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Agenda

- Introduction – Your Way to SAP S/4HANA
- Overview - Functions and Process
- Different Migration Approaches
  - File/Staging
  - Direct Transfer
  - Direct Transfer Scenarios
- Migration Objects
- Further Information
- Key Takeaways
- Appendix
Introduction – Your Way to SAP S/4HANA
Your Way to SAP S/4HANA in General
Three transition scenarios

- **REUSE** by in-place conversion
  - Highly standardized fueled with best practices & based on a clean core

- **REENGINEERING** with data migration
  - Customer-tailored

- **New Implementation**
  - Business Model Innovation

- **System Conversion**
  - Start Rapid Modernization
  - SAP S/4HANA
  - SAP S/4HANA Cloud, private edition

- **Selective Data Transition**
  - Selective Business Process Optimization
  - SAP S/4HANA
  - SAP S/4HANA Cloud, private edition

Mapping your journey to SAP S/4HANA – a practical guide for senior IT leadership
Your Way to SAP S/4HANA Detailed

System Conversion

- Bring your business processes to the new platform
  - A complete technical in-place conversion of an existing SAP ERP system to SAP S/4HANA
  - Adopt new innovations at your speed
  → Delivery model: included in SAP S/4HANA shipment

Partly re-use, partly re-implementation

- Covers the migration of relevant business data from SAP ERP to SAP S/4HANA
- Allows to combine redesign of business processes with retaining historical data
- Realized by a combination of standard functions used for a new implementation or system conversion together with complementing expert functions which are not released to general availability
  → Delivery model: as a service / consulting project

Selective Data Transition

New Implementation

- New implementation/re-implementation
  - Reengineering and process simplification based on latest innovations
  - Highly standardized, fueled with best practices & based on a clean core
  - Implement innovative business processes with preconfigured best practice content on an innovative platform
  - Migrate your master data and retire old landscape
  → Delivery model: included in SAP S/4HANA shipment

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Your Way to SAP S/4HANA

**SAP S/4HANA migration cockpit**

- Part of SAP S/4HANA and SAP S/4HANA Cloud (included in these licenses)
- Supports customers with the “New Implementation” scenario
- SAP’s recommended approach for the migration of business data to SAP S/4HANA and SAP S/4HANA Cloud

**Bring your business processes to the new platform**
- A complete technical in-place conversion of an existing SAP ERP system to SAP S/4HANA
- Adopt new innovations at your speed
  → Delivery model: included in SAP S/4HANA shipment

**New implementation/re-implementation**
- Reengineering and process simplification based on latest innovations
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- Migrate your master data and retire old landscape
  → Delivery model: included in SAP S/4HANA shipment
Introduction to Data Migration
Your SAP S/4HANA migration requirements

- Migrate data from SAP systems and non-SAP systems to SAP S/4HANA and SAP S/4HANA Cloud
- Provide a comprehensive migration solution with no programming required by the customer
- Include mapped data structures between source and target systems
- Reduce test effort
- Make the migration solution auditable
SAP S/4HANA Migration Cockpit
Overview – Functions and Process
SAP S/4HANA Migration Cockpit at a Glance
Data migration to SAP S/4HANA: Easy, safe, and accelerated

Key facilitators

- Out-of-the-box
- Available for SAP S/4HANA and SAP S/4HANA Cloud, included in licenses
- Facilitates the transfer of business data (master data and open transactional data)
- No developer skills required
- Step-by-step guidance through the migration process
- Preconfigured migration objects and rules
- Automatized cross-object value mapping
- Initial load

Migration object modeler for custom requirements
Powerful and easy-to-use state-of-the-art modeling environment (SAP S/4HANA only)
Data Migration Process for New Implementation

Data migration
- This is one key task during the transition to SAP S/4HANA
- Make sure to understand your requirements early and plan for them accordingly

Select
migration objects

Get data

Map and transform data
Model and design to reflect custom requirements*

Simulate

Migrate

SAP Business Suite

Legacy

SAP S/4HANA Cloud

SAP S/4HANA Cloud, private edition

SAP S/4HANA

*Migration object modeler available for SAP S/4HANA and SAP S/4HANA Cloud, private edition only
SAP S/4HANA Migration Cockpit
In detail: Preconfigured migration content

Key benefits

• Content (= migration objects) covers all best practice migration objects for **master data and transactional data**

• Automated mapping between source and target structure

• Migration programs are automatically generated – no programming required by the customer

• Standard APIs are used to post the data to SAP S/4HANA system

*Examples transactional data:
  • FI: open items, balances
  • LO: inventory
  no historical data
SAP S/4HANA Migration Cockpit
In detail: Migration object modeler

Flexible and extendable

Easily integrate custom objects and enhancements into the migration project

- Customer-specific enhancements to SAP standard objects delivered with the SAP S/4HANA migration cockpit
  - Easily adjust input structure
  - Map structures and fields
  - Add or change migration object selection criteria (Direct Transfer)
- Integration of newly created objects
  - Custom objects
  - SAP standard objects that are not yet in the scope of the SAP S/4HANA migration cockpit
  - Use standard APIs or code your function module

Transaction: LTMOM
SAP S/4HANA Migration Cockpit
Different Migration Approaches
Transfer data using files
- Download template file for relevant migration object
- Populate file with relevant business data
- Upload file to the SAP S/4HANA migration cockpit

Transfer data using Staging Tables
- Staging Tables are created automatically (in an SAP HANA DB schema)
- Populate Staging Tables with business data
- Transfer data from Staging Tables to target SAP S/4HANA system

Transfer data directly from SAP System (new with SAP S/4HANA 1909)
- Transfer data from SAP ERP source system to target SAP S/4HANA system
- Access source system through RFC connection
- Supports data migration scenarios from other applications
- for example, from SAP Apparel and Footwear (SAP AFS) to SAP S/4 Fashion and Vertical Business, SAP Extended Warehouse Management (SAP EWM) to Decentralized EWM
SAP S/4HANA Migration Cockpit – Migration Approaches

Transfer data using files
- Download template file for relevant migration object
- Populate file with relevant business data
- Upload file to the SAP S/4HANA migration cockpit

Transfer data using Staging Tables
- Staging Tables are created automatically (in an SAP HANA DB schema)
- Populate Staging Tables with business data
- Transfer data from Staging Tables to target SAP S/4HANA system

Migrate data using Staging Tables
- Staging Tables are created automatically (either locally or in a remote system)
- Populate Staging Tables with business data
  - Using XML template files is one possibility to populate Staging Tables
  - Using SAP or third-party ETL tools is another possibility to populate Staging Tables
- Transfer data from Staging Tables to target SAP S/4HANA System
**SAP S/4HANA Migration Cockpit – Benefits for Combined Approach**

- Mix file and staging possibilities in one approach (= one project)
- Easier way to populate Staging Tables
- Instance-based status tracking and messages
- Improved capability of downloading & uploading mapping values

- All data is stored in Staging Tables
- Use either local SAP S/4HANA DB (local connection) or remote SAP HANA DB connection
- Delivered XML template files ease population of Staging Tables
- Still other tools (external or SAP) can be used for populating Staging Tables

- State-of-the-art user experience with Fiori UI
- Faster UI response time
- Processing of multiple objects at once possible
- Progress tracking during simulation / migration
SAP S/4HANA Migration Cockpit
Migration approaches from SAP S/4HANA 2020 onwards

Migrate data using Staging Tables
- Staging Tables are created automatically (either locally or in a remote system)
- Populate Staging Tables with business data
  - Using XML template files is one possibility to populate Staging Tables
  - Using SAP or third-party ETL tools is another possibility to populate Staging Tables
- Transfer data from Staging Tables to target SAP S/4HANA system

Migrate data directly from SAP system
- Transfer data from SAP ERP source system to target SAP S/4HANA system
- Access source system through RFC connection
- Supports data migration scenarios from other applications for example from SAP Apparel and Footwear to SAP S/4HANA for fashion and vertical business, SAP Extended Warehouse Management (SAP EWM) to decentralized EWM
SAP S/4HANA Migration Cockpit
Migrate Data Using Staging Tables
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

Fiori App
Migrate Your Data

Process & content

Data load

SAP S/4HANA 2020: 120+

Migration objects

Excel XML template files
or other tools of choice

Active Migration Proj...

API based

SAP S/4HANA Cloud

SAP S/4HANA Cloud, private edition

SAP S/4HANA

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SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

Process flow

1. **Select Migration Objects**
   The system automatically creates the staging tables for each object.

2. **Prepare the Staging Tables**
   Prepare the staging tables so data can be transferred.

3. **Transfer Data to Staging Tables**
   Use the provided template files or your preferred tools.

4. **Process Mapping Tasks**
   Ensure that the source data is mapped correctly.

5. **Simulate the Migration**
   Call the function module in test mode to check whether there are any issues.

6. **Migrate Data**
   Data from the staging tables will be posted to the target SAP S/4HANA system.
Projects are only be accessed in the SAP Fiori app where they have been created.

- If you are already in a migration project right now and approaching Go-Live, use the “old” app.
- If you start from scratch, use the “new” app as there is more functionality available.

Details in KBA 2988692
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

Create new project

The Fiori App includes now both migration approaches. Choose your migration approach.

There are two options to transferring data to S/4HANA:
- Migrate data directly from SAP system
- Migrate data using Staging Tables
Create new project II

Specify details for your migration project.

**Local SAP S/4HANA database**
- System will generate Staging Tables in the internal schema of the SAP S/4HANA system
- Use this option if you only want to use XML template files to fill the Staging Tables with data

**Remote SAP HANA database**
- System will generate Staging Tables in a remote SAP HANA DB Schema
- Prerequisite: valid database connection (please refer to KBA 2733253)
- Select this option if you want to fill the staging table with data by using your preferred tools
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

Create new project – choose migration objects

The migration cockpit delivers a larger quantity of migration objects depending on the selected migration scenario.
The migration cockpit creates the project with your selected migration objects.

```
<table>
<thead>
<tr>
<th>Name</th>
<th>Predecessor</th>
<th>Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>2</td>
<td>Documentation</td>
</tr>
<tr>
<td>Product - extend existing record by new org levels</td>
<td>3</td>
<td>Documentation</td>
</tr>
<tr>
<td>Product consumption</td>
<td>1</td>
<td>Documentation</td>
</tr>
</tbody>
</table>
```

Confirm your data selection by choosing the *Create Project* button.
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

Migration project screen – more buttons

On the **migration project** screen, you trigger all the steps that are required to transfer the data for each migration object to the target SAP S/4HANA system. In addition, you can quick access additional information and tasks.

### Buttons for quick access:
- **Monitoring** – to view a log of all activities
- **Mapping tasks** – all mapping tasks for your project
- **Job management** – adjust number of background jobs
- **Settings** – general settings for example add new migration objects
- **Finish project**

See more details in application help.
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

Trigger actions through drop down list

The migration cockpit guides you through the various steps of the data migration. You can also flexibly choose which steps you want to do next (select, mapping tasks, simulate, migrate).

The system proposes the next action to be performed. For example "Upload File" - here, you start the action for one object only.
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

Download XML templates for multiple migration objects

The migration cockpit provides XML template files for all delivered migration objects.

You can download the template for several migration objects by selecting them and then clicking on Download Template.

A messages toast appears – check Monitoring for file download.

Creating file. Navigate to "Monitoring" screen to download file.
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

Download XML templates for migration objects

The Monitoring screen shows you all activities depending on your filter criteria.

On the Monitoring screen, choose the last activity and download the file(s).
You can save them and start preparing populating them with your legacy data.
Populate the XML template file with data

In the XML template files, please check introduction worksheet to gain information on how to fill the template.

To get more details on how to fill the excel file, check the Introduction worksheet.

Unhide/expand rows to get information on the single fields.
**SAP S/4HANA Migration Cockpit – XML Template**

### Important information

- Enter legacy data in generated XML file template for the selected migration object
- Default size limit for each uploaded XML or ZIP file is 100 MB
- The knowledge base article [KBA 2719524](#) contains further information about increasing file size limits for SAP S/4HANA and zipping files for SAP S/4HANA Cloud and SAP S/4HANA

### Recommendations

- Read introduction and check field list before starting filling the template
- Unhide and read the tooltips (line 8)
- Copy and paste values only using the following options:
  - Paste option then Values (V) - within XML file
  - Paste special and then choose Text - from somewhere else
  - Paste option then keep text only - from notepad/text editor
The migration cockpit provides details in the overview screen.

On the Migration Project overview screen, the progress bar indicates the status of your single migration object.

You can drill down into numbers to get details on tables/tasks/instance level.
Migration Cockpit driven data operations for staging tables

- Reset Table Settings. To unlock the staging tables and reset to 0 the number of instances simulated successfully and the number of instances for which errors exist. (See more details in next slide)
- Delete all records. Note: usually, already migrated instances will be deleted from the staging tables. However, if the system is not released for changes (e.g. in the production system), deletion is not possible and results in an error message.
- Adjust Structure. To reflect the latest version of the migration object provided by SAP (e.g. if the staging tables were adjusted or dropped by error)
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
Migration object tables screen – reset table settings

- **Reset Table Settings**: The current transfer status will be reset. Also to unlock the staging tables so that you can adjust data again (freeze triggers will be deleted).
- For example, to unlock the tables after a user cancelled jobs manually, or if an unexpected event occurred.

- On the Migration Project screen, the system resets the number of instances that have been simulated successfully and the number of instances for which errors exists to 0. The number of migrated instances is not adjusted.
Freeze triggers prevent that during the transfer of data, changes can be done on any data in the staging table.

- On the database, you can see three triggers for each staging table:
  - Freeze triggers
  - If you want to insert data in the staging table, when the freeze triggers are set, you will get the following database error:

```
Could not execute 'insert into "DB_ACCESSER"./ILT/DSCCF000087" ...' in 237 ms 719 ms.
SAP DBTech JDBC: [12000]: user-defined error: "DB_ACCESSER"./ILT/DSCCF000087FRI": line 2 col 145 (at pos 282): [12000] (range 3) user-defined error exception: no table change allowed
```

To delete the freeze triggers you have two possibilities:
1. Finish the transfer: after transfer is finished the freeze triggers will automatically be dropped.
2. Press the *Reset Table Settings* button in the Migration Object Tables Screen.
On the **Mapping Tasks** screen, you can view all the mapping tasks, you can maintain the value mapping and you can confirm them.

You can specify value mappings and transform values from the source system to the target system.

Search help for target values provides existing values in the SAP S/4HANA Cloud target system.
Download mapping XML templates

On the **Mapping Tasks** screen, you can download empty templates or download / upload mapping values.

**Download mapping template files are available for each mapping task.**

Select mapping task – click “Download Mapping Template”.

You can use this template files instead of specifying the values manually. If files are filled, you can upload the values by clicking on “Upload Values”.

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Populate XML mapping template file with data

Enter your mappings in the downloaded template.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Type</th>
<th>Associated Type</th>
<th>Data Type</th>
<th>Length</th>
<th>Decimals</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV_MAABC</td>
<td>Import Parameter</td>
<td></td>
<td>CHAR</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>EV_MAABC</td>
<td>Export Parameter</td>
<td></td>
<td>CHAR</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
SAP S/4HANA Migration Cockpit - Mapping Tasks

Handling of insert/delete mapping value

- In very early releases, it was possible to add/delete by using buttons like “Insert Row”
- In Fiori App this is not possible right now.

Procedure:
1. Download values
2. Edit in XML file
3. Upload again - Check additional settings

Details in KBA 3003068
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
Different message analysis capabilities

View: which messages occurred for an activity?

Simulation run no. 1
Simulation run no. 2
Simulation run no. 3

View: which messages occurred for one instance?

Instance 111
Message AA123
Instance 112
Message BB444
Instance 113
Message HJ123
Instance 114
Message UU555
Instance 115
Message ZZ333
Instance 116

View: which instances are concerned by a message?
SAP S/4HANA Migration Cockpit – Error Handling

Different ways to check error messages - overview

1. On migration object instance level
   • find errors for the selected instance(s)
   • on latest action (latest simulation run, latest migration run)
   • no history

2. On migration object level – history tab
   • find all messages for the selected migration object and action
   • different views: default (no grouping) vs. group by message ID
   • drill down to every single error message

3. On migration object level – all messages - project view
   • find all messages for the selected migration object(s)
   • select from recent actions (different simulation/migration runs)
   • drill down to every single error message and instance

Background & Tip

• Different possibilities to analyze (error) messages
SAP S/4HANA Migration Cockpit – Error Handling

1. Messages on migration object instance level

- **Tip**
  - Free text search
  - Group, sort
  - Download to MS Excel

**Select multiple instances – press Messages button**

**Click on Error to get the message for the corresponding instance**

**Click on number to get all a list of all erroneous instances**

**All messages referring to this single instance**
SAP S/4HANA Migration Cockpit – Error Handling

2. Messages on migration object level – history tab (1/2)

Click on migration object name to get details

Select History tab to view messages for the selected migration object and action.

Select Show Messages.
Tip

- Free text search
- Group, sort
- Download to MS Excel
SAP S/4HANA Migration Cockpit – Error Handling

3. Messages on migration project level

Select relevant migration objects – press Messages button

Tip
- Use filters and messages types
- Group, sort
- Download to MS Excel

Forward navigation to instance list for further processing

Forward navigation to see all instances directly

Find numbers of instances with this message

Forward navigation to see all instances directly
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

Instance-based deletion through mass processing

Click on number of instances to get to detail level of migration object instances

Use filter options to select relevant instances

Press button **Mass Processing**

Review chosen instances before deletion

To start mass processing deletion of instances - press button **Step2**
Adjust the maximum number of background jobs used for your project.

You can also adjust the maximum number of jobs to be used per migration object.
When you set the status of a project to “Finished” you can specify a data retention period.

For projects created with transaction LTMC (file approach), only the temporary created data will be deleted once the data retention time expires. This includes data from any uploaded files that is cached in the SAP system, as well as other data used for the transfer.
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

System setup SAP S/4HANA local SAP S/4HANA database schema

1. Select Local SAP S/4HANA database schema* for your migration project

2. Staging table creation for selected migration object

3. Fill Staging Tables with Microsoft Excel XML templates files

4. Read access

5. Insert/update through API

6. Status update of record

Staging table 1

Staging table 2

... Staging table n

Application interface

Application tables

Legacy system

Application data

Data source(s)

SAP S/4HANA

* Staging Tables reside within the SAP S/4HANA schema
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables

System setup SAP S/4HANA remote SAP HANA database schema

1. Select Remote SAP HANA database schema** for your migration project
2. Staging table creation for selected migration object
3. Extraction and fill of Staging Tables through SAP or third-party tools, or Microsoft Excel XML templates files
4. Read access
5. Insert/update through API
6. Status update of record

ODBC

SAP S/4HANA

SAP S/4HANA or separate SAP HANA box*

SAP HANA DB schema*

Staging table 1  Staging table 2  ...  Staging table 3

Legacy system

Application data

Data source(s)

---

* Separate SAP HANA database schema is required, can also be on SAP S/4HANA target system
** Prerequisite: established secondary database connection

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How can I populate the staging tables?

To extract data from the source systems you can use either SAP tools or third-party tools. The staging tables have to be filled in a ready-to-load data format, i.e. the format expected by SAP S/4HANA.

- **SAP Smart Data Integration** to fill staging tables from Excel files (more details in SAP Note [2091095](#))
- **ABAP** to fill staging tables from an SAP ERP 6.0 system
- **SAP Data Services** to fill staging tables from an external database
- **SAP Agile Data Preparation (ADP)**
- **Third-party tools to fill staging tables**
- **Manual entry in SAP HANA studio to fill staging tables** (using SQL statement)

**Note:** ETL Third-party or SAP Tools to populate the staging tables can be used for the remote SAP HANA database schema. Additional costs may apply when using the remote SAP HANA database schema option and ETL Tools to fill the staging tables.
To fill the staging tables, you can either use an ETL tool or fill the data directly on the SAP HANA database. You can also use SAP HANA Studio to fill the data.

There are several blogs listed below that explain the different methods to load data into the staging tables:

- **Part 1:** Migrate your Data – Migration Cockpit, Migrate data using staging tables and methods for populating the staging tables with data (from SAP S/4HANA 2020, SAP S/4HANA Cloud 2008, Fiori UI)
- **Part 1:** Migrating data using staging tables and methods for populating the staging tables (Old WebDynpro UI)
- **Part 2:** Using SAP data services to load data to the staging tables
- **Part 3:** Using SAP HANA Smart Data Integration (SDI) to load data to the staging tables
- **Part 4:** Using SAP HANA Studio to load data to the staging tables
- SAP S/4HANA migration cockpit – creating and using synonyms for renaming staging tables
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
Example: Filling the staging tables using the SAP HANA studio

Main Steps
• Create your flat file (.csv, .xls or .xlsx)
• In the SAP HANA studio:
  1. Choose File and then Import from the menu
  2. Select Data from Local File option
  3. Select target system where you want to load data
  4. Select the source file to upload
  5. Enter required information under File Details
  6. Map source fields to the target fields under Manage Table Definition and Data Mappings
  7. Choose finish to confirm mapping and to upload the data from the flat file to the staging tables.

Note: The flat file must have one of the extensions .csv, .xls, or .xlsx, and must correspond to the table definition.

Detailed How-To-Guide
Video
Migrate Data Using Staging Tables
SAP S/4HANA Migration Cockpit (File/Staging)
What’s new in SAP S/4HANA 2020?

• One harmonized user experience using SAP Fiori UI for all approaches
• Possibility to process multiple objects at once
• Instance-based status tracking and messages
• Progress tracking during simulation/migration (monitoring)
• Mapping upload/download in SAP Fiori app – templates or with populated values
• Projects created using old app transaction LTMC (Web Dynpro) cannot be converted to new SAP Fiori app but will be available as read-only from SAP S/4HANA 2021 onwards.
What’s new in SAP S/4HANA 2020 FPS01

- Additional view on messages
- Instance-based deletion from mass processing
- Screen refresh function
- Activity monitoring
Flexible and extendable

- Copy migration objects
- Adjust standard migration objects (for example add fields)
- Simulate / debug import of data from staging tables
- Create user defined migration objects
- Use standard APIs or code your function module
- Create or edit translation objects and rules
- New*: Export / import a project from one system to another system
- New*: Use project in a different client
- New*: Reset transfer status

Transaction: LTMOM

*This does not apply for projects created with LTMC.
For projects created with **new Fiori App** the following applies:

1. **Client Dependency:** Projects can only be seen and changed in the client where the project was created.

2. **Using a project in a different client:** It is possible to use a project in a different client, the project is not copied, but only available in the new client; all mapping tasks are deleted.

3. **Non modifiable systems / productive systems:** It is not possible to modify projects in non-modifiable / productive systems. If you need to make adjustments (for example delete a migration object), you can adjust the project in the development system and export/import it again to the productive system.

This does not apply for projects created with LTMC.
SAP S/4HANA Migration Cockpit – Migrate Data Using Staging Tables
Export / import projects

Before SAP S/4HANA 2020: You export / import projects using transaction LTMC.

As of SAP S/4HANA 2020 and for projects created with the Fiori App: You export / import projects using transaction LTMOM (migration object modeler).
SAP S/4HANA Migration Object Modeler (File/Staging)
New namespace for customer structures and fields introduced with 2020 FPS01

Source Structure

• The name of a source structure must begin with “ZS_”
• This applies to source structures which are added by the user to a migration object which was copied from template

Source Structure Fields

• The name of a source structure field must begin with “ZZ”
• This applies if the source structure field is added by the user to a migration object which was copied from template
SAP S/4HANA Migration Object Modeler (File/Staging)
Deep dive slides
SAP S/4HANA Migration Cockpit
Migrate Data Directly from SAP System
SAP S/4HANA Migration Cockpit – Direct Transfer*

Fiori App
Migrate your data

Process & content

Data load

SAP S/4HANA Cloud, private edition

SAP S/4HANA

Fiori App
Migrate your data

SAP S/4HANA 2020, FPS02:

+200 Migration objects

Available for:
- SAP ERP 6.0 to SAP S/4HANA
- SAP Apparel and Footwear Solution (SAP AFS) 6.0 to SAP S/4HANA
- SAP Extended Warehouse Management to Decentralized EWM based on SAP S/4HANA
- SAP CRM to SAP S/4HANA for customer management
- SAP APO SPP to SAP S/4HANA eSPP**

Predefined selection criteria is depending on migration scenario.

**new in SAP S/4HANA 2020, FPS01

* Migration approach "Migrate Data Directly from SAP System"
Suitable for ABAP-based SAP source systems only

Five migration scenarios supported

- SAP ERP to SAP S/4HANA
- SAP Apparel and Footwear to SAP S/4HANA
- SAP EWM to decentralized EWM based on SAP S/4HANA
- SAP CRM to SAP S/4HANA for customer management (SAP S/4HANA 1909 FPS01 onwards)
- SAP APO SPP to SAP S/4HANA eSPP (SAP S/4HANA 2020 FPS01 onwards)
SAP S/4HANA Migration Cockpit – Direct Transfer

Start the app

Start the “Migrate Your Data” App

- The SAP S/4HANA migration cockpit facilitates the transfer of business data from an SAP source system to SAP S/4HANA.
- The SAP S/4HANA migration cockpit is designed for an initial load of data, specifically for the SAP S/4HANA new implementation scenario.
- It is not designed to keep data in sync between systems, to realize a continuous exchange or flow of data, or to establish an integration scenario.
- SAP S/4HANA systems are currently not supported as source systems.
**SAP S/4HANA Migration Cockpit – Direct Transfer**

Create new migration project - general data

---

**Selection of relevant scenario:**

- SAP Apparel and Footwear (SAP AFS) to SAP S/4HANA
- SAP ERP to SAP S/4HANA
- SAP CRM to SAP S/4HANA Service
- SAP EWM to Decentralized EWM based on SAP S/4HANA
- SAP APO SPP to SAP S/4HANA eSPP

**Enter the relevant RFC connection to the SAP Source System.**

**Enter a development package, so that you can transport your project to another system.**

Note: If you enter $TMP you will not be able to add your project to a transport request, this means, the project is only locally available in the client and system, where you created the project.
The migration cockpit delivers preconfigured data selection criteria depending on the migration scenario.

Preconfigured data selection based on key organization units, depending on migration scenario, for example, company codes for SAP ERP to SAP S/4HANA.
The migration cockpit delivers a larger quantity of migration objects depending on the selected migration scenario.

Preconfigured migration content: List of available migration objects relevant for the selected scenario (for example SAP ERP to SAP S/4HANA).
The migration cockpit delivers a larger quantity of migration objects depending on the selected migration scenario.

Preconfigured data selection based on key organization units, depending on migration scenario, for example company codes for SAP ERP to SAP S/4HANA.

Confirm your data selection by choosing the Create Project button.
The migration cockpit guides you through the various steps of the data migration. You can also flexibly choose which steps you want to do next (select, mapping tasks, simulate, migrate).

You can execute actions for several or all migration objects in your project.

The system proposes “Select Data” as the next action. You can start the selection for one object only.
On the **Migration Object** screen, you get detailed information about a migration object.

To get detailed information about a migration object, click the migration object name in the migration object column.

You find a direct link to the migration object documentation in the SAP Help Portal.

The system displays the migration object screen, where you can view the following information:

- Link to [SAP Help Portal](#) Documentation
- Table structure
- History of events, including logs
- Dependencies to other migration objects
- Technical information (relevant for support)
On the **Migration Object** screen, you get information on the table structure and the history.

**Table Structure**

In the *Table Structures* section, you see the relevant source system tables for the migration object. The system displays the source system tables in a hierarchy.

**History**

In the *History* section you see the different actions for the migration object. You can also view the log for each action regarding this object.
SAP S/4HANA Migration Cockpit – Direct Transfer
Selection/Reselection of data

If you have already selected data and choose the selection button again, you have the possibility to reselect the data.

Reselection of data

- **New Selection**: Add new instances from the source system to already selected instances (available since SAP S/4HANA 1909 – default behavior); no update of already selected instances
- **Add Additional Instances**: Deletes former selection and select completely new (available as of SAP S/4HANA 2020)

If you have **changed** data in the source, use the new selection button to delete the formerly selected instances and start a completely new selection.

If you work with SAP S/4HANA 1909, you can use the report mentioned in the following SAP Note 2857598 to delete the former selection and repeat the select of data.
SAP S/4HANA Migration Cockpit – Direct Transfer

Maintain value mapping

On the **Mapping Tasks** screen, you can view all the mapping tasks, you can maintain the value mapping and you can confirm them.

You can specify value mappings and transform values from the source system to the target system.

The mapping tasks will be filled with values only after the system has selected the data from the source system. Without selection, the mapping tasks will be empty.
On the **Mapping Tasks** screen, you can download empty templates or download / upload mapping values.

When you upload the mapping values, you have different options:

- Confirm values automatically
- Do not confirm values automatically
- Replace existing values
- Modify values / Add values

Note that the files may contain target values that were created automatically (for example internal numbering). Ensure that you adjust the target values (or remove them completely in the files) before uploading the file to another system.
In the Monitoring screen, you can check the upload activity afterwards: when the upload was done, who did the upload and more.

By Show messages you can see all the logs related to the upload of the mapping values.
SAP S/4HANA Migration Cockpit – Direct Transfer

Migration object instances list

On the **Migration Object Instances** screen, you can view the records for each migration object instance.

The system offers various possibilities to search and filter the list.

Use the gear wheel to select the columns to be displayed.

Click the arrow to view the migration object instance details.
On the **Migration Object Instances** list you can simulate, migrate or exclude single instances or have a look at the error messages.

To exclude a single instance, mark the entry, and press the *Exclude* button.

On the migration project screen, you will now find one excluded item. The number of items to be migrated (not started) has changed from “32” to “31”.

### Migration Object Instances

<table>
<thead>
<tr>
<th>CO - Activity type (32)</th>
<th>Activity Type</th>
<th>Valid To Date</th>
<th>Activity Type Category</th>
<th>Variant Activity Type Category for Actual postings</th>
<th>Additional Fields</th>
<th>Action</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demo_2020_DT</td>
<td>001</td>
<td>99991231</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Warning**

You are going to exclude the selected migration object instances.

If you exclude migration object instances, we recommend that you analyze the impact on dependent migration objects and ensure that the instances in the dependent objects can still be processed successfully (for example during the simulation or migration).

Are you sure you want to exclude the selected migration object instances?

[OK] [Cancel]
On the **Migration Object Instances** list you can exclude, undo exclude, simulate and migrate instances in a mass processing.

You can filter a subset of instances and execute one of the following actions:

- Exclude
- Undo Exclude
- Simulate
- Migrate
On the **Migration Project** screen, you can choose, which items you want to simulate / migrate.  
*Example migration:* migrate single items (on the migration object screen), migrate random 10% or random 500 items, migrate only instances with errors, migrate all successfully simulated instances or migrate all instances.

![Diagram of SAP S/4HANA Migration Cockpit – Direct Transfer](image)

You can simulate/migrate **several migration objects** at once:
- Simulation: selecting all instances or all instances with errors
- Migration: selecting all instances, the ones with errors or all successfully simulated instances

You can simulate/migrate **only one migration object** and choose different options.

![Diagram of SAP S/4HANA Migration Cockpit – Direct Transfer](image)
On the **Migration Project** screen, you trigger all the steps that are required to transfer the data for each migration object to the target SAP S/4HANA system. In addition you can quickly access additional information and tasks.

**Buttons for quick access:**

- **Monitoring** – to view a log of all activities
- **Mapping tasks** – all mapping tasks for your project
- **Job management** – adjust number of background jobs
- **Settings** – general settings for example add new migration objects
- **Finish project**

See more details in application help.
On the **monitoring** screen, you can view the active and completed activities.

The system offers various possibilities to search and filter the list.

You can view the downloaded files (for example downloaded mapping values.)

You can have a look at the messages for a single activity.
Create and copy projects and migration objects

Create project & assign delivered objects **copies** the SAP migration object template into the respective project

**Migration objects delivered by SAP**
- CO - Cost center
- FI - G/L account
- PM - Equipment
- ...

**create project**

original object templates stay untouched!

**Project A**
- CO - Cost center
- FI - G/L account
- FI - G/L account Cust

**Project B**
- CO - Cost center
- PM - Equipment

**Project AAA**

- copy object within project

*copy project function available since 2020 FPS1*
SAP S/4HANA Migration Cockpit – Direct Transfer
Different message analysis capabilities

Simulation run no. 4

Instance 111
Message AA123

Instance 112
Message BB444

Instance 113
Message HJ123

Instance 114
Message UU555

Instance 115
Message ZZ333

Instance 116

View: which messages occurred for one instance?

NEW with 2020 FPS01

View: which instances are concerned by a message?

View: which messages occurred for an activity?

Simulation run no. 1
Simulation run no. 2
Simulation run no. 3
SAP S/4HANA Migration Cockpit – Direct Transfer
Use a project as rollout template

Transport is available since SAP S/4HANA 2020
Copy projects is available since SAP S/4HANA 2020 FPS01

DEV

transport

QAS

transport

PRD

Project A
is your template project

copy project

Project B
adapt objects, selection criteria, …

Project B
execute
SAP S/4HANA Migration Cockpit – Direct Transfer

How to handle SAP migration object updates

Migration object updates can come into your system by: a new release, a feature package (FPS) or support package (SP) or by a so-called TCI note (SAP Note transport-based correction instructions). The updates are always first available in client 000 only and must be loaded to the current client!

While distributing the TCI into the system landscape ensure that the import happens into client 000 only. “Client-cascading” should not be used!

**Client 000** contains the updated SAP template migration objects

Client 001: execute program `CNV_PE_MC_LOAD_OBJECTS` to update the **template SAP migration objects** in current client 001 (see SAP Note 2870546)

1. **already existing project stays untouched!**
   - Project A
     - CO - Cost center
     - FI - G/L account

2. copy this updated template object to an existing project (using LTMOM, create object from template)
   - Project A
     - CO - Cost center (new)
     - CO - Cost center
     - FI - G/L account

3. or create a new project
   - Project AAA
     - CO - Cost center (new)
SAP S/4HANA Migration Cockpit – Direct Transfer

Additional view on messages

- Select relevant migration objects – press Messages button
- Toggle between migration objects
- Number of instances with this message with forward navigation
- Forward navigation to instance list or details of one instance

Tip

- Use filters and messages types
- Group, sort
- Download to MS Excel
SAP S/4HANA Migration Cockpit – Direct Transfer

Copy projects

Select relevant migration project – press Copy button

Change the selection criteria, for example company codes.
Add migration objects (after copy is finished).
Remove migration objects in transaction LTMOM

You can enter a new name for the project.
Change the connection to source system and development package.
Video

Migrate Data Directly from SAP Source System
Technical preconditions

- SAP ERP to SAP S/4HANA, the lowest supported ERP release is ERP 6.0 (SAP NetWeaver 7.0),
- SAP Apparel and Footwear (SAP AFS) to SAP S/4HANA, the supported release is AFS 6.0,
- SAP EWM to decentralized EWM, the lowest supported EWM release is EWM 5.1 (SAP NetWeaver 7.0).
- SAP CRM to SAP S/4HANA for customer management, lowest supported release is SAP CRM 7.0
- SAP APO SPP to SAP S/4HANA eSPP, recommended source system release is SCM 7.0

Necessary preparations in the system landscape

- The add-on DMIS_2011 SP19 or higher needs to be installed in the source system (included in the license for SAP S/4HANA 2020)
- RFC connection from ERP/AFS/EWM/CRM/APO SPP source to SAP S/4HANA target system*
- Setup FIORI
- Apply necessary notes: start with Composite SAP Note 2747566
- Check customizing: relevant customizing in the target must be available (for example, organizational units, define document type for migration, define accounts for migration, remove account blocks)
- Ensure availability of required authorizations
- For required roles, please check the installation guide (chapter 7)

*Caution: It is not supported to use RFC connections with trusted log on.
Define a mapping strategy between SAP source and SAP S/4HANA target
- Standard APIs are used to load the data into SAP S/4HANA target system
- Where configuration in the source deviates from the configuration in the target, adequate mappings have to be defined upfront, such as rename of organizational units, cost centers, document types, ….
- In case of questions carefully check the object-related documentation

Test and productive migration
- First create a project in a development system and then transport the project to a test system, which is a copy of the production system.
- The more the data in the test system resembles the data in the production system, the more precise the test.
- Several test data migrations are required before you transfer data to the SAP S/4HANA production system.
- For each new test data migration, you transport a migration project that includes any corrections or refinements.
- You transport your project from the development system to your productive system once the tests have been executed successfully.
- Mapping value download and upload
  - You can download mapping values of your previous test and upload them into your new project. Note, that you might need to adapt the mapping values before you upload them to the new system for example so that you do not upload value mapping from internal numbering.
SAP S/4HANA Migration Cockpit – Direct Transfer
What’s new in 2020?

- One harmonized user experience using Fiori UI for all approaches
- Migration object documentation available on help.sap.com
- Transport concept
- Transport of projects between systems
- Reselection of data – functionality integrated in Fiori
- Mapping download/upload in Fiori – templates or with populated values
- Migration object instances - mass processing
- Monitoring functionality
SAP S/4HANA Migration Cockpit – Direct Transfer
What’s new in 2020 FPS01?

- Additional view on messages
- Copy projects
- Screen refresh function
SAP S/4HANA Migration Cockpit – Direct Transfer

Transport concept

**Design Time Activities**
- Create Project
- Set Connection
- Set Selection (Company Codes)
- Add Objects to Project
- Change Objects in LTMOM

**Transport Project**

**Execution Time Activities**
- Execute Migration Test
- Maintain Mapping
- Finish Project

**Import** change request and update connection
(NO Design Time Activities*)

**Separation between design time and execution time activities**

More details in [KBA 3043614](https://example.com)

*Design time activities are allowed in systems which are open for changes, usually DEV systems

DEV: Development System       TST: Test System
Create user defined migration objects using a wizard
Add customer tables or fields to a standard migration object or to a new migration object
Add or change selection criteria of standard migration objects or user defined migration objects
Possibility to add projects, migration objects, and rules (mapping tasks) to a transport request
Debug the transformation and/or the posting process
Use standard APIs or code your function module
Copy migration objects
Create or edit transformation rules
SAP S/4HANA Migration Cockpit – Direct Transfer
SAP S/4HANA Migration object modeler - what’s new in 2020?

1. One harmonized user experience using SAP GUI UI for all approaches
2. Transport: add projects, objects and rules to transport requests
3. Copy and delete migration objects
4. Selection: skip rule; inherit restrictions within the data model
5. Create source code rules; custom-created mapping rules automatically filled with mappings
6. Debugging capabilities for transformation and simulation (since 1909)
7. Finished projects in display mode only
SAP S/4HANA Migration Object Modeler
Deep dive slides
SAP S/4HANA Migration Cockpit
Migrate Data Directly from SAP System – Migration Scenarios
SAP Apparel and Footwear (SAP AFS) to SAP S/4HANA
SAP S/4HANA migration cockpit - migrate data directly from SAP system

Migrate data directly from SAP System
Selection of data from SAP source system through RFC
Data Selection based on company code

70+ 72 Pre-defined AFS specific migration objects are supported
Capability to derive complex selection criteria automatically from company code

AFS standalone system*
S/4HANA with fashion module integrated

*Prerequisite for transfer data directly from SAP System: DMIS installation in source
SAP Apparel and Footwear (SAP AFS) to SAP S/4HANA
SAP S/4HANA migration cockpit – create new migration project

1. General Data

Here, you specify general information for your project. Note that it will not be possible to change the scenario or the development package after you create the project.

Migration Approach: Migrate Data Directly from SAP System

Name: New Migration Project AFS

Scenario:
- SAP Apparel and Footwear (SAP AFS) to SAP S/4HANA

Connection to Source System: LOKCLNT200

Development Package: $tmp

Select your scenario:
- SAP Apparel and Footwear (SAP AFS) to SAP S/4HANA

Enter a source system connection

Enter a valid development package
SAP Apparel and Footwear (SAP AFS) to SAP S/4HANA
SAP S/4HANA migration cockpit – create new migration project

2. Data Selection
The Migration Cockpit uses organizational units such as company codes to select data from the source system. These organizational units are predefined for each scenario. For example, the scenario SAP ERP to SAP S/4HANA uses company codes to select data from the source system.

Company Code: *
0001 (SAP A.G.)

Data selection based on company code (depending on migration scenario)
SAP Apparel and Footwear (SAP AFS) to SAP S/4HANA

SAP S/4HANA migration cockpit – select migration objects

Preconfigured migration content: List of available migration objects

Select migration objects in scope
SAP EWM to Decentralized EWM Based on SAP S/4HANA

SAP S/4HANA migration cockpit - migrate data directly from SAP system

**Preconfigured migration objects**

- Material flow system
- Physical inventory settings
- Production supply area
- Resource and user maintenance
- Resource execution settings
- Resource group and queue settings
- Shipping and receiving settings
- Warehouse application log settings
- Warehouse fixed bin assignment log settings
- Warehouse storage bin sorting
- Warehouse product
- Warehouse stock
- Warehouse storage bin

- Work center dependent settings
- Work center determination
- Route
- Zone
- Zone Hierarchy
- Carrier profile
- Condition Records (warehouse-independent)
- Condition Records (warehouse-dependent)

*Prerequisite for Migrate data directly from SAP System: DMIS installation in source*
SAP SCM (APO/ SPP) to eSPP Based on SAP S/4HANA

SAP S/4HANA migration cockpit - migrate data directly from SAP system

- Migrate data directly from SAP system
- Selection of data from SAP source system through RFC
- Data Selection based on plant

Preconfigured migration objects

- Bill of Distribution (BoD)
- Location
- Location Product
- MRP Area
- Product
- Product BoD Assignment
- Transportation Lane

**Recommended source system release SCM 7.0**

*Prerequisite for Migrate data directly from SAP System: DMIS installation in source

**Related support component for content: SCM-APO-SPP**
SAP CRM to SAP S/4HANA for Customer Management
SAP S/4HANA migration cockpit - migrate data directly from SAP system

Migrate data directly from SAP system
Selection of data from SAP source system through RFC
Data Selection based on Sales Organization

Preconfigured migration object
- Activities

*Prerequisite for transfer data directly from SAP System: DMIS installation in source
SAP S/4HANA Migration Cockpit
Summary Migration Approaches
## SAP S/4HANA Migration Cockpit – Comparison of Migration Approaches

### SAP S/4HANA 1909

<table>
<thead>
<tr>
<th>Transfer data using files</th>
<th>Transfer data using Staging Tables</th>
<th>Transfer data directly from SAP system</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Availability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAP S/4HANA Cloud</td>
<td>SAP S/4HANA Cloud</td>
<td>SAP S/4HANA</td>
</tr>
<tr>
<td>SAP S/4HANA</td>
<td>SAP S/4HANA</td>
<td></td>
</tr>
<tr>
<td><strong>Source system</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any source system (SAP or non-SAP)</td>
<td>Any source system (SAP or non-SAP)</td>
<td>ABAP-based SAP source systems</td>
</tr>
<tr>
<td><strong>Data volume</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small and medium volumes of data</td>
<td>Large volumes of data</td>
<td>Any volumes of data</td>
</tr>
<tr>
<td><strong>Data provisioning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XML template files filled by customers</td>
<td>Staging Tables filled by customers (using for example SAP Data Services, SDI, SAP HANA Studio, open SQL, or any 3rd party ETL Tools)</td>
<td>Data selected and extracted directly from SAP system</td>
</tr>
<tr>
<td><strong>Data cleansing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before starting the migration project, or in the XML template files</td>
<td>Before starting the migration project, or in the Staging Tables</td>
<td>Before starting the migration project. Note that you can always adjust the selection of data by using the migration object modeler</td>
</tr>
</tbody>
</table>
### SAP S/4HANA Migration Cockpit – Comparison of Migration Approaches

**SAP S/4HANA 2020 onwards**

<table>
<thead>
<tr>
<th>Migrate data using Staging Tables</th>
<th>Migrate data directly from SAP system</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Availability</strong></td>
<td></td>
</tr>
<tr>
<td>SAP S/4HANA Cloud</td>
<td>SAP S/4HANA Cloud, private edition</td>
</tr>
<tr>
<td>SAP S/4HANA</td>
<td>SAP S/4HANA Cloud, private edition</td>
</tr>
<tr>
<td>SAP S/4HANA</td>
<td>SAP S/4HANA</td>
</tr>
<tr>
<td><strong>Source System</strong></td>
<td>ABAP-based SAP source systems</td>
</tr>
<tr>
<td>Any source system (SAP or non-SAP)</td>
<td></td>
</tr>
<tr>
<td><strong>Data Provisioning</strong></td>
<td>Data selected and extracted directly from SAP system</td>
</tr>
<tr>
<td>• XML template files filled by customers</td>
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</tr>
<tr>
<td>• Staging Tables filled by customers (using for example SAP Data Services, SDI, ABAP, or any 3rd party ETL tool)</td>
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<tr>
<td><strong>Data cleansing</strong></td>
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<tr>
<td>Before starting the migration project,</td>
<td>Before starting the migration project.</td>
</tr>
<tr>
<td>• in the XML template files</td>
<td>Note that you can always adjust the selection of data by using the migration object modeler</td>
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<tr>
<td>• in the Staging Tables</td>
<td></td>
</tr>
</tbody>
</table>

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SAP S/4HANA Migration Cockpit
Migration Objects
SAP S/4HANA Migration Cockpit
Preconfigured migration objects SAP S/4HANA

Migration object list in SAP Help Portal (SAP S/4HANA)

* Filter depending on selection SAP S/4HANA or SAP S/4HANA Cloud*
SAP S/4HANA Migration Cockpit
Check migration object changes in release comparison - available for File/Staging

Data Migration ★

SAP enables data migration to SAP S/4HANA for customers coming from any legacy system. SAP’s S/4HANA customers can approaches built into SAP S/4HANA using the SAP S/4HANA Migration Cockpit together with a set of predefined data migration objects.

Object-Related Information
- Migration Objects for SAP S/4HANA
  Find an extensive table listing all migration objects available in the respective migration object documentation.
- SAP S/4HANA – Release Comparison of Migration Object Templates
  The purpose of this document is to explain the differences between migration object templates of various releases, with the help of templates.
- Data Migration Template Samples
  These template samples help you in filling out the data migration objects available in the SAP S/4HANA Migration Cockpit. Note that the templates are created for, and tested in, SAP S/4HANA Cloud system they are built for.

Change Overview ★

Objects Added with SAP S/4HANA 2020
- CD - Business process
- CO - Statistical key figure
- DG - Assessment for packaged product (text-based)
- DSG - Assessment for packaged product (content-based)
- ECM - Change master
- EFD - Reinst report
- EHS - Location
- EHS - Location hierarchy
- FI - G/L account
SAP S/4HANA Migration Cockpit

Further Information
Data Migration Landing Page on SAP S/4HANA SAP Help Portal
SAP S/4HANA Migration Cockpit – Further Training Material

- **Training Material** (for customers and partners only)
- Video Library for Data Migration
- openSAP Course: Migrating Your Business Data to SAP S/4HANA – New Implementation Scenario*  

* openSAP Course based on 1909
SAP S/4HANA Migration Cockpit - In-App Help Now Available

Open the In-App Help from any screen in the migration cockpit.

Navigate directly to the SAP Help Portal documentation.

View additional information for certain fields.
One-stop shop – free access

- Latest news
- Blogs
- Q&A section

Formerly known SAP HANA Cloud Customer Community was migrated into SAP Community platform.
Preconfigured SAP S/4HANA Sandbox System
Demo scripts for SAP S/4HANA migration cockpit available

SAP S/4HANA trial system (external link):
https://www.sap.com/cmp/oth/crm-s4hana/s4hana-on-premise-trial.html

Demo scripts for SAP S/4HANA migration cockpit
- File approach (bank)
- File approach (material)
- LTMOM - file approach (cost center texts)
- Staging approach (G/L accounts)
- Direct Transfer approach (cost centers and activity types)
- LTMOM – Direct Transfer approach (cost center texts)
- Direct Transfer approach (material)
- Direct Transfer approach (vendor, CVI)


System access for externals
External CAL: https://cal.sap.com/catalog#/solutions/a0b63a18-0fd3-4d88-bbb9-4f02c13dc343
SAP S/4HANA Migration Cockpit
SAP Notes and KBAs

Tip:
Run Report DMC_NOTE_ANALYZER
Check SAP Note 2596411

Composite SAP Note for migration cockpit
CA-LT-MC

Collective SAP Note for Direct Transfer
CA-LT-MC

Collective SAP Notes for File/Staging
CA-GTF-MIG

2780378
Composite SAP Note for SAP S/4HANA migration cockpit (all releases)

2747566
SAP S/4HANA migration cockpit
Composite Note for Transfer Data Directly from SAP System

2538700
Collective SAP Note and FAQ for SAP S/4HANA migration cockpit
File/Staging (SAP S/4HANA Cloud)

2537549
Collective SAP Note and FAQ for SAP S/4HANA migration cockpit
File/Staging (SAP S/4HANA)
SAP S/4HANA Migration Cockpit

Key Takeaways
SAP S/4HANA Migration Cockpit Key Takeway

- Included in the licenses for all SAP S/4HANA deployment options
- Preconfigured SAP S/4HANA-specific migration content
- Automated mapping between source & target
- Guidance and simulation for the migration process
- Integrated into SAP Activate methodology
- Lower migration time and costs
Key Takeaways
SAP S/4HANA migration cockpit – the next-generation data migration software

- Included in SAP S/4HANA and SAP S/4HANA Cloud license and shipment
- Made for migrating data from SAP and non-SAP sources into SAP S/4HANA and SAP S/4HANA Cloud
- Guided procedure takes users through the migration process: Easy and safe, no programming required
- Flexible for integration of custom business data including data transformations

Migration approaches

Data Transfer
- Migrate data using Staging Tables
- Migrate data directly from SAP system

Predefined SAP S/4HANA-specific migration content facilitates and accelerates your data migration
- Preconfigured content and mapping
- Automated mapping between template and target structure
- Migration programs generated automatically

Customer-specific migration content can be flexibly included
- Integration of customer-built objects
- Customer-specific enhancements to SAP standard objects (for example: add new fields)
SAP S/4HANA Migration Cockpit

Appendix
SAP S/4HANA Migration Cockpit
Project Methodology and Setup
Key Questions to Understand Your Data Migration Requirements

What deployment option is the target / receiver of the data?
SAP S/4HANA or SAP S/4HANA Cloud

Which data is needed from sources to operate S/4HANA the way you want?
Customizing? Master data? Open items? Balances?

What are the sources / sender systems of the data?
Number and type of source systems? Central master data management active?

Migrate data “as is” or transform on the fly?
Data transformations needed? Data quality improvement necessary?

Who needs to be involved?
Decisions to be taken? Major stakeholder?
Data Migration in SAP Activate Roadmap

What needs to be done?
When do I have to take care?

Information about data migration is represented within the workstream system & data migration.

SAP Activate roadmap viewer

https://go.support.sap.com/roadmapviewer/
## Additional SAP Offerings for Data Migration

Data migration activities mapped to SAP Activate

<table>
<thead>
<tr>
<th>DISCOVER</th>
<th>PREPARE</th>
<th>EXPLORE</th>
<th>REALIZE</th>
<th>DEPLOY</th>
<th>RUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discover SAP S/4HANA</td>
<td>Transition planning &amp; preparation</td>
<td>Design SAP S/4HANA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Get to know SAP S/4HANA migration cockpit

- Data migration architecture (systems, data flow, tools, stakeholder, data migration waves & orchestration)

### Data migration design (detailed data migration requirements, Fit/Gap & solution design, project planning)

### Data migration execution

- Select and get data
- Map and transform data
- Model and design custom migration objects
- Complementing data extraction and data cleansing, if required
- 2-n test cycles and dress rehearsal – validate, adapt and improve
- Availability of appropriate test landscape
- Timely go live planning

SAP Activate Roadmap Viewer: [https://go.support.sap.com/roadmapviewer/](https://go.support.sap.com/roadmapviewer/)
### Business Data Migration to SAP S/4HANA

**Key roles and tasks in customer’s project team**

<table>
<thead>
<tr>
<th>Role</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project lead</strong>*</td>
<td>• Drives the data migration project at customer side &lt;br&gt;• Responsible for all aspects affecting project setup and project planning</td>
</tr>
<tr>
<td><strong>System administrator / Basis lead</strong>*</td>
<td>• Drives software download, software installation, installation of notes, system settings and more&lt;br&gt;• Responsible to fulfill technical prerequisites such as provision of test landscape, RFC connections, system access &amp; authorizations and more&lt;br&gt;• …</td>
</tr>
<tr>
<td><strong>Data migration expert</strong></td>
<td>• Uses the SAP S/4HANA migration cockpit and complementing tools (if any)&lt;br&gt;• Responsible to execute data migration and track progress&lt;br&gt;• …</td>
</tr>
<tr>
<td><strong>Application / business contacts</strong></td>
<td>• Act as key contacts for all application-related questions and represent business departments&lt;br&gt;• Clarify business requirements, for example define selection criteria and mappings&lt;br&gt;• Conduct functional testing and validate migration result&lt;br&gt;• …</td>
</tr>
</tbody>
</table>

*Roles may differ on Cloud context*
SAP Supports You on Your Way to SAP S/4HANA

“Transition to SAP S/4HANA” road map:

- Best Practices project documentation in the Roadmap Viewer for all SAP customers to transition to SAP S/4HANA on-premise
- Graphical overview and structured end-to-end documentation of an implementation or conversion project, including project file templates
- Helps customers, partners, and SAP to prepare and run transition projects according to SAP Best Practices
- Accelerators link to more detailed information, blogs, templates, training
- Links from project activities and tasks to services ➔ Your guidance for SAP support offerings

For more information, please visit us online:
- www.sap.com/maxattention
- www.sap.com/activeattention

Check our webinars on Transition to SAP S/4HANA: https://webinars.sap.com/sap-user-groups-k4u/en/s4hana11
Appendix

Miscellaneous Information
Recent innovations

**SAP S/4HANA, SAP S/4HANA Cloud**
- Pool of migration objects significantly enriched
- Transfer data using files & staging tables
  - Enable NULL-able fields in staging tables
  - Improve scalability in data load parallelization

**SAP S/4HANA**
- New additional migration approach: Transfer Data Directly from SAP System
  - Supported migration scenarios:
    - SAP ERP to SAP S/4HANA
    - SAP AFS to SAP S/4HANA for fashion
    - SAP EWM to SAP S/4HANA
    - SAP CRM to SAP S/4HANA Service
- Basic version of Migration Object Modeler for migration approach direct transfer supports tailored selection of data, enhance existing objects and create own migration objects

**S/4HANA Cloud, ES:**
- Extend Data Migration Status App with audit functionality
- Situation handling for Data Migration Status App

**SAP S/4HANA Migration Cockpit**

**Product road map overview**

**2020 – Q3/Q4**

**SAP S/4HANA, SAP S/4HANA Cloud**
- Harmonized Fiori UI for all migration approaches (File/Staging/Direct transfer)
- Introduction of one combined approach for File and Staging
- Additional new migration objects
- Direct Transfer:
  - Enable Transport Layer
  - Mass processing – possibility to process defined instances
  - Improved mass handling of value mappings (download possibility)
  - More flexible error reporting/handling
  - Facilitated use by further in-app help capabilities

**SAP S/4HANA**
- Migration object modeler for direct transfer:
  - Copy migration objects
  - Source code rules possible
  - Skip rule for selection
  - Harmonized UI for all approaches (file/staging, direct transfer)
  - Improved usability

**2021 – Product direction**

**SAP S/4HANA, SAP S/4HANA Cloud**
- Additional new migration objects
- Further parallelization options / performance improvements
- Enhanced mapping functionality

**SAP S/4HANA**
- Additional migration scenarios for Direct Transfer: APO-eSSP

**2022 – Product vision**

**SAP S/4HANA, SAP S/4HANA Cloud**
- Additional new migration objects
- Additional new migration scenarios
- Enhanced content upgrade: Functionality to merge modified migration objects with updates on predefined migration objects
- Administration of own-created content
- Provide more granular authorization concept to support different roles
- Improved functionality to plan, track and document the data migration and to validate the migration result
- Direct Transfer for SAP S/4HANA Cloud

SAP AFS: SAP Apparel and Footwear
SAP EWM: SAP Extended Warehouse Management
APO-eSSP: APO extended Service Parts Planning

This is the current state of planning and may be changed by SAP at any time.
Additional SAP Offerings for Data Migration
Complementing data migration offerings in the SAP portfolio

For complementing requirements, SAP portfolio includes additional data migration offerings. For example

- **SAP Data Services** – Extract, transform, and load data, particularly for non-SAP sources and intense data quality improvements
- **SAP Advanced Data Migration by Syniti** for the orchestration of large data migration projects and a workflow-like tracking of activities

Unit 3 of this week introduces additional migration features for SAP S/4HANA Cloud
Decision Path to S/4HANA

Influencing factors

- Current processes enable long-term strategy?
  - Yes
  - No
    - Historical data?
      - Yes
        - Re-imaged processes?
          - Few
            - Yes
              - Conversion
            - No
              - Many
              - New business models?
                - Few
                  - Incremental Value to Upgrade Current SAP ERP?
                    - Yes
                      - Conversion
                    - No
                      - Many
                      - New implementation
                - Many
                - “SAP S/4HANA First”
                  - Yes
                    - Conversion
                  - No
                    - Selective data transfer

- New SAP version?
  - “SAP S/4HANA First”
    - Yes
      - Conversion
    - No
      - Incremental Value to Upgrade Current SAP ERP?
        - Yes
          - Conversion
        - No
          - Many
          - New implementation
        - Few
          - “SAP S/4HANA First”
            - Yes
              - Conversion
            - No
              - Selective data transfer

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SAP Tools and Services

Today

Adoption Starter

What product map does SAP recommend for me and how to I identify the value

Business value

All SAP products

Quality value assessment

Business process improvement

All SAP products

BSR report

Recommended products

SAP Transformation Navigator

S/4HANA compatibility

SAP Readiness Check / SIC

SAP ERP & S/4HANA

SAP BW & BW/4HANA

Improvement & innovation

Pathfinder

SAP ERP

How can I identify benefits and track them in the future?

How can I best prepare my transformation?

How do I create my detailed execution plan?

How can I generate immediate value in the meantime?

Planning the digital transformation

SAP roadmaps – interactive

All SAP products

SAP product roadmaps

Tomorrow

SAP methodology

SAP best practices

Innovation discovery

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# Facilitate Migration Projects with SAP S/4HANA Migration Cockpit

1. **Tool of choice for migration to SAP S/4HANA**
   - Part of SAP S/4HANA and SAP S/4HANA Cloud (included in these licenses)
   - Ready-to-use solution
   - Support for customers with new implementations

2. **Preconfigured migration content specific to SAP S/4HANA**
   - Comprehensive set of preconfigured migration objects, such as customers, suppliers, and so on
   - Automated mapping between source data and SAP S/4HANA target values

3. **Integrated in SAP Activate methodology**
   - Proven methodology integrated in SAP Activate road map
   - Best practices

4. **Easy and safe migration**
   - Two migration approaches
   - Step-by-step guidance through the migration process
   - Preconfigured migration objects
   - Data validation to ensure high-data quality and consistency

5. **Flexible and extendable**
   - Migration object modeler for custom requirements
   - Ability to extend existing SAP migration objects
   - Integration of custom objects

6. **Outlook**
   - Improved functionality to plan, track and document the data migration
   - Provide additional migration content
   - Enhanced content upgrade - merge modified migration objects with updates on predefined migration objects
   - Direct Transfer for SAP S/4HANA Cloud
Matrix – Data Load into Staging Tables - Recommendation

<table>
<thead>
<tr>
<th>Connection</th>
<th>Staging Tables located</th>
<th>HANA Enterprise Edition</th>
<th>HANA Runtime License (REAB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local SAP S/4HANA DB Schema</td>
<td>Staging tables will be created in same HANA DB schema as SAP S/4HANA.</td>
<td>Fill tables via*</td>
<td>Fill tables via*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• XML Template files</td>
<td>• XML Template files</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ABAP programming</td>
<td>• ABAP programming</td>
</tr>
<tr>
<td>Remote SAP HANA Database</td>
<td>Staging tables will be created in a separate HANA DB Schema.</td>
<td>Tables can be filled by</td>
<td>Tables can be filled via**</td>
</tr>
<tr>
<td>Schema</td>
<td></td>
<td>all tools of choice – incl. 3rd party (staging tables can be accessed via DB layer)</td>
<td>• XML Template files</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• ABAP programming</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Data Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• SLT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 3rd Party Tools</td>
</tr>
</tbody>
</table>

* This is SAP’s recommendation. In case system administrator provides users and access, technically all tools listed for remote HANA DB schema are possible. Keep auditing process in mind. This is pure on SAP customer side.

** staging tables can not be filled directly on database layer, for example with SAP HANA Studio (SUR Software Usage Rights)
Legal Statement on Use of 3<sup>rd</sup> Party Tools to Fill Staging Tables in REAB

In addition to the standard options of using either a full-use-version of SAP HANA (i.e. SAP HANA, enterprise edition) or the SAP tools provided as Runtime Software with SAP HANA, runtime edition, it is possible to utilize a 3<sup>rd</sup> party ETL tool to populate the staging tables for the SAP S/4HANA migration cockpit.

In this case, the staging tables will be created by the SAP S/4HANA migration cockpit in a dedicated schema, either in the same database tenant where SAP S/4HANA is installed or a separate dedicated database tenant. Such a schema can then be configured as a remote database connection enabling connectivity and filled by a 3<sup>rd</sup> party ETL tool solely for the purpose of consumption by the S/4HANA migration cockpit.

For the avoidance of doubt, the tables may not be used for any kind of processing by SAP HANA outside of SAP S/4HANA migration cockpit, including, but not limited to, calculation view modeling, custom SAP HANA Extended Application Services (XS) applications, and other processing by SAP HANA engines. Furthermore, the use of such 3<sup>rd</sup> party tools to populate staging tables shall be limited to the timeframe during which a migration project is active in the SAP S/4HANA system installed in the same SAP HANA database tenant.

*This information is officially published on help.sap.com – Data Migration Landing Page – Further Information (as of 2020 FPS02)
Thank you.

Standard slide deck SAP S/4HANA: Migrate Your Data to SAP S/4HANA – SAP S/4HANA Migration Cockpit
Standard slide deck SAP S/4HANA Cloud: Migrate Your Data to SAP S/4HANA Cloud – SAP S/4HANA Migration Cockpit
Video: Migrate Data Using Staging Tables
Video: Migrate Data Directly from SAP System
Community topic page https://community.sap.com/topics/s4hana-migration-cockpit/
Click through tutorials SAP S/4HANA migration cockpit
Classroom Training S4D445 Data Migration using the SAP S/4HANA Migration Cockpit (based on 1909; chargeable)

SAP S/4HANA migration cockpit: sap_s4hana_migration_cockpit@sap.com

Find a comprehensive FAQ list in the SAP S/4HANA migration cockpit Community: https://www.sap.com/documents/2020/12/ec514ba3-c37d-0010-87a3-c30de2ffd8ff.html
SAP folgen auf

www.sap.com/germany/contactsap


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