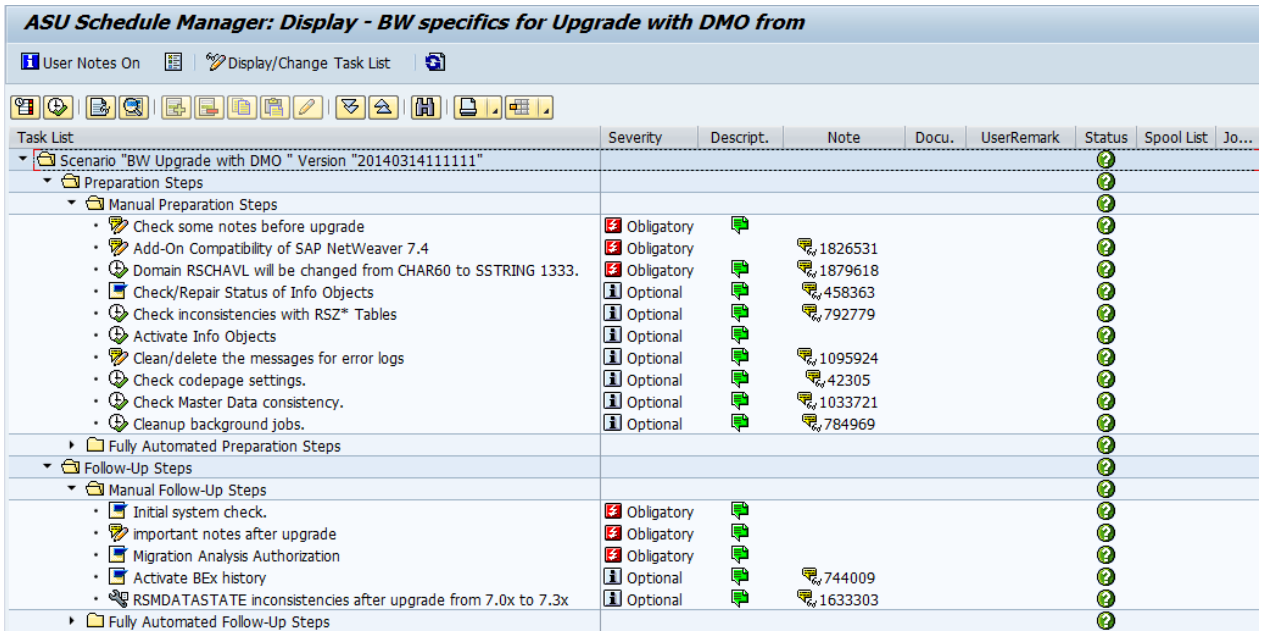
```
Create tablespace MIG#ES740DX with 7680 MB
Create tablespace MIG#ES740IX with 4890 MB
Create tablespace MIG#EL740DX with 5110 MB
Create tablespace MIG#EL740IX with 420 MB
db2 -tvf DB6TBSXT.CLP
```



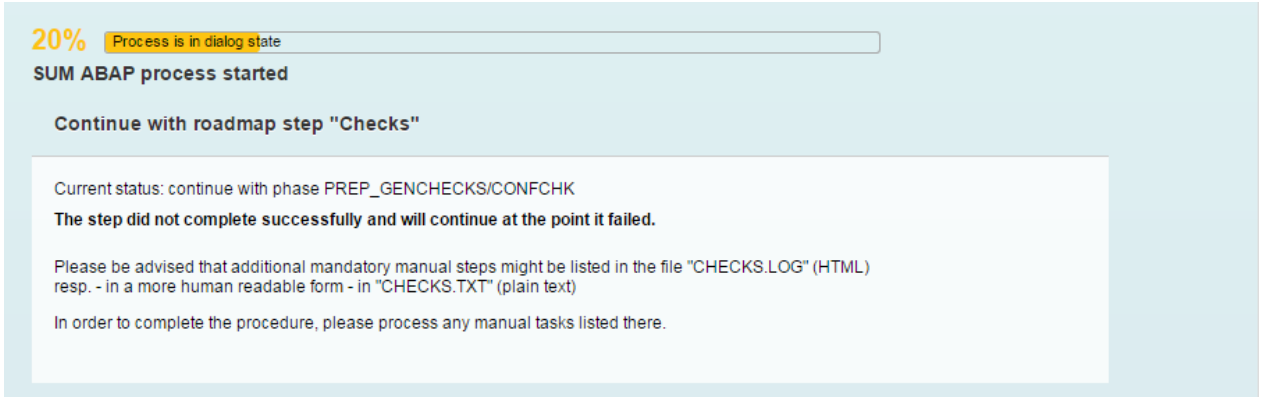
Phase: 48 20% PREP_PREPPROC/REQ_ASU_RUN - start ASU toolbox

Transaction /ASU/UPGRADE (Note 1000009)





Phase: 49 - Transaction /ASU/UPGRADE



Phase: 50 20% MAIN_INIT/BEGIN - END (3)

Phase Preprocessing (4)

Note 1764085 - Error Update records still exist - Please process during phase JOB_RSVBCHCK_D

Note 1705774 - Error in phases MAIN_SWITCH/JOB_RSVBCHCK2 or MAIN_SWITCH/JOB_RSVBCHCK_D; Checks after phase MAIN_INIT/JOB_RSVBCHCK* were negative.

Note 2089122 - SAP HANA DB: CDS view with external view as base object cannot be created in the database

Note 2519247 - MAIN_NEWBAS/XPRAS_AIMMRG: Invalid objects: 'After Import' terminated

Settings in table RSADMIN to optimize runtime and errors in Phase XPRAS_AIMMRG:

Note 1629923 - Skip BW technical content objects activation during upgrade

Set the parameter with the Report SAP_RSADMIN_MAINTAIN into table RSADMIN

```
SKIP_TCO_ACTIVATION_XPRA = X
```

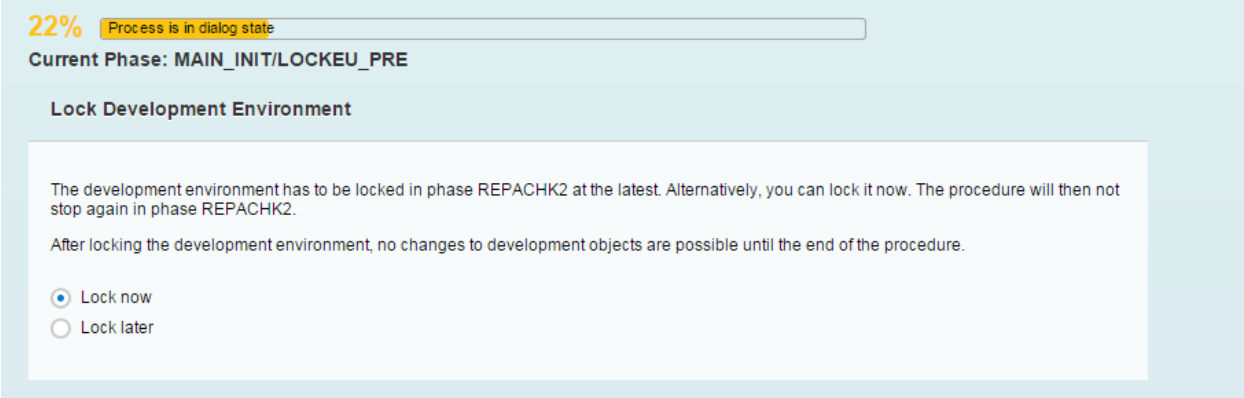
You can run the XPRA RS_TCO_ACTIVATION_XPRA after the technical upgrade has finished. Make sure the parameter mentioned above is removed from table RSADMIN before executing the XPRA.

Note 1649901 - Time-critical processes in BW upgrade/Support Package import

```
PSEUDO_D_AFTER_IMPORT_D = ''
REPL_D_AFTER_IMPORT_D = X
```

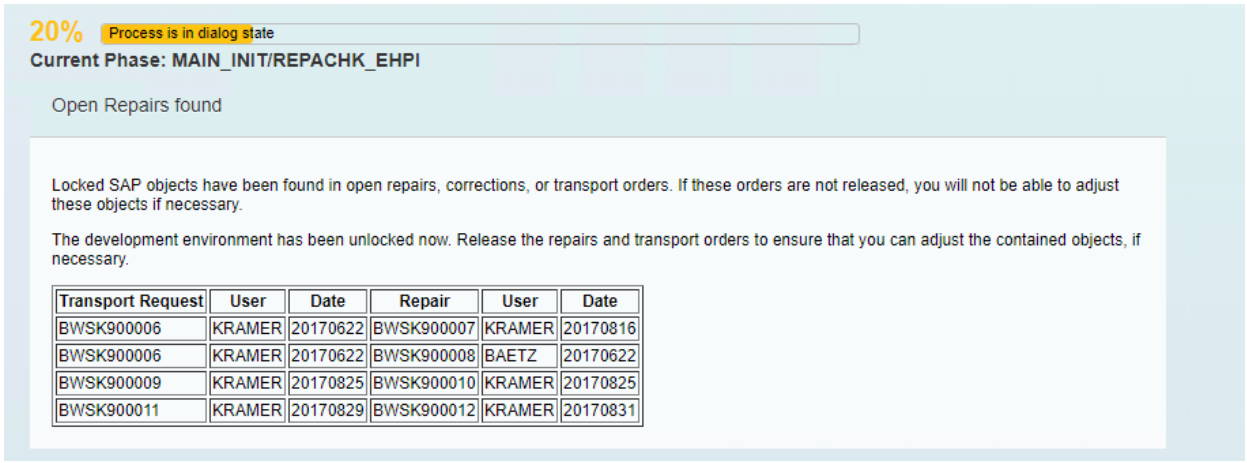
Note 1934939 - CX_SY_IMPORT_MISMATCH_ERROR dump during XPRA of a transport during upgrade

```
RSVERS_BI_IMPORT_ALL = ' '
```

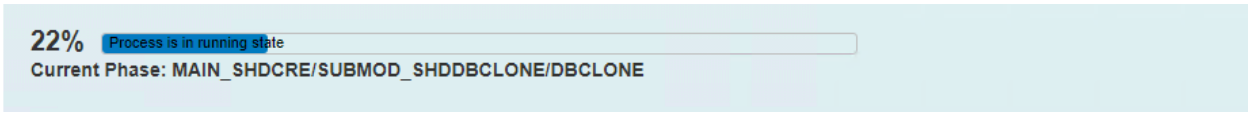


Phase: 51 22% MAIN_INIT/LOCKEU_PRE - lock development environment

Despite what Information you might have from other sources, from now on you cannot maintain BW objects anymore without doing it on your own risk!



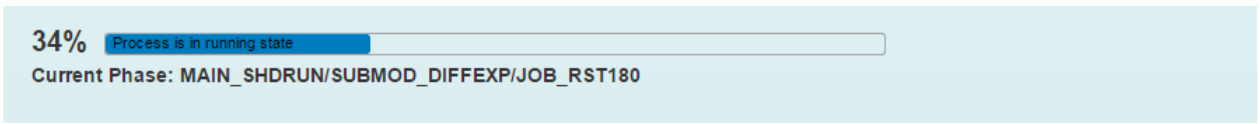
Phase: 52 21% MAIN_INIT/REPACHK1 - check open transports

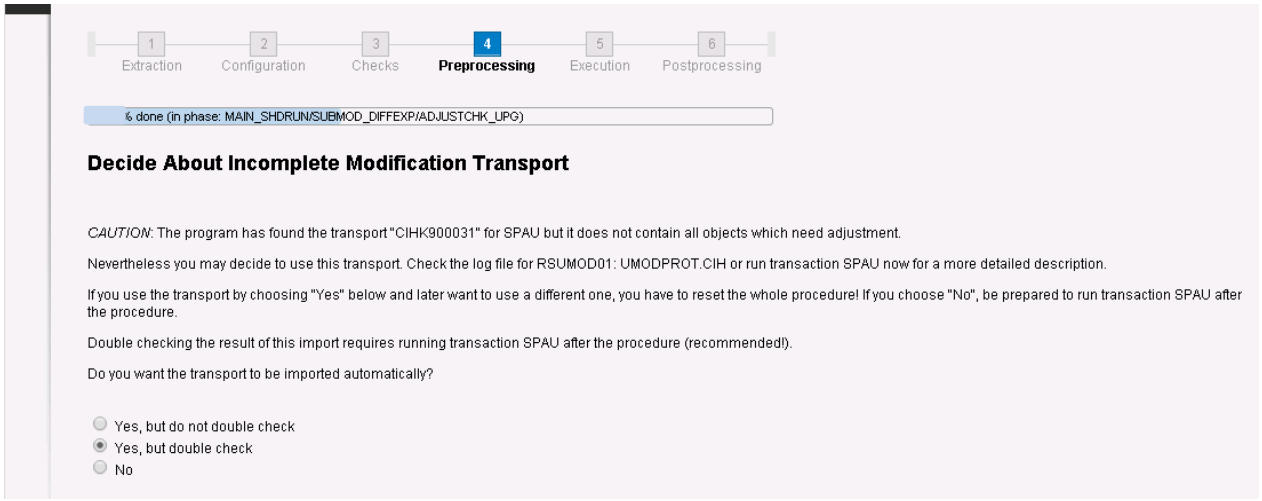


Phase: 53 24% MAIN_SHDRUN/SUBMOD_SHDDBCLONE/DBCLONE

Phase: 54 25% MAIN_SHDCRE/EU_IMPORTx - R3trans depending

Phase: 55 25% MAIN_SHDCRE/SHADOW_IMPORT_UPG1 - R3trans depending

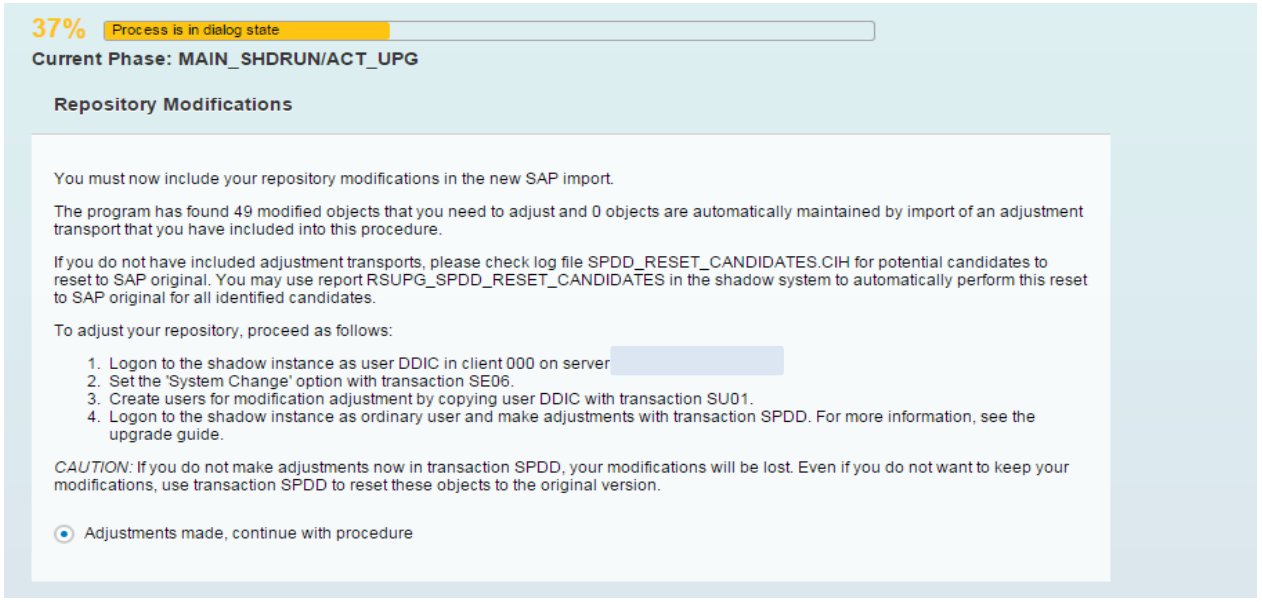




Phase: 56 34% MAIN_SHDRUN/SUBMOD_DIFFEXP/ADJUSTCHK_UPG

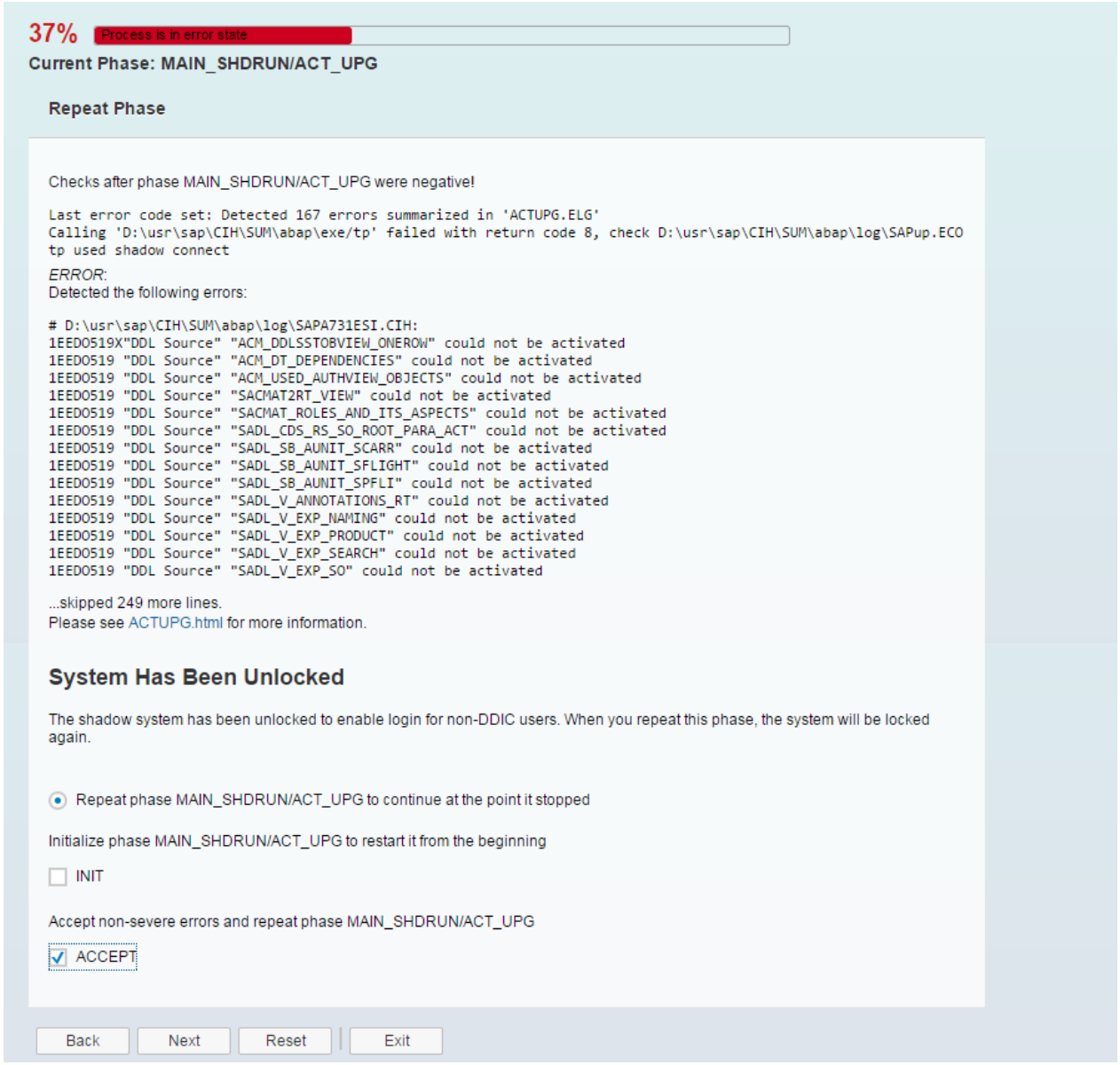
Phase: 57 35% MAIN_SHDRUN/START_SHDI_FIRST

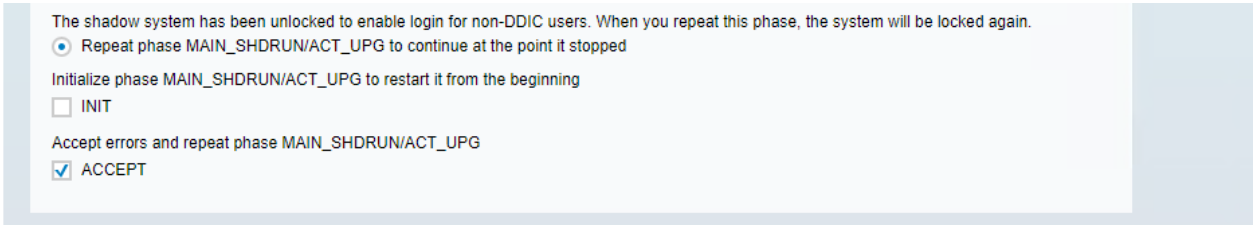
Phase: 58 36% MAIN_SHDRUN/DDIC_UPG - R3trans depending



Phase: 59 37% MAIN_SHDRUN/ACT_UPG - adjustments made, continue with procedure

Phase: 60 37% MAIN_SHDRUN/ACT_UPG - Batch Process depending (SHD)





Phase: 61 37% MAIN_SHDRUN/ACT_UPG – create CDS views

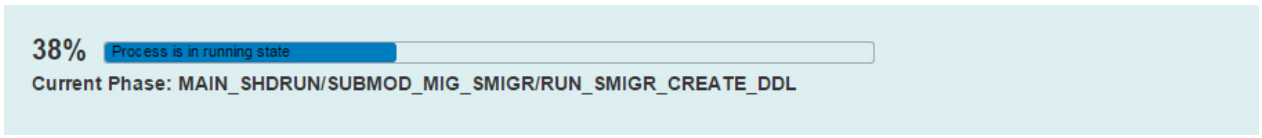
Note 2086899 - Upgrade phase MAIN_SHDRUN/ACT_UPG returns error messages

Repeat the activation phase ACT_UPG within the DMO/SUM procedure. Several repetitions might be required.

Unlock the shadow Instance

http://wiki.scn.sap.com/wiki/display/TechTSG/(Un)lock+the+shadow+instance

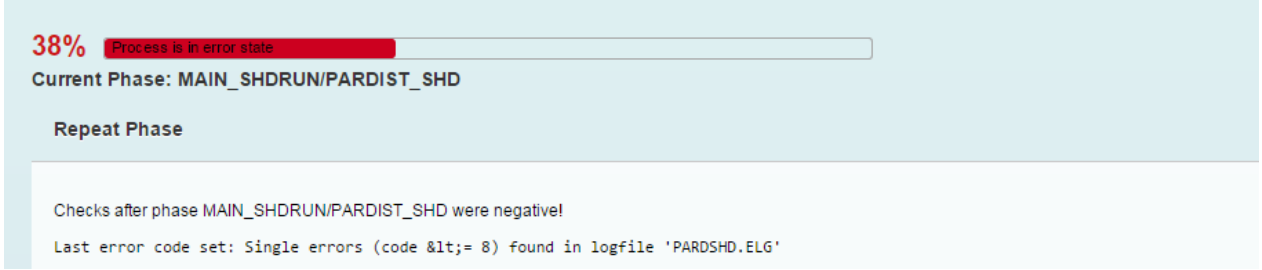
```
./SAPup unlockshd
```



Phase: 62 38% MAIN_SHDRUN/SUBMOD_MIG_SMIGR/RUN_SMIGR_CREATE_DDL

Phase: 63 38% MAIN_SHDRUN/RUN_INDC_UPG

Phase: 64 38% MAIN_SHDRUN/PARDIST_SHD



ERROR:
Detected the following errors:

```
# D:\usr\sap\CIH\SUM\abap\log\DS150622.CIH:
2 ED0307 Platform.................: "CUSTOMER"-"CIH"("740")/"MSSQL/WindowsNT/iwdf4368"
2 ED0311 Tool.....................: "BATCH"/"LSDSBU02"
2 ED0315 Log......................: "F", "D:\usr\sap\CIH\SUM\abap\tmp\DS150622.CIH"
2 ED0302 ================================================================================
4 EDA507 -> "ACMAT2RT_V" - - - "iwdf4368_13_17552" "21:52:16" "22.06.2015" - - - - - - - - - - - - - - - - - - - -
A2EESDDL_PARSER_MSG 000 Syntax Errors
2EEDA122 Error generating the program for "ACMAT2RT_V" " "
2EEDA476 Code for creating view "ACMAT2RT_V" could not be generated
2EEDA471 Result "ACMAT2RT_V": Action: "CNV" Mode flag: "E" Return code: "95"
4 EDA507 -> "ACMATDT2RT_NLNKV" - - - "iwdf4368_13_17552" "21:52:16" "22.06.2015" - - - - - - - - - - - - - - - - - - - -
A2EESDDL_PARSER_MSG 000 Syntax Errors
2EEDA122 Error generating the program for "ACMATDT2RT_NLNKV" " "
2EEDA476 Code for creating view "ACMATDT2RT_NLNKV" could not be generated
2EEDA471 Result "ACMATDT2RT_NLNKV": Action: "CNV" Mode flag: "E" Return code: "95"

...skipped 118 more lines.
Please see PARDSHD.html for more information.
```

Trouble Ticket Generation

A trouble ticket and an archive with all relevant log files have been generated.
Trouble ticket: "D:\usr\sap\CIH\SUM\abap\log\SAPup_troubleticket.log"
Log archive: "D:\usr\sap\CIH\SUM\abap\log\SAPup_troubleticket_logs.sar"

(•) Repeat phase MAIN_SHDRUN/PARDIST_SHD to continue at the point it stopped

Initialize phase MAIN_SHDRUN/PARDIST_SHD to restart it from the beginning

☐ INIT

Phase: 65 38% MAIN_SHDRUN/PARDIST_SHD

40% Process is in running state
Current Phase: MAIN_SHDRUN/PARDIST_SHD2

Phase: 66 40% MAIN_SHDRUN/PARDIST_SHD2

42% Process is in running state
Current Phase: MAIN_SHDIMP/PARMVNT_SHD

Phase: 67 44% MAIN_SHDIMP/PARMVNT_SHD

Note 589296 - Problems w/ database links during the System Switch Upgrade

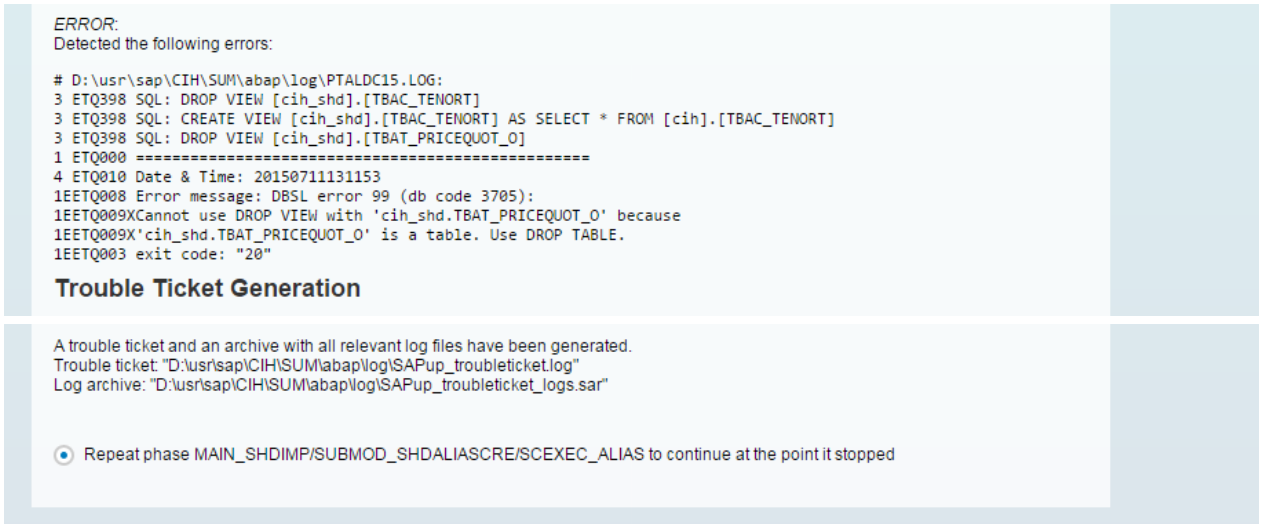
45% Process is in running state
Current Phase: MAIN_SHDIMP/SUBMOD_SHDALIASCRE/SCEXEC_ALIAS

45% Process is in error state
Current Phase: MAIN_SHDIMP/SUBMOD_SHDALIASCRE/SCEXEC_ALIAS

Repeat Phase

Severe error(s) occurred in phase MAIN_SHDIMP/SUBMOD_SHDALIASCRE/SCEXEC_ALIAS!

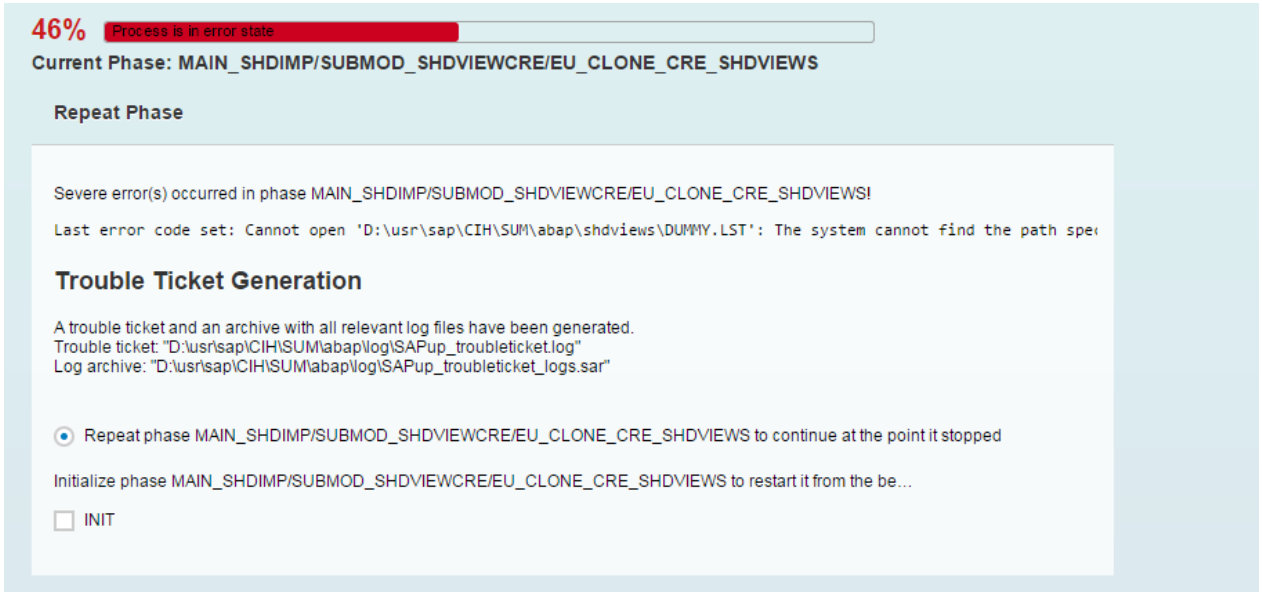
```
Last error code set: Non single errors (code &gt; 8) found in logfile 'SQLEXEAL.LOG'
3 error during parallel execution of processes, check 'SQLEXEAL.LOG' for details
6 processes failed, check 'SCEXEC_A.*' for details
```



Phase: 68 45% MAIN_SHDIMP/SUBMOD_SHDALIASCRE/PSCRGEN_ALIAS

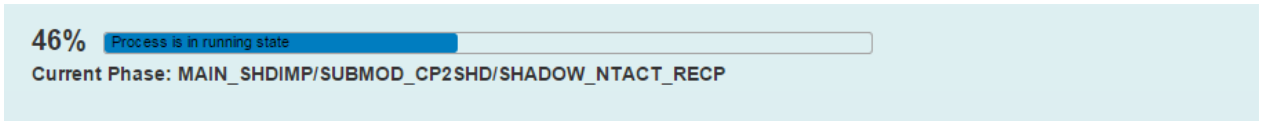
Note 1844436 - ORA-00955: name is already used by an existing object

SQLEXEAL.LOG ➔ `DROP TABLE <sid>_shd.TBAT_PRICE_FWD`

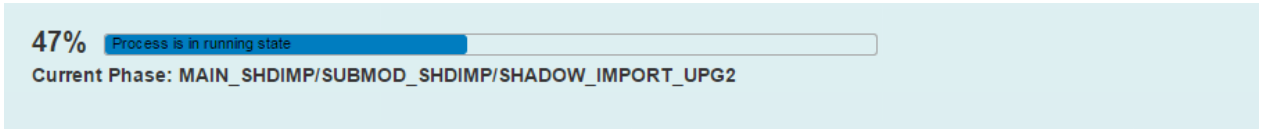


Phase: 69 46% MAIN_SHDIMP/SUBMOD_SHDVIEWCRE/EU_CLONE_CRE_SHDVIEWS

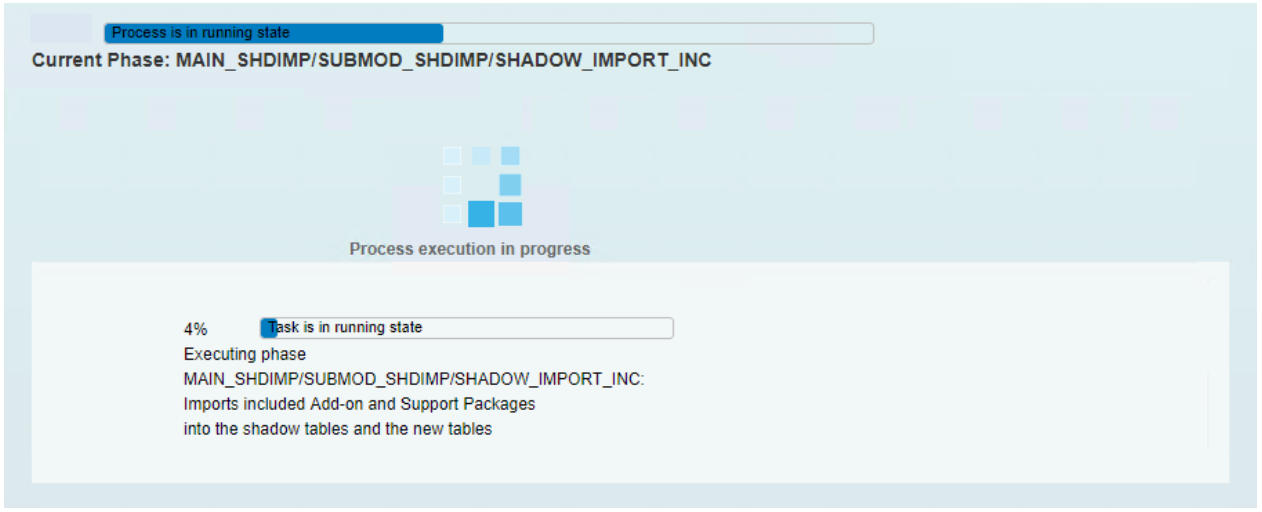
Read/Write permissions in `/SUM/abap`



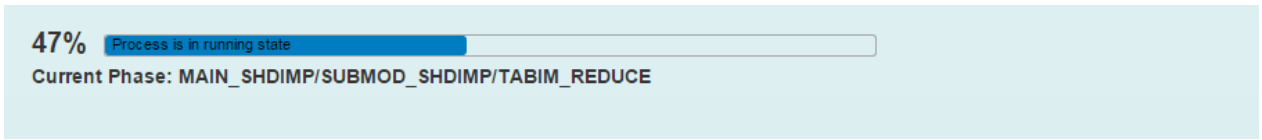
Phase: 70 46% MAIN_SHDIMP/SUBMOD_CP2SHD/SUBMOD_DIFFCP2SHD/DIFFEXPABAP_CIGPR

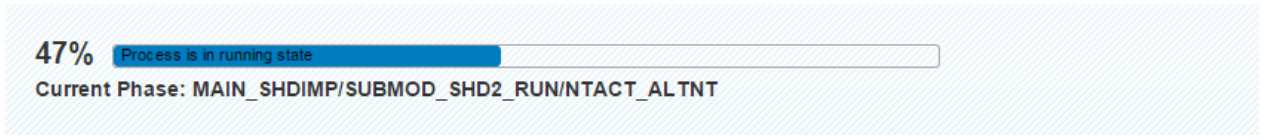


Phase: 71 47% MAIN_SHDIMP/SUBMOD_SHDIMP/SHADOW_IMPORT_UPG2 - R3trans depended

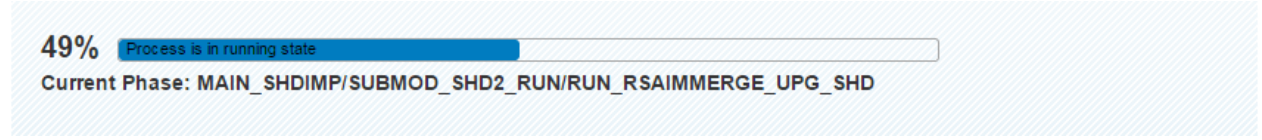


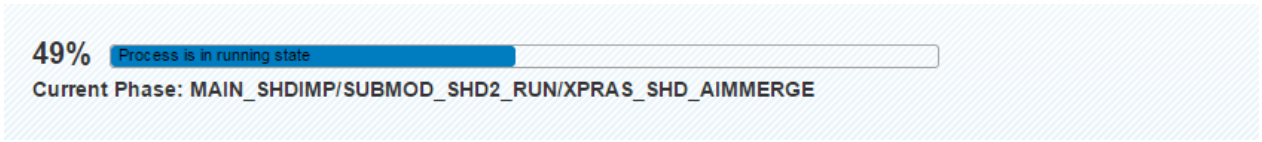
Phase: 72 47% MAIN_SHDIMP/SUBMOD_SHDIMP/SHADOW_IMPORT_INC - R3trans dependent



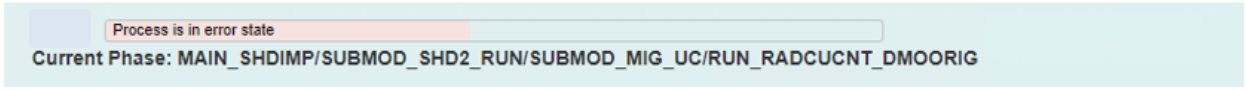


Phase: 73 47% MAIN_SHDIMP/SUBMOD_SHD2_RUN/NTACT_ALTNT

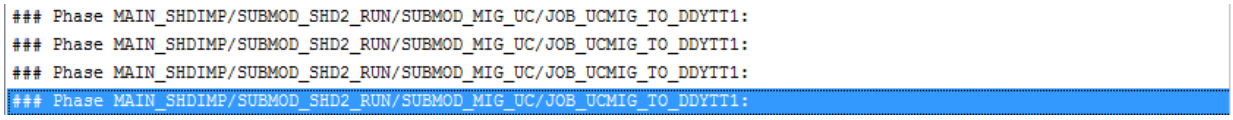




Phase: 74 49% MAIN_SHDIMP/SUBMOD_SHD2_RUN/XPRAS_SHD_AIMMERGE




```
4 ETG039 ------------------------------------------------------------------
2EETG012 "UC-Nametab does not exist for: /BIC/F100033" " "
2EETG012 "UC-Nametab does not exist for: /BIC/F100034" " "
2EETG012 "UC-Nametab does not exist for: /BIC/F100261" " "
2EETG012 "UC-Nametab does not exist for: /BIC/F100346" " "
2EETG012 "UC-Nametab does not exist for: /BIC/F100352" " "
2EETG012 "UC-Nametab does not exist for: /BIC/F100354" " "
```

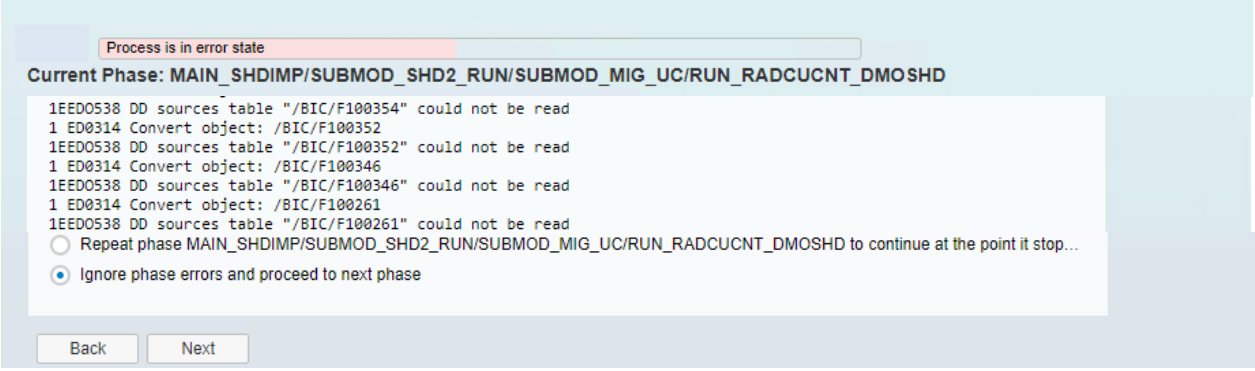


Phase: 75 50% MAIN_SHDIMP/SUBMOD_SHD2_RUN/SUBMOD_MIG_UC/JOB_UCMIG_TO_DDYTT1

Check table DDYTT in case of DMO problems with DDNTT_CONV_UC and Phase JOB_UCMIG_TO_DDYTT1 and follow the suggestion from SAP Note 1307982

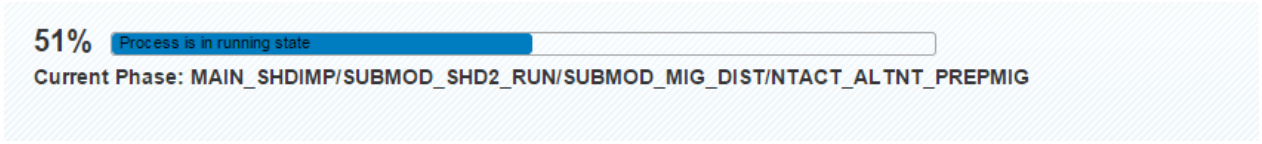
Note 1426513 - Unicode Conversion: check nametab tables

Note 2463053 - DD source table <table name> could not be read [collection note]

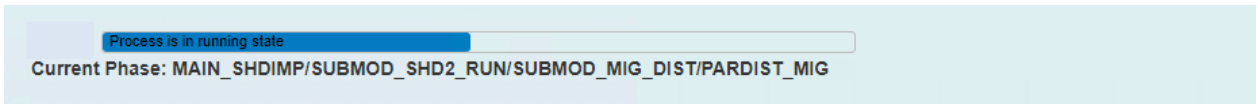


Phase: 76 50% MAIN_SHDIMP/SUBMOD_SHD2_RUN/SUBMOD_MIG_UC/RUN_ RADCUCNT_DMOSHD

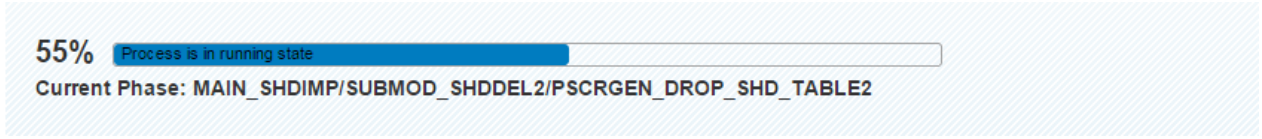
Phase: 77 51% MAIN_SHDIMP/SUBMODE_SHD2_RUN/RUN_RSGEN - Batch Process depending



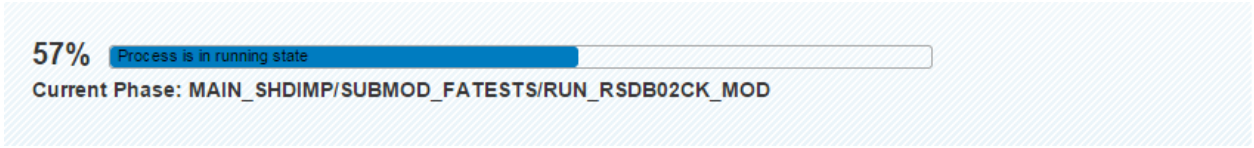
Phase: 78 51% MAIN_SHDIMP/SUBMOD_SHD2_RUN/SUBMOD_MIG_DIST/NTACT_ALTNT_PREPMIG



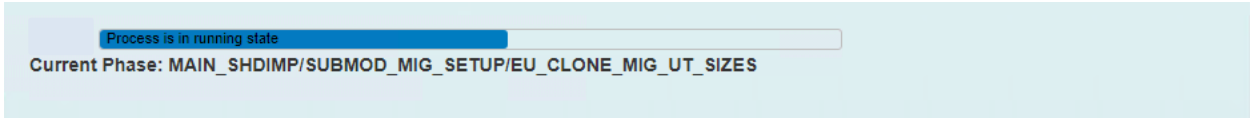
Phase: 79 51% MAIN_SHDIMP/SUBMOD_SHD2_RUN/SUBMOD_MIG_DIST/PARDIST_MIG

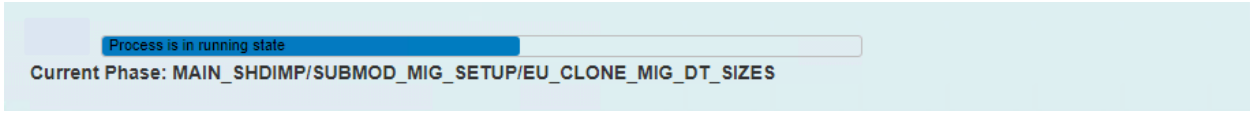


Phase: 80 55% MAIN_SHDIMP/SUBMOD_SHDDEL2/PSCRGEN_DROP_SHD_TABLE2

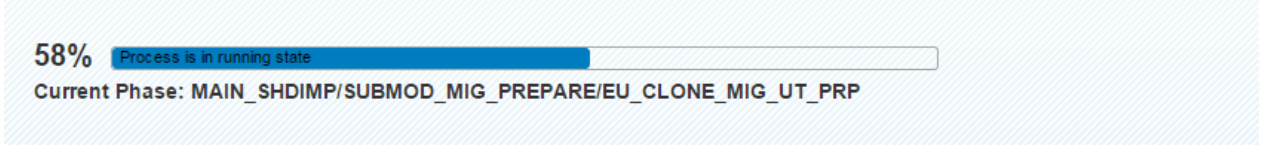


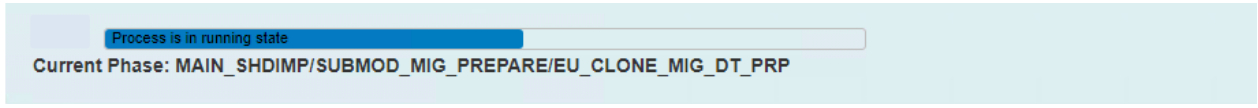
Phase: 81 57% MAIN_SHDIMP/SUBMOD_FATESTS/RUN_RSDB02CK_MOD



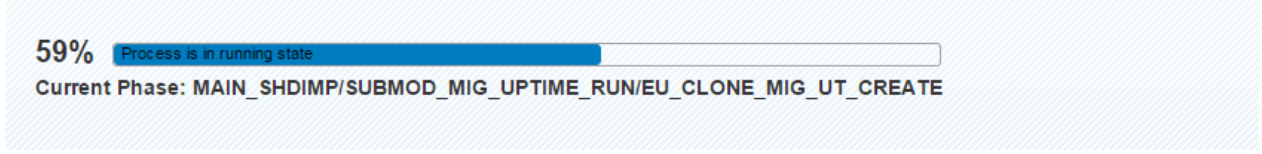


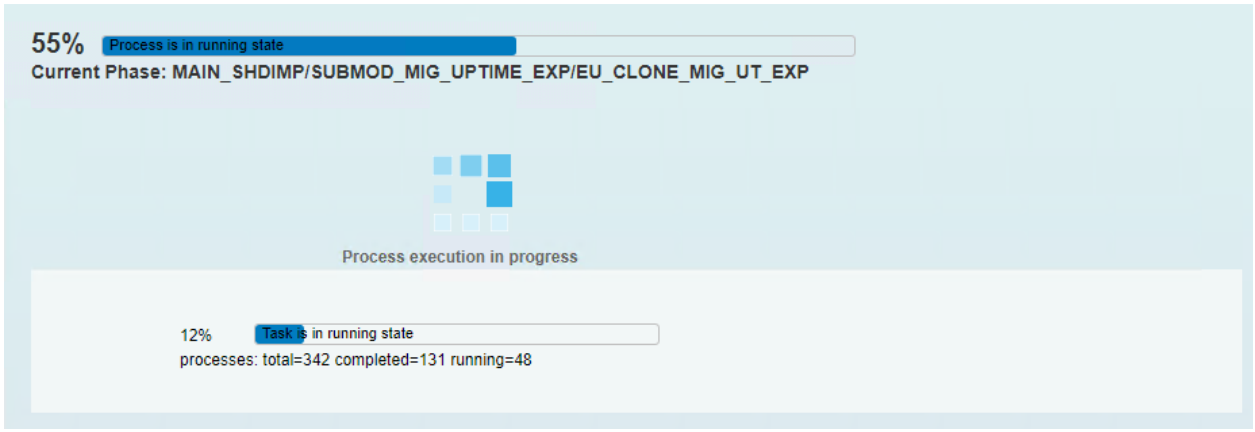
Phase: 82 57% MAIN_SHDIMP/SUBMOD_MIG_SETUP/EU_CLONE_MIG_DT_SIZES

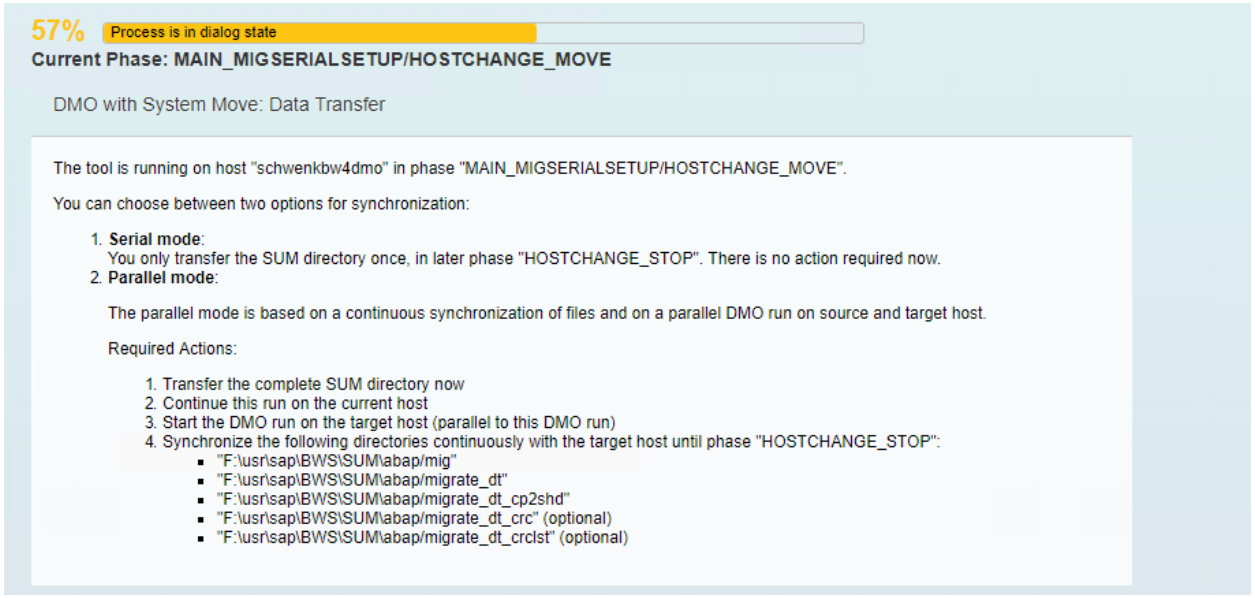




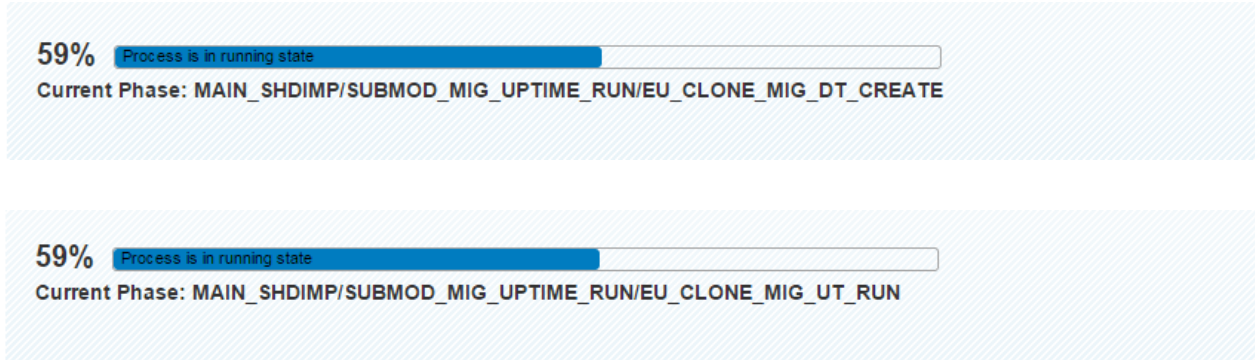
Phase: 83 58% MAIN_SHDIMP/SUBMOD_MIG_PREPARE/EU_CLONE_MIG_DT_PRP



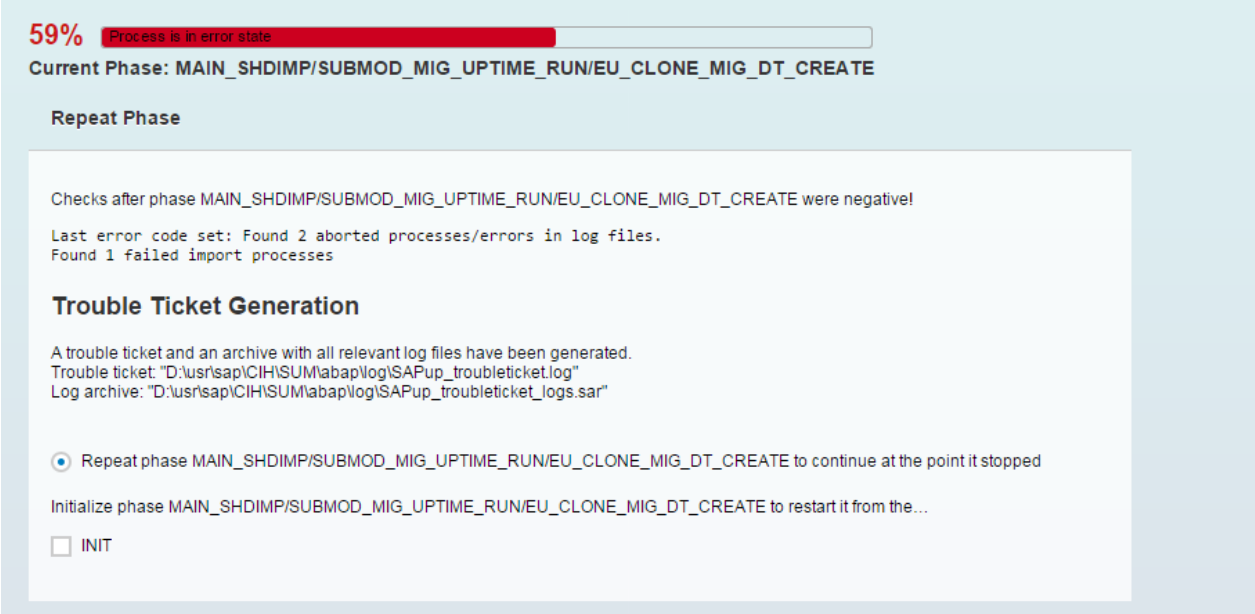




Phase: 84 57% MAIN_MIGSERIALSETUP/HOSTCHANGE_MOVE



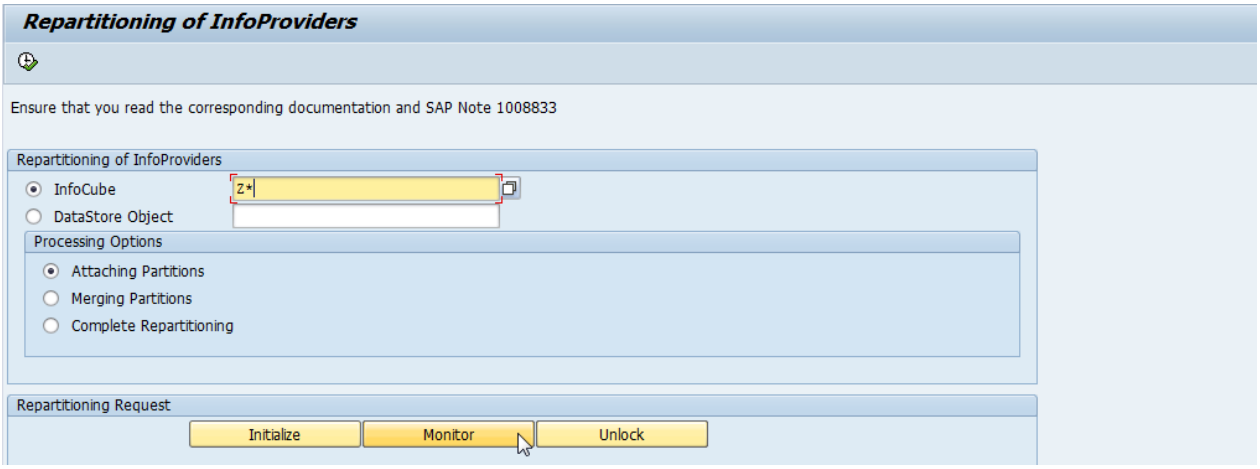
Phase: 85 59% MAIN_SHDIMP/SUBMOD_MIG_UPTIME/EU_CLONE_MIG_UT_RUN
- start of Preprocessing



In this Case check the existence of any additional inconsistencies with shadow indexes which were left from unsuccessful BW Table Repartitioning

Note 1741015 - Repartitioning of BW tables (contains Report RSDU_REPART_UI)

Please Note that currently DSO objects with a partition number higher than 1000 are not supported by HANA. So, you must repartition the objects accordantly beforehand.

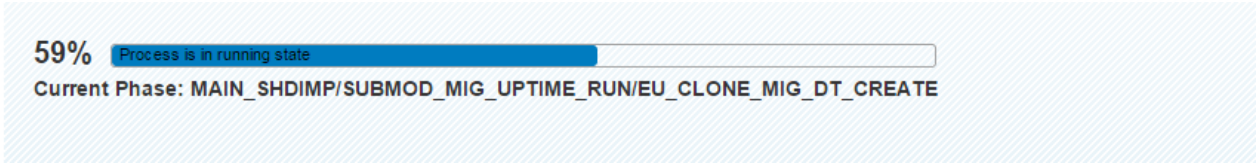


Furthermore, there are the following Repair Reports available:

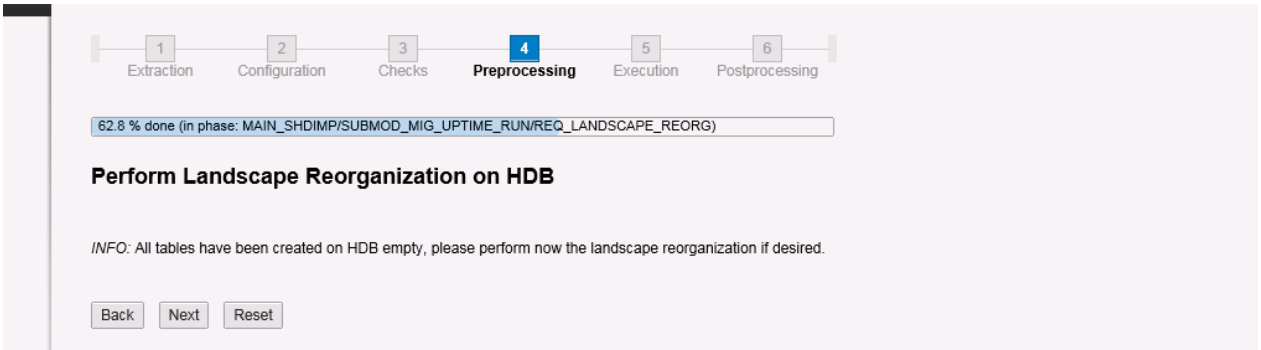
Report **DDIF_OBJECT_DELETE** to clean database entries and nametab

Report **RSDU_REPART_UI** to check inconsistencies with shadow indexes

Optional: if you encounter any import problems which are not critical, use the suggestion from Chapter 3.3.5.1



Phase: 86 59% MAIN_SHDIMP/SUBMOD_MIG_UPTIME/EU_CLONE_MIG_DT_CREATE



Phase: 87 62% MAIN_SHDIMP/SUBMOD_MIG_UPTIME/REQ_LANDSCAPE_REORG

This Phase is very important, so please make sure you have the latest info's about the correct procedure.

For a correct Landscape Reorg, at least HANA 1.0 Rev. 68 or higher is needed. For SAP BW 7.40 SP07 and higher HANA 1.0 SP08 Rev 81 and higher is needed.

Note 1815547 - Row/ColumnStore check without rowstorelist.txt

Note 1883487 - SMIGR: Row store Tables Without file access needed

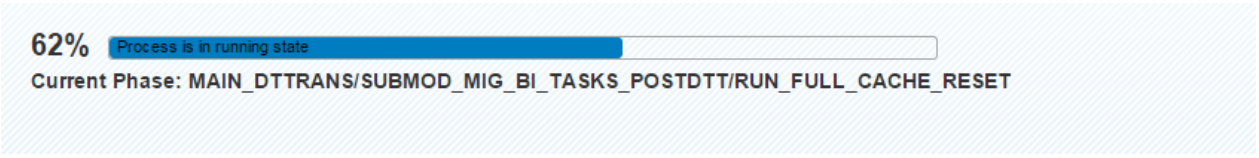
Note 1908075 - BW on HANA SP6: Landscape Redistribution

Note 1908073 - BW on HANA Scale Out: Tabellenverteilung / -partitionierung

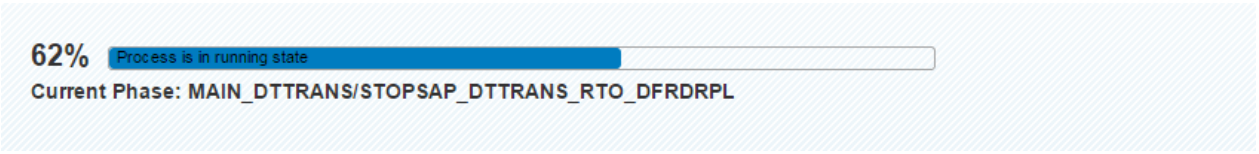
Note 1891393 - Automated Configuration scripts for HANA Landscape (contains HDB script for reorg)

For more details see also the following Blog:

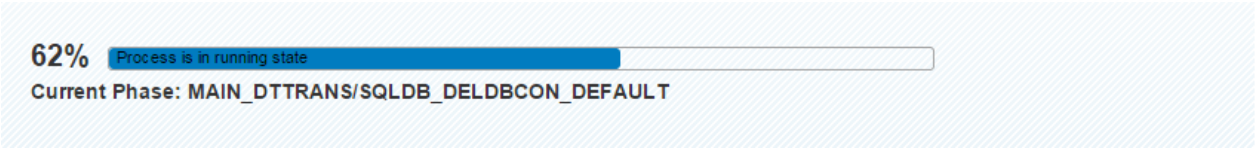
http://scn.sap.com/community/hana-in-memory/blog/2013/09/03/sap-hana-landscape-redistribution-with-sp6



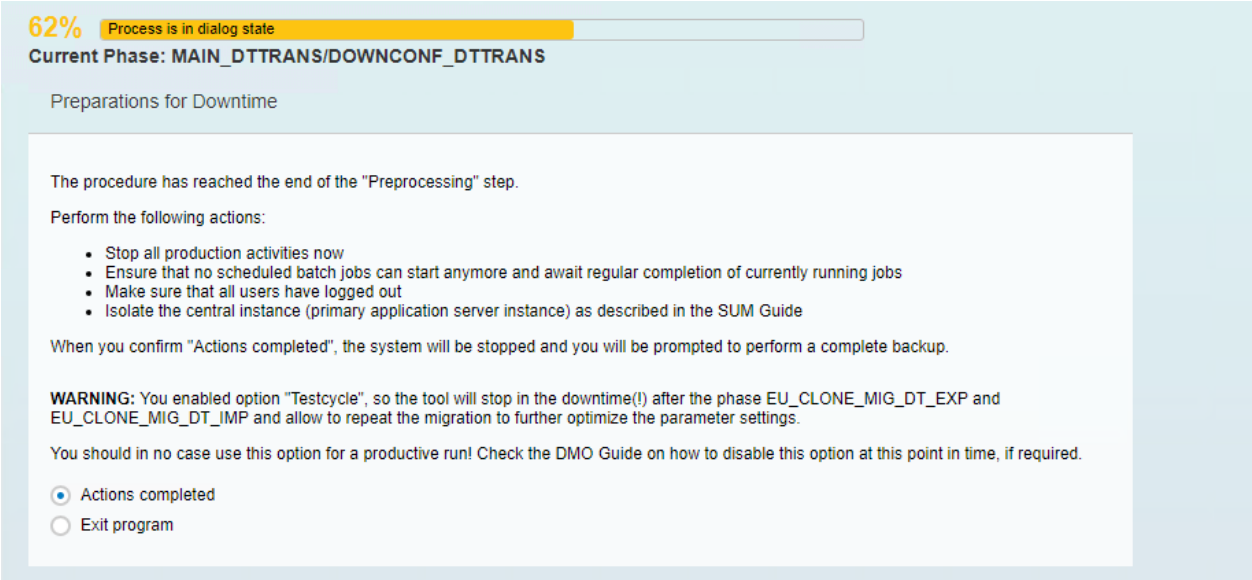
Phase: 88 62% MAIN_DTTRANS/SUBMOD_MIG_BI_TASKS_POSTDTT/RUN_FULL_CACHE_RESET



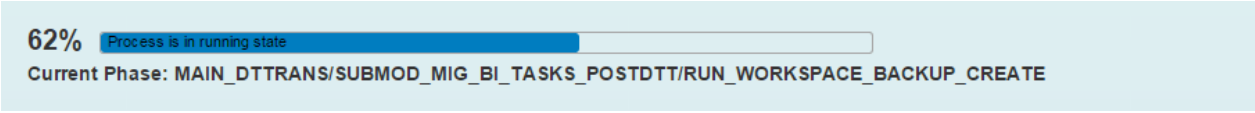
Phase: 89 62% MAIN_DTTRANS/STOPSAP_DTTRANS_RTO_DFRDRPL

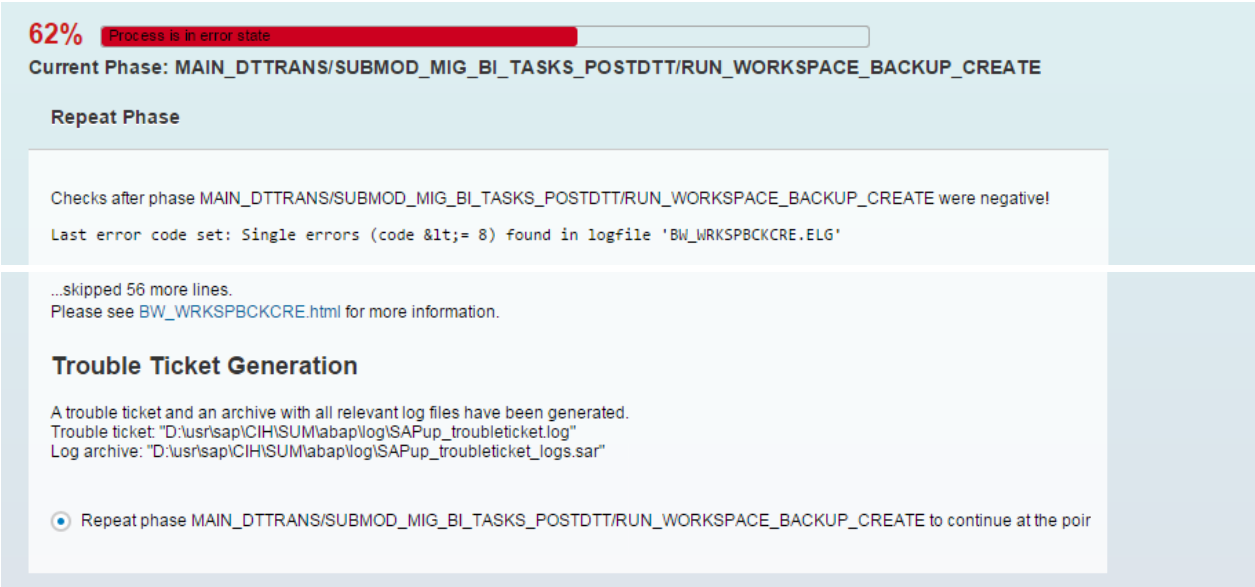


Phase: 90 62% MAIN_DTTRANS/SQLDB_DELDBCON_DEFAULT



Phase: 91 62% MAIN_DTTRANS/DOWNCONF_DTTRANS - preparations for downtime

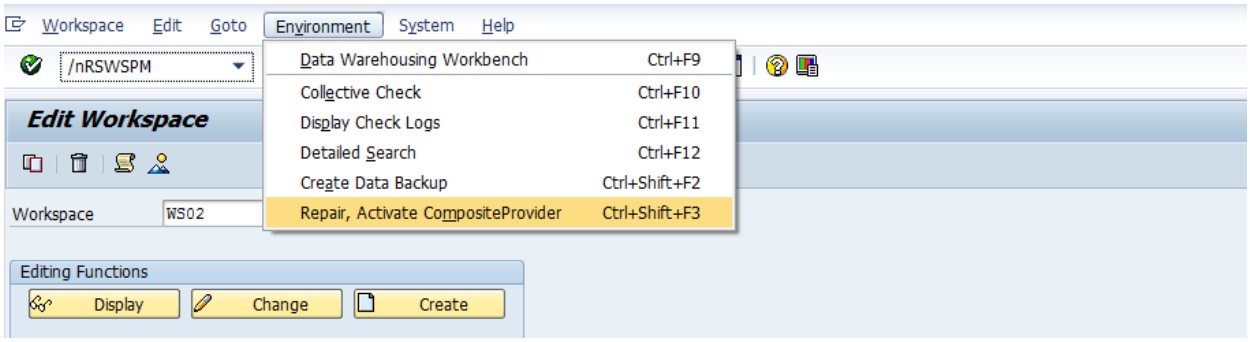




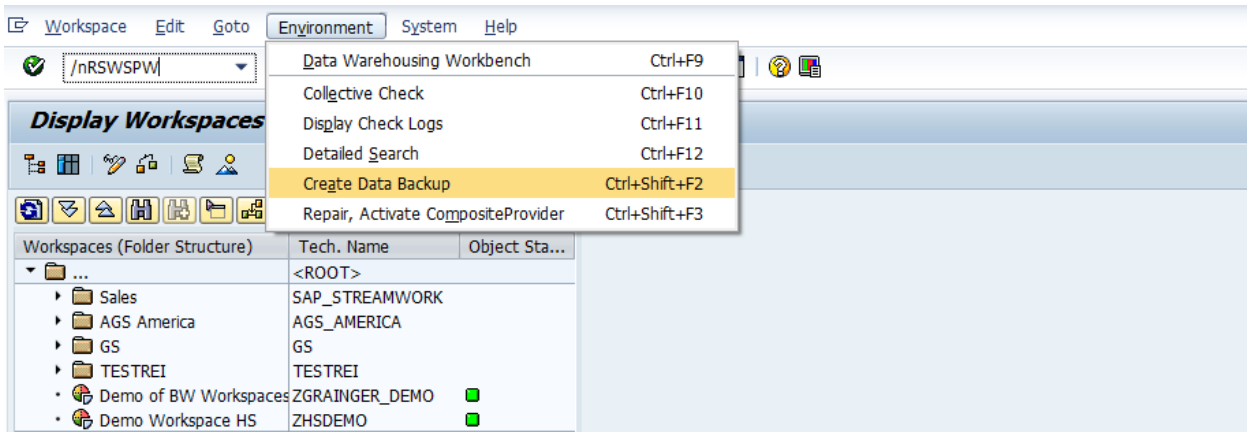
Phase: 92 62% MAIN_DTTRANS/SUBMOD_MIG_BI_TASKS_POSTDTT/
RUN_WORKSPACE_BACKUP_CREATE

To avoid errors in this phase, make sure that you have a working connection to a BWA server, as the backup program check the existence. If there are BW Workspaces which either not used anymore or can be deleted for various reasons, you can use the following option for it. Check the existence and/or the backup of the existing BW Workspaces

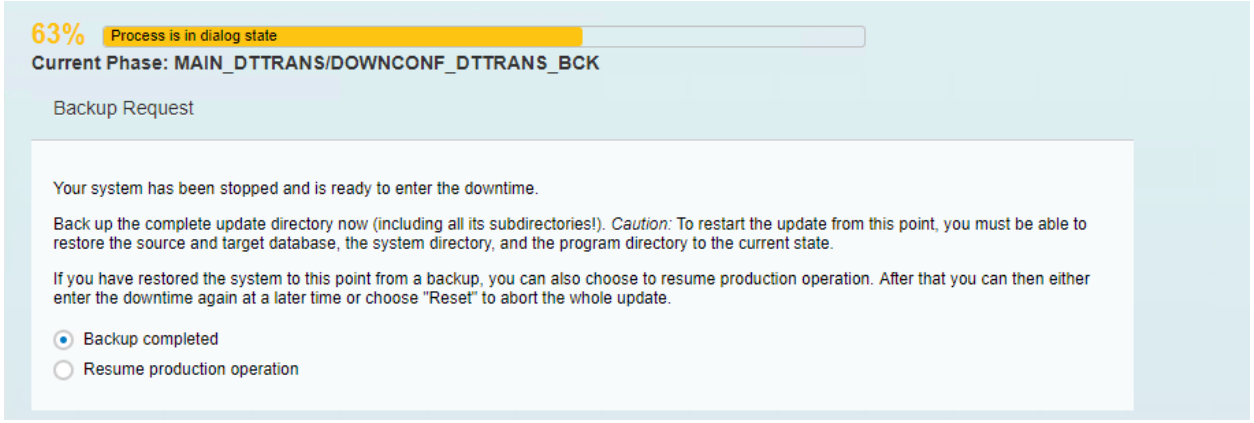
Transaction RSWSP (single WS maintenance)

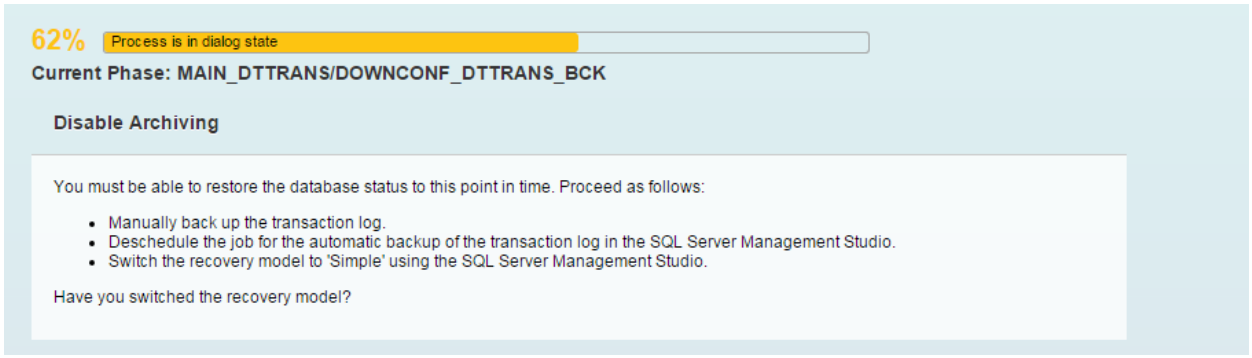


Transaction RSWSPW (mass WS maintenance)

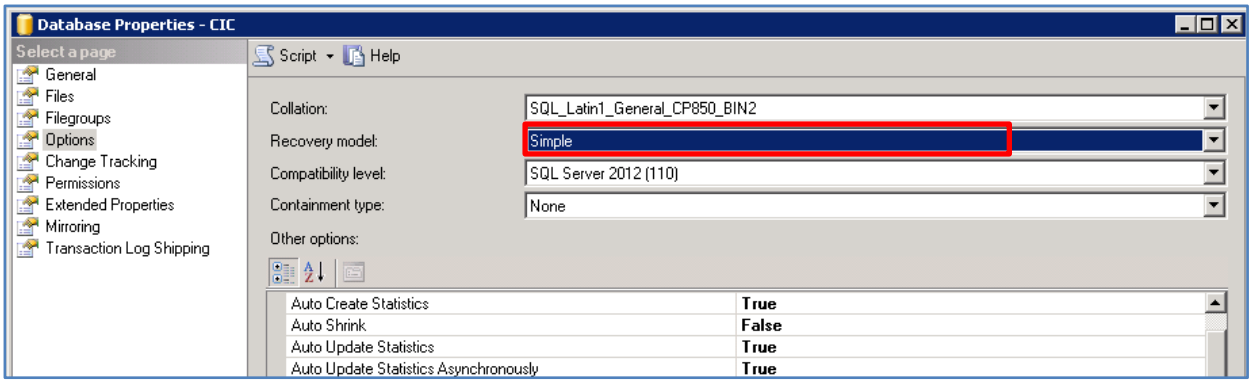


[Note 2130519 - BW on HANA upgrade and migration with DMO tool fails in phase EU_CLONE_MIG_DT_RUN with error Invalid object name '/BIC/D100XXXX'.]

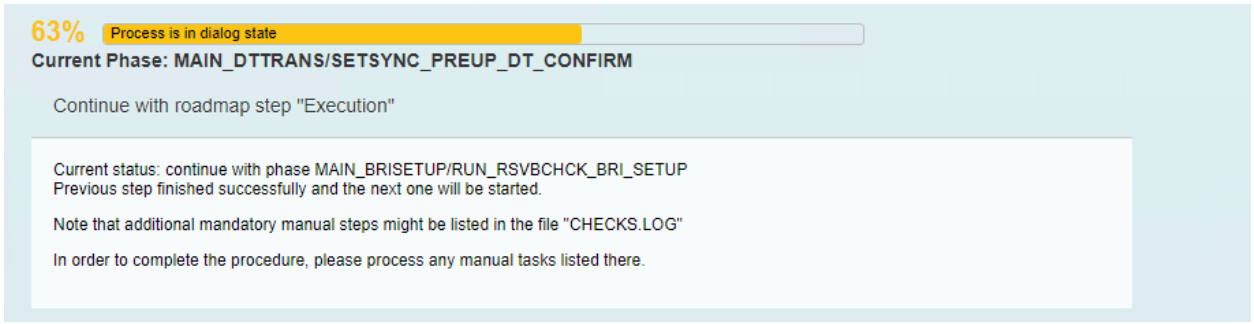




Phase: 93 63% MAIN_DTTRANS/DOWNCONF_DTTRANS_BCK - backup request

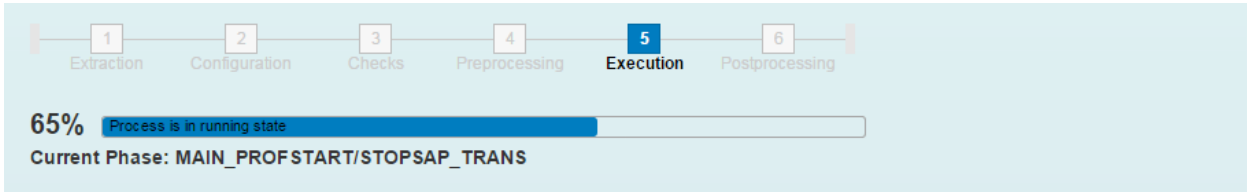


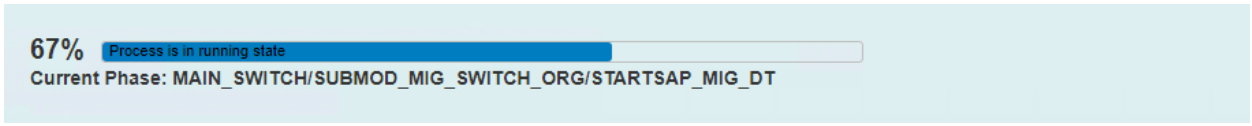
Phase: 94 - switch archive mode on MSSQL (Example)



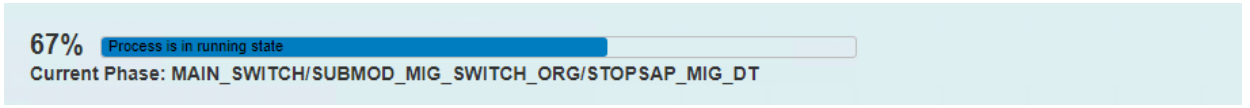
Phase: 95 63% MAIN_DTTRANS/SETSYNC_PREUP_DT_CONFIRM - END (4)

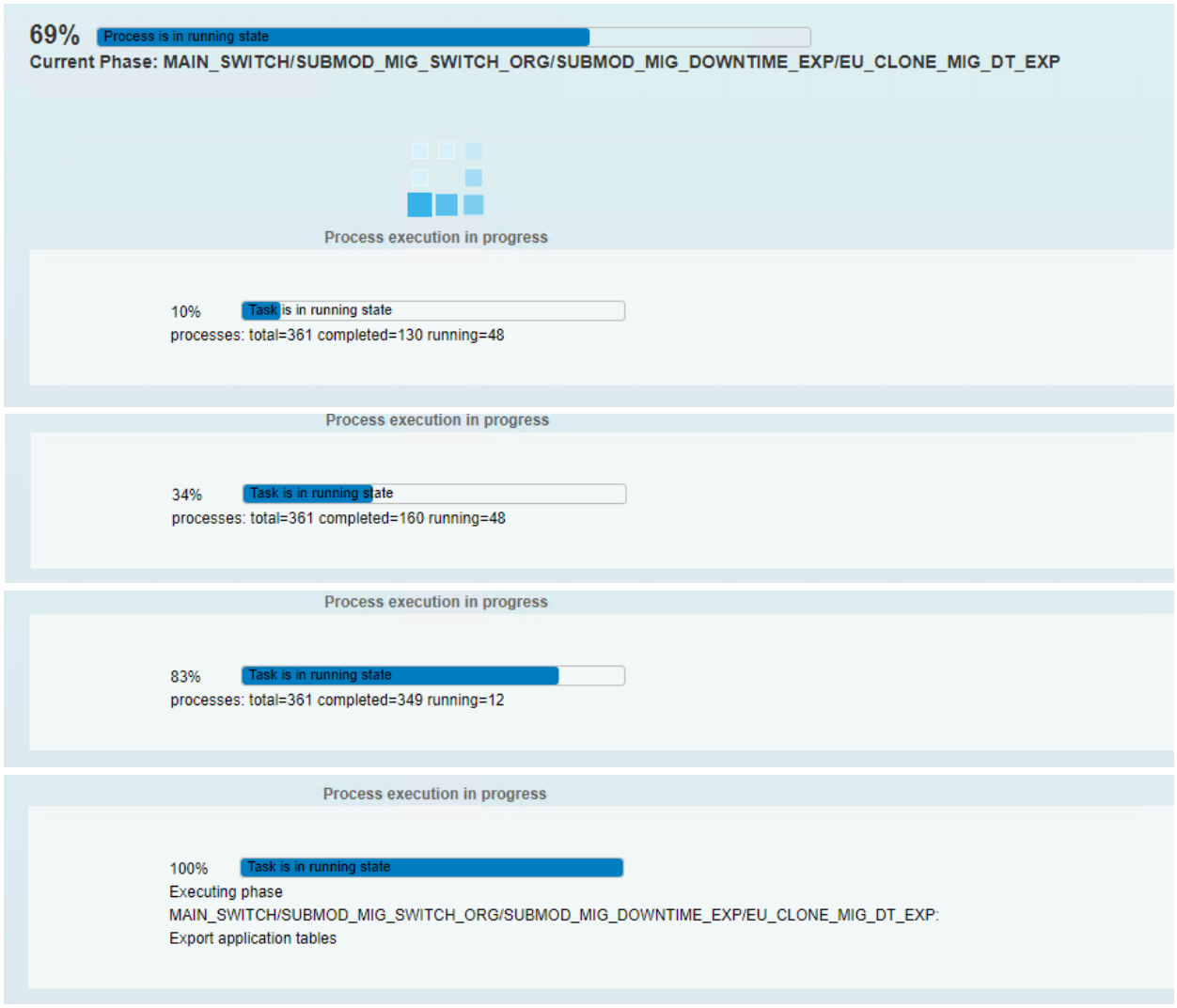
Phase Execution (5)



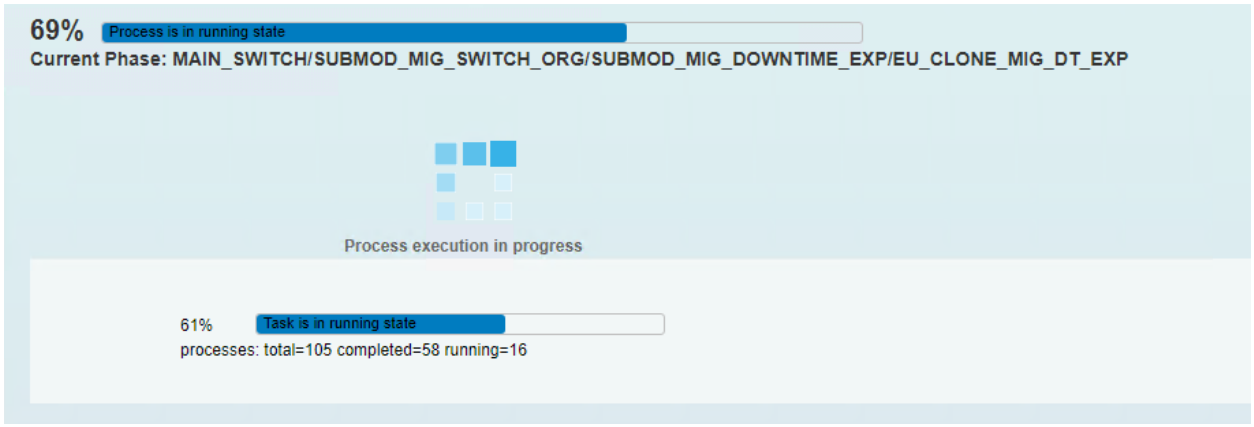


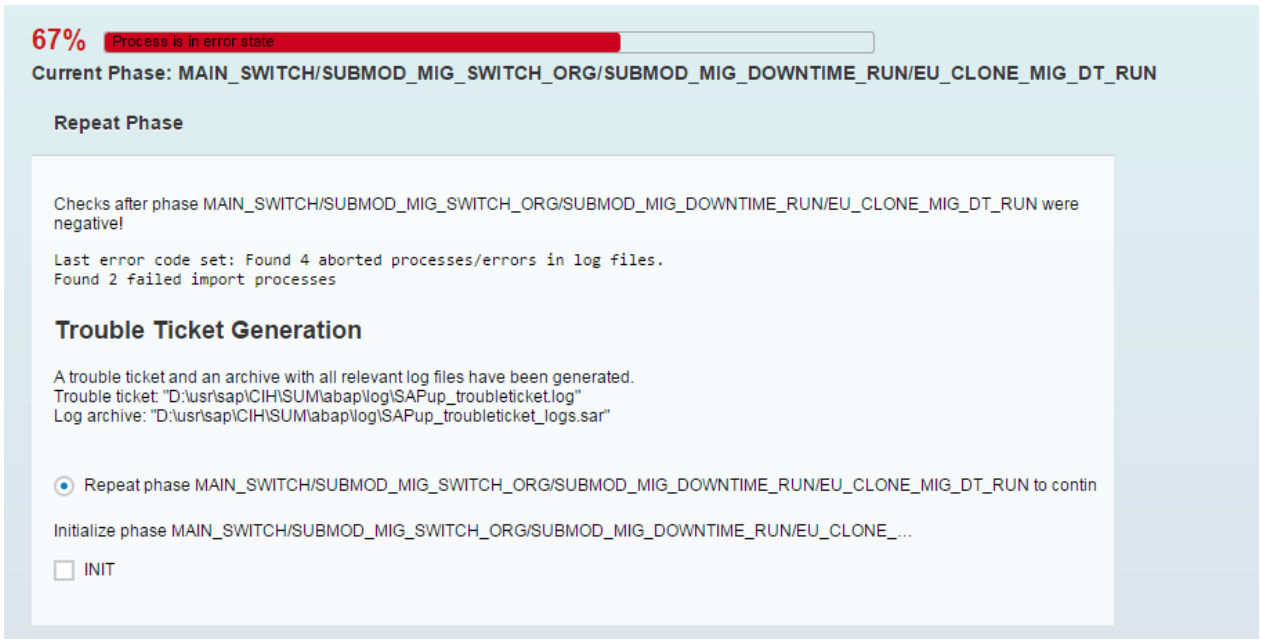
Phase: 96 66% MAIN_SWITCH/SUBMOD_MIG_SWITCH_ORG/STARTSAP_MIG_DT





Phase: 97 69% MAIN_SWITCH/SUBMOD_MIG_SWITCH_ORG/SUBMOD_MIG_DOWNTIME_EXP/EU_CLONE_MIG_DT_EXP

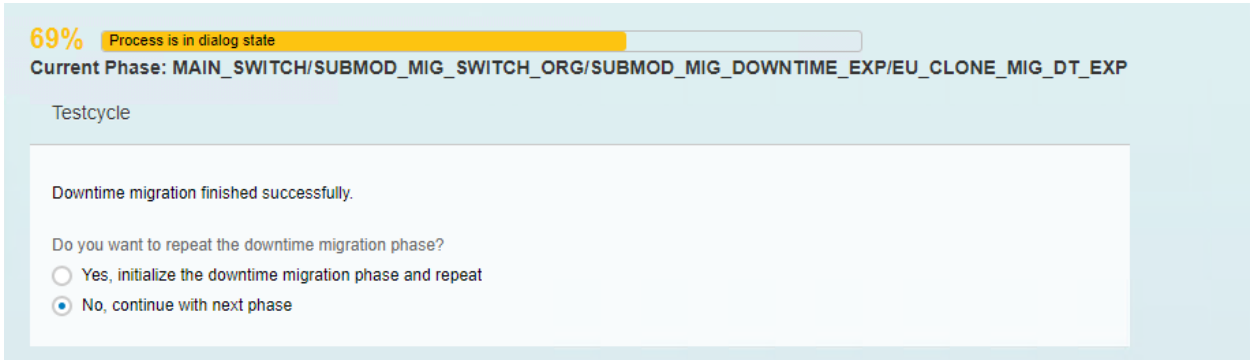




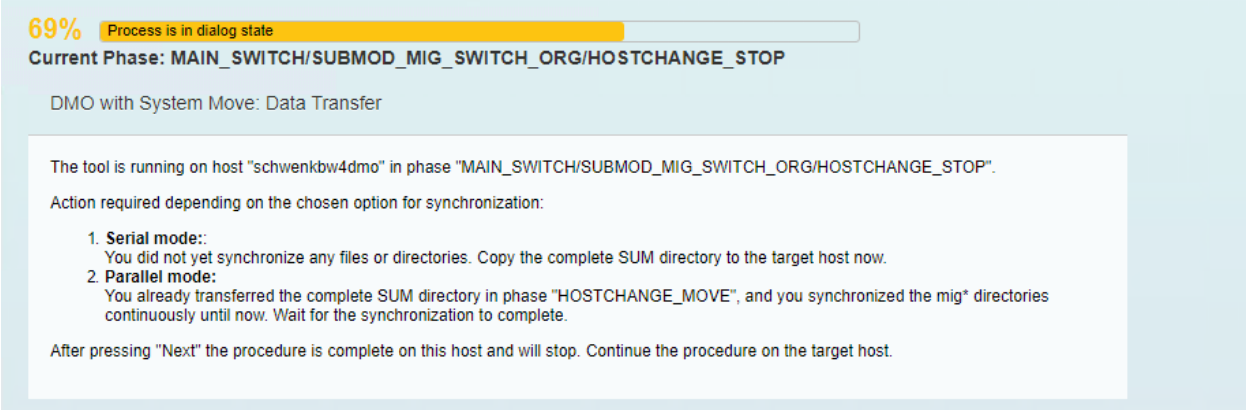
Phase: 98 67% EU_CLONE_MIG_DT_RUN - error

If you encounter problems with tables/views/match codes/cluster tables you don't want to consider during the migration use the file **`/usr/sap/<SID>/SUM/abap/bin/EUCLONEDEFS_ADD.LST`** (create the file if it is not available) and specify a custom procedure for these objects, e.g.

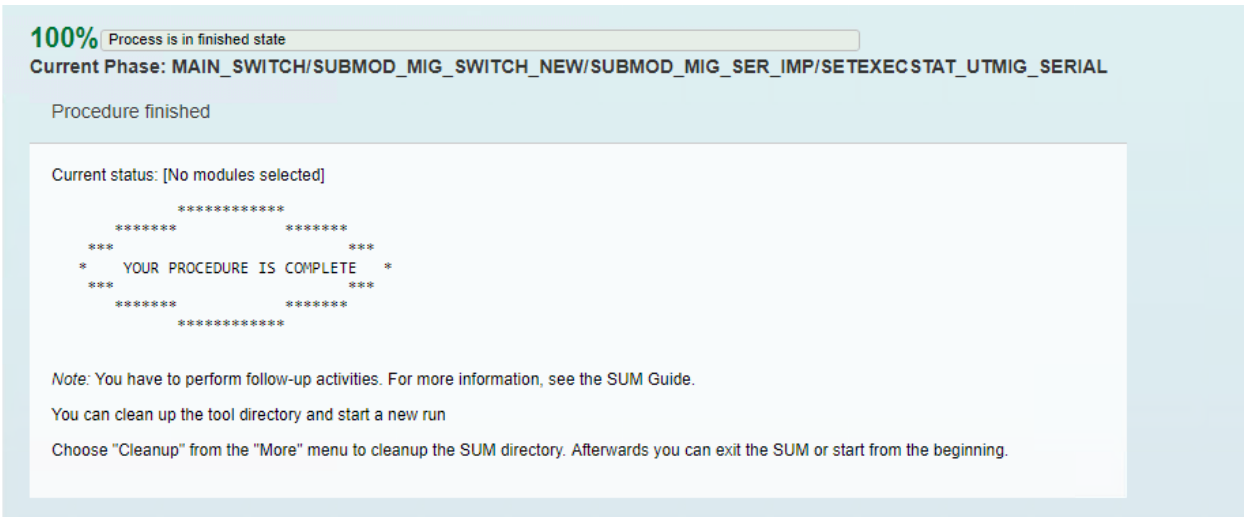
Example:
`/BIC/AZSPOB10300  noclone`



Phase: 99 69% MAIN_SWITCH/SUBMOD_MIG_SWITCH_ORG/SUBMOD_MIG_DOWNTIME_EXP/ EU_CLONE_MIG_DT_EXP



Phase: 100 69% MAIN_SWITCH/SUBMOD_MIG_SWITCH_ORG/HOSTCHANGE_STOP



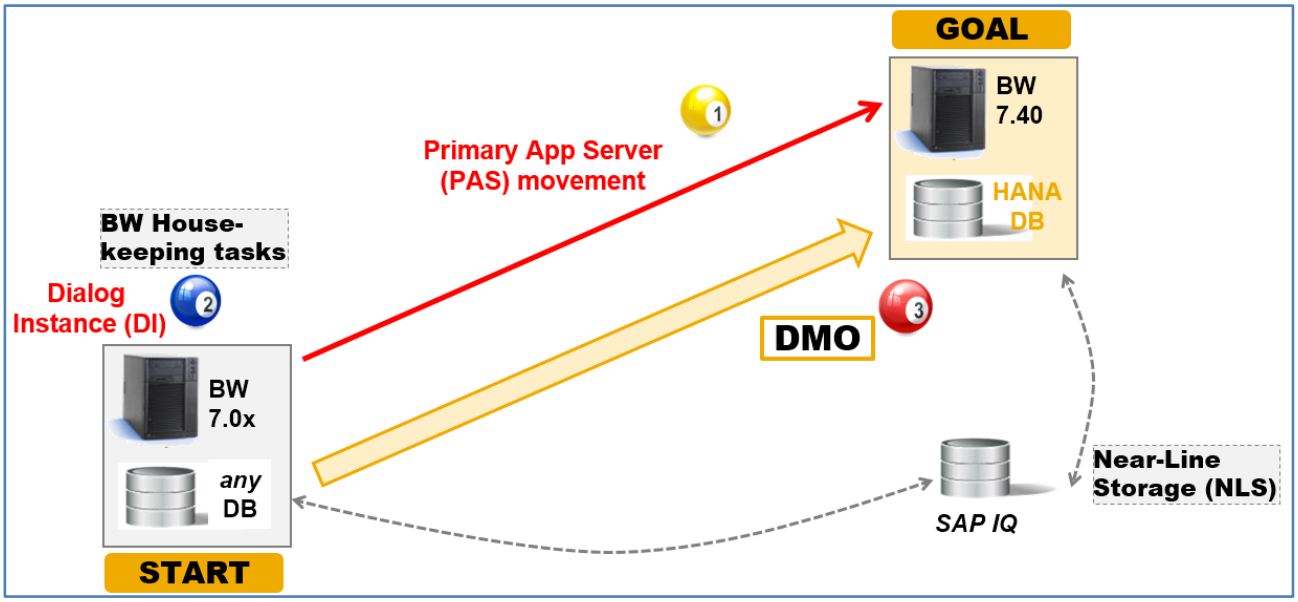
Phase: 101 70% MAIN_SWITCH/SUBMOD_MIG_SWITCH_NEW/SUBMOD_MIG_SER_IMP/ SETEXECSTAT_UTMIG_SERIAL

As the “serial option” was selected follow the Instruction on the screen and copy the SUM directory to the server were the HANA database resides.

Switching the PAS to the HANA server

Since SUM/DMO 1.0 SP20 you have the possibility to switch the PAS to the SAP HANA server during the DMO procedure. This is also helpful, if you plan to move your server in your on-premise Network to a Cloud based environment like Azure or AWS.

However, a few steps are necessary to continue with the DMO procedure. For details refer to the current DMO of SUM 1.0 SP20 Guide (SAP HANA)



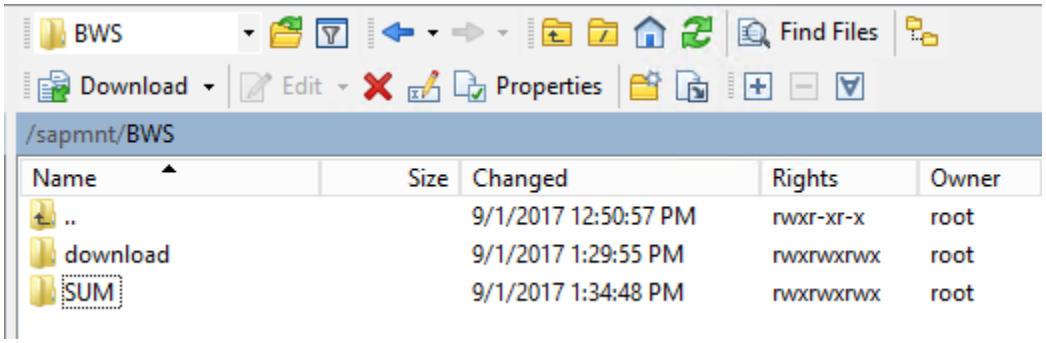
Copy the SUM directory

To continue, you must now copy the complete SUM directory to the new server to the same location as it was on the original server. If you not yet created the directory structure, you must manually create the /sapmnt/<SID> structure.

The SUM directory might be large, as it also contains all support packages, Kernel Versions, etc. So, copying the download directory is not necessary.

Provide the SAP Kernel of the target OS

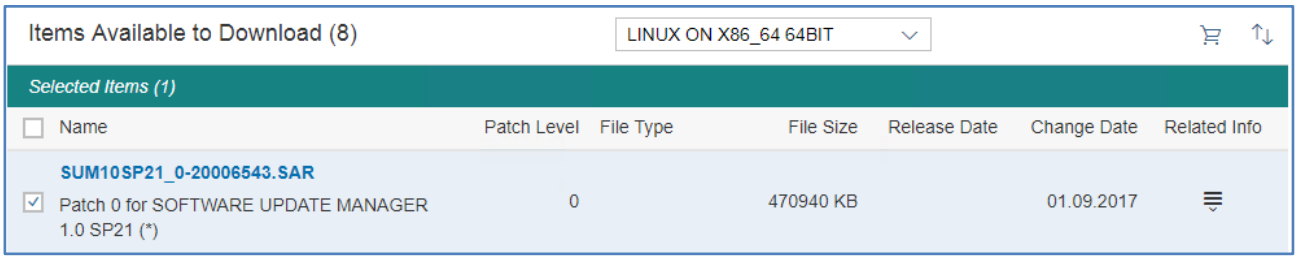
Create the directory /sapmnt/<SID>/download and copy the target Kernel of the SAP HANA server to the directory. You will also need the files when you install the target dummy system



Provide the SUM/DMO executables of the target OS

As you possibly move from the existing OS e.g. Windows to Linux, you also must provide the correct SUM executables for the target OS.

During the DMO procedure including system move, SUM asks you for a directory that contains the kernel files for the target system. To meet this request, proceed as follows before you start the procedure



Create a download folder on the target system host, such as \usr\sap\<SID>\download.

Copy the two kernel files for the target into this directory. One kernel file is database independent, the other is database dependent for the target database type. Both files are for the target product version.

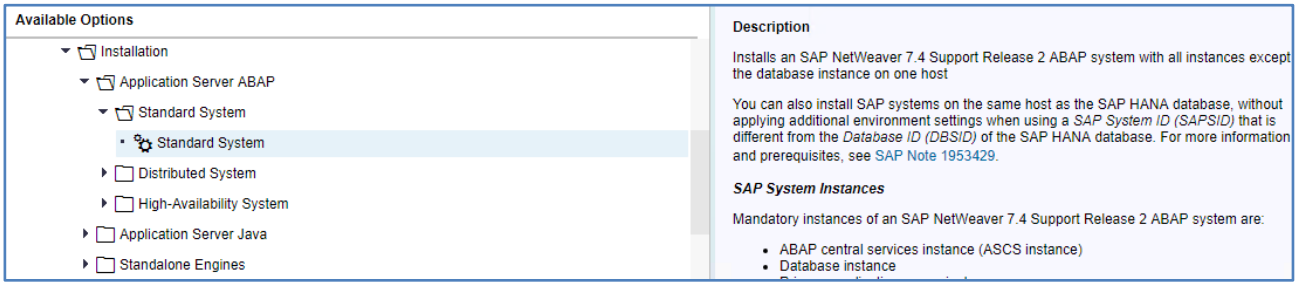
As all created files are written to new files, it is save to unpack now the correct SUM/DMO executables to the new structure as follows

```
server:bwsadm 55> pwd
/sapmnt/BWS
server:bwsadm 56> SAPCAR -xvf /sapmnt/software/SUM10SP21_0-20006543.SAR
```

Install a fresh PAS of the target OS

The SUM controls the entire procedure, from checking the system requirements and importing the necessary programs through stopping production operation until production operation is resumed. The procedure is divided up into several different roadmap steps. The roadmap steps are in turn divided into individual steps. The successful completion of a step is a precondition for the success of all subsequent steps.

To install the target PAS, download the latest Version of the SWPM and the necessary files, e.g. for the target release of NetWeaver 7.40, this would be the export of NetWeaver 7.40 SR02 for HANA



Please Note that for the fresh Installation of SAP HANA the Installation Package with the correct Labels is necessary.

51052383_1 SAP HANA Platf.Ed.1.0 SPS12 DSP(SAP HANA DB 1.00.122.11) 1/3	EXE	3906250 KB	18.08.2017	18.08.2017
51052383_2 SAP HANA Platf.Ed.1.0 SPS12 DSP(SAP HANA DB 1.00.122.11) 2/3	RAR	3906250 KB	18.08.2017	18.08.2017
51052383_3 SAP HANA Platf.Ed.1.0 SPS12 DSP(SAP HANA DB 1.00.122.11) 3/3	RAR	2644635 KB	18.08.2017	18.08.2017

Current Documentation of the SWPM tool

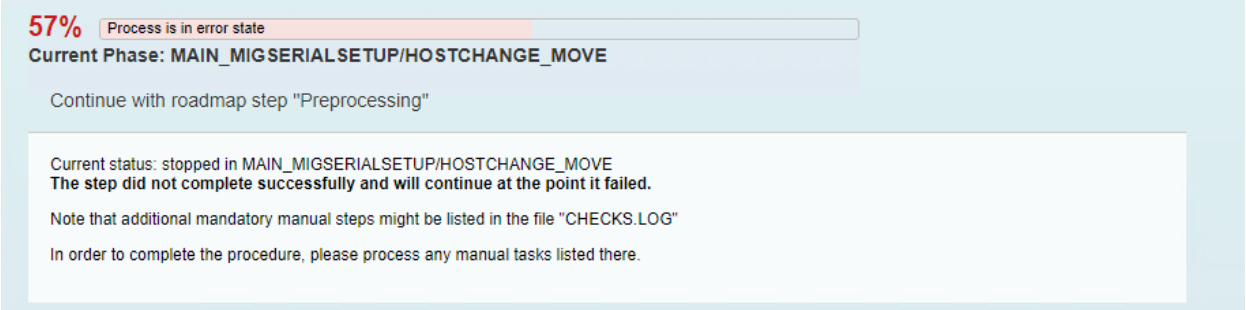
https://support.sap.com/en/tools/software-logistics-tools.html

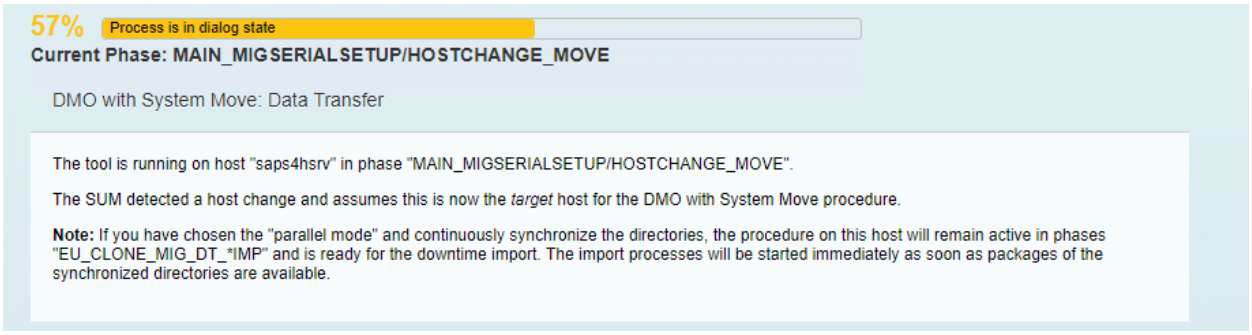
Installation Guides - Application Server Systems

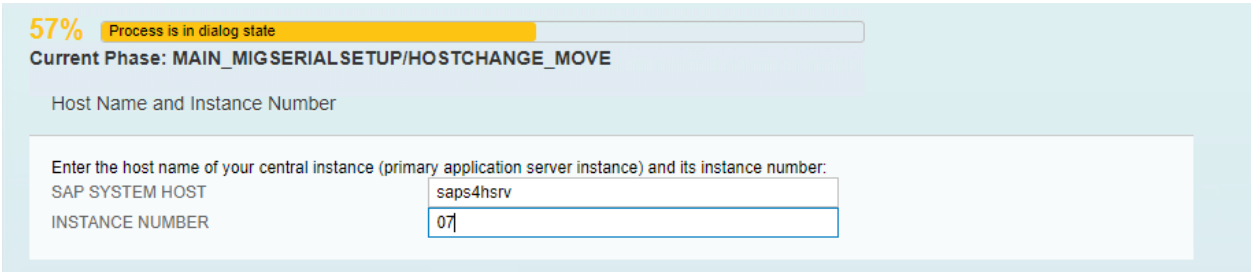
Install the target SAP HANA database

The SWPM tool also installs the target SAP HANA database. If you have trouble during the Installation, provide the correct file directory structure as seen in the following example.

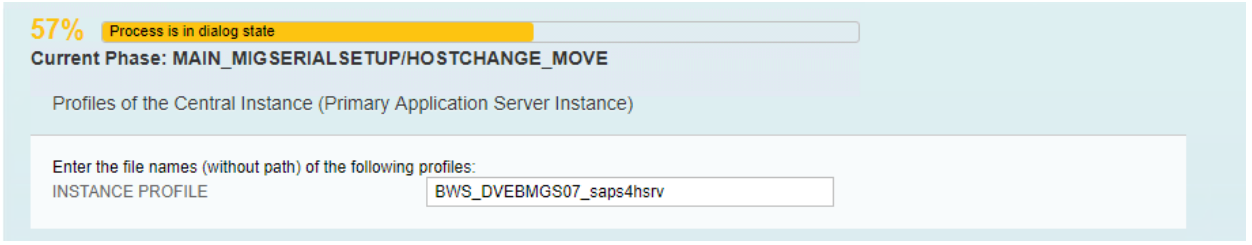
```
server:/hana # dir
total 0
lrwxrwxrwx 1 root root 16 Sep  1 20:02 data -> /sapmnt/BSH/data
lrwxrwxrwx 1 root root 15 Sep  1 19:52 log -> /sapmnt/BSH/log
lrwxrwxrwx 1 root root  7 Sep  1 18:13 shared -> /sapmnt
server:/hana #
```

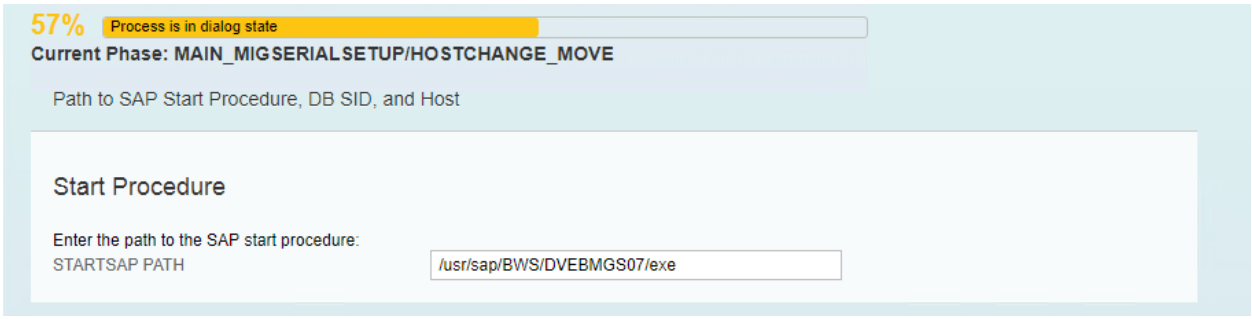


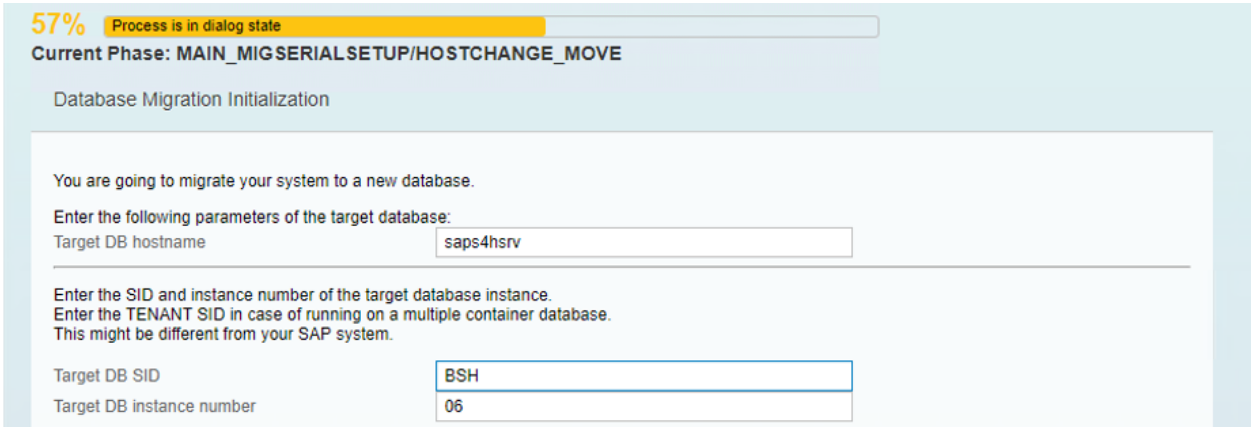


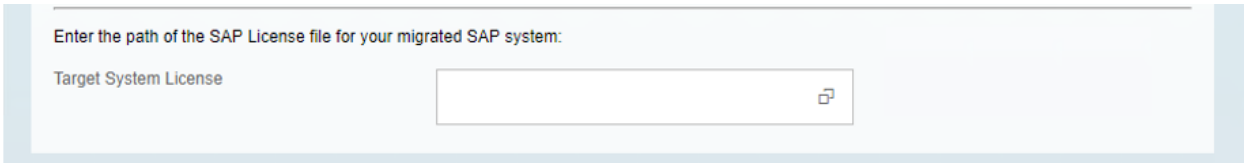


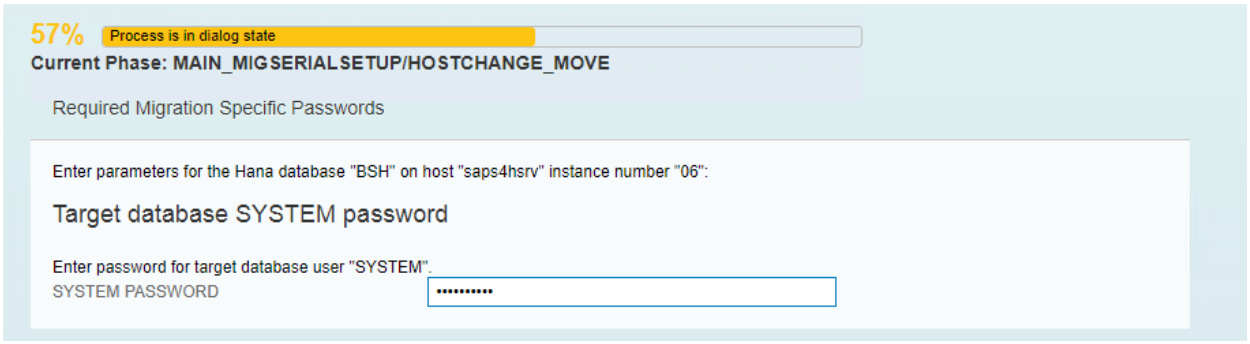
Phase: 102 57% MAIN_MIGSERIALSETUP/HOSTCHANGE_MOVE

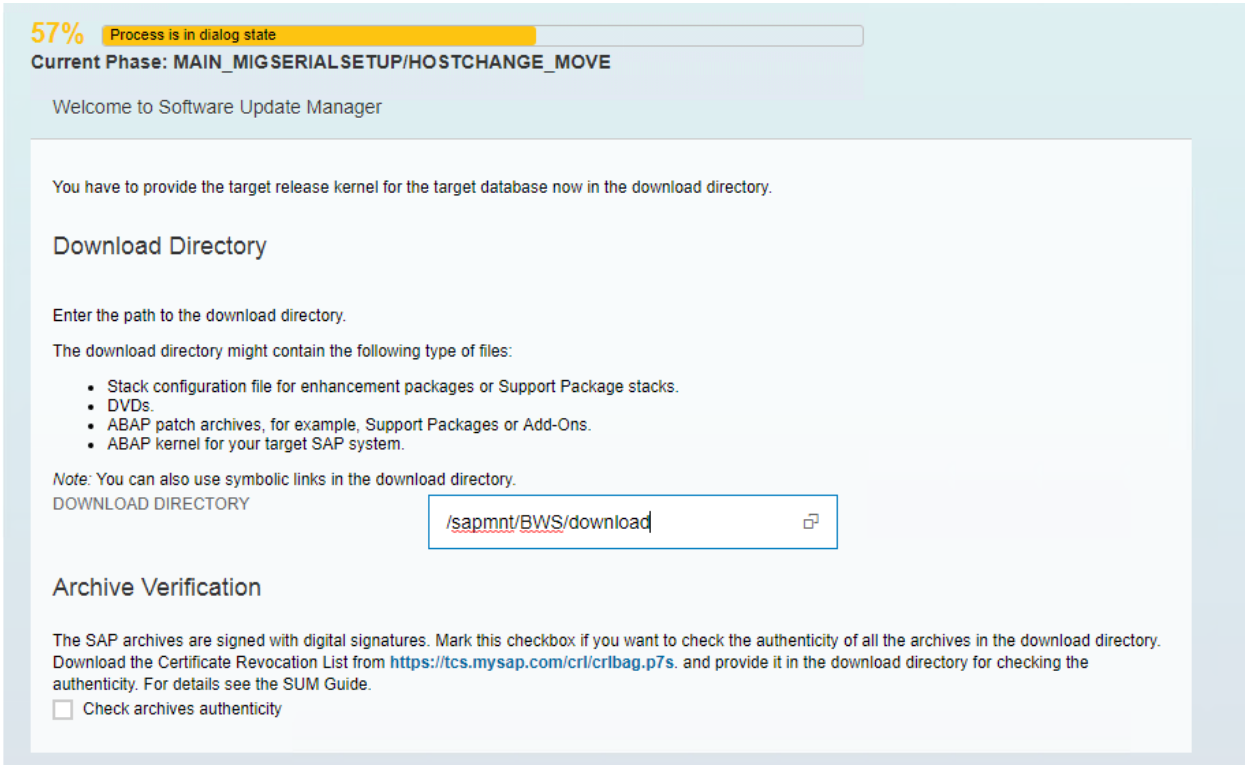




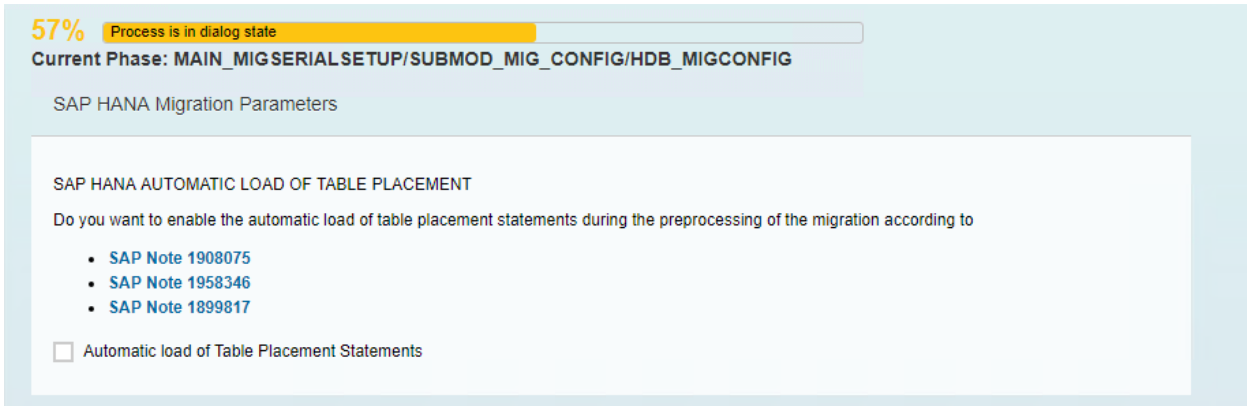




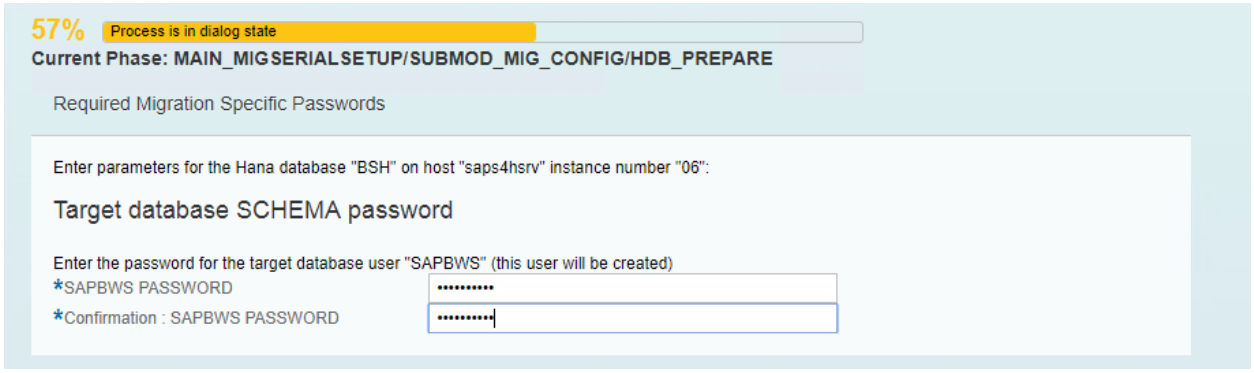




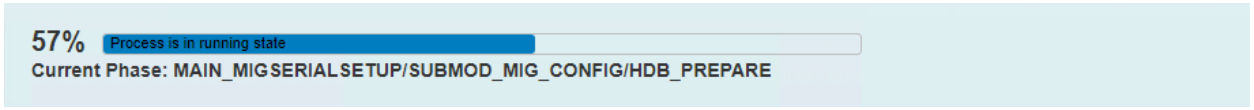
Phase: 103 57% MAIN_MIGSERIALSETUP/HOSTCHANGE_MOVE - continue on new server

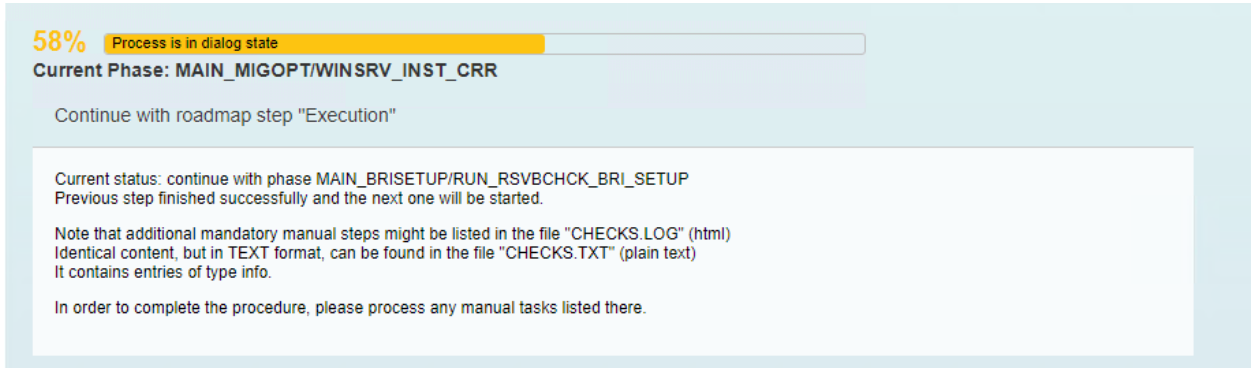


Phase: 104 57% MAIN_MIGSERIALSETUP/SUBMOD_MIG_CONFIG/HDB_MIGCONFIG

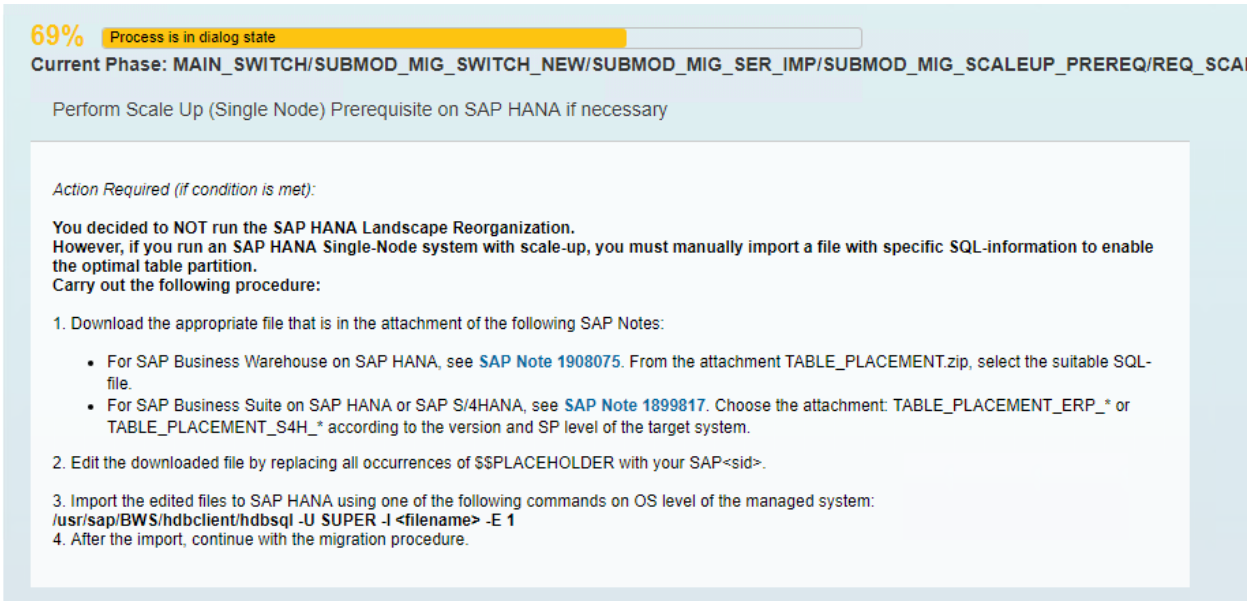


Phase: 105 57% MAIN_MIGSERIALSETUP/SUBMOD_MIG_CONFIG/HDB_PREPARE



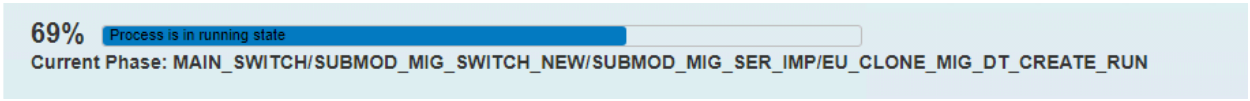


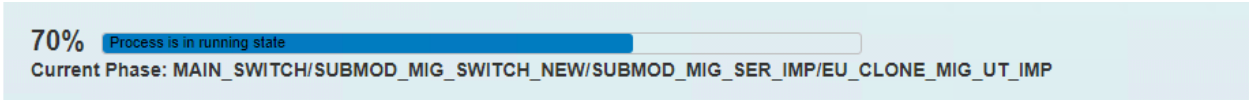
Phase: 106 58% MAIN_MIGOPT/WINSRV_INST_CRR - End of Phase Host Change



Phase: 107 69% MAIN_SWITCH/SUBMOD_MIG_SWITCH_NEW/SUBMOD_MIG_SER_IMP/ SUBMOD_MIG_SCALEUP_PREREQ/REQ_SCALEUP_PREREQ

```
./hdbsql -U SUPER -I HdbTablePlacementParameters_BWS.SQL -E 1
```





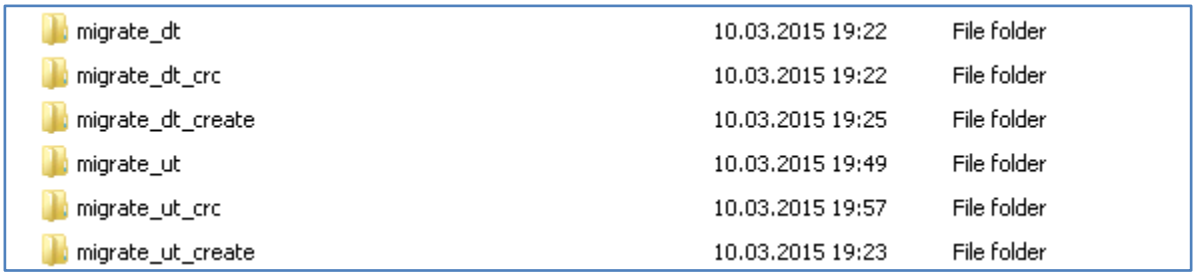
Phase: 108 70% MAIN_SWITCH/SUBMOD_MIG_SWITCH_NEW/SUBMOD_MIG_SER_IMP/ EU_CLONE_MIG_UT_IMP

Details of the export/import process

Note 1904239 - SUM options to change parameters entered in INITPUT and INITSUBST phases

Phases behind DMO R3load parallel export/import during UPTIME and DOWNTIME to target HANA DB

During the main phases for the uptime and downtime migration there are several directories created which you can link to the following phases:



The following Phases

EU_CLONE_UP_PRP ➔ creates the directory **migrate_ut_create** **"R3ldctl"** phase
EU_CLONE_UP_RUN ➔ creates the directory **migrate_ut** **"R3load"** phase

EU_CLONE_DT_PRP ➔ creates the directory **migrate_dt_create** **"R3ldctl"** phase
EU_CLONE_DT_RUN ➔ creates the directory **migrate_dt** **"R3load"** phase

If you want to optimize the different phases, it is not possible with a Breakpoint to stop between this phases. There will be additional files created during the first complete DMO run called

MIGRATION_UT_DUR.XML* for details of the uptime migration

MIGRATION_DT_DUR.XML* for details of the downtime migration

* From SUM/DMO 1.0 SP13 the extension of the files changed from **.LST** to **.XML**

You can specify this file within **SAPup_add.par** as follows (you must create them beforehand), and reference both files, separated with a comma:

```
/clonepar/clonedurations = /usr/sap/<SID>/SUM/abap/htdoc/MIGRATE_UT_DUR.<ext>,
/usr/sap/<SID>/SUM/abap/htdoc/MIGRATE_DT_DUR.<ext>
```

Both files are in the **/usr/sap/<SID>/SUM/abap/htdoc** directory and allow to keep you own settings in separate files while you can exchange the existing files by a newer SAR file of the same SUM Support Package.

The command **SAPup set procpar gt=scroll** allows you from SUM 1.0 SP10 onwards dynamically change the main load parameters during the phase for optimization.

To completely initialize the uptime/downtime migration process you have to remove all the mentioned directories. This will restart the migration process from the beginning.

If you encounter problems with tables/views/match codes/cluster tables you don't want to consider during the migration use the file **/usr/sap/<SID>/SUM/abap/bin/EUCLONEDEFS_ADD.LST/XML** (create the file if it is not available) and specify a custom procedure for these objects, e.g.

```
Table name  Option
TABLE       nocontent/noclone/ignlargercount/igncount/rowstore/columnstore
TABLE       split segmentsize/splitindex=<indname>/splitfields=<fld>,<fld>,…
```

Result from the parallel export/import process

EUMIGRATEUTRUN.LOG

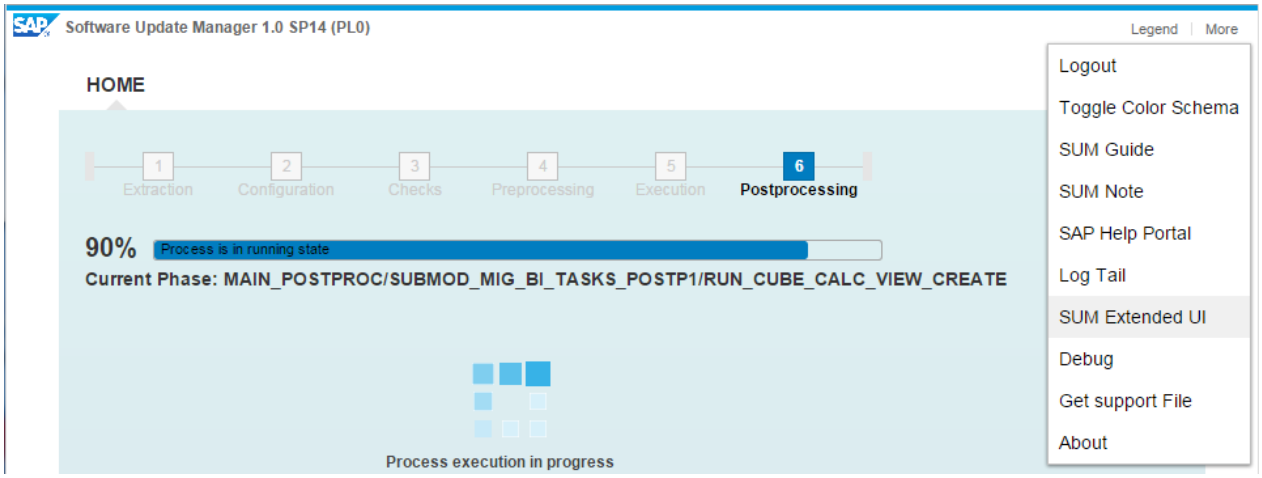
```
1 ETQ201 Entering upgrade-phase "MAIN_SHDIMP/SUBMOD_MIG_UPTIME_RUN/EU_CLONE_MIG_UT_RUN" ("20150712100003")
2 ETQ367 Connect variables are set for standard instance access
4 ETQ399 System-nr = '01', GwService = 'sapgw01' Client = '000'
4 ETQ399 Environment variables:
4 ETQ399   dbs_mss_schema=cih
1 ETQ206 Executing pre-phase DB specific actions.
1 ETQ200 Executing actual phase 'MAIN_SHDIMP/SUBMOD_MIG_UPTIME_RUN/EU_CLONE_MIG_UT_RUN'.
1 ETQ399 Phase arguments:
2 ETQ399 Arg[0] = 'EUCLONEDEFS.LST'
2 ETQ399 Arg[1] = 'MIGRATE_UPTIME'
2 ETQ399 Arg[2] = 'migrate_ut'
2 ETQ399 Arg[3] = 'RUN_ONLY;DEST_NOCREATE;DESTSECONDDB;CHECKCOUNTS'
1 ETQ399 Using error summary log 'EUMIGRATEUTRUN.ELG'.
1 ETQ399 Getting all tables/views supposed to be cloned.
1 ETQ399 Enabling table declustering flag.
4 ETQ399 Mapping SCR class 'MIGRATE_UPTIME' to actual condition.
3 ETQ399 Selecting from 'PUTTB_SHD' with condition '( ( CLONE == "U" and ( SRCTYPE == "J" or SRCTYPE == "T" or SRCTYPE == "P
3 ETQ399 4883 entries matched.
3 ETQ399 ============= 2015/07/12 10:35:58, Progress 12571 MB/12583 MB (99.91%) ===================
3 ETQ123 20150712103558 (1): PID 27252 exited with status 0 (time 0.000 real)
3 ETQ399 ============= 2015/07/12 10:35:58, Progress 12573 MB/12583 MB (99.92%) ===================
3 ETQ123 20150712103600 (0): PID 27808 exited with status 0 (time 0.000 real)
3 ETQ399 ============= 2015/07/12 10:36:00, Progress 12583 MB/12583 MB (100.00%) ===================
1 ETQ000 ==================================================
4 ETQ010 Date & Time: 20150712103601
2 ETQ102 Finished execution of 47 process(es).
2 ETQ108 Analyzing logs for errors.
1 ETQ124 Scanned file 'migrate_ut\MIGRATE_UT_CNT_00023_IMP.LOG' from offset 114 to 298 for errors.
1 ETQ124 Scanned file 'migrate_ut\MIGRATE_UT_CNT_00024_EXP.LOG' from offset 114 to 296 for errors.
1 ETQ124 Scanned file 'migrate_ut\MIGRATE_UT_CNT_00024_IMP.LOG' from offset 114 to 296 for errors.
3 ETQ114 Analyzed 47 log files.
1 ETQ399 Finished execution of buckets with rc = 0.
1 ETQ000 ==================================================
4 ETQ010 Date & Time: 20150712103604
3 ETQ399 Checking counters/checksums from 'MIGRATE_UT_CNT.BUC'.
3 ETQ399 Skipped 8 export-only counts (declustered tables and tables without content transfer).
1 ETQ207 Executing post-phase DB specific actions.
4 ETQ010 Date & Time: 20150712103604
1 ETQ202 Upgrade phase "EU_CLONE_MIG_UT_RUN" completed successfully ("20150712103604")
```

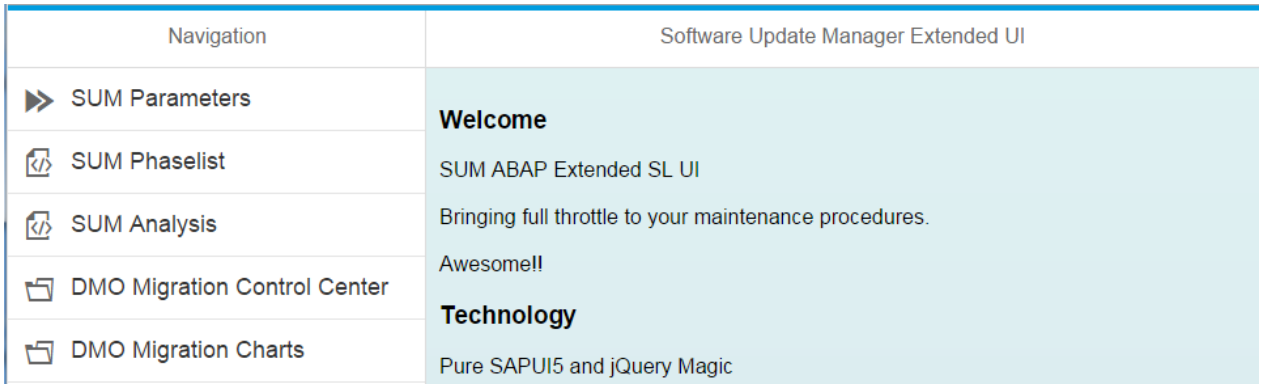
EUMIGRATEDTRUN.LOG

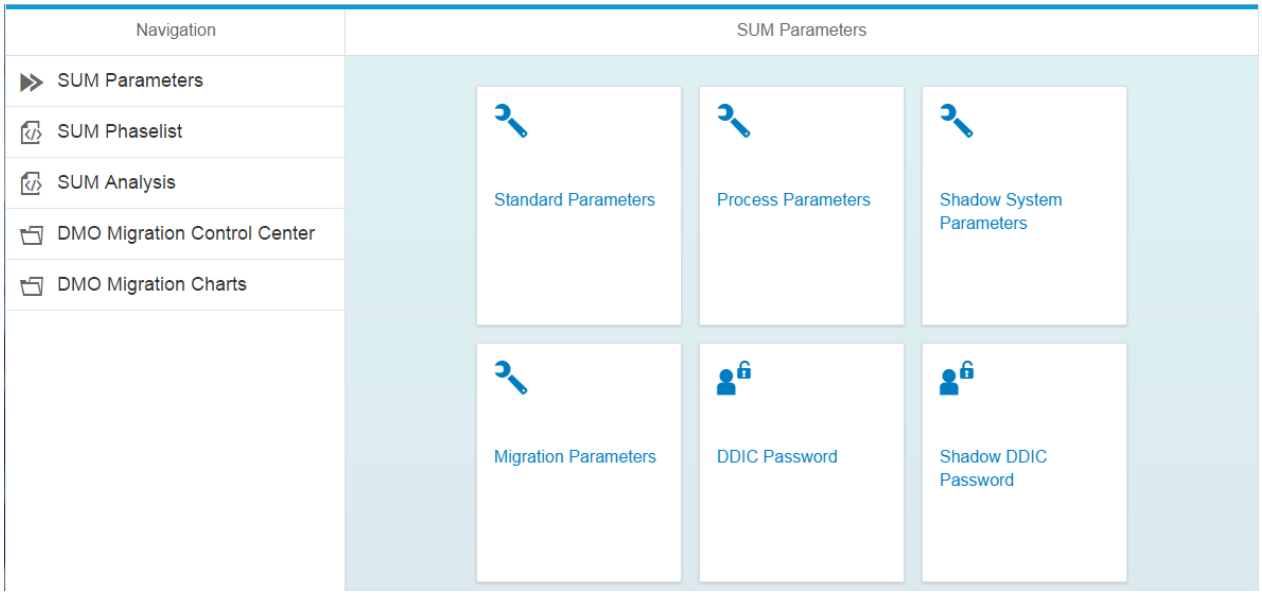
```
1 ETQ201 Entering upgrade-phase "MAIN_SWITCH/SUBMOD_MIG_SWITCH_ORG/SUBMOD_MIG_DOWNTIME_RUN/EU_CLONE_MIG_DT_RUN" ("2015071311
2 ETQ367 Connect variables are set for standard instance access
4 ETQ399 System-nr = '01', GwService = 'sapgw01' Client = '000'
4 ETQ399 Environment variables:
4 ETQ399   dbs_mss_schema=cih
1 ETQ206 Executing pre-phase DB specific actions.
1 ETQ200 Executing actual phase 'MAIN_SWITCH/SUBMOD_MIG_SWITCH_ORG/SUBMOD_MIG_DOWNTIME_RUN/EU_CLONE_MIG_DT_RUN'.
1 ETQ399 Phase arguments:
2 ETQ399 Arg[0] = 'EUCLONEDEFS.LST'
2 ETQ399 Arg[1] = 'MIGRATE_DOWNTIME_NOMIGTRIG'
2 ETQ399 Arg[2] = 'migrate_dt'
2 ETQ399 Arg[3] = 'RUN_ONLY;DEST_NOCREATE;DESTSECONDDB;SEL4DOWNTIME;CHECKCOUNTS;INDEXSUPPRESSIONS;OPTIMIZE_CLONING'
1 ETQ399 Using error summary log 'EUMIGRATEDTRUN.ELG'.
1 ETQ399 Getting all tables/views supposed to be cloned.
1 ETQ399 Enabling table declustering flag.
4 ETQ399 Mapping SCR class 'MIGRATE_DOWNTIME_NOMIGTRIG' to actual condition.
3 ETQ399 Selecting from 'PUTTB_SHD' with condition '( ( ( CLONE == "D" or CLONE == "C" or CLONE == "G" or CLONE == "T" or CL
3 ETQ399 62570 entries matched.
2 ETQ399 Read 10 entries from 'D:\usr\sap\CIH\SUM\abap\bin\EUCLONEDEFS.LST'.
4 ETQ399 Remove /BIC/AZSPOB10300              from clone list.
3 ETQ123 20150713120739 (0): PID 27216 exited with status 0 (time 0.000 real)
3 ETQ399 ============= 2015/07/13 12:07:39, Progress 33398 MB/33398 MB (100.00%) ===================
1 ETQ000 ==================================================
4 ETQ010 Date & Time: 20150713120739
2 ETQ102 Finished execution of 330 process(es).
2 ETQ108 Analyzing logs for errors.
3 ETQ114 Analyzed 330 log files.
1 ETQ399 Finished execution of buckets with rc = 0.
1 ETQ000 ==================================================
4 ETQ010 Date & Time: 20150713120748
3 ETQ399 Checking counters/checksums from 'MIGRATE_DT_CNT.BUC'.
3 ETQ399 Skipped 335 export-only counts (declustered tables and tables without content transfer).
4 ETQ399 Starting dialog 'MigOptimizeCloning' at 20150713120751.
4 ETQ399 Dialog finished at 20150713145653.
1 ETQ207 Executing post-phase DB specific actions.
4 ETQ010 Date & Time: 20150713145653
1 ETQ202 Upgrade phase "EU_CLONE_MIG_DT_RUN" completed successfully ("20150713145653")
```

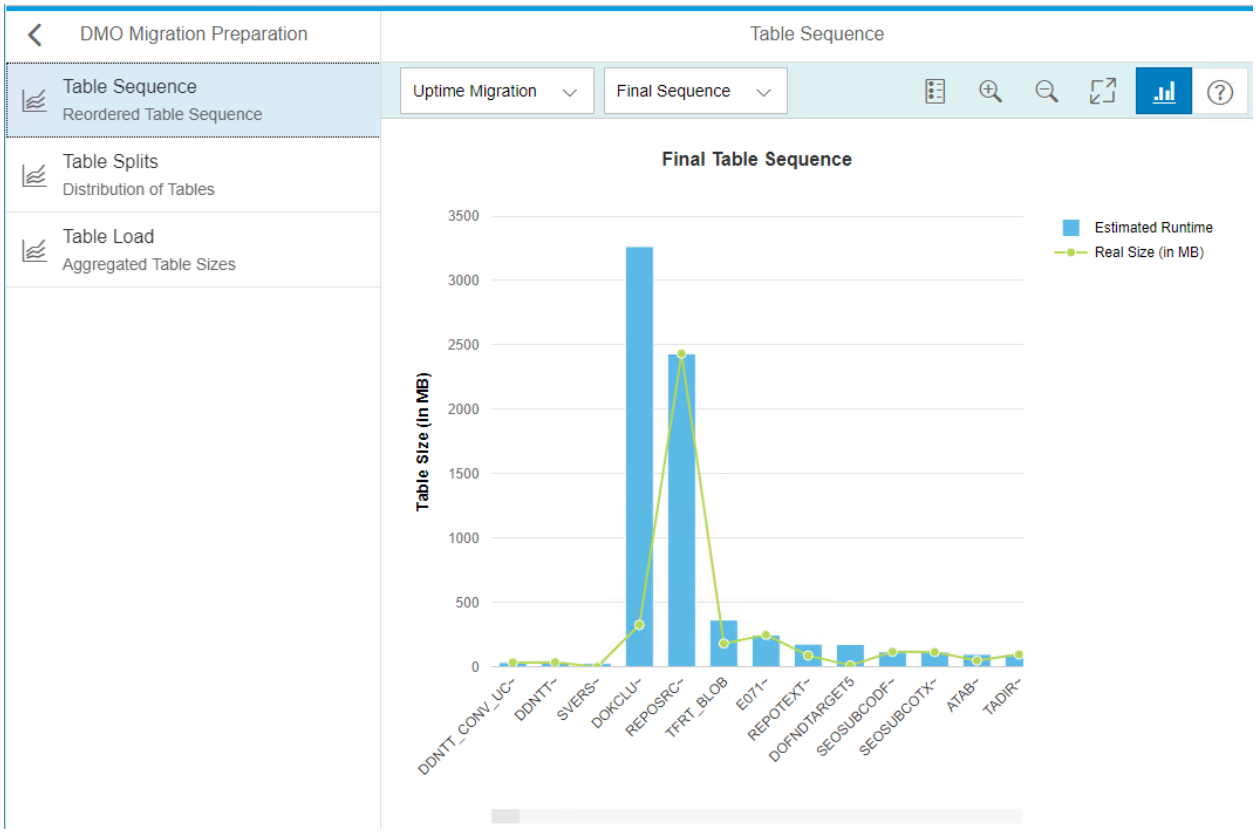
SUM ABAP Extended SL UI (with SP14 onwards)

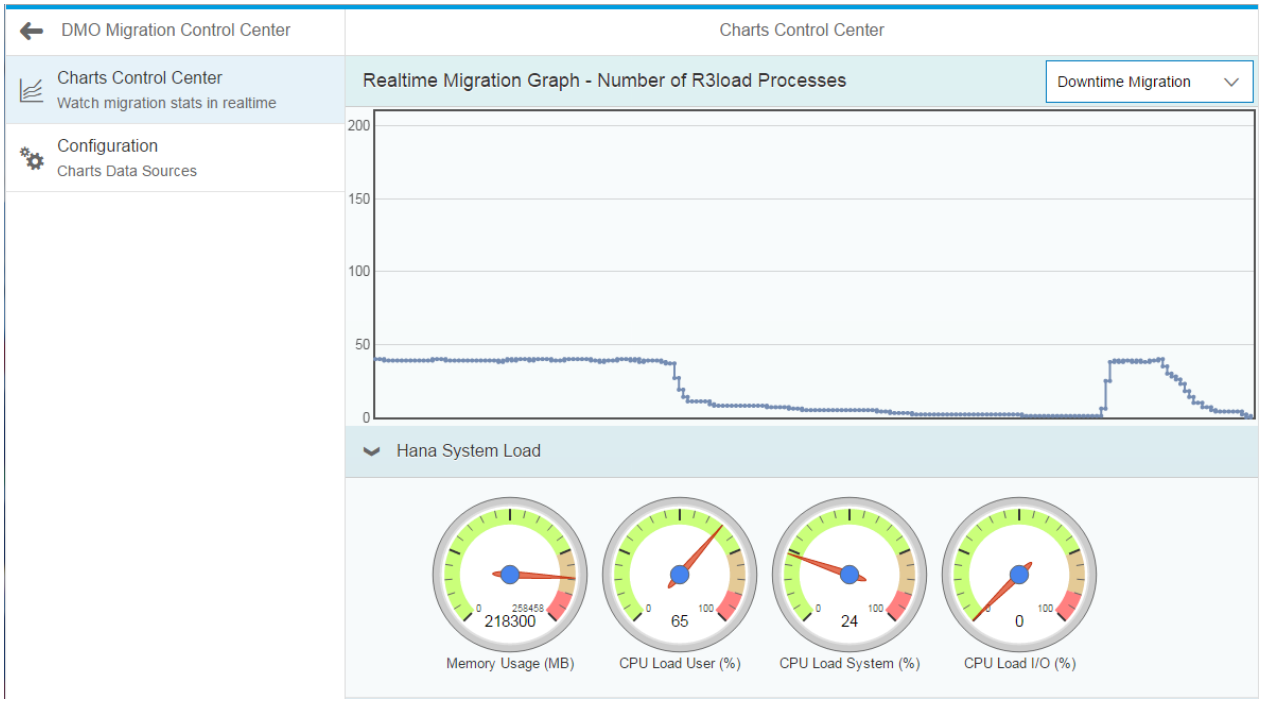
You can access the area either via the Menu out of the SL UI GUI or via the URL
Error! Hyperlink reference not valid.

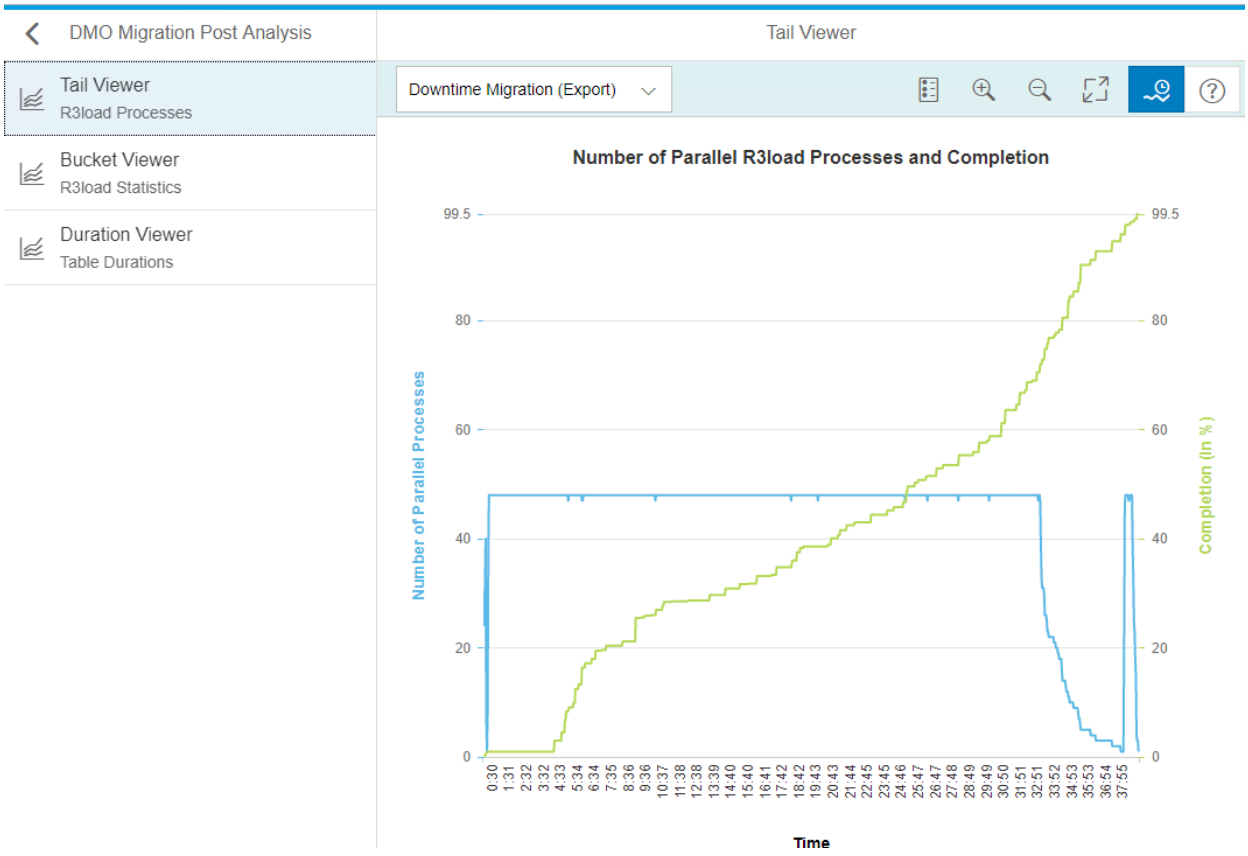


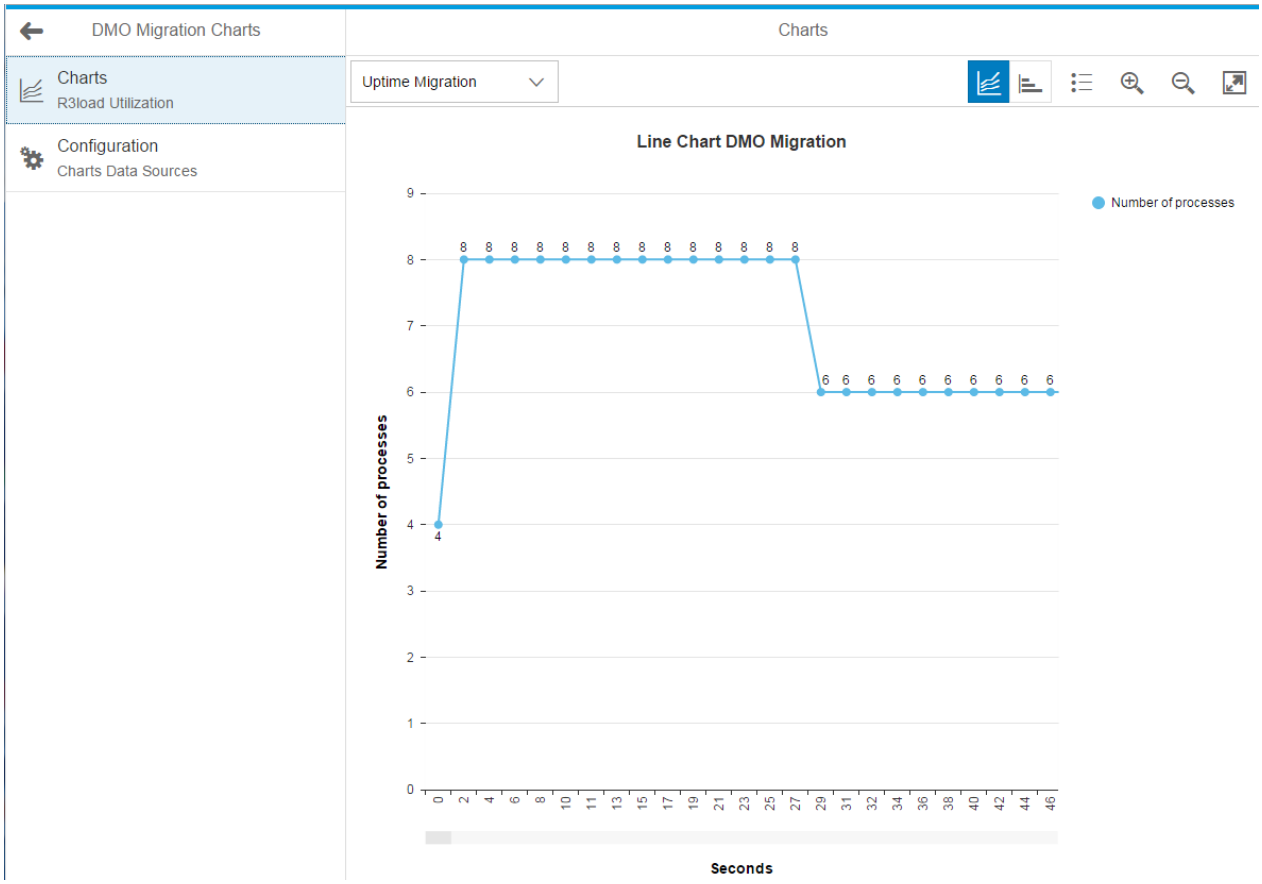


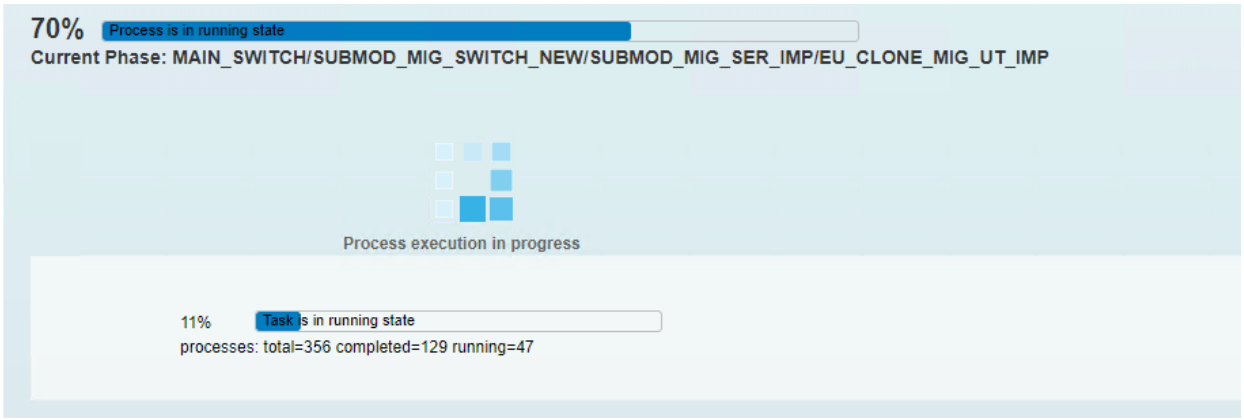


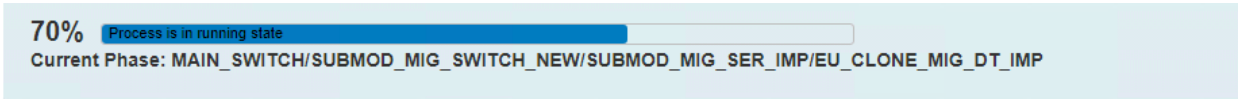

DMO Migration Preparation
Table Sequence
Reordered Table Sequence
Table Splits
Distribution of Tables
Table Load
Aggregated Table Sizes
Table Sequence
Uptime Migration
Final Sequence
Final Table Sequence
Estimated Runtime
Real Size (in MB)
Table Size (in MB)
3500
3000
2500
2000
1500
1000
500
0
DDNTT_CONV_UC~
DDNTT~
SVERS~
DOKCLU~
REPOSRC~
TFRT_BLOB
E071~
REPOTEXT~
DOFNDTARGETS
SEOSUBCODF~
SEOSUBCOTX~
ATAB~
TADIR~

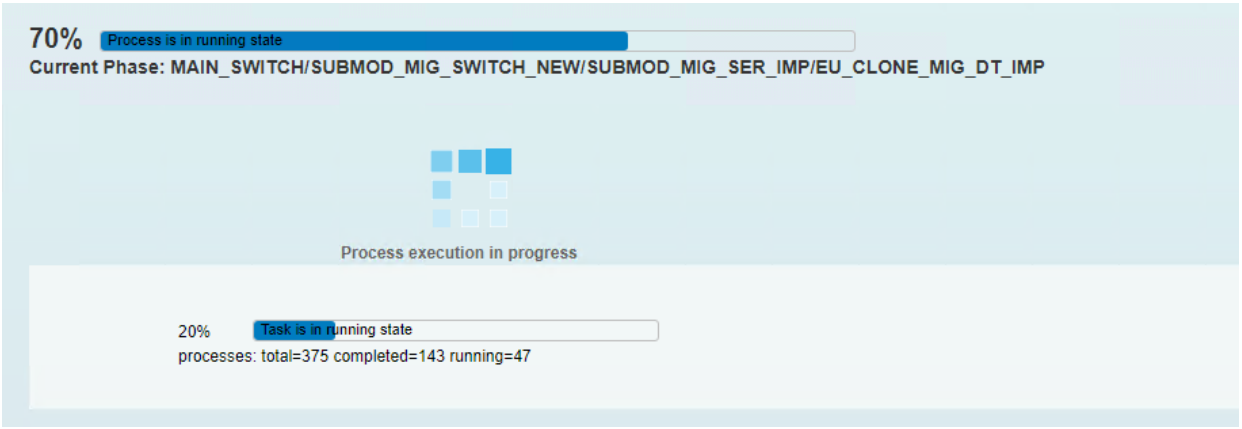

DMO Migration Control Center
Charts Control Center
Watch migration stats in realtime
Configuration
Charts Data Sources
Charts Control Center
Realtime Migration Graph - Number of R3load Processes
Downtime Migration
200
150
100
50
0
Hana System Load
218300
Memory Usage (MB)
65
CPU Load User (%)
24
CPU Load System (%)
0
CPU Load I/O (%)


DMO Migration Post Analysis
Tail Viewer
R3load Processes
Bucket Viewer
R3load Statistics
Duration Viewer
Table Durations
Tail Viewer
Downtime Migration (Export)
Number of Parallel R3load Processes and Completion
Number of Parallel Processes
Completion (in %)
Time

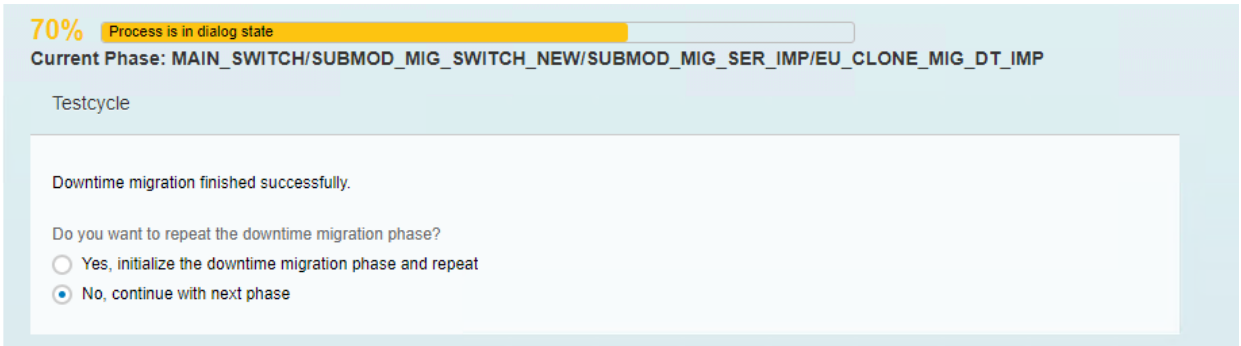

DMO Migration Charts
Charts
R3load Utilization
Configuration
Charts Data Sources
Charts
Uptime Migration
Line Chart DMO Migration
Number of processes
Number of processes
Seconds

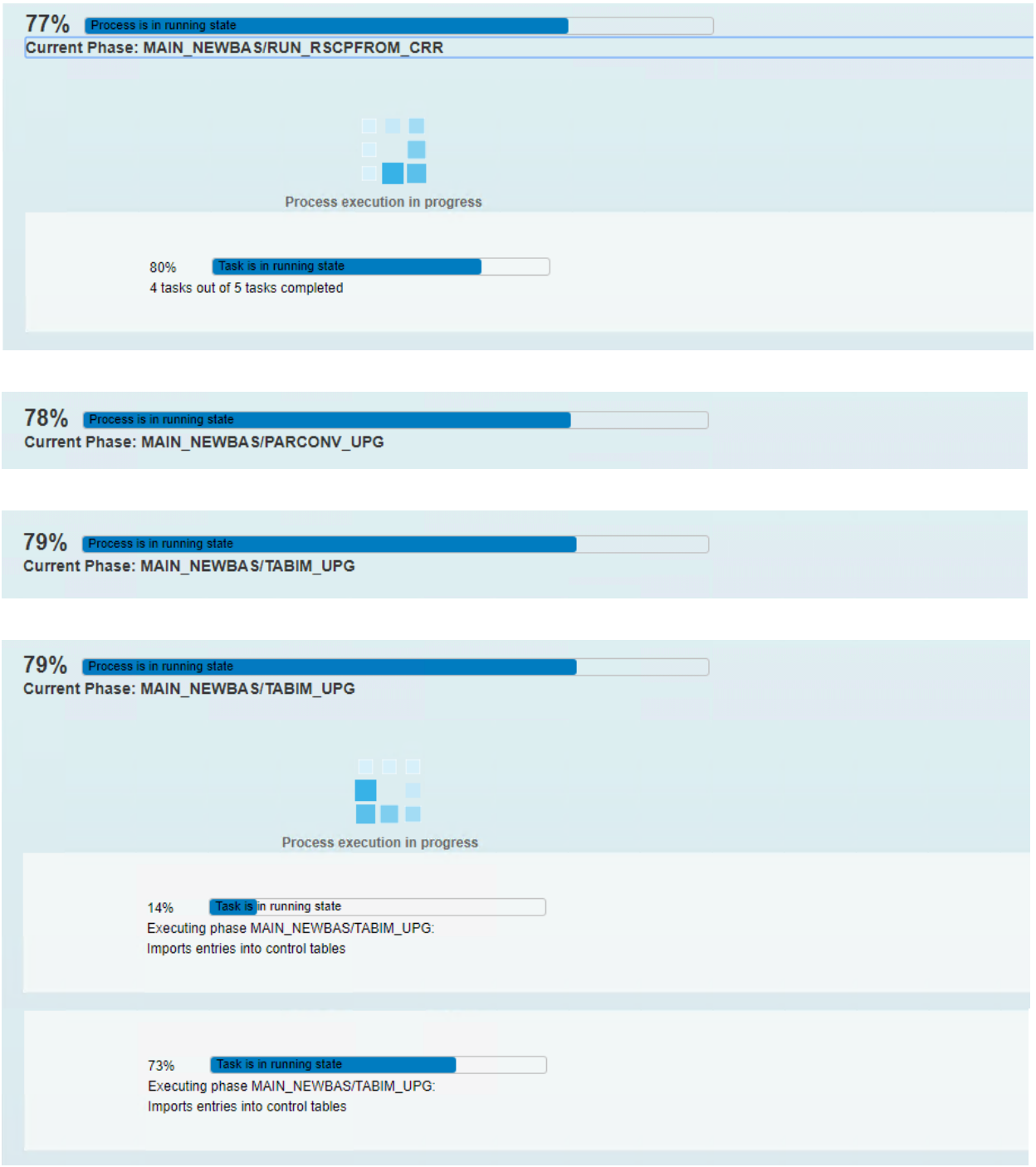




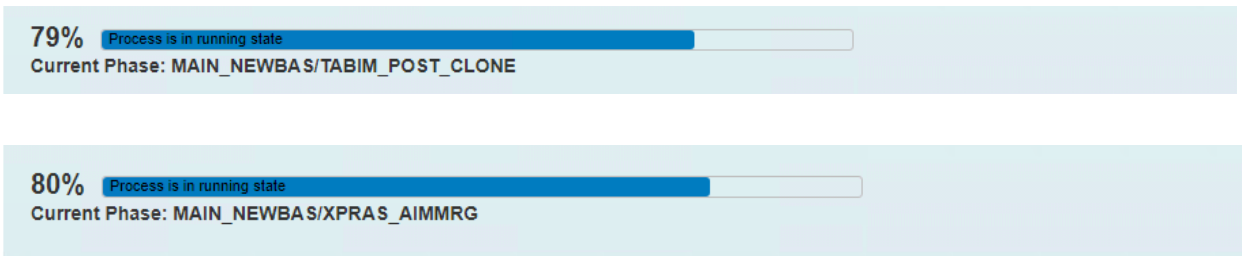


Phase: 109 70% MAIN_SWITCH/SUBMOD_MIG_SWITCH_NEW/SUBMOD_MIG_SER_IMP/EU_CLONE_MIG_DT_IMP





Phase: 110 79% MAIN_NEWBAS/TABIM_UPG - long runtime phase 4



Phase: 111 80% MAIN_NEWBAS/XPRAS_AIMMRG - Batch processing

If the following errors occur in SAPR750XPRA90000105.HBT make sure, that the Notes mentioned in Chapter 3.3.4 have been applied:

```
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
XPRA ERRORS and RETURN CODE in SAPR750XPRA90000105.HBT
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
A4 ERSAA 555 Routines were successfully indicated as SAP objects
A4 ERSAA 555 Routines were successfully indicated as SAP objects
A4 ERSAA 555 Routines were successfully indicated as SAP objects
A4 ERSAA 555 Routines were successfully indicated as SAP objects
A4 ERSAA 555 Routines were successfully indicated as SAP objects
1AETR012XProgram canceled (job "RDDEXECL", number "20051100")
1AEPU320 See job log"RDDEXECL""20051100""HBT"
1 ETP111 exit code : "12"
```

Additional troubleshooting SAP Notes

Note 1839664 - IMPORT All buffer reset, error a781(rso)

Note 2042755 - Prerequisites: ABAP DD enh. messages, and report texts for SAP Note 2036310

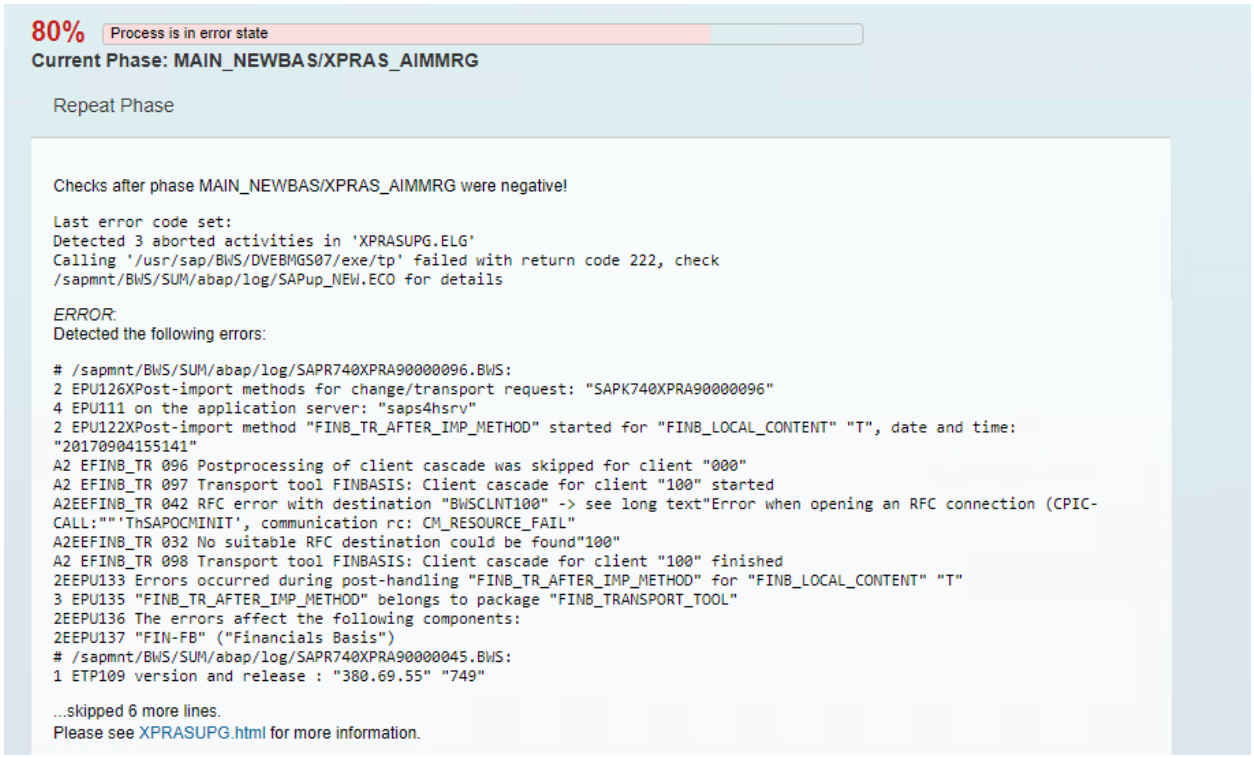
Note 2036310 - Incorrect AIM execution: No repeated activation of successfully processed objects; technical enhancement

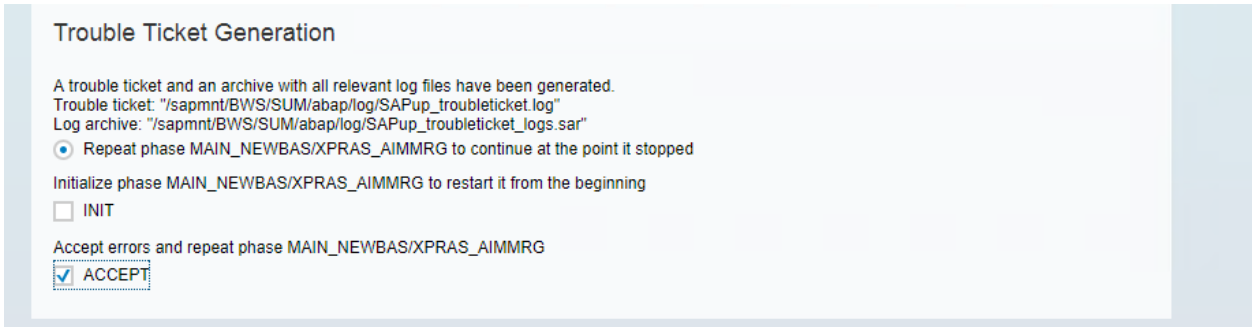
Note 2042927 - Incorrect AIM execution: No repeated activation of successfully processed objects

Note 2244827 - SUM or SAPup in an execution phase - Upgrade still running: Logon not possible

Note 2279019 - Dump SYNTAX_ERROR during MAIN_NEWBAS / XPRAS_AIMMRG phase

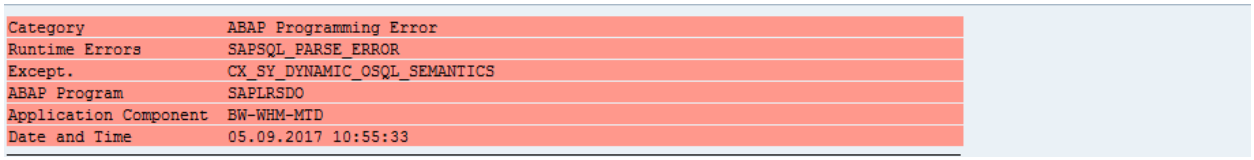
Note 2350730 - Additional Info - SAP BW 7.50 SP04 Implementation





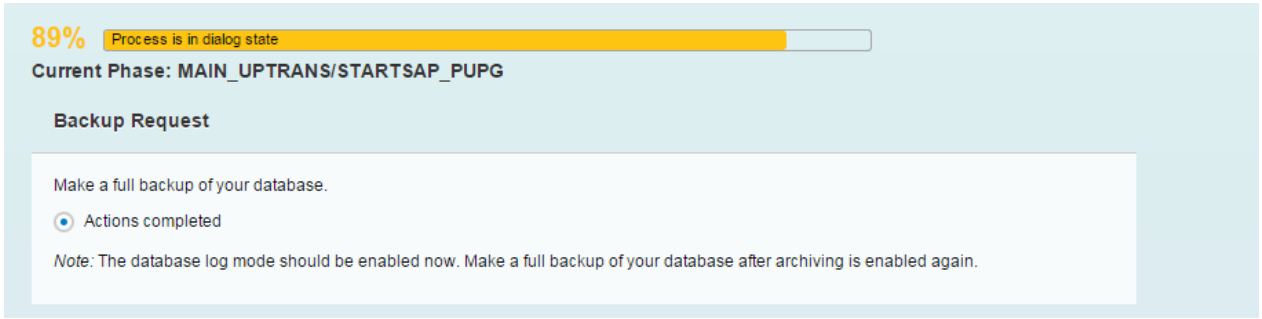
Note 912369 - FINB_TR_DEST, after import failures, transport errors

Note 1564964 - Source system XYZ does not exist

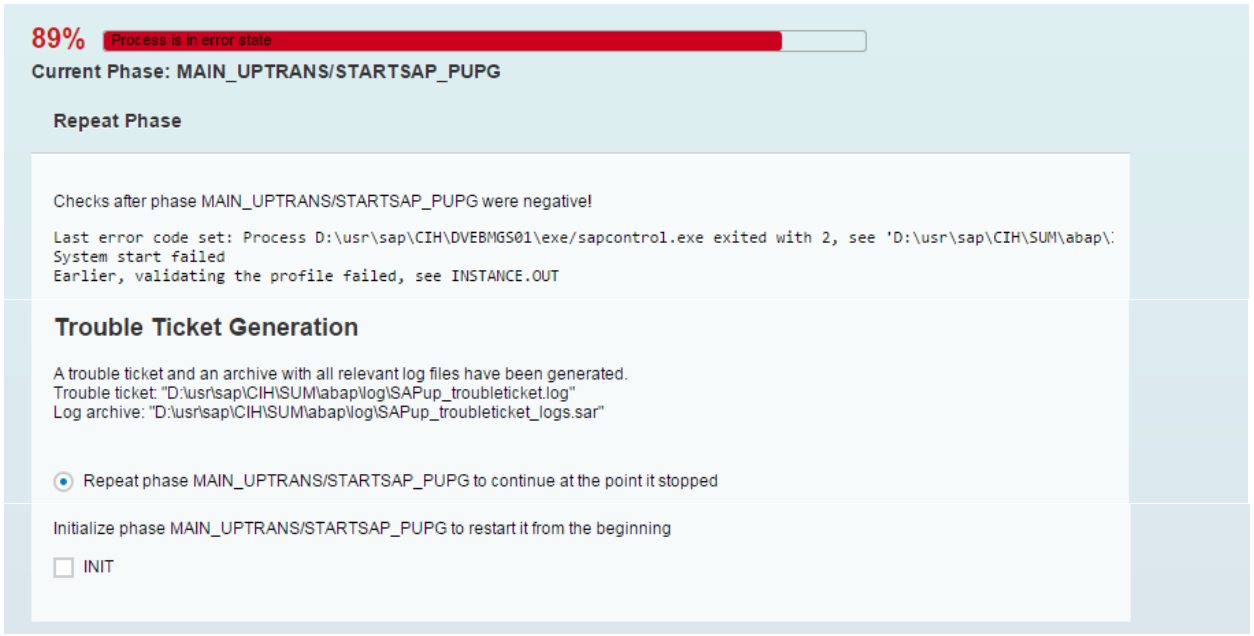


Category	ABAP Programming Error
Runtime Errors	SAPSQL_PARSE_ERROR
Except.	CX_SY_DYNAMIC_OSQL_SEMANTICS
ABAP Program	SAPLRSDO
Application Component	BW-WHM-MTD
Date and Time	05.09.2017 10:55:33

Note 1962421 - EHP Upgrade failed, issues with InfoObject 0RTYPE2

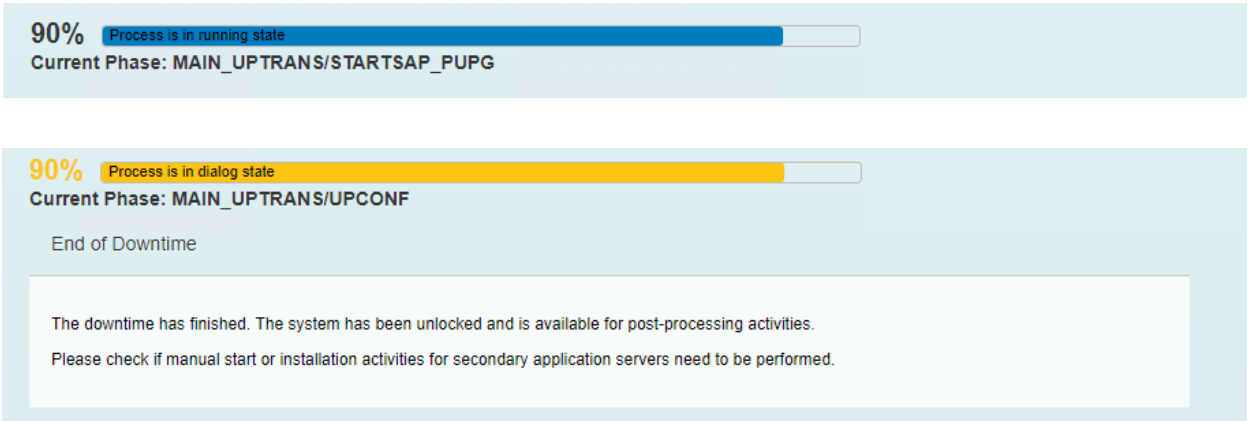


Phase: 112 89% MAIN_UPTRANS/STARTSAP_PUPG - 2nd backup request

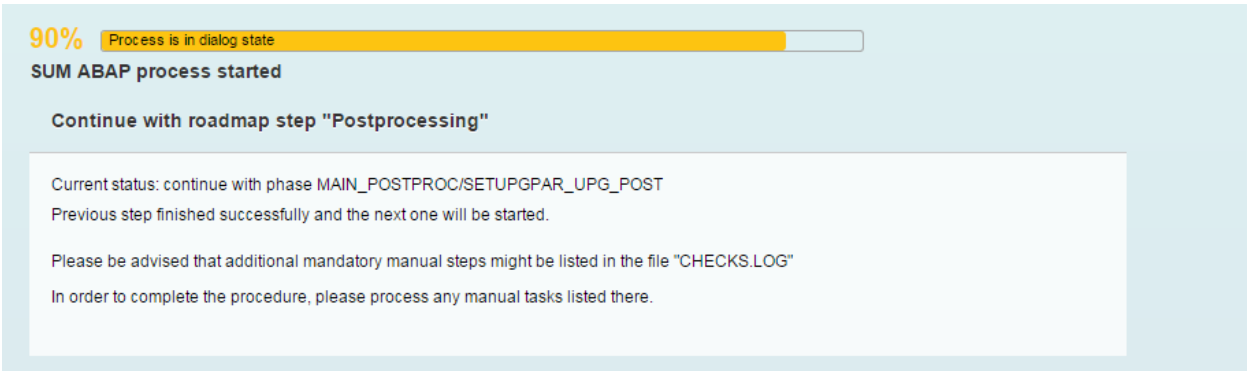


Phase: 113 89% MAIN_UPTRANS/STARTSAP_PUPG

If there is a failure in the start of the new Application Server Instance check the memory settings, as the new SAP Kernel might have other memory recommendations, or simply start the SAP Instance manually.

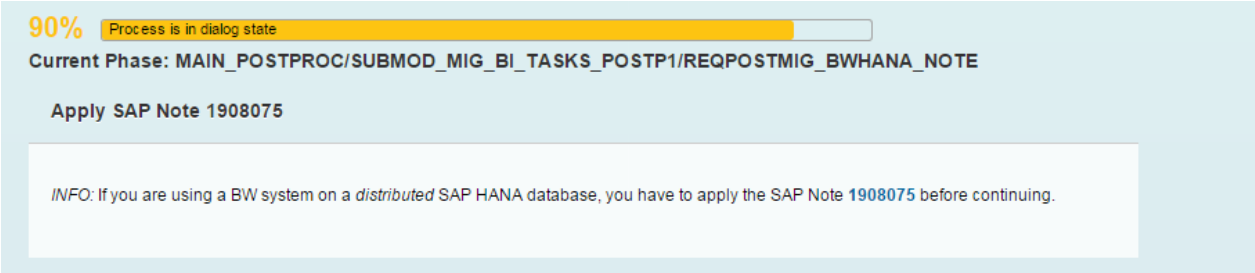


Phase: 114 89% MAIN_UPTRANS/UPCONF - end of downtime



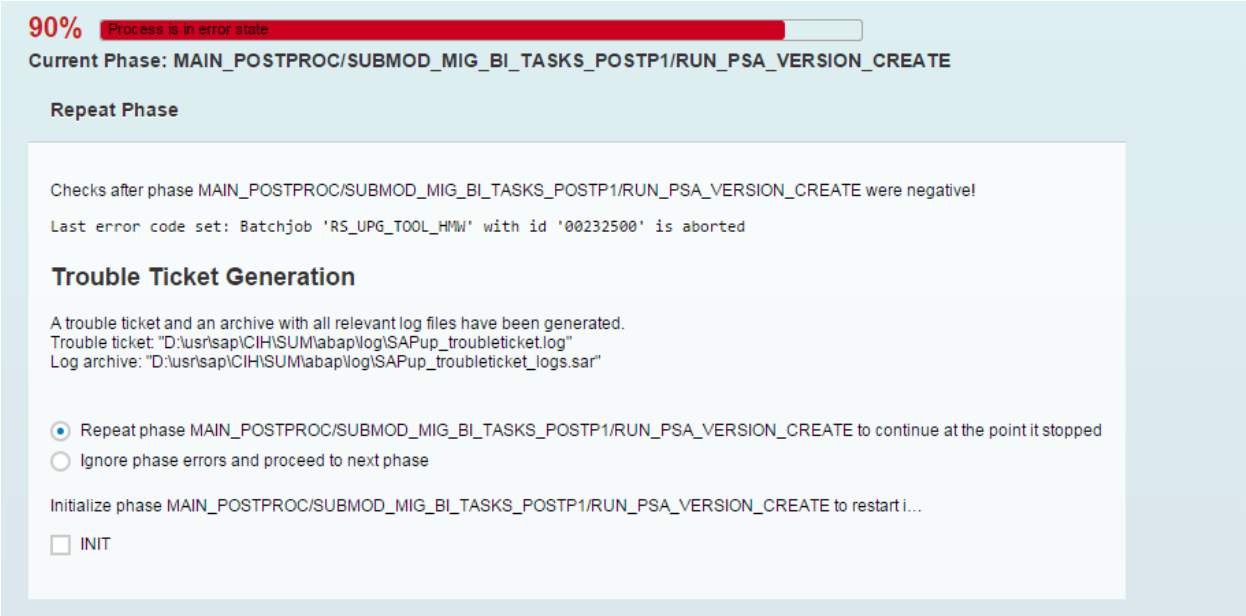
Phase: 115 90% MAIN_UPTRANS/MAIN_POSTP - END (5)

Phase Postprocessing (6)



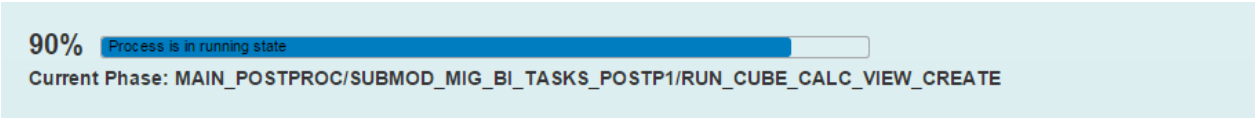
Phase: 116 90% MAIN_POSTPROC/SUBMOD_MIG_BI_TASKS_POSTP1/REQPOSTMIG_BWHANA_NOTE

Note 1908075 - BW on SAP HANA SP6: Landscape redistribution (at least Rev. ≥ 60 for HANA needed)
Note 2334091 - BW/4HANA: Table Placement and Landscape Redistribution



Phase: 117 90% MAIN_POSTPROC/SUBMOD_MIG_BI_TASKS_POSTP1/RUN_PSA_VERSION_CREATE

This error indicates access or similar problems with inactive source systems connected to BW.
Note 2182306 - 730SP14: PSA Version create step in DMO tool hangs

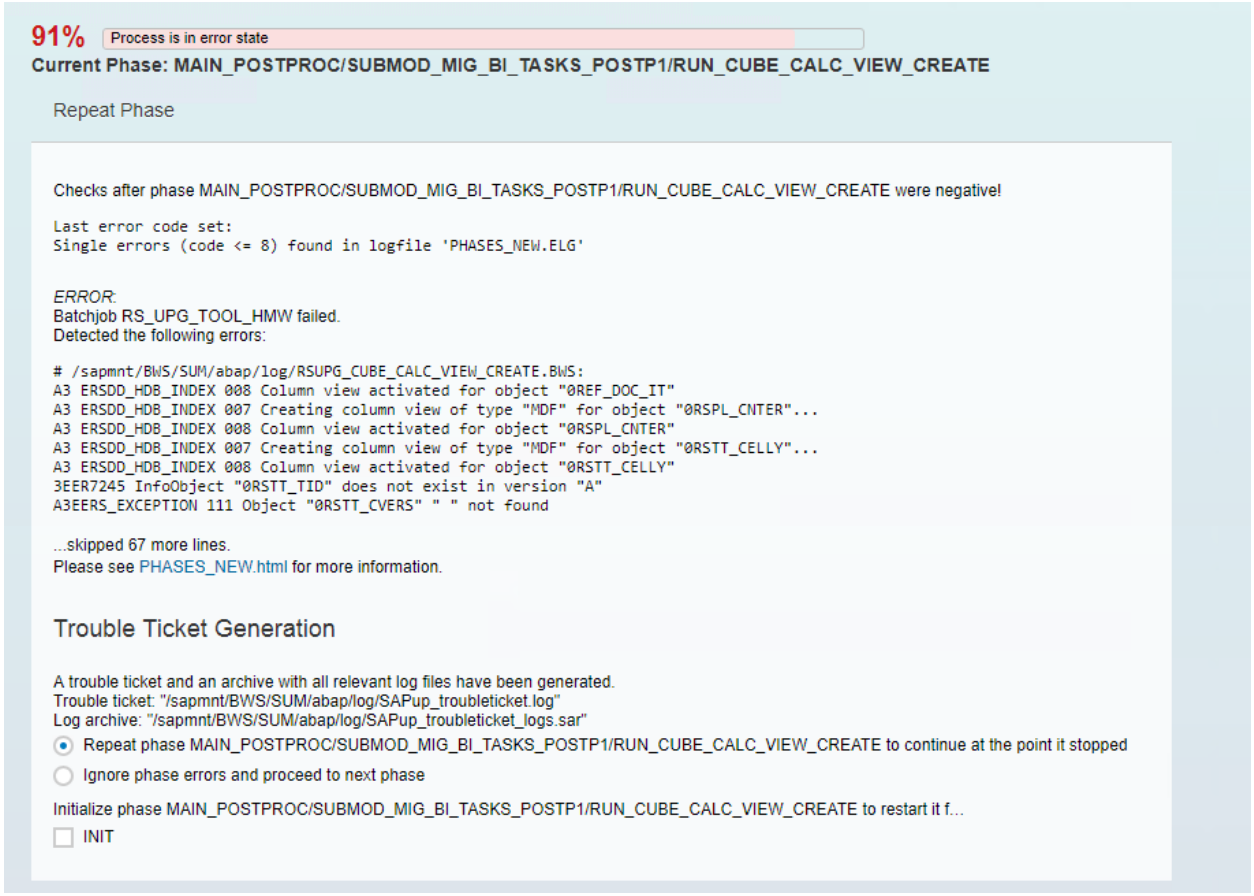


Phase: 118 90% MAIN_POSTPROC/SUBMOD_MIG_BI_TASKS_POSTP1/
RUN_CUBE_CALC_VIEW_CREATE

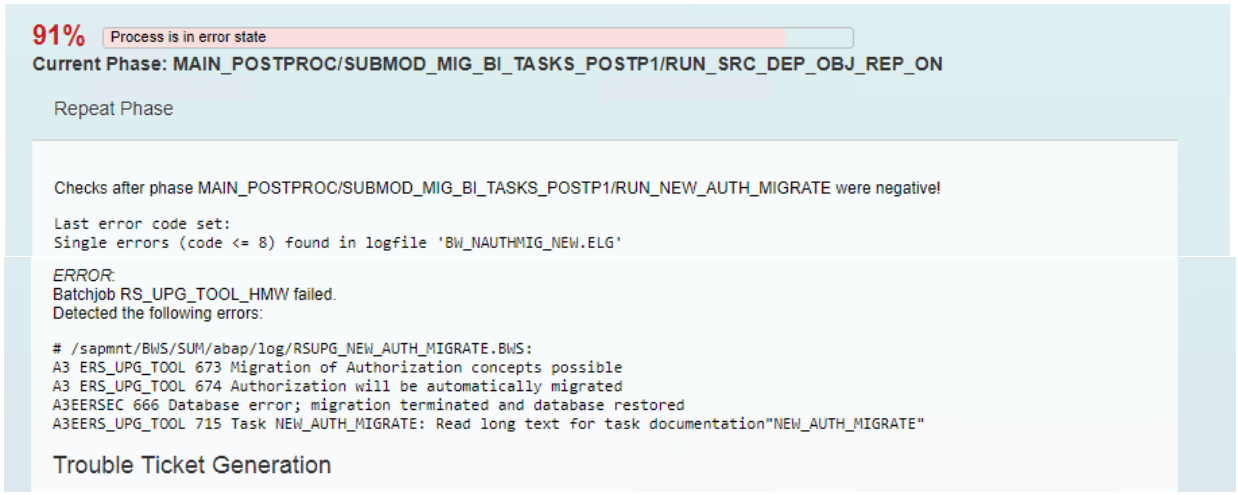
Note 2188433 - Runtime error MOVE_TO_LIT_NOTALLOWED_NODATA

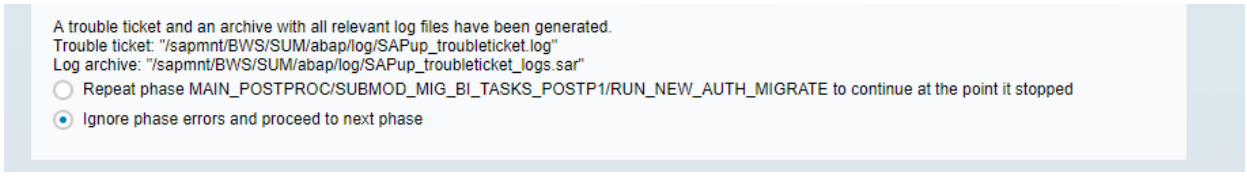
Note 2161094 - BW on HANA: Upgrade BW 7.3x -> 7.4x: Column Views missing after running RS_BW_POST_MIGRATION

Note 2228812 - 730SP15: DMO Task 'PSA_PARTITION_CHECK' executed even if not relevant

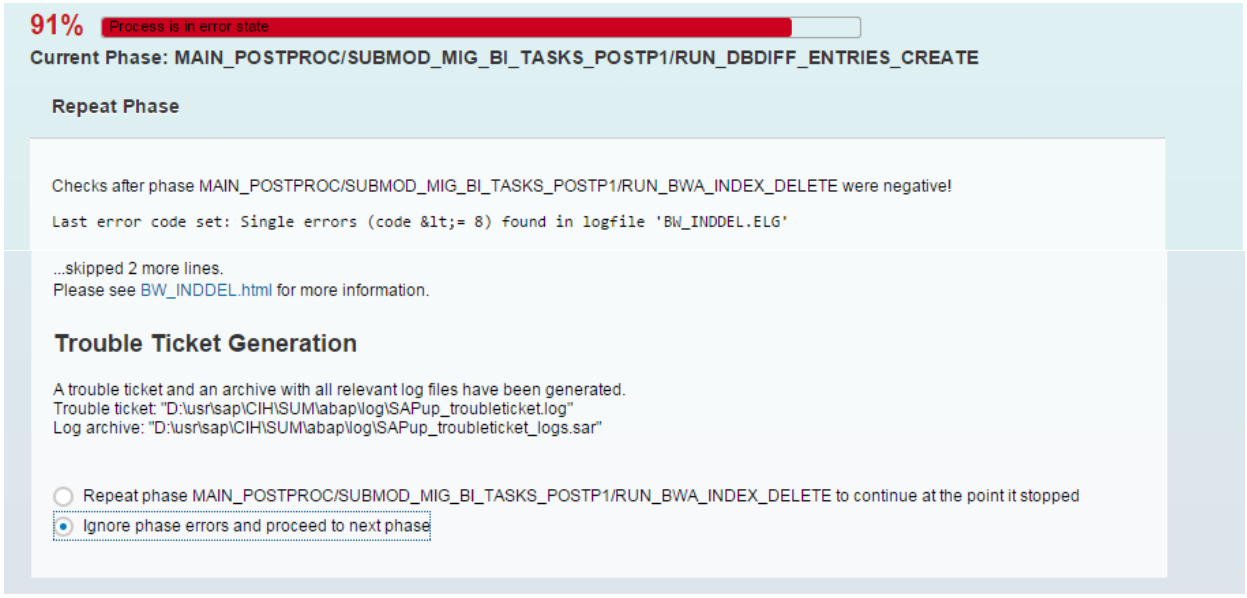


Phase: 119 91% MAIN_POSTPROC/SUBMOD_MIG_BI_TASKS_POSTP1/ RUN_CUBE_CALC_VIEW_CREATE

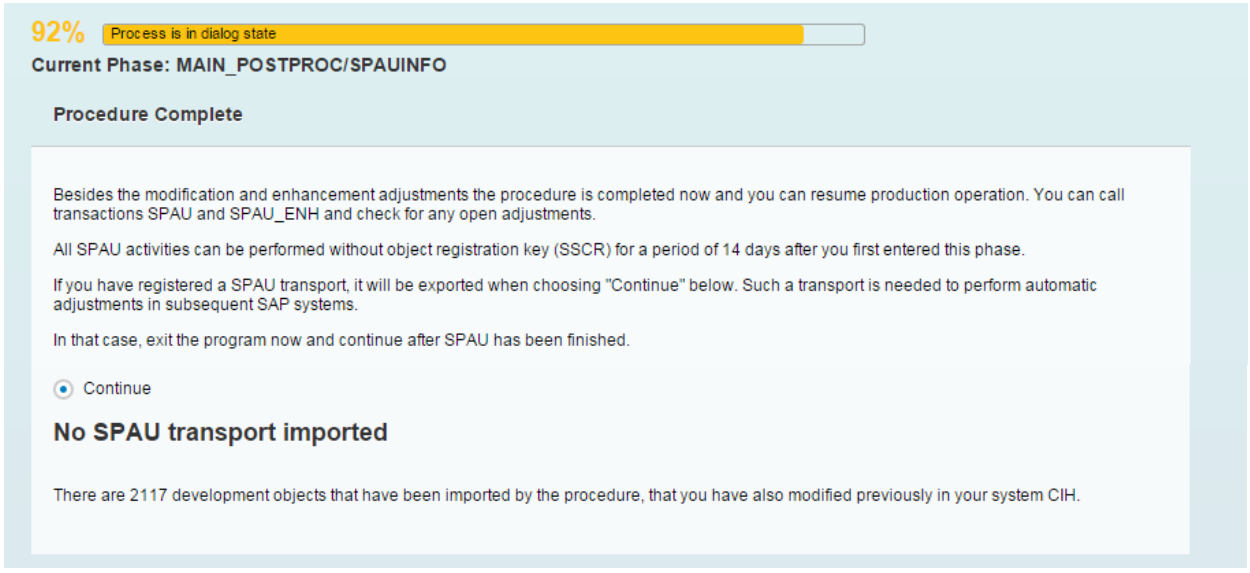




Phase: 120 91% MAIN_POSTPROC/SUBMOD_MIG_BI_TASKS_POSTP1/RUN_SRC_DEP_OBJ_REP_ON



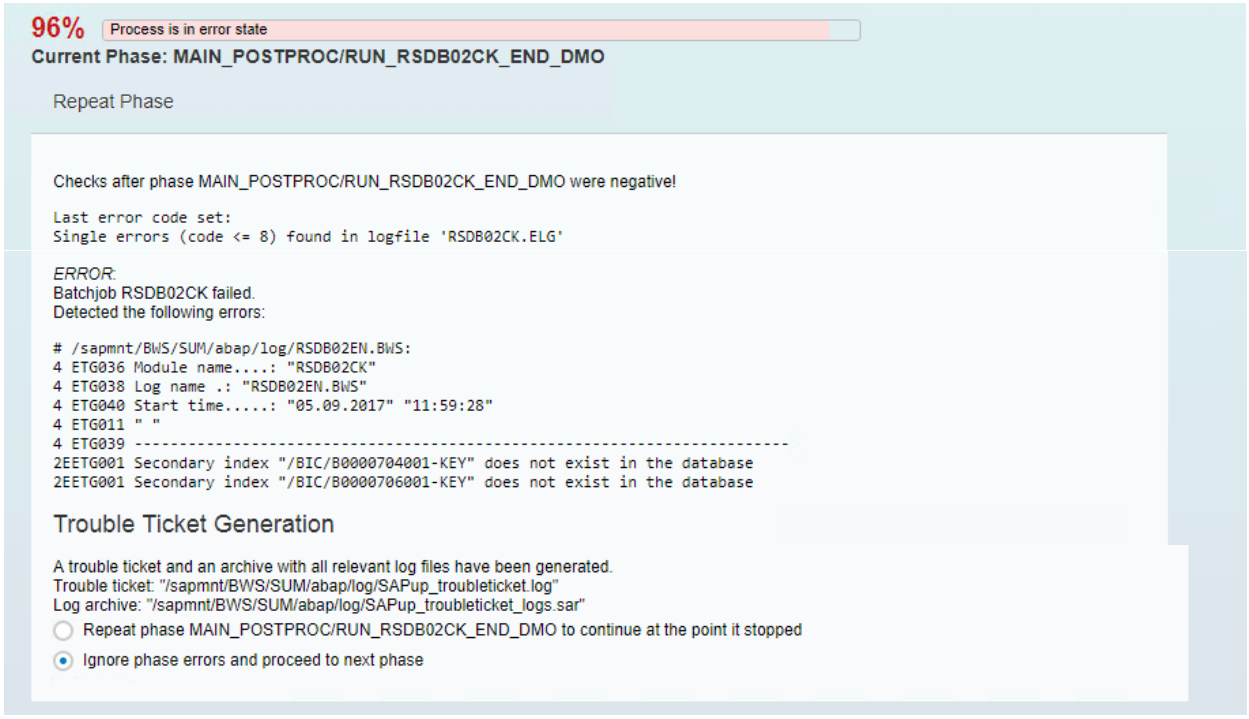
Phase: 121 91% MAIN_POSTPROC/SUBMOD_MIG_BI_TASKS_POSTP1/
RUN_DBDIFF_ENTRIES_CREATE - BIA related



Phase: 122 92% MAIN_POSTPROC/SPAUINFO

You can call transactions SPAU and SPAU_ENH and check for any open adjustments.
All SPAU activities can be performed without object registration key (SSCR) for a period of 14 days after you first entered this phase.
If you have registered a SPAU transport, it will be exported when choosing "Continue" below.

Such a transport is needed to perform automatic adjustments in subsequent SAP systems.
In that case, exit the program now and continue after SPAU has been finished.

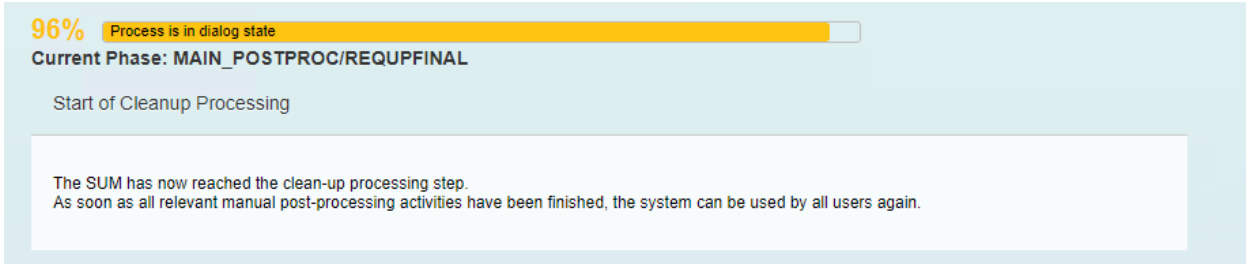


Phase: 123 96% MAIN_POSTPROC/RUN_RSDB02CK_END_DMO

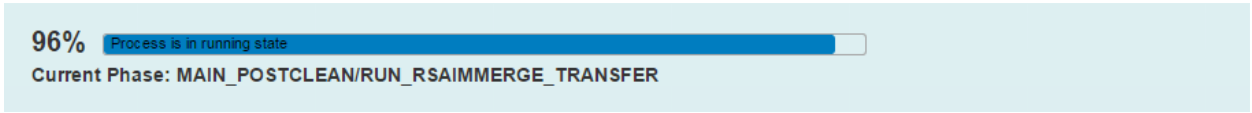
You can repair any of these errors after the technical DMO procedure with the Report RSDU_TABLE_CONSISTENCY

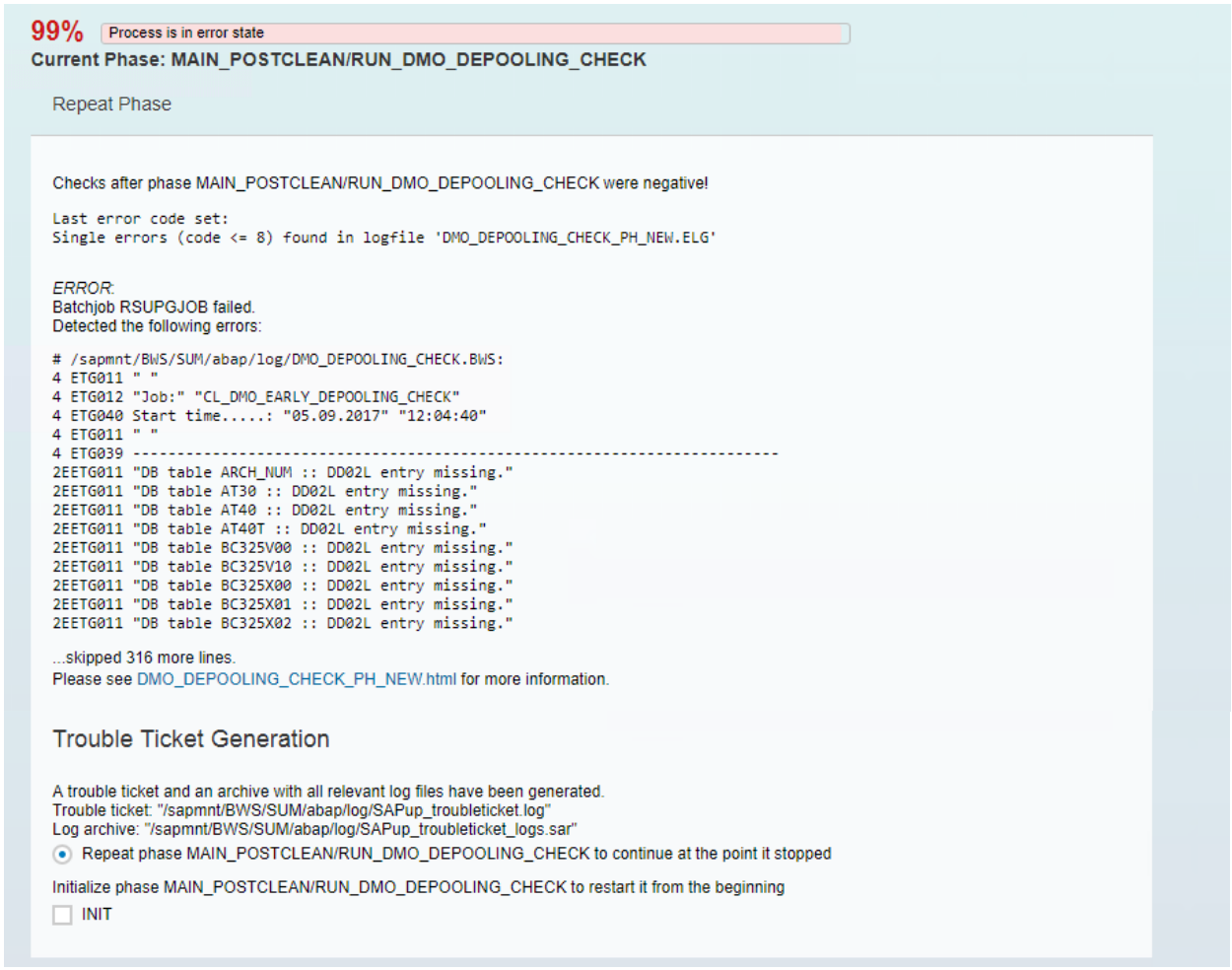
Note 2074714 - SUM:RUN_RSDB02CK_END_DMO: Primary indexes missing

Note 2077953 - How to remove unwanted secondary Indexes after a BW on HANA Database migration



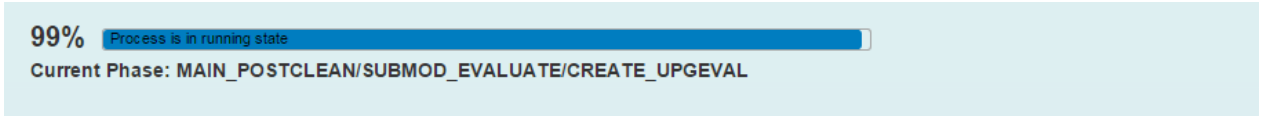
Phase: 124 96% MAIN_POSTPROC/REQUPFINAL



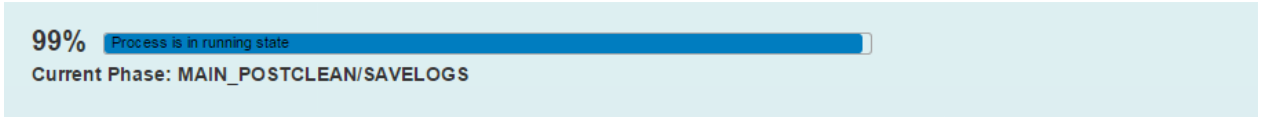


Phase: 125 99% MAIN_POSTCLEAN/RUN_DMO_DEPOOLING_CHECK

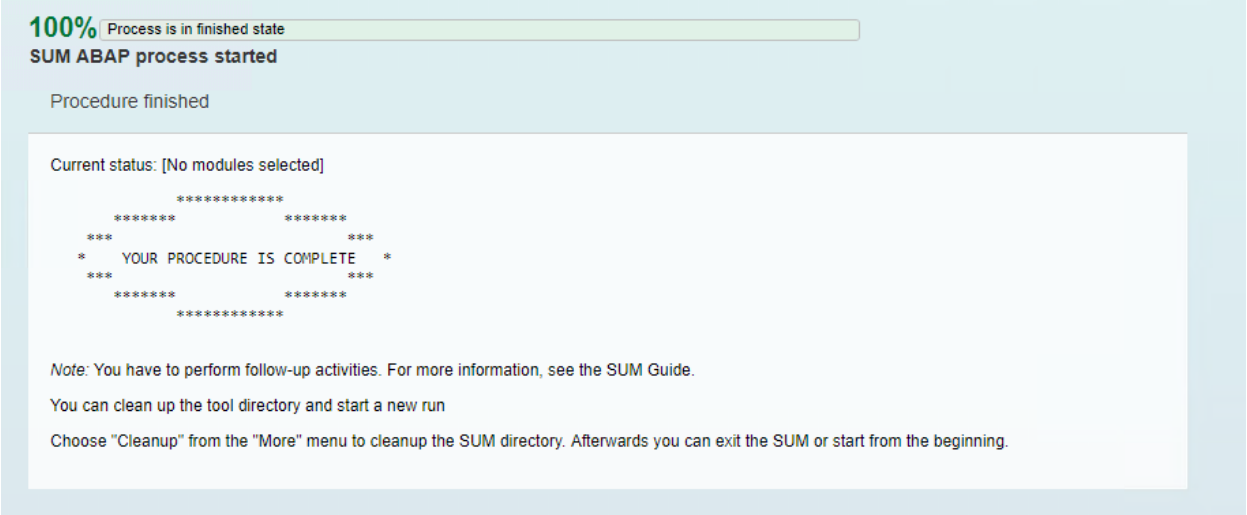
Phase: 126 99% MAIN_POSTCLEAN/TOOLIMP_DELETE_ZDM_CRR



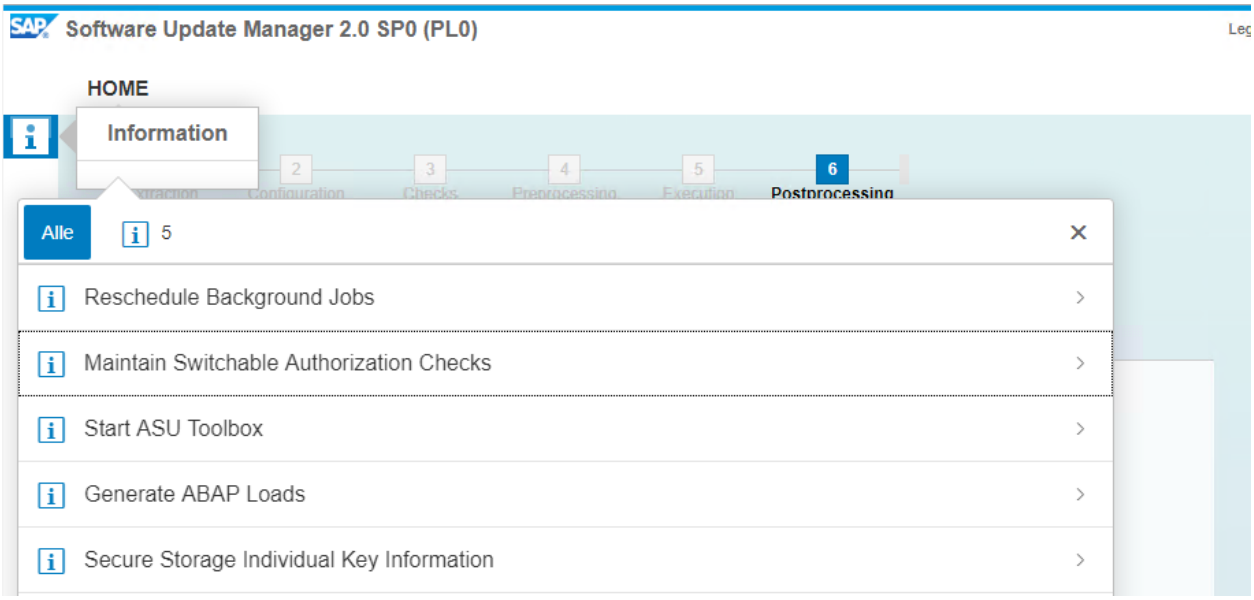
Phase: 127 99% MAIN_POSTCLEAN/SUBMOD_EVALUATE/CREATE_UPGEVAL



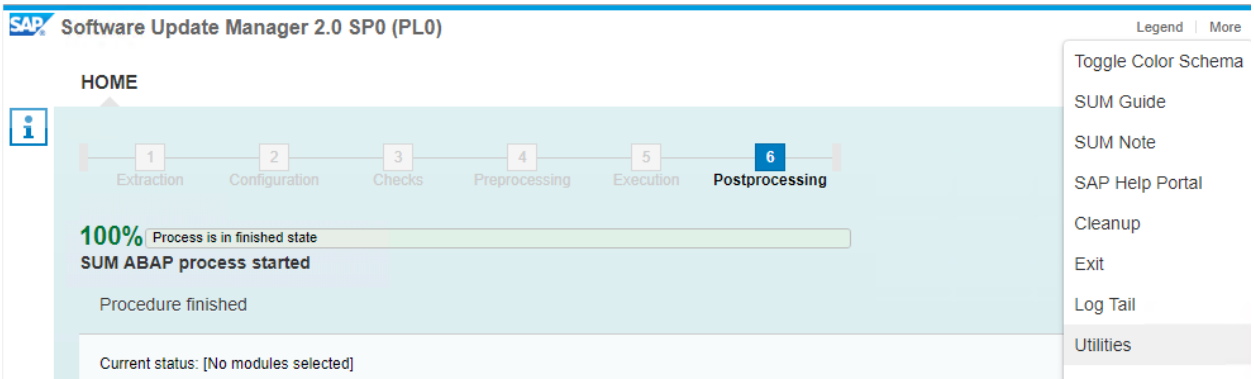
Phase: 128 99% MAIN_POSTP/SAVELOGS



Phase: 129 100% YOUR UPGRADE IS COMPLETE - END (6)



Phase: 130 - MAIN_POSTPROC Information's



Phase: 131 - Software Update Manager - Utilities

Note 824971 - Message ETG447 for /1SAP1/CCE_RUN01 in LONGPOST.LOG

Note 2022173 - Errors in LONGPOST.LOG after upgrade related to technical BW objects

Phase MAIN_POSTPROC/REQJOBRES
INFO: The upgrade has descheduled all background jobs at the beginning of downtime. As the right time to reschedule these background jobs depends on your requirements, the program does not automatically reschedule the jobs.

Moreover, you must revise all background jobs and ensure that they are still applicable for the new release. Then, you can reschedule the system's periodic batch jobs. To do this, start the report

```
************
* BTCTRNS2 *
************
```

As user DDIC in Transaction SE38. Refer also to SAP Note 37425

Phase MAIN_POSTPROC/SUBMOD_MIG_BI_TASKS_POSTP2/REQRSRDA
INFO: The upgrade has stopped all RDA daemons at the beginning of downtime.
As the right time to restart these daemons depends on your requirements, the program does not automatically restart them. You must restart the RDA daemons manually. To do this, use the transaction

```
************
* RSRDA    *
************
```

Phase MAIN_POSTPROC/REQNOTE1951685
INFO: The settings in table HTTPURLLOC should be checked.

Please read SAP Note 1951685 carefully and perform the described corrections if applicable.

Phase MAIN_POSTPROC/REQ_SPLIT_ASCS
As of NetWeaver 7.30 there is an additional option available for Splitting off a central services instance for ABAP (ASCS instance) from an existing primary application server instance: With the option Split Off ASCS Instance from Existing Primary Application Server Instance, you can split off a central services instance for ABAP (ASCS instance) from the primary application server instance of an existing ABAP system or ABAP+Java (dual-stack) system. For details, you may refer to the corresponding installation guide.

Phase MAIN_POSTPROC/CHK_POSTUP
we strongly recommend to solve the below problems before you resume the production operation of your SAP system.
For more information, see log file **'D:\usr\sap\CIC\SUM\abap\log\LONGPOST.LOG'**. You can use the message class and the message number to search relevant SAP Notes on SAP Service Marketplace (for example, search for 'TG123').

If mentioned explicitly in the LONGPOST.LOG you may have to run the following XPRAS again:

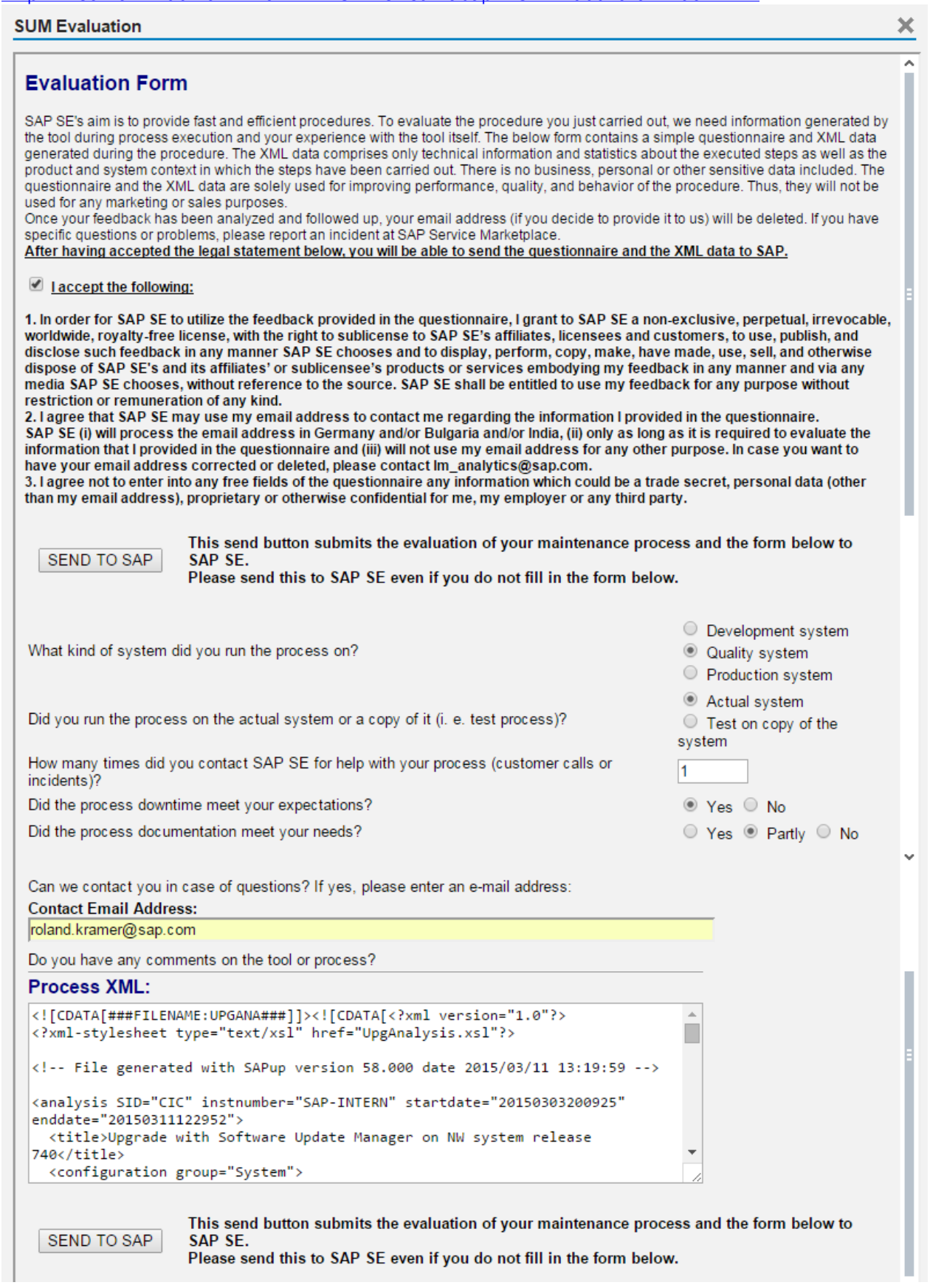
COM_PRODUCT_UPGRADE

RSD_XPRA_REPAIR_0TCTIOBJVL_740

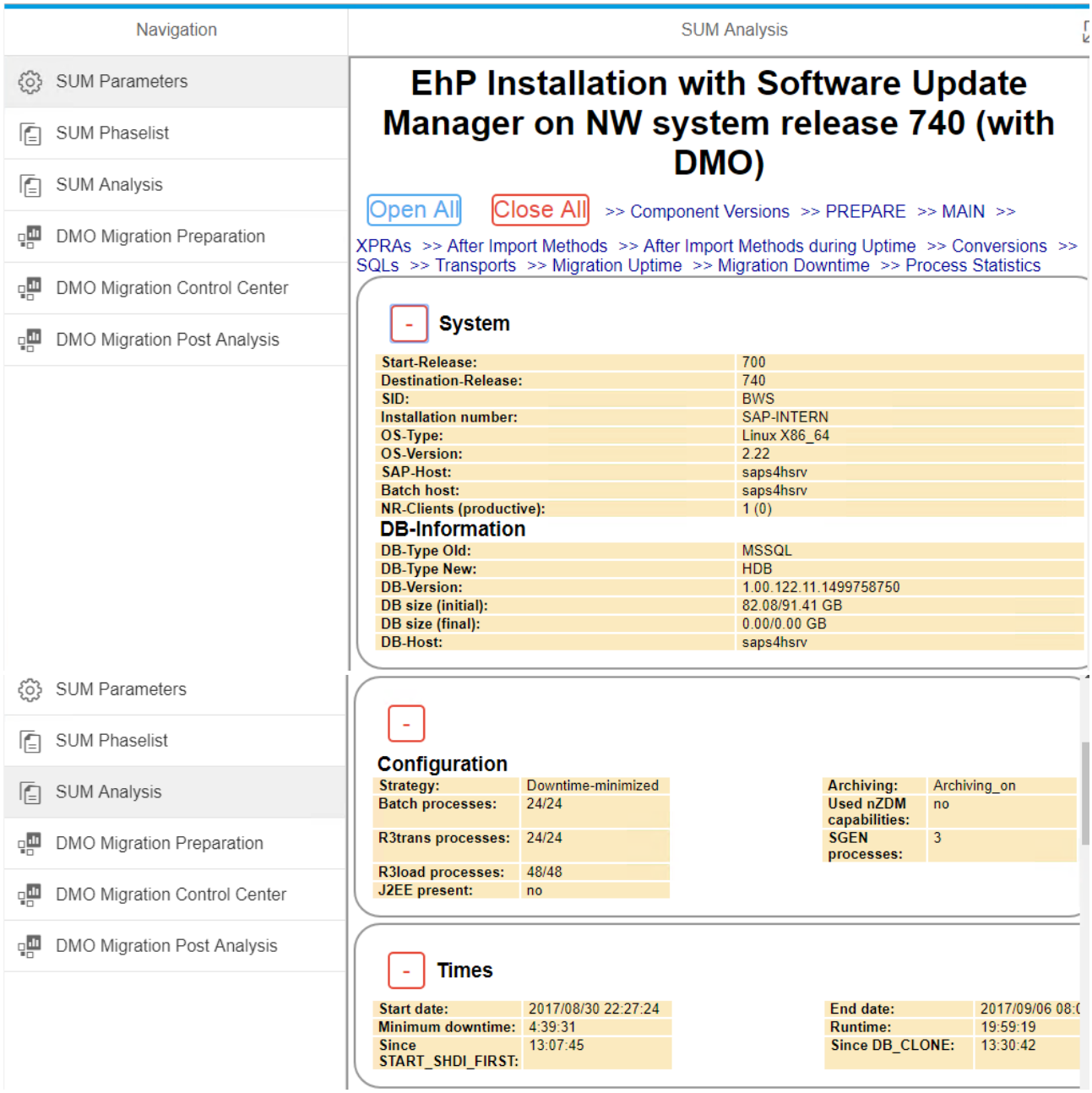
RSD_XPRA_REPAIR_RSCHAVL_740

3.4 Software Update Manager Evaluation

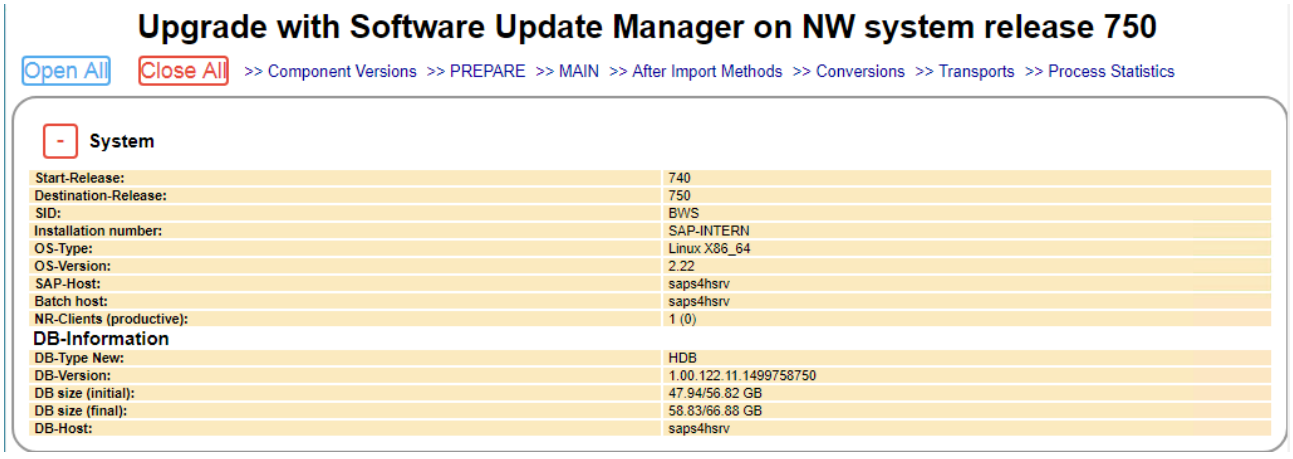
http://<server>.<domain>.<ext>:1128/lmsl/sumabap/<SID>/doc/eval/index.html



Phase: 132 - DMO Process XML - Details



Phase: 133 - SUM/DMO Analysis - Details



3.5 Post Activities after the main DMO Procedure

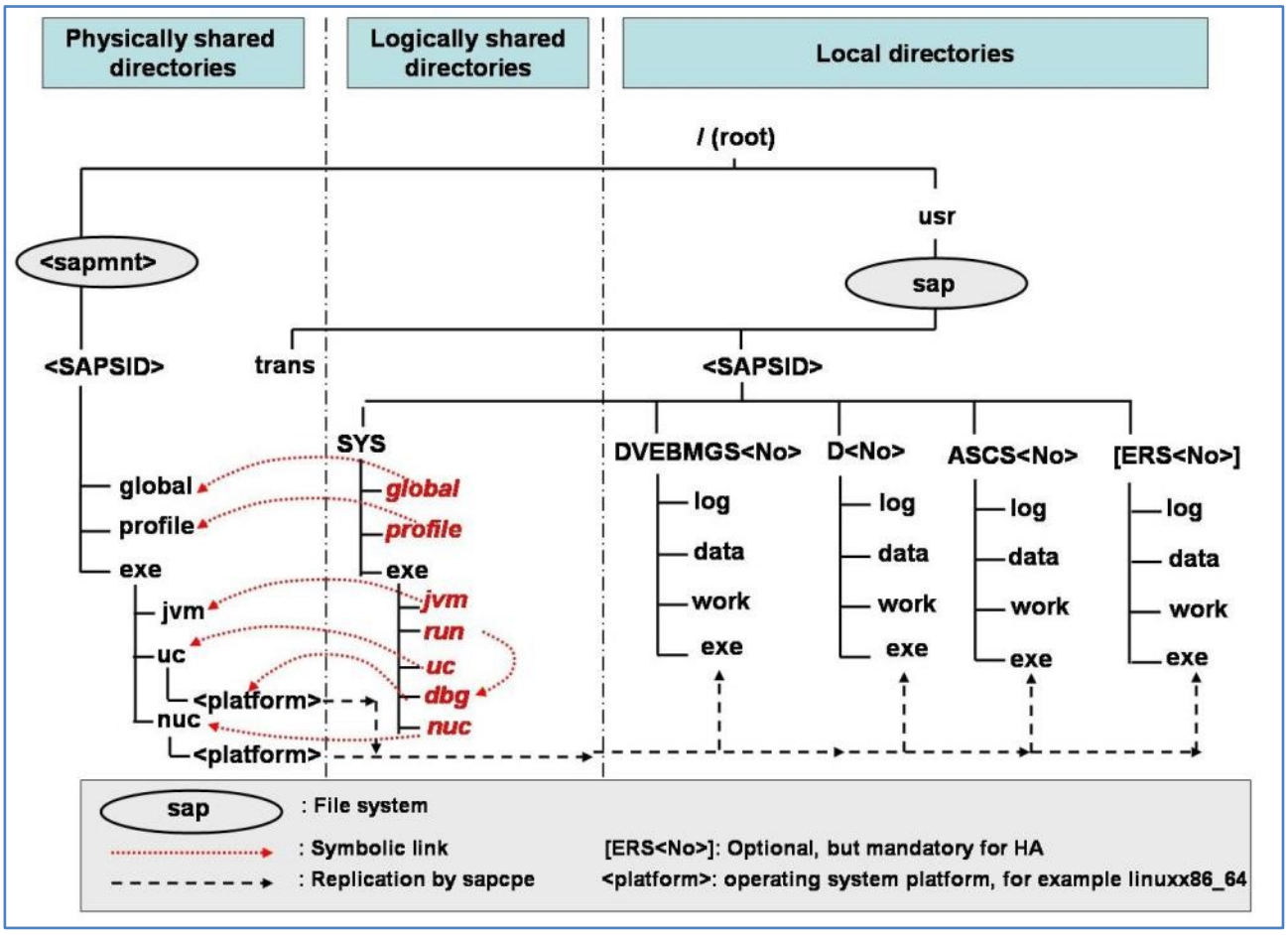
Split off ASCS Instance from Existing Server

In case the Source System was based on non-unicode (NUC) or was already upgraded from a previous release, you must check the file structure of your SAP Instance manually. See the following Notes for details:

Windows ➔ Note 919046 - Upgrade to the New Instance-Specific Directory Structure

UNIX ➔ Note 1104735 - Upgrade to new instance-specific directory on UNIX

The following graphic illustrates the new structure on UNIX based systems (since NetWeaver 7.0 UC):



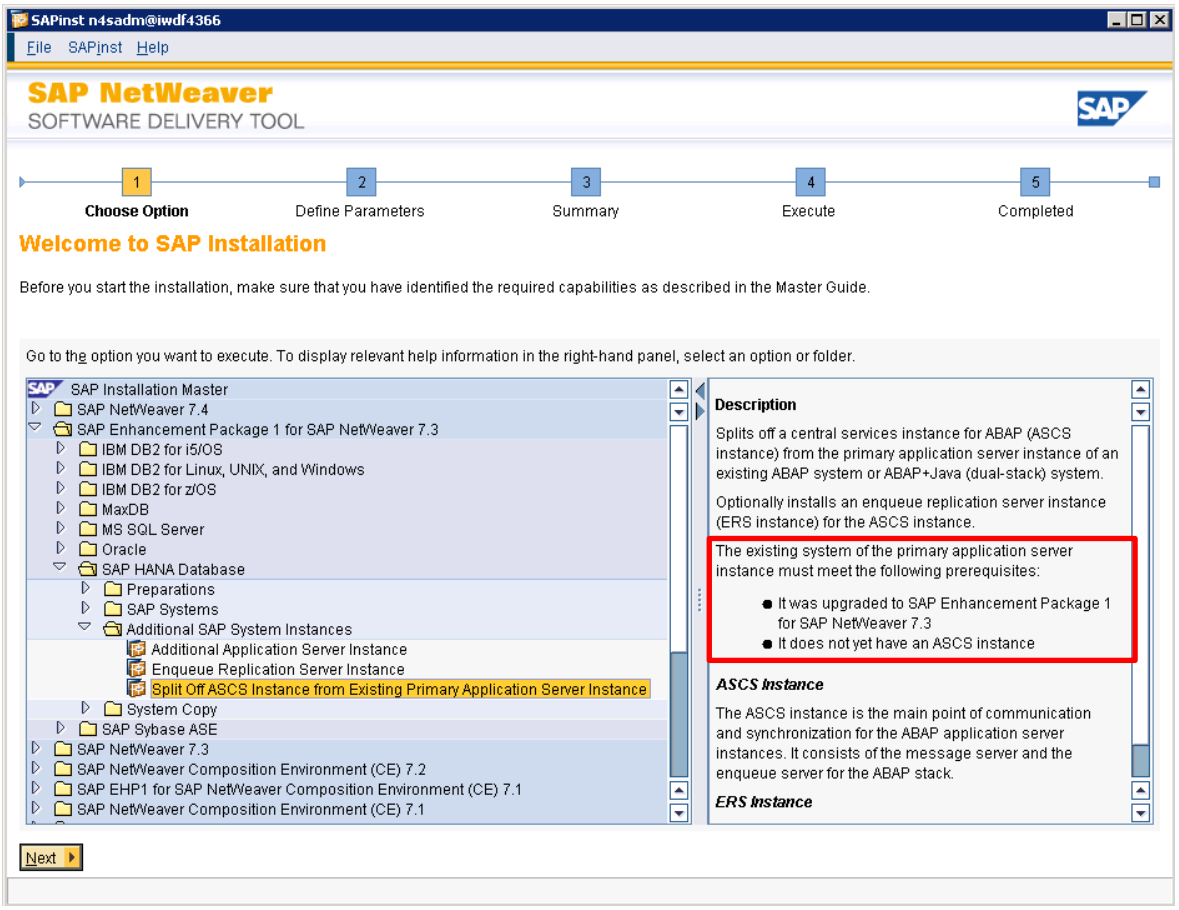
Phase: 134 - new structure on UNIX based systems

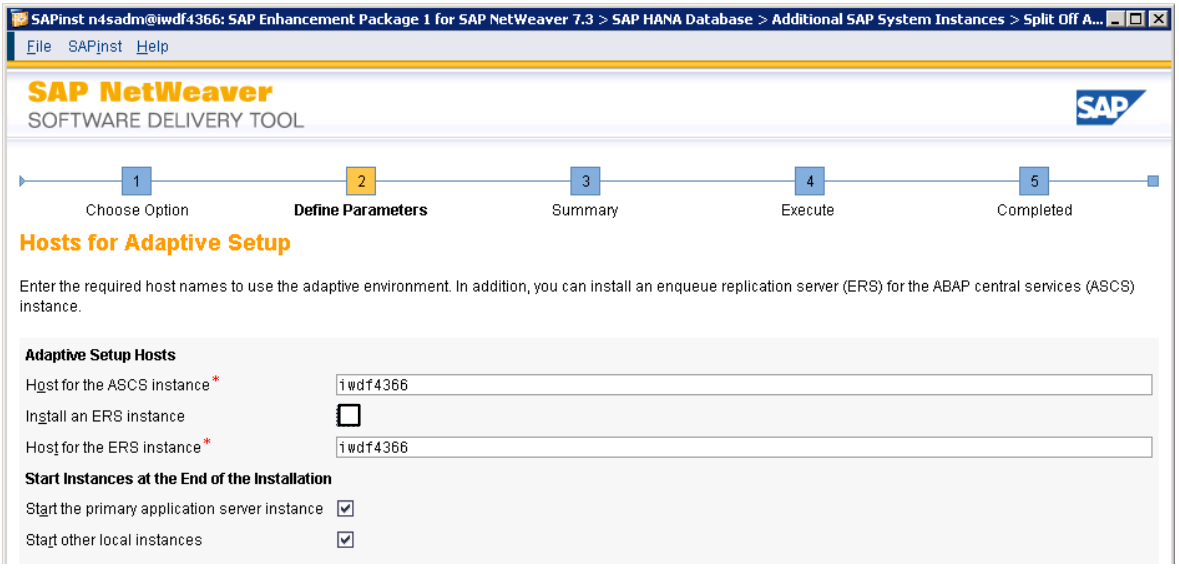
The structure for Win64 based systems looks similar, except the symbolic links as they are not exist on Win64 in the SAP context.

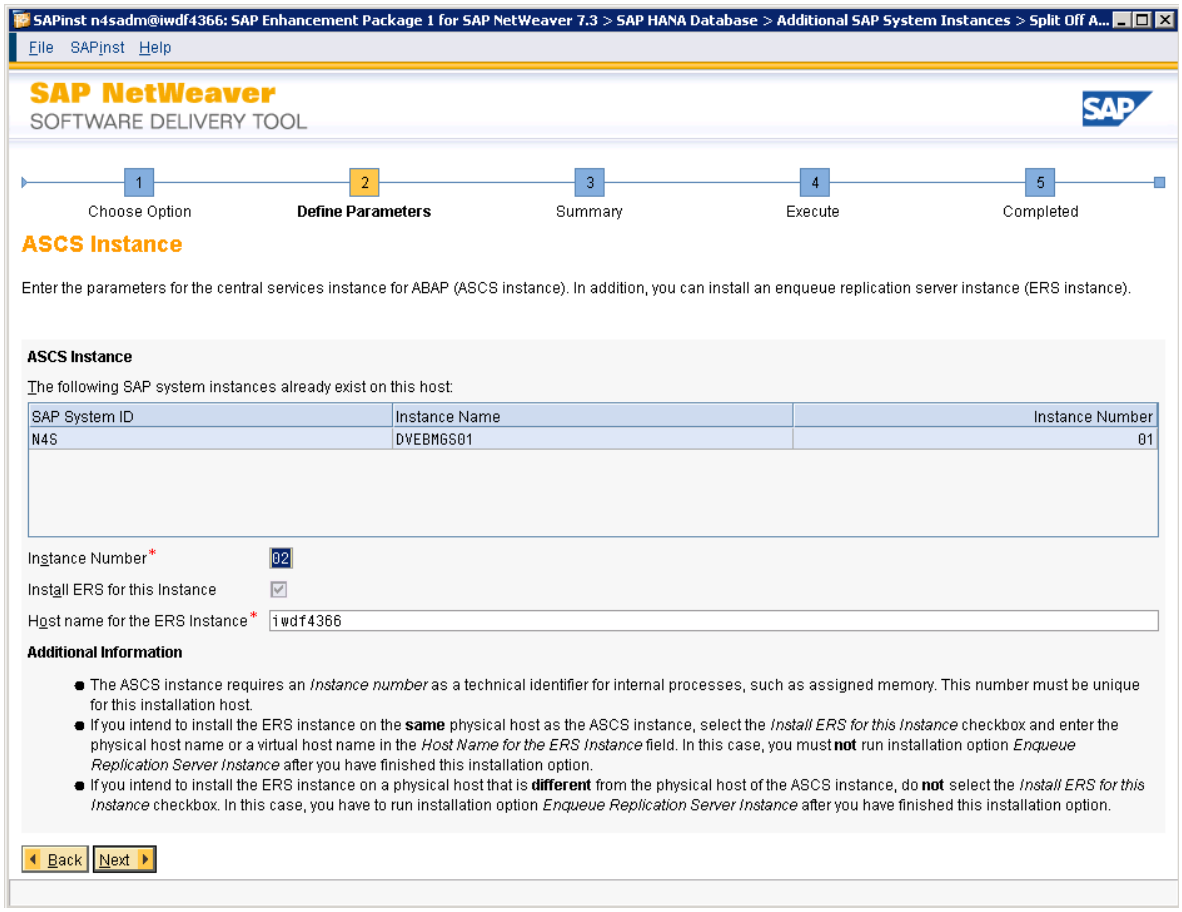
Furthermore, you must Split off ASCS Instance from the Primary Application Server Instance to follow the new Guideline from 7.30 onwards.

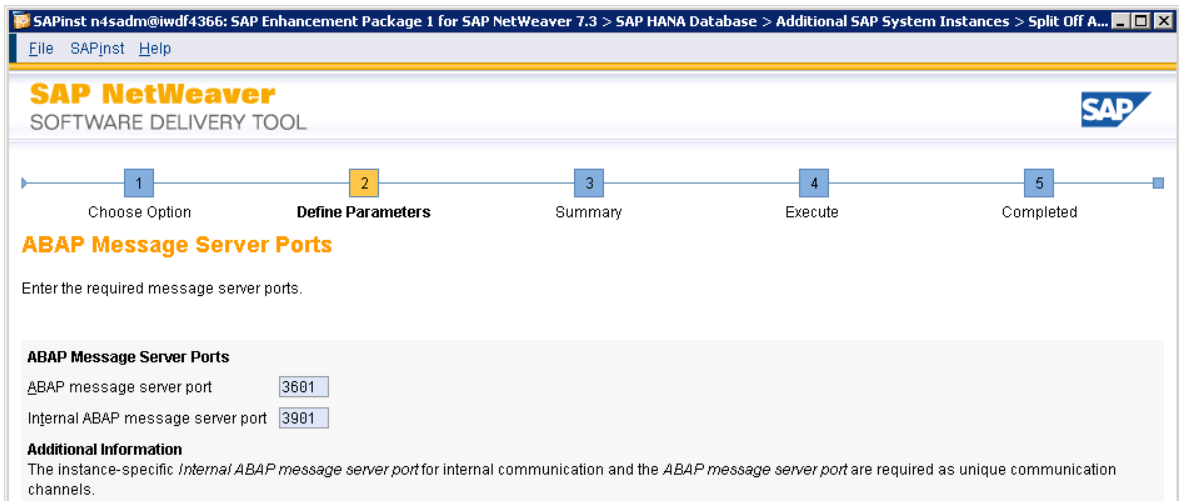
This can be done via a software provisioning manager (SWPM) option. See the following pages for details.

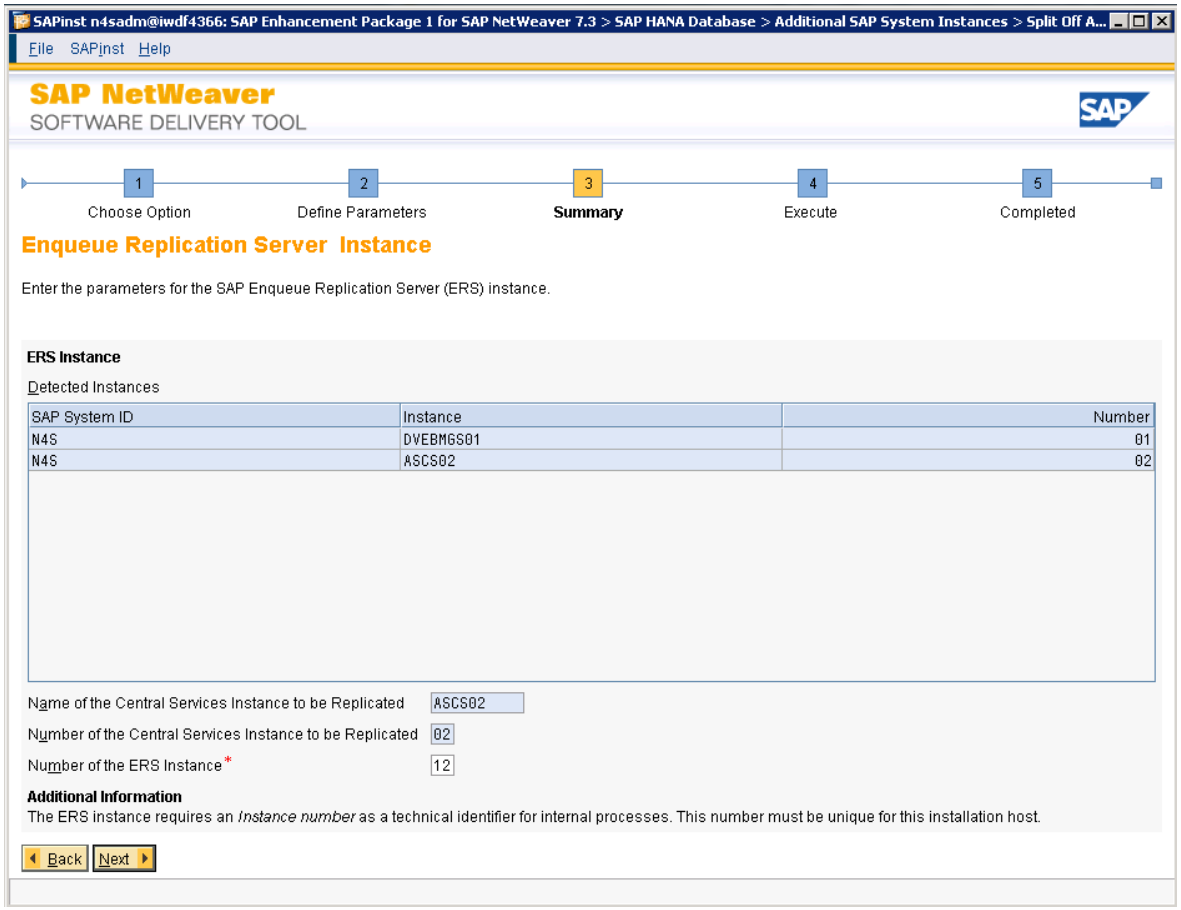
The software provisioning manager can be downloaded either from http://service.sap.com/patches or http://service.sap.com/sltoolset

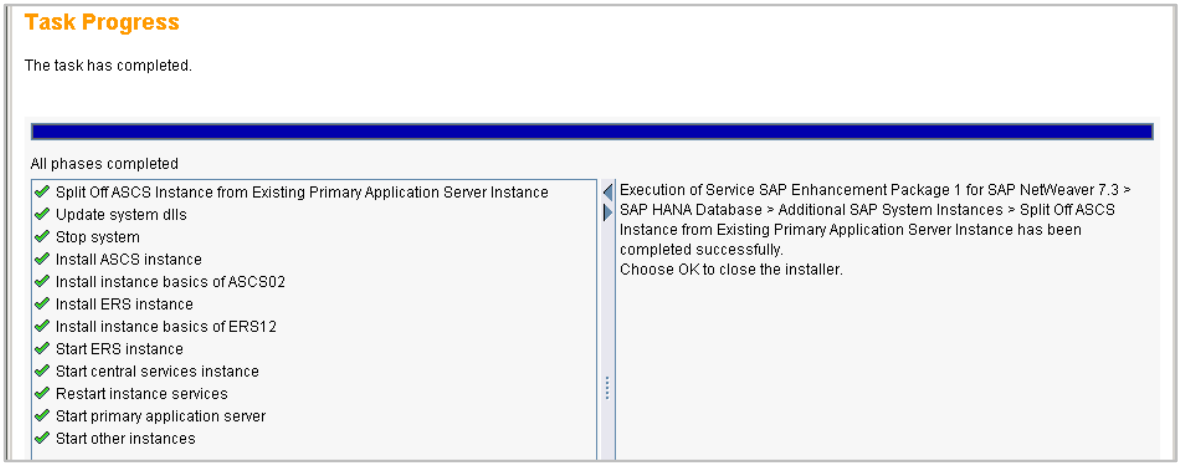

SAPinst n4sadm@iwdf4366
File SAPinst Help
SAP NetWeaver
SOFTWARE DELIVERY TOOL
1 Choose Option
2 Define Parameters
3 Summary
4 Execute
5 Completed
Welcome to SAP Installation
Before you start the installation, make sure that you have identified the required capabilities as described in the Master Guide.
Go to the option you want to execute. To display relevant help information in the right-hand panel, select an option or folder.
SAP Installation Master
SAP NetWeaver 7.4
SAP Enhancement Package 1 for SAP NetWeaver 7.3
IBM DB2 for i5/OS
IBM DB2 for Linux, UNIX, and Windows
IBM DB2 for z/OS
MaxDB
MS SQL Server
Oracle
SAP HANA Database
Preparations
SAP Systems
Additional SAP System Instances
Additional Application Server Instance
Enqueue Replication Server Instance
Split Off ASCS Instance from Existing Primary Application Server Instance
System Copy
SAP Sybase ASE
SAP NetWeaver 7.3
SAP NetWeaver Composition Environment (CE) 7.2
SAP EHP1 for SAP NetWeaver Composition Environment (CE) 7.1
SAP NetWeaver Composition Environment (CE) 7.1
Description
Splits off a central services instance for ABAP (ASCS instance) from the primary application server instance of an existing ABAP system or ABAP+Java (dual-stack) system.
Optionally installs an enqueue replication server instance (ERS instance) for the ASCS instance.
The existing system of the primary application server instance must meet the following prerequisites:
It was upgraded to SAP Enhancement Package 1 for SAP NetWeaver 7.3
It does not yet have an ASCS instance
ASCS Instance
The ASCS instance is the main point of communication and synchronization for the ABAP application server instances. It consists of the message server and the enqueue server for the ABAP stack.
ERS Instance
Next

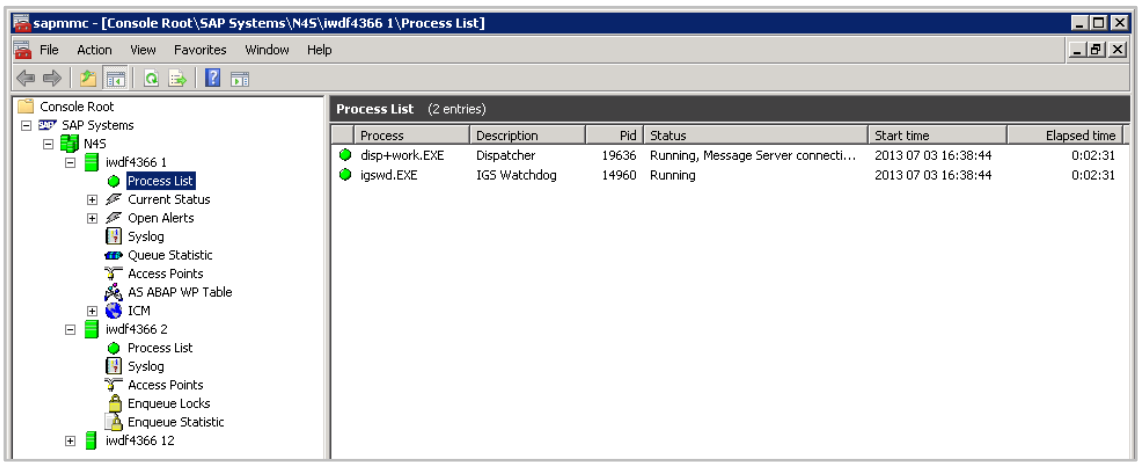

SAPinst n4sadm@iwdf4366: SAP Enhancement Package 1 for SAP NetWeaver 7.3 > SAP HANA Database > Additional SAP System Instances > Split Off A...
File SAPinst Help
SAP NetWeaver
SOFTWARE DELIVERY TOOL
1 Choose Option
2 Define Parameters
3 Summary
4 Execute
5 Completed
Hosts for Adaptive Setup
Enter the required host names to use the adaptive environment. In addition, you can install an enqueue replication server (ERS) for the ABAP central services (ASCS) instance.
Adaptive Setup Hosts
Host for the ASCS instance *
iwdf4366
Install an ERS instance
Host for the ERS instance *
iwdf4366
Start Instances at the End of the Installation
Start the primary application server instance
Start other local instances


SAPinst n4sadm@iwdf4366: SAP Enhancement Package 1 for SAP NetWeaver 7.3 > SAP HANA Database > Additional SAP System Instances > Split Off A...
File SAPinst Help
SAP NetWeaver
SOFTWARE DELIVERY TOOL
1 Choose Option
2 Define Parameters
3 Summary
4 Execute
5 Completed
ASCS Instance
Enter the parameters for the central services instance for ABAP (ASCS instance). In addition, you can install an enqueue replication server instance (ERS instance).
ASCS Instance
The following SAP system instances already exist on this host:
SAP System ID | Instance Name | Instance Number
N4S | DVEBMGS01 | 01
Instance Number*
02
Install ERS for this Instance
Host name for the ERS Instance*
iwdf4366
Additional Information
The ASCS instance requires an Instance number as a technical identifier for internal processes, such as assigned memory. This number must be unique for this installation host.
If you intend to install the ERS instance on the same physical host as the ASCS instance, select the Install ERS for this Instance checkbox and enter the physical host name or a virtual host name in the Host Name for the ERS Instance field. In this case, you must not run installation option Enqueue Replication Server Instance after you have finished this installation option.
If you intend to install the ERS instance on a physical host that is different from the physical host of the ASCS instance, do not select the Install ERS for this Instance checkbox. In this case, you have to run installation option Enqueue Replication Server Instance after you have finished this installation option.
Back
Next


SAPinst n4sadm@iwdf4366: SAP Enhancement Package 1 for SAP NetWeaver 7.3 > SAP HANA Database > Additional SAP System Instances > Split Off A...
File SAPinst Help
SAP NetWeaver
SOFTWARE DELIVERY TOOL
1 Choose Option
2 Define Parameters
3 Summary
4 Execute
5 Completed
ABAP Message Server Ports
Enter the required message server ports.
ABAP Message Server Ports
ABAP message server port
3601
Internal ABAP message server port
3901
Additional Information
The instance-specific Internal ABAP message server port for internal communication and the ABAP message server port are required as unique communication channels.


SAPinst n4sadm@iwdf4366: SAP Enhancement Package 1 for SAP NetWeaver 7.3 > SAP HANA Database > Additional SAP System Instances > Split Off A...
File SAPinst Help
SAP NetWeaver
SOFTWARE DELIVERY TOOL
1 Choose Option
2 Define Parameters
3 Summary
4 Execute
5 Completed
Enqueue Replication Server Instance
Enter the parameters for the SAP Enqueue Replication Server (ERS) instance.
ERS Instance
Detected Instances
SAP System ID | Instance | Number
N4S | DVEBMGS01 | 01
N4S | ASCS02 | 02
Name of the Central Services Instance to be Replicated ASCS02
Number of the Central Services Instance to be Replicated 02
Number of the ERS Instance* 12
Additional Information
The ERS instance requires an Instance number as a technical identifier for internal processes. This number must be unique for this installation host.
Back Next


Task Progress
The task has completed.
All phases completed
Split Off ASCS Instance from Existing Primary Application Server Instance
Update system dlls
Stop system
Install ASCS instance
Install instance basics of ASCS02
Install ERS instance
Install instance basics of ERS12
Start ERS instance
Start central services instance
Restart instance services
Start primary application server
Start other instances
Execution of Service SAP Enhancement Package 1 for SAP NetWeaver 7.3 > SAP HANA Database > Additional SAP System Instances > Split Off ASCS Instance from Existing Primary Application Server Instance has been completed successfully.
Choose OK to close the installer.

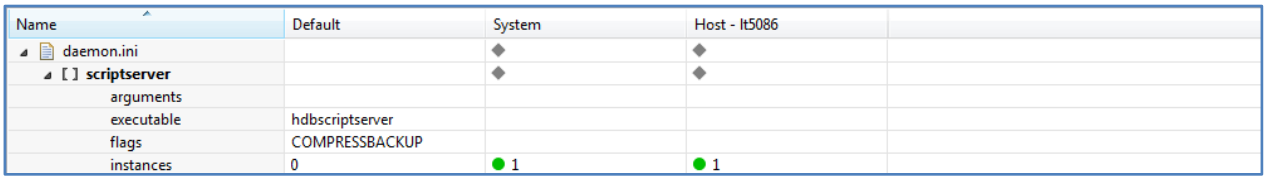

sapmmc - [Console Root\SAP Systems\N4S\iwdf4366 1\Process List]
File Action View Favorites Window Help
Console Root
SAP Systems
N4S
iwdf4366 1
Process List
Current Status
Open Alerts
Syslog
Queue Statistic
Access Points
AS ABAP WP Table
ICM
iwdf4366 2
Process List
Syslog
Access Points
Enqueue Locks
Enqueue Statistic
iwdf4366 12
Process List (2 entries)
Process | Description | Pid | Status | Start time | Elapsed time
disp+work.EXE | Dispatcher | 19636 | Running, Message Server connecti... | 2013 07 03 16:38:44 | 0:02:31
igswd.EXE | IGS Watchdog | 14960 | Running | 2013 07 03 16:38:44 | 0:02:31

HANA Specific Post Steps

Activate new HANA server functions

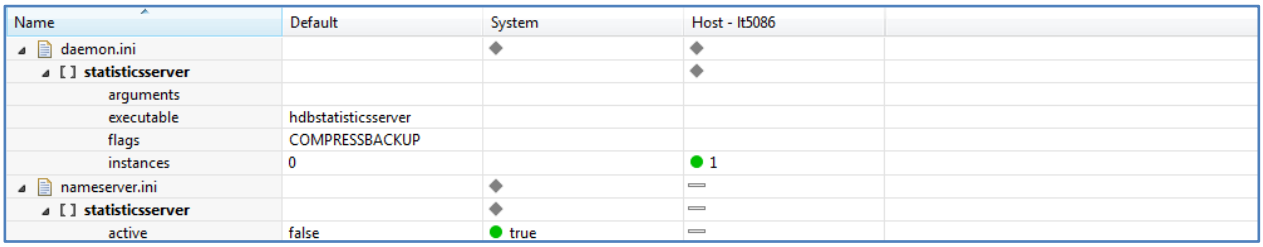
To work with the new SAP BW 7.40 Functionality together with SAP HANA 1.0 SP07 and above, you must activate the following components on your HANA server.

Note 1650957 - SAP HANA Database: Starting the Script Server



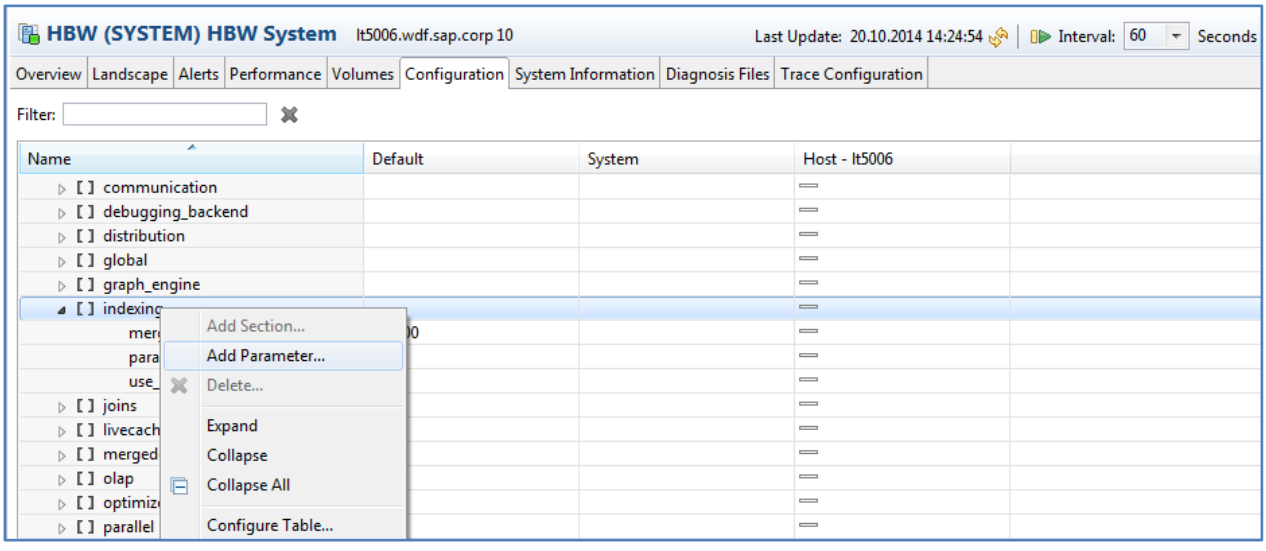
Note 1917938 - Migration des Statistics Server mit dem Upgrade auf SPS 7 ➔ Rev. 71

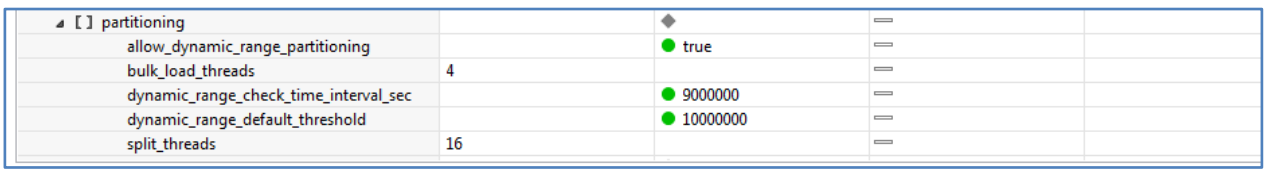
Note 1925684 - ABAP adjustments for SAP HANA SPS 7



Note 2147247 - FAQ: SAP HANA Statistics Server

Note 2081135 - Enable "Dynamic Range Partitioning" feature for DataStore objects (advanced)





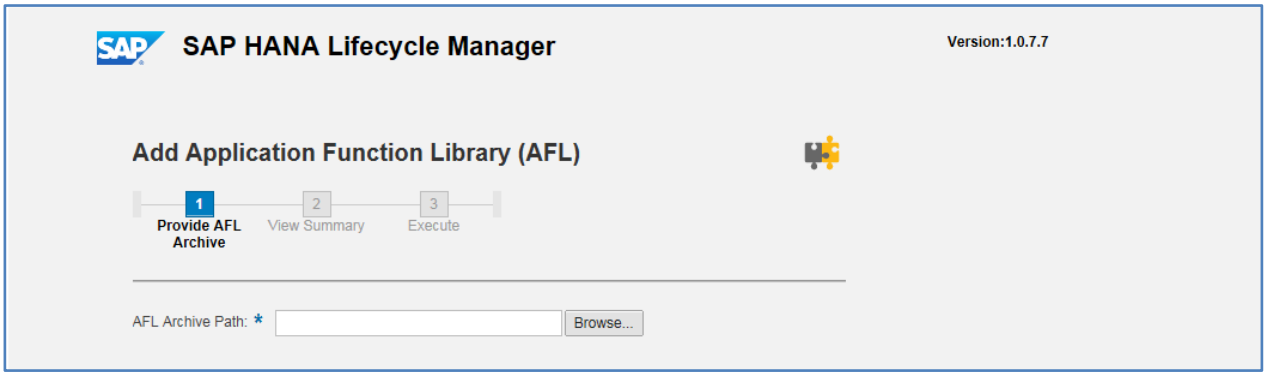
Add the following Parameters to the HANA 1.0 Rev. 83 configuration after you updated the binaries:

```
indexserver.ini ≥ partitioning ≥

allow_dynamic_range_partitioning = true

dynamic_range_check_time_interval_sec = 900

dynamic_range_default_threshold = 10000000
```

Install Application Function Library (AFL)

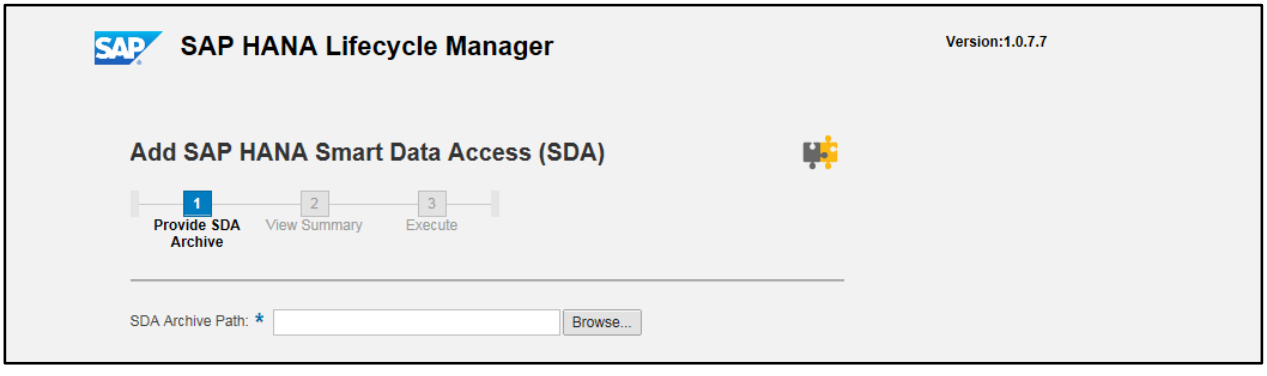
The HANA Analysis Process (HAP) uses the AFL content for SAP HANA. Therefore, you must import the correct Version of the AFL assign to your HANA Revision. If you are Updating HANA with AFL content applied, you must update the AFL content first, or apply a complete HANA stack. You can use the HANA Lifecycle Management via the HANA Studio.

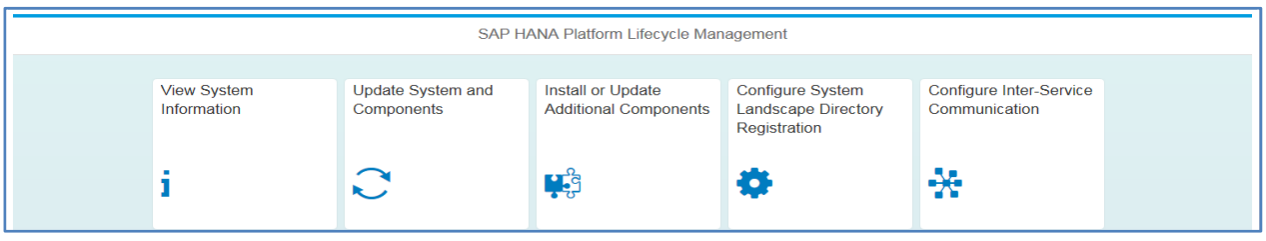
Refer to the SAP First Guidance Document - SAP First Guidance - Business Warehouse on SAP HANA Installation for more Details.



Install the smart data access (SDA) drivers

The SDA drivers can be applied with the same tool (HLM) as mentioned above.





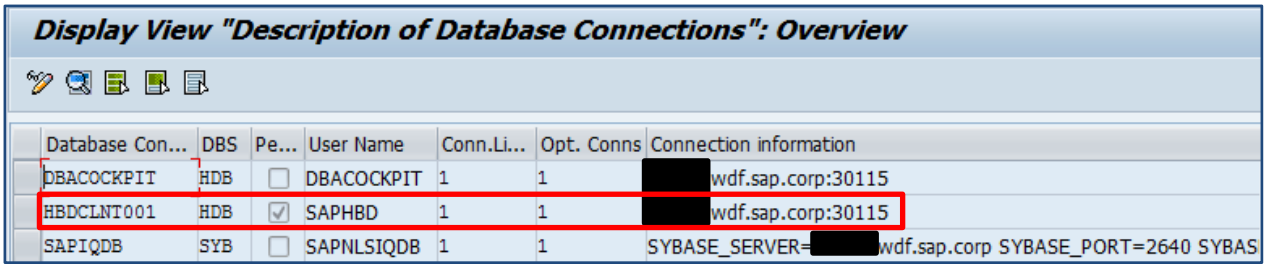
Configuring DBMS User Man. for SAP HANA

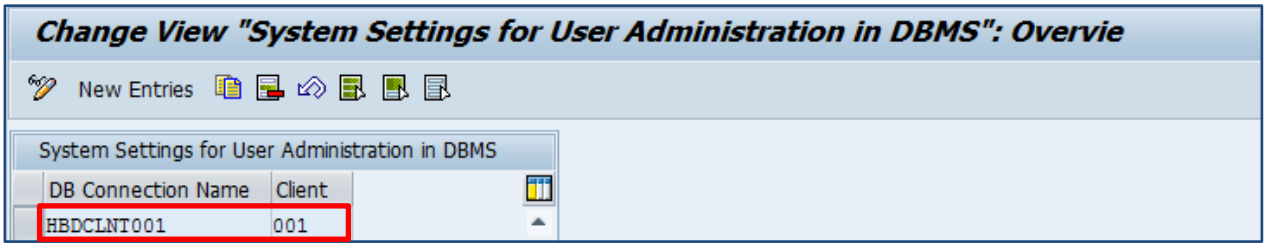
Note 1559592 - Valid User Names for DBMS User

Note 2073847 - Support for new fields for DBMS user in SQL back-end interface

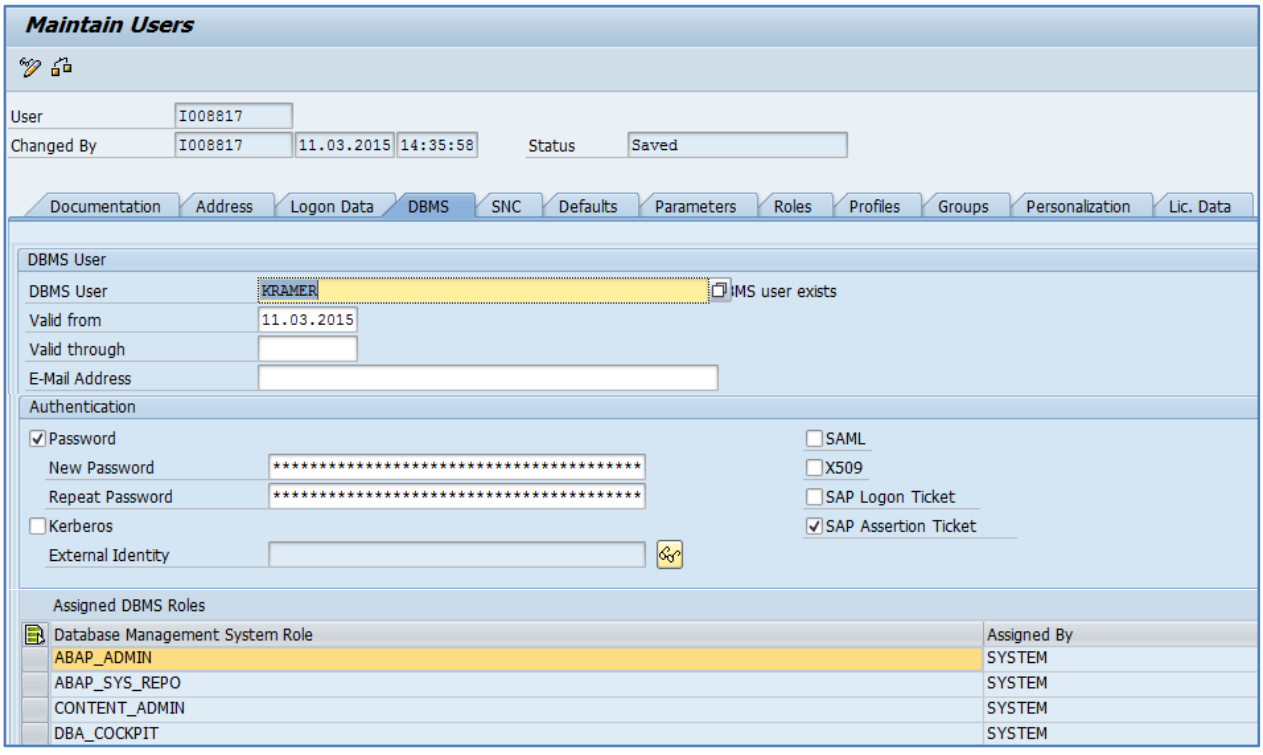
To enable the usage of the Analysis Capabilities together with SAP BW and HANA, you must map the existing ABAP User to an existing HANA User.

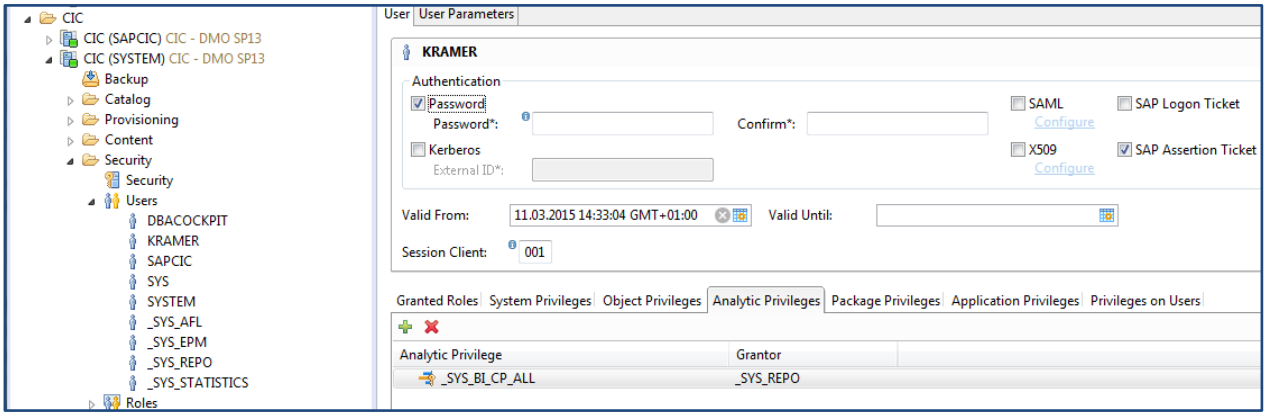
With the Transaction DBCO create a connection with the SAP<SID> to the underlying HANA database and assign this connection in the User DBMS System View (SM30 ➔ Table USR_DBMS_SYSTEM). After this, you can assign the user in the Transaction SU01 via an additional Tab Strip as follows:





It is suitable to use a similar notation as for the creation of logical source systems as known for SAP BW.





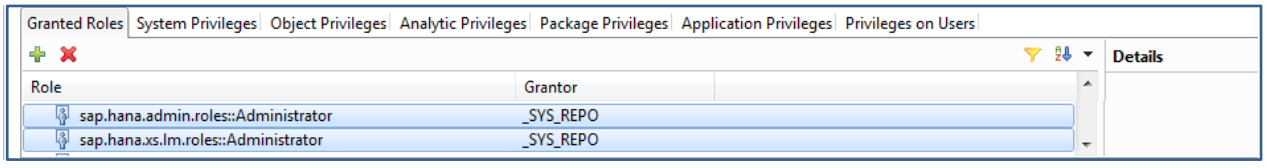
The Assignment of the Analytical Privilege _SYS_BI_CP_ALL is helpful as well. See also

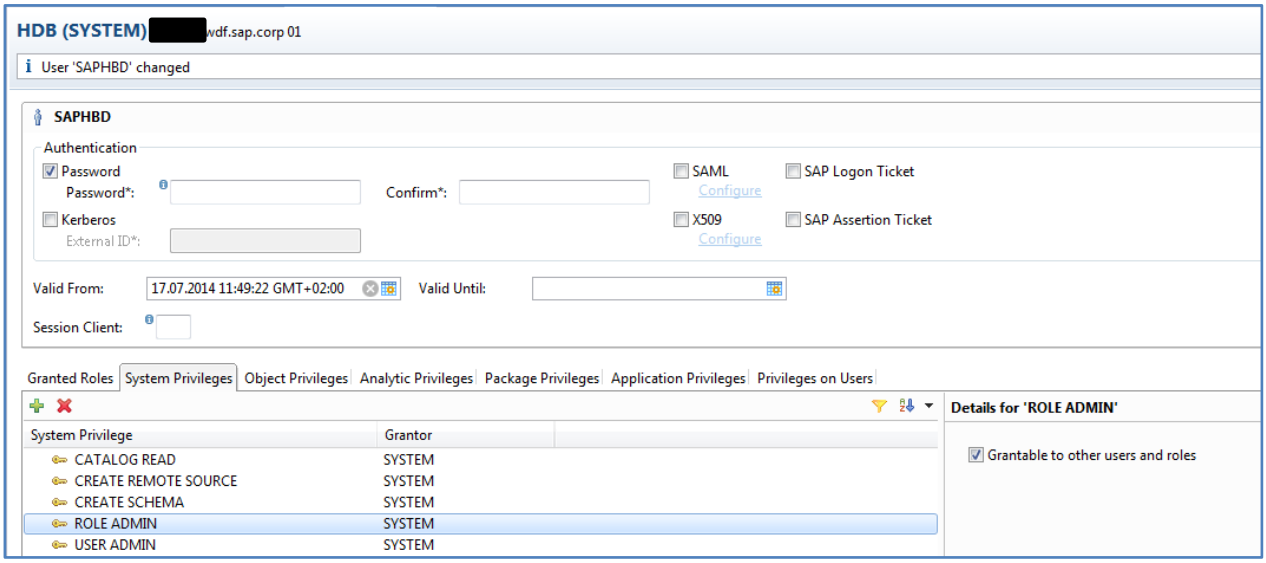
Note 1956963 - Creating roles from BW in SAP HANA not possible

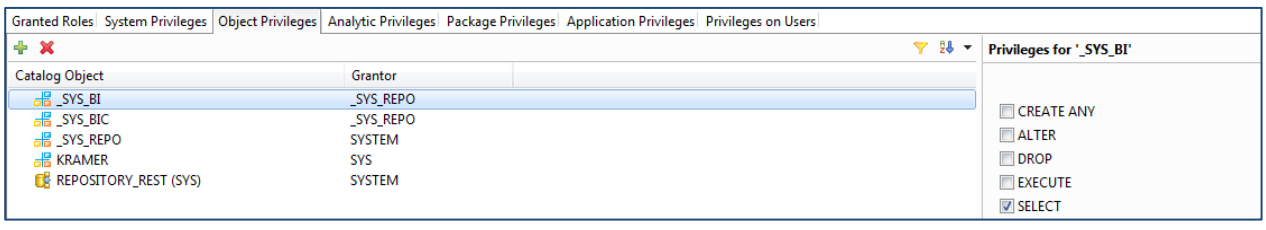
Note 1881935 - Access privileges required for SAP Lumira from SAP HANA

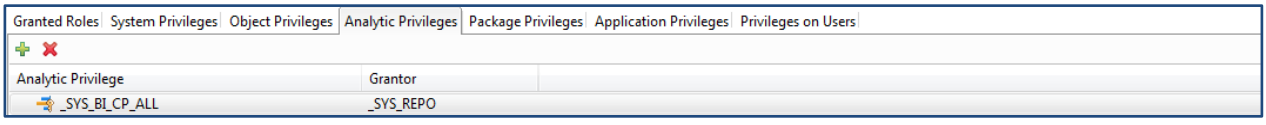
Note 1823771 - SAP Lumira 1.0 - Insufficient rights: Unable to connect to HANA server, or Not enough rights to open view (HDB 02074).

Note 2086725 - HANA HALM is not working with error - 403 Forbidden



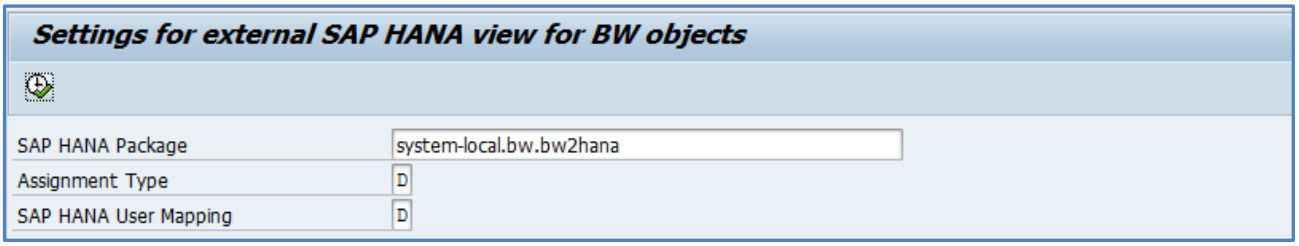






Additional Information can also be found in the SAP Help Portal:
http://help.sap.com/saphelp_nw74/helpdata/en/74/3ef0e24417493a8bf2b50fb0199d64/content.htm?frameset=/en/74/3ef0e24417493a8bf2b50fb0199d64/frameset.htm&current_toc=/en/06/371640b7b6dd5fe10000000a155106/plain.htm&node_id=217&show_children=false

Transaction RS2HANA_VIEW



Additional Information for the details of the Transaction can be found in the SAP First Guidance Document - https://scn.sap.com/docs/DOC-52790

Furthermore, the additional SAP Notes corrections must be applied (Component BW-WHM-MTD-HMOD):

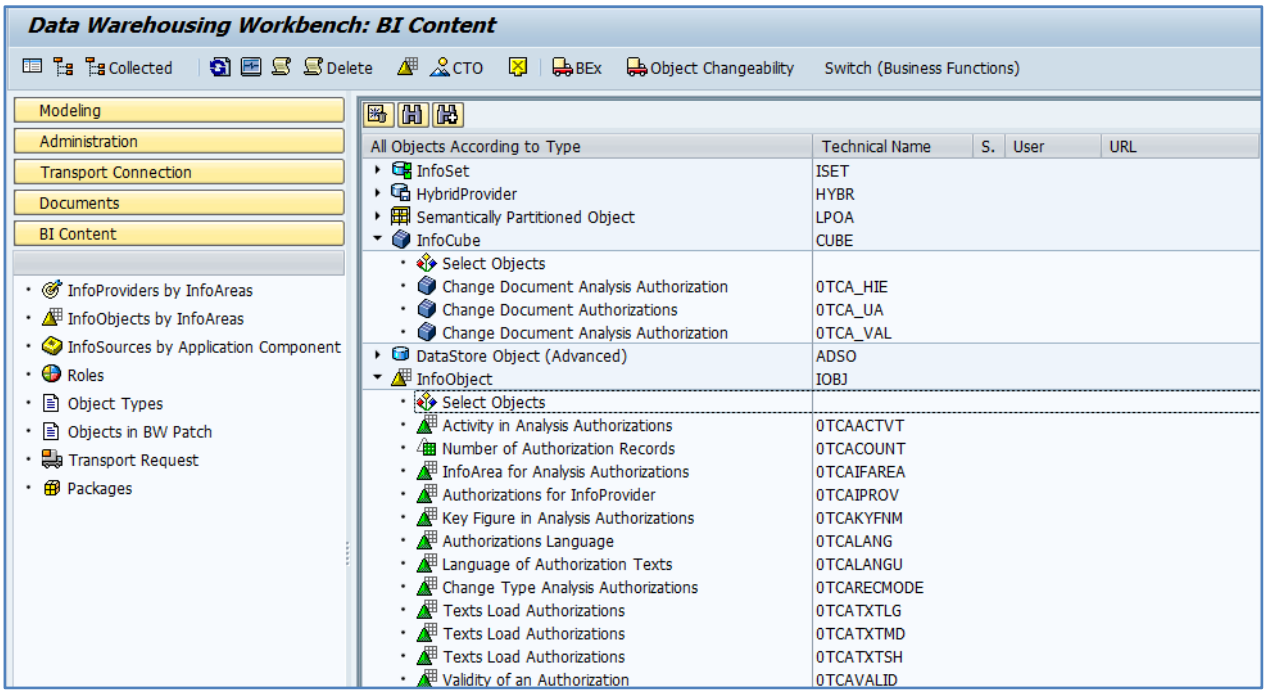
Note 2057532 - Error "User has no authorization" after rep. of BW authorizations for a specific BW user

Note 2040167 - Replication of CP * authorizations and correction in the key of BW filter tables

If you are not yet on SAP BW Support Package Stack 08, these SAP Notes are also relevant:

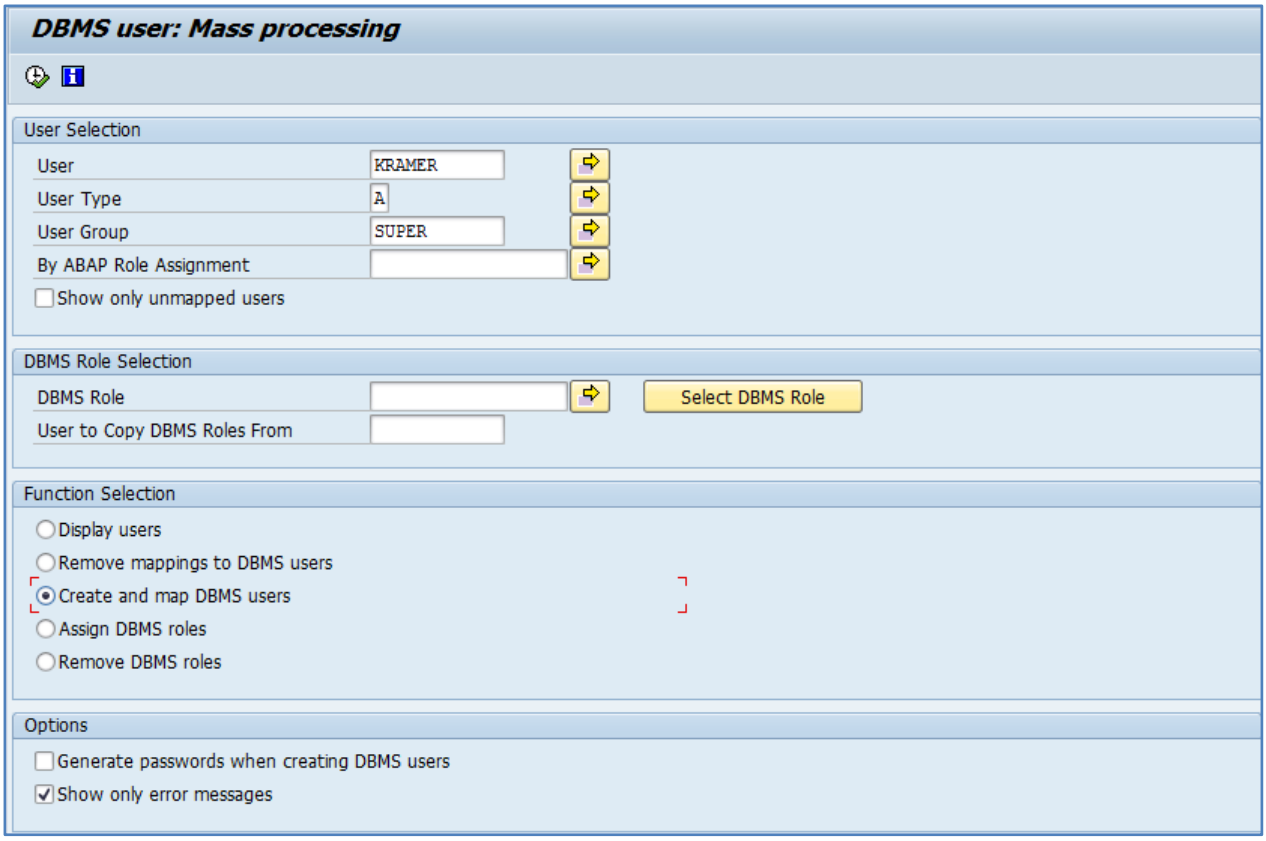
Note 2038892 - Prerequisite SAP Note for SAP Note 2038865

Note 2038865 - External SAP HANA view: Assignment of SAP HANA authorizations without roles



Mass Maintenance of DBMS User

For the Mass Maintenance of the DBMS Users you can use the Program RSUSR_DBMS_USERS: (Component BC-SEC-USR-ADM)



Details about the usage can be found in the following Notes:

Note 1927767 - Mass DBMS User Management

Note 1836006 - Requirements for DBMS User for DB connection

Additional Information can also be found in the SAP Help Portal:

http://help.sap.com/saphelp_nw74/helpdata/en/69/faccbf575c4f79b61e1b38af757a2c/content.htm?frameset=/en/82/25d779272c40b2867137374af77017/frameset.htm&current_toc=/en/06/371640b7b6dd5fe10000000a155106/plain.htm&node_id=223

Tip:

Create with SE93 a Transaction to call the program RSUSR_DBMS_USERS directly.

See also the Blog from Posted by Matthias Buehl in Security on Oct 21, 2014
DBMS Users in SAP NetWeaver AS ABAP 7.40

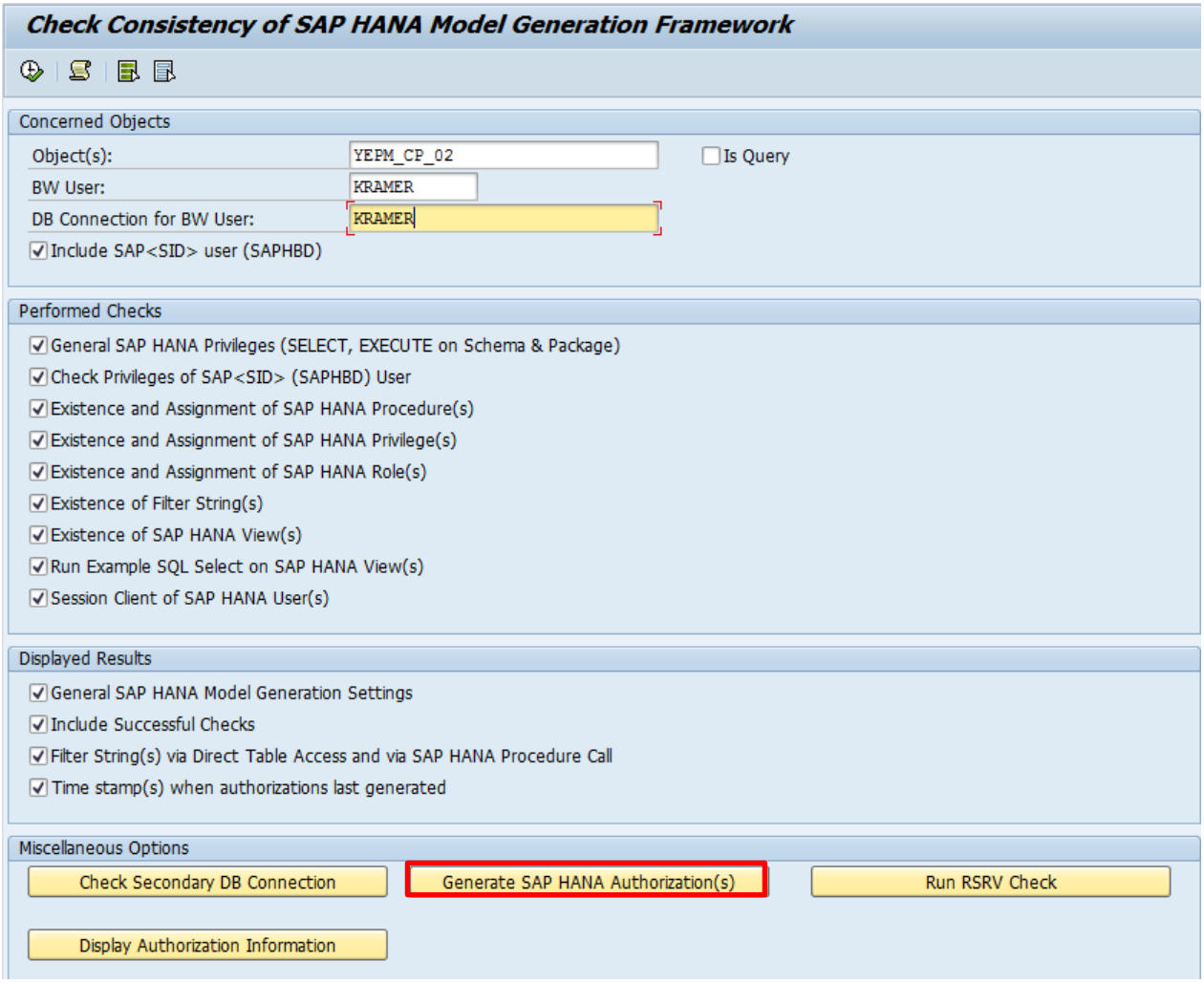
Transaction RS2HANA_CHECK/ADMIN

With the Transactions RS2HANA_ADMIN and RS2HANA_CHECK you can maintain the correct creation of the external HANA Views. The Functionality will be final delivered with 7.40 SP09, so apply the following

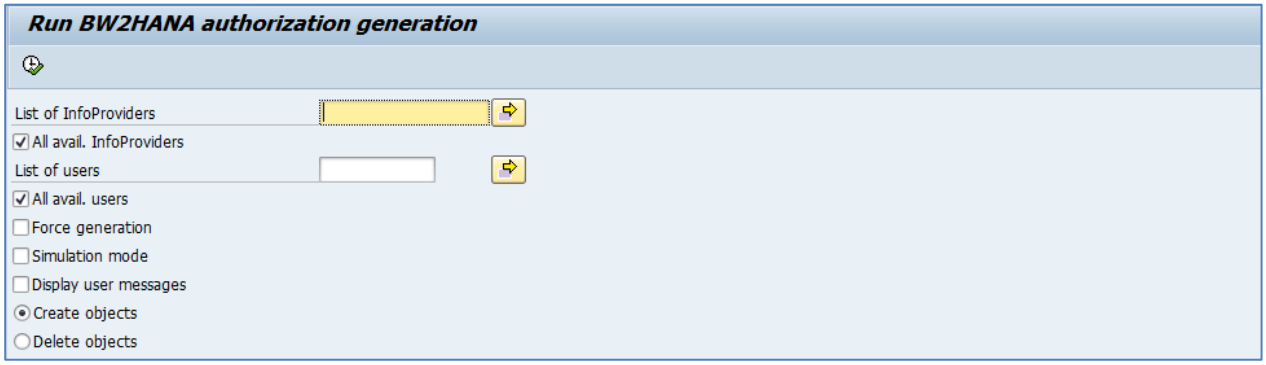
Note 2031522 - Transactions RS2HANA_ADMIN and RS2HANA_CHECK

Note 2135108 - Error "user not authorized" with database user longer than 12 records

Note 2174750 - RS2HANA_CHECK enhancement: Check for system privileges REPO.MODIFY_* (SAP HANA change recording management)



Transaction to call the Report directly: RS2HANA_AUTH_RUN



Create CDS views after migration

Note 2081053 - Cannot create CDS views: Missing base objects

Note 2084716 - Upgr phase RUN_RUTDDLSCREATE: Prompt for error handling no errors are present

Note 2086902 - Cannot create CDS views: Missing base objects

Note 2089122 - SAP HANA DB: CDS view w. external view as base object can´t be created in the database

Note 2150018 - CDS views missing from database

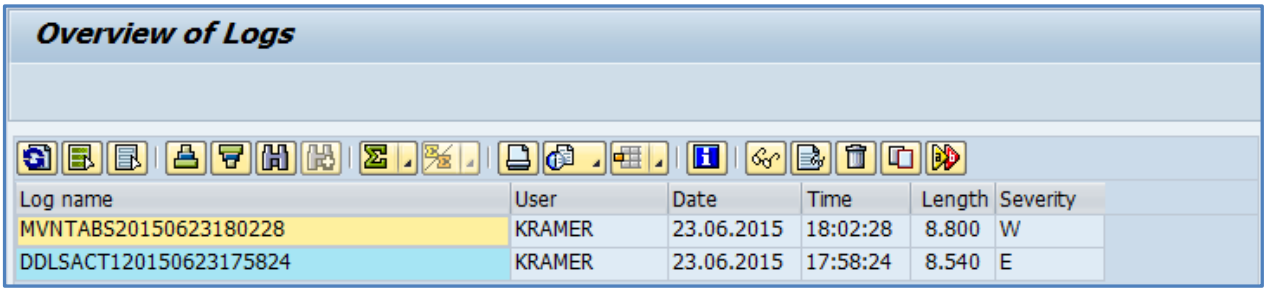
Note 2153150 - DDL source is not active due to missing base table include fields

Note 2160038 - Error message during activation: View cannot be deleted from the database

Note 2179450 - Activation errors for CDS views if feature is missing from database

CDS views are defined and activated using DDL sources in ABAP in Eclipse (AIE). When you activate the DDL source, the CDS view and a corresponding SQL view are generated from it.
There is no editor in the workbench (transaction SE80).
If an error occurs here during the activation, correct the error in AIE and check or activate the DDL source again. You can edit the DDL sources in the target system using AIE and activate them directly if necessary. Otherwise you must correct the DDL sources in the original system and carry out a new transport.

In the upgrade, errors can occur with DDL sources in different phases, for example in the activation phase, in one of the PARDIST phases, or finally during the creation of the generated SQL views in the database. Check the corresponding action log. If the error appears to be temporary, you can repeat this phase. Using the program does not make sense here. The back-end system might not even be available depending on the upgrade phase.



For general Information's about the correct HANA settings and performance Problems see also the KBA´s

Note 2000003 - FAQ: SAP HANA

Note 2186744 - FAQ: SAP HANA Parameters

BW Specific Post Steps

With the following SAP Notes, you can elaborate the recommended SAP ABAP Backend Version with the assigned SAP HANA Revision. If your "Matrix" differs towards to an actual SAP HANA Revision, but you SAP BW Release is still 7.30, then you cannot benefit from the current possibilities based on BW on HANA, such as embedded BPC planning or BW-MT together with Advanced DSO (BW-aDSO)

Note 1850327 - SP Equivalence for update/upgrade to SAP NW 7.4

Note 1914052 - NetWeaver 7.40 Database Dependencies

Check for updates for SNOTE/SPAU corrections

Note 1668882 - Note Assistant: Important notes for SAP_BASIS 730,731,740

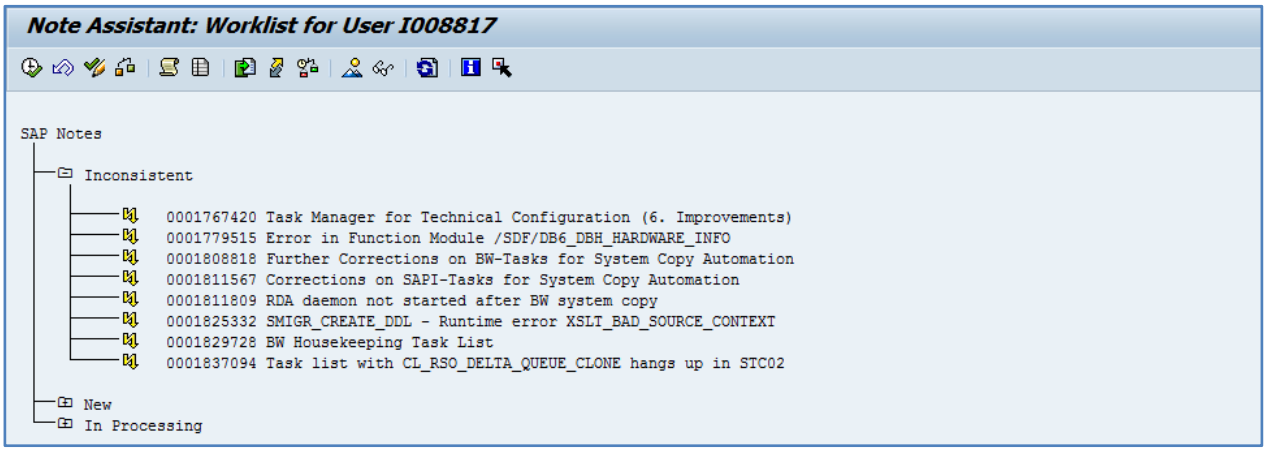
Note 2077553 - Obsolete version imp. notes - Automatic adjustment for manual activities in SPAU

Search for SAPKB740xx (where xx can be 10, 11, and 12) and in the Application Area for

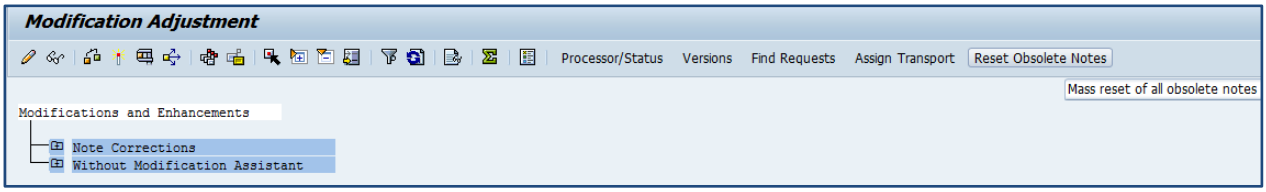
SNOTE ➔ BC-EIM-ESH

SPAU ➔ BC-DWB-CEX

Transaction SNOTE



Transaction SPAU



Note 1975910 - Mass reset of obsolete notes in SPAU

Note 1972294 - SPAU: Resetting of obsolete SAP Notes

Note 2166955 - Deletion and reactivation of ABAP Dictionary object generates deadlock on DDFTX

Note 2122333 - DD_INT_UPDATE_DDFTX hangs without end

Note 2028598 - SAP GUI 7.40: Front-end printing with access method 'F' no longer works

Important SAP Notes after 7.40 SP08 and higher

This is a collection of SAP Note correction for various topics after the Upgrade of SAP BW 7.40 SP08 and higher

Note 1709947 - SP29:Field length wrong in source and target of TRF

Note 2036310 - Incorrect AIM execution: No repeated activation of successfully processed objects; technical enhancement

Note 2076059 - After upgrade to later BW releases, key figure values are not displayed correctly

Note 2077976 - Table pool deletion incorrectly handled

Note 2086899 - Upgrade phase MAIN_SHDRUN/ACT_UPG returns error messages

Note 2091348 - CD: No call of BAdI on shadow instance during upgrade

Note 2120719 - RC = 12 during script-based Inhouse transport, error RSO 781

Note 2136898 - Missing Database Index after Upgrade from SAP Business Warehouse 7.40 SP8 to 7.40 SP 10 or lower on non-SAP HANA database systems

Note 2146347 - Planning DSO: Error RSDODSO 256 after upgrade from BW 7.3X

Note 2125844 - Automatic upload of profiles after an upgrade

Regenerate Technical Content

Run the transaction RSTCT_INST_BIAC or RSTCO_ADMIN.

Run the transaction RS_PERS_ACTIVATE.

Make sure that the background user BWREMOTE is correctly configured - BW 7.x Basis Customizing

RowStore to Column conversion after 7.40 SP08

Note 2044047 - Pre-BW7.4 SP08 RowStore-to-ColumnStore conversion

Program RSDU_MOVE_TO_COLUMN

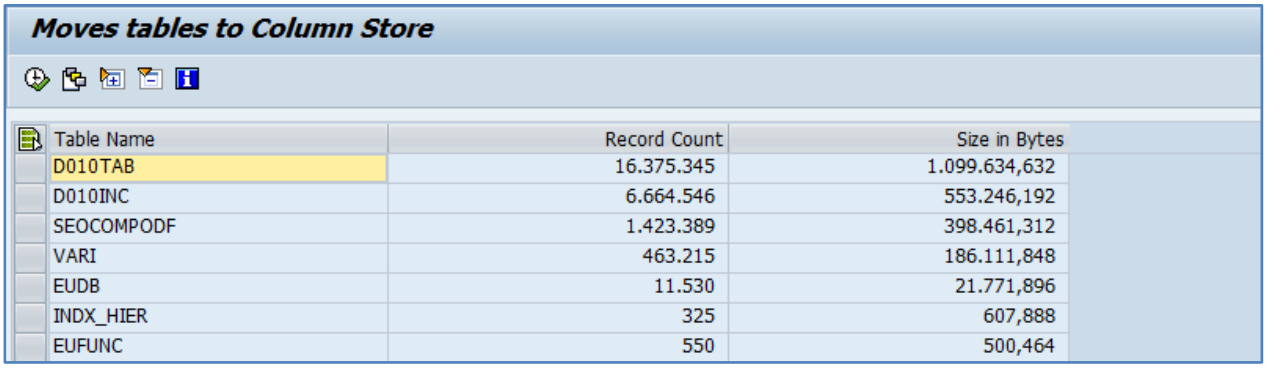
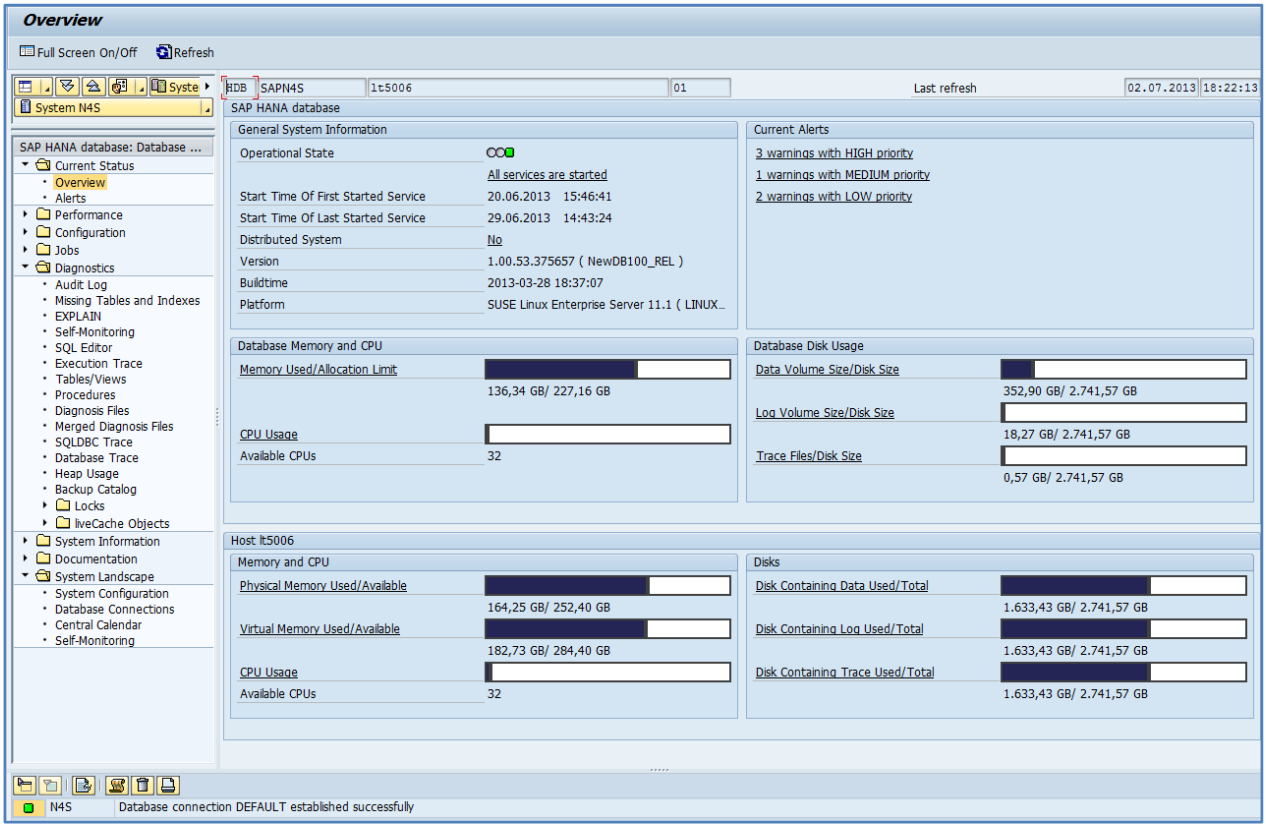


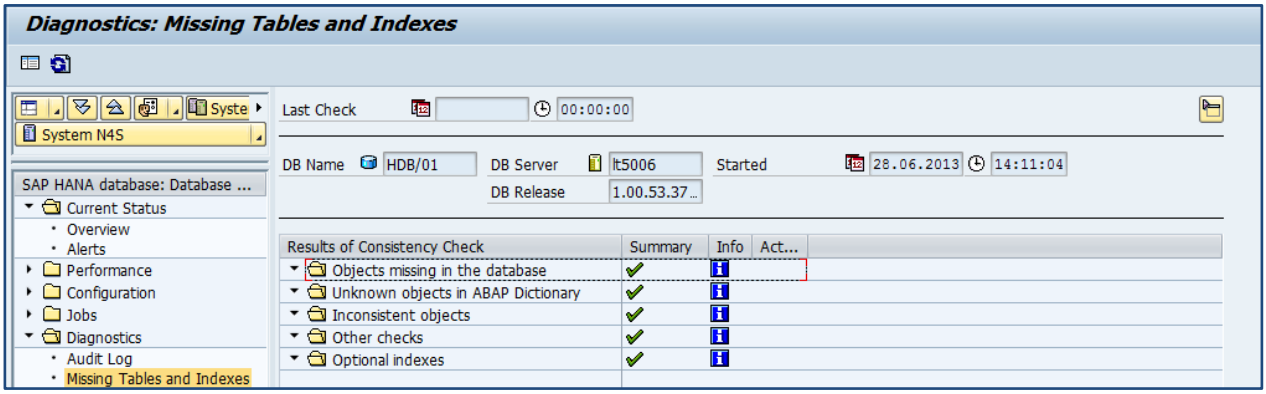
Table Name	Record Count	Size in Bytes
D010TAB	16.375.345	1.099.634,632
D010INC	6.664.546	553.246,192
SEOCOMPODF	1.423.389	398.461,312
VARI	463.215	186.111,848
EUDB	11.530	21.771,896
INDX_HIER	325	607,888
EUFUNC	550	500,464

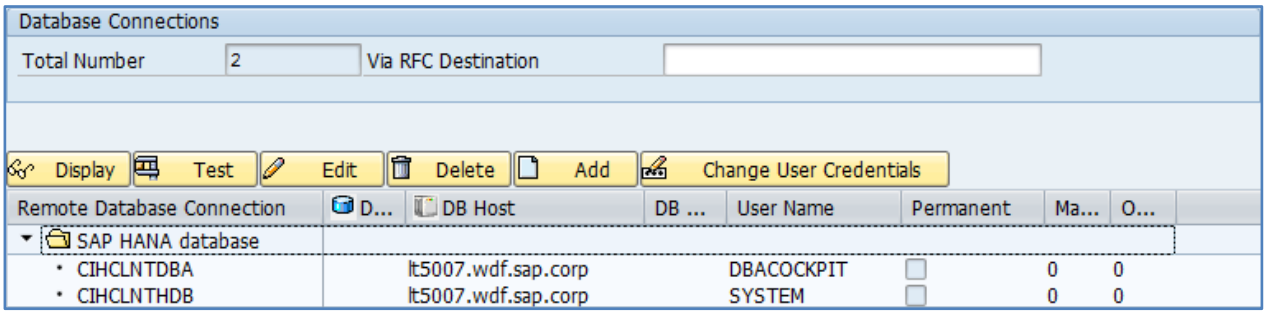
With BW7.40 SP08 the number of RowStore tables is again significantly reduced by approximately 1000 tables as they are moved to the ColumnStore. This has several positive impacts on the system, most prominently a shorter re-start time since ColumnStore tables are loaded in lazy mode and a better overall system compression rate – without a negative impact on the system performance and stability. Check HANA DB with transaction DBACOCKPIT
From the technical perspective your database migration process (DMO) including the upgrade to SAP BW 7.31/7.40 is complete.

Check HANA DB with transaction DBACOCKPIT

From the technical perspective, your database migration process including the upgrade to SAP BW 7.31/7.40 is complete.
KBA Note 2077953 - How to remove unwanted sec Indexes after a BW on HANA Database migration







You must manually create the DBCON entry for the HDB connection with the user DBACOCKPIT.
The automatic created local connection (<SID>) is not visible in this view or in transaction DBCO

Please Note that the DMO process includes also all post activity steps after the Upgrade and Migration as well. Depending on the needed corrections, there is a need to run the Report RS_BW_POST_MIGRATION separately. The usage of the ASU toolbox is already mentioned before.

In case of running the Report RS_BW_POST_MIGRATION again, apply the following Notes first

Note 2103428 - HANA: Performance improvement of function module TREX_EXT_LIST_INDEXES

Note 2161094 - BW on HANA: Upgrade BW 7.3x -> 7.4x: Column Views missing after running RS_BW_POST_MIGRATION

Note 2103428 - HANA: Performance improvement of function module TREX_EXT_LIST_INDEXES

Optionally it might be necessary to re-run certain steps in interaction with the program RSDU_TABLE_CONSISTENCY and/or RSDDB_INDEX_CREATE_MASS, like the recreation of the calc views. This depends on the skipped phases in the DMP procedure beforehand.

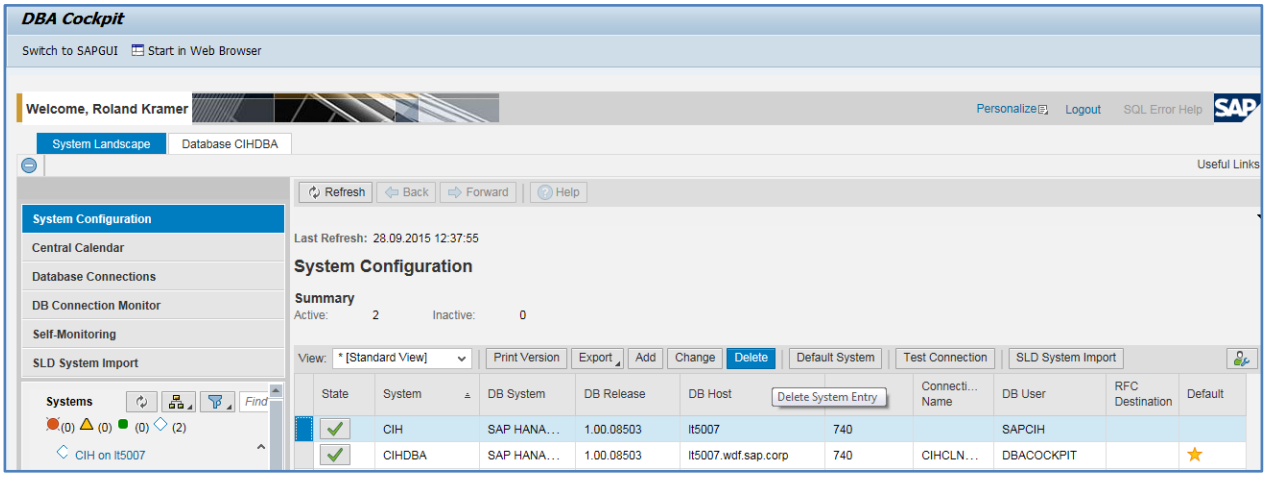
Follow the procedure in the following SAP Note to activate the Web based access to the DBACOCKPIT.
Note 1245200 - DBA: ICF Service-Activation for WebDynpro DBA Cockpit

Note 2058283 - DDIC/DB consistency check: Unknown objects in ABAP/4 Dictionary

Note 2049571 - SAP BW 7.40 (SP09) DB migration

Note 2074695 - SAP BW 7.40 (SP10) Migration

Note 2153496 - Enhancements and problem solutions with SAP BW 7.40 SP12 (SAPBW74012)



Note 2136898 - Missing Database Index after Upgrade from SAP Business Warehouse 7.40 SP8 to 7.40 SP 12 or lower

```
DROP FULLTEXT INDEX "SAP<SID>"."RSOS_RSLTIPT_DESCRIPTION";
```

Migration Check - SHDB_MIGRATION_CHECK

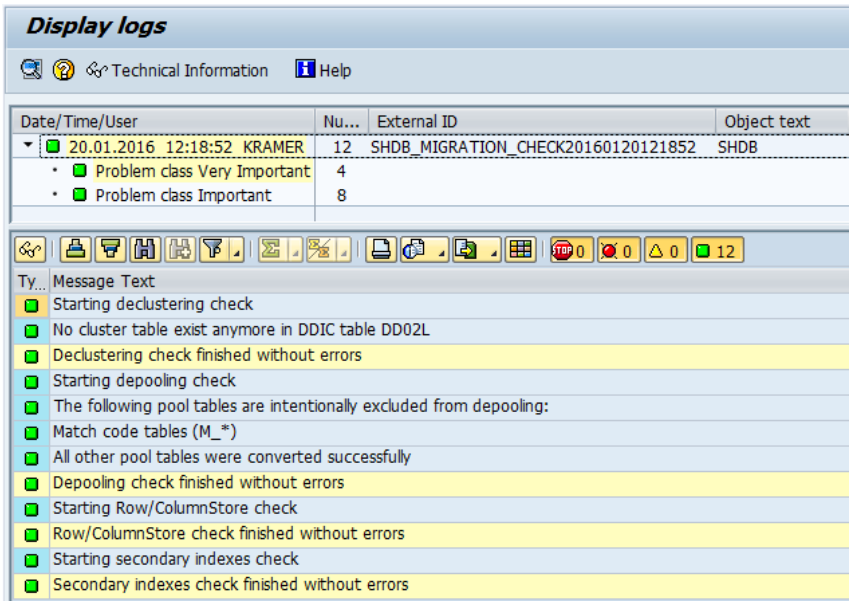
Note 1785060 - Recommendations for performing the migration to SAP HANA

Note 2163556 - Secondary indexes check detected errors when running SHDB_MIGRATION_CHECK

Note 2227432 - Declustering and depooling with NW 7.4 SP03 on databases other than SAP HANA

Run the Report SHDB_MIGRATION_CHECK and check for Errors in the Areas of:

- Declustering
- Depooling
- Row/ColumnStore
- Secondary Indexes



Errors can be repaired within Transactions SE11 and SE14 (Extras ➔ Change Table Type)

Application Check - RSDU_TABLE_CONSISTENCY

Note 1977584 - Technical Consistency Checks for SAP HANA Databases

Note 2110539 - Error using RSDU_TABLE_CONSISTENCY repair

Note 2110993 - Program RSDU_TABLE_CONSISTENCY can repair emp, incorrectly partitioned InfoCubes

KBA Note 2098436 - RSDS243 „Request &1 in PSA has zero records" in a HANA system

Before you run the Report RSDU_TABLE_CONSISTENCY make sure the following corrections or the equivalent Service Pack is applied:

Note 1937062 - Usage of RSDU_TABLE_CONSISTENCY (apply in sequence 1953984 and 1953493)

Note 2093836 - SHDB: tools for HANA integration (7.30 SP13; 7.31 SP15; 7.40 SP10)

Note 2099114 - RSHDB: HANA tools for BW (7.30 SP13; 7.31 SP15; 7.40 SP10)

Note 2025241 - SHDB: Tool classes for NW 7.30 SP13

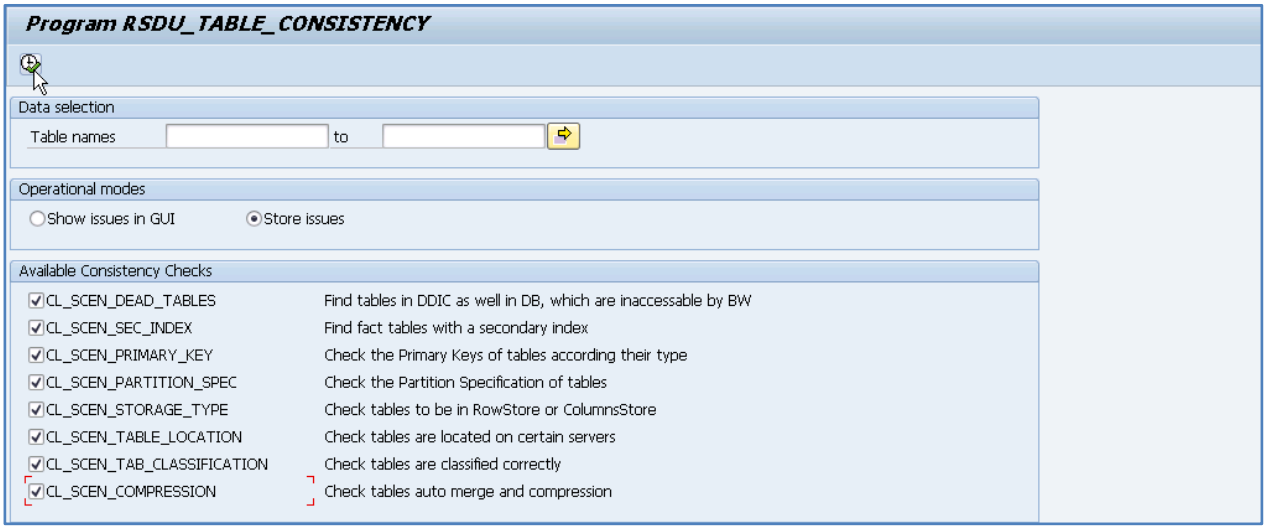
Note 2025271 - RSHDB: RSDU_TABLE_CONSISTENCY NW7.30 SP13

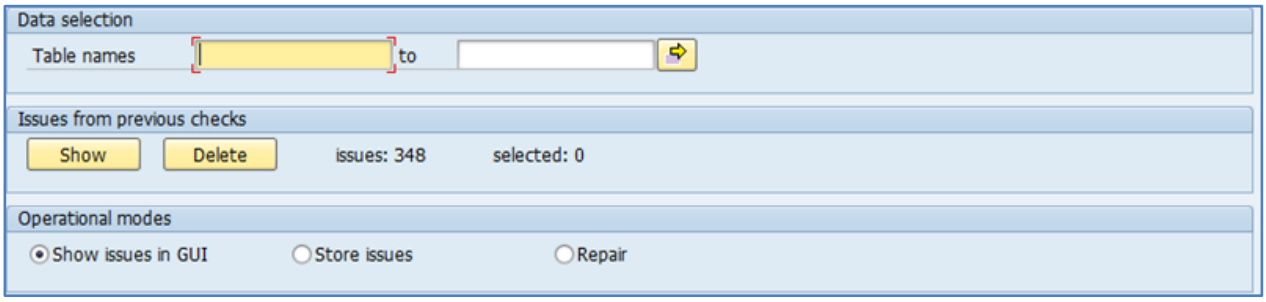
Note 1953493 - RSHDB: RSDU_TABLE_CONSISTENCY NW7.30 SP12

Note 1953984 - SHDB: Development tool classes NW 7.30 SP12

Note 1888511 - RSHDB: Dev. RSDU_TABLE_CONSISTENCY NW 7.30 SP11

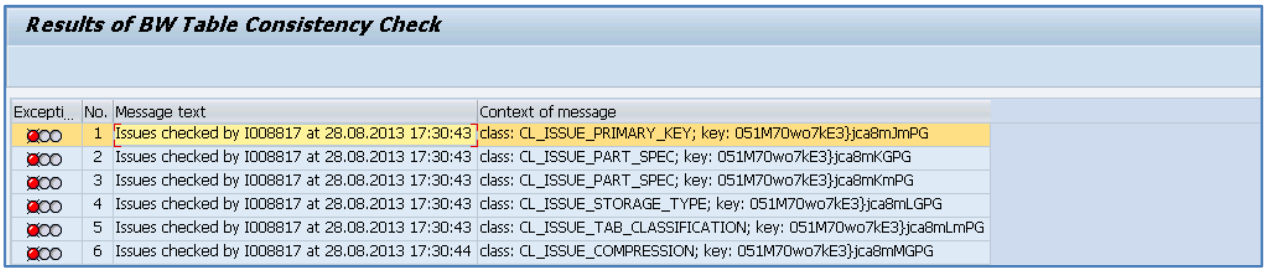
Note 1892492 - SHDB: Development Tool-Classes NW7.30 SP11



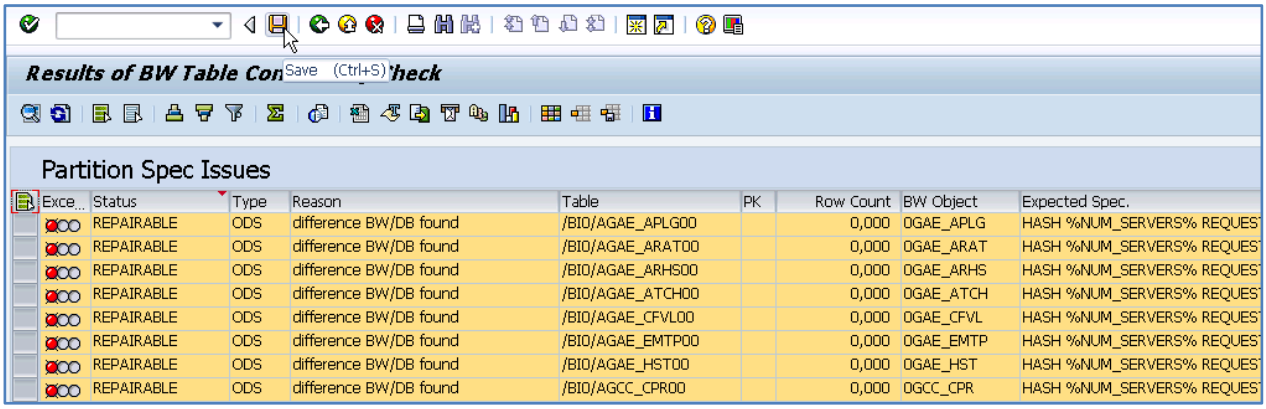


After the first run (either for or background) with option „Store issues“ you will an additional operation mode “Repair” and the section “Issues from previous checks”

DoubleClick on the selected Line in the Log list (1)

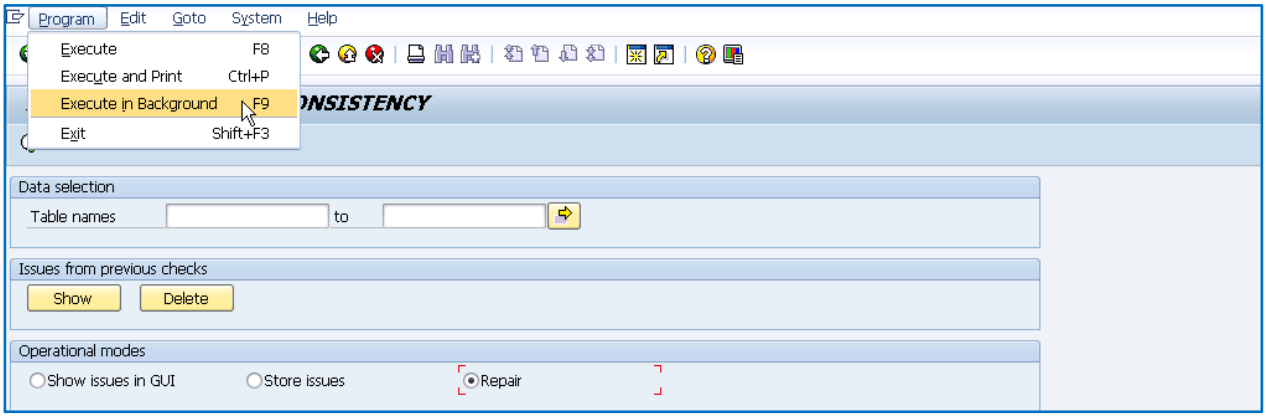


Press the Save Button (2)



Continue with these Steps (1-2) for the other entries in the Log List as well.

Go back to the main entry screen and start the “Repair” option with “Execute in Background”

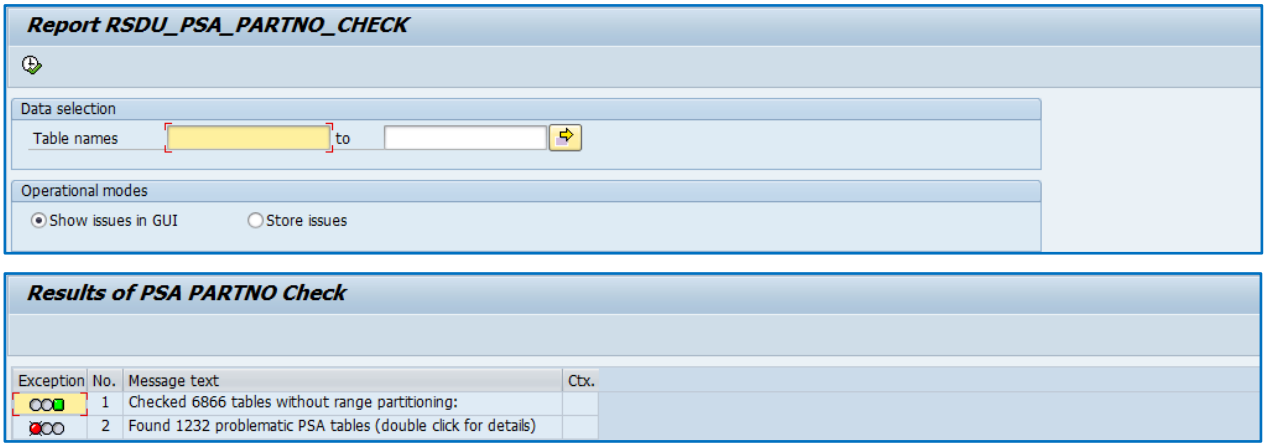


The Repair Job is now running as background job. Check either with SM50 or SM37.

Repair inconsistent PSA tables

Note 1979867 - Program for repairing inconsistent partitioning of PSA tables

The Note contains the program RSDU_PSA_PARTNO_CHECK.
The usage of the program is identical with the program RSDU_TABLE_CONSISTENCY.



Regenerate all Transformations

With the existing Report RSDG_TRFN_ACTIVATE you should re-activate all Transformations again after the migration. Within this step the HANA optimization takes place, as far as the existing Transformation is capable to handle this.

Corrections for Report RSDG_TRFN_ACTIVATE

Note 1823174 - BW 7.4 changes and customer-specific programs

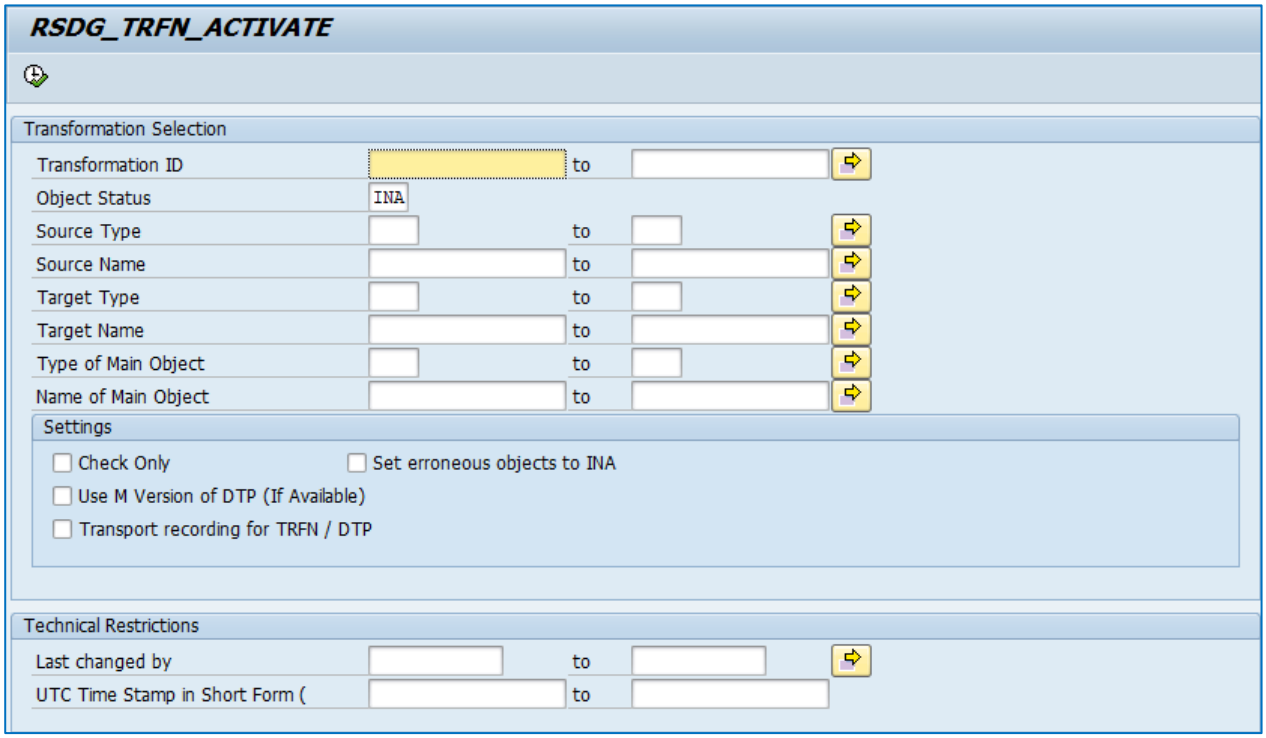
Note 1928753 - Syntax error in start / end routine of a transformation

Note 1927521 - SP32: Report 'RSDG_TRFN_ACTIVATE' with check option

Note 2108561 - Runtime object of transformation in RTO case, standard as of BW 7.40, no singleton instance/RSTRAN333

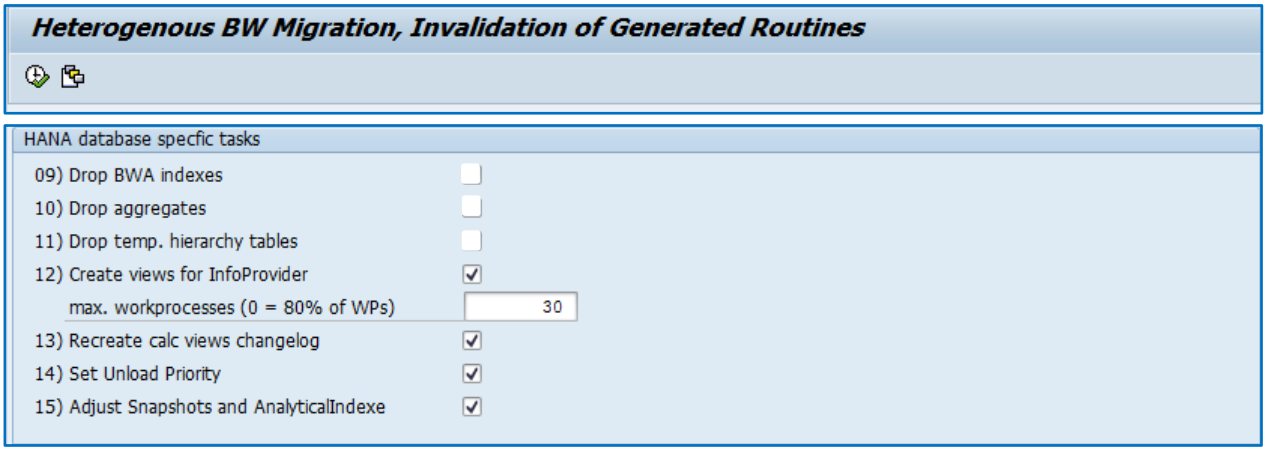
Note 2191288 - Transformation runtime program created without routines or formulas in rare cases

Report RSDG_TRFN_ACTIVATE



Migrate existing BW Workspaces

Report RS_BW_POST_MIGRATION



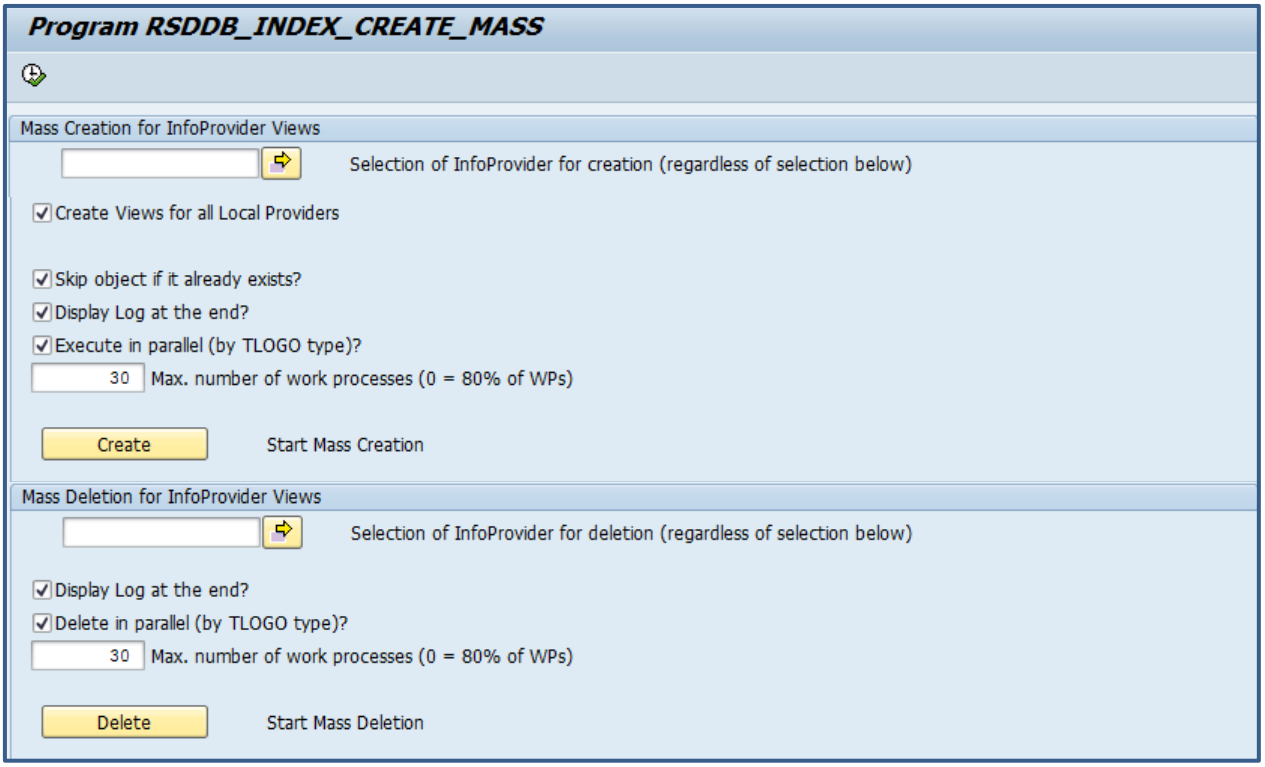
Corrections for Report RS_BW_POST_MIGRATION

Note 1953480 - Column view generation after upgrade to SAP BW 7.40 SP5 or above

Note 2084404 - BW Workspaces: upgrade 730/731 SAP HANA -> 740 SAP HANA

Note 2161094 - BW on HANA: Upgrade BW 7.3x -> 7.4x: Column Views m. RS_BW_POST_MIGRATION

Report RSDDB_INDEX_CREATE_MASS



Corrections for Report RSDDB_INDEX_CREATE_MASS

Note 2106851 - Column Store Error 2048 when executing RSDDB_LOGINDEX_CREATE on MultiProvider

Note 2130664 - Termination CX_RSR_X_MESSAGE when characteristic activated

Note 2153017 - olap:merging multi value dicts is not implemented

If you had a BWA in use, and with BW 7.30 the new BW workspaces you can now also adjust these areas for the usage on BW on HANA.

After the SAP Note 2060342 has been implemented with the latest version, please execute step 12 of the post migration report (RS_BW_POST_MIGRATION) which also adjusts the xmls of the CompositeProviders. Afterwards please execute report SET_COPR4REPAIR_MPRO

Note 2047732 - After system copy the query execution ends with error 2048 using a SAP HANA database

Note 2131803 - Workspaces: General corrections to BW Workspace Designer - requirements

Execution of the Report RS_UDO_NOTE_2131803

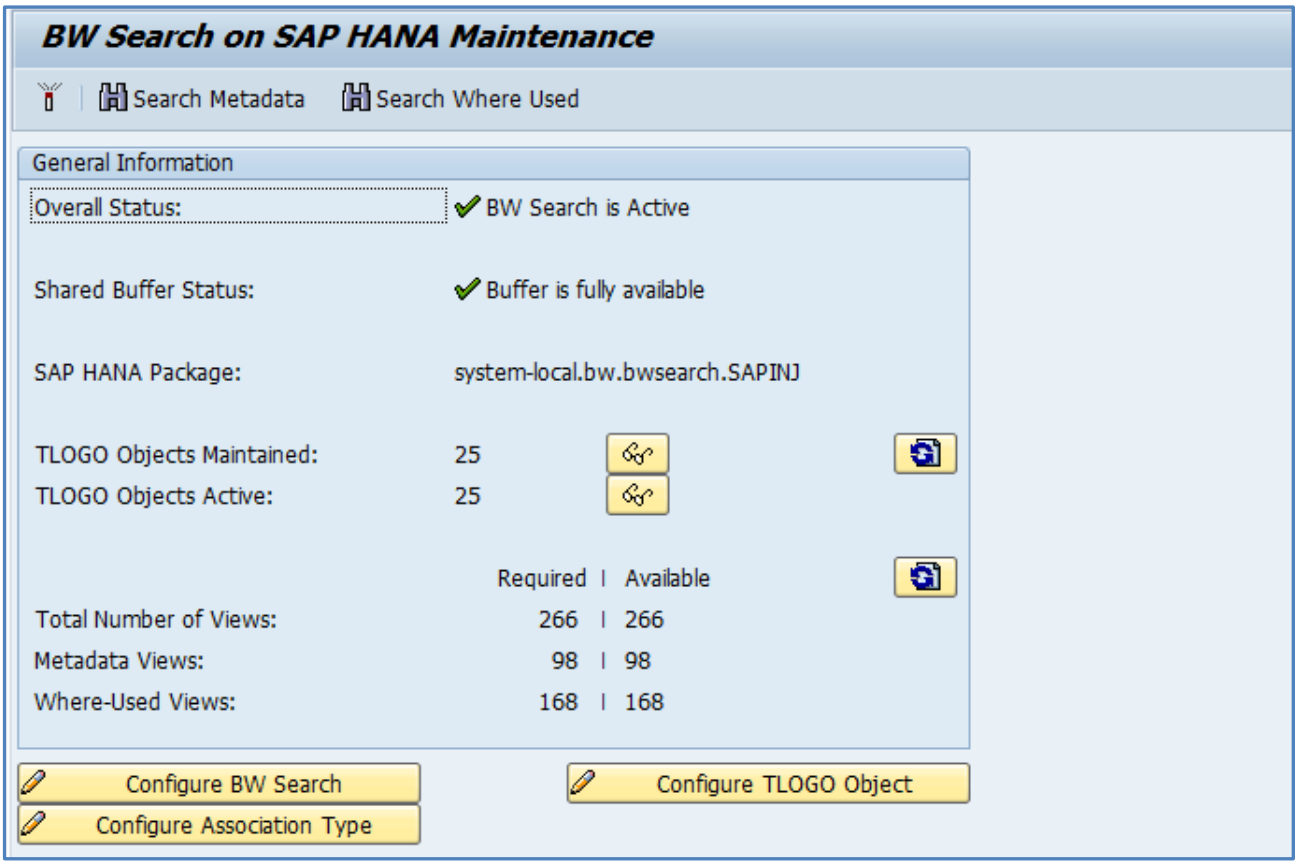
Note 2122367 - Workspaces: General corrections to BW Workspace Designer

In General, you can always save for the latest corrections for the BW Workspaces in the Application Area “BW-BEX-OT-WSP” together with the Support Package you are looking for, e.g. SAPKW74010.

Note 2152359 - BW search/input help for InfoObjects returns no results

This Report fills the metadata cache for the SAP search help, e.g. F4

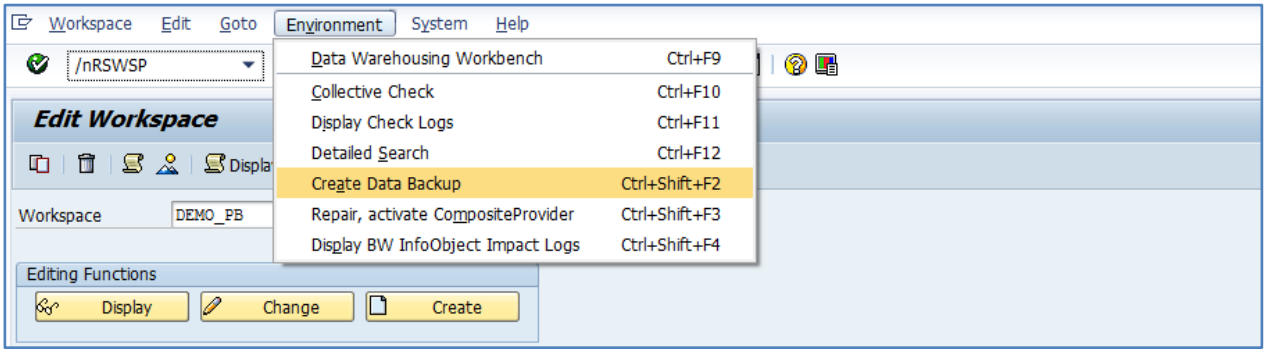
RSOSN_INIT_DATA_74008 or Transaction RSOSM



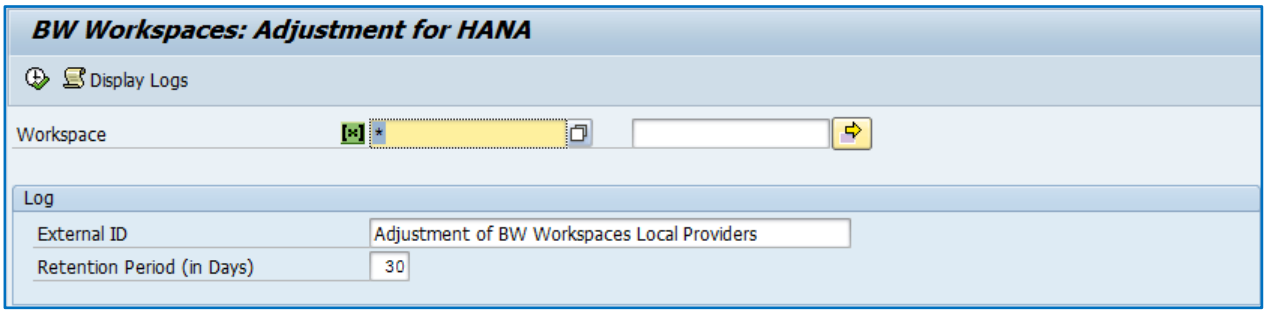
Note 2064791 - "Migration" of BW Workspaces from BW7.3 with BWA to BW 7.4 on HANA

Refer to the attached Graphic Note_2064791.jpg for details of using the SAP Note.

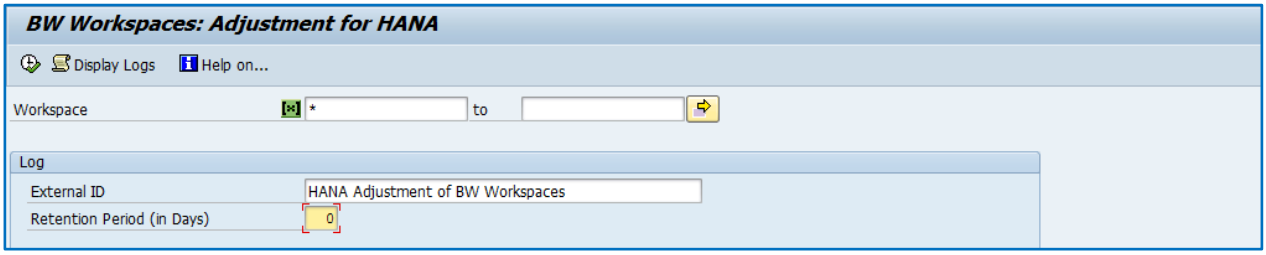
(Before) Transaction RSWSP or Report RSL_WSP_BACKUP_CREATE



(After - 1) Report RSL_WSP_ADJUSTMENT_AINX

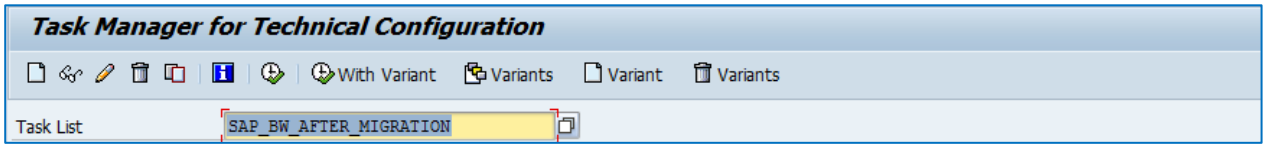


(After - 2) Report RSL_WSP_ADJUSTMENT_COMPLETE



BW Migration Post Task List with DMO procedure

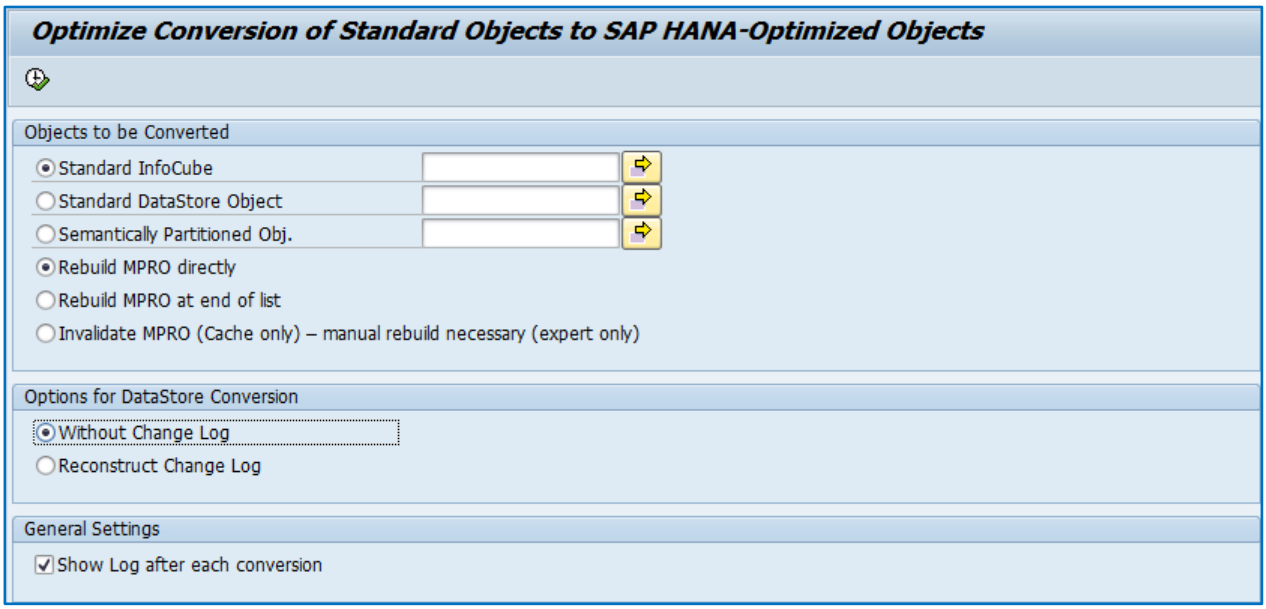
The call of the Post Migration Task List is optional in case not all steps ran successfully with the DMO procedure. However, this Task List is implemented with the DMO procedure as well.



Note 2017638 - Corrections to SAP_UPDATE_DBDIFF and RS_BW_POST_MIGRATION

Convert InfoCubes into in-memory optimized

Use Transaction RSMIGRHANADB to convert InfoCubes on demand, DSO objects remains unchanged.



Note 1731569 - SAP HANA DB: Check for correct InfoCube migration

Note 1925571 - BW on SAP HANA: Conversion of an InfoCube terminates

Note 1926112 - BW on SAP HANA: Merge after InfoCube compression

Note 1952076 - Report BW_POST_MIGRATION causes ABAP memory shortage

If you have inconsistencies with the BW-PCA or the BW Housekeeping Task Lists, reset the NOTES implementation for these Notes, as they are Part of the SP08 for 7.31 and higher now.

The new created Document - SAP First Guidance - Implementing BW-MT for BW-aDSO contains a comprehensive list of SAP Notes to apply after 7.40 SP08 (SR2) and higher to enable the BW system also for the latest enhancements, including BW-MT, BW-HAP and BW-aDSO.

See also the Blog: Converting DataStore Objects and InfoCubes into advanced DSO

http://scn.sap.com/docs/DOC-64718

Additional SAP Notes to check/repair inconsistencies on lower releases:

Note 1827854 - Enqueue/Lock during parallel data loads

Note 1839792 - Consolidated note on check and repair report for the request administration in BW

Note 1903072 - Error "Could not create logical index" occurred when activating InfoObject

Note 1977218 - How to handle HANA Alert 52 'Check for new crash dump files'

Note 1977231 - DBMAN099: View or Procedure Invalidated; table or view name = 0BW:BIA:xxx:<ABC>

Note 2074801 - Dumps and Issues with special InfoObjects

Note 2147247 - FAQ: SAP HANA Statistics Server

Notes to stay compatible with MS IE 9/10/11

Note 1989718 - Use of "Edge" and "Compatibility" mode for HTTP system logon page

Note 1970427 - SAP GUI for HTML: Rendering problems in Enterprise Portal (EP)

Note 1753544 - Web Dynpro - HTML standards mode

Note 1814711 - SAP applications iViews in EP: Rendering Modes

Note 2000082 - Runtime Exception when trying to add new user agent string

Note 2008196 - SAP NWBC ABAP Runtime Patch 38

Note 1353538 - NWBC -Patch Collection- SERVER SIDE (ABAP)+NWBC for HTML

You can always look for the latest corrections in certain areas at http://support.sap.com/notes with the keywords like:

Example: find all HANA DSO related SAP Note corrections after NetWeaver 7.31 SP10

SAPKW73111 HANA DSO

Example: find all advanced DSO related SAP Note corrections after NetWeaver 7.40 SP09

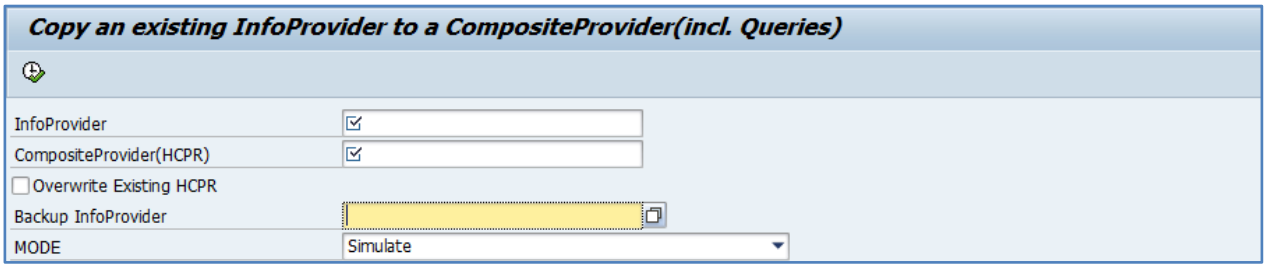
SAPKW74011 HANA aDSO BW-aDSO

Convert MultiProvider to CompositeProvider

This functionality is available with SAP BW 7.40 SP10 or higher.

Note 2080851 - Conversion of MultiProvider to CompositeProvider

In transaction SA38, execute the program RSO_CONVERT_IPRO_TO_HCPR



The following actions are possible (with 7.40 SP10/11):

- Conversion of a MultiProvider to a CompositeProvider
- Conversion of a MultiProvider to a CompositeProvider with the same name
    - This is only possible:
        - If no name conversion is required
        - If no content version of the MultiProvider exists
        - If no transformation uses the MultiProvider as a source
- Conversion of an old CompositeProvider to a new CompositeProvider
- Copying of queries to the new CompositeProvider considering the InfoObject mapping
- Creation of a backup for a MultiProvider
- Recovery of a MultiProvider from the backup

Activate ABAP WebDynpro in BW 7.40

The implementation in Web Dynpro ABAP enables you to make master data editing available as a Web-based application to business users. To be able to use the WebDynpro based master data maintenance, the following services must be active in transaction SICF:

Use Transaction SICF_INST also to activate the DBACOCKIT web dynpro´ s.

/default_host/sap/bc/webdynpro/sap/RSDMDM_MD_NEW_APP

/default_host/sap/bc/webdynpro/sap/RSDMDM_MD_MAINTENANCE_APP

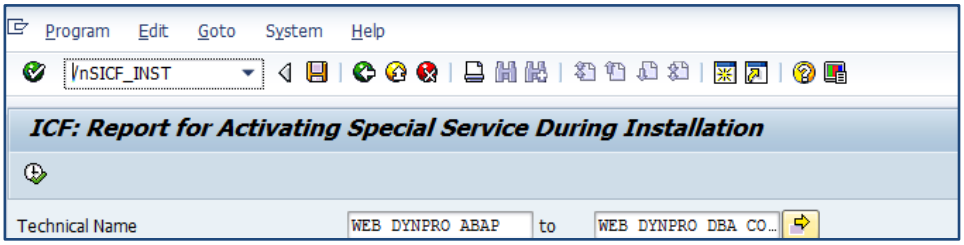
/default_host/sap/bc/webdynpro/sap/RSO_METADATA_REPOSITORY

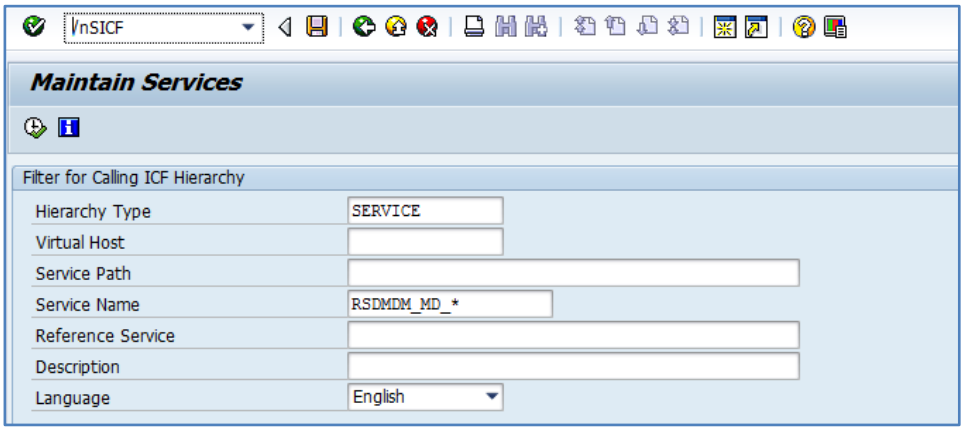
Note 1969105 - Master data maintenance for InfoObjects does not start

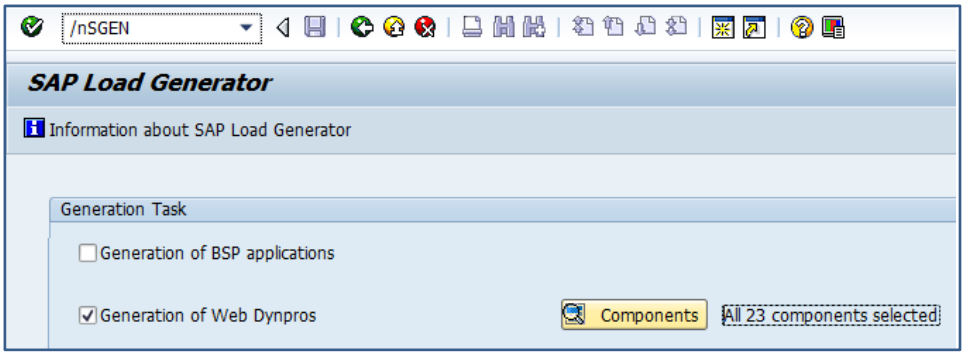
Note 1088717 - Active services for Web Dynpro ABAP in transaction SICF

Note 1769139 - Metadata Repository: This program cannot display the webpage

Note 2224765 - Internal navigation from Eclipse to DWB







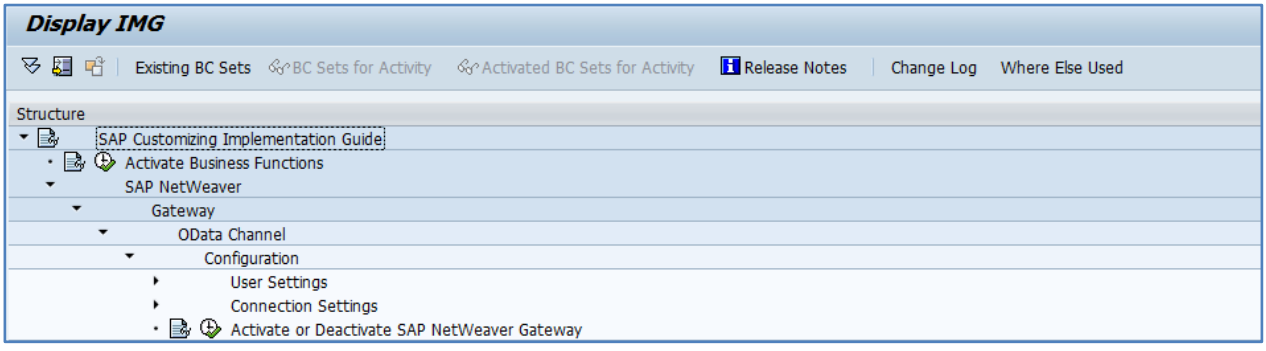
Activate the UI5 Process Monitor

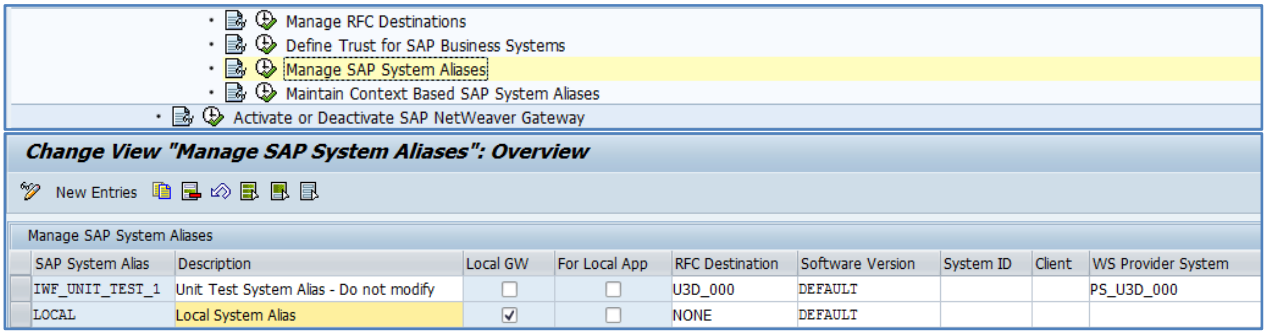
Configuring the App for Process Chain Monitoring

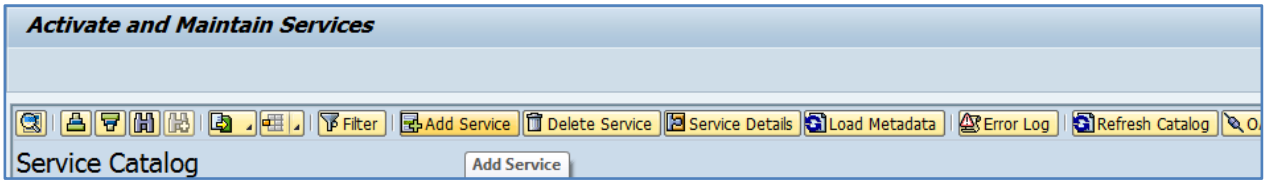
Note 2113675 - RSPCM_WEB transaction error with 403 Forbidden

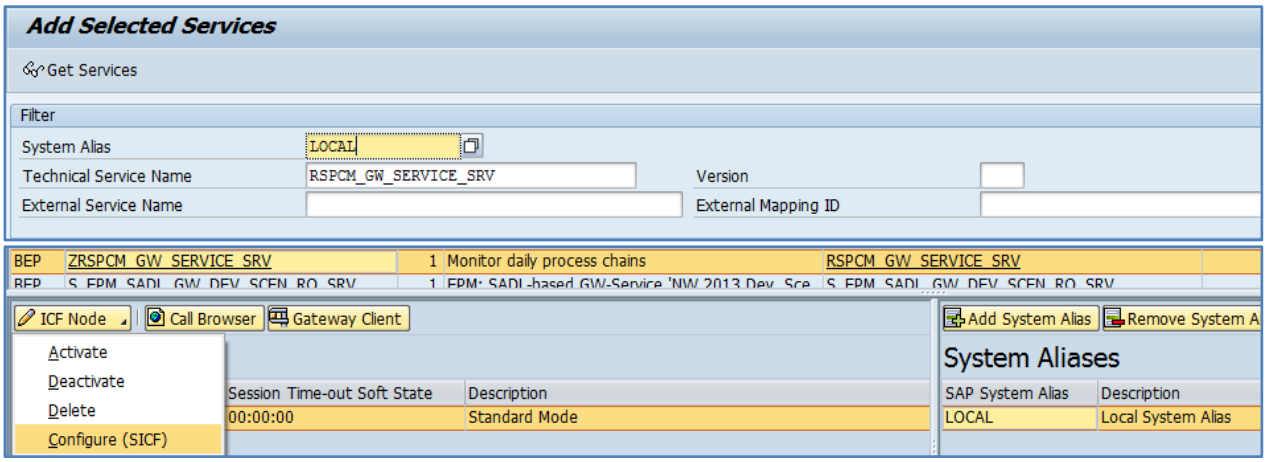
http://help.sap.com/saphelp_nw74/helpdata/en/49/917b48b0904d1eaf6d1bd5a3824bf2/content.htm

RSPCM_GW_SERVICE_SRV

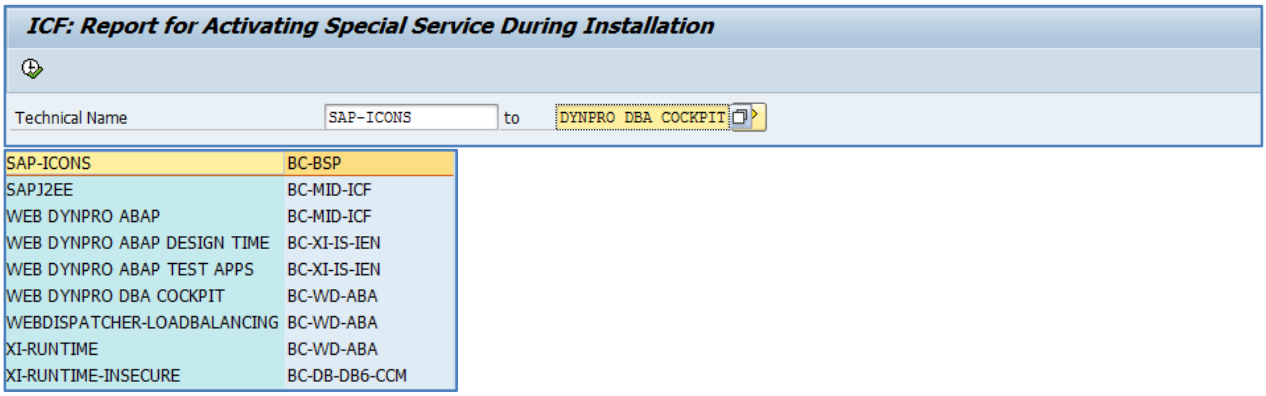




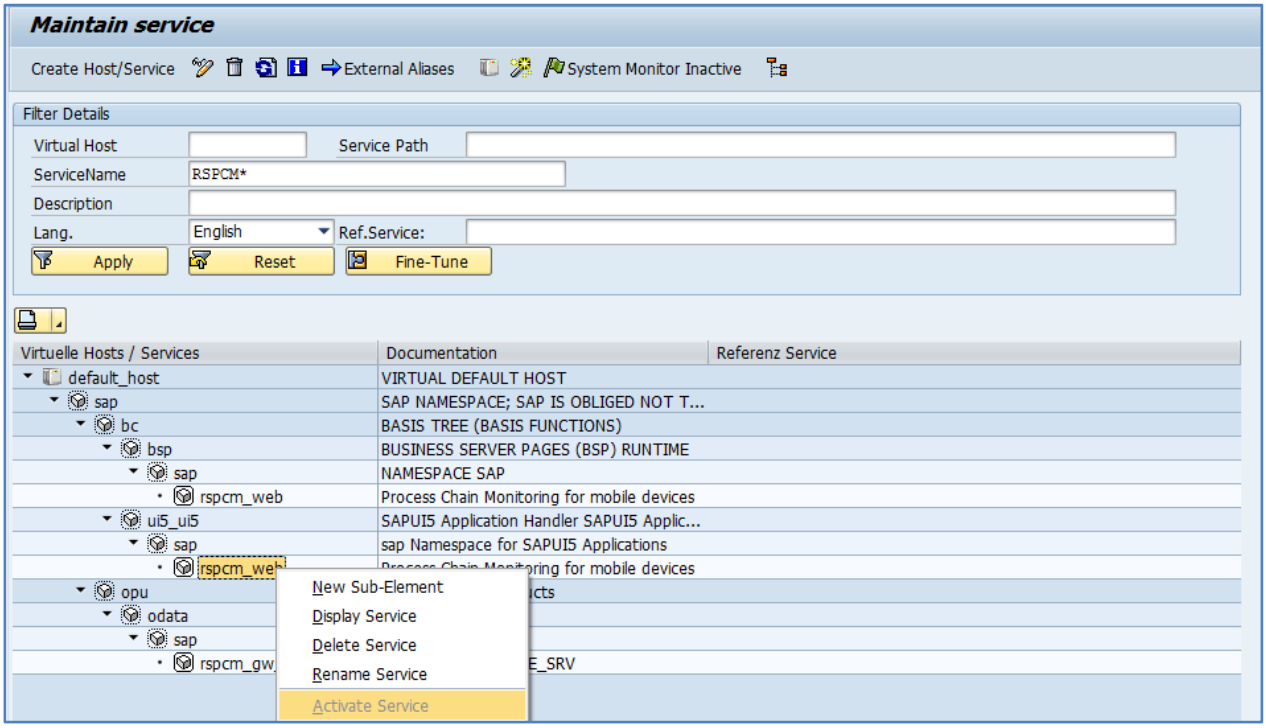




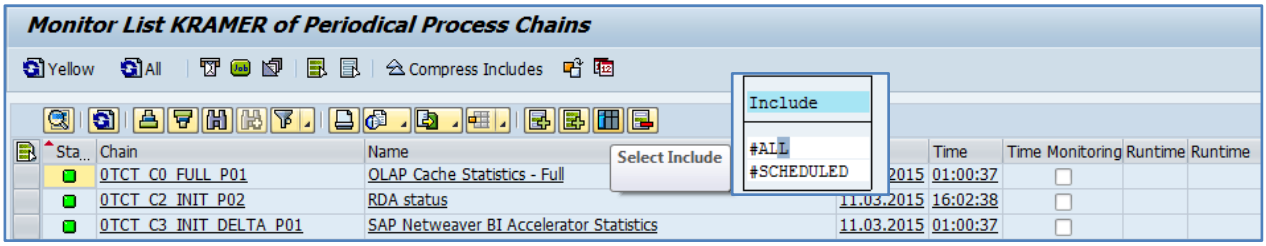
Transaction SICF_INST



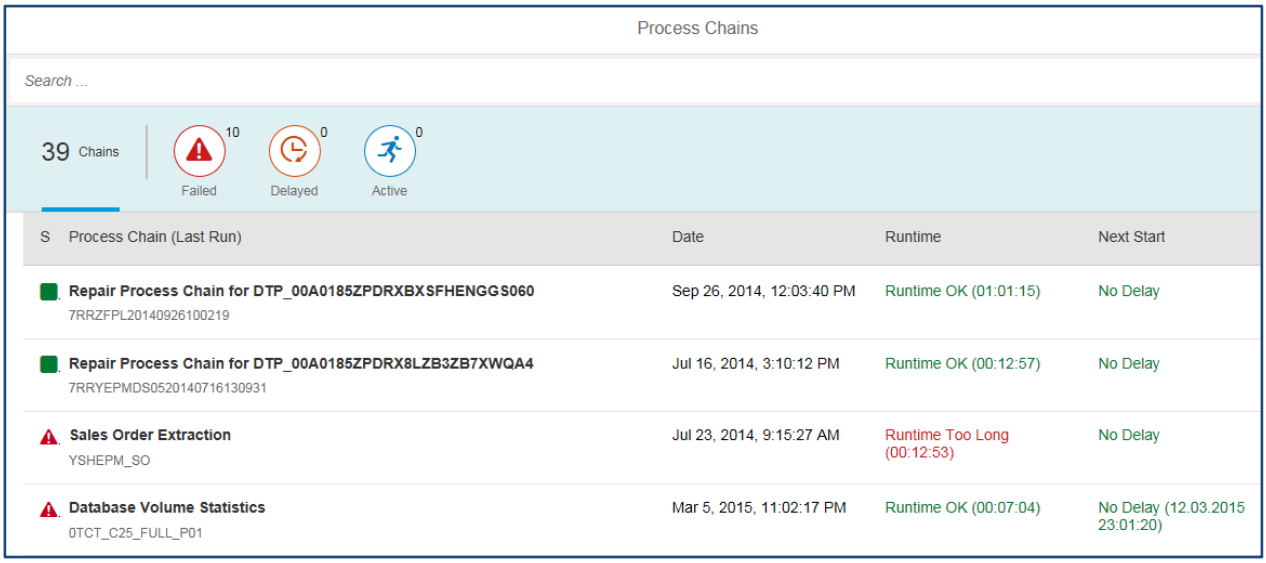
Transaction SICF ➔ RSPCM*



Transaction RSPCM



Transaction RSPCM_WEB



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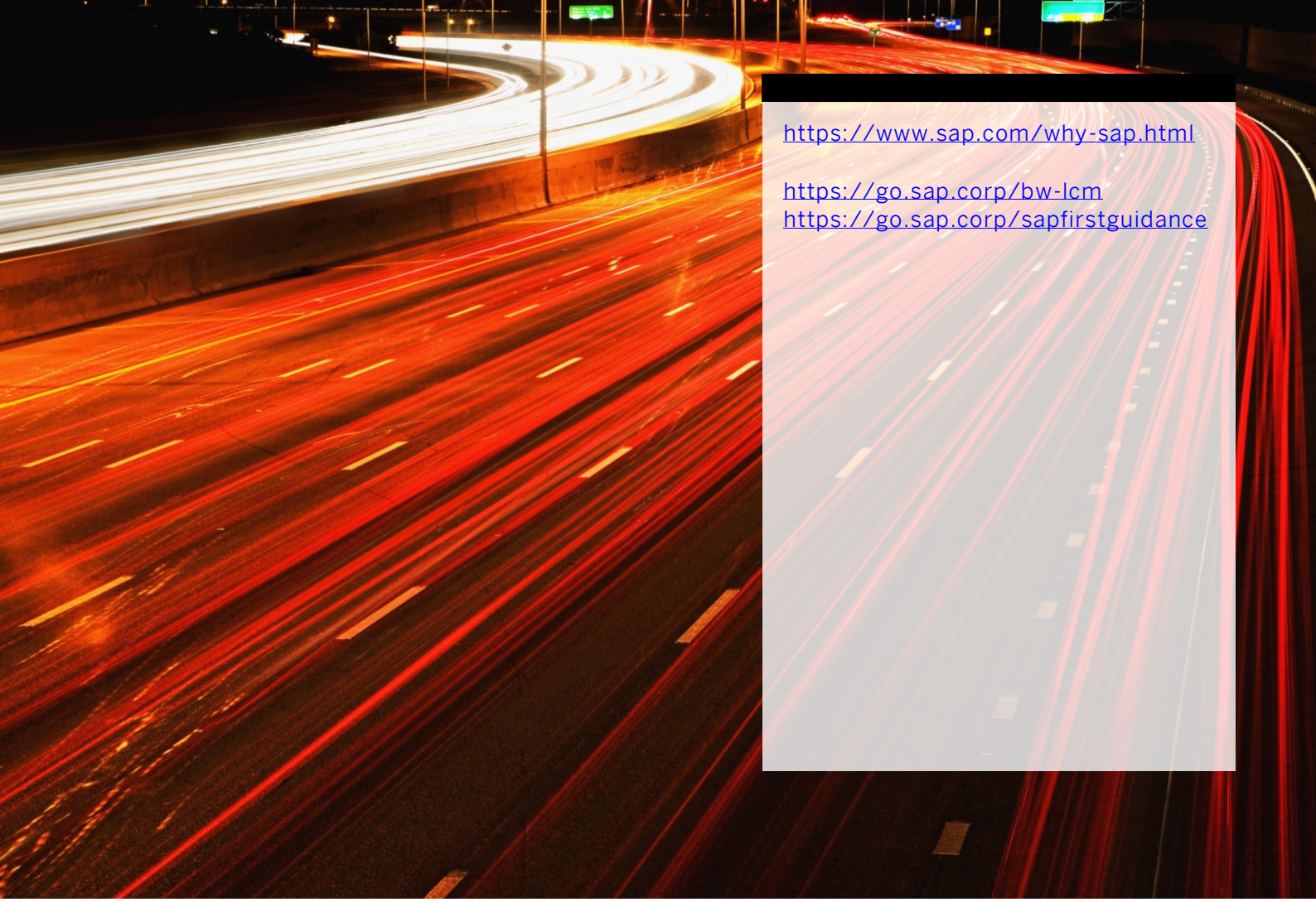

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