M3BE 15.1.2 ION Integration Guide for Infor Dynamic Enterprise Performance Management

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Contents

About this guide

This guide describes the necessary configuration steps to enable the integration between M3 Business Engine, referred to as M3 BE, and Infor Dynamic Enterprise Performance Management (d/EPM) through Business Object Documents (BODs) using ION.

Intended audience

This guide is intended mainly for system administrators who implement the integration between M3 BE and D/EPM, or who must troubleshoot or trace back data between M3 BE and d/EPM.

Before you read this guide, you must be familiar with the content of the guides listed in the "Related documents" section.

Related documents

You can find core Infor product documents in the product documentation section of Infor Xtreme Support.

Before you read this guide, you must be familiar with the content of these documents:

- *Infor ION Installation Guide (U9658 US)*
- *M3 13.2 Configuration Guide for Infor ION*
- *Cross BOD Mapping and Descriptions - Infor M3BE with d/EPM*
- *M3 Enterprise Collaborator Partner Admin Tool User Guide*
- *M3 Enterprise Collaborator Flat File Definition Tool User Guide*
- *M3 Business Engine Administrator's Guide for Document and Media Management*
- *d/EPM Administration Guide*
- *d/EPM Installation Guide*
- *d/EPM Platform Support Guide*

- *d/EPM Integration from PM Source Views, KB article #1470429*
- *Infor BI Designer online help, topic "Creating database" for information about building OLAP Server databases*

Organization

In this guide, you will find this information:

- Overview of the integration process of M3 BE and d/EPM
- Installation requirements
- Setup requirements for M3 BE
- Setup requirements for d/EPM
- Setup requirements for ION Connect
- Detailed description of the business processes within M3 BE and d/EPM
- Troubleshooting information

Contacting Infor

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If we update this document after the product release, we will post the new version on Infor Extreme. We recommend that you check this web site periodically for updated documentation.

If you have comments about Infor documentation, contact documentation@infor.com.

Chapter 1 Requirements

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System requirements

To integrate M3 BE with d/EPM, you must comply with the following requirements:

Software	**Version**
M3 Business Engine	15.1.2.0
Infor Dynamic Enterprise Performance Management	10.5.0 or later
M3 Enterprise Collaborator	11.4.2.0
Infor ION Desk	11.1 or later
M3 BE BOD	15.3.0.0 or later

Ensure that the requirements listed in these guides are fulfilled:

- *M3 13.2 Configuration Guide for Infor ION*
- *d/EPM Platform Support Guide*
- *d/EPM Installation Guide*

Chapter 2 Known limitations

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The integration processes are described in the “Business process” chapter. These are the limitations of those business processes:

Dimensions

M3 can handle a maximum of seven accounting dimensions, that is, account + six additional dimensions. d/EPM 10.5.0 can handle a maximum of three segments, that is, account + three additional dimensions. The most important dimension must be identied in each d/EPM installation.

Budgets

The integration uses the SourceSystemGLMovement BOD for budget data. Only one of the systems can be System of Record (SOR).

For outbound budgets from M3 BE to d/EPM:

- Only accounting identities from ‘M3 Accounting Identity.Open’ - CRS630 can be used.
- The currency for the budget is the same as the local currency of the division.
- Daily budget is not supported.

For inbound budgets from d/EPM to M3 BE:

- Publishing of BODs from d/EPM is only supported from d/EPM 10.5.1 (minimum version).
- Blocked accounts in M3 BE should not be used in the budget from d/EPM.

Currency exchange rates

The currency conversion rules of d/EPM uses division to calculate the rates. If M3 is set up to use multiplication, the rates have to be processed at the time of import so that calculation will be correct.

Chapter 3 Overview

3

This chapter provides an overview of the integration of M3 Business Engine (M3 BE) and Infor Dynamic Enterprise Performance Management (d/EPM).

This table shows the BODs that are communicated between M3 BE and d/EPM:

BODMapping	**Communication**	**System of Record (SOR)**
SyncAccountingChart	BODs from M3 BE	M3 BE
SyncChartOfAccounts	BODs from M3 BE	M3 BE
SyncCodeDefinitionAccountingDimensions	BODs from M3 BE	M3 BE
SyncCodeDefinitionDynamicDimensions	BODs from M3 BE	M3 BE
SyncSourceSystemGLMovementActuals	BODs from M3 BE	M3 BE
SyncSourceSystemGLMovementBudget	BODs from **or** to M3 BE	M3 BE **or** d/EPM
SyncSourceSystemJournalEntry	BODs from M3 BE	M3 BE

Chapter 4 M3 settings

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The *M3 13.2 Configuration Guide for Infor ION* describes the required setup for BOD publishing and receiving.

To enable M3 integration to d/EPM, you must set up additional data and verify additional conditions.

Supply or verify the following information to further configure M3 BE and M3 Enterprise Collaborator (MEC):

- Settings to enable credit and debit code in outbound mappings
- Currency exchange rates
- Settings for budget values

Settings to enable credit and debit code in outbound mappings

ION requires a credit or debit code for the outbound mapping of ChartOfAccount. The solution in M3 BE is to use the program 'M3 Acc Translation Scenario' (GLS030) to categorize the accounts into assets, liabilities, costs or revenues. The debit or credit code is decided from the categories. Assets and costs are set to debit, liabilities and revenues are set to credit.

The accounts are categorized in 'M3 Acc Translation Scenario' (GLS030) using account ranges. The translations can either be created on company level (division blank) or on division level. If the translations are created on company level, they apply for all divisions in that company.

1 Open 'M3 Acc Translation Scenario.Open' (GLS030), and create a new translation scenario.

Scenario	Specify CRS630BODDC.
Dim	Specify. 1
Description	Specify a description, example: ION Account Categories

2 Use the following guidelines to specify the account ranges for assets, liabilities, costs or revenues. At least one range for assets, one for liabilities, one for costs, and one for revenues must be entered. Because accounts are alphanumeric, the sorting is done character-by-character from left to right. This makes 2 bigger than 19, because 2 is bigger than 1.

Category	Specify ASSET
From account ID	Specify the lower limit for the account range that defines the asset accounts. Example 1
To account ID	Specify the upper limit for the account range that defines

	the asset accounts. Example 19999999.

Category	Specify LIABILITY
From account ID	Specify the lower limit for the account range that defines the liability accounts. Example 2
To account ID	Specify the upper limit for the account range that defines the liability accounts. Example 29999999.

Category	Specify REVENUE
From account ID	Specify the lower limit for the account range that defines the revenue accounts. Example 3
To account ID	Specify the upper limit for the account range that defines the revenue accounts. Example 39999999.

Category	Specify COST
From account ID	Specify the lower limit for the account range that defines the cost accounts. Example 4
To account ID	Specify the upper limit for the account range that defines the asset accounts. Example 89999999.

Note that several ranges can be set up for each category. Make sure that the ranges cover the full chart of accounts so that no accounts are left without a category.

Currency exchange rates

In ‘Currency. Open’ (CRS055), the currencies are defined. The abbreviation should follow ISO 4217 standard (for example, Euro = EUR, US dollar = USD, Swedish crown = SEK).

Exchange rate types are defined in ‘Exchange Rate Type. Open’ (CRS056). The two fields, ’Description’ (TX40) and ’Name’ (TX15) in CRS056/E, will be used in the currency exchange rate file that can be sent to d/EPM, and therefore the naming of those fields should be in accordance with what d/EPM requires. The text in the Description field will be the name of the Exchange rate set in the file. The text in the Name field will be the name of the Rate in the file and could be, for example, Period End Rate or Average Rate. When Average Rate is selected, this rate has to be calculated outside M3 BE.

Exchange rate is defined per date for each exchange rate type and currency in ‘Exchange Rate. Open per Date’ (CRS058). It is possible to set up different rate factors for currencies to make it easier to specify exchange rates between widely differing currencies.

Settings for MBM Initiator

Basic data for the generic document number MBM should be set up in various programs (CRS027, CRS928, CRS929, CRS116, and so on). For more information, see *M3 Business Engine Administrator's Guide for Document and Media Management*, available at the Documentation page on Infor Xtreme.

1 Use the following guidelines to enter field values in ‘M3 Std Document. Connect Media Ctrl Object’ (CRS945):

Document number	Select MBM.
Partner reference 1 (PRF 1)	Specify DEPM.
Description	Specify a description, for example:Currency Exchange Rates to d/EPM

2 Select Related options ‘Media’ in CRS945 to open ‘M3 Doc Media Control Object. Connect Media’ (CRS949).

3 Use the following guidelines to enter field values in CRS949:

Media	Create an entry for Media MBM.
Rcvr ref data 1	Specify DEPM, because this is used in the MEC Partner Agreement Detection.
Service ID	Select the Service ID for the MEC environment.

Information on service port for the Service ID can be found in the MEC Partner Admin Tool. Go to Manage Communication and find the MvxNGIn channel on the Receive tab. Select it and the settings for the channel are shown including the port number. Also make sure the channel is enabled.

4 Create an MBM initiator in ‘M3 Output. MBM Initiator’ (MNS260) for triggering the creation of the currency exchange rate file to send from M3 BE to d/EPM.

5 Use the following guidelines to enter field values in MNS260:

MBM Initiator	Specify the name of the initiator, for example, MBM_M3_CurrencyExchangeRates.
Document number	Specify MBM.
Media ctrl obj1	Specify DEPM.
Printer file	Specify EXCHRATES.

DEPM and EXCHRATES are used for detection purposes by MEC.

6 Define the following message key fields, in this order:

Msg key field 1	CONO (Company)
Msg key field 2	DIVI (Division)
Msg key field 3	FPER (From Period)
Msg key 4	TPER (To Period)

Msg key 5	DAYN (Day number)

Settings in MEC – Flat File Definition Tool

Install the Flat file definition file, `DEPM_CurrencyExchangeRates_FlatFileDefinition.xml`, using MEC Flat File Definition Tool.

For more information on this tool, see *M3 Enterprise Collaborator Flat File Definition Tool User Guide*.

Settings in MEC – Partner Admin Tool

1 On the Detections > Target Groups > Available Target Groups section, ensure that detection (and target group) for one sender and one recipient (MVX_S1_R1) is available.

2 Create a new partner agreement and use the detection above.

3 Adjust the values to match the customer environment:

mvx:env	Environment name for M3
mvx:host	Host name or IP address of host
mvx:pgm	Must be: EXCHRATES
mvx:ercpRefData1	Must be: DEPM
mvx:sndRefData1	M3 BE CONO value

4 Add the following processes to the partner agreement:

Archive	*Optional*
XML Transform	Use the mapping M3BE15_FIN_Out_DEPM_CurrencyExchangeRates_1.
Archive	*Optional*
XML To FLAT	Use the flat file definition DEPM_CurrencyExchangeRates_FlatFileDefinition.
Archive	*Optional*
Send	Specify a disk output folder for storing the file on disk.

Settings for budget values

The integration between M3 BE and d/EPM allows either part to be the System of Record (SOR) for budget values.

Settings when d/EPM is SOR

Stop the rule session M3BEBODs_SourceSystemGLMovementBudget in EventAnalytics.

MEC Partner Agreement settings:

1. For the protocol IONDbIn, add SourceSystemGLMovement to BODTypes.
2. Create an XML Target Detection for inbound SourceSystemGLMovement:
    - Path: /SyncSourceSystemGLMovement/DataArea/Sync/TenantID
    - Default Namespace URL: http://schema.infor.com/InforOAGIS/2
3. Create a Target Group for this detection:
    - Name: ION BOD SyncSourceSystemGLMovement
    - Include: SyncSourceSystemGLMovement/DataArea/Sync/TenantID
4. Add a new target group to Detection order.
5. Create a new Agreement:

- Use the detection above, and add the tenant value from d/EPM as target value.
- Add the following processes:
    - Archive
    - XML Transform:
        - Use appropriate API reference.
        - Use M3BE15_FIN_In_ION_SyncSourceSystemGLMovement_2_7_0 mapping.

Creation of budget template for inbound budgets

When budget values are sent from d/EPM to M3, the BOD can only be populated with a subset of all the values required by M3. The solution is based on a template budget with a specific version and number. An inbound budget picks some values from this budget template.

Open ‘M3 Budget. Open’ (BUS100) and create a budget with Budget number (Bno) 999 and Budget version (Bvs) 9999.

The values set in the following fields are used for inbound budget BODs:

- Exch rate tp (CRTP)
- Start period (BSPR)
- No of periods (NPAM)

- Upd bal file (UPDB)

All other fields are populated as per the inbound BOD.

Settings when M3 BE is SOR

Start the rule session M3BEBODs_SourceSystemGLMovementBudget in EventAnalytics.

No extra settings are required in MEC Partner Agreements.

Chapter 5 ION Connect settings

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Install ION Connection Model and perform the required configurations in the connection points.

There are no additional settings required except for the configuration of connection points.

Chapter 6 d/EPM settings

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The BOD Setup chapter of the d/EPM Administration Guide describes how to configure d/EPM for an ION integration. Detailed integration information is available in Infor Xtreme > **KB 1470429,** *d/EPM Integration from PM Source Views*.

High level integration overview

1. Configure d/EPM for BOD Integration.

   Create a d/EPM BOD database designated with **Companies: Accounting entities** (default).

   Start the Infor PM BOD Shredder Service and set its properties.

2. After the BODs sent from M3 are received and processed, the PM Source Views within the d/EPM BOD database are populated with M3 structure and financial data.

3. Use BI Designer to create and load d/EPM models from the PM source views.

   You can customize an Application Studio report to drill through from GL data to journal detail.

Chapter 7 Business processes

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This chapter provides a description of the business processes in M3 BE and d/EPM.

Running the initial load jobs

The master data and transactional data can be published to d/EPM through the Initial Load sessions.

Note: Publishing initial load BODs might take a long time (several days) depending on the size of the tables. Also be aware that M3 Batch subsystem might require additional memory during the initial load process.

Tip: If applicable, the initial load time can be decreased by limiting the M3 data to a single division, see Limiting M3 data to single divisionLimiting M3 data to single division.

Publishing financial master data

To publish the master data to d/EPM, run the initial load job for the following BODs:

1. ShowAccountingChart (CSYTAB)
2. ShowChartOfAccounts (FCHACC)
3. ShowCodeDefinition for Accounting Dimensions (FCHACC)
4. ShowCodeDefinition for Dynamic Dimensions (FGLEDG)

Publishing financial transactional data

To publish finalized journal documents, run the initial load job for the following BOD:

1. ShowSourceSystemJournalEntry (FGLHED)

Publishing General Ledger balances

To publish opening balances, actual balances, and budget balances, run the initial load job for the following BODs:

1. ShowSourceSystemGLMovement for Actuals (FBAVAL)
2. ShowSourceSystemGLMovement for Budget (FBUDET)

Limiting M3 data to single division

If data from M3 can be limited to one division, a new detection can be set up in Partner Administration Tool that includes DIVI. This is valid for all mappings that use DIVI as input.

Note: SourceSystemGLMovement does not include DIVI.

In the Partner Administration Tool, navigate to Manage Detections.

1. Create new Target with Path /EventData/Document/ElementData/Name[2]
2. Create new Target with Path /EventData/Document/ElementData/Value[2]
3. Create a new Target Group with Targets Publisher, DocumentName, Name[1], Value[1], Name[2], Value[2]
4. Set the detection order. The new detection order must be placed before the standard bod detection.
5. Set the values of the new detection:
    a. Set Name[2] to DIVI.
    b. Set Value[2] to the division that contains the data to use for d/EPM. For example AAA.

Creating a currency exchange rate file

The currency exchange rate data can be sent from M3 BE to d/EPM through a file. The file is triggered from ‘M3 Output. MBM Initiator’ (MNS260).

Configuring exchange rate file selection in MNS260

Update the selections for the MBM initiator you have created earlier (described in chapter 4) in MNS260.
Note: There is no verification of whether the data you specify in those fields is correct.

This configuration is required for all applicable divisions to enable creating the currency exchange rate file:

Msg key field 1	Company
Msg key field 2	Division
Msg key field 3	From Period (format YYYYPP e.g. 201301)
Msg key 4	To Period (format YYYYPP e.g. 201312)
Msg key 5	Day number (optional, if blank the last day of the period will be used)

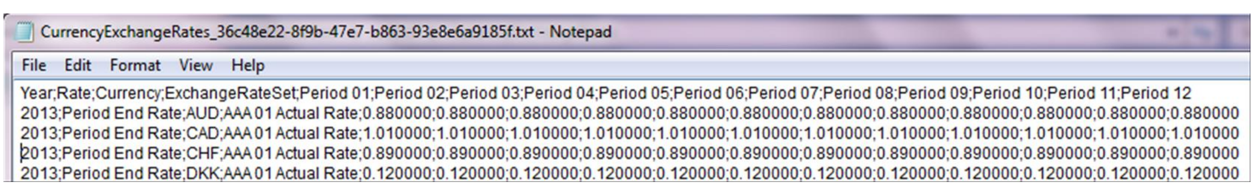
Trigger the file for the applicable division by changing the value of message key 2 (DIVI).

From and to periods has to be within the same financial year. One run needs to be done for every year that data is required for.

Day number is the day of the period from where you want to pick the current exchange rates. Writing 1 means the first day of the period and 31 means the last day. Day number is optional and if you leave the field blank, it will be set to day 31, the last day of the period (it does not matter if the period has fewer days).

Creating the file

1. Select Related option 9 = 'Send' in MNS260/B to trigger the creation of the file.
2. In 'M3 Output. Manage per job' (MNS206), locate the output files by searching for printer file, 'EXCHRATES'.
3. To view the output file, select Related option 'Partner' for the file where you have the exclamation sign (!). This sign means the MBM initiator is created.
4. In MNS207, select Related option 'View'.
5. The file created is a text file. Example:


CurrencyExchangeRates_36c48e22-8f9b-47e7-b863-93e8e6a9185f.txt - Notepad

File Edit Format View Help

```
Year;Rate;Currency;ExchangeRateSet;Period 01;Period 02;Period 03;Period 04;Period 05;Period 06;Period 07;Period 08;Period 09;Period 10;Period 11;Period 12
2013;Period End Rate;AUD;AAA 01 Actual Rate;0.880000;0.880000;0.880000;0.880000;0.880000;0.880000;0.880000;0.880000;0.880000;0.880000;0.880000;0.880000
2013;Period End Rate;CAD;AAA 01 Actual Rate;1.010000;1.010000;1.010000;1.010000;1.010000;1.010000;1.010000;1.010000;1.010000;1.010000;1.010000;1.010000
2013;Period End Rate;CHF;AAA 01 Actual Rate;0.890000;0.890000;0.890000;0.890000;0.890000;0.890000;0.890000;0.890000;0.890000;0.890000;0.890000;0.890000
2013;Period End Rate;DKK;AAA 01 Actual Rate;0.120000;0.120000;0.120000;0.120000;0.120000;0.120000;0.120000;0.120000;0.120000;0.120000;0.120000;0.120000
```

The exchange rates correspond to the requested period/s for all currencies and exchange rate types you have set up in the division. One detail record is created per Year, Exchange rate type, and Currency. There could be exchange rates for 1 to 12 periods for one line depending on the selections made in MNS260 when requesting the file.

The name of the Exchange Rate set consists of Division + M3 exchange rate type from CRS056 + Description from CRS056/E.

Transactional data

All M3 BE BODs are triggered by database events. For more information, see *M3 13.2 Configuration Guide for Infor ION*.

Create Budget versions in d/EPM

If d/EPM is the source of record for budget data, use Designer to create budget versions in d/EPM that follow the M3 BE naming conventions.

Important: The budget name must follow the pattern AAAANNN, four positions alpha-numeric and three positions numeric. The first four positions corresponds to Budget Version, the last three positions corresponds to Budget Number in M3.

Chapter 8 Troubleshooting

8

This chapter describes troubleshooting topics that are related to the integration.

Troubleshooting the data flow

To troubleshoot the data flow, see the guides for ION, d/EPM, or M3 BE BODs.

If the data is not flowing all the way through the system, review this information:

- Use the ION Desk to find failures related to BOD structures. For example, if a message has an invalid format or is missing a mandatory field, the problem is described in ION.
- If BODs are not found in ION, continue with troubleshooting in M3 (MEC).
- If the BODs received in ION are sent to d/EPM, but are not received in the latter, continue troubleshooting in d/EPM.

Troubleshooting transaction data

Symptom	Cause	Solution
The DebitCreditFlag is missing from the SyncChartOfAccount Bod from M3.	The account categories in GLS030 have not been set up or have been set up incorrectly.	Set up the account categories according to section Settings to enable credit and debit code in outbound mappings.
The Currency Exchange Rate file is triggered in MNS260 but there's no output.	The MBM settings are incorrect.	Check all parameters in MNS260, CRS945 and CRS949 against the section Settings for MBM Initiator. Verify that the Service ID specified on CRS949/J is referring to the correct Output Service and that the Output Service is correctly configured against the MEC server.
A budget is published from d/EPM to M3 but the budget does not appear in M3 Budget.Open.	1. The budget values in the BOD are not accepted by M3	1. Make sure that all accounts in the budgets are un-blocked. Make sure that all accounts in the budget exist in M3. Verify that the budget data from d/EPM is within the same year and period range as the template budget. Verify that the Description is included in the BOD from d/EPM.
	2. A template budget is not set up in M3	2. Configure a template budget according to section Creation of budget template for inbound budgets.