VERITAS | NUTANIX

Protecting Nutanix Hyperconverged Virtual Infrastructure with Veritas NetBackup

The Global Hyperconverged Infrastructure (HCI) market accounted for approximately $1.460 billion in 2016, according to Stratistics MRC, and is expected to reach $17.03 billion by 2023. The continual growth of data increases the use of virtualization and drives the need for highly scalable data protection and disaster recovery solutions. As a result, organizations turn to hyperconverged solutions to simplify the deployment and management of their infrastructure by managing the entire stack in a single system.

The Veritas NetBackup 8.2 Acropolis Hypervisor (AHV) plug-in delivers a seamless and streamlined approach to protecting Nutanix scale-out hyperconverged platform with the new hypervisor policy. The feature highlights of the NetBackup 8.2 AHV plug-in for the protection of virtual machines (VMs) include:

- **Agentless backup and recovery**— An agent is not required to be installed on the guest operating system to conduct backups of VMs.

- **Rapid VM backups**—Support for NetBackup Accelerator allows for faster VM backups by using Nutanix RESTful change block APIs to only back up the blocks that have changed since the previous backup.

- **Flexible deployment**— The AHV plug-in can be installed on Linux (RHEL and SUSE) platforms, NetBackup appliances, a NetBackup virtual appliance and a Flex appliance.

- **Optimized storage backups**—Only data blocks that are being used by VMs are included in the backup. Any blocks unallocated or not used are not backed up. Also, NetBackup deduplication technology can be employed to provide better storage efficiency.

- **Guided recovery and pre-recovery checks**—The user experience is enhanced with assisted recovery of VMs and extra checks using the NetBackup Administration console.

- **Certified**—The Veritas NetBackup 8.2 AHV plug-in has been certified under the Nutanix Ready Program.

Nutanix can run several other hypervisors such as VMware® ESXi and Microsoft® Hyper-V. NetBackup also includes support to protect these environments within the Nutanix platform. For more details, refer to the Veritas NetBackup for VMware Administrator's Guide and the Veritas NetBackup for Hyper-V Administrator's Guide.

HOW DOES VERITAS PROTECT NUTANIX VIRTUAL INFRASTRUCTURE?

NetBackup 8.2 provides a plug-in to support the protection of the Nutanix AHV virtual infrastructure. The plug-in transparently implements Nutanix RESTful APIs such as discovery of VMs, creation and deletion of VM snapshots, change block tracking and other operations to back up and recover the VMs on Nutanix AHV. You download the NetBackup 8.2 AHV plug-in as a package and install it on a backup host that can be a NetBackup Appliance/VM, a Flex Appliance and/or a Linux platform acting as a NetBackup media, master or client. The purpose of the backup host is to read and write the backup data in addition to managing the NetBackup storage media. Nutanix is a scale-out platform and thus additional backup hosts can be deployed to support this expandable architecture.
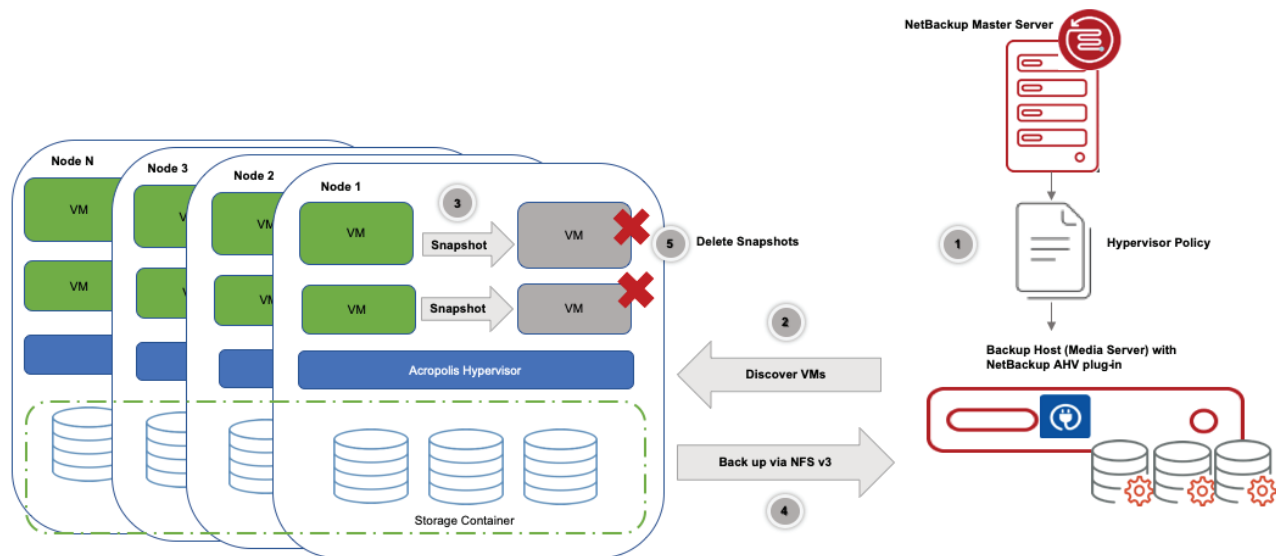
Figure 1. Example backup of VMs within a Nutanix cluster using the NetBackup AHV plug-in.

Figure 1 illustrates how the NetBackup AHV plug-in for Nutanix works when backing up VMs. Assuming the backup host is a media server, the flow of the backup when using the plug-in is as follows:

1. Define a hypervisor policy in the NetBackup master server indicating the virtual machine(s) to back up, the schedule, the Nutanix cluster, the target storage unit and the backup host.

2. Discover the VMs specified in the policy on the Nutanix cluster.

3. Create snapshots on the Nutanix cluster for each discovered VM.

4. Mount the storage container(s) where the snapshot(s) resides using the NFS v3 protocol on the backup host and conduct the backup(s).

5. After the backup completes, delete the snapshots and unmount the storage container from the backup host.

NOTE: With NetBackup Accelerator, the previous Nutanix snapshot is preserved to use the Nutanix change block tracking API. Once the backup is complete, the previous snapshot is deleted.

As shown in Figure 2, a sample recovery flow of a Nutanix VM involves:

1. Using the NetBackup graphical user interface (GUI), you specify the VM to recover and locate it in the NetBackup catalog where it will return a list of backups of the VM based on point in time. You will be guided to specify certain options to restore the VM such as location (original or alternate storage container or cluster), create a new VM ID, retain or remove the network interfaces, change the VM name and power on.

2. With the information provided in Step 1, NetBackup conducts pre-recovery checks that include checking space availability on the Nutanix storage container, naming conflicts and other things based on the options you specified for recovering the VM.

3. Once the pre-recovery checks succeed, a recovery is triggered on the backup host.

4. The backup host NFS mounts the specified Nutanix storage container and then restores the backup onto the storage container mounted.

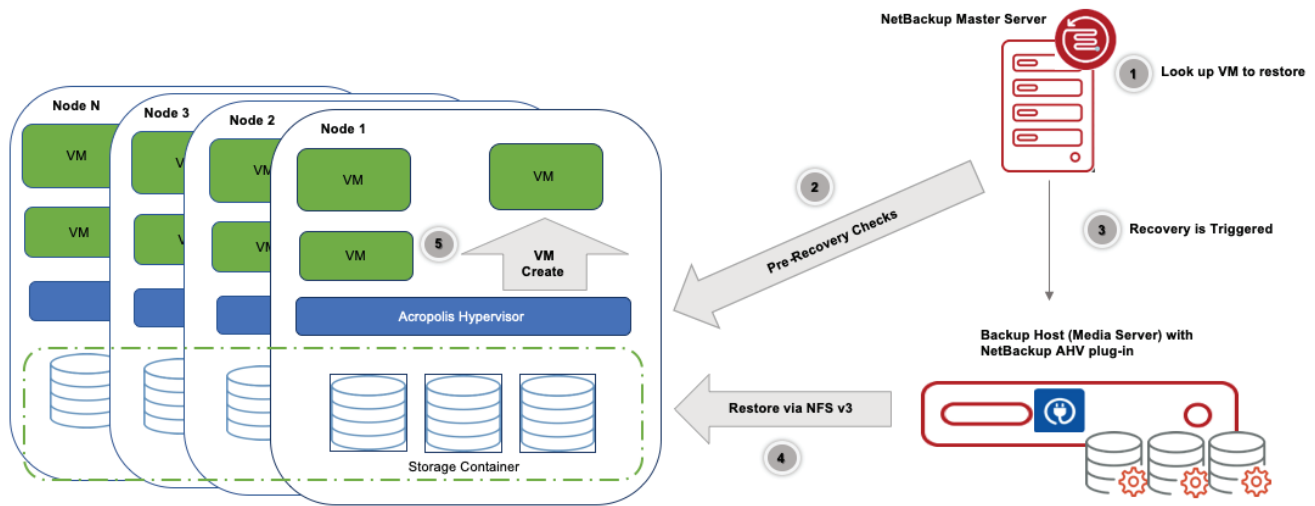5. The VM is created on the Nutanix cluster based on the options entered in Step 1.

Figure 2. Example recovery of a Nutanix VM using the NetBackup AHV plug-in.

REFERENCES

Veritas NetBackup for Nutanix Acropolis Hypervisor (AHV) Administrators Guide

- https://www.veritas.com/content/support/en_US/doc/127664414-138646136-0/v127698721-138646136

Veritas and Nutanix Strategic Alliance Pages

- https://www.veritas.com/partners/nutanix
- https://www.nutanix.com/partners/technology-alliances/veritas

ABOUT NUTANIX

Nutanix enables IT teams to build and operate powerful multi-cloud architectures. Our Enterprise Cloud OS software melds private, public and distributed cloud operating environments and provides a single point of control to manage IT infrastructure and applications at any scale. Nutanix solutions are 100% software-based, and are built on the industry's most popular hyperconverged infrastructure (HCI) technology, delivering a full infrastructure stack that integrates compute, virtualization, storage, networking and security to power any application, at any scale. Nutanix Enterprise Cloud OS delivers the simplicity and agility of popular public cloud services, but with the security and control that you need in a private cloud. Learn more at https://www.nutanix.com/partners/technology-alliance-program/veritas/ or on Twitter at @Nutanix.

ABOUT VERITAS

Veritas Technologies is a global leader in data protection and availability. Over 50,000 enterprises—including 99 of the Fortune 100—rely on us to abstract IT complexity and simplify data management. Veritas Enterprise Data Services Platform automates the protection and orchestrates the recovery of data everywhere it lives, ensures 24/7 availability of business-critical applications, and provides enterprises with the insights they need to comply with evolving data regulations. With a reputation for reliability at scale and a deployment model to fit any need, Veritas supports more than 500 data sources and over 150 storage targets, including 60 clouds. Learn more at www.veritas.com. Follow us on Twitter at @veritastechllc.

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