

The software described in this documentation is either no longer supported or is in extended support.
Oracle recommends that you upgrade to a current supported release.

Oracle® Cloud Native Environment

Release Notes for Release 1.4

ORACLE®

F27574-33
March 2023

The software described in this documentation is either no longer supported or is in extended support.
Oracle recommends that you upgrade to a current supported release.

Oracle Legal Notices

Copyright © 2020, 2023, Oracle and/or its affiliates.

Table of Contents

Preface	v
1 Component Versions	1
2 CVE and Bug Fix Updates	3
3 New Features and Notable Changes	5
3.1 Release 1.4.10	5
3.2 Release 1.4.9	5
3.3 Release 1.4.8	5
3.4 Release 1.4.7	5
3.5 Release 1.4.6	5
3.6 Release 1.4.3	5
3.7 Release 1.4.0	5
4 Deprecation Notices	7
4.1 Unbreakable Enterprise Kernel Release 5	7
4.2 Deprecated Platform CLI Commands	7
5 Documentation Changes	9
5.1 Release 1.4.7	9
5.2 Release 1.4	9
6 Known Issues	11
6.1 Upgrading Kubernetes 1.12 to Oracle Cloud Native Environment	11
6.2 Disabled virt module on Oracle Linux 8	11
6.3 Errors using overlay networking	11
6.4 Listing environments	11
6.5 Validating a module reports network ports are not open	11

Preface

This document contains information about Oracle Cloud Native Environment. This document includes information on component versions, new features, documentation changes and known issues for Oracle Cloud Native Environment.

Document generated on: 2023-03-14 (revision: 1279)

Audience

This document is written for system administrators and developers who want to use Oracle Cloud Native Environment. It is assumed that readers have a general understanding of the Oracle Linux operating system and container concepts.

Related Documents

The latest version of this document and other documentation for this product are available at:

<https://docs.oracle.com/en/operating-systems/olcne/>

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.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <https://www.oracle.com/corporate/accessibility/>.

For information about the accessibility of the Oracle Help Center, see the Oracle Accessibility Conformance Report at <https://www.oracle.com/corporate/accessibility/templates/t2-11535.html>.

Access to Oracle Support for Accessibility

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <https://www.oracle.com/corporate/accessibility/learning-support.html#support-tab>.

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

The software described in this documentation is either no longer supported or is in extended support.
Oracle recommends that you upgrade to a current supported release.

Diversity and Inclusion

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.

Chapter 1 Component Versions

This section lists the version numbers of the major components included with Oracle Cloud Native Environment.

To see the version of the packages, use the `rpm -q` command, for example:

```
rpm -q olcne-api-server  
olcne-api-server-1.4.x-x.el7.x86_64
```

Table 1.1 Oracle Cloud Native Environment Component Versions

Component	Version
Oracle Cloud Native Environment Platform API Server	1.4
Oracle Cloud Native Environment Platform Agent	1.4
Oracle Cloud Native Environment Platform Command-Line Interface	1.4
Kubernetes	1.21.14-3
RunC	1.0
CRI-O	1.21.7
Kata Containers	1.12.1
NGINX	1.17.7
Helm	3.6.4
Prometheus	2.30.1
Istio	1.13.9
Grafana	7.5.15
Operator Lifecycle Manager	0.17.0

Chapter 2 CVE and Bug Fix Updates

Notices for Common Vulnerabilities and Exposures (CVEs) and bug fix updates for Oracle Cloud Native Environment are available on the Unbreakable Linux Network at:

<https://linux.oracle.com/errata>

You can subscribe to the el-errata@oss.oracle.com email list to receive these notices via email at:

<https://oss.oracle.com/mailman/listinfo/el-errata>

All Oracle Cloud Native Environment CVE and bug fix update notices are listed on ULN and via the email list mentioned, and are not included in this document.

You may also find it helpful to check the list of new and updated packages posted on the Oracle Linux yum server available at:

<https://yum.oracle.com/whatsnew.html>

Oracle Cloud Native Environment receives CVE and bug fix updates for the current and the previous major and minor releases (N and N-1). When a new release is available, the release previously at N-1 moves to N-2 and no longer receives CVE and bug fix updates. Oracle Cloud Native Environment versions as a stack, with each release containing specific component versions. Updates are based on the major and minor release numbers (for example 1.0 to 2.0 or 1.3 to 1.4, and so on), not on the patch releases (for example: 1.2.1 or 1.2.2, and so on).

Table 2.1 Oracle Cloud Native Environment CVE and Bug Fix Updates

Oracle Cloud Native Environment Release	Release Date	CVE and Bug Fix Updates
Release 1.4 (N)	December 2021	Yes
Release 1.3 (N-1)	May 2021	Yes
Release 1.2 (N-2)	November 2020	No more updates after December 2021
Release 1.1 (N-3)	April 2020	No more updates after May 2021
Release 1.0 (N-4)	November 2019	No more updates after November 2020

Chapter 3 New Features and Notable Changes

This chapter lists the new features and notable changes in each Oracle Cloud Native Environment release.

3.1 Release 1.4.10

This section lists the notable changes in Release 1.4.10 of Oracle Cloud Native Environment.

Istio Updated: Istio is updated to Release 1.13.9.

3.2 Release 1.4.9

This section lists the notable changes in Release 1.4.9 of Oracle Cloud Native Environment.

Kubernetes Updated: Kubernetes is updated to Release 1.21.14-3.

3.3 Release 1.4.8

This section lists the notable changes in Release 1.4.8 of Oracle Cloud Native Environment.

Kubernetes Updated: Kubernetes is updated to Release 1.21.14.

3.4 Release 1.4.7

This section lists the notable changes in Release 1.4.7 of Oracle Cloud Native Environment.

Istio Updated: Istio is updated to Release 1.13.7.

3.5 Release 1.4.6

This section lists the notable changes in Release 1.4.6 of Oracle Cloud Native Environment.

Istio Updated: Istio is updated to Release 1.13.5.

3.6 Release 1.4.3

This section lists the notable changes in Release 1.4.3 of Oracle Cloud Native Environment.

Istio Updated: Istio is updated to Release 1.13.2.

Grafana Updated: Grafana is updated to Release 7.5.15.

3.7 Release 1.4.0

This section lists the notable changes in Release 1.4.0 of Oracle Cloud Native Environment.

Configuration File: A YAML configuration file can be used with the `olcnectl` command. This file contains all the information required to create and manage environments and modules. Using a configuration file simplifies `olcnectl` commands as you no longer need to enter command line options as they are read from the file. Use the `--config-file` option with most `olcnectl` commands to specify the location of the configuration file.

A new `olcnectl template` command is added. This command creates a boilerplate YAML file to help get you started writing a configuration file.

For information on creating and using a configuration file, see [Platform Command-Line Interface](#).

Oracle Cloud Infrastructure Storage: An Oracle Cloud Infrastructure Container Storage Interface module is added to configure Kubernetes persistent storage with Oracle Cloud Infrastructure. The Platform CLI is updated with new options for the Oracle Cloud Infrastructure Container Storage Interface module.

For information on using the Oracle Cloud Infrastructure Container Storage Interface module, see [Storage](#).

Gluster Storage: A Gluster Container Storage Interface module is added to configure Kubernetes persistent storage with Gluster Storage for Oracle Linux. The Platform CLI is updated with new options for the Gluster Container Storage Interface module. Gluster must be installed and configured before it is used by the Gluster Container Storage Interface module.

For information on using the Gluster Container Storage Interface module, see [Storage](#).

Platform CLI Reports: The Platform CLI `olcnectl environment report` and `olcnectl module report` commands are now available to report on installed environments, modules, and properties. These commands are useful for obtaining information to validate environments, module installations, module updates, and for troubleshooting.

For information on creating reports, see [Platform Command-Line Interface](#).

Grafana Module: Grafana is now included as a module. This simplifies the installation and management of Grafana with a service mesh using the Istio module. The Grafana module is automatically installed or uninstalled (along with the Prometheus module) with the Istio module. There are new command options in the Platform CLI to work with the Grafana module.

Kubernetes Updated: Kubernetes is updated to Release 1.21.6. For a list of the Kubernetes API Server changes since the last update in Oracle Cloud Native Environment, see the upstream [Kubernetes Release Notes](#). This shows the changes from Releases 1.20.12 to 1.21.6.

CRI-O Updated: CRI-O is updated to Release 1.21.4.

Helm Updated: Helm is updated to Release 3.6.4.

Istio Updated: Istio is updated to Release 1.11.4.

Prometheus Updated: Prometheus is updated to Release 2.30.1.

Grafana Updated: Grafana is updated to Release 7.3.7.

Deprecation Notice: Oracle Linux 7 running Unbreakable Enterprise Kernel Release 5 (UEK R5) is removed as a kernel.

Chapter 4 Deprecation Notices

This chapter lists the deprecation notices for Oracle Cloud Native Environment.

4.1 Unbreakable Enterprise Kernel Release 5

Oracle Linux 7 running Unbreakable Enterprise Kernel Release 5 (UEK R5) is removed as a kernel in Oracle Cloud Native Environment Release 1.4. Oracle Cloud Native Environment Release 1.3 is the last release this kernel can be used.

4.2 Deprecated Platform CLI Commands

The `apiserver-advertise-address` option in the `olcnectl module create` command is deprecated in Release 1.2.0. This option set the IP address on which to advertise the Kubernetes API server to members of the Kubernetes cluster in a non-HA cluster, with a single control plane node. The `--master-nodes` option specifies the IP address and this deprecated option is no longer used.

Chapter 5 Documentation Changes

This chapter lists notable changes to the Oracle Cloud Native Environment documentation.

5.1 Release 1.4.7

This section lists the notable changes in the documentation for Release 1.4.7 of Oracle Cloud Native Environment.

Release Notes: The historical information related to Releases 1.2 and 1.3 is removed from the Release Notes. This information is available in the Release Notes for those releases.

5.2 Release 1.4

This section lists the notable changes in the documentation for Release 1.4 of Oracle Cloud Native Environment.

Storage: A new [Storage](#) book is added to provide information on using the Gluster Container Storage Interface module and Oracle Cloud Infrastructure Container Storage Interface module to configure persistent storage in Oracle Cloud Native Environment.

Monitoring and Visualization: The contents of this book has been consolidated into the Service Mesh book.

Chapter 6 Known Issues

This chapter contains information about known issues and limitations in this release.

6.1 Upgrading Kubernetes 1.12 to Oracle Cloud Native Environment

You cannot upgrade from Kubernetes 1.12 or earlier and add the cluster to Oracle Cloud Native Environment. You must perform a new deployment of Kubernetes using the Platform CLI.

6.2 Disabled virt module on Oracle Linux 8

After deploying the Kubernetes module on Oracle Linux 8, the `virt` module is disabled in the operating system. It is recommended that you do not enable this module again unless requested to do so in this documentation or by Oracle Support.

6.3 Errors using overlay networking

A Kubernetes cluster that uses overlay networking, may result in an issue with the VxLAN configuration for the cluster. Nodes that are affected by the issue display errors similar to the following in the `dmesg` output:

```
[ 610.495450] bnxt_en 0000:00:03.0 ens3: hwrn req_type 0xal seq id 0x67
error 0xf
[ 610.498246] bnxt_en 0000:00:03.0 ens3: hwrn_tunnel_dst_port_alloc failed.
rc:15
```

This issue is commonly caused when the `tx offload` feature is enabled in the `bnxt_en` driver module. You can resolve this issue by disabling the `tx offload` feature using the `ethtool` command. For example:

```
sudo ethtool --offload $(ip -o -4 route show to default | awk '{print $5}') tx off
```

6.4 Listing environments

The Platform CLI does not yet have a method to display a list of the environments created.

6.5 Validating a module reports network ports are not open

If you open network ports on nodes using the range option, the `olcnectl module validate` command cannot validate the ports are open. This is due to an issue in the `firewall-cmd` command. For example, if you use a command like the following which opens ports using a port range:

```
sudo firewall-cmd --add-port=2379-2380/tcp
sudo firewall-cmd --add-port=2379-2380/tcp --permanent
```

The `olcnectl module validate` command reports that ports 2379 and 2380 are not open.

Workaround: Open network ports individually, without specifying a port range. For example:

```
sudo firewall-cmd --add-port=2379/tcp
sudo firewall-cmd --add-port=2379/tcp --permanent
sudo firewall-cmd --add-port=2380/tcp
sudo firewall-cmd --add-port=2380/tcp --permanent
```

