Cloud-Optimized Backup from Snapshot and Autoscaling in NetBackup 10

Technical Brief

Introduction

Veritas Technologies is a leader in developing data resiliency solutions that focus on protection and management of companies' digital assets. Our flagship product, Veritas NetBackup™, is designed to protect data centers, hybrid-cloud, and multi-cloud environments.

This document describes how the new Backup from Snapshot and Autoscaling capabilities in NetBackup 10 can help you optimize cloud resources, minimize costs, and ensure that your data will be protected wherever it resides.

Backup from Snapshot and Storage Lifecycle Policy

Cloud snapshots provide a great option for fast recovery, with rollback restore and the ability to restore to alternate virtual machines (VMs). However, it can be cost-prohibitive to use snapshots as long-term retention.

By deduplicating and compressing your data and then storing it on a less-expensive storage tier, Veritas can provide storage savings of up to 99 percent when compared to the cost of snapshot storage to Amazon Web Services (AWS) Deep Archive tier, with a 50 percent reduction in data stored (see Figure 1).

Use Case: Long-Term Retention of Point-in-Time Data Copies for Compliance, Discovery, and Litigation Support

In this use case, the cost of snapshot storage is prohibitive. For example, consider the following costs, based on 1 TB of annual storage:

- **Snapshot storage only: $614 per year**
  ($.05 x 1024 GB x 12 months)
- **Backups stored on AWS Archive tier with deduplication: $12 per year**
  ($.001 x 1024 GB x 12 months)

Retention assumptions: Daily snapshots for two weeks, monthly subscription for one year.

- Amazon EBS Snapshots priced at $.05/GB/month
- Deep Archive priced at $.001/GB/month

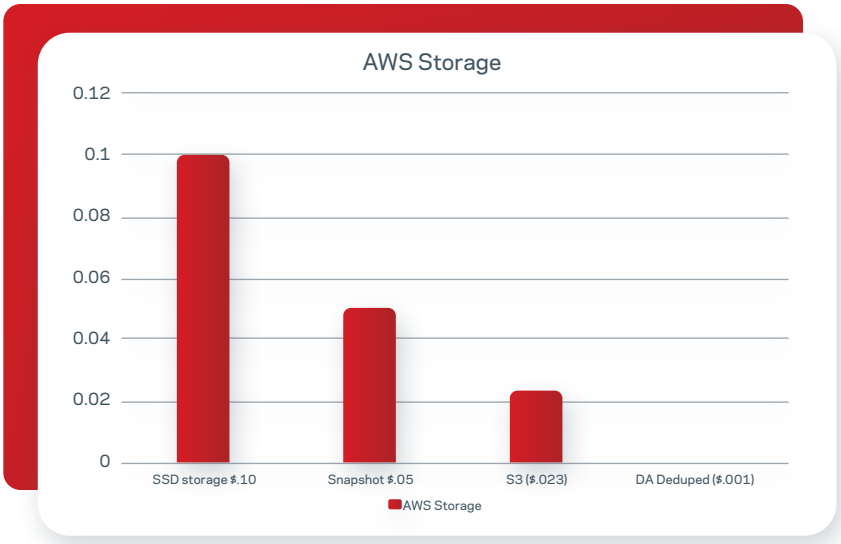

Figure 1. An overview of the cost of AWS SSD, Snapshot, S3, and Long-Term De-Duped storage

lthough every situation is different and may have diverse retention and/or recovery requirements, this example clearly shows that for long-term retention, using the proper storage tier can yield significant cost savings while still minimizing the impact to cloud- based production systems with the new Backup from Snapshot capabilities in NetBackup 10 (see Figure 2).

With Backup from Snapshot, backup administrators can retain all the flexibility of NetBackup in the cloud while minimizing storage costs.

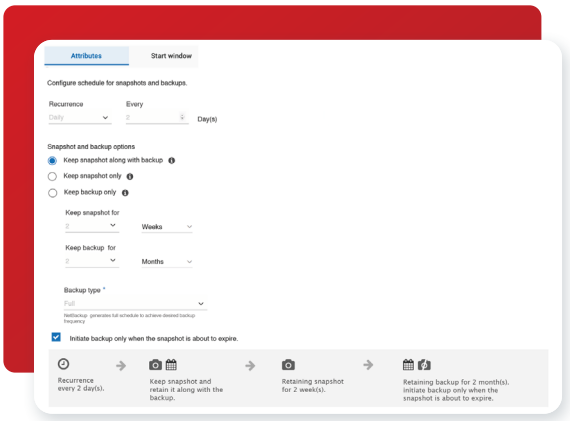

Figure 2. Setting Backup from Snapshot in the NetBackup web UI

Storage Lifecycle Policy

NetBackup has long supported the concept of storage lifecycle management by placing less-accessed data on longer-term storage to assist in long-term retention costs. Adopting a similar approach to cloud, NetBackup supports multiple storage tiers in the cloud, and supports storage lifecycle policy (SLP) management of backup copies going from one tier such as hot to another tier such as Glacier.

Cloud Autoscaling

Poor IT capital utilization was traditionally considered a cost of doing business in the data center; however, this problem has shifted as companies accelerated migration of existing infrastructure and workloads into the cloud. Although IT spending in the cloud is projected to grow, organizations still struggle to accurately forecast their total cloud spend.

Data protection infrastructure is no different, whether on-premises or in today's distributed cloud. If the instance size chosen for protecting cloud resources is large, you waste many computing resources during idle hours, and storage costs cut into the organization's overall budget. Cloud providers also provide various tiers of storage based on the speed and services available for their offering. Snapshots of VM instances cost significantly more than using lower-cost object storage, for example. With NetBackup, you only pay for what you use.

NetBackup Cloud Autoscaling delivers a predictable cost envelope when it comes to cloud data protection. For storage cost optimization, thin NetBackup clients read only the allocated or changed blocks in the snapshot by leveraging incremental snapshots, thereby reducing data center costs. Data is then moved to a supported NetBackup storage unit, which further optimizes data storage with our deduplication engine and the ability to tier that data to any cloud storage. NetBackup 10 provides this functionally today for AWS, Azure, Azure Stack and GCP using NetBackup CloudPoint Extension.

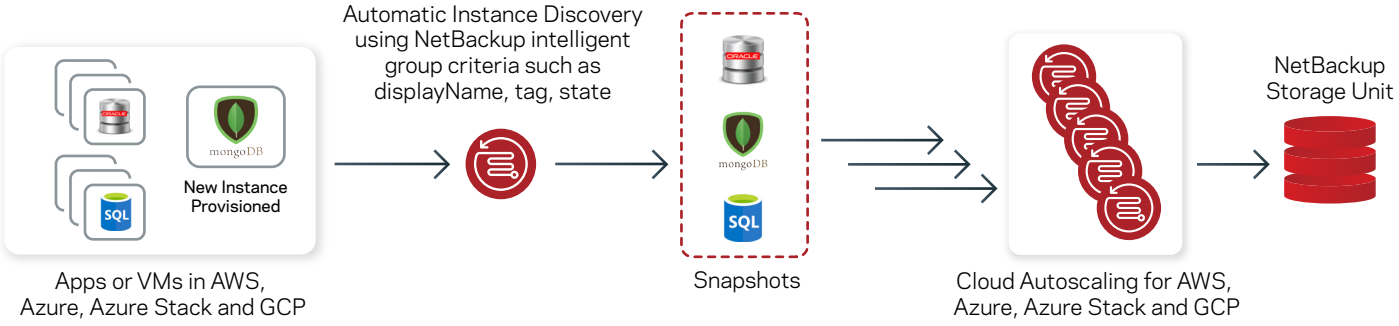

Figure 3. An example of NetBackup's Cloud Autoscaling for AWS, Azure, Azure Stack or GCP.

Figure 3 depicts adding automatically discovered cloud assets to an intelligent group based on resource attributes or tag criteria, snapshot indexing using the NetBackup Autoscaling client, and finally storing the data in any configured NetBackup storage.

For compute optimization, the NetBackup thin client is implemented using an Azure, AWS or GCP Kubernetes (K8s) cluster where the node pool Scale Method is set to Autoscale. The administrator can define the maximum node count and node size for each node in the pool. This process helps with establishing a predictable cost for compute resources in the cloud. Using a cost-conscious approach ensures additional nodes are spun up only after the K8s cluster has determined that the current node's capacity has been reached. Once the jobs are done or the backup window completes, the nodes are powered off and removed (nodepool shrunk) to keep the idle running cost at a minimum.

For Azure Stack Hub, an on-premises host or VM compatible with NetBackup CloudPoint instance is sufficient for the thin client containers. In this scenario, additional thin clients can be launched on another host VM to extend the compute infrastructure to run data protection jobs to complete the data protection workflow.

Summary

Veritas NetBackup is not only your trusted on-premises backup suite, but also your one-stop choice to back up all your cloud resources, with simple tools that accomplish complex tasks. NetBackup and CloudPoint enterprise tools make protecting your data easier, while lowering long-term storage costs.

NetBackup has comprehensive and integrated solutions to ensure safe backup and recovery, no matter where your data resides. For more information about NetBackup, visit http://www.veritas.com/netbackup.

VERITAS

2625 Augustine Drive
Santa Clara, CA 95054
+1 (866) 837 4827
veritas.com

For global contact information visit:
veritas.com/company/contact

V1510 09/22