
ALM215
Software Update Manager –
the Tool for System Maintenance
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SAP

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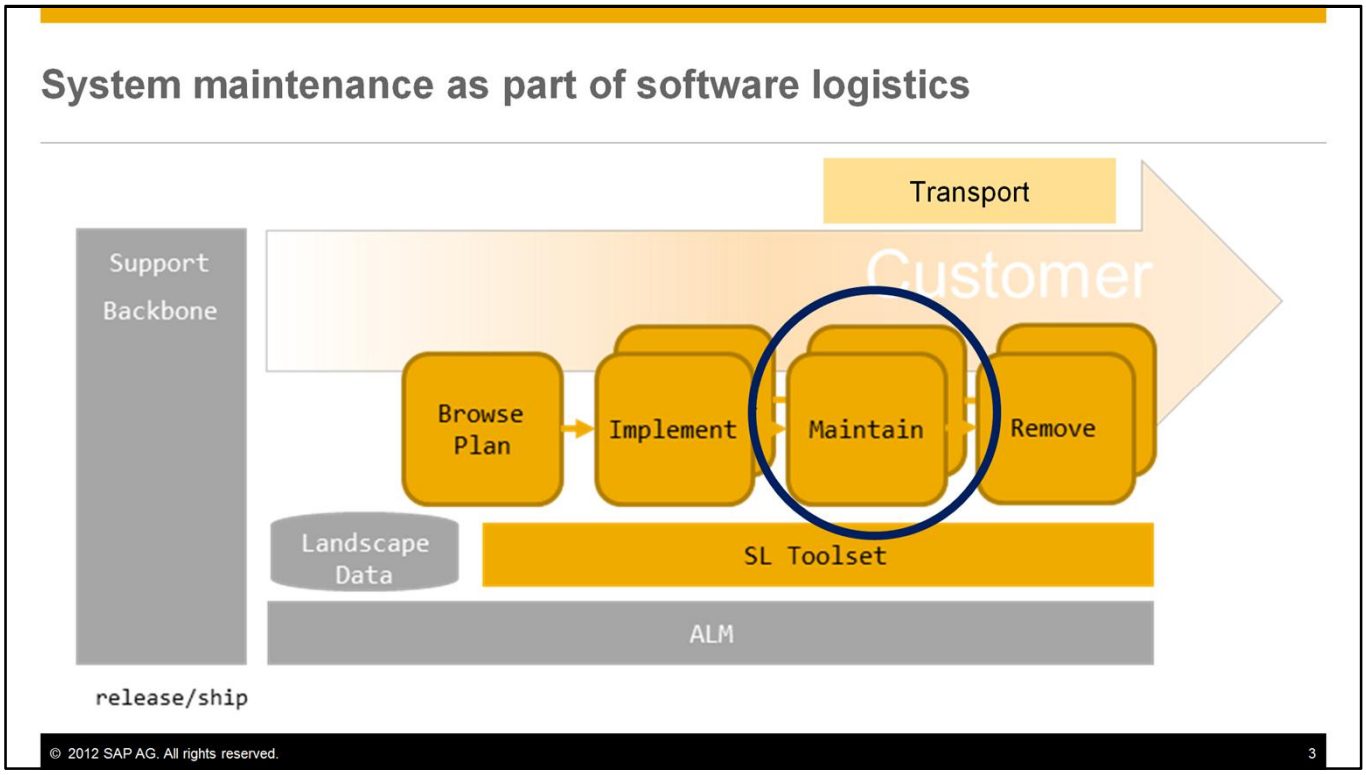
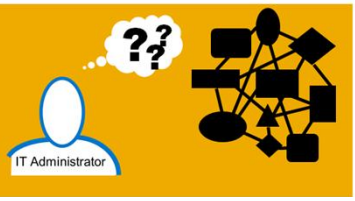


ALM -> SL -> Software Maintenance:
Software Maintenance is a part of **Software Logistics** (SL), which is a part of **Application Lifecycle Management** (ALM). ALM is not depicted here, but in other SAP TechEd presentations. Software Logistics comprises activities and procedures where software is changed.
The phases shown in the picture above happen at customer side.
Browse and plan
is a phase in which Line of Business and IT colleagues are involved.
Implement
Is a phase focusing on installation and technical configuration.
Maintenance
Is typically triggered by incidents or maintenance planning or implementation projects.

Software maintenance & Software Update Manager

- Different maintenance tools
- for different system types
- and diverse user interfaces

make the work of an administrator complicated



Software Update Manager (SUM)

- ✓ is *the* tool for system maintenance
- ✓ reduces effort, update process runtime, and system downtime
- ✓ is constantly improved and enhanced

The three main points for the Software Update Manager (SUM) are the three units that structure this presentation:
Software Update Manager (SUM)

- is the tool for system maintenance
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Agenda – Software Update Manager

1. SUM is *the* tool for system maintenance

1.1 System Maintenance activities

1.2 First Steps with SUM

2 SUM reduces effort, update process runtime, and system downtime

3 SUM is constantly improved and enhanced

SUM is *the* tool: system maintenance activities

- Release Upgrade
- System Update (EHP installation)
- Support Packages
- Java Patches

SAP EHPs

Support Package Stacks

In this presentation, the term **update** is used for different activities:

- Release upgrade (major release change for an SAP system)
- System update (Enhancement Package installation)
- Applying Support Packages or Support Package Stacks
- Updating single components

The documentation follows the same approach, and it applies as well for the name **Software Update Manager**: the SUM supports all these processes.

To apply Support Packages (SPs) only (instead of Support Package Stacks), the option in the Maintenance Optimizer (MOpz) to deselect SPs (out of an SP Stack) has to be used.

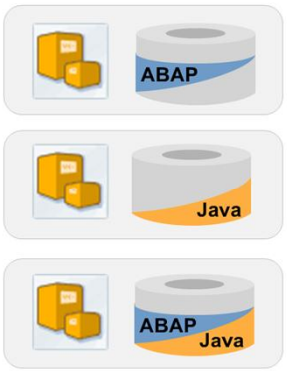
Update of single components with the SUM is only possible for the Java stack. For the ABAP stack, the Note Assistant (SNOTE) is used to apply ABAP notes.

SUM is not used for applying Kernel Patches only.

SUM is *the* tool: system types

System maintenance for all systems based on SAP NetWeaver:

- Application Server ABAP
- Application Server Java
- Dual-stack system
  (AS ABAP & AS JAVA, same System-ID)



SUM is used for all systems based on SAP NetWeaver Application Server. This applies for all activities depicted with the three icons: release upgrade, EHP installation, and applying SP Stacks.

A dual-stack system (or – less precise – sometimes called *double-stack*) consists of both the ABAP and the Java stack, together in one database, and with only one system-ID.

Note: SUM for HANA is a different tool.

SUM is *the* tool: target system releases

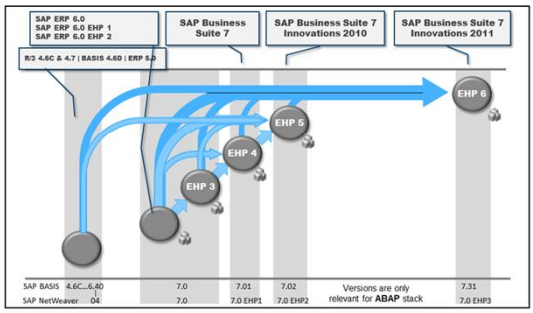
Upgrade, EHPs, SPs for target releases

- SAP Business Suite 7 Innovations 2011
- SAP NetWeaver 7.3 and higher

EHPs and SPs for target releases

- SAP Business Suite 7 Innovations 2010
- SAP NetWeaver PI, CE, MI 7.1 and above

Example: SAP ERP 6.0



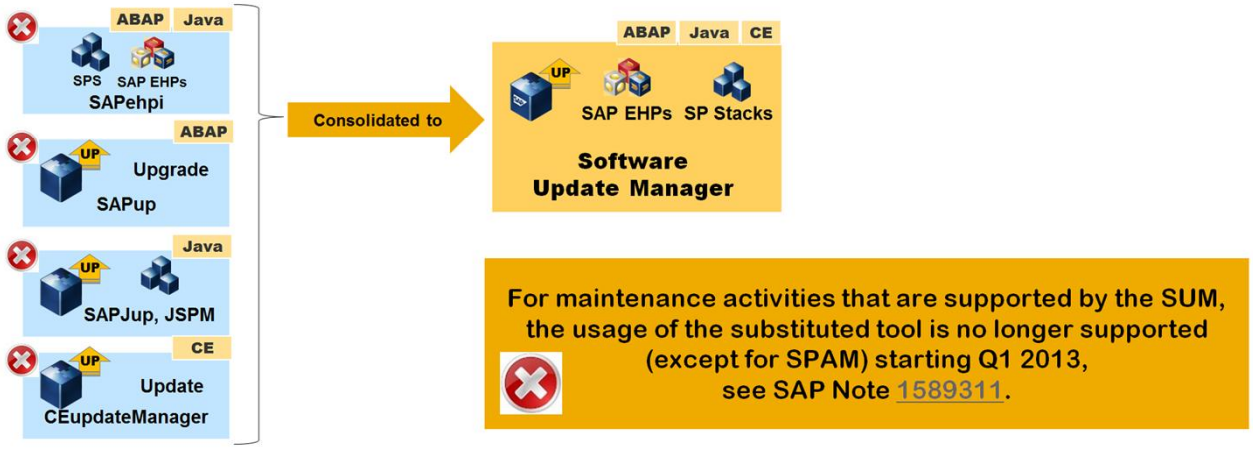
Details on 5 slides in the appendix

The listed declarations are rather a rule of thumb.
The complete description can be found in the respective SAP Note. For SUM SP05, this is SAP Note 1680769. In the appendix of this presentation, some slides are included that try to use a visualization of the possible paths for which SUM can be used. These slides are meanwhile also appended to the respective SUM SAP note.

SAP ERP 6.0 enhancement package 6 is an example for a system that is part of **SAP Business Suite 7 Innovations 2011**.
An example for EHP installations is implementing enhancement package 6 for SAP ERP 6.0.
All paths that lead to a system that is part of SAP Business Suite 7 Innovations 2011 are supported by the SUM.
For the target release SAP Business Suite 7 Innovations 2010, the upgrade is currently not supported by the SUM, but installing EHPs and/or implementing SPs / SPS is supported.

SUM is *the* tool: successor of other tools

SUM replaces tools for upgrade, update, and implementing SPs.



The previous tools are replaced by the SUM.
SPAM/SAINT can still be used, see discussion on later slide. On the slides, we use the abbreviation SPAM which includes SAINT as well.
The SUM uses SAPup for the maintenance of AS ABAP systems, so SAPup is not really replaced by the SUM, rather reused.

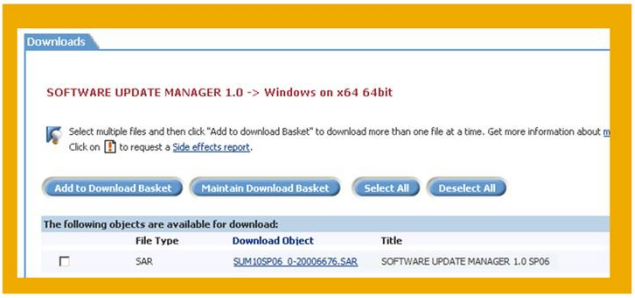
The SUM can be used to implement Support Packages or Support Package Stacks for a SAP Solution Manager System, still the SUM is currently not replacing the SolManUp.

SUM is *the* tool: availability

The Software Update Manager 1.0 is available since 2011

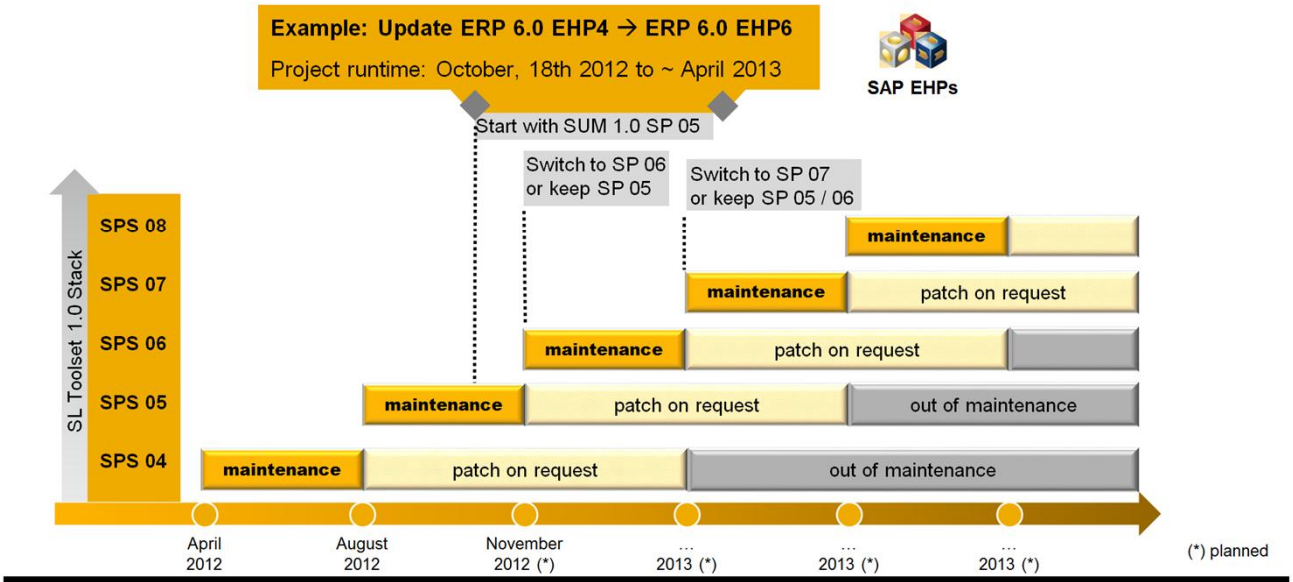
- as part of the “Software Logistics Toolset 1.0”
- in the Maintenance Optimizer download list
- frequently updated (approx. 3 times a year)
- SUM 1.0 SP05 available since 8/2012

SAP Service Marketplace
service.sap.com/sltoolset
SAP Note on SL Toolset
SAP Note 1563579



The Maintenance Optimizer (MOpz) does not show SUM for all scenarios, but for update of SAP Business Suite systems. The standard way to get the SUM is a separate download via SWDC. The Software Logistics Toolset 1.0 (SL Toolset) is the central entry point for SL tools like the SUM, see http://service.sap.com/sltooset. SUM 1.0 is delivered in SPs, and patches in-between.

SL Toolset 1.0: maintenance strategy 4 - 8



"Meta-Level": This is the maintenance strategy for the maintenance tools. Use the latest SL Toolset Stack when you start your project! Still it is possible to continue a running project with the SUM version initially used. Note that a SUM SP version will be supported for a maximum of 12 months (4 months *maintenance* phase plus 8 months *patch on request* phase). As soon as the next SL Toolset Stack is available, its predecessor passes into „patch on request" mode immediately.
The documentation guides available on SAP Service Market Place cover the latest version only.

Agenda – Software Update Manager

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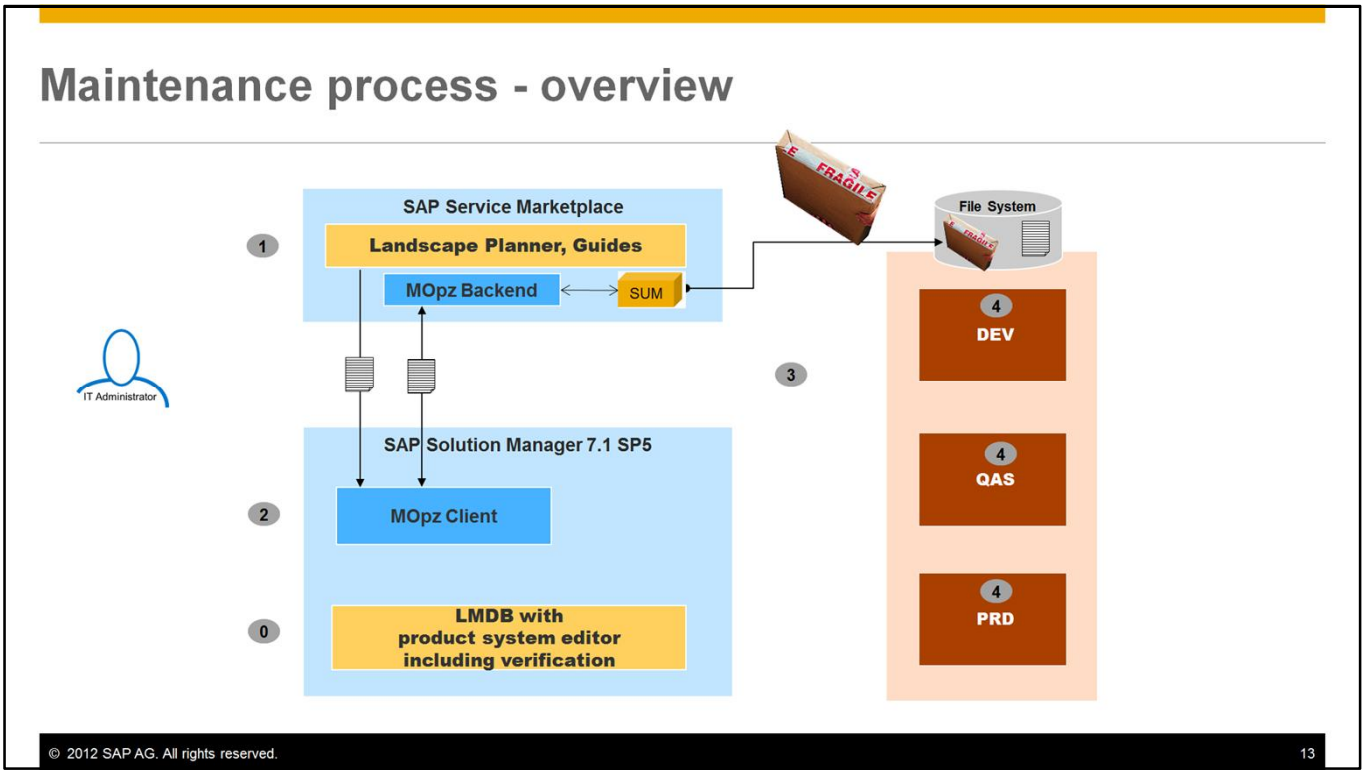
1.2 First Steps with SUM

2 SUM reduces effort, update process runtime, and system downtime

3 SUM is constantly improved and enhanced

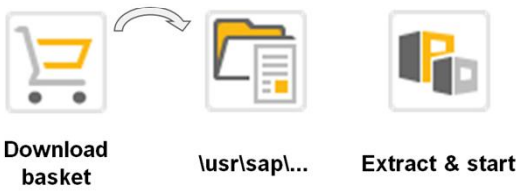


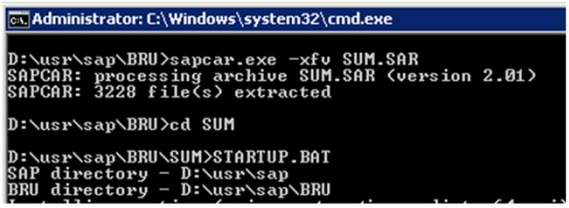
The Master Guide should be the starting point for your update project. Make sure that your system landscape is maintained correctly in your Solution Manager. Use the Landscape Verification of the LMDB that is part of Solution Manager 7.1 SP05.
Start a maintenance transaction using Maintenance Optimizer (MOpz). Download the software packages, selected kernel files, and the SUM archive (if provided). The software packages can be placed on a central share. The SUM archive has to be copied to each primary application server of all systems to be updated.

Starting the Software Update Manager on host

The Software Update Manager 1.0

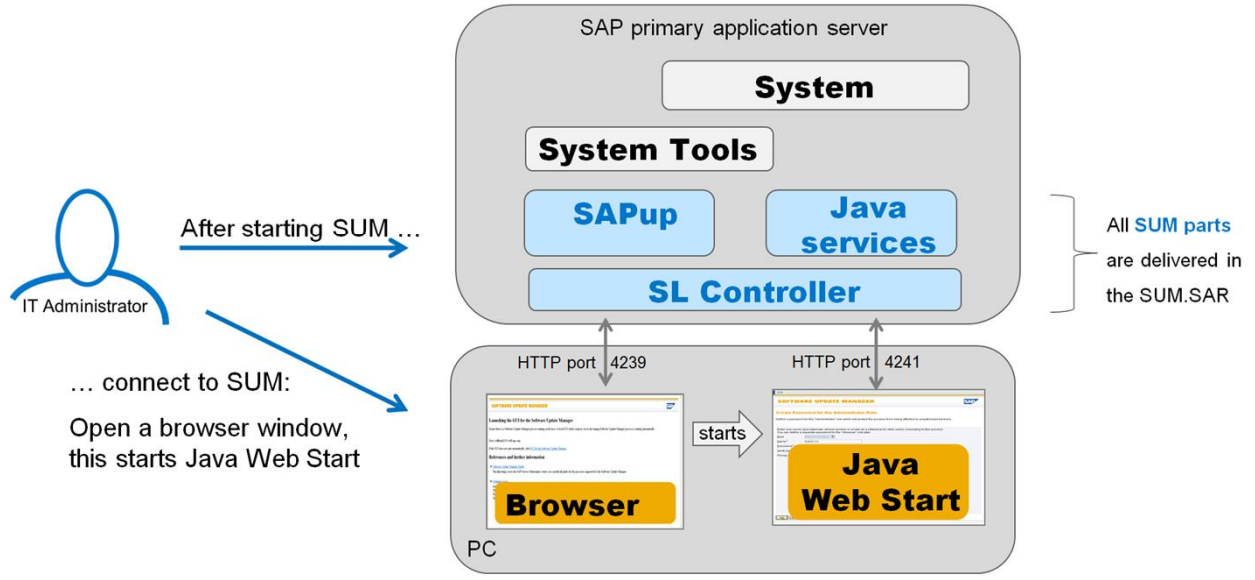
- is an archive, extracted and started on the primary application server (CI)





You download the SUM from your download basket in the SAP Service Marketplace, and copy the archive to a folder on the primary application server.
The you logon to the server with <sid>adm, extract the archive, and start the STARTUP.BAT to start the SUM.

Connecting to Software Update Manager from PC



After you have started the SUM on the primary application server, you can open a browser window on your local PC, and connect to the SUM process. The browser window will then start a java web start application, using a different port.
Working locally with browser windows on your PC, you may connect to several SUM instances running on several hosts in parallel.
The SUM includes parts that are based on the SAPup that was also part of the SAP Enhancement Package Installer (SAPehpi).
The SAPJup part was redesigned, so it is named Java services here.

Agenda – Software Update Manager

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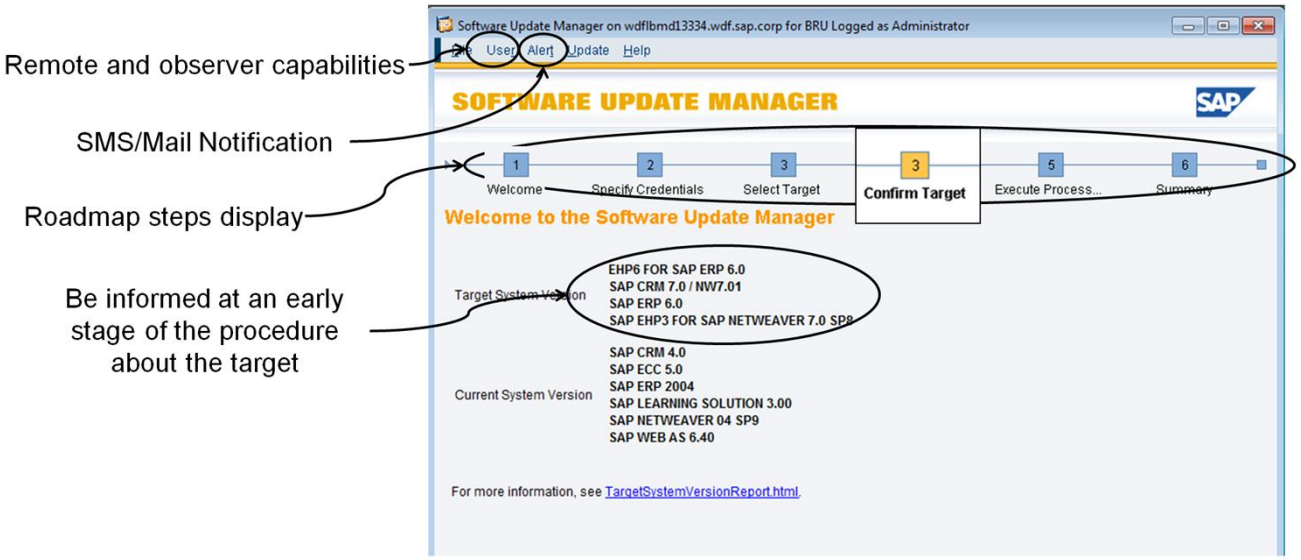
- **2.1 Usability**
- 2.2 Runtime
- 2.3 SPAM and SUM

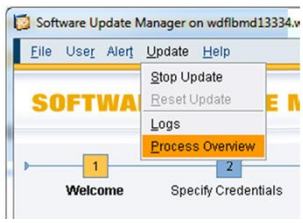
3 SUM is constantly improved and enhanced

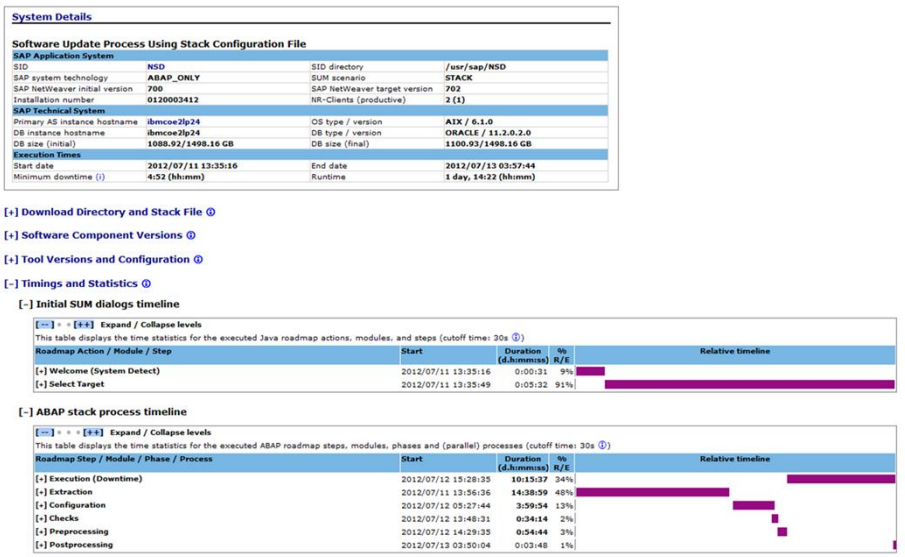
Usability reduces the effort for the administrator



If you have already used the SAPehpi, you will not have any difficulties using the SUM UI.
The information shown about the target system version are taken from the Stack.xml.
The observer capabilities allows a second user to monitor the process of the SUM procedure.

Process overview during runtime of SUM





The process overview is an important source of information, during the processing as well as after the run.
Please use the possibility to provide feedback to SAP via email, including the process information, as this feedback channel is frequently analyzed, and the statistics about runtimes can be updated.

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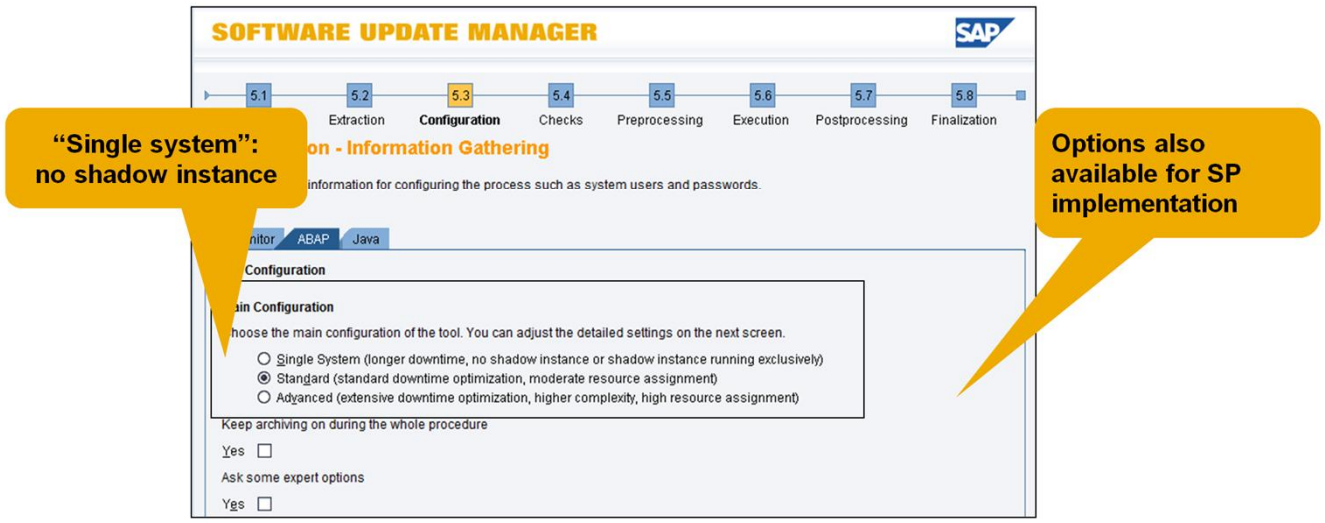
Configuration to influence runtime and performance

…concerning shadow instance usage, and resource assignment versus downtime optimization



THE SUM offers three configuration options.

Single system

No shadow instance is used, thus no downtime optimization takes place. The mode is sometimes also referred to as *transport mode*.

Standard

The use of a shadow instance allows downtime optimization.

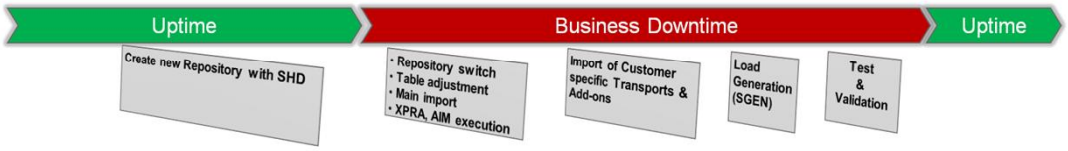
Advanced

System resources are extensively used to optimize downtime optimization, which may affect end users working on the system during uptime. An example for use of resources is R3load which creates shadow tables.

Note that these options are also available for applying Support Package Stacks.

SUM standard procedure using shadow system

Use of a shadow instance reduces the system downtime



- Create new Repository with SHD
- Repository switch
- Table adjustment
- Main import
- XPRA, AIM execution
- Import of Customer specific Transports & Add-ons
- Load Generation (SGEN)
- Test & Validation

SHD = Shadow instance

The shadow instance is used to create a new repository during the uptime. After the new repository is build up, the repository switch takes place in the downtime. Load Generation (SGEN), test and validation take place in the uptime of the system, but since the system cannot be used productively yet, this phase is still business downtime.

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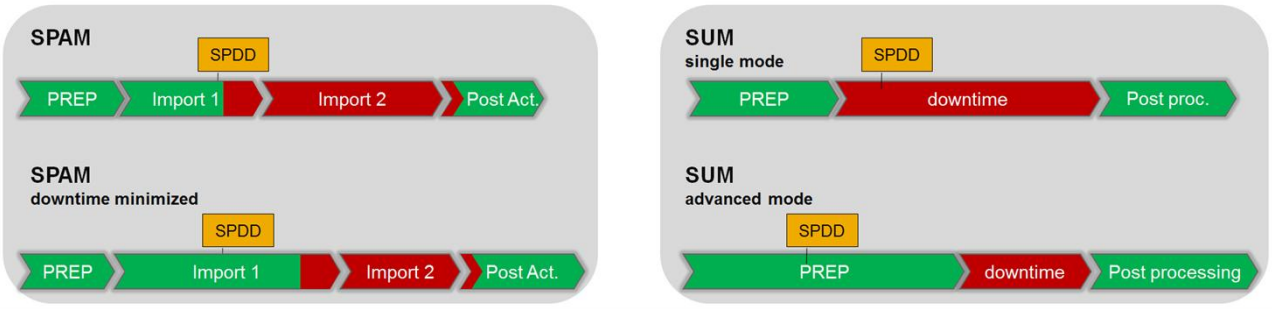
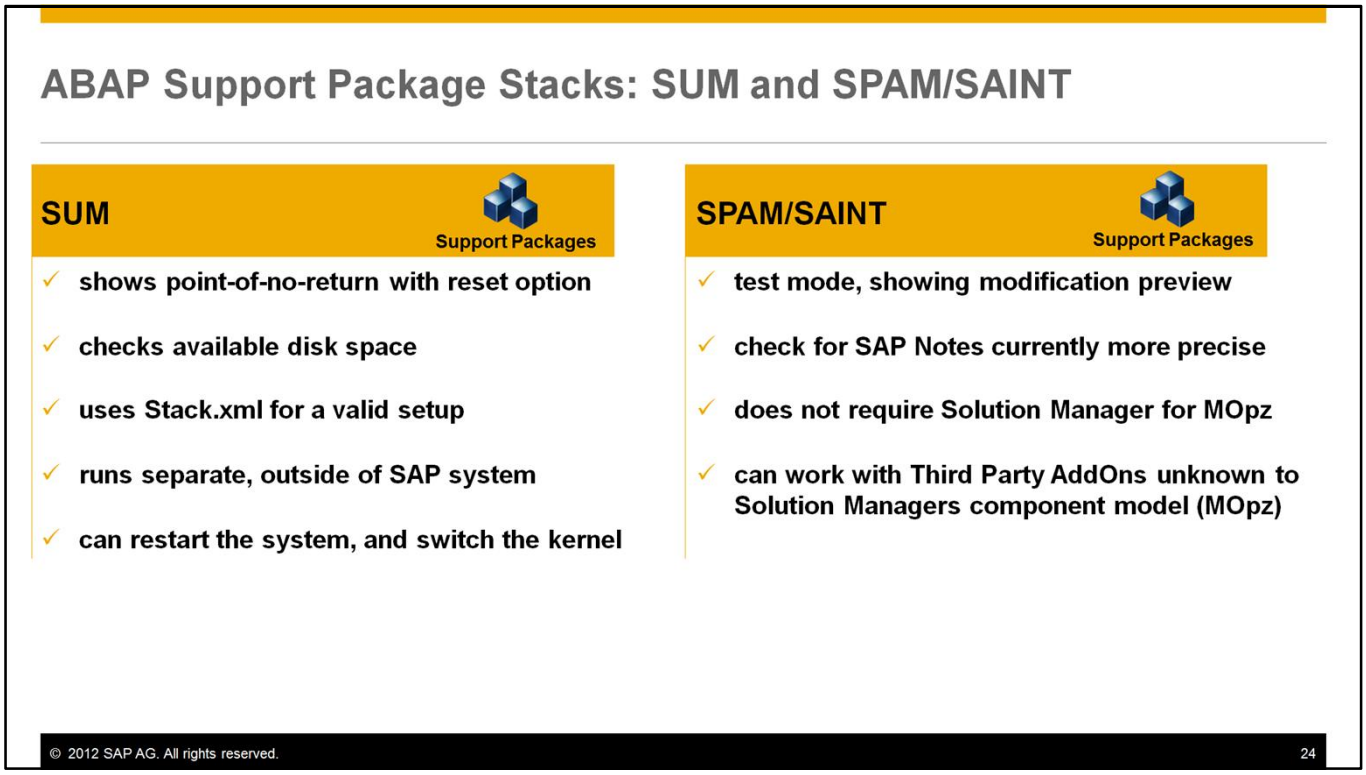
ABAP Support Package Stacks: SUM or SPAM? Both!

- **Both SUM and Support Package Manager (SPAM/SAINT) can be used, now and in the future**
- **Both tools have scenarios in which they are the preferred choice**
  - SPAM/SAINT for “few” SPs
  - SUM for downtime critical systems



SPAM/SAINT is the preferred choice for “some“ SPs (up to ~50 or more, as a rule of thumb).
SUM is the choice for downtime critical systems because it’s superior possibility to reduce the downtime. This is especially relevant for productive systems.

The SPAM downtime minimized mode shifts some transport activities (for program code and program text) to module Import 1. The old sources have to be dropped, that is why the phase Post Activities and the overall runtime become longer.
The SUM advanced mode uses a shadow system in which activities take place during the preparation phase, shifted from the downtime.



SPAM does not show the point of no return before DDIC import, before start of downtime, and no reset option is given.
SUM check for SAP Notes is not yet as precise as SPAM, but will be.
SPAM does not work based on the Stack.xml from the Solution Manager (but SAINT may).
SUM runs separate to SAP system, and may restart the system and exchange the kernel. So SUM usage is more robust: in some cases, the SPAM may have problems when basis software component SPs are imported and the run is aborted.
Third Party Add-ons that are not known in MOpz do not appear in Stack.xml, so SPAM is the only choice to work with these Add-ons.

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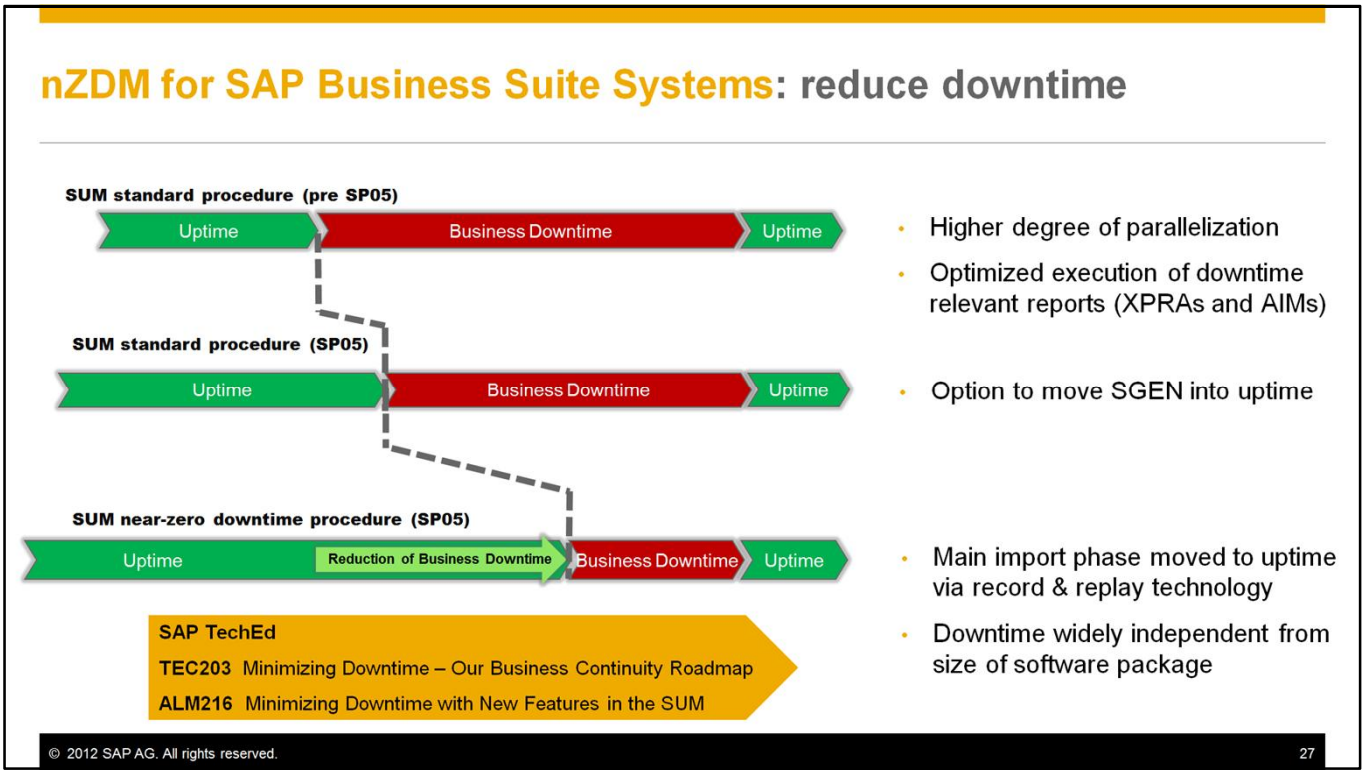
SUM is constantly improved and enhanced

SUM is delivered with Software Logistics Toolset 1.0

- Regular updates are delivered with the Software Logistics Toolset 1.0 updates
- New features and enhancements are available in short timeframe
- Some features are „available on request“ before general availability, examples are:
  - near Zero Downtime (nZDM) for SAP Business Suite Systems (SAP Note 1678565)
  - Customer Transports included in update (SAP Note 1759080)
  - Deployment Optimization Option (SAP Note 1759081)

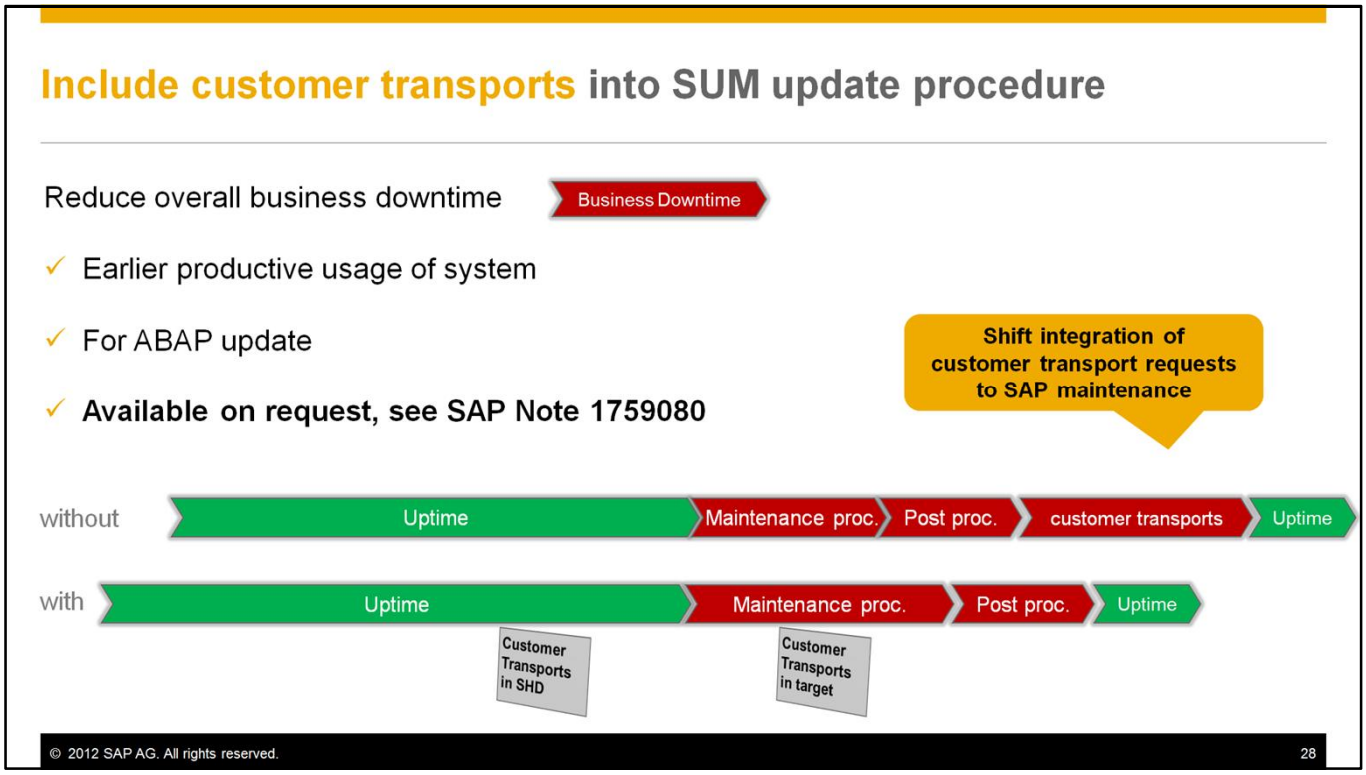
The examples are explained on the following three slides.



The SUM includes several enhancements, and not all of them are visible (or available as an option in the UI), like the optimized execution of downtime relevant reports - XPRAS and After-Import-Methods (AIMs).

SUM SP05 introduced an option to move the load generation (SGEN) into the uptime, working on the shadow repository.

With the near-zero downtime Management (nZDM) feature for SAP Business Suite systems, the main import phase can be moved into the uptime phase as well. Relevant application tables on the database are moved to shadow tables. Changes on these application tables on the database (due to usage of business transactions) are recorded, and later replayed on the shadow tables. This technique is based on proven database trigger technology. The SUM includes a logic to decide for which tables this technique is applied.



During the update (SUM) post processing step, the production system is technically usable, because customer transport requests have been included.

Prerequisite is that the customer transports must fit to target level:

The SUM updates the ABAP system to a status with several components having specific releases and specific support package levels. All included customer transport requests must fit to these.

Customer transports must be able to be imported together

The SUM imports the included customer transport requests in a way similar to the “import all“ import method.

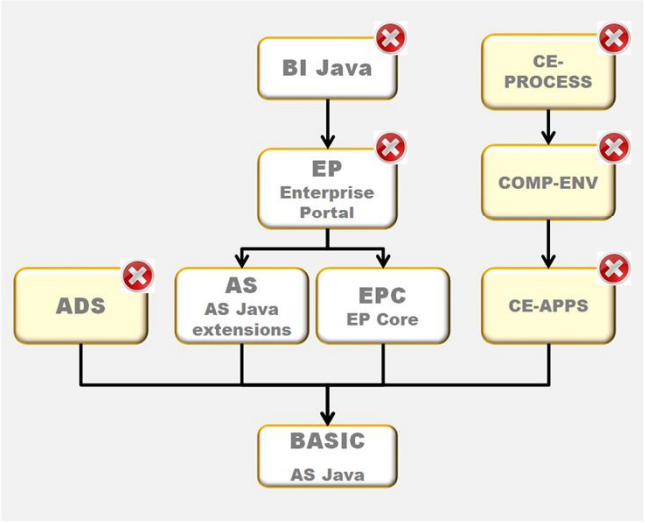
The technical downtime is technically needed with the current SUM (regardless if customer transports are included or not). With included customer transport requests this part is longer, because some parts are imported during downtime, XPRAS and post import methods are executed during downtime (if the customer transport requests include such) and versioning for customer transports is partly done in downtime.

The update post processing time is technical uptime, because the system is in a consistent state of the target release.

As the customer transport requests have already been imported during the update (SUM) this is now business uptime and the system can be used productively.

Deployment Optimization Option: optimize deployment footprint

- Option for AS Java based systems to remove usage types or to not-install CE based components **during upgrade** of SAP NetWeaver 7.0x to 7.3x
- Benefit from leaner usage type concept of SAP NetWeaver 7.3 without reinstallation
- Less software components means
  - Lower start/stop times
  - Lower memory and disc footprint
  - Lower maintenance process runtime
- Example: remove Adobe Document Services (ADS)
- **Available on request, see SAP Note 1759081**



Deployment Optimization Option (DOO) is a SUM feature that is currently „available on request“.
The feature is based on the switch-upgrade procedure, so the usage types are not *undeployed*, but they are not re-deployed. That way, the leaner usage type concept of SAP NetWeaver 7.3 can be used without having to re-install from scratch and without manual content creation.
Examples are the removal of the Adobe Document Services (ADS), or the removal of the usage types BI Java and Enterprise Portal for scenarios where EP core is sufficient. This allows to adapt the system to follow the SAP landscape governance board recommendations.
The current DOO procedure is that the customer creates a Stack.xml file in the Maintenance Optimizer, and that file is modified by SAP to represent the new system state after the upgrade. The SUM will finally take that modified Stack.xml file for the upgrade.
Note that the shown hierarchy indicates that you cannot remove components without removing dependent components as well: you cannot remove EP without removing BI Java.

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➡ **Further information, Appendix**

Further Information

SAP Public Web

scn.sap.com
scn.sap.com/community/it-management/alm/software-logistics
http://scn.sap.com/community/business-continuity
service.sap.com/sltoolset
https://cw.sdn.sap.com/cw/community/ideas/software_logistics_toolset

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SAP Notes

Software Update Manager 1.0 SP05	SAP Note 1680769
Software Update Manager 1.0 SP06	SAP Note 1707161
Replacement of outdated tools	SAP Note 1589311
Release Note for SL Toolset 1.0	SAP Note 1563579
near Zero Downtime (nZDM)	SAP Note 1678565
Customer Transport inclusion	SAP Note 1759080
Deployment Optimization Option	SAP Note 1759081

Feedback

Please complete your session evaluation for ALM215.

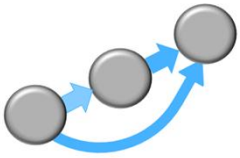
mailto://boris.rubarth@sap.com

Thanks for attending this SAP TechEd session.

Appendix

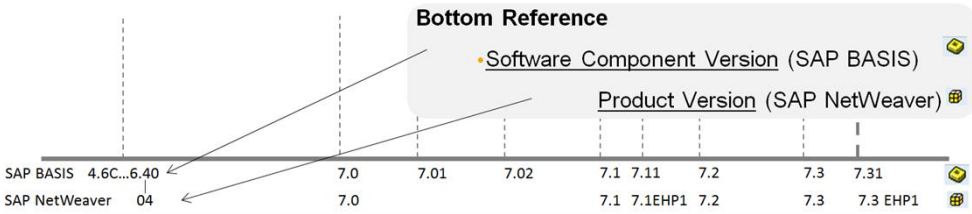
Software Update Manager SP5 usage

- **Goal**
  Visualize the possible usage of SUM SP05
- **Legend**
  Blue arrow between release versions shows path where SUM can be used
  (Dark blue: recommended target release
  Lighter blue: possible target release)
  SPS icon shows that SUM can apply SP stacks
- **Wording**
  No distinction made between *update* and *upgrade*



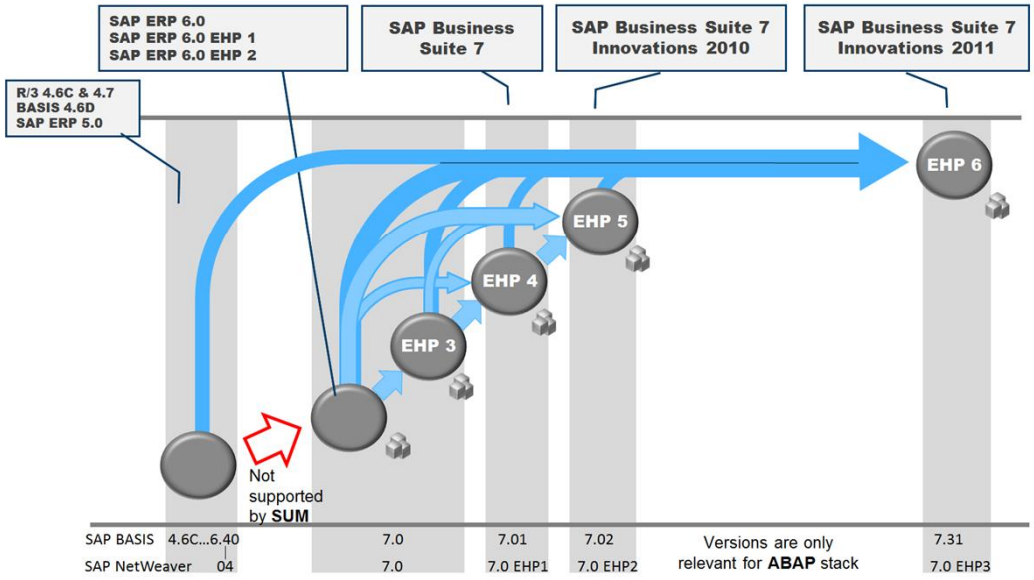
Support Package Stacks

SAP Note 1680769 on SUM SP05

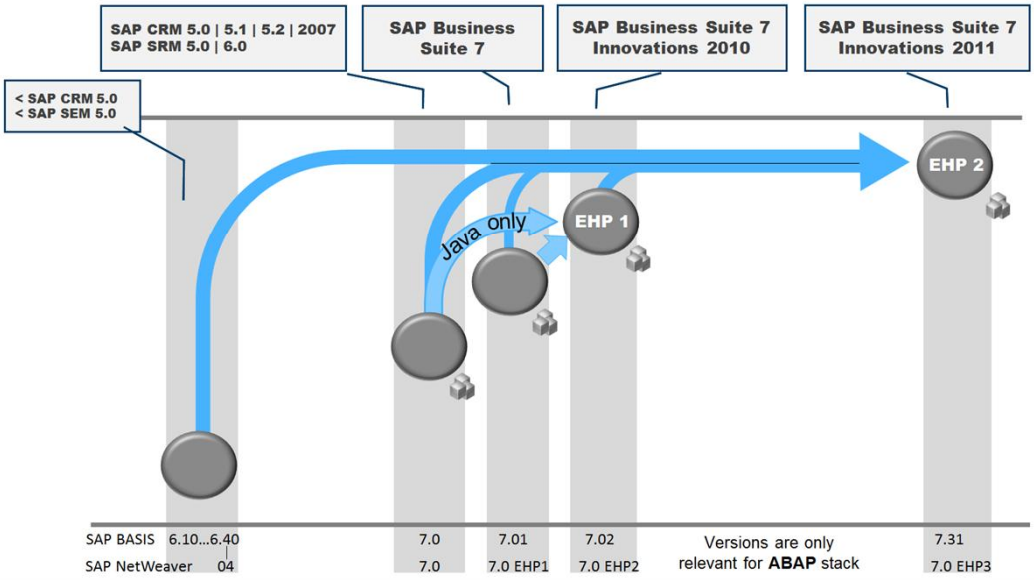


The following slides try to illustrate the paths (source to target release) for which the SUM 1.0 SP05 can be used.
The possible paths are described in SAP Note 1680769.
The blue arrows show a possible usage of the SUM for an update/upgrade.
For cases that the SUM can be used to apply SPS on a system release, the icon for the SPS is shown near the release circle.
The path where the SUM cannot be used are not shown on the slides - apart from a few dedicated exceptions.
The bottom reference with release versions are only relevant for the ABAP stack of the appropriate solution.
Please note that the bottom references (release versions) are only relevant for the ABAP stack of a solution.

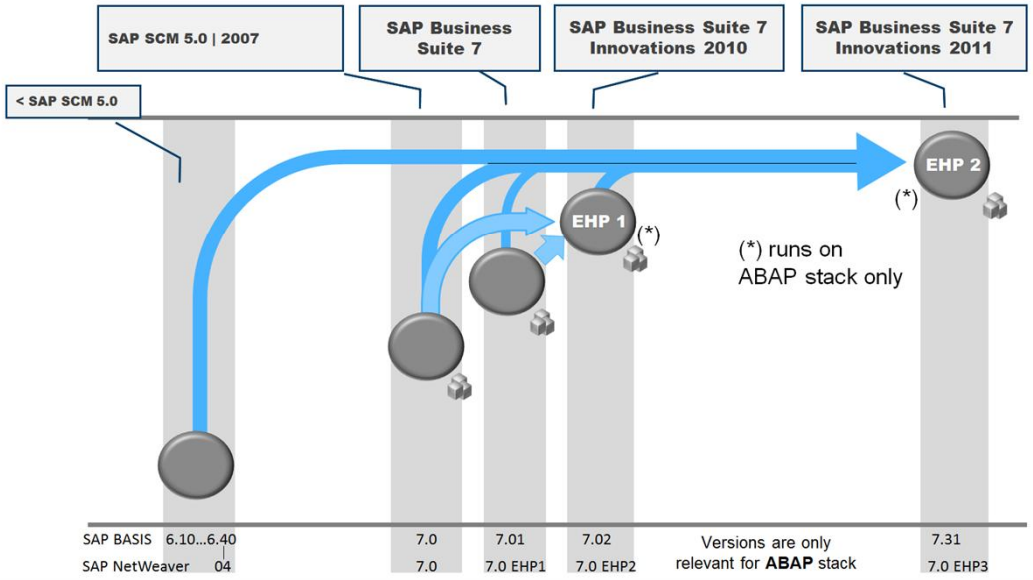
SUM SP5 usage for SAP ERP 6.0



SUM SP5 usage for SAP CRM 7.0 & SAP SRM 7.0

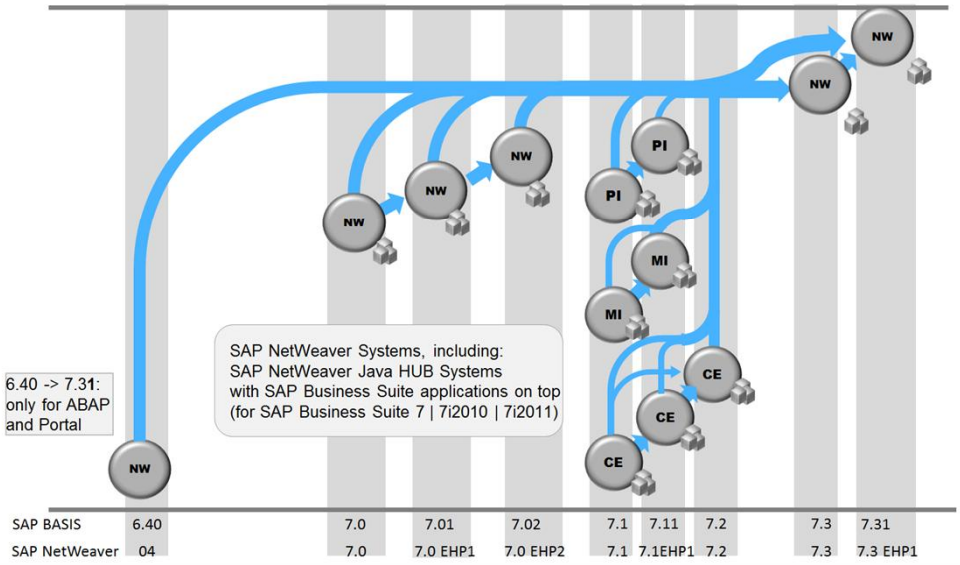


SUM SP5 usage for SAP SCM 7.0

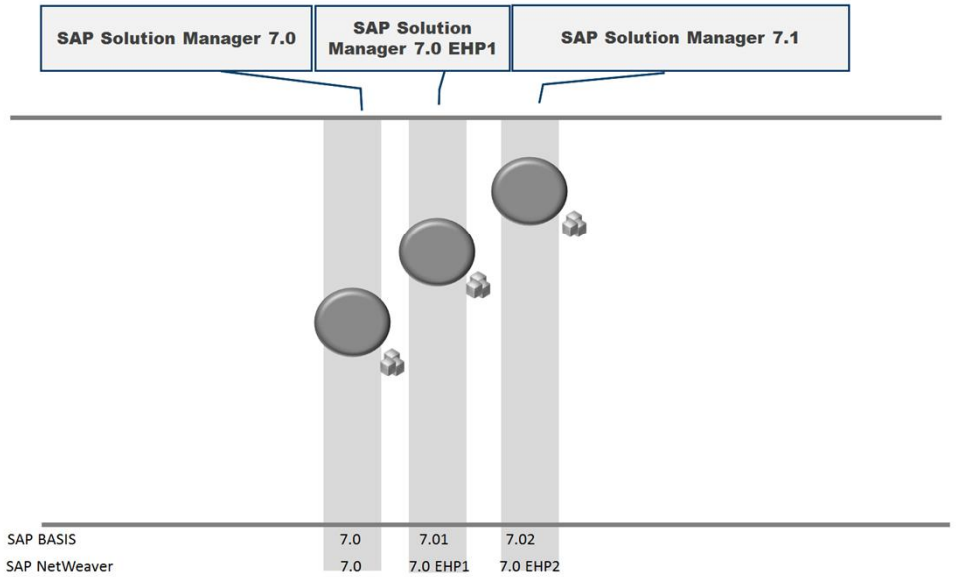


SUM SP5 usage for SAP NetWeaver components

(with or without Business Suite applications on top)



SUM SP5 usage for SAP Solution Manager



The SUM can be used on a Solution Manager system to apply Support Packages and Support Package Stacks, but not (yet) for an update of the Solution Manager System.

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