

Oracle® Banking APIs

Third Party Simulation Guide



Patchset Release 22.2.6.0.0

G28208-01

April 2025

ORACLE®

Copyright © 2006, 2025, Oracle and/or its affiliates.

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.

If this is software, software documentation, data (as defined in the Federal Acquisition Regulation), or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software," "commercial computer software documentation," or "limited rights data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. 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 fail-safe, 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.

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

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about 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 unless otherwise set forth in an applicable agreement between you and Oracle. 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, except as set forth in an applicable agreement between you and Oracle.

Contents

Preface

Purpose	iv
Audience	iv
Documentation Accessibility	iv
Critical Patches	iv
Diversity and Inclusion	v
Conventions	v
Related Resources	v
Screenshot Disclaimer	v
Acronyms and Abbreviations	v

1 Objective and Scope

1.1 Background	1-1
1.2 Scope	1-1

2 Basic Definitions

2.1 Java Message Service (JMS)	2-1
2.2 Message Driven Bean (MDB)	2-1

3 External System Simulation

3.1 Sequence Diagram	3-1
3.2 Producer and Consumer queue configuration	3-1
3.3 Deployment of ExtxfaceSimulatorMDB.ear	3-2
3.4 Response files guidelines	3-2

Index

Preface

- [Purpose](#)
- [Audience](#)
- [Documentation Accessibility](#)
- [Critical Patches](#)
- [Diversity and Inclusion](#)
- [Conventions](#)
- [Related Resources](#)
- [Screenshot Disclaimer](#)
- [Acronyms and Abbreviations](#)

Purpose

This guide is designed to help acquaint you with the Oracle Banking Digital Experience application. This guide provides answers to specific features and procedures that the user need to be aware of the module to function successfully.

Audience

This document is intended for the following audience:

- Customers
- Partners

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.

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](#).

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.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	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.

Related Resources

For more information on any related features, refer to the following documents:

- [Oracle Banking APIs Installation Manuals](#)

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.

Acronyms and Abbreviations

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

Table 1 Acronyms and Abbreviations

Abbreviation	Description
OBAPI	Oracle Banking APIs

1

Objective and Scope

- [Background](#)
- [Scope](#)

1.1 Background

This document is intended to outline the OBAPI-External system simulation process.

OBAPI is the banking solution platform which needs to be integrated with one of core banking systems to retrieve the customer banking details and to execute the set of operations on the core banking system as per the service requirement. External system simulation will simulate host system and will return response whenever it receives request.

1.2 Scope

The scope of this document is to explain the set up of external system simulation environment considering external system has exposed JMS as API to OBAPI. Details covered are as follows:

- Basic Definitions
- Sequence diagram of External system simulator.
- Creation of queue to send the message (producer queue) and to receive message (consumer queue) on application server.
- Deployment of Simulator MDB.
- Response files guidelines.

2

Basic Definitions

- [Java Message Service \(JMS\)](#)
- [Message Driven Bean \(MDB\)](#)

2.1 Java Message Service (JMS)

Java Message Service (JMS) API, a Java API that allows applications to create, send, receive, and read messages using reliable, asynchronous, loosely coupled communication.

Messaging is a method of communication between software components or applications. A messaging system is a peer-to-peer facility: A messaging client can send messages to, and receive messages from, any other client. Each client connects to a messaging agent that provides facilities for creating, sending, receiving, and reading messages. It enables distributed communication that is loosely coupled. A component sends a message to a destination, and the recipient can retrieve the message from the destination.

2.2 Message Driven Bean (MDB)

A message-driven bean is an enterprise bean that allows Java EE applications to process messages asynchronously. This type of bean normally acts as a JMS message listener, which is similar to an event listener but receives JMS messages instead of events. The messages can be sent by any Java EE component (an application client, another enterprise bean, or a web component) or by a JMS application or system that does not use Java EE technology. Message-driven beans can process JMS messages or other kinds of messages

Client components do not locate message-driven beans and invoke methods directly on them. Instead, a client accesses a message-driven bean through, for example, JMS by sending messages to the message destination for which the message-driven bean class is the `MessageListener`. When a message arrives, the container calls the message-driven bean's `onMessage` method to process the message.

Enterprise beans may be packaged within a EAR module as Java programming language class files or within a JAR file that is bundled within the EAR module, or it can be packaged within WAR module.

Jar contains `ejb-jar.xml` deployment descriptor. it must be located in the JAR module's `WEB-INF` directory.

Figure 2-1 Fig. 1.0 [ejb-jar.xml]

```

<display-name>com.ofss.digx.extxface.mdb</display-name>
<enterprise-beans>
  <message-driven>
    <display-name>ExtxfaceSimulatorMDB</display-name>
    <ejb-name>ExtxfaceSimulatorMDB</ejb-name>
    <ejb-class>com.ofss.digx.extxface.mdb.ExtxfaceSimulatorMDB</ejb-class>
    <transaction-type>Bean</transaction-type>
    <message-destination-type>javax.jms.Queue</message-destination-type>
  </message-driven>
</enterprise-beans>
</ejb-jar>

```

The WebLogic Server weblogic-ejb-jar.xml deployment descriptor file describes the elements that are unique to WebLogic Server. Configuration of queue details, which mdb listener listen are mentioned here.

Figure 2-2 Fig. 2.0 [weblogic-ejb-jar.xml]

```

<weblogic-ejb-jar xmlns="http://xmlns.oracle.com/weblogic/weblogic-ejb-jar" xmlns:xsi="http://xmlns.oracle.com/weblogic/weblogic-ejb-jar/1.1/weblogic-ejb-jar"
xsi:schemaLocation="http://xmlns.oracle.com/weblogic/weblogic-ejb-jar/1.1/weblogic-ejb-jar"
>
  <weblogic-enterprise-bean>
    <ejb-name>ExtxfaceSimulatorMDB</ejb-name>
    <dispatch-policy>FileProcessWorkManager</dispatch-policy>
    <message-driven-descriptor>
      <pool>
        <initial-beans-in-free-pool>10</initial-beans-in-free-pool>
        <max-beans-in-free-pool>100</max-beans-in-free-pool>
      </pool>
      <destination-jndi-name>EndPointPREPROCESS</destination-jndi-name>
      <connection-factory-jndi-name>EndPointQCF</connection-factory-jndi-name>
      <jms-polling-interval-seconds>1</jms-polling-interval-seconds>
    </message-driven-descriptor>
  </weblogic-enterprise-bean>
</weblogic-ejb-jar>

```

3

External System Simulation

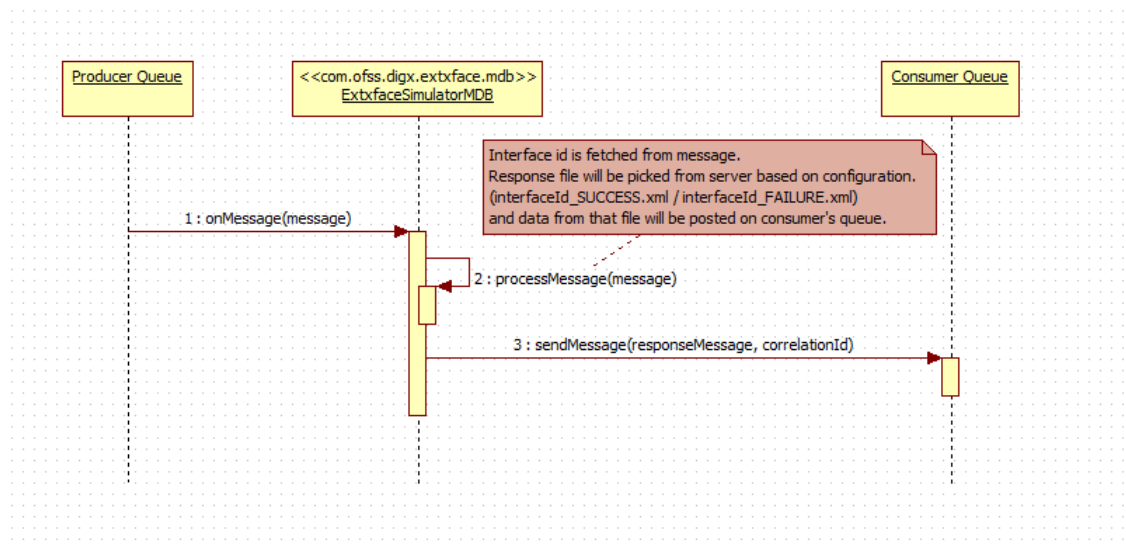
This section describes how simulation of external system will happen with OBAPI considering external system exposing JMS.

This simulator will consume request and produce response. It will pick up request from producer queue and post the response on consumer queue. For same, **ExtxfaceSimulatorMDB.ear** should be deployed, as Enterprise Application, on application server. MDB listener in ExtxfaceSimulatorMDB.ear will listen producer queue, retrieves request whenever it comes, process it and sends response to the consumer queue. Below sequence diagram explain the same.

- [Sequence Diagram](#)
- [Producer and Consumer queue configuration](#)
- [Deployment of ExtxfaceSimulatorMDB.ear](#)
- [Response files guidelines](#)

3.1 Sequence Diagram

Figure 3-1 Fig. 3.0 [Sequence diagram of External System Simulator]



3.2 Producer and Consumer queue configuration

ExtxfaceSimulatorMDB.ear will contain details of producer queue, consumer queue details will be configured in a property file. Create producer and consumer queue with JNDI names as given below on application server.

1. Producer Connection Factory JNDI name: **ExtSystemSenderQCF**

2. Producer Queue JNDI name: ExtSystemSenderQueue
3. Consumer Connection Factory JNDI name: ExtSystemReceiverQCF
4. Consumer Queue JNDI name: **ExtSystemReceiverQueue**

3.3 Deployment of ExtxfaceSimulatorMDB.ear

Deployment of ear can be manual or automated.

ExtxfaceSimulatorMDB.ear should be deployed on application server as an enterprise application.

3.4 Response files guidelines

This section describes response file location on server, its naming convention and file type.

MDB Listener responds to OBAPI system by identifying interface id. Using interface id and usertype provided to MDB, response file will be picked from **applications/com.ofss.digx.extxface.mdb/xml/{usertype}** folder in the mdb.

Every transaction (interface id) will have two related files with below file names.

- {interface_id}_SUCCESS.xml
- {interface_id}_FAILURE.xml

Based on configuration done for transaction result in table **DIGX_FW_CONFIG_ALL_B** for category_id = ' ExtSystemsConfig' MDB Listener will pick up success or failure response xml to post it on consumer queue.

Index

B

Background, [1-1](#)

D

Deployment of ExtxfaceSimulatorMDB.ear, [3-2](#)

E

External System Simulation, [3-1](#)

J

Java Message Service (JMS), [2-1](#)

M

Message Driven Bean (MDB), [2-1](#)

P

Producer and Consumer queue configuration, [3-1](#)

R

Response files guidelines, [3-2](#)

S

Scope, [1-1](#)

Sequence Diagram, [3-1](#)