

**Siebel CRM Integration to Oracle® Incentive
Compensation 3.1 - Implementation Guide**

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Siebel CRM Integration to Oracle Incentive Compensation 3.1 - Implementation Guide

Part No. E20496-04

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Preface

Welcome to the Siebel CRM integration to Oracle Incentive Compensation Implementation Guide, Release 3.1.

Oracle Application Integration Architecture (AIA) provides the following guides and resources for this release:

Oracle AIA Guides

- Oracle Fusion Middleware Infrastructure Components and Utilities User's Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.5.0)
- Oracle Fusion Middleware Installation and Upgrade Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.5.0)
- Oracle Fusion Middleware Concepts and Technologies Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.5.0)
- Oracle Fusion Middleware Reference Process Models User's Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.5.0)
- Oracle Fusion Middleware Migration Guide for Oracle Application Integration Architecture 11g Release 1 (11.1.1.5.0)
- Oracle Fusion Middleware Developer's Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.5.0)

Additional Resources

The following resources are also available:

Resource	Location
Oracle Application Integration Architecture: Product-to-Guide Index	Oracle Technology Network: http://www.oracle.com/technetwork/index.html
Known Issues and Workarounds	My Oracle Support: https://support.oracle.com/
Release Notes	Oracle Technology Network: http://www.oracle.com/technetwork/index.html
Documentation updates	My Oracle Support: https://support.oracle.com/

Common Terms Used in this Guide

This table lists the common terms used in this guide:

Term	Definition
AIA	Oracle Application Integration Architecture
BPEL	Business Process Execution Language
Business Unit	A business unit is a logical organization of resources. A business unit controls the data access of employees that are attached to it. In Siebel CRM, a Business Unit is also known as an Organization.
Calculation	Calculation is a process used by OIC to calculate commission and bonus plans for sales representatives. Commission incentives use transaction-based compensation, and bonus incentives are based on information other than individual transactions.
Compensated participants	Participants compensated through OIC. OIC pays employees, partners, partner organizations, and so forth.
Compensation plan	A compensation plan defines the commission or bonus and non-monetary credits such as managerial points or production credits, for the sales representatives. It uses plan elements to reflect variations of commission or perhaps a bonus that is not based on transaction information, and to track the non-monetary credits.
EBS	The Oracle E-Business Suite of applications
Employee	An employee is a user who is associated with a position in a division with the company.
ODI	Oracle Data Integrator
ORM	Oracle Resource Manager
OIC	Oracle Incentive Compensation
Organization	An organization provides a container where positions can be associated with data. An organization can be internal or partner.
Partner	Siebel PRM user A Partner is a user who is associated with a position in a division within an external organization.
Position	A position represents reporting hierarchies. A position within a company is associated with a division and the organization to which the division belongs. A position within a partner organization is associated with a division and the partner organization to which the division belongs.

Term	Definition
	A position is associated with only one organization.
Resource	Operating Unit defined compensated participant. For instance a single resource may be two salespersons: one in US and another in Canada.
Revenue Class	A revenue class is a user-defined category of sales for which an organization awards compensation. Each revenue class represents a different type of sale for which the organization pays compensation. By assigning revenue classes, you specify different ways in which each resource can earn compensation.
Roles	A role encompasses one or more job descriptions and job titles. In OIC, compensation plans and resources are assigned to roles.
Sales User	Siebel Sales user
Siebel	Siebel Business Application (Siebel CRM)
Siebel PRM	Siebel Partner Relationship Management
UOM	Unit of Measure
User	<p>A user is anyone who can log into the database and has a responsibility that defines what application views are accessible.</p> <p>Users can be associated with multiple organizations if they hold multiple positions.</p>

Chapter 1: Understanding the Siebel CRM Integration to Oracle Incentive Compensation

This chapter provides an overview of the Oracle Opportunity to Commission Integration Pack for Siebel CRM and Oracle Incentive Compensation and discusses:

- Key benefits
- Participating applications overview
- Solution assumptions and constraints
- Best practices

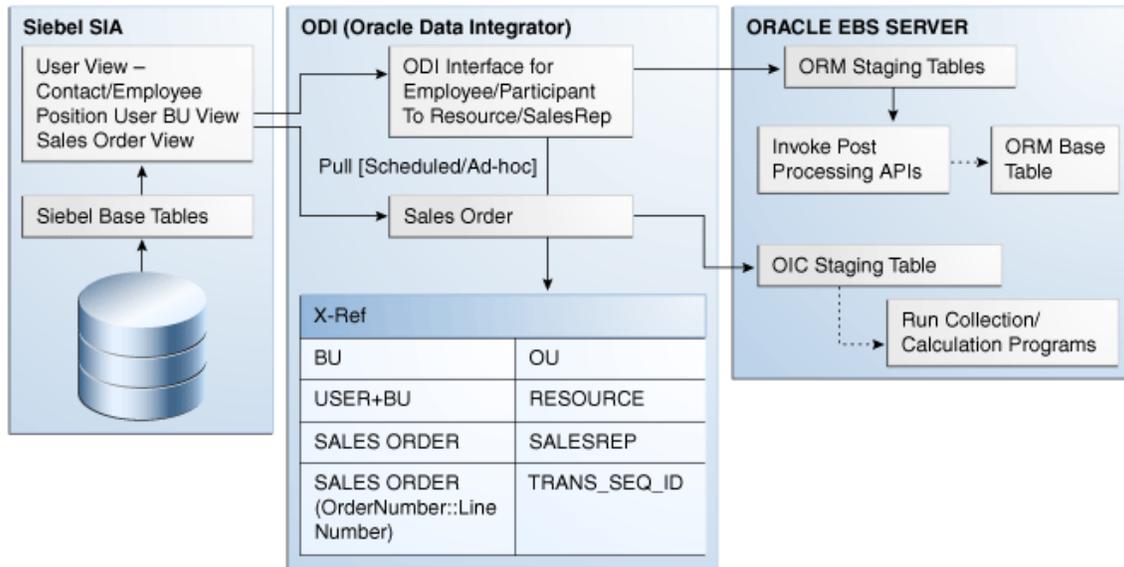
Siebel CRM Integration to Oracle Incentive Compensation Overview

One of the main objectives of this integration is to offer Siebel CRM customers a reduced implementation effort and risk in leveraging Oracle Incentive Compensation (OIC) as the sales compensation solution. In addition, this integration offers and supports some business best practices relative to what information to collect and how, from Siebel sales orders for compensation purposes.

The integration between Siebel Sales, Siebel Partner Relationship Management (PRM) and OIC & Oracle Resource Manager (ORM) is designed to:

- Synchronize users in Siebel Sales and partners in Siebel PRM to resources in ORM.
- Synchronize sales orders in Siebel Order Management to transactions in OIC.

This graphic illustrates a high level overview of the business processes for the integration between Siebel CRM and E-Business Suite (EBS):



High level overview

Note: These synchronizations are one way from Siebel CRM to EBS.

Key Benefits

The Siebel CRM Integration for Oracle Incentive Compensation is the keystone of a sustained integration for commissioning on Siebel sales orders. The PIP eliminates the need for manual synchronization or custom integrations between the two systems, thereby providing accurate, timely commissions enabling sales alignment, and optimizing the power of commissions to drive desired sales behavior.

Participating Applications Overview

These applications are participating in this integration:

- Oracle Incentive Compensation
- Oracle Resource Manager
- Siebel Sales
- Siebel Partner Relationship Management
- Siebel Order Management

Oracle Incentive Compensation

The Oracle Incentive Compensation application is used to determine cash and other tangible rewards, such as points for the sales employees. You can use OIC to pay employees, partners, customers, and any non-employee role or organization.

Oracle Resource Manager

You can use Oracle Resource Manager (ORM) to define resources/participants, roles, teams, groups, and roll-up hierarchies that are recognized by OIC, when calculating compensation amounts.

Siebel Sales users and Siebel PRM partners are periodically synchronized into ORM.

As part of ORM setups, these imported resources can then be:

- Placed into teams, groups, or roll-up hierarchies for crediting and roll up.
- Assigned sales compensation roles to define what compensation plans resources get.
- Assigned to pay groups within OIC for payment distribution.

Each Siebel user or partner that is imported is created as a resource and a sales person. There can be a one-to-many relationship between resources and E-Business Suite sales persons because resources are operating unit agnostic and EBS sales persons are operating unit aware.

Siebel Sales

Siebel Sales is designed to improve pipeline visibility, effectiveness of sales procedures, and forecast ability.

Siebel Partner Relationship Management

Siebel Partner Relationship Management (PRM) automates and streamlines the relationship between brand owner companies and their channel and alliance partners, distributors, resellers, agents, brokers, or dealers.

Prospective partners can use Siebel PRM to view information about the brand owner company's partnership program, and to apply to be a partner. The brand owner's partner manager must approve the application, convert the prospect into a partner, and provide the partner company with login access. The brand owner can add partner employees or can assign this task to a delegated administrator at the partner company.

Siebel Order Management

Siebel Order Management enables employees such as salespeople and call center agents to create and manage quotes and orders and manage these through their entire life cycle. Siebel Order Management can be tightly integrated with back-office systems, enabling users to perform tasks such as checking credit and confirming availability, as well as monitoring the fulfillment process.

Asset-based ordering enables quotes and orders to be created based on a customer's existing assets. Asset-based ordering is particularly useful in supporting companies whose product offerings include complex service products, such as phone services and equipment.

Solution Assumptions and Constraints

These are the assumptions and constraints:

Assumptions

- Only users or partners who are marked for compensation in Siebel CRM are synchronized from Siebel CRM to OIC.
- Resources in ORM are created with type/category Other.
- All employees and partners in Siebel having end date earlier than the date when this integration was run for the first time are not synchronized to EBS.
- The start date and end date of a sales representative in ORM is same as that of the underlying resource in ORM.
- Position Type in Siebel is mapped to OIC Roles for a Resource.
- The ODI layer converts the Siebel date and time values from GMT to the EBS server time zone, before sending the data to EBS.

Constraints

- Users whose employee number is NULL are not created as sales representatives in ORM.
- Reversal of sales orders is not supported because completed sales orders cannot be reversed in Siebel Order Management.
- Only completed sales orders in Siebel CRM are synchronized to OIC.
- Sales orders update functionality is supported through a different Order Number.

Best Practices

The PIP is based on industry best practices, and offers an integration that is easy to deploy, configure, operate, maintain, and upgrade.

Integration best practices are prescribed and supported that understand how best to leverage the functionality from both Siebel CRM and OIC. These best practices include the ability to:

- Determine who is eligible for sales credit down to the order line level.
- Compensating on the margin down to the order line level.
- Leveraging promotions in Siebel Order Management to identify when bundles have been sold.

Chapter 2: Synchronization of Compensated Participants

This chapter provides an overview of synchronization of sales users and discusses:

- Integration flows
- Entity mappings
- Cross-references
- Siebel CRM interfaces
- Core AIA components
- Integration services

Synchronization of Compensated Participants Overview

Salespersons in Siebel Sales, and partners in Siebel PRM are given compensation in accordance to the sales they have made. Compensation is an important benefit that drives an organization's growth.

OIC calculates compensation based on various parameters. To calculate compensations, resources must be copied from the Siebel CRM system to the EBS system.

In this integration flow, ORM collaborates with Siebel CRM to load user data. OIC leverages ORM to store compensated participants' data and hierarchies. Employees and Partners, which exist as Users in Siebel CRM and assigned to a compensable position, are periodically synchronized with Resources in ORM. This integration flow ensures that any modifications to synchronized attributes of Siebel CRM are reflected in ORM.

This integration flow can be divided into these two synchronization flows:

- Full synchronization of employees and partners in Siebel Sales and Siebel PRM: This integration flow enables all employees and partners in Siebel CRM to be synchronized with ORM. This is generally the initial synchronization.
- Incremental synchronization of employees in Siebel Sales and Siebel PRM: This incremental process synchronizes employee and partner changes since the last synchronization. After this synchronization process, resource and sales representative information in ORM is in sync with employee and partner data in Siebel CRM.

Note: Once users in Siebel CRM are synchronized with salespersons and resources in ORM, you should not update the synchronized information or attributes, which are synchronized, in ORM. If you update information, then these updates are not synchronized with the Siebel CRM system. However, other attributes are available that are not synchronized, which you can update, without losing any information during synchronization.

The synchronization process of compensated participants supports these integration flows:

- Full synchronization of employees in Siebel Sales
- Full synchronization of partners in Siebel PRM
- Incremental synchronization of employees in Siebel Sales
- Incremental synchronization of partners in Siebel PRM

Participating Applications

- Siebel Sales
- Siebel PRM
- Oracle Resource Manager

Prerequisites

Siebel CRM

- Set up users in Siebel Sales and Siebel PRM.

Only those users will be synchronized who have the COMPENSABLE option set to True at their position.

- Run the ODI scenario, CREATESIEBELVIEWS (v.001) to create the SEBL_USER_VIEW and SEBL_PARTY_PER_VIEW Siebel database views. In addition, SEBL_SALES_ORDER_VIEW Siebel database view is also created for synchronizing Sales Orders.

For more information, see *Siebel Applications Administration Guide* and *Siebel Partner Relationship Management Administration Guide*.

Oracle Resource Manager

- Map Position Type in Siebel to Role in EBS, which drives the assignment of compensation plans.
- Each Siebel CRM user or partner imported is created as a resource and a sales person.

EBS

The USER and RESPONSIBILITY should be set in the AIAConfigurationProperties.xml file on the FMW host. This is used to set the EBS applications context that is used while interacting with ORM APIs.

For example,

```
<ModuleConfiguration moduleName="Ebiz">
  <Property name="USER">MFG</Property>
  <Property name="RESPONSIBILITY">System Administrator</Property>
</ModuleConfiguration>
```

Solution Assumptions and Constraints

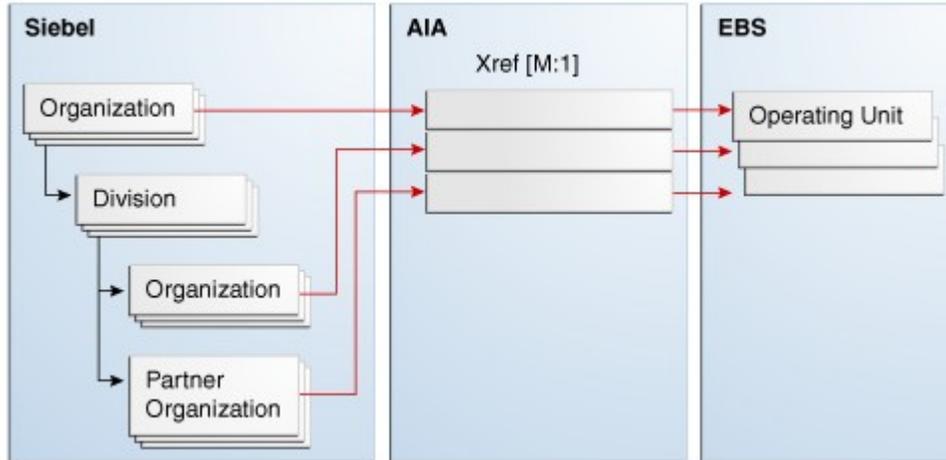
- Users in Siebel CRM, having at least one compensable position, are synchronized with resources in ORM.
- Sales representatives created in ORM are leveraged in OIC when you:
 - Assign a new salesperson to a compensation plan, using role, or
 - Assign a new salesperson to a compensation analyst in OIC.
- Resources in ORM are created with type/category Other.
- The start date and end date of a sales representative in ORM is same as that of the underlying resource in ORM.
- All employees and partners in Siebel having end date earlier than the date when this integration was run for the first time are not be synchronized to EBS.
- If a user record is deleted in Siebel CRM, then it cannot be communicated to ORM.
It must be deleted manually, in ORM, on a periodic basis as part of scheduled maintenance.
- The Compensable option is applied at the Position level.
Hence, it is derived from the user's position.
- If an employee is re-hired, then ORM stores the employee's start date as the original start date in the first tenure with the organization.

If the rehired employee is assigned a new user ID in Siebel, then after the synchronization process, ORM creates a new resource for the corresponding rehired employee.
- Position Type in Siebel is mapped to OIC Roles for a Resource.
- Users, in Siebel CRM, whose employee number is NULL, are not created as Salesrep in EBS, but the resources are created for such users.

Performing Setup Tasks

1. Map Organization in Siebel to Operating Unit in EBS.

This graphic illustrates the mapping between Organization and Operating Unit.



Organization - Operating Unit mapping

Many Siebel CRM organizations can be mapped to a single Operating Unit (OU) in EBS.

2. Populate the COMPENSATION_ORGANIZATION_ID cross-reference manually.

For more information about populating the cross-reference manually, see *Oracle Fusion Middleware Installation and Upgrade Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1*, "Installing Siebel CRM to OIC Integration", Performing Post-Installation Configurations, Populating the COMPENSATION_ORGANIZATION_ID Xref Manually.

3. Set the value of the profile option JTFRS: End Date Resource Child Entities to True.

Integration Flow

To synchronize users in Siebel CRM with resources in ORM:

1. Set up Salesperson in Siebel Sales and Partners in Siebel PRM.
2. Set up user specific data for roles and groups in ORM.
3. Run the **LOAD_SIEBELUSERDATATOEBIZ_PKG Version 001** scenario to load user specific data to EBS ORM database interface tables.

ORM APIs are invoked that copy data from interface tables to ORM base tables.

After successful synchronization:

- Resources are created in Resource Manger with attributes like category as 'Other' and Commissionable option set to Yes.
- For each resource, operating unit-specific sales representative(s) are created.

Perform these setups for ORM in OIC, after the synchronization process is over:

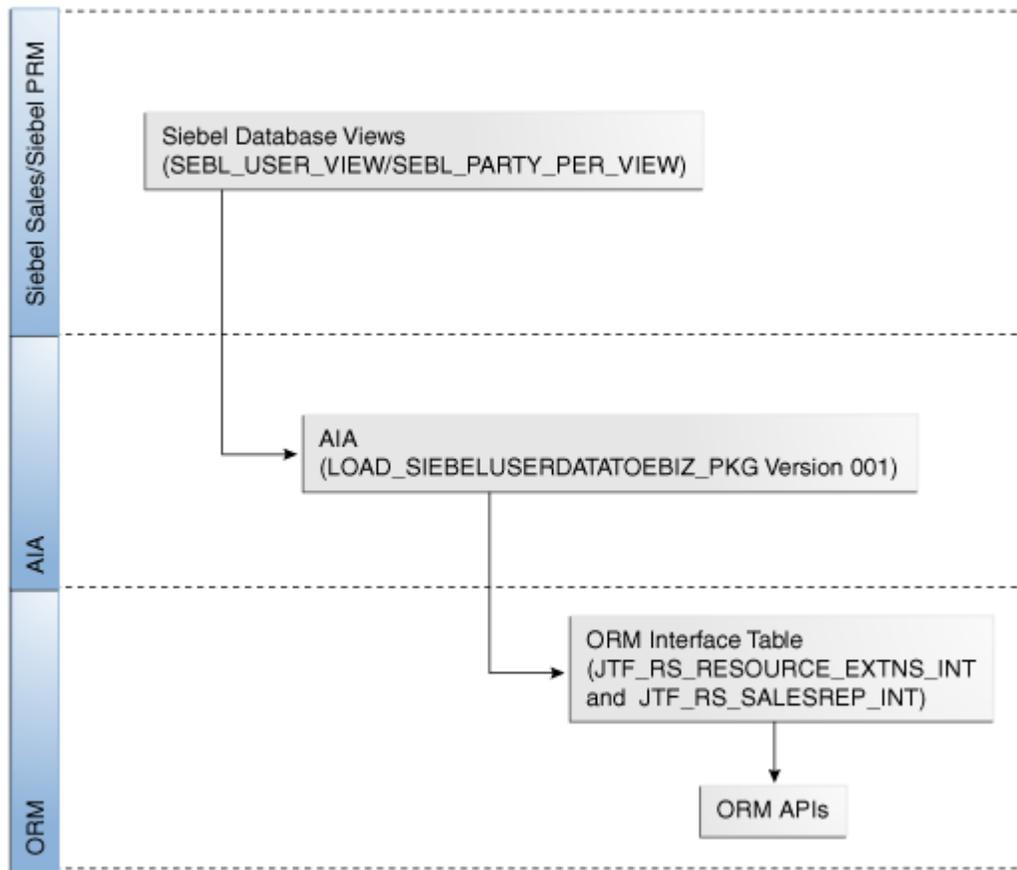
- Organize sales persons into teams or groups in a sales roll-up hierarchy
- Assign roles to sales persons to give them a compensation plan.
- Assign a compensation analyst to each sales person.

After these setups are completed OIC can calculate compensations for the resources.

For more information, see *Oracle Incentive Compensation User Guide*, "Assigning Compensation Plans, Pay Groups, and Payment Plans."

This diagram illustrates the overall flow for the integration of compensated participants:

Synchronization of Compensated Participants Integration Flow



Synchronization of compensated participants integration flow

Run the LOAD_SIEBELUSERDATATOEBIZ_PKG Version 001 scenario to invoke the integration process.

This integration flow performs these functions:

1. The ODI process copies data from the SEBL_USER_VIEW and SEBL_PARTY_PER_VIEW Siebel database views to JTF_RS_RESOURCES_INT and JTF_RS_SALESPERSONS_INT interface tables.
2. The ODI process transfers data from Siebel database views to ORM interface tables, in a sequence, for each entity. T

The data is transferred as per the mapping described in the [Prerequisite](#) section.

3. If any errors occur when data is copied from Siebel database views to ORM interface tables, then the ODI process invokes the AIAAsyncErrorHandler service and sends notification to the user.

For more information about setting email notifications, see [Configuring Worklists and Email Notifications](#).

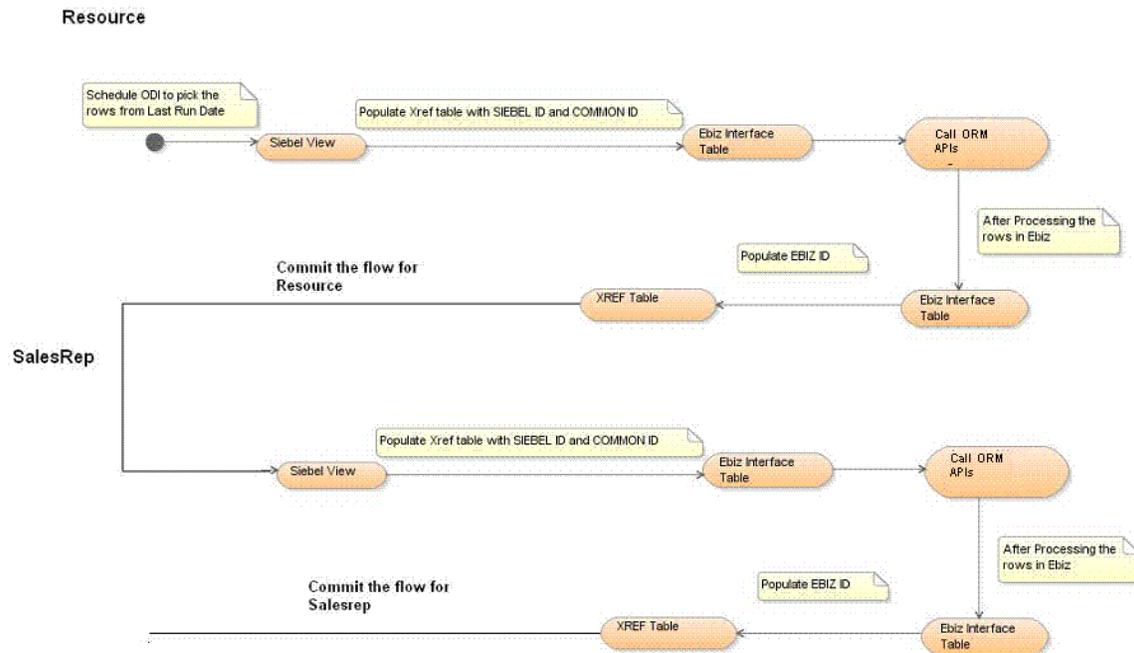
4. ORM post-processing APIs copies data from the interface tables and loads them into the ORM base tables.
5. In case of any errors in the ORM APIs or ORM interface tables the XREF rows for Siebel and Common are deleted along with the ORM interface tables' rows that have errors.
6. If any errors occur in ORM post-processing then the ORM APIs return the error codes to the AIA layer for error handling and sending notification to the user.

Note: The direction of data flow is only from Siebel CRM to EBS. The reverse data flow is not supported in this integration. If any user data is modified or created in ORM, then those changes are not reflected in Siebel CRM. Any subsequent synchronization of the same data from Siebel CRM to ORM may overwrite the changes already made in the source system.

ODI Process

The ODI process transfers data from corresponding Siebel database views to ORM interface tables, in sequence, for each entity. It calls the ORM APIs at each step and then updates the cross-references before proceeding to the next entity.

This flow diagram illustrates the data flow in this ODI process.



Synchronization of compensation participants data flow

The ODI process retrieves those rows from Siebel database views that have the last update date (LUD) later than the Last Run Date (LRD). For initial full synchronization, the value of LRD is 1900-01-01 00:00:00, so all the rows from Siebel database views are retrieved. However, for incremental synchronization the ODI process retrieves only those records from Siebel database views whose last update date is later than the last run date.

After the ODI process retrieves data from the Siebel database views, it resets the value of LRD to the current date. The next time the ODI process is run, it retrieves the updated records only.

On successful run of the process resources are created in ORM with attributes:

- Category as 'Others'
- Role Type as 'Sales Compensation'
- Commissionable option as 'Yes'

For each resource in ORM, OU specific sales representative is created. If a user in Siebel CRM belongs to multiple organizations, then based on the Siebel Org to EBS OU mapping multiple sales representatives are created for a single resource.

Entity Mappings

This table lists the entity mapping between Siebel CRM and EBS:

Siebel Entity	EBS Entity
Siebel Sales: Employee	Resource Manager: Resource
Siebel PRM: Partner	Resource Manager: Resource

Resources

Employees and Partners in Siebel CRM are mapped to Resource in ORM. Siebel uses the SEBL_USER_VIEW database view to map resources.

This mapping uses the RESOURCE_ID cross-reference, which is a 1:1 mapping between the Siebel entity UserID and the EBS entity ResourceID.

Salesrep

The combination of User and Organization in Siebel CRM is mapped to Salesrep in ORM. This integration flow considers these scenarios to capture Users and Organization information from Siebel CRM:

- The User to BU attributes association changes in the S_PARTY_PER table in Siebel.
- Position changes to a different Organization.
- Email address of User changes in the S_USER table in Siebel.

Siebel CRM uses the SEBL_PARTY_PER_VIEW database view to map resources to Salesrep in EBS.

The SEBL_PARTY_PER_VIEW database view uses the SALESREP_ID cross-reference to map the combination of Siebel UserID and BU_ID to EBS SalesrepID. This view also uses the COMPENSATION_ORGANIZATION_ID cross-reference to map Organization in Siebel with Operating Unit in EBS.

Cross-References

Cross-references map and connect the records within the application network, and enable these applications to communicate in the same language. The integration server stores the relationship in a persistent way so that others can refer to it

These are the cross-references used in this integration flow:

Xref	Siebel	EBS	Mapping
RESOURCE_ID	User_ID	RESOURCE_ID	1: 1
SALESREP_ID	User_ID::BU_ID	SALESREP_ID	M:1

Xref	Siebel	EBS	Mapping
COMPENSATION_ORGANIZATION_ID	BU_ID	ORG_ID/OU_ID	M:1

For more information, see *Oracle Fusion Middleware Developer's Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1* and the *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*, "Working with Cross References."

Siebel CRM Interfaces

Siebel CRM provides these database views to complete this integration flow.

- **SEBL_USER_VIEW**: This database view maps resources in Siebel CRM with sales representatives in OIC.

It retrieves these values:

- Created Date
- Last Update Date
- User ID
- Name
- Email
- Employee number
- Start date
- End Date
- Partner Flag

- **SEBL_PARTY_PER_VIEW**: This database view maps parties and positions in Siebel CRM with sales representatives in OIC.

It retrieves these values:

- Created date
- Last update date
- Organization ID
- User ID
- Partner Flag
- Email
- Employee number

Core AIA Components

This AIAConfigurationProperties.xml file stores the configuration information needed to run the integration.

Integration Services

These are the integration services delivered with this integration:

- AIAAsySncErrorHandlingBPELProcess
- Sync User Data

Sync User Data

This ODI service synchronizes users in Siebel CRM with resources and sales representatives in ORM. You can schedule this ODI to run periodically to synchronize data since the last synchronization, or run on an ad-hoc basis for a given period of time. The Sync User Data service uses the LOAD_SIEBELUSERDATATOEBIZ_PKG Version 001 scenario to synchronize resources and sales representatives data.

For more information about scheduling the ODI service to synchronize resources, see [Synchronizing Resources and Sales Representatives](#).

This service performs these functions:

1. **Synchronize resources:** The LOAD_SIEBELRESOURCEDATATOEBIZ_PKG Version 001 scenario synchronizes Resources.
2. **Synchronize sales representatives:** The LOAD_SIEBELSALESREPDATATOEBIZ_PKG Version 001 scenario synchronizes Salesreps.

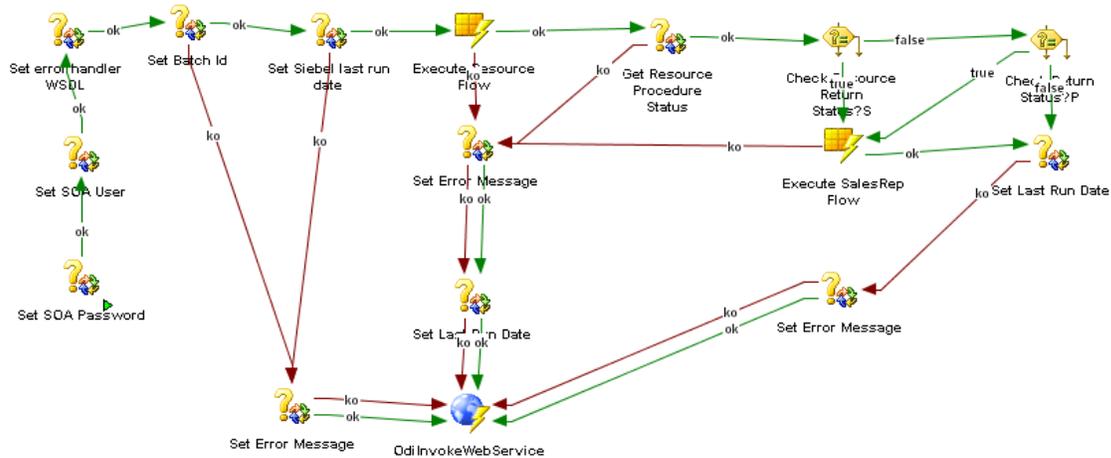
If at any stage an error occurs, then an appropriate error message variable is set and the AIAAsyncErrorHandler service is invoked, with the error message and session identifier as parameters.

You can set up AIA error handling configuration details on the **Error Notifications** page. Specify the **ServiceName** value as follows:

- Load_SiebelUserDataToEbiz_Pkg
- Load_SiebelSalesRepDataToEbiz_Pkg
- Load_SiebelResourceDataToEbiz_Pkg

For more information about setting email notifications, see [Configuring Worklists and Email Notifications](#).

This flow diagram illustrates the data flow in the Sync User Data service:



Synchronization of user data integration service

The Sync User Data service internally invokes the Sync Resources and Sync Salesreps services to synchronize resources and sales representatives.

Sync Resources

This ODI service is used to synchronize users in Siebel CRM with resources in EBS. The Sync Resources service uses the LOAD_SIEBELRESOURCEDATATOEBIZ_PKG Version 001 scenario to perform these functions:

1. User data is transferred from Siebel CRM to EBS interface table and Xref is populated for Source and Common value.
2. ORM APIs transfer data from interface tables to ORM base tables.
3. The Sync Resources service then checks if any error occurs during transferring data.
 - a. If the return value is 'S', then Xref is populated for the target values and value of the PVV_RESOURCE_FLOW_STATUS variable is set to 'S'.
 - b. If the return value is 'P', then target value of Xref is populated for successfully transferred rows.

The Xref values are deleted for rows that were not transferred. A log containing the error message for the rows that were not transferred is created in the ODI server and an error notification with the log file name is sent to the User.

- c. If the return value is 'E', then Xref value is deleted for all the rows and a notification with the error message is sent to the user.

Sync Salesreps

This ODI service is used to synchronize users in Siebel CRM with sales representatives in EBS. The Sync Salesreps service uses the LOAD_SIEBELSALESREPDATATOEBIZ_PKG Version 001 scenario to perform these functions:

1. User and position data is transferred from Siebel CRM to EBS interface table and Xref is populated for Source and Common value.
2. ORM APIs transfer data from interface tables to ORM base tables.
3. The Sync Salesreps service then checks if any error occurs during transferring data.
 - a. If the return value is 'S', then Xref is populated for the target values and value of the PVV_SALESREP_FLOW_STATUS variable is set to 'S'.
 - b. If the return value is 'P', then target value of Xref is populated for successfully transferred rows.

The Xref values are deleted for rows that were not transferred. A log containing the error message for the rows that were not transferred is created in the ODI server and an error notification with the log file name is sent to the User.

- c. If the return value is 'E', then Xref value is deleted for all the rows and a notification with the error message is sent to the user

For more information about setting email notifications, see [Configuring Worklists and Email Notifications](#).

Chapter 3: Synchronization of Sales Orders

This chapter provides an overview of sales orders synchronization and discusses:

- Integration flows
- Entity mappings
- Cross-reference
- Siebel CRM interfaces
- Oracle Incentive Compensation (OIC) interfaces
- Core AIA Components
- Integration services

Synchronization of Sales Order Overview

CRM applications typically create transactions for which variable compensation needs to be calculated and paid. Using this integration flow implementation user can synchronize sales orders in Siebel Order Management as transactions in OIC. Once these sales orders are synchronized with transactions in OIC, OIC calculates the incentives and variable compensations based on various parameters.

New and changed sales orders from Siebel Order Management need to be periodically synchronized from Siebel Order Management to OIC collection staging tables. New or completed sales order with status Completed are loaded for calculation.

Sales order lines in Siebel CRM consists of revenue details, sales credit receivers and other attributes. After this synchronization is completed, these details are ported to the OIC system, which then calculates the compensations. This way the incentives are based on actual sales orders or lines in Siebel CRM.

For more information about sales order, see *Siebel Order Management Guide*.

All sales order with the status Completed, as of a specified date and time, in Siebel Order Management are synchronized with transactions in OIC.

For more information about transactions, see *Oracle Incentive Compensation Implementation Guide*, Collection Setups.

These roles take part in this integration flow:

- Sales Operations Administrator
- Partner Operations Administrator

- OIC System Administrator
- Compensation Manager

Note: The synchronization of sales order is a one-way process from Siebel Order Management to OIC.

Participating Applications

- Siebel Order Management
- Oracle Incentive Compensation

Solution Assumptions and Constraints

This integration assumes these statements to be true:

- Only Users or Partners who are marked for compensation in Siebel are synchronized to OIC.
- Siebel order lines are associated with the positions of users in a sales team. In EBS, a position translates to a role using position type. This role is an individual role that is assigned to a user.
- Only completed sales orders in Siebel are synchronized to OIC.
- Sales orders update functionality is supported through a different order number.
- New or updated sales order, with status Completed, is identified by status date.

Status date of an order is automatically updated when the status of the order is changed. Customers can make the Status Date field as read-only at user interface level to avoid updating it manually.

Prerequisites

- Organizations in Siebel Order Management must be mapped to Operating Units in OIC as per the COMPENSATION_ORGANIZATION_ID Xref.
- Data should be set up for roles, exchange rate, compensation plans, and revenue classes.
- Sales credit receivers in Siebel Order Management order lines must be synchronized to resources in OIC.
- Product lines for Opportunities in Siebel Sales and Siebel PRM must be manually mapped to Revenue Classifications in OIC.
- Set up these DVMs: COMPENSATION_UNIT_OF_MEASURE, CURRENCY_CODE, ADDRESS_COUNTRY ID, STATE, SALESORDER_ACTIONCODE, and SIEBEL_BU_TO_PREPROCESSFLAG

- Map Position Type in Siebel to Role in EBS, which drives the assignment of compensation plans.
- Assign sales compensation roles in ORM to define what compensation plans resources get.
- Assign resource in ORM to pay groups within OIC for payment distribution.

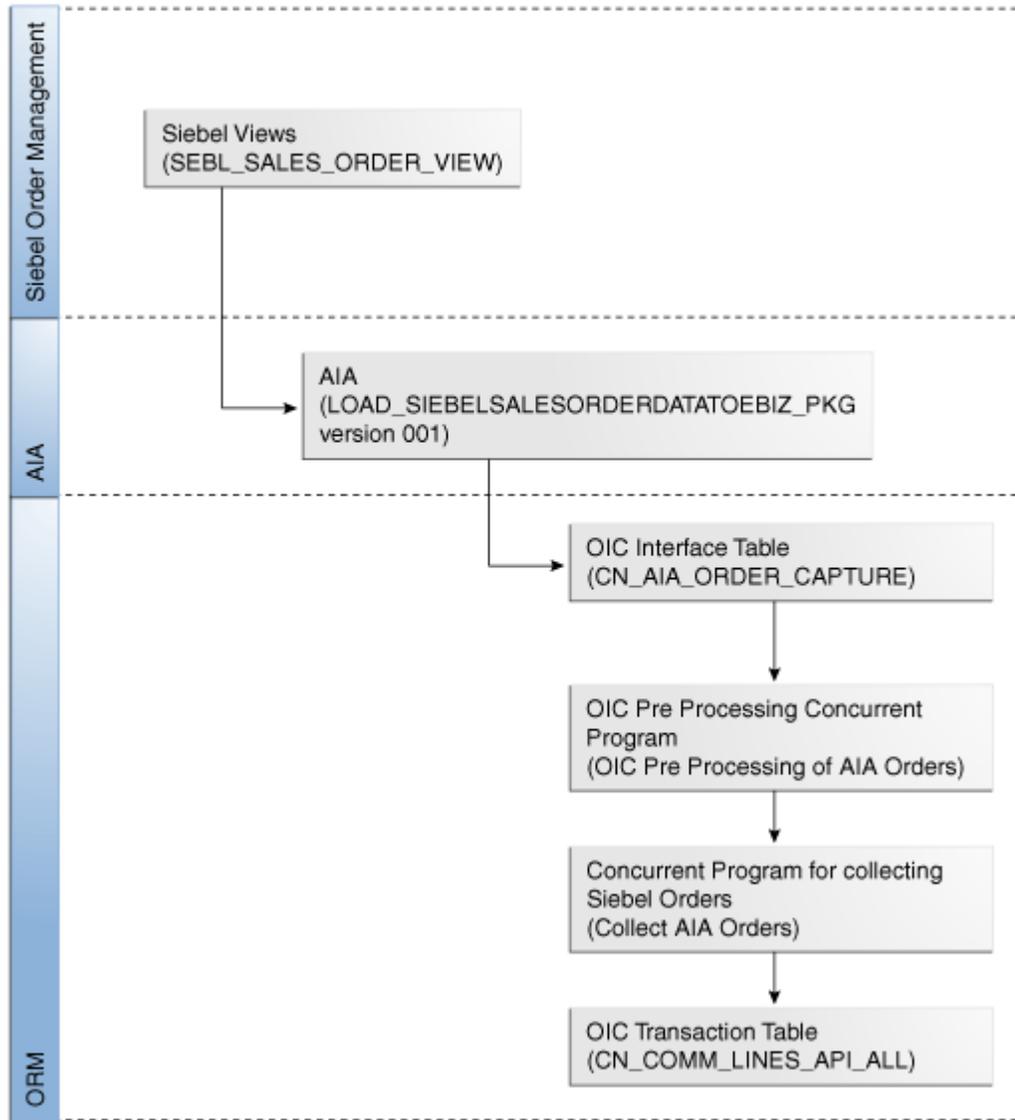
Integration Flow

To synchronize sales orders in Siebel with transactions in OIC:

1. Create sales order in Siebel Order Management.
Siebel Order Lines contain the Revenue details, Sales Credit Receivers and other required attributes.
2. Set up Compensation Plans, Elements and Rules in OIC.
3. Run the **LOAD_SIEBELSALESORDERDATATOEBIZ_PKG Version 001** scenario to load new completed sales order transactions for calculation to EBS OIC database interface tables.
4. Run the **OIC Pre-processing of AIA Order** concurrent program in OIC.
5. Run the **OIC Collect AIA Orders** concurrent program in OIC to invoke the collection programs.
OIC creates transactions as per sales orders in Siebel and calculates the actual compensation.

This diagram illustrates the overall data flow for the integration of sales orders:

Synchronization of Sales Orders Integration Flow



Synchronization of sales orders integration flow

To synchronize sales order data from Siebel CRM to OIC:

1. Run the LOAD_SIEBELSALESORDERDATATOEBIZ_PKG Version 001 scenario to invoke this integration process.

The ODI process copies data from the SEBL_SALES_ORDER_VIEW Siebel database view into the CN_AIA_ORDER_CAPTURE OIC interface table.

If any error occurs during data transfer, then the ODI layer invokes the AIAAsynchHandler service and sends email notifications to the user. You can set up AIA error handling configuration details on the **Error Notifications** page. Specify the **ServiceName** value as Load_SiebelSalesOrderDataToEbiz_Pkg to configure error handling.

For more information about setting email notifications, see [Configuring Worklists and Email Notifications](#).

The **OIC Pre Processing of AIA Orders** concurrent program pre-processes the data.

The **OIC Collect AIA Orders** concurrent program transfers data from the interface table to the CN_COMM_LINES_API_ALL table.

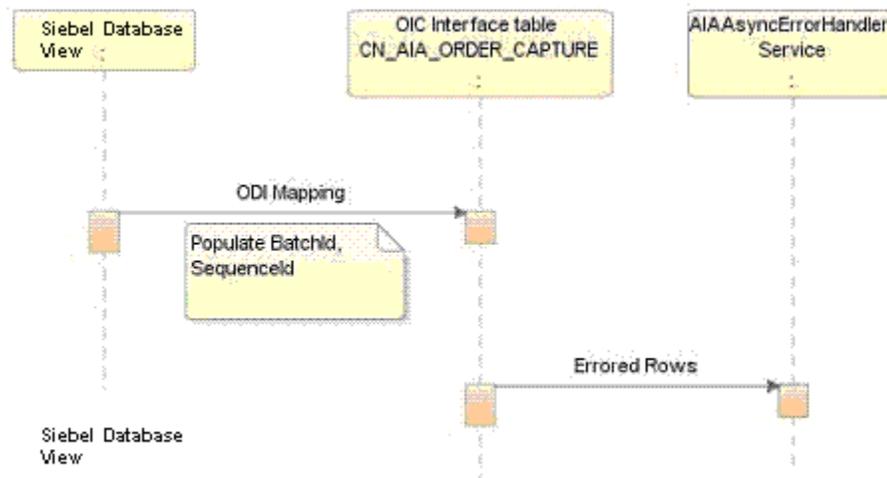
Note: The direction of data flow is only from Siebel CRM to AIA and EBS. The reverse data flow is not supported in this integration. If any user data is modified or created in OIC or ORM, those changes are not reflected in Siebel CRM.

For each unprocessed individual transaction line identifier in the Notification Table, you can build as many compensation transactions as you need. In transaction source, it is necessary to join the Order Lines and Sales Credits tables. Suppose three salespeople earned credit for a particular Order Line. The Order Line identifier is stored in the Notification Table, but you need a join to the Sales Credits table to find out that three transactions need to be created and three salespeople must be identified. Run the OIC collection program to create these transactions in the EBS database.

ODI Process

This ODI process that runs at regular intervals maps data between the SEBL_SALES_ORDER_VIEW Siebel database view and the OIC CN_AIA_ORDER_CAPTURE OIC interface table.

This sequence diagram illustrates the data flow from Siebel CRM to OIC.



Synchronization of sales order ODI process

The ODI process copies data from Siebel database view into OIC interface table as per the mappings and retrieves those rows from Siebel database views that have the last update date (LUD) later than the Last Run Date (LRD). For initial full synchronization, the value of LRD is 1900-01-01 00:00:00, so all the rows from Siebel database views are retrieved. However, for incremental synchronization, the ODI process retrieves only those records from Siebel database views whose LUD is later than the LRD.

Note: The ODI process uses the value of the STATUS_DT column in the Siebel view and data is filtered based on the completion status of the order.

After the ODI process retrieves data from the Siebel database views, it resets the value of LRD to the current date. The next time that the ODI process is run, it retrieves the updated records.

These DVMs are used while mapping:

- ADDRESS_COUNTRYID
- CURRENCY_CODE
- SALESORDER_ACTIONCODE
- SIEBEL_BU_TO_PREPROCESS_FLAG
- STATE
- COMPENSATION_UNIT_OF_MEASURE

For more information, see [Entity Mappings](#).

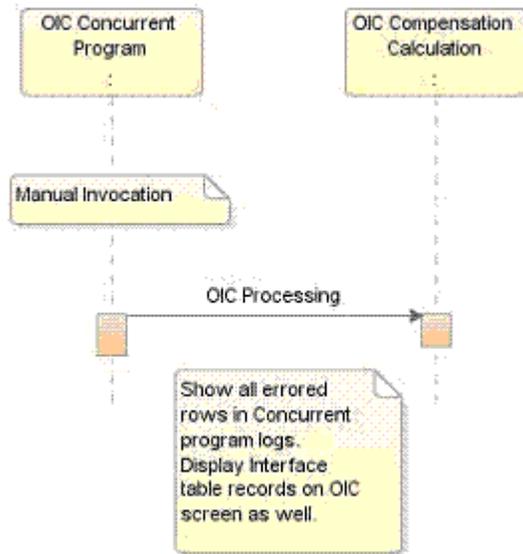
Along with all the attributes that are mapped, the ODI generates a batch ID using a GUID to group a set of rows to be processed together. The ODI also generates a sequence ID using the CN_AIA_ORDER_CAPTURE_S EBS sequence to identify the sales order transactions rows.

If any error occurs, when data is copied, then ODI invokes the AIAAsyncErrorHandler services and send email notification to the user.

For more information about setting email notifications, see [Configuring Worklists and Email Notifications](#).

OIC Data Collection Program

This sequence diagram describes the data flow from the CN_AIA_ORDER_CAPTURE interface table to the CN_COMM_LINES_API_ALL table.



OIC Data Collection program sequence diagram

The **OIC Pre Processing of AIA Orders** concurrent program pre-processes the data that is in the CN_AIA_ORDER_CAPTURE interface table. It sets the value of pre-process option in the interface table to 'T' or 'F', depending on the audience being B2B or B2C.

The pre-processing program creates:

- Exchange rates based on order currency and OIC functional currency
- Employee numbers
- Revenue types

After populating the data, the procedure, CN_CUST_AIA_ORD_PROC_PUB.ct_aia_om_pre_processing, is invoked for customer specific data processing.

The integration loads Siebel transactions, which are denormalized order lines and sales representatives from the order header sales team, into the CN_AIA_ORDER_CAPTURE table. These records are set with the value of the PRE-PROCESS option as 'F'.

Note: Records whose PRE-PROCESS option has value 'F' are collected into the CN_COMM_LINE_API_ALL table. Records whose PRE-PROCESS option has value 'Y' are eligible for pre-processing but these records are not collected until they are pre-processed.

After pre-processing, you must manually run the **OIC Collect AIA Orders** concurrent program to load data into the CN_COMM_LINES_API_ALL table. This concurrent program retrieves data based on a specified date range for records whose pre-process option value is 'F'.

The orders are first copied into an intermediate notification table and a notification batch ID is allotted to these orders. The COLLECTED_FLAG field is updated for each row that is inserted in the notification table. These records are then inserted into the target OIC table.

OIC retrieves data for unique sequence IDs in a batch. If duplicate sequence IDs are available in different batches during a single collection program run, then OIC retrieves transactions with the minimum batch ID value.

The concurrent program log files display all the errors that have occurred during the collection process. These log files display the number of order lines that were inserted in the CN_COMM_LINES_API_ALL table along with their batch IDs. These log files also display the order numbers that were inserted in the notification table but were not successfully copied into the CN_COMM_LINES_API_ALL table.

Note: For any errors in OIC calculation process, OIC UI is utilized to correct the data in OIC interface table. For any errors in collection process, the data has to be re-loaded in OIC AIA interface table.

If SALESREP_ID is picked from the Siebel database view then the PRESERVE_CREDIT_OVERRIDE_FLAG in the CN_AIA_ORDER_CAPTURE table should be set to Y and the transaction is not allocated sales credit.

For more information about credit allocation setup, see *Oracle Incentive Compensation Implementation Guide*, "Credit Allocation Setups."

Entity Mappings

This table lists the mandatory mapping between Siebel CRM and OIC:

Siebel Base Table (Source)	Column (Source)	OIC Table (Target)	Column (Target)
N/A	N/A	CN_AIA_ORDER_CAPTURE	BATCH_ID
N/A	N/A	CN_AIA_ORDER_CAPTURE	TRANS_SEQ_ID
S_ORDER	STATUS_DT	CN_AIA_ORDER_CAPTURE	PROCESSED_DATE
S_ORDER_ITEM	CREATED_BY	CN_AIA_ORDER_CAPTURE	SALESREP_ID
S_ORDER	BU_ID	CN_AIA_ORDER_CAPTURE	ORG_ID

These are the domain value maps (DVMs) for this integration flow:

Name	Siebel Column	EBS Column (CN_AIA_ORDER_CAPTURE)	Description
ADDRESS_COUNTRYID	BL_COUNTRY, SH_COUNTRY	B_COUNTRY, S_COUNTRY	Mapping of country codes.
CURRENCY_CODE	AMT_CURCY_CD	AMT_CURCY_CD	Mapping of currency codes.
SALESORDER_ACTIONC	ACTION_CD	TRX_TYPE	Mapping of possible action codes

Name	Siebel Column	EBS Column (CN_AIA_ORDER_CAPTURE)	Description
ODE			on a sales order. The Siebel view retrieves rows only for action codes Add and Update.
SIEBEL_BU_TO_PREPROCESS_FLAG	BU_ID	PREPROCESS_FLAG	Mapping between Siebel BU and Pre-process option in AIA to set the value of OIC AIA interface table column for the Pre-process option.
STATE	BL_STATE, SH_STATE	B_STATE, S_STATE	Mapping of various states. Used in conjunction with ADDRESS_COUNTRYID.
COMPENSATION_UNIT_OF_MEASURE	UOM_CD	UOM_CD	Mapping of different units of measure.

Cross-References

Cross-references map and connect the records within the application network, and enable these applications to communicate in the same language. The integration server stores the relationship in a consistent way so that others can refer to it

These are the cross-references that are used in this integration flow:

Xref	Siebel	EBS	Mapping
SALESREP_ID	User_ID::BU_ID	SALESREP_ID	M:1
COMPENSATION_ORGANIZATION_ID	BU_ID	ORG_ID/OU_ID	M:1
COMPENSATION_SALESORDER_ID	OrderNumber::LineNumber	TRANS_SEQ_ID	1:1

For more information, see *Oracle Fusion Middleware Developer's Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1* and the Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite, "Working with Cross References."

Siebel CRM Interfaces

Siebel CRM provides the SEBL_SALES_ORDER_VIEW database view to complete this integration flow. It retrieves these values:

- DUNS_NUM
- STATUS_DT
- ACTION_CD
- ASSET_INTEG_ID

- ASSET_NAME
- ORDER_NUM
- LN_NUM
- EXTENDED_QTY
- AMT_CURCY_CD
- DISCNT_PERCENT
- TXN_AMT
- MARGIN_PERCENT
- ORIG_TXN_AMT
- ACCNT_ID
- OU_NUM_1
- ACCNT_NAME
- ACCNT_REGION
- ACCNT_TYPE_CD
- INDUSTRY_NAME
- BL_CITY
- BL_COUNTY
- BL_PROVINCE
- BL_STATE
- BL_ZIPCODE
- BL_COUNTRY
- SH_CITY
- SH_COUNTY
- SH_PROVINCE
- SH_STATE
- SH_ZIPCODE
- SH_COUNTRY
- PROD_ID
- PART_NUM
- PROD_NAME
- PROD_UOM_CD

- PROD_LN_NAME
- PAR_ORDER_ITEM_ID
- PROD_CLASS_NAME
- PROD_SERVICE_FLG
- PROD_TYPE_CD
- PRICE_TYPE_CD
- PROD_CD
- PROMO_NAME
- PROMO_PART_NUM
- ORDER_TYPE
- CAMPAIGN_CODE
- CAMPAIGN_NAME
- EVENT_CODE
- EVENT_NAME
- SALES_REP
- BU_ID

OIC Interfaces

These are the indices available for inbound integration to OIC:

Index Name	Table Name	Column Name
CN_AIA_ORDER_CAPTURE_N1	CN_AIA_ORDER_CAPTURE	TRANS_SEQ_ID
CN_AIA_ORDER_CAPTURE_N2	CN_AIA_ORDER_CAPTURE	PROCESSED_DATE
CN_AIA_ORDER_CAPTURE_N3	CN_AIA_ORDER_CAPTURE	PREPROCESS_FLAG & UPDATE_FLAG
CN_AIA_ORDER_CAPTURE_N4	CN_AIA_ORDER_CAPTURE	ORG_ID
CN_AIA_ORDER_CAPTURE_N5	CN_AIA_ORDER_CAPTURE	SALESREP_ID

Integration Services

The Sync Sales Orders integration service is delivered with this integration.

Sync Sales Orders

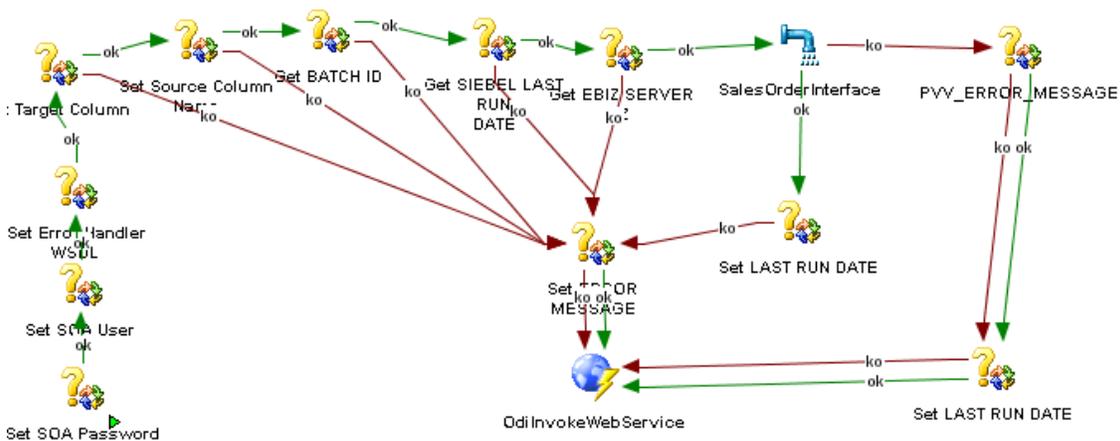
This ODI service synchronizes sales order transactions in Siebel Order Management with transactions in OIC. To achieve this data is transferred from the SEBL_SALES_ORDER_VIEW Siebel database view to the CN_AIA_ORDER_CAPTURE OIC interface table. The Sync Sales Order service uses the LOAD_SIEBELSALESORDERDATATOEBIZ_PKG version 001 scenario to synchronize sales orders.

You can schedule this ODI to run in these ways:

- Whenever ODI is executed, it synchronizes the data that is updated since the last time an ODI scenario was executed.
- Run on ad-hoc basis where the service can be run for a given period of time.

For more information about scheduling the ODI service to synchronize resources, see [Scheduling ODI Scenarios](#).

This diagram illustrates the data flow in the Sync Sales Order service:



Synchronization of sales orders integration service

Scenarios

The Sync Sales Order service uses these scenarios for loading respective DVM data:

- LOADACTIONCODEDVM version 001: Loads the SALESORDER_ACTIONCODE DVM
- LOADBUTOPREPROCESSFLAGDVM version 001: Loads the SIEBEL_BU_TO_PREPROCESS_FLAG DVM.
- LOADCOUNTRYDVM version 001: Loads the ADDRESS_COUNTRYID DVM.
- LOADCURRENCYCODEDVM version 001: Loads the CURRENCY_CODE DVM.
- LOADSTATEDVM version 001: Loads the STATE DVM.

- LOADUNITOFMEASUREDVM version 001: Loads the COMPENSATION_UNIT_OF_MEASURE DVM.

Chapter 4: Configuring the Siebel CRM Integration to Oracle Incentive Compensation

This chapter provides an overview of implementing the integration and discusses:

- Setting up participating applications
- Post-installation setup
- Loading domain value maps
- Scheduling ODI scenarios
- Handling errors
- Configuring Worklists and Email Notifications

Setting up Participating Applications

OIC, Siebel Sales, Siebel Partner Relationship Management (PRM), and Siebel Order Management must be set appropriately for the Opportunity to Commission: Siebel CRM to OIC integration to work properly. These sections describe these setups in details.

For more information about the application versions, see *Oracle Application Integration Architecture Installation Guide for Process Integration Packs Release 3.1*.

Setting Up Oracle Incentive Compensation

Before the integration, you must perform these operations:

- Mandatory dependencies and integration
- Application setups

Mandatory Dependencies and Integration

OIC requires these related products and components to be installed and implemented:

- Oracle Resource Manager
- Oracle General Ledger

Oracle Resource Manager is a core foundation component of E-Business Suite and is leveraged by OIC to define participants whether sales reps or partners and related team, group and hierarchies. Teams, groups, and hierarchies can be used to drive credit sharing or roll-ups.

Oracle General Ledger is leveraged by OIC to define financially oriented accounting information such as calendars, functional currencies, currency exchange rate, and so forth.

For more information, see *Oracle Incentive Compensation Implementation Guide*, “Mandatory Dependencies and Integrations.”

Application Setups

The setup steps for OIC are:

Setups	Navigation	Description	Reference
General Ledger		OIC uses periods and calendars from General Ledger to calculate commissions.	Oracle Incentive Compensation Implementation Guide, “General Ledger Setups”
Application parameters	Setup Tasks > Application Parameters	Here you identify the information you set up in General Ledger and set up ways for OIC to measure achievement and perform currency conversion.	Oracle Incentive Compensation Implementation Guide, “Application Parameters Setup”
Collection	Setup Tasks > Collection	<p>You must define from where OIC collects the transactions on which commission is paid.</p> <p>The integration loads Siebel transactions, which are denormalized order lines and sales representatives from the order header sales team, into the CN_AIA_ORDER_CAPTURE table. These records are set with the value of the Pre-Process option as ‘F’.</p> <p>As part of this integration, collections have been augmented to perform transformations of various elements, including exchange rate conversions, and so forth.</p> <p>This integration also provides a user hook within OIC’s AIA</p>	Oracle Incentive Compensation Implementation Guide, “Collection Setups”

Setups	Navigation	Description	Reference
		Pre-Processing cycle to run custom pre-processing code.	
Calculation	Setup Tasks > Calculation	Oracle Incentive Compensation performs calculation in two ways: Complete and Incremental. Complete calculation calculates all transactions in the interval, and it is the default setting. However, calculating the entire set of transactions can take a long time. Using Incremental calculation, the calculation engine processes only those transactions that have been newly loaded or affected by setup changes since the last calculation was run.	Oracle Incentive Compensation Implementation Guide, "Calculation Setups"
Payment	Payment > Setup Payment Parameters	You may integrate OIC with Oracle Payroll and Oracle Payables by configuring the payment parameters and mapping here.	Oracle Incentive Compensation Implementation Guide, "Payment Setups"
Credit Allocation	Setup Tasks > Credit Allocation	Credit allocation systematically applies a set of consistent rules to determine automatically who receives credit for a sales transaction and how much of a credit each person receives.	Oracle Incentive Compensation Implementation Guide, "Credit Allocations Setups"

For more information, see *Oracle Incentive Compensation Implementation Guide*.

In addition to these generic steps, you must perform these setups for this integration:

1. Run the **Replicate Seed Data** concurrent program from the **System Administration** responsibility for the required organization/operating unit.
2. Map AIA source table to OIC destination tables.
 - a. Navigate to Incentive Compensation Administrator > Configuration workbench.
 - b. Click the **Go To Task** icon for the Collection business area.
 - c. Click the **Go To Task** icon for the Define Collection Sources and Mapping task.
 - d. Search for the Collect AIA OM transaction source.
 - e. Click **Details** corresponding to Collect AIA OM, and then navigate to the **Column Mapping** tab.

- f. Map the required source columns with appropriate destination columns.
3. Generate Collection packages.
 - a. Navigate to the Incentive Compensation Administrator responsibility.
 - b. Select the appropriate operating unit.
 - c. Navigate to Configuration Workbench, then click Tasks, then Collection and then Generate Collection Packages.
 - d. Select **Collection** from AIA Orders as the transaction source.
 - e. Click the **Test Generate** button. If no errors occur then click the **Generate** button.
 4. Maintain compensation periods.
 - a. Navigate to the **Compensation Manager** responsibility.
 - b. Click **Maintain Compensation Periods** and verify that the periods are open for which the calculations are done.
 - c. If periods are closed, then open the periods.

For more information, see *Oracle Incentive Compensation User Guide*.

Setting Up Siebel Application

Before you send any data from Siebel CRM to EBS, you must set up the Siebel applications. This includes:

- Prerequisites
- Starting the application for the first time
- Entering license keys
- Selecting a data source
- Administrative tasks

Prerequisites

Once a Siebel application is successfully installed, you need to enter license keys so that you and your organization can access Siebel Sales, Siebel PRM, and Siebel Order Management.

For more information about prerequisites in setting up Siebel CRM, see *Siebel Applications Administration Guide*, “Getting Started Prerequisites.”

Starting the Application for the First Time

In order to begin setting up your Siebel application, you must log in with administrative responsibilities. The Siebel database server installation script creates a Siebel administrator account that you can use to perform administrative tasks. The default user ID and password are SADMIN and SADMIN (case-sensitive). Your database administrator may also have created a user ID and password that allows you to access the Siebel server and perform the required setup.

For more information about starting the Siebel applications, see *Siebel Applications Administration Guide*, “Starting the Application for the First Time.”

Entering License Keys

The Siebel license key is generated so that your organization's users can access the Siebel products that your organization has purchased. The license key is a series of numbers (up to 54 digits). Your organization's specific license key is included in the Welcome Package. You must enter this license key before you begin to use the Siebel product, products, or optional modules that your organization has purchased. Because the license key resides in the database and not on the client machine, everyone who accesses the Siebel database uses the same license key.

For more information about entering license keys, see *Siebel Applications Administration Guide*, “Entering License Keys.”

Selecting a Data Source

When you start a Siebel application from the Siebel Developer Web Client, you specify the data source to which you want to connect.

For more information about data sources, see *Siebel Applications Administration Guide*, “Selecting a Data Source.”

Administrative Tasks

These tasks summarize the additional administrative tasks necessary to set up the Siebel applications.

For more information about administrative tasks, see *Siebel Applications Administration Guide*, “Summary of Applications Administrative Tasks.”

Post-Installation Setup

You must perform these post-installation setups:

1. Configure the AIAConfigurationProperties.xml file.
2. Start these two ODI agents: SiebelCRMTToEbizOICAgent and SiebelCRMTToEbizOICInternalAgent.
3. Manually populate the COMPENSATION_ORGANIZATION_ID cross reference.

For more information about populating the cross-reference manually, see *Oracle Fusion Middleware Installation and Upgrade Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1*, "Installing Siebel CRM to OIC Integration", Performing Post-Installation Configurations, Populating the COMPENSATION_ORGANIZATION_ID Xref Manually.

4. Update these DVMs: ADDRESS_COUNTRYID, CURRENCY_CODE, SALESORDER_ACTIONCODE, STATE, and COMPENSATION_UNIT_OF_MEASURE. Add new rows to the SIEBEL_BU_TO_PROPROCESS_FLAG DVM that maps Siebel BU_ID to the Pre-process flag. Export the DVMs to the path specified in OUI screen while installing the PIP.

Note: After loading the DVMs bounce the FMW server.

5. Reload the DVMs by running the ODI scenarios for updating DVMs.

For more information about loading DVMs, see [Loading Domain Value Maps](#).

6. Associate Oracle Data Integrator Console with the work repository.

Configuring the AIAConfigurationProperties.xml File

To configure the AIAConfigurationProperties.xml file:

1. Navigate to the \$AIA_HOME>/aia_instances/\$INSTANCE_NAME/AIAMetaData/config folder and open the AIAConfigurationProperties.xml file.
2. Navigate to the module level configuration for the 'Ebiz' module.
3. Change the properties USER and RESPONSIBILITY with the appropriate user name and responsibility and save the changes.

The xml file should be similar to this:

```
<ModuleConfiguration moduleName="Ebiz">
  <Property name="USER">sysadmin</Property>
  <Property name="RESPONSIBILITY">System Administrator</Property>
</ModuleConfiguration>
```

Note:

1. These values are used to set the EBS Apps context while creating resources and sales representatives.
2. The EBS user configured in AIA configuration properties should have access to the EBS Organization (through MOAC setup) in which the Salesrep is being created or updated in EBS ORM.
4. Run the LOADAIACONFIGURATIONPROPERTIES (v.001) ODI scenario to load the property values into the ODI repository.
5. Refresh the MDS repository to reload the AIAConfigurationProperties.xml file.

For more information about requirements for working with AIAConfigurationProperties.xml, see *Oracle Fusion Middleware Developer's Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1*, "Building AIA Integration Flows," How to Set Up AIA Workstation.

Starting the ODI Agents

Run these commands from the <ODI_HOME>/agent/bin directory to start the ODI agents:

```
.agent.sh -PORT=20911 -NAME=SiebelCRMTToEbizOICInternalAgent
.agent.sh -PORT=20910 -NAME=SiebelCRMTToEbizOICAgent
```

These commands start the agent schedulers also. If you do not want to start the agent scheduler then run these commands:

```
.agent.sh -PORT=20911 -NAME=SiebelCRMTToEbizOICInternalAgent
.agent.sh -PORT=20910 -NAME=SiebelCRMTToEbizOICAgent
```

Associating Oracle Data Integrator Console with the Work Repository

The Oracle Data Integrator Console must be associated with the work repository that is created for the Siebel CRM to OIC integration.

For more information on associating the Oracle Data Integrator Console with the work repository, refer to *Oracle Fusion Middleware Developer's Guide for Oracle Data Integrator 11g Release 1*, "Creating a Repository Connection" in "Performing Administrative Operations."

Loading Domain Value Maps

Domain value maps (DVMs) are a standard feature of the Oracle SOA Suite and enable you to equate lookup codes and other static values across applications. For example, "FOOT" and "FT" or "US" and "USA."

To load the DVMs:

1. Log in to the Oracle Data Integrator Console.
2. In the Browser tab, click **Runtime, Scenarios, All Scenarios**, and then right click **Execute a Scenario**.
3. Select a scenario as per this table:

Scenario	Description
LOADACTIONCODEDVM version 001	Loads the SALESORDER_ACTIONCODE DVM.
LOADBUTOPREPROCESSFLAGDVM version 001	Loads the SIEBEL_BU_TO_PREPROCESS_FLAG DVM.
LOADCOUNTRYDVM version 001	Loads the ADDRESS_COUNTRYID DVM.
LOADCURRENCYCODEDVM version 001	Loads the CURRENCY_CODE DVM.
LOADSTATEDVM version 001	Loads the STATE DVM.
LOADUNITOFMEASUREDVM version 001	Loads the COMPENSATION_UNIT_OF_MEASURE DVM.

4. Select the SiebelCRMTToEbizOICAgent agent and the SiebelCRMTToEbizOICContext context.
5. Click **Execute**.

Scheduling ODI Scenarios

This section discusses:

- Synchronizing Resources and Sales Representatives
- Synchronizing Sales Orders

Synchronizing Resources and Sales Representatives

To schedule the Sync Users process:

1. Start ODI Client by executing the command `. odi.sh` from the `<ODI_HOME>/client` directory.
This opens the ODI designer.
2. Click the **Project** tab in the ODI designer.
3. Select **SiebelCRMTToEbizOICORMProject**, then select **SiebelCRMTToEbizOICORM**, then select **Packages**, then select **Load_SiebelUserDataToEbiz_Pkg**, and then select **Scenarios**, to navigate to the scenario.
4. Expand the scenario.
5. Navigate to the **Scheduling** node.

6. Right-click and select **Insert Scheduling**. This opens the **Scenario-Scheduling** window.
7. Navigate to the **Definition** tab and select these values:
Context: SiebelCRMTToEbizOICContext
Agent: SiebelCRMTToEbizOICAgent
Log Level: 5
8. Select the **Simple** option.
9. Enter the date and time for when you want to schedule the process.
10. Click **Apply**.
11. Navigate to the physical agent in the topology and open **Agents**.
12. Expand Agents, and right click **SiebelCRCToEbizOICAgent**, and select **Update Scheduling**.

This refreshes the schedule with the latest changes.

At the scheduled time the ODI scenario is launched and users are synchronized with resources and sales representatives in ORM. When the ODI scenario runs, then all records in Siebel, which were modified since the last time the same ODI scenario was run, are retrieved and synchronized with ORM.

Synchronizing Sales Orders

To schedule the Sync Sales Order process:

1. Start ODI Client by executing the command `. odi.sh` from the `<ODI_HOME>/client` directory.
This opens the ODI designer.
2. Click the **Project** tab in the ODI designer.
3. Select **SiebelCRMTToEbizOICSalesOrderProject**, then select **SiebelCRMTToEbizOICSalesOrder**, then select **Packages**, then select **Load_SiebelSalesOrderDataToEbiz_Pkg**, and then select **Scenarios**, to navigate to the scenario.
4. Expand the scenario.
5. Navigate to the **Scheduling** node.
6. Right-click and select **Insert Scheduling**. This opens the **Scenario-Scheduling** window.
7. Navigate to the **Definition** tab and select these values:
Context: SiebelCRMTToEbizOICContext
Agent: SiebelCRMTToEbizOICAgent
Log Level: 5

8. Select the **Simple** option.
9. Enter the date and time for when you want to schedule the process.
10. Click **Apply**.
11. Navigate to the physical agent in the topology and open **Agents**.
12. Expand **Agents**, and right-click **SiebelCRCToEbizeOICAgent**, and select **Update Scheduling**.

This refreshes the schedule with the latest changes.

At the scheduled time, the ODI scenario is launched and sales orders are synchronized with OIC. When the ODI scenario is run, then all records in Siebel, which were modified since the time the same ODI scenario was run, are retrieved and synchronized with OIC.

Handling Errors

In case of any error or failure in the ODI integration flows, the AIAAsyncErrorHandler BPEL web service is invoked. You can do configurations in the FMW server to receive error notifications in these formats:

- Email notification
- Worklist notification

During the synchronization of users flow, if records of resources or sales representatives are not synchronized to ORM, then a log file is created in the <AIA_HOME>/SOIC_ODI_OUTPUT folder.

The naming convention of this log file is:

<ODI_session_ID>_<Resource or SalesRep>.txt

Configuring Worklists and Email Notifications

Based on the roles defined for the services, email notifications are sent if an error occurs. These roles can be assigned at various levels in a hierarchy so that when an error occurs in a service then the Error Handling Framework uses the role value to derive the user(s) that need to be notified of the error. The Error Handling Framework then notifies the user(s) through their preferred notification method and, puts the error in the user's Oracle Worklist and the error log.

For more information about error handling, see *Oracle Fusion Middleware Infrastructure Components and Utilities User's Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1*, "Part II Setting Up and Using Error Handling and Logging."

Appendix A: Troubleshooting

Issues during Installation

1. Error: Some of the configuration assistants failed or were canceled

User may encounter this error at the end of the PIP installation. The reasons for this error are:

- Incorrect Work Repository Name/ID: If user had entered an incorrect ODI work repository name or ID in the ODI input names, during installation.
- Incorrect parameters entered in EBS or Siebel data entry screens: If user had entered incorrect server or port information for EBS or Siebel during installation.

Issues in ODI Console

1. Error: java.net.ConnectException: Connection refused.

User may encounter this error in the ODI Console, while executing an ODI scenario, if the ODI agent is down or not running.

To start the ODI agent:

- a. Navigate to <ODI_HOME>
- b. Run these commands:

```
. agent.sh "-PORT=20910" "-NAME=SiebelCRMTToEbizOICAgent"  
. agent.sh "-PORT=20911" "-NAME=SiebelCRMTToEbizOICInternalAgent"
```

2. Only one instance created while executing "LOAD_SIEBELUSERDATATOEBIZ" scenario.

User may encounter this error if the internal agent is down or not running.

To start the internal agent, run the command:

```
. agent.sh "-PORT=20911" "-NAME=SiebelCRMTToEbizOICInternalAgent"
```

3. Error: ODI-3047: exception while executing LOAD_SIEBELUSERDATATOEBIZ_PKG.

User may encounter this error if the credential is not defined.

To add entries in the credential map for the ODI Console, refer to the Add Credential Store Entries section of the *Oracle Fusion Middleware Installation Guide for Oracle Data Integrator 11g Release 1*.

4. When starting the ODI Agent, error displayed is "Port is already in use."

User may encounter this error when the agent was not stopped properly.

To stop and start the ODI agent, use the following commands:

a. Navigate to <ODI_HOME>/agent/bin

b. Run the command:

```
[ps -ef |grep "<port number>"]
```

c. Make a note of the PID, which is the value from the second column

d. To kill the agent run the command:

```
[kill -9 <PID>]
```

e. Repeat the steps a to d for the Internal Agent. This will stop both the agents.

f. To restart the agents run the following commands:

```
. agent.sh "--PORT=20910" "--NAME=SiebelCRMTToEbizOICAgent"
. agent.sh "--PORT=20911" "--NAME=SiebelCRMTToEbizOICInternalAgent"
```

5. A session has been running for a very long period.

If an ODI scenario in the ODI console is taking very long time to complete, then other scenarios may not execute.

Kill the process from the ODI Client and restart the scenarios. To kill a process:

a. Start the ODI Client.

b. Navigate to Operator.

c. Expand **All Executions**. This displays all the scenarios that are running.

d. Right-click the particular scenario and select **Stop**.

General Issues

1. Synchronization failure

If synchronization fails, then check that:

- DVM exists in the location that was specified during installation
- DVM xml files are valid
- DVM folders have write permissions
- AIA configuration file is valid
- AIA configuration folder has write permission
- EBS, Siebel, or AIA databases are running
- EBS, Siebel, and AIA databases are reachable
- User name and password used in EBS, Siebel, and AIA data sources in the physical schema are correct
- Siebel database views are created correctly

2. Salesrepid is populated as -99

If the user, who has created a sales order in Siebel, is not synchronized to EBS, then check if the sales order is assigned to a user who is synchronized.

3. Error: Unique Constraint

User receives this error if there are duplicate values in the DVMs.

For example, in the CURRENCYCODE DVM there are two entries for the same currency.

4. Error: "ORGID invalid" in the resource interface table in the EBS database

If user does not have sufficient privilege then the application presents this error. Check for the user privilege that is defined in the AIConfigurationsProperties.xml file.

5. Initial data synch is failing with 2289: 42000: java.sql.SQLException: ORA-02289: sequence does not exist

User encounters this error if the PIP is installed with the EBS User having read-only access or the EBS patch is not applied correctly.

To rectify this error change the physical connection in the Topology Manager.

6. Batch ID not generated

The Batch ID is not generated if the record is not synchronized

7. User not synchronized

User may not be synchronized if the position, associated with the user, is not compensable.

8. Sales Representative not generated

Sales representatives are not created in EBS if:

- Employee number is not entered in Siebel.
- User belongs to a BU, whose ID is not mapped to any EBS organization in the COMPENSATION_ORGNIZATION_ID Xref.
- User with the same employee number already exists in EBS.
- The time zone of Siebel database is incorrect.

9. Order not synchronized

Sales orders may not be synchronized if:

- Value of sales order status is not complete.
- Order type is not Sales Order or Web Order.

10. Duplicate resource created in ORM

This may have occurred because the XREF database is refreshed.

Users should take back up, if they want to refresh the database server where XREF data is stored. After the database has been refreshed, users should restore the data from the backup.

Error Handler Email Notification

If worklist or email notifications are not sent to user then:

- Check if the EBS, Siebel, and AIA servers are running.
- Check if the SOA server is running and is reachable from the ODI server.
- Verify the AIA configurations for notifications.

Issues in OIC

1. Collection failure

- Check that the transaction type is set up in the DVM as Active or Upgrade.
- See the concurrent request log for collection, for other issues.

2. Order number, product ID and so not generated in an OIC transaction.

Check that the column mappings are defined in the Collection Source tables. To view the column mappings, navigate to Configuration Workbench, then Tasks, then Collection, and then Define Collection Sources and Mappings. You can update the mappings for columns, if required. After you have updated the column mappings generate the collection packages. To generate the collection packages, navigate to Configuration Workbench, then Tasks, then Collections, and then Generate Collection Packages.

3. Calculation failure

a. Failed classification in XLS

This issue may arise when you run the Load Transactions program. If the product is not defined in OIC then the transactions' load status displays the Failed Classification XLS error and OIC does not calculate commissions for these transactions. To rectify this error user should enter existing products in transactions and then run the Load Transactions program.

Check that:

- Product, product hierarchy, and product classification rules are defined.
- Revenue classification rules are synchronized.
- The attribute ITEM ID is correct.
- The processing date is earlier or later than the dates that are defined in the Classification Ruleset

OIC displays the status of failed classifications in the transaction status.

Note: OIC displays failure status if the transaction fails at the top of the classification rule hierarchy.

b. Failed roll-up

Roll-up fails if:

- The salesperson is not in the hierarchy in a compensation group.
- Resource is defined in different organizations with different roles.
- The system parameter option Managerial Rollup is not selected.

c. Failed creation

OIC does not calculate commission for a transaction if there is no matching revenue class in the compensation plan for the credited salesperson.

If OIC displays a failed status in the transaction status then check that:

- Attributes you have specified in the transaction and the attributes of the revenue class are same.
- Pay group exists.
- Revenue class hierarchy is defined for the period calculated.
- Revenue class is added to the revenue class hierarchy.
- Sales person assignment is correct.

d. Failed calculation

If OIC does not calculate commissions for a transaction then OIC displays the status in XCALC.

Check that:

- Target is not zero.
- Formula is valid.

4. General

You may encounter this issue if the OIC UI is open and you try to synchronize a resource after updating it.

- e.** If you update the end date of the resource, then the application displays the error message “This record has been updated by another user. Please requery and try again.”
- f.** You will not be able to update employee number of the resource.

To avoid these issues, please save the record in OIC running the synchronizing process or close the OIC UI.

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