

# Oracle® Banking Enterprise Limits and Collateral Management

## Development Workbench Rest-Services Development



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# 1

## Preface

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- [Acronyms and Abbreviations](#)  
The list of the acronyms and abbreviations used in this guide are as follows:
- [Symbols and Icons](#)  
The lists of symbols, buttons and shortcut key that are used in the application to perform various tasks are covered in this topic.
- [Prerequisite](#)

### 1.1 Purpose

This guide is designed to help acquaint you with the Oracle Banking Enterprise Limits and Collateral Management (ELCM) application. This guide provides answers to specific features and procedures that the user need to be aware of the module to function successfully.

User can further obtain information specific to a particular field by placing the cursor on the relevant field and pressing <F1> on the keyboard.

### 1.2 Audience

This guide is intended for the following User/User Roles:

**Table 1-1 Audience**

Role	Function
Back office data entry clerk	Input functions for funds
Back office managers/officers	Authorization functions
Product Managers	Product definition and authorization
End of day operators	Processing during end of day / beginning of day

### 1.3 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

### Access to Oracle Support

Oracle customer access to and use of Oracle support services will be pursuant to the terms and conditions specified in their Oracle order for the applicable services.

## 1.4 Critical Patches

Oracle advises customers to get all their security vulnerability information from the Oracle Critical Patch Update Advisory, which is available at [Critical Patches](#), [Security Alerts and Bulletins](#). All critical patches should be applied in a timely manner to ensure effective security, as strongly recommended by [Oracle Software Security Assurance](#).

## 1.5 Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

## 1.6 Basic Actions

Table 1-2 Basic Actions

Action	Description
<b>Approve</b>	Used to approve the initiated report. This button is displayed, once the user click <b>Authorize</b> .
<b>Audit</b>	Used to view the maker details, checker details, and report status.
<b>Authorize</b>	Used to authorize the report created. A maker of the screen is not allowed to authorize the report. Only a checker can authorize a report, created by a maker.
<b>Close</b>	Used to close a record. This action is available only when a record is created.
<b>Confirm</b>	Used to confirm the performed action.
<b>Cancel</b>	Used to cancel the performed action.
<b>Compare</b>	Used to view the comparison through the field values of old record and the current record. This button is displayed in the widget, once the user click <b>Authorize</b> .
<b>Collapse All</b>	Used to hide the details in the sections. This button is displayed, once the user click <b>Compare</b> .
<b>Expand All</b>	Used to expand and view all the details in the sections. This button is displayed, once the user click <b>Compare</b> .
<b>New</b>	Used to add a new record. When the user click <b>New</b> , the system displays a new record enabling to specify the required data.

Table 1-2 (Cont.) Basic Actions

Action	Description
<b>OK</b>	Used to confirm the details in the screen.
<b>Save</b>	Used to save the details entered or selected in the screen.
<b>View</b>	Used to view the report details in a particular modification stage. This button is displayed in the widget, once the user click <b>Authorize</b> .
<b>View Difference only</b>	Used to view a comparison through the field element values of old record and the current record, which has undergone changes. This button is displayed, once the user click <b>Compare</b> .
<b>Unlock</b>	Used to update the details of an existing record. System displays an existing record in editable mode.

## 1.7 Related Documents

For more information refer to the Oracle Banking manuals on:

- Development of Launch Forms and Others Screens
- Enterprise Collaterals User Guide
- Enterprise Limits and Collaterals Common User Guide

## 1.8 Conventions

The following text conventions are used in this document:

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

## 1.9 Screenshot Disclaimer

Personal information used in the interface or documents is dummy and does not exist in the real world. It is only for reference purposes.

## 1.10 Acronyms and Abbreviations

The list of the acronyms and abbreviations used in this guide are as follows:

Table 1-3 Acronyms and Abbreviations

Acronyms	Abbreviations
CIF	Customer Information File

**Table 1-3 (Cont.) Acronyms and Abbreviations**

Acronyms	Abbreviations
CASA	Current Account and Savings Account
DDA	System that holds the CASA account and balances
ELCM	Enterprise Limits and Collateral Management
ECA	External Credit Approval
FCUBS	Oracle FLEXCUBE Universal Banking Solution
GW	Gateway
HTTP	Hyper Text Transfer Protocol
ID	Identification Number
Mark EOTI	Mark End of Transaction Input
Mark TI	Mark Transaction Input
OFSA	Oracle Financial Services Analytical Applications
ORMD	Oracle Revenue and Billing Management
PK	Primary Key
RDBMS	Relational Data Base Management System
SMS	Security Services
UI	User Interface
VD	Value Date
XML	Extensible Mark-up Language
XSD	XML Schema Definition
XSLT	Extensible Stylesheet Language Transformations

## 1.11 Symbols and Icons

The lists of symbols, buttons and shortcut key that are used in the application to perform various tasks are covered in this topic.

**Table 1-4 Symbols and Icons**









Icons	Function
	Perform search
	Minimize
	Navigate to the next record
	Navigate to the previous record
	Toggle OFF
	Toggle ON
	Delete
	Click this icon to add a new row.

Table 1-4 (Cont.) Symbols and Icons














Icons	Function
	Click this icon to delete an existing row.
	List view
	Maximize
	Navigate to the first record
	Navigate to the last record
	Advance search
	Search record
	Save the record
	Reset the record
	Clear the record

Table 1-5 Symbols and Icons - Audit Details

Icons	Function
	A user
	Branch details
	Date and Time

## 1.12 Prerequisite

Specify the **User ID** and **Password**, and login to **Home** screen.



# 2

## Introduction

This topic describes an overview of the Rest services.

The purpose of this user manual is to guide users on the end-to-end setup of the Rest services. Here are the steps involved in setting up Rest services:

1. Enabling REST in RADXML using ODT
2. Generation of Rest Artifacts using Silent ODT
3. Building of Rest Property files using Installer
4. Generation of EXEC sources using Installer
5. EAR building using Installer

# 3

## Enable Rest in RADXML

This topic explains systematic instructions to enable Rest in RADXML.

On the Development Workbench login page, specify the **Username** and **Password** and login to the Development Workbench landing page.

1. On **Homescreen**, click **Function Generation** node under the **Browser** menu.

The **Function Generation** screen displays.

**Figure 3-1 Function Generation**

Web Service	Action Code	Operation Code	Action Stage Type	Rest Enabled	Amendables	Comment Code
<input checked="" type="checkbox"/>	QUERY	QueryTDTTopUp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Comments
<input checked="" type="checkbox"/>	NEW	CreateTDTTopUp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Comments
<input checked="" type="checkbox"/>	MODIFY	ModifyTDTTopUp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Comments
<input checked="" type="checkbox"/>	AUTHORIZE	AuthorizeTDTTopUp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Comments
<input checked="" type="checkbox"/>	DELETE	DeleteTDTTopUp	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Comments
<input type="checkbox"/>	CLOSE		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
<input type="checkbox"/>	REOPEN		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
<input type="checkbox"/>	REVERSE		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
<input type="checkbox"/>	ROLLOVER		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
<input type="checkbox"/>	CONFIRM		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
<input type="checkbox"/>	LIQUIDATE		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments
<input type="checkbox"/>	SUMMARYQUERY		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Comments

2. Click the **Action** node at the left panel.
3. On the **Form Actions** screen, specify the fields.  
Refer to the topic [#unique\\_26](#) for the detailed information.
4. On the **Form Actions** screen, check the **Rest Enabled** box to enable Rest Services for a function ID.
5. Specify the **Rest Service Name**.
6. Select the **Action Code** in the **Rest Enabled** column which needs to be enabled as part of Rest Services.
7. Compile all the INC's generated as part of RAD Artifacts.

# 4

## Generation of Rest Artifacts Using Silent ODT

This topic describes an overview of components of the Oracle FLEXCUBE Universal Banking Rest service.

### Components of Rest service

Following are the components of the Oracle FLEXCUBE Universal Banking Rest service:

- **DTO File** - REST Messages And Data Transfer Objects. In Patterns of Enterprise Application Architecture, Martin Fowler defines a Data Transfer Object (DTO) as an object that carries data between processes to reduce the number of methods calls.
- **Service File** - File used to perform the actual actions of the Rest Service.
- **Util File**
- **Web.xml**

# 5

## Prerequisites

Before the run utility operation in Open Development Tool, ensure the installation of the following technologies:

- **JDK**  
**License Information** - JDK is distributed by Sun Microsystems, Inc under Java Development Kit Binary Code License Agreement.  
**Instructions** - The installer requires JDK 1.8.0 version to be downloaded into the system and the same should be set as an environmental variable.
- **Apache Ant 1.7.1**  
**Instructions** - The installer requires ANT 1.7.1 version to be downloaded into the system and the same should be set as an environmental variable.

# 6

## ODT Silent Utility

This topic describes an overview of the operations of ODT Silent Utility.

### Prerequisites

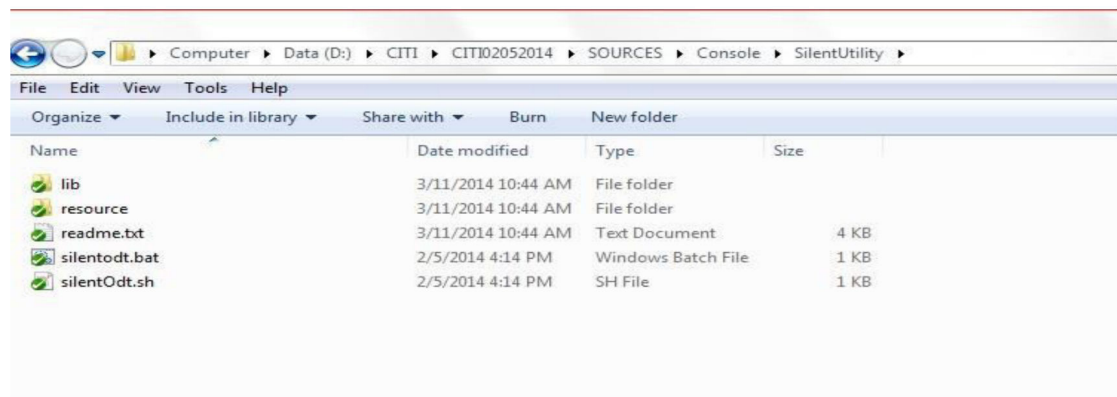
Refer to the topic [#unique\\_30](#) for detailed information.

### Utility Run on Windows/Unix

After copying the installer sources and library folder to the local system, make sure to uncheck the read-only check box in source properties and apply the same to all the subfolders.

The figure below shows the source folder in the local system:

**Figure 6-1 Source Folder of SilentODTUtility**



### Configuration of SilentODTUtility

All Configuration files can be found inside/resource folder of the utility.

#### 1. SilentOdt.properties

**Table 6-1 SilentOdt.properties**

Field	Description
<b>ODT Data Source Detail Credentials</b>	
<b>OdtJdbcUrl</b>	JDBC <i>jdbc:oracle:thin:@10.184.xx.xx:1521:FCDEMO</i> (should be encrypted using utility)
<b>OdtDbUser</b>	DB User name (should be encrypted using utility)
<b>OdtDbPassword</b>	DP Password (should be encrypted using utility)
<b>Logger Properties</b>	

Table 6-1 (Cont.) SilentOdt.properties

Field	Description
<b>Logreqd</b>	<b>Y/N</b> , Default set to <b>N</b> . If the value is set to <b>Y</b> the logger will be enabled for the generation of the log. If the value is set to <b>N</b> logger will be disabled.
<b>Logpath</b>	Provide the path where the Logger files will be generated.
<b>Level</b>	Provide the Logger Level. This can be either <b>DEBUG/INFO/WARNING/SEVERE</b> . Provide as <b>DEBUG</b> for writing detailed log. Default value would be set to <b>INFO</b> .
<b>System Properties</b>	
<b>JAVA_HOME</b>	Maintain the Java installed location.
<b>WEBLOGIC_HOME</b>	Maintain the oracle Weblogic installed location.
<b>WAS_HOME</b>	Maintain the IBM Websphere installed location.

**JAVA\_HOME**, **WEBLOGIC\_HOME**, **WAS\_HOME** are optional and can be used for generating template Ant scripts.

## 2. **OdtOperations.properties**

Configure the Operations files as per requirement. The following operations are supported in the silent utility of ODT:

- a. **LOGIN**
- b. **SETRELEASE**: Setting Release and Environment Details
- c. **BULKGENERATION**: Bulk Generation of RADXML units
- d. **REFRESH**: Bulk refresh of RADXML
- e. **SXML\_REFRESH**: Bulk refresh of Service XMLs
- f. **SXML\_UPDATER**: Bulk Updater of service XMLs based on the changes in RADXMLs
- g. **SXML\_BULKGENERATION**: Bulk Generation of web service artifacts.
- h. **REST\_GENERATION**: Bulk Generation of Rest Service Artifacts

Execution of Operation will be as per the sequence maintained in **OdtOperations.properties**.

Example:

- a. Operation = **LOGIN**
- b. Operation= **SETRELEASE**
- c. Operation= **REST\_GENERATION**

If the sequence of operations is as above, then **LOGIN**, **SETRELEASE**, and **REST\_GENERATION** Operations would be processed in the respective sequence.

### **Note:**

**LOGIN** and **SETRELEASE** are mandatory operations to be performed.

- a. **LOGIN**

Login should always be the first operation to be configured as part of any execution.

**Figure 6-2 LOGIN Operation**

```

1  ###Login to Tool
2  ## 1.operation = LOGIN
3  ## 1.userId=RADTOOL
4  ## 1.password=PASSWORD
5

```

**Table 6-2 Login to Tool**

Field	Description
Operation	LOGIN
User Id	ODT User Id which is created in the ODT Application.
Password	ODT Password which is created in the ODT Application (should be encrypted using Utility).

**b. SETRELEASE**

This operation is used for setting Release and Environment Preferences for SilentODTUtility. Connection to the FLEXCUBE schema would be established based on data maintained in ODT or through the data in **env\_config.xml** as explained in an earlier section.

**Figure 6-3 SETRELEASE Operation**

```

6  ##Set Release and Environment for the User
7  ## 2.operation= SETRELEASE
8  ## 2.relCode=MODEL_BANK
9  ## 2.envCode=MODEL_BANK_DEV_ENV
10 ## 2.langCode=ENG
11

```

**Table 6-3 Release and Environment Details for User**

Field	Description
Operation	SETRELEASE
relCode	ODT Release Code which is created in the ODT Application.

**Table 6-3 (Cont.) Release and Environment Details for User**

Field	Description
<b>envCode</b>	ODT Environment Code which is created in the ODT Application.
<b>langCode</b>	Lang code for the above-mentioned release code.

**c. REST\_GENERATION**

Web service artifacts can be generated through this operation.

**Table 6-4 REST\_GENERATION**

Field	Description
<b>radxmlListFile</b>	Prepare text file which contains absolute path of all RADXMLs which are used for those services.
<b>srcPath</b>	Provide source folder path which is an option (Tool will create <b>radxmlListFile</b> by itself from the <b>srcPath</b> . Note that if <b>srcPath</b> is provided, <b>radxmlListFile</b> need not be provided.
<b>destpath</b>	Provide the path where the files will be generated.
<b>gen</b>	Provide the type of files to be Generated (separated by comma). Options are REST.

**Table 6-5 Service XML Component Generator**

Input	Output
<b>operation</b>	REST in destination path
<b>radxmlListFile</b>	REST in destination path
<b>srcPath</b>	REST in destination path
<b>fileType</b>	REST in destination path
<b>destpath</b>	REST in destination path
<b>gen</b>	REST in destination path

**Generation of Rest service Artifacts through SilentOdtUtility**

To generate Rest service artifacts for a service, configure the property files of the utility as explained in the previous section.

Following operations needs to be configured in **OdtOperations.properties** in the respective sequence:

1. **LOGIN**
2. **SETRELEASE**
3. **REST\_GENERATION**

Provide the following values for **gen** parameter of **REST\_GENERATION**. To generate Rest service Artifacts, the user has to double click on the batch file **silentOdt.bat/sh** present in the ODT source.



Figure 6-4 SilentODT Sources Folder

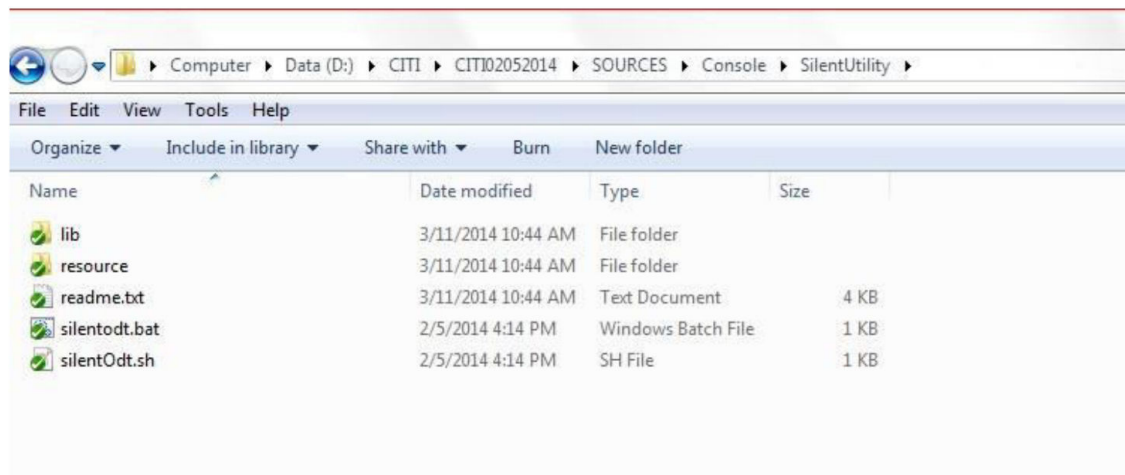
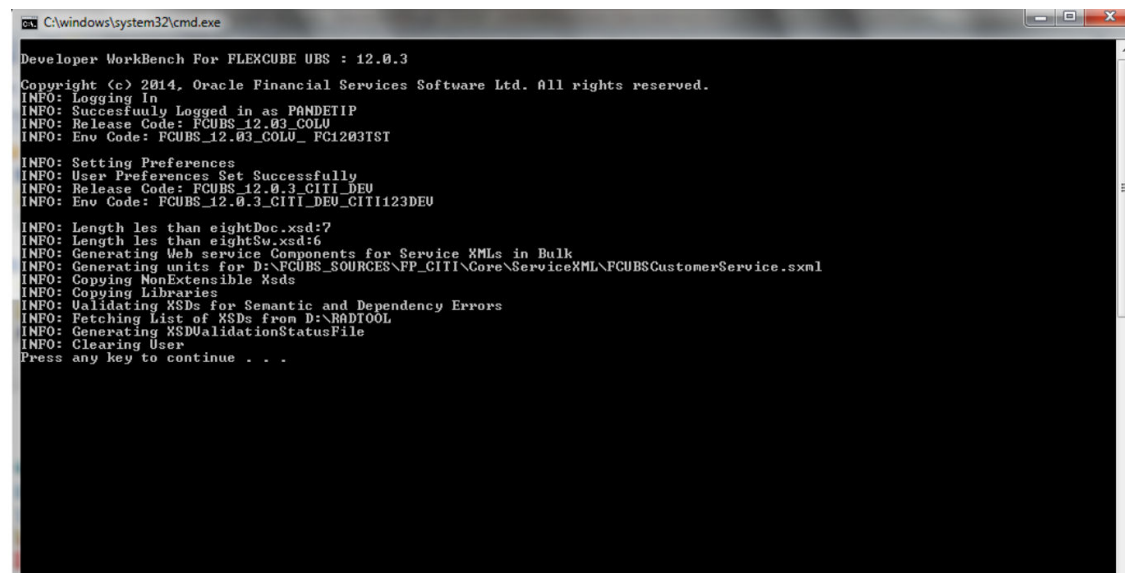


Figure 6-5 SilentODT Command Prompt



After the successful built operation, The Rest artifacts files will be generated in the destination directory specified.