NETAPP SNAPCENTER

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Simple, performant, empowering: enterprise data protection and clone management for ONTAP

The Challenge

Data protection at scale

Protecting data is one of the top concerns of any IT manager. As applications proliferate and the organization grows, managing a diverse IT environment can be a real challenge. This challenge is especially evident for organizations that have application, database, and backup specialists who are required to back up their data but might not be responsible for the storage infrastructure.

For organizations with IT specialists, it is critical to create an environment that allows each function to operate independently and according to its own application workflow. At the same time, these specialists must retain some level of infrastructure control and integrity. It is not easy to achieve this balance with traditional tools and technologies. IT specialists want to have "self-service" autonomy, but they might not have in-depth knowledge of storage systems and backup software. And storage infrastructure administrators

want to offload typical data protection tasks to application owners without sacrificing the ability to oversee and regulate activity on the storage systems.

Traditional backup and restore technologies based on streaming data protection devices, such as tape or streaming disk devices that emulate tape, don't use storage-based snapshot technology. As a result, these technologies can be very slow in responding and are resource-intensive. Ingesting large amounts of data is one strength of these devices, but trying to restore or retrieve data is complicated and can take a significant amount of time. As the size of applications and the number of applications increase, complexity goes up significantly because each application can have a different administrator with different needs requiring different schedules and policies. How do you easily manage backups across disparate applications and infrastructures, with delegated management to application or database owners, without sacrificing control or oversight and do it at scale?

The Solution Enterprise-ready, easy-to-use data protection

NetApp® SnapCenter® software is simple, unified platform for application-consistent data protection and clone management. This software simplifies backup, restore, and clone lifecycle management with application-integrated workflows. Leveraging storage-based data management, SnapCenter enables increased performance and availability and reduced testing and develop- ment times.

Simple

NetApp SnapCenter includes both the SnapCenter Server and individual lightweight application, database, and operating system plug-ins that are all controlled from a central management console. The management console delivers a consistent user experience across all applications or databases. It incorporates an intuitive GUI with visual representations of data copies across the Data Fabric to support critical functions. These functions include job monitoring, event notification, logging, dashboard, reporting, scheduling, and policy management for all application or database plug-ins.

SnapCenter Server also includes Snapshot™ catalog management to facilitate easy rollback to point-in-time copies. SnapCenter Server checks application, database, and OS interoperability and then nondis-ruptively installs and upgrades software plug-ins on application and database hosts. Those plug-ins can then be managed from the central management console.

In addition, SnapCenter Server enables custom scripts to be executed either before or after common operations such as backup, cloning, and restore by using Perl, Python, PowerShell and REST APIs Customers who use NetApp SnapManager® products have an intuitive migration mechanism to move to NetApp SnapCenter.

High Performance

SnapCenter is designed to deliver high performance backup and recovery for database and application workloads hosted on ONTAP storage. Backup and restore performance is largely due to onboard capabilities of NetApp ONTAP storage-based Snapshot technology. Offloading this functionality not only simplifies operation, but also offloads Snapshot functions from the host.

By leveraging the embedded functionality of NetApp ONTAP® storage software to perform space-efficient NetApp FlexClone® management, NetApp SnapCenter also enables greater agility by increasing the performance of testing and development. Application and database administrators can initiate FlexClone volumes independent of storage administrators through the same GUI console to support highly iterative test and development workflows. The self-service feature of space-efficient cloning reduces testing and development time and puts more capability into the hands of application owners.

KEY BENEFITS

- Simplifies backup, restore, and clone management with application- integrated workflows and predefined policies.

- Simplifies VMware backup and recovery with new Linux-based SnapCenter Plug-in for VMWare vSphere

- Increases performance and availability and reduces testing and development time with storage-based data management.

- Offers role-based access control (RBAC) to give application administrators self- service capability While providing centralized oversight.

- Provides intuitive GUI with centralized management to simplify the user experience across all supported application environments.

- Added and enhanced plug-ins offer richer functionality across a broad set of applications.

Empowering

IT organizations face the challenge of providing self-service capabilities for individual administrators while also retaining oversight and control of the storage infrastructure by the storage administrator. SnapCenter uses RBAC to delegate functionality to application and database owners while retaining oversight and control by a central storage infrastructure administrator. This level of control and security frees storage administrators from tedious tasks that application and database owners can do for themselves. At the same time, such control protects the overall infrastructure from abuse from even colleagues with the best intentions.

Administrators can use SnapCenter plug-ins for applications such as SAP HANA and for databases so that the application or database is consistent at all levels, which promotes maximum recoverability. Plug-ins for SnapCenter enable a variety of restore capabilities. Plug-ins can roll forward logs and enable application or database administrators to clone or recover to the latest information available or to a specific point in time. Available plug-in enhancements include simplified data protection for virtualized databases; support for Microsoft SQL Server Stretch Database; Oracle RMAN cataloging; and Microsoft Windows host file systems backup, restore, and cloning. SnapCenter also enables end users to create plug-ins for custom applications. SnapCenter leverages NetApp storage-based backup and replication functions, such as with NetApp SnapVault® and SnapMirror® technology. All SnapCenter plug-ins can perform cloning and restore operations from both primary and secondary locations.

SnapCenter software is...
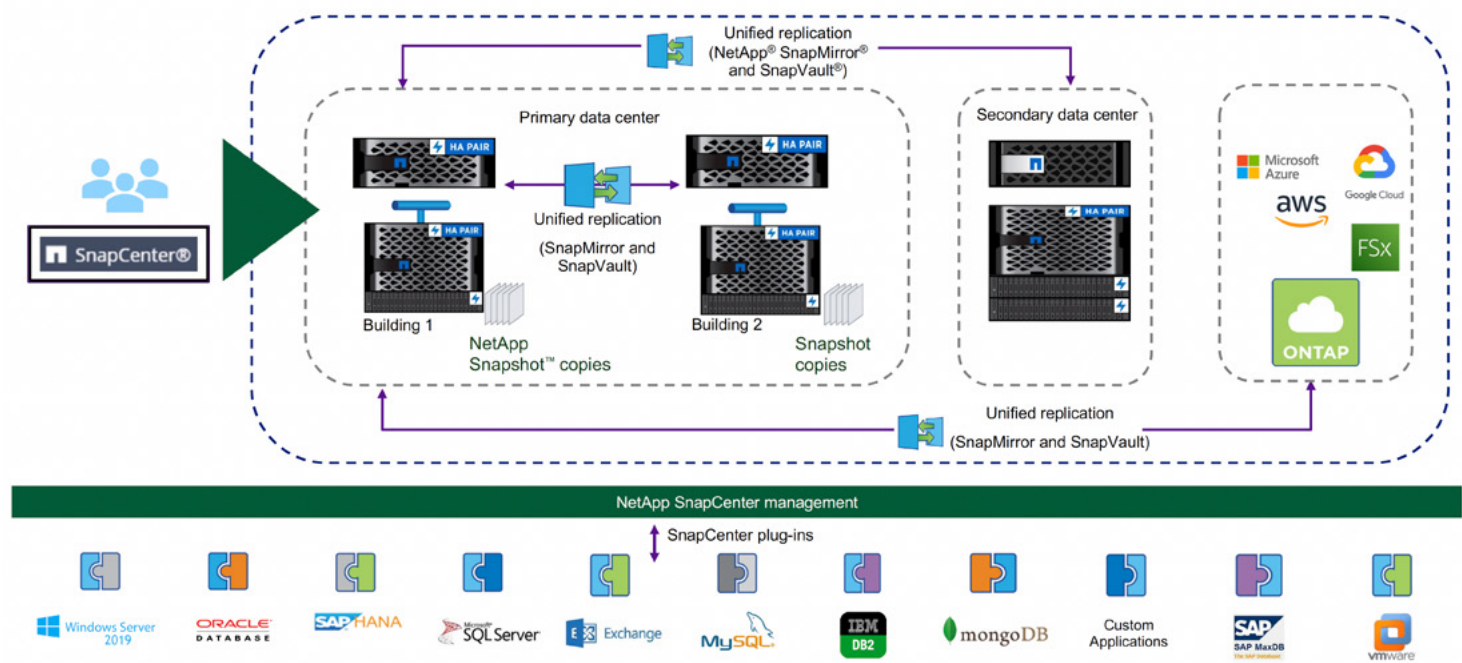End-to-end protection and copy management for data anywhere in the data fabric powered by NetApp

Figure 1) SnapCenter supports a variety of applications and protocols. Consult the NetApp Interoperability Matrix Tool (IMT) for details.

Conclusion

NetApp SnapCenter software is an easy-to-use enterprise platform to securely coordinate and manage data protection across applications, databases, and file systems. SnapCenter tightly integrates with your enterprise applications, providing application- and database-specific workflows. SnapCenter delivers the control and choice needed to enable application and database owners to manage their own environment through RBAC while preserving the integrity of the storage environment. Designed with simplicity in mind for both enterprise and mid-size businesses, SnapCenter can accelerate application and database development, preserve data integrity, and simplify management of traditional complex backup and restore processes.

Supported platforms	
Application/ database support**	Microsoft Exchange Server; Microsoft SQL Server (physical/virtual) Microsoft Windows host file system (physical/virtual) SAP HANA (physical/virtual) Oracle Database on Linux/ AIX (physical/virtual); Linux file system VMware virtual machines and datastores User-defined custom plug-ins
NetApp storage*	NetApp AFF, FAS, ONTAP® Select, Cloud Volume ONTAP, AWS FSx for NetApp ONTAP, Azure NetApp Files
NetApp SnapCenter Server OS support*	Microsoft Windows Server 2012, 2012 R2, 2016 and 2019 (physical/virtual)
Protocols	FC, FCoE, iSCSI, NFS, dNFS

* Consult Interoperability Matrix Tool (IMT) for supported software versions.

**Additional application and database plug-ins are available on the NetApp Automation Store.

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