



# **JBoss Enterprise Application Platform Continuous Delivery 13**

## **JBoss EAP Continuous Delivery 13 Release Notes**

For Use with JBoss Enterprise Application Platform continuous delivery 13



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## Abstract

These release notes contain important information related to JBoss Enterprise Application Platform continuous delivery release 13, which is available as a Technology Preview release in the cloud only.

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## CHAPTER 1. ABOUT JBOSS EAP CONTINUOUS DELIVERY 13

The JBoss Enterprise Application Platform continuous delivery (JBoss EAP CD) release 13 is a Technology Preview release available in the cloud only. This JBoss EAP CD release introduces a new delivery stream of JBoss EAP, which provides incremental updates and new capabilities on a regular schedule for Red Hat OpenShift Online and the Red Hat OpenShift Container Platform.

The purpose of this new delivery model is to quickly introduce new features ahead of the traditional JBoss EAP GA release. The JBoss EAP CD releases are only available in the OpenShift image format and can be accessed from the Red Hat Container Catalog.

Traditional JBoss EAP GA releases, the next being JBoss EAP 7.2, will be based on an aggregate of JBoss EAP CD releases and will continue to be available through the normal distribution methods.



### IMPORTANT

This continuous delivery release for JBoss EAP is provided as Technology Preview only. Technology Preview features are not supported with Red Hat production service level agreements (SLAs), might not be functionally complete, and Red Hat does not recommend to use them for production. These features provide early access to upcoming product features, enabling customers to test functionality and provide feedback during the development process.

See [Technology Preview Features Support Scope](#) on the Red Hat Customer Portal for information about the support scope for Technology Preview features.

### 1.1. DIFFERENCES BETWEEN JBOSS EAP AND JBOSS EAP CONTINUOUS DELIVERY

There are notable differences between the JBoss EAP product and the continuous delivery release for JBoss EAP.



### IMPORTANT

For descriptions of differences and details about feature support in the continuous delivery release for JBoss EAP, see the comparison table in [Getting Started with JBoss EAP for OpenShift Container Platform](#) or [Getting Started with JBoss EAP for OpenShift Online](#).

## CHAPTER 2. NEW FEATURES AND ENHANCEMENTS

### 2.1. SECURITY

#### Enable SASL Authentication for the Management Interfaces Using the CLI Security Commands

SASL authentication can now be enabled for the management interfaces using the `security enable-sasl-management` CLI command. This command creates all of the non-existing resources necessary to configure authentication.

For more information, see [Enable SASL Authentication for the Management Interfaces Using the CLI Security Command](#) in *How to Configure Server Security*.

#### Enable HTTP Authentication Using the CLI Security Commands

HTTP authentication can now be enabled for the Undertow security domain and the management interfaces using the `security` CLI commands.

- For the Undertow security domain, use the `security enable-http-auth-http-server` CLI command.
- For the management interfaces, use the `security enable-http-auth-management` CLI command.

For more information, see [Enable HTTP Authentication for Applications Using the CLI Security Command](#) and [Enable HTTP Authentication for the Management Interfaces Using the CLI Security Command](#) in *How to Configure Server Security*.

### 2.2. JAVA EE 8

#### Java EE 8 Preview Mode

By default, this continuous delivery release for JBoss EAP uses Java EE 7 APIs.

You can preview Java EE 8 functionality by setting the `ee8.preview.mode` system property to `true` on the `JAVA_OPTS_APPEND` environment variable. The following is an example of how to set Java EE 8 functionality when using the `oc new-app` command.

```
$ oc new-app IMAGE_STREAM~PATH_TO_SOURCE_CODE -e JAVA_OPTS_APPEND=-Dee8.preview.mode=true
```

For more information about how to configure environment variables, see [Getting Started with JBoss EAP for OpenShift Container Platform](#).

This enables support for the following Java EE 8 standards:

- [JSR 250](#): Common Annotations 1.3
- [JSR 338](#): JPA 2.2
- [JSR 365](#): CDI 2.0
- [JSR 367](#): JSON-B 1.0
- [JSR 369](#): Servlet 4.0



- [JSR 370](#): JAX-RS 2.1
- [JSR 372](#): JSF 2.3
- [JSR 374](#): JSON-P 1.1
- [JSR 380](#): Bean Validation 2.0
- [JSR 919](#): JavaMail 1.6

### Java EE 8 Security Support

Java EE 8 includes support for [JSR 375](#), which defines portable, plug-in interfaces for authentication and identity stores, and a new `injectable-type SecurityContext` interface that provides an access point for programmatic security. You can use the built-in implementations of these APIs, or define custom implementations.

JBoss EAP Continuous Delivery 13 now supports [JSR 375](#).

## 2.3. DATASOURCES

### New Datasource Attribute

The `datasource-class-info` attribute provides the list of datasource connection properties that can be set for the datasource class.

For more information, see the [Datasource Attributes](#) table in the *Configuration Guide*.

## 2.4. INFINISPAN

### Scattered Cache Mode

The `infinispan` subsystem now supports scattered cache mode. Scattered mode is similar to distributed mode in that it uses a consistent hash algorithm to determine ownership. However, ownership is limited to two members, and the originator, or node receiving the request for a given session, always assumes ownership for coordinating locking and cache entry updates. The cache write algorithm used in scattered mode guarantees that a write operation results in only a single RPC call. This can potentially reduce contention and improve performance following a cluster topology change.

For more information, see [Clustering Modes](#) in the *Configuration Guide*.

### Externalize HTTP Sessions Using the Remote Cache Store

A new method of externalizing HTTP sessions to JBoss Data Grid is included in this release. This method utilizes a remote cache container in the `infinispan` subsystem of JBoss EAP that has a client SSL context defined for security.

For more information, see [Externalize HTTP Sessions to JBoss Data Grid](#) in the *Configuration Guide*.

## 2.5. IO

### New Worker Attribute

In previous releases of JBoss EAP, the core threads size was always equal to the max threads size. This meant that threads would never die, even if the `task-keepalive` attribute was set. In this release, the number of threads for the core thread pool can be configured separately using the `task-core-threads` attribute, allowing the `keepalive` setting to work as expected.

For more information, see [Configuring a Worker](#) and [IO Subsystem Attributes](#) in the *Configuration Guide* for JBoss EAP.

## 2.6. LOGGING

### JSON and XML Formatter

You can use the JSON and XML log formatters to format log messages in JSON and XML.

For more information, see [Log Formatters](#) in the *Configuration Guide*.

## 2.7. MESSAGING

### Connect to Red Hat AMQ Using the Integrated Artemis Resource Adapter

You can configure the integrated Artemis resource adapter to connect to a remote installation of Red Hat AMQ 7, which then becomes the JMS provider for your JBoss EAP 7.1 applications. This allows JBoss EAP to be a client for the remote Red Hat AMQ 7 server.

For more information, see [Configuring the Artemis Resource Adapter to Connect to Red Hat JBoss AMQ 7](#) in *Configuring Messaging* for JBoss EAP.

## 2.8. MANAGEMENT CLI

### Printing CLI Output in Color

You can now configure the management CLI to print the CLI log output in color based on the log message output type. For more information about the available colors and how to enable and disable color printing, see [Configuring the Management CLI](#) in the *Management CLI Guide*.

## 2.9. WEB SERVER

### Undertow Byte Buffer Pools

You can now use Undertow byte buffer pools to allocate pooled NIO `ByteBuffer` instances. All listeners have a byte buffer pool and you can use different buffer pools and workers for each listener. Byte buffer pools can be shared between different server instances.

For more information, see [Configuring Byte Buffer Pools](#) in the *Configuration Guide*.

### Setting the Default Cookie Version

Undertow now provides a way to set the default cookie version to use for cookies created by the application. For information about the new `default-cookie-version` attribute, see [servlet-container Attributes](#) in the *Configuration Guide*.

### Allowing Unescaped Characters in a URL

You can now configure Undertow to allow non-escaped characters in a URL by setting the `allow-unescaped-characters-in-url` attribute for the HTTP, HTTPS, and AJP listeners. When this attribute is set to `true`, the listener processes any URL containing non-escaped, non-ASCII characters. When set to `false`, the listener rejects any URL containing non-escaped, non-ASCII characters with an `HTTP Bad Request 400` response code.

For more information about listener attributes, see Undertow [Server Attributes](#) in the *Configuration Guide*.

### PROXY Protocol

Undertow now supports the PROXY protocol Version 1, as defined by [The PROXY protocol Versions 1](#)

& 2 specification. This option is disabled by default and must only be enabled for listeners that are behind a load balancer that supports the same protocol. It is configured using the new `proxy-protocol` attribute on the Undertow HTTP and HTTPS listeners.

For more information about listener attributes, see Undertow [Server Attributes](#) in the *Configuration Guide*.

## 2.10. EJB

### EJB and JNDI over HTTP/HTTPS with HTTP Load Balancer

Performing EJB and JNDI invocations using the HTTP protocol, so that requests are mapped directly to HTTP requests, is now fully supported in JBoss EAP Continuous Delivery 13. In addition, you can invoke EJBs over an HTTP load balancer. For more information, see [EJB Invocation Over HTTP](#) in the *Developing EJB Applications*.

## 2.11. OPENSIFT

### KUBE\_PING Integrated Natively In JBoss EAP

Previously, the `KUBE_PING` JGroups discovery protocol was implemented only in the JBoss EAP OpenShift image. `KUBE_PING` is now implemented natively in JBoss EAP, so users creating their own custom container images are now able to natively use `KUBE_PING` for clustered applications. For more information on using `KUBE_PING`, see the [Clustering reference](#) in *Getting Started with JBoss EAP for OpenShift Container Platform*.

## 2.12. MODULES

### Predefined Modules

A set of predefined modules, `org.jboss.modules`, which includes all of the JBoss Modules API, is supported in JBoss EAP Continuous Delivery 13 when you use the default module loader. This special module is always available and is provided by JBoss Modules. The standard Java Platform Module System (JPMS) modules, which are provided in Java 9 and later, are also available by their standard names. When using JDK 8, the JDK 9 modules are emulated by JBoss Modules.

For more information, see [Predefined Modules](#) in the *Configuration Guide*.

## CHAPTER 3. UNSUPPORTED AND DEPRECATED FUNCTIONALITY

### 3.1. UNSUPPORTED FEATURES

Support for some technologies are removed due to the high maintenance cost, low community interest, and better alternative solutions. The following features are not supported in this continuous delivery release for JBoss EAP.



#### NOTE

The unsupported features listed in the [Unsupported Features](#) section of the *7.1.0 Release Notes* also apply to this continuous delivery release for JBoss EAP, unless they are mentioned in the [New Features and Enhancements](#) section of this document.

### 3.2. DEPRECATED FEATURES

Some features have been deprecated with this release. This means that no enhancements will be made to these features, and they may be removed in the future, usually the next major release.

Red Hat will continue providing full support and bug fixes under our standard support terms and conditions. For more information about the Red Hat support policy, see the [Red Hat JBoss Middleware Product Update and Support Policy](#) located on the Red Hat Customer Portal.

For details of which features have been deprecated, see the [JBoss Enterprise Application Platform Component Details](#) located on the Red Hat Customer Portal.

#### IO Subsystem

- IO buffer pools are deprecated in this release. They are replaced by Undertow byte buffer pools.

#### Platforms and Features

Support for the following platforms and features is deprecated:

##### Databases

- IBM DB2 e9.7
- MySQL 5.5
- Microsoft SQL Server 2012
- PostgreSQL 9.3
- Enterprise DB Postgres Plus Advanced Server 9.3
- Sybase 15

##### JMS Providers/Adapters

- IBM WebSphere MQ 7.5
- TIBCO EMS

**LDAP Servers**

- Red Hat Directory Server 9.1
- Microsoft Active Directory 2008

**Tested Frameworks**

- JQuery (all versions)
- AngularJS (all versions)

## CHAPTER 4. RESOLVED ISSUES

See [Resolved Issues for JBoss EAP CD 13](#) to view the list of issues originating from customer cases that have been resolved for this release.

## CHAPTER 5. FIXED CVES

continuous delivery release for JBoss EAP includes fixes for the following security related issues:

- [CVE-2018-10237](#): **guava**: Unbounded memory allocation in `AtomicDoubleArray` and `CompoundOrdering` classes allow remote attackers to cause a denial of service.
- [CVE-2018-1067](#): **undertow**: HTTP header injection using CRLF with UTF-8 encoding.
- [CVE-2018-10862](#): **wildfly-core**: Path traversal can allow the extraction of `.war` archives to write arbitrary files.

## CHAPTER 6. KNOWN ISSUES

See [Known Issues for JBoss EAP CD 13](#) to view the list of known issues for this release.

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