Business Continuity in VMware and HP Environments
Comprehensive High Availability, Disaster Recovery and Data Protection

Need for Virtualization-Optimized Storage
Virtualization enables fundamental improvements in datacenter resilience, yet it also places increased demands on storage infrastructure. Traditional backup solutions can be overwhelmed by the demands of a highly consolidated server infrastructure, and older management tools might lack the flexibility to support complex and dynamic virtual environments.

High availability and disaster recovery introduce additional challenges. Virtual machine failover across local and wide area networks is easy and cost effective to implement in VMware environments. Yet broad implementation typically requires significant improvements in the scalability, availability, and functionality of the storage infrastructure.

Comprehensive Support for the Always-On Business
HP and VMware have been working together for nearly a decade to deliver complete and integrated solutions for virtualized datacenters and private clouds. HP Storage provides shared storage solutions across the full range of business and IT requirements and includes integrated functionality to support high-quality, cost-effective business continuity.

HP Data Protector software supports multiple backup and recovery options, all managed from a centralized console. Automatic discovery and protection of new VMs help to ensure complete coverage, while zero-downtime backup and instant recovery options address even the most demanding recovery time and recovery point objectives.

Multiple options are available to ensure continuous data availability, such as Network RAID striping and synchronous data replication across clustered storage nodes. Combined with VMware HA, VMware FT and VMware SRM, these capabilities provide comprehensive and cost-effective support for business continuity in virtually any IT environment.

Range of Options to Address All Requirements

VMware High Availability (HA)
VMware HA monitors virtual machines and, in the event of a hardware or operating system failure, restarts them on another server within the resource pool. It provides uniform, cost-effective failover protection and is appropriate for a wide range of applications.

VMware Fault Tolerance (FT)
VMware FT takes high availability to the next level by providing fully mirrored operation with continuous availability to eliminate even the smallest IT service disruption. It provides zero-downtime, zero-data loss protection without the cost or complexity of traditional solutions.

VMware vCenter Site Recovery Manager (SRM)
VMware vCenter SRM provides fully automated failover for an entire datacenter. It is far simpler and more cost effective than traditional disaster recovery solutions. It is also more reliable, since it eliminates error-prone manual processes and can be tested without disrupting the production environment.

VMware vStorage API for Data Protection (VADP)
Included with all versions of VMware vSphere®, VADP enables backup software to perform centralized virtual machine backups without the disruption and overhead that occur when backup tasks are performed from inside each virtual machine.
HP Storage
HP offers a complete selection of storage solutions optimized for VMware deployments. These storage solutions are designed to increase VM density, improve application availability, simplify management and reduce overall storage costs. HP Storage solutions are certified with VMware vSphere and support VMware vSphere storage technologies such as VAAI, VASA, and vCenter Site Recovery Manager as well as integrate with vCenter Server through plug-ins that simplify HP storage deployment and management.

HP Storage extends the business continuity capabilities of VMware to protect critical applications and IT infrastructure against various causes of downtime. HP and VMware solutions improve high availability, data protection and disaster recovery.

High Availability
HP Storage provides solutions that extend the benefits of VMware vMotion, High Availability (HA) and VMware Fault Tolerance (FT) to deliver the highest levels of application and data availability. For example the HP LeftHand P4000 storage solution uses Network RAID to stripe and protect multiple copies of data across a cluster of storage nodes, eliminating any single point of failure. In the event of a disk, controller, storage node, power, network, or site failure, VMware virtual machines (VMs) have continuous volume availability. The HP LeftHand P4000 Multi-site SAN also gives you the ability to stretch a VMware vSphere cluster and associated volumes across two sites to provide increased fault tolerance and built-in zero downtime. This solution is vSphere Metro Storage Cluster certified.

HP Peer Motion for HP 3PAR and HP LeftHand provides migration of data online between storage systems or tiers non-disruptively to enable higher application availability.

Data Protection
HP Data Protector Software provides centralized management of all backup and recovery for virtual and physical systems in VMware environments. It offers multiple protection options and is tightly integrated with VMware VADP to address any recovery point and recovery time objectives. The combined solution delivers simple support for automated tiered recovery with application-consistent backups and lightning-fast recovery of virtualized systems. Both HP LeftHand and HP 3PAR storage systems include VMware application consistent snapshot and recovery capabilities that give superior control over data protection and recovery in VMware vSphere environments-including granular, rapid online recovery of files.

Disaster Recovery
HP Storage Remote Copy Software solutions are integrated with VMware vCenter Site Recovery Manager (SRM) to provide simple, reliable, end-to-end disaster recovery for virtual and cloud computing environments. HP Remote Copy solutions such as HP LeftHand and 3PAR Remote Copy provide space efficient, reservation-less centralized backup and disaster recovery on a per-volume basis that leverages application integrated snapshots for faster recovery. HP provides Storage Replication Adapters (SRA) for SRM that ensure the highest performing and most reliable disaster protection for all VMware virtualized applications.

Find Out More
Visit the following links to learn more:

Visit the HP and VMware Alliance webpage to learn more.

www.hp.com/go/vmware/storage