

Preparation of SLD for Transports Using CMS in XI

Applies to:

SAP XI 3.0 & 7.0

Summary

This web log brings out the problems one would face while using CMS to transport the Repository and Directory objects and solutions or workarounds for the same.

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Introduction

I have been working with XI and CMS from quite a some time. At my customer location, they have been using CMS only for transporting the repository objects but not the directory objects. For this, they have been using File Transport mechanism, but with the same Technical and Business systems names all the way from XID to XIQ and to XIP. This made me think and research to straight out the things and result is this weblog with all my learnings with respect to the problems I have faced.

This weblog would address the below problems –

- CMS always works at the SWCV level but not at namespace level
- The Directory objects when transferred using CMS, the source Business Systems must be replaced by the target environment Business Systems.

XI Landscape and SLD

In general, the XI landscape would fall in to one of the categories –

- A single master SLD connected to all the XI systems
- Separate SLD for each of the XI systems in the landscape (i.e. XID, XIQ and XIP)

In any of the above case, the SLD must be organized systematically so that, the transportation replacement of the business systems would be automatic with less effort.

Repository & SLD

The XI repository is linked to SLD through Product, Software Component and Software Component Version objects. The part of the SLD which is used to organise these objects is the *Software Catalog* link on the SLD home page.

Software

[Software Catalog](#)

Search for products and software components.

In order to create any repository objects, one must create a Product, a Software Component (SWC) under that product. This SWC must be imported in repository in order to get the Software Component Version (SWVC). Then one can create name spaces under it and go on building the scenario.

When the scenario is completed in development and needs to be moved to QA, We need to make sure that the target SLD has the related Product/SWC and SWCV imported in it (In case of a maste SLD, this step is not needed).

Go to the SWC in SLD.

Software Component Version: APPLICATION, 1.0 of example.org
 Name: APPLICATION
 Version: 1.0
 GUID: a0c89b61-629d-11da-8412-d1f60a011533
[Usage Dependencies](#)

[Remove](#)

[Export](#)

[Products](#)

[Installed Systems](#)

APPLICATION, 1.0 of example.org is used in products:

[MyApplication, 1.0 of example.org](#)

The SWCV can be exported to the target SLD by clicking on the *Export* button.

Download

Download your CIM data: **sld/active** (Database).

 [Download file](#) (1 KB)

Instances: 11

Once the button is clicked, we would get the above screen. Download the file and save it to your disk.

Now log on to the target SLD.



[Home](#) [Administration](#) [Help](#)

System Landscape Directory

Go to *Administration* by using the link on the SLD home page. For this, the user must have SLD Administrator privileges.

Content

[Import](#), [Export](#) and [Backup](#)

Upload and download CIM models and data.

Use the *Import* link in the above screen to import the Product/SWC and SWCV to the target SLD.

Import Selection

Upload CIM models and data to the current namespace: **sld/active**.

File:

Select the file previously saved on to the disk using the browse button and click on *Import File*.

Note: One might get a warning while importing saying that, the objects already exists, if the product is already existing in the target SLD and you are importing a new SWC under it. In such case, please continue to import.

The target namespace for the special import already contains data for one or more export lines. Continuing this import may corrupt the state of your data.

Import

Import CIM models and data to the current namespace: **sld/active** (Database).

Ensure that this import will not cause an inconsistent state of your data.
If you are uncertain about the consequences of this import, you should cancel it.

On clicking *Import anyway*, the below screen would appear (The number of objects imported varies depending on the number of objects exported).

Import finished: All 11 objects loaded

Now this SWCV must be assigned to the repository and the directory track of the CMS (The detailed explanation is not part of this weblog).

With this we are ready to import the repository objects to quality environment.

The Problems and Workarounds

In CMS, once the objects are imported to the quality system, they will be visible under the tab – Consolidation. Before moving to production, once has to consolidate all the exports from development in to one patch so that, they can be moved to production at once. The problem here is, it works at the SWCV level.

If the scenario which is getting exported to production has got multiple interfaces (namespaces) under it, all of them would be exported to production, which one would not want, if the other scenarios are still under testing.

The work around for this would be –

- Create a separate SWCV for each of the interface you create in XI
- Once the objects are exported from DEV to QA using CMS, use the consolidation step before exporting any other objects using CMS. This way, only the imported interface objects would be consolidated and packed together. Similarly any further exports must also be consolidated then and there.

Directory & SLD

The XI Directory is linked to SLD through Technical and Business Systems. One must organise these systems properly in order to get the directory objects moved to subsequent environments properly.

The part of the SLD which is used to organise these objects are Technical and Business Landscape links on the SLD home page.

Technical Landscape

View and define systems, servers, and clients of your system landscape.

Business Landscape

View and configure business systems for use in the Exchange Infrastructure (XI).

The Technical System represents the physical system in the landscape. The respective Product and the SWC related to the scenario being worked on, must be assigned to this system while we create it.

A Business System sits on the Technical System. This Business System would be used in the Configuration Scenario in the XI directory.


Once we are done with the development of the Directory objects, it is now time to move them to quality environment. Before doing this, We must prepare the SLD for transport.

In case of master SLD –

- We need to create separate groups for business systems such as DEV, QA and PRD. In business system landscape.

Business Landscape

View and configure business systems for use in the Exchange Infrastructure (XI).


Group: Filter: 


Name	Technical System	Client
<input type="checkbox"/> AP	AP_INBOUND on ap	

- Click on the *group* combo box and select *Edit Groups* to add new groups to SLD. Then select *Create*.

To define a new Business System Group, please fill in the fields below.

Business System Group




Name: 

Location: 

Integration Server:

- Enter Name, Location and select the Integration Server. Repeat this step for creating 3 groups and assigning the respective Integration Servers of the XI systems in 3 environments. This would make sure that, the Business Systems newly created would be assigned to the proper group for transportation.

- Once the above step is completed, we have to create a new Technical System (if not already created for QA system) or use an existing Technical System for this.
- Create a new Business System on the above created/existing Technical System.

Business System: .GLSQL_QAS		◀ ▶
<input type="button" value="Save"/> <input type="button" value="Remove"/> <input type="button" value="Export"/>		
Name:	GLSQL_QAS	
Description:	<input type="text"/>	
Administrative Contact:	<input type="text"/>	
Business System Role:	Application System	
Related Integration Server:	<input type="text" value="xiq1"/> ▼	
Group:	QA	
<u>Transport Targets:</u>		
Transport Source:		
Technical System:	GL_INBOUND_QAS on ql_inbound_qas	Change...
Logical System Name:		
Installed Products:	<input type="checkbox"/>	GL_INBOUND_QAS on gl_inbound_qas
Software Components:		

- Select the quality XI system integration server name as the *Related Integration Server* as. Note that the Transportation Source is empty here. Our next step is to get this populated with the Dev Business System.
- One must set the Transport Targets for the business system which was used in development (shown in below screen shot) environment to the one that was created for quality assurance system.

Business System: GLSQL_DEV		◀ ▶
<input type="button" value="Save"/> <input type="button" value="Remove"/> <input type="button" value="Export"/>		
Name:	GLSQL_DEV	
Description:	<input type="text" value="Dev Business system for"/>	
Administrative Contact:	<input type="text"/>	
Business System Role:	Application System	
Related Integration Server:	<input type="text" value="xid01"/>	
Group:	Dev	
Transport Targets:	QA GLSQL_QAS	
Technical System:	GL_INBOUND_SYSTEM on ql_inbound	Change...
Logical System Name:		
Installed Products:	<input type="checkbox"/> GL_VENDOR_PRODUCT_NAME, 1.0 GL_INBOUND_SYSTEM on ql_inbound <input type="checkbox"/>	
Software Components:		

- Click on *Transportation Targets*.

Business System Targets

Add, change or remove Business System targets.

Targets for Business System [GLSQL_DEV](#)

Group: Target:

- Select the QA group and the select the newly created Business System under it (The assignment of Business Systems to various groups is dependent on the selection of the proper Intergration Server associated with them).

Now the Business System for QA environment looks like this –

Business System: GLSQL_QAS		◀ ▶
<input type="button" value="Save"/> <input type="button" value="Remove"/> <input type="button" value="Export"/>		
Name:	GLSQL_QAS	
Description:	<input type="text"/>	
Administrative Contact:	<input type="text"/>	
Business System Role:	Application System	
Related Integration Server:	<input type="text" value="xiq1"/>	
Group:	QA	
<u>Transport Targets:</u>		
Transport Source:	GLSQL_DEV	
Technical System:	GL_INBOUND_QAS on gl_inbound_qas	Change...
Logical System Name:		
Installed Products:	<input type="checkbox"/>	GL_INBOUND_QAS on gl_inbound_qas
Software Components:		

Note that the Transportation source has been populated.

Now I believe what you have to do in order populate the empty transportation target for this QA system. Yes. We have to create another Business System for PRD system and assign it as the transportation target for this QA system.

Incase of multiple SLDs –

- One has to import the technical and business systems created on the DEV SLD to QA and PRD SLDs separately by following the procedure shown for exporting and importing the SWVC components in this document.
- One has to make sure that in each environment, the Transportation Targets are selected appropriately, so that, when design objects are exported they are replaced by the appropriate business systems in the target environment.

Note: The Technical and Business Systems for various R3 systems involved in the landscape must also be created in the SLD and associated with appropriate group in SLD.

Now go on with CMS to import the objects in to quality environment and further to production environment. **Happy Transportation..!!** 😊

Related Links

<https://www.sdn.sap.com/irj/sdn/thread?threadID=648452&messageID=4494446#4494446>

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