



Software Update Manager (SUM) as Part of System Conversion

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Knowledge 4 you

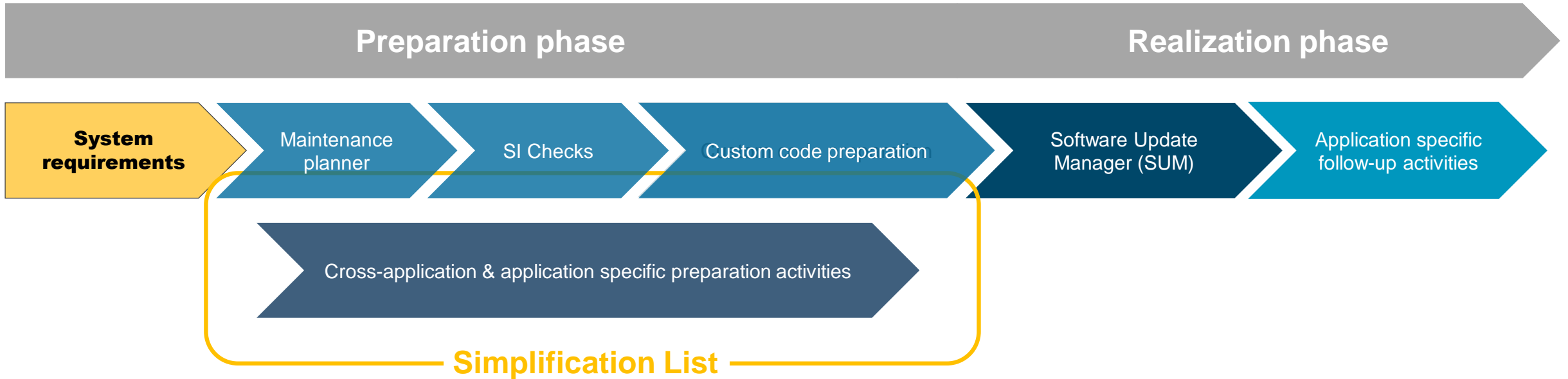
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System Conversion - Recap



- System Conversion is a *transition scenario*: SAP ECC \Rightarrow SAP S/4HANA (on-premise)
- SAP ECC source system requirements: SAP ERP 6.0+, Unicode, ABAP single stack, anyDB
- SAP S/4HANA comes with Simplifications, e.g. a simplified data model

Software Update Manager (SUM) as part of der System Conversion

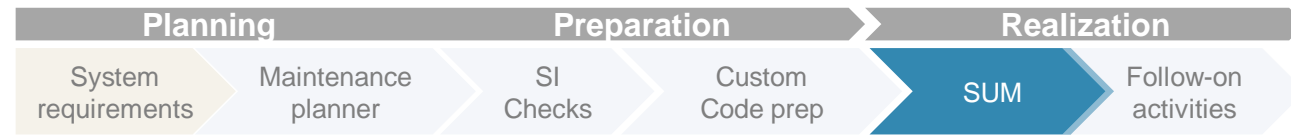
Software Update Manager (SUM)

Downtime aspects

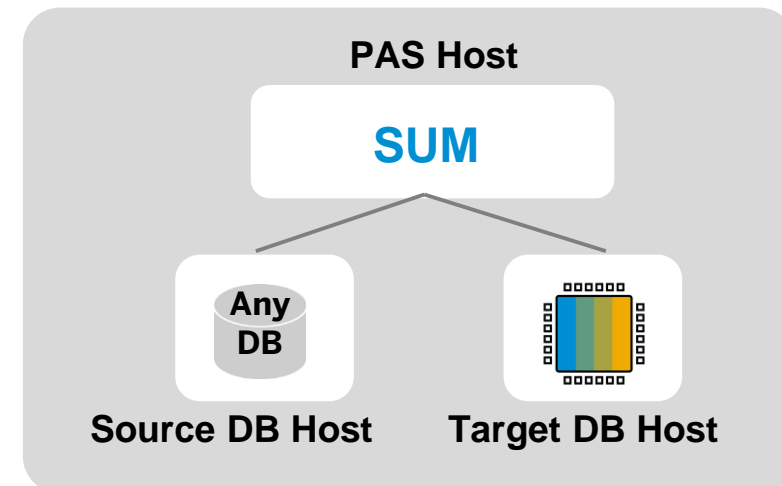
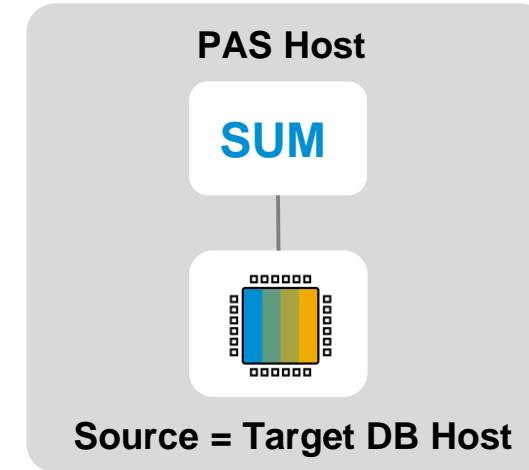
Project aspects

SAP S/4HANA system conversion

Technical conversion by Software Update Manager (SUM)

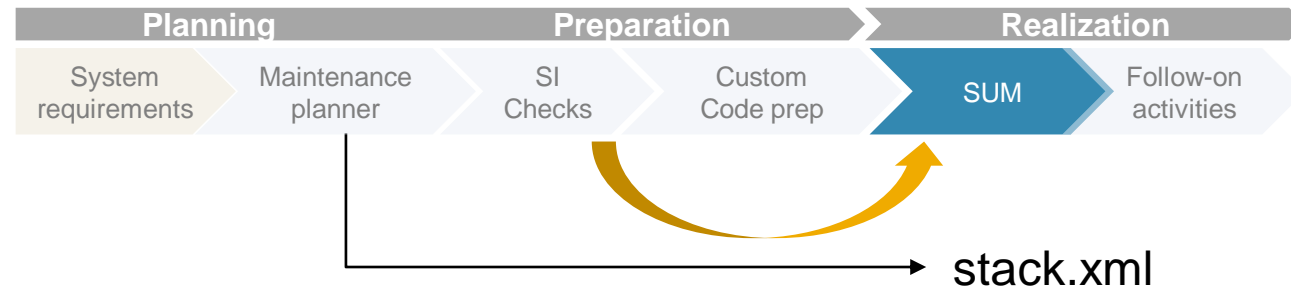


- Conversion tasks for SUM:
 - **Software update**
Provide new applications and new tables
 - **Data conversion**
Conversion of table content to new data model
 - **Database migration**
Migrate to SAP HANA database (if required)



SAP S/4HANA System Conversion

Technical conversion prerequisites



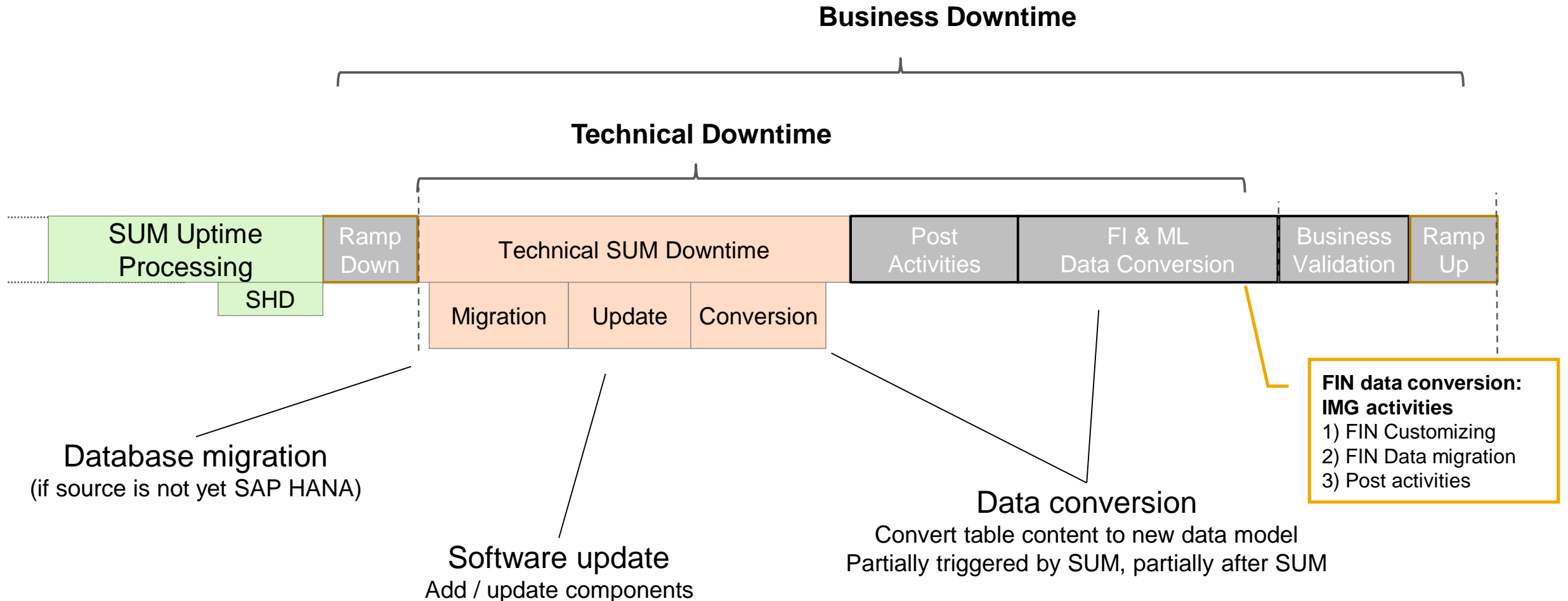
- **Maintenance planner:** provides stack.xml and software archives
- **SI checks:** will be executed by SUM as well -> solve all issues before

Optional activities (depending on system type)

- **Readiness check:** is optional, but strongly recommended!
- **Custom code check:** may be ignored, e.g. for a sandbox conversion run
- **SUM prerequisite check:** check of OS/DB- and SPAM requirements
See SUM conversion guide: <https://support.sap.com/sltoolset> -> Maintenance area

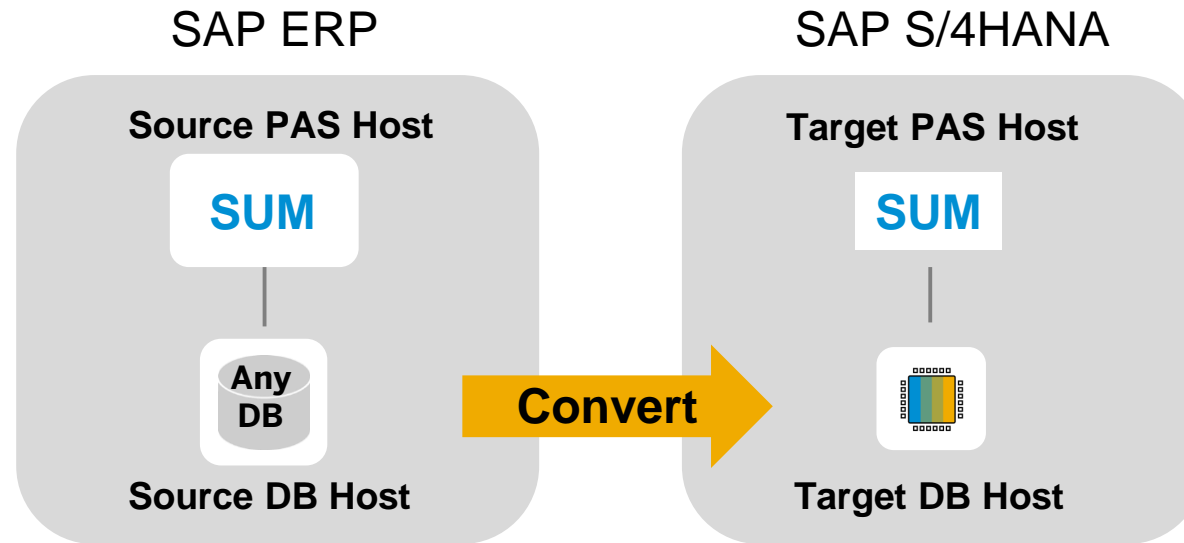
Main technical conversion steps

Partially related to Software Update Manager (SUM)



DMO with system move

Possible option for a system conversion



DMO with system move allows to switch the complete system (esp. AppServer host):

- From one host to a different host (e.g. hardware change)
- From one data center to a different one
- From on-premise to Cloud (IAAS)

Note:

DMO with system move for target SAP S/4HANA **1909** is not supported with SUM 2.0 SP **06**, but it will be supported with a later SUM SP version

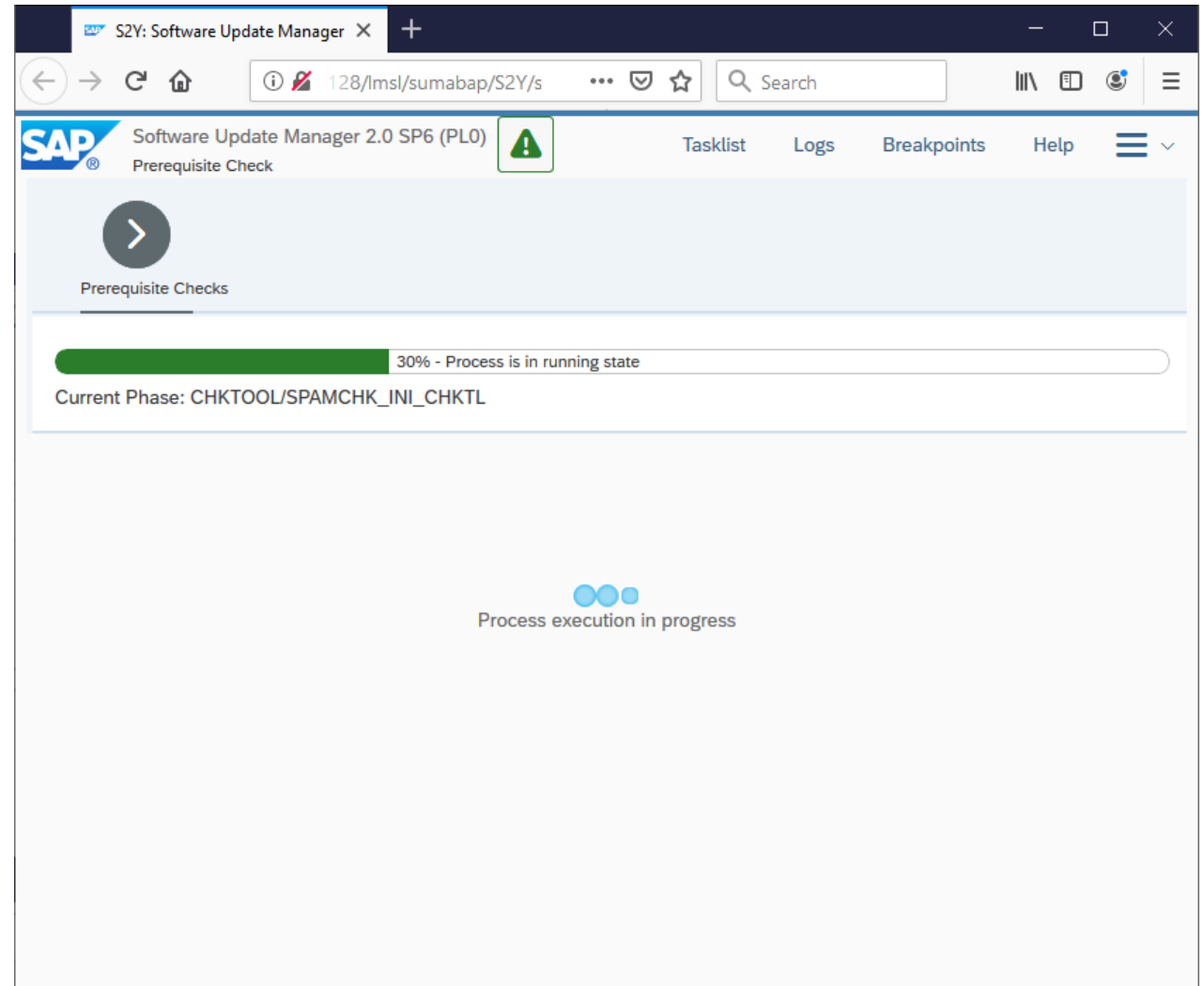
SUM Prerequisite Check provided with SUM 2.0

Allows quick and non-invasive check for requirements, e.g.:

- Source OS version
- Source database version
- SPAM patch level

New with **SUM 2.0 SP 06** (and higher):

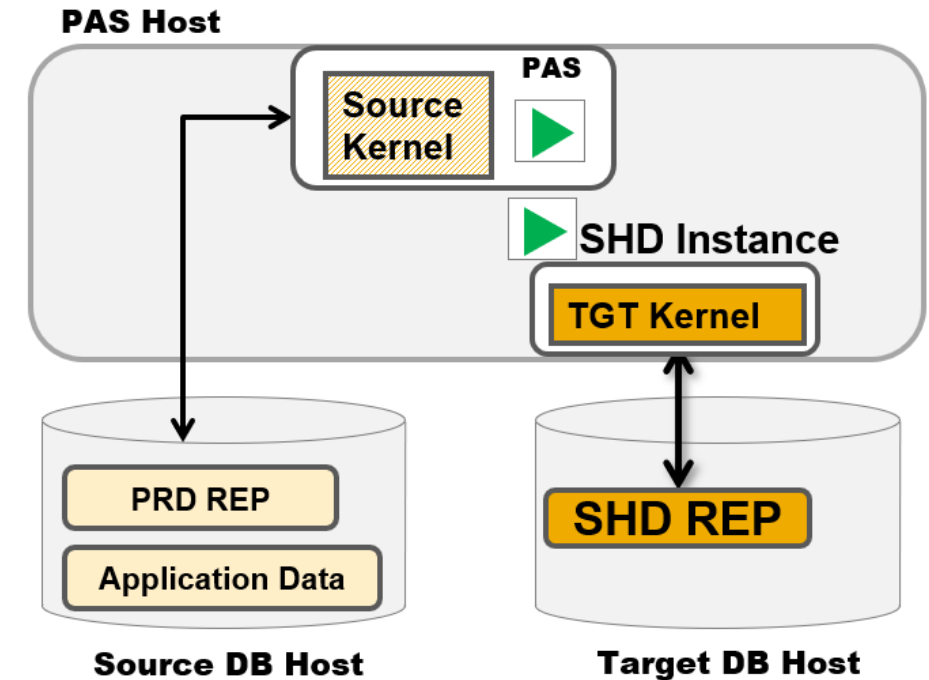
- Unique URL for all scenarios
sumabap used for
precheck, conversion, benchmarking, ...



Conversion to SAP S/4HANA 1909

SUM 2.0 SP 06 creates shadow repository on target database

- SAP Kernel 7.77 only supports SAP HANA database -> shadow repository not possible on source database
- SUM 2.0 SP 06 creates SHD REP on target, but not for previous SAP S/4HANA releases
- No manual interaction or dialog parameters required
- Potentially lower source database requirements, but Unicode requirement for source system remains
- Restrictions with SUM 2.0 SP 06 on downtime-optimized DMO and “DMO with System Move”: will not be supported for targeting SAP S/4HANA 1909 immediately, but with later SP version



 https://support.sap.com/en/tools/software-logistics-tools/software-update-manager.html#section_870338401

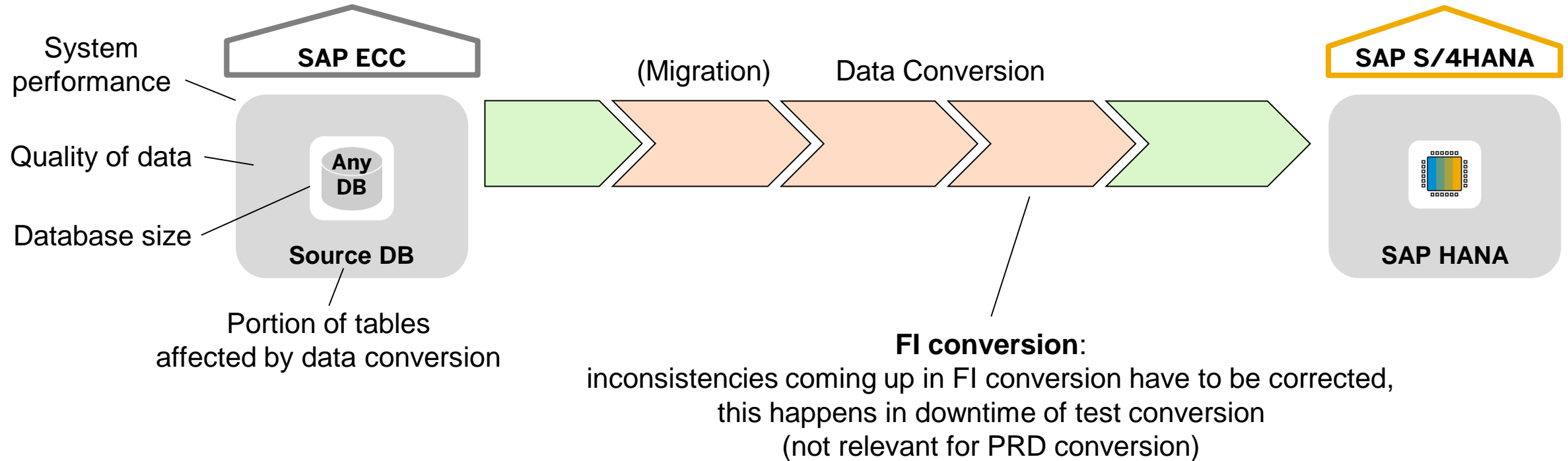
Software Update Manager (SUM) as part of der System Conversion

Software Update Manager (SUM)

Downtime aspects

Project aspects

Properties of the source system that impact the technical downtime

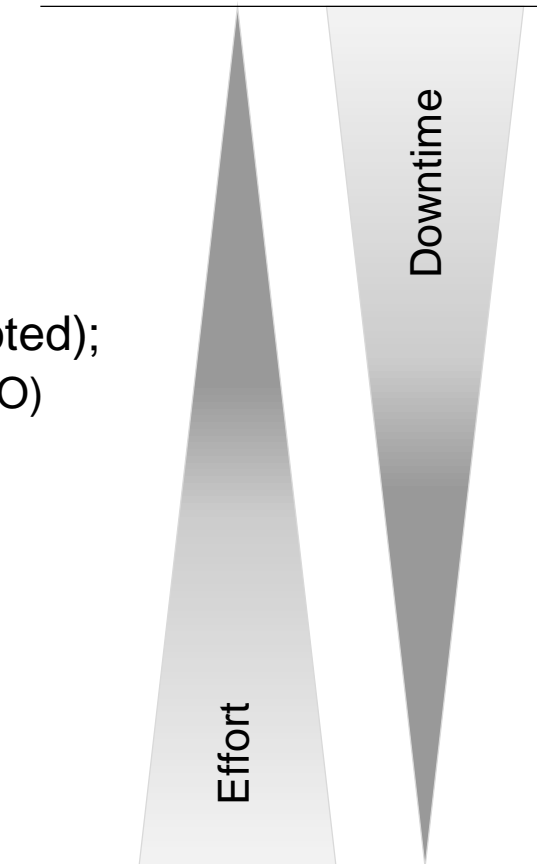


Second run is always faster → decide on approach only after second run

Downtime optimization approaches

Overview

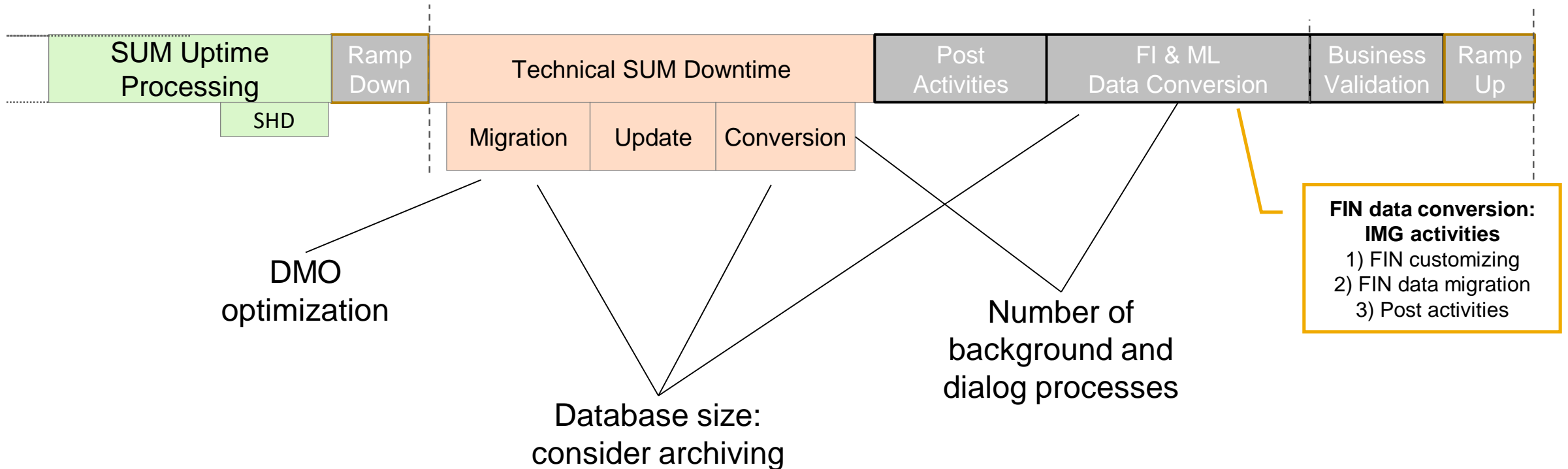
- **Standard approach**
using Software Update Manager (SUM)
with several optimizations
- ***Downtime-optimized conversion approach***
downtime is reduced by moving data conversion
and migration partly to uptime (currently only piloted);
(subset: Uptime Migration i.e. downtime-optimized DMO)
see [SAP Note 2293733](#)
- ***Near-Zero Downtime Technology approach***
allows further reduction of downtime
by executing the conversion on a clone;
it is a consulting service project (aka NZDT),
see [SAP Note 693168](#)



Decision about approach depends on several factors and should be taken after a **migration planning workshop**.
(Service component of SAP Value Assurance for SAP S/4HANA)

Tuning the standard approach

- **DMO optimization:** see blog in SAP Community: <https://blogs.sap.com/?p=135725>
- **SAP Note 2351294** – SAP S/4HANA System Conversion / Upgrade: Measures to reduce technical downtime
- **SAP Note 1616401** – Parallelism in the Upgrades, EhPs and Support Packages implementations

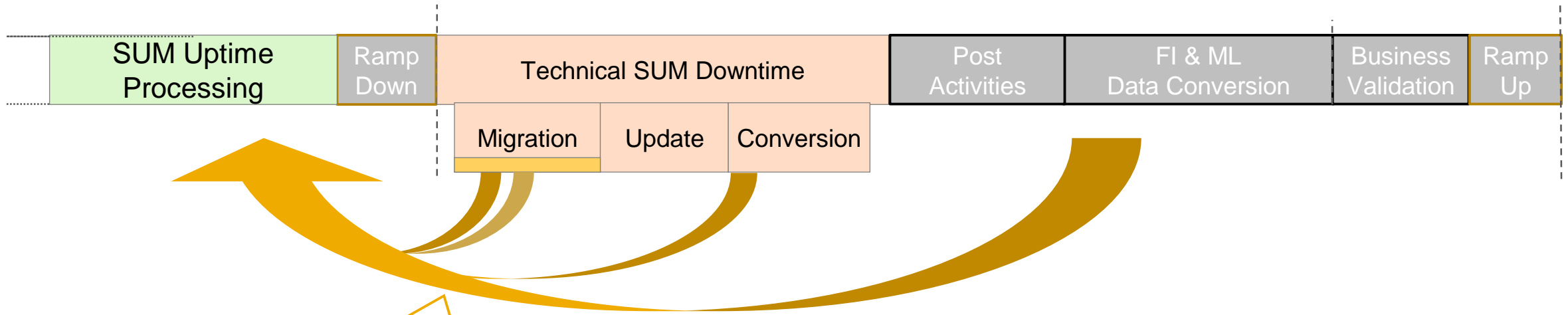


Downtime-optimized conversion approach

Migration and conversion happens partly in uptime

Lab Preview

- **Table conversion** moved to uptime processing
- **Field conversion** moved to uptime processing (KONV and VBFA tables)
- **Uptime migration** for selected big application tables (which are not part of the data conversion)



Conversion partially moved to uptime for

- FIN and Material Ledger (MM-ML) & Inventory Management (MM-IM)
- KONV and VBFA tables

Migration is only relevant for source systems on non-HANA database

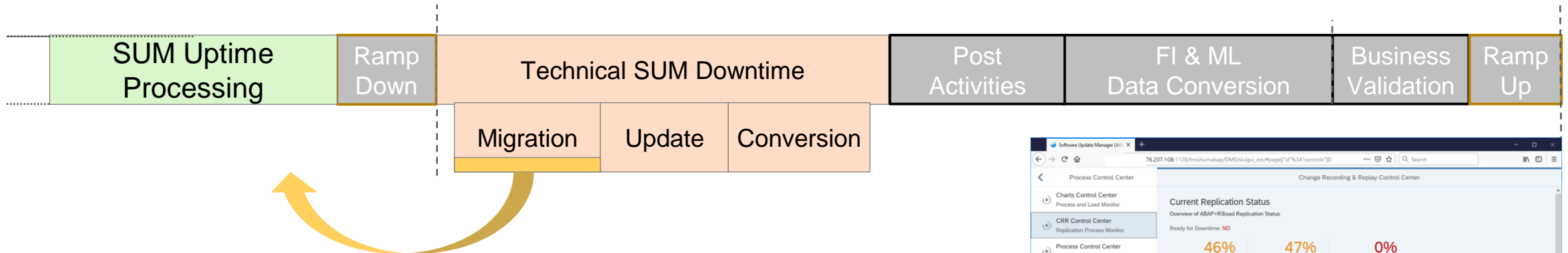


SAP Note 2293733 on prerequisites and restrictions

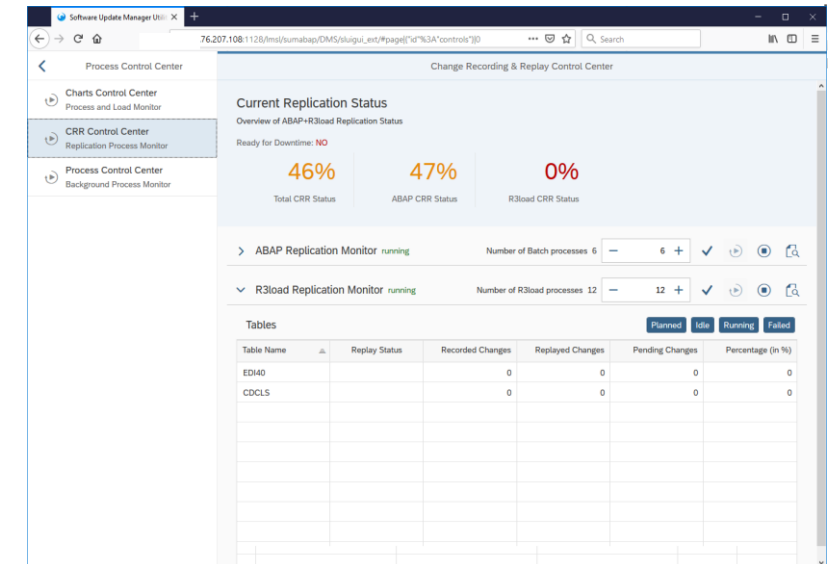
<https://blogs.sap.com/2019/03/08/system-conversion-to-sap-s4hana-downtime-optimized-conversion/>

Uptime Migration (Downtime-optimized DMO approach)

- **Uptime migration** for selected big application tables, general available with SUM 2.0 SP 06
 - Only applies to tables that are not affected by the data conversion / new data model
 - Only applicable if source is on non-HANA database (otherwise no migration is required)

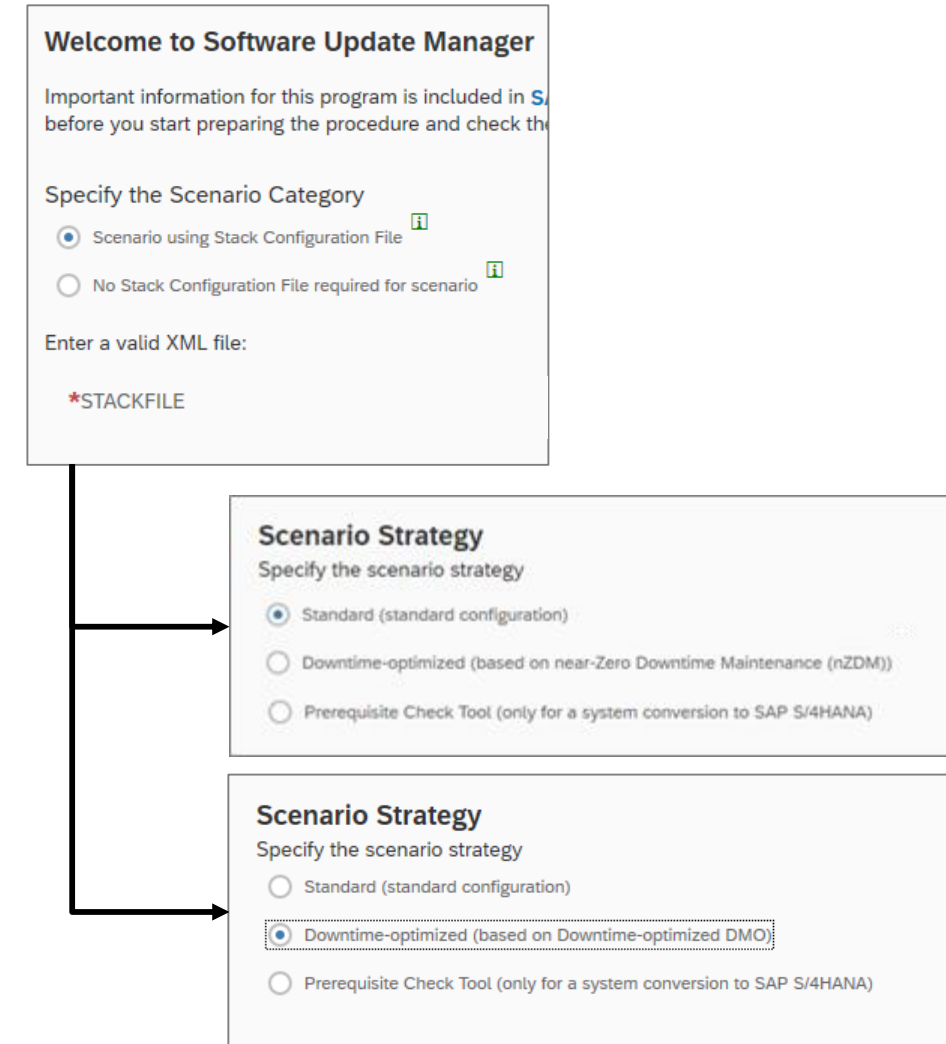


- Option is offered on SUM dialog on scenario strategy
- Report available to select appropriate tables for uptime migration
- Uptime processing: initial migration and delta migration
- Downtime: remaining delta migration and migration for remaining tables
- Replication monitoring is part of SUM Utilities



Dialog sequence for a System Conversion

- **Scenario category** (with or without stack.xml)
 - System Conversion requires a stack.xml
- **Scenario strategy: standard or downtime-optimized:**
 - Conversion from SAP HANA database: nZDM
 - Conversion from non-HANA database: downtime-optimized DMO
 - SUM prerequisite check is offered on that dialog as well
- All SUM scenarios use same URL now (apart from Observer mode)
- nZDM is no longer hidden in Advanced Mode



Approaches for downtime optimization

<https://support.sap.com/en/tools/software-logistics-tools/software-update-manager.html#section>

| Approach | Abbreviation | Scenario | Availability* | SAP Note |
|---|-------------------------------|--------------------------------|---------------------|-------------------------|
| near-Zero Downtime Maintenance (ABAP) ** | nZDM (ABAP) | Update/Upgrade | generally available | 1678565 |
| Zero Downtime Option | ZDO | Update/Upgrade | Pilot | 2707731 |
| downtime-optimized Database Migration Option | downtime-optimized DMO | Migration to SAP HANA database | generally available | 2442926 |
| downtime-optimized Conversion | | Conversion to SAP S/4HANA | Pilot | 2293733 |
| near-Zero Downtime Maintenance (JAVA) | nZDM Java | Update/Upgrade | generally available | 2422909 |
| Near Zero Downtime Technology | NZDT | several | service based | 693168 |

* Current status of planning, may be adapted by SAP without further notice.

** This is different to *nZDM for SAP HANA database*

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Software Update Manager (SUM)

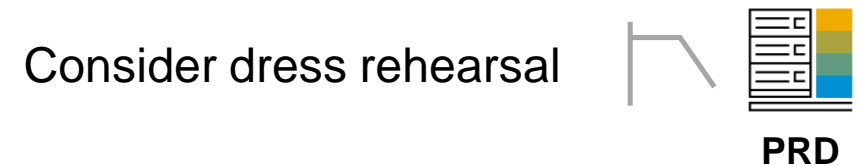
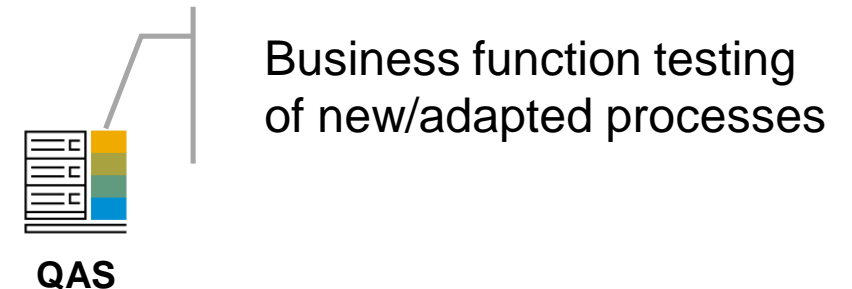
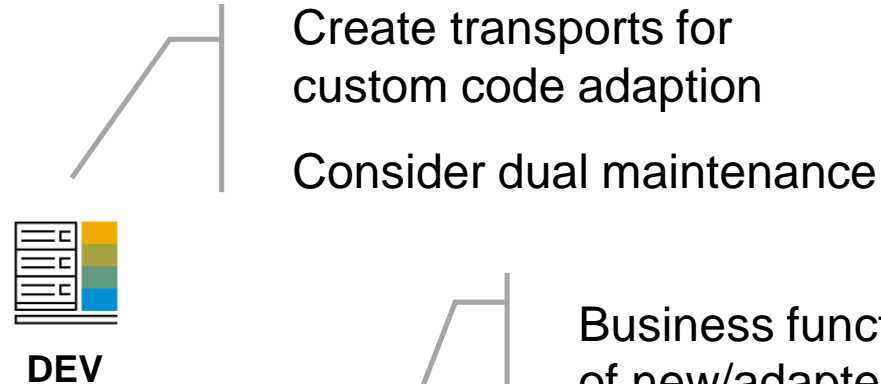
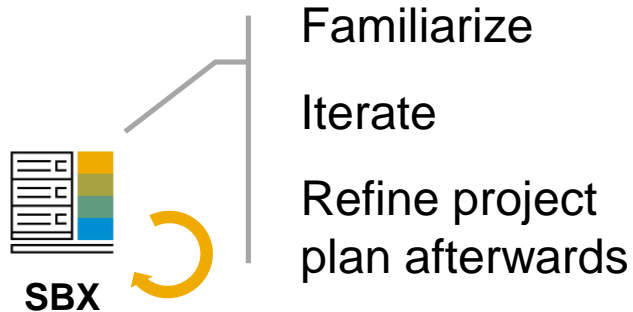
Downtime aspects

Project aspects

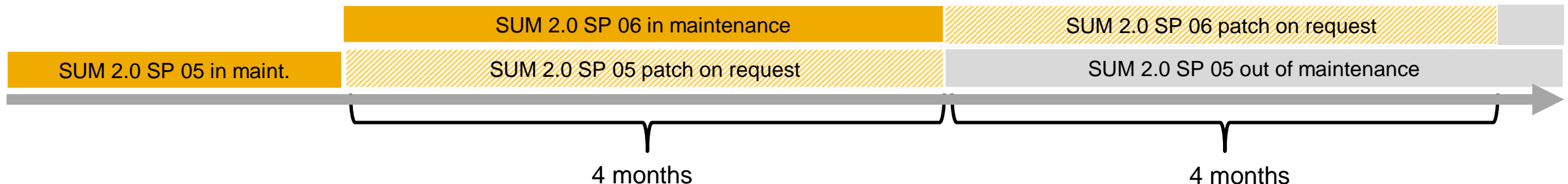
Aspects of project planning



Maintenance Strategy: Attached to
SAP Note for respective SL Toolset



Goal: SUM SP version shall not be switched in critical phase
4 to 8 months maintenance => relevant systems to be converted therein



SAP S/4HANA system conversion

Transition paths overview



Notes on source system

- Unicode is required
- ABAP single stack required
- SAP HANA database **not** required

Notes on target system

- SAP S/4HANA 1909 is based on ABAP Platform 1909
- Consider different OS coverage since ABAP Platform 1809



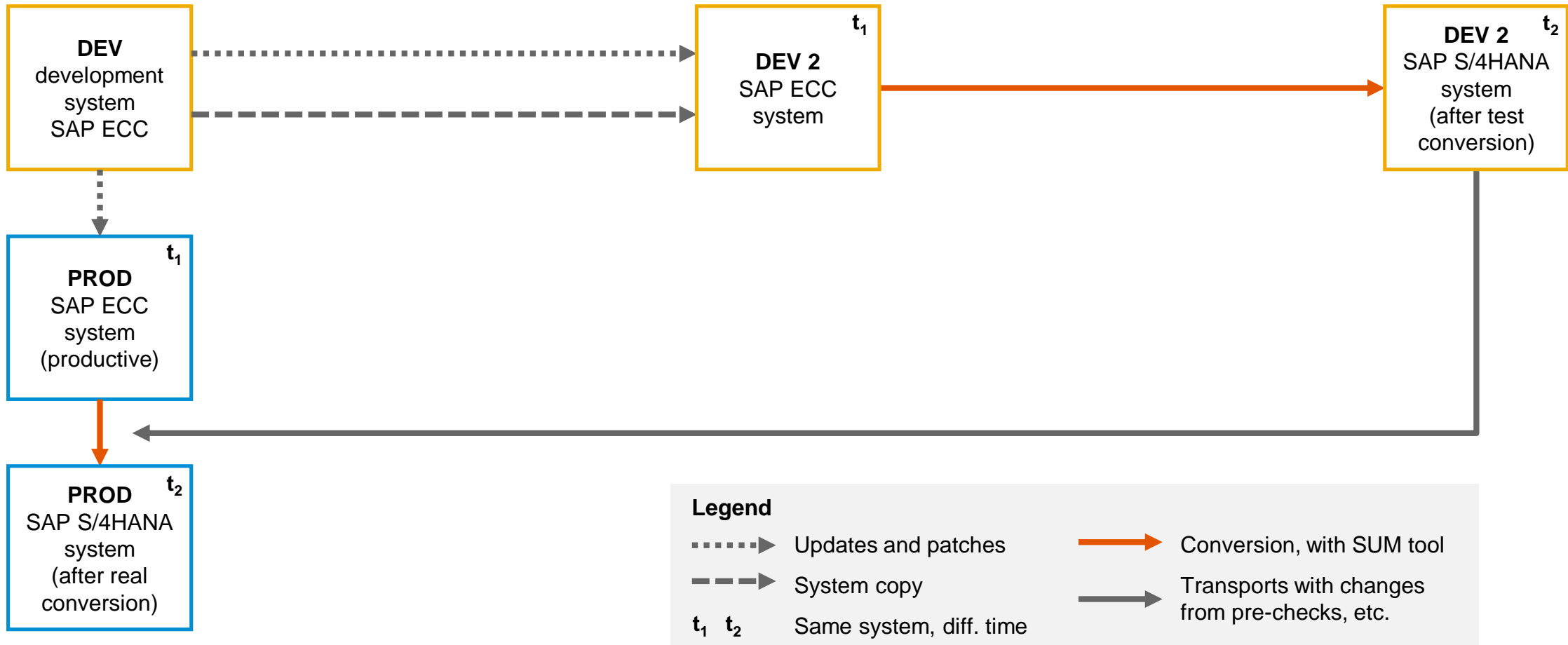
Conversion requirements incl. min./max. SP-level on source system:
[2769531 - SAP S/4HANA 1909: Release Information Note](#)



[2620910 - SAP S/4HANA ... and SAP BW/4HANA 1.0: Recommended Application Server Platforms](#)

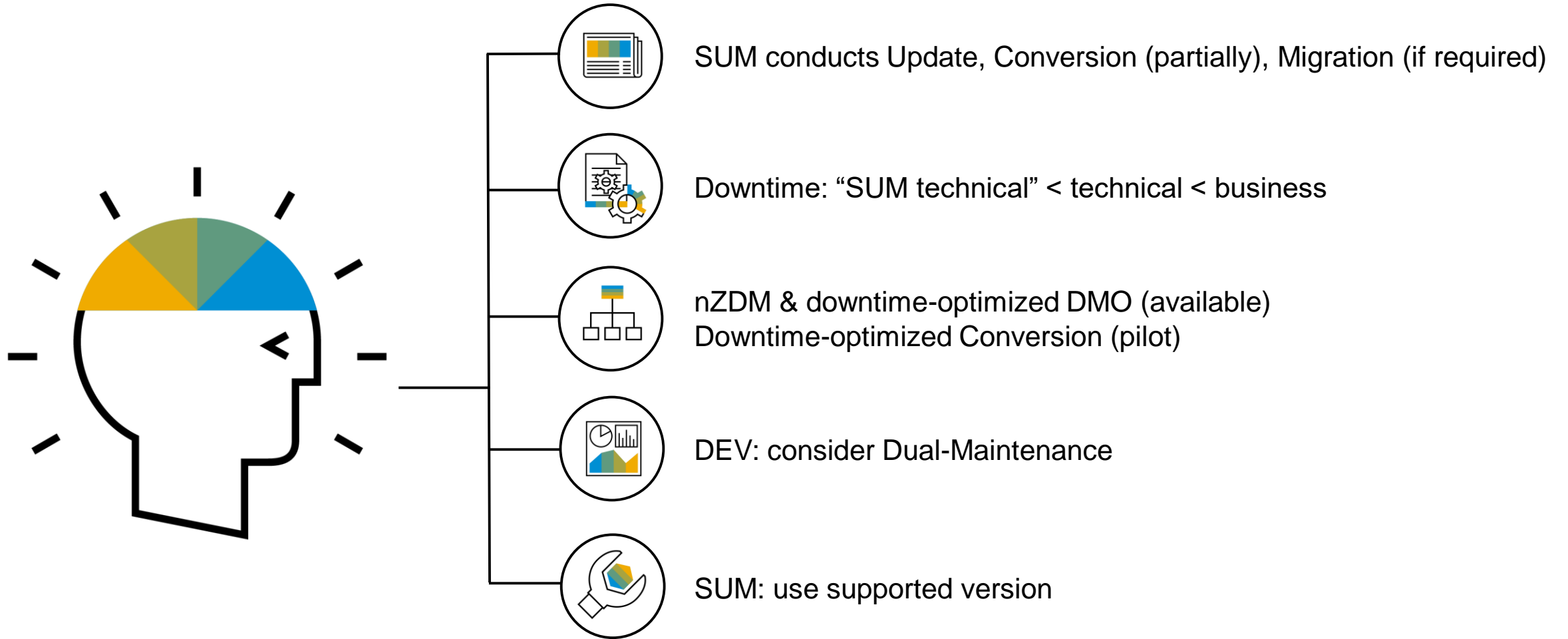
<https://blogs.sap.com/2019/04/12/ascs-instance-move-use-sum-to-switch-your-ascs/>

Dual Maintenance (see Conversion Guide)



Conversion in a Distributed System Landscape

Key Takeaways



Additional Information Sources

- Support Portal Entry page on SL Toolset & SUM
<http://support.sap.com/sltoolset>
- Conversion Guide (S/4HANA): <http://help.sap.com/s4hana> -> Product Documentation
- Conversion Guide (SUM&DMO extract)
https://support.sap.com/en/tools/software-logistics-tools.html#panel-section_18674764-accordion-item_1-body
- Blog: SUM as Tool for technical conversion
<https://blogs.sap.com/2015/11/24/system-conversion-to-sap-s4hana-sum-is-the-tool/>
- Blog: downtime-optimized Conversion
<https://blogs.sap.com/2019/03/08/system-conversion-to-sap-s4hana-downtime-optimized-conversion/>
- Blog: DMO with System Move
<https://blogs.sap.com/2017/05/22/dmo-with-system-move-the-use-case-to-change-pas-host-during-dmo/>
- Blog: ASCS Instance Move
<https://blogs.sap.com/2019/04/12/ascs-instance-move-use-sum-to-switch-your-ascs/>

Thank you.

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