

PROTECT HIGHLY VIRTUALIZED ENVIRONMENTS, REDUCE COST, RISK, AND GET SCALABLE PERFORMANCE

INCREASING DATA PROTECTION COMPLEXITY WITH GROWTH OF VMS

Server virtualization has proven to be one of the most transformative IT technologies of the past two decades. It revolutionized how servers and applications are provisioned and sustained, and in the process, unlocked significant amounts of business agility by facilitating a more flexible, consolidated IT infrastructure. Today it's common to see the enterprise deploy 80-90%, and in some cases, 100% of their application workloads in a virtual infrastructure that can range from 100s to 100,000s of virtual machines or VMs.

“ By 2017, IDC predicts vendor ecosystems and **interoperability** will drive 70% of infrastructure purchase decisions. ”
— Worldwide Enterprise Infrastructure 2016 Predictions, IDC FutureScape: November 2015

While IT operations and production teams have realized considerable benefits with virtualization, it has also added considerable complexity and uncertainty in the area of protecting corporate data and servers. Adding to this complexity is the use of multiple data protection point products, resulting in interoperability challenges that can lead to gaps in protection, and additional overhead costs for support and maintenance. With siloed solutions and their inherent lack of interoperability, cross-enterprise dedupe cannot be fully exploited resulting in costly storage bloat, and makes tuning for maximum performance and scalability nearly impossible.

“ **58%** Use **unified** protection today
42% Use a **separate/VM-specific** solution
70% using separate or VM-specific solutions...
are considering moving to unified protection ”
— Protecting Highly Virtualized Environments 2016 ESG Survey

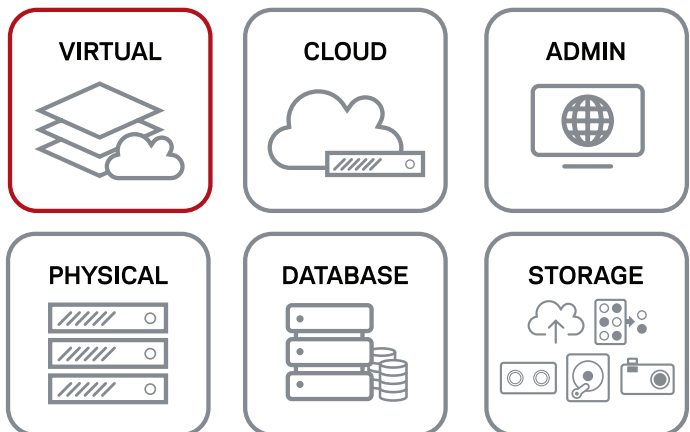
This complexity has also fragmented many IT organizations— decentralizing not just the data protection tools themselves, but the workload administrators too. The VM Admins, Backup Admins, and even IT Operations must now use cumbersome, typically manual methods, to coordinate the backup and recovery of not only VMs but applications across the enterprise.

The end result of siloed solutions is the creation of added cost and risk due to gaps in visibility and protection and the need to

train and cross-train IT teams on multiple solutions to ensure adequate coverage. All of this leads to reduced confidence in enterprise protection and availability for both day-to-day operations as well as potential disaster recovery situations.

PROTECTING VIRTUAL ENVIRONMENTS IS A PIECE OF THE PUZZLE

To reduce cost, risk, and simplify this complexity, many enterprises look to consolidate and standardize data protection across their enterprise on a single, unified data protection platform. A recent ESG study on protecting highly virtualized environments found that while the 42% of enterprises are using point or VM-specific solutions today, nearly 70% of those enterprises are considering a move to unified data protection. Ideally this platform approach protects virtual, physical, cloud and emerging workloads as well as provides turnkey support for the myriad of storage environments. It would also have a fast, flexible, software and/or hardware deployment model depending on business need.



Intelligent Automation to Provide Comprehensive VM Protection

It's no secret one of the big virtues of virtualization is the ability to spin up unlimited numbers of new applications on demand. Studies have also shown that in highly virtualized environments, more than 10% of restores fail because no one knew to back up these new VMs! Automating the discovery of new, changed, or moved VMs and protecting them with policy based backups is a must, not a nice to have. This eliminates the manual processes that create gaps in protection and leads to failed recoveries. Whether protecting VMware, Hyper-V, or multi-hypervisors, ensuring all VMs are protected and available for fast recovery, intelligent automation is the key.



11% Virtual Machine Recoveries Fail
Cause: VM was never designated for backup!

— Protecting Highly Virtualized Environments 2016
ESG Survey



Intelligent Automation for Performance and Confidence

However, using intelligent automation to ensure all VMs are protected is only part of the solution. If you want to achieve near 100% backup and recovery success rates, you need to solve for performance and scalability as well. The other key ingredient for success is to deploy a highly integrated software and hardware data protection architecture that can easily scale with performance.

Look for features like automated load balancing that can maximize backup performance by managing the optimal number of simultaneous operations and avoid high numbers of backup failures. Another important capability to look for is a unified solution that can easily scale to meet your needs by delivering integrated, factory-tuned appliances with out-of-the-box performance. Automation and integrated solutions simplify the deployment and management of highly scalable data protection architecture and eliminates the manual and complex guesswork of protecting large, highly virtualized environments.

Self-Service Through Familiar Management Consoles

IT struggles with the challenge of finding the balance between workload owners wanting to protect their data using application specific tools, or use a unified protection architecture that provides the scale and consistent reliability to protect workloads across the enterprise, managed by the backup administrators. A unified, scalable platform with many workload integration points enables IT to extend data protection management beyond the backup admin. This gives backup and recovery control to workload owners with tools they can manage with their own familiar management console, but not the hassle of maintaining the data protection infrastructure. Extending self-service capabilities frees up key IT resources from day-to-day support to focus on strategic business initiatives.

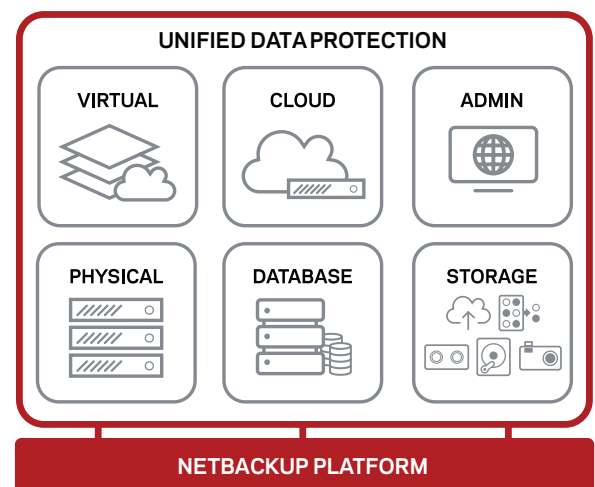
- VM admins can protect VMware® and Microsoft® Hyper-V multi-hypervisor environments.
- Database admins can better leverage infrastructure for faster, more efficient backup and recovery.
- Business owners can back up and recover data through customized self-service portals without IT.
- Backup admins gain a global view of data protection across the enterprise.

VERITAS NETBACKUP™ PLATFORM - UNIFIED DATA PROTECTION FOR TODAY'S ENTERPRISE

NetBackup Platform delivers unified data protection for small to the largest global organizations with enterprise-class scale, performance, and extensive workload integrations. It is designed to protect the largest and most complex heterogeneous environments—virtual, cloud, and physical applications across the enterprise—no matter where data resides. NetBackup supports nearly every enterprise workload, 65+ applications, 100+ operating systems, 2,500+ storage devices, 30+ different array snapshot support, and single-click cloud integrated storage with the major cloud providers, all from a single console.

Take the worry out of VM Protection

As your VMware and Hyper-V virtual environments grow along with your business, eliminating manual steps with intelligent policy based automation helps ensure new, changed, or moved VMs are protected and available around the clock.



Automated Discovery and Policy Based VM Backup

Take the worry out of failed recoveries with policy based “set-and-forget” automation. Intuitive and easy to use Veritas NetBackup™ Intelligent Policies automate the discovery and policy based backup of new, changed, or moved VMs to make sure all VMs are properly backed up and no VM is left behind. NetBackup Intelligent Policies also support VMware® Virtual SANs (vSAN), Virtual Volumes™ (vVOL), and TAGs for automatic discovery, protection, and load balancing of VMs in those environments.

Automated Load Balancing for Backup Performance and Success

Automating for maximum backup performance eliminates the complex and error prone manual process of load balancing for large virtual environments. Veritas NetBackup™ Intelligent Load Balancing policies are easy to set up, yet when backups occur, it manages the complex task of automatically spreading the backup load evenly across the physical servers, supporting VMware or Hyper-V environments and safely allowing more simultaneous backups for the highest possible performance and backup and recovery success rates.

Faster Backups, Reduced Storage

Experience up to 100x faster backup and recovery performance and eliminate time consuming full VM backups that can exceed your backup windows. The incredibly efficient Veritas NetBackup™ Accelerator sends only changed blocks that have been deduped for backup, which then are synthesized into a new full backup. This ensures you are ready for fast recovery to help tackle the challenges of shrinking backup windows and meet increasingly demanding RPO/RTO SLAs.

Integrated Appliances, Out-of-the-Box Performance

The ultimate choice in high performance data protection for any size virtual environment should deliver “out-of-the-box” performance and simplicity. **Veritas NetBackup™ Appliances** eliminate the need for complex tuning to achieve **proven, industry leading performance**, they can scale to 100s of petabytes of data protection with reduced storage cost and footprint, and it comes with single vendor global support from Veritas.

VM Backup and Recovery Success for When Your World Stops Being Always-on

Intelligent, automated backup ensures your data is protected and available so your recoveries don't fail. However, when the unthinkable happens and the world is watching, you need to quickly find and give users access to that data.

Instant Access to Multiple Users from Backup Disk

In a matter of minutes, give users fast access to up to 10 VM applications. Instant Recovery can simultaneously recover up to 10 VMs by simply booting from backup disk storage, and even let users have full access to those applications while being migrated back to production.

Agentless Backup, Fast Object Level Recoveries

Gain visibility and deliver faster, more granular recoveries from image level backups with Agentless backup at the hypervisor-host level and with Veritas NetBackup Granular Recovery Technology (GRT) which indexes the contents of backups and makes the complete contents of the VM visible and searchable for file and folder level restores.

Search, Select, Restore, Without Mount and Browse

NetBackup Granular Recovery Technology (GRT) – Simplifies and accelerates object level restores by indexing the contents of backups, making it easy to find, select, and restore specific objects or items without the need to mount and browse with endless trial-and-error guesses at which backups hold the data you need.

- Restore objects contained within a hardware snapshot.
- Restore virtual machine objects directly from an agentless backup image.
- Eliminate the need to mount and browse the entire VM to find and restore a single file or folder.
- Restore individual VM image files (e.g. VMDK or VHDX) eliminating the need to first restore the entire VM.
- Restore Microsoft® Exchange, SharePoint®, and Active Directory® objects – natively to the application, without having to take it offline.



After consolidating our entire global data protection including VMware on NetBackup, we routinely hit **99.9%** backup and recovery success rates.



Success is Success.

— Patrick McDonagh, Sr. IT Infrastructure Manager
Boston Scientific

[Click to hear Patrick's story](#)

COMPREHENSIVE SUPPORT, SIMPLIFIED MANAGEMENT

Enterprise IT is an eco-system of vendors and solutions that is constantly evolving and creating exciting new capabilities. As the leading supplier of enterprise data protection, collaborating and working closely with this eco-system means that when you're ready to take that next step, we're ready too.

Day-1 Protection for Multi-Hypervisor Environments

Enterprise customers want vendors to be ready when they are. Veritas is committed to this, and NetBackup 8 supports VMware vSphere® 6.5 and Microsoft Windows® Server 2016.

NetBackup Scale, Self-Service for VM Admins

VM admins can leverage the massive scale, performance, and automated capabilities of NetBackup to protect their VM environments. Console plug-ins for Hyper-V and VMware® enables VM admins to manage NetBackup through their own familiar consoles, with direct control over backup, restore, and Instant Recovery operations without the hassle of managing and maintaining the backup infrastructure.

Downloadable Remote Office Protection

The complexity of installing, managing, and supporting the protection of ten to thousands of remote offices with an appliance just got solved, with a download. The new **Veritas NetBackup Virtual Appliance for Remote Offices** is hosted within a VMware environment and dramatically simplifies the deployment, management, and support of backup and recovery services in remote locations.

IDEXX PROVES UNIFIED DATA PROTECTION IS BETTER

In just 6 months, NetBackup delivered 5x faster VM backup performance and 99.97% success rates.

Before consolidating on NetBackup, IDEXX Laboratories, Inc. used multiple, and incompatible point products for their data protection. Concerned with consistently low backup performance and success rates, unreliable recoveries, and excessive use of expensive primary storage, they started an initiative to consolidate their entire enterprise on another major vendor's backup product. Unable to declare success after more than 2 years of migrating only 40% of their workloads, they knew they needed to find another, more predictable solution. Familiar with NetBackup, the IT team set up a proof of concept (POC) by leveraging the ease, simplicity, and performance of NetBackup Appliances, and were able to quickly demonstrate to IDEXX leadership the benefits and performance of standardizing their entire global data protection on the NetBackup Platform.

PROTECTION PERFORMANCE AND SUPPORT	MULTIPLE POINT PRODUCTS (BEFORE)	NETBACKUP (AFTER)
Critical VM Backups	20+ hrs	<4hrs
Backup Success	40% - 92%	99.97%
Restore from Image	"unreliable / hours"	100% / minutes
Operational Efficiency	30 hours / week	5 hours / week
Storage Utilization	120TB Primary storage used for backup	<ul style="list-style-type: none"> Returned 50TB expensive storage NetBackup Appliance* 97% Dedupe rates
Operational Support	<ul style="list-style-type: none"> Multiple products Multi-vendor training Multi-vendor support costs 	<ul style="list-style-type: none"> Single platform solution Simplified global administration One point of contact for support

* "Out-of-the-Box" performance

Given the approval to move ahead, the predictable scale and performance of the NetBackup Platform allowed IDEXX to easily plan and successfully execute the migration all their virtual and physical workloads across their global locations in just six months. The results were

immediate and dramatic. They experienced 5x faster backups, returned nearly 40% of expensive primary storage to production with enterprise deduplication, and achieved 99.97% backup and recovery success rates. Critical VM backups taking more than 20 hours before NetBackup, were now easily completed in less than 4 hours, well within their established backup windows. Another benefit from the added performance and simplified operations, even with a 25% per year growth rate there was no need to add staff to manage their data protection. With data protection reliability, performance, and confidence no longer an issue, the IT leadership team was able to once again focus on their strategic initiatives.

“ Our organization is heavily virtualized like many others and I absolutely love the simplicity, power, and speed of how NetBackup protects my virtual machines. ”

— Joe Donahue, Principle Systems Administrator
IDEXX Laboratories, inc.

[Click to hear Joe's story](#)

PROTECTING VIRTUAL ENVIRONMENTS WITH AN ENTERPRISE DATA MANAGEMENT APPROACH

Organizations today need to manage their data as a critical asset with solutions that reliably protect the right data, ensure resiliency and on-demand access from anywhere, and reduce the risks and costs of storing their ever-increasing amounts of data throughout the globe. The 'always on' nature of digital business also demands the removal of the artificial barriers between these frequently siloed capabilities, to reduce complexity, streamline operations, and benefit from synergies that otherwise are not achievable.

Maximizing your data protection infrastructure and investment to go beyond backup becomes straight forward when engaging the enterprise scalability and performance of the NetBackup Platform to protect all of your virtual, cloud, and physical workloads, no matter where they reside. With the NetBackup unified data protection infrastructure, you get a solid foundation for access to data across the enterprise, and with new data management integrations, new capabilities become available to better manage both your information and your business. This unique access to your global data enables new capabilities that go beyond data protection such as copy data management and recovery, surface actionable insights that help you make better decisions, and single-click recovery orchestration when time matters.

With the NetBackup family of integrated software and hardware, Veritas enables you to accelerate your own digital transformation while leveraging an existing investment and establish a reliable foundation for the future with 360 Data Management™.

ABOUT VERITAS TECHNOLOGIES LLC

Veritas Technologies LLC enables organizations to harness the power of their information, with solutions designed to serve the world's largest and most complex heterogeneous environments. Veritas works with 86 percent of Fortune 500 companies today, improving data availability and revealing insights to drive competitive advantage.

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