SnapCenter role-based access control (RBAC)

SnapCenter Software 4.7

NetApp
November 16, 2022

Table of Contents

SnapCenter role-based access control (RBAC)

Types of RBAC

SnapCenter role-based access control (RBAC) and ONTAP permissions enable SnapCenter administrators to delegate control of SnapCenter resources to different users or groups of users. This centrally managed access empowers application administrators to work securely within delegated environments.

You can create and modify roles, and add resource access to users at any time, but when you are setting up SnapCenter for the first time, you should at least add Active Directory users or group to roles, and then add resource access to those users or groups.

> You cannot use SnapCenter to create user or group accounts. You should create user or group accounts in Active Directory of the operating system or database.

SnapCenter uses the following types of role-based access control:

- SnapCenter RBAC
- SnapCenter plug-in RBAC (for some plug-ins)
- Application-level RBAC
- ONTAP permissions

SnapCenter RBAC

Roles and permissions

SnapCenter ships with predefined roles with permissions already assigned. You can assign users or groups of users to these roles. You can also create new roles and manage permissions and users.

Assigning permissions to users or groups

You can assign permissions to users or groups to access SnapCenter objects such as hosts, storage connections, and resource groups. You cannot change the permissions of the SnapCenterAdmin role.

You can assign RBAC permissions to users and groups within the same forest and to users belonging to different forests. You cannot assign RBAC permissions to users belonging to nested groups across forests.

> If you create a custom role, it must contain all of the permissions of the SnapCenter Admin role. If you only copy some of the permissions, for example, Host add or Host remove, you cannot perform those operations.

Authentication

Users are required to provide authentication during login, through the graphical user interface (GUI) or using PowerShell cmdlets. If users are members of more than one role, after entering login credentials, they are prompted to specify the role they want to use. Users are also required to provide authentication to run the APIs.

Application-level RBAC

SnapCenter uses credentials to verify that authorized SnapCenter users also have application-level permissions.

For example, if you want to perform Snapshot copy and data protection operations in a SQL Server environment, you must set credentials with the proper Windows or SQL credentials. The SnapCenter Server authenticates the credentials set using either method. If you want to perform Snapshot copy and data protection operations in a Windows file system environment on ONTAP storage, the SnapCenter admin role must have admin privileges on the Windows host.

Similarly, if you want to perform data protection operations on an Oracle database and if the operating system (OS) authentication is disabled in the database host, you must set credentials with the Oracle database or Oracle ASM credentials. The SnapCenter Server authenticates the credentials set using one of these methods depending on the operation.

SnapCenter Plug-in for VMware vSphere RBAC

If you are using the SnapCenter VMware plug-in for VM-consistent data protection, the vCenter Server provides an additional level of RBAC. The SnapCenter VMware plug-in supports both vCenter Server RBAC and Data ONTAP RBAC.

For information, see SnapCenter Plug-in for VMware vSphere RBAC

ONTAP permissions

You should create vsadmin account with required permissions to access the storage system.

For information to create the account and assign permissions, see Create an ONTAP cluster role with minimum privileges

RBAC permissions and roles

SnapCenter role-based access control (RBAC) enables you to create roles and assign permissions to those roles, and then assign users or groups of users to the roles. This enables SnapCenter administrators to create a centrally managed environment, while application administrators can manage data protection jobs. SnapCenter ships with some predefined roles and permissions.

SnapCenter roles

SnapCenter ships with the following predefined roles. You can either assign users and groups to these roles or create new roles.

When you assign a role to a user, only jobs that are relevant to that user are visible in the Jobs page unless you assigned the SnapCenter Admin role.

- App Backup and Clone Admin
- Backup and Clone Viewer
- Infrastructure Admin
- SnapCenterAdmin

SnapCenter Plug-in for VMware vSphere roles

For managing VM-consistent data protection of VMs, VMDKs, and datastores, the following roles are created in vCenter by the SnapCenter Plug-in for VMware vSphere:

- SCV Administrator
- SCV View
- SCV Backup
- SCV Restore
- SCV Guest File Restore

For more information, see Types of RBAC for SnapCenter Plug-in for VMware vSphere users

Best Practice: NetApp recommends that you create one ONTAP role for SnapCenter Plug-in for VMware vSphere operations and assign it all the required privileges.

SnapCenter permissions

SnapCenter provides the following permissions:

- Resource Group
- Policy
- Backup
- Host
- Storage Connection
- Clone
- Provision (only for Microsoft SQL database)
- Dashboard
- Reports
- Restore
  - Full Volume Restore (only for Custom Plug-ins)
- Resource

  Plug-in privileges are required from the administrator for non-administrators to perform resource discovery operation.

- Plug-in Install or Uninstall

  When you enable Plug-in Installation permissions, you must also modify the Host permission to enable reads and updates.

- Migration
- Mount (only for Oracle database)
- Unmount (only for Oracle database)
- Job Monitor

Job Monitor permission enables members of different roles to see the operations on all the objects to which they are assigned.

Pre-defined SnapCenter roles and permissions

SnapCenter ships with pre-defined roles, each with a set of permissions already enabled. When setting up and administering role-based access control (RBAC), you can either use these pre-defined roles or create new ones.

SnapCenter includes the following pre-defined roles:

- SnapCenter Admin role
- App Backup and Clone Admin role
- Backup and Clone Viewer role
- Infrastructure Admin role

When you add a user to a role, you must assign either the StorageConnection permission to enable storage virtual machine (SVM) communication, or assign an SVM to the user to enable permission to use the SVM. The Storage Connection permission enables users to create SVM connections.

For example, a user with the SnapCenter Admin role can create SVM connections and assign them to a user with the App Backup and Clone Admin role, which by default does not have permission to create or edit SVM connections. Without an SVM connection, users cannot complete any backup, clone, or restore operations.

SnapCenter Admin role

The SnapCenter Admin role has all permissions enabled. You cannot modify the permissions for this role. You can add users and groups to the role or remove them.

App Backup and Clone Admin role

The App Backup and Clone Admin role has the permissions required to perform administrative actions for application backups and clone-related tasks. This role does not have permissions for host management, provisioning, storage connection management, or remote installation.

Permissions	Enabled	Create	Read	Update	Delete
Resource Group	Not applicable	Yes	Yes	Yes	Yes
Policy	Not applicable	Yes	Yes	Yes	Yes
Backup	Not applicable	Yes	Yes	Yes	Yes
Host	Not applicable	Yes	Yes	Yes	Yes
Storage Connection	Not applicable	No	Yes	No	No

Permissions	Enabled	Create	Read	Update	Delete
Clone	Not applicable	Yes	Yes	Yes	Yes
Provision	Not applicable	No	Yes	No	No
Dashboard	Yes	Not applicable	Not applicable	Not applicable	Not applicable
Reports	Yes	Not applicable	Not applicable	Not applicable	Not applicable
Restore	Yes	Not applicable	Not applicable	Not applicable	Not applicable
Resource	Yes	Yes	Yes	Yes	Yes
Plug-in Install/Uninstall	No	Not applicable		Not applicable	Not applicable
Migration	No	Not applicable	Not applicable	Not applicable	Not applicable
Mount	Yes	Yes	Not applicable	Not applicable	Not applicable
Unmount	Yes	Yes	Not applicable	Not applicable	Not applicable
Full Volume Restore	No	No	Not applicable	Not applicable	Not applicable
Job Monitor	Yes	Not applicable	Not applicable	Not applicable	Not applicable

Backup and Clone Viewer role

The Backup and Clone Viewer role has read-only view of all permissions. This role also has permissions enabled for discovery, reporting, and access to the Dashboard.

Permissions	Enabled	Create	Read	Update	Delete
Resource Group	Not applicable	No	Yes	No	No
Policy	Not applicable	No	Yes	No	No
Backup	Not applicable	No	Yes	No	No
Host	Not applicable	No	Yes	No	No
Storage Connection	Not applicable	No	Yes	No	No

Permissions	Enabled	Create	Read	Update	Delete
Clone	Not applicable	No	Yes	No	No
Provision	Not applicable	No	Yes	No	No
Dashboard	Yes	Not applicable	Not applicable	Not applicable	Not applicable
Reports	Yes	Not applicable	Not applicable	Not applicable	Not applicable
Restore	No	No	Not applicable	Not applicable	Not applicable
Resource	No	No	Yes	Yes	No
Plug-in Install/Uninstall	No	Not applicable	Not applicable	Not applicable	Not applicable
Migration	No	Not applicable	Not applicable	Not applicable	Not applicable
Mount	Yes	Not applicable	Not applicable	Not applicable	Not applicable
Unmount	Yes	Not applicable	Not applicable	Not applicable	Not applicable
Full Volume Restore	No	Not applicable	Not applicable	Not applicable	Not applicable
Job Monitor	Yes	Not applicable	Not applicable	Not applicable	Not applicable

Infrastructure Admin role

The Infrastructure Admin role has permissions enabled for host management, storage management, provisioning, resource groups, remote installation reports, and access to the Dashboard.

Permissions	Enabled	Create	Read	Update	Delete
Resource Group	Not applicable	Yes	Yes	Yes	Yes
Policy	Not applicable	No	Yes	Yes	Yes
Backup	Not applicable	Yes	Yes	Yes	Yes
Host	Not applicable	Yes	Yes	Yes	Yes
Storage Connection	Not applicable	Yes	Yes	Yes	Yes

Permissions	Enabled	Create	Read	Update	Delete
Clone	Not applicable	No	Yes	No	No
Provision	Not applicable	Yes	Yes	Yes	Yes
Dashboard	Yes	Not applicable	Not applicable	Not applicable	Not applicable
Reports	Yes	Not applicable	Not applicable	Not applicable	Not applicable
Restore	Yes	Not applicable	Not applicable	Not applicable	Not applicable
Resource	Yes	Yes	Yes	Yes	Yes
Plug-in Install/Uninstall	Yes	Not applicable	Not applicable	Not applicable	Not applicable
Migration	No	Not applicable	Not applicable	Not applicable	Not applicable
Mount	No	Not applicable	Not applicable	Not applicable	Not applicable
Unmount	No	Not applicable	Not applicable	Not applicable	Not applicable
Full Volume Restore	No	No	Not applicable	Not applicable	Not applicable
Job Monitor	Yes	Not applicable	Not applicable	Not applicable	Not applicable

Copyright information

Trademark information