

VMware vCenter™

Product Family Solution Brief

DECEMBER 2009

VMware vCenter™ Server Overview

VMware vCenter Server provides a scalable and extensible platform that forms the foundation for virtualization management. VMware vCenter Server, formerly VMware VirtualCenter, centrally manages VMware vSphere environments allowing IT administrators dramatically improved control over the virtual environment compared to other management platforms.

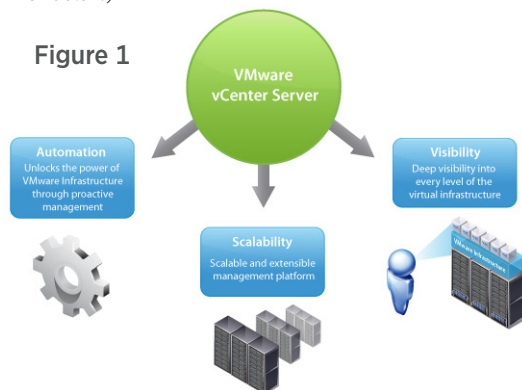
VMware vCenter Server:

- Provides centralized control and visibility at every level of virtual infrastructure
- Unlocks the power of vSphere through proactive management
- Is a scalable and extensible management platform with a broad partner ecosystem

Centralized Control and Visibility at Every Level of Virtual Infrastructure

VMware vCenter Server is the simplest, most efficient way to manage VMware vSphere™ – whether you have ten virtual machines (VMs) or tens of thousands of VMs. It provides unified management of all the hosts and VMs in your datacenter from a single console with an aggregate performance monitoring of clusters, hosts and VMs. VMware vCenter Server gives administrators deep insight into the status and configuration of clusters, hosts, VMs, storage, the guest OS and other critical components of a virtual infrastructure – all from one place.

With VMware vCenter Server, virtualization environments are easier to manage: a single administrator can manage 100 or more workloads, more than doubling typical productivity when compared to managing a physical server environment. VMware vCenter Server provides administrators with the power to automate routine tasks and proactively manage their virtual environment; gain insight and visibility into every part of their virtual infrastructure; and implement a scalable management platform that can grow as their virtual infrastructure grows. (See Figure 1 for details)



Proactive Management of VMware vSphere

A dynamic datacenter environment requires proactive management, with standardization and automation to get the most out of VMware vSphere's flexibility. Connecting business requirements to IT processes with streamlined and standardized workflows helps eliminate costly errors and reduces reliance on manual tasks.

VMware vCenter Server lets administrators rapidly provision VMs and hosts using standardized templates, and ensures compliance with vSphere host configurations and host and VM patch levels with automated remediation. VMware vCenter Server also gives administrators control over key capabilities such as VMware VMotion™, Distributed Resource Scheduler, High Availability and Fault Tolerance. A powerful orchestration engine gives administrators the ability to create and easily implement best practice workflows.

With proactive management, VMware vCenter Server allows you to meet business requirements and improve service levels by dynamically provisioning new services, allocating resources and automating high availability.



A Scalable and Extensible Management Platform

As you extend virtualization across the datacenter, you need a management platform that can both scale to fit your organization and plug into your existing architecture. VMware vCenter Server enables efficient management of a large scale enterprise, giving you the ability to manage more than 1,000 hosts and up to 10,000 VMs from a single console.

VMware vCenter Server's open plug-in architecture supports a broad range of additional capabilities from VMware and its partners. More than 200 VMware partners directly integrate with vCenter Server, allowing you to easily extend the platform for more advanced management capability in areas such as capacity management, compliance management, business continuity and storage monitoring. The vCenter Server APIs also allow customers to integrate physical and virtual management tools, using their choice of enterprise management tools to connect to vCenter Server.

VMware has also developed several applications, known as the vCenter Product Family, that extend the operations of VMware vCenter Server to include virtual machine lifecycle management, application performance monitoring and measurement, automated business continuity and disaster recovery planning and execution, application development and test lab automation, virtual machine accounting and chargeback mechanisms, virtual environment capacity planning and measurement, and virtual machine configuration management. (See Figure 2 below)

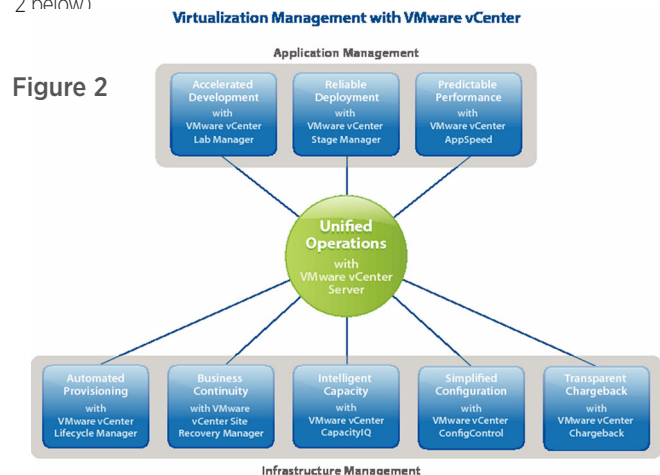


Figure 2

VMware vCenter Product Family Overview

Achieve greater operational efficiency and policy driven control of your virtual datacenter with the VMware vCenter product family. Manage IT service levels across a dynamic virtual infrastructure with powerful solutions that fully leverage the capabilities of the VMware vSphere platform to deliver dramatically simplified and more effective IT management.

The components of the vCenter Product Family include: vCenter AppSpeed™, vCenter CapacityIQ™, vCenter Chargeback™, vCenter Lab Manager™ (including Stage Manager), vCenter Lifecycle Manager™, and vCenter Site Recovery Manager™. Later this year, VMware will launch vCenter ConfigControl. In addition, customers can purchase vCenter Server Heartbeat which provides disaster recovery protection for vCenter Server.

- **vCenter AppSpeed™:** VMware vCenter AppSpeed enables VMware vSphere administrators to gain deep insight into the performance of their virtualized multi-tier applications and ensure SLAs. VMware vSphere administrators traditionally lack the ability to determine the performance of applications running in VMware environments. They are often the first to be blamed for performance issues unless they are able to show that the issues are not caused by the virtualization platform. AppSpeed is designed to measure the latency experienced by application end users and correlate it to the different tiers of the underlying physical and virtual infrastructure. This ensures SLAs for quality

of service are met, and reduces perceived risks of migrating enterprise applications to a virtual environment.

- **VMware vCenter CapacityIQ™:** Balance business demand with IT supply, without compromising performance, availability and security. With CapacityIQ, your IT infrastructure is guaranteed to have sufficient capacity to meet any business service level agreements.

IT organizations can leverage VMware vCenter CapacityIQ in a number of scenarios, including:

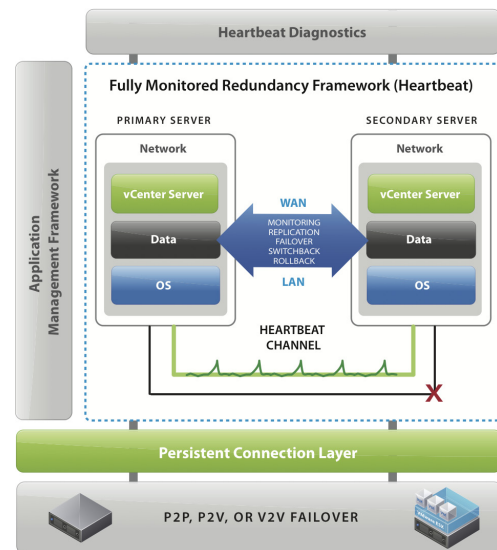
- **vCenter Chargeback™:** Get accurate cost measurement, analysis and reporting with VMware vCenter Chargeback, part of the VMware Product Family. Create cost transparency and accountability so business owners and IT can understand the actual cost of the virtual infrastructure required to support business services. VMware vCenter Chargeback is fully integrated with VMware vCenter Server and gives you the ability to map IT costs to business units, cost centers, or external customers – enabling a better understanding of how much resources cost and what can be done to optimize resource utilization to reduce overall spend on IT infrastructure.
- **vCenter Lab Manager™:** Provide on-demand access and automated management of the internal cloud for dev/test with VMware vCenter Lab Manager. Application owners, development, QA, and training teams can deploy, capture and share multi-tier application environments in seconds while IT remains in administrative control. Lab Manager saves time, simplifies administration of fast changing environments and enables project teams to get to market faster.
- **vCenter Lifecycle Manager™:** Automate provisioning tasks and standardize the way virtual machines are requested, deployed and decommissioned with VMware vCenter Lifecycle Manager. Ensure consistency of virtual machine deployments with a service catalog of virtual machine configurations and automated workflows for routine lifecycle management tasks. Lifecycle Manager gives IT administrators more control over virtual machine deployments and optimizes resource utilization for greater ROI.
- **vCenter Site Recovery Manager™:** VMware vCenter Site Recovery Manager is disaster recovery management and automation solution for VMware Infrastructure. Site Recovery Manager accelerates recovery by automating the recovery process and simplifies management of disaster recovery plans by making disaster recovery an integrated element of managing your virtual datacenter. The solution ensures reliable recovery by eliminating complex manual recovery steps and enabling non-disruptive testing of recovery plans. Site Recovery Manager integrates tightly with VMware vSphere, VMware® vCenter Server and storage replication software from leading storage vendors to make failover and recovery rapid, reliable, affordable and manageable. It enables organizations to take the risk and worry out of disaster recovery, as well as expand protection to all of their important systems and applications. Dell has developed two specific extensions to their EqualLogic SAN product line that augment the capabilities provided by vCenter Site Recovery Manager.
 - Auto-Snapshot Manager / VMware Edition 2.0 (ASM/VE) – Included at no additional cost or license fees with Dell EqualLogic products, coordinates with VMware vCenter Server to take a hypervisor-aware SAN-based snapshot of a particular VM or group of VMs enabling automated and scalable protection & recovery of VM's. ASM/VE 2.0 has been enhanced to include selective restore capabilities and integration with Auto-Replication for advanced data protection and disaster recovery for the cloud.
 - VMware vCenter Site Recovery Manager Adapter –automates and simplifies disaster recovery procedures for an enterprise by integrating the EqualLogic Auto-Replication feature into vCenter Site Recovery Manager to ensure that your data is available at the disaster recovery

site. Autoreplication is also an included feature of the PS Series Arrays, enabling organizations of all sizes to cost-effectively take advantage of automated disaster recovery.

- **vCenter Server Heartbeat™:** VMware vCenter Server Heartbeat delivers high availability and disaster recovery for VMware vCenter Server and all of its components – including the database and licensing server – with failover across the LAN or WAN. The software supports physical-to-virtual (P2V), physical-to-physical (P2P) and virtual-to-virtual (V2V) failover, ensuring consistent operation of VMware vSphere when VMware vCenter Server is threatened by unplanned or planned downtime. The software monitors VMware vCenter Server and provides the broadest range of protection against application or operator errors, operating system or hardware failure, or external events.

The vCenter Server Heartbeat product protects vCenter Server and its database by replicating the server configuration and data to a passive standby server either on the LAN or across the WAN. It monitors the vCenter Server application connectivity and components, including the License Server and Update Manager, and can restart the entire vCenter Server on the passive server automatically when a failure is detected. (See Figure 3 for Details)

Figure 3



Summary

VMware vCenter Server and the associated virtualization management products provide a scalable and extensible platform that forms the foundation to provide effective management of your VMware vSphere environment. The products deliver centralized control and visibility into every level of your virtual infrastructure, and give you the capability to provide higher service levels and improved application availability. VMware innovations continue to make VMware vSphere 4 and vCenter Server the industry standard for computing in data centers of all sizes and across all industries.

Find Out More

To learn more about these products, go to: <http://www.vmware.com/products/vcenter/>. To learn more about the Dell and VMware alliance, go to: www.vmware.com/dell or www.dell.com/vmware. To purchase these products, contact your Dell account representative.

For detailed product specifications and systems requirements, please refer to the specific product installation and configuration guides.

