



ITM110 – SAP HANA Platform’s Transport for ABAP: The What, The When, The How



Speakers

Las Vegas, Sept 19 - 23

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Bangalore, October 5 - 7

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Barcelona, Nov 8 - 10

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Agenda

The What

- Motivation
- Sources of SAP HANA artifacts
- ABAP based SAP HANA development options
- SAP HANA repository content

The When

- Transport options for SAP HANA repository content
- Prerequisites for using SAP HANA transport for ABAP (HTA)

The How

- HTA process overview
- HTA tools overview
- Step-by-step demo
- Additional options

The What

Motivation

Sources of SAP HANA artifacts

ABAP based SAP HANA development options

SAP HANA repository content

Motivation

Separation of tasks in the development process

- Many customers follow SAP's recommendation to separate development from quality assurance and production in separate systems.



Change and transport system

- This setup is supported in 'classical' SAP NetWeaver based environments by the change and transport system (CTS) allowing to move changes through the system landscape



SAP HANA as development platform

- SAP HANA is not only a database but also a platform and therefore introduces a new level on which development is possible



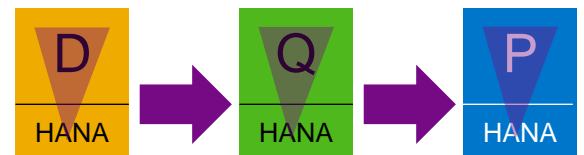
Code pushdown

- This allows e.g. to implement data intensive activities more efficiently by implementing them as native SAP HANA artifacts and executing them on SAP HANA directly instead of on the ABAP application server ('code pushdown')

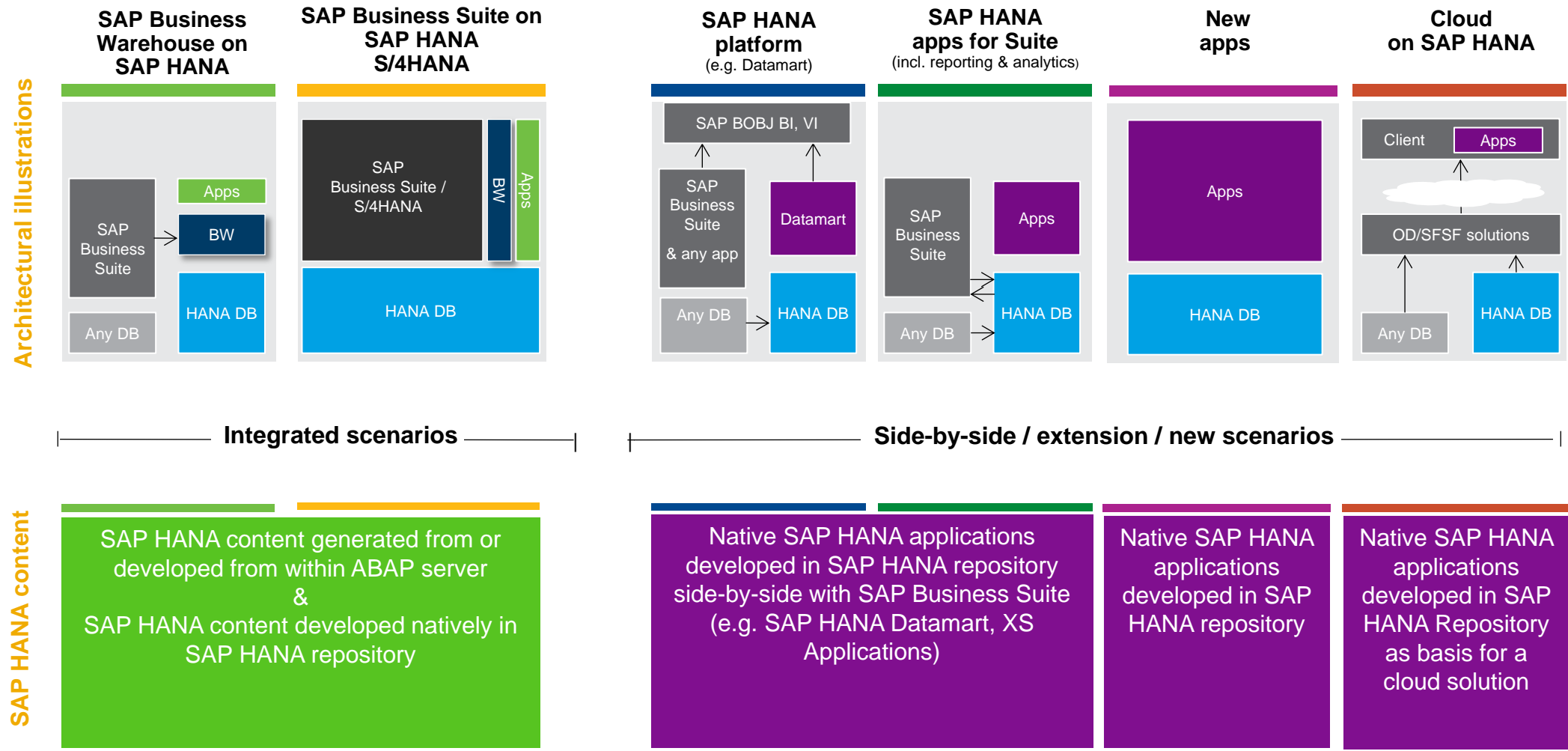


Transport of native SAP HANA artifacts

- These native SAP HANA development artifacts have to be integrated into the transport tools as well



SAP HANA use cases as sources of transport relevant content



ABAP based SAP HANA development options

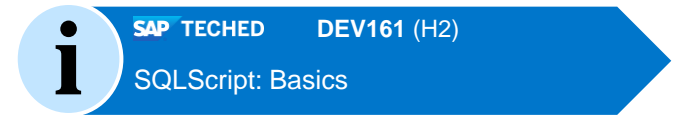
ABAP Core Data Services (CDS)

- Infrastructure for advanced data modelling in ABAP application server
- ABAP CDS is database independent
- Fully integrated in ABAP development and transport infrastructure
- To be distinguished from HANA CDS which offers even more options



ABAP Managed Database Procedures (AMDP)

- Allowing to write database procedures directly in ABAP (in the form of methods)
- Implementation for SAP HANA based on SQL Script
- Fully integrated in ABAP development and transport infrastructure



SAP HANA-optimized objects in SAP BW

- Fully integrated in ABAP development and transport infrastructure

→ No SAP HANA specific transport tool needed for (ABAP) CDS, AMDP and objects created from within SAP BW

SAP HANA extended application services, classic model (XSC)

The development platform

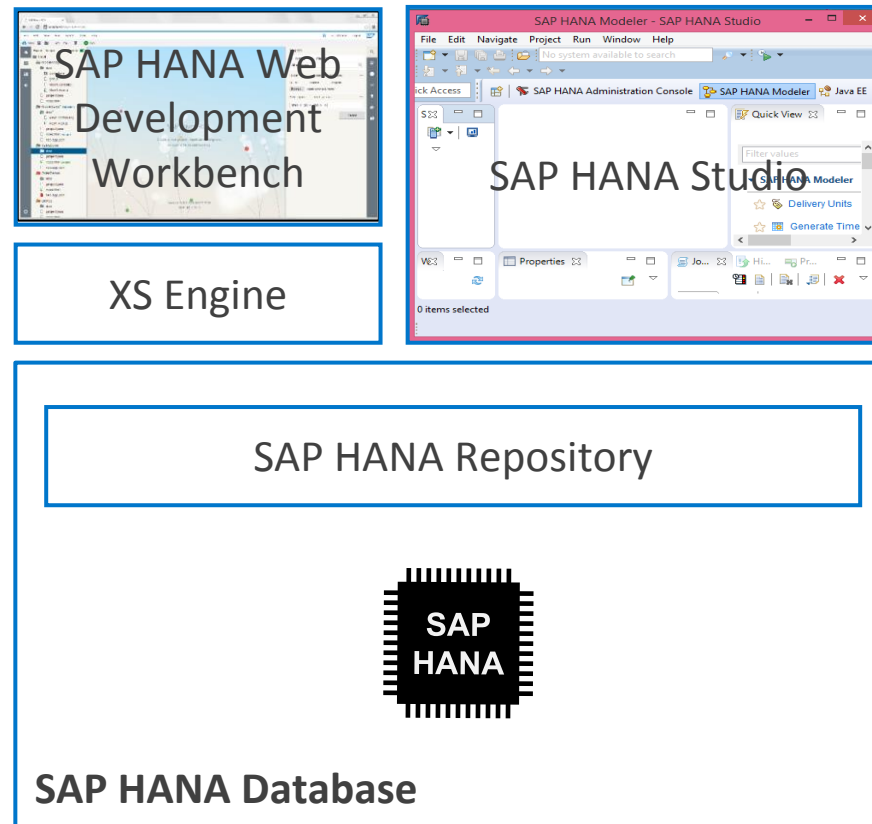
SAP HANA XSC is a lightweight application server to enable native SAP HANA development:

- Lightweight small web-based applications
- Analytical applications
- Enterprise business applications

Integrated **SAP HANA repository** for SAP HANA artifacts/content:

- SAP HANA tables
- Views
- Calculation views
- SAP HANA core data services...

SAP HANA studio and web-based development workbench for development and administration



SAP HANA repository content

... in the context of transport

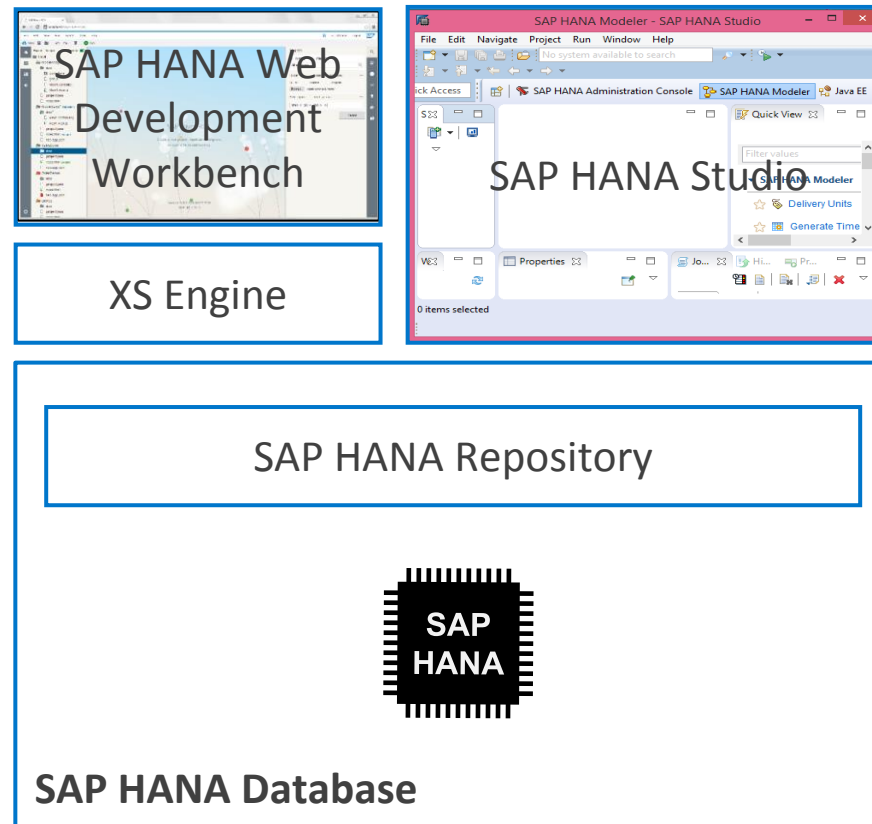
SAP HANA Repository Content

Catalog

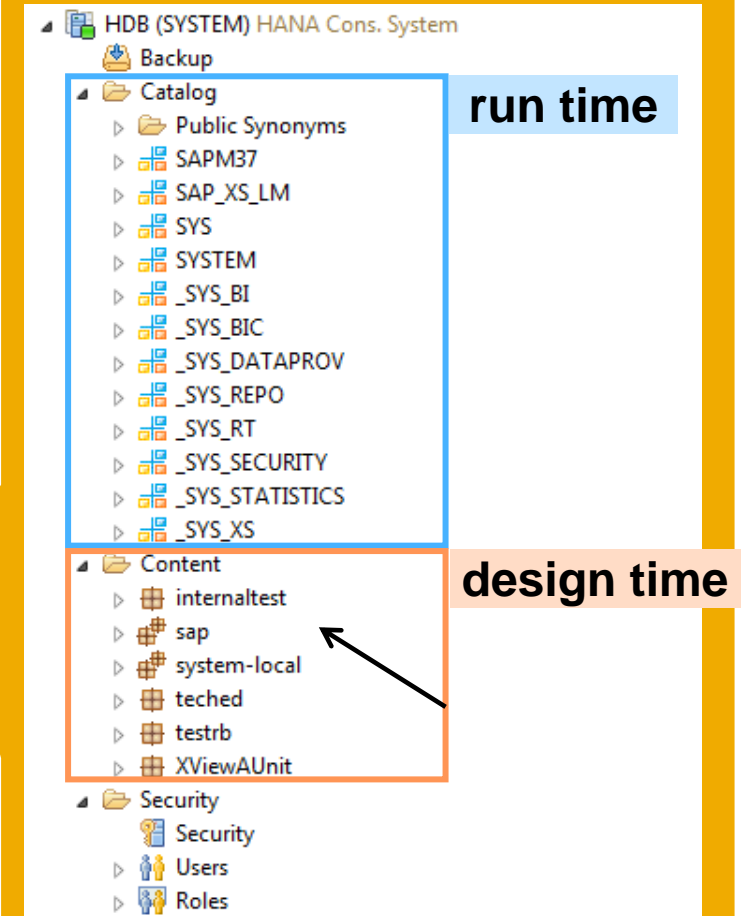
- Stores activated (run-time) objects
- Stores design-time objects

Only activated design-time objects are relevant for transport.

Each object belongs to one SAP HANA package



SAP HANA Studio Modeling Perspective



The When

Transport options for SAP HANA repository content

Prerequisites for using SAP HANA transport for ABAP (HTA)

Transport options for SAP HANA repository content

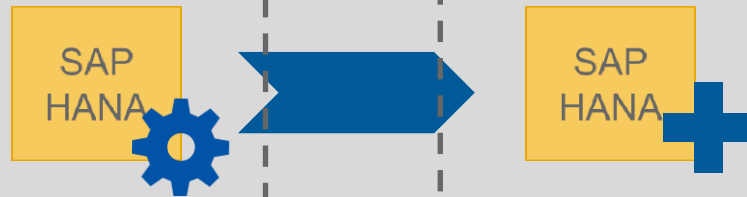
Use case: SAP HANA Content

Source

Target

Transport Offering

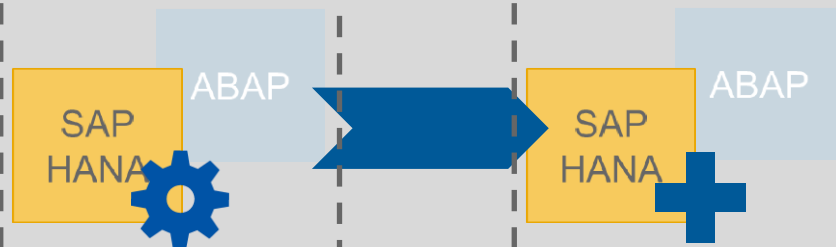
...in a stand-alone setup



Native SAP HANA Transport (HALM)

- SAP HANA Application Lifecycle Management (HALM)
- No need for ABAP-footprint
- Lightweight and easy-to-use transport tool

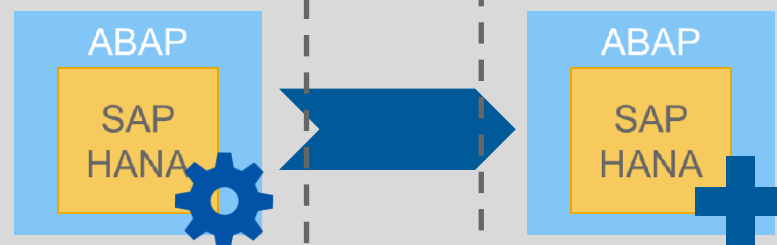
...on a dedicated system with ABAP background



Enhanced CTS (CTS+) integration via HALM

- Transported as any other non-ABAP content
- Integrated in existing CTS mechanisms
- Integrated in SAP process tools (ChaRM, QGM)

...exclusively used by ABAP
(ABAP for SAP HANA)



Change and Transport System (CTS) with

- **SAP HANA Transport for ABAP (HTA)**
- Predecessor: SAP HANA Transport Container (HTC)
- Integrated in SAP process tools (ChaRM, QGM)

Prerequisites for using SAP HANA transport for ABAP (HTA)

System based on SAP NetWeaver 7.40 SP11 or higher or SAP NetWeaver 7.50

SAP HANA is primary database

Change and transport system (CTS) is configured for standard ABAP transports within your landscape

→ **No further configuration necessary!**

→ **HTA works out of the box 😊**

The How

HTA process overview

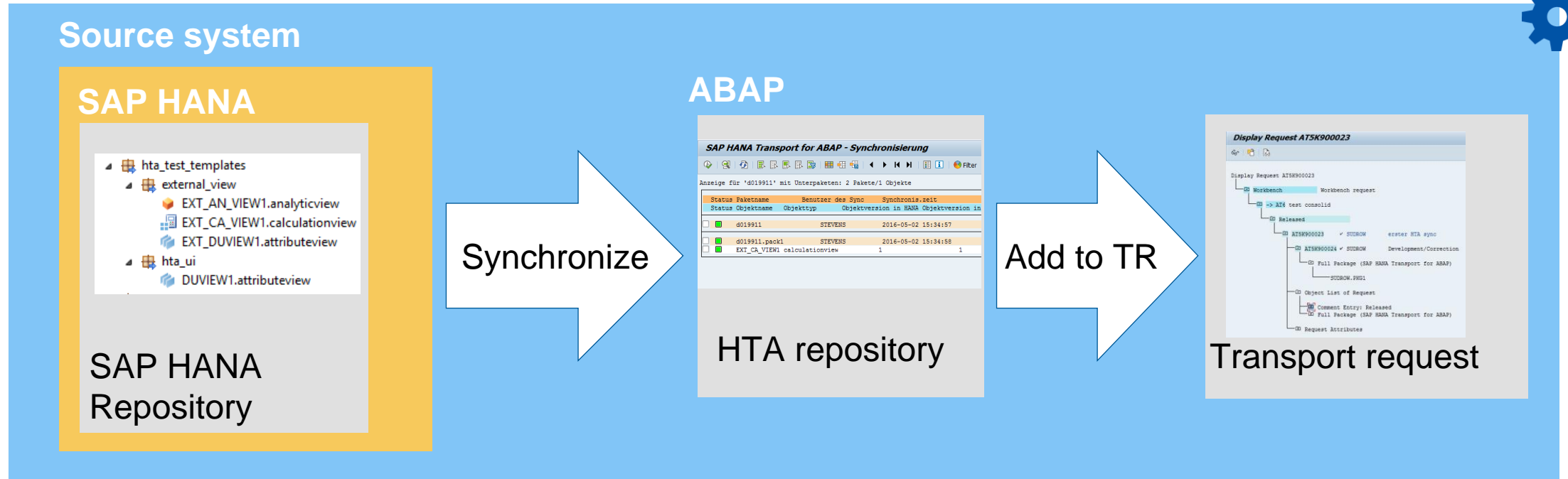
HTA tools overview

Step-by-step demo

Additional options

HTA process overview

How SAP HANA repository objects are added to a transport request



To Do:

- Create your packages
- Develop your objects
- Decide what to synchronize
- Manage your transport request

How SAP HANA repository objects are imported



- Import your transport request

HTA tools overview

Which tools are involved?

Development

- SAP HANA Studio or SAP HANA web-based development workbench

Synchronization

- ABAP transaction SCTS_HTA

Releasing tasks and transport requests

- ABAP transaction SE09

Executing the import

- ABAP transaction STMS

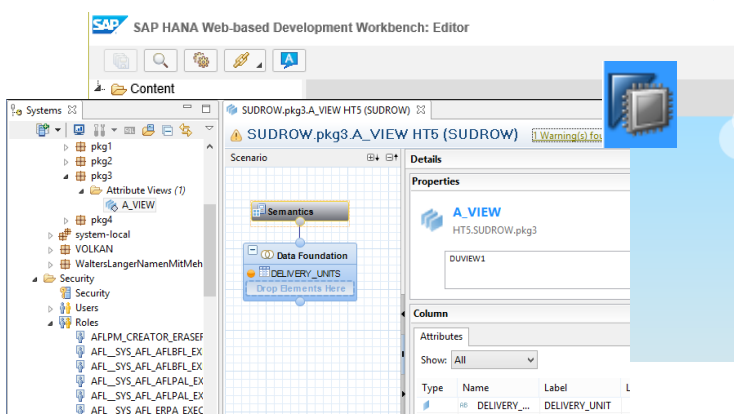
Optionally: High level change process and project management tools

- Change request management (ChaRM) and quality gate management (QGM) within SAP Solution Manager

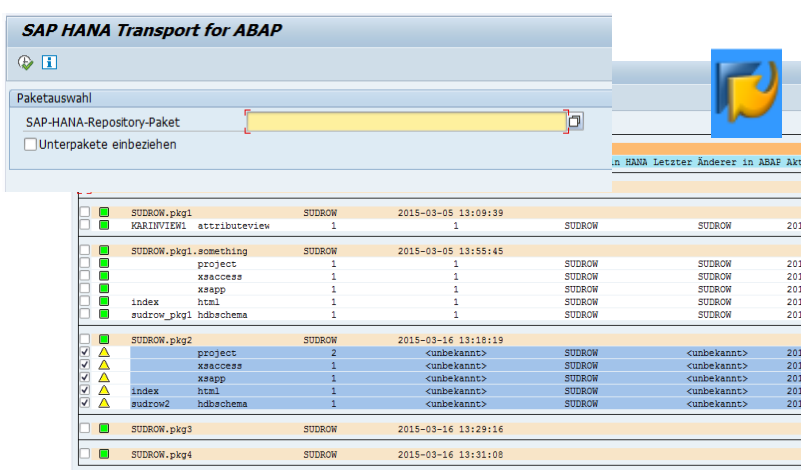
HTA tools overview

The sequence

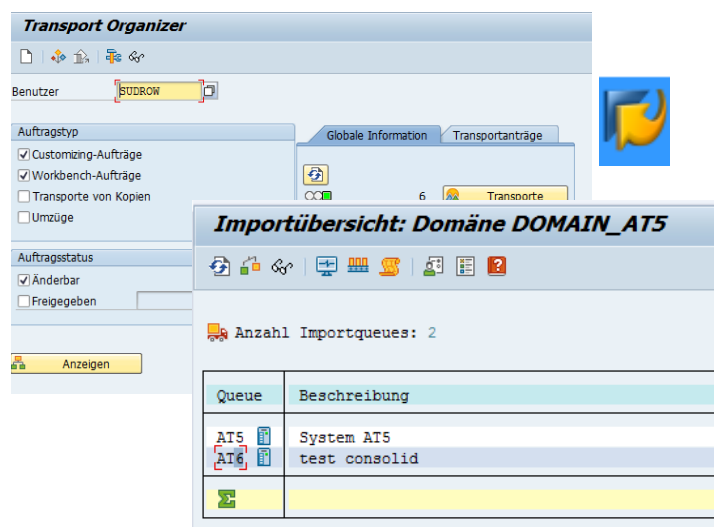
Develop your application



Select objects / packages to be transported



Manage your transports



SAP HANA studio
or
SAP HANA web-based development workbench

Transaction SCTS_HTA

Transaction SE09 on source and STMS on target system

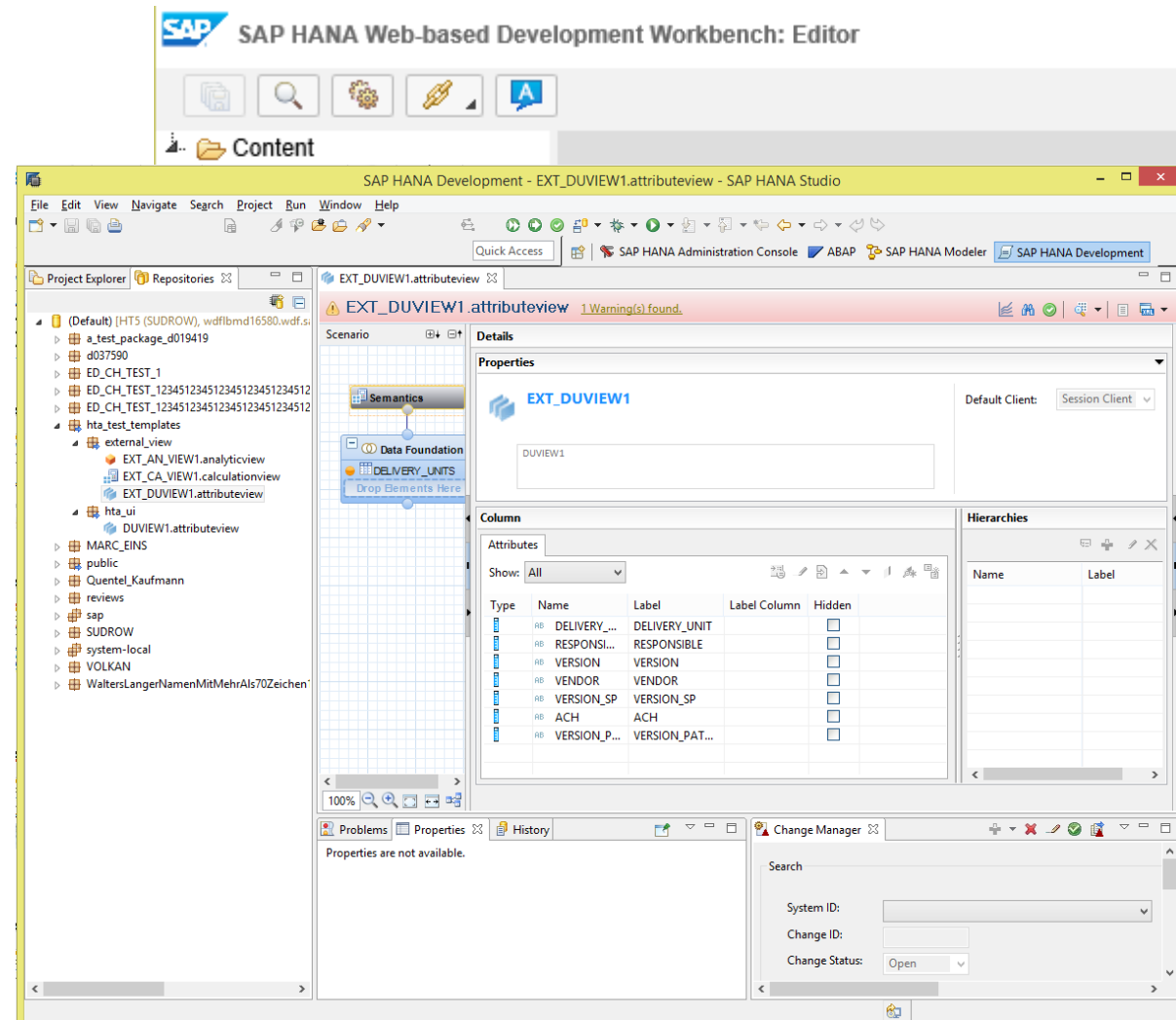
Tools in detail

SAP HANA Studio or SAP HANA web-based development workbench

Develop your application

Save and activate

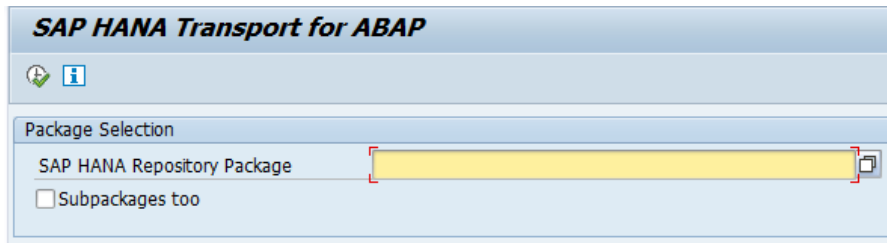
**Nothing special to be done for SAP HANA
Transport for ABAP**



Tools in detail

Transaction SCTS_HTA

In transaction SCTS_HTA



SAP HANA Transport for ABAP

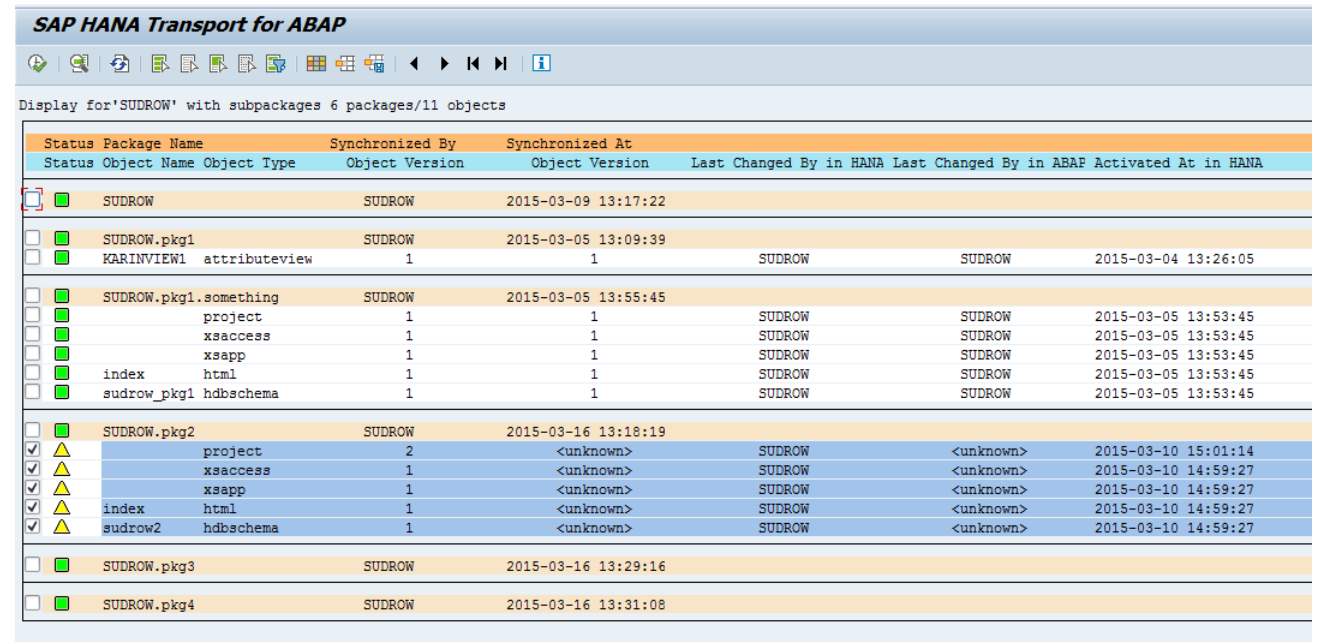
Package Selection

SAP HANA Repository Package

☒ Subpackages too

Enter your package (case sensitive!)
Include sub-packages if needed

New / changed objects are selected by default
Differences are marked in blue
Select what you would like to synchronize
You will be asked for a transport request (and
for an ABAP package when first synchronizing
an SAP HANA package)



SAP HANA Transport for ABAP

Display for 'SUDROW' with subpackages 6 packages/11 objects

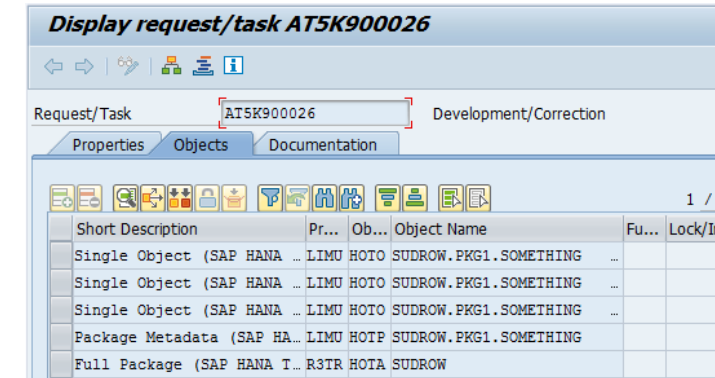
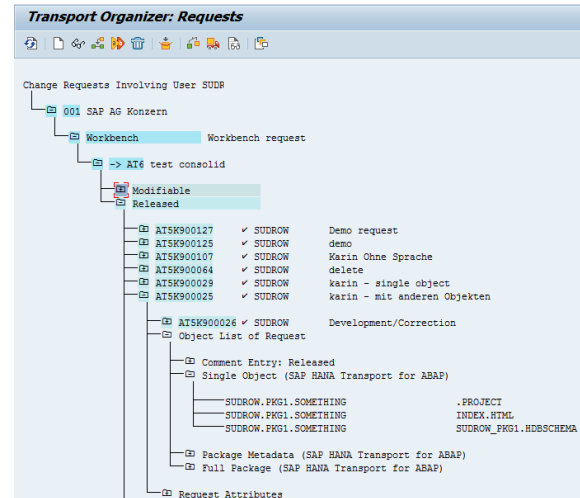
| Status | Package Name | Object Name | Object Type | Object Version | Synchronized By | Synchronized At | Last Changed By in HANA | Last Changed By in ABAP | Activated At in HANA |
|-------------------------------------|-----------------------|---------------|-------------|----------------|-----------------|---------------------|-------------------------|-------------------------|----------------------|
| <input checked="" type="checkbox"/> | SUDROW | | | | SUDROW | 2015-03-09 13:17:22 | | | |
| <input type="checkbox"/> | SUDROW.pkg1 | | | | SUDROW | 2015-03-05 13:09:39 | | | |
| <input type="checkbox"/> | KARINVIEW1 | attributeview | | 1 | | | SUDROW | SUDROW | 2015-03-04 13:26:05 |
| <input type="checkbox"/> | SUDROW.pkg1.something | | | | SUDROW | 2015-03-05 13:55:45 | | | |
| <input type="checkbox"/> | | project | | 1 | | | SUDROW | SUDROW | 2015-03-05 13:53:45 |
| <input type="checkbox"/> | | xsaccess | | 1 | | | SUDROW | SUDROW | 2015-03-05 13:53:45 |
| <input type="checkbox"/> | | xsapp | | 1 | | | SUDROW | SUDROW | 2015-03-05 13:53:45 |
| <input type="checkbox"/> | | index | html | 1 | | | SUDROW | SUDROW | 2015-03-05 13:53:45 |
| <input type="checkbox"/> | | sudrow_pkg1 | hdbschema | 1 | | | SUDROW | SUDROW | 2015-03-05 13:53:45 |
| <input type="checkbox"/> | SUDROW.pkg2 | | | | SUDROW | 2015-03-16 13:18:19 | | | |
| <input checked="" type="checkbox"/> | | project | | 2 | | <unknown> | SUDROW | <unknown> | 2015-03-10 15:01:14 |
| <input checked="" type="checkbox"/> | | xsaccess | | 1 | | <unknown> | SUDROW | <unknown> | 2015-03-10 14:59:27 |
| <input checked="" type="checkbox"/> | | xsapp | | 1 | | <unknown> | SUDROW | <unknown> | 2015-03-10 14:59:27 |
| <input checked="" type="checkbox"/> | | index | html | 1 | | <unknown> | SUDROW | <unknown> | 2015-03-10 14:59:27 |
| <input checked="" type="checkbox"/> | | sudrow2 | hdbschema | 1 | | <unknown> | SUDROW | <unknown> | 2015-03-10 14:59:27 |
| <input type="checkbox"/> | SUDROW.pkg3 | | | | SUDROW | 2015-03-16 13:29:16 | | | |
| <input type="checkbox"/> | SUDROW.pkg4 | | | | SUDROW | 2015-03-16 13:31:08 | | | |

Tools in detail

Transactions SE09 and STMS

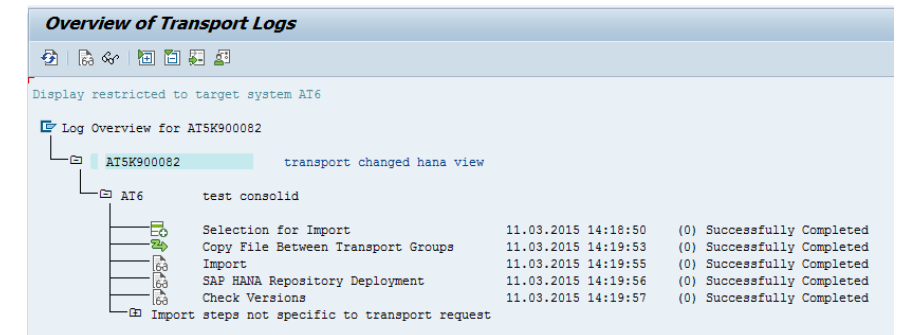
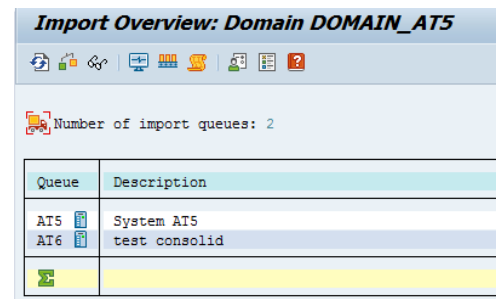
In transaction SE09

- Release tasks
- Release transport requests
- Check export logs if needed



In transaction STMS

- Select the import queue
- Import transport requests
- Check import logs if needed (especially “SAP HANA Repository Deployment”)



Demo

Step-by-step demo

Demo Sequence

1. Create SAP HANA object (SAP HANA studio)
2. Synchronize SAP HANA object (SCTS_HTA)
3. Show transport content (SE09) (optional)
4. Show import queue of target system (STMS) (optional)
5. Release task / transport request (SE09)
6. Show export log (SE09) (optional)
7. Show SAP HANA object not existing in target system (SAP HANA studio) (optional)
8. Show import queue (STMS)
9. Import transport request (STMS)
10. Show import log (STMS/SE09)
11. Show object existing in target system (SAP HANA studio)

Additional options in SAP HANA transport for ABAP

‘Prework required’ functionality (as of SAP NW 740 SP12 or NW 750 SP00)

- Option to suppress immediate deployment of SAP HANA artifacts to SAP HANA database in order to perform (manual) activities prior to deployment

Translation support (from SAP NW 740 SP13 or NW 750 SP01)

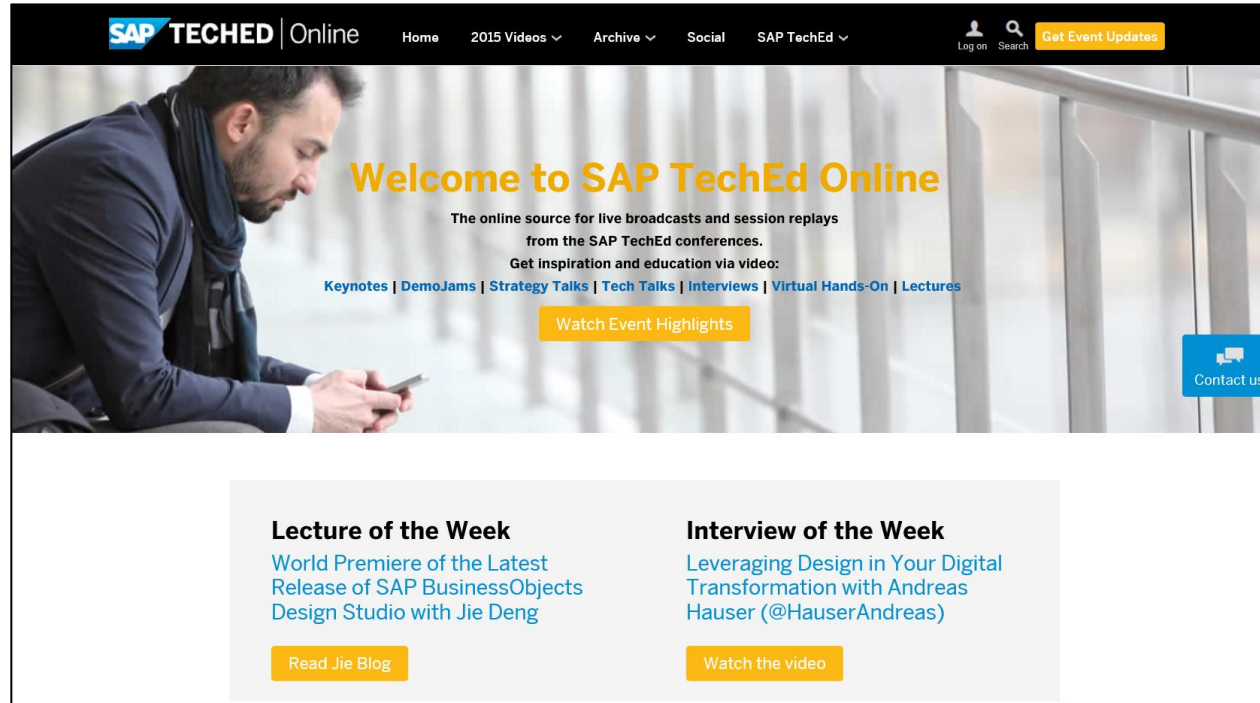
- Translation of texts of SAP HANA artifacts integrated into standard ABAP translation tools (SE63 etc.)
- Relevance for translation can be configured on SAP HANA package level

Transaction SCTS_HTA_DEPLOY (from SAP NW 740 SP16 or NW 750 SP04)

- New transaction allowing manual deployment of SAP HANA artifacts, e.g. for troubleshooting or deployment after completion of prework

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<http://sapteched.com/online>



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Further information



Related SAP TechEd sessions:

ITM111 – Development Process and Software Logistics in XSA in SAP HANA

DEV201 – Core Data Services: Next-Generation Data Definition and Access on SAP HANA

DEV161 – SQLScript: Basics

SAP Public Web

HTA documentation: http://help.sap.com/saphelp_nw74/helpdata/en/ff/7652bd542849b18b218efe8d2f2373/content.htm

HTA overview presentation: <https://scn.sap.com/docs/DOC-64633>

Blog about CTS+ and SAP HANA Transport for ABAP: <http://scn.sap.com/community/it-management/alm/software-logistics/blog/2015/06/11/cts-or-hta>

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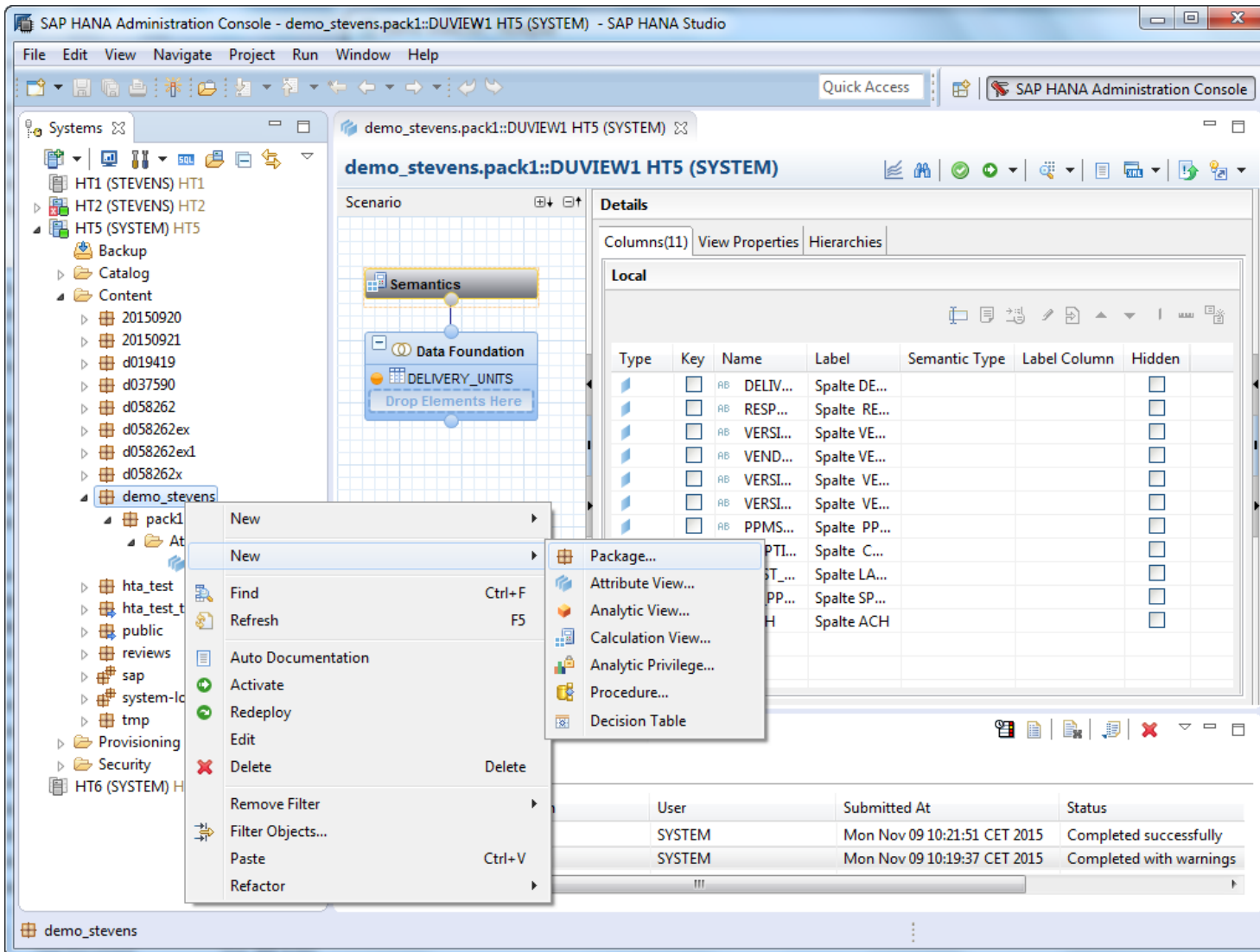
Harald Stevens
Product Manager
Harald.Stevens@sap.com



Demo Backup

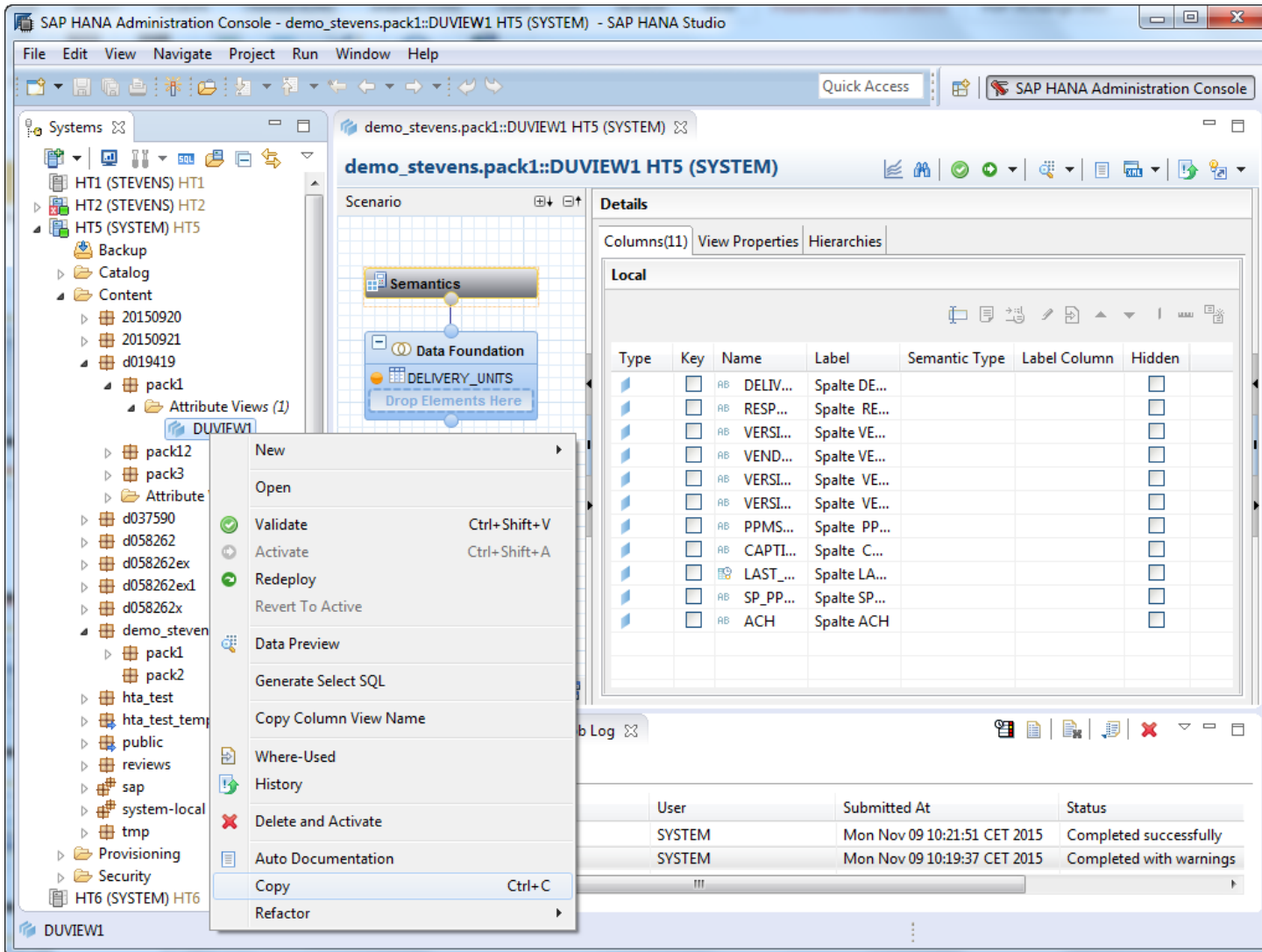
Demo: Create SAP HANA object (SAP HANA studio)

Create new package



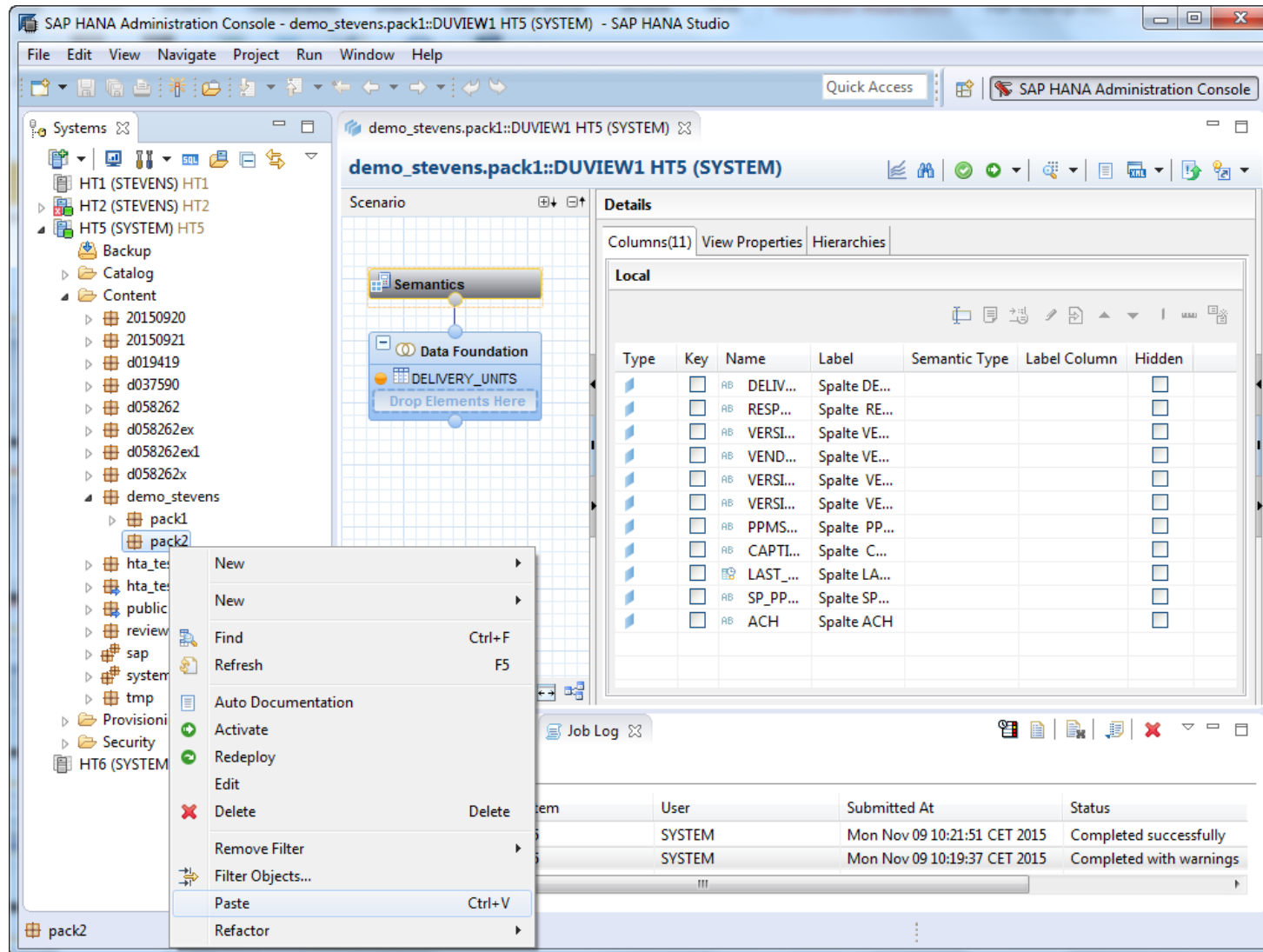
Demo: Create SAP HANA object (SAP HANA studio)

Copy existing object



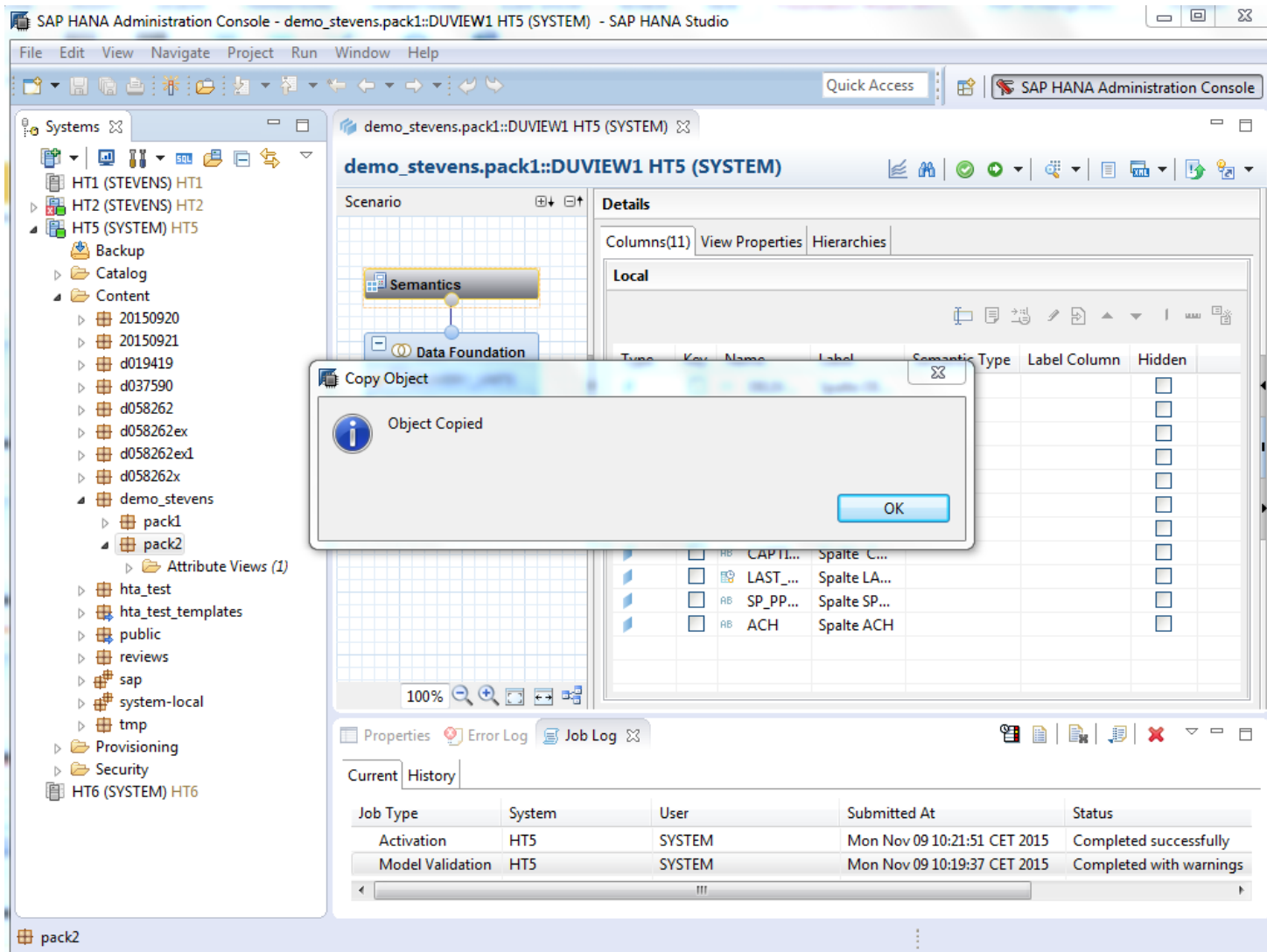
Demo: Create SAP HANA object (SAP HANA studio)

Paste object into new package

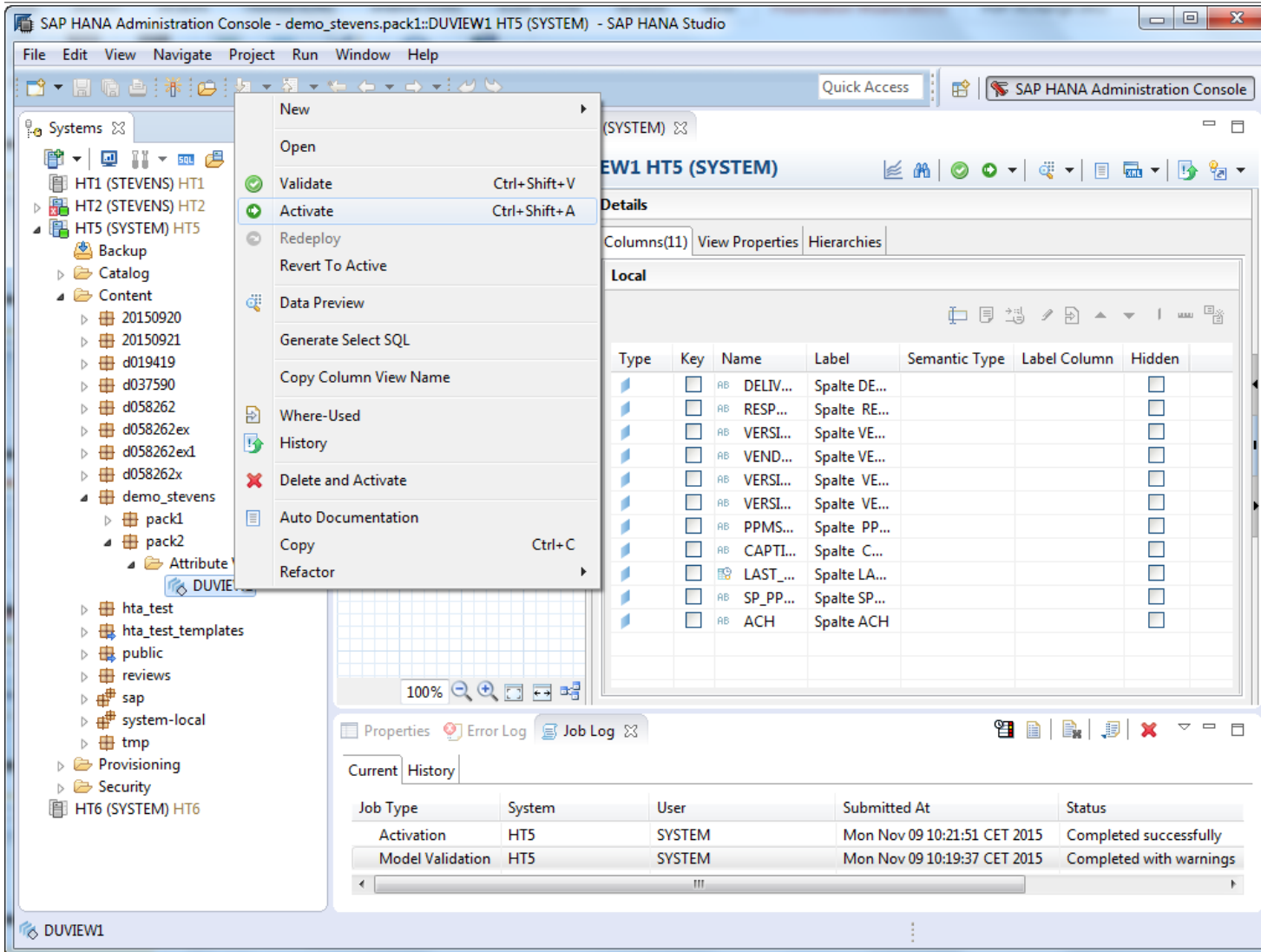


Demo: Create SAP HANA object (SAP HANA studio)

Object successfully copied

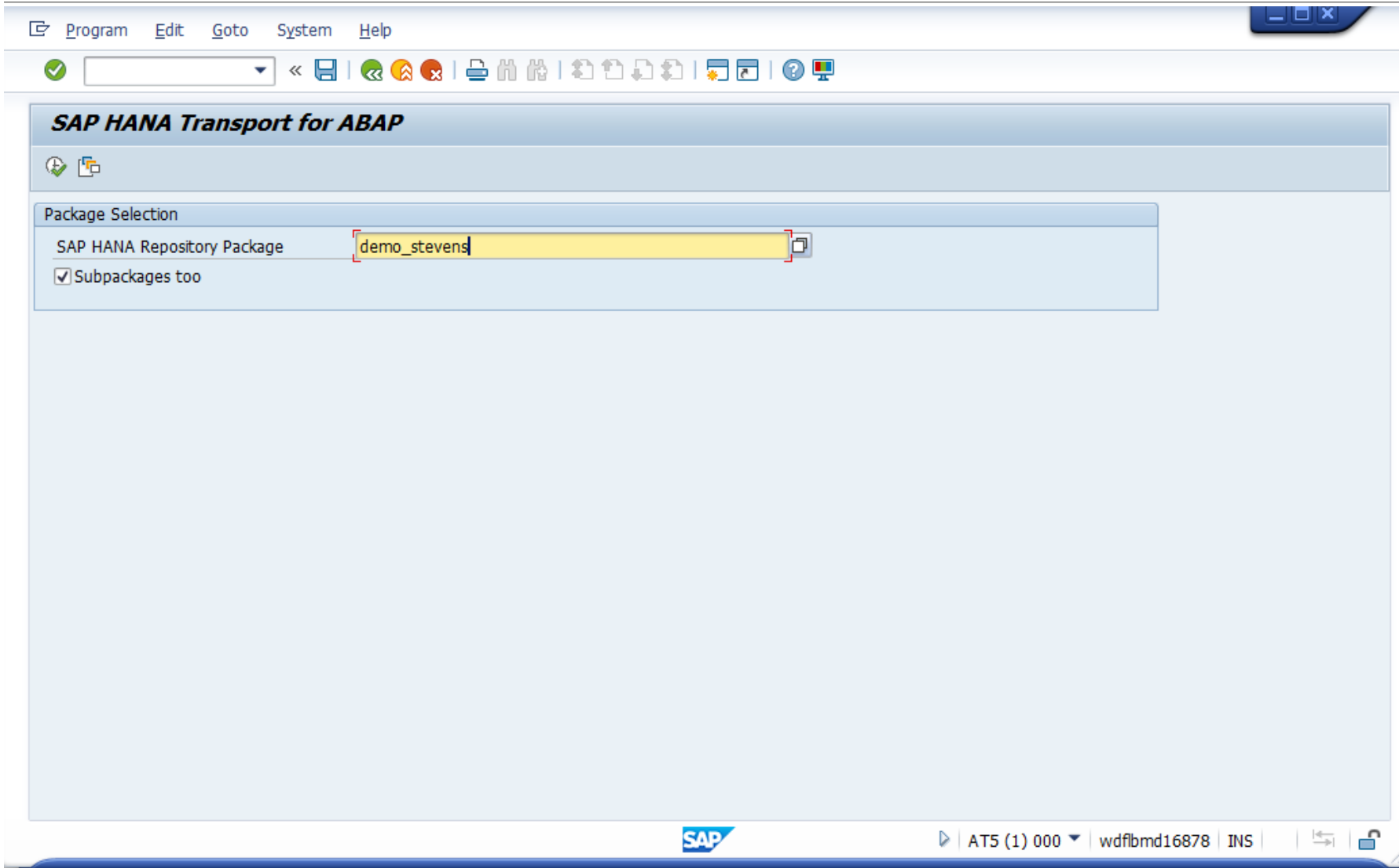


Demo: Activate new SAP HANA object (SAP HANA studio)



Demo: Synchronize SAP HANA object (SCTS_HTA)

Select new SAP HANA package (case sensitive)



Select objects to be synchronized



Demo: Synchronize SAP HANA object (SCTS_HTA)

Assign an ABAP package

The screenshot shows the SAP HANA Transport for ABAP interface. A dialog box titled 'Create Object Directory Entry' is open, allowing the user to assign an ABAP package to a HANA object. The dialog box contains the following fields:

- Object: R3TR HOTA DEMO_STEVENS.PACK2
- Package: Z HTA TEST E (highlighted)
- Person Responsible: STEVENS
- Original System: AT5
- Original language: EN English
- Created On: (empty field)

The background interface shows a table with columns: 'letzter Änderer in HANA', 'Letzter Änderer in ABAP', and 'Activated At'. The table contains two rows of data:

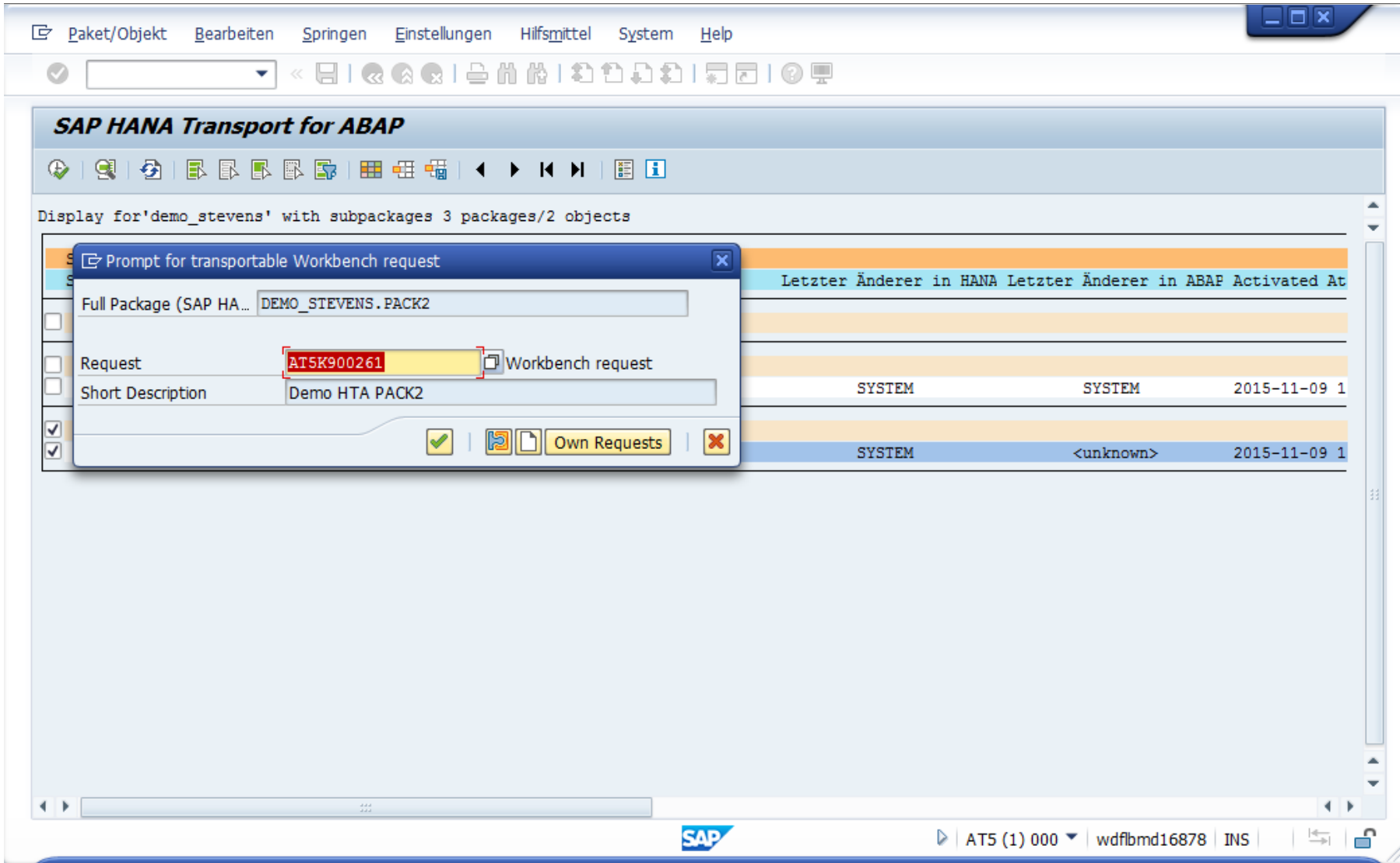
| letzter Änderer in HANA | Letzter Änderer in ABAP | Activated At |
|-------------------------|-------------------------|--------------|
| SYSTEM | SYSTEM | 2015-11-09 1 |
| SYSTEM | <unknown> | 2015-11-09 1 |

The SAP logo is visible in the bottom right corner of the interface.

Assign a transport request

Demo: Synchronize SAP HANA object (SCTS_HTA)

Assign a transport request



Demo: Synchronize SAP HANA object (SCTS_HTA)

Objects have been synchronized

The screenshot displays the 'SAP HANA Transport for ABAP' interface. The main window shows a table of synchronization results for the package 'demo_stevens'. The table has columns for Status, Paketname, Benutzer des Sync, Synchronized At, and additional details for objects. The status bar at the bottom indicates that 1 package/1 object has been added to transport request AT5K900261 and synchronized.

SAP HANA Transport for ABAP

Display for 'demo_stevens' with subpackages 3 packages/2 objects

| Status | Paketname | Benutzer des Sync | Synchronized At | | | | |
|-------------------------------------|--------------------|-------------------|---------------------|----------------|-------------------------|-------------------------|--------------|
| Status | Objektname | Objekttyp | Object Version | Object Version | Letzter Änderer in HANA | Letzter Änderer in ABAP | Activated At |
| <input checked="" type="checkbox"/> | demo_stevens | STEVENS | 2015-11-09 10:25:06 | | | | |
| <input type="checkbox"/> | demo_stevens.pack1 | STEVENS | 2015-11-09 10:25:07 | | | | |
| <input type="checkbox"/> | DUVIEW1 | attributeview | 1 | 1 | SYSTEM | SYSTEM | 2015-11-09 1 |
| <input type="checkbox"/> | demo_stevens.pack2 | STEVENS | 2015-11-09 12:27:52 | | | | |
| <input type="checkbox"/> | DUVIEW1 | attributeview | 1 | 1 | SYSTEM | SYSTEM | 2015-11-09 1 |

1 packages/1 objects added to transport request AT5K900261 and synchronized

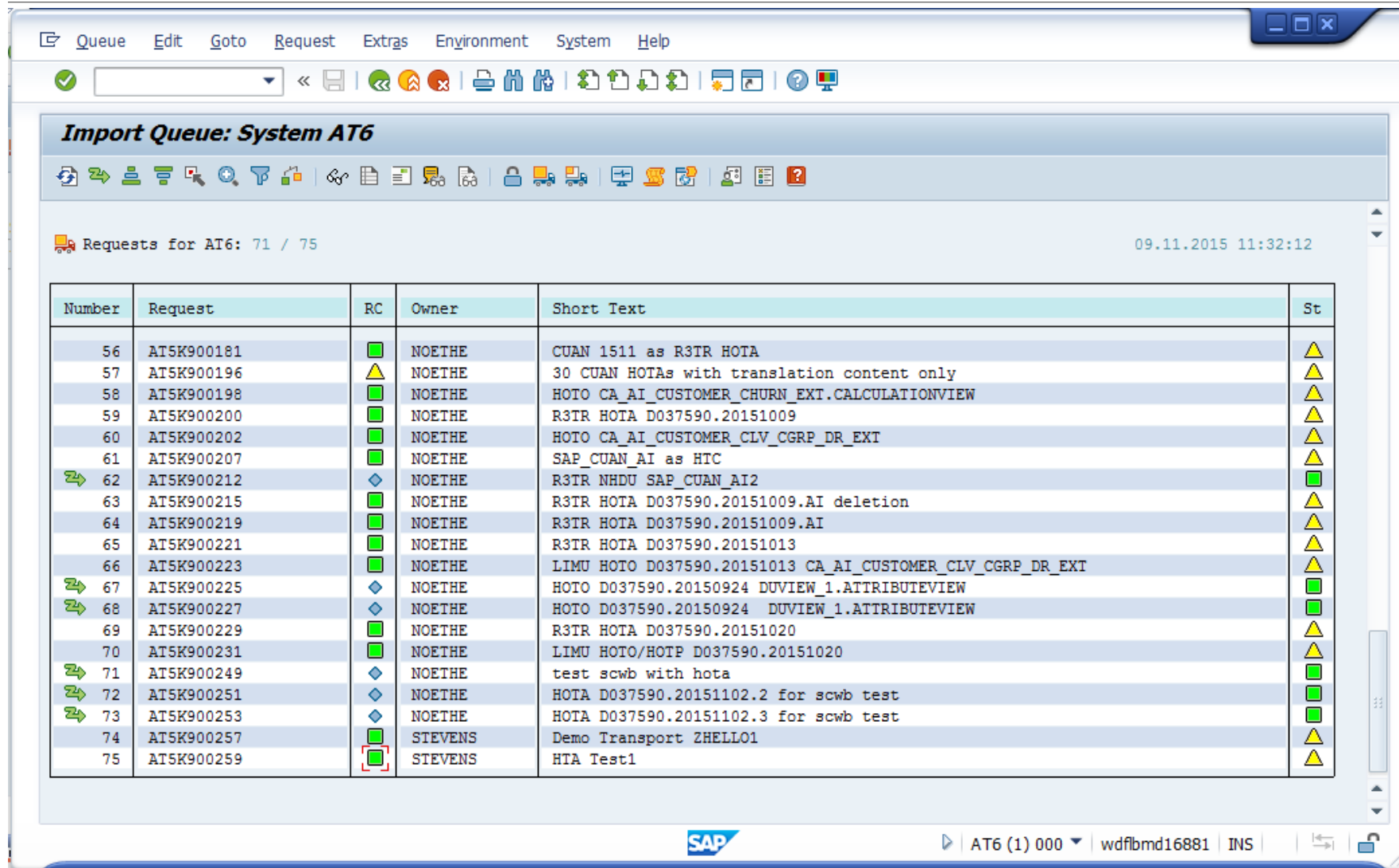
Demo: Show transport content (SE09) (optional)

The screenshot displays the SAP Transport Organizer: Requests window. The title bar includes menu items: Request/Task, Edit, Goto, Object, Utilities, Environment, System, and Help. Below the menu is a toolbar with various icons. The main content area shows a tree structure under the heading "Change Requests Involving User STEVENS (STEVENS)".

- 000 SAP SE
 - Workbench Workbench request
 - > AT6 System AT6
 - Modifiable
 - AT5K900261 STEVENS Demo HTA PACK2
 - AT5K900262 STEVENS Development/Correction
 - Full Package (SAP HANA Transport for ABAP)
 - DEMO_STEVENS.PACK2
 - AT5K900255 STEVENS Demo1

The status bar at the bottom shows "AT5 (1) 000", "wdfbmd16878", and "INS".

Demo: Show import queue of target system (STMS) (optional)



Import Queue: System AT6

Requests for AT6: 71 / 75 09.11.2015 11:32:12

| Number | Request | RC | Owner | Short Text | St |
|--------|------------|----|---------|---|----|
| 56 | AT5K900181 | ■ | NOETHE | CUAN 1511 as R3TR HOTA | ▲ |
| 57 | AT5K900196 | ▲ | NOETHE | 30 CUAN HOTAs with translation content only | ▲ |
| 58 | AT5K900198 | ■ | NOETHE | HOTO CA_AI_CUSTOMER_CHURN_EXT.CALCULATIONVIEW | ▲ |
| 59 | AT5K900200 | ■ | NOETHE | R3TR HOTA D037590.20151009 | ▲ |
| 60 | AT5K900202 | ■ | NOETHE | HOTO CA_AI_CUSTOMER_CLV_CGRP_DR_EXT | ▲ |
| 61 | AT5K900207 | ■ | NOETHE | SAP_CUAN_AI as HTC | ▲ |
| 62 | AT5K900212 | ◆ | NOETHE | R3TR NHDU SAP_CUAN_AI2 | ■ |
| 63 | AT5K900215 | ■ | NOETHE | R3TR HOTA D037590.20151009.AI deletion | ▲ |
| 64 | AT5K900219 | ■ | NOETHE | R3TR HOTA D037590.20151009.AI | ▲ |
| 65 | AT5K900221 | ■ | NOETHE | R3TR HOTA D037590.20151013 | ▲ |
| 66 | AT5K900223 | ■ | NOETHE | LIMU HOTO D037590.20151013 CA_AI_CUSTOMER_CLV_CGRP_DR_EXT | ▲ |
| 67 | AT5K900225 | ◆ | NOETHE | HOTO D037590.20150924 DUVIEW_1.ATTRIBUTEVIEW | ■ |
| 68 | AT5K900227 | ◆ | NOETHE | HOTO D037590.20150924 DUVIEW_1.ATTRIBUTEVIEW | ■ |
| 69 | AT5K900229 | ■ | NOETHE | R3TR HOTA D037590.20151020 | ▲ |
| 70 | AT5K900231 | ■ | NOETHE | LIMU HOTO/HOTP D037590.20151020 | ▲ |
| 71 | AT5K900249 | ◆ | NOETHE | test scwb with hota | ■ |
| 72 | AT5K900251 | ◆ | NOETHE | HOTA D037590.20151102.2 for scwb test | ■ |
| 73 | AT5K900253 | ◆ | NOETHE | HOTA D037590.20151102.3 for scwb test | ■ |
| 74 | AT5K900257 | ■ | STEVENS | Demo Transport ZHELLO1 | ▲ |
| 75 | AT5K900259 | ■ | STEVENS | HTA Test1 | ▲ |

Demo: Release task / transport (SE09)

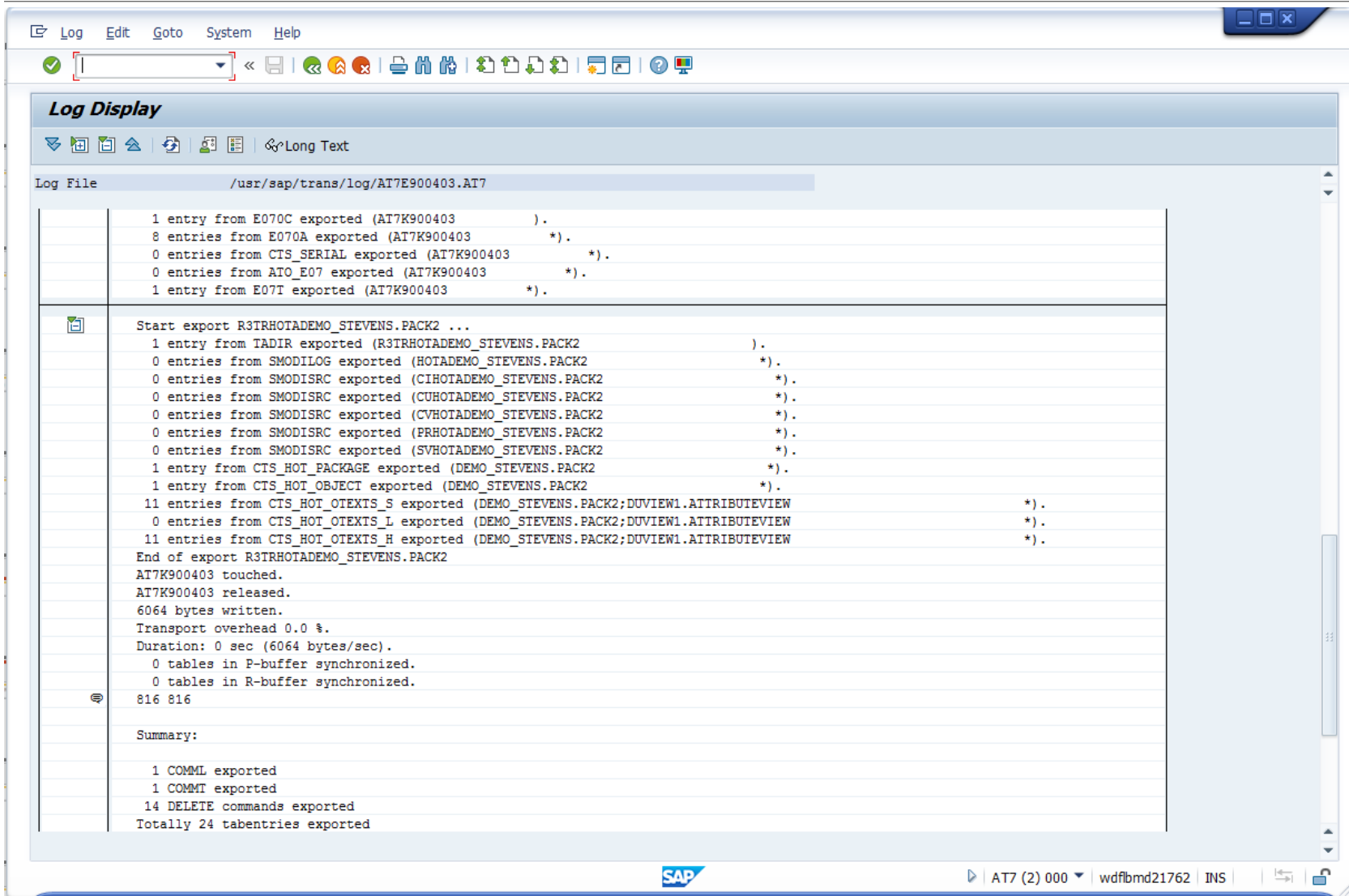
The screenshot shows the SAP SE09 'Log Overview for AT5K900261' window. The title bar includes menus for Transport, Edit, Goto, Utilities, Environment, System, and Help. Below the title bar is a toolbar with various icons. The main content area is titled 'Overview of All Transport Logs for AT5K900261' and contains a tree view on the left and a log table on the right.

Log Overview for AT5K900261

- AT5K900261 Demo HTA PACK2
 - AT5 System AT5
 - Checks at Operating System Level 09.11.2015 11:34:40 (0) Successfully Completed
 - Pre-Export Methods 09.11.2015 11:34:42 (0) Successfully Completed
 - Export 09.11.2015 11:34:42 (0) Successfully Completed
 - Import steps not specific to transport request
 - AT6 System AT6

The status bar at the bottom shows 'Log overview updated', the SAP logo, and navigation information: 'AT5 (1) 000', 'wdfibmd16878', and 'INS'.

Demo: Show export log (SE09) (optional)



Log File: /usr/sap/trans/log/AT7E900403.AT7

```
1 entry from E070C exported (AT7K900403      ).
8 entries from E070A exported (AT7K900403    *).
0 entries from CTS_SERIAL exported (AT7K900403 *).
0 entries from ATO_E07 exported (AT7K900403  *).
1 entry from E07T exported (AT7K900403      *).

Start export R3TRHOTADEMO_STEVENS.PACK2 ...
1 entry from TADIR exported (R3TRHOTADEMO_STEVENS.PACK2      ).
0 entries from SMODILOG exported (HOTADEMO_STEVENS.PACK2    *).
0 entries from SMODISRC exported (CIHOTADEMO_STEVENS.PACK2  *).
0 entries from SMODISRC exported (CUHOTADEMO_STEVENS.PACK2  *).
0 entries from SMODISRC exported (CVHOTADEMO_STEVENS.PACK2  *).
0 entries from SMODISRC exported (PRHOTADEMO_STEVENS.PACK2  *).
0 entries from SMODISRC exported (SVHOTADEMO_STEVENS.PACK2  *).
1 entry from CTS_HOT_PACKAGE exported (DEMO_STEVENS.PACK2    *).
1 entry from CTS_HOT_OBJECT exported (DEMO_STEVENS.PACK2    *).
11 entries from CTS_HOT_OTEXTS_S exported (DEMO_STEVENS.PACK2;DUVIEW1.ATTRIBUTEVIEW *).
0 entries from CTS_HOT_OTEXTS_L exported (DEMO_STEVENS.PACK2;DUVIEW1.ATTRIBUTEVIEW *).
11 entries from CTS_HOT_OTEXTS_H exported (DEMO_STEVENS.PACK2;DUVIEW1.ATTRIBUTEVIEW *).
End of export R3TRHOTADEMO_STEVENS.PACK2
AT7K900403 touched.
AT7K900403 released.
6064 bytes written.
Transport overhead 0.0 %.
Duration: 0 sec (6064 bytes/sec).
0 tables in P-buffer synchronized.
0 tables in R-buffer synchronized.
816 816

Summary:
1 COMML exported
1 COMMT exported
14 DELETE commands exported
Totally 24 tabentries exported
```

Demo: Show SAP HANA object not existing in target system (SAP HANA studio)

The screenshot displays the SAP HANA Studio interface. On the left, the 'Systems' tree shows a hierarchy of systems, including 'demo_stevens.pack1::DUVIEW1 HT6 (SYSTEM)'. The main workspace is divided into two panes. The left pane, titled 'Scenario', shows a Semantic model with a 'Data Foundation' node containing a 'DELIVERY_UNITS' table. The right pane, titled 'Details', shows a table of columns with the following data:

| Type | Key | Name | Label | Semantic Type | Label Column | Hidden |
|------|--------------------------|----------|--------------|---------------|--------------|--------------------------|
| RB | <input type="checkbox"/> | DELIV... | Spalte DE... | | | <input type="checkbox"/> |
| RB | <input type="checkbox"/> | RESP... | Spalte RE... | | | <input type="checkbox"/> |
| RB | <input type="checkbox"/> | VERSI... | Spalte VE... | | | <input type="checkbox"/> |
| RB | <input type="checkbox"/> | VEND... | Spalte VE... | | | <input type="checkbox"/> |
| RB | <input type="checkbox"/> | VERSI... | Spalte VE... | | | <input type="checkbox"/> |
| RB | <input type="checkbox"/> | PPMS... | Spalte PP... | | | <input type="checkbox"/> |
| RB | <input type="checkbox"/> | CAPTL... | Spalte C... | | | <input type="checkbox"/> |
| RB | <input type="checkbox"/> | LAST... | Spalte LA... | | | <input type="checkbox"/> |
| RB | <input type="checkbox"/> | SP_PP... | Spalte SP... | | | <input type="checkbox"/> |
| RB | <input type="checkbox"/> | ACH | Spalte ACH | | | <input type="checkbox"/> |

At the bottom, the 'Job Log' pane shows a table of job execution results:

| Job Type | System | User | Submitted At | Status |
|------------|--------|--------|------------------------------|------------------------|
| Activation | HT5 | SYSTEM | Mon Nov 09 10:51:09 CET 2015 | Completed successfully |
| Activation | HT5 | SYSTEM | Mon Nov 09 10:21:51 CET 2015 | Completed successfully |

Demo: Show import queue (STMS)

Import Queue: System AT6

Requests for AT6: 72 / 76 09.11.2015 11:49:02

| Number | Request | RC | Owner | Short Text | St |
|--------|------------|----|---------|---|----|
| 57 | AT5K900196 | ▲ | NOETHE | 30 CUAN HOTAs with translation content only | ▲ |
| 58 | AT5K900198 | ■ | NOETHE | HOTO CA_AI_CUSTOMER_CHURN_EXT.CALCULATIONVIEW | ▲ |
| 59 | AT5K900200 | ■ | NOETHE | R3TR HOTA D037590.20151009 | ▲ |
| 60 | AT5K900202 | ■ | NOETHE | HOTO CA_AI_CUSTOMER_CLV_CGRP_DR_EXT | ▲ |
| 61 | AT5K900207 | ■ | NOETHE | SAP_CUAN_AI as HTC | ▲ |
| 62 | AT5K900212 | ◆ | NOETHE | R3TR NHDU SAP_CUAN_AI2 | ■ |
| 63 | AT5K900215 | ■ | NOETHE | R3TR HOTA D037590.20151009.AI deletion | ▲ |
| 64 | AT5K900219 | ■ | NOETHE | R3TR HOTA D037590.20151009.AI | ▲ |
| 65 | AT5K900221 | ■ | NOETHE | R3TR HOTA D037590.20151013 | ▲ |
| 66 | AT5K900223 | ■ | NOETHE | LIMU HOTO D037590.20151013 CA_AI_CUSTOMER_CLV_CGRP_DR_EXT | ▲ |
| 67 | AT5K900225 | ◆ | NOETHE | HOTO D037590.20150924 DUVIEW_1.ATTRIBUTEVIEW | ■ |
| 68 | AT5K900227 | ◆ | NOETHE | HOTO D037590.20150924 DUVIEW_1.ATTRIBUTEVIEW | ■ |
| 69 | AT5K900229 | ■ | NOETHE | R3TR HOTA D037590.20151020 | ▲ |
| 70 | AT5K900231 | ■ | NOETHE | LIMU HOTO/HOTP D037590.20151020 | ▲ |
| 71 | AT5K900249 | ◆ | NOETHE | test scwb with hota | ■ |
| 72 | AT5K900251 | ◆ | NOETHE | HOTA D037590.20151102.2 for scwb test | ■ |
| 73 | AT5K900253 | ◆ | NOETHE | HOTA D037590.20151102.3 for scwb test | ■ |
| 74 | AT5K900257 | ■ | STEVENS | Demo Transport ZHELLO1 | ▲ |
| 75 | AT5K900259 | ■ | STEVENS | HTA Test1 | ▲ |
| 76 | AT5K900261 | ◆ | STEVENS | Demo HTA PACK2 | ■ |

SAP | AT6 (1) 000 | wdfbmd16881 | INS

Demo: Import transport (STMS)

The screenshot displays the SAP STMS 'Import Queue: System AT6' interface. A dialog box titled 'Import Transport Request' is open, showing the following details:

- Transport Request: AT5K900261 Demo HTA PACK2
- Target System: AT6 System AT6
- Target Client: [Yellow box] Targ.Client=Source Client

The dialog has three tabs: 'Date', 'Execution', and 'Options'. The 'Date' tab is active, showing the 'Start Date' section with the following options:

- ☒ Immediate
- ☐ At Start Time
 - Planned Start: 09.11.2015 11:50:23
 - No Start After: [Empty]
- ☐ After Event
 - Event: [Empty]
 - Parameters: [Empty]

The main window shows a list of transport requests with a status column 'St'. The list includes:

| | St |
|---------------------------------------|----|
| translation content only | ▲ |
| CHURN_EXT.CALCULATIONVIEW | ▲ |
| 151009 | ▲ |
| CLV_CGRP_DR_EXT | ▲ |
| I2 | ■ |
| 151009.AI deletion | ▲ |
| 151009.AI | ▲ |
| 151013 | ▲ |
| 151013 CA_AI_CUSTOMER_CLV_CGRP_DR_EXT | ▲ |
| 4 DUVIEW_1.ATTRIBUTEVIEW | ■ |
| 4 DUVIEW_1.ATTRIBUTEVIEW | ■ |
| 151020 | ▲ |
| 90.20151020 | ■ |
| 2.2 for scwb test | ■ |
| 2.3 for scwb test | ■ |
| .01 | ▲ |

The status bar at the bottom shows: AT6 (1) 000 | wdfbmd16881 | INS

Demo: Import transport (STMS)

Import Queue: System AT6

Requests for AT6: 72 / 76 09.11.2015 11:52:15

| Number | Request | RC | Owner | Short Text | St |
|--------|------------|----|---------|---|----|
| 57 | AT5K900196 | ▲ | NOETHE | 30 CUAN HOTAs with translation content only | ▲ |
| 58 | AT5K900198 | ■ | NOETHE | HOTO CA_AI_CUSTOMER_CHURN_EXT.CALCULATIONVIEW | ▲ |
| 59 | AT5K900200 | ■ | NOETHE | R3TR HOTA D037590.20151009 | ▲ |
| 60 | AT5K900202 | ■ | NOETHE | HOTO CA_AI_CUSTOMER_CLV_CGRP_DR_EXT | ▲ |
| 61 | AT5K900207 | ■ | NOETHE | SAP_CUAN_AI as HTC | ▲ |
| 62 | AT5K900212 | ◆ | NOETHE | R3TR NHDU SAP_CUAN_AI2 | ■ |
| 63 | AT5K900215 | ■ | NOETHE | R3TR HOTA D037590.20151009.AI deletion | ▲ |
| 64 | AT5K900219 | ■ | NOETHE | R3TR HOTA D037590.20151009.AI | ▲ |
| 65 | AT5K900221 | ■ | NOETHE | R3TR HOTA D037590.20151013 | ▲ |
| 66 | AT5K900223 | ■ | NOETHE | LIMU HOTO D037590.20151013 CA_AI_CUSTOMER_CLV_CGRP_DR_EXT | ▲ |
| 67 | AT5K900225 | ◆ | NOETHE | HOTO D037590.20150924 DUVIEW_1.ATTRIBUTEVIEW | ■ |
| 68 | AT5K900227 | ◆ | NOETHE | HOTO D037590.20150924 DUVIEW_1.ATTRIBUTEVIEW | ■ |
| 69 | AT5K900229 | ■ | NOETHE | R3TR HOTA D037590.20151020 | ▲ |
| 70 | AT5K900231 | ■ | NOETHE | LIMU HOTO/HOTP D037590.20151020 | ▲ |
| 71 | AT5K900249 | ◆ | NOETHE | test scwb with hota | ■ |
| 72 | AT5K900251 | ◆ | NOETHE | HOTA D037590.20151102.2 for scwb test | ■ |
| 73 | AT5K900253 | ◆ | NOETHE | HOTA D037590.20151102.3 for scwb test | ■ |
| 74 | AT5K900257 | ■ | STEVENS | Demo Transport ZHELLO1 | ▲ |
| 75 | AT5K900259 | ■ | STEVENS | HTA Test1 | ▲ |
| 76 | AT5K900261 | ■ | STEVENS | Demo HTA PACK2 | ▲ |

SAP | AT6 (1) 000 | wdfbmd16881 | INS

Demo: Show import log (STMS/SE09)

The screenshot displays the 'Overview of Transport Logs' window in SAP. The window title is 'Overview of Transport Logs'. Below the title bar, there is a toolbar with various icons. The main content area shows a tree view on the left and a log table on the right.

Tree View:

- Log Overview for AT7K900403 (STEVENS)
 - AT7K900403 (selected)
 - Demo HTA PACK2
 - AT8 (selected)
 - System AT8
 - Selection for Import
 - Copy File Between Transport Groups
 - Import Request Piece List
 - Create Versions Before Import
 - Import
 - SAP HANA Repository Deployment
 - Create Versions After Import
 - Import steps not specific to transport request

Log Table:

| Step | Date/Time | Status |
|------------------------------------|---------------------|---------------|
| Selection for Import | 10.08.2016 13:58:41 | (0) Completed |
| Copy File Between Transport Groups | 10.08.2016 14:01:56 | (0) Completed |
| Import Request Piece List | 10.08.2016 14:02:01 | (0) Completed |
| Create Versions Before Import | 10.08.2016 14:02:02 | (0) Completed |
| Import | 10.08.2016 14:02:08 | (0) Completed |
| SAP HANA Repository Deployment | 10.08.2016 14:04:49 | (0) Completed |
| Create Versions After Import | 10.08.2016 14:04:59 | (0) Completed |

The bottom status bar shows 'AT8 (1) 000', 'wdfibmd15633', and 'INS'.

Demo: Show import log (STMS/SE09)

The screenshot shows the SAP Log Display window with the following content:

Log Display

Log File: /usr/sap/trans/log/AT7C900403.AT8

| | |
|---|---|
| + | Start of deployment of SAP HANA repository packages: 20160810140209 Packages created: 1 Updated packages: 0 Packages with errors: 0 End of deployment of SAP HANA repository packages: 20160810140209 |
| + | Start of deployment of SAP HANA repository objects: 20160810140209 |
| + | Start of object import details Objects imported inactively: 1 Objects deleted inactively: 0 Objects with import errors: 0 End of object import details |
| + | Start of object activation details Activated objects: 1 Aktiv gelöschte Objekte: 0 Objects with activation errors: 0 Activating the repository objects in 1 imported requests: |
| + | DUVIEW1.attributeview (demo_stevens.pack2) activated successfully End of object activation details |
| + | Start of text deployment details Objects for which texts were deployed: 1 Deployed texts: 11 Languages where texts were deployed: E/en Objects where no text deployment was required: 0 Objects with errors in text deployment: 0 End of text deployment details End of deployment of SAP HANA repository objects: 20160810140449 SAP HANA(R) repository deployment End date and time : 20160810140449 |

SAP AT8 (1) 000 wdfbmd15633 INS

Demo: Show object existing in target system (SAP HANA studio)

The screenshot displays the SAP HANA Studio interface. The left-hand 'Systems' tree shows a hierarchy where 'demo_stevens.pack1::DUVIEW1 HT6 (SYSTEM)' is selected. The main workspace is divided into two panes: 'Scenario' and 'Details'. The 'Details' pane shows a table of columns for the selected object.

| Type | Key | Name | Label | Semantic Type | Label Column | Hidden |
|------|--------------------------|-------------|--------------|---------------|--------------|--------------------------|
| | <input type="checkbox"/> | AB DELIV... | Spalte DE... | | | <input type="checkbox"/> |
| | <input type="checkbox"/> | AB RESP... | Spalte RE... | | | <input type="checkbox"/> |
| | <input type="checkbox"/> | AB VERSI... | Spalte VE... | | | <input type="checkbox"/> |
| | <input type="checkbox"/> | AB VEND... | Spalte VE... | | | <input type="checkbox"/> |
| | <input type="checkbox"/> | AB VERSI... | Spalte VE... | | | <input type="checkbox"/> |
| | <input type="checkbox"/> | AB VERSI... | Spalte VE... | | | <input type="checkbox"/> |
| | <input type="checkbox"/> | AB PPMS... | Spalte PP... | | | <input type="checkbox"/> |
| | <input type="checkbox"/> | AB CAPTI... | Spalte C... | | | <input type="checkbox"/> |
| | <input type="checkbox"/> | AB LAST... | Spalte LA... | | | <input type="checkbox"/> |
| | <input type="checkbox"/> | AB SP_PP... | Spalte SP... | | | <input type="checkbox"/> |
| | <input type="checkbox"/> | AB ACH | Spalte ACH | | | <input type="checkbox"/> |

The bottom pane shows the 'Job Log' with two entries:

| Job Type | System | User | Submitted At | Status |
|------------|--------|--------|------------------------------|------------------------|
| Activation | HT5 | SYSTEM | Mon Nov 09 10:51:09 CET 2015 | Completed successfully |
| Activation | HT5 | SYSTEM | Mon Nov 09 10:21:51 CET 2015 | Completed successfully |

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