

XM INTEGRATION GUIDE

Infor10 Financials Business (SunSystems)

Infor10 Financials Business (SunSystems) – XM Integration Guide
Based on software version 6.1.2 – document version 612A, November 2011

Copyright © 2011 Infor. All rights reserved. The word and design marks set forth herein are trademarks and/or registered trademarks of Infor and/or related affiliates and subsidiaries. All rights reserved. All other trademarks listed herein are the property of their respective owners. www.infor.com.

Infor
1 Lakeside Road
Aerospace Centre
Farnborough
Hampshire
GU14 6XP
United Kingdom
Phone: +44 (0) 1252 556000

Contents

Introduction	4
Prerequisites	5
SunSystems	5
ION	5
XM	5
Overview	6
Setting up your System	7
ION	7
SunSystems	8
XM	11

Introduction

This guide covers the integration of SunSystems and Expense Management (XM), and describes how you must configure SunSystems, XM, and ION.

This guide is in addition to the information provided in the documents detailed below. It is important that you also refer to these documents and ensure that the necessary steps have been followed for your integration:

- SunSystems v6 Integration Configuration Guide
- Quick Start Guide: Installing SunSystems / Workspace / ION
- Infor Technology Stack – Installation and Configuration Checklist
- Infor ION Process Administration Guide
- XM Installation Guide.

This integration relies on the use of BODs (Business Object Documents) which are XML files containing data to be exchanged to and from the integrated systems. The definitions of these BODs are built into SunSystems; the instances of them are created when publication is triggered by an event in SunSystems, such as the creation of a Supplier record representing an employee.

For example, XM sends a BOD representing an approved expense claim to SunSystems; SunSystems processes the data using BLImport and creates a journal.

If you need information about BODs and BOD mappings, documentation is available via Infor365 detailing SunSystems' BOD publication capabilities, and also detailing mappings between integrated systems.

Prerequisites

For this integration the following must be installed:

- SunSystems version 6.1.2
- XM version 8.1
- ION version 10.1.

SunSystems

- Integration user set up in User Manager
- XM employees set up as suppliers
- Addresses set up for suppliers
- Ledger Interface Account Recognition Code set up
- Analysis Dimensions and Analysis Codes set up if required
- Business rules set up
- Integration Configuration created.

ION

- Application Connection Point to SunSystems set up
- Application Connection Point to XM set up
- Document flow from SunSystems to XM set up
- Document flow from XM to SunSystems set up.

XM

- XM and XM Integration Server configured.

Overview

SunSystems integrates with XM by the following method:

- User Manager – set up a specific user in User Manager to be used for any system integration activity.
- Supplier – set up a Supplier for each XM Employee.
- Ledger Interface Account Recognition Codes (LIA) – create an Account Recognition Code with the Account Recognition Code Type of Business Account Code; define the Business Account Code.
- Ledger Interface (LIS) – set up a definition for the supplier, in order to credit the supplier account; and set up a definition for the expense, in order to debit the expense account.
- Analysis – if used, set up Analysis Dimensions of Expense Type and Supplier Type; set up Analysis Codes which use Analysis Dimensions of Expense Type and Supplier Type.
- Business Rules – set up business rules in order to publish a Personnel BOD from the SunSystems Supplier record, and thus interpret it as an Employee in XM.
- Integration Configuration – create a configuration with XM.
- ION - set up connection points and document flows between SunSystems and XM.

Note: See the section Setting up your System below for more detailed information.

Setting up your System

The following must be set up in order for your integration to work correctly, in addition to the items detailed in the Prerequisites section earlier in this document.

ION

ION Desk is a browser-based interface that you use to configure and monitor all Infor ION services.

Note: See the document Infor ION Process Administration Guide for more information about this product.

Application Connection Points

In ION Desk, you must set up two Application Connection Points: one for SunSystems and one for XM.

SunSystems

The connection point for SunSystems must be defined as follows:

Logical ID

This is where you define a unique identifier for an individual installation of SunSystems. In order for ION to deliver BODs to and from SunSystems, this ID must exactly match the corresponding ID which is defined in SunSystems itself.

ION Desk uses the information which you enter in the Name and Logical ID Type fields to compose the Logical ID for your instance of SunSystems. For example, if you enter 'sunsystems612' in Logical ID Type and 'livesystem' in Name, the resultant Logical ID will be 'infor.SunSystems612.livesystem'.

Note: If you have multiple instances of SunSystems, it is vital that you have different Logical IDs.

Type

Select Infor JDBC.

Connection Tab

URL – amend this to show the machine name in place of [HostName] and the SunSystems domain name in place of [SchemaName].

User name and Password – enter those used for SunSystems.

Documents Tab

Select Personnel, and set Sync >> Send from Application.

Select Remittance Advice, and set Sync >> Send from Application.

Select Expense Report, and set Sync >> Receive in Application.

XM

The connection point for XM must contain the following information:

Type

Select Infor JDBC.

Connection Tab

URL – amend this to show the machine name in place of [HostName] and the database that you created for the XM ION Integration in place of [SchemaName].

User name and Password – enter those used for XM.

Documents Tab

Select Personnel, and set Sync >> Receive in Application.

Select Remittance Advice, and set Sync >> Receive in Application.

Select Expense Report, and set Sync >> Send from Application.

Documentation Flows

Once you've created these connection points, you must create two document flows: one from SunSystems to

XM, and one from XM to SunSystems.

You must then activate them.

Remittance Advice BODs

This integration setup does not provide any facility to control the publication of RemittanceAdvice BODs using SunSystems Business Rules. If publication of RemittanceAdvice BODs is switched on, then all System payments are published via BODs.

However, it is probable that you will not require all your remittance data to go to XM.

In order to limit the number of RemittanceAdvice BODs which are directed to XM, you must use the content-based routing and/or content-based filtering capabilities within ION.

Note: See the section Filtering and content-based routing, in the ION Connect Administration Guide.

Examples of Filtering

- You can filter on the <TransactionID> element, which will be populated with XM's Expense Report number. For example, 'ER00000003'. The condition might be 'Starts with 'ER'.
- You can filter on the <PartyIDs> element, which will be populated with the Supplier code. The condition will be dependent on how you identify those suppliers which are employees, for example, those with a code starting with 'E'.

SunSystems

Logical ID

The Logical ID for SunSystems is defined in Property Editor. You must ensure that this exactly matches the Logical ID which you defined for the SunSystems Connection Point in ION Desk.

In SunSystems Property Editor (PPE), under integration >> from_queue >> value, set the Logical ID (which defaults to 'lid:/infor.sunsys6') to match the Logical ID which you have defined.

Note: Leave the prefix 'lid:/' in place before the Logical ID.

For example, if the Logical ID for this installation of SunSystems in ION Desk is 'infor.SunSystems612.livesystem', you should enter 'lid:/infor.SunSystems612.livesystem' in this property.

Currency Codes

BODs only allow for ISO currency codes to be used, but SunSystems can be set up not to use ISO currency codes on transactions. For this integration you must assign all currency codes an ISO currency code in the SunSystems Currency Codes (CNC) function.

Defining an Integration User

You must set up a specific user in User Manager to be used for any system integration activity. That is, this user will apply to all BOD-originated data being brought into SunSystems. If this user is not present, then the integration will not function.

This user must have sufficient Data Access Group access to be capable of importing any data which you expect to bring in via ION and SSC. For example, rights to use SSC.

See User Manager Help for more information about creating and maintaining users.

Once you have set up your user, from the Settings menu select Security Policy to display the Security Policy dialog.

Select the System User tab, and in the Integration User field select the user to be used for system integration activity.

Note: This type of user cannot be deleted. If the integration user is selected for deletion, the warning message, 'The user is set as an integration user and cannot be deleted', is displayed.

Setting up Employees as Suppliers

In SunSystems, using the function Supplier (SUS), you must set up a Supplier record for each Employee in XM.

Note: See the topic Adding and Maintaining Suppliers in the Administrator Help for more information about this function.

In order to identify the supplier as an employee, you can either structure your Supplier Codes in a particular way (for example, starting them with 'E'), or use analysis, as detailed in the section Setting up Analysis below.

Note: See the section below Setting up the Supplier Address for information about the Country field.

This supplier is then used in Business Rules as detailed in the section Setting up Business Rules below.

Note: You must use the Lookup and Short Heading fields on the Supplier form to store FamilyName and GivenName respectively.

Setting up the Supplier Address

The address used for the Supplier record above, must have the Country field completed with either Alpha-2 or Alpha-3 variants of ISO country codes. This is set up using Addresses (ADD).

For example,

Alpha-2 variant: CN=China, GB=United Kingdom, US=United States of America

Alpha-3 variant: CHN=China, GBR=United Kingdom, USA=United States of America.

Setting up the Ledger Interface

Note: See the Help topics in the Ledger Interface section of the Order Fulfilment Administration Help file for more information about these functions.

You must set up the Ledger Interface as follows:

- Ledger Interface Account Recognition Codes (LIA) – create an Account Recognition Code with the Account Recognition Code Type of Business Account Code; define the Business Account Code.
- Ledger Interface (LIS) – set up a definition for the supplier, in order to credit the supplier account; and set up a definition for the expense, in order to debit the expense account.

Note: For the expense side, SSC defaults to use a Ledger Interface Definition code of 'EXP'. In order to use a different code, the property must be changed in SunSystems Property Editor (PPE). It can be found under integration >> xm_integration >> ledger_interface_definition_code.

Ledger Interface Account Recognition Codes (LIA)

In Ledger Interface Account Recognition Codes (LIA) create a new Account Recognition Code with the Account Recognition Code Type of Business Account Code. This is used to map the account code to the XM expense code.

The Substitute Recognition Code is an alternative code that can be specified to be used when the account code for this account recognition code cannot be found. This can be used to provide a default account code, see note below.

1. On the main Ledger Interface Account Recognition Code form, click the Business Account Code button. This button is only enabled for Business Account Code types. The Business Account Code Definition form is displayed.
2. In the Source Code field, enter BLI_MISC.MISC_DESCR_3 (for mapping information, refer to the table in the Ledger Interface (LIS) section below).
3. In the Analysis Dimension field, enter the dimension set up for expenses (if used). See the section Setting up Analysis later in this document.
4. In the grid, enter the Expense Type analysis code in Miscellaneous Analysis Code and the corresponding account code in Account Code Analysis information. This maps the analysis code to the account code.

Note: If the Source Code is set to No Specified Field then a single Account Code can be entered in the header (no Analysis Dimension required), and no mapping in the grid. This can be used to provide a default account code.

Ledger Interface (LIS)

As the Expense Report is transformed into a Business line Import payload, set up a Ledger Interface definition for this payload with the Value Type set to External/Business Line Import Values, and the Module set to Purchase. Set up the detail lines, in order to credit the supplier account; and to debit the expense account.

The following information must be used in the definition in order to map these fields to the BLImport payload:

BOD element	Table/Column
LineNumber	BLI_DETAIL.LINE_NUM
Description	BLI_MISC.MISC_DESCR_2
DocumentReference/DocumentID/ID	BLI_MISC.MISC_TEXT_1
Status/Code	BLI_MISC.MISC_TEXT_2
PaymentMethodCode	BLI_MISC.MISC_TEXT_3
ReceiptIndicator	BLI_MISC.MISC_TEXT_4
ReceiptCheckedIndicator	BLI_MISC.MISC_TEXT_5
PersonalIndicator	BLI_MISC.MISC_TEXT_6
CreditCard/Type	BLI_MISC.MISC_TEXT_7
CreditCard/Number	BLI_MISC.MISC_TEXT_8
ExpenseType/ExpenseCode	BLI_MISC.MISC_DESCR_3
ExpenseType/ExpenseCategory	BLI_MISC.MISC_DESCR_4
BaseAmount	BLI_DETAIL.VAL_1
ApprovedAmount	BLI_DETAIL.VAL_2
ApprovedAmount	BLI_DETAIL.CURR_CODE
ExchangeRate/RateNumeric	BLI_DETAIL.VAL_5
ApprovedExchangeRate/RateNumeric	BLI_DETAIL.VAL_6
ExpenseAllocation/ProjectReference/ResourceCodes/Code	BLI_DETAIL.ANL_CODE_1

You should set up the ledger interface so that a posting from XM to the creditor account (that is, the employee) is summarised as much as possible:

- In Ledger Interface Setup, Summarisation Breakout should not be set to Breakout at Transaction Line Number
- In Ledger Interface Details Setup, the settings on the line for the employee's account should generate the same values for Analysis Codes and Transfer Data Codes against every line on the expense report, so that they are summarised during the ledger posting process.

Setting up Analysis

Note: See the topic What Steps are Required to Define the Analysis? and associated topics in the Administration Help for more information about these functions.

Supplier

In order to identify the supplier as an employee, you can either structure your Supplier Codes in a particular way (for example, starting them with 'E'), or use analysis.

This supplier is then used in Business Rules as detailed in the section Setting up Business Rules below.

Setting up the Analysis Dimensions

Using Analysis Dimensions (AND), set up a dimension called Supplier Type.

Setting up the Analysis Codes

Using Analysis Codes (ANC), set up a code Employee in XM, using the Analysis Dimension Supplier Type.

Expense

Setting up the Analysis Dimensions

Using Analysis Dimensions (AND), set up a dimension called Expense Type.

Setting up the Analysis Codes

Using Analysis Codes (ANC), set up a code for each Expense Type in XM, using the Analysis Dimension Expense Type.

Setting up Business Rules

You must set up business rules in order to publish a Personnel BOD from the SunSystems Supplier record, and thus interpret it as an Employee in XM.

Note: See the topic Using Business Rules – Overview in the Administrator Help, and associated Help topics, for more information about this function.

A business rule always consists of an Event Profile and Rule Sets.

Setting up the Event Profile

An event profile contains a series of conditions that determine when, and under what circumstances, a set of business rules apply.

Note: See the topic Creating Event Profiles in the Administrator Help for more information about this function.

Using the function Event Profiles (EVP) set up an event profile with an Event Code of, for example, XM Personnel, and with the following information:

Command	Data Item	Operator	Data Item or Value
IF	Function Code	=	Supplier
IF	Call Point	=	Posting Data

Setting up the Rule Sets

You must now create a Rule Set to use the Event Profile.

Note: See the topic Creating Rule Sets in the Administrator Help for more information about this function.

Using Rule Sets (RST), set up the rule sets to use the Event Profile set up above.

For example:

Event Code	Rule Code	Description	Command	Value1	Operator	Value2	Rule Action1
XM Personnel	Supplier Type	Employee supplier type	IF	Supplier Analysis 4	=	EMP	Y
XM Personnel	Supplier Type	Employee supplier type	Publish	Personnel			X
XM Personnel	Supplier Code	Employee supplier code convention	IF	1 st Letter	=	E	Y
XM Personnel	Supplier Code	Employee supplier code convention	Publish	Personnel			X

Setting up the Integration Configuration

Note: See the SunSystems v6 Integration Configuration Guide for more information about this function.

In Integration Configuration (INC), create a new configuration, and select XM as the integrated system.

The Integration Setup grid will be populated with the predefined SunSystems Objects.

XM

Configuring XM

1. Ensure the following dataset is loaded into the system:
mm/wf/er/export_verify, mm/wf/er/postpay_audit, soa
2. Create XM ION INBOX/OUTBOX database. Make a note of the database name for later use.
3. Create ION tables with the sql scripts provided in XM integration server in path below:

Note: Replace "\$DATABASE\$" with the XM ION database name created in step 4 before running the scripts.

```
{XM_Install_Root}\apache-tomcat-6.0.29-
intserver\webapps\XMFortressServer\WEB-
INF\scripts\sql\CreateFortressTables.mssql
```

4. Configure a datasource in the XM extensity server as follows:

Note: If you are using an XM multiple server environment, you must configure datasources for all XM extensity servers in the same way.

- a) Add the following segments into {XM_Install_Root}\apache-tomcat-6.0.29\conf\web.xml


```
<resource-ref>
  <description>Fortress DB Connection</description>
  <res-ref-name>FortressDB</res-ref-name>
  <res-type>javax.sql.DataSource</res-type>
  <res-auth>Container</res-auth>
</resource-ref>
```
- b) Add the following segments into {XM_Install_Root}\apache-tomcat-6.0.29\conf\context.xml with the correct database connection information. For example:


```
<Resource name="FortressDB" auth="Container" type="javax.sql.DataSource"
  maxActive="100" maxIdle="30" maxWait="10000"
  username="<user>" password="<password>"
  driverClassName="net.sourceforge.jtds.jdbc.Driver"
  url="jdbc:sqlserver://<hostname>:<port>;DatabaseName=<dbname>"/>
```

5. Configure BKG Servers as follows:

Note: If you are using an XM multiple BKG server environment, you must to configure all the XM BKG servers in the same way.

Update {XM_Install_Root}\bkgserver\conf\server.xml with two sections below:

- a) Register the following listener -


```
<Listener className="largesoft.soa.client.ExtnIONServiceListener" />
```
- b) Add FortressDB naming resource into the section 'GlobalNamingResources' using the correct XM ION database connection information (created in step 4).

For example:

```
<Resource name="FortressDB" auth="Container" type="javax.sql.DataSource"
maxActive="100" maxIdle="30" maxWait="10000" username="<db user>"
password="<db password>"
driverClassName="net.sourceforge.jtds.jdbc.Driver"
url="jdbc:sqlserver://<db server>:<port>;DatabaseName=<XM ION db name>"/>
```

Example server.xml -

...

```
<Listener
className="largesoft.security.integration.apache.InforLifecycleListener"
/>

<!-- XM ION Service start-up-->
<Listener className="largesoft.soa.client.ExtnIONServiceListener" />
<GlobalNamingResources>

...
  <Resource                  name="FortressDB"                  auth="Container"
type="javax.sql.DataSource"
  maxActive="100" maxIdle="30" maxWait="10000"
  username="xxx" password="xxx"
  driverClassName="net.sourceforge.jtds.jdbc.Driver"
  url="jdbc:sqlserver://xxx:1433;DatabaseName=xxx"/>
</GlobalNamingResources>
```

Configuring XM ION Integration Server

1. Go to XM ION Integration Server and configure XM ION database connection in both 'database.properties' and 'security.database.properties' under the folder

{XM_ION_Integration_Server_Install_Root}\apache-tomcat-6.0.29-intserver\webapps\XMFortressServer\WEB-INF\

Example configuration in 'database.properties'

```
...
hibernate.connection.url=jdbc:jtds:sqlserver://<db server
name>:<port>;databaseName=<XM ION db name>
hibernate.connection.username=<db user>
hibernate.connection.password=<db password>
...
```

Example configuration in 'security.database.properties'

```
secdb.host=<db server>
secdb.port=<port>
secdb.username=<db user>
secdb.password=<db password>
secdb.catalog=SECMDM
secdb.context=
secdb.pooled=true
secdb.url=jdbc:jtds:sqlserver://<db server>:<port>;databaseName=<db name>
secdb.driverClass=net.sourceforge.jtds.jdbc.Driver
secdb.maxActive=5
secdb.maxIdle=3
secdb.initialSize=3
```

2. Set fortress Id in

{XM_ION_Integration_Server_Install_Root }\apache-tomcat-6.0.29-intserver\webapps\XMFortressServer\WEB-INF\fortress.properties

The fortress Id is set from ION Desk >> XM Application Connection Point.

Example configuration -

fortress.id=infor.erp.xml

Enabling ION in XM

1. Start up XM Services.
2. Launch SAT.
3. Go to Tools >> Configure ION.
4. Select ION Enabled and complete the Accounting Entity Mapping fields with the Financials system information.
5. Click Update.