ESOA - Enterprise Service Oriented Architecture

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ESOA Error handling
Debugging guide for XML processing
SOA SRM Interfaces

Overview

From SRM 7.0 on we have the possibility to transfer documents to ECC using ESOA. This leads to some configurations and requirements that we also will see in this document.

WHAT IS ESOA?

First to explain what is ESOA we need to clarify the SOA (Service Oriented Architecture) concept.

- **SOA** is an idea of creating composite applications based on reusable building blocks using open standards like Web Services, WSDL, SOAP, UDDI. Any system that provides web services (which are self-contained and self-describing) can be termed as SOA enabled. The provider of the service registers the service over UDDI in the form of WSDL. The consumer searches the UDDI for the desired service and invokes it. There can be multiple web services (from multiple providers) for the same application (eg. purchase order creation).

- **ESOA** (former ESA - Enterprise Service Architecture) is SAP's own version of SOA (more specialized version of SOA). SAP calls the services developed over the Business Process Platform and Enterprise Services. The enterprise services are different that web services in the sense that there will only one generic service (registered at UDDI) for one application. Enterprise Services are web services with business value and are reusable parts of business processes. Enterprise Services Repository - part of SAP NetWeaver is central point of ESOA and starting point for creating applications. **ESOA** is using xml documents for the data exchange.

ESOA x SRM X ECC

On SRM7.0 with ECC 6.0 EHP4 on the ESOA is used within the scenarios.

Backend system ECC 6.0 EHP4 type ERP 4.0 using **adaptor /SAPSRM/CL_SOA_ADPT_PO_CRT_ERP** (class interface)

Use SRM 7.0 with ECC 6.0 EHP4 functionalities with XI/PI. In this scenario, you will need to configure PI/XI.

You have the option to configure PI server to handle the xml traffic between Your systems.

Many of the ESOA interfaces of SRM 7.0 can only be used with XI/PI. For these interfaces, you will not be able to use ESOA and the new functionalities of EHP4 without configuring a PI system.

Example is the interface SupplierPortalTradingPartner_CreateOrChange_In (from namespace http://sap.com/xi/SRM/SupplierEnablement). This interface does only support usage with PI system.

If you **do not require service hierarchy for example (one of the new functionalities)**, you may try to configure the system using backend system **ERP P_3.0** (that use RFC and will not call XI/PI)

PI-independent Enterprise services

As of SRM701 and ERP6 EHP5 (only for EHP5 and higher) You can use PI independent Enterprise services without need for PI system.

This is only supported for a limited number of xml interfaces. These interfaces do have own Web service definitions, so they do not need PI system for the data exchange.

Some examples:
Contract replication from SRM to ECC:
SRM side: PurchasingContractSRMReplicationRequest_Out
(http://sap.com/xi/SRM/SE/Global)
ECC side: PurchasingContractSRMReplicationRequest_In
(http://sap.com/xi/APPL/Global2, web service definition:
PurchasingContractSRMReplication)

Purchase Requisition replication to SRM:
ECC side: PurchaseRequestERPSourcingRequest_Out
(http://sap.com/xi/APPL/Global2)
SRM side: PurchaseRequestERPSourcingRequest_In
(http://sap.com/xi/SRM/SE/Global, web service definition:
PurchasingContractSRMReplication)
and the related confirmation XML to set the status of the PR:
SRM side: PurchaseRequestERPSourcingConfirmation_Out
(http://sap.com/xi/SRM/SE/Global)
ECC side: PurchaseRequestERPSourcingConfirmation_In
(http://sap.com/xi/APPL/Global2, web service definition:
PurchasingContractSRMReplication)

Contract replication from CLM to SRM:
PurchasingContractSRMCreateRequestConfirmation_In
(http://sap.com/xi/ESOSRMINT/Global2)

Purchase Order creation from SRM shopping cart in Classic scenario:
outbound SRM side: PurchaseOrderERPRequest_Out_V1
(http://sap.com/xi/SRM/SE/Global)
inbound ECC MM side: PurchaseOrderERPRequest_In_V1
(http://sap.com/xi/APPL/Global2, web service definition:
PurchasingContractSRMReplication)

others:
PurchasingContractERPConfirmation_In
PurchasingContractSRMReplicationConfirmation_In
RFQRequestSUITERequest_In
SupplierInvoiceSUITEContractReleaseNotification_In

PurchaseOrderERPContractReleaseNotification_In
(http://sap.com/xi/SRM/SE/Global) - MM side:
PurchaseOrderERPContractReleaseNotification_Out
(http://sap.com/xi/SAPGlobal2/Global)(More info about this scenario here)

You can configure these Web services using the transaction SOAMANAGER.

Please read following SAP Notes and the contained documentation about this topic:

SAP Note: 1268336 - Synchronous peer-to-peer Services Configuration
SAP Note: 1672909 - SRM / ECC prerequisite for configuration of PI-Independent

Related Content

Related Documents

Basic Settings for SAP Enhancement Package 1 for SAP SRM 7.0
https://help.sap.com/saphelp_srm701/helpdata/en/01/6a4a057df0442ea34f054c8993add3/framset.htm
https://help.sap.com/viewer/c27743e3dcb84d20a8864b012f5f22e6/7.04%20SP07/en-US/c61fb023e68c4b93b661ab6149db3950.html

Related Notes

SAP Note: 1270081 - Trouble shooting SOA Services
SAP Note: 817920 - XI Readiness Check 3.0/7.0, 7.1, 7.3
SAP Note: 1286936 - PI configuration for SRM additional information
SAP Note: 1268336 - Synchronous peer-to-peer Services Configuration
SAP Note: 1672909 - SRM / ECC prerequisite for configuration of PI-Independent