Tiger SPACES

Tiger Spaces: Guidelines for Creating Network Shares and Dedicated Account

This document provides sample steps for creating a SMB/NFS share compatible with Tiger Spaces on a Windows computer and on Qumulo's Qumulo Core and EMC's Isilon NAS appliances (the procedures in this document are tested with Qumulo Core 2.0.3 and Isilon OneFS v8.0.0.0).

Note: *Refer to the documentation of your Linux distribution for steps about creating SMB/NFS shares compatible with Tiger Spaces, making sure they meet the requirements outlined below.*

Currently, Tiger Spaces supports the following network shares:

protocol:	Windows	CentOS/ Ubuntu Linux	Qumulo Core	Isilon OneFS
SMB	✔	✔ *	✔	✔
NFS	✔	✔	✔	-

* Using Samba 3 and Samba 4 protocol.

For the purposes of its workflow Tiger Spaces has the following requirements for the shares, which can comprise the workspaces depot:

• Each share should have a "psp_" prefix in its name. If allowed, add the "psp_" prefix in front of the share name after it has been exported. If renaming a share once it has been created is not possible, you should rename the volume/folder itself, adding the "psp_" prefix, and then export the share anew. Thus, if a share that you want to use is named for example "Projects", you should rename it or the folder to "psp_Projects".

Note: *The prefix is automatically hidden in the Tiger Spaces interface to allow you to more easily discern between shares on which to enable Tiger Spaces support.*

• Tiger Spaces uses a dedicated account (Active Directory domain or local account on the NAS appliance), which has Full Control (on Windows) or Read & Write permissions (on Linux) over each share, which will be made part of the workspaces depot. This account should be the only one, which has permissions to read and write on the share, thus preventing other users from accessing the share. The dedicated account must also have Full Control (on Windows) or Read & Write permissions (on Linux) over the share file system (the folder or the whole volume exported as a share). You must use one and the same dedicated account for each share exported by the same NAS appliance.

Creating the Dedicated Account

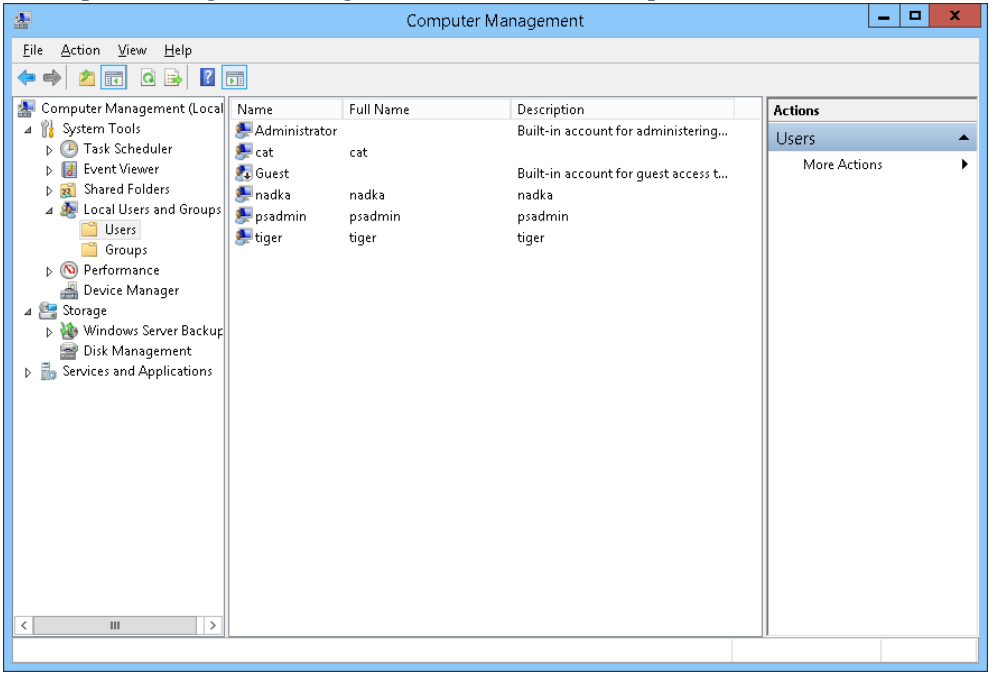
When the computer exporting the share on the network is part of an Active Directory domain, the dedicated account must be a domain user account with Full Control (on Windows)/Read & Write permissions (on Linux) over the share and its file system. For more information about creating/ managing domain user accounts, refer to the documentation of your domain controller.

When the computer exporting the share(s) operates in workgroup environment i.e. is not part of an Active Directory domain, the dedicated account must be locally created. Follow the sample steps below to create a local account, which to serve as dedicated account for use with Tiger Spaces.

Create Dedicated Local Account on Windows

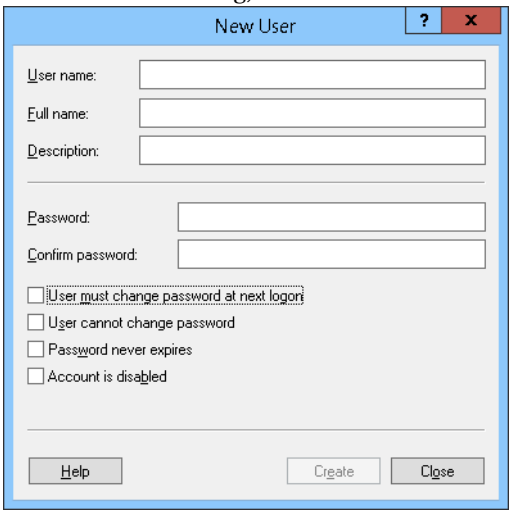
To create a dedicated local user account on Windows:

1. Navigate to Computer Management.
2. In Computer Management, navigate to Local Users and Groups and double-click Users.



3. Right-click in the right pane and select New User.

4. In the New User dialog, enter the details in the corresponding fields.



5. Make sure that the "User must change password at next login" and "Account is disabled" check boxes are not selected.
6. Click Create.

Create Dedicated Local Account on Linux

To create a dedicated local user account on Linux:

1. In command-line, execute the following:
   `useradd {username}`

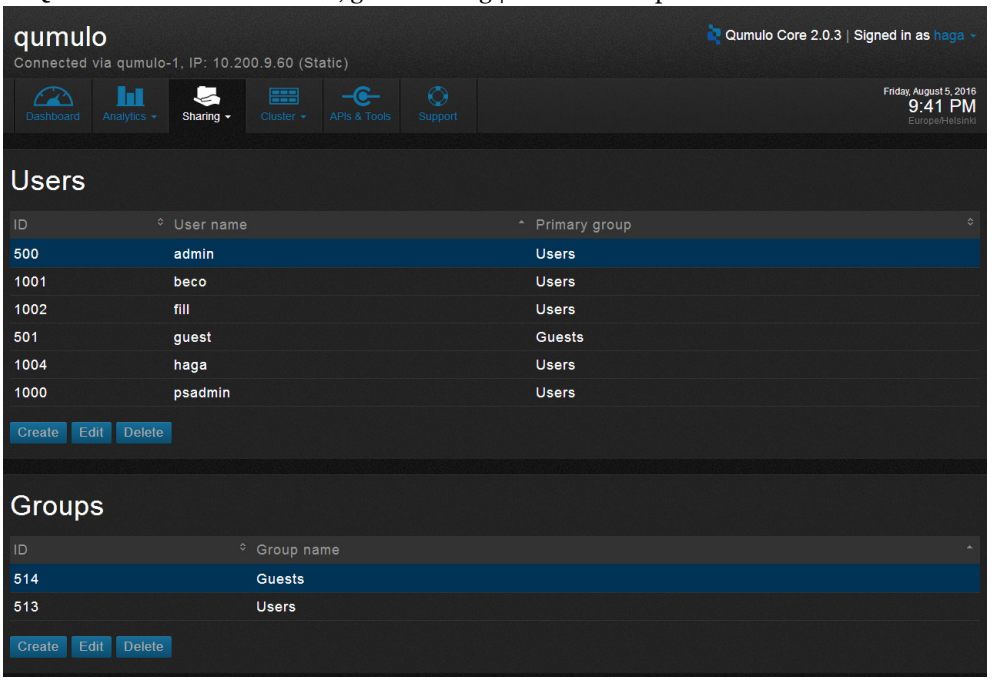
   For example, to create a user named "pspowner", execute the following:
   `useradd pspowner`
2. Set password of the newly created user account, by executing the following:
   `passwd {username}`

   For example, to set the password of the local user account "pspowner", execute the following:
   `passwd pspowner`
3. Enter new password and then retype it.

To create a dedicated local user account on Qumulo Core:

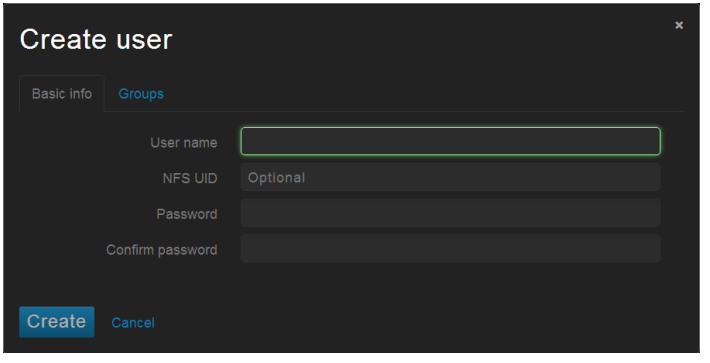
Note: *In Qumulo Core, all locally created users have full access to the shares exported by the appliance.*

1. In Qumulo Core's web interface, go to Sharing | Users & Groups.



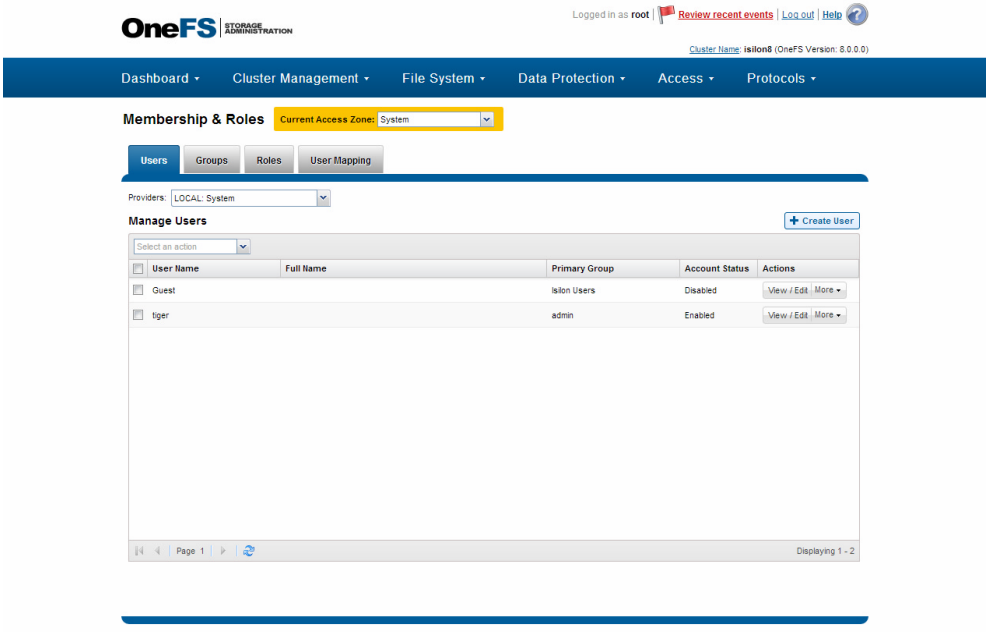
2. Under Users, click Create.

3. In the Create User dialog, enter the user name and password in the respective fields and click Create.



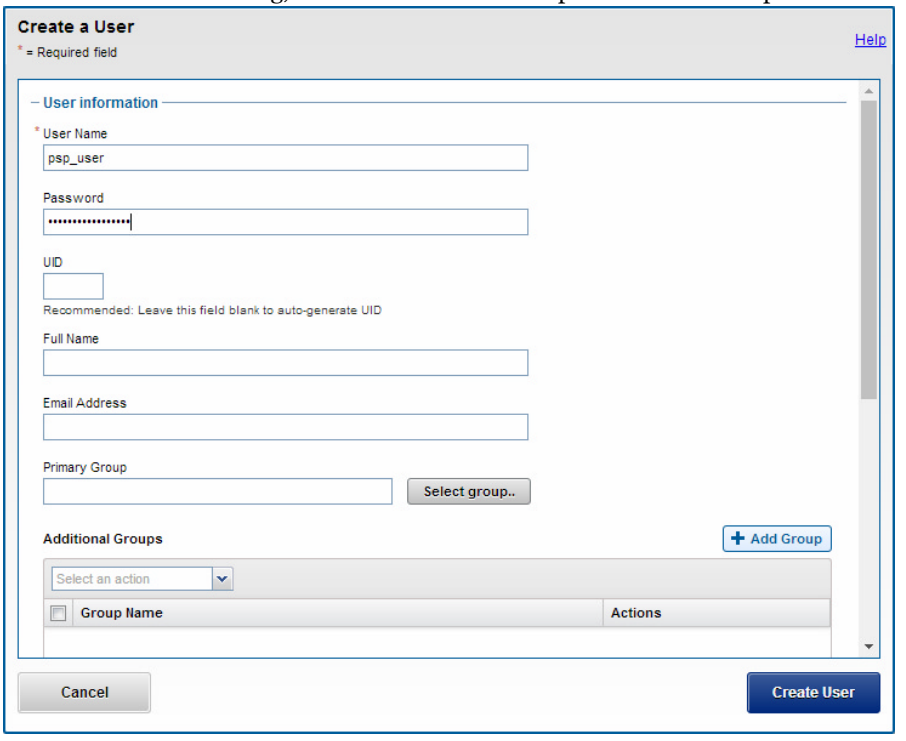
To create a dedicated local user account on EMC Isilon NAS appliance:

1. In EMC Isilon NAS 's web interface, go to Access | Membership & Roles.



2. In the Providers drop-down box, select "LOCAL: System", then click Create User.

3. In the Create a User dialog, enter the user name and password in the respective fields.

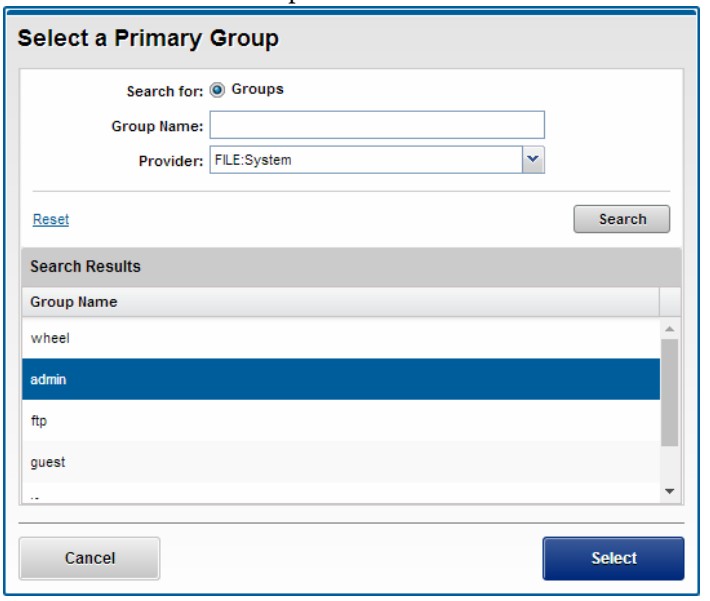


4. Next to Primary Group, click Select Group.

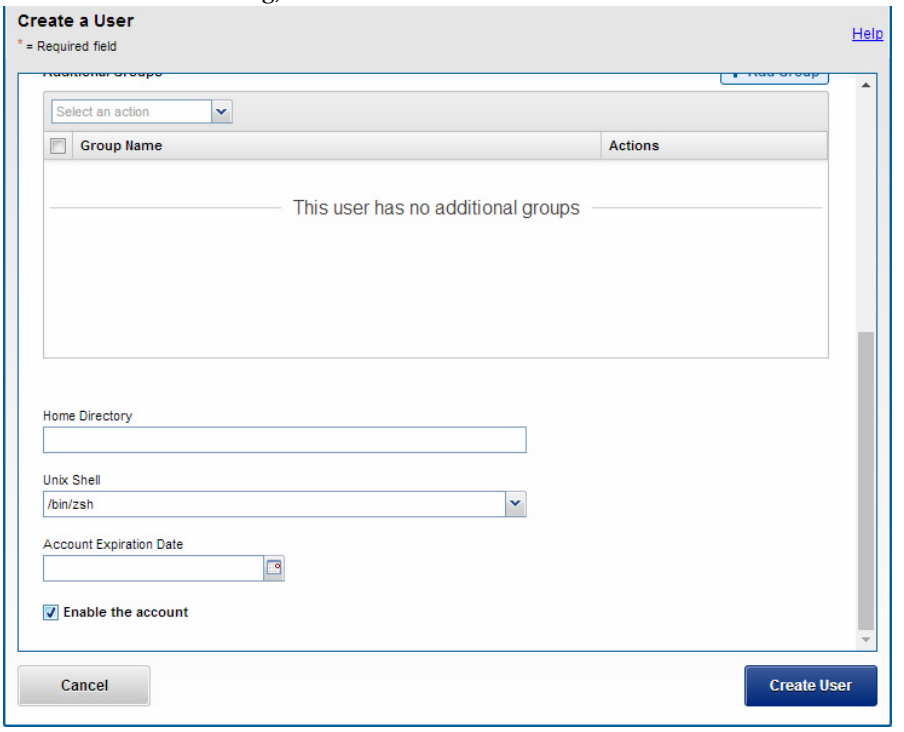
5. In the Select a Primary Group dialog, do the following:

- In the Provider drop-down box, select “FILE: System” and then click Search.

- Select “admin” in the Group Name list below and then click Select.



6. In the Create a User dialog, select the "Enable the account" check box and then click Create User.



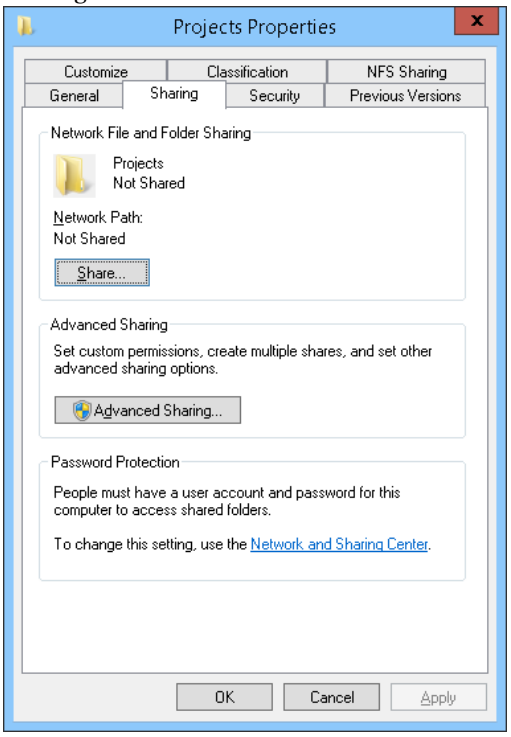
Sample Procedures for Creating Network Shares

Creating a SMB Network Share

To create a SMB network share on Windows:

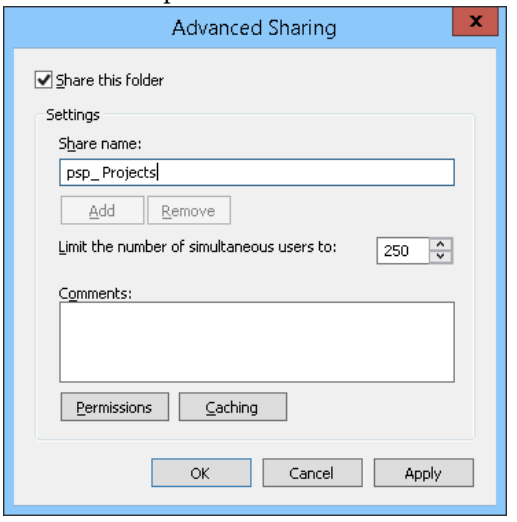
Important: *It is advisable to log on as an administrator to the computer before proceeding with these steps.*

1. In Windows Explorer, browse to and right-click the folder/volume you want to export as a SMB share.
2. In the context menu, click Properties and in the Sharing tab of the dialog, click Advanced Sharing.



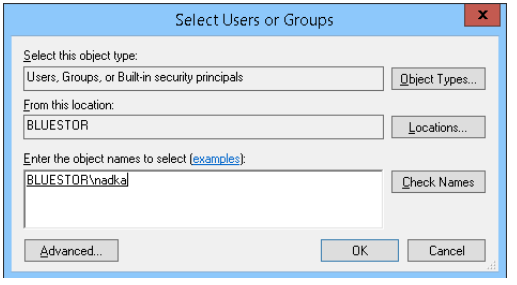
3. In Advanced Sharing, select the “Share this folder” check-box.

4. If the volume/folder you are exporting doesn't have the "psp_" prefix in its name, in "Share name" add the prefix to the name.



Important: *If for some reason the name of the share cannot be renamed, you must rename the volume/folder itself by adding the "psp_" prefix to its name.*

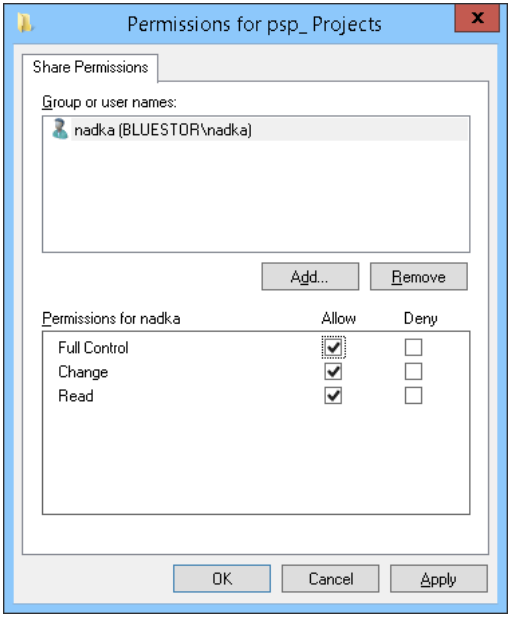
5. In the dialog, click Permissions.
6. In the Permissions dialog, one by one select each listed user/group and click Remove.
7. Click Add.
8. In Select Users and Groups dialog, type the name of the local or domain dedicated user account and click Check Names.



Note: *If Windows cannot verify the account you have entered, go through the steps in "Creating the Dedicated Account" on page 2 or create a dedicated Active Directory domain user account and then proceed again with creating and setting up the share.*

9. Click OK.

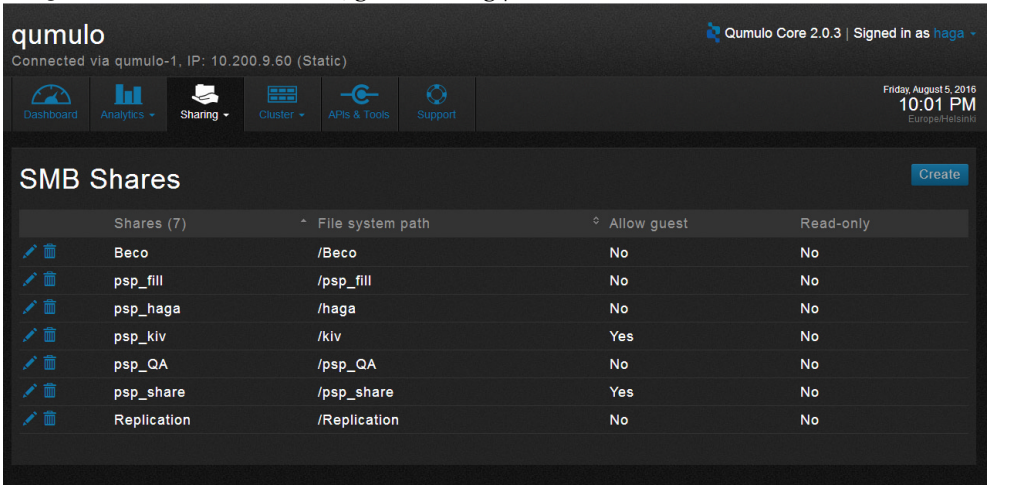
10. In the permissions dialog, select the account that you have just added and in "Permissions for user" select Full Control under Allow, then click OK.



11. Click OK in the Advanced Sharing dialog and then click OK in the Share Properties dialog.

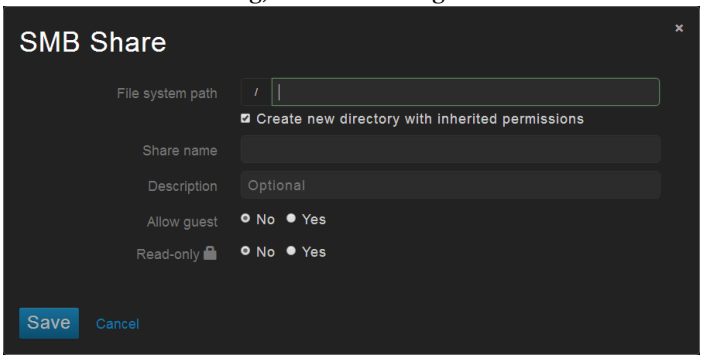
To create a SMB network share on a Qumulo Core NAS appliance:

1. In Qumulo Core's web interface, go to Sharing | SMB Shares.



2. In the SMB Shares page, click Create.

3. In the SMB Share dialog, do the following:



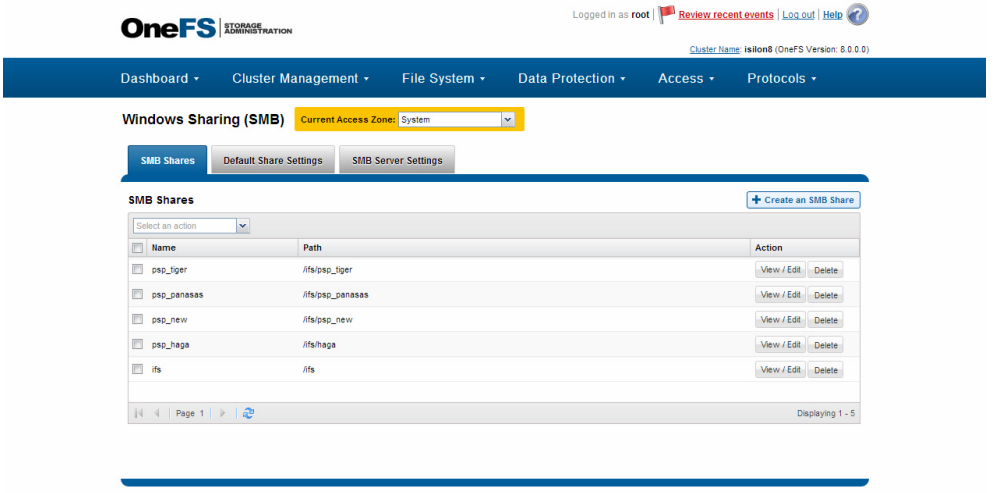
- In File system path, enter the name of the directory to be shared or leave just the slash to share the whole volume.
- Make sure the "Create new directory with inherited permissions" check box is selected.
- In Share name, enter the name of the share, adding the "psp_" prefix in front of it.
- (optional) Add some description of the share.
- In Allow guest, select No.
- In Read-only, select No.

4. Click Save.

Note: *If your Qumulo Core appliance is added to an Active Directory domain, on a network computer assign Full permissions for the newly created SMB share to the dedicated domain user account. If your Qumulo Core appliance is deployed in workgroup environment, make sure only one locally created user account exists and map the guest access to other shares, not participating in the Tiger Spaces workflow, to this locally created account.*

To create a SMB network share on a EMC Isilon NAS appliance:

1. In EMC Isilon NAS appliance's web interface, go to Protocols | Windows Sharing (SMB).



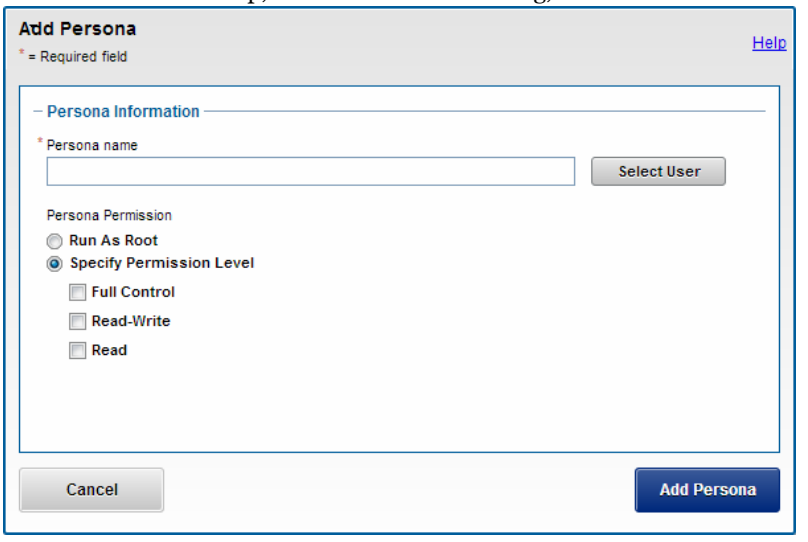
2. Click "Create an SMB Share".
3. In the "Create an SMB Share" dialog, enter the name of the share, adding the "psp_" prefix in front of it.
4. Do one of the following:

   • In Path, browse to and select existing folder on the volume to export it as an SMB share.

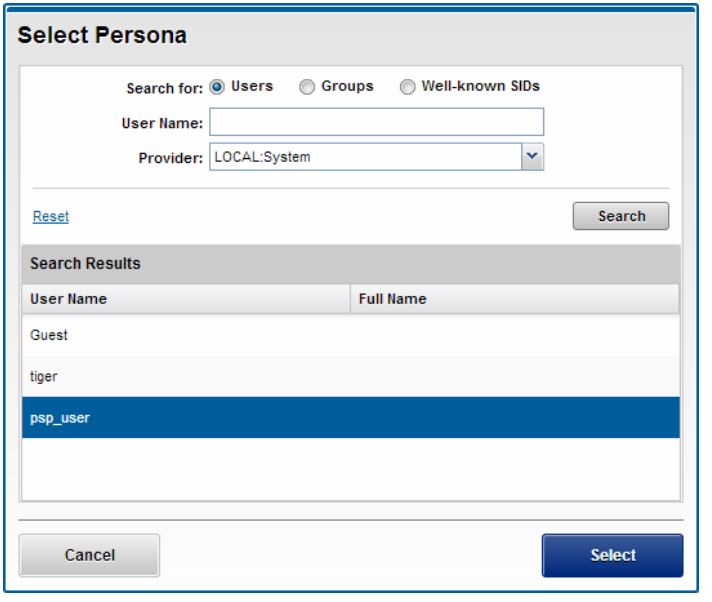
   Note: *If you want to export the whole volume as an SMB share, in the Path field leave just the path to the root of the volume.*

   • Select the "Create SMB share directory if it does not exist" check box, to create a new folder on the volume and export it as an SMB share.
5. In Directory ACLs, make sure "Apply Windows default ACLs" is selected.

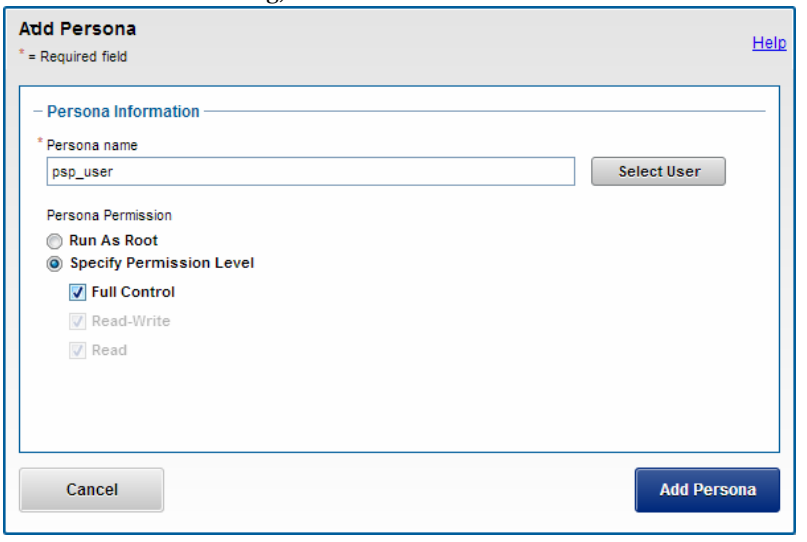
6. Click Add User or Group, in the Add Persona dialog, click Select User.



7. In the Select Persona dialog select “LOCAL: System” in the Provider drop-down box and click Search, then select the dedicated user account created for the purposes of Tiger Spaces and click Select.



8. In the Add Persona dialog, select the Full Control check box and click Add Persona.



9. In the Users and Groups list of the Create an SMB Share dialog, select the check boxes of each user and group and click Delete, leaving just the dedicated user account in the list.

10. Click Create Share.

Creating Sample NFS Shares

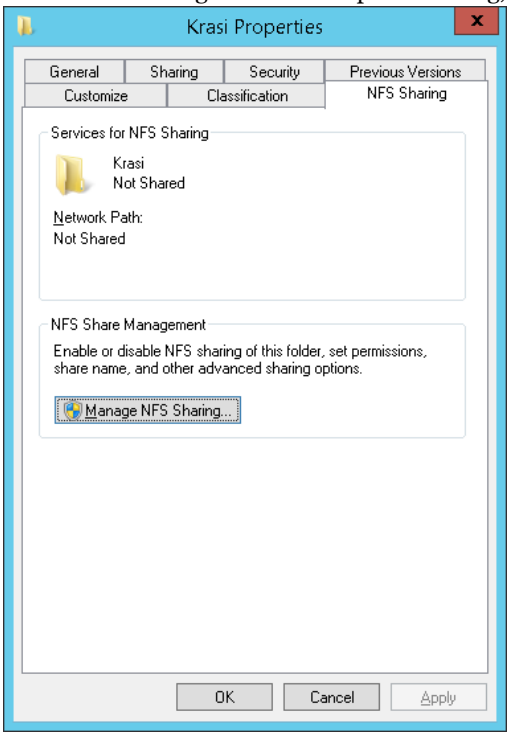
Create an NFS Share on Windows

On Windows, you can create an NFS share only on a server operating system running Windows Server 2008 R2 or later. The computer, on which you create the NFS share must have the Server for NFS enabled (for steps about enabling the feature, refer to your Windows operating system documentation).

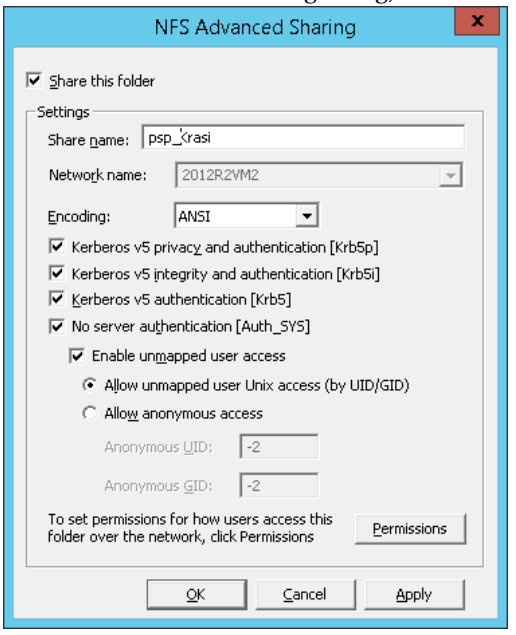
To create an NFS share on a Windows Server OS:

Important: *It is advisable to log on as an administrator to the computer before proceeding with these steps.*

1. In Windows Explorer, browse to and right-click the directory you want to export as NFS Share and select Properties.
2. In the NFS Sharing tab of the Properties dialog, click Manage NFS Sharing.



3. In the NFS Advanced Sharing dialog, do the following:

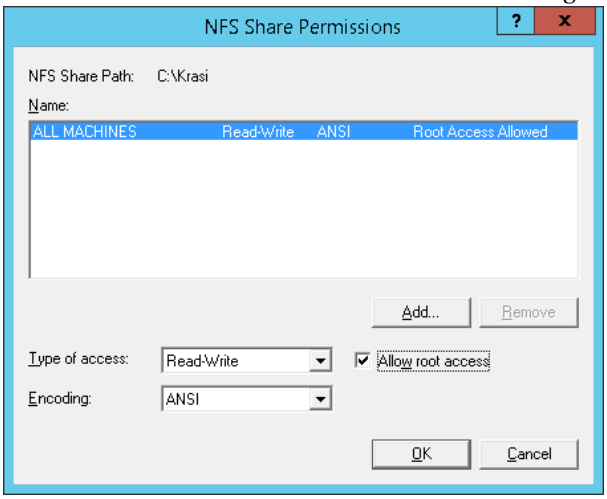


- Select the “Share this folder” check box.
- Change the name of the share, by adding the required “psp_” prefix.
- In Encoding, select ANSI.
- Select “No server authentication” check box.
- Select “Enable unmapped user access” check box and then select “Allow unmapped user Unix access (by UID/GID)”.

Note: *The other options in the dialog can be set up depending on the needs of your configuration.*

4. Click the Permissions.
5. In the NFS Share Permissions dialog, select and then click Remove for each other entry in the list except ALL MACHINES.

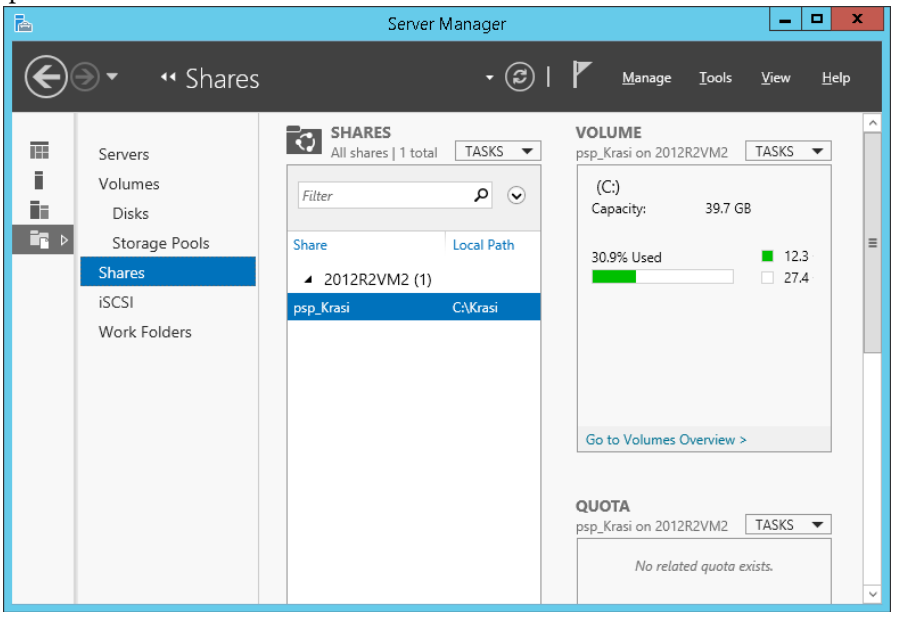
6. Select ALL MACHINES in the list and do the following:



- In Type of access drop-down box, select Read-Write.
- In Encoding drop-down box, select ANSI.
- Select the Check the Allow root access (i.e., make sure Allow root access is enabled)

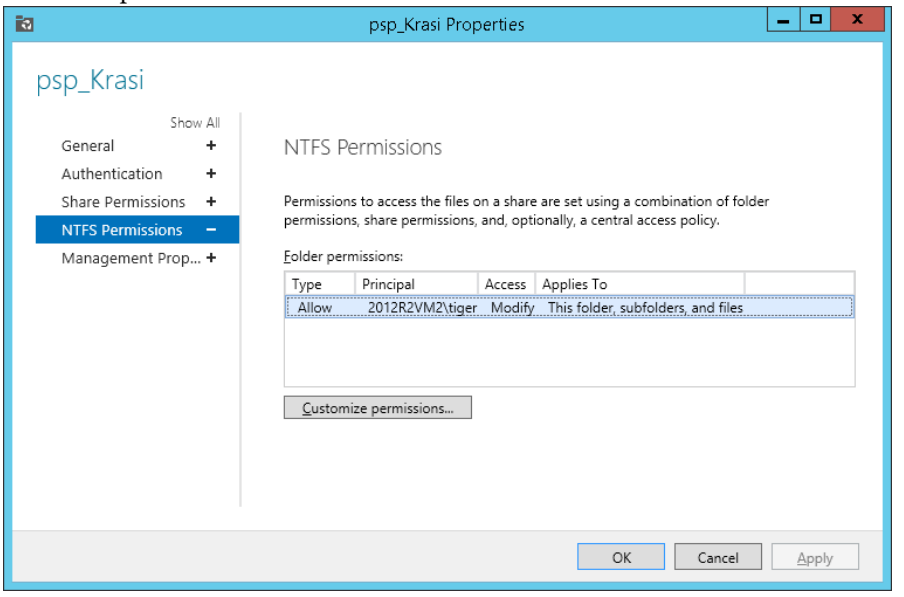
7. Click OK in the NFS Share Permissions dialog and then in the NFS Advanced Sharing dialog.

8. In the Server Manager of the computer, go to File and Storage and then click Shares in the left pane.

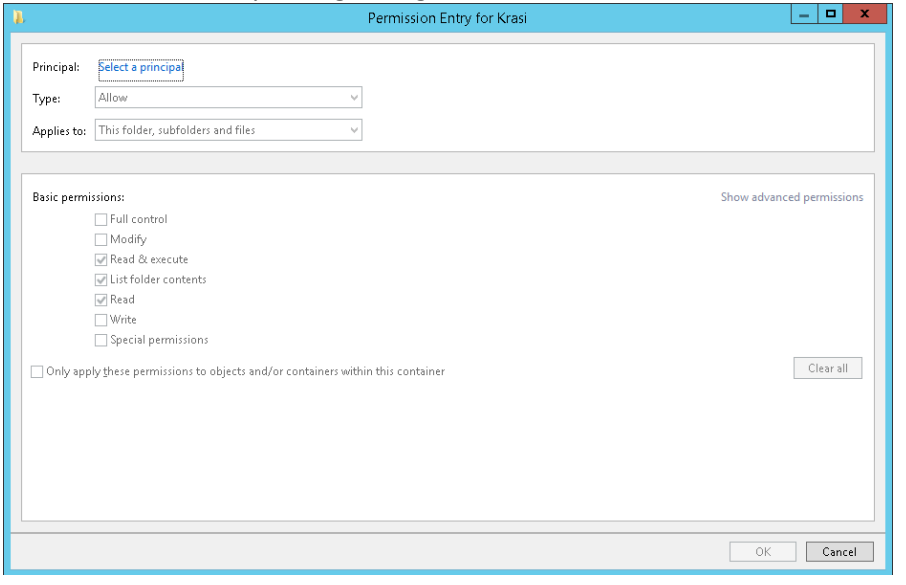


9. In the Shares column, right-click the newly created NFS share and select Properties.

10. In the Share Properties window, click NTFS Permissions in the left pane and then click Customize permissions.



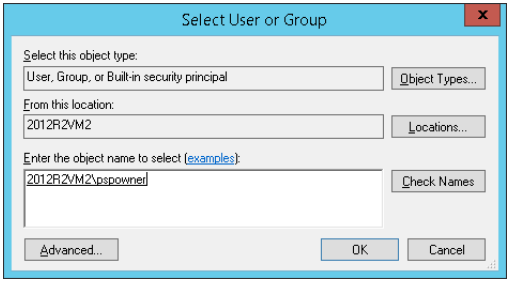
11. In the Advanced Security Settings dialog of the share, click Add.



12. Click Select Principal.

13. In the Select User or Group dialog, click Locations and in the Locations dialog, select either the local machine (for a dedicated account of a local user) or the domain controller (for a domain dedicated account, then click OK.

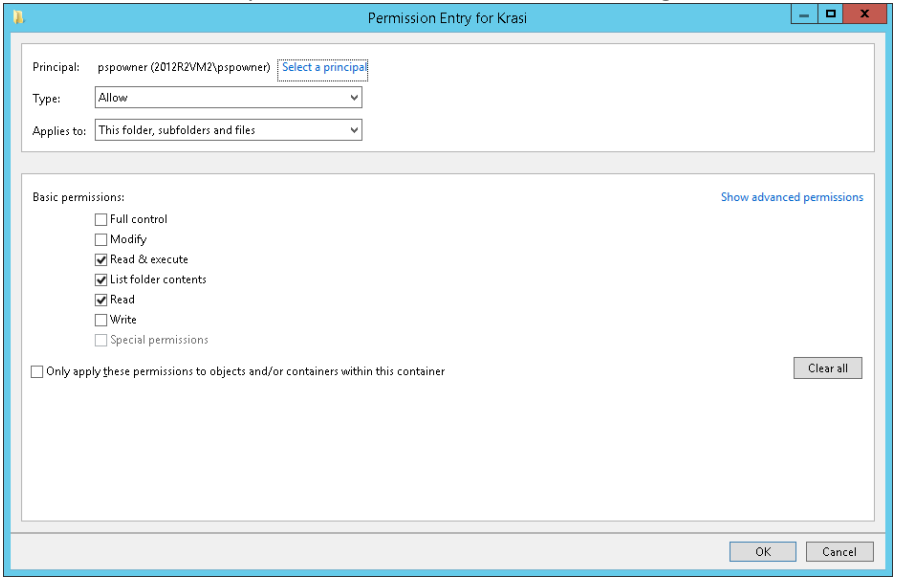
14. Under "Enter the object name to select", enter the name of the dedicated user account and then click Check Names.



Note: *If Windows cannot verify the account you have entered, go through the steps in "Creating the Dedicated Account" on page 2 and then proceed again with creating and setting up the share.*

15. In the Select User or Group dialog, click OK.

16. In the Permission Entry for the share window, do the following:

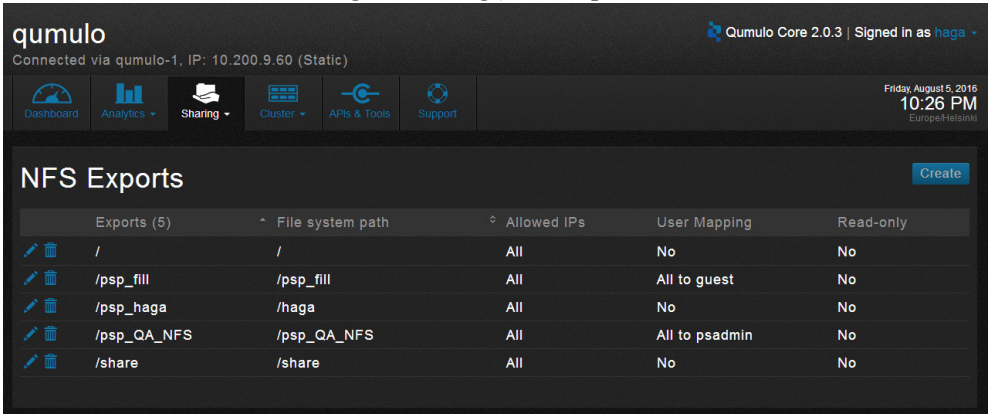


- In "Type" drop-down box, select Allow.
- In "Applies To" drop-down box, select "This folder, subfolders and files.
- Under "Basic Permissions", select the "Full Control" check box.

17. Click OK.

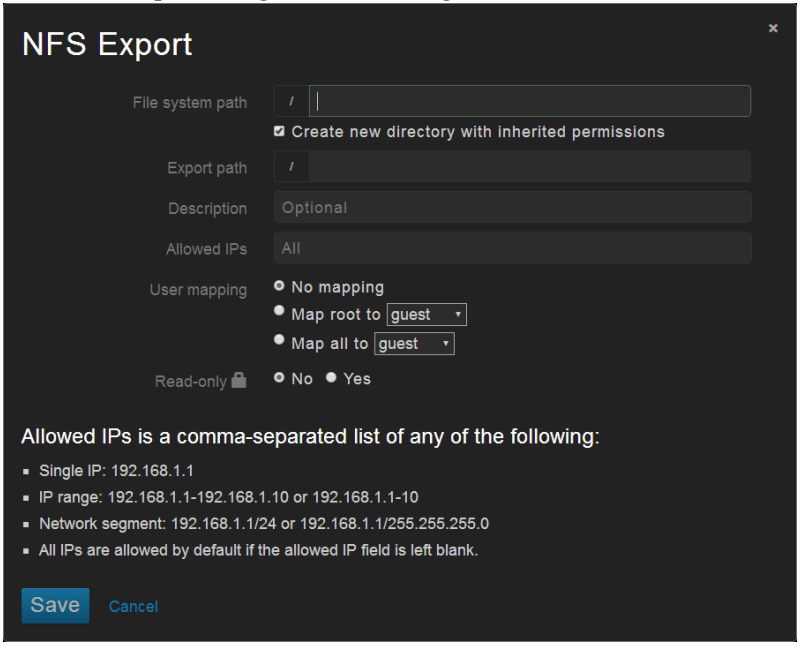
To create an NFS share on a Qumulo Core NAS appliance:

1. In Qumulo Core's web interface, go to Sharing | NFS Exports.



2. In the NFS Exports page, click Create.

3. In the NFS Export dialog, do the following:



- In File system path, enter the name of the directory to be shared or leave just the slash to share the whole volume.

- Make sure the “Create new directory with inherited permissions” check box is selected.
- In Export path, enter the name of the NFS share, adding the “psp_” prefix in front of it.
- (optional) Add some description of the share.
- In Allowed IPs, enter “All”.
- In User mapping, select “No mapping”.
- In Read-only, select No.

4. Click Save.

Note: *Make sure that the dedicated Active Directory domain user account or the dedicated local account created on the Qumulo Core appliance has full permissions for the directory, exported as an NFS share.*