VEEAM
IT JUST WORKS!™

Top 10 Reasons Enterprises Choose Veeam

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AVAILABILITY™
for the Modern Data Center

Introduction

There are a lot of decisions to be made in today's modern data center. One key decision is how to ensure availability for the data center. The Always-On Business™ is powered by the data center, and everything supporting it is strategic to the business. This white paper will outline key decision points that enterprise organizations have looked at when deciding to build their availability strategy with Veeam® Availability Suite™.

The problem

Applications, whether they run the data center or protect the data center, are required to have key characteristics to perform well and meet today's expectations. Today, availability solutions need to do much more than simple backup and restore tasks. Specifically, the protection strategy needs to address the needs of an enterprise organization by providing some key characteristics:

Flexible design for large environments – hub and spoke, or remote sites. There are a number of ways today's data centers can exist, and different initiatives are in place to bring data centers together or even separate them out to remote sites. The enterprise protection strategy must be able to accommodate any design.

Business-oriented approach. Too many times, a key technology is put forth to IT decision makers, but the market is ripe for a business benefit approach that is powered by key technology and features that have a comprehensive approach to meet overall business objectives.

Performance to meet the needs of the business. Everything from a consistent and reliable user experience to getting the job done when needed—companies put a lot of trust in their protection strategy. High performance, a good user interface and the ability to sustain continuous use are key positive traits. This applies also to maintenance, monitoring and administration of the infrastructure to support the data protection strategy.

Why do enterprises choose Veeam?

Beyond the key characteristics outlined above, companies demand a lot from their data protection strategy today. Companies that have invested in Veeam have done so for a number of reasons, which we will outline below. Most consistently, the decision to go with Veeam has been made to align business objectives with the technology in data centers of all types.

[1] Recovery time and point objectives met

Above all benefits, being able to specifically qualify and deliver recovery time and point objectives (RTPO™) translates into immediate benefits for companies of all sizes. Specifically for larger organizations, these numbers are critical to operations, finance and external customers. With Veeam Availability Suite, companies can enjoy RTPO of less than 15 minutes for ALL applications and data. Operationally, 15 minutes for RTPO works for the bulk of workloads in data centers today, and it can be brought in at a fraction of the price of fully redundant systems with instant failover.

Combining both the recovery time and point objectives opens the discussion to what types of recovery are available. Having many options to meet the same metric is a powerful position to be in when developing a data protection strategy. Companies who have invested in Veeam enjoy up to 39 different restore scenarios with the backup product, which can address all kinds of recovery situations such as:

- Instant VM Recovery™: Allows for immediate use of a VM by running it directly from the backup file.
- Application restore scenarios: Veeam Explorer™ for Microsoft Exchange, SharePoint, Active Directory and SQL Server can have restores in just minutes of specific application items.
- Replica failover: A replicated infrastructure is one of the quickest ways to recover from a complete failure. The advanced replication engine can do this in quick order, including offsite.

RTPO of 15 minutes may not address all recovery situations, however. There are plenty of situations where Veeam can protect and recover in time frames even less than 15 minutes. Companies today, however, can implement data center availability policies around a specific measure, such as having an RTPO of 15 minutes.

[2] Operational expense efficiency for data protection

Companies who run data centers and deliver IT services of any type look very closely at the operational expense associated with products that are leveraged to meet business objectives. There are specific KPIs associated with data protection that will be critical to viability of the data protection strategy. Specifically, how much work is involved in setting up the data protection strategy? How much work is required for ongoing administration?

Data protection strategies historically have also had to invest in administrative time to deploy backup agents on systems. This usually was part of the deployment phase of new workloads. Automation options can help, but nonetheless, the historical challenge is that if a backup agent isn't installed, that system won't be backed up.

The data protection strategy for today needs to see beyond this limitation to provide the reliability expected without requiring administrative intervention. Ensuring that an agent is installed and running brings an increase in operational expenses.

Enterprises have chosen Veeam for reduced operational expenses; not only for the fact that the backups are agentless, but also because existing constructs can be used to define the data protection strategy. Key mechanisms—like storage investments, leveraging infrastructure tagging or existing permission models (folders)—can all be used to define the data protection strategy. This introduces one very important benefit; namely, data center growth is protected. Specifically, the moment a new business service is deployed, it is automatically protected. Companies enjoy this benefit of scale as it grows with the business without introducing new risk and keeps operational expenses low.

Additionally, these same constructs and more can be used for the restore task. Whether it be self-service, a helpdesk environment or application administrator restores, Veeam can address these needs and more to lower operational expenses and increase data center availability.

[3] Requirements can be confidently met with agentless backups

There was a time not too long ago that the notion of an agentless backup would stir contentious debates in IT meetings. The idea sounded good to infrastructure teams: No work is needed to protect workloads! But then the application teams became involved. Companies historically had serious concerns with the agentless backup, especially applied to virtual environments, as it left three key questions unanswered: What about application consistency? What about log truncation? What about granular recovery?

Today, enterprises can proceed confidently down the agentless path knowing that these key questions are answered well. A modern approach to a data protection strategy can immediately benefit from this.

Veeam has enabled companies to succeed in their data protection strategy by delivering agentless backups that meet these requirements well. One example is Veeam Explorer for Microsoft Exchange, which allows Exchange to be recovered very easily at the mailbox item level. This is in addition to the whole system recovery options that are available with Veeam. The Microsoft Exchange options are rich for enterprises today. With Veeam they can:

- Have instant visibility into Exchange backups
- Browse, search, restore and selectively export items
- Manage transaction logs specifically for Exchange during backups
- Provide application administrator access to do restores for Exchange systems
- Leverage storage systems for fast backups directly from storage snapshots for mission-critical systems like Exchange

Veeam's approach to the key questions has improved over time and is addressed by a number of core features of Veeam Backup & Replication™ that help on both the backup and the recovery. This includes the advanced application-aware image processing and Veeam Explorer tools for application recovery scenarios. Additionally, enterprises with application administrators (SQL Server Administrator, Exchange Administrator, etc.) can optionally defer to the application team to provide log management for the mission-critical applications. This strategy works well with companies who have invested in expertise in-house to support the applications.

[4] Address scalability requirements with ease

Companies of all sizes are dealing with a constant strain of growth in the data center. Business leaders are searching for the competitive edge in all areas, and usually that is driven by information and powered by the modern data center. Even with key technology investments around virtualization, there still is growth in the data center that will need protection.

As the modern data center grows, the need for protection doesn't diminish; in fact, it becomes even more critical. The technical task of performing a backup has a large impact on data centers today due to vast amounts of data that need to be moved. There are key assisting mechanisms, however. VMware's Changed Block Tracking was a key innovation, making backups perform faster; but companies who have invested in Veeam benefit from that and more.

Through the years, Veeam has implemented a number of features that enable the protection strategy to grow with the data center. With version 6 of Veeam Backup & Replication, companies benefited from an advanced distributed architecture of proxies and repositories. This also implemented centralized management and self-service file recovery. Subsequent versions provided enhanced self-service recovery options for VMs, Exchange and SQL items.

Likely the most telling feature for companies today, however, is the ability to protect the data center, yet not incur a slowdown symptom by doing so. Companies who invest in Veeam are well equipped to address this scenario with the new Backup I/O Control feature. This feature was built specifically from enterprise feedback that backup processing was so powerful it was causing too much I/O, which in turn would impact unrelated workloads. The new Backup I/O Control can solve the key management problem: "Why should a backup of the SQL Server database cause the Exchange Server to have higher disk latency?"

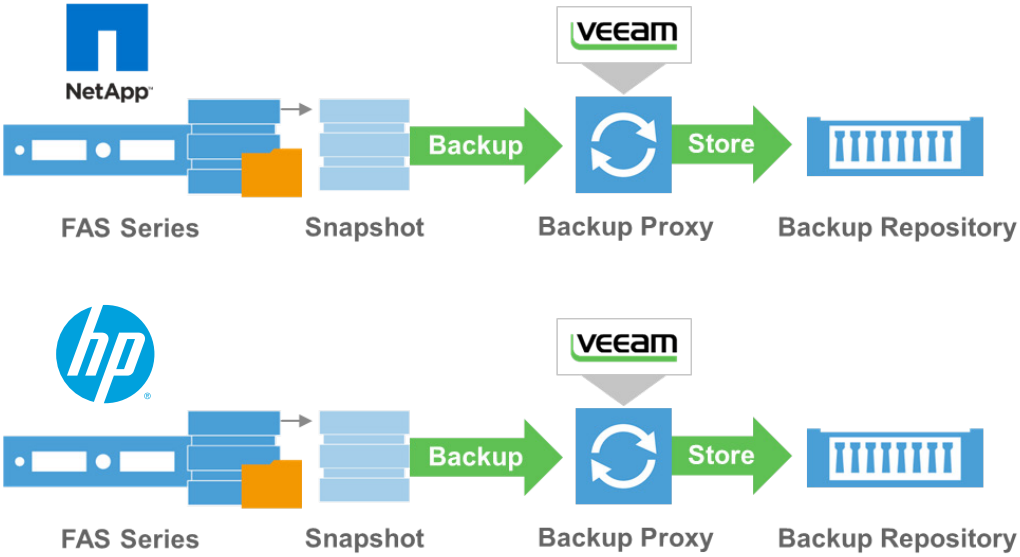
This innovative new feature is built specifically to keep service levels high, in native terms, to the data center. Specifically, Backup I/O Control ensures that new tasks will not be assigned to a disk resource when a specific measure (datastore latency) is exceeded and optionally will throttle existing tasks to not exceed that same specific measure. Additionally, individual disk resources can have this option set. This is a great way to ensure performance levels on Tier-1 storage systems in the data center.

Enterprises know that the ability to scale a protection strategy has to be approached in many directions. With Veeam, companies have benefitted from the distributed architecture, bandwidth control features and the new Backup I/O Control to ensure performance levels. Also the ability to scale the usage of the product to include self-service restore scenarios is a key to success in enterprises of all types.

[5] Leverage storage investments with key Veeam features

Companies have made significant investments in storage systems as the fundamental building blocks of their modern data center. Because of that, availability is key. More than just ensuring that components don't fail, it is also important that performance expectations are met. Storage systems are critical to the availability of the data center, as well as the protection strategy.

Since version 7 of Veeam Backup & Replication, companies have been able to leverage storage snapshots to perform backups of VMware virtual machines with minimal impact on the running workload. This provides a dramatic increase in efficiency in the backup process and will leverage investments in key storage systems in the data center. Customers leveraging HP 3PAR StoreServ, StoreVirtual and StoreVirtual VSA as well as NetApp Data ONTAP based storage—including FAS, FlexArray (V-Series), Data ONTAP Edge and IBM N series—can leverage this patent-pending Veeam technology to take backups on workloads that simply may have been too critical before.



The functionality of Backup from Storage Snapshots in Veeam Backup & Replication allows companies to take backups with the absolute least impact on production storage. Additionally, this process is done at speeds up to 20 times faster than competing solutions that take a generic approach to storage snapshots for VMware backups. Other storage systems can benefit from Veeam as well—all VMware and Hyper-V storage systems can benefit from Veeam's powerful backup and replication engine.

In addition to primary storage benefits, there also is a need to have the best options available for backup targets. Since version 8 of Veeam Backup & Replication, EMC Data Domain customers can leverage Data Domain Boost to accelerate data into the enterprise-class deduplicating storage system. The Data Domain Boost support allows companies to provide reduced backup windows and more retention by allowing the backup target to integrate closely with the backup application.

[6] High-Speed Recovery: Data centers of all types can enjoy this

Many companies have arrived at Veeam from one key technology that was released in 2010: Instant VM Recovery. This technology allows a workload to be restored in as little as two minutes. It's arguably quicker than possibly deploying a new workload. This example is one benefit, but the fact is that the current state of the data protection strategy allows companies to build data center policies around RTPO of 15 minutes or less. Combining both RTO and RPO to this 15 minute measurement is a commanding metric that can be used in data centers of all types.

Flybe

"Veeam's Instant VM Recovery is amazing; when **there was a problem with one of the VMs** that runs an important aircraft maintenance application, I kicked off Instant VM Recovery and **users were able to access the application within minutes**."

— James Richards
Virtualisation and Server Specialist
Flybe

This benefit is more than just recovering a workload; it provides additional scenarios such as file-level recovery and key Veeam Explorer recovery scenarios for Exchange, SharePoint, SQL Server and Active Directory. Additionally, companies can leverage Veeam Explorer for Storage Snapshots for high-speed recovery options as well. These features are good but here is the benefit that matters: 96% of Veeam recoveries are within RTO SLAs, compared to 78% for other solutions. High-Speed Recovery matters and companies who have invested in Veeam are better prepared for their recovery scenarios.

[7] Agentless backups do not reduce capabilities

Managing operational expenses is difficult in light of the demands of the Always-On Business. Companies who have invested in Veeam are looking at operational expenses closely but have done so in a way that doesn't sacrifice protection options. Historically, data center teams took issue with infrastructure-focused agentless backups. Simply put, they focused less on providing crucial application considerations such as log truncation, application consistency and granular recovery.

Companies who have invested in Veeam have gone down the agentless backup path without this risk. And they have also benefitted in reduced operational expenses to keep the process of running a data center in check.

[8] Recovery point objective management

Managing RPOs is a tough line to sign when IT decision makers commit to the business on how protected the data center can be. But that's only half of the battle. There is an explosion of data that data centers of all types are dealing with, and this can put a serious strain on agreed-upon RPOs – not to mention the expectations of consumers of IT services today.

Deciding on an RPO is one thing – but having the infrastructure to meet it becomes a separate challenge. Companies who have invested in Veeam align specific technologies to not only meet the RPO decision, but also to ensure that the protection strategy doesn't take too long. A few technologies align to this business goal:

- **Backup from Storage Snapshots:** Historically, some workloads were "too busy" to take backups during the day. This technology makes easy work of managing the storage duress that a backup places on the infrastructure.
- **Synthetic full backups:** Taking backups is one thing, but keeping the backup window small is another. From the beginning, Veeam has provided synthesizing of backups that reduces the burden on the primary storage and creates backups on the backup target.
- **EMC Data Domain Boost:** True source-side deduplication and storage acceleration for synthesizing backups on the appliance easily gives double- and triple-digit performance improvements.
- **Built-in compression and deduplication:** For environments looking to get more mileage from their storage investments, this feature comes at no additional cost and reduces the amount of data transferred in the course of the backup process.

[9] Leveraged Data is a gateway to more insight into the data center

Managing a data center is an intimidating task as it is, but handling large-scale changes that introduce risk is a reality in today's technology landscape. Handling these changes is where companies can manage the risk by leveraging the data that they already have.

Enterprises that have invested in Veeam can leverage the data that they have to avoid issues with new deployments, key upgrades or installing the latest patch. The Veeam Virtual Lab allows companies to avoid these problems and more in an isolated, production-like environment based on the latest backup. Additionally, multi-tiered applications can be tested as well by leveraging the Virtual Lab.

Companies may have looked at the Virtual Lab already—it's been out since 2010 with Veeam Backup & Replication v5 and maybe it was deemed too complex. This is arguably the most difficult part of the product, yet it can deliver dividends that make the staff training time worthwhile. Specifically, 65% of Veeam Virtual Lab users save $1,000 or more, and 84% save an hour or more every month by avoiding deployment problems.

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"We had two options: we could spend more than half the workweek managing and worrying about VM backup and replication, or we could put Veeam in place and forget about it."

YellaWood Pressure Treated Pine

Brooks Barnes, Systems Administrator, Great Southern Wood Preserving, Inc.

The takeaway here is that a strong data protection strategy holds the key to reducing deployment issues that arise from unavoidable changes in the data center. This is a benefit that enterprises that have invested in Veeam enjoy, yet it is something that companies don't expect from a backup product.

[10] Complete Visibility

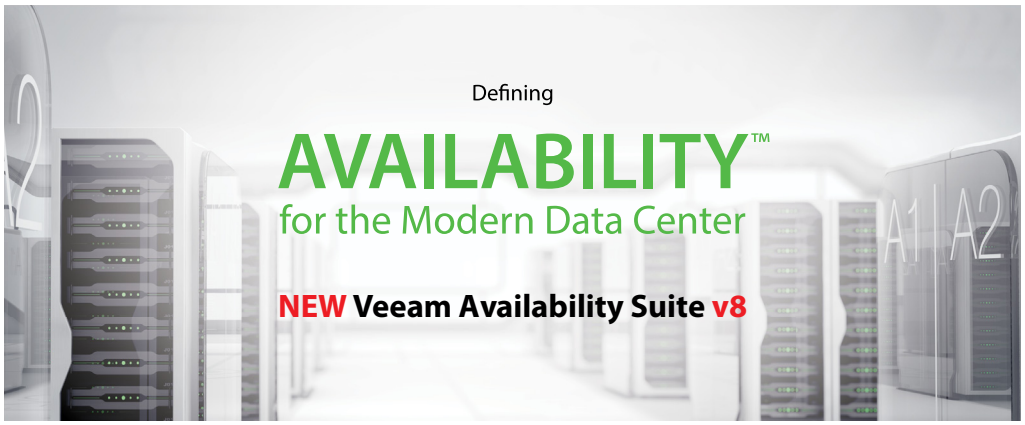
Ask any decision maker about the difference between the upfront and ongoing requirements to support any service in the data center, and you will get a lot of feedback based on experience of things going well and not so well. A data protection strategy warrants much the same discussion. Too many times something can be set up and it may work well at first, but over time, it may not perform as expected.

Whether the data center has outgrown the design of the data protection solution (or the core infrastructure itself) or the design wasn't correct at the start, there is a clear need for visibility to indicate where the issues are as the data center changes over time.

Companies who have invested in Veeam enjoy a number of additional visibility points, not just in their backup infrastructure, but in points beyond. The benefit here is that there are many ways to achieve complete visibility with Veeam, depending on needs. It is not a one-size-fits-all approach. Complete visibility can be achieved in the following ways with Veeam:

- Veeam ONE™ used as part of Veeam Availability Suite
- Veeam Management Pack™ for System Center used with Veeam Backup & Replication
- Remote management and monitoring integration with Kaseya and LabTech

Conclusion: Why do enterprises choose Veeam?



In most situations, companies invest in Veeam to solve a problem that another tool can't solve. But as they arrive at Veeam, companies find that they have embarked on a strategic way of addressing their availability needs for the modern data center.

There have been a number of changes in the data center in recent years, and that likely won't slow down. The difference that Veeam brings to companies today and tomorrow is being ready for the data center as it changes. Whether it's being ready for the latest VMware vSphere or Microsoft Hyper-V technologies, the latest operating systems and newest storage technologies, or allowing companies to find a way to engage in a service provider cloud for the next level of offsite protection, Veeam presents options to companies to meet their business objectives and provide *Availability for the Modern Data Center*™.

About the Author

Rick Vanover (vExpert, MCITP, VCP) is a product strategy specialist for Veeam Software, based in Columbus, Ohio. Rick is a popular blogger, podcaster and active member of the virtualization community. Rick's IT experience includes system administration and IT management, with virtualization being the central theme of his career recently.

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About Veeam Software

Veeam® provides *Availability for the Modern Data Center*™ by leveraging virtualization, storage, and cloud technologies to deliver recovery time and point objectives (RTPO™) of less than 15 minutes for all data and applications. Veeam's solutions enable the Always-On Business™ with high-speed recovery, data loss avoidance, verified protection, leveraged data and complete visibility. Veeam Backup & Replication™ leverages technologies that enable the modern data center, including VMware vSphere, Microsoft Hyper-V, NetApp storage, and HP 3PAR StoreServ and StoreVirtual Storage, to help organizations meet RTPO, save time, mitigate risks, and dramatically reduce capital and operational costs. Veeam Availability Suite™ provides all of the benefits and features of Veeam Backup & Replication along with advanced monitoring, reporting and capacity planning for the backup infrastructure. Veeam Management Pack™ is the most comprehensive, intuitive and intelligent extension for app-to-metal management of Hyper-V and vSphere infrastructures, and includes monitoring and reporting for Veeam Backup & Replication. The Veeam Cloud Provider Program (VCP) program offers flexible monthly and perpetual licensing to meet the needs of hosting, managed service and cloud service providers. The VCP program currently includes more than 5,000 service provider partners worldwide.

Founded in 2006, Veeam currently has 25,000 ProPartners and more than 111,500 customers worldwide. Veeam's global headquarters are located in Baar, Switzerland, and the company has offices throughout the world. To learn more, visit http://www.veeam.com.