



Confidence in a connected world.



NetBackup for VMware

The Opportunities & Challenges of Virtualization

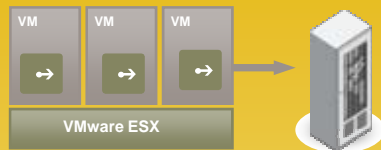


- Significant advantages to adopting virtualization-enabled hardware
 - Efficient hardware resource utilization, server portability and high availability for any system
- Went from niche to mainstream over the last couple of years...
 - According to Gartner the is a “Mega Trend”
 - According to IDC, more than three quarters of companies with 500 or more employees use virtual servers, and 45% of all new servers purchased this year will be virtualized.
- But...backing up virtual servers isn't like backing up physical ones....
 - Virtual Machines compete for hardware resources and disk & network I/O may quickly become a bottleneck
- Companies have found that they need to take a multilayered approach to achieve adequate uptime and reliability

Challenges with VMware Backup



NetBackup Client in Each VM



- + Simple
- + Guarantees consistency
- Too burdensome on host CPU cycles

Client-based backup with normal backup clients is just too much overhead!

Direct Backup of VMDK Files



- + Simple
- Doesn't Guarantees consistent backup

- Shut down VMs & backup
- Shut down VMs, snapshot, backup the snapshot
- Hot snapshot & backup the crash-consistent snapshot

VMDK-based backups are ideal, but require better coordination between VMware, NetBackup, and applications!

Symantec/VMware Relationship



- 7+ year technology relationship
- Predates Symantec/Veritas and VMware/EMC acquisitions
- Bi-directional interoperability and integration testing
- Joint solutions across NetBackup, Storage Foundation, VCS, Enterprise Security Manager, and Symantec Anti-Virus
- Cooperative support agreement for joint solutions

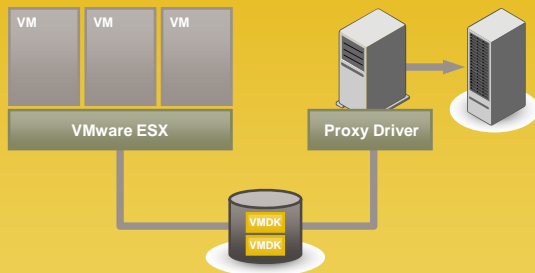
Netbackup Is Committed to Delivering the Industry's Best Solutions for VMware Protection

NetBackup 6.5

Comprehensive Protection of VMware



VMware VCB Off-VM Backup

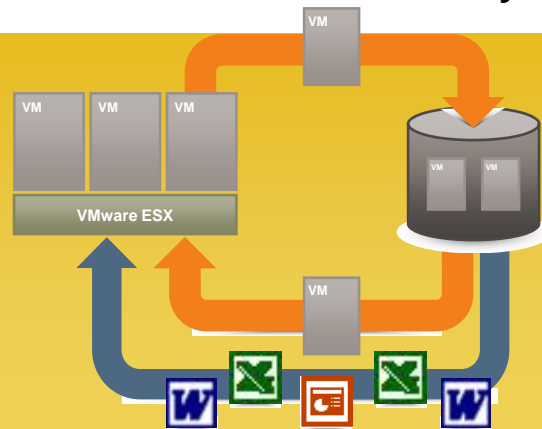


- A “VMware snapshot” that allows a virtual machine to be snapshotted and mounted to backup server
- Process controlled by NetBackup Enterprise Client

Key Benefits:

- **Reduces ESX CPU overhead:** backup is performed by backup server
- **No downtime:** VMs always running
- **Automated:** process managed through NetBackup Enterprise Client

VMware Granular Recovery

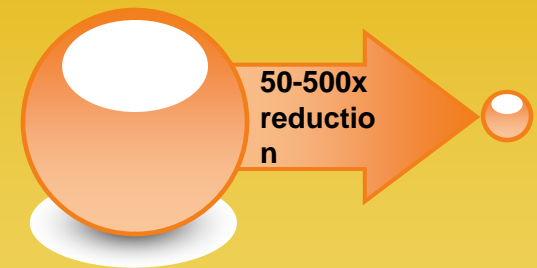


- Single image-level backup
- Backup image mapped offline
- Image-level or file-level restore

Key Benefits:

- **Reduced time & cost:** single backup to take, store, manage
- **Flexibility:** image-level copy for DR, file-level mapping for single-file recovery

Data Deduplication

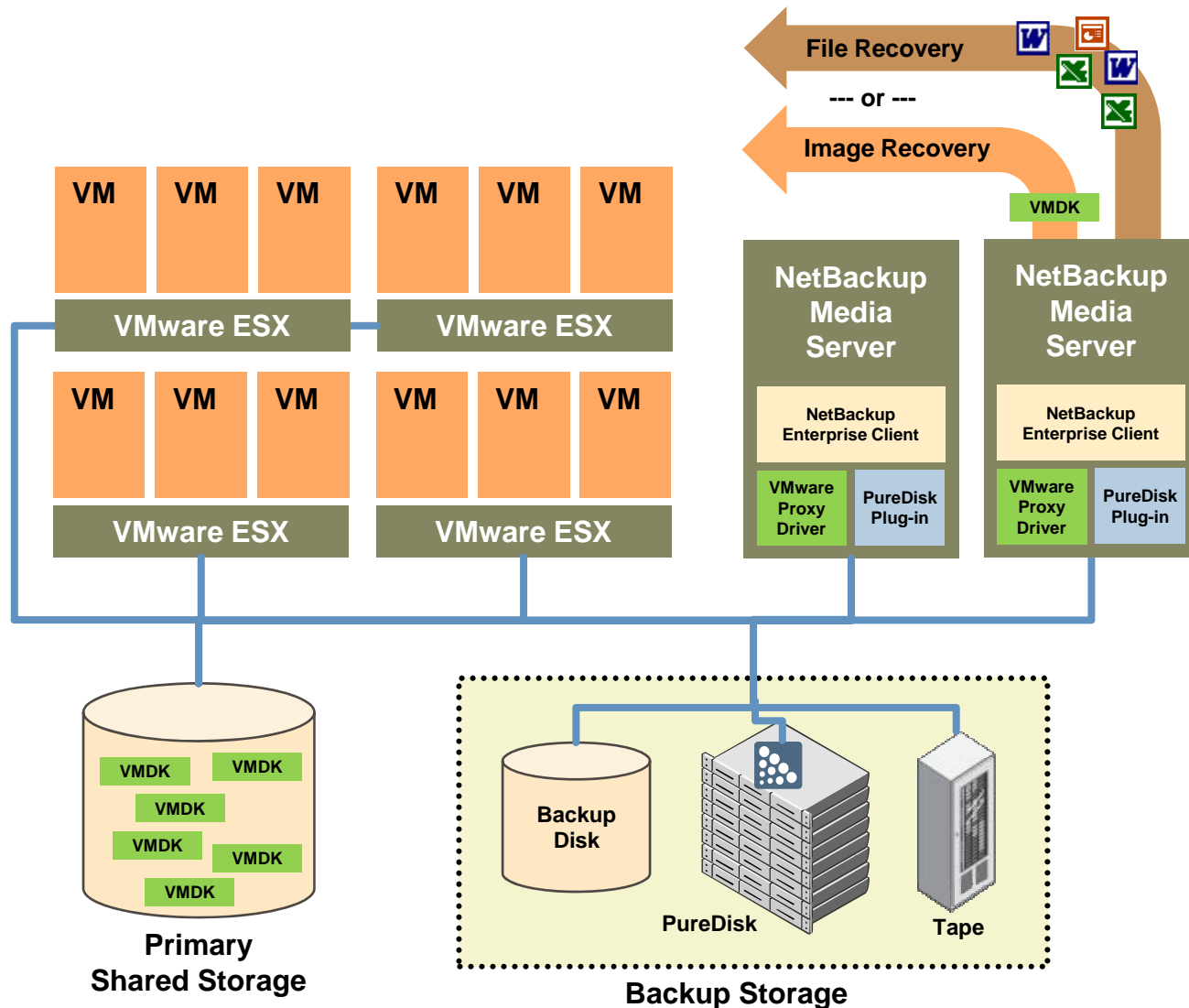


- Global, block-level deduplication reduces duplicate data in the enterprise
- NetBackup PureDisk allows all core NetBackup agents, VMware, and remote offices to all share common deduplicated storage

Key Benefits:

- **Reduced backup disk cost:** storage reduced by 50-500x, any disk can be used from any vendor
- **Reduced backup time:** faster backups, less data over the network
- **Replication** to remote site for DR

The NetBackup Solution for VMware



1

Consolidated, off-VM backup with **NetBackup Enterprise Client & VMware VCB**

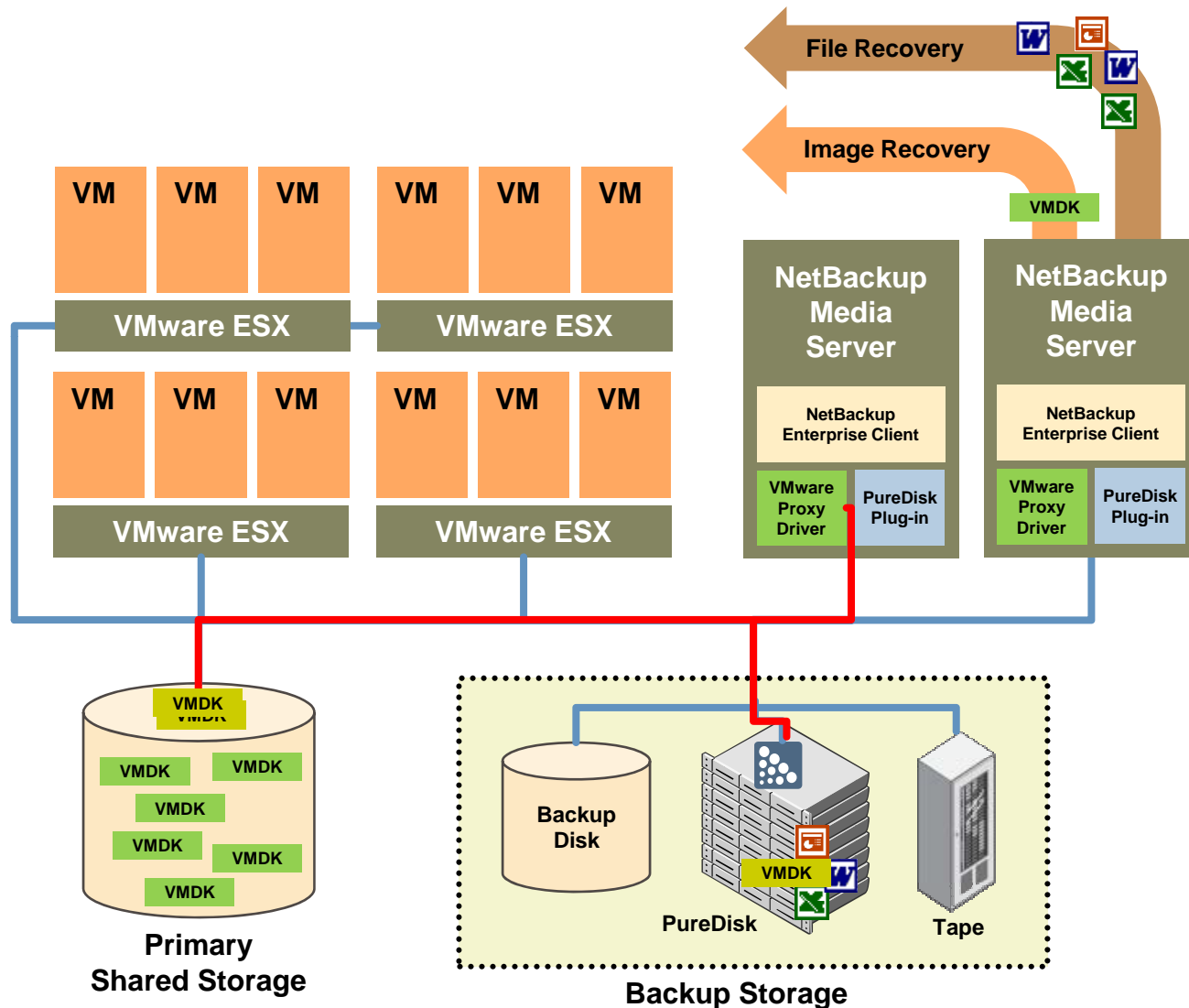
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VMware Granular Recovery:
VCB backup mapped and cataloged to allow file-level restore & image-level restore for DR from a single backup

3

PureDisk Deduplication Option:
Backup can be performed directly to PureDisk for 50-500x data reduction!

In Depth: The NetBackup Solution for VMware



- 1 Backup policy alerts NetBackup that it is time to do a virtual machine backup
- 2 NetBackup instructs VMware to snapshot the virtual machine
- 3 The new VMDK snapshot is mounted to the NetBackup Server via the proxy driver
- 4 Backup is then performed to any NetBackup storage device (disk, tape, PureDisk)
- 5 The VMDK snapshot is deleted
- 6 The backup image is then mapped for file-level recovery
- 7 Virtual Machines can then be restored from image backups for DR
- 8 Or, single files can be recovered to any location

NetBackup 6.5 Differentiation



- The NetBackup solution for VMware is the most comprehensive in its class, no other competitor has the feature depth
- Key Reasons Why:
 - **VMware Granular Restore:** ONE backup pass gives you the ability to restore a single file or an entire image.
 - **Virtual Machine Discovery:** Automatic discovery of all your virtual machines
 - **PureDisk for VMware:** Installing a PureDisk client in VMware virtual machines will dramatically reduce the data you have to backup, and make client backups feasible for many VMware environments.

New NetBackup 6.5 Simplified Clients



Standard Client

- Now includes **Bare Metal Restore** and **Client Encryption** at the same price
- Includes new **PureDisk Client**

Enterprise Client

- Includes everything in Standard Client
- Includes the new **SAN Client** and **VMWare** features as well as **Snapshot client** (aka Advanced Client), and **SAN Media Server**

Application and Database Pack

- Optional addition to either Standard Client or Enterprise Client
- Includes **all application and database agents** (except SAP agent)



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For More Info.

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