

## Panzura Backup of Structured Data with HP Cloud

While the inherent data protection from automated snapshots and replication in the Panzura Global Cloud Storage System obviates the need to backup unstructured data, some enterprises still desire a backup solution, either to supplement Panzura's inherent data protection of unstructured data or to backup structured data like databases, Exchange, or virtual machines.

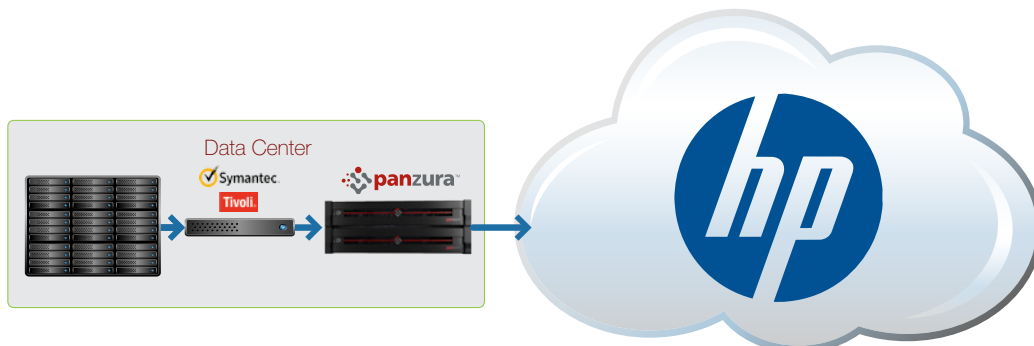
The Quicksilver™ Data Protection (DPC) series of cloud storage controllers have been optimized for backup workloads while providing full HP Cloud integration for maximum scalability at minimum cost. This solution replaces slow, cumbersome tape or optical disk as well as provides an alternative to expensive spindles for storing backup data. By integrating directly with Symantec NetBackup and IBM Tivoli Storage Manager (TSM) while also supporting database dumps and VMDK files, the Quicksilver Data Protection series can be deployed with no changes to existing infrastructures. Full HP Cloud integration provides the compelling cost structure and scalability required by data protection policies while maintaining online access, both in the cloud and on local cache, for very aggressive RPO and RTO SLAs. In addition, frequent snapshots and replication of payload and metadata makes fast and simple DR a fundamental side benefit. This high performance platform dramatically reduces the cost, time, and overhead of data protection in the enterprise.

Panzura + HP Cloud for backup provides:

- Seamless integration with major backup tools like Symantec and IBM Tivoli
- Global deduplication for unmatched capacity minimization
- Military-grade encryption
- Large local cache for fast access to backups

Specific features of the Quicksilver Data Protection series and HP Cloud include:

- Global deduplication across sites, a capability unique to Panzura, ensures that if a data block has been stored in the HP Cloud by one Quicksilver controller, it will not be sent to the cloud by any other Quicksilver controller in the global network. This dramatically reduces the amount of HP Cloud storage needed for data protection.
- Large local cache per controller that gives local access to recent backups, allowing for extremely fast recovery of individual files or entire systems.
- Symantec NetBackup and IBM TSM support, with NetBackup OpenStorage (OST)-like ability to track and access all backups from any location.
- Military-grade AES-256-CBC encryption for data at rest in the HP Cloud and TLS v1.2 for data in motion.
- High speed network connectivity and WAN optimization to minimize transmission times and network bandwidth needs.
- 10GbE connectivity and WAN optimization for high-speed throughput to HP Cloud and other sites.
- High speed network connectivity and WAN optimization to minimize transmission times and network bandwidth needs.



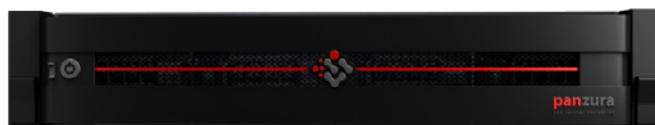
## Example NAS Use Cases:

1. Direct database dumps from an Oracle or SQL database for storage both locally and in the HP Cloud.
2. Backup of VMDK files to ensure recovery of virtual machines in a VMware environment.
3. Full HP Cloud integration for Symantec NetBackup while providing OpenStorage (OST)-like functionality at no extra cost.
4. Rapid DR capability by spinning up a new Quicksilver controller at the same or recovery location and downloading all backup data, metadata, deduplication tables, and snapshots from the HP Cloud, making the recovery controller a near clone of the downed controller.

The Quicksilver Data Protection series is available in a 2U profile and can be configured with all HDDs (for low cost) or mixed SSD/HDD (for extreme performance). For specific information on using Symantec NetBackup with the Panzura Global Cloud Storage System, see the Symantec NetBackup Solution Brief. For general information on the Quicksilver family of cloud storage controllers, see the Quicksilver Datasheet.

## Panzura: Cloud Storage Made Seamless

	Quicksilver DPC 2U
Size	2U
SSD Acceleration	1-24 SSDs
Maximum Local Capacity (Raw)	66 TB
Local Data Protection	RAID-5
Maximum Cloud Capacity	Unlimited
Network Interface	2 x Gigabit Ethernet, optional 2x10-Gigabit Ethernet



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