

Purge Entity Definition
Oracle Banking Treasury Management
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1. Preface

This document explains the method to configure purge entities and to apply purge filters and discusses the process of purge generation in Oracle FLEXCUBE Development Workbench

1.1 Audience

This document is intended for FLEXCUBE Application developers/users that use Development Workbench to develop various FLEXCUBE components.

To Use this manual, you need conceptual and working knowledge of the below:

| <i>Proficiency</i> | <i>Resources</i> |
|-------------------------------------------|------------------------------------------------------------|
| FLEXCUBE Functional Architecture | Training programs from Oracle Financial Software Services. |
| FLEXCUBE Technical Architecture | Training programs from Oracle Financial Software Services. |
| Working knowledge of Oracle Database | Oracle Documentations |
| Working knowledge of PLSQL & SQL Language | Self Acquired |
| Working knowledge of XML files | Self Acquired |

1.2 Related Documents

[03-Development WorkBench Getting Started.docx](#)

2. Introduction

2.1 How to use this Guide

The information in this document includes:

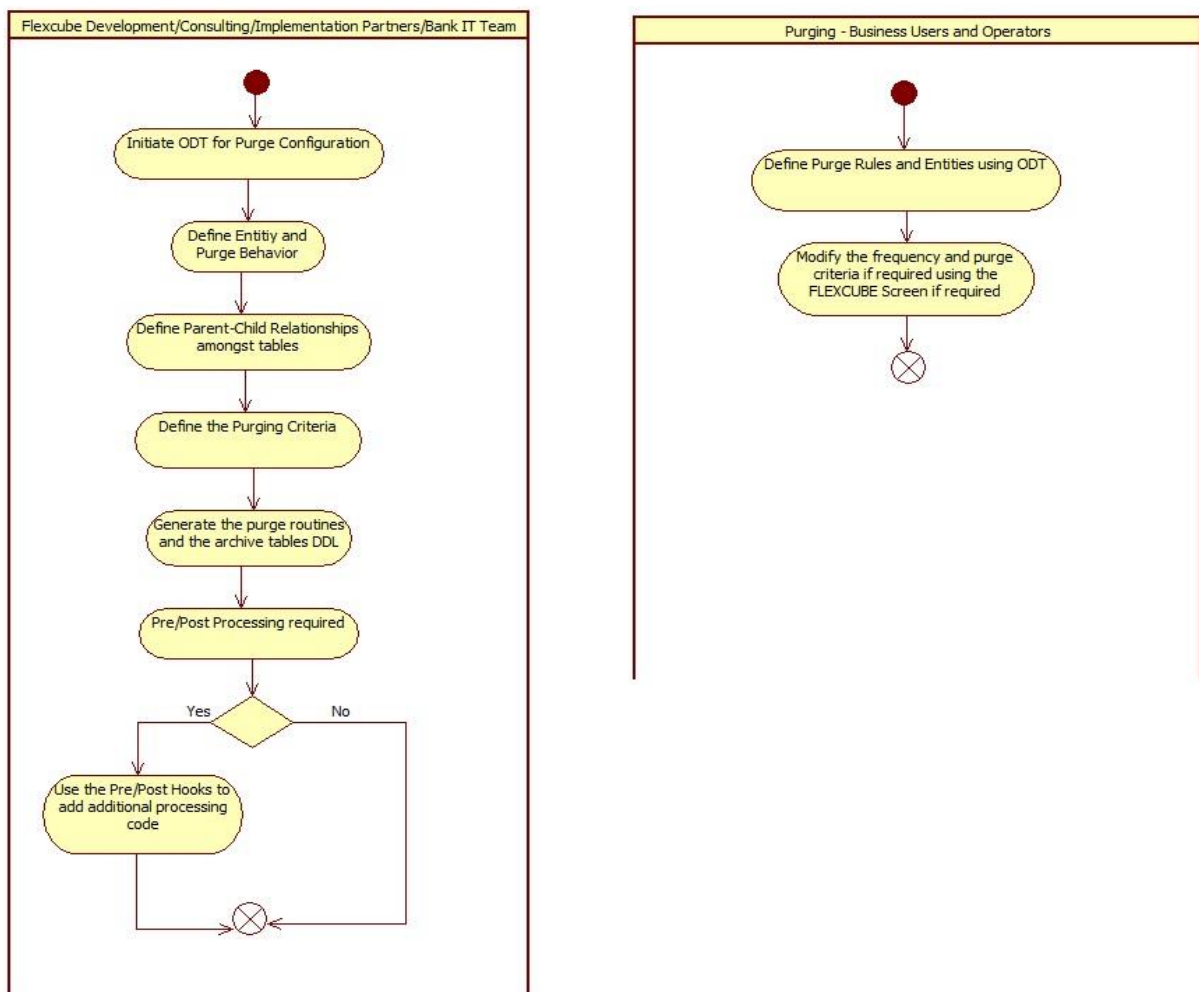
- [Chapter 2 , "Introduction"](#)
- [Chapter 3 , "Overview of Purge Entity"](#)
- [Chapter 4 , "Purge Entity Definition"](#)
- [Chapter 5 , "Generated Units"](#)
- [Chapter 5 , "Extensible Development"](#)

3. Overview of Purge Entity

New Purge Framework is introduced in FLEXCUBE where user can configure the data to be purged.

This framework consists of two parts - - Purge Parameter Configuration and Purge Execution.

The following diagram captures the framework of Purge Parameter Configuration



Workbench will be used for defining the list of entities to be purged. Persistence of Purge Entity Configured is achieved through the RADXML saved by the Tool.

3.1 Purge Parameters Configuration

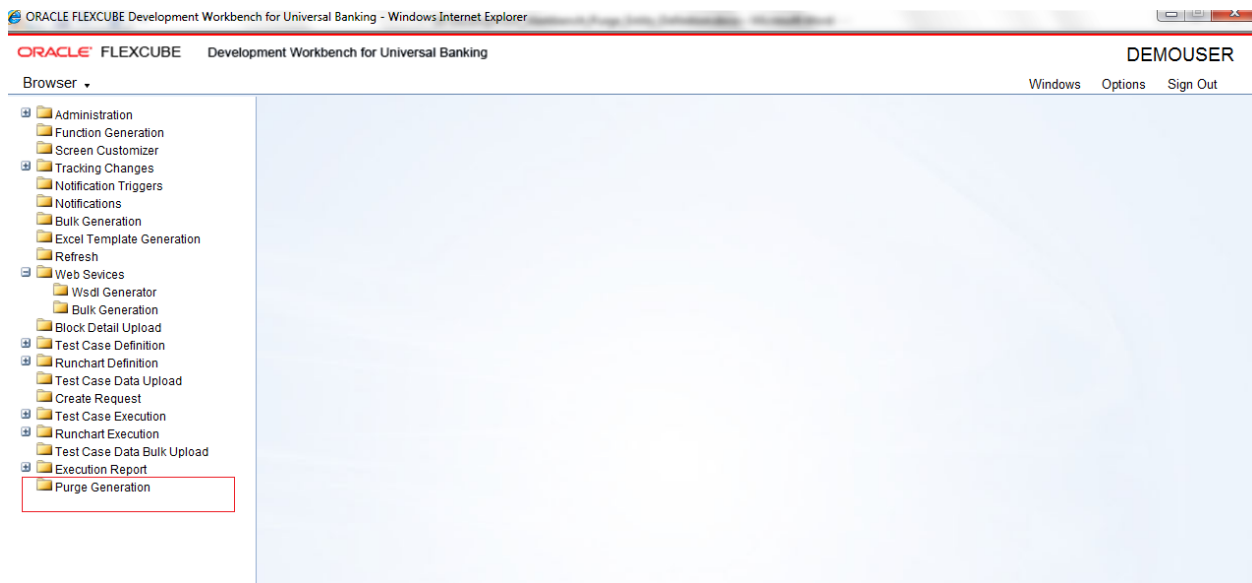
For the initial purge parameter configuration, ODT utility for generating the Purge routines is to be used. The tool will be used to generate the packages that will have the purge logic based on the criteria. The tool will be used for the following –

1. Maintaining the list of entities that need to be purged. This includes maintaining the Master-Child relationship between the tables. Each entity will have the following
 - a. Parent table
 - b. Primary key for the parent table and the data-types of the key fields
 - c. List of child tables
 - d. Relation with the parent tables and the data-types of the key fields
2. Maintaining the purge behavior – whether the data is to be deleted or archived
3. Maintaining the mode of purge – whether it is bulk or record level
4. Maintaining the archive table suffix if the purge behavior is to archive the data
5. Maintaining the filter criteria to determine what data to purge. These filter criteria will be applied on the parent table to identify the data to purge and based on the setup, corresponding data will be purged from the child tables also.

4. Purge Entity Definition

Login to FLEXCUBE Workbench by providing your user credentials.

Click on Purge Generation from the browser tree as shown in the figure



Specify the following details:

Action

Specify whether you need to create a new record or load modify an existing record.

Save XML Path

Specify the location of the RAD XML file.

Entity name

Specify the name of the entity.

Module Name

Specify the name of the module to which the entity belongs.

Entity ID

ODT defaults the entity ID. Entity ID name is derived as <Module_Name>P<Entityname>

Example: FTPCONTRACT

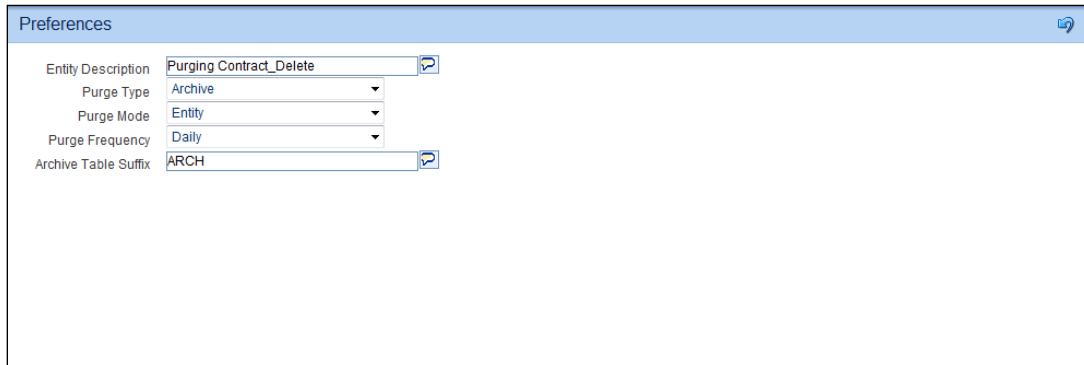
The screenshot displays the Oracle FLEXCUBE Development Workbench for Universal Banking interface. The top navigation bar includes the Oracle logo, 'FLEXCUBE Development Workbench for Universal Banking', and the user name 'Demo User'. Below the navigation bar, there are several fields for configuration: 'Action' (New), 'Entity Name' (CONTRACT), 'Entity Id' (BCPCONTRACT), 'Save XML Path' (BCDTRONL_RAD.xml), and 'Module Name' (BC). The main area is titled 'Preferences' and contains several dropdown menus: 'Entity Description' (Purging Contract_Delete), 'Purge Type' (Archive), 'Purge Mode' (Entity), 'Purge Frequency' (Daily), and 'Archive Table Suffix' (ARCH). A left-hand menu shows 'Purge Master', 'Purge Tables', and 'Purge Filters'.

On the left menu, you can find the following options:

- Purge Master
- Purge Tables
- Purge Filters

4.1 Purge Master

You can define the purge preferences for the entity from 'Purge Master' menu item. Click 'Purge Master' on the left menu.



The screenshot shows a 'Preferences' dialog box with the following fields:

| | |
|----------------------|-------------------------|
| Entity Description | Purging Contract_Delete |
| Purge Type | Archive |
| Purge Mode | Entity |
| Purge Frequency | Daily |
| Archive Table Suffix | ARCH |

Specify the following details:

Entity Description

Specify a brief description of the entity that you are defining.

Purge Type

Specify the purge type. The following options are available in the drop-down list:

Delete – if you select this, the data will be deleted from the main tables

Archive – if you select this, the data will be saved in the archive tables and deleted from the main tables

Purge Mode

Specify the mode of purge. You can select one of the following options:

Entity – if you select this, purge happens based on the entity or record

Bulk – if you select this, purge happens in bulk for many records

Purge Frequency

Specify the frequency at which the purge should happen.

You can select one of the following options:

Ad-hoc

Daily

Weekly

Monthly

Quarterly

Yearly

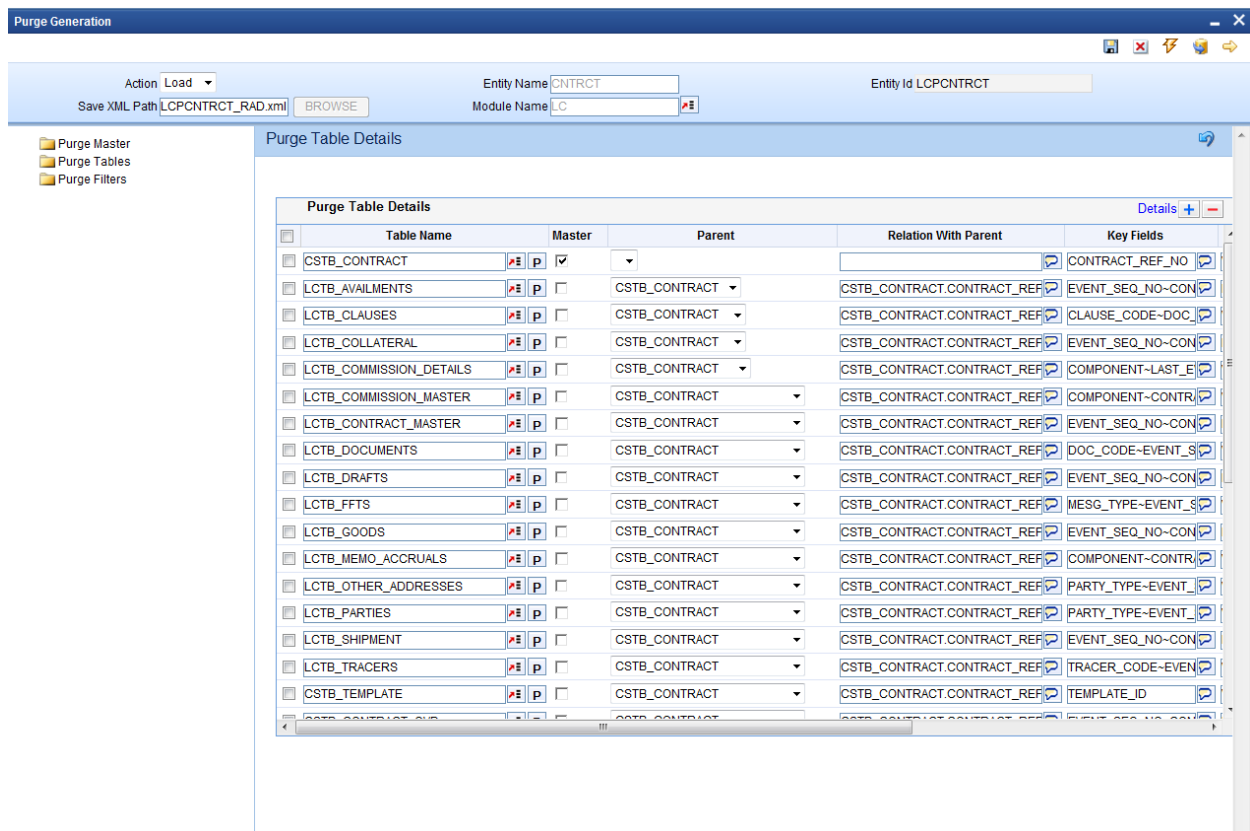
Archive Table Suffix

Specify the text that should suffix the main table name during archive purge operation. If you select the purge type as 'Archive', you need to specify this.

For example, if the name of the main table is 'MAIN_TABLE' and you have specified the archive table suffix as 'HIST', then after the purge, the name of the archive table will be 'MAIN_TABLE_HIST'.

4.2 Purge Tables

You can maintain the underlying tables for a particular entity using Purge Tables. Click 'Purge Tables' on the left menu.



Specify the following details:

Table Name

Specify the name of the table.

Master

Check this box to indicate that the selected table is the master table.

Parent

If the selected table is not the parent table, then you need to specify the master table name here.

Relation with Parent

Specify the relation of the selected table with the parent table.

Key Fields

Specify the key field name. You can populate the key fields by clicking the 'P' button adjoining the table name.

Key Fields Data Type

Specify the key field data type. You can populate the key field name and data type by clicking the 'P' button adjoining the table name.

Archiving Not Required

In purge mode 'Archive', you can exclude specific tables from archiving. Check this box against the tables that you need to exclude from archiving.

Exclude from Purging

You can exclude selected tables from purging. Check this box against the tables that you need to exclude from purging.

4.3 Purge Filters

You can define the purge filter criteria and define the predicates to be used to filter the data for purging from 'Purge Filters' section. Click 'Purge Filters' on the left menu.

The screenshot shows the 'Purge Generation' application interface. The top bar includes 'Action: Load', 'Save XML Path: LCPCTRCT_RAD.xml', 'Entity Name: CTRCT', 'Module Name: LC', and 'Entity Id: LCPCTRCT'. The left sidebar has a tree view with 'Purge Master', 'Purge Tables', and 'Purge Filters'. The main area is titled 'Purge Filter Details' and has tabs for 'Business Filters', 'Execution Filters', and 'Free Format Filter'. The 'Business Filters' tab is active, showing a table with the following data:

| Filter Name | Filter Data Type | Scope | Filter Expression | Filter Operator | Default Value |
|---------------------------------------------------|------------------|--------|------------------------------------------------|----------------------|------------------|
| <input type="checkbox"/> PURGESTATUS | String | Entity | CSTB_CONTRACT.CONTRACT_STATUS | Builder Equals | S |
| <input type="checkbox"/> PURGEMODULECODE | String | Entity | CSTB_CONTRACT.MODULE_CODE | Builder Equals | LC |
| <input type="checkbox"/> PURGEBRANCH | String | Entity | CSTB_CONTRACT.BRANCH | Builder Equals | global.current_b |
| <input checked="" type="checkbox"/> RETENTIONDAYS | Number | Entity | GLOBAL_APPLICATION_DATE-NVL(CSTB_CONTRACT.LATE | Builder Greater Than | 160 |

Below the table is a 'Final Filter Expression' field containing the following SQL query:

```
CSTB_CONTRACT.CONTRACT_STATUS = S
AND
CSTB_CONTRACT.MODULE_CODE = LC
AND
CSTB_CONTRACT.BRANCH = global.current_branch
AND
GLOBAL_APPLICATION_DATE-NVL(CSTB_CONTRACT.LATEST_EVENT_DATE,GLOBAL_APPLICATION_DATE) > 160
AND
NOT EXISTS (SELECT 1 FROM CSTB_CHG_LIQ B WHERE B.CONTRACT_REF_NO =
CSTB_CONTRACT.CONTRACT_REF_NO AND B.LIQ_STATUS IN ('OS','PRV')) AND NOT EXISTS (SELECT 1 FROM
```

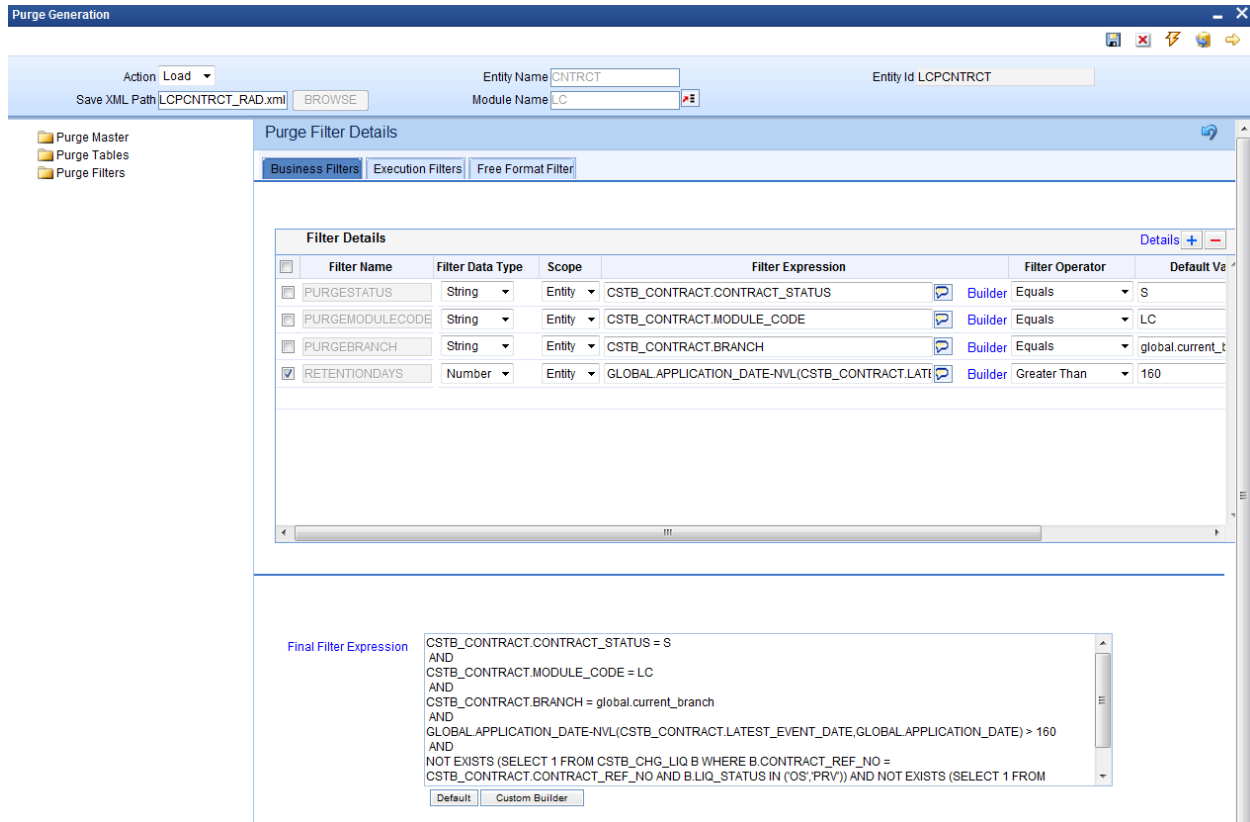
At the bottom of the field are 'Default' and 'Custom Builder' buttons.

Here, you can find three types of filters:

- Business Filter
- Execution Filter
- Free Format Filter

4.3.1 Business Filter

This filter is governed by the business needs or the regulatory environment. If you need to define a business filter, click 'Business Filters' tab.



Specify the following details:

Filter Name

Specify a filter name. The filter name should be unique across business and execution filters for an entity.

Filter Data Type

Specify the filter data type. You can select one of the following options:

- Date
- String
- Number

Scope

Specify the scope, whether entity or table. If scope is table, then the filter would be applied over the filter expression table and its child tables. If it is entity, filter is applied over the entire entity; hence if the expression returns false entire entity will be skipped.

Filter Expression

Specify the filter expression. You can use the Builder button to build a filter expression using the builder screen.

Filter Operator

Specify the filter operator. You can select the appropriate one from the drop-down list.

Default Value

Specify the value that satisfies the expression. If the operator expects more than one value, then each value can be separated by tilde.

This is an optional field.

Maximum Length

Specify the maximum length of the filter value that can be used.

Final Filter Expression

The Development Workbench system concatenates each filter and the operators to derive the final expression. This is a display only field.

4.3.2 Execution Filter

This filter is an operational filter that provides an additional predicate while doing an ad-hoc purge for an entity. During ad-hoc purge, you can use the execution filter in order to get flexibility in purging selective data for an entity.

If you need to define an execution filter, click 'Execution Filters' tab.

Purge Filter Details

Business Filters Execution Filters Free Format Filter

| Filter Name | Filter Data Type | Scope | Filter Expression | Filter Operator | Default |
|-------------------------------------|------------------|--------|-------------------|-----------------|---------|
| | | Entity | | Builder | |
| | | Entity | | Builder | |
| <input checked="" type="checkbox"/> | | Entity | | Builder | |

Final Filter Expression

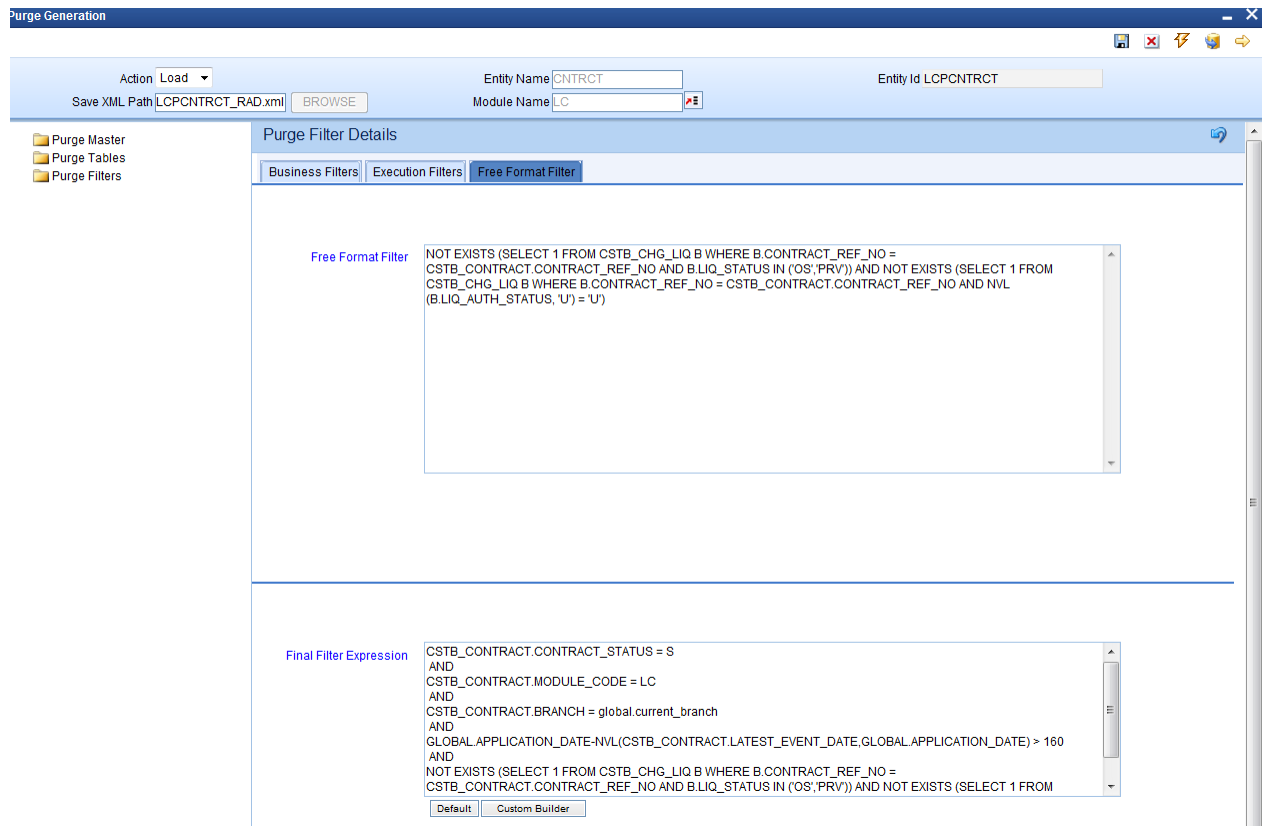
?
AND
?

Default Custom Builder

For details on each field, refer to the section 'Business Filters' in this chapter.

4.3.3 Free Format Filter

This contains predefined filter conditions. You cannot modify these.



A Sample Filter and its constituent fields in Filter Definition

GLOBAL.APPLICATION_DATE- CSTB_CONTRACT.BOOK_DATE > 120

- Filter Name: RETENTION
- RHS Expression:
GLOBAL.APPLICATION_DATE- CSTB_CONTRACT.BOOK_DATE
- Operator: Greater Than
- Default Value: 120
- Filter Data Type: NUMBER
- Maximum Length: 5

Final Filter Expression is derived by concatenating each filters by AND operator.

5. Generated Files

1) Main Package

This package will have the capability of either purging/archiving the data based on the criteria that has been configured.

Record keys of the data to be purged will be inserted into a staging table. Multiple threads will be accessing the staging table to purge the data from table. Once purged, data from staging table would be removed.

2) Hook Packages

- Post Hook after deriving filter values
- Pre and Post hooks at the purge program level
- Pre and Post hooks at the record level

3) Static Scripts

Scripts for the following tables will be generated.

- STTM_PURGE_MASTER
- STTM_PURGE_TBL_DETAILS
- STTM_PURGE_FILTER_DETAILS

4) Archival table Definitions

DDL for all archival tables would be generated

The screenshot shows the Oracle Flexcube Development Workbench interface. The main window is titled "ORACLE FLEXCUBE Development Workbench for Universal Banking" and includes a "DEMOUSER" header. The "Generate" dialog box is open, showing the "Purge Generation" configuration. The dialog has several tabs: "Front-End Files", "System Packages", "Hook Packages", "Meta Data", and "Others".

The "Generate" dialog box contains the following configuration options:

- Front-End Files:** RadXML, Screen Xml, System JS (all unchecked).
- System Packages:** Main Package Spec, Main Package Body (checked); Notification Triggers, Upload Package Spec, Upload Package Body (unchecked).
- Hook Packages:** Kernel Package Spec, Kernel Package Body (checked); Cluster Package Spec, Cluster Package Body, Custom Package Spec, Custom Package Body (unchecked).
- Meta Data:** Menu Details, Datasource Details, LOV Details, Block Details, Screen Details, Amendable Details, Call form Details, Summary Details (all unchecked); Label Details, Block PK Columns, Function Call Forms, Gateway Details, Notification Details, Function Parameters, Purge Details (checked).
- Others:** Xsds, Xsd With Annotations, Screen Html, Upload Table Trigger, Upload Tables Definition, Archive Table Definition (checked).

Below the configuration options is a table listing the generated files:

| Sl.No | File Name | File Type | Status |
|-------|--------------------------------------------|-----------|-----------|
| 1 | bcps_bcpcontract_main.spc | SPC | Generated |
| 2 | bcps_bcpcontract_kernel.spc | SPC | Generated |
| 3 | bcps_bcpcontract_main.sql | SQL | Generated |
| 4 | bcps_bcpcontract_kernel.sql | SQL | Generated |
| 5 | ARCHIVE_TABLES__BCPCONTRACT.DDL | DDL | Generated |
| 6 | STTM_PURGE_MASTER__BCPCONTRACT.INC | INC | Generated |
| 7 | STTM_PURGE_TBL_DETAILS__BCPCONTRACT.INC | INC | Generated |
| 8 | STTM_PURGE_FILTER_DETAILS__BCPCONTRACT.INC | INC | Generated |
| 9 | BCPCONTRACT_RAD.xml | RADXML | Generated |

At the bottom right of the dialog, there are "Generate" and "Exit" buttons.



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