Oracle® Financial Services Data Migration Scripts: OFSA 4.5 to OFSAA, for migration to Release 6.0/7.3

Migration Guide

Release 6.0/7.3

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Oracle Financial Services Data Migration Scripts: OFSA 4.5 to OFSAA, for migration to Release 6.0/7.3
Migration Guide, Release 6.0/7.3

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Contents

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Preface

1 Introduction

2 Preparing a Migration Plan

3 Pre-Migration Activities

4 Migrating the Database

5 Post Migration Activities

6 Troubleshooting and Logging

A Migration Errors – Troubleshooting

B Table Mapping

C Objects Not Migrated

D Issues

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Oracle Financial Services Data Migration Scripts: OFSA 4.5 to OFSAA, for migration to Release 6.0/7.3 Migration Guide, Release 6.0/7.3

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Preface

Intended Audience

Welcome to Release 6.0/7.3 of the *Oracle Financial Services Data Migration Scripts: OFSA 4.5 to OFSAA, for migration to Release 6.0/7.3 Migration Guide.*

This manual is intended for administrators and IT staff involved in the migration of:

Oracle Financial Services Applications version 4.5

To Oracle Financial Services Analytical Applications ("OFSAA"):

- Infrastructure release 7.3
- Profitability Management ("OFSPM") release 6.0
- Funds Transfer Pricing ("FTP") release 6.0
- Asset | Liability Management ("ALM") release 6.0

See Related Information Sources on page viii for more Oracle product information.

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Structure

Related Information Sources

The following documents are related or can be helpful during Oracle Financial Services Migration to the target release:

- *OFSAA Release Notes for Infrastructure, OFSPM, FTP, and ALM*
- *OFSAA Data Model Utilities User Guide*
- *OFSAA Infrastructure Installation and Configuration Guide*
- *OFSAA User Guides for Infrastructure, OFSPM, FTP, and ALM*

1

Introduction

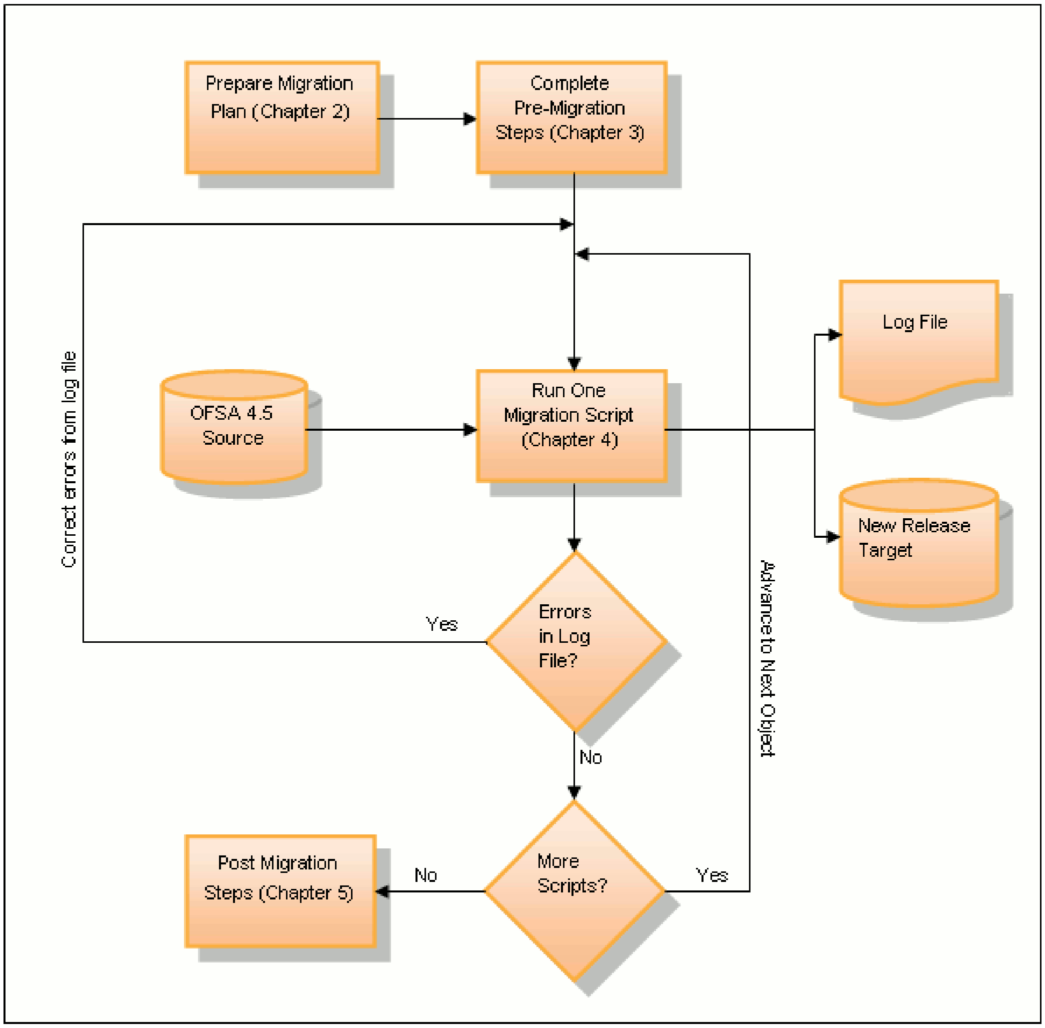
About the Guide

This document describes how to use the Oracle Financial Services Migration Tool. It also provides detailed information about the migration process, source and target data models, and acceptance testing of the target system.

Overview of Migration Tool

The Migration Tool is designed to allow customers to easily carry forward as much data as possible to the OFSAA target environment.

Following is the general approach a customer will follow during the migration:


Prepare Migration Plan (Chapter 2)
Complete Pre-Migration Steps (Chapter 3)
Correct errors from log file
OFSA 4.5 Source
Run One Migration Script (Chapter 4)
Log File
New Release Target
Advance to Next Object
Yes
Errors in Log File?
No
Post Migration Steps (Chapter 5)
No
More Scripts?
Yes

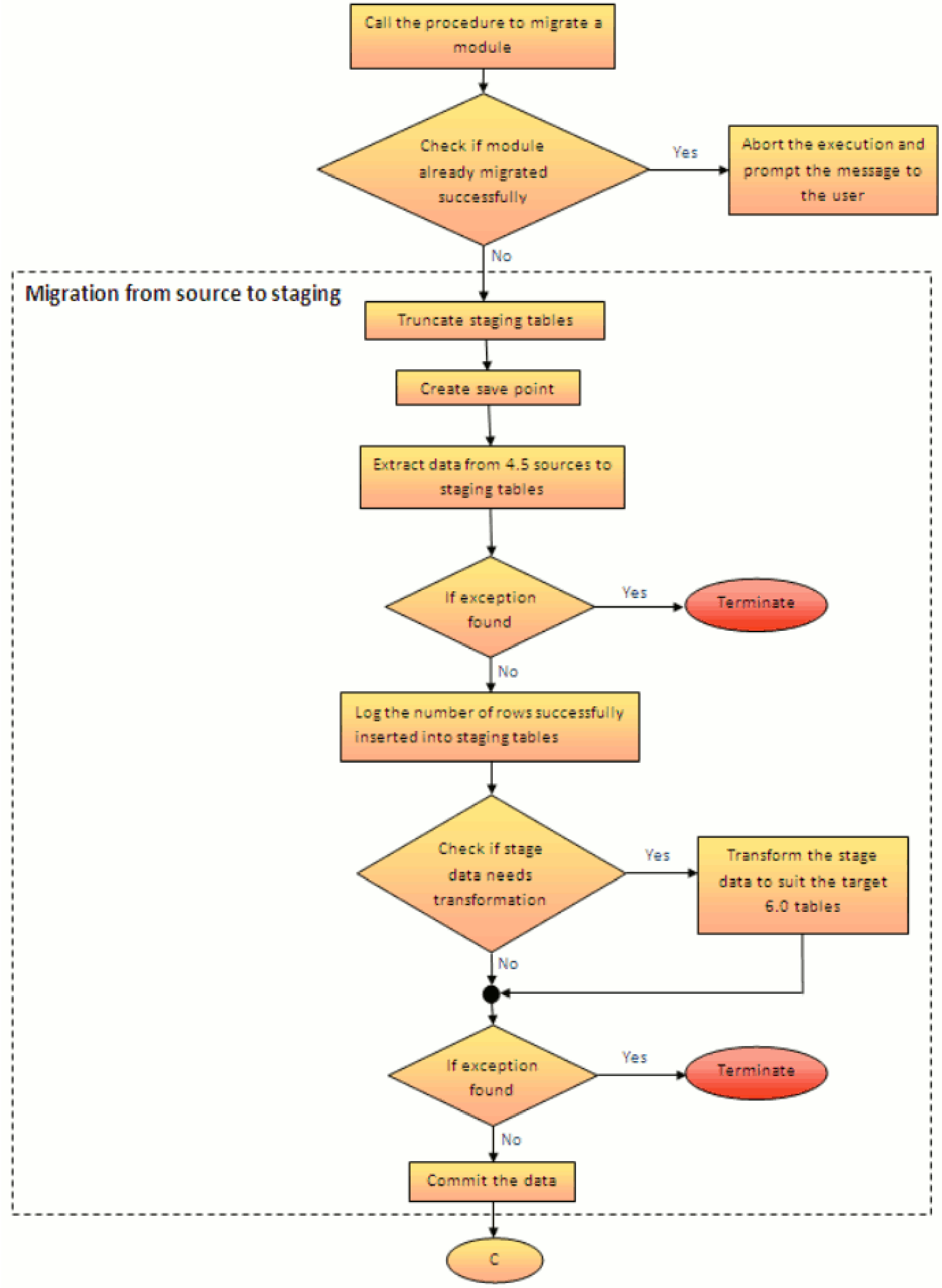
Implementation Note

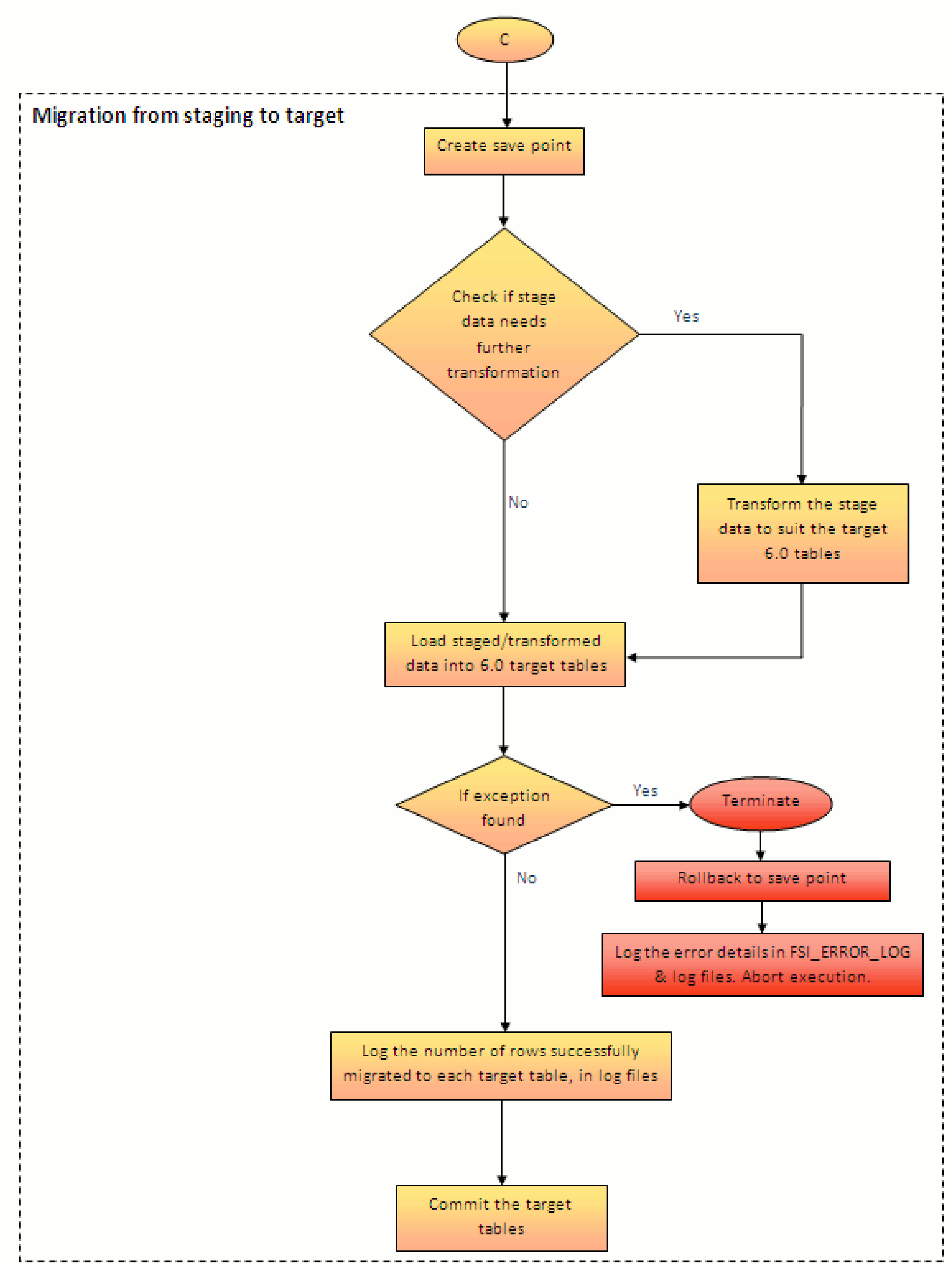
During the migration process, you will run a script to create the staging tables. You should only need to run this script once during the entire migration process.

The "staging tables" or "staging area" mentioned in this guide (as used by migration scripts) are not the same as staging tables used for loading business data such as Ledger or Instruments during a regular ETL activity.

These staging tables are created by migration scripts as described later in this user guide and facilitate transformation of OFSA 4.5 data to suit the OFSAA table structures. These are solely for the use by migration utility and can be cleaned up, once the migration is successfully completed and verified.

The following charts provide an overview of data flow for each migration procedure:


Call the procedure to migrate a module
Check if module already migrated successfully
Yes
Abort the execution and prompt the message to the user
No
Migration from source to staging
Truncate staging tables
Create save point
Extract data from 4.5 sources to staging tables
If exception found
Yes
Terminate
No
Log the number of rows successfully inserted into staging tables
Check if stage data needs transformation
Yes
Transform the stage data to suit the target 6.0 tables
No
If exception found
Yes
Terminate
No
Commit the data
C


C
Migration from staging to target
Create save point
Check if stage data needs further transformation
Yes
No
Transform the stage data to suit the target 6.0 tables
Load staged/transformed data into 6.0 target tables
If exception found
Yes
Terminate
Rollback to save point
Log the error details in FSI_ERROR_LOG & log files. Abort execution.
No
Log the number of rows successfully migrated to each target table, in log files
Commit the target tables

Terminology

The name of the Oracle Financial Services Migration Tool has been shortened in this guide to Migration Tool.

The following operating systems have been shortened in this guide to Windows, where appropriate:

- Microsoft Windows NT 4.0
- Microsoft Windows 2000
- Microsoft Windows XP

The name for a number of Unix-based operating systems, including Red Hat Enterprise Linux and Solaris, has been shortened in this guide to UNIX, where appropriate.

Application Abbreviations:

OFSAA: Oracle Financial Services Analytical Applications

OFSAAI: Oracle Financial Services Analytical Applications Infrastructure

ALM: Asset | Liability Management

FTP: Funds Transfer Pricing

OFSPM: Profitability Management

> **Note:** Profitability Management is also abbreviated as PFT in this Guide.

General Definitions:

InfoDom: An Information Domain is the area of analysis. It forms the backbone for all the analysis inside Infrastructure. It is the knowledge domain where information is stored, which consists of specific data models, Technical and Business definition of data to help in processing data for analysis. An application install may contain one or more Information Domains.

Dimension: Leaf, Processing Leaf, or Processing Dimension. Refers to a leaf in OFSA 4.5 OFSA_CATALOG_OF_LEAVES.

There are two types of dimensions: Key and Simple. A key dimension can be of type Ledger Only (for example, financial_elem_id) or Both Instrument and Ledger (for example, gl_account_id). A simple dimension is also known as a User-Defined Code (for example, accrual_basis_cd).

Member: Leaf Value or Dimension Value. Members may be of leaf level or node level.

Hierarchy: Refers to Tree Rollup in OFSA 4.5

Segment: Refers to Folder in OFSA 4.5 with similar functionality. Basically a storage mechanism that can be used to restrict access to objects.

Database Schemas:

CONFIG: Stores all administrative and security metadata related to users. An application install can have only one CONFIG schema.

ATOMIC: Stores all the metadata related to FTP, ALM, OFSPM, Dimensions, and Rates within an InfoDom. An application install can have one or more ATOMIC schema.

2

Preparing a Migration Plan

Overview of Preparing a Migration Plan

Before you execute any migration scripts, the following steps should be taken:

- Become familiar with the features and general usage of the new release
- Determine the upgrade path to the new release
- Choose an upgrade method
- Prepare a backup strategy
- Develop a testing plan
- Test your migration plan on a test database

Become Familiar with New Release

To execute acceptance tests, users involved in the migration process will need to be familiar with the architecture, tools, and user interface of the new release. For more information, see *OFSAA User Guides*. In particular, users will want to become skilled at accessing similar objects such as business rules, dimensions, users, folders, and hierarchies in both source and target installations.

Upgrade Path

Prerequisite: Install Oracle Financial Services Analytical Applications release 6.0 and Infrastructure release 7.3 in the target environment.

For Oracle Financial Services Analytical Applications release 6.0 and Infrastructure release 7.3, the following upgrade path is supported:

Current Release	Upgrade Path
OFSA 4.5.39 Server / Database	Direct upgrade is supported using the Financial Services 4.5 Migration Tool and this guide.

Source Instance = OFSA 4.5.39 with non-UTF8 characterset (for example, WE8ISO8859P1 or US7ASCII)

Target Instance = OFSAA 6.0/7.3 with NLS_CHARACTERSET = AL32UTF8.

The migration scripts should be run on the target OFSAA instance to pull data from the source OFSA 4.5 instance through a dblink. The migration code refers to the oracle views like USER_TAB_COLUMNS. Hence the migration cannot be run against a shadow of the source schema. The source schema used for migration must have real objects.

> **Note:** We recommend that the migration should be run against OFSA 4.5 production setup. Though the migration does not write anything into the source 4.5 schema, customers can backup the source schema as a precaution.

It is expected that the NLS_CHARACTERSET between Source and Target instances do not match. Having different NLS_CHARACTERSETs between source and target (such as those noted above) should not lead to any migration script errors.

Upgrade Method

Currently the only method supported is a manual script-driven process using the Migration Tool described in this guide.

Prepare a Backup Strategy

The ultimate success of your migration depends heavily on the design and execution of an appropriate backup strategy. To develop a backup strategy, consider the following questions:

- How long can the production database remain inoperable before business consequences become intolerable?
- What backup strategy should be used to meet your availability requirements?
- Are backups archived in a safe, offsite location?

- How quickly can backups be restored (including backups in offsite storage)?
- Have recovery procedures been tested successfully?

Prepare a Testing Plan

You need a series of carefully designed tests to validate all stages of the upgrade process. Executed rigorously and completed successfully, these tests ensure that the process of upgrading the production database is well understood, predictable, and successful. Perform as much testing as possible before upgrading the production database. Do not underestimate the importance of a test program.

The testing plan must include the following types of tests:

- Minimal Testing: Entails moving all or part of an application from the current database to the new database and running the application without enabling any new features. Minimal testing is a very limited type of testing that may not reveal potential issues that may appear in a "real-world" production environment. However, minimal testing will immediately reveal any application startup or invocation problems.
- Functional Testing: Includes a set of tests in which new and existing functionality of the system are tested after the upgrade. Functional testing includes all database, networking, and business/application components. The objective of functional testing is to verify that each component in common between the source and target systems behaves properly, as well as confirming that new features are working.
- Performance Testing: Compares the performance of various business functions on both the source and target systems. Unlike volume or load stress testing, base performance testing is meant to provide a real-world comparison of common usage without the setup and long run times. Successful completion of base performance testing should be considered a prerequisite to volume or load stress testing.

Test Your Migration Plan on a Test Environment

Create a test environment that will not interfere with the current production environment. Practice migration of the application metadata using the test environment. The best test, if possible, is performed on an exact copy of the database to be migrated, rather than on a downsized copy or test data. This will familiarize you with the migration process and minimize unexpected issues.

3

Pre-Migration Activities

Steps in Pre-Migration

Prior to executing the Migration Tool scripts for specific object types, read the latest release notes to identify any infrastructure and application issues that may impact migration, then follow these steps:

1. **Understand What's New in this Release**

   1. **Schema Structure**

      OFSAAI install has at a minimum two application schema; *CONFIG* and *ATOMIC*. CONFIG schema contains metadata like users, segments, groups, etc. that are related to security. All other objects and metadata related to rules and processes are present in the ATOMIC schema. Since all procedures are executed in ATOMIC schema, the ATOMIC schema owner should have proper grants for tables in CONFIG schema.

      > **Note:** The migration utility currently supports integrated setup with multiple applications installed on a single infodom. But, if the setup is configured with multiple infodoms (different infodoms for FTP/PFT/ALM) on a single Config schema, then the migration utility does not support it.

   2. **Dimension Management: OFSA 4.5 Vs. OFSAA**

      The OFSA 4.5 processing leaves are known as dimensions in OFSAA. The leaf_num_id for leaves in 4.5 is known as dimension_id for dimensions in OFSAA. The value of leaf_num_id should be retained in OFSAA as dimension_id in all the tables where it has been referenced. **If you have registered any custom dimensions in OFSA 4.5, you will need to create and register them in the OFSAA instance prior to migration.** The list of tables where this synch operation has to be carried out is provided below in **Step 5:**

Synchronize OFSAAI Data Model with OFSA 4.5, page 3-13. Step 5 also discusses steps required to synch other user-defined columns, tables and indexes.

In OFSA 4.5 the leaf members and their attributes are stored the same table whereas in OFSAA, display codes, language specific names, and attributes for the members are stored in separate tables.

DIM_<DIMENSION NAME>_B - Display Code, Leaf / Node Indicator, Enable / Disable

DIM_<DIMENSION NAME>_TL - Language specific Name, Description

DIM_<DIMENSION NAME>_ATTR - Attribute value

DIM_<DIMENSION NAME>_HIER - Hierarchy Parent / Child association

Metadata information about dimensions:

REV_DIMENSIONS_B - Display Code, Column Name, Tables, Key / Simple, …

REV_DIMENSIONS_TL- Language specific Name, Description

Metadata information about dimension attributes:

REV_DIM_ATTRIBUTES_B - Label, Data Type, Default value, …

REV_DIM_ATTRIBUTES_TL - Language specific Name, Description

The custom dimensions in 4.5 had 4 attributes. To migrate these attributes to 6.0 and successfully repopulate them into the OFSA_DETAIL_OTHER_COA table, the attributes must have the below names in rev_dim_attributes_tl.attribute_name column. This also applies to the case, wherein a 4.5 custom dimension is migrated into the PRODUCT_ID in 6.0.

1. Common chart of accounts - 'COMMON COA ID'
2. Offset org unit - 'OFFSET ORG ID'
3. Offset common chart of accounts - 'OFFSET COA ID'
4. Tax rate - 'TAX RATE'

Due to business requirement, management of dimensions must follow a dual format approach. OFSAA retains the way leaves were stored in OFSA 4.5.

OFSA_LEAF_DESC	OFSA_NODE_DESC	OFSA_LEVEL_DESC

OFSA_DETAIL_ELEM_B	OFSA_DETAIL_LEAVES	OFSA_DETAIL_ORG_UNIT
OFSA_DETAIL_OTHER_COA	OFSA_IDT_ROLLUP	

4.5 dimension members are allowed to have duplicate names, whereas the target (DIM_<dimension>_TL) requires names to be unique. Therefore, migration preparation should include a step to ensure unique source names for dimension members.

The Source data can be reviewed and cleaned up manually or through a mass update:

To clean up manually, run the following queries in the 4.5 setup to retrieve a list of all records that have duplicate display names, for each dimension type.

You can clean up each record individually.

```
Select * from ofsa_detail_elem where display_name in
(select DISPLAY_NAME  a from ofsa_detail_elem
group by DISPLAY_NAME
having count(*) > 1)
order by display_name, leaf_node;

Select * from ofsa_leaf_desc where (description,leaf_num_id) in
(select description, leaf_num_id  a from ofsa_leaf_desc
group by description,leaf_num_id
having count(*) > 1)
order by leaf_num_id, description, leaf_node;
```

You can run the above queries again after your manual updates to ensure that there are no further duplicates.

If you prefer to do a mass update, then use the following update statements:

```
Update ofsa_detail_elem set display_name =
leaf_node || '-' ||  display_name
where display_name in
(select DISPLAY_NAME  a from ofsa_detail_elem
group by DISPLAY_NAME
having count(*) > 1);

Update ofsa_leaf_desc set description =
leaf_node || '-' || description
where (description, leaf_num_id) in
(select description,leaf_num_id  from ofsa_leaf_desc
group by description,leaf_num_id
having count(*) > 1);

Commit;
```

3. **New Seeded Dimension: "Product"**

OFSAA introduces a new seeded dimension "Product" (Product_ID) with dimension_id (leaf_num_id) = 4. Since there are dependencies on the dimension_id (e.g., for business rules), if you have any user-defined dimensions in OFSA 4.5, you will need to retain the dimension_id of the dimension while adding it in the target instance. There is a potential conflict if you have already defined a dimension called "Product" or leaf_num_id of 4 is assigned to a different user-defined dimension.

We suggest the following actions when appropriate for these three cases:

1. OFSA 4.5 has a dimension "Product" with leaf_num_id = 4.

   Solution: No action required.

2. OFSA 4.5 has a dimension "Product" with leaf_num_id <> 4 (e.g. 9).

   Solution: Update the dimension_id of the "Product" in the new instance to reflect the leaf_num_id of the "Product" in 4.5.

   ```
   update rev_dimensions_b
   set dimension_id = <Product leaf_num_id>
   where dimension_id = 4;

   update rev_dimensions_tl
   set dimension_id = <Product leaf_num_id>
   where dimension_id = 4;

   update rev_dim_attributes_b
   set dimension_id = <Product leaf_num_id>
   where dimension_id = 4;

   update rev_dim_attributes_tl
   set dimension_id = <Product leaf_num_id>
   where dimension_id = 4;

   update ofsa_catalog_of_leaves
   set leaf_num_id = <Product leaf_num_id>
   where leaf_num_id = 4;
   ```

3. OFSA 4.5 has a different user-defined dimension (i.e. channel_id) with leaf_num_id = 4.

   Solution: Update the dimension_id of the "Product" in the new instance using a value of MAX (leaf_num_id in OFSA 4.5) +1.

```
update rev_dimensions_b
set dimension_id = (select max(leaf_num_id)+1
                    from ofsa_catalog_of_leaves@<dblink>)
where dimension_id = 4;

update rev_dimensions_tl
set dimension_id = (select max(leaf_num_id)+1
                    from ofsa_catalog_of_leaves@<dblink>)
where dimension_id = 4;

update rev_dim_attributes_b
set dimension_id = (select max(leaf_num_id)+1
                    from ofsa_catalog_of_leaves@<dblink>)
where dimension_id = 4;

update rev_dim_attributes_tl
set dimension_id = (select max(leaf_num_id)+1
                    from ofsa_catalog_of_leaves@<dblink>)
where dimension_id = 4;

update ofsa_catalog_of_leaves
set leaf_num_id = (select max(leaf_num_id)+1
                   from ofsa_catalog_of_leaves@<dblink>)
where leaf_num_id = 4;
```

Please ensure you retain the leaf_num_id for other user-defined dimensions and carry them forward to OFSAA. You can use the following query to find the dimension_id (leaf_num_id) of all the key dimensions.

```
In Source:
select * from ofsa_catalog_of_leaves;
In Target:
select * from rev_dimensions_b where simple_dimension_flag =
'N'' ;
```

If you have a user-defined Product leaf in 4.5 with a different column name (for example, 'PROD_ID' instead of the new seeded 'PRODUCT_ID'), you can either:

Add your leaf as a user-defined dimension in the target instance (see Case 3 above)

OR

Manually update your 4.5 instance prior to migration by renaming your leaf in 4.5, to match the target's new seeded Product.

For more details, refer to Support Note 166358.1 [https://mosemp.us.oracle.com/epmos/faces/DocContentDisplay?_afrLoop=343745856037838&id=166358.1&_afrWindowMode=0&_adf.ctrl-state=5rs32zr0l_111]. This will rename the leaf and retain the leaf_num_ID. Then, if your 4.5 Product leaf_num_id <> 4, follow the instructions in Case 2 (above) to update the target instance

4. **Cleanup**

   [Optional] Custom code tables and code values

Currently, there is no provision in migration to identify and migrate the "custom code tables" and custom values entered in "application code tables" (non key dimensions in OFSAA).

User must manually identify these custom entities and re-create them in the target OFSAA setup. Please recollect that the creation and registration of tables must be done through data model upload.

[Optional] Hierarchies (Tree Rollups) and Hierarchy (Tree) Filters

Since the dimension member table in OFSAA includes leaf and node members, the migration converts the OFSA 4.5 tree rollup nodes to new unique node dimension members. Therefore, you may want to delete obsolete tree rollups from your 4.5 instance prior to migration. This will help to avoid "clutter" of unnecessary node members in the dimension member pool of the target database.

If a node/leaf exist in a TREE FILTER rule but does not exist in underlying TREE ROLLUP, the customers are suggested to reconstruct the filter and drop the obsolete dimension members (leafs/nodes) before running the migration scripts.

Following queries can help you in finding out the data to be cleaned up:

- Query to find filters with obsolete leaf:

  ```
  select a.* from OFSA_IDT_VIEW_FILTER a where a.rollup_node not
  in
  (select leaf_node from ofsa_idt_rollup where sys_id_num=
  a.rollup_sys_id )
  and a.rollup_level=(select leve from (select max(level_num)
  leve, sys_id_num
  from ofsa_level_desc
  where sys_id_num in (select distinct rollup_sys_id from
  OFSA_IDT_VIEW_FILTER)
  group by sys_id_num) where sys_id_num=a.rollup_sys_id);
  ```

- Query to find filters with obsolete node:

  ```
  select a.* from OFSA_IDT_VIEW_FILTER a where a.rollup_node not
  in
  (select rollup_node from ofsa_node_Desc where sys_id_num=
  a.rollup_sys_id
  and a.rollup_level=rollup_level)
  and
  a.rollup_level<(select leve from (select max(level_num) leve,
  sys_id_num from
  ofsa_level_desc
  where sys_id_num in (select distinct rollup_sys_id from
  OFSA_IDT_VIEW_FILTER)
  group by sys_id_num) where sys_id_num=a.rollup_sys_id);
  ```

[Optional] Repricing Patterns (FTP and ALM)

In OFSA 4.5, in Repricing Patterns defined with Repricing Type = Flat Rate, users may leave Net Rate, Gross Rate, or Transfer Rate undefined.

The application will store this as "-1" in the pattern table and will display it as blank in the UI.

In 6.0, these fields are required; they may not be left blank. The query below may help you identify the Repricing Patterns with Net Rate, Gross Rate, or Transfer Rate undefined.

```
Select * from OFSA_REPRICE_PATTERN_EVENT where
    reprice_method_cd = 2 and
    (net_rate = -1 or gross_rate= -1 or transfer_rate = -1);
```

You can then manually update the Patterns you identified by the query. If you do not clean up these values prior to migration, the migration code will automatically assign a default value of 999 to these columns. You can then identify and update the Patterns manually as a post-migration activity.

[Optional] Result Tables

Since result tables may contain a tremendous amount of data which may be updated when you re-run a process, you may wish to save migration processing time by removing result data prior to migration. This can include:

1. FTP and ALM detail cash flow audit records (OFSA_PROCESS_CASH_FLOWS). This data is migrated when you run the FTP or ALM rules script.

2. ALM: ALM result data is migrated when you run the script for ALM result data ("migrate_result_tbls"). If you don't want to migrate any of the OFSA 4.5 ALM results, you can simply skip that script.

   > **Note:** Some ALM process rules may have a selective reprocessing flag on, which impacts the set of data it will overwrite when you rerun the process.
   >
   > Please see the OFSAAI Installation and Configuration Guide for details on ALM tablespace requirements for result tables (For example, RES_DTL_% and CONS_DTL% tables).

   OFSA_EXCHANGE_RATES_AUDIT

   OFSA_INTEREST_RATES_AUDIT

   RES_DTL%

   CONS_DTL%

   OFSA_RESULT_MASTER

   OFSA_CONSOLIDATED_MASTER

OFSA_RESULT_SCENARIO

OFSA_IDT_RESULT_HEADER

OFSA_RESULT_BUCKET

OFSA_TM_STOCH_VAR

OFSA_TM_STOCH_TOT_VAR

OFSA_TM_STOCH_MKT_VAL

EAR_LEAF_AVG_%

EAR_LEAF_DTL_%

EAR_TOTAL_AVG_%

EAR_TOTAL_DTL_%

[Mandatory] Users

Usernames cannot exceed 20 characters in length. Run the following SQL to determine if any usernames exceed this limit.

```
SELECT DISTINCT
 username
,CASE WHEN LENGTH(username) > 20
      THEN 'FAIL: UserName cannot exceed length of 20'
 ELSE 'OK'
 END user_status
FROM ofsa_users;

SELECT DISTINCT
 access_name
,CASE WHEN LENGTH(access_name) > 20
      THEN 'FAIL: UserName cannot exceed length of 20'
 ELSE 'OK'
 END user_status
FROM ofsa_catalog_of_ids;

SELECT DISTINCT
 chg_login
,CASE WHEN LENGTH(chg_login) > 20
      THEN 'FAIL: UserName cannot exceed length of 20'
 ELSE 'OK'
 END user_status
FROM ofsa_catalog_of_ids;
```

[Optional] User Preferences

During migration, few of the OFSAA Application Preferences like As of Date and default error message limits (that is total and per item) are updated based on the last updated Configuration ID in 4.5 setup.

The Default Total Error Message Limit in 4.5 allows 5 digits, whereas it is 3 digits in 6.0 so the migration logic converts any value greater than 3 digits to a value of 999 when updating 6.0 Preferences. These values can be set to users convenience post migration.

[Mandatory] Object Names and Descriptions

The following special characters are not allowed in names or descriptions in the new release:

1. &
2. @
3. ~
4. '
5. +
6. "

Remove the restricted characters from names and descriptions of rules, as well as objects such as Interest Rate Codes, Currencies, ALM and FTP Repricing Patterns and Payment Patterns.

Use the queries provided in {Patch: p17996334 _73_Generic.zip} to determine if any of the names or descriptions contain special characters in the following objects:

Interest rates (OFSA_IRCS)

Currencies (OFSA_CURRENCIES)

Repricing Patterns (OFSA_ADJUSTABLE_TYPE_MLS)

Payment Patterns (OFSA_AMORTIZATION_TYPE_MLS)"

[Mandatory] Dimension Member Names and Descriptions

The following special characters are not allowed in the leaf and node descriptions and hence needs to be cleaned up before migration:

1. &
2. '
3. "
4. +
5. ~
6. @

The queries below will identify the Nodes and processing Leaves, including user-defined Financial Elements, which have special characters in 4.5. The identified members must be cleaned by removing the special characters.

```
select description from
(select description, TRANSLATE (description,'''&"+~@', '0000000') as
NO_SPLCHAR
from OFSA_node_desc@<g_dblink>)
where NO_SPLCHAR<>description;

select description from
(select description, TRANSLATE (description,'''&"+~@', '0000000') as
NO_SPLCHAR
from OFSA_leaf_desc@<g_dblink>)
where NO_SPLCHAR<>description;

select display_name from
(select display_name, TRANSLATE (display_name,'''&"+~@','0000000')
as NO_SPLCHAR
from OFSA_DETAIL_ELEM@<g_dblink>)
where NO_SPLCHAR<>display_name;
```

The queries below can be used to identify if the new member name (that will be updated in place of member name with special characters) is already used in the dimension. If already present, please rename the member with another unused name.

```
select a.*,b.leaf_num_id From ofsa_node_desc@<g_dblink>a,
ofsa_catalog_of_ids@<g_dblink>b
where a.description = '<new_name>'
and a.sys_id_num = b.sys_id_num and b.leaf_num_id= <leafnum_id>;
```

```
select * From ofsa_leaf_desc@ <g_dblink> where description =
'<new_name>'
and leaf_num_id = <leaf_num_id>;
select * From OFSA_DETAIL_ELEM@ < g_dblink >where display_name =
'<new_name>';
```

where

<g_dblink> is the database link to connect to the 4.5 source setup

<new_name> is the name suggested as a substitute for the name with special characters

<leaf_num_id> is the dimension_id of the leaf/node member

[Mandatory] Folder Names

No special characters are allowed in the folder names, hence the source data needs to be cleaned up before migration. The query below will help identify the folder with prohibited special character in the name.

```
select folder_name from
(select FOLDER_NAME,TRANSLATE (FOLDER_NAME,'`~!@#$%^&*()
-_+={}[]|\":;< >,''''.?/','000000000000000000000000000000000000000')
as NO_SPLCHAR from OFSA_ID_FOLDERS@ <g_dblink>)
where FOLDER_NAME <> NO_SPLCHAR;
```

The query below can be used to identify if the new folder name (that will replace the folder name with special characters) is already used in the setup. If already present, please rename the folder with another unused name.

```
select * From OFSA_ID_FOLDERS@<g_dblink> where FOLDER_NAME =
'<new_name>';
```

where

<g_dblink> is the database link to connect to the 4.5 source setup

<new_name> is the name suggested as a substitute for the name with special characters

Changing the folder name in 4.5 may impact the tables and columns listed below. Please ensure that the new folder name is updated in all the columns where required, to keep the folder name consistent across tables and therefore maintain the integrity of your 4.5 database. (This does not imply that every table in this list will have a corresponding target in OFSAA 6.0/ 7.3).

OFSA_USERS.DEFAULT_FOLDER_NAME

OFSA_CATALOG_OF_IDS.FOLDER_NAME

OFSA_ID_FOLDER_ACCESS. FOLDER_NAME

OFSA_BATCH_EVT_GRP_FOLDER.BATCH_EVT_GRP_FOLDER_NAME

OFSA_CAMPAIGN_GRP_FOLDER.CAMP_GRP_FOLDER_NAME

OFSA_IDT_ABM_MAP_TABLE_ID.NEW_TABLE_ID_FOLDER_NAME

OFSA_OFFER_GRP_FOLDER.OFFER_GRP_FOLDER_NAME

OFSA_PROMO_GRP_FOLDER.PROMO_GRP_FOLDER_NAME

OFSA_SET_GRP_FOLDER.SET_GRP_FOLDER_NAME

[Mandatory] Ledger Stat

The OFSAA 6.0 version does not support multiple "set of books code" in ledger stat table. Hence the data in 4.5 has to be refined to have a single "set of books code", or the data cannot be migrated.

[Mandatory] Seeded Rules

OFSAA reserves Sys_ID_Num values 90000 through 99999 for seeded rules. Therefore, the following 4.5 seeded rules will not be migrated:

- 4.5 Sys IDs 90000 and 90001 are defined as TP Processes
- 4.5 Sys IDs 90002 and 90004 are defined as Configuration IDs
- 4.5 Sys ID 90003 is defined as a Transfer Pricing Rule

If these rules are used by the customer, then its advised to clone these rules through "Save As" option in 4.5 UI before the migration. The 4.5 processes can be modified to include the cloned rules in place of the rules in reserved range. This way the customer can ensure that no information is lost while these seeded range rules are not migrated.

The query below can be run in 4.5 setup to identify if any TP process rule is dependent upon the TP rule with sys id 90003. Check for dependency on other rules mentioned above must be manually performed.

```
Select Sys_ID_Num, ID_Desc_Short, Folder_Name
from OFSA_Catalog_of_IDs where sys_id_num in
(select tp_process_sys_id from OFSA_IDT_TP_Process
  where Transfer_Price_Sys_ID = 90003
  and TP_Process_Sys_ID not in(90000,90001));
```

2. **Backup Procedure**

   At a minimum take a backup of CONFIG and ATOMIC schema. Make sure the folder has necessary permission to create dump and log files.

   You can use the below command to create a backup –

   ```
   exp <schema name>/<password>@<database sid> file=<export filename>
   log=<log filename> full=N
   ```

3. **Set aside enough space**

   1. Target Database

      Make sure the OFSAA target database has sufficient space to execute the migration tool. The target database size should be double the size of the source OFSA 4.5 database or at least two times the size all product tables (All Rule + Common + Dimension Management) + 1 times size of all the fact tables (Instrument, Transaction, Ledger, and User-defined Lookup tables) + Results tables. Your database administrator can assist with this task.

      Since, Ledger-Stat, Instrument, and Results tables may have varying number of records to be migrated, UNDO tablespace(s) must be setup according to the data in these tables.

   2. RAM

      The migration scripts require a minimum of 800MB RAM.

4. **Create reference IRC**

   This step applies to customers with ALM or FTP installed and where Rate Index IDs have been defined. This is due to the design change in OFSAA where the valuation curve code becomes a selection in the Rate Index rule instead of the FTP and ALM process rules.

   Within OFSA 4.5 Rate Manager, assign a reference IRC to each active currency.

   In OFSA 4.5, you may also want to create additional rate indexes and select them in the process in such a way that a rate index is always used in combination with the same valuation curve code as you have selected in the OFSA 4.5 process rule.

During migration of 4.5 Rate Index IDs, the scripts will assign a valuation curve for the functional currency based on the following logic:

- IF a reference IRC is available for functional currency THEN the IRC will be used as the valuation curve in Rate index.
- IF a reference IRC is not available for functional currency THEN the minimum IRC of the functional currency available will be used.
- IF no IRC is available for functional currency (technical possibility) THEN the minimum of all the IRCs available will be used.

5. **Synchronize OFSAAI Data Model with OFSA 4.5**

There are a few areas where you will need to synchronize the source and target data model. The following explains some considerations for fact tables (e.g. for instrument and transaction data) and for dimensions:

Consider the table name for each fact table you will use in application processing:

- If it is not the same as a seeded table in the target environment (e.g. named "CREDIT_CARDS" in 4.5 versus "FSI_D_CREDIT_CARDS" in the target) and you wish to continue using the same table name, you will need to create and register the table in the target, prior to migration. During migration, you can optionally copy existing 4.5 fact table data to the target table using a migration script ("migrate_user_Acc_tables") even if the table names differ. Going forward, if you choose to load your fact data from staging tables to processing tables via an OFSAAI Table-to-Table (T2T) definition, you will need to create a T2T for each user-defined fact table. If your fact table names are the same as the seeded target tables, you can use the seeded T2Ts.
- If you choose to use seeded target tables which are named differently than the ones in your 4.5 environment, you will need to identify objects (such as Filters, Processes, etc.) which contain such table names and update them accordingly, as discussed later in this section.

If you have registered any user-defined columns in OFSA 4.5, you will need to create and register them in the OFSAA instance prior to migration.

The column names in the OFSAA instance should match the names in the OFSA 4.5 instance, but the column order does not have to match. There may be additional columns in the OFSAA instance due to new requirements for certain table classifications. You will also need to create and register user-defined tables and indexes, including those noted above for various fact tables if they are named differently than the seeded tables in OFSAA.

The need to register the entities properly and have the registration metadata in synch with 4.5 is due to the fact that migration as well as the applications work based on the registration metadata rather than working exclusively on the structure available in database.

For example, the scripts identify the instruments based on the table classification code in REV_TABLE_CLASS_ASSIGNMENT.

This is critical to identify the table, even if it exists physically.

Similarly, let's say the dimension tables exist and the registration metadata is found in the REV_DIMENSIONS_B table. But if the dimension is not registered as a processing key in instruments, it would impact the migration process adversely.

If a dimension exists in the 4.5 OFSA_CATALOG_OF_LEAVES but is missing in the target REV_DIMENSIONS_B or REV_DIMENSIONS_TL table, the script will log a warning for that dimension and will not migrate any of its associated members, attributes, or hierarchies.

> **Note:** Above are few examples of instances where the metadata may not be in sync.

For more information regarding the steps for adding user-defined dimensions, columns, tables, and so on, through ERWin to create logical and physical objects for user-defined objects, and various utilities for registering and validating the additions, see *Oracle Financial Services Analytical Applications Data Model Utilities User Guide*. This will help to ensure that the proper data model is in place and all seeded information and metadata updates are captured before starting migration.

Synchronize Dimension Metadata:

Please set the dimension_id in the tables listed below to match the leaf_num_id of leaves stored in OFSA_CATALOG_OF_LEAVES:

- REV_DIMENSIONS_B
- REV_DIMENSIONS_TL
- REV_DIM_ATTRIBUTES_B
- REV_DIM_ATTRIBUTES_TL

> **Note: It is important to retain the leaf_num_id used in OFSA 4.5 OFSA_CATALOG_OF_LEAVES, as this number is used in other dependent tables (e.g. OFSA_CATALOG_OF_LEAVES and its OFSAA target table).**

The Formulas, Filters, RM (ALM) and TP Processes, PFT Lookup IDs and Allocation IDs use some table names in their definition. It's important that the tables used in defining these 4.5 rules are present in 6.0, so that the rules continue to work.

Queries found below can help in identifying the rules that use tables that do not exist in 6.0 setup. Appropriate cleanup activities like creating the table in 6.0 or redefining the rules in 4.5 can ensure that the rules work properly after migration.

Identify Formula IDs with obsolete tables

```
select distinct table_name,sys_id_num from
OFSA_IDT_FORMULA@<g_dblink>
    where table_name not in(select table_name from rev_tables_v)
    and table_name  in(select table_name from
user_tables@<g_dblink>)
    and sys_id_num in (select sys_id_num from
    ofsa_catalog_of_ids@<g_dblink> where id_type = 14)
    order by Table_Name;
```

Identify ALM Process IDs with obsolete tables

```
Select distinct table_name,tm_process_sys_id from
OFSA_TM_PROC_INSTRMNTS@<g_dblink>
where table_name not in(select table_name from rev_tables_v)
and table_name in (select table_name from user_tables@<g_dblink>)
order by Table_Name;
```

Identify Data Filter IDs with obsolete tables

```
Select distinct table_name, sys_id_num from
OFSA_IDT_DATA_FILTER@<g_dblink>
where table_name not in (select table_name from rev_tables_v) and
table_name in (select table_namefrom user_tables@<g_dblink>)
order by Table_Name;
```

Identify TP Process IDs with obsolete tables

```
Select distinct table_name, tp_process_sys_id from
OFSA_TP_PROC_TABLES@<g_dblink>
where table_name not in(select table_name from rev_tables_v)
and table_name in (select table_name from user_tables@<g_dblink>)
order by Table_Name;
```

Identify PFT Lookup IDs with obsolete tables

```
Select distinct source_table_name,lookup_table_sys_id from
OFSA_IDT_LOOKUP_TABLE@<g_dblink>
where source_table_name not in(select table_name from rev_tables_v)
and source_table_name in (select table_name from
user_tables@<g_dblink>)
order by source_table_name;
```

```
Select distinct lookup_table_name,lookup_table_sys_id from
OFSA_IDT_LOOKUP_TABLE@<g_dblink>
where lookup_table_name not in(select table_name from rev_tables_v)
and lookup_table_name in (select table_name from
user_tables@<g_dblink>)
order by lookup_table_name;
```

Identify PFT Allocation IDs with obsolete tables

Below query returns the tables used by every allocation. You can manually check if the tables used are present in the 6.0 target setup.

```
select distinct constant_char,mirror_to_table,alloc_sys_id from
ofsa_alloc_leaves@<g_dblink> ;
```

Identify obsolete tables in OFSA_DATA_IDENTITY

```
Select distinct table_name from OFSA_DATA_IDENTITY@<g_dblink>
where table_name not in(select table_name from rev_tables_v)
and table_name in (select table_name from user_tables@<g_dblink>)
order by
table_name;
```

Please refer to the Post-Migration Activities chapter, which provides instructions for checking SQL Rules in the target environment, where referenced objects might differ from the 4.5 source environment.

6. **Set up required GRANT permission**

   1. **Grants to be created in CONFIG schema**

      The migration is executed from the *ATOMIC* schema. Therefore, it is essential that the *ATOMIC* schema be given select, insert, and update privileges to the tables in the *CONFIG* schema. For migration, these privileges should be assigned to the tables CSSMS_GROUP_MAST, CSSMS_USR_PROFILE, CSSMS_USR_PROFILE_UNAUTH, CSSMS_USR_GROUP_MAP, CSSMS_SEGMENT_MAST, DSNMASTER, DB_MASTER, CSSMS_ROLE_FUNCTION_MAP, CSSMS_GROUP_ROLE_MAP, CSSMS_USR_GROUP_MAP_VIEW and INFODOM_PATCHES.

      Log into **CONFIG** schema and execute the following commands.

      ```
      GRANT SELECT, INSERT, UPDATE on CSSMS_GROUP_MAST to <ATOMIC
      SCHEMA>;

      GRANT SELECT, INSERT, UPDATE on CSSMS_USR_PROFILE to <ATOMIC
      SCHEMA>;

      GRANT SELECT, INSERT, UPDATE on CSSMS_USR_PROFILE_UNAUTH to
      <ATOMIC SCHEMA>;

      GRANT SELECT, INSERT, UPDATE on CSSMS_USR_GROUP_MAP to <ATOMIC
      SCHEMA>;

      GRANT SELECT, INSERT, UPDATE on CSSMS_SEGMENT_MAST to <ATOMIC
      SCHEMA>;

      GRANT SELECT, INSERT, UPDATE on DSNMASTER to <ATOMIC SCHEMA>;

      GRANT SELECT, INSERT, UPDATE on DB_MASTER to <ATOMIC SCHEMA>;

      GRANT SELECT, INSERT, UPDATE on CSSMS_ROLE_FUNCTION_MAP to
      <ATOMIC SCHEMA>;

      GRANT SELECT, INSERT, UPDATE on CSSMS_GROUP_ROLE_MAP to <ATOMIC
      SCHEMA>;

      GRANT SELECT, INSERT, UPDATE on CSSMS_USR_GROUP_MAP_VIEW to
      <ATOMIC SCHEMA>;

      GRANT SELECT, INSERT, UPDATE on INFODOM_PATCHES to <ATOMIC
      SCHEMA>;
      ```

2. **Grants to be created to ATOMIC schema**

   For logging, a directory has to be created on the server (E.g., /home/<user>/log) and it has to be mapped using the create directory command.

   Grant create directory permission to ATOMIC schema:

   ```
   GRANT CREATE ANY DIRECTORY to <ATOMIC SCHEMA>;
   ```

   Create Directory '**ERRORDIR**' using the following command:

   ```
   CREATE OR REPLACE DIRECTORY ERRORDIR as '<Absolute Path of Log
   Directory>';

     E.g., in Windows
     CREATE OR REPLACE DIRECTORY ERRORDIR as 'C:\Migration\Log';

     E.g., in Linux
     CREATE OR REPLACE DIRECTORY ERRORDIR as '/home/<user>/log';
   ```

   Grant exec privilege on UTL_FILE to ATOMIC schema

   ```
   GRANT EXECUTE on sys.utl_file to <ATOMIC SCHEMA>;
   ```

   Make sure the log directory has write privileges for others if you created the directory as a non-DBA OS group user. Proper file write permission should be granted for the folder in which the log files will be written.

   Log into ATOMIC schema and run the below commands to test privileges.

   ```
   declare
     outFile utl_file.file_type;
   begin
     outFile := utl_file.fopen('ERRORDIR', 'Test.txt', 'W');
     utl_file.put_line(outFile, 'Testing the Output in linux');
     utl_file.fclose(outFile);
   end;
   /
   ```

   Please check that the file "Test.txt" is generated successfully in the log directory you set in Step 6(2), page 3-17. If the file is not created, please review/repeat the step.

7. **Create DB Link**

   Log into target database via SQL Plus and create a database link from target database (OFSAA) to the source database (OFSA 4.5).

   You will need the following information about the source database: Oracle SID, OFSA Owner, and OFSA Owner Password to create this link. Use the following commands at the SQL prompt of target database to grant the permission to create database link and create the database link by SYS or user with equivalent privileges:

   To Grant permission to create DB Link

```
GRANT CREATE DATABASE LINK TO <ATOMIC SCHEMA>;
CREATE DATABASE LINK <DB_LINK>
       CONNECT TO <OFSA OWNER>
       IDENTIFIED BY <OFSA OWNER PWD>
       USING <SOURCE SID>;
```

The <DB_LINK>will be passed as parameter in all the migration scripts (see also: Step 9, page 3-18, where you will need the database link name so you can update this parameter within the migration script). Only a user with DBA role can create this link. Please contact your DBA or Oracle support for further help.

8. **Set up your shell environment on Target Database server**

   export ORACLE_HOME=$myhome

   export ORACLE_SID=$mysid

   $ORACLE_HOME/bin/oraenv (assuming this prompts you for the information regarding your new instance, to update TNSNAMES)

9. **Copy Migration Packages**

   - Create a new directory "Migration" under home directory (or the user directory) and copy the following scripts in target database machine in text mode:

     1. Migration_Staging_Tables.sql
     2. fsi_migds.sql
     3. fsi_migdb.sql
     4. fsi_migups.sql
     5. fsi_migupb.sql
     6. fsi_utils.sql
     7. fsi_utilb.sql
     8. fsi_alm_db.sql
     9. fsi_alm_ds.sql
     10. fsi_alm_upb.sql
     11. fsi_alm_ups.sql
     12. fsi_alm_utilb.sql
     13. fsi_alm_utils.sql

14. fsi_ftp_db.sql

15. fsi_ftp_ds.sql

16. fsi_ftp_upb.sql

17. fsi_ftp_ups.sql

18. fsi_ftp_utilb.sql

19. fsi_ftp_utils.sql

20. fsi_pft_db.sql

21. fsi_pft_ds.sql

22. fsi_pft_upb.sql

23. fsi_pft_ups.sql

24. fsi_pft_utilb.sql

25. fsi_pft_utils.sql

26. ALM.sql

27. FTP.sql

28. PFT.sql

- Edit Migration_Staging_Tables.sql: For all occurrences of "G_DBLINK" within the file, replace with database link name, which you created in step 7, page 3-17 .

  > **Note:** The Migration_Staging_Tables.sql script has the reference to the configuration schema labeled as "<CONFIG SCHEMA >" which should be used correctly, otherwise the script will fail with the following error:
  >
  > create or replace view CSSMS_GROUP_ROLE_MAP_view_t as select * from < CONFIG SCHEMA >.CSSMS_GROUP_ROLE_MAP
  > *
  >
  > ERROR at line 1:
  >
  > ORA-00903: invalid table name

10. **Create Staging Tables**

Log into sqlplus from Atomic schema user, and execute the following at the prompt:

```
SQL> spool migrationStagingTables.log
SQL> @Migration_Staging_Tables.sql
SQL> spool off
```

Check the contents of **migrationStagingTables.log** in the current directory for any errors and **correct before continuing**.

Log into **ATOMIC** schema and execute the following scripts based upon the applications that need to be migrated:

```
SQL>@ALM.sql
SQL>@FTP.sql
SQL>@PFT.sql
```

For example, if only ALM has to be migrated, then execute ALM.sql. If both ALM and FTP have to be migrated, then execute both ALM.sql and FTP.sql. This will compile the packages required for migration in the Target schema.

11. **NLS_CHARACTERSET Warning**

As discussed earlier in the section on Preparing a Migration Plan (Upgrade Path), the migration scripts expect differing source and target NLS_CHARACTERSETs. However, if you are creating a test source OFSA 4.5 instance with an NLS_CHARACTERSET = AL32UTF8 (same characterset as target OFSAA instance), then please be aware of the following:

Care should be taken when doing the character conversion of data from the working OFSA 4.5 source instance with a non-UTF8 characterset (for example, WE8ISO8859P1 or US7ASCII) to the test OFSA 4.5 instance with an NLS_CHARACTERSET = AL32UTF8. The character conversion may cause existing data to expand beyond the length of its column when single-byte characters are converted to multi-byte characters. For example, WE8ISO8859P1 is a single-byte character set, so every character is stored in one byte; a 20 byte column holds 20 characters. In UTF8, some of those characters will take up more than one byte, and then the 20 characters may require more than 20 bytes of storage space. The impact of data expansion varies according to the character sets, languages, and amount of data involved. This may become evident with ORA-12899 errors upon import of the data into the UTF8 characterset. In this case, do not modify the column attribute to increase the column precision to accommodate the existing data. If the column attributes are updated to accommodate the increase in character length, errors may occur when running the migration scripts. Instead, be sure the new test OFSA 4.5 source database AL32UTF8 has the init.ora parameter BLANK_TRIMMING=TRUE to avoid the problem documented in Note 779526.1 "CSSCAN does not detect data truncation for CHAR datatype - ORA-12899 when importing.

Refer to Note 260192.1 [https://mosemp.us.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=37199018

2927354&id=260192.1&_afrWindowMode=0&_adf.ctrl-state=kvh9rm4xc_4] "Changing the NLS_CHARACTERSET to AL32UTF8 / UTF8 (Unicode)" for further details.

12. **Pre-Migration: Important Checklist**

    Before running the migration scripts, please confirm the following have been successfully completed:

    1. Data model upload for the new release is completed in the target database

    2. DB link from target to source was created with privilege granted to ATOMIC schema.

    3. All the migration scripts, provided in Step 9, page 3-18 above, were executed successfully in target database.

    4. Tables related to user-defined dimensions have been created in the target database in the new format DIM_<DIMENSION NAME>_B, DIM_<DIMENSION NAME>_TL, DIM_<DIMENSION NAME>_ATTR, and DIM_<DIMENSION NAME>_HIER.

    5. Metadata about the user defined dimensions exists in REV_DIMENSIONS_B and REV_DIMENSIONS_TL; these tables are populated when you run the " Add Dimension" utility. This metadata is crucial for migration of user defined dimensions.

    6. User-Defined instrument and transaction tables have been created in the target database and include the new product_id dimension, defined as number(14). The dimension product_id should already exist as a seeded column in the seeded instrument tables.

    7. Target database has sufficient space to execute the migration. Target database size must be approximately 2 times the source 4.5 database size; see details earlier in this document. Please contact your DBA to find the tablespace and database size in source as well as target database.

    8. A physical directory in the server has been mapped to logical directory using the create directory command of Step 6(2), page 3-17.

    9. Sufficient RAM is available before running the scripts. (Minimum 800MB).

    10. For the rate index rules in ALM and FTP stochastic processing: Confirm that a reference IRC has been assigned in OFSA 4.5 to each active currency there.

        Note: Cleaning Script to drop all temporary objects created during migration might be provided as an enhancement in a later release.

4

Migrating the Database

Steps in Migrating the Database

At this point, you are prepared to migrate the data from the original OFSA 4.5 source to the OFSAA target database. All of the following scripts are assumed to be run from a UNIX shell with the same environment as defined in Pre-Migration Activities, page 3-1. Some of the pre-migration steps discussed earlier in this document are highlighted again here for your reference. For more information on specific objects migrated within each step, see Table Mapping, page B-1.

Refer to table FSI_ERROR_LOG for any errors after executing each procedure. For more details, refer to Migration Errors – Troubleshooting, page A-1 section.

1. **Folders and Users**

   1. **Prerequisite**

      Ensure that all the CMMS_* tables are available and verify that the ATOMIC user has insert privilege on them.

   2. **How to execute the procedure**

      Log into target DB *ATOMIC* schema. Run the following script to migrate users and folders:

      ```
      SQL> set serveroutput on
      SQL> exec fsi_util.migrate_user_folder_tbls(<CONFIG
      SCHEMA>,<G_DBLINK>);
      ```

      where <CONFIG SCHEMA> is the name of CONFIG schema and <G_DBLINK> is the database link from target to source.

      Check the contents of **status.txt** and **migrateUserFolderData.log** in the log directory for any errors and correct before continuing.

2. **Dimensions - Seeded and User Defined:**

1. **Prerequisite**

   Check that the metadata info for all dimensions in OFSA_CATALOG_OF_LEAVES of source database is seeded in REV_DIMENSIONS_B and REV_DIMENSIONS_TL. This metadata info is captured when you run the "Add Dimension" utility. If metadata for any dimension is missing in REV_DIMENSIONS_B or REV_DIMENSION _TL table, the script will log a warning for that dimension and will not migrate any of its associated members or attributes.

2. **How to execute the procedure**

   Log into target DB *ATOMIC* schema. Run the following scripts to migrate dimension data, such as dimension members and attributes:

   ```
   SQL> set serveroutput on
   SQL> exec fsi_util.migrate_dimension (<G_DBLINK>);
   ```

   where <G_DBLINK> is the database link from target to source.

   Check the contents of **status.txt** and **migrateDimensionData.log** in the current directory for any errors and correct before continuing.

3. **Common Tables**

   1. **Prerequisite**

      Dimension data must be migrated before you execute this procedure.

   2. **How to execute the procedure**

      Log into target DB *ATOMIC* schema. Run the following scripts to migrate common tables, such as interest rate codes, fiscal year info, etc.:

      ```
      SQL> set serveroutput on
      SQL> exec fsi_util.migrate_common_tbls (<CONFIG
      SCHEMA>,<G_DBLINK>);
      ```

      where <CONFIG SCHEMA> is the name of CONFIG schema and <G_DBLINK> is the database link from target to source.

      Check the contents of **status.txt** and **migrateCommonData.log** in the current directory for any errors and correct before continuing.

      > **Note:** For more information, refer to Support Note 1457744.1 [https://support.oracle.com/epmos/faces/DocContentDisplay?_afrLoop=221617683772929&id=1457744.1&_afrWindowMode=0&_adf.ctrl-state=11q6yw7ad1_25].

4. **Hierarchies**

1. **Prerequisite**

   Dimension data and common tables migration must be completed before you execute this procedure. Confirm that all the DIM_<DIMENSION NAME>_HIER tables exist for all seeded and user defined processing dimensions. Confirm that the metadata information for all the dimensions in your OFSA 4.5 OFSA_CATALOG_OF_LEAVES table is available in the REV_DIMENSIONS_B and REV_DIMENSIONS_TL tables and that the leaf_num_id of each dimension is preserved. If metadata for any dimension is missing in the REV_DIMENSIONS_B or REV_DIMENSIONS_TL table, the script will log a warning for that dimension and will not migrate any of its associated hierarchies.

2. **How to execute the procedure**

   Log into target DB *ATOMIC* schema. Run the following script to migrate hierarchies:

   ```
   SQL> set serveroutput on
   SQL> exec fsi_util.migrate_hierarchy(<G_DBLINK>)
   ```

   where <G_DBLINK> is the database link from target to source.

   Check the contents of **status.txt** and **migrateHierarchy.log** in the current directory for any errors and correct before continuing.

5. **Business Rules and Results**

   1. **Prerequisite**

      Log into target DB *ATOMIC* schema. This procedure should be executed only after Steps 1 to 4 (listed above) are executed successfully.

   2. **How to execute the procedure**

      There are separate migration scripts for each set of application-specific objects, categorized according to the associated OFSAA application. Objects shared by more than one application are handled internally in each procedure individually, but in such a way that they are migrated only once irrespective of which application script is run first.

      Run the following scripts in the order given below to migrate various business rules:

      - **Asset | Liability Management Rule Migration**

        ```
        SQL> set serveroutput on
        SQL> exec fsi_alm_util.migrate_almRule_tbls (<G_DBLINK>)
        ```

        where <G_DBLINK> is the database link from target to source.

        Check the contents of **status.txt** and **migrateALMRule.log** in the current directory for any errors and correct before continuing.

Note: Rules shared by FTP and ALM

The FTP and ALM rule migration scripts contain logic to ensure that rules shared by the two applications are only migrated once. For example, if you run the FTP rule migration it will migrate your prepayment rules; the ALM rule script will then recognize that these rules have already been migrated and will not attempt to migrate them again.

- **Asset | Liability Management Results Tables Migration**

  Prerequisite:

  Run ALM rule related tables migration (see above).

  Execute the procedure:

  ```
  SQL> set serveroutput on
  SQL> exec fsi_alm_util.create_result_table (G_DBLINK)
  ```

  where <G_DBLINK> is the database link from target to source.

  Check the contents of **status.txt** and **createResultTables.log** in the current directory for any errors and correct before continuing.

  Execute the procedure:

  ```
  SQL> set serveroutput on
  SQL> exec fsi_alm_util.migrate_result_tbls (G_DBLINK)
  ```

  where <G_DBLINK> is the database link from target to source.

  Check the contents of **status.txt** and **migrateResultTablesData.log** in the current directory for any errors and correct before continuing.

- **Funds Transfer Pricing Rule Migration**

  ```
  SQL> set serveroutput on
  SQL> exec fsi_ftp_util.migrate_tpRule_tbls (<G_DBLINK>)
  ```

  where <G_DBLINK> is the database link from target to source.

  Check the contents of **status.txt** and **migrateTPRule.log** in the current directory for any errors and correct before continuing.

- **Profitability Management Rule Related Tables Migration**

  ```
  SQL> set serveroutput on
  SQL> exec fsi_pft_util.migrate_pftRule_tbls(<G_DBLINK>)
  ```

  where <G_DBLINK> is the database link from target to source.

  Check the contents of **status.txt** and **migratePFTRule.log** in the current directory for any errors and correct before continuing.

6. **Fact Tables: Instrument and Transaction**

    1. **Prerequisite**

        This procedure can be executed independently to migrate Instrument and Transaction tables one at a time. As mentioned earlier, ensure that all the tables exist in the target instance and that they include the product_id dimension.

        If the OFSA 4.5 source table includes a product_id dimension, then the value of that leaf (dimension member) will be migrated, otherwise the migration scripts will automatically populate this column with "-1".

        The instrument or transaction table can have a new name in the target instance. However, as discussed earlier, the target structure should be similar: At minimum, it should include all column names defined in the OFSA 4.5 source table. The migration procedure expects the new target table name as a parameter. If you want to retain the same name (recommended), then the first two parameters will have the same value.

        > **Important:** If you specify a target table name different than the source table name, any objects which depend on the original table name will be affected. This could impact (but is not limited to) objects such as your target data element filters, expressions, ALM or FTP process rules, etc., where OFSA 4.5 had a specific table selection.

    2. **How to execute the procedure**

        Run the following script to migrate instrument or transaction tables:

        ```
        SQL> set serveroutput on
        SQL> exec fsi_util.migrate_user_acc_tables(<SRC TABLE>,<TRG
        TABLE>, <G_DBLINK>) ;
        ```

        where <SRC TABLE> is the OFSA 4.5 source table name, <TRG TABLE> is the OFSAA target table name, and <G_DBLINK> is the database link between target and source.

        Check the contents of **status.txt** and **migrateUserAccData.log** in the current directory for any errors and correct before continuing.

7. **Generic Script to Migrate Any Table**

    1. **Prerequisite**

        This module migrates any generic table; it should not be used for migrating instrument or transaction tables. The structure of the table in the target instance must match the structure of the OFSA 4.5 table you are migrating.

    2. **How to Execute the Procedure**

Run the following script to migrate other user-defined tables:

```
SQL> set serveroutput on
SQL> exec fsi_util.migrate_any_table(<SRC TABLE>,<G_DBLINK >);
```

where <SRC TABLE> is the OFSA 4.5 source table name, and <G_DBLINK> is the database link between target and source.

Check the contents of **status.txt** and **migrateGenericData.log** in the current directory for any errors and correct before continuing.

8. **Migrate Ledger Stat Table**

   1. **Prerequisite**

      This procedure can be executed independently to migrate ledger table. Ensure that the table exists in the target instance and that it includes the product_id dimension.

      If the OFSA 4.5 source table includes a product_id dimension, then the value of that leaf (dimension member) will be migrated, otherwise the migration scripts will automatically populate this column with "-1".

      > **Note:** 6.0 version does not support multiple "set of books code" in ledger stat table. Hence the data in 4.5 has to be refined to have a single "set of books code" or the data cannot be migrated.

   2. **How to Execute the Procedure**

      Run the following script to migrate ledger table:

      ```
      SQL> set serveroutput on
      SQL> exec fsi_util.migrate_ledger_stat(<G_DBLINK>);
      ```

      where <G_DBLINK> is the database link between target and source.

      Check the contents of **status.txt** and **MigrateLedgerData.log** in the current directory for any errors and correct before continuing.

5

Post Migration Activities

Activities after migration

- **Passwords**

  Passwords are not migrated from OFSA 4.5. The user will be prompted for a new password upon initial login.

  Some OFSAAI patches released after AAI 7.3, do not allow the password to be null. So please make sure the password is reset from the "Security Management" screen before upgrading the setup.

- **User mapping: Groups and Roles**

  In the OFSAAI security design, users are mapped to groups, and groups are mapped to roles. Migrated users need to be mapped to one or more user groups, which in turn must be mapped to specific segments/folders and roles for any of the installed applications, so users will have access to appropriate rules and other objects in the application. If these steps are not completed, your user will not be able to see any rules. Refer to OFSAAI User Guide Security Management section for more details.

- **SQL IDs**

  4.5 SQL IDs might reference some table and column names which have changed or do not exist in the target environment. To ensure that the SQL Rules are functional in your target instance, you can review and edit each of your migrated rules through the UI. The SQL Rule definition page also provides an option to Validate the SQL. If the validation indicates any errors, check your syntax and confirm that the target objects exist and have been registered properly. Then correct the SQL and Validate again to check for any remaining errors.

- **Preferences (Global and Application-Specific)**

  Application administrators should set the global preferences and application preferences (for each installed application) through the UI. Administrators can define settings at the level for 'All Users', and designate whether each setting is editable by individual users.

Some of the application preferences options will vary by application, such as auto-balancing leaves for ALM, as of date, etc.

After the administrator has defined global and application preferences, each individual user should review his own preferences settings. For more information on preferences, see *OFSAAI User Guide*.

- **FTP processes**

  1. Processes with both transfer pricing and option cost selections

     In OFSA 4.5, the transfer pricing process rule allows users to combine standard transfer pricing and stochastic / option cost selections. In OFSAA, these are split into two separate process rule types. For process rules which have both transfer pricing and option cost selections, only the transfer pricing selections will be migrated. If you wish to produce option cost results based on the combined OFSA 4.5 rule, you can build new process rules through the FTP UI.

  2. Processes with propagation selection

     Propagation settings are not migrated due to the design change between OFSA 4.5 and OFSAA. In OFSA 4.5, propagation selections were available within the process rule. In OFSAA, propagation patterns are globally defined in a separate UI. If you process FTP using the rate propagation feature, please check and update the propagation patterns UI in the OFSAA.

  3. Processes with only option cost selections (no transfer pricing selections)

     (Also see "Pre-Migration" Step 4.)

     In OFSA 4.5 the valuation curve selection is in the process rule. In OFSAA, the valuation curve selection is in the stochastic rate indexing rule, so the migration scripts cannot migrate the OFSA 4.5 valuation curve selection. After migration, you may want to change the valuation curve selection associated with the functional currency in your OFSAA stochastic rate indexing rules, so the selection there is in synch with the valuation curve selection in your OFSA 4.5 process.

  4. Processes with ledger migration selection

     In OFSA 4.5, the process reads the selection in the active configuration. In OFSAA FTP , accrual basis is a selection in the process rule. The migration scripts default this to product accrual basis. This may not be the same selection you ran with in OFSA 4.5 from the configuration. Please check applicable process rules and select the accrual basis accordingly.

- **Rate Index Rules in FTP and ALM**

  See notes under FTP and ALM process rules, regarding valuation curve selection, and see "Pre-Migration" step 4.

- **Repricing Patterns in FTP and ALM**

  See "Pre-Migration" step 4 regarding Repricing Patterns.

- **ALM: Active Time Bucket rule**

  The migration scripts create a new time bucket rule for every configuration which has time buckets defined.

  User must check and activate a time bucket rule prior to launching an ALM process.

- **ALM processes**

  1. Transfer Pricing Flag

     The transfer pricing flag will be turned off for all deterministic processes. If any of your OFSA 4.5 processes have the transfer pricing flag set on, you can navigate to the process in the OFSAA UI, set the switch on, and select an appropriate transfer pricing rule.

  2. Stochastic Processes: Valuation Curve selection

     (See also: "Pre-migration" step 4.)

     In OFSA 4.5 the valuation curve selection is in the process rule. In OFSAA, the valuation curve selection is in the stochastic rate indexing rule, so the migration scripts cannot migrate the OFSA 4.5 valuation curve selection. After migration, you may want to change the valuation curve selection associated with the reporting currency in your OFSAA stochastic rate indexing rules, so the selection there is in synch with the valuation curve selection in your OFSA 4.5 process.

- **OFSPM: Allocations that incorporate parentheses:**

  The migration scripts do not migrate allocations that incorporate parentheses, as the new release does not support parentheses. If you have any such allocations, you can rebuild them in OFSAA, which supports nested expressions (equivalent to OFSA 4.5 formula id) such that an allocation can "filter on" an expression. OFSAA allocation rules also support expressions in their drivers.

- **User-Defined Views**

  The migration scripts do not migrate custom views. To create a single table view in OFSAA:

  1. Create logical/physical table in ERWin data model with same name/structure as view.

2. Register this table by importing the data model and running the validation routine.

3. Drop table and create view with same name in the schema directly.

- **Reverse Population**

  In OFSAA, processing dimension data is held in dual format: It is stored in legacy OFSA 4.5 format and the new OFSAA format, to support engines and UIs which will ultimately run off the newer format in a future release, enabling greater flexibility in dimension management.

  You can execute the procedure below to invoke the reverse population utility that migrates member data from the new format to legacy-format tables within the target database.

  ```
  SQL> set serveroutput on
  SQL> exec fsi_util.reversePopulate (<G_DIM_ID>)
  ```

  where <G_DIM_ID> is the Dimension ID of the dimension you want to reverse populate.

  Check the contents of reversePopulate.log in the error directory (as created during pre-migration) for any errors and correct before continuing. All the key dimensions in your setup must be reverse populated using this step, one after another.

- **Dependency Registration**

  Once all the other post migration steps are performed and the setup is working fine, the following steps must be performed to register the dependency information:

  ALM

  - Upgrade the solution ALM 6.0.0.0.0 to ALM 6.1.0.0.0

  - The file rev_dependencies_handler_6_0.sql present in the ALM 6.1.0.0.0 SP must be executed in the atomic schema.

  FTP

  - Upgrade the solution FTP 6.0.0.0.0 to FTP 6.1.0.0.0

  - Execute the following procedure in the atomic schema to register FTP dependencies:

    ```
    begin
     rev_dependency_handler_ftp;
    end;
    ```

  PFT

  - Upgrade the solution PFT 6.0.0.0.0 to PFT 6.1.0.0.0

6

Troubleshooting and Logging

Log File and Status File

Each procedure produces a log and status file. These files are overwritten each time you run the procedure. The log file contains the list of tables and number of rows migrated for these tables. Most procedures contain two parts: Staging and Target Migration; the log captures the details for both. (For instrument, transaction, and ledger tables, there are no staging tables.) The log is produced in the LOG DIRECTORY created in pre-migration step 6 (2), page 3-17. The status file is created by the spool command when executing SQL. The status file gives the status of the procedure executed. If there is an error, the error along with possible solution is provided. If the procedure does not complete successfully, you must correct the error before proceeding.

Refer to *Appendix A - Migration Errors - Troubleshooting* for additional details on error messages in FSI_ERROR_LOG and Logerror.txt.

Procedure names and the associated log file names are:

Procedure Description	Procedure Name	Log File Generated
Users And Folders	migrate_user_folder_tbls	migrateUserFolderData.log
Dimensions	migrate_dimension	migrateDimensionData.log
Common Tables	migrate_common_tbls	migrateCommonData.log
Hierarchies	Migrate_hierarchy	migrateHierarchy.log
Funds Transfer Pricing Rules	migrate_tpRule_tbls	migrateTPRule.log
ALM Rules	migrate_almRule_tbls	migrateALMRule.log

Procedure Description	Procedure Name	Log File Generated
Creation of ALM result tables	create_result_table	createResultTables.log
Migration of ALM result tables	migrate_result_tbls	migrateResultTablesData.log
OFSPM Rules	migrate_pftRule_tbls	migratePFTRule.log
Instrument and Transaction Tables	migrate_user_Acc_tables	migrateUserAccData.log
Ledger	migrate_ledger_stat	MigrateLedgerData.log
Other user-defined tables	migrate_any_table	migrateGenericData.log
Reverse Population	reversePopulate	reversePopulate.log

Sample Migration log file

```
Time of Procedure Execution : 26-NOV-2009 06:11:32
 INSERTING INTO TABLE FSI_USERS_T
 ******   Inserted 61 Rows Successfully in FSI_USERS_T
INSERTING INTO TABLE FSI_USER_GROUPS_T
 ******   Inserted 30 Rows Successfully in FSI_USER_GROUPS_T

 *********     Starting Migration From Staging to Target     *********
INSERTING INTO TABLE CSSMS_USR_PROFILE
 ******   Inserted 61 Rows Successfully in CSSMS_USR_PROFILE
INSERTING INTO TABLE CSSMS_GROUP_MAST
 ******   Inserted 30 Rows Successfully in CSSMS_GROUP_MAST
```

Sample Status.txt when there is no Error

```
Last Procedure Executed :- MIGRATE_ALMRULE_TBLS
 Time of Procedure Execution : 11-DEC-2009 05:12:35
 Procedure MIGRATE_ALMRULE_TBLS Completed Successfully
 *** NO Errors found ***
```

Sample Status.txt when there is an Error

```
Last Procedure Executed :- MIGRATE_LEDGER_STAT
Time of Procedure Execution : 19-OCT-2012 10:10:31
Procedure MIGRATE_LEDGER_STAT Executed with ERRORS
*** Errors Details ***

Table Name :- 'LEDGER_STAT'
Oracle Error Message :- ORA-00904: "ISO_CURRENCY_CD": invalid identifier


Suggested Solution (Please Contact Oracle Support):
 ==================================================
Please check the structure of the Table Name :- 'LEDGER_STAT'.
A column (See Error Message) is missing.
```

A

Migration Errors – Troubleshooting

Troubleshooting the Errors

This section gives basic troubleshooting for the errors that might be faced during the migration process. If the error is not listed here or you would like further details regarding the solution, please contact your System Administrator or Oracle Support.

You can query FSI_ERROR_LOG table to see the error message. This table is created by the migration scripts and stores error messages after every procedure is run. When you execute each procedure, it automatically truncates this table. You may also manually delete the contents.

> **Note:** When there is a problem while attempting to log another error into FSI_ERROR_LOG, the information about both these exceptions are logged into a new file called Logerror.txt. In a normal scenario, the errors will continue to be logged in FSI_ERROR_LOG." It refers to FSI_ERROR_LOG but there is no prior mention of FSI_ERROR_LOG, and the table subsequent to this paragraph lists the procedure-specific log files.

Error Description	Solution	Occurrence	Severity
ORA-02019: connection description for remote database not found	*Check whether the Database Link passed as a parameter is Created see* Pre-Migration Activities, page 3-1	Low	Low
ORA-00942: table or view does not exist	*Check whether the table is present or not*	Medium	Low

ORA-00904: "<COLUMN NAME>" : invalid identifier E.g.,ORA-00904: "SYS_ID_NUM"*: invalid identifier*	*Check the table name in FSI_ERROR_LOG. Check whether the column name captured in the ERROR is present in the table.* *In the example,* if Table Name points to ABC then ensure that Table ABC contains "SYS_ID_NUM" column.	High	Low
ORA-01722: invalid number	*Check the datatype of the Table column. A Number Data type was expected by procedure whereas Varchar2/Char was passed to it.*	Medium	Low
ORA-00001: unique constraint (<PRIMARY KEY NAME>) violated For example : *ORA-00001: unique constraint (FSI_DB_INFO_PK) violated*	*A duplicate row exists and cannot be inserted into a table. This should not occur. Please check with your DBA or contact Oracle Helpdesk*	Low	High
ORA-06502: PL/SQL: numeric or value error: number precision too large	*Table column has size smaller than expected. Please check the table name and column mapping.*	Low	Low
ORA-12899: value too large for column	*Check the column definition of source instance and target instance. If the source OFSA 4.5 column precision has been increased to accommodate characterset conversion, this change must be reversed. The table should be dropped and recreated using the DDL from the original non-UTF8 OFSA 4.5 instance. The table should then be reloaded using a trim function on the problematic columns.*	Low	High

B

Table Mapping

Mapping of OFSA 4.5 tables to OFSAA tables

This section describes the mapping of OFSA 4.5 tables to the OFSAA tables, categorized by associated application, functional object, or commonality across applications.

See also: Pre-Migration Activities, page 3-1 and Post Migration Activities, page 5-1.

Users and Folders

Users:

The underlying paradigm for user, user group, and folders has changed in OFSAA, but the user experience should be similar to OFSA 4.5. In OFSAA, security management functions are mapped to roles. Roles and segments are mapped to user groups, and users are mapped to user groups.

Passwords will not be migrated; users will be prompted for a new password during initial login.

Folders:

All the existing folders will be migrated to OFSAA format tables. The rules will be migrated into the same folders as they were in OFSA 4.5.

> **Note:** For more information, see cleanup section under Pre-Migration Activities Chapter.

Object Category	Source	Target
Users	OFSA_USER_GROUP_ASSIGNMENT	CSSMS_USR_GROUP_MAP
	OFSA_USERS	CSSMS_USR_PROFILE
	OFSA_USERS	CSSMS_USR_PROFILE_UNAUTH
	OFSA_USER_GROUPS	CSSMS_GROUP_MAST
Preferences	OFSA_IDT_CONFIGURE	REV_APP_USER_PREFERENCES
Folders	OFSA_ID_FOLDERS	CSSMS_SEGMENT_MAST

Dimension Members and Attributes

See also: Hierarchies, page B-6.

In OFSAA, processing dimension data is held in dual format: It is stored in legacy OFSA 4.5 format and the new OFSAA format, to support engines and UIs which will ultimately run off the newer format in a future release, enabling greater flexibility in dimension management. A reverse population utility manages member data from the new format to legacy-format tables within the target database.

Corresponding to each dimension, in the OFSAA format, there are four tables:

DIM_<DIMENSION NAME>_B - Display Code, Leaf / Node Indicator, Enable / Disable

DIM_<DIMENSION NAME>_TL - Language specific Name, Description

DIM_<DIMENSION NAME>_ATTR - Attribute values

DIM_<DIMENSION NAME>_HIER - Hierarchy parent / child association

The OFSA 4.5 dimension members are migrated to their corresponding DIM_%_B and %_TL tables. Also note that in OFSA 4.5, OFSA_DETAIL_OTHER_COA holds user-defined processing dimensions as well as members of the seeded General Ledger dimension type. Therefore, there could be multiple dimension in the OFSA 4.5 table; their members would be stored in separate OFSAA tables, based on the dimension.

The OFSA 4.5 columns (attributes) of a given dimension are transposed to rows, and are stored in the corresponding DIM_<DIMENSION NAME>_ATTR table.

In OFSA 4.5, the root and nodes in a hierarchy are stored separately from the leaf-member pool. In OFSAA, nodes are stored in the same tables as leaf members.

Therefore, during migration to OFSAA, we populate the nodes used in hierarchies as members in the corresponding DIM_<DIMENSION NAME>_B and DIM_<DIMENSION NAME>_TL table, identifying the nodes with LEAF_ONLY_FLAG='N'. The nodes are given a unique sequence number. To ensure a unique display name, if the script encounters a duplicate name, it will add the Member ID as a prefix to the name and description.

> **Note:** The script also checks leaf-level members (that is LEAF_ONLY_FLAG='Y') for uniqueness and will similarly prefix with the Member ID if it encounters a duplicate name.

OFSAA also stores metadata about dimensions in REV_DIMENSIONS_B and REV_DIMENSIONS_TL tables. The attribute metadata is stored in REV_DIM_ATTRIBUTES_B and REV_DIM_ATTRIBUTES_TL table. For seeded dimensions, these tables are populated during installation.

> **Note:** See Pre-Migration Activities, page 3-1.
>
> User must create the OFSAA dimension tables for user defined dimensions, run the "Add Dimension" utility to seed metadata in REV_DIMENSIONS_B and REV_DIMENSIONS_TL tables, and synch the dimension_id with the OFSA_CATALOG_OF_LEAVES leaf_num_id before executing the dimension migration. If a dimension exists in your 4.5 OFSA_CATALOG_OF_LEAVES but is missing in the target REV_DIMENSIONS_B or REV_DIMENSIONS_TL table, the script will log a warning for that dimension and will not migrate any of its associated members or attributes.

'V' type leaves are not supported in OFSA 4.5 and will not be migrated to OFSAA.

Object Category	Source	Target
Dimension Members and Attributes	OFSA_LEAF_DESC	DIM_<DIMENSION NAME>_B
		DIM_<DIMENSION NAME>_TL
		OFSA_LEAF_DESC
	OFSA_NODE_DESC	DIM_<DIMENSION NAME>_B
		DIM_<DIMENSION NAME>_TL
		OFSA_NODE_DESC

Object Category	Source	Target
	OFSA_DETAIL_ELEM	DIM_FINANCIAL_ELEMENTS_B
		DIM_FINANCIAL_ELEMENTS_TL
		DIM_FINANCIAL_ELEMENTS_ATTR
		OFSA_DETAIL_ELEM_B
	OFSA_DETAIL_LEAVES	DIM_COMMON_COA_B
		DIM_COMMON_COA_TL
		DIM_COMMON_COA_ATTR
		OFSA_DETAIL_LEAVES
	OFSA_DETAIL_ORG_UNIT	DIM_ORG_UNIT_B
		DIM_ORG_UNIT_TL
		DIM_ORG_UNIT_ATTR
		OFSA_DETAIL_ORG_UNIT
	OFSA_DETAIL_OTHER_COA	DIM_GENERAL_LEDGER_B
		DIM_GENERAL_LEDGER_TL
		DIM_GENERAL_LEDGER_ATTR
		DIM_<DIMENSION NAME>_B
		DIM_<DIMENSION NAME>_TL
		OFSA_DETAIL_OTHER_COA

Common Tables

The Common Tables procedure migrates several tables which are common to all products; examples include database info, preferences, application info, rate management data like interest rates, currencies, and so on. Other common tables such as hierarchies, instruments, transactions, and so on are handled through other migration steps.

Object Category	Source	Target
Various Metadata	OFSA_DB_INFO	FSI_DB_INFO
	OFSA_APPLICATIONS	FSI_APPLICATIONS
	OFSA_DATA_IDENTITY	FSI_DATA_IDENTITY
	OFSA_FISCAL_YEAR_INFO	FSI_FISCAL_YEAR_INFO
	OFSA_CATALOG_OF_IDS	FSI_M_OBJECT_DEFINITION_B
		FSI_M_OBJECT_DEFINITION_TL
	OFSA_LOOKUP	FSI_ENGINE_LOOKUP
Rate Management	OFSA_CURRENCIES	FSI_CURRENCIES
	OFSA_EXCHANGE_RATE_HIST	FSI_EXCHANGE_RATE_HIST
	OFSA_EXCHNG_RATE_DIRECT_ACCESS	FSI_EXCHNG_RATE_DIRECT_ACCESS
	OFSA_EXCHNG_RATE_CONF_FORMULA	FSI_EXCHNG_RATE_CONV_FORMULA
	OFSA_FIXED_CURRENCIES	FSI_FIXED_CURRENCIES
	OFSA_IRCS	FSI_IRCS
	OFSA_IRC_RATE_TERMS	FSI_IRC_RATE_TERMS

Object Category	Source	Target
	OFSA_IRC_RATE_HIST	FSI_IRC_RATE_HIST
	OFSA_IRC_TS_PARAM_HIST	FSI_IRC_TS_PARAM_HIST
Tuning Options	Currently not migrated…	
Expressions (Formulas)	OFSA_IDT_FORMULA	REV_EXPRESSION_DETAILS
Preferences	OFSA_IDT_CONFIGURE	REV_APP_USER_PREFERENCES
SQL ID	OFSA_IDT_SQL	REV_SQL_RULE

Hierarchies and Filters

Hierarchies

See also: Dimensions and Attributes, page B-2.

In OFSA 4.5, hierarchies for the various dimensions are stored in a single table, OFSA_IDT_ROLLUP. In OFSAA, for each dimension, there is a separate hierarchy table: DIM_<DIMENSION NAME>_HIER. The OFSA 4.5 rows are moved to their corresponding DIM_<DIMENSION NAME>_HIER table based on the dimension_id.

In OFSAA, a parent child relationship is created in the hierarchical model. As discussed earlier, the root and all nodes in OFSA 4.5 are stored as members in the corresponding OFSAA dimension member table; a flag identifies those members as a node type rather than a leaf.

Migration also creates a default hierarchy for each processing dimension. It uses a two level format, i.e. a root node and all the members of the dimension as its children. The hierarchy rule is named DEFAULT_HIER:<DIMENSION ID>, where the dimension name is based on leaf_field in OFSA_CATALOG_OF_LEAVES. In the event the hierarchy name exceeds 30 characters, the 3 trailing characters "_ID" will be excluded from the rule name, and the prefix will be shortened to "DE". The default hierarchies will be placed in the "ALL" folder. A new unique hierarchy_id will be generated based on Max(sys_id_num) +1 from OFSA_CATALOG_OF_IDS table.

As mentioned in **Chapter 3: Pre-Migration Activities**, before executing the migration script, please ensure that:

- all the tables related to user defined dimensions are in place.

  DIM_<DIMENSION NAME>_B - Display Code, Leaf / Node Indicator, Enable / Disable

  DIM_<DIMENSION NAME>_TL - Language specific Name, Description

  DIM_<DIMENSION NAME>_ATTR - Attribute values

  DIM_<DIMENSION NAME>_HIER - Hierarchy parent / child association

- Metadata for the user defined dimensions exists in REV_DIMENSIONS_B and REV_DIMENSIONS_TL tables, with dimension_id the same as the OFSA_CATALOG_OF_IDS leaf_num_id. If a dimension exists in your 4.5 OFSA_CATALOG_OF_LEAVES but is missing in the target REV_DIMENSIONS_B or REV_DIMENSIONS_TL table, the script will log a warning for that dimension and will not migrate any of its associated hierarchies.

Filters

The OFSA 4.5 data, group, and tree (hierarchy) filter types are now available under a single rule type (Filters) in OFSAA.

Migration scripts update the hierarchy filter table in OFSAA with the latest node details and levels.

Based on level restrictions from OFSA 4.5, the maximum levels in a hierarchy is 15 including Root, lower level nodes, and the leaf members.

For data element filters, the migration scripts do not check the validity of the table and column names. Further, the OFSAA data element UI performs more validations than the OFSA 4.5 UI. The migration script will migrate OFSA 4.5 data filters "as is" and if there is any invalid data, the OFSAA UI will prevent you from saving cases which violate these rules:

Ranges:

1. The "To" value should be >= the "From" value

2. The ranges should not overlap.

Method = Formula:

Return type of formula should be the same as source column data type. Criteria should be complete; there may be rare cases in OFSA 4.5 where a column has been selected, but no criteria have been defined, so the filter will produce invalid SQL.

Tree (hierarchy) filters: If a node/leaf exist in a TREE FILTER rule but does not exist in the underlying TREE ROLLUP, the customers are suggested to reconstruct the filter and drop the obsolete dimension members (leafs/nodes) before running the migration scripts.

Object Category	Source	Target
Hierarchies	OFSA_IDT_ROLLUP	DIM_<DIMENSION NAME>_HIER
		OFSA_IDT_ROLLUP
	OFSA_LEVEL_DESC	REV_HIERARCHY_LEVELS
		OFSA_LEVEL_DESC
Filters	OFSA_IDT_DATA_FILTER	REV_DATA_FILTER
	OFSA_IDT_GRP_FILTER	REV_GROUP_FILTER
	OFSA_IDT_VIEW_FILTER	REV_HIERARCHY_FILTER

Common for FTP/ALM

The FTP and ALM rule migration scripts contain logic to ensure that rules shared by the two applications are only migrated once. The examples include prepayments, prepayment tables, payments and repricing patterns, and so on.

For example, if you run the FTP rule migration it will migrate your prepayment rules; the ALM rule script will then recognize that these rules have already been migrated and will not attempt to migrate them again.

Target requires a hierarchy selection; migration scripts will create and populate with default hierarchy for the appropriate dimension. Target currency will default to functional currency from OFSA_DB_INFO.

The valuation curve is now a selection in the rate index rule, instead of the OFSA 4.5 design where it was selected in the process rule. Each active currency should have at least one associated interest rate code.

Please see Pre-Migration Activities for further details on the steps to create a reference IRC and the logic the scripts use for assigning a valuation curve for the functional currency.

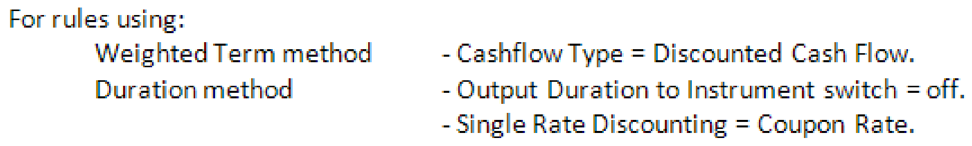
Application administrators should review the rate index rules and confirm selections for the valuation curve(s) in each rule during the post migration analysis.

Object Category	Source	Target
Prepayment rules	OFSA_IDT_PREPAYMENT	FSI_M_PPMT
	OFSA_PP_ORGDATE_ASSUMP	FSI_M_PPMT_CALC_PARAMS
Prepayment Tables (Prepayment Model Rules)	OFSA_IDT_PREPAY_TBL	FSI_M_PPMT_MODEL
	OFSA_PP_TBL_HYPERCUBE	FSI_PPMT_MODEL_HYPERCUBE
	OFSA_PP_HYPERCUBE_MAP	FSI_PPMT_MODEL_HYPERCUBE_MAP
Detailed cash flow audit records	OFSA_PROCESS_CASH_FLOWS	FSI_O_PROCESS_CASH_FLOWS
Payment Patterns	OFSA_PAYMENT_PATTERN	FSI_PAYMENT_PATTERN
	OFSA_PAYMENT_PATTERN_EVENT	FSI_PAYMENT_PATTERN_EVENT
Rate Index Rules	OFSA_IDT_RATE_INDEX	FSI_M_RATE_INDEX
Repricing Patterns	OFSA_REPRICE_PATTERN	FSI_REPRICE_PATTERN
	OFSA_REPRICE_PATTERN_EVENT	FSI_REPRICE_PATTERN_EVENT
		FSI_REPRICE_PATTERN_EVENT_DTL
Rate audit	OFSA_FIXED_CURRENCIES_AUDIT	FSI_FIXED_CURRENCIES_AUDIT
	OFSA_EXCHANGE_RATE_HIST_AUDIT	FSI_EXCHANGE_RATE_HIST_AUDIT
Payment Schedule	OFSA_ PAYMENT_SCHEDULE	FSI_D_PAYMENT_SCHEDULE

Transfer Pricing/ FTP

Transfer pricing rules requires a hierarchy selection; migration will create and populate with default hierarchy for the appropriate dimension. Target currency will default to functional currency from OFSA_DB_INFO. There are a few new features for which the migration scripts populate a default value equivalent to OFSA 4.5 functionality.

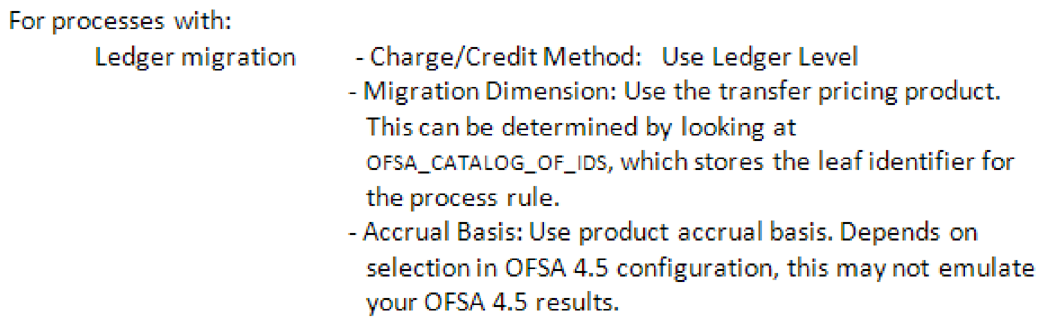
Transfer pricing rules migrate a few new features with default values equivalent to OFSA 4.5 functionality.



For rules using:

Weighted Term method — - Cashflow Type = Discounted Cash Flow.
Duration method — - Output Duration to Instrument switch = off.
- Single Rate Discounting = Coupon Rate.

Transfer pricing process rules migrate a few new features with default values equivalent to OFSA 4.5 functionality.



For processes with:

Ledger migration
- Charge/Credit Method: Use Ledger Level
- Migration Dimension: Use the transfer pricing product. This can be determined by looking at OFSA_CATALOG_OF_IDS, which stores the leaf identifier for the process rule.
- Accrual Basis: Use product accrual basis. Depends on selection in OFSA 4.5 configuration, this may not emulate your OFSA 4.5 results.

For more information regarding handling of OFSA 4.5 process rules which have both transfer pricing and option cost selections, and processes which have propagation selections, and option-cost-only processes (handling of valuation curve), see remarks in Post Migration Activities, page 5-1.

- If Detail Cash Flow flag is on, number of records is set to 5, and record selection code "Set to First" (i.e. first 5).
- Deterministic processes: Interpolation method = Linear.

Object Category	Source	Target
Transfer Pricing Rules	OFSA_IDT_TRANSFER_PRICE	FSI_M_TRANSFER_PRICE_RULE

Object Category	Source	Target
	OFSA_TP_REDEMPTION_CURVE_DTL	FSI_M_TP_REDEMPT_CURVE_DTL
	OFSA_TP_UNPRICED_ACCT_DTL	FSI_M_TP_UNPRICED_ACCT_DTL
TP Process Rules	OFSA_IDT_TP_PROCESS	FSI_M_TP_PROCESS_RULE
		FSI_TP_SELCTD_COLUMNS
	OFSA_TP_STOCH_ASSUMP	FSI_TP_STOCH_ASSUMP
	OFSA_TP_PROC_TABLES	FSI_TP_PROC_TABLES

Risk Manager/ ALM

In ALM, many of the tables' data have been transposed from rows to columns; e.g. Auto Balancing, Leaf (Product) Characteristics, and Transaction Strategies.

Some target requires a hierarchy selection; migration scripts will create and populate with default hierarchy for the appropriate dimension. Target currency will default to functional currency from OFSA_DB_INFO.

For rules with rate-volume relationships, rate dependency pattern rules are generated based on unique combination of forecast balance sys_id_num, currency, and product. The new rate dependency is saved as an embedded rule selection within the migrated forecast balance rule.

An OFSA 4.5 process rule can be either deterministic (scenario based) or stochastic. In OFSAA, these are separate rule types, further differentiated by whether they are static or dynamic.

Depending on selections in an OFSA 4.5 rule, any of the following would qualify a rule as dynamic:

1. It has forecast balance, maturity strategy (a.k.a. maturity mix), and pricing margins. (Note: if it has one, it should have all 3, otherwise it's bad data – an unlikely case)

2. It has a transaction strategy

The transfer pricing flag will be set off for all deterministic processes. For more information regarding any OFSA 4.5 processes which have the transfer pricing flag set on, see Post-Migration Activity, page 5-1.

Object Category	Source	Target
Configuration, Modeling Buckets, Gap Buckets	OFSA_IDT_CONFIGURE	FSI_TIME_BUCKET_MASTER
	OFSA_CNFG_DATE_BUCKET	FSI_INCOME_SIMULATION_BUCKETS
	OFSA_IDT_DGAP	FSI_M_LR_IRR_BUCKETS
	OFSA_DGAP_AUX	FSI_LR_IRR_BUCKETS_AUX
Discount Rates (Discount Methods)	OFSA_IDT_DISCOUNT_RATE	FSI_M_DISCOUNT_RATE
Forecast Balances	OFSA_IDT_FORECAST_BAL	FSI_M_FORECAST_BAL
		FSI_RATE_DEPENDENCY_RELATION
	OFSA_FBAL_DIMENSIONS	FSI_FBAL_DIMENSIONS
	OFSA_FBAL_ROLL_INTO	FSI_FBAL_ROLL_INTO
	OFSA_FBAL_VOLUMES	FSI_FBAL_VOLUMES
		FSI_RATE_TIERS
Forecast Rates	OFSA_IDT_FORECAST_RATES	FSI_M_FORECAST_RATES
	OFSA_FCAST_XRATES	FSI_FCAST_XRATES
	OFSA_FCAST_IRCS	FSI_FCAST_IRCS
	OFSA_FCAST_XRATE_STRCT_CHG	FSI_FCAST_XRATE_STRCT_CHG
	OFSA_FCAST_XRATE_DIRECT_INPUT	FSI_FCAST_XRATE_DIRECT_INPUT
	OFSA_FCAST_IRC_CHG_BASE_VAL	FSI_FCAST_IRC_CHG_BASE_VAL

Object Category	Source	Target
	OFSA_FCAST_IRC_DIRECT_INPUT	FSI_FCAST_IRC_DIRECT_INPUT
	OFSA_FCAST_IRC_STRCT_CHG_BKT	FSI_FCAST_IRC_STRCT_CHG_BKT
	OFSA_FCAST_IRC_STRCT_CHG_VAL	FSI_FCAST_IRC_STRCT_CHG_VAL
	OFSA_FCAST_RATES_BUCKETS	FSI_FCAST_RATES_BUCKETS
	OFSA_FCAST_RATES_SCENARIOS	FSI_FCAST_RATES_SCENARIOS
Note:	Minimum Rate is defaulted to 0 for Exchange Rates and Interest Rates.	
Leaf Characteristics (Product Characteristics)	OFSA_IDT_LEAF_CHARACTERISTICS	FSI_M_PROD_CHARACTERISTICS
Maturity Strategies (Maturity Mix)	OFSA_IDT_MATURITY	FSI_M_MATURITY
	OFSA_MATURITY_AUXILIARY	FSI_MATURITY_AUXILIARY
Pricing Margins	OFSA_IDT_PRICING_MARGIN	FSI_M_PRICING_MARGIN
Process Rules	OFSA_IDT_TM_PROCESS	FSI_M_ALM_PROCESS
	OFSA_IDT_TM_PROCESS	FSI_ALM_DTL_CASHFLOW_AUDIT
	OFSA_TM_SCENARIO_ASSUMP	FSI_ALM_DETERMINISTIC_PROCESS
	OFSA_TM_NEW_BUSINESS	FSI_ALM_NEW_BUSINESS

Object Category	Source	Target
	OFSA_TM_PROC_INSTRMNTS	FSI_ALM_PROC_TABLES
		FSI_ALM_PROCESS_PRODUCT_LIST
	OFSA_TM_FIN_ELEM_SET	FSI_TM_FIN_ELEM_SET
	OFSA_TM_STOCH_ASSUMP	FSI_ALM_STOCHASTIC_PROCESS
	OFSA_ID_TYPE_FLAGS	FSI_ID_TYPE_FLAGS
Result tables including audit tables	OFSA_IDT_RESULT_HEADER	FSI_O_RESULT_HEADER
	OFSA_RESULT_BUCKET	FSI_O_RESULT_BUCKET
	OFSA_RESULT_SCENARIO	FSI_O_RESULT_SCENARIO
	OFSA_RESULT_MASTER	FSI_O_RESULT_MASTER
	RES_DTL_%	RES_DTL_%
	CONS_DTL_%	CONS_DTL_%
	OFSA_CONSOLIDATED_MASTER	FSI_O_CONSOLIDATED_MASTER
	OFSA_TM_STOCH_VAR	FSI_O_STOCH_VAR
	OFSA_TM_STOCH_TOT_VAR	FSI_O_STOCH_TOT_VAR
	OFSA_TM_STOCH_MKT_VAL	FSI_O_STOCH_MKT_VAL
	EAR_LEAF_AVG_%	EAR_LEAF_AVG_%
	EAR_LEAF_DTL_%	EAR_LEAF_DTL_%
	EAR_TOTAL_AVG_%	EAR_TOTAL_AVG_%

Object Category	Source	Target
	EAR_TOTAL_DTL_%	EAR_TOTAL_DTL_%
	OFSA_INTEREST_RATES_AUDIT	FSI_INTEREST_RATES_AUDIT
	OFSA_EXCHANGE_RATES_AUDIT	FSI_EXCHANGE_RATES_AUDIT
Transaction Strategies	OFSA_IDT_TRANS_STRATEGIES	FSI_M_TRANS_STRATEGIES
		FSI_M_TRANS_MASTER
	OFSA_FIN_ELEM_SET_DTL	FSI_FIN_ELEM_SET_DTL

Profitability/OFSPM

The migration of allocation rules from OFSA 4.5 to OFSAA has seen a complete structural change, in terms of data storage logic. Primarily the concept of a multiple page allocation rule is eliminated in this migration. Migration will translate multi-page rules from OFSA 4.5 into multiple individual rules in OFSAA. It will name each page based on the OFSA 4.5 allocation rule name with a sequential number (i.e. Fixed Cost_1, Fixed_Cost_2). It will not be possible to split out the data that has been previously generated by multi-page rules into multiple identity codes. The association of sys_id_num to identity_code will only be truly correct going forward for the allocation's first page. Rules with parentheses will not be migrated. Rules with more than one source, operator, and driver will not be migrated.

Object Category	Source	Target
Allocation rules	OFSA_IDT_ALLOC	FSI_M_ALLOCATION_RULE
	OFSA_ALLOC_LEAVES	FSI_M_ALLOC_DETAILS
		FSI_M_ALLOC_LEAF_SELECTION
Lookup Driver Table rules	OFSA_IDT_LOOKUP_TABLE	FSI_M_LOOKUP_TABLE
	OFSA_LOOKUP_TABLE_KEY_MAPPING	FSI_M_LOOKUP_TABLE_KEY_MAPPING

Object Category	Source	Target
Static Driver Table rules	OFSA_TABLE_DESC	FSI_M_ALLOC_TABLE_ID
	OFSA_IDT_TABLE	FSI_M_ALLOC_TABLE_DETAILS
	OFSA_MAP_TABLES	FSI_MAP_TABLES

Instrument and Transaction Tables

You can individually migrate seeded or user-defined instrument and transaction tables, as mentioned earlier with the script "migrate_user_Acc_tables".

When you migrate the table, the script allows you to specify the name of the existing source and target table. The target table must contain a minimum of all the source columns using the same column names as in source, and the new product_id dimension where applicable to the table type.

As mentioned earlier, the product_id column will be seeded with -1, unless the OFSA 4.5 source table already has a product_id column (in which case the values will be directly migrated). Depending on table classification, the target table may have additional new columns.

The following default values are used:

PRODUCT_ID: If product_id is a new dimension in the target instance (not present in OFSA 4.5 source) then it will receive a default value of -1 in OFSAA.

Object Category	Source	Target
Instrument	<INSTRUMENT NAME>	FSI_D_<INSTRUMENT NAME>
Transaction	<INSTRUMENT NAME>_TRNS	FSI_D_<INSTRUMENT NAME>_TXNS

For additional considerations regarding these tables, please see Chapter 3: Pre-Migration Activities, step 5: Synchronize OFSAAI Data Model with OFSA 4.5.

Ledger

You can individually migrate the ledger table with the script "migrate_ledger_stat".

As mentioned earlier, the product_id column will be seeded with -1, unless the OFSA

4.5 source table already has a product_id column (in which case the values will be directly migrated).

The following default values are used:

PRODUCT_ID: If product_id is a new dimension in the target instance (not present in OFSA 4.5 source) then it will receive a default value of -1 in OFSAA.

BALANCE_TYPE_CD: LEDGER_STAT balance_type_cd will receive a default value of 500:"Legacy Migration".

> **Note:** 4.5 Ledger_Stat contains SET_OF_BOOKS_CD, whereas the column is not present in OFSAA, because OFSAA does not support multiple SET_OF_BOOKS_CD.

Object Category	Source	Target
Ledger	LEDGER_STAT	LEDGER_STAT

Lookup Tables

You can individually migrate any look up tables with the script "migrate_any_table".

The structure of the table in the target instance must match the structure of the OFSA 4.5 table you are migrating.

Object Category	Source	Target
Lookup	<LOOKUP_NAME>	<LOOKUP_NAME>

C

Objects Not Migrated

Objects Comments

4.5 Profitability Functional Area	Comments

OFSPM: Allocations (some cases)	1. Rules with more than one Source, Operator, and Driver will not be compatible with PFT 6.0 .
	- The query below can show the allocations and the number of operators used:
	select alloc_sys_id ,sequences, count(*) from ofsa_alloc_leaves where constant_char in ('+','-','*','/') group by alloc_sys_id ,sequences;
	- The query below can identify the allocation rules with complex structure having multiple drivers:
	select alloc_sys_id,sequences from (select distinct alloc_sys_id,sequences,row_type from ofsa_alloc_leaves) group by alloc_sys_id,sequences having count(*) > 5;
	2. Migration scripts will translate multi-page rules from OFSA 4.5 into multiple individual rules in OFSAA. It will name them based on the OFSA 4.5 allocation name, numbered sequentially. It will not be possible to split out the data that has been previously generated by multi-page rules into multiple identity codes. The association of sys_id_num to identity_code will only be truly correct going forward for the allocation's first page.
	3. OFSAA does not support rules with multiple macros and/or multiple constants.
	The queries below can show the allocations and the number of macros and constants used in the allocations respectively:
	select alloc_sys_id,sequences,row_type,count(*) from ofsa_alloc_leaves where row_type = 400 group by alloc_sys_id ,sequences,row_type;
	select alloc_sys_id,sequences,row_type,count(*) from ofsa_alloc_leaves where row_type = 200 group by alloc_sys_id ,sequences,row_type;

4.5 Balance and Control Functional Area	Comments
Correction Rules	Correction rules are not migrated.
Correction Processing	You can create Cash Flow Edit rules in ALM and FTP.

4.5 Risk Manager Functional Area	Comments
Leaf Characteristics, Transaction Strategies (TP fields)	TP IRC and TP Margin are no longer defined in ALM but user can select a TP Rule with the ALM process.
Formula Leaves	This functionality is not enabled in ALM 6.0. Users may rebuild Formula Leaves (Formula Results) in a future release.

4.5 Transfer Pricing Online Functional Area	Comments
Transfer Pricing Online (6.0: Pricing Management)	Pricing Management selections should be freshly implemented in 6.0.

4.5 Common Code Functional Area	Comments
Configuration (subset of data)	1. In the new applications, Global and Application Preferences replace some of the options from the 4.5 Configuration rules. Preferences are not rule-based; so there is no direct mapping from 4.5. For more information regarding setup of Preferences, see Post Migration Activities, page 5-1. 2. For ALM, the time and gap bucket definitions from the 4.5 Configuration ID's will be migrated to ALM Time Bucket Rules, named based on the source Configuration ID. Only 1 may be active at a given time.

4.5 Common Code Functional Area	Comments
Error reporting	OFSA_PROCESS_ERRORS is not migrated.
Leaves, Nodes (some special cases)	1. 'V' type leaves are not supported in OFSA 4.5 and will not be migrated to OFSAA. 2. Member names must be unique; script will concatenate text to non-unique member names to ensure the name is unique. This logic applies to leaf-level members, and node-level members from 4.5 hierarchies.
Batch IDs	Not migrated.
Transformation IDs	Not migrated.
Transformed Hierarchies, Ledger, and ALM results.	Not migrated.
Tree Filters (special cases)	If a node/leaf exist in a TREE FILTER rule but does not exist in underlying TREE ROLLUP, the customers are suggested to reconstruct the filter and drop the obsolete dimension members (leafs/nodes) before running the migration scripts.
User-Defined Codes	The current migration does not migrate OFSA 4.5 user-defined codes. They can be stored as simple dimensions in OFSAA.
User-Defined Views	See Post Migration Activities, page 5-1.
User Passwords	Passwords will not be migrated; users will be prompted for a new password during initial login.

Other Functional Areas	Comments
4.5 Seeded Rules	Rules in the 4.5 reserved range (designated in OFSA 4.5 OFSA_CATALOG_OF_IDS where the sys_id_num is between 79999 and 100000) will be migrated, except for rules in the range 90000 through 99999. Please see Pre-Migration Activities for further details.
Ledger Stat Table (special case)	The new release does not currently support multiple sets of books. Therefore, if the source Ledger_Stat contains data for multiple sets of books, the scripts do not support migrating that data.

4.5 Tuning Option	Comments
Process Tuning	Tuning options can be manually entered via the UI.

D

Issues

Release Notes

For more information on latest issues and resolutions, see *Release Notes for Oracle Financial Services 4.5 Migration Tool v 6.0.*