Development Workbench Rest-Services Development
Oracle FLEXCUBE Investor Servicing
Release 14.7.3.0.0
Part No. F90302-01
[December] [2023]

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FINANCIAL SERVICES

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1. Introduction

Purpose of this user manual is to guide user on end to end setup of REST Services.

Steps involved in REST Services setup:

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

2. Enabling of Rest in RADXML

The screenshot of RAD Tool after loading RADXML is as shown below:

The steps to enable REST Services for a Function ID are as follows:

In the Actions section of RAD:

1. Select REST Enabled Flag

2. Provide the REST Service Name

3. Select the Action Code which needs to be enabled as part of REST Services

4. Service Name and Operation ID are mandatory for REST Service to generate static data

5. Compile all the INC's generated as part of RAD Artifacts

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3. Generation of REST Artifacts using Silent ODT

3.1 Components of REST Service

Following are the components of Oracle FLEXCUBE Investor REST service:

- dto files: 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 in order to reduce the number of method calls.
- Service File: File used to perform the actual actions of the REST Service
- Util File
- Web.xml

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4.1 <u>Prerequisites</u>

JDK Instructions

Installer requires JDK version to be downloaded in the system and the same should be set as environmental variable.

Library required for executing ANT jaxb-xjc-2.2.11.jar and ojdbc8.jar

apache-ant-1.10.1 Instructions

Installer requires ANT 1.10.1 version to be downloaded in the system and the same should be set as environmental variable.

Set JAVA_HOME and ANT_HOME in CMD or set in environment variable

Set JAVA_HOME=D:\JAVA18_161\JDK18161

Set ANT_HOME= ..\INSTALLER\SOURCE\Library\installer\apache-ant-1.10.1

Set PATH=%PATH ANT_HOME\bin

Silent Utility Instructions

SilentUtility.jar is required for executing silent ODT.

Copy the SilentUtility.jar from /INSTALLER/SOURCE/Library/odt to /TOOLS/ODT/SOURCE/Consol/SilentUtility/lib before executing.

4.2 <u>How to run Utility on Windows/ UNIX</u>

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

The screen shot below shows how the source folder in your local system should look like:
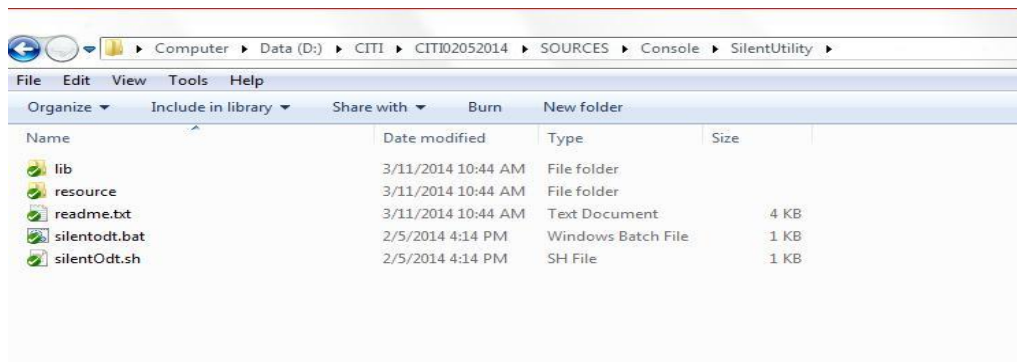
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4.3 <u>Configuration of SilentODTUtility</u>

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

4.3.1 <u>SilentOdt.properties</u>

ODT Data Source Detail Credentials	
OdtJdbcUrl	Jdbc jdbc:oracle:thin:@10.184.xx.xx:1521:FCDEMO (should be encrypted using utility)
OdtDbUser	DB User name (should be encrypted using utility)
OdtDbPassword	DP Password (should be encrypted using utility)
Logger Properties	
Logreqd	Y/N. Default set to N
Logpath	Provide the path where the Logger files will be generated
Level	Provide the Logger Level This can be either DEBUG/INFO/WARNING/SEVERE Provide as DEBUG for writing detailed log Default value would be set to INFO
System Properties	
JAVA_HOME	Maintain the Java installed location
WEBLOGIC_HOME	Maintain the oracle WebLogic installed location

ODT Data Source Detail Credentials

Maintain ODT Database schema details as demonstrated in the figure above.

Maintain values for *OdtJdbcUrl, OdtDbUser, and OdtDbPassword.*

Logger Properties

*Logreqd***:** Y/N. Default set to N

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If value set to 'Y' logger will be enabled for generation of log

If value set to 'N' logger will be disabled

Logpath: Provide the path where the Logger files will be generated.

Level: Provide the Logger Level.

This can be either DEBUG/INFO/WARNING/SEVERE.

Provide as DEBUG for writing detailed log.

Default value would be set to INFO

System Properties

JAVA_HOME: Maintain the Java installed location*.*

WEBLOGIC_HOME: *Maintain the oracle WebLogic installed location*

(JAVA_HOME, WEBLOGIC_HOME)These are optional and would be used for generating template Ant scripts

4.3.2 <u>OdtOperations.properties</u>

Configure the Operations files as per requirement.

The following operations are supported in silent utility of ODT:

1. LOGIN
2. SETRELEASE: Setting Release and Environment Details
3. BULKGENERATION: Bulk Generation of Radxml units
4. REFRESH: Bulk refresh of radxml
5. SXML_REFRESH: Bulk refresh of Service XMLs
6. SXML_UPDATER: Bulk Updater of service XMLs based on the changes in RADXMLs
7. SXML_BULKGENERATION: Bulk Generation of web service artifacts
8. REST_GENERATION: Bulk Generation of Rest Service Artifacts

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

Example:

>   *1. Operation = LOGIN*
>
>   --
>   *2. Operation= SETRELEASE*
>
>   --
>   *3. Operation*= REST_GENERATION

If sequence of operations is as above, then Login Operation, Set Release and REST_GENERATION Operations would be processed in respective sequence

Note: login and setrelease are mandatory operations to be performed.

4.3.2.1 Login

User ID: Provide the ODT User ID which is created in the ODT Application

Password: Provide the ODT Password which is created in the ODT Application

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

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

Login to Tool	
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)

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4.3.2.2 <u>Set Release</u>

This operation can be used for setting Release and Environment Preferences for SilentODTUtility

relcode: Provide the ODT Release Code which is created in the ODT Application

envCode: Provide the ODT Environment Code which is created in the ODT Application

langcode: Provide the Lang code for above mentioned release code

Connection to Oracle FLEXCUBE schema would be established based on data maintained in ODT or through the data in env_config.xml as explained in earlier section

```
### Set the Release and Environment  ( Operation ==> SETRELEASE)
2.operation= SETRELEASE
2.relCode=FCIS140 ·
2.envCode=FCIS140
2.langCode=ENG
```

Set Release and Environment for User	
Operation	SETRELEASE
relCode	ODT Release Code which is created in the ODT Application
envCode	ODT Environment Code which is created in the ODT Application
langCode	Lang code for above mentioned release code

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4.3.2.3 <u>REST Generation</u>

Web service artifacts can be generated through this operation

radxmlListFile: Prepare text file which contains absolute path of all RADXMLs which are used for those services .

srcPath: provide source folder path which is option (Tool will create radxmlListFile by itself from the srcPath

Note that if srcPath is provided, radxmlListFile need not be provided

gen: Provide type of Files to be Generated (separated by coma) . Options are REST

destpath: Provide the path where the files will be generated.

```
3.operation=REST_GENERATION
3.gen = REST
3.srcPath=D:\\FCIS_REST\\WorkFolder\\RADREST\\UTDFPMNT\\RADXML
3.fileType=EXTENSIBLE
3.destpath=D:\\FCIS_REST\\WorkFolder\\RADREST\\Restgenfolder
```

Service XML Component Generator	
Input	**Output**
operation	REST in destination path
radxmlListFile	
srcPath	
fileType	
destpath	
gen	

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4.4 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 respective sequence

1. LOGIN
2. SETRELEASE
3. REST_GENERATION

Provide following values for gen parameter of REST_GENERATION

REST

Double click the batch file silentOdt.bat/sh present in the ODT source.
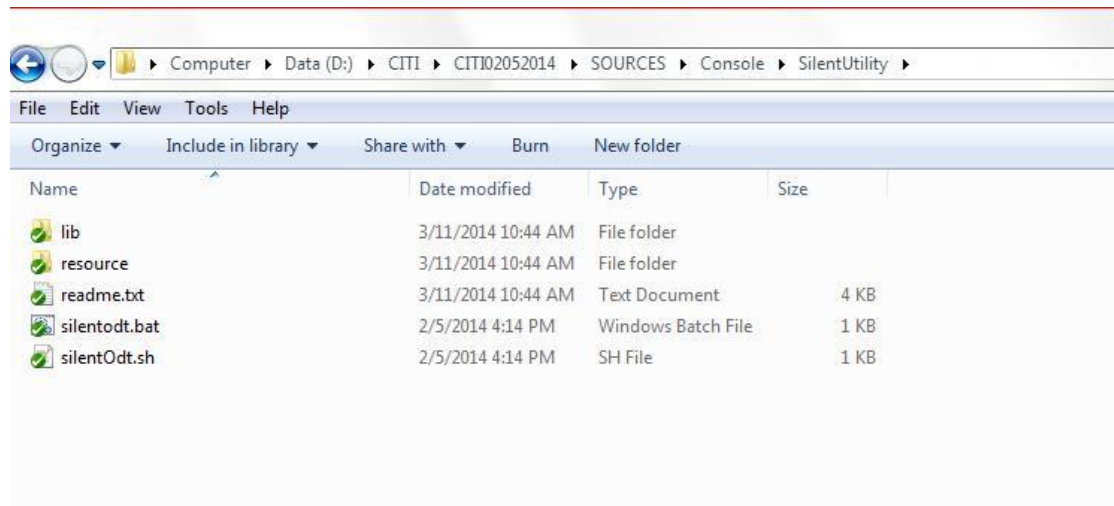
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This displays the screen as follows.


```
                                                          \SOURCE\Consol\SilentUtility>silentodt.bat

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SilentODT version : 14.0
java home is D:\JAVA18_161\JDK18161
Dec 05, 2018 11:00:42 AM com.ofss.tools.odt.login.ODTLoginAction doLogin
INFO: Logging In
Dec 05, 2018 11:00:43 AM com.ofss.tools.odt.login.ODTLoginAction doLogin
INFO: Succesfuuly Logged in as SRAMABAD
Dec 05, 2018 11:00:43 AM com.ofss.tools.odt.login.ODTLoginAction doLogin
INFO: Release Code: FCIS141
Dec 05, 2018 11:00:43 AM com.ofss.tools.odt.login.ODTLoginAction doLogin
INFO: Env Code: FCIS141

Dec 05, 2018 11:00:43 AM com.ofss.tools.odt.login.ODTSetRelease doSetRelease
INFO: Setting Preferences
Dec 05, 2018 11:00:44 AM com.ofss.tools.odt.dao.DBConnection lookup
WARNING: Lookup failed for:jdbc/FCIS141_DISTB140ITR2
Dec 05, 2018 11:00:44 AM com.ofss.tools.odt.login.ODTSetRelease doSetRelease
INFO: User Preferences Set Successfully
Dec 05, 2018 11:00:44 AM com.ofss.tools.odt.login.ODTSetRelease doSetRelease
INFO: Release Code: FCIS141
Dec 05, 2018 11:00:44 AM com.ofss.tools.odt.login.ODTSetRelease doSetRelease
INFO: Env Code: FCIS141

Dec 05, 2018 11:00:44 AM com.ofss.tools.odt.util.FileUtil getFileList
INFO: Fetching List of RADXMLs from D:\FCIS_REST\WorkFolder\RADREST\UTDFPMNT\RADXML
Dec 05, 2018 11:00:45 AM com.ofss.tools.odt.rest.RestRadGenerator process
INFO: Generating units for UTDFPMNT
Dec 05, 2018 11:00:46 AM com.ofss.tools.odt.rest.RestRadGenerator process
INFO: Generating SYS JS for UTDFPMNT
Dec 05, 2018 11:00:50 AM com.ofss.tools.odt.dao.RadOracleDao clearUser
INFO: Clearing User
Press any key to continue . . .
```

SilentODT Running in Command Prompt

After successful built operation, the Following Rest artifacts files will be generated in the destination directory specified.
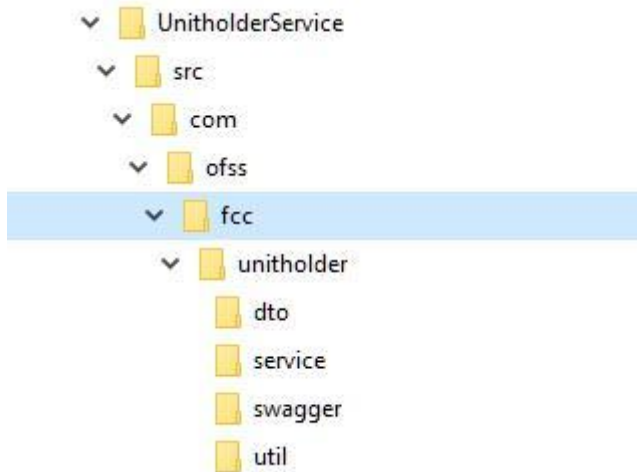
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Development Workbench RestServices Development
[December] [2023]
Version 14.7.3.0.0

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