

# vRanger Pro™ DPP

Backup, Recovery & Backup Management for Virtual Environments

Data Security, Data Recovery and Backup Management for virtual environments, all in a single solution.

vRanger Pro Data Protection Platform (DPP) is the market-leading backup, recovery and backup management solution for virtual environments.

*Key highlights of vRanger Pro DPP's new technology:*

**Incremental Backups** - performs a block-by-block scan and only backs up the files (or data and VM settings within them) that have changed since the last backup, reducing the amount of backup data.

**Direct to Target Architecture** - Backup traffic directly from the ESX host to the storage target removing proxy bottle necks in the backup traffic pattern.

**Multiple Simultaneous Backups** - Uses all available ESX hosts when performing backups.

**Smarter Backups** - Ignores reading or compressing white space resulting in faster full image level backups – more than an 80% improvement!

**Instant File Level Recovery** - Recover files while the original backup image remains compressed and encrypted or even de-duped.

**Central Multi-Datacenter Management** - Remote management capabilities of backup traffic between the ESX and the storage target eliminating the need to install clients at each data center.

**LAN Free (Fiber) Backups using new VMware vStorage API** - Perform faster backups than possible with existing VCB interface.

**ESXi Support** - Allows more VMware customers to use vRanger Pro as a fast, flexible, and cost-effective backup and recovery solution.

**Intelligent Recovery** - Image level restores use a single DataStream that consists of only the blocks needed for recovery so that no time is wasted reading, sending, uncompressing or writing blocks that are just going to be replaced by a newer incremental or differential file.

**Smart Backup Manager** – New backup management functions allows users more control over their backup throughput and environment.

#### Backup Repositories

**CIFS (Common Internet File System, Windows Share)** - Allows backups to be sent directly from the Source ESX host to a windows share or a Linux/UNIX host, hosting a CIFS share.

**SFTP (Secure File Transfer Protocol)** - Allows backups to be sent directly from the Source ESX host to a SFTP host. This backup protocol is useful securing backup/restore traffic, i.e., backup and restore to ESX hosts in a DMZ.

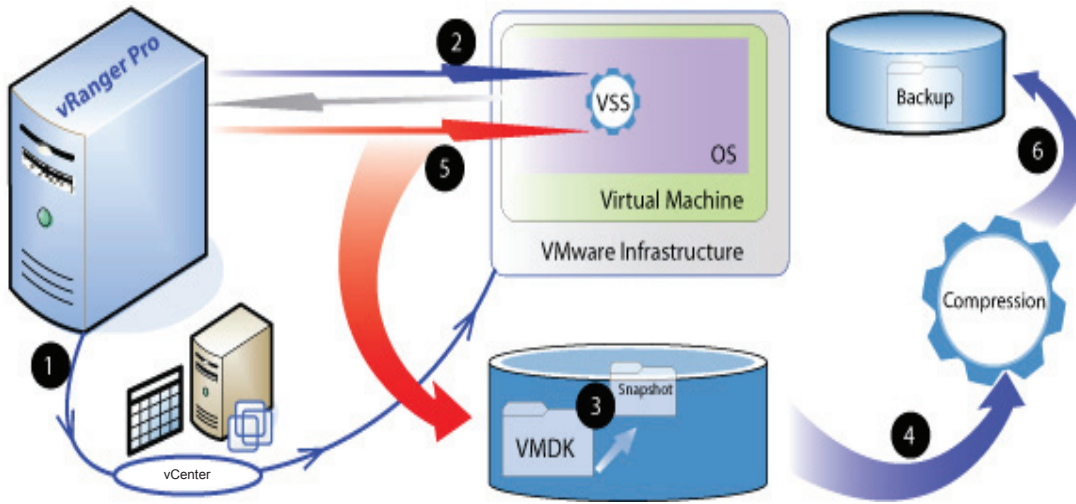
**Inline Data Validation** – During recovery of VM images, each block performs a checksum to ensure the data is read, uncompressed and written correctly.

**PowerShell** - Allows administrators to use standard PowerShell scripting to automate tasks.

TECHNICAL DATA SHEET



# vRanger Pro DPP Architecture



1. vRanger Pro DPP is downloaded and integrated into vCenter.
2. A point-in-time backup of the VMware ESX Server guest OS is initiated.
3. A VSS process is executed, freezing the OS. No transactions are lost.
4. Using VMware Snapshot, the VMDK is opened; changes made since the last snapshot are recorded.
5. While the snapshot is open, the VSS thaws the file system, releasing writers from their temporary inactive phase. All queued write I/Os are completed.
6. The VMDK is read, and the whitespace is compressed while being sent to the storage destination. Compression options include full, differential and incremental.
7. Once complete, the job information is updated and stored.

## System Requirements

Backup Type	Full, differential or incremental backups
Repository & Retention Type	CIFS & SFTP
Recovery Type	File level or full VM image including data, applications, configuration settings, the OS, patches to the OS and any other OS-level changes
Platforms Supported	VMware ESX3.x, VMware ESX 4.x, ESXi
OS Required	XP 32 Bit, Vista 32 & 64 Bit, 2008 32 & 64Bit
Installed VM	Yes
Database Repository	SQL Express SP2, 2005 or 2007
vCenter	vCenter 2.0.1 – 2.5 u4
APIs	Uses and communicates with the VMware vCenter APIs
Agents	Does not require additional agents inside the Guest OS or ESX Server
Licensing	Each physical CPU socket on ESX Host source requires 1 CPU License (Quad CPU ESX Host requires 4 CPU Licenses); number of cores does not matter
Languages	English, Spanish, French, Italian, German, Simplified Chinese, Japanese



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