Quick Start Guide of Hikvision IP Camera & Synology NAS Connection

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About this Document

This manual applies to the following devices and Hikvision IP camera **DS-2CD2211-I5** and Synology NAS **DS112j** are used as examples in it.

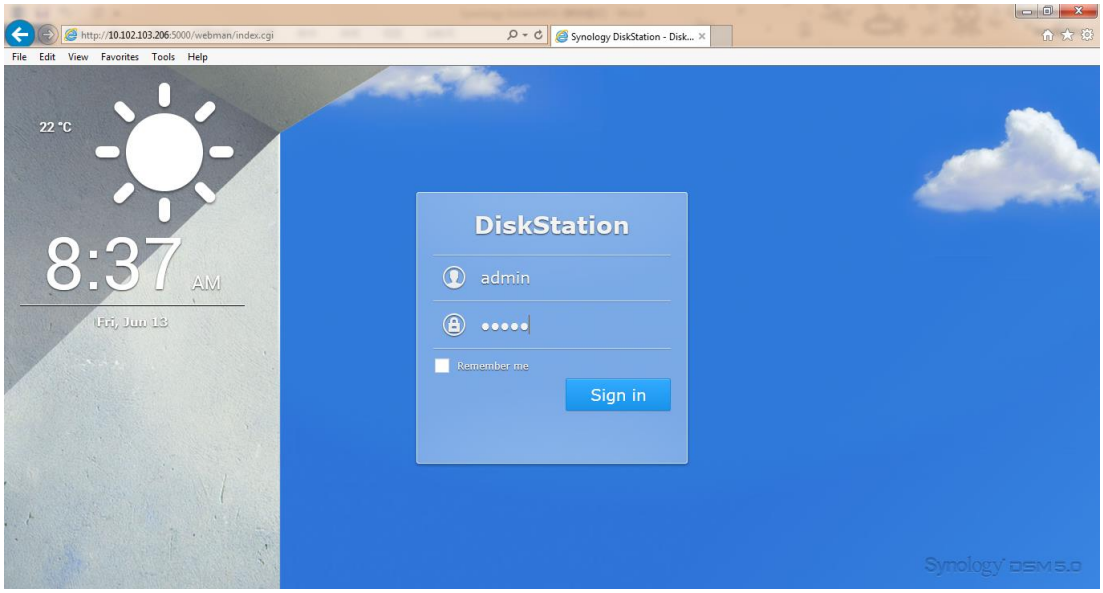
Hikvision IP Camera				**Synology NAS**
Series		Platform	Firmware Version	Model Number
Smart	DS-2CD4xxx	R1	V5.1.0 131202 or above	DS112j
	DS-2CD63xx[1]	R4	V5.0.9 140305 or above	
Pro	DS-2CD7xx/8xx/72xx/82xx	DM365	V5.1.0 131202 or above	
	DS-2CD6412FWD-10/20	R1	V5.1.0 131202 or above	
Value	DS-2CD2xx2	R0	V5.1.0 131202 or above	
	DS-2CD2x14WD-I	R2	V5.1.6 140412 or above	

[1] DS-2CD63xx series IP cameras do not support Synology NAS connection via CIFS mount type.

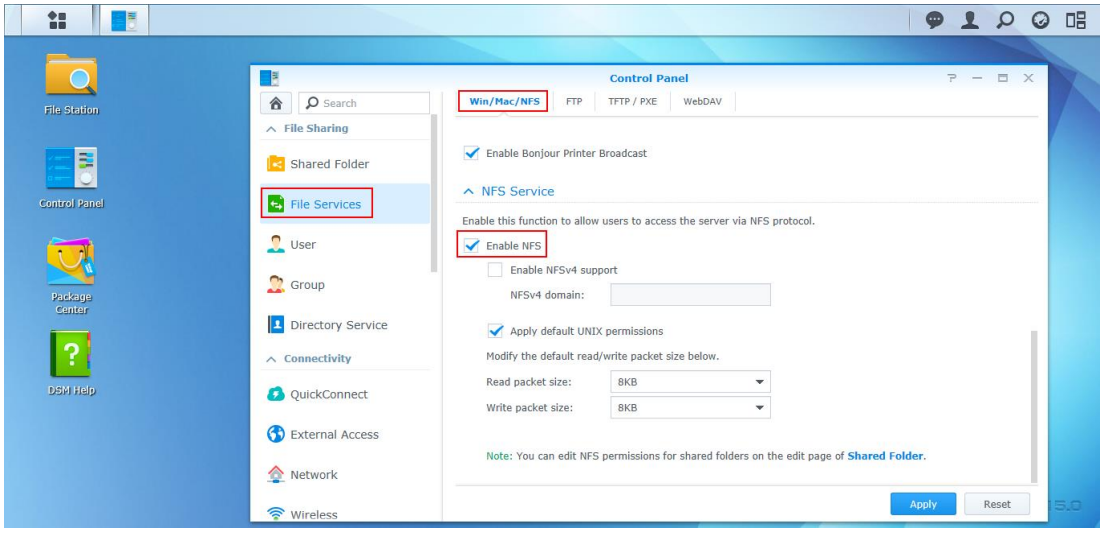
1. Adding DS112j to DS-2CD2112-I5 via NFS Mount Type

Main Steps:

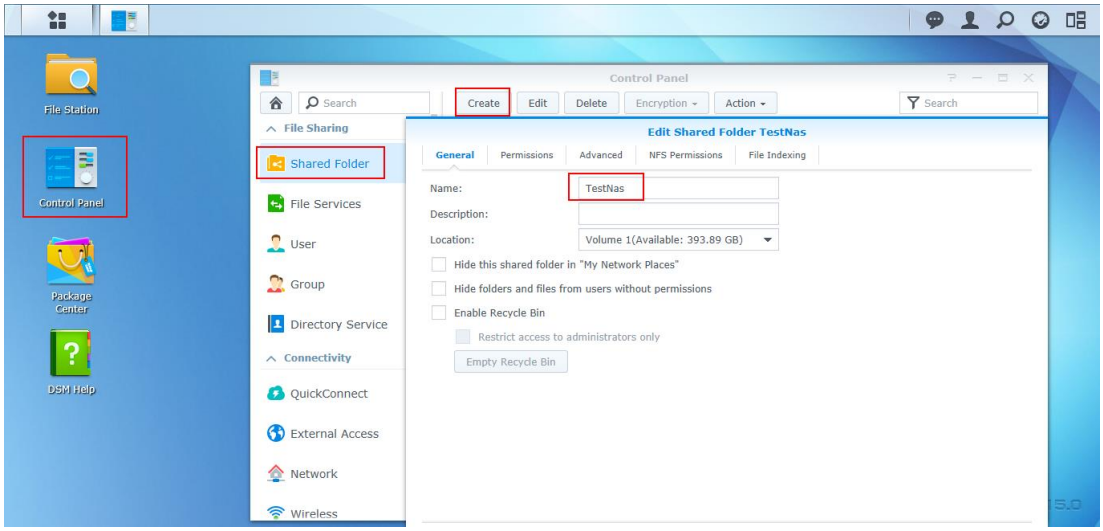
1. Log in the web page of the DS112j. The IP address of DS112j in US office is http://10.102.103.206:5000 and user name/password is admin/12345.



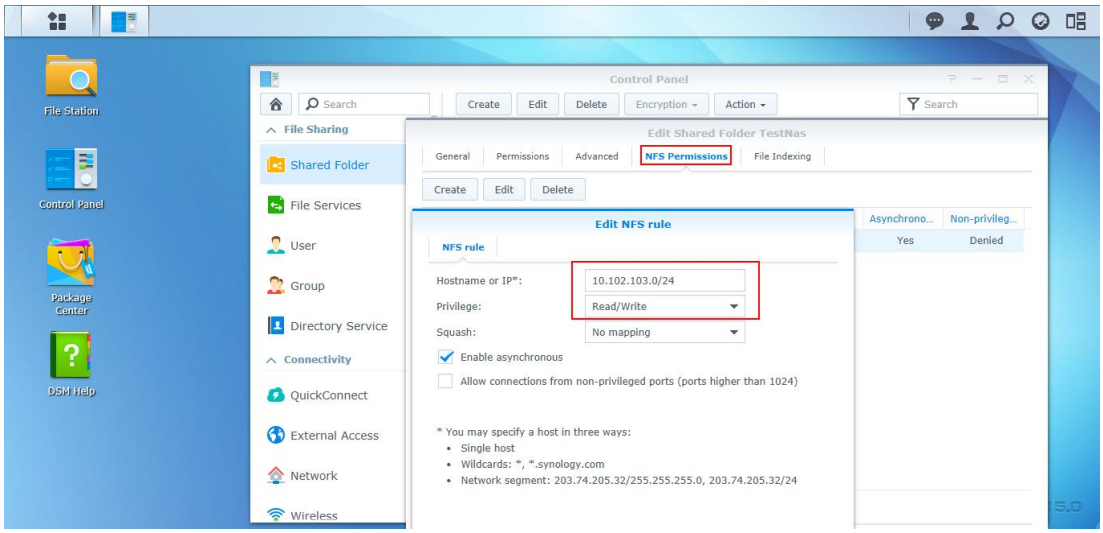
2. Click Control Panel, and in the pop-up message box, click File Services. Under Win/Mac/NFS tab, enable the NFS by tick the box in front of Enable NFS and click Apply to save the settings.



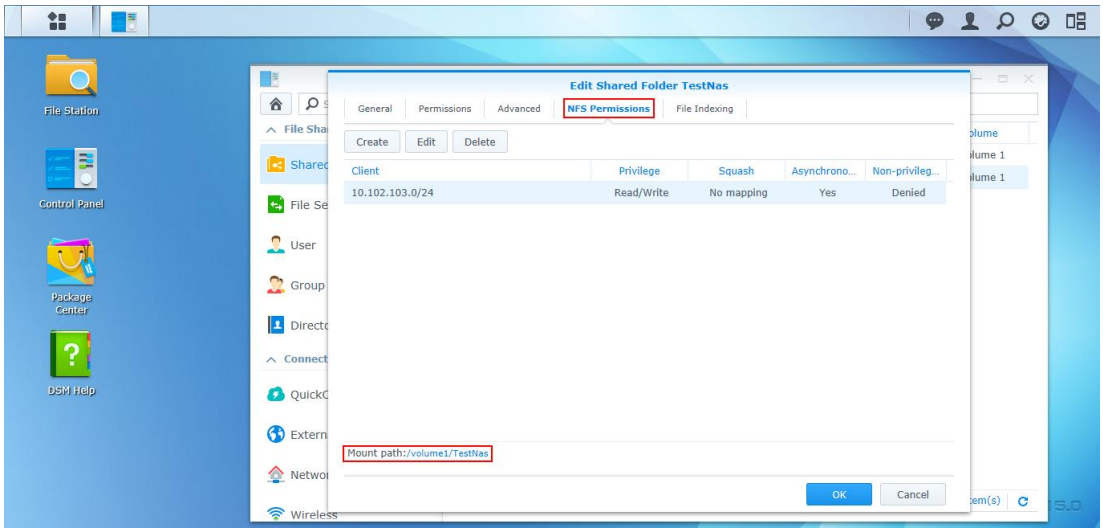
3. **Create a Shared Folder:** Then click Shared Folder and create a shared folder. In this case, we named it "TestNas" and click OK.



4. Then go to NFS Permissions tab and click Create button. In pop-up message box, enter the IP address. In this case, my IP address is 10.102.103.x, so I entered 10.102.103.0/24 (***Note: /24*** means that the subnet mask is 255.255.255.0). And then all the IP cameras in this segment can be mounted on this directory. Please also select ***No mapping*** for ***Squash*** option. Click OK to save the settings.

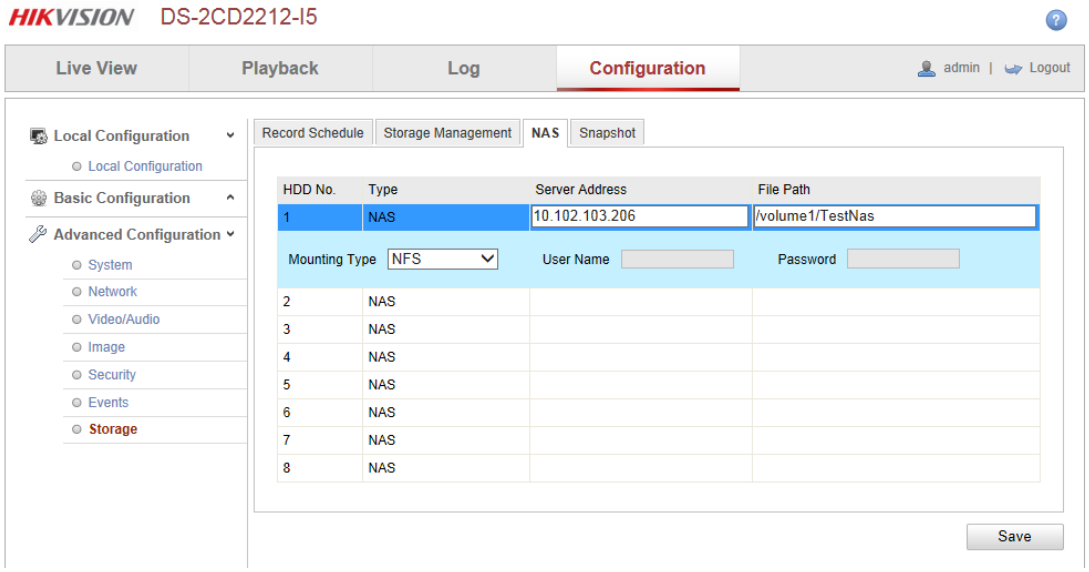


5. And under NFS permission tab, you will see the mount path (file path) is /volume1/TestNas

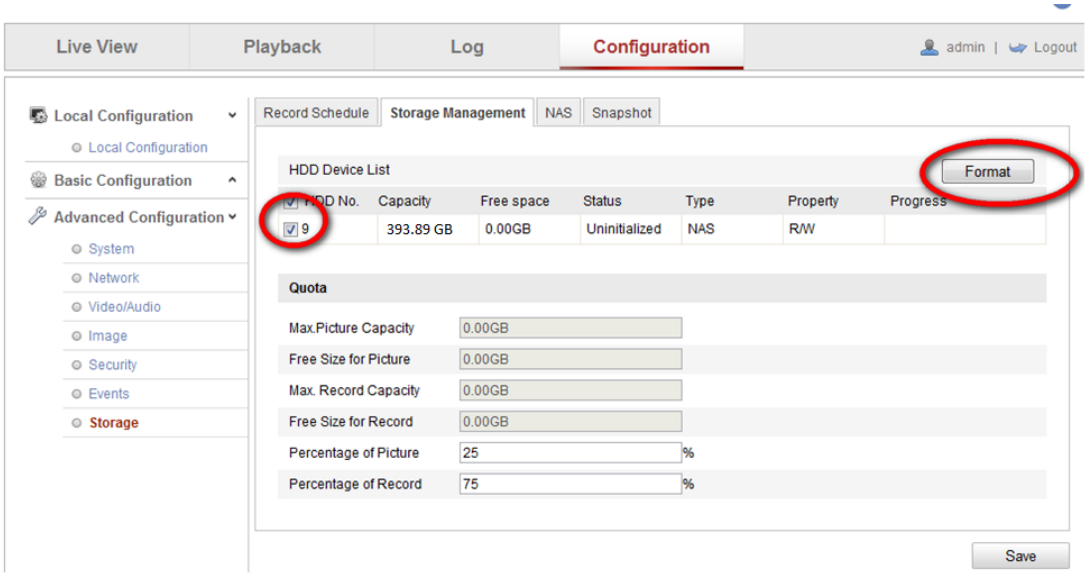


6. **Add NAS to an IP camera:** Go to web client of DS-2CD2112-I5 and select NFS as the mounting type and input the server address and file path, then click save.

Note: NFS mounting type does not require user name and password.

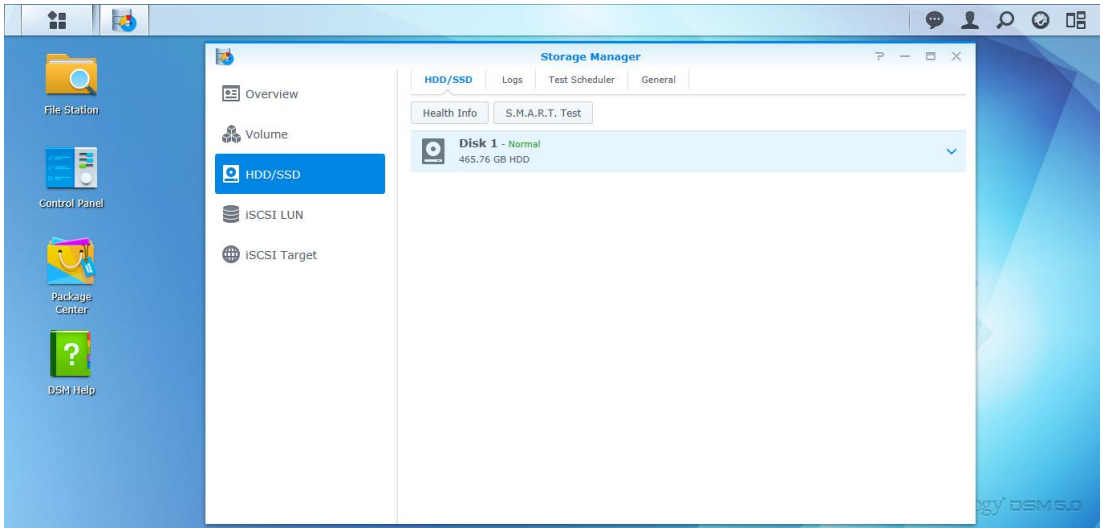


7. Go back to Storage Management, tick the checkbox of the HDD No. and click Format. After it is formatted, the NAS can be used for recording.

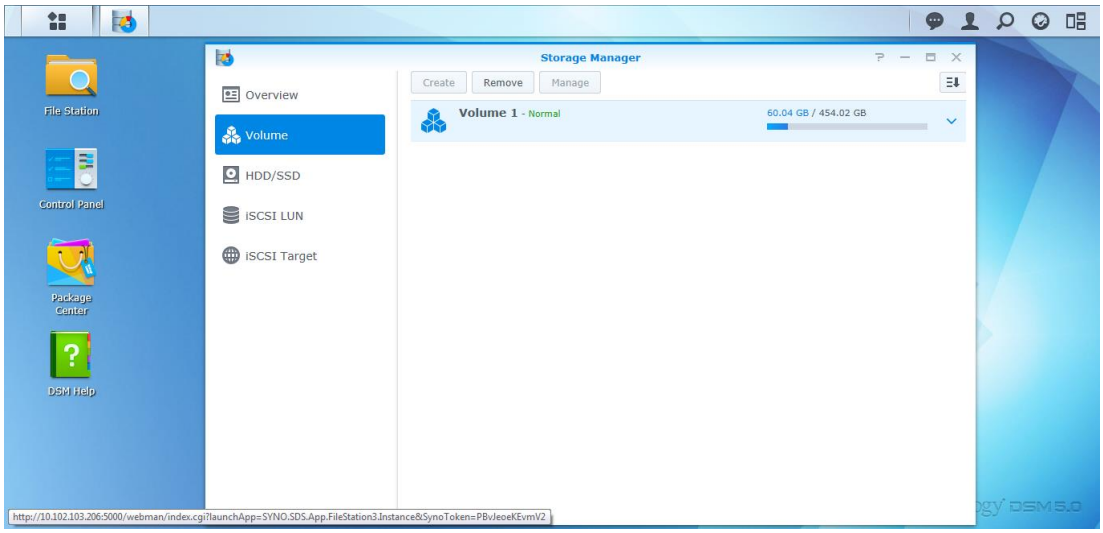


2. Notes of using NFS mount type on DS112j

1. DS112j only supports adding one HDD so it does not support disk group management as shown in the figure below.



2. DS112j only supports creating one volume (as shown in the figure below) and a volume can only be attached to one IP camera when using NFS mount type. There might be confliction that causes HDD error and video loss if a volume is attached to more than one IP camera.

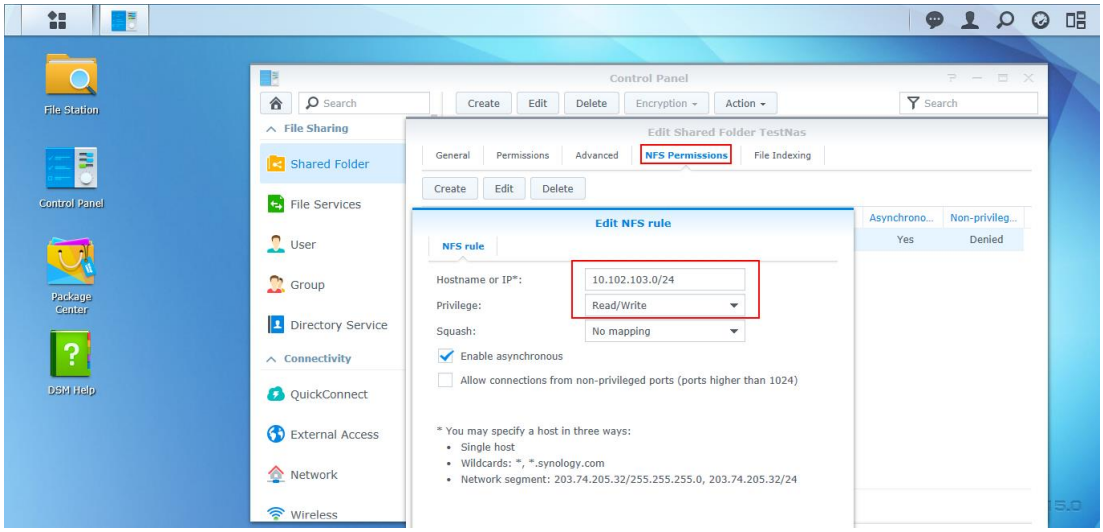


3. A shared folder can be only attached to one IP camera. There might be confliction that causes HDD error and video loss if a shared folder is attached to more than one IP camera.

4. When using NFS mount type, a shared folder will use up all the space in a volume, so it is suggested that creating only one shared folder in a volume for only one IP camera to use.

5. NFS mount type does not require user name/password when it is attached to an IP camera, so there is no need to create user on the Synology NAS as well.

6. When assign the NFS permission for NFS mount type, please select ***No mapping*** for ***Squash*** option as shown in the figure below.

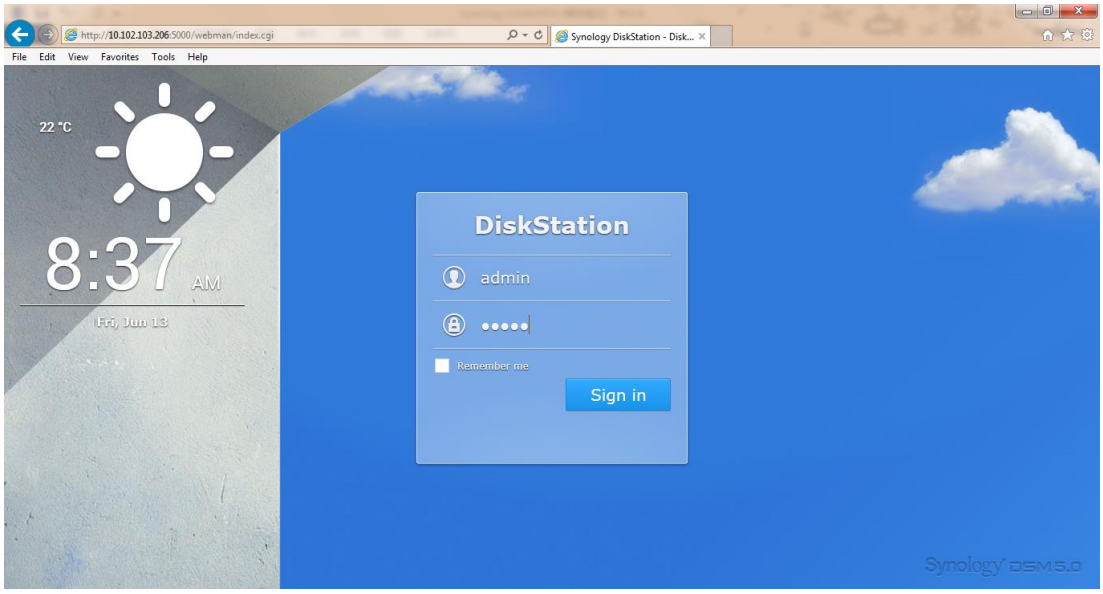


7. When using NFS mount type, the file path format filled in an IP camera is **/volume *id*/*name of shared folder***. For example, if the volume id is 1 and the name of shared folder is TestNas, the file path is /volume3/TestNas.

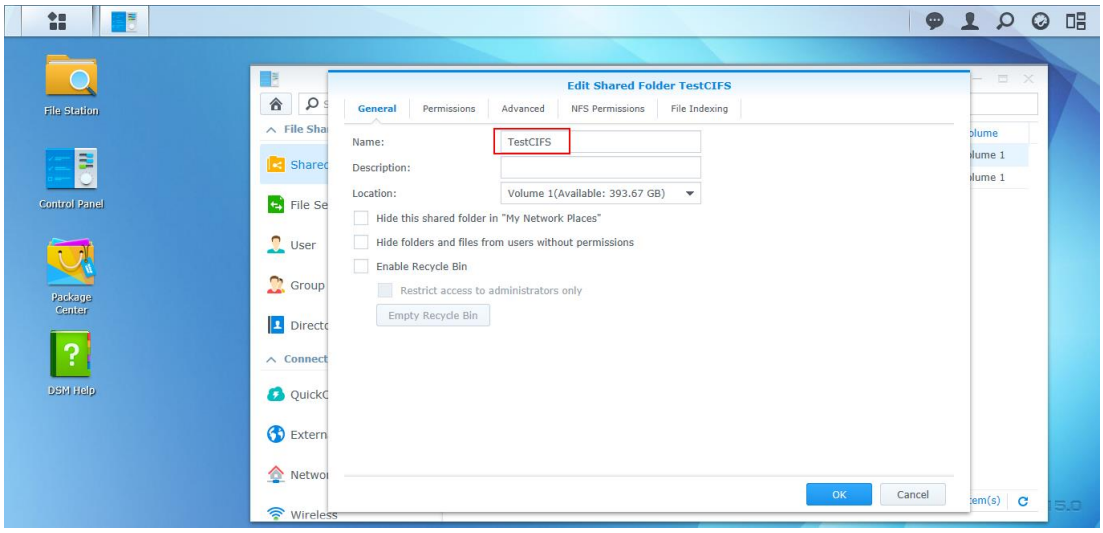
3. Adding DS112j to DS-2CD2112-I5 via CIFS Mount Type

Main Steps:

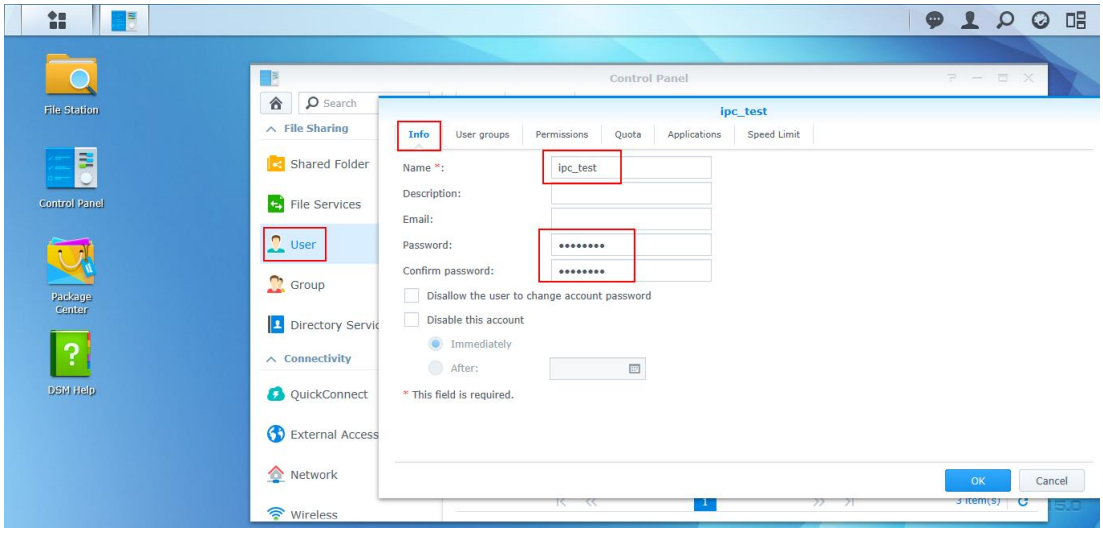
1. Log in the web page of the DS112j. The IP address of DS112j in US office is http://10.102.103.206:5000 and user name/password is admin/12345.



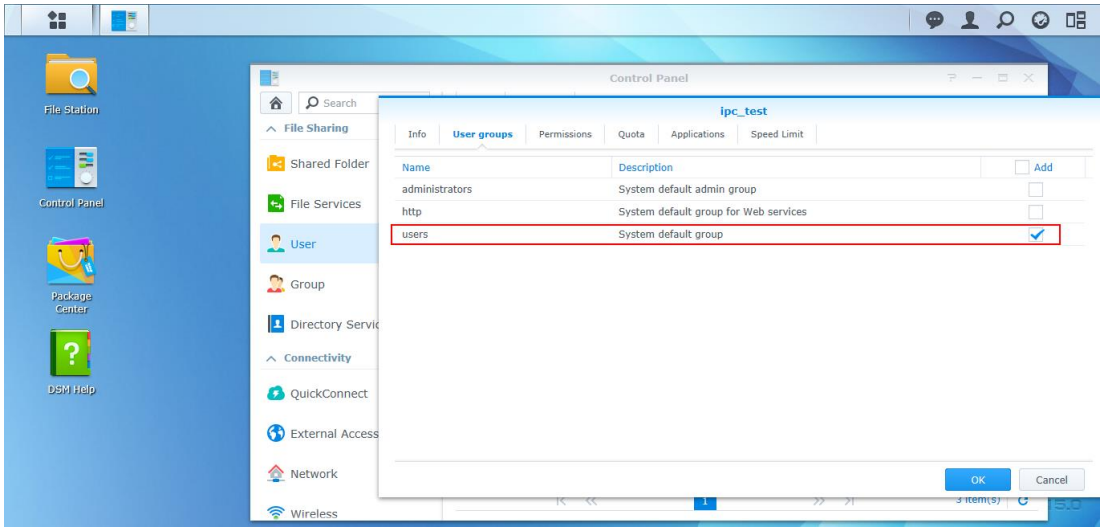
2. **Create a Shared Folder**: Click Control Panel, and in the pop-up message box, click Shared Folder. Input the name of the new folder and click OK. In this case, we named it "TestCIFS" under General tab and click OK. The file path is **/TestCIFS** in this case then.



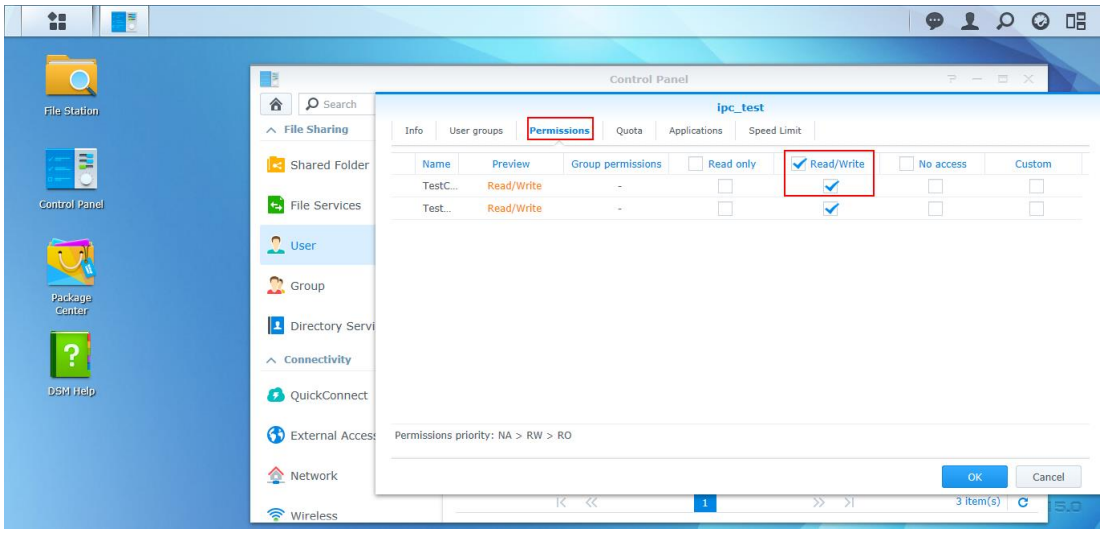
3. **Create a User**: Click Control Panel, and in the pop-up message box, click User and click Add button. Then you will see the message box below, input the user name and password under Info tab. In this case, ipc_test is the user name and 12345 is the password for the newly added user. Click OK to save the settings.



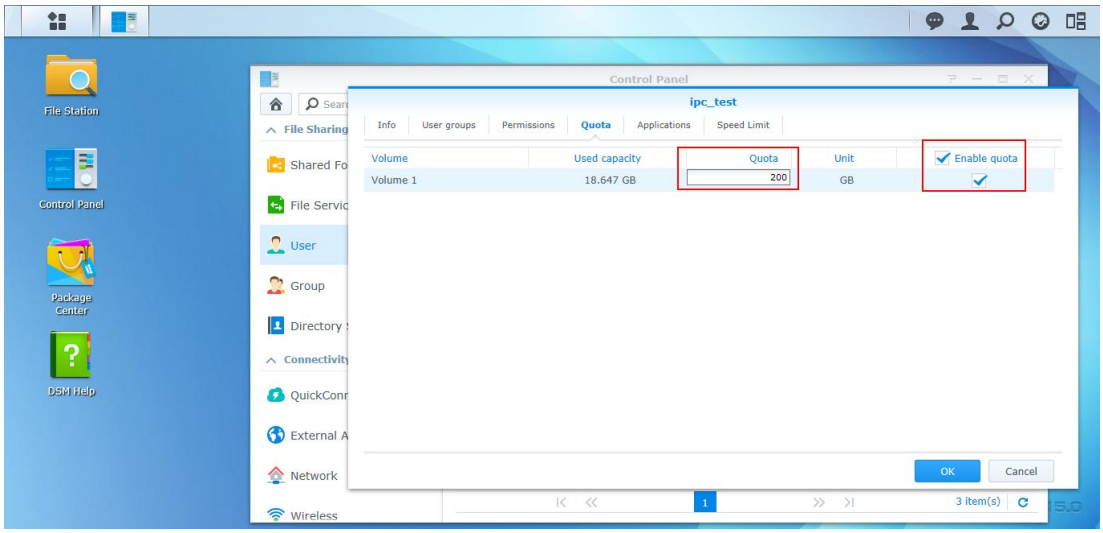
4. Then go to User groups tab and select users by ticking the box on the right side. Click OK to go to next step.



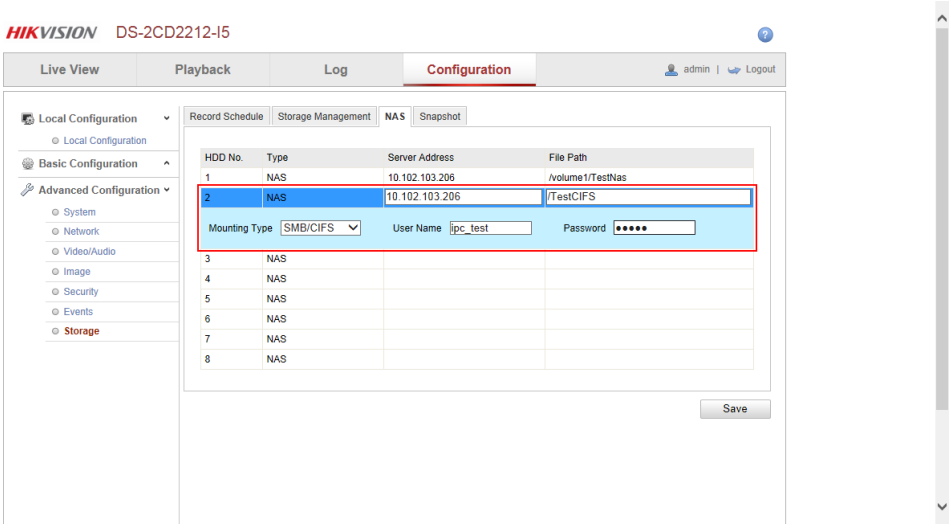
5. Go to Permissions and assign the Read/Write permission of TestCIFS folder to the newly added user – ipc_test and click OK.



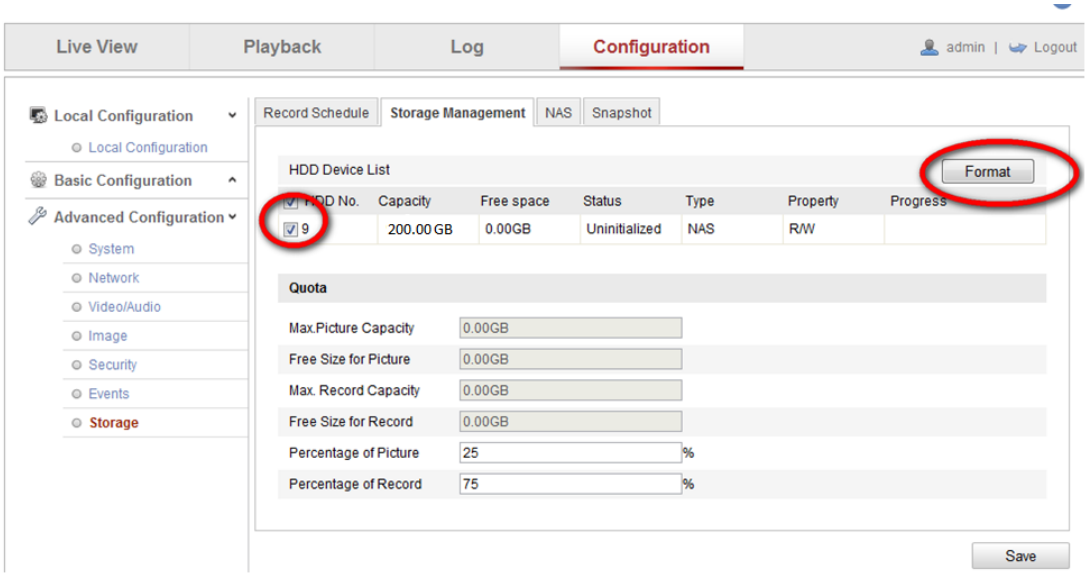
6. In the following interface, you can configure the upper limit of the storage space. Quota control is only valid when using CIFS protocol and quota size cannot be zero or empty (For NFS protocol, it is invalid). In this case, we tick the checkbox of Enable Quota, and enter the number 200, then the user ipc_test is able to use 200G space on the volume 1. If you want the ipc_test to use all the storage space of the volume 1, you can leave the Enable Quota unchecked which is as known as No Quota Mode. After configuration, click OK to finish.



7. **Add NAS to an IP camera:** In the web client of DS-2CD2212-I5, select SMB/CIFS as the mounting type and input the file path, user info and server address, and then click save.

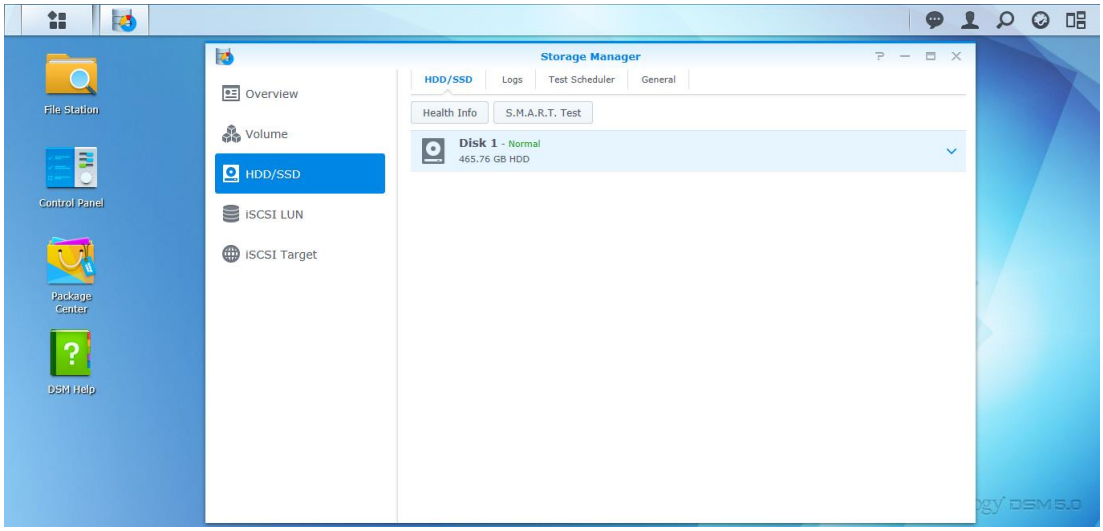


8. Go back to Storage Management, tick the checkbox of the HDD No. and click Format. After it is formatted, the HDD can be used for recording.

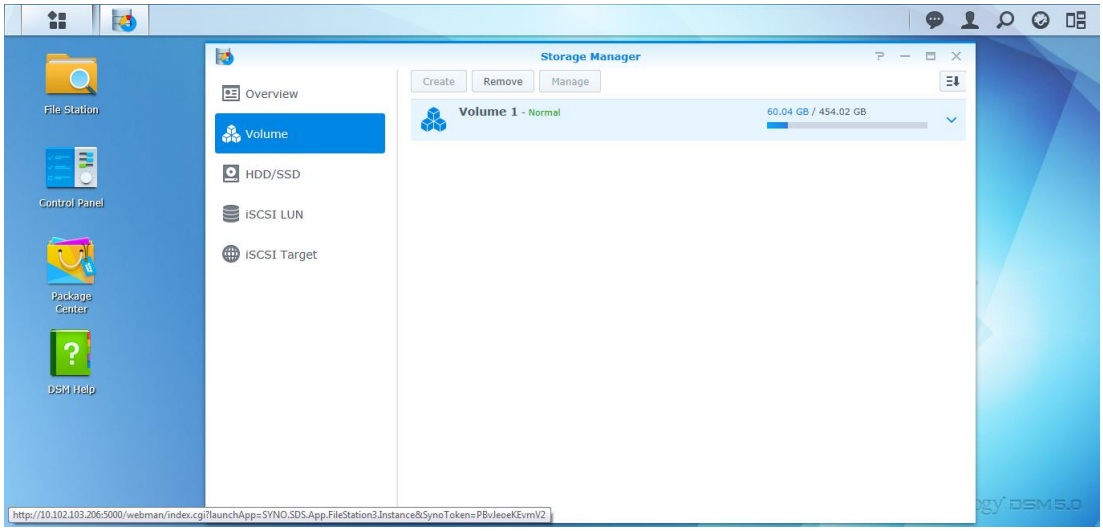

Live View
Playback
Log
Configuration
admin | Logout
Local Configuration
Local Configuration
Basic Configuration
Advanced Configuration
System
Network
Video/Audio
Image
Security
Events
Storage
Record Schedule
Storage Management
NAS
Snapshot
HDD Device List
Format
HDD No.
Capacity
Free space
Status
Type
Property
Progress
9
200.00 GB
0.00GB
Uninitialized
NAS
R/W
Quota
Max.Picture Capacity
0.00GB
Free Size for Picture
0.00GB
Max. Record Capacity
0.00GB
Free Size for Record
0.00GB
Percentage of Picture
25
%
Percentage of Record
75
%
Save

4. Notes of using CIFS mount type on DS112j:

1. DS112j only supports adding one HDD so it does not support disk group management as shown in the figure below.



2. DS112j only supports creating one volume (as shown in the figure below). If you want to attach more than one IP camera to a volume, please create multiple shared folders and users on DS112j. Note that quota mode must be enabled on every single user and the total quota size of all users must be smaller than the volume size. After that you should assign each shared folder to each user and then input each shared folder (file path) and user info in the web client of each IP camera.



3. A shared folder can be only attached to one IP camera. There might be confliction that causes HDD error and video loss if a shared folder is attached to more than one IP camera.

4. In quota mode, if the quota size of a user is changed, you have to format the HDD again on the web client of

the IP camera before use it again.

5. CIFS mount type requires user name/password when it is attached to an IP camera, so you need to create a user on the Synology NAS.

6. When using CIFS mount type, the file path format filled in an IP camera is /***name of shared folder***. For example, if the name of shared folder is **TestCIFS**, the file path is **/TestCIFS**.