Enhanced Change and Transport System (CTS+) in a SAP NetWeaver Portal landscape

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Agenda

1. Transports in the Portal
2. What is CTS+
3. Transports in the Portal with CTS+

The first chapter ‘Transports in the Portal’ provides an overview on the transport mechanisms which are available in the SAP NetWeaver Portal today.

In the second chapter, you can find some explanations about what CTS+ is in general.

The third chapter will explain, how CTS+ can be used within a portal landscape.

This presentation assumes that you are using a portal landscape with at least two systems where you want to make sure that the content and the look and feel etc is the same by transporting configurations and content from one system into the other. Some of the slides refer to different SP stacks. If this is the case, you will find a hint in the header of the slides. Please take a look.
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When you look at a portal screen, there are several elements or components which might require a transport.

Corporate Branding: the branding of the portal consists of a theme, a framework page, a desktop and rule collections. These objects have to be transported to provide the same look&feel in the target system.

Navigation (Roles): Content in the portal is assigned to a user by the help of roles. The roles consist of iViews, pages and worksets.

Portal Content: the content displayed within an iView requires a transport as well. Depending on the type of content, different transport mechanisms have to be used. In some cases, it might be sufficient, to transport only the role with all its dependent objects, in other cases, it might be required to perform additional transports on the backend system landscape that is used.
Transporting Portal Content

The Transport Package Editor

- Is used to transport Portal Content as epa-files
- Is an export tool – it does not provide any transport logistics or transport routes

The Package Export Editor is used to transport portal content (including roles, iViews, pages etc). This tool is provided to portal administrators via the system administration role. After having chosen the objects that require an export, a transport package named <name>.epa is created. It can be downloaded to your client and is stored on the server. This epa-file can be imported on the target system.

To learn more about transporting portal content, please have a look at http://help.sap.com/saphelp_nw70/helpdata/en/c5/56599164d0c04cb566ba0e2d7ed55c/frameset.htm
In addition to the portal content, KMC (Knowledge Management and Collaboration) objects and configurations require a transport.
Transporting in Knowledge Management

KM documents

- Since SPS 13, a new tool for transporting KM Content is available
- WebDAV (Web-based Distributed Authoring and Versioning) to copy files in a way similar to file-system copy
- ICE (Information and Content Exchange) as online and offline transporting mechanism

KM Configurations

- A transport option is provided by KM
- Collect Configuration objects. Download *.configarchive
- Import configarchive via a KM administration

There are three options to transport KM content.

- Starting with SPS 13, you can use a transport mechanism for KM Content. The following slide shows a screenshot and explains some details.
- Transporting via WebDAV is an online procedure that needs to be done manually by copying files from one folder into another.
- KM provides the option to use ICE as an online or an offline mechanism. The online mechanism requires that you set up one portal as syndicator and one as subscriber. In this setup, folders can be synchronized on a timely basis. To transport content offline, a file needs to be created which contains the KM Content that shall be transported. This file can be imported into the target portal by the help of a special import screen which is provided by KM. You can find more information about ICE transports on help.sap.com: http://help.sap.com/saphelp_nw70/helpdata/en/35/4cf72bfe18455e892fc53345f4f919/frameset.htm

KM Configurations can be transported by the help of configarchives. These files are created via the KM Administration. You can find more information on help.sap.com: http://help.sap.com/saphelp_nw70/helpdata/en/e1/029c414c79b25fe10000000a1550b0/frameset.htm
Transporting KM documents

New menu entries have been added to the Content Administration Role that allow transporting KM documents.

This slide shows a sample screenshot of the transport tool for KM Content that is provided with SAP NetWeaver 7.0 SPS 13. The tools are part of the Content Administration role and provide exporting mechanisms as well as screens for importing KM Content.

Transporting Collaboration Room Templates

- Collaboration Room templates consist of worksets and KM configurations
- To transport worksets, please use the Package Export Editor – as portal content is transported
- To transport the KM configurations, please use the mechanism for KM configarchives

Collaboration Rooms can not be transported

Transporting Collaboration Room Templates requires two transports:

- The workset containing the pages and iViews needed to create a room based on the template have to be transported via the Package Export Editor
- The additional configurations like e.g. Room Extensions have to be transported via a configarchive.

Rooms that have been created in one system based on a template can not be transported

More information is provided on help.sap.com.
To simplify things, only portal content is considered on this slide. KM content and configurations require a similar process.

Looking at the current situation in a portal landscape, there is no tracking tool for portal transports available. Therefore a special solution needs to be created for portal projects. You could use mounts to avoid moving files around (mount the export folder of the dev-system as the import folder of the Q-system…). In addition some tracking needs to be done to monitor, which transports are already done, which one can already be imported into which system, which one needs to wait for some additional development to finish and which transport has already been performed. This results in different tasks and challenges:

**For a portal administrator**
- Understand what needs to be transported
- Keep KM- and Portal-transports synchronized (know about dependencies)
- Track transports: make sure everything is transported to all systems in a landscape and maintain the status of transports in a separate place

**For setting up business processes**
- Find mechanisms to automate transports for very different file types to simplify the process as much as possible
- Integrate tools or requirements for tracking into the applications
1. Transports in the Portal
2. What is CTS+
3. Transports in the Portal with CTS+
CTS+ is an extension to the existing Change and Transport System of the ABAP stack. It is now possible to transport Java-objects by the help of CTS. This extension is represented by the ‘+’ in CTS+.

The idea is to provide all the transport logistics and monitoring options that are well known from the ABAP stack to the Java transports as well.

Transport routes can be set up and can be used for Java transports

Deployment to a development landscape is not part of CTS+. Every developer is responsible for the deployment from his development system to the central development system that is used as the first system in a row in the system landscape.

Changes and developments can only be checked in to the transport system after the changes and developments have become part of the central development landscape (have been deployed and are tested by the developer).

For more information, please have a look at help.sap.com:
What is CTS, What are the Enhancements of CTS+

This slide shows the basic elements of CTS+. The more colorful ones have been added to allow the transport of Java objects. The other elements are available in CTS.

The Transport Organizer Web UI is an ABAP Web Dynpro Application, which is used within CTS+ e.g. to create transport requests, attach objects to a transport and monitor the status of a transport. As this application is displayed in a browser window, the Java developer or administrator doesn’t have to go to the system that performs transports to create a transport request but can use a web interface e.g. as a link from within the portal.

In addition, some transport tools for Java objects have been created. The CTS Deploy Web Service connects the ABAP transport tools to the deployment tools in the non-ABAP applications.

Detailed explanations for the elements can be found on help.sap.com.
http://help.sap.com/saphelp_nw70/helpdata/en/14/94fc3f8fc2c542e10000000a1550b0/frameset.htm
Portal transport packages can be attached to transport request. During attachment metadata is included that describes the deployment method.
In general, there are two options concerning the landscape and the location of CTS+:

- **CTS+ can run a dual stack system that has SPS 13 (or up) installed. SPS 12 also offers CTS+ mechanisms, but we recommend to start with SPS 13 as a lot of improvements have been introduced.**

- **CTS+ can be divided between two servers: one providing the ABAP stack and another one that has the Java stack installed.**

If you decide to use a dual stack system, a good option would be to use the Solution Manager. If you decide to use single stack systems, please be aware of some additional configuration effort.
Agenda

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The process for transporting portal content consists of the following steps:
1. Choose the content that you want to transport and add it to an epa-file
2. Export the epa-file
3. Attach the epa-file to a transport order. It depends on the SPS of your portal if you are able to attach the epa-file to the transport order directly from within the package export editor or whether you have to attach it manually afterwards (see following slides).

Concerning self developed portal applications (par-files) you can choose between two options:
- Configure the pcd startup properties in a way that par files are included in the epa file when exporting the appropriate iView. The details are described on help.sap.com: http://help.sap.com/saphelp_nw70/helpdata/en/10/082840f3ddee01e10000000a155106/frameset.htm
- Use the NWDI for transporting portal applications. NWDI provides integration with CTS+ as well.
Transport Portal Content

- Epa-files can be added to a transport request and will be deployed via SDM.
- In addition, par, ear, sca and sda-files can be transported and deployed.
- Other file types can be transported. They will be deployed to a specified folder on the file system.
- As soon as the import for a certain transport order is started, the SDM is used to deploy the files on the target system.

Landscape Configuration

- The transport routes for the landscape (e.g. Development-, QA- and Production- system) are configured within the ABAP Stack as known for ABAP Systems. It is now possible to configure transport routes for non-ABAP systems.

Support for ‘old’ releases:

- It is possible to include systems from SAP NetWeaver 04 SPS 09 onwards (SDM available to deploy epas) into the transport routes if this system is not used for performing the transports. Please have a look at SAP note 906120.
- No functionality within the portal required. (direct integration of CTS+ functionality into the package export editor starting with SAP NetWeaver 7.0 SPS 13).

Logging and tracing

- Logging and tracing mechanisms known from ABAP can be used.
If the CTS+ system is on SAP NetWeaver 7.0 SPS 13 or up and the portal system on any SPS lower than SAP NetWeaver 7.0 SPS 13, the process for transporting portal content is the following:

2. Download the epa-file to a file-share.
3. Create a transport order in the CTS+ system.
4. Attach the epa-file (and any other file that you would like to transport) to a transport order by the help of the Transport Organizer Web UI (You could include it as an iView into one of your portal administration roles)
5. release the transport order
6. Start import of the queue via the Transport Management System (transaction STMS)
The Transport Organizer Web UI

Facts

The Transport Organizer Web UI is...

- ...based on Web Dynpro for ABAP
- ...delivered with the standard ABAP Stack
- ...can be integrated into the portal as an iView

CTS+ provides a Web UI for the Transport Organizer. This Web Dynpro application is used to create transport orders, view them and attach objects. The screenshot is taken from SAP NetWeaver 7.0 SPS 13. In SPS 14 some enhancements are provided to show e.g. more information on the transport orders, their status and the attached objects.


The Web Dynpro Application to be used with SPS 13 and up is named ‘cts_browser’ (in SPS 12 ‘sodis_core_wbo’)
The Transport Organizer Web UI
Features in SPS 14

- Can be used to create transport request
- Can be used to attach non-ABAP objects to a transport request
- Can be used to view objects within a transport request
- Can be used to release transport request
- Can be used to monitor transports
- Can not be used to start the import of a transport request
  ➔ Use transaction STMS_QUEUES

The Transport Organizer Web UI is **THE TOOL** to be used as single entry point for none ABAP-users to connect to CTS+.

The features described on this slide refer to SAP NetWeaver 7.0 SPS 14. Most of the features are also available in SPS 13.
Please Consider

What CTS+ does not

- Provide Collision Management
- Automate Change Recording
- Change Request Management
- Transport UWL configuration, Users, Groups, User-Role assignments

This slide reflects the current status of transporting portal objects with CTS+ and tries to explain what CTS+ does not.

Provide Collision Management

- Epa-files are imported without any respect to creation date of the epa-file.
- This means that iViews etc are imported without any respect to change date etc of already existing content. If changes have been done in the target system, they might be overwritten by an import.
- No version management for single items

Automate Change Recording

- You still have to create epa-files. There is no mechanism that tracks the changes that you do e.g. in the portal content studio.
- You have to create transport request and attach the epa-files to this transport request. This is done via the Transport Organizer Web UI. (direct integration into the Package Export Editor available from SAP NetWeaver SPS 13 onwards to attach epa directly to Transport Requests).

Change Request Management

- No link between a transport request and a change request that might have been posted by a user
- No control mechanisms that all the content that is needed for a certain change is included in a transport request

Transport UWL configuration, Users, Groups, User-Role assignments

- No automatic deployment
- No special mechanism to attach objects to a transport request

There might be additional things that you know from your current transporting mechanisms which are not provided by CTS+ and the portal transport mechanisms. In addition, there might be other objects that might require a transport and that are not listed on this slide.
If the CTS+ system and the portal landscape are on NW 7.0 SPS 13, the process for transporting portal content is the following:

2. Choose the ‘CTS’-Option before exporting – a transport request is suggested by the backend. The epa-file is automatically attached to the suggested transport request.
3. release the transport order.

**Improvements**

- CTS+ is integrated into the Package Export Editor – no need to change the tool for exporting content and choosing the right transport request.
- A Transport Request is provided automatically in the Package Export Editor.
- The request taken from the backend is the one that is marked as default request. If you don’t want to use this request, you can go to the transport organizer Web UI and create another one.
- For NW 7.0 SPS 13, you could create your own role containing the Package Export Editor, create a related link for the Transport Organizer and use this link to create your own transport request.
- In NW 7.0 SPS 14, the integration is even tighter and a link to the Transport Organizer is provided directly within the package export editor.
## Terms

### Loose Coupling
- No direct integration of CTS+ mechanisms into existing portal tools
- Additional tool needed to create transport requests, attach files and release transport orders
- Needs to be used for existing portal landscapes (< NW7.0 SPS13)

### Close Coupling
- Is what we are aiming for
- CTS+ mechanisms are available via additional buttons, links and input-fields within the existing portal transport tools

This slide explains the terms ‘loose coupling’ and ‘close coupling’ which are used on the following slides.
New fields have been introduced in the Package Export Editor for NW 7.0 SPS 13 / 14. The screenshot is taken from SPS 14.

If a CTS+ system is configured in the visual administrator, the user can choose whether he wants to use the ‘classical’ way of transporting via the file system or the CTS+. Therefore the Drop Down Box ‘Transport Method’ has been introduced.

The data for the fields transport request, owner and description is read from the CTS. There are different transport strategies that can be configured on the CTS system:

- **Smart**
  The system creates a transport request (if not already available) and flags it as the standard request.

- **Tagged**
  This is configured as the default value in the system. You must have created a transport request already in Transport Organizer Web UI and flagged it as the standard request.

The field ‘File name’ can only be edited if ‘File system’ is chosen as a transport method. If you used the file name for information purposes for the administrator, you would now be able to use the field ‘Note’ instead.

The field ‘note’ can be used to add some comments concerning the specific file. The input field is only available if ‘CTS’ is chosen as transport method. The text that you enter here will be added to the Transport Request documentation in the CTS system.

A more detailed description can be found on help.sap.com:
In NW 7.0 SPS 14, the transport for KM documents and folders has been enhanced. When exporting documents, you can now also choose a transport request directly from within the export screen. The mechanisms and the meaning of the input fields is the same as described on the previous slide about the package export editor.

In SPS 13, you can transport KM Documents via CTS+ as well. In SPS 13, loose coupling has to be used which means that you have to download the exported file and attach it manually to a transport order.

In both cases (SPS 13 and 14), the file is deployed to the import folder. You can view it under ‘Pending Imports’ and start the import whenever it fits.

A detailed description can be found on help.sap.com:
In NW 7.0 SPS 14, the transport for KM configurations (configarchives) has been enhanced. When finalizing an export, you can now also choose the option ‘Finalize via CTS’. On the following screen, a transport request can be chosen directly from within the export screen. The mechanisms and the meanings of the input fields are the same as described on the previous slide about the package export editor.

Please be aware that the import of a configarchive requires a restart. CTS+ does not perform this restart automatically and it does not check whether a transport request requires a restart.

A detailed description can be found on help.sap.com:
http://help.sap.com/saphelp_nw70/helpdata/en/e1/029c414c79b25fe10000000a1550b0/frameset.htm
Summary

If you already know CTS:

- Creation of transport routes is very similar (create a non-ABAP-System)
- Transport Organizer: Use ABAP Web Dynpro Application CTS_BROWSER. Do not use SE09 for non-ABAP systems like e.g. the portal

If you already know Portal Transports

- Existing Transport Tools are used
  - Transport Package Editor for EPA
  - KM Administration for configarchives
  - KM Export Tool for KM Documents
- CTS+ is (to become) part of existing transport tools
- CTS+ needs to be configured in the Visual Admin

CTS+ is the strategic Transport Tool for all SAP Business Suite customers to transport all kind of ABAP, non-ABAP and non-SAP objects

For details about the configuration in the Visual Administrator, please have a look at help.sap.com:
http://help.sap.com/saphelp_nw70/helpdata/en/37/dd368da16f476fad78ca8b51f9b75c/frameset.htm