How to setup schedule backup to iSCSI storage

with EonOne for Linux NVR

Application Notes

Version <1.0>



Technical Support Team

Preface

Surveon Linux NVR can backup and archive the recorded video to iSCSI storage. Local and remote backups are available for easy expansion of video retention period. Archiving with playback function is supported to ensure data integrity, improve operational efficiency, and simplify disaster-recovery operations.

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

Our agenda are as follows:

- 1. Setup iSCSI storage.
- 2. Add iSCSI storage into Linux NVR.
- 3. Setup schedule backup for Linux NVR.

Appendix : About schedule Task mode.

Note:

- 1. This procedure only applyies to Linux NVR **3.2** or later version.
- One Linux NVR can only link to one iSCSI device and only use for one purpose (Only used for storage or for backup).
- 3. If iSCSI storage is full, the oldest record will still be overwritten.

1. Setting iSCSI storage with EonOne

1.1. Login EonOne

(1) Double click the icon.



(2) Default login account / password: admin / admin

	Welcome to EonOne!
	Username:
	Password:
Anniol Lieno	Remember Me 🛛 Secure Login (SSL)
	Login

1.2. Add Storage

(1) Press "Add Device".

O Infortrend®	-	Overview	Monitor
Device List	Add Device	Resource	Usage
		CPU	
		Cache Usage	

(2) Select an option to add device and press "OK".

Add Device		8
• Add single/multiple devices by auto search	1	
\bigcirc Add a single device by IP address:		
IP Address:		
\bigcirc Add single/multiple devices under a subne	t	
IP Address:		
Netmask: 255.255.		
	ОК	Cancel

(3) If the operation succeeded, it will show "The operation has been completed".

Information	8	
The operation has been completed.		
	ОК	

(4) Please press "Connect".



(5) Please enter password and press "OK". (Default password is admin.)

Connect		8
IP Address Username Password	172.30.110.39 admin •••••• Save the password on the server	
	OK Cance	el

(6) If the operation succeeded, it will show "The operation has been completed".

Information			
The operation has been completed.			
	ОК		

1.3. Setting channel IP and channel type

(1) Please press "Settings".



(2) Please press "Access".

	A	1	3
System	Access	Privilege	Storage
Time, License management, System information	Channel & Network, Initiators, Network services	Users, User groups, Shared folders, AD/LDAP	Volume, Pool, Logical drive, Drive, SSD cache
		0	*
Backup & Restore	Applications	Update & Security	Initial Setup Wizard
Backup schedule, Replication, Snapshot, Cloud integration	LDAP server, Proxy server, VPN server, Syslog server	Security, Firmware update, Factory reset	

(3) Press "Channel & Network" and select Channel (Ethernet port) used to connect NAS and press "Edit".

S	ettings		
	Device: GSe 1016G		
	Settings > Access		
	Channel & Network	Channel & Network	
	You can configure a channel interface for block-level data service (e.g. iSCSI, Fibre, SAS) or for file-level data service (e.g. CIFS/SMB, AFP, NFS, FTP, etc.)		
	Network services	Channel 0 iSCSI 1G Block-level Data Service (ISCSI) 172.30.110.40	
		Channel 1 ISCSI 1G Block-level Data Service (ISCSI)	

(4) Please select "Block-level Data Service".

Please set your channel IP and press "Apply".

Host Channel Settings		
	Interface	e: ISCSI 1.0 Gbps
	Туре	e: Block-level Data Service
	Speed	d: Negotiated to 100Mbps, Full Duplex
IPV4		
(MAC Address :00:D0:23:8	2:15:A2)	
Type:	DHCP Y	
IP Address:	172.30.110.40	
Subnet mask:	255.255.254.0	
Default gateway:	172.30.111.254	
IPV6		
Type:	Disabled 🗸	
IPV6 address:		
Subnet Prefix Length:		
Route:		·
		Apply Cancel

(5) Channel status : "Block-level"

ungs	
Device: GSe 1016G	
Settings > Access	
Channel & Network	Channel & Network
Initiators	You can configure a channel interface for block-level data service (e.g. iSCSI, Fibre, SAS) or for file-level data service (e.g. CIFS/SMB, AFP, NFS, FTP, etc.)
Network services	Channel 0 ISCSI 1G Block-level Data Service (ISCSI) 172,30.110.40
	Edit

1.4. Create Pool, volume and LAN map

1.4.1. Clean HDD

(1) Please press "Storage".

Settings				8
Device: GSe 1016G				
System Time, License management, System information	Access Channel & Network, Initiators, Network services	Privilege Users, User groups, Shared folders, AD/LDAP	Storage Volume, Pool, Logical drive, Drive, SSD cache	
Backup & Restore Backup, Schedule, Replication, Snapshot, Cloud integration	Applications LDAP server, Proxy server, VPN server, Syslog server	O Update & Security Security, Firmware update, Factory reset	initial Setup Wizard	
			Close	

(2) Please press "Drive", go to "More" scroll down list and choose Clean reserved space.

Settings						
Device: GSe 1016G						
Settings > Storage						
Volume	Drive li You can se	Drive list You can select a drive and edit its settings. Storage device (GSE 1016G)				
Pool	Storage de					
Logical drive	Slot 1 Model: ATA Hitachi HDS72202 Type: HDD Status: © formatted			Capacity: 1.81 TB Drive Details		
CCD anaha		Copy & Replace Clone		Clone	Manage sp	oare drive 🛛 More 🗸
SD cache	SSD cache		Slot 2 Model: ATA Hitachi HUA72202 Type: HDD Status: ♥ Formatted		Capacity: 1.81 Drive Details	Media Scan Clean reserved space Erase SED drive Read/Write test
		Slot 3				Locate drive

(3) To clean the reserved space, please select the drive(s).

Clean reserve	Clean reserved space								
Please select t	he drive for cleaning its reserved spa	ace.							
🔽 Disk 🗸	Model ~	Туре	Interface	Size	JBOD				
☑ Slot 1	ATA Hitachi HDS72202	HDD	SATA	1.81 TB	RAID				
Slot 2	ATA Hitachi HUA72202	HDD	SATA	1.81 TB	RAID				
Slot 3	ATA Hitachi HDS72303	HDD	SATA	2.72 TB	RAID				
Slot 4	ATA Hitachi HDS72303	HDD	SATA	2.72 TB	RAID				
				Clean	Cancel				
				cream	Cancer				

(4) If the operation succeeded, it will show "The operation has been completed". Drive status: New Drive

Information		8	
The o comp	peration has been leted.		
Settings Device: GSe 1016G Settings > Storage	Drive list	ОК	6
Pool Logical drive Drive	You can select a drive and edit its setting Storage device (GSe 1016G) Slot 1 Model: ATA Hitachi HD572202 Type: HDD Status: © New Drive Copy & Rep	Capacity: 1.81 TB Drive Details Nace Clone Manage spare drive More	
SSU cache	Slot 2 Model: ATA Hitachi HUA72202 Type: HDD Status: New Drive	Capacity: 1.81 TB Drive Details	
	Slot 3 Model: ATA Hitachi HD572303 Type: HDD Status: New Drive	Capacity: 2.72 TB Drive Details	
	V Sloc 4 Nodel: ATA Hitachi HD572303 Type: HDD Status: O New Drive	Capacity: 2.72 TB Drive Details	Close

1.4.2. Create Pool, volume and LAN map

(1) Please press "Workflow".

O Infortrend®		Overview	Monitor	Workf	low
Device List	💁 🖬 Add Device	Resource	Usage	_	(
Model:GSe 10	🔆 Settings 👘 Remove				
GSe Version:1.32D Details	Itealthy	CPU		4 %	
		Cache Usage		0%	

(2) Please select All under Workflow group, and then press "Create Pool, volume and LUN map".

O Infortrend [®]	Overview Monitor Workflow Event Log
Workflow group Workflow group III Storage Provision Scheduling Backup Cloud	Create Pool, volume and LUN map
	Create SSD cache, pool, volume and LUN map
	Schedule a volume replication

(3) Please select drive.

flow / Storage Provision / Create Pool, volume	and LUN map	Configure Parame	eters
Select Device			
Device	GSe 1016G	~	

(4) Please select drives and select the configuration of the pool (RAID).

te Pool				
* Pool Name	Pool-2			
Storage Tiering	Disable	~		
Write Policy	Default	~		
Member drives (SATA)	Tier Index	0	~	
	Total selected: 2			
	✓Slot ✓	Size 🗸	Device 🗸	
	√ Slot3	2.72 TB	RAID	
	√ Slot4	2.72 TB	RAID	
_				
	RAID level	RAID 1	~	
	Stripe Size	128K	~	
	SED security	Disable	~ 0	

(5) Configure the parameters of the Volume. Select volume size.

Create Volume		
	* Pool	Pool-2 v
	Quantity	1 ~
	Volume Name	Volume+index ~
		Enable Thin Provisioning
	* Volume Size	• Maximum: 2.7 TB 2.7 TB •
Minimu	m reserved space	0 TB ~
		Initialize Volume After Creation
		Enable File System 🕦

(6) Please select volume.

Please select "Customize host LUN mapping configurations". Please select Channel. (refer to 1.3.3~1.3.5)

Host LUN mappin	9					
r	Select Volume	 Refer to previ 	ous setting			
		• Pool:	Pool-2	~		
		* Volume:	Volume1	~		
_	Mapping	 Create a host 	LUN mapping se	et automatically		
		Customize ho	st LUN mapping	configurations		
		Channel	1 101			
		Channel	0 0	~		
		Customize	the LUN numbe	r No'	~	
		Use Extended	Host LUN Function	onal@v		
				onancy		
Back to Workflow	v Selection					Reset Executi

2. Add iSCSI storage into Linux NVR.

(1) Please enter Record / Storage.

		VMS Setup	×
Camera	Schedule	Storage	Pre/Post Recording
External			
111 v	Individual Schedut	, ,	
Record			
🔔 Alarm			
💄 Account			
Network			
📃 System			
💥 Maintenance			
			Close

(2) Press "Setting".

			Stora	ige Manager				
Storage Usage -	1.86(GB),total 368	34.95(GB)						
Details								
Disk Type	Logical Drive	RAID Level	Drive Size(GB)	Available Size(GB)	Online	Data Type	Enable Disable) St
RAID	E	RAID 5	3684.95	3612.09	Yes	LOG, VIDEO	Enable	Nor
						nation	cet Det	olo.
					linear			919 919
Advanced Settin Disk detection:	gs Join NVR Server	disk allocation					Sett	
								ing

(3) Please choose IP Storage / Add.

	J	Advanced Se	ttings		2
General IP	Storage N.	AS			
Initiator Name					
iqn.1993-08.or	lebian:01:27	b07515321			
To authenticate secret.	argets using	CHAP, click CHAP	to specify a	a CHAP	СНАР
-Target Partol					
Host	ddress	Address		Port	
	,				
Add	D	elete	Refresh		Targets
					Close

(4) Host Address : Storage IP

Data Address : Channel IP

Add Target Portal						
Type the Host Address to config your ISCSI						
192.168.10.22						
Data Address	* Port					
192.168.10.11	3260					
		ок	Cancel			

(5) Please Choose "Targets".

	Advanced Settings	5	×			
General IP Storage N	AS		_			
Initiator Name						
iqn.1993-08.org.debian:01:27b07515321						
To authenticate targets using CHAP, click CHAP to specify a CHAP CHAP secret.						
Host Address	Address	Port				
ISCSI	192.168.10.11	3260				
Add D	elete Refre	sh Targets				
		Close				

(6) Please press "Connect".

Please press "Close", after the status show "Connected".

	IP Storage	
Description	or that target. Ipt to reconnect to it each time the NVR is re	booted
Targets:		
Name	Status	Connect
iqn.2002-10.com.infortrend:raid.sn838505	Disconnected	Advanced
		Ciose

(7) Please press General / Check.

	Advanced S	ettings .
General IP Storage	NAS	
Free Space	0MB	
RAID Level		T
		Create Logical Drive
Check Storage		
SAS/ISCSI/HBA, runtime avoid NVR Server restar	e unplug again brain, † rt, (description)	through, heck storage resumed, to
		Check
		Close

(8) Please press "OK" and NVR will restart.



(9) Please enter Setup / Record / Storage again.Confirm if iSCSI is added successfully.

Storage Usage Used(5.49%) 303.45(GB) total 5530.91 (GB) Details Details RAID E RAID 5 3684.95 3429.63 Yes LOG,VIDEO Enable SCSI F NON RAID 1845.95 1797.83 Yes NO Disable	S30.91(GB) RAID Level Drive Size(GB) Available Size(GB) Online Data Type Enable Disable B RAID 5 3664.95 3429.63 Yes LOG,VIDEO Enable N NON RAID 1845.95 1797.83 Yes NO Disable N Information Edit Delete				Stora	ige Manager				
Disk Type Logical Drive RAID Level Drive Size(GB) Available Size(GB) Online Data Type Enable Disable 1 RAID E RAID 5 3684.95 3429.63 Yes LOG,VIDEO Enable 2 ISCSI F NON RAID 1845.95 1797.83 Yes NO Disable	RAID Level Drive Size(GB) Available Size(GB) Omline Dala Type Enable Disable S RAID 5 3684.95 3429.63 Yes LOG, VIDEO Enable N NON RAID 1845.95 1797.83 Yes NO Disable N	itorage Usage Jsed(5.49%) 3	03.45(GB).total 5	530.91(GB)						
Disk Type Logical Drive RAID Level Drive Siza(GB) Available Siza(GB) Online Data Type Enable Disable I RAID E RAID 5 3684.95 3429.63 Yes LOG,VIDEO Enable I RSCSI F NON RAID 1845.95 1797.63 Yes NO Disable	BAID Level Drive Size(GB) Available Size(GB) Online Data Type Enable Disable # RAID 5 3684.95 3429.63 Yes LOG,VIDEO Enable N NON RAID 1845.95 1797.83 Yes NO Disable N	ietails ———								
RAID E RAID 5 3684.95 3429.63 Yes LOG,VIDEO Enable ISCSI F NON RAID 1845.95 1797.83 Yes NO Disable	RAID 5 3684.95 3429.63 Yes LOG,VIDEO Enable N NON RAID 1845.95 1797.83 Yes NO Disable N	Disk Type	Logical Drive	RAID Level	Drive Size(GB)	Available Size(GB)	Online	Data Type	Enable/Disable	
2 ISCSI F NON RAID 1845.95 1797.83 Yes NO Disable	NON RAID 1845.95 1797.83 Yes NO Disable N	1 RAID	E	RAID 5	3684.95	3429.63	Yes	LOG, VIDEO	Enable	N
	Information Edit Delete	2 ISCSI	F	NON RAID	1845.95	1797.83	Yes	NO	Disable	N
ntormation Edit Dek)			
Disk detection: Join NVR Server disk allocation Setti		dvanced Settin Disk detection:	ngs	disk allocation			Infor	mation E	dit Dele Setti	le Ig

3. Setup schedule backup for Linux NVR

(1) Please enter Maintenance / Backup System



(2) There will be a new NAS device on the list. Press "Add" to create a new schedule.

			Backup	Syste	m		×
ľ	Task Name	Schedule	Execution Tir	ne	Backup Driver	Stat	tus
				Add	Edit	Stop	Remove
	– Storage Usage —						
	Disk type	Drive	Drive Size(GB)	Used(GB)	Free(GB)	
	SMB	F	227.76	158.07	69.69		
							,
							Close

(3) In the schedule backup, you will be able to select camera and backup schedule.

	Add	task		×
CAM2511	Task name:	TaskName		
CAM6351	Task mode:	Once		•
	Task start time:	2016-04-21 14: <mark>40</mark>		-
	Г ^{Period} ———			
	Start time:	2016-04-21 14:30		
	End time:	2016-04-21 14:40		
	<u> </u>			J
	Backup driver:	F		•
Select all			ок	Cancel

(4) When the system starts to backup, the task status will show the percentage for backup process.

			Backup	System			>
	Task Name	Schedule	Execution Ti	me Backu	p Driver	Stat	us
I	TaskName	Once		F		27%	
I							
I							
I							
I							
I							
			(Add	Edilt	Stop	Remove
U	– Storage Usage –		L.		Lon	Chop	
		Det ur		11	1	E	1
	Disk type	Drive	Drive Size(GB)	Used(GB)		Free(GB)	
	SMB	F	227.76	158.50	69.26		
I							
							Close

(5) When backup is finished, it will show "Complete".

		Backu	p System	ı		×
Task Name TaskName	Schedule Once	Execution 1	fime f	Backup Driver	Sia Complete	tus
			Add	Edit	Stop	Remove

(6) You can check your backup video by pressing Playback / Backup Search.

	Su	rve	on		NVF	85316	Q	₽	G,	٩	H	4	9	16			
L	ive V	ïew		Play	/bacl	k											
Time	Setup					ę											
÷		Ap	oriĻ 20			•											
Sun	Mon	Tue	Wed	Thu	Fri	Sat											
27	28	29	30		1	2											
3			6		8	9											
10			13		15	16											
17				21	22	23											
24	25	26	27	28	29	30								Dra	ag Ca	mera	Here
1			4		6	7											
00:00	• 🗘	То	23	:50	s	et											
Cam	era List			D		FV											
CAN	12511				-												

(7) Select your backup time and you can see your backup video.



Appendix: About schedule task mode:

There are three modes that you can choose for the schedule task: *once, once a day, once a week* and *once a month*.

Once: it will only backup once, but customers can backup any particular date or time by period.

Add	task	×
Task name:	TaskName	
Task mode:	Once	•
Task start time:	2016-03-10 14:30	•
Г ^{Period} ———		
Start time:	2016-03-0114:30	:
End time:	2016-03-10 14:40	

Example:

Task time is set at 2016-03-10 14:30, and the period is set between 2016/3/1 14:30 – 2016/3/10 14:40. When it reaches the task time, the system will only backup record from 2016/3/1 14:30 – 2016/3/10 14:40. (Backup only once)

Once a day: When it reaches the task time, it will backup record for the previous day.

Add	task	×
Task name:	TaskName]
Task mode:	Once a day	
Task start time:	2016-03-10 14:30	
This task will be exe	cuted at 14:30:00 every day,since 2016-03-10	

Example:

- Task time is set at 2016-03-10 14:30, when it reaches the task time, the system will backup record from 2016-03-09 14:30 to 2016-03-10 14:30. (Backup one day)
- Every day at 14:30, it will backup record from one day ago.

Once a week: When it reaches the task time, it will backup record for the previous week.

Ad	d task	×
Task name:	TaskName	
Task mode:	Once a week	
Task start time:	2016-03-10 14:30	.
2016-03-10 is Th	ırsday	
This task will be e	xecuted at 14:30:00 every Thursday,sinc	e 2016-03-10

Example:

- Task time is set at 2016-03-10 14:30, when it reachs the task time, the system will backup record from 2016-03-03 14:30 to 2016-03-10 14:30. (Backup one week)
- Every Thursday at 14:30, it will backup record for the previous week.

Once a month: When it reaches the task time, it will backup record for the previous month.

Task name:	TaskName	
Task mode:	Once a month	•
Task start time:	2016-03-10 14:30	Ĵ

- Task time is set at 2016-03-10 14:30, when it reaches task time, the system will backup record from 2016-02-03 14:30 to 2016-03-10 14:30. (Backup one month)
- The 10th day of every month at 14:30, it will backup record for the previous month.