# Oracle® Cloud

Implementing Your Deployment for Oracle Transactional Business Intelligence Enterprise

11*g* Release 10

**E55530-04**

December 2015

Provides initial setup and configuration tasks for Implementors.

ORACLE

Oracle Cloud Implementing Your Deployment for Oracle Transactional Business Intelligence Enterprise, 11g Release 10

E55530-04

# Contents

# Preface

Learn how to set up and deploy Oracle Transactional Business Intelligence Enterprise.

**Topics:**



## Audience

This guide is aimed at administrators and implementors.

## Conventions

These 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. |
| *italic* | 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. |

## Related Resources

These related Oracle resources provide more information.

- Oracle Cloud Known Issues for Oracle Transactional Business Intelligence Enterprise
- Oracle Cloud Administering Your Deployment for Oracle Transactional Business Intelligence Enterprise

# 1

# Getting Started With Implementation

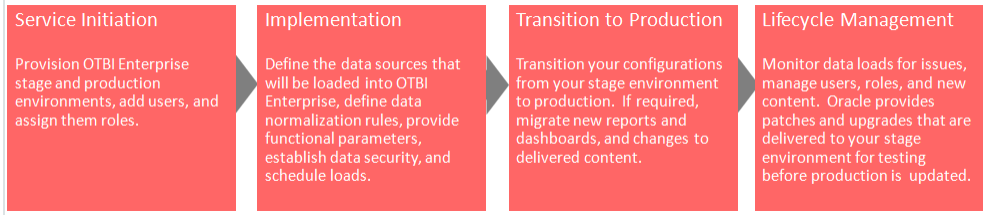
The Implementation Phase is one of the phases in an OTBI Enterprise deployment project. Learn about the major phases, and review the roadmap for the Implementation phase and the Transition to Production phase.

### Topics



## What Are The Major Phases Of An OTBI-Enterprise Project?

The major phases of an OTBI-Enterprise project are Service Initiation, Implementation, Transition to Production, and Lifecycle Management, as shown in the diagram below.

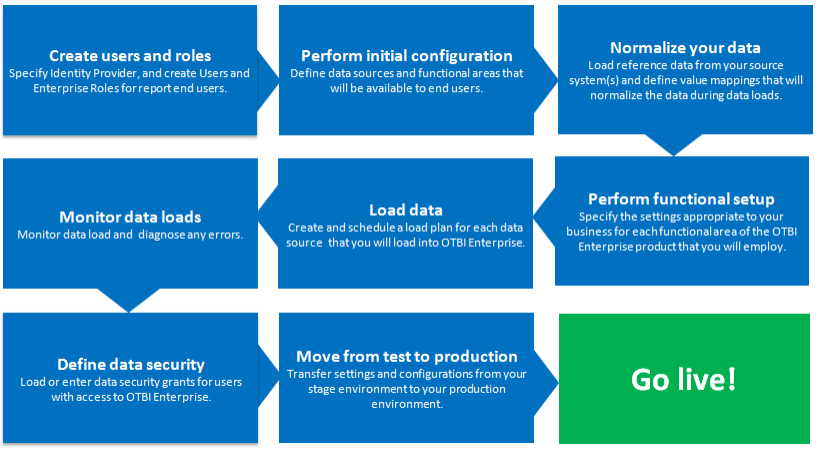



## Roadmap for Cloud Data Sources

This roadmap includes high level tasks that are required for the Implementation Phase and Transition to Production Phase. Use the links in the **More Information** column below to drill into the high level tasks to see sub-tasks.

### Roadmap

Roadmap overview:



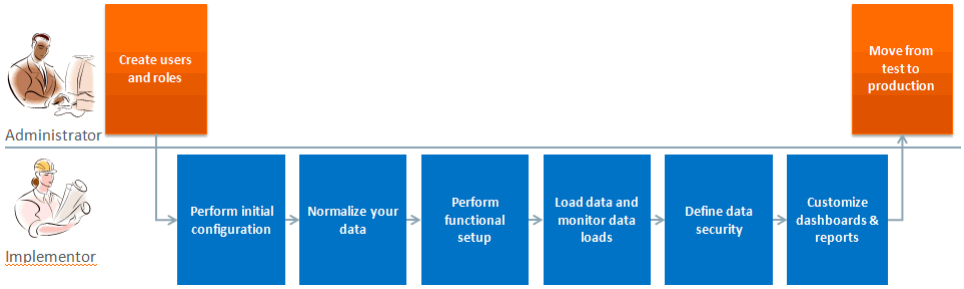

| Task | Description | More Information |
|---|---|---|
| Create users and roles | Specify identity provider, and create Users and Enterprise roles for BI report end users. | Create users and roles in *Oracle Cloud Administering Your Deployment for Oracle Transactional Business Intelligence Enterprise* |
| Perform initial configuration | Define data sources and functional areas that will be available to BI report end users. | Perform initial configuration |
| Normalize your data | Load reference from your data sources and define value mappings that normalize the data during data loads. | Normalize your data |
| Perform functional setup | Specify ETL and Reporting values that determine how the transactional data is loaded and displayed to BI end users. | Perform functional setup |
| Load your data | Create and schedule a load plan for each data source that you will load into OTBI Enterprise. | Load your data |
| Monitor data loads | Monitor data load and diagnose any errors. | Monitor data loads |
| Define data security | Load or enter data security grants for users with access to OTBI Enterprise. | Define data security |
| Move from test to production | Transfer settings and configurations from your stage environment to your production environment. | Move from test to production in *Oracle Cloud Administering Your Deployment for Oracle Transactional Business Intelligence Enterprise* |

# How Do Administrators Work With Implementors?

During the Implementation Phase, Administrators work alongside Implementors to set up OTBI-Enterprise.

Administration tasks are covered in *Oracle Cloud Administering Your Deployment for Oracle Transactional Business Intelligence Enterprise* and on the Administer page in Help Center.

The process flow diagram below shows the breakdown of tasks for Administrators and Implementors.




# About Implementing On-premises Data Sources

OTBI-Enterprise supports Human Capital Management (HCM) data from a number of On-premises data sources, including Oracle and non-Oracle systems.

### Deploying On-premises Data Sources Using Pre-built Adapters

Using pre-build ETL adaptors, you can extract data from E-Business Suite and PeopleSoft data sources.

For detailed information about supported versions, refer to *System Requirements and Supported Platforms* on the Get Started page in the Help Center.

### Deploying Other On-premises Data Sources

Using Universal Adapter, you can extract data from other data sources. Refer to the following resources:

- Universal Adaptor Reference for HCM Subject Areas
- External Data File Load Specifications

# High Level Steps for On-premises Data Sources

To deploy an on-premises E-Business Suite or PeopleSoft data source, Implementors perform these setup steps.

### How to load data from an E-Business Suite or PeopleSoft On-premises data source

1. Register Source PSFT or EBS PL with Load Tech as External Data, and Configure Storage Service Container.
2. Pick subject areas (FGs) and build Load Plans (Regular and Domains-only).
3. Download ORDER.SQL, ORDER_DDL.SQL and ORDER_PE.SQL files for each Load Plan.

4. Follow ORDER.SQL against the Domains-only Load Plan and prepare the data exports in CSV format for the Domains-only Load Plan.
5. Upload data files (for Domains-only Load Plan) to the Storage Service Container.
6. Run the Domain-only Load Plan.
7. Configure domains.
8. Clean up files from the Storage Service Container.
9. Follow ORDER.SQL against the regular Load Plan and prepare the data exports in CSV format for the regular Load Plan.
10. Upload data files (for the regular Load Plan) to the Storage Service Container.
11. Run the regular Load Plan.
12. Repeat steps 8 through 11 for the incremental ETL.
13. If you have deletes in the OLTP for a table, then follow ORDER_PE.SQL for that table and prepare data exports in PECSV format and upload in SSC and run along with the usual Incremental run.

# 2

# Performing Initial Configuration

During OTBI-Enterprise Initial Configuration, Implementors define the data sources that will be loaded into OTBI-Enterprise, specify how data is loaded into the OTBI-Enterprise warehouse, and specify environment details such as reporting languages and currencies.

### Topics



## High Level Steps for Initial Configuration

During Initial Configuration, (which you start after you sign up for this service and receive a Welcome email from Oracle Cloud Operations), Implementors perform these tasks in the order listed:

1. Register your transactional data sources (for example, Fusion Applications HCM Cloud, Taleo Cloud), as follows:

   If you are deploying a Fusion Applications HCM Cloud data source, then follow the instructions in Registering a Fusion Applications Data Source.

   If you are deploying a Taleo HCM Cloud data source, then follow the instructions in Registering a Taleo Data Source.

2. If you are deploying FA HCM Release 9.2 Cloud data source, then create a Service Request by following the steps in Creating an SR to Deploy A Fusion HCM Cloud Data Source. Oracle Cloud Operations deploys the required software on your Fusion Applications pod.

**Note:** If you are deploying a Release 10 Fusion Applications HCM Cloud data source or a Taleo HCM Cloud data source, then you skip this step because an SR is not required.

3. If you are deploying a Fusion Applications HCM Cloud data source (either Release 9.2 or 10), then:

   a. Extract your Cloud data into your Oracle Storage Service (known as a Cloud Extract) by following the steps in Extracting Data Into Your Oracle Cloud Storage Service.

   b. Synchronizing Deletes for the Cloud Extract by following the steps in Synchronizing Deletes In Your Cloud Extract.

4. Enable your Offerings for deployment by following the steps in Enabling Your Offerings For Deployment.

5. Specify Languages and Preferred Currencies for Data Load by following the steps in Specifying Languages and Preferred Currencies.

6. Enable ETL diagnostics and health check email notifications by following the steps in Enabling ETL Diagnostics and Health Check notifications.

7. If you want to analyze data from Fusion Applications Flexfields, then perform the Flexfield integration steps in Setting Up Fusion Applications Flexfields.

You can change the Cloud Extract configuration details later if required. For example, you might need to change the Storage Service password when it expires.

# Registering a Fusion Applications Cloud Data Source

During Initial Configuration, Implementors specify the Cloud data source details.

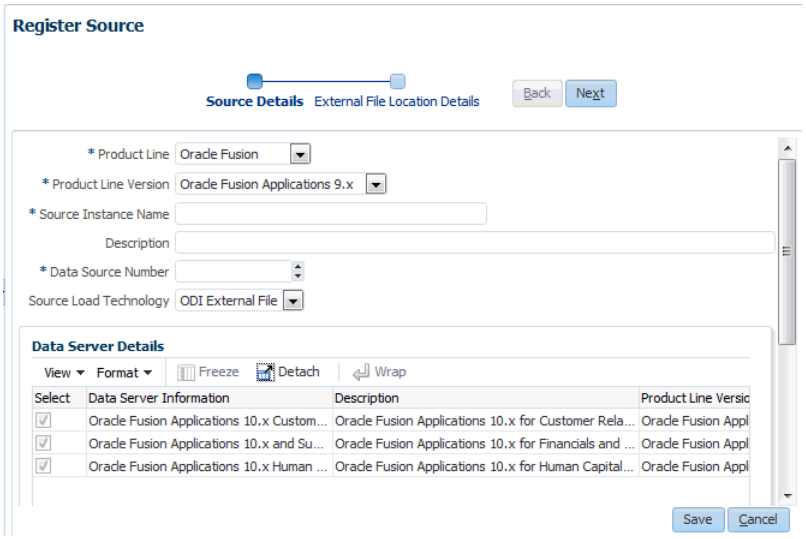
## Registering a FA HCM Cloud Data Source

You use Configuration Manager to specify the data source details. Before you start, log in to Configuration Manager using the web link and user name supplied to you by Oracle Cloud Support.

**Prerequisites**: You must have the connection details of the Oracle Storage Service, including user name, password, and connection string. You obtain these details in the My Services page in Oracle Cloud.

1. In Configuration Manager, select the **Define Business Intelligence Applications** link in the System Setups area on the Tasks pane.

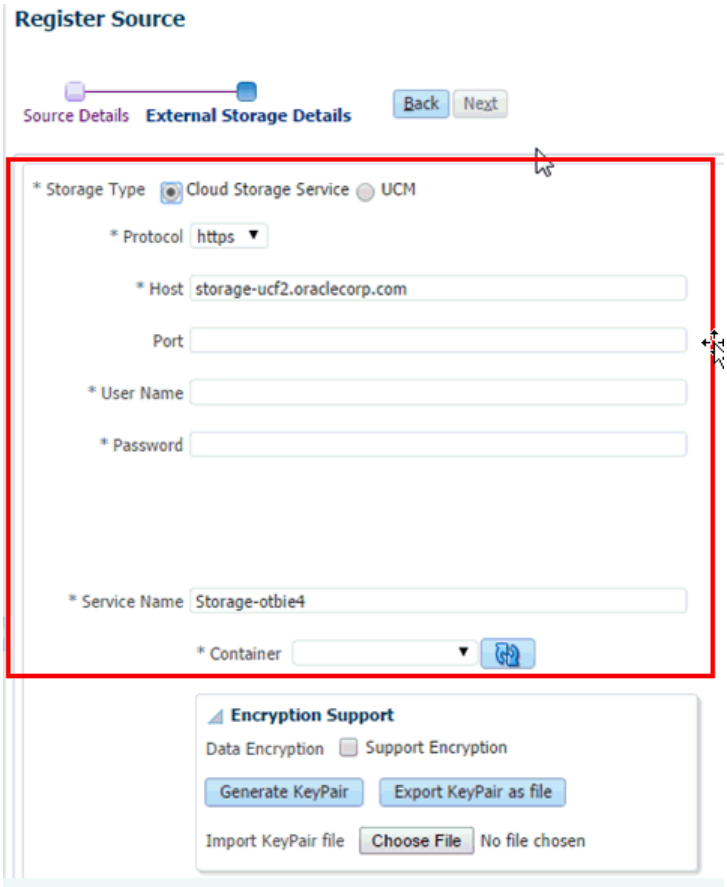
2. Click the **Add** icon ( ) to register a new source system using the Register Source Details dialog.




3. At the Register Source Details dialog, specify the following details:

   - Product Line — Select Oracle Fusion.
   - Product Line Version — Select the Cloud data source version that is deployed.
   - Source Instance Name — Specify a short readable name to identify this data source in Configuration Manager. For example, FA_HCM_9.2.
   - Description — (Optional) Enter a short description to help Administrators and Implementers identify and use this data source in Configuration Manager.
   - Data Source Number — Enter an integer or use the spinner to specify a number to identify data in the OTBI-Enterprise data warehouse. This number must be unique within Configuration Manager. The number 999 is reserved, and should not be used.
   - Source Load Technology — Select ODI External File.

4. Click **Next** to display the External File Location Details dialog.




5. At the External Storage Details dialog, specify the following details:

   - Protocol — Select https.
   - Host — auto-populated. Do not change the default value. For example, storage.us2.oraclecloud.com.
   - Port — auto-populated. Do not change the default value.
   - Download Folder — auto-populated. Do not change the default value.
   - Upload Folder — auto-populated. Do not change the default value.
   - Service name — auto-populated. Do not change the default value.
   - Container — the storage service container from where the files for this source will be downloaded. You must provide the same container when configuring the external storage details in BI Cloud Connector Console in step Extracting Data Into Your Oracle Cloud Storage Service.
   - Data Encryption — Select the **Support Encryption** check box, click **Generate KeyPair**, then click **Export KeyPair as file**. Save the file locally. You use this file when you set up data loading in the step Extracting Data Into Your Oracle Cloud Storage Service.

6. Click **Save.**

# Registering a Taleo Data Source

During Initial Configuration, Implementors specify the Cloud data source details.

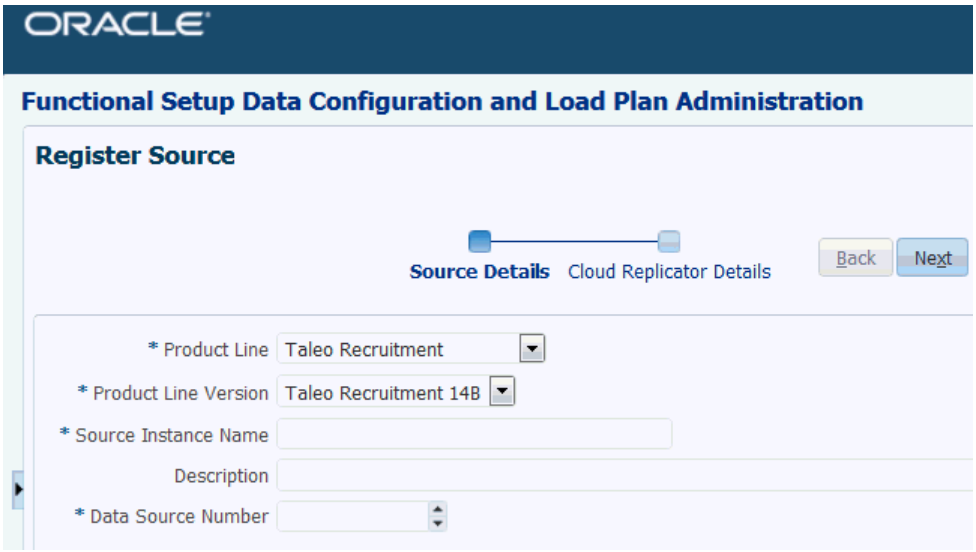
## Registering a Taleo Cloud Data Source

You use Configuration Manager to specify the data source details. Before you start, log in to Configuration Manager using the Web link and user name supplied to you by Oracle Cloud Support.

**Prerequisites**: You must have the Taleo Cloud source details.

1. In Configuration Manager, select the **Define Business Intelligence Applications** link in the System Setups area on the Tasks pane.

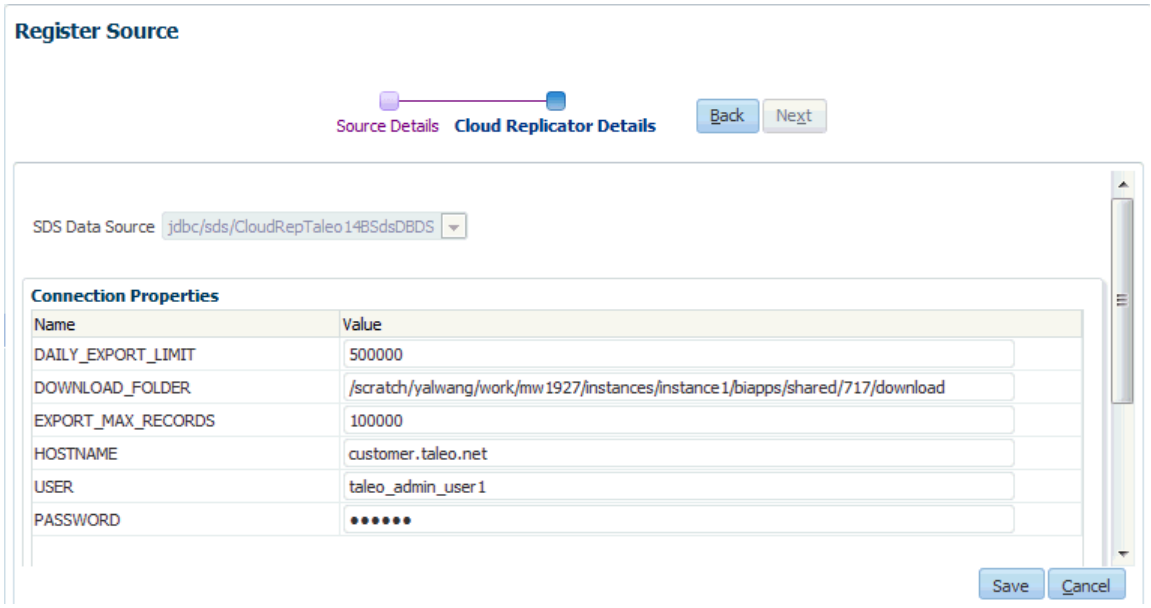
2. Click the Add icon ( ) to register a new source system using the Register Source dialog.




3. At the Register Source dialog, specify the following details:

   - Product Line — Select your source system type. For example, Taleo Recruitment.
   - Product Line Version — Select the data source version that is deployed.
   - Source Instance Name — Enter a short readable name to identify this data source in Configuration Manager.
   - Description — (Optional) Enter a short description to help Administrators and Implementors identify and use this data source in Configuration Manager.
   - Data Source Number — Enter an integer or use the spinner to specify a number to identify data in the OTBI-Enterprise data warehouse. This number must be unique within Configuration Manager. The number 999 is reserved, and should not be used.

4. Click **Next** to display the Cloud Replicator Details dialog.




5. At the Cloud Replicator Details dialog, specify connection properties,:

   Specify the following details:

   - For `HOSTNAME`, specify the Taleo hostname, for example, `customer.taleo.net`.
   - For `USER` and `PASSWORD`, specify the Taleo user account and password that you created in the Taleo application based on the default user type System Integration (Administrator WebTop). For more information, see Roadmap for setting up security in OTBI-Enterprise in *Oracle Cloud Administering Your Deployment for Oracle Transactional Business Intelligence Enterprise*.

6. Click **Save.**

# Creating a Service Request to Deploy BI Cloud Connector Console

If you are deploying FA HCM Cloud Release 9.2 data source, then during Initial Configuration, OTBI-Enterprise Implementors create a Service Request to deploy BI Cloud Connector on your Fusion Applications pod. When the Service Request is completed, Oracle Cloud Operations will supply you with the URL and login credentials for BI Cloud Connector Console.

> **Note:** If you are deploying a Release 10 Fusion Applications HCM Cloud data source or a Taleo HCM Cloud data source, then this SR is not required.

1. Log an SR, and specify the details in the Description column:

| Option | Description |
|---|---|
| **Action** | Deploy Fusion Applications Cloud Source System Data |
| **Problem Type** | Specify this information: |

| Option | Description |
|---|---|
| | Service Type: **Oracle Fusion Global Human Resource Cloud Service.** |
| | BI Applications deployment: **OTBI-E** |
| | Problem Type: **Hosting Services – Application.** |
| | Sub-Problem Type: **Deploy Fusion Cloud Adaptor.** |
| | User ID: User ID for access to BI Cloud Connector Console. |
| | FA POD details: Pod ID. |
| | FA POD: Stage OR Production. |
| **Additional Information** | This SR initiates the process for Oracle Hosting Operations to enable data extraction. Include the following information in the SR: |
| | Provide the Fusion Applications POD details. This must include the POD identifier (the URL used to access the Fusion environment). |
| | Indicate whether the FA POD is Stage or Production. |

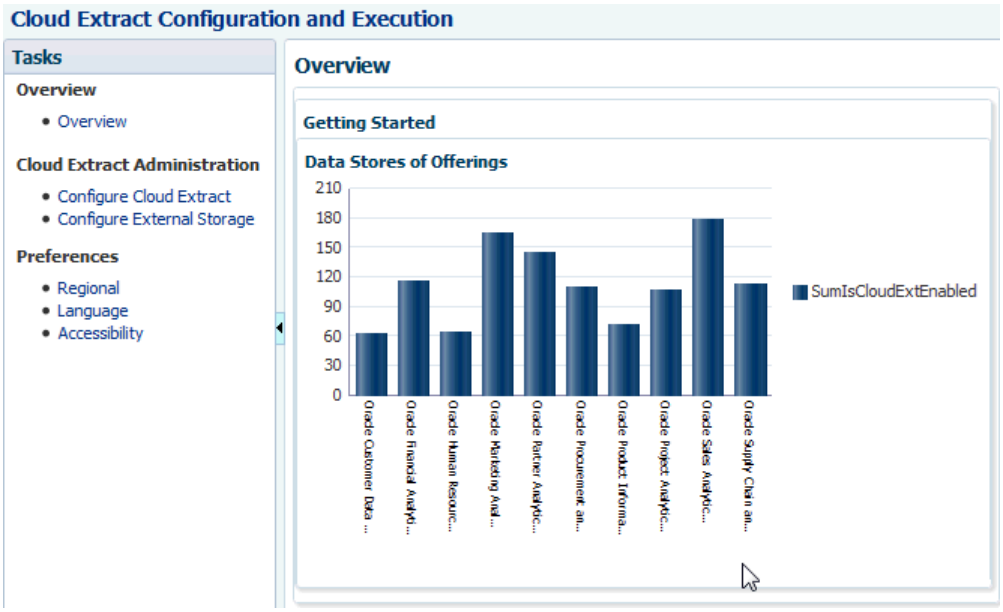
## Extracting Data From A Fusion Applications Data Source

If you are deploying a Fusion Applications HCM Cloud data source (either Release 9.2 or 10), you first load your data into your Oracle Storage Service (this process is known as a Cloud Extract). Then, you load the data into the OTBI-Enterprise data warehouse. To load data into your Oracle Cloud Storage Service, you use BI Cloud Connector Console, which is deployed on your Fusion Applications HCM pod.

Before you start, log into BI Cloud Connector Console using the Web link and user name supplied to you by Oracle Cloud Support. You can also start BI Cloud Connector Console using a HTTP URL based on the following format: http://<*FA OHS Host*>:<*FA OHS Port*>/biacm.

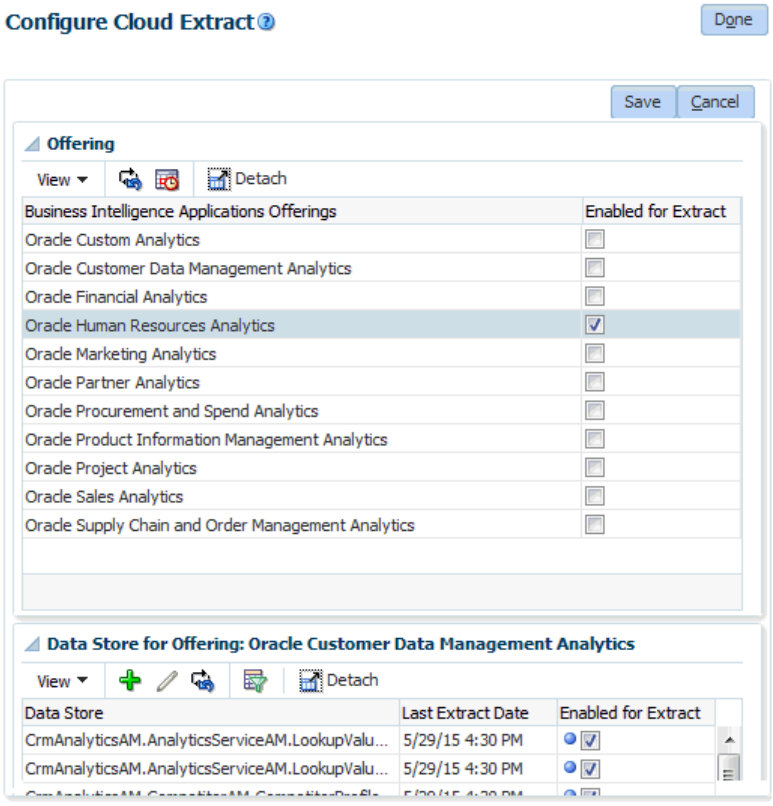
To operate BI Cloud Connector Console, users must be provisioned with the Application role – ESSAdmin and the Enterprise Role – ASM_APPLICATION_IMPLEMENTATION_ADMIN_ABSTRACT, as described in the topic Provisioning a User for Oracle Business Intelligence Cloud Connector Access, in *Oracle Transactional Business Intelligence Enterprise Administering Your Deployment for Oracle Transactional Business Intelligence Enterprise*.

**Note:** If you are deploying from Fusion Applications HCM Cloud Release 9.2, then Oracle Cloud Operations supply you with the URL and login credentials for BI Cloud Connector Console when the Service Request is completed (for more information, see Creating a Service Request to deploy BI Cloud Connector Console).

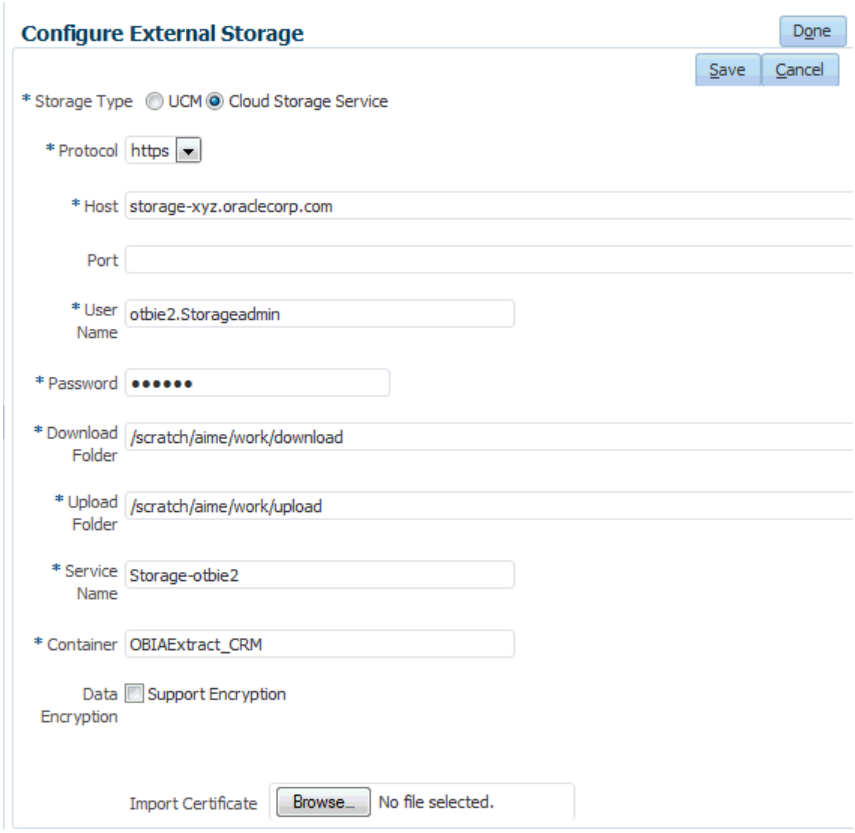



To extract data from a cloud source to an Oracle Cloud Storage Service:

1. In BI Cloud Connector Console, select the **Configure Cloud Extract** link on the Tasks pane.
2. In the list of Offerings, select the check box next to the Cloud source system functional areas that you want to deploy.



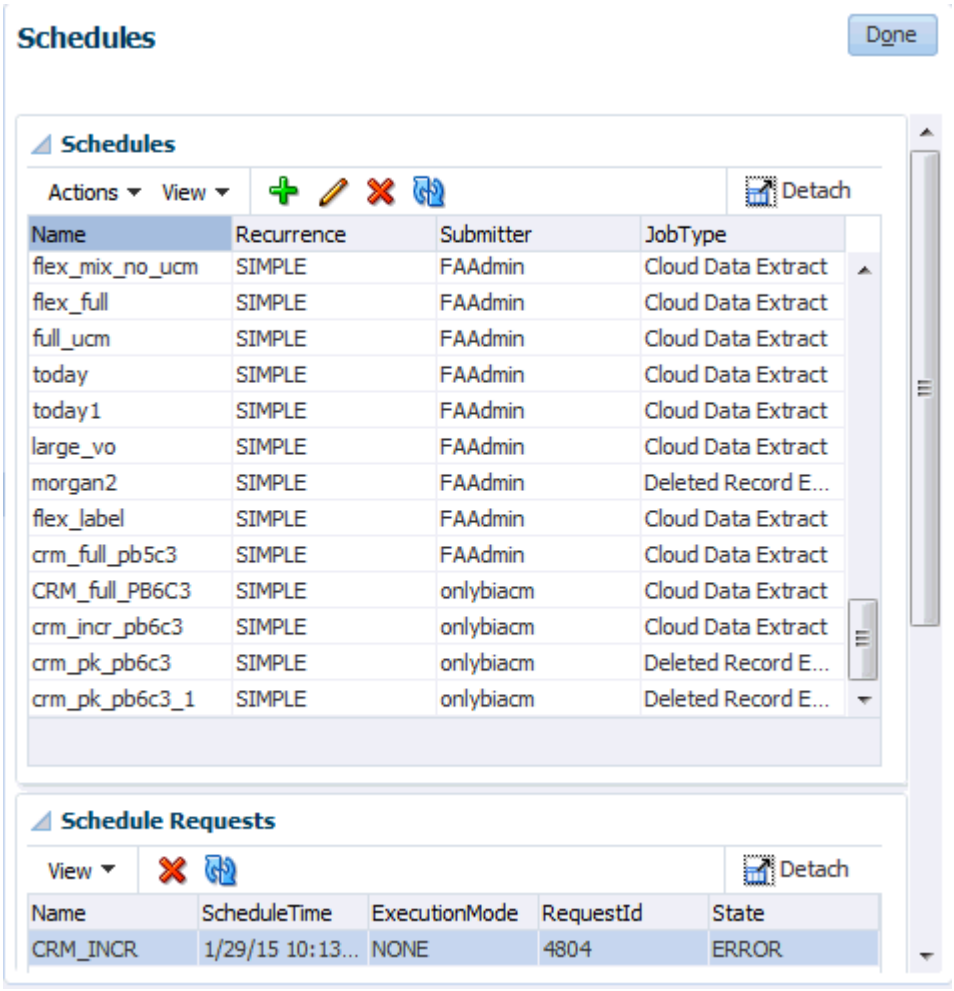
3. Click Save, then Done.
4. Click the **Configure External Storage** link on the Tasks pane.
5. Under **Storage Type**, click the **Cloud Storage Service** option.




6. Specify the following details:
   - Protocol — Select https.
   - Host — Enter the domain name of your Oracle Cloud Storage Service. The domain of the storage service is typically formatted as: identitydomain.storage.oraclecloud.com. You can obtain this domain name from the **Service REST Endpoint** data field in the storage service's details area from Oracle Cloud My Services. It is the first part of the address, before the first forward slash.
   - Port — Leave blank.
   - User Name — Use the Oracle Cloud account user name that will be used to authenticate to the Storage Service. The account must have the following storage cloud service role: 'StorageServiceName Storage Read Write Group'.
   - Password — Enter the password for the Oracle Cloud account user name that you specified in the User Name field.
   - Download Folder — This should be filled in automatically. If it is not, select UCM as storage type, copy the download folder value, navigate back to Cloud Storage Service and paste.

- Upload Folder — This should be filled in automatically. If it is not, select UCM as storage type, copy the upload folder value, navigate back to Cloud Storage Service and paste.
- Service Name — Identifies the specific service to upload files to. This is a concatenation of the service name and the identity domain, separated by a dash, for example: storageservicename-identitydomainname. You can obtain this service name from the **Service REST Endpoint** data field in the storage service's details area in Oracle Cloud My Services. It is the last part of the address, after the last forward slash.
- Container — Name of the container to upload data to in the storage service. This should be the same container specified in Configuration Manager where the Fusion data source was registered (that is, in Configuration Manager navigate to System Setups\Define Business Intelligence Applications\Source Systems tab).
- Data Encryption — Select the check box to enable data encryption at rest within storage cloud service. Click **Choose File**, and navigate to and select the key pair file that you saved when you registered your data source in Configuration Manager (that is, in Configuration Manager navigate to System Setups\Define Business Intelligence Applications\Source Systems tab). **Note**: if you revisit this page after logging out and then logging back in, the certificate file name will no longer be visible. This is a system limitation, and does not mean that the uploaded certificate details were not saved.

7. Click Save, then Done.
8. Select the **Configure Cloud Extract** link on the Tasks pane.
9. Click the Manage Extract Schedules icon (  ) to display the Schedules dialog.




10. Click the Add icon ( ) to create a new schedule.

11. Specify when you want to perform the Cloud Extract.

    **Note**: To perform a once-only Cloud Extract, select the 'Simple' option under **Recurrence**.

    You typically schedule a daily extract to run at a time when the load on the Fusion Applications source system is low, for example, during off-peak hours. In addition, you must schedule the extract so that it completes before the load plan executes to load data from the Oracle Cloud Storage Service into the OTBI-Enterprise data warehouse.

12. Click Save, and then Done.

## Synchronizing Deletes for a Cloud Extract

If you are loading data into a Cloud Storage Service using a Cloud Extract, you use BI Cloud Connector Console to synchronize deletes in the source system with deletes in the Cloud Extract data.

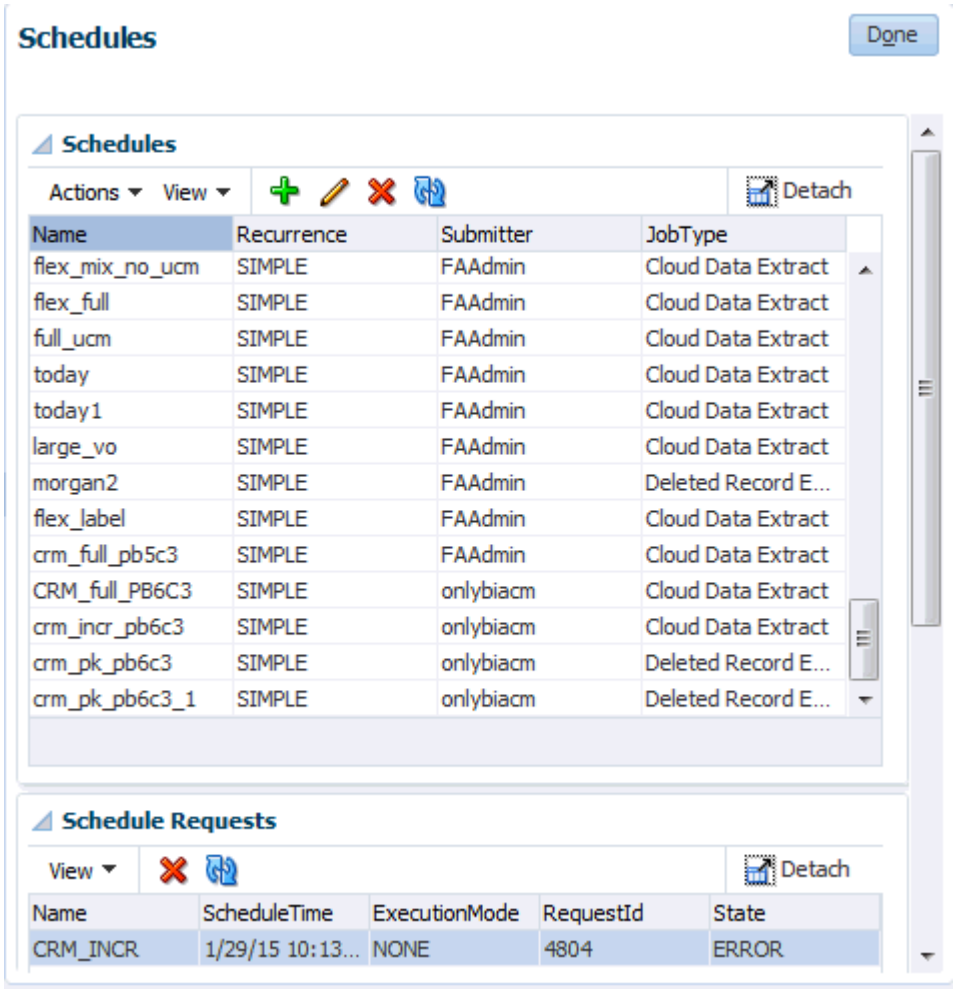
Before you start, log into BI Cloud Connector Console using the Web link and user name supplied to you by Oracle Cloud Support. You can also start BI Cloud

Connector Console using a HTTP URL based on the following format: http://<*FA OHS Host*>:<*FA OHS Port*>/biacm.

To synchronize your Cloud Extract data:

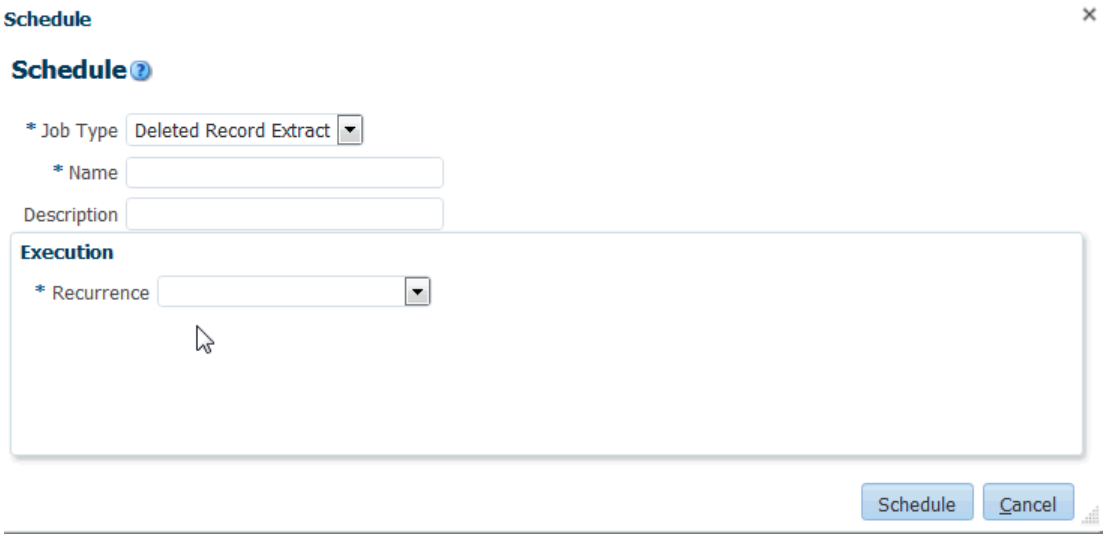
1. Select the **Configure Cloud Extract** link on the Tasks pane.

2. Click the Manage Extract Schedules icon ( ) to display the Schedules dialog.




3. Click the Add icon ( ) to create a new schedule.

4. Use the **Name** field to specify a short name to identify this schedule in BI Cloud Connector Console.



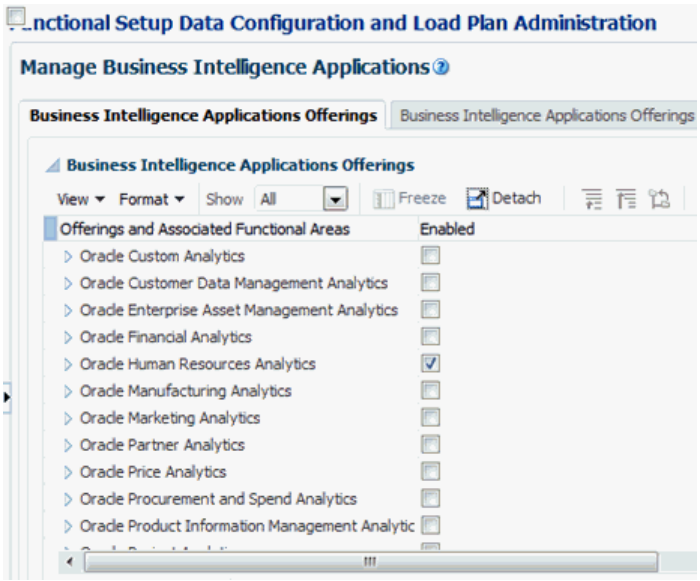

5. Select 'Deleted Record Extract' from the **Job Type** drop down.
6. Use the **Recurrence** drop down to specify when you want to synchronize the data.

   You typically schedule the synchronization to run at a time when the load on the Fusion Applications source system is low, for example, during off-peak hours. In addition, you must schedule the synchronization so that it does not conflict with the Cloud Extract or the data load into the OTBI-Enterprise data warehouse.
7. Save the details.

## Enabling Offerings for Deployment

During Initial Configuration, OTBI-Enterprise Implementors specify the Cloud data source details. Before you start, log in to Configuration Manager using the Web link and user name supplied to you by Oracle Cloud Support.

1. In Configuration Manager, select the **Manage Business Intelligence Applications** link in the System Setups area on the Tasks pane.



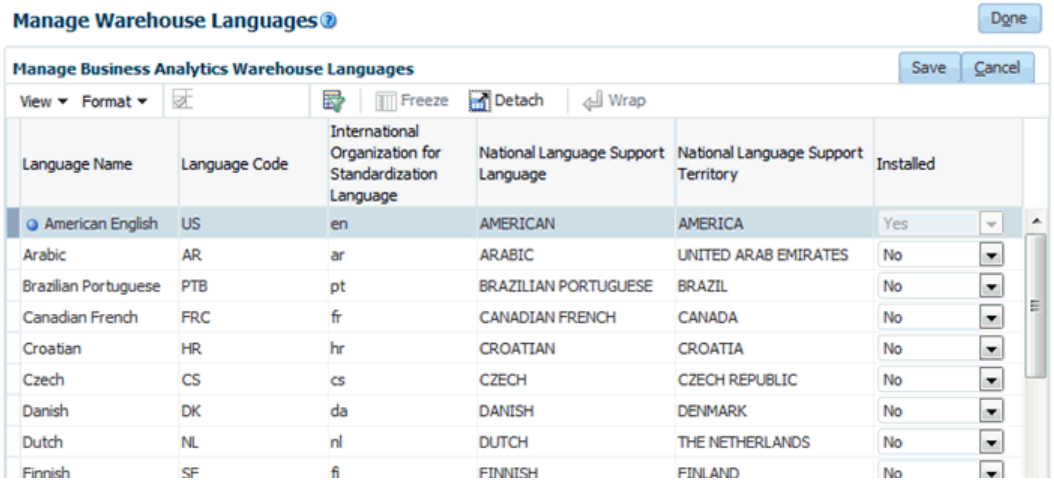
2. Select the **Enabled** option next to the offering and functional areas that you are deploying.

3. Click **Save**, then **Done**.

## Specifying Languages and Preferred Currencies

During Initial Configuration, OTBI-Enterprise Implementors specify the languages and currencies in which to extract OLTP data into the OTBI-Enterprise data warehouse.

1. In Configuration Manager, select the **Manage Warehouse Languages** link in the System Setups area on the Tasks pane.

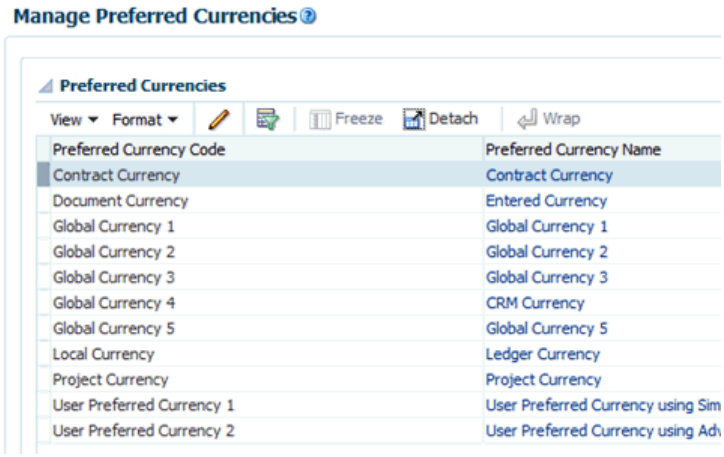



2. Specify the languages from which data is to be extracted from the list of languages displayed in the table by selecting Yes from the Installed drop down.

> **Note:** American English is the default installed language. All other languages are disabled by default.

3. Click **Save**.

4. Select the **Manage Preferred Currencies** link in the System Setups area on the Tasks bar.




5. Select a currency in the Preferred Currencies list. Selecting the currency displays the associated modules in the bottom table.
6. Click the value in the Preferred Currency Name column (or click the **Edit** icon) to display the Preferred Currency Name dialog.
7. In the Preferred Currency Name field, specify a currency name. This is the name that is displayed to BI report users.
8. Click **Save** and **Close**.

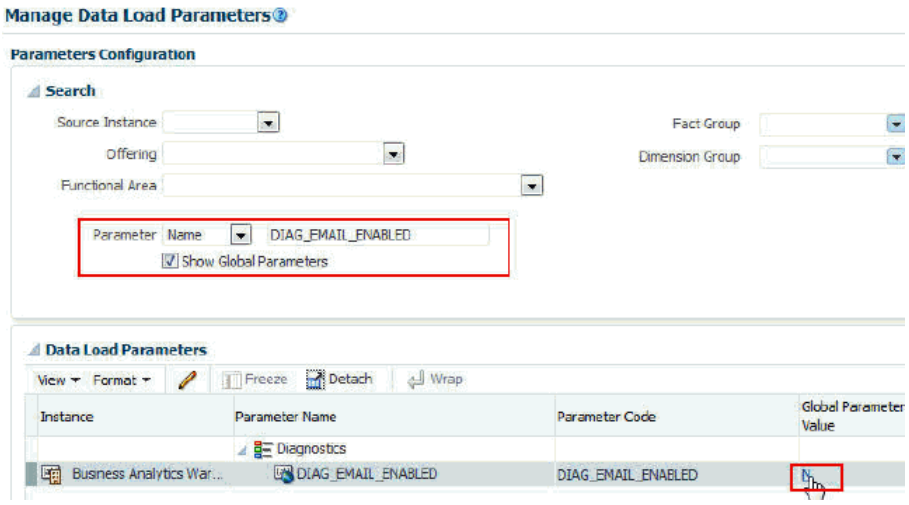
## Enabling Email Notifications for ETL Diagnostics and Health Check

During Initial Configuration, OTBI-Enterprise Implementors enable email notifications for ETL diagnostics and health checks.

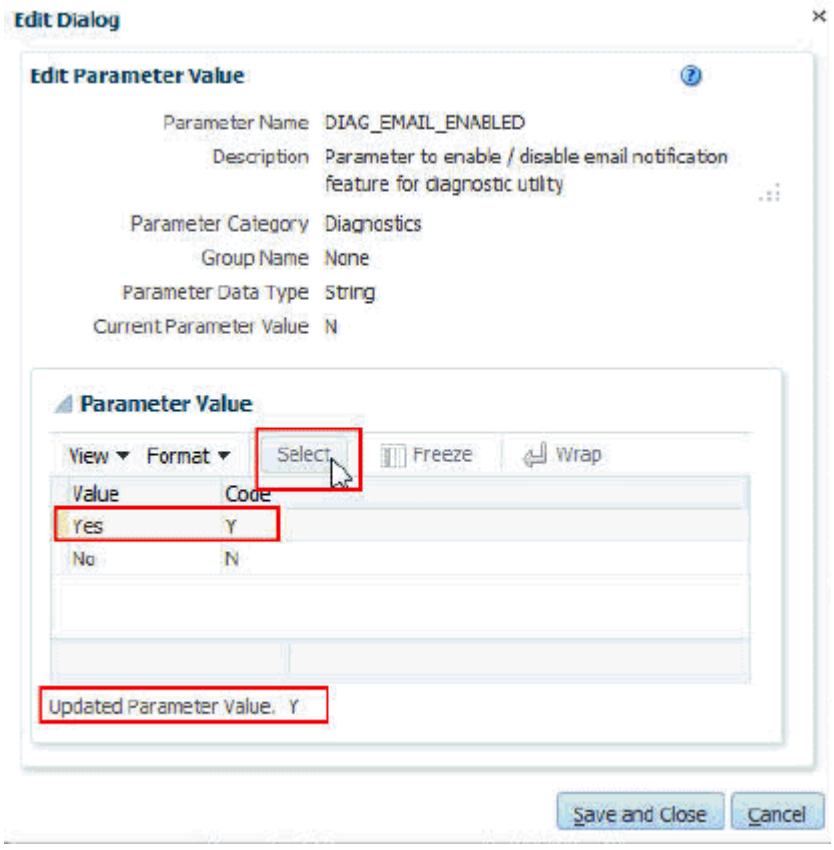
Email notifications are sent to the Service Administrator, using the email address that was used to subscribe to the OTBI-Enterprise Service. For example, notifications are sent if a load plan fails, or a load plan executes successfully but with auto-corrections.

1. In Configuration Manager, select the **Manage Data Load Parameters** link in the System Setups area on the Tasks pane.
2. At the Manage Data Load Parameters dialog, use the Search pane to locate the DIAG_EMAIL_ENABLED parameter:

> **Note:** Select Parameter Name from the list below the Functional Area box, enter DIAG_EMAIL_ENABLED in the adjacent field, and select the **Show Global Parameters** box.




3. In the **Global Parameter Value** column, click the N value to edit the parameter.
4. Use the Edit Parameter dialog to change the value to Y.



# 3

# Normalizing Your Data

During Data Normalization, Implementors load reference data (such as lists of valid values) from data sources and verify that the default source to data warehouse mappings meet business needs. For example, reference data might include lists of valid values for Gender, Department, Salary-scale, and Age-range.

**Topics:**



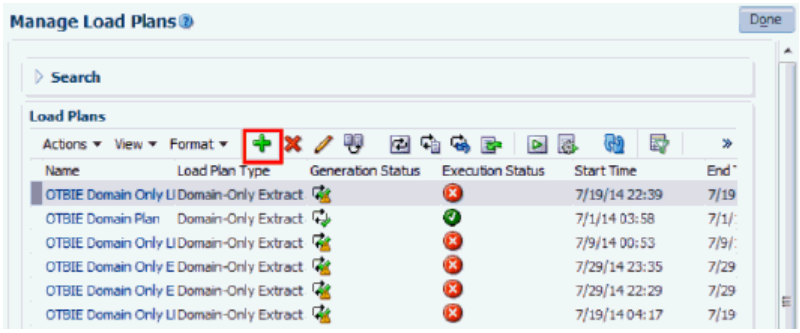
## Loading Reference Data

During Data Normalization, OTBI-Enterprise Implementors create, generate, and execute a Domain-only Load Plan to load reference data from the cloud data source. For example, reference data might include lists of valid values for Gender, Department, Salary-scale, and Age-range.

To load reference data:

1. Create a Domain-only Load Plan:

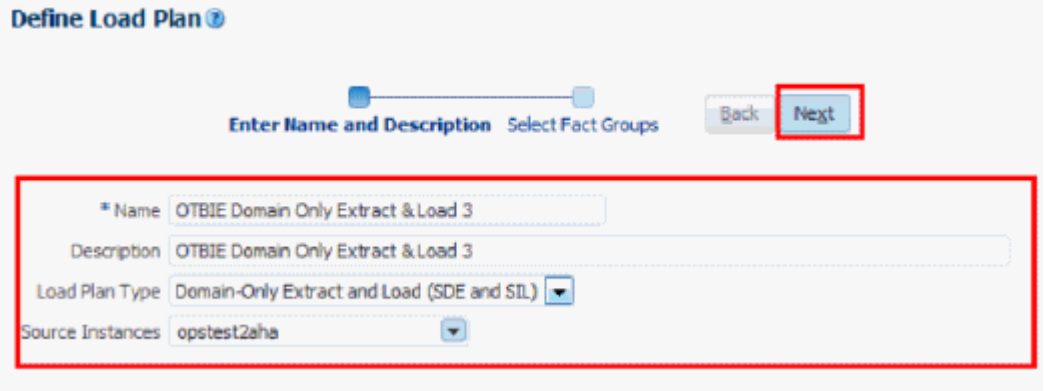
   a. In Configuration Manager, select the **Manage Load Plans** link on the Tasks pane, then click the **Add** icon to create a new load plan.




   - In the **Name** field, specify a short name to identify the load type, source, and version. For example, enter Taleo_Domain_Only_Plan.
   - (Optional) In the **Description** field, specify a short string that identifies the Load Plan in Configuration Manager.
   - In the **Load Plan Type** list, select **Domain-Only Extract and Load (SDE and SIL)**.

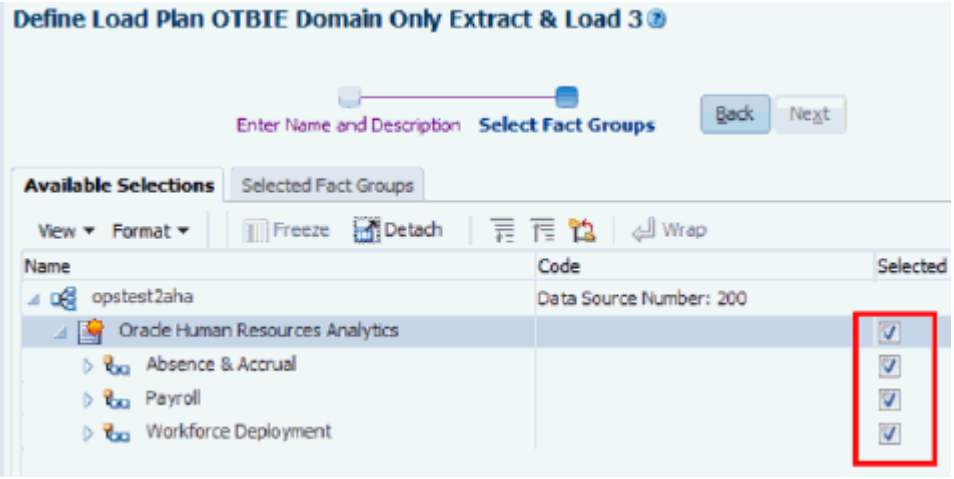
- In the **Source Instances** list, select the cloud data source from which you want to extract reference data.

**b.** Complete the **Enter Name and Description** fields.



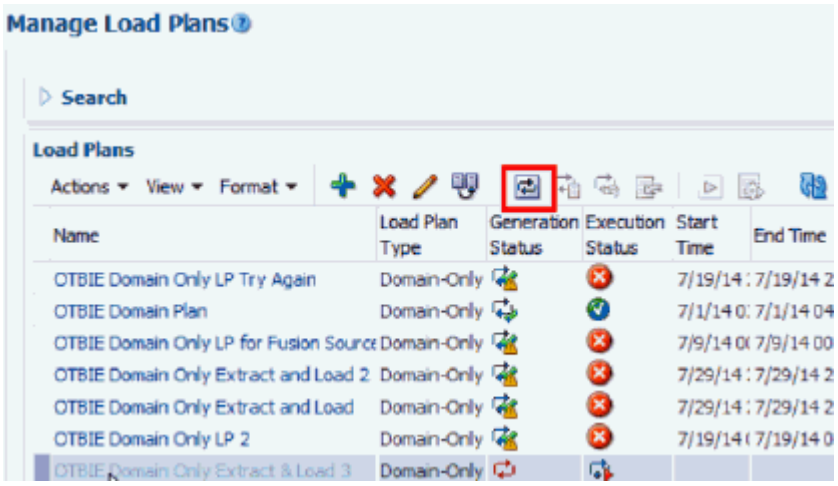

**c.** Click **Next** to display the Select Fact Groups page.

**d.** Select the **Selected** box next to each fact group that you want to load, then save the details.

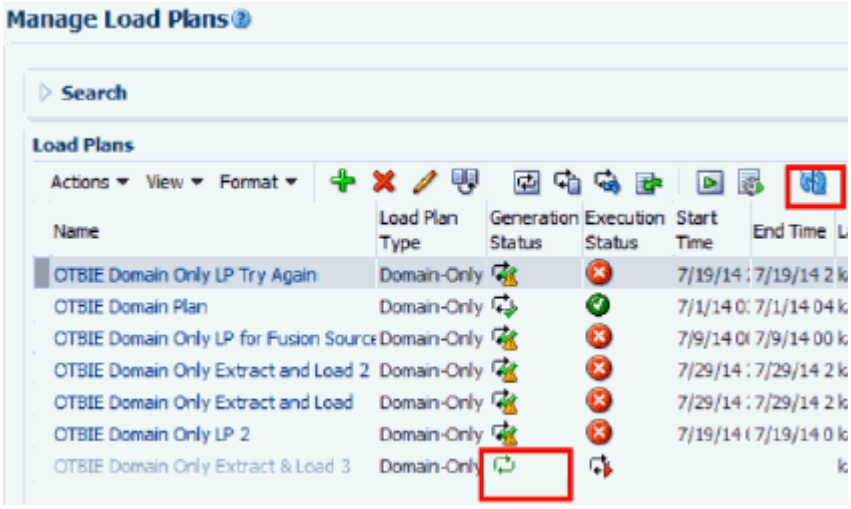



**2.** Generate the new Load Plan:

**a.** Select the **Manage Load Plans** link on the Tasks bar, highlight the Domain-Only Extract and Load (SDE and SIL) load plan, then click **Generate**.




**b.** Monitor the progress of this load plan using the Generation Status and Execution Status icons.

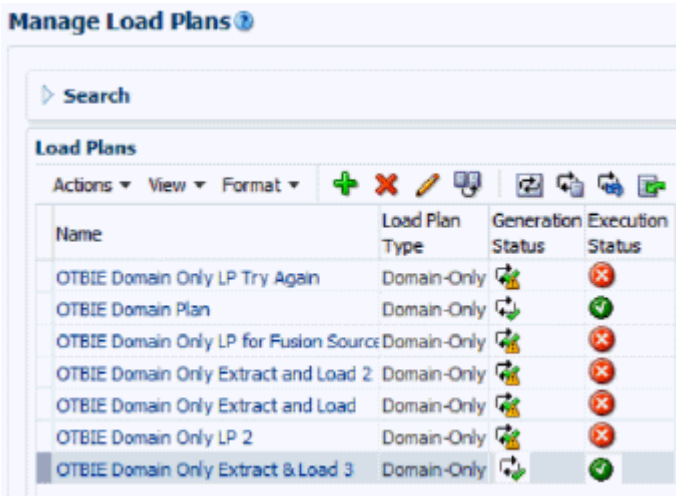



- If the Generate process succeeds, then continue to Step 3.
- If the Generate process fails, then:
  - Use Manage Load Plans toolbar options to diagnose issues.
  - Resolve the issues.
  - Click **Generate** and monitor the process again.
  - Repeat this process until the Generate succeeds, then skip to Step 3.

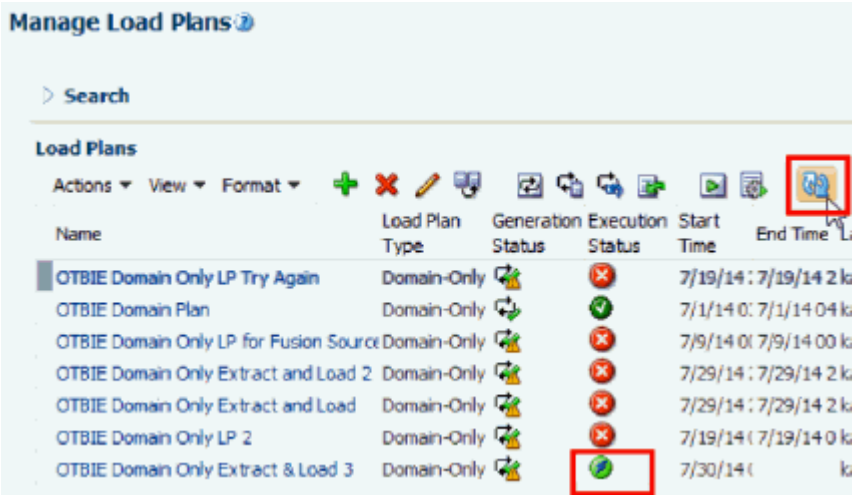
**3.** Execute the new Load Plan:

**a.** At the Manage Load Plans page, highlight the Domain-Only Extract and Load (SDE and SIL) load plan, and click **Execute** (  ).

**b.** Monitor the Execute process.




- If the Execute process succeeds, then you have completed the configuration.
- If the Execute process fails, then:
  - Use the ODI Console to diagnose issues.
  - Resolve the issues.
  - Click **Execute** and monitor the process again.
  - Repeat this process until the Execution succeeds.

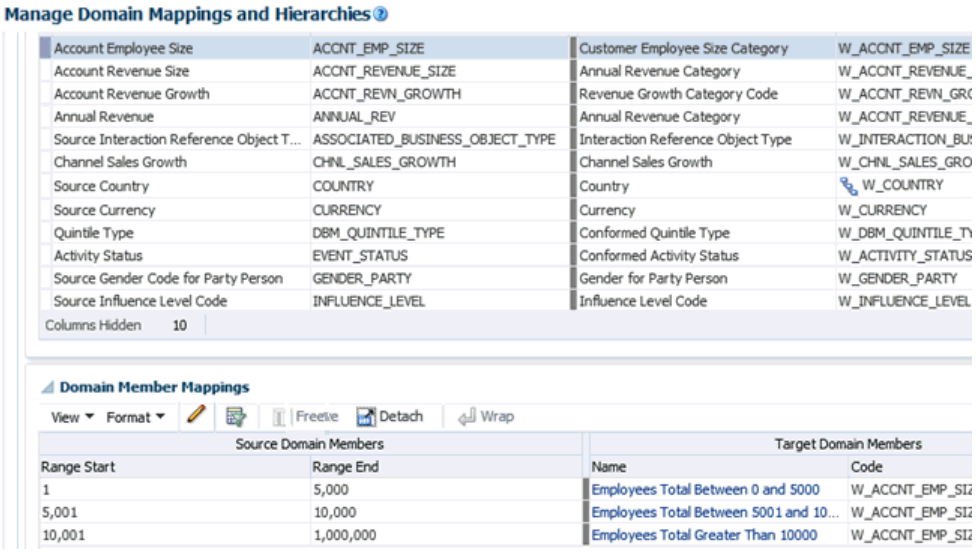



# Verifying Domain Mapping from Source Data to Data Warehouse Data

During data normalization, OTBI-Enterprise Implementors verify the default Domain mappings and hierarchies, and if necessary change the default values to match business needs.

To verify domain mapping:

1. In Configuration Manager, select the **Manage Domain Mappings and Hierarchies** link on the Tasks pane.
2. Use the Manage Domain Mappings and Hierarchies dialog to configure the domain mappings.



# 4

# Performing Functional Configuration

During OTBI-Enterprise Functional Configuration, Implementors specify ETL and Reporting values that determine how the transactional data is loaded and displayed to BI end users.

### Topics



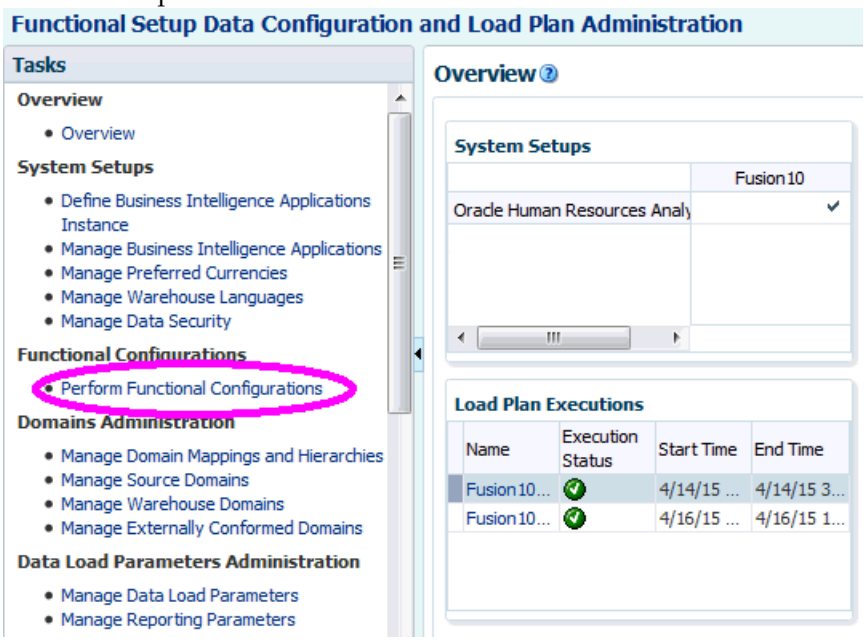
## Creating an Implementation Plan

During Functional Configuration, Implementors use Functional Setup Manager to enable Offerings and create an Implementation Plan.

To perform Functional Configuration:

1. Enable your Offerings:

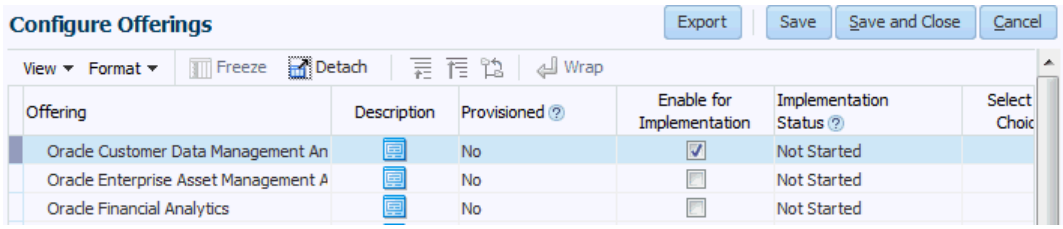
   a. In Configuration Manager, select the **Perform Functional Configurations** link on the Tasks pane.




   If prompted, enter the user name and password that you used to log into Configuration Manager. Functional Setup Manager is displayed.


**b.** In Functional Setup Manager, select the **Configure Offerings** link to display the Configure Offerings dialog.

**c.** Select the **Enable for Implementation** check box next to the Offering that you are deploying, for example, OTBI Enterprise for HCM Cloud Service.



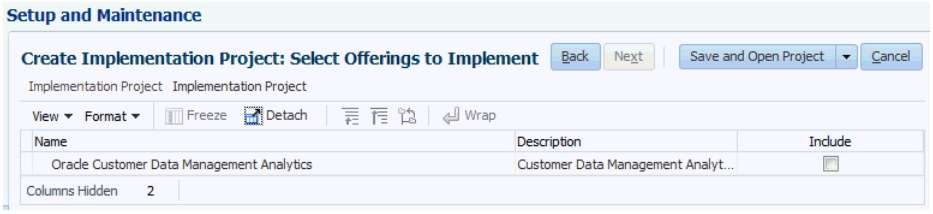

**d.** Click Save and Close.

2. Create an Implementation Plan:

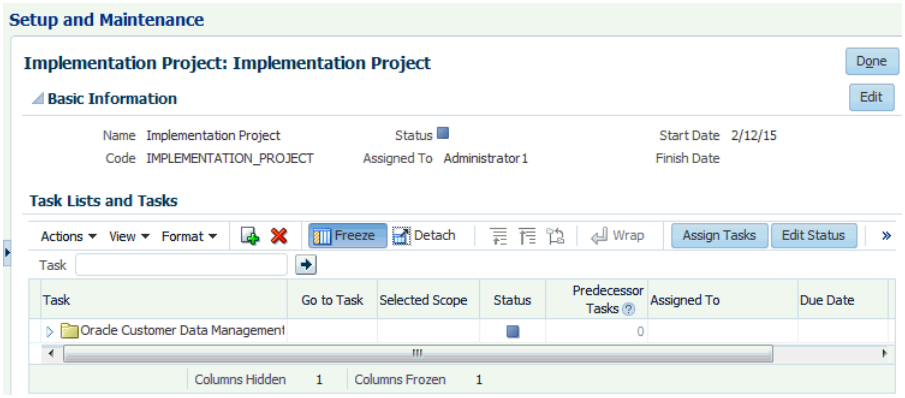
**a.** In Functional Setup Manager, select the **Manage Implementation Projects** link on the Tasks pane.

**b.** Click the Create icon (or select Actions, then Create), use the Enter Basic Information dialog to specify a Name for the Implementation Plan, then click Next.

**c.** At the Select Offerings to Implement page, select the **Include** check box next to the Offering that you are deploying, for example, OTBI Enterprise for HCM Cloud Service.



d. Click Save and Open Project.



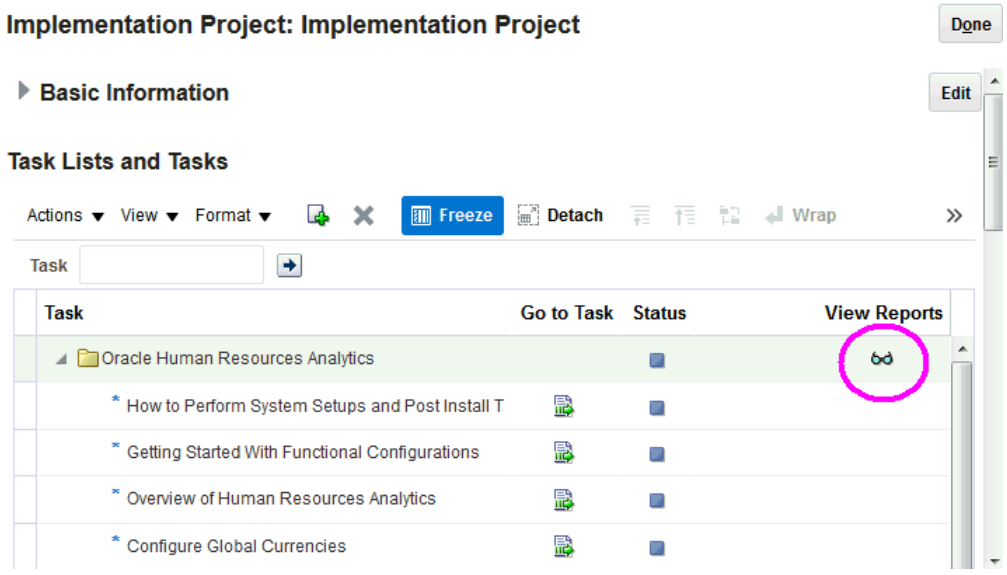

You can now proceed to the next step where you create a Configuration Workbook.

## Creating a Configuration Workbook

During Functional Configuration, Implementors create a Configuration Workbook that contains advice and tips on setting configuration values in Functional Setup Manager.

To create a Configuration Workbook:

1. In FSM, from the Tasks pane, select the **Manage Implementation Projects** link.
2. In the list of Implementation Plans, click on the plan that you created for this project.
3. In the View Reports column, click the View Report icon, then select the **Excel** link for the Setup Task Lists and Tasks option.




4. When prompted, save the `SetupTaskLists.csv` file locally.

5. Use the file to review advice and tips on specifying configuration values.

   You can find the FSM Task Name in column B, and the associated advice and tips in column D.

| | A | B | C | D |
|---|---|---|---|---|
| 1 | Leve | Task List or Task | Type | Description |
| 2 | 1 | Oracle Human Resources Analytics | Tas | Human Resources Analytics Configurations |
| 3 | 2 | How to Perform System Setups and Post Insta | Tas | Description: How to Perform System Setups and Post Install Tasks for BI Applications |
| 4 | 2 | Getting Started With Functional Configurations | Tas | Description: Getting Started With Functional Configurations |
| 5 | 2 | Overview of Human Resources Analytics | Tasl | This task describes the various subject areas that are offered within Human Resources Analytics and a high level detail on each. |
| 6 | 2 | Configure Global Currencies | Tasl | This task is used to configure Global Currency related parameters. There are five types of parameters: Default Global Exchange Rate, Default Local Rate Type, Global Currency Code, Global Currency Rate Type, and Exchange Rate Update Number Of Days. Default Global Exchange Rate parameter is DEFAULT_GLOBAL_EXCH_RATE. Configure a static value for the exchange rate that will be used in the calculations. The exchange rate will be defaulted to this value, if the ETL does not find a valid record from OLTP, between two currencies. Default Local Rate Type parameter is DEFAULT_LOC_RATE_TYPE_DOMAIN. Configure a local rate type that will be used by Facts when no local rate type can be obtained from the OLTP transactions. Global Currency Code parameters include GLOBAL1_CURR_CODE_DOMAIN, GLOBAL2_CURR_CODE_DOMAIN, GLOBAL3_CURR_CODE_DOMAIN, GLOBAL4_CURR_CODE_DOMAIN, and GLOBAL5_CURR_CODE_DOMAIN. Global Currency Rate Type Parameters include GLOBAL1_RATE_TYPE_DOMAIN, GLOBAL2_RATE_TYPE_DOMAIN, GLOBAL3_RATE_TYPE_DOMAIN, GLOBAL4_RATE_TYPE_DOMAIN, and GLOBAL5_RATE_TYPE_DOMAIN.Parameter for Exchange Rate Update Number Of Days is XRATE_UPD_NUM_DAY. Configure number of days that the currency exchange should be updated in history during Incremental runs. |
| 7 | 2 | Specify Gregorian Calendar Date Range | Tasl | This task is used to specify the range of dates for which the Gregorian calendar is generated. The parameter END_DATE is used to specify the end of the Gregorian Calendar Date Range. The Gregorian calendar will be generated till the date specified by this parameter. Customers **should generally pick a value that covers at least 10 years forward.The parameter** START_DATE is used to specify the start of the Gregorian Calendar Date Range. The Gregorian calendar will be generated from the date specified by this parameter. Customers should generally pick a value that covers the entire range for which they plan to load data into the warehouse. |
| 8 | 2 | Configure Data Load Parameters for File Based | Tasl | This task is used to configure data load parameters for file based calendars. The parameter 13P_CALENDAR_ID is used to define which of the File Based Calendars is a 13-period calendar. The default value is 10001. The parameter 445_CALENDAR_ID is used to define which of the File Based Calendars is a 4-4-5 calendar. The default value is 10000. |

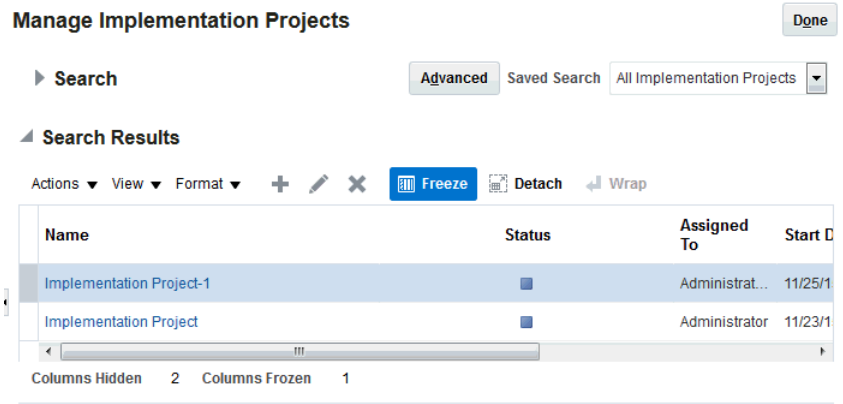
Use the advice and tips when you configure values in the following task.

# Performing Functional Configuration

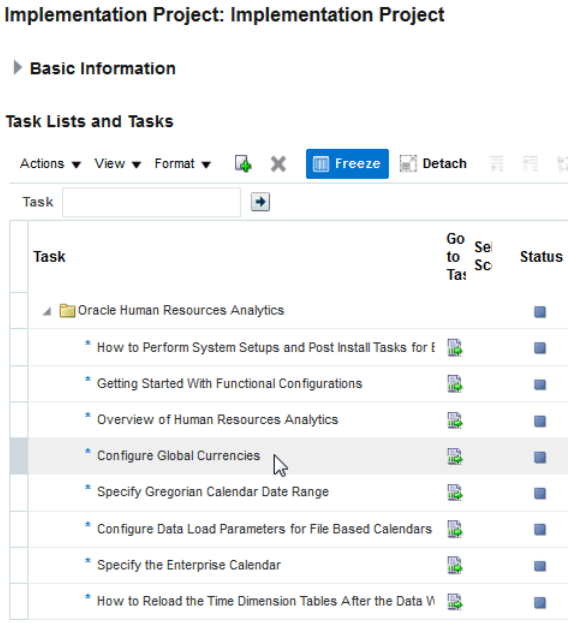
During Functional Configuration, Implementors specify ETL and Reporting values that determine how the transactional data is loaded and displayed to BI end users. For example, you might specify the Initial Extract Date for data as January 1 2014, specify the local currency as US Dollars (USD), and define the Enterprise Calendar data range for your business. This is done by completing a number of Tasks in Functional Setup Manager. You can either complete the tasks yourself or assign tasks to other members of your team.

To perform Functional Configuration:

1. In FSM, from the Tasks pane, select the **Manage Implementation Projects** link, and click the Implementation Plan that you created earlier.

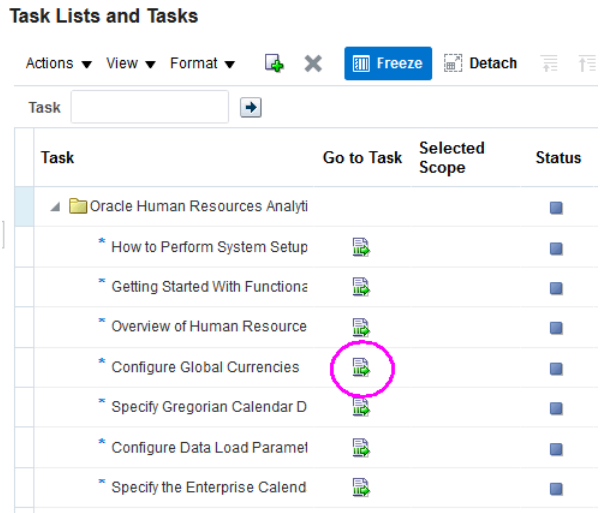


2. In the Task column, expand your Offering (for example, Oracle Human Resource Analytics) to display the Tasks that you need to complete.



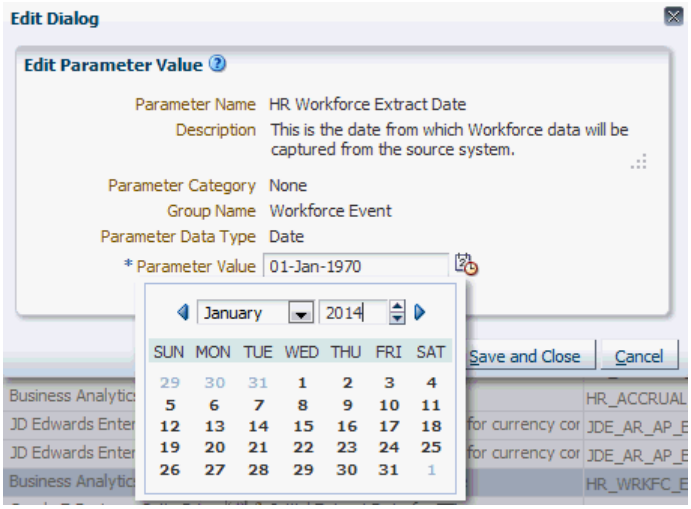

3. For each Task under that Offering, do the following:

   a. Click the **Go to Task** icon.



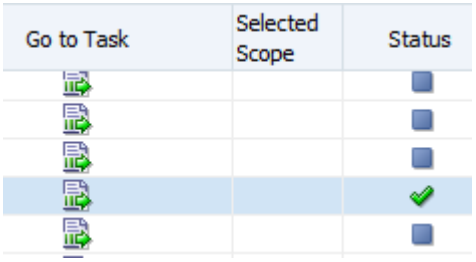

   b. Use the displayed dialog to review the default value and change the value if required, then click **Save and Close**.

      For example, if you click Go to Task for the Task named 'Workforce Extract Date', then you use the Edit Parameter Value dialog to review and edit the date.




If the task is Informational only, then you can review the information in a separate Help dialog. If the information contains a list of steps that you must perform in a separate tool, then you must perform those steps as specified. For example, an Informational task might display a list of Functional Areas to include in a load plan, or it might include a list of steps to be performed in a separate (for example, a security tool).

c. Click the icon in the **Status** column, use the Edit Status dialog to change the status to Completed, then click **Save and Close**. The Status icon will change to a green tick.




Your Offering is now functionally configured for ETL, and you can now start to load your data.

If you want to verify that your configuration values have been set, then click the **Go to Task** icon again to review the current value and change the value if required, then click Save and Close. You can also use Configuration Manager to review functional configuration values such as Data Load Parameters, Reporting Parameters, and Mappings.

# 5

# Loading BI Data

During the Loading Data stage, Implementors load transactional data into the OTBI-Enterprise data warehouse for analysis by BI end users.

If you are in the test phase and you want to load data just once, then follow the steps in Loading Your Data One Time Only.

**Topics:**

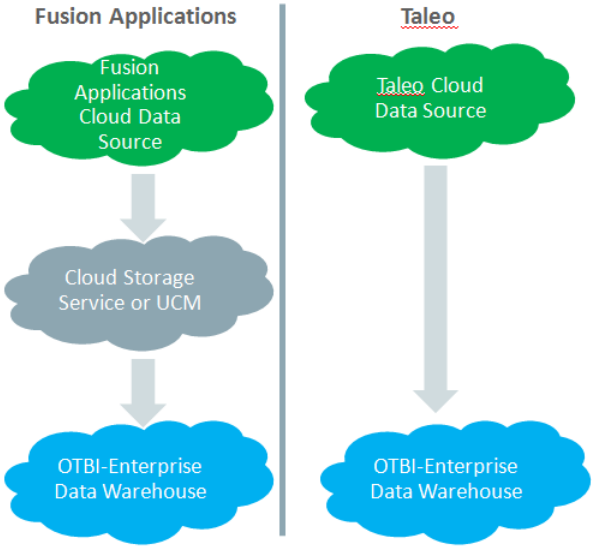


## Overview of Data Loading

During the Loading Data stage, Implementors load transactional data into the OTBI-Enterprise data warehouse for analysis by BI end users.

### Loading data into the OTBI-Enterprise data warehouse

For most data sources, you first load transactional data into your Oracle Cloud Storage Service. Then, you move the data from the Cloud Storage Service into the OTBI-Enterprise data warehouse. For Taleo data, you load data directly from the Taleo Cloud data source into the OTBI-Enterprise data warehouse.



# High Level Steps for Data Loading

During the Loading Data stage, Implementors load transactional data into the OTBI-Enterprise data warehouse for analysis by BI end users.

**High–level steps for loading data**

1. If you are deploying a Fusion Applications Cloud, E-Business Suite, or PeopleSoft data source, then you will have performed a Cloud Extract during Initial Configuration to load data into your Cloud Storage Service. If you created a once-only Cloud Extract during Initial Configuration, then you must schedule a regular Cloud Extract by following the steps in Extracting Data Into Your Oracle Cloud Storage Service. If you scheduled a regular Cloud Extract during Initial Configuration, then you can skip this step.

**Note**: This step is not required for Taleo data sources.

2. Create a load plan in Configuration Manager to specify which offerings and functional areas to load by following the steps in Specifying which offerings and functional areas to load.

3. Load the data using one of the following methods:

— Schedule the load plan in Configuration Manager to execute and load the data into the OTBI-Enterprise data warehouse by following the steps in Scheduling a load plan.

— Execute the load plan manually in Configuration Manager by following the steps in Execute a load plan manually.

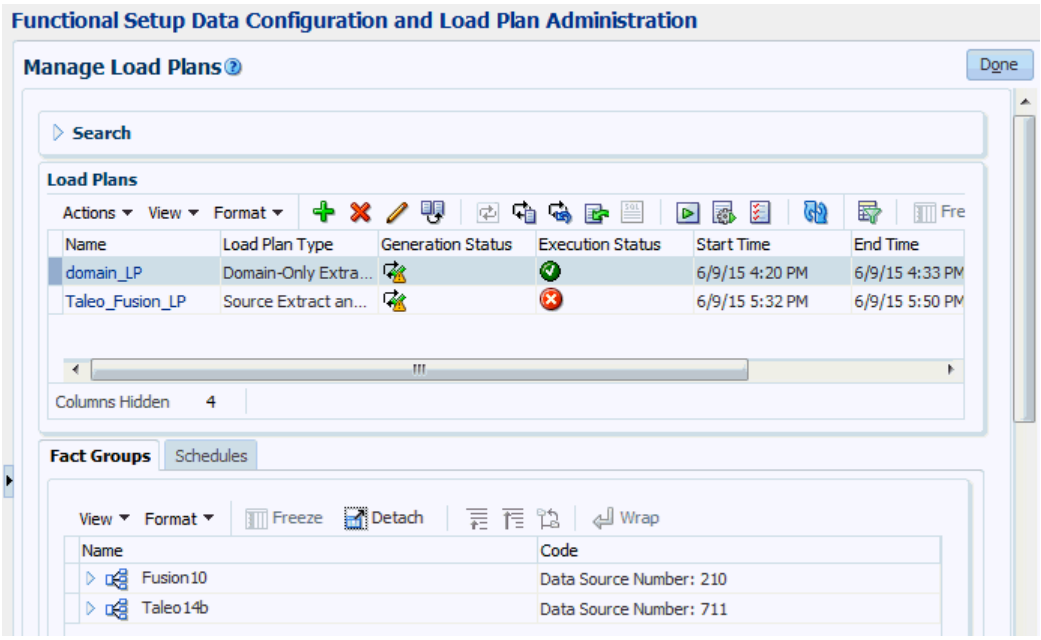
When you load data, if irregularities are found in the source data or auto-corrections are made, then the Administrator receives a Health Check notification email. For more information, see Responding to a Health Check notification email.

# Specifying Which Offerings and Functional Areas to Load

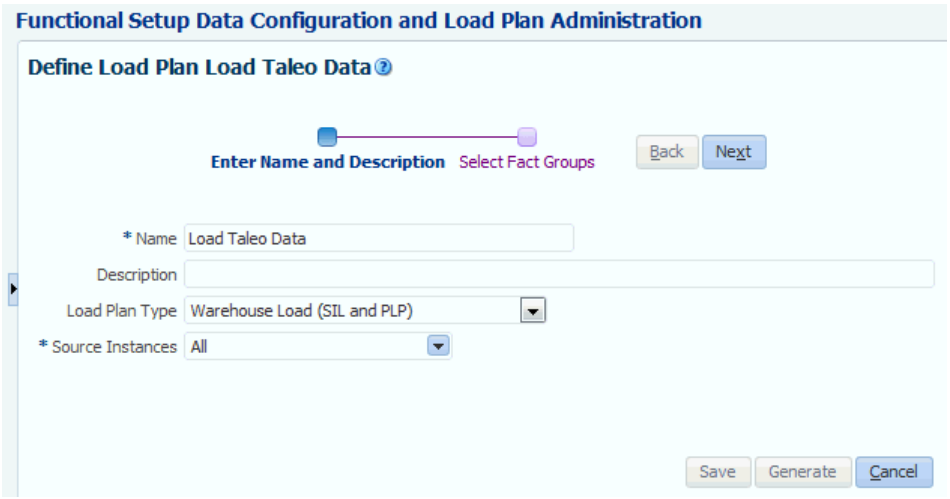
You specify which offerings and functional areas to load by creating a load plan. A load plan is a set of instructions in Configuration Manager that extracts data from a Cloud data source or Cloud Storage Service and loads that data into the OTBI-Enterprise data warehouse. Load plans can be executed once only or scheduled to execute regularly.

Specifying which Offerings and Functional Areas to load:

1. In Configuration Manager, select the **Manage Load Plans** link on the Tasks pane.




2. On the Load Plans toolbar, click the Add icon ( ) to display the Define Load Plan dialog.



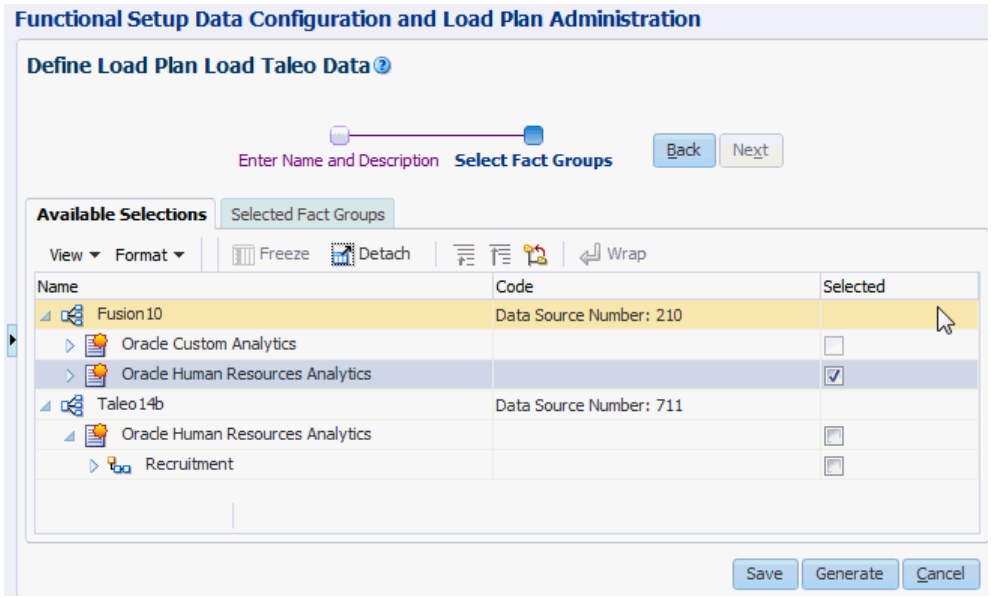

3. On the first page of the Define Load Plan series, specify the following information about the load plan:

   - Name — Enter a unique name for the load plan to identify the data being loaded. This name is used in Configuration Manager, and in Health Check email notifications.
   - Description — (Optional) Enter additional information to help manage the load plan.
   - Load Plan Type — Select 'Source Extract and Load (SDE, SIL and PLP)'.

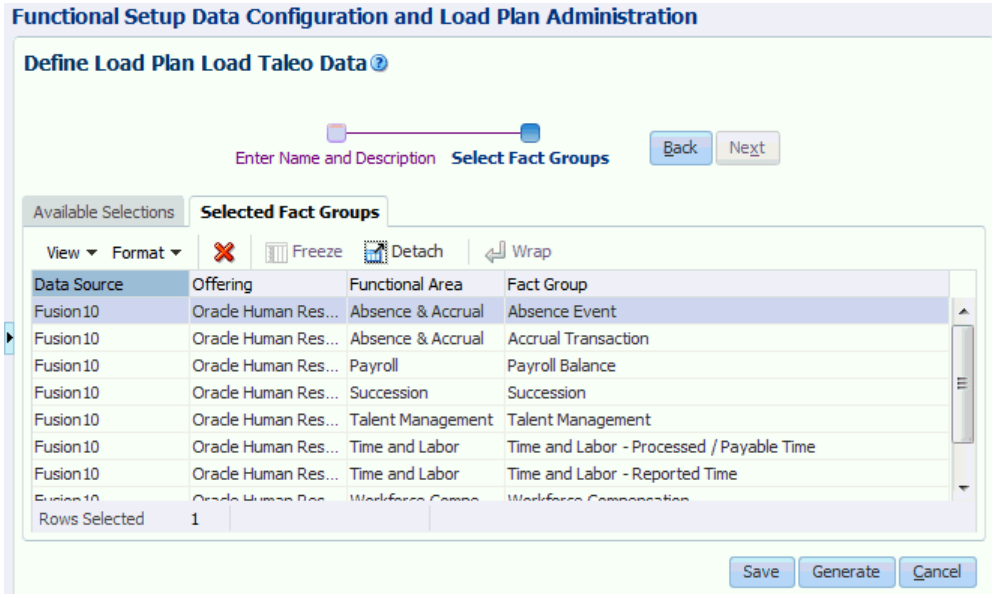
- Source Instances — Select the data sources from which the fact groups will be selected. This list displays the data sources that you specified during the task 'Register FA HCM Cloud Source System' or 'Register Taleo Cloud Source System' during the Initial Configuration stage.

4. Click **Next** to display the Select Fact Groups page.

5. In the Available Selections tab, select the **Selected** box next to each Offering that you want to include in the load plan.




To verify that you have the correct Fact Groups included in the Load Plan, click the Select Fact Groups tab and verify the list.




6. Click **Save**, then click **Generate**.

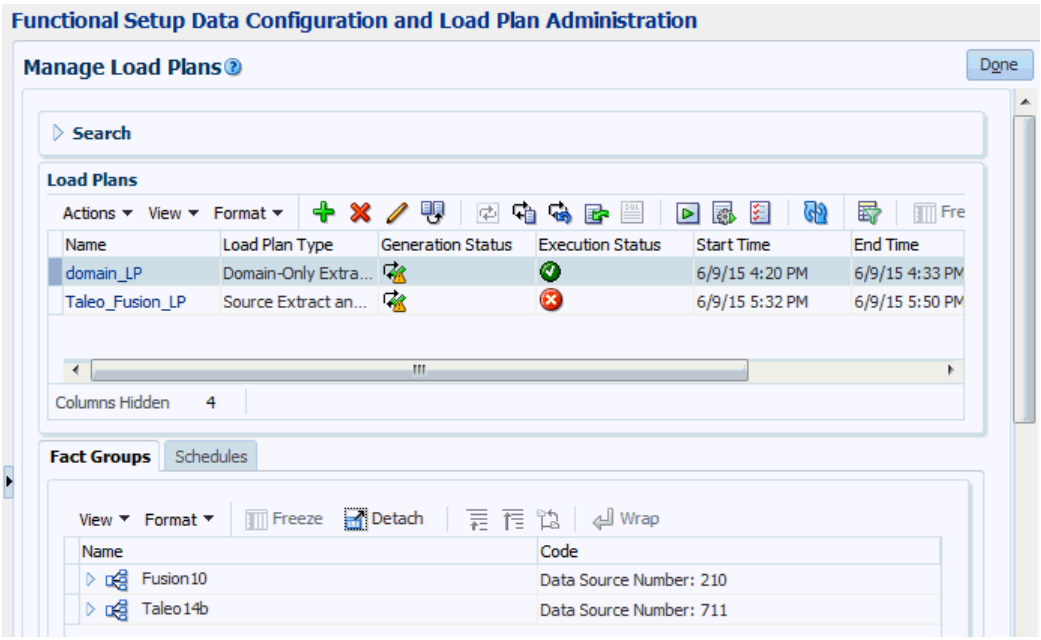
When the load plan generation is complete, you can execute the load plan manually or schedule the load plan to execute at a particular time. If the generation fails, then use the Help system in Configuration Manager to find out how to diagnose generation issues and make corrections.

## Creating a Schedule to Load Your Data Regularly

When you have specified which Offerings and Functional Areas to load by creating a Load plan in Configuration Manager, you schedule that load plan to load data regularly. For example, you might want to perform an incremental data load once per week on Sunday at midnight. You typically schedule the data load to run during off-peak hours. In addition, if you are loading Fusion Applications data from an Oracle Cloud Storage Service, then you must schedule the data load so that it starts after the Cloud Extract (that is, from Fusion Applications source into Oracle Cloud Storage Service) has completed.

To create a schedule to load your data regularly:

1. In Configuration Manager, select the **Manage Load Plans** link on the Tasks pane.




2. In the Load Plans list, select the load plan that you want to schedule.
3. Select the Schedules tab.
4. On the Schedules toolbar, click the Add icon ( ).
5. Specify the following information about the load plan:
   - Context — The ODI context to be used when the load plan is run. Note that Global is the only supported context.
   - Local Agent — Select OracleDIAgent.
   - Log Level — The level of logging information to retain. Configuration Manager uses Oracle Diagnostic Logging.

- Status — Specify 'Active'.
- Recurrence — Specify the frequency of data loads.

6. Click **Schedule**.

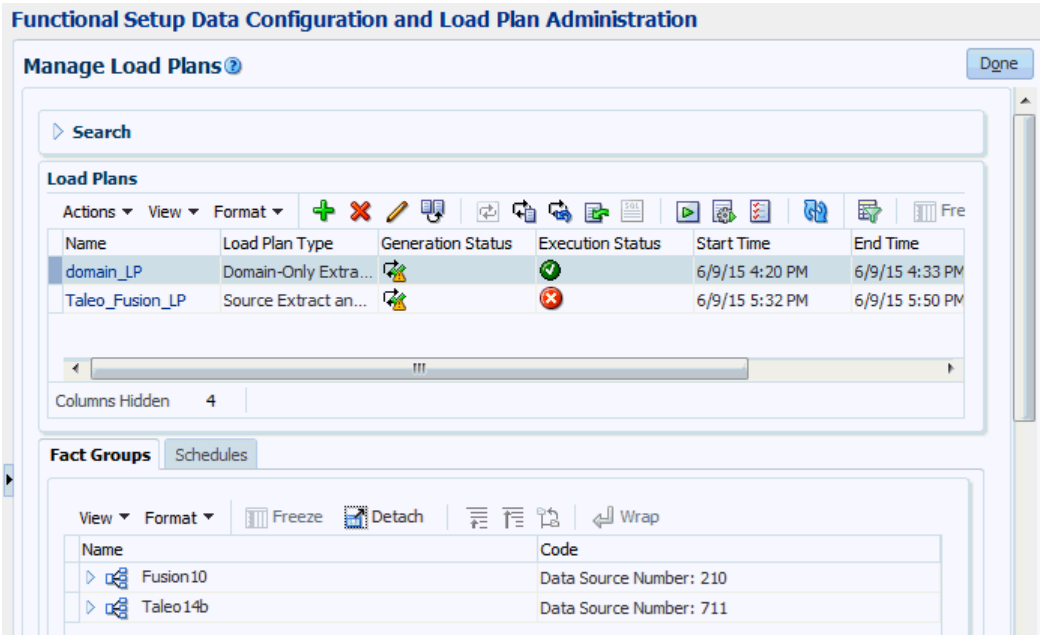
   When you have scheduled a load plan, you monitor the load plan executions in Configuration Manager, as described in Monitoring Data Loads.

## Loading Your Data One Time Only

If you want to load data once only, you execute a load plan directly in Configuration Manager. For example, your deployment project might be in test phase. You load data during off-peak hours. In addition, if you are loading Fusion Applications data from an Oracle Cloud Storage Service, then you perform the data load after the Cloud Extract (that is, from Fusion Applications source into Oracle Cloud Storage Service) has completed.

To load data one time only:

1. In Configuration Manager, select the **Manage Load Plans** link on the Tasks pane.




2. In the Load Plans list, select the load plan that you want to execute.
3. On the Load Plans toolbar, click **Execute**.
4. Specify the following execution details:
   - Context — Select Global.
   - Local Agent — Select OracleDIAgent.
   - Oracle Data Integrator Work Repository — Select the ODI Work repository.

   When you have executed a load plan, you monitor the load plan executions in Configuration Manager, as described in Monitoring Data Loads.

If irregularities are found in the source data or auto-corrections are made, then the Administrator receives a Health Check notification email. For more information, see Responding to a Health Check notification email.

# 6

# Monitoring and Diagnosing Data Load Issues

During the Loading Data stage, Implementors use Configuration Manager to monitor the progress of load plans. If a data load fails or completes with auto-corrections, then the Implementor receives an email alert that contain a summary of the data loading issue.

**Topics:**



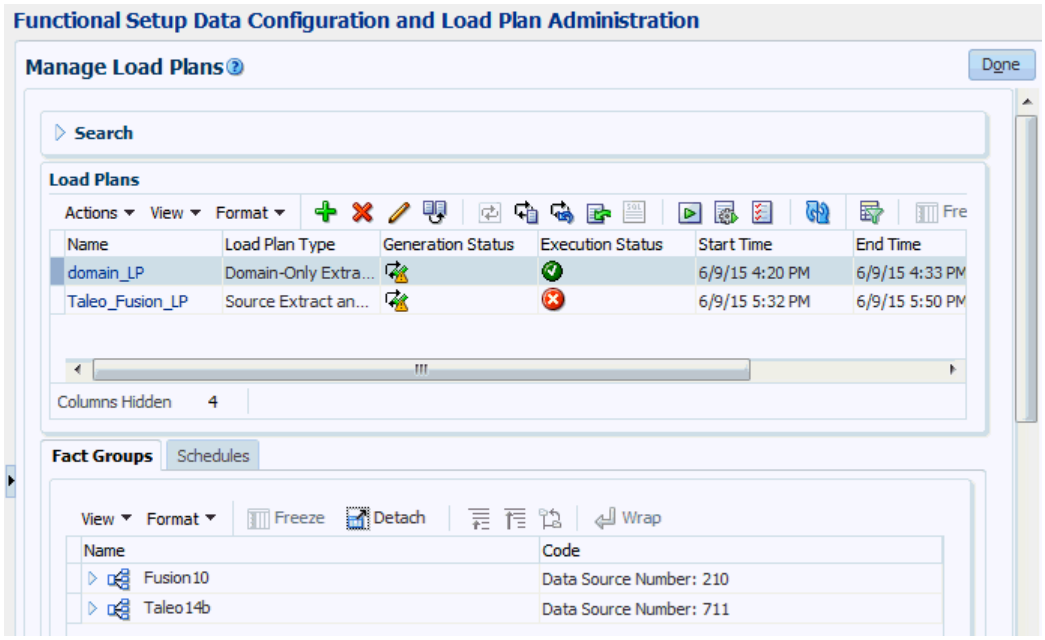
## Responding to a Health Check Email Notification

Health Checks are performed automatically during data loads, and analyze source data and ETL processes to look for irregularities and errors. The Administrator receives a Health Check email notification if the load plan failed because of irregularities in the source data, or if the load plan executed successfully but with auto-corrections.

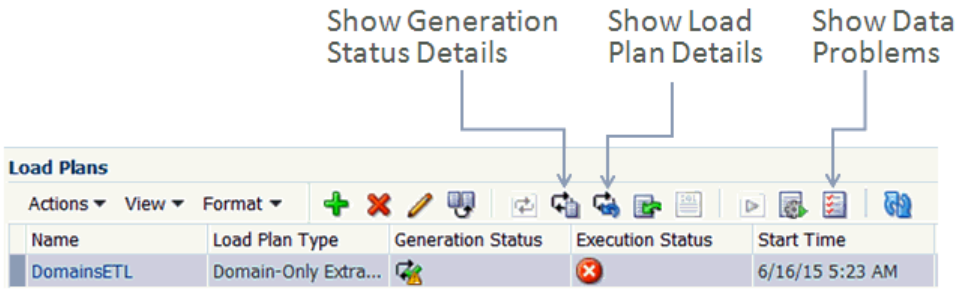
### Responding to a Health Check Email Notification

If you receive a Health Check notification email:

1. Review the email to determine whether the Health Check detected auto-corrections (but the load plan completely successfully), or detected source data irregularities (and the load plan failed).
2. In Configuration Manager, navigate to the Manage Load Plans dialog.




3. Click Show Data Problems on the toolbar.




4. Select the task that was specified in the email.
5. Click Download.
6. If the Health Check email notifies you that the load plan execution was successful but with auto-corrections, then open the downloaded CSV file and verify the auto-corrections.
7. If the Health Check failed due to irregularities in the source data, then:
   a. Open the downloaded HTML file and review the errors.
   b. In the data source, use an appropriate database client to correct the errors.
   c. Execute the load plan again, either manually or scheduled.

   If you corrected the errors in the source data, then the load plan will execute successfully and you will not receive another Health Check email for that load plan execution.

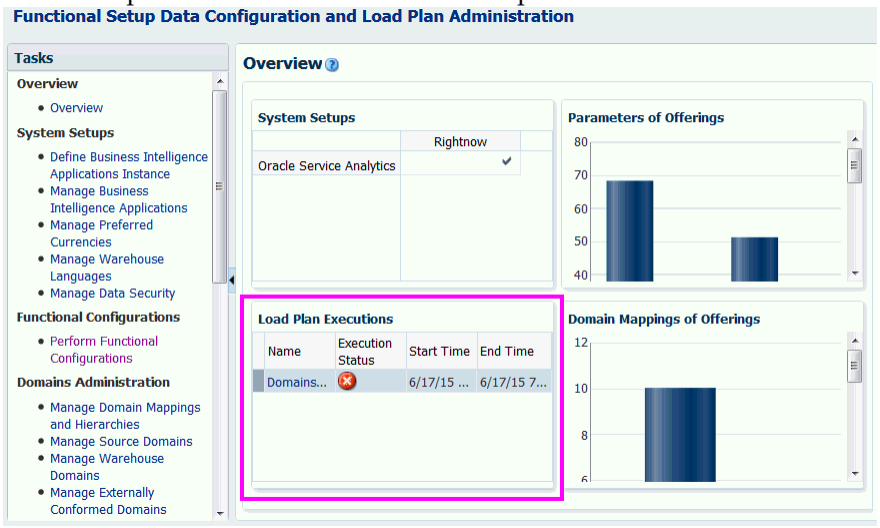
# Overview to Diagnosing Data Loading Issues

During data loads, Implementors use Configuration Manager to diagnose issues in load plans and in the data itself.

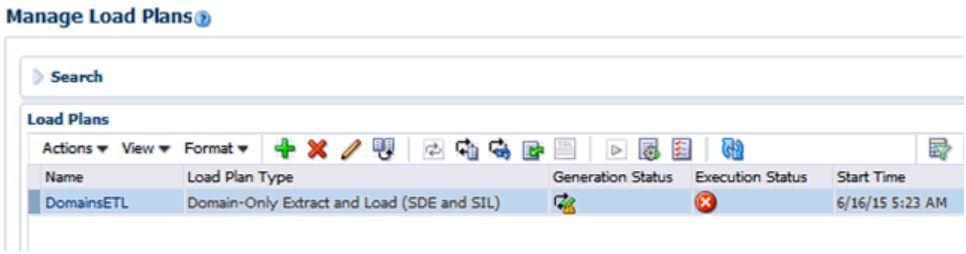
In Configuration Manager, you use the following features to monitor data loads.

### Using Configuration Manager to diagnose data loading issues

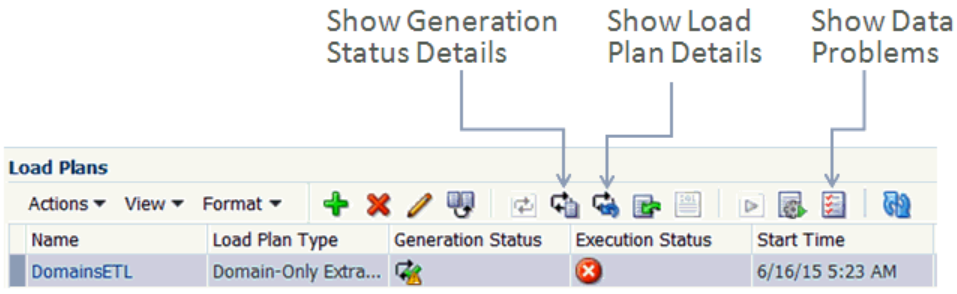
Display the Overview page in Configuration Manager and use the Load Plan Execution pane to review the status of load plans.




Select the **Manage Load Plans** link on the Tasks bar to display the Manage Load Plans dialog, and use the Load Plans list to monitor data loads.




Use the load plan monitoring options on the tool bar.




### Tips on diagnosing data loading issues

— If you use the Restart Load Plan option, then set the Log Level to 6. Log Level 6 will enable you to see variable values resolved in session logs.

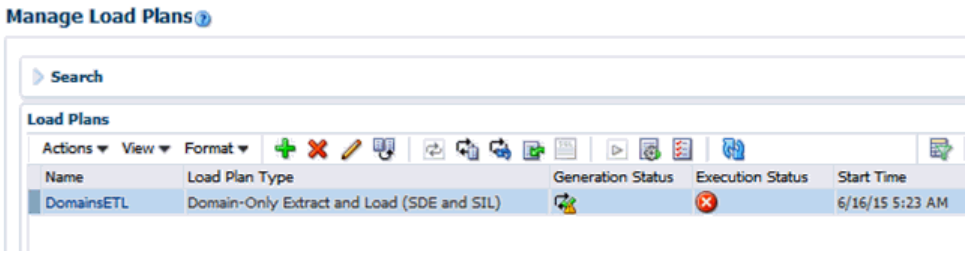
# Monitoring Data Loads

During data load monitoring, OTBI-E Implementors monitor load plans to check that data has loaded correctly from a source system or Storage Service into the OTBI-Enterprise Data Warehouse. You use Configuration Manager to monitor the real-time status of load plans.

## Example: Diagnosing a data loading issue

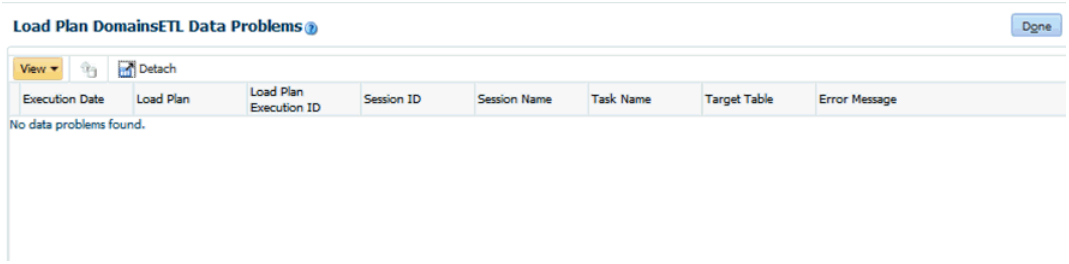
In this example, an Implementor uses Configuration Manager to diagnose a typical data loading issue.

1. In Configuration Manager, select the **Manage Load Plans** link on the Task pane to display the Manage Load Plans dialog.




   If a Load Plan has failed, you will see a X icon in the **Execution Status** column.

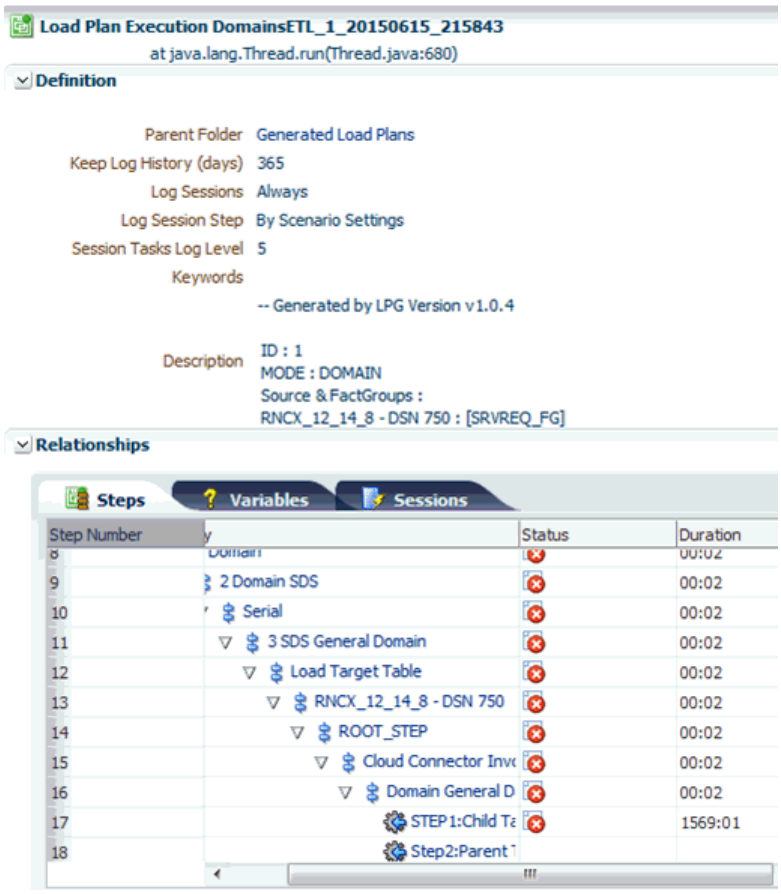
2. First, check for data problems by clicking the Show Data Problems option to display the ETL Data Problems dialog.




3. If no data problems are reported, then click the Execution Status icon to view the load plan details in the ODI Console UI. Here, you can see the top level error messages.

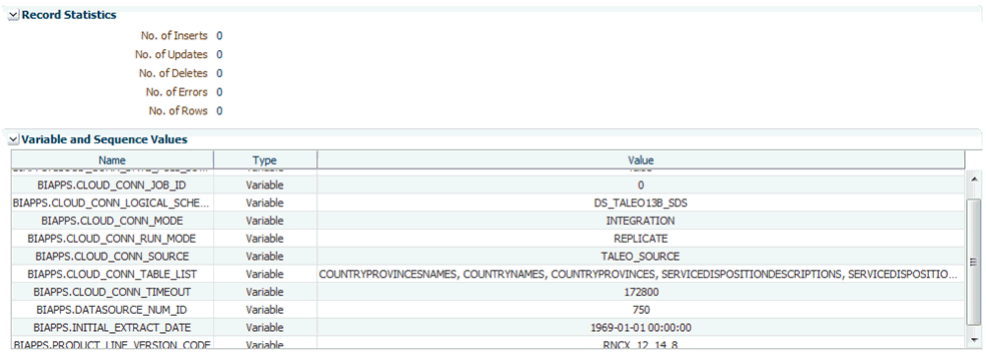

Take a note of the entire error message.

4. Scroll down to view the load plan in the tree structure, and click on the session of the task that failed.

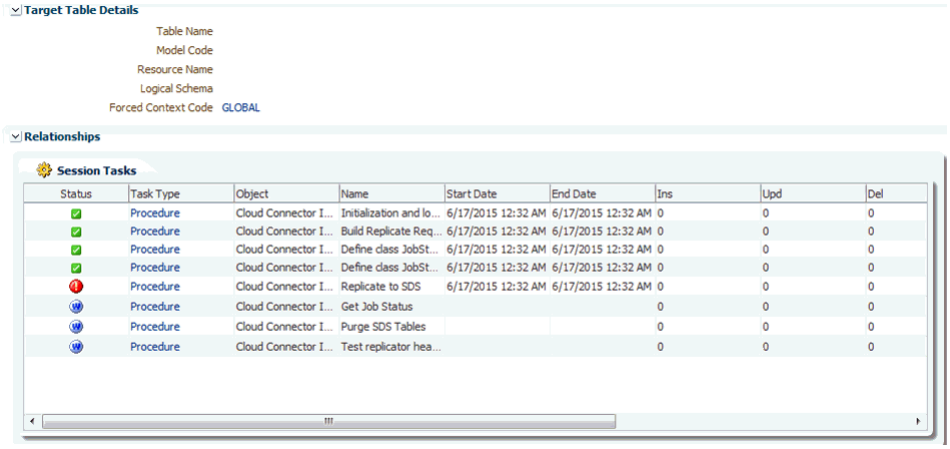



5. Drill down further to review individual steps.


6. At each step, you will see further details, error messages, variables & values, and further breakup of the steps.




7. You can drill down till you reach the lowest level of the step and gather the details at each step.




8. You can also examine the execution statistics to gather information for diagnosis.

# Common Data Loading Issues

When you load data into an OTBI-Enterprise data warehouse, you might encounter these data loading issues.

Use the list below to identify issues and find out how to diagnose them.

### Loading Issues and resolutions

***Example 6-1 ETL failed due to healthcheck***

Description: a data load was not completed (that is, a load plan execution fails), and a Health Check notification email is sent to the Administrator.

Resolution: Use the error information in the Health Check notification email to diagnose the issue in Configuration Manager, and then correct the issue.

***Example 6-2 ETL failed due to other issue***

Description: A data load was not completed (that is, a load plan execution fails). A Health Check email notification is not sent to the Administrator.

Resolution: Use Configuration Manager to diagnose the data loading issue, and then correct the issue.

***Example 6-3 ETL completed but with auto-corrections***

Description: Data was loaded but the ETL process auto-corrected data in the OTBI-Enterprise data warehouse, and a Health Check notification email is sent to the Administrator.

Resolution: Use Configuration Manager to view an auto-corrections report and verify the corrections.

# 7

# Setting Up Data Security

During the Data Security setup phase, Implementors provision users with access to specific areas of the OTBI-Enterprise data warehouse. You do this either manually (one-by-one) using Configuration Manager, or automatically by importing a bulk-load of user data.

### Topics



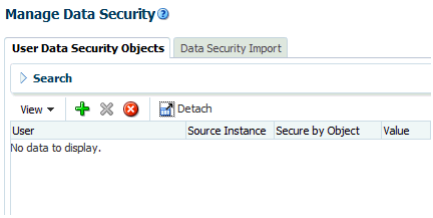
## Setting Up Data Security By Provisioning User Accounts Manually

During an OTBI-Enterprise implementation, Implementors provision users with access to specific areas of the data warehouse. You can either provision users manually one-by-one as described here, or import provisioning data in a bulk load (see Setting Up Data Security By Importing User Data).

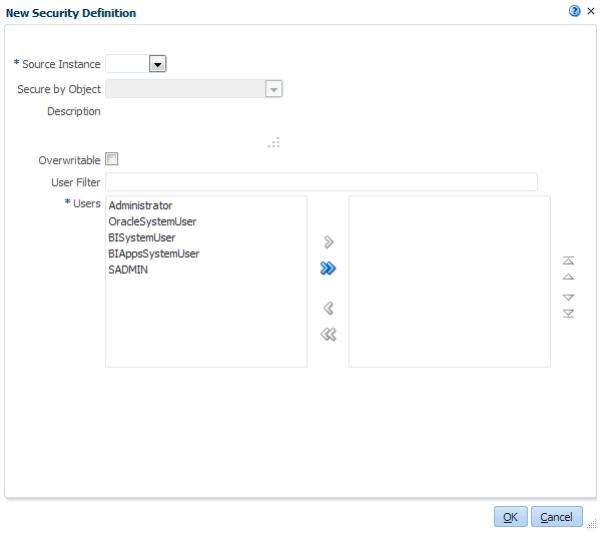
### Provisioning a user with access to areas in the OTBI-Enterprise data warehouse

To set up data security, you use Configuration Manager to assign functional areas to user roles.

1. In Configuration Manager, select the **Manage Data Security** link on the Tasks pane.




2. Click the Add icon ( ) to display the New Security Definition dialog.




3. For each user that you want to provision, do the following:

   a. In the **Source Instance** drop down list, select the data source that you are deploying.

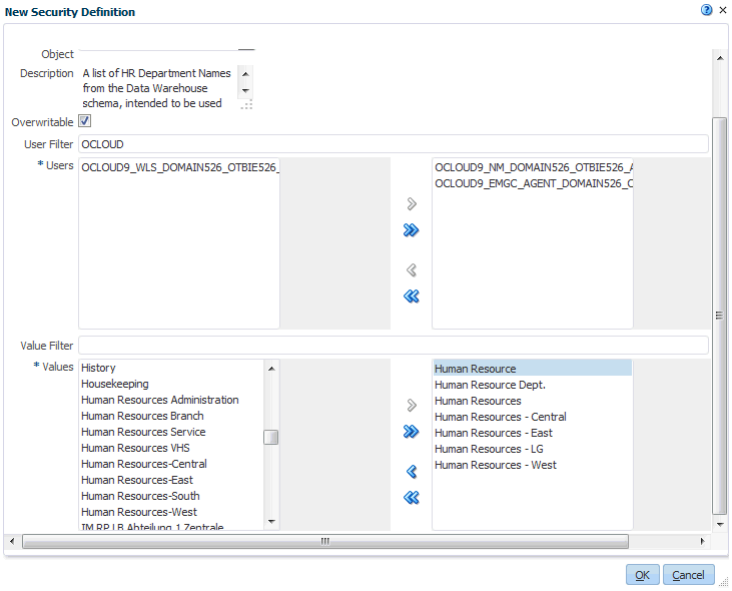
   b. In the **Secure by Object** drop down list, select the data warehouse object that you want the user to access. For example, HR Department.

   c. In the **Users** area, move the user or users that you want to provision from the left hand list to the right hand list.

      To filter the **Users** list, enter the first characters of the user name that you want to provision into the **User Filter** field.

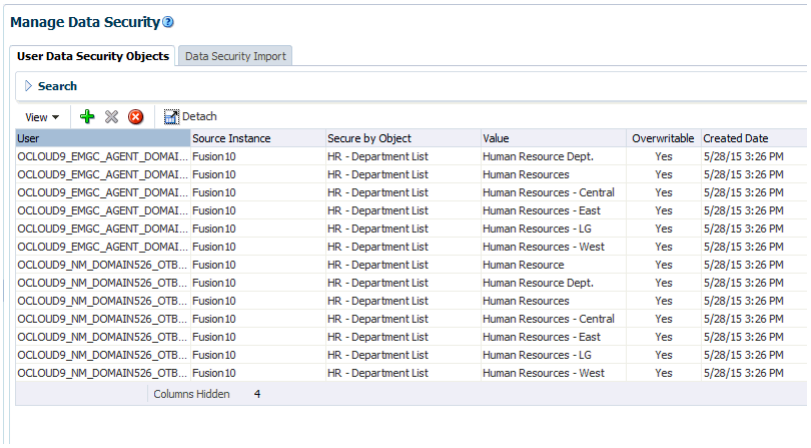
   d. In the **Values** area, move the data areas that you want users to access from the left hand list to the right hand list.

      To filter the **Users** list, enter the first characters of the value into the **Value Filter** field.




e. Click OK to save the details.

4. Repeat the above step for every user that you want to provision.




# Setting Up Data Security By Importing User Data In A Bulk Load

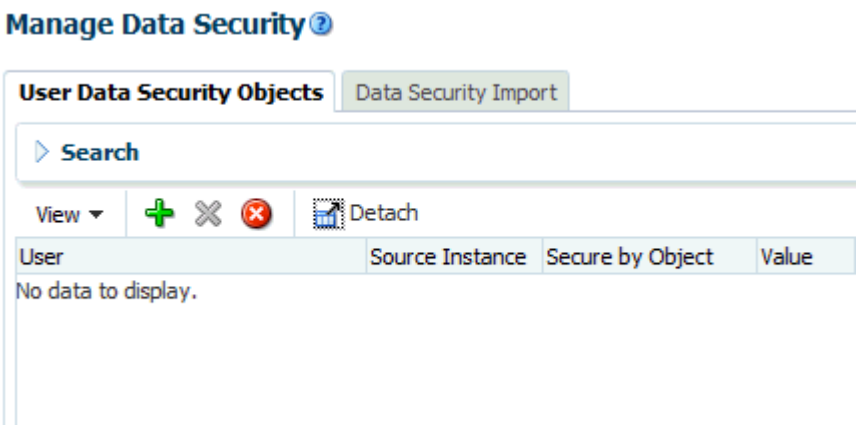
During the Setting Up Data Security step in an OTBI-Enterprise deployment, Implementors can optionally provision users by importing in bulk load a set of user to data mappings in a comma separated value (CSV) file.

Before you start, prepare a CSV containing the user to data mappings, in the following format:

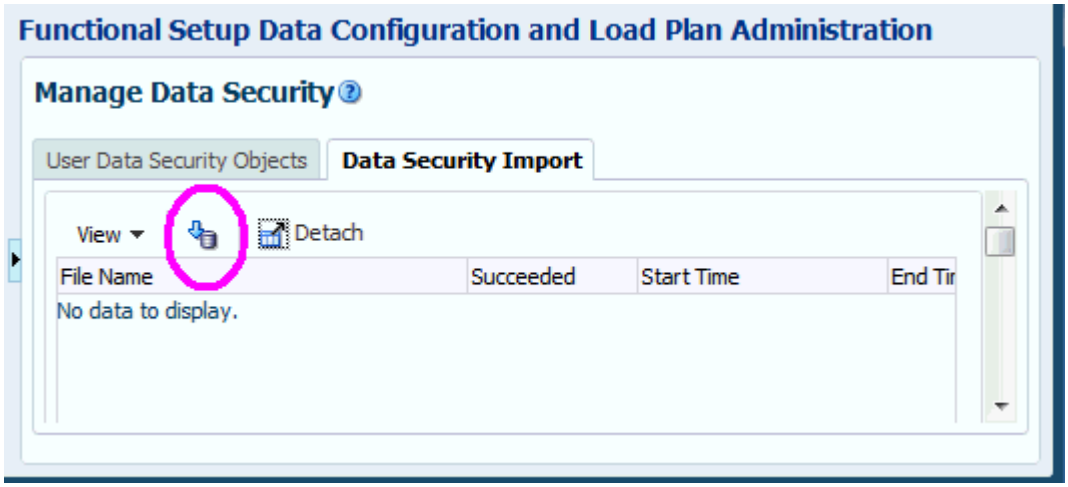
The first line of the CSV file should be a header row, followed by one or more data rows. The Header can be in any order, but data row values must be placed adjacent to the headers. Header names are read case-insensitive, that is, ACTION, Action or action are interpreted as Action header. The following table describes the required columns in the CSV file:

| Header | Header Name in CSV File | Valid Values |
|---|---|---|
| Action (Mandatory) | Action | Insert / i / + For Inserting, Delete / d / - For Deleting |
| Data Source (Mandatory) | DataSourceNumber, DATA_SOURCE_NUMBER, DSN, Source | Name or DSN ID given to a data source instance. Use 'All' to performs the action for all configured data sources that are defined for the given data security type. **Note**: Values are case in-sensitive. |
| User (Mandatory) | Username, USER_NAME, User, UserId | User name or user ID as available in Oracle Internet Directory (OID). Values are case-insensitive. |
| Data Security Type (Mandatory) | Code, DataSecurityCode, DATA_SECURITY_CODE | Data security code or name given to the data security type. Values are case-insensitive. |
| Data Security Value (Mandatory) | Value, DataSecurityValue, DATA_SECURTY_VALUE | A non empty data security value. Values are case-sensitive. |
| Overwrite (Optional) | Override, Overwrite | No / 0 / False / N. |

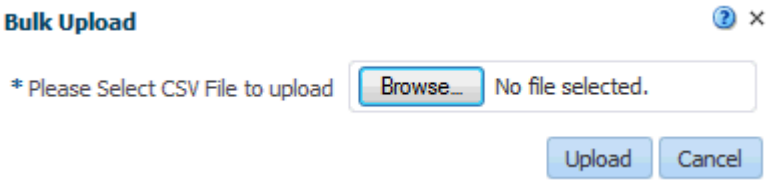
1. In Configuration Manager, select the **Manage Data Security** link on the Tasks pane.




2. Display the Data Security Import tab, and click the Bulk Upload icon.




3. Click Browse and navigate to the CSV file that contains the user to data mappings.




4. Click **Upload**.
5. Use the import logs listed on the Data Security Import dialog to verify that the data was uploaded.
6. Display the User Data Security Objects tab, and review the user to data mappings that were imported.

If the user to data mappings are correct, then you can test the user accounts in BI Answers to verify that each user has access to the correct data areas.

# 8

# Integrating Fusion Applications Flexfields

OTBI-Enterprise supports Flexfields for HCM content.

**Topics**



## Setting Up Flexfields

To load Flexfield data from Fusion Applications into the OTBI-Enterprise data warehouse, you must perform the following configuration steps in the Fusion Applications SaaS environment.

### How to Set Up Flexfields to Display in BI Dashboards and Reports

In the Fusion Applications SaaS environment, do the following:

1. Enable DFF extensions.

   For information on how to enable DFF extensions, refer to the following two documents on My Oracle Support:

   **Note**: You do not need to run BI Extender again.

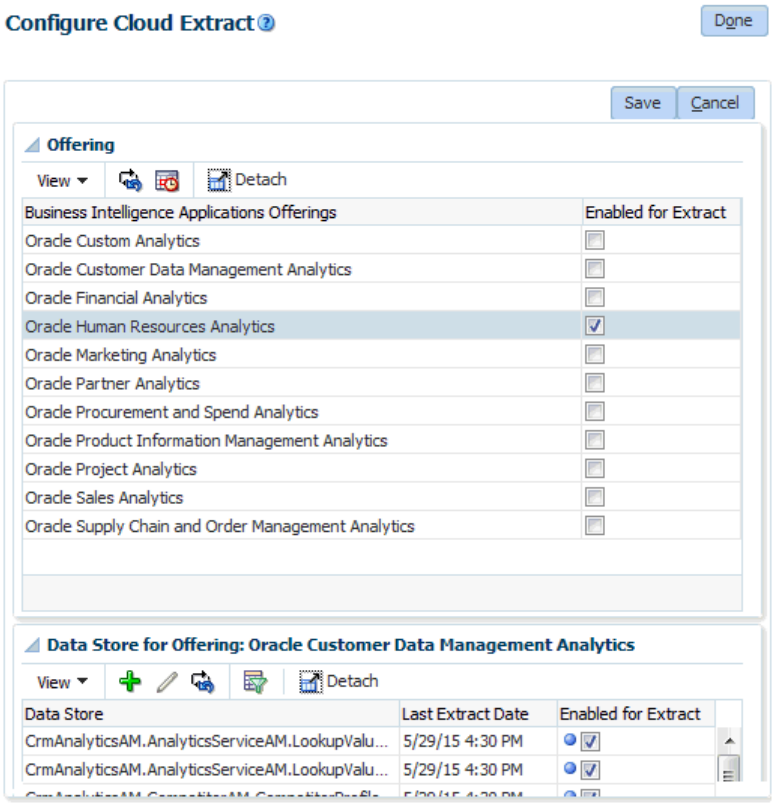
   — How To Expose Descriptive Flexfields In Relevant OTBI Subject Areas After They Have Been Configured In Fusion Applications (Doc ID 1478273.1)

   — Fusion Applications Business Intelligence - List of Descriptive Flex Field Mappings (Doc ID 1509316.1)

2. Use BI Cloud Connector Console to load the View Objects (VOs) listed in the 'Supported View Objects' table below:

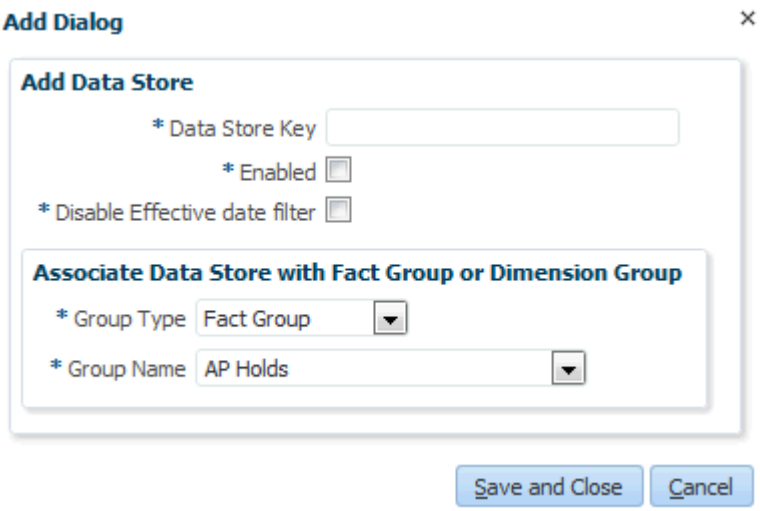
   a. On the Fusion Applications pod, start BI Cloud Connector Console using a HTTP URL based on the following format: `http://<FA OHS Host>:<FA OHS Port>/biacm`.

   b. In BI Cloud Connector Console, select the **Configure Cloud Extract** link on the Tasks pane to display the Configure Cloud Extract dialog.




**c.** Scroll down to the Data Store area.

**d.** For each of the View Objects (VOs) listed in the 'Supported View Objects' table below, click the Add icon ( ) to display the Add Data Store dialog and create a new data store.




The next scheduled Cloud Extract executed by BI Cloud Connector Console will extract these VOs and generate files as required by OTBI Enterprise.

Then, the next scheduled OTBI-E load plan executed by Configuration Manager will download the newly generated FLEX files and load the flexfield changes into the OTBI-Enterprise data warehouse.

**Supported View Objects**

| Presentation Table Name in Fusion Applications | Target Table | Model Name | VO Name |
|---|---|---|---|
| Assignment Extensible Attributes | W_HR_ASSIGNMENT_DS/D | Dim – HR Assignment | HcmTopModelAnalyticsGlobalAM.BaseWorkerAsgDFFBIAM.FLEX_BI_BaseWorkerAsgDFF_VI |
| Person Extensible Attributes | W_HR_PERSON_DS/D | Dim – HR Person | HcmTopModelAnalyticsGlobalAM.PersonsDFFBIAM.FLEX_BI_PersonsDFF_VI |
| Person Extensible Attributes | W_HR_PERSON_LEG_DS/D | Dim – HR Person Legislation | HcmTopModelAnalyticsGlobalAM.PersonLegislativeInfoDFFBIAM.FLEX_BI_PersonLegislativeInfoDFF_VI |
| Position Extensible Attributes | W_HR_POSITION_DS/D | Dim – HR Position | HcmTopModelAnalyticsGlobalAM.PositionCustomerFlexBIAM.FLEX_BI_PositionCustomerFlex_VI |
| Pay Grade Extensible Attributes | W_PAY_GRADE_DS/D | Dim – Pay Grade | HcmTopModelAnalyticsGlobalAM.GradeCustomerFlexBIAM.FLEX_BI_GradeCustomerFlex_VI |
| Job Extensible Attributes | W_JOB_DS/D | Dim – Job | HcmTopModelAnalyticsGlobalAM.JobCustomerFlexBIAM.FLEX_BI_JobCustomerFlex_VI |

| | | | |
|---|---|---|---|
| Location Extensible Attributes | W_BUSN_LOCATION_DS/D | Dim - Worker Location | HcmTopModelAnalyticsGlobalAM.LocationCustomerFlexBIAM.FLEX_BI_LocationCustomerFlex_VI |
| Department Extensible Attributes | W_INT_ORG_DS/D | Dim - Department | HcmTopModelAnalyticsGlobalAM.OrgAttributesDFFDFFBIAM.FLEX_BI_OrgAttributesDFF_VI |