Oracle Data Integrator Configuration for FLEXCUBE Information Server

Oracle FLEXCUBE Universal Banking

Release 14.4.0.0.0

[May] [2020]

ORACLE

FINANCIAL SERVICES

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1. Oracle Data Integrator Configuration

1.1 Introduction

This document explains configuration of Oracle Data Integrator (ODI) for Flexcube Information Server in two steps, they are verification of prerequisite software installation and steps for ODI Configuration.

1.2 Verification of Prerequisite software and installation

Verification of prerequisite software and installation, involves the below steps:

- Verification of prerequisite software
- Verification of prerequisite installation
- ODI repository connection configuration and verification
- ODI agent configuration and verification

1.2.1 Verification of prerequisite software

Ensure the availability below prerequisite software:

- Oracle Data Integrator(ODI)
  - ODI Designer
  - ODI Master and Work Repositories
  - ODI JEE Agent installed
- Oracle Golden Gate (GG) installed in Flexcube and Operational Data store (ODS) Schema.

1.2.2 Verification of prerequisite installation

Ensure the installation/configuration of the below prerequisite software:

- **Flexcube Information Server Utility**
  - Run Flexcube Information Server Utility using Oracle Flexcube Universal Banking Installer .Refer document in path Installation/FLEXCUBE_UBS_Installation/Utilities/FLEXCUBE_Information_server.doc
  - This utility will ensure Operational Data Store(ODS) and Flexcube Information Server(FIS) Database is ready.
  - Note- Both ODS and FIS are on same schema.i.e one Reporting schema acting as ODS and FIS.

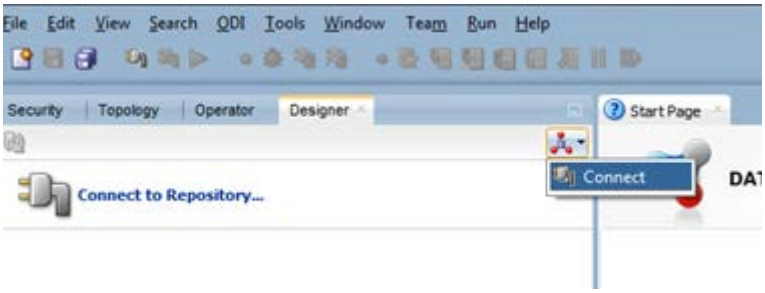
- **Data Synchronization of Flexcube and ODS tables**
  - Get a dump of all data in ODS Tables from Flexcube to ODS Schema. The list of tables to be in sync can be got from INSTALLER/SOURCE/config/Database/DDL_List_ODS.txt

- Oracle Golden Gate(GG) param file configuration
  Update param file configuration and start Golden Gate.

Database	Param File	Param File path	Deployment path
Flexcube	Ext.prm	ODS/PARAM_FILES	scratch/db/db1212/product/12.1.0/oggcore_1/dirprm/
ODS	REPL2.prm	ODS/PARAM_FILES	scratch/db/db1211/product/12.1.0/oggcore_1/dirprm/

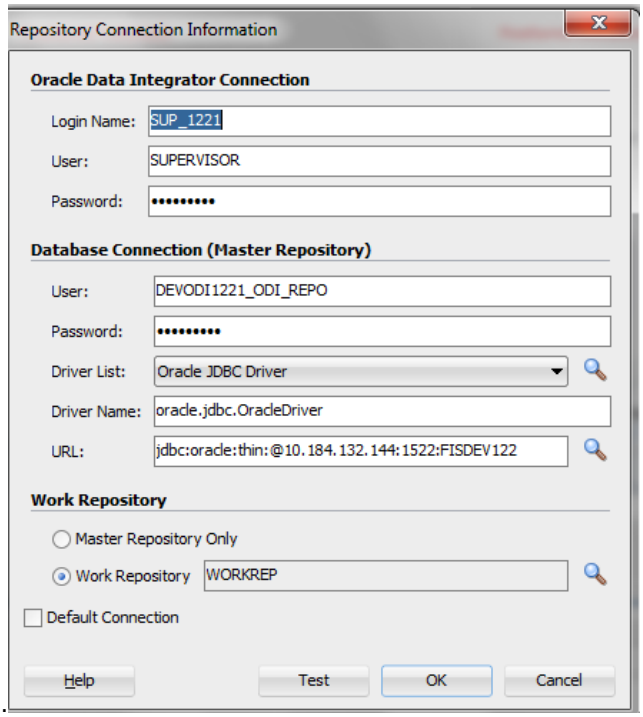
1.2.3 ODI repository connection configuration and verification

Start ODI Designer by running the odi studio.exe file. Connect to the repository by clicking on the icon as indicated in the screen below:



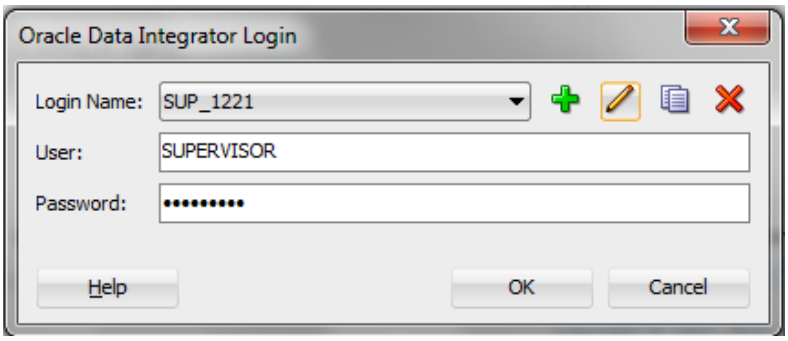
This opens an empty Repository Connection Information Screen. Enter the login credentials,

Master and work repository details. Specify the repository connection information as in the below screen, click test to Test Connection and click **OK**



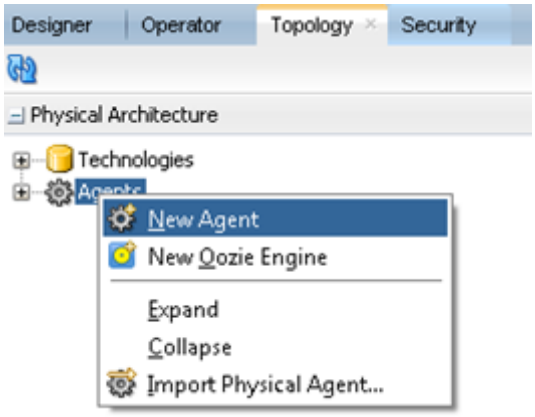
The login credentials entered above need to be entered every time we login to ODI as below,

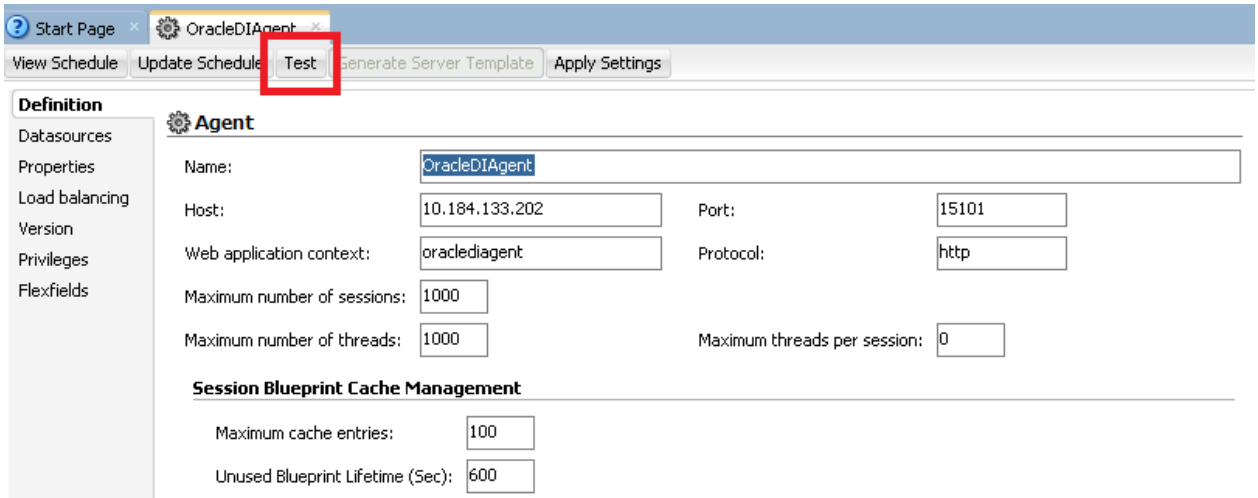
Click Connect to repository and enter the login credentials and click **OK**. A confirmation is displayed on successful login. Next time whenever we open ODI Designer, it would display ODI Login screen as below:



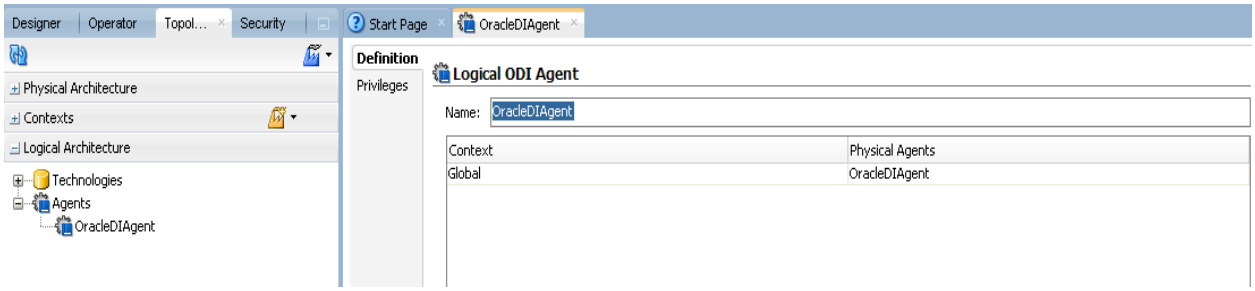
1.2.4 ODI agent connection configuration and verification

Create an agent by right click on Agents under Topology→Physical Architecture →Agents and select New Agent and give the agent details. To confirm if the agent is working fine, click **Test** button at the top of the OracleDIAgent.





Similarly under Topology→ Logical Architecture → Agents , right click on Agents and select New Logical Agent and enter details and save it.



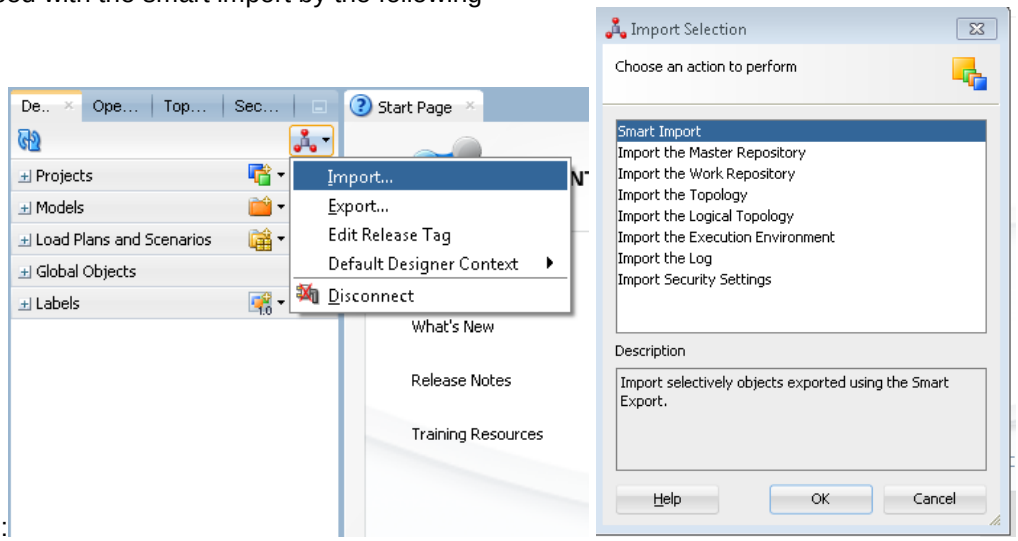
1.3 Steps for ODI Configuration

ODI configuration involves the below steps:

- Smart import
- Topology-Physical architecture configuration
- Journalized tables creation
- UDF Maintenance in ODS
- Load Initial data in FIS
- Running of packages

1.3.1 Smart Import

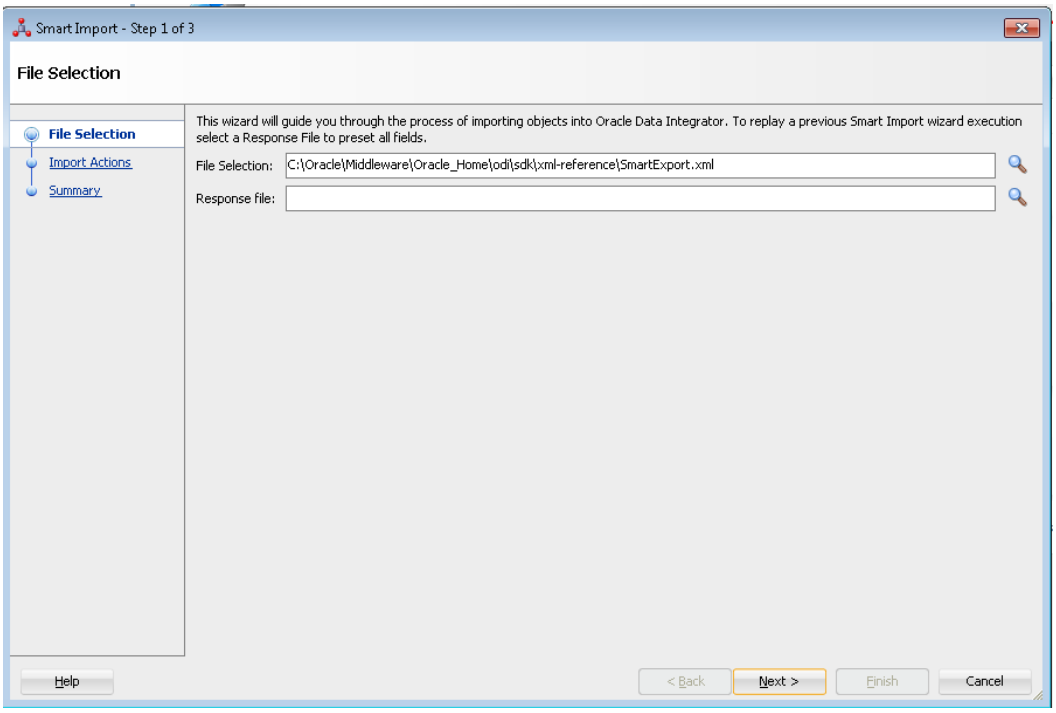
Proceed with the smart import by the following steps:



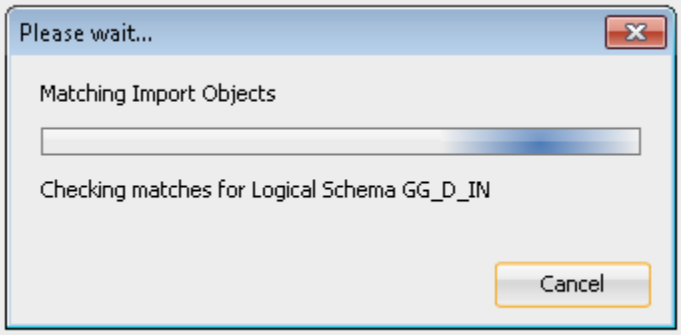
Select the Import→Smart Import from the action to perform dialogue box

Give the SmartExport.xml file path in the File Selection and click NEXT.

Note - SmartExport.xml is in path /FIS-REPORTING/FIS-Reporting-Infra/ODI/Projects/FIS/Project



This would start importing all the files.



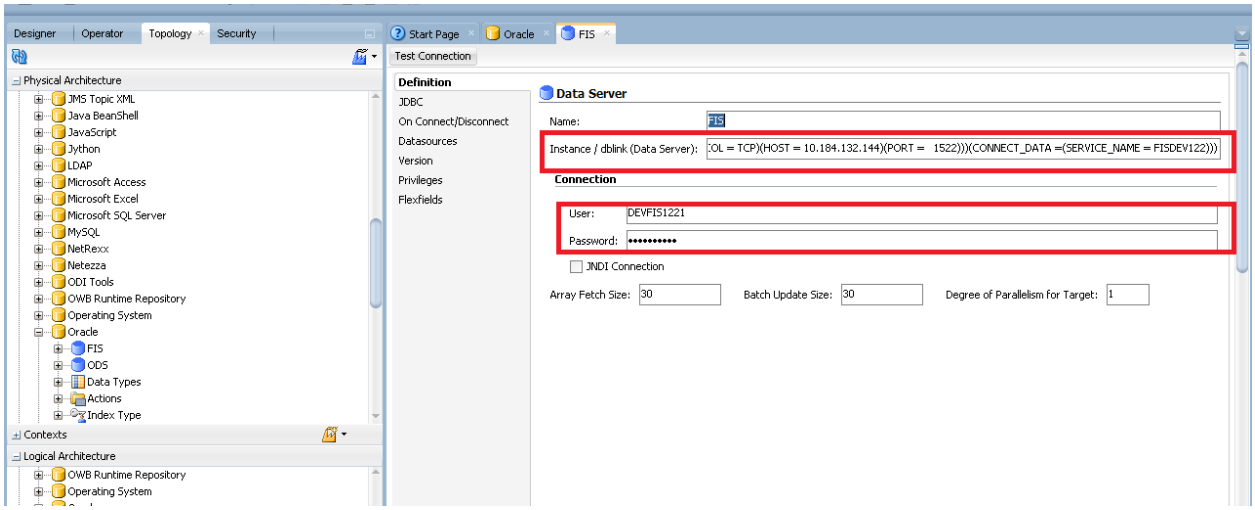
On confirmation of smart import, proceed with the below steps.

1.3.2 Topology- Physical architecture configuration

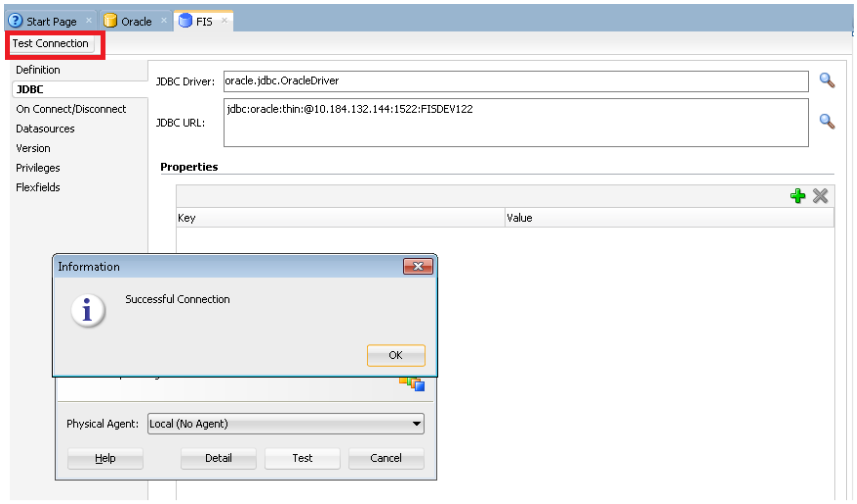
Under Topology we have to update the Physical Architecture of Oracle and Oracle Golden Gate

1.3.2.1 Oracle

Under the Topology→ Physical Architecture→Oracle→FIS→ Definition, update the Data Server Instance / dblink with connection user and password for the source schema.



Then go to the JDBC and update the driver details of the source schema and test the connection

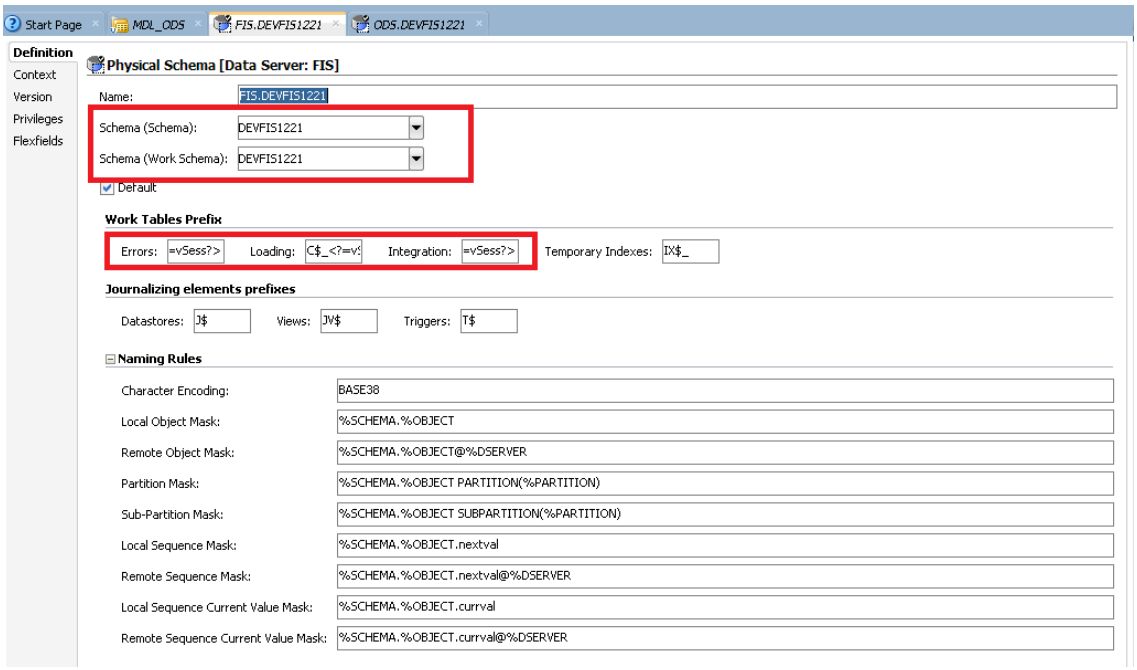


Inside the Topology→ Physical Architecture→Oracle→FIS→ FIS.DEVFIS1221,update the Schema and Work Schema . Check or otherwise update the Work Tables Prefix as:

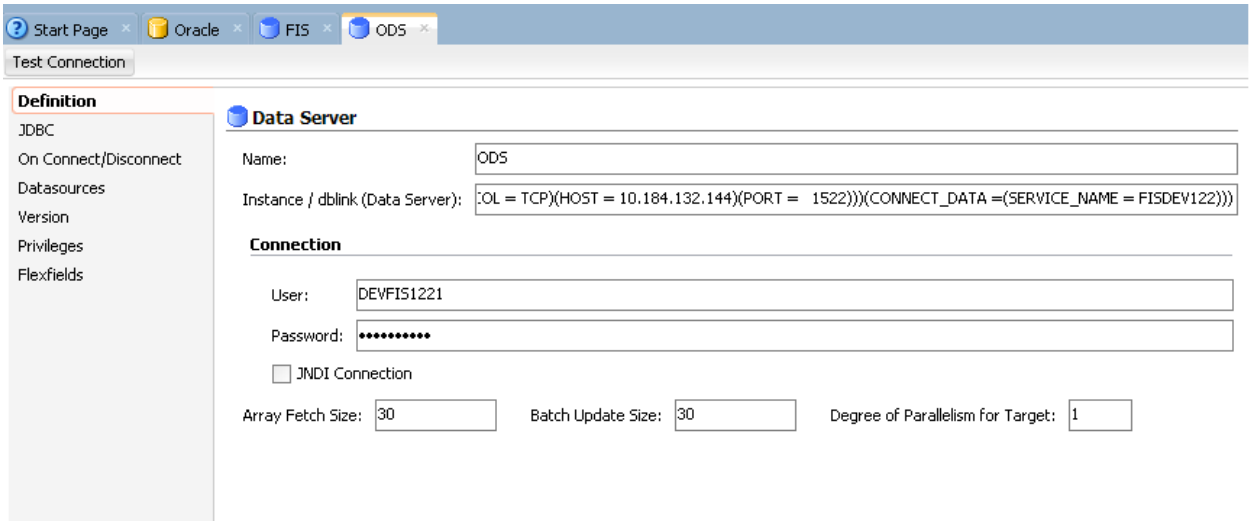
Errors: E$_<?=vSess?>

Loading: C$_<?=vSess?>

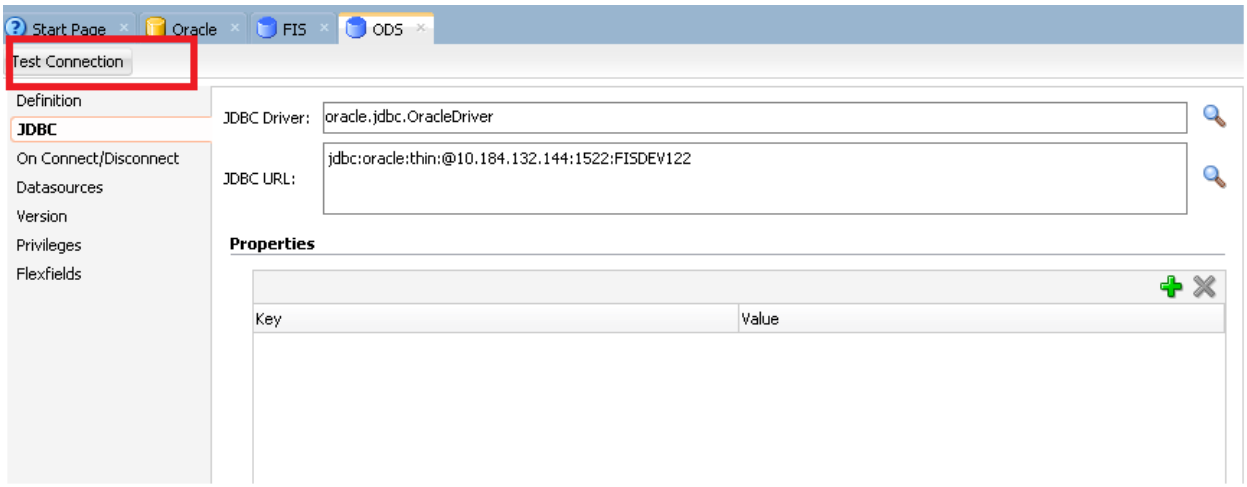
Integration : I$_<?=vSess?>



Similarly under Topology→ Physical Architecture→Oracle→ODS→ Definition , update the destination schema details in the Instance/dblink(data server) ,connection User and Password .



Update the JDBC driver details under Topology→ Physical Architecture→Oracle→ODS and test the connection for the destination schema

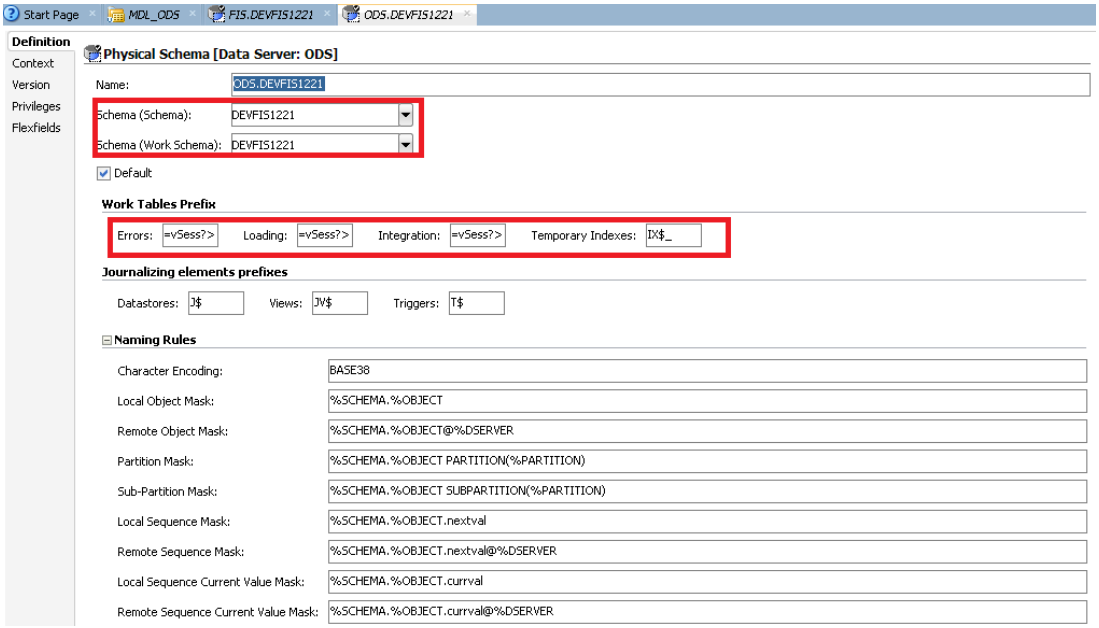


Inside the Topology→ Physical Architecture→Oracle→FIS→ FIS.DEVFIS1221,update the Schema and Work Schema . Check or otherwise update the work tables prefix as :

Errors: E$_<?=vSess?>

Loading: C$_<?=vSess?>

Integration : I$_<?=vSess?>

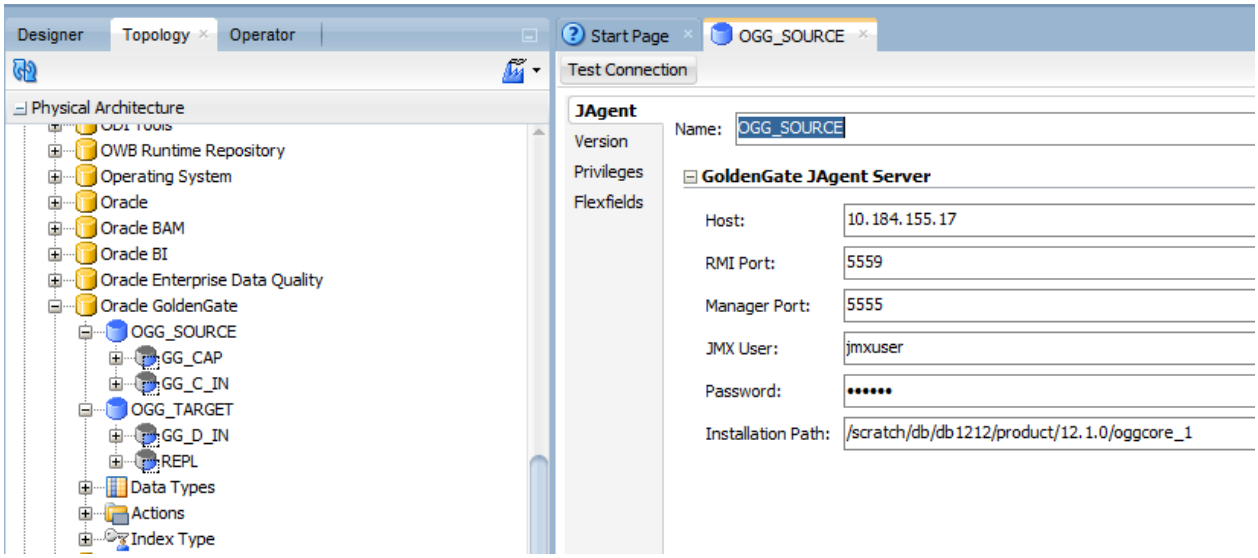


1.3.2.2 Oracle Golden Gate

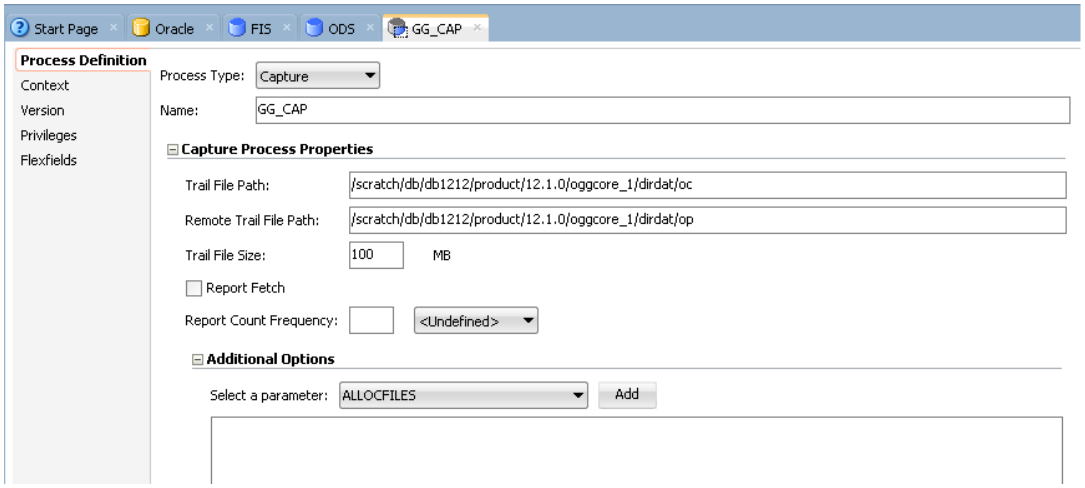
Update the golden gate source details under the

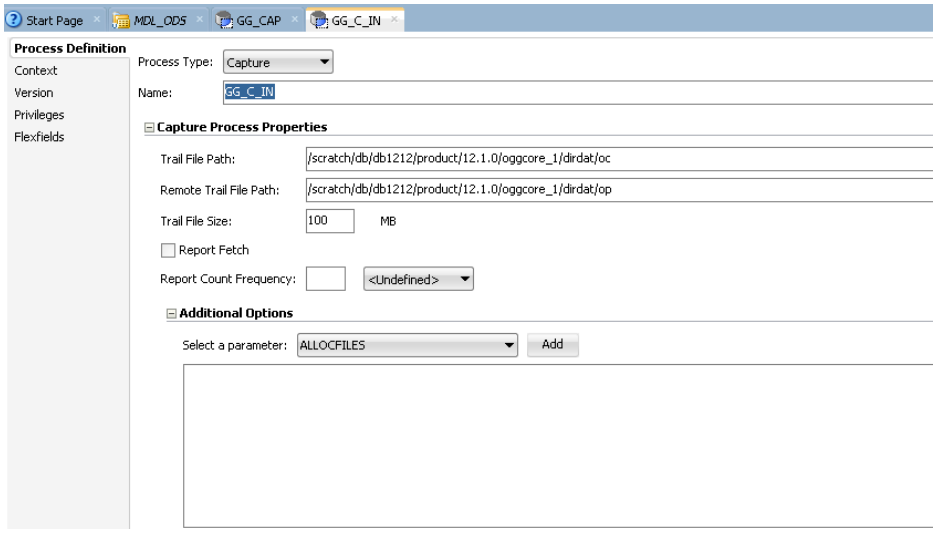
Topology→ Physical Architecture→Oracle GoldenGate →OGG_SOURCE.

Update the Host,RMI port,Manager Port,JMX User, Password and Installation Path.



And also update the GG_CAP,GG_C_IN Capture Process Properties .

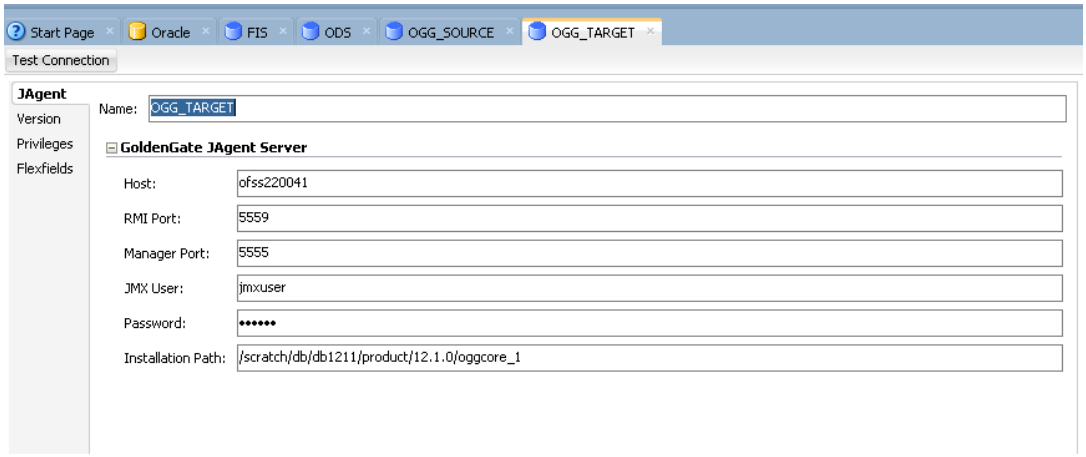


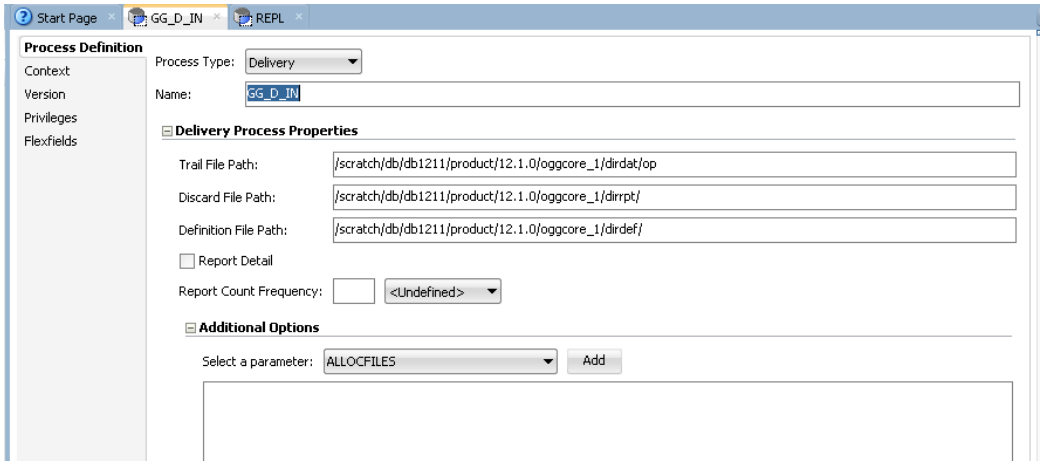


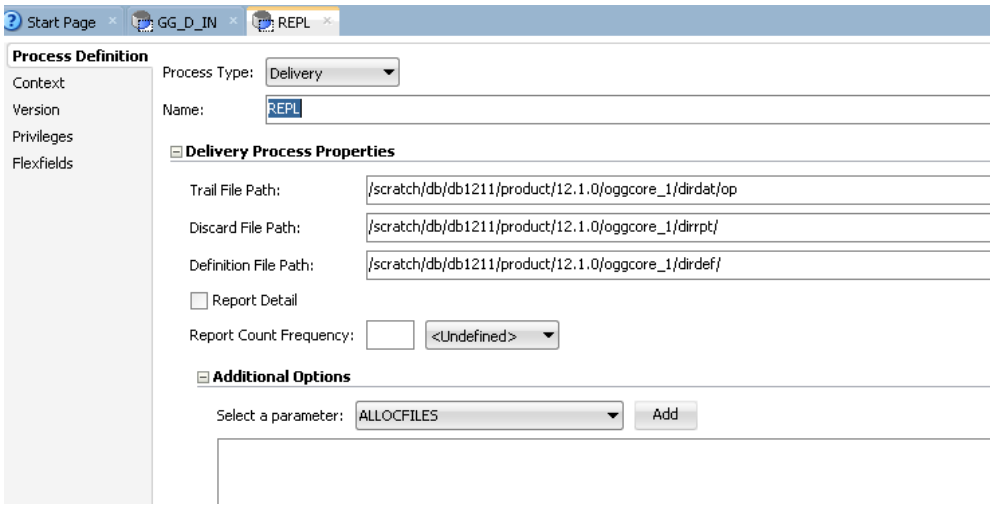
Similarly update the GoldenGate JAgent Target Server details under

Topology→ Physical Architecture→Oracle GoldenGate →OGG_Target

along with the details in the GG_D_IN and REPL delivery process properties







1.3.3 Journalized tables creation

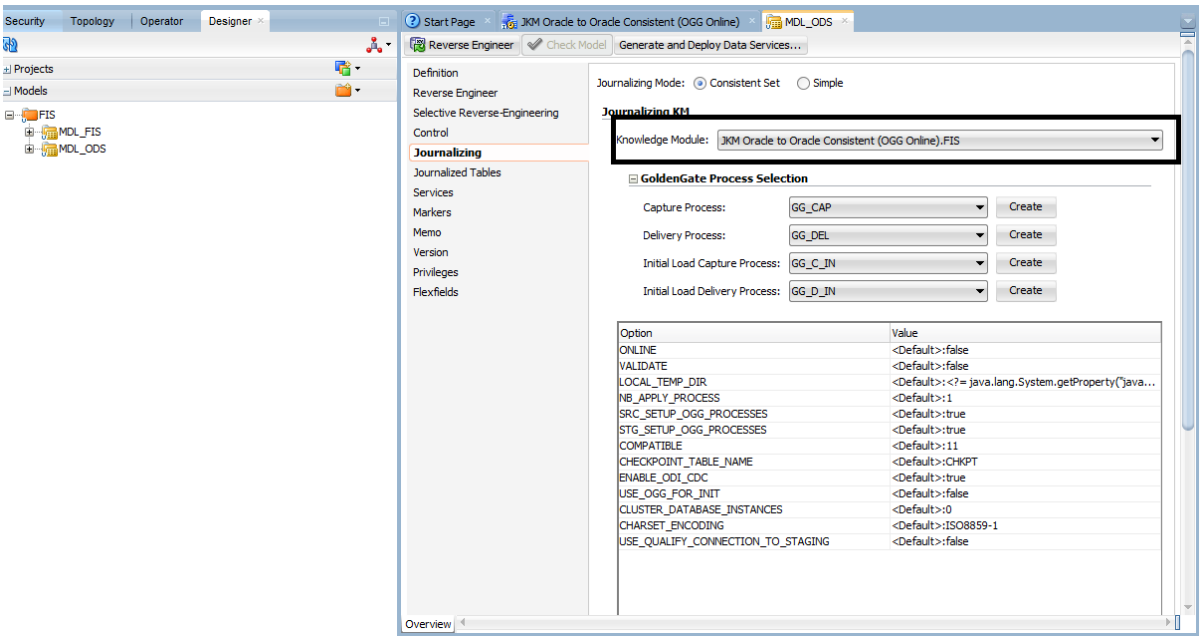
Journalized Tables Creation involves few Steps

(i) Verification of MDL_ODS properties
(ii) Verify/Add Subscriber
(iii) Add tables to CDC
(iv) Start Journal
(v) Add journal Tables in GG parameter files

1.3.3.1 Verification of MDL_ODS properties

Select MDL_ODS in Models →FIS →MDL_ODS,

- Definition : Logical Schema MDL_ODS is selected and verify details are as per below screenshot
- Journalizing : Knowledge Module(KM) should be set to JKM Oracle to Oracle Consistent(OGG Online).FIS and other parameters are defined as per below screenshot.



Check the Group Name value in CHKPT table. This table is internally used by Golden Gate to create Window Ids.

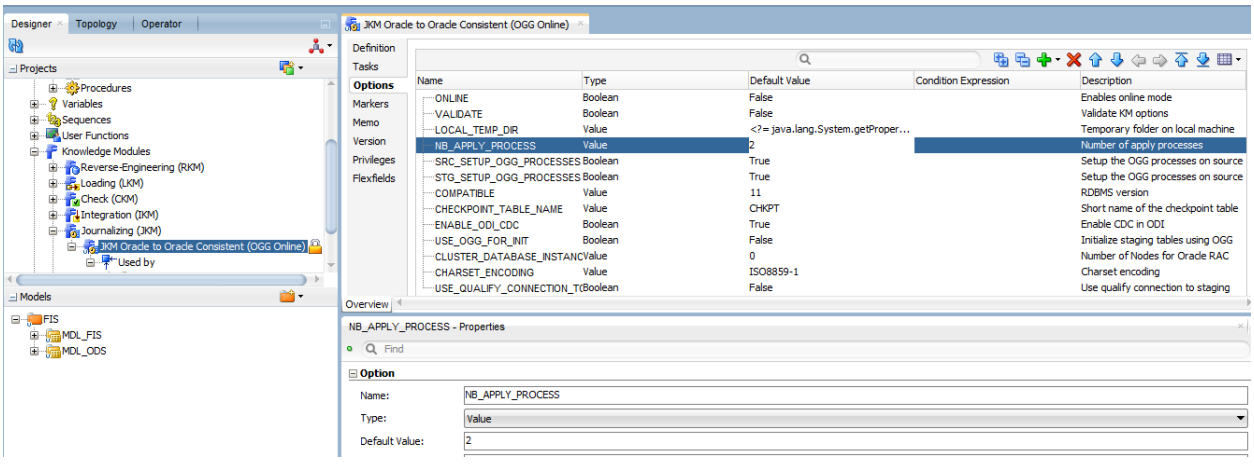
If Group name value is REPL1 then the NB_APPLY_PROCESS value should be 1.

If Group name value is REPL2 then the NB_APPLY_PROCESS value should be 2.

ODI may not allow changing the value directly in MDL_ODS→Journalizing tab, then change in JKM screen as mentioned below, and then come change in Model details.

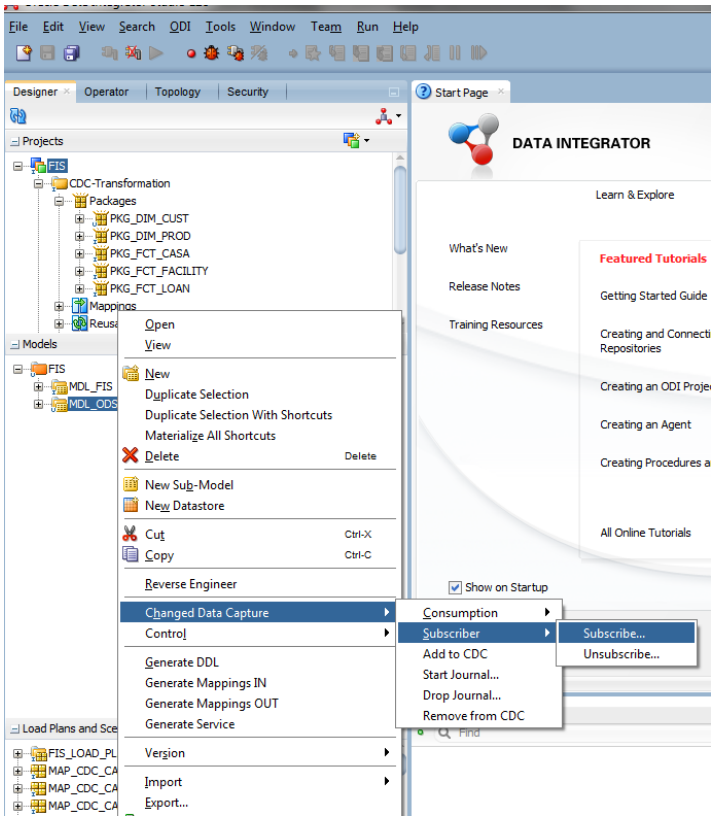
To change in JKM go to Knowledge Modules → Journalizing(JKM) → JKM Oracle to Oracle Consistent(OGG Online)

In that under Options Tab update the value of NB_APPLY_PROCESS.

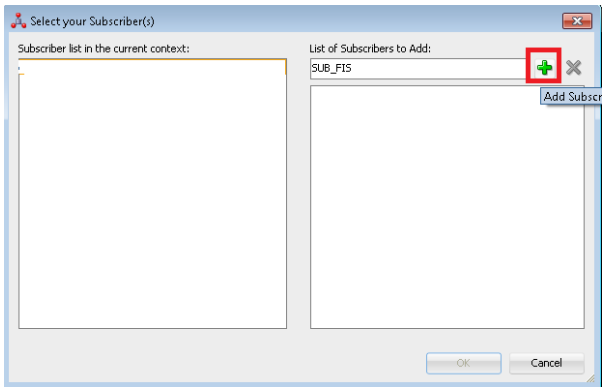


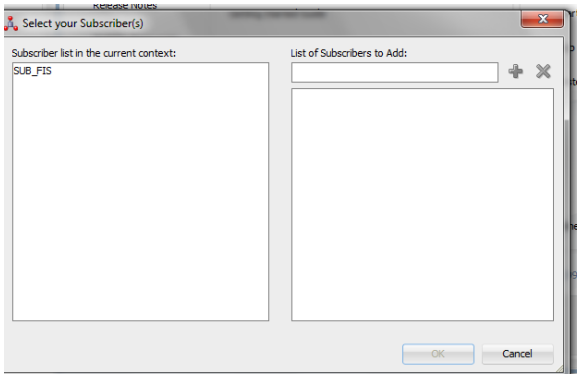
1.3.3.2 Verify/Add Subscriber

- Right click on MDL_ODS -> Changed Data Capture -> Subscriber ->Subscribe...
- Check if the entry SUB_FIS is available in Subscriber list in the current context.
- If not available please add a subscriber.



To add a subscriber enter “SUB_FIS” in “List of Subscribers to Add” box and click the plus symbol and click OK. Then “Sub_FIS” would be listed in Subscriber list in the current context box.





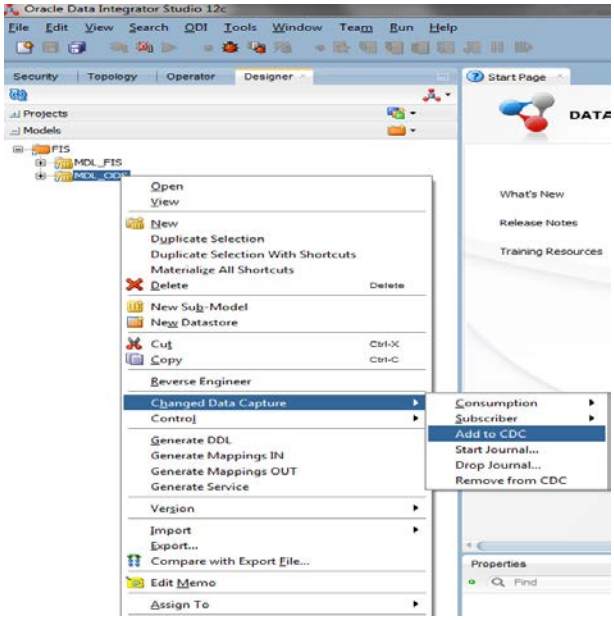
Note – After adding Subscriber it puts an entry in Table “SNP_CDC_SUBS” for

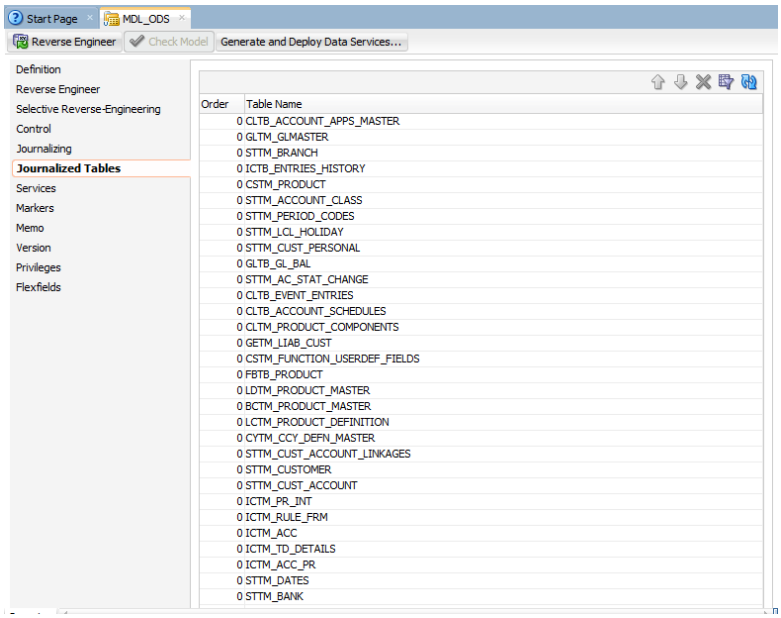
CDC_Subscriber= ’ SUB_FIS’. Please ensure it is available.

1.3.3.3 Add tables to CDC

To add tables for Change Data Capture, Right click on MDL_ODS and select

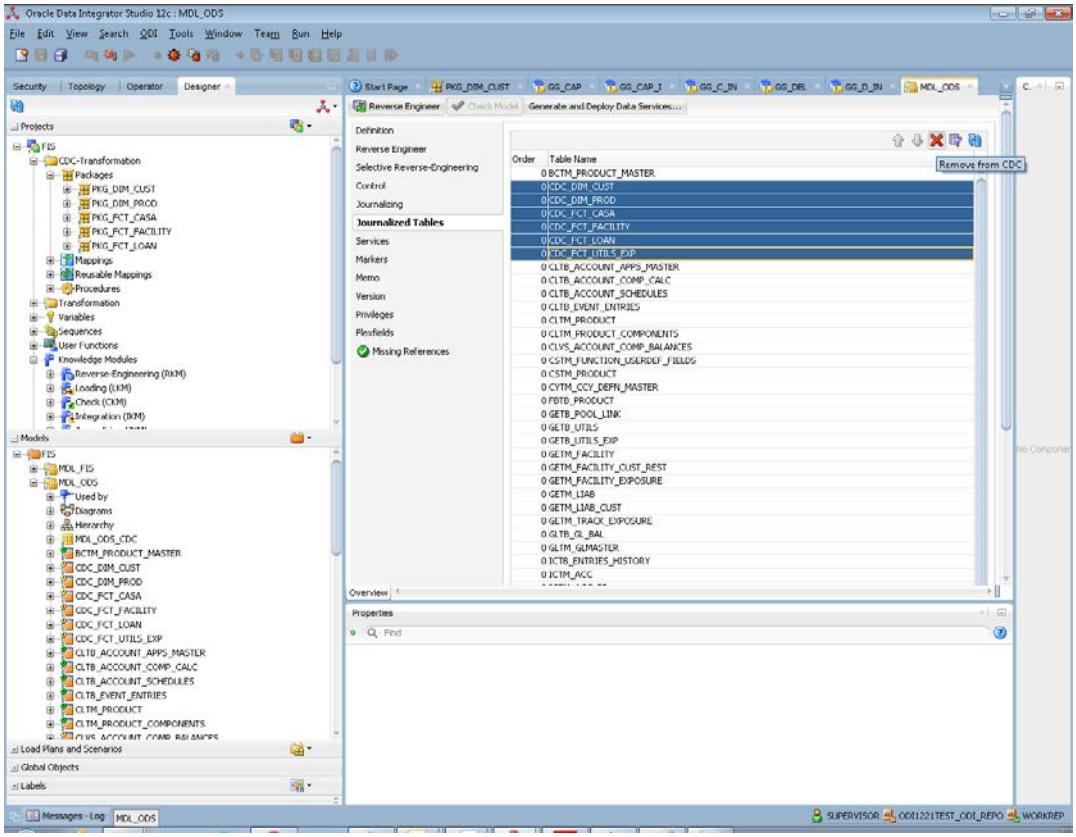
Changed Data Capture -> Add to CDC. It would list all the Journalized tables inside the Journalized Tables tab of MDL_ODS .





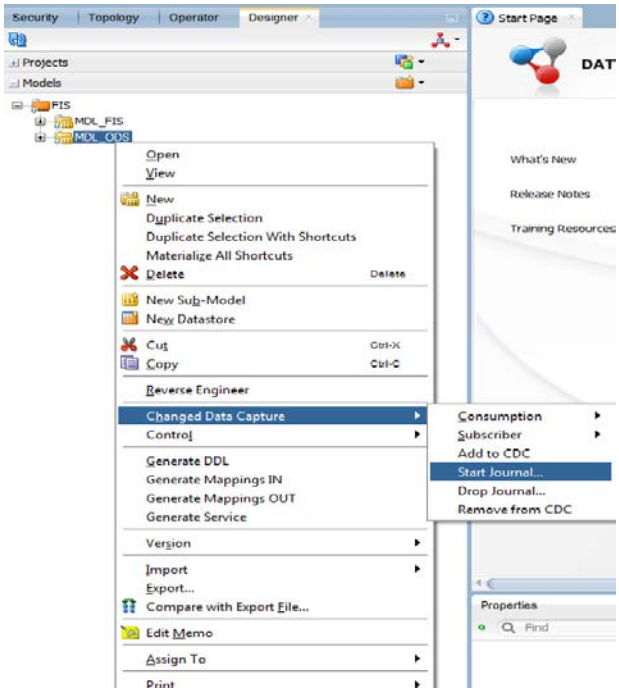
Now remove all the Tables starting with CDC_* by selecting the Cross symbol (Remove from CDC)

Note- Tables starting with CDC_* are temporary tables created in the ODS schema. This step is very essential as if we forget to remove those tables; it would create critical issues with journalizing.



1.3.3.4 Creation of journalized tables

Journal Tables are created using Start Journal feature, by Right click on MDL_ODS -> Changed Data Capture -> Start Journal.



Then update Journal Tables in Golden gate param file REPL_ODS.prm from REPL2_OnlyJournal.txt in path "/ODS/PARAM_FILES"

1.3.4 UDF Maintenance in ODS

Ensure param value in CSTB_ODS_PARAM and field number of UDFs maintained in Flexcube are in sync.

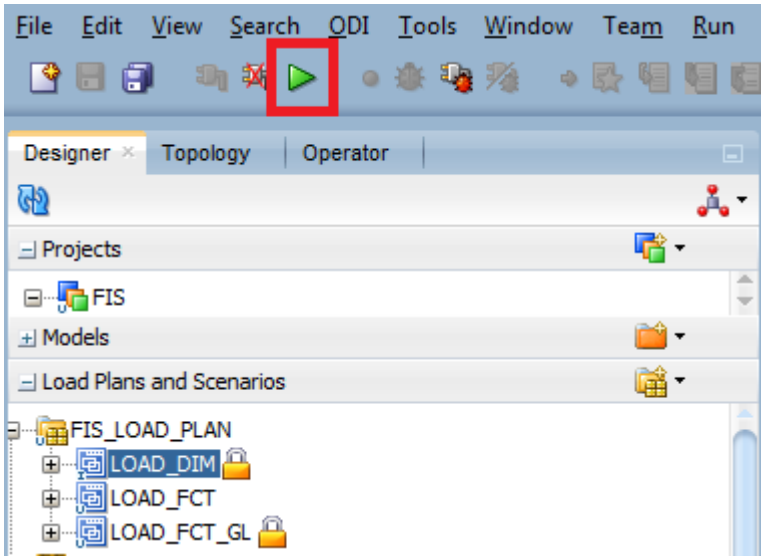
PARAM_NAME	PARAM_VALUE	PARAM_DESCRIPTION	KEY_ID
LOAN_INDUSTRY	3	UDF Number for Loan Industry	4
LOAN_TYPE_UDF_NO	2	Udf Number for Loan Type	2
CUSTOMER_SEGMENT_UDF_NO	1	Udf Number for Segment Type	1

Note-
In Flexcube run the below queries to get the Field number
SELECT FIELD_NO FROM CLTM_PRODUCT_UDF WHERE FIELD_NAME IN ('LOAN_TYPE','LOAN_INDUSTRY')
SELECT FIELD_NUM FROM CSTM_FUNCTION_UDF_FIELDS_MAP WHERE FUNCTION_ID='STDCIF'

1.3.5 Load Initial Data in FIS

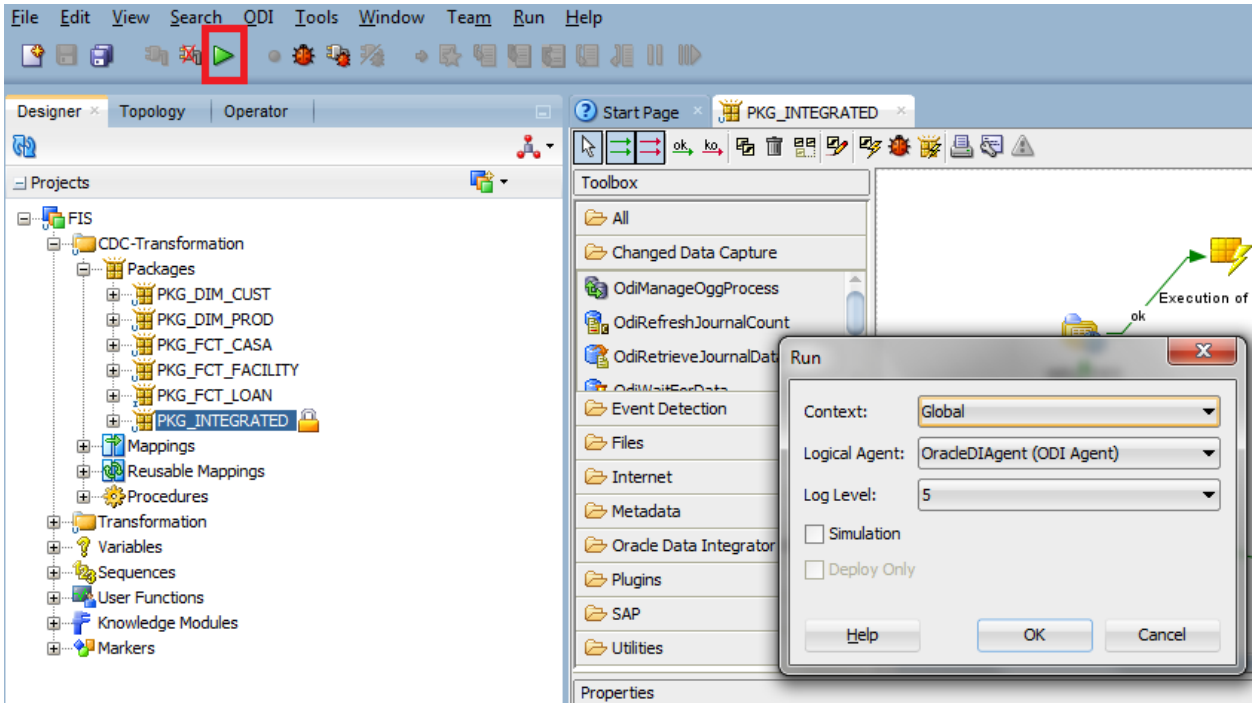
Check if all the tables starting with FCT_ and DIM_ are empty otherwise truncate them and run the LOAD_DIM and LOAD_FCT under Designer →Load Plans and Scenarios. This will load the Dimension and all Fact Tables, except GL Balance table (FCT_GL). The FCT_GL table will be populated at End of Financial Input (EOFI).

Note*- If GL Balances has to be manually updated please run LOAD_FCT_GL load plan @ EOFI.



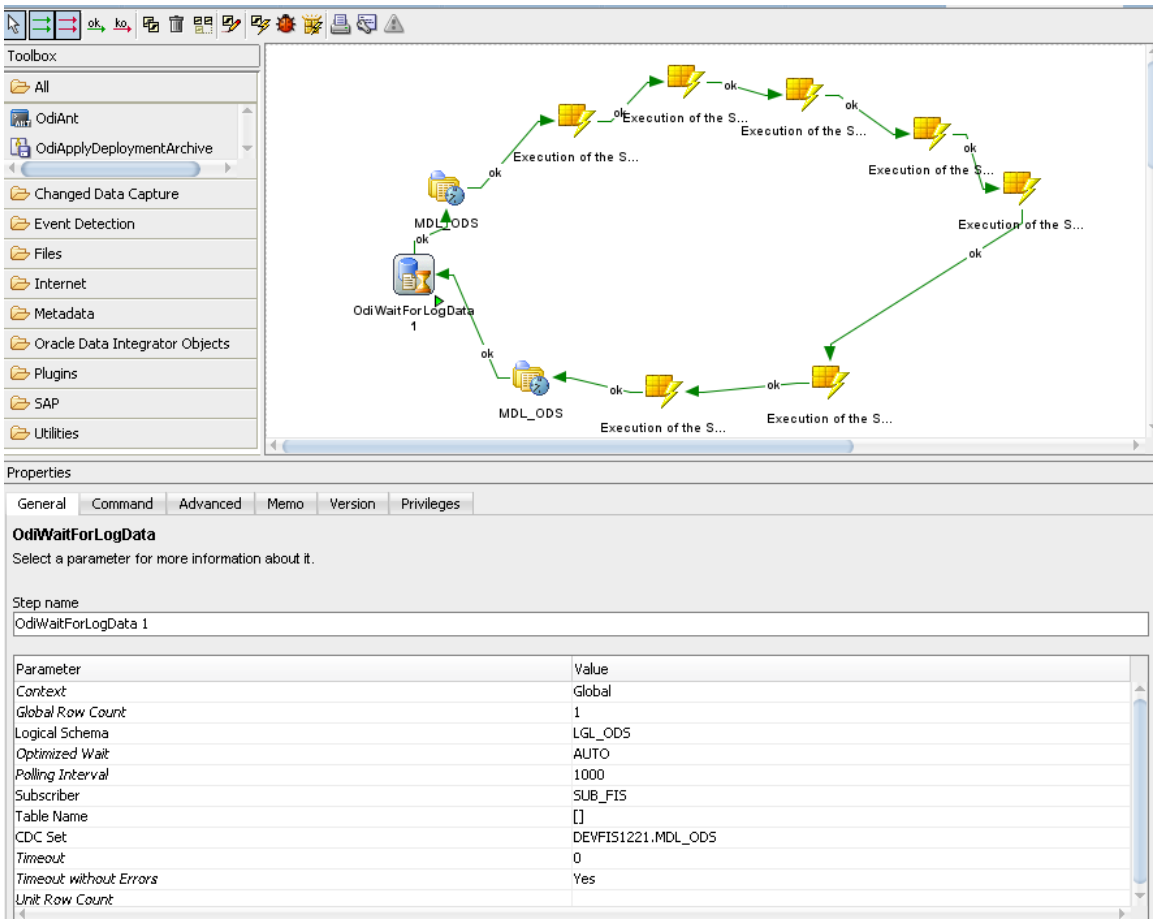
1.3.6 Running the Package

The below screenshot depicts the step to run a package /Mapping/Load Plan.



Press the Play button on the menu bar and select the OracleDIAgent.

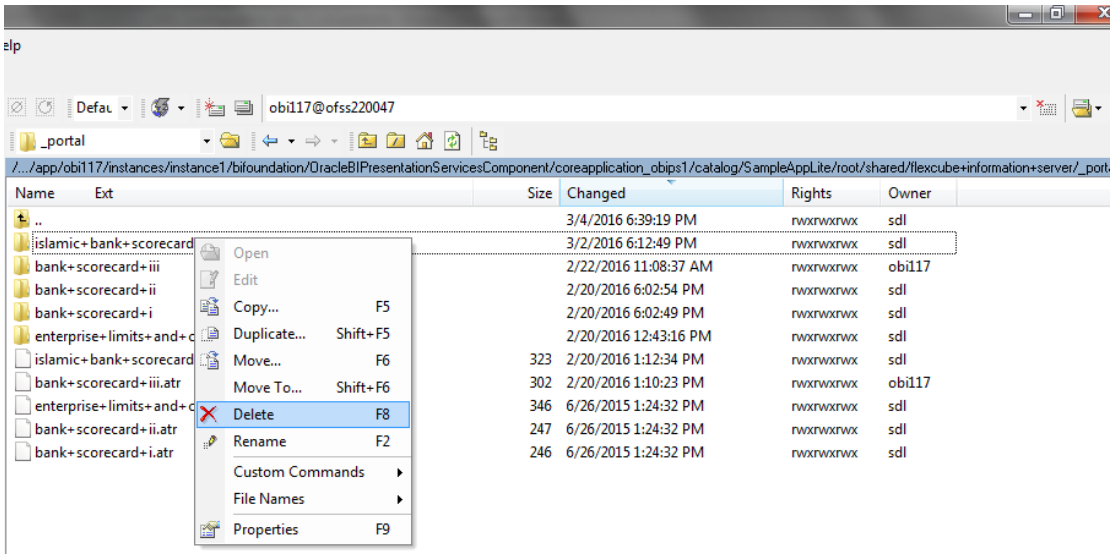
Run package **PKG_INTEGRATED** (under CDC-Transformation).Ensure that you change the Subscriber and CDC Set Under OdiWaitForLogData. CDC Set name can be Obtained by querying Table `SNP_CDC_SET`.



1.4 OBIEE Configuration

While installing OBIEE, make sure that either one of the Bank Scorecard -3 or Islamic Bank Scorecard exists according to the Site requirement. So in-order to remove the scorecard, just remove the .atr and the respective scorecard folder from the OBIEE server (in path similar to below path):

/scratch/app/obi117/instances/instance1/bifoundation/OracleBIPresentationServicesComponent/coreapplication_obips1/catalog/SampleAppLite/root/shared/flexcube+information+server/_portal



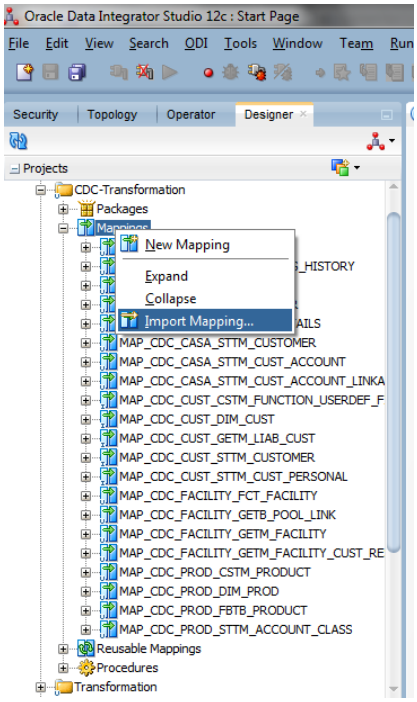
1.5 Intermediate Release and Import of Objects

- Incase the load plan stops in any intermediate steps ,right click on the stopped sessions under operator → Load Plan Executions→Agent→ OracleDIAgent

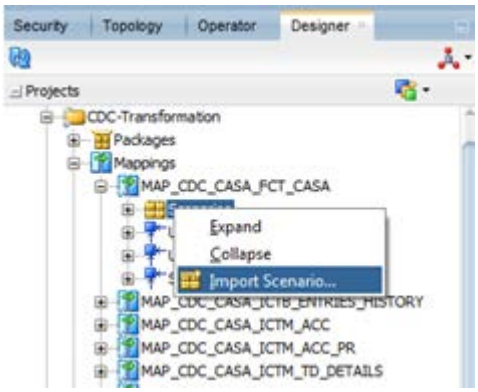
  right click on the stoped session and Restart

- In the Intermediate Release of objects, ensure that both the Designer and the Scenario components are been imported properly with the change.

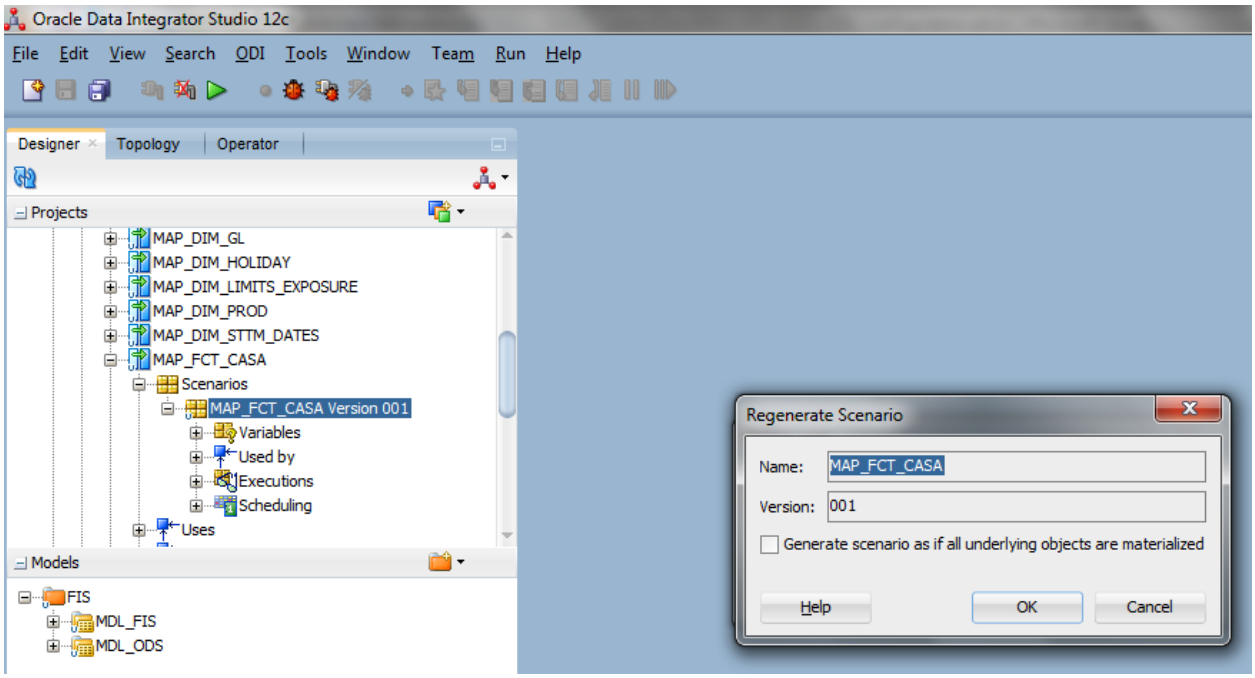
  Follow the below steps to import the individual mappings.



Follow the below step to import the individual scenarios.



To re-generate existing scenario, Select the scenario, right click and select “Regenerate”.This regenerates the scenario to be in sync with the mapping.



1.6 Technical Specification

- ODI Studio Memory configuration :

  We have to set a minimum heap size to 4GB.We can set it in odi.conf file which is placed in path similar to

  /scratch/app/fmw122/Oracle/odi/studio/bin, as "AddVMOption -Xmx4g"

- ODI Work Repository :

It should have a minimum of 15 GB tablespace.



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Version 14.4.0.0.0

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