SGI NAS
Virtual Machine DataCenter Plug-in (VMDC)

Setting Storage Policies for Virtual Environments

About VMDC SGI NAS

The rise of server virtualization has provided greater impetus to deduplication since virtual machines, and their associated storage, can consume a significant amount of high performance, expensive primary storage.

Before SGI NAS, deduplication technology has been available only at a high price from vendors who have built proprietary, siloed solutions that impact only secondary data—either disk-based backup and replication or archiving and compliance. As a result, an organization can have multiple deduplication approaches—and data stores—that do not work with each other, thereby dramatically increasing costs.

Features

The SGI NAS Virtual Machine DataCenter (VMDC) Plug-in SGI NAS dramatically simplifies the experience of storage for system administrators in setting storage policies for virtual environments and in performing common tasks, such as stopping and starting VMs and performing template-based clones.

VMDC SGI NAS highlights include:

- Easy Installation: Using standard system utilities, installation is easy.
- DataCenter: A UI that discovers all ESX or Xen servers, as well as Hyper-V and all other VMs on the servers. Manages all aspects of all virtual servers from one location.
- Replication Policies: User establishment of replication policies for each VM, including common tasks such as stopping and starting VMs. VMDC also supports storage migration and migration of VMs.
- Lightning Fast Cloning: Clones VMs in 90% less time while consuming 80-90% less storage space. Brings out the full power of VMDC by pairing SGI NAS with SSDs to access and clone data even faster.
- Capacity Utilization: Utilizing ZFS technology, SGI NAS supports inline deduplication and thin provisioning, which leverages SSDs, making SGI NAS great for the random I/O of virtualized environments.
- Flexibility: SGI NAS is optimized to work with VMware and Xen servers, but also performs well in a variety of other virtualized environments.

Benefits

SGI NAS includes support for Microsoft Hyper-V, making it the only storage solution to support all major virtualization environments.

With this new support for Microsoft Hyper-V, SGI NAS is the only product to support VMware, Citrix Xen, and Hyper-V virtualization platforms from a single point within one unified environment—VMDC.

VMDC allows storage administrators to see the entire virtual environment and to provision storage and storage policies, including back-up, replication, and retention policies from a simple point-and-click UI.

Both SGI NAS and VMDC run on industry-standard hardware, a fundamental pillar of OpenStorage, thereby driving acquisition and upgrade costs dramatically lower than those of proprietary solutions.

Further, by making storage and virtualization management more efficient, operational costs drop dramatically.

Comparing VMDC Compatibility

VDMC Features	VMware ESX	Citrix XEN	Microsoft Hyper-V
Virtual machine cloning / templating	• Included	• Included	• Included
Virtual machine multi-cloning	• Included	• Included	• Included
Native VMotion capability (operation on a live VM)	• Included	• Included	• N/A
Creating new Virtual Machine from scratch	• Included	• Included	• N/A
NFS data storage	• Included	• Included	• N/A
iSCSI data storage	• Included	• Included	• Included
Integration with SGI NAS auto-services: Auto-Snap, Auto-Tier, and Auto-Sync	• Included	• Included	• Included
VM(s) relocation between SGI NAS	• Included	• N/A	• N/A
Fibre Channel support	• Included	• N/A	• Included

SGI NAS VMDC Plug-in

Additional functionality for the SGI NAS VMDC Plug-in:

- Fully integrates into the SGI NAS appliance to provide a UI for tasks such as mapping LUNs to ZVOLs.
- Exposes one or more ZVOLs as LUNs over a Fibre Channel SAN.
- Multiple FC targets created, independent of the number of LUNs being exposed through those targets.
- Mappings created so that specific sets of FC initiators see specific iFC LUNs through a specific set of FC targets, as opposed to all the FC initiators being able to access all the FC LUNs.
- Use of CHAP or Radius authentication for initiators. Use iSNS for device discovery.

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