Database Migration Option for Software Update Manager (DMO)

- DMO simplifies the procedure of a migration to SAP HANA, or SAP ASE, (other database targets are available on request), by combining the upgrade and the migration
- DMO can be used for ABAP systems that are part of either SAP BW, SAP for Banking, SAP Netweaver or SAP Business Suite
- DMO with system move option allows the SAP instance to move to a different host during the upgrade
- DMO without software change allows the DMO without updating the SAP software

Purpose

This page will help you to prepare for an upgrade using the Database Migration Option (DMO) for the Software Update Manager (SUM) to prevent any issues that will prevent the successful completion of the update and troubleshoot issues that occur during the Add-on Handling phases

Overview

Helpful notes, troubleshooting tips, documentation, known issues and phases of the DMO for SUM

Related Content

DMO to SAP HANA – without software change
DMO with System Move – the use case to change PAS host during DMO
Introduction to Database Migration Option (DMO of Software Update Manager (video)
Introduction to Database Migration Option (DMO) of Software Update Manager - UI Demo (video)
DMO: table comparison and migration tools

Related Documents

Rapid Database Migration Test to Run SAP Business Suite on SAP HANA in the Cloud Configuration Guide
Database Migration Option (DMO) of SUM - Introduction
DMO: technical background
DMO: background on table split mechanism
SAP First Guidance - Using the DMO Option to Migrate BW on HANA
DMO: introducing the benchmarking tool
Table-Content Checks in SUM
Phases behind DMO R3load parallel export/import during UPTIME and DOWNTIME to target HANA DB

Helpful Notes to prepare for the upgrade

This is a list of notes that will be helpful to review before starting the update, and during to help with troubleshooting issues

Current Notes for Software Update Manager notes specific for Database Migration Option (select Database Migration Option (DMO with SUM X.x SP XX) for the current note)

1968508 - Release Change & Single Code Page Conversion to Unicode with DMO
2345636 - SAP Solution Manager 7.2: Simplified Upgrade and Migration to SAP HANA
Helpful Note for resolving problems during the upgrade

2054965 - R3load: TOC for logical table is incomplete in declustering mode after restart
1978565 - Upgrade with database migration option: MAIN_SWITCH/PMVNT_XCNV; incorrect SQL statements
1959955 - SUM upgrade/migration to HANA fails during HDB_MIGCONFIG
1897665 - R3load: declustering support for tables in / namespace
1897665 - Row store/column store inconsistencies after system migration with DMO
1447267 - Error messages that can be ignored in RUN_RADCUCNT_NEW
1908075 - BW on SAP HANA: Table placement and landscape redistribution
1644396 - SMIGR: No data export for aggregate tables
1981718 - R3load: support for CDS views and some fixes
2236178 - Dump "DBSQL_TABLE_UNKNOWN", Table T439I doesn't exist in the Database after upgrade

Helpful Notes for troubleshooting

1666976 - uniqueChecker usage description
1784377 - Checking pool tables and cluster tables

Troubleshooting tips

1. Use the latest patch of SUM, most known errors are resolved with the latest SUM patch
2. Use the latest kernel, kernel tools and DBSL, ensuring that they are patched in both <SUM_DIR>/abap/exe and <SUM_DIR>/abap/exe/2_nd
   Most known errors are resolved using the latest patches of the upgrade tools, kernel and kernel tools (R3load, R3szchk etc)
3. Analyze the log files, the reason for the stop error will be written to the log file (see table below).

Performance optimization

DMO: optimizing system downtime
DMO: introducing the benchmarking tool
DMO: background on table split mechanism

SAP note 2153242 - Estimation of table sizes and downtime for SUM with Downtime-Optimized DMO

Please note, cluster tables may take longer to migrate in phase EU_CLONE_MIG_DT_RUN than standard tables.

DMO Phases in SUM and Error analysis

<table>
<thead>
<tr>
<th>When</th>
<th>Phase name</th>
<th>Description</th>
<th>Directory</th>
<th>Logfiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uptime</td>
<td>EU_CLONE_MIG_UT_SIZES</td>
<td>Determination of table sizes for uptime migration</td>
<td>-</td>
<td>EUMigrateUtsizes.LOG</td>
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<td>EU_CLONE_MIG_DT_SIZES</td>
<td>Determination of table sizes for downtime migration</td>
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<td>EUMIGRATEDTSIZES.LOG</td>
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<tr>
<td>EU_CLONE_MIG_UT_CREATE</td>
<td>Tables are created on target database for uptime migration</td>
<td>migrate_ut_create</td>
<td>EUMIGRATEUTCREATE.LOG + MIGRATE_UT_CREATE_RUN.LOG</td>
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<tr>
<td>EU_CLONE_MIG_UT_PRP</td>
<td>Creates directories and control files for uptime migration (STR, TSK, CMD files for R3load)</td>
<td>migrate_ut</td>
<td>EUMIGRATEUTPRP.LOG</td>
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<tr>
<td>EU_CLONE_MIG_UT_RUN</td>
<td>Transport of tables into target database</td>
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**Known Issues**

**Related SAP Notes/KBAs**

1895764 - R3load hangs if called with unknown option

2099073 - R3load writes an incomplete header in the TOC file of logical table after resta

1818067 - Merge of R3load, R3ldctl, R3ta packages in R3tools

1914260 - Abort R3load task if TOC file has no entry for the table

1854483 - R3load does not create primary keys in declust. by import

1905316 - R3load skips table with error message "no entry for table"

1981718 - R3load: support for CDS views and some fixes

1949365 - Various improvements in R3load and R3szchk

2097926 - R3load keep blanks option for R3load anonymous mode and other corrections

1859676 - R3load option `-sort_cluster’ and action modifier ‘s’

1923294 - R3load adds extra spaces to strings after unicode conversion

2023495 - R3load reports source IDs and other corrections

1958957 - R3load cannot import some tables when performing Unicode conversion from Asian

1963554 - Improvements in R3load and R3ldctl

1931360 - R3load improvements for declustering of empty table clusters

2044380 - R3load dependency loop if calles with -o option and other corrections

1891426 - R3load on HANA to avoid unnecessary MERGEs during import
2095316 - R3load corrupts DDNTF table when changing the database
1897665 - R3load: declustering support for tables in / namespace
2017805 - R3ldctl: fix CDS views creation in upgrade export mode
1816978 - R3ta: incorrect split ranges to tables with RAW fields
1778564 - R3load, R3ldctl, R3ta Development Changelog
1824246 - R3ldctl duplicate index if TADIR definition is missing
1809726 - R3ta split rules may contain holes
1933687 - R3ldctl fails with assertion if called with decluster