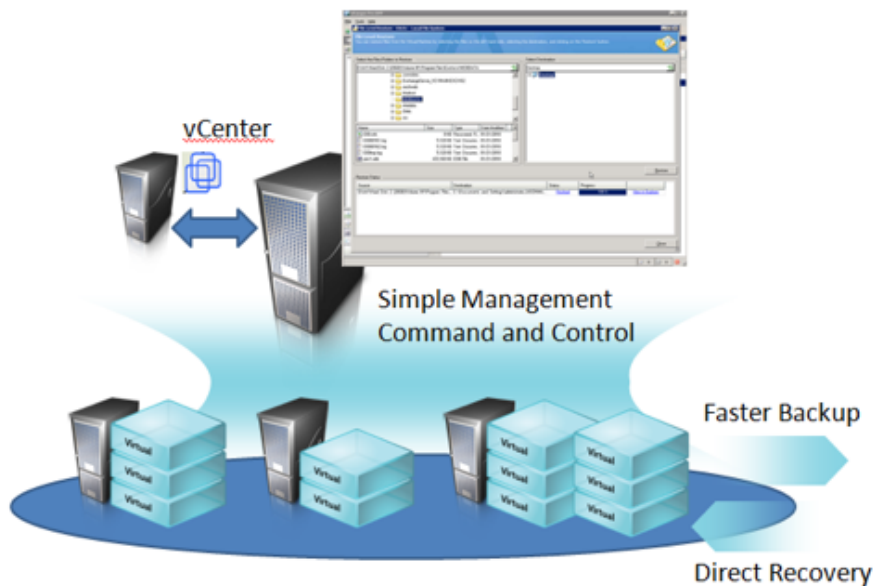**QUEST SOFTWARE®**

Quest vRanger Standard

Essential Image-Based VMware Backup and Recovery That's Simple, Fast and Affordable

As virtual systems become more complex and time-consuming to manage, you don't need additional hassles with backup and recovery. Lucky for you, there's vRanger.

vRanger Standard offers innovative, easy-to-manage technology to efficiently protect your VMware systems, while minimizing the impact on the network and storage requirements. It's built on Quest's unique Data Protection Platform – an unparalleled architecture optimized for image-based data handling in virtual environments.

Its patent-pending capabilities make it faster than any alternative as well as provide the most reliable and secure backup repository on the market.

vRanger Standard is deployed seamlessly into VMware environments and protects VMs with no impact on VMware host operations.

With vRanger, protection is simple:

- Backup and restore VMs at the same time -- with no limits.
- Complete backup jobs faster with distributed processing that makes backup fast and recovery direct, with no impact on host operations; there's no need to send all of that VM data through a single, central server.
- Recover multiple VMs at the same time, without having to walk through the recovery wizard for each and every one.
- Browse vCenter to see which VMs have been protected and when backup completed, as well as which VMs need protection immediately.
- Configure new backup jobs that are automatically refreshed to stay current with new VMs as they are added in the environment.
- Protect all types of guest data, with a single VM backup.
- Restore any type of data from a single backup image -- including individual files, databases, and full guest systems.

BENEFITS

- Fast backup and recovery of virtual machine (VM) images -- 33% faster on backup and 90% faster on restore
- Smaller backup image for 25% more network and storage capacity
- Ensured archive integrity
- Efficient image portability
- Agent-less, maintenance-free deployment
- Proven reliability
- Unmatched performance
- Market-leading, image-based data protection
- World-class service and support
- Track record of innovation

Add-On or Upgrade Options

- **vRanger Pro —** An upgrade provides these additional features: Linux FLR, full catalog, one-click catalog recovery, LAN-free backup and restore, and seamless replication with vReplicator

- **Object-Level Recovery (OLR) for Microsoft Exchange —** Add Quest Recovery Manager for Exchange (RME) for best-of-breed restore of individual e-mail objects from the vRanger backup repository, including mailboxes, messages, attachments, contacts, calendar items, and more.

- **Physical System Protection —** Add Quest vConverter to enable backup, replication and recovery of converted physical system images.

- **vEssentials —** Get a single package at a reduced price, with all of these SMB best-fit solutions: vRanger Standard, vFoglight, vReplicator, vOptimizer

Key Features

- **Active Block Mapping (ABM), Patent-Pending —** Eliminates inactive and white space blocks from protected Windows guest images to speed backup, replication and recovery jobs — and to reduce network and storage requirements.

- **Change Block Tracking (CBT) —** Eliminates the time required to scan for changed blocks in guest images on vSphere hypervisor systems to speed backup and replication jobs.

- **Instant File-Level Recovery (FLR) for Windows —** Enables you to quickly restore a single file from a backup image in the repository using a one-step process.

- **Custom Backup Groups —** Provides optimal flexibility in defining backup jobs to protect new VMs automatically as they get created, reducing configuration time and administrative burden.

- **Advanced Encryption Standard (AES)-256 —** Secures protected images block by block on the VMware host as they are read so they are also secure over the network and in the backup repository.

- **Thin Disk Provisioning —** Supports vSphere thin disk provisioning on image replication and recovery to reduce network and storage space requirements.

- **Full, Incremental and Differential Backup —** Enables a complete backup cycle for protected images that is optimized for speed and resource efficiency.

- **Synthetic Recovery —** Provides single-pass restore, reading each required block only one time from multiple full, incremental and differential backup images in the repository for the fastest, most efficient results.

- **Advanced Savepoint Management —** Allows you to manage and use multiple point-in-time copies of backup and replica images for precise image, file, and object restores.

- **Dynamic Resource Management —** Optimizes real-time use of critical resources in a virtual environment to ensure the highest efficiency and complete jobs faster -- without exceeding resource capacity.

- **Job Multi-Streaming —** Lets you run multiple protection jobs simultaneously to backup, replicate and recover images for dramatic improvement in performance times.

- **Direct-to-Target (D2T) Architecture —** Distributes job execution and movement of data to improve protection performance and ensure seamless scalability.

- **Inline Data Validation —** Tests the integrity of captured data on the source, block by block as it is read, to ensure that images can be recovered from the backup repository and that replica images are usable.

- **Remote Management —** Lets you manage data protection jobs through a central console over LAN and WAN connections for control across all systems and sites in an environment.

- **VSS Driver —** Replaces VMware VSS to ensure data integrity and log file truncation during backup of Windows guests running database applications.

- **vAPI and PowerShell Access —** Enables scripting automation of protection jobs to reduce administrative burden and human error.

ADDITIONAL INFORMATION

"Recovery is equally accelerated and efficient in vRanger. From a VM image, vRanger is able to recover a VM whole (similar to bare metal recovery) or in part (individual file or application object) to a virtual or physical machine (the latter through a V2P conversion). The optimization achieved with CBT and ABM also impacts the recovery process. For example, because ABM removes empty blocks from the read list for a full backup, the speed of recovery processes is improved."

— Lauren Whitehouse, Sr Analyst, ESG

System Requirements:
- VMware ESX and ESXi Systems
- Any guest VM supported by VMware
- Storage support using CIFS, SFTP, NFS and FTP
- FLR on Windows guests
- API support that includes vCenter Server, vStorage, Windows Powershell, and Quest Software vAPI

Operating Requirements:
- vRanger Server: Microsoft Windows XP, 2003-2008, Vista and Windows 7; 32- and 64-bit dual core, 1GB RAM (2GB recommended), > 4GB free disk space
- Database repository: SQL Express 2005-2008, SQL Server Management Studio Express 2005
- Licensing: Each physical CPU socket on VMware host source

About Quest Software, Inc.

Quest simplifies and reduces the cost of managing IT for more than 100,000 customers worldwide. Our innovative solutions make solving the toughest IT management problems easier, enabling customers to save time and money across physical, virtual and cloud environments. For more information about Quest go to **www.quest.com**.

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