

SWTCH Simulator
Oracle FLEXCUBE Universal Banking
Release 14.7.6.0.0
Part No. G29457-01
[April] [2025]



Table of Contents

| | |
|---|----------|
| 1. INTRODUCTION | 3 |
| 1.1 SCOPE OF THE DOCUMENT..... | 3 |
| 1.2 INTENDED AUDIENCE | 3 |
| 1.3 ORGANIZATION OF THE DOCUMENT | 3 |
| 2. SIMULATOR BASIC REQUIREMENTS..... | 4 |
| 2.1 SOFTWARE REQUIREMENTS..... | 4 |
| 2.2 REQUIRED EXTERNAL JARS | 4 |
| 3. SIMULATOR DEPLOYMENT PROCESS..... | 5 |
| 3.1 COPY FOLDER STRUCTURE..... | 5 |
| 3.2 PLACE THE REQUIRED JARS | 5 |
| 4. SIMULATOR BASIC CONFIGURATION..... | 6 |
| 4.1 IP & PORT CONFIGURATION | 6 |
| 4.2 BITMAP CONFIGURATION | 6 |
| 4.3 HEADER LENGTH TYPE | 6 |
| 5. SIMULATOR USAGE..... | 8 |
| 5.1 START THE SIMULATOR..... | 8 |
| 5.2 STOP THE SIMULATOR | 9 |
| 5.3 LOAD THE PREVIOUS TRANSACTION DETAILS | 9 |
| 5.4 SEND ISO TRANSACTION MESSAGE | 11 |
| 5.5 AUTO GENERATION OF FIELDS | 12 |
| 5.6 CLEAR OPTION OF SIMULATOR..... | 12 |
| 5.7 SWITCH TO DIFFERENT VERSION | 12 |

1. Introduction

1.1 Scope of the Document

This document explains the basic configuration and usage of the Simulator.

It provides a detailed description of the software requirements, building process, and Usage.

1.2 Intended Audience

The document is intended for the KERNEL implementation Team.

1.3 Organization of the Document

The organization of the document is as follows:

| Chapter | Remarks |
|-----------|--------------------------------------|
| Chapter 1 | Short Introduction to this document. |
| Chapter 2 | Simulator Basic Requirements |
| Chapter 3 | Simulator Deployment Process |
| Chapter 4 | Simulator Basic Configuration |
| Chapter 5 | Simulator Usage |

2. Simulator Basic Requirements

2.1 Software Requirements

- Java JDK 11 and above
- Ant

2.2 Required External Jars

- log4j.jar
- commons-logging-1.0.4.jar
- commons-pool-1.2.jar
- xml.jar
- xerces-2.4.0.jar

Note: The external jar we could find in the any application server's folder (e.g: weblogic or IBM web spear or oc4j (please search entire home folder of application server home folder with .jar)).

3. Simulator Deployment Process

3.1 Copy Folder Structure

Get the simulator folder which has required folder structure, configuration related files and simulator related jar files from the below link and place it in the local system.

"FCUBS_14.0.0.0\SwitchGateway\utilities\SWJavaSimulator"

Assume that it is <HomeFolder>

3.2 Place the required Jars

Place the external jar files into <HomeFolder>/lib folder.

4. Simulator Basic Configuration

4.1 IP & Port Configuration

Config File Name: <HomeFolder>/<Version - xxxx>/config/properties.xml

Configuration (change):

- The following XPATH will contain the Host Name or IP of the system to which simulator has to send the generated ISO Messages.

XPATH: simulator/FepiServer/Ip

- The following XPATH will contain the port to which simulator will establish the TCP/IP connection

XPATH: simulator/FepiServer/Port

4.2 Bitmap Configuration

Config File Name: <HomeFolder>/<Version - xxxx>/config/properties.xml

- The following XPAH has to be used to configure the Bitmap Type

XPATH: simulator/Bitmap-AsciiMode

Supporting Bitmap Modes:

1. **ASCII – XPATH value should be true**
2. **BINARY – XPATH value should be false**

4.3 Header Length Type

Config File Name: <HomeFolder>/<Version - xxxx>/config/properties.xml

- The following XPAH has to be used to configure the Bitmap Type

XPATH: simulator/ HeaderLength-AsciiMode

Supporting Bitmap Modes:

1. **ASCII – XPATH value should be true**
2. **BINARY – XPATH value should be false**

5. Simulator Usage

5.1 Start the Simulator

By executing the Simulator.bat we can start the Simulator

File Path: <HomeFolder>/Simulator.bat

When simulator is started, it will load with default values

The screenshot shows the 'Simulator' application window with the 'Iso Simulator' tab selected. The window has a menu bar with 'Simulator', 'Configuration', and 'Help'. Below the menu bar is a toolbar with buttons: 'Send', 'Reversal', 'Clear', 'Close', and navigation arrows. The main area contains a grid of input fields for transaction data. The 'System Trace Audit No' field is pre-filled with '000000' and the 'Message Type' field is pre-filled with '1804'. The 'Function Code' field is pre-filled with '801'. The 'Referral Phone Number' field is partially visible at the bottom left.

| | | | |
|-----------------------------|--------|--------------------------------|-----|
| Acquiring Institution | | Transaction Amount | 0 |
| Forwarding Institution | | Reconciliation Amount | 0 |
| CAT ID | | Conversion Rate Reconciliation | |
| CA ID Code | | R.R.No | |
| Transmission Date Time | | Transaction Ccy Code | |
| System Trace Audit No | 000000 | Reconciliation Ccy Code | |
| Message Type | 1804 | Cardholder Billing Ccy Code | |
| Primary Account Number | | Function Code | 801 |
| Processing Code | | Date & Time Local Transaction | |
| Card Acceptor Name/Loc... | | Date Effective | |
| Narrative | | Date Settlement | |
| Approval code | | Date Capture | |
| Response Code | | Year Transmission | |
| Additional Amount... | | To Account | |
| Net Avail Bal | | From Account | |
| Uncleared Bal | | Mini Statement | |
| Ledger Balance | | POS Code | |
| Additional Data... | | Amount Fee | |
| Field Length indicator | | Original Data Elements | |
| Preauthorisation Hold | | Orig Message | |
| Pre-Authorization Sequen... | | Orig STAN | |
| Referral Phone Number | | Orig Txn Date & Time | |

5.2 Stop the Simulator

Closing the simulator is preferred by using Close option of the simulator, since what ever the transactions are done so far will get saved in the transactions log history.

So that when we open next time we would be able to load the previous transactions what ever are done.

5.3 Load the previous Transaction Details

We can use to load the previous Transaction details on to the Simulator Panel, using Simulator menu, and then click on of the following

- First Record
- Next Record
- Previous Record
- Last Record

The following snap shot is to load the Last transaction

While choosing the option

| Simulator | | Configuration | | Help | |
|-----------------------------|-------|-------------------------------------|--------------------------------|----------------------------------|--|
| Send | Alt-S | Close < < > > | | | |
| Reversal | Alt-R | | | | |
| Clear | Alt-L | | | | |
| Close | Alt-X | | | | |
| First Record | Alt-1 | <input type="text"/> | Transaction Amount | <input type="text" value="0"/> | |
| Previous Record | Alt-2 | <input type="text"/> | Reconciliation Amount | <input type="text" value="0"/> | |
| Next Record | Alt-3 | <input type="text"/> | Conversion Rate Reconciliation | <input type="text"/> | |
| Last Record | Alt-4 | <input type="text"/> | R.R.No | <input type="text"/> | |
| CA ID Code | | <input type="text"/> | Transaction Ccy Code | <input type="text"/> | |
| Transmission Date Time | | <input type="text"/> | Reconciliation Ccy Code | <input type="text"/> | |
| System Trace Audit No | | <input type="text" value="000000"/> | Cardholder Billing Ccy Code | <input type="text"/> | |
| Message Type | | <input type="text" value="1804"/> | Function Code | <input type="text" value="801"/> | |
| Primary Account Number | | <input type="text"/> | Date & Time Local Transcation | <input type="text"/> | |
| Processing Code | | <input type="text"/> | Date Effective | <input type="text"/> | |
| Card Acceptor Name/Loc... | | <input type="text"/> | Date Settlement | <input type="text"/> | |
| Narrative | | <input type="text"/> | Date Capture | <input type="text"/> | |
| Approval code | | <input type="text"/> | Year Transmission | <input type="text"/> | |
| Response Code | | <input type="text"/> | To Account | <input type="text"/> | |
| Additional Amount.... | | <input type="text"/> | From Account | <input type="text"/> | |
| Net Avail Bal | | <input type="text"/> | Mini Statement | <input type="text"/> | |
| Uncleared Bal | | <input type="text"/> | POS Code | <input type="text"/> | |
| Ledger Balance | | <input type="text"/> | Amount Fee | <input type="text"/> | |
| Additional Data.... | | <input type="text"/> | Original Data Elements | <input type="text"/> | |
| Field Length indicator | | <input type="text"/> | Orig Message | <input type="text"/> | |
| Preauthorisation Hold | | <input type="text"/> | Orig STAN | <input type="text"/> | |
| Pre-Authorization Sequen... | | <input type="text"/> | Orig Txn Date & Time | <input type="text"/> | |
| Deferred Phone Number | | <input type="text"/> | | | |

After choosing the option

We can also do the same sort of work using buttons located on the standard tool bar

- |< will load the First Record
- > will load the Next Record
- < will load the Previous Record
- >| will load the Last record

5.4 Send ISO Transaction Message

Once if the data is entered in the required fields, we just need to choose send option of the simulator. Once if the send option is selected, It does the basic validation, prepares the ISO message based on the configurations, and will send the message to the host.

Once simulator send the Transaction to the host, It will start looking for response, and wits till some time (configured time) and if it doesn't get the response I t will popup the message.

If simulator get the response, first it clears the all the fields of the panel and will display the fields values those are present in the response

The screenshot shows the 'Iso Simulator' application window. The title bar includes 'Simulator Configuration Help' and standard window controls. Below the title bar is a menu bar with 'Send', 'Reversal', 'Clear', and 'Close'. A toolbar with navigation buttons is also present. The main area is titled 'Iso Simulator' and contains two columns of input fields. The left column includes fields for Acquiring Institution (12323), Forwarding Institution, CAT ID (4234), CA ID Code, Transmission Date Time (0711161907), System Trace Audit No (000003), Message Type (1210), Primary Account Number (1234567890123456), Processing Code (311000), Card Acceptor Name/Location, Narrative, Approval code, Response Code (06), Additional Amount..., Net Avail Bal, Uncleared Bal, Ledger Balance, Additional Data..., Field Length Indicator, Preauthorisation Hold, Pre-Authorization Sequen..., Referral Phone Number, Reason for Chargeback, and Number of Chargeback. The right column includes fields for Transaction Amount (000000000000), Reconciliation Amount (000000000000), Conversion Rate Reconciliation, R.R.No (00001265), Transaction Ccy Code (123), Reconciliation Ccy Code, Cardholder Billing Ccy Code, Function Code (801), Date & Time Local Transaction (080711161907), Date Effective (0807), Date Settlement (080711), Date Capture (0711), Year Transmission, To Account, From Account (100695), Mini Statement, POS Code, Amount Fee, Original Data Elements, Orig Message, Orig STAN, Orig Txn Date & Time, and Orig Acquirer.

After getting Response:

The screenshot shows the 'Iso Simulator' application window. The title bar includes 'Simulator Configuration Help' and standard window controls. Below the title bar is a menu bar with 'Send', 'Reversal', 'Clear', and 'Close'. A toolbar with navigation buttons is also present. The main area is a form titled 'Iso Simulator' containing two columns of fields. The left column includes fields like 'Acquiring Institution', 'Forwarding Institution', 'CAT ID', 'CA ID Code', 'Transmission Date Time', 'System Trace Audit No', 'Message Type', 'Primary Account Number', 'Processing Code', 'Card Acceptor Name/Loc...', 'Narrative', 'Approval code', 'Response Code', 'Additional Amount...', 'Net Avail Bal', 'Uncleared Bal', 'Ledger Balance', 'Additional Data...', 'Field Length indicator', 'Preauthorisation Hold', 'Pre-Authorization Sequen...', 'Referral Phone Number', 'Reason for Chargeback', and 'Number of Chargeback'. The right column includes fields like 'Transaction Amount', 'Reconciliation Amount', 'Conversion Rate Reconciliation', 'RR.No', 'Transaction Ccy Code', 'Reconciliation Ccy Code', 'Cardholder Billing Ccy Code', 'Function Code', 'Date & Time Local Transcation', 'Date Effective', 'Date Settlement', 'Date Capture', 'Year Transmission', 'To Account', 'From Account', 'Mini Statement', 'POS Code', 'Amount Fee', 'Original Data Elements', 'Orig Message', 'Orig STAN', 'Orig Txn Date & Time', and 'Orig Acquirer'. Some fields have values entered, such as '12323' for Acquiring Institution, '0711161907' for Transmission Date Time, and '000000000000' for Transaction Amount.

| Field | Value |
|--------------------------------|------------------|
| Acquiring Institution | 12323 |
| Forwarding Institution | |
| CAT ID | 4234 |
| CA ID Code | |
| Transmission Date Time | 0711161907 |
| System Trace Audit No | 000003 |
| Message Type | 1210 |
| Primary Account Number | 1234567890123456 |
| Processing Code | 311000 |
| Card Acceptor Name/Loc... | |
| Narrative | |
| Approval code | |
| Response Code | 06 |
| Additional Amount... | |
| Net Avail Bal | |
| Uncleared Bal | |
| Ledger Balance | |
| Additional Data... | |
| Field Length indicator | |
| Preauthorisation Hold | |
| Pre-Authorization Sequen... | |
| Referral Phone Number | |
| Reason for Chargeback | |
| Number of Chargeback | |
| Transaction Amount | 000000000000 |
| Reconciliation Amount | 000000000000 |
| Conversion Rate Reconciliation | |
| RR.No | 00001265 |
| Transaction Ccy Code | 123 |
| Reconciliation Ccy Code | |
| Cardholder Billing Ccy Code | |
| Function Code | 801 |
| Date & Time Local Transcation | 080711161907 |
| Date Effective | 0807 |
| Date Settlement | 080711 |
| Date Capture | 0711 |
| Year Transmission | |
| To Account | |
| From Account | 100695 |
| Mini Statement | |
| POS Code | |
| Amount Fee | |
| Original Data Elements | |
| Orig Message | |
| Orig STAN | |
| Orig Txn Date & Time | |
| Orig Acquirer | |

Note: Request to restart the Simulator if we don't get response for one message.

5.5 Auto Generation of Fields

Few field's values will be generated automatically. And will be populated when we choose the send option. Just before validating the fields values, It will generates the values for the fields (As per the configuration e.g: STAN), will populate on the panel then will validates and prepares the message and will send.

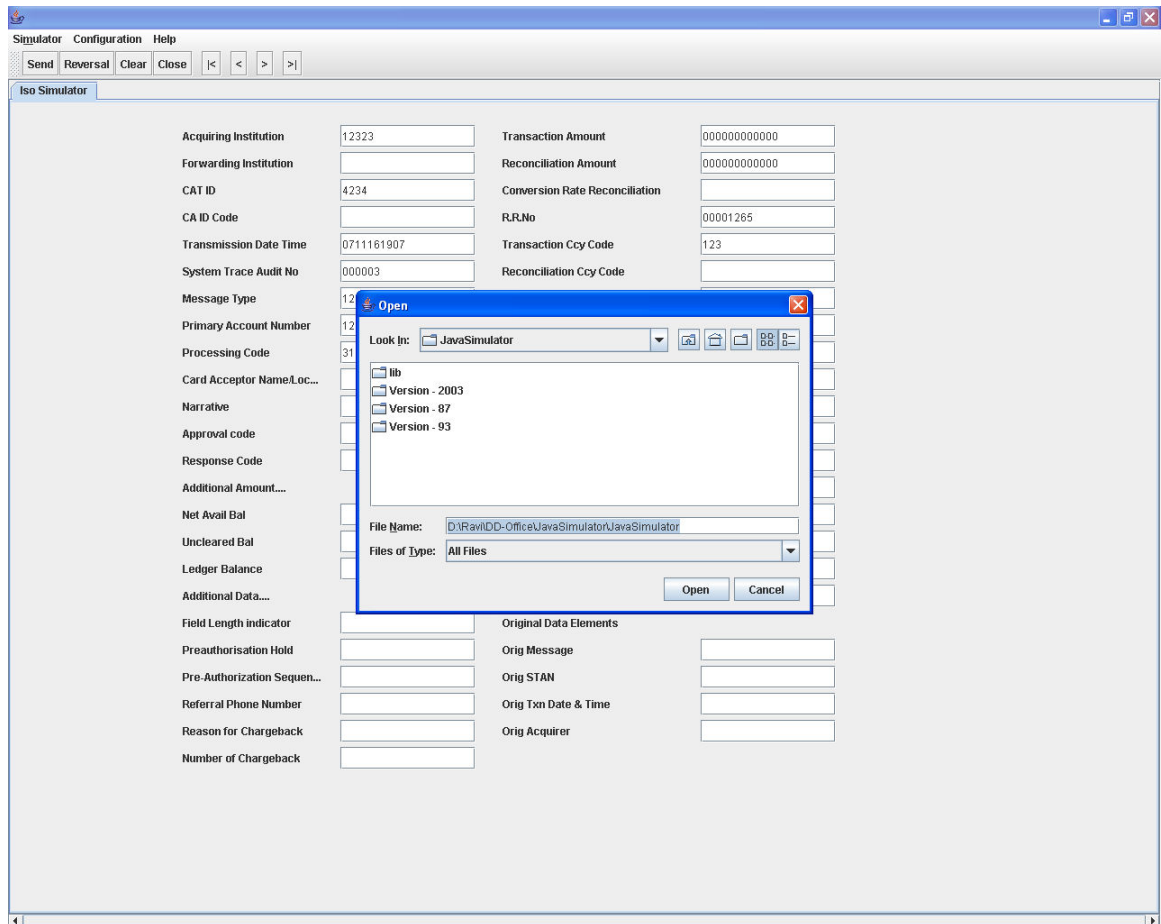
5.6 Clear option of simulator

It just clears the field's values of Simulator Panel

5.7 Switch to different Version

Click on Configuration menu. Then it will popup open dialog box. Select the one of the version folders available

When we click on configuration



After Selecting the Version Folder

The screenshot shows the 'Iso Simulator' application window. The title bar includes 'Simulator', 'Configuration', and 'Help'. Below the title bar is a menu bar with 'Send', 'Reversal', 'Clear', and 'Close'. To the right of the menu bar are navigation buttons: '<|', '<', '>', and '>|'. The main area is titled 'Iso Simulator' and contains two columns of input fields. The left column includes: 'Acquiring Institution', 'Forwarding Institution', 'CAT ID', 'CA ID Code', 'Transmission Date Time', 'System Trace Audit No' (with value '000000'), 'Message Type' (with value '800'), 'Primary Account Num...', 'Processing Code', 'Card Acceptor Name', 'Narrative', 'Authorisation code', 'Retrieval Reference No', 'Point of Service Condi...', 'Response Code', and 'Additional Amount'. The right column includes: 'Amount Transaction' (with value '0'), 'Settlement Amount' (with value '0'), 'Conversion Rate Settle...', 'Transaction Fee Amount' (with value '00000000'), 'Settlement Fee Amount' (with value '00000000'), 'Trans Processing Fee Amt' (with value '00000000'), 'Settl Processing Fee Amt' (with value '00000000'), 'Transaction Ccy Code', 'Settlement Ccy Code', 'Cardholder Billing Ccy Co...', 'Network Management Inf...' (with value '301'), 'Time Local Transcation', 'Date Local Transcation', 'Date Settlement', 'Date Capture', 'Year Transmission', 'To Account', 'From Account', 'Original Transaction Deta...', and 'Replacement Amounts'.

Note:

- Once if we switch to another version, all the transactions will get saved, new version related property files, and transaction history will be loaded. Once version related things are loaded, rest of the operations is same.
- When we are using sub fields, we must enter all the sub fields, otherwise corresponding field value won't be the part of the generated ISO Message.



SWITCH Simulator
[April] [2025]
Version 14.7.6.0.0

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
<https://www.oracle.com/industries/financial-services/index.html>

Copyright © [2007], [2025], Oracle and/or its affiliates. All rights reserved.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate failsafe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.