

**Oracle® Retail Financial Integration for Oracle
Retail Merchandise Operations Management and
Oracle Financials**

Implementation Guide

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Primary Author: Sharath Panduranga

Contributing Author: Maria Andrew

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Oracle® Retail Financial Integration for Oracle Retail MOM and Oracle Financials,
Release 16.0.023

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Preface

The Oracle Retail Financial Integration represents the second release of the direct integration solution between Oracle Retail Merchandising Suite and enterprise financial systems. Because the concept of retail financial integration continues to be strategic to Oracle Retail, this integration is designed to better match other Oracle Retail provided integration patterns and so has the benefit of being easier to implement and support. The Oracle Retail Financial Integration is aligned with our overall integration strategy.

This version of the Oracle Retail Financial Integration adds integration between Oracle Retail Merchandising System and Oracle PeopleSoft Financials. This is in addition to the integration previously provided to the Oracle E-Business Suite Financials. Integration best practices have been applied to this integration so that it can be easily implemented and supported by our retail customers.

The Oracle Retail Financial Integration is supported by Oracle for customers who have purchased the Oracle Retail Integration Bus product. As with most packaged integration, the base package provides the most common integration content to satisfy end-to-end scenarios, but customers will tend to make some integration and mapping changes to meet their specific needs. This release includes technical and design documentation to assist customer specific deployments.

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- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screen shots of each step you take

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When you install the application for the first time, you install either a base release (for example, 16.0) or a later patch release (for example, 16.0.023). If you are installing the base release and additional patch releases, read the documentation for all releases that have occurred since the base release before you begin installation. Documentation for patch releases can contain critical information related to the base release, as well as information about code changes since the base release.

Improved Process for Oracle Retail Documentation Corrections

To more quickly address critical corrections to Oracle Retail documentation content, Oracle Retail documentation may be republished whenever a critical correction is needed. For critical corrections, the republication of an Oracle Retail document may at times not be attached to a numbered software release; instead, the Oracle Retail document will simply be replaced on the Oracle Technology Network Web site, or, in the case of Data Models, to the applicable My Oracle Support Documentation container where they reside.

This process will prevent delays in making critical corrections available to customers. For the customer, it means that before you begin installation, you must verify that you have the most recent version of the Oracle Retail documentation set. Oracle Retail documentation is available on the Oracle Technology Network at the following URL:

<http://www.oracle.com/technetwork/documentation/oracle-retail-100266.html>

An updated version of the applicable Oracle Retail document is indicated by Oracle part number, as well as print date (month and year). An updated version uses the same part number, with a higher-numbered suffix. For example, part number E123456-02 is an updated version of a document with part number E123456-01.

If a more recent version of a document is available, that version supersedes all previous versions.

Oracle Retail Documentation on the Oracle Technology Network

Oracle Retail product documentation is available on the following web site:

<http://www.oracle.com/technetwork/documentation/oracle-retail-100266.html>

(Data Model documents are not available through Oracle Technology Network. You can obtain them through My Oracle Support)

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Understanding the Oracle Retail Financial Integration for Oracle Retail Merchandise Operations Management and Financials (E-Business Suite / PeopleSoft)

Note: Any reference to Oracle Financials in this book refers to either the EBS or PeopleSoft Financials application, depending upon which financial application is being used.

This chapter provides an overview of the Oracle Retail Financial Integration (RFI) for Oracle Retail Merchandise Operations Management (MOM) and financials E-Business Suite (EBS) or PeopleSoft Financials and discusses:

- Key benefits
- Participating applications
- Retail Sales Financial business process flow
- Retail Inventory Financial business process flow
- Retail Procure to Pay business process flow
- Solution assumptions and constraints

Overview

The Oracle Retail Financial Integration (RFI) for E-Business Suite (EBS) / PeopleSoft Financials provides integration to a robust enterprise financial system to complement the Oracle Retail Merchandising system in a retail customer environment.

From here on any reference in the document to Oracle GL / AP should be interpreted as a reference to Oracle EBS Financials (GL/AP) or PeopleSoft Financials (GL / AP). This would depend on whether EBS Financials or PeopleSoft Financials is being integrated with RFI.

Oracle Retail Financial Integration (RFI) includes the following four processes:

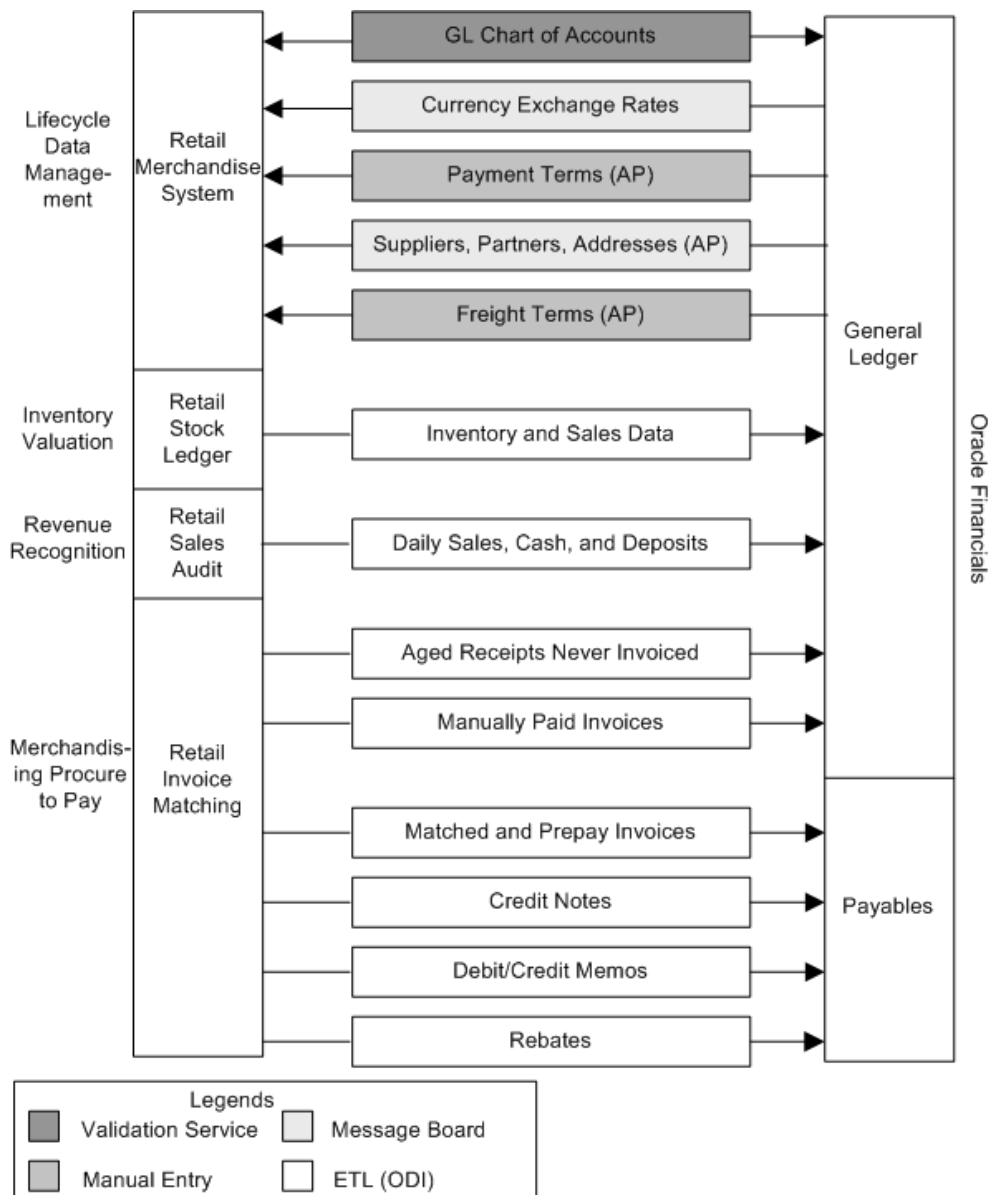
- Life Cycle Data Management - This process provides data synchronization for the initial load prior to implementation and incremental data creation and maintenance after implementation. This process synchronizes supplier and currency exchange rates from the Financials System (EBS or PeopleSoft) to the Oracle Retail Merchandising System (RMS). Oracle Payables is the source of Currency Exchange Rates, suppliers, payment terms, and freight terms. Because

the Exchange Rate Types, freight and payment terms are static in nature and their volume is very low, they are synchronized between the two systems manually. This process enables users of the Oracle Retail Merchandise suite to carry out functions with data that is shared with the Financials applications (E-Business or PeopleSoft Financials applications) while creating and updating this data.

- Inventory Valuation (Retail stock ledger) - This process enables the posting of accounting entries generated from transactions that change the value of sellable products at a retailer's inventory locations (stores and warehouses) to the appropriate ledgers from Oracle Retail Merchandising - stock ledger to Oracle General Ledger (Oracle GL). This process records the financial impact of changes in the sellable inventory in store and warehouse locations. Valuation of sellable inventory in the stores and warehouses is based on the processing of transactions for movement, pricing, costing, and sale of the inventory. This valuation is captured and processed in Oracle Retail stock ledger. These transactions include sales, shipments from warehouse to store, store receipts, store transfers, returns to vendors, price changes, stock counts, and shrinkage due to theft or damage.
- Retail Revenue Recognition - This process enables posting of accounting entries generated from sales and returns transactions from the retailer's stores for revenue and cash reconciliation to the appropriate ledgers. In this process, the data flows from Oracle Retail Sales Audit (ReSA) to Oracle GL. This process records the financial impact of sale/return, cash reconciliation, and void transactions from stores. The Revenue Recognition process begins when store transactions (sales and returns) are processed by ReSA. For each store transaction, ReSA generates the appropriate accounting entries to be posted to the Oracle GL. Each accounting entry has a valid account code segment combination based on the transaction type, business unit, and location (store or warehouse).
- Retail Merchandising Procure to Pay - This process begins with the Oracle Retail Invoice Matching (ReIM) application. Invoices from suppliers for retail merchandise are matched to the original purchase order (PO) for the merchandise and the receipt of the merchandise by the retailer. A proper match of invoice, PO, and receipt trigger the payment authorization of the supplier's invoice. Invoices may be authorized for payment prior to receipt of goods for which prepayment is required. When the authorization for payment is generated, the appropriate accounting distribution is also generated to support the payment authorization. The Retail Merchandise Procure to Pay integration automates the processing of invoice payments, adjustments, and write-offs from ReIM to Oracle Payables and GL. Other accounting transactions are generated from ReIM to write off aged receipts that were never invoiced and to post accounting distribution for manually paid or prepaid invoices after receipt.

This diagram illustrates the Oracle Retail to Oracle Financials process flow:

Figure 1–1 Oracle Retail to Financials Application (EBS / PeopleSoft) RFI process flow



RFI does not synchronize chart of accounts from Oracle GL to Oracle Retail but only validates chart of accounts available in Oracle Retail against Oracle GL. Chart of accounts are combinations of account code segments. Because transaction types are defined and assigned combinations of code segments for proper handling of the financial impacts in Oracle Retail, the code combinations are validated by a service provided by the Oracle GL. This ensures that the accounting entries generated by the transactions are valid when they are posted to Oracle GL.

Key Benefits

The following are the key benefits of RFI:

- This integration is not a point-to-point integration between the Financial System (EBS or PeopleSoft) and Oracle Retail applications. This RFI implementation is independent of the version of integrated applications. A Oracle Retail Financial

Integration (RFI) layer serves as an intermediate thin layer of application between Financial application (EBS or PeopleSoft) and Oracle Retail. This integration remains synchronized with the new releases of the edge applications.

- Audited transaction data is exported to the Financial applications days before the traditional audit process permits. The Financials applications can use this timely data in a proactive manner, which results in increased productivity and operational efficiencies.
- Total cost of ownership for Oracle and its customers is reduced.

Participating Applications Overview

This section provides an overview of the applications participating in the RFI:

- Oracle Retail Merchandising System
- Oracle Retail Sales Audit
- Oracle Retail Invoice Matching
- Oracle Payables
- Oracle General Ledger

Oracle Retail Merchandising System

Oracle Retail Merchandising (RMS) is an integrated solution for global retailing. This solution enables retailers to better manage, control, and perform crucial day-to-day merchandising activities. From new product introduction to inventory management, RMS provides retailers with a complete end-to-end solution and is the most comprehensive and integrated solution for global retailing. For more information, see the Oracle Retail Merchandising System User Guide.

Oracle Retail Sales Audit

Oracle Retail Sales Audit (ReSA) provides retailers with a flexible tool that evaluates and ensures accuracy and completeness of point of sale (POS) data. Real time access to this audited sales data ensures integrity of information throughout the retail enterprise. With a highly configurable sales audit application, the retailer can maintain existing business practices while providing for future options as the operations grow and change.

ReSA enables retailers to receive POS transaction data, cleanse it, and export the data to the Oracle Merchandising system and the Oracle Retail Data Warehouse. By providing corporate control and visibility to sales audit information, ReSA enables retailers to make better decisions to improve merchandise operations and transform the economics of their business. For more information, see the latest Oracle Retail Sales Audit User Guide.

Oracle Retail Invoice Matching

Oracle Retail Invoice Matching (ReIM) is a market-leading solution for retailers who need an automated application to better manage reconciliation and payment of purchase orders. This advanced solution enables account payables teams to resolve discrepancies on invoices quickly before payments are made. A highly automated, multidimensional matching engine minimizes time spent on manual reviews. Automated routing provides an effective method to ensure that accurate information

is delivered to the right internal teams for resolution and compliance controls. For more information, see the latest Oracle Retail Invoice Matching User Guide.

Oracle Payables

Oracle Payables provides automated invoice and payment processing to ensure timely and accurate payment for goods and services. Best-practice business processes match purchase orders, receipts, and invoices and provide online approvals to identify exceptions and increase control over disbursements.

Oracle Payables delivers built-in controls to help an enterprise meet regulatory requirements, enforce compliance, reduce risk, and implement due-diligence best practices reducing cycle times and errors. Other features include a flexible, user-defined system setup, extensive vendor maintenance, digital signatures; financials sanction validation, and powerful inquiry and analytical capabilities. For more information, see the EBS Payables User's Guide, version 12.2.4 and PeopleSoft 9.2 Payables User's Guide.

Oracle General Ledger

Oracle General Ledger (GL) offers a fully automated close and consolidation solution for legal and management reporting, including support for Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS). Transactions are automatically processed and validated according to the best-practice business processes and control settings. In addition, an enterprise can proactively control expenditures by automatically checking spending requests against budget. With real time reporting and information access, an enterprise can achieve complete visibility into financial results. For more information, see the Oracle General Ledger User's Guide, version 12.2.4 and PeopleSoft 9.2 General Ledger User's Guide

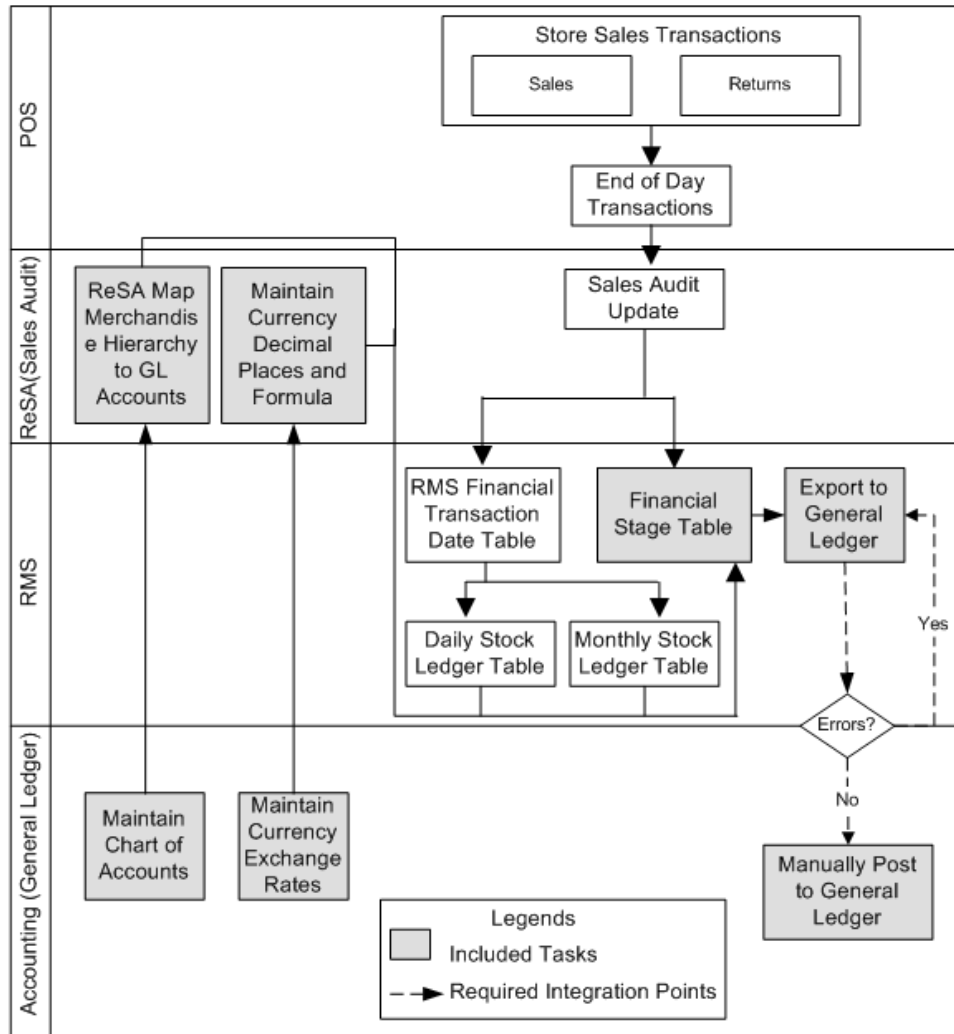
Retail Sales Financial Business Process Flow

The Retail Sales Financial business process consists of the post channel sales, cash, and deposits from ReSA to Oracle GL integration flow.

This diagram illustrates the Retail Sales Financial business process flow:

Figure 1–2 Retail Sales Financial business process flow

Retail Sales Financial Management (Sales Audit)



ReSA sends summarized sales audit information to Oracle GL for the Sales Journal. The sales audit information includes channel sales, cash, and deposits. The ReSA Export processes select and format corrected and pre audited data from the ReSA database so that it can be sent to Financials system (EBS or PeopleSoft)

ReSA includes programs to automatically extract the required totals data and to format it to generic data files from a financial staging table for import into Oracle GL. Sales audit data from ReSA is also posted directly to the RMS stock ledger and can be integrated into Oracle GL through the stock ledger to the financial staging table and the accounting entry table. Before data is imported into Oracle GL, a batch process writes balanced records to the financial staging table using the appropriate General Ledger account combinations (maintained in Cross Reference tables in ReSA) and the Currency Exchange Rates.

For journal entries, an Oracle Data Integrator (ODI) process is used to load the accounting entries into the GL_Interface table. Appropriate Journal Import, is then run to move the journal entries into the GL transaction tables.

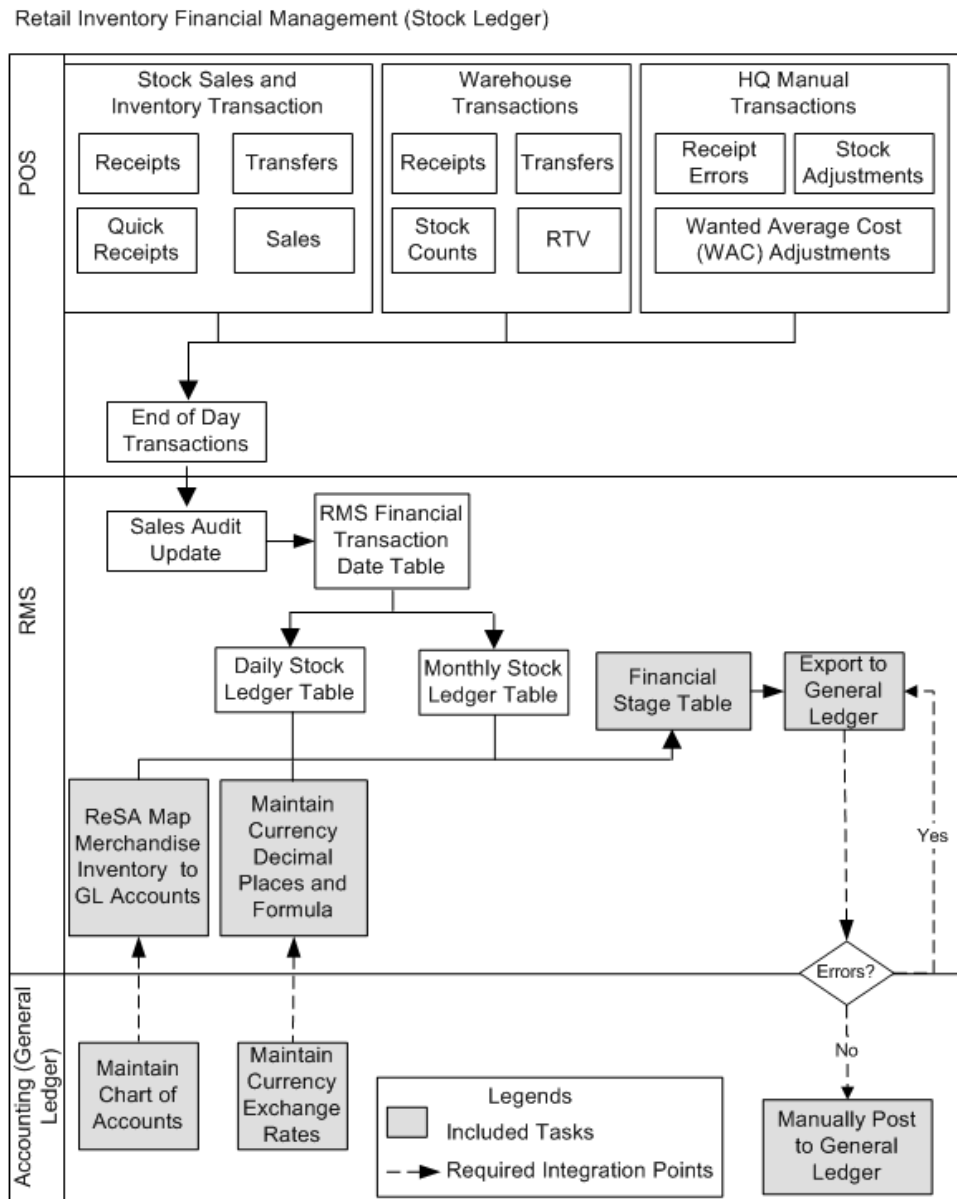
Retail Inventory Financial Business Process Flow

The Retail Inventory Financial business process consists of the following integration flows:

- Post stock ledger from RMS to Oracle GL
- Post write-offs (aged receipts, not invoiced to ledger) from RMS to Oracle GL

This diagram illustrates the Retail Inventory Financial business process flow:

Figure 1-3 Oracle Retail Inventory Financials(EBS or PeopleSoft) business process flow



The stock ledger in RMS records financial results of the merchandising processes that occur in the Retail system, such as buying, selling, price changes, transfers, and so on. All of these transactions are recorded in the RMS stock ledger and rolled up to the subclass or location level for days, weeks, and months. Daily and period-based

financial information is scheduled to be loaded into the Financials. RMS sends three levels of stock ledger information to Oracle GL:

Monthly - no access to detailed reference information

Daily by subclass, class, or department - no access to detailed reference information.

Daily by transaction

The stock ledger transactions to be loaded into Financials system (EBS or PeopleSoft) are placed on the financial staging table through the use of table triggers or batch, by means of the appropriate General Ledger account combinations (maintained in the RMS cross-reference table in Oracle Retail) and the currency exchange rates.

For journal entries, an ODI process is used to load the accounting entries into the GL transaction staging tables of Oracle GL application. Then appropriate Journal Import, is run to move the journal entries into the GL transaction tables.

Retail Merchandise Procure to Pay Business Process Flow

The Retail Merchandise Procure to Pay business process consists of the following integration flows:

- Post matched prepaid invoices from ReIM to Oracle GL
- Post manually matched paid Invoices from ReIM to Oracle GL
- Post receipt write-offs from ReIM to Oracle GL
- Post matched invoices for payment from ReIM to Oracle Payables
- Post credit notes (matched or unmatched) for payment adjustment from ReIM to Oracle Payables
- Post debit or credit memos for payment adjustment from ReIM to Oracle Payables
- Post rebates for payment adjustment from ReIM to Oracle Payables
- Post unmatched invoices for prepayment from ReIM to Oracle Payables

This diagram illustrates the Retail Merchandise Procure to pay business process flow:

Figure 1-4 Retail Merchandise Procure to Pay business process flow (1 of 2)

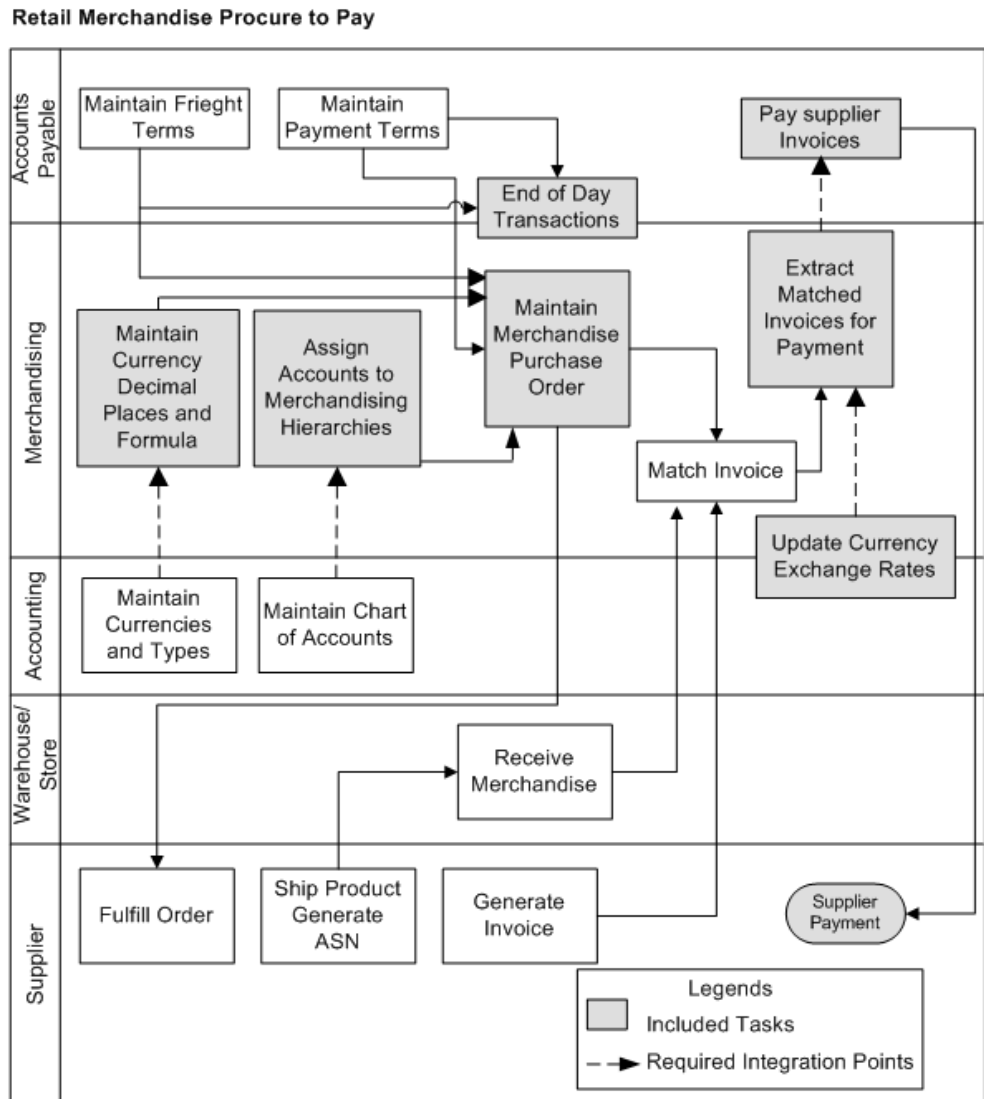
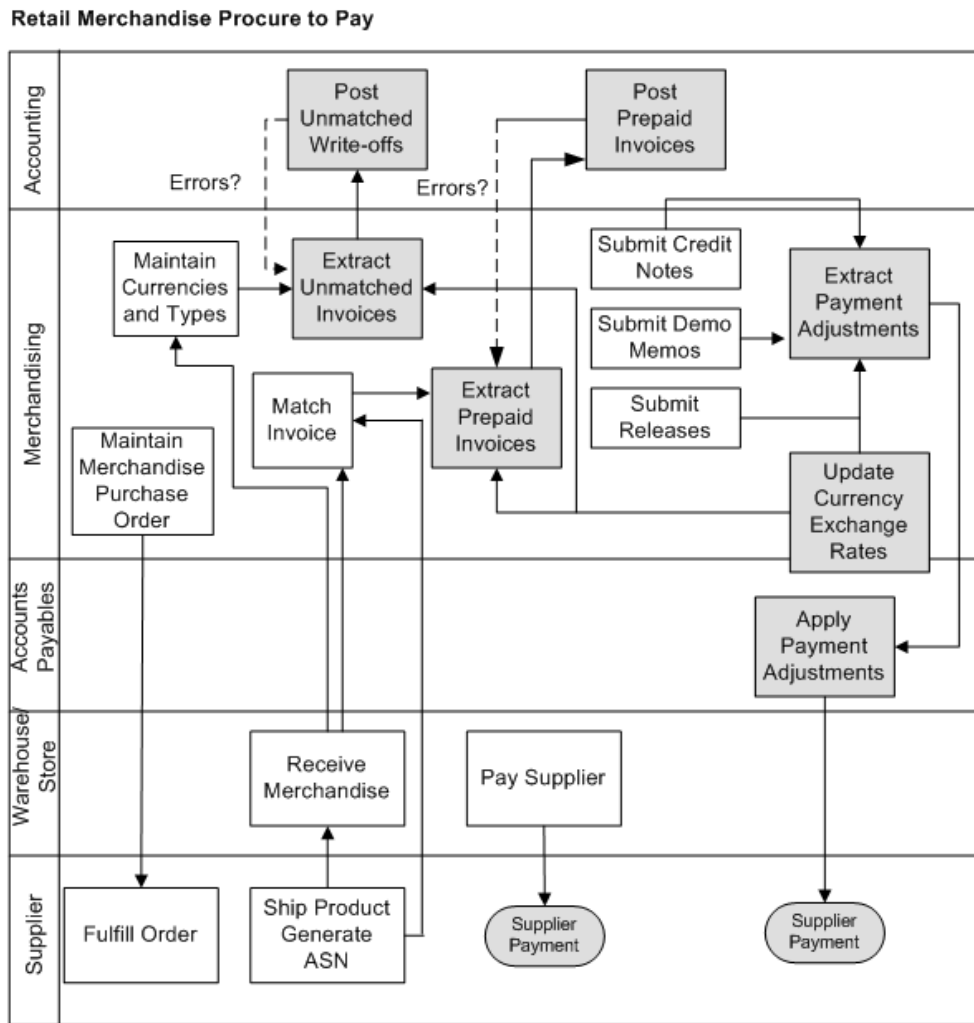


Figure 1–5 Retail Merchandise Procure to Pay business process flow (2 of 2)



The Retail Merchandise Procure to Pay business process flow enables posting of matched invoices, matched credit notes, debit and credit memos, rebates, and unmatched invoices for prepayment from ReIM to Oracle Payables. The payables invoices are placed in the Oracle Payables (AP) Interface tables. Then appropriate Invoice Import, is run to move the payables invoice into the payables transaction tables.

Solution Assumptions and Constraints

The following are the assumptions made for the RFI solution:

- The Financials applications(EBS or PeopleSoft) are implemented prior to the implementation of the RFI.
- Oracle Retail manually creates and stores the valid charts of accounts in the appropriate GL Cross Reference tables (ReSA, RMS, and ReIM).
- The Retail stock ledger supports multiple currencies. All transaction-level information is stored in the local currency of the store or warehouse where the transaction occurred.

- During the initial load for currency, historical and current rates are passed to Retail.
- Oracle Retail sends the accounting date and the transaction date with its transactions. These dates should not be changed or manipulated in Oracle Financials application.
- Accounting entry errors that are found from accounting entries are handled manually on both the Oracle Retail and Oracle Financials application side.
- Use or sales tax accounting information is passed as part of the accounting entries between Oracle Retail and Oracle Financials.
- Value-added tax (VAT) is calculated in Oracle Retail. VAT calculation is passed as a part of the accounting entry.
- Oracle Retail stock ledger determines the valuation of inventory for merchandise being directly procured. This information is passed to Oracle Financials as the accounting entries.
- RMS, through the Retail stock ledger, provides Financials with the value of ending inventory at cost using the method that the retailer indicates (cost method or retail method of accounting) by means of an adjusting entry.
- Accounting entries need to be manually posted to Oracle General Ledger.
- Both Oracle Financials and Oracle Retail support multiple organizations in one application instance.
- Before running the interfaces for data migration, XREF/DVM values in RFI_XREF_DVM table is validated against the transaction data set that needs to be posted from Oracle Retail to Oracle Financials.

The following is a constraint that occurs for the RFI solution:

- Customers switching from one financial application to another are not compatible with this RFI.

Note: Additional assumptions and constraints exist for each of the process integration flows. They are covered in the respective chapters.

Reviewing Life Cycle Management for Reference Data

This chapter discusses the following process integrations:

- Currency exchange rate integration
- Supplier information integration

Currency Exchange Rate Integration

This section provides an overview of the process integration for initial loading and incremental synchronization of currency exchange rates between Oracle General Ledger (GL) and the Oracle Retail Merchandising System (RMS) and discusses:

- Currency exchange rate integration details
- Data requirements
- Extensions

Overview

The currency exchange rate is the reference information used in the translation of monetary values from one currency to another. The exchange rate expresses the value of one currency in terms of another. The process integration for currency exchange rates enables you to use Oracle Financials as an accounting engine and Oracle Retail for sales audit and stock ledger transactions.

The process integration for currency exchange rates supports the following integration flows:

- Load initial currency exchange rate from Oracle GL to RMS: Enables the loading of all current and future effective dated currency exchange rates from Oracle GL to RMS for a new instance (logical or physical) of RMS.
- Incremental creation and updates of currency exchange rates from Oracle GL to RMS: Enables the synchronization of incremental creation and updates of the current and future effective dated currency exchange rates from Oracle GL to RMS.

This integration is not a point-to-point integration between Oracle GL and RMS. A RFI layer serves as an intermediate thin layer of application between Oracle GL and RMS. As part of the currency exchange rates integration, Oracle GL sends the currency exchange rates to the RFI layer and the RFI layer delivers the information to RMS. The RFI layer performs message filtering, message transformation, and message routing.

EBS Financials application triggers the integration by invoking the Business Event Subscriber Java class CurrencyRateBES with corresponding Business Event parameters. If the program fails, then an error displays in the standard EBS notifications.

PeopleSoft Financials application triggers the integration by invoking the Business Service in RFI with corresponding service parameters. If the program fails, then error is displayed in PeopleSoft application

Pre-requisites

Pre-requisites exist for the process integration for currency exchange rate. The following DVM's are available in the RFI_XREF_DVM table:

- CURR_CODE_DVM
- CURR_CONV_TYPE_CODE_DVM

Currency codes and currency exchange rate types are manually maintained in both the Systems and mapped using DVM.

The RMS FIF_CURRENCY_XREF table should have the appropriate exchange rate type mapping entries between Finance application and RMS.

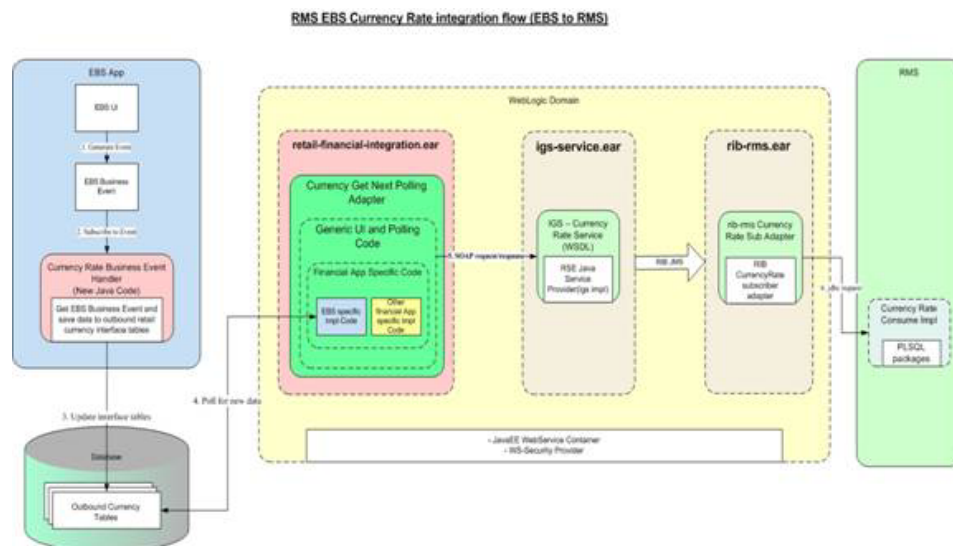
Solution Assumptions and Constraints

The integration design assumes that:

- Financials application suite stores daily exchange rate for each day. For example, for the month of August 2009 for USD to Euro, there will be 31 entries with the specific conversion rates. Even if the same conversion rates apply for the entire month, there will still be an individual exchange rate for each day.
- Oracle Retail does not support triangulation of currency exchange rates
- The Retail RIB Error Hospital holds all the Oracle Retail side errors and handles any notification on their side. Deleted currency exchange rates are not passed to Retail and the sync is one-direction only.

The diagram illustrates the currency exchange rate integration flow with EBS:-

Figure 2-1 Currency Exchange Rate Integration Flow



EBS: - Currency Exchange Rate Integration Details

The integration flow uses the following services:

- CurrencyRateBES - Business Event Subscriber
- Currency EJB Service
- IGS Currency Service
- RIBforRMS CurRate Subscriber

Incremental Loading of Currency Exchange Rates

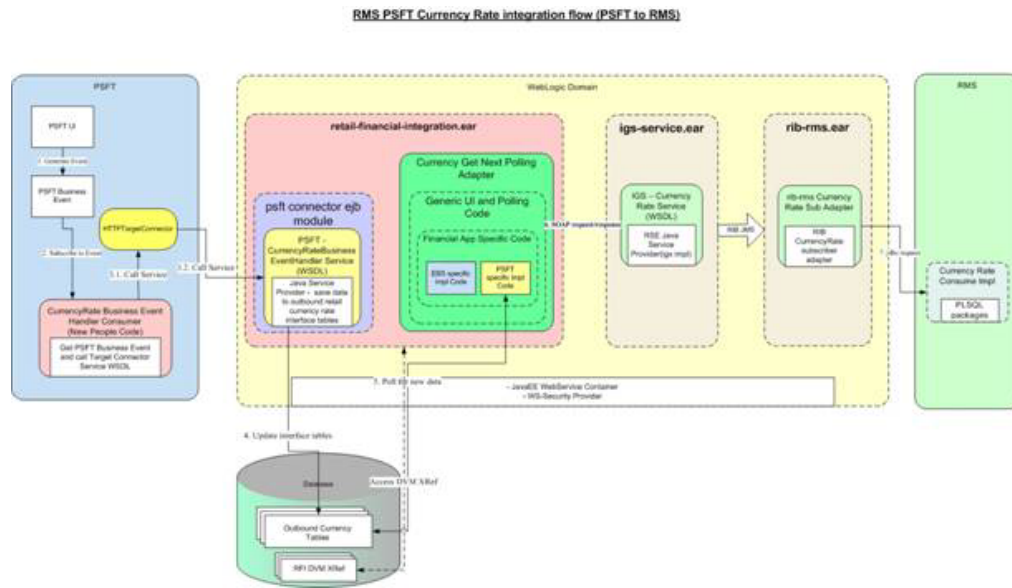
When the process is initiated, the following steps would occur:

- Oracle E-Business Suite invokes the Business Event Subscriber Java class CurrencyRateBES whenever a currency exchange rate is created or loaded into Oracle E-Business Suite.
- The Business Event Subscriber Java class CurrencyRateBES extracts all the currency exchange rates from the Oracle E-Business Suite Business Event object and moves the currency exchange rates into RFI Database Staging table RFI_CURR_RATE_STAGE.
- A Configured Timer for Currency service invokes the Currency EJB service.
- The Currency EJB service picks up the records from the RFI Database Staging table RFI_CURR_RATE_STAGE and transforms the Currency Code and Currency Exchange type using the CURR_CODE_DVM and CURR_CONV_TYPE_CODE_DVM respectively.
- Then IGS Currency Service is invoked with the transformed currency rate record.
- If there are any errors in Currency EJB service, the errors are added to the logs file. The Currency logs can be viewed using the RFI Adapter Manager screens in RFI Administration GUI.

PeopleSoft: - Currency Exchange Rate Integration Details

The diagram illustrates the currency exchange rate integration flow with PeopleSoft:-

Figure 2–2 RMS PSFT Currency Rate Integration Flow



The integration flow uses the following services:

- CURRENCYRATEBUSINESSEVENTHANDL- Business Event Handler
- Currency Web Service
- IGS Currency Service
- RIBforRMS CurRate Subscriber

Incremental Loading of Currency Exchange Rates

When the process is initiated, the following steps would occur:

- PeopleSoft invokes the Business Event Handler service whenever a currency exchange rate is created or loaded into PeopleSoft E-Business Suite.
- The Business Event Handler service "CURRENCYRATEBUSINESSEVENTHANDL "extracts currency exchange rates created from the PeopleSoft invokes Currency Web Service in RFI.
- The RFI Service moves the currency exchange rates into RFI Database Staging table RFI_CURR_RATE_STAGE and sends back a response to PeopleSoft
- A Configured Timer for Currency service invokes the Currency EJB service.
- The Currency EJB service picks up the records from the RFI Database Staging table RFI_CURR_RATE_STAGE and transforms the Currency Code and Currency Exchange type using the CURR_CODE_DVM and CURR_CONV_TYPE_CODE_DVM respectively.
- Then IGS Currency Service is invoked with the transformed currency rate record.
- If there are any errors in Currency EJB service, the errors are added to the logs file. The Currency logs can be viewed using the RFI Adapter Manager screens in RFI Administration GUI.

Initial Loading of Currency Exchange Rates

The purpose of this flow is to load the existing currency exchange rates from Oracle Financials (EBS or PeopleSoft) into Retail.

How to Start or Run Initial Load of Exchange Rates

Before executing the following steps from Oracle Financials application (EBS or PeopleSoft), VDATE in RMS should be made to point to a date in past (for example, 01-JAN-2008). This is required, because any exchange rate older than VDATE will be filtered out by RIB and will not be interfaced to RMS. Therefore, to load the complete history of exchange rate information in RMS, it is imperative that VDATE is set to past, depending on retailer's cutover choice of effective date.

Use the following steps to load the currency exchange rates initially from Oracle Financials (EBS or PeopleSoft) to Retail. Use the configured database link to load the currency data from the Oracle Financials (EBS or PeopleSoft) to the RFI database.

1. A wrapper script `currency_initial_load.sh` is provided to load the existing currency rates from E-Business Suite to the RFI Staging table. This file is available in the RFI pack, folder - `$INSTALL_DIR/retail-financial-integration-solution/<$FINANCIAL>-integration/install/set-up-data/dml`. Here `$ FINANCIAL` should be replaced with value `ebs-financial` or `psft-financial` based on the Oracle financials application that is being integrated with RFI
2. Use the database link to load the currency data from Oracle Financials (EBS or PeopleSoft) to the RFI database. A database link either `EBS_RFI_DBLINK` or `PSFT_RFI_DBLINK` should be created between Financials Schema (E-Business Suite APPS schema or PeopleSoft SYSADM schema) and RFI staging schema in RFI Database (created as part of RFI installation step).
3. Skip this step if the database link is created with default (`EBS_RFI_DBLINK` or `PSFT_RFI_DBLINK`) name. If not, Open the sql script `currency_initial_load.sql` in a text editor and change the database link values created in the above step.
4. Run the `currency_initial_load.sh` (available `$INSTALL_DIR/retail-financial-integration-solution/<$FINANCIAL>-integration/install/set-up-data/dml`) script to load data from Oracle Financials (EBS or PeopleSoft) to RFI staging area. This script considers the required environment variables (`ORACLE_HOME`, `INSTALL_DIR`) are present.

Note: `$FINANCIAL` should be replaced with `ebs-financial` or `psft-financial` based on your integration financial applications.

The script takes two arguments on the command line: Financials system schema database login credentials and `conversion_date` (from when the currency rates have to be pushed to Retail system).

For example:

```
sh currency_initial_load.sh <username>/<password>@<sid> 02-AUG-2013
```

5. Once the initial currency rate data is moved to the RFI Staging table, `RFI_CURR_RATE_STAGE`, the records are sent to Retail similar to the Currency Incremental Loading process.

Data Requirements

No data requirements exist for this process integration.

Currency Exchange Rate Integration Extension

The RFI Application supports passing custom payload data to the Currency Integration Service.

- In case of EBS Financials , the additional information that has to be passed should be captured in Attribute Columns (Attribute1 to Attribute15) in GL_DAILY_RATES table in case of EBS.
- In case of PeopleSoft Financials, the additional information has to be passed along with existing payload mapping it to (Attribute 1 to Attribute 15) in RFI_CURR_RATE_STAGE
- The Attribute columns are pushed to the RFI Currency staging table RFI_CURR_RATE_STAGE by the Business Event Subscriber Java class CurrencyRateBES or Business Service that is configured in PeopleSoft
- A Java interface RfiCurRateCustomPayload is provided in the RFI Application.
- A Java class needs to be written by implementing the above interface RfiCurRateCustomPayload and the additional custom payload attributes (Attribute1 to Attribute15) can be added to CurrRateDesc object. A sample implementation class RfiCurRateCustomPayloadImpl is provided in the RFI application.
- In RfiSpringBeans.xml, an entry for the implementation class has to be provided.

```
<bean id="rfiCurRateCustomPayloadBean" class="<Implementation Class Name>">
</bean>
```

Suppliers Information Integration

This section provides an overview of the process integration for initial loading and incremental synchronization of suppliers' information between Oracle Payables and Oracle Retail Merchandising System (RMS) and discusses:

- Supplier integration details
- Data requirements
- Extensions

Supplier Integration Overview

In the integrated environment, Oracle Payables acts as a payable, and RMS handles supplier payments, merchandise write-offs, and prepaid adjustments.

Merchandise suppliers are suppliers of goods and services that the retailer sells to customers. Oracle Payables and RMS require sharing of suppliers' information between them. RMS requires the supplier information for several key functions including creation and management of items and purchase orders. Oracle Payables requires suppliers' information for supplier payment. For end-to-end business integration, same supplier instance and related information must be shared between these two systems.

Between the two systems, Oracle Payables is the source of valid suppliers (vendors in Oracle Payables) and their Remit to Location and Order from addresses

The supplier integration synchronizes supplier's information from Oracle Payables to RMS through these integration flows:

- Load initial suppliers from Oracle Payables to RMS: Enables the loading of all active merchandise suppliers, the current effective supplier locations and their current effective remit and order to addresses.
- Incremental creation and updates of suppliers from Oracle Payables to RMS: Enables the synchronization of incremental creation and updates of the active suppliers from Oracle Payables to RMS.

Note: For incremental loads, Oracle Payables doesn't propagate deleted suppliers information to Retail.

This integration is not a point-to-point integration between Oracle Payables and RMS. A RFI layer serves as an intermediate thin layer of application between Oracle Payables and RMS. As a part of the supplier integration, Oracle Payables sends the suppliers' information to the RFI layer and the RFI layer delivers the information to RMS. The RFI layer performs message filtering, message transformation, and message routing. Because this integration is not a point-to-point integration, the vendor number (ID) in Oracle Payables is not similar to the supplier number (ID) in Oracle Retail.

Prerequisites

These are the prerequisites for this integration:

Note: For more information about initial load of the Org Id and Payment term cross reference table, see 'section Setting up Cross-References for Oracle Retail IDs and Oracle Entities.

The following DVM's/XREFs are available in RFI_XREF_DVM table:

- ADDRESS_COUNTRY_DVM
- CURR_CODE_DVM
- LANGUAGE_CODE_DVM
- STATE_DVM
- SUPPLIER_ADDRESS_TYPE_DVM
- SUPPLIER_PRIMARY_SITE_FLAG_DVM
- SUPPLIER_STATUS_CODE_DVM
- FREIGHT_TERMS_XREF
- PAYMENT_TERMS_XREF
- ORG_ID_XREF
- SUPPLIER_XREF
- SUPPLIER_SITE_XREF

Freight terms synchronization between both the systems is a manual process. The Supplier and Supplier XREF data are populated by a Supplier Integration Adapter; the values are required during the Supplier Update flow.

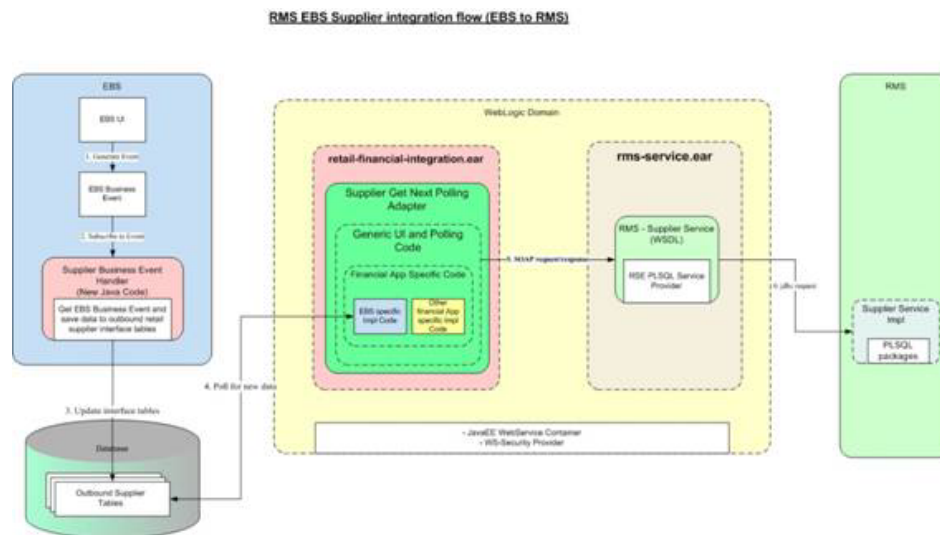
Solution Assumptions and Constraints

The integration design assumes that:

1. Oracle Payables is the source system for merchandise suppliers, their contacts, locations, addresses and other attributes.
2. You can create suppliers and suppliers' locations in Oracle Payables.
3. You can maintain the relationship between suppliers, suppliers' locations in Oracle Payables. This integration is a one-way synchronization. Any update to supplier information in RMS is not synchronized with Oracle Payables. The volume of data that is handled by the process depends on the server configuration.
4. Oracle sends the suppliers in batches based on different criteria.
5. RFI subscribes to oracle.apps.ap.supplier.event raised by Oracle E-Business Suite. The Oracle E-Business Suite system sends all the information, related to this event, to RFI.

This diagram illustrates the supplier integration flow with EBS:

Figure 2-3 Supplier Integration Flow



EBS:-Supplier Integration Details

These services are specific to sync supplier integration flows:

- SupplierBES - Business Event Subscriber
- Supplier EJB Service
- RMS Supplier Service
- RIBforRMS Vendor Subscriber

Supplier Sequence Incremental Load

When you initiate the process:

- Oracle Payables invokes the SupplierBES Business Event Subscriber whenever a supplier is created or updated.
- The Business Event Subscriber Java class SupplierBES extracts all the supplier, supplier sites and supplier contacts from the Oracle E-Business Suite Business

tables and moves the supplier, supplier sites and supplier contacts into RFI Database Staging tables RFI_SUPP_STAGE, RFI_SUPP_SITES_STAGE, RFI_SUPP_CONTACTS_STAGE respectively.

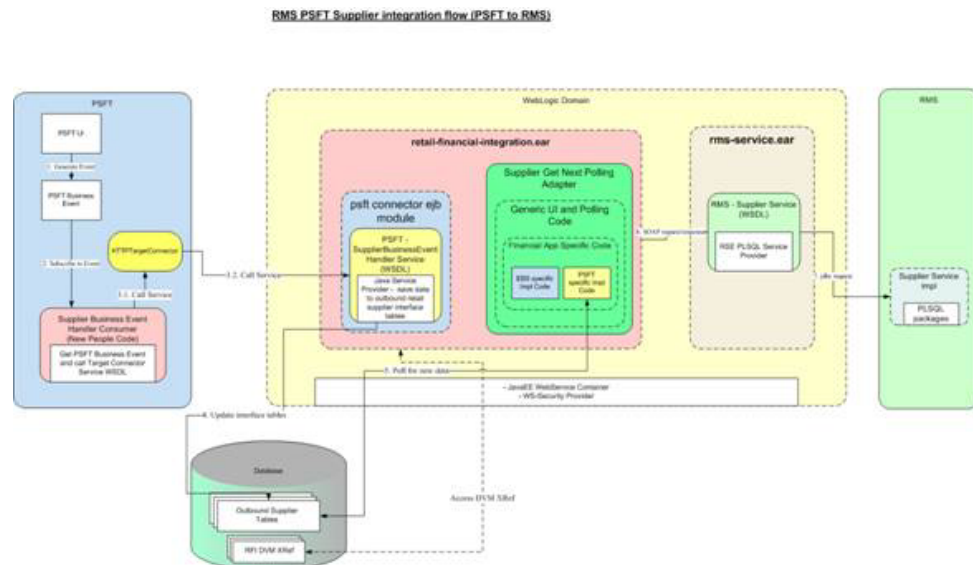
- A Configured Timer for RFI Supplier service invokes the Supplier EJB service.
- The Supplier EJB service picks up the records from the RFI Database Staging tables RFI_SUPP_STAGE, RFI_SUPP_SITES_STAGE, RFI_SUPP_CONTACTS_STAGE and transforms the Organization id using ORG_ID_XREF, Currency Code using CURR_CODE_DVM, Language using LANGUAGE_DVM, Payment terms and Freight terms using PAYMENT_TERMS_XREF and FREIGHT_TERMS_XREF respectively.
- Then RMS Supplier Service is invoked with the transformed supplier records. If there are any errors in Supplier EJB service, the errors are added to the logs file. The Supplier logs can be viewed using the RFI Adapter Manager screens in RFI Administration GUI.
- If the transaction is successful, Retail Id cross references for supplier, supplier site are stored in the cross reference table RFI_XREF_DVM. The cross references updated is SUPPLIER_XREF, SUPPLIER_SITE_XREF respectively.

Note: Transformation applies the DVM and invokes create or update web service from RMS. It also updates the cross-reference table after the Retail web service call.

PeopleSoft:-Supplier Integration Details

This diagram illustrates the supplier integration flow with PeopleSoft:

Figure 2-4 RMS PSFT Supplier Integration Flow



These services are specific to sync supplier integration flows:

- SUPPLIERBUSINESSEVENTHANDLERSE - Business Event Handler
- Supplier EJB Service
- RMS Supplier Service

- RIBforRMS Vendor Subscriber

Supplier Sequence Incremental Load

When you initiate the process:

1. Oracle Payables invokes the "SUPPLIERBUSINESSEVENTHANDLERSE" Business Event service whenever a supplier is created or updated.
2. The Business Event service extracts all the supplier, supplier sites and supplier contacts from the PeopleSoft Business tables and moves the supplier, supplier sites and supplier contacts into RFI Database Staging tables RFI_SUPP_STAGE, RFI_SUPP_SITES_STAGE, RFI_SUPP_CONTACTS_STAGE respectively.
3. A Configured Timer for RFI Supplier service invokes the Supplier EJB service.
4. The Supplier EJB service picks up the records from the RFI Database Staging tables RFI_SUPP_STAGE, RFI_SUPP_SITES_STAGE, RFI_SUPP_CONTACTS_STAGE and transforms the Organization id using ORG_ID_XREF, Currency Code using CURR_CODE_DVM, Language using LANGUAGE_DVM, Payment terms and Freight terms using PAYMENT_TERMS_XREF and FREIGHT_TERMS_XREF respectively.

Then RMS Supplier Service is invoked with the transformed supplier records. If there are any errors in Supplier EJB service, the errors are added to the logs file. The Supplier logs can be viewed using the RFI Adapter Manager screens in RFI Administration GUI.

5. If the transaction is successful, Retail Id cross references for supplier, supplier site are stored in the cross reference table RFI_XREF_DVM. The cross references updated is SUPPLIER_XREF, SUPPLIER_SITE_XREF respectively.

Note: Transformation applies the DVM and invokes create or update web service from RMS. It also updates the cross-reference table after the Retail web service call.

Data Requirements

The process integration for supplier information requires the following data:

- Suppliers must be assigned to at least one GL business unit (set of books)
- For this integration, Oracle suppliers must be created with these status attributes:
 - Classification of supplier. Other type of vendors such as attorneys, employees, and HCM are not synchronized with Oracle Retail. All suppliers except employee are synced.
 - The Open for ordering option is selected. If the supplier is approved but is not open for ordering, the RFI layer on the RMS side changes its status to inactive. EBS doesn't have an approval status.

Note: Only contacts associated with supplier sites or addresses will be synchronized from Oracle Payables to RMS.

For Retail to Oracle Financials integration, only certain suppliers with specific criteria are sent to Retail:

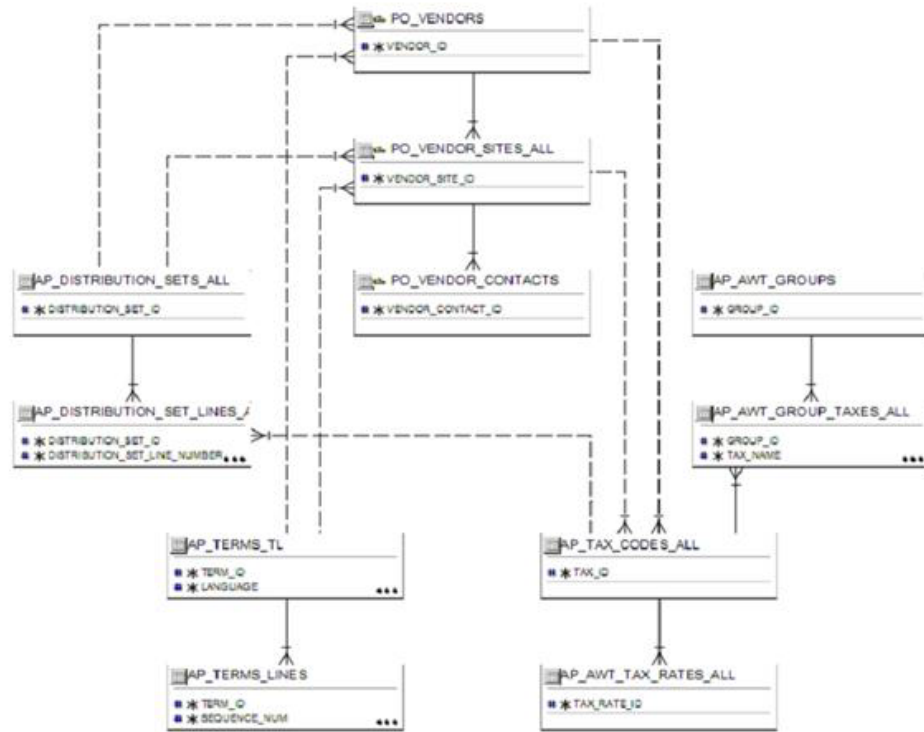
- Supplier must have at least one or more address or site

- Supplier address or site must be a purchasing and/or a payment purpose.
- If a supplier has one address or site, it must be both a purchasing and payment purpose.
- If a supplier has two or more addresses, one address may be a purchasing site and other address a payment site.
- Supplier address or site without a purchasing or payment purpose will not be sent to Retail.
- Only Supplier address or site(s) which are active, are interfaced to Retail. Deactivate date for the site should either be NULL or a future-date in Oracle Financials (EBS or PeopleSoft).
- In the contact details and purpose, the phone area code, fax number and email address are meant for general contact information such as a main operator number or a general company inquiry email address. This information should not be passed to Retail.
- In EBS, Under Company Profile --> Contact directory, there is contact information for specific people and their specific contact information. For example, the Account Receivable person's phone #, name, and email address is listed here. This information is passed to Retail.
- Supplier Recommendation
 - Data cleansing prior to Supplier Initial Load: It is recommended that for each supplier, you must select a supplier site as a primary pay site. The values on the primary pay site are used as the default values for any supplier attributes such as payment terms and freight terms that are missing during the integration.
 - Integration Supplier Logic: Payment/Freight terms and other attributes of parent supplier are defaulted from the primary Pay site. If the supplier does not have a primary pay site, then the first purchasing site is used. If no payment or freight terms are defined at supplier or any supplier purchasing site, and there is no primary pay site, then the supplier transfer fails or errors.

EBS: - Class Diagram

The following diagrams show supplier relation in E-Business Suite and Retail:

Figure 2-5 Supplier Relations in E-Business Suite



PeopleSoft: - Class Diagram

The following diagrams show supplier relation in PeopleSoft and Retail:

Figure 2-6 Supplier Relation in PeopleSoft and Retail (1 of 3)

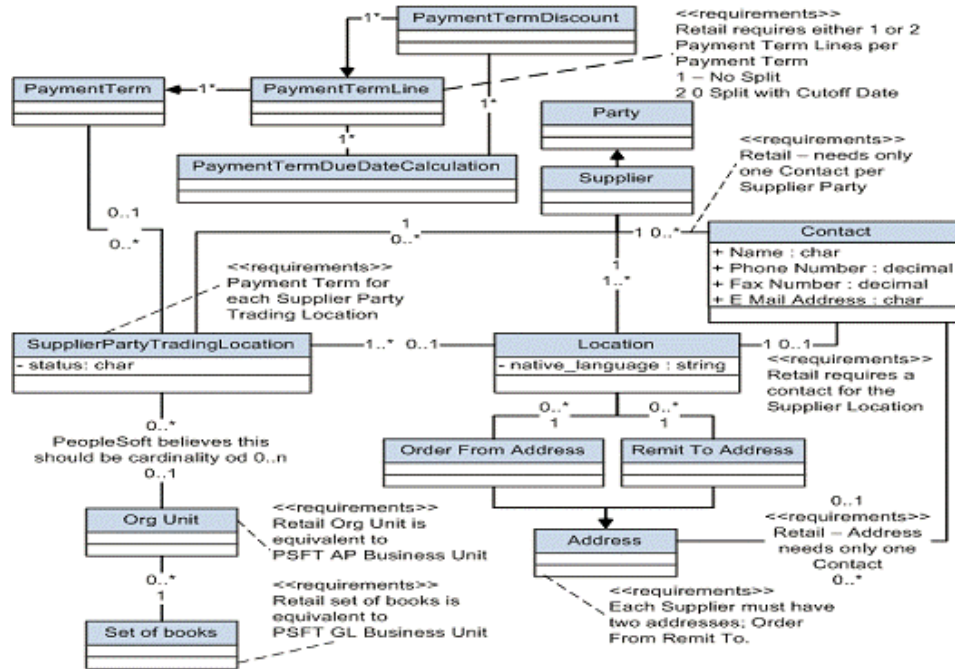


Figure 2-7 Supplier Relation in PeopleSoft and Retail (2 of 3)

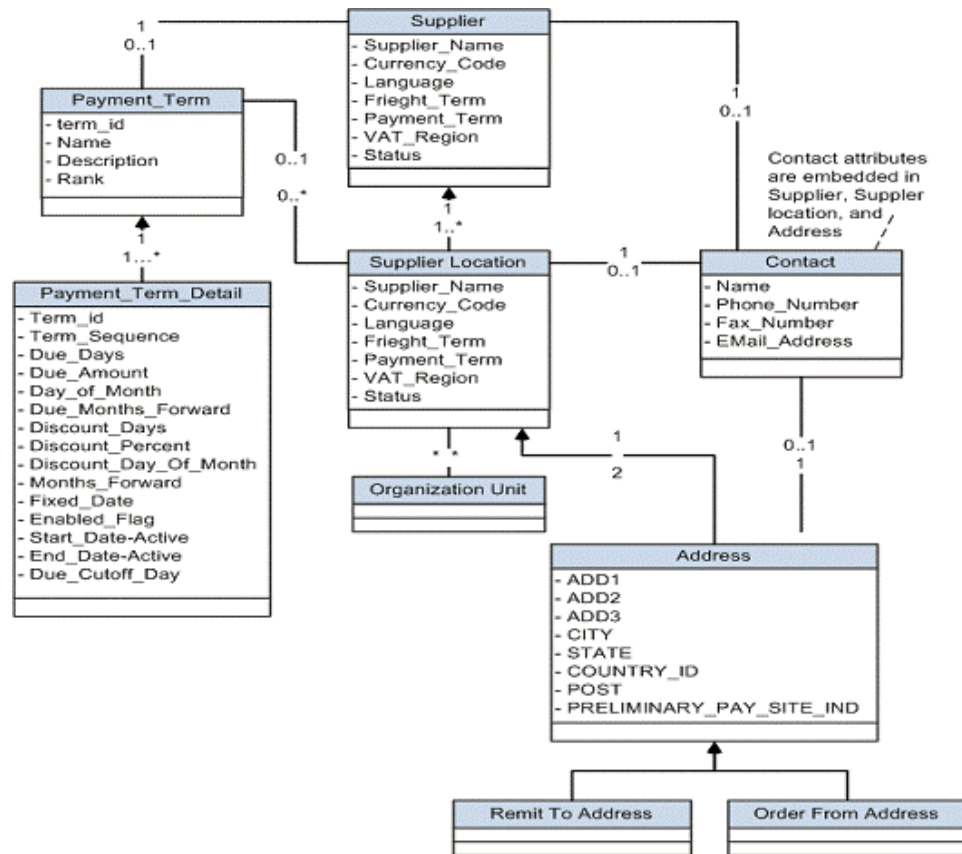
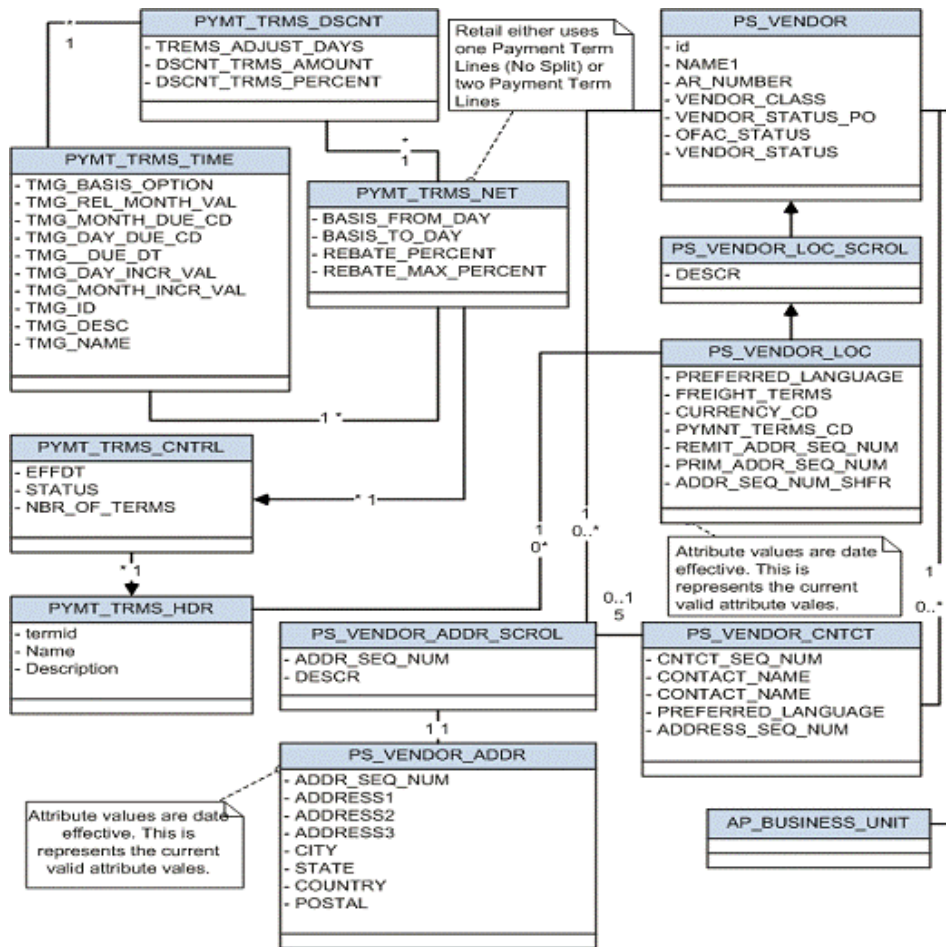
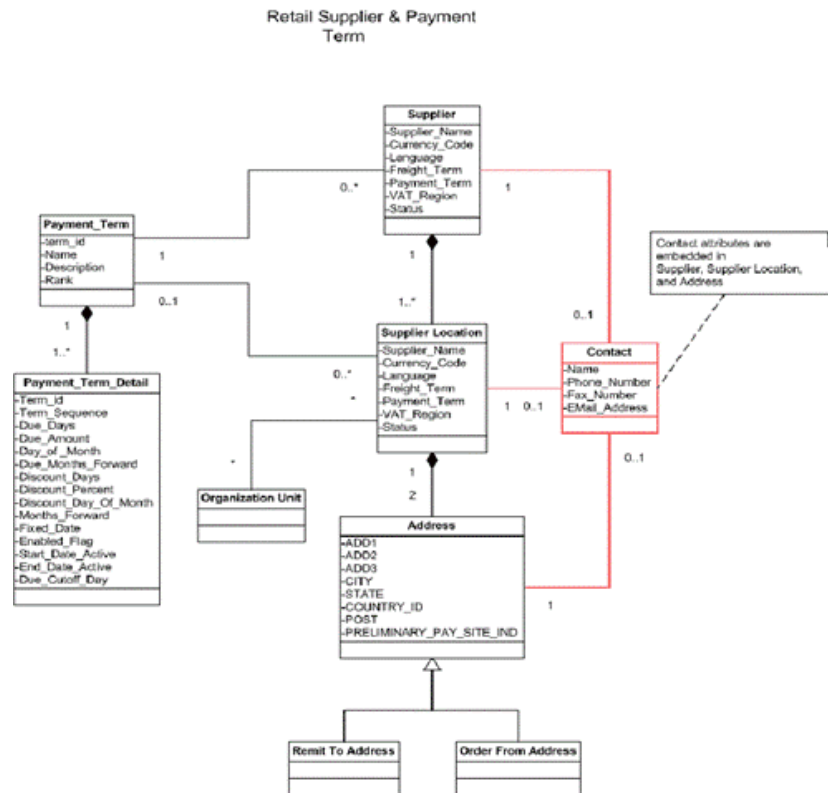


Figure 2-8 Supplier Relation in PeopleSoft and Retail (3 of 3)



Retail: - Class Diagram

Figure 2–9 Supplier Relation in Retail



How to Start or Run Initial Load of Supplier Parties

The purpose of this flow is to load the existing active Suppliers, Supplier Sites, and Supplier Contacts from Oracle Financials (EBS or PeopleSoft) into Retail. Database link is used to load the supplier data from Oracle Financials (EBS or PeopleSoft) Suite to RFI database.

These are the steps to load the Supplier details initially from Oracle E-Business Suite to Retail.

1. A wrapper script `supplier_initial_load.sh` is provided to load the existing Suppliers, Supplier Sites, and Supplier Contacts from Oracle Financials (EBS or PeopleSoft) Suite to RFI Staging table. These files are available in the RFI pack, folder -- `$INSTALL_DIR/retail-financial-integration-solution/<FINANCIAL>-integration/install/set-up-data/dml`. Here `$FINANCIAL` should be replaced with value `ebc-financial` or `psft-financial` based on the Oracle financials application that is being integrated with RFI.
2. Oracle Financials (EBS or PeopleSoft) to the RFI database. A database link either `EBS_RFI_DBLINK` or `PSFT_RFI_DBLINK` should be created between Financials Schema (E-Business Suite APPS schema or PeopleSoft SYSADM schema) and RFI staging schema in RFI Database (created as part of RFI installation step).
3. Skip this step if the database link is created with default (`EBS_RFI_DBLINK` or `PSFT_RFI_DBLINK`) name. If not, Open the sql script `supplier_initial_load.sql` in a text editor and change the database link values created in the above step.

4. Skip this step if the database link is created with default (EBS_RFI_DBLINK or PSFT_RFI_DBLINK) name. Open below list of SQL scripts in a text editor and change the database link values.
 - `supplier_initial_load.sql`
 - `supplier_sites_initial_load.sql`
 - `supplier_contacts_initial_load.sql`
5. Run the `supplier_initial_load.sh` (available in `INSTALL_DIR/retail-financial-integration-solution/<$FINANCIAL>-integration/install/set-up-data/dml`). Here `$ FINANCIAL` should be replaced with value `ebs-financial` or `psft-financial` based on the Oracle financials application that is being integrated with RFI) script to load data from Oracle Financials (EBS or PeopleSoft) to RFI staging area. This script considers the required environment variables (`ORACLE_HOME`, `INSTALL_DIR`) are present.

The script takes two arguments on the command line: APPS schema db login credentials and conversion date. For example:

```
prompt$ sh supplier_initial_load.sh <username>/<password>@<sid> 10-APR-2008
```
6. Suppliers, Supplier Sites, Supplier Contacts records are pushed to RFI Staging tables `RFI_SUPP_STAGE`, `RFI_SUPP_SITES_STAGE`, and `RFI_SUPP_CONTACTS_STAGE` respectively.
7. Once the initial supplier details are moved to RFI Staging tables, the records are sent to Retail similar to the Supplier Incremental Loading process.

Supplier Information Integration Extension

The RFI Application supports passing custom payload data to the Supplier Integration Service.

- The additional information that has to be passed from E-Business suite should be captured in Attribute Columns (Attribute1 to Attribute15) in `AP_SUPPLIERS`, `AP_SUPPLIER_SITES_ALL`, `AP_SUPPLIER_CONTACTS` table.
- The Attribute columns are pushed to the RFI Supplier staging tables `RFI_SUPP_STAGE`, `RFI_SUPP_SITES_STAGE`, `RFI_SUPP_CONTACTS_STAGE` by the Business Event Subscriber Java class `SupplierBES`.
- A Java interface `RfiSupplierCustomPayload` is provided in the RFI application.
- A Java class needs to be written by implementing the above interface `RfiSupplierCustomPayload` and the additional custom payload attributes (Attribute1 to Attribute15) can be added to `SupplierDesc` object. A sample implementation class `RfiSupplierCustomPayloadImpl` is provided in the RFI application
- In `RfiSpringBeans.xml`, an entry for the implementation class has to be provided.

```
<bean id="rfiSupplierCustomPayloadBean" class="<Implementation Class Name>">
</bean>
```

Payment Terms Integration

This section provides an overview of the process integration for initial loading and incremental synchronization of payment terms between Oracle General Ledger (GL) and the Oracle Retail Merchandising System (RMS) and discusses:

- Payment Terms integration details
- Data requirements
- Extensions

This section is applicable only if your Oracle GL system is PeopleSoft and not when it is Oracle E-Business Suite.

Overview

In the integrated environment, PeopleSoft Enterprise Financials acts as a payable and accounting engine with RMS for supplier payment, merchandise write-offs, and prepaid adjustments. It eliminates the need for manual reentry of the reference data from PeopleSoft Payables to the RMS. This benefits retailers by reducing the labor cost of double entry and providing more accurate and effective payment of invoices, payment adjustments, and accounting records.

PeopleSoft Payables is the source of valid payment terms. RMS uses payment terms to apply the correct payment terms to a supplier or purchase order and ensures correct timing of payment and application of payment term discounts.

The payment terms integration synchronizes payment terms information from PeopleSoft Payables to RMS through these integration flows:

- Load initial payment term from PeopleSoft Payables to RMS: Enables the loading of all current effective dated payment terms from PeopleSoft Payables to RMS for a new instance (logical or physical) of RMS.
- Incremental creation and updates of current effective dated payment term from PeopleSoft Payables to RMS: Enables the synchronization of incremental creation and updates of the payment terms from PeopleSoft Payables to RMS.

For more information about payment terms, see PeopleSoft Enterprise Source to Settle Common Information 9.2 PeopleBook, "Defining Procurement Options," Defining Payment Terms

This integration is not a point-to-point integration between PeopleSoft Payables and RMS. An RFI layer serves as an intermediate thin layer of application between PeopleSoft Payables and RMS. As a part of the payment term integration, PeopleSoft Payables sends the payment term to the RFI layer and the RFI layer delivers the information to RMS. The RFI layer performs message filtering, message transformation, and message routing.

Pre-requisites

No prerequisites exist for the process integration for payment term.

Solution Assumptions and Constraints

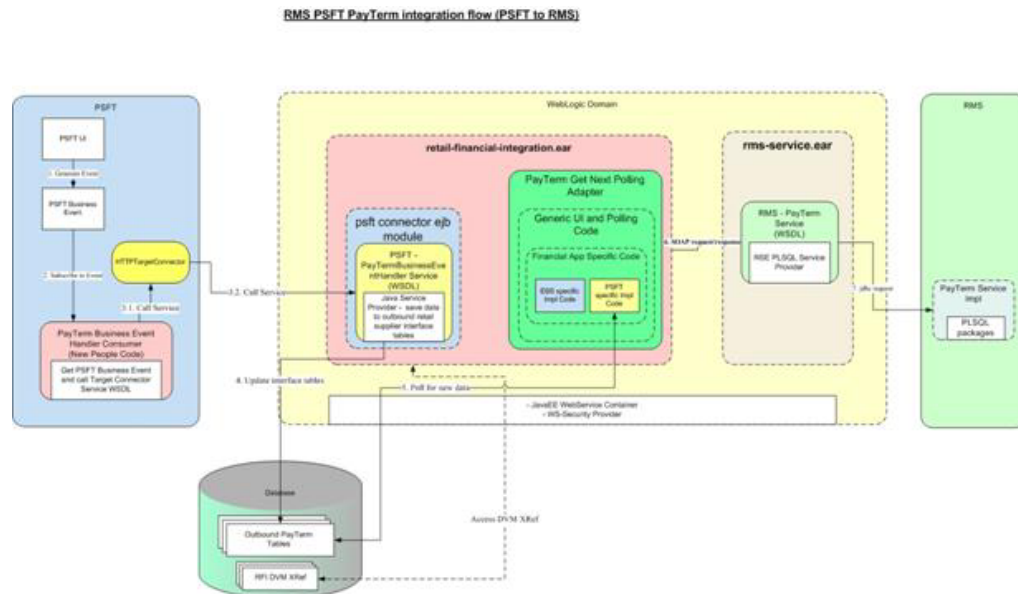
The integration design assumes that:

- Oracle Retail can handle only single tier payment terms.
- PeopleSoft Payables supports multiple tier payment terms for installment payments.
- If the PeopleSoft Payables inactivates a payment term and the end date is not before the current system date or vdate in Oracle Retail, it is rejected by Oracle Retail.
- All Oracle Retail business units have the same set of payment terms.

- Only the Sync operation accepts a list (or collection) message. The Create and Update operations only accept a single message for new rows created or updated in PeopleSoft Payables.
- PeopleSoft Payables can have the same payment terms code in different setIDs. However, Oracle Retail only supports global payment terms. PeopleSoft sends a common value that represents the setID/payment terms code combination. It is recommended that the same payment terms code value not be set up under multiple setID when using this integration
- PeopleSoft payment terms have a record in the Oracle Retail language prior to the Sync operation being performed. The last update to a payment term in PeopleSoft application should be in the Oracle Retail language, so that the translatable fields appear correct in Oracle Retail.
- Oracle Retail does not allow users to create and update payment terms in RMS.
- Payment term integration occurs prior to supplier initial load and manual setup of freight term in RMS.
- Oracle Retail does not support triangulation of currency exchange rates
- Payment Terms changes in Retail are not passed to PeopleSoft and the sync is one-direction only.

The diagram illustrates the Payment terms integration flow:-

Figure 2–10 Payment Terms Integration Flow



Payment Terms Integration Details

The integration flow uses the following services:

- PAYTERMBUSINESSEVENTHANDLERSER- Business Service Handler
- Payment Terms EJB Service
- RMS Payment Terms Service
- RIBforRMS Payterms Subscriber

Incremental Loading of Payment Terms Rates

When the process is initiated, the following steps would occur:

- PeopleSoft invokes the Business Event service "PAYTERMBUSINESSEVENTHANDLER" whenever a payment terms is created or loaded into PeopleSoft which in turn calls the service in RFI.
- The Business Event service extracts all the payment terms details from PeopleSoft tables and moves the details into RFI Database Staging table RFI_TERMS_HEAD and RFI_TERMS_DETAIL.
- A Configured Timer for payment terms service invokes the Payment Terms EJB service.
- The Payment Terms EJB service picks up the records from the RFI Database Staging table RFI_TERMS_HEAD & RFI_TERMS_DETAIL.
- Then RMS Pay terms Service is invoked with the payment terms record.
- If there are any errors in Payment terms EJB service, the errors are added to the logs file. The Payment terms logs can be viewed using the RFI Adapter Manager screens in RFI Administration GUI.

Initial Loading of Payment Terms

The purpose of this flow is to load the existing payment terms from PeopleSoft into Retail.

How to Start or Run Initial Load of Payment Terms

Use the following steps to load the payment terms rates initially from Oracle Financials (only for PeopleSoft integration) to Retail. Use the configured database link to load the payment terms data from the Oracle Financials (Only for PeopleSoft) to the RFI database.

1. A wrapper script `payterms_initial_load.sh` is provided to load the existing payment terms from PeopleSoft to the RFI Staging table. This file is available in the RFI pack, folder - `$INSTALL_DIR/retail-financial-integration-solution/psft-financial /install/setup-data/dml`.
2. Use the database link to load the payment terms data from PeopleSoft to the RFI database. A database link is `PSFT_RFI_DBLINK` should be created between PeopleSoft `SYSADM` schema) and RFI staging schema in RFI Database (created as part of RFI installation step).
3. Skip this step if the database link is created with default `PSFT_RFI_DBLINK` name. If not, Open the sql script `payterms_initial_load.sql` in a text editor and change the database link values created in the above step.

Run the `payterms_initial_load.sh` (available `$INSTALL_DIR/retail-financial-integration-solution/psft-financial /install/setup-data/dml`) script to load data from PeopleSoft)to RFI staging area. This script considers the required environment variables (`ORACLE_HOME`, `INSTALL_DIR`) are present.

The script takes two arguments on the command line: Financials system schema database login credentials and `conversion_date` (from when the payment terms have to be pushed to Retail system). For example:

```
prompt$ sh payterms_initial_load.sh <username>/<password>@<sid> 02-AUG-2013
sh payterms_initial_load.sh <username>/<password>@<sid> 02-AUG-2013
```

4. Once the initial payment terms data is moved to the RFI Staging table, RFI_TERMS_HEAD and RFI_TERMS_DETAIL, the records are sent to Retail similar to the payment terms Incremental Loading process.

Data Requirements

No data requirements exist for this process integration.

Drill Back and Drill Forward Integration

This section provides an overview Drill back and drill forward integration. This integration helps the PeopleSoft and Oracle Retail applications' users to access information about the financial transactions from the integrated systems in a seamless and intuitive manner..

This section is applicable only if your Oracle financials application is PeopleSoft and not when it is Oracle E-Business Suite.

Overview

In the integrated environment, drill forward and drill backward provides the users end-to-end traceability between PeopleSoft Payables and General Ledger back to Oracle Retail merchandising System (RMS), oracle Retail Sales Audit (ReSA), and Oracle Retail Invoice Matching (ReIM). Drill back and drill forward supports navigation at the User Interface level from the PeopleSoft applications to the Oracle Retail applications and vice versa for the transactions that are integrated between the two systems.

The drill back and drill forward feature enables the PeopleSoft and Oracle Retail applications' users to trace and investigate the financial transactions by:

- Drilling back from a journal entry in PeopleSoft General Ledger (GL) to RMS, ReSA, and ReIM to find the source of the journal or from a voucher in PeopleSoft Payables to an invoice in ReIM.
- Drilling forward from RMS, ReSA, or ReIM to PeopleSoft GL and Payables for detailed information about posted transactions for a source transaction.

These Oracle Retail and PeopleSoft applications participate in the integrated environment.

- **RMS Stock Ledger:** This application is the source of transactions for the valuation of sellable inventory located in stores, warehouses, and distribution centers.ReSA: This application is the source of transactions for recognition of revenue and cash posting.
- **ReIM:** This application is the source of invoices to be paid, credit adjustments, debit memos, write-offs, and invoice adjustments.
- **PeopleSoft GL:** This application posts the accounting entries from the Oracle Retail applications (RMS, ReSA, and ReIM) to designated ledgers.
- **PeopleSoft Payables:** This application processes invoices for payment and posts the results in PeopleSoft GL based on the templates and account coding.

The drill back and drill forward actions support these flows:

- **Drill back from ledger entry to revenue recognition transactions** for information about revenue recognition transactions using the ledger entry.

- **Drill back from ledger entry to inventory valuation transactions** for information about inventory valuation transactions using the ledger entry.
- **Drill back from ledger entry to aged open receipt write-of transactions** for information about aged open-receipt write-off transactions using the ledger entry.
- **Drill back from ledger entry to matched prepaid invoice transactions** for information about matched pre-paid invoice transactions using the ledger entry.
- **Drill back from payment voucher to matched invoice, credit notes, debit memos, and rebates** for details of matched invoice, credit notes, debit memos, and rebates from the related payment voucher.
- **Drill forward from sales audit transaction to ledger** for details of a particular ledger entry using the sales audit transaction information.
- **Drill forward from stock ledger transaction to ledger** for details of a particular ledger entry using the stock ledger transaction information.
- **Drill forward from matched invoice to payment voucher** for details of a particular payment voucher from the related matched invoice.
- **Drill forward from credit note, debit memo, or rebate to payment voucher** for details of a particular payment voucher from the related credit note, debit memo, or rebate.
- **Drill forward from aged open receipt write-off transactions** to ledger for details of a particular ledger entry from the aged open receipt write-off transaction information.
- **Drill forward from matched prepaid invoice to ledger** for details of a particular ledger entry from the matched prepaid invoice information.

Pre-requisites

Before performing this integration, ensure that:

- PeopleSoft GL and Payables and Oracle Retail implementations are live with all setup and configurations.
- Accounting entries and invoice data have been integrated from Oracle Retail to the PeopleSoft applications.
- BI Publisher has been installed and configured for Oracle Retail.
- Invoice Oracle Data Integrator (ODI) flow is run.

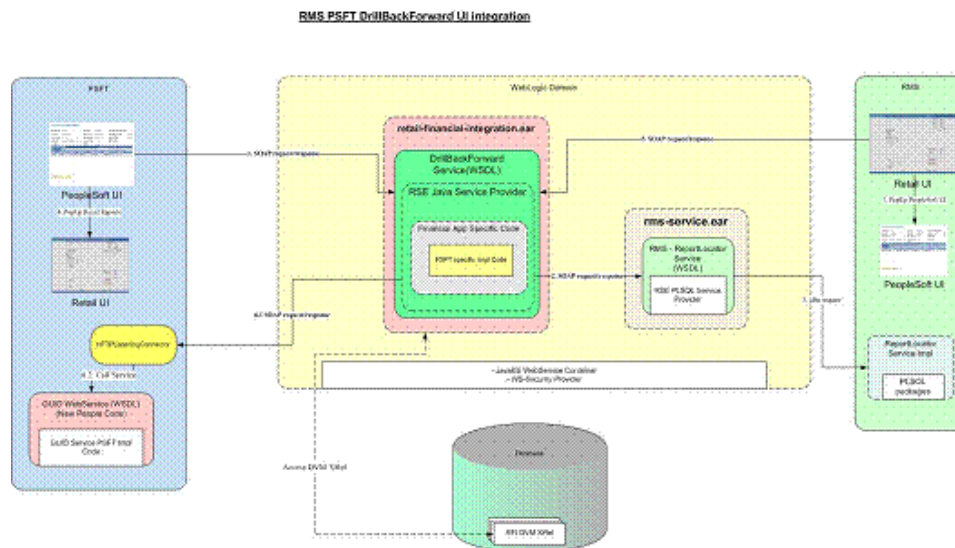
Solution Assumptions and Constraints

The integration design assumes that:

- The services are properly configured during RFI installation
- Two systems are supported as target systems for forming the URL: Oracle Retail and PeopleSoft. PeopleSoft configuration is done in the RFI configuration file.

The diagram illustrates the drill forward and drill backward flow:-

Figure 2–11 Drill Forward and Drill Backward Integration Flow



Drill Back and Drill Forward Integration Details

The integration discusses uses the following services:

- Drill Back Service
- Drill Forward Service
- Overall Flow

Drill Back Details

The drill back enables the user to:

- Query ReIM using the payment voucher ID from the PeopleSoft Payables user interface (UI) to find invoices, credit notes, and debit memos that are used to generate the payment voucher.
- Query RMS and ReSA from the PeopleSoft GL UI to find the source transactions that generated the journal entry in the ledger for revenue recognition and cash deposit postings.
- Query RMS stock ledger from the PeopleSoft GL UI to find the source transactions for inventory valuation postings.
- Query ReIM from the PeopleSoft GL UI to find the source transactions for aged receipt write-offs, manually paid invoices, and matched pre-paid invoices.

This integration uses the DrillBackForwardURLService.

Drill Forward Details

The drill forward enables the user to:

- Query PeopleSoft Payables from the ReIM UI using the invoice, credit note, debit memo, or document ID to query the resulting payment voucher.
- Query the PeopleSoft GL from ReIM UI for aged receipt write-offs and prepaid invoices to audit the impact on the ledgers. For aged receipt write-offs, the receipt ID is used to access the PeopleSoft GL transaction. For prepaid invoices, the document ID is used.

- Query PeopleSoft GL from the ReSA UI using the sales transaction document ID to audit the journal entry impact of the financials.
- Query PeopleSoft GL from RMS UI using the stock ledger document ID or fixed deal reference ID to audit the journal entry impact of the financials.

This integration uses the DrillBackForwardURLService.

When the drill back or drill forward process is initiated:

- The source application calls the DrillBackForwardURLService web service to create a URL for the target system.
- The source application passes an array of parameter name and value pairs and the name of the web service requestor (RETAIL or PSFT).
- The web service invokes the DrillBackForwardURL Service hosted in RFI
- The RFI Service based on the input parameter name and the web service requestor name looks up the RFI configuration properties file to construct the URL
- If the target system is PSFT, the client implementation-specific information (host, port) file is fetched. A URL with retrieved information is constructed.
- If the target system is RETAIL, then Oracle Retail web service is called to obtain the URL. The URL is returned to the caller of the service.
- If an error occurs, a fault message is generated.

Service Solution Components

This table contains the service solution components that are used in the process integration:

Table 2–1 Service Solution Components

DrillBackForwardURLService	RFI	Oracle Retail or PeopleSoft	INVOICE_ID OR ACCOUNTING ENTRY
Invoice Document Report	Retail BI Publisher	PeopleSoft Payables UI	BI Publisher URL
Aged Receipts Transaction Report	Retail BI Publisher	PeopleSoft GL UI	BI Publisher URL
Matched Pre Paid Transaction Report	Retail BI Publisher	PeopleSoft GL UI	BI Publisher URL
Sales Audit Transaction Report	Retail BI Publisher	PeopleSoft GL UI	BI Publisher URL
Stock Ledger Transaction Report	Retail BI Publisher	PeopleSoft GL UI	BI Publisher URL
Stock Ledger Line	Retail BI Publisher	PeopleSoft GL UI	BI Publisher URL

Service Solution Component Details

- **DrillBackForwardURLService:** This web service enables users to navigate from the PeopleSoft applications to Oracle Retail (drill back) and Oracle Retail to PeopleSoft applications (drill forward). The source application (Oracle Retail or PeopleSoft application) sends a synchronous request with source system name and an array of parameter name value pairs to this service. This service returns a URL based on the given scenario (drill back or drill forward). The source application

launches the returned URL to open the target application in a web browser. If an error occurs, a fault message is generated.

- **Invoice Document Report:** PeopleSoft Payables invokes the DrillBackForwardURLService in RFI for requesting a report on the invoices, credit notes, debit memos, and rebates from ReIM that made up the payment voucher. The RFI layer passes the URL to PeopleSoft Payables UI. PeopleSoft Payables UI initiates a report on the BIP server using the URL created by RFI. BIP generates a report for the requesting user.
- **Invoice Document Report:** PeopleSoft Payables invokes the DrillBackForwardURLService in RFI for requesting a report on the invoices, credit notes, debit memos, and rebates from ReIM that made up the payment voucher. The RFI layer passes the URL to PeopleSoft Payables UI. PeopleSoft Payables UI initiates a report on the BIP server using the URL created by RFI. BIP generate a report for the requesting user.
- **Aged Receipts Transaction Report:** PeopleSoft GL invokes the DrillBackForwardURLService for requesting a report on the aged receipt write-off transactions generated from ReIM that made up the journal entry. The RFI layer passes the URL to PeopleSoft GL UI. PeopleSoft GL UI initiates a report on the BIP server using the URL created by RFI. BIP generates a report for the requesting user.
- **Matched Pre-Paid Transaction Report:** PeopleSoft GL invokes the DrillBackForwardURLService for requesting a report on the matched pre-paid transactions generated from ReIM that made up the journal entry. The RFI layer passes the URL to PeopleSoft GL UI. PeopleSoft GL UI initiates a report on the BIP server using the URL created by RFI. BIP generates a report for the requesting user.
- **Sales Audit Transaction Report:** PeopleSoft GL invokes the DrillBackForwardURLService for requesting a report on transactions generated from ReSA that made up the journal entry. The RFI layer passes the URL to PeopleSoft GL. PeopleSoft GL UI initiates a report on the BIP server using the URL created by RFI. BIP generates a report for the requesting user.
- **Stock Ledger Transaction Report:** PeopleSoft GL invokes the DrillBackForwardURLService for requesting a report on inventory valuation transaction generated from RMS stock ledger that made up the journal entry. The RFI layer passes the URL to PeopleSoft GL UI. PeopleSoft GL UI initiates a report on the BIP server using the URL created by RFI. BIP generates a report for the requesting user.
- **Fixed Deal Transaction Report:** PeopleSoft GL invokes the DrillBackForwardURLService for requesting a report on fixed deal transaction generated from RMS stock ledger that made up the journal entry. The RFI layer passes the URL to PeopleSoft GL UI. PeopleSoft GL UI initiates a report on the BIP server using the URL created by RFI. BIP generates a report for the requesting user.

Data Requirements

The accounting entry and invoice ODI integration flows are run.

Requesting Chart of Accounts Validation

This chapter describes how to request the chart of accounts combination validation and discusses:

- Oracle Retail interfaces
- Oracle GL interfaces
- Data requirements

Requesting Chart of Accounts Combination Validation

Oracle General Ledger (GL) is the system of record for chart of accounts segment combinations. Chart of accounts (segments) combinations are set up manually in Oracle Retail Merchandising System (RMS), Retail Invoice Matching (ReIM), and Retail Sales Audit (ReSA). This manual setup enables assignment of transaction data in sales audit, stock ledger, and invoice match to specific account codes. ReIM also creates segment combinations dynamically during the invoice match transaction processing.

While creating the valid segment combinations, Oracle Retail validates each created combination individually against Oracle GL. Any valid segment combination in Oracle Retail must exist as a valid combination in Oracle GL. Oracle Retail publishes the segment combination to Oracle GL for validation. Oracle GL verifies the combination and returns the status to Oracle Retail. If the combination is valid, the combination is stored in the Oracle retail database tables for future validation purpose.

Oracle Retail sends these data for validation to Oracle GL:

- Requesting system (RMS, ReIM, or ReSA)
- Set of books (GL business unit)
- Segment or ChartField combination values

Oracle GL sends the validation status whether the combination is valid. The RFI layer copies all the other information from the original request and sends these response data to Oracle Retail:

- Requesting system (RSM, ReIM, or ReSA)
- Set of books (GL business unit)
- Date
- Validation status - valid or invalid

Prerequisites

These are the prerequisites for this integration:

The following DVM's are available in RFI_XREF_DVM table if EBS is the Oracle Financials system:-

- COA_GLELEMENT_REIM_DVM
- COA_GLELEMENT_RESA_DVM
- COA_GLELEMENT_RMS_DVM
- COA_STATUS_DVM

Also, Set of Books should be setup in RMS/ReSA/ReIM similar to EBS GL

The following DVM's are available in RFI_XREF_DVM table if PeopleSoft is Oracle Financials system:-

- COA_GLELEMENT_LEDGER_GROUP_DVM (Set of Books mapped to corresponding Ledger Group for PeopleSoft GL Business Unit)
- COA_STATUS_DVM
- COA_GLELEMENT_DVM

Also, Set of Books should be setup in RMS/ReSA/ReIM similar to PeopleSoft GL Business unit

Solution Assumptions and Constraints

This design assumes that:

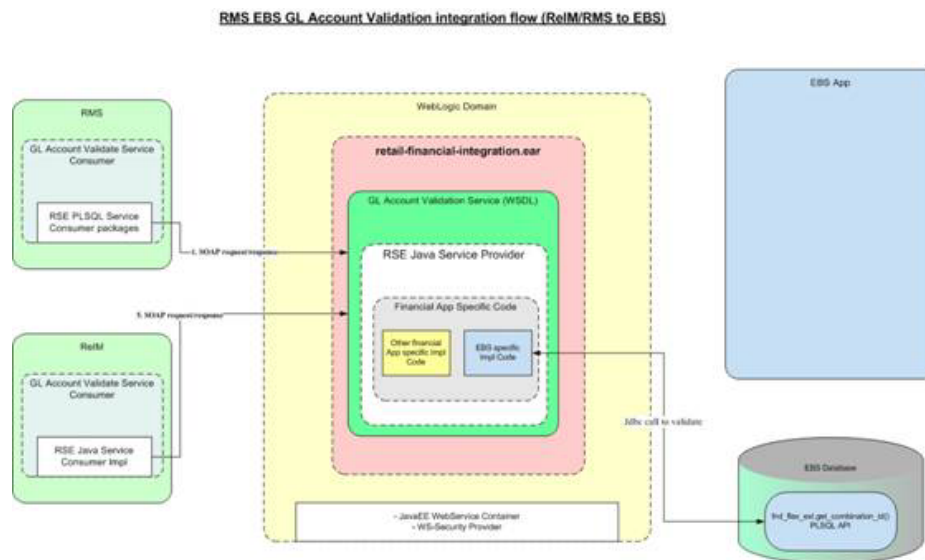
- The Oracle Retail request contains a field called requesting system that identifies the system that is requesting the service so that the correct Retail segment is retrieved from the Domain Value Map (DVM) lookup.
- DVM (Retail segments to Oracle accounts) may be set up differently for each system (RMS, ReSA, or ReIM).
- Oracle GL receives the array of the values for each segment. If the structure is segment1-segment2-segment3-segmentn, then Oracle GL expects that the array size (in this case is n) and the array of value in the order of 1 to n is passed.
- Multiple sets of GL accounts can be sent from Oracle Retail to the Oracle Financials validation web service.
- Once the validated chart of account is stored in Retail, Oracle GL doesn't send any updates if chart of account becomes invalid.
- The Account Segment values in Oracle Financials system (EBS or PeopleSoft) and Retail are same.

EBS:- Chart of Accounts Combination Validation Integration Flow

These services are delivered with the chart of accounts combination validation integration flow:

- GLAccountValidationServiceCons
- GLAccountValidationService
- GLAccountValidationServiceProviderImpl

This diagram illustrates the chart of accounts combination validation integration flow:

Figure 3–1 Chart of accounts combination validation diagram

When the chart of accounts validation process is initiated:

1. Oracle Retail calls the GLAccountValidationServiceCons Consumer service with Requesting System, Set of Books Id, Segment 1..N values whenever a GL account is required to be validated.
 - The GLAccountValidationServiceCons Consumer service calls the GLAccountValidationService service which routes the request to GLAccountValidationServiceProviderImpl Provider service
2. The GLAccountValidationServiceProviderImpl Provider service does the following transformations.

The Set of Books ID from Oracle Retail is transformed to ChartOfAccountIdentification field in E-business suite using Chart of Accounts DVM lookup COA_GLELEMENT_<Requesting System>_DVM (for e.g. if RMS is the requesting system, COA_GLELEMENT_RMS_DVM is used) lookup has the entry like < Set of Books ID >-SEGMENT1 for Retail value and < ChartOfAccountIdentification>-SEGMENT1 for the E-business suite value.

The COA_GLELEMENT_<Requesting System>_DVM lookup is also used to transform the Segment combination in Retail to Segment Combination in E-business suite.
3. GLAccountValidationServiceProviderImpl Provider service invoked the E-Business suite account validation API. E-Business suite account validation API validates the account combination and returns valid/invalid status.
4. Regardless of whether the account is valid or invalid, a transformation occurs in GLAccountValidationServiceProviderImpl Provider service to populate the account_status field. A COA_STATUS_DVM DVM is used to transform the E-Business suite value to the Oracle Retail value.
5. If the account is valid, then sets the valid CCID received from E-Business suite account validation API to the response; otherwise, set the received CCID to the response variable.

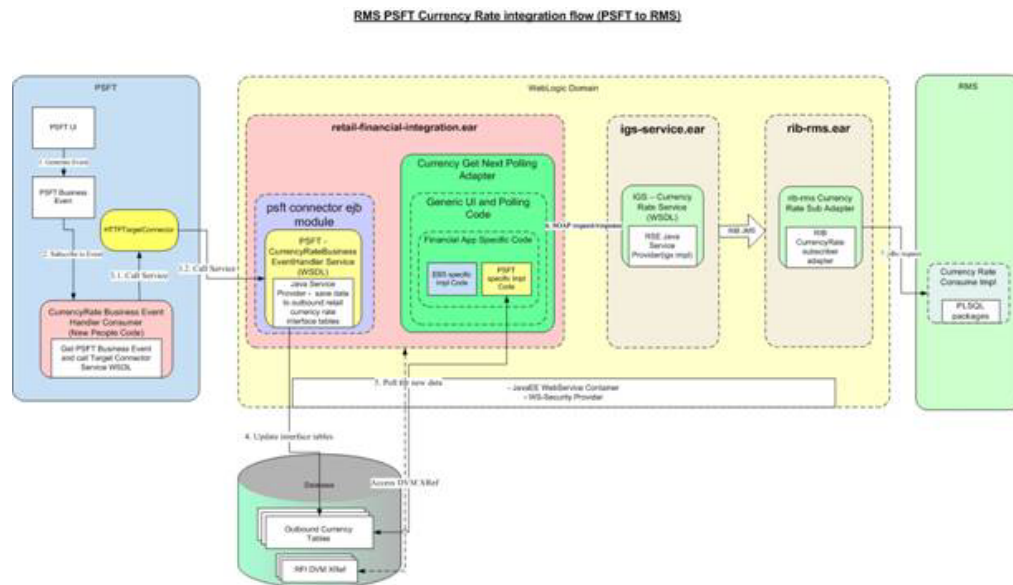
PeopleSoft :- Chart of Accounts Combination Validation Integration Flow

These services are delivered with the chart of accounts combination validation integration flow:

- GLAccountValidationServiceCons
- GLAccountValidationService
- GLAccountValidationServiceProviderImpl
- COMBO_CF_EDIT_REQUEST

This diagram illustrates the chart of accounts combination validation integration flow:

Figure 3–2 Chart of accounts combination validation diagram



When the chart of accounts validation process is initiated:

1. Oracle Retail calls the GLAccountValidationServiceCons Consumer service with Requesting System, Set of Books Id, Segment 1..N values whenever a GL account is required to be validated.
 - The GLAccountValidationServiceCons Consumer service calls the GLAccountValidationService service which routes the request to GLAccountValidationServiceProviderImpl Provider service
2. The GLAccountValidationServiceProviderImpl Provider service does the following transformations.

The Set of Books ID from Oracle Retail is transformed to ChartOfAccountIdentification field in E-business suite using Chart of Accounts DVM lookup COA_GLELEMENT_DVM (for e.g. if RMS is the requesting system, COA_GLELEMENT_RMS_DVM is used) lookup has the entry like < Set of Books ID >-SEGMENT1 for Retail value and < ChartOfAccountIdentification >-SEGMENT1 for the E-business suite value.

The COA_GLELEMENT_DVM lookup is also used to transform the Segment combination in Retail to Segment Combination in E-business suite.

3. `GLAccountValidationServiceProviderImpl` Provider service invoked the PeopleSoft `COMBO_CF_EDIT_REQUEST` service validation API which validates the account combination and returns valid/invalid status.
4. Regardless of whether the account is valid or invalid, a transformation occurs in `GLAccountValidationServiceProviderImpl` Provider service to populate the `account_status` field. A `COA_STATUS_DVM DVM` is used to transform PeopleSoft value to the Oracle Retail value.

If the account is valid, then sets the valid CCID received from PeopleSoft account validation API to the response; otherwise, set the received CCID to the response variable.

Oracle Retail Interfaces

Retail Outbound Interactions:

- Name: `GLAccountValidationServiceCons`: Oracle Retail (RMS, RESA, or REIM) invokes this service to determine whether an account is valid with Oracle GL.

Data Requirements

The segment combinations in the GL ACCOUNT MAINTENANCE (Sales Audit), GL CROSS REFERENCE (RMS), and GL CROSS REFERENCE (ReIM) forms must be entered manually.

Reviewing Process Integration for Inventory Valuation and Revenue Recognition Accounting Entries

This chapter provides an overview of the process integration for accounting entries from Oracle Retail Sales Audit (ReSA), Retail Merchandising System (RMS), and Retail Invoice Matching (ReIM) to Oracle General Ledger (GL) and discusses how to:

- Perform setup tasks
- Configure and generate data in Oracle Retail applications
- Pick up and transform the data
- Configure and run the process integration for accounting entries

Process Integration for Inventory Valuation and Revenue Recognition Accounting Entries Overview

The process integration for accounting entries enables you to record the financial impact of changes to sellable store and warehouse inventory. It also records the financial impact of sales and returns, cash reconciliation, and void transactions from stores.

The system sends sales audit and stock ledger data in Oracle Retail to Oracle GL through accounting entries. Similarly the system sends the prepaid invoice reversals and write-offs of aged receipts Oracle GL(EBS or PeopleSoft GL). RMS, ReIM, and ReSA are the source for accounting entry. After successful completion of data transfer, the system deletes the data from the source interface tables.

This integration uses the Oracle Data Integrator (ODI) application to transfer the data from the Oracle Retail applications to the Oracle GL application (EBS or PeopleSoft).

The process integration between Oracle Retail (RMS, ReSA, and ReIM) and Oracle GL supports the following integration flows:

- Post stock ledger from RMS to Oracle GL
- Post channel sales, cash, and deposits from ReSA to Oracle GL
- Post write-offs (aged receipts, not invoiced to ledger) from RMS to Oracle GL
- Post prepaid invoice reversals after receipt from ReIM to Oracle GL

Business Process Flow for the Integration of Accounting Entries

The overall process includes:

Table 4–1 Business Process Flow for the Integration of Accounting Entries

Oracle Retail	Step1: Prepare the interface data
Integration Process(ODI)	<p>Step2: Integration process will wait for the data to arrive in Retail staging tables.</p> <p>Step3: Load and Transform retail data into E-Business Suite GL interface table.</p> <p>Step4: Delete the data from the source staging tables.</p>
OracleFinancials(EBS or PeopleSoft)	Step5: Launch journal import concurrent program to import data from interface table to journal transaction tables. An event will be raised after the concurrent program is completed. Then manually post to GL.

Pre-requisites

Before performing this process integration, ensure that:

The following Domain Value Maps (DVMs) have been entered on the RFI_XREF_DVM table:

- BUSINESS_UNIT_DVM
- CURR_CODE_DVM
 - The currency exchange rate is synchronized between Oracle Retail and Oracle Financials.
 - The journal category and source are set up if in Oracle Financials is E-Business Suite.

Facts and Constraints

Oracle Retail:

1. RMS, ReSA, and ReIM are the source of the accounting entry flow.
2. Oracle Retail populates one of the staging tables: STG_FIF_GL_DATA or IM_FINANCIALS_STAGE (depending on whether the RMS or ReIM package is running) on a scheduled basis.
3. Data in the Oracle Retail staging tables is deleted after the ODI job completes successfully.

Oracle GL:

- Oracle GL has one interface table to receive data; GL_INTERFACE (EBS) / PS_ORT_ACT_ENTRY (PeopleSoft).

Performing Setup Tasks

This section discusses:

- Setup Tasks Specific to Oracle Financials (General Ledger)

Setup Tasks Specific to Oracle Financials (General Ledger)

- Synchronize currency exchange rate between Oracle Retail and Oracle Financials (EBS or PeopleSoft).
- Set up journal category and source in EBS, if EBS is the financials system. This can be skipped if PeopleSoft is the financials application

- The following DVMs/Xref have been entered on the RFI_XREF_DVM table:
 - BUSINESS_UNIT_DVM
 - CURR_CODE_DVM
 - TAX_DVM
 - SUPPLIER_XREF
- The following email options have been entered in the RFI_XREF_DVM table:
 - RMS_GL_MSG_NOTIFICATION
 - ReIM_GL_MSG_NOTIFICATION

Configuring and Generating Data in Oracle Retail

This section discusses:

- Configuring the data in Oracle Retail
- Generating the data in Oracle Retail

Configuring the Data in Oracle Retail

Before running any accounting data, perform these tasks in RMS and ReIM:

- Set up general ledger (GL) account cross-reference
- Define GL options.

For more information, see the RMS User Guide, version 16.0.0, "Financial Management," "Stock Ledger," "Maintain general ledger cross reference" and the ReIM User Guide, version 1 , "System Administration," "General Ledger Accounts".

Generating the Data in Oracle Retail

RMS stages GL data for subsequent upload into the integrated financial system. A set of batch processes gather and organize the data before using it to populate the related staging table.

These batch designs are included in this functional area

- FIFGLDN1.PC
- FIFGLDN2.PC
- FIFGLDN3.PC

For more information, see the Chapter 13 General Ledger (GL) Batch in RMS Operations Guide, Volume 1, and Release 16.0.0

In ReIM, the batch process engages in these high-level steps:

1. Performs any resolution actions (for example, initiate the creation of payment documents).
2. Calls the posting process to write applicable financial accounting transactions to the financials staging table, IM_FINANCIALS_STAGE.

The processing occurs after discrepancies for documents have been resolved by resolution documents. Once all of the resolution documents for a matched invoice are built, and all of the RCA/RUA external processing has been confirmed, the process inserts financial accounting transactions to the financials staging table, to represent the

resolution and consequent posting of the invoice. The process also inserts financial accounting transactions for the approved documents that are being handled.

Once all of the transactions have been written, the process switches the status of the current invoices or documents to "Posted", and then moves on to the next invoice or document. If a segment look-up fails, the failed record is written to a financials error table.

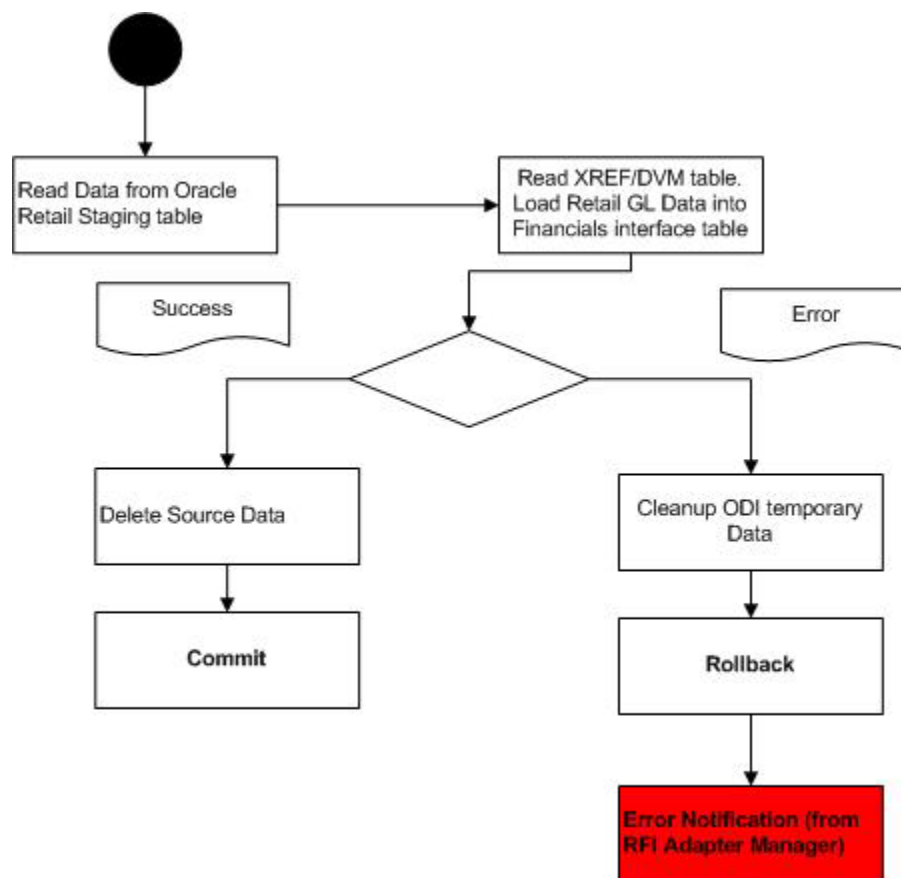
For more information, see the Chapter 9-26 Financial Posting Batch Design of the latest ReIM Operations Guide.

Picking Up and Transforming the Data

The process integration for accounting entries uses ODI to pick up the data from RMS, ReSA, and ReIM, transform it, and load it into the Oracle staging table for the GL Generator.

This flowchart illustrates the process:

Figure 4-1 Accounting entries load process



These tasks are performed as a part of the accounting entries load process:

1. The system polls the STG_FIF_GL_DATA or IM_FINANCIALS_STAGE tables (depending on whether the RMS or ReIM package is running) until the data has been loaded in the tables.
2. An ODI interface object is run to transform and map the data from the Retail table to the Oracle Financials(EBS or PeopleSoft) interface table.

3. If the package has errors, an email is sent to the administrator indicating the error in the interface.

The system deletes the processed data in the STG_FIF_GL_DATA and IM_FINANCIALS_STAGE tables.

Note: If any of these steps fails, an error message is entered in RFI_ODI_LOGS table. The same information can be viewed using the RFI Administration UI screens. Data in Retail table is not deleted; saving it for another run after the error is fixed.

Configuring and Running the Process Integration for Accounting Entries

This section discusses how to:

- Configure the process integration for accounting entries
- Set up a schedule
- Run the process integration for accounting entries

Configuring the Process Integration for Accounting Entries

This section discusses how to set up a schedule.

Setting Up a Schedule

This section covers the following topics:

- Part I: Set Up Master Repository and Work Repository
- Part II: Set up Domain Value
- Part III: Set up EBS source
- Part IV: Scenario test

Part I: Set Up Master Repository and Work Repository

Note: If you haven't had a master and work repository created, you need to create it beforehand according to the sections F.3, F.4, F.5 and F.6 in Oracle Data Integrator Installation guide 12.2.4 or follow the steps given below. It is better to create master and work repository schema in server where ODI is installed.

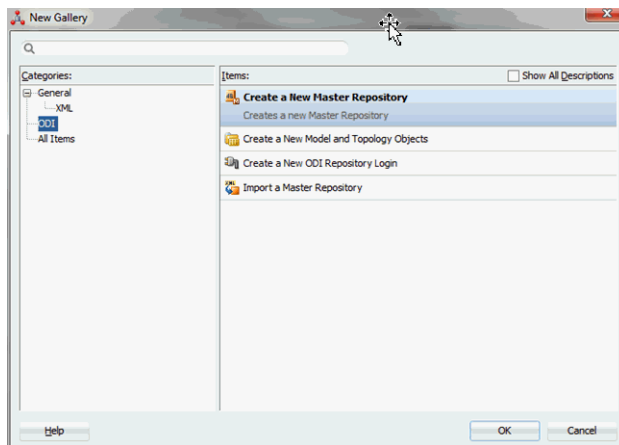
Create master repository

Pre-Requisite:

1. Create Database schemas for Master Repository and Work Repository. It is better to create master and work repository schema in server where ODI is installed.
2. Make sure RFI_ODI_TEMP schema exists in Oracle Financials (EBS or PeopleSoft) suite database.
3. Make sure RFI Infrastructure Database setup is completed.
4. Give DBA privileges to schema "AP" in case of E-Business suite and "SYSADM" in case of PeopleSoft database.

Launch ODI Studio, Click **File > New** and select Master Repository Creation Wizard

Figure 4–2 New Gallery screen



Enter the Master Repository Database connection details and Click **Next**.

a. Database Connection

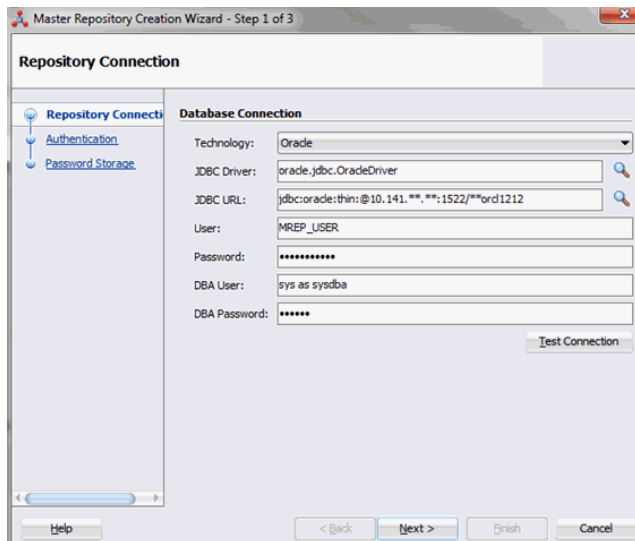
Enter valid Master Repository schema details.

Note: You have to enter sysdba credentials in DBA User and DBA Password fields.

b. Repository Configuration

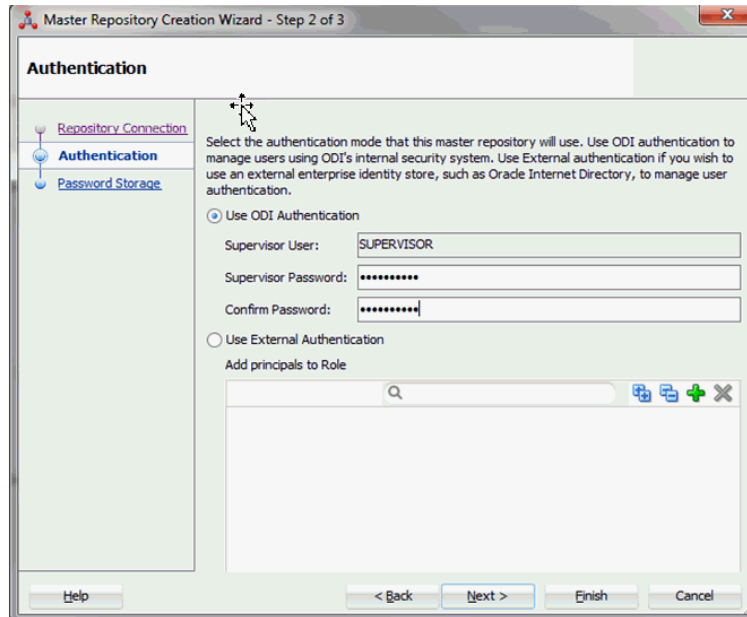
Enter any Id other than 804, 805 in ID field.

Figure 4–3 Master Repository Creation Wizard - Step 1 of 3



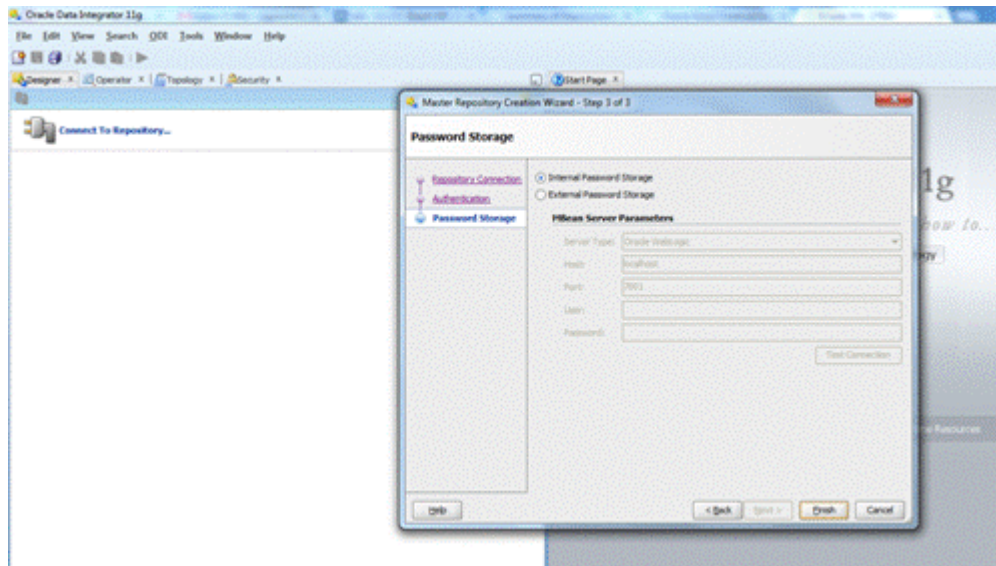
Enter "SUPERVISOR" password and Click **Next** .

Figure 4–4 Master Repository Creation Wizard - Step 2 of 3



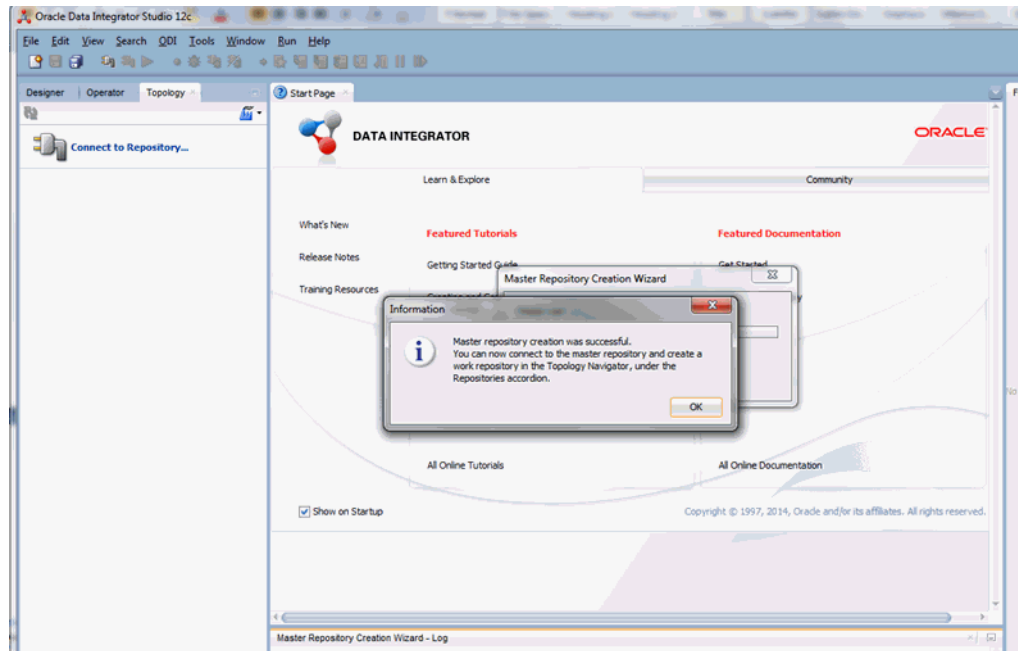
Click Next.

Figure 4–5 Master Repository Creation Wizard - Step 3 of 3



Click Finish.

Figure 4–6 Information screen

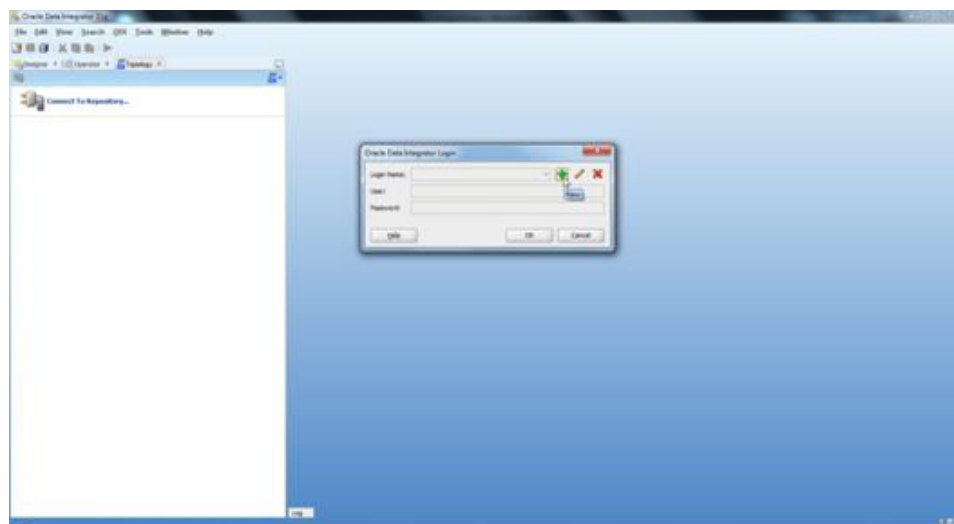


RFI Create work repository

To create a work repository, take the following steps:

1. Login to Master Repository in Oracle Data Integrator (ODI) Studio to create a Work Repository.
2. Select the **ODI Menu**à**Connect** option.
3. Create Master Repository login credentials selecting the + button from a Oracle Data Integrator Login popup.

Figure 4–7 Oracle Data Integrator Login screen



4. Update Repository Connection Information as below:

a. Oracle Data Integrator Connection

Login Name: <Login Name>

User: <Enter "SUPERVISOR" in this field>

Password: <Which you had entered in step 2.4 from Create Master Repository section.>

b. Database Connection (Master Repository)

Enter Master Repository database credentials for User and Password fields.

Select "Oracle JDBC Driver" from dropdown list for Driver List field.

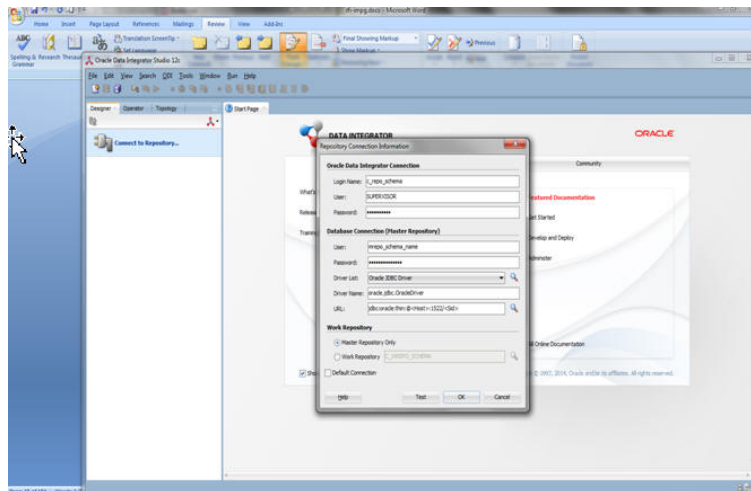
Enter Url field as below:

`jdbc:oracle:thin:@<host>:<port>:<sid>`

c. Work Repository

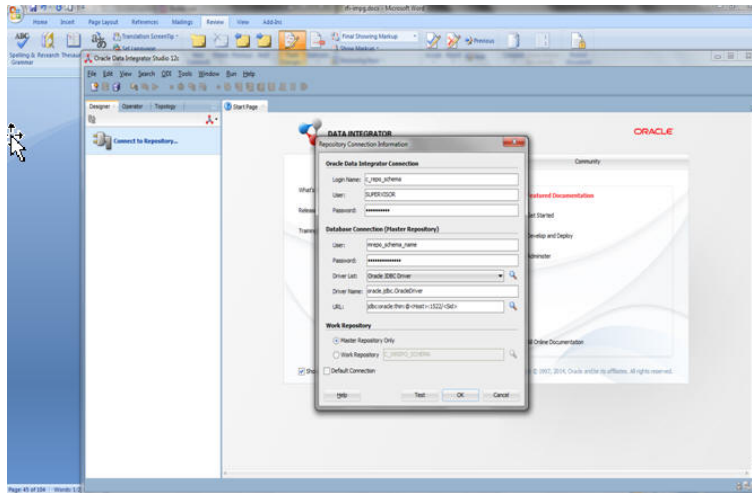
An option should be select as "Master Repository Only".

Figure 4–8 Repository Connection Information screen



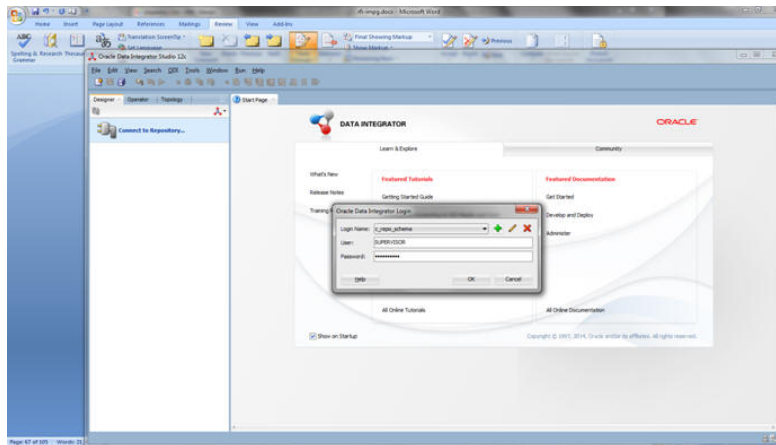
5. Test your credentials information by using "Test" button. If it is successful then click OK.

Figure 4–9 Information screen



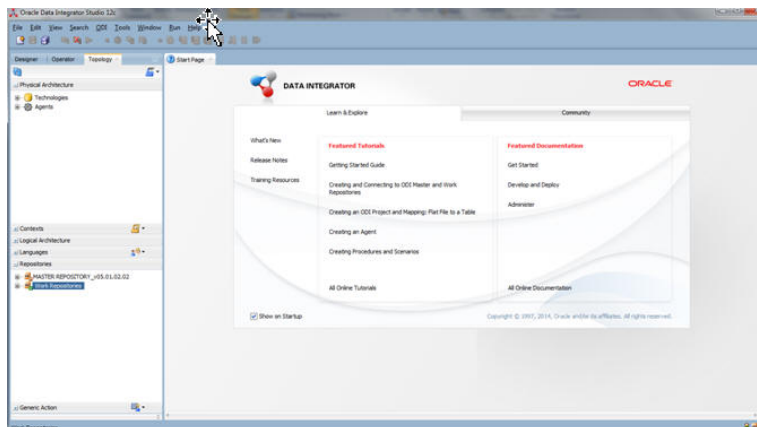
6. Select OK from Oracle Data Integrator Login popup.

Figure 4–10 Oracle Data Integrator Login screen



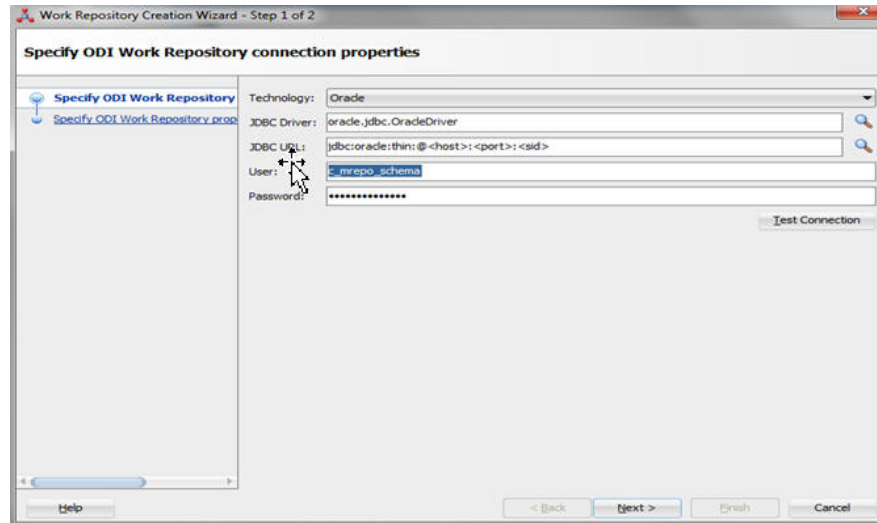
7. From Topology tab select Repositories, right click on the Work Repositories. Select the **New Work Repository** option.

Figure 4–11 New Work Repository option



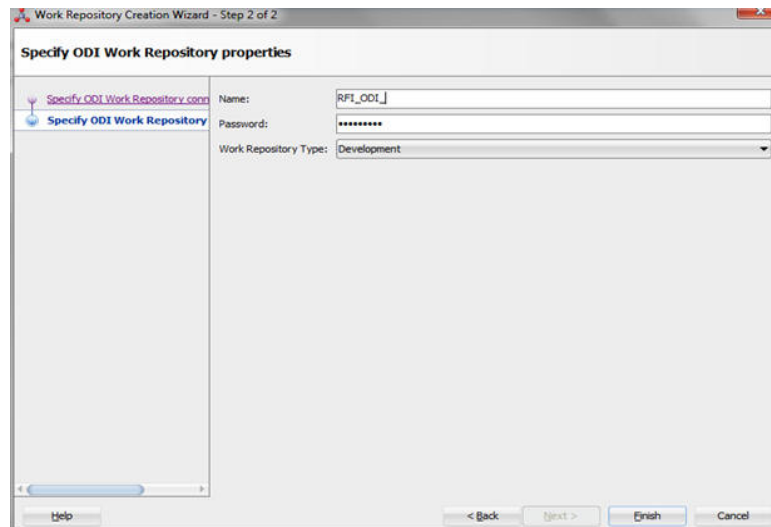
8. Enter the work repository database credentials details.
 - a. Test your credentials information with using "Test" button. If it is successful then click Next.

Figure 4–12 Create Work Repository - Step 1 of 2



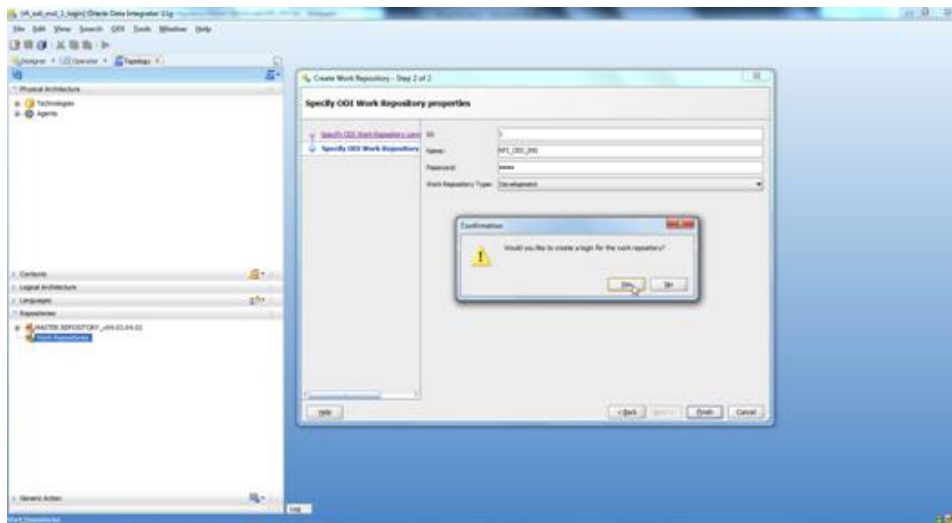
9. Update ODI Work Repository properties. Enter Name and Password (should be "SUPERVISOR" password) for work repository and click **Finish**.

Figure 4–13 Create Work Repository - Step 2 of 2



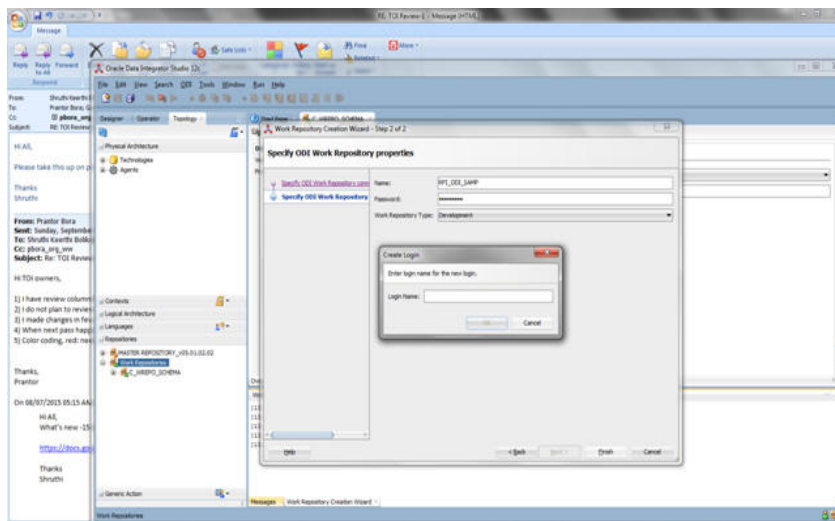
10. Select **Yes** to create an ODI login for work repository.

Figure 4–14 Confirmation screen



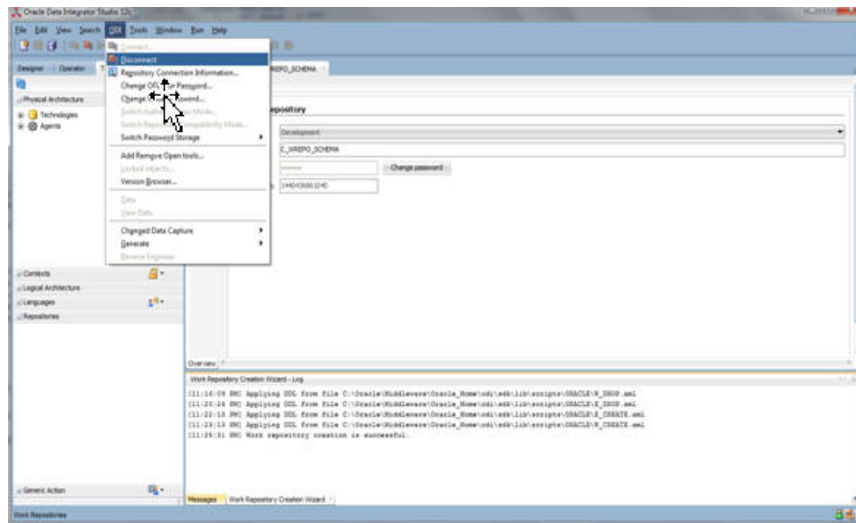
11. Enter ODI work repository login name in the popup.

Figure 4–15 Login Name screen



12. Select the **ODI Menu->Disconnect** option to connect Work Repository.

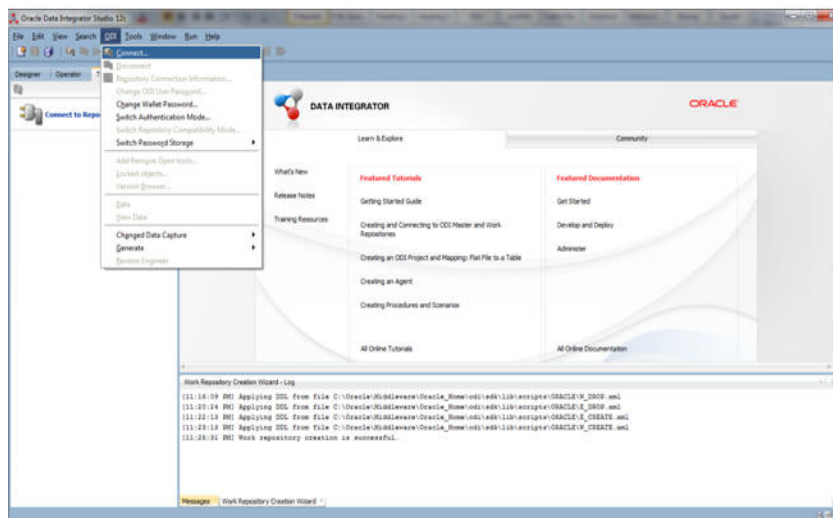
Figure 4–16 Disconnect option



13. Select the ODI Menu->Connect option.

- a. ODI Login popup select Login Name from dropdown list (select which you had created in previous step7).
- b. Enter user as "SUPERVISOR".
- c. Enter "SUPERVISOR" password.
- d. Select edit option.

Figure 4–17 Oracle Data Integrator Login screen

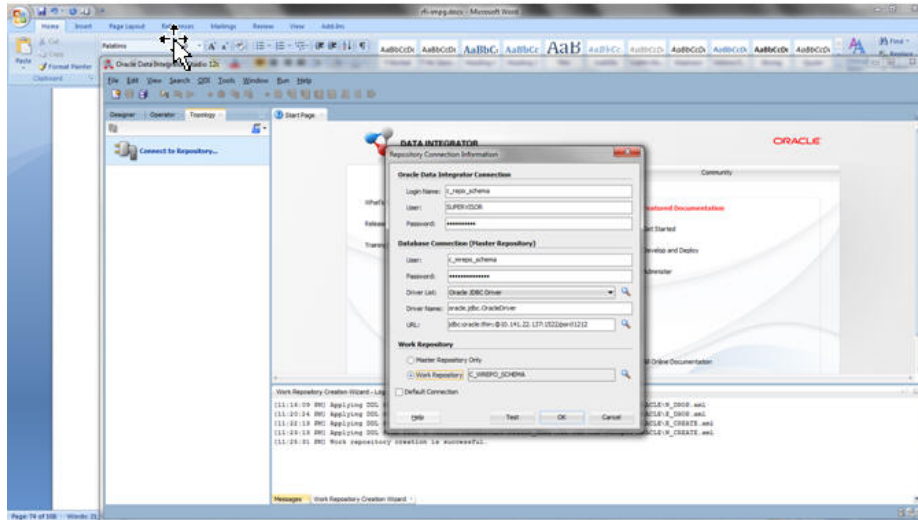


14. Validate Repository Connection Information:

- a. Oracle Data Integrator Connection
 - a. Login Name: <work repository login name>
 - b. User: <"SUPERVISOR">
 - c. Password: <SUPERVISOR Password>
- b. Database Connection (Master Repository)

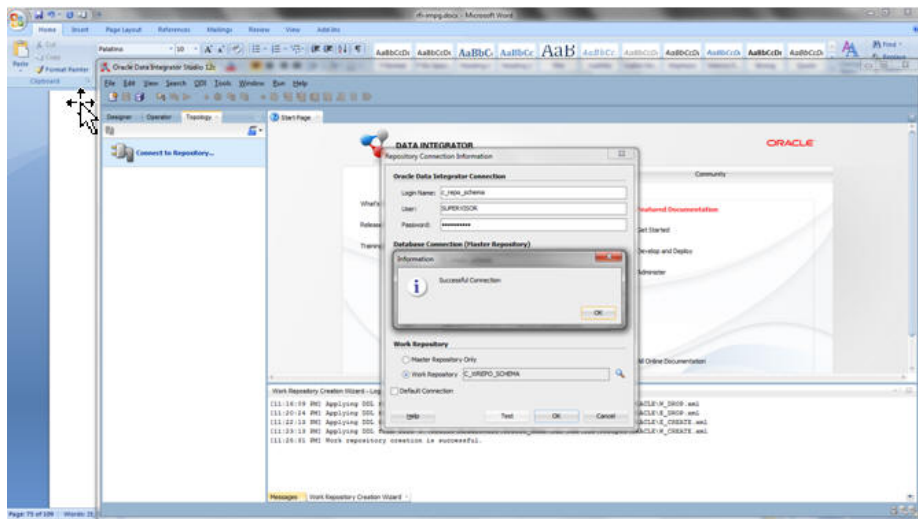
- a. Validate Master Repository database details.
- c. Work Repository
 - a. Select Work Repository option and select the repository which you had created in step 1.8.

Figure 4–18 Repository Connection Information screen



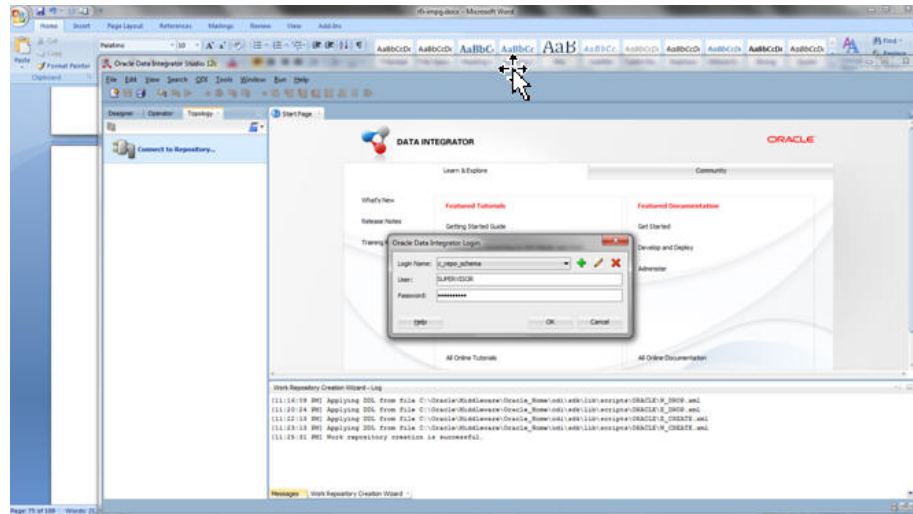
15. Test your credentials information with using "Test" button. If it is successful then click OK.

Figure 4–19 Information screen



16. Select OK from Oracle Data Integrator Login popup.

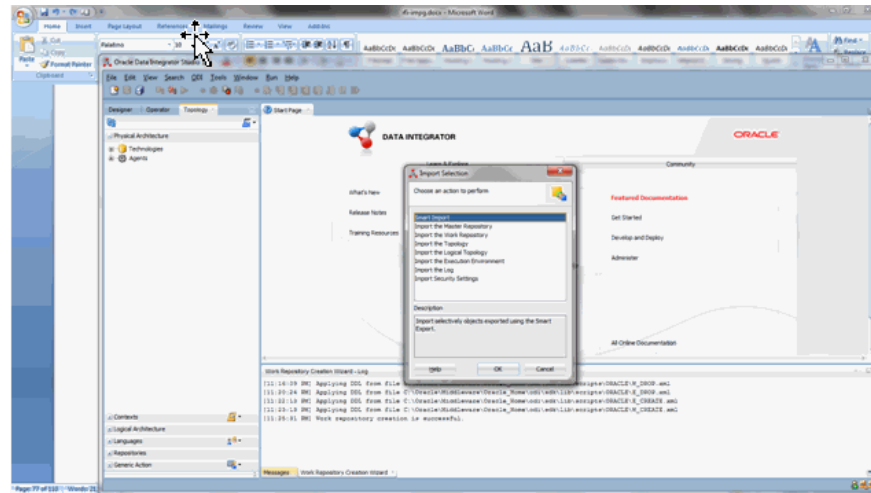
Figure 4–20 Oracle Data Integrator Login screen



Smart Import the ODI interfaces

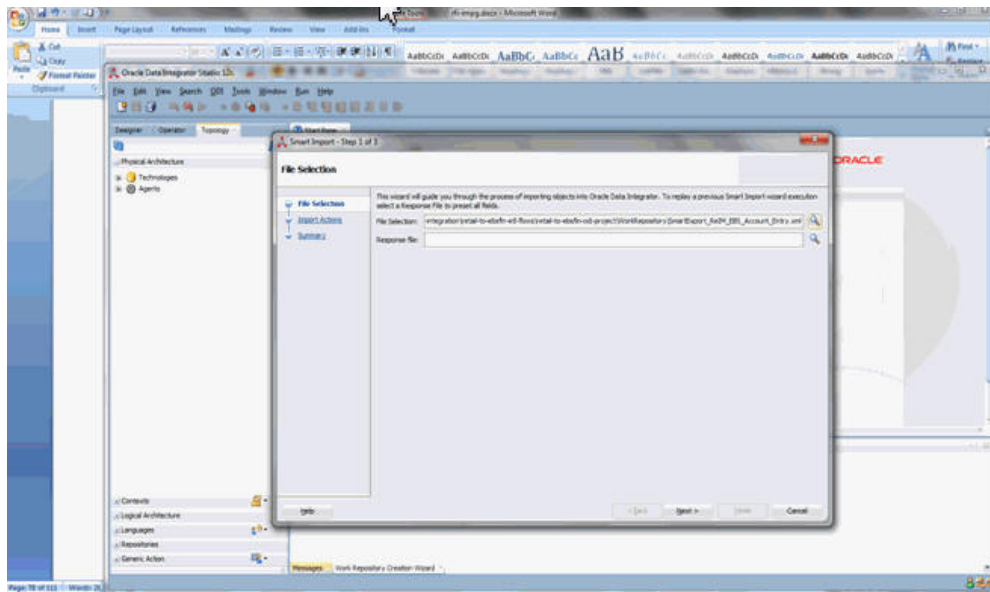
1. Import the ODI interface RMS to E-Business Account Entry or RMS to Peoplesoft Account Entry (Depends on the Oracle Financials System that is integrated to RFI).

Figure 4–21 Import Selection screen



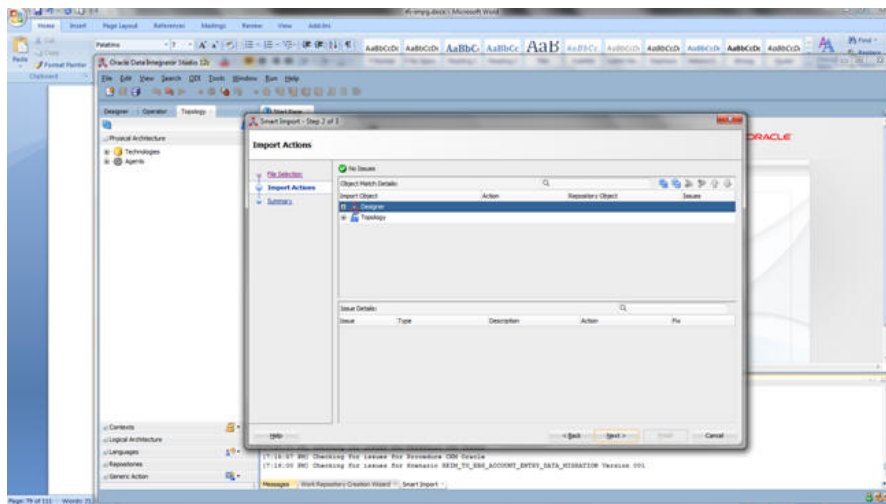
2. Select SmartExport_RMS_EBS_Account_Entry.xml (EBS Integration) or SmartExport_RMS_PSFT_Account_Entry.xml (PeopleSoft Integration) file in the File Selection Field.

Figure 4–22 Smart Import - Step 1 of 3



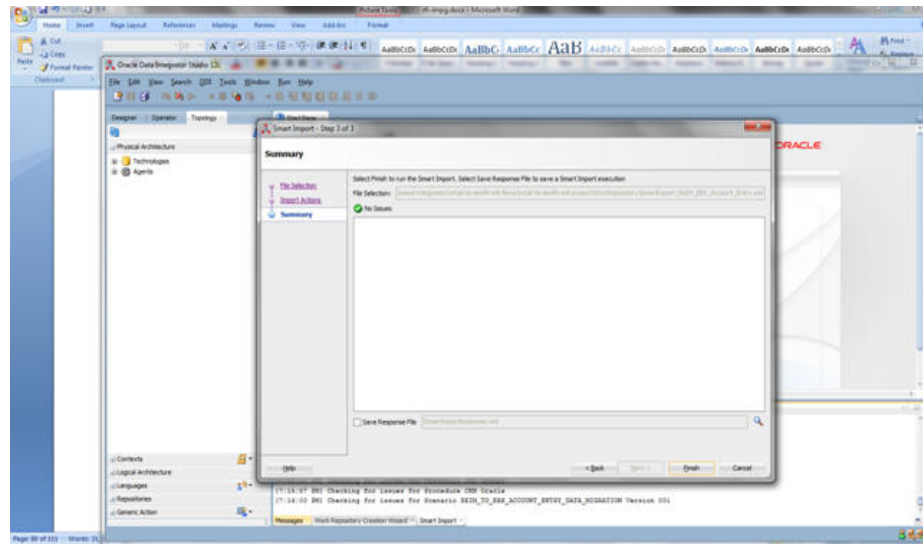
3. Click Next.

Figure 4–23 Smart Import - Step 2 of 3



4. Click Next.

Figure 4–24 Smart Import - Step 3 of 3



5. Click **Finish**.

Similarly perform Smart Import for the other ODI Interfaces.

- SmartExport_ReIM_EBS_Account_Entry.xml (EBS integration) Or SmartExport_ReIM_PSFT_Account_Entry.xml (PeopleSoft integration)
- SmartExport_ReIM_EBS_Invoice_Entry.xml (EBS integration) Or SmartExport_ReIM_PSFT_Invoice_Entry.xml (PeopleSoft integration)

Note: If any of the interface is missing in ODI, please copy the missing interface from RFI to ODI.

In addition, if any of the interfaces is in an invalid state, follow the instructions below.

1. Import the interface using smart import option from ODI studio.
 2. Expand all the objects to find out the invalid one and choose the second option from the dropdown and click next.
 3. Continue the same steps for all the invalid objects.
-

Update Connection Information

In **Topology**, under **Physical Architecture**, **Technologies** > **Oracle**, Update Database Connection detail in Physical Servers and Physical Schemas as given in the table below.

The below table shows the Topology Configurations, if the EBS is the Oracle Financials system that is integrated with:-

Table 4–2 Topology Configurations (EBS)

Physical Server (Data Server)		Physical Schema		
Name	Definition > Connection	JDBC	Schema (Schema)	Schema (Work Schema)
EBIZ_DS	User: <APPS Schema Name> Password: <APPS Schema Password>	Update EBS JDBCUrl	APPS Schema	RFI_ODI_TEMP Schema
EBIZ_AP	User: <APPS Schema Name> Password: <AP Schema Password>	Update EBS JDBCUrl	AP Schema	RFI_ODI_TEMP Schema
RETAIL_DS	User: <RMS User Schema Name> or <BDI RFI User Schema Name> (On Hybrid Cloud) Password: <RMS User Schema Password> or <BDI RFI Schema Password (On Hybrid Cloud)>	Update RMS or BDI RFI (On Hybrid Cloud) JDBCUrl	RMS Schema Owner or BDI RFI Schema Owner (On Hybrid Cloud)	RMS Schema Owner or BDI RFI Schema Owner (On Hybrid Cloud)
RFI_LOGS	User: <RFI Schema Name> Password: <RFI Schema Password>	Update RFI JDBCUrl	RFI Schema	RFI Schema
RFI_RETAIL_XREF	User: <RFI Schema Name> Password: <RFI Schema Password>	Update RFI JDBCUrl	RFI Schema	RFI Schema

In Physical Schema, make sure the context (Global and RETL_TO_EBIZ) is mapped to Logical Schemas as given in the table below. If some mapping is missing, map the Logical schemas as given in the table below:

Table 4–3 Physical and Logical Schema Mapping

Physical Schema	Logical Schema
EBIZ_DS.APPS	EBIZ_GL
EBIZ_AP.AP	EBIZ_AP

Table 4–3 (Cont.) Physical and Logical Schema Mapping

Physical Schema	Logical Schema
RETAIL DS. BDI_RFI_INT_SCHEMA (On Hybrid Cloud)	Retail
Or RMS01APP	
RFI_LOGS.RFI	RFI_LOGS
RFI_RETAIL_XREF.RFI	RFI_RETAIL_XREF

If integrating Oracle Financials application is PeopleSoft, Please validate the below details:-

The below table shows the Topology Configurations, if the PeopleSoft is the Oracle Financials system that is integrated with:-

Table 4–4 Topology Configurations (PeopleSoft)

Physical Server (Data Server)		Physical Schema		
Name	Definition > Connection	JDBC	Schema (Schema)	Schema (Work Schema)
PEOPLESOFT DS	User: <SYSADM Schema Name> Password: <SYSADM Schema Password>	Update EBS JDBCUrl	SYSADM Schema	RFI_ODI_TEMP Schema
RETAIL DS	User: <RMS User Schema Name> Password: <RMS User Schema Password>	Update RMS JDBCUrl	RMS Schema Owner	RMS Schema Owner
RFI_LOGS	User: <RFI Schema Name> Password: <RFI Schema Password>	Update RFI JDBCUrl	RFI Schema	RFI Schema
RFI_RETAIL_XREF	User: <RFI Schema Name> Password: <RFI Schema Password>	Update RFI JDBCUrl	RFI Schema	RFI Schema

In Physical Schema, make sure the context (Global and (RETL_TO_PSFT)) is mapped to Logical Schemas as given in the table below. If some mapping is missing, map the Logical schemas as given in the table below:

Table 4–5 Physical and Logical Schema Mapping

Physical Schema	Logical Schema
PEOPLESOFT DS.SYSADM	PeopleSoft
RETAIL DS.RMS01APP	Retail
RFI_LOGS.RFI	RFI_LOGS
RFI_RETAIL_XREF.RFI	RFI_RETAIL_XREF

Part II: Set Up Domain Value Maps

Enter appropriate values to the DVM table (RFI_XREF_DVM).

Note: EXT_SYSTEM column mentioned below can have only one of the two values, either EBS or PSFT. It should not have any other value. On the same instance of RFI_XREF_DVM should not have both EBS and PSFT values in the EXT_SYSTEM COLUMN.

Table 4–6 DVM table values

DVM Name (CATEGORY_ TYPE Column)	Retail Value (RETL_ID column)	Oracle Financials value (EXT_ SYSTEM_ID column)	EXT_SYSTEM column
BUSINESS_UNIT_ DVM	Enter Retail Value for Business Unit	Enter EBS or PSFT Value for Business Unit	EBS or PSFT
CURR_CODE_ DVM	Enter Retail Value for Currency Code	Enter EBS or PSFT Value for Currency Code	EBS or PSFT
TAX_DVM	Enter Retail Value for VAT Code	Enter EBS or PSFT Value for VAT Code	EBS or PSFT
SUPPLIER_XREF (Inserted by Supplier Integration Adapter)	Retail Value for Supplier Id	EBS or PSFT Value for Supplier Id	EBS or PSFT

Enter appropriate values for Mail option (RFI_XREF_DVM).

Table 4–7 Mail Option values

Name (CATEGORY_ TYPE Column)	Retail Value (RETL_ID column)	E-Business suite value (EXT_ SYSTEM_ID column)	EXT_SYSTEM column
RMS_GL_MSG_ NOTIFICATION	MAIL_SUBJECT	Enter the mail Subject for ODI Error Notification.	RMS
RMS_GL_MSG_ NOTIFICATION	MAIL_BODY	Enter the mail content for ODI Error Notification, Max length 240 chars	RMS

Table 4–7 (Cont.) Mail Option values

Name (CATEGORY_ TYPE Column)	Retail Value (RETL_ID column)	E-Business suite value (EXT_ SYSTEM_ID column)	EXT_SYSTEM column
ReIM_GL_MSG_ NOTIFICATION	MAIL_SUBJECT	Enter the mail Subject for ODI Error Notification.	ReIM
ReIM_GL_MSG_ NOTIFICATION	MAIL_SUBJECT	Enter the mail content for ODI Error Notification, Max length 240 chars	ReIM

The FROM Email Address and TO Email Address List will be specified during RFI deployment.

Part III: Set up EBS source data

1. Login to EBS self-service, navigate to General Ledger responsibility, **Setup > Journals**, launch Categories form, enter the following categories:

Table 4–8 Category Form entries

Category	Key	Desc
RETEK	RETEK	RETEK
RMS	RMS	Retail RMS
Retail Invoices	Retail Invoices	Retail Invoices
ReSA	ReSA	Retail ReSA

2. Launch Sources form, enter the following sources:

Table 4–9 Sources Form entries

Source	Key	Desc
RMS	RMS	Retail RMS
Write-offs	Write-offs	Retail Write-offs
Prepayments	Prepayments	Retail Prepayments
Manual Payments	Manual Payments	Retail Manual Payments
ReSA	ReSA	Retail ReSA

3. Navigate to Payables responsibility, **Setup > in the Lookups** menu, launch Payables form.
 - Enter the following condition and search:
 - Type: SOURCE Application: Payables
 - In the result list, add the following line and save:

Table 4–10 Result list

Code	Meaning	Desc
REIM	Retek ReIM	Retek ReIM

Part IV: Scenario test

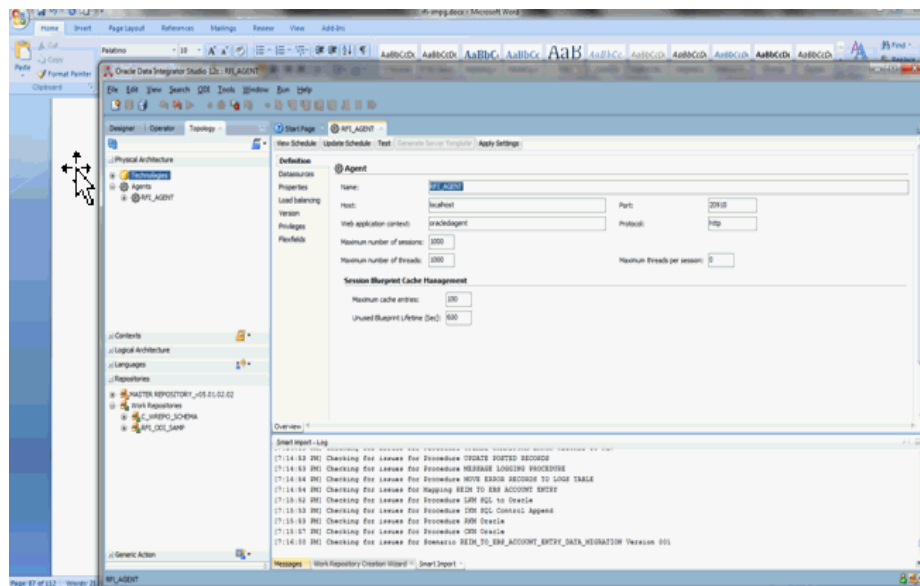
In this part, you need to do similar things to the three packages in this RFI. In this guide we only use package, Migrate RMS To EBIZ Acc Entry Package, for example.

Agents and Scenario

Oracle Data Integrator run-time Agents orchestrate the execution of jobs. The run-time agent functions as a listener and a scheduler agent. The agent executes jobs on demand (model reverses, packages, scenarios, interfaces, and so forth). The agent is also to start the execution of scenarios according to a schedule defined in Oracle Data Integrator. Schedules can be attached to scenarios and also to Load Plans. In ODI Topology, navigate to **Physical Architecture > Agents**.

Make sure the RFI_AGENT is available and default to port 20910.

Figure 4–25 Physical Architecture -> Agents screen



Run Agent Scheduler

1. Modify odiparams file and set the following lines to connect them to the work repository. For example:

In Windows OS (odiparams.bat),

```
set ODI_MASTER_DRIVER=oracl.jdbc.driver.OracleDriver
set ODI_MASTER_URL=<JDBC Connection URL to ODI>
set ODI_MASTER_USER=<ODI Master Schema>
set ODI_MASTER_ENCODED_PASS=< ODI Master Schema password>
set ODI_SUPERVISOR=SUPERVISOR
set ODI_SUPERVISOR_ENCODED_PASS=<ODI SUPERVISOR password>
set ODI_SECU_WORK_REP=<ODI Work Repository name>
```

In Linux/Unix OS (odiparams.sh),

```
ODI_MASTER_DRIVER=oracle.jdbc.driver.OracleDriver
ODI_MASTER_URL=<JDBC Connection URL to ODI>
ODI_MASTER_USER=<ODI Master Schema>
ODI_MASTER_ENCODED_PASS=< ODI Master Schema password>
ODI_SUPERVISOR=SUPERVISOR
ODI_SUPERVISOR_ENCODED_PASS=<ODI SUPERVISOR password>
```

```
ODI_SECU_WORK_REP=<ODI Work Repository name>
```

You can use the following command to generate the encoded password:

```
encode <password>
```

Go to a CMD prompt and type

```
agent "-NAME=<physical agent name>"
```

For example

```
agent "-NAME=RFI_AGENT"
```

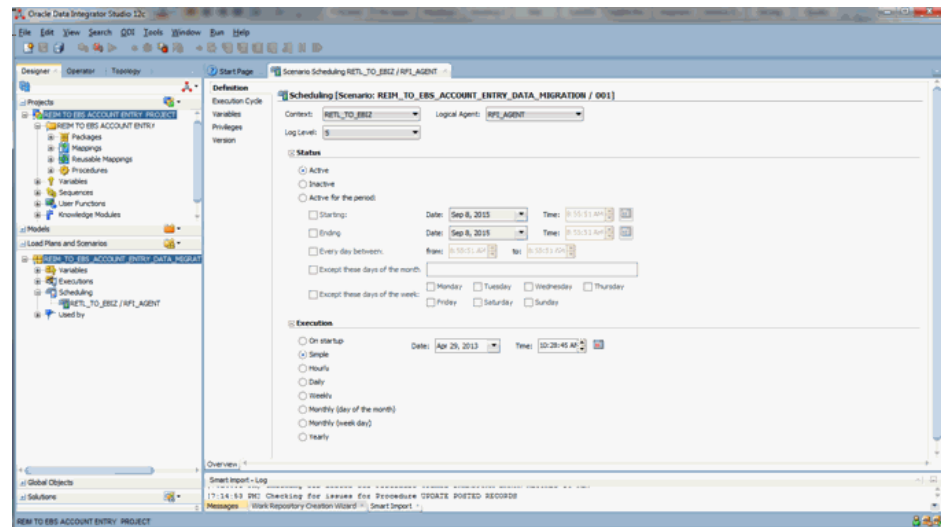
You should get a message that the agent is started successfully.

Generate scheduler

In ODI designer, navigate to Load Plans and Scenarios, select scenario MIGRATE_RMS_TO_EBIZ_ACC_ENTRY_PACKAGE (For EBS integration) or MIGRATE_RMS_TO_PSFT_ACC_ENTRY_PACKAGE (For PeopleSoft integration).

Select Existing Scheduling. Make sure the context is set to RETL_TO_EBIZ (For EBS integration) or RETL_TO_PSFT (For PeopleSoft integration) and agent is selected as RFI_AGENT.

Figure 4–26 Load Plans and Scenarios



Update schedule

Go back to Topology and find your Physical Agent, right click and update schedule.

Check

The agent runs at a predefined execution time as given in the schedule. When it runs, you can check it in the Operator. You can also check the data in Oracle Financials side in the interface tables if the execution is successful and data has flown to Oracle Financials interface tables.

Run import program

When running the import program, enter the source name you set up in previous steps.

When the import program is complete, you can check the data in the Oracle Financials transaction tables.

Running the Process Integration for Accounting Entries

This process runs based on the schedules created for it. The integration between Oracle Retail and Oracle GL can be scheduled to occur automatically.

Note: You can start or stop the scheduler agent whenever you want, which enables you to control the integration process. For more information about starting and stopping the scheduler agent, see *Oracle Data Integrator Installation Guide 12.2.4*, Section 3.2.6 "Starting the Standalone Agent" and section C.1.2 for "Stopping a Standalone Agent."

Reviewing Process Integration for Retail Merchandise Procure to Pay

This chapter provides an overview of the process integration for Retail Merchandise Procure to Pay between Oracle Retail Invoice Matching (ReIM) and Oracle Payables and discusses how to:

- Perform setup tasks
- Configure and generate data in Oracle Retail
- Pick up and transform the data
- Configure and run the process integration for Retail Merchandise Procure to Pay

Process Integration for Retail Merchandise Procure to Pay Overview

ReIM is the source of matched invoices, credit notes, debit memos, and rebates. Oracle Payables requires these details for payment to the suppliers. Invoices from suppliers for retail merchandise are matched to the original purchase order (PO) for the merchandise and the receipt of the merchandise by the retailer. A proper match of invoice, PO, and receipt trigger the payment authorization of the supplier's invoice. Invoices may be authorized for payment prior to receipt of goods for which prepayment is required. When the authorization for payment is generated, the appropriate accounting distribution is also generated to support the payment authorization. The Retail Merchandise Procure to Pay integration automates the processing of invoice payments, adjustments, and write-offs from ReIM to Oracle Payables and General Ledger. Other accounting transactions are generated from ReIM to write off aged receipts that were never invoiced and to post accounting distribution for manually paid or prepaid invoices after receipt.

This integration uses the Oracle Data Integrator (ODI) application to transfer the data from ReIM to Oracle Payables.

The process integration between ReIM and Oracle Payables supports the following integration flows:

- Post matched invoices for payment from ReIM to Oracle Payables.
- Post credit notes (matched or unmatched) for payment adjustment from ReIM to Oracle Payables.
- Post debit or credit memos for payment adjustment from ReIM to Oracle Payables.
- Post rebates for payment adjustment from ReIM to Oracle Payables.
- Post unmatched invoices for prepayment from ReIM to Oracle Payables.

Table 5–1 Business Process Flow for integration of Retail Merchandise and voucher posting interface tables in Oracle Financials (EBS or PeopleSoft)

Work Location	Step
Oracle Retail (ReIM)	Configure and generate outgoing data from ReIM.
Integration process	<p>The integration process checks for data in the ReIM Invoice Header and Invoice Lines interface tables.</p> <p>Load and transform the Oracle Retail data into the Oracle Voucher Header and Voucher Lines Staging tables.</p> <p>Delete the data from the source tables (ReIM Invoice Header and Invoice Lines interface tables) after a successful load.</p>
Oracle Payables	Run the Voucher Build process and import the vouchers into Oracle Payables system for the pay cycle.

Pre-requisites

Before performing this process integration, ensure that:

1. Chart of accounts code combinations are validated.
2. Calendars must be set up for transactions.
 - Supplier synchronization and supplier cross-reference.
 - Supplier address synchronization and supplier address cross-reference.
 - Payment terms synchronization and payment terms cross-reference.
 - Currency code domain value mapping (DVM) and currency exchange rate synchronization.
3. Chart of accounts combinations are manually entered into the Oracle Retail and Oracle Financials Application (EBS or PeopleSoft).
4. The DVM data is set up in RFI_XREF_DVM table that is used as input in the ODI interfaces.

Assumptions and Constraints

The integration design assumes that:

1. The data moves from one instance of source database to one instance of target database.
2. If the user loads the same data twice in the Oracle Retail interface table then the data is transported again to the Oracle financials interface tables.
3. In the ODI interface, no business validation is applied to check whether any data is already transported.
4. The chart of accounts combinations are valid for invoice lines.
5. Invoice lines with invalid combinations are rejected by General Ledger and the correction is a manual process in Oracle Financials applications.
6. Oracle GL does not delete the invoices with source as RETL.
7. Oracle Retail modifies the IM_AP_STAGE_HEAD and IM_AP_STAGE_DETAIL tables and adds an ORG_UNIT column to map it to BUSINESS_UNIT.

Performing Setup Tasks

This section discusses:

- Setup tasks specific to ReIM
- Setup tasks specific to Oracle General Ledger
- Setup tasks specific to Oracle Payables
- Setup tasks specific to the integration layer

Setup Tasks Specific to ReIM

For more information, see the latest version of the ReIM Operations Guide for details about the setup tasks specific to ReIM.

Setup Tasks Specific to Oracle Payables

Perform the following tasks:

- Need to check
- Suppliers synchronization
- Supplier locations synchronization
- Payment Terms synchronization
- Chart of account code combination validation
- Currency Exchange Synchronization
- The invoice source has been setup if integrating Oracle Financials Suite is E-Business Suite
- The following DVM have been entered in the RFI_XREF_DVM TABLE:
 - CURR_CODE_DVM TAX_DVM
 - BUSINESS_UNIT_DVM
 - TAX_DVM
- The following XREF has been populated:
 - ORG_ID_XREF
 - SUPPLIER_XREF
 - SUPPLIER_SITE_XREF
 - PAYMENT_TERMS_XREF
- The following email options have been entered in the RFI_XREF_DVM TABLE:
 - REIM_AP_MSG_NOTIFICATION

Configuring and Generating Data in Oracle Retail

This section discusses how to:

- Configure the data in Oracle Retail
- Generate the data in Oracle Retail

Configuring the Data in Oracle Retail

Before running any transaction data, these tasks must be done in ReIM:

- General ledger (GL) account cross-reference is set up.
- GL options are defined.

For more information, see the latest version of the ReIM User Guide, specifically the System Administration and the General Ledger Accounts chapters.

Generating the Data in Oracle Retail

In ReIM, the batch process engages in these high-level steps:

1. Performs any resolution actions (for example, instigates the creation of payment documents).
2. Calls the posting process to write applicable financial accounting transactions to the financials staging tables IM_AP_STAGE_HEAD and IM_AP_STAGE_DETAIL

The processing occurs after discrepancies for documents have been resolved by resolution documents. Once all of the resolution documents for a matched invoice are built, and all of the RCA/RUA external processing has been confirmed, the process inserts financial accounting transactions to the financials staging table, to represent the resolution and consequent posting of the invoice. The process also inserts financial accounting transactions for the approved documents that are being handled.

Once all of the transactions have been written, the process switches the status of the current invoices or documents to "Posted", and then moves on to the next invoice or document. If a segment look-up fails, the failed record is written to a financials error table. For more information, see the latest version of the ReIM Operations Guide, specifically the Batch Processes chapter.

Configuring and Running the Process Integration for Retail Merchandise Procure to Pay

This section discusses the steps to set up a schedule.

Configuring the Process Integration for Retail Merchandise Procure to Pay

Setting up a Schedule

Part I: Set up master repository and work repository

Please refer to the steps in section "Process Integration for Inventory Valuation and Revenue Recognition Accounting Entries Overview".

If the master/work repository setup, Smart Import and Scenario Scheduling is not done, please do the setup as mentioned in section "Process Integration for Inventory Valuation and Revenue Recognition Accounting Entries Overview".

Part II: Set up client side configuration and DVM files

Enter appropriate values to the DVM table (RFI_XREF_DVM).

Note: EXT_SYSTEM column mentioned below can have only one of the two values, either EBS or PSFT. It should not have any other value. On the same instance of RFI_XREF_DVM should not have both EBS and PSFT values in the EXT_SYSTEM COLUMN

Table 5–2 DVM Table

DVM Name (CATEGORY_TYPE Column)	Retail Value (RETL_ ID column)	E-Business suite value (EXT_ SYSTEM_ID column)	EXT_SYSTEM column
BUSINESS_UNIT_ DVM	Enter Retail Value for Business Unit	Enter EBS or PSFT Value for Business Unit	EBS or PSFT
CURR_CODE_DVM	Enter Retail Value for Currency Code	Enter EBS or PSFT Value for Currency Code	EBS or PSFT
TAX_DVM	Enter Retail Value for VAT Code	Enter EBS or PSFT Value for VAT Code	EBS or PSFT

Enter appropriate values for Mail option (RFI_XREF_DVM).

Table 5–3 Mail Option

Name (CATEGORY_TYPE Column)	Retail Value (RETL_ ID column)	E-Business suite value (EXT_ SYSTEM_ID column)	EXT_SYSTEM column
ReIM_AP_MSG_ NOTIFICATION	MAIL_SUBJECT	Enter the mail Subject for ODI Error Notification.	ReIM
ReIM_AP_MSG_ NOTIFICATION	MAIL_BODY	Enter the mail content for ODI Error Notification, Max length 240 chars	ReIM

The FROM Email Address and TO Email Address List will be specified during RFI deployment.

Part III: Set up XREF data

Enter appropriate values to the XREF table (RFI_XREF_DVM).

Note: EXT_SYSTEM column mentioned below can have only one of the two values, either EBS or PSFT. It should not have any other value. On the same instance of RFI_XREF_DVM should not have both EBS and PSFT values in the EXT_SYSTEM COLUMN

Table 5–4 XREF Table

XREF Name (CATEGORY_TYPE Column)	Retail Value (RETL_ ID column)	E-Business suite value (EXT_ SYSTEM_ID column)	EXT_SYSTEM column
SUPPLIER_XREF (Inserted by Supplier Integration Adapter)	Retail Value for Supplier	EBS or PSFT Value for Supplier	EBS or PSFT

Table 5–4 (Cont.) XREF Table

XREF Name (CATEGORY_TYPE Column)	Retail Value (RETL_ ID column)	E-Business suite value (EXT_ SYSTEM_ID column)	EXT_SYSTEM column
SUPPLIER_SITE_ XREF(Inserted by Supplier Integration Adapter)	Retail Value for Supplier Site	EBS or PSFT Value for Supplier Site	EBS or PSFT
ORG_ID_XREF (Manual Sync)	Enter Retail Value for Org Unit	Enter EBS Value for Org Unit	EBS or PSFT
PAYMENT_TERMS_ XREF (Manual Sync for EBS and Inserted by Pay terms integration adapter for PeopleSoft)	Enter Retail Value for Payment Term	Enter EBS Value for Payment Term	EBS or PSFT

Part IV: Set up EBS source data

Login to EBS self-service, navigate to General Ledger responsibility, launch Categories form, and enter the following categories:

Table 5–5 Categories form entries

Category	Key	Desc
RETEK	RETEK	RETEK
RMS	RMS	Retail RMS
Retail Invoices	Retail Invoices	Retail Invoices
ReSA	ReSA	Retail ReSA

Launch Sources form, enter the following sources:

Table 5–6 Sources form entries

Source	Key	Desc
RMS	RMS	Retail RMS
Write-offs	Write-offs	Retail Write-offs
Prepayments	Prepayments	Retail Prepayments
Manual Payments	Manual Payments	Retail Manual Payments
ReSA	ReSA	Retail ReSA

Navigate to the Payables responsibility, in the Lookups menu, launch Payables form.

Enter the following condition and search:

- Type: SOURCE
- Application: Payables

In the result list, add the following line and save:

Table 5-7 Result list entry

Code	Meaning	Desc
REIM	Retek ReIM	Retek ReIM

Part V: Scenario test

Refer to the steps in section "Process Integration for Inventory Valuation and Revenue Recognition Accounting Entries Overview".

If the master/work repository setup, Smart Import and Scenario Scheduling is not done, please do the setup as mentioned in section "Process Integration for Inventory Valuation and Revenue Recognition Accounting Entries Overview".

Run concurrent import program

When running the import program, you need to enter the source name you set up in previous steps. When concurrent program is completed, you can check the data in the Oracle Financials transaction tables. For more information about creating schedules and scenarios, see Oracle Data Integrator User Guide and Oracle Data Integrator Installation Guide, version 12.2.4.

Running the Process Integration for Accounting Entries

This process runs based on the schedules created for it. The integration between Oracle Retail and Oracle AP can be scheduled to occur automatically.

Note: You can start or stop the scheduler agent whenever you want, which enables you to control the integration process.

For more information about starting and stopping the scheduler agent, see Oracle Data Integrator Installation Guide 12.2.4, Section 3.2.6 "Starting the Standalone Agent" and section C.1.2 for "Stopping a Standalone Agent."

Data Requirements

The accounting entry and invoice ODI integration flows are run. For more information, see Chapter 4 and Chapter 5 of this guide.

Implementing Oracle Retail Merchandise Integration Pack for Oracle Financials (EBS /PeopleSoft Financials)

This chapter discusses the following:

- Setting up Oracle Retail applications
- Setting up Oracle General Ledger
- Setting up Oracle Payables
- Setting up Oracle Domain Value Maps
- Synchronizing freight terms manually
- Synchronizing currency rate types manually
- Synchronizing currency codes manually
- Synchronizing chart of accounts values manually
- Synchronizing financial calendar manually
- Mapping business and organization units
- Working with cross-references
- Working with Domain Value Maps (DVMs)
- Handling errors
- Setting configuration properties

Oracle Retail applications, Oracle General Ledger (GL), and Oracle Payables must be set up for the Oracle Retail to Oracle Retail Financial Integration (RFI) to work properly. This chapter describes these setups in detail.

Setting Up Oracle Retail Applications

Before integration, you must set up Oracle Retail Merchandising System (RMS), Oracle Retail Invoice Matching (ReIM), and Oracle Retail Sales Audit.

For more information, see the ReIM Operations Guide, version 16.0.0, RMS Operations Guide, Volume 3, version 16.0.0 for setting up the Oracle Retail applications.

Setting Up Oracle General Ledger (GL)

To set up Oracle GL, perform these actions:

- Activate service operations, queue, and handlers
- Activate or create routings
- Set up end points (connector properties) for provided services
- Setup recurring run controls for delay publish of effective dated objects
- Activate validation service operations
- Set up cross-reference tables
- Synchronize currency exchange rate

For more information, see the Oracle General Ledger Implementation Guide, Release 12.2.4.

Setting Up Oracle Payables

To set up Oracle Payables, perform these actions:

- Activate service operations, queue, and handlers
- Activate or create routings
- Set up end points (connector properties) for provided services
- Set up recurring run controls for delay publish of effective dated objects
- Activate validation service operations
- Set up cross-reference tables
- Synchronize payment terms and vendors

For more information, see the Oracle Payables Implementation Guide, Release 12.2.4.

RFI Database Schema Topology

The diagrams below illustrates the Database schema topology for EBS and PeopleSoft integration:-

Figure 6–1 RFI Database Schema Topology for EBS Integration

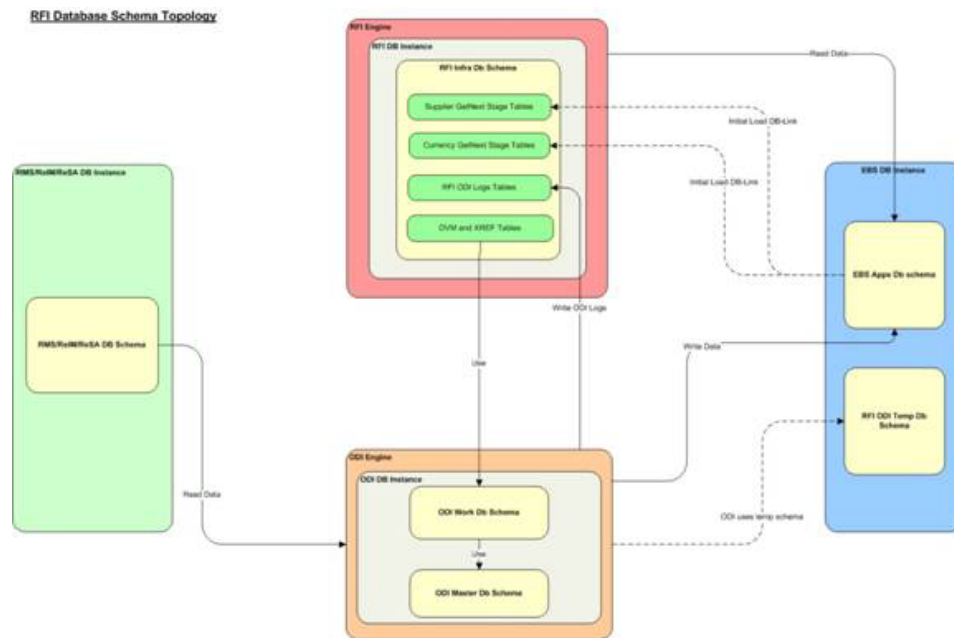
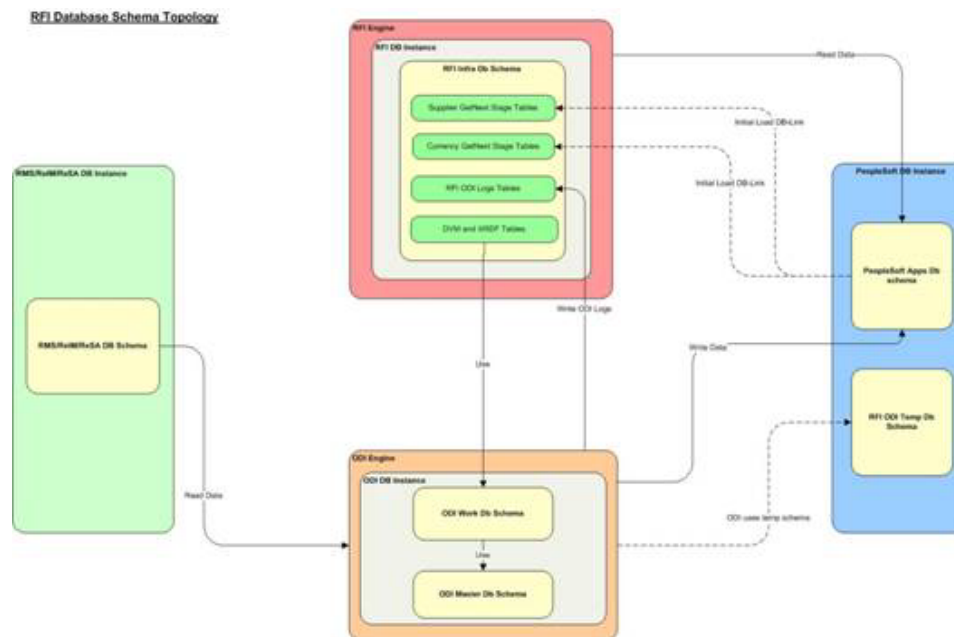


Figure 6–2 RFI Database Schema Topology for PeopleSoft Integration



Setting Up Cross-References for Oracle Retail IDs and Oracle Entities

Before running the supplier flow, you must manually load `ORG_ID_XREF`, `FREIGHT_TERMS_XREF` cross-reference in `RFI_XREF_DVM` table. Because no automated process for this synchronization is available, you need to load this table manually.

If the EBS is oracle financials integrating system then `PAYMENT_TERMS_XREF` should also be manually loaded into `RFI_XREF_DVM` table. If PeopleSoft is oracle financials integrating system, `PAYMENT_TERMS_XREF` will be loaded using the initial load script provided with RFI pack.

Setting Up Oracle Domain Value Maps

Set up these Oracle Domain Value Maps (DVMs):

Table 6–1 Oracle Domain Value Maps (DVMs)

Name	Description
ADDRESS_COUNTRY_DVM	Country Code DVM
BUSINESS_UNIT_DVM	Business Unit Mapping
COA_STATUS_DVM	DVM mappings for valid/invalid status in Retail to TRUE/FALSE in Oracle Financials (EBS or PeopleSoft)
CURR_CODE_DVM	Currency code mapping
CURR_CONV_TYPE_CODE_DVM	Currency Exchange Conversion Type Mapping
LANGUAGE_CODE_DVM	Language Code DVM
STATE_DVM	State Code DVM
SUPPLIER_ADDRESS_TYPE_DVM	Supplier Address Type DVM (Order and Remittance), 04/06 in Retail to PURCHASING_SITE_FLAG/ PAY_SITE_FLAG in EBS
SUPPLIER_STATUS_CODE_DVM	Supplier Status DVM
TAX_DVM	Tax code (VAT) DVM
CURRENCY_NOTIFICATION_DVM	Service specific DVM
SUPPLIER_NOTIFICATION_DVM	Service specific DVM
PAYTERMS_NOTIFICATION_DVM	Service specific DVM
COA_GLELEMENT_DVM	Chart of Account Element - Segment Mapping
COA_GLELEMENT_LEDGER_GROUP_DVM	Ledger Group mapping with Business Unit. Used only when PeopleSoft is the Oracle Financials applicaiton

Synchronizing Freight Terms Manually

Freight is the transportation charge paid by retailers when they receive goods from a supplier. Freight term is an agreement between a retailer and a supplier regarding the type and payment of freight. Because the volume of freight terms is low, they are maintained and synchronized manually in Oracle Payables and RMS.

Synchronizing Currency Exchange Rate Types Manually

Oracle Retail allows for multiple currency exchange rate types (such as operational, consolidated, letter of credit or bank, purchase order, customs entry, and transportation) but uses only one type for the default processing—either Operational or Consolidation.

The Oracle Financials system supports any number of currency exchange rate types and allows for multiple currency exchange rate types. Because Oracle Retail uses only one currency exchange rate for the default processing, one exchange rate is selected.

The selected currency exchange rate is used by all of the Oracle Retail products that integrate with Oracle Financials (EBS or PeopleSoft).

The Oracle Financials system can have separate currency exchange rate types that are not integrated with Oracle Retail. The relationship between Oracle Retail and Oracle rate types is mapped in a Domain Value Mapping (DVM) table.

When the selected currency exchange rate type is manually set up in RMS, RMS uses the Currency Exchange Type Mapping window to map the external exchange type sent by the Oracle Financials system. This currency exchange rate type is used by the Oracle Retail applications for all transactions.

Because the volume of currency exchange rate types is low, they are maintained and synchronized manually in Oracle GL (EBS or PeopleSoft) and RMS. These are not synchronized automatically. This synchronization is required for the synchronization of currency exchange rates between Oracle GL and RMS. For more information, see the Oracle General Ledger Implementation Guide, Release 12.2.4 or PeopleSoft GL 9.2.

Synchronizing Currency Codes Manually

Oracle Retail and Oracle GL synchronize the currency codes manually. The currency codes mapping between Oracle GL and Oracle Retail is required for the sales audit and stock ledger transactions. For more information, see the Oracle General Ledger Implementation Guide, Release 12.2.4 or PeopleSoft GL 9.2 release.

Synchronizing Chart of Accounts Segments Manually

A chart of accounts is a listing of all the accounts in the general ledger. You can use a chart of accounts to view specific information about a transaction.

Oracle Retail uses the chart of accounts as reference information to create accounting entries for both sales and inventory transactions. Oracle General Ledger (GL) is the system of record for this information. Oracle Retail also stores and uses the GL accounts.

In Oracle Financials, the chart of accounts implies all the accounting segments and values such as chart of accounts, business unit, and setID. A chart of accounts includes account, department, operating unit, and other segments. The attributes under each segment can differ from those of other segments. For example, Account can have Account Number, Description, Account Type, and VAT Flag, and Department can have Department number, Description, and Manager.

Chart of accounts is manually synchronized from Oracle Payables to Oracle Retail. It is not synchronized automatically.

The chart of accounts is validated based on the currently chart of account. The most current active Chart of Account value row needs to be manually synchronized from Oracle GL to Oracle Retail.

The Oracle Financials system can also create future dated chart of accounts. These future dated charts of accounts need to be re-validated against Oracle Financials system. Also, chart of accounts can be end-dated or disable. The chart of account will need to be manually re-validated.

After the chart of account segment mappings have been set up in both systems, a validation occurs for each Oracle Retail transaction ready to be transmitted to Oracle Financials system

Synchronizing Financial Calendar Manually

The calendars are manually maintained in Oracle Retail and Oracle Financials (EBS or PeopleSoft) Suite; they are not automatically synchronized.

Working with Cross-References

Cross-references maps and connects the records within the application network, and they enable these applications to communicate in the same language. The RFI application stores the relationship between applications in a persistent way so that others can refer to it. The following table lists the Oracle Retail to Oracle Financials RFI cross-references:

Table 6–2 Oracle Retail to Oracle Financials RFI cross-references

Cross Reference Table - RFI_XREF_DVM				
Column: Category_Type	Retail Column Name RETL_ID	EBS Column Name - EXT_SYSTEM_ID	Description	Usage
PAYMENT_TERMS_XREF (manual sync for EBS and RFI integration adapter sync for PeopleSoft)	Payment Term Value in Retail	Payment Term Value in EBS or PeopleSoft	Payment Term Id	Manual Sync for EBS & Integration Adapter sync for PeopleSoft
FREIGHT_TERMS_XREF (manual sync)	Freight Term Value in Retail	Freight Term Value in EBS or PeopleSoft	Freight Term Id	Manual Sync
ORG_ID_XREF	ORG_UNIT_ID in Retail	ORGANIZATION_ID value in EBS Or AP Business Unit in PeopleSoft	Organization Unit	Manual Sync.
SUPPLIER_XREF	Supplier Id in Retail	Vendor id in Oracle Financials (EBS or PeopleSoft)	Supplier Id	Xref value for Retail is Supplier. The value for Oracle Financials will be Vendor ID. Populated during the supplier integration.
SUPPLIER_SITE_XREF	Supplier Site Id in Retail	Vendor Site id in Oracle Financials (EBS or PeopleSoft)	Supplier Site Id	Xref value for Retail is Supplier. The value for Oracle Financials will be the VendorSiteID. Populated during the supplier integration.

Working with Domain Value Maps (DVM)

DVM's are tables containing mapping between related information in the participating applications. They enable you to equate lookup codes and other static values across applications, for example, FOOT and FT or US and USA. These DVM tables are maintained in the RFI layer. The RFI layer uses these DVM tables in transforming the messages from one system in the expected format of the other system.

DVM types are seeded for the Oracle Retail to Oracle Financials flows, and administrators can extend the list of mapped values by adding more maps. The DVM data should be synchronized with what the participating applications use. This synchronization should occur before any initial loads are run or any incremental transactional flows are initiated.

RFI uses the same table RFI_XREF_DVM to store XREF and DVM information, the differentiator is the CATEGORY_TYPE column.

Note: DVM and Xref (Manual Sync) is not pre-seeded, the values have to be entered manually as give in the sections below.

The following table lists the DVMs for the Oracle Retail to Oracle Financials RFI:

Table 6-3 DVMs for Oracle Retail to Oracle Financials RFI

DVM Type	DVM Column Name	Comments
BUSINESS_UNIT_DVM	RETL_ID, EXT_SYSTEM_ID	This maps Oracle Retail's Set Of Books ID to Oracle GL business unit (Ledger Id). EBS Table : GL_LEDGERS Retail Table: FIF_GL_SETUP
COA_STATUS_DVM	RETL_ID, EXT_SYSTEM_ID	This is a hard coded DVM and should not be changed. This maps the EBS value of "TRUE" or "FALSE" to Oracle Retail's value of "valid" or "invalid".
ADDRESS_COUNTRY_DVM	RETL_ID, EXT_SYSTEM_ID	This maps the country codes between Oracle Retail and Oracle system.
CURR_CONV_TYPE_CODE_DVM	RETL_ID, EXT_SYSTEM_ID	This maps the Currency Conversion Types between Oracle Retail and Oracle system.
CURR_CODE_DVM	RETL_ID, EXT_SYSTEM_ID	This maps the currency codes between Oracle Retail and Oracle system.
LANGUAGE_CODE_DVM	RETL_ID, EXT_SYSTEM_ID	This maps the language code between Oracle Retail and E-Business Suite system. This DVM is used to determine which language to be sent the translatable fields to Oracle Retail.

Table 6-3 (Cont.) DVMs for Oracle Retail to Oracle Financials RFI

DVM Type	DVM Column Name	Comments
COA_GLELEMENT_REIM_DVM	RETL_ID, EXT_SYSTEM_ID	Segment name mappings between Retail Requesting System and EBS
COA_GLELEMENT_RESA_DVM		The values are mapped like COA_GLELEMENT_<RequestingSystem>_DVM (fore.g if RMS is the requesting system, COA_GLELEMENT_RMS_DVM is used) lookup has the entry like < Set of Books ID >-SEGMENT1 for Retail value and < ChartOfAccountIdentification>-SEGMENT1 for the E-business suite value.
COA_GLELEMENT_RMS_DVM		
STATE_DVM	RETL_ID, EXT_SYSTEM_ID	This maps the state codes between Oracle Retail and Oracle Payables.
SUPPLIER_ADDRESS_TYPE_DVM	RETL_ID, EXT_SYSTEM_ID	This maps the supplier's address type between Oracle Retail and Oracle Payables. Order and Remittance Address type 04/06 in Retail to PURCHASING_SITE_FLAG/ PAY_SITE_FLAG in EBS
SUPPLIER_STATUS_CODE_DVM	RETL_ID, EXT_SYSTEM_ID	This maps the supplier's status between Oracle Retail and Oracle Payables. "I" for Inactive and "A" for Active status in both Retail and EBS
TAX_DVM	RETL_ID, EXT_SYSTEM_ID	This maps the Tax code (VAT) between Oracle Retail and EBS

The DVM/XREF table RFI_XREF_DVM has the following table structure:

Table 6–4 RFI_XREF_DVM table structure

Column Names	Description
CATEGORY_TYPE	The DVM or XREF name. The below DVM/XREF are Static Values and should be manually entered. The XREF here are manually synchronized. ADDRESS_COUNTRY_DVM BUSINESS_UNIT_DVM COA_GLELEMENT_DVM COA_GLELEMENT_RESA_DVM COA_GLELEMENT_RMS_DVM COA_STATUS_DVM CURR_CODE_DVM CURR_CONV_TYPE_CODE_DVM FREIGHT_TERMS_XREF LANGUAGE_CODE_DVM ORG_ID_XREF PAYMENT_TERMS_XREF RMS_GL_MSG_NOTIFICATION ReIM_AP_MSG_NOTIFICATION ReIM_GL_MSG_NOTIFICATION STATE_DVM SUPPLIER_ADDRESS_TYPE_DVM SUPPLIER_PRIMARY_SITE_FLAG_DVM SUPPLIER_STATUS_CODE_DVM TAX_DVM XREF values inserted by Supplier Integration Adapter SUPPLIER_XREF SUPPLIER_SITE_XREF
CATEGORY_TYPE_DESC	Description of the DVM or Xref
COMMON_ID	Common identifier for the record. Make sure the Common Id entered for DVM's are below 25000. The Integration Adapter uses database sequence RFI_XREF_SEQUENCE which starts from 25000.
RETL_ID	Retail value
EXT_SYSTEM_ID	EBS or PSFT value
EXT_SYSTEM	External system name. Hardcode to "EBS" or "PSFT" based on integrating oracle Financial application.

RFI - Domain Data Cross Reference Graphical User Interface

The RFI console now includes a new page "Domain Data Cross Reference" for viewing, searching, browsing the Cross References (XREF) and DVM records setup in RFI.

Figure 6–3 RFI - Domain Data Cross Reference Graphical User Interface

ID	Category Type	Category Type Description	Retail ID	External System ID
2009	SUPPLIER_NOTIFICATION_DVM	SUPPLIER_NOTIFICATION	MAIL_SUBJECT	Errr Supplier Adapter Create/Update Service
2010	SUPPLIER_STATUS_CODE_DVM	Supplier Active Status mapping A - A	A	A
2011	SUPPLIER_STATUS_CODE_DVM	Supplier In-Active Status mapping I - I	I	I
2012	SUPPLIER_ADDRESS_TYPE_DVM	Supplier Address Type mapping - 00	00	PAY_SITE_FLAG
2016	COA_STATUS_DVM	Chart of Account In-Valid Status mapping invalid - FALSE	invalid	FALSE
2016	CURR_CODE_DVM	Errr	EUR	EUR

When user navigates to the Domain Data Cross Reference page, it displays the list of all XREF and DVM records in RFI. User can search for specific records based on a field value using the Search By form in the page. In order to search for records, select corresponding field name in the 'Search By' list based on which the search needs to be done. And enter the value to search for in the adjacent text box.

The search will query and display records that match the search string entered. The search is also case-insensitive and has wild card searches.

Example: select Search By 'Category Type' and enter 'dvm' (without quotes) in the search text box, and click 'Search', the page will display all the records with Category Type containing 'dvm' string, say, records with Category Type such as, 'COA_STATUS_DVM', 'SUPPLIER_ADDRESS_TYPE_DVM', 'CURR_CODE_DVM', 'DVM_STATE', 'RFI_DVM_FOR_BUSINESS_UNIT' and so on.

Clicking 'Refresh' button in the page will refresh the page with list of all records. The page will also highlight the record count statistics i.e., 'No. Of Records' fetched / displayed.

In cases when the search string is not found or in the DVM table with matching criteria, error message is displayed indicating no record matching i.e 'No data found for the specified search criteria'.

Handling Errors

This section discusses how you can handle errors in the application.

Currency Exchange Rate, Supplier Information, GL Account Validation Integration Flows

The errors are logged in CurrencyRate.log, Supplier.log, GLAccount.log log files respectively. These log files are created in the Application Server where RFI application is deployed.

The logs can be viewed from the RFI Adapter Manager Screens. The RFI Adapter Manager can be accessed using the URL:

`http://<Application Server Name>:<Port>/<RFI Application Deployed Name>`

The following information is available in the logs

- DVM/XREF mapping not available
- Any error returned by Web service
- Any RFI application errors

Payment Terms - In case of PeopleSoft integration

The errors are logged in PaymentTerms.log log file. This log file is created in the Application Server where RFI application is deployed.

ODI Interfaces

ODI interfaces log the messages in RFI_ODI_LOGS table in RFI Schema available in RFI database. If there are any transformation errors due to DVM/XREF, then the Retail Staging tables are updated with the following values and the number of records with transformation error is logged in the RFI_ODI_LOGS table.

Table 6–5 Transformation errors updated in Retail Staging tables

Retail Staging Table	Column	Value
STG_FIF_GL_DATA	STATUS	TRANSFORM_ERROR
IM_FINANCIALS_STAGE	ODI_SESSION_NUM	-2
IM_AP_STAGE_HEAD	ODI_SESSION_NUM	-2
IM_AP_STAGE_DETAIL	ODI_SESSION_NUM	-2

Any other ODI errors during execution are logged in the RFI_ODI_LOGS table.

If there are any interface errors or transformation error records, an error notification is sent from RFI Adapter Manager to the To Email Address list specified during RFI deployment. The adapter logs can be viewed from the RFI Adapter Manager Screens. The RFI Adapter Manager screens can be accessed using the URL:

<http://<Application Server Name>:<Port>/<RFI Application Deployed Name>>

Global Logs

Global logs for Adapter Timers are logged in RfiGlobal.log file and can be viewed from the RFI Adapter Manager Screens. For more information about the errors generated by Oracle Retail or Oracle applications, see that product's documentation.

Understanding the RFI Administration User Interface

RFI provides an Administration UI where the Integration adapter timers could be started/stopped and also the logs can be viewed for the individual adapters. The RFI Administration user interface can be accessed using the URL:

<http://<Application Server Name>:<Port>/<RFI Application Deployed Name>>

Scheduling Adapters

Schedulers are created for the RFI Integration Adapters at the time of RFI Application deployment. The following adapter schedule can be updated by changing values of below mentioned properties configured at the time of deployment:

- Currency Rate
 - scheduler.currencyRate.timer.delyToStart
 - * Start time in minutes from the time of deployment or restart of Application Server.
 - scheduler.currencyRate.timer.interval

* Interval, the time between the initial run to the next run in minutes

Similarly, for:

- Supplier
 - scheduler.supplier.timer.delyToStart
 - scheduler.supplier.timer.interval
- ODI Error Mail Notification
 - scheduler.mail.timer.delyToStart
 - scheduler.mail.timer.interval
- Payment Terms - For PeopleSoft integration only
 - scheduler.paymentTerms.timer.delyToStart
 - scheduler.paymentTerms.timer.interval

The adapters can be stopped/started from the RFI Adapter Manager Screens Logs. The errors are logged in CurrencyRate.log, Supplier.log, GLAccount.log log ,PaymentTerms.log(only for PeopleSoft integration) files respectively. These log files are created in the Application Server where the RFI application is deployed. The logs can be viewed from the RFI Adapter Manager Screens. The RFI Adapter Manager can be accessed using the URL:

http://<Application Server Name>:<Port>/<RFI Application Deployed Name>

ODI interfaces logs the messages in RFI_ODI_LOGS table in RFI Schema available in Retail Database. If there are any transformation errors due to DVM/XREF, then the Retail Staging tables are updated with the following values:

Table 6–6 Transformation errors updated in Retail Staging tables

Retail Staging Table	Column	Value
STG_FIF_GL_DATA	STATUS	TRANSFORM_ERROR
IM_FINANCIALS_STAGE	ODI_SESSION_NUM	-2
IM_AP_STAGE_HEAD	ODI_SESSION_NUM	-2
IM_AP_STAGE_DETAIL	ODI_SESSION_NUM	-2

The logs can be viewed from the RFI Adapter Manager Screens. The RFI Adapter Manager can be accessed using the URL:

http://<Application Server Name>:<Port>/<RFI Application Deployed Name>

If there are any interface errors or transformation error records, the Error Notification is sent from RFI Adapter Manager to the To Email Address list specified during RFI deployment.

Global Logs

Global Logs for Adapter Timers are logged in RfiGlobal.log file and can be viewed from the RFI Adapter Manager screens.

Figure 6-4 RFI Adapter Manager Screen

The screenshot displays the Oracle Retail RFI Adapter Manager interface. At the top, it shows the Oracle logo and 'RETAIL RFI Integration Manager'. A navigation bar includes 'Home', 'Adapter Manager', 'Domain Data Cross Reference', and 'RFI Application Logs'. The main content area is divided into two sections: 'Service Adapters' and 'Bulk Adapters'.

Service Adapters Table:

Name	Source	Destination	Status	Start / Stop	Start Time	View Log
CurrencyRate	Financial	RMS	↑	(Stop)	Mon Aug 31 00:38:46 EDT 2015	
Supplier	Financial	RMS	↑	(Stop)	Mon Aug 31 00:38:46 EDT 2015	
GLAccount	ReIM, RMS, ReSA	Financial	↑			
RFI Error Email Notification	ReIM, RMS, Financial, RFI	Email	↑	(Stop)	Mon Aug 31 00:38:46 EDT 2015	

Bulk Adapters Table:

Name	Source	Destination	Description	Last Run	View Log
RMS To Financial - Account Entry	RMS	Financial		NO_LAST_RUN_DATA	
ReIM To Financial - Account Entry	ReIM	Financial		NO_LAST_RUN_DATA	
ReIM To Financial - Invoice Entry	ReIM	Financial		NO_LAST_RUN_DATA	

At the bottom of the screen, there is a copyright notice: 'Copyright © 2015, Oracle and/or its affiliates. All rights reserved.'

In the above screen, the option of Payterms Service Adapter would be available only if PeopleSoft is the Oracle Financials system.

Retail Hybrid Integration with EBS using BDI Applications

Hybrid Cloud Integration

Problem: Most of the Retail applications (RMS/ReIM) are on cloud but EBS is on premises. It utilizes a hybrid cloud model for the integration to happen. There is a limitation in hybrid cloud integration. ODI has issues interacting with remote database tables using JDBC.

Solution: Oracle Retail Bulk Data Integration (BDI) is able to move the data from one end (source) to the other end (destination) using REST service calls. This moves the retail schema data from the cloud to the on-premises retail proxy schema where ODI looks for further data processing. BDI implementation has to take place at the retail application side (RMS, REIM and retail integration application, RFI).

The Oracle Retail Financial Integration (RFI) layer serves as an intermediate thin layer of application between the financial application (EBS) and the Oracle Retail applications. This integration remains synchronized with the Edge applications.

Figure 7-1 RFI EBS Hybrid Cloud Architecture

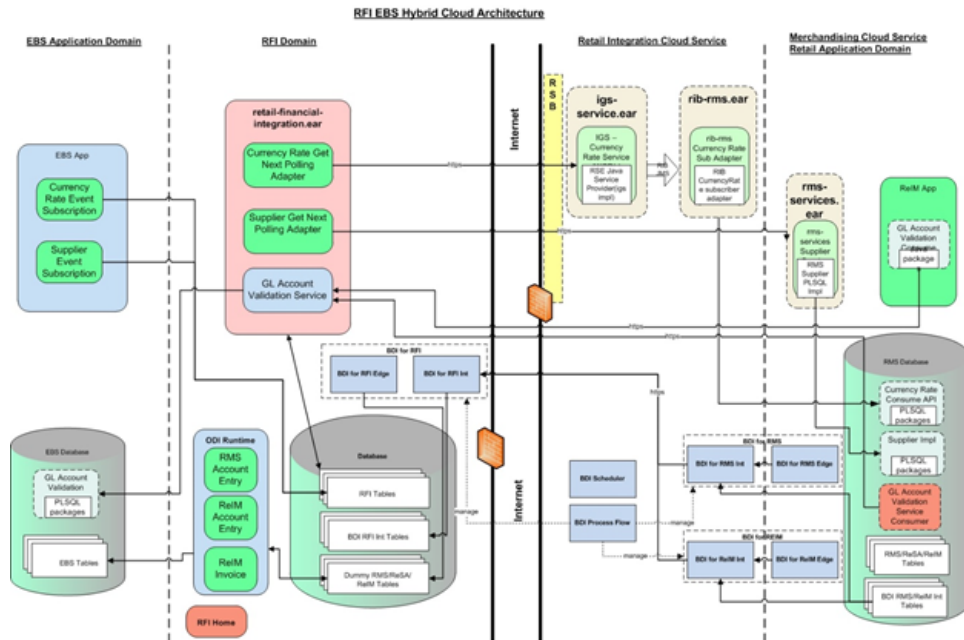


Table 7-1 Hybrid Cloud Topology

Applications to be installed	Hybrid Topology	On-Premises Topology
RMS-EDGE, REIM-EDGE	Required	N/A
BDI-RMS, BDI-REIM	Required	N/A
BDI-RFI	Required	N/A
BDI-PROCESSFLOW	Required	N/A
BDI-SCHEDULER	Optional	N/A
ODI	Required	Required
RFI	Required	Required
EBS	Required	Required
RIB, RIB-RMS	Required	Required

Implementation Details

The RMS-Edge and ReIM-Edge applications’ (sender side) jobs are used to read the data from the retail schema (RMS, ReIM) tables and write the data to the outbound tables of the integration schema. The BDI-RMS and BDI-ReIM applications’ jobs are used to read data from the outbound tables and write to csv files.

The BDI-RFI application (receiver side) includes uploader and importer jobs. The uploader job moves the data from the csv files to the retail proxy schema inbound tables. Once data is available in the inbound tables, the importer job moves the data from the inbound tables to invoice matching financial tables. After moving the data to the retail proxy schema, ODI scripts transfer the data to DVM and EBS tables.

BDI Job Admin Application Implementation

RMS-Edge Application

Embedded jobs: FinGenLdgr_Tx_ExtractorJob

DB Procedures: FIN_GEN_LDGR_UP

DB Package: BDI_FINANCIAL_SQL

This procedure is written by the RMS application to populate the bdi *_OUT tables present in the BDI integration schema using the BDI Extractor API. The Edge application schema should have write permission to the BDI integration schema

The FIN_GEN_LDGR_UP procedure reads data from the Stg_Fif_GI_Data table and writes to the Fif_GI_Data_Out table.

ReIM-Edge Application

Embedded jobs: InvcMtchAp_Tx_ExtractorJob, InvcMtchFin_Tx_ExtractorJob

DB Procedures: INVC_MTCH_AP_STAGE_UP, INVC_MTCH_FIN_STAGE_UP

DB Package: REIM_BDI_SQL

These procedures are written by the ReIM application to populate the bdi *_OUT tables present in the BDI integration schema using the BDI Extractor API. The Edge application user should have write permission to the BDI integration schema

The INVC_MTCH_AP_STAGE_UP procedure reads data from the Im_Ap_Stage_Head and Im_Ap_Stage_Detail tables and writes to the Im_Ap_Head_Out and Im_Ap_Detail_Out tables respectively.

The INVC_MTCH_FIN_STAGE_UP procedure reads data from the m_Financials_Stage table and writes to the Im_Financials_Out table.

BDI-RMS Application

Embedded jobs: FinGenLdgr_Tx_DownloaderAndTransporterToRfiJob

The above BDI job reads data from the Fif_GI_Data_Out table and writes to a csv file.

BDI-ReIM Application

Embedded jobs: InvcMtchAp_Tx_DownloaderAndTransporterToRfiJob
InvcMtchFin_Tx_DownloaderAndTransporterToRfiJob

The InvcMtchAp_Tx_DownloaderAndTransporterToRfiJob BDI job reads data from the Im_Ap_Head_Out and Im_Ap_Detail_Out tables and writes to the corresponding csv files.

The InvcMtchFin_Tx_DownloaderAndTransporterToRfiJob BDI job reads data from the Im_Financials_Out table and writes to the corresponding csv file.

BDI-RFI Application

Embedded jobs: InvcMtchAp_Tx_UploaderJob, InvcMtchFin_Tx_UploaderJob, FinGenLdgr_Tx_UploaderJob, InvcMtchAp_Tx_ImporterJob, InvcMtchFin_Tx_ImporterJob, FinGenLdgr_Tx_ImporterJob

DB Procedures: RFI_FinGenLdgr_Tx_Import.import_FinGenLdgr_Tx RFI_InvcMtchAp_Tx_Import.import_InvcMtchAp_Tx RFI_InvcMtchFin_Tx_Import.import_InvcMtchFin_Tx

The `InvcMтчAp_Tx_UploaderJob` BDI job reads data from the csv files and writes to the `Im_Ap_Head_In` and `Im_Ap_Detail_In` tables respectively.

The `InvcMтчFin_Tx_UploaderJob` BDI job reads data from the csv file and writes to the `Im_Financials_In` table.

The `FinGenLdgr_Tx_UploaderJob` BDI job reads data from the csv file and writes to the `Fif_Gl_Data_In` table.

The `RFI_InvcMтчAp_Tx_Import.import_InvcMтчAp_Tx` procedure moves the data from `Im_Ap_Head_In`, `Im_Ap_Detail_In` tables to `Im_Ap_Stage_Head` and `Im_Ap_Stage_Detail` respectively.

The `RFI_InvcMтчFin_Tx_Import.import_InvcMтчFin_Tx` procedure moves the data from the `Im_Financials_In` table to `Im_Financials_Stage`.

The `RFI_FinGenLdgr_Tx_Import.import_FinGenLdgr_Tx` procedure moves the data from the `Fif_Gl_Data_In` table to `Stg_Fif_Gl_Data`.

Purge Process: After successful execution of the ODI scripts, the already processed records in the transaction tables present in the BDI RFI INT schema should be cleared. The execution of purge logic is based on the respective column values present in the transaction tables given below.

Table 7-2 Transaction Table Values

Table	Column	Value
STG_FIF_GL_DATA	PROCESSED_FLAG	Y
IM_AP_STAGE_HEAD	ODI_SESSION_NUM	-1
IM_AP_STAGE_DETAIL	ODI_SESSION_NUM	-1
IM_FINANCIALS_STAGE	ODI_SESSION_NUM	-1

After each successful process flow execution, the import process purges the data which satisfies the above condition.

BDI Process Flow Application Implementation

BDI-Processflow Application

There are three different process flows for this integration.

InvcMтчAp_Tx_ProcessFlow_From_REIM.flo: Launching this process moves data from the `Im_Ap_Stage_Head` and `Im_Ap_Stage_Detail` tables of the ReIM schema (cloudside) to the same tables present in the ReIM proxy schema (on-premises).

InvcMтчFin_Tx_ProcessFlow_From_REIM.flo: Launching this process moves data from the `Im_Financials_Stage` table of the ReIM schema (cloud side) to the same table present in the ReIM proxy schema (on-premises).

FinGenLdgr_Tx_ProcessFlow_From_RMS.flo: Launching this process moves data from `Stg_Fif_Gl_Data` table of the RMS schema (cloud side) to the same table present in the RMS proxy schema (on-premises).

Note: The `Rms-Edge-App`, `Reim-Edge-App`, `Bdi-Rms-App`, `Bdi-Reim-App`, `Bdi-Processflow-App` will be deployed in a cloud environment.

BDI Scheduler Application Implementation

BDI-Scheduler Application

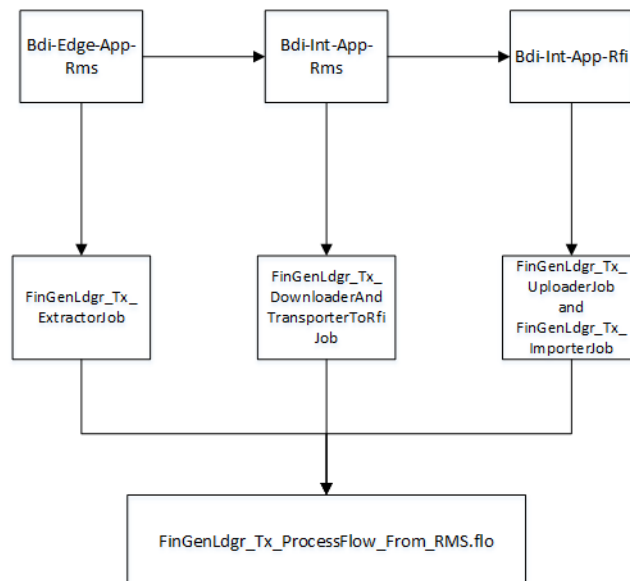
The application can be deployed in any domain but it is recommended that you deploy it in the BDI domain with a separate managed server.

Below are the schedules which will trigger the respective process flows at scheduled interval of time.

- InvcMtchAp_Tx_From_REIM_Schedule_Action.sch -> InvcMtchAp_Tx_ProcessFlow_From_REIM.flo
- InvcMtchFin_Tx_From_REIM_Schedule_Action.sch -> InvcMtchFin_Tx_ProcessFlow_From_REIM.flo
- FinGenLdgr_Tx_From_RMS_Schedule_Action.sch -> FinGenLdgr_Tx_ProcessFlow_From_RMS.flo

Implementation Details: Three different BDI process flows as follows:

rms_rfi-no_split_flows



reim_rfi-no_split_flows

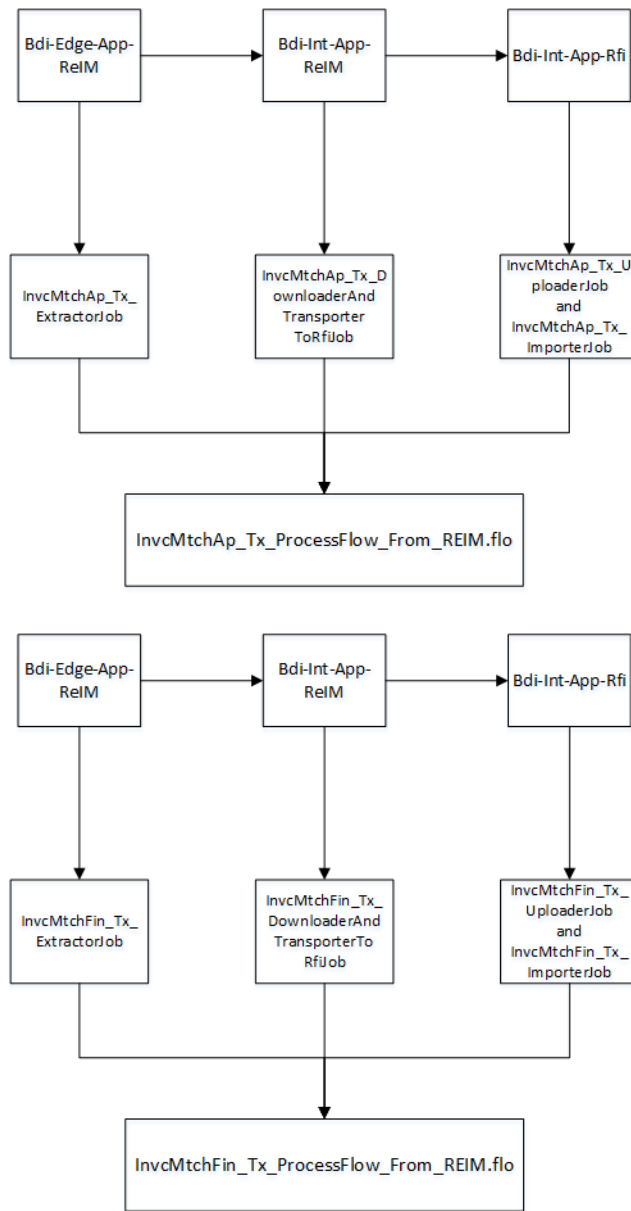


Table and Interface Details

Table 7-3 Table and Interface Details

App Name	Table Name	Interface Name	Interface Short Name	BDI Out Table Name	BDI In Table Name
ReIM	Im_Financials_Stage	InvcMtchFin_Tx	Im_Financials	Im_Financials_Out	Im_Financials_In
ReIM	Im_Ap_Stage_Head	InvcMtchAp_Tx	Im_Ap_Head	Im_Ap_Head_Out	Im_Ap_Head_In
ReIM	Im_Ap_Stage_Detail	InvcMtchAp_Tx	Im_Ap_Detail	Im_Ap_Detail_Out	Im_Ap_Detail_In
RMS	Stg_Fif_Gl_Data	FinGenLdgr_Tx	Fif_Gl_Data	Fif_Gl_Data_Out	Fif_Gl_Data_In

Process Flow and Job Details

Table 7-4 Process Flow and Job Details

Process Flow Name	Extractor Job -> App Name	Downloader Transporter Job -> App Name	Uploader Job -> App Name	Importer Job -> App Name
InvcMtchFin_Tx _ProcessFlow_ From_REIM.flo	InvcMtchFin_Tx_ ExtractorJob.xml -----> Bdi-Edge-App-ReIM	InvcMtchFin_Tx_ DownloaderAnd TransporterToRfi Job.xml -----> Bdi-Int-App-ReIM	InvcMtchFin_Tx_ UploaderJob.xml -----> Bdi-Int-App-Rfi	InvcMtchFin_Tx_ ImporterJob.xml -----> Bdi-Int-App-Rfi
InvcMtchAp_Tx _ProcessFlow_ From_REIM.flo	InvcMtchAp_Tx_ ExtractorJob.xml -----> Bdi-Edge-App-ReIM	InvcMtchAp_Tx_ DownloaderAnd TransporterToRfi Job.xml -----> Bdi-Int-App-ReIM	InvcMtchAp_Tx_ UploaderJob.xml -----> Bdi-Int-App-Rfi	InvcMtchAp_Tx_ ImporterJob.xml -----> Bdi-Int-App-Rfi
FinGenLdgr_Tx _ProcessFlow_ From_RMS.flo	FinGenLdgr_Tx_ ExtractorJob.xml -----> Bdi-Edge-App-Rms	FinGenLdgr_Tx_ _DownloaderAnd TransporterToRfi Job.xml -----> Bdi-Int-App-Rms	FinGenLdgr_Tx_ UploaderJob.xml -----> Bdi-Int-App-Rfi	FinGenLdgr_Tx_ ImporterJob.xml -----> Bdi-Int-App-Rfi

Configuring Web Service Security

Web service providers are secured using security policies. There are many security policies available to use in the WebLogic server. When a service provider is secured with a particular policy, the service consumer will have to provide the required information (like username, password, certificate etc) for the provider to validate, authenticate and secure the service invocation. Two such security policy configurations are certified by Oracle for RFI. These are referred to as Policy A and an unsecured policy in this document.

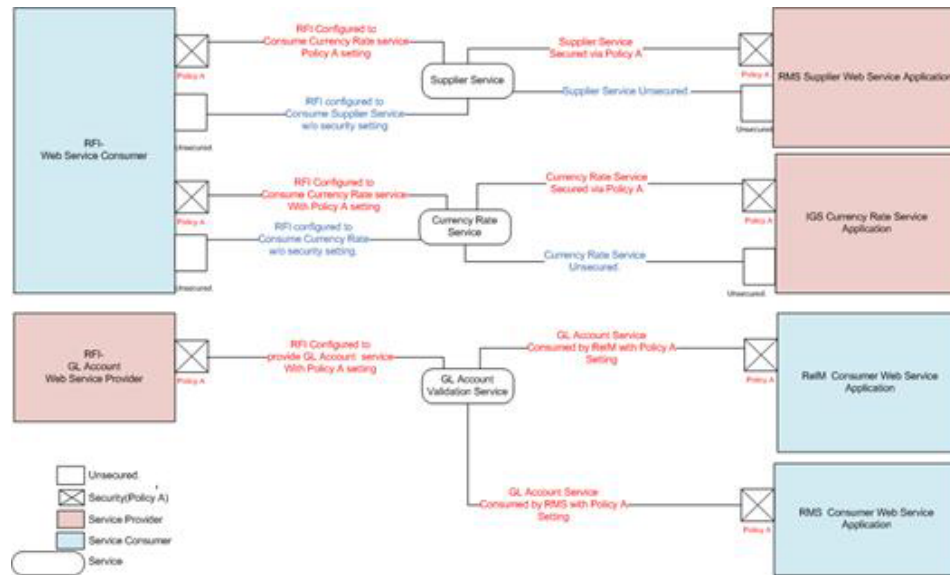
- Policy A is Username Token over HTTPS. The transport layer of the service invocation uses https for this policy. The consumers will have to provide the username and password for invoking the service.

For more information on configuring security, see the *OracleRetail Services Backbone Security Guide*.

When RFI is a Web service consumer, either Policy A or unsecured can be setup for the provider service. The consumer must be configured with corresponding Policy A or Unsecured setting. For example, if RMS supplier service is configured with policy A, the RFI Web service consumer should be configured to Policy A.

When the RFI acts as a Web service provider, service can be either unsecured or secured only with Policy A. For example, for GL Account validation Web service, supplied by RFI can be secured using only policy A else it needs to be unsecured; policy setting in RMS should be configured to use Policy A.

Figure 8–1 Security Configurations



The above diagram shows the security configurations that are needed for web service providers and consumers. If RMS Supplier Web service is configured with Policy A configuration then the corresponding RFI consumer should be configured to use Policy A.

The RFI GL account Web service can be configured secured with only Policy A or it can be unsecured.

. For invoking services over SSL, RFI will need to provide a username and password for authentication of the service. User credentials are recommended to be stored in Oracle credential wallets. These wallets should be accessible to service consumer.

RFI will also need to provide a username and password for user authentication with the service. User credentials are recommended to be stored in a wallet file.

RFI uses credential wallets, a password-protected container, for storing authentication information.