

Oracle Private Cloud Appliance

Frequently Asked Questions

General Overview

What is Oracle's Oracle Private Cloud Appliance?

Oracle's Private Cloud Appliance is an integrated, "wire once", software-defined infrastructure system designed for rapid deployment of both infrastructure hardware and application software. Whether running any Linux, Oracle Solaris, or Microsoft Windows, Oracle Private Cloud Appliance supports a large range of OS versions hosted in a converged server, network, and storage environment to enable general purpose, business-, and mission-critical application deployments in medium-to-large data centers. High performance, low-latency Oracle Fabric Interconnect and Oracle SDN software, two products in the Oracle Virtual Networking family, allow automated configuration of the server and storage networks. The embedded Oracle Private Cloud Appliance controller software automates the installation, configuration, and management of all the infrastructure components at the push of a button. The users need only to enter some very basic configuration parameters and then create VMs manually or by leveraging Oracle VM Templates and Assemblies to get a full application up and running in as little as a couple of hours.

By default, all Oracle software that has been certified for use with Oracle VM is certified for Oracle Private Cloud Appliance, which includes the Oracle Database, Oracle Fusion Middleware, Oracle Applications, and Oracle Real Application Clusters. Backed by Oracle's world-class support organization, customers now have a single point of support for their entire hardware and software virtualization environments.

The Oracle Private Cloud Appliance was previously called the Virtual Compute Appliance.

Why is Oracle offering the Oracle Private Cloud Appliance?

Oracle has a long-standing history of delivering Engineered Systems solutions to market to help simplify IT and enable datacenters to deliver better services from database, business applications to middleware and hardware integrated solutions.

Consistent with this strategy, the Oracle Private Cloud Appliance provides IT a highly scalable virtualization foundation to support consolidation as well as a robust integrated solution to help IT achieve maximum efficiency with existing investments or prepare for the migration to cloud computing. Oracle Private Cloud Appliance is an easy-to-acquire, easy-to-deploy, "turnkey" solution that integrates compute, network, and storage resources in a software-defined fabric to enable agile and efficient data center deployments. With Oracle Private Cloud Appliance, customers get a converged infrastructure that can be scaled linearly, one server at a time, from two- to 25 compute nodes per rack. But Oracle Private Cloud Appliance also uniquely provides the capability to rapidly deploy applications, not just hardware, based on the ability to leverage Oracle VM Templates and Assemblies that are user-created or that are available for download from Oracle.

What are the components of the Oracle Private Cloud Appliance X5-2?

Oracle Private Cloud Appliance X5-2 is a turnkey solution which has the following components pre-integrated and wired from the factory:

- Compute and Management: The base rack consists of 2 dedicated Oracle Server X5-2 as Management Nodes. In addition a Base rack can support a maximum of 25 Oracle Server X6-2 as compute nodes.
- Networking:
 - Oracle Virtual Networking with two Oracle Fabric Interconnect F1-15

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- Two InfiniBand switches: Oracle Sun Data Center InfiniBand Switch 36
- Two Ethernet switches: Management network support provided by Oracle Switch ES1-24
- Storage: Oracle ZFS Z3-ES Storage Appliance System
- Software: Oracle Private Cloud Appliance is preloaded with Oracle Private Cloud Appliance controller, Oracle VM, Oracle VM Manager, Storage System Software and Oracle SDN Software

Pricing and Licensing

What additional licenses are required with the Oracle Private Cloud Appliance?

No additional Software licenses are required for Oracle Private Cloud Appliance. The Oracle Private Cloud Appliance system price includes all the required software.

Features and Benefits

What are some of the features and benefits of the Oracle Private Cloud Appliance?

Oracle Private Cloud Appliance is an easy-to-acquire, easy-to-install and easy-to-deploy turnkey solution that integrates compute, network and storage resources to enable agile and efficient data center deployments. With Oracle Private Cloud Appliance, you get infrastructure that scales linearly and applications that can be deployed rapidly. Oracle Private Cloud Appliance is built from innovative Oracle products that are proven and tested for enterprise deployments through multiple product generations, making it easy to use and implement in your environment. By leveraging an integrated system, administrators are free to focus on delivering flexible services, addressing strategic needs, and transforming IT to respond to

their customers' evolving needs rather than investing considerable time to hand-configure hardware infrastructure from scratch.

With the Oracle Private Cloud Appliance, users only need to wheel the racks into place, connect power, network, and storage cables and power-on the system. Oracle Private Cloud Appliance controller orchestration software automatically powers up, installs, and configures the hardware and software environment. Within minutes, the system is ready, and users can add virtual machines (VMs) by using standard Oracle VM Templates or by creating them from scratch.

And Oracle Private Cloud Appliance works with Oracle Enterprise Manager, transforming it into a powerful IaaS cloud services delivery platform and providing a simple path to the Oracle Cloud. Customers can centrally manage consolidated workloads across Private Cloud Appliance and Oracle Cloud with Enterprise Manager. Additionally, both Private Cloud Appliance and Oracle Cloud share same underlying technologies, providing a bridge between private and public cloud.

Oracle Private Cloud Appliance offers exceptional value in the following areas:

- Accelerate Time to Value
 - Respond rapidly to market needs by provisioning applications faster in a virtualized environment
 - Preconfigured hardware allows rapid install and initialization to allow application VMs to be deployed and running in hours rather than days and weeks
- Lower business risks and scale your infrastructure to your needs

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- Reduce application deployment and maintenance complexity by deploying a pre-configured hardware and software solution
- Tailor compute requirements for today with flexibility to grow granularly in the future
- Deliver on path to cloud by leveraging same management tool and underlying technologies
- Integrate into existing data center models
- Self-contained environment utilizes existing storage infrastructure
- Deploy applications on standard operating systems: Linux, Oracle Solaris, and Microsoft Windows

Can Oracle VM Templates be used with Oracle Private Cloud Appliance?

Yes, Oracle VM Templates can be used with Oracle Private Cloud Appliance. Oracle VM Templates provide an innovative approach to deploying a fully configured software stack by offering pre-installed and pre-configured software images. Use of Oracle VM Templates eliminates the installation and configuration costs, and reduces the ongoing maintenance costs, helping organizations achieve faster time-to-market and lower cost of operations. Oracle VM Templates of many key Oracle products are available for download, including Oracle Database, Oracle Real Application Cluster (RAC), Oracle E-Business Suite, JD Edwards, Fusion Middleware, HCM, PeopleSoft and many more. [Learn more about Oracle VM Templates.](#)

Technical Details

How do customers manage their Oracle Private Cloud Appliance?

A browser-based management utility Oracle Private Cloud Appliance dashboard is included along with the Oracle Private Cloud Appliance Controller software. The Dashboard allows customers to manage the hardware. The controller software, which runs on the management nodes, is responsible for the automation and control of the Appliance. To manage the virtualized environment, a browser-based management solution [Oracle VM Manager](#) is included at no additional charge.

What guest operating systems are supported with Oracle Private Cloud Appliance?

The following guest operating systems are supported with Oracle Private Cloud Appliance:

- Oracle Solaris
- Oracle Linux
- Red Hat Enterprise Linux
- Microsoft Windows Server

Please refer to [Oracle VM Documentation](#) for complete information on supported Guest OS configurations.

What are Compute and Management node specification in Oracle Private Cloud Appliance X5-2?

Oracle Server X3-2, X4-2, X5-2, and X6-2 are the only compute and management nodes supported in Oracle Private Cloud Appliance. Oracle Server X6-2 may be used with Oracle Private Cloud Appliance X3-2, X4-2 and X5-2.

The Oracle Server X6-2 has the following specification:

- (2) Twenty two Core Intel 2.2 GHz Xeon processors (44 cores total)

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- 256 GB 1600 MHz RAM
- (2) 1.2 TB HDD's (RAID1)
- (1) Dualport QDR InfiniBand HCA (PCIe)

In Oracle Private Cloud Appliance X5-2, Oracle Server X5-2 has the following specification:

- (2) Eighteen Core Intel 2.3 GHz Xeon processors (36 cores total)
- 256 GB 1600 MHz RAM
- (2) 1.2 TB HDD's (RAID1)
- (1) Dualport QDR InfiniBand HCA (PCIe)
- (1) GbE management port (BASET)

In Oracle Private Cloud Appliance X4-2, the Oracle Server X4-2 has the following specifications:

- (2) Eight Core Intel 2.6 GHz Xeon processors (16 core total)
- 256 GB 1600 MHz RAM
- (2) 1.2 TB HDD's (RAID1)
- (1) Dualport QDR InfiniBand HCA (PCIe)
- (1) GbE management port (BASET)

In Oracle Private Cloud Appliance X3-2, the Oracle Server X3-2 has the following specification:

- (2) Eight Core Intel 2.2 GHz Xeon processors (16 cores total)
- 256 GB 1600 MHz RAM
- (2) 900GB HDD's (RAID1)

- (1) Dualport QDR InfiniBand HCA (PCIe)
- (1) GbE management port (BASET)

What Oracle Virtual Networking configuration is included in Oracle Private Cloud Appliance?

Each Oracle Private Cloud Appliance base rack includes (2) Fabric Interconnect F1-15 units with 15 I/O module slots each. Each Oracle Fabric Interconnect F1-15 is pre-configured in the factory with:

- (20) Non-blocking QDR InfiniBand server ports
- (4) Quad Port 10Gb Ethernet Modules,
- (2) Dual Port 8 Gb Fibre Channel Modules

Does Oracle Private Cloud Appliance include any Ethernet/Infiniband switching elements?

Yes, Oracle Private Cloud Appliance uses both. Oracle Private Cloud Appliance is pre-installed with the Oracle Switch ES1-24 1/10G Ethernet switch, which is used to connect to the customer Management network. Oracle Private Cloud Appliance controller uses this switching element for management purposes. A 36 port InfiniBand switch is used to connect the Oracle Server X5-2 to the Oracle Fabric Interconnect. This network provides a very low latency solution.

What kind of Storage protocols does Oracle Private Cloud Appliance support?

Oracle Private Cloud Appliance has an integrated storage appliance that supports NFS/iSCSI. This storage is used for management and maintenance of the Appliance. A slice of the storage can be used for VMs and application. Oracle Private Cloud Appliance also connects to customer's existing NFS, iSCSI and Fibre Channel storage. Supported storage includes Oracle ZFS Storage Appliance as well as storage from other

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storage vendors. In addition customers may connect the Oracle Private Cloud Appliance to an external ZFS Storage Appliance over IB. Any expansion storage is purchased separately and installed external to the Oracle Virtual Cloud Appliance.

Support Details

How do I get access to patches and updates?

Patches for Oracle Private Cloud Appliance are available through My Oracle Support. Get the download instructions from Oracle VM OTN [download page](#).

What is Microsoft's support policy regarding Windows and Oracle VM?

Oracle VM server for x86 with Windows PV Drivers passed [Microsoft SVVP requirements for Windows Servers](#). Please refer to the Microsoft Help and Support document titled, [“Support Policy for Microsoft Software Running in Non-Microsoft Hardware Virtualization Software.”](#)

More Information

For more information about Oracle Private Cloud Appliance visit oracle.com/pca or call +1.800.ORACLE1 to speak to an Oracle representative.



Oracle Corporation
Worldwide Headquarters
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Worldwide Inquiries
Phone: +1.650.506.7000
+1.800.ORACLE1
Fax: +1.650.506.7200
oracle.com



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