

  
**Hewlett Packard  
Enterprise**

# Protect your data in the cloud

Cloud and flash-integrated data protection and archiving solution



**Cloud deployment is gaining momentum**

The fastest growth will be in private clouds because most companies don't want to put most of their applications and data in the public cloud.

- 56% of organizations use private, on-premises cloud<sup>1</sup>
- 38% of organizations use hosted, private clouds<sup>2</sup>
- 30% of enterprises run an average of more than 1000 virtual machines in a private cloud<sup>3</sup>

**Gain insights into your backup environment**

**HPE NinjaProtected + Backup Assessment**

delivers a free, simple, and complete health check for your data protection environment by examining your backup systems and processes to so that your backup is operating with peak efficiency, security, and cost-effectiveness.

The results provide you with intelligent insights into deduplication benefits, uncovering issues around backup windows and failed backups, and revealing opportunities for cost reductions, such as how to safely reduce data retention times.

**Leverage the expertise of HPE Pointnext**

HPE Pointnext delivers numerous projects each year ranging from single-site to global, multi-site rollouts. These services include:

- Advisory Services to envision and define a road map for future success
- Professional Services to design and implement the integration of infrastructure and software to deliver enterprise application continuity
- Operational Services to help optimize your environment for long-term sustained application continuity

**Protecting your business in a new world**

As Hybrid IT—the blending of traditional and cloud services—becomes the new reality, you are faced with new opportunities for organizational efficiencies. In the context of data protection, you can deploy high performance, robust local secondary storage together with public or private cloud storage. 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 your backup data.

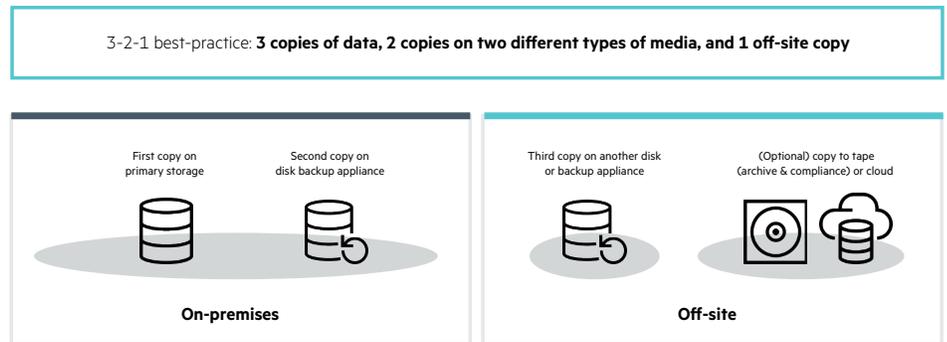
Wherever you run your workloads, a hybrid backup infrastructure ensures that performance and cost is aligned with the value of the backup data. You need an end-to-end solution that integrates local and cloud storage and enables a single point of management.

**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.

With the proper execution of this best practices, you can protect your data by following these simple “3-2-1” guidelines:

- Maintain three (3) copies of your data—the primary data and two copies—to avoid losing data to a faulty backup.
- Store backup copies on two (2) different media types—such as tape, disk, secondary storage, or the cloud.
- Keep one (1) copy off-site—either on tape or in the cloud—in the event of local hazards or ransomware infections within the network.



**Figure 1.** The 3-2-1 rule for best-practice Hybrid IT data protection

<sup>1, 2</sup> Corporate Cloud Computing Trends, 451 Alliance, June 2015

<sup>3</sup> Cloud Computing Trends: 2016 State of the Cloud Survey, RightScale, January 2016



## Common use cases for cloud-ready storage

When it comes to leveraging the cloud in specific ways to support cost-effective IT modernization, long-term data retention and disaster recovery represent two of the most frequent uses for cloud storage today. According to a recent ESG analyst survey,<sup>4</sup> 42% of enterprises use cloud for backup and archive while 40% use cloud for disaster recovery. This is in large part due to the operational agility, efficiency, and appealing cost structure that a secure off-site data repository provides:

**Long-term data retention:** Many IT organizations cannot delete backups in case future restores are needed or for compliance with legal requirements. This drives the need to retain vast datasets for years or decades, potentially raising cost and complexity.

**Disaster recovery:** Investing in and managing an owned off-site location that prevents the business from coming to a halt in the event of a site outage, ransomware threat or natural disaster is cost-prohibitive for many businesses. Yet, high costs associated with the transfer of large amounts of data to the cloud remains a barrier.

Low cost, high-capacity object storage in public, private, or hybrid cloud is an ideal storage option for long-term data retention and disaster recovery in the face of explosive data growth, strict retention policies, and a pressure to reduce costs.

## Cloud-ready data protection solution for long-term data retention and disaster recovery

HPE Cloud Bank Storage is a feature of HPE StoreOnce Systems, industry-leading data protection storage, that delivers highly efficient data transfer to, and storage in, the cloud. The combination of the HPE StoreOnce deduplication and cloud storage delivers low cost, high performance and zero risk long term retention solution.

HPE Cloud Bank Storage lets you leverage the economics, agility, and flexibility of the cloud for modernized data protection. You can natively, reliably, and cost-effectively move backup data to the public, private or hybrid cloud, enabling long-term retention and reliable disaster recovery that is simple and efficient. HPE Cloud Bank Storage has the following benefits:

- **Economic:** Protect more than 100 PB<sup>5</sup> of data at 20X<sup>6</sup> lower cost than existing public cloud services. You can triple the native capacity of HPE StoreOnce Systems by leveraging on-premises or public cloud storage.<sup>7</sup> For instance, using the largest currently available HPE StoreOnce System, you can protect up to 102 PB of user data using the cloud storage platform of your choice and achieve long-term backup data storage costs starting from one-tenth of one cent per GB/month or lower. In addition, with HPE Cloud Bank Storage archive feature, data can be detached and archived for an indefinite period of time at a lower cost and colder object storage.
- **Efficient:** Reduce storage capacity requirement by 20X<sup>8</sup> when combined with HPE StoreOnce deduplication and help optimize the bandwidth utilization cost while transferring the data. HPE Cloud Bank Storage helps reduce the backup windows by sending only unique or changed data from HPE StoreOnce System to the cloud, thereby, lowering the bandwidth needed for transfer as well as the amount of duplicate data stored in the cloud. Cloud service providers allow practically free data storage, but charge \$/GB for reading data out from the cloud tier, resulting in high recovery costs. With HPE Recovery Manager Central (RMC) Express Restore feature only changed blocks are moved from the cloud tier back to the storage array, less data is read out from the cloud tier, leading to cost savings for recovery from the cloud tier.

<sup>4</sup> The Importance of Flash Storage in a Hybrid IT World, ESG, May 2017

<sup>5</sup> Assuming dedupe ratio of 20:1 and the maximum logical capacity of HPE StoreOnce 6600 of 34 PB

<sup>6, 7</sup> Cost of long-term retention of backup data with HPE Cloud Bank Storage assuming dedupe ratio of 20:1 and AWS (S3) standard object storage pricing of \$0.02 per GB/Month

<sup>8</sup> When compared to a fully hydrated backup



- **Flexible:** Protect data on-premises and off-premises with public and private cloud services by simply upgrading your HPE StoreOnce System software, purchasing an HPE Cloud Bank Storage license and pointing it at either Amazon Web Services (AWS), Microsoft® Azure, or even your own private cloud with Scality RING. In addition, HPE RMC not only speeds up backups and restores, along with highly granular and flexible recovery point objectives and recovery time objectives but also uses HPE 3PAR StoreServ snapshot protection to configure and manage data on HPE Cloud Bank Storage.
- **Reliable:** Mitigate risk with simple, encrypted, and reliable cloud disaster recovery solution. HPE Cloud Bank Storage moves data not only to cloud storage but also from the cloud and back to the local HPE StoreOnce System. In case of a system failure of the local StoreOnce System, due to a natural disaster, a new HPE StoreOnce System can be installed and the data can be recovered from it. Alternatively, using HPE RMC Express Restore, data can also be restored directly to primary storage.

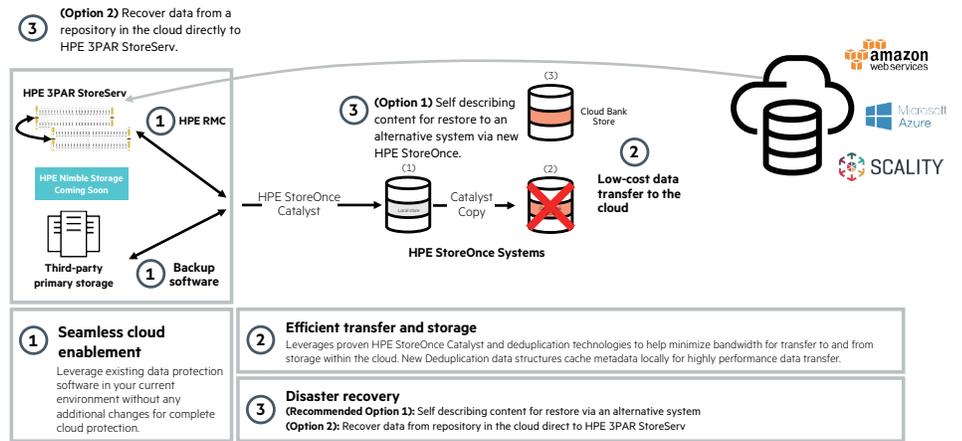


Figure 2. HPE Cloud Bank Storage—how it works

## Protect your data in the cloud—affordably

In today's data-intensive digital world, you need to reduce the cost and complexity of protecting your environment. More and more businesses are considering cloud storage for their long-term data retention for regulatory compliance, as well as for a lower-cost disaster recovery option.

HPE Cloud Bank Storage offers you the ability to retain your data for a longer time on high-capacity and low-cost cloud storage. It also enables you to implement a simple and reliable off-site disaster recovery solution by backup to and restore from cloud storage. The HPE data protection solution brings together industry-leading infrastructure and data protection software with the expert services from HPE Pointnext to provide integrated end-to-end resilience and risk reduction from the data center to the cloud.

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