



# Secure client access with Kerberos

## ONTAP System Manager

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# Secure client access with Kerberos

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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