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The Veeam Availability Suite

*Robust Disaster Recovery Platform with
Strong Opportunities for MSPs*

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Introduction¹

Disaster Recovery-as-a-Service (DRaaS) has been a boon for cloud and managed service providers, with many firms bringing offers to market over the last three years. DRaaS provides disaster recovery services on a subscription basis, generally backing up not only data, but an organization's complete environment including applications, and providing a new, cloud-based failover environment.

While some service providers have developed proprietary disaster recovery software platforms, others have built their unique offers on the software platforms of third-party providers such as Sungard, Zerto, and Veeam. Among these platform providers, Veeam rises to the top as a leader in the disaster recovery space, offering a robust platform with strong benefits for both enterprise and managed service customers.

In this SPIE, we look at the market need for cloud-based disaster recovery solutions, and clarify service definitions that are sometimes confused in the market. We then examine the Veeam solution, including its capabilities for both enterprises and partners.

The Market Need for Cloud-Based Disaster Recovery

In today's "always on" business environment, IT systems uptime is critical, and outages may result in loss of revenue, if not loss of the business itself. According to the U.S. Federal Emergency Management Agency (FEMA), more than 40% of businesses never reopen after a disaster that entails major data loss; and 90% of smaller companies fail within one year of a disaster, unless they can resume operations within five days.² And even if a business survives a significant outage, the toll can be steep. Customers expect to be able to reach businesses at any moment through digital means, and remote workers and partners require access around the clock to be productive and service their customers. Outages of noticeable length can impact:

- business productivity among employees
- the ability to process business transactions—like sales or financial transactions
- reputation among customers

¹ In preparing this report, Stratecast conducted interviews with:

- Veeam – Yesica Schaaf, Senior Director, Cloud Marketing
- Veeam – Anthony Spiteri, Technical Evangelist
- Veeam –Edward Watson, Global Product Marketing Manager

Please note that the insights and opinions expressed in this assessment are those of Stratecast, and have been developed through the Stratecast research and analysis process. These expressed insights and opinions do not necessarily reflect the views of the company executives interviewed.

² [FEMA "Make Your Business Resilient: How to Be Prepared" Infographic, 2015](#)

Market Drivers for Cloud-Based Disaster Recovery³

Eighty-seven percent of U.S. businesses say it is important to use cloud for business continuity purposes, an increase from 78% in both 2015 and 2014.⁴ Among the growth drivers in the DRaaS market are:

- **Application availability** – Businesses need to be “always on” in order to remain competitive in today’s market. Nearly 30% of businesses cite minimizing downtime as a top-three challenge that they face in managing their IT environment. As a result, more businesses are turning to services like DRaaS to prevent downtime for their business.
- **Customer Demands in a Competitive Market** – Accelerating customer demands make constant access to business necessary. In today’s on-demand economy, a customer expects access to online services at the moment that they need them; and if businesses can’t accommodate them because their digital presence is down, they will move on to the closest available competitor.
- **Performance-Sensitive Applications** – Today’s applications require constant access to the most up-to-date data. If data servers experience an outage, multiple applications may fail to perform. DRaaS becomes an important service to keep applications linked to the data they need, should a production server fail.
- **Compliance** – When businesses back up data, copies must adhere to the same regulatory requirements as primary production data sets. DRaaS can help apply the same compliance policies across multiple backup data copies.

The Burden Systems Outages Place on IT Organizations

Systems outages also impact IT resources. The hybrid IT environments commonly found in businesses today draw data from a variety of infrastructure sources. In the event of a system outage, IT staff must map data to new failover locations, and every associated application must then be remapped to point to the new data source location. Remapping data during an outage takes extra time before data and applications can be restarted. Additionally, before outages occur, IT staff must assure that backup copies of data remain compliant with applicable regulations in the same manner as production copies. With multiple data copies, and data growth from newer services like artificial intelligence and IoT, it can be difficult to apply retention policies that are compliant across every production workload; so, applying those same policies to multiple backup sites is that much more of a challenge.

Data backup and recovery can be difficult, and the cost of data loss is high. As disaster recovery services have evolved, many providers have grouped their services into tiered levels that enable businesses to back up and restore some workloads or data faster than others. In the higher tiers, data is backed up more frequently and restoration is faster—at a higher cost. Lower tiers have less frequent backups and slower restoration, for a lower price.

³ Additional information about the DRaaS market can be found in the Frost & Sullivan report, [Disaster Recovery-as-a-Service \(DRaaS\) Buyer's Guide, 2016](#).

⁴ 2017 Stratecast Cloud User Survey, the results of which are published in numerous reports including [Strategic Goals Drive Cloud Decisions: Drivers and Constraints Vary by Industry, Company Size, and Title](#); [Hybrid Cloud Adoption Trends and Challenges: On-Premises Data Center Remains Key to Businesses](#); and [Adoption Trends in Managed Cloud Services: Opportunities Exist Across All Segments and Industries](#).

In recent years, cloud-based disaster recovery solutions have bridged a market gap, offering solutions that are quick and easy to deploy, cost-effective and flexible. Such services can be customized to balance a business's fault tolerance against its budget. For businesses that cannot cost-justify a secondary disaster recovery site, DRaaS offers an appealing alternative.

Backup and Disaster Recovery Explained

Today, there are as many different services in the backup and recovery market as there are providers. Furthermore, providers use various terms inconsistently, placing the onus on the buyer to determine exactly how each provider defines specific terms. Following are the key terms and services used in the business continuity/disaster recovery (BCDR) market, as defined by Stratecast:

- **Replication** is the act of copying data from one database or server to another database, server, or data center. Replication creates an exact copy of the data in the database in a different storage array. With replication, data can be updated incrementally to enable faster duplication of data.
- **Backup** is the act of taking a point-in-time snapshot of the operational state, architecture, and stored data in a database. The point-in-time snapshot captures the complete data set as it exists at that moment, but does not allow for data to be updated incrementally.
- **Recovery Point Objective (RPO)** is the targeted maximum amount of time that an organization can tolerate between instances of mirroring of its data. In other words, the recovery point objective is the amount of time between instances of data being backed up in a recovery solution. For rapidly changing critical data (e.g., sales data), an enterprise would select a low RPO. For less frequent changes or where applications require fewer data points (e.g., sampling air temperatures for a weather report), a higher RPO can be applied.
- **Recovery Time Objective (RTO)** is the targeted interval between when an outage or disaster occurs and when the environment must be back up and running. This includes the time it takes to detect the failure, prepare the backup site, initialize the failed components, and perform any network configuration to reroute requests to the backup environment.
- **DRaaS Appliance** is an intermediary server placed at the edge of the customer's network, which acts as the initial backup location for data to be duplicated to, as well as a gateway to the provider's cloud. Some appliances can act as the final failover location, but in many DRaaS solutions, they only facilitate the duplication and uploading of data to the provider's cloud-based environment.
- **DRaaS** is a cloud-based service that replicates data and applications, and facilitates restoration to the provider's cloud. DRaaS typically provides faster recovery points and times than other modes of backup and recovery. DRaaS solutions use software to replicate workloads, data, and user settings (when applicable) to a provider's cloud. Some providers deploy an appliance at the edge of the customer's network to facilitate both the replication and the transfer of data to the cloud. In the event of a disaster, data and applications housed in the provider's cloud are spun up as a secondary production site, and remain operational until the customer's primary site resumes operations, and failback can occur.
- **Backup-as-a-Service (BaaS)** – There are two major differences between DRaaS and BaaS: application recovery and recovery times. Backup-as-a-Service only backs up data, not

applications, and it lacks the infrastructure on which to failover. Backup-as-a-service facilitates backup of data only to a cloud-based environment. Unlike DRaaS, BaaS does not re-map data to applications, or restore applications to operation. It simply recovers data. The second differentiator between DRaaS and BaaS is recovery time. Most BaaS services are unable to set recovery point objectives in minutes; rather, they can backup incremental data in terms of hours. Additionally, the recovery time objective of BaaS services is higher, meaning that BaaS would take longer to recover data.

The Veeam Availability Platform: Hybrid Environment Protection

For businesses looking for a cost-effective way to meet continuity needs, cloud-based disaster recovery solutions can mitigate the cost and sometimes even the staffing needed to cover disaster planning and implementation in the enterprise.

But no two services are alike. Especially in today's hybrid IT environments, it's critical to find a provider that can protect any type of infrastructure you need to protect, whether physical servers or virtualized data center components, or cloud-based infrastructure, whether private or public. Veeam offers comprehensive data replication, backup and recovery platforms, and service suites that protect a wide variety of infrastructures for enterprise customers. Veeam's offerings are particularly well-suited to the growing ranks of managed service providers (MSPs) and cloud service providers (CSPs) that seek to offer cloud-based data protection services to their customers.

The Veeam portfolio protects applications and data hosted in a hybrid or multi-cloud environment. The platform facilitates:

- Cloud backup and DRaaS from on-premises or hosted environments
- Infrastructure-as-a-Service (IaaS) and Software-as-a-Service (SaaS) protection in a secondary cloud site
- Cross-cloud replication and migration across different cloud data centers or regions

From the enterprise premises, Veeam Availability Suite provides backup and recovery of VMware and Hyper-V environments, as well as agent-based backups of both Windows and Linux-based physical servers. The Veeam Agent is a lightweight program configured by the Veeam Availability Suite software, which creates a secure socket layer/transport layer security (SSL/TLS) connection from the enterprise to the cloud service provider, to enable data backup. For typical backups, workloads are scheduled to be duplicated on a regular basis—often daily or every set number of days, based on the customer's preference. Should the need arise due to equipment failures, site outages or larger emergencies, the backup can be spun up in the location of the customer's choosing.

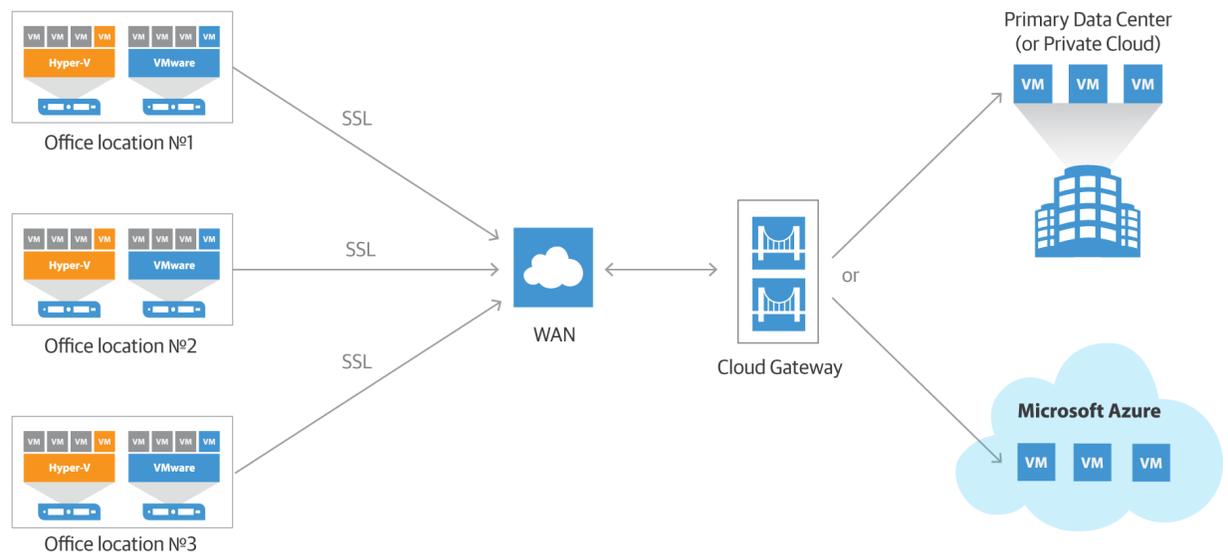
Customers can restore to their own virtualized environments or directly to a cloud provider. Today, Veeam can restore directly to Microsoft Azure, Amazon Web Services (AWS), IBM Cloud, or to any of the more than 18,000 managed or cloud service providers that partner with Veeam.

Among Veeam's extensive portfolio offerings are the cloud-based recovery services described below.

Veeam Cloud Connect

For a true DRaaS service with tight recovery points and fast recovery times, Veeam offers its Cloud Connect Replication solution. Veeam Cloud Connect helps customers to move data from the premises to the cloud in a more consumable fashion. The service can facilitate replication of data, storage in the cloud, and failover to a cloud infrastructure for fast recovery in the event of an outage. Included in the Veeam Cloud Connect solution is compute and storage allocated per customer, software that orchestrates the replication and recovery, and networking technology that enables swift transfer of data for both replication and storage.

Figure 1: Veeam Cloud Connect Architecture



Source: Veeam, 2018

As shown in Figure 1, the Veeam Cloud Connect solution places a Windows server as a cloud gateway at the edge of the cloud service provider's network, to act as an entry point to the cloud. The gateway sends a lightweight agent to the customer's servers to facilitate backups. Agents create a SSL/TLS connection from the customer back to the Veeam cloud connect gateway device, which helps facilitate failover. The Veeam Cloud Connect server also manages all network mapping to the new failover locations, to ensure that workloads operate properly if they need to be spun up in the failover environment. Through its Cloud Connect service, Veeam can facilitate failovers to service providers' cloud environments.

Veeam Protection for AWS

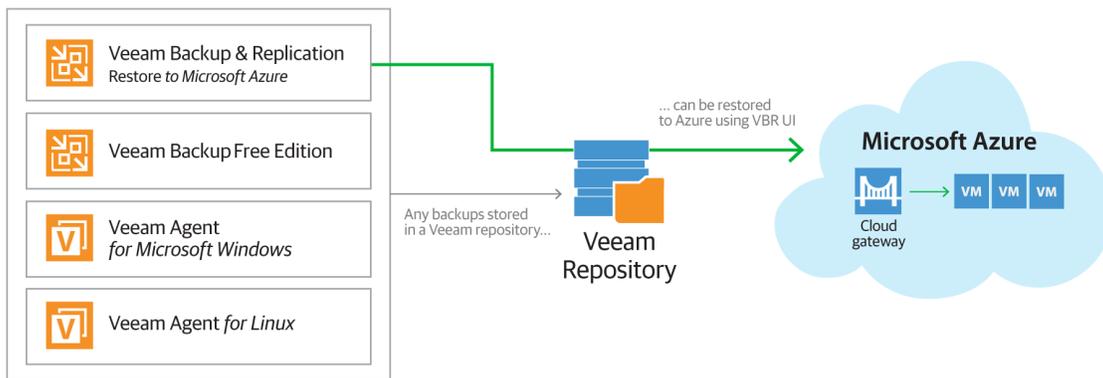
Veeam recently acquired N2WS, a provider of cloud-native backup and disaster recovery services designed specifically for AWS workloads. The service is designed to decouple data from AWS services, and store copies independently from the underlying AWS infrastructure. The service is cloud-native and agentless, meaning that no additional software is needed to create backup copies. The service uses native, AWS snapshots to backup and store data in a third-party location for recovery, if needed, in the event of an outage or disaster. This Veeam service can provide near instant recovery of EC2 instances, including recovery of applications or granular files.

Veeam Protection with Microsoft Azure

Veeam provides two primary forms of protection focused on Microsoft Azure: Veeam data restoration to MS Azure, and a Veeam powered network (PN) for Azure.

- Veeam Restore to MS Azure** provides cloud-based restoration of on-premises VMware and Hyper-V VMs, or physical servers and endpoints; and enables them to be restored or migrated to the cloud. The service allows any data stored in a Veeam repository to be restored in MS Azure, as shown in Figure 2.

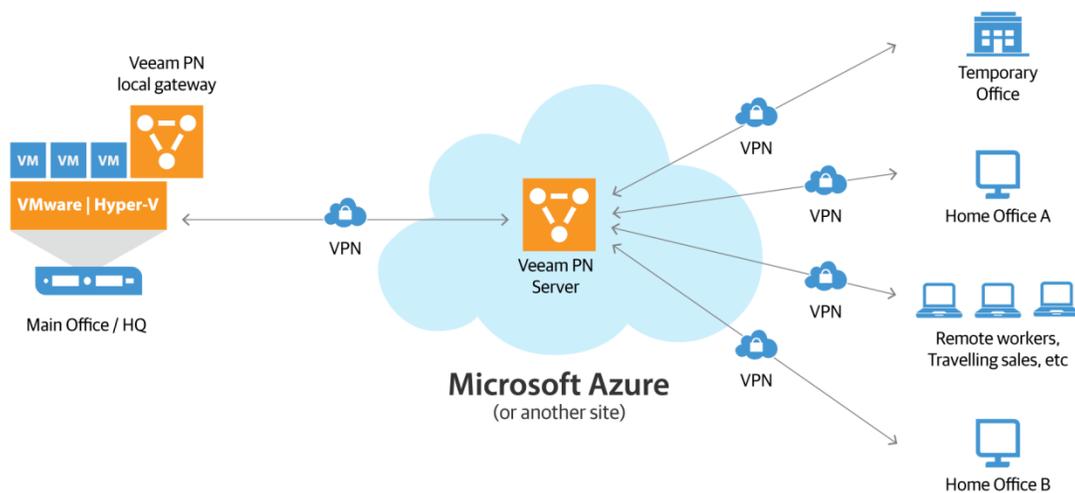
Figure 2: Veeam Restore to MS Azure



Source: Veeam, 2018

- Veeam PN for Azure** is a free solution that simplifies and automates the configuration of a MS Azure recovery site, using software-defined networking. The service enables customers to back up both on-premises and Azure instances without using VPNs. Instead, the service makes point-to-point connections directly between sites using a Veeam server hosted in Azure, as shown in Figure 3.

Figure 3: Veeam PN for MS Azure



Source: Veeam, 2018

Veeam Backup for Microsoft Office 365

Veeam also offers specialized backup for business customers who are using Office 365. The Veeam Backup for MS Office 365 securely backs up email data to a separate location in a very granular fashion, allowing users to choose information to be recovered down to a single user or even a single email. Customers can set both the backup proxy and a restoration repository, and set retention policies easily to ensure they are compliant with applicable regulations. Customers can retrieve Office 365 Exchange Online mailbox items, including email, calendars, and contacts, from a separate, cloud-based instance that the service creates. Cloud backups can be stored with either AWS or Microsoft Azure, or with a third-party cloud provider. Backups can also be stored on the customer's premises, if preferred, using the same APIs that Office 365 uses natively.

Veeam for MSPs and CSPs

The Veeam portfolio is especially suitable for managed or cloud service provider usage, as Veeam does not offer managed services or its own cloud environment. Numerous providers, like iland and Bluelock, currently include the Veeam platform as a basis for their services. The robust Veeam platform and suite of services offer providers a foundation on which to build backup, recovery, and DRaaS services. Providers are able to configure many of Veeam's data protection products for multiple tenants on the back end using the Veeam Availability Console. Providers can create separate customer accounts, and manage all of their tenants from a single portal in Veeam Availability Console. Each customer account can be configured by the provider, with the customer's input, to meet the customers' own needs, including setting different RPOs or RTOs for different tiers of workloads or applications. Providers can also set different data retention policies, customize individual user privileges, and allocate varying amounts of infrastructure to meet each customer's business goals and requirements.

Beyond the flexibility of the console, Veeam offers a provider program that offers significant benefits. Enrollment in the program removes licensing restrictions: becoming a part of the Veeam Cloud & Service Provider (VCSP) program removes restrictions imposed by the Veeam End User License Agreement (EULA)—which restricts usage of Veeam software to back up a business's own data—allowing service providers to build their own managed service offers around the Veeam software, without competition. The program also provides savings on software and storage pricing, which enables providers to set competitive pricing while still ensuring good revenues for themselves. Providers also have the ability to customize or white-label the product user interfaces, so that their contact information appears directly within the portal; or their own brand's colors or themes can be applied to the user portal, enabling them to ensure that it is the primary point of contact for their own customers.

Veeam says it is also currently testing a reseller use case within the Veeam Availability Console. This capability will allow MSPs to sell to resellers—who do not offer as many value-added services but simply resell other providers' service, and offer a presence for businesses that prefer a local contact—and the reseller can turn around and sell to many customers. In doing so, Veeam appropriately acknowledges that the sales ecosystem for IT services can be complex, and strives to accommodate many different types of resellers that may want to base offers on its data availability platform. It also enables Veeam to extend its market reach to smaller customers and additional geographic regions, without supporting a larger in-house sales force to do so.

The Veeam service suite resonates with partners, as evidenced by the more than 18,000 service providers that Veeam states are currently enrolled in its Cloud & Service Provider program.

Stratecast The Last Word

The beauty of the Veeam product suite is that it not only meets a critical customer need, but offers an attractive platform for the MSP community. It recognizes the complex ecosystem that exists between cloud service providers, MSPs, resellers, and customers, and offers a solution that can meet a variety of different customers' needs.

The Veeam platform offers a robust availability solution that can back up or replicate, store, and failover workloads and applications from a variety of infrastructure deployment models, whether physical, virtualized, or cloud-based. The Veeam software also facilitates data or workload movement between environments with strong and secure networking, and enables them to be deployed in a different environment in the event of an outage or disaster. Veeam is one of few providers whose services can be used to backup or replicate data across such a broad array of different infrastructures, to nearly any environment that the enterprise wishes to recover to—whether in a hosted, third-party environment or in the cloud. The Veeam solution also helps facilitate workload movement between disparate environments, handling all of the recoding and mapping that needs to occur for a workload to operate in a new and different infrastructure.

Stratecast sees this as an excellent solution to help businesses ensure data and workload availability, and also a potential means of achieving easy data migration between disparate workloads.

For MSPs, the Veeam portal is a boon, as evidenced by the number of DRaaS providers that underpin their services with the Veeam platform. The solution makes managing multiple customers easy using Veeam's single-pane portal, which is also customizable to each MSP's business. The scalability of the service makes it an excellent solution for MSP resale, as it offers strong recurring revenue that comes from ever-growing volumes of backed up data. And because the MSP can specify flexible backup and retention periods and competitive price points based on their customers' needs, it gives them the flexibility to serve their customers well while still ensuring revenues for themselves.

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