Master Guide

RFID-Enabled Supply Chain Execution powered by SAP NetWeaver™

Using SAP Auto-ID Infrastructure 2.1

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Disclaimer

Some components of this product are based on Java™. Any code change in these components may cause unpredictable and severe malfunctions and is therefore expressively prohibited, as is any decompilation of these components.

Any Java™ Source Code delivered with this product is only to be used by SAP's Support Services and may not be modified or altered in any way.

Documentation on SAP Service Marketplace

You can find this documentation at
`service.sap.com/instguidesNW04`

Typographic Conventions

Type Style	Represents
Example Text	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.
	Cross-references to other documentation.
Example text	Emphasized words or phrases in body text, graphic titles, and table titles.
EXAMPLE TEXT	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
`Example text`	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
`Example text`	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
`<Example text>`	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.

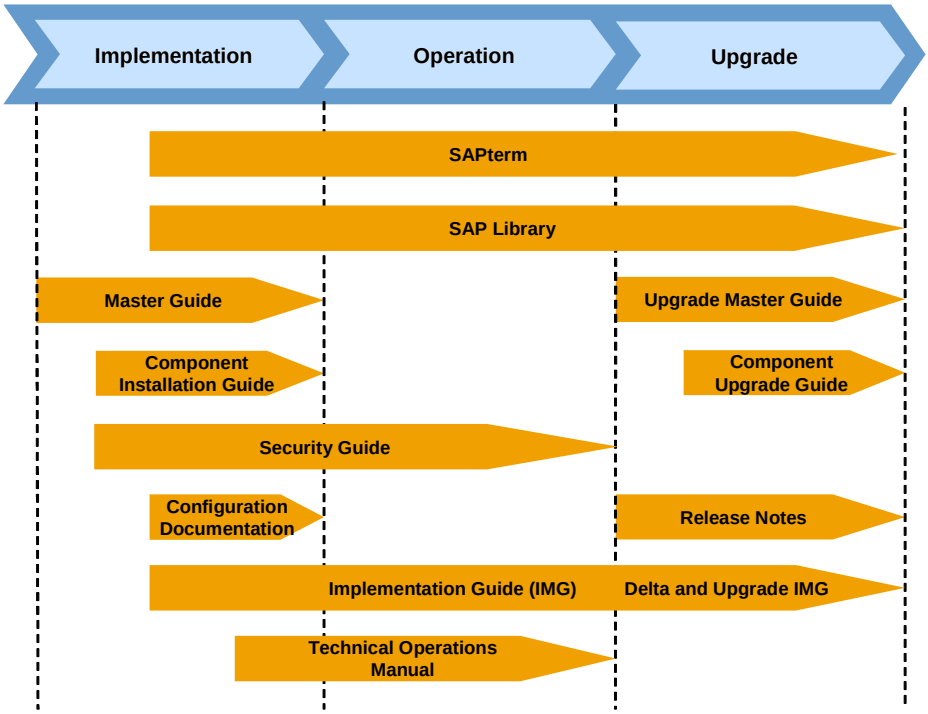
Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

The Main SAP Documentation Types

The following is an overview of the **most important** documentation types that you need in the various phases in the life cycle of SAP NetWeaver™.

Documentation types in the software life cycle



Cross-Phase Documentation

SAPterm

SAPterm is SAP's terminology database. It contains SAP-specific vocabulary in over 30 languages, as well as many definitions and glossary entries in English and German.

- Target group:

  Relevant for all target groups

- Current version:

  Located on SAP Service Marketplace at **`service.sap.com/sapterm`**

SAP Library

The SAP Library is a collection of function- and process-oriented documentation for SAP components.

- Target group:
  - Consultants
  - System administrators
  - Project teams for implementations or upgrades
- Current version:

  See Accessing the SAP Library.

Implementation Guide (IMG)

The Implementation Guide is a tool for configuring the SAP system to meet customer requirements. Its structure and documentation are component-oriented.

- Target group:
  - Solution consultants
  - Project teams for implementations or upgrades
- Current version:

  In the SAP menu of the SAP system under *Tools* → *Customizing* → *IMG*

Security Guide

The Security Guide describes the settings for a medium security level and offers suggestions for raising security levels. A collective security guide is available for the SAP NetWeaver™ technologies like SAP Web Application Server (SAP Web AS). This document contains general guidelines and suggestions about system security. Other technologies and individual applications have a Security Guide of their own.

- Target group:
  - Technology consultants
  - Solution consultants
  - Project teams for implementations or upgrades
- Current version:

  Located in the SAP Library at *SAP NetWeaver* → *Security* → *SAP NetWeaver Security Guide*

Implementation

Master Guide

The Master Guide is the starting point for implementing RFID-enabled Supply Chain Execution. It lists the required SAP components and third party applications that are required for each scenario. It provides scenario-specific descriptions of preparation, execution, and follow-up of an implementation. It also offers references to other documents, such as Component Installation Guides and SAP Notes.

- Target group:
  - Technology consultants
  - System administrators
  - Project teams for implementations
- Current version:

  Located on SAP Service Marketplace at **`service.sap.com/instguides`**

Component Installation Guide

The Component Installation Guide describes the technical implementation of an SAP component, taking into account the combinations of operating systems and databases. It does not describe any business-related configuration.

- Target group:
  - Technology consultants
  - Project teams for implementations
- Current version:

  Located on SAP Service Marketplace at **`service.sap.com/instguides`**

Production Operation

Technical Operations Manual

The Technical Operations Manual is the starting point for operating RFID-enabled supply chain execution. The guide refers users to the tools and documentation that are needed to carry out various tasks, such as monitoring, backup/restore, master data maintenance, transports, and tests. It also refers users to more detailed documentation in the SAP Library.

- Target group:
  - System administrators
  - Technology consultants
  - Solution consultants
  - Project teams for implementations or upgrades
- Current version:

  Located in the SAP Library.

History of Changes

The Master Guide is regularly updated on SAP Service Marketplace at **`service.sap.com/instguides`**.

Make sure you have the latest version of the Master Guide by checking SAP Service Marketplace immediately before starting the installation.

The following table provides an overview of the most important changes that were made in the latest versions.

Master Guide Version	
1.0	First Customer Shipment
1.1	Corrected version (regarding integration with SAP Event Management)

Contents

1 Getting Started

This documentation was developed to provide a central starting point for the technical implementation of the RFID-enabled supply chain execution. It contains all activities for installation and configuration of the RFID-enabled supply chain execution.

The RFID-enabled supply chain execution provides the business scenarios

- RFID-Enabled Outbound Processing
- RFID-Enabled Slap&Ship Outbound Processing

To facilitate the implementation process, all information within this document is sorted according to scenario-based aspects. You can choose among several generic business scenarios and find all the information that is relevant for the technical implementation of a specific business scenario in an enclosed section. Upgrade information for business scenarios is available in separate upgrade documentation that is referenced within the Master Guide in the respective sections.

This Master Guide provides the information about which components and which guides are required during this process.

- In section Getting Started [page 9], you get valuable information about using this document and related information (documentation and SAP Notes) crucial for the installation and upgrade.
- In section RFID-enabled supply chain execution Overview [page 12], a short introduction is given to RFID-enabled supply chain execution and its business scenario in an enclosed subsection:
  - An overview of the business scenario including its technical components (mandatory and optional components).
  - Examples of how the different components interact and what protocols and interfaces are used (technical infrastructure examples). Depending on the actual business processes that have to be implemented and other aspects (such as security or performance), the real infrastructure might be different.
  - Information about the component's software releases.
  - Information about the overall installation sequence and subsequent steps.
  - References to related installation and configuration guides.
  - References to scenario-based upgrade guides. These guides provide information about the overall upgrade sequences, references to related documentation, SAP Notes and additional upgrade information.
  - Information about mutual dependencies that affect two or more components within the business scenario.
- In section Software Components Overview [page 29], you get a short description of every software component that is part of the RFID-enabled supply chain execution.
- Depending on the specific business scenario and the number of processes to be implemented, many different installation and configuration guides are required during the business scenario implementation process. In section References: Related Implementation / Configuration Documentation [page 33], you can find an overview of all required documentation referenced in this Master Guide.

1.1 Related Information

1.1.1 Related Documentation

The following list contains links to crucial information for implementing mySAP SCM.

List of Related Documentation

Content	Location
• The latest version of the installation and upgrade documentation for the RFID-enabled supply chain execution • Links to related SAP Notes	SAP Service Marketplace at: `service.sap.com/instguides`
Information about released platforms	SAP Service Marketplace at: `service.sap.com/platforms`

1.2 Important SAP Notes

Read the installation notes before beginning the installation. These notes contain the most recent information regarding the installation, as well as corrections to the installation documentation.

Make sure that you have the most recent version of each note. You can find the SAP Notes in SAP Service Marketplace (`service.sap.com/notes`) or by using SAPNet - R/3 Front end.

List of Related SAP Notes

SAP Note Number	Title	Description
784406	Master Guide SAP RFID-Enabled Supply Chain Execution	It contains: • Any information relating to RFID-enabled supply chain execution when the Master Guide was published (for example, latest component version requirements), • Corrections to this Master Guide.

2 RFID-enabled Supply Chain Execution Overview

The RFID-enabled Supply Chain Execution comprises software-components for enabling customers to use radio frequency identification with their currently installed backend systems. It is available in different versions.

RFID-enabled Supply Chain Execution with SAP R/3

With SAP ECC 5.0 as a backend system, use the RFID-enabled Supply Chain Execution for mySAP ERP 2004. It contains the two software components building the SAP Auto-ID Infrastructure 2.1, the SAP Event Manager 4.1 (as an application of SAP SCM 4.1) and the XI content components needed for the connection of the SAP Auto-ID Infrastructure 2.1 and the ERP system via SAP Exchange Infrastructure 3.0.

RFID-enabled Supply Chain Execution for SAP R/3 4.6C and RFID-enabled Supply Chain Execution are meant for enabling SAP R/3 4.6C and SAP R/3 Enterprise, Extension Set 200 to use RFID technology efficiently. It consists of the SAP Auto-ID Infrastructure 2.1 software components, Add-Ons for SAP R/3, enhancing these systems with the integration functionality (already built into the Package for SAP ECC 5.0), SAP NetWeaver 2004, and SAP Event Manager 4.1. The XI Content software components needed for integration via SAP Exchange Infrastructure 3.0 are included, too. The longer list of software components in that packages compared to the RFID-enabled Supply Chain Execution for mySAP ERP 2004 is needed, because much of the functionality of that components already is included in mySAP ERP.

2.1 RFID-enabled Supply Chain Execution Components

This section gives an overview of the components of the business scenario.

List of Software Components (X = mandatory / (X) = optional)

Software Component	**Business Scenario *RFID-Enabled Outbound Processing***	**Business Scenario *RFID-Enabled Slap&Ship Outbound Processing***
Add-On SAP Auto-ID Infrastructure 2.1 (SAP AII 2.1)	X	X
SAP Exchange Infrastructure 3.0 SP05 (requires a separate SAP Web AS ABAP + J2EE System 6.40)	X	-
XI Content for SAP Auto-ID Infrastructure 2.1	X	-
SAP system Backend	X You have three options to use an SAP system backend. See table *Backend Options* on next page.	-
SAP SCM server 4.1	(X)	-
SAP SCM – Web Communication Layer 4.1	If Event Management with SAP SCM 4.1 is used	-
XI Content for SAP SCM 4.1	If SAP SCM 4.1 is used	-

When using SAP R/3 4.6C as backend component within the *RFID-Enabled Outbound Processing* scenario, the integration of Event Management described in this document is not supported in the standard.

Backend Options and related Components for the Business Scenario *RFID-Enabled Outbound Processing* (X = mandatory / (X) = optional)

Backend Options for Scenario *RFID-Enabled Outbound Processing*	
Backend Option: SAP R/3 4.6C	
SAP R/3 4.6C with with SAP BASIS ≥ SP 47/SAP ABA ≥ SP 47/SAP APPL ≥ SP 47	X
Add-On AUTOID_INT_200_46C	X
XI Content AUTOID_INT_200_46C	X
Backend Option: SAP R/3 Enterprise 4.7 Extension Set 200	
SAP R/3 Enterprise 4.7 Extension Set 200 with SAP BASIS ≥ SP 37/SAP APPL ≥ SP 09	X
Add-On AUTOID_INT_200_470	X
XI Content AUTOID_INT_200_470	X
SAP R/3 Plug-In 2004.1 (or higher)	If SAP SCM 4.1 is used
Backend Option: SAP ERP Central Component 5.0	
SAP ECC 5.0	X
XI Content EA_APPL_500	X
SAP R/3 Plug-In 2004.1 (or higher)	If SAP SCM 4.1 is used

2.2 System Infrastructure

Planning the Technical Infrastructure

The design of the technical infrastructure for your system determines to a large degree the cost-effectiveness of the implementation. You have to determine the requirements that your system must fulfill.

The following questions can help you to identify the requirements that influence the design of the technical infrastructure most:

- Purpose of the system
  - Is it a non-production system such as a demo system or is it a development or test system? (Development and test systems should also be considered as “production” systems in the sense that failure of a system could result in loss of money.).
  - Or is it a “true” production system in the sense that your actual business processes run in this system? (In the following, we will refer only to this kind of system as “production system”.)
- Number of users
  - How many users do you expect?
  - Do you expect to be able to control the number of users (as in the case of a pure intranet scenario), or do you have no control over the number of users (as in the case of an internet enabled “Outbound Order Fulfillment”)?
- Scalability

  We recommend that you plan the system to be scalable right from the start. This way you can react to increasing demands more easily without major redesigns.
- Availability

  What are the availability requirements of the system? It is desirable to have as little downtime as possible, but guaranteeing certain service levels (such as 99.9% uptime) is costly.
- Security / Manageability

  How do you assess the security risks of the system? Security is a requirement that influences the infrastructure design quite heavily, because security considerations often demand exactly the opposite of what is required to retain the manageability of the system. For example, manageability would demand that you keep your software together as much as possible, while network security demands that you separate your software into network segments connected only over firewall systems.

  Some general design principles include keeping the system as simple as possible to ensure manageability and being flexible so that you can modify the system in response to new demands.

High Availability

To make your system highly available, you need to set up at least two copies of each software component of the system, so that one component can take over when the other one fails. This does not necessarily mean that you have to double the hardware, but in practice this is usually the case. You have to take great care not to omit any part of the software or hardware (servers, network, firewalls) from the high availability concept. If the failure of one component causes the entire system to fail, that component is called a single point of failure (SPOF).

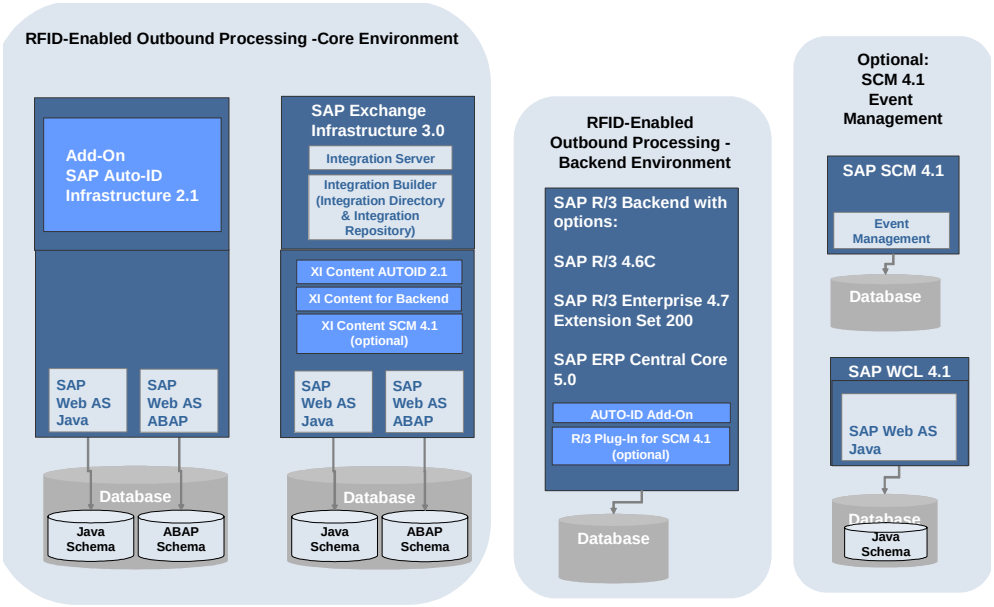
Note that a high availability concept should also include planned downtimes for software and server maintenance, upgrades and the possibility of software stability problems. We do not discuss these topics in depth here, but you should keep in mind implementing concepts to keep these downtimes under control.

Exemplary Technical Infrastructures

The following graphics show exemplary the technical infrastructures of Scenario *RFID-Enabled Outbound Processing* and its sub-related components (SAP Auto-ID Infrastructure, SAP Exchange Infrastructure, required backend and the optional SAP Event Management).

Depending on the involved backend and optional SCM Event Management, different XI contents and the R/3 plug-in need to be installed. For a short description of every component, see section Software Components Overview [page 29].

Technical Infrastructure of Scenario *RFID-Enabled Outbound Processing*



When using SAP R/3 4.6C as backend component within the *RFID-Enabled Outbound Processing* scenario, the integration of Event Management described in this document is not supported in the standard.

2.3 *RFID-Enabled Outbound Processing*

The following topics are covered:

- Overview of *RFID-Enabled Outbound Processing* scenario
- Technical system landscape
- Overview of implementation sequence

2.3.1 *RFID-Enabled Outbound Processing Overview*

With the business scenario RFID-Enabled Outbound Processing you can enhance the efficiency and quality of outbound processing operations by enabling:

- Automated hands-free goods issue/ loading confirmation
- Verification of physically goods issued items against the fulfillment requirements stipulated by the backend system in the form of a delivery document, thus presenting a real-time quality control function at source for correct issuing of goods ordered.
- Near instantaneous communication of pallet and case level EPC information to business partners and enterprise backend systems upon goods issue.

See the documentation *Business Scenario Description for RFID-Enabled Outbound Processing* for more information.

2.3.2 Technical System Landscape

The following graphics show exemplary the technical infrastructure of *RFID-Enabled Outbound Processing* depending on the different backend options, including its components and the communication between them.

For a short description of every component, see section Software Components Overview [page 29].

General Considerations

For the sake of simplicity and clearness the graphics contain icons for whole SAP systems, not for single hosts. Remember that every SAP system may consist of several hosts with different tasks.

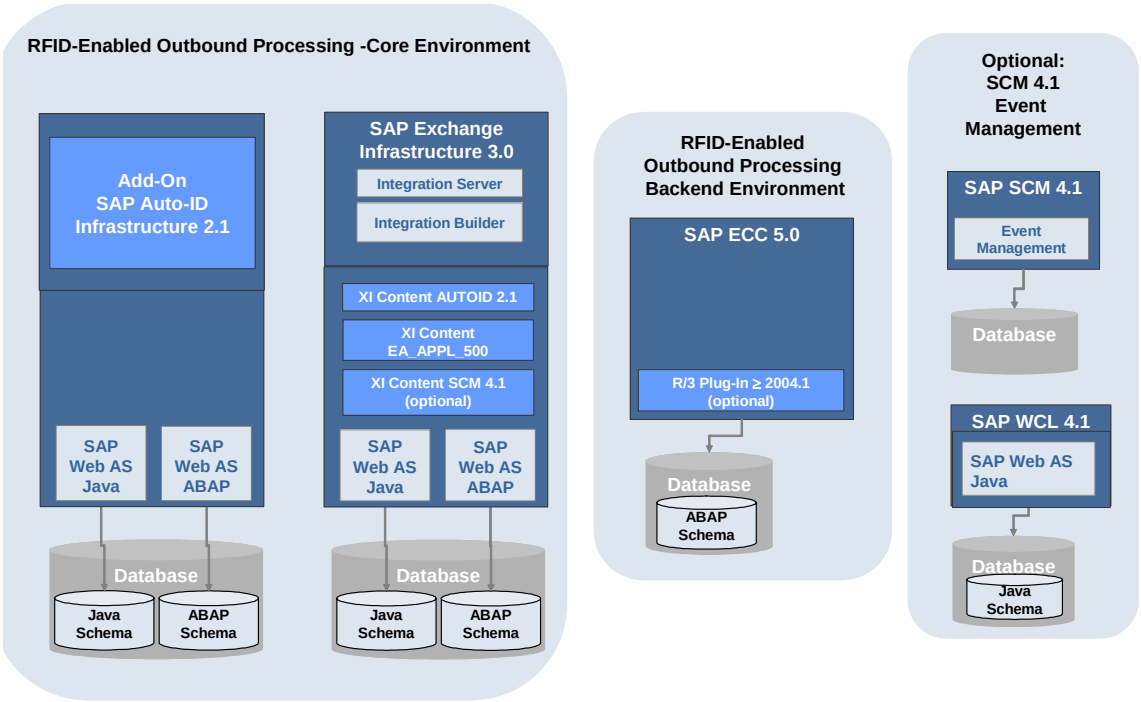
Use the internal features of the SAP Web Application Server to provide high availability and load balancing between the SAP systems.

XI Content Considerations

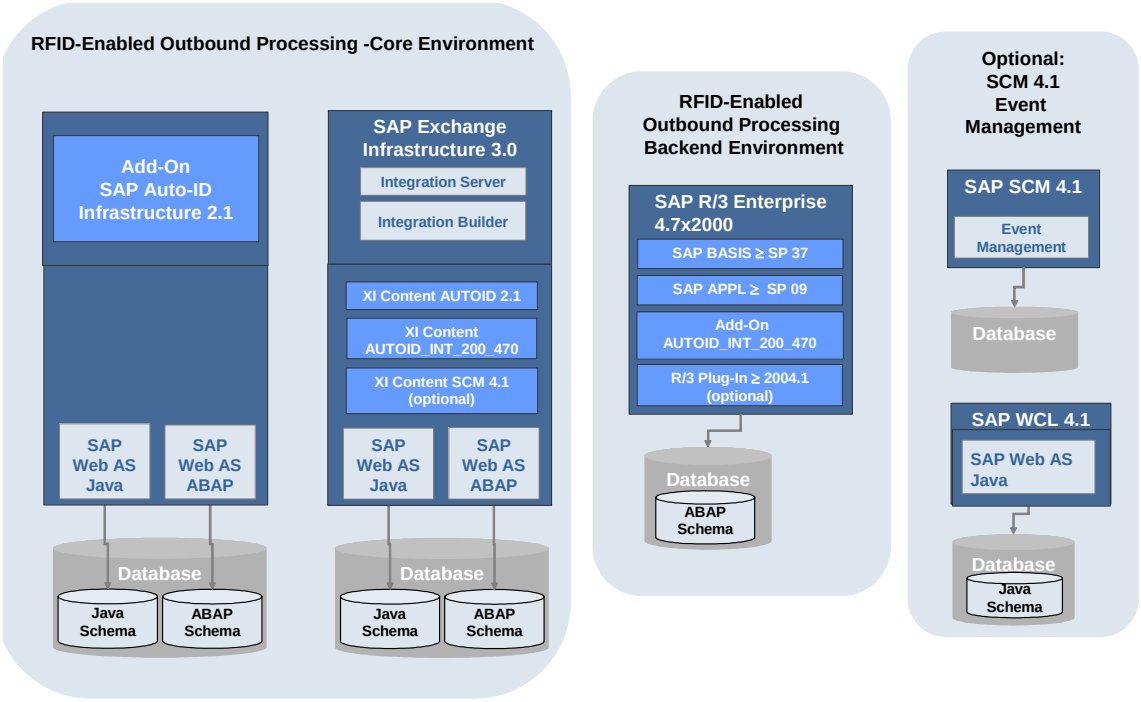
The XI Content is a special application content that must be installed on the SAP Exchange infrastructure host where each shared application needs its own content.

For each ABAP Support Package for SAP systems there is a corresponding XI Content Binary Patch Package that must be applied every time you upgrade your Support Package. This also applies for the SAP Auto-ID Infrastructure and the corresponding XI Content for SAP AII 2.1. The relationship is one to one with every Support Package.

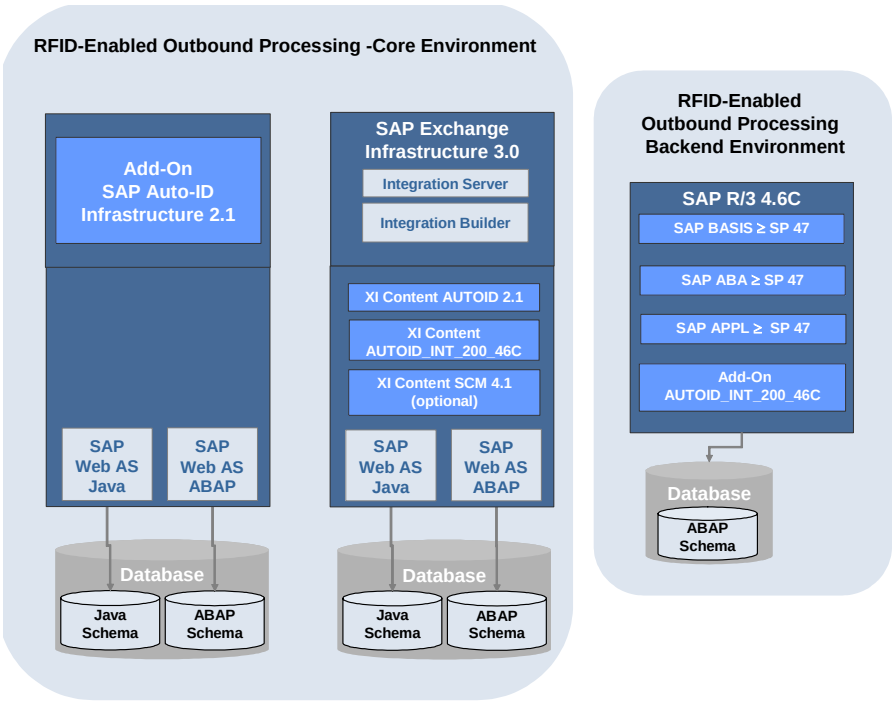
Technical Infrastructure with backend SAP ECC 5.0



Technical Infrastructure with backend SAP R/3 Enterprise 4.7x200



Technical Infrastructure with backend SAP R/3 4.6C



2.3.3 Overview of Implementation Sequence

This section lists the sequence of steps (installation, technical configuration, application configuration) required to implement the business scenario. Depending on the backend you use different implementation sequences are necessary.

2.3.3.1 Backend Option SAP ECC 5.0: Implementation Sequence

No	Action [Corresponding Documentation]
1	Installation/Integration of SAP ERP Central Core 5.0: [*Installation Guide – SAP ERP Central Core 5.0 on <Operating System>: <Database>,* available at: `service.sap.com/instguides`]
2	Installation/Integration of an **SAP Web AS 6.40 ABAP and Java system Support Package Stack 5 or higher** (J2EE Add-In) as prerequisite for SAP Exchange Infrastructure 3.0. [*SAP NetWeaver '04 Installation Guide - SAP Web Application Server 6.40 on <OS>:<DB> available* at: `service.sap.com/instguidesNW04`]
3	Installation/Integration of **SAP Exchange Infrastructure 3.0 SP05 or higher** Install the component ***SAP Exchange Infrastructure*** as described in the guide below. [*SAP NetWeaver '04 Installation Guide - SAP Exchange Infrastructure 3.0* available at: `service.sap.com/instguidesNW04`]
4	Installation of the current **System Landscape Directory (SLD) content** on the SLD host (located on the SAP Exchange Infrastructure host) as described in **SAP Note 669669.**
5	Configuration of SAP Exchange Infrastructure 3.0 SP05 or higher Configure the system as described in the guide below. System readiness can be checked as described in SAP Note 817920. [*SAP Exchange Infrastructure Configuration Guide* available at: `service.sap.com/instguides` → SAP NetWeaver → Release 04 → Installation → SAP XI]
6	Installation of **XI Content AUTO-ID 2.1** on the SAP Exchange Infrastructure host. a. Download this XI Content at: `service.sap.com/swdc` → Download → Support Packages and Patches → Entry by Application Group → SAP Application Components → SAP Auto-ID Infrastructure → SAP AII 2.1 → XI Content AUTO-ID 2.1 b. Import the downloaded XI Content files as described in **SAP Note 705541.**
7	Installation of **XI Content EA_APPL_500** on the SAP Exchange Infrastructure host. a. Download this XI Content at: `service.sap.com/swdc` → *Download* → *Support Packages and Patches* → *Entry by Application Group* → *SAP ERP* → *SAP ERP 2004* → *SAP NW - XI* → *XI Content EA-APPL 500* b. Import the downloaded XI Content files as described in **SAP Note 705541.**

8	Installation/Integration of an **SAP Web AS 6.40 ABAP and Java system Support Package Stack 5 or higher** (J2EE Add-In) as prerequisite for the SAP Auto-ID Infrastructure 2.1 Add-On. [*SAP NetWeaver '04 Installation Guide - SAP Web Application Server 6.40 on <OS>:<DB> available* at: `service.sap.com/instguidesNW04`]
9	Installation of **Add-On SAP Auto-ID Infrastructure 2.1** on the SAP Web AS 6.40 ABAP and Java system. [SAP Note 777426]
10	**Optional**: Installation of ***SAP SCM Event Management*** environment. See section Implementation Sequence: Optional SAP SCM Event Management [on page 27]

2.3.3.2 Backend Option SAP R/3 Enterprise: Implementation Sequence

No	Action [Corresponding Documentation]
1	Installation/Integration of **SAP R/3 Enterprise 4.7x200**: [*Installation Guide - SAP R/3 Enterprise on <OS>:<DB> - Using SAP R/3 Enterprise Core 4.70, SAP R/3 Enterprise Extension Set 2.00-* available at: `service.sap.com/instguides`]
2	Applying at least **SAP BASIS SP 37** and **SAP APPL SP 09** for the SAP R/3 Enterprise Server. The Support Packages are available at `service.sap.com/swdc`
3	Install **Add-On AUTOID_INT_200_470** on the SAP R/3 Enterprise Server: a. Install Add-On according to **SAP Note 728372** b. Apply **SAP Note 689793**
4	Installation/Integration of an **SAP Web AS 6.40 ABAP and Java system Support Package Stack 5 or higher** (J2EE Add-In) as prerequisite for SAP Exchange Infrastructure 3.0. [*SAP NetWeaver '04 Installation Guide - SAP Web Application Server 6.40 on <OS>:<DB> available* at: `service.sap.com/instguidesNW04`]
5	Installation/Integration of **SAP Exchange Infrastructure 3.0 SP05 or higher** Install the component ***SAP Exchange Infrastructure*** as described in the guide below. [*SAP NetWeaver '04 Installation Guide - SAP Exchange Infrastructure 3.0* available at: `service.sap.com/instguidesNW04`]
6	Installation of the current **System Landscape Directory (SLD) content** on the SLD host (located on the SAP Exchange Infrastructure host) as described in **SAP Note 669669.**
7	Configuration of SAP Exchange Infrastructure 3.0 SP05 or higher Configure the system as described in the guide below. System readiness can be checked as described in SAP Note 817920. [*SAP Exchange Infrastructure Configuration Guide* available at: `service.sap.com/instguides` → SAP NetWeaver → Release 04 → Installation → SAP XI]
8	Installation of **XI Content AUTO-ID 2.1** on the SAP Exchange Infrastructure host. a. Download this XI Content at: `service.sap.com/swdc` → *Download* → *Support Packages and Patches* → *Entry by Application Group -> SAP Application Components* → *SAP Auto-ID Infrastructure* → *SAP AII 2.1* → *XI Content AUTO-ID 2.1* b. Import the downloaded XI Content files as described in **SAP Note 705541.**
9	Installation of **XI Content AUTOID_INT_200_470** on the SAP Exchange Infrastructure host. a. Download this XI Content at: `service.sap.com/swdc` → *Download* → *Support Packages and Patches* → *Entry by Application Group* → *SAP Application Components* → *SAP Auto-ID Infrastructure* → *SAP AII 2.1* b. Import the downloaded XI Content files as described in **SAP Note 705541.**

10	Installation/Integration of an **SAP Web AS 6.40 ABAP and Java system Support Package Stack 5 or higher** (J2EE Add-In) as prerequisite for the SAP Auto-ID Infrastructure 2.1 Add-On. [*SAP NetWeaver '04 Installation Guide - SAP Web Application Server 6.40 on <OS>:<DB> available* at: `service.sap.com/instguidesNW04`]
11	Installation of **Add-On SAP Auto-ID Infrastructure 2.1** on the SAP Web AS 6.40 ABAP and Java system. [SAP Note 777426]
12	**Optional**: Installation of ***SAP SCM Event Management*** environment. See section Implementation Sequence: Optional SAP SCM Event Management [on page 27]

2.3.3.3 Backend Option SAP R/3 4.6C: Implementation Sequence

No	Action [Corresponding Documentation]
1	Installation/Integration of **SAP R/3 4.6C**: [*Installation Guide - SAP R/3 4.6C on <OS>:<DB>* available at: `service.sap.com/instguides`]
2	Applying at least **SAP BASIS SP 44 / SAP ABA SP 44** / **SAP APPL SP 47** for the SAP R/3 Server. The Support Packages are available at `service.sap.com/patches`
3	Install **Add-On AUTOID_ INT_200_46C** on the SAP R/3 Enterprise Server: a. Install Add-On according to **SAP Note 725064** b. Apply **SAP Note 689793**
4	Installation/Integration of an **SAP Web AS 6.40 ABAP and Java system Support Package Stack 5 or higher** (J2EE Add-In) as prerequisite for SAP Exchange Infrastructure 3.0. [*SAP NetWeaver '04 Installation Guide - SAP Web Application Server 6.40 on <OS>:<DB> available* at: `service.sap.com/instguidesNW04`]
4	Installation/Integration of **SAP Exchange Infrastructure 3.0 SP05 or higher** Install the component ***SAP Exchange Infrastructure*** as described in the guide below. [*SAP NetWeaver '04 Installation Guide - SAP Exchange Infrastructure 3.0* available at: `service.sap.com/instguides`]
5	Installation of the current **System Landscape Directory (SLD) content** on the SLD host (located on the SAP Exchange Infrastructure host) as described in **SAP Note 669669.**
6	Configuration of SAP Exchange Infrastructure 3.0 SP05 or higher Configure the system as described in the guide below. System readiness can be checked as described in SAP Note 817920. [*SAP Exchange Infrastructure Configuration Guide* available at: `service.sap.com/instguides` → SAP NetWeaver → Release 04 → Installation → SAP XI]
7	Installation of **XI Content AUTO-ID 2.1** on the SAP Exchange Infrastructure host. a. Download this XI Content at: `service.sap.com/swdc` → *Download* → *Support Packages and Patches* → *Entry by Application Group* → *SAP Application Components* → *SAP Auto-ID Infrastructure* → *SAP AII 2.1* → *XI Content AUTO-ID 2.1* b. Import the downloaded XI Content files as described in **SAP Note 705541.**

8	Installation of **XI Content AUTOID_INT_200_46C** on the SAP Exchange Infrastructure host. b. Download this XI Content at: `service.sap.com/swdc` → *Download* → *Support Packages and Patches* → *Entry by Application Group* → *SAP Application Components* → *SAP Auto-ID Infrastructure* → *SAP AII 2.1* a. Import the downloaded XI Content files as described in **SAP Note 705541.**
9	Installation/Integration of an **SAP Web AS 6.40 ABAP and Java system Support Package Stack 5 or higher** (J2EE Add-In) as prerequisite for the SAP Auto-ID Infrastructure 2.1 Add-On. [*SAP NetWeaver '04 Installation Guide - SAP Web Application Server 6.40 on <OS>:<DB> available* at: `service.sap.com/instguidesNW04`]
10	Installation of **Add-On SAP Auto-ID Infrastructure 2.1** on the SAP Web AS 6.40 ABAP and Java system. [SAP Note 777426]

2.3.3.4 Implementation Sequence: Optional SAP SCM Event Management

No	Action [Corresponding Documentation]
1	Installation of **SAP R/3 Plug-In** 2004.1 (or higher) on the Backend: See **SAP Note 704564** (*R/3 Plug-In: Installation Delta-Upgrade PI 2004.1*) and SAP Service Marketplace at: `service.sap.com/r3-plug-in`
2	Installation of **SAP SCM server 4.1** [*Installation Guide - SAP SCM server 4.1 on <Operating System>: <Database>* available at: `service.sap.com/instguides`]
3	Installation of **XI Content** for **SAP SCM 4.1** (consists of: *XI Content SCM 4.1* / *XI Content SCM Basis 4.1*) on the SAP Exchange Infrastructure host. a. Download the two SCM XI Content files at: `service.sap.com/patches` → *SAP SCM* → *SAP SCM 4.1* → *Binary Patches* b. Import the downloaded XI Content files as described in **SAP Note 705541.**
4	Installation of ***SAP SCM - Web Communication Layer 4.1*** [*Installation Guide – SAP SCM - Web Communication Layer* available at: `service.sap.com/instguides`]

When using SAP R/3 4.6C as backend component within the RFID-Enabled Outbound Processing scenario, the integration of Event Management described in this document is not supported in the standard.

2.3.3.5 Configuration

The documentation *Business Scenario Configuration Guide - RFID-Enabled Outbound Processing* describes how to setup the business scenario manually in the corresponding systems. The guide is available at: `service.sap.com/ibc` → *mySAP SCM* → *RFID-enabled Supply Chain Execution* → *RFID-Enabled Outbound Processing.*

2.4 *RFID-Enabled Slap&Ship Outbound Processing*

SAP Auto-ID Infrastructure 2.1 provides for a stand-alone deployment option with which customers can execute an outbound process that does not require a connection to any external system such as an SAP R/3 or ERP system.

The stand-alone deployment option of SAP AII 2.1 enables customers to perform basic slap& ship outbound processing whilst providing the platform to migrate to a solution that is integrated with a backend and expert system and scale the solution in a later roll-out following for instance a pilot.

Outbound processing with the stand-alone AII 2.1 provides users with the ability to execute the process sequence: tag commissioning (to write and validate written tags), packing and loading.

2.4.1 Overview of Implementation Sequence

This section lists the sequence of steps (installation, technical configuration, application configuration) required to implement the business scenario. Depending on the backend you use different implementation sequences are necessary.

No	Action [Corresponding Documentation]
1	Installation/Integration of an **SAP Web AS 6.40 ABAP and Java system Support Package Stack 5 or higher** (J2EE Add-In) as prerequisite for the SAP Auto-ID Infrastructure 2.1 Add-On. [*SAP NetWeaver '04 Installation Guide - SAP Web Application Server 6.40 on <OS>:<DB> available* at: `service.sap.com/instguidesNW04`]
2	Installation of **Add-On SAP Auto-ID Infrastructure 2.1** on the SAP Web AS 6.40 ABAP and Java system. [SAP Note 777426]

3 Software Components Overview

This section provides additional information about the most important mySAP SCM software components.

3.1 SAP Components

3.1.1 Application Components

3.1.1.1 OLTP System

Definition

OnLine Transaction Processing system (for example, SAP R/3 system, SAP R/3 Enterprise, SAP ECC) that is used in the RFID-enabled supply chain execution environment as backend system.

Use

Data is exchanged between the RFID-enabled supply chain execution environment and a connected OLTP system.

3.1.1.2 SAP Auto-ID Infrastructure

This component, optionally together with adapters for SAP backend systems and/or SAP Event Management, supports the integration of RFID interrogators and other hardware for automatic identification with backend systems. It could be described as a kind of middleware for RFID and automatic identification integration.

In contrast to the adapters this component is implemented as an independent system. It is connected to the device controllers of the readers. SAP Auto-ID Infrastructure receives business-related information - indirectly - from the SAP ERP or other systems and translates it into technical information for the readers, handles the actions to be executed, receives messages about read tags, decides on the reaction to read information or missing reads, and delivers filtered and comprised information back to the backend system.

Instead of connecting SAP Auto-ID Infrastructure directly with different backend systems, it is integrated using SAP Exchange Infrastructure. This makes it possible to use an open XML message interface on the SAP Auto-ID Infrastructure side and to easily connect backend systems that are not an SAP ECC 5.0.

3.1.1.3 SAP Supply Chain Management server

SAP Supply Chain Management server (SAP SCM server) is part of the mySAP Supply Chain Management solution suite. It is an advanced planning and scheduling tool that enables real-time decision support and collaborative network optimization across the extended supply chain. SAP SCM SERVER helps companies synchronize supply chain activities with their partners and excel at customer service and order fulfillment.

SAP Event Management

Integrated component of the SAP SCM system that offers the possibility to process application objects in various application systems and thereby to track events for individual objects, processes or parts of these throughout the entire supply chain.

Use

SAP Event Management (SAP EM) can link, update and evaluate the event messages with the application data from the supply chain network.

It allows you to:

- Monitor, measure and evaluate business processes
  - SAP Event Management automatically monitors events that occur and those that have not been reported (for example, goods issue, purchase order transfer, production end, or unreported proof of delivery).
  - SAP Event Management can automatically transfer data to a data warehouse system that uses key performance indicators to create performance data for the quality of execution and notification.
- Employ checking processes and notify persons responsible to control events
  - SAP Event Management checks the Supply Chain Event Management-relevant objects as soon as they are saved in the application system.
  - SAP Event Management can automatically inform the decision maker in critical situations that action is required (for example, automatic re-scheduling of the subsequent process step when a delay has occurred).
- Exchange and query information between partners (for example, e-mail or Internet)

3.1.1.4 SAP SCM - Web Communication Layer

Java-based SAP front end which offers information access and full supply chain visibility for SAP EM via the Internet.

3.1.2 Technology Components

3.1.2.1 SAP Basis / SAP Web Application Server

Definition

SAP Web Application Server (SAP Web AS) provides the technological foundation for all other mySAP.com components. In a sense, SAP Web Application Server is the "operating system" of mySAP.com. Until SAP R/3 4.6D, SAP Web Application Server was named SAP Basis.

In the past, SAP Basis was used and shipped exclusively as an integral part of SAP R/3. This was also reflected by the fact that SAP Basis and SAP R/3 had identical release names and shared Support Packages.

With the introduction of mySAP.com, SAP now offers multiple components that build on SAP Web Application Server. As a result, there is no tight naming relation between SAP Web Application Server and SAP R/3 any more.

An SAP System consists of a database server, (optional) additional application servers, and a number of front-end computers.

The database server is the computer on which the database is installed. This server can also accommodate the central instance (the SAP instance that includes the message server and enqueue server processes). If the central instance is installed on a separate application server, the database server is called a standalone database server.

Additional dialog instances (SAP instances including only dialog, batch, spool, or update processes) are installed on application servers.

Use

SAP Web Application Server provides a platform for quickly developing and deploying dynamic and collaborative Web applications or other thin-client applications (WAP, PDA, and so on) and includes all proven SAP programming models and technologies. With SAP Web Application Server, SAP natively supports open Internet standards, including such protocols as HTTP, HTTPS, and SMTP, as well as Internet document standards like HTML and XML.

Open integration capabilities provide access to existing SAP and non-SAP applications. All integration facilities supported by SAP are available with SAP Web Application Server. The Java Connector or the DCOM Connector give ABAP applications access to Java or .NET components and vice versa. In addition, the Internet Communication Framework (ICF) of SAP Web AS enables ABAP-written programs to process and distribute HTTP requests directly. As a consequence, SAP Web Application Server can serve both as an HTTP server and client. It serves as an HTTP server for bringing applications to the user via a Web browser either directly or via a standard Web server. It serves as an HTTP client to access other Web applications for collecting information and data. To complete Web connectivity, SAP Web AS provides full support for sending and receiving e-mails via SMTP.

3.1.2.2 SAP Exchange Infrastructure

Based on a native Web infrastructure that leverages open standards, SAP Exchange Infrastructure (SAP XI) makes it possible to manage the broad diversity of highly heterogeneous components from a multitude of vendors and running in various technology environments. The integration capabilities capture shared business semantics and act as a mediator between the services and their technical realizations. It includes technical functions, such as Web service discovery, queuing, mapping, and routing.

Exchange-based process integration removes the problems of direct connections by extracting shared collaboration knowledge. These shared business semantics ease the

integration of both external and internal components. Instead of directly coding point-to-point interfaces for each new component, the exchange infrastructure allows instant plug-in of new components once per component. This provides the future flexibility needed in today's fast-changing business world, and it reduces integration costs compared to the direct connection approach.

3.1.2.3 SAP GUI

Generally, the latest release of the SAP GUI software can be used with all previous SAP R/3 releases (such as 4.0B). As a result, older SAP systems can also benefit from the features that are only available in the newer SAP GUI releases - for example, the look and feel of EnjoySAP and support for Windows 2000.

The benefit of this downward compatibility is that you can simply install a new SAP GUI release instead of patching an old one. The SAP GUI maintenance strategy takes advantage of this feature. In many problem situations, the recommendation is to install a new SAP GUI release, because patches cannot always be provided for older SAP GUI releases even if SAP still maintains the SAP R/3 System with the same release number.

3.1.2.4 SAP R/3 Plug-Ins

The SAP R/3 Plug-In is an interface that enables the exchange of data between one or several SAP R/3 systems and other mySAP.com components. The SAP R/3 Plug-In supplies the mySAP.com components with transaction data and master data in real time. It also makes it possible to use mySAP.com application components like SAP APO or SAP CRM together with certain mySAP.com industry-specific components. All mySAP.com industry-specific components based on SAP R/3 4.6B or higher SAP R/3 releases require an SAP R/3 Plug-In. The SAP R/3 Plug-In is an add-on to SAP R/3.

SAP R/3 Plug-Ins are shipped with SAP application components (SAP APO, SAP BW, SAP BBP, SAP EBP, SAP CRM, and SAP SEM) and with industry-specific SAP components based on SAP R/3 4.6B or higher SAP R/3 releases. You can order the most recent SAP R/3 Plug-In releases free of charge or download them from the SAP Service Marketplace.

Depending on the combination of the SAP R/3 Plug-In release and version and the SAP R/3 release, certain SAP R/3 Support Package levels are required to install the SAP R/3 Plug-In.

For more information and for download, see SAP Service Marketplace at the Internet address: `service.sap.com/r3-plug-in`.

4 References: Related Implementation / Configuration Guides

List of implementation and configuration documentation for RFID-enabled supply chain execution.

Title	Purpose	Where to find
Installation Specific –Core Installation		
SAP NetWeaver '04 Installation Guide - SAP Web Application Server 6.40 on <OS>:<DB>	Installation of an SAP Web AS ABAP and Java system as a prerequisite for SAP Auto-ID Infrastructure 2.1	`service.sap.com/instguidesNW04`
SAP NetWeaver '04 Installation Guide - SAP Exchange Infrastructure 3.0	Installation of SAP XI 3.0 SP 1 as dedicated server	
Installation Note - SAP Auto-ID Infrastructure 2.1	Installation of SAP Auto-ID Infrastructure 2.1	`SAP Note 777426`
SAP Note 705541: XI 3.0 (SP1 and following): Importing XI content	Applying XI Content AUTO-ID 2.0 on the SAP XI server	`service.sap.com/notes`
Installation Specific – Backend (OLTP) Installation		
Backend (OLTP) Option SAP ECC 5.0		
Installation Guide - SAP ERP Central Core 5.0 on <Operating System>: <Database>	Installing the OLTP SAP ECC 5.0 server	`service.sap.com/instguides` → *mySAP Business Suite Solutions*
Backend (OLTP) Option SAP R/3 Enterprise 4.70x200		
Installation Guide - SAP R/3 Enterprise on <Operating System>: <Database>- Using SAP R/3 Enterprise Core 4.70, SAP R/3 Enterprise Extension Set <Release>	Alternative OLTP server installation	`service.sap.com/instguides` → *SAP Components*
SAP Note 728372	Applying Add-On AUTOID_INT_200_470 on SAP R/3 4.70x200	`service.sap.com/notes`
SAP Note 705541: XI 3.0 (SP1 and following): Importing XI content	Applying XI Content AUTOID_INT_200_470 on the SAP XI server	

Backend (OLTP) Option SAP R/3 4.6C		
R/3 Installation on <Operating System>: <Database>- Release 4.6C	Alternative OLTP server installation	`service.sap.com/instguides`
SAP Note 728372	Applying Add-On AUTOID_INT_200_46C on SAP R/3 4.6C	`service.sap.com/notes`
SAP Note 705541: XI 3.0 (SP1 and following): Importing XI content	Applying XI Content AUTOID_INT_200_46C on the SAP XI server	
Installation Specific – Optional SAP Event Management		
Installation Guide – SAP SCM server 4.1 on <Operating System>: <Database>	Installing the SAP SCM 4.1system.	`service.sap.com/instguides` → *mySAP Business Suite Solutions*
Installation Guide - SAP SCM - Web Communication Layer 4.1	Installing the SAP EM – WCL on a SAP Web AS Java	`service.sap.com/instguides` → *mySAP Business Suite Solutions*
SAP Note 705541: XI 3.0 (SP1 and following): Importing XI content	Applying SCM XI Content SCM 4.1 / XI Content SCM Basis 4.1on the SAP XI server	`service.sap.com/notes`
SAP Note 704564: R/3 Plug-In: Installation Delta-Upgrade PI 2004.1	Applying plug-in on the OLTP backend system.	
Configuration Specific		
Business Scenario Configuration Guide – RFID-EnabledOutbound Processing	Detailed description of this business scenario	`service.sap.com/ibc` → for *mySAP SCM* → *RFID-Enabled Supply Chain Execution* → *RFID-Enabled Outbound Processing* → *Configuration Guide*
Business Scenario Configuration Guide – RFID-Enabled Slap&Ship Outbound Processing	Detailed description of this business scenario	`service.sap.com/ibc` → for *mySAP SCM* → *RFID-Enabled Supply Chain Execution* → *RFID-Enabled Slap&Ship Outbound Processing* → *Configuration Guide*

SAP Exchange Infrastructure 3.0	Detailed configuration information	`service.sap.com/instguides` → SAP NetWeaver → Release 04 → Installation → SAP XI → Configuration Guide SAP XI 3.0
System Landscape Directory	Detailed configuration information	`service.sap.com/instguides` → *SAP NetWeaver → Release 04 → Operations → SAP Web AS → SLD User Manual for Web AS 640 / NetWeaver 04*