Hewlett Packard Enterprise

HPE Apollo servers and Veeam Availability Suite

Simple, flexible, and affordable data protection for your virtualized workloads

The cost and risk of data loss can be catastrophic:

75%

of organizations surveyed recognize they have a protection gap.[1]

$21.8M

is the average financial cost of the availability protection gap.[2]

66%

of organizations admit that digital transformation is being constrained by unplanned downtime.[3]

[1], [2], [3] 2017 Veeam Availability Report, ESG.

The data protection challenge

As the amount and types of data that your business owns continue to grow, and as more of your IT deployments include virtualized workloads, there is an immediate and critical need to protect this data reliably. At the same time, the risk of data loss and variety of threats are increasing. Network and power outages, component failure, human error, willful malevolence, data corruption, software bugs, site failures, and even natural disasters are just a few sources of application downtime and data loss.

Many businesses today do not have data protection mechanisms or even storage specialists on staff. A simple yet reliable data backup system is critical to keeping the business running, meeting ever-evolving user expectations, and remaining competitive.

Typically, businesses face a three-fold data protection challenge:

1. Can we find a data protection solution that fits our budget?

2. How easy is it for our IT staff to run backups and restores?

3. How reliable is our data protection solution in reducing downtime and facing ransomware attacks?

The HPE and Veeam data protection solution

Hewlett Packard Enterprise and Veeam jointly offer a data protection solution Reference Architecture (RA) that includes the Veeam Availability Suite, Veeam integration with

HPE 3PAR StoreServ and **HPE Nimble Storage** snapshots, and **HPE Apollo servers**. This RA is verified by HPE and Veeam and provides multiple configurations specifically built, tuned, and tested for Veeam with different performance and capacity.

The solution offers the following benefits to deliver a cost-effective data protection infrastructure for virtualized environments:

- **Rapid backups and restores:** This solution has the ability to write backup data to local storage in the HPE Apollo server, so backups and restores for critical applications and workloads require significantly less time compared to the time needed for transferring data to and from a separate storage resource using either a Fibre Channel or Ethernet based transfer medium.

- **Scalability and simplicity:** In addition to providing hundreds of terabytes of local storage capacity, the HPE Apollo server has the required compute resources for running the Windows® operating system and Veeam Availability Suite software on the same server. This converged approach greatly simplifies the solution compared to designs based on compute-only and storage-only components.

- **Cost-efficiency:** No additional storage licenses are required to deploy the storage capacity of the HPE Apollo server.

- **Proven protection:** HPE and Veeam performed testing to reduce the complexity of the solution. The RA provides guidance on how to configure hardware and storage resources in order to efficiently and effectively implement the configuration with minimal additional tuning.

Backup targets: Use cases for HPE Apollo server and HPE StoreOnce

HPE Apollo excels as a primary backup target when used for multistream backup, single stream backup, multistream restore, and single stream restore; when restoring a virtual machine with multiple virtual machine disks (VMDKs); and when performing one or more Instant VM Recovery operations.

HPE StoreOnce is most suitable as a backup target when it's important to decouple the target storage from the Windows operating system for protecting against ransomware attacks. HPE StoreOnce also reduces capacity because of HPE StoreOnce deduplication. This deduplication also provides a significant advantage for HPE StoreOnce in LAN and WAN bandwidth required for carrying the backup data. Multistream backups with HPE StoreOnce are equivalent to multistream backup speeds with the HPE Apollo 4200 server as the target.

In order to further reduce capacity, an HPE StoreOnce VSA can be deployed on the HPE Apollo server and Veeam solution.

HPE and Veeam data protection solution configurations

The following table summarizes the small, medium, and large configurations for the HPE and Veeam data protection solution based on HPE Apollo servers and the Veeam Availability Suite.
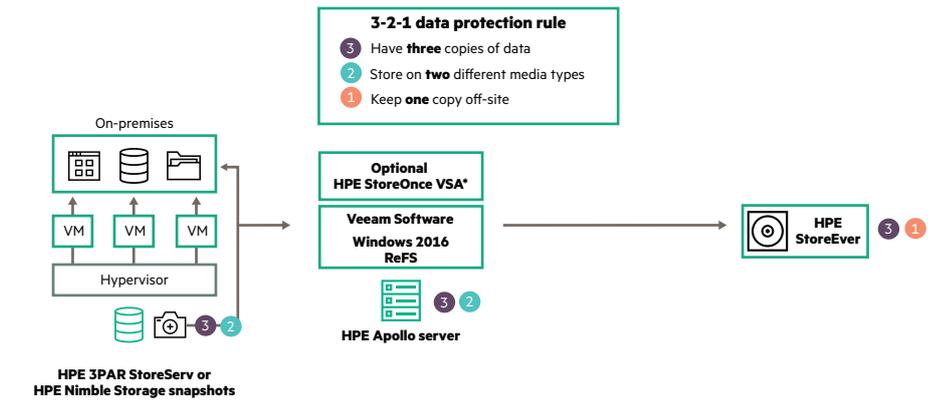
Figure 1. HPE Apollo server and Veeam

Table 1. Small, medium, and large configurations for HPE Apollo server as backup target with Veeam Availability Suite

HPE Apollo server	Small	Medium 1	Medium 2	Large
Model	HPE Apollo 4200 Gen9	HPE Apollo 4200 Gen9	HPE Apollo 4510 Gen10	HPE Apollo 4510 Gen10
Description	Half capacity	Full capacity	Half capacity	Full capacity
Number of SSDs	2	2	2	2
Number of 12 TB HDDs	12	24	28	56
Number of hot spares	1	1	1	2
CPU	1 socket, 18 cores	1 socket, 22 cores	2 sockets, 24 cores	2 sockets, 24 cores
RAM	192	192	256	256
HBA	2 ports at 16 Gb/s	2 ports at 16 Gb/s	2 ports at 32 Gb/s	2 ports at 32 Gb/s
NIC	2 ports at 25 Gb/s	4 ports at 25 Gb/s or 2 ports at 100 Gb/s	2 ports at 100 Gb/s	2 ports at 100 Gb/s
Usable TB (no SSDs)	115	242	276	553
Logical TB (deduplication ratio: 3:1)	345	726	828	1659

Summary

The HPE and Veeam solution comprises of HPE Apollo servers and Veeam Availability Suite and an optional HPE StoreOnce appliance or HPE StoreOnce VSA. This offering provides a cost-effective and simple data protection solution for virtualized workloads. The HPE Apollo servers, the compression and deduplication capabilities of HPE StoreOnce VSA, and the integration of HPE 3PAR StoreServ and HPE Nimble Storage snapshots with Veeam provide a simple, flexible, and affordable data protection solution for virtualized environments.

Learn more at
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