

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:

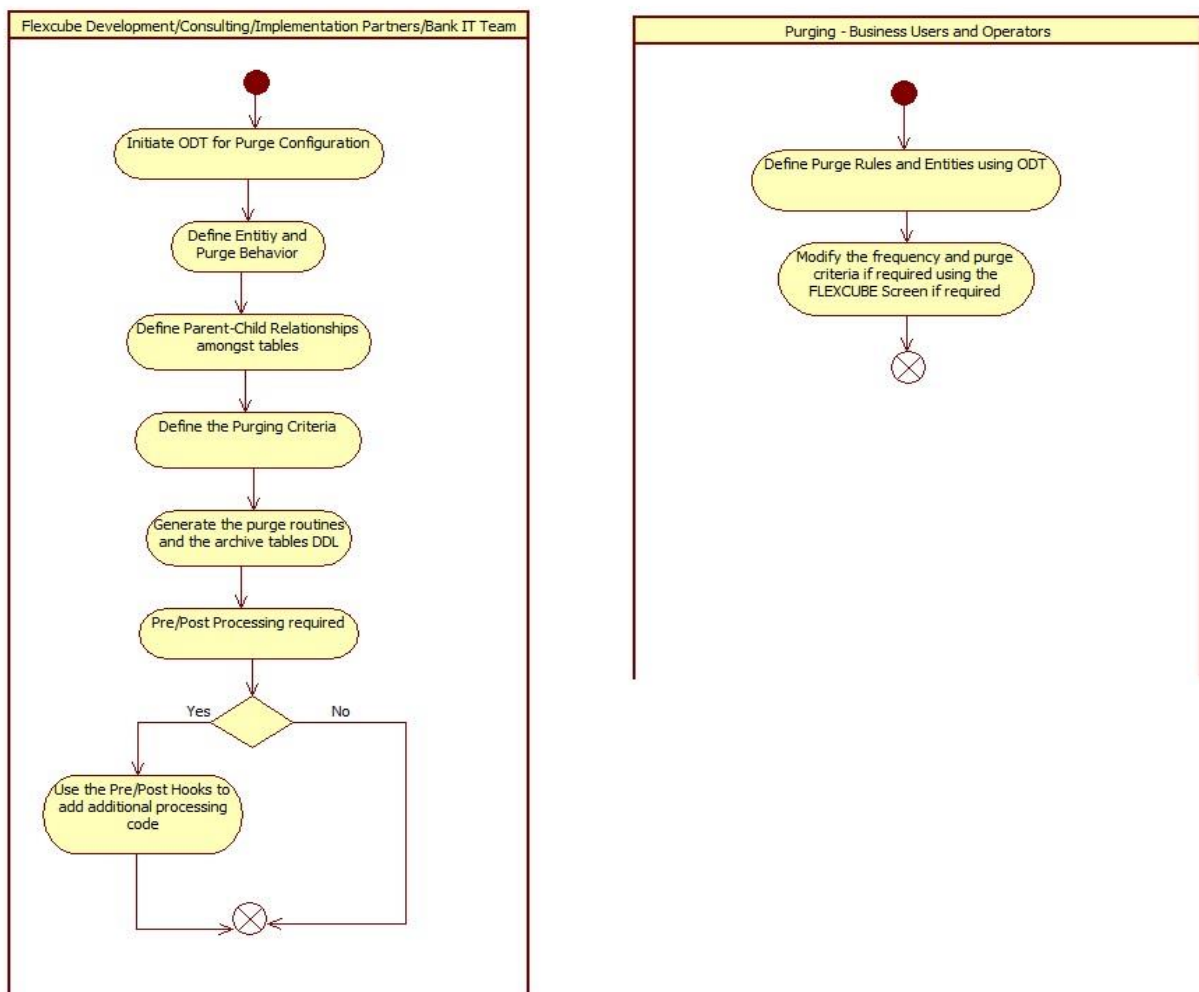
- [Chapter 2 , "Introduction"](#)
- [Chapter 3 , "Overview of Purge Entity"](#)
- [Chapter 4 , "Purge Entity Definition"](#)
- [Chapter 5 , "Generated Units"](#)
- [Chapter 5 , "Extensible Development"](#)

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

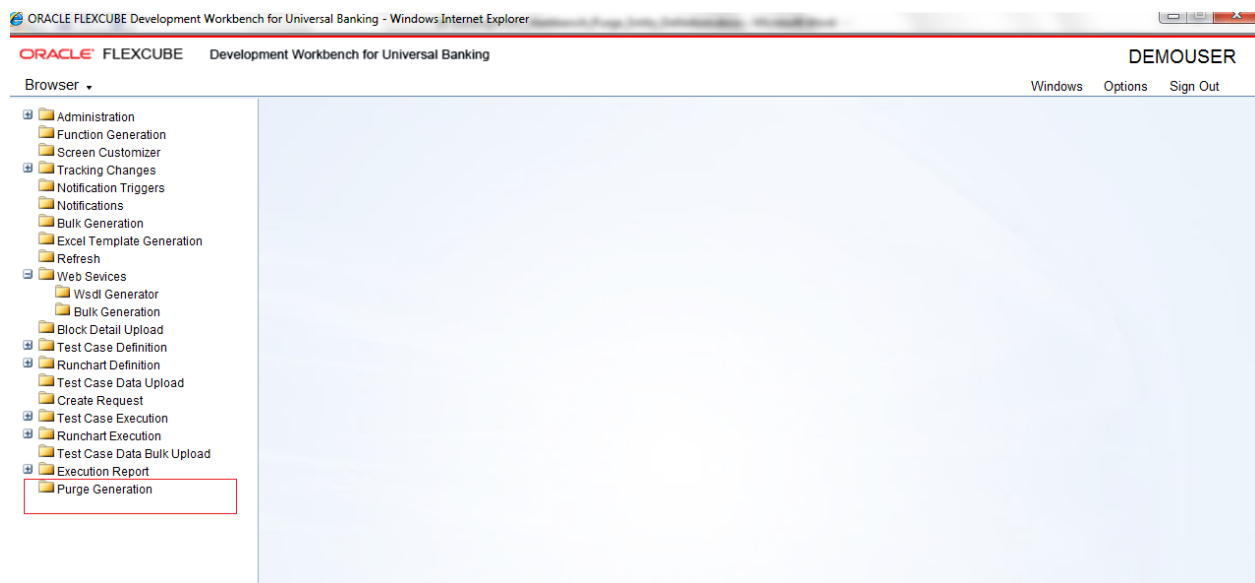
For the initial purge parameter configuration, ODT utility for generating the Purge routines is to be used. The tool will be used to generate the packages that will have the purge logic based on the criteria. The tool will be used for the following –

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>

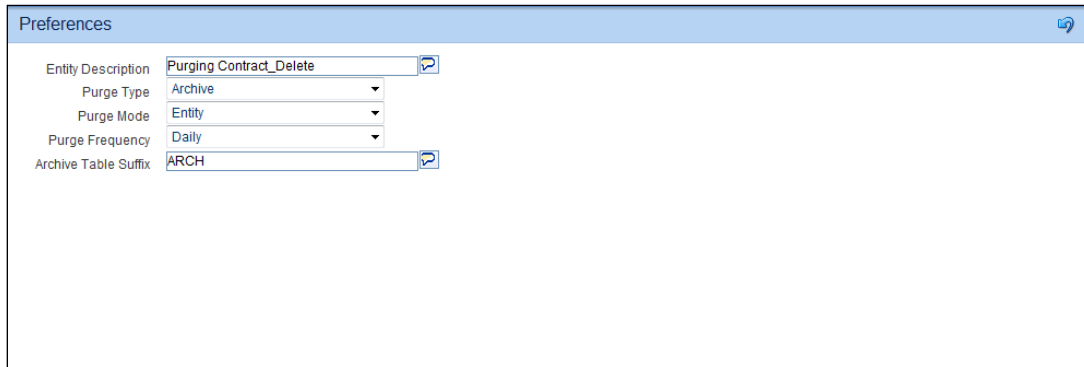
Example: FTPCONTRACT

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 a light blue header. It contains five configuration rows, each with a label on the left and a value field on the right. The values are: 'Purging Contract_Delete' for Entity Description, 'Archive' for Purge Type, 'Entity' for Purge Mode, 'Daily' for Purge Frequency, and 'ARCH' for Archive Table Suffix. The 'Purge Type', 'Purge Mode', and 'Purge Frequency' fields are dropdown menus, while the others are text boxes. Each text box has a small blue icon with a question mark to its right.

Label	Value
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.

The screenshot shows the 'Purge Generation' application window. At the top, there's a header bar with 'Purge Generation' and standard window controls. Below the header, there's a navigation bar with 'Action: Load', 'Save XML Path: LCPCTRCT_RAD.xml', 'Entity Name: CTRCT', 'Module Name: LC', and 'Entity Id: LCPCTRCT'. On the left, there's a sidebar menu with 'Purge Master', 'Purge Tables', and 'Purge Filters'. The main area is titled 'Purge Table Details' and contains a table with the following columns: Table Name, Master, Parent, Relation With Parent, and Key Fields. The table lists various tables like CSTB_CONTRACT, LCTB_AVAILMENTS, LCTB_CLAUSES, etc., with their respective master, parent, relation, and key fields.

Table Name	Master	Parent	Relation With Parent	Key Fields
CSTB_CONTRACT	☒			CONTRACT_REF_NO
LCTB_AVAILMENTS	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	EVENT_SEQ_NO-CON
LCTB_CLAUSES	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	CLAUSE_CODE-DOC
LCTB_COLLATERAL	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	EVENT_SEQ_NO-CON
LCTB_COMMISSION_DETAILS	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	COMPONENT-LAST_E
LCTB_CONTRACT_MASTER	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	EVENT_SEQ_NO-CON
LCTB_DOCUMENTS	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	DOC_CODE-EVENT_S
LCTB_DRAFTS	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	EVENT_SEQ_NO-CON
LCTB_FFTS	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	MESG_TYPE-EVENT_S
LCTB_GOODS	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	EVENT_SEQ_NO-CON
LCTB_MEMO_ACCRUALS	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	COMPONENT-CONTR
LCTB_OTHER_ADDRESSES	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	PARTY_TYPE-EVENT
LCTB_PARTIES	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	PARTY_TYPE-EVENT
LCTB_SHIPMENT	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	EVENT_SEQ_NO-CON
LCTB_TRACERS	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	TRACER_CODE-EVEN
CSTB_TEMPLATE	☐	CSTB_CONTRACT	CSTB_CONTRACT.CONTRACT_REF	TEMPLATE_ID

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 window. At the top, there's a header bar with 'Purge Generation' and standard window controls. Below the header, there's a navigation pane on the left with a tree view containing 'Purge Master', 'Purge Tables', and 'Purge Filters'. The main area is titled 'Purge Filter Details' and has three tabs: 'Business Filters', 'Execution Filters', and 'Free Format Filter'. The 'Business Filters' tab is active. It contains a table with the following columns: Filter Name, Filter Data Type, Scope, Filter Expression, Filter Operator, and Default Value. The table lists four filters: PURGESTATUS (String, Entity, CSTB_CONTRACT.CONTRACT_STATUS = S), PURGEMODULECODE (String, Entity, CSTB_CONTRACT.MODULE_CODE = LC), PURGEBRANCH (String, Entity, CSTB_CONTRACT.BRANCH = global.current_branch), and RETENTIONDAYS (Number, Entity, GLOBAL_APPLICATION_DATE-NVL(CSTB_CONTRACT.LATEST_EVENT_DATE, GLOBAL_APPLICATION_DATE) > 160). Below the table, there's a section for the 'Final Filter Expression' which displays a complex SQL query. At the bottom, there are 'Default' and 'Custom Builder' buttons.

Filter Name	Filter Data Type	Scope	Filter Expression	Filter Operator	Default Value
PURGESTATUS	String	Entity	CSTB_CONTRACT.CONTRACT_STATUS	=	S
PURGEMODULECODE	String	Entity	CSTB_CONTRACT.MODULE_CODE	=	LC
PURGEBRANCH	String	Entity	CSTB_CONTRACT.BRANCH	=	global.current_branch
RETENTIONDAYS	Number	Entity	GLOBAL_APPLICATION_DATE-NVL(CSTB_CONTRACT.LATEST_EVENT_DATE, GLOBAL_APPLICATION_DATE)	>	160

Final Filter Expression

```
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
```

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.

Purge Generation

Action: Load

Save XML Path: LCPNTRCT_RAD.xml BROWSE

Entity Name: CNTRCT

Module Name: LC

Entity Id: LCPNTRCT

Purge Master
Purge Tables
Purge Filters

Purge Filter Details

Business Filters Execution Filters Free Format Filter

Filter Name	Filter Data Type	Scope	Filter Expression	Filter Operator	Default Value
PURGESTATUS	String	Entity	CSTB_CONTRACT.CONTRACT_STATUS	Builder Equals	S
PURGEMODULECODE	String	Entity	CSTB_CONTRACT.MODULE_CODE	Builder Equals	LC
PURGEBRANCH	String	Entity	CSTB_CONTRACT.BRANCH	Builder Equals	global.current_t
RETENTIONDAYS	Number	Entity	GLOBAL_APPLICATION_DATE-NVL(CSTB_CONTRACT.LATE	Builder Greater Than	160

Final Filter Expression

```
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
```

Default Custom Builder

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	
		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.

Entity Name: CNTRCT
Entity Id: LPCNTRCT
Module Name: LC

Purge Filter Details

Business Filters | Execution Filters | **Free Format Filter**

Free Format Filter

```
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
CSTB_CHG_LIQ B WHERE B.CONTRACT_REF_NO = CSTB_CONTRACT.CONTRACT_REF_NO AND NVL
(B.LIQ_AUTH_STATUS, 'U') = 'U')
```

Final Filter Expression

```
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
```

Default Custom Builder

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 'Generate' window in the ORACLE FLEXCUBE Development Workbench. The window is titled 'Generate' and contains a grid of checkboxes for various file types and packages. The 'Generate' button is visible at the bottom right.

SI.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



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Oracle Financial Services Software Limited
Oracle Park
Off Western Express Highway
Goregaon (East)
Mumbai, Maharashtra 400 063
India

Worldwide Inquiries:
Phone: +91 22 6718 3000
Fax: +91 22 6718 3001
www.oracle.com/financialservices/

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