

# OBIA 12c: Technical Implementation Guide : How to use External Tables in Oracle Autonomous Data Warehouse (ADW) with BI Applications Fusion Load Plan

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## 1. Overview

By default, In the BI Applications Fusion Load plan, FTS Phase scenario's consume WLS ODI Server1 Managed Server JVM to read and process the BICCC extracted files. Instead if you want to use External tables in Oracle Autonomous Data Warehouse (ADW) to read and process BICCC Extracted files, refer to the below implementation steps.

## 2. Prerequisite

### 2.1 Create an Object storage to Upload the BICC Extractor Fusion Files.

- Go to OCI console > Object Storage > Object Storage and then click Create Bucket.
- Select the appropriate Storage Tier, Object versioning and Encryption.

Create Bucket
[Help](#)
[Cancel](#)

BUCKET NAME

BIAPPS\_BUCKET

STORAGE TIER

Storage tier for a bucket can only be specified during creation. Once set, you cannot change the storage tier in which a bucket resides.

☒ STANDARD
☐ ARCHIVE

OBJECT EVENTS ⓘ

☐ EMIT OBJECT EVENTS

OBJECT VERSIONING ⓘ

☐ ENABLE OBJECT VERSIONING

ENCRYPTION

☒ ENCRYPT USING ORACLE MANAGED KEYS  
Leaves all encryption-related matters to Oracle.
☐ ENCRYPT USING CUSTOMER-MANAGED KEYS  
Requires you to have access to a valid Key Management key. ([Learn More](#))

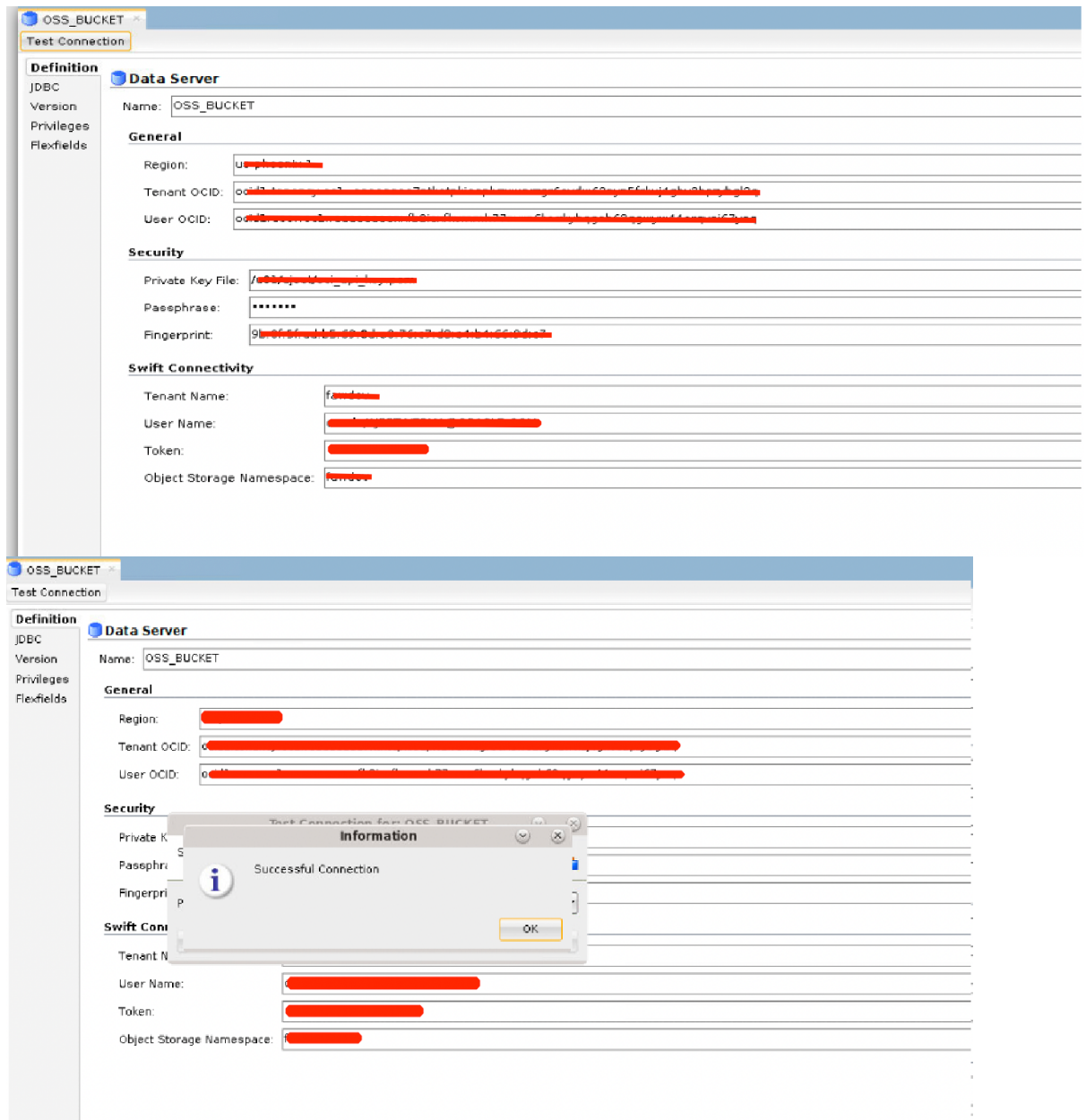
- Click on Create Bucket.

## 2.2 Generate an API Signing Key and upload the Public key to OCI.

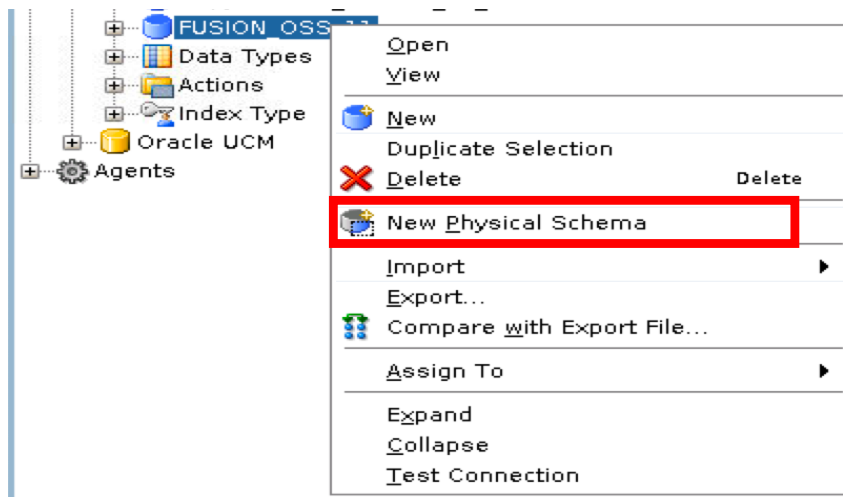
- Please refer to the 'Generating an API Signing Key (Linux and Mac OS X)' guide and the 'How to Upload the Public Key' section from the following link <https://docs.oracle.com/en-us/iaas/Content/API/Concepts/apisigningkey.htm#two>

## 2.3 Set up Source Data Server/Physical Schema in Object Storage.

- Create the Physical data server as “*FUSION\_OOS\_FUSION\_11*” under Oracle Object Storage and fill the details as shown below.  
Refer the section Oracle Object Storage of Connectivity and Knowledge Modules Guide for Oracle Data Integrator



- Now right click on “*FUSION\_OOS\_FUSION\_11*” and then click on “New Physical Schema”.



- Select the Object Storage Bucket Name & Type the directory as “OOS”

**FUSION\_OSS\_11.BIAPPSD\_BUCKET**

**Definition**

**Physical Schema [Data Server: FUSION\_OSS\_11]**

Context

Version

Privileges

Flexfields

Name: FUSION\_OSS\_11.BIAPPSD\_BUCKET

Bucket Name: [ ]

Directory (Work Schema): OOS

☐ Default

- Now go to Context and click on Plus (  ) Icon and Type logical schema name as “OOS\_FUSION\_11\_0” and click on save button.

**FUSION\_OSS\_11.BIAPPSD\_BUCKET**

**Definition**

**Context**

Version

Privileges

Context

Global

Logical Schema

OOS\_FUSION\_11\_0

### 3. Configuration & Execution

**3.1** Connect to OBIA Target Warehouse schema and run the below SQL script to enable the ADW External table feature configuration.

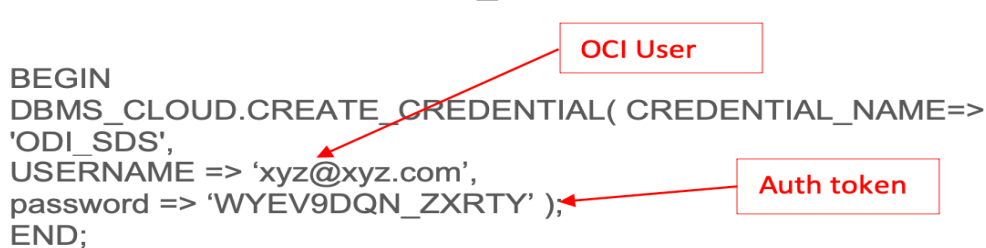
- Insert the flag as “Y” and Object Storage Bucket url in W\_FTS\_ADW\_EXT\_LOAD table. This Table will be present in OBIA Target DW schema.

```
INSERT INTO W_FTS_ADW_EXT_LOAD VALUES ('Y', <Bucket pre-auth url> ' ');
commit;
```

**Note:** To generate Pre-Auth url please refer OCI documentation.  
<https://docs.oracle.com/en-us/iaas/Content/Object/Tasks/usingpreauthenticatedrequests.htm>

**3.2** Create the credential as “**ODI\_SDS**” in ADW SDS Schema.

```
BEGIN
DBMS_CLOUD.CREATE_CREDENTIAL( CREDENTIAL_NAME=>
'ODI_SDS',
USERNAME => 'xyz@xyz.com',
password => 'WYEV9DQN_ZXRTY' );
END;
```



**Note:** To generate Auth token please refer OCI documentation.  
<https://docs.oracle.com/en-us/iaas/Content/Registry/Tasks/registrygettingauthtoken.htm>

**3.3** Run the Fusion Load Plan.

- Now FTS job will be run in External Table mode.

**Start Load Plan**

Choose a Context, a Logical Agent and a Log Level to Start  
"FUSION\_FINS\_LP\_1\_20201128\_084303".

Context:

Logical Agent:

Log Level:

Assign startup values for Load Plan Variables:

| Variable                | Data Type    | Startup Value |
|-------------------------|--------------|---------------|
| BIAPPS.13P_CALENDAR_ID  | Text         |               |
| BIAPPS.445P_CALENDAR... | Text         |               |
| BIAPPS.ANALYSIS_END_... | Numeric      |               |
| BIAPPS.CAL_WEEK_FLG     | Text         |               |
| BIAPPS.CAL_WEEK_STAN... | Text         |               |
| BIAPPS.CLOUD_BATCH_...  | Alphanumeric |               |
| BIAPPS.CLOUD_CONNEC...  | Alphanumeric |               |
| BIAPPS.CLOUD_CONNEC...  | Alphanumeric |               |
| BIAPPS.CLOUD_CONN_J...  | Text         |               |
| BIAPPS.CLOUD_CONN_R...  | Alphanumeric |               |
| BIAPPS.CLOUD_CONN_S...  | Alphanumeric |               |

| #  | Steps Hierarchy                                                  | Status | Duration | Start    | End      |
|----|------------------------------------------------------------------|--------|----------|----------|----------|
| 11 | Assign File Partition Number                                     | ✓      | 00:00    | 10:12:23 | 10:12:23 |
| 12 | Assign Last File Indicator                                       | ✓      | 00:00    | 10:12:23 | 10:12:23 |
| 13 | IS_INCREMENTAL                                                   | ✓      | 00:00    | 10:12:24 | 10:12:24 |
| 14 | Assign DIAG_FTS_ERR_RUN                                          | ✓      | 00:00    | 10:12:24 | 10:12:24 |
| 15 | FTS_FUSION_CrmAnalyticsAM.OrganizationAM.OrganizationUnitPVO     | ✓      | 00:17    | 10:12:25 | 10:12:25 |
| 10 | SERIAL - MAP_MAIN                                                | ⚠      | 00:14    | 10:12:25 | 10:12:25 |
| 20 | SERIAL - EU - DS_FUSION_11_0_REPLSTG_FILES_UNIT                  | ⚠      | 00:06    | 10:12:25 | 10:12:25 |
| 30 | ADW External Load Type - LKM BIAPPS CLOUD VO File to SQL         | ✓      | 00:00    | 10:12:25 | 10:12:25 |
| 40 | Initialization and log header - LKM BIAPPS CLOUD VO File to SQL  | ✓      | 00:00    | 10:12:26 | 10:12:26 |
| 50 | Drop work table - LKM BIAPPS CLOUD VO File to SQL                | ⚠      | 00:00    | 10:12:26 | 10:12:26 |
| 60 | Alter Session - Char Semantics - LKM BIAPPS CLOUD VO File to SQL | ✓      | 00:00    | 10:12:26 | 10:12:26 |
| 70 | Create work table - LKM BIAPPS CLOUD VO File to SQL              | ✓      | 00:00    | 10:12:27 | 10:12:27 |
| 80 | Load work table - LKM BIAPPS CLOUD VO File to SQL                | ✓      | 00:00    | 10:12:27 | 10:12:27 |
| 90 | Upload File to OSS - LKM BIAPPS CLOUD VO File to SQL             | ✓      | 00:00    | 10:12:27 | 10:12:27 |
|    | Upload File to OSS - LKM BIAPPS CLOUD VO File to SQL             | ✓      | 00:04    | 10:12:27 | 10:12:27 |
|    | External Tbl Column List - LKM BIAPPS CLOUD VO File to SQL       | ✓      | 00:00    | 10:12:31 | 10:12:31 |
|    | Create External Table - LKM BIAPPS CLOUD VO File to SQL          | ✓      | 00:00    | 10:12:31 | 10:12:31 |
|    | SERIAL - EU - DS_FUSION_11_0_SUS_UNIT                            | ⚠      | 00:07    | 10:12:32 | 10:12:32 |
|    | SERIAL - MAP_CLEANUP                                             | ✓      | 00:02    | 10:12:40 | 10:12:40 |
| 16 | Assign DIAG_FTS_ERR_RUN To N                                     | ✓      | 00:00    | 10:12:42 | 10:12:42 |

## 4. References

### 4.1 Oracle document on creating an oracle object storage Data Server

<https://docs.oracle.com/en/middleware/fusion-middleware/data-integrator/12.2.1.4/odikm/oracle-object-storage.html#GUID-133D1E0C-2501-4A12-8A36-E9DAD3DBBDE6>

### 4.2 How to get PEM public key to upload to OCI

<https://docs.oracle.com/en-us/iaas/Content/API/Concepts/apisigningkey.htm#How>