Protect Your Data Wherever It Resides

HPE data protection solutions for Microsoft Azure Stack and Microsoft Azure
Protecting your business in a new world

Enterprises are under pressure to deliver public cloud-like experiences and services to their internal customers and business groups. Application developers and administrators in an organization look to Microsoft® for a seamless cloud-like experience across their on-premises infrastructure and off-premises cloud. Consequently, demand for hybrid cloud environments is rising. The challenge is to deploy the Right Mix of Microsoft Azure Stack (private cloud), Microsoft Azure (public cloud), and traditional IT.

Data is a core asset of all businesses and could be lost due to unexpected situations arising from hardware failure, human error, or natural disaster. For this reason, hybrid cloud transformation requires organizations to protect the data wherever it resides—in traditional IT or a private or public cloud. A data protection solution must not only integrate seamlessly with existing backup software, but also provide the option of keeping backup stores in the public cloud for low-cost, long-term retention and disaster recovery.

Wherever you run workloads, a hybrid backup infrastructure ensures that performance and cost are aligned with the value of the backup data. You need an end-to-end solution that integrates local and cloud storage and enables a single point of management.

The 3-2-1 rule for best practice data protection

The goal of the 3-2-1 rule for best practice data protection is to provide a data protection solution that maximizes application uptime and data protection.

You can protect data by following these simple 3-2-1 guidelines:

- Maintain three copies of the data—the primary data and two copies—to avoid losing data to a faulty backup.
- Store backup copies on two different media types such as tape, disk, secondary storage, or the cloud.
- Keep one copy off-site in the event of local hazards or ransomware infections within the network.

HPE ProLiant for Microsoft Azure Stack

HPE ProLiant for Microsoft Azure Stack enables customers to deploy the Right Mix of private, public, and traditional IT on an open platform. It is a pretested, factory-integrated Azure hybrid cloud solution that provides a consistent development, management, and security experience. Co-engineered by Hewlett Packard Enterprise (HPE) and Microsoft, it delivers Azure consistent software-defined Infrastructure as a Service (IaaS) and Platform as a Service (PaaS) solutions on HPE hardware in the data center. It runs Azure compatible workloads on-premises to meet security, compliance, cost, and performance requirements. The speed, agility, and simplicity provided by the Azure public cloud when combined with the cost-effective and secure on-premises HPE ProLiant for Microsoft Azure Stack solution help provide the best of both worlds.

HPE data protection solution for Azure Stack

Today’s data protection solutions for Azure Stack fall short in required capabilities. For example, the native Azure backup tool doesn’t provide backups at the VM level. Although you can back up the data directly to the Azure public cloud, there is no option to keep a backup copy on-premises. Many solutions rely on snapshots and replication, which are part of an end-to-end data protection spectrum. However, these solutions don’t integrate with applications to ensure application-consistent recovery and can’t be relied on for long-term retention.
You can deploy high-performance, robust local secondary storage together with Azure Stack. The local storage allows you to rapidly complete backups and execute restores to maintain user productivity. The cloud storage offers scalability and lower costs for long-term retention and archiving of backup data.

**Enabling on-premises data protection for Azure Stack with HPE StoreOnce and Veritas NetBackup**

**HPE StoreOnce** provides a backup appliance target for Azure Stack that delivers 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 to deliver the following benefits:

- Higher backup/restore performance compared to traditional disk backup by distributing deduplication processing between NetBackup media servers and the HPE StoreOnce System
- Simplified management with centrally controlled data movement by the NetBackup backup
- Greater flexibility by moving data from one site to multiple sites and enabling replication across low-bandwidth networks with HPE StoreOnce deduplication

**Figure 1. On-premises data protection for Azure Stack with HPE StoreOnce and NetBackup**

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**Enabling off-premises data protection for Azure Stack with HPE Cloud Bank Storage and Azure Blob Storage**

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

- Support for a variety of cloud service providers including Azure Blob Storage (hot and cool tiers) with an option for private cloud object store with Scality
- 20X\(^1\) reduction in storage capacity requirements while optimizing bandwidth utilization cost during data transfer
- Simple, encrypted, and reliable cloud disaster recovery using off-site backup data copies without having to invest in off-site facilities
- Optimized protocol and functions to minimize cloud-related expenses (high deduplication, compression, S3 operations)

\(^1\) As compared to a fully hydrated backup
Summary

The growth of Hybrid IT is creating new challenges for IT leaders, particularly in the areas of risk and resilience. You need to support a mix of traditional, private, and public cloud services across departments, applications, locations, and facilities, while ensuring data integrity, availability, and protection.

In a Hybrid IT world with Azure Stack and Azure public cloud, you need an end-to-end solution that protects data across all consumption models and delivers zero impact, flash speed protection. This solution must also use low-cost cloud storage efficiently for long-term retention and disaster recovery.

HPE StoreOnce backup appliances integrate with NetBackup to provide on-premises data protection for Azure Stack. This integration delivers fast backups and restores and enables efficient CPU consumption with source and server-side deduplication. To take advantage of the economics, agility, and flexibility of cloud, you can copy the backup stores to Azure Blob Storage with HPE Cloud Bank Storage.

HPE data protection solutions ensure that you can protect data wherever it resides—in traditional IT, Azure Stack, or Azure—while leveraging your existing backup application.

Learn more at
hpe.com/cloud/azure-stack
hpe.com/info/storeonce

Figure 2. Off-premises data protection for Azure Stack with HPE Cloud Bank Storage and Azure Blob Storage