Guide for Automated Configuration: Connecting CRM and ERP Systems

Target Audience

- System Administrators
- Technology Consultants

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1 Business Context and Scope

1.1 Business Context

This document describes how to automate the mandatory configuration you need to integrate ERP and CRM systems in a Financial Shared Services Center. The Financial Shared Services Center integrates financial and controlling processes (from the ERP systems) with the CRM Accounting Interaction Center (AIC). In most cases, the customers' system landscape is expected to consist of a single CRM system release CRM 7.0 enhancement package 1, which is connected to several ERP systems spanning different releases. The Automated Configuration Template (ACT) shall automate the technical configuration of both the ERP and CRM systems as well as the configuration required to facilitate the communication between both systems.

1.2 Scope

This ACT is designed to be used with one ERP system that is connected to one CRM system. The system initialization tasks such as defining the logical system, is automated. If some of these settings have already been made in ERP, CRM or both, then the ACT recognizes the settings and automatically cancels the run.

This ACT can also deal with several ERP system releases. The ACT steps vary depending on the ERP system release.

1.3 Out of Scope

1.3.1 Customer-Specific Configuration

This ACT does not automate the business or functional configuration. Functional and business configuration consists of tasks that model the customer's business organization such as setting up business entities. For example, the creation of and configuration of customer and vendor master data is not automated in this ACT.

1.3.2 External Configuration

This ACT does not automate the configuration of the connections between several ERP systems and the CRM system at the same time. However, you can use this ACT to connect each ERP system individually to the CRM system.

1.4 Prerequisites

The user who executes the configuration template must have the Administrator Authorization in both the ERP and CRM systems. This user is required for the following tasks:
Create users
Assign roles and profiles to the created users
Create RFC destinations
Configure the client to allow cross client changes, in other words to configure the client itself
Maintain client dependent and client independent table entries.
Configure the CRM middleware.

1.4.1 Technical Prerequisites

To automate configuration steps for connecting the ERP system with the CRM system, the conditions in the table below must be met:

Connection Between Systems		Type and intention of the connection (customizing vs. master data; protocol (RFC, DIAG, HTTP), etc.
From	To	
ERP	CRM	RFC Type 3 for Transaction Data/Master Data
CRM	ERP	RFC Type 3 for Transaction Data/Master Data

Technical Configuration of the system on which the LM Automation tool is executed:

- System Configuration with one of the following OS:
  - 1 GB of disk space and at least 1 GB of memory
  - Microsoft Windows XP (32 and 64 bit)
  - Microsoft Windows Vista (32 and 64 bit)
  - Microsoft Windows 7 (32bit and 64 bit)
  - Microsoft Windows Server 2003 Windows Server 2008 (32bit and 64 bit)
- Adobe Flash plug-in has to be installed in the browser to enable the LM Automation tool UI. If the plug-in is not installed, the browser pops up a message with a link to from where you can install

the ActiveX component. Alternately you can download the required plug-in from the official Adobe website. www.adobe.com/products/flashplayer/

- 32 bit jre and 32 bit C runtime
  To run LM Standalone solution on 64 bit systems, the system should have Microsoft Visual C runtime DLL with version x86_x64 installed on it. Follow the steps given below to install it:
  1. Access the URL, http://www.microsoft.com/technet/security/bulletin/MS09-035.mspx
  2. In the "Affected Software" section, click the following link: Microsoft Visual C++ 2005 Service Pack 1 Redistributable Package (KB973544)
  3. In the "Files in This Download" section, download one of the following platform-specific files:
     - For a 64-Bit SAP system on Intel 64-Bit, download vcredist_x86.exe and vcredist_x64.exe
     - For a 32-Bit SAP system on Intel 64-Bit, download vcredist_x86.exe
     - For an SAP system on Intel 32-Bit, download vcredist_x86.exe
  4. Execute the downloaded binary by double-clicking on it and follow the instructions.

For more information, refer the SAP Release Note for LMAUTOSTD 1.0 SP01: 1622263.

1.4.2 SAP Notes for ERP Releases < ERP 6.0 EHP5

The following table lists the SAP Notes that you must implement before using the configuration template in case you run a backend ERP systems on a release lower than ERP 6.0 EhP 5:
The AIC and the Financial Shared Services Center features delivered with SAP ERP 6.0 enhancement package 5 are highly integrated. The integration of these features with the CRM IC is much easier as a result. SAP Note 1454759 gives an overview of the features delivered with each note.

SAP Note Number	Description	System
1454759	Overview Note: Consulting FSSC Solution for lower releases	N/A
1459900	BP Replication with Company Code	
1461856	Customer and Vendor Invoice Search	
1459883	Downport search help	
1457490	Self Services F4 help enablement	
1456110	Self Services backend enablement	
1454798	Enablement of Service Request Manual Creation	
1461836	Biller Direct Enhancements	
1463902	CO Transaction Launches	
1456605	FI Transaction Launchers	

SAP Note Number	Description	System
1462284	Financial Shared Service Center: Fact Sheet Enabling	
1480575	Downport Customizing for Manual Creation of Service	

2 System Landscape

2.1 Systems

The following table shows which systems and components are involved:

Involved Systems and Components

SAP Business Suite System or SAP NetWeaver Component	Software Component
CRM	The following software components are accessed by the CTC template: SAP_BASIS, SAP_ABA, PI-BASIS, BBPCRM
ERP	The following software components are accessed by the CTC template: SAP_BASIS, SAP_ABA, PI-BASIS

2.2 Release Matrix

The following releases can be used with this ACT:

- SAP CRM 7.0 enhancement package 1
- ERP 6.0 enhancement package 6
- ERP 2005 enhancement package 5
- ERP 2005 enhancement package 4
- ERP 2005 enhancement package 3
- ERP 2005 enhancement package 2
- ERP Central Component 6.0
- ERP ECC 5.0

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3 How to Deploy this Configuration Template

You can download the automated configuration content from SAP Service Marketplace at http://service.sap.com/swdc -> SAP Support Packages -> Support Packages and Patches -> A - Z Index -> "S" -> SL Toolset -> SL Toolset 1.0 -> Entry By Components -> LM Automation Standalone.

Procedure

1. Download the archive to a folder and unzip/unpack the downloaded file.

   > Note
   >
   > You require write access to this folder; Administrator rights are not required.

2. Click on LMAuto.bat to start the application.
3. Choose the template, *Connect CRM System with ERP System*, when the popup window containing a list of templates opens.
4. Choose *Start*.
5. Follow the guidance of the tool and enter further information about the systems that you want to connect using the template. The tool defines the necessary settings. The tool reports any configuration errors, and error message long texts are written to the log.
6. To view the details of each task performed by the automation template, choose the *Task Explorer* tab in the Home page.
   The information about each task is provided in a tree format, which you can expand to view additional details.

> Note
>
> We recommend that you deactivate or delete the technical user used to call Remote Function Calls (RFCs), Business Application Programming Interfaces (BAPIs), and Web services after automatically executing the automated configuration template.

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4 Detailed Configuration Steps and Automation Information

The following table shows which configuration steps are automatically completed when running the configuration script and which steps have to be manually performed:

Configuration Steps and Automation Information

Configuration Step	Logical Task*	Target System**	Description	Automated***
1		ERP	Check Business Function 'FIN_SSC_AIC_1' is switched on	Yes
2		CRM	Check Business Function 'CRM_SHSVC' is switched on	Yes
3	Customizing	ERP	Defining Logical System	Yes
4	Customizing	ERP	Assigning Logical System to Client	Yes
5	Identity	ERP	Creating an RFC User and assign the right roles and profiles	Yes
6	Customizing	CRM	Defining Logical System	Yes
7	Customizing	CRM	Assigning Logical System to Client	Yes
8	Customizing	CRM	Defining Client Administration	Yes
9	Identity	CRM	Creating RFC User and assign the right roles and profiles	Yes
10	Customizing	ERP	Creating a Logical System for SAP CRM	Yes

Configuration Step	Logical Task*	Target System**	Description	Automated***
11	RFC Destination	ERP	Connecting SAP CRM	Yes
12	Customizing	ERP	Checking Table CRMCONSUM	Yes
13	Customizing	ERP	Maintaining Table CRMRFCPAR	Yes
14	Customizing	ERP	Maintaining Table CRMPAROLTP	Yes
15	Customizing	ERP	Activating Event Control	Yes
16	Customizing	CRM	Defining Logical System for ECC	Yes
17	RFC Destination	CRM	CreatiChecking Table CRMCONSUM ng RFC Destination for the ECC System	Yes
18	Identity	CRM	Creating RFC User in current CRM Client (For CRM Replication and Realignment Client Destination)	Yes
19	Identity	CRM Replication and Realignment Client	Creating RFC User in Client 000 (For CRM Replication and Realignment Client Destination)	Yes
20	RFC Destination	CRM Replication and Realignment Client	Creating RFC Destination for Replication & Realignment (Client 000)	Yes
21	RFC Destination	CRM	Creating RFC Destination for Replication & Realignment (Application Client)	Yes
22	Queue Registration	CRM	Register Inbound and Outbound Queues	Yes

Configuration Step	Logical Task*	Target System**	Description	Automated***
23	Queue Registration	CRM	Register Inbound and Outbound Queues	Yes
24	Customizing	CRM	Creating Site for ERP	Yes
25		CRM	Create Publication Transaction SMOEAC	Yes
26	Customizing	CRM	Creating Subscriptions for ERP	Yes
27	Customizing	CRM	Checking Table CRMCONSUM	Yes
28	Customizing	CRM	Middleware Mode (MW_MODE)	No
29	Customizing	CRM	Middleware Generation (GNRWB)	No
30	Customizing	CRM	Define the Destination for standard BAPI call (transaction SALE)	Yes
31	Transaction R3AC1	CRM	Define R3 Adapter for Mass Creation in CRM	Yes
32	Customizing	CRM	Define Queue Name for Mass Creation of Service Request in ECC Systems (View CRMQNAMES)	Yes
33	Transaction SE19	CRM	Activate the BADI implementation "CRM_SSC_SR_R3A" for BADI definition "CRM_BUS20001_R3A	Yes

A Reference

A.1 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 software.

Cross-Phase Documentation

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

- Target group:
  - Relevant for all target groups
- Current version:
  - On SAP Help Portal at http://help.sap.com → *Glossary*
  - In the SAP system in transaction `STERM`

SAP Library is a collection of documentation for SAP software covering functions and processes.

- Target group:
  - Consultants
  - System administrators
  - Project teams for implementations or upgrades
- Current version:
  - On SAP Help Portal at http://help.sap.com (also available as documentation DVD)

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 SAP NetWeaver. This document contains general guidelines and suggestions. SAP applications have a security guide of their own.

- Target group:
  - System administrators
  - Technology consultants
  - Solution consultants
- Current version:
  - On SAP Service Marketplace at http://service.sap.com/securityguide

Implementation

The **master guide** is the starting point for implementing an SAP solution. It lists the required installable units for each business or IT scenario. It provides scenario-specific descriptions of preparation, execution, and follow-up of an implementation. It also provides references to other documents, such as installation guides, the technical infrastructure guide and SAP Notes.

- Target group:
  - Technology consultants
  - Project teams for implementations
- Current version:
  - On SAP Service Marketplace at `http://service.sap.com/instguides`

The **installation guide** describes the technical implementation of an installable unit, 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:
  - On SAP Service Marketplace at `http://service.sap.com/instguides`

Configuration Documentation in SAP Solution Manager – SAP Solution Manager is a life-cycle platform. One of its main functions is the configuration of business scenarios, business processes, and implementable steps. It contains Customizing activities, transactions, and so on, as well as documentation.

- Target group:
  - Technology consultants
  - Solution consultants
  - Project teams for implementations
- Current version:
  - In SAP Solution Manager

The **Implementation Guide (IMG)** is a tool for configuring (Customizing) a single SAP system. The Customizing activities and their documentation are structured from a functional perspective. (In order to configure a whole system landscape from a process-oriented perspective, SAP Solution Manager, which refers to the relevant Customizing activities in the individual SAP systems, is used.)

- Target group:
  - Solution consultants
  - Project teams for implementations or upgrades
- Current version:
  - In the SAP menu of the SAP system under *Tools → Customizing → IMG*

Production Operation

The **technical operations manual** is the starting point for operating a system that runs on SAP NetWeaver, and precedes the application operations guides of SAP Business Suite. The manual 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.

- Target group:
  - System administrators
- Current version:
  - On SAP Service Marketplace at `http://service.sap.com/instguides`

The **application operations guide** is used for operating an SAP application once all tasks in the technical operations manual have been completed. It refers users to the tools and documentation that are needed to carry out the various operations-related tasks.

- Target group:
  - System administrators
  - Technology consultants
  - Solution consultants
- Current version:
  - On SAP Service Marketplace at `http://service.sap.com/instguides`

Upgrade

The **upgrade master guide** is the starting point for upgrading the business scenarios and processes of an SAP solution. It provides scenario-specific descriptions of preparation, execution, and follow-up of an upgrade. It also refers to other documents, such as upgrade guides and SAP Notes.

- Target group:
  - Technology consultants
  - Project teams for upgrades
- Current version:
  - On SAP Service Marketplace at `http://service.sap.com/instguides`

The **upgrade guide** describes the technical upgrade of an installable unit, 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 upgrades
- Current version:
  - On SAP Service Marketplace at `http://service.sap.com/instguides`

Release notes are documents that contain short descriptions of new features in a particular release or changes to existing features since the previous release. Release notes about ABAP developments are the technical prerequisite for generating delta and upgrade Customizing in the Implementation Guide (IMG).

- Target group:

  - Consultants
  - Project teams for upgrades
- Current version:
  - On SAP Service Marketplace at `http://service.sap.com/releasenotes`
  - In the SAP menu of the SAP system under *Help → Release Notes* (only ABAP developments)

Typographic Conventions

Example	Description
`<Example>`	Angle brackets indicate that you replace these words or characters with appropriate entries to make entries in the system, for example, “Enter your `<User Name>`”.
Example → *Example*	Arrows separating the parts of a navigation path, for example, menu options
Example	Emphasized words or expressions
`Example`	Words or characters that you enter in the system exactly as they appear in the documentation
http://www.sap.com	Textual cross-references to an internet address
`/example`	Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web
123456	Hyperlink to an SAP Note, for example, SAP Note 123456
Example	■ Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options. ■ Cross-references to other documentation or published works
`Example`	■ Output on the screen following a user action, for example, messages ■ Source code or syntax quoted directly from a program ■ File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools
`EXAMPLE`	Technical names of system objects. These include report names, program names, transaction codes, database table names, and key concepts of a programming language when they are surrounded by body text, for example, `SELECT` and `INCLUDE`
`EXAMPLE`	Keys on the keyboard

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