Upgrade SAP Business Warehouse to release 7.40

Roland Kramer - SAP Product Management BW/in-Memory
October 2015

Disclaimer

This presentation outlines our general product direction and should not be relied on in making a purchase decision. This presentation is not subject to your license agreement or any other agreement with SAP. SAP has no obligation to pursue any course of business outlined in this presentation or to develop or release any functionality mentioned in this presentation. This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. SAP assumes no responsibility for errors or omissions in this document, except if such damages were caused by SAP intentionally or grossly negligent.

© 2012 SAP AG. All rights reserved.

Agenda

1 Roadmap and technology facts

- Upgrade paths to SAP NetWeaver Business Warehouse 7.40

2 What's new with the Upgrade to BW 7.40

- End to end implementation roadmap
- Increased usage of the Solution Manager (MOPZ)
- Software update manager (SUM 1.0)

3 Usage of the ASU toolbox for BW

- Pre steps (w/o unicode conversion)

4 General checks prior to the Upgrade

5 Summary

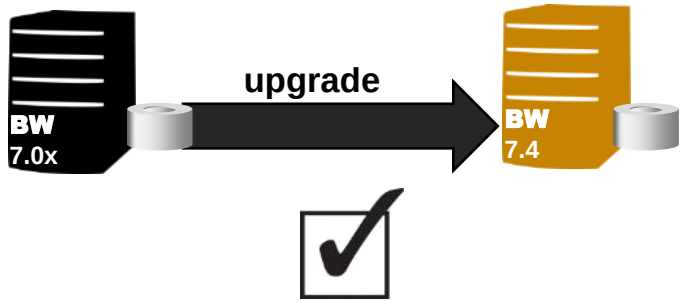
© 2012 SAP AG. All rights reserved.

Goal of this session:

Provide overview how you can perform the upgrade to
SAP NetWeaver® Business Warehouse 7.40

For this, SAP is offering:

1. An end to end guide including upgrade/migration
2. An ASU toolbox (BW related) and additional guidance
3. software upgrade manager (SUM 1.0)



© 2012 SAP AG. All rights reserved.

Roadmap and technology facts

SAP BW powered by SAP HANA

Planned Product Roadmap Overview – Key Themes and Capabilities

SAP BW 7.4 SP9/SP10 on SAP HANA

Push down of data intensive functions to HANA
- Analytic Manager, Warehouse management processes and Planning Semantics

Simplified data modeling
- Open ODS View flexible integrating external data
- CompositeProvider consolidating existing InfoProviders
- Common Eclipse based modeling tools
- Advanced DSO to consolidate DSOs and InfoCube

BIG Data scenarios
- HANA dynamic tiering for Petabyte-scale storage
- NLS Storage enhancements

SAP HANA Enterprise Cloud
- Best practice for large scale BW migrations into the cloud

Exposing BW data models for SQL consumption
- Generation of HANA models from BW InfoProviders and simple BEx queries

"BPC Embedded Model"
- Integrating capabilities of BW IP, BPC and HANA

Mobile devices
- Easy mobile consumption using ODATA standard
- SAPUI5 based Process Chain Monitor

Upcoming planned release

Integration with the HANA Platform
- Leverage HANA Information Management capabilities for BW
- Further pushdown of data intensive functions to HANA

Simplified and Streamlined User Experience
- Eclipse based Modeling for Data Flows
- SAPUI5 based Monitoring and Administration Tools

BIG Data scenarios
- NLS: Exceptional inserts, updates and deletes
- HANA dynamic tiering for Advanced DSO.
- Further HADOOP/BIG Data integration

SAP HANA Data Warehousing Foundation
- Data distribution optimizer
- Data lifecycle management

SAP HANA Enterprise Cloud
- NLS as a Service in the HEC

BPC Embedded Model
- Local planning scenarios with BW Work-spaces and BPC Embedded Model

Future innovations

BW run simple mode

- Advanced DSO and New CompositeProvider as central modeling objects
- No 3.x dataflows, no InfoCubes, no DSOs
- Simplified governance
- All data loads based on optimized Request handling
- All modeling tools based on Eclipse
- All administration tools based on SAPUI5
- BW on HANA-optimized Business Content

Enhanced tool support to enable the pass to the HANA optimized BW objects

Today

(Release SAP BW 7.4 SP9/SP10)

Planned Innovations

(Release SAP BW 7.5)

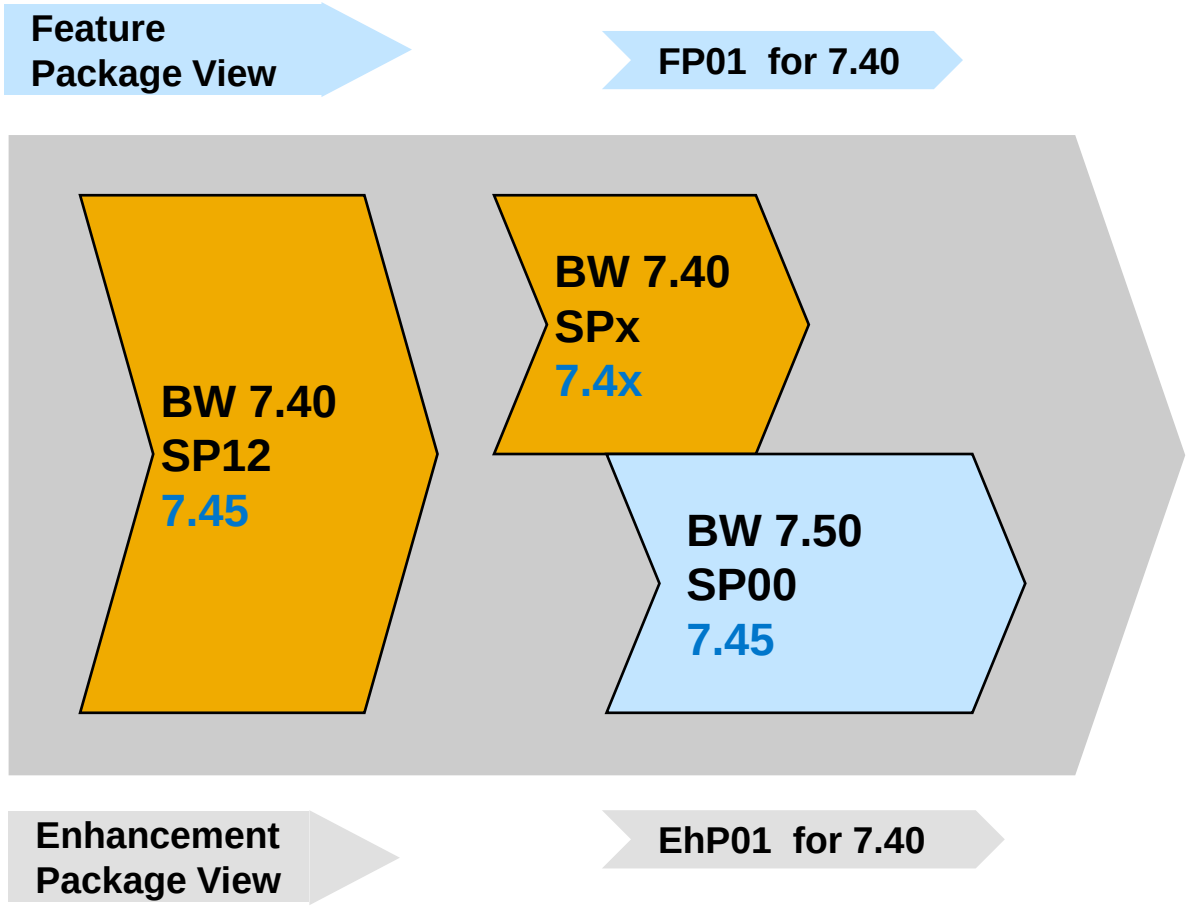
Future Direction

(SAP will continue to support RDBMS platforms)

© 2012 SAP AG. All rights reserved.

What's new with the Update to SAP BW 7.40/7.50

Updated Software Lifecycle Maintenance Process following the EhP Strategy



Code Split of NetWeaver 7.40 in Q4 2015 (RTC October 2015)

- stabilized version, 2-4 support packages per year, corrections-only - release number: 7.40
- enhancement package delivering innovations (BW feature pack, new kernel, …) – release number: 7.50

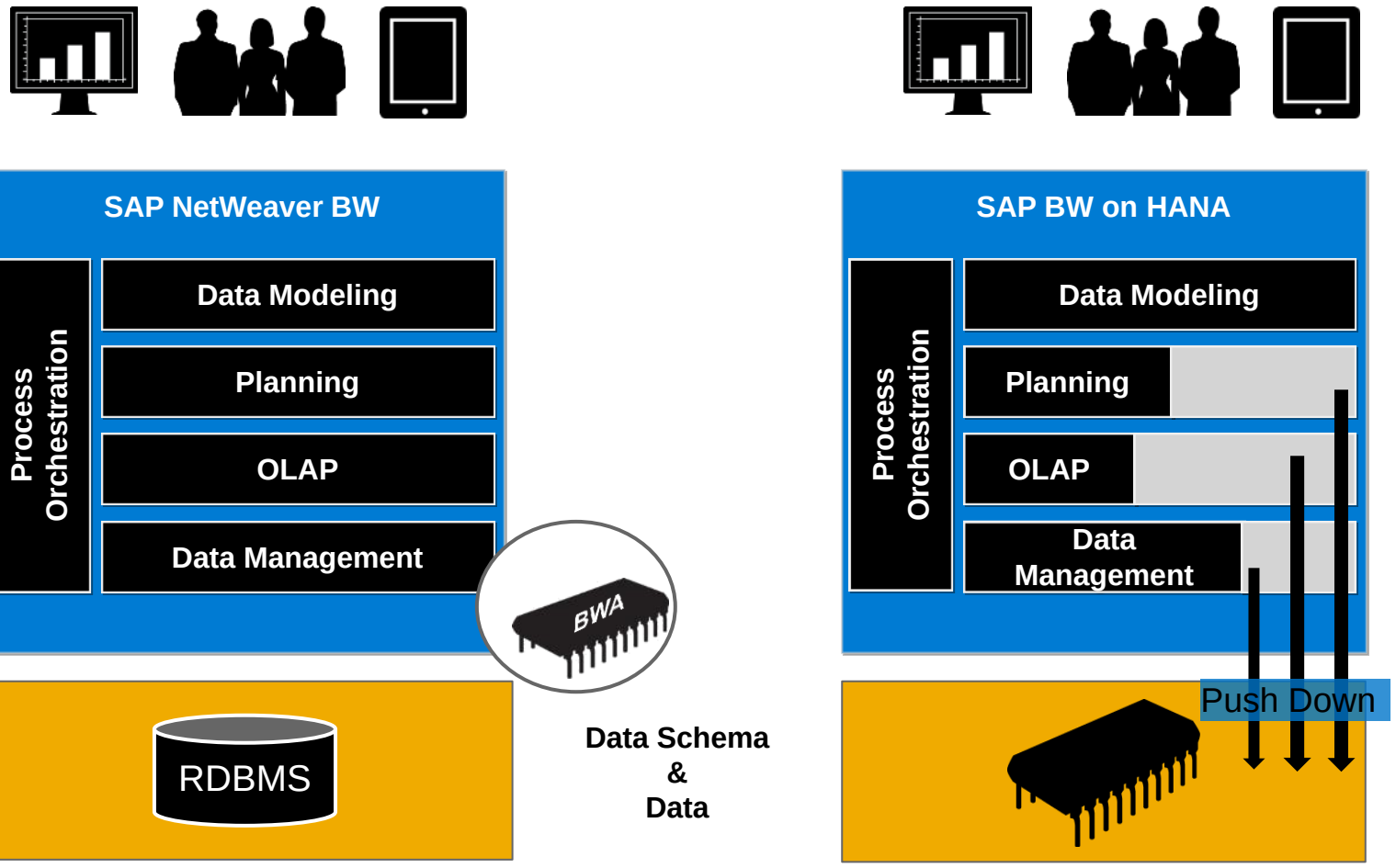
NetWeaver 7.40 FP01 is basis for

- S/4HANA
- BusinessSuite EhP8

© 2012 SAP AG. All rights reserved.

SAP BW on HANA - Smarter, simpler, more efficient

How Does BW running on RDBMS differ from BW running on HANA ?



Customer value of SAP BW powered by SAP HANA

- Excellent query performance for improved decision making
- Performance boost for Data Load processes for decreased data latency
- Accelerated In-Memory planning capabilities for faster planning scenarios
- Flexible combine EDW with HANA-native data for real-time insights and decision making
- Data persistency layers are cut off and reduced administration efforts
- Simplified data modeling and remodeling

Data intensive functions are pushed down from BW to HANA

HANA as the Primary Database for BW and Foundation for new Applications

© 2012 SAP AG. All rights reserved.

1 Roadmap and technology facts

SEM Add-On Implications - http://help.sap.com/sem

Choose your NetWeaver BW Start Release

BW 7.0x/SEM 6.0x
(generic EhP approach)
Upgrade to

- NetWeaver 7.40
- SEM 7.37

possible!
(Note 1326576 and 1752914)

BW 7.01/SEM 6.04
(specific case for EhP4)
Upgrade to

- NetWeaver 7.40
- SEM 6.37

possible!

BW 7.0/SEM 6.0
(EhPs except EhP4)
Upgrade to

- NetWeaver 7.40
- SEM 6.37

possible!

BW 7.3/SEM 6.34
(specific case for EhP4)
Upgrade to

- NetWeaver 7.40
- SEM 7.37

possible!

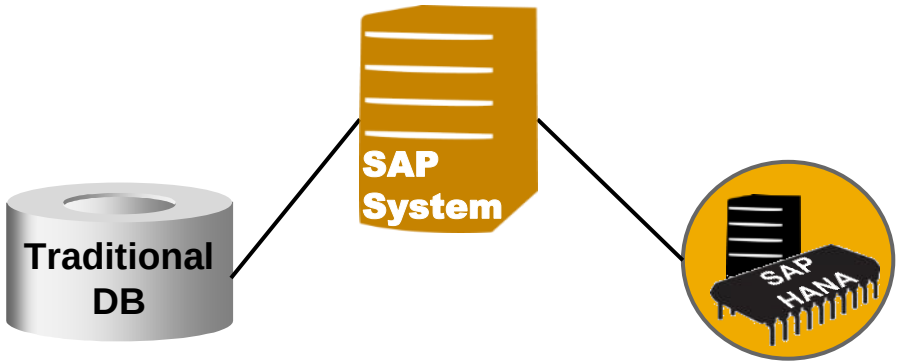
Consider Options in Notes 1539356 (7.30), 1681435 (7.31) and 1531022 (SEM)
Blog: Good News - Easier Modeling of the SEM Add-On in Solution Manager

Recommended Option: 1927083 - SAP NetWeaver Systems with SEM-BW
Change to Add-On Product Version of SAP SEM (CISI)

© 2012 SAP AG. All rights reserved.

1 Roadmap and technology facts

functionality of the database migration option (DMO) within the SUM framework



1. Upgrade “Prepare”
2. Execute Upgrade (until downtime phase)
3. Switch database connection
4. Migrate application data (incl. data conversion)
5. Finalize Upgrade
6. Start SAP HANA-based system

Setup SAP HANA specifics (client, schema …) — Uptime

Downtime

Note
Traditional database continues to run

SAP HANA Migration Wizard will be a SUM-based tool simplifying the migration process

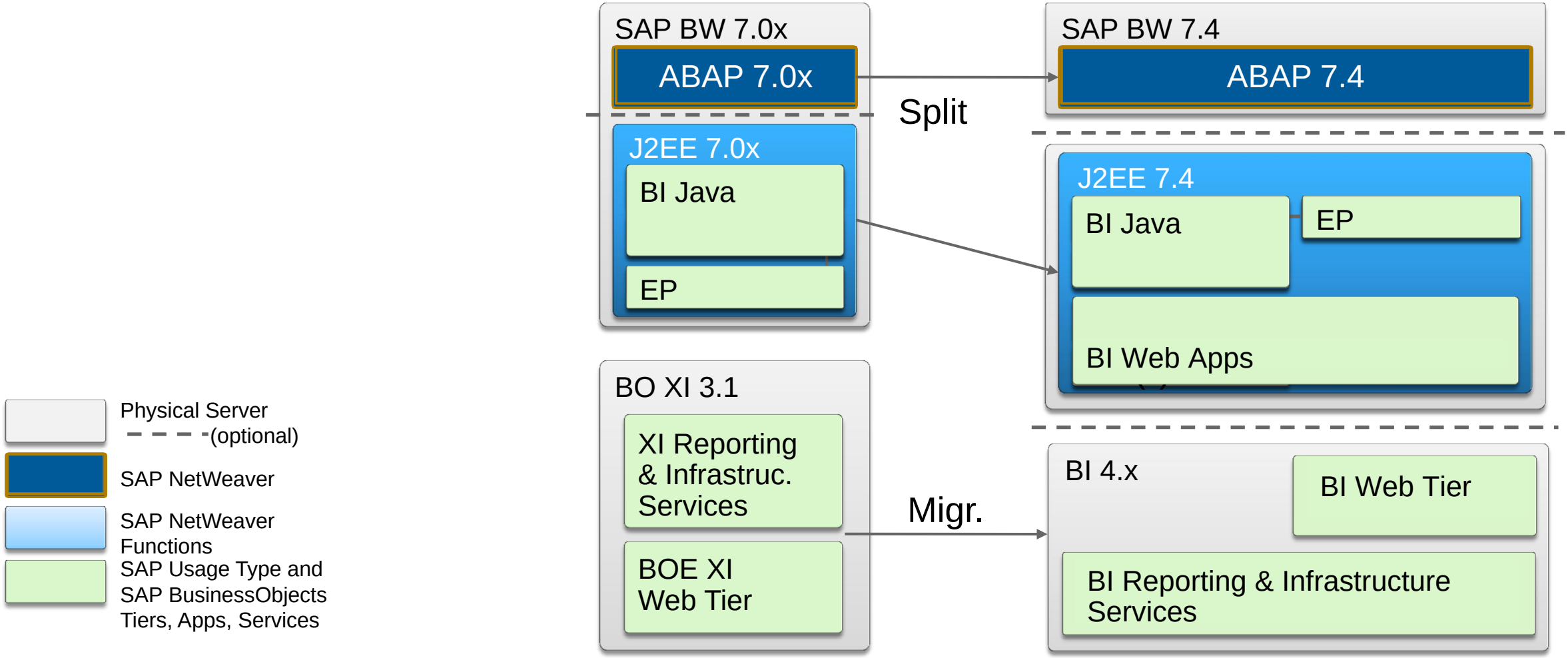
- Generally available SUM 1.0 SP09 Upgrade and Migration of BW system
- Included UC conversion available with DMO/SUM 1.0 SP10
- With DMO/SUM 1.0 SP13 SUM/DMO consolidated UI based on UI5

Time

© 2012 SAP AG. All rights reserved.

1 Roadmap and technology facts

New BI 4.x Installation for SAP BW Customers Platform View - Proposal

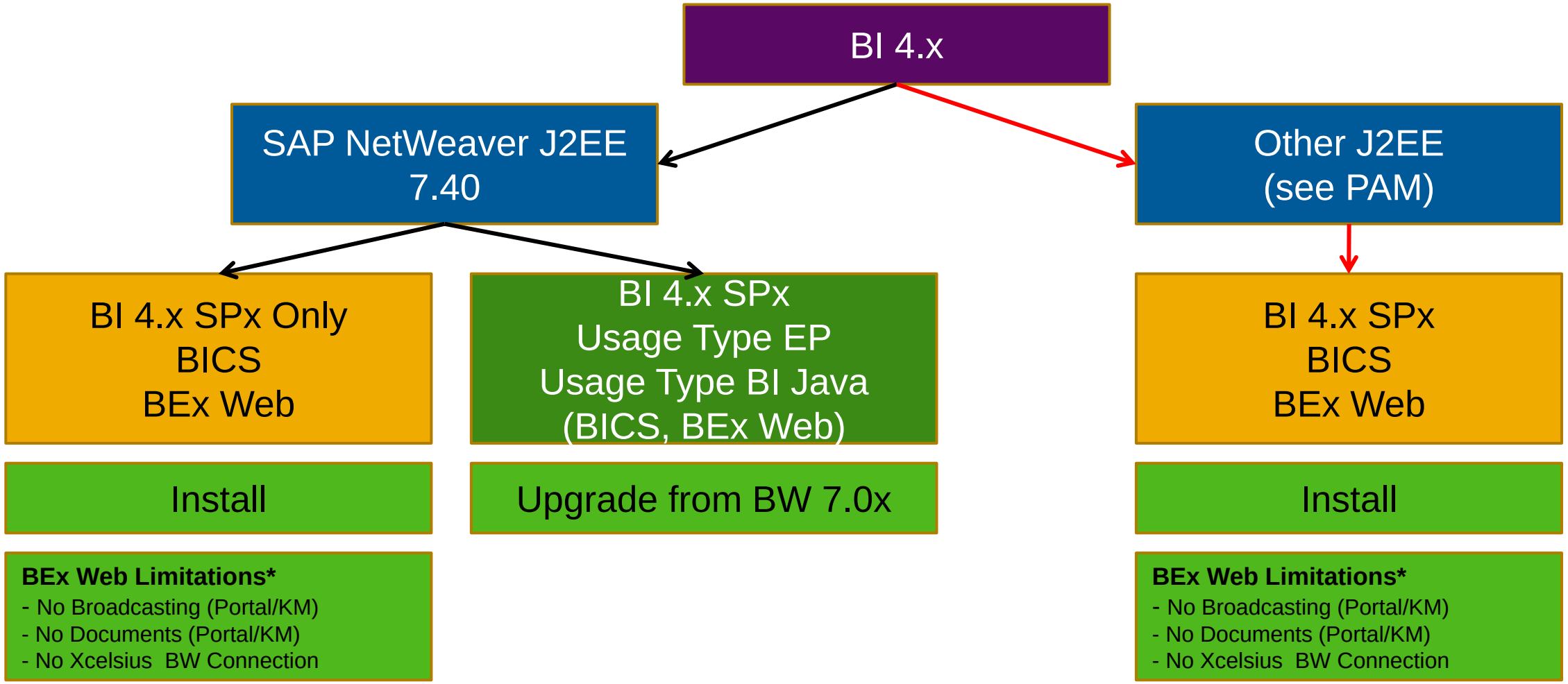


The XI 3.1/BI 4.0 Java apps can deployed either on an existing SAP J2EE 7.0x or 7.4 Engine, or ideally capsulated with BI with Tomcat by default. Consider the SAPJVM 4.1. A JVM switch tool is available as well

© 2012 SAP AG. All rights reserved.

1 Roadmap and technology facts

Use the recommendation with the BI 4.x inbuilt Java Server

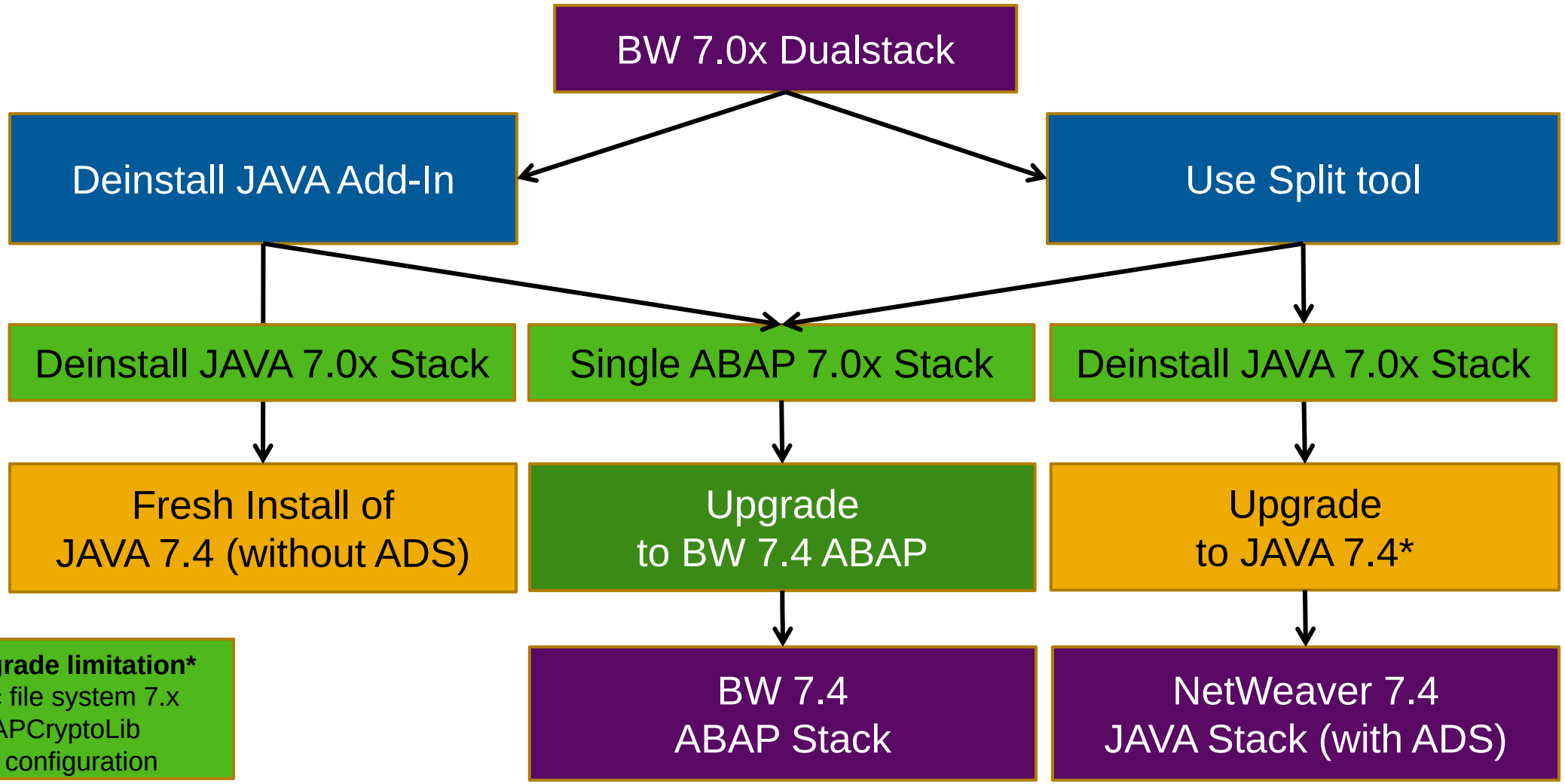


***Broadcasting is either a direct ABAP process (Excel) or an ABAP HTTP process publishing in a separate SAP EP
Distinguish between 3.x and 7.x web templates. 3.x web templates do not require BI-JAVA 7.x

© 2012 SAP AG. All rights reserved.

1 Roadmap and technology facts

Dualstack options prior to the Upgrade - separate JAVA stack easies the process



JAVA 7.4 Upgrade limitation*
- no automatic file system 7.x
- automatic SAPCryptoLib
- disable SNC configuration

ADS = Adobe Document Services (obsolete with NetWeaver 7.4 BI-Java)

© 2012 SAP AG. All rights reserved.

1 Roadmap and technology facts

SAP Business Intelligence Architecture 2014 - choose your combination

	BW 7.40 Upgrade	JAVA fresh Install (not the central EP)	BI 4.0/4.1 Upgrade/fresh
BW 3.5 BW 7.0 BW 7.0x	Depended from SEM Add-On and Analysis Authorizations	Deinstall/Split Java Add-In Deinstall JAVA Instance	BW 7.31 - BI 4.1 BW 7.30 - BI 4.0 BW 7.01 SP08 BW 7.0 (not recommended) BW 3.5 (not recommended)
JAVA 7.0x Add-On or sep. Install	Deinstall/Split Java Add-In Deinstall JAVA Instance	Fresh JAVA 7.40 Install	Upgrade/Migrate to BI 4.x Fresh BI 4.0/4.1 Install Use BI 4.0/4.1 In-Build JAVA Application Server
XI 3.1	XI 3.1 SP04	Fresh JAVA 7.01 Install Fresh JAVA 7.40 Install	Upgrade/Migrate to BI 4.x Use BI 4.0/4.1 In-Build JAVA Application Server

© 2012 SAP AG. All rights reserved.

1 Roadmap and technology facts

SAP BusinessObjects BI 4.x support for BW 7.40 - Note 1869560

Product	Connectivity	BW 7.01 SPS 06+	BW 7.01 SPS 08+	BW 7.02 SPS 02+	BW 7.30 SPS 03+	BW 7.31 SPS 04+	BW 7.40 SPS 02+
Web Intelligence	BICS (Dimensional Transient Universe)	✓	✓	✓	✓	✓	SP01+
Crystal Reports for Enterprise		✓	✓	✓	✓	✓	SP01+
Dashboards		✓	✓	✓	✓	✓	SP01+
Web Intelligence	UNV OLAP	✓	✓	✓	✓	✓	SP01+
Live Office		✓	✓	✓	✓	✓	SP01+
Web Intelligence	Multi source universe (Relational)	✓	✓	✓	✓	✓	SP01+
Crystal Reports Enterprise		✓	✓	✓	✓	✓	SP01+
Dashboards		✓	✓	✓	✓	✓	SP01+
Explorer		✓	✓	✓	✓	✓	SP01+
Analysis, edition for OLAP *(*1)*	BICS (Direct to BEx)	✓	✓	✓	✓	✓	SP01+
Analysis, edition for Microsoft Office *(*2)*		(*5)	(*5)	(*5)	(*5)	(*5)	(*5)
Dashboards	BICS (NW BI Java)	✓	✓	✓	✓	✓	SP01+
Explorer	BWA *(*4)*	✓	✓	✓	✓	✓	SP01+
Crystal Reports for Enterprise	Direct to Data (D2D)	-	-	-	-	-	-
Crystal Reports 2013	Direct BW Connection	✓	✓	✓	✓	✓	SP01+
BEx Web Applications *(*3)*	(Integrated with BI 4)	-	✓	✓	✓	✓	SP01+

(*1) Analysis, edition for OLAP additionally supports BW 7.0 SPS23+
(*2) Analysis, edition for Microsoft Office standalone (not used with BI 4) supports any BW release as of 7.0 (no specific SP needed)
(*3) Please consult SAP notes 1541365 and 1476156
(*4) Explorer supports BWA Version 7.20, rev 19 and above
(*5) Support for BW 7.31 SPS 04+ is added with BI 4.0 SP05, Patch 1

© 2012 SAP AG. All rights reserved.

2 What’s new with the Upgrade to BW 7.40

End to end implementation roadmap

Increased usage of the Solution Manager (MOPZ)

Functional changes in NetWeaver 7.40 BW

SAP BW Application Lifecycle Management (ALM)

http://scn.sap.com/docs/DOC-7856#section8

BW Technical and Functional Upgrade

BLOG: Software Update Manager (SUM): introducing the tool for software maintenance

BLOG: **Good News - Easier Modeling of the SEM Add-On in Solution Manager**

ASU Toolbox (incl. BW Specific Content) and BW Upgrade pre/post Task List

With the ASU (application specific upgrade) toolbox, customers get one single truth for all pre/post upgrade steps regarding the technical upgrade to SAP NetWeaver BW 7.0x and all following releases.

More detailed information about the ASU toolbox can be found in note 1000009. This tool has been available since 2008 (see the TechEd Presentation and the new Upgrade to SAP NetWeaver BW 7.30 Presentation) has been enhanced and now allows application specific and technical resources to work together for a successful upgrade to SAP NetWeaver BW 7.30

With SAP NetWeaver 7.30 JAVA, the Functional Unit Configuration UI (former CTC BI-JAVA Template) is available.

New:

Together with the BW Housekeeping Task List, there are also additional Task Lists available to simplify preparation of the application-specific part.

Implement the following SAP Note to enable usage of task list SAP_BW_BEFORE_UPGRADE via transaction STC01

Note 1734333 - BW Pre and Post Upgrade and Migration Tasks

(contains manual report ZNOTE_1734333_PRE_70x/ZNOTE_1734333_PRE_70x, and **NO** automated steps applied with SNOTE)

The Presentation Teched 2012 - Session EIM301 illustrates the complete Upgrade process.

© 2012 SAP AG. All rights reserved.

2 What's new with the Upgrade to SAP BW 7.40

a detailed look at the upgrade steps

Milestones	Tasks	More Information
3.1 Planning	Obtain an overview and access the delta information on the upgrade to SAP NetWeaver 7.3.	Upgrade Master Guide - SAP NetWeaver 7.3 (SMP) Upgrade to NetWeaver BW 7.3 -> "chapter 1: Technology/Roadmap facts" and "chapt 2: What's new with the Upgrac to BW 7.30" (SCN)
3.2 Application preparation	Perform application-specific preparation tasks with the application-specific upgrade toolbox (ASU toolbox) and optionally perform housekeeping steps. Tools : • Application-specific upgrade toolbox (ASU toolbox): transaction code /ASU/START	Information on the ASU toolbo • SAP Note 1000009 (SMP) • Upgrade to NetWeaver BW 7.3x -> "chapter 3: Usage the ASU toolbox for BW" (SCN) Information on housekeeping: • SAP NetWeaver BW - Impo tant Housekeeping Principle for keeping your SAP NetWeaver BW in good shape (SMP)
3.4 Procedure	Perform the upgrade of SAP NetWeaver BW (ABAP) to SAP NetWeaver BW 7.3 SPS5 or higher using the Software Update Manager (SUM). We recommend to apply the latest Support Package for SAP NetWeaver BW. Tools: • Upgrade program SAPup	Update Guide - Update of SAP Systems Using Software Update Manager 1.0 SP0x at Update of SAP Systems Using Software Update Manager 1.0 SP0x **Update of SAP Systems Using Software Update Manager (ABAP Systems)** (SMP) Upgrade and Update Guide - SAP NetWeaver 7.3 ABAP at Upgrade and Update Documentation - SAP NetWeaver 7.3 (SMP) Upgrade to NetWeaver BW 7.3x -> "chapter 5: Details of the Upgrade Process" (SCN)
3.5 Post-upgrade technical steps	Perform technical post-upgrade tasks. Tools: • Application-specific upgrade toolbox (ASU toolbox): transaction code /ASU/START	SAP Note 1000009 (SMP) Upgrade to NetWeaver BW 7.3x -> "chapter 3: Usage of the ASU toolbox for BW" (SCN)

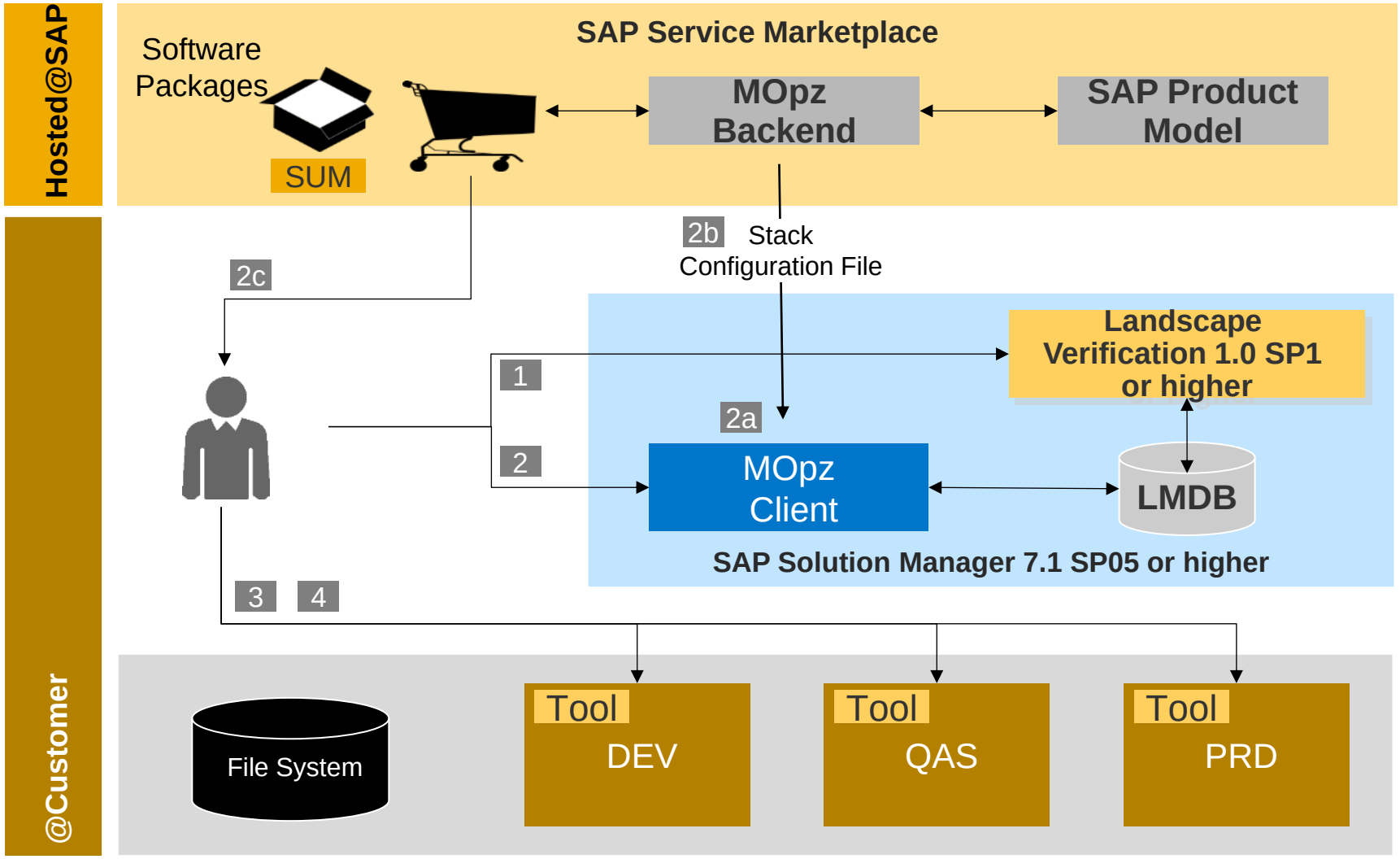
http://help.sap.com/nw74/#section2

© 2012 SAP AG. All rights reserved.

2 What's new with the Upgrade to SAP BW 7.40

Solution Manager pre requisites for the correct usage of the MOPZ

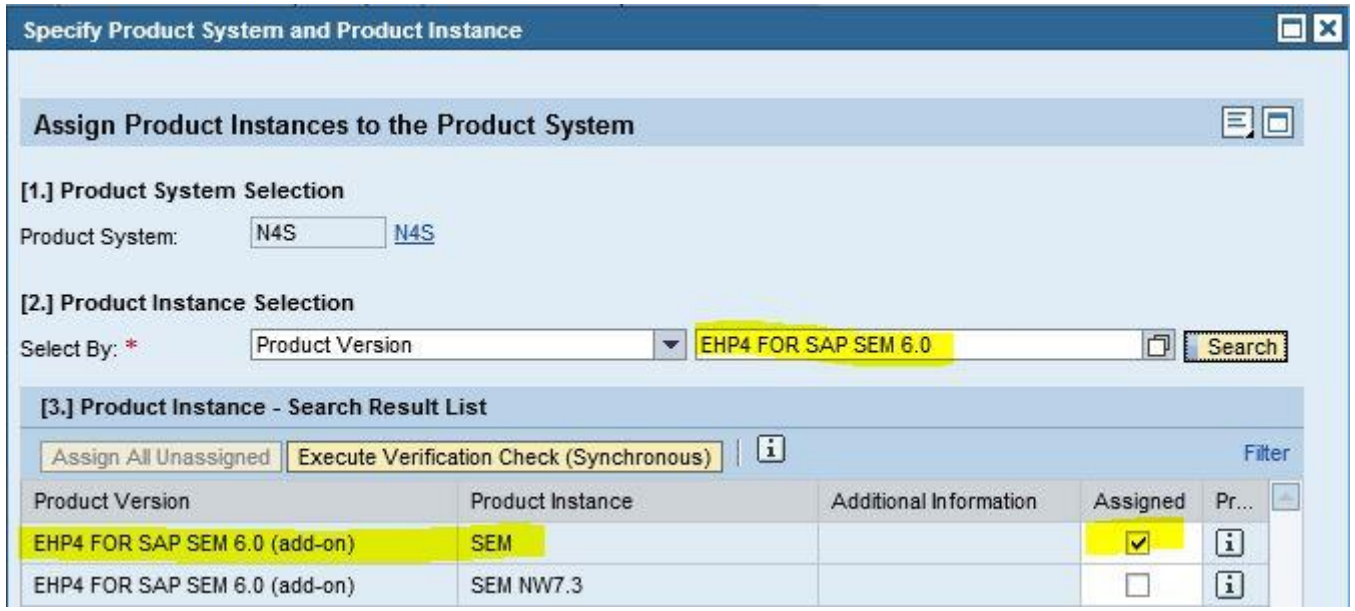
SAP First Guidance available



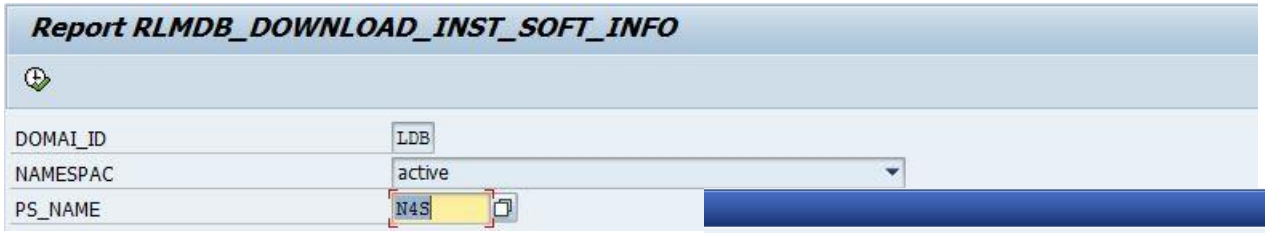
© 2012 SAP AG. All rights reserved.

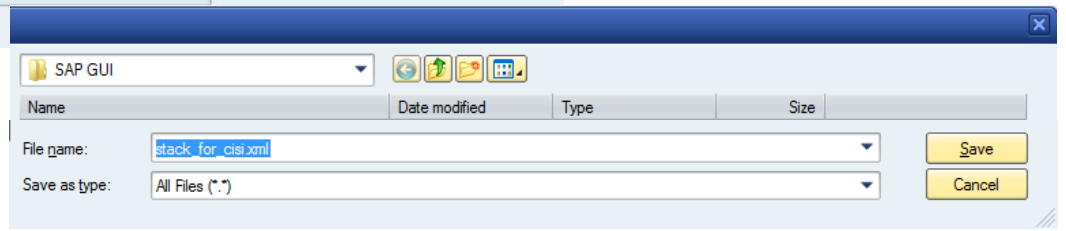
2- What's new with the Upgrade to SAP BW 7.3x/7.40

Blog: Good News - Easier Modeling of the SEM Add-On in Solution Manager



Note
Repairs all kind of misconfigured backend errors!



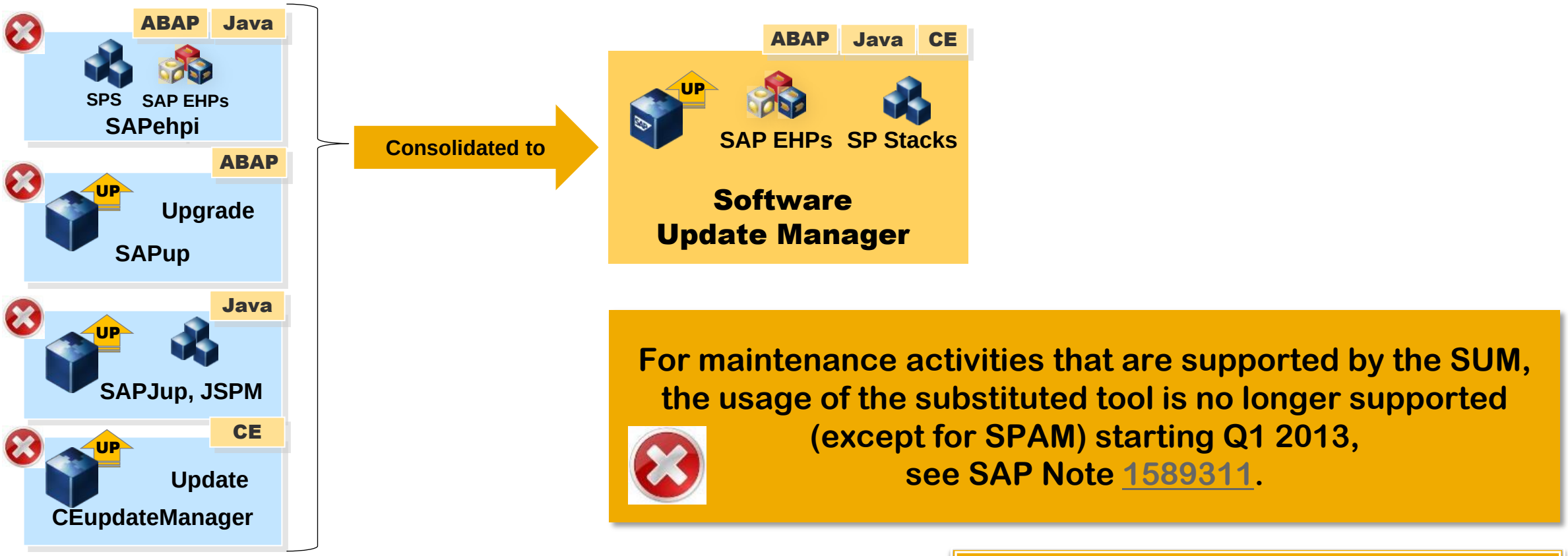


© 2012 SAP AG. All rights reserved.

2 What's new with the Upgrade to SAP BW 7.40

SUM is the tool: successor of other tools for upgrade, update and support packages

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



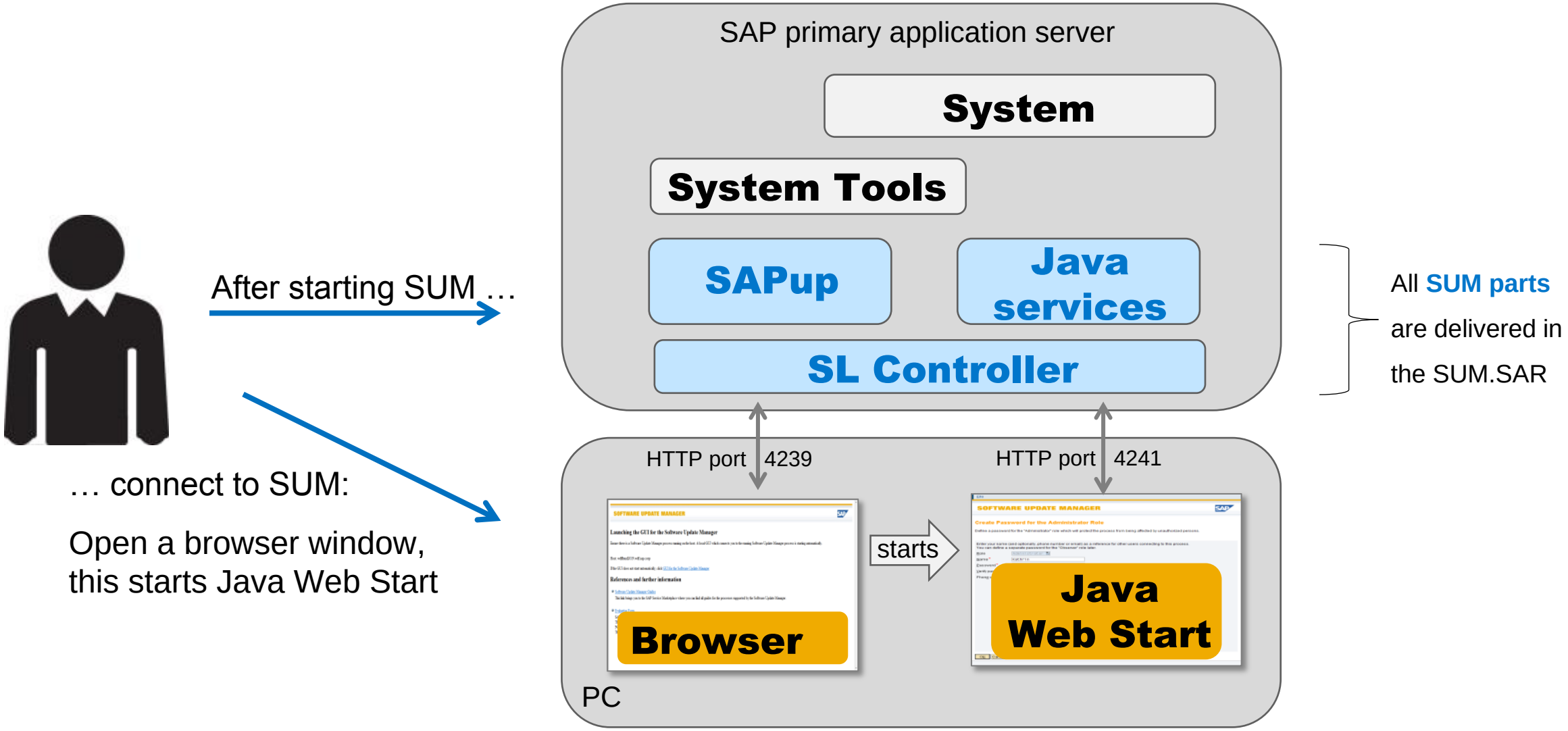
For maintenance activities that are supported by the SUM, the usage of the substituted tool is no longer supported (except for SPAM) starting Q1 2013, see SAP Note 1589311.

http://service.sap.com/sltoolset

© 2012 SAP AG. All rights reserved.

2 What's new with the Upgrade to SAP BW 7.40

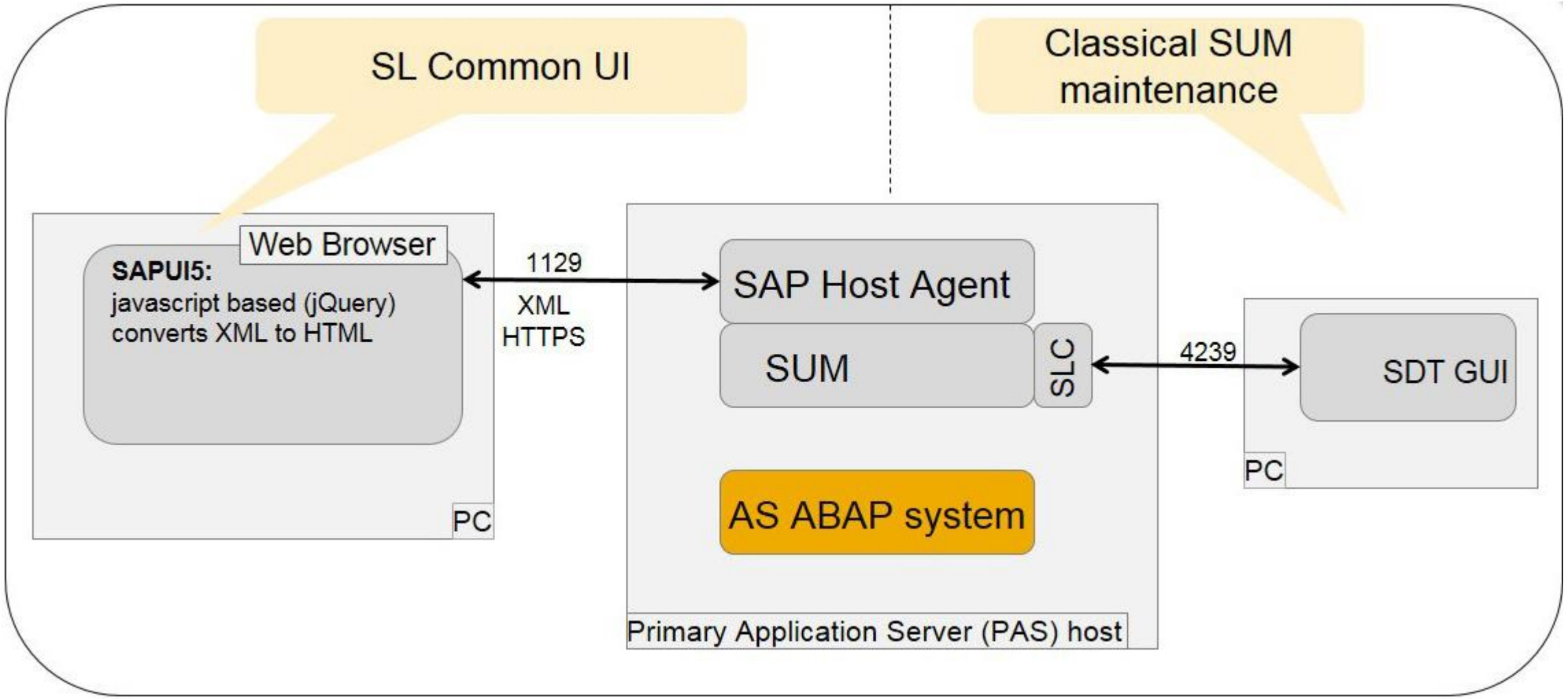
Recap: Connecting to Software Update Manager from PC



© 2012 SAP AG. All rights reserved.

2 What's new with the Upgrade to SAP BW 7.40

New with SUM 1.0 SP12 onwards - Blog: Upgrade has never been easier …



© 2012 SAP AG. All rights reserved.

2 What's new with the Upgrade to SAP BW 7.40

software update manager (SUM) 1.0 changes

- Exception implementation for Service Releases (SR) for (NetWeaver) BW 7.40

  These SPS are not applied via the SPAM procedure due, to fundamental changes in the SR Basis Support Packages, e.g. new CDS views in SP08. Instead this update is scheduled via the software update manager (SUM). Find additional information in the blog - Software Update Manager (SUM): introducing the tool for software maintenance.

- The creation of a `stack.xml` via the Solution Manager and the usage of the ASU toolbox and/or the Upgrade tasks lists are mandatory (except the Import of the Service Release).
  - SR1 ➔ SPS05 requires the new 7.41 UC Kernel
  - SR2 ➔ SPS08 requires the new 7.42 UC Kernel
  - SR3 ➔ SPS12 requires the new 7.45 UC Kernel
- Note 1969546 - Release Roadmap Kernel 740

© 2012 SAP AG. All rights reserved.

2- What's new with the Upgrade to SAP BW 7.40

software update manager (SUM) vs. database migration option (DMO)

- The database migration option (DMO) is an integrated part of the software update manager (SUM) and not a separate tool.

- The upgrade procedure differs from the upgrade part of the database migration option
  - A standard upgrade requires a main database upgrade, DMO not.
  - In a standard upgrade, you have manually to run the ASU toolbox, and/or the upgrade pre/post task lists, DMO includes them automatically.

- The (heterogeneous) migration procedure to SAP HANA differs from the heterogeneous system copy
  - The DMO procedure uses a UI5 browser based fronted based on the SAP host agent, SUM the classical JAVA based GUI frontend.
  - The start release can be already SAP NetWeaver 7.0 (SPS17/SP19).
  - The specific script SMIGR_CREATE_DDL run's already automatically in the source release.
  - The in-place migration (related to the PAS) uses parallel export/import (via pipes) and is not comparable to the SWPM procedure. The usage of manual created MigMon scripts is not supported and not compatible with the DMO procedure.
  - The DMO procedure call's a reduced version of the ASU toolbox and the pre/post task lists for upgrade and migration, SWPM not.
  - The DMO procedure calls the post program RS_BW_POST_MIGRATION automatically, SWPM not.
  - For an optimized table splitting from the source database, also the SWPM **may call** the SUM/DMO procedure **for the split** (no further enhancement in SWPM for table splitting).

- A standard upgrade followed by a heterogeneous system copy to SAP HANA (BW based systems) is a different approach than the usage of the database migration option (upgrade with a in-place database migration)

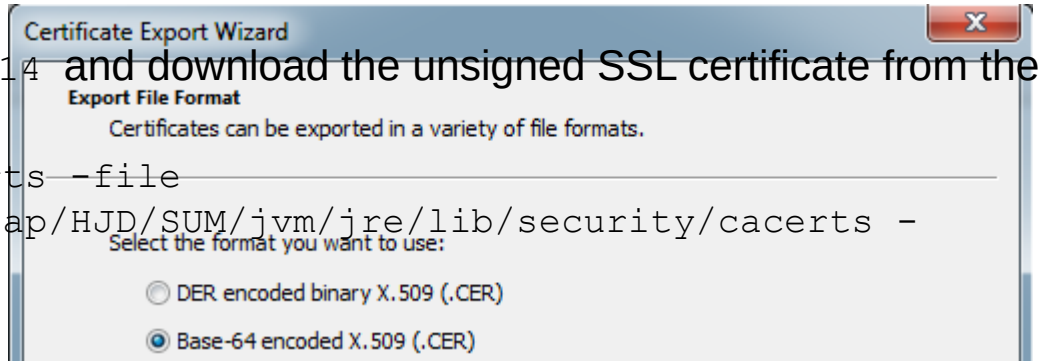
© 2012 SAP AG. All rights reserved.

2 What's new with the Upgrade to SAP BW 7.40

software update manager (SUM) 1.0 changes - SSL certificates

- With SUM 1.0 SP10 and higher you have now to verify the certificates to avoid problems with the check for SSL certificates during the update process, you need to ensure the certificates are trusted. See the following example:
  - `C:\Program Files\SAP\hostctrl\exe>`
    `sapcontrol -host iwdf4443 -nr 1 -function GetSystemInstanceList`
  - `/usr/sap/hostctrl/exe>`
    `sapgenpse export_own_cert -v -p /usr/sap/HBD/DVEBMGS03/sec/SAPSSLS.pse -o /usr/sap/HJD/SUM/certificate_HBD_SSL.crt`
  - `/usr/sap/HJD/SUM/jvm/jre/bin>`
    `./keytool -importcert -noprompt -alias HJD04 -trustcacerts -file /usr/sap/HJD/SUM/certificate_HJD_04.cer -keystore /usr/sap/HBD/SUM/jvm/jre/lib/security/cacerts -storepass changeit`

- Also for SAP BI-JAVA updates you might have to verify the SSL certificates. You have to do this for the PAS and the SCAS Instance. See the following example:
  - Call the following URL `http://<server>.<domain>.<ext>:5<nn>14` and download the unsigned SSL certificate from the browser and import this to the SUM SSL certificate.
  - `./keytool -importcert -noprompt -alias HJD04 -trustcacerts -file /usr/sap/HJD/SUM/certificate_HJD_04.cer -keystore /usr/sap/HJD/SUM/jvm/jre/lib/security/cacerts -storepass changeit`



© 2012 SAP AG. All rights reserved.

2 What's new with the Upgrade to SAP BW 7.40

overall stack changes

- The ST-PI 2008_1_710 (and the Versions below) are replaced by the new ST-PI 7.40. If you apply/update the Add-On in advance, make sure that the SLD-LMDB connection is updated, otherwise the stack.xml would be listing two releases with the same component.

- The core components from the Gateway 2.0 Add-On are now part of the technical NetWeaver 7.40 Stack.
  - SAP Gateway Foundation 7.40 (SAP_GWFND)
  - User Interface Technology 7.40 (SAP_UI), furthermore at least one SP ahead of the current SPS overall.

- The SAP CTS Plug-In 2.0 (SAP_CTS) is a independed component, which is related to the CTS system (optional component)
  - Note 2025686 - CTSPLUG 200: TMS dumps with CL_CTS_BOOTSTRAP_PLUGIN_MGR, CL_CTS_SERVER or CL_CTS_COMMON_TOOL
  - Note 2036254 - Dumps with CL_CTS_COMMON_TOOLS in SAP NetWeaver 7.02 SP15, 7.31 SP11 and 7.40 SP6-8

© 2012 SAP AG. All rights reserved.

2 What's new with the Upgrade to SAP BW 7.40

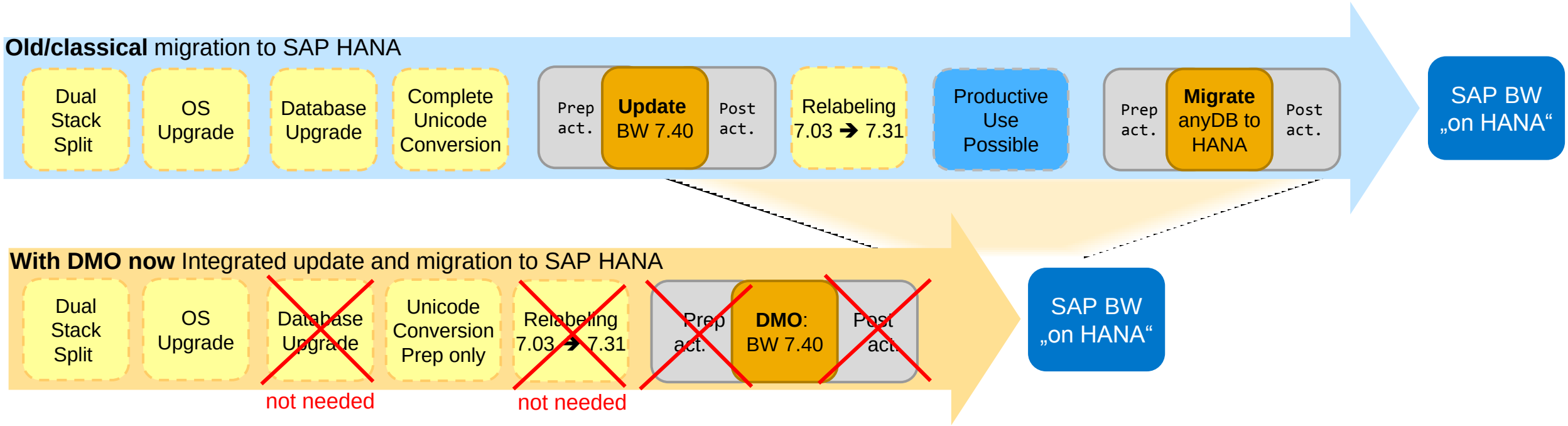
Important Notes corrections to consider

- Errors with Upgrade to BW 7.40 SP08 and higher
  - Note 1709947 - SP29:Field length wrong in source and target of TRF
  - Note 1943752 - SYNTAX_ERROR Dump in Customer Program or Customer Exit Code after Upgrade to BW7.4
  - Note 2036310 - Incorrect AIM execution: No repeated activation of successfully processed objects; technical enhancement
  - Note 2076059 - After upgrade to later BW releases, key figure values are not displayed correctly
  - Note 2077976 - Table pool deletion incorrectly handled
  - Note 2086899 - Upgrade phase MAIN_SHDRUN/ACT_UPG returns error messages
  - Note 2091348 - CD: No call of BAdI on shadow instance during upgrade
  - Note 2120719 - RC = 12 during script-based Inhouse transport, error RSO 781
  - Note 2136898 - Missing Database Index after Upgrade from SAP Business Warehouse 7.40 SP8 to 7.40 SP 10 or lower on non-SAP HANA database systems
  - Note 2146347 - Planning DSO: Error RSDODSO 256 after upgrade from BW 7.3X
  - Note 2125844 - Automatic upload of profiles after an upgrade
  - Note 2049119 - AS ABAP 7.40: Cannot call transactions SM04 and SM50
  - Note 2168131 - P12: Missing authorization checks
  - Note 2161094 - BW on HANA: Upgrade BW 7.3x -> 7.4x: Column Views missing after running RS_BW_POST_MIGRATION

© 2012 SAP AG. All rights reserved.

Comparison of the Standard and New Migration Processes

new option also reduces time by eliminating prep/post activities



SAP First Guidance available

Legend

* - may be a necessary step – depends on customer situation, start release

© 2012 SAP AG. All rights reserved.

SAP BW 7.40 - Query usage impact for Version 3.5

- **If you are still running Query Designer 3.x on your BW system, please note the following:**
- The BEx tools from SAP BW 3.5 are not available in SAP NetWeaver 7.40. Whereas the Analytic Engine of BW 7.4 can still execute queries which were with the defined with the BEx 3.5 Query Designer, the workbooks created with the BEx Analyzer or WEB Templates need to be migrated . Please read “Cookbook for Migration to BEx 7.0” in SAP Note 1807522 - BEx 3.5 Objects Migration to BEx 7.0
- If you are upgrading your BW system to BW 7.40 and are still using the obsolete Query Designer 3.x, SAP provides the following additional information:
  - To check which old query features are no longer supported in 7.40, use the reporting tool described in SAP Note 1911469. This tool will check the queries in your system and shows those which contain features that are no longer supported.

© 2012 SAP AG. All rights reserved.

SAP BW 7.40 - further Upgrade Information

- Additional application pre upgrade activities are described in
  Note 1879618 - Pre Upgrade Activities for Upgrade/Update to 7.4
  Note 2176977 - Pre-upgrade measures for upgrade/update to 7.4
- Do not upgrade lower than NetWeaver 7.40 SR1! (which is SP05)
  Note 1962880 - RDDMASGL job fails during ACT_UPG phase during NetWeaver 7.4 upgrade
- After the Upgrade run again the report RS_TCO_ACTIVATION_XPRA to clean unused TCO objects in the /BI0/ namespace
  Note 2123772 - RS_TCO_ACTIVATION_XPRA
- Oracle and DB6 based systems: please check the following SAP Note:
  Note 1805195 - Handling and troubleshooting of tablespaces during Upgrades, EhPs and SPs updates
- The maximum length of texts for characteristic values is increased. For changes that might be advised, please see
  Note1823174 - BW7.40 Changes and customer-specific programs

  http://wiki.scn.sap.com/wiki/display/BI/Tips+for+Note+1823174
- Virtual Key Figures or Characteristics do not work as expected after Upgrade to 7.4
  Note 1717880 - Virtual Key Figures & Characteristics
- Please read also SAP Note1600929 - SAP BW powered by SAP HANA DB: Information and
  Note 1729988 - SAP NetWeaver BW powered by SAP HANA - Checklist Tool if HANA will be used (e.g. DMO)
- If the SEM Add-On is applied on the NetWeaver system, you can change the modeling in the Solution Manager for better handling at any time, see the blog "Good News - Easier Modeling of the SEM Add-On

© 2012 SAP AG. All rights reserved.

3 Usage of the ASU toolbox for BW

pre/post steps upgrade process

3 Usage of the ASU toolbox for SAP BW

Your single source for all pre and post upgrade steps

Lower your TCO and time efforts by Managing your Upgrade with innovative tools

2. CTC for BW-Java

automatic connection between Abap and Java (Note 983156)

1. ASU toolbox (incl. BW Content)

one single truth for all pre/post upgrade steps (Note 1000009) additionally new Note 1734333

Complete Business Suite 7 connectivity (with EhP1):

- abap - java connection (available) for connection BW-IP, EP, ESS/MSS, etc.
- abap - abap (with EhP1) for backend connection e.g. ERP, CRM, BW, PI, etc.
- java - java (upcoming) for frontend connection e.g. FPM, etc.
- Note 1178800

Use the predefined content for:

- upgrade to NetWeaver 7.4 BW
- upgrade to ERP 6.0 EhPx
- upgrade to any SAP Product based on the NetWeaver 7.x Platform
- create/modify own content (XML based)

© 2012 SAP AG. All rights reserved.

3 Usage of the ASU toolbox for SAP BW

Upgrade process with the ASU toolbox for SAP BW

1 day	*1 day*	*1 day*	*1 Week*
Pre Upgrade Steps	**PREPARE/ UPGRADE**	**Post Upgrade Steps**	**Testing**
• Application checks/ cleansing and Upgrade Preparation • Technical checks and Upgrade preparation • Agree on result	• Last checks • PREPARE • UPGRADE	• Application Post checks and functional tests • Technical post Steps and Go-Live Preparation	• Application testing • New 7.40 EDW features • Technical testing • BI-Java CTC and testing of new 7.40 features

Key Highlights of the ASU toolbox for BW

One single source of all pre and post steps for a successful upgrade

Clear distribution of tasks between SAP Basis Administration and the Application Development

Additions, Remarks, Documentation can be added immediately as well

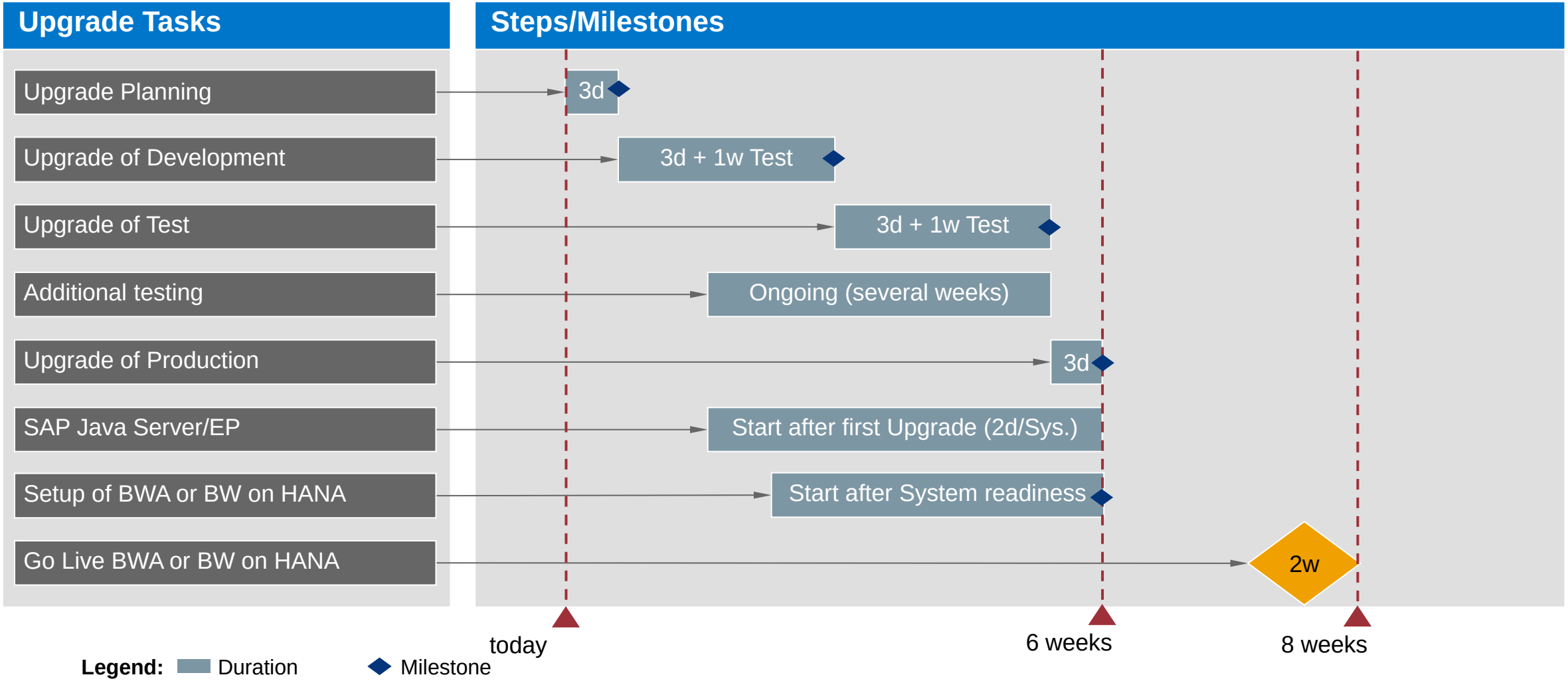
XML editor makes adoptions to other SAP upgrades easy.

Note: Elapsed time may be longer due to scheduling and lags, etc.

© 2012 SAP AG. All rights reserved.

3 Usage of the ASU toolbox for SAP BW

Typical project duration 6-8 weeks for a 3-system landscape

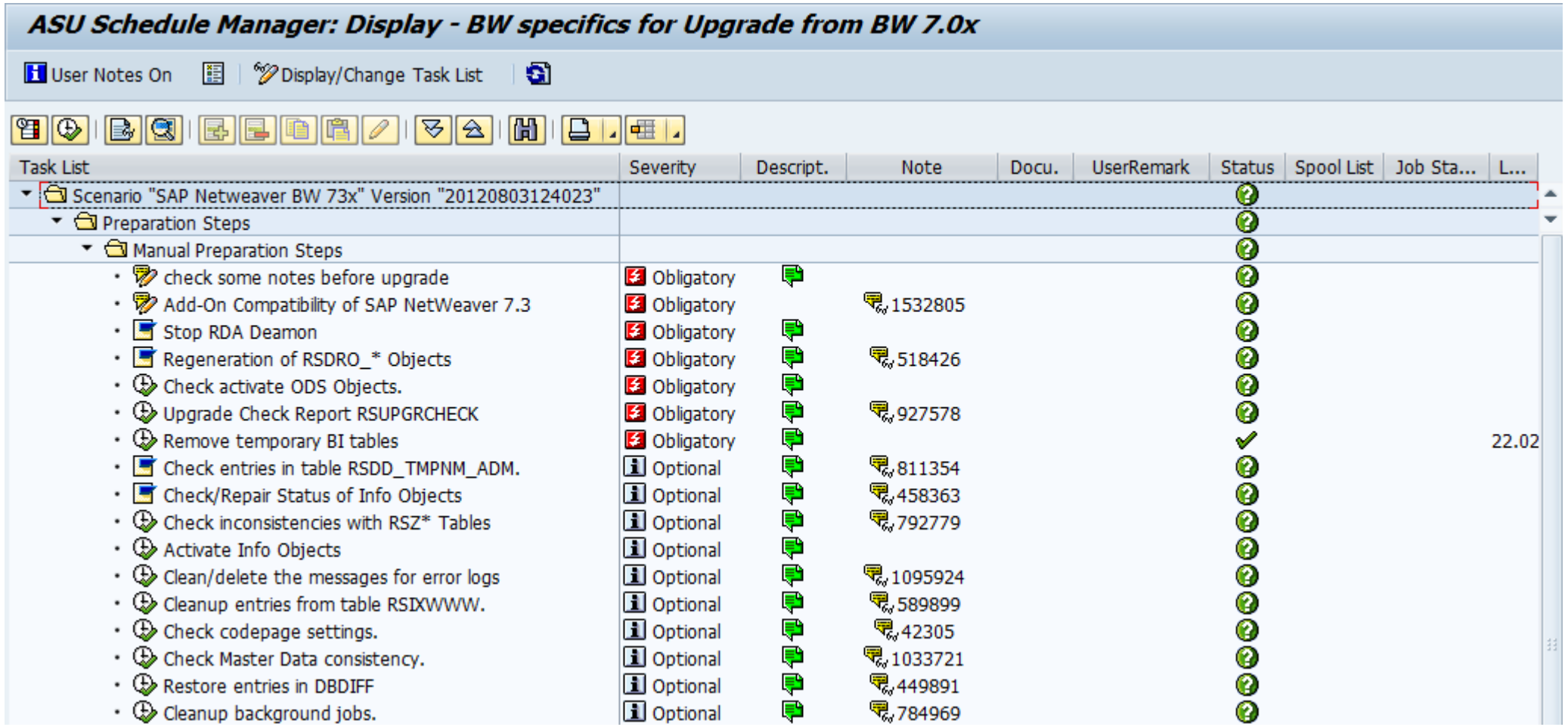


Time in total: 9d Upgrade, 10+d testing, 6d Java Inst, 9d het. Systemcopy, conversion IC/DSO individually, BW on HANA testing individually

© 2012 SAP AG. All rights reserved.

3 Usage of the ASU toolbox for SAP BW

Pre steps of ASU toolbox for SAP BW

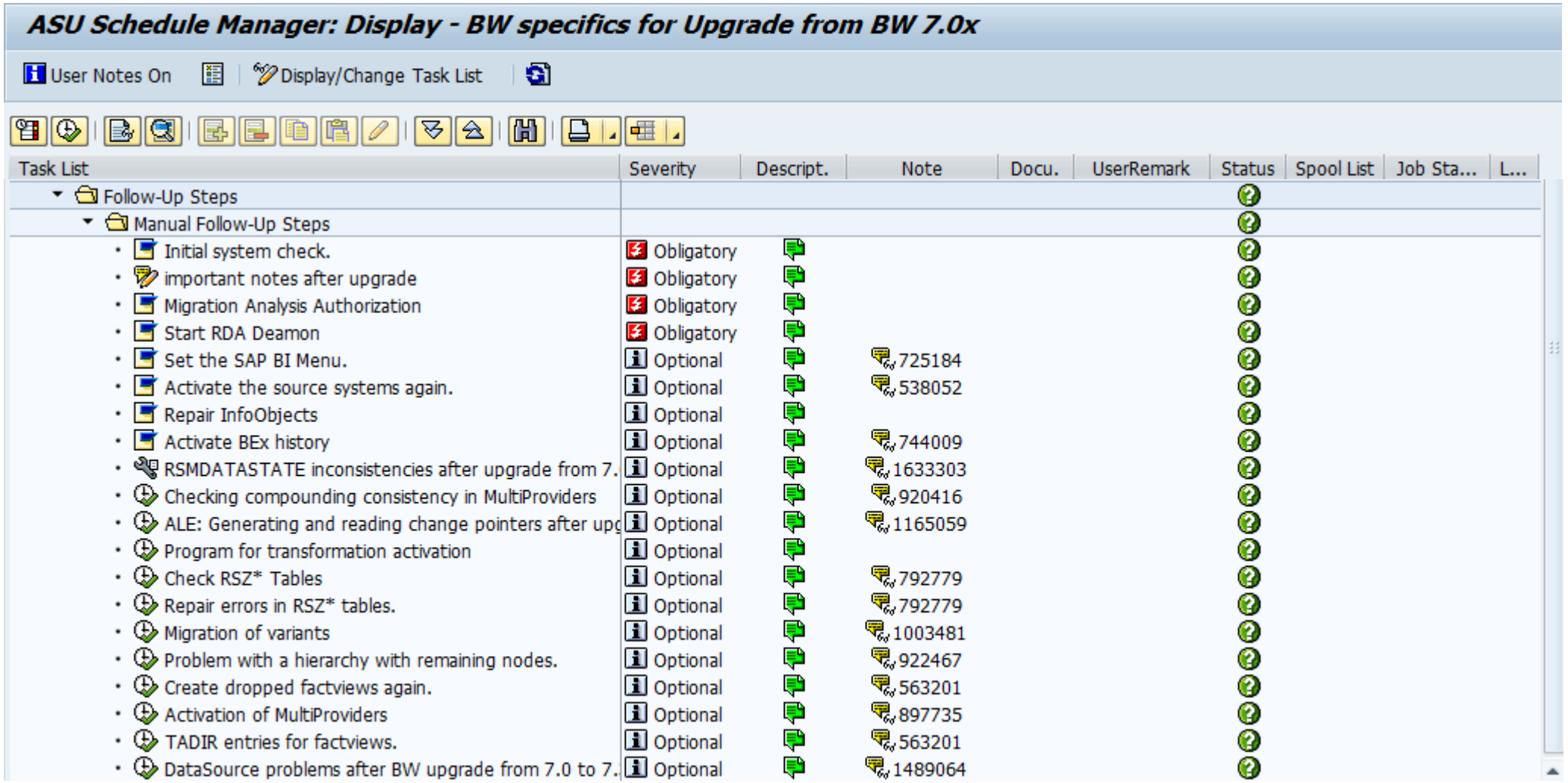


Task List	Severity	Descript.	Note	Docu.	UserRemark	Status	Spool List	Job Sta...	L...
Scenario "SAP Netweaver BW 73x" Version "20120803124023"									
Preparation Steps									
Manual Preparation Steps									
check some notes before upgrade	Obligatory								
Add-On Compatibility of SAP NetWeaver 7.3	Obligatory		1532805						
Stop RDA Deamon	Obligatory								
Regeneration of RSDRO_* Objects	Obligatory		518426						
Check activate ODS Objects.	Obligatory								
Upgrade Check Report RSUPGRCHECK	Obligatory		927578						
Remove temporary BI tables	Obligatory					✓			22.02
Check entries in table RSDD_TMPNM_ADM.	Optional		811354						
Check/Repair Status of Info Objects	Optional		458363						
Check inconsistencies with RSZ* Tables	Optional		792779						
Activate Info Objects	Optional								
Clean/delete the messages for error logs	Optional		1095924						
Cleanup entries from table RSIXWWW.	Optional		589899						
Check codepage settings.	Optional		42305						
Check Master Data consistency.	Optional		1033721						
Restore entries in DBDIFF	Optional		449891						
Cleanup background jobs.	Optional		784969						

© 2012 SAP AG. All rights reserved.

3 Usage of the ASU toolbox for SAP BW

Post steps of ASU toolbox for SAP BW

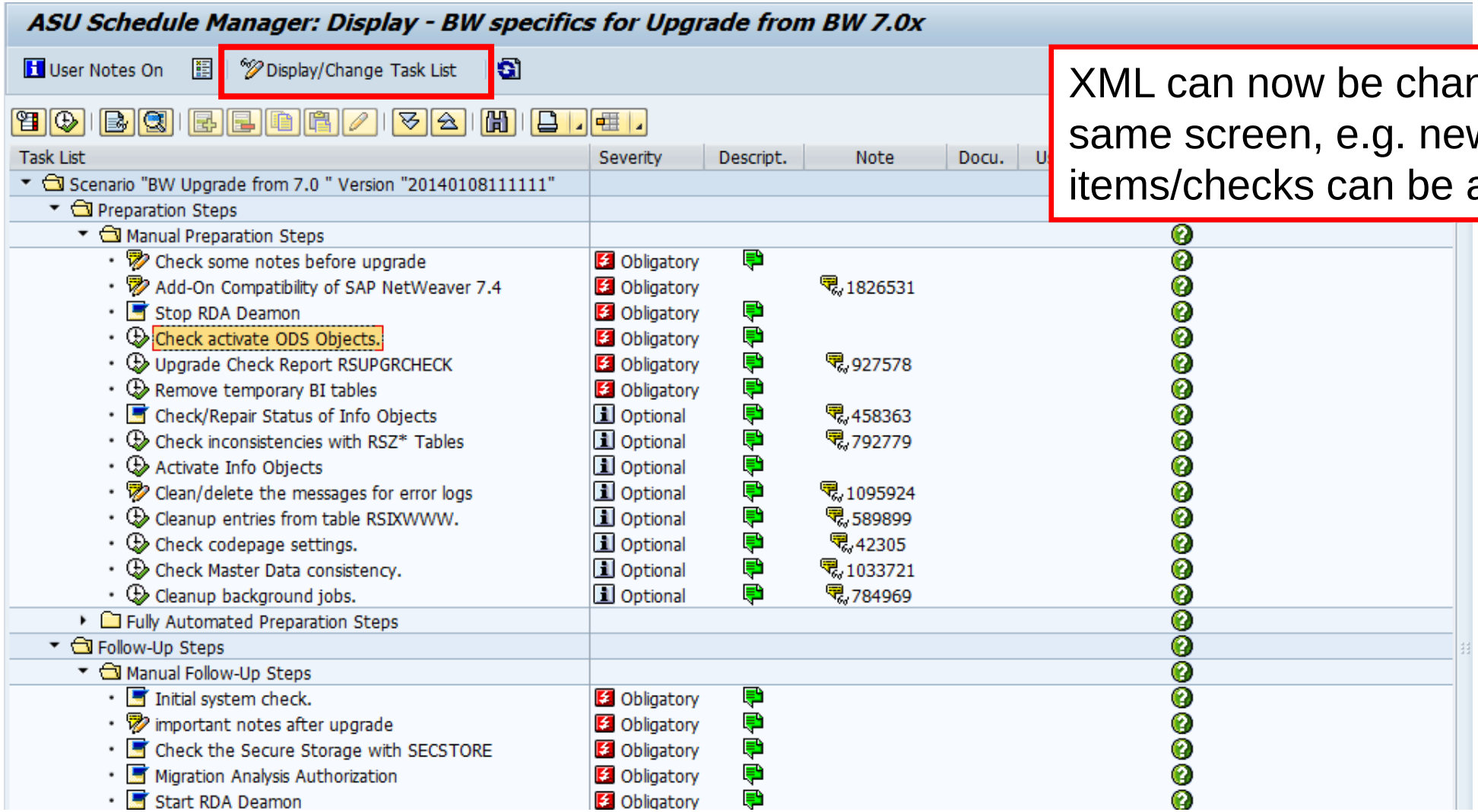


Task List	Severity	Descript.	Note	Docu.	UserRemark	Status	Spool List	Job Sta...	L...
Follow-Up Steps									
Manual Follow-Up Steps									
Initial system check.	Obligatory								
important notes after upgrade	Obligatory								
Migration Analysis Authorization	Obligatory								
Start RDA Deamon	Obligatory								
Set the SAP BI Menu.	Optional		725184						
Activate the source systems again.	Optional		538052						
Repair InfoObjects	Optional								
Activate BEx history	Optional		744009						
RSMDATASTATE inconsistencies after upgrade from 7.	Optional		1633303						
Checking compounding consistency in MultiProviders	Optional		920416						
ALE: Generating and reading change pointers after upg	Optional		1165059						
Program for transformation activation	Optional								
Check RSZ* Tables	Optional		792779						
Repair errors in RSZ* tables.	Optional		792779						
Migration of variants	Optional		1003481						
Problem with a hierarchy with remaining nodes.	Optional		922467						
Create dropped factviews again.	Optional		563201						
Activation of MultiProviders	Optional		897735						
TADIR entries for factviews.	Optional		563201						
DataSource problems after BW upgrade from 7.0 to 7.	Optional		1489064						

© 2012 SAP AG. All rights reserved.

3 Usage of the ASU toolbox for SAP BW

Install latest ST-PI 2008 Add-On (SP07 or higher)

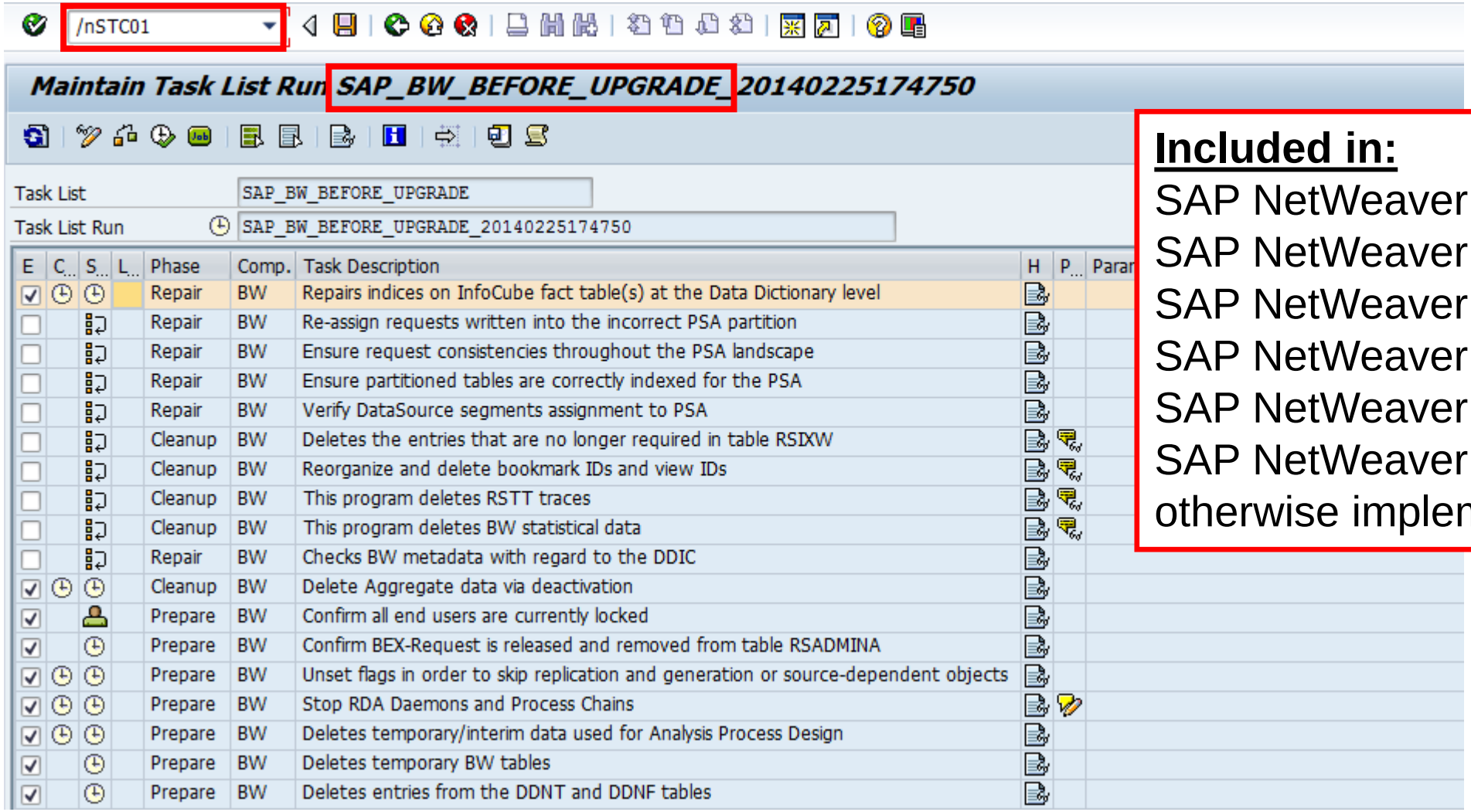


XML can now be changed within the same screen, e.g. new or changed items/checks can be added immediate.

© 2012 SAP AG. All rights reserved.

3 Usage of the Pre/Post Upgrade Task List (Note 1734333)

Automated task list option for common pre/post upgrade tasks



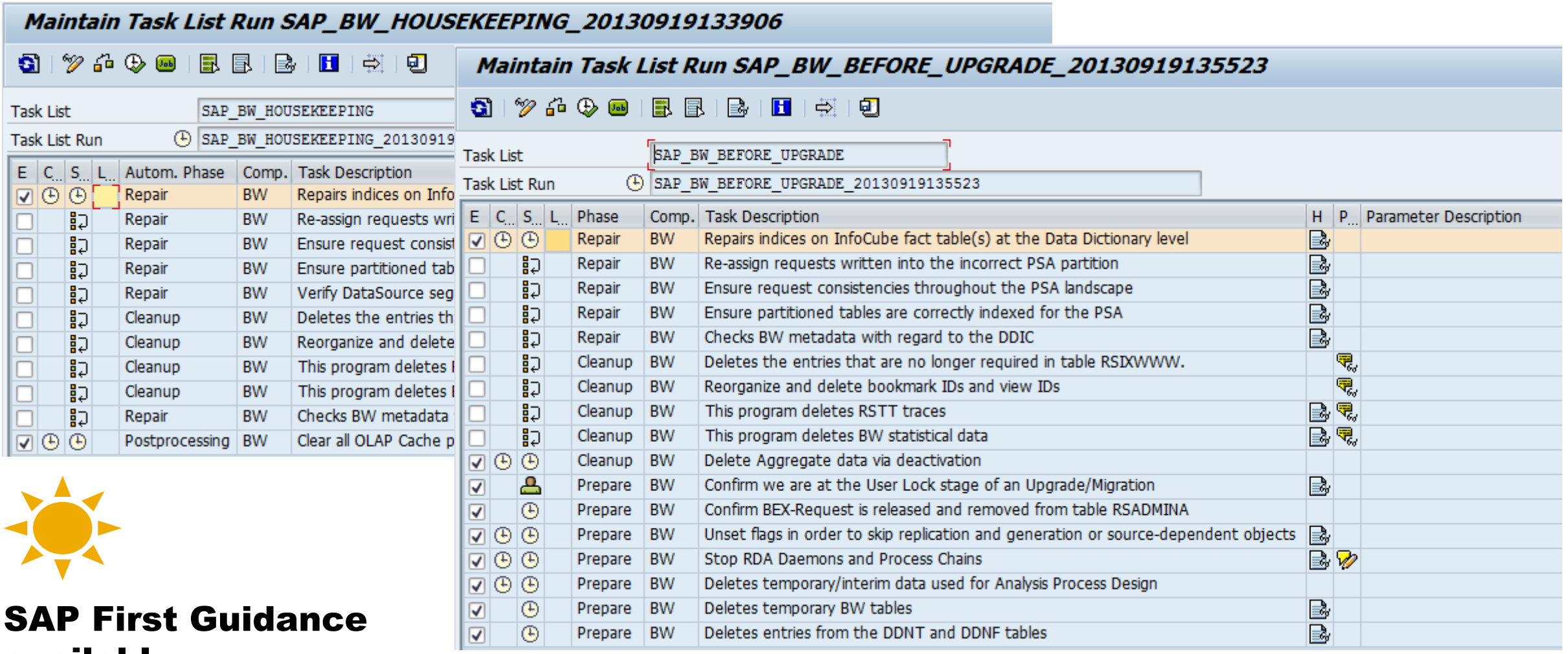
Included in:

SAP NetWeaver BW 7.00: SP32
SAP NetWeaver BW 7.01: SP15
SAP NetWeaver BW 7.02: SP15
SAP NetWeaver BW 7.30: SP11
SAP NetWeaver BW 7.31: SP11
SAP NetWeaver BW 7.40: SP06
otherwise implement Note 1734333

© 2012 SAP AG. All rights reserved.

New: SAP BW Housekeeping and Upgrade Before Tasklist

http://scn.sap.com/docs/DOC-7856#section16



SAP First Guidance available

© 2012 SAP AG. All rights reserved.

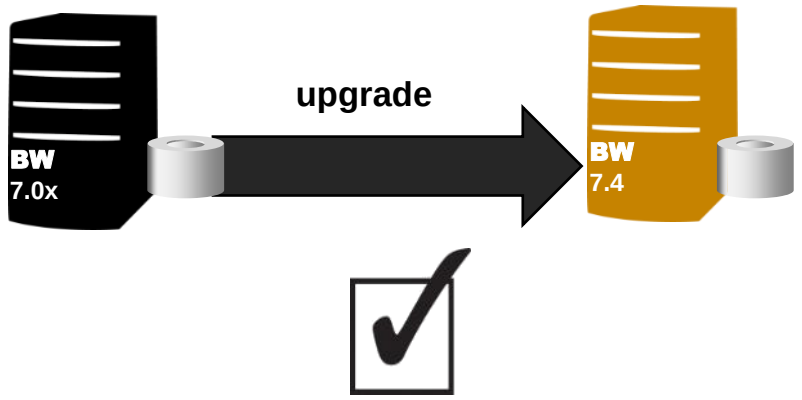
3 Usage of the ASU toolbox/task list for SAP BW

When to call the ASU toolbox within the technical upgrade process

Check/first call before the start of SUM 1.0 - upgrade tool

SUM 1.0 - upgrade tool for the technical upgrade procedure

Post work starts before the SUM 1.0 - upgrade tool ends with step finalization



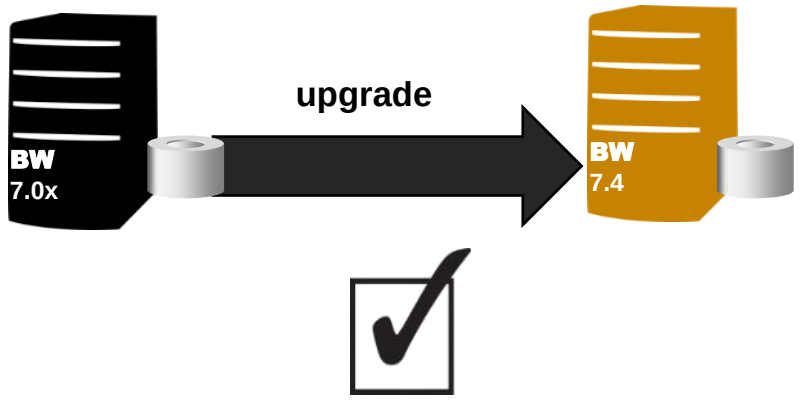
© 2012 SAP AG. All rights reserved.

4 General checks prior to the upgrade

4 General checks prior to the Upgrade

Reminder: the ASU toolbox/task list for SAP BW is the first step for the upgrade prep.

- SAP BW
- Object consistency
- Cleaning old data

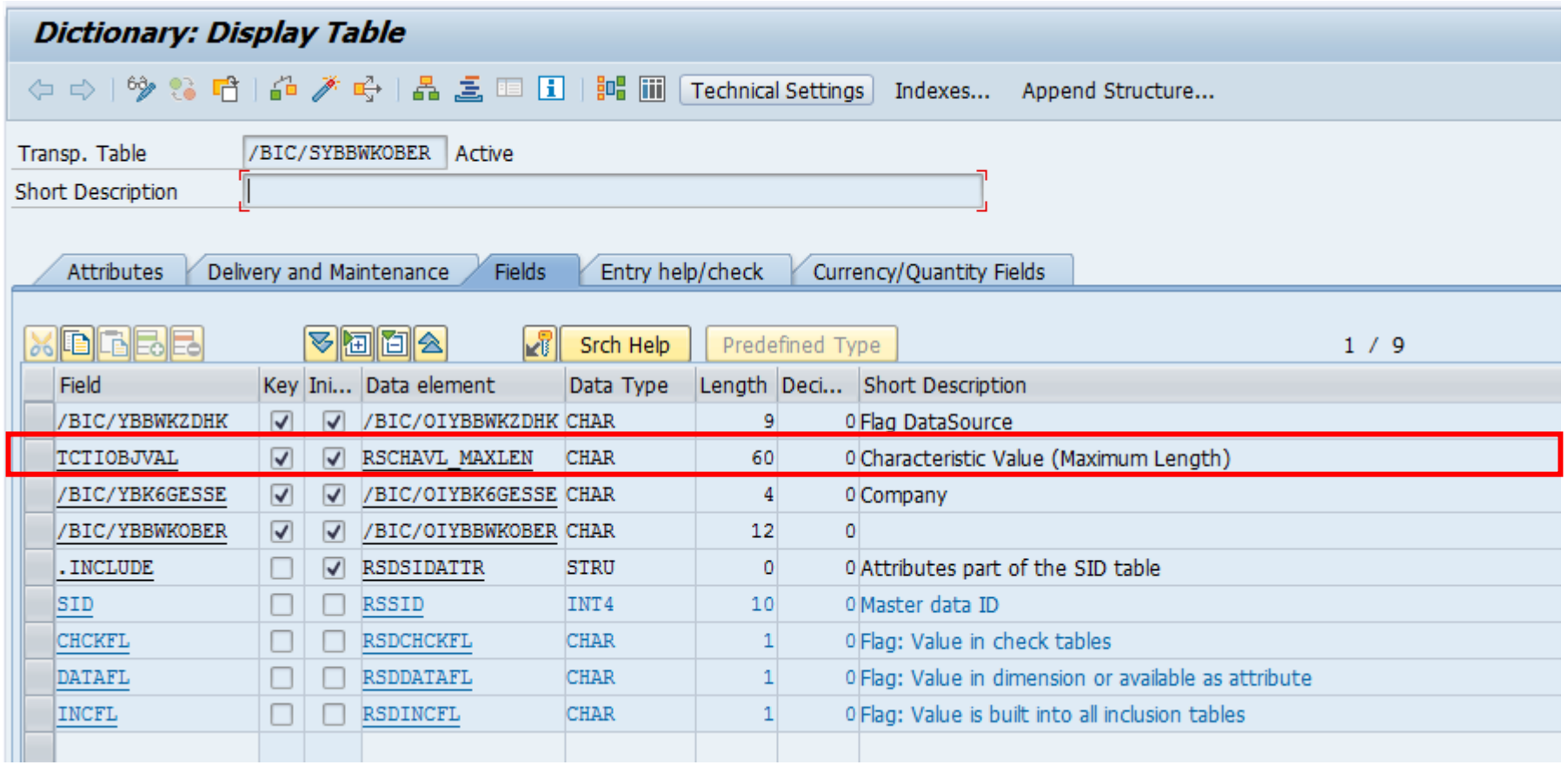


© 2012 SAP AG. All rights reserved.

4 General checks prior to the upgrade

Note 1823174 - BW 7.4 changes and customer-specific programs

Note 1978243 - Changes to content 0TCT* due to RSCHAVL conversion
KBA Note 2184825 - Field TCTIOBJVAL: Date type change from SSTRING to CHAR not possible
KBA Note 2193921 - Running RSD_XPRA_REPAIR_0TCTIOBJVL_740 - Error during Activation of Content

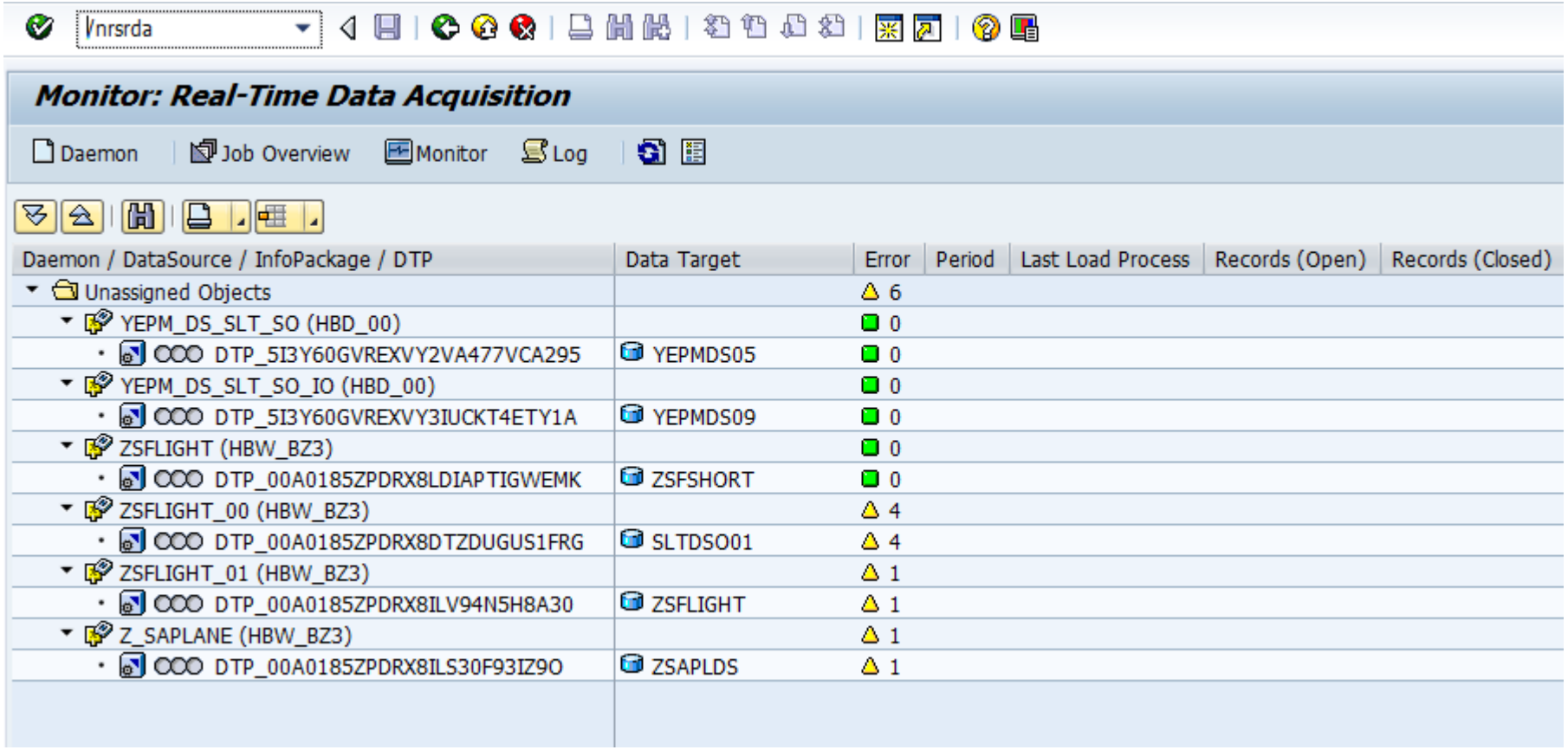


Replace RSCHAVL with the RSCHAVL_MAXLEN before the upgrade.

© 2012 SAP AG. All rights reserved.

4 General checks prior to the upgrade

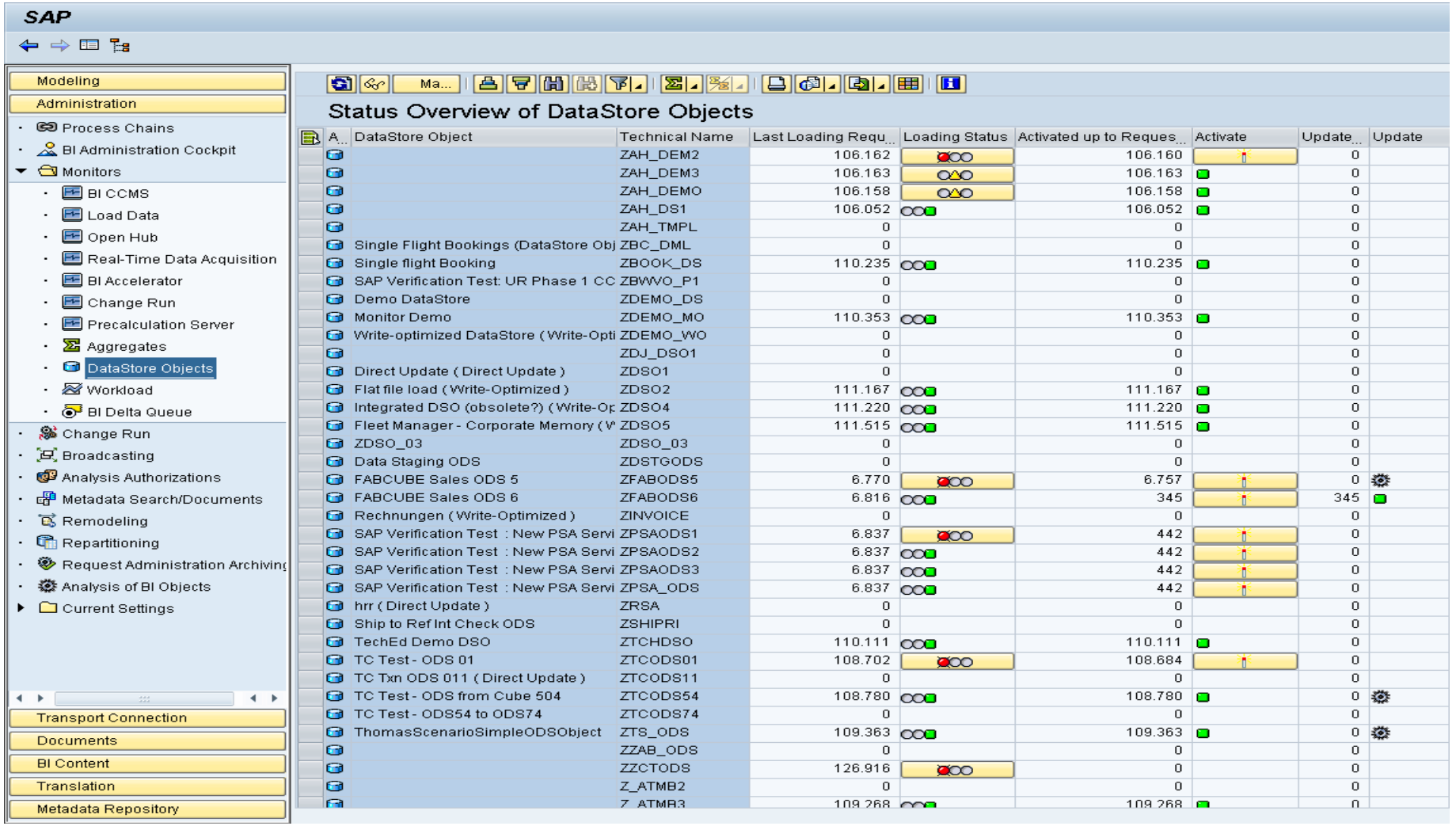
New with SAP BW 7.0x ➔ stop all daemon process



© 2012 SAP AG. All rights reserved.

4 General checks prior to the upgrade

Activate all DataStore objects - valid for all SAP BW Releases 3.x and 7.0x



A...	DataStore Object	Technical Name	Last Loading Requ...	Loading Status	Activated up to Reques...	Activate	Update...	Update
		ZAH_DEM2	106.162		106.160		0	
		ZAH_DEM3	106.163		106.163		0	
		ZAH_DEMO	106.158		106.158		0	
		ZAH_DS1	106.052		106.052		0	
		ZAH_TMPL	0		0		0	
	Single Flight Bookings (DataStore Obj	ZBC_DML	0		0		0	
	Single flight Booking	ZBOOK_DS	110.235		110.235		0	
	SAP Verification Test: UR Phase 1 CC	ZBWVO_P1	0		0		0	
	Demo DataStore	ZDEMO_DS	0		0		0	
	Monitor Demo	ZDEMO_MO	110.353		110.353		0	
	Write-optimized DataStore (Write-Opti	ZDEMO_WO	0		0		0	
		ZDJ_DSO1	0		0		0	
	Direct Update (Direct Update)	ZDSO1	0		0		0	
	Flat file load (Write-Optimized)	ZDSO2	111.167		111.167		0	
	Integrated DSO (obsolete?) (Write-Op	ZDSO4	111.220		111.220		0	
	Fleet Manager - Corporate Memory (V	ZDSO5	111.515		111.515		0	
	ZDSO_03	ZDSO_03	0		0		0	
	Data Staging ODS	ZDSTGODS	0		0		0	
	FABCUBE Sales ODS 5	ZFABODS5	6.770		6.757		0	
	FABCUBE Sales ODS 6	ZFABODS6	6.816		345		345	
	Rechnungen (Write-Optimized)	ZINVOICE	0		0		0	
	SAP Verification Test : New PSA Servi	ZPSAODS1	6.837		442		0	
	SAP Verification Test : New PSA Servi	ZPSAODS2	6.837		442		0	
	SAP Verification Test : New PSA Servi	ZPSAODS3	6.837		442		0	
	SAP Verification Test : New PSA Servi	ZPSA_ODS	6.837		442		0	
	hrr (Direct Update)	ZRSA	0		0		0	
	Ship to Ref Int Check ODS	ZSHIPRI	0		0		0	
	TechEd Demo DSO	ZTCHDSO	110.111		110.111		0	
	TC Test - ODS 01	ZTCODS01	108.702		108.684		0	
	TC Txn ODS 011 (Direct Update)	ZTCODS11	0		0		0	
	TC Test - ODS from Cube 504	ZTCODS54	108.780		108.780		0	
	TC Test - ODS54 to ODS74	ZTCODS74	0		0		0	
	ThomasScenarioSimpleODSObject	ZTS_ODS	109.363		109.363		0	
		ZZAB_ODS	0		0		0	
		ZZCTODS	126.916		0		0	
		Z_ATMB2	0		0		0	
		Z_ATMB3	109.268		109.268		0	

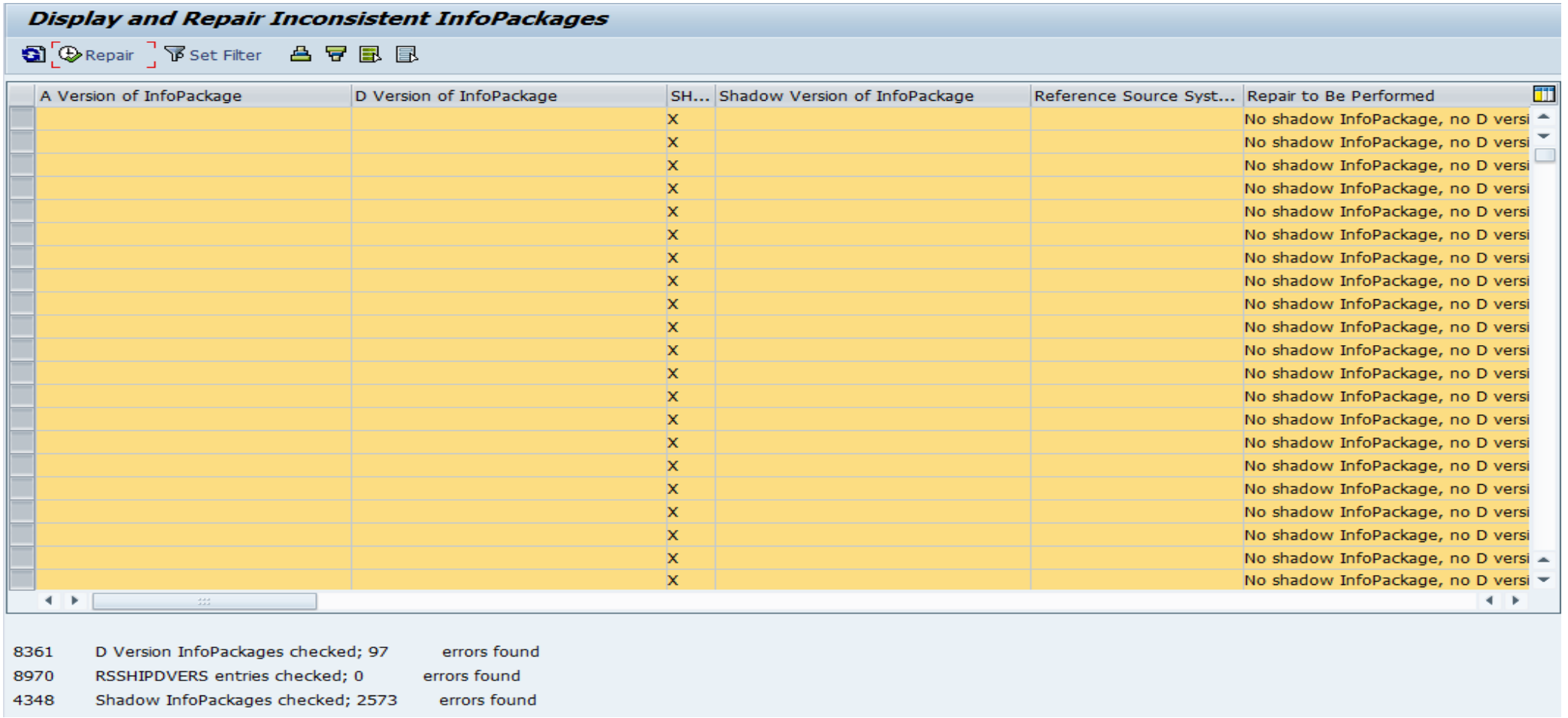
Note

It's a classic …

© 2012 SAP AG. All rights reserved.

4 General checks prior to the upgrade

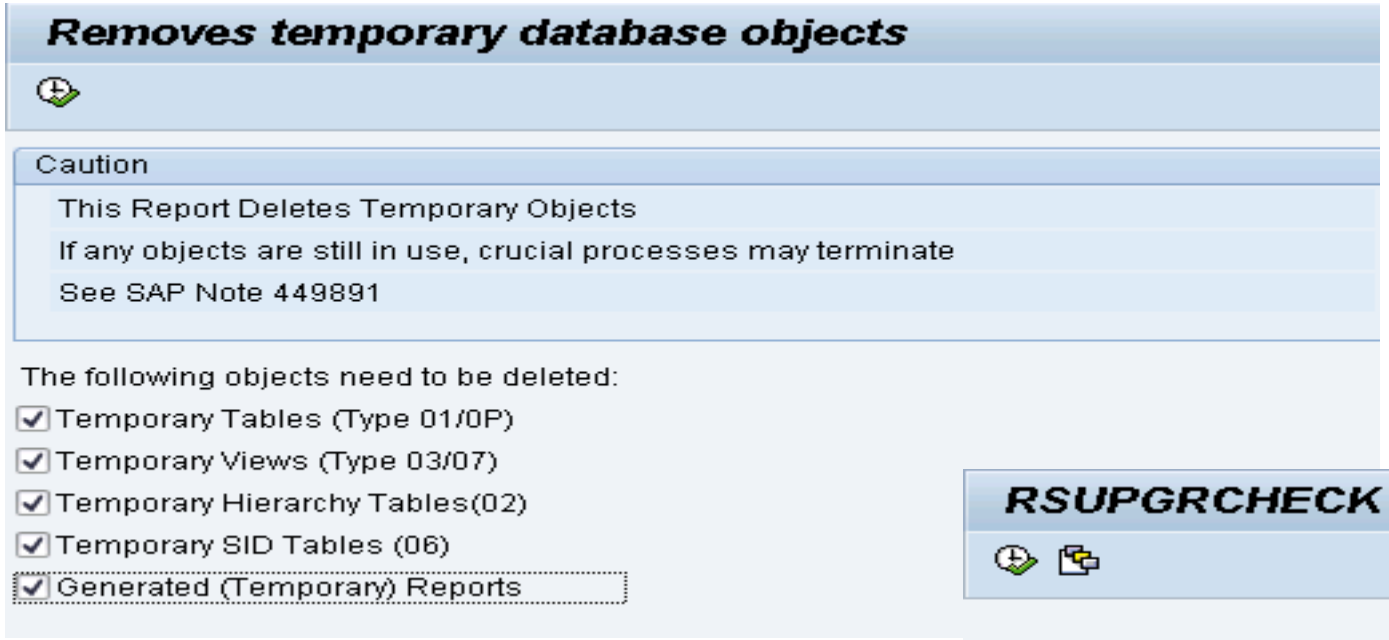
Repair Inconsistent InfoPackages - transaction RSBATCH

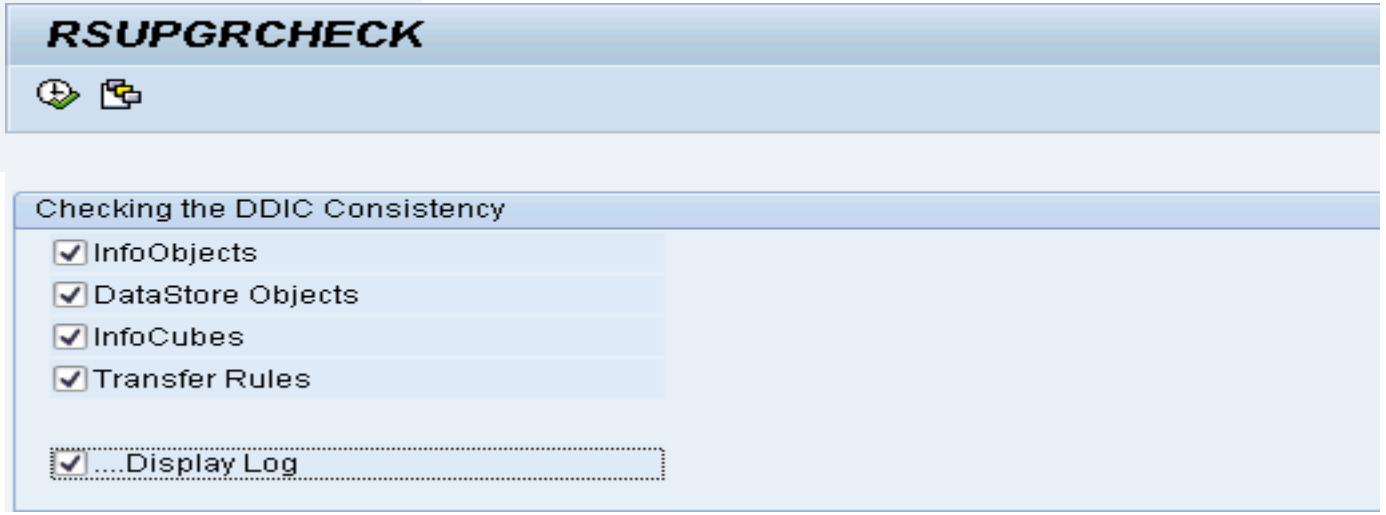


© 2012 SAP AG. All rights reserved.

4 General checks prior to the upgrade

Further general upgrade checks - SAP_DROP_TMPTABLES / RSUPGRCHECK

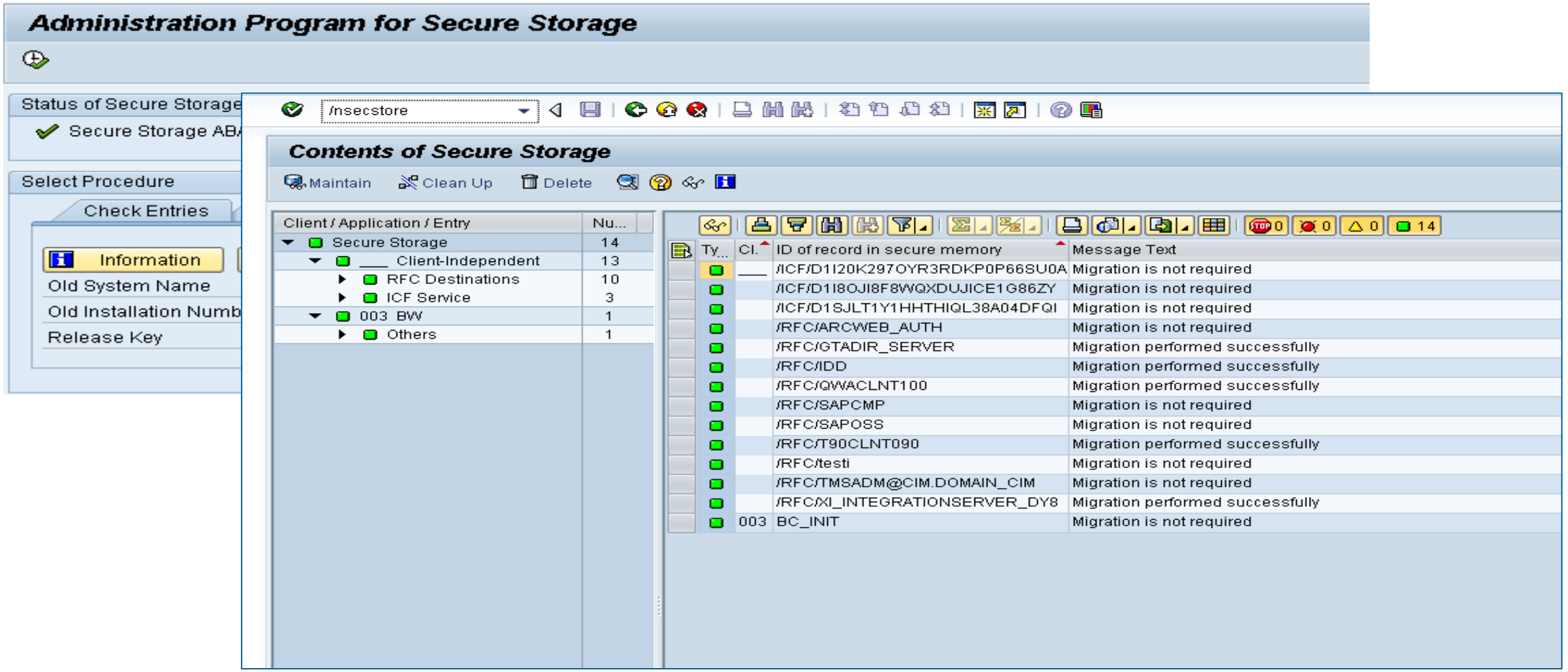




© 2012 SAP AG. All rights reserved.

4 General checks prior to the upgrade

Check the Secure Storage with SECSTORE - e.g. system created by copy



© 2012 SAP AG. All rights reserved.

Example runtime for SAP BW 7.40 upgrade

Running at the end of the technical upgrade

Upgrade with Software Update Manager on NW system release 740

OPEN ALL CLOSE ALL	>>Components	>>PREPARE	>>MAIN
>>XPRAS	>>AFTER-IMPORT-METHODS	>>CONVERSIONS	>>SQLs
>>TRANSPORTS	>>Process statistics		

System

Start-Release:	730	Destination-Release:	740
SID:	CIH	Installation number:	SAP-INTERN
DB-Type:	HDB	OS-Type:	Windows NT X86_64
DB-Version:	1.00.74.00.390550	OS-Version:	6.1
DB size (initial):	0.00/0.00 GB	SAP-Host:	iwdf4366
DB size (final):	56.40/61.86 GB	Batch host:	iwdf4366
NR-Clients (productive):	1 (0)	DB-Host:	lt5007.wdf.sap.corp

Configuration

Strategy:	Downtime-minimized	Archiving:	STOPSAP_TRANS
Batch processes:	8/8	Uptime processes:	
R3trans processes:	8/8	R3load processes:	8
SGEN processes:	8	CRR processes:	42796384
Imported Languages:	ED		
J2EE present:	0	Used nZDM capabilities:	no

Times

Start date:	2014/04/16 16:15:15	End date:	2014/04/27 23:23:27
Minimum downtime:	9:07:42	Runtime:	28:44:09
Since START_SHDI_FIRST:	22:24:47	Since EU_IMPORT:	23:18:05

Versions

SAPup	lmt_006 Version: 55.000 UNICODE		
Export:	Thu Nov 14 06:47:59 CET 2013	Misc:	Fri Nov 15 13:20:47 CET 2013
Control:	Thu Nov 14 11:30:24 CET 2013	Kernel:	Apr 6 2014 01:25:36

Tool versions

	Source		Destination	
Tool	Rel	PL/Date	Rel	PL/Date
disp+work	721	227 /Apr 12 2014 03:12:22	741	29 /Apr 6 2014 01:25:36
tp	721	227	741	24
R3trans	721	225 /27.03.14	741	28 /27.03.14
R3load	721	214 /Apr 11 2014 23:11:20	741	24 /Apr 5 2014 21:40:35

© 2012 SAP AG. All rights reserved.

Additional post activities for SAP BW 7.40 upgrade - ABAP related

Support Package Stack - always check for high priority/hot news as well

- To shorten dramatically the test cycle after the technical upgrade, please ensure that you checked for the SAP Notes which where released after the corresponding Support Package is available. Example: you applied SP06 for BW 7.40 during the Upgrade, so the Keyword is “SAPKW74007 (Stack + 1) in the SAP Notes Search
- Information about Support Packages can be found here http://scn.sap.com/docs/DOC-35784

Not satisfied?

New Search

Redefine search terms

SAPKW74007 go

The following terms may help you:

Note 1955499
Note 1951409
Note 1950117
News NW BW
BW News NW
SAPKW73112
SAPKW73012
Note 1940530
Note 1940531
Note 1936601

Restrict your search by:

Category (22)
Program error (22) go
Application Area (22)
BW (22) go
More Terms (19)
ACCELERATOR (1) go

Search in SAP xSearch

SAPKW74007 go

View | Sort | Download

Language: **English**
You search for: **SAPKW74007**, Search Method **All Terms (AND)**, Search Range **All**
Search criteria: no criteria
Post search-restrictions: **Priority** (Correction with high priority)

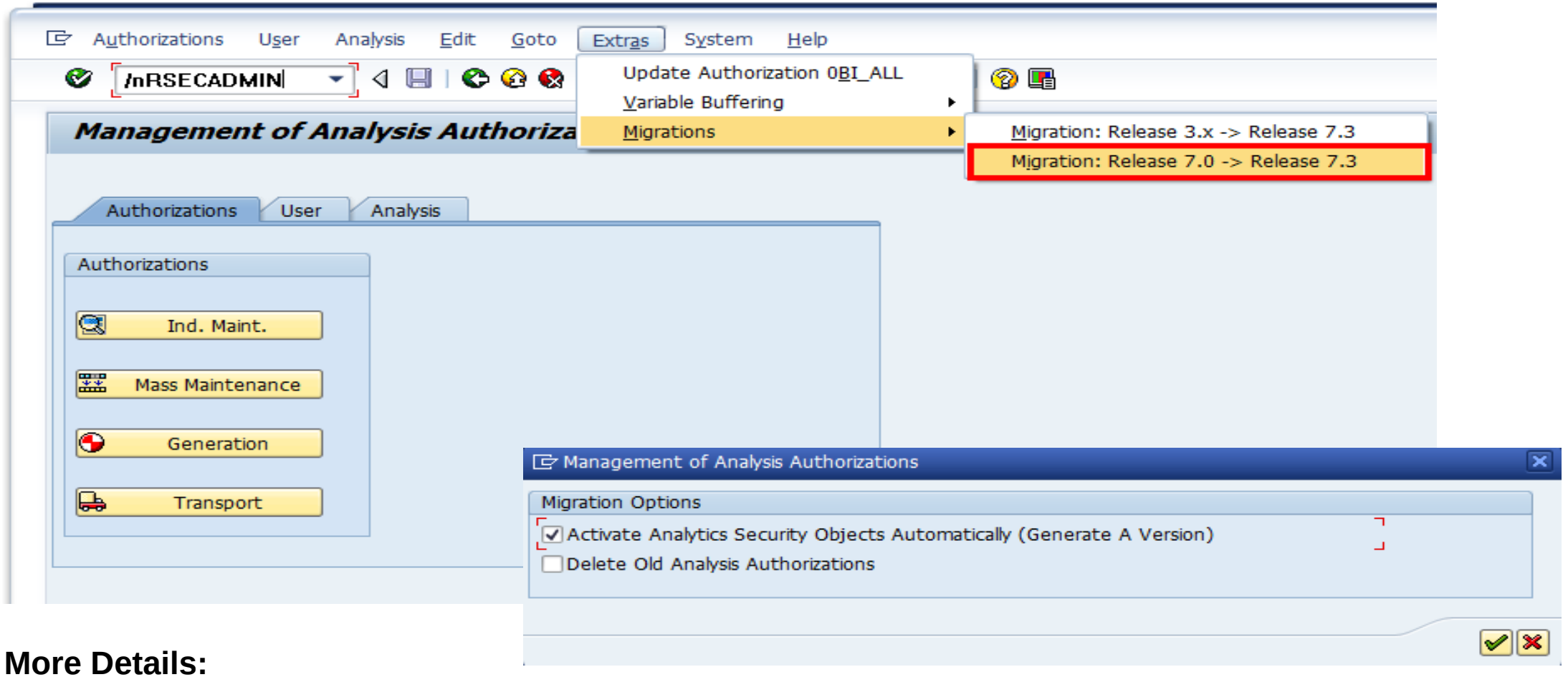
22 SAP Notes found Page 1 of 1

	Ranking	Application Area	Number	Short text	Released On
1.	0.240	BW-WHM-DBA-ICUB	1980065	Data loss in the event of inconsistencies between InfoCube metadata with cubesu	24.02.2014
2.	0.230	BW-WHM-DST-PC	1981893	Errors with client-dependent chain in after-import	21.02.2014
3.	1.000	BW-PLA-BPC	1964403	DDIC Objects and messages for the Note 1932780	20.02.2014
4.	1.000	BW-BEX-OT-WSP	1883857	BW Workspace: Filter in tables does not work as of 7.31	19.02.2014
5.	0.240	BW-WHM-DBA-ODS	1977489	SAP HANA: SID values missing after activation for referencing characteristics w	12.02.2014
6.	0.240	BW-SYS-DB-DB6	1972055	DB6: Incorrect transformation of currencies with three and more decimal places	12.02.2014
7.	0.240	BW-SYS-DB-MSS	1970947	Incorrect transformation of currencies with three and more decimal places (MSSQ	11.02.2014
8.	1.000	BW-WHM-MTD-HMOD	1955345	RS2HANA: Generation of authorizations before and after SAP HANA Revision 70/71	31.01.2014
9.	1.000	BW-SYS-DB-DB2	1858051	Database extension for accelerated reporting	31.01.2014
10.	0.230	BW-WHM-DST-ARC	1966432	Event-based Backup Automation does not work anymore with IQ 16.0 SP 3	27.01.2014
11.	1.000	BW-SYS-DB-DB2	1965192	Note DB2-z/OS: BW: ANALYZE with RTS refresh	16.01.2014
12.	1.000	BW-PLA-BPC	1964468	Transformations for the Note 1932780	16.01.2014
13.	1.000	BW-BEX-OT-BIA	1955263	Support MPRO activation when CalcScenario Generation fails	16.01.2014
14.	1.000	BW-SYS-DB-DB2	1801132	DB2-z/OS: DB2 Accelerator support, latest FixPack	15.01.2014

© 2012 SAP AG. All rights reserved.

Migrate the SAP BW Authorization to 7.40

Transaction RSECADMIN



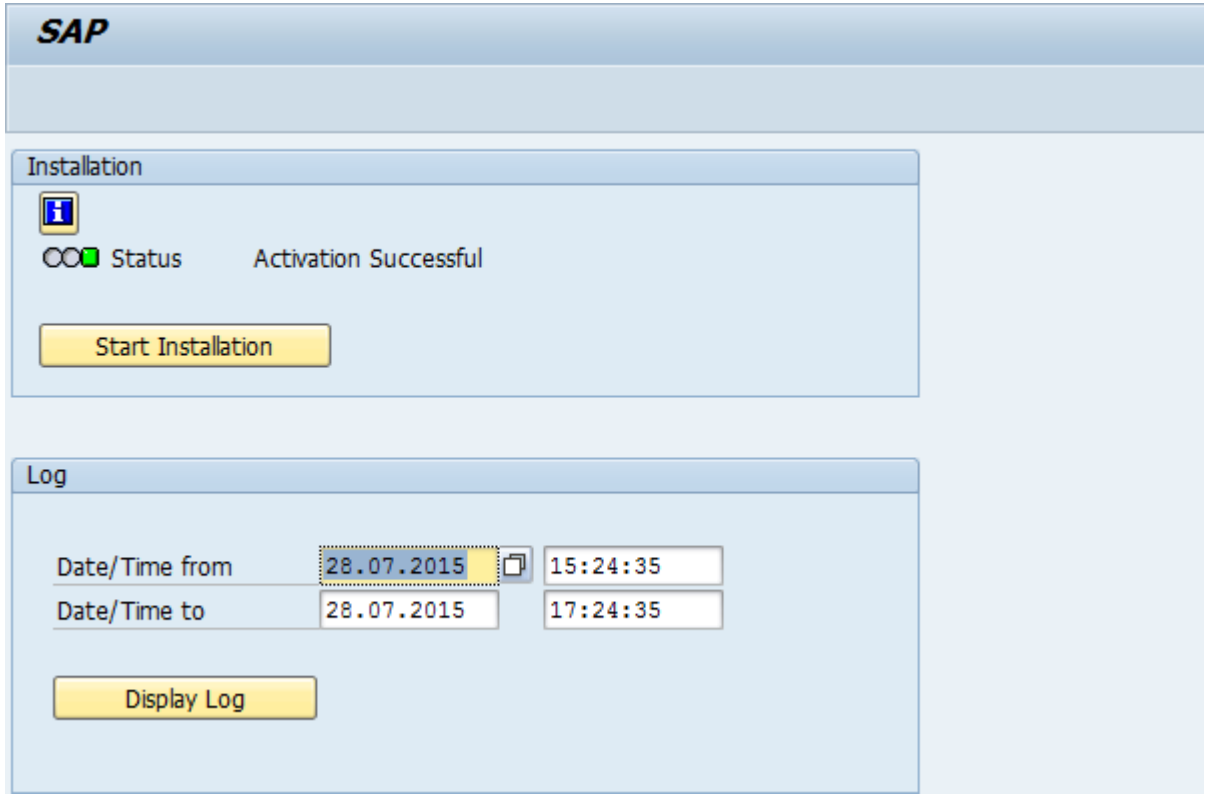
More Details:

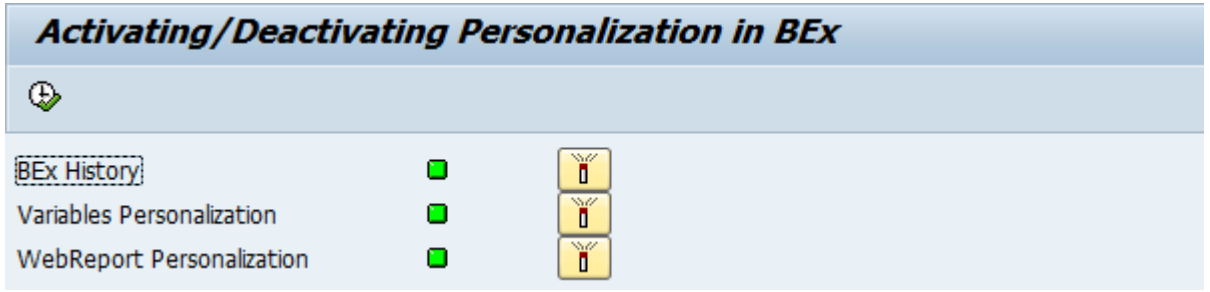
- http://help.sap.com/saphelp_nw73/helpdata/en/45/5ae49cee142a50e10000000a11466f/frameset.htm

© 2012 SAP AG. All rights reserved.

Activate the technical content in SAP BW 7.40

Transactions RSTCO_ACTIVATE and RS_PERS_ACTIVATE

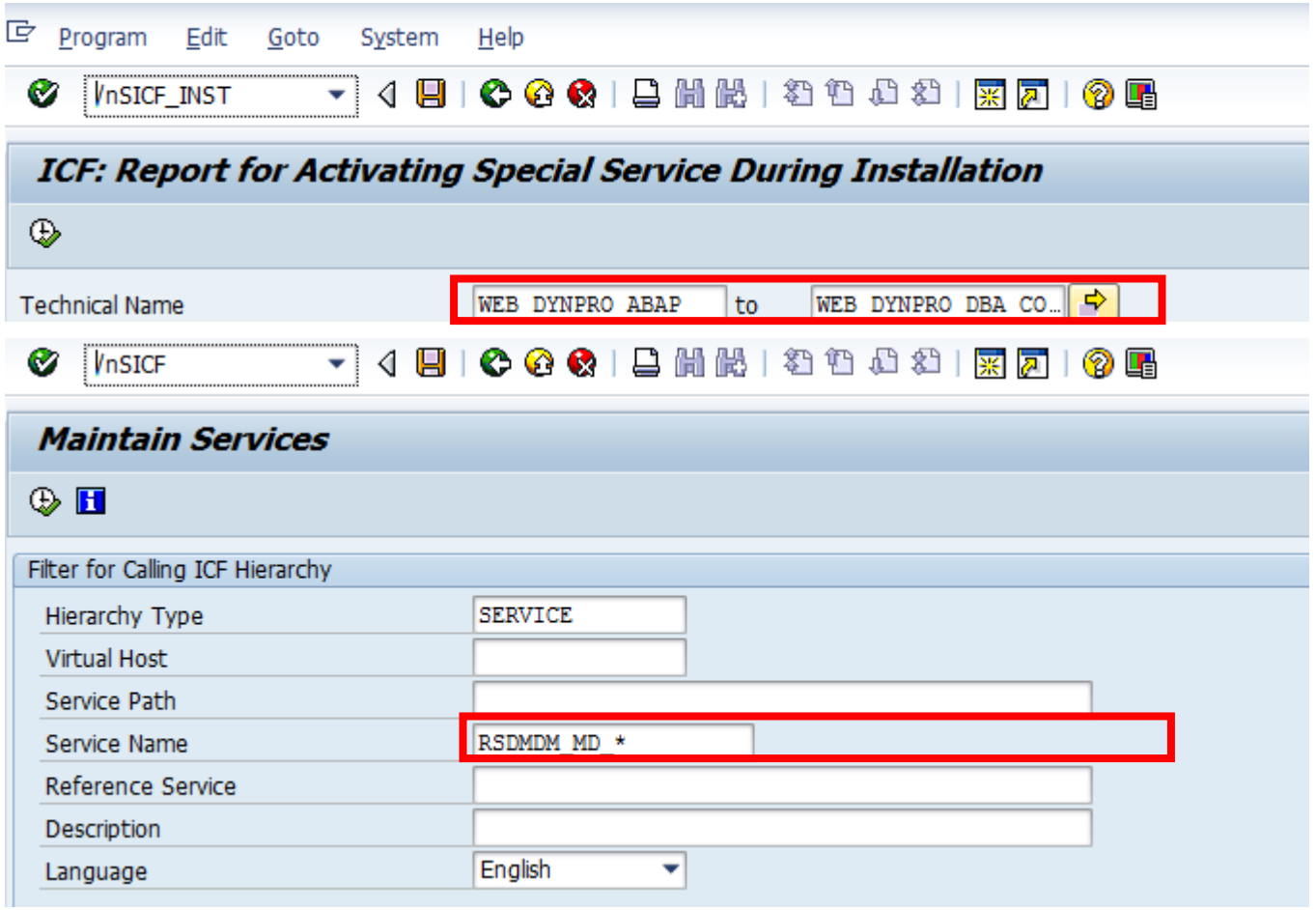




© 2012 SAP AG. All rights reserved.

Activate ABAP WebDynpro in SAP BW 7.40

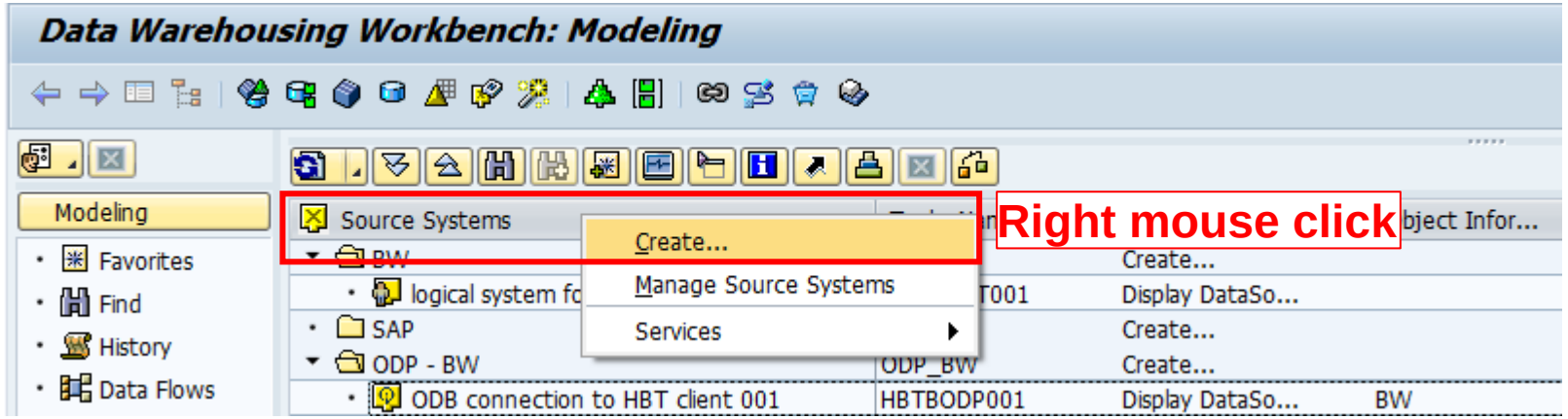
Transactions SICF_INST/SICF/SGEN

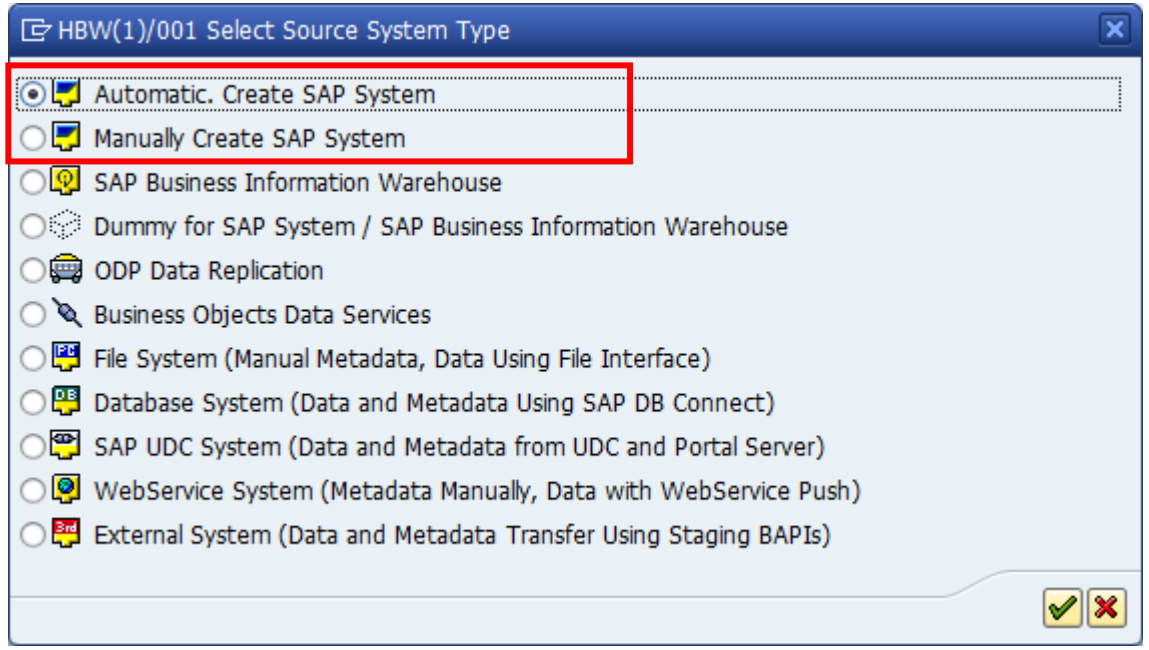


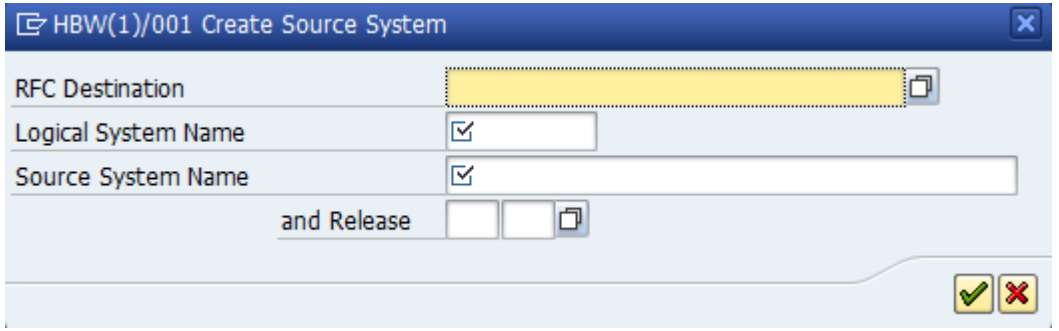
- Note 1969105 - Master data maintenance for InfoObjects does not start
- Note 1088717 - Active services for Web Dynpro ABAP in transaction SICF

© 2012 SAP AG. All rights reserved.

Creating a Source System with SAP BW 7.40







What ever you choose, everything will end in a manual creation of a Source System.

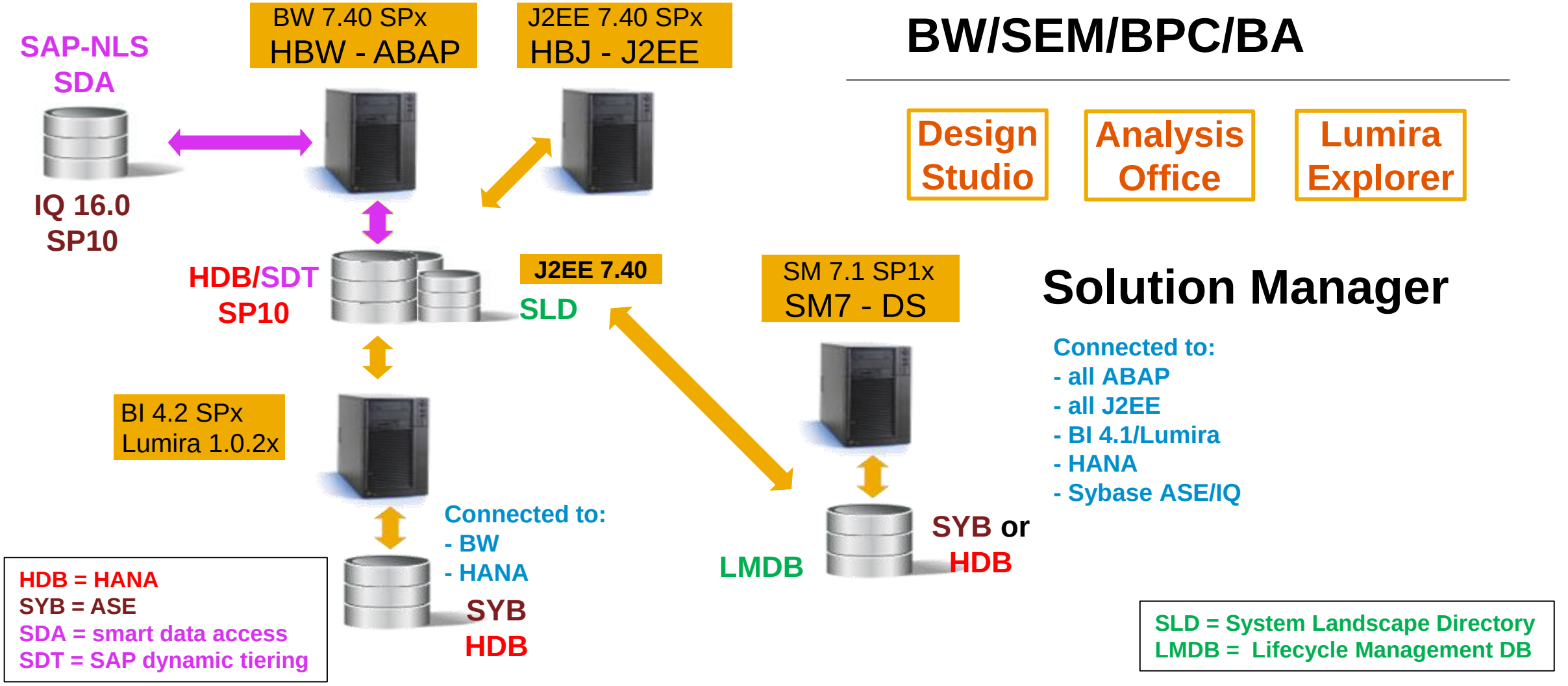
- http://scn.sap.com/docs/DOC-11075

© 2012 SAP AG. All rights reserved.

5 Summary

SAP Business Intelligence Architecture

Based on SAP BW 7.40 on SAP HANA and additional components



© 2012 SAP AG. All rights reserved.

Conclusion: SAP BW? - three things to know ...

1. New SL Common UI available for AS ABAP
   Blog: **Upgrade has never been easier …**

2. The Upgrade from 7.0x to 7.4 is possible directly/one step including SEM
   Blog: **Good News - Easier Modeling of the SEM Add-On in Solution Manager**

3. SAP Business Warehouse 7.4
   SAP BW 7.4 on SAP HANA / The In-Memory Data Fabric

© 2012 SAP AG. All rights reserved.

5 Summary

Further information

SAP Public Web

SAP Community Network (SCN):

- SAP BW application lifecycle management (ALM) page
  http://scn.sap.com/docs/DOC-7856#section8
- Upgrade to SAP BW 7.3x - Technical Aspects
  http://scn.sap.com/docs/DOC-30452
- SEM Add-On specific information
  http://service.sap.com/~sapidb/011000358700000890142012E
- Support Package Stack Schedule
  http://service.sap.com/~sapidb/011000358700000294692004

SAP Help Portal:

- SAP end to end implementation roadmap: http://help.sap.com/nw74/#section2

© 2012 SAP AG. All rights reserved.

© 2015 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. Please see http://global12.sap.com/corporate-en/legal/copyright/index.epx for additional trademark information and notices.

Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors.

National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP SE or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP SE or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platform directions and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.