

Data Volume Management during an SAP S/4HANA Conversion



Document History

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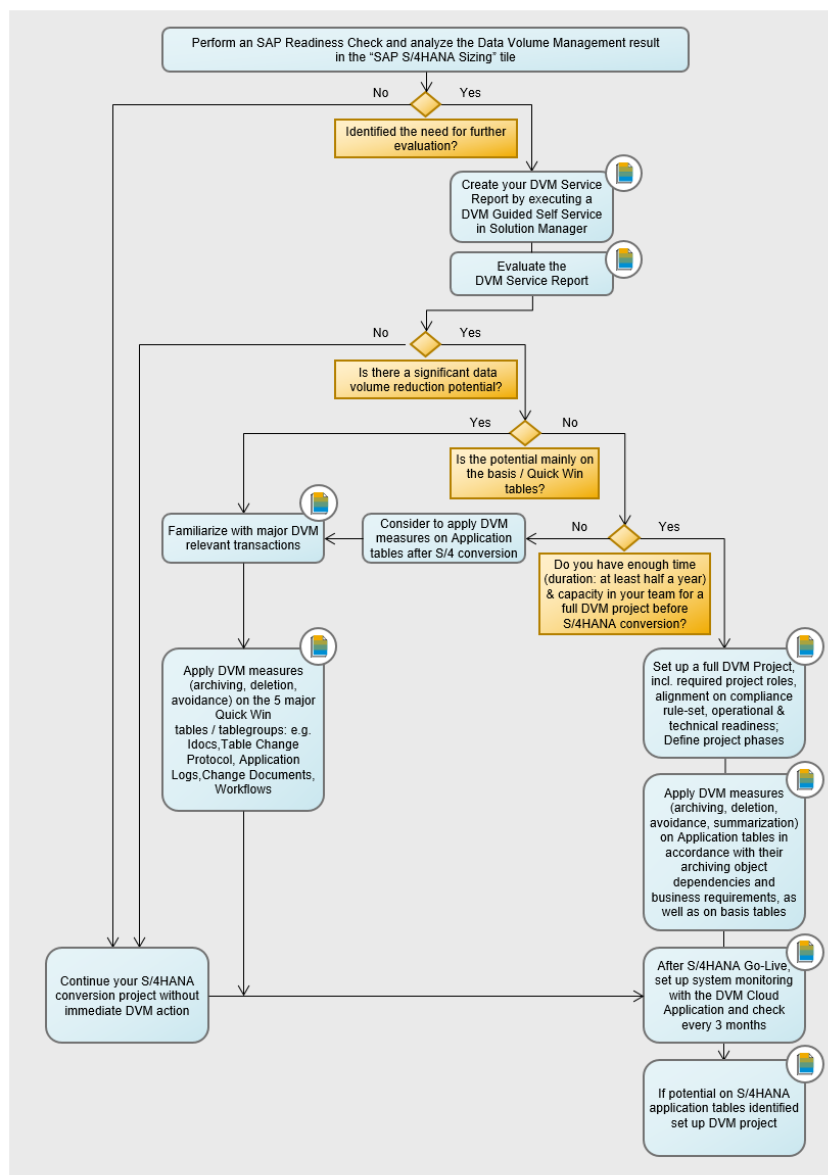
1 Why you should you care about your Data Volume

In general, SAP Data Volume Management (DVM) describes processes and provides tools to ensure that all aspects for managing and controlling your SAP Landscape data are covered. This includes running your database as lean as possible by getting rid of waste and keeping the relevant data for your business processes.

This topic becomes even more relevant in the context of an SAP S/4HANA conversion, where a reduced data footprint supports you in achieving a shorter conversion duration due to reduced load size. In addition, a lean system will help to reduce the required memory for the new SAP S/4HANA system.

For customers who consider conducting a plain conversion of an SAP ERP system with a moderately sized database to an SAP S/4HANA system (thus without consolidation), we recommend following the below DVM Decision Tree. This decision tree guides you through the stages of your Data Volume Management journey, from discovery and analysis to execution and follow-up.

DVM Decision Tree



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For each step in this tree, SAP recommends specific documents for how to best tackle these steps. Therefore, several links will guide you to information sources which are part of the SAP Enterprise Support Data Volume Management Value Map. The access to this Value Map is part of your Enterprise Support maintenance contract without additional costs. It requires only a one-time registration with an S-user for access at

<https://support.sap.com/valuemaps>

If you need more information about the sign-in process, see the video and tutorial provided after pressing the "Sign in" button.

Each major step in the DVM Decision Tree will contain a list of required roles, as well as a best practice timing for this step. Here, we differentiate between the sheer effort to execute the task(s) and the overall duration that includes possibly required wait times (for example runtimes in system, business department feedback).

2 Starting Point

SAP highly recommends that you run the SAP Readiness Check for SAP S/4HANA in advance of your conversion project to identify any issues you need to consider and activities you need to do in preparation for your project and achieving an optimal planning for your journey to SAP S/4HANA. Conducting an SAP Readiness Check works as follows

Readiness Check How-to: [SAP Note 2758146](#)

One part of the SAP Readiness Check is the “SAP S/4HANA Sizing” tile which provides you with a first overview of the estimated minimum memory requirement of your system after the conversion to SAP S/4HANA, starting from the current size of the tables in your ERP system. And for a first insight on how many GB you could save by archiving, an additional tab shows you the archiving potential of preselected application archiving objects.

If you decide after the SAP Readiness Check that you want to gain further insights and deep-dive on how to achieve the identified memory reduction and archiving potential in your ERP system with regard to your SAP S/4HANA conversion, it's time to start with Data Volume Management (DVM) activities. So, the next step is to create/receive your detailed Data Volume Management Best Practice Service Report.

3 Receiving the DVM Best Practice Service Report

The SAP DVM Best Practice Service Report not only gives you a complete overview of your data distribution and quality of your current ERP system. Actually, the best practice document describes how to handle your largest data objects using the methodologies of data avoidance, summarization, archiving, and deletion. It shows the type and amount of data that can be archived or deleted, as well as the corresponding archiving objects or deletion reports, including SAP's recommended residence times which are used to calculate possible savings.

To obtain the SAP DVM Best Practice Service Report you need to execute a tool based Guided Self-Service (GSS) within your SAP Solution Manager. The minimum release requirement is SAP Solution Manager 7.2 SP05 with ST-SER 720. In addition, before any DVM (self-) service can be executed, several technical prerequisites need to be fulfilled in the system. For details, please refer to the following SAP Notes:

[1159758](#) - Data Volume Management: Central Preparation Note

[91488](#) - SAP Support Services - Central preparatory note

Required roles:

- System Administrator

Effort & Duration:

- Effort: ~4 hours
- Duration: up to 1 week (depending on the change management in the Managed System)

Once the preparation tasks have been executed, it's time to perform the DVM Guided Self-Service (GSS) in your Solution Manager to receive the DVM Best Practice Service Report. For more information about the GSS and a step-by-step guide on how to set this service up, see:

SAP Note [1904491](#) - Guided Self Service - Data Volume Management (DVM)

SAP "How-to" Guide: [Create your own DVM Reports through Solution Manager](#)

In case you face difficulties to create the DVM Best Practice Service Report by yourself, you can consider ordering an SAP CQC DVM service to receive the report, including a first "go through" the report with an SAP consultant. For a short service overview, see the following:

[CQC DVM Information Sheet](#)

To order the CQC service you can either open an Incident or contact the Enterprise Support Advisory Team via the SAP Customer Interaction Center. For more information, refer to SAP Note:

[2360708](#) – How to request Remote Support Service

Required roles:

- System Administrator
- Application Owner (in case the report is the outcome of a CQC service and discussed with SAP)

Effort & Duration:

- Effort: ~4 hours
- Duration: 2 days (especially if a CQC service for the report has been ordered and the results are explained by SAP)

4 Evaluate the DVM Best Practice Service Report

Once you have obtained the DVM service report, it should be properly evaluated with regards to improvements in housekeeping activities, determination of data that can be reduced most efficiently in your ERP system before the conversion, as well as the detection of so far unknown problems.

The following link directs to an example DVM Best Practice Service Report which provides a good general overview on the set-up of the report structure and the content of the different chapters:

[Sample DVM GSS Report for SAP ERP](#)

In addition, the following short DVM document contains links to descriptions on how to interpret the results of your report with a focus on: Expected size of objects and tables, the tables in scope, as well as on some of the basis tables (Application Logs, IDocs and Table Change Protocols) which are also called “Quick Wins”

[Interpreting the results of your DVM Analysis](#)

Required roles:

- Application Owners
- Basis Experts

Effort & Duration:

- Effort: 2 days
- Duration: up to 1 week

After you have fully interpreted and evaluated your DVM report the question is: Have you identified a significant data volume reduction potential which you want to deal with before your SAP S/4HANA conversion?

If your answer is **“no”**, you should continue your SAP S/4HANA conversion project without any immediate further DVM actions. Please continue reading this document with [Chapter 9](#) where further recommendations and SAP Best Practices regarding DVM strategies for your SAP S/4HANA system after conversion are described.

If your answer is **“yes”**, and you identified reduction potential which you want to take care of during your S/4HANA conversion project, the next step is to define the scope of your DVM activities. Here, you should determine if the identified potential is mainly on the basis and “Quick Win” tables, or a bigger reduction potential on your application tables has been identified as well.

The SAP DVM Quick Wins represent an opportunity to easily or quickly reduce the growth rate or existing volume of data for a particular table/tablegroup in a short time frame. The time frame is reduced as these are primarily basis tables which can be managed with housekeeping or archiving. These basis tables do not require the more elaborate process of determining the data residence and data retention requirements of application tables with the Business Owner.

Therefore, including DVM activities on your application tables will require that you to conduct a full DVM project before your SAP S/4HANA conversion, demanding a longer timeframe (at least half a year) and more capacity in your team.

Yet, if you don't have the time and/or resources before your conversion, you should consider focusing only on the basis and "Quick Win" tables and applying the DVM measures on your application tables after the SAP S/4HANA conversion.

So, if you decide to have:

only **basis / "Quick Win" tables**
in scope, or no time to set up an entire
DVM project

enough resources and time to set up a
full DVM project

You can directly jump to:

- [Chapter 6](#) "Familiarize with important DVM related transactions"

Continue reading all subsequent chapters of this step-by-step DVM document, starting with

- [Chapter 5](#) "Set up a full DVM Project"

and then continue reading with chapters:

- [Chapter 7](#) "Apply the DVM measures to the identified Quick Win tables"
- [Chapter 9](#) and following

5 Set up a full DVM Project

Once you decide to include application tables into your DVM strategy the topic becomes more complex and time consuming because different departments will be involved, and it needs to be ensured that statutory and fiscal requirements are met (for example, decisions on residence and retention times for the data). Therefore, you should set up a full DVM project which will consist of different phases, will require different involved project roles, and so on.

Keep in mind that the key success factor for a timely completion of the DVM project is a clear definition of a DVM project lead, who is responsible to set deadlines for the sign-off of the respective residence times, collect them in time, and the essential “go” decisions to proceed within the project. In addition, all relevant business departments of the affected applications should be involved in the project at the earliest, since already in the planning phase you need to decide how to guarantee end user access to the archived data.

A good starting point to achieve an overview on the proposed project phases and what to do when, is the following DVM Implementation Project Phases document:

[Implementation Project Phases](#)

For an overview on what should be considered in planning a DVM project, like required project roles, alignment on Compliance rulesets, operational and technical readiness, or general archiving guidelines, refer to the

[DVM Planning Guide](#)

Required roles:

- DVM Project Lead
- Application Owners

Effort & Duration:

- Effort: 5-8 days (includes also evaluation and acknowledgement of required man-days)
- Duration: 2 weeks

6 Familiarize yourself with important DVM related transactions

In case you haven't dealt with the SAP Data Volume Management topic before, it's now time to become familiar with the concept of data archiving and the important DVM related transactions.

To get started, watch the following short online course (30 min) which provides a good overview on the basic concept of SAP Data Archiving and related transactions used (for instance SARA)

[Data Volume Management – Introduction to SAP Data Archiving in 4 parts](#)

and a list of DVM related transactions (for example RTCCTOOL, DB02, TAANA) with a description on their usage are provided in the following document, helping to gain the necessary insight:

[Important DVM transactions](#)

Required roles:

- Basis Expert

Effort & Duration:

- Effort: 3 days
- Duration: up to 1 week

7 Apply the DVM measures to the identified Quick Win tables

Now that you have an idea about the most relevant DVM transactions it's time to start the actual housekeeping or archiving activities on your identified basis and SAP DVM "Quick Win" tables.

To achieve a better understanding on these SAP DVM Quick Wins, the following document provides you a list of the major tables like Application Logs, IDocs, Table Change Protocols, Work Items, Change documents and Accounting Interface Documents, and contains links to the related DVM measures for these tables/tablegroups:

[List of DVM Quick Win Archive Guides](#)

In case you also identified further technical tables with data volume reduction potential you want to take care of, please refer to SAP Note

[2388483](#) – How-To: Data Management for Technical Tables

for additional insight and SAP's "How-to" DVM measure recommendations for most of these tables.

Even if this step is mainly handled by the Basis experts of your team it needs to be clear that this step still requires a proper user acceptance test, even though mostly technical tables are affected, and the tests can be executed by the IT department itself. In addition, a proper documentation of the archived objects and a roll out of this documentation to all relevant roles should be put into effect.

Required roles:

- Basis Expert

Effort & Duration:

- Effort: 10 - 15 days (depends on number of affected tables)
- Duration: 6 weeks

Once all these DVM activities have been successfully executed and completed, and your current DVM strategy consists only of the basis and "Quick Win" tables, it's time to proceed with [Chapter 9](#).

Yet, if you plan a full DVM project, including your application tables, please continue reading the subsequent [Chapter 8](#).

8 Continue your DVM project on the application side

After you properly planned your DVM project and all required roles have been assigned, it is finally time to apply the relevant DVM measures (data archiving, deletion, avoidance, summarization) on your identified application tables as well. Ensure that this is done in accordance with their archiving object dependencies and business requirements.

The best-practice document [Data Management Guide for SAP Business Suite](#) not only provides general information on Data Volume Management and housekeeping best practices. Additionally, it lists a comprehensive summary of technical, as well as application tables that may show a strong growth in data volume, including their possible DVM measures (data archiving, deletion, avoidance, summarization) and related archiving objects.

In addition, the following document contains a set of Archiving Guides for selected ERP Application tables:

[List of ERP and Industry Solution Archive Guides](#)

Finally, if you want to achieve an insight on how to identify and handle tables not covered in the SAP DVM Best Practice Service Report, as well as non-SAP defined tables (for instance Z-tables), refer to the best-practice document

[How to handle growing tables that are not covered in the DVM Service Session](#)

Be aware, that your activities regarding the application tables can usually be executed in parallel to the work on the more technical “Quick Win” tables.

Required roles:

- DVM Project Lead
- Application Owners & Teams
- Basis Experts (for Quick Wins)

Effort & Duration:

- Effort: 5 - 10 days per archiving object on application side
10 - 15 days (for Quick Win tables)
- Duration: min 3-4 months
An important factor for the overall duration is the time required by the individual involved parties (for example Legal, Revision, Business) who need to provide feedback and align with the others

9 After SAP S/4HANA system conversion: Additional information for customers with previous ERP archiving objects of the financial or logistics application components in place

Once you have successfully converted your ERP system into an SAP S/4HANA system the following is important if you had already set up a DVM strategy with several archiving objects related to the financials or logistics application components on your previous ERP system.

With SAP S/4HANA the data model structure changes in these areas, and some tables become completely or partly obsolete. Therefore, it is necessary to check which changes/adaptions to your existing DVM concepts might be required. (Of course, this is something you could already consider at least investigating on *before* you do the actual S/4HANA conversion).

For more information please read the following SAP Note:

[2818267](#) - Data Volume Management during migration to SAP S/4HANA

(start with the section "Where to focus in the post-conversion data clean-up")

as well as the SAP Best Practice document which will give you an overview about changed financial data models structured by tables and relevant archiving objects:

[Influences of Financial Data Model changes to DVM Strategies](#)

Required roles:

- Application Owners

Effort & Duration:

- Effort: 3-5 days (per application object)
- Duration: ~1 week (several activities can be parallelized)

10 Set up a DVM monitoring of your new SAP S/4HANA system

After everything is running smoothly in your freshly converted SAP S/4HANA system, it's now time to consider setting up a Data Volume Management related system monitoring. This will help to improve your DVM strategy by proactively monitoring the data distribution and growth rates (for example on those tables for which the data growth is known to significantly change with SAP S/4HANA), supporting in the identification of savings potentials, and hence reducing system load and improving system performance by running a lean system.

Starting with SAP S/4HANA, SAP built a new Application in the SAP ONE Launchpad just for Data Volume Management which you should use for the related system monitoring.

A very good introduction to this new Data Volume Management Application is provided in the following video from the DVM Blog Series in the SAP Enterprise Support Value Maps

[DVM Cloud App Quick Tour](#)

as well as in the SAP Note:

[2716655](#) – How To Use the DVM Cloud Application - Step by Step guide

For deeper technical background information, you can refer to the Meet the Expert session:

[DVM Cloud Application for SAP S/4HANA on ONE Support Launchpad](#)

Once you have set up the monitoring, the results should be checked and evaluated on a regular basis, at least every 3 months.

Required roles:

- System Administrator

Effort & Duration:

- Effort: 1 day
- Duration: 1 day (set-up of DVM Cloud Application)
1 day (regular check of the monitoring results every 3 months)

11 Set up an SAP S/4HANA DVM project if required

Maybe you already identified possible DVM measures on specific application tables in [Chapter 4](#) of this document, but due to the lack of required resources and/or time constraints you decided to postpone these activities for the time after the SAP S/4HANA conversion. Or, at one point in time, your regular SAP S/4HANA DVM system monitoring reveals a data reduction potential on your SAP S/4HANA application and basis tables. This is then the right time you might want to set up a new SAP S/4HANA DVM project.

In general, the information on what should be considered for setting up such a Data Volume Management project is exactly the same as described in [Chapter 7](#) “Set up a full DVM project”. Therefore, please refer to this chapter for more details.

In much the same way, all referenced documents in [Chapter 8](#) “Apply the DVM measures of your project” are also valid for an SAP S/4HANA DVM project. You can find additional SAP S/4HANA specific information in the following documents

[List of Archiving Guides for SAP S/4HANA](#)

as well as in the Meet the Expert session:

[“New FI document archiving process in SAP S/4HANA”](#) (60 min)



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