

SWITCH Simulator
Oracle FLEXCUBE Universal Banking
Release 12.87.7.0.0
[May] [2021]



Table of Contents

1. INTRODUCTION	1-1
1.1 SCOPE OF THE DOCUMENT.....	1-1
1.2 INTENDED AUDIENCE	1-1
1.3 ORGANIZATION OF THE DOCUMENT	1-1
2. SIMULATOR BASIC REQUIREMENTS.....	2-1
2.1 SOFTWARE REQUIREMENTS.....	2-1
2.2 REQUIRED EXTERNAL JARS	2-1
3. SIMULATOR DEPLOYMENT PROCESS.....	3-1
3.1 COPY FOLDER STRUCTURE.....	3-1
3.2 PLACE THE REQUIRED JARS	3-1
4. SIMULATOR BASIC CONFIGURATION.....	4-1
4.1 IP & PORT CONFIGURATION	4-1
4.2 BITMAP CONFIGURATION	4-1
4.3 HEADER LENGTH TYPE	4-1
5. SIMULATOR USAGE.....	5-1
5.1 START THE SIMULATOR	5-1
5.2 STOP THE SIMULATOR	5-2
5.3 LOAD THE PREVIOUS TRANSACTION DETAILS	5-2
5.4 SEND ISO TRANSACTION MESSAGE	5-5
5.5 AUTO GENERATION OF FIELDS	5-6
5.6 CLEAR OPTION OF SIMULATOR.....	5-6
5.7 SWITCH TO DIFFERENT VERSION	5-7

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 1.5 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 a menu bar (Simulator, Configuration, Help) and a toolbar (Send, Reversal, Clear, Close, and navigation arrows). The main area is titled 'Iso Simulator' and contains a grid of input fields for transaction data. The fields are organized into two columns:

Field Name	Value	Field Name	Value
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

The image shows a screenshot of the Oracle Simulator Configuration window. The window has a blue title bar with the text "Simulator Configuration Help" and standard window control buttons. Below the title bar is a menu bar with "Send", "Reversal", "Clear", and "Close" options, each with a keyboard shortcut (AI-S, AI-R, AI-L, AI-X). To the right of the menu bar are navigation buttons: "Close", "|<", "<", ">", and ">|".

The main area of the window is a grid of fields for configuration. The fields are organized into two columns. The left column contains fields for record navigation and transaction details, while the right column contains fields for reconciliation and transaction parameters. The "Last Record" field is highlighted in blue.

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

After choosing the option

Iso Simulator			
Acquiring Institution	12323	Transaction Amount	000000000000
Forwarding Institution		Reconciliation Amount	000000000000
CAT ID	4234	Conversion Rate Reconciliation	
CA ID Code		R.R.No	00001265
Transmission Date Time	0711104918	Transaction Ccy Code	123
System Trace Audit No	000001	Reconciliation Ccy Code	
Message Type	1200	Cardholder Billing Ccy Code	
Primary Account Number	1234567890123456	Function Code	801
Processing Code	311000	Date & Time Local Transaction	080711104918
Card Acceptor Name/Loc...		Date Effective	0807
Narrative		Date Settlement	080711
Approval code		Date Capture	0711
Response Code		Year Transmission	
Additional Amount....		To Account	
Net Avail Bal		From Account	100695
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	

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' buttons, along with navigation arrows. The main area is a form titled 'Iso Simulator' with two columns of input fields. The fields are as follows:

Acquiring Institution	12323	Transaction Amount	000000000000
Forwarding Institution		Reconciliation Amount	000000000000
CAT ID	4234	Conversion Rate Reconciliation	
CA ID Code		RR.No	00001265
Transmission Date Time	0711161907	Transaction Ccy Code	123
System Trace Audit No	000003	Reconciliation Ccy Code	
Message Type	1210	Cardholder Billing Ccy Code	
Primary Account Number	1234567890123456	Function Code	801
Processing Code	311000	Date & Time Local Transaction	080711161907
Card Acceptor Name,Loc...		Date Effective	0807
Narrative		Date Settlement	080711
Approval code		Date Capture	0711
Response Code	06	Year Transmission	
Additional Amount...		To Account	
Net Avail Bal		From Account	100695
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	
Reason for Chargeback		Orig Acquirer	
Number of Chargeback			

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' buttons, along with navigation arrows. The main area is a grid of input fields for transaction data. The fields are organized into two columns. The left column contains 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/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, and Number of Chargeback. The right column contains 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 (100895), Mini Statement, POS Code, Amount Fee, Original Data Elements, Orig Message, Orig STAN, Orig Txn Date & Time, and 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.

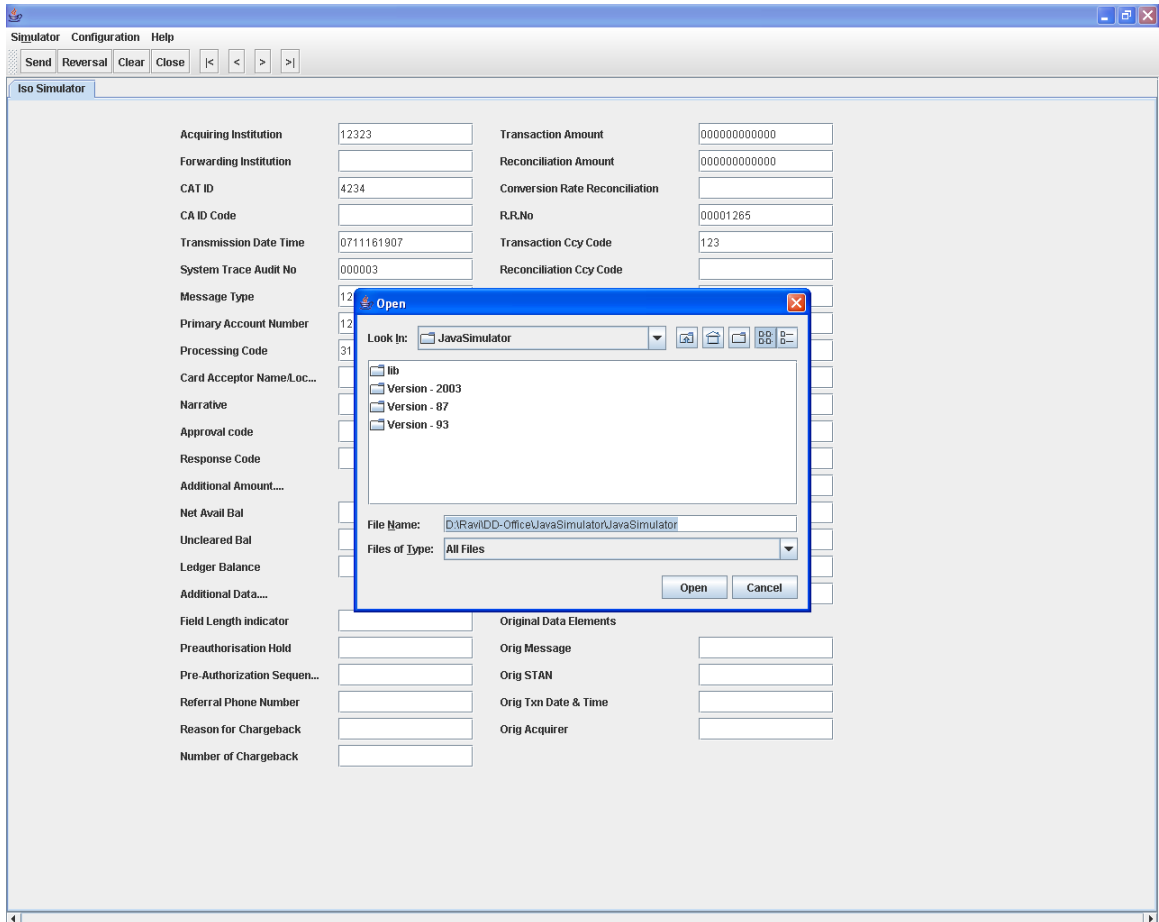
5.6 Clear option of simulator

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 Help' and standard window controls. Below the title bar is a menu bar with 'Send', 'Reversal', 'Clear', and 'Close' buttons, followed by navigation arrows. The main area is a form titled 'Iso Simulator' with two columns of input fields. The left column contains fields for: Acquiring Institution, Forwarding Institution, CAT ID, CA ID Code, Transmission Date Time, System Trace Audit No (000000), Message Type (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 contains fields for: Amount Transaction (0), Settlement Amount (0), Conversion Rate Settle..., Transaction Fee Amount (00000000), Settlement Fee Amount (00000000), Trans Processing Fee Amt (00000000), Settl Processing Fee Amt (00000000), Transaction Ccy Code, Settlement Ccy Code, Cardholder Billing Ccy Co..., Network Management Inf... (301), Time Local Transaction, Date Local Transaction, 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
[May] [2021]
Version 12.87.7.0.0

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], [2021], 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.