Guide for Advance Shipping Notification (ASN) Scenario Using SNC Implementation via SAP PI

Applies to:

SAP Process Integration 7.0, Supply Chain Management – SNC 5.1 and SAP ERP (ECC 6.0).

For more information, visit the Supply Chain Management homepage.

Summary

In challenging global scenario, the supply chain partners are vital to the success of company and its products. Hence in view of this real time integration of supplier's network with customer landscape and processes in needed and it can be achieved using SCM SNC and SAP PI 7.0 integration functionality. To learn more about SAP Supply Network Collaboration (SNC), visit www.sap.com/scm.

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Author Bio

Sarang Kahu is currently working as SAP Technical Consultant (SAP PI, ABAP) in Larsen and Toubro Infotech Limited and has interest in SAP SNC (Supply Network Collaboration).

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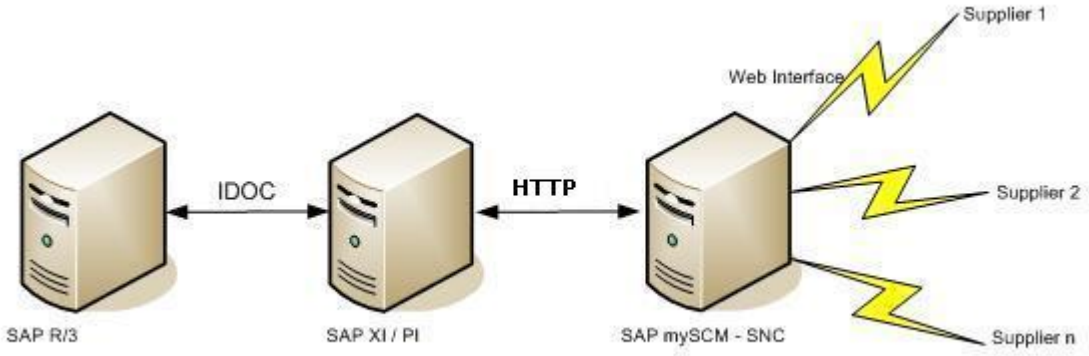
Collaboration Overview

In the competitive global scenario, the success of the company depends on not only its product quality but also on its agile and responsive supply chain partners. Hence real time information sharing between customer and its supplier is implicit. The SCM-SNC provides the real time collaboration between customer's landscape and supplier's network by providing the web User Interface (UI) to supplier. The SNC enabled supplier can handle typically following scenarios

- Purchase Order Handling
- Dynamic Replenishment
- Scheduling Agreement processing
- Supplier Managed Inventory
- Delivery control Monitor
- Subcontracting
- Work Order
- Supplier Network Inventory
- Kanban

Architecture Overview

The diagram below represents a typical scenario involving SAP ERP, SAP PI and SAP SNC.



The synchronous communication between SAP ERP and SAP PI takes place via IDOC, while communication between SAP PI and SAP SNC takes place by HTTP messages. As seen from the above diagram, the supplier can access the SNC screens via web bases UIs.

Implementation

The pre-requisites and various settings needed on SAP ERP and SAP PI and SAP SNC side are explained as follows.

Pre-requisites

SAP ERP - SAP Plug-In Basis 2006_1_700 (ECC 6.0), SAP Plug-In Basis 2005_1_700 and PI 2004.1 SP 10 (ECC 5.0 and 4.7)

SAP PI - SAP PI 7.0 minimum, ST-PI 2005_1_700,

SAP SNC - SCMSNC 5.1, SAP Plug-In Basis 2006_1_700. (SAP SNC 7.0 is recently introduced)

Settings Needed for SAP ERP

Below configuration is required for ALE between Backend ECC 6.0 System and SAP PI system for IDOC communication on ECC 6.0:

- Define Logical System (SALE)
- Assign client to logical system (SALE)
- Create RFC Destinations - type 3 (SM59)
- Create Ports of type Transactional RFC (WE21)
- Maintain Distribution Model (BD64)
- Maintain Partner Profile (WE20) – The message types can be added into Outbound and Inbound parameters as per scenario requirements.

Note: The contents in the parenthesis are transaction codes to be run on SAP ERP side.

Settings Needed for SAP PI

- Download SAP XI standard content required for SNC from SAP market place. The contents can be downloaded via path www.service.sap.com → SAP Support Portal → Software Download → Software Distribution Center→ Download→ Support Packages and Patches→Installation & Upgrades → Entry by Application Group. The downloaded content needs to be installed into SLD via Integration Repository with the help of Basis team. After successful installation, we get as below in Integration Repository (IR).

- Once the XI content for SNC is installed into Integration Repository, we can configure the System Landscape Directory (SLD) which includes Technical System and Business Systems creation.
- Load the IDOC metadata using IDX2 transaction code and maintain the port for IDOC adapter by IDX1 transaction.
- Configure the Communication Channel using IDOC adapter to receive the IDOCs from SAP ERP in Integration Directory which would be used in all the integration scenarios.
- Maintain the RFC connection from SAP PI to SAP ERP type 3 using SM59 transaction code.

Settings Needed for SAP SNC

- Create HTTP connection of type H to connect to ABAP system for HTTP communication.
- Confirm the connections pointing to SLD by transaction SLDCHECK.
- Activate the HTTP port and service using SMICM.

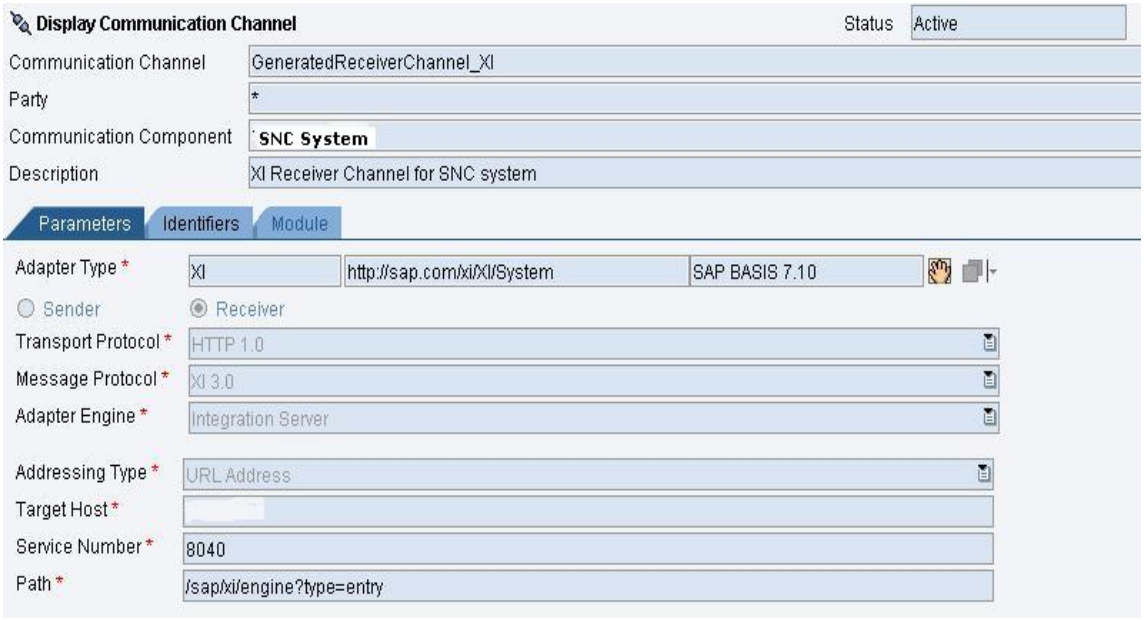
Business Case

The supplier can create the Advance Shipping Notification (ASN) using web User Interface when are goods are shipped from suppliers site. The ANS scenario can be explained in brief as follows

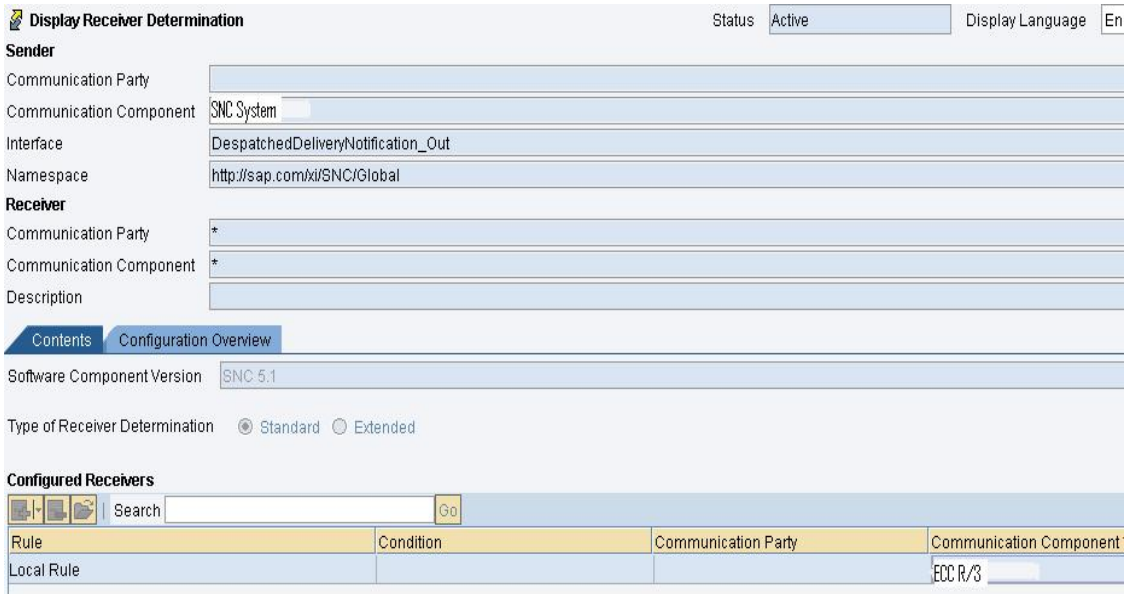
- ASN Created in SNC web UI.
- SAP ERP receives ASN IDOC via SAP PI
- Delivery Document is created at SAP R3
- Delivery information is passed onto SNC web UI via SAP PI.

The various steps required in SAP PI are:

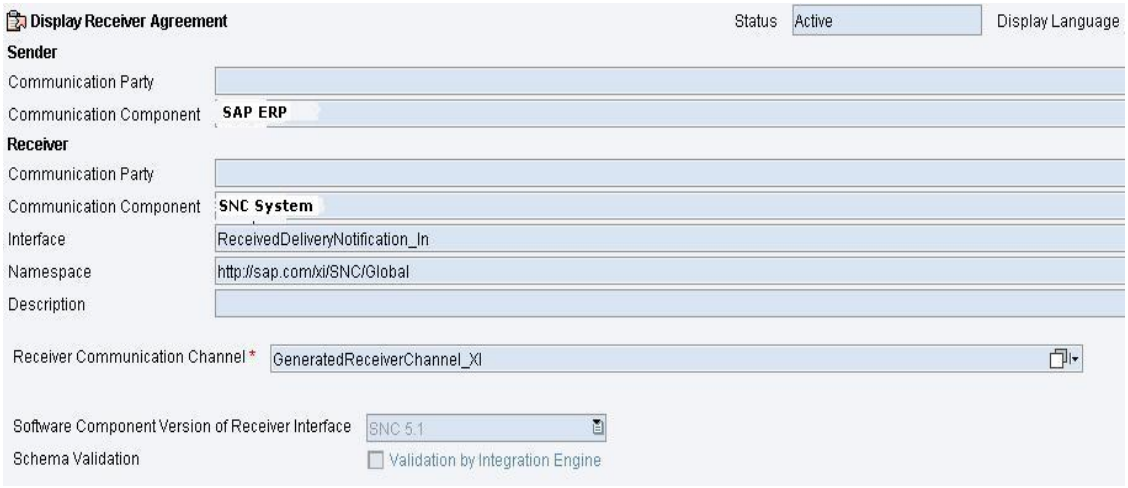
- Create Technical and Business System for SAP ERP and SNC 5.1 systems via SLD.
- Create Configuration Scenario in Integration Directory (ID).
- Create Communication Channel for IDOC communication with SAP ERP of adapter type IDOC. The partner profile should have inbound parameter with message type - DESADV.DELVRY03 and outbound parameters with message type - STPPOD.DELVRY03.
- To receive data into SNC system provide the required details for the XI adapter channel associated with SNC business system.



- Create Interface Determination for IDOC DESADV.DELVRY03 acting as outbound interface with ECC ERP as sender system and DespatchedDeliveryNotification_Out as outbound interface with sender as SNC business system.
- Create Receiver determination for SAP ERP as sender with outbound interface STPPOD.DELVRY03 and for SNC system as sender with outbound interface as DespatchedDeliveryNotification_Out.



- The Sender Agreement need not to be created since IDOC is sender and sender IDOC adapter lies on ABAP stack of PI system. However we need to create Receiver Agreements as follows.



Similarly other Receiver Agreement can be created in which message would be triggered from SNC System.

Related Content

http://www.sdn.sap.com

http://www.help.sap.com

http://service.sap.com

http://www.sap.com/scm

For more information, visit the Supply Chain Management homepage.

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