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Virtual Compute Appliance
Frequently Asked Questions

General Overview

What is Oracle's Virtual Compute Appliance?

Oracle's Virtual Compute 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, Virtual Compute 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 Virtual Compute 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 to get a full application up and running in few hours.

By default, all Oracle software that has been certified for use with Oracle VM is certified for Virtual Compute 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.

Why is Oracle offering the Virtual Compute Appliance?

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

Consistent with this strategy, the Virtual Compute 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. Virtual Compute 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 Virtual Compute 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 Virtual Compute Appliance also uniquely provides the capability to rapidly deploy applications, not just hardware, based on the ability to leverage Oracle VM Templates that are user-created or that are available for download from Oracle.

What are the components of the Virtual Compute Appliance X5-2?

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

- Compute and Management: Oracle Server X5-2. The base rack consists of 2 dedicated Management Nodes. In addition, a base rack can support a maximum of 25 compute nodes.
- Networking:
  - Oracle Virtual Networking with two Oracle Fabric Interconnect F1-15
  - Two InfiniBand switches: Oracle Sun Data Center InfiniBand Switch 36 Management network support provided by Oracle Switch ES1-24
- Storage: Oracle ZFS Z3-ES Storage Appliance System

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- Software: Virtual Compute Appliance is preloaded with Virtual Compute Appliance controller, Oracle VM, Oracle VM Manager, Storage System Software and Oracle SDN Software

Pricing and Licensing

What additional licenses are required with the Virtual Compute Appliance?

No additional Software licenses are required for Virtual Compute Appliance. The Virtual Compute Appliance system price includes all the required software.

Features and Benefits

What are some of the features and benefits of the Virtual Compute Appliance?

Virtual Compute 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 Virtual Compute Appliance, you get infrastructure that scales linearly and applications that can be deployed rapidly. Virtual Compute 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 Virtual Compute Appliance, users only need to wheel the racks into place, connect power, network, and storage cables and power-on the system. Virtual Compute 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.

Virtual Compute 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
  - 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
- 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 Virtual Compute Appliance?

Yes, Oracle VM Templates can be used with Virtual Compute Appliance. Oracle VM Templates provide an innovative

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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 Virtual Compute Appliance?

A browser-based management utility Virtual Compute Appliance dashboard is included along with the Virtual Compute 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 Virtual Compute Appliance?

The following guest operating systems are supported with Virtual Compute 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 Virtual Compute Appliance X5-2?

Oracle Server X3-2 and X4-2 and X5-2 are the only compute and management nodes supported in Virtual Compute Appliance. Oracle Server X5-2 may be used with Virtual Compute Appliance X4-2 and X3-2.

In Virtual Compute Appliance X5-2, the 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 Virtual Compute Appliance X4-2, the Oracle Server X4-2 has the following specification:

- (2) Eight Core Intel 2.6 GHz Xeon processors(16 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 Virtual Compute Appliance X3-2, the Sun Server X3-2 has the following specification:

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- (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 Virtual Compute Appliance?

Each Virtual Compute 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 (Optional)

Does Virtual Compute Appliance include any Ethernet/Infiniband switching elements?

Yes, Virtual Compute Appliance uses both. Virtual Compute Appliance is pre-installed with the Oracle Switch ES1-24 1/10G Ethernet switch, which is used to connect to the customer Management network. Virtual Compute 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 Virtual Compute Appliance support?

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

Support Details

How do I get access to patches and updates?

Patches for Oracle's Virtual Compute 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 Virtual Compute Appliance visit **oracle.com/vca** or call +1.800.ORACLE1 to speak to an Oracle representative.

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Hardware and Software, Engineered to Work Together