



# ERP*i* Drillback for Hyperion –A Client Study and considerations for transitioning to FDMEE

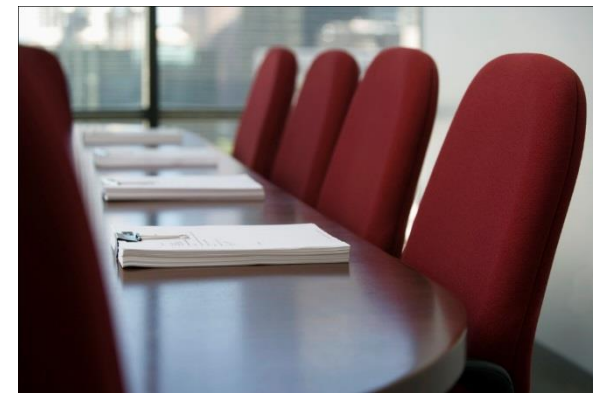


**5.15.14**

MindStream delivers premier consulting and managed services solutions to clients by enhancing technology and aligning resources through a systemic process to harness insight and enable financial and operational fact-base decision making.

# Agenda

- Webinar Objectives
- Client Study
- Considerations for transition to FDM Enterprise Edition
- Questions



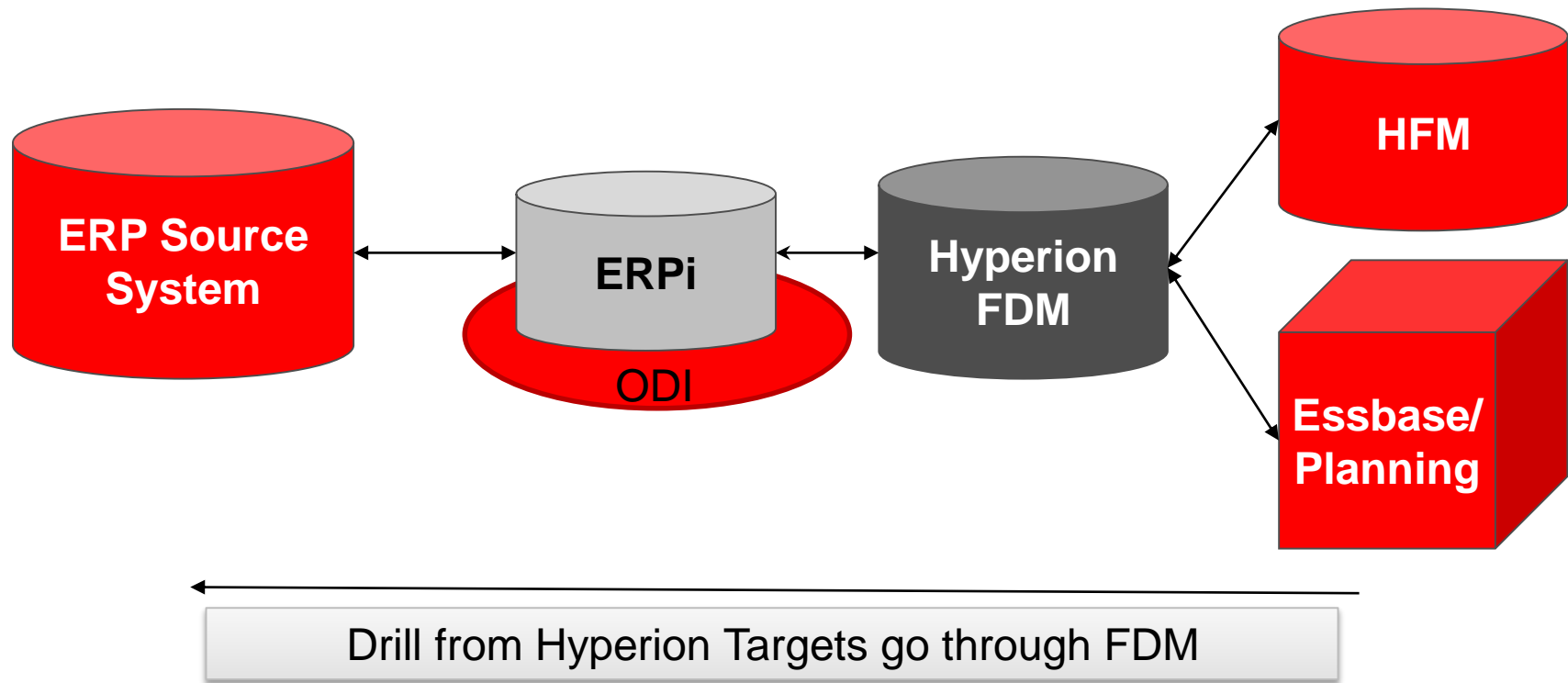
# Objectives

- Learn about the use and functionality of Enterprise Resource Planning integrator with FDM
- Examine a client study, using ERPi as a solution for an EBS to HFM integration
  - Our solution for automation, drillback, and performance enhancement
  - Basic navigation and setup in ERPi
  - Requisite configurations in ODI and FDM
- Considerations for upgrading to FDMEE
  - Current state assessment
  - What to expect when making the transition

# Enterprise Resource Planning integrator

- ERPi functions as an adapter for FDM in order to extract GL data from compatible source systems.
- ERPi enables drill through from highly aggregated amounts in Hyperion all the way back to source transactional detail
- Drilling from target system runs through FDM

# Architecture



A Client Study

# **AUTOMATION & DRILLBACK**

# Client Study: Current State

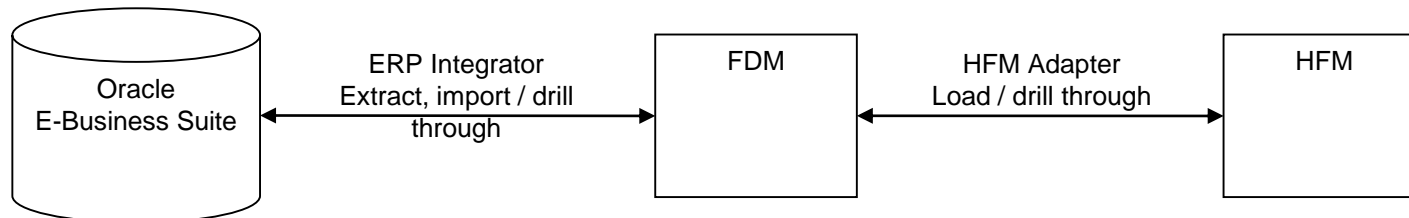
- Client upgrading from Oracle 11i to R12.
- Uses HFM and currently loaded data via flat files on FDM.
- Manual Process:
  - required flat file feeds either manually or by grabbing Oracle flat files from an internal FTP site.
- No drill through option.



# Client Study: The Plan



- Implement ERPi in conjunction with FDM
  - Automate extraction of data directly from Oracle EBS
  - Enable drill back from HFM to EBS



# Drillback

- **Process: HFM → FDM (Loaded) → FDM (Imported/prior to mapping) → EBS**
- Drilling through is available through HFM data grids, smart view, or financial reports.
- FDM's view of the data that was loaded into HFM:

Export excel									
Enti	Account	View	ICP	Product	Funding	Lead	BSegment	Data Type	Amount
G2008_HC	10001	YTD	[ICP NONE]	PD_02000	FT_00	LM_00	SG_0	DT_020	8,905,799.42
G2008_HC	10001	YTD	[ICP NONE]	PD_02010	FT_00	LM_00	SG_0	DT_020	-1,655,912.02
G2008_HC	10017	YTD	[ICP NONE]	PD_02000	FT_00	LM_00	SG_0	DT_020	-290,704.32
G2008_HC	10017	YTD	[ICP NONE]	PD_02010	FT_00	LM_00	SG_0	DT_020	736,188.42
G2008_HC	10561	YTD	[ICP NONE]	PD_02000	FT_00	LM_00	SG_0	DT_020	12,934,394.61
G2008_HC	12401	YTD	[ICP NONE]	PD_02010	FT_00	LM_00	SG_0	DT_020	14,980,011.57
G2008_HC	12412	YTD	[ICP NONE]	PD_02000	FT_00	LM_00	SG_0	DT_020	25,047,257.78
G2008_HC	12412	YTD	[ICP NONE]	PD_02010	FT_00	LM_00	SG_0	DT_020	-24,116,237.77

# Drillback

- View of Imported data, option to Open Source System

Drill Down												
Export to Excel												
	Source FM Ent	Source FM Acc	Account Desc	Source ICP	Source Custom1	Source Custom2	Source Custom3	Source Custom4	Custom5	Source Custom	Convert	Amount
--	20102_02010	12401		00000_00000	02010	00	00	000	GAAP_ENT		<input type="checkbox"/>	370,943.82
--	20105_02010	12401		00000_00000	02010	00	00	000	GAAP_ENT		<input type="checkbox"/>	424,948.60
--	20107_02010	12401		00000_00000	02010	00	00	000	GAAP_ENT		<input type="checkbox"/>	222,961.44
--	20109_02010	12401		00000_00000	02010	00	00	000	GAAP_ENT		<input type="checkbox"/>	2,761,649.59
--	20115_02010	12401		00000_00000	02010	00	00	000	GAAP_ENT		<input type="checkbox"/>	224,962.12
--	20116_02010	12401		00000_00000	02010	00	00	000	GAAP_ENT		<input type="checkbox"/>	507,936.40
--	20119_02010	12401		00000_00000	02010	00	00	000	GAAP_ENT		<input type="checkbox"/>	1,146,829.53
--	20124_02010	12401		00000_00000	02010	00	00	000	GAAP_ENT		<input type="checkbox"/>	942,888.41
--	20126_02010	12401		00000_00000	02010	00	00	000	GAAP_ENT		<input type="checkbox"/>	299,964.89
--	20129_02010	12401		00000_00000	02010	00	00	000	GAAP_ENT		<input type="checkbox"/>	1,215,867.10
--	20132_02010	12401		00000_00000	02010	00	00	000	GAAP_ENT		<input type="checkbox"/>	612,894.98

- Show Attributes
- Show Conversion Rules
- Show Archive Information
- Open Source Document
- Open Source System
- Open Processing Log
- Restore Source Document

# Drillback

- Source System opens to show transaction (EBS)

Account Balances - Windows Internet Explorer

**ORACLE** Account Analysis and Drilldown

Navigator Favorites Home Logout Preferences Personalize Page

Account Balances

\* Indicates required field

Inquiry Type: **Period Listing** [Create View](#)

**Search**

Note that the search is case insensitive

Ledger/Ledger Set: **GAAP\_ENTERPRISE**

Ledger Currency: **USD**

Account From: 20115.02010.12401.00000.90217000.00000.00.00.000.00.000000.0000  
Company,Product,Prime,Sub-Prime,Expense Center,Affiliate,R  
Type,Business Segment,Lead M I Funding,Future 1,Future 2

Account To: 20115.02010.12401.00000.90217000.00000.00.00.000.00.000000.0000  
Company,Product,Prime,Sub-Prime,Expense Center,Affiliate,R  
Type,Business Segment,Lead M I Funding,Future 1,Future 2

Balance Type: **Actual**

Currency Type: Total

Go Clear

Period From: **JUL-13**


Period To: **JUL-13**

Display Summary Accounts: No

Display Accounts With No Activity: Yes

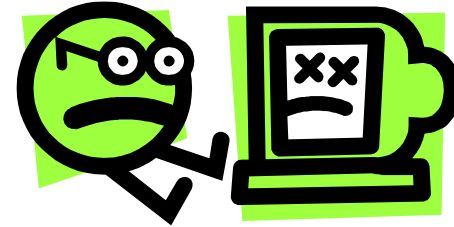
TIP For explanation of currency codes used in this page, see the [currency key](#).

Export

Ledger	Account	Period	Currency	PTD	Converted	YTD	Converted	Summary Accounts
GAAP_ENTERPRISE	20115.02010.12401.00000.90217000.00000.00.00.000.00.000000.0000	JUL-13	USD	0.00		224,962.12		

[Create View](#)

# Client Study: Performance Problem



- Problem: significantly long load times when pulling EBS data through ERPi, causing time-out in FDM web workflow.
  - Client's Oracle R12 instance had been implemented without sub ledgers.
  - Number of code combinations per period, as present in the GL, resulted in a very large data set

# Client Study: Performance Solution



- Data Integration team introduced a “Dual Load” process.
- Two separate streams/FDM locations to load data
  1. Load the full dataset in Import step only. using ERPi, this includes all Code Combination detail as it is required for drill back.
  2. Extract data from EBS via an FDM integration script which extracted only relevant detail. Excluding code combinations, therefore dramatically reducing number of records. This stream performed a full loading process: Import, Validate, Export and consolidate in HFM.

ERP*i*

# STANDARD CONFIGURATIONS

# Gather this stuff:



- EBS
  - Database connectivity information: DB server, port, username, password, provisions for access to database
  - URL for HTTP access via web browser
  - Name of relevant ledgers
- ODI
  - Database connectivity information: master work/execution repository, host name, port for ODI agent
- ERPI
  - Database connectivity: DB server, port, username, password
- HFM
  - Cluster name, FM application name, username, password

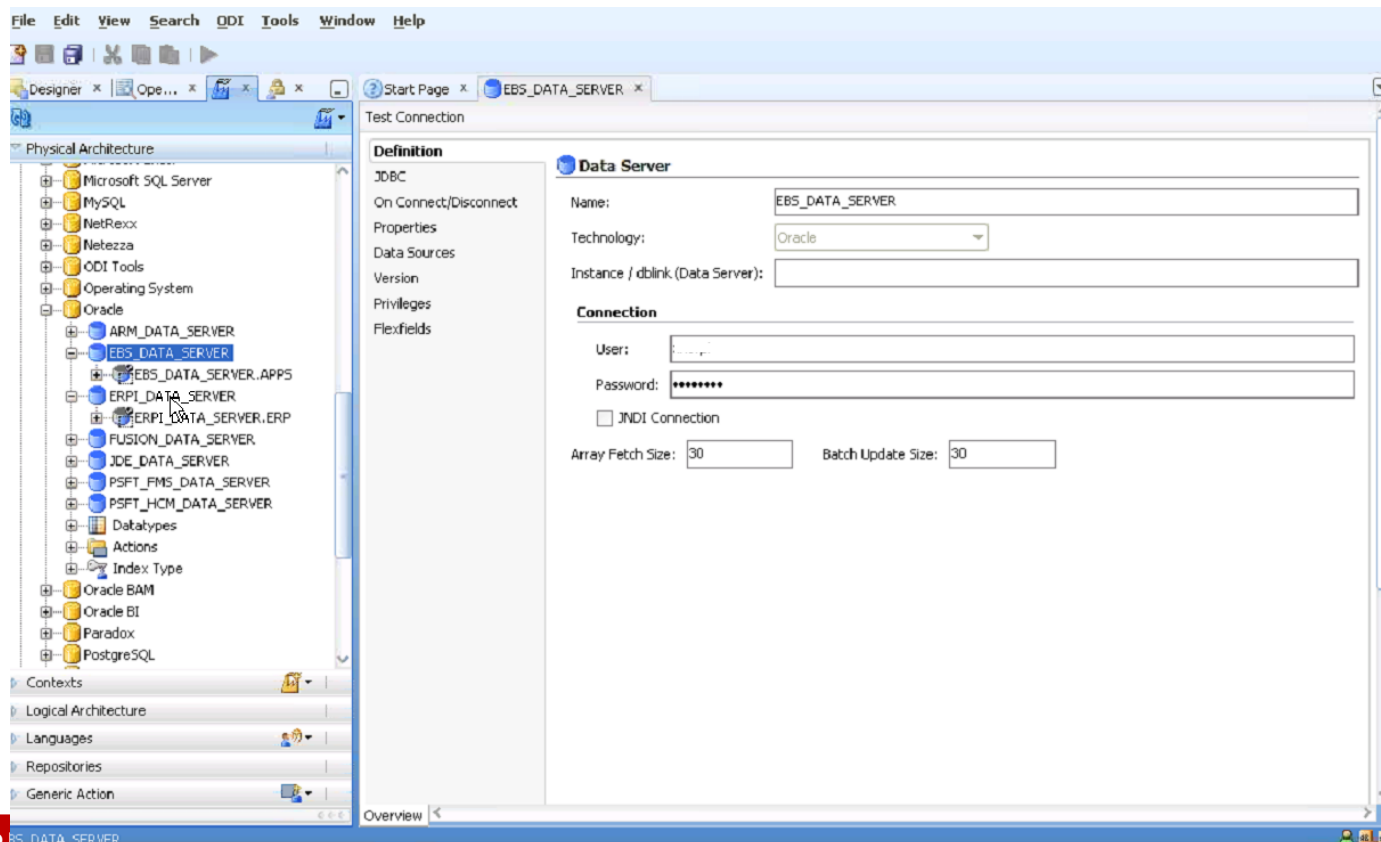


# Oracle Data Integrator

- The initial configuration of ERPi needs to be done inside of ODI
  - Define physical and logical schemas for FDM, ERPi, HFM, and EBS
  - Define Work and Master repository
  - Setup the ODI Context Code
  - Map logical schemas to physical schemas

# Oracle Data Integrator

- Primarily concerned with EBS\_DATA\_SERVER and ERPI\_DATA\_SERVER to configure with information
- Topology Manager tab → Technologies → Oracle



# ODI Information for ERPi

- System Settings in ERPi require the following ODI information:
  - ODI Agent URL
  - ODI Username and password
  - ODI Master repository connectivity for ERPi repository
  - ODI Work and Execution repositories
  - Application root directory
  - Encrypted password file directory

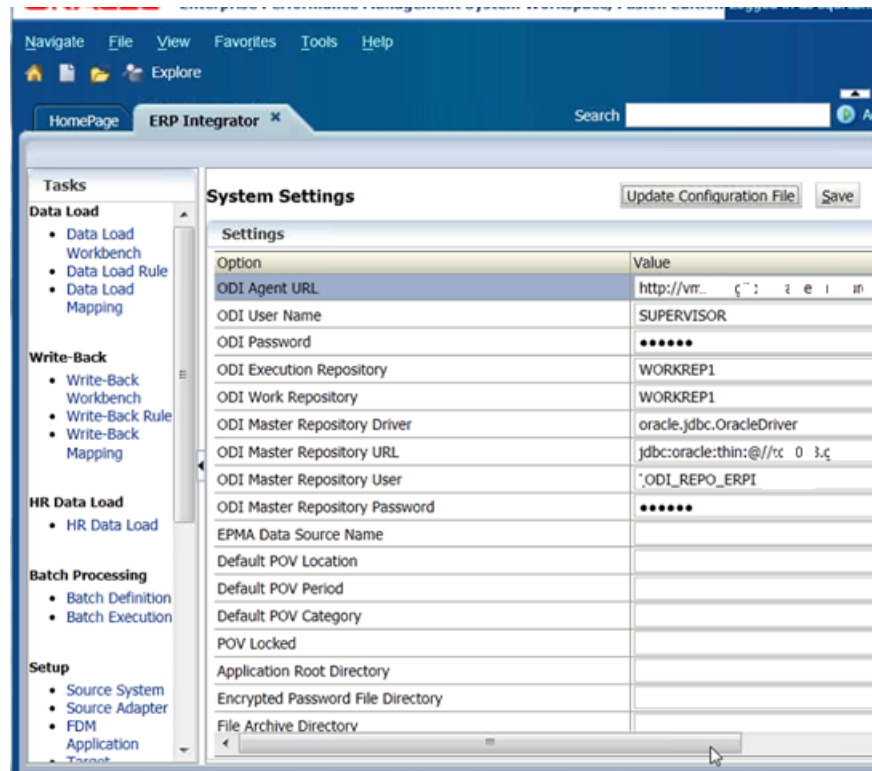
# ERPi Tasks Menu



- Navigation pane on left

# ERP*i* connection to ODI repository.

- In ERP*i*, select “System Settings”

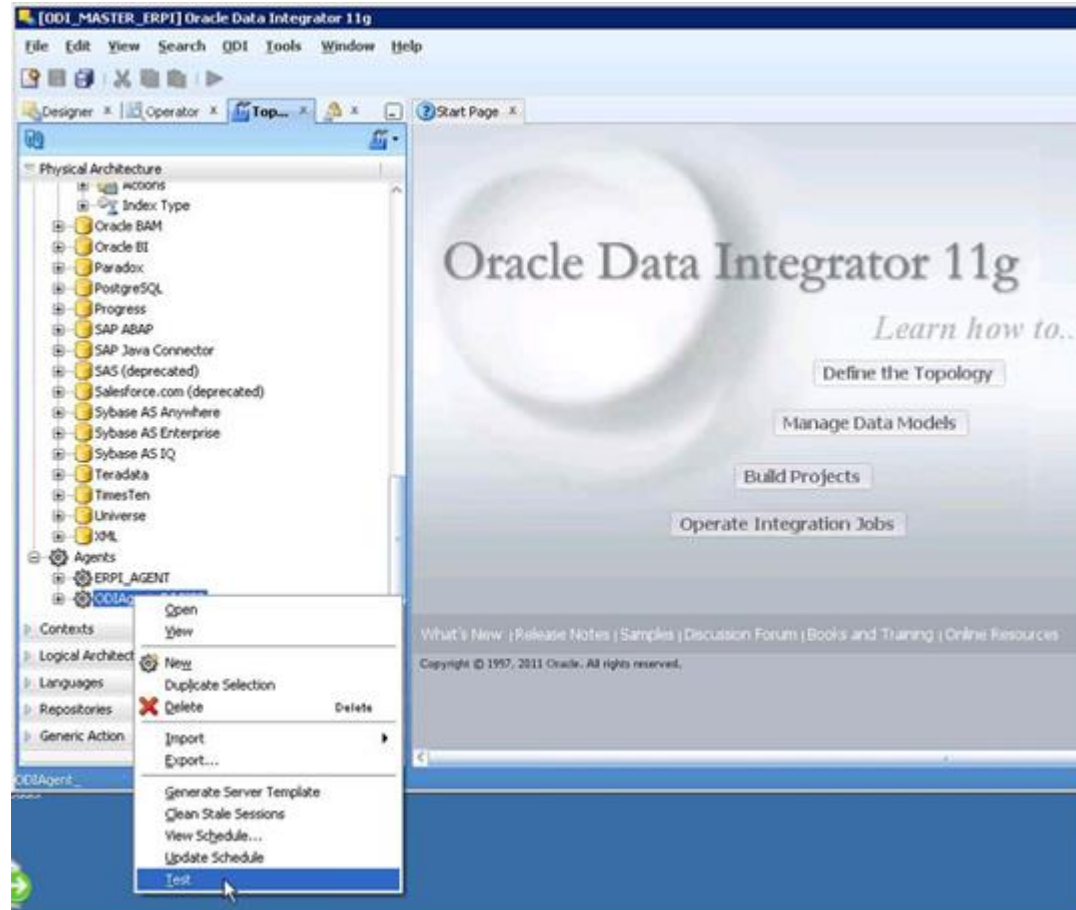


The screenshot shows the ERP Integrator application window. The left sidebar contains a 'Tasks' menu with categories: Data Load, Write-Back, HR Data Load, Batch Processing, and Setup. The main area is titled 'System Settings' and contains a table of configuration options.

Option	Value
ODI Agent URL	http://vr... ç : z e i n
ODI User Name	SUPERVISOR
ODI Password	*****
ODI Execution Repository	WORKREP1
ODI Work Repository	WORKREP1
ODI Master Repository Driver	oracle.jdbc.OracleDriver
ODI Master Repository URL	jdbc:oracle:thin:@//rc 0 3,ç
ODI Master Repository User	ODI_REPO_ERPI
ODI Master Repository Password	*****
EPMA Data Source Name	
Default POV Location	
Default POV Period	
Default POV Category	
POV Locked	
Application Root Directory	
Encrypted Password File Directory	
File Archive Directory	

# Test ODI agent

- In ODI Studio, find ODI Agent in Topology



# Initialize Source System

- Type: EBS R12
- Enter ODI Context Code
- Enter Drill Through URL

Oracle Enterprise Performance Management System Workspace, Fusion Edition - Windows Internet Explorer

Enterprise Performance Management System Workspace, Fusion Edition

HomePage ERP Integrator

Tasks

- Data Load
  - Data Load Workbench
  - Data Load Rule
  - Data Load Mapping
- Write-Back
  - Write-Back Workbench
  - Write-Back Rule
  - Write-Back Mapping
- HR Data Load
  - HR Data Load
- Batch Processing
  - Batch Definition
  - Batch Execution
- Setup
  - Source System
  - Source Adapter
  - FDH Application
  - Target Application
  - Source Accounting Entities
  - Import Format
  - Location
  - Metadata
  - Period Mapping
  - Category Mapping
  - Process Details
- Preferences
  - System Settings
  - Resolution Environment

**Source System**

Source System Summary

View Add Delete Detach Initialize

Name	Type	Description	Drill-Through URL	Base Language
EBS_R12_UAT	E-Business Suite Release 12			
EBS_R12_F	E-Business Suite Release 12	EBS R12 - ...	https://eb : tte . 2.o . d u u . n	US

**EBS\_R12\_UAT : Details**

\* Source System Name EBS\_R12\_

\* Source System Type E-Business Suite Release 12

\* ODI Context Code U

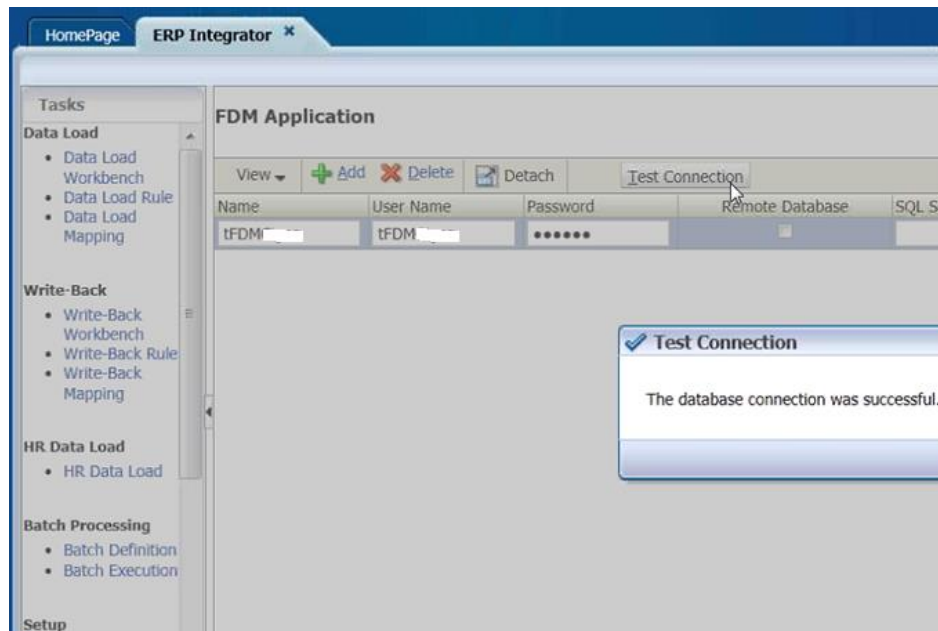
Source System Description EBS R12 -

Drill-Through URL https://el : itstaya: o ck ut u rch .c.m

Log Level

# Define FDM Application

- FDM application must be defined with username, password, and a JDBC URL
- In the screen below, the Database is tested by clicking “Test Connection”





# Define the Target System

- Target Application settings: In our case, we select “Applications Registered in FDM” and then we are able to select the name of the HFM application that FDM is pointing to.

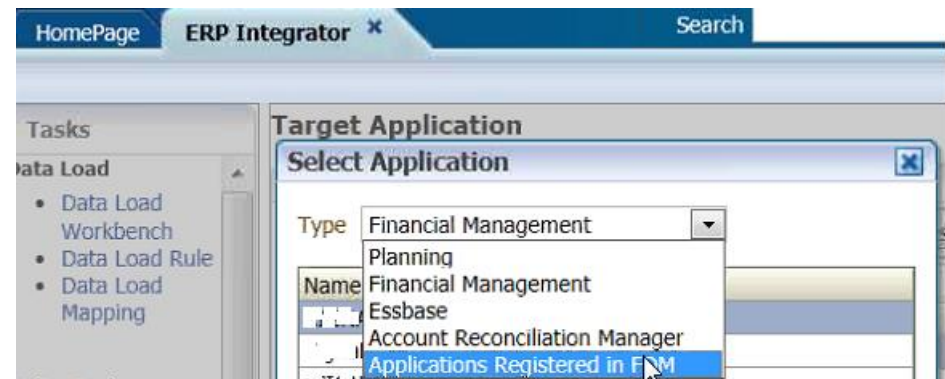
## Setup

- Source System
- Source Adapter
- FDM Application
- Target Application
- Source Accounting Entities
- Import Format
- Location
- Metadata
- Period Mapping
- Category Mapping
- Process Details

## Target Application

### Target Application Summary

View ▾  Add  Delete  Refresh Metadata  Detach

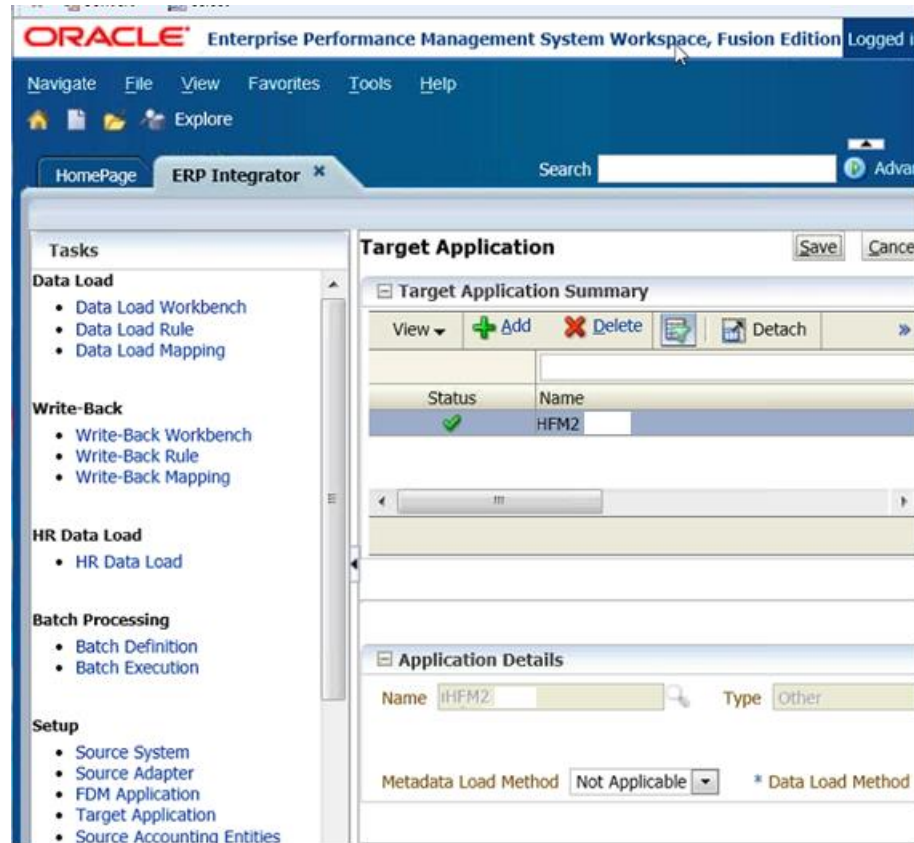


# Specify what the Target Application is

- In ERPi Setup, select “Target Application”

## Setup

- Source System
- Source Adapter
- FDM Application
- Target Application
- Source Accounting Entities
- Import Format
- Location
- Metadata
- Period Mapping
- Category Mapping
- Process Details



The screenshot shows the Oracle Enterprise Performance Management System Workspace, Fusion Edition interface. The main window is titled "ERP Integrator" and contains a "Target Application" section. On the left, a "Setup" sidebar lists various configuration options, with "Target Application" selected. The "Target Application" section includes a "Target Application Summary" table and an "Application Details" section.

**Target Application Summary**

Status	Name
✓	HFM2

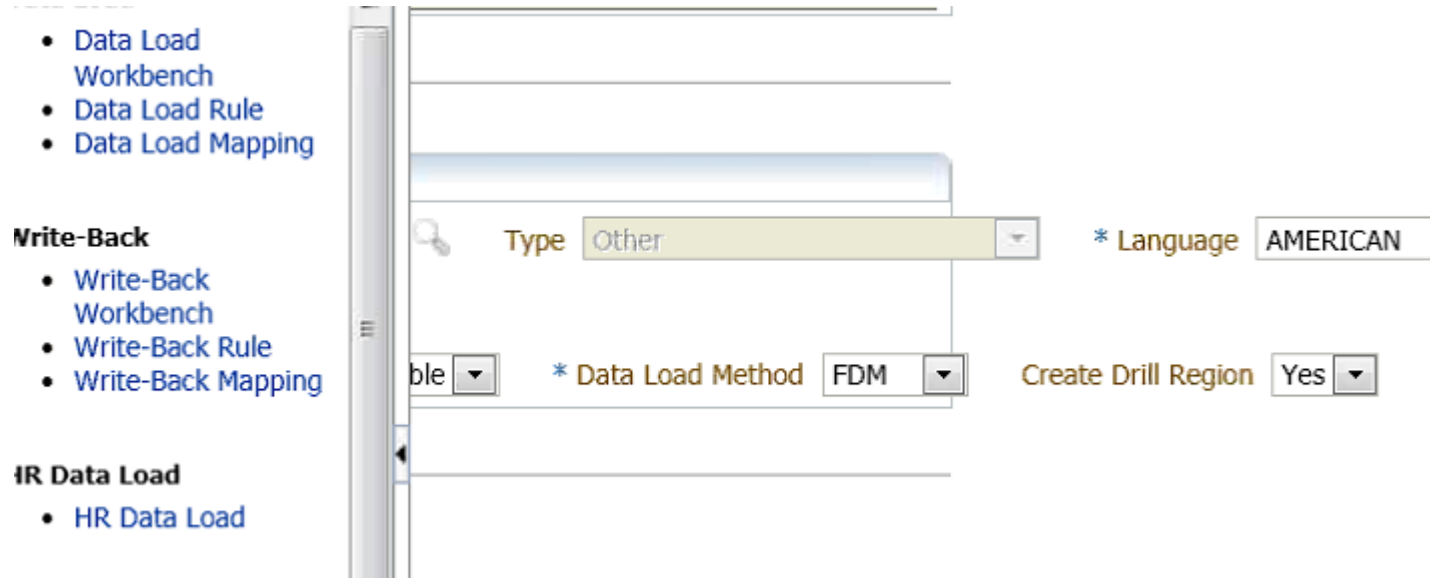
**Application Details**

Name: iHFM2 Type: Other

Metadata Load Method: Not Applicable \* Data Load Method

# Define the Target System

- Language = American ☺
- Create Drill Region = Yes
- Load Method = FDM



The screenshot shows the 'Define the Target System' configuration window. On the left is a tree view with the following structure:

- Data Load
  - Workbench
  - Data Load Rule
  - Data Load Mapping
- Write-Back
  - Write-Back Workbench
  - Write-Back Rule
  - Write-Back Mapping
- HR Data Load
  - HR Data Load

The main configuration area on the right contains the following fields:

- Type**: A dropdown menu with 'Other' selected.
- \* Language**: A text field containing 'AMERICAN'.
- \* Data Load Method**: A dropdown menu with 'FDM' selected.
- Create Drill Region**: A dropdown menu with 'Yes' selected.

# ERPi Location

- Create a specific location for ERPi

**Location** Save

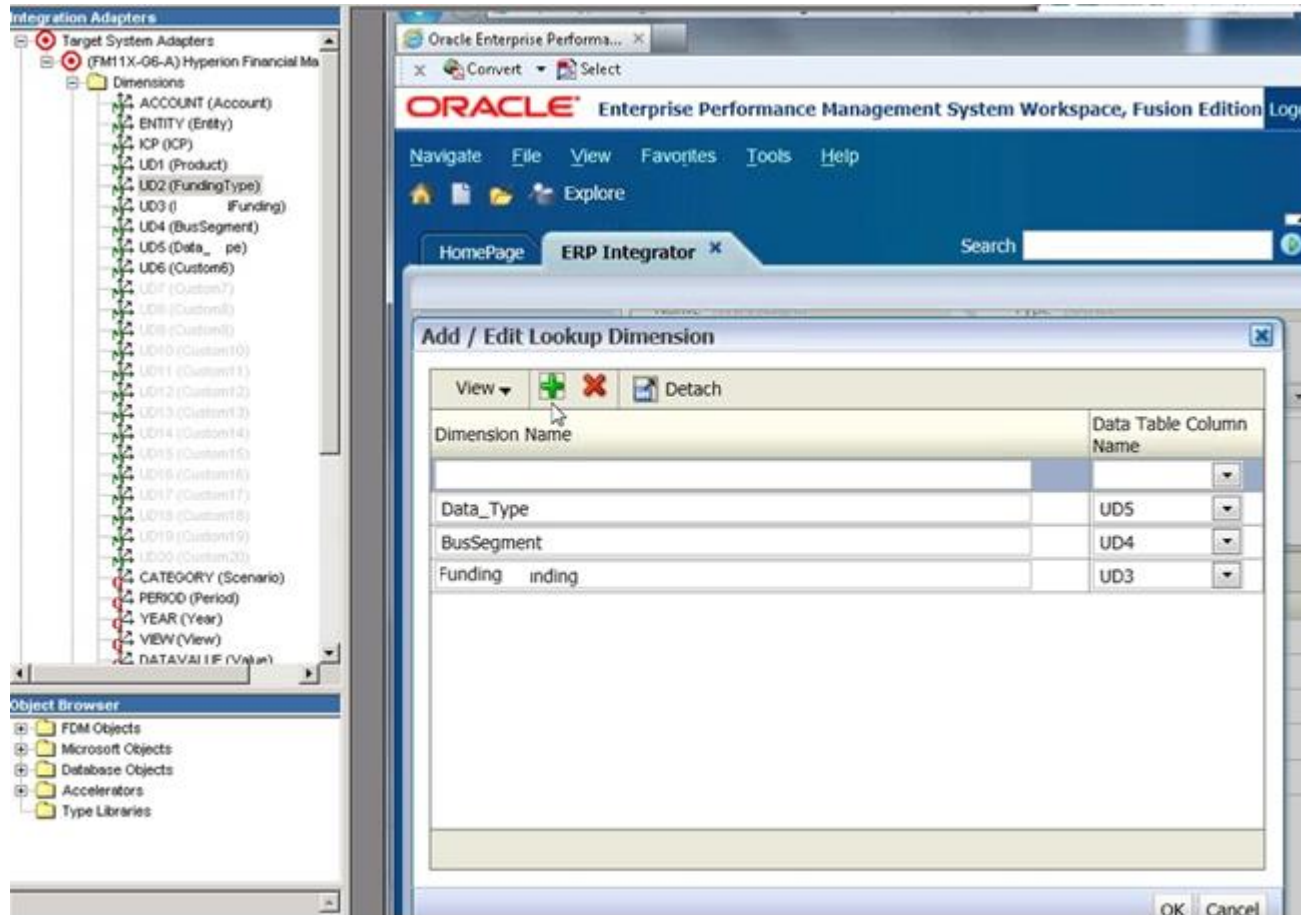
View + Add × Delete 📄 Detach

Name	Import Format	Source System	Accounting Entity	Target Application	Functional Currency	Data Value
LOC_EBS_R12	IF_EBS_R12	EBS_R12_TEST	_GAAP_ENTERPRISE	rHFM	USD	

Data Value

# Import Format

- Assign EBS segments to the HFM dimensions.
- Match ERPi with active dimensions in FDM



# Import Format

- Assign EBS segments to HFM target dimensions

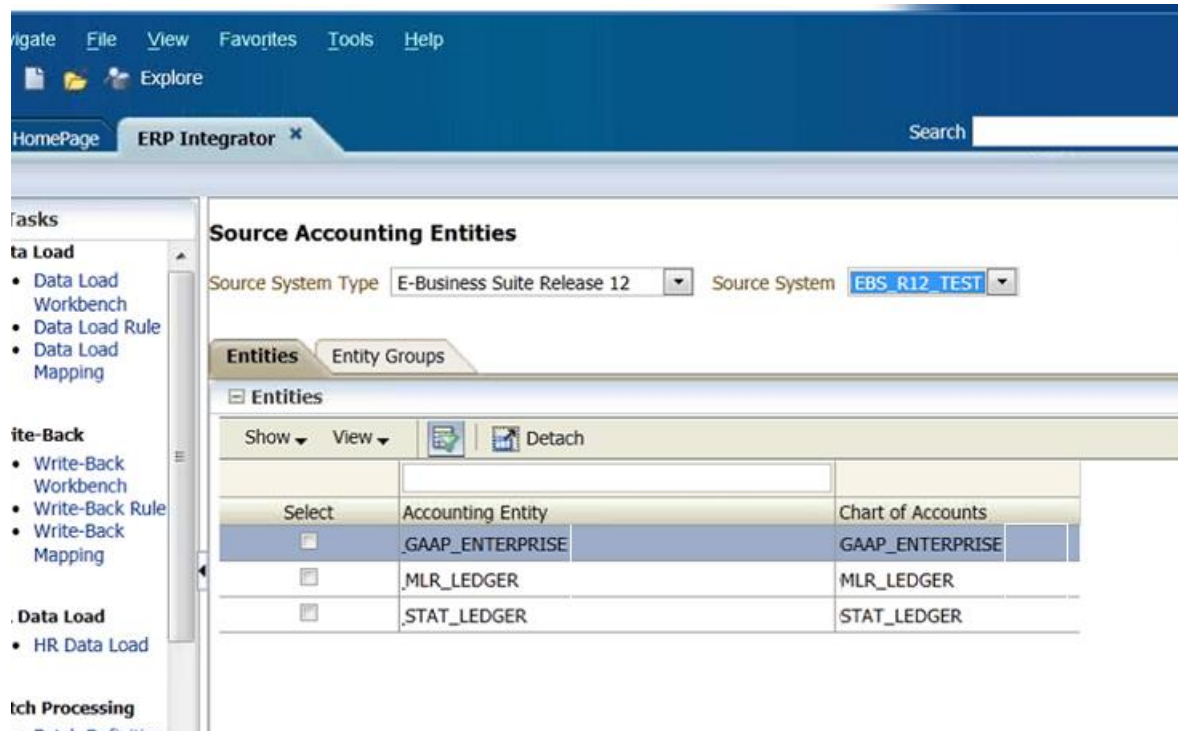
IF\_EBS\_R12: Mappings

Data Load Mapping Write-Back Mapping

Source					Concatenation Character	Target
Source Segment 1	Source Segment 2	Source Segment 3	Source Segment 4	Source Segment 5		Dimensions
Pr_n						Account
Business Segr						BusSegment
Ledger						Custom6
Expense Cent						Data_Type
Company	Product					Entity
Funding Type						FundingType
Affil_Jt	Sub-Pr...					ICP

# Select source Ledgers to be included

- In “Source Accounting Entities” After selecting the EBS source system in the drop-down menu, options of ledgers will be available



Setup

- Source System
- Source Adapter
- FDM Application
- Target Application
- Source Accounting Entities
- Import Form
- Location
- Metadata
- Period Mapping
- Category Mapping
- Process Details

Tasks

- Data Load
  - Data Load Workbench
  - Data Load Rule
  - Data Load Mapping
- Write-Back
  - Write-Back Workbench
  - Write-Back Rule
  - Write-Back Mapping
- Data Load
  - HR Data Load
- Batch Processing
  - Batch Definition

Source Accounting Entities

Source System Type: E-Business Suite Release 12 Source System: EBS\_R12\_TEST

Entities Entity Groups

Entities

Show View Detach

Select	Accounting Entity	Chart of Accounts
<input checked="" type="checkbox"/>	_GAAP_ENTERPRISE	GAAP_ENTERPRISE
<input type="checkbox"/>	_MLR_LEDGER	MLR_LEDGER
<input type="checkbox"/>	_STAT_LEDGER	STAT_LEDGER

# Period & Category Mappings – same as FDM

Explore

ERP Integrator x Search

Period Mapping Save

Global Mapping Application Mapping Source Mapping

View + Add X Delete Detach

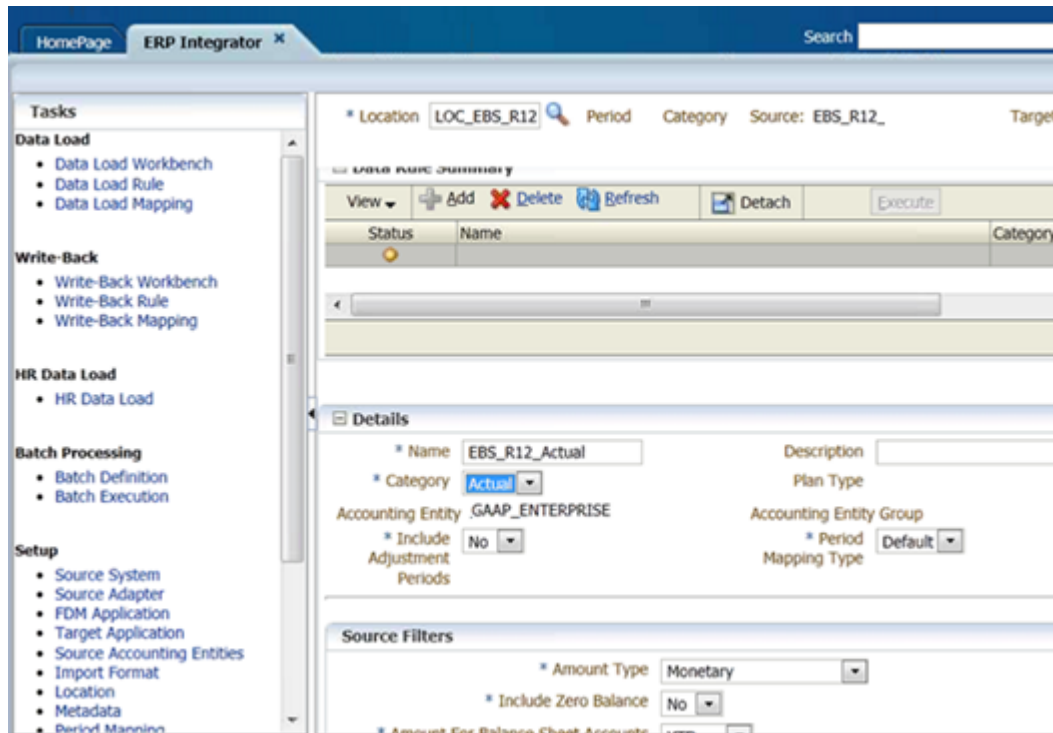
Period Key	Prior Period Key	Period Name	Target Period Month	Target
6/30/2017	5/31/2017	Jun-17	Jun	
7/31/2017	6/30/2017	Jul-17	Jul	
8/31/2017	7/31/2017	Aug-17	Aug	
9/30/2017	8/31/2017	Sep-17	Sep	
10/31/2017	9/30/2017	Oct-17	Oct	
11/30/2017	10/31/2017	Nov-17	Nov	
12/31/2017	11/30/2017	Dec-17	Dec	
1/31/2018	12/31/2017	Jan-18	Jan	
2/28/2018	1/31/2018	Feb-18	Feb	
3/31/2018	2/28/2018	Mar-18	Mar	
4/30/2018	3/31/2018	Apr-18	Apr	
5/31/2018	4/30/2018	May-18	May	
6/30/2018	5/31/2018	Jun-18	Jun	
7/31/2018	6/30/2018	Jul-18	Jul	
8/31/2018	7/31/2018	Aug-18	Aug	

- Setup
- Source System
  - Source Adapter
  - FDM Application
  - Target Application
  - Source Accounting Entities
  - Import Format
  - Location
  - Metadata
  - Period Mapping
  - Category Mapping
  - Process Details



# ERP*i*: Data Load Rule

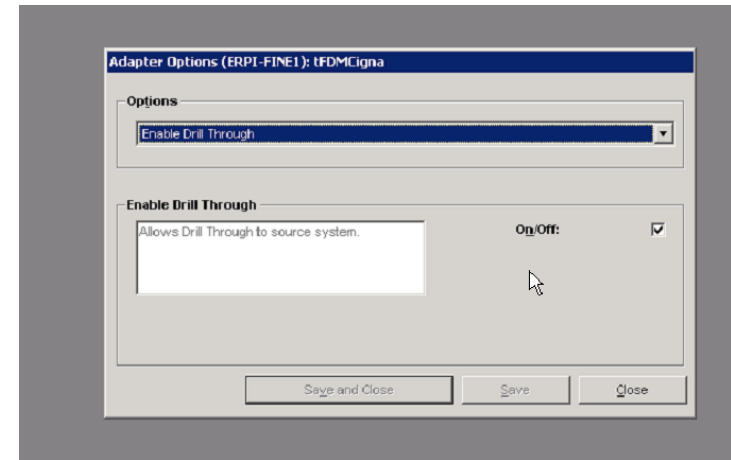
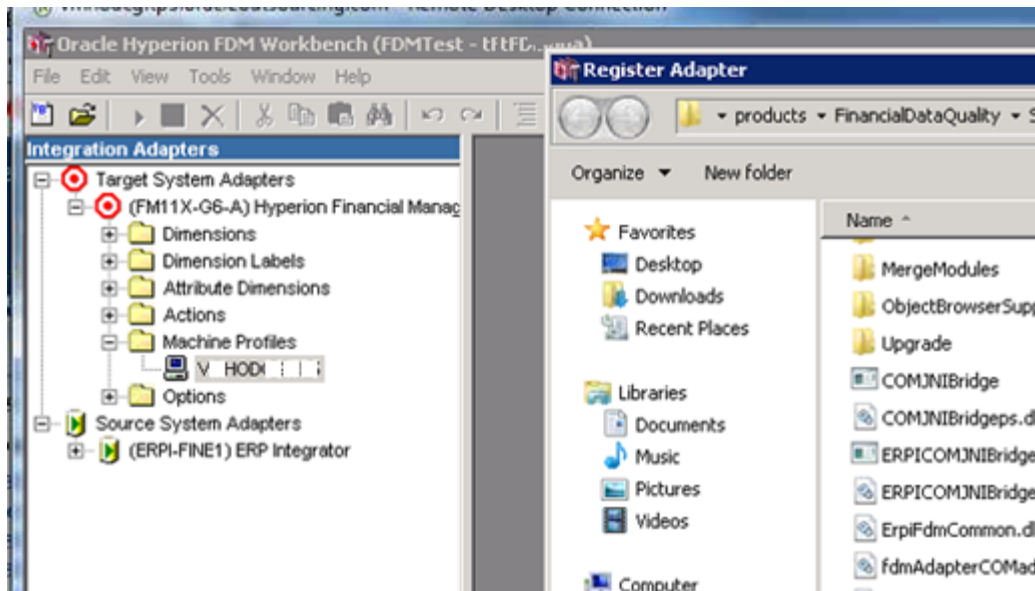
- Define how data is loaded to target



The screenshot shows the 'ERP Integrator' application window. The left sidebar contains a 'Tasks' menu with categories: Data Load, Write-Back, HR Data Load, Batch Processing, and Setup. The 'Data Load' category is selected, showing sub-items: Data Load Workbench, Data Load Rule, and Data Load Mapping. The main area displays the configuration for a 'Data Load Rule'. At the top, there are fields for 'Location' (LOC\_EBS\_R12), 'Period', 'Category', 'Source' (EBS\_R12\_), and 'Target'. Below these are buttons for 'View', 'Add', 'Delete', 'Refresh', 'Detach', and 'Execute'. A table with columns 'Status', 'Name', and 'Category' is shown, with one row containing a yellow status icon. The 'Details' section contains several fields: 'Name' (EBS\_R12\_Actual), 'Description', 'Category' (Actual), 'Plan Type', 'Accounting Entity' (GAAP\_ENTERPRISE), 'Accounting Entity Group', 'Include Adjustment Periods' (No), and 'Period Mapping Type' (Default). The 'Source Filters' section includes 'Amount Type' (Monetary), 'Include Zero Balance' (No), and a partially visible 'Amount For Balance Sheet Accounts' field.

# Register Adapters

- Source adapter for ERPi (ERPI-FINE1)
  - Enter ERPI data rule name (as created in ERPi)
  - Select execution mode
  - Check box for Enable drill though



# FDM: Assign adapter to Import Format

- FDM Import format screen
- Select Source Adapter ERPI-FINE1

Page (1 of 1) 1

Fields for Selected Import Format

Source Adapter
<b>Adapter=ERPI-FINE1</b>

Considerations

# **MOVING TO FDMEE**

# FDME: what's new?

## ✓ Full-Featured integration of FDM and ERPi

- Maintains key functionality from classic FDM
- Now enables load of metadata, data, drill through

## ✓ Simplified Installation

- In the past FDM, ERPi, ODI were installed separately
- An install of FDME includes the install and configuration of ODI and are on the same server

## ✓ Full Lifecycle Management Support

- LCM makes migration much easier and complete like other Workspace applications

## ✓ Consistent Hyperion Interface

- Integrated on Workspace and consistent with other Oracle Hyperion interfaces like HFM and Planning
- Load Balancing configuration is consistent with the other Hyperion EPM products.

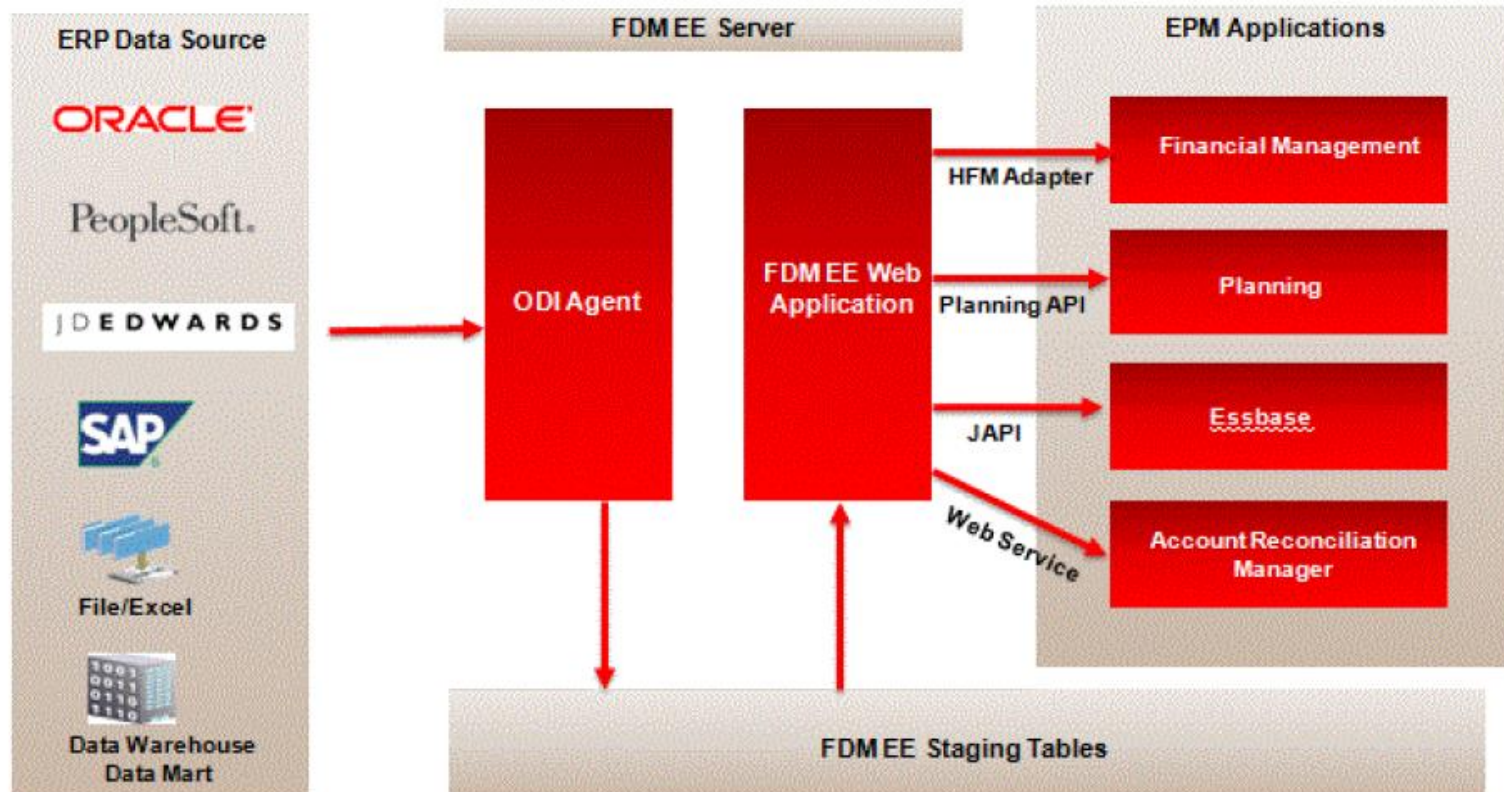
## ✓ Hyperion Shared Services

- Groups can be created
- security applied by location

## ✓ Now on 64-bit Platform

- Previously 32 bit FDM limited scalability
- New architecture improves performance for larger applications and real-time performance

# FDMEE Data Flow, Architecture



# Considerations:

## What is your current state?



- Do you currently use ERPi?
- What are your target systems?
- What are your data sources?
- Application size:
  - Number of Locations
  - Number of Maps
  - Conditional mapping numbers/complexity
- Number and complexity of import and event scripts
- Do you use Multi-Dimensional mapping scripts?
- How involved is IT in Hyperion development/Maintenance?

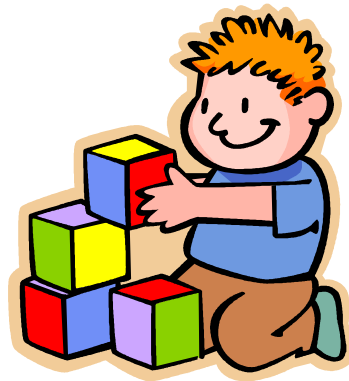
Considerations

**HERE'S WHY I NEED TO KNOW**



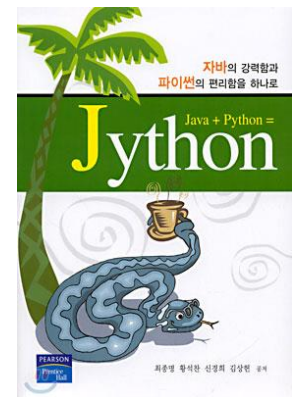
# Rebuild FDM, Migrate ERPi

- The migration from FDM Classic to FDMEE will require re-development in most areas.
- ERPi to FDMEE is upgraded when applying the Maintenance Release. Yet, many specific items in ERPi need to be re-entered.



# New Coding: Time to learn Jython!

- Jython is a high-level, dynamic, object-oriented language that integrates Python with Java
- FDM mapping can be migrated *except for conditional maps* which require re-development as either a #SCRIPT in **Jython** or a **SQL** case statement.
- Event, Custom, and import scripts need to be re-written in either Jython or VB.Net.
  - Note, the VBScript in FDM is now **VB.Net** in FDMEE, which has some syntax differences.



# Added Mapping Options



- “Like” mapping includes new conditions
  - <x> such as <1>, <2>, <3>, ... used on concatenated source values and selects a corresponding segment based on the value of x.
    - Example: <3> for a concatenated source data 345\_10005\_7654 would return the third segment 7654.
  - <Blank> to map blank source values
- Multidimensional mapping
  - Now can assign mapping based on various source fields.  
Example: A combination of field 3 and 5 are required to make an account mapping.
  - Eliminates need for import script coding (varvalues)

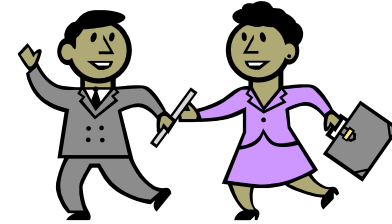
# Significant interface change from FDM Classic

- The new interface for FDMEE is very different than FDM classic. It is on the Hyperion Workspace now and has a similar feel/consistency as HFM and Planning.
- If you have been using ERPi, it will be familiar looking.
- While some usability is standardized for the end user, FDMEE may require more support from an IT group for maintenance.

# Upgrade Options

- Existing FDM Classic users can continue to use FDM Classic and upgrade to 11.1.2.3 or FDMEE.
- New FDM customers must begin with FDMEE

# Is my client ready for FDMEE?



## No Brainer

- Utilize ERPi with FDM
- Have a strong IT support team that is familiar with ERPi setup and configuration
- Simple import scripts

## Risks

- EBS implemented without sub-ledgers, therefore Dual Load (or similar) solution still needed.
- Some complicated event and custom scripts
- Budget (its worth it!)

# Questions

Contact: Saqib Qureshi

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