OBDX Caching Configuration Guide
Oracle Banking Digital Experience
Patchset Release 22.2.6.0.0

Part No. F72987-01

April 2025

ORACLE

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1. Preface

1.1 Purpose

Welcome to the User Guide for Oracle Banking Digital Experience. This guide explains the operations that the user will follow while using the application.

1.2 Audience

This manual is intended for Customers and Partners who setup and use Oracle Banking Digital Experience.

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

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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 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.
Italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1.7 Screenshot Disclaimer

The images of screens used in this user manual are for illustrative purpose only, to provide improved understanding of the functionality; actual screens that appear in the application may vary based on selected browser, theme, and mobile devices.

1.8 Acronyms and Abbreviations

The list of the acronyms and abbreviations that you are likely to find in the manual are as follows:

Abbreviation	Description
OBDX	Oracle Banking Digital Experience

2. Introduction

This document contains information on caching and related configurations to be done for OBDX.

3. Coherence Cache

Coherence cache is provided out the box in OBDX. Coherence uses TCMP protocol to discover cluster members, manage the cluster, provision services, and transmit data. It works on both multicast and unicast routings.

3.1 Unicast

Unicast is the default routing used in OBDX for communication when using Coherence.For enabling unicast routing for Coherence on OBDX, following changes needs to be done.

- Add comma separated master servers' Ip and ports in system properties (server start params in managed server in case of WebLogic)

  -Dwka.list=<IP1:PORT1>,<IP2:PORT2>

- Run below query in database

  Insert into digx_fw_config_all_b (PROP_ID,CATEGORY_ID,PROP_VALUE,FACTORY_SHIPPED_FLAG,PROP_COMMENTS,SUMMARY_TEXT,CREATED_BY,CREATION_DATE,LAST_UPDATED_BY,LAST_UPDATED_DATE,OBJECT_STATUS,OBJECT_VERSION_NUMBER,EDITABLE,CATEGORY_DESCRIPTION) values ('COHERENCE_CACHE_ADDRS','dayoneconfig',<IP1:PORT1>,<IP2:PORT2>,'Y','Coherence servers addresses','Coherence servers addresses','ofssuser',sysdate,'ofssuser',sysdate,'Y',1,'N',null);

  Please replace IP and PORT with respective values. Please note that all PORT values by default will be 9099. Default port value can be changed using system property -Dcoherence.localport . Example : -Dcoherence.localport=9098

  Also note that master members should be about 10% of the cluster.

3.2 Multicast

In systems with ephemeral containers, multicast is the preferred option. In cases where multicast routing is undesirable or not supported, unicast routing can be used.

For enabling multicast routing for Coherence on OBDX, following changes needs to be done -

Replace code in <**caching-shemes**> block in **extend-client-config.xml** with below code in **digx-shared-libs.war/WEB-INF/classes**

```
<caching-schemes>
        <remote-cache-scheme>
          <scheme-name>obdx</scheme-name>
          <service-name>ExtendTcpCacheService</service-name>
          <initiator-config>
```

```
            <outgoing-message-handler>
               <request-timeout>5s</request-timeout>
            </outgoing-message-handler>
                  <connect-timeout>5s</connect-timeout>
         </initiator-config>
      </remote-cache-scheme>

      <remote-invocation-scheme>
         <scheme-name>extend-invocation</scheme-name>
         <service-name>ExtendTcpInvocationService</service-name>
         <proxy-service-name>ExtendTcpCacheService</proxy-service-name>
         <initiator-config>
            <outgoing-message-handler>
               <request-timeout>5s</request-timeout>
            </outgoing-message-handler>
         </initiator-config>
      </remote-invocation-scheme>
   </caching-schemes>
```

Replace **tangosol-coherence-override.xml** with below code in **digx-coherence.war/WEB-INF/classes**

```
<?xml version='1.0'?>
<coherence xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
                  xmlns="http://xmlns.oracle.com/coherence/coherence-operational-config"
                  xsi:schemaLocation="http://xmlns.oracle.com/coherence/coherence-operational-config
  coherence-operational-config.xsd">
```

```
<cluster-config>
<member-identity>
<cluster-name>OBDXCluster</cluster-name>
</member-identity>
</cluster-config>
<logging-config>
<destination>coherence.log</destination>
<severity-level>9</severity-level>
</logging-config>
<configurable-cache-factory-config>
<init-params>
<init-param>
<param-type>java.lang.String</param-type>
<param-value system-property="coherence.cachecon-
fig">OBDX-cache-configuration.xml</param-value>
</init-param>
</init-params>
</configurable-cache-factory-config>
</coherence>
```

4. Caches other than Coherence

OBDX can be customized to use other caches as well. This can be achieved by writing a custom java class implementing ***com.ofss.digx.infra.cache.IDistributedCache*** interface

type method should return **CacheType.DISTRIBUTED** and override priority method by providing the priority greater than 1.

5. Using Database

In situations where cache is undesirable, database can be used in place of a dedicated cache mechanism.

For turning off distributed caching and switching to database, run the below script and take a restart

update digx_fw_config_all_b set PROP_VALUE='false' where PROP_ID='DISTRIBUTED_CACHE_ENABLED';

6. Configuring TTL (Time-To-Live)

TTL configuration is maintained in the database. Default TTL is set to -1 for the product. If bank wants to override the value, they can achieve it by running below query. TTL value should be in milliseconds.

update digx_fw_config_all_b set prop_value = '3000000' where prop_id = '{CachName}_ttl';

{CachName} is name of the Cache for which TTL is to be updated.

For Example:

update digx_fw_config_all_b set prop_value = '3000000' where prop_id = 'cacheUsername_ttl';