Prepare SAP System to test SAP BC-XOM Interface integration

Applies to:
SAP R/3 4.6C
SAP NetWeaver 6.20, 6.40, 7.0x, 7.1x

Summary
This document describes how to prepare SAP System to test SAP BC-XOM Interface integration with external output management system (OMS) and how to execute functions of the OMS.

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Author Bio
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Introduction
This document describes how to use SAP Trial Version for connecting external Output Management system using the BC-XOM interface. There is overview of SAP Spool System, its components and explanation of the used terms. The architecture of the interface for External Output Management Systems is described in detail. The setup and configuration of SAP Systems for using BC-XOM Interface with outlined with screenshots and examples. And last but not least there is description how to export / Import SAP Configuration to/from file.

SAP BC-XOM Interface:

SAP Trial Version:
The SAP NetWeaver 7.01 - ABAP Trial Version SAP Evaluation Software
Download Page: https://www.sdn.sap.com/irj/sdn/nw-downloads
Spool System Overview

Task of the SAP Spool system

### Interface to SAP Users

- Output Parameters
- Output Controller
- Acceptance of Print Data

**to SAP Applications**

- Platform-Independent
- Device (type)-Independent

### Interface to External Spool Systems

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Components of the SAP Spool system

- **Data Retention Memory Management (TemSe)**
- **Spooling Document/ Request Management**
- **Device Management**

**Formatting**

**Output System**

- Generation of Print Data
- Host Spool System
Components in Detail

Sequence of Printing Procedure
Connecting external Devices

SAP Terminology: Output Device
Every outgoing document in SAP requires a destination. Since output may be done not only to printers but also to fax devices or archiving devices, the general term in SAP for these destinations is output device. Output devices have four-character names in releases 2.x/3.x (e.g. LP01) and may have names up to 30 characters long from 4.0A on.

SAP Terminology: Access Method
Every device type definition requires the specification of an access method.

The access method (plus associated parameters like printer queue name or name of network host) tells the SAP spooler how to route the print data to its destination.

In general, access methods can be subdivided into local and remote access methods.

SAP Terminology: Device Type
In order to format a document, SAP needs to know some information on the capabilities of the output device (e.g. list of available fonts). This kind of information is contained in a device type definition.

For every output device that exists in SAP, a device type must be specified that will be used when processing the output document.

One physical printer may have several output devices assigned to it in SAP with different device types.
**SAP Terminology: Printer Driver**

A device type definition consists of a collection of configuration table entries. For printing, the SAP spooler offers several generic printer drivers:

- **STN2**: Line printers
- **HPL2**: PCL-5 printers
- **POST**: PostScript printers
- **PRES**: Kyocera PRESCRIBE printers
- **SWIN**: SAPlpd printing via MS Windows drivers

The device type definition specifies which printer driver is to be used for printing.

**SAP Devices and Spool Servers**

Connecting Printers

Spooler administration transaction (shortcut SPAD) is used for all printer-related settings.

- Every printer must be defined as an output device in SPAD
- Always specify an SAP application server with a spool workprocess as spool server (use F4 key)
- Choice of access method determines output channel
  - (local/remote printing)
**SAP BC-XOM Interface integration**

**Prepare SAP System to test**

**SAP Printing Architecture: Location of Printer**

- Same SAP application server
- Any SAP application server
- Database server
- Other UNIX/Windows machine
- Windows PC
- Network printer
- External OMS

**Interface for External Output Management Systems**

- **BC-XOM: Access method E**
- With release 4.0A, a new access method E is available to link the SAP spooler to external output management systems (OMS)
- One intention of OMS is to provide SAP users with more detailed information on the status of output requests
- The OMS interface (technically known as "BC-XOM") is a certified interface open to all manufacturers of OMSs
- Access method E is a local output channel between dedicated SAP spooler and dialog servers and the OMS
Access method E: ROMS and LOMS

A real output management system (ROMS) definition specifies the entire set of capabilities, according to the BC-XOM spec, that a given OMS supports (e.g. cancellation of output requests, RFC status reporting, etc.)

A logical output management system (LOMS) definition supplies the actual interface parameters to SAP that are needed to communicate with an OMS according to the BC-XOM interface description. A specific subset of the OMS functionality is used through the LOMS definition.

Different output devices may be assigned to different LOMS served by the same output management system.
**Interface Level 1**

to solve:
- feedback problem
- correct final job status
- network problems

how: command line interface (corresponds to access method L)
with fully specified output formats for called commands
Interface Level 2

to solve:
- polling problem

how: active callbacks from the external output management system to the SAP system
Interface Level 3

to solve:
- software installation on all Spool WP instances

how: all communication to external output management system over the network
OMS Representation in SAP

Functions Supported by Real OMS

Logical OMS - Functions Used

Configuration Parameter

Submit: /usr/oms/submit &P &F
Polling: . . .
Job query: /usr/oms/jquery &EL

Scenario for an OMS (with callback) supporting several SAP Systems

SAP System C01
- SAP Instance 1 (Central Instance) LOMS 1
- SAP Instance 2 (Dialog Instance) LOMS2
- SAP Instance 3 (Dialog Instance)

SAP System C02
- SAP Instance 1 (Central Instance)
- SAP Instance 2 (Dialog Instance)

Alternative Callback target (can be any instance of a SAP system)

OMS Client

OMS
Setup SAP Systems for BC-XOM Interface

Obtain SAP Trial Version
SAP Developer Network → http://www.sdn.sap.com/irj/scn/nw-downloads

Adjustments after Installation:

In Instance-profile define at least one Spool-Work-Process:
Search for file that contains "rdisp/wp_no_dia",
In the file add line: “rdisp/wp_no_spo = 1

For load-tests you can increase value to have several Spool-Work-Process

See also article on SDN: http://www.sdn.sap.com/irj/scn/index?rid=/library/uuid/704a5dde-1f87-2b10-969f-de66c17b5ab9&overridelayout=true

Set up Real OMS for Polling

Transaction SPAD
→ Full Administration
→ Output Management Systems
→ Real Output Management Systems
→ Display
→ Change (to change from view to edit mode)
→ Create
Set up Real OMS for Polling

Configure Capabilities of Output Management System for Real OMS - ROMS

Set up Logical OMS for Polling + Operations Supplement

Configure subset of capabilities of Output Management System for Logical OMS - LOMS

Transaction SPAD
- Full Administration
- Output Management Systems
- Logical Output Management Systems
- Create
Set up Logical OMS for Callback

Configure subset of capabilities of Output Management System for Logical OMS - LOMS

Transaction SPAD
→ Full Administration
→ Output Management Systems
→ Logical Output Management Systems
→ Create

Set up Command Set for Polling + Callback

In LOMS configuration define Command Sets
Set up Printer

**Transaction SPAD → Output Devices → Create**

Utilize functions of the OMS

**OMS command „device query“**

**Transaction SPAD**

- Output Devices
- Select output device
- External jobs (Shift+F1)
**OMS command „job query“**

Transaction SP01
➔ Spool requests
➔ Status information
➔ Query (F8)

**OMS command „cancel“**

Transaction SP01
➔ Delete (Shift+F2)

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Retain print-file

Transaction SPAD
→ Output Devices
→ Select output device
→ Edit
→ Test Tool

Data-relation (click-function) I

SP01 List

Transaction SP01
Double-click on spool-request to get to the spool-request maintenance
Data-relation (click-function) II

Device Query

Transaction SPAD
- Go to external jobs with Shift+F1
- Double-click on the spool-request
- Double-click on spool-request to get to the spool-request maintenance.

View Log file

Transaction SM50
→ Select spool-work-process to view Log file
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Activate Trace (1)

Transaction SM50

⇒ Log file of spool-work-process

Activate Trace (2)

Transaction SM50

⇒ Log file of spool-work-process
Activate Trace (3)

Transaction SM50
→ Enhance trace-level of log file

Alternative Trace Activation

Transaktion SE38
→ Start report "rspo0050"
→ Do required settings
→ Execute
Submit Command

Polling Command

Transaction SM50
→ Refresh log-file
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Trace details

Transaction SM50
Refresh log-file

Sometimes command details are truncated

In that case open related file on operation system

Export / Import SAP Configuration

Spool Administration

Transaction SPAD
Utilities
For Output Management Systems
Export

Similar is valid also for Output devices
Export Settings

- File system info:
  - Export file name: C:\tmp\export_ROMS_LOMS_Settings.ini
  - Operation: Export
  - Options: Execute export
  - Objects for export: Logical OMS, Real OMS, All LOMs for ROMS

Do all Entries and Execute

Import Settings

- File system info:
  - Export file name: C:\tmp\export_ROMS_LOMS_Settings.ini
  - Operation: Import
  - Options: Import (Non-Unicode)
  - Objects for export: Logical OMS, Real OMS, All LOMs for ROMS

Do all Entries and Execute

Depending on the codepage of your file and settings of your SAP system. Maybe you have to try it out.
Related Content

Please include at least three references to SDN documents or web pages.

SAP Integration & Certification Center
SAP BC-XOM Interface
Download SAP Trial Version
Configure SAP Trial Version for Callback
Prepare SAP System to test

SAP BC-XOM Interface integration

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