Overview

HPE Cloud Volumes

HPE Cloud Volumes Block & HPE Cloud Volumes Backup
HPE Cloud Volumes is an enterprise-grade storage, backup and disaster recovery service for running your application; and executing your backup and Disaster Recovery strategy in AWS, Azure and Google Cloud Platform.

HPE Cloud Volumes Block is much more durable than public cloud storage, while also facilitating easy mobility and visibility for Hybrid Cloud and Cloud First strategies. This integrates Hyper Scaler clouds, HPE public cloud solutions and private clouds built on HPE Nimble Storage technology.

This block storage service supports replication from on-prem Nimble appliances using native Nimble Replication, as well as presenting volumes to compute VMs running in AWS, Azure or GCP.

HPE Cloud Volumes Backup supports backing up from on-prem HPE Storage and third-party storage using native deduplication and compression as well as restoring backups to on-prem storage or to HPE Cloud Volumes Block and presenting volumes to compute VMs running in AWS, Azure or GCP.

This backup service is much more cost-effective and flexible compared to backing up into a public cloud storage of the Hyper Scalers. It facilitates flexible Disaster Recovery strategies supporting On-Prem, Private Cloud, Hybrid Cloud and Cloud First strategies.

The Cloud Volumes portfolio offers the right service SLAs and cost to meet a customer's key objective such as:

- Recovery Time Objective: how quickly data to be restored in case of outage.
- Recovery Point Objective: how long data is to be retained for.
- The business case; the balance between performance and storage cost.
- Need for service mobility and future migration strategy such as: from On-Prem to Cloud, Cloud to Hyperscale, Hyperscale to On-Prem or a mixture of these strategy, e.g. a Hybrid Cloud Strategy.

To illustrate the difference in use cases, in the case of immediate access and frequent use, Cloud Volumes Block is the service of choice.
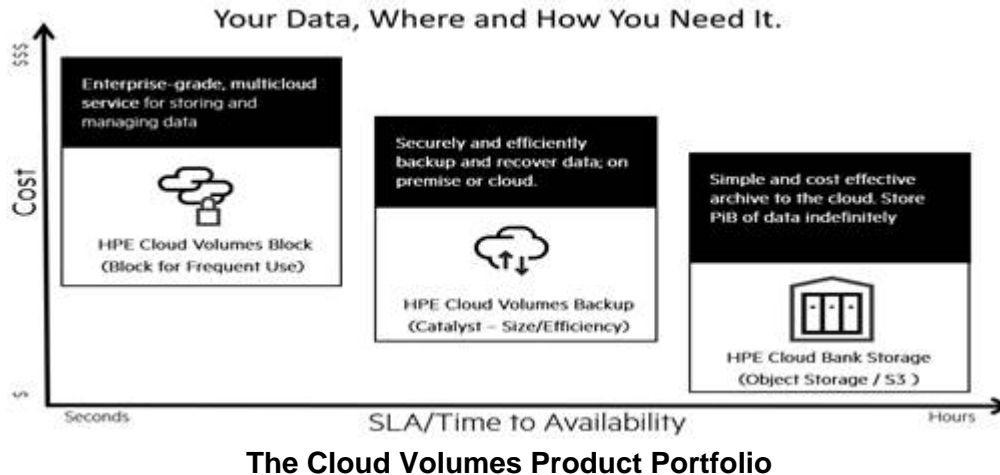
If a longer time to availability is acceptable, with efficient and secure backups being of prime concern, Cloud Volumes Backup should be considered. HPE Cloud Volumes Backup deploys HPE's compression, encryption and deduplication methods, making Backups and restores fast, efficient, flexible and secure, with the added benefit that they can be stored in various places.

HPE Cloud Volumes from Hewlett Packard Enterprise includes 24x7 troubleshooting support.

HPE Cloud Volumes is offered worldwide, with service locations in USA, UK, Ireland, Tokyo, and Japan.

For information on HPE Cloud Volumes from Hewlett Packard Enterprise, please visit
https://www.hpe.com/us/en/storage/cloud-volumes.html

Overview

The Cloud Volumes Product Portfolio

At A Glance

HPE Cloud Volumes Block and HPE Cloud Volumes Backup provides native elastic cloud storage and backup with state-of-the-art capabilities, reliability, and security that is simple as one, two, three. Just log into HPE Cloud Volumes, select "block" or "backup", pick the GB and IOPS you need, and select the AWS, Azure or GCP instances to use if required.

Key features and benefits include for Cloud Volumes Block:

- Enterprise Grade - HPE Cloud Volumes Block is built on HPE Nimble Storage technology, affording a variety of advantages to the storage provided by the Public Cloud, including:

    - Durability - HPE Cloud Volumes Block is millions of times more durable

    - Data Protection and Clones - HPE Nimble Storage technology natively supports protection and clones in a cost effective and performant methodology. Protect data instantly and more often. Pay for changed data, not a full copy. Replicate data from on-premises to the cloud, or back on-premises.

    - Clustering Support - Support for failover clusters between availability zones to assure high availability using HPE Cloud Volumes Block.

    - Set and Forget - Configure your strategy and they will be automatically performed.

    - On-Demand, Flexible Capacity and Performance Management - with the Public Cloud, capacity and performance are linked concepts, so increasing one requires also paying for an increase in the other even if you don't need it. With HPE Cloud Volumes you can manage capacity and performance independently, scaling either up or down on demand and programmatically.

- Easy Mobility - Replication from Nimble on-prem arrays provides an easy Cloud on-ramp for applications. Store data in HPE Cloud Volumes and achieve multi-cloud use cases; present one volume to multiple public VMs across AWS, Azure and GCP without any data migration. No lock-in or egress costs as are the typical public cloud experience.
- Global Visibility - HPE Infosight provides visibility from on-prem data centers to the cloud.   Predictive analytics and usage trending facilitate optimizing data placement and uncovering savings opportunities. Predict and track usage of replication and cloud resources. Pinpoint and resolve issues across the stack.
- Solution-level support - HPE Cloud Volumes provides 24x7 Service included with all services.

Overview

Key features and benefits include for Cloud Volumes Backup:

- Provides highly efficient cloud native backup and recovery for HPE Storage arrays such as HPE Nimble, HPE 3PAR and HPE Primera without the need for a backup application.
- Recover to the Cloud Volumes Block service to power on backups in your cloud provider of choice as required.
- Also works with the leading backup applications such as Commvault and Veeam to protect data on any system to the cloud.
- Powerful source side deduplication, compression and encryption minimize data transmission and storage.
- No egress charges to recover data.

Standard Features

Manageability

All HPE Cloud Volumes services are managed through the HPE Cloud Volumes portal. The portal connects with On-prem Nimble Arrays, provisioning replication stores on the HPE cloud, setting backup, clone and copy policies, creating cloud backups and cloud volumes and setting up linkages with VMs in AWS, Azure and GCP to run against those volumes.

HPE Cloud Volumes may also be managed through a REST API and a Command Line Interface.

Storage Appliance Compatibility

HPE Cloud Volumes Block is currently compatible with replication from on-prem Nimble arrays.
HPE Cloud Volumes Backup is compatible with HPE Nimble, HPE 3PAR, HPE Primera & HPE StoreOnce storage systems and all 3rd party systems via leading backup applications such as Commvault and Veeam.

For detailed support information please consult HPE SPOCK
https://h20272.www2.hpe.com/SPOCK/Pages/spock2Html.aspx?htmlFile=sw_cloud_volume.html

CLI Utilities

Command Line Interface utilities are available for download, for both Linux and Windows.

These CLI utilities are available within the HPE Cloud Volumes portal:
https://cloudvolumes.hpe.com/downloads
Notes: Accessing the downloads requires a login

HPE Web Sites

HPE Cloud Volumes page on HPE.com: **https://www.hpe.com/us/en/storage/cloud-volumes.html**
HPE Cloud Volumes portal: https://www.cloudvolumes.hpe.com

For More Information on HPE Cloud Volumes
Case Studies **- https://www.hpe.com/us/en/storage/cloud-volumes.html#casestudies**

Licensing and Credits

HPE Cloud Volumes and the related storage service is available through a software entitlement accessed by purchasing pre-paid credits. The credits are sold in three tiers which afford increasing amounts of free bonus credits that can be used to consume additional services. In the United States there is also an option to pay-as-you-go with monthly billing via credit card or invoice.
Credits are not service specific and can be used for any current or future HPE Cloud Volumes service.

License Activation and Software Onboarding Instructions

You will receive an email from Hewlett Packard Enterprise with a link for retrieving your entitlement certificate at My License Portal **https://itg.myenterpriselicense.hpe.com/cwp-ui/auth/login**

After you receive your entitlement certificate you will receive an onboarding email inviting you to create your credentials to log into the HPE Cloud Volumes portal and configure your account. You will be the admin user and will be able to configure user roles for any other users in your organization to log in and use the HPE Cloud Volumes portal and associated storage services.

Standard Features

For existing customers purchasing additional SKUs to add credits to their account balance, the above flow through the entitlement certificate will still apply, but there will be no onboarding email. The credits will be applied directly to your HPE Cloud Volumes account.

Service and Support

HPE Cloud Volumes is supported by HPE Nimble Storage's support team.

The support team can assist with issues related to connecting to on-prem hardware, connecting with VMs in the public cloud, or functionality of the HPE Cloud Volumes service itself.

For any support issues or other questions please email **support.cv@hpe.com** or dial your local HPE Nimble support number.

Configuration Information

Startup

HPE Cloud Volumes is accessed through the HPE Cloud Volumes portal, a web application that manages connectivity with on-prem appliances, managing replication stores for replication volumes to the HPE cloud, managing cloud volumes, and managing connections with VMs in the public cloud. The portal provides downloads for a secure connection client as well as command line utilities are available (for Linux and Windows) for users desiring automation**.**

HPE Cloud Volumes SKUs

HPE Cloud Volumes SKUs are pre-paid credits that expire after 13 months. The credits allow for consumption of services offered today or added to the portfolio in the future.
For more information regarding the services on offer please refer to
https://cloudvolumes.hpe.com/welcome/resources/pricing
The credits are sold in three tiers (previously referred to as Gold/Silver/Bronze) which afford increasing amounts of free bonus credits that can be used to consume additional services. The breakout of Regular and Bonus Credits per SKU Tier is as follows:

- Tier 1 - Units of $500 with 15% Bonus Credits ($75) for a total of $575 credits to the customer
- Tier 2 - Units of $5,000 with 20% Bonus Credits ($1,000) for a total of $6,000 credits to the customer
- Tier 3 - Units of $50,000 with 25% Bonus Credits ($12,500) for a total of $62,500 credits to the customer

For example, imagine a customer whose forecasted needs for HPE Cloud Volumes services will require $60,000 for 12 months. If the customer purchases one Tier 3 SKU they will have $62,500 in total credits ($50k paid for, $12.5k free) to consume those services and the credits will be available for 13 total months. Credits can be extended by making any purchase of additional credits in the 13 month window, however bonus credits always expire after 13 months.
Notes: Customers can now access their bonus credits up front, meaning that any fees and charges will be applied towards their bonus credits first, once this amount has been fully extinguished, fees and charges will then be applied against the prepaid amount.

Description	SKU
HPE Cloud Volumes 575 Prepaid Credits E-RTU	R3S74AAE
HPE Cloud Volumes 6000 Prepaid Credits E-RTU	R3S75AAE
HPE Cloud Volumes 62500 Prepaid Credits E-RTU	R3S76AAE

Technical Specifications

HPE Cloud Volumes Limits	
Replication Size Limits	30 TiB (Larger by request)
Cloud Volumes Size Limit	16 TiB (Larger by request)
IOPS Per Volume	20,000 for General Purpose Flash and Premium Flash

Summary of Changes

Date	Version History	Action	Description of Change
04-May-2021	Version 8	Changed	Configuration Information section was updated. Obso SKUs were removed.
06-Apr-2021	Version 7	Changed	Cloud Volumes SKUs updated
01-Feb-2021	Version 6	Changed	Technical Specifications section was updated.
02-Nov-2020	Version 5	Changed	Overview and Configuration Information sections were updated.
06-Jul-2020	Version 4	Changed	Standard Features and Configuration Information sections were updated
04-May-2020	Version 3	Changed	Overview and Standard Features sections were updated
02-Dec-2019	Version 2	Changed	Standard Features and Configuration Information sections were updated.
05-Aug-2019	Version 1	New	New QuickSpecs

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