Using iSCSI NAS with NVR

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What is NAS

NAS (Network Attached Storage) provides a single storage device that is directly attached to a LAN and offers shared storage to all clients on the network. A NAS device is simple to install and easy to administer, providing a low-cost storage solution. However, it provides limited throughput for incoming data because it has only one network connection, which can become problematic in high-performance systems.

Benefit of NAS

When the amount of stored data and management requirements exceed the limitations of a direct-attached storage, a network-attached storage (NAS) allows for increased storage space, flexibility and recoverability.

Also, Centralized storage reduces administration and provides a high performance, flexible storage system for use in multi-server environments.

What is ISCSI NAS

iSCSI (Internet Small Computer System Interface), an Internet Protocol (IP)-based storage networking standard for linking data storage facilities. By carrying SCSI commands over IP networks, iSCSI is used to facilitate data transfers over intranets and to manage storage over long distances. iSCSI can be used to transmit data over local area networks (LANs), wide area networks (WANs).

The protocol allows clients (NVR Server, iSCSI initiator) to send SCSI commands (CDBs) to SCSI storage devices (iSCSI NAS, iSCSI Target) on remote servers. With the illusion of locally-attached disks, NVR server will recognize the iSCSI NAS as a local storage.
How to add iSCSI NAS as a local storage

Setup your iSCSI NAS device:

- Install an iSCSI NAS

Setup the iSCSI NAS device, Customer can purchase any NAS devices with iSCSI protocol.

- Create a iSCSI target

To let NVR server (iSCSI initiator) to connect with.

- Setup multiple users

To let multiple NVR servers access this iSCSI storage.
Setup your PC:

- Create an iSCSI initiator

To connect your NVR server to an iSCSI target, you need to first go to Control Panel and double click on the iSCSI Initiator.
When you see the dialog box below then answer “Yes” to start the iSCSI service every time the system boots up in the future.

When you see the dialog box below, answer “Yes” to unblock the iSCSI service from the Windows Firewall.

When the iSCSI Initiator Properties come up, click on the Discovery tab. Click on Add Portal.
Enter the IP address or DNS name of the iSCSI server when the Add Target Portal window appears, like this:

![Add Target Portal window](image)

(the port number of 3260 will already be there as this is the default iSCSI port number).

Click OK.

Go to the Targets tab and click Refresh. You should see the name of your iSCSI Target in the list.

Select your target server and click Log on.

Check to automatically restore this connection when the computer starts and click OK.

![Log On to Target window](image)

You should now see that you are connected.

Click OK to close the iSCSI Initiator Properties.

Now click on Administrative Tools, open Computer Management, and click on Storage -> Disk Management.

You will have to initialize the disk if it hasn’t been used before.
You should now see the new disk in your Disk Manager.

Right click on the disk and click on New Simple Volume.

Go through the steps of formatting it and assigning it a drive letter.

When you are done, your disk manager should look like this:
You can now access your shared iSCSI disk in My Computer as a drive letter, like this:
Setup your NVR:

Execute NVR ActiveSetup → System Setup → Storage Management
You should see the iSCSi Drive at the Available Drive column.

*Note: The sample device used is Synology DS-209+. We neither guarantee nor recommend specific manufacturer or device. Please contact NAS provider for details.