

How to use RAID function in NVR

Preparation

Please use the enterprise-class HDDs in HDD Compatible List for RAID function.

Steps:

1. Enable RAID in Storage→Advanced.

NVR 4.0			L 🗐	
Recording Sche Capture Schedule Storage Device Storage Mode Advanced	Overwrite eSATA Usage Enable HD	eSATA1 Record/Capture	· _ · · · · · · · · · · · · · · · · · ·	ن ب ب ب ب ب ب ب ب ب ب ب ب ب ب ب ب ب ب ب

2. After the device reboots, create RAID in Storage→Raid Setup→Physical Disk.

	NVR 4.0		e-touch Config	Ð		÷	59	<u>\$</u> 4	U
	Recording Sche		ch C 🗇 Create						
0	Capture Schedule	⊠No. ⊠1	Capacity 5589.03GB	Array	Type Normal	Status	Model WDC WD60PUR	Hot Sp	I T N
	Storage Device	2	1863.02GB		Normal	Functional	WDC WD20PUR		Ν
88	Raid Setup 🛛 🗸	⊻3	465.77GB		Normal	Functional	WDC WD5000A		N
	Physical Disk								
	Array								
	Firmware								
B	Storage Mode								
())	Advanced								

Note:

1) It's better to create RAID via One-touch Config (RAID 5 will be created by



default).

- 2) If the number of HDD is more than 3, there will be 1 HDD for hot spare by default when you choose One-touch Config.
- **3.** After creating the RAID, it will be initialized in **Storage** \rightarrow **Raid Setup** \rightarrow **Array**.

	NVR 4.0			\odot			S S	🐨 🖛 🖓
	Recording Sche							
Ō	Capture Schedule	Free Space 931/931G	Physical 3 2 1	Hot S	Status Functional	Level RAID 5	Rebu	Delete Task Initialize (Fast)(Running) 14%
B	Storage Device	33//3310	521		Functional	NAID 0		
88	Raid Setup 🔍 🗸							
	Physical Disk							
	Array							
	Firmware							
	Storage Mode							
(i))	Advanced							
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4. After the initialization, you will find the RAID in **Storage →Storage Device**, which means the RAID can be used.

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Recording Sche	+ Add	⊖ Init		Total Cap 931.26GB	Free Spa913.00GB
Capture Schedule	Label Label	Capacity 931.26GB	Status Prop Normal R/W	Type Free Space Array 913.00GB	Gr Edit D 1
📇 Storage Device					
Raid Setup >					
Storage Mode				b	
Advanced					

Note:

1) The storage mode is recommended to be selected as Quota when using RAID function to reduce the write times of the HDD.



2) Make sure that the HDD Sleeping is enabled.

NVR 4.0				휿 🕶 🖓
Recording Sche	Overwrite			
Capture Schedule		SATA1	-	
🚊 Storage Device	Enable HD			
Raid Setup >	Enable RAID			
💾 Storage Mode	Use the enterprise-cla	SS HUD.		
Advanced				
	Apply			

3) Check the status of the HDD via SMART Test regularly in order to replace the abnormal HDD early (According to the result of Self-Evaluation or All-Evaluation).

	NVR 4.0					ŝ		۶	1 [®] .∓	
i	System Info >									
	Log Information	HDD No.	1	-						
ru.	C4	Self-Test Type	e Short Test	-	Sel	f-Test		Self-test succeeded		
Ð	Import/Export	Temperatur	32		Self-Ev Pas	s				
Ŷ	Upgrade >	Working Tim	. 178		All-Eval Fun	ctional				
۰.	Default	S.M.A.R.T Info)r							
A		ID	Attribute Name		Status	Flags	1	Threshold	Value	
Ð	Network Detecti>	0×1	Raw Read Err	or Rate	OK	2f		51	200	
Q)	HDD Operation 🗸	0×3	Spin Up Time		OK	27		21	201	
		0×4	Start/Stop Cou	unt	OK	32		0	100	
	S.M.A.R.T	0×5	Reallocated S	ector Count	OK	33	7	140	200	
		0×7	Seek Error Ra	te	OK	2e	1	0	200	
	Bad Sector Det	0×9	Power-on Hou	rs Count	OK	32		0	95	
	HDD Clone	0×a	Spin Up Retry	Count	ок	32		0	100	
		0×b	Calibration Re	try Count	ок	32		0	100	
	Health Detection	0×c	Power Cycle (Sount	ок	32		0	100	
Q	Health Detection	Oxc	Power Cycle (Sount	OK	32		0	100	

- 4) It's better to use guide rail to install the device to avoid the vibration in project.
- 5) If a HDD is kicked out from the array, even the status of this HDD shows Functional, it should be replaced.

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🖞 🙆 System	Configurin	g the RAID P:	rameters				
Device Information	RAID	Steeping					
💮 General	Physical Dis	Array Vi	tual Disk RA	ID Adapter			
💮 Time				One-touch Cor	ng	Create Array Set Hot Spare D	isk.
System Maintenance	HDD No.	Capacity(GB)	Array	Type	Status	Serial No.	6
🛞 RS232	1	3726	RL	Aney	Normal	WDC WD40PURX-64GVNV0	
RS485	2	3726	R1	Array	Normal	WDC WD40PURX-64GVNV0	
🛞 Log	3	3726	R1	Array	Normal	WDC WD40PURX-64GVNV0	
🛞 User	4	3726		Global Hot	Normal	WDC WD40PURX-64GVNY0	
🎡 Resource Usage	5	3726	R1	Amay	Normal	WDC WD40PURX-64GVNV0	
🎡 Cameta	6	3726	R1	Array	Normal	WDC WD40PURX-64GVNY0	
Login Security	7	3726		PI Inctional	Normal	WDC WD40PURX-64GVNY0	
🖞 🌀 Network			_		1000000		
- 🕼 Storage							
🎡 General							
🎯 NAS							
Array							
🛞 File	_						
🖭 🌀 Event							
📩 🌀 Image							
🗄 🌀 Counting							
🐮 🐨 Heat Map							
🐮 🚳 Heat Map 🖭 🔞 Road Traffic							

- 6) If the hot spare HDD can't work when the array is degraded, check the status of the HDD via SMART Test.
- 7) If the RAID is abnormal or lost, do not configure the RAID function again or videotape on the HDDs to avoid overwriting the recording data, just power off the device and feedback to us.

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