# Oracle FLEXCUBE Direct Banking Environment

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# Preface

## 1.1 Intended Audience

This document is primarily targeted at

- Oracle FLEXCUBE Direct Banking Development Teams
- Oracle FLEXCUBE Direct Banking Implementation Teams
- Oracle FLEXCUBE Direct Banking Implementation Partners

## 1.2 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.

## 1.3 Access to OFSS Support

https://flexsupp.oracle.com/

## 1.4 Structure

This manual is organized into the following categories:

Preface gives information on the intended audience. It also describes the overall structure of the User Manual

## 1.5 Related Information Sources

For more information on Oracle FLEXCUBE Direct Banking Release 12.0.2.0.0, refer to the following documents:

Oracle FLEXCUBE Direct Banking Licensing Guide

# 2 Overview

Oracle FLEXCUBE Direct Banking is a multi channel e-banking platform with support for customer touch points like Internet, Mobile Phones and PDAs. Oracle FLEXCUBE Direct Banking is based on the industry standard Java Standard Edition (Java SE) and Oracle Java Enterprise Edition (Java EE) platforms.

For the Mobile Banking features, Oracle FLEXCUBE Direct Banking leverages on the Java Micro Edition (Java ME) features.

The document provides the list of hardware and software environments on which the platform is available. Oracle FLEXCUBE Direct Banking is a Java EE compliant application and can be supported on any Java EE standard platform supporting JDK1.5 and Java EE1.4 specifications. The document provides the hardware and software requirements for the recommended platforms on which Oracle FLEXCUBE Direct Banking can be deployed.

# 3 Hardware and Software Requirements

Oracle FLEXCUBE Direct Banking is a multi channel e-banking platform with support for customer touch points like Internet, Mobile Phones and PDAs. The infrastructure components required for the deployment of Oracle FLEXCUBE Direct Banking are

- **Web Server and Application Server**
  Web Server and Application server support required in Oracle FLEXCUBE Direct Banking.

- **Database Server**
  Database support required in Oracle FLEXCUBE Direct Banking.

- **Reports Server**
  This is an optional component for Oracle FLEXCUBE Direct Banking to provide Bank and Customer Reports. If this component is not implemented or procured, the reports functionality shall not be available from Oracle FLEXCUBE Direct Banking.

- **Internet Browsers**
  The web browsers supported for the customer facing Internet Banking as well as internal administration of the solution.

- **Mobile Browsers**
  The web browsers on mobile phones supported for the customer facing Mobile Banking available on mobile phones, from Oracle FLEXCUBE Direct Banking.

- **Java based Mobile Phones**
  The technology (J2ME) support required in Java enabled Mobile Phones to support the required Java based Mobile Banking, from Oracle FLEXCUBE Direct Banking.

- **128-bit SSL Certificates**
  Required for SSL configurations.

The external infrastructure components like Networks, Routers, Firewalls, and Load Balancers etc. are expected to be implemented as required by the financial institution, deploying Oracle FLEXCUBE Direct Banking.

## 3.1 Web Server and Application Server

Oracle FLEXCUBE Direct Banking is JDK 1.6 and Java EE 1.4 compliant and can use any standard Java EE Application Server and a corresponding Web Server to support the deployment.

The recommended Java EE environments are

- WebSphere Application Server Network Deployment 6.1
- Oracle Weblogic Application Server 10.3
- Oracle Application Server Release 3 OC4J

The individual hardware and software supported by the underlying Java EE Servers is entirely application to Oracle FLEXCUBE Direct Banking and there are no special

The individual hardware and software for each Java EE Application Server and the corresponding Web Server is provided for reference here.

### 3.1.1 WebSphere Application Server Network Deployment 6.1

Oracle FLEXCUBE Direct Banking supports the IBM WebSphere Application Server Network Deployment 6.1 version with the latest service packs.

| Hardware | Operating System | Web Server |
|---|---|---|
| Intel Xeon or Intel EM64T or AMD Opteron | - Microsoft Windows Server 2008, Datacenter with SP1 (32-bit)<br>- Microsoft Windows Server 2008, Enterprise with SP1 (32-bit)<br>- Microsoft Windows Server 2008, Standard with SP1 (32-bit)<br>- Microsoft Windows Server 2008 x64 Edition with SP1 (32-bit)<br>- Microsoft Windows Server 2003, Datacenter with SP1 (32-bit)<br>- Microsoft Windows Server 2003, Enterprise with SP1 (32-bit)<br>- Microsoft Windows Server 2003, Standard with SP1 (32-bit)<br>- Microsoft Windows Server 2003 x64 Edition (32-bit)<br>- Microsoft Windows Server 2008 x64 Datacenter with SP1 (64-bit)<br>- Microsoft Windows Server 2008 x64 Enterprise with SP1 (64-bit)<br>- Microsoft Windows Server 2008 x64 Standard with SP1 (64-bit)<br>- Red Hat Linux 5 AES | - Apache Web Server 2.0.54 or Apache Web Server 2.2 (32-bit or 64-bit)<br>- IBM HTTP Server for WebSphere Application Server 6.1 (*Only 32-bit plug-in support on Red hat Linux 5)*<br>- Microsoft Internet Information Services (IIS) 6.0 (on Windows Only)<br>- Microsoft Internet Information Services (IIS) 7.0 (on Windows Only) |
| IBM Power 5<br>IBM Power 6 | - AIX 5L 5.3 with Service Pack 5300-04-01 (32 and 64-bit kernel support)<br>- AIX 6.1 with Recommended Maintenance package 6100-00-01-0748<br>- AIX 5L 5.2 with Recommended Maintenance package 5200-07 (32 and 64-bit kernel support)<br>- Red Hat Enterprise Linux Version 5 (32 bit and 64-bit kernel support) | - Apache Web Server 2.0.54 or Apache Web Server 2.2<br>- IBM HTTP Server for WebSphere Application Server 6.1 (*Only 32-bit plug-in support on Red hat Linux 5)*<br>- Microsoft Internet Information Services (IIS) 6.0<br><br>*All above are valid for 32-bit and 64-bit combination except* |

| | | |
|---|---|---|
| | | *where mentioned.* |
| Sun Sparc IV | - Sun Solaris operating environment, Version 9 with the latest Patch Cluster (32 and 64-bit kernel support)<br>- Sun Solaris operating environment, Version 10 with the latest Patch Cluster (32 and 64-bit kernel support) | - Apache Web Server 2.0.54 or Apache Web Server 2.2<br>- IBM HTTP Server for WebSphere Application Server 6.1 (*Only 32-bit plug-in support)*<br>- Microsoft Internet Information Services (IIS) 6.0 |
| HP PA-RISC | - HP-UX 11iv2 (11.23) with Standard Patch Bundles of March 2006 and Sep 2004 Bundle 11i<br>- HP-UX 11iv3 (11.31) | - Apache Web Server 2.0.54 or Apache Web Server 2.2<br>- IBM HTTP Server for WebSphere Application Server 6.1<br><br>*All configurations in 32-bit only.* |
| HP Itanium 2 | - HP-UX 11iv2 (11.23) with Standard Patch Bundles of March 2006 and Sep 2004 Bundle 11i + Java patches PHCO_30476 and PHSS_34201 (64 bit kernel support)<br>- HP-UX 11iv3 (11.31) (64 bit kernel support) | - Apache Web Server 2.0.54 or Apache Web Server 2.2 (32-bit or 64-bit plugin)<br>- IBM HTTP Server for WebSphere Application Server 6.1 (64-bit plugin) |

- 6.1.0.11 (or higher) is required for Web Server plug-in to work with Apache 2.2.
- Refer the actual IBM WebSphere site for the most updated information on the IBM WebSphere 6.1 platform.

### 3.1.2 Oracle Weblogic Application Server 10.3

Oracle FLEXCUBE Direct Banking supports the Oracle Weblogic Application Server 10.3 (10.3.1 / 10.3.2) on the following platforms.

The Weblogic Server is supported for JDK1.5 and JDK1. 6 both.

| Hardware | Operating System | Web Server |
|---|---|---|
| Intel EM64T or AMD64 | - Red Hat Linux 5 Enterprise (32-bit and 64-bit)<br>- Oracle Enterprise Linux 5.x (32-bit and 64-bit)<br>- Oracle Enterprise Linux 5.x on Oracle Virtual Machine (OVM) (32-bit and 64-bit) | - Apache Web Server 2.2.x (32-bit or 64-bit)<br>- Microsoft Internet Information Services (IIS) 6.0 (on Windows Serve r 2003 Only)<br>- Microsoft Internet Information Services (IIS) 7.0 (on Windows Server |

| | | |
|---|---|---|
| | | 2003 Only) |
| IBM Power 5<br>IBM Power 6 | - AIX 5L 5.3 TL7+ (64-bit)<br>- AIX 6.1 Gold (6.1 TL0+) (64-bit)<br><br>*JDK is 32-bit or 64-bit.* | - Apache Web Server 2.2.x (32-bit) |
| Sun SPARC | - Sun Solaris 9 (64-bit)<br>- Sun Solaris 10 (64-bit)<br><br>*JDK is 32-bit or 64-bit.* | - Apache Web Server 2.2.x (32-bit) |
| HP PA-RISC | - HP-UX 11iv2 (11.23) (64-bit)<br>- HP-UX 11iv3 (11.31) (64-bit)<br><br>*JDK is 32-bit only.* | - HP Apache-based Web server (32-bit) |
| HP Itanium 2 | - HP-UX 11iv2 (11.23) (64-bit)<br>- HP-UX 11iv3 (11.31) (64-bit)<br><br>*JDK is 32-bit or 64-bit.* | - HP Apache-based Web server (64-bit) |

## 3.2 Database Server

Oracle FLEXCUBE Direct Banking support Oracle Database as its Local Database option.

Oracle Enterprise Edition with Real Application Clusters (RAC) and Partitioning Support is required for Oracle FLEXCUBE Direct Banking.

Additional features like Compression, Total Recall, and Advanced Security Options (ASO) are optional features required for Oracle FLEXCUBE Direct Banking.

### 3.2.1 Oracle 11g

Oracle FLEXCUBE Direct Banking supports Oracle 10g Release 2 database version 11.2.0.1.0 and above on the below recommended platforms.

| Hardware | Operating System |
|---|---|
| Intel EM64T or AMD64 Opteron | - Red Hat Linux 5 Enterprise (32 and 64-bit kernel support)<br>- Oracle VM 5.2 (32 and 64-bit kernel support) |
| IBM Power 5<br>IBM Power 6 | - AIX 5L 5.3 (32 and 64-bit kernel support) |
| Sun Sparc | - Sun Solaris operating environment, Version 9 (only 64-bit support)<br>- Sun Solaris operating environment, Version 10 (only 64-bit support) |
| HP PA-RISC | - HP-UX 11iv2 (11.23) (64 bit kernel support)<br>- HP-UX 11iv3 (11.31) (64 bit kernel support) |
| HP Itanium 2 | - HP-UX 11iv2 (11.23) (only 64 bit kernel support)<br>- HP-UX 11iv3 (11.31) (only 64 bit kernel support) |

### 3.2.2 Oracle 10g

Oracle FLEXCUBE Direct Banking supports Oracle 10g Release 2 database version 10.2.0.4.0 and above on the below recommended platforms.

| Hardware | Operating System |
|---|---|
| Intel EM64T or AMD64 Opteron | - Red Hat Linux 5 Enterprise (32 and 64-bit kernel support)<br>- Oracle VM 5.2 (32 and 64-bit kernel support) |
| IBM Power 5<br>IBM Power 6 | - AIX 5L 5.3 with TL06 (32 and 64-bit kernel support)<br>- Red Hat Linux 5 Enterprise 5 (32 bit and 64-bit kernel support) |
| Sun Sparc | - Sun Solaris operating environment, Version 9 (only 64-bit support)<br>- Sun Solaris operating environment, Version 8 (only 64-bit support) |
| HP PA-RISC | - HP-UX 11iv2 (11.23) (32-bit and 64-bit kernel support)<br>- HP-UX 11iv3 (11.31) (32-bit and 64-bit kernel support) |
| HP Itanium 2 | - HP-UX 11iv2 (11.23) (only 64 bit kernel support)<br>- HP-UX 11iv3 (11.31) (only 64 bit kernel support)<br>- Red Hat Enterprise 5 Enterprise (only 64 bit kernel support) |

## 3.3 Reports Server

Oracle FLEXCUBE Direct Banking provides reporting capabilities using Oracle BI Publisher. The Reports Server is an optional component for the Oracle FLEXCUBE Direct Banking deployment.

| Hardware | Operating System |
|---|---|
| Intel EM64T or AMD64 Opteron | - Red Hat Linux 5 Enterprise (32 and 64-bit kernel support)<br>- Oracle VM 5.2 (32 and 64-bit kernel support) |

## 3.4 Internet Browsers

Oracle FLEXCUBE Direct Banking supports all industry standard browsers for Internet banking access. Oracle FLEXCUBE Direct Banking has been tested specifically on the following browsers for verifications.

| Operating System | Browsers |
|---|---|
| Microsoft Windows XP | Following browser versions were used for the base testing :<br><br>Internet Explorer 6.0<br>Internet Explorer 7.0<br>Internet Explorer 8.0<br>Mozilla 3.0<br>Apple Safari 4.0<br>Google Chrome 3.0<br>Google Chrome 4.0 |

| | |
|---|---|
| | Google Chrome 5.0<br>Opera 9.0 |
| Apple Macintosh 10.5 | Apple Safari 4.0.2 |

## 3.5 Java based Mobile Phones

All Java enabled mobile phones supporting MIDP-II standards and 128-bit SSL shall be supported

# 4 References

The following reference web-sites for the Java EE Server specifications have been referred for deriving the environment specifications for Oracle FLEXCUBE Direct Banking.

| Java EE Application Server | Web Site |
|---|---|
| Weblogic 10.3 | http://edocs.bea.com/platform/suppconfigs/configs103/103_over/add-ons.html |
| WebSphere 6.1 | http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27006921 |