

How To... Configure SAP HANA Extended Services - Advanced Model (XSA) for CTS

Applicable Releases:

SAP HANA 2.0 SP0

SAP NetWeaver 7.4 with SL Toolset 1.0 (latest available CTS Plugin)

SAP NetWeaver 7.4 SP10 (without SL Toolset)

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Document History

Document Version	Description
1.0	First official release of this guide
1.2.1	Minor addition to section 5.1, step 5
1.2.2	Correction to section 5.1, step 4

Typographic Conventions

Type Style	Description
<i>Example Text</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Cross-references to other documentation
Example text	Emphasized words or phrases in body text, graphic titles, and table titles
<code>Example text</code>	File and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example text	User entry texts. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
<code>EXAMPLE TEXT</code>	Keys on the keyboard, for example, F2 or ENTER.

Icons

Icon	Description
	Caution
	Important
	Note
	Recommendation or Tip
	Example

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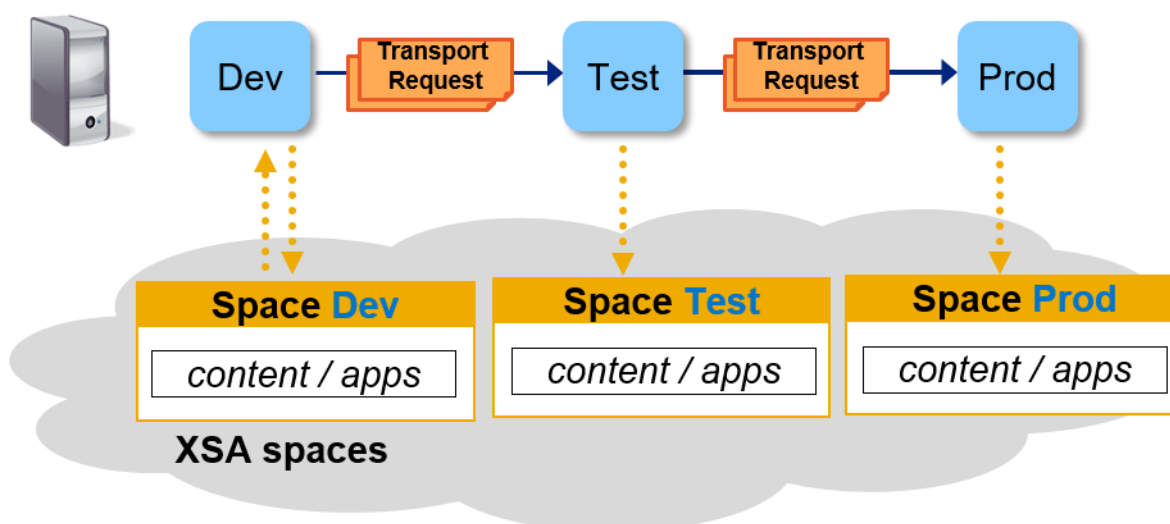
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1. Scenario

The Change and Transport System (CTS) of ABAP has been enhanced so that it can be used for transporting non-ABAP objects as well – known as CTS+ or enhanced CTS. In the remainder of this document, the abbreviation CTS is used for the system where the transport landscapes are configured and for the fact that CTS can also be used for non-ABAP transports.

In this guide, you can find information on how to use CTS for transporting applications running on SAP HANA Extended Application Services - Advanced model (XSA). This guide shows step by step - including sample screenshots - how the configuration is done. Afterwards, you will be able to transport XSA applications, bundled in Multi-Target Application (MTA) archives, to XSA spaces. If you already use CTS, e.g. to manage non-ABAP transports for applications like the SAP Enterprise Portal or to transport your BW ABAP objects, you might be interested in using the same tool to transport XSA applications as well. With the integration of XSA into CTS, this is now possible. You can model a landscape for your XSA spaces in TMS like for any other non-ABAP application supported by CTS. When doing that, you associate logical systems in TMS to the spaces you have in XSA.

The following figure shows a sample transport route modeled in CTS.



CTS does not limit your landscape to one source and one target system. All the options that you might know from TMS are available for systems associated with XSA spaces as well. You can e.g. have several systems in a row or more than one target system at once.

To implement the scenario, you need a physical system where CTS is configured. For the setup described in this guide you have to use a SAP NetWeaver system on release 7.4 (or higher).

In order to trigger the transport you have to create a transport request for the first system in the transport route (Dev in the example above) and attach the MTA archive that you want to transport to it using the Transport Organizer tool in CTS. Afterwards, you need to release the transport request. You can then start the import into the next logical system from the transport route, which will trigger the import into the corresponding XSA space.

2. Background Information

- XSA Developer Guide:
http://help.sap.com/hana/SAP_HANA_Developer_Guide_for_SAP_HANA_XS_Advanced_Model_en.pdf
- Guides for CTS: <http://scn.sap.com/docs/DOC-8576>
- The Multi-Target Application Model
<http://go.sap.com/documents/2016/06/e2f618e4-757c-0010-82c7-eda71af511fa.html>
- SAP Note for installing the SAP CTS Plug-In of [SL Toolset: 1665940](#)
  - Documentation for CTS including CTS Plug-In:
    - <http://help.sap.com/nwcts>
- As of SAP NetWeaver 7.4 SPS 10 CTS plug-in functionality is integrated in standard NetWeaver delivery. For documentation, see *Transporting Non-ABAP Objects in Change and Transport System*:
http://help.sap.com/saphelp_nw74/helpdata/en/bb/6fab6036a146baa58e42fac032ab7b/content.htm
- Central note for CTS+: [1003674](#)
- Security for the Enhanced Change and Transport System (CTS+):
http://help.sap.com/saphelp_nw74/helpdata/en/66/a77ac24d41471c96ea923d6de40a50/content.htm

3. Prerequisites

To be able to use CTS with XSA as described in this guide, your systems have to fulfill the following prerequisites:

- SAP HANA 2.0 SP0.
- CTS system: SAP NetWeaver 7.4 (or higher).
- If CTS system is on a state lower than SAP NetWeaver 7.4 SP10: CTS plug-in installed on the CTS system (taken from SL Toolset 1.0 SP06 at least – always use the newest available CTS plug-in).
- To enable HTTP-based deployment, implement the corrections that are referenced in SAP Note 2236955 in the CTS system.
- Enable basic authentication for XSA (see 5.2).

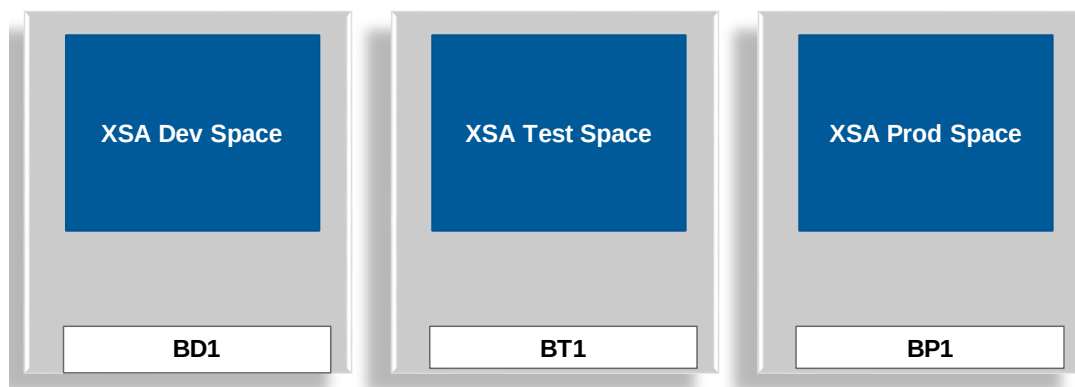
4. Restrictions and Recommendations

- You have to use a system as CTS system, which is on SAP NetWeaver 7.4, and at least on SP10 or has CTS plug-in installed (for SPs below SP10).
- At this point only a single MTA archive can be imported with a transport request. Because of that, you should not attach more than one MTA archive in a transport request. Additionally, multiple transport requests should be imported one by one.

5. Basic Configuration for CTS

You have to do configurations on your CTS system and on the XSA spaces to be able to use CTS. This chapter helps you with these configurations. It provides a step by step guide. (Remember: You may have to install the CTS plug-in on the CTS system.)

Sample Landscape



In the sample landscape shown in the picture above, you can see three systems associated with XSA spaces:

BD1 is the development system – also called export or source system

BT3 is the test system – also called import or target system

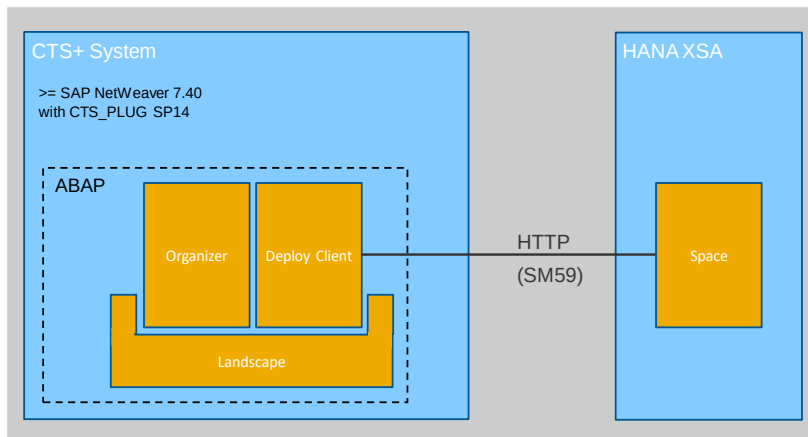
BP3 is the productive system – also called import or target system

This landscape is used as an example in the following chapters explaining the configuration.

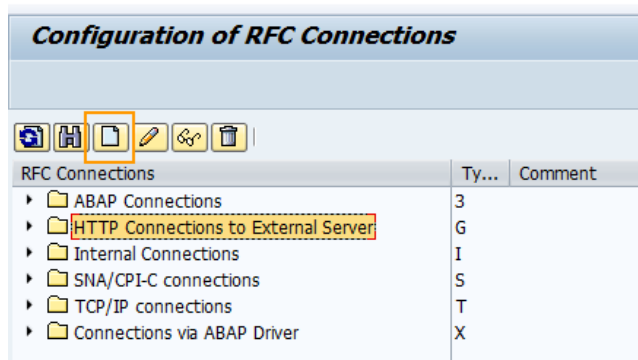
5.1 Configuring an HTTP Destination

You have to create an HTTP destination on the CTS system for every XSA target space (every system where you would like to execute imports).

For more information on configuring an HTTP destination in an ABAP system, see [Establishing a Connection Using a Destination \(SM59\)](#).



1. Go to transaction SM59.
2. Select *HTTP Connections to External Server* and choose *Create*.



3. Enter a name in the field *RFC Destination* e.g. BT1_DESTINATION (you need a destination for each target system).

CAUTION

The name that you enter in the field *RFC Destination* is automatically converted into upper case as soon as you save the destination. Later on, you have to enter the name of the destination when you define the target system in STMS. Make sure you use the correct lettering style. For an example, see the screenshot in the following step.

4. On the *Technical Settings* tab, enter the details of the target system. Enter the host name and port of the deploy-service application on your XSA installation as *Target Host* and *Service No*, respectively. Afterward, replace the target *org* and *space* names, and enter `/slprot/<target_org_name>/<target_space_name>/slp` as *Path Prefix*. Finally, configure the HTTP Proxy Options according to your network configuration.

Note

You can check the URL of the deploy-service application by executing one of the following commands:

```
xs version
```

```
xs apps (in the space where the deploy-service application is located)
```

**Note**

If the URL of the deploy-service application does not contain a port, leave the *Service No* field empty.

RFC Destination

Connection Test

RFC Destination: BT1_DESTINATION

Connection Type: G HTTP Connection to External Serv Description

Description

Description 1

Description 2

Description 3

Administration Technical Settings Logon & Security Special Options

Target System Settings

Target Host: mo-540084242.mo.sap.corp Service No.: 510

Path Prefix: /slprot/myorg/Test/slp

HTTP Proxy Options

Global Configuration

Proxy Host

Proxy Service

Proxy User

Proxy PW Status: is initial

Proxy Password

- Go to the *Logon & Security* tab and configure the logon to the target system according to your needs.

Activate the SSL security option navigating to SM59 -> <destination_name> -> *Logon & Security* tab -> *Security Options*, and there set the SSL property to *Active*.

Connection Edit Goto Extras Utilities System Help

RFC Destination DESTINATION

Connection Test

RFC Destination: DESTINATION

Connection Type: G HTTP Connection to External Serv Description

Description

Description 1

Description 2

Description 3

Administration Technical Settings Logon & Security Special Options

System ID

Client

Security Options

Status of Secure Protocol

SSL: ☐ Inactive ☒ Active

SSL Certificate: DEFAULT SSL Client (Standard) Cert. List

Authorization for Destination

SAP

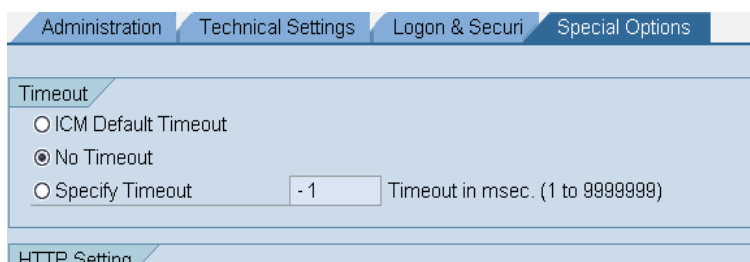
 Note

The XSA user that you enter in here needs to have at least the XSA role “SpaceDeveloper” in the corresponding XSA space.

 Note

All import processes of XSA content for this target system triggered by CTS use this username and password by default.

6. On the *Special Options* tab page, select *No Timeout*.



7. Repeat these steps for each target system.

5.2 Configuring the XSA Deploy Service

Since CTS supports only basic authentication, the deploy-service application on your XSA system should be configured to allow basic authentication. A prerequisite for that is to have a user with SpaceDeveloper role in the deploy-service’s org and space (which is typically the “SAP” space). To enable basic authentication, follow these steps:

1. Target the organization and space, where your deploy-service application is located:

```
xs target -o <ORG> -s <SPACE>
```

You can list the applications in a targeted space by using the following command:

```
xs apps
```
2. Set the environment variable BASIC_AUTH_ENABLED to “true” for the deploy-service application:

```
xs set-env deploy-service BASIC_AUTH_ENABLED true
```
3. Restart the deploy-service application, so that it sees this new environment variable:

```
xs restart deploy-service
```

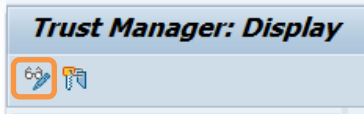
5.3 Import SSL Certificate

The CTS system must validate the server certificate in order to ensure the server identity and to prevent man-in-the-middle attacks. This means that the root certificate of the certificate authority that was used to sign the certificate configured for XSA needs to be imported.

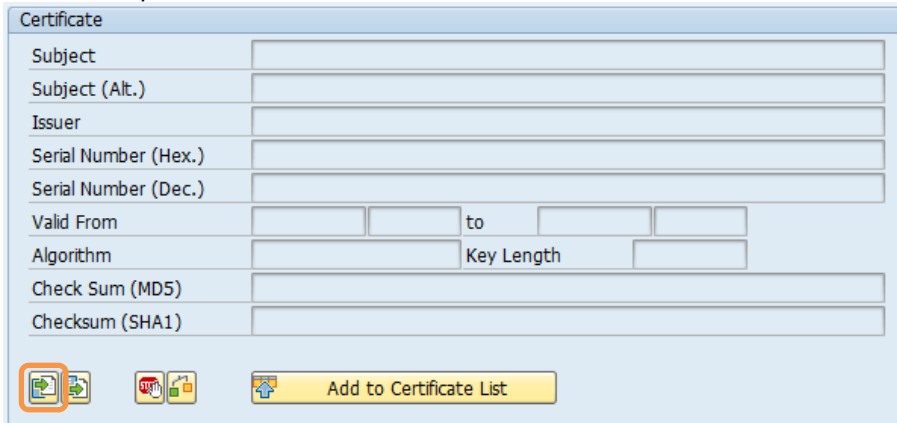
The following is a step-by-step description for importing the root certificate using the transaction STRUST.

1. Export the root certificate to a file.

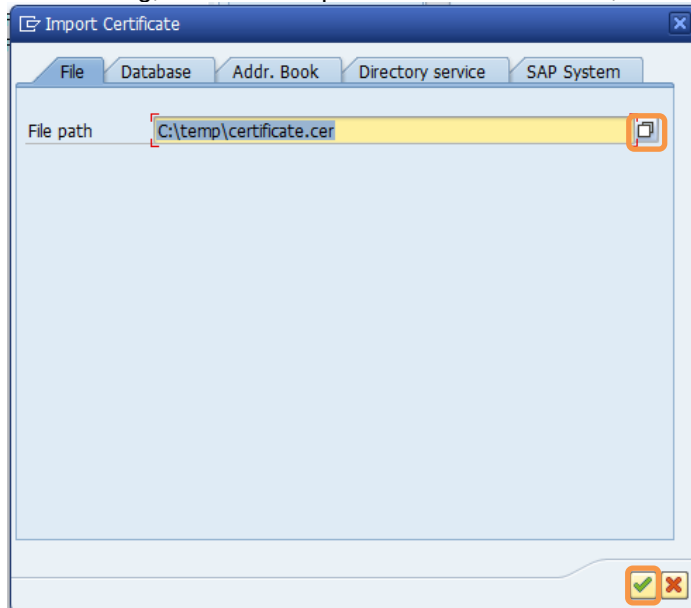
2. Log on to the CTS system and open transaction "STRUST". Open the edit mode by clicking on the "Display<->Change" button.



3. Select the certificate list on the left, which you specified in 5.1.5.
4. Click the *Import Certificate* button on the bottom left.

The image shows the 'Certificate' dialog box. It has a title bar with the text 'Certificate'. Below the title bar, there is a list of fields: Subject, Subject (Alt.), Issuer, Serial Number (Hex.), Serial Number (Dec.), Valid From, Algorithm, Key Length, Check Sum (MD5), and Checksum (SHA1). Each field has a corresponding input box. At the bottom left, there is a button labeled 'Import Certificate' with a small icon of a document with a magnifying glass. At the bottom right, there is a button labeled 'Add to Certificate List' with a small icon of a document with a magnifying glass.

5. In the dialog, enter the file path of the certificate file, which you exported before.



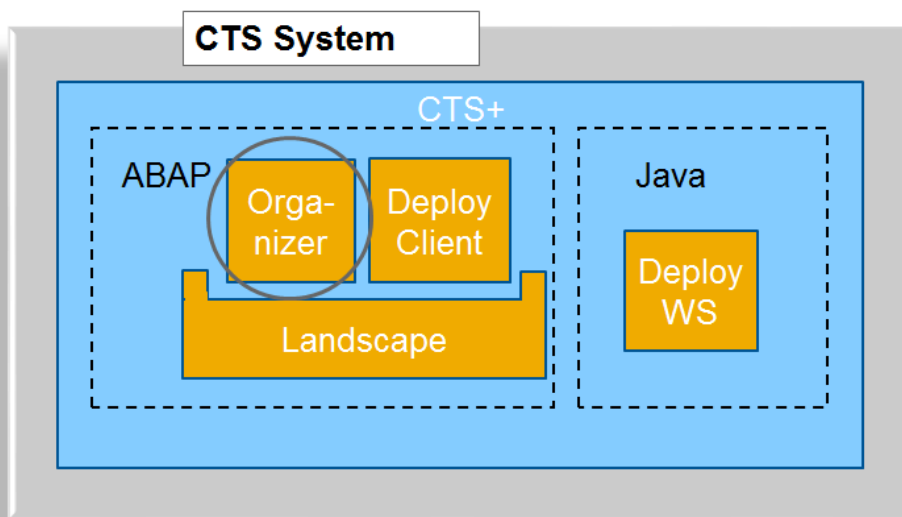
6. Click *Add to Certificate List* and leave the edit mode by clicking the *Display <-> Change* button on the top.

Certificate	
Subject	CN=mo-a08a0cd06.mo.sap.corp, OU=XS, O=SAP SE, SP=BW, C=DE
Subject (Alt.)	dNSName=*.mo-a08a0cd06.mo.sap.corp, dNSName=mo-a08a0cd06.mo.s...
Issuer	CN=mo-a08a0cd06.mo.sap.corp, OU=XS, O=SAP SE, SP=BW, C=DE
Serial Number (Hex.)	1E:B5:EF:DF:C3:DC:00:94
Serial Number (Dec.)	2212938536265187476
Valid From	07.11.2016 10:03:06 to 12.11.2017 10:03:06
Algorithm	RSA with SHA-256 Key Length 2048
Check Sum (MD5)	F3:28:24:C7:E9:C3:B6:95:49:B0:CA:D2:34:A7:D5:FD
Checksum (SHA1)	66:15:3A:94:15:23:9B:03:FC:88:CE:BD:48:7B:FD:85:D6:24:36:AB

7. The connection test for the connection in transaction „SM59“ should be successful after importing the certificate.

Test Result		Response Header Fields
Detail	Value	
Status HTTP Response	200	
Status Text	OK	
Duration Test Call	910 ms	

5.4 Configuring the Transport Organizer Web UI



CTS provides Transport Organizer Web UI, an ABAP Web Dynpro application, which is used to get detailed information about transport requests (for example, default request, target systems) and to create transport requests and attach objects manually. You have to activate the ICF service CTS_ORGANIZER to run and use this application.

In order to use the Object List Browser to see a detailed list of objects attached to a transport request (as part of one file) you need to activate the ICF service CTS_OBJECTLIST_BROWSER.

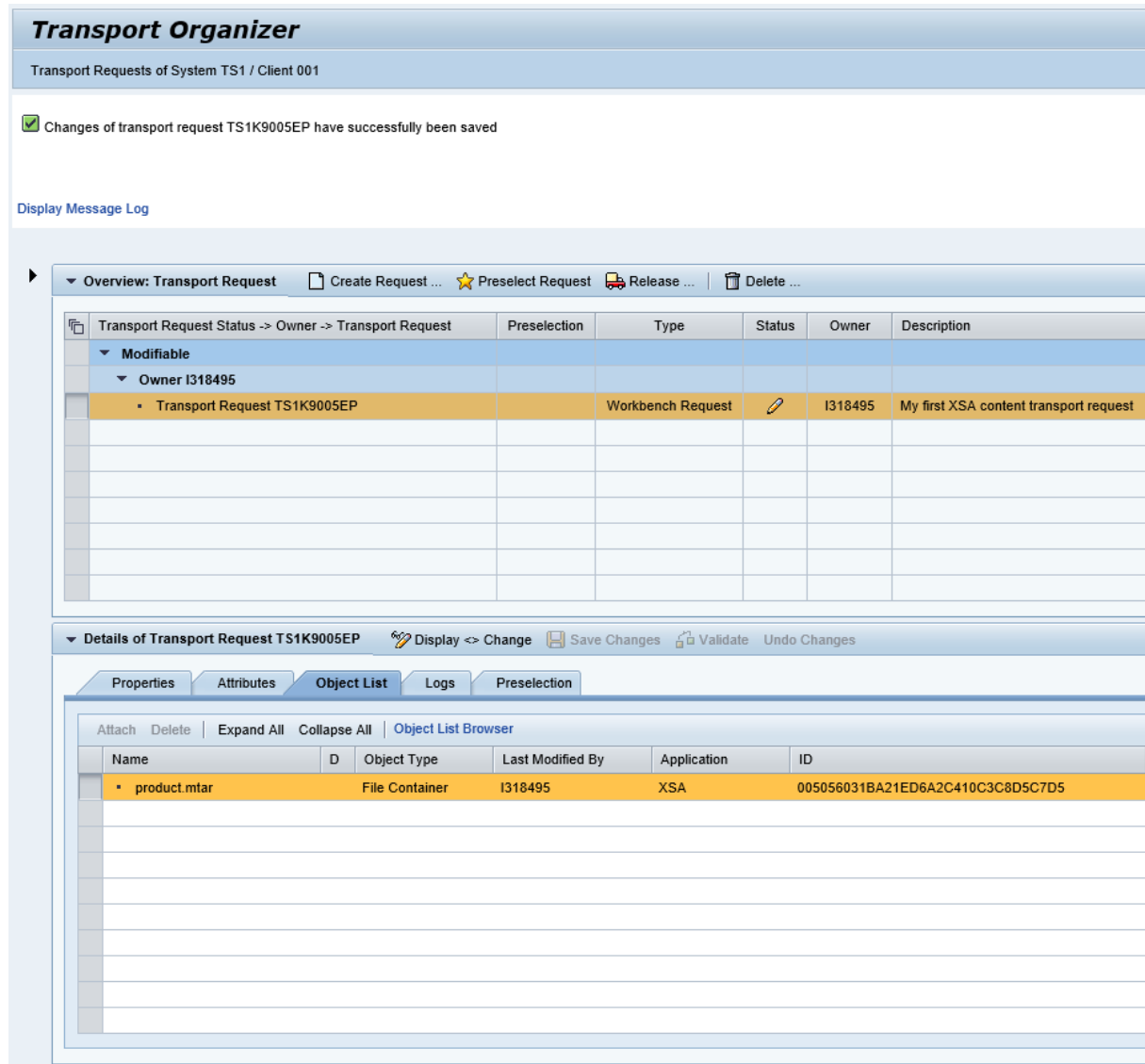
For more details, refer to

http://help.sap.com/saphelp_ctsplug20sm71/helpdata/en/e5/998566c2174196a12b72e7c7af51e7/frameset.htm

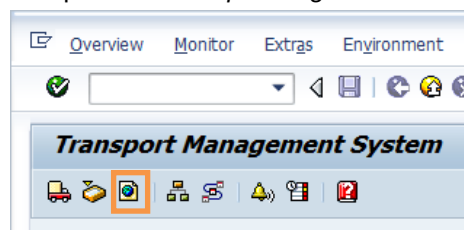
If CTS+ is already in use on the CTS system where you are doing the configuration, the services should already be activated. If not, activate them now.

If you receive error messages when running this application later on or if you don't want to activate all ICF services read the error messages carefully and activate the services named in the error messages via transaction SICF.

The following figure shows the *Transport Organizer* Web UI.



To open the *Transport Organizer* Web UI, go to transaction *STMS* in CTS system and click on 



6. Configure XSA as Application Type

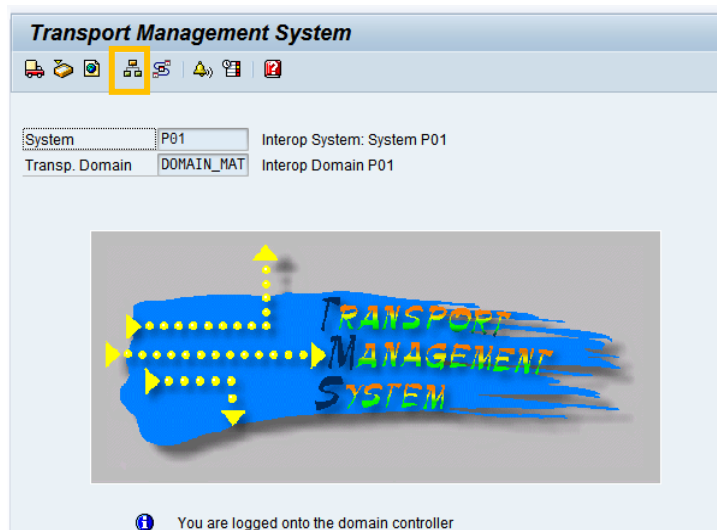
In order to use CTS with XSA, you have to define an application type for XSA in CTS. This application type will then be used as a unique identifier for XSA content in CTS. For the XSA integration with CTS, the application type XSA is used.

Documentation on how to do this is provided on the SAP Help Portal:

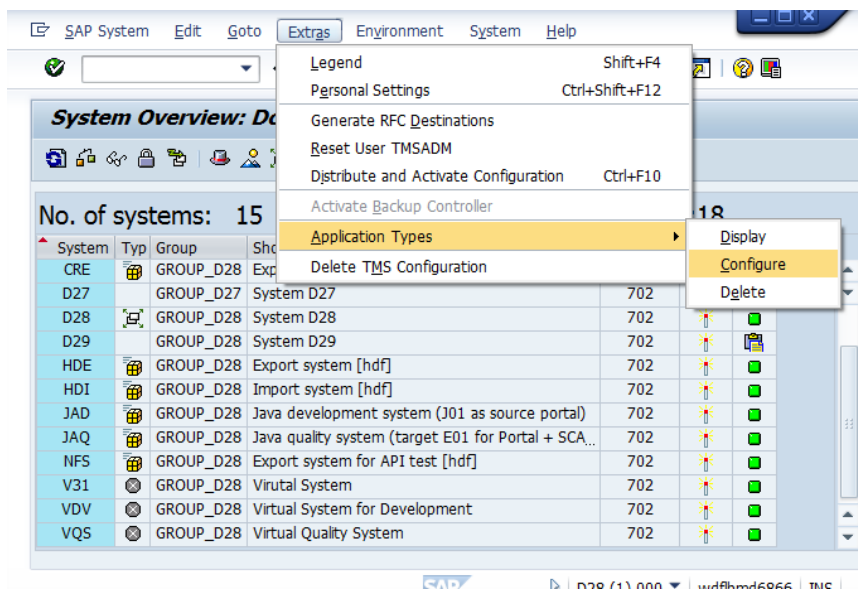
https://help.sap.com/saphelp_nw74/helpdata/en/02/4c3be45416486ea116cff53831e50a/content.htm

The following steps describe how the application type is created and managed in CTS.

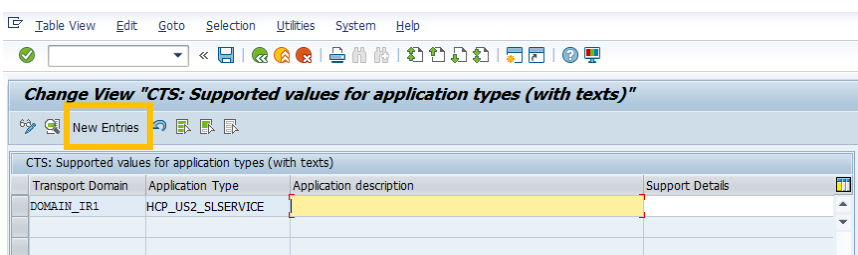
Log on to your CTS system (Domain Controller) and open transaction *STMS*. Go to the *System Overview*.



To create a new application type, go to *Extras* → *Application Types* → *Configure*.



You can see a list of application types already created in your system. Choose *New Entries* if XSA is not yet part of the list.



On the next screen, you can enter your application type and some details. Use "XSA" in here.

Use "Multi-Target Application (MTA) on XSA" as *Description* and "BC-XS-SL-DS" as *Support Details*. This is where you can get support in case of issues with transporting of XSA content.

Change View "CTS: Supported values for application types (with texts)"

Transport Domain: DOMAIN_IR1
Application Type: XSA

CTS: Supported values for application types (with texts)

Description: Multi-Target Application (MTA) on XSA
Support Details: BC-XS-SL-DS

Save your entry and click Yes to distribute the new application type through your landscape.

Distribution of configuration for application types

Should changed configuration of application types be distributed immediately?

Yes No Cancel

The new application type has been saved. Click *Back* to return to the list of application types.

Change View "CTS: Supported values for application types (with texts)"

Transport Domain: DOMAIN_IR1
Application Type: XSA

CTS: Supported values for application types (with texts)

Description: Multi-Target Application (MTA) on XSA
Support Details: BC-XS-SL-DS

The new application type XSA is now part of the list.

Change View "CTS: Supported values for application types (with texts)"

Transport Domain	Application Type	Application description	Support Details
DOMAIN_IR1	XSA	Multi-Target Application (MTA) on XSA	BC-XS-SL-DS

7. Configure the XSA Transport Landscape

The configuration of the XSA transport landscape consists of several steps, which will be detailed in the following chapter.

As an example, we will setup a landscape of three systems as depicted in chapter [Configure the Transport](#), i.e. a development system (BD1) as source system, a test system (BT3) and a production system (BP3) as target systems.

1. CTS identifies systems or transport nodes via 3-digit system IDs (SIDs). You cannot derive an SID from an XSA space directly. So think at first about the 3 digit SIDs that you would like to use to identify your XSA space.



SIDs consist of three characters (letters and / or numbers). They have to be unique within your transport domain, but they may be shared between different applications (i.e. Portal and SLD if they run on same NW AS JAVA instance).

2. As soon as you know the SIDs for your XSA spaces, you can start creating the representations for these systems in TMS and connect them with the help of transport routes. Details are described in the chapter [Configure the Transport Landscape in TMS](#) below.
3. Finally, the import system has to be configured on CTS and XSA side as described in the chapter [Configuration for Import](#).

7.1 Configuring the Transport Landscape in TMS

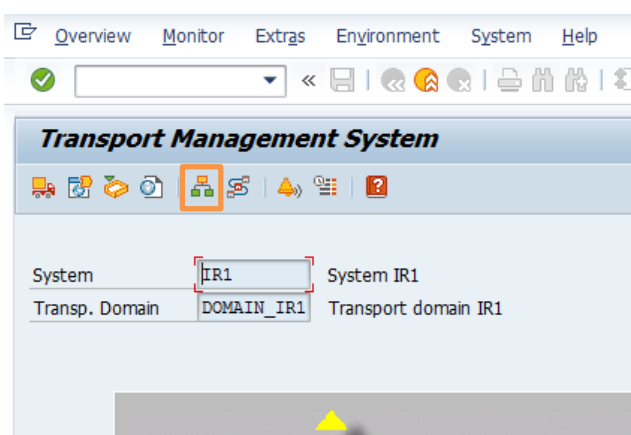
Create the systems of your XSA transport landscape as non-ABAP systems in TMS. These systems, identified with the corresponding SIDs will represent the XSA spaces in TMS. Their SIDs are representing them in TMS.

Documentation on how to create non-ABAP systems in TMS is provided on the SAP Help Portal: https://help.sap.com/saphelp_nw74/helpdata/en/bf/e4626214504be18b2f1abeeaf4f8e4/content.htm. This chapter shows how setting up the systems would work in our example.

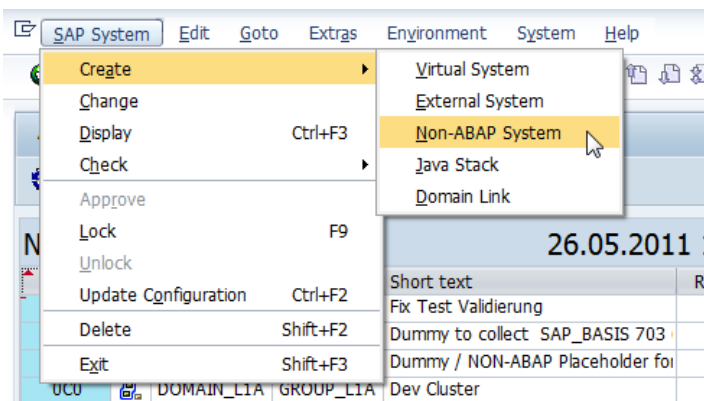
7.1.1 Configuring the Development System (Export System)

Define a source system (BD1) for your XSA development account. You therefore have to select the *Activate Transport Organizer* option when creating the system representation in TMS.

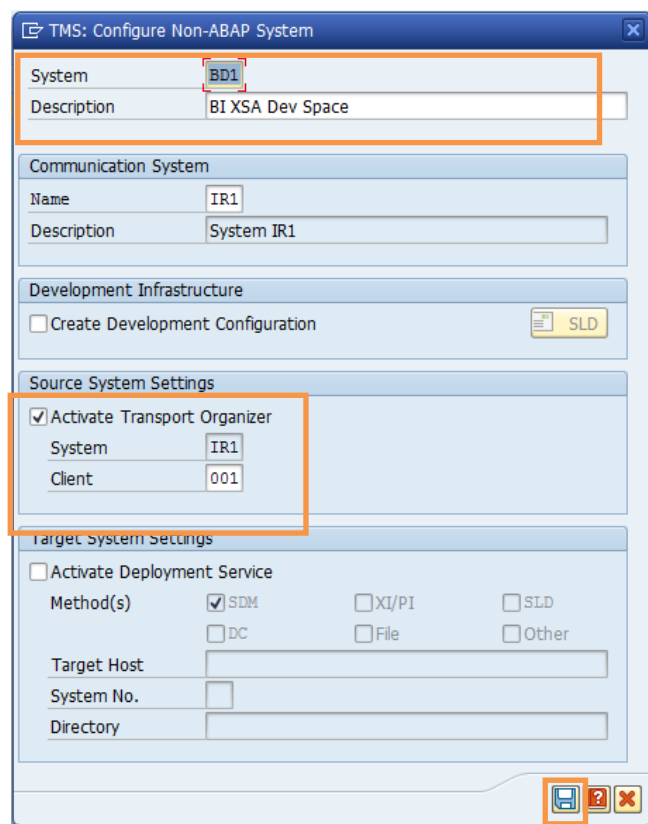
Log on to your CTS system (domain controller). Open transaction *STMS* and choose *System Overview*.



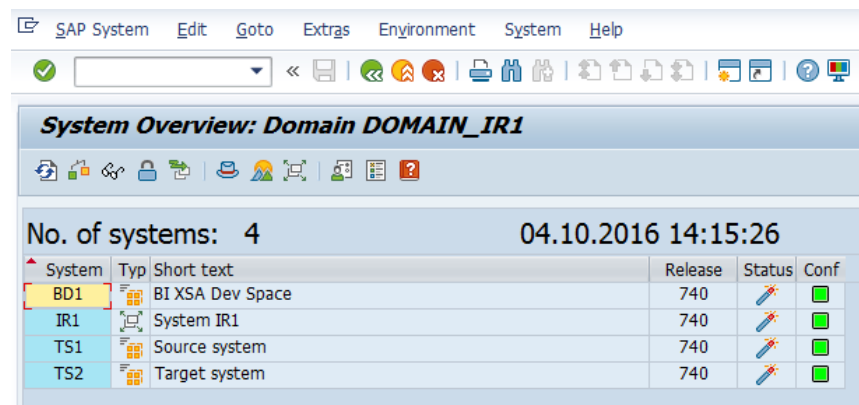
Choose SAP System → Create → Non-ABAP System



Enter the SID of your development system (BD1 in our example) in the field *System*, a *Description* and choose *Activate Transport Organizer*. Select an appropriate client and then choose *Save*.



The system will be created and the system list will show up.



All XSA users that should be allowed to attach XSA content to transport requests have to have a corresponding user in the client of the CTS system that you are using for transports (= the client where you activated the Transport Organizer Web UI). To transport non-ABAP objects, you can use the authorizations of the delivered role SAP_CTS_PLUS.

CAUTION

Do not use this role directly. Instead, use it as a template and copy it to your own role (Z_*). For more information on the creation and maintenance of roles in ABAP take a look at the SAP Help Portal:

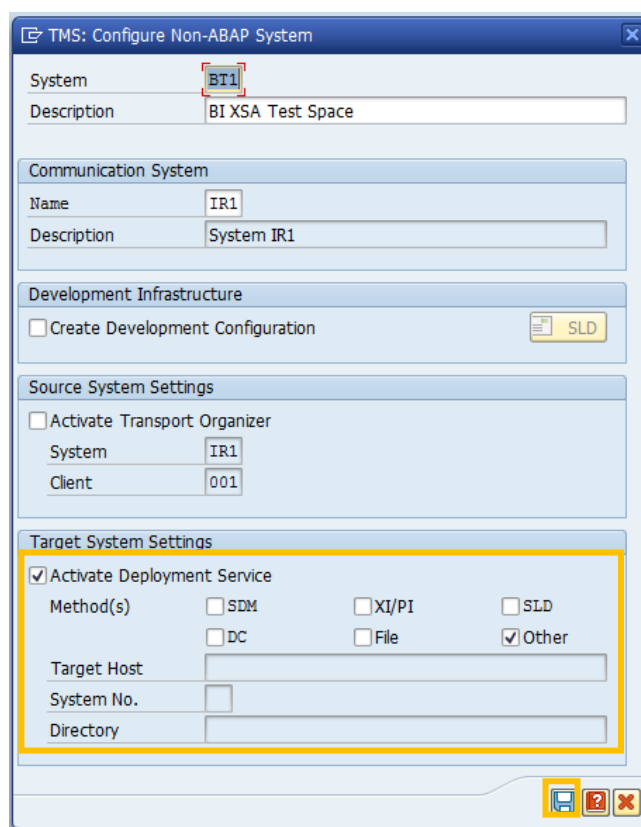
http://help.sap.com/saphelp_nw74/helpdata/en/52/6714a9439b11d1896f0000e8322d00/frameset.htm.

Also take a look at SAP note [1003674](#) for recent updates on authorizations required for the different releases.

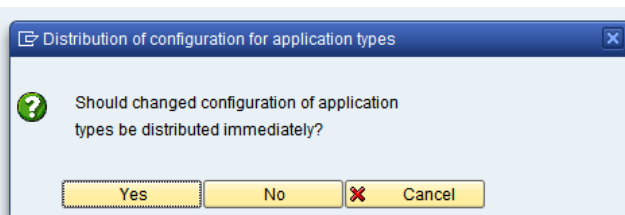
7.1.2 Configuring the Test and Production System (Import Systems)

All other systems of your XSA landscape – like the test and production systems ('BT3', 'BP3') have to be defined as target systems. This chapter describes how this is done.

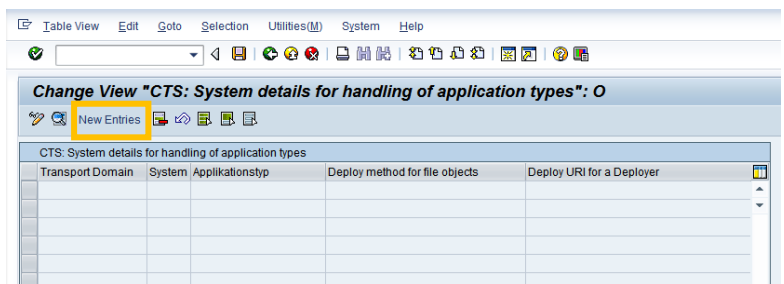
When you create a non-ABAP target system, which should use this new application type XSA, you have to choose *Other* as *Method(s)*. Click *Save*.



Click *Yes* to distribute the configuration.

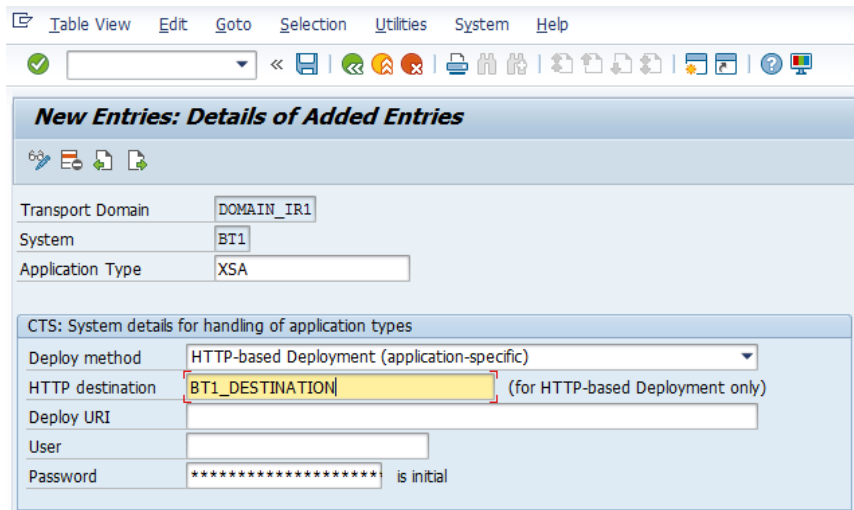


When saving the non-ABAP system, you will be asked to define the deployment method for your system. Choose *New Entries*.

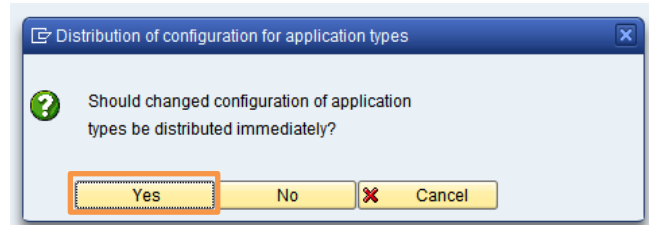


On the next screen, choose XSA as *Application Type* (F4-help). Choose the *Deployment Method* HTTP-based Deployment (application-specific).

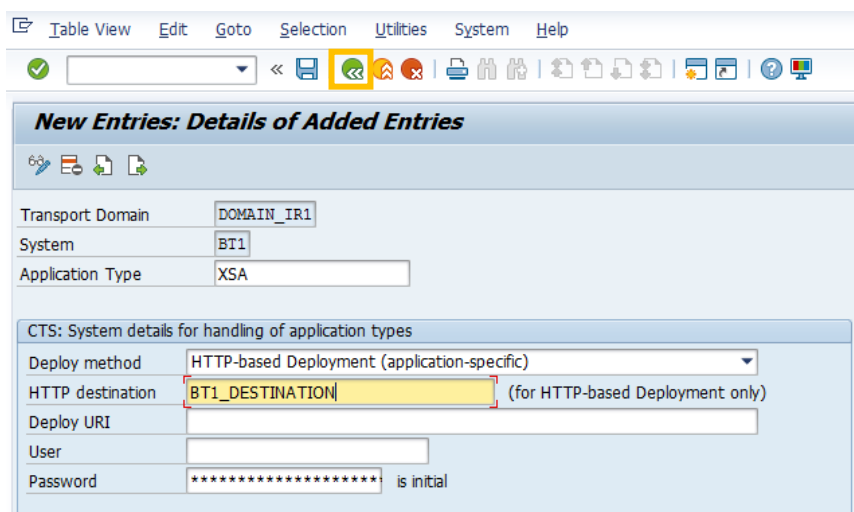
Enter the HTTP destination that you configured for this system before in chapter 5.1 [Configuring an HTTP Destination](#). Make sure that you use the correct writing – this entry is case-sensitive. Destinations are stored in upper case.



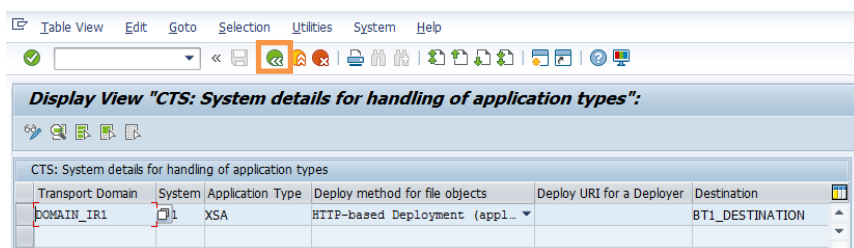
Save your entries and choose Yes to distribute the new application type through your landscape.



Your entry is now saved. Click *Back* to reach the list again.



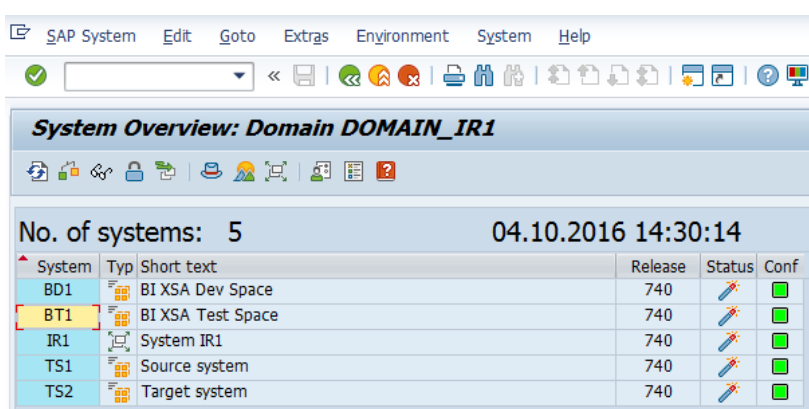
You can now see your details for handling the application type XSA. Choose *Back* to return to the system.



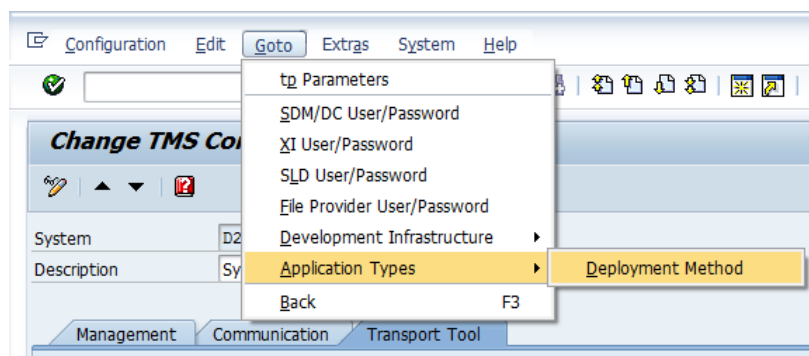
Create any other target system that you might need (e.g. here for production system –'BP3') as shown before.

You can also extend the configuration of existing systems to be able to use them with new application types. To do so, proceed as follows:

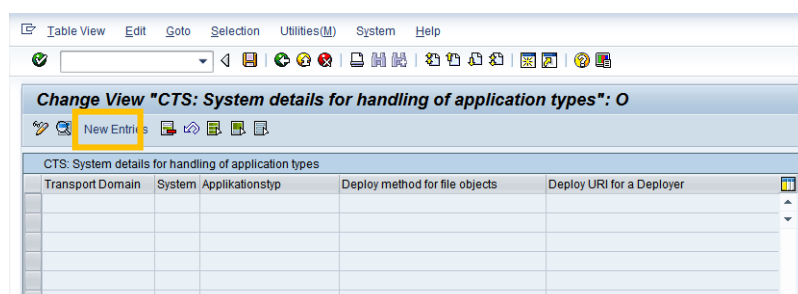
Go to the system overview in TMS and double-click on the system where you would like to extend the configuration.



In the details of your system, choose *Goto* → *Application Types* → *Deployment Method*



Choose *New Entries* and proceed as described above for the creation of new systems.



Note

The parameters `DEPLOY_DATA_SHARE` and `DEPLOY_WEB_SERVICE` are not required if you configure CTS+ for HTTP-based deployment. Nevertheless, they are automatically added

to newly created non-ABAP systems in any case. In case of CTS+ using HTTP-based deployment, these parameters are simply ignored at runtime. The same is valid for the parameter CTS_FILE_PROVIDER_URI. There is no need to delete these parameters – neither if they were added automatically when you created the system nor if you decide to change the configuration of a certain non-ABAP system. The transport tool check will only report errors for these parameters if they are used for at least one transport configuration in the respective system.

You can check if the system can be reached: Return to system overview, select the target system and check the import settings using *SAP System* → *Check* → *Transport Tool*. To get the details about reported errors for non-ABAP systems, go to transaction SA38 and execute the program RSTMS_NONABAP_SUPPORT (available on SAP Netweaver 7.40, starting with SP10 or with CTS plug-in from SL Toolset 1.0 SP12).

7.1.3 Transport Landscape: Defining Transport Routes

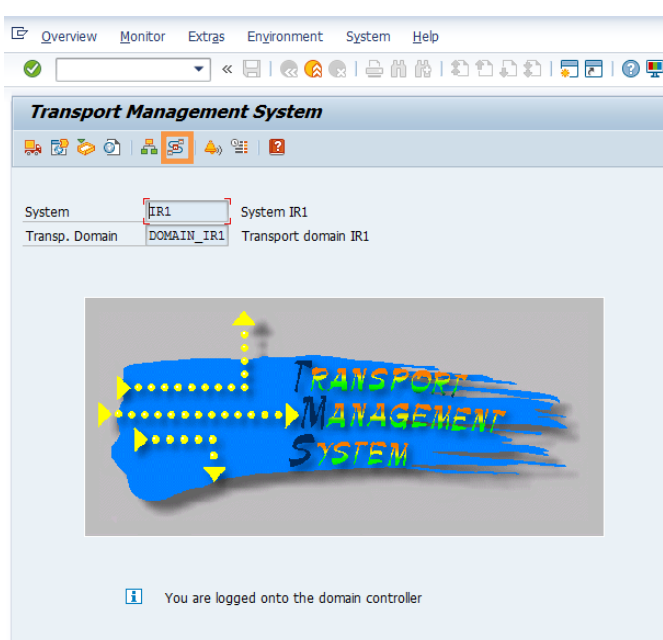
Now that you have created representations for the different systems (BD1, BT3 and BP3 in our example) in TMS, you have to connect them with the help of transport routes.

Use client-independent transport routes.

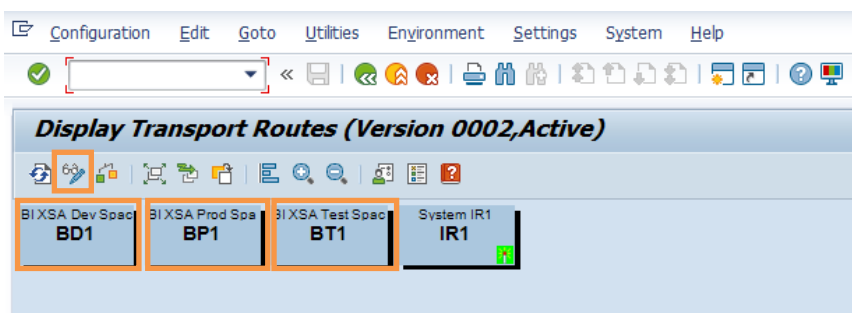
For details on how to configure transport routes, take a look at the SAP Help Portal:

http://help.sap.com/saphelp_nw74/helpdata/en/44/b4a1df7acc11d1899e0000e829fbbd/frameset.htm

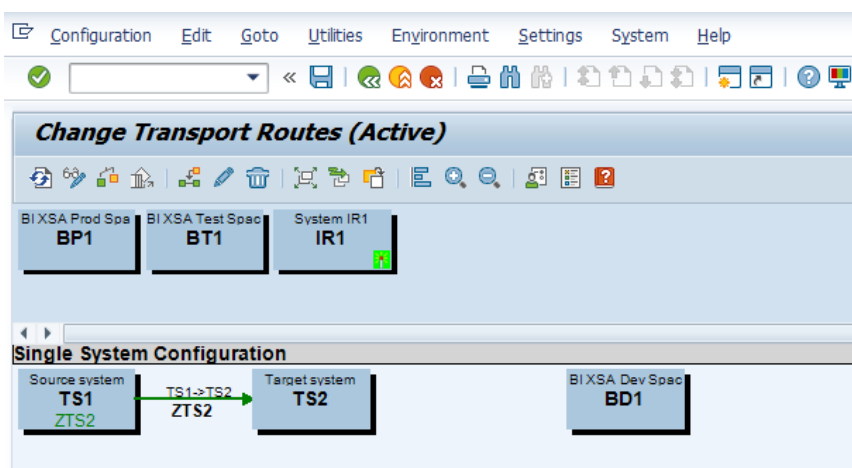
Log on to your CTS system (domain controller). Open transaction *STMS* and go to *Transport Routes*



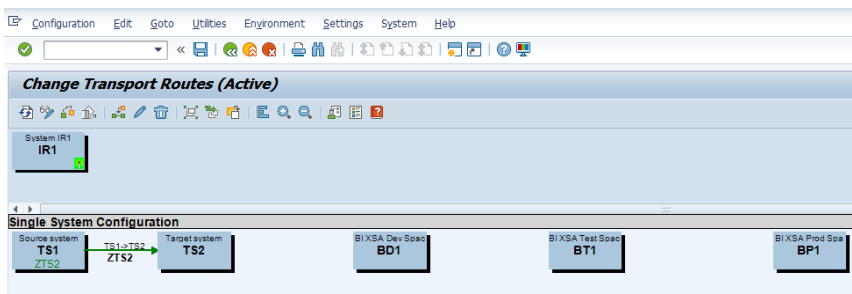
The systems BD1, BT3 and BP3 that you just created are shown in the upper row of systems. The systems shown in here are not yet connected by transport routes. Switch to *Edit* mode.



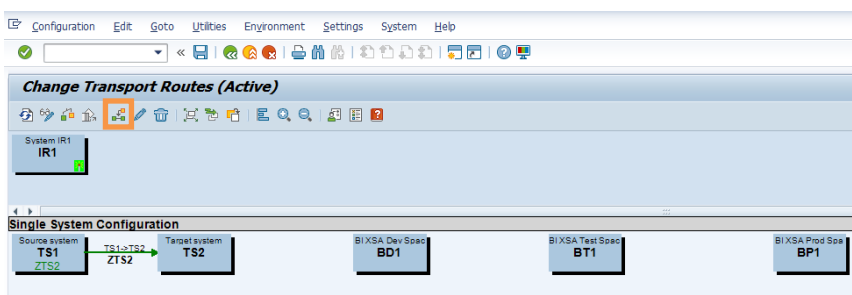
Click on system *BD1* and then click in the area where the transport routes are shown.



Repeat the previous step for BT3 and BP3



Choose *Add Transport Route* and your mouse pointer will become a pencil. Draw a line from BD1 to BT3



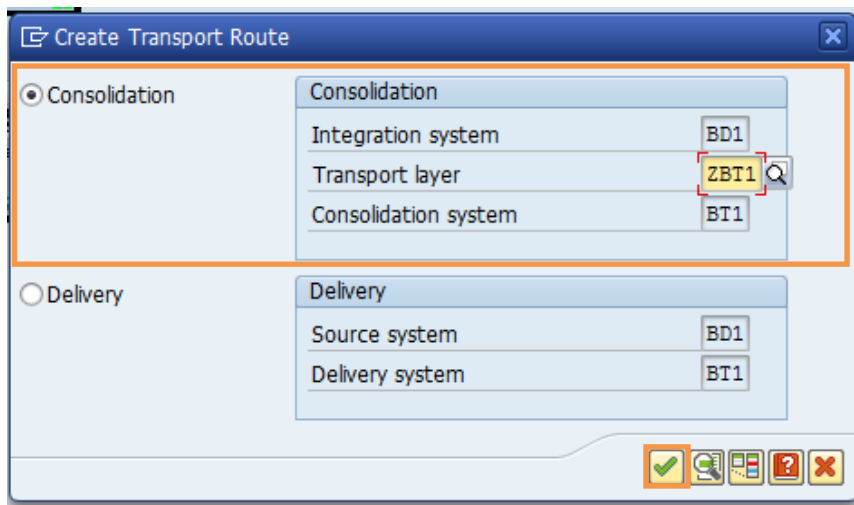
A dialog box opens. Make sure that *Consolidation* is selected. A consolidation route is needed to connect a development system to e.g. a test system (from a system where you do an export to a system where you would like to import the transport request).

Enter a name for the *Transport Layer*, e.g. ZBT3. The name has to start with a Z.

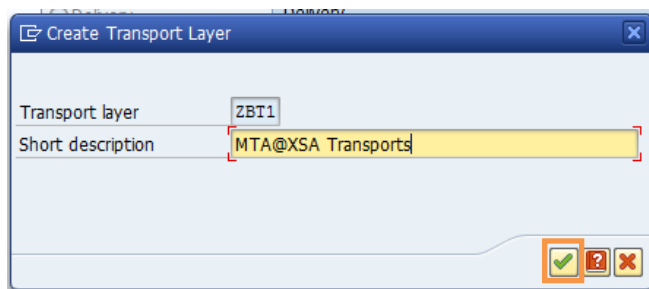
 Note

Create one standard transport layer (this is the default), not two separate ones for SAP- and custom transports as you might know it from configuring transport routes for ABAP systems.

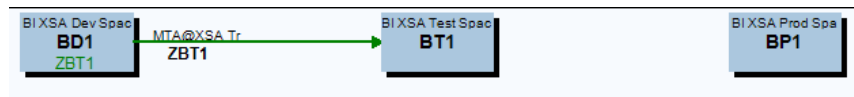
Choose *Transfer*.



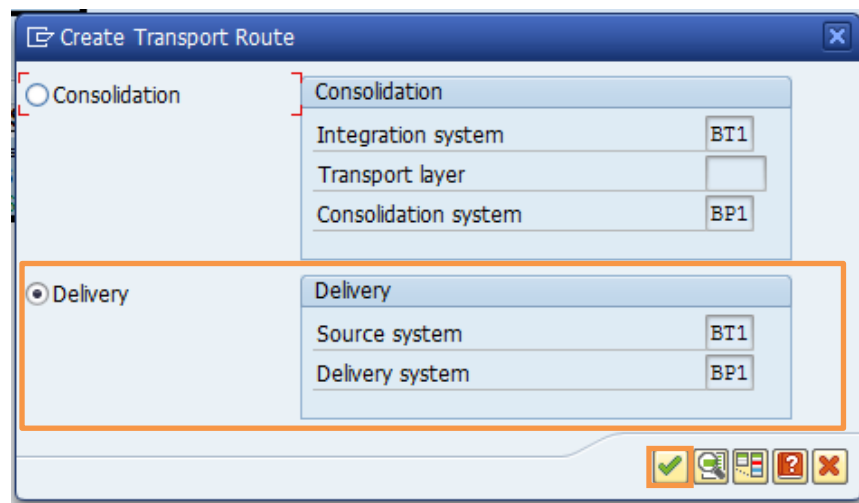
You have to enter a *Short Description* for the transport layer in a second window if the transport layer does not yet exist. Choose again *Transfer*.



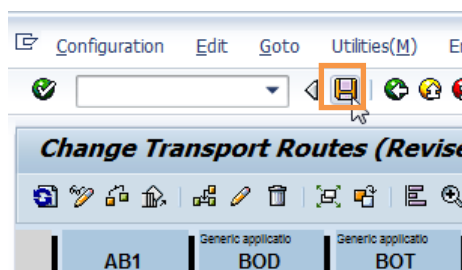
A transport route has been added connecting BD1 with BT3. Now draw a line from BT3 to BP3.



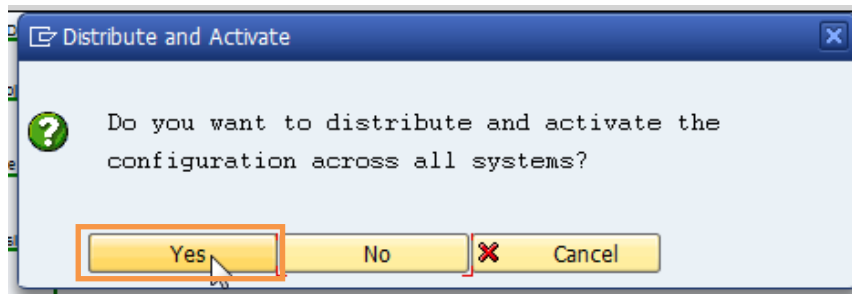
Choose *Delivery* for this transport route and click on *Transfer*. When you set up a delivery route, you are making sure that all transport requests that are imported into the route's source system are automatically flagged for import into the route's target system. Choose *Transfer*.



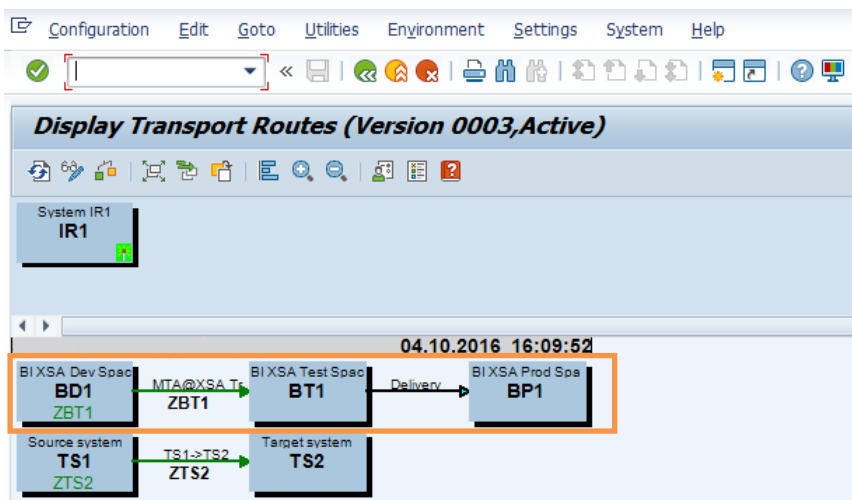
Save the configuration



Confirm that you would like to *Distribute and Activate* the configuration



The transport route for BD1, BT3 and BP3 is now part of the configuration

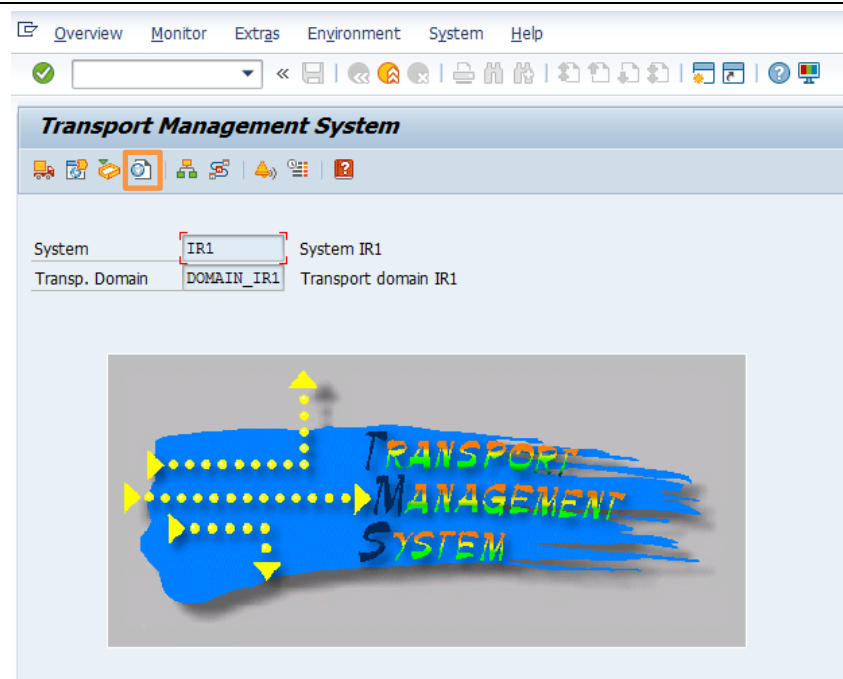


8. Use XSA with CTS

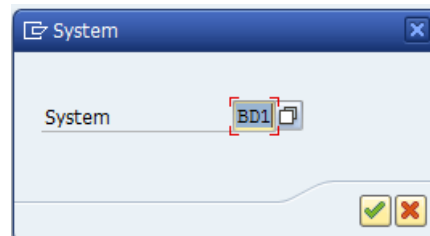
8.1 Select Objects and Attach to Transport Request

This section shows how to attach an MTA archive to a transport request.

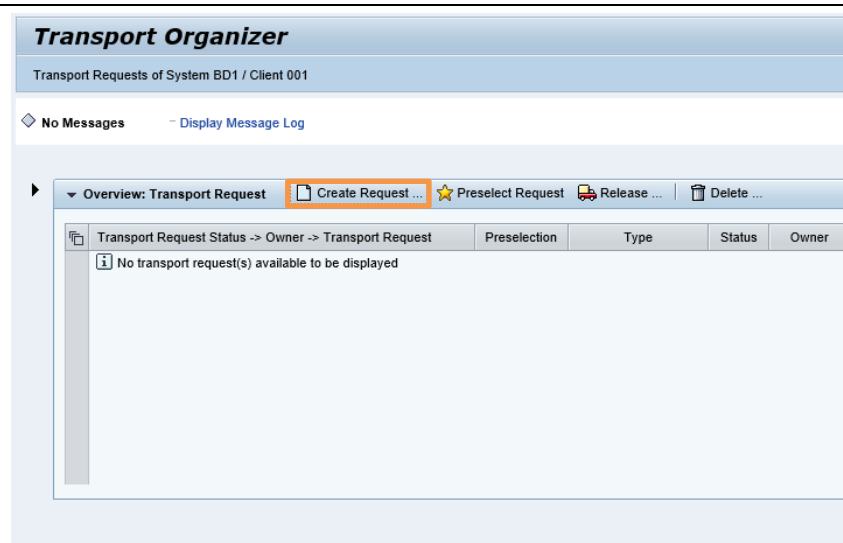
To add an MTA archive to a transport request in CTS, you first have to start the Transport Organizer. To do this, log on to your CTS system, open transaction STMS and choose *Transport Organizer Web UI*.



Select the first system in the transport route (source system), in our example *BD1*.



The Transport Organizer Web UI will open. You can either select an existing transport request or create a new one. To create a new one, choose *Create Request*.

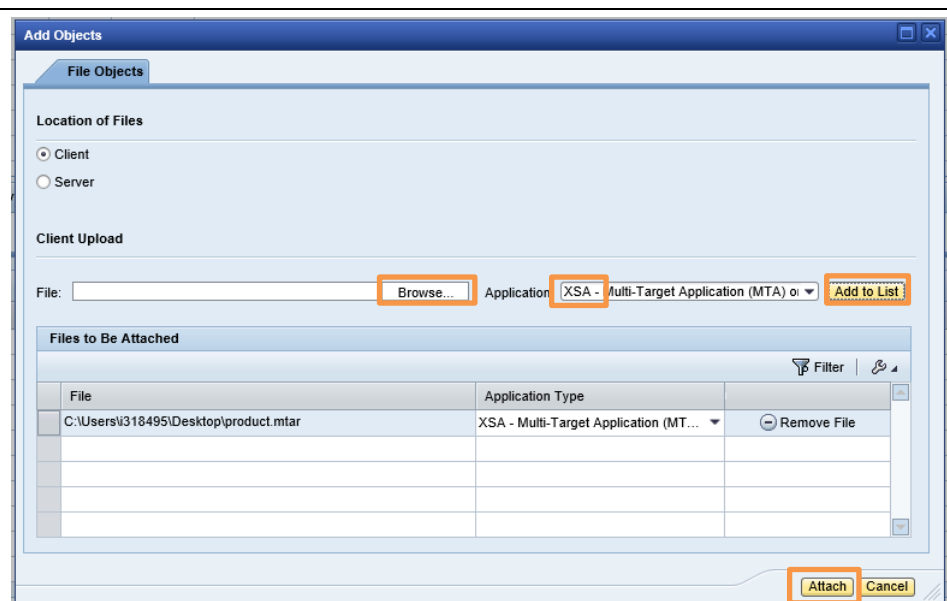


Enter a *Description* and choose *Create*.

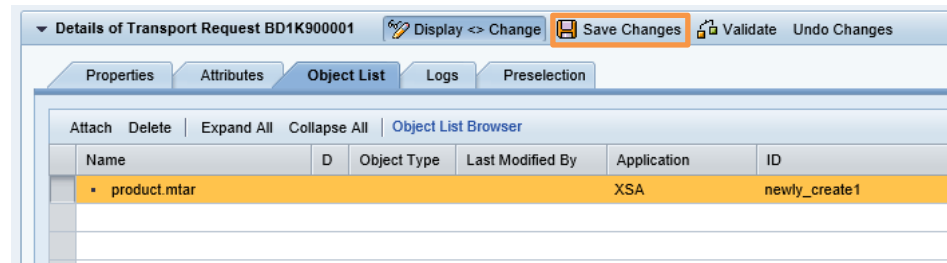
Afterwards, you can see the newly created transport request in the overview.

To attach an MTA archive to the transport request, select the *Object List* tab, choose *Display <-> Change*, and then *Attach*.

In the next dialog, select the MTA archive on your local machine by using the *Browse* button. Then, select XSA as the *Application* and then choose *Add to List*. Finally, choose *Attach*.



As a result, you can see the attached MTA archive in the object list. Click on *Save Changes*.



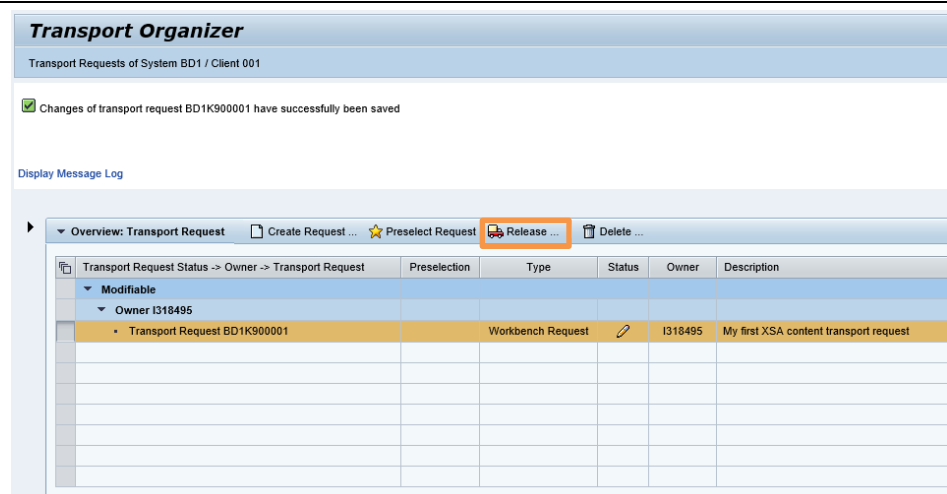
After you have added an MTA archive to a transport request, you can release the request. To do that, mark the request and choose *Release*.

After releasing the request, it cannot be changed any more. It is no longer visible in the list of modifiable requests in the *Transport Organizer Web UI*.



Note

Attach only a single MTA archive to the object list. Multiple archives in one transport request are not supported at the moment.



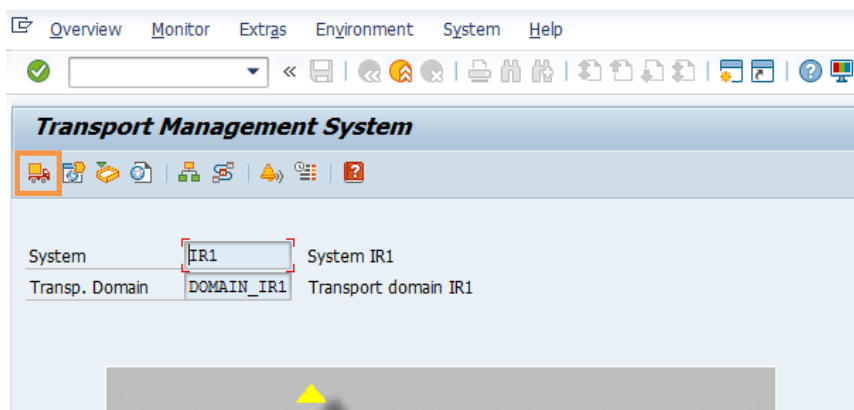
For information on Transport Organizer Web UI, see

http://help.sap.com/saphelp_ctsplug20sm71/helpdata/en/df/7a1d1a4f0d4805b46c61a0d53cb4c7/frameset.htm.

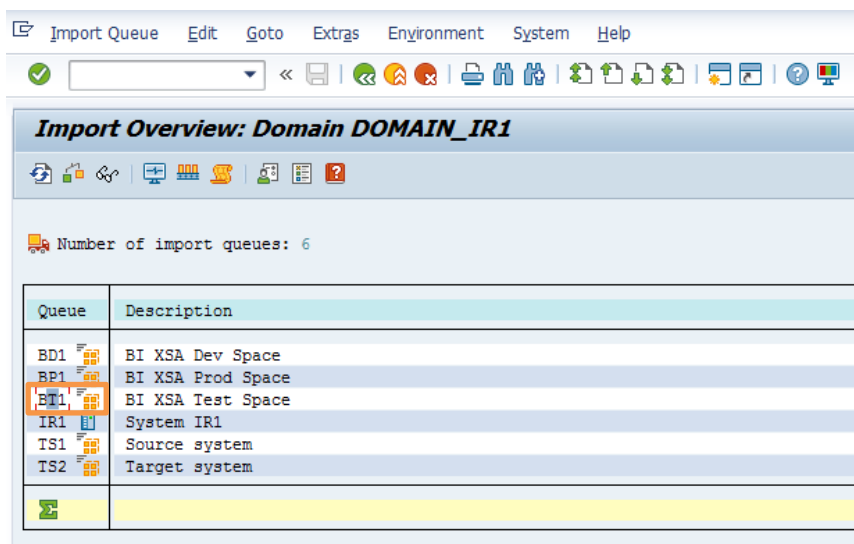
8.2 Importing Transport Requests with XSA content

All transport requests that are released become part of the import queue of the first target system. You can now import them one by one.

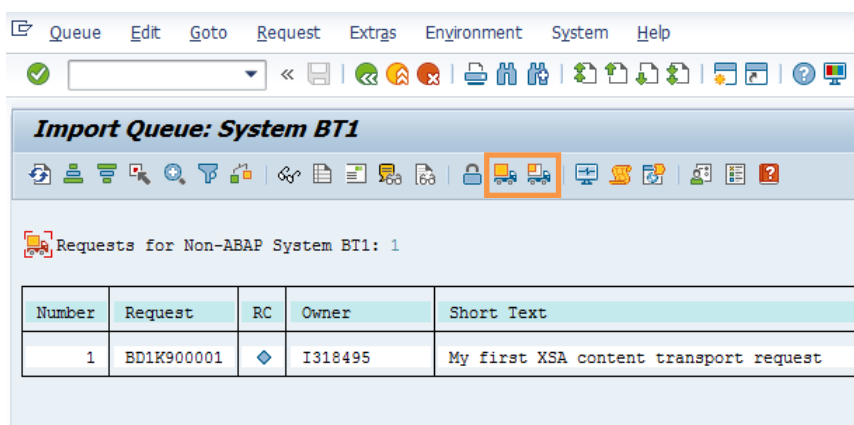
Log on to your CTS system and open transaction *STMS*. Choose *Import Overview*.



Double-click on the SID of your target system.



Mark the request that you would like to import and choose *Import Request*.



Choose *Continue* to start the import immediately or define an appropriate time frame or event when the import should be started and choose *Continue* afterwards.

The screenshot shows the 'Import Transport Request' dialog box. The 'Transport Request' field contains 'BD1K900001' and the 'Target System' is 'BT1'. The 'Date' tab is selected, showing 'Start Date' options: 'Immediate' (selected), 'At Start Time' (with 'Planned Start' as 14.10.2016 and 'No Start After' as empty), and 'After Event' (with 'Event' and 'Parameters' fields). The 'Options' tab is also visible. The 'Continue' button is highlighted with a red box.

Confirm that you want to import the request (click Yes).

The screenshot shows the 'Start import' dialog box. It contains the text: 'The import is being executed asynchronously. The dialog or batch process will be released after the import has been started.' Below this, it asks 'Import transport request BD1K900001 into system BT1 ?'. The 'Yes' button is highlighted with a red box.

After having imported a request, a return code will be shown to tell whether the import was successful or not. Take a look into the next chapter to learn more about return codes.

The screenshot shows the 'Import Queue: System BT1' window. It displays a table of requests for Non-ABAP System BT1. The 'RC' column is highlighted with a red box, showing a green square for the first request and a red square for the second request.

Number	Request	RC	Owner	Short Text
1	BD1K900001		I318495	My first XSA content transport request
2	BD1K900002		I318495	My second XSA content transport request

For more details on performing imports, see http://help.sap.com/saphelp_nw74/helpdata/en/09/ca0f3a878f46e9a5a32e666131d2ba/content.htm.

**Note**

As of CTS Plug-In 2.0 SP02 (SL Toolset 1.0 SP05), a new browser-based Import UI is available. As of SAP NetWeaver 7.4 SP10, it is integrated in the NetWeaver delivery. Alternatively, you can use the Import UI to perform imports. For more information, see http://help.sap.com/saphelp_nw74/helpdata/en/4b/b9a1222f504ef2aa523caf6d22d1c9/contnt.htm.

8.2.1 Meaning of Return Codes - Reading the Deployment Log-File on CTS side

Four different return codes can appear in the import queue:

- RC = 0: The import has been successfully completed. Icon in the queue:
- RC = 4: Warning that not everything was ok but import in principle worked. Icon in the queue:
- RC = 8: Errors for the content occurred when importing. A subsequent transport is required. Icon in the queue:
- RC = 12: There were issues with the tool during the import. The request can be imported again after the issue has been fixed. Icon in the queue:

You can double-click on the icon for the return code for one transport request to learn more about the import. Especially if the RC is not zero, it might be interesting to find out what went wrong. Clicking on the return code will bring up the overview of the transport logs.

You can click on the icon in front of the step *Deployment* to view the deployment log.

Step	Time	Status
Selection for Import	07/20/2011 11:16:37	(0) Successfully Completed
Import	07/20/2011 13:45:23	(0) Successfully Completed
Deployment	07/20/2011 13:45:45	(0) Successfully Completed

You can see the deployment log. For more details, you can use the expand-buttons.

```

*****
Deployment
Transport request : JA1K900008
System           : JA2
tp path          : tp
Version and release: 376.02.14 720

Start deployment of EP
Deploy Webservice environment (2011-07-20 11:45:31.0114 +0:00)
Communication data provided (2011-07-20 11:45:31.0124 +0:00)
Begin deployment (2011-07-20 11:45:31.0125 +0:00)
End deployment (2011-07-20 11:45:45.0042 +0:00)

Stop deployment of EP

Highest return code is 0
Deployment
End date and time : 20110720134545
Ended with return code: ==> 0 <==
*****
  
```

8.3 Advanced Usage of XSA with CTS+

8.3.1 Tools for managing transports

In some cases, XSA content should be kept in sync, resp. transported together with content from other applications, for example ABAP backend content. There are tools in SAP Solution Manager that can help you in managing collections of change requests and keeping changes done in different systems together. These tools are called Change Request Management (ChaRM) and Quality Gate Management (QGM). Details for both are provided on the Service Marketplace at <https://service.sap.com/changecontrol>.

