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ORMB-EBS Integration Guide

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Preface

About This Document

This guide explains how to install the integration package to integrate Oracle E-Business Suite (EBS) Revenue Accounting General Ledger and Accounts Payable with the Oracle Revenue Management and Billing (ORMB) application.

You must go through this guide thoroughly before you begin installation of the integration package.

Intended Audience

This document is intended for the following audience:

- End-Users
- System Administrators
- Consulting Team
- Implementation Team

Organization of the Document

The information in this document is organized into the following sections:

Section No.	Section Name	Description
1	Installing the Oracle EBS and ORMB Integration Package	Lists and describes the software requirements, pre-installation tasks and the installation steps to install the integration package for integrating Oracle EBS with the ORMB application. It also lists the post-installation tasks and explains how to manage the ODI environment.

Related Documents

You can refer to the following documents for more information:

- Oracle Revenue Management and Billing Implementation Guide for EBS RMB Integration.
- Oracle E-Business Suite Revenue Accounting General Ledger and Accounts Payable Installation Guide for Release V12.2.6
- Oracle Revenue Management and Billing Installation Guide for Release V2.7.0.0.0
- Oracle Data Integrator V12.2.1.3.0 Documentation

Contents

1. Installing the Oracle EBS and ORMB Integration Package

This section explains the procedure to install the integration package for integrating the Oracle E-Business Suite (EBS) Revenue Accounting General Ledger and Accounts Payable with the Oracle Revenue Management and Billing (ORMB) application. It lists and describes the software requirements, and the pre-installation and post-installation tasks that are required for the integration. In addition, it describes how you can manage the ODI environment.

You must install the integration package before configuring the applications for running the integrated functionality. The integration package is installed on top of the Oracle Data Integrator (ODI) tool. This integrated functionality enables the Oracle EBS Revenue Accounting General Ledger and Accounts Payable, and the ORMB application to interact with the middleware to initiate the housed services.

1.1 Software Requirements

Before installing the integration package, verify that the following software is properly installed and configured:

Note: Please refer to your product specific installation instructions for complete details.

1. Oracle Revenue Management and Billing – Application version 2.7.0.0.0 installed on an Oracle database.
2. Oracle E-Business Suite Revenue Accounting General Ledger and Accounts Payable – Application version 12.2.6 installed on an Oracle database.
3. Oracle Data Integrator version 12.2.1.3.0 (Standalone Installation and Developer Installation or Java EE Installation and Developer Installation).

1.2 Pre-Installation Tasks

Before you begin installing the integration package, complete the following tasks:

- Ensure that Oracle Data Integrator 12.2.1.3.0 is installed and running.

  (Refer to the document *Installing and Configuring Oracle Data Integrator Guide)*.

  Oracle Data Integrator installed should have the following components:
  - Agent
  - Designer
  - Operator
  - Security Manager
  - Topology Manager
  - SDK
- Ensure that the database for ODI is created.

- Ensure that the Repository Creation Utility (RCU) has been run to create the master and work repository schemas on the ODI Database. Refer to the **Creating the Master and Work Repository Schema** section in the *Installing and Configuring Oracle Data Integrator Guide*.
- Ensure you have the tnsnames.ora entry for the databases related to ORMB, EBS and ODI repositories.

1.3 Installation Steps

Note: The following utility provided as deliverable is created to import ODI Artifacts.

Perform the following steps to install the integration package:

1. Download the patch number 29367368 file from My Oracle Support.

Note: This patch is not an upgrade for any earlier releases, it has to be newly installed.

2. Extract the patch number 29367368 in the folder/directory (for e.g. D:\). This extracted folder contains the RMB_EBS_INSTALL_HOME.zip.
3. Extract the RMB_EBS_INSTALL_HOME.zip. The folder structure of the extracted files is as shown below:

Note: Ensure there are no spaces in the directory names for installation.

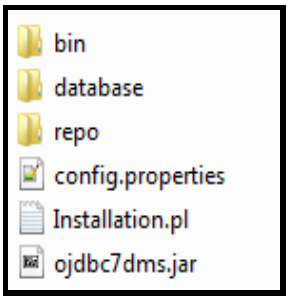

Figure 1: Directory Names

4. Review the database scripts related to static data required for integration `IntegrationLookupData.sql`. Refer to the implementation guide on details for each of these values.
5. Set the following environment variables for Unix and Windows OS:

Variable	Example
Linux and Windows OS	
`INT_INSTALL_HOME`	Set this to the directory where RMB_EBS_INSTALL_HOME.zip is extracted. Examples: **Unix/Linux**: `export INT_INSTALL_HOME=/scratch/RMB_EBS_INSTALL_HOME/` **Windows**: set `INT_INSTALL_HOME=D:\RMB_EBS_INSTALL_HOME\`

Variable	Example
ODI_INST_HOME	Set this to the ODI installation directory Examples: **Unix/Linux**: export ODI_INST_HOME= /scratch/ODI_12.2.1.3.0 **Windows:** D:\ODI_12.2.1.3.0
PATH	PATH=<ORACLE_HOME>/perl/bin;<ORACLE_HOME>/bin;%PATH%
LD_LIBRARY_PATH	Set this variable in case of Unix/Linux only. LD_LIBRARY_PATH=$ORACLE_HOME/lib:$LD_LIBRARY_PATH

Note: The syntax for INT_INSTALL_HOME changes depending on whether you are installing on Linux or Windows. The following sections refer to this as $INT_INSTALL_HOME in the Linux syntax. However, if you are installing on Windows, it should be referred to as: %INT_INSTALL_HOME%. Wherever $INT_INSTALL_HOME is mentioned in this document please replace with %INT_INSTALL_HOME% for Windows.
Make sure that JAVA_HOME and ORACLE_HOME are set as were used at time of ODI installation.

6. Modify the $INT_INSTALL_HOME\config.properties file and ensure that the values are relevant to the server where the integration product will be installed. The following table lists the properties available in config.properties file along with their usage. The default values are specified wherever applicable.

Property	Description	Example
ODI Repository Supervisor Information		
odiSupervisorUser	Supervisor user as provided while running the RCU	SUPERVISOR
odiSupervisorPassword	Supervisor Password as provided while running the RCU	SUPERVISOR
ODI Master Repository Database Information		
masterRepositoryJdbcUrl	Master Repository Database url	jdbc:oracle:thin:@<host>:<port>:<SID>
masterRepositoryJdbcDriver	Oracle Driver	oracle.jdbc.OracleDriver
masterRepositoryJdbcUser	Master Repository database schema user	DEV_ODI_REPO

Property	Description	Example
masterRepositoryJdbcPassword	Master Repository database schema password	Password
ODI Work Repository Database Information		
workRepositoryJdbcUrl	Work Repository Database url	jdbc:oracle:thin:@<host>:<port>:<SID>
workRepositoryJdbcDriver	Oracle Driver	oracle.jdbc.OracleDriver
workRepositoryJdbcUsername	Work Repository database schema user	DEV_ODI_REPO
workRepositoryJdbcPassword	Work Repository database schema password	Password
workRepositoryName	Work Repository Name as provided while running the RCU	ODIWORK
RMB Database credentials		
rmbUser	RMB Database User	<rmb_db_username>
rmbPass	RMB Database Password	<rmb_db_pwd>
rmbJdbcUrl	RMB database URL	jdbc:oracle:thin:@<host>:<port>:<SID>
EBS Database credentials		
ebsUser	EBS Database User	<ebs_db_username>
ebsPass	EBS Database Password	<ebs_db_pwd>
ebsJdbcUrl	EBS database URL	jdbc:oracle:thin:@<host>:<port>:<SID>
Webservice Details		
rmbWebServiceHttpUser	RMB Webservice User	<rmb_webservice_user>
rmbWebServiceHttpPwd	RMB Webservice Password	<rmb_webservice_pwd>

Property	Description	Example
rmbAPDataWebServiceWsdlUrl	RMB Webservice WSDL URL	Enter WSDL URL for invocation of Webservice. Either XAI or IWS webservice url can be used **XAI Webservice URL:** http://<ormb_host>:< port >/ouaf/ XAIApp/xaiserver/C1AdjustmentMaintenance?WSDL **IWS Webservice URL** (Recommend)**:** https://<ormb_host>:< port >/ouaf/ webservices/xla/C1AdjustmentMaintenance?WSDL
ODI Repository Details		
repoType	This is the work repository type to be created. In case of Development repository enter "DEVELOPMENT" or if type execution enter "EXECUTION" for production deployment	DEVELOPMENT or EXECUTION
workRepoPath	Work repository path based on the installation directory. (No Change Required)	./repo/WorkRepo.zip
masterRepoPath	Master repository path based on the installation directory. (No Change Required)	./repo/MasterRepo.zip

Property	Description	Example
scenariosPath	Scenarios path based on the installation directory. (No Change Required)	./repo

Note: $ INT_INSTALL_HOME/ folder contain the perl file for running the installation.

```
odiSupervisorUser=SUPERVISOR
odiSupervisorPassword=<<ODI_SUPERVISOR_PASSWORD>>

masterRepositoryJdbcUrl=jdbc:oracle:thin:@<<ODI_HOST_NAME>>:<<ODI_PORT>>:<<ODI_SID>>
masterRepositoryJdbcDriver=oracle.jdbc.OracleDriver
masterRepositoryJdbcUser=<<MASTER_REPOSITORY_USER>>
masterRepositoryJdbcPassword=<<MASTER_REPOSITORY_PASSWORD>>

workRepositoryJdbcUrl=jdbc:oracle:thin:@<<ODI_HOST_NAME>>:<<ODI_PORT>>:<<ODI_SID>>
workRepositoryJdbcDriver=oracle.jdbc.OracleDriver
workRepositoryJdbcUsername=<<WORK_REPOSITORY_USER>>
workRepositoryJdbcPassword=<<WORK_REPOSITORY_PASSWORD>>
workRepositoryName=<<WORK_REPOSITORY_NAME>>

rmbUser=<<ORMB_DB_USERNAME>>
rmbPass=<<ORMB_DB_PASSWORD>>
rmbJdbcUrl=jdbc:oracle:thin:@<<ORMB_HOST>>:<<ORMB_PORT>>:<<SID>>

ebsUser=<<EBS_DB_USERNAME>>
ebsPass=<<EBS_DB_PASSWORD>>
ebsJdbcUrl=jdbc:oracle:thin:@<<EBS_HOST>>:<<PORT>>:<<SID>>

rmbWebServiceHttpUser=<<ORMB_HTTP_USERNAME>>
rmbWebServiceHttpPwd=<<ORMB_HTTP_PASSWORD>>
# configure XAI (https://<ORMB_HOST>:<Port>/ouaf/XAIApp/xaiserver/C1AdjustmentMaintenance) or
# IWS (https:/<ORMB_HOST>:<PORT>/ouaf/webservices/xla/C1AdjustmentMaintenance) webservice url
rmbAPDataWebServiceWsdlUrl=https:/<ORMB_HOST>:<PORT>/ouaf/webservices/xla/C1AdjustmentMaintenance

# DEVELOPMENT or EXECUTION
repoType=DEVELOPMENT

workRepoPath=./repo/WorkRepo.zip
masterRepoPath=./repo/MasterRepo.zip
scenariosPath=./repo
```

Figure 2: Sample config.properties file

1.4 Installing the Integration

1.4.1 Run the Installation Script

Note: This installation scripts are for fresh RMB-EBS installation, it is not an upgrade to earlier release.

After you set the environment variables, install the integration package as per the following steps:

1. Open a command prompt and execute the command:
   `cd RMB_EBS_INSTALL_HOME\`
2. Execute: perl Installation.pl to invoke the deployment script.
   `<RMB_EBS_INSTALL_HOME> perl Installation.pl`

   The deployment script displays menu options as shown in the figure below:-

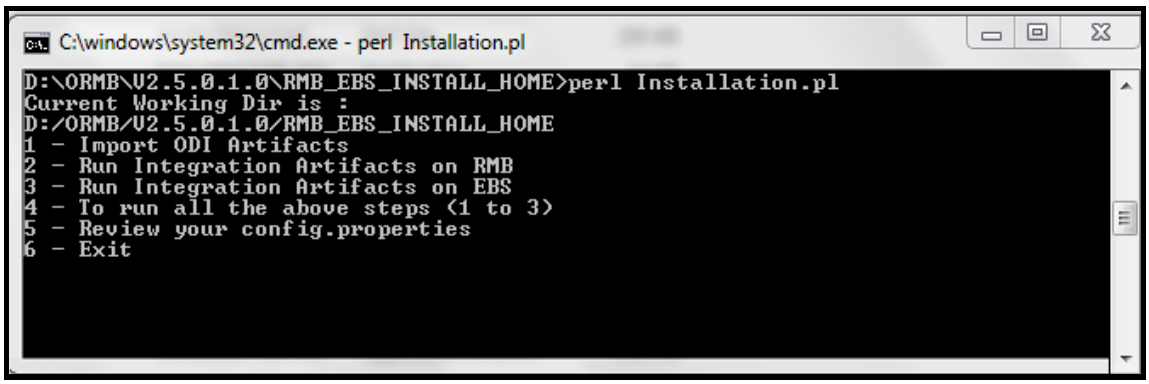

Figure 3: Deployment Script

Note: Execute Steps 1 to 3 individually or Execute Step 4 which will run all steps from 1 to 3 in the sequence defined. Ensure all configuration settings are done in config.properties prior to running all the steps.

This completes the end to end RMB-EBS integration installation by performing the following tasks:

Step 1

Deploys the integration artifacts in the ODI repositories.

If ODI artifacts are already imported in repository, it will prompt user for action (yes/no). User may choose 'Y' if earlier installation exited with errors, it will re-install (override) artifacts.

Step 2

Creates database tables/data required for RMB EBS integration on RMB schema.

Table Name	Description
INTEGRATION_LOOKUP_TABLE	A lookup table to store all the configuration parameters used by the ODI processes. This table is also used to configure the email addresses to be notified if errors occur. This table is seeded with data at the time of integration product installation.

Table Name	Description
INTEGRATION_ERROR_STORE	The table is used to hold the information regarding the errors encountered during integration transactions. A record is inserted for each error encountered by the ODI Flows. The mail notification process, accesses this table to get the error information needed to construct the notification email. This table is delivered with no data.

If RMB artifacts are already installed in database, it will prompt user for action (yes/no). User may choose 'Y' if earlier installation exited with errors, it will re-install artifacts (existing artifacts would be dropped/overridden).

Step 3

Creates database procedures and functions required for RMB EBS integration on EBS schema.

Table Name	Description
DATABASE LINK	A database link is created which is used by the ODI processes for integration.

If EBS artifacts are already installed in database, it will prompt user for action (yes/no). User may choose 'Y' if earlier installation exited with errors, it will re-install artifacts (existing artifacts would be dropped/overridden).

Step 4

Execute steps 1 to 3 in the sequence defined.

1.5 Post Installation Tasks

After successfully running the installation scripts, you must complete the following tasks to finalize the installation.

1.5.1 Connecting to the Work Repository

1. Launch the ODI Studio. The **Oracle Data Integrator** screen appears.

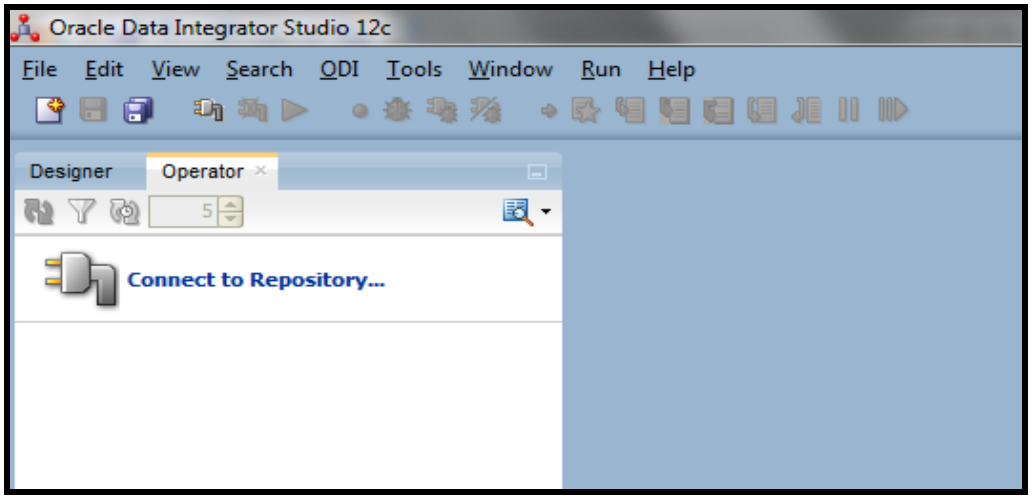

Figure 4: Oracle Data Integrator

2. Click the **ODI** menu option and click **Connect**. The **Oracle Data Integrator Login** dialog box appears.

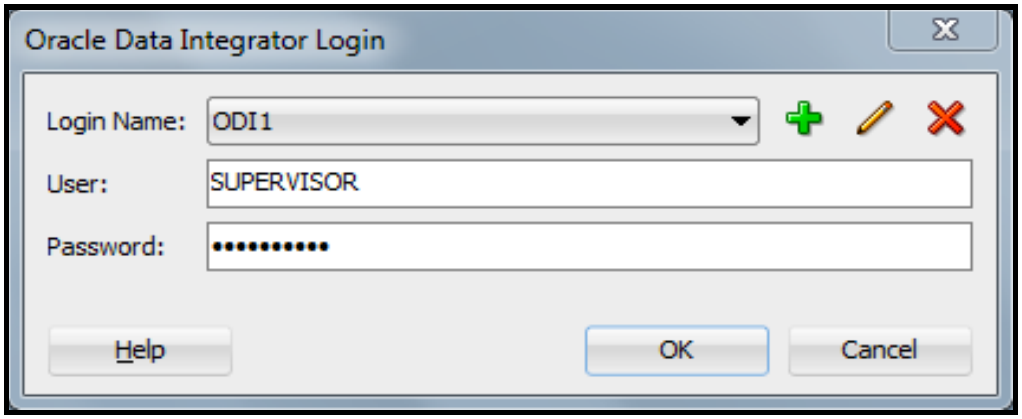

Figure 5: Oracle Data Integrator Login

The **Oracle Data Integrator Login** dialog box contains the following fields:

Field Name	Description	Mandatory (Yes or No)
Login Name	Used to select the login name that you want to use to connect to the work repository.	Yes
User	Indicates the ODI admin user name through which the connection will be established.	Yes

Field Name	Description	Mandatory (Yes or No)
Password	Indicates the ODI admin password through which the connection will be established.	Yes

3. Click the **New** icon on the **Oracle Data Integrator Login** dialog box. The **Repository Connection Information** dialog box appears.
4. Enter the repository connection information for the master repository user SUPERVISOR (set password to SUPERVISOR). Refer to the **Connecting to the Work Repository** section in the *Installing and Configuring Oracle Data Integrator Guide*.

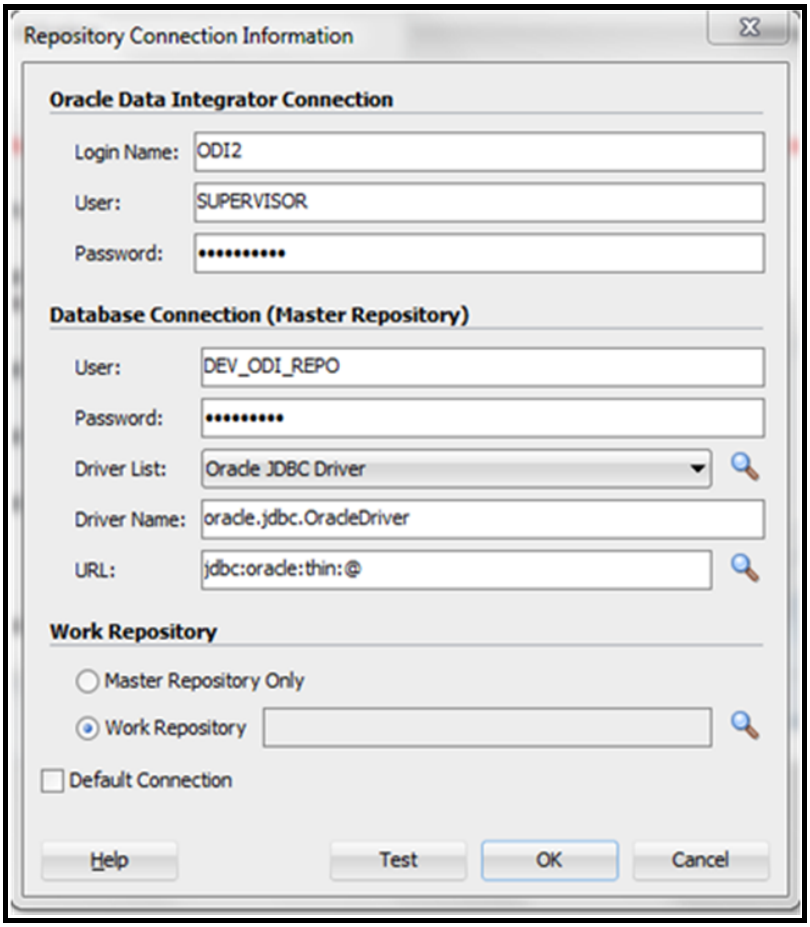

Figure 6: Repository Connection Information

5. Select the work repository name from the **Work Repositories List** as mentioned in *config.properties*.

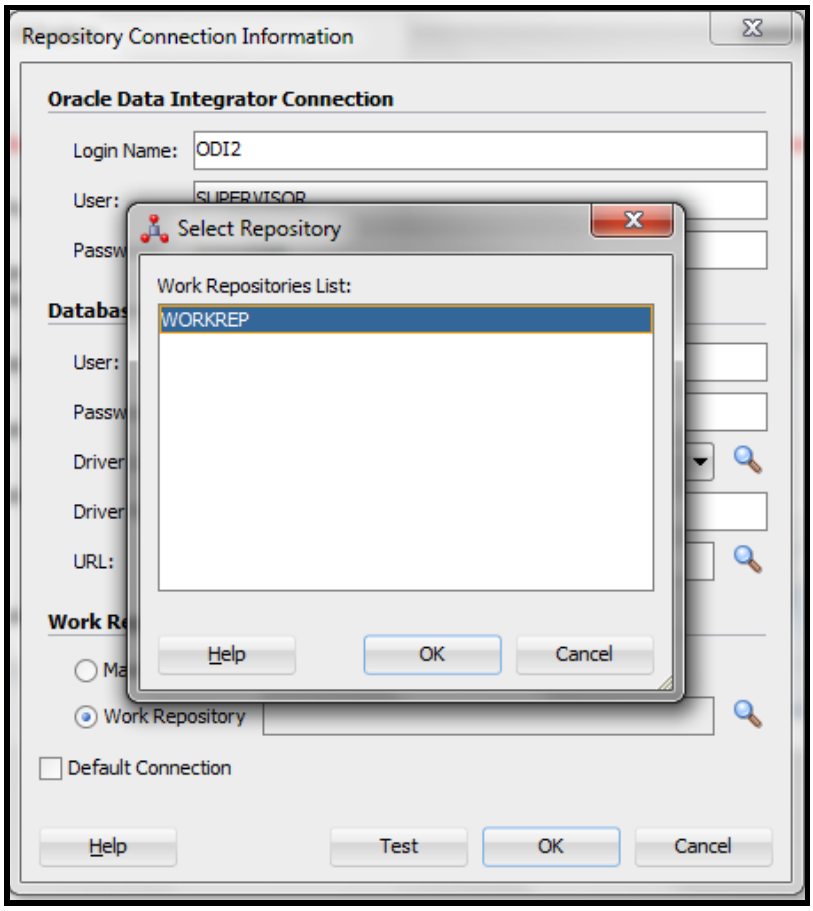

Figure 7: Select Repository

1.5.2 Viewing the objects of the Work Repository

1. Log into Work Repository with proper credentials (User: SUPERVISOR & Password: SUPERVISOR). Open **Designer** tab to check that the Model/Packages/Interface/Scenario objects are available.

If Work Repository type is selected as “DEVELOPMENT”, you can view the EBS_PROJECT in your setup in the **Designer** tab.

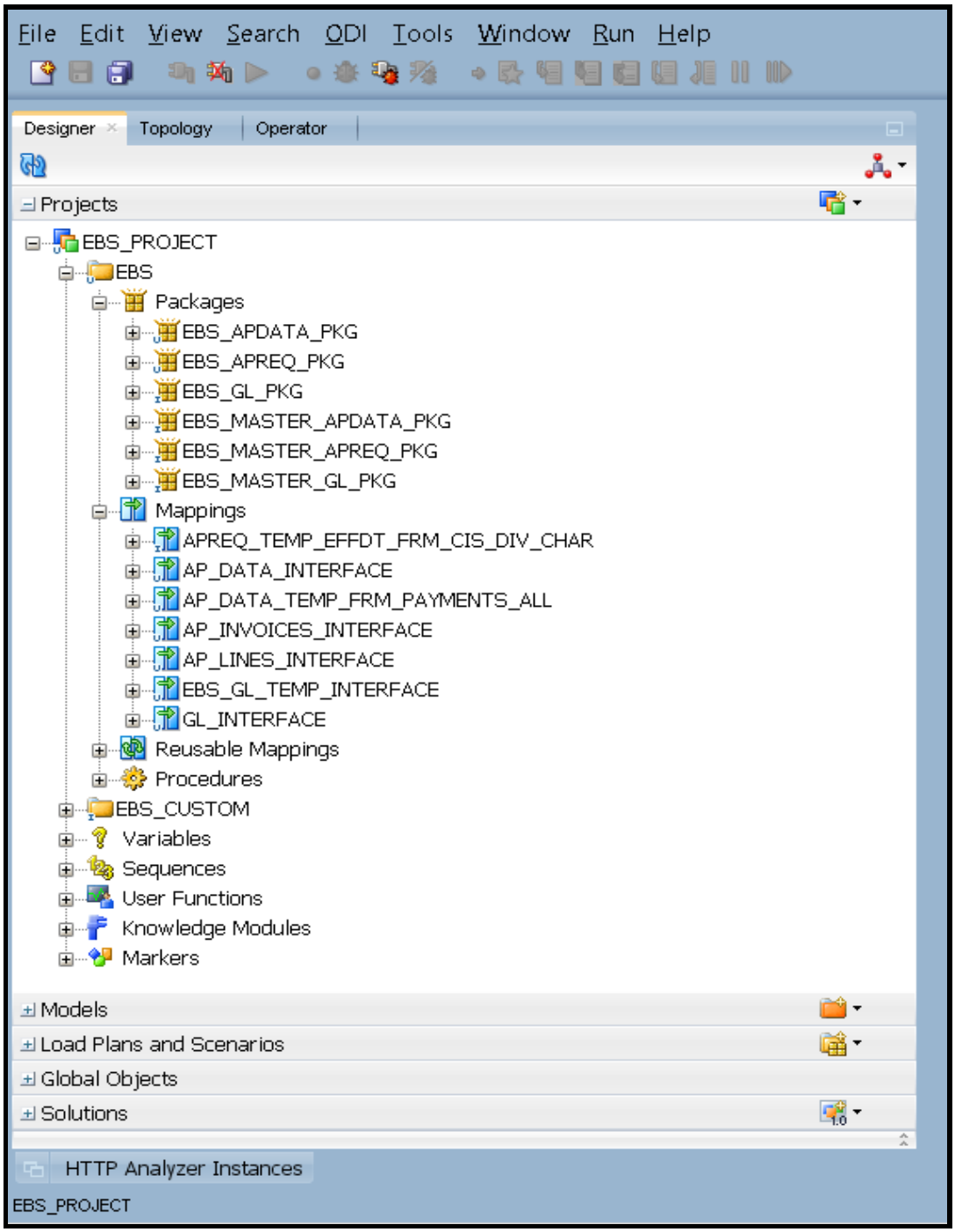

Figure 8: Viewing the objects of Work Repository

2. Under the **Designer** tab, click and expand **Models** section to view the model for EBS/RMB.

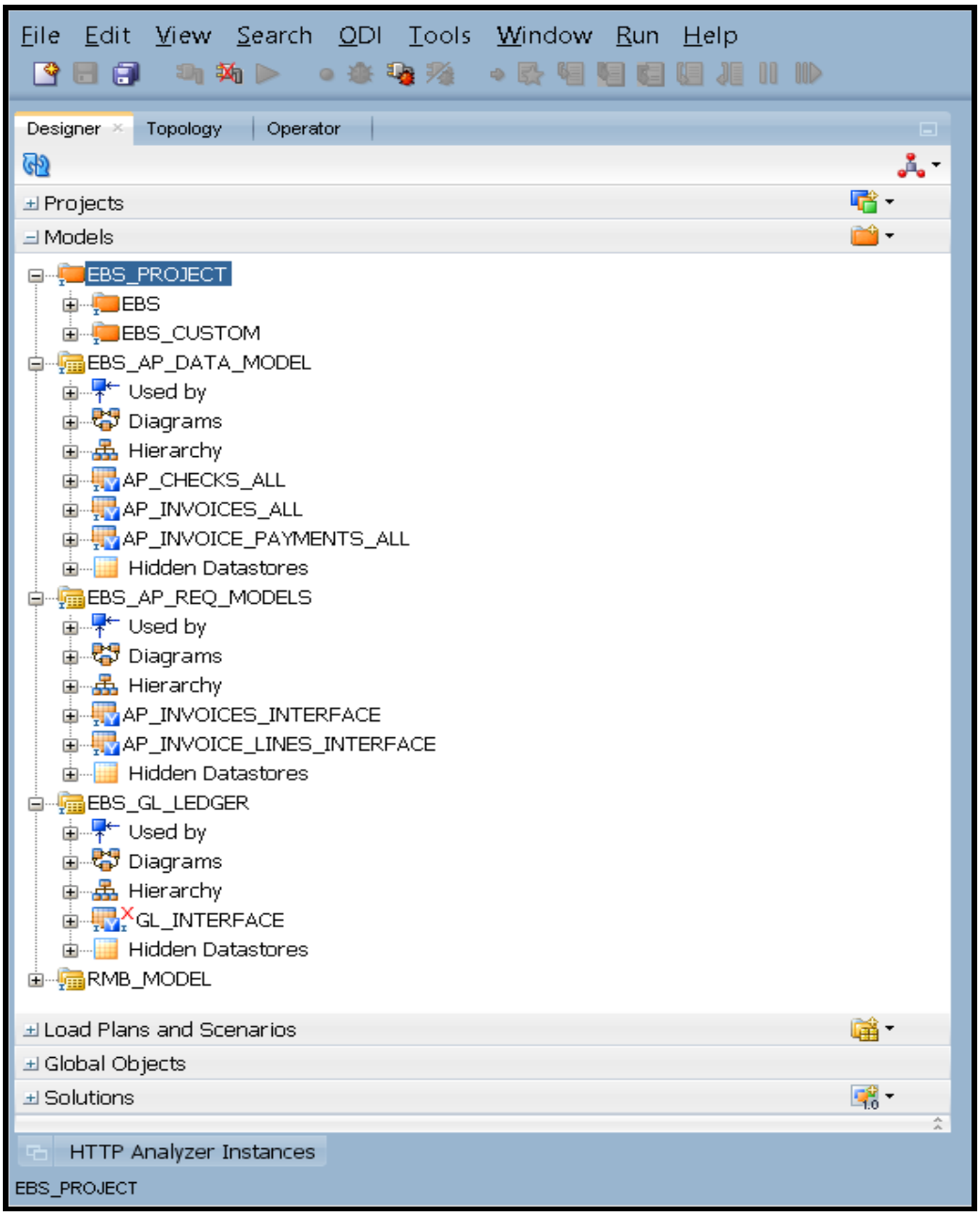

Figure 9: Designer Tab

In case Work Repository type was selected as "EXECUTION" (for production deployments) in the **Operator** tab, you can view the **Scenarios** under the **Load Plans and Scenarios** section as shown below.

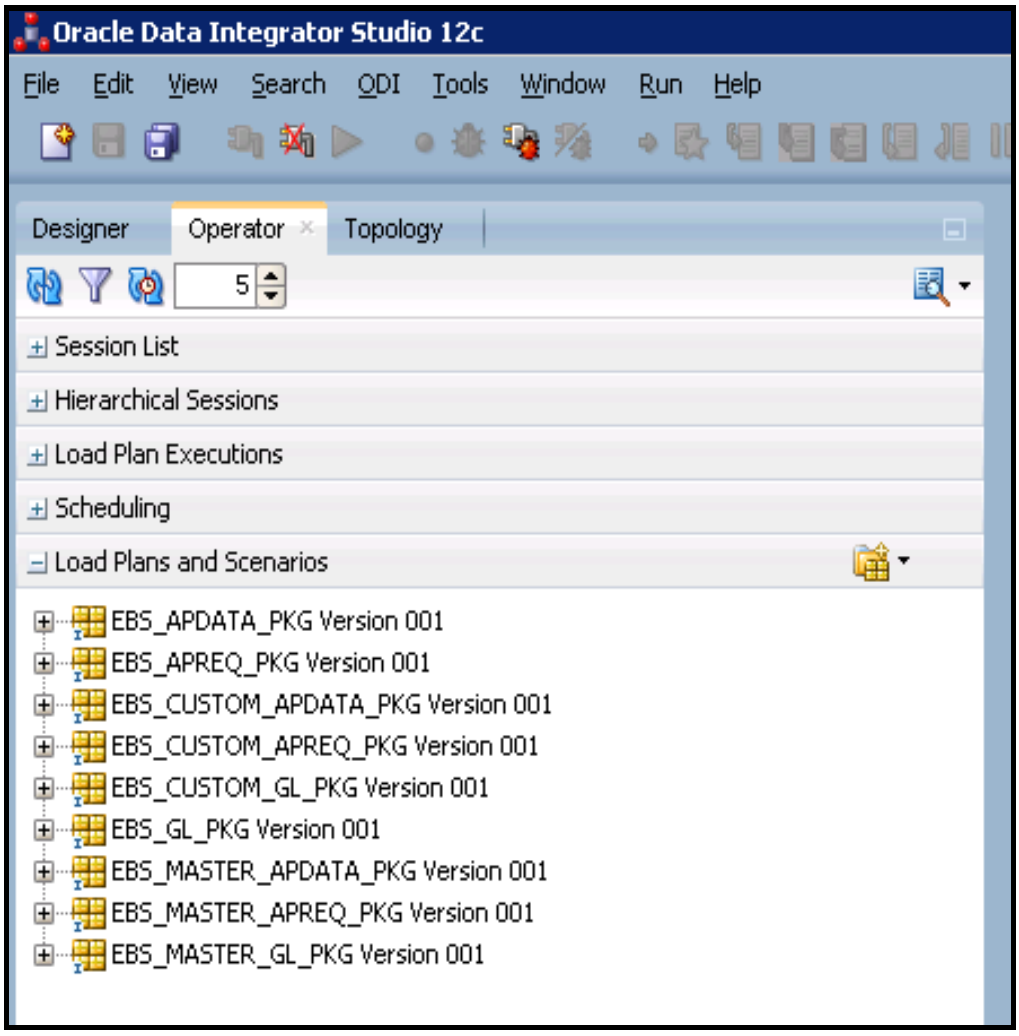

Figure 10: Operator Tab

3. Enter the tnsnames entry in the target database and vice versa.
4. Use **ODI Topology Manager** to check the Oracle Data Server Connections for source RMB and target EBS. Verify both the **Logical Architecture** and **Physical Architecture**.

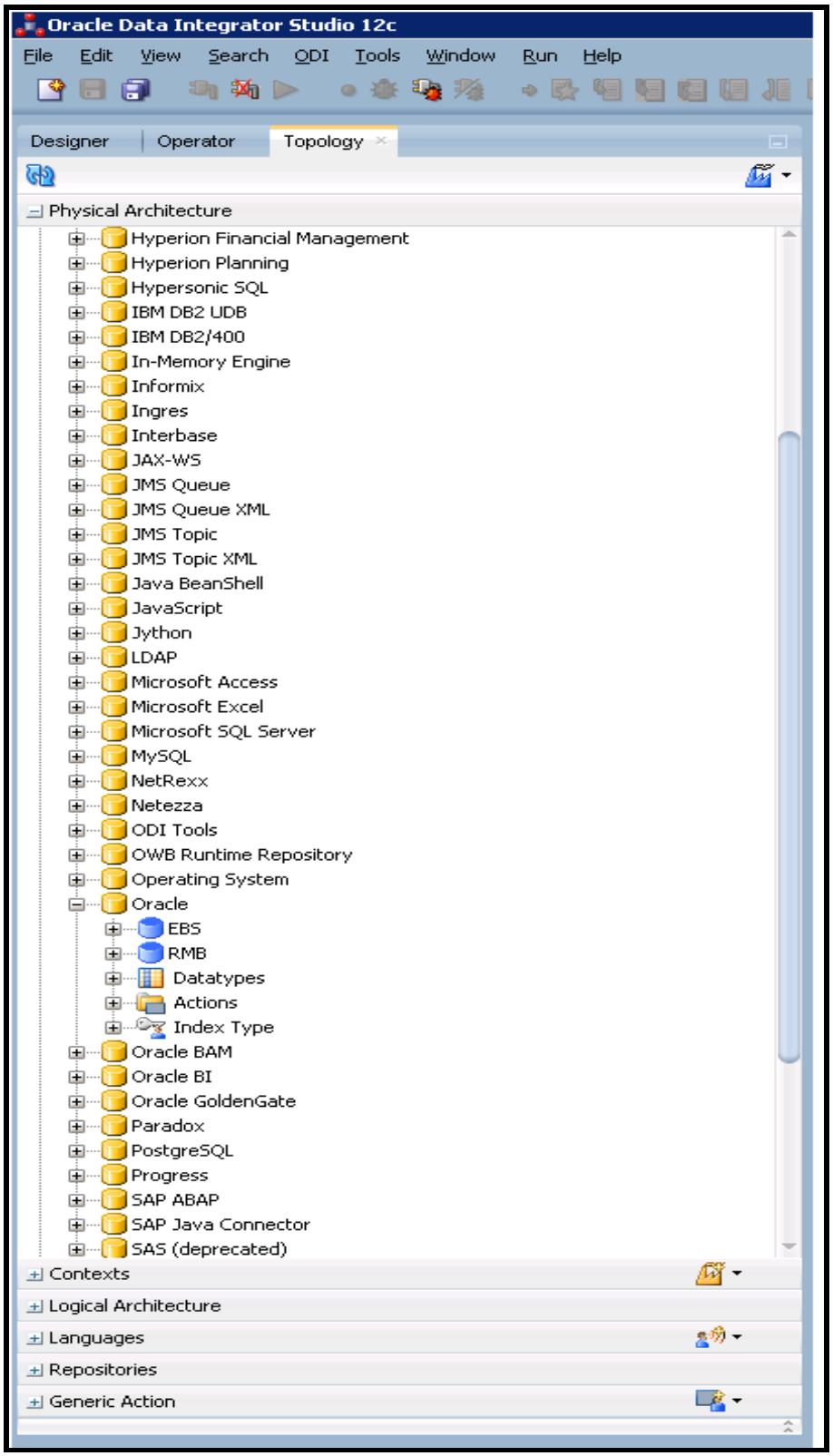

Figure 11: Topology Tab

5. Edit the data server details for target database and source database JDBC URLs as per the setup environment.

6. Edit the JDBC URL for Source and Target.

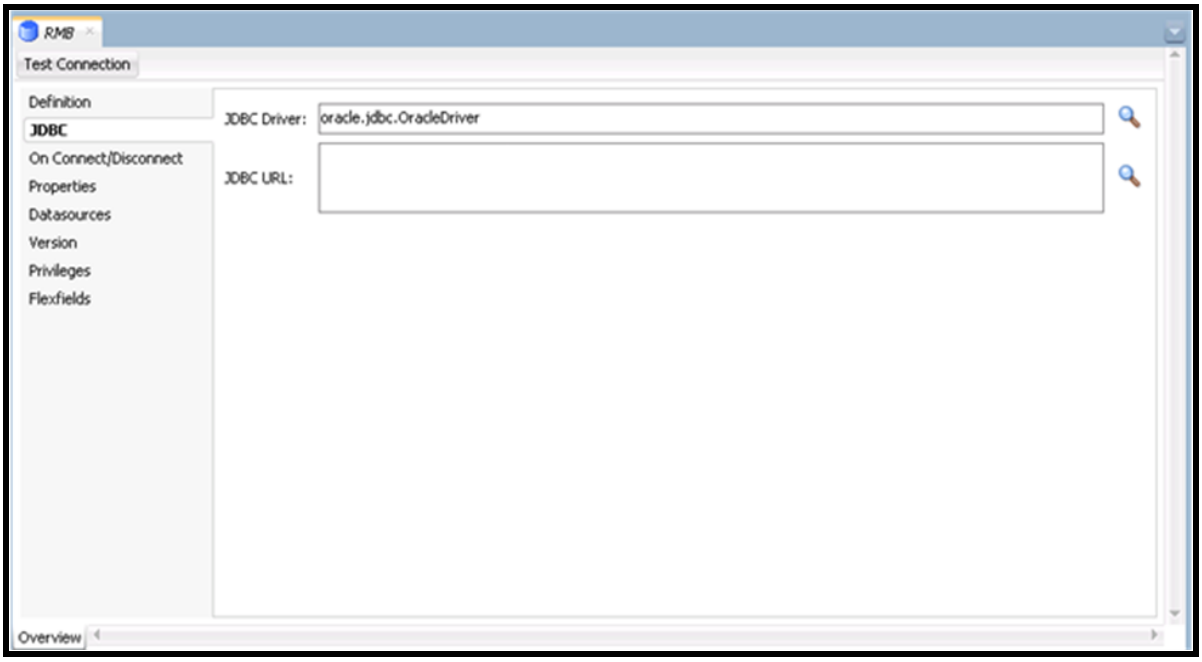

Figure 12: JDBC Tab

7. Similarly edit the **Instance / dblink** name in the **Definition** tab to the SID of the respective source and target databases.

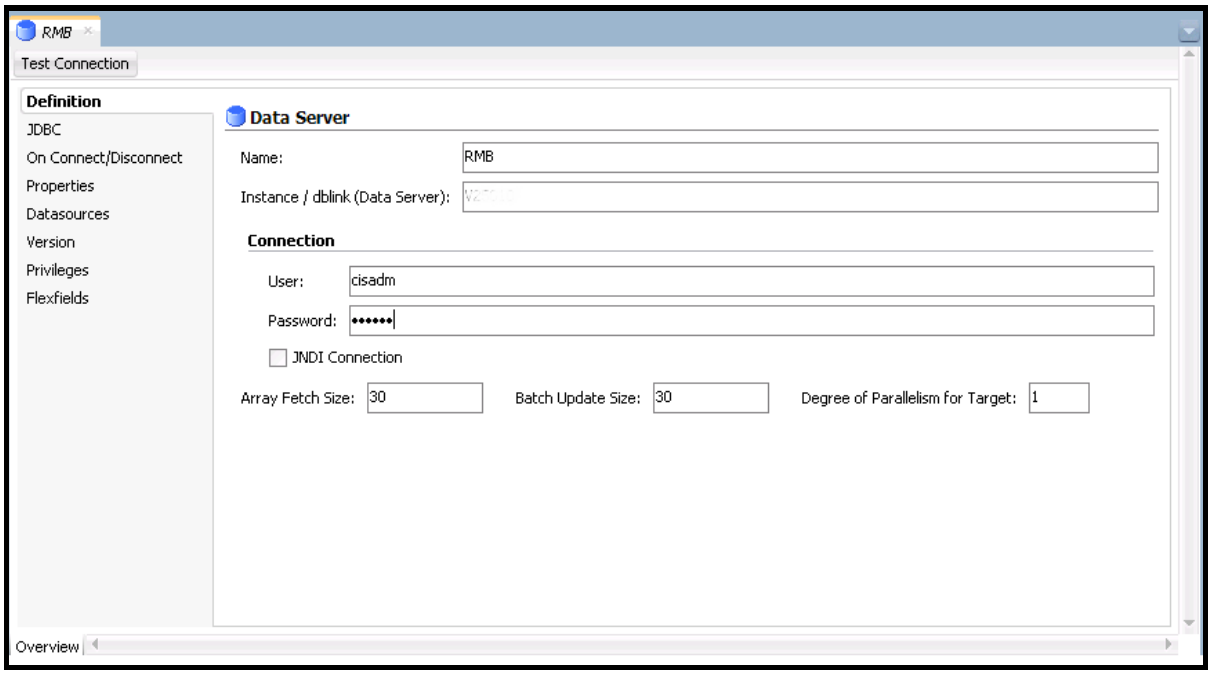

Figure 13: Definition Tab (Source Database)

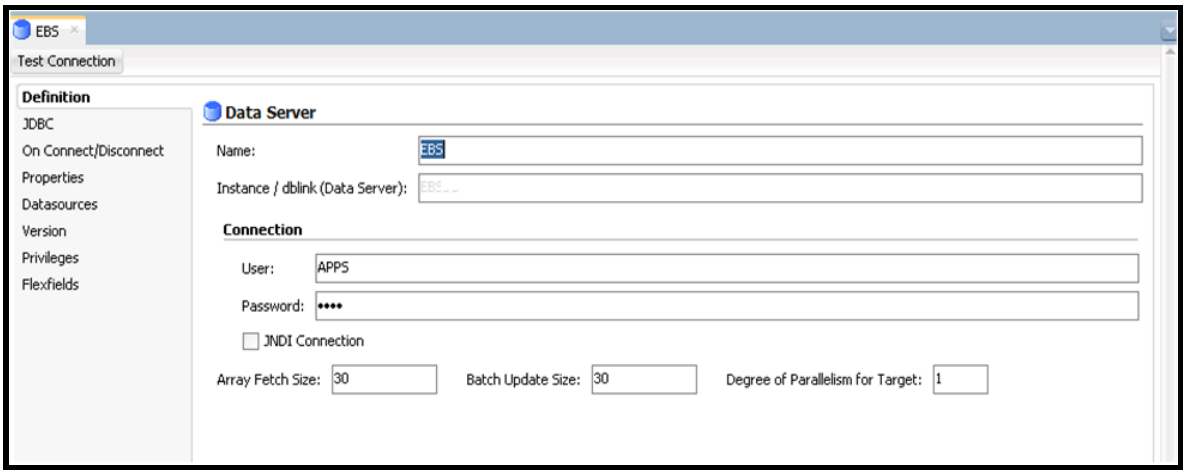

Figure 14: Definition Tab (Target Database)

8. Logical Schemas for source and target require no editing.

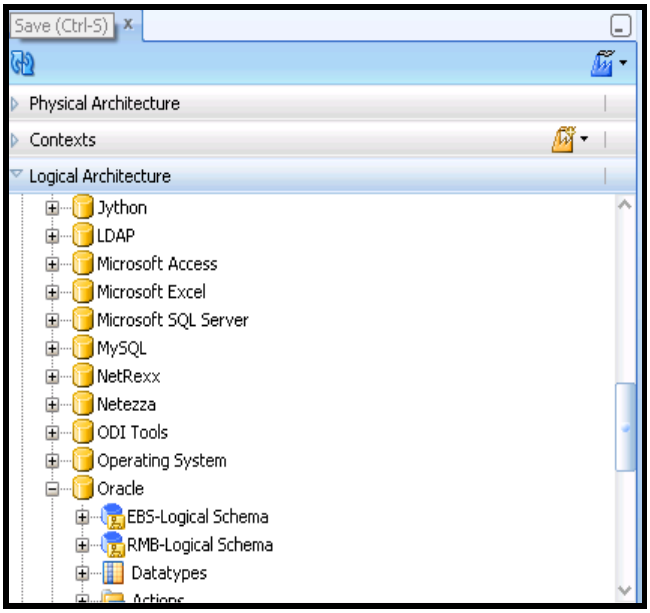

Figure 15: Logical Architecture

9. Use **ODI Topology Manager** to check the SOAP Data Server Connections for RMB webservice. Verify both the **Logical Architecture** and **Physical Architecture**.

Note: If HTTPS protocol is used, SOAP Data Server 'RMBWeb' requires ORMB Keystore certificate to be imported in ODI else all Physical schema details wouldn't be populated. Refer section below *Configure ORMB Key Store Certificate*.

10. **SOAP Web Service** from Physical Architecture should have entry for Data Server 'RMBWeb' as shown below.

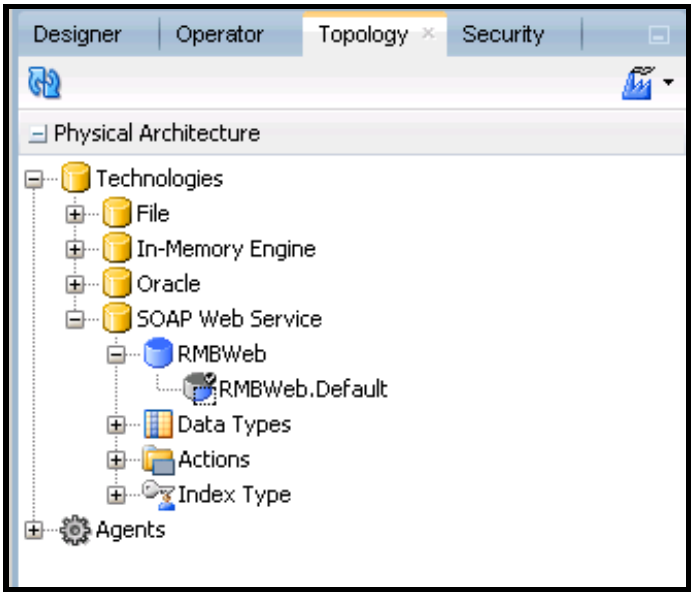

Figure 16: Physical Architecture

11. RMBWeb Data Server configuration will look like as shown in below screenshot. Verify WSDL URL and User are configured as per environment setup.

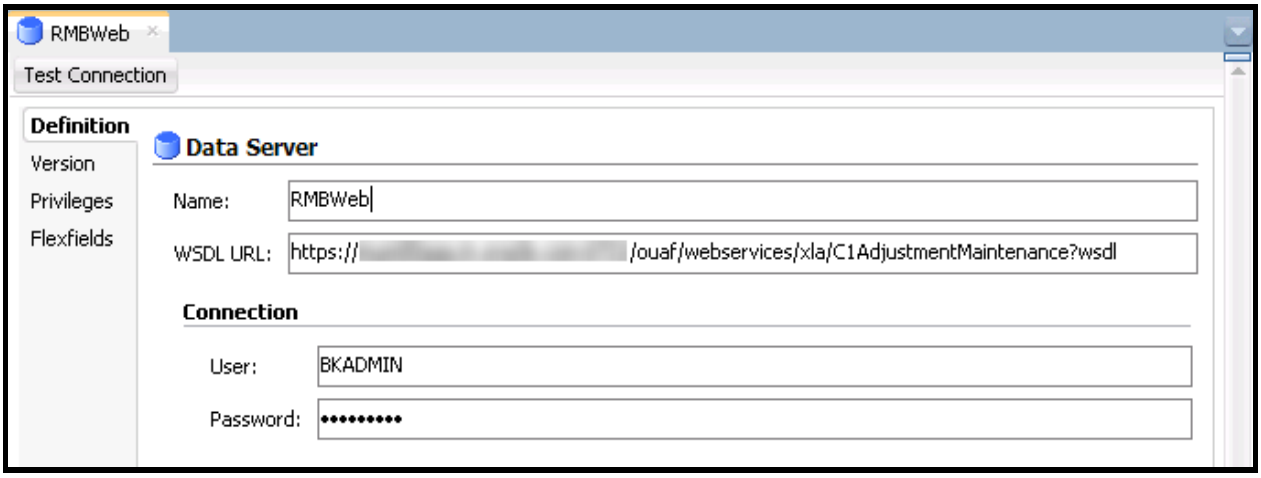

Figure 17: RMBWeb Data Server configuration

12. Physical schema for 'RMBWeb' data server will look like as shown in below screenshot. Verify all Service, Port, Endpoint URL, Binding and User are configured as per environment setup. Also, default OWSM policy is configured as 'oracle/wss_http_token_over_ssl_client_policy'.

Figure 18: RMBWeb.Default (Physical Schema)

13. Ensure Logical Schema is created as shown below.

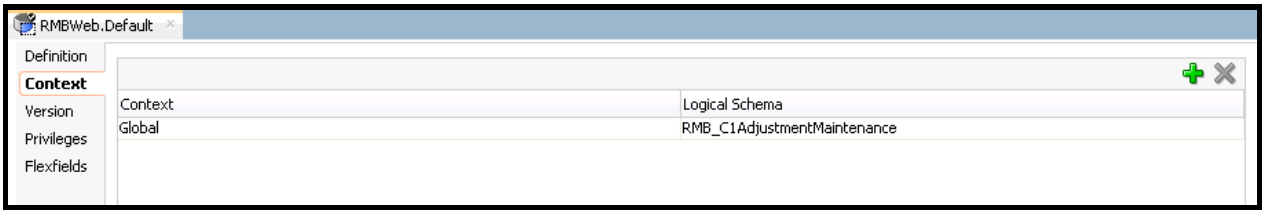

Figure 19: Context Tab (Logical Schema)

14. Use **ODI Topology Manager** to check the **Agent** deployed. Verify the host and port and edit if required based on the setup in the **Physical Architecture**.

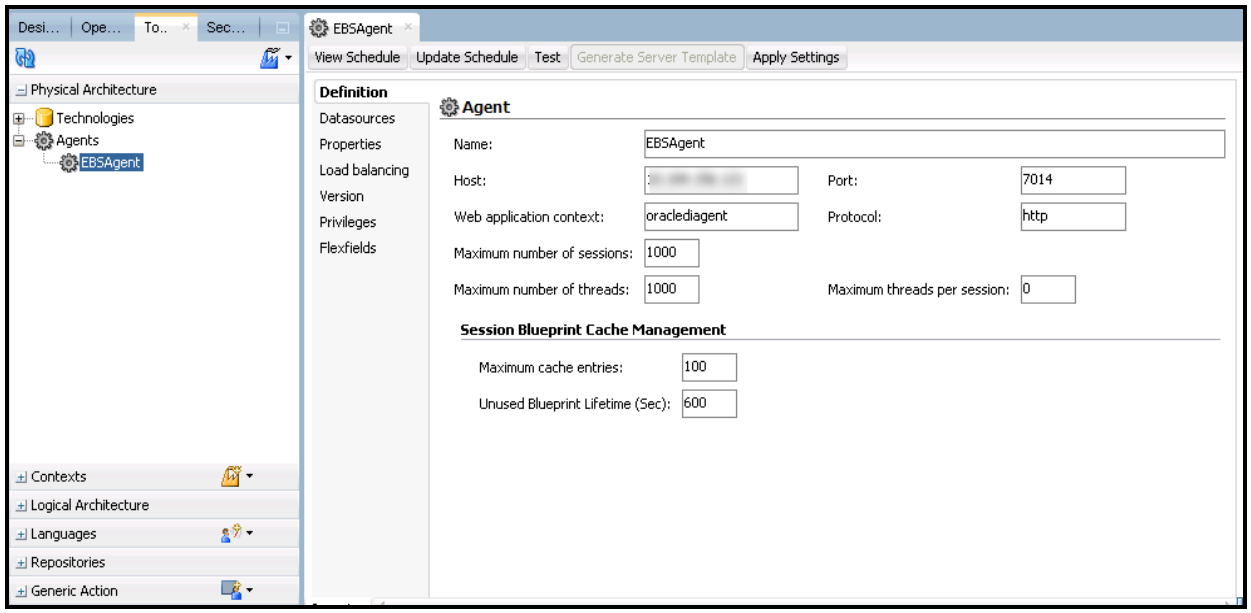

Figure 20: EBSAgent

Configure ORMB Key Store Certificate:

If XAI or IWS web service used for this integration are configured using HTTPS protocol then ORMB key store certificate needs to be imported and configured in ODI. To export ORMB certificate (e.g. ormbcertificate.cer), access web service wsdl url in browser (e.g. Firefox) and use browser certificate manager to copy certificate.

For more information on import and configuration of certificate in ODI Studio and Agent, refer to **Administering Oracle Data Integrator** guide.

Starting the Agent:

EBSAgent is available as part of the EBS deliverable. You can use this agent as standalone agent or Java EE agent after making the Standalone or Java EE specific changes to the agent. You can also create a custom agent as per your requirement.

Before you start the Standalone or Java EE agent, you need to configure the domain for Standalone or Java EE agent. For more information on how to configure the domain for Standalone or Java EE agent, refer to the **Configuring the Domain for the Standalone Agent** or **Configuring the Domain for the Java EE Agent** section, respectively in the *Installing and Configuring Oracle Data Integrator Guide.*

For example, to start the standalone agent:

1. Change to the BIN directory using the following command:

   Linux:

   ```
   cd <ODI_INST_HOME>/user_projects/domains/<DOMAIN_NAME>/bin
   ```

   Windows:

   ```
   cd <ODI_INST_HOME>\user_projects\domains\<DOMAIN_NAME>\bin
   ```

2. Start the standalone agent for the repository connection using the following command:

   Linux:

   ```
   ./agent.sh -NAME=EBSAgent
   ```

   Windows:

   ```
   agent.cmd -NAME=EBSAgent
   ```

Figure 21: Starting the Agent

Note: For more information on how to start Java EE agent, refer to the Configuring the Domain for the Java EE Agent section in the *Installing and Configuring Oracle Data Integrator Guide.*

1.6 Configure the Applications

For guidelines to configure the ORMB integration and Oracle E-Business Suite Revenue Accounting General Ledger and Accounts Payable installation, refer to *Oracle Revenue Management and Billing and Oracle E-Business Suite Integration Implementation Guide.*

1.7 Managing the ODI Environment

How to Change the Default Database Passwords

Altering the database passwords post setup, change the Physical Architecture in ODI for technology Oracle, the data server, the source and target databases. For master repository, ensure this information is updated in the login details for both master and work (Refer Connecting to the Work Repository). Similarly for work repository update the connection details in master under Repositories tab.

How to Change the ODI Topology Source and Target Connection Details

Edit the Physical Architecture for technology Oracle using Topology Manager for the source and target databases. Also, edit the Instance/ dblink name to the SID of the database.

How to Change the Password for the ODI SUPERVISOR User

Change password for the SUPERVISOR user created during installation using the Security Manager module in ODI. Password set during installation is SUPERVISOR.