The Battle of the Backups:
Veritas Backup Exec™ vs. Veeam Backup & Replication™

Key Finding

For companies with mixed infrastructures that include virtual, cloud and physical resources, Backup Exec provides a more integrated experience than Veeam, making it easier, faster and less expensive to use.

Overview

Most companies today have heterogeneous infrastructures. While according to Gartner, over 75% of on-premises corporate workloads are virtualized, that means that nearly 25% are on physical infrastructure. Also, every day, companies are moving more and more workloads into AWS, Azure, or another cloud provider. In fact, revenues for AWS and Azure are expected to exceed $30B in 2017.

Heterogeneous environments provide IT managers at small and medium businesses unique challenges when it comes to one of their most important responsibilities – Backup and Recovery. When systems go down, IT must be able to get them back online quickly with nearly zero data loss, regardless of whether they are virtual or physical, on-premises or in the cloud.

So how do the two leading backup and recovery solutions for small and medium businesses – Veritas Backup Exec and Veeam Backup & Replication – perform in heterogeneous environments?

To answer that question, Topline conducted an evaluation of the two solutions in a heterogeneous environment consisting of a mix of virtual (Hyper-V and VMware), physical and cloud (AWS and Azure) servers. The environment also included both on-premises and cloud backup repositories.

Veritas Advantages

1. **75% faster installation and configuration**
2. **Native connections for AWS and Azure**
3. **59% lower 5 Year Total Cost of Ownership**

Our Findings

While our evaluation found that both companies offer modern, well designed, full-featured systems that were able to do the job, ultimately, Backup Exec came out clearly on top.

This finding largely stems from the fact that Backup Exec appears to have been designed with a heterogeneous environment in mind, while Veeam was designed for a completely virtualized environment where the source machines, backup server, and data repository are all on-premises.

This difference between the two products can perhaps best be illustrated via the differences in the integration levels of their UIs:

Backup Exec UI: Fully Integrated

- Provides an integrated experience through a single pane of glass across all environments

Veeam UI: Not Fully Integrated

- Has separate or tacked on tools for managing physical servers and for the cloud
- Supporting these environments requires extra work, extra cost, or both.

The evaluation did find that Veeam does have some strong capabilities. However, after weighing the strengths and weaknesses of both products, Backup Exec, due to its level of integration across environments and lower total cost of ownership, came out the winner.

In the remainder of this paper, we describe the test results for the 3 areas where Backup Exec had an advantage over Veeam and the 1 area where Veeam had an advantage.

Installation and Configuration

Throughout the Installation and Configuration process, Backup Exec provided a fully integrated experience. All tasks, including the installation of agents on physical and cloud machines, connections to virtual machines and backup job configuration could be easily completed through the main UI.

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In contrast, Veeam required a considerable share of the work to be performed outside of the main UI.

Agent Installation

Veeam requires agents to be installed manually on each physical and cloud machine. In contrast, Backup Exec automatically installs agents as part of the server install process. As a result, the overall Veeam installation process for our lab environment took nearly 4x longer than the installation process for Backup Exec.

Backup Job Configuration

In Backup Exec, all backup job configuration is done directly through the main UI. For Veeam, configuring backup jobs for virtual hosts is done in the main UI. However, configuring jobs for physical and cloud machines requires logging into the agent running on each machine.

It Took Nearly 4 Times Longer to Install Veeam than Backup Exec

(Time to Install Backup Server and connect 2 Virtual Hosts, 2 Physical Machines and 1 Cloud Machine)
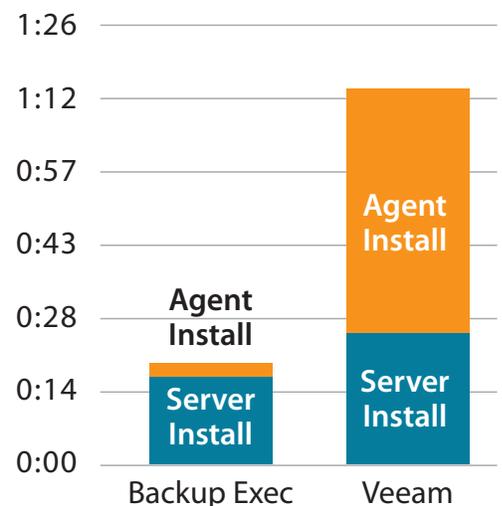
Backing Up to AWS or Azure

When it comes to using AWS or Azure cloud storage, Backup Exec provides native connections that are just as easy to set up and manage as local storage. When configuring a backup repository, all that is required is to select AWS or Azure as the location of the repository and then provide credentials. Because Backup Exec uses a native connection, the only cost is what AWS or Azure charges for their storage, which can be $.01/MB/Month or even lower for the least expensive storage.

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In comparison, Veeam does not have native connections to either service. Using AWS with Veeam requires setting up a gateway that then treats AWS as a tape backup. In addition to the cost of the storage itself, there is also the cost of the gateway, which can run to thousands of dollars per year. To use Azure, currently the only option is to license Veeam Cloud Connect. However, this option is only available to larger companies who either have Microsoft or VMware enterprise licenses. Given the cost and minimums, these licenses are not practical for SMBs.

As an alternative to native connections, Veeam recommends that customers who are looking to back up into the cloud work with one of their partners who can provide Cloud Connect as a service. Cloud Connect does provide some additional capabilities not available with Veritas' native connections. However, once everything is taken into account, the total cost of using Cloud Connect is far higher than the cost of using Backup Exec's native AWS and Azure storage. While the cost differences will vary for different customers, in our test environment, the annual Veeam cloud storage costs were more than 7x the Backup Exec cloud storage costs.

Total Cost of Ownership

Ultimately, because of the companies' different licensing models and cloud connection options, the differences in Total Cost of Ownership between the vendors will depend on a number of factors including:

- The number and types of machines that are being backed up
- The amount of data protected
- Whether or not the cloud is used as a backup repository
- The type of cloud storage used
- The expected compression and dedupe ratios achieved
- The number of full backups retained
- The number of years the solution will be run

The following table provides the details of the environment used in our model. This scenario was chosen to represent what we considered a fairly typical scenario: A deployment that was mostly virtualized but still had some legacy physical servers as well as a couple of workloads working in the cloud. The scenario also assumed that in addition to an on-site repository, the backup data would be copied to a repository in the cloud as opposed to being moved to tape and physically moved off site.

TCO Modeling Scenario

Area	Backup Exec	Veeam
Hosts		
• Virtual	• 3 2-socket Virtual Hosts	• 3 2-socket Virtual Hosts
• Physical	• 2 Physical Servers	• 2 Physical Servers
• Cloud	• 2 Cloud Servers	• 2 Cloud Servers
Total Data to Back Up	3TB	3TB
Cloud Storage Type	AWS Infrequent Access	Cloud Connect via Partner
Cloud Data Reduction Ratios		
• Dedupe Ratio	3 to 1	2.66 to 1
• Compression Ratio	1 to 1	1.5 to 1
Number of Full Backups Retained	5	5
Number of Years	5	5

Under this scenario, using list prices and the recommended Cloud Storage options for each vendor, the 5-year TCO for Veeam came out to $52,600, while for Backup Exec, the 5-year TCO was $21,817.

The chart below breaks out the costs into licenses, support, and cloud storage charges. As the chart illustrates, Veeam costs more than Backup Exec in all three areas, but by far the majority of the difference comes from the cloud storage charges. While Cloud Connect offering enables users to both compress and dedupe data in the cloud, the per-MB storage price quoted to Topline Strategy was nearly 11 times the price of the AWS's. As a result, even with a far smaller data footprint, cloud storage costs for Veeam were far higher than for Veritas.

5-Year Total cost of Ownership comparison
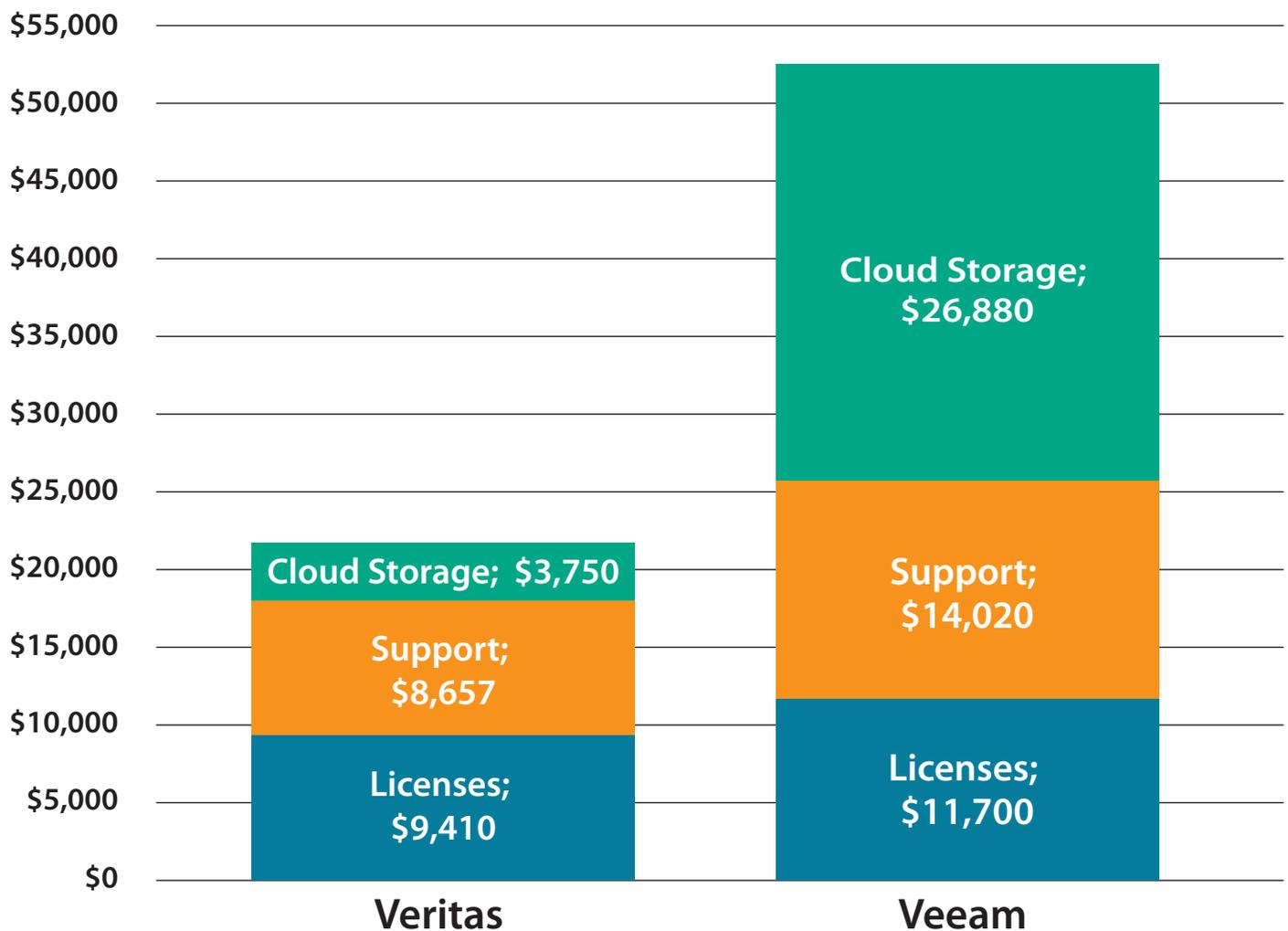
Feature Compatibility

One of the limitations of backup solutions is that not every feature works seamlessly with every other feature (feature incompatibilities). For example, Veeam customers using AWS as their cloud repository cannot use dedupe while Backup Exec customers have to choose between using dedupe and compression.

Overall, Veeam has fewer feature incompatibilities than Backup Exec, giving it the advantage in this area.

However, the impact of the feature tradeoffs is primarily economic. For example, the primary downside of not being able to compress and/or dedupe the cloud repository is that the cloud repository will be larger and cost more.

When comparing TCO in the previous section, we took into account each product's feature incompatibilities. Despite Veeam's advantage in this area, Backup Exec still had a 59% lower TCO.

While cost is the primary consideration, there can be other downsides to not being able to use different features in conjunction with others, such as increased network traffic or slower restore times. In addition, feature incompatibilities require that the administrator evaluate all of their options and make the best tradeoffs for their deployment.

Conclusion

While both Veritas and Veeam offer solid products, when it comes to supporting a heterogeneous environment, Backup Exec comes out ahead. While Veeam does have its strengths, Veritas comes out ahead due to its 3 core advantages:

- Its single pane of glass simplifies management – which results in a 75% faster initial installation and configuration
- Native AWS and Azure support
- 59% lower 5-year Total Cost of Ownership