



Secure client access with Kerberos

ONTAP System Manager

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November 04, 2020

This PDF was generated from https://docs.netapp.com/us-en/ontap/task_nas_secure_client_access_with_kerberos.html on December 04, 2020. Always check docs.netapp.com for the latest.



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Enable Kerberos to secure storage access for NAS clients.

This procedure configures Kerberos on an existing storage VM enabled for [NFS](#) or [SMB](#).

Before beginning you should have configured DNS, NTP, and [LDAP](#) on the storage system.



Steps

1. At the ONTAP command line, set UNIX permissions for the storage VM root volume.
 - a. Display the relevant permissions on the storage VM root volume: `volume show -volume root_vol_name-fields user,group,unix-permissions`

The root volume of the storage VM must have the following configuration:

| Name... | Setting... |
|------------------|--------------|
| UID | root or ID 0 |
| GID | root or ID 0 |
| UNIX permissions | 755 |

- b. If these values are not shown, use the `volume modify` command to update them.
2. Set user permissions for the storage VM root volume.
 - a. Display the local UNIX users: `vserver services name-service unix-user show -vserver vserver_name`

The storage VM should have the following UNIX users configured:


| User name | User ID | Primary group ID |
|-----------|---------|------------------|
| nfs | 500 | 0 |
| root | 0 | 0 |

Note: The NFS user is not required if a Kerberos-UNIX name mapping exists for the SPN of the NFS client user; see step 5.


- b. If these values are not shown, use the `vserver services name-service unix-user modify` command to update them.
3. Set group permissions for the storage VM root volume.
 - a. Display the local UNIX groups: `vserver services name-service unix-group show -vserver vserver_name`

The storage VM should have the following UNIX groups configured:

| Group name | Group ID |
|------------|----------|
| daemon | 1 |
| root | 0 |

- b. If these values are not shown, use the `vserver services name-service unix-group modify` command to update them.
4. Switch to System Manager to configure Kerberos
5. In ONTAP System Manager, click **Storage > Storage VMs** and select the storage VM.
6. Click **Settings**.
7. Click  under Kerberos.
8. Click **Add** under Kerberos Realm, and complete the following sections:
 - Add Kerberos Realm

Enter configuration details depending on KDC vendor.
 - Add Network Interface to Realm

Click **Add** and select a network interface.
9. If desired, add mappings from Kerberos principal names to local user names.
 - a. Click **Storage > Storage VMs** and select the storage VM.
 - b. Click **Settings**, and then click  under **Name Mapping**.
 - c. Under **Kerberos to UNIX**, add patterns and replacements using regular expressions.

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