

HIKVISION pStor V1.5.1

User Manual

© 2019 Hangzhou Hikvision Digital Technology Co., Ltd. All rights reserved.

This Manual is the property of Hangzhou Hikvision Digital Technology Co., Ltd. or its affiliates (hereinafter referred to as "Hikvision"), and it cannot be reproduced, changed, translated, or distributed, partially or wholly, by any means, without the prior written permission of Hikvision. Unless otherwise expressly stated herein, Hikvision does not make any warranties, guarantees or representations, express or implied, regarding to the Manual, any information contained herein.

About this Manual

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual at the Hikvision website (http://www.hikvision.com/en/). Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

Trademarks Acknowledgement

- **HIKVISION** and other Hikvision's trademarks and logos are the properties of Hikvision in various jurisdictions.
- Other trademarks and logos mentioned are the properties of their respective owners.

LEGAL DISCLAIMER

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS MANUAL AND THE PRODUCT DESCRIBED, WITH ITS HARDWARE, SOFTWARE AND FIRMWARE, ARE PROVIDED "AS IS" AND "WITH ALL FAULTS AND ERRORS". HIKVISION MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. THE USE OF THE PRODUCT BY YOU IS AT YOUR OWN RISK. IN NO EVENT WILL HIKVISION BE LIABLE TO YOU FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGES, INCLUDING, AMONG OTHERS, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, OR LOSS OF DATA, CORRUPTION OF SYSTEMS, OR LOSS OF DOCUMENTATION, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, OR OTHERWISE, IN CONNECTION WITH THE USE OF THE PRODUCT, EVEN IF HIKVISION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSS.

YOU ACKNOWLEDGE THAT THE NATURE OF INTERNET PROVIDES FOR INHERENT SECURITY RISKS, AND HIKVISION SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER-ATTACK, HACKER ATTACK, VIRUS INSPECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, HIKVISION WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

YOU AGREE TO USE THIS PRODUCT IN COMPLIANCE WITH ALL APPLICABLE LAWS, AND YOU ARE SOLELY RESPONSIBLE FOR ENSURING THAT YOUR USE CONFORMS TO THE APPLICABLE LAW. ESPECIALLY, YOU ARE RESPONSIBLE, FOR USING THIS PRODUCT IN A MANNER THAT DOES NOT INFRINGE ON THE RIGHTS OF THIRD PARTIES, INCLUDING WITHOUT LIMITATION, RIGHTS OF PUBLICITY, INTELLECTUAL PROPERTY RIGHTS, OR DATA PROTECTION AND OTHER PRIVACY RIGHTS. YOU SHALL NOT USE THIS PRODUCT FOR ANY PROHIBITED END-USES, INCLUDING THE DEVELOPMENT OR PRODUCTION OF WEAPONS OF MASS DESTRUCTION, THE DEVELOPMENT OR PRODUCTION OF CHEMICAL OR BIOLOGICAL WEAPONS, ANY ACTIVITIES IN THE CONTEXT RELATED TO ANY NUCLEAR EXPLOSIVE OR UNSAFE NUCLEAR FUEL-CYCLE, OR IN SUPPORT OF HUMAN RIGHTS ABUSES.

IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATER PREVAILS.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
Provides additional information to emphasize or supplement important points of the main text.	
	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

TABLE OF CONTENTS

Cha	pter 1 Preface	1
	1.1 Product Introduction	1
	1.2 Purpose	1
	1.3 Notice	1
	1.3.1 Personnel Quality Requirements	1
	1.3.2 Notice	1
	1.4 Software Preparation	2
	1.4.1 Operating System	2
	1.4.2 Product Version Description	2
	1.5 Environment Preparation	2
	1.5.1 Network Environment	2
	1.5.2 Power Supply Environment	3
	1.5.3 Machine Room Environment	3
	1.5.4 Port	3
	1.5.5 System Firewall	3
Cha	pter 2 Software Installation	4
	2.2 Software Uninstallation	7
	2.3 Software Upgrade	9
Cha	pter 3 Software Operation	. 11
	3.1 Browser Requirement	. 11
	3.2 Login	. 11
	3.2.1 Modify Default Password	. 11
	3.2.2 Login	. 12
	3.3 Home Page	. 12
	3.3.1 Modify Admin Password	. 13
	3.3.2 About	. 14
	3.3.3 Logout	. 15
	3.4 Wizard	. 16
	3.4.1 Add Storage Space	. 16
	3.4.2 Add Resource Pool	. 16
	3.5 Storage Management	. 17
	3.5.1 Storage Space	. 17
	3.5.2 Resource Pool	. 21
	3.5.3 NAS	.24
	3.6 Recording Schedule	. 25
	3.6.1 Live Stream Recording Schedule	. 26
	3.6.2 Historical Stream Recording Schedule	. 26
	3.6.3 Video Inspection	. 27
	3.7 Log	. 29
	3.7.1 Display Log	. 29
	3.7.2 Download Log	. 30
	3.7.3 Clear Log	. 30

3.7.4 Search Log	
3.8 System Management	31
3.8.1 Configure NTP	31
3.8.2 HA Mode	
3.8.3 Configure Stream Authentication	
3.8.4 Configure ANR	34
3.8.5 Manage Key	42
3.8.6 Configure Stream Media Line	
3.8.7 Configure Address Mapping	
3.8.8 Configure Time Zone	
3.8.9 Restore Database	42
3.8.10 KMS Resource Pool	40
3.8.11 PSS Resource Pool	41
3.8.12 Configure Picture Download Authentication	35
3.8.13 Configure License	41
Chapter 4 Appendix	53
4.1 Mount iSCSI to Windows System	53
4.1.1 Map IPSAN to iSCSI initiator	53
4.1.2 Connect iSCSI initiator to iSCSI target	54
4.2 Windows NIC Teaming	60
4.2.1 Introduction	60
4.2.2 Environment	60
4.2.3 Configuration	60
4.3 Edit 10 Gigabit Ethernet Card Parameters	64
4.4 Failed to Write to Video Caused by Slow Overwrite of Recording Pool After pStor Shutdo	own for a Long
Time and Running Again	66
4.4.1 Environment	66
4.4.2 Description	66
4.4.3 Cause	66
4.4.4 Resolution	67
4.4.5 Evaluation	67
4.4.6 Capacity Calculation	67
4.5 Failed Installation of Windows Runtime Library	68
4.5.1 Description	68
4.5.2 Cause and Resolution	68
4.6 Mount NAS Drive to Windows System	72
4.6.1 Create NAS Drive	73
4.6.2 Map Network Driver in Windows Operating System (Not for pStor Mounting)	73
4.6.3 Create Map in Windows Operating System (Not for pStor Mounting)	74
4.6.4 Mount NAS to pStor	76
4.7 Configure Address Mapping	76

Chapter 1 Preface

1.1 Product Introduction

HIKVISION pStor is the storage access service software developed by Hangzhou Hikvision Digital Technology Co., Ltd. You can set the server local HDD to be the storage room, or set the logical HDD (standard iSCSI/CIFS) mounted by the server to be the storage room via the software. It provides efficient and compatible storage access management service for Hikvision video surveillance management platform.

HIKVISION pStor can be deployed flexibly, supporting centralized deployment with Hikvision surveillance platform and internal deployment in server independently. It provides basic video storage, picture storage, and system management.

1.2 Purpose

The purpose of the user manual is to guide you to install the software correctly and master the operation, avoiding unnecessary risks or property damage caused by misoperation.

The applicable targets of the user manual are the system maintenance personnel and daily operation personnel.

Before using the product, read the user manual carefully, and keep it properly for reference.

1.3 Notice

1.3.1 Personnel Quality Requirements

As the installation and maintenance personnel, you should have the qualification certificates or experiences of being engaged in video surveillance system installation and maintenance. Besides, you must master the following knowledge and skills.

- Basic knowledge and installation skills of video surveillance system and components.
- Basic network security skills and the capacity of understanding the user manual.

1.3.2 Notice

• The system may face network security risk after it is accessed to Internet. Strengthen your personal information and data security protection. When you find that the system may in the hidden danger of network security, contact us in time. • You shall acknowledge that you have the responsibility to configure all the passwords, server security settings, and other security settings of the system reasonably, and keep your user name and password properly.

1.4 Software Preparation

Check if the hardware is working normally, if the operating system is installed, and the version information.

1.4.1 Operating System

The following operating systems are recommended:

- 64-bit Windows Server 2012R2
- 64-bit Windows Server 2008R2
- 64-bit Windows Server 2016
- 64-bit Win10
- 64-bit Win7

1.4.2 Product Version Description

The installation package is named as *Product Line-Product Series-Vx.x.x-buildyymmdd-R<n>*. The detailed description of the name is shown as below.

- Product Line: HikCentral
- Product Series: pStor
- Vx.x.x: Baseline version information
- **buildyymmdd**: Delivered date
- R<n>: R stands for the delivered system test version. n stands for the times of system test. E.g., *HIKVISION pStor-V1.1.0-build180118-R2.exe* means the product is delivered as V1.1.0 at January 18th, 2018, and has passed 2 cycles of system tests.

1.5 Environment Preparation

1.5.1 Network Environment

HIKVISION pStor product supports multiple NICs binding. If the video data for storage are too large, you need to bind multiple NICs of the storage device to increase network bandwidth.

If Intel NIC is used for the server, you need to configure NIC parameters to enhance NIC transmission performance.

1.5.2 Power Supply Environment

HIKVISION pStor product is strict in the stability of power supply. It is recommended to equip the machine room with two independent power lines to provide dual power supply, with independent UPS, and with generator.

1.5.3 Machine Room Environment

As the temperature, humidity, and dust have a great influence on the service life of disks and device, it is recommended to locate the machine room in a relatively closed environment and equip it with independent environment control device to guarantee all the devices are in the environment with constant temperature, constant humidity, and no dust.

1.5.4 Port

Port segment from 6001 to 6100, from 6111 to 6114, port 6120, and port 6201 are used in pStor system.

1.5.5 System Firewall

After HIKVISION pStor is installed successfully, Windows firewall will be enabled automatically, and port 2188, port 554, port 6011, port segment from 6021 to 6100, from 6111 to 6114, port 6120, port 6201, and port segment from 34000-36000 will be enabled.

Chapter 2 Software Installation

Step 1 Double click *HIKVISION pStor-xxx.exe* to start installation, as shown in figure below.

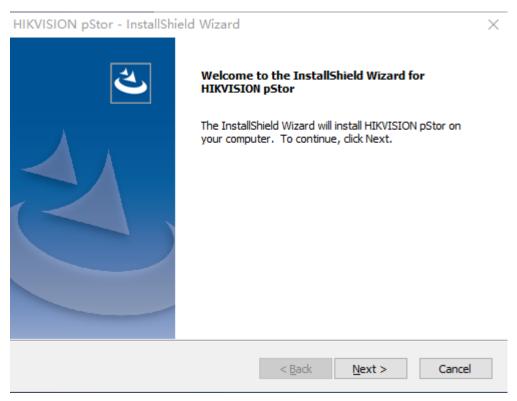


Figure 2-1 Start Installation

Step 2 Click **Next** to go to license agreement, as shown in figure below.

HIKVISION pStor - InstallShield Wizard	×
License Agreement Please read the following license agreement carefully.	Z
[Revised: April 2017]	^
© 2001 Hangzhou Hikvision Digital Technology Co., Ltd. subsidiaries.	with its all
ALL RIGHTS RESERVED.	~
 I accept the terms of the license agreement I do not accept the terms of the license agreement 	Print
<pre>A Back Next ></pre>	Cancel

Figure 2-2 License Protocol

Step 3 Check I accept the terms of the license agreement and click Next to select installation path, as shown in figure below.

HIKVISION	N pStor - InstallShield Wizard			×
	Destination Location older where setup will install files.		V	Z
	Install HIKVISION pStor to: C:\SurveillanceSystem\ASW			Change
InstallShield		< Back	Next >	Cancel

Figure 2-3 Select Installation Path

Step 4 Click **Next** to enter the installation preparation interface, as shown in figure below.

HIKVISION pStor - InstallShield Wizard		\times
Ready to Install the Program The wizard is ready to begin installation.		Z
Click Install to begin the installation.		
If you want to review or change any of your exit the wizard.	installation settings, click Back. Cli	ck Cancel to
InstallShield	< Back Install	Cancel

Figure 2-4 Prepare to Install

Step 5 Click Install to install the software as shown in figure below.

HIKVISION pStor -	InstallShield Wizard	\times
Setup Status		Z
The InstallShield W	izard is installing HIKVISION pStor	
		1
	Installing the prerequisites	
•		
InstallShield		
		Cancel

Figure 2-5 Install Software

Step 6 During the installation process, you may need to install Microsoft Visual C++ 2013 Redistributable. Follow the wizard to install them. Then continue to install HIKVISION pStor.

HIKVISION pStor - InstallShield Wizard		
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed HIKVISION pStor. Click Finish to exit the wizard.The computer will reboot now.	
	< Back Finish Cancel	

Figure 2-6 Finish Installation

Step 7 Click **Finish** to finish the software installation.

2.2 Software Uninstallation

Step 1 Deactivate license before uninstallation. See details in **3.8.13 Configure License**. Double click the file named HIKVISION pStor-xxx.exe. See figure below.

Welcome	or - InstallShield Wizard ×
	ne HIKVISION pStor Setup Maintenance program. This program lets you modify stallation. Click one of the options below.
⊖ Repair	Reinstall all program features installed by the previous setup.
Remove	Remove all installed features.
InstallShield ———	< Back Next > Cancel

Figure 2-7 Start to Uninstall

Step 2 Select Remove and click Next. See figure below.

Do you want to completely remove the selected application and all of its features?

Figure 2-8 Uninstall Software

Step 3 Click **Yes** to uninstall. Click **Finish** after uninstallation completed and the server will reboot. See figure below.

<u>4</u> ,	Uninstall Complete
	InstallShield Wizard has finished uninstalling HIKVISION pStor.
	< <u>B</u> ack Finish Cancel

Figure 2-9 Uninstallation Completed

2.3 Software Upgrade

Step 1 Double click the file named HIKVISION pStor-xxx.exe to upgrade. See figure below.





Step 2 Click **Next** to start upgrade and click **Finish** after upgrade completed.

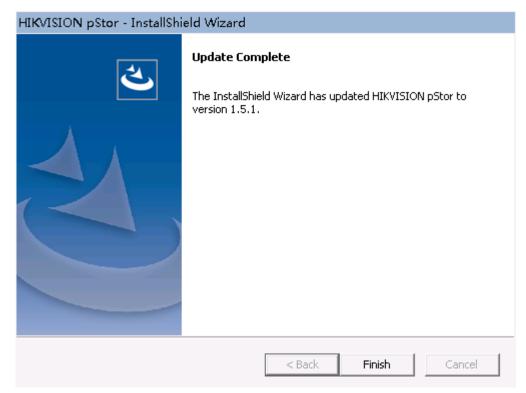


Figure 2-11 Upgrade Completed

Chapter 3 Software Operation

3.1 Browser Requirement

You can configure the system via web browser. The supported web browsers include IE10, IE11, Firefox, and Chrome. The supported resolution includes 1280*768, 1366*768, 1440*900, and 1920*1080.

3.2 Login

Step 1 Open the supported web browser.

Step 2 Input the server IP address and port No. (6060) in the address bar. E.g., https://***.***.***.6060. Press enter key to enter the login interface, as shown in figure below.

HIKVISION pStor System ^{®Windows}	English	~
Login		

2018 Hangzhou Hikvision Digital Technology Co., Ltd. All Rights Reserved.

Figure 3-1 Login

Step 3 Input the user name and password.

The default user name is admin, and the default password is HIK88075998. You need to modify the password after login for the first time. Refer to **3.2.1 Modify Default Password** for details.

Step 4 Click Login.

3.2.1 Modify Default Password

You need to modify the default password after login for the first time.

Step 1 On the Login interface, click **Login**, and the **Change Initial Password** message box pops up as shown in figure below.

Change Initial Password	×
Please input the password. The password should contain 8 to 16 characters, which should be the combination of at least two types of numeric, lowercase letter, capital letter, and special symbol.	
New Password *]
Confirm Password *]
Modify Cance)

Figure 3-2 Modify Password

Step 2 Input new password and confirm.

Step 3 Click **Modify**, and the message box pops up as shown in figure below.



Step 4 Click \times to finish the modification.

3.2.2 Login

After default password modification, input the server IP address and port No. (6060) in the address bar. Press enter key to enter the login interface. Input the user name and modified password to log in to the system.

3.3 Home Page

After login, enter the home page, on which you can view the HA mode, system time, storage space, service status, etc., as shown in figure below.

MIKVISION pStor System	(SWindows				English	⊻ Radmin *
=	HA Mode: Disable Configuration			System Time:	2019-11-29T13:41:41+08:00(Unco	onfigured NTP) Configura
습 Home	Available Initialized Storage Space		Uninitialized Avaliable Storage Space			
Waard Society Management Recording Schedule Leg System Management	Available Cognotity 008 . Percentage 06 Total Cognotity OGB	Ured Crassily (DGB +Percentage (DN		6000	58	
	Storage Management Service	Access Management S	Service	0	Data Storage Servi	ce
	Total Storage Pools O	Total Recording Schedules O Live Steam Recordu. : 07 Historical Steam Re.	Total Accessible Cameras -: ° 600	0	Video Access Servi	ce

Figure 3-4 Home Page

- **System time**: It shows the current time of storage accessing to server, and the time is changing all the time.
- **Pie chart**: The left one shows storage total capacity, used capacity, and available capacity; the right one shows uninitialized available storage space.
- Service status: It shows storage management service status, data storage service status, access management service status, and video access service status.
- General information: It shows total resource pools, total recording schedules, live stream recording schedule, historical stream recording schedule, and total accessible cameras.

3.3.1 Modify Admin Password

You can modify the admin password.

<u>A admin</u> v

Step 1 Click figure below.

on the upper right corner of the home page, as shown in

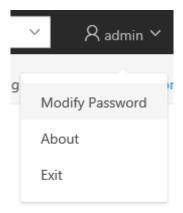


Figure 3-5 Menu

Step	2	Click	Modify	Password	to	enter	the	interface	as	shown	in	figure	below.	,
------	---	-------	--------	----------	----	-------	-----	-----------	----	-------	----	--------	--------	---

Modify Password	×
Please input the password. The password should contain 8 to 16 characters, which should be the combination of at least two types of numeric, lowercase letter, capital letter, and special symbol.	
Current password *	
Confirm Password *	
Modify Cancel	

Figure 3-6 Modify Password

Step 3 Input current password, new password, and confirm the new password.

Step 4 Click **Modify**, and the message box pops up as shown in figure below. It hints if the password modification is successful or not.



Step 5 Click \times to finish the modification.

Step 1 Click

After modifying the password, when you log out of the system and log in again, you need to input the new password.

3.3.2 About

You can view the version information of the system.

R admin ∽

on the upper right corner of the home page, as shown in

figure below.

∼ R admin	~
Modify Password	
About	
Exit	

Figure 3-8 Menu

Step 2 Click About, and the interface pops up as shown in figure below.

About		×
	pStor System Version: Baseline1.5.1-R3 Build2020/09/04 <u>www.hikvision.com</u> <u>Open Source Software Licenses</u>	
@ 2018 Hangzhou Hikvisi	on Digital Technology Co., Ltd. All Rights Reserved.	
	Figure 3-9 About	
3.3.3 Logout		
Step 1 Click on figure below.	the upper right corner of the home page, as shown	in
	 ✓ A admin ✓ Modify Password About 	

Figure 3-10 Menu

Exit

Step 2 Click Exit to log out of the system.

3.4 Wizard

You can follow the wizard to configure the main functions of the system quickly. Then you can use the system normally.

Click **Wizard** on the left menu to enter the wizard interface, which provides quick configuration, including adding storage space, and adding resource pool, as shown in figure below.

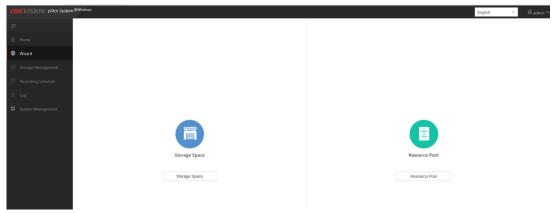


Figure 3-11 Wizard

3.4.1 Add Storage Space

Step 1 On the wizard interface, click **Storage Space** to enter the interface as shown in figure below.

FIIK VISION pStor System	n ©Windows							English	\sim	R admin ∽	
=	Storage Management > Storage Sp	orage Management > Storage Space									
⇔ Home	Storage Space	+ Add								C Refresh	
Wizard	Resource Pool	Index Saving Path	Device Type	Status		Progress	Space Usage	Remaining/Total Space (GB)	Operation		
Storage Management	NAS										
Recording Schedule											
II Log											
System Management											

Figure 3-12 Add Storage Space

Step 2 Add storage space. Refer to 3.5.1 Storage Space for details.

3.4.2 Add Resource Pool

Step 1 On the wizard interface, click **Resource Pool** to enter the interface as shown in figure below.

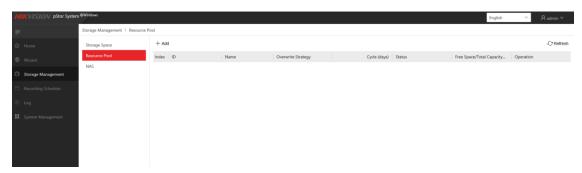


Figure 3-13 Add Resource Pool

Step 2 Add resource pool. Refer to 3.5.2 Resource Pool for details.

3.5 Storage Management

3.5.1 Storage Space

The system supports local disk, iSCSI input device and RAID (RAID equipped in Windows or hardware RAID card). The disk installed in storage device must be formatted to NTFS file system.

Storage Space mainly manages file folders in storage device, and includes information such as Saving Path, Device Type, Status, Progress, Space Usage, and Remaining/Total Space. You can add, delete, initialize, and restore storage space, as shown in figure below.

Storage Management > Storag	torage Management > Storage Space											
Storage Space	+ A	dd										
Resource Pool	Index	Saving Path	Device Type	Status		Progress	Space Usage	Remaining/Total Space (GB)	Operation			
NAS	1	G:\storData(4)	DISK	 Normal 		100%	5.12%	4.63 / 4.88				
	2	G:\storData(5)	DISK	 Normal 		100%	0%	14.88 / 14.88	•••			

Figure 3-14 Storage Space

3.5.1.1 Add Storage Space

Click Add to add storage space, as shown in figure below.

Select Storage Space		Selected total storage space0 GB
	>	
		No Data
	Initialize	Cancel

Figure 3-15 Add Storage Space

- Existed folders: When you go to Add Storage Space page, the system will read all the information of folders, except for folders in C drive (C drive is the system drive, not for data storage). If only one disk partition exists, storage space cannot be created. Because the system disk is reserved partition.

storData(4) \angle \square . The new folder will be created on the server at the same time.

- Rename folders: Move to or click the child folder, click *l* to rename the folder. The folder will be renamed on the server at the same time.
- Delete folders: Move to or click the child folder, click in to delete the folder.
 The folder will be deleted on the server at the same time.
- Select folders: before folders means these folders can not be selected, because they have already been initialized to storage space. before folders means the folders can be selected.
- Configure storage space (GB): When the child folder is selected, a text box such

as 🗹 🗋 storData(4) 🖉 🔲 5 GB will appear at the end of the

folder. You can configure appropriate storage space according to your need (at least 5 GB).

- Move to the right: Select folders and configure their storage spaces, and then click

 All the selected folders in the left and their configured storage spaces will be copied to the right.
- Move to the left: Select one or more folders with shift key pressed and held down, and then click
 All the selected folders in the right will be removed. You can also double click one folder to remove it.
- Total storage space: The system can automatically calculate the total storage space of the selected folders in the right.
- Initialize: Click **Initialize** to initialize all the folders in the right at the same time. The page will jump to Storage Space when the operation finished.

3.5.1.2 Initialize Storage Space

On the Storage Space page, choose the storage space you want to initialize, and click in the same line, and then a confirmation message box pops up as shown in figure below.

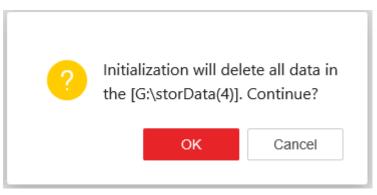
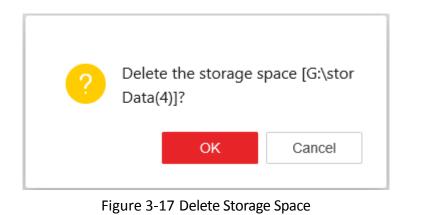


Figure 3-16 Initialize Storage Space

• Initialization will delete all the data in the selected saving path. Please be careful.

3.5.1.3 Delete Storage Space

On the Storage Space page, choose the storage space you want to delete, and click $\overline{\mathbb{II}}$, and then a confirmation message box pops up as shown in figure below.



As deletion is dangerous, you can only delete the storage space in Lost status.

3.5.1.4 Restore Storage Space

After reinstalling HIKVISION pStor software, you can see the previous storage space on the Storage Space page, as shown in figure below.

Storage Management 🗧 Storage Sp	ace								
Storage Space	+ Ad	bd							C Refresh
Resource Pool	Index	Saving Path	Device Type	Status	Progress	Space Usage	Remaining/Total Space (GB)	Operation	
NAS	1	G:\storData(4)	DISK	 Waiting for recovery 	0%	100.00%	0 / 4.88		
	2	G:\storData(5)	DISK	• Waiting for recovery	0%	100.00%	0 / 14.88		

Figure 3-18 Restore Storage Space

Click \square to restore the storage space (invalid in the trial version), and a confirmation message box pops up as shown in figure below.



Figure 3-19 Restore Storage Space

Click **OK** and the recovery results will show in the Status column, as shown in figure below.

Storage Management > Storage Sp	ace			Operation complete					
Storage Space	+ Ad	d							€ Refresh
Resource Pool	Index	Saving Path	Device Type	Status	Progress	Space Usage	Remaining/Total Space (GB)	Operation	
NAS	1	G:\storData(4)	DISK	 Normal 	100%	5.12%	4.63 / 4.88	D Ø I	
	2	G:\storData(5)	DISK	 Restoring 	0%	100.00%	0 / 14.88		



The status changes from • Restoring to • Formatting , and you can see the progress to know how huch has been done. When the status turns to • Normal , the recovery is finished, as shown in figure below.

Storage Management > Storage Space												
Storage Space	+	Add	dd									
Resource Pool	Ind	ex Saving Path	Device Type	Status		Progress	Space Usage	Remaining/Total Space (GB)	Operation			
NAS	1	G:\storData(4)	DISK	 Normal 		100%	5.12%	4.63 / 4.88				
	2	G:\storData(5)	DISK	 Normal 		100%	0%	14.88 / 14.88				

Figure 3-21 Restore Storage Space—Recovery Finished

3.5.2 Resource Pool

The resource pool is a basic unit of system data storage. With enough storage space, you can create up to 20 resource pools. After created, resource pool ID need to be configured on Hikvision platform. When configuring recording schedule, you need to link resource pool ID to recording pool ID, and the corresponding recording data will be saved into the configured resource pool.

Select resource pool under storage management, and go to the resource pool management page. The resource list mainly includes: ID, Name, Overwrite Strategy, Cycle (days), Status, Max. Locking up Attempts (%), Free Space/Total Capacity (GB), Transcoding Type, Original Data Cycle (days), etc., as shown in figure below.

$+ \mathrm{Add}$								C Refresh
Index ID		Name	Overwrite Strategy	Cycle (days)	Status	Free Space/Total Capacity (Operation	
1 <u>183</u>	3193595	test	Capacity Overwrite	-	Normal	3.00/3.00	<i>L</i> .	

Figure 3-22 Resource Pool

- You can add, delete, edit and view resource pools.
- You can create up to 20 resource pools.

When configuring recording, you need to choose resource pool ID to get linked. After configuration, you can view recording schedule in Live Stream Recording Schedule. The recording schedule contains resource pool ID information, and the recording data will be saved into the corresponding resource pool.

3.5.2.1 Add Resource Pool

Click Add to add resource pool, as shown in figure below.

Storage Management > Resource Pool > Add Resource Pool	
source Pool	Resource Pool Name *
S	
	Overwrite Mode
	Capacity Overwrite Cycle Overwrite Not Overwrite
	Resource Pool Capacity *
	Maximum distributable capacity:17GB
	Max. Locking up Attempts *
	10 9
	Add Cancel

Figure 3-23 Add Resource Pool

Enter needed information, and click **Add** to finish adding resource pool.

Frame extracting can be selected as transcoding type of resource pool. See figure below.

ite
~
fps
fps
fps

Figure 3-24 Frame Extracting

Cycle overwrite should be selected, and other parameters, such as resource pool capacity and cycle, data cycle, frame rate, max. locking up attempts, should be entered as required. Click **Add** to finish resource pool adding if transcoding type is frame extracting.

3.5.2.2 Edit Resource Pool

On the Resource Pool page, choose the resource pool you want to modify, and click *in the same line to go to Edit Resource Pool page, as shown in figure below.*

Storage Space Resource Pool NAS	Resource Pool Name
	Overwrite Mode
	Capacity Overwrite Cycle Overwrite Not Overwrite
	Resource Pool Capacity *
	10 GB
	Maximum distributable capacity:17GB
	Max. Locking up Attempts *
	10 %
	Save Cancel

Figure 3-25 Edit Resource Pool

Enter needed information, and click Save to finish editing resource pool.

3.5.2.3 Expand Resource Pool

• When storage space is enough, select resource pool to be expanded, click 🗹 in the same line to enter editing resource pool interface. The max. distributable capacity will be shown. And you can configure resource pool capacity accordingly. See figures below.

	ID	Name	Overwrite Strategy	Cycle (days)	Status	Free Space/Total Capacity (GB)	Operation
1	977036817	test_pstor	Cycle Overwrite	2	Ø Normal	4.00/4.00	Z ×

Figure 3-26 Expand Resource Pool

HIK	VISION pStor System ^{@Windows}		
۲	Storage Space	🔶 Edit Resource I	Pool
$\widehat{\mathbb{Q}}$	Resource Pool	*Resource Pool Name	And when
Ψ	NAS	Resource Poor Marile	test_pstor
		Overwrite Mode	Capacity Overwrite Scycle Overwrite Not Overwrite
		*Resource Pool Capacity	4 GB Maximum distributable capacity:8GB
<u>6</u>		*Resource Pool Cycle	2 day(s)
		*Transcoding Type	Untranscoded v
ŝ		*Max. Locking up Attempts	15 %
			Save Cancel

Figure 3-27 Expand Reouse Pool

 When storage space is not enough and adding hardware device is required, add storage space according to 3.5.1 Storage Space. And edit resource pool in the same way as above.

3.5.2.4 Delete Resource Pool

On the Resource Pool page, choose the resource pool you want to delete, and click \bar{m} , and then a confirmation message box pops up as shown in figure below.

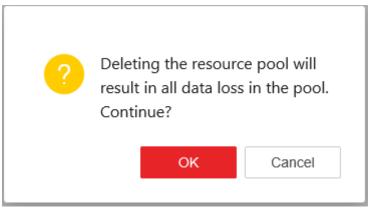


Figure 3-28 Delete Resource Pool

Click **OK** to delete resource pool.

3.5.2.5 View Resource Pool

On the Resource Pool page, choose the resource pool you want to view, and click

			Index	ID	
corresponding	g ID in the same line, su	ich as	1	205040650	, to see details, as
shown in figur	e below.				
Storage Space	Resource Pool ID	Resource Pool Name	-	Storage Type	Overwrite Mode
Resource Pool		test1	-	Video and Image	Capacity Overwrite
NAS		Resource Pool Cycle -day(s)		Transcoding Type Untranscoded	Original Data Cycle -day(s)

Figure 3-29 Detailed Information of Resource Pool

Max. Locking up Attempts 10 % Overwrite Time

Earliest Time

3.5.3 NAS

Network-attached storage (NAS) is a file-level computer data storage server connected to a computer network providing data access clients. The system supports to add NAS device, and after added, it can be used in Add Storage Space page.

At present, window server 2012 and window server 2016 support NAS, while window server 2008 does not. Other operation systems have not been verified.

3.5.3.1 Add NAS

Click **Add** to go to Add NAS page, as shown in figure below.

Transcoding Time Point

torage Space	
lesource Pool	UNC Path *
IAS	
	User Name
	Password

Figure 3-30 Add NAS

Enter UNC Path, User Name, Password, and then click **Add**. After addition, you can check NAS information including UNC Path, User Name, Status, Mapping Driver, etc., as shown in figure below.

/ISION pStor System ^{@Windows}						💄 admin
Storage Space		- Add 🔀 Refresh				
Resource Pool		UNC Path	User Name	Status	Mapping Driver	Operation
NAS	1		wwy_test	Online	z	×

Figure 3-31 NAS Information

3.5.3.2 Delete NAS

Click \times on NAS page, and a confirmation message box pops up as shown in figure below. Click **OK** to delete NAS.

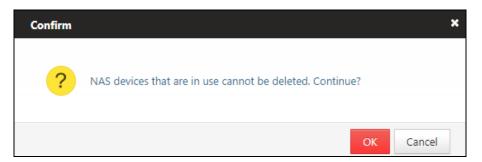


Figure 3-32 Delete NAS

3.6 Recording Schedule

The system supports to view recording schedules and recording status, meanwhile inspect videos, but does not support to add, edit or delete recording schedules. Recording status includes normal, streaming error, and recording error.

3.6.1 Live Stream Recording Schedule

Live Stream Recording Schedule mainly includes Camera ID, Camera Name, IP Address, Port No, Device Type, Channel No, Resource Pool ID, Recording, Stream, Pre-Recording Duration (sec), Post-record (sec), Recording Status, Arming Status.

You can search the recording schedule according to camera name or camera IP address, as shown in figure below.

Video Inspection	Recording Schedule > Live Stream R	ecording 3	Schedule								
Video Inspection Camera ID Camera Name Stream Mode IP Address Port No Stream Connection Status Recording Status Arming	Live Stream Recording Sched	Select	~		Search	Reset					
Video Inspection 1 10192732090101 10192732090101 Device 10.19273239 8000 Main Stream • Connected • Normal • Disart	-	Index	Camera ID	Camera Name	Stream Mode	IP Address	Port No	Stream	Connection Status	Recording Status	Arming Status
	Video Inspection	1	10192732090101	10192732090101	Device	10.192.73.209	8000	Main Stream	 Connected 	 Normal 	Disarmed

Figure 3-33 Live Stream Recording Schedule

3.6.1.1 View Recording Schedule

Click camera ID to view recording schedule, as shown in figure below.

Recording Schedule > Live Streag	m Recording Sch	edule > Recor	ding Schedule	Details									
Live Stream Recording Sched Historical Stream Recording	General Ir	nformation											
Video Inspection	Camera ID 1019273209	0101			Camera Name 10192732090101			IP Address 10.192.73.209	9		Stream P HIKVISIC		
	Port No 8000				Channel No 1			Resource Poo 205040650	ol ID		Overwrit Capacity	e Mode Overwrite	
	Recording Yes				Stream Main Stream			Stream Mode Device			Pre-Recc 0	ording Duration (5)
	Post-record	(s)			Recording Status Normal			Arming Statu Disarmed 	5				
	Recording Schedule Template												
											F	(ecording Type	 Scheduled Event
		00	02	04	06	08	10	12	14	16	18	20	22
	Monday												
	Tuesday												
	Wednesday												
	Thursday												
	Friday												
	Saturday												
	Sunday												

Figure 3-34 View Recording Schedule

3.6.2 Historical Stream Recording Schedule

Historical Stream Recording Schedule mainly includes Camera ID, Camera Name, IP Address, Port No, Device Type, Channel No, Post-record Start Date, Resource Pool ID, Connection Status, Video Type, Upload Speed (KB/s), Stream Type.

You can search the recording schedule according to camera name or camera IP address, as shown in figure below.

Recording Schedule > Historical Stre	eam Recor	ding Sch									
Live Stream Recording Sched	Select	~			Search Reset						
Historical Stream Recording	Index	Camera ID	Camera Name	Stream Mode	IP Address	Port No	Post-record Start D	Connection Stat	Video Type	Upload Speed	Stream Type
Video Inspection	1	10192732090102	10192732090102	Device	10.192.73.209	8000	20191202	 Connected 	All	-	Main Stream

Figure 3-35 Historical Stream Recording Schedule

3.6.2.1 View Historical Recording Schedule

Click camera ID to view historical recording information, as shown in figure below.

Recording Schedule > Historical S	Stream Recordir	ng Sch > Re	cording Sched	lule Details											
Live Stream Recording Sched Historical Stream Recording	General I	nformation													
Video Inspection	Camera ID 10192732090102 Port No 8000				Camera Name 10192732090102			IP Address 10.192.73.209				Stream Protocol HIKVISION			
					Channel No 1			Resource Pool 205040650	ID			Overwrite Mode Capacity Overwrite			
	Stream Main Stream				Stream Mode Device			Post-record St 20191202	art Date		Upload S	Upload Speed (KB/s) -			
		g Schedule		on Schedule Te							Recordi	Recording Type Scheduled Event All 			
		00	02	04	06	08	10	12	14	16	18	20	22		
	Monday	_													
	Tuesday														
	Wednesday														
	Thursday														
	Friday	_													
	Saturday	_													
	Sunday														

Figure 3-36 View Historical Recording Schedule

3.6.3 Video Inspection

For live stream recording schedule, you can use video inspection to analyze all the recording data in schedule.

3.6.3.1 Check Videos by Day

Choose the date you want to check in Time	2019/12/01	, and then click

Search. You can check camera ID\name\IP, channel No, exception hour(s) and recording status of the whole day, as shown in figure below.

Recording Schedule > Video Inspec	tion
Live Stream Recording Sched Historical Stream Recording	Camera Conversition/Name/UP Ohanne Time 2019/12/01 Search Reset This month Exceptions Check Today's Video Check Today's Video
Video Inspection	Index Camera ID Camera N., Camera IP Channel No Exception Hour(s)

Figure 3-37 Check Videos by Day

You can filter the videos by camera ID\name\IP or channel No to check what you want to view.

Click the red block, such as 19, to check the recording status in this one hour, as shown in figure below.

Index	Camera ID	Camera N	Camera IP	Chann	Excepti						Event vide 14 15 16 17 18 1		2019-12-02
1	101927320401	10192732	10.192.73	1	13	60 60	0 60 60 6	0 60 60	60 60 6	0 60 60 19		 -	
					12-02 12:00 st for 19 mir			tatus	Х				
			0	1 2	3 4	5	6 7 16 17	8	9 19				
			20	21 22	23 24		26 27	28	29 39				
			40	31 32 41 42	43 44	35 45	36 37 46 47	38 48	49				
			50	51 52	53 54	55	56 57	58	59				

Figure 3-38 Detailed Information of Video Exception

You cannot inspect today's video and only the videos of the day before today can be inspected.

3.6.3.2 Check Videos by Month

Select **V** This month, and click **Search** to check recording status by month. You can check Camera ID\Name\IP, Channel No, Exception Hour(s), and Recording Status, as shown in figure below.

Index	Camera ID	Camera Name	Camera IP	Channel No	Exceptio	No video plan 📕 video normal 📕 video exception[Unit: hours] 📕 Event video plan – Unchecked 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
1	HCSTEST001	HCSTEST001	www.HCS-te	1	1	
2	19102100001	1910210000	rtsp://www.s	-	1	

Figure 3-39 Check Videos by Month

Click 1 or to check the recording status in this one hour, as shown in figure below.

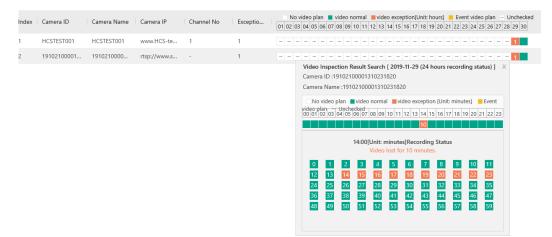


Figure 3-40 Detailed Information of Video Inspection

3.6.3.3 Check Today's Video

Click Check Today's Video at the top right corner to check today's video, as shown in figure below.

	ra Camera ID		Channe Check Today's	Video		Time Select date 📄 Search Reset	
Index	Camera ID	Camera N	Camera IP	Chann	Excepti	No video plan u video normal u video exception[Unit: minutes] Event video plan Unchecked 20 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Check for
1	10192732	10192732	10.192.73	1	14	60 60 60 60 60 60 56 31 45 60 60 =	2019-12-02T14:5

Figure 3-41 Check Today's Video

You can filter the videos by camera ID\name\IP or channel No to check what you want to view. Click 31 to check the recording status in this one hour, as shown in figure below.

	Camera ID\Nan		Channe Check Today		0			Tir	ne Se				Ē	Search	Reset					
Index Car	mera ID Ca	mera N	Camera IP	CH	iann	Excepti	00							ion[Unit: min 15 16 17 18		o plan —	Unchecked	I	2019-12-02	Check for
1 101	192732 10	192732	10.192.73	1		14	60	60 60 6	06060	60 60	160/56	31 45 60	60 -		 					2019-12-02T14:5
				0 10 20 30 40 50	2019- Video lo 1 2 11 12 21 22 31 32 41 42 51 52		00Reco minutes 4 5 14 12 24 23 34 33 44 45 54 55			8 18 28	9 19 29 39 49 59									

Figure 3-42 Detailed Information of Video Inspection

3.7 Log

3.7.1 Display Log

Log displays IP, time, level, content, etc.

Select the number of log displayed per page in the lower left corner, as shown in figure below.

13	127.0.0.1							
20	10 /page							
20	30 /page	-						
21	50 /page							
22	100 /page							
Total 26	30 /page	^						

Figure 3-43 Log

In the lower right corner, it displays the current page and total page number.

Click or box to switch to the previous or next page.

Enter number in 1^{3} , click **Go** to the specific page, as shown in figure below.

:	لى Do	wnload Log	団 Clear Log			
Home	Index	IP		Time	Level	Content
Wizard	1	127.0.0.1		2019-12-02T09:56:11+08:00	Normal	Recording schedule of real-time stream recovered to normal or ended. (Camera
Storage Management	2	127.0.0.1		2019-12-02T09;48:25+08:00	Normal	Resource pool added (ID: 205040650, name: test1, storage type: Video and Imag
Recording Schedule	3	127.0.0.1		2019-12-02T09:40:36+08:00	Normal	Storage space added (storage path: G:\storData(5))
Log	4	127.0.0.1		2019-12-02T09:40:19+08:00	Normal	Resource pool deleted (ID: 183193595)
System Management	5	127.0.0.1		2019-12-02T09:30:30+08:00	Normal	Recording schedule of real-time stream recovered to normal or ended. (Camera
System Management	6	127.0.0.1		2019-12-02T09:29:55+08:00	Normal	Recording schedule of real-time stream recovered to normal or ended. (Camera
	7	127.0.0.1		2019-12-02T09:27:10+08:00	Normal	Recording schedule of real-time stream recovered to normal or ended. (Camera
	8	127.0.0.1		2019-12-02T09:17:24+08:00	Normal	Logged in
	9	127.0.0.1		2019-12-02T09:08:11+08:00	Serious	Restart CVA
	10	127.0.0.1		2019-12-02T09:08:07+08:00	Serious	Storage space exception (storage path: G\storData(4). device type: 111, status:
	Total 26	10 /page	v			< 1 2 3 > <u>1</u> /3

Figure 3-44 Log

3.7.2 Download Log

Click **Download Log** in the upper left to download log to local.

Up to 1 million log entries can be downloaded.

3.7.3 Clear Log

Step 1 Click Clear Log in the upper left.

Step 2 Click **OK** to confirm the operation, as shown in figure below.

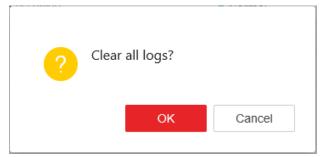


Figure 3-45 Clear Log

3.7.4 Search Log

Click \checkmark in the upper right, and search log according to type, time, level, IP or content, as shown in figure below.

IP Content	Time	
	Start Date - End Date 🛱	
Туре	Level	
All Operation Log Running Log	Al Normal Warning Serious	Query Reset

Figure 3-46 Search Log

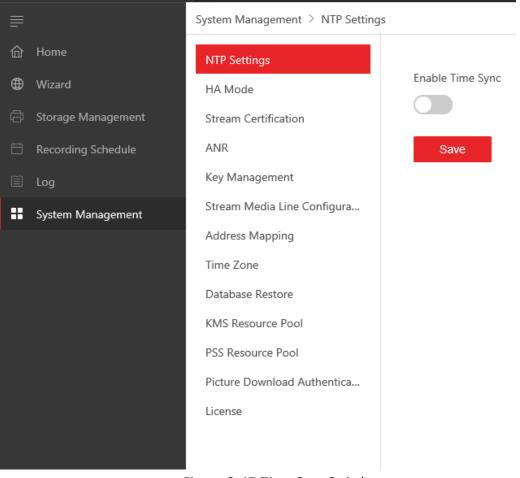
3.8 System Management

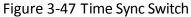
3.8.1 Configure NTP

Set the time sever for linked storage service system.

Step 1 Click **System Management** > **NTP Settings** to enter the NTP settings interface as shown in figure below.

Time sync is OFF by default.





Step 2 Click

to turn on time sync function, as shown in figure below.

NTP Settings	
HA Mode	Enable Time Sync
Stream Certification	
ANR	NTP Server Address *
Key Management	
Stream Media Line Configura	NTP Port *
Address Mapping	123
Time Zone	
Database Restore	NTP Interval *
KMS Resource Pool	1439 min.
PSS Resource Pool	Save
Picture Download Authentica	
License	

Figure 3-48 NTP Settings

Step 3 Enter the parameters accordingly, and click Save.



The default NTP port is 123; the default NTP interval is 1439.

The storage access service management system will make the first correction, and the result can be viewed through the home page. The storage access service management system will regularly update the time according to the set interval.

3.8.2 Configure Time Zone

Time zone function is designed to ensure the accuracy of searching and ANR time period in case that pStor and front-end devices are not in the same time zone or the DST is adjusted.

Step 1 Click **System Management** > **Time Zone** to enter the time zone settings interface as shown in figure below.

Step 2 Click to enable the function.

HIKVISION pStor User Manual

=		System Management \geq Time Zone	
命		NTP Settings	() Keep consistent with the time zone and DST of the camera.
⊕		HA Mode	
đ	Storage Management	Stream Certification	Time Zone(T) (GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi
Ħ	Recording Schedule	ANR	(ain 1 100.00) beijing, chongqing, hong kong, oranqi
Ē		Key Management	Daylight Saving Time
	System Management	Stream Media Line Configura	
		Address Mapping	Save
		Time Zone	
		Database Restore	
		KMS Resource Pool	
		PSS Resource Pool	
		Picture Download Authentica	
		License	

Figure 3-49 Disabled Daylight Saving Time

Step 3 Select time zone, saving time period, and time offset accordingly.

=		System Management > Time Zone									
命		NTP Settings	1 Keep consistent with the time zone and DST of the camera.								
⊕ ©	Wizard	HA Mode		Time Zone(T)							
ţ ţ	Storage Management Recording Schedule	Stream Certification ANR		(GMT+08:00)) Beij	ing, Chongqir	ng, Ho	ng Kong, Ur	umqi		~
Ē		Key Management		Daylight Savi	ng Tin	ne					
	System Management	Stream Media Line Configura									
		Address Mapping	Into Daylight Saving Time								
		Time Zone		April	\sim	Last	\sim	Friday	\sim	02	\sim
		Database Restore	End of Daylight Saving Time								
		KMS Resource Pool PSS Resource Pool		Octorber	~	Second	~	Friday	~	02	~
		Picture Download Authentica		Time Offset							
		License		60min.							\sim
				Save							

Figure 3-50 Enabled Daylight Saving Time

Step 4 Click Save.

3.8.3 Configure Stream Authentication

Step 1 Click **System Management** > **Stream Authentication** to enter the stream authentication settings interface as shown in figure below.

Step 2 Click

to enable the function.

HIK	VISION pStor System ^{@Window}	8	English	\sim	R admin ∽
≡	System Management > Stream Cert	ification			
â	NTP Settings HA Mode	Enable Authentication			
⊕ ©	Stream Authentication	After stream authentication, the service will reboot automatically, which may cause data loss.			
8	Key Management Stream Media Line Configura	Save			
	Address Mapping Time Zone				
	Database Restore KMS Resource Pool				
	PSS Resource Pool Picture Download Authentica				
	License				

Figure 3-51 Enable Stream Authentication

Step 3 Enter the parameter value accordingly, and click **Save**, as shown in figure below.

HII	VISION pStor System ^{@Windows}		English V	R admin ∨
=	System Management > Stream Certifica	ation		
	NTP Settings HA Mode Stream Authentication ANR	Enable Authentication		
	Key Management Stream Media Line Configura Address Mapping Time Zone	Digest Algorithm		
	Database Restore KMS Resource Pool PSS Resource Pool Picture Download Authentica License	Keys Component *		

Figure 3-52 Stream Authentication Settings

3.8.4 Configure ANR

Step 1 Click **System Management** > **ANR** to enter the ANR settings interface as shown in figure below.

Step 2 Click to enable the function.

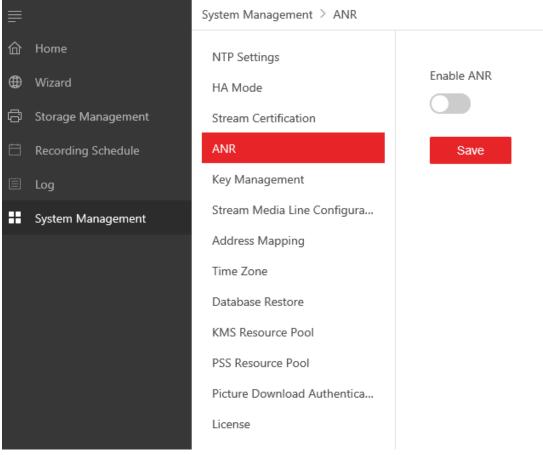


Figure 3-53 ANR Settings

Once configured, the storage access service takes the real-time flow from the camera for storage. When streaming is interrupted, the storage access service generates the recording task for the interrupted time period to make up the missing video data from the camera.

ANR is not supported when real-time streaming through ONVIF protocol.

3.8.5 Configure Picture Download Authentication

- Step 1 Click **System Management > Picture Download Authentication** to enter the settings interface as shown in figure below.
- Step 2 Click the switch to enable/disable the function, click Save.

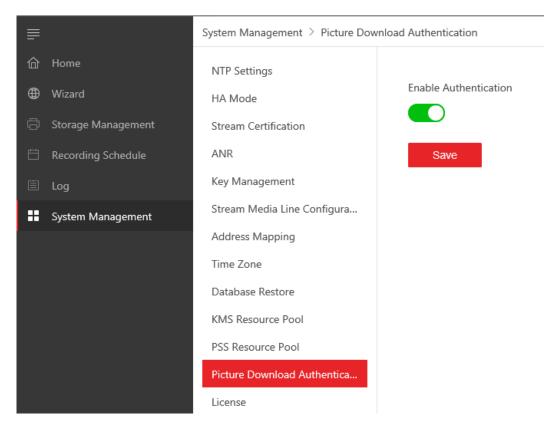


Figure 3-54 Picture Download Authentication Settings

Picture download authentication is enabled by default. It needs authentication when downloading picture via Restful. If you turned off the function, no authentication is needed when downloading picture via Restful. You can check the picture via web browser.

3.8.6 Configure Stream Media Line

Stream media line configuration is mainly applied in multi-network cards storage server environment.

Click **System Management** > **Stream Media Line Configuration** to enter the server NIC settings interface as shown in figure below.

≣		System Management > Stream Media Line Configuration						
仚	Home	NTP Settings						
⊕	Wizard	HA Mode	NIC IP Address					
G	Storage Management	Stream Certification	127.0.0.1					
Ħ	Recording Schedule	ANR	NIC Description					
	Log	Key Management	NIC MAC Address					
::	System Management	Stream Media Line Configura						
		Address Mapping	Save					
		Time Zone						
		Database Restore						
		KMS Resource Pool						
		PSS Resource Pool						
		Picture Download Authentica						
		License						

Figure 3-55 Server NIC Settings

When there are multiple network cards available, the first network card will be considered by default as the current network card. If you need modify the NIC Settings, select a network card from the drop down box.

Click **Save**, and the page will prompt "The NIC has been changed. Restart the computer to take effect.", and restart the server.

If the NIC IP is not modified, you can't click **Save**.

3.8.7 Configure Address Mapping

3.8.7.1 Multi-Line

Multi-line function is mainly applied in scenario, that is, pStor system and platform with fixed IP address are in different network environments.

Step 1 Click System Management > Address Mapping to enter the address mapping settings interface.

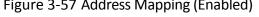
Step 2 Click $^{+ \, \rm Add}$ to configure address mapping and client authorized IP segment.

=		ess Mapping					
🗇 Home	NTP Settings	+ Add					Multi-Line
Wizard	HA Mode	Index Line IP Address	Port Mapping	F	Function Descripti	Line Whitelist	Operation
Storage Management	Stream Certification						
Recording Schedule	ANR						
🗐 Log	Key Management						
System Management	Stream Media Line Configura						
	Address Mapping						
	Time Zone						
	Database Restore						
	KMS Resource Pool						
	PSS Resource Pool						
	Picture Download Authentica						
	License						

Figure 3-56 Configure Address Mapping

Step 3 Enter the IP Address and port of external network and click **Add** to configure IP addresses, as shown in figure below.

	Address Mapping Table		
HA Mode			
Stream Certification			
ANR	10.192.73.11		
Key Management	Port Function Description *		
Stream Media Line Configura	Video Picture Object File		
Address Mapping			
Time Zone			
Database Restore			6041 - 6041 6042 - 6042 6044 - 6044 6021 - 6021
KMS Resource Pool	6111 - 6111 6112 - 6112 6040 - 6040 6	120 - 6120 6113 - 6113 6114 - 6114	6027 - 6027 6201 - 6201 6045 - 6045 6046 - 6046
PSS Resource Pool			
	Line Whitelist		
Literate			a contra
			Operation
	1 10.199.105.5	10.199.105.5	2
	Cancel		
	Stream Certification AMR Key Management Stream Media Line Configura Addream Maginga Time Zone Database Restore MdS Resource Fool	HA Mode Address Mapping Table Steam Certification Line IP Address * ANR 10.192.73.11 Key Munagement Destroption * Stream Media Line Configura. IV the IP Picture Configura * Address Napping Table Line IP Address * Time Zone Object File Database Restore 6011 _ 6012 _ 6022 _ 6026 _ 6040 _ 6640 _ 6 PS Resource Pool FS Resource Pool PS Resource Pool Line Whitelist Lionse ⊥Address	AA Mode Sream Certification ANE Nation Stream Media Configura. Database Restore Not Rescover Prod Pricture Download Authentica Liones Address Mapping Table Unit P Address * 1015/2111 Pricture Download Authentica Liones Address Mapping Table Unit P Address * 1015/2111 Pricture Download Authentica Liones Address Mapping Table Database Restore Pricture Download Authentica Liones Pricture Download Authentica Liones Pricture Download Authentica Pricture



Step 4 Enter authorized start and end IP address, and click and Save, as shown in figure below.

Start IP and end IP should belong to the same IP segment.

-+ Add	
Index Start IP Address End IP Address Operation	n
1 10.199.105.5	

Figure 3-58 Client Authorized IP Segment

After address mapping is saved, the figure is shown below.

F	System Management > Address Ma	pping							
份 Home	NTP Settings	+ Ad	d						Multi-Line
Wizard	HA Mode	Index	Line IP Address	Port Mapping			Function Descripti	Line Whitelist	Operation
Storage Management	Stream Certification			6011 - 6011 6027 - 6027	6021 - 6021 6036 - 6036	6022 - 6022 6037 - 6037			
Recording Schedule	ANR		10.192.73.11	6038 - 6038 6041 - 6041	6039 - 6039 6042 - 6042	6040 - 6040 6044 - 6044	Video;Object	10.199.105.5 - 10.199.105.5	2 0
🗐 Log	Key Management			6045 - 6045	6046 - 6046 6111 - 6111 FilesPicture	10.139.103.5 - 10.139.103.5	2		
System Management	Stream Media Line Configura			6112 - 6112 6120 - 6120	6113 - 6113 6201 - 6201	6114 - 6114			
	Address Mapping								
	Time Zone								
	Database Restore								
	KMS Resource Pool								
	PSS Resource Pool								
	Picture Download Authentica								
	License								

Figure 3-59 Succeeded Address Mapping

3.8.7.2 Multi-Domain

Multi-domain function is mainly applied in scenario, that is, pStor system and client with unfixed IP address (e.g. 4G mobile device) are in different network environments, and pStor system cannot be accessed by configuring authorized IP segment due to unfixed IP address.

You should configure IP segment of internal network. External IP address should be configured with address mapping.

Step 1 Click System Management > Address Mapping to enter the address mapping settings interface.

Step 2 Disable multi-line to change to multi-domain mode.

Step 3 Click + Add to configure address mapping and IP segment of internal network.



Figure 3-60 Configure Address Mapping

Step 4 Enter the IP Address and port of external network and click **Add**, as shown in figure below.

System Management > Address M	lapping ≥ Add
NTP Settings HA Mode	Address Mapping Table
Stream Certification	Line IP Address *
ANR	10.192.10.10
Key Management	Port Function Description *
Stream Media Line Configura	Video Video Voject File
Address Mapping	
Time Zone	Internal Network Port And External Network Port 6011 - 6011 6022 - 6022 6036 - 6036 6037 - 6037 6038 - 6038 6039 - 6039 6041 - 6041 6042 - 6042 6044 6021 - 6021
Database Restore	6011 - 6011 6022 - 6022 6026 - 6056 6037 - 6037 6038 6039 - 6039 6041 - 6041 6042 - 6042 6044 - 6044 6021 - 6021 - 6021 - 6041 6042 - 6044 6021 - 6042 6044 - 6044 6021 - 6021 - 6021 - 6021 - 6041 6042 - 6044 6044 - 6044 6044 -
KMS Resource Pool	
PSS Resource Pool	Line Whitelist
Picture Download Authentica	Line writenst
License	+ Add
	Index Start IP Address Operation
	1 10.193.105.6
	Save Cancel

Figure 3-61 Address Mapping (Enabled)

Step 5 Enter the start and end IP address of internal network, and click **Save**, as shown in figure below.

Start IP and end IP should belong to the same IP segment. And local IP address should be added into the IP segment of internal network.

Line Whitelist		
+ Add		
Index Start IP Address	End IP Address	Operation
1 10.199.105.6	10.199.105.6	

Figure 3-62 IP Segment of Internal Network

After address mapping is saved, the figure is shown below.

system Management 🤌 Address Ma	ipping							
NTP Settings	+ Ad	Id						Multi-Line
HA Mode	Index	Line IP Address	Port Mapping			Function Descripti	Line Whitelist	Operation
Stream Certification			6011 - 6011 6027 - 6027 6038 - 6038	6021 - 6021 6036 - 6036 6039 - 6039	6022 - 6022 6037 - 6037 6040 - 6040			
Key Management	1	10.192.10.10	6041 - 6041 6045 - 6045	6042 - 6042 6046 - 6046	6044 - 6044 6111 - 6111	Video:Object File;Picture	10.199.105.6 - 10.199.105.6	2 🗈
Stream Media Line Configura			6112 - 6112 6120 - 6120	6113 - 6113 6201 - 6201	6114 - 6114			
Address Mapping								
Time Zone								
Database Restore								
KMS Resource Pool								
PSS Resource Pool								
Picture Download Authentica								
License								



3.8.8 KMS Resource Pool

Step 1 Click System Management > KMS Resource Pool to enter the settings interface as shown in figure below.

HIKVISION pStor User Manual

=		System Management $>$ KMS Resou	rce Pool	
仚		NTP Settings		
⊕		HA Mode	Resource Pool	٦
đ	Storage Management	Stream Certification	Please select 🗸	
Ħ	Recording Schedule	ANR	Save	
Ē		Key Management		
::	System Management	Stream Media Line Configura		
		Address Mapping		
		Time Zone		
		Database Restore		
		KMS Resource Pool		
		PSS Resource Pool		
		Picture Download Authentica		
		License		

Figure 3-64 Setting KMS Resource Pool

Step 2 Select resource pool in drop-down box and click Save.

3.8.9 PSS Resource Pool

Step 1 Click System Management > PSS Resource Pool to enter the settings interface as shown in figure below.

≡		System Management > PSS Resou	rce Pool
佡		NTP Settings	
⊕		HA Mode	Resource Pool
đ	Storage Management	Stream Certification	Please select
₿	Recording Schedule	ANR	Save
Ē	Log	Key Management	
::	System Management	Stream Media Line Configura	
		Address Mapping	
		Time Zone	
		Database Restore	
		KMS Resource Pool	
		PSS Resource Pool	
		Picture Download Authentica	
		License	

Figure 3-65 Setting PSS Resource Pool

Step 2 Select resource pool in drop-down box and click Save.

3.8.10 HA Mode

Step 1 Click **System Management** > **HA Mode** to enter the HA mode settings interface as shown in figure below.

HA mode is OFF by default.

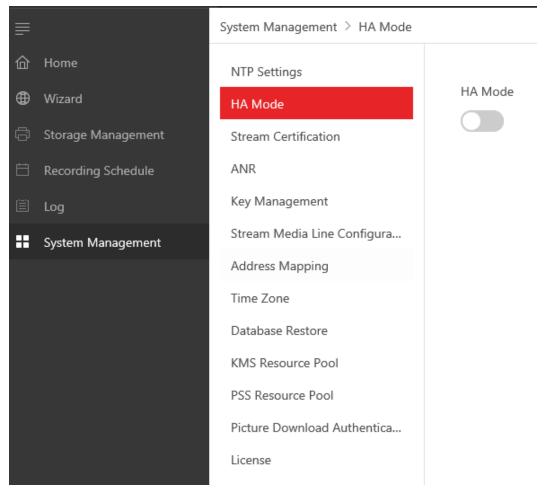


Figure 3-66 HA Mode Settings

HA Mode

Step 2 Click , configure background services, and make deployments to enable the function.

3.8.11 Restore Database

System supports database automatic backup. System will backup important data information automatically and regularly. When the system encounters an unrecoverable failure, the original system can be restored by reinstalling the system and by restoring the backup database. Due to the delay of database backup, the backup data may have some error.

Step 1 Click System Management > Restore Database to enter the restore database interface.

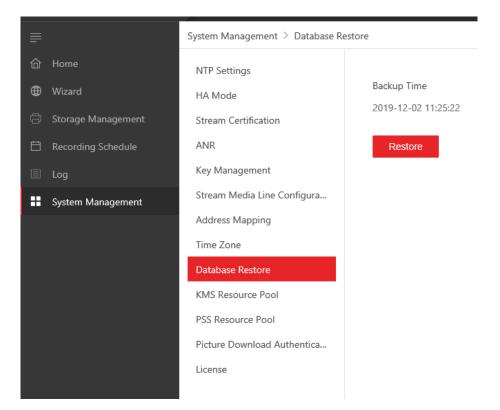


Figure 3-67 Data Restoration

Step 2 Click **Restore** to start restoring the database, and the message box pops up as shown in figure below.

Users should be careful when performing database restoration to avoid data loss.

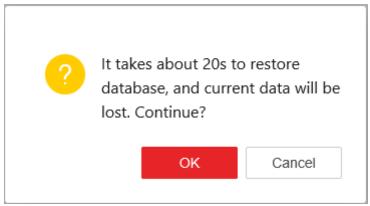


Figure 3-68 Confirm to Restore the Database

Step 3 Click **OK** to continue.

After the system runs for a period of time, if the user reloads the system, a prompt box will pop up when the user enters the web page for the first time. It indicates whether to restore the database to the state of saved by the system before reloading, as shown in figure below.

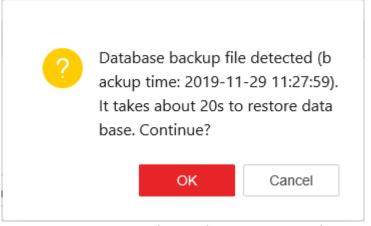


Figure 3-69 Restore the Database Prompt Window

Step 4 Click OK.

3.8.12 Manage Key

The system provides access key and encryption key, which are mainly used in Restful image storage protocols.

Step 1 Click **System Management** > **Key Management** to enter the key management settings interface as shown in figure below.

≡		System Management > Key Manage	ement
命	Home	NTP Settings	
⊕	Wizard	HA Mode	Download
G	Storage Management	Stream Certification	Key Download
Ħ	Recording Schedule	ANR	
Ē	Log	Key Management	Key Reset
H	System Management	Stream Media Line Configura	Login password *
		Address Mapping	
		Time Zone	
		Database Restore	
		KMS Resource Pool	Save
		PSS Resource Pool	
		Picture Download Authentica	
		License	

Figure 3-70 Key Management Settings

Step 2 Click Key Download to download and save the key files.

(Optional) Enter login password to reset the password, click **Save**.

3.8.13 Video Cover

It will provide cover for videos if users enable this feature, and click System

Management > Video Cover to enable it.

System Management > Video Cover

NTP Settings
Time Zone
Stream Authentication
ANR
Picture Download Authentica
Stream Media Line Configura
Address Mapping
KMS Resource Pool
PSS Resource Pool
HA Mode
Database Restore
Key Management
Video Cover
License

3.8.14 Configure License

You can check the system authorization information, activate and deactivate license.

For non-authorized users, the system can be used for 1 month by default and supports up to 8 channels of video recording. When exceeding 1 month, please contact us to obtain authorization documents.

Click **System Management** > **License** to enter the license settings interface as shown in figure below. You can check the license related information.

HIKVISION pStor User Manual

HIKVISION pStor System	n @Windows				License Validity Period 201	9-12-28 English 🗸	R admin ∨
=	System Management > License						
습 Home	NTP Settings	Please properly keep your activation code. You	ou need to deactivate device before unin	stalling pStor, or the activation code will be inval	id.		
Wizard	HA Mode						
Storage Management	Stream Certification	License Details					
Recording Schedule	ANR	Expiration Date 2019-12-28Trial Period	Capacity (TB) 20	Video		Recording Schedule	
🗄 log	Key Management					0	
System Management	Stream Media Line Configura	Picture Enabled	Video Enabled	Smart Search Enabled		Storage Object Enabled	
	Address Mapping	License List					
	Time Zone	License List					
	Database Restore	Activation Code	Capacity (TB)	Recording Schedule	Expiration Date		
	KMS Resource Pool						
	PSS Resource Pool						
	Picture Download Authentica			No Data			
	License	Upgrade License Deactivate Lice	inse				
		> Online Activation(Network is availab	ie.)				
		> Offline Activation(Network is not ava	allable.)				

Figure 3-71 License Settings

3.8.13.1 Online Upgrade License

The method is applied when the license is invalid and network is available.

Step 1 Click > before online activation and click Enter activation code to pop up the online activation window. See the figure below.

Online Ac	tivation		×
	Activation Code*	+	Ī
		ОК	Cancel

Figure 3-72 Online Activate License

Step 2 Enter activation code and click **OK** to pop up license protocol window. See figure below.

[Revised: April 2017]	
© 2001 Hangzhou Hikvisio	on Digital Technology Co., Ltd. with its all subsidiaries.
ALL RIGHTS RESERVED.	
	END USER LICENSE AGREEMENT
IMPORTANT: THIS END U	JSER LICENSE AGREEMENT (EULA) IS A LEGAL AGREEMENT BETWEEN YOU ("END-USER" OR "YOU") AND
HANGZHOU HIKVISION DI	IGITAL TECHNOLOGY CO., LTD. WITH ITS ALL SUBSIDIARIES ("HIKVISION" OR "WE"). YOUR AUTHORIZED
I accept the item.	

Figure 3-73 License Protocol

Step 3 Check I accept the item and click **OK**. The license prompt window will pop up to show license update status. See the figure below.

System Management 🗧 License								
NTP Settings	Please properly keep your activation code. You need to deactivate device before uninstalling pStor, or the activation code will be invalid.							
HA Mode								
Stream Certification	License Details							
ANR	Expiration Date	Capacity (TB)	Vid		Recording Schedule			
Key Management	2030-12-31	200	Ena	abled	600			
Stream Media Line Configura	Picture Enabled	Video Enabled		art Search abled	Storage Object Enabled			
Address Mapping								
Time Zone	License List							
Database Restore	Activation Code	Capacity (TB)	Recording Schedule	Expiration Date				

Figure 3-74 License Update Result

3.8.13.2 Offline Upgrade License

The method is applied when both license and network are invalid.

Step 1 Click > before offline activation and click Export License Request File to pop up the offline activation window. See the figure below.

Offline Activation				×
Activatio	on Code*] +	Ē
		0	к	Cancel

Figure 3-75 License Offline Activation

Step 2 Enter activation code and click **OK** to pop up the license protocol window. Check the **I accept the item** and save the file to local. See the figure below.

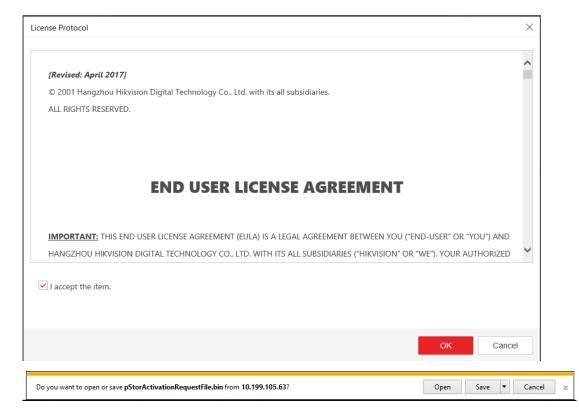


Figure 3-76 License Protocol and Saving File

Step 3 Visit offline activation website

(<u>https://www.hikvision.com/en/VMS/Support/LicenseManagement</u>) and click **How to Activate Your Account**. Click **Browse** and select offline license request file and click **Submit**. Download offline activation response file accordingly. See figures below.

HI	KVISION °			Head	iquarters	🍘 Region /	Language 🛔	Login	Search Q
HOME	PRODUCTS&TECHNOLOGIES	SOLUTIONS	EZVIZ	ROBOTICS	VMS	PRESS	SUPPORT	PARTNERS	CORPORATE
Home > VM	S > Support > License Manageme	ent							
VMS HikCentral	н	ow to Activat	e Your	Account					
Blazer	Th	pose: instructions below will qu	uickly guide ye	ou through the nece	ssary step:	s to activate yo	our licensed accou	unt when offline. Th	e CMS to be
iVMS4200	Series act	vated does not require a	connection to	the Internet to comp	olete this o	peration. How	ever, you will nee	d a removable stora	ge medium (e.g.,
Hik-Conne	ct US	B flash drive). Please per	form the follow	ving steps to activat	e your acc	ount.			
Support	Ins	ructions:							
Download	1.1	og on to the Web Client o	of your HikCer	ntral or iVMS-5200 F	۲o.				
Operation Vi	deo 2.	Click "Export the License I	Request File*	in the license area ir	n the botto	m right corner,	the Export File w	vindow will appear.	
License Man	agement →	xport File			×				
Knowledge E	ase								
How to Buy	/	Activation Code							
			Export	Cancel					

Figure 3-77 Offline Activation Website

7. Click "Browse" and choose the Request File from your storage device. When the file name app	ears in the text field in the window, click
"Import." A notification with the text "Activated" will appear on your screen.	
As Step 4 instructs, click on "Browse" as shown below to open your local directory, and then click "Submit" to upload the Request File.	choose the ActivationRequestFile.bin and
C:\Users\yanting7\Downloads\pStorActivationRed Browse Submit	
How to Update Your Account	
non to optite rourneoutit	

Figure 3-78 Upload License Request File

Step 4 Go to System Management > License > Upgrade License. Click

Step 2 Import Activation File under offline activation. And click to import the offline activation request file in step 3. Click Import. See the figure below. The license prompt window will pop up to show license update status.

System Management 💈 License					
NTP Settings	 Please properly keep your activation con 	de. You need to deactivate device befo	re uninstalling pStor, or the activation code wil	ll be invalid.	
HA Mode					
Stream Certification	License Details				
ANR	Expiration Date		Capacity (TB)	Video	
Key Management	2030-12-31		200	Enabled	
Stream Media Line Configura	Recording Schedule 600		Picture Enabled	Video Enabled	
Address Mapping				Liabled	
Time Zone	Smart Search Enabled		Storage Object Enabled		
Database Restore					
KMS Resource Pool	License List				
PSS Resource Pool	Activation Code	Capacity (TB)	Recording Schedule	Expiration Date	
Picture Download Authentica		200	600	2030-12-31	
License	Update License				
	Upgrade License Deactivate	Lienne			
	> Online Activation(Network is av	railable.)			
	 Offline Activation(Network is no 	ot available.)			
	Step 1 Export License Request 1 Step 2 Import Activation File	file			
Import File				×	
	Activation File *				
ſ				D -	
			Import	Cancel	

Figure 3-79 Import Activation File

3.8.13.3 Online Deactivate License

You need to deactivate license before uninstalling pStor, or the activation code will be invalid. The method is applied when network is available.

Step 1 Click > before online deactivation and <u>Select activation code</u> will pop up.

Step 2 Select the activation code, and click **OK**.

The license status will be updated. See the figure below.

System Management 🗧 License					
NTP Settings	Please properly keep your activation	code. You need to deactivate device before unin	stalling pStor, or the activation code will be	invalid.	
HA Mode	License Details				
Stream Certification	Electrise Details				
ANR	License Invalid	Capacity (TB) 0	Video Disabled		Recording Schedule 0
Key Management	Invalid	Ū	Disabled		0
Stream Media Line Configura	Picture Disabled	Video Disabled	Smart Se Disabled		Storage Object Disabled
Address Mapping					
Time Zone	License List				
Database Restore	Activation Code	Capacity (TB)	Recording Schedule	Expiration Date	
KMS Resource Pool					
PSS Resource Pool					
Picture Download Authentica			No Data		
License	Upgrade License Deactive	ate License			
	> Online Activation(Network is	available.)			
	> Offline Activation(Network is	i not available.)			

Figure 3-80 License Update

3.8.13.4 Offline Deactivate License

The method is applied when network is not available.

Step 1 Click > before offline deactivation and click

Step 1 Export License Request File to pop up the offline deactivation window. See the figure below.

Offline Deactiva	ition		×
License	✓ D ECE 1007 DEC 108 9		
		Export	Cancel

Figure 3-81 Offline Deactivate License

Step 2 Select activation code, and click **Export**. Save the license request file.

Step 3 Visit offline activation website

(https://www.hikvision.com/en/VMS/Support/LicenseManagement) and click How to Deactivate Your Account. Click Browse and select offline license request file and click Submit. Download offline deactivation response file accordingly. See figures below.

MS	How to Activate Your Account
HikCentral	How to Update Your Account
Blazer	
VMS4200 Series	How to Deactivate Your Account
Hik-Connect	Purpose:
Support	If you need to activate your already-installed CMS on another PC or server using the same Activation Code, please deactivate the CMS on the
Download	existing PC or server. The CMS to be deactivated does not require an Internet connection to complete this operation. However, you will need a removable storage medium (e.g., USB flash drive). Please perform the following steps to activate your account.
Operation Video	removable storage medium (e.g., OSD nash unve). Frease periorin die following steps to activate your account.
icense Management $ ightarrow$	Instructions:
Knowledge Base	 Log on to the Web Client of your HikCentral or iVMS-5200 Pro. Click "Deactivate License" in the license area in the bottom right corner to expand the panel.
How to Buy	 Click "Export the License Request File" and the Export File window will appear with the default Activation Code already visible.
	Export File × Activation Code DAte C7
	Export Cancel
	 Click on "Export" and save the DectivationRequestFile.bin to the removable storage medium (e.g., USB flash drive). Connect your removable storage medium to a PC or server with Internet connection, enter this web page, and click on "Browse" as shown
	below. Choose the DeactivationRequestFile.bin, and click "Submit" to generate the Request File.
	Figure 3-82 Offline Deactivate Website
8. Click "Browse," choo	use the Request File, and click "Logout." A notification will appear, instructing you to repeat Steps 2 through 8.
	n Code is correct, after repeating Steps 2 through 8, a notification with the text "Deactivated" will appear on your sc
	n successfully deactivated.

C:\fakepath\pStorDeactivationRequestFile1.bin	Browse	Submit

Figure 3-83 Upload License Request File

Step 4 Go to System Management > License > Deactivate License. Click Step 2 Import Activation File

under offline deactivation.

Step 5 Click 🗀 to import the offline deactivation response file in step 3. Click Import. See the figure below. The offline deactivation file will be downloaded automatically on offline deactivation page.

Import File	2		×
	Activation File * 20191202034623185_new.bin	Ē	
		Import Can	icel

Figure 3-84 Import Activation File

Stream Media Line Configura	Upgrade License	Deactivate License
Address Mapping	opgrade License	Deactivate License
Time Zone	> Online Deactivati	ion(Network is available.)
Database Restore	> Offline Deactivati	ion(Network is not available.)
KMS Resource Pool	(i) Fir	nish the deactivation process first.
PSS Resource Pool		
Picture Download Authentica		
License		

Figure 3-85 Offline Deactivation Page

- Step 6 Repeat step 3 and step 4.
- Step 7 Click to import the offline deactivation response file again. Click **Import**. See the figure below. The license prompt window will pop up to show license update status.

System Management \geq License					
NTP Settings	 Please properly keep your activation co 	de. You need to deactivate device before unir	nstalling pStor, or the activation code will be invali	d.	
HA Mode					
Stream Certification	License Details				
ANR	License Invalid	Capacity (TB) 0	Video Disabled	Recording S 0	Schedule
Key Management	invalid	0	Disabled	0	
Stream Media Line Configura	Picture Disabled	Video Disabled	Smart Search Disabled	Storage Obj Disabled	ject
Address Mapping					
Time Zone	License List				
Database Restore	Activation Code	Capacity (TB)	Recording Schedule	Expiration Date	
KMS Resource Pool					
PSS Resource Pool					
Picture Download Authentica			No Data		
License	Upgrade License Deactivat	e License			
	> Online Activation(Network is a	vailable.)			
	> Offline Activation(Network is n	ot available.)			

Figure 3-86 License Update Result

Chapter 4 Appendix

4.1 Mount iSCSI to Windows System

4.1.1 Map IPSAN to iSCSI initiator

Take Hikvision IPSAN as an example.

Step 1 Enter Hikvision IPSAN management interface (2004), and click **Enable iSCSI Service**.

9 海康威视 - Windows Interr	net Explorer		Name and Address of Street	the state of the s		
🕒 💬 🔻 🙋 https://10.1	192.71.199:2004/web/n	nain.php	and the second sec		 ♥ 证书错误 ◆ × 	D 四个火念什么 P
文件(F) 编辑(E) 查看(V)	收藏夹(A) 工具(T)	帮助(H)				
🖕 收藏夹 🛛 🕄 🔹 🛆 智能	能云存储管理平台	🥏 iSCSI Seagate 🛛			👌 🕶 🖾 👻 🗆	1 🖶 ▼ 页面(P)▼ 安全(S)▼ 工具(O)▼ 🕢 ▼
海康)或礼	DS-AS8	L016S 管理系统	· · + · · +	+ + + + + +	<u>O</u>	-W- ******
维护系统	SAN管理 -> iSe	ret答理				
存储管理		554 F 7 <u>F</u>				
SAN管理	开启iSCSI服务	\supset				
✤ iSCSI管理	■ iSCSI配置信息					
** FC管理	搜索:	排	索			
≫ 设置管理		iSCSI存储ID	LUN卷名称	客户服务器IP	访问模式	Chap授权
NAS管理		1	xwj_test	10.192.74.41	读写	没有Chap授权
系统管理		2	test	10.192.74.41	读写	没有Chap授权
		3	KAK	10.192.72.101	读写	没有Chap授权
日志系统		4	hupj	10.192.75.46	读写	没有Chap授权
🥐 使用帮助		5	KAK2	10.192.72.101	读写	没有Chap授权
😜 退出系统		7	lzh_01	10.192.71.128	读写	没有Chap授权
		8	lzh_02	10.192.71.128	读写	没有Chap授权
		9	hupjadd	10.192.74.44	读写	没有Chap授权

Step 2 Enter server IP address which can access iSCSI target (e.g. IP address of pStor server), and iSCSI storage ID.

Step 3 Select available logical volume.

Step 4 If iSCSI target of third-party manufacturer can be accessed by all IP addresses, mapping is not required. Click **OK**.

	客户服务器IP: iSCSI存f		192.67.65	_ 例如 92.168.40		
	Chap用户		īChap授权 💽		<u>+</u> [1,1024])	
	LUN的访问	摸式: 读雪	5	·		
可用	逻辑卷					
选择	名称	块大小(B) 容量(MB)	物理卷	使用状	8
\bigcirc	jiangwen	512	10,240	pv_ted5	iSCSI	
\bigcirc	jiangwen2	512	1,024	pv_ted5	空闲	
\bigcirc	zss07	512	102,400	pv_tef4	iSCSI	
0	yf	512	4,096	pv_tef4	iSCSI	
-						- P-

Step 5 If Chap is not enabled in iSCSI target, **Advanced** is not required to click in **Step 8** in **4.1.2 Connect iSCSI initiator to iSCSI target**, and **Step 9** can be skipped.

开	启iSC	SI服务					Σ
		客户服务器IP	地址: 10.19	92.67.65	例如 192.168.40	.60	
		iSCSI存储	者ID: 122		例如 100 (取值范	围:[1,1024])	
		Chap用户	受权: 没有C	hap授权	\supset		
		LUN的访问	膜式: 读写		•		
ſ	可用道	逻辑卷					
	选择	名称	块大小 <mark>(</mark> B)	容量(MB)	物理卷	使用状	R
	\bigcirc	lun_test1	512	2,334,976	pv_tef2	iSCSI	
	\bigcirc	lun_test2	512	1,465,984	pv_tef4	iSCSI	
	\bigcirc	hy_test	512	102,400	pv_tef4	iSCSI	
	\bigcirc	xwj_test	512	384	pv_tef4	iSCSI	
	< Contract of the second secon	· · · · · -					- F
						确定	关闭

4.1.2 Connect iSCSI initiator to iSCSI target

- Step 1 Enter Windows system of pStor server, and click Start.
- Step 2 Enter iSCSI. System will search iSCSI initiator automatically.
- Step 3 Open the initiator and enter iSCSI control interface. See figure below.

iSCSI Initiator Properties	;
Targets Discovery Favorite Targets Volumes and Devices	RADIUS Configuration
Quick Connect To discover and log on to a target using a basic connection, t DNS name of the target and then click Quick Connect.	ype the IP address or
Target:	Quick Connect
Discovered targets	
Name	<u>R</u> efresh Status
To connect using advanced options, select a target and then click Connect.	Connect
To completely disconnect a target, select the target and then click Disconnect.	Disconnect
For target properties, including configuration of sessions, select the target and click Properties.	Properties
For configuration of devices associated with a target, select the target and then click Devices.	Deyjces
OK	Cancel Apply

Step 4 Enter discovery interface, and click **Discover Portal**.

		iSCSI In	itiator Properties			X
Fargets	Discovery	Favorite Targets	Volumes and Devices	RADIUS	Configuration	
Targe	t portals					
The s	system will lo	ok for Targets on fo	llowing portals:	R	efresh	
Addr	Address Port Adapter		IP	address		
To re			Portal. address above and		emove	
		istered on the follow	ving iSNS servers:	R	efresh	
To re		erver, click Add Serv S server, select the e.			Server	

Step 5	Enter IP address of managed iSCSI target server	r, and click O	K.
Step 5		, and check O	

Discover Target	Portal	C			
Enter the IP address or DNS name and port number of the portal you want to add.					
To change the default settings of the discov the Advanced button.	To change the default settings of the discovery of the target portal, click the Advanced button.				
IP address or DNS name:	Port: (Default is 3260.)				
10.192.85.237	3260				
Advanced	OK Cancel]			

Step 6 Enter target interface, and all available targets will be shown automatically. If not, click **Refresh** or set the IP address of test device which can access iSCSI target, and refresh (target status: inactive, connected, connecting).

iSCSI Initiator Propertie	es 🛛 🗙
Targets Discovery Favorite Targets Volumes and Device	s RADIUS Configuration
Quick Connect To discover and log on to a target using a basic connection, DNS name of the target and then click Quick Connect.	type the IP address or
Target:	Quick Connect
Discovered targets	Refresh
Name	Status
ign. 1321-05.storos.t-95	Inactive
To connect using advanced options, select a target and the click Connect.	n Connect
To completely disconnect a target, select the target and then click Disconnect.	Disconnect
For target properties, including configuration of sessions, select the target and click Properties.	Properties
For configuration of devices associated with a target, select the target and then click Devices.	t Devices
ОК	Cancel <u>Apply</u>

Step 7	Select a target in the list and cli	ck Connect . See figure below.

iSCSI Initiat	or Propertie	s	X
Targets Discovery Favorite Targets Volu Quick Connect To discover and log on to a target using a bind bind bind bind bind bind bind bind			nfiguration ress or
Target: Discovered targets			Connect
Name ign. 1321-05.storos.t-95		Status Inactive	
To connect using advanced options, select a click Connect. To completely disconnect a target, select th then click Disconnect.	-		nnect
For target properties, including configuration select the target and click Properties. For configuration of devices associated with the target and then click Devices.			erties
	OK	Cancel	Apply

Step 8 Click **OK**. If CHAP is not enabled in iSCSI target, **Advanced** is not required to click.

Connect To Target	x			
Target name:				
iqn. 1321-05.storos.t-95				
Add this connection to the list of Favorite Targets. This will make the system automatically attempt to restore the connection every time this computer restarts.				
Enable multi-path				
Advanced OK	Cancel			

Step 9 Check **Enable CHAP log on**, and enter name and password of iSCSI target. If CHAP is not enabled, you can skip this step.

HIKVISION pStor User Manual

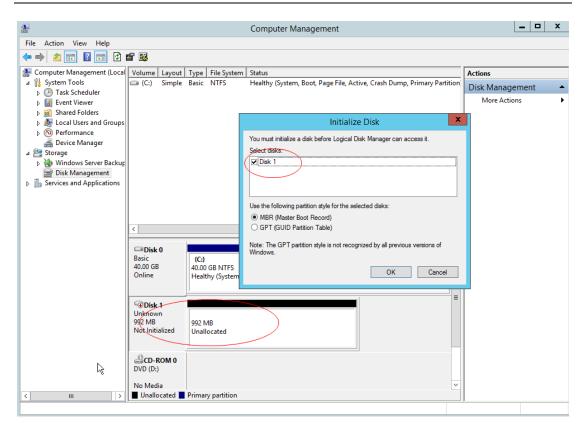
	Advanced Settings	?	×
General IPsec			
Connect using			
Local adapter:	Default	~	
Initiator IP:	Default	~	
Target portal IP:	Default	~	
CRC / Checksum			
Data digest	Header digest		
	e name and CHAP secret that was configured on the target for default to the Initiator Name of the system unless another name iqn. 1991-05.com.microsoft:win-5rh7ssef7ma		
Target secret:	•••••		
RADIUS.	entication ther specify an initiator secret on the Configuration page or use rrate user authentication credentials enticate target credentials		
	OK Cancel	Арр	oly

Step 10 If connection succeeded, you can view the status in target interface.

HIKVISION pStor User Manual

		ISCSE	nitiator Properties	5	
Targets	Discovery	Favorite Targets	Volumes and Devices	RADIUS	Configuration
To disc		on to a target us arget and then clic	ing a basic connection, t k Quick Connect.	ype the IP	address or
Target	:			Qu	uick Connect
Discove	ered targets			_	
					Refresh
Name		- + 05		Status	
ign. 13	321-05.storo	s.t-95		Connecte	
	nect using a	dvanced options,	select a target and then		Connect
click Co To com	onnect.	nnect a target, s	select a target and then elect the target and		Connect Disconnect
click Co To com then cl For tar	onnect. pletely disco ick Disconne get propertie	nnect a target, s t.	elect the target and guration of sessions,		
dick Co To com then d For tar select	onnect. pletely disco ick Disconne get propertie the target ar nfiguration o	nnect a target, s ct. es, including confi nd dick Properties	elect the target and guration of sessions,		Disconnect
dick Co To com then d For tar select	onnect. pletely disco ick Disconne get propertie the target ar nfiguration o	nnect a target, s ct. es, including confi nd click Properties f devices associat	elect the target and guration of sessions,		Disconnect Properties

Step 11 Enter diskmgmt.msc in **Run** to open disk management. You can view added IP SAN storage and format partition. The figure below shows that iSCSI protocol is supported by IP SAN.



4.2 Windows NIC Teaming

4.2.1 Introduction

Any available Gigabit Ethernet cards can be configured as part of TEAM. Teaming can group multiple Gigabit Ethernet cards into one virtual NIC. Load balancing can be achieved through selecting available Gigabit Ethernet cards and adding them to the group for creating TEAM and sharing data stream. For user and application, only a virtual NIC can be viewed.

Any Gigabit Ethernet cards in the group can be assigned as the main card for controlling data stream. If the main card controlling failed, backup card can replace. If one of the main cards restores, it will continue to control the data.

4.2.2 Environment

Hardware: Hikvision server (NIC: Intel(R) 82574L Gigabit Network Connection)

Software: Windows server 2008 R2

4.2.3 Configuration

Step 1 Check NIC property. If the driver is too old, and no options are selected in advanced interface, drivers of intel NIC card should be downloaded.

は素 阿靖连接 本地连接 未見別的阿絡 「Intel (R) PEO/10		0
本地连接 未识别的网络 「Intel (R) PR0/10		0
Intel (R) FE0/10		
和次件 ·		
-	今详细信息。 科软件。 呈序时失败,请 呈序。	界软件。

Step 2 After driver is updated, check **Team this adapter with other adapters** under Teaming interface, and click **New Team**.

A 同緒造機		그미즈
G 🕞 ・ 控制面板 ・ 网络和 Inte	rnet • 网络连接 • 🔹 🕶 🛛 授索	: 网络连接 💋
组织 - 禁用此网络设备 诊断这个连	赛 重命名此连接 查看此连接的状态 更改此连接的设置	B • 🖬 0
本地注接 本地注接 betterlifecar.com Intel (R) FED/1000 FT Bual Po 素地注接 4 阿姆电质被挑出 Brosdcom BCH5708C MetXtreme	本地连接 2 betterlifecar.com Intel (R) FR0/1000 FT Dual Po アレート Tatel (R) FR0/1000 FT Dual Port Server Adapto VLAS 引导法项 鉱材程序 求規 鎚排速度 嘉級 电源管理 问言: 道配器分组 环境社话酸器与其他话酸器组合(T) 理(T): 新组	本地连接 3 网络电纸被抹出 Broadcom BCMSTORC NetItreme
	允许您指定网络连接是否参加一个组。要查看有关分述,单击此处。	

Step 3 Name the new group as "Team 1#".



Step 4 Check NIC cards to team.



Step 5 Select teaming type (adaptive load balancing combined with advantages of fault tolerance and link aggregation).

臺网络這種		_ 0 >
GO · · 控制面板 · 网络和 Internet	Ⅰ・网络连接・ ・ ジン 根索 网络连接	
组织 - 禁用此网络设备 诊断这个连接	重命名此连接 查看此连接的状态 更改此连接的设置	s • 🖬 0
本地连接 betterlifecar.com Intel(R) FEO/1000 PT Dual Fo	本地连接 2 betterlifecar.com Intel (R) PB0/1000 PT Dual Fo Frondcom ECNST	06C NetXtreme
本地连接 4. 网络电缆键换出 Broadcom BCHSTOBC MetItreme	Text+1 03 F20/1000 F2 Fact Fact	×
新组向导		×
	选择组类型(7):	-
	遊应性负载平衡 适应性负载平衡(ALB)在交換器演口、电缆或适配器发生故障时提供作 通信單的负载平衡及容错。	
	英特尔(R) PROSet分析各成员适配器的传输员载并在成员适配器之间中 通信里。一个适配器接受所有接收通信里。	

Step 6 Go to **Properties** > **Settings**, click **Edit**, and set two NICs as main adapter and backup adapter.

2 网络连接		
🌀 🗍 • 控制面板 • 网络和 Internet • 网络连接 •	 	2
组织 - 禁用此网络设备 诊断这个连接 重命名此连接 查看此	這接的状态 更改此连接的设置 😚 🔹 🗌	
本地主接 已自用 狙: Tean 1# - Intel (k) FR0/1 新地注接 4 网络电缆模挑出 Broadcom EUESTORE SetXtrens 和 本地注接 5	本地注接 3 网络电缆被热出 Broadcom BCMS708C NetXtreme ar.com	tian.
2017 17 19 18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Intel (0) FR0/1000 FF Back Feet Second Alegter () Team 18 「近配器 类型 名称	1 12
組美型: 适应性负载平衡 組中通配器 状态	法释要包括在此组中的适配器: ♥ Intel (B) PR0/1000 FT Dual Port Server 羊道田 ♥ Intel (B) PR0/1000 FT Dual Port Server 次道型	233
Intel (R) FED/1000 FT Dual Fort Server Ada 活动 Intel (R) FED/1000 FT Dual Fort Server Ada 活动	↓ 设置主述武器 (2)	
勝縁組(8.) 详細信息(0) 修改組(0) 新試交換器(7) 适配器属性(7) 列出作为选定组成员的话载器・并表明它们的当前状态。 ▲	此列表显示对高级网络服务(Advanced Networking Services, ANS)分组可用的适配器。列表中不包含不支持 ANS 分组的适配器,已是另一个组的成员的适配器,或因 他原因而无法参加组的适配器。	, 1

Step 7 Configure IP address for new NIC (Team 1#). IP addresses of the two NICs in teaming cannot be configured.

う ・ 控制面板 ・ 网络和 Internet ・ 网络连接 ・	- 😂 被索 网络连接
组织 👻 禁用此网络设备 诊断这个连接 重命名此连接 查试	看此连接的状态 更改此连接的设置 💱 🐨 🛄 🥹
本地注接 自用 组: Team 1# - Intel (8) PB0/1 製 本地注接 回自用 组: Team 1# - Intel (8) PB0/1	2 1# - Intel (R) FBD/1 革地注接 3 网络电缆被线出 Breadcom BCWS708C NetXtreme
本地连接 4 网络电缆被线出 Broadcom BCWSTOBC NetXtreme 疑望 2010年111	fecur, con
- 木地连接 5 圆性 X	Internet 协议版本 4 (TCP/IPv4) 圆性 21>
网络 共享	常規
连接时使用:	如果网络支持此功能,则可以获取自动推荐的 IP 设置。否则, 须需要从网络系统管理员处获得适当的 IP 设置。
18 18: Tean 18	您需要从网络系统管理员处获得适当的 17 设置。
	 ○ 自动結構 IP 地址(0) ○ 使用下面的 IP 地址(5):
✓ ♥ Hierosoft 网络客户端 ▼ ■QoS 数据包计划程序	17 地址(1): 102 168 100 147
☑ All areas of 网络的文件和打印机共享	子阿擯码(0): 255 .255 .255 .0
- Intel (R) Advanced Network Services Protocol	登认阿关 (D): 182-168-108-254
✓ → Internet 协议版本 6 (TCP/IPv6) ✓ ↓ Internet 协议版本 4 (TCP/IPvD)	C 自动發展 pas 服务器使量 (5)
	④ 使用下面的 105 服务器地址 (2):
安装(8) 即款(0) 属性(8)	首选 DMS 服务器(2): 192 168 100 10
描述	备用 DHS 服务器(A):
TCP/IP。该协议是默认的广域网络协议,它提供在不同 的相互连续的网络上的通讯。	

4.3 Edit 10 Gigabit Ethernet Card Parameters

For better throughput and lower CPU usage in 10 Gigabit Ethernet environment with mass data input and output, number of receive side scaling (RSS) queues should be set as 2.

Step 1 Click the network icon and open network and sharing center.



Step 2 Click connection of the NIC to be edited, and click **Properties**.



Step 3 Select NIC and click Configure.



Step 4 Set number of receive side scaling (RSS) queues as 2 or the max. value in **Advanced**, and click **OK**.

Intel (R) 82576 Gigabit Dual Port Wetwork Connectio 🗙				
VLAN 驱动程序 详细信息 常规 链接速度 高级 电源管理 分组				
道配器高级设置				
设置 (S): 大型发送分载 V2 (IPv6) 等待链接 分载选项 记录链接状态事件 接收方调整				
接板方過整队列 巨帧数据包 1千兆位主从模式				
接收方调整队列 配置接收方调整(RSS)队列的数目: • 1 个队列在要求低 CPU 使用量的情况下使用。 • 2 个队列在要求良好的吞吐里和低 CPU 使用量的情况下 使用。 • 4 个或更多队列用于要求高传输速率的应用程序,如基于 Web 服务器的应用程序。使用 4 个或更多队列时, CPU 使用里可能较高。				

4.4 Failed to Write to Video Caused by Slow Overwrite of Recording Pool After pStor Shutdown for a Long

Time and Running Again

4.4.1 Environment

pStor version is 1.0.0, and multiple recording schedules are being executed.

4.4.2 Description

After writing to video, pStor shuts down for a long time (e.g. 30 days), and runs again. Continuing to write data to the original data block will cause that video time span is too large. When pStor capacity is overwritten, the earliest time of recording pool exception occurs, which causes slow overwrite and writing failure.

4.4.3 Cause

- 1. When pStor stores video data, data is written to the original data block without checking video time span, which causes large time span of single data block.
- 2. Large time span of single data block with time-consuming overwrite will cause overwrite time exception, and insufficient data block.

4.4.4 Resolution

- 1. When pStor stores video, picture, and auxiliary, check whether time span of single data block exceeded limit which can be set in configuration file. If exceeded the limit, set the data block status as full to avoid writing data to data block and large time span of single data block.
- 2. When pStor overwriting, shorten overwrite strategy time and increase data overwrite speed (4-hour will be cost for overwriting data block with 30-day time span).

4.4.5 Evaluation

- 1. Set the status of data block with space as full will cause waste of storage space.
- 2. pStor with insufficient space or too many channels will also cause failed to write. See **4.4.6 Capacity Calculation**.

4.4.6 Capacity Calculation

Formula is shown below.

Parameters	Symbol	Unit
Stream	A	Mbps
Number of channels	В	
Max. storage time span of data block (overwrite time)	Т	second
Capacity overwrite threshold ((e.g. 0.9))	E	

Min. space for capacity overwrite: Z = (A*B*T)/(1-E) MB

For example: Overwriting one-hour video costs 20 seconds, and max. storage time span of single data block is 30 days. pStor overwriting data block with 30-day time span will cost

T = 30 * 24 * 20 s = 4 H

Recording 300-ch video stream at 2 Mbps for 4 hours will cost

300 * 2 * (4 * 3600) / 8 = 1080 G (8 as denominator means converting Mbps to MB/s)

Set the threshold as 10%. Storing 300-ch video stream at 2 Mbps will take

Z=1080 G / (1- 10%) = 10.8 TB

4.5 Failed Installation of Windows Runtime Library

4.5.1 Description

vs2013 runtime library should be installed when you install HIKVISION pStor. Failed installation of vs2013 runtime library occurs in Windows server 2008. "A certificate chain could not be built to a trusted root authority" will be prompted. See figure below.

🚰 licrosoft Visual C++ 2013 Redistributable (x64) - 12.0 💶 🗙
Microsoft Visual C++ 2013 Redistributable (x64) - 12.0.40660
Setup Failed
One or more issues caused the setup to fail. Please fix the issues and then retry setup. For more information see the log file.
0x800b010a - 无法建立到信任根颁发机构的证书链。
EN 😧 📮 Close

Figure 4-1 Installation Failed

4.5.2 Cause and Resolution

This problem occurs because vs 2013 runtime library is signed by Microsoft, which should be authenticated by certificate for software tamper-proofing, such as virus.

The resolution is to find and install missing certificate of windows server 2008.

Two certificate manager tools are provided by Microsoft: certmgr.exe and certmgr.msc. Enter certmgr in Run or double-click certmgr.msc in C:\Windows\System32 or C:\Windows\SysWOW64 to open the certificate manager tool. See figure below.

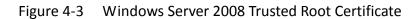
File Action View Help	rtmgr - [Certificates - Current User] 📃 🗖 🗙
Certificates - Current User Certificates - Current User Personal Crusted Root Certification Au Crusted Root Certification Au Crusted Publishers Crusted Publishers Crusted Certificates Crusted People Client Authentication Issuers Smart Card Trusted Roots	Logical Store Name Personal Trusted Root Certification Authorities Enterprise Trust Intermediate Certification Authorities Active Directory User Object Trusted Publishers Untrusted Certificates Third-Party Root Certification Authorities Trusted People Client Authentication Issuers Smart Card Trusted Roots
< III >	

Figure 4-2 certmgr Interface

You can view logical storage path of all certificates, such as personal, trusted root certification authorities.

The error mentioned above is caused by missing certificate in trusted root certification authorities. Expand the path. See figure below.

🧧 certagr - [证书 - 当前用户\受信任的根证书颁发机构\证书] 📃 🗖	×
文件 (F) 操作 (A) 查看 (V) 帮助 (H)	
🗢 🔿 📶 📋 🛛 😖 🔽 🗊	
 ● 个人 ● 受信任的根证书颁发机 ● 证书 ● 企业信任 ● 一中级证书颁发机构 ● 一中级证书颁发机构 ● 一种级证书颁发机构 ● 一种级证书预发机构 ● ● 中级证书预发机构 ● ● ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	<u>前友</u> Clas Copy Wicr Wicr Wicr Wicr NO L Thaw
【● ●	▶



Three Microsoft certificates are shown in Figure 4-3. Open another certmgr.msc which can install other systems of vs2013 runtime library normally. See figure below.

File Action View Help (= 🔿 🖄 🔝 📋 🗔 🔒 🚺	? 📭		
 Certificates - Current User Personal Trusted Root Certification Au Certificates Enterprise Trust Intermediate Certification Au Active Directory User Object Trusted Publishers Untrusted Certificates Third-Party Root Certificatior Trusted People Client Authentication Issuers Smart Card Trusted Roots 	Issued To Class 3 Public Primary Certification Author Copyright (c) 1997 Microsoft Corp. Microsoft Authenticode(tm) Root Authority Microsoft Root Authority Microsoft Root Certificate Authority 2010 Microsoft Root Certificate Authority 2011 NO LIABILITY ACCEPTED, (c)97 VeriSign, Inc. Thavte Timestamping CA	Thawte Timestamping CA	Expiration Date 8/2/2028 12/31/1999 1/1/2000 12/3172920 5/10/2021 6/24/2035 3/23/2036 1/8/2004 1/1/2021 7/17/2036
	< III		

Figure 4-4 Windows 7 System Trusted Root Certificate

You can check and export the missing certificates (Microsoft Root Certificate Authority 2010/2011) after comparing two figures above (Figure 4-3 and Figure 4-4).

Right-click Certificates, and select Import in All Tasks. See figure below.

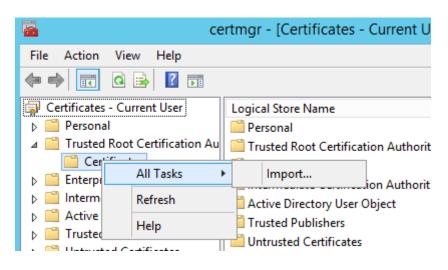


Figure 4-5 Certificate Import

Enter certificate import wizard interface. See figure below.

💿 🍠 Certificate Import Wizard	X
Welcome to the Certificate Import Wizard	
This wizard helps you copy certificates, certificate trust lists, and certificate revocation lists from your disk to a certificate store.	
A certificate, which is issued by a certification authority, is a confirmation of your identit and contains information used to protect data or to establish secure network connections. A certificate store is the system area where certificates are kept.	y
Store Location © Current User	
O Local Machine	
Next	incel

Figure 4-6 Certificate Import Wizard

Click Next, and select path of certificate to be imported. See figure below.

	X
📀 🛃 Certificate Import Wizard	
File to Import	
Specify the file you want to import.	
File name:	
C:\Users\denglei9\Desktop\2011.cer Browse	
Note: More than one certificate can be stored in a single file in the following formats:	
Personal Information Exchange-PKCS #12 (.PFX,.P12)	
Cryptographic Message Syntax Standard-PKCS #7 Certificates (.P7B)	
Microsoft Serialized Certificate Store (.SST)	
Next Cano	:el

Figure 4-7 Certificate File Path

Click Next, and select Trusted Root Certification Authorities as certificate store. See

figure below.

Certificate Import Wizard Certificate Store Certificate stores are system areas where certificates are kept. Windows can automatically select a certificate store, or you can specify a location for the certificate. O Automatically select the certificate store based on the type of certificate Image: Place all certificates in the following store Certificate store:
Certificate stores are system areas where certificates are kept. Windows can automatically select a certificate store, or you can specify a location for the certificate. Automatically select the certificate store based on the type of certificate Place all certificates in the following store Certificate store:
Certificate stores are system areas where certificates are kept. Windows can automatically select a certificate store, or you can specify a location for the certificate. Automatically select the certificate store based on the type of certificate Place all certificates in the following store Certificate store:
Certificate stores are system areas where certificates are kept. Windows can automatically select a certificate store, or you can specify a location for the certificate. Automatically select the certificate store based on the type of certificate Place all certificates in the following store Certificate store:
the certificate. Automatically select the certificate store based on the type of certificate Place all certificates in the following store Certificate store:
the certificate. Automatically select the certificate store based on the type of certificate Place all certificates in the following store Certificate store:
Place all certificates in the following store Certificate store:
Certificate store:
Trusted Root Certification Authorities Browse
Next Cancel

Figure 4-8 Select Certificate Store

Click **Next** and **OK**. Succeeded message will be prompted after certificate imported. See figure below.

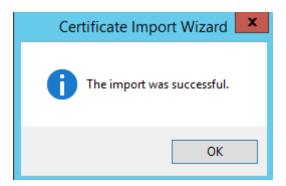


Figure 4-9 Certificate Imported

Install HIKVISION pStor again.

4.6 Mount NAS Drive to Windows System

Take Hikvision NAS as an example.

4.6.1 Create NAS Drive

Enter Hikvision NAS management interface and create a user in user and group management. Create NAS volume in NAS drive interface. Click Add NAS Drive, select an available NAS volume, input name, and select Windows (CIFS) protocol. Select the created user, reading and writing permission, and enter IP segment with accessing permission. Click **Yes**. The figure is shown below.

维护系统				
存储管理	NAS管理 -> NAS网络盘			
SAN管理	添加NAS网络盘			
NAS管理	■ NAS网络盘信息 (总裁	1: 2)		
* NAS网络盘	被索 :	被索		
** 用户和组管理		名称	所属NAS卷	使用协议
→ NAS査録		nas126	nas_lun	cifs
>> 基本维护配置		nvr	nas_lun	cifs
系统管理	¥ <u>#88</u>			
系現管理日志系统	创建NAS卷		添加NAS网络盘	×
	■ NAS卷信息 (总数: 3)	5		
? 使用帮助	· · · · · · · · · · · · · · · · · · ·	被索	可用NAS袋: nas_hy v	
🔁 過出系統		名称		闲容量(MB)
		nas_lun(NAS)	音 名称: nas_hy	998892
		bobo(NAS)	使用协议: 💟 Windows (CIFS) 💿 只读 🔍 读写	499953
		nas_hy(NAS)	Unix(NFS)	102365
1		has_hy(has)	E FTP	102303
	× <u>#88</u>	☆ <u>挂載</u>		
			Mac OS(AFP)	
			Web(HTTP)	
© 2011				
杭州海康威视数字技术股份有限 公司				1
			确定	关闭

Figure 4-10 Add NAS Drive

4.6.2 Map Network Driver in Windows Operating System (Not for pStor Mounting)

Log in pStor service. Right click **My Computer** or **Network** and select **Map Network Drive** to pop up the wizard. Disconnecting to shared space can also be achieved by this function. See figure below.

Recycle Bin	1	
This	Open	
	Manage	
	Pin to Start	
(Map network drive	
	Disconnect network drive	
	Create shortcut	
	Delete	
	Rename	
	Properties	

Figure 4-11 Map Network Drive

4.6.3 Create Map in Windows Operating System (Not for pStor Mounting)

Input IP address and NAS drive name of storage device. For example,

<u>\\10.192.77.9\nas_hy</u>. And click **Finish** to go to user login interface. If connecting to shared space when startup is required, please check **Reconnect at sign-in**. See figure below.

🙆 😪 Man I	Network Drive	x									
What ne	What network folder would you like to map?										
Specify the	drive letter for the connection and the folder that you want to connect to:										
Drive:	Z: •										
Folder:	\\10.199.104.207\nas Browse										
	Example: \\server\share										
	Reconnect at sign-in										
	Connect using different credentials										
	Connect to a Web site that you can use to store your documents and pictures.										
	Finish Cancel										

Figure 4-12 Map Network Drive

The shared space will be shown in figure below after completing configuration.

🚇 l ⊋ 🛄 = l	Т	This PC	- 🗆 X
File Computer V	iew		~ ?
🔄 💿 🔻 🕇 📕 🕨 TI	his PC 🔸	✓ C Search This PC	Q
 ★ Favorites ■ Desktop ↓ Downloads 1 Recent places 1 This PC 1 Network 	 Folders (6) Desktop Downloads Pictures 	Documents Music Videos	
-			
	Devices and drives (3)		
	Floppy Disk Drive (A:)	Local Disk (C:) 31.2 GB free of 39.9 GB	
	DVD Drive (D:)		
	A Network locations (1)	~	
	nas (\\10.199.104.207) (Z:) 242 GB free of 319 GB		
10 items			: 🖿

Figure 4-13 Map Network Drive Result

4.6.4 Mount NAS to pStor

See **3.5.3 NAS** for mounting NAS to pStor.

4.7 Configure Address Mapping

Multi-line button: If this button is switched to the right, the multi-line function is enabled. Otherwise, the multi-domain function is enabled.

HIKU	SION pStor System @Windows	S	English	✓ × ×
	NTP Settings	Address Mapping		
	Stream Certification	+ Add	(1) Multi-Line	Enable
a í	ANR	Index Line IP Address Port Mapping Function Description Line Whitelist		Operation

Figure 4-14 Multi-Line

HII	VISION pStor System ^{@Window}	5	English	✓ ×
≡	NTP Settings	Address Mapping		
命	Stream Certification	+ Add	Multi-Line	Disable
•	ANR	Index Line IP Address Port Mapping Function Description Line Whitelist		Operation
LC1	Key Management			

Figure 4-15 Multi-Domain

Line IP address: IP address which users in external network can access directly. Port function description: Users can select functions as required, including picture, video, and object file. Different functions correspond to different port mapping. Internal network port and external network port: Should be the same as the gateway port.

Line whitelist: In multi-line mode, an external IP address (start and end IP address should be the same, for example, 192.168.23.2 to 192.168.23.2) or an external IP segment (for example, 192.168.23.1 to 192.168.23.254) can be set. In multi-domain mode, an internal IP segment can be set (192.168.23.1 to 192.168.23.254).

KVISION pStor System @Window	NS											English	n v	8
NTP Settings Stream Certification ANR Key Management Stream Media Line Configuration	Address Mapping Address Mapping Table Une IP A Port Function Desc Internal Network Port And Exten		ideo 🔽 Pictu	re 🔽 (6022 -	6022	6027 -	6027	6036 -	6036	6037 -	6037	
Address Mapping		6038	6038	6039 -	6039	6040 -	6040	6041 -	6041	6042 -	6042	6044 -	6044	
Time Zone Database Restore		6045 6120	6045 - 6120	6046 - 6201 -		6111 -	6111	6112 -	6112	6113 -	6113	6114 -	6114	
KMS Resource Pool	Line Whitelist													
PSS Resource Pool		Add												
Picture Download Authentication		Index St	art IP Address			End IP Add	ress		Operati	ion				
License		1 1	0.199.104.1			10.199.10	1.254		×					
			Save											٦.

Figure 4-16 Address Mapping

Address N	/lapping					
+ Add						① Multi-Line Enable
Index Li	ine IP Address	Port Mapping		Function Description	Line Whitelist	Operation
1 10	0.192.74.218	6011 - 6011 6022 - 6022 6036 - 6036 6038 - 6038 6040 - 6040 6042 - 6042 6045 - 6045 6111 - 6111 6113 - 6113 6120 - 6120	6021 - 6021 6027 - 6027 6037 - 6037 6039 - 6039 6041 - 6041 6044 - 6044 6046 - 6046 6112 - 6112 6114 - 6114 6201 - 6201	Video;Object File;Picture	10.199.104.1 - 10.199.104.254	∠ ×

Figure 4-17 Succeeded Address Mapping (Multi-Line)

Addres	s Mapping					
+ Ad	d					③ Multi-Line Disable
Index	Line IP Address	Port Mapping		Function Description	n Line Whitelist	Operation
1	10.192.74.203	6011 - 6011 6022 - 6022 6036 - 6036 6038 - 6038 6040 - 6040 6042 - 6042 6045 - 6045 6111 - 6111 6113 - 6113 6120 - 6120	6021 - 6021 6027 - 6027 6037 - 6037 6039 - 6039 6041 - 6041 6044 - 6044 6046 - 6046 6112 - 6112 6114 - 6114 6201 - 6201	Video;Object File;Picture	195.168.1.1 - 195.168.1.254	∠ ×

Figure 4-18 Succeeded Address Mapping (Multi-Domain)

