ORACLE

Oracle Cloud Native Environment

Oracle Cloud Native Environment is software for configuring, deploying, updating, and upgrading infrastructure for running cloud native applications. It is based on open standards, specifications, and APIs defined by the Open Container Initiative and Cloud Native Computing Foundation (CNCF), including a CNCF-certified Kubernetes module, container runtimes, virtualization, service mesh, storage, networking, observability, and diagnostics.

Software features

Oracle Cloud Native Environment provides an integrated set of components to deploy, manage, and scale container-based applications for on-premises, in the cloud, and at the edge. Oracle closely tracks CNCF projects as well as the Open Container Initiative and contributes to and abides by the standards defined by both. For example, Oracle delivers the tools to create and provision Open Container Initiative compliant containers.

- Includes the Kubernetes software and is released under the CNCF Certified Kubernetes Conformance program.
- Simplifies the configuration and setup of Kubernetes with support for backup and recovery.
- Thanks to the built-in KubeVirt technology, provides a unified development platform where developers can build, modify, and deploy applications residing in both application containers and virtual machines in a common, shared environment.
- Relies on the native Kubernetes container runtime interface, CRI-O, and provides two runtime engines, runC and Kata Containers.
- Provides Istio service mesh to coordinate communication between services, providing service discovery, load balancing, security, recovery, telemetry, and policy enforcement capabilities. Istio uses a sidecar service mesh model powered by the Envoy proxy.
- Supplies Prometheus, a powerful, flexible, instrumentation solution for monitoring container environments. It provides time-series dimensional data, powerful query tools, and alerting features to improve visibility across the environment.
- Storage integration is provided through plug-ins and is referred to as the Container Storage Interface (CSI). The plug-ins adhere to a standard specification and include the Oracle Cloud Infrastructure Cloud Controller Manager module to set up dynamically provisioned persistent storage using Oracle Cloud Infrastructure and the Rook Container Storage Interface module to set up dynamically provisioned persistent storage using Ceph Storage for Oracle Linux.
- The Container Network Interface (CNI) project, currently incubating under CNCF, seeks to simplify networking for container workloads by defining a common framework for dynamically configuring networking

ORACLE

resources. The CNI plug-in, included with Oracle Cloud Native Environment, simplifies container-to-container networking and includes the adoption of Flannel, Calico and Multus.

## Flexible support options and more value

Oracle Linux Cloud Native Environment can be downloaded, used, and distributed free of charge. Updates and errata are freely available, excluding certain updates and errata such as those released with Ksplice and Extended Support, which may require Oracle Linux Premier or Extended Support.

With an Oracle Linux Premier Support subscription there is no need to worry about whether a system will run as a physical or virtual instance. It is all included in the price of a single subscription. Users can run Oracle Cloud Native Environment on the host and as many Oracle Linux guest instances as desired without additional cost. And, when workloads need to move between different deployment models, the transition can be nearly effortless.

Oracle Linux Premier Support, backed by one of the most experienced engineering and QA teams in the world, provides a comprehensive, integrated solution for delivering modern apps at scale, that includes:

- Operating System and Virtualization
- Container Infrastructure Runtime
- Infrastructure Automation and Management

This comprehensive solution enables enterprises to:
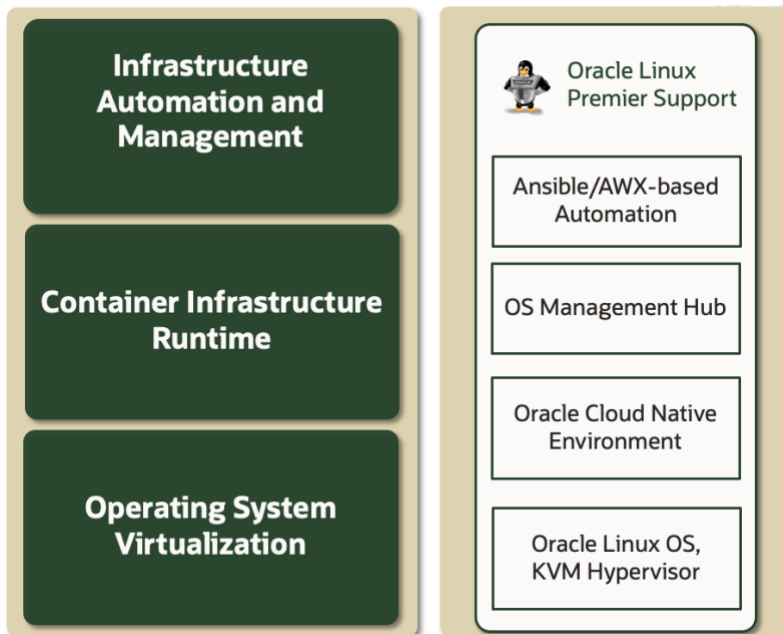
- Deploy, manage, and secure container-based applications on a multicloud Kubernetes deployment.
- Unify application lifecycle management across microservices and traditional server applications.
- Standardize management across Kubernetes clusters on-premises, on Oracle Cloud Infrastructure, and on other public clouds.

Key benefits

- Accelerates time-to-value and delivers agility through modularity and developer productivity
- Modernizes applications and lowers costs by fully exploiting the economic advantages of cloud and open source
- Avoids vendor lock-in with standards-based software
- Certified Kubernetes to meet CNCF software conformance requirements for interoperability
- Accelerates creating and provisioning Open Container Initiative (OCI)-compliant containers
- Easily scales up and down Kubernetes clusters to manage peak workloads
- Deploys highly available Kubernetes clusters
- Can be deployed anywhere with multiple cloud and on-premises options
- Backed by enterprise-class worldwide support
- Reduces DevOps costs with support included at no extra charge with Oracle Linux Premier Support

ORACLE

In addition to the documentation, Oracle offers free and comprehensive resources such as learning paths, tutorials, hands-on labs, and videos to help customers gain proficiency in deploying, configuring, monitoring, and managing Oracle Cloud Native Environment with enterprise-grade performance.

Getting started with Oracle Cloud Native Environment

Oracle Linux is a prerequisite to getting started with Oracle Cloud Native Environment. The first step is to install Oracle Linux, which can be downloaded, used, and distributed free of charge and updates and errata are freely available from the Oracle Linux yum server. Then, follow the documentation to install and configure the required Oracle Cloud Native Environment packages into Oracle Linux. Container images can be downloaded via Oracle Container Registry, GitHub Container Registry or Docker Hub and deployed to Oracle Cloud Native Environment.

Free training videos are also available to help customers quickly adopt Oracle Cloud Native Environment.

Connect with us

Call **+1.800.ORACLE1** or visit **oracle.com/linux**. Outside North America, find your local office at: **oracle.com/contact**.

🅱 blogs.oracle.com/linux   f facebook.com/oraclelinux   🐦 twitter.com/oraclelinux

ORACLE