



Milesight-Troubleshooting

How to use NAS on Milesight Network Camera

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1. What is NAS?

NAS(Network-Attached Storage) is dedicated file storage that enables multiple users and heterogeneous client devices to retrieve data from centralized disk capacity. Users on a local area network (LAN) access the shared storage via a standard Ethernet connection.

Advantages of using NAS:

The key benefits of network-attached storage are mainly speed and convenience. Instead of a hard drive connecting to your computer, NAS connects to your wireless router-enabling multiple users from multiple devices to access the files on the network. A NAS storage appliance is a computing device that can be attached anywhere on the network, primarily to store files. NAS solutions are nothing more than dedicated file servers.

Disadvantages of using NAS:

NAS appliances share the network with their computing counterparts and hence the NAS solution consumes more bandwidth from the network. Also, the performance of the NAS will depend upon the amount of bandwidth available.

2. How to create NAS ?

The two ways which Milesight Network Cameras supported are NFS and SMB/CIFS.

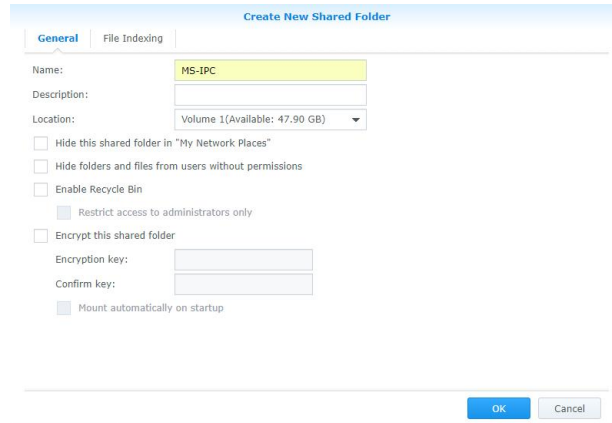
2.1 NFS

2.1.1 Physical NAS

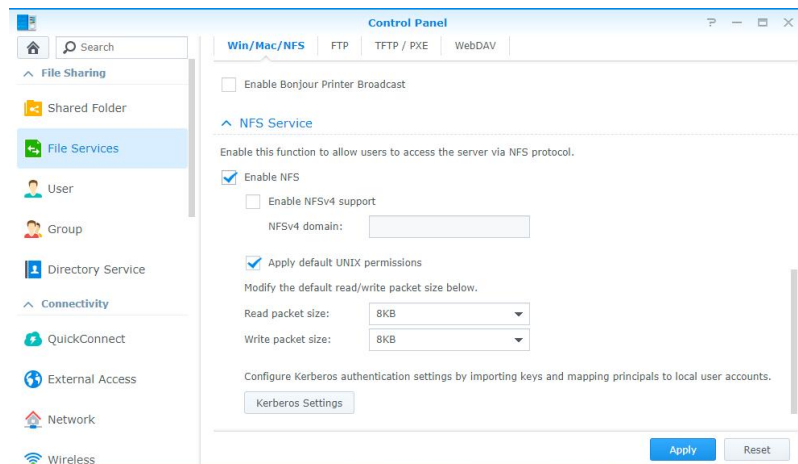
If you have a physical NAS , **take Synology as an example**, you need to configure as follow.

- Create a shared folder

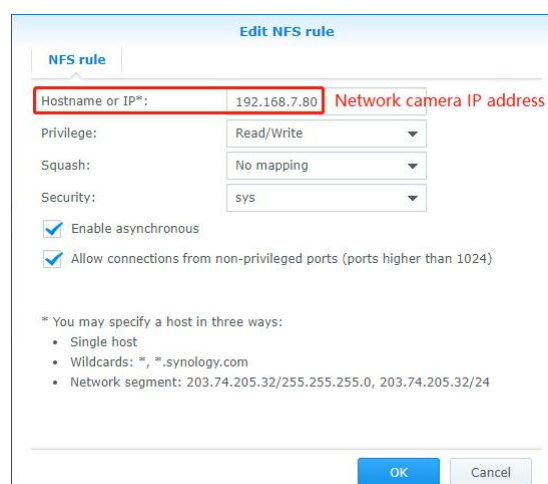
Go to “Control Panel”→ “Shared Panel”→ “Create”.



- Enable NFS Service and give NFS permission to the Network Camera
Go to “Control Panel”→ “File Services”→ “Win/Mac/NFS”



Go to “Shared Folder”→ “Edit”→ “NFS Permissions”



Note: Enable “Allow connection from non-privileged ports(ports higher than 1024)”

2.1.2 Non-Physical NAS

If you **do not have a physical NAS**, you can create a NAS in Linux, **take Ubuntu as a example**.

Note: The version of the Ubuntu i used to test is **18.04**

- Create a root user

1. # sudo passwd
2. # su

```
sky@sky-virtual-machine:~$ sudo passwd
[sudo] password for sky:
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
sky@sky-virtual-machine:~$ su
Password:
root@sky-virtual-machine:/home/sky#
```

- System update

apt update

```
root@sky-virtual-machine:/home/sky# apt update
Get:1 http://cn.archive.ubuntu.com/ubuntu bionic InRelease [242 kB]
Get:2 http://cn.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:3 http://cn.archive.ubuntu.com/ubuntu bionic-backports InRelease [74.6 kB]
Get:4 http://cn.archive.ubuntu.com/ubuntu bionic/main amd64 Packages [1,019 kB]
Get:5 http://cn.archive.ubuntu.com/ubuntu bionic/main i386 Packages [1,007 kB]
Get:6 http://cn.archive.ubuntu.com/ubuntu bionic/main Translation-en [516 kB]
Get:7 http://cn.archive.ubuntu.com/ubuntu bionic/main amd64 DEP-11 Metadata [477 kB]
Get:8 http://security.ubuntu.com/ubuntu bionic-security InRelease [83.2 kB]
Get:9 http://cn.archive.ubuntu.com/ubuntu bionic/main DEP-11 48x48 Icons [118 kB]
Get:10 http://cn.archive.ubuntu.com/ubuntu bionic/main DEP-11 64x64 Icons [245 kB]
Get:11 http://cn.archive.ubuntu.com/ubuntu bionic/restricted i386 Packages [9,156 B]
Get:12 http://cn.archive.ubuntu.com/ubuntu bionic/restricted amd64 Packages [9,184 B]
Get:13 http://cn.archive.ubuntu.com/ubuntu bionic/restricted Translation-en [3,584 B]
Get:14 http://cn.archive.ubuntu.com/ubuntu bionic/universe amd64 Packages [8,570 kB]
Get:15 http://security.ubuntu.com/ubuntu bionic-security/main i386 Packages [171 kB]
Get:16 http://cn.archive.ubuntu.com/ubuntu bionic/universe i386 Packages [8,531 kB]
```

- Set up Static IP

For different versions of Ubuntu, the way to set a static IP address is different and unable to explain the setup method for all versions here, so please search for how to modify the static IP address for your Ubuntu version

- Install NFS

apt-get install nfs-kernel-server

```
root@sky-virtual-machine:/home/sky# apt-get install nfs-kernel-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
nfs-kernel-server is already the newest version (1:1.3.4-2.1ubuntu5).
0 upgraded, 0 newly installed, 0 to remove and 474 not upgraded.
```

- Create Shared projects

cd /home/sky

mkdir nfs_shared (Note: You can create the folder in different path as you want.)

chmod 777 -R nfs_shared

```

root@sky-virtual-machine:/home/sky# cd /home/sky
root@sky-virtual-machine:/home/sky# mkdir nfs_shared
root@sky-virtual-machine:/home/sky# chmod 777 -R nfs_shared
root@sky-virtual-machine:/home/sky#

```

- Modify the NFS configuration file

```
# vi /etc/exports
```

```
root@sky-virtual-machine:/home/sky# vi /etc/exports
```

Insert content

```
# /home/sky/nfs_shared *(rw,sync,no_root_squash,no_subtree_check)
```

```

File Edit View Search Terminal Help
# /etc/exports: the access control list for filesystems which may be exported
#               to NFS clients.  See exports(5).
#
# Example for NFSv2 and NFSv3:
# /srv/homes      hostname1(rw,sync,no_subtree_check) hostname2(ro,sync,no_sub
tree_check)
#
# Example for NFSv4:
# /srv/nfs4       gss/krb5i(rw,sync,fsid=0,crossmnt,no_subtree_check)
# /srv/nfs4/homes gss/krb5i(rw,sync,no_subtree_check)
/home/sky/nfs_shared *(rw,sync,no_root_squash,no_subtree_check)

```

- Start the service

```
# service portmap restart
```

```
# service nfs-kernel-server restart
```

```

root@sky-virtual-machine:/home/sky# service portmap restart
root@sky-virtual-machine:/home/sky# service nfs-kernel-server restart

```

2.2 SMB/CIFS

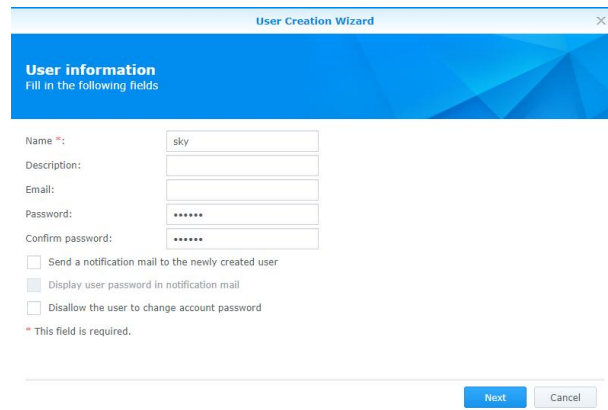
2.2.1 Physical NAS

If you have a physical NAS , **take Synology as an example**, you need to configure as follow.

- Create a user

Now NAS has only two users, admin and guest who have the highest privilege. Do not use the admin user as the user to access the daily files if there is no special case. Therefore, you need to create other users.

Go to “Control Panel”→ “User”→ “Create”.



User Creation Wizard

User information
Fill in the following fields

Name *: sky

Description:

Email:

Password: *****

Confirm password: *****

☐ Send a notification mail to the newly created user

☐ Display user password in notification mail

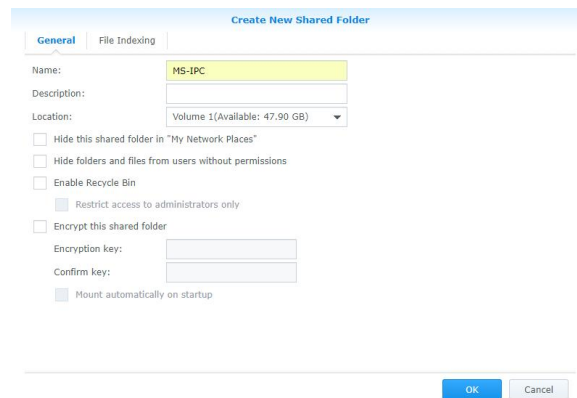
☐ Disallow the user to change account password

* This field is required.

Next Cancel

- Create a shared folder

Go to “Control Panel”→ “Shared Panel”→ “Create”.



Create New Shared Folder

General File Indexing

Name: MS-IPC

Description:

Location: Volume 1 (Available: 47.90 GB)

☐ Hide this shared folder in “My Network Places”

☐ Hide folders and files from users without permissions

☐ Enable Recycle Bin

☐ Restrict access to administrators only

☐ Encrypt this shared folder

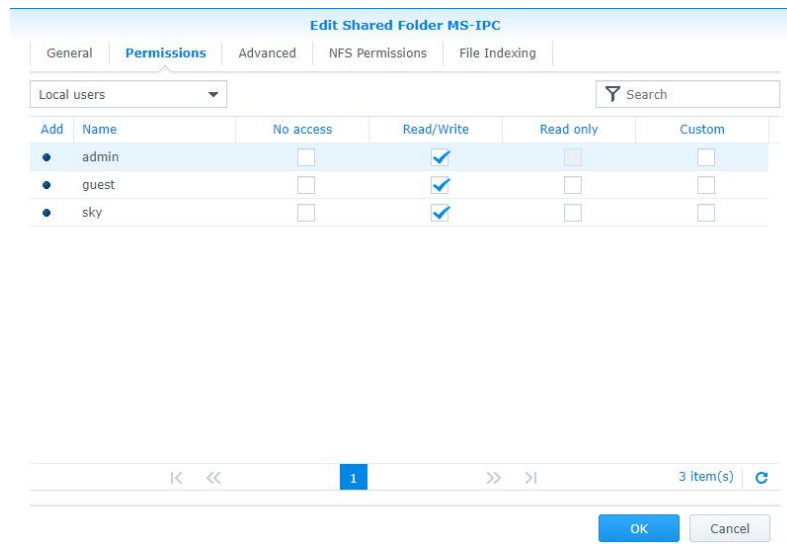
Encryption key:

Confirm key:

☐ Mount automatically on startup

OK Cancel

- Setting permissions: “Shared Panel”→ “Edit”→ “Permissions”.



Edit Shared Folder MS-IPC

General **Permissions** Advanced NFS Permissions File Indexing

Local users Search

Add	Name	No access	Read/Write	Read only	Custom
•	admin	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	guest	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	sky	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1 3 item(s)

OK Cancel

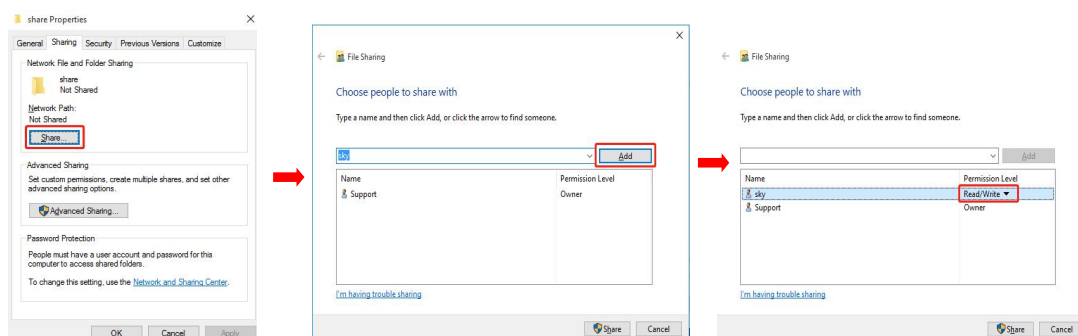
2.2.2 Non-Physical NAS

If you **do not have a physical NAS**, there are **two ways** to create a NAS if you want to add NAS by SMB/CIFS.

1) On PC side

- Select shared users and give permissions

Select the folder you want to share → “Properties”→ “Sharing”.



2) On Linux (take Ubuntu as an example)

Note: The version of the Ubuntu i used to test is 18.04

- Create a root user

```
1.# sudo passwd
```

```
2.# su
```

```
sky@sky-virtual-machine:~$ sudo passwd
[sudo] password for sky:
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
sky@sky-virtual-machine:~$ su
Password:
root@sky-virtual-machine:/home/sky#
```

- System update

```
# apt update
```

```
root@sky-virtual-machine:/home/sky# apt update
Get:1 http://cn.archive.ubuntu.com/ubuntu bionic InRelease [242 kB]
Get:2 http://cn.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:3 http://cn.archive.ubuntu.com/ubuntu bionic-backports InRelease [74.6 kB]
Get:4 http://cn.archive.ubuntu.com/ubuntu bionic/main amd64 Packages [1,019 kB]
Get:5 http://cn.archive.ubuntu.com/ubuntu bionic/main i386 Packages [1,007 kB]
Get:6 http://cn.archive.ubuntu.com/ubuntu bionic/main Translation-en [516 kB]
Get:7 http://cn.archive.ubuntu.com/ubuntu bionic/main amd64 DEP-11 Metadata [477 kB]
Get:8 http://security.ubuntu.com/ubuntu bionic-security InRelease [83.2 kB]
Get:9 http://cn.archive.ubuntu.com/ubuntu bionic/main DEP-11 48x48 Icons [118 kB]
Get:10 http://cn.archive.ubuntu.com/ubuntu bionic/main DEP-11 64x64 Icons [245 kB]
Get:11 http://cn.archive.ubuntu.com/ubuntu bionic/restricted amd64 Packages [9,156 B]
Get:12 http://cn.archive.ubuntu.com/ubuntu bionic/restricted i386 Packages [9,184 B]
Get:13 http://cn.archive.ubuntu.com/ubuntu bionic/restricted Translation-en [3,584 B]
Get:14 http://cn.archive.ubuntu.com/ubuntu bionic/universe amd64 Packages [8,570 kB]
Get:15 http://security.ubuntu.com/ubuntu bionic-security/main i386 Packages [171 kB]
Get:16 http://cn.archive.ubuntu.com/ubuntu bionic/universe i386 Packages [8,531 kB]
```

- Set up Static IP address:

For different versions of Ubuntu, the way to set a static IP address is different and unable to explain the setup method for all versions here, so please search for how to modify the static IP address for your Ubuntu version

- Install Samba

```
#apt-get install samba
```



```
root@sky-virtual-machine:/home/sky# apt-get install samba
Reading package lists... Done
Building dependency tree
Reading state information... Done
samba is already the newest version (2:4.7.6+dfsg~ubuntu-0ubuntu2.5).
0 upgraded, 0 newly installed, 0 to remove and 468 not upgraded.
```

- Create Shared projects

mkdir /home/share (Note: You can create the folder in different path as you want)

chmod 777 /home/share

```
root@sky-virtual-machine:/home/sky# mkdir /home/share
```

```
root@sky-virtual-machine:/home/sky# chmod 777 /home/share
```

- Modify the Samba configuration file

vi /etc/samba/smb.conf

```
root@sky-virtual-machine:/home/sky# vi /etc/samba/smb.conf
```

Insert content at the end

[share]

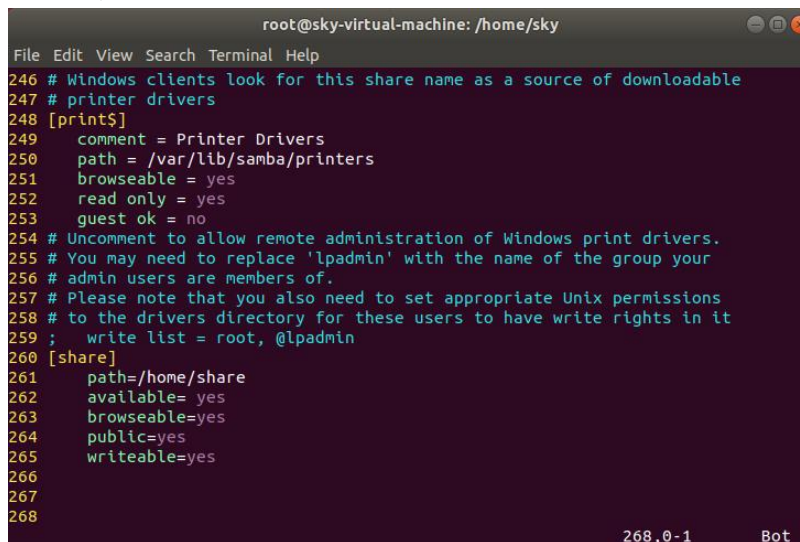
Path=/home/share

available=yes

browseable=yes

public=yes

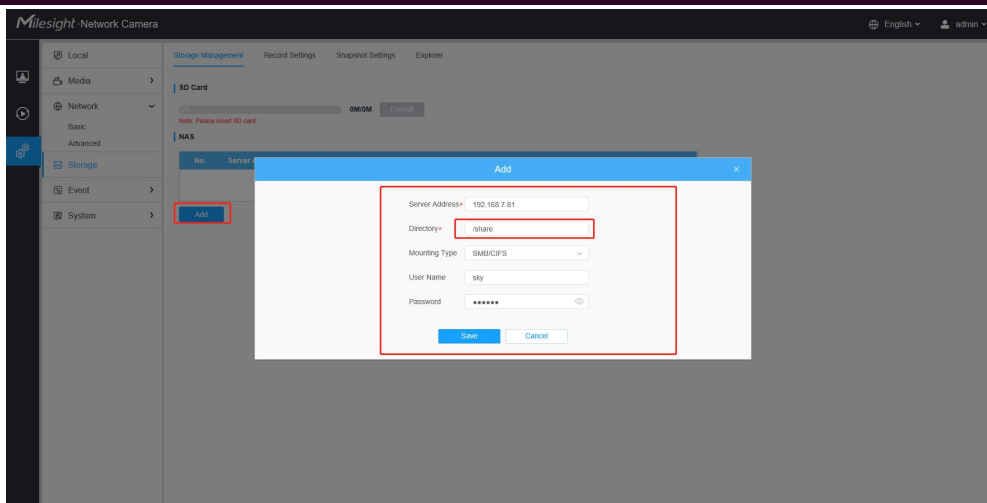
writable=yes



```
root@sky-virtual-machine: /home/sky
File Edit View Search Terminal Help
246 # Windows clients look for this share name as a source of downloadable
247 # printer drivers
248 [print$]
249     comment = Printer Drivers
250     path = /var/lib/samba/printers
251     browseable = yes
252     read only = yes
253     guest ok = no
254 # Uncomment to allow remote administration of Windows print drivers.
255 # You may need to replace 'lpadmin' with the name of the group your
256 # admin users are members of.
257 # Please note that you also need to set appropriate Unix permissions
258 # to the drivers directory for these users to have write rights in it
259 ; write list = root, @lpadmin
260 [share]
261     path=/home/share
262     available= yes
263     browseable=yes
264     public=yes
265     writeable=yes
266
267
268
268,0-1 Bot
```

Note: The file path you need to fill in on camera side is the Folder in parentheses [...], like **share** as shown above picture. You also can change the Folder name as you want.

```
# Uncomment to allow remote administration of Windows print drivers.
# You may need to replace 'lpadmin' with the name of the group your
# admin users are members of.
# Please note that you also need to set appropriate Unix permissions
# to the drivers directory for these users to have write rights in it
; write list = root, @lpadmin
[share]
    path=/home/share
    available= yes
    browseable=yes
    public=yes
    writeable=yes
```



- Add and enable Samba user

```
#smbpasswd -a sky
```

```
#smbpasswd -e sky
```

```
root@sky-virtual-machine:/home/sky# smbpasswd -a sky
New SMB password:
Retype new SMB password:
root@sky-virtual-machine:/home/sky# smbpasswd -e sky
Enabled user sky.
```

- Start the service

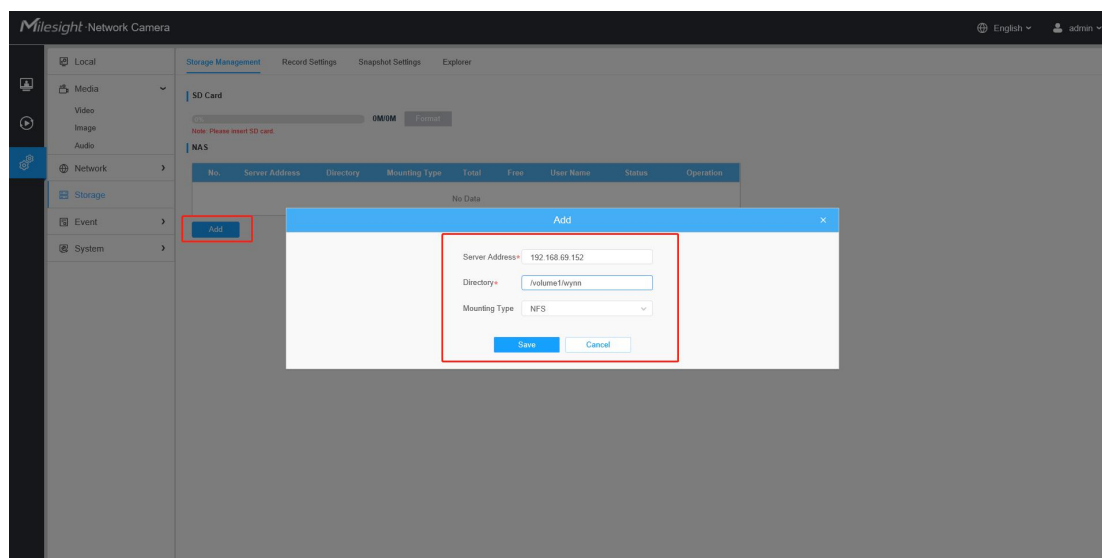
```
# service smb restart
```

```
root@sky-virtual-machine:/home/sky# service smb restart
```







3. How to add NAS to Milesight Network Camera?


3.1 NFS


1. Go to “Storage”→“Storage Management”, and input some information about the NAS.



2. Make sure the Status is “Online”.

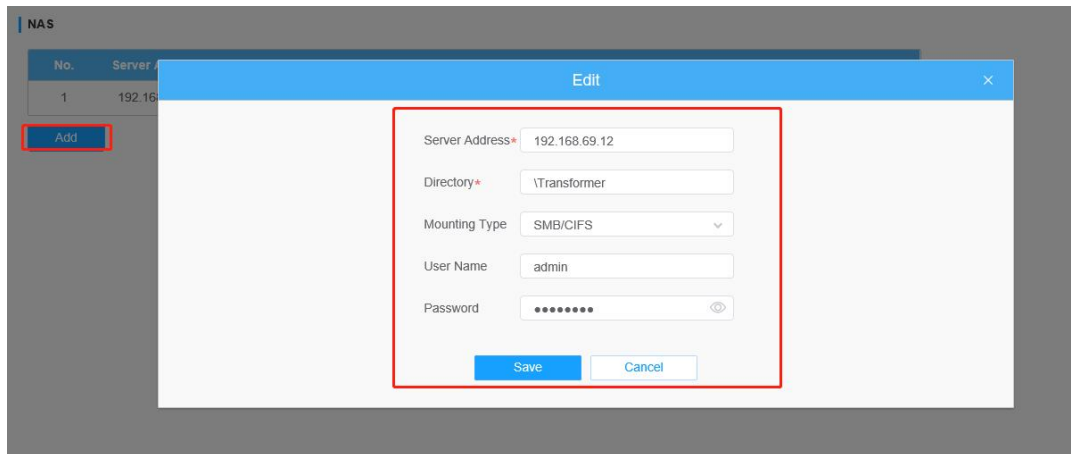
NAS								
No.	Server Address	Directory	Mounting Type	Total	Free	User Name	Status	Operation
1	192.168.69.152	/volume1/wynn	NFS	24.25G	16.49G		Online	  
2	192.168.69.115	/home/joey/nfs_shared	NFS	-	-		Unformatted	  

Note: If the Status is “Unformatted”, please click the button  format the NAS.

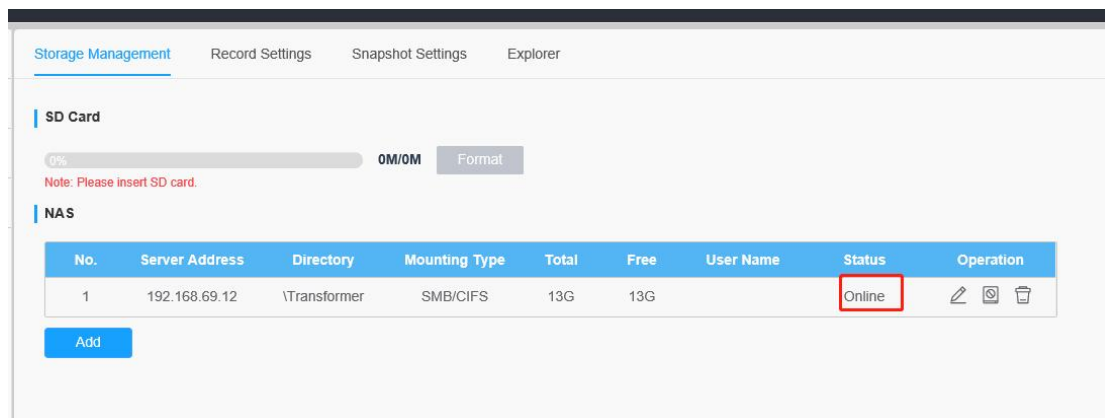
NAS								
No.	Server Address	Directory	Mounting Type	Total	Free	User Name	Status	Operation
1	192.168.69.152	/volume1/wynn	NFS	24.25G	16.49G		Online	  
2	192.168.69.115	/home/joey/nfs_shared	NFS	-	-		Unformatted	  

3.2 SMB/CIFS

1. Go to “Storage”→“Storage Management”, and input some information about the NAS.



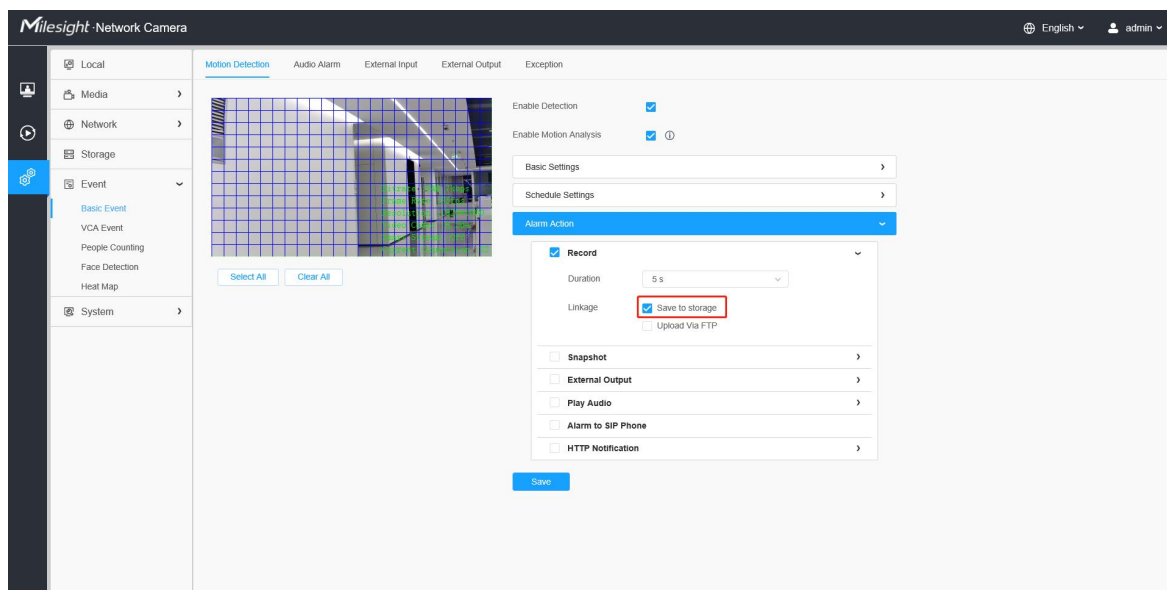
2. Make sure the Status is "Online".



4. How to use NAS on Milesight Network cameras?

After NAS setting, you can use it in Events. **Take Motion Detection as an example.**

Setting the Motion region and schedule first, then enable "Save Into Storage", choose the file format and save the setting.



Note: In the case of having both SD card and NAS, the file will be saved to NAS first when enable “Save into Storage”.

—————END—————