Development of Gateway Screen and LOV Enhancer Oracle Banking Corporate Lending

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FINANCIAL SERVICES

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1 Preface

This document describes the process of FLEXCUBE Screen Development using Enterprise Limits and Collateral Management Development Workbench.

1.1 Audience

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

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

| Proficiency | Resources |
|--------------------------------------|--|
| FLEXCUBE Functional Architecture | Training programs from Oracle |
| | Financial Software Services. |
| FLEXCUBE Technical Architecture | Training programs from Oracle |
| | Financial Software Services. |
| FLEXCUBE Object Naming conventions | Development Overview Guide |
| Working knowledge of Web based | Self Acquired |
| applications | |
| Working knowledge of Oracle Database | Oracle Documentations |
| Working knowledge of PLSQL & SQL | Self Acquired |
| Language | |
| Working knowledge of XML files | Self Acquired |
| Essential knowledge on FLEXCUBE | <u> Development Workbench – Administration</u> |
| ODT | <u>Development Workbench – Getting Started</u> |

1.2 Related Documents

Oracle FLEXCUBE Enterprise Limits and Collateral Management ODT Screen Development

2 Overview of Gateway Screen Development for Oracle FLEXCUBE

Oracle FLEXCUBE ODT provides the developer with a user friendly console for designing and developing screens for Oracle FLEXCUBE.

ODT assist developers in designing screens with the capability of generating front end scripting files, PL/SQL Packages, Static data scripts, XSDs, Excel templates and html files. This generated code performs validations and does some processing which is common across screens in FLEXCUBE; only the Business logic specific to the screen has to be added by the Developer in back end and front end units.

Example

Release Name: FC 12.1

Release Type: KERNEL, CLUSTER, CUSTOM

ODT will generate all files and developers are supposed to add the business logic in designated units depending on the Release Type.

2.1 Radxml

ODT saves all the activities carried out by the developer in an xml file hereby referred to as **radxml**. Persistence of the screens is achieved through radxml. All the units required for the working of a screen can be generated from its radxml.

If some changes are required on the screen in a future release, the same radxml can be loaded and changes can be done on this radxml. ODT can segregate the changes done on different releases and saves the radxml accordingly.

Radxml will adhere to following naming convention

Function Id name + _RAD.xml

Example: STDCULND_RAD

2.2 Design Steps

Sequence of Steps to be followed while developing a screen in ODT is:

1. Identifying the data sources and their relations

- 2. Logically grouping the data sources into Data Blocks
- 3. Designing Screen Layout
- 4. Logically grouping the Block Fields into Field sets
- 5. Attaching Call forms and launch forms if any
- 6. Defining Actions

Refer respective sections for detailed explanation of each step

Saving Radxml

While Development, save radxml at constant intervals. Click on save icon in the top right for having the work. Radxml would be saved in the user directory maintained

2.2.1 Design Process:

Click on Function Generation node in the browser tree found in the Landing page of ODT. Function Generation Page window gets launched.

While creating a new function in Function Generation page in ODT, below information needs to be provided in the Header section

The Header portion of the Function Generation Page screens consists of the following fields:

2.2.2 Action

New and Load options are provided for this field.

For a new screen development, select the action as New; if an existing screen radxml has to be loaded for customization select Load option

If the action is load then corresponding radxml has to be loaded using browser option in Save Xml Path; all the header information will get populated.

2.2.3 Function Id

If the Action is selected as New, the function Id name needs to be specified. Function Id is the unique name with which a screen is identified.

Function Id name should follow the FLEXCUBE standard naming convention.

- Function Id name to have maximum length of 8 characters
- For detail screens the third character should be 'D'
- For report screens the third character should be 'R'
- For call form function ids the third character should be 'C'
- First 2 characters should specify the module name for which the particular function id is used (recommended).

2.2.4 Save Xml Path

The label description of the field will change depending on the action .If the action is load, ODT attaches a Browse button to it so that user can browse the radxml and load it.

2.2.5 Gateway Specific changes

Design of screen will be as any other normal maintenance screen, only change with in preference user has to select the screen as gateway. Below mentioned screen will help in better understanding.

| Function Generation | | | | _ × |
|---|---|---|---|--------------------|
| | | | | 🖬 🗙 🗉 C 🎸 🧃 🔿 |
| Action New V Function Id STDC001 Save XML Path | Function Type Parent Parent Function Parent Xml | V N | Function Category Maintenance V Header Template None V Footer Template None V | |
| Search | Preferences | | | š |
| Preferences DataSource LiatSource DataBlocks Screens FieldStds Actions CaliForms LaunchForms Summary | Head Office Function Ogging Required Ogging Required Oncode Auto Authorization Tank Modifications Field Log Required Muttle Branch Access Excel Sport Required Auto Automation Field GateWay Screen Menu Datam Parameter Value Mappings | Module Notule Description Module Group Branch Program Id Process Code SVN Repository URL | | |
| | | | | Control String 🕂 🗕 |
| | Function Id | Module * | Module Description | · |
| | STDC001 | ٩ | | |
| | | | | |

Fig 2.2.5.1: Preferences Screen

Once gateway screen checkbox is selected then in generation screen only front-end units, xsd's and INC's will only be generated. Below screen shows generation screen.

| Front-End Files | System Packages | Hook Packages | | Meta Data | Others | ^ |
|---|---|--|--|--|--|---|
| ☑ RadXML ☑ Screen Xmi ☑ System JS | Man Package Spec Main Package Body Notification Trogers Upload Package Body Upload Package Body Java Classes | Kermel Package Spec Kermel Package Body Cluster Package Spec Cluster Package Body Cluster Package Body Clustor Package Body | G Menu Details G Datasource Details G LOV Details G Biock Details G Streen Details G Amendable Details G Amendable Details G Ammary Details G Summary Details G Summary Details G Symbol Details | Zi Labol Details Silocie NC Columns Silocie NC Columns Silocie NC Columns Silocie NC Columns Silocie | ⊘ Xsos Green Himi Upload Table Trigger Upload Tables Definition Archive Table Definition | v |

Fig 2.2.5.2: Generation Screen

User has to generate the above selected units and has to deploy in FCUBS. Code has to be written in gateway flow to make this screen work. For generation and design please use <u>Oracle FLEXCUBE</u> <u>Enterprise Limits and Collateral Management ODT Screen Development</u>.

3 Overview of LOV Enhancer

Lov Enhancer is used to map Lov's of Screens to External or Combined Lovs.

3.1 External Lov

Lov of a screen is mapped to External Lov. Where all the data populated and data fetched in the lov will be from external system. User has to simply select the lov as External in the screen. Below screen will help in better understanding.

| | | | | Populate Combined | Details |
|----------------------|--------|----------|--------------------------|-------------------|----------|
| | Lov Id | | Internal/External/Combin | ed | |
| LOV_ACCOUNT | | External | | | |
| LOV_ACCOUNT_OFF | | External | | | |
| LOV_ADDRESS_CODE | | Internal | | | |
| LOV_AML_CUST_GRP | | Internal | | | |
| LOV_AMTCCY1 | | Internal | | | |
| LOV_BUSINESS_ACT | | Internal | | | |
| LOV_CHG_GRP | | Internal | | | |
| LOV_CHKLST | | Internal | · | | |
| LOV_CLG_GRP | | Internal | | | |
| LOV_CLSCCY | | Internal | | | |
| LOV_ALG_ID | | Internal | | | |
| LOV_BIC | | Internal | | | |
| LOV_COLLATERAL_TYPE | | Internal | | | |
| LOV_COUNTRY | | Internal | | | |
| LOV_CREDIT_RATING | | Internal | · | | |
| LOV_CURRENT_EMPLOYER | | Internal | | | |
| LOV_CUSTPREFIX1 | | Internal | | | |
| LOV_CUSTPREFIX2 | | Internal | · | | |
| LOV_CUST_CAT | | Internal | • | | ~ |
| , , | | | - | Genera | te Close |

Fig 3.1.1: Lov Enhancer Screen External

3.2 Combined Lov

User can use combination of lovs from external and internal. Where we will provide details of external Lov's bind variable and reduction field details. Please check the below screen.

| v Details | | | Populate | Combined De | tails |
|--|------------------|-----------------|-------------|-------------|-------|
| LOV_Name LOV_AML_CUST_GRP Function ID Name STDCIF | xlemal | Internal/Extern | al/Combined | | 1 |
| External LOV Name LOV_EXT_AML_CUST | oternal V | | | | |
| LOV Function Name fn_function() | nternal V | | | | |
| tion Fields Bind Variables | × bendmo | | | | |
| | nternal V | | | | |
| Bind Variables Mapping | niernal 🗸 | | | | |
| | iternal 🗸 | | | | |
| Bind Variables Available Bind Variables Mapped | iternal 🗸 | | | | |
| BIND1 | nlernal 🗸 | | | | |
| | nternal 🗸 | | | | |
| | nlemai 🗸 | | | | |
| 44 | nternal 🗸 | | | | |
| | nternal 🗸 | | | | |
| | tlernal 🗸 | | | | |
| | iternal 🗸 | | | | |
| | tlemal 🗸 | | | | |
| | nternal 🗸 | | | | |
| Ok | Cancel Iternal 🗸 | | | | |
| | nlernal 🗸 | | | | 1 |
| | | | | Generate | Clos |

Fig 3.2.1: Lov Enhancer Screen Combined

Here user will provide details for external LOV.

When generated after the modifications, INC will be generated with below kind of data

```
UPDATE CSTB_LOV_INFO SET LOV_TYPE = 'E' WHERE FUNCTION_ID='STDCIF' AND LOV_ID IN ('LOV_ACCOUNT','LOV_ACCOUNT_OFF')
```

/

UPDATE CSTB_LOV_INFO SET LOV_TYPE = 'C' WHERE FUNCTION_ID='STDCIF' AND LOV_ID IN ('LOV_AML_CUST_GRP')

/

DELETE CSTB_CMB_LOV_INFO A WHERE A.FUNCTION_ID IN ('STDCIF');

```
INSERT INTO CSTB_CMB_LOV_INFO (FUNCTION_ID, LOV_ID, EXTERNAL_LOV_ID, LOV_FUNCTION, REDUCTION_LIST, BIND_LIST) VALUES ('STDCIF','LOV_AML_CUST_GRP','LOV_EXT_AML_CUST','fn_function()','','1~')
```

/

COMMIT;

| nformatio | on Description | Information Code | | | | | P | pulate | Combined D | etails | |
|-----------|----------------------|---------------------|----------|--------|----------------------------|--|---|--------|------------|--------|--|
| i File S | aved | | | | Internal/External/Combined | | | | , | | |
| | | | External | ~ | | | | | | | |
| | | | External | ~ | | | | | | | |
| | | | Internal | ~ | | | | | | | |
| | | | Internat | \sim | | | | | | | |
| | | | Combine | sd 🗸 | | | | | | | |
| | | Ok | Internal | ~ | | | | | | | |
| | LOAT RIC | <u></u> | Internal | ~ | | | | | | | |
| | | | Internal | ~ | | | | | | | |
| | LOV_CHG_GRP | | Internal | ~ | | | | | | | |
| | | | | , | | | | | | | |
| | | | Internal | ~ | | | | | | | |
| | LOV_CLO_GRP | | Internal | ~ | | | | | | | |
| | LOV_CLECCY | | Internal | ~ | | | | | | | |
| | LOV_COLLATERAL_TYPE | | Internal | ~ | | | | | | | |
| | LOV_COUNTRY | | Internat | \sim | | | | | | | |
| | LOV_CREDIT_RATING | | Internal | ~ | | | | | | | |
| | LOV_CURRENT_EMPLOYER | | Internal | \sim | | | | | | | |
| | LOV_CUSTPREFIX1 | | Internal | ~ | | | | | | | |
| | LOV_CUSTPREFIX2 | | Internal | ~ | | | | | | | |
| | LOV_CUST_CAT | | Internal | ~ | | | | | | ~ | |
| | | | - | | | | | | Generate | Close | |
| | | | | | | | | | concrete | 1 | |
| | | | | | | | | | | | |

Fig 3.2.3: Generation Screen



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