

Frequently Asked Questions

Release of Veritas™ Cluster Server 5.0 for VMware® ESX

General information

QUESTION

What is Veritas Cluster Server 5.0 for VMware ESX?

ANSWER

Veritas Cluster Server 5.0 for VMware ESX offers proven, enterprise-class high-availability and disaster recovery (HA/DR) protection for production workloads running on VMware Infrastructure 3.0 (VI3). Veritas Cluster Server for VMware automates both local and remote failover of virtual machines (VMs), providing high availability, disaster recovery, and centralized management for virtual server environments running on VI3.

QUESTION

What is the difference between the standard Veritas Cluster Server and the new Veritas Cluster Server for VMware?

ANSWER

Veritas Cluster Server for VMware runs on the VMware hypervisor—also known as the ESX Server® or the ESX Console—and treats individual VMs as resources that can be stopped, started, switched, and monitored. The standard Veritas Cluster Server, on the other hand, runs inside each individual virtual machine, treating it as a physical server. Both products have the same look and feel, but Veritas Cluster Server for VMware is tailor-made for VMware's VI3 and includes agents not available with standard Veritas Cluster Server that monitor VMs, virtual switches, and Virtual Machine File System (VMFS) volumes. In addition, Veritas Cluster Server for VMware includes special lightweight application agents that run inside the VMs to monitor application state.

QUESTION

When would a customer run Veritas Cluster Server for VMware vs. running Veritas Cluster Server inside a virtual machine?

ANSWER

Use Veritas Cluster Server for VMware when:

- Running VMware ESX Server 3.0
- Providing HA/DR for a large number of VMs
- Implementing wide-area failover using hardware-based replication

Use Veritas Cluster Server inside the VM when:

- Implementing wide-area failover using host-based replication (Veritas Volume Replicator)
- Implementing P2V/V2P architectures

QUESTION Which guest operating systems are supported with Veritas Cluster Server <i>for VMware</i> ?	ANSWER Veritas Cluster Server <i>for VMware</i> supports the following operating systems (32-bit only) inside the virtual machine: <ul style="list-style-type: none"> • Windows® 2000 Server or Advanced Server with SP4 • Windows 2003 Standard or Enterprise Edition with SP1 • Red Hat Enterprise Linux 4.0 Update 3 • SUSE Enterprise Linux 9 with SP3
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Compatibility with VMware Infrastructure 3.0

QUESTION Does VMware, Inc., support Veritas Cluster Server <i>for VMware</i> on the ESX Console?	ANSWER Symantec is a Global member of VMware's Technology Alliance Partner program, and VMware is a member of the Symantec Technology Enabled Program (STEP). So the two companies offer several products that complement each other's portfolio to deliver significant value to joint customers.
QUESTION What versions of VMware ESX Server are supported by Veritas Cluster Server <i>for VMware</i> ?	ANSWER Veritas Cluster Server 5.0 <i>for VMware</i> supports ESX Server 3.0 and 3.0.1. There are no plans to support earlier versions of VMware ESX Server.
QUESTION Does Veritas Cluster Server <i>for VMware</i> require that VMware VirtualCenter be installed?	ANSWER VirtualCenter is not required to implement a Veritas Cluster Server <i>for VMware</i> cluster. However, capabilities unique to virtual server environments (e.g., VMotion™ and DRS) will not be available until they have been enabled through VirtualCenter.
QUESTION Does Veritas Cluster Server <i>for VMware</i> support VMotion and DRS?	ANSWER Veritas Cluster Server <i>for VMware</i> is fully compatible with both VMotion and DRS. VMotion can be initiated from VirtualCenter, the Veritas Cluster Server command line, or the Veritas Cluster Server Web GUI.

Comparing VMware HA with Veritas Cluster Server for VMware

QUESTION Does VMware have a bundled HA solution with VI3?	ANSWER VMware HA is a separately licensed feature of VI3 that provides failover protection for VMs in the event of an ESX Server failure. VMware HA does not protect against failure of an individual VM, an application running inside the VM, or a fault of an underlying network or storage component.
QUESTION Does VMware have a DR solution for VI3?	ANSWER VI3 does not have bundled DR capability. VMware relies on third-party vendors to provide data protection and disaster recovery for VMs.
QUESTION What is the difference between VMware HA and Veritas Cluster Server for VMware?	ANSWER VMware HA protects against hardware failures of the physical ESX Server only. Veritas Cluster Server for VMware protects against ESX Server failures as well, but also provides protection from application outages, failure of individual virtual machines, and failures of the underlying network and storage components. In addition, Veritas Cluster Server for VMware provides disaster recovery through support for wide-area clustering.
QUESTION Does Veritas Cluster Server for VMware use GAB and LLT for cluster interconnects?	ANSWER Yes, Veritas Cluster Server for VMware uses GAB and LLT for cluster interconnects. A minimum of two interconnects (one low-priority, one high-priority) are required.
QUESTION Can I run VMware HA together with Veritas Cluster Server for VMware?	ANSWER VMware HA must be disabled on all nodes in a Veritas Cluster Server for VMware cluster. It is easily disabled by simply deselecting the VMware HA checkbox on the cluster properties menu in VirtualCenter.
QUESTION If my customer is using VMotion and DRS, do they still need Veritas Cluster Server for VMware?	ANSWER Yes, VMotion is for planned downtime only and requires that the host, VM, and all applications always be in a running state. VMotion does not detect failures and cannot be used to restart a VM or application if an outage occurs. DRS is used to balance VM workload across ESX Servers and relies on VMotion. But it provides no capability for fault detection or the restarting of any failed components.

Application support

QUESTION What application agents are available with Veritas Cluster Server <i>for VMware</i> ?	ANSWER Inside the Windows guest, Veritas Cluster Server <i>for VMware</i> supports Microsoft® SQL Server 2000, SQL Server 2005, and IIS. Inside the Linux guest, Veritas Cluster Server <i>for VMware</i> supports Apache Web Server 1.3, 2.0, and 2.2; IBM® HTTP Server 1.3 and 2.0; and Oracle® 10g. New application agents are continuously being added. Refer to documentation accompanying the quarterly Veritas Cluster Server Agent Packs for a current list of supported agents.
QUESTION How are application agents for Veritas Cluster Server <i>for VMware</i> different from standard Veritas Cluster Server agents?	ANSWER Application agents for Veritas Cluster Server <i>for VMware</i> monitor only application health. They rely on the operating system running inside the VM to start and stop applications in conjunction with VM startup and shutdown. If an application faults, the agent monitoring the application notifies Veritas Cluster Server <i>for VMware</i> running on the ESX Console, at which time Veritas Cluster Server <i>for VMware</i> can initiate an automated response based on the policy set by the customer.
QUESTION Can I create my own custom agents for Veritas Cluster Server <i>for VMware</i> ?	ANSWER Customers can create “custom agents” to be integrated into the guest operating system’s agent framework. For information on creating custom agents, refer to the Implementation Guide.
QUESTION Veritas Cluster Server <i>for VMware</i> doesn’t offer an agent for my application and I don’t want to write a custom agent. Can I still use Veritas Cluster Server <i>for VMware</i> to protect my app?	ANSWER Veritas Cluster Server <i>for VMware</i> supports GenericService and application agents for basic monitoring of applications running inside the VM.
QUESTION Can standard Veritas Cluster Server agents be used in a Veritas Cluster Server <i>for VMware</i> cluster?	ANSWER Symantec does not formally support running standard Veritas Cluster Server agents in a Veritas Cluster Server <i>for VMware</i> cluster.
QUESTION What is the Intentional Offline feature of Veritas Cluster Server <i>for VMware</i> ?	ANSWER The Intentional Offline capability, which is built into some application agents, allows the agent to identify when an application has been intentionally shut down (rather than a crash). The purpose of Intentional Offline is to allow administrators to manage the applications (start/stop) running inside their VMs without having to coordinate application start and stop with the cluster. Note: Intentional Offline is not supported by all application agents; consult the applicable agent guide to verify whether it is supported for your applications.

Veritas Cluster Server for VMware and disaster recovery

QUESTION Does Veritas Cluster Server <i>for VMware</i> support global/wide-area clustering?	ANSWER Yes, Veritas Cluster Server <i>for VMware</i> has the same support for wide-area clustering as provided by standard Veritas Cluster Server.
QUESTION Can I use the Cluster Management Console to manage my Veritas Cluster Server <i>for VMware</i> clusters?	ANSWER Veritas Cluster Server <i>for VMware</i> clusters can be managed as a member cluster under the control of the Cluster Management Console (CMC). The CMC provides overall management of physical and virtual clusters that use various operating systems in different geographical locations.
QUESTION What types of hardware replication are supported with Veritas Cluster Server <i>for VMware</i> ?	ANSWER Veritas Cluster Server <i>for VMware</i> currently supports EMC CLARiiON arrays running MirrorView Replication. Support for additional types of replication will be added in future releases.
QUESTION Does Veritas Cluster Server <i>for VMware</i> support Fire Drill?	ANSWER Veritas Cluster Server <i>for VMware</i> supports Fire Drill using EMC CLARiiON arrays running SnapView. Support for additional third-party disk-based snapshot solutions will be added in future product updates.
QUESTION Does Veritas Cluster Server <i>for VMware</i> support host-based replication using Veritas Volume Replicator, ESX Migrator, or Double-Take?	ANSWER Veritas Cluster Server <i>for VMware</i> does not support host-based replication. If host-based replication is required, customers should run Veritas Storage Foundation™ HA, which bundles Storage Foundation and Veritas Cluster Server inside the VM.

Miscellaneous

QUESTION Is there an upgrade path for customers running Veritas Cluster Server 2.2 <i>for Linux</i> on VMware Server 2.5.x?	ANSWER There is no upgrade path. Veritas Cluster Server 2.2 <i>for Linux</i> has EOL status and Veritas Cluster Server <i>for VMware</i> is a new product.
QUESTION Can I run Veritas Storage Foundation and Volume Replicator with Veritas Cluster Server <i>for VMware</i> ?	ANSWER Veritas Cluster Server <i>for VMware</i> runs on the ESX Console. Storage Foundation and Veritas Volume Replicator cannot run on the console. Note: Storage Foundation and Veritas Volume Replicator can be installed inside individual VMs for those customers wanting to use Veritas Volume Replicator for replication.
QUESTION Does Veritas Cluster Server <i>for VMware</i> support I/O Fencing?	ANSWER I/O Fencing requires Storage Foundation, which is not supported on the ESX Console. But I/O Fencing is not necessary with Veritas Cluster Server <i>for VMware</i> because it uses the same VMFS file-locking capability to protect against cluster split-brain as is used by VMware HA.
QUESTION Does Veritas Cluster Server <i>for VMware</i> support P2V or V2P architectures?	ANSWER Veritas Cluster Server <i>for VMware</i> does not support the mixing of physical and virtual servers in a cluster. This architecture is supported when Veritas Cluster Server is running inside the VM.

Licensing

QUESTION

How is Veritas Cluster Server *for VMware* licensed?

ANSWER

Veritas Cluster Server *for VMware* licensing is based on the number of virtual machines in the cluster on which customers will implement either application monitoring and/or disaster recovery. There are two pricing tiers: HA/DR and Standard HA. One license provides protection for a single virtual machine; based on the tier purchased, the virtual machine will be protected from standard HA issues or a comprehensive list of HA/DR issues. Note: License pricing is not based on the number of physical components (servers, CPUs, sockets), rather the number of virtual servers.

One HA/DR license corresponds to one specific virtual machine and protects it from the following threats:

- Data center outage
- Application fault
- Virtual resource fault
- Physical server hardware failure
- Virtual server OS failure

One Standard HA license corresponds to one specific virtual machine and protects it from the following threats:

- Application fault
- Virtual resource fault
- Physical server hardware failure
- Virtual server OS failure

In addition, a minimum of one license purchase will enable all of the virtual machines in the Veritas Cluster Server cluster to be protected against the following threats at no additional cost:

- Physical server hardware failure
- Virtual server OS failure

