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Conversion Guide for SAP S/4HANA Cloud Private Edition 2023

Content

1	Conversion Guide for SAP S/4HANA Cloud Private Edition.	5
2	Getting Started.	6
2.1	Documentation, Tools, and SAP Notes for the Conversion.	7
2.2	Conversion Scenarios.	10
2.3	Overview of the Conversion Process.	12
2.4	RISE with SAP System Transition Workbench.	15
3	Planning the Conversion.	18
3.1	Conversion in a Distributed System Landscape.	18
3.2	Choose Technical Conversion Path.	19
	DMOVE2S4: Step-by-Step Process.	21
3.3	Runtime Optimization.	23
4	Preparing the Conversion.	25
4.1	Prepare the Move to Cloud Infrastructure.	25
4.2	System Requirements.	27
4.3	What's the Impact on Your System Landscape?.	28
4.4	Supported Start Releases.	30
4.5	Data Volume Reduction.	30
4.6	Maintenance Planner.	31
4.7	Simplification Item-Check.	32
4.8	Custom Code Analysis.	35
4.9	Data Transition Validation.	36
4.10	Cross-Application Preparations.	37
	Prepare the Use of the Maintenance Planner.	37
	Remove Client 066.	38
	Uninstall SAP Fiori Apps.	38
	Prepare the Conversion of Authorizations.	39
	Prepare the Conversion for SAP Fiori UX Enablement.	39
4.11	List of Application-Specific Preparations.	39
5	Realizing the Conversion.	41
5.1	Conversion Using SUM.	41
5.2	SAP ECS Post-Conversion Activities.	42
6	Follow-On Activities.	45
6.1	Silent Data Migration.	45

6.2	Custom Code Adaptation.	46
6.3	Cross-Application Follow-On Activities.	47
	Adapting Database Extensions to SAP S/4HANA Cloud Private Edition.	47
	Output Management.	48
	Follow-On Activities for the Conversion of Authorizations.	51
	Follow-On Activities for SAP Fiori UX Enablement (incl. Authorizations).	51
	Adapting the User Interface.	54
6.4	List of Application-Specific Follow-On Activities.	54
6.5	Cleaning Up Obsolete Data After the Conversion.	55
7	Appendix.	57
7.1	SAP Readiness Check Versus SI-Check.	57

Document History

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1.0	January 28, 2026	Version for SAP S/4HANA Cloud Private Edition 2023 SPS05.
2.0	August 5, 2026	Version for SAP S/4HANA Cloud Private Edition 2023 SPS06.

1 Conversion Guide for SAP S/4HANA Cloud Private Edition

SAP S/4HANA Cloud Private Edition is the next-generation business suite. It is fully built on the most advanced in-memory platform existing today: SAP HANA. The product uses modern design principles with the SAP Fiori user experience (UX) as well as a new role-based user experience concept. With the move to SAP S/4HANA Cloud Private Edition, you are benefitting from continuous application innovations such as:

- Application optimizations specific for SAP HANA in-memory platform
With SAP S/4HANA Cloud Private Edition, SAP optimizes the application to make best use of the capabilities of the SAP HANA database. For example, we removed aggregates, and reduced the data footprint.
- Responsive user experience design
With SAP S/4HANA Cloud Private Edition, SAP designs the application with the latest role-based user experience (UX).
- Unifying functionality in the core
With SAP S/4HANA Cloud Private Edition, SAP removes redundancy by providing one functionality for one objective.

With SAP S/4HANA Cloud Private Edition, SAP helps businesses to run simple in the digital economy, including such topics and principles as the Internet of Things, Big Data, business networks, and mobile-first.

This guide explains the conversion process with which you can move from your existing SAP Business Suite to the next-generation business suite: SAP S/4HANA Cloud Private Edition.

2 Getting Started

Read this guide carefully to get an overview of how to convert an existing SAP Business Suite system to SAP S/4HANA Cloud Private Edition 2025.

This guide has to be used together with the following documents and tools:

- **Simplification Item Catalog**
This tool allows you to search and browse simplification items online.
- *System Conversion to SAP S/4HANA using SUM 2.0 SP <latest version>*
- *Maintenance Planner User Guide*
- **SAP Readiness Check**
This tool analyzes your SAP ERP 6.0 system and highlights important aspects of the conversion to SAP S/4HANA Cloud Private Edition, such as identification of relevant simplification items, high-level custom code analysis, add-on compatibility, sizing, and more.

→ Recommendation

Although not mandatory, this tool is highly recommended.

- **ASU Toolbox Application Conversion Assistant**
The ASU Toolbox focuses on the application view, and is therefore a complement to the more technically-oriented conversion tools mentioned in this guide. It's content is regularly updated and is intended to help you achieve the conversion as efficiently as possible. For information about the tool, see SAP Note [3008338](#) .

→ Recommendation

Although not mandatory, this tool is highly recommended.

- *Custom Code Migration Guide for SAP S/4HANA 2025*
- *RISE with SAP system transition workbench*
The RISE with SAP system transition workbench offers you additional guardrails for your conversion. As it is highly tailored to the SAP S/4HANA Cloud Private Edition conversion, it allows you to benefit from additional downtime reduction for your handover activities. For information about the tool, see [3462243](#) .

You find more information about these tools and guides (including where to find them), as well as additional important documents and SAP Notes relevant for the conversion in the section [Documentation and SAP Notes for the Conversion \[page 7\]](#).

The section [Overview of the Conversion Process \[page 12\]](#) provides information about the different phases of the conversion and the tools involved.

The sections [Preparing the Conversion \[page 25\]](#) and [Realizing the Conversion \[page 41\]](#) provide details for those conversion phases.

For an overview of all function available with SAP S/4HANA 2025, see the *Feature Scope Description* at https://help.sap.com/s4hana_op_2023  [Discover](#) .

2.1 Documentation, Tools, and SAP Notes for the Conversion

Required Documents, Tools, and SAP Notes

You require the following conversion assets to prepare and run a conversion project.

Document	Available at	Comment
Simplification Item Catalog This tool enhances and replaces the <i>Simplification List for SAP S/4HANA</i> (PDF). The PDF is still available, but we recommend using the catalog.	https://help.sap.com/s4hana_op_2023 ► <i>Implement Conversion & Upgrade Assets</i> ►	Describes the simplifications in comparison to the SAP Business Suite product family such as, simplified functions, merged database tables, and new data models.
<i>System Conversion to SAP S/4HANA using SUM 2.0 SP <latest version></i>	https://support.sap.com/sltoolset ► <i>Software Logistics Toolset (SL Toolset)</i> ► <i>System Maintenance</i> ► <i>System Maintenance Scenarios</i> ► <i>System Conversion to SAP S/4HANA using SUM 2.0 <latest SP></i> ►	Describes how to prepare the system for running the Software Update Manager, how to use it, and what general follow-up steps are required.
Best Practice guides for the conversion Note These guides, while not mandatory, are highly recommended.	https://help.sap.com/s4hana_op_2023 ► <i>Implement Conversion & Upgrade Assets</i> ►	• <i>Custom Code Management (CCM) During an SAP S/4HANA Conversion</i> Best practices for CCM during the conversion of a single SAP ERP system to an SAP S/4HANA system. • <i>Data Volume Management (DVM) During an SAP S/4HANA Conversion</i> Best practices for DVM during the conversion of a single SAP ERP system with a medium sized database to an SAP S/4HANA system. • <i>Introduction of SAP Fiori during an SAP S/4HANA Conversion</i> Best practices for SAP Fiori introduction during the conversion of a single SAP ERP system to an SAP S/4HANA system.
<i>Maintenance Planner User Guide</i>	http://help.sap.com/maintenance-planner ►	Describes how to use the Maintenance Planner for calculating and downloading the required stack.xml file and software packages.

Document	Available at	Comment
SAP Readiness Check	https://help.sap.com/viewer/p/SAP_READINESS_CHECK	This tool analyzes your SAP ERP 6.0 system and highlights important aspects of the conversion to SAP S/4HANA, such as identification of relevant simplification items, high-level custom code analysis, add-on compatibility, sizing, and more. → Recommendation The tool is not mandatory, but highly recommended.
ASU Toolbox Application Conversion Assistant	SAP Note 3008338 	The ASU Toolbox focuses on the application view, and complements the more technically-oriented conversion tools mentioned in this guide. Its content is regularly updated and is intended to help you achieve the conversion as efficiently as possible. → Recommendation The tool is not mandatory, but highly recommended.
Custom Code Migration Guide for SAP S/4HANA 2023	https://help.sap.com/s4hana_op_2023 ► <i>Implement</i> ► <i>Conversion & Upgrade Assets</i> ►	Provides instructions on how to adapt custom code in the context of a system conversion to SAP S/4HANA.
SAP S/4HANA 2023: Release Information Note	SAP Note 3307222 	-
SAP S/4HANA 2023: Restriction Note	SAP Note 3348949 	-
SAP FIORI for SAP S/4HANA 2023: Release Information Note	3336823 	-
SAP S/4HANA Foundation 2023: Release Information Note	3306766 	-
SAP S/4HANA Add-on Note	SAP Note 2214409 	-
Delivery of the SAP S/4HANA Simplification Item-Check	SAP Notes 2399707  and 2502552 	With this note, the SAP S/4HANA Pre-Transition Check Report is delivered.

Document	Available at	Comment
SAP S/4HANA 2023 - application specific notes in system conversion / upgrade preparation phase	SAP Note 3340515 	Information about errors that may occur during the preparation phase of the conversion.
Additional information on converting to SAP S/4HANA using SUM 2.0 <latest version>	SAP Note for the latest version of SUM 2.0 at https://support.sap.com/sltoolset  Software Logistics Toolset (SL Toolset)  System Maintenance  System Maintenance Scenarios  System Conversion to SAP S/4HANA using SUM 2.0 <latest SP> 	Information about errors that may occur during the SUM phase of the conversion.
SAP S/4HANA 2023 - application specific notes in system conversion / upgrade follow-on phase	SAP Note 3340526 	Information about errors that may occur during the follow-on phase of the conversion.
SAP S/4HANA System Conversion/Upgrade: Measures to reduce technical downtime	SAP Note 2351294 	-
ABAP Platform 2023 – General Information	SAP Note 3346290 	-
Java components for S/4HANA 2023 – Restrictions	SAP Note 3247591 	-

Additional Information and SAP Notes

The following table lists important additional documents and SAP Notes.

Document	Available at	Comment
SAP S/4HANA: Always-Off Business Functions	SAP Note 2240359 	-
SAP S/4HANA: Always-On Business Functions	SAP Note 2240360 	-
Uninstalling ABAP Add-ons	SAP Note 2011192 	-
Automated guided steps for enabling Note Assistant for TCI and Digitally Signed SAP Notes	SAP Note 2836302 	-

Document	Available at	Comment
<i>Data Migration of Financials in SAP S/4HANA: Do not migrate twice!</i>	SAP Note 2294486 	Relevant if you are planning to convert a SAP Simple Finance, respectively SAP S/4HANA Finance, on-premise edition installation to SAP S/4HANA.
<i>Conversion of Financial Accounting to SAP S/4HANA</i>	SAP Note 2332030 	-
<i>S4TWL: Business partner data exchange between SAP CRM and SAP S/4HANA – required pre-conversion and post-conversion actions</i>	SAP Note 2285062 	-
<i>Superfluous field "BUFFERED" causes exception in Consolidation and Mass Processing and potential S/4 upgrade error</i>	SAP Note 2781530 	-

2.2 Conversion Scenarios

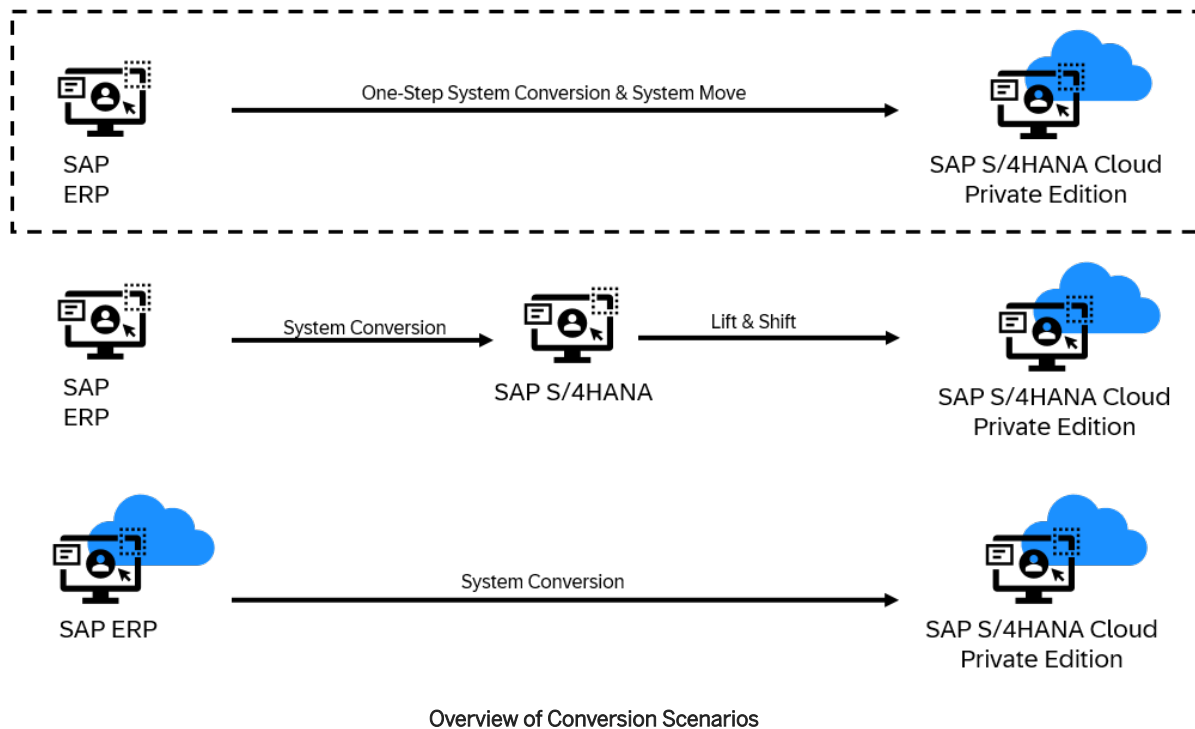
There are different approaches for moving from your SAP ERP 6.0 system to SAP S/4HANA Cloud Private Edition:

This guide covers the most common approach: a **one-step conversion**, during which you transition your existing SAP ERP 6.0 system to SAP S/4HANA while simultaneously moving your system from your own data center to either a data center of SAP or that of an IaaS provider. The system conversion will be accomplished using the SAP Software Update Manager (SUM) in a one-step procedure with a single downtime for adopting the following changes:

- Migration of your source system from your data center to a data center of SAP or of an infrastructure-as-a-service (IaaS) provider.
- Migration of any database for SAP ERP to the SAP HANA database
- Conversion of the data model for SAP ERP to that for SAP S/4HANA
- A software upgrade where the application code for SAP ERP is replaced with that for SAP S/4HANA Cloud Private Edition

Note

SAP strongly recommends that you use the expertise of a qualified migration partner or SAP-offered services to accomplish the technical tasks of the system conversion with simultaneous system move, including the alignment and handover activities to SAP Enterprise Cloud Services (SAP ECS) operations team..



Alternative Conversion Scenarios

Besides the one-step conversion described above, there are other migration scenarios based on your current SAP product or software release. These options provide flexibility, allowing you to choose the path that best fits your technical landscape and business needs.

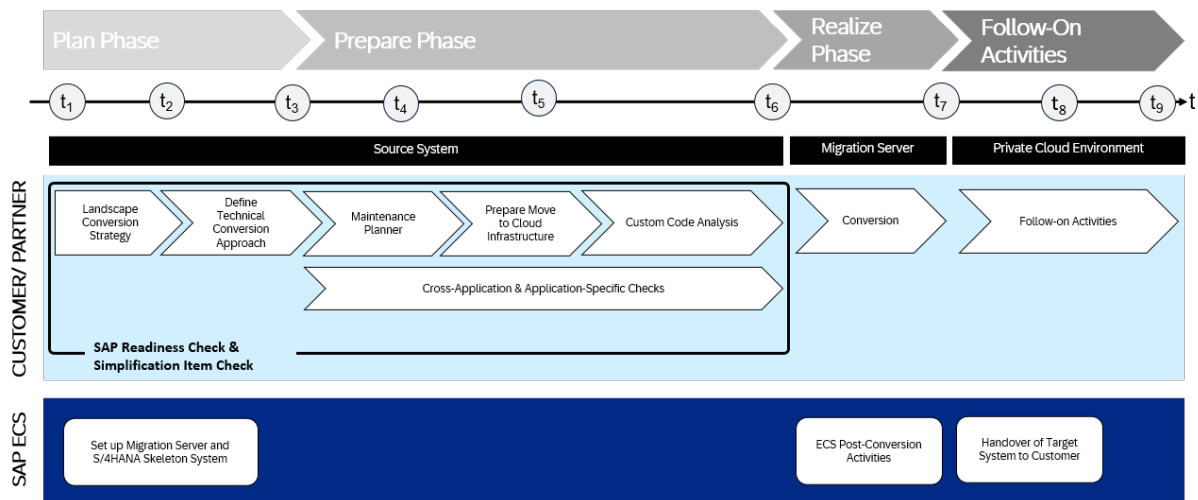
1. You follow a phased approach and convert your system to SAP S/4HANA first and then move it via so-called *Lift & Shift* procedures from your data center to either an SAP data center or that of an infrastructure-as-a-service (IaaS) provider in a subsequent step. Your SAP system is moved as is and there are no changes to the software or the release version. This approach allows you to manage the transition in stages, reducing complexity and allowing for a more manageable migration process.
For more information on this option, refer to the [Conversion Guide for SAP S/4HANA](#). In addition, see the product page for [RISE with SAP Private Cloud Edition](#) under **Implement** > **Installation and Upgrade** for instructions on the *Lift & Shift* procedure.
2. If you're running an SAP ERP 6.0 installation on any Enhancement Package (EHP) in a private cloud environment already, you can simply perform the system conversion to SAP S/4HANA.
For more information on this option, refer to the [Conversion Guide for SAP S/4HANA](#) and [SAP ECC to SAP S/4HANA Transformation Roadmap System Conversion](#).

2.3 Overview of the Conversion Process

SAP provides a process for the conversion to SAP S/4HANA Cloud Private Edition. The following figure gives an overview of the tools, the phases, and the activities involved in the process.

→ Recommendation

We recommend that you do the activities in the sequence shown in the figure and explained in the sections below.



Planning Phase

When planning your conversion to SAP S/4HANA Cloud Private Edition make sure to do the following planning activities as required for your setup:

1. Use the following tools to do your project planning:
 - **SAP Roadmap Viewer**
Refer to the SAP Roadmap Viewer to familiarize yourself with the project steps recommended by SAP and required for the transition to SAP S/4HANA Cloud Private Edition. For more information, see [SAP Activate for RISE with SAP S/4HANA Cloud Private Edition](#).
 - **Simplification Item Catalog**
This tool allows you to search or browse the complete collection of simplification items grouped by product version and presented by application or functional area. Each simplification item details the steps that need to be taken for the conversion from a business and a technical point of view, both preparatory and follow-on steps and each item is available as an SAP Note. You find the Simplification Item Catalog at [SAP for Me - Simplification Item Catalog](#).

→ Tip

We recommend that you consume the simplification items also via the SAP Readiness Check for SAP S/4HANA. Based on an analysis of the configuration, data, and usage of your productive SAP

Enterprise Resource Planning system, the SAP Readiness Check for SAP S/4HANA identifies the simplification items relevant for your conversion.

- **SAP Readiness Check**

Run the SAP Readiness Check for SAP S/4HANA as soon as possible to get an overview and planning baseline about important topics you need to take care of and the related efforts and required skills. For more information about how to use the SAP Readiness Check for SAP S/4HANA, see [SAP Readiness Check](#).

2. Plan your system conversion according to your **system landscape**. If you have an SAP system landscape consisting, for example, of a production system, a quality assurance system, and a development system, you must consider the entire system group regarding the sequence of conversions.
3. Plan and choose the optimal approach for the technical realization of your system conversion with simultaneous transition of your system from on-premise to a private Cloud environment.
4. Learn about additional runtime optimizations to further reduce the overall runtime of the conversion as well as the technical downtime.

For more details, see [Planning the Conversion \[page 18\]](#).

Prepare Phase

Before you start the realization phase of the upgrade process, you have to do the following preparatory activities:

1. **Maintenance Planner**

You need to run the maintenance planner tool as a first step in the conversion process. It checks your components, add-ons, and business functions to ensure compatibility with SAP S/4HANA Cloud Private Edition and also creates the stack file used for the actual conversion process (done by the Software Update Manager tool). For more information, see [Maintenance Planner \[page 31\]](#).

Note

This step is mandatory, because the Software Update Manager requires the stack file for the conversion process.

The Maintenance Planner has replaced the Maintenance Optimizer, which is not supported by SAP S/4HANA Cloud Private Edition.

2. **Move to Cloud Infrastructure**

Learn about the step-by-step onboarding and system provisioning process for SAP S/4HANA Cloud Private Edition following a RISE with SAP contract, including key roles, communications, and essential technical preparations for migration.

3. **System Requirements**

You need to be aware of system requirements, start releases, conversion paths, and data volume. See the following sections for more information:

- [System Requirements \[page 27\]](#)
- [What's the Impact on Your System Landscape? \[page 28\]](#)
- [Supported Start Releases \[page 30\]](#)
- [Data Volume Reduction \[page 30\]](#)

4. **Simplification Item-Check**

These checks identify important steps that you need to take to make sure that your system can technically be converted and that your business processes can start running directly after the conversion process has been completed. For more information, see [Simplification Item-Check \[page 32\]](#).

Note

This step is mandatory and will be triggered again by the Software Update Manager. Ideally, you run the Simplification Item-Check (SI-Check) early in the process, so that you can take note of the planning information provided by the checks. Note that you no longer need the stack file for the checks.

See also, [SAP Readiness Check Versus SI-Check \[page 57\]](#).

5. Custom Code Migration

The custom code migration tool checks your custom code against a list of simplifications developed for SAP S/4HANA Cloud Private Edition. For more information, see [Custom Code Analysis \[page 35\]](#) and [Custom Code Adaptation \[page 46\]](#).

Note

While not mandatory, this step is highly recommended. Ideally, you combine the SAP S/4HANA Cloud Private Edition conversion project with housekeeping activities for your existing custom code base. In particular, you need a consolidated view of productively used custom developments and you should remove custom code that is no longer used.

For more information, see the *Custom Code Migration Guide for SAP S/4HANA 2025* at https://help.sap.com/s4hana_op_2023 ► [Implement](#) ► [Conversion & Upgrade Assets](#) ►.

We recommend that you do the steps 2 to 4 in the prepare phase in the sequence listed above. It is, however, technically possible to do them independently or in parallel.

6. Cross-Application Preparation Activities

In addition to the general preparation steps described above, you also need to do some cross-application preparations. For more information, see [Cross-Application Preparations \[page 37\]](#).

7. Application-Specific Preparation Activities

In addition to the cross-application preparations, you may also need to do some application-specific preparatory steps. These steps and their documentation are partly provided by the pre-checks and the custom code checks.

For a complete overview of all necessary steps, see the *Simplification Item Catalog* (mentioned above).

For an overview of some important preparations steps, see [List of Application-Specific Preparations \[page 39\]](#).

For more information about preparations for the conversion of Financial Accounting, see SAP Note [2332030](#) .

For more information, see [Preparing the Conversion \[page 25\]](#)

Realize Phase

1. Software Update Manager (SUM)

Once all necessary adaptations are made for your SAP S/4HANA Cloud Private Edition conversion, you or your migration partner can carry out the system conversion on the migration server.

Note

If your SAP ERP system already runs in the Cloud, you can ask SAP ECS to execute the Software Update Manager (SUM) by submitting a conversion service request. SAP ECS may contact you for clarifications or additional actions.

2. SAP ECS Post-Conversion Activities

Once the conversion process is finished and you have exited the Software Update Manager on the migration server, inform SAP ECS that they can begin the system handover and start postprocessing activities.

For more information, see [Realizing the Conversion \[page 41\]](#).

Follow-On Activities

1. Silent Data Migration

Migration of application data usually happens during release upgrades or conversions while the system is down. SAP provides the Silent Data Migration Infrastructure (SDMI) to allow the migration of application data after the conversion during business operations. For more information, see [Silent Data Migration \[page 45\]](#).

2. Custom Code Adaptation

After the completion of the SUM run, we highly recommend that you adapt your custom code, see [Custom Code Adaptation \[page 46\]](#).

3. Cross-Application Follow-On Activities

Other manual cross-application activities may also be required. For more information, see [Cross-Application Follow-On Activities \[page 47\]](#).

4. Application-Specific Follow-On Activities

In addition to the cross-application follow-on activities, you may also need to do application-specific manual steps. These steps and their documentation are provided by the pre-checks and the custom code checks, which provide the list of simplification items relevant for your specific systems.

For a complete overview of all necessary steps, see the *Simplification Item Catalog* (mentioned above). For an overview of some important follow-on steps, see [List of Application-Specific Follow-On Activities \[page 54\]](#).

For more information about the migration of Finance Data, see SAP Note [2332030](#).

For more information, see [Follow-On Activities \[page 42\]](#).

2.4 RISE with SAP System Transition Workbench

The *RISE with SAP system transition workbench* guides you through the technical handover and migration to the SAP S/4HANA private cloud environment. It offers a unified platform with both manual and automated step-by-step instructions for your preferred migration approach.

Each migration approach uses a structured guided procedure called a *cockpit*. Each cockpit is carefully crafted to lead you through the technical procedure and is divided into two main phases: the uptime phase and the

downtime phase. This structure ensures you have a clear understanding and control over the entire process. By following cockpits, you benefit from a clearly defined "golden path," ensuring that every critical activity is addressed for a successful and confident system migration. Detailed documentation is available for each supported approach. It provides clear guidelines and insights on how to proceed with your specific migration requirements.

The following conversion approaches are supported::

- Lift & Shift (see [Conversion Scenarios \[page 10\]](#))
 - SAP HANA Tenant Copy
 - SAP HANA Backup and Recovery
 - Homogenous Update and Copy
- One-Step System Conversion
 - System Conversion Using SUM 2.0 (DMOVE24 and DMOW with System Move)

For more information, see [Cockpits Supported by "RISE with SAP system transition workbench"](#).

The workbench supports both cross-application and application-specific follow-on activities. It reduces manual effort and minimizes system downtime for customers, partners, and SAP ECS teams. It upholds SAP S/4HANA private cloud standards, enhances quality assurance, and integrates seamlessly with distributed system landscapes. This integration allows teams to identify, process, and apply necessary software changes efficiently. Provided at no additional cost as part of your RISE landscape, it serves as the single entry point for your RISE journey.

What are the key benefits?

- Extensive automated prerequisite check report for each migration approach: This report is designed to significantly reduce manual effort in verifying system readiness for the selected approach. It ensures that all necessary criteria are met promptly, reducing unplanned delays in project runtime.
- Automation integrated into the workbench: This automation is crafted to significantly minimize the time spent and errors in manual steps of the process, such as system preparation, configuration, and validation. Reducing manual steps results in a stable, efficient, reliable, and repeatable migration.
- Reduced post-processing timelines by SAP ECS: The workbench ensures the system meets SAP ECS's standards and expectations at the time of handover. This substantially decreases the need for time-consuming follow-up actions and corrections.

Who is it for?

The RISE with SAP system transition workbench is available to all customers transitioning into the private cloud. It is supported by their respective migration teams, whether they are qualifying partners or SAP directly. Access to the workbench is straightforward, as it comes pre-installed on the migration server designated for migration purposes.

For comprehensive support and the latest updates, refer to SAP Note [3462243](#) ("RISE with SAP System Transition Workbench"). With its combination of automated guidance and robust documentation, the workbench empowers organizations to navigate their SAP transformation with clarity, reliability, and speed.

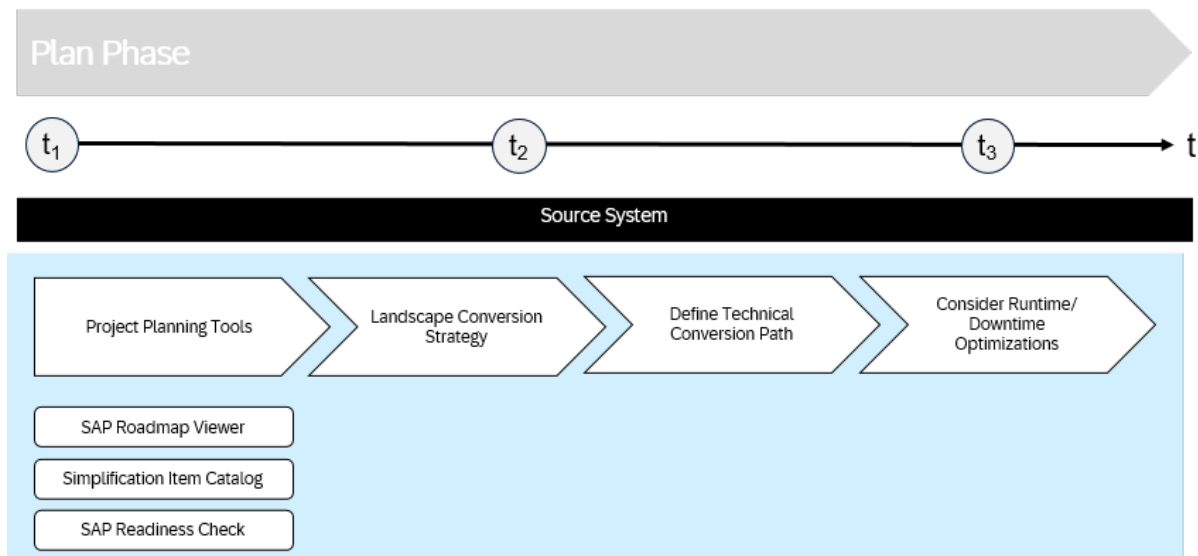
Restriction

Consider the following restrictions:

- The workbench is permitted for ECS internal operations as well as for qualified migration partners and SAP services.

- Qualified migration partners must have earned at the minimum “Essential Level” designation for the SAP S/4HANA Cloud Private Edition competency for RISE deals as visible in SAP Partner Finder.
- SAP provides required automation tooling and configuration on the Migration VM for the purposes of the transition.
- Any not-authorized software export of the automation tooling or its configuration is prohibited.
- Any usage beyond defined usage constraints is prohibited.

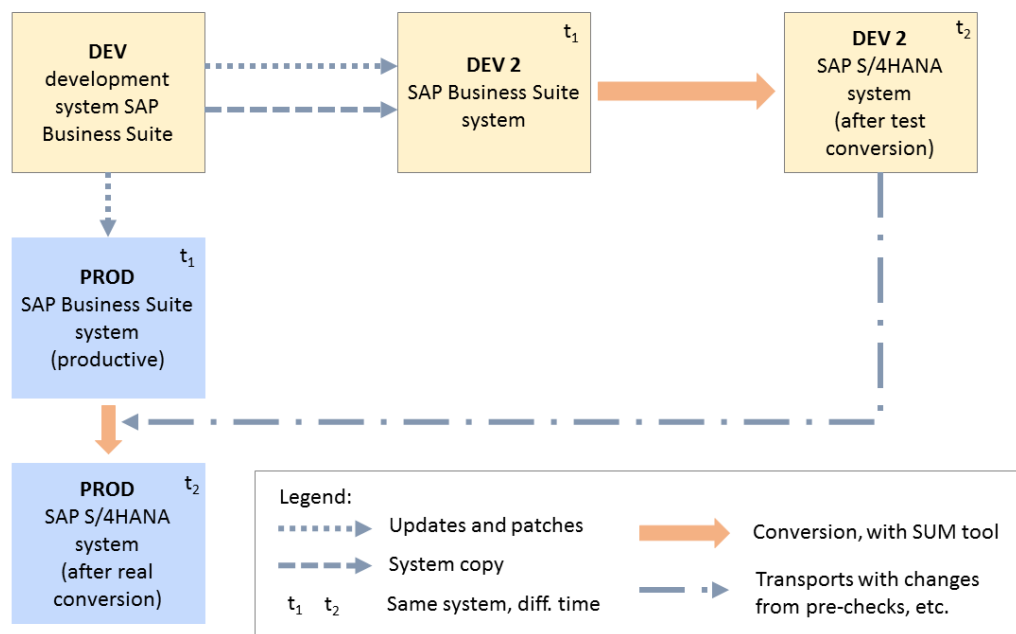
3 Planning the Conversion



Conversion to SAP S/4HANA Cloud Private Edition: Plan Phase

3.1 Conversion in a Distributed System Landscape

When planning your conversion project, you should use a distributed system landscape as shown in the figure below. The figure is an example of a very simple version of a distributed system landscape comprising only development and productive systems to illustrate the principle .



Conversion in a Distributed System Landscape

The figure shows that there is a development system (DEV) used to apply updates and patches to the productive system (PROD), which, at the beginning of the conversion project (t_1), is a SAP Business Suite system. You then set up a second development system (DEV 2) as a system copy of the original DEV system. You use the second development system to perform and test all phases of the conversion. You can collect all the necessary software changes during the test conversion in transport requests, including those that can only be done after a conversion (for example, the Finance customizing). Note that DEV t_1 and DEV t_2 as shown in the figure describe the same system, at points in time before (t_1) and after (t_2) the conversion. The collected transports with the required software changes are then handed over to the Software Update Manager (SUM) tool and applied during the real conversion of the productive system. Note that PROD t_1 and PROD t_2 as shown in the figure also describe the same productive system before (t_1) and after (t_2) the conversion.

The use of a distributed system landscape for your conversion allows you to take as long as needed to identify and process the software changes required by the conversion and then apply these changes efficiently during the conversion of your productive system to minimize downtime.

3.2 Choose Technical Conversion Path

When planning to convert your SAP ERP 6.0 system to SAP S/4HANA Cloud Private Edition, it's crucial to evaluate the different conversion paths early in the project. The choice of the technical system conversion approach can significantly influence the project plan, timelines, effort, and costs.

There are different SAP S/4HANA conversion approaches and downtime optimization techniques embedded in the Software Update Manager (SUM) tool or available through SAP Services. The choice may depend on various factors such as maximum business downtime, system locations, database size, network connectivity, and specific requirements.

For more details about the technical conversion options, refer to the [SAP Software Logistics Tools](#) page under the section *System Maintenance Scenarios*.

Overview: Technical Conversion Options

	Source System	Technical Requirements	Downtime-Optimized Conversion
DMOVE2S4	SAP ERP 6.0	Requires a strong and stable network with low latency (less than 20 milliseconds) and high bandwidth (over 400 MBit/s)	Yes
DMO with System Move	SAP ERP 6.0	No	No
DMO	SAP ERP 6.0 [Cloud deployment]	ERP system is still running on a non-HANA database	Yes

DMOVE2S4

DMOVE2S4 is the **SAP-recommended approach** that transforms your system to SAP S/4HANA Cloud Private Edition, updates the database to SAP HANA if needed, and relocates both the server and database into SAP's private cloud environment or that of an Infrastructure as a Service (IaaS) provider.. It's built on the proven mechanisms of the Software Update Manager, ensuring a smooth and reliable journey into the cloud.

→ Tip

A dedicated cockpit for the DMOVE2S4 option is available in the [RISE with SAP system transition workbench](#) to guide you through the one-step system conversion and migration process. For more information, see [RISE with SAP System Transition Workbench \[page 15\]](#).

DMOVE2S4 uses memory pipes for data transfer, which makes it a faster alternative to other methods. It can also work with features that reduce downtime during the migration, such as downtime-optimized DMO or Conversion (see [Runtime Optimization \[page 23\]](#)). However, it has specific technical requirements:

- It only supports target systems based on SAP S/4HANA and SAP S/4HANA Foundation.
- It requires a strong and stable network with low latency (less than 20 milliseconds) and high bandwidth (over 400 MBit/s).

DMOVE2S4 is not a separate selection in the SUM interface and can also be used for moving to the cloud without updating or upgrading your SAP S/4HANA system. For more information on this approach, see [DMO Move to SAP S/4HANA \(on Hyperscaler\)](#).

Database Migration Option (DMO) with System Move

DMO with System Move is suitable for system conversions that also require a system move to another data center or hyperscaler and do not meet the requirements for the DMOVE2S4 approach. In this method, the source system database is exported to a file system, transferred to the target location, and imported/converted in one step.

As of SUM 2.0 SP17, DMO with System Move is also possible for HANA-based source systems, a process known as "Homogeneous DMO." For an overview of this approach, please check the SAP Technology Blog post [DMO with System Move: The use case to change PAS host during DMO](#) .

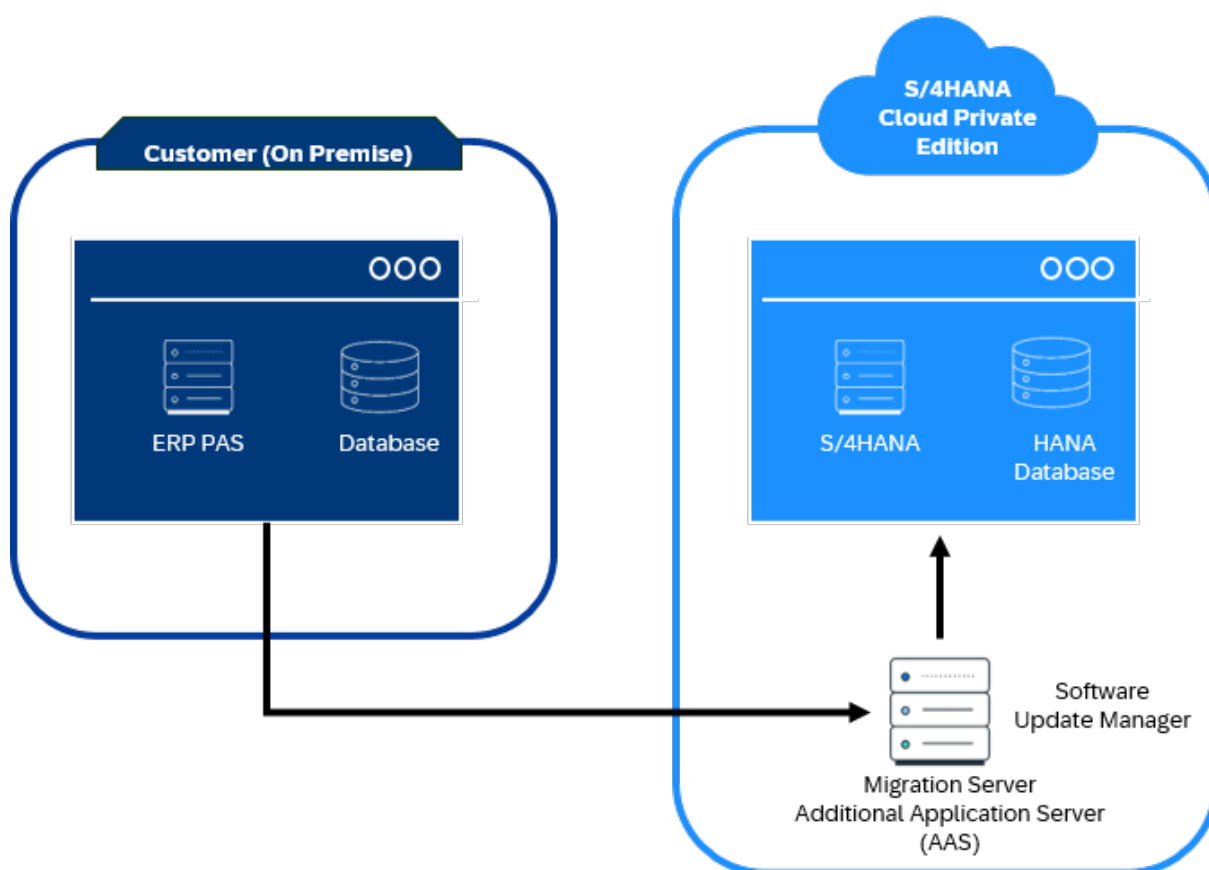
If you're running an SAP ERP 6.0 installation on any database in a private cloud environment already, the following approach is recommended:

Database Migration Option (DMO)

DMO is a standard conversion procedure provided by the SUM tool. It transfers data using memory pipes and is suitable when its technical downtime duration aligns with the customer's requirements without needing additional advanced downtime reduction techniques. DMO is primarily used for system conversions without a system move. For more details, refer to the SAP Software Logistics Tools page under the section "System Conversion to SAP S/4HANA using SUM 2.0."

3.2.1 DMOVE2S4: Step-by-Step Process

System Conversion with DMOVE2S4 is a structured approach for migrating your SAP landscape to S/4HANA using dedicated migration tools and processes. This chapter outlines the essential steps and prerequisites to ensure a smooth and successful transition.



Process Overview

The following section provides a high-level overview of the DMOVE2S4 process. The tasks indicated with an asterisk (*) in the list above are automated through the RISE with SAP system transition workbench. For more information, see [RISE with SAP System Transition Workbench \[page 15\]](#).

1. ECS provisions the skeleton system for the S/4HANA installation. This involves setting up an empty installation of the S/4HANA target release, including both the application and HANA database server. Once prepared, the application servers are stopped.
2. ECS provides an empty virtual server, referred to as the *migration server*.
3. You or your migration partner must install a temporary SAP ERP additional application server (AAS) on the migration server, linking it to your source environment. If you use the [RISE with SAP system transition workbench](#), this process will be handled automatically.

→ Tip

How to Set Up the Additional Application Server?

1. **Verify Access to the Migration Server:** Confirm that you can access the HEC migration server from your customer or partner location.
 2. **Test Connectivity to the Source SAP System:** Ensure that the migration server can communicate with your source SAP system's Primary Application Server (PAS). This may require configuring your network firewall to allow necessary connections.
 3. **Open Port 22:** Make sure Port 22 is open on the migration server. You can test access by connecting to the migration server with an SSH client. Successfully logging in via SSH confirms your network, credentials, and permissions are correctly set up, ensuring you have the necessary access to proceed with the migration process.
 4. **Prepare Export Directories:** Set up the required directories for the application server installation.
 5. **Mount Network File System (NFS) Directories:** Attach the necessary NFS directories to the migration server to enable installation and data transfer.
 6. **Validate User and Group IDs:** Check that user and group IDs on the migration server correspond to those on your on-premise environment.
 7. **Confirm Hostname and IP Resolution:** Ensure that the migration server's hostname, as well as the hostnames of the source PAS and ABAP Central Services (ASCS) servers, can be resolved from each other for network consistency.*
 8. **Install the Additional Application Server (AAS):** Proceed with the installation of the temporary SAP AAS on the migration server.*
 9. **Verify AAS Installation:** Validate the installation to ensure the AAS is functioning as expected.
 10. **Initiate the SUM DMO Procedure:** Start the Software Update Manager Database Migration Option (SUM DMO) process as the final step in this installation sequence.*
4. Proceed to carry out all necessary preparation steps for the conversion, following section [Preparing the Conversion \[page 25\]](#) of this guide.
 5. Initiate Software Update Manager (SUM) for the conversion process on the additional application server (AAS).*
 6. After the conversion is complete, exit SUM on the migration server.
 7. [Optional]: Perform the post-processing activities in the RISE with SAP system transition workbench.*
 8. Inform SAP that all technical steps have been successfully completed. At this point, stop all SAP processes running on the temporary AAS (migration server).

9. When ready, request ECS to switch the Primary Application Server (PAS) to the SAP application server in your SAP S/4HANA Cloud Private Edition system. This action is performed using the self-service tool at me@SAP, selecting *Switch Application back to Main Instance after Migration**
10. ECS will complete post-migration activities before handing over the system to you, including the configuration of monitoring tools, setting up backup schedules, and performing validation checks.
11. Execute all post-technical conversion steps and follow the required activities within your SAP S/4HANA Cloud Private Edition system.

3.3 Runtime Optimization

The system conversion process and tools already include many optimizations to reduce the overall runtime of the conversion as well as the technical downtime.

In addition to these inherent optimizations, you can optionally apply additional runtime optimizations which may, however, not be applicable to all scenarios. Please ensure that you understand the boundary conditions and implications explained in the individual notes mentioned below, before applying any of these optimization options.

Runtime of the Simplification Item Check

- For the runtime of the CLS4SIC_CO_PC_ACT_MIG check class, see SAP Note [2432689](#) . This note explains how to skip the pre-checks for the material ledger migration. It is a pilot note. To get access to the note, please open an incident on the support component **FIN-MIG-ML**.
- For the runtime of the CLS4SIC_MM_IM_SI1 check class, see SAP Note [2753888](#) . This note explains how to skip the KALNR check.

SUM Downtime Optimization

The basic idea behind the downtime-optimized conversion to SAP S/4HANA is that you can update and migrate your SAP system in just one procedure, and thus significantly reduce your business downtime. The downtime-optimized conversion procedure executes part of the data conversion in the uptime processing, which significantly reduces the overall business downtime. The main benefit of this approach is the reduction of technical downtime.

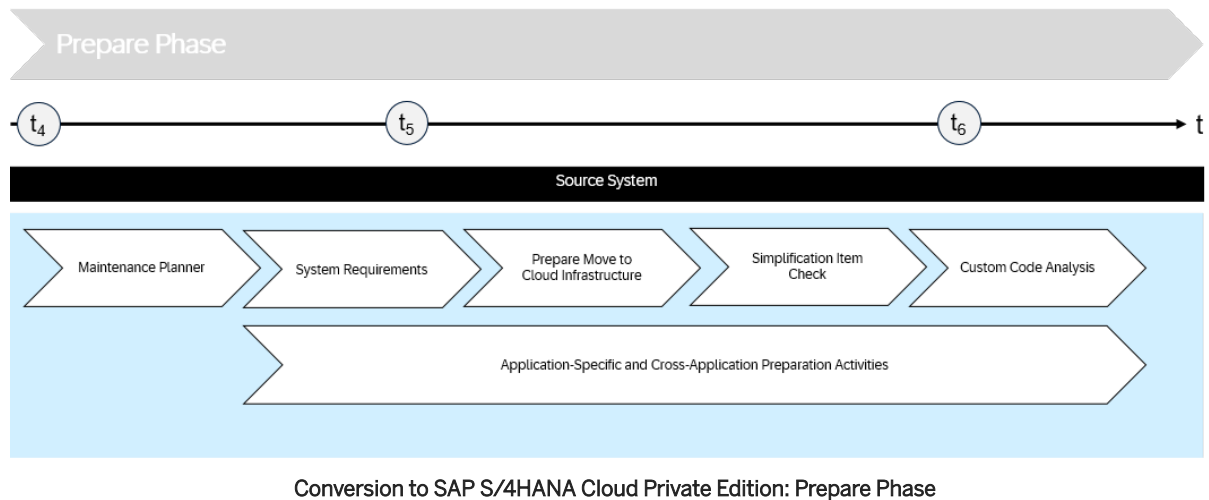
Note

The Downtime-Optimized Conversion to SAP S/4HANA Cloud Private Edition requires an SAP expert who has successfully completed the corresponding training course ADM329.

The downtime-optimized conversion feature is delivered with the Software Update Manager tool as a part of the Software Logistics Toolset (SL Toolset). For information about how to optimize the standard system conversion approach with the SUM, see:

- SAP Note [2351294](#)  *SAP S/4HANA System Conversion / Upgrade: Measures to reduce technical downtime*
- SAP Note [1616401](#)  *Parallelism in the Upgrades, EhPs and Support Packages implementations*
- For optimizing DMO performance, see <https://blogs.sap.com/2019/03/08/system-conversion-to-sap-s4hana-downtime-optimized-conversion/> 
- For downtime optimized conversion, see SAP Note [3301507](#)  *Executing and Monitoring Downtime-Optimized Conversion to SAP S/4HANA with SUM 2.0 SP 17*
- For nZDT (near Zero Downtime Service), see SAP Note [693168](#)  *Minimized Downtime Service (MDS)*

4 Preparing the Conversion



For the conversion to SAP S/4HANA Cloud Private Edition you have to prepare an overall project plan and schedule the tasks. The preparation activities described in this section give you an idea of what is involved. For a short overview of the process and tools, see [Overview of the Conversion Process \[page 12\]](#).

📘 Note

In addition, review the planning section of the Software Update Manager guide *System Conversion to SAP S/4HANA using SUM 2.0 <latest version>* at <https://support.sap.com/sltoolset> [Software Logistics Toolset \(SL Toolset\)](#) [System Maintenance](#) .

📘 Note

You find the cross-application preparation steps in this guide; you get the application-specific preparation steps with the Simplification Item-Check and custom-code checks and with the Simplification Item Catalog or the SAP Readiness Check. Some of the most important application-specific preparation steps are also listed in this section: [List of Application-Specific Preparations \[page 39\]](#).

Please see also SAP Note [3634200](#) .

4.1 Prepare the Move to Cloud Infrastructure

When preparing for your transition to SAP S/4HANA Cloud Private Edition, it's important to know what to expect after signing your contract. For customers entering into a RISE with SAP agreement, a dedicated contact person from the Enterprise Cloud Services (ECS) team will be assigned to support you. This point of contact will guide you through each step and ensure you have direct assistance throughout the entire process.

Note

SAP strongly recommends that you use the expertise of a qualified migration partner or SAP-offered services to accomplish the technical tasks of the system conversion with simultaneous system move, including the alignment and handover activities to SAP Enterprise Cloud Services (SAP ECS) operations team..

Onboarding Communication

Once you've signed your Cloud contract, the designated signer (such as your CTO, CIO, or similar) will receive a purchase-order confirmation e-mail detailing your order and outlining upcoming steps. On the contract start date, a separate "Welcome" e-mail will be sent to the specified IT Contact—if one was provided during contract signing—providing all the essential information to kick off your implementation project.

If an IT Contact (typically your customer system admin) was not specified, the initial "Welcome" e-mail will instead be sent to the contract signer. Regardless of who receives the welcome message, it's crucial that your chosen system administrator reviews and understands all the information, as there can only be one designated IT Contact. This individual acts as the customer system administrator and will be responsible for all system provisioning notifications and critical communications.

Take note: the "Welcome" e-mail is only sent once and cannot be re-sent. For ongoing reference, all details are documented and available on the [Customer Onboarding Resource Center](#)  website.

→ Tip

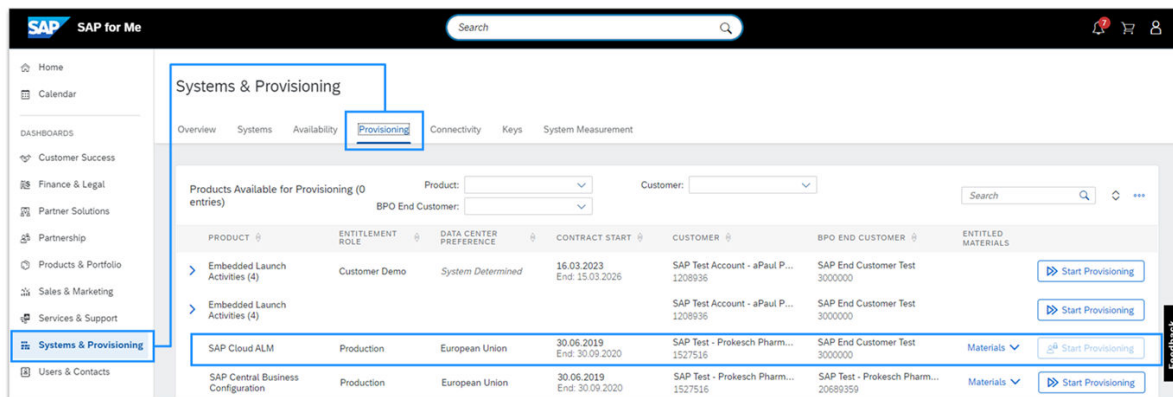
If the IT Contact role was not assigned to the correct person, this can be resolved by creating a support case in SAP for Me on the Services & Support dashboard with the following information:

- **Subject:** Request update to the Contact Person IT
- **Description:** Please change the IT contact to XYZ
- **Component:** XX-S4C-OPR-SRV

System Provisioning in SAP for Me

To begin SAP S/4HANA Cloud Private Edition implementation, the IT Contact initiates SAP Cloud ALM provisioning through SAP for Me's [Systems & Provisioning Dashboard](#).

SAP Cloud ALM supports project execution with integrated best practices, guidance, and task management, and enables post-go-live monitoring in a cloud environment.



After triggering provisioning, the IT Contact will receive email notifications with login details. The SAP Cloud Identity Authentication Service (IAS) must be activated first to create user accounts and assign SAP Cloud ALM access. Other systems, including SAP Signavio Process Manager, SAP Signavio Process Collaboration Hub, and SAP Business Technology Platform, are provisioned automatically and require no further action.

Following these steps ensures all key systems are ready and properly configured for migration, streamlining onboarding to SAP S/4HANA Cloud Private Edition.

Ensuring Readiness: Migration Server, Skeleton System, and Backup Storage

Upon signing a RISE with SAP contract, both the skeleton system and migration server—integral components for system conversion using DMOVE2S4 (see [DMOVE2S4: Step-by-Step Process \[page 21\]](#)) or DMO with System Move—are provisioned automatically. This process requires no additional action from the IT Contact.

As outlined in chapter [Choose Technical Conversion Path \[page 19\]](#), the Software Update Manager (SUM) is used for the system migration. The source database is exported utilizing SAP tools and then imported into the private cloud environment. In this context, storage planning is essential and involves two main components:

- **Migration Server Storage:** Adequate storage must be provisioned for the export dump on the Migration Server. Since this server will be utilized for all systems involved—such as development, quality assurance, and production—it is important to size the storage based on the largest source system database.
- **SAP HANA Database Server Storage:** Sufficient additional storage for backups is also necessary. It is recommended to allocate space equal to twice the SAP HANA database size. This enables the migration team to create at least two local backups at key milestones during the migration or conversion process.

4.2 System Requirements

Unicode

As a prerequisite for the conversion, your system needs to be a Unicode system. If your system is still non-Unicode, you can follow a two-step conversion approach: First, perform a combined upgrade and Unicode conversion with one of the supported start releases as target, then perform the conversion to SAP S/4HANA.

Application Server ABAP Only

Your system has to be an AS ABAP-only system. Dual-stack systems (AS ABAP and AS Java combined in one system) are not supported for the conversion. If your system is as dual-stack system, you have to split it before doing the conversion.

For additional information on how to perform a dual-stack split, see:

- SAP Note [1686144](#)
- SAP Note [1655335](#)
- Guide at <https://support.sap.com/sltoolset> » *System Provisioning* » *System Provisioning Scenarios* » *Split a System using Software Provisioning Manager 1.0* » *Dual Stack Split Guides*
- [Dual Stack Split](#)

CDS Views (Core Data Services)

If you need to adapt your custom code during the conversion of your development system, you may need to create or edit CDS view. For example, to reflect your specific table appends in related CDS compatibility views. To find out whether these activities are required in your case, check the results of the corresponding Simplification Item-Checks and the S/4HANA-specific code inspector checks.

For additional information, see:

- [Simplification Item-Check \[page 32\]](#)
- [Custom Code Migration \[page 35\]](#)
- https://help.sap.com/s4hana_op_2023 » *Use* » *Product Assistance* » *English* » *Related Information* » *SAP S/4HANA and SAP S/4HANA Cloud Private Edition* » *Enterprise Technology* » *ABAP Platform* » *Development Information* » *Application Development on AS ABAP* » *ABAP Development Tools for Eclipse*
- [Configuring the ABAP Back-end for ABAP Development Tools](#)
- <https://community.sap.com/topics/abap>

4.3 What's the Impact on Your System Landscape?

When you convert your system to SAP S/4HANA Cloud Private Edition, you may have to adapt further systems or components in your system landscape.

SAP Enterprise Resource Planning (SAP ERP) Java Components

The following Java instances are relevant for and included in SAP S/4HANA Cloud Private Edition 2023:

- Adobe Document Services

- Enterprise Services Repository
- Advanced Adapter Engine Extended
- Integration for Elster
- Integration for Swift

All other SAP ERP Java instances are obsolete with SAP S/4HANA Cloud Private Edition. You could remove them from your system landscape.

If you plan a conversion of Java instances to SAP S/4HANA Cloud Private Edition 2023 (or latest feature package or support package stack), check first that your operating system and database are still supported. For more information, see the Product Availability Matrix at <https://apps.support.sap.com/sap/support/pam>. If your operating system is no longer supported, you have to migrate to a supported operating system using the system copy procedure. For information, see the system copy guide at <https://support.sap.com/sltoolset> ► *System Provisioning* ► *System Provisioning Scenarios* ► *Copy a System using Software Provisioning Manager*.

In the Maintenance Planner, you can choose "Plan a Conversion to SAP S/4HANA Cloud Private Edition" for your SAP NetWeaver system.

SAP Fiori

There are two possible deployment options for SAP Fiori for SAP S/4HANA Cloud Private Edition, the embedded or the standalone deployment option.

Embedded Deployment

Components for embedded deployment for SAP S/4HANA Cloud Private Edition 2023 (or latest feature package or support package stack):

- Optional UI components (HR, Travel, MDG)
- SAP Fiori for SAP S/4HANA Cloud Private Edition 2023 (or latest feature package or support package stack)
- SAP Fiori front-end server 2023 for SAP S/4HANA Cloud Private Edition
- SAP_UI 7.58
- SAP S/4HANA Cloud Private Edition 2023 (or latest feature package or support package stack)
- SAP Gateway 7.58
- ABAP Platform 2023 (or latest feature package or support package stack) (part of SAP S/4HANA Cloud Private Edition 2023)

Standalone Deployment

You can use an existing front-end server (hub) for the SAP Fiori for SAP S/4HANA Cloud Private Edition installation. Existing apps continue to run against the old back-end systems while the newly installed applications of SAP Fiori for SAP S/4HANA Cloud Private Edition need to be configured to run against the SAP S/4HANA Cloud Private Edition system. As a prerequisite, you have to migrate the database of the central hub system (supported databases are SAP HANA, SAP MaxDB, or SAP ASE) and upgrade the system.

Components for hub deployment for SAP S/4HANA Cloud Private Edition 2023 (or latest feature package or support package stack):

- **Frontend:**
 - Optional UI components (HR, travel, MDG)
 - SAP Fiori for SAP S/4HANA Cloud Private Edition 2023 (or latest feature package or support package stack)
 - SAP Fiori front-end server 2023 for SAP S/4HANA Cloud Private Edition
 - SAP Gateway 7.52 (minimum version)
 - SAP NetWeaver 7.52 SPS11 (minimum version)
- **Backend:**
 - SAP S/4HANA Cloud Private Edition 2023 (or latest feature package or support package stack)
 - SAP Gateway 7.58
 - ABAP Platform 2023 (or latest feature package or support package stack) (part of SAP S/4HANA Cloud Private Edition 2023)

For more information, see https://help.sap.com/s4hana_op_2023 ► *Use* ► *Product Assistance* ► *English* ► *Related Information* ► *SAP S/4HANA and SAP S/4HANA Cloud Private Edition* ► *Enterprise Technology* ► *SAP Fiori* ► *SAP Fiori Overview* ►.

See also, SAP Notes [2590653](#) and [3348673](#).

4.4 Supported Start Releases

For a one-step conversion, your system needs to have a minimum release level. Check the *SAP S/4HANA Cloud Private Edition 2023: Restriction Note* [3348949](#) for more information.

Check the SAP Note *SAP S/4HANA Cloud Private Edition 2023: Release Information Note* [3307222](#) for the required feature package stack equivalencies.

4.5 Data Volume Reduction

SAP Data Volume Management is designed to reduce the data footprint so that you can achieve a shorter conversion duration due to reduced load size. Data Volume Management (DVM) offers various capabilities supporting the pre- and post-conversion phases. One central tool is the SAP DVM Work Center (DVM WoC) in SAP Solution Manager, including tools with a special focus on SAP HANA.

- **Guided Self Service:** You can generate a best practice document to determine data that can be reduced most efficiently in an SAP system before the conversion. You can use the same tool after the conversion to develop a blueprint for a DVM strategy.
- **Reorganization and Compression:** You can use this tool without a SAP HANA context in order to simulate the savings gained by reorganizing tables or databases or compressing the database.
- In addition, you can simulate the future system size of your system. This is useful for a forecast of the impact any planned measures may cause.

Beside the DVM Work Center, Data Volume Management offers services to give you an overview of your data distribution and quality as well as services to help you to develop a DVM road map for your system landscape. All services allow you to make flexible decision about your content and data volume management.

Additional Information

For more information, see the SAP Help Portal at <http://help.sap.com/solutionmanager>  **SAP Solution Manager <release>**  **Use**  **Application Help**  **Application Help (English)**  **Data Volume Management** .

For general information about Data Volume Management, see the SAP Community Network at <http://wiki.scn.sap.com/wiki/display/TechOps/Data+Volume+Management> .

4.6 Maintenance Planner

Overview

You have to use the Maintenance Planner to do the conversion to SAP S/4HANA. The Maintenance Planner generates the download files (add-ons, packages, DBDs, and the stack configuration file) that the Software Update Manager (SUM) uses to do the conversion. In particular, the Maintenance Planner checks if the following items are supported for the conversion:

- Add-ons to your system
- Active business functions in your system
- Industry solutions

If there is no valid conversion path for any of the items listed above (for example, an add-on is not released for the conversion yet), the Maintenance Planner prevents the conversion. After the check, the Maintenance Planner creates the stack configuration file (stack.xml).

Note

In order to generate the stack.xml, you need to have an SAP S/4HANA license. You can do the above checks without a license, but you cannot create a stack.xml with the Maintenance Planner without a license.

For more information, see the *Maintenance Planner User Guide* at <http://help.sap.com/maintenanceplanner> .

For preparatory steps specific to the conversion to SAP S/4HANA, see also [Prepare the Use of the Maintenance Planner \[page 37\]](#).

Business Functions

Business functions can have the following status: `always_on`, `customer_switchable`, and `always_off`. This results in the following behavior during the conversion:

- If a business function was switched on in the start release system, but defined as `always_off` in the SAP S/4HANA target release, then a system conversion is not possible with this release.
- If a business function was switched off in the start release system, but defined as `always_on` in the SAP S/4HANA target release, then the business function will be activated during the conversion.
- If a business function is defined as `customer_switchable` in the SAP S/4HANA target release, it will keep the state defined in the target release during the conversion.

For more information about always-off and always-on business functions in SAP S/4HANA, see SAP Notes [2240359](#) and [2240360](#).

Add-Ons

During the conversion, add-ons are either merged into SAP S/4HANA or deleted if no successor is available. Some add-ons may be included without being fully functional.

For a list of supported add-ons, see SAP Note [2214409](#).

For information about uninstalling add-ons, see SAP Note [2011192](#).

Industry Solutions

For information about supported industry solutions, see SAP Note [3659273](#).

4.7 Simplification Item-Check

The Simplification Item-Check (SI-Check) identifies all simplification items relevant for the current system. They will be called by the Software Update Manager (SUM) tool to ensure that the system is in a consistent state.

The SI-Check is delivered with SAP Notes [2399707](#) and [2502552](#). SAP Note [2399707](#) delivers the new check report; SAP Note [2502552](#) delivers the check classes via transport-based correction instructions (TCI) and prerequisite notes.

Note

If you follow the process described in SAP Note [2502552](#) exactly, you do not need to read any of the SAP Notes required by SAP Note [2502552](#). They do not contain any manual tasks and are independent of business functionality. After you run the SI-Check, the result list will contain the SAP Notes you have to look at in detail.

For information about the SI-Check, see:

- Blog post: <https://blogs.sap.com/2018/03/26/sap-s4hana-simplification-item-check-how-to-do-it-right/>

Implementing TCI and the SI-Check

1. To enable TCI implementation, follow the instructions provided in SAP Note [2187425](#) (see especially the PDF file attached to the SAP Note).

Note

If you do not enable your system to install TCI notes, SAP Note [2502552](#) will be implemented without the TCI part, which will cause missing check class errors. However, if your system is on the following SAP NetWeaver / ABAP Platform releases, TCI is already enabled:

TCI Enabled Releases

Release	Minimum Support Package
700	SP36
701	SP20
702	SP20
731	SP19
740	SP16
750	SP05

2. Follow the process description in SAP Note [2502552](#) to implement the SI-Checks.

Running the SI-Check

You run the SI-Check to identify the simplification items relevant for your conversion project. We recommend to do this early in the project, to get an overview of the conversion scope.

1. Start the report `/SDF/RC_START_CHECK` in transaction **SA38**.
2. In the section *Simplification Item Check Options*, choose the target SAP S/4HANA version.
3. Choose the mode in which you want to run the checks:
 - In online mode: The results are displayed immediately after the check is finished.
 - As a background job: We recommend this option if the check will need a long running time.
4. Run the checks to get an overview over all simplification items and then check the system consistency with *Check Consistency for All*.
5. Check the results

The report returns a list of relevant and irrelevant simplification items. We recommend that you check every relevant simplification item for the impact it will have on your conversion project.

Some simplification items have a consistency check. The consistency check identifies inconsistencies in the system that would be a problem during the SUM process. It also provides additional information on how to solve the problem. Some simplification items do not have a consistency check, but nevertheless are relevant.

This means that from a technical perspective a conversion of your system is possible without any action from you, but there will be an impact and you should investigate it.

Some of the error messages from the consistency check aim for you to read and understand the information provided by the consistency check error – for example, the information might be about data loss incurred during the conversion process. These errors can only be processed by creating an exception for them which is logged in the system. The errors are highlighted in the report in the column *Exemption Possible*, so that you can see which errors need an exemption.

For more information about how to use the SI-Checks, see the user guide in SAP Note [2399707](#).

SI-Check Messages and Their Meanings

The SI-Checks checks your system for data consistency (necessary for the conversion of existing data) and effects on the data after the conversion. The severity of the resulting messages indicates whether there are no inconsistencies, warnings you should look at, or inconsistencies you need to resolve. The results are provided as green, yellow, or red messages:

Message Overview

Message Color	Message Return Code	Descriptions
Green	0	These messages indicate that there are no technical or other inconsistencies. They also function as status messages and indicate that the conversion can go ahead.
Yellow	4	These messages provide important information (or warnings) about various topics, such as changes to business functions, or adaptations that can be done either before or after the conversion (but must be done to ensure business continuity). They indicate that there are no technical problems for the conversion itself. However, some of these yellow messages provide information about possible data changes, changes in functionality, or required tasks after conversion. For instance, per default, no custom table appends are retained during the conversion – the data from those fields is just lost. ⚠ Caution Please do not underestimate yellow messages. Read them carefully and do what is required to ensure system consistency after the conversion, so that business continuity is not compromised.
Red	7	These messages show skippable errors that indicate important changes for the affected simplification items. The errors are no inconsistencies, but you need to confirm that you have read and understood them. Usually they point out imminent data loss, deprecation, or required activities after conversion. Once you have confirmed (that is, exempted) them, they will no longer act as blockers for the conversion.

Message Color	Message Return Code	Descriptions
	8 or 12	These messages always indicate inconsistencies in the system. These inconsistencies need to be solved before the conversion, as they would act as blockers in later SUM phases. Please read the messages for information about how you can solve the inconsistencies. Note The Software Update Manager (SUM) runs the SI-Check at the beginning of the SUM process and again just before the downtime. At the beginning, the SUM process is stopped if a message with return code 12 is detected. Just before the downtime, the SUM process is stopped if a message with return code 8 or higher is found. So, for the SUM process to run successfully, you need to make sure that all the inconsistencies found by the SI-Check with message return codes at 8 or higher are solved.

Information about Financial Accounting

Controlling, General Ledger, and Asset Accounting pre-checks are included in the Simplification Item-Check.

After you have technically converted your system to SAP S/4HANA, you have to migrate your migration-relevant Customizing settings as well as your General Ledger, Asset Accounting, Controlling and Material Ledger data to the new data structure.

For more information about the conversion of Financial Accounting, see SAP Note [2332030](#).

Note

We recommend that you do the conversion to SAP S/4HANA in a development or test system first, so that you get access to the Accounting-relevant Customizing steps. You collect any changes in transport requests which you hand over to the SUM tool when you do your final conversion of your productive system.

For more information, see [Conversion in a Distributed System Landscape \[page 18\]](#).

4.8 Custom Code Analysis

The custom code migration checks are based on the simplification item concept. With SAP S/4HANA Cloud Private Edition, business processes have been changed and simplified. Before converting to SAP S/4HANA Cloud Private Edition 2023 (or any of its feature package or support package stacks), you need to check your custom code against the SAP S/4HANA Cloud Private Edition simplifications in a SAP S/4HANA Cloud Private Edition 2023 (or the relevant 2023 feature package or support package stack) system.

The simplifications are loaded into the Custom Code Migration tool. After you run the tool, you get a list of instances where your custom code does not comply with the scope and data structure of SAP S/4HANA Cloud Private Edition.

Note

The custom code checks do not yet identify all the instances where your custom code does not comply with SAP S/4HANA Cloud Private Edition. For a full overview of changes that may affect your custom code, see the Simplification Item Catalog, as explained in [Overview of the Conversion Process \[page 12\]](#).

We highly recommend that you perform these checks before starting the conversion process, because this step is the most important preparation for your ABAP custom code on the way to SAP S/4HANA Cloud Private Edition. Even if you do not plan to take development actions before the conversion, these checks will give you a sound foundation for your project planning and organization. They also enable you to decide on helpful preparatory activities, such as the decommissioning of unused custom code.

The application content of the simplification database is being increased and improved over time. In addition to the custom code analysis and adaptations based on the Custom Code Migration tool, you also need to test the custom code within SAP S/4HANA Cloud Private Edition.

For additional information about the Custom Code Migration tool, see:

- SAP Note [2241080](#) for information about how to download the simplification database.
- *Custom Code Migration Guide for SAP S/4HANA 2023* at https://help.sap.com/s4hana_op_2023
► [Implement](#) ► [Conversion & Upgrade Assets](#) ►

4.9 Data Transition Validation

The data transition validation is a tool that allows you to compare business data before and after a system conversion from SAP ERP to SAP S/4HANA Cloud Private Edition, or before and after an SAP S/4HANA Cloud Private Edition upgrade. The tool supports validation of upgrade or conversion scenarios with predelivered content for business validation. The tool uses business reports or transactions as instruments of comparison. It is available as part of the standard license.

To use DTV for the business validation after an upgrade, proceed as follows:

1. In the preparation phase of the upgrade, define the reports to be used for validation together with your requesting lines of business and your internal or external auditors.
2. Create a project and maintain required test specifications in the DTV tool.
3. During the ramp-down of the system prior to the SAP S/4HANA Cloud Private Edition system upgrade, trigger data extraction from the source release.
4. Once the SAP S/4HANA Cloud Private Edition system upgrade is finished, proceed with the tasks in the target release to validate business correctness.

For more information about the DTV tool, see:

- Product documentation at https://help.sap.com/s4hana_pce_2023 ► [Product Assistance](#) ► [Technology](#) ► [ABAP Platform](#) ► [Administering the ABAP Platform](#) ► [Administration Concepts and Tools](#) ► [Solution Life Cycle Management](#) ► [Software Logistics](#) ► [Data Transition Validation](#) ►

- SAP Note [3117879](#) 

4.10 Cross-Application Preparations

Before starting conversion activities, you need to do the preparatory activities described in the next sections.

4.10.1 Prepare the Use of the Maintenance Planner

Context

Besides the general preparation described in the *Maintenance Planner User Guide*, you have to make the following preparatory steps specific to the conversion to SAP S/4HANA:

Procedure

1. Setup the Maintenance Planner as described in the *Maintenance Planner User Guide* available at <http://help.sap.com/maintenanceplanner> .
2. Check the SPAM/SAINT version in your source release system.

Note

SPAM/SAINT patch 71 (or higher) is required.

3. Apply SAP Note [2186164](#)  to your SAP Solution Manager system.
4. Create an RFC-connection between your source release system and SAP Solution Manager:
 - a. In SAP Solution Manager, choose  [SOLMAN_WORKCENTER](#)  [Solution Manager Administration](#)  [Landscape \(Technical Systems\)](#) .
 - b. Click  [RFC connections](#)  [Start New Window](#) .
 - c. Select client 000 and choose [Advanced Mode](#).
 - d. Under [Export Options](#), fill in the field [SAP Solution Manager Host Name](#).
 - e. Under [Communication RFCs](#), select [Create SM_<SID>CLNT<CLNT>_READ](#).
 - f. Select [Create New User](#).
 - g. Enter a password.
 - h. Enter a user and password under [Managed System Setup Administrator](#), and choose [Test Login](#) in the group [Administration Users](#) to check that it works.

Related Information

[Maintenance Planner \[page 31\]](#)

4.10.2 Remove Client 066

Context

Client 066 is the Early Watch client which was set up during the installation of your system. This client is not used in SAP S/4HANA. To prevent issues, for example, with job scheduling, you have to remove it before starting the conversion.

Procedure

To remove client 066, proceed as described in SAP Note [1749142](#).

4.10.3 Uninstall SAP Fiori Apps

Context

If you have SAP Fiori apps installed locally on your source system, you need to uninstall them if they are not released for USER INTERFACE TECHNOLOGY 7.50 (SAP_UI 7.50). If you do not uninstall these apps, the Maintenance Planer will not allow a conversion for your system.

ⓘ Note

Use the [SAP Fiori Apps Reference Library](#) to check which applications are available for SAP S/4HANA 2023.

Procedure

1. Check SAP Note [2034588](#) for a list of apps that you need to uninstall and the steps required to do so.

ⓘ Note

SAP Note [2200415](#) provides a list of all apps that are supported by SAP_UI 7.50.

2. Uninstall the apps using SAINT. For more information, see SAP Note [2011192](#).

4.10.4 Prepare the Conversion of Authorizations

Check the simplification items relevant for your conversion project for required transactions used by your existing business roles. After the technical conversion with the Software Update Manager tool, you need to adjust your business roles.

For more information, see [Follow-On Activities for the Conversion of Authorizations \[page 51\]](#).

4.10.5 Prepare the Conversion for SAP Fiori UX Enablement

The recommended access to functions in SAP S/4HANA is through SAP Fiori UX with SAP Fiori Launchpad that you run in a browser or in SAP Business Client. If you plan to follow this recommendation, you need to prepare the conversion of your existing authorization concept to support the role-based menu structure and authorization concept of SAP Fiori Launchpad.

For more information on the role-based concept for SAP Fiori Launchpad, see https://help.sap.com/s4hana_op_2023 ► [Use](#) ► [Product Assistance](#) ► [English](#) ► [Related Information](#) ► [SAP S/4HANA and SAP S/4HANA Cloud Private Edition](#) ► [Enterprise Technology](#) ► [SAP Fiori](#) ► [SAP Fiori Overview](#) ► [Implement SAP Fiori Apps](#) ►. One of the conversion goals is to keep your existing authorization concept as a basis for the converted authorization concept.

You need to review your authorization concept and map existing back-end role menu structures to SAP Fiori catalogs. SAP Fiori catalogs are assigned to front-end roles that define the SAP Fiori Launchpad content available to users. Use the [SAP Fiori App Reference Library](#)  to check the SAP Fiori catalogs or roles available for SAP S/4HANA 2022 applications.

For information about the deployment options for SAP Fiori for SAP S/4HANA, see [SAP Fiori Deployment Options and System Landscape Recommendations](#) .

4.11 List of Application-Specific Preparations

The list below contains important application-specific preparatory steps and where to find their documentation.

Note

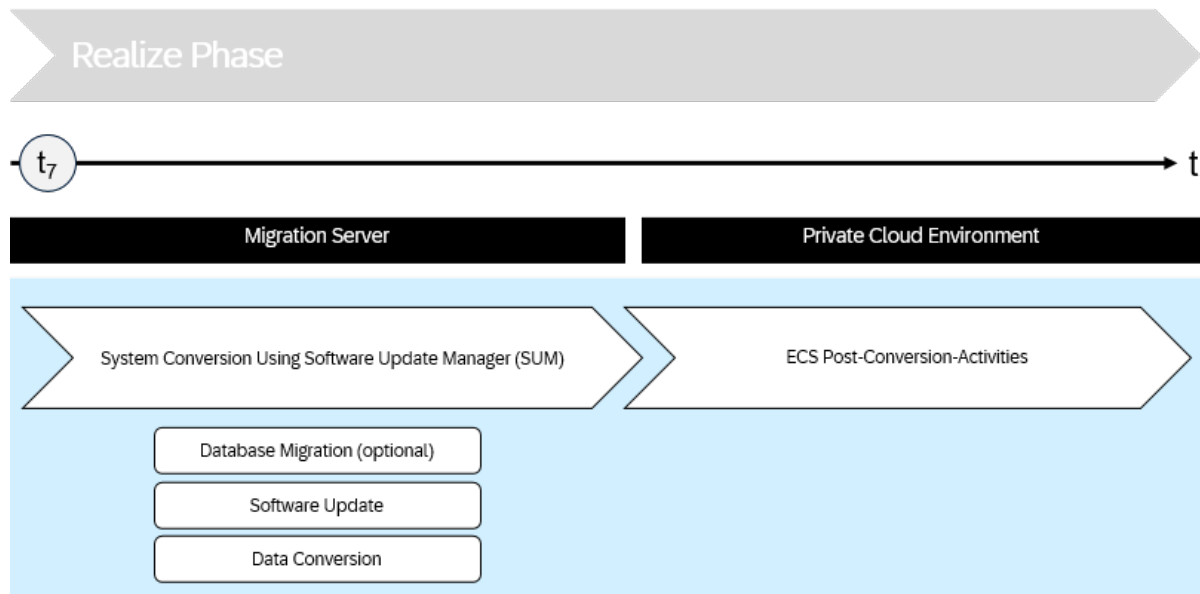
This list contains an overview of important steps, but it is not complete. You find the complete list of conversion-relevant items in the Simplification Item Catalog, as explained in the [overview \[page 12\]](#).

App-Specific Preparations

Preparatory Tasks per Application Area		Reference
Enterprise Technology	Information Governance: Business Partner Approach	SAP Note 2265093 

Preparatory Tasks per Application Area		Reference
	Application Life-Cycle Management: Check Program for Material Number Extension	SAP Note 2216958
Finance	Documentation of Finance-related conversion tasks, see the SAP Note.	SAP Note 2332030
SAP Credit Management	Documentation of all SAP Credit-Management-related conversion tasks, see the SAP Note.	SAP Note 2270544
SAP Cash Management	Cash management	SAP Note 2270400
Sales: Order and Contract Management	Foreign Trade Replaced by Global Trade Services	SAP Notes 2223144 and 2205202
	Revenue Recognition Replaced by SAP Revenue Accounting and Reporting	SAP Notes 2225170 and 2227824
	Simplified Data Models in Sales and Distribution (SD)	SAP Notes 2198647 and 2224436
	SD Pricing: Data Model Changes	SAP Note 2267308
Retail	Changes in Retail functionality	SAP Notes 2385984 and 2386003
Supply Chain: Inventory	Simplified Data Model in Inventory Management (MM-IM)	SAP Notes 2206980 , 2238690 , and 2236753
Environment Health and Safety	Documentation of all EHS-related conversion tasks, see the SAP Note.	SAP Note 2336396
Product Safety and Stewardship	Documentation of all PSS-related conversion tasks, see the SAP Note.	SAP Note 2267461
Discrete Industries & Mill Products	Long material number	SAP Note 2270396
Business Network Integration	Conversion from SAP Business Network Integration (that is, Ariba Network Integration) for SAP Business Suite	SAP Note 2341836
Media: Media Product Master	Documentation of all conversion tasks related to Media Product Master.	SAP Note 2499057

5 Realizing the Conversion



SAP S/4HANA System Conversion: Realize Phase

After the preparation phase, you start with the realization of the conversion to SAP S/4HANA Cloud Private Edition using the Software Update Manager (SUM) tool. For a short overview of the entire process, see [Overview of the Conversion Process \[page 12\]](#).

After the SUM run, we highly recommend that you adapt your custom code, see [Custom Code Adaptation \[page 46\]](#).

📘 Note

You find the cross-application follow-on steps in this guide; you get the application-specific follow-on steps with the Simplification Item-Check and custom-code checks and with the Simplification Item Catalog or the SAP Readiness Check. Some of the most important application-specific preparation steps are also listed in this section: [List of Application-Specific Follow-On Activities \[page 54\]](#).

Please see also SAP Note [3634222](#) 📄.

5.1 Conversion Using SUM

Software Update Manager (SUM) is the technical tool used for the system conversion to SAP S/4HANA Cloud Private Edition.

Note

You have to run the Maintenance Planner before the SUM, because the SUM requires the `stack.xml` generated by the Maintenance Planner as an input. For more information, see [Maintenance Planner \[page 31\]](#).

Within the SUM-process the following steps are done in a one-step procedure (for dedicated start releases):

1. Database migration (optional).
If your source system is not yet running on the SAP HANA database, use the database migration option (DMO) of the Software Update Manager to migrate your database to SAP HANA during the conversion.
2. Installation of the SAP S/4HANA Cloud Private Edition software.
3. Conversion of your data into the new data structure used by SAP S/4HANA Cloud Private Edition (this is the automated part of the data migration).

For information on SUM downtime optimization, see the section [Runtime Optimization \[page 23\]](#).

For all information about using the SUM, see the guide *System Conversion to SAP S/4HANA using SUM* available at <http://help.sap.com/sltoolset>  [Software Logistics Toolset](#)  [System Maintenance](#)  [System Maintenance Scenarios](#)  [System Conversion to SAP S/4HANA using SUM 2.0 <latest SP>](#) .

5.2 SAP ECS Post-Conversion Activities

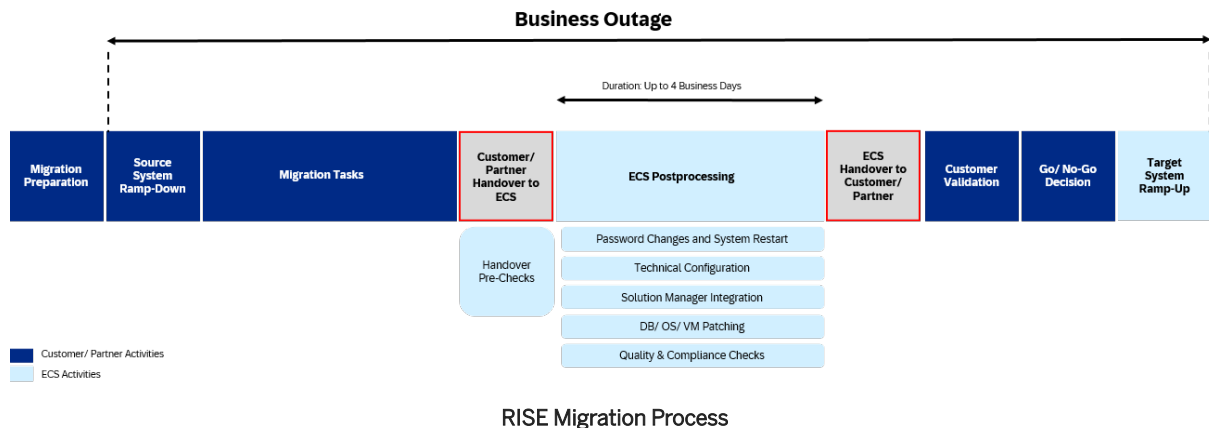
You or your migration partner need to plan handover points to ensure smooth cooperation with SAP, as both parties share responsibility throughout migration. Because access to ECS-hosted systems is restricted, you or your migration partner must submit service requests (SRs) for standard tasks. This makes detailed planning and clear communication even more important.

Tip

The **RISE with SAP system transition workbench**, along with its guided procedure, provides direction for all technical handover steps. For more information, see [RISE with SAP System Transition Workbench \[page 15\]](#).

Overview: RISE Migration Process

Maintaining prompt and clear communication with SAP Enterprise Cloud Services is essential. SAP ECS will act on your instructions—whether SRs or incidents—to help keep the migration process aligned with objectives.



RISE Migration Process

The customer or migration partner initiates the process by preparing the system, as detailed in chapter [Preparing the Conversion \[page 25\]](#) of this guide. Once preparation is complete, the source system is ramped down.

Next, the customer or migration partner executes the system conversion using the Software Update Manager (SUM) tool.

Upon completion, responsibility transfers to SAP Enterprise Cloud Services (ECS), which assumes management of the system. Before SAP formally accepts the system, comprehensive system health checks are performed. SAP then updates system passwords to align with the RISE environment and restarts the system as required. Following this, SAP proceeds with the integration setup for Focused Run (FRUN), which is an advanced monitoring and operations platform designed to provide high-volume system and application monitoring, analytics, and alerting for SAP environments. Critical updates are applied to the database, operating system, and virtual network to ensure compliance with quality standards. SAP ECS then conducts quality compliance checks.

Once these steps are finalized, the system is officially handed back to the customer. The customer team then validates the system and makes a go/no-go decision for production rollout. Upon approval, the target system is ramped up by ECS.

You can now perform the follow-on activities as specified in chapter [Follow-On Activities \[page 45\]](#) of this guide.

Dry Runs and Cutover

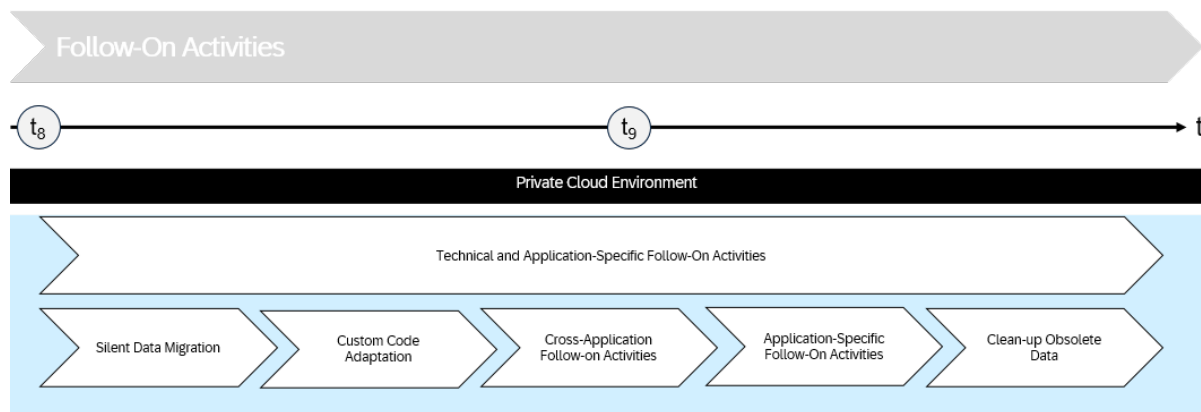
Within the standard SAP S/4HANA Cloud Private Edition basic contract scope, additional test runs are provided for, and more can be added as a billable service if necessary. In SAP S/4HANA conversion scenarios, two dry runs are available—one for non-production (QAS, DEV, and so on) systems and another for the production system. If production hardware is used for dry runs, there's no need to rebuild the target system for the final run. Partners can efficiently drop the database and continue with the migration.

While customers can perform multiple dry runs if they wish, ECS post-migration/build activities are limited according to roles and responsibilities. In the case of sandbox run (SBX), quality- or production-tier resources can be reused if no standalone SBX is included in the contract.

ECS post-processing are performed after partners completed the migration and post-system copy tasks. These tasks involve internal ECS component tasks which aren't possible for partner or customer resources to complete. It's crucial to incorporate time frames and lead times for requesting these actions via Service Requests (SR) into the migration and cutover plan.

This comprehensive support framework ensures a systematic and efficient process during dry runs and cutover in the SAP S/4HANA Cloud Private Edition environment.

6 Follow-On Activities



Conversion to SAP S/4HANA Cloud Private Edition: Follow-On Activities

After SAP ECS has completed the post-conversion activities and handed over the system to you/ your migration partner, , make sure to follow-up on the activities displayed in the graphic. For a short overview of the complete process, see [Overview of the Conversion Process \[page 12\]](#).

6.1 Silent Data Migration

Migration of application data usually happens during release upgrades or updates during downtime. In contrast, the Silent Data Migration Infrastructure (SDMI) allows zero-downtime upgrades and runs after the upgrade (or conversion) during business operations.

An SDMI supports uptime capability for at least one release. Therefore zero-downtime upgrades are possible if every release is taken into account. If an upgrade jumps over a certain release (for example, if the upgrade goes from SAP S/4HANA 1809 straight to SAP S/4HANA 2020), the SDMIs from the release that was jumped over (in this example, SAP S/4HANA 1909) are done during business downtime (if they do not support uptime capability for the target release).

As of SAP S/4HANA 2020 (as start release) SDMIs also support **three** releases in uptime making it possible to do jump-upgrades with zero downtime option (ZDO) over up to **two** releases (towards the **third** release), for example from SAP S/4HANA 2020 to SAP S/4HANA 2023.

By default the SDMIs are run during uptime. The SDMI job from the job repository starts and calls the SDMIs in each client individually once the system comes out of the maintenance mode. To see all relevant SDMIs, call transaction `SDM_MON`.

The users can be maintained in transaction `SDM_USER` prior to the upgrade, so that the users can comply to your corporate standard. However, they can also be created as technical users during the upgrade process by the Software Update Manager (SUM). During the post-processing phase, the SUM checks if the technical user exists. If not, a message will be created in the update log. If the users are not created, the SDMIs cannot be started and the data will not be migrated.

Note

It is also possible to create the technical users after the SUM run. For more information, see

https://help.sap.com/s4hana_op_2023 ► Use ► Product Assistance ► English ► Related Information
► SAP S/4HANA and SAP S/4HANA Cloud Private Edition ► Enterprise Technology ► ABAP Platform ►
Adminstrating the ABAP Platform ► Administration Concepts and Tools ► Solution Life Cycle Management
► Silent Data Migration Infrastructure ►

The SUM offers the option to force the SDMI processing during downtime. In that case, the SDMIs are finished by the time the system resumes business operations.

Caution

On the one hand, this option has the one benefit that the business data is no longer changed by SDMI processes after the upgrade procedure is completed. On the other hand, this option also includes disadvantages that you should be aware of:

- The overall system business downtime is significantly extended due to the time it takes to execute the data migration because the SUM runs the SDMI jobs synchronously and waits until they are completed.
- Depending on the available resources, the size of the migration tables and the configuration of the dialog work processes and the parallelization framework, the downtime can even reach a duration that is no longer tolerable.

Note

Please take care that all SDMIs have been processed successfully in all clients. Otherwise this will leave the upgrade unfinished and bears the risk, that some new application functionality may not be available on the target release. Furthermore, all SDMIs need to be done before the next upgrade can happen.

For more information, see:

- SAP Note [2850918](#) ► Authorizations required for Silent Data Migration (SDMI) in SAP S/4HANA Release
- SAP Note [2664638](#) ► Create and assign SDMI User in a client
- SAP Note [2907976](#) ► Silent Data Migration (SDMI) - FAQ
- SAP Note [2916801](#) ► Silent Data Migration (SDMI) Configuration Options
- SAP Note [3382097](#) ► SDMI Classes in the Silent Data Migration Framework in SAP S/4HANA 2023 (Details, Corrections, Special Handling)
- SAP Note [3445802](#) ► Silent Data Migration (SDMI) New Rows after Migration - FAQ
- <https://blogs.sap.com/2019/10/03/s4hana-silent-data-migration-infrastructure-quick-guide/> ►

6.2 Custom Code Adaptation

After the Software Update Manager (SUM) has done the technical conversion, you can start adapting your custom code.

1. You need to adapt any modifications and enhancements using the standard transactions SPDD, SPAU and SPAU_ENH.

This is the same process as in previous upgrades in the SAP Business Suite product portfolio except that the tools SPDD and SPAU have been renewed.

2. You need to fix any issues due to SAP S/4HANA Cloud Private Edition simplifications.
To find the issues, you use the ABAP Test Cockpit (ATC) and do a check run with the check variant S4HANA_READINESS locally in your converted system.

We recommend to use the ABAP development tools for Eclipse to do the custom code adaptation as SE80 no longer supports all development object (such as CDS Views) needed in SAP S/4HANA Cloud Private Edition.

For more information about these tools, see the SAP Help Portal at https://help.sap.com/s4hana_pce_2023
► *Product Assistance* ► *Technology* ► *ABAP Platform* ► *Development Information* ► *Application Development on AS ABAP* ► *ABAP Development Tools for Eclipse* ►.

For more information about doing local ATC runs and for the custom code migration in general, see the *Custom Code Migration Guide for SAP S/4HANA and SAP S/4HANA Private Cloud Edition* at https://help.sap.com/s4hana_pce_2023 ► *Conversion & Upgrade Assets* ►.

6.3 Cross-Application Follow-On Activities

After the Software Update Manager (SUM) has run, you need to do the follow-on activities described in the next section.

6.3.1 Adapting Database Extensions to SAP S/4HANA Cloud Private Edition

Context

When you convert your system from SAP Suite on HANA to SAP S/4HANA, modifications to the SAP HANA database remain unchanged. However, to make your modifications visible on the UI, manual steps can be required in different content layers.

Procedure

1. If required for your modifications, adapt the relevant Core Data Service (CDS) views in the SAP Business Suite layer. You can extend CDS views by using ABAP development tools. For more information, see https://help.sap.com/s4hana_op_2023 ► *Use* ► *Product Assistance* ► *English* ► *Related Information* ► *SAP S/4HANA and SAP S/4HANA Cloud Private Edition* ► *Enterprise Technology* ► *ABAP Platform* ►

[Developing on the ABAP Platform](#) > [Development Information](#) > [ABAP Development Tools for Eclipse](#) > [SAP - ABAP CDS Development User Guide](#) > [Tasks](#) > [Extending Data Models](#) > .

2. If required for your modifications, adapt the OData services for your CDS views in the SAP Gateway layer:
 - For OData services that are included in a CDS view definition as an annotation, the relevant artifacts are generated automatically. No modifications are required in the SAP Gateway layer. For more information, see https://help.sap.com/s4hana_op_2023 under [Use](#) > [Product Assistance](#) > [English](#) > [Related Information](#) > [SAP S/4HANA and SAP S/4HANA Cloud Private Edition](#) > [Enterprise Technology](#) > [ABAP Platform](#) > [Developing on the ABAP Platform](#) > [Development Information](#) > [Application Development on AS ABAP](#) > [SAP \(On-Premise\) - ABAP Programming Model for SAP Fiori](#) > [Get Started](#) > [Developing a Simple List Reporting App](#) > [Generating OData Service With Auto-Exposure](#) > .
 - OData services that are not included in a CDS view definition must be redefined in Service Builder. For more information, see https://help.sap.com/s4hana_op_2023 under [Use](#) > [Product Assistance](#) > [English](#) > [Related Information](#) > [SAP S/4HANA and SAP S/4HANA Cloud Private Edition](#) > [Enterprise Technology](#) > [ABAP Platform](#) > [Developing on the ABAP Platform](#) > [Development Information](#) > [SAP Gateway Foundation Developer Guide](#) > [SAP Gateway Service Builder](#) > [Data Modeling Basics](#) > [Data Modeling Options](#) > [Redefining Services](#) > .
3. If available for your app, you can use runtime adaptation to add, move, or remove view fields in the UI layer. For more information, see [Adapting the User Interface \[page 54\]](#). As an alternative, you can extend views by using SAP UI5 extension points. For more information, see https://help.sap.com/s4hana_op_2023 under [Use](#) > [Product Assistance](#) > [English](#) > [Related Information](#) > [SAP S/4HANA and SAP S/4HANA Cloud Private Edition](#) > [Enterprise Technology](#) > [ABAP Platform](#) > [UI Technologies](#) > [SAPUI5: UI Development Toolkit for HTML5](#) > [Extending Apps](#) > [Using SAPUI5 Flexibility](#) > .

6.3.2 Output Management

SAP S/4HANA introduces a new style of output management. Note that other existing frameworks can be used as well, depending on the application.

You make settings for output control in Customizing under [Cross-Application Components](#) > [Output Control](#) > .

This is an overview of the required technical setup.

Prerequisites for Output Control

- bgRFC configuration has been set up
- Storage system and category have been maintained
- BRFplus is active and usable
- Adobe Document Services is available (when using Adobe Forms)

bgRFC (Background Remote Function Call)

Output control uses a bgRFC to process output. Therefore, you need to maintain the bgRFC configuration. Otherwise, no output can be performed.

You can perform all the relevant steps in transaction **SBGRFCCONF**. One of the most important steps is defining a supervisor destination, as bgRFC doesn't work without it.

For more information, enter the keyword *bgRFC Configuration* at <http://help.sap.com>, and refer to SAP Note [2309399](#) and SAP Note [1616303](#).

Storage System and Category

Output control needs a defined storage system (content repository) to save the rendered form output as PDF.

To set up the storage system, choose the following navigation option:

SAP Menu	SPRO > Cross-Application Components > Document Management > General Data > Settings for Storage Systems > Maintain Storage System
Transaction Code	/n0AC0

You can set up the storage type which fits your needs, for example a SAP System Database, or a HTTP content server (such as fileserver, database, or external archive).

Once the storage system is available, you need to assign it to the predelivered storage category SOMU. To do so, choose the following navigation option:

SAP Menu	SPRO > Cross-Application Components > Document Management > General Data > Settings for Storage Systems > Maintain Storage Category
Transaction Code	/n0ACT

Select category SOMU. For column *Document Area*, choose SOMU. For column *Content Repository*, choose the content repository you created in the previous step.

Business Rule Framework plus (BRFplus)

Output control uses BRFplus for the output parameter determination. Technically, BRFplus is based on WebDynpro applications. Therefore, you need to set up the according ICF services:

/sap/bc/webdynpro/sap/fdt_wd_workbench	FDT Workbench
/sap/bc/webdynpro/sap/fdt_wd_object_manager	FDT Object Manager
/sap/bc/webdynpro/sap/fdt_wd_catalog_browser	FDT Catalog Browser

For more information, enter the keyword *Active Services in SICF* at <http://help.sap.com>.

Once you've set up the services, download and install the required BRFplus applications from SAP Note [2248229](#).

Procedure:

1. Access transaction **BRF+**.
If required, personalize your screen, and change the user mode from *Simple* to *Expert*.

2. On the *Business Rule Framework plus* screen, choose **Tools** > *XML Import*.
3. On the *Business Rule Framework plus – XML Import* screen, under *File and Transport Request*, browse for the local *.xml files you want to import. You can import the files one after the other.
4. In the *Customizing Request* field, enter an applicable Customizing Request ID.
5. Choose *Upload XML File*.
6. Choose *Back to Workbench*.

Adobe Document Services (ADS)

Applications in SAP S/4HANA ship default form templates implemented as PDF-based print forms with fragments.

They require ADS for rendering. ADS is available as cloud solution or on-premise solution.

The cloud solution is a service provided on SAP Cloud Platform. See SAP Note [2219598](#) for more information and links to the documentation for the new solution Form Service by Adobe.

For the on-premise solution, you need an AS Java installation (with ADOBE usage type) to run ADS.

ADS itself must have version 10.4 (1040.xxx) or higher. This version is delivered with SAP NetWeaver 7.3 EHP1 SP7 (and higher), NW 7.40 SP2 (and higher), and NW 7.50 (all SPs).

You do not necessarily need to use ADS, as output management also supports SAPscript and Smart Forms.

However, special customizing is necessary for these two form technologies, and restrictions apply. For more information, see SAP Notes [2292539](#) and [2294198](#).

Printer Setup

Printing is done using the spool. For more information, see the *SAP Printing Guide* at https://help.sap.com/s4hana_op_2023 > *Use* > *Product Assistance* > *English* > *Related Information: SAP S/4HANA and SAP S/4HANA Cloud Private Edition* > *Enterprise Technology* > *ABAP Platform* > *Administering the ABAP Platform* > *Administration Concepts and Tools* > *Solution Life Cycle Management*.

Output control uses the short name of the printer (for example LP01), as defined in transaction SPAD.

Limitations

- Printing using the spool is not available in release S4CORE 1.00 SP00. If this is the case, please upgrade to S4CORE 1.00 SP01.
- Currently, a PDF is always created for any kind of form.
This has the following impact:
 - Previewing the document from the spool request is only possible when the device type is PDF1 or PDFUC.
 - Using another device type can lead to alignment issues for SAPscript and Smart Forms.
- Frontend output is not supported, since the output is processed via bgRFC.

Related Information

[SAP Note 2228611](#)

6.3.3 Follow-On Activities for the Conversion of Authorizations

You need to review your existing back-end PFCG role menus for obsolete transactions as well as for transaction code replacements. You can do this with the transaction SU25 report [Exchange of obsolete transactions in role menu](#). For more information, see SAP Note [2465353](#).

If you plan to enable SAP Fiori UX, see [Follow-On Activities for SAP Fiori UX Enablement \(incl. Authorizations\)](#) [page 51].

6.3.4 Follow-On Activities for SAP Fiori UX Enablement (incl. Authorizations)

The following activities are relevant if you plan to enable SAP Fiori UX:

Activities for Enabling SAP Fiori UX

Activity	Description
Analyze SAP Fiori content with the help of the SAP Fiori Apps Library or with the SAP Readiness Check	SAP Fiori UX supports role-based content that includes new SAP Fiori Apps as well as classic UI technologies that are bundled in catalogs for authorization handling and in groups for structuring a user's homepage in the SAP Fiori launchpad. SAP S/4HANA delivers business roles as examples for structuring your SAP Fiori content. Analyze the available SAP Fiori content in the SAP Fiori Apps Library. The SAP Fiori Apps Library also provides a self-service to get specific SAP Fiori app recommendations based on your system usage, see SAP Fiori Apps Library  Get SAP Fiori App Recommendations . Alternatively, SAP Readiness Check for SAP S/4HANA recommends SAP Fiori apps based on your transaction usage history, see the section <i>Recommended SAP Fiori Apps</i> in the <i>Feature Scope Description</i> at https://help.sap.com/viewer/p/SAP_READINESS_CHECK.

Activity	Description
Define your front-end catalogs for SAP Fiori	SAP provides templates for business catalogs that you can find in the SAP Fiori Apps Library. Check if the template catalogs fit your needs and then either adapt these front-end catalogs or create new catalogs for your requirements. Enrich them with relevant back-end transactions according to existing back-end roles. See also <i>SAP Fiori Launchpad Content and Authorization Concept</i> at https://help.sap.com/s4hana_op_2023 ► <i>Use</i> ► <i>Product Assistance</i> ► <i>English</i> ► <i>Related Information</i> ► <i>SAP S/4HANA and SAP S/4HANA Cloud Private Edition</i> ► <i>Enterprise Technology</i> ► <i>SAP Fiori</i> ► <i>SAP Fiori Overview</i> ► <i>Implement SAP Fiori Apps</i> ► <i>User Management and Authorization</i> ►. As prerequisite, you need to have done a replication of your back-end applications, see the section <i>Replicate App Descriptors</i> at https://help.sap.com/s4hana_op_2023 ► <i>Use</i> ► <i>Product Assistance</i> ► <i>English</i> ► <i>Related Information</i> ► <i>SAP S/4HANA and SAP S/4HANA Cloud Private Edition</i> ► <i>Enterprise Technology</i> ► <i>SAP Fiori</i> ► <i>SAP Fiori Overview</i> ► <i>Implement SAP Fiori Apps</i> ► <i>UI-Specific Implementation Tasks</i> ► <i>Basic Information</i> ►.
Define your front-end business role	SAP provides templates for business roles, which contain references to catalogs and groups. You may copy these business roles and adapt them to your needs. You need to assign relevant catalogs to front-end business roles to make the apps contained in a catalog available for user access from the SAP Fiori launchpad. In addition you need to add the start authorizations for the activated OData services used by the apps contained in a catalog.

Activity	Description
Integrate SAP Fiori business catalogs into the back-end PFCG roles	To enable an integration of SAP Fiori front-end with the SAP S/4HANA back-end systems, you need to integrate the front-end catalogs (that are assigned to your front-end roles) into your existing the back-end PFCG roles. This replicates the start authorization of the OData services for the apps in the catalogs to the role menu of the back-end PFCG roles. For more information, see: - See also <i>SAP Fiori Launchpad Content and Authorization Concept</i> at https://help.sap.com/s4hana_op_2023 ▶ Use ▶ Product Assistance ▶ English ▶ Related Information ▶ SAP S/4HANA and SAP S/4HANA Cloud Private Edition ▶ Enterprise Technology ▶ SAP Fiori ▶ SAP Fiori Overview ▶ Implement SAP Fiori Apps ▶ User Management and Authorization ▶. https://help.sap.com/s4hana_op_2023 ▶ Use ▶ Product Assistance ▶ English ▶ Related Information ▶ SAP S/4HANA and SAP S/4HANA Cloud Private Edition ▶ Enterprise Technology ▶ ABAP Platform ▶ UI Technologies ▶ SAP Fiori Launchpad ▶ Administration Guide ▶ Setting Up Authorization Roles ▶ Configuring Roles for Catalogs, Spaces and Groups ▶ Configure Roles for Catalogs ▶.
Configure access to SAP Easy Access Menu and User Menu from SAP Fiori Launchpad	A starting point for the usage of SAP Fiori launchpad can be the access to SAP Easy Access Menu and User Menu from the connected back-end system. From these menus a user can populate the SAP Fiori launchpad homepage. This configuration enables access to existing back-end SAP Easy Access Menu and User menus. This is also an additional access option for users with dedicated SAP Fiori Launchpad content that was created on the front-end system. For more information, see https://help.sap.com/s4hana_op_2023 ▶ Use ▶ Product Assistance ▶ English ▶ Related Information ▶ SAP S/4HANA and SAP S/4HANA Cloud Private Edition ▶ Enterprise Technology ▶ ABAP Platform ▶ UI Technologies ▶ SAP Fiori Launchpad ▶ Administration Guide ▶ Setting Up Launchpad Content ▶ Integrating Remote Content ▶.

6.3.5 Adapting the User Interface

Key users can adapt the user interface (UI) of their apps at runtime in a modification-free way, for example, by adding, removing, or moving fields and groups. Runtime adaptation is supported for apps that use SmartForm controls with stable IDs. Note that you can only add fields which have been made available for this app. If you need additional fields, you have to create them as described at https://help.sap.com/s4hana_op_2023 ► [Use Product Assistance](#) ► [English](#) ► [Related Information](#) ► [SAP S/4HANA and SAP S/4HANA Cloud Private Edition Enterprise Technology](#) ► [SAP Fiori](#) ► [SAP Fiori Overview](#) ► [Extend and Develop SAP Fiori Apps](#) ► [Extend SAP Fiori Apps](#) ►.

6.4 List of Application-Specific Follow-On Activities

The list below contains important application-specific follow-on steps and where to find their documentation.

Note

This list contains an overview of important steps you may need to do after the conversion process, but it is not complete. You find the complete list of conversion-relevant items in the Simplification Item Catalog, as explained in the [overview \[page 12\]](#).

App-Specific Follow-On Tasks

Follow-On Tasks per Application Area		Reference
Finance	Documentation of Finance-related conversion tasks, see the SAP Note.	SAP Note 2332030 
SAP Credit Management	Documentation of all SAP Credit Management-related conversion tasks, see the SAP Note.	SAP Note 2270544 
Human Resources	Integration of HR Master Data	SAP Note 2340095 
Sales: Order and Contract Management	SD Pricing: data model changes	SAP Note 2267308 
	SD Rebate Processing replacement by Settlement Management	SAP Note 2226380 
	Optimization of SD Rebate Processing for Trade Promotion Management	SAP Note 2200691 
Retail	Cleanup of Retail generic articles and variant data	SAP Note 2350650 
	Documentation of site master conversion, see the SAP Note.	SAP Note 2310884 

Follow-On Tasks per Application Area		Reference
Environment, Health, and Safety	Documentation of all EHS-related conversion tasks, see the SAP Note.	SAP Note 2336396 
Enterprise Portfolio and Project Management	Conversion tasks related to Commercial Project Management	SAP Note 2766260 
Product Safety and Stewardship	Documentation of all PSS-related conversion tasks, see the SAP Note.	SAP Note 2267461 
Integration	Business network integration: Activities after converting SAP Business Network Integration (that is, Ariba Network Integration)	SAP Note 2341836 
	Integration with SAP SuccessFactors Employee Central	SAP Note 2340095 
Media: Media Product Master	Documentation of all conversion tasks related to Media Product Master.	SAP Note 2499057 
Other Follow-On Tasks		
Follow-Up Activities for Advanced Variant Configuration	For information about how enable Advanced Variant Configuration, see the section <i>Follow-Up Activities for Advanced Variant Configuration</i> in the <i>Installation Guide for SAP S/4HANA</i> at https://help.sap.com/s4hana_op_2023  Implement  Guides  Installation Guide  You need to do all the steps described in this section.	

6.5 Cleaning Up Obsolete Data After the Conversion

The Obsolete Data Handling tool allows you to delete obsolete data that may remain after the conversion of your SAP ERP system to SAP S/4HANA.

Obsolete data originates from SAP S/4HANA data model simplifications in many application areas where the related application data is migrated to new data structures. These areas include Material Management, Financials, Sales and Distribution, Environment and Health Science and others. The source data is not deleted automatically during the conversion because this would increase the business downtime and the obsolete data store may sometimes be required during or after the conversion. Therefore, after you have successfully tested and validated the conversion results, you can clean up the obsolete data with the Obsolete Data Handling tool.

Note

With SAP S/4HANA 2023 a new obsolete data handling tool is delivered.

The old tool (report/transaction code `ODH_Data_processing`) can only be used with SAP S/4HANA 2023 to view the logs of already finished cleaning runs. It will not be available at all for future SAP S/4HANA releases. For the old tool, see SAP Note [2661837](#) .

All new obsolete data cleaning activity must be done with the new, class-based tool (transaction code SODH). For information on how to enable and use this tool in the productive SAP S/4HANA 2023 system, see SAP Note [3335020](#) .

7 Appendix

7.1 SAP Readiness Check Versus SI-Check

The tools SAP Readiness Check and Simplification Item-Check (SI-Check) are used to support the conversion process, see also [Overview of the Conversion Process \[page 12\]](#). The following table explains the differences between the two tools.

Tool Comparison

	SAP Readiness Check	Simplification Item-Check /SDF/RC_START_CHECK
Type	Customer self-service provided by SAP Digital Business Services (included as standard support)	Standalone report
SAP Solution Manager	Not required	Not required
User Interface	Cloud-based web interface	SAP GUI
Included Checks	• Simplification item relevance • Custom code • Recommended SAP Fiori apps • Add-on compatibility • SAP Custom Development projects • SAP S/4HANA sizing • Business functions • Check of system consistency before conversion or upgrade • Integration analysis	• Simplification item relevance • Check of system consistency before conversion or upgrade
Called by Software Update Manager (SUM)	No	Yes
Mandatory	No	Yes
Use Cases	• Conversion to SAP S/4HANA • Upgrade to a higher SAP S/4HANA release	• Conversion to SAP S/4HANA • Upgrade to a higher SAP S/4HANA release

While both the SAP Readiness Check and the Simplification Item-Check can display information on simplification item relevance and consistency, they serve different purposes and are both required:

- SAP Readiness Check is mainly a planning tool which you run early in a system conversion project to get an overview about the required activities – including tasks related to simplification items. It is also useful for tracking these activities during the project, for example, using the burndown chart that shows simplification item consistency errors.
- The Simplification Item-Check is used on operational level during the cleanup of the simplification item consistency errors, up to the downtime, before which the SUM tool does the final executions of the SI-Check. So, the SI-Check offers a more detailed control over running the checks. This includes the option to re-run checks for individual simplification items instead of running all checks like SAP Readiness Check does. This option can significantly reduce the check runtime when you just want to re-check if a specific error which you have just fixed is really gone.
In addition, the SI-Check offers the option to exempt certain types of errors (for details, see the blog post linked below).

For more information, see:

- SAP Note [2913617](#)  (about the SAP Readiness Check).
- In this guide [Simplification Item-Check \[page 32\]](#)
- Blog post <https://blogs.sap.com/2018/03/26/sap-s4hana-simplification-item-check-how-to-do-it-right/> 

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