INSIGHT

Symantec Optimizes Veritas Cluster Server for Use in VMware Environments

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IDC OPINION

Phase 2 virtualization deployments are bringing new expectations for service-level agreements (SLAs) and reliability in virtualized x86 server environments. Symantec and VMware recently announced that their combined products will jointly address application availability within virtual machines (VMs). Key points relating to this partnership include:

☑ Phase 2 deployments involve more demanding applications than the first phase of virtualization (for resource utilization) did, because they require high levels of availability to ensure end-user access to business services.

☑ Customers need to consider requirements for availability, replication, archiving, and other functions associated with traditional business services, which must now be translated into virtualized x86 server deployments.

☑ Enablement of these Phase 2 virtualization projects prepares customers to move into cloud computing (Phase 3) — most often deployed as private clouds within the enterprise that leverage cloud technology for IT flexibility and the ability to "scale up" business services to meet demand.

IN THIS INSIGHT

This IDC Insight looks at the partnership between Symantec and VMware, announced at VMworld 2012 in San Francisco (August 2012) and Copenhagen (October 2012), that optimizes Symantec Veritas Cluster Server (VCS) software for use in virtualized x86 computing environments, using VMware's vSphere. The combination of the Symantec and VMware products is aimed at Phase 2 virtualization adoption, which is often seen as a stepping stone to cloud computing.

SITUATION OVERVIEW

Virtualization, taken as a first step toward more efficient operations in a Phase 1 deployment, often leads to Phase 2 deployments for more demanding workloads (applications and databases running in a virtualized computing environment). These enterprise workloads often require higher service-level agreements than earlier virtualization deployments that were aimed at placing more VMs per physical server for purposes of improving resource utilization.

Once virtualization is widely adopted within a site, it paves the way for cloud computing via provisioning of VMs, based on levels of end-user demand for business services. Because important Phase 2 applications are involved, for enterprises and SMBs, improvements in availability can improve the readiness for cloud computing — moving customers one step closer to migrating to private cloud deployments. For SMBs, VMware has made it possible to deploy workloads using vMotion live migration without acquiring SAN hardware equipment — supporting VM migration between servers; however, it hasn't had the ability to do application monitoring and recovery inside the virtual machine.

At the VMworld conferences, in August (San Francisco) and October (Copenhagen), Symantec and VMware expanded on their earlier relationship, making the following announcements:

☑ VMware environments can now leverage Veritas Cluster Server functionality for virtualized x86 server deployments.

☑ At VMworld 2012, Symantec announced that a beta version of VCS would be made available to customers in October 2012. It was made generally available on October 22, 2012, targeting enterprise applications, including those from SAP, Oracle, Microsoft Exchange, the Microsoft SQL Server database, and the Apache Web environments. Each of these will come with pre-configured scripting to accomplish a restart on alternate resources.

☑ With this latest release of VCS, organizations can get application-level failover between running VMs. This is designed to achieve faster application recovery while fully leveraging VMware's vMotion for live migration and VMware Distribute Resource Scheduler (DRS) on any storage connectivity. The connectivity links between storage and server include Ethernet (10GbE and 40GbE) via PCIe links and Fibre Channel — and they can access multiple disk types (e.g., RDM and VMDK disks). Further, this capability is compatible with the rest of the VMware product portfolio, including VMware Site Recovery Manager (SRM) and storage-based snapshots of the VM deployments.

☑ Symantec VCS integrates with VMware's vCenter management console, and it is now fully manageable from VMware vSphere clients. Users can visualize and control the application directly from the same vSphere client user interface that they use extensively for managing virtual machines.

☑ Symantec VCS 6.0 continues to support geographically separated servers, via geoclustering, in VMware vSphere environments, for application-level failover to remote sites. This supplements VMware's Site Recovery Manager (SRM) and vMotion live migration products for remote HA/DR use-case scenarios.

☑ Symantec's Dynamic Multi-Pathing for VMware cloud infrastructure integrates directly into VMware vCenter Server. Dynamic Multi-Pathing for VMware is aimed at improving SAN storage I/O performance and availability for VMware vSphere. It also provides granular views to the state of applications and VMs as they reside in the storage resources.

- ☑ Symantec's Enterprise Vault can be utilized in a virtualized VMware environment and can be used with VMware vSphere and VMware View.

- ☑ Symantec Critical System protection supports VMware vSphere 5 with policy-based control.

Combining Software Functionality

The Symantec-VMware announcement was made in the context that the companies would cooperate around mixed deployments of Symantec and VMware software. It provides that there will be automatic application failover between VMware-managed VMs by leveraging Symantec VCS high-availability software.

Importantly, customers have the option to manage the VCS through the VMware vCenter server, unifying management into a single view. If they are longtime VMware customers, this will preserve a familiar view to all the objects under management, rather than requiring system administrators to learn a new interface.

As part of this go-to-market partnership, a group of Symantec products, including Symantec Backup Exec, NetBackup, NetBackup Accelerator for VMware, and NetBackup Instant Recovery for cloud infrastructure will also be sold into VMware x86 server virtualized environments.

The go-to-market partnership of Symantec and VMware around optimizing Symantec Veritas Cluster Server for VMware vSphere computing is a pragmatic step aimed at addressing these Phase 2 deployments, by focusing on the availability of stateful workloads (e.g., applications and databases).

IDC Analysis

IDC has been writing for some time that the combination of availability software for VMs, and replication software, show a new utility in light of virtualized x86 computing. Historically, availability and clustering software (ACS) was targeted at monolithic, dedicated servers for restart of applications, via high-availability/failover software. Although the software still supports those kinds of deployments, virtualized x86 environments tend to be more diffuse and distributed than traditional datacenter SMP servers, which host unified, onboard, global resources — and to focus on the mobility of VMs throughout the infrastructure, which can be restarted from a variety of locations across the network.

Although virtualization deployments look very different from traditional IT deployments — many of them based on standalone, scalable servers — the customer's requirements for security, workload isolation, and management by policy remain the same. However, the way that these new systems are implemented leverages layered software that takes on the capabilities that formerly were integrated, or built into, the systems software that was found on scalable SMP servers.

Accordingly, IT managers need to plan differently — and to add software that addresses service levels, security, and compliance issues even when contemplating how traditional workloads will be delivered via private cloud within the enterprise. It is

the specifics of the reference architectures, or templates for deployment, that is changing here — the functional requirements remain largely the same. That means that availability, replication, archiving, and other functions must now be translated into next-generation implementations for virtualization and cloud computing.

One big caveat for IT managers is that all such new combinations must be tested thoroughly, when working together, to certify that the levels of service-level agreements and security compliance are met. These testing exercises must be repeated as new elements are added into the system-level software "mix." Without them, the business would be exposed to downtime (including both planned and unplanned downtime) that reduces business continuity — and that would make business units wary about placing too much pressure on new-style deployments.

FUTURE OUTLOOK

Conclusion

Virtualization adoption is rapidly maturing — and expectations about availability are rising as more enterprise applications enter the virtualized x86 server space. Examples include collaborative applications (i.e., email), enterprise workloads (i.e., ERP, CRM), and databases (i.e., Microsoft SQL Server, Oracle Database and Oracle's MySQL, and IBM's DB2).

Highly virtualized computing environments are ready to take the next step, into cloud computing — but only if they are ready to do so. Private cloud deployments can occur in-house, or can be lined to public cloud services hosted by service providers. Many customers carefully select which workloads will be deployed into cloud services — but it is clear that virtualization is a pre-requisite for preparing to go to cloud deployments.

IDC demand-side research has shown that about 80% of all respondents surveyed plan to virtualize first in preparation for their entry into cloud computing. The decision of Symantec and VMware to partner on VMware deployments, in combination with VCS functionality, fits with this pattern of cloud computing adoption.

LEARN MORE

Related Research

☑ *VMware Points to Availability as a Key Enabler of Phase 2 Deployments* (IDC #237440, October 2012)

☑ *Symantec's Veritas Cluster Server 6.0 Ships to Customers* (IDC #lcUS23318512, February 2012)

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