Implementation Guide for Data Volume Management Workcenter (DVM WoC) on Solman 7.1
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1 Introduction

The following documentation is intended to assist relevant users with the implementation of the DVM WoC functionality as delivered in Solution Manager 7.10. The document covers the elementary and most important concepts for a successful deployment of the WoC. It does not focus on troubleshooting activities – these are dealt with in our wiki pages found at the following link http://wiki.scn.sap.com/wiki/display/TechOps/DVM+Troubleshooting+in+SAP+Solution+Manager+7.

The intended audience for this document is the Basis/IT group charged with implementing the DVM WoC functionality. It is assumed that the user of this document has a sound understanding of the workings of the Solution Manager topics such as Basic Configuration, System Preparation and Managed System Configuration. These topics, while referenced throughout this document are not covered in any detail here. However, they are prerequisites and critical to a successful deployment of the DVM WoC.

DVM WoC Business Scenario

The DVM WoC has the goal of providing a Landscape-wide view of the data distribution in complex constellations (i.e. more than one system) with a view to taking control of the data growth and managing it in the future. More than that it provides you with tools and applications that allow you to determine the cause of the data growth, discover recommended actions for controlling the growth and reducing the existing data and for tracking compliance with corporate policy (if one exists).

The DVM WoC is a mature tool with many different in-built applications that allow you to operate it as an

- **ICI Dashboard – Interactive Continuous Improvement** -
  By defining and tracking progress on your own DVM relevant KPIs.

- **OCC – Operations Control Center** -
  By monitoring progress on defined DVM activities e.g. archiving, deletion etc.,
  By checking compliance with corporate policy.
  As a data quality check for incomplete business processes.

- Tool to support your pre-activities for a successful HANA migration, e.g. by calculating potential savings by migrating to HANA, helps you to find quick-win tables which can be reduced easily before HANA migration.

A range of applications allow you to

- Visualize the biggest consumer’s of data across landscapes and products.
  Identify reduction measures beneficial for multiple systems
- Determine the most business critical objects in the landscape.
  Detect Waste – unused data.
- Determine the age footprint of data in your landscape.
  Reveal gaps in data quality.
- Perform “what if” analysis for calculating the saving potential using SAP Best Practice and/or your own defined residence times.
- Monitor archiving and related deletion activities.
- Generate a Best Practice Document containing all SAP’s best practice information for objects in your landscape, complete with business background, relevant reduction measures, analysis of your data and saving potential based on SAP’s recommendations.
- Determine the objects (tables, reports, Business Process,) impacted by planned DVM measures. A great starting point for discussions with the business owners and for integrating a test plan.
- Find out what objects to tackle first in your DVM Project – generate a ranked list of objects based on SAP’s or your own weighting factors such as Growth Rate, Age of Data, Archiving Activity, Archiving Complexity.
- Determine what amount of space can be saved by using data reorganization or compression or by migrating to SAP HANA.
- Forecast future system size and cost savings by implementing DVM measures.
- Measure, visualize and track the progress of a DVM project.

## 2 Implementation

Before starting with the DVM WoC Implementation it is important to note the following:

1) There is no transport concept for the DVM WoC i.e there are no transport requests or transport Management. Meaning that ALL activities performed in the pre-production (Development/Test) systems will have to be performed in the Production system also. So, if you want to document what activities you have performed so as to replicate this in the production systems, you should do so at the earliest opportunity.

2) In order to implement the DVM WoC in the productive Solution Manager you need to open that system for customizing changes.

3) The DVM WoC is dependent on other features and infrastructure of the Solution Manager and consequently there are prerequisites that have to be met before a successful deployment of the DVM WoC can be achieved. Read on to find out more details.

How can I set up the DVM work center?

There are technical prerequisites that need to be met in order to setup a fully-functioning DVM WoC.

You require an Installation of **SAP Solution Manager 7.1** (recommended SP05 or higher) with access to transaction **SOLMAN_SETUP** for the following scenarios:

- ‘System Preparation’ (incl. local preparation of SAP Solution Manager and all required frameworks, such as extractor framework etc.), important: The step ‘Implement SAP Note’ needs to have a green light!
- ‘Basic Configuration’
‘Managed System Configuration’, run the managed system setup for each managed system in scope for DVM.

‘Data Volume Management,’ perform all mandatory steps (see later chapter)

- Remote Access
- Connection between SAP Solution Manager and managed system via RFC SAPOSS in SAP Note 812386
- S-user in the SAP Service Marketplace with necessary authorizations for SAP Solution Manager
- Prepare configuration user in SAP Solution Manager, roles SAP_SMWORK_DVM, SAP_DVM_ALL → SAP Note 1779670

Technical Prerequisites for the managed system(s).

- SAP NetWeaver release as of 70
- Remote Access
  - User in managed system with role SAP_DVM_SERVICE
  - ST-A/PI requirement for managed system: ST-A/PI 01P or higher
  - DB02 (collector for statistics) up and running

**How do I proceed?**

In the Solution Manager system call transaction SOLMAN_SETUP

Using the related guided procedures step through the following topics
- System Preparation
- Basis Configuration
- Managed Systems Configuration
- Data Volume Management
2.1 System Preparation

The Activities in this section:

- Prepare the system for the configuration
- Need to be performed fully after a new installation

After upgrades you need to:

- update dialog and system users
- assign the appropriate default roles
- implement the appropriate central correction SAP Note (important: step ‘Implement SAP Note’ needs to have a green light!)

The central correction note contains general corrections for the Solution Manager and also corrections for the DVM Workcenter.

SAP is aware that this central correction note is usually only implemented once, i.e. right after the implementation of a new support package. As this note is regularly updated and new notes that have been created in the meantime are added, it is possible that this central note may show up as necessary to implement from time to time as newer version of this note are released. If implementing the latest version of this note is considered as “not possible” (i.e. as this would require too much test effort) it is possible to run report RTCCTOOL with a focus on DVM on the Solution Manager system. The result shows at least all DVM related notes that are necessary to implement. Be aware that there may still be some notes missing e.g. framework related notes, if an old version of this central note is implemented, but having at least the DVM related notes implemented is a good starting point.

2.2 Basis Configuration

The activities in this section:

- Configure the basic scenarios in SAP Solution Manager (like SAP EarlyWatch® Alerts, maintenance optimizer, ...)
- Need to be performed after a new installation and after an upgrade, to perform delta configuration
The important activity in this section is that you create the Data Volume Management configuration user to configure the Data Volume Management scenario. This user will have all required authorizations to run through the Data Volume Management configuration.

### 2.3 Managed System Configuration

The activities in this section are required for the

- Connection and configuration of managed systems
- Creation of logical components for managed systems

Start by selecting ‘Full Configuration incl. Service Delivery / EWA’; Ensure a working DBCon connection is established between Solution Manager System and Managed system.

This is the related guided procedure:
Managed system/systems are configured in this section.

Important steps to watch out for:

- **Check Prerequisites** – Ensure ‘Software Prerequisites’ activity has Green status for Solution Manager system and Managed system as well

- **Maintain RFC’s** – Create/Update READ RFC, TMW RFC for managed system (production client) and ensure the status is Green. TRUSTED RFC is nice to have.

The latest adjustments of the predefined roles for these users have to be performed. See SAP Note 1830640. Depending on your constellation you should watch out for issues with authorizations which required a) running a service content update (SCU) in transaction AGS_UPDATE to enable the DVM Self-Service to work correctly AND the implementation of SAP Note 2115837.

- **Enter System Parameters** – this is the place where the connection to the database (DBCon) is setup which is required a) for the latest extractor for table sizes and b) for the reorg- and compression simulation.
Hint: To avoid issues in the Reorg- and Compression simulation you need to ensure that the ADBC connection is working. The value maintained in the ‘System’ column, has to match the SID of the system.
Also the column Extended SID needs to be populated, which may not be the case after adjusting the column ‘System’. So ensure you check these.

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- Finalize Configuration – Execute all the mandatory activities especially “Database Extractor Setup”, “Extractors Setup” etc. and ensure they have a Green status.

A well-defined system will have green lights in all areas such as RFC Status, Auto. Conf. Status, Plugin Status, System Status
If any of these areas does not have a Green status select the “Show Details” button to find more information on the cause of the status setting.

Usually there is a link provided in the URL column that takes you directly to the activity that needs to be performed in order to rectify the situation.
2.4 Data Volume Management

The activities in this section are required to configure the scenario needed for DVM work center.

As a result mass configuration of systems is enabled.

Most administration and configuration tasks are fully automated e.g.
Activate BI content

Prerequisite checking for all systems in scope

Activate extractors

Download and apply latest DVM content

Note: New automatic activities may be added from time to time. Documentation on these activities is provided through the “Documentation” link on the far right column of the screen.

Ensure the following authorizations are granted

- SAP_BI_E2E
- SAP_SM_BI_ADMIN
- SAP_SM_BI_EXTRACTOR

Ensure the user has authorization to change BW content.

A common issue here is that the first step (Activate BW Content) shows a RED rating.

Possible solutions:
1. Check the following authorisations:
   - SAP_BI_E2E
   - SAP_SM_BI_ADMIN
   - SAP_SM_BI_EXTRACTOR

If the authorizations are present and you still have the issue then check if the provided user has authority to change BW content.

Note: This step has to be performed after every support package implementation. Executing the steps multiple times does NOT do any harm, e.g. in case you are not sure if ‘Activate BW Content’
has already been executed successfully, simply (re-)execute it once again. You cannot destroy any settings by executing these steps. You can check recent executions in the logs displayed at the bottom of this screen.

**Attention:** Please be aware that the column ‘Updates Needed’ is meaningless (at least on Solution Manager 7.1 SP12). This column is provided by a UI framework but it is NOT populated with meaningful data by the DVM configuration. As a consequence you cannot rely on that column. Even if it looks like no updates are needed, as this column is not flagged, it is still necessary to update all those activities after every SP upgrade.

‘Adjust extractor settings’: With SP 12 a new extractor to collect the size data of the tables and indexes was introduced, which should replace the previous extractor. The new extractor requires a working DBCon connection. Only in case this DBCon connection is tested to be working properly in this step, then the new extractor is activated. In case you re-execute this step and at this moment the DBCon connection is not working properly, the new extractor will be switched back to the old extractor. This procedure should ensure that both extractors (new and old) will not be actively running at the same time.

**2.4.1.1 Housekeeping Settings - (Optional step)**

In this optional step, you define how long you want to store the reporting and analytical data in the BW of your local Solution Manager System. For each infocube you can specify the maximum number of months to store the data. The housekeeping job searches the data and deletes any that exceeds this value. By default the housekeeping runs every night. This is an important step to ensure the infocubes are cleansed of obsolete data on a regular basis and to avoid data growth issues.

For the Housekeeping settings – Please use the default settings with the exception of OSM_ARCHH, this should be extended to 120 months.

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</table>
2.4.12 Maintain Users - (Optional step)

This optional step creates the standard Template/Demo Users in the SAP Solution Manager system with all the required authorizations for operating the DVM Workcenter.

Note: The *ADM* user is the application user (SM_WORKCENTER), and has full authorization for the DVM Workcenter, but not for the SOLMAN_SETUP. The user for SOLMAN_SETUP is created in the scenario Basic Configuration. Similarly the *DIS* user is the application user (SM_WORKCENTER) with display only authorisation.

Hint: Although the creation of template users is optional, it is strongly recommended to update the user roles after every support package implementation. Sometimes the delivered SAP Source roles are changed and these changes also have to be applied to the user roles in the customer namespace (e.g. ZSAP_) in this example.
2.4.13 Scope Selection

Here you select the systems in scope for DVM. This is a manual process, you can select multiple systems but you must select at least one.

Hint: You should also select the Solution Manager itself so that it too can be monitored.

In most cases, the DVM Workcenter will only work if the RFC Status and the Auto. Config Status are Green rated. However, you can usually proceed if the Auto. Config. Status is showing a warning for activities other than Activate services and Extractors Setup. These two are critical for the DVM WoC.

2.4.14 Select Client

This step is mandatory for the DVM WoC as some settings are client dependent such as scheduling background jobs and extractor runs or retrieving status information.

Hint: Avoid selecting client 000 as this is considered SAP's 'change' client to install SP's etc., and some functions will not work on this client. We therefore recommend that you don't select this client.
### 2.4.15 Technical Preparation

In this step we perform similar checks to those in Step 1 above for the Managing (Solution Manager) System. Here we are checking the Managed system(s) to ensure that all the technical prerequisites that we need for DVM have been met.

The Check Note activity determines whether all the required SAP notes are implemented in the managed system.

If this check results in an error you should check the log and use the link in the Details column to find out what notes are missing. Then apply these notes in your landscape. Afterwards please execute this step again to get a green rating.

The Update Local DVM Content automatic activity updates the local Data Volume Management (DVM) content. Before setting up any analyses for Data Volume Management, you need to make sure that the SAP content is up-to-date in your SAP Solution Manager system and all managed systems.

The system sends an RFC call to the SAP OSS system to start downloading the latest content. The download is approximately 200 kb of data.
2.4.16 Template Configuration - (Optional step)

The template configuration step helps you to quickly and easily create pre-defined statistics and dashboards. For example SAP delivers templates to determine the age of records for selected application areas. This can be very useful when setting up the DVM WoC for the first time.

Hint:
Only select the template if the relevant application exists in the target system. Otherwise you end up with a list of analysis in the Analysis Administration section of the DVM WoC that will never be executed.

Furthermore, when creating analysis by using the corresponding step in DVM WoC directly (not in solman_setup), you can save your analysis data (analysis type, selected tables etc.) in templates which can then be re-used, in step solman_setup, for other satellite systems.

2.4.17 Activate DVM Extractors

Some Data Volume Management extractors are client-dependent, for example, for extracting archiving runs and archive file statistics.

In this step, you activate these extractors for the individual clients. The default client that appears in the table is the client you selected previously.
2.4.1.8 Automated Self Service

The DVM Best Practice Reports can be executed on an ad-hoc basis or you can schedule them to run automatically.

Using this step you can define the parameters for the execution.

You can only configure systems for which the TMW RFC Status and either Extractor Status or EWA Status are green.

2.4.1.9 Create Template Users - (Optional step)

This step is considered ‘Optional’ on the basis that the DVM WoC will still work and show data in the dashboards if you don’t execute this step. However, if you want to execute the Guided Self Service (GSS) report, it is a necessary step. The GSS report contains all the Best Practice recommendations from SAP for the specific objects (Tables, Indexes, Document Types) being analysed in your landscape. Therefore at some point you will need to execute the GSS report. The GSS report will start analysis jobs and data collection on the target/managed system.

This configuration step creates the users with the relevant authorizations in the managed system(s) allowing the data collection process to be executed successfully. Some of the transactions that will be executed are TAANA, ST13, ST14.

Recommendation: Perform this step.
Attention: This step became obsolete with SP12 and can be ignored. As TMW users are used to log on from the Solution Manager to the managed systems it is no longer necessary to create specific (named or trusted) DVM users on the managed systems.

2.4.1.10 Complete

This step provides an overview of the steps already performed in the DVM scenario. Ideally you will have GREEN LED lights for all steps in the Status column. It provides a useful overview of the status and indicates any that may need to be reworked.

You can do the following:

To return to a step, choose the link in the Configuration Steps column.

To save your settings and close the scenario, choose Finish.

To export the scenario structure, documentation, and information about the status of the scenario, choose Export To HTML. You can then print the information from the HTML version.

To e-mail the information about the scenario, choose Send By Email.
After this scenario is finished, you can go to the next scenario or, if available, in the “What do you want to do now?” area, choose a link.

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What do you want to do now?

- Go to Managed Systems Configuration
- Go to Technical Scenario Wizard
- Data Volume Management (DMM) Center

Help

This step provides an overview of the steps that have been performed in this scenario, including information about the users who made the changes, and the status of each step.

You can do the following:

- To return to a step, choose the link in the Configuration Step column.
- To save your settings and close the scenario, choose Finish.
- To export the scenario structure, documentation, and information about the status of the scenario, choose Export To HTML. You can then print the information from the HTML version.
- To e-mail the information about the scenario, choose Send By Email.