



Backup-as-a-Service with HPE StoreOnce Systems





Importance of data and complexity of data management

Data is your most valuable currency

We're living in an era of digital transformation. Data is the engine of that digital transformation and is therefore your most valuable currency. Data needs to be instantly available and secure—wherever and whenever you need it. And in an always-on connected world, the financial and business impact of unplanned downtime and data loss can prove catastrophic.

Managing data is increasingly challenging

As the value and business-criticality of data increases, the challenges of managing data are also growing. Exploding data growth and copy data sprawl, transforming data protection SLA requirements, and an evolving threat and compliance landscape are exacerbating costs and risk. And as you transform to a Hybrid IT operating model, protecting and managing data across the data center and cloud infrastructure can prove increasingly complex. Given these dynamics, it is time to adopt a more intelligent approach to data management.

To help you take advantage of cloud economics and satisfy the 3-2-1 data protection requirements, Hewlett Packard Enterprise has extended the benefits of HPE StoreOnce that are deployed in various use cases, including:

- On-premises private Backup-as-a-Service (pBaaS) with HPE GreenLake
- On-premises private cloud with Microsoft Azure Stack
- Off-premises public cloud managed by a cloud service provider
- Off-premises public cloud with Microsoft Azure

3-2-1 data protection rule and cloud

The industry best practice for data protection is to have at least three copies of data on two separate media with one copy off-site.

However, many companies don't have the IT budget to build secondary or disaster recovery (DR) data centers. Some still use tapes to get data off-site to a safety vault as primary DR protection. Either approach is not optimal if your goal is rapid data and applications recovery to avoid prolonged service interruption.

The agility and economics offered by the cloud is very attractive for businesses. For many companies, the cloud presents a viable destination to store their backup copies off-site. These companies treat the cloud as a secondary or DR data center that is operated on an OPEX basis instead of as a capital investment in the hardware or personnel required to manage the data center.

HPE StoreOnce System—Extending protection to the cloud

HPE StoreOnce is a purpose-built backup appliance designed to store copies of backup data in deduplicated form, thereby reducing the backup footprint by as much as 95%.¹ The system delivers high-performance backup and recovery to enable rapid protection of growing data sets while enabling fast recovery of data when the need arises. HPE StoreOnce is available in two deployment models—physical single-node appliances (HPE StoreOnce Systems) or a virtual storage appliance (HPE StoreOnce VSA).

HPE StoreOnce VSA delivers the cost efficiency and high backup performance of deduplicating backup storage in a software-defined form factor for VMware®, Microsoft® Hyper-V, and Azure environments for more flexibility in adding capacity and VM portability. You can easily transform the existing virtual infrastructure into a purpose-built backup appliance with a wizard that enables simple self-installation.

¹ Data from internal HPE testing demonstrates 20:1 deduplication, which equates to 95% space savings.



HPE Cloud Bank Storage is a feature of HPE StoreOnce Systems that enables you to efficiently transfer data and store it in the cloud. The combination of HPE StoreOnce deduplication and cloud storage provides a low-cost, high-performance, and zero-risk long-term retention solution.

On-premises private Backup-as-a-Service with HPE GreenLake

HPE GreenLake provides an end-to-end data protection solution that covers the entire life cycle of the data protection environment. It combines the simplicity, agility, and economics of the public cloud with the security features and performance benefits of an on-premises environment. This solution delivers the following benefits:

- Easy acquisition, reducing the risk of investing too much or too little in IT infrastructure
- Growth of backup environment aligned to organizational demands
- Proactive monitoring of usage in order to provision additional capacity ahead of demand
- Assistance in solution deployment integration

HPE GreenLake provisions and integrates eligible hardware, software, and services to create an on-premises backup solution. It is consumed like a cloud service by purchasing front-end terabytes. As a result, there is less concern for back-end infrastructure requirements such as storage, management servers, and software.

HPE StoreOnce for Microsoft Azure Stack private cloud

HPE StoreOnce provides a backup appliance target for data residing on a private cloud infrastructure such as Azure Stack to deliver fast backups and restores with efficient deduplication. HPE StoreOnce tightly integrates with third-party backup software such as Veritas NetBackup to provide higher levels of efficiency in data protection tasks. This integration provides the following benefits:

- **Better backup/restore performance:** By distributing deduplication processing between Veritas NetBackup media servers and the HPE StoreOnce System, backups and restores are faster compared to traditional disk backups.
- **Simplified management:** Veritas NetBackup centrally controls data movement.
- **Greater flexibility:** With HPE StoreOnce deduplication, data can be moved from one site to multiple sites and replicated across low-bandwidth networks with HPE StoreOnce deduplication.

For longer-term retention or for off-site disaster recovery, HPE StoreOnce backup stores can optionally be copied natively, securely, and cost-effectively to low-cost object storage such as Azure Blob Storage with HPE Cloud Bank Storage. This approach combines HPE StoreOnce deduplication efficiency with the economics of cloud storage to drive down the cost of long-term retention.

HPE StoreOnce VSA on public cloud with cloud service providers

HPE StoreOnce VSA enables you to stack licenses up to 500 TB and provides a license server for which licenses are purchased in 100 TB units. Aimed at cloud service providers, HPE StoreOnce VSA offers the following benefits:

- Less license management administration to provision 100s of TB from a single pool
- Delivery of the required mix of capacity, performance, and backup targets for better performance and scalability
- Single console reporting for centralized management via a single log-on, enabling you to view all VSAs and easily drill down to individual VSAs
- Unlimited pool of VSA license capacity for more dynamic and responsive license allocation when faced with unpredictable capacity demands

HPE StoreOnce VSA integrates with cloud service providers' portals and billing systems through the StoreOnce REST API and SDK.² Additionally, integration with third-party backup software is available through HPE StoreOnce Catalyst.

HPE has partnered with Commvault to offer the following services using HPE servers, storage (**HPE 3PAR StoreServ** or **HPE StoreOnce** backup appliances), and networking:

- HPE installation services and operational support services
- Commvault backup software installation services
- HPE Datacenter Care services
- Dedicated account team for metering and invoicing
- Single point of contact for resolving issues

² Refer to the [HPE StoreOnce REST API and SDK version 3.18.x User Guide](#) for more information.



HPE StoreOnce VSA on Microsoft Azure public cloud

HPE StoreOnce VSA on Microsoft Azure can serve as a replication target for backups stored on an on-premises HPE StoreOnce appliance. HPE Cloud Bank Storage copies backup stores from the on-premises HPE StoreOnce appliance to StoreOnce VSA on Azure to enable a reliable and low-cost disaster recovery solution.

To use HPE StoreOnce VSA on Azure, simply go to Azure Marketplace,³ deploy HPE StoreOnce VSA from a pre-existing template, and set up a replication target for the on-site backup. Within minutes, you can go from having no DR solution to a fully operational DR backup stored in the cloud that is accessible anytime you need it.

As with any cloud computing resource consumption model, you are billed by Azure for compute resources and storage required to run HPE StoreOnce VSA. HPE StoreOnce VSA running on Azure ships with a free license for 1 TB,⁴ which allows you to try the solution and add capacity licenses of up to 32 TB as required to suit your data protection needs.

With the assumed 20:1 deduplication ratio, even with complimentary licensing, you can replicate backup data up to 20 TB, which is sufficient for many small business customers. You can purchase additional capacity licenses for HPE StoreOnce VSA on Microsoft Azure from HPE.

HPE StoreOnce VSA on Microsoft Azure public cloud delivers the following benefits:

- **Setup of a one-to-many replication target:** Replicate backups from multiple on-site HPE StoreOnce Systems to HPE StoreOnce VSA on Azure, thereby using the cloud instance as centralized DR for multiple smaller virtualized sites, ROBO, and regional offices.
- **Data restore from cloud to on-premises or to cloud:** Retrieve data from HPE StoreOnce VSA on Microsoft Azure to an on-site data center for local recovery. Alternatively, you can restore data to volumes on Azure so you can restart the application instances in the cloud.
- **Reduced data transfer costs to and from an Azure cloud:** The speed of data transfer depends on the available bandwidth between the data center and the Azure public cloud. HPE StoreOnce replication works on standard internet network links as well as high-speed and high-bandwidth Azure ExpressRoute. However, because HPE StoreOnce replicates only changed blocks, the cost of data transfer to and from Azure cloud decreases, saving you time and money.
- **Flexible retention policies:** On-site backups on HPE StoreOnce Systems and backup replicas using HPE StoreOnce VSA on Microsoft Azure can have different retention policies to suit your recovery and compliance needs.

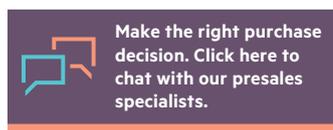
³ Access the Azure Marketplace here:
azuremarketplace.microsoft.com/en-us/marketplace/apps/hpe.storeoncevsa

⁴ Support is not included.

Conclusion

Your business depends on data, and protection of that data is a necessity, not a luxury. With HPE solutions for Backup-as-a-Service, you can simply adopt a data protection strategy that complements your on-premises protection needs with the economics and flexibility of the cloud to keep your business running smoothly.

Learn more at
hpe.com/storage/storeonce



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