SAP S/4HANA Migration Cockpit

November, 2019
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Agenda

Introduction – Your way to SAP S/4HANA

SAP S/4HANA Migration Cockpit
- Overview - Functions and Features
- Different Migration Approaches
  - Transfer Data using Files
  - Transfer Data using Staging Tables
  - Transfer Data Directly from SAP System
- Summary Migration Approaches
- Migration Objects
- Outlook

Further Information
- Project Methodology
- Useful Documentation

Key Takeaways
Introduction – Your way to SAP S/4HANA
Your way to SAP S/4HANA (1/3)

- **System Conversion**
  - REUSE by in-place conversion
  - Customer-tailored
  - Highly Standardized, fueled with best practices & based on a clean core

- **Selective Data Transition**
  - REENGENEERING with data migration

- **New Implementation**
  - Start Rapid Modernization
  - Selective Business Process Optimization
  - Business Model Innovation

- **SAP S/4HANA**
  - SAP S/4HANA Cloud single-tenant edition

- **SAP S/4HANA Cloud single-tenant edition**

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Your way to SAP S/4HANA (2/3)

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

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 & retire old landscape
  → Delivery model: included in SAP S/4HANA shipment
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

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
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- Delivery model: included in SAP S/4HANA shipment
SAP S/4HANA Migration Cockpit
Overview - Functions and Features
Data migration process for new implementation

Data Migration
- 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 & transform data → Simulate → Migrate

*SAP S/4HANA Cloud single-tenant edition
*SAP S/4HANA Cloud

Get data
Model & design to reflect custom requirements *

Legacy

*Migration object modeler available for On-Premise only
SAP S/4HANA Migration Cockpit
Data migration to SAP S/4HANA EASY – SAFE – and ACCELERATED

Key Facilitators

- Preconfigured data migration: Can be used out of the box and does not require developer skills
- Step-by-step guidance through the migration process
- Preconfigured migration objects and rules
- Automatized cross-object value mapping
- Migration programs are automatically generated

Migration object modeler for custom requirements
- Powerful and easy-to-use state-of-the-art modeling environment (SAP S/4HANA only)
SAP S/4HANA Migration Cockpit – preconfigured migration content

**Key Benefits**

- Content covers all best practice migration objects
- Preconfigured content and mapping for each migration object, e.g. bank, material master
- Predefined file templates and staging table definitions for each migration object and predefined selection criteria for direct data transfer
- Automated mapping between source and target structure
- Migration programs are automatically generated - no programming required by the customer
- Available for SAP S/4HANA and SAP S/4HANA Cloud, included in licenses

**Examples migration objects:**

- Customer
- Account balances
- Material
- Pricing condition
SAP S/4HANA Migration Cockpit - migration object modeler

Key Benefits

- Design functionality to easily integrate custom objects and enhancements into the migration project
- Integration of newly created objects:
  - Custom objects
  - SAP standard objects that are not yet in the scope of the SAP S/4HANA Migration Cockpit
- Customer-specific enhancements (e.g. add new fields) to SAP standard objects delivered with the SAP S/4HANA migration cockpit
- Data source:
  - Easily adjust input structure (file/staging)
  - Add or change migration object modeler’s selection criteria (direct transfer)
- Use Standard APIs or code your function module
- Map structure and fields

Transaction: LTMOM
SAP S/4HANA Migration Cockpit
Different Migration Approaches
SAP S/4HANA Migration Cockpit – three 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)
- Access source system database directly (ABAP-based SAP source systems only)
- Transfer data from SAP source system to target SAP S/4HANA system
- Supports data migration scenarios from other applications, e.g. from SAP Apparel and Footwear (SAP AFS) to SAP S/4 Fashion and Vertical Business
SAP S/4HANA Migration Cockpit
File / Staging
SAP S/4HANA Migration Cockpit – file and staging approach

Data provisioning

- Template file upload
- Staging

Process & content

Data load

API based

SAP S/4HANA Cloud

SAP S/4HANA

SAP S/4HANA Cloud 1908: **100+**

SAP S/4HANA 1909: **80+**

Business objects
**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

---

**Migration file template for bank**
SAP S/4HANA Migration Cockpit - transfer data using staging tables

System setup SAP S/4HANA

1. Select database connection** for your migration project

2. Staging table creation for selected migration object

3. Extraction and fill of staging tables via SAP or third-party-tools

4. Read access

5. Insert / update via API

6. Status update of record

SAP S/4HANA or separate SAP HANA box*

SAP HANA DB schema*

Legacy system

Application data

SAP S/4HANA

Application tables

* Separate SAP HANA database schema is required, can also be on SAP S/4HANA target system

** Prerequisite: established secondary database connection
SAP S/4HANA Migration Cockpit - transfer data using staging tables
System setup SAP S/4HANA Cloud

Prerequisite:
- Communication Arrangement (Service)
- SAP Cloud Platform Account
- Customer must register for a DBaaS HANA Instance on SAP Cloud Platform
- Customer has to request the activation via ticket on component XX_S4C-OPR-SRV (scope item 2Q2) see application help
SAP S/4HANA Migration Cockpit App: Data Migration Status
Released 1805

Data Migration Status: Features

- **Real time progress monitoring**
- **Many filter capabilities**
- **Ready to use record statistics**
- **Status of every source record**

- **Ready made status Log**
- **No need to store & distribute the Log**
- **Export to Excel**
- **Quick and Easy evaluation of failed records**
- **Smart data validation**
  - Audit & Direct Navigation to Fiori App

Application Help for Data Migration Status
New Migration Approach
Transfer data directly from SAP system
SAP S/4HANA Migration Cockpit – transfer data directly from SAP system

New migration approach with SAP S/4HANA 1909

Data Provisioning

Transfer data directly from SAP System

Process & Content

SAP S/4HANA 1909: 100+

Business objects

Data Load

API based

SAP S/4HANA

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 S/4HANA Migration Cockpit – transfer data directly from SAP systems

Create new migration project

New Migration Project

Migration Approaches: Migrate Data Directly from SAP System

Header
Select Data
Migration Objects

Selection of relevant scenario:
- SAP ERP to SAP S/4HANA
- SAP AFS to SAP S/4HANA
- SAP EWM to Decentralized EWM based on SAP S/4HANA

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

Preconfigured migration content:
List of available migration objects relevant for the selected scenario
SAP S/4HANA Migration Cockpit – transfer data directly from SAP systems

Migration process

The migration cockpit guides you through the various steps of the data migration, but you can also flexibly choose which steps you want to do next (select, simulate, migrate).
SAP S/4HANA Migration Cockpit – transfer data directly from SAP systems

Migration process with activity tracking

Activity tracking tab on projects overview page informs you on the status of running activities
You can specify value mappings and transform values from the source system to the target system.

Search help provides existing values in the SAP S/4HANA target system.

SAP S/4HANA Migration Cockpit – transfer data directly from SAP systems

Maintain value mapping
Migration Approach “Migrate Data Directly from SAP System”
also available in LTMOM

- 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
- Debug the data transfer and posting process by using the “test” button in the modeler screen
- Create, show and activate transformation rules of type “Fixed Value” and of type “Value Mapping”
- Mapping download and upload
SAP S/4HANA Migration Cockpit – transfer data directly from SAP systems

Must Know I

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).

Necessary preparations in the system landscape

▪ The add-on DMIS_2011 SP17 or higher needs to be installed in the source system (included in the license for SAP S/4HANA 1909)
▪ RFC connection from ERP/AFS/EWM source to SAP S/4HANA target system
▪ Setup FIORI
▪ Apply necessary notes
▪ 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)

Installation Guide (check chapter 7)
Define a mapping strategy between SAP source and S/4HANA target

- Standard APIs are used to load the data into 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 org.units, cost centers, document types, ....
- In case of questions carefully check the object-related documentation.

Test and Productive Migration

- Test Migration
  - The data transfer process is client specific, so you create your project in the client on the receiver system which should finally receive the data to be migrated.
  - You execute several test data migrations before you run the data migration in the production systems.
- Mapping Value Download and Upload
  - You can download mapping values of your previous test and upload them into your new project. This functionality is available in the migration object modeler.
- Productive Migration
  - When the results of your data migrations meet the expectations of your business, users you create an equivalent project in the production systems including own enhancements.
SAP S/4HANA Migration Cockpit

Summary Migration Approaches
**SAP S/4HANA Migration Cockpit** – comparison of migration approaches

<table>
<thead>
<tr>
<th>Availability</th>
<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>Source System</td>
<td>SAP S/4HANA Cloud</td>
<td>SAP S/4HANA Cloud</td>
<td>SAP S/4HANA Cloud</td>
</tr>
<tr>
<td>Source System</td>
<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>Data Volume</td>
<td>Small and medium volumes of data</td>
<td>Large volumes of data</td>
<td>Any volume of data volumes of data</td>
</tr>
<tr>
<td>Data Provisioning</td>
<td>XML template files filled by customers</td>
<td>Staging tables filled by customers (using e.g. 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>Data cleansing</td>
<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
Migration Objects
SAP S/4HANA Migration Cockpit
Preconfigured migration objects SAP S/4HANA Cloud

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

Documentation available

*Quick link: help.sap.com/S4_CE_MO, whereas CE = Cloud Edition, MO = Migration
SAP S/4HANA Migration Cockpit

Preconfigured migration objects SAP S/4HANA

Available Migration Object List

You can use the following table to get an overview of all migration object order by Migration Cockpit Object Name. Choose a migration object and select the respective checkbox to filter.

### Migration Cockpit Object Name
<table>
<thead>
<tr>
<th>Business Object Name</th>
<th>Business Object Type</th>
<th>Migration Approach</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch (if Batch is unique at material level)</td>
<td>Batch (if Batch is unique at plant level)</td>
<td>Select All Direct Transfer</td>
<td></td>
</tr>
<tr>
<td>Catalog code group and code</td>
<td>Characteristic</td>
<td>Master data</td>
<td>Direct Transfer</td>
</tr>
<tr>
<td>Class</td>
<td>Customer</td>
<td>Master data</td>
<td>Direct Transfer</td>
</tr>
<tr>
<td>Customer Material Info Record</td>
<td>Customer Material Info Record</td>
<td>Master data</td>
<td>Direct Transfer</td>
</tr>
</tbody>
</table>

### Filter for migration approach:

- Quick link: help.sap.com/S4_OP_MO, whereas OP = onPremise, MO = Migration
SAP S/4HANA Migration Cockpit
Outlook
# SAP S/4HANA Migration Cockpit

## Product road map overview

### Recent innovations

**Data Provisioning**
- On-premise: Direct data transfer from SAP source
  - Data extraction from SAP source and direct transfer to SAP S/4HANA target
  - Parallel selection of data
  - Possibility of excluding certain instances

**Migration Object Modeler for direct data transfer from SAP source:**
- Allow users
  - To change filter or skip criteria
  - Enhance existing migration objects
  - Allow users to create own migration objects

**Business data migration from SAP Apparel and Footwear (SAP AFS) to SAP S/4HANA for fashion**
- Key AFS wholesale components

**Cloud:**
- Extend Data Migration Status App with audit functionality
- Situation handling for Data Migration Status App

### 2019 – Planned innovations

**Migration Cockpit for File & Staging:**
- Enable NULL-able fields in staging tables
- Improve scalability in data load parallelization

### 2020 – Product direction

**Migration Cockpit**
- Harmonized Fiori UI for all migration scenarios (File/Staging/Direct data transfer)
- Enable Transport Layer to transport migration content between systems
- Provide more granular authorization concept to support different roles
- Improved handling of value mappings (mass maintenance options)
- Integration Layer: provide APIs that can be used to integrate partner tools into the migration cockpit
- Aggregated error reporting

**Migration object modeler for direct data transfer from SAP source:**
- Improved usability & UI harmonization with file and staging approach

**New migration objects for all migration scenarios**
- Cloud: Complementing Apps
  - Facilitate project planning

### 2021 – Product vision

**Enhanced Content Upgrade Functionality**
- To merge modified migration objects with updates on predefined migration objects

**Auditable Solution**
- Provide audit functionality for on-premise

**Data Quality**
- Complement migration cockpit with SAP Data Quality solutions

**Analyses**
- Analyze migration data in SAP source systems

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This is the current state of planning and may be changed by SAP at any time.
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/
## Migration of business data to SAP S/4HANA

Activities along SAP Activate phases: Start as early as possible

<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>

### SAP S/4HANA Migration Cockpit

- 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 & transform data
  - Model & design custom migration objects
  - Complementing data extraction and data cleansing if required
  - 2-n test cycles & dress rehearsal – validate, adapt & improve
  - Availability of appropriate test landscape
  - Timely go live planning
- Migrate data to production
- Operate on migrated data
## Business data migration to SAP S/4HANA

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

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

* on premise; role differs in Cloud context
SAP S/4HANA Migration Cockpit
Further Information
Further Information

Application Help SAP S/4HANA Migration Cockpit SAP S/4HANA Cloud 1908

Data Migration Landing Page SAP S/4HANA 1908 Cloud

New with SAP S/4HANA 1908
Further Information

Application Help SAP S/4HANA Migration Cockpit SAP S/4HANA 1909

Data Migration Landing Page SAP S/4HANA 1909

New with SAP S/4HANA 1909
SAP S/4HANA Data Migration Content Development Newsletter (file/staging) 1908/1909

SAP S/4HANA Cloud News
SAP S/4HANA (on premise) News
KBAs, SAP Notes, Help Portal Pages you should know
Tips & Tricks
Outlook
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 Tool
CA-LT-MC

2780378
Composite SAP Note for SAP S/4HANA Migration Cockpit (all releases)

Collective SAP S/4HANA Migration Cockpit Notes for Direct Transfer (1909)

2747566
Composite SAP Note for SAP S/4HANA Migration Cockpit – Transfer Data Directly from SAP System

2819445
Transfer Data Directly from SAP System – Corrections in migration technology

2815704
Migrate Your Data Fiori App for SAP S/4HANA On-Premise Edition 1909

Collective SAP Notes for Migration Content (file/staging)
CA-GTF-MIG

2538700
Collective SAP Note and FAQ for SAP S/4HANA Migration Cockpit (Cloud)

2537549
Collective SAP Note and FAQ for SAP S/4HANA Migration Cockpit (on premise)
SAP S/4HANA Migration Cockpit

Key Takeaways
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: Transition to SAP S/4HANA
   - Part of the SAP Model Company service
   - Best practices

4. Easy and safe migration
   - Direct data transfer from SAP source systems (new with SAP S/4HANA 1909)
   - Step-by-step guidance through the migration process
   - Template files for each migration object
   - 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
   - Automated validation of migration results
   - Facilitated auditing
   - Complementing Apps for SAP S/4HANA Cloud
   - Data cleansing and integration with MDG
Thank you.

SAP S/4HANA Migration Cockpit
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► High Level Video
  SAP S/4HANA Migration Cockpit
► Technical Brief
  Migrate your Data to SAP S/4HANA Quickly, Safely and Cost-Effectively
► Video: Migration Cockpit
► Video: Migration Object Modeler
  http://bit.ly/2BHmUHm
► Blog: Migration Cockpit
  https://blogs.sap.com/2017/07/05/starter-blog-for-sap-s4hana-migration-cockpit/
Appendix - FAQ

SAP S/4HANA Migration Cockpit
Question #1:
What is the licensing model for the SAP S/4HANA migration cockpit?
Answer:
The SAP S/4HANA Migration Cockpit is part of SAP S/4HANA and SAP S/4HANA Cloud and included in these licenses.

Question #2:
Which migration object is available for which Release?
Answer:
Please find detailed information in the Application Help (=Product Assistance)
For SAP S/4HANA use quick link https://help.sap.com/S4_OP_MO
For SAP S/4HANA Cloud use quick link https://help.sap.com/S4_CE_MO
Here you can switch between the different releases.

Question #3:
What can I do when I have specific requirements that are not covered by the migration objects?
Answer:
You can create user-defined migration objects using the migration object modeler. If available, you can assign standard SAP APIs to these objects. If not available, you can create your own function module to populate the target structure including your custom field enhancements. See SAP Note 2590165 for more information on how to create an own function module for the SAP S/4HANA Migration Cockpit.
Question #4:
How can I populate the Excel template files or the staging tables?
Answer:
For the extraction of data from the source systems you can use either SAP tools or third-party tools. The template files and the staging tables have to be filled in a ready-to-load data format, i.e. the format expected by SAP S/4HANA.

Question #5:
Instead of a 1:1 mapping, can I also define a 1:n or n:1 mapping in the migration cockpit?
Answer:
No, this is not possible.

Question #6:
How can I migrate historical financial balances?
Answer:
Migration object ‘FI – Historical balance’ available for Cloud (as of SAP S/4HANA Cloud 1811) and planned for future on-premise Releases. See SAP Note 2587192 – Migration of historical balances to SAP S/4HANA Cloud for further information.
Appendix - Deep Dive
Transfer Data Using Files
Available for SAP S/4HANA and for SAP S/4HANA Cloud

- Suitable for any source system (SAP or non-SAP)
- Pre-delivered MS Excel templates for migration object
- Suitable for small and medium amounts of data
SAP S/4HANA Migration Cockpit – Transfer Data Using Files
Select your Solution and Create Migration Project

1. Create a migration project

2. Choose the type File
SAP S/4HANA Migration Cockpit – Transfer Data Using Files
Select Migration Objects and Enter your Data

3. Select the relevant migration objects

Data migration objects delivered with the SAP S/4HANA Migration Cockpit will be listed in the migration project.
Select the migration objects you need, and generate a migration template for them.

4. Populate Template with your data
SAP S/4HANA Migration Cockpit – Transfer Data Using Files
Transfer Data being Guided Through the Migration Process

5. Start the transfer and monitor the data migration process

Migration Guidance:
- The cockpit guides you through the various steps of the data migration – from the data validation to the actual data import.
- The ‘Simulate Import’ feature checks migration data against the Customizing data in the system.
Appendix - Deep Dive
Transfer Data Using Staging Tables
Available for SAP S/4HANA and for SAP S/4HANA Cloud

- Used to transfer large volumes of data
- Staging tables can be filled by SAP tools or external ETL tools (Extract, Transfer, Load)

The Knowledge Base Article [SAP KBA 2733253](https://knowledge.sap.com/) contains information on the staging approach.
SAP S/4HANA Migration Cockpit - Transfer Data Using Staging Tables
Details – Create Project (1/6)

- Staging tables will be created natively in the schema of the SAP HANA database depending on the selected database connection.
- For each source structure of a migration object, a separate staging table will be generated.
- Staging tables must be filled by customer using extraction tools from SAP or from a third party.

It is not possible to combine staging and file approach in one project!
For each source structure of the migration object (e.g. customer), a separate staging table will be generated natively in the SAP HANA database schema - depending on the selected database connection.
SAP S/4HANA Migration Cockpit - Transfer Data Using Staging Tables
Details – Data Records (3/6)

- Screen for preview on table structure and records with different statuses (unprocessed, processed, error)
- Migration Cockpit driven data operations for staging tables
  - Delete selected records
  - Delete all records
  - Reset Status (to unprocessed)
- Start Synchronization (e.g. after changes done in migration object modeler)
Instead of delta-file known from the file approach, flag E is set in field /1LT/PROCEED, if record could not be inserted. P is set for records, which have been transferred to S/4HANA system.

Comments and field information available in staging table fields. A * in the comment field means, that this field is mandatory.
Freeze triggers prevent that, during the transfer of data, changes can be done on any data in the staging table

- If freeze triggers are set, you will see this message on the Migration Object Screen in the Migration Cockpit:

- On the database, you can see three triggers for each staging table:

- If you want to insert data in the staging table, when the freeze triggers are set, you will get the following database error:

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 Restart Transfer button in the Migration Object Screen.
SAP S/4HANA Migration Cockpit - Transfer Data Using Staging Tables
Details – Restart Transfer (6/6)

- **Restart Transfer Button:**
  The current transfer status will be reset (freeze triggers will be deleted) and you will have to start again from the first step of the transfer process: Validate data, after you have started the transfer again.

- **Note that the existing records remain in the staging tables and new records can be added to the staging tables. When you start the transfer again, all the unprocessed records will be processed and transferred.**

**Parallelization**

- It is possible to transfer multiple staging tables in parallel.

‘No. of Data Transfer Jobs’ field available with Cloud 1811 and On-Premise 1809
SAP S/4HANA Migration Cockpit and migration object modeler
New features with SAP S/4HANA Cloud 1902 / SAP S/4HANA 1809 FPS1

New Features

- Simulation and debugging functionality in migration object modeler - LTMOM
- Mapping table for staging table names
  Table /1LT/DS_MAPPING
  - Contains mapping information about the migration object, source structure and staging table name.
  - To determine staging table names after copying a project from a quality to production system.
  - Can use these table names in scripts or applications to populate the staging tables
Demo Transfer Data Using Staging Tables
SAP S/4HANA Migration Cockpit 1909 (direct transfer)

Features

- Displays the list of projects in your client and system

**Migration Projects Screen**

Message logs are available for completed activities by clicking the ‘View Log’ button in the activity tracking panel of a project.
On the Migration Project Screen, you can view the migration objects assigned to your project including information on the status (e.g. the number of selected instances for a migration object, Mapping Tasks, Simulation and Migration Information).

You can start the selection for multiple migration objects if required. To do this, select the relevant migration objects and choose Actions and then Select.
In the project setup phase, you see which objects are ready for processing, and which objects are still in a generation phase and will be available for processing soon.
To get detailed information about a migration object, click a migration object name in the **Migration Object** column.

The system displays the **Migration Object** screen, where you can view the following information:

- Description
- Table Structure
- History of events including logs
- Dependencies to other migration objects
- Data
- Technical Information (relevant for support)
Appendix -
Transfer Data Directly from SAP System –
Different Scenarios
Migrate Data Directly from SAP System
Selection of data from SAP source system via RFC

Preconfigured migration objects
- Warehouse Stock
- Warehouse Product
- Storage Bin
- Storage Bin Sorting
- Fixed Bin Assignment

*SAP Business Suite EWM*

Digital Core
SAP S/4HANA

Decentral EWM based on S/4HANA

*Prerequisite for Transfer data directly from SAP System: DMIS installation in source*
SAP EWM to Decentralized EWM based on SAP S/4HANA

SAP S/4HANA Migration Cockpit – Create new migration project

New Migration Project

Selection scenario:
SAP EWM to Decentralized EWM based on SAP S/4HANA

Data selection based on Warehouse Number
(depending on migration scenario)

Preconfigured migration content:
List of available migration objects
Appendix

Migration Objects
SAP S/4HANA Migration Cockpit
Customer Vendor Integration since 1808 / 1809

Migration Objects

- Customer
  - Customer (deprecated)
  - Customer - extend existing record by new org levels
  - Customer - extend existing record by new org levels (deprecated)

- Supplier
  - Supplier (deprecated)
  - Supplier – extend existing record by new org levels
  - Supplier – extend existing record by new org levels (deprecated)

A new API is used for customer and supplier with 1808 and 1809. The old used API is not supported, therefore the old migration objects are marked as deprecated.

It is now possible to create a business partner with both customer and supplier roles. You have two possibilities:
1. Create Customer and then use Supplier Extend to add the supplier role
2. Create Supplier and then use Customer Extend to add the customer role
**SAP S/4HANA Migration Cockpit – direct transfer** (SAP S/4HANA 1909)

Preconfigured migration objects I (SAP ERP to SAP S/4HANA)

<table>
<thead>
<tr>
<th><strong>Controlling</strong></th>
<th><strong>Financials - General Ledger</strong></th>
<th><strong>Treasury and Risk Management</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>FI-CO Activity group</td>
<td>FI-AA Fixed Asset - including Balance</td>
<td>FI-TRM Additional flow</td>
</tr>
<tr>
<td>FI-CO Activity type</td>
<td>FI-GL Account Balance - classic GL</td>
<td>FI-TRM Commercial paper</td>
</tr>
<tr>
<td>FI-CO Activity type – price planning</td>
<td>FI-GL Account Balance - new GL</td>
<td>FI-TRM Condition details</td>
</tr>
<tr>
<td>FI-CO Business process</td>
<td>FI-GL Bank account</td>
<td>FI-TRM Foreign exchange collar contract</td>
</tr>
<tr>
<td>FI-CO Business process group</td>
<td>FI-GL Bank Key</td>
<td>FI-TRM Foreign exchange option</td>
</tr>
<tr>
<td>FI-CO Cost center</td>
<td>FI-GL Customer Open Item - classic GL</td>
<td>FI-TRM Foreign exchange spot/forward contract</td>
</tr>
<tr>
<td>FI-CO Cost center standard hierarchy and groups</td>
<td>FI-GL Customer Open Item - new GL</td>
<td>FI-TRM Foreign exchange swap contract</td>
</tr>
<tr>
<td>FI-CO Cost element group</td>
<td>FI-GL Exchange rate</td>
<td>FI-TRM Interest rate instrument</td>
</tr>
<tr>
<td>FI-CO Internal order</td>
<td>FI-GL General Ledger Account</td>
<td>FI-TRM OTC Interest rate derivative swap</td>
</tr>
<tr>
<td>FI-CO Profit center</td>
<td>FI-GL House bank</td>
<td>FI-TRM Payment details</td>
</tr>
<tr>
<td>FI-CO Profit center standard hierarchy and groups</td>
<td>FI-GL Open Item - classic GL</td>
<td>FI-TRM Settlement</td>
</tr>
<tr>
<td>FI-CO Secondary cost element</td>
<td>FI-GL Open Item - ledger group specific</td>
<td></td>
</tr>
<tr>
<td>FI-CO Statistical key figure</td>
<td>FI-GL Open Item - new GL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FI-GL Vendor Open Item - classic GL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FI-GL Vendor Open Item - new GL</td>
<td></td>
</tr>
</tbody>
</table>
### SAP S/4HANA Migration Cockpit – direct transfer (SAP S/4HANA 1909)

Preconfigured migration objects II (SAP ERP to SAP S/4HANA)

<table>
<thead>
<tr>
<th><strong>Logistics</strong></th>
<th><strong>Materials Management</strong></th>
<th><strong>Plant Maintenance</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch (if Batch is unique at material level)</td>
<td>Material inventory balance</td>
<td>Equipment</td>
</tr>
<tr>
<td>Batch (if Batch is unique at plant level)</td>
<td>Purchasing contract</td>
<td>Equipment BOM</td>
</tr>
<tr>
<td>Material</td>
<td>Purchase info record</td>
<td>Equipment Task List</td>
</tr>
<tr>
<td>Material commodity</td>
<td>Purchase Order (only open PO)</td>
<td>Functional Location</td>
</tr>
<tr>
<td>Material MRP Area</td>
<td>Purchase Requisition (only open PR)</td>
<td>Functional Location BOM</td>
</tr>
<tr>
<td>Production Version</td>
<td>Pricing condition (Purchasing and Sales)</td>
<td>Functional Location Task List</td>
</tr>
<tr>
<td>Sales Order BOM</td>
<td>Scheduling agreement</td>
<td>General task list</td>
</tr>
<tr>
<td>VC - Configuration profile</td>
<td>Service entry sheet</td>
<td>Maintenance item</td>
</tr>
<tr>
<td>VC - Material variant</td>
<td>Service Master</td>
<td>Maintenance plan</td>
</tr>
<tr>
<td>VC - Object Dependency &amp; Dependency Net</td>
<td>Source List</td>
<td>Measuring point</td>
</tr>
<tr>
<td>Vendor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Center</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Production Planning</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Material BOM</td>
</tr>
<tr>
<td>Material consumption</td>
</tr>
<tr>
<td>Material classification</td>
</tr>
<tr>
<td>Planned independent requirement</td>
</tr>
<tr>
<td>Production order</td>
</tr>
<tr>
<td>Routing</td>
</tr>
</tbody>
</table>
SAP S/4HANA Migration Cockpit – direct transfer (SAP S/4HANA 1909)
Preconfigured migration objects III (SAP ERP to SAP S/4HANA)

**Sales and Distribution**
- Customer
- Customer Material Info Record
- Customer quotation
- Pricing condition (purchasing and sales)
- Sales Order (only open SO)
- Sales Contract

**Quality Management**
- Inspection catalog selected set code
- Inspection catalog selected sets
- Inspection method
- Inspection plan
- Inspection setup
- Master inspection characteristics
- Quality info record

**Cross Application**
- Business Partner
- Characteristic
- Class
- Engineering change number

**Project Systems**
- Project
- Project system - Network
SAP S/4HANA Migration Cockpit – direct transfer (SAP S/4HANA 1909)
Preconfigured migration objects I (SAP AFS to SAP S/4HANA)

**Controlling**
- FI-CO Activity Group
- FI-CO Activity Type
- FI-CO Activity Type–Price Planning
- FI-CO Business Process
- FI-CO Business Process Group
- FI-CO Cost Center
- FI-CO Cost Center Standard Hierarchy & Group
- FI-CO Cost Element Group
- FI-CO Internal Order
- FI-CO Profit Center
- FI-CO Profit Center Standard Hierarchy & Group
- FI-CO Secondary Cost Element
- FI-CO Statistical Key Figure

**Financials - General Ledger**
- FI-GL Account Balance - classic GL
- FI-GL Account Balance - new GL
- FI-GL Bank Account
- FI-GL Bank Key
- FI-GL Customer Open Item - classic GL
- FI-GL Customer Open Item - new GL
- FI-GL Exchange Rate
- FI-GL General Ledger Account
- FI-GL Open Item - classic GL
- FI-GL Open Item - ledger group specific
- FI-GL Open Item - new GL
- FI-GL Vendor Open Item - classic GL
- FI-GL Vendor Open Item - new GL
- House Bank

**Application Platform**
- Purchase Grid Article
- Purchase Grid for plants and articles
- Purchase Grid for Pur.Org., Vendor & Articles
- Purchase Grid for Purchasing Org and Articles
- Purchasing contract
- Sales Grid for Articles
- Sales Grid: S.Org, Dist.Ch, Cust. Grp & Article
- Sales Grid: S.Org, Dist.Ch, Customer & Article
- Sales Grid: Sales Org, Dist. Channel & Article
- Segmentation default values
- Segmentation structure
- Segmentation strategy

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SAP S/4HANA Migration Cockpit – direct transfer (SAP S/4HANA 1909)
Preconfigured migration objects II (SAP AFS to SAP S/4HANA)

**Logistics**
- Batch at plant level
- Configuration class for Material Grid
- Customer
- Equipment
- Quantity Distribution Profile
- VAS (Sales Area and Customer)
- VAS (Sales Area, Customer Group and Material)
- VAS (Sales Area, Customer and Material)
- Vendor

**Production Planning**
- Planned Indep. Requirement at Material Level
- Planned Indep. Requirement at SKU Level
- Planned Independent Requirement
- Routing-Task List
- Work Center
- Source list

**Cross Application**
- Characteristics for Dimensions
- Characteristics for Non-Dimensions
- Classification for batches
- Engineering Change Numbers

**Materials Management**
- Article
- Material BOM
- Material Inventory balance
- Purchase Order (only open PO)
- Purchasing Info Record

**Sales and Distribution**
- Customer
- Pricing Condition (purchasing and sales)
- Sales contract
- Sales Order (only open SO)
- Sales Order BOM
- Scheduling agreement

**Industry Specific**
- Distribution curve
- Distribution curve condition
- Season
SAP S/4HANA Migration Cockpit – direct transfer (SAP S/4HANA 1909)
Preconfigured migration objects (SAP EWM to SAP S/4HANA)

Decentralized Extended Warehouse Management
Warehouse Fixed Bin Assignments
Warehouse Product
Warehouse Stock
Warehouse Storage Bin
Warehouse Storage Bin Sorting
Appendix

Project Methodology
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

Ask for SAP Service Offerings
If you want SAP to support and safeguard your project, ask your account representative for SAP service offerings: SAP Value Assurance, SAP MaxAttention™, and SAP ActiveAttention services.

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
Decision path to S/4HANA
Influencing factors

Current processes enable long-term strategy?

Yes

No

Historical data?

Yes

No

Re-imaged processes?

Few

Many

New business models?

Yes

No

Current SAP version?

“SAP S/4HANA First”

Yes

No

Incremental Value to Upgrade Current SAP ERP?

Yes

No

Conversion

Selective Data Transfer

New implementation

(Single Tenant Edition option)
SAP S/4HANA Migration Cockpit
Transfer Data Directly from SAP Source System

- Suitable for ABAP-based SAP source systems only
- Three 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
Further Information

Click Through Demos:

- Introducing SAP S/4HANA Migration Cockpit (based on 1610 FPS02)
- SAP S/4HANA Migration Cockpit: Using staging tables
- Working on a migration object with the migration object modeler
- Adding fields to a migration object
- Creating a new migration object

Available in SAP Learning Hub:
SAP S/4HANA Data Migration - Tutorials; SAP Learning Hub subscription required

http://help.sap.com


### SAP S/4HANA System Conversion – Transition Paths Overview

#### Start Release | Target Release | Availability | Remarks
--- | --- | --- | ---
1. SAP S/4HANA Finance 1605 | SAP S/4HANA 1709 | Planned for: Q4/2017 | Update DB to SAP HANA 2 and Installation of S4CORE Software
2. SAP Simple Finance, on-premise edition 1503 | SAP S/4HANA 1709 | Planned for: Q4/2017 | Update DB to SAP HANA 2 and Installation of S4CORE Software
4. SAP S/4HANA 1610 | SAP S/4HANA 1709 | Planned for: Q4/2017 | Update DB to SAP HANA 2 and Installation Software (Upgrade)
5. SAP S/4HANA, on-premise edition 1511 | SAP S/4HANA 1709 | Planned for: Q4/2017 | Update DB to SAP HANA 2 and Installation Software (Upgrade)
7. SAP ERP Ehp 0-8 | SAP S/4HANA 1909 | Available since: Q3/2019 | Migration to SAP HANA DB [if required], Installation of S4CORE Software

#### System Conversion from SAP ERP to SAP S/4HANA

1. SAP ERP 6.0, EHP xx
2. SAP S/4HANA Finance 1605
3. SAP Simple Finance, on-premise edition 1503
4. SAP S/4HANA, on-premise edition 1511
5. SAP S/4HANA Finance 1605
6. SAP S/4HANA 1610
7. SAP S/4HANA 1909

#### System Conversion from SAP S/4HANA Finance to SAP S/4HANA

1. SAP S/4HANA Finance 1605
2. SAP Simple Finance, on-premise edition 1503
3. SAP S/4HANA, on-premise edition 1511
4. SAP S/4HANA Finance 1605
5. SAP S/4HANA 1610
6. SAP S/4HANA Finance 1605
7. SAP S/4HANA 1610

#### Upgrade within the SAP S/4HANA product family

- SAP HANA 2
- SAP S/4HANA 1809 / 1909
- SAP S/4HANA 1909

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- **SAP S/4HANA Conversion Blog – 1909**
SAP Tools and Services

Recommended Products

All SAP products

SAP Transformation Navigator

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

S/4HANA Compatibility

SAP ERP & S/4HANA
SAP BW & BW/4HANA

SAP Readiness Check / SIC

How do I create my detailed execution plan?

Improvement & Innovation

SAP ERP

Pathfinder

URL

Today

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

How can I best prepare my transformation?

How can I generate immediate value in the meantime?

Business Value

Quality Value Assessment

All SAP products

Business Process Improvement

BSR Report

SAP Business Suite | SAP S/4HANA

Planning the Digital Transformation

SAP Roadmaps – Interactive

All SAP products

SAP Product Roadmaps

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SAP S/4HANA Adoption

Tool List

Discover

Build Your Business Case
- SAP Fiori apps reference library
- Business Scenario Recommendations (BSR)
- Solution Explorer
- Value Lifecycle Manager (VLM)
- Pathfinder
- Innovation Discovery Tool
- SAP Roadmap
- SAP Best Practice Explorer
- SAP S/4HANA Trial
- Feature Scope description
- SAP Innovation Guide
- Intelligent Technologies for Industry
- Innovations of Scenario by Industry

Determine

Discover Your Destination
- SAP Roadmap Viewer
- SAP Transformation Navigator
- SAP Readiness Check for SAP S/4HANA
- Simplification Item Catalog
- Simplification Item Check
- Code Inspector / Custom Code Migration Worklist
- Pre-Checks
- SAP API Hub

Prepare

Adapt

Migrate

Execute Your Move
- SAP Activate
- Maintenance Planner
- Migration Cockpit
- SAP Data Services with Rapid Data Migration content
Transition to S/4HANA – data migration service view
Engagement Options

Data Migration Services within the SAP Activate Phases

Prepare
- Transition Planning
- Data Migration Architecture

Explore
- Understand Migration Scenario
- Verify & Understand Detailed Scope

Realize
- SAP led Data Migration Execution Service / Project
  - S/4HANA Migration cockpit
    (released scope as well as expert mode)
- Build & Validate Migration/Transformation Solution

Deploy
- Migrate/Transform the Data
S/4HANA Migration Cockpit
The next-generation data migration software

- Included in S/4HANA 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 Approach
Data Transfer

- Using Microsoft Excel Template File
- Staging Tables
- Directly from SAP Source Systems (planned)

Predefined SAP S/4HANA-specific Migration Content facilitates and accelerates your data migration

- Preconfigured content and mapping for available migration objects, e.g. customers
- Automated mapping between template and target structure
- Migration programs are generated automatically

Customer-Specific Migration Content can be flexibly included

- Integration of customer-built objects
- Customer-specific enhancements to SAP standard objects (e.g. add new fields)

Select your required migration objects

Further information

- Migration Cockpit in SAP Community

Step-by-step guidance through the migration process