
How to expand iSCSI for Linux NVR

Application Notes

Version <1.0>



Technical Support Team

Preface

In this application guide, we are going to introduce how to setup the iSCSI storage device and how to add iSCSI device into Linux NVR

Our agenda is as below:

1. How to connect iSCSI storage and Linux NVR
2. Setting in iSCSI storage
3. Add on iSCSI storage into Linux NVR

1. How to connect iSCSI storage and Linux NVR

- This is iSCSI storage's back board.



- This is iSCSI storage's LAN port and it is based on for configuration purpose.



- These are iSCSI storage's Channel ports. One channel (one logical volume) will assign one IP address.



- ✘ All the network cable must connect GigaLAN Port from core switch.

2. Setting in iSCSI storage

- 2.1 Install SANWatch and log in.
- 2.2 Add new storage device.
- 2.3 Create new logical volume.
- 2.4 Create new partitions.
- 2.5 Host LUN Mapping.

2.1 Install SANWatch and log in

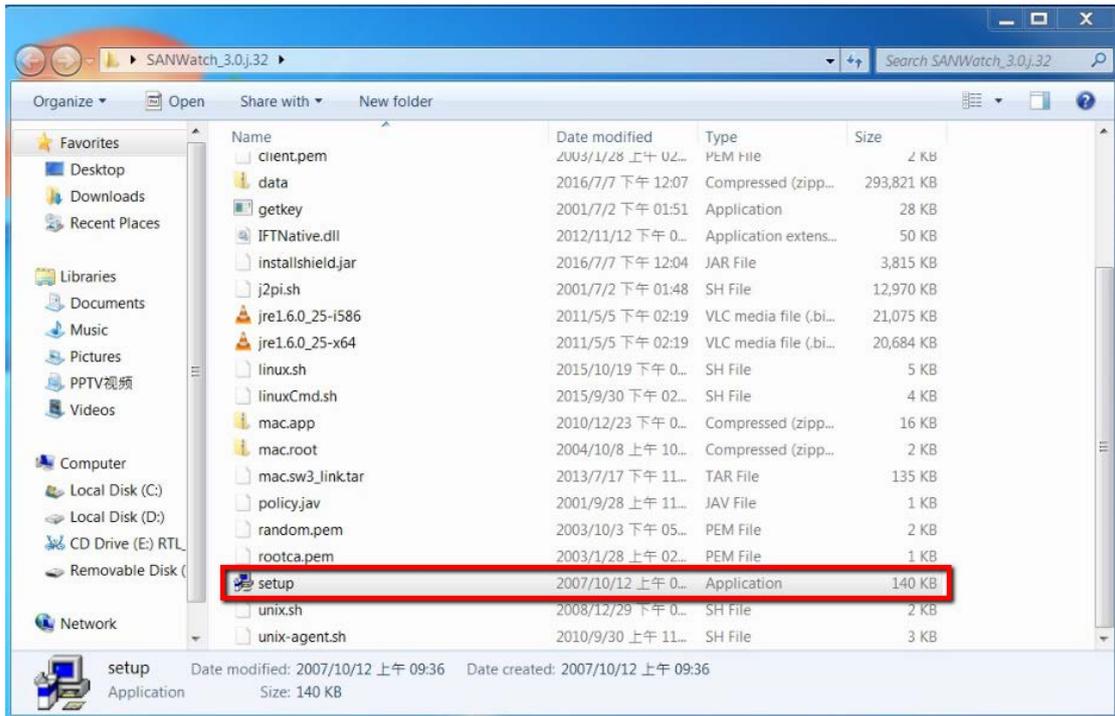
- SANWatch download link :

https://www.dropbox.com/home/Surveon/Public/Tool?preview=SANWatch_3.0.j.27.zip

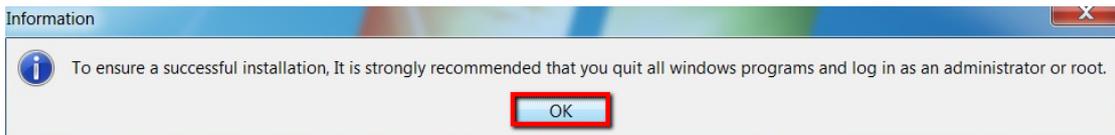
- Download the software and Unzip it.



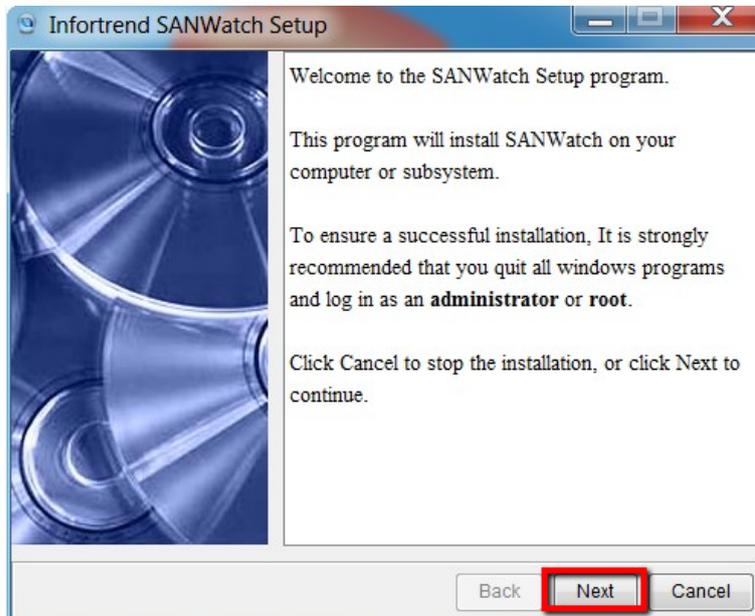
- Click "setup" to install it.



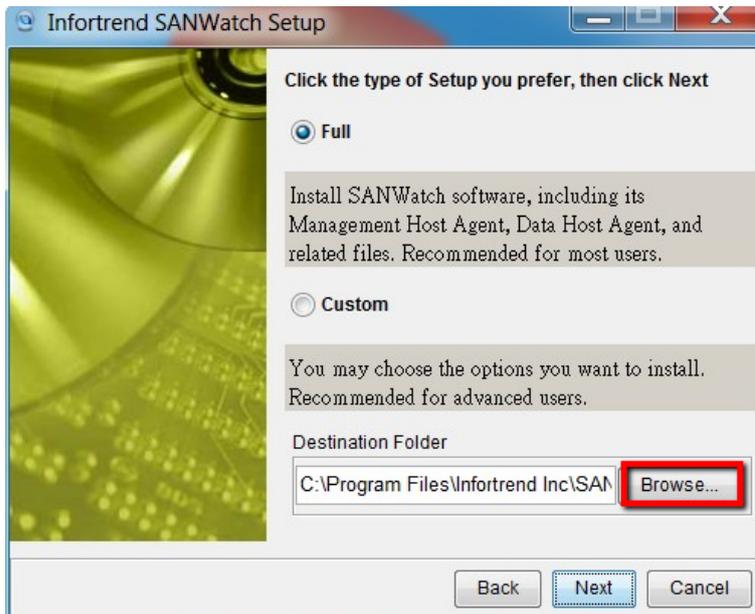
- Press "OK".



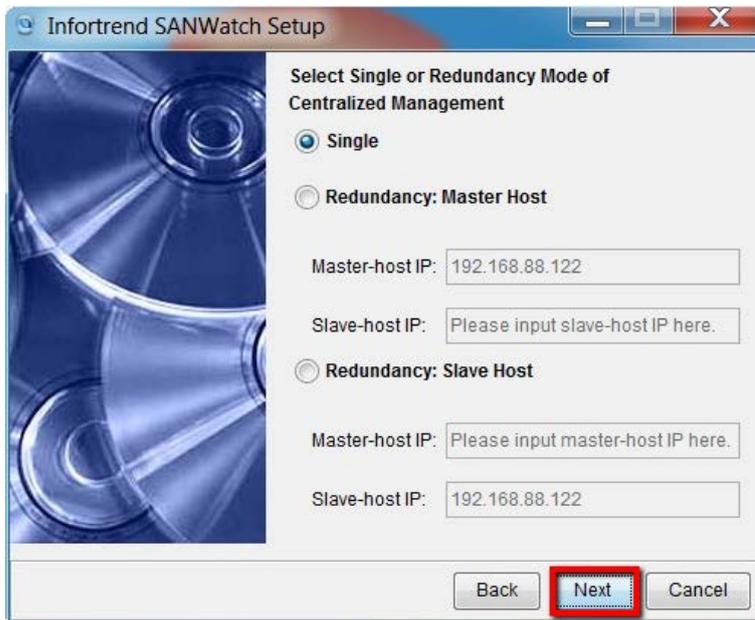
- Install it step by step.



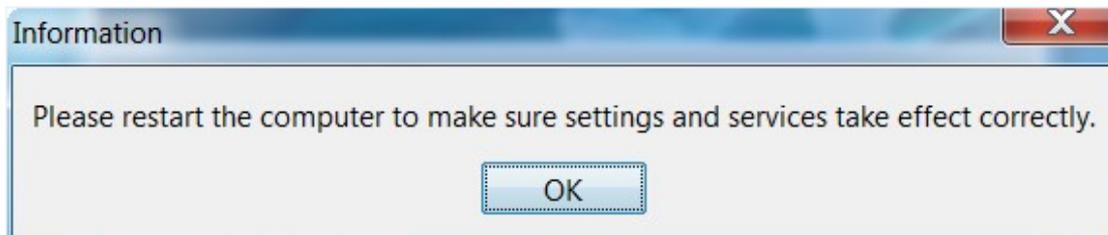
- In this step, you can press “Browse...” to select the path where you want to save it.



- Press “Next”.



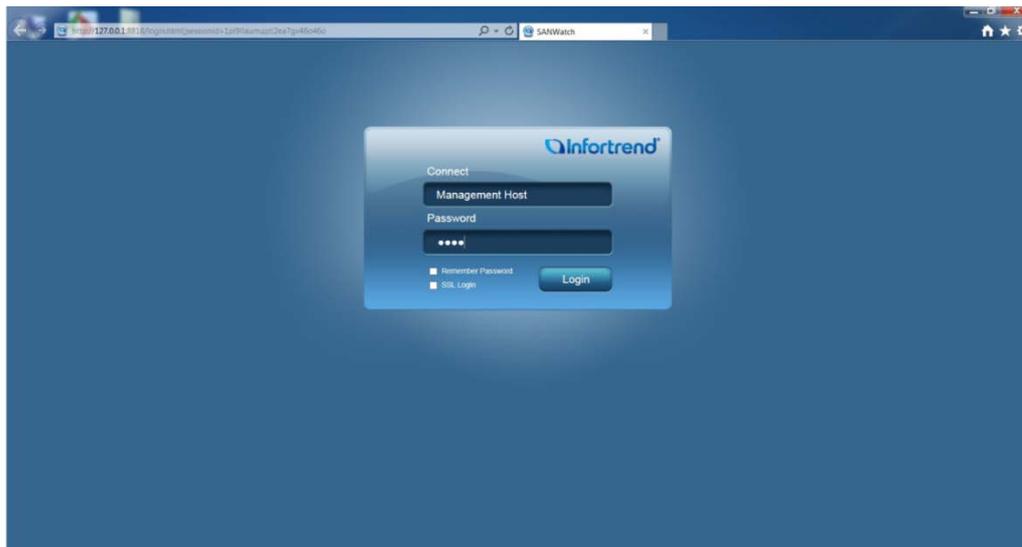
- After finished, it will show the information, close all the program and restart PC.



- After restart, press “SANWatch” on desktop.

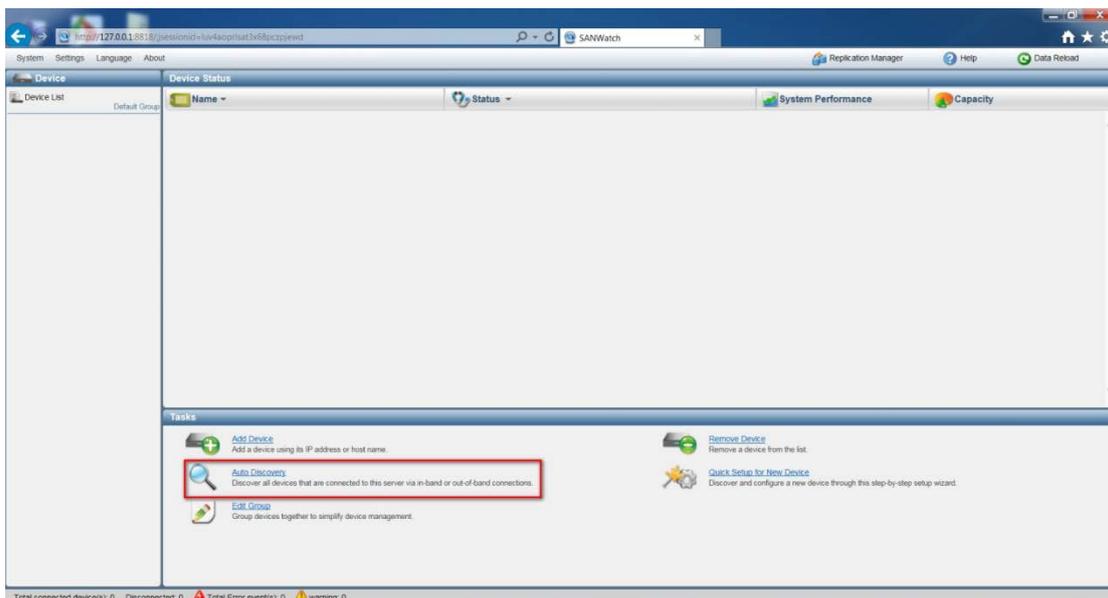


- Enter SANWatch device (default password is root).

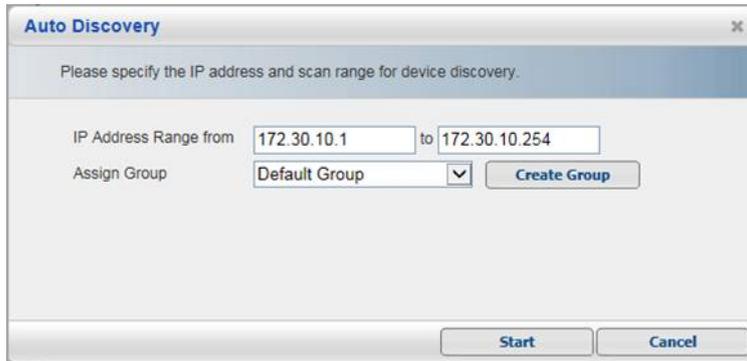


2.2 Add new storage device.

- User can press “Auto Discovery” to search your iSCSI device or choice “Add Device” to manually add on the iSCSI device.

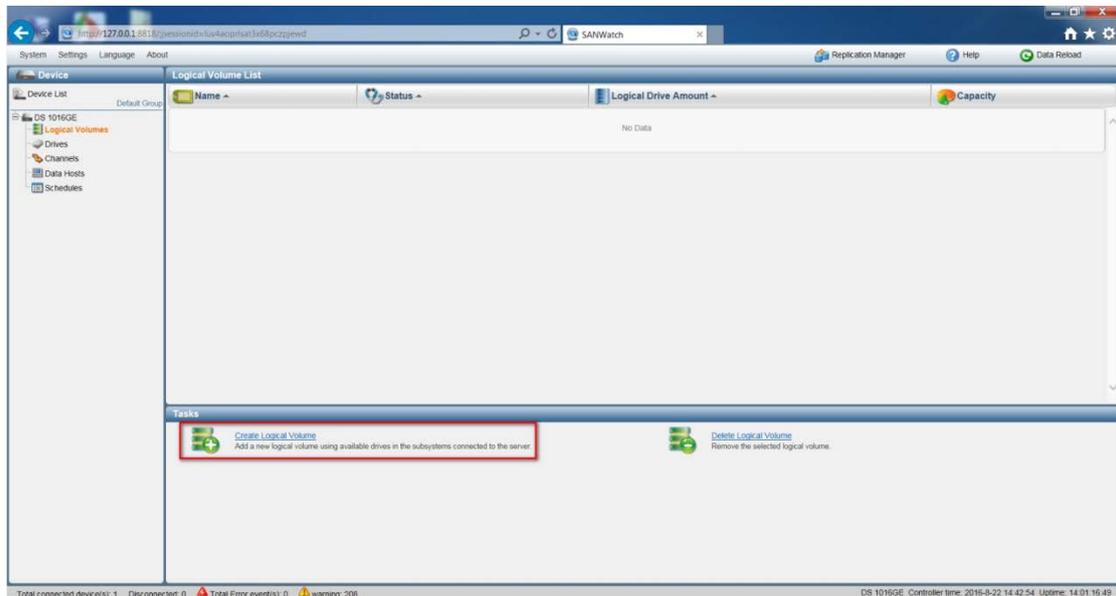


- For “Auto Discovery”, assign the scan range of IP address.



2.3 Create new logical volume.

- After add on the new storage device, click the storage and click Logical Volume to Create Logical Volume.



- Select the HDD and RAID Level for this new logical volume, and then choice “Next”.

Create Logical Volume

Create a logical volume and configure its parameters.

Logical Volume Name:

RAID

<input type="checkbox"/> Slot	Size	Type
<input checked="" type="checkbox"/> 1	931.25 GB	SATA
<input checked="" type="checkbox"/> 2	931.25 GB	SATA
<input checked="" type="checkbox"/> 3	931.25 GB	SATA
<input checked="" type="checkbox"/> 4	931.25 GB	SATA
<input type="checkbox"/> 5	931.25 GB	SATA
<input type="checkbox"/> 6	931.25 GB	SATA
<input type="checkbox"/> 7	931.25 GB	SATA
<input type="checkbox"/> 15	931.25 GB	SATA

Number of Member Drives: RAID Level:

Write Policy:

Stripe Size:

SED Security: Total Capacity: 1.81 TB

- Check the summary and press “OK” to close it.

Summary

View the summary of Quick Setup and confirm the parameters.

Logical Volume:

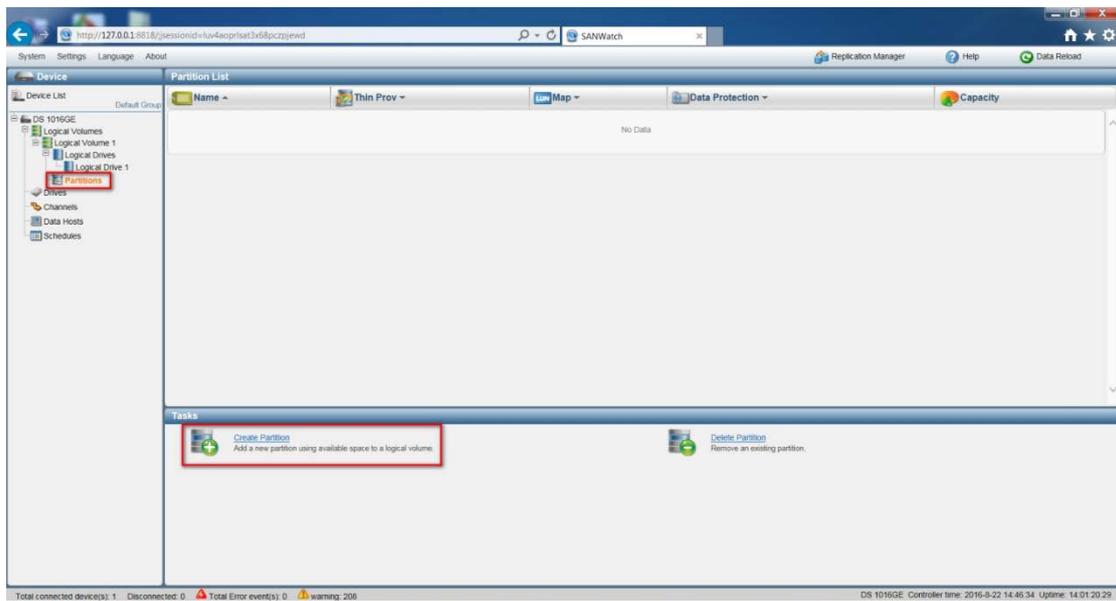
Logical Volume Name: Logical Volume 1
 Data Protection Level: Better Protection
 Number of Member Drives: 4
 Write Policy: Default
 Stripe Size: 128K
 SED Security: Disable
 Total Capacity: 1.81 TB
 Used / Available Drives: 4 / 4

Information

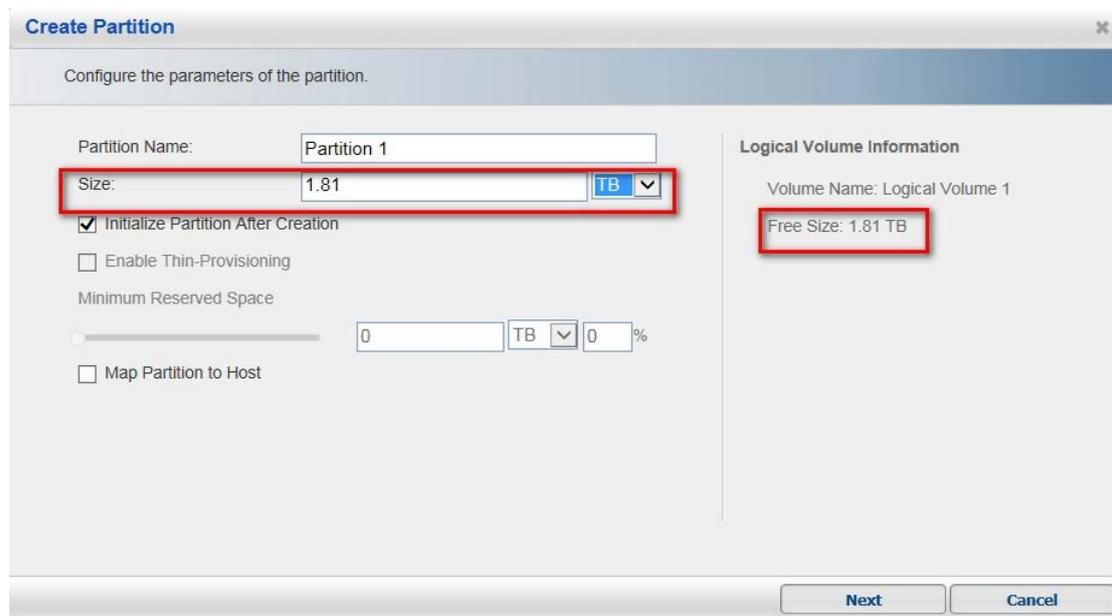
The logical drive has been created.

2.4 Create new partitions.

- In the new logical volume, choice “Partition” to Create Partition.



- Create a new partition and assign whole size for it.



The 'Create Partition' dialog box is shown, with the following fields and options:

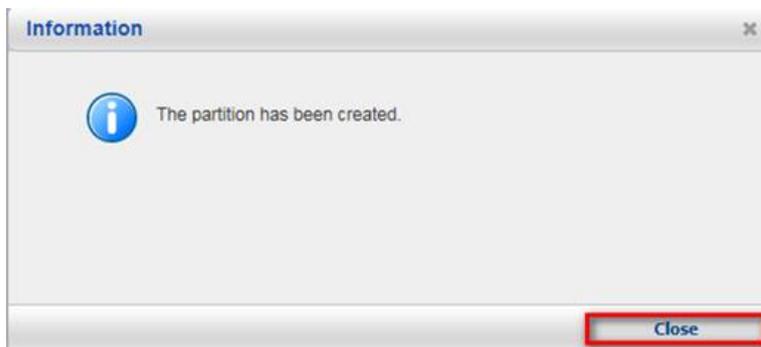
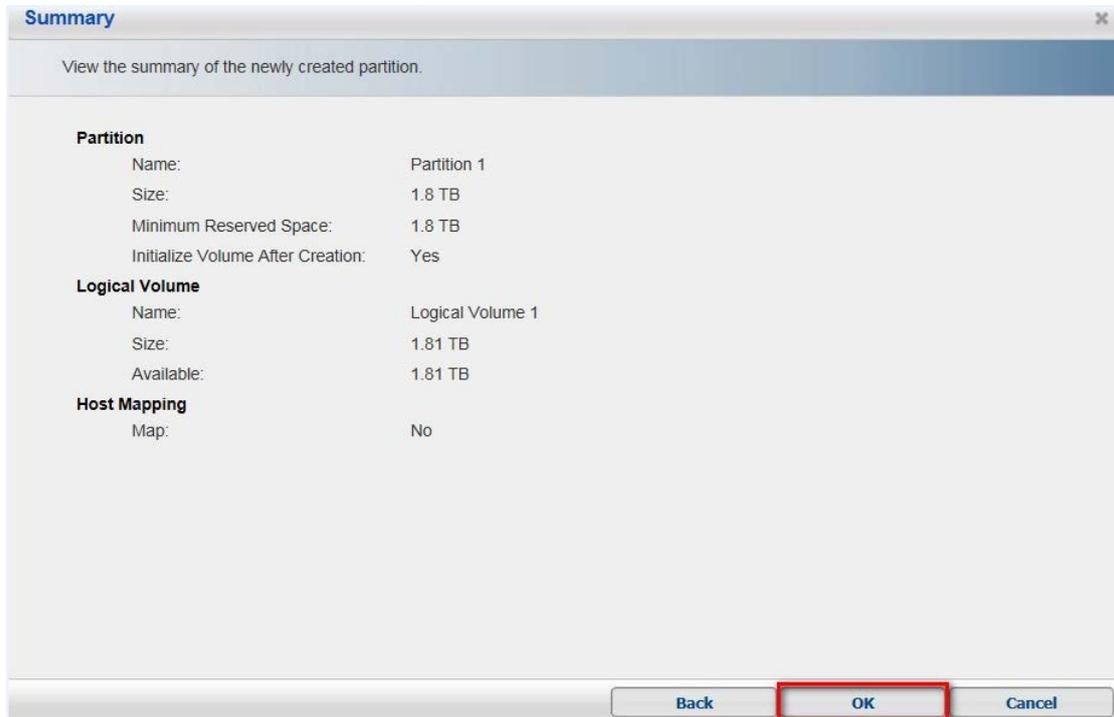
- Partition Name:** Partition 1
- Size:** 1.81 TB (highlighted with a red box)
- Initialize Partition After Creation
- Enable Thin-Provisioning
- Minimum Reserved Space:** 0 TB 0 %
- Map Partition to Host
- Logical Volume Information:**
 - Volume Name: Logical Volume 1
 - Free Size: 1.81 TB (highlighted with a red box)

Buttons for 'Next' and 'Cancel' are located at the bottom right of the dialog.

- Press “Yes”.

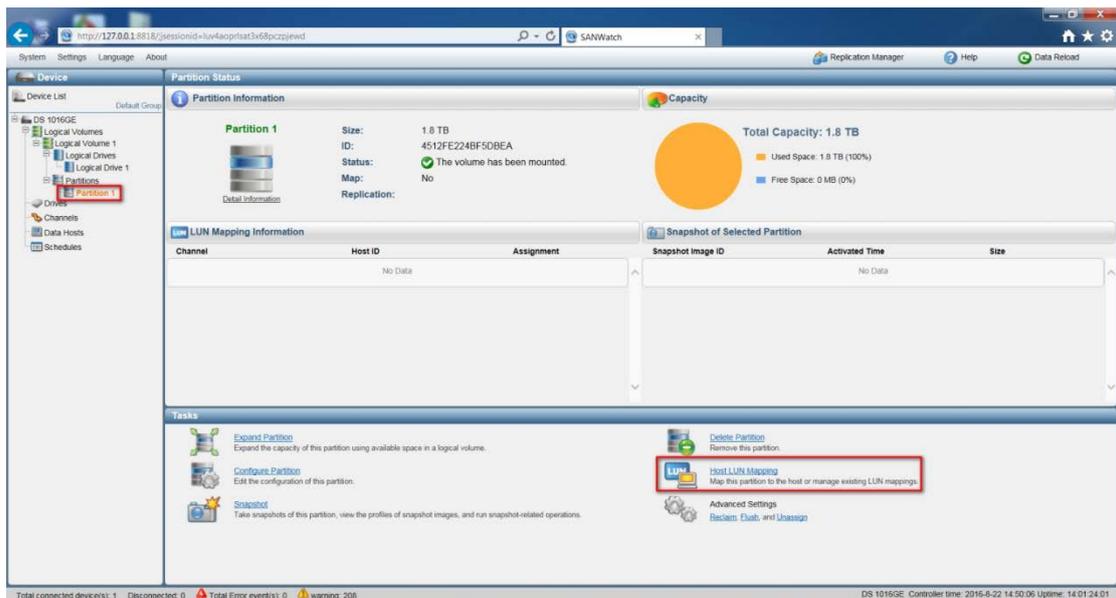


- Press "Ok" to finish creating the new partition.

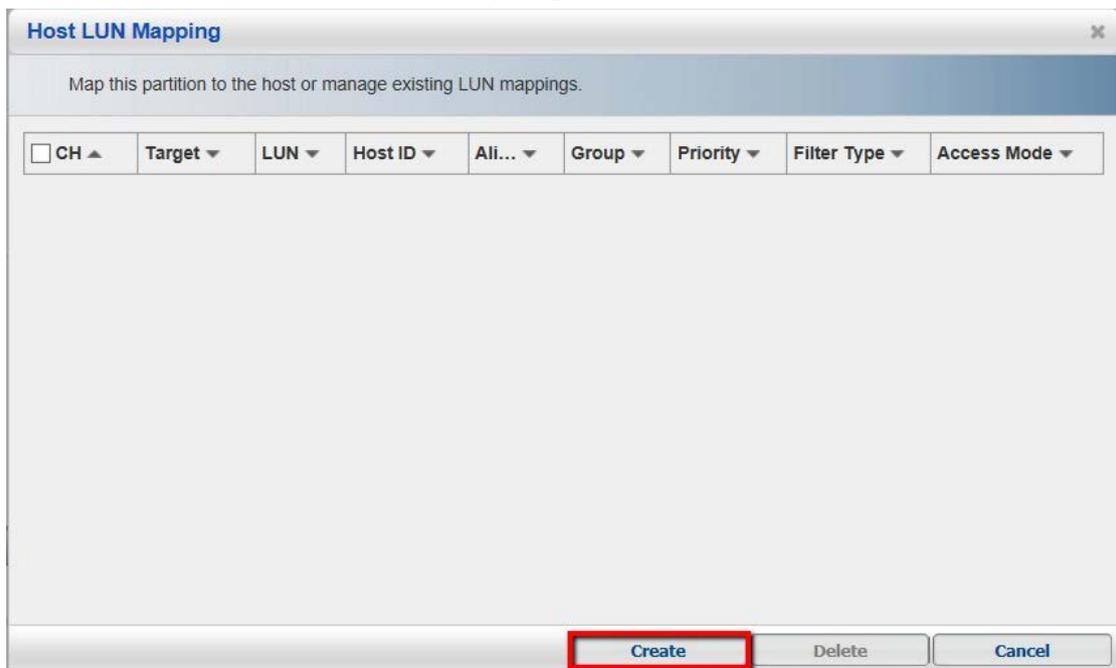


2.5 Host LUN Mapping

- Select new partition and enter "Host LUN Mapping".



- Press “Create” to create LUN Mapping.



- Switch to “Customize the host LUN mapping configurations”, then select the Channel, press “OK” and “Close”.

Create Host LUN Mapping

Create LUN Mapping to host

Create a host LUN mapping set automatically.

SAS 6.0 Gbps iSCSI 1.0 Gbps

Customize the host LUN mapping configurations.

SAS 6.0 Gbps iSCSI 1.0 Gbps

Slot A

Channel 0 ID: ---- Channel 1 ID: ---- Channel 2 ID: ---- Channel 3 ID: ----

Customize the LUN Number: 0

Use Extended Host LUN Functionality:

Alias: PC

Filter Type: Include

Access Mode: Read/Write

Configure iSCSI Initiator Alias

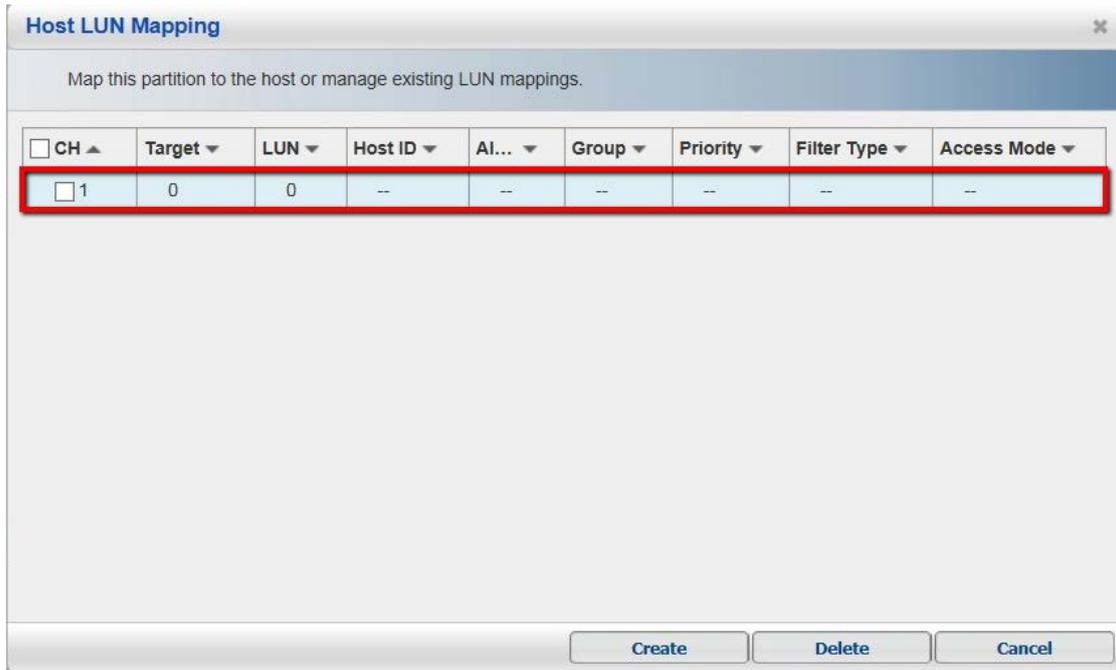
OK Cancel

Information

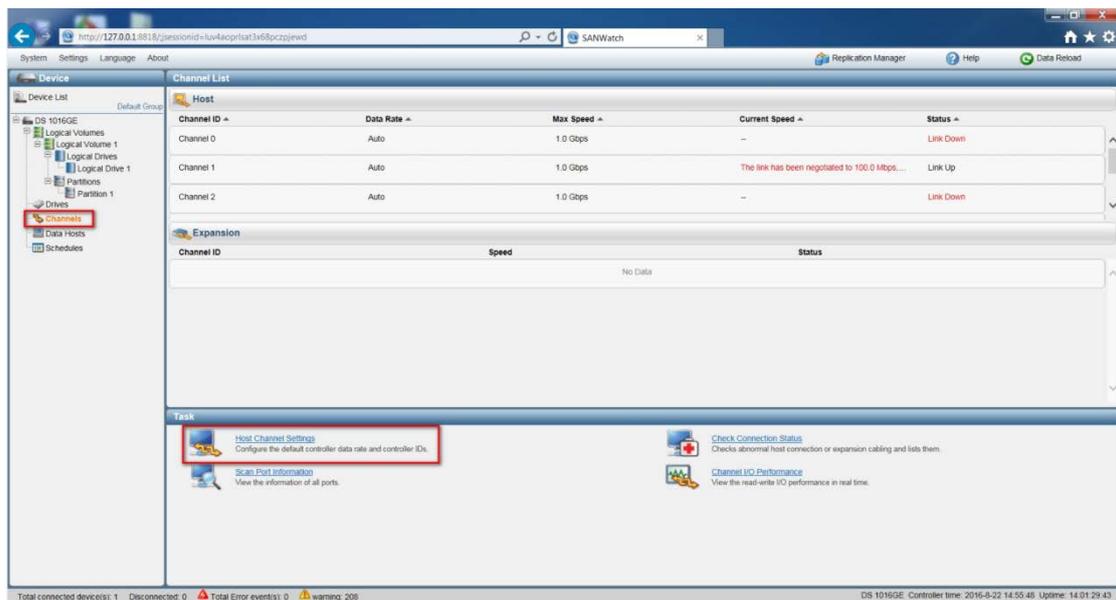
The task has been completed.

Close

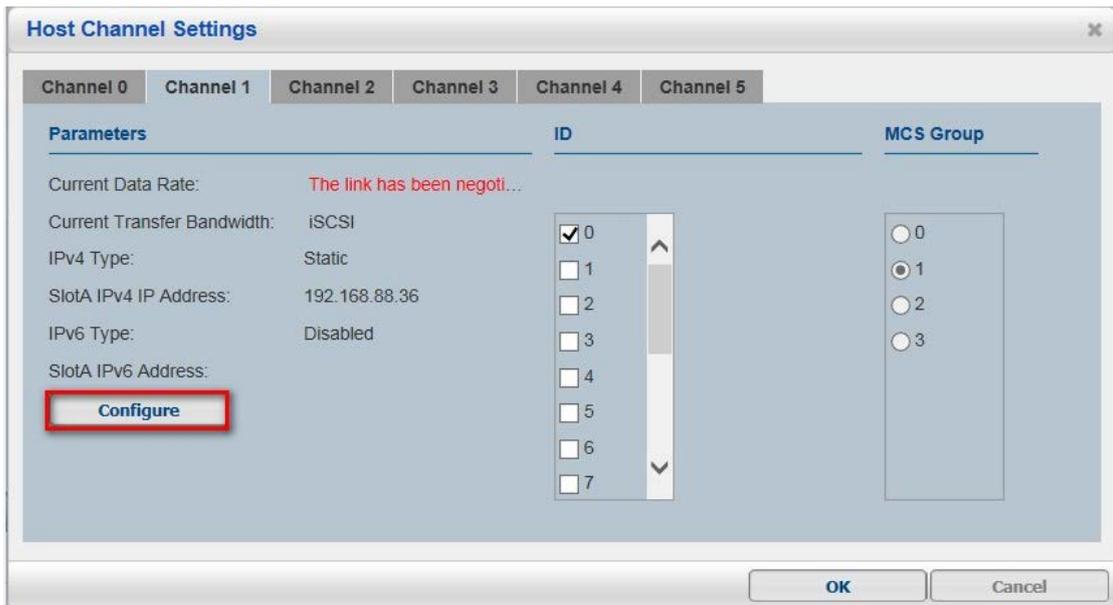
- In the table, we can see the CH we just created, press "Cancel" to exit.



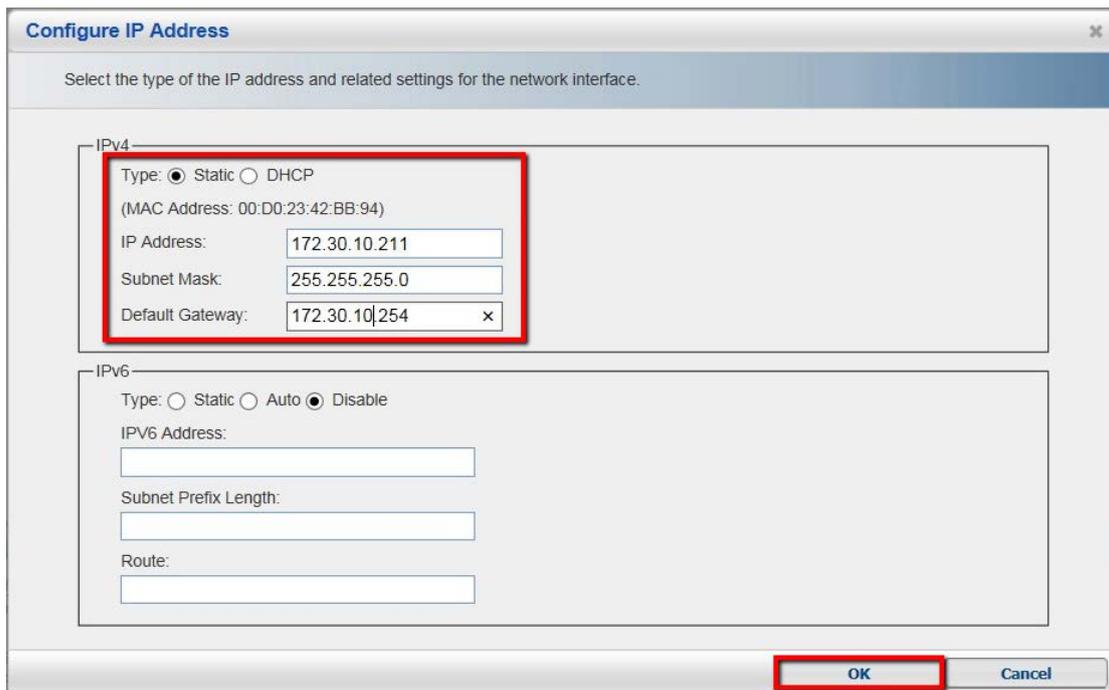
- Press Channel and Host Channel Settings.



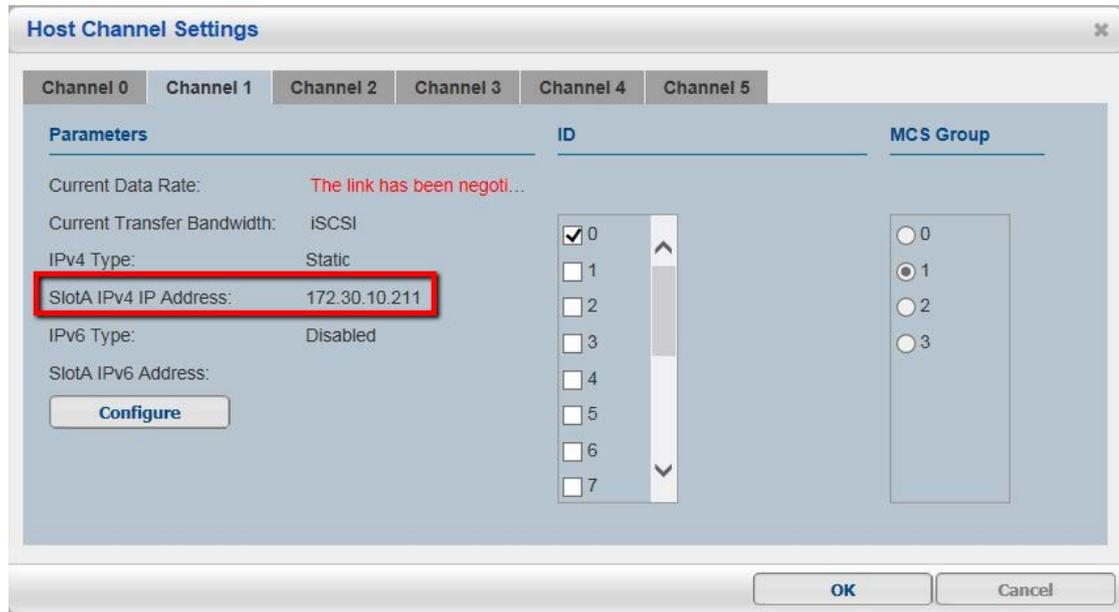
- Select the channel we just created, and then press “Configure”.



- Setup this Channel's IP address and then press "OK" and "Yes".

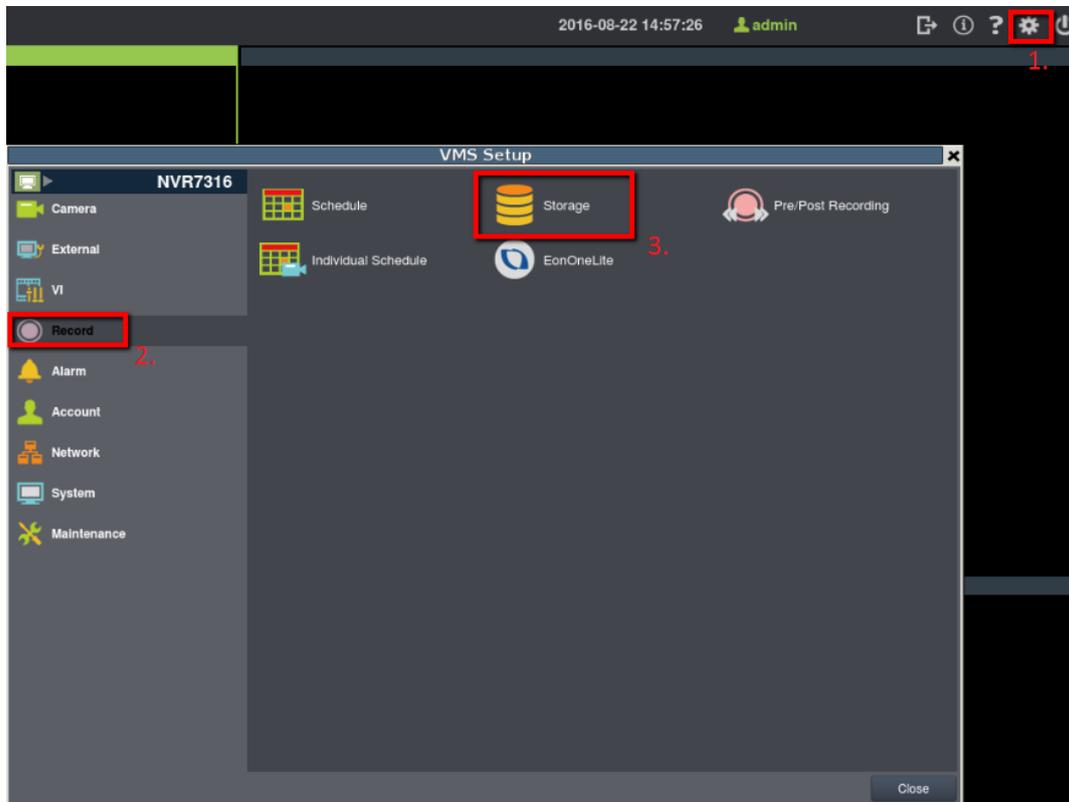


- After finished, you will see the IP has been assigned.

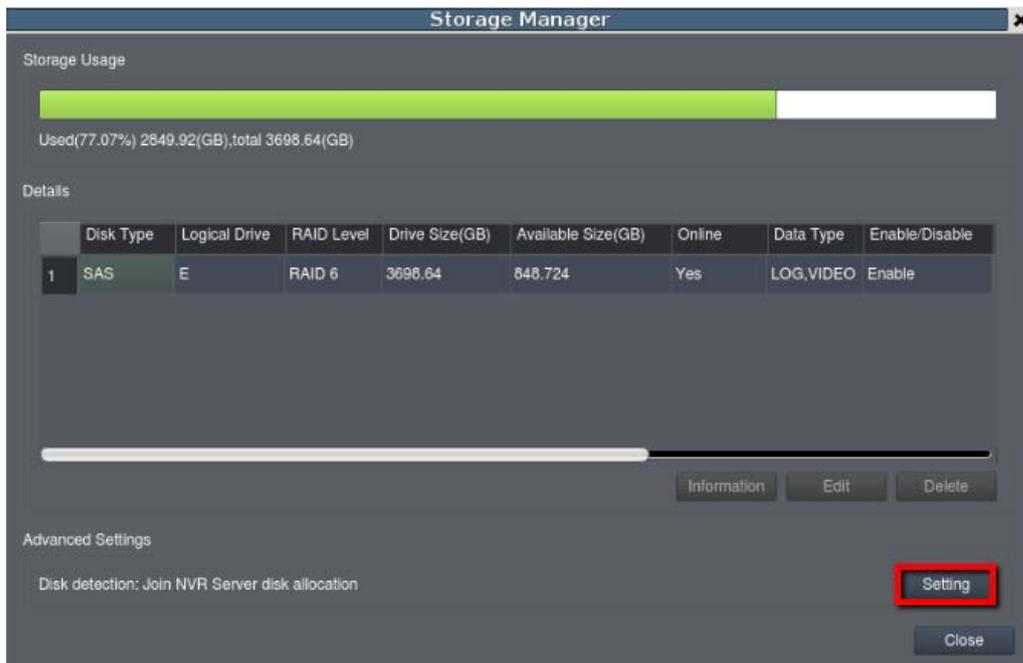


3. Add on iSCSI storage into Linux NVR.

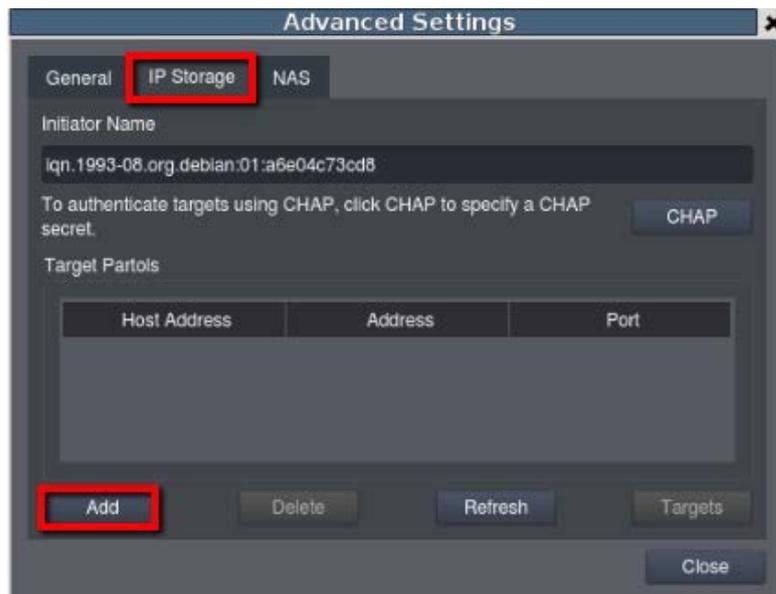
- Go to local NVR server > Setup > Record > Storage.



- Press "Setting".



- Choice IP Storage > Add.



- Enter the iSCSI IP.
Type the Host Address to setup your iSCSI : Enter the storage LAN IP. (EX: we set IP as 172.30.10.241 in this document)
Data Address : Enter the storage Channel IP. (EX: we set IP as 172.30.10.211 in this document)

Add Target Portal

Type the Host Address to config your iSCSI

172.30.10.241

Data Address: 172.30.10.211 Port: 3260

OK Cancel

- Choice "Targets".

Advanced Settings

General IP Storage **NAS**

Initiator Name
iqn.1993-08.org.debian.01:a6e04c73cd8

To authenticate targets using CHAP, click CHAP to specify a CHAP secret. CHAP

Target Partols

Host Address	Address	Port
172.30.10.241	172.30.10.211	3260

Add Delete Refresh **Targets** Close

- Press "Connect". After connected, the status will become Connected, then press "Close".

IP Storage

Description
select Login to access the storage devices for that target.
If a target is persistent, the initiator will attempt to reconnect to it each time the NVR is rebooted

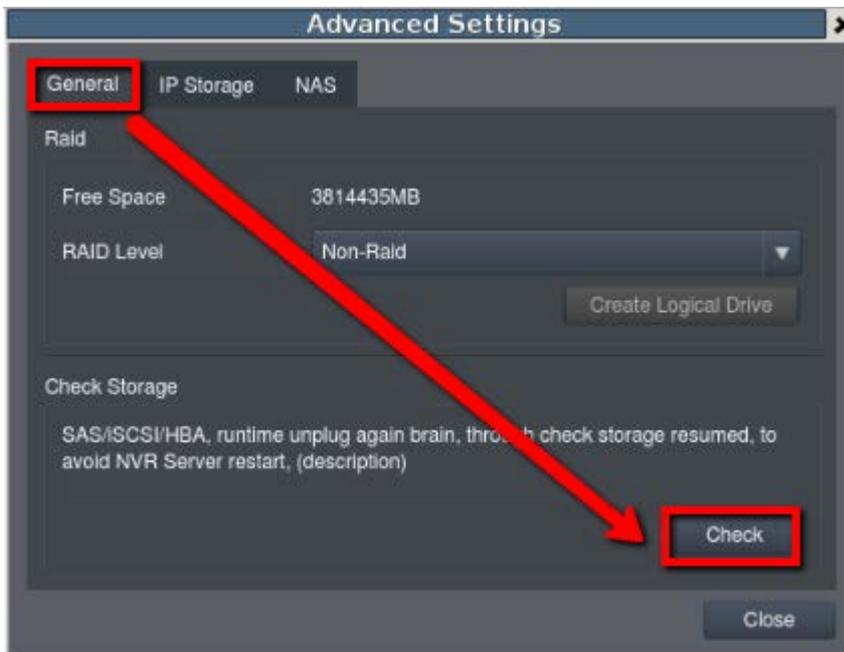
Targets:

Name	Status	Connect
iqn.1993-08.org.debian.01:a6e04c73cd8	Disconnected	Advanced

Close



- Enter General > Check.



- After finish all steps close the window and you will see iSCSI did add on NVR.

Storage Manager

Storage Usage



Used(54.74%) 3034.92(GB),total 5544.60(GB)

Details

	Disk Type	Logical Drive	RAID Level	Drive Size(GB)	Available Size(GB)	Online	Data Type	Enable/Disable
1	SAS	E	RAID 6	3034.92	848.724	No	L2D vBIO	Enable
2	ISCSI	F	RAID 6	1645.95	1660.96	Yes	NO	Enable

Information

Edit

Delete

Advanced Settings

Disk detection: Join NVR Server disk allocation

Setting

Close