EXPECT MORE
FROM YOUR PRIMARY STORAGE

WHY ADOPTING AN INNOVATIVE APPROACH TO AVAILABILITY PUSHES YOU TO LOOK BEYOND JUST BACKUP AND RECOVERY

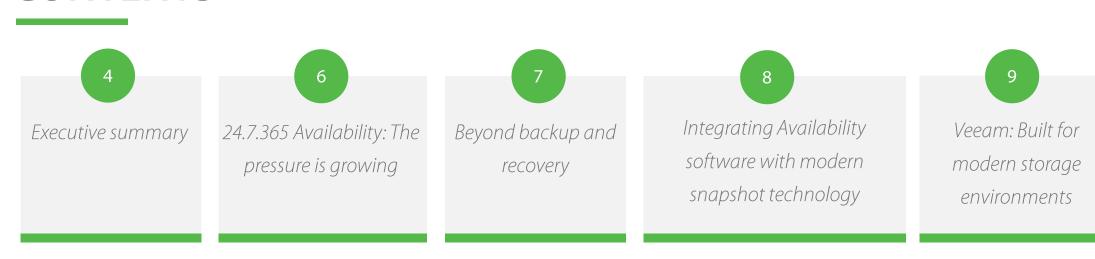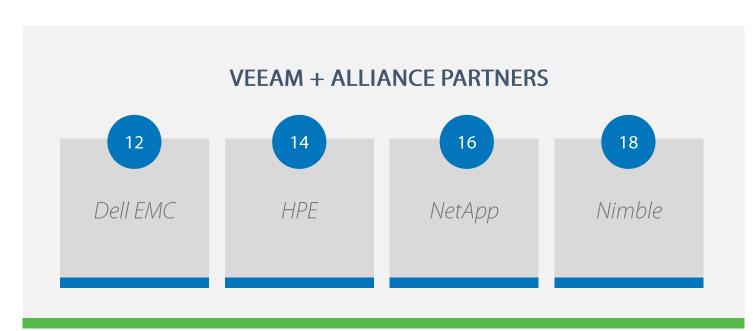Veeam Vantage Guide: Volume 2

Veeam makes the Fortune 500 Available. 24.7.365

AVAILABILITY for the Always-On Enterprise™

To enable its **Digital Transformation**, 70% of the Fortune 500 rely on Veeam to ensure Availability of all data and applications. 24.7.365

VEEAM

2

CONTENTS

EXECUTIVE SUMMARY

Every IT organization is under increasing pressure to improve the customer experience, enable more efficient and productive business operations and deliver real value to the bottom line. Currently 87% of companies see digital transformation as an opportunity to develop a competitive edge. Perhaps more tellingly, 67% of executives believe that it's now "a question of survival" for business.[1]

Aligning technology projects to incorporate these objectives is helping CIOs demonstrate the increasing value of IT to the business. As Kim Stevenson, CIO at Intel says, "Aligning to the goals of the business, Intel IT creates strategic investment plans that are achieving desired business results and revealing new opportunities to increase business value. Looking ahead, I see extraordinary opportunities for IT leaders in every industry to contribute their unique point of view, in the backroom and the boardroom."[1]

As IT continues to move from cost center to value driver, one thing is becoming clear — the key to meeting these new demands is 24.7.365 Availability of data and services. Investments in virtualization and modern storage technologies have ramped up to enable digital transformation. But, these investments can't deliver full value when organizations continue to rely on traditional backup and recovery tools and techniques. This leaves most organizations with a huge gap between what users expect and what IT can deliver. Until now.

In this e-book, we look at what's going wrong, how to fix it and how you can get maximum value from your investments in modern storage to deliver *Availability for the Always-On Enterprise*™.

EXPLORE THE REST OF THE E-BOOK TO DISCOVER :

- Why so many IT organizations struggle to meet the Availability demands of their users

- How integrating Availability software with modern storage snapshot technology can help

- How Veeam® delivers 24.7.365 Availability through tight integration with market-leading storage vendors — including Dell EMC, Hewlett Packard Enterprise (HPE), NetApp, Nimble and soon, IBM

24.7.365 AVAILABILITY:
THE PRESSURE IS GROWING

Today, becoming an *Always-On Enterprise* isn't an aspiration — it's essential for survival. There is zero tolerance for downtime, as enterprises strive to compete in a world that demands 24.7.365 Availability.

Businesses live or die by the Availability of their applications. Customers expect constant access to business services and information whenever, wherever. Around-the-clock global operations, the growth of mobile workers and more real-time interactions between business users, partners and suppliers, all put additional pressure on IT to keep apps running and data available.

And, the costs of downtime can be staggering. The 2016 Veeam Availability Report found that the average annual cost of downtime is now $16 million[2] — leaving a significant hole in the bottom lines of many organizations.

It's not just lost productivity and revenue that has an impact. The loss of customer confidence from downtime can have a dramatic effect on an enterprise's ability to remain competitive.

Handling these pressures isn't easy. In fact, 84% of organizations suffer from an Availability Gap[2] — the gap between what users expect and what IT can actually deliver. As rising customer expectations and demands from the business meet static IT budgets, limited resources and explosive data growth, the Availability Gap widens further.

BEYOND JUST BACKUP AND RECOVERY

In an attempt to handle all these pressures, IT leaders are modernizing their data centers through virtualization and modern storage array technologies. But, many fail to update their data protection strategy to include modern Availability solutions in tandem with these upgrades.

Traditional backup and recovery methods designed for an older, physical data center world are harming performance in heavily virtualized environments, lengthening recovery times and increasing the risk of data loss.

It's now critical to move beyond traditional backup and recovery, and adopt an innovative approach to Availability. By combining sophisticated, industry-hardened Availability software with modern storage, IT organizations can reduce backup windows and accelerate recovery time objectives (RTOs) and recover point objectives (RPOs) — while still handling massive data growth and increasing application performance requirements.

INTEGRATING AVAILABILITY SOFTWARE WITH MODERN SNAPSHOT TECHNOLOGY

Modern data centers have responded to rapidly increasing user demand and growing transactions by investing heavily in virtualization and flash storage.

The snapshot technologies in modern storage arrays help enhance RPOs and RTOs by minimizing data loss and enabling fast data recovery. But, it's often cumbersome to integrate and manage storage snapshots in conjunction with the backup process. Backup overhead can also impact critical application performance in production environments.

However, with Availability software that's tightly integrated with the storage platform, IT organizations can leverage modern snapshot capabilities to help them:

- **Improve backup and recovery speed and performance** with zero impact on production environments — freeing up resources to power mission-critical applications
- **Reduce complexity** by eliminating multiple legacy data protection tools
- **Apply the 3-2-1 Rule[3]** of keeping three copies of data on two media types, with one remote copy to ensure data Availability
- **Lower TCO** by leveraging the technology you already have, or that you plan to invest in as you modernize storage
- **Minimize the risk of data loss** by providing more recovery points without application performance disruption
- **Accelerate new application deployments and updates** by using exact copies of production environments for development and testing
- **Get a centralized view** of the overall health of the entire virtual environment to enable proactive monitoring and troubleshooting
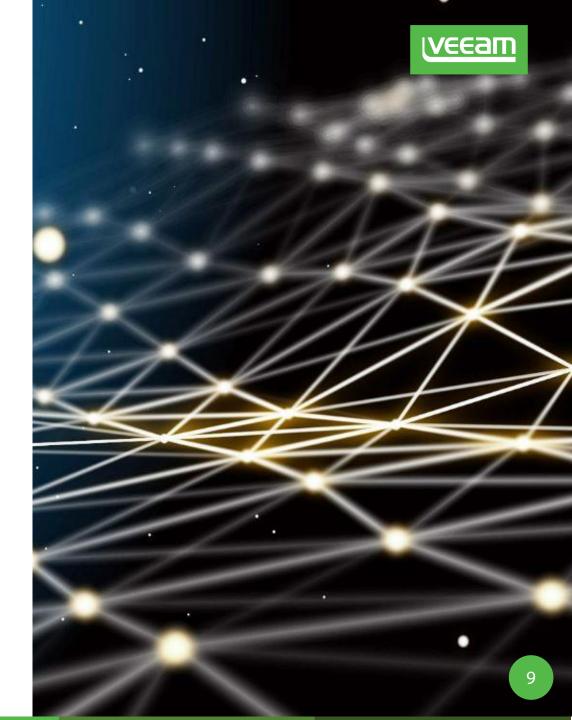
BUILT FOR MODERN STORAGE ENVIRONMENTS

Veeam Explorer™ for Storage Snapshots

Veeam's direct integration with industry-leading storage vendors, including Dell EMC, HPE, NetApp and Nimble — and integration with IBM storage coming soon — simplifies IT operations and guarantees the recoverability of mission-critical data.

Veeam Software is designed from the ground up for virtualized environments. Combine that with Veeam's tight integration with modern storage and the end result is a single, easy-to-use Availability solution that dramatically increases backup and recovery speeds.

Veeam delivers:

- The ability to meet SLAs for recovery time and point objectives (RTPO™) of <15 minutes for ALL applications and data
- Guaranteed recovery of every file, application or VM, every time
- All your Availability functionality in one place, all from one vendor
- Support for complex multi-vendor storage environments

Veeam Gives You THREE KEY Capabilities:

1) Recover what you want, when you want, the way you want it

Veeam Explorer for Storage Snapshots enables the widest range of granular restore capabilities. With Veeam, it's simple to recover VMs, guest OS, individual files, OS files, emails, database objects and application items from SQL, Exchange, Active Directory, SharePoint and Oracle.

2) Leverage backup data for real business value

Businesses can take advantage of the low overhead that periodic storage snapshots offer to automate the recovery process and lower RTOs.

3) Backup faster

Veeam Backup from Storage Snapshots minimizes or even eliminates backup windows, with 20x faster backups than competitive offerings. It's all thanks to Veeam's seamless integration with industry-leading, modern storage arrays and VMware vSphere.

With Veeam, you can…

- Reduce the risk of data loss and downtime with guaranteed recoverability

- Meet stringent business SLAs while lowering OpEx

- Extend the life of existing storage and server investments and save CapEx on new hardware purchases

- Reduce operational complexity and increase IT automation

- Accelerate backups by 20x with zero impact on application performance

- Improve VM performance through non-disruptive backup operations

- Deploy new applications, updates and patches faster with confidence

10

WORKING WITH OTHERS: VEEAM AND ALLIANCE PARTNERS

Veeam Availability Suite™ is configured to work with the industry's leading modern storage providers to ensure 24.7.365 *Availability for the Always-On Enterprise.*

1 + 1 = 3
Alliances + Veeam
Better Together

VEEAM AND DELL EMC

Veeam's integration with Dell EMC Unity, VNX and VNXe hybrid storage arrays and Data Domain Boost adds intelligence to storage snapshots so you can get even more business value from your EMC storage investments.

Veeam and Dell EMC combine to help you quickly and efficiently create backups from EMC storage snapshots with little or no impact on production VM performance. Granular recovery capabilities remove the need for staging or intermediate steps, allowing you to easily recover individual application items in two minutes or less.

With Dell EMC modern storage and Veeam solutions, you can:

- Achieve RTOs and RPOs of <15 minutes: Keep mission-critical data available with lightning-fast recovery of VMs, files and individual items using Veeam Explorers *for Microsoft Exchange, SharePoint, Active Directory, SQL* and *Oracle*

- Backup faster — and with less impact: Perform backups up to 20x faster than backup products without impacting VM performance

- Trust your backups: Guarantee recoverability with automated testing and verification of all backups, so you know they'll work when they're needed

- Put data to work: Leverage backup data to test and troubleshoot in an isolated sandbox

> " Veeam gives us the confidence to continue virtualizing critical systems and applications for several reasons. For example, recovery is quick and easy, which enables us to meet our RTOs of 24 hours or less. We find that file-level recovery with Veeam is at least 10x faster than our previous method. "
>
> *- Łukasz Rakowski, Manager, IT Department, TK Telekom*

VEEAM AND DELL EMC

1 + 1 = 3
DELL EMC + Veeam
Better Together

Veeam Backup from Storage Snapshots
Veeam's integration with Dell EMC snapshot technology enables you to run backups whenever you want and as often as you want — dramatically improving achievable RPOs while minimizing backup windows. Backup from snapshots is up to 20x faster than competitive offerings and significantly reduces the impact of backup activities on your production environment.

Veeam Explorer for Storage Snapshots
Veeam Explorers enable granular recovery of what you want — from guest OS files and application items to entire VMs — in two minutes or less. You can restore directly from Dell EMC storage snapshots with no need for staging, and Dell EMC snapshot mounting is 10x faster than using traditional manual processes.

Veeam On-Demand Sandbox for Storage Snapshots
Veeam Virtual Lab capabilities allow you to leverage your backup data in a production-like test environment. DevOps teams can provision complete copies of production VMs directly from storage snapshots, enabling them to test new applications, upgrades and patches at speed — and minimize the risks of production deployments.

Dell EMC Data Domain Boost and Veeam

Veeam's enhanced integration with Data Domain Boost helps you get more from your existing storage solutions without compromising recovery.

- Up to 50% faster backup performance

- 10x faster synthetic full backup creation and transformation

- Fibre Channel connectivity for LAN-free backup to Dell EMC Data Domain appliances

- Source-side deduplication and in-flight encryption for greater security and control

" Veeam makes it easy to replicate VMs to our other data center, fail over and fail back, which minimizes the risk of data loss.

- Łukasz Rakowski, Manager, IT Department, TK Telekom

VEEAM AND HPE

Veeam directly integrates with HPE 3PAR, StoreVirtual and StoreOnce Catalyst to dramatically accelerate backup and recovery times.

Because Veeam eliminates the traditional performance impact of taking storage snapshots, you can take them far more frequently, improving RPOs and minimizing the risk of data loss. And, the combination of HPE and Veeam provides industry-leading recovery capabilities to reduce the cost and business impact of downtime.

Seamless integration between primary storage, secondary storage and Availability software means you can implement a more cohesive backup and recovery strategy to protect your data — and your business — when the worst happens.

With HPE modern storage and Veeam solutions, you can:

- Deliver RTOs and RPOs of <15 minutes: Meet stringent business SLAs with rapid recovery of VMs, files and individual items from Exchange, SharePoint, Active Directory, SQL and Oracle
- Backup faster — and with less impact: Perform backups up to 20x faster than other backup products without impacting VM performance
- Guarantee recovery: Rely on your backups to work every time, with automated testing of the recoverability of every VM, file and application item
- Leverage your data: Use backups or storage snapshots to test and troubleshoot complete, isolated copies of your production environment

> " Veeam gives us a level of recoverability that we've never experienced before. Meeting RTOs and RPOs is not a concern because Veeam lets us recover VMs, files and individual items in minutes, saving time and eliminating risk. It will probably take longer to contact people and let them know we recovered a VM than it will take to actually recover a VM. "
>
> – *Michael David Perez, Manager of IT Infrastructure and Operations, Norwegian Cruise Line*

Hewlett Packard Enterprise

1 + 1 = 3
HPE + Veeam
Better Together

VEEAM AND HPE

Veeam Backup from Storage Snapshots
Veeam and HPE storage integration enables you to backup directly from HPE snapshots rather than using traditional backup methods — minimizing the impact on production VM applications and making it easy to meet shrinking backup windows. And, with zero performance impact, it's possible to backup from HPE storage systems far more frequently, enhancing RPOs.

Veeam Explorer for Storage Snapshots
Veeam Explorers allow you to perform granular restores directly from snapshots with no need to be slowed down by the staging processes. These capabilities mean you can easily recover anything you need in two minutes or less — from individual files and items to entire VMs.

Veeam On-Demand Sandbox for Storage Snapshots
Put your HPE storage snapshots to work with Veeam Virtual Lab capabilities. By using snapshots to create full copies of production VMs in a sandbox environment, it's much faster and easier for DevOps teams to test and troubleshoot issues — accelerating deployments, upgrades and patches while minimizing risk.

> " Fast recovery is always critical. I know if something happens to a server in Argentina, due to either major power outages or minor earthquakes, I can bring that server online in another office and we won't lose a bit of data "
> - *Craig French Hendry, Group ICT Manager, Troy Resources Limited*

HPE StoreOnce Catalyst and Veeam

Veeam's integration with HPE StoreOnce Catalyst improves backup and recovery performance while lowering data retention costs and keeping more data accessible.

- Up to 3x faster backup and restore performance
- Secure protocol between Veeam and StoreOnce provides an additional level of data protection
- Faster synthetic full backup file creation and transformation for even shorter backup windows
- Fibre Channel connectivity enabling LAN-free backup to HPE StoreOnce
- Source-side data deduplication and in-flight encryption for greater security and control

VEEAM AND NETAPP

Veeam integrates directly with NetApp's Data ONTAP storage architecture, to enable faster, more efficient and non-disruptive backups that help you get a greater return on your NetApp storage investments.

The combination of NetApp's low RPO capabilities and Veeam's low RTO enablement allows you to create backups from storage snapshots up to 20x faster than competitive offerings and restore them quickly when needed. And, Veeam integration with Data ONTAP enables faster recoveries at a granular level — from individual application items to entire VMs.

Veeam's advanced Availability software also supports local and remote recoverability by making it simpler to coordinate and manage replicated data between multiple NetApp devices.

With NetApp modern storage and Veeam solutions, you can:

- **Keep systems available** with high-speed recovery of VMs, files and items from Exchange, SharePoint, Active Directory, SQL and Oracle

- **Leverage data** from on-site, off-site or cloud-based NetApp devices for virtual lab testing

- **Ensure high performance** by creating snapshots on primary or secondary arrays with no impact on production systems

- **Reduce data loss** with automated creation of secondary backups from NetApp SnapVault

- **Guarantee recoverability** for every file, application and VM by automating the testing of backups

> " Veeam is the number one Availability solution, and NetApp is the master in snapshot technology, so combining Veeam and NetApp is a win-win. "
>
> - *Neal D. Barrett, Network Administrator, Civista Bank*

VEEAM AND NETAPP

Cisco and NetApp FlexPod Platform

Scale quickly and easily: Meet the growing demands of your business with converged Cisco UCS compute, Nexus switches and NetApp FAS storage in tandem with Veeam Availability software

Protect all your data: Achieve unprecedented levels of data protection at a price point practical for all applications

Backup faster: Create backups and replicas from snapshots 20x faster than competitive offerings — without impacting production environments

Accelerate data transfer: Built-in WAN acceleration speeds up the transfer of data to off-site NetApp storage by up to 50x

Enhance visibility: Get simple tools to monitor health, troubleshoot performance, plan your backup infrastructure and manage compliance requirements

NetApp FAS

Eliminate backup windows: Create backups and replicas from snapshots as often as you like, even during business hours, 20x faster than the competition, with little or no impact on your production environment

Get business value from backups: Quickly spin up an isolated copy of your production environment — from secondary storage to eliminate performance impact — for testing and troubleshooting

Accelerate data transfer: Built-in WAN acceleration speeds up data transfer to NetApp secondary storage by up to 50x

Stay in control: Get a comprehensive suite of easy-to-use tools to monitor health, troubleshoot performance, plan your backup infrastructure and simplify compliance

NetApp E-Series

Protect current and future investments: Veeam and NetApp E-Series offer an ideal combination for backups and replicas on simple, fast and scalable storage

Accelerate backups and recoveries: Get faster backups with parallel processing and use E-Series as a staging area for even faster recovery

Enhance Availability capabilities: With its support for flash, NetApp E-Series storage has the I/O muscle to enhance Veeam's Virtual Lab and SureBackup® capabilities

Reduce multivendor cost and complexity: Replicate VMs from non-NetApp primary storage to E-Series for unmatched data protection and cost savings

" The auditor who assessed our recovery efforts watched me recover a 500GB Exchange VM at our disaster recovery (DR) site in fewer than 30 minutes. He was so impressed that he implemented Veeam at his company.
  - *Larry Walker, Vice President & Data Processing Officer, Chelsea Groton Bank* "

17

VEEAM AND NIMBLE

Veeam Availability Suite adds direct integration with Nimble storage, enabling organizations to reduce costs and protect their virtualization investments while simplifying IT operations and management.

With Nimble modern storage and Veeam solutions, you can:

- **Shrink backup windows:**
  Restore data even faster using Nimble's Adaptive Flash technology
- **Keep data safer for longer:**
  Replicate or copy backups from Nimble storage to secondary disk targets for long-term data retention
- **Create a more efficient storage infrastructure:**
  Improve storage efficiencies by leveraging Veeam inline deduplication in tandem with Nimble's storage compression
- **Enhance backup performance:**
  Enable backup best practices and improve backup performance by using Veeam's SureBackup technology in conjunction with Nimble's write-caching capabilities

Veeam Backup from Storage Snapshots
With Veeam, you can enhance data protection by performing more frequent Nimble storage snapshots and replicate them to secondary arrays for extremely low RPOs. Backup directly from Nimble snapshots on primary or secondary arrays with little or no impact on production application performance.

Veeam Explorer for Storage Snapshots
Veeam Explorer provides tools for fast, efficient granular recovery of individual application items, guest files or entire VMs from Nimble storage snapshots on primary or secondary arrays. This makes it far easier to meet stringent business RTOs and RPOs and close the Availability Gap.

Veeam On-Demand Sandbox for Storage Snapshots
With Veeam, DevOps teams can quickly create production-like sandbox environments directly from Nimble storage snapshots. With isolated access to complete copies of production VMs, your organization can accelerate deployments while minimizing risk by testing new applications, updates and patches on real production data.

PROTECT YOUR CURRENT AND FUTURE STORAGE INVESTMENTS WITH VEEAM

Modern storage solutions deliver fantastic benefits to enterprises, but IT organizations can get even more value out of these investments through Veeam's direct integration with market-leading storage vendors.

Veeam's ability to leverage the capabilities of modern storage is fundamental to how we deliver 24.7.365 *Availability for the Always-On Enterprise*. That's why we're always searching for new ways to integrate with more storage vendors — not just to improve backup and recovery performance, but to maximize the business value of your data and your storage investments.

Veeam's commitment to extending storage integration gives you increased flexibility and a higher return on your current and future storage investments. In fact, for many of our customers, integration with Veeam is the primary selection criterion for choosing a storage vendor.

KEY DIFFERENTIATORS FOR DRIVING STORAGE CHOICE :

Performance	Flexibility	Scalability	Total Cost of Ownership	Integration with Veeam

" We wanted to take advantage of storage snapshot technology, but only if we could continue using Veeam. We had placed our trust in Veeam for DR and business resumption, and Veeam had proven itself year after year. The key differentiator that drove our storage choice wasn't performance, features, scalability, purchase price or even total cost of ownership. The key differentiator was integration with Veeam. "

- Neal D. Barrett, Network Administrator, Civista Bank

LET'S TALK

If you're modernizing your primary storage environment, you need to upgrade to a modern Availability solution as well. With more than 230,000 customers, 45,000 partners and 100+ industry awards, we think Veeam is the obvious choice.

To learn more about what we can do for the Availability of your modern storage environment, get in touch with one of our Availability advisors today.

www.veeam.com/availability

GLOBAL ALLIANCE PARTNERS

CISCO. DELL EMC Hewlett Packard Enterprise NetApp Microsoft vmware

---

SOURCES:
1. http://www.cio.co.uk/it-strategy/it-alignment-how-cios-align-business-it-3622362/
2. https://go.veeam.com/2016-availability-report.html
3. https://www.us-cert.gov/sites/default/files/publications/data_backup_options.pdf

www.veeam.com/global-alliance-partners.html

1 + 1 = 3
Alliances + Veeam
Better Together