Oracle Cloud Native Environment

Release Notes for Release 2.0

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Preface

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

Documentation License

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.

Documentation Accessibility

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

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 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

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 on the email list mentioned, and aren't included in this document.

You might 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

Product enhancements, Common Vulnerabilities, and Exposures (CVEs) and bug fix updates are available for Oracle Cloud Native Environment as described in Oracle Linux: Product Life Cycle Information.

2

New Features and Notable Changes

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

Release 2.0

Release 2.0 of Oracle Cloud Native Environment provides a new way of creating and managing Kubernetes clusters, compared to previous releases. This section lists new features introduced in this release.

CLI

The Oracle Cloud Native Environment CLI (CLI) is the command line tool to create and manage Kubernetes clusters in Oracle Cloud Native Environment. The CLI (`ocne` command) includes a help system to show all command options, and a set of configuration files at various levels to configure the environment and Kubernetes clusters.

> **Note:**
>
> This is a new CLI and isn't backwardly compatible with the CLI (`olcnectl`) in previous releases.

For more information on using the CLI, see Oracle Cloud Native Environment: CLI.

Oracle Container Host for Kubernetes (OCK) Images

Oracle Cloud Native Environment includes a CLI that can manage the life cycle of Kubernetes clusters, using OSTree based container images. The container image includes both the host Oracle Linux OS, and the Kubernetes software distribution. The image is deployed to hosts or Virtual Machines (VMs) to create nodes in a Kubernetes cluster. This image is referred to in this documentation as the Oracle Container Host for Kubernetes (OCK) image.

The OCK image is distributed on the Oracle Container Registry in the following formats:

Bootable image
This is a container image in the Qcow2 format, available at:
container-registry.oracle.com/olcne/ock
The bootable image contains a single VM image in the Qcow2 format, and is used to create boot media for virtualized platforms. This image is used as the boot media for clusters created with the libvirt and Oracle Cloud Infrastructure providers.
By default, the image is configured to work with the libvirt provider. A conversion of the boot image to the appropriate format for Oracle Cloud Infrastructure can be performed automatically when you upload the image to Oracle Cloud Infrastructure.

OSTree image
This is an OSTree commit based container image, available at:

container-registry.oracle.com/olcne/ock-ostree
This image is used as the basis for an OSTree archive for customized installations using the Bring Your Own provider.
This image is also used for updating cluster nodes to stage patch updates, and to update to the next Kubernetes minor release.
For information on OSTree containers, see the upstream OSTree documentation.

For more information on the OCK image, see Oracle Cloud Native Environment: Kubernetes Clusters.

Cluster Providers

Oracle Cloud Native Environment includes the following providers, which use the OCK image to create Kubernetes clusters:

libvirt Provider
The libvirt provider can be used to provision clusters in a Kernel-based Virtual Machine/QEMU (KVM) environment. This is the default provider.

Oracle Cloud Infrastructure Provider
The Oracle Cloud Infrastructure provider can be used to create clusters on Oracle Cloud Infrastructure. This provider uses the Kubernetes Cluster API to provision the clusters.

Bring Your Own Provider
The Bring Your Own provider can be used to create clusters on bare metal or other virtual instances, not provided explicitly by Oracle Cloud Native Environment.

For information on using these providers to create clusters, see Oracle Cloud Native Environment: Kubernetes Clusters.

Application Catalogs

Oracle Cloud Native Environment provides application catalogs for deploying Cloud Native applications into a Kubernetes cluster.

An application catalog is a searchable collection of software that can be installed into a Kubernetes cluster. Two types of application catalogs can be configured within a cluster: an Oracle catalog, and an external community catalog.

An application catalog is set up in two flavors: a Helm repository, and a service that's compatible with Artifact Hub (an external catalog). The Oracle catalog is a Helm repository, while an external catalog typically points to artifacthub.io and is compatible with Artifact Hub.

For information on using application catalogs and installing applications into a cluster, see Oracle Cloud Native Environment: Applications.

Web-Based UI

The Oracle Cloud Native Environment UI (UI) provides a web-based interface to manage the maintenance and installation of Kubernetes cluster resources, and applications.

The UI is based on the open source Kubernetes UI Headlamp application. For more information on the Headlamp project, see the upstream Headlamp documentation.

For information on installing the UI, see Oracle Cloud Native Environment: Kubernetes Clusters and for information on using the UI to install applications, see Oracle Cloud Native Environment: Applications.

3
Documentation Changes

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

Release 2.0

A new set of documents are provided in this release. The document list for this release is:

Oracle Cloud Native Environment: Release Notes
This document provides an overview of the new features introduced in Oracle Cloud Native Environment.

Oracle Cloud Native Environment: Quick Start
This document guides you through creating a Kubernetes cluster using the Oracle Cloud Native Environment CLI (CLI) with the default `libvirt` provider. It also covers installing applications from the default Oracle application catalog, and accessing the web-based Oracle Cloud Native Environment UI.

Oracle Cloud Native Environment: Kubernetes Clusters
This document covers using the Oracle Container Host for Kubernetes (OCK) image to create and manage Kubernetes clusters with the cluster providers. The book also shows how you can use cluster templates and configuration files to create customized clusters. Administration operations, such as updating Kubernetes clusters with the latest OCK images, are also included.

Oracle Cloud Native Environment: CLI
This document provides information on how to install and use the CLI. The document provides a CLI command reference with syntax and usage examples, and also shows how to set options in YAML configuration files to customize the CLI and clusters.

Oracle Cloud Native Environment: Applications
This document covers the different aspects of application management, for example searching for, installing, and updating applications, hosted in the Oracle Catalog, into a Kubernetes cluster. The document covers using both the CLI and the UI to perform these tasks.