1 XI Configuration for SkillSoft Integration

1.1 Introduction

SAP Enterprise Learning is a learning management system. Customers who use a learning management system often buy eLearning or web based courses from content providers. SkillSoft is one of the leading content providers. SkillSoft delivers such content from a hosted web location so that customers do not have to download and deploy content in their own content management systems. SAP Enterprise Learning delivers standard integration points to SkillSoft so that customers do not have to build a custom integration with SkillSoft.

The integration is done using SAP Exchange Infrastructure (SAP XI).

Note

SAP XI is now referred to as SAP NetWeaver Process Integration (SAP PI). It is SAP's enterprise application integration (EAI) software, a component of the NetWeaver product group used to facilitate the exchange of information among a company's internal software and systems and those of external parties. Before the current version, SAP PI was called SAP Exchange Infrastructure (SAP XI). We have used the term XI through out the document because most consultants and customers still use this term.

1.2 Preparation

Configuring the integration has two parts. Configuring the SAP Enterprise Learning backend and configuring SAP XI. This document does not cover configuring the SAP Enterprise Learning backend. Please refer to chapter 8 in the book for that information. This is a step by step guide for XI integration configuration between Enterprise Learning and SkillSoft.

Audience for this document

This is a step-by-step guide for XI Integration Configuration between Enterprise Learning and SkillSoft. These tasks are performed by an experienced XI consultant. This document is meant to be read by such an experienced XI consultant. The XI integration work, including preparation and testing, is expected to take about 40 hours.

1.2.1 Import XI content EA-HR 600 into XI Integration Repository.

All relevant objects are located in http://sap.com/xi/EA-HR/Global namespace. Do not make any changes or copy any objects to other software component versions.

Caution

We import EA-HR 600 in this example (see Figure 1.1). If we had been on EhP2, we would import EA-HR 602 instead.

Figure 1.1 EA-HR 600

1.2.2 Creating a SkillSoft Namespace

Create a Skillsoft namespace under your company's software component version Z_EA_HR and namespace http://sap.com/xi/Z_EA_HR in the repository. All objects identified in Figure 1.2 must be created. These objects are based on four synchronous messages initiated by ECC.

- CourseEnrollmentRequest: To enroll a learner in a course

- CourseQuery: To launch a course
- LearningProgressQuery: To track course progress
- CourseEnrollmentCancellationRequest: To cancel and enrollment

These messages are discussed in detail later in this section.

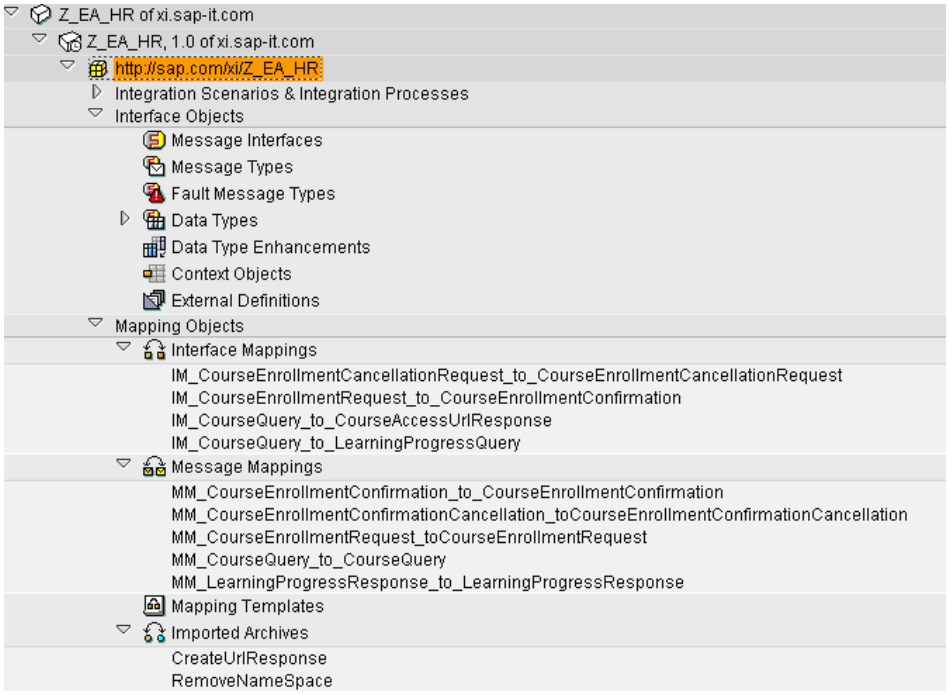

Figure 1.2 Objects in Z_EA_HR

Tip

If you are reading this in electronic form, zoom in to see all the details of the screen grabs.

1.2.3 Create necessary objects

Create a http://sap.com/xi/SkillSoft namespace under SWCV "Z_SkillSoft." All objects in Figure 1.3 must be created.

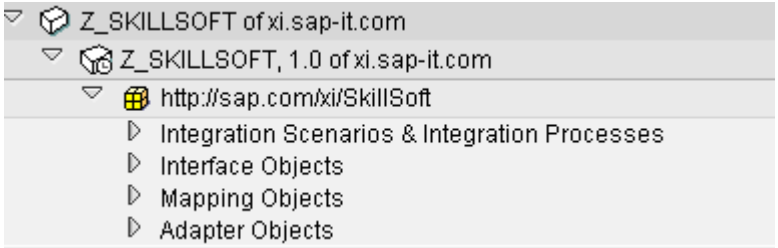

Figure 1.3 Objects in Z_SkillSoft

1.2.4 Import WSDL provided by SkillSoft

Import the WSDL provided by SkillSoft into External Definitions as shown in Figure 1.4.

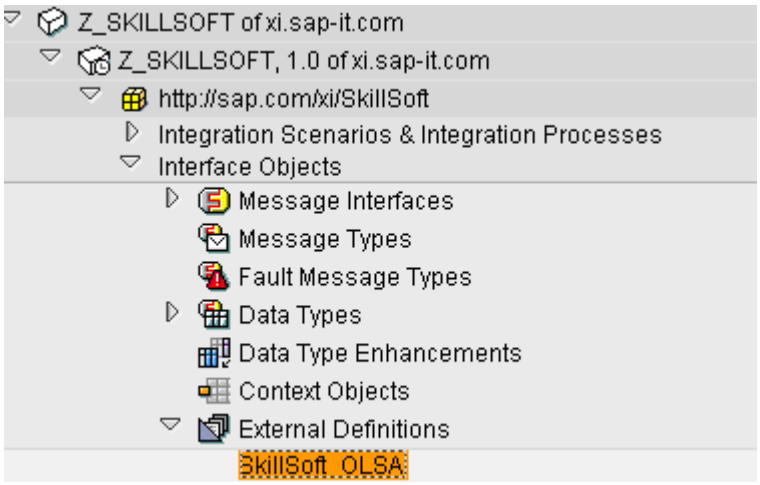

Figure 1.4 External Definitions View

Note

The Web Services Description Language (WSDL, pronounced 'wiz-dəl' or spelled out, 'W-S-D-L') is an XML-based language that provides a model for describing Web services.

1.3 Configuring Course Enrolment

Configure the following Interface Mapping and Message Mappings as described below.

1.3.1 Course Enrollment Request

CourseEnrollmentRequest: For enrolling an employee

Note

For this implementation, there is no need to enroll users manually at the SkillSoft hosted content site. Thus, course enrollment information is turned around in XI with the appropriate response code.

Interface Mapping for Course Enrollment: Request as illustrated by Figure 1.5.

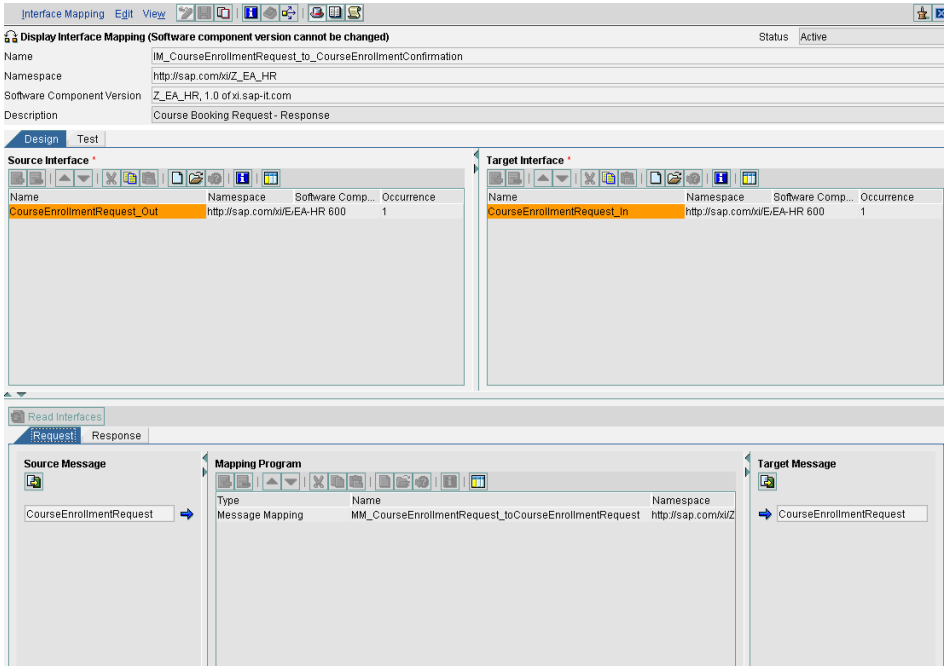

Figure 1.5 Interface Mapping for Course Enrollment: Request

1.3.2 Interface mapping for Course Enrollment Response

Interface Mapping for Course Enrollment: Response as illustrated in Figure 1.6.

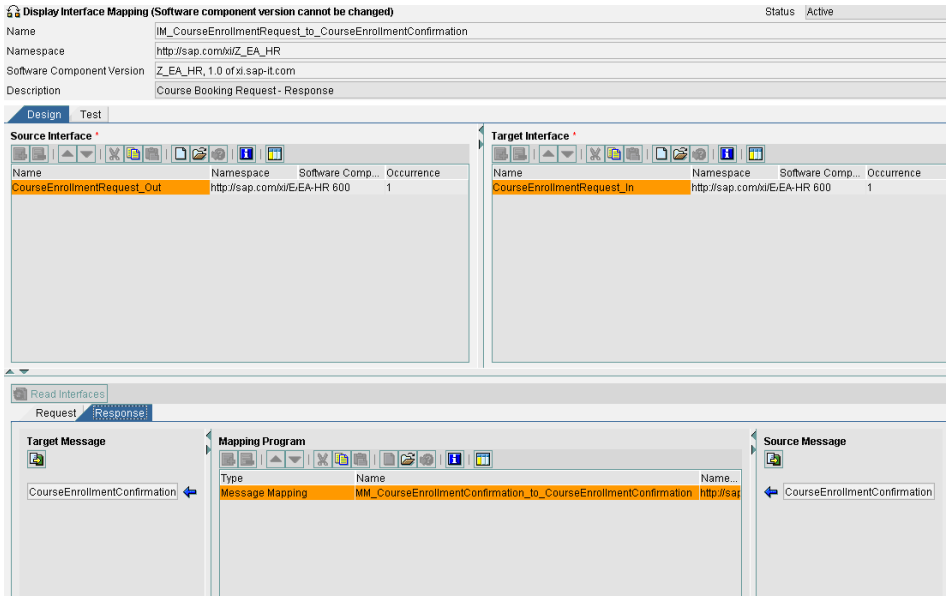

Figure 1.6 Interface Mapping for Course Enrollment: Response

1.3.3 Message mapping for Course Enrollment

Map MM_CourseEnrollmentRequest_to_CourseEnrollmentRequest as illustrated in Figure 1.7.

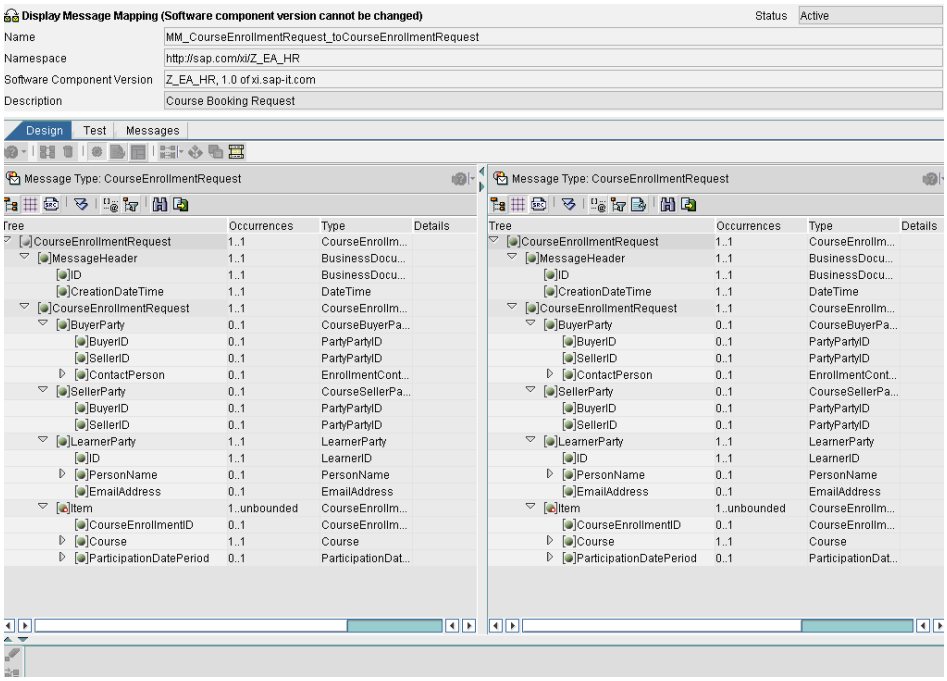

Figure 1.7 Message Mapping: MM_CourseEnrollmentRequest_to_ CourseEnrollmentRequest

Note

All the elements are mapped from source to target.

MM_CourseEnrollmentConfirmation_to_CourseEnrollment-Confirmation as shown in Figure 1.8.

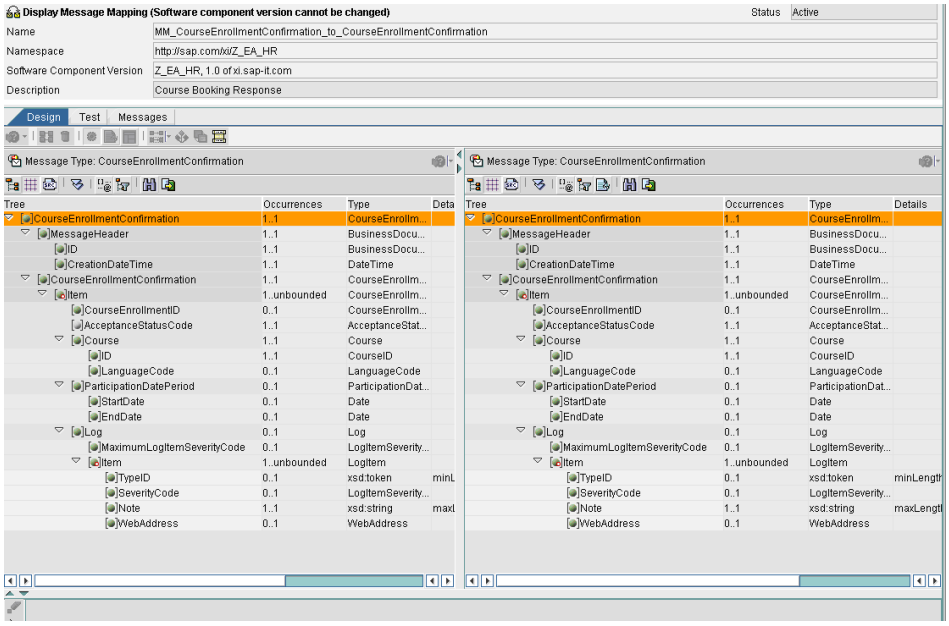

Figure 1.8 MM_CourseEnrollmentConfirmation_to_CourseEnrollment-Confirmation

Note

All the elements are mapped from source to target except for: AcceptanceS-tatusCode (see Figure 1.9.)

Figure 1.9 AcceptanceStatusCode

1.4 Configuring Course Launch

In this section we will do the necessary configuration to enable course launch.

1.4.1 Interface Mapping for Course Launch

Map Course Launch Request as shown in Figure 1.10.

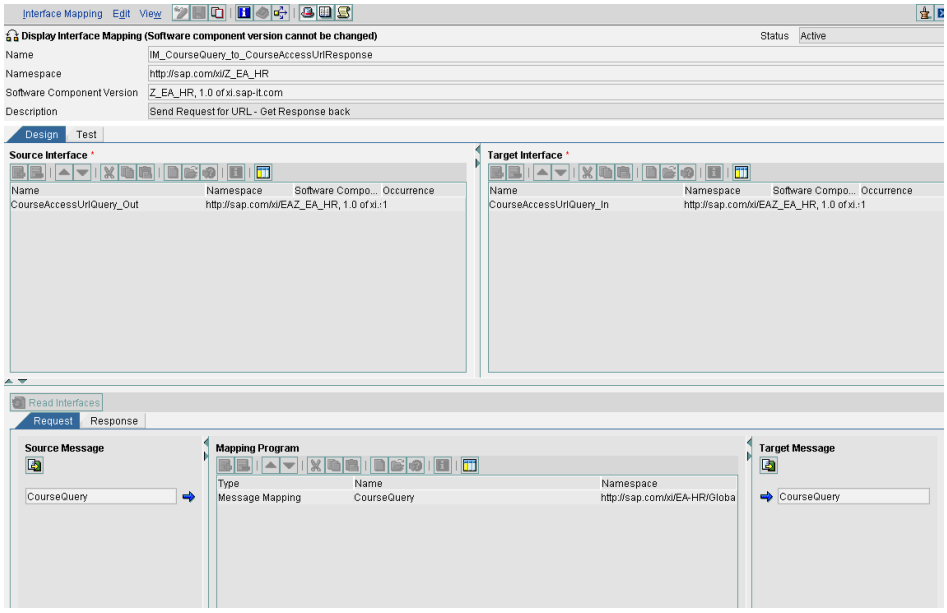

Figure 1.10 Interface Mapping for Course Launch: Request

Map Course Launch Response as shown in Figure 1.11.

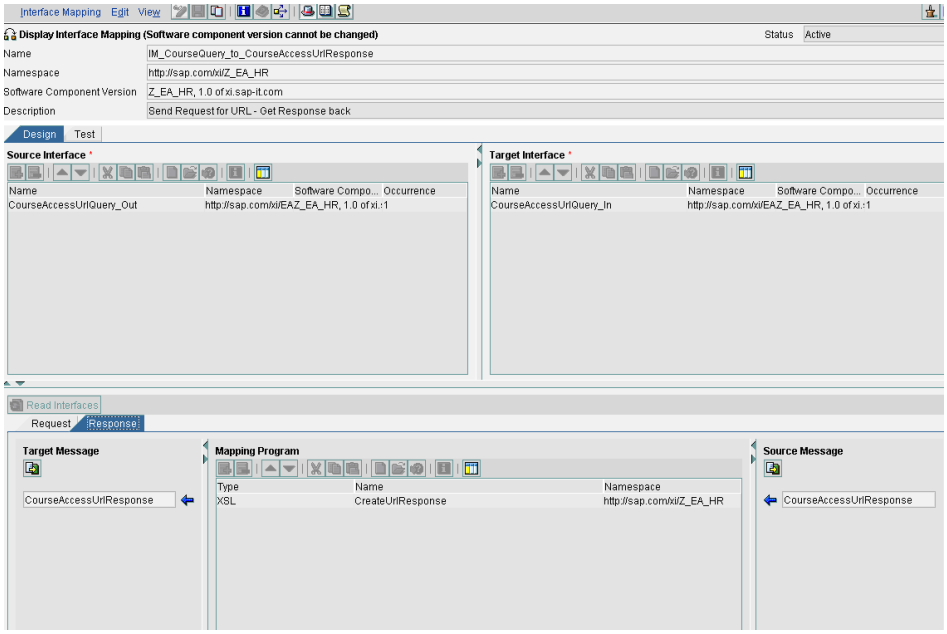

Figure 1.11 Interface Mapping for Course Launch: Response

1.4.2 Message mapping for Course Launch

MM_CourseQuery_to_CourseQuery (GetMultiActionSignOnUrlRequest) as shown in Figure 1.12.

Note

This message mapping is required to map SAP LSO information to Skillsoft's external message "GetMultiActionSignOnURL" for launching a course.

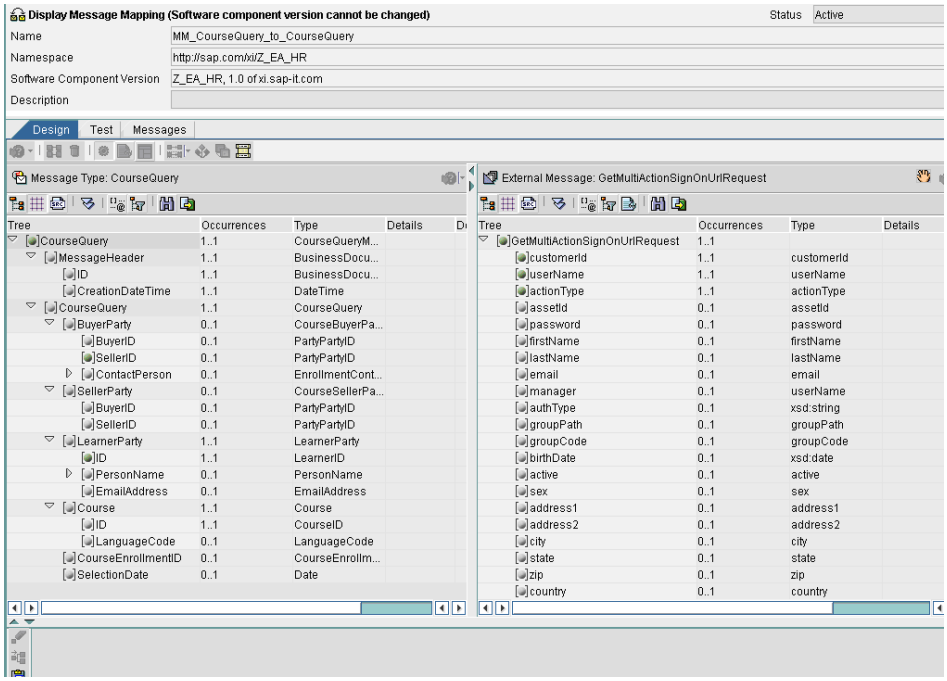

Figure 1.12 Message Mapping for Course Launch

The Field Level Mappings are illustrated in Figure 1.13.

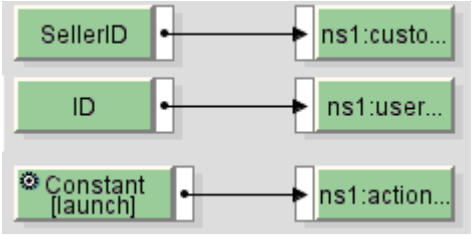

Figure 1.13 Field Level Mappings

A synchronous call to SkillSoft webservice “SO_GetMultiActionSign-OnUrl” is made through SOAP Adapter. Communication channel details are shown in Figure 1.14.

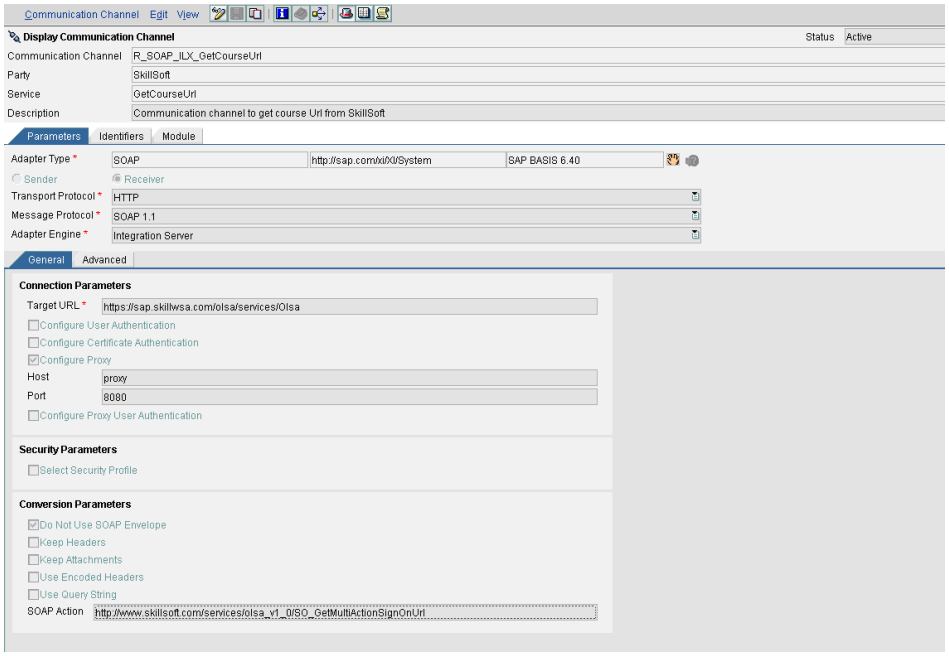

Figure 1.14 Communication Channel Details

Note

The "Do Not Use SOAP Envelope" is used as Skillsoft requires SOAP Envelope to be populated with Web Services Security Username Token standard.

More details about the standard are found at: http://docs.oasis-open.org/wss/v1.1/wss-v1.1-spec-os-UsernameTokenProfile.pdf

Custom java code, along with XSLT mapping was written to populate the SOAP envelope with < wsse:Security>& <wsse:UsernameToken> tags. The tags were populated dynamically in the custom code with the help of JAVA APIs.

< wsu:Timestamp>

- <wsu:Created>

  - <wsu:Expires>

```
<wsse:Password

<wsse:Nonce>
```

1.4.3 CourseAccessUrlResponse Mapping

An XSLT was developed to map the “UrlRespone” returned by SkillSoft. The URL for the course launch in the field olsaURL is mapped to SAP LSO structure CourseAccessUrlResponse. This URL launches the course in Skillsoft Player as a new window.

1.5 Configuring Learning Progress Tracking

LearningProgressQuery is used for tracking progress

1.5.1 Interface Mapping for Learning Progress:

Map Request as shown in Figure 1.15.

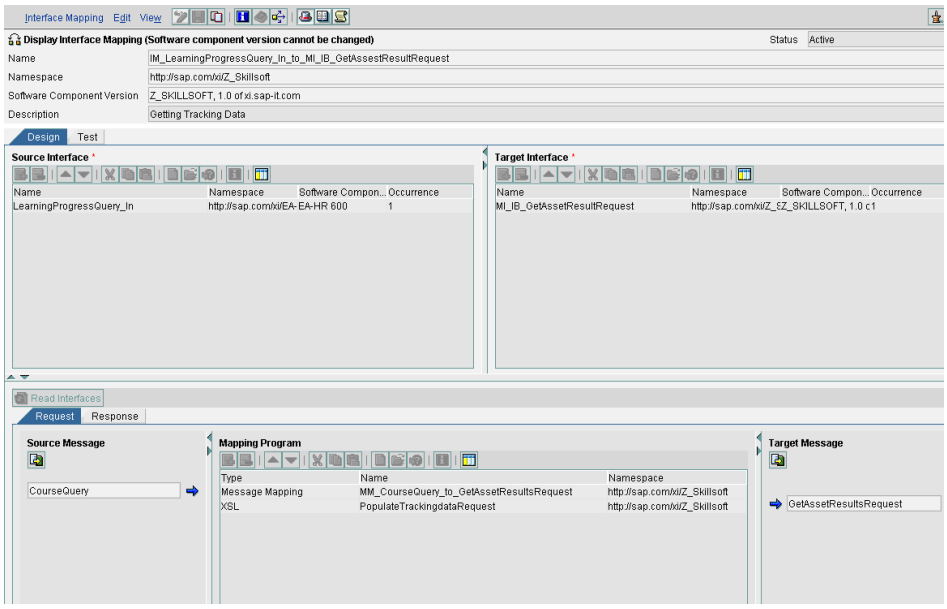

Figure 1.15 Interface Mapping for Learning Progress: Request

Interface Mapping for Learning Progress: Response as shown in Figure 1.16.

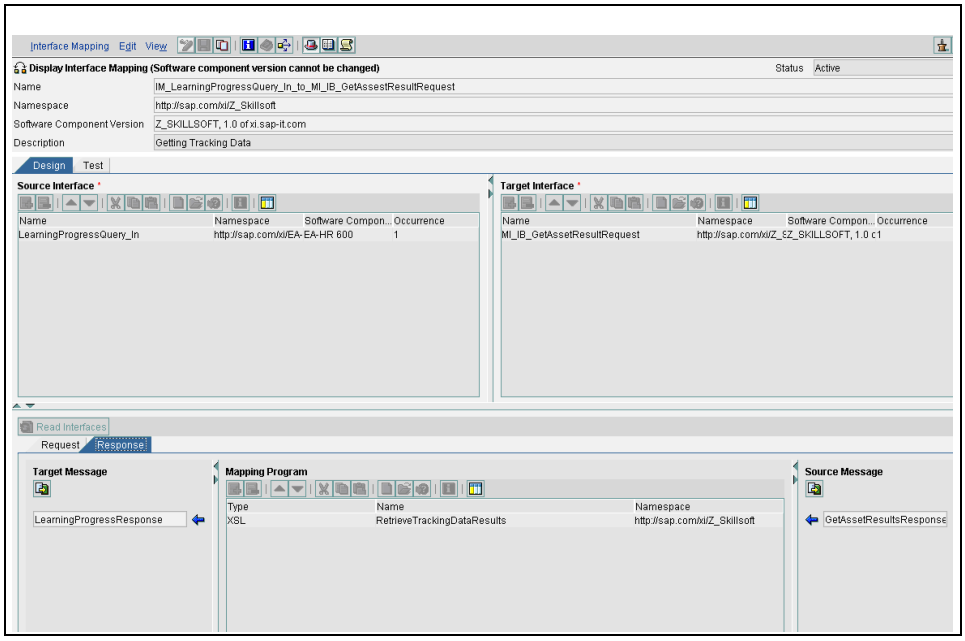

Figure 1.16 Interface Mapping for Learning Progress: Response

1.5.2 Message Mapping For Learning Progress Tracking

Message Mapping: Learning Progress Request

MM_CourseQuery_to_GetAssetResultsRequest

When the user closes the course player after accessing the course, LSO automatically requests the course progress and structure “CourseQuery” is populated. This structure should be mapped to SkillSoft structure “GetAssetResultRequest” as shown in Figure 1.17.

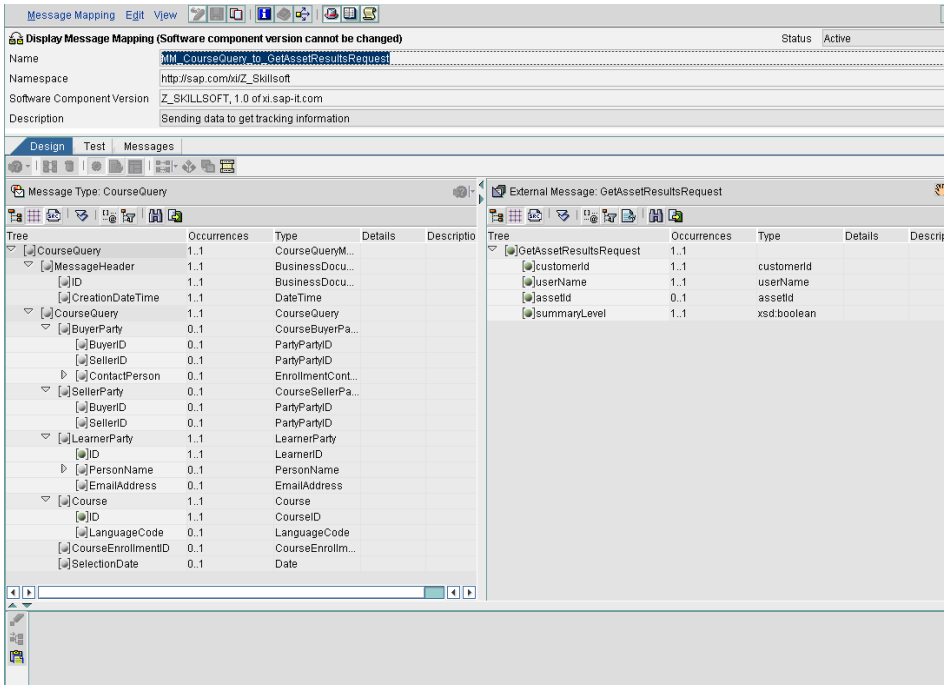

Figure 1.17 Display Message Mapping for

MM_CourseQuery_to_GetAssetResultsRequest

Note

This mapping is straight-forward: Customer ID, User ID and Course ID (Asset ID) are the only fields mapped.

Learning Progress Mapping: Response

This message mapping is required to post the tracking/progress information back to LSO from Skillsoft. Skillsoft returns the tracking/progress data as external message “GetAssetResultsResponse” which is mapped to “LearningProgressResponse” in a XSLT mapping.

Sample of response data received from SkillSoft:


```
<GetAssetResultsResponse xmlns =
"http://www.skillsoft.com/services/olsa_v1_0/">

<RESULTS>
<RESULT
loginname="i006075"
lastname="Doe"
firstname="John"
email="John.Doe@xyz.comaddress1=""
address2=""
city=""
zip=""
country=""
phone=""
ccnumber=""
activated="1"
courseid="MGMT0001"
coursetitle="Becoming a Manager"
firstaccess-date="2008-11-26"
lastaccessdate="2009-01-01"
timesaccessed="5"
duration="12058"
over-allprescore="43"
overallhighscore="52"
overallcurrentscore="47"
status="Incomplete"
completiondate=""
timesdownloaded="0"
scoid="" />
</RESULTS>
</GetAssetResultsResponse>
```


A synchronous call to Skillsoft webservice “UD_GetAssestResult” is made through SOAP Adapter. Communication channel details are shown in Figure 1.18:

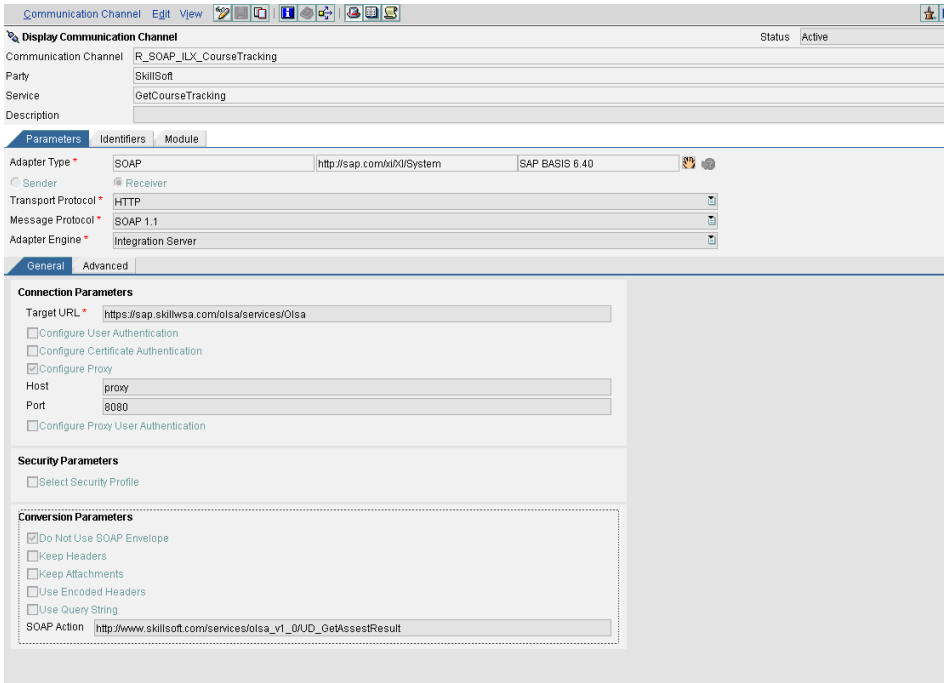

Figure 1.18 Communication Channel Details

Note

Do not use the SOAP Envelope option as Skillsoft requires SOAP Envelope to be populated with the Web Services Security Username Token standard.

1.6 Configuring Course Enrolment Cancellation

CourseEnrollmentCancellationRequest: For canceling the enrollment of an employee.

Note

For this implementation, there is no need to cancel enrollment of users individually. Thus, Course Cancellation information is turned around in XI with the appropriate response code.

1.6.1 Map Course Enrolment Cancellation

Interface Mapping for Course Enrollment Cancellation: Request as shown in Figure 1.19.

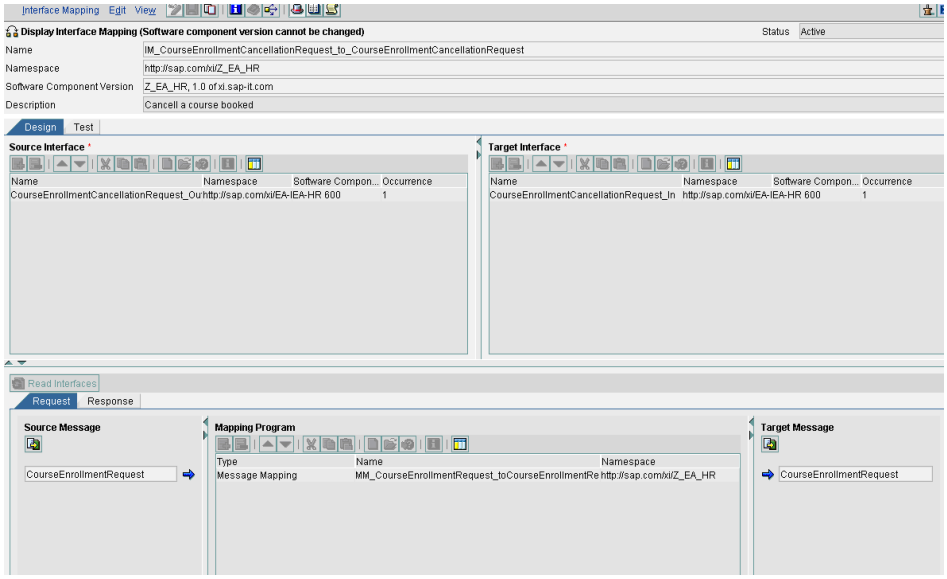

Figure 1.19 Interface Mapping for Course Enrollment Cancellation: Request

Interface Mapping for Course Enrollment Cancellation: Response as shown in Figure 1.20.

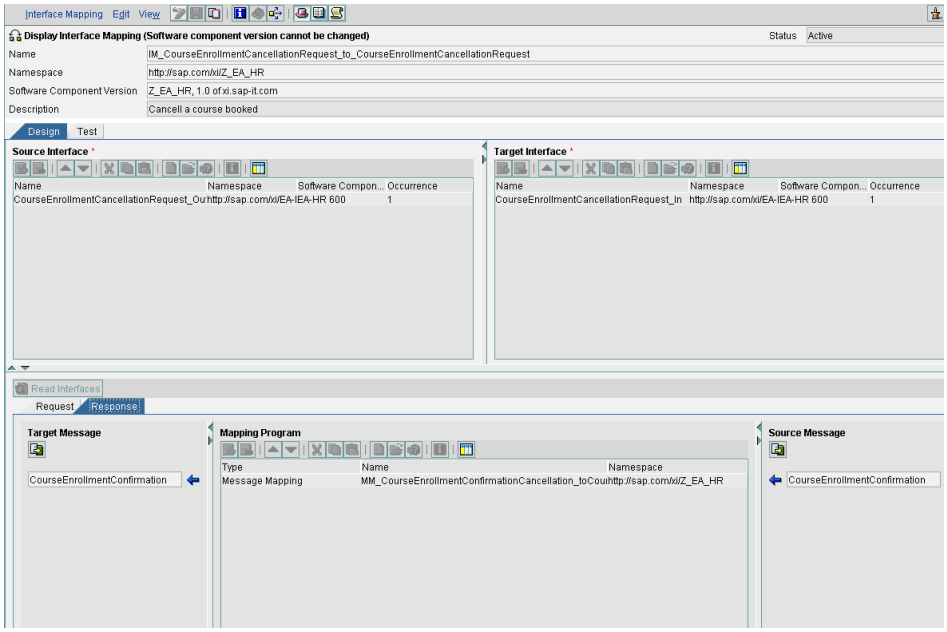

Figure 1.20 Interface Mapping for Course Enrollment Cancellation: Response

Message Mapping for MM_CourseEnrollmentConfirmation Cancellation_toCourseEnrollmentConfirmationCancellation as shown in Figure 1.21.

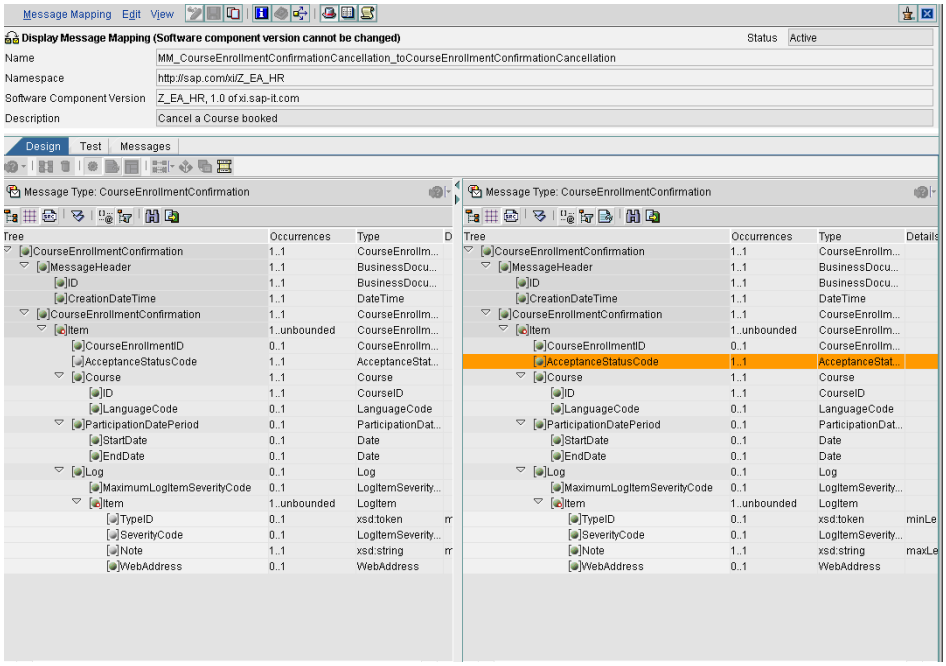

Figure 1.21 Display Message Mapping

All source elements are mapped to the target except for “AcceptanceStatus-Code” as shown in Figure 1.22.

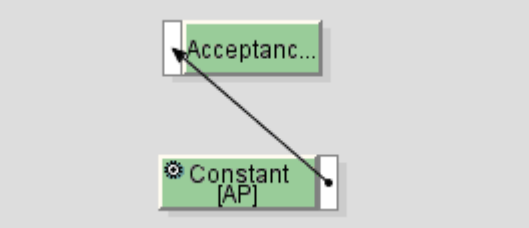

Figure 1.22 Source Elements not Mapped

1.7 Summary

SAP Enterprise Learning delivers standard integration points to SkillSoft so that customers do not have to build custom integration with SkillSoft. These are the steps to preparing for and configuring this integration.

- Prepare SAP backend
- Create namespace for SkillSoft and import WSDLfile
- Configure XI for course enrolment
- Configure XI for course launch
- Configure Xi for tracking progress
- Configure XI for canceling courses

This configuration is done by an experienced XI consultant. The work takes about 40 hours including preparation and testing.

1.8 Contributors

Shirish Yadwadkar contributed to this document. Shirish is an SAP XI consultant. You can reach Shirish at shirish.yadwadkar@sap.com.