

# OBIA 12c: How to Configure OBIA Load Plan with Oracle Autonomous Database (ADB) Preconfigured Database Services

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## Introduction:

Oracle Autonomous Database comes with preconfigured database services like, HIGH, MEDIUM, LOW etc... These services control the priority of the sessions when the system is under resource pressure and some extent control the parallel degree used.

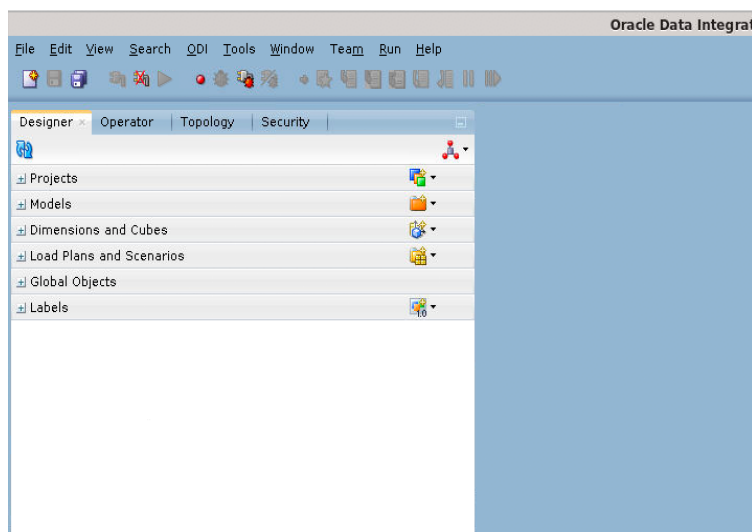
Out-of-the-box, Oracle Business Intelligence Applications 11.1.1.10.3 Patch Set 3 support ONLY Oracle Autonomous Database (ADB) preconfigured database service "LOW". However, if you would want to use other preconfigured database services other than "LOW" for a specific OBIA load plan scenario / group of OBIA load plan scenarios then this article would provide you an overview on how to implement & configure OBIA load plan scenario to use various Oracle ADB preconfigured database service while OBIA Load plan execution takes place.

## Implementation steps:

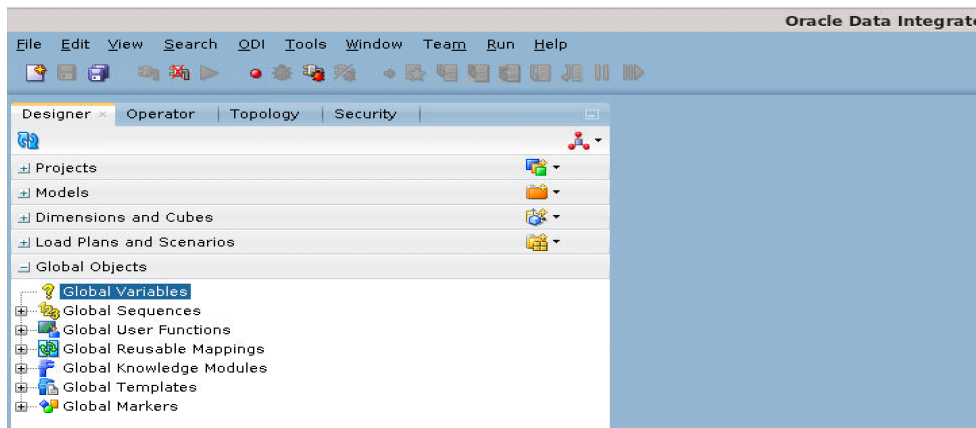
- Step 1: Define a ODI variable which would hold the value of preconfigured database service
- Step 2: Identify impacted ODI artifacts and make necessary changes
- Step 3: Modify ODI Topology to make ADB service as configurable
- Step 4: Customize the load plan to configure ADB service as configurable
- Step 5: Validate the Load Plan execution results

## Detailed Technical Implementation Instructions:

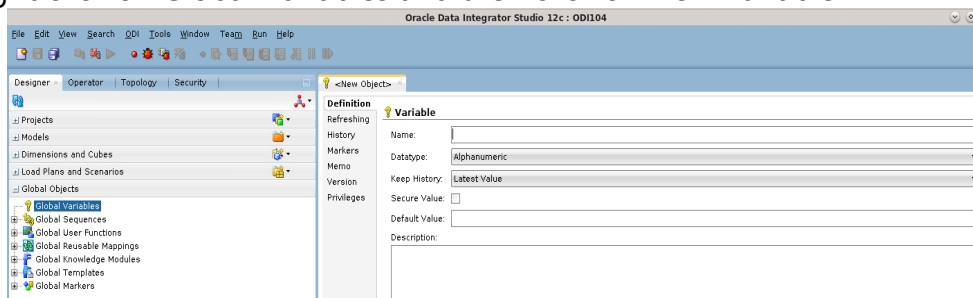
1. Create ADW\_SERVCE global variable  
Login to ODI and Go to Designer



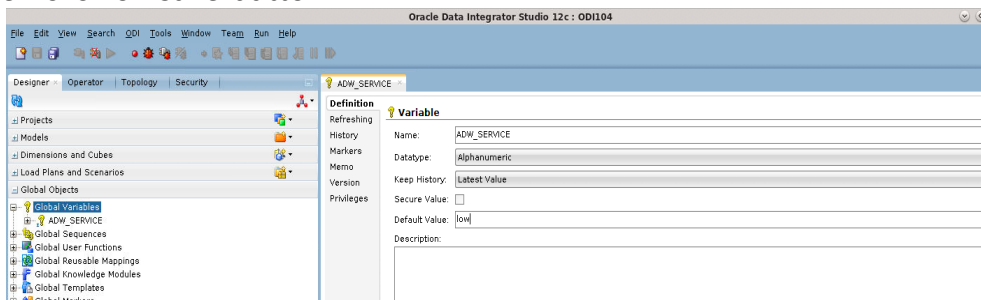
- Expand the "Global Objects"



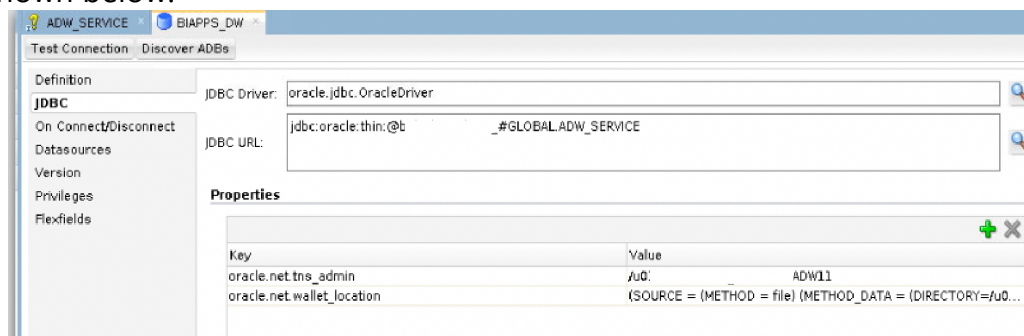
- Right click on Global Variables and then click on New Variable



- Type the name as "ADW\_SERVICE" and add the default value as "low" and then click on save button



- Now add **ADW\_SERVICE** variable to the JDBC url of the ODI Data server as shown below.

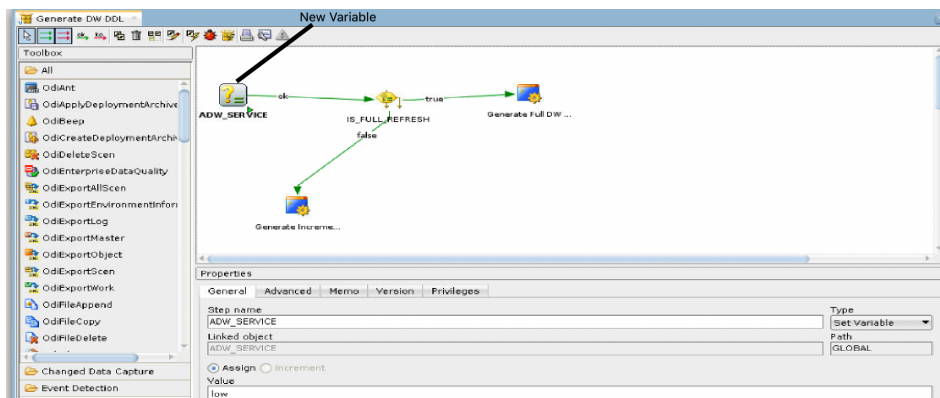


- Add ADW\_SERVICE variable as set variable to the below ODI procedures. Once after making changes, regenerate the corresponding Procedure Package scenario.

- Generate DW DDL
- Generate SDS DDL
- Log ETL Run Status
- GENERATE\_FAILED\_TASKS\_REPORT
- Load Datastore Flex Metadata
- UTILITIES\_CLEAN\_WORK\_AND\_FLOW\_TABLES
- Cloud Connector Invoke Web Service
- Diagnostics Cloud Connector
- Load and Control Healthcheck
- TABLE\_MAINT\_PROC

Follow the below sample process to add variable to all the above procedures.

Go to Designer- > Expand the BI Apps Project -> Expand the Components -> Expand the DW -> Expand the Oracle -> Expand the Generate DW DDL -> Double click on Generate DW DDL Package -> Drag and drop the ADW service variable -> Set the value as "low" -> Mark ADW\_SERVICE as "First Step" -> Then save and regenerate the scenario of the Procedure.



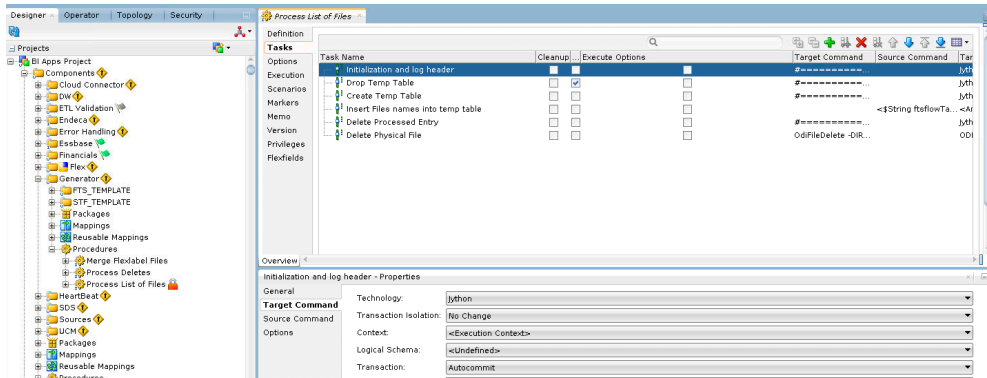
**Note:** Repeat the same process for all the above procedures.

## 2. Changes that are needed for Fusion Adaptor (For an Example)

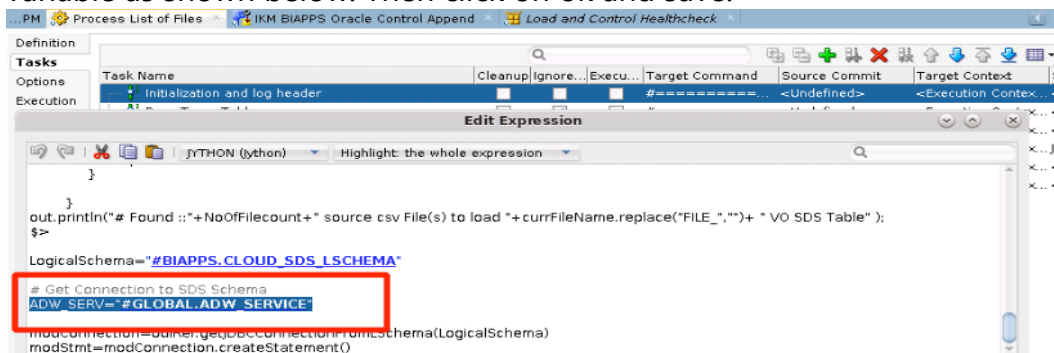
**Note:** Step No. 2 is applicable only for Fusion Adaptor. Ignore this if you are implementing the solution for Non-Fusion Adaptor such as EBS, PSFT.

Follow the below step to modify the procedure.

- Go to Designer- > Expand the BI Apps Project -> Expand the Components -> Expand the Generator -> Expand the procedures -> Double click on Process List of Files -> Go to Tasks



- Open the task name "Initialization and log header" and add the ADW\_SERVICE variable as shown below. Then click on ok and save.



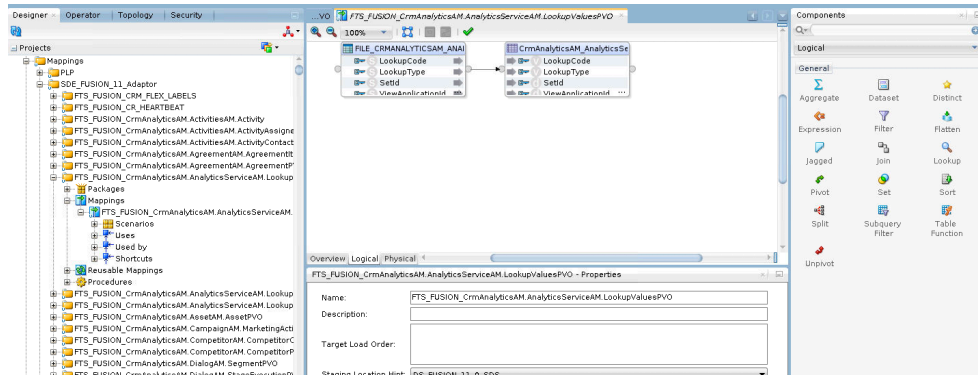
### 3. Changes that are needed for ODI Knowledge Modules

To execute a scenario in HIGH or MEDIUM service, first you would need to identify the IKM, which is used in the mapping and then do the following changes.

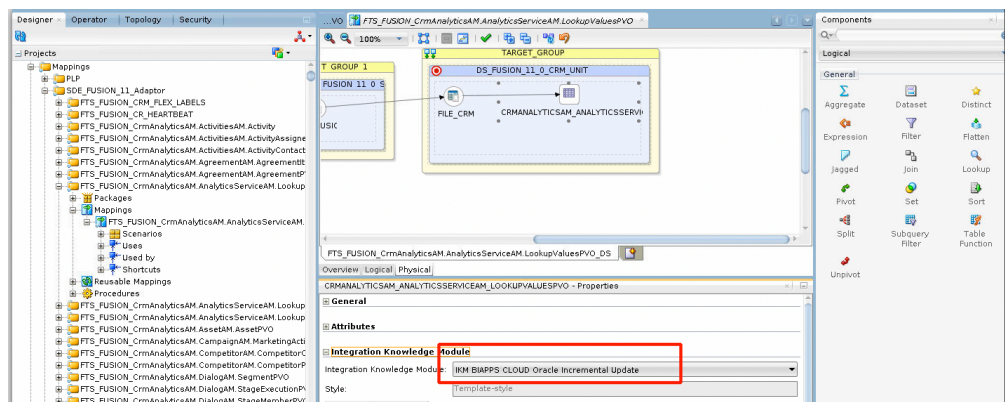
Suppose you want to use high/medium service for the one of the FTS Map ( FTS\_FUSION\_CrmAnalyticsAM.AnalyticsServiceAM.LookupValuesPVO)

Follow the steps to modify the map to achieve high/medium service.

- Go to the Designer-> Expand the BI Apps Project -> Expand the Mappings -> Expand the SDE\_FUSION\_11\_Adaptor -> Expand the FTS\_FUSION\_CrmAnalyticsAM.AnalyticsServiceAM.LookupValuesPVO Folder-> Expand the Mappings -> Double click on Mapping ( FTS\_FUSION\_CrmAnalyticsAM.AnalyticsServiceAM.LookupValuesPVO)



- Click on Physical -> Click on the Target\_Group -> Get the IKM Name as highlighted below.



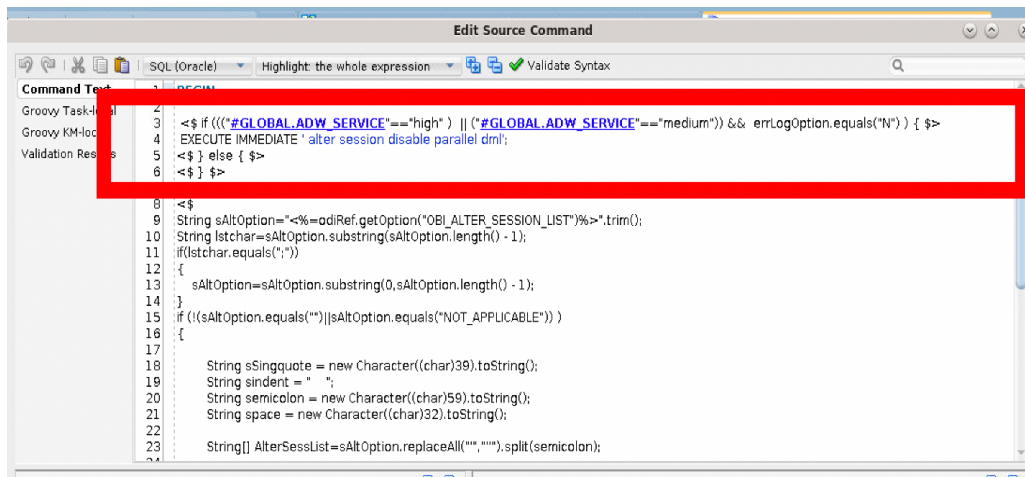
- Once you get the KM name from the mapping which you want to run using high or medium ADW service, modify the IKM as shown in below steps. Please make sure you follow the OBI 11.1.1.10.3 customization guidelines to modify any existing or new ODI Objects.
- Create the Copy of the IKM and rename the KM from IKM BIAPPS CLOUD Oracle Incremental Update to CUSTOM\_IKM BIAPPS CLOUD Oracle Incremental Update
- Go to Run Alter Session1 Commands Task of the KM and add the below logic. Then click on OK and save.

Code snippet:

```

BEGIN
<$ if (( "#GLOBAL.ADW_SERVICE"=="high" ) ||
( "#GLOBAL.ADW_SERVICE"=="medium" )) { $>
EXECUTE IMMEDIATE ' alter session disable parallel
dml';
<$ } else { $>
<$ } $>

```



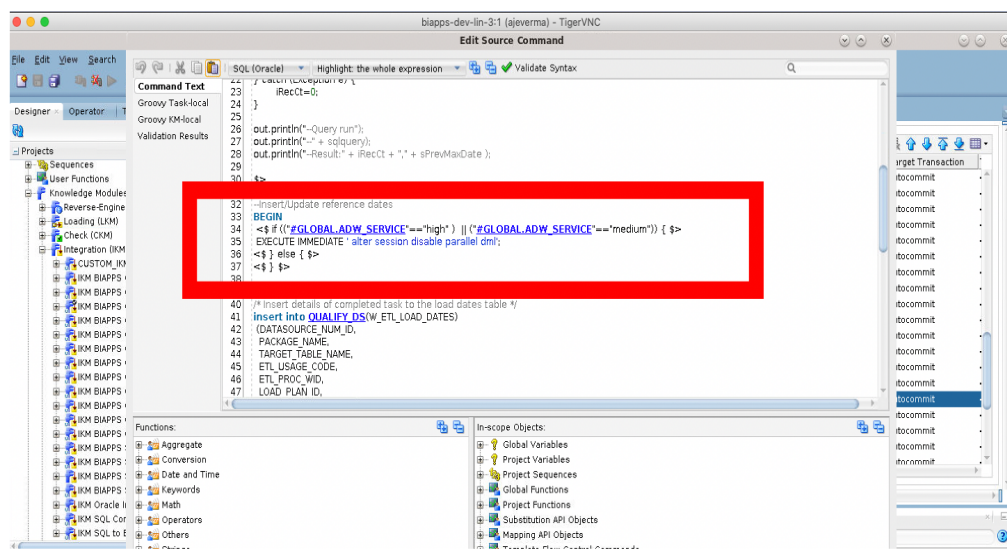
- Go to step Insert reference dates and add the additional logic as shown in below screen

Code snippet:

```

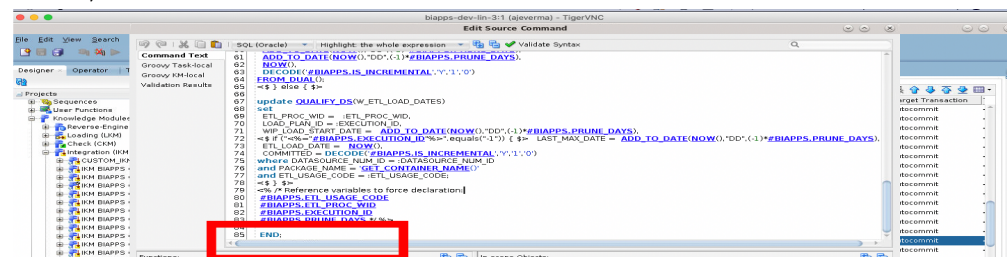
BEGIN
<$ if ((("#GLOBAL.ADW_SERVICE"=="high" ) ||
("#GLOBAL.ADW_SERVICE"=="medium")) { $>
EXECUTE IMMEDIATE 'alter session disable parallel
dml';
<$ } else { $>
<$ } $>

```



Code snippet:

END;



Also add semicolon (;) at the end as highlighted below



```

53 select
54 :DATASOURCE_NUM_ID,
55 'GET_CONTAINER_NAME()',
56 '<%=odiRef.getTargetTable("RES_NAME")%>',
57 :ETL_USAGE_CODE,
58 :ETL_PROC_WID,
59 :EXECUTION_ID,
60 ADD_TO_DATE(NOW(),"DD",(-1)*#BIAPPS.PRUNE_DAYS),
61 ADD_TO_DATE(NOW(),"DD",(-1)*#BIAPPS.PRUNE_DAYS),
62 NOW(),
63 DECODE('#BIAPPS.IS_INCREMENTAL','Y','1','0')
64 FROM DUAL();
65
66
67 update QUALIFY_DS(W_ETL_LOAD_DATES)
68 set
69 ETL_PROC_WID = :ETL_PROC_WID,
70 LOAD_PLAN_ID = :EXECUTION_ID,
71 WIP_LOAD_START_DATE = ADD_TO_DATE(NOW(),"DD",(-1)*#BIAPPS.PRUNE_DAYS),
72 <%=if ("<%= #BIAPPS.EXECUTION_ID %>".equals("-1")) { $> LAST_MAX_DATE = ADD_TO_DATE(NOW(),"DD",(-1)*#BIAPPS.PRUNE_DAYS)} else { $> LAST_MAX_DATE = :LAST_MAX_DATE } %>,
73 ETL_LOAD_DATE = NOW(),
74 COMMITTED = DECODE('#BIAPPS.IS_INCREMENTAL','Y','1','0')
75 where DATASOURCE_NUM_ID = :DATASOURCE_NUM_ID
76 and PACKAGE_NAME = 'GET_CONTAINER_NAME()'
77 and ETL_USAGE_CODE = :ETL_USAGE_CODE;
78
79
80

```

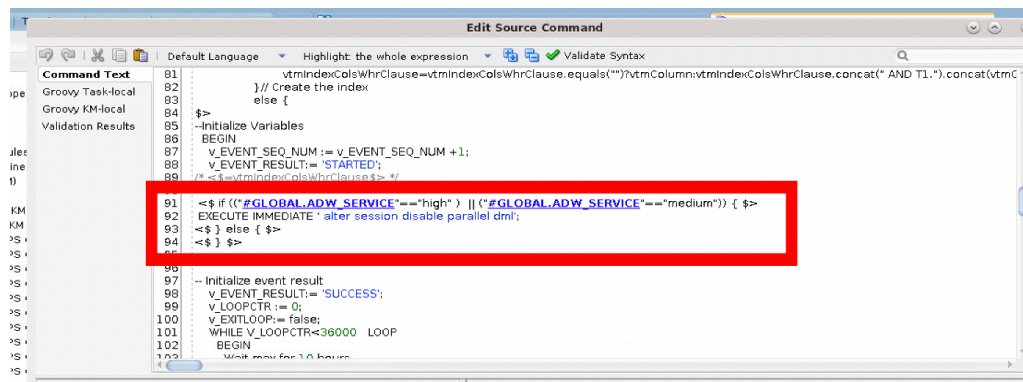
- Go to step Diagnostics - Find Dupes in Full Load and Autocorrect and Add disable parallel dml logic as show in below screen

Code snippet:

```

BEGIN
<$ if ("#GLOBAL.ADW_SERVICE"=="high" ) ||
("#GLOBAL.ADW_SERVICE"=="medium")) { $>
EXECUTE IMMEDIATE ' alter session disable parallel
dml ';
<$ } else { $>
<$ } $>

```

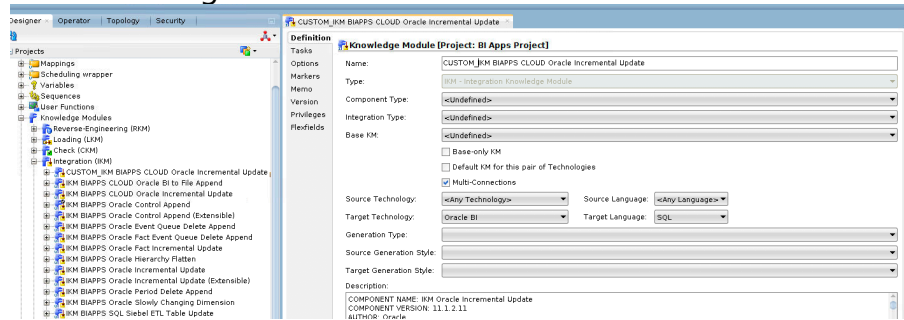


```

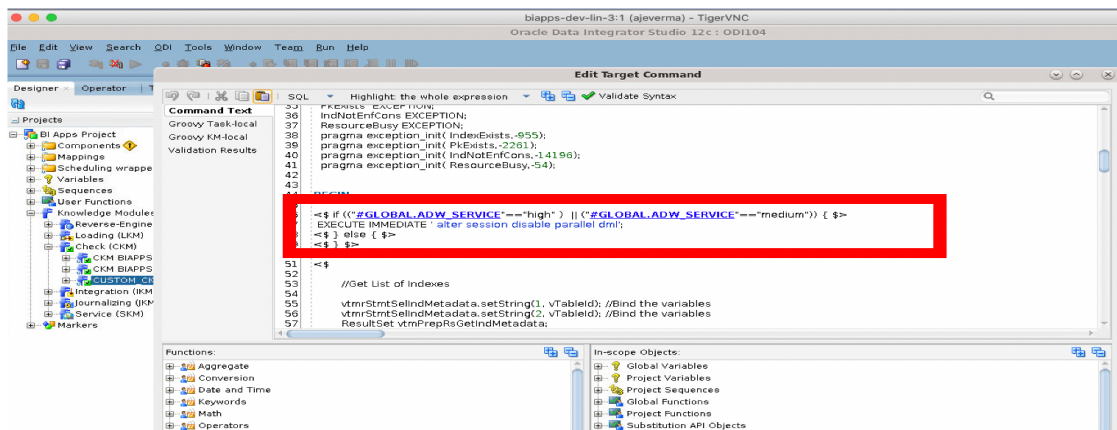
81 vtmindexColsWhrClause=vtmindexColsWhrClause.equals("")?vtmColumn:vtmindexColsWhrClause.concat(" AND T1.").concat(vtmC
82 // Create the index
83 else {
84 $>
85 --Initialize Variables
86 BEGIN
87 v_EVENT_SEQ_NUM := v_EVENT_SEQ_NUM +1;
88 v_EVENT_RESULT:= 'STARTED';
89 /* <%=vtmindexColsWhrClause%> */
90
91 <%=if ("<%= #GLOBAL.ADW_SERVICE %>=="high" ) || ("<%= #GLOBAL.ADW_SERVICE %>=="medium")) { $>
92 EXECUTE IMMEDIATE ' alter session disable parallel dml';
93 <%=} else { $>
94 <%=} $>
95
96
97 -- Initialize event result
98 v_EVENT_RESULT:= 'SUCCESS';
99 v_LOOPCTR := 0;
100 v_EXITLOOP:= false;
101 WHILE v_LOOPCTR<36000 LOOP
102 BEGIN
103 -- Wait for 10 hours

```

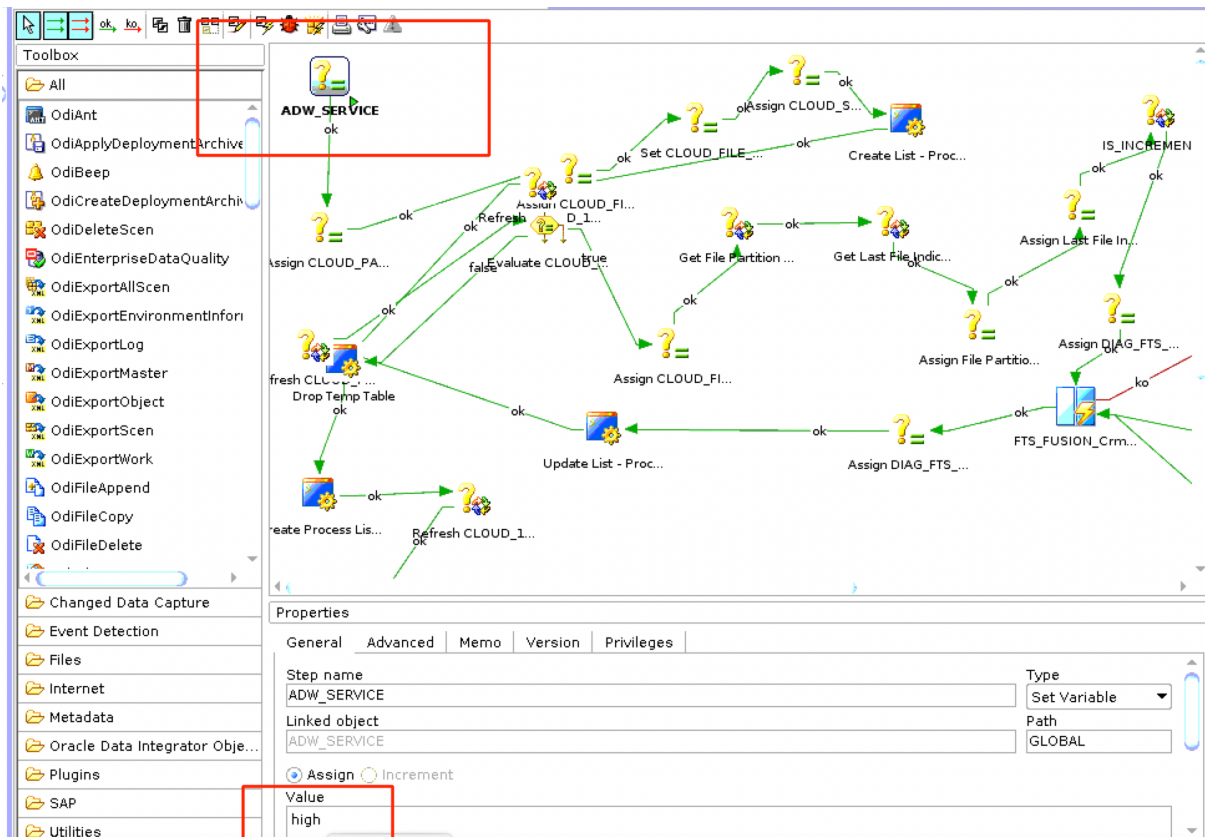
- Once all changes done. Click on save.



- Similar steps must be followed incase if you want to implement high or medium for any of the mapping.
- Once KM IKM changes done, now go and modify the CKM. Please follow the customization guidelines as per OBIA 10.3.
  - Create copy of the CKM (CKM BIAPPS Oracle)
  - CUSTOM\_CKM BIAPPS Oracle
    - Add the logic to step "Diagnostics - Find Dupes,Cnstrnt Vltm rows on I\$" of CKM.
  - Save the changes.



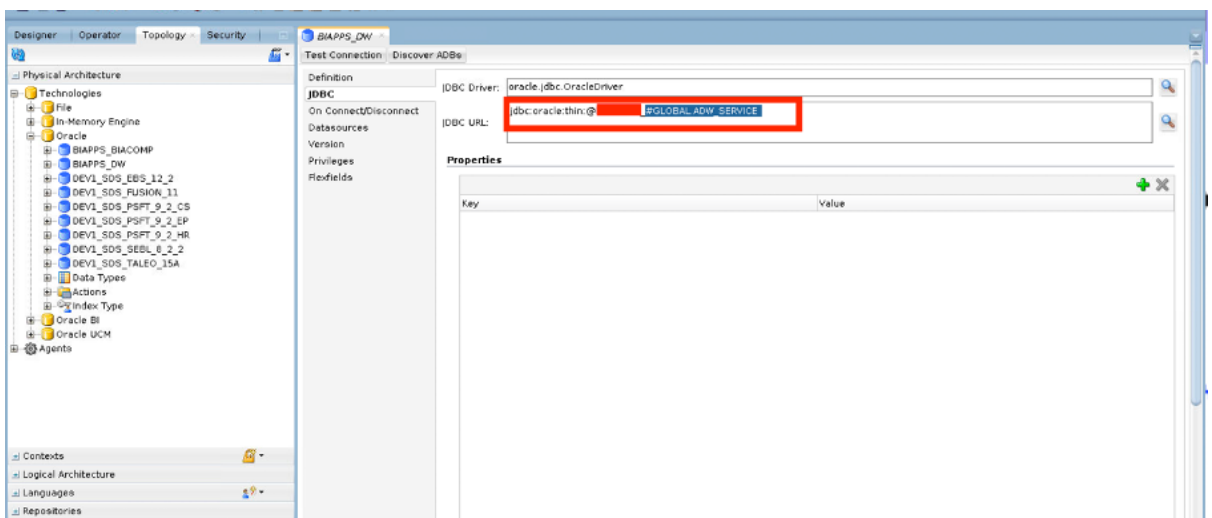
- Add the new variable to respective mapping package
  - Add ADW\_SERVICE variable to the package for which you want to perform the load using high/medium service.
  - Save and regenerate the Package.
  - Repeat the Step3 for any other maps of BIA adaptor.



**Note:** In case you are implementing this solution for Fusion Maps then you need to regenerate all FTS maps scenario.

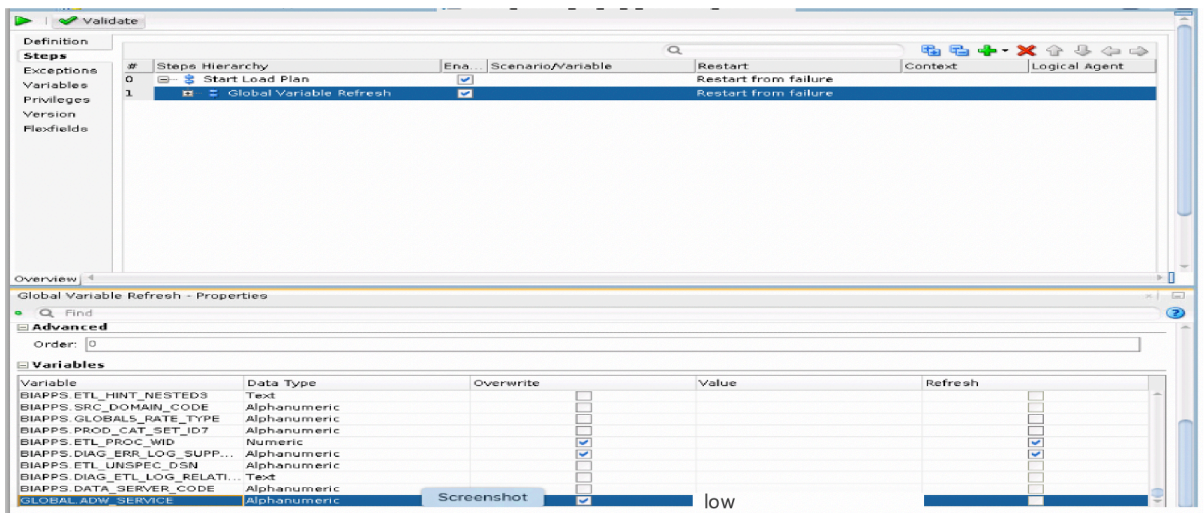
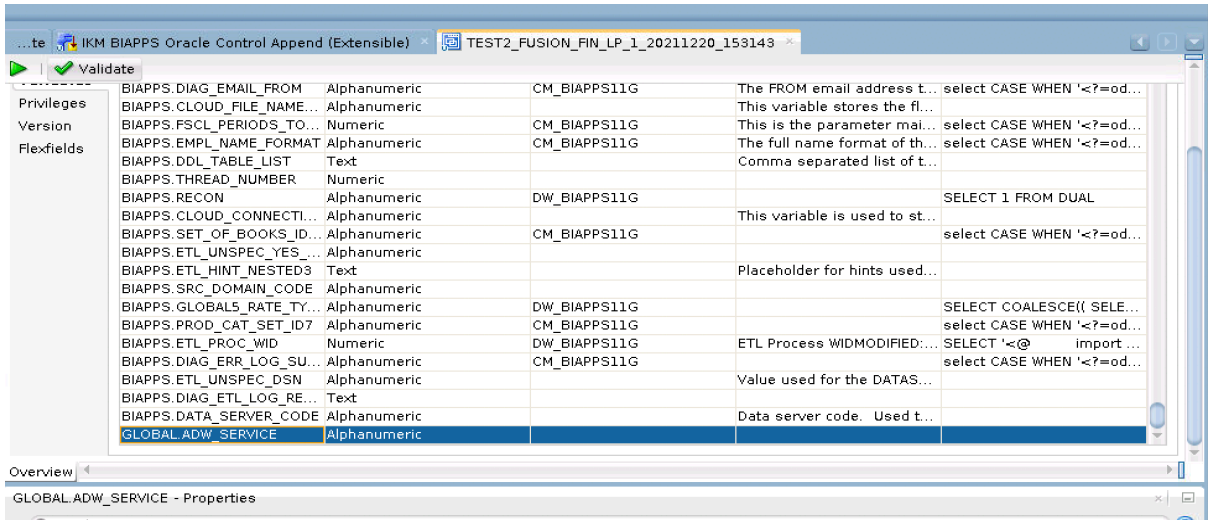
For Non-Fusion Maps, No need to regenerate all the maps, only the impacted one should be regenerated.

4. Add the new variable to DW/SDS Physical Topology  
In order to pass the value dynamically use ADW\_SERVICE variable in JDBC url properties.



## 5. Customize the Load Plan

Add "ADW\_SERVICE" variable to the load plan and assign the value as "high" or "medium" or "low".



Click on save and run the Load Plan.

## 6. Verify the loads.

Please execute the below command to see if the load is running in high/medium/low service.

```
Select * from v$session;
```

Worksheet Query Builder

```
select sid,serial#,resource_consumer_group,service_name from v$session;
select * from v$session;
```

Query Result

SQL | All Rows Fetched: 3 in 0.292 seconds

SID	SERIAL#	RESOURCE_CONSUMER_GROUP	SERVICE_NAME
1	28881	39177 LOW	OH
2	30056	49294 HIGH	OH
3	46880	65452 LOW	OH

Session SDE\_FUSION\_11\_ADAPTOR\_FTS\_FUSION\_CRMANALYTICSAM\_ANALYTICSSERVICEAM\_LOOKUPVALUESPVO (1739)

Definition

Steps

#	Steps Hierarchy	Status	Duration	Start	End	Retur...
0	SDE_FUSION_11_ADAPTOR_FTS_FUSION_CRMANALYTICSAM_ANALYTICSSERVICEAM_LOOKUPV...	✓	00:26	17:51:45	17:52:11	0
	ADW_SERVICE	✓	00:00	17:51:45	17:51:45	0
1	Assign CLOUD_PACKAGE_METADATA	✓	00:00	17:51:45	17:51:45	0
2	Assign CLOUD_FILE_NAME	✓	00:00	17:51:45	17:51:45	0
3	Set CLOUD_FILE_LOGICAL_SCHEMA	✓	00:00	17:51:45	17:51:45	0
4	Assign CLOUD_SDS_LSCHEMA	✓	00:00	17:51:45	17:51:45	0
5	Create List - Process List of Files	✓	00:02	17:51:45	17:51:47	0
6	Refresh CLOUD_11_0_FLOW_TABLE_NAME	✓	00:00	17:51:47	17:51:48	0
7	Refresh CLOUD_FILE_NEXT_BATCH_ID	✓	00:00	17:51:48	17:51:48	0
8	Evaluate CLOUD_FILE_NEXT_BATCH_ID	✓	00:00	17:51:48	17:51:48	0
9	Assign CLOUD_FILE_BATCH_ID	✓	00:00	17:51:48	17:51:48	0
10	Get File Partition Number	✓	00:00	17:51:48	17:51:48	0
11	Get Last File Indicator	✓	00:00	17:51:48	17:51:48	0
12	Assign File Partition Number	✓	00:00	17:51:48	17:51:49	0
13	Assign Last File Indicator	✓	00:00	17:51:49	17:51:49	0
14	IS_INCREMENTAL	✓	00:00	17:51:49	17:51:49	0
15	Assign DIAG_FTS_ERR_RUN	✓	00:00	17:51:49	17:51:49	0
16	FTS_FUSION_CrmAnalyticsAM.AnalyticsServiceAM.LookupValuesPVO	✓	00:16	17:51:49	17:52:06	0
10	SERIAL - MAP_MAIN	⚠	00:16	17:51:49	17:52:06	0
....	SERIAL - MAP_CLEANUP	✓	00:00	17:52:06	17:52:06	0
17	Assign DIAG_FTS_ERR_RUN To N	✓	00:00	17:52:06	17:52:06	0
18	Update List - Process List of Files	✓	00:00	17:52:06	17:52:07	0
7	Refresh CLOUD_FILE_NEXT_BATCH_ID	✓	00:00	17:52:07	17:52:07	0
8	Evaluate CLOUD_FILE_NEXT_BATCH_ID	✓	00:00	17:52:07	17:52:07	0
25	Drop Temp Table	✓	00:00	17:52:07	17:52:08	0
26	Create Process List of Primary Extract Files	✓	00:01	17:52:08	17:52:09	0
27	Refresh CLOUD_11_0 PE FLOW TABLE NAME	✓	00:00	17:52:09	17:52:09	0

## References

- <https://docs.oracle.com/en/cloud/paas/autonomous-database/adbsa/service-names-data-warehouse.html#GUID-80E464A7-8ED4-45BB-A7D6-E201DD4107B7>
- <https://docs.oracle.com/en/cloud/paas/autonomous-database/adbsa/manage-service-concurrency.html#GUID-C286FAFA-7FFE-4722-A7E5-DC779224E7A4>