Oracle® Communications Billing and Revenue Management
Compatibility Matrix

Release 15.1

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ORACLE®

Oracle Communications Billing and Revenue Management Compatibility Matrix, Release 15.1

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Preface

This guide describes the compatibility considerations and software and hardware requirements you should review when installing or upgrading the following Oracle Communications Billing and Revenue Management (BRM) Suite components:

- BRM server and clients
- Oracle Communications Billing Care (BC)
- Oracle Communications Business Operations Center (BOC)
- Oracle Communications Pricing Design Center (PDC)
- Oracle Communications Billing and Revenue Management Elastic Charging Engine (ECE)
- Oracle Communications Billing and Revenue Management Pipeline Configuration Center (PCC)
- Oracle Communications Billing and Revenue Management (BRM) cloud native deployment

Audience

This document is intended for system administrators responsible for product installations, upgrade planning, and patch set installations.

Documentation Accessibility

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Access to Oracle Support

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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
BRM Suite Compatibility

Learn about the compatibility between the different Oracle Communications Billing and Revenue Management (BRM) 15.1 Suite components. Review this information before installing or upgrading BRM.

Oracle uses the following terminology to refer to releases:

- Major release: For example, 15.0.0.0.0
- Minor release: For example, 15.1.0.0.0
- Maintenance release: For example, 15.1.1.0.0
- Patch Set: For example, 15.1.1.1.0
- Patch/Hot Fix: For example, 15.1.1.1.1

All of the BRM components need to be using the same version as each other, down to the Patch Set level. Only the Patch/Hot Fix level can be different. This applies to the following components:

- BRM
- Elastic Charging Engine (ECE)
- Pricing Design Center (PDC)
- Billing Care
- Business Operations Center
- Pipeline Configuration Center
- Offline Mediation Controller

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Supported Upgrades

Learn about the commonly supported upgrade paths for Oracle Communications Billing and Revenue Management (BRM) 15.1 Suite components.

Topics in this document:

* Supported BRM Upgrades

Supported BRM Upgrades

Table 2-1 lists the supported upgrade paths for the BRM 15.1 Suite components: BRM, Elastic Charging Engine (ECE), and Pricing Design Center (PDC). This also includes Billing Care, Business Operations Center, Pipeline Manager, and Pipeline Configuration Center. This applies to both on-premises and Cloud Native upgrades, as well as upgrades from on-premises to Cloud Native environments.

> **Note:**
>
> For upgrades from versions prior to BRM 12.0 Patch Set 4, please contact Oracle Support for guidance and availability of upgrade paths.

Table 2-1   BRM and ECE Upgrade Paths to 15.1

Version	Upgrade with Downtime (BRM with ECE and PDC)	Zero Downtime Upgrade Using Second Deployment (BRM with ECE and PDC)	Zero Downtime Upgrade on a Single Instance Using Rolling Upgrades (BRM with ECE and PDC)	Zero Downtime Upgrade on a Single Instance Using Rolling Upgrades (BRM only)
15.0.1	Yes	Yes	No	Yes
15.0.0	Yes	Yes	No	Yes
12.0.0.8	Yes	Yes	No	Yes
12.0.0.7	Yes	Yes	No	No
12.0.0.6	Yes	Yes	No	No
12.0.0.5	Yes	Yes	No	No
12.0.0.4	Yes	Yes	No	No

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Common Software Compatibility

Learn about the common software that is compatible with Oracle Communications Billing and Revenue Management (BRM), Pricing Design Center (PDC), and Elastic Charging Engine (ECE) 15.1 servers and client systems.

Topics in this document:

* Supported Common Software

Supported Common Software

Table 3-1 lists the supported common software for cloud native and traditional deployments.

Table 3-1   Supported Common Software

Software	BRM 15.1	Notes
Compilers	gcc version 12.2.1	None
Oracle Linux Red Hat Enterprise Linux (RHEL)	8.10 or later 9.4 or later	Applicable to non-cloud native deployments only. OEL/RHEL should be patched with any applicable critical patch updates. **Note:** Oracle Applications are developed and tested on Oracle Linux, which is optimized for performance, stability and security.
Oracle Database 19c Client	19.x (x >= 20)	None
Oracle Database Enterprise Edition	19.x (x >= 20)	The Oracle Database must be in close network proximity to the BRM application, in an environment and configuration that is officially supported by Oracle.
Oracle Java Platform, Standard Edition (Java SE)	Java 21.0.6	None
Web Browsers	Apple Safari: 18 or later Google Chrome: 130 or later Microsoft Edge: Default version with OS Mozilla Firefox: 132 or later	None

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BRM Cloud Native Deployment Software Compatibility

Learn about the software compatible with the Oracle Communications Billing and Revenue Management (BRM) cloud native deployment package. This package uses Kubernetes, Helm, and Linux for containerization and orchestration.

Topics in this document:

- Mandatory BRM Cloud Native System Requirements
- Optional BRM Cloud Native System Requirements for Monitoring
- Optional BRM Cloud Native System Requirements for Log File Management
- Additional Notes

> ⚠️ **Caution:**
>
> - Your system administrator is responsible for ensuring that all installed software dependencies are kept up to date wherever possible. Oracle supports software versions where the software vendor declares backward compatibility to the version certified with BRM, and the upgrade is a minor version increment (A.B.C to A.B.D).
>
>   System administrators should adopt this policy for software dependencies for which upgrades are generally related to security rather than focusing on functionality.
>
> - Oracle does not provide support for any prerequisite third-party software installation or configuration. The customer should manage any installation or configuration issues related to non-Oracle prerequisite software.

Mandatory BRM Cloud Native System Requirements

The BRM Docker images require the third-party software listed in Table 4-1.

> ✏️ **Note:**
>
> Oracle does not provide any third-party software mentioned in the table below. You must obtain and install the required third-party software before using the product.

Table 4-1   Mandatory BRM Cloud Native System Requirements

Software	BRM 15.1
Kubernetes	1.31.*x*
Helm	3.16.2
WebLogic Kubernetes Operator	4.2.13

Optional BRM Cloud Native System Requirements for Monitoring

Table 4-2 lists the software that validates the sample Grafana dashboards included in BRM cloud native for monitoring the system.

Table 4-2   Optional BRM Cloud Native System Requirements for Monitoring

Software	BRM 15.1
Grafana	11.5.1
Prometheus	3.0.1
Prometheus Alert Manager	0.26.0
Prometheus JMX Exporter Java Agent	0.20.0
Prometheus Operator	0.78.2
WebLogic Monitoring Exporter	2.2.2

Optional BRM Cloud Native System Requirements for Log File Management

Table 4-3 lists the software that validates the BRM log files collected by the sample Fluentd configuration included in BRM cloud native.

Table 4-3   Optional BRM Cloud Native System Requirements for Log File Management

Software	BRM 15.1
Fluentd	1.16.3

Additional Notes

Oracle Kubernetes Platforms

- BRM cloud native is certified on the Container Engine for Kubernetes (OKE), Oracle Communications Cloud Native Environment, and Oracle Linux Cloud Native Environment (provided the version requirements listed in this document are satisfied).

Third-Party Kubernetes Platforms

- BRM cloud native is designed to be independent of the underlying cloud infrastructure. It relies on standard APIs, objects, and configuration functions from the software products listed in this document. As such, BRM cloud native is certified on any container platform

based on a CNCF-certified Kubernetes, provided the version requirements listed in this document are satisfied.

OCI Search with OpenSearch

BRM cloud native is compatible with OCI Search with OpenSearch. See "Search with OpenSearch" on the Oracle website for more details.

Operating System for Kubernetes Nodes

- BRM supports any Linux version that is supported by the specified version of your chosen Kubernetes platform.

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External Applications Compatibility

Learn about the external applications compatible with Oracle Communications Billing and Revenue Management (BRM), Pricing Design Center (PDC), and Elastic Charging Engine (ECE) 15.1 servers and client systems.

Topics in this document:

- Additional External Applications Compatibility

Additional External Applications Compatibility

Table 5-1 provides the compatibility information for other external applications you need to create a complete customer management and billing system for your business.

Table 5-1   Additional External Applications Compatibility

Product	BRM 15.1
Oracle Analytics Publisher **Note:** Business Intelligence Publisher has been renamed to Oracle Analytics Publisher.	2024 (7.6)
Oracle Identity and Access Management	12.2.1.4.0
Oracle Unified Directory	14.1.4.1.0
Paymentech 120-Byte Batch Processing Format Specification	3.0.0 Revision 15.3
Paymentech Online Processing Format Specification	Version 7.4 Revision 15.3
Vertex Communications Tax Q Series	3.02
Vertex Sales Tax Q Series	10.1

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BRM Non-Cloud Native Prerequisites

Learn about the software compatible with Oracle Communications Billing and Revenue Management (BRM) 15.1 server and client systems.

Topics in this document:

- Windows
- Additional BRM Software Requirements
- About Critical Patch Updates

See "System Requirements" in *BRM Installation Guide* for hardware and information requirements.

> **Note:**
>
> - BRM 15.*x* server components do not support any 32-bit server operating systems.
> - Character Sets: BRM 15.1 supports AL32UTF8 as its default character set. It also continues to support the UTF8 character set for backward compatibility. The Unicode character set AL32UTF8 is recommended for all new BRM 15.1 deployments.
> - All BRM clients are supported on Linux in addition to Windows.
> - This section applies to non-cloud native deployments only. For cloud native deployments, the BRM container images include all required prerequisites.

Windows

This section lists software compatible with BRM clients on Windows.

- Windows 8.1 Enterprise
- Windows 10
- Windows 11

Additional BRM Software Requirements

Table 6-1 provides the compatibility information for other applications you need to create a complete customer management and billing system for your business.

> **Note:**
>
> Oracle does not provide any third-party software mentioned in the table below. You must obtain and install the required third-party software before using the product.

Table 6-1   Required Third-Party Software for BRM

Product	BRM 15.1.0	Notes
Apache Kafka Client	3.8.0	None
Apache Tomcat	11.0.2	None
Oracle WebLogic Server	14.1.2	Compatible version with Oracle Linux/RHEL 8.x
Perl (64-bit)	5.38.2	None

About Critical Patch Updates

You should install all critical patch updates as soon as possible. To download critical patch updates, find out about security alerts, and enable email notifications about critical patch updates, see "Critical Patch Updates, Security Alerts and Bulletins" on the Oracle website.

7

ECE Non-Cloud Native Prerequisites

Learn about the software compatible with Oracle Communications Billing and Revenue Management Elastic Charging Engine (ECE) 15.1.

Topics in this document:

- Additional ECE Software Requirements

See "ECE System Requirements" in *ECE Installation Guide* for hardware and information requirements.

> **Note:**
>
> This section applies to non-cloud native deployments only. For cloud native deployments, the BRM container images include all required prerequisites.

Additional ECE Software Requirements

Table 7-1 lists the required third-party software for ECE 15.0.

> **Note:**
>
> Oracle does not provide any third-party software mentioned in the table below. You must obtain and install the required third-party software before using the product.

Table 7-1   Required Third-Party Software for ECE 15.1

Product	BRM 15.1	Notes
Apache Kafka Clients	3.8.0	None
Groovy	4.0.22	The ECE software package does not include Groovy. Installing Groovy is a prerequisite for running ECE monitoring tools.
Oracle Coherence for Java Libraries	14.1.2	The ECE software package does not include Oracle Coherence libraries.

Table 7-2 lists the JAR files that are required during ECE installation.

Table 7-2   Required JAR Files

File	Description
coherence-login.jar	This file is available in the Oracle Coherence package.
coherence-work.jar	This file is available in the Oracle Coherence package.
coherence.jar	This file is available in the Oracle Coherence package.

Table 7-2   (Cont.) Required JAR Files

File	Description
com.oracle.weblogic.bean gen.general.api.jar	This file is available in the Oracle WebLogic Server client package.
com.oracle.weblogic.logging.jar	This file is available in the Oracle WebLogic Server client package.
com.bea.core.beangen.jar	This file is available in the Oracle WebLogic Server client package.
com.bea.core.beaninfo.jar	This file is available in the Oracle WebLogic Server client package.
com.bea.core.descriptor.jar	This file is available in the Oracle WebLogic Server client package.
com.bea.core.logging.jar	This file is available in the Oracle WebLogic Server client package.
com.bea.core.xml.staxb.runtime.jar	This file is available in the Oracle WebLogic Server client package.
groovy-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-ant-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-cli-picocli-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-console-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-datetime-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-docgenerator-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-groovydoc-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-groovysh-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-jmx-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-json-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html

Table 7-2   (Cont.) Required JAR Files

File	Description
groovy-jsr223-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-macro-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-nio-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-servlet-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-sql-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-swing-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-templates-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-test-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-test-junit5-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-xml-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
groovy-yaml-4.0.22.jar	Download this file from the following page on the Apache Groovy website in the "Maven Repository" section: http://groovy-lang.org/install.html
kvclient-24.1.jar	(Optional) You need this file only if you use Oracle NoSQL Database. This file is available in the Oracle NoSQL Database package.
ojdbc8.jar	Download this file from the following page: https://www.oracle.com/database/technologies/appdev/jdbc-downloads.html **Note:** Ensure you download the latest version of the **ojdbc8.jar** file for the correct version of your database.

Table 7-2   (Cont.) Required JAR Files

File	Description
wlthint3client.jar	This file is available in the Oracle WebLogic Server client package.
	Note: If you choose to use two JMS providers, both WebLogic Server and another provider, ensure that you do the following after installation on the driver machine:
	• Copy the other JMS provider's client JARs to the *ECE_home*/**oceceserver/lib** directory.
	• Rename the other JMS provider JAR file to **wlthint3client.jar**.
	• (When using the other JMS provider to publish ECE notification events) Update the *ECE_home*/**oceceserver/ JMSQueueConfiguration.xml** file to specify the InitialContextFactory and protocol information of the other JMS provider.
xdb6.jar	Download this file from the following page:
	https://www.oracle.com/database/technologies/appdev/jdbc-downloads.html