

FolderscapeTM

Configuration Guide

1. Introduction

If you are reading this guide, you have probably already installed Folderscape on one of your Windows workstations. Now, you need to configure each of your filers to work with Folderscape. This isn't a difficult process, but you may have some questions along the way, and this document can help with that.

2. Requirements for Folderscape

To use install Folderscape, you will need the following things:

1. **A NetApp filer.** The filer must be running version 7.0.4 or later of ONTAP, and it must be running CIFS, NFS, or both.
2. **The "root" password.** You will need to know the "root" password for the filer.
3. **A Windows workstation.**
4. **A Windows userid.** If your filer is a member of a Windows domain, you will need to log on to the Windows workstation with a userid that is a member of the same domain as the NetApp filer.

3. Running Folderscape for the First Time

The first time you run Folderscape and try to connect to a given filer, Folderscape will detect that the filer hasn't been configured for use with Folderscape, and will begin the process of configuring it. **Folderscape won't make any changes to the filer without asking your permission first.**

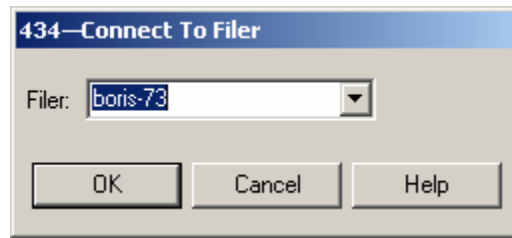
Here are the things Folderscape will do to configure your filer:

1. **Create Roles and Groups.** Folderscape will create several roles and groups on the filer. All the roles and groups will have names that begin with "Folderscape," so they are easy to identify. Folderscape won't make changes to any of your existing groups except possibly to add users to the "administrators" group. (Folderscape will ask your permission first before adding users to the "administrators" group.)
2. **Create the Folderscape Folder.** Folderscape will add a folder to the root of one of your volumes. The folder will be named "Folderscape", and will be used to hold information that Folderscape needs. Folderscape will ask your permission before creating this folder, and will let you choose which volume to use.

You can run Folderscape by choosing the "Folderscape" option from the "Start" menu. When you do this, follow the instructions in section 4a if your filer is a member of a Windows domain, or section 4b if it is not.

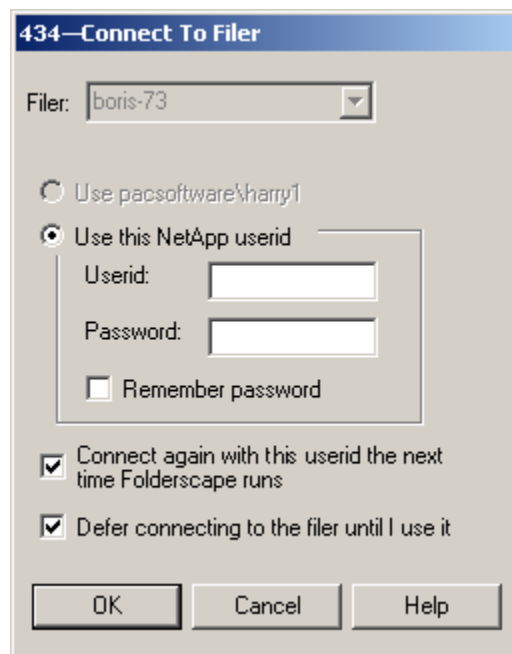
4a. Configuring Folderscape on a Filer Which Is a Domain Member

When you run Folderscape, it will ask you to connect to a filer with the following window:



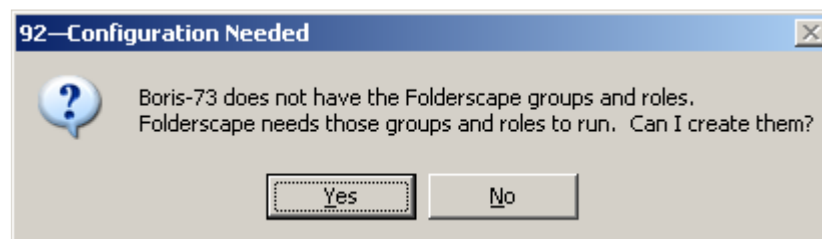
In most cases, the filers in your domain will automatically appear on the list in this window. If the filers aren't on the list, you can edit the list by choosing the "<Edit list...>" entry.

When you have either entered the name of the filer you want to connect to, or chosen that filer from the list, click the OK button. You'll now see this window:

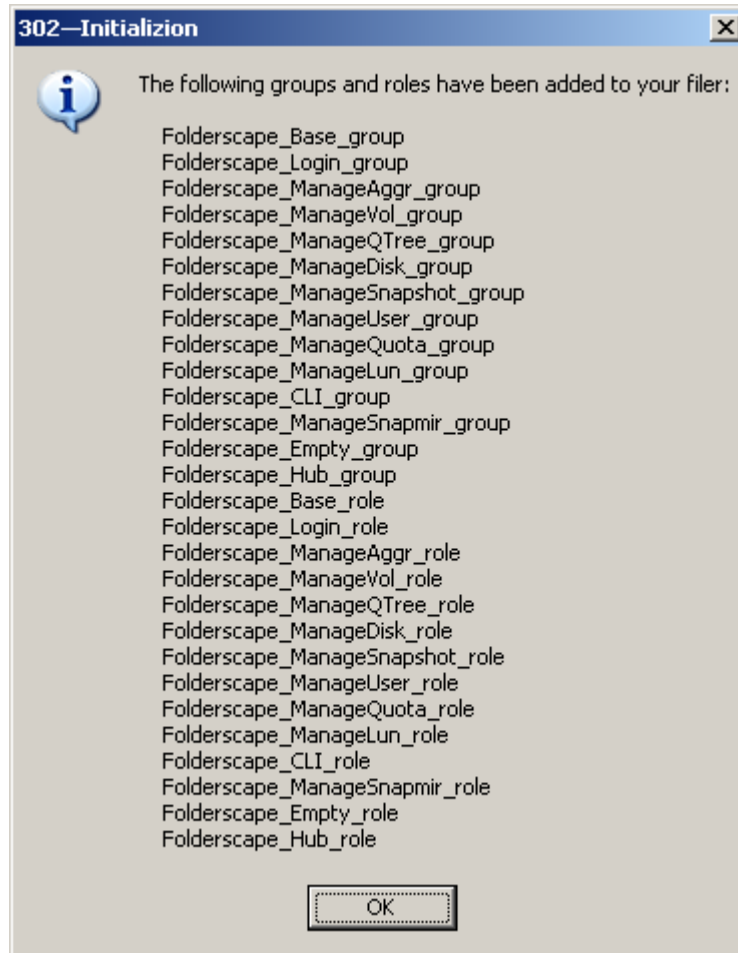


You'll notice that the option to connect using your Windows userid will be disabled. That's because you *must* connect using the "root" userid the first time you connect to a filer. Enter "root" in the "userid" field, and the root password in the "password" field, then press the OK button.

Folderscape will now ask your permission to add the groups and roles it needs:



If you answer “No” to this question, you will not be able to use Folderscape on this filer. If you answer “Yes”, Folderscape will create the groups and roles, and will tell you about it:



If one or more of your volumes do not have shares and exports, you will see one or both of the following windows:

Shares

For Folderscape to allow you to work with a Windows volume, there must be a CIFS share at the root of the volume.

Turn on the checkbox for the shares you wish to add

Volume	Type	Existing Share	Share To Add	
<input type="checkbox"/> vol0	unix			<input type="button" value="Check All"/> <input type="button" value="Clear All"/>
<input type="checkbox"/> vol2	unix			
<input checked="" type="checkbox"/> vol3	ntfs		vol3\$	

(The new share names end in "\$" so they will be hidden from users.)

Exports

For Folderscape to allow you to work with a Unix volume, there must be an NFS export at the root of the volume.

Turn on the checkbox for the exports you wish to add

Volume	Type	Existing Export	Export To Add	
<input type="checkbox"/> vol0	unix	/vol/vol0		<input type="button" value="Check All"/> <input type="button" value="Clear All"/>
<input checked="" type="checkbox"/> vol2	unix		/vol/vol2	
<input type="checkbox"/> vol3	ntfs	/vol/vol3		

Each NTFS volume *must* have a share at its root for Folderscape to be able to access that volume. Similarly, each Unix volume *must* have an export at its root for Folderscape to access it. These windows make it easy to add the necessary shares and exports. Simply check each volume which should have a share or export added. (The volumes which Folderscape recommends changing will automatically have checks next to them.)

Next, Folderscape will check your Windows userid (the one you are logged on with at your Windows workstation) to see if it is a member of the “administrators” group:

If your Windows userid **is** in the “administrators” group:

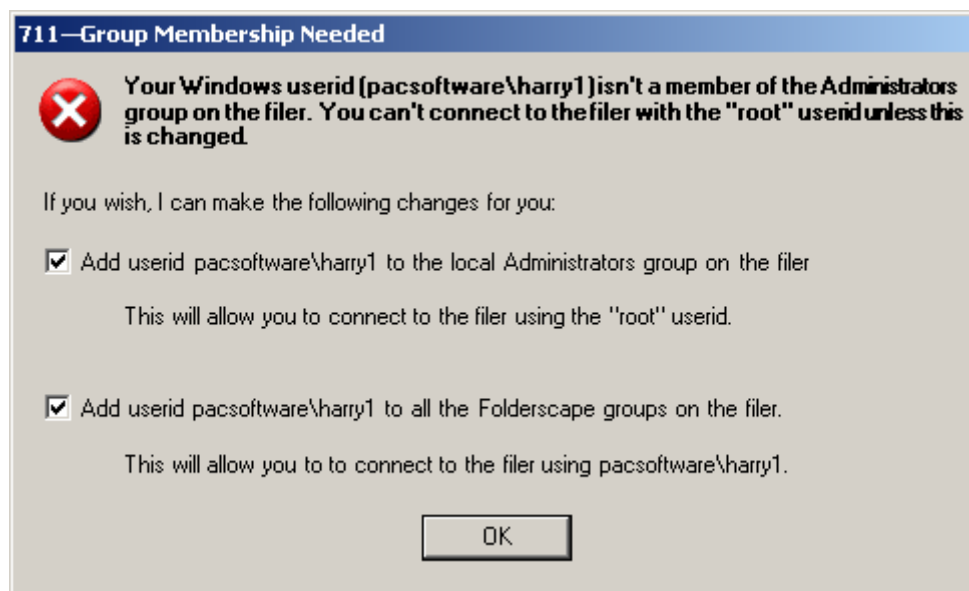
Continue with section 4a2.

If your Windows userid **is not** in the “administrators” group:

Continue with section 4a1.

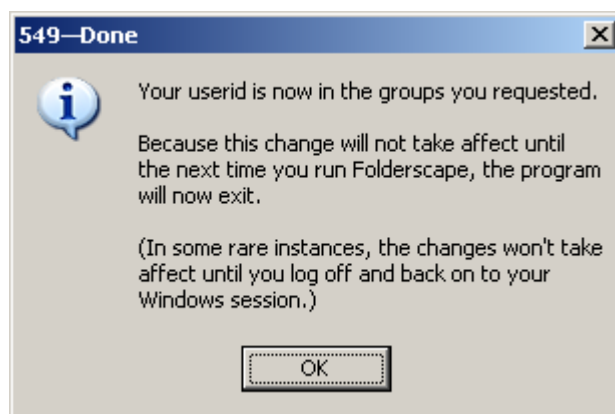
4a1. Configuring Folderscape When You’re Not In The Administrators Group

Folderscape will ask for permission to add your Windows userid to the “administrators” group with this window:

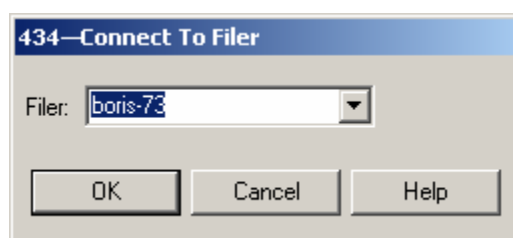


You can only use Folderscape from userids which are members of the “administrators” group on the filer, so you would normally leave the first checkbox checked. You will also normally leave the second checkbox checked, since it will allow you to run Folderscape with the authority of your Windows userid, rather than having to connect with a NetApp userid.

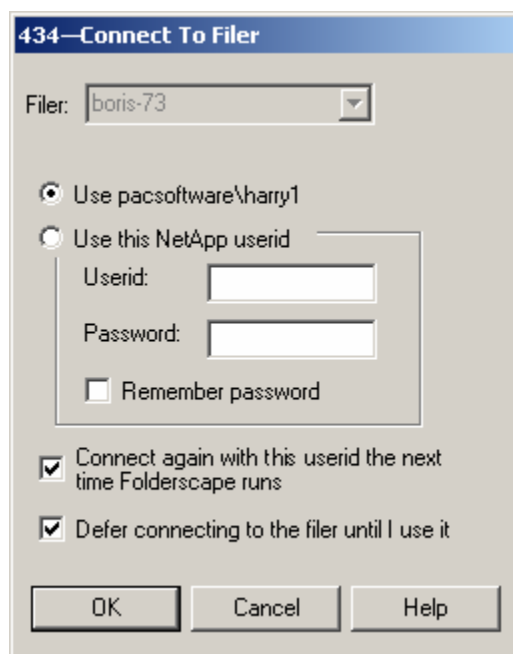
If you leave both checkboxes checked, as we recommend, Folderscape will make the group changes, and then display this message:



Folderscape will now exit. To proceed, simply run Folderscape again. When you do that, Folderscape will once again ask which filer to connect to:

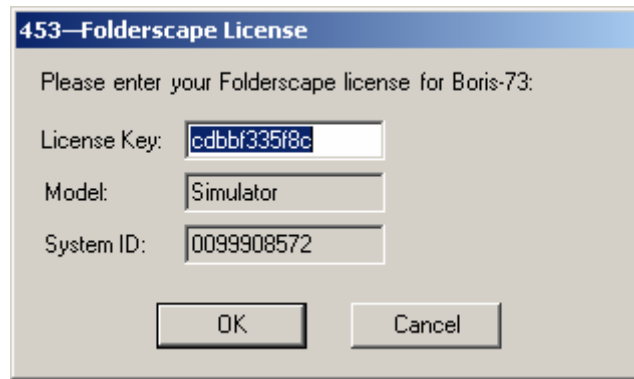


Once you click the OK button, you'll once again see the second connection window:



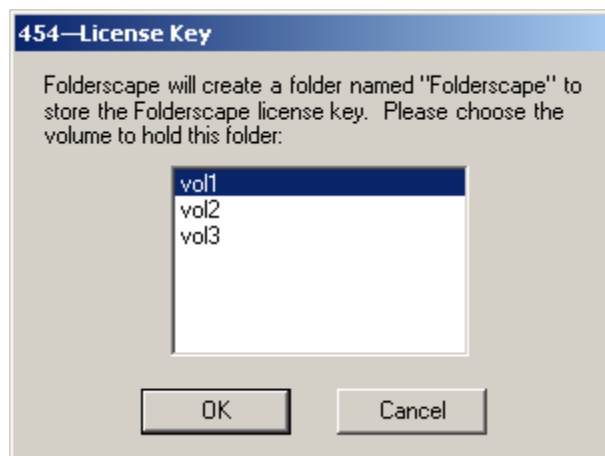
This time, there's a difference: the option to connect with your Windows userid is available. That's because you have authorized your Windows userid to use Folderscape with your filer. In most cases, we recommend that you use your Windows userid when connecting to your filer. (In a few cases, you may have to connect with "root" again to perform configuration changes to your filer.)

Next, Folderscape will ask for your license key:



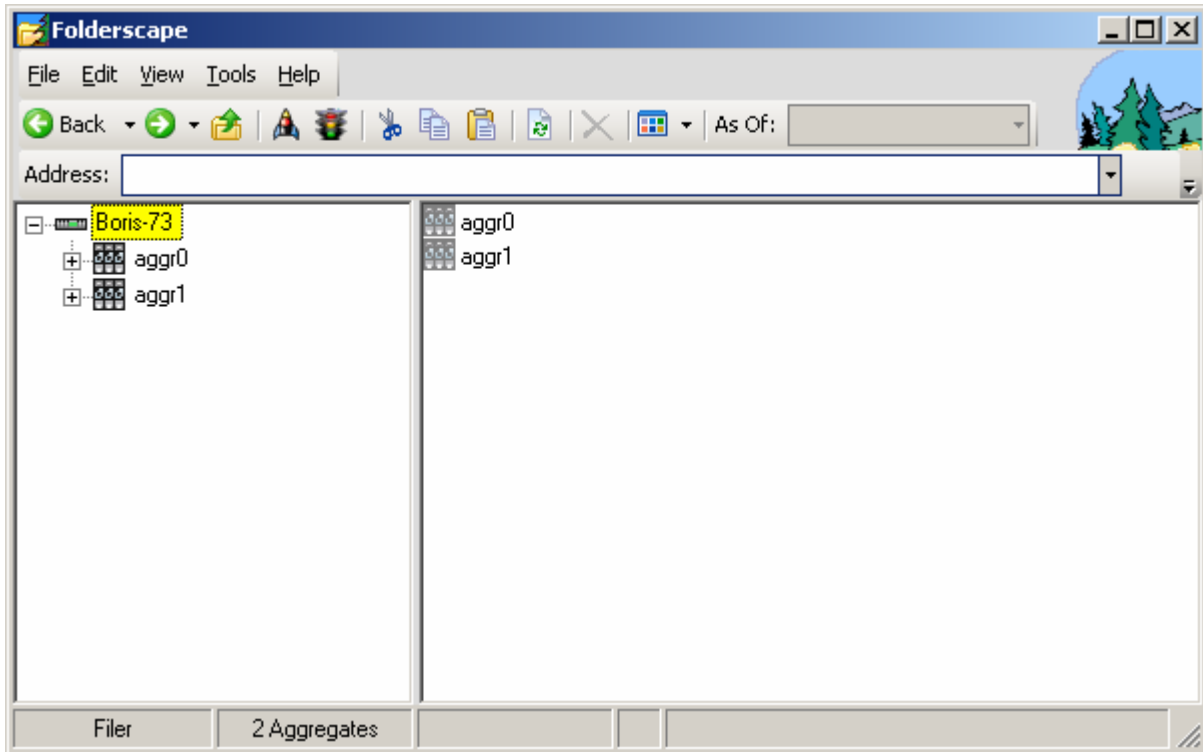
If you are connecting to a simulator, as shown above, the license key will have automatically been filled in for you. (Folderscape is free of charge on simulators; you don't have to purchase a license key.) If you are connecting to a real filer, you will have to enter the license key.

Folderscape will now create a folder named "Folderscape" on one of your volumes. It will use this folder to store the license key and other Folderscape information. Folderscape will let you choose which volume to use for this folder:

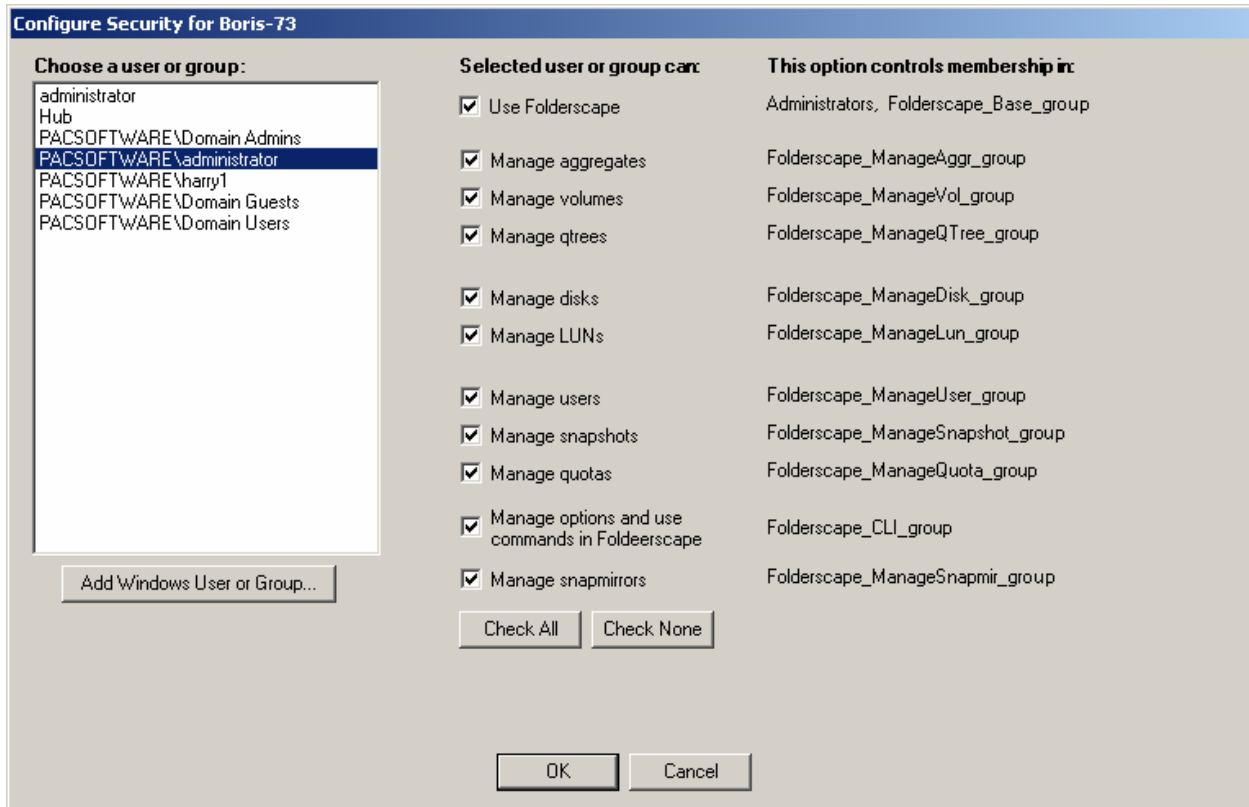


(For security reasons, the root volume cannot be used to hold the "Folderscape" folder.)

Once you choose a volume and press OK, the main Folderscape window will appear:



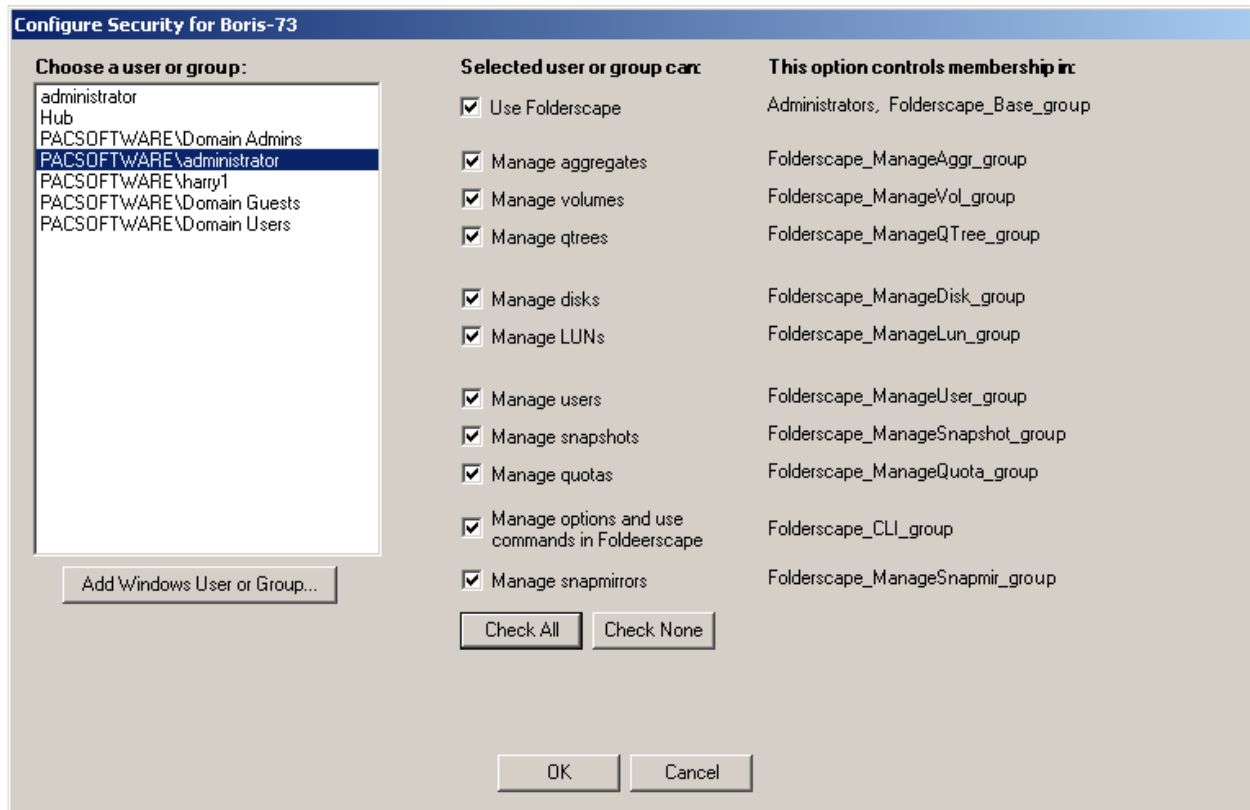
You have already authorized your Windows userid to connect to the filer with Folderscape, but you may want to authorize other userids too. To do that, choose “Folderscape Security” from the “Tools” menu. That will display the following window:



You have now completed most of the configuration tasks for Folderscape. To wrap things up, follow the steps described in section 5.

4a2. Configuring Folderscape When You're In The Administrators Group

Folderscape will now let you authorize userids to use Folderscape by displaying this window:



You can use this window to authorize NetApp userids or Windows domain userids, and you can specify what functions each userid can perform. We recommend that you authorize the Windows userid you are currently logged onto. If you wish, you can return to this window later to change userid authority by choosing “Folderscape security” from the “Tools” menu in Folderscape.

Next, Folderscape will ask for your license key:



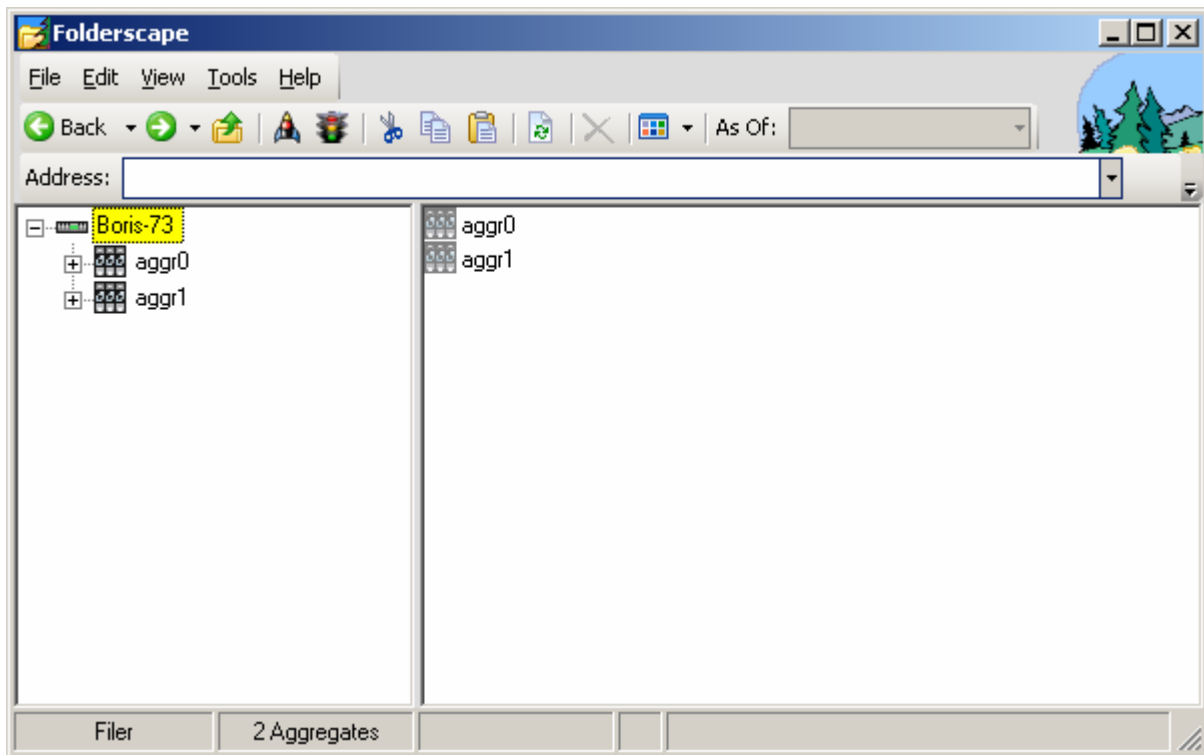
If you are connecting to a simulator, as shown above, the license key will have automatically been filled in for you. (Folderscape is free of charge on simulators; you don't have to purchase a license key.) If you are connecting to a real filer, you will have to enter the license key you were given by PAC Software.

Folderscape will now create a folder named "Folderscape" on one of your volumes. It will use this folder to store the license key and other Folderscape information. Folderscape will let you choose which volume to use for this folder:



(For security reasons, the root volume cannot be used to hold the "Folderscape" folder.)

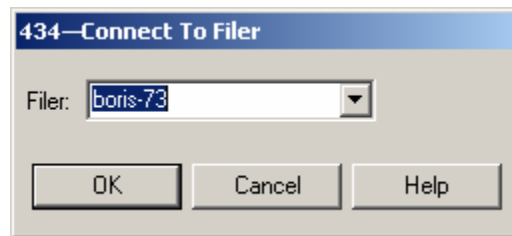
Once you choose a volume and press OK, the main Folderscape window will appear:



You have now completed most of the configuration tasks for Folderscape. To wrap things up, follow the steps described in section 5.

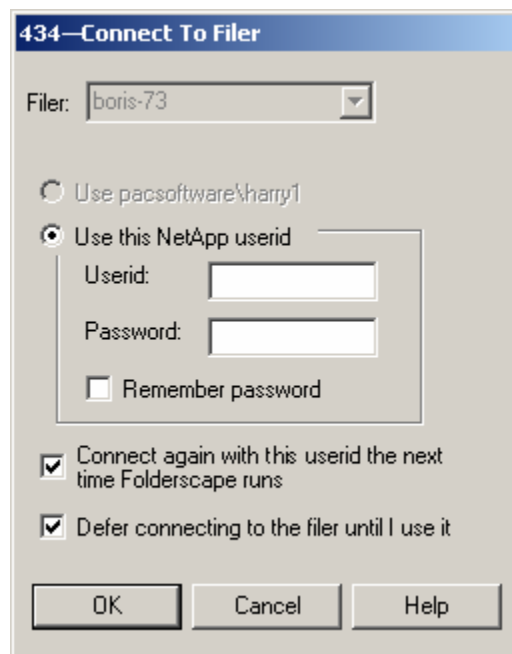
4b. Configuring Folderscape on a Filer Which Is NOT a Domain Member

When you run Folderscape, it will ask you to connect to a filer with the following window:



You can simply type in the name of the filer you wish to connect to. To save time in the future, you may want to use the "<Edit list...>" entry to add all your filers to the list for this window.

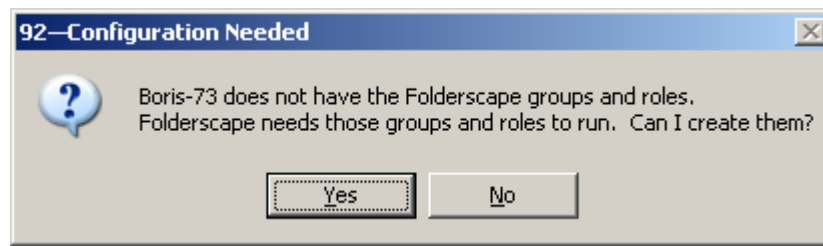
When you have either entered the name of the filer you want to connect to, or chosen that filer from the list, click the OK button. You'll now see this window:



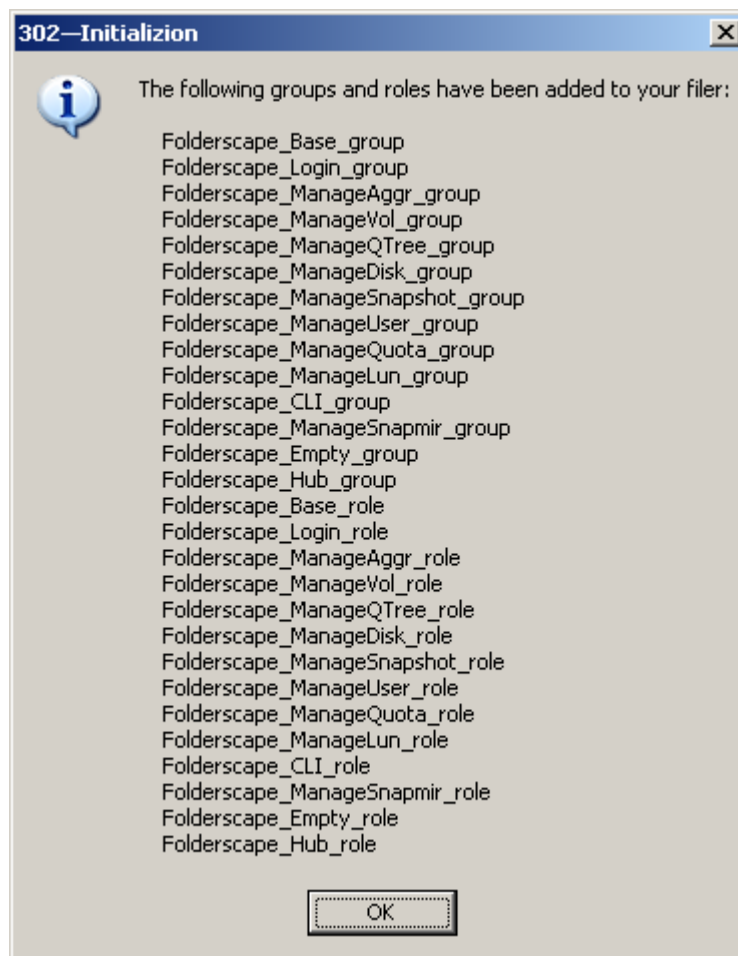
You'll notice that the option to connect using your Windows userid will be disabled. That's because you cannot connect to the filer with your Windows userid since your filer is not a member of the Windows domain.

The first time you connect to the filer, you *must* connect using the "root" userid. Enter "root" in the "userid" field, and the root password in the "password" field, then press the OK button.

Folderscape will now ask your permission to add the groups and roles it needs:



If you answer “No” to this question, you will not be able to use Folderscape on this filer. If you answer “Yes”, Folderscape will create the groups and roles, and will tell you about it:



If one or more of your volumes do not have shares and exports, you will see one or both of the following windows:

Shares

For Folderscape to allow you to work with a Windows volume, there must be a CIFS share at the root of the volume.

Turn on the checkbox for the shares you wish to add

Volume	Type	Existing Share	Share To Add	
<input type="checkbox"/> vol0	unix			<input type="button" value="Check All"/> <input type="button" value="Clear All"/>
<input type="checkbox"/> vol2	unix			
<input checked="" type="checkbox"/> vol3	ntfs		vol3\$	

(The new share names end in "\$" so they will be hidden from users.)

Exports

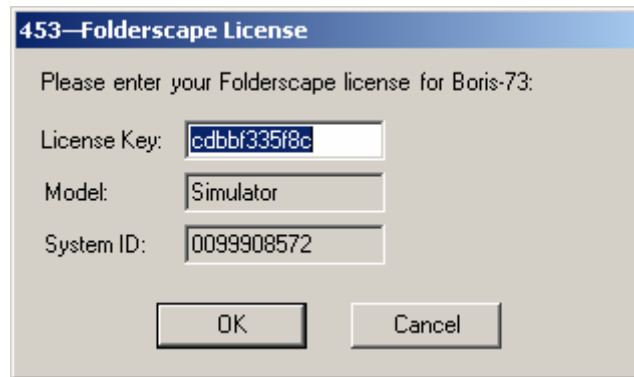
For Folderscape to allow you to work with a Unix volume, there must be an NFS export at the root of the volume.

Turn on the checkbox for the exports you wish to add

Volume	Type	Existing Export	Export To Add	
<input type="checkbox"/> vol0	unix	/vol/vol0		<input type="button" value="Check All"/> <input type="button" value="Clear All"/>
<input checked="" type="checkbox"/> vol2	unix		/vol/vol2	
<input type="checkbox"/> vol3	ntfs	/vol/vol3		

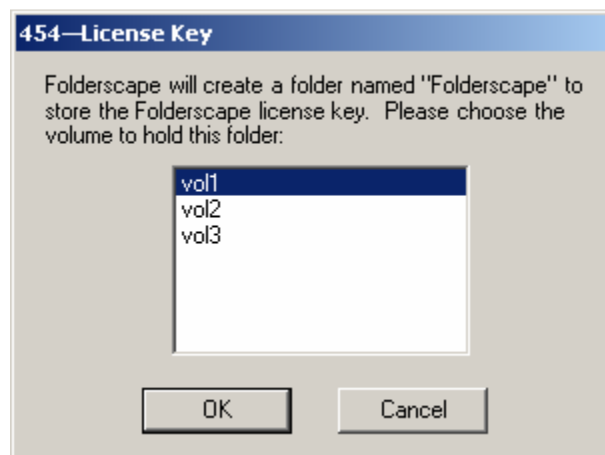
Each NTFS volume *must* have a share at its root for Folderscape to be able to access that volume. Similarly, each Unix volume *must* have an export at its root for Folderscape to access it. These windows make it easy to add the necessary shares and exports. Simply check each volume which should have a share or export added. (The volumes which Folderscape recommends changing will automatically have checks next to them.)

Next, Folderscape will ask for your license key:



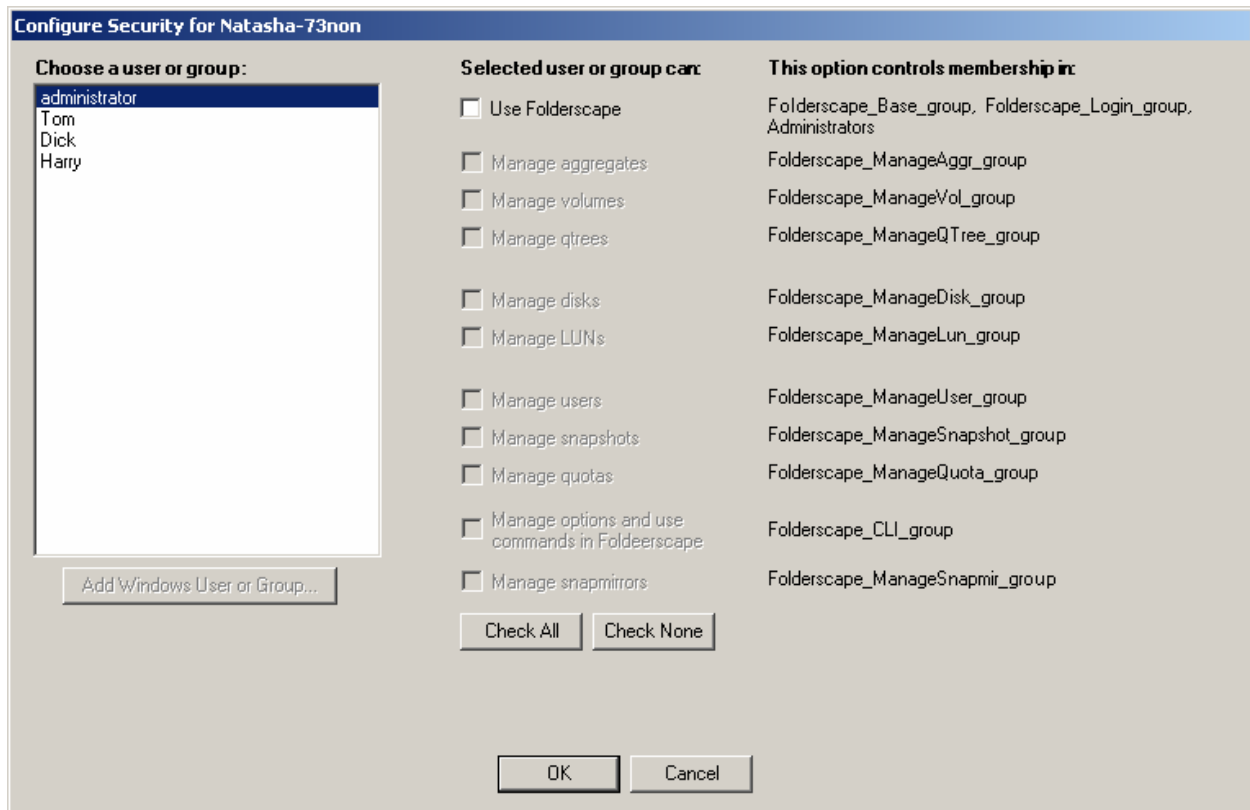
If you are connecting to a simulator, as shown above, the license key will have automatically been filled in for you. (Folderscape is free of charge on simulators; you don't have to purchase a license key.) If you are connecting to a real filer, you will have to enter the license key you were given by PAC Software.

Folderscape will now create a folder named "Folderscape" on one of your volumes. It will use this folder to store the license key and other Folderscape information. Folderscape will let you choose which volume to use for this folder:



(For security reasons, the root volume cannot be used to hold the "Folderscape" folder.)

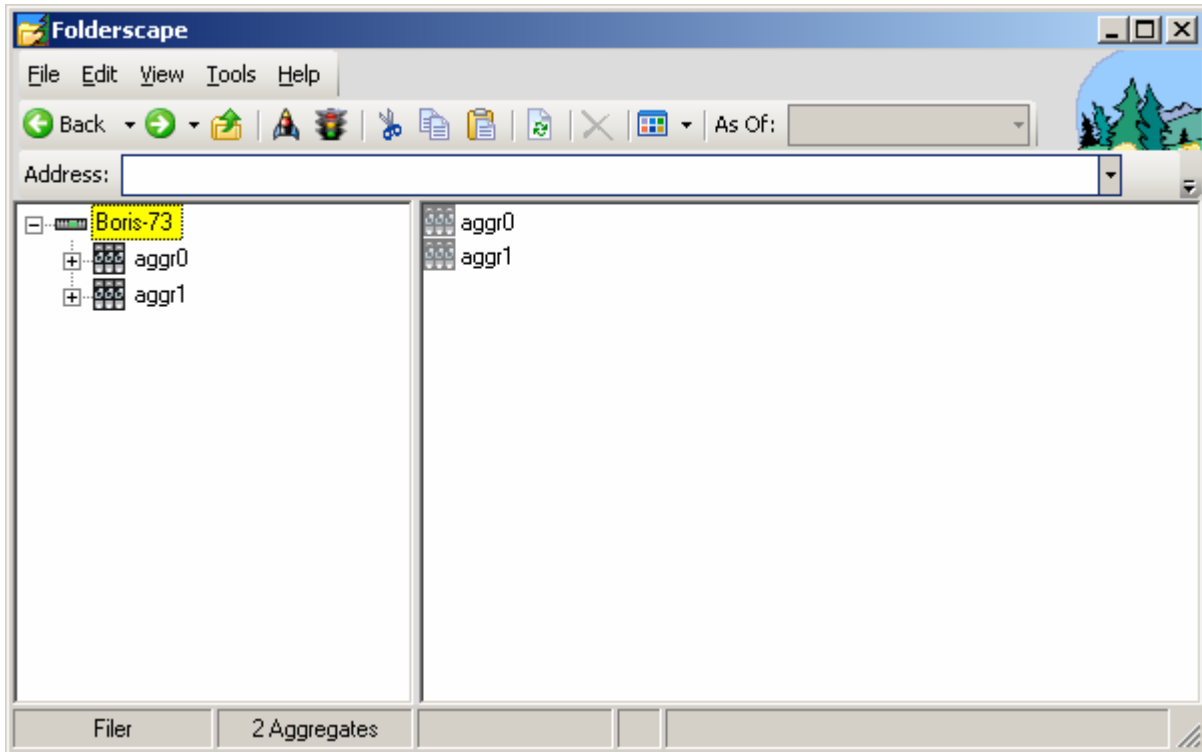
Folderscape will now let you determine which NetApp userids can be used to run Folderscape, and what operations each of those userids can perform:



By clicking on a userid in the list on the left, you can grant authority to that userid.

(You don't have to decide which userids should have which authority right now, since you can return to this window at any time by choosing "Folderscape security" from the "Tools" menu in Folderscape. We recommend that you grant authority to use Folderscape to at least one userid now, however, so you won't have to continue to use "root" to run Folderscape.)

Once you finish with the security window and press OK, the main Folderscape window will appear:



You have now completed most of the configuration tasks for Folderscape. To wrap things up, follow the steps described in section 5.

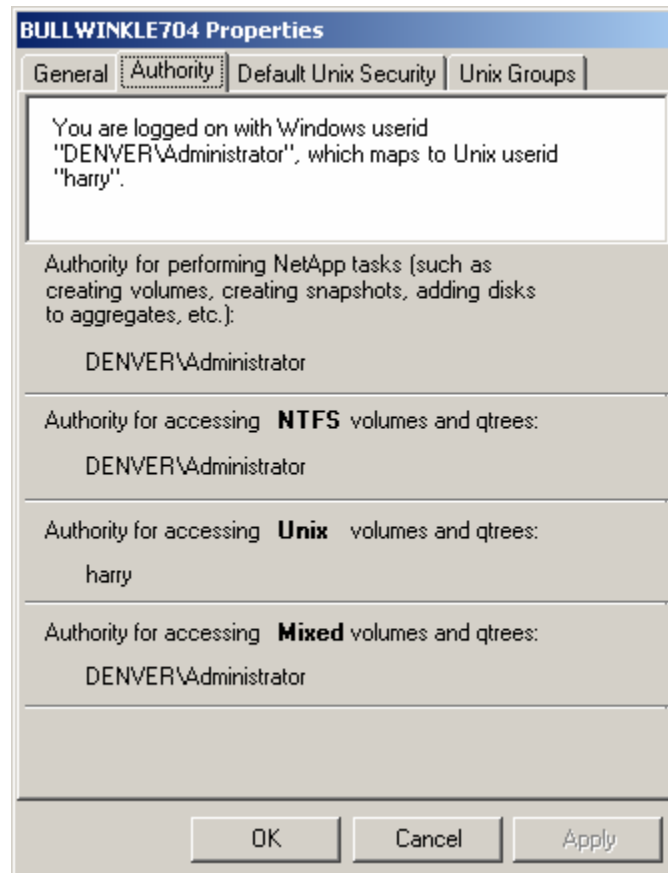
5. Using NFS

Folderscape can work with both Windows and Unix volumes. When you work with a Windows volume, Folderscape uses CIFS to communicate with the filer. That means it will use Windows security rules. When you work with a Unix volume, Folderscape uses NFS to communicate with the filer. That means it will use Unix security rules.

In order to use NFS, Folderscape needs to know what Unix userid to use. It determines this by using the standard NetApp Unix userid translation. In other words, it lets the filer decide what Unix userid belongs to you based upon the Windows userid or NetApp userid you chose when you connected to the filer.

We won't go into all the details of the Unix userid translation here, since those details are available in NetApp documentation. Briefly, however, the filer will try to use the `/etc/usermap.cfg` file to determine what userid to use. Then, it will try to verify that userid through the NIS server you configured for the filer.

To see what userids Folderscape is using, you can right-click on the name of the filer, and choose "Properties" from the popup menu. Then, choose the "Authority" tab. The results will look similar to this:



You can use the “Unix Groups” tab in the same window to see a list of the Unix groups that your Unix userid belongs to, and you can use the “Default Unix Security” tab to set the NFS security to be set for new files created through Folderscape.

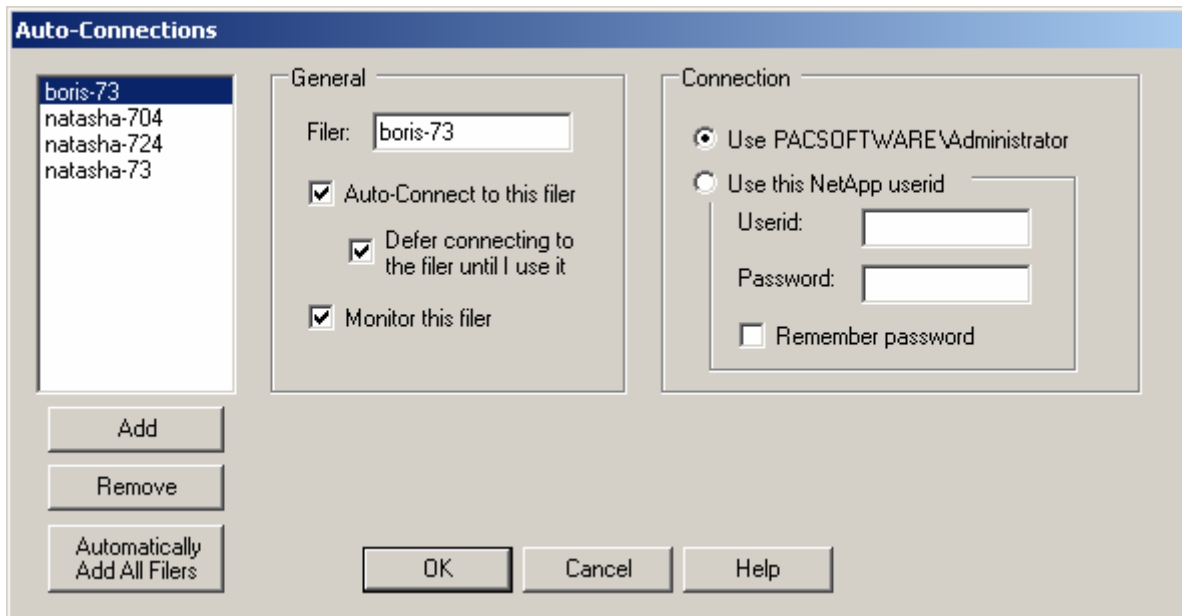
6. Installing Folderscape on More Workstations

The instructions you’ve followed so far cover connecting Folderscape to a filer for the first time. After you’ve gone through that process for a filer, you don’t have to do it again for that filer. Whether you are connecting from the same workstation, or you’ve installed Folderscape on more workstations and are connecting from there, you can simply connect—you don’t have to go through the configuration process again.

7. Setting up Automatic Connections

When you run Folderscape, you can have it automatically connect to one or more filers. (Among other things, this can save you from having to enter your userid and password for each filer.)

To setup automatic connections, choose “auto-connections” from the “tools” menu in Folderscape, and you’ll see this window:

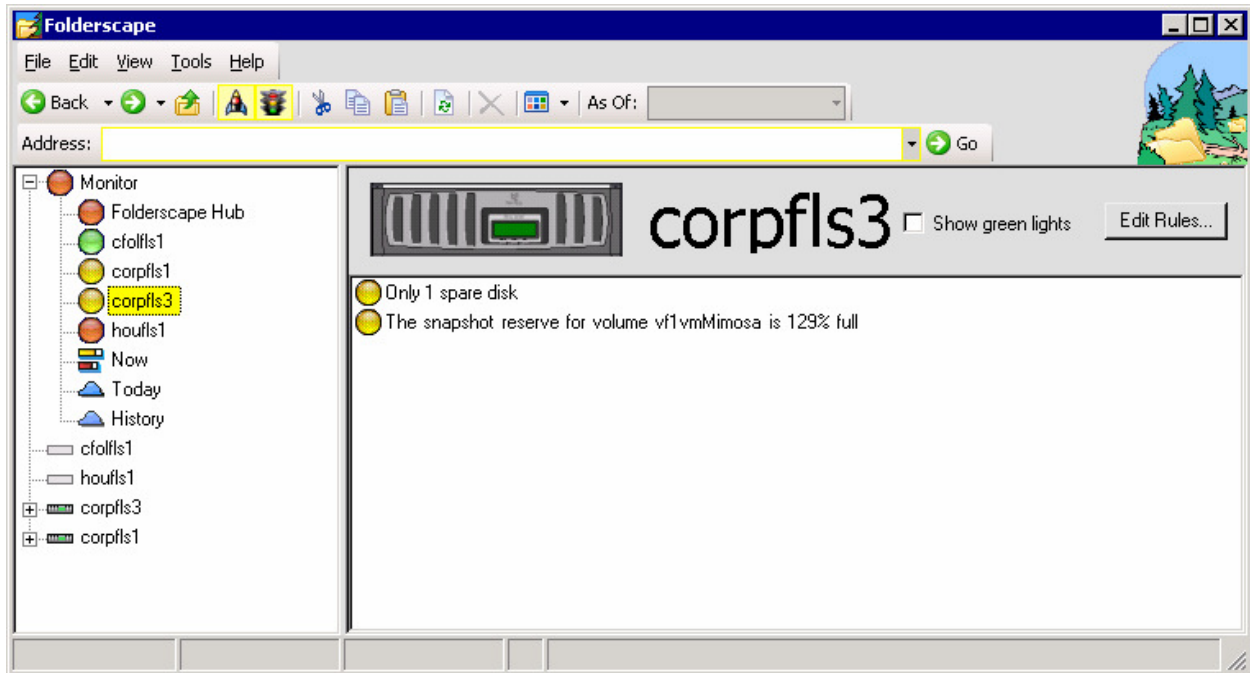


8. Configuring the Monitor

If you wish, you can have Folderscape “monitor” your filers. This means Folderscape can watch for volumes getting too full, make sure you have enough spare disks available, look out for excessive CPU usage, and other things. When Folderscape discovers a problem, it can let you know about it.

If you want to use the monitoring facility in Folderscape, you should start by turning it on by choosing “filer monitor” from the “view” menu. This will add a new “traffic light” entry on the left side of the Folderscape menu labeled “Monitor”.

The next step is to tell Folderscape what filers to monitor. Do this by right-clicking on “monitor” and picking “choose filers to monitor” on the popup menu. This will add an entry under “monitor” for each of the filers you pick. Those entries will have lights that are red, yellow, or green to show the status of the filer. To get details about the status, click on the filer name, and the filer’s status will be shown in the main window:



When you first begin to monitor a filer, it will use a default set of rules for determining whether or not the filer's status is normal. To customize those rules, just click on the "edit rules" button.

You can enhance the monitoring capabilities of Folderscape by installing Folderscape Hub on one of your Windows servers. Doing this adds the following abilities to Folderscape:

- When you click on the "today" entry in the monitor tree, you'll see activity for the entire day if you have installed Folderscape Hub. If you haven't installed Folderscape Hub, you'll only see activity from the time you started running Folderscape.
- When you click on the "history" entry in the monitor tree, you'll see the past history of statistics like volume and CPU utilization.
- You can have Folderscape Hub send you email messages whenever a problem is detected on one of your filers. You can also have Folderscape Hub send you a daily status report on all your filers.

To install Folderscape Hub, go to the server that should house Folderscape Hub and run the same installation program you used to install Folderscape. At the end of the installation process, you'll have a chance to see a document that describes how to configure Folderscape Hub.