



Centralized Backup

Application Introduction



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CONTENTS



PART 01.
Introduction

PART 02.
Demands and scenarios

PART 03.
Features

PART 04.
Q&A



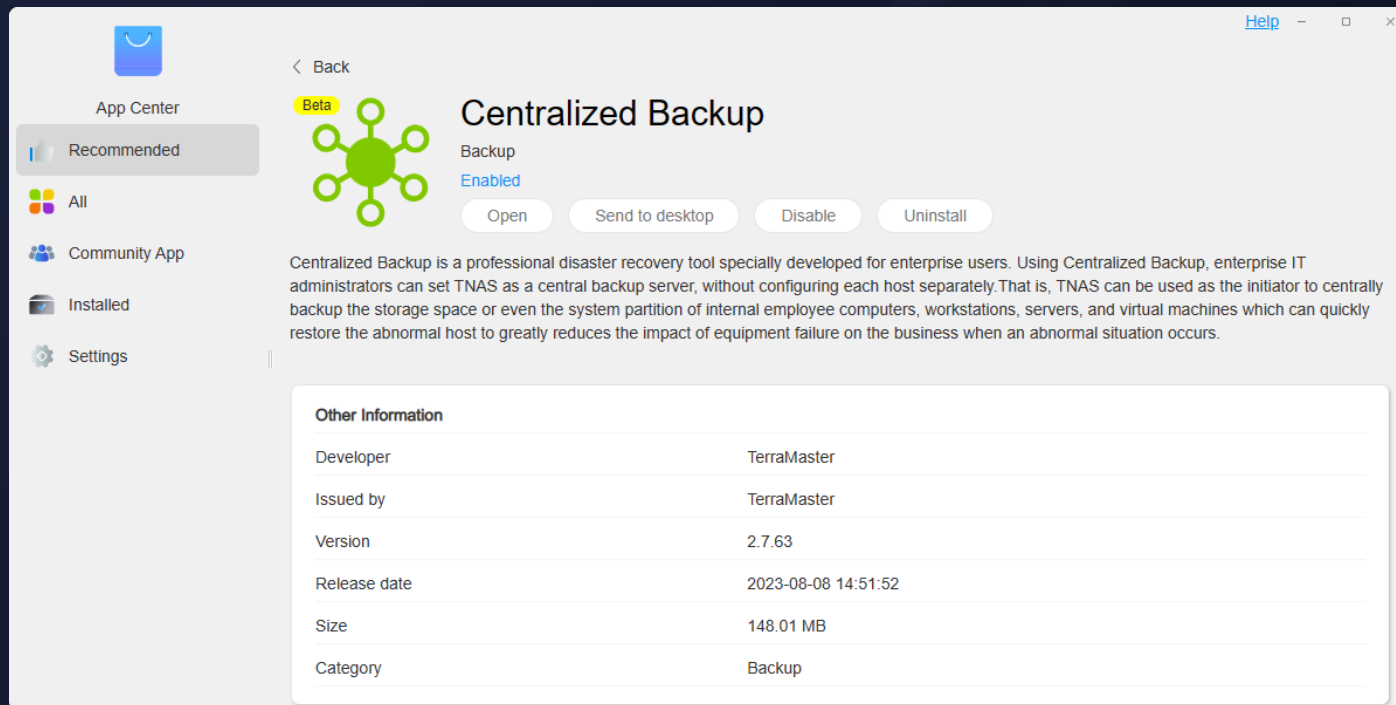
PART 01.

Introduction

What is it?



- Windows computers/servers, file servers, virtual machines and other diverse IT environments are backed up to TNAS through data, and centralized management is conducted by TNAS.



01. Introduction

Centralized Backup is a professional disaster recovery tool developed for enterprise and individual users, providing an integrated business data protection solution.

02. Users

Target users: SME administrators/operators

Other users: Individual users using TNAS

03. Characteristics

Support diversified platforms, backup data encryption, backup data compression, automatic backup, flexible backup strategy, task version management, log record and report.

What is upgraded this time?

Add VMware virtual machine backup and restoration function



The central backup version upgrade has fully supplemented the backup and restoration function of VMware virtual machine that has been missing. Currently, the application has supported virtual machine backup of ESXi components and vCenter components in VMware vSphere.

Optimize the application process and improve the user experience



- Add device type screening
- Simplify the process of creating tasks
- Reserve task version
- Correct copy description

VMware		
✓ VMware vSphere 8.0	✓ VMware ESXi 8.0	✓ VMware vCenter 8.0
✓ VMware vSphere 7.0	✓ VMware ESXi 7.0	✓ VMware vCenter 7.0
✓ VMware vSphere 6.7	✓ VMware ESXi 6.7	✓ VMware vCenter 6.7
✓ VMware vSphere 6.5	✓ VMware ESXi 6.5	✓ VMware vCenter 6.5
✓ VMware vSphere 6.0	✓ VMware ESXi 6.0	✓ VMware vCenter 6.0

Backup

VMware vSphere

	VMware-ubuntu Backup succeeded	VMware vSphere 10.18.13.208
Number of virtual machines	1	
Destination	/Volume1/CB/CentralizedBackup/VM_VMware-ubuntu	
Backup schedule	Not enabled	
Cycle	Not enabled	
Frequency	Not enabled	
Module Tracking (CBT)	Enabled	
Last run	2023-08-24 11:52:04	
Next run	-	



PART 02.

Demands and scenarios



Centralized Backup

Overview

PC/Server

Backup

Restore

Log

PC/Server

All



GKE

Backup created



YFLIN

Backup not created



10.18.15.100

Backup created



10.18.15.100

Backup not created



10.18.13.250

Backup not created



10.18.13.208

Version: 2.7.63

Definition of product

Centralized data protection solution

- The interface is simple and the operation is smooth. You can build a basic backup system with just several clicks
- Meet the basic backup demands of most enterprise and individual users
- Back up different devices and monitor all created tasks in a central console to save management cost and reduce manual errors
- Provide efficient backup and recovery functions, reduce business interruption caused by data loss or damage, and reduce risks and costs for enterprises.

Comprehensive
functions

Simple and easy
to use

Centralized
management

What are the demands of customers?



External threats

Data security is always threatened.

Ransomware and Trojan virus maliciously invade enterprise systems, delete important data, damage system programs, and infringe on enterprise operation and revenue. Coupled with unpredictable force majeure such as system breakdown, device fault and power outage, data security is always threatened.

Data loss

Data loss causes huge losses.

The globally average loss caused by data security is \$3.86 million. The loss of corporate reputation and goodwill caused by data loss is even immeasurable.

Data security

Backup solves data security problem.

The direct and effective method to solve the data security problem is periodic data backup. Through the modern backup software, important enterprise data can be automatically backed up, reducing the risk of enterprise data loss.

Usage scenario of customers

Regular backup

Enterprises need to back up important data regularly to prevent data loss or damage. Central backup can automatically back up enterprise data and store it in a safe location for recovery when needed.

Data protection

Enterprises usually need to encrypt and store sensitive data. Central backup can encrypt and compress backup data to protect the security of sensitive information and prevent unauthorized access and disclosure.

Disaster recovery

Enterprises may face catastrophic events such as natural disasters, hacker attacks or human errors, which results in data loss. Central backup can help enterprises to recover from disasters and restore business to normal as soon as possible.

Cross-device relocation

Enterprises need to relocate data from one device to another, such as migration between local servers. Central backup can help enterprises migrate data and ensure data integrity and security.

Backup of virtualized environment

Enterprises use virtualization technology to manage and run multiple virtual machines. Backup tools can help enterprises back up virtual machines and virtualized environments for recovery or relocation when needed.

Data archiving

Enterprises usually need to archive old data to release storage space and ensure long-term storage and compliance of data. Backup tools can help enterprises archive data and provide easy retrieval and recovery functions.



Enterprises and individuals

What are the advantages of the product?

Stable

Ensure that the important data of the enterprise has been backed up safely, prevent the data from being lost or damaged, and ensure the business continuity and stability of the enterprise.

Automatic

It can automatically and regularly back up enterprise data, reduce manual operation, improve work efficiency and avoid the risk of data loss caused by human negligence.

Fast

It can quickly restore the backed-up data, reduce business interruption caused by data loss or damage, and enhance the responsiveness and flexibility of enterprises.

Friendly

Intuitive user interface and easy-to-use functions make it easy for enterprise users to execute backup and recovery operations without requiring professional technical knowledge.

Safe

Advanced encryption technology and access control mechanism are adopted to protect the security and privacy of backup data and prevent data leakage and malicious attacks.

Extensible

It can support the backup of multiple data sources, adapt to the enterprises of different sizes and types, and have strong extensibility.

Flexible

A variety of backup strategies, such as full backup, incremental backup, etc., enterprises can choose the appropriate backup methods according to their requirements, saving storage space and backup time.

Efficient

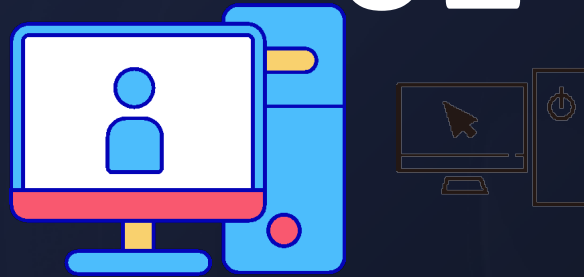
It can support centralized management of devices, tasks, policies and configurations. Administrators can easily monitor and manage the whole application environment through the app.



PART 02.
Features

What types of devices are supported for backup?

01



PC/physical server

Windows computer

Windows server

Mac computer

Linux server

02



File server

SMB file server

Rsync file server

NetAPP file server

Nutanix file server

03



VMware



Microsoft
Hyper-V

Virtual machine

VMware vSphere

Microsoft Hyper-V

Overview information panel

- Summarize and display the necessary information of each functional module in the application.

01. Overview of connected devices

- Types of devices that support backup
- Number of various types of devices that have been successfully connected
- Number of backup tasks being executed by each device

02. Overview of successful tasks

Display all backup tasks in a centralized way, and display the necessary information that customers want to get the tasks right the first time

Centralized Backup

Overview

PC/Server

Backup

Restore

Log

Overview

PC/Server

PC/Server	Existing equipment	Backing up
Windows Computer	2	0
Windows Server	0	0
File Server	2	0
VMware vSphere	2	0
Microsoft Hyper-V	1	0

Backup task

Device	Task name	Last run	Status
10.18.15.100	FileServer-Rsync	2023-08-24 12:15...	Backup succeeded
10.18.8.202	PC-Win10	2023-08-24 11:59...	Backup succeeded

Version: 2.7.63

Process for application usage



01



Connect devices

TNAS connects with the device through the network

02



Create backup tasks

Create backup tasks according to backup requirements

03



Execute backup

Back up data to TNAS hard disk for storage

04



Create restoration tasks

Create restoration tasks according to restoration requirements

05



Execute restoration

Restore data to the target device

Device management panel

- Centralized display and management of all the successfully connected devices

The screenshot shows the 'PC/Server' management interface. On the left is a navigation menu with 'Overview', 'PC/Server', 'Backup', 'Restore', and 'Log'. The main area displays a list of devices. A dropdown menu (1) is open, showing device types: All, Windows Computer, Windows Server, File Server, VMware vSphere, and Microsoft Hyper-V. A toolbar (3) with icons for Add, Edit, Disconnect, and List is visible. A row of devices (2) is highlighted, showing IP addresses, device types, and backup status.

IP Address	Device Type	Backup Status
10.18.8.202	Windows Computer	Backup created
10.18.8.241	Windows Computer	Backup created
10.18.15.100	Rsync File Server	Backup created
10.18.15.100	SMB File Server	Backup not created
10.18.13.250	VMware vSphere	Backup not created
10.18.13.208	VMware vSphere	Backup not created

01.Type screening

Carry out classification and screening according to the device type, and select different device types. The information panel automatically screens the corresponding connected devices.

02.Device information

Display the details of connected devices, including device type, IP address, connection state and system version...

03.Management operation

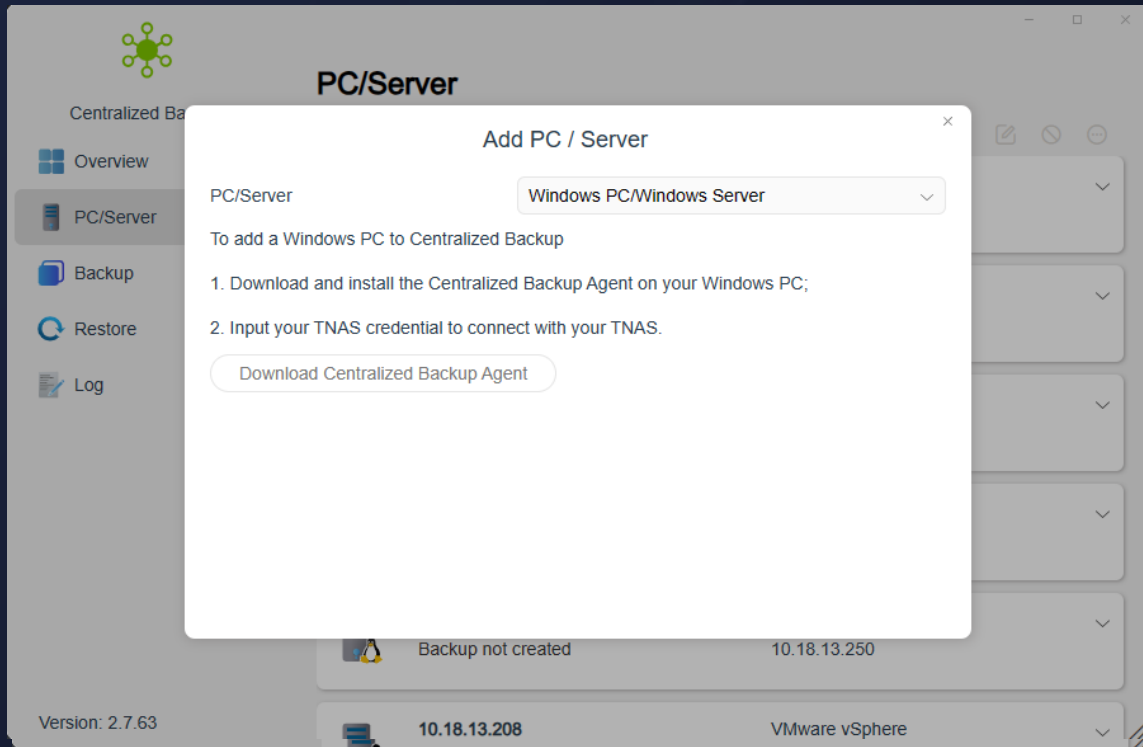
Add: Add new devices

Edit: Edit the existing device connection information

Disconnect: Disconnect from the currently selected device

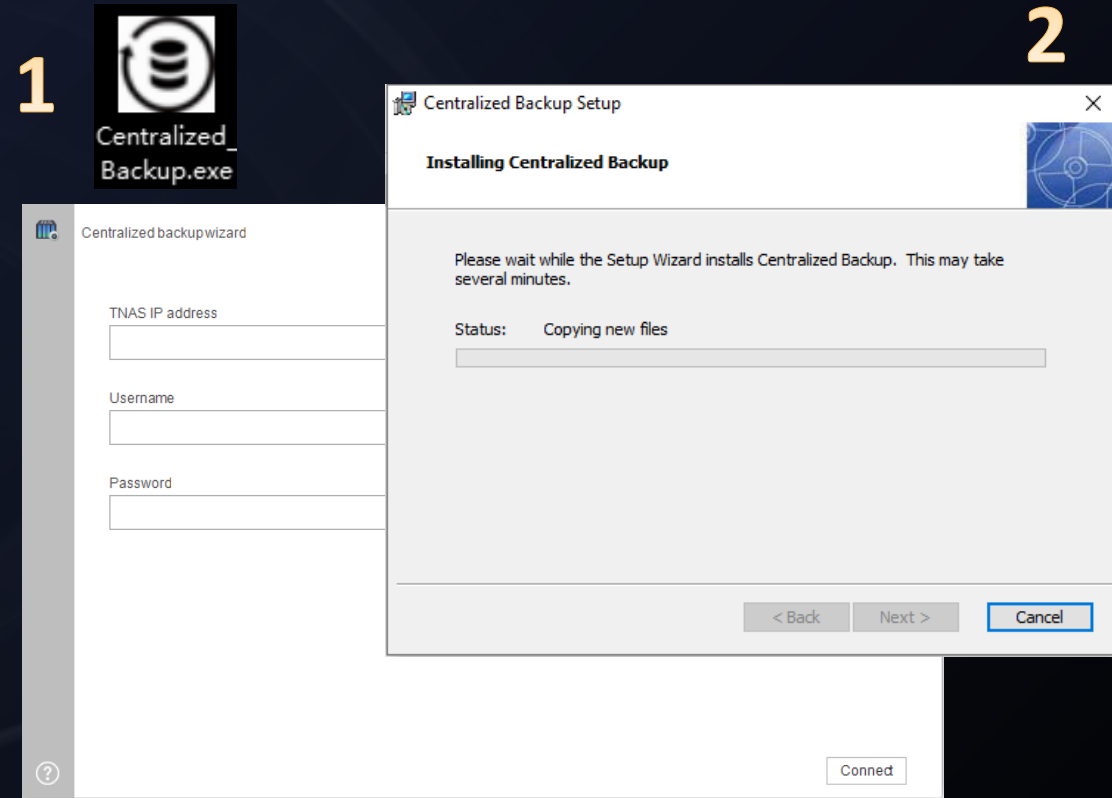
List: Multiple virtual machines under a single server.

Add Windows devices



■ Download client

As Windows devices cannot be directly connected to TNAS, you need to download the client and install it in a Windows computer or server.



■ Connect TNAS

Enter the TNAS IP address, account number and password of the storage destination in the client so that the Windows device can be connected with TNAS.

Add server host

Add PC / Server

PC/Server: File Server

Server type: SMB server

Address:

Port: 445

Username:

Password:

Add PC / Server

PC/Server: VMware vSphere

Address:

Port: 443

Username:

Password:

Confirm

Add PC / Server

PC/Server: Microsoft Hyper-V

Address:

Port: 5985

Protocol: HTTP

Username:

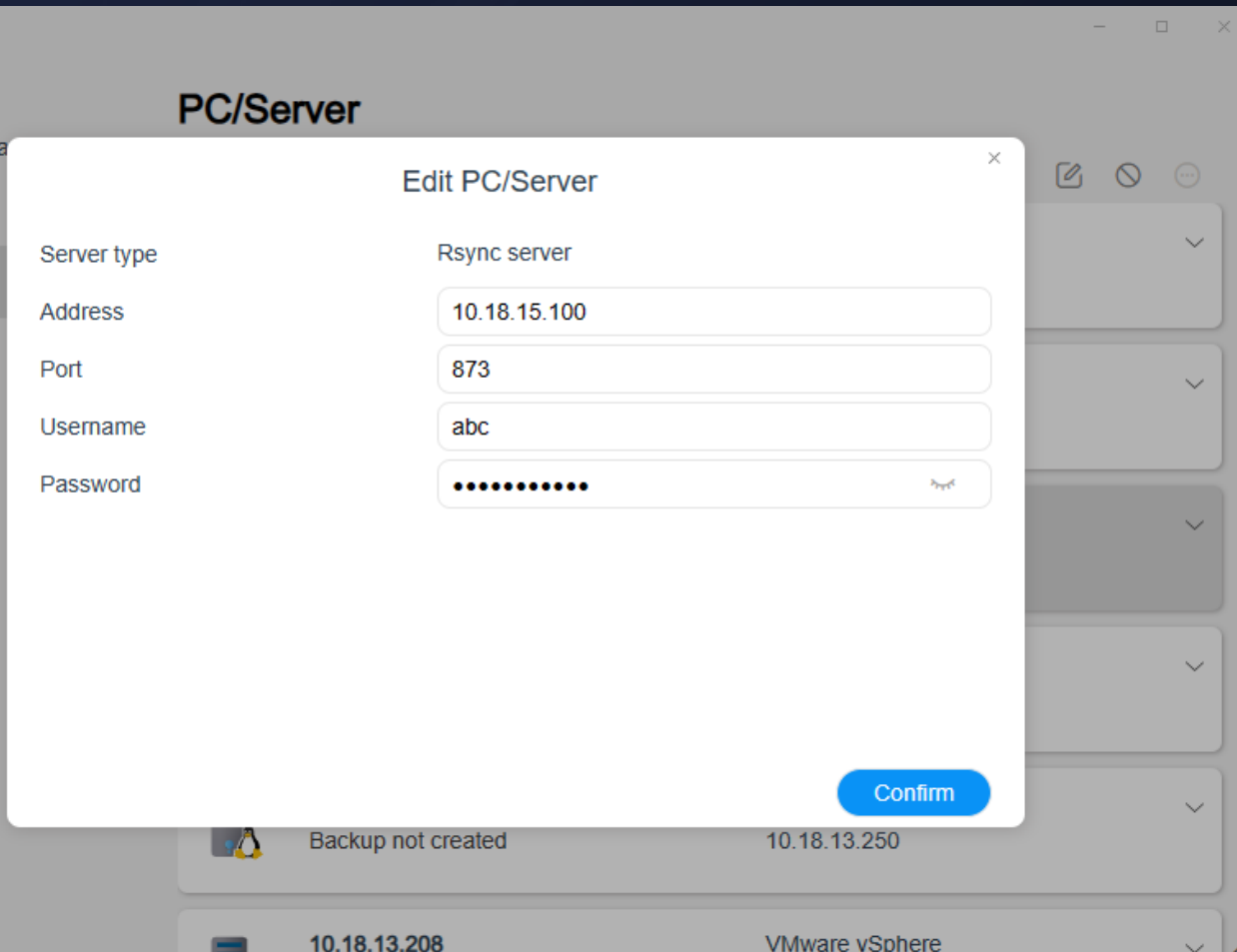
Password:

Confirm

■ Connect TNAS

Enter the IP address, port (default), account number and password of the server host to be connected so that the server device can be connected with TNAS.

Edit connection information



The screenshot displays a web application interface with a sidebar on the left containing navigation options: Overview, PC/Server, Backup, Restore, and Log. The main content area is titled 'PC/Server'. A modal dialog box titled 'Edit PC/Server' is open in the center, containing the following fields:

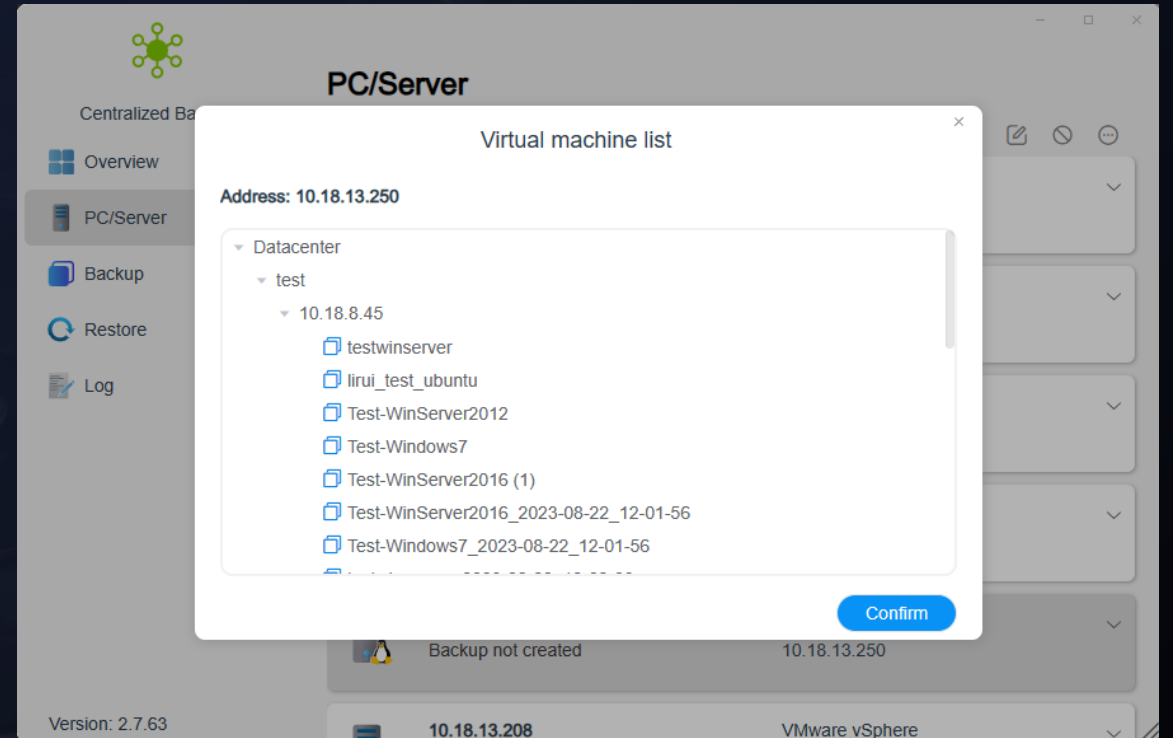
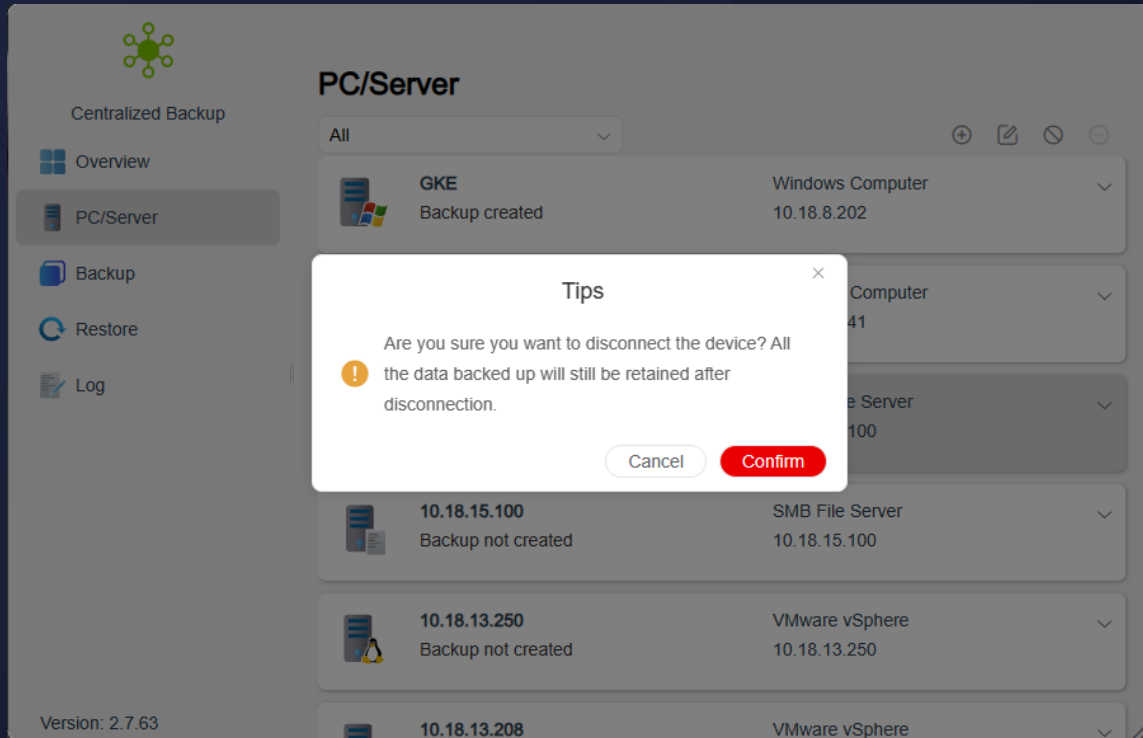
Server type	Rsync server
Address	10.18.15.100
Port	873
Username	abc
Password

A blue 'Confirm' button is located at the bottom right of the dialog box. The background shows a table with columns for server status and IP addresses, including entries like 'Backup not created' at '10.18.13.250' and '10.18.13.208' with 'VMware vSphere'.

■ Edit connection information

Change and edit the IP address, port, account number and password of the server host so that the server device can be connected with TNAS.

Device disconnect and device list



■ Disconnect the device

Disconnect the currently selected device from TNAS

Note: To disconnect the host of virtual machine, you need to delete all backup tasks associated with the host before disconnection.

■ Virtual machine list (dedicated)

As multiple virtual machines can be hosted in a server host, this list can display users the number of virtual machines in the current host.

Backup management panel

Centralized display of backup tasks in the application

The screenshot displays the Backup management panel with the following components:

- 1**: Centralized Backup navigation menu on the left, including Overview, PC/Server, Backup (selected), Restore, and Log.
- 2**: Detailed information for the selected VMware-ubuntu task, including:
 - Task Name: VMware-ubuntu
 - State: Backup succeeded
 - Source: VMware vSphere
 - Destination: /Volume1/CB/CentralizedBackup/VM_VMware-ubuntu
 - Number of virtual machines: 1
 - Backup schedule: Not enabled
 - Cycle: Not enabled
 - Frequency: Not enabled
 - Module Tracking (CBT): Enabled
 - Last run: 2023-08-24 11:52:04
 - Next run: -
- 3**: Filter dropdown menu set to 'All' and management icons (Add, Edit, Start/Pause, Delete, More) for the task list.

Version: 2.7.63

01.Type screening

Carry out classification and screening according to the device type, and select different device types. The information panel automatically screens the corresponding backup task list.

02.Task information

Display the detailed information of the current backup task, including task name, state, backup source, destination path, planning cycle and execution time...

03.Management operation

Create: Add a new backup task

Edit: Edit the current backup task settings

Start/pause: Start/pause the task

Delete: Delete the current task (delete the tasks that have been successfully backed up and the data files)

Task version information: Display all the version information of the current tasks

Backup task settings

Create Backup Task

General settings

Name: PC-Win10

Backup PC/Server: GKE (Windows Computer)

Destination: [Folder icon]

Backup source: Custom volume

Custom volume: C,D,E

Notes

The backup destination only supports BTRFS shared folders
The customized volume of the backup source supports only NTFS disk space

Next

Windows PC/server

Support backup system, system disk, and single/multi-disk.

File server

Support single folder backup, and require permission.

Create Backup Task

General settings

Name: FileServer-Rsync

Backup PC/Server: GKE (Windows Computer)

Destination: [Folder icon]

Backup source: System backup

Notes

The backup destination only supports BTRFS shared folders
The customized volume of the backup source supports only NTFS disk space

Next

Create Backup Task

General settings

Name: VMware-windows

Backup PC/Server: VMware vSphere

Virtual machine: Test-Windows7

Destination: CB

Notes

The backup destination only supports BTRFS shared folders

Next

VMware

Support the cross backup of multiple hosts and virtual machines.

Hyper-V

Support the backup of multiple virtual machines in a single host.

Create Backup Task

General settings

Name: Hper-V

Backup PC/Server: 10.18.8.66 (Microsoft Hyper-V)

Virtual machine: ddd

Destination: [Folder icon]

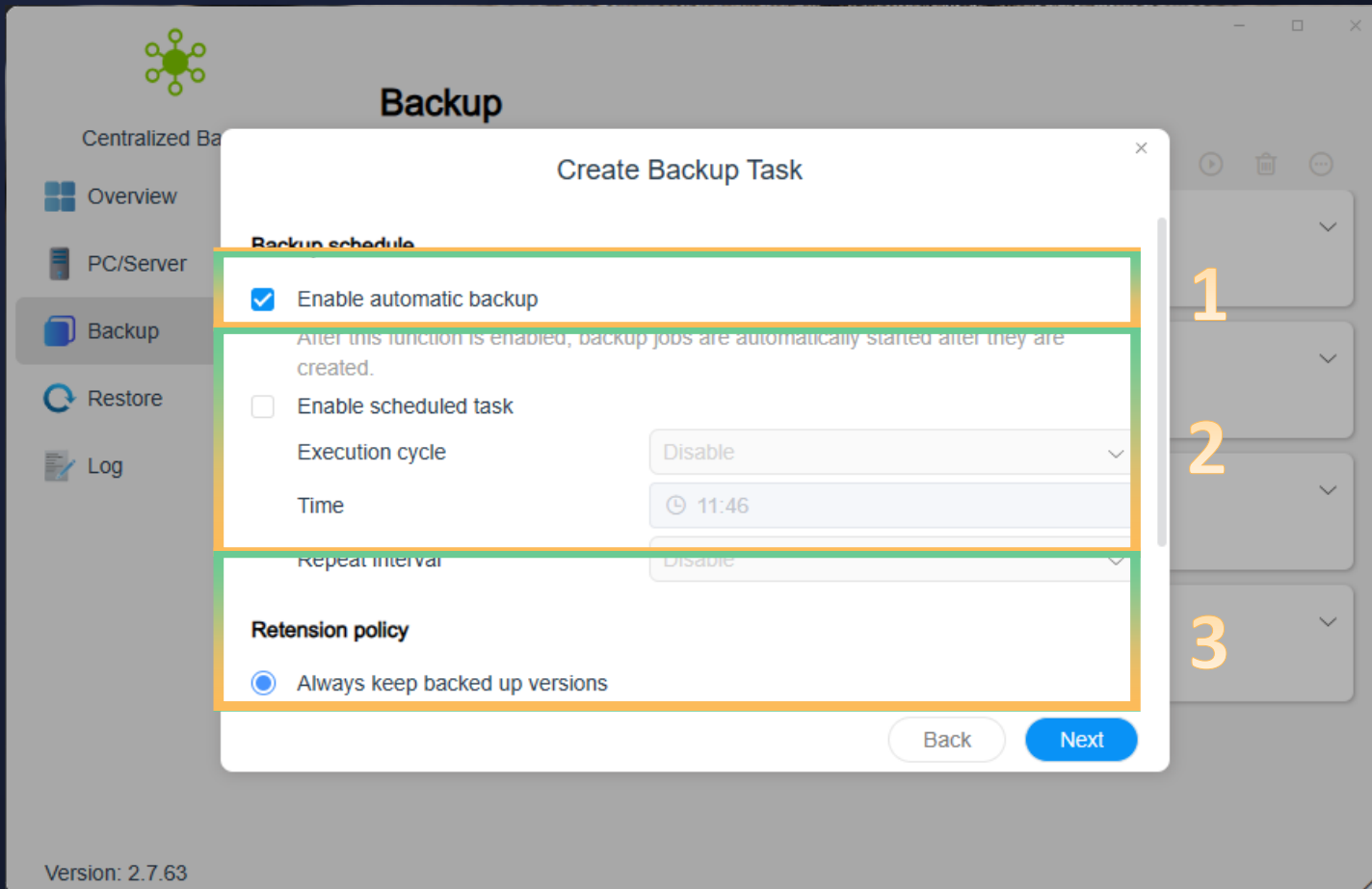
Notes

The backup destination only supports BTRFS shared folders

Next

Backup plan strategy

- Centralized display and management of all the successfully connected devices



01. Automatic backup

Start the task automatically when the backup task is created. (Currently, only VMware virtual machine backup is supported, and other devices will be developed in subsequent versions.)

02. Scheduled task

Execution cycle: Monthly, daily, working day, and every day

Time: The time when the task starts to be executed

Repeat interval: Fixed execution interval within the execution cycle

03. Retention policy

Always keep all task versions and a fixed number of versions. (If it exceeds the fixed number, the earliest unlocked versions will be automatically deleted, and the locked task versions will not be counted in the total number.)

Backup task confirmation settings

Create Backup Task

Confirm settings

Name	PC-Win10
Backup PC/Server	GKE (Windows Computer)
Destination	/Volume1/CB
Backup source	C,D,E
Schedule	Not enabled

Back Apply

Windows PC/server



Create Backup Task

Confirm settings

Name	FileServer-Rsync
Backup PC/Server	10.18.15.100 (Rsync File Server)
Backup type	Incremental mode
Destination	/Volume1/CB
Backup source	/DDD
Schedule	Not enabled

Back Apply

File server



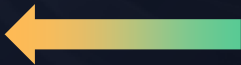
Create Backup Task

Confirm settings

Name	VMware-ubuntu
Type	VMware vSphere
Backup PC/Server	10.18.13.208
Virtual machine	lirui_test_ubuntu22_1111111
Destination	/Volume1/CB
Schedule	Not enabled
Module Tracking (CBT)	Enabled

Back Apply

VMware



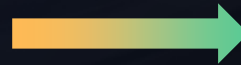
Create Backup Task

Confirm settings

Name	Hper-V
Backup PC/Server	10.18.8.66 (Microsoft Hyper-V)
Virtual machine	ddd
Destination	/Volume1/CB
Schedule	Not enabled

Back Apply

Hyper-V



Restoration management panel

- Centralized display of all the restoration tasks in the application

Centralized Backup

Overview

PC/Server

Backup

Restore

Log

Restore

All

	Restore-test Restored successfully	VMware vSphere 10.18.8.45
	Backup task	test
	Task version information	test(2023-08-04 14:04)
	Restore a VM	lirui_test_ubuntu_base
	New VM name	lirui_test_ubuntu_base_new123
	Destination	10.18.8.45

	Restore Restored successfully	VMware vSphere 10.18.8.45
	Restore1 Restored successfully	VMware vSphere 10.18.8.45
	Restore3 Restored successfully	VMware vSphere 10.18.8.45

Version: 2.7.63

01.Type screening

Carry out classification and screening according to the device type, and select different device types. The information panel automatically screens the list of restoration tasks of the corresponding devices.

02.Task information

Display the details of the created restoration task, including task name, state, restoration mode, backup source and destination...

03. Management operation

Add: Add a new restoration task
Start/pause: Start/pause the restoration
Restoration progress: View the progress state of the current restoration tasks
Delete: Delete the current task
More: Open the restoration portal and create restoration media

Restore task settings

Create a Restore Task

General settings

Name: Restore4

Backup task: PC-Win10 (Windows Computer)

Task version information: PC-Win10(2023-08-24 11:59)

Restore of source: C:/

Destination: D:/

Skip files with the same name

Next

Windows PC/server

Support to the restoration to the original host.

Create a Restore Task

General settings

Name: Restore4

Backup task: FileServer-Rsync (Rsync File Server)

Task version information: FileServer-Rsync(2023-08-24 12:15)

Restore of source: /Volume1/CB/eed

Destination: /DDD

Next

File server

Support the restoration to the original host.

Create a Restore Task

General settings

Name: Restore4

Backup task: VMware-ubuntu (VMware vSphere)

Task version information: VMware-ubuntu(2023-08-24 11:52)

Restore a VM: lirui_test_ubuntu22_111111

Restore mode: Restore to original location

Next

VMware

Support the restoration of the original host and cross-host of single virtual machine.

Create a Restore Task

General settings

Name: Restore4

Backup task: Hyper-V (Microsoft Hyper-V)

Task version information: Hyper-V(2023-08-02 14:57)

Restore a VM: I36

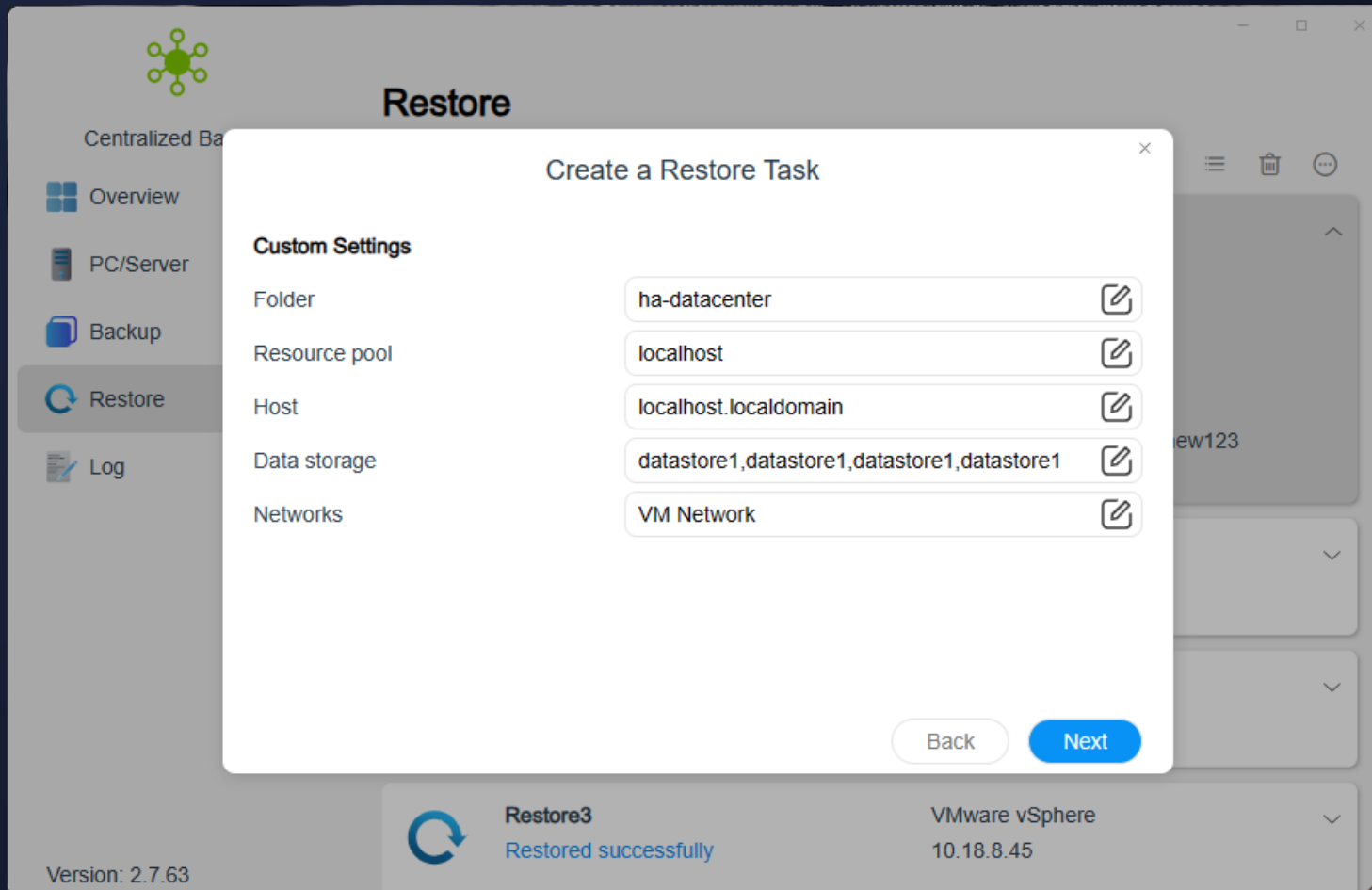
Restore mode: Restore to original location

Next

Hyper-V

Support the restoration of the original host of single virtual machine.

VMware virtual machine to new location



■ Configuration parameters

As the restoration of VMware virtual machine involves cross-host restoration, you need to set the corresponding parameters of the restored virtual machine.

Restore task confirmation settings

Create a Restore Task

Confirm settings

Name	Restore4
Backup task	PC-Win10 (Windows Computer)
Task version information	PC-Win10(2023-08-24 11:59)
Restore of source	C:/
Destination	D:/

Back Apply

Windows PC/server



Create a Restore Task

Confirm settings

Name	Restore4
Backup task	FileServer-Rsync (Rsync File Server)
Task version information	FileServer-Rsync(2023-08-24 12:15)
Restore of source	/Volume1/CB/eed
Destination	/DDD

Back Apply

File server



Create a Restore Task

Confirm settings

Name	Restore4
Backup task	VMware-ubuntu (VMware vSphere)
Task version information	VMware-ubuntu(2023-08-24 11:52)
Restore a VM	lirui_test_ubuntu22_1111111
New VM name	lirui_test_ubuntu22_1111111
Folder	ha-datacenter
Resource pool	localhost
Host	localhost.localdomain

Back Apply

VMware



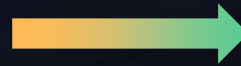
Create a Restore Task

Confirm settings

Name	Restore4
Backup task	Hyper-V (Microsoft Hyper-V)
Task version information	Hyper-V(2023-08-02 14:57)
Restore a VM	I36
Restore mode	Restore to original location

Back Apply

Hyper-V



Log information panel

- Display all the operation behavior logs in the application.

1

2

3

Category	User	Event
Info	kegeng	Device authentication
Info	kegeng	Device authentication
Info	kegeng	Device authentication
Info	kegeng	Device activation
Info	kegeng	Device authentication
Info	kegeng	Device authentication
Info	kegeng	Device authentication
Info	kegeng	Device authentication

Version: 2.7.63

01.Type screening

Carry out classification and screening according to device and log types, and select different device and log types. The information panel automatically screens the required logs.

02.Log information

Display all the operation logs in the application, add/delete devices, create/delete tasks, execute/pause tasks, and feedback the state of tasks... (Currently, the log function of VMware virtual machine will be updated in subsequent versions.)

03. Management operation

Search: Search the corresponding log by keywords

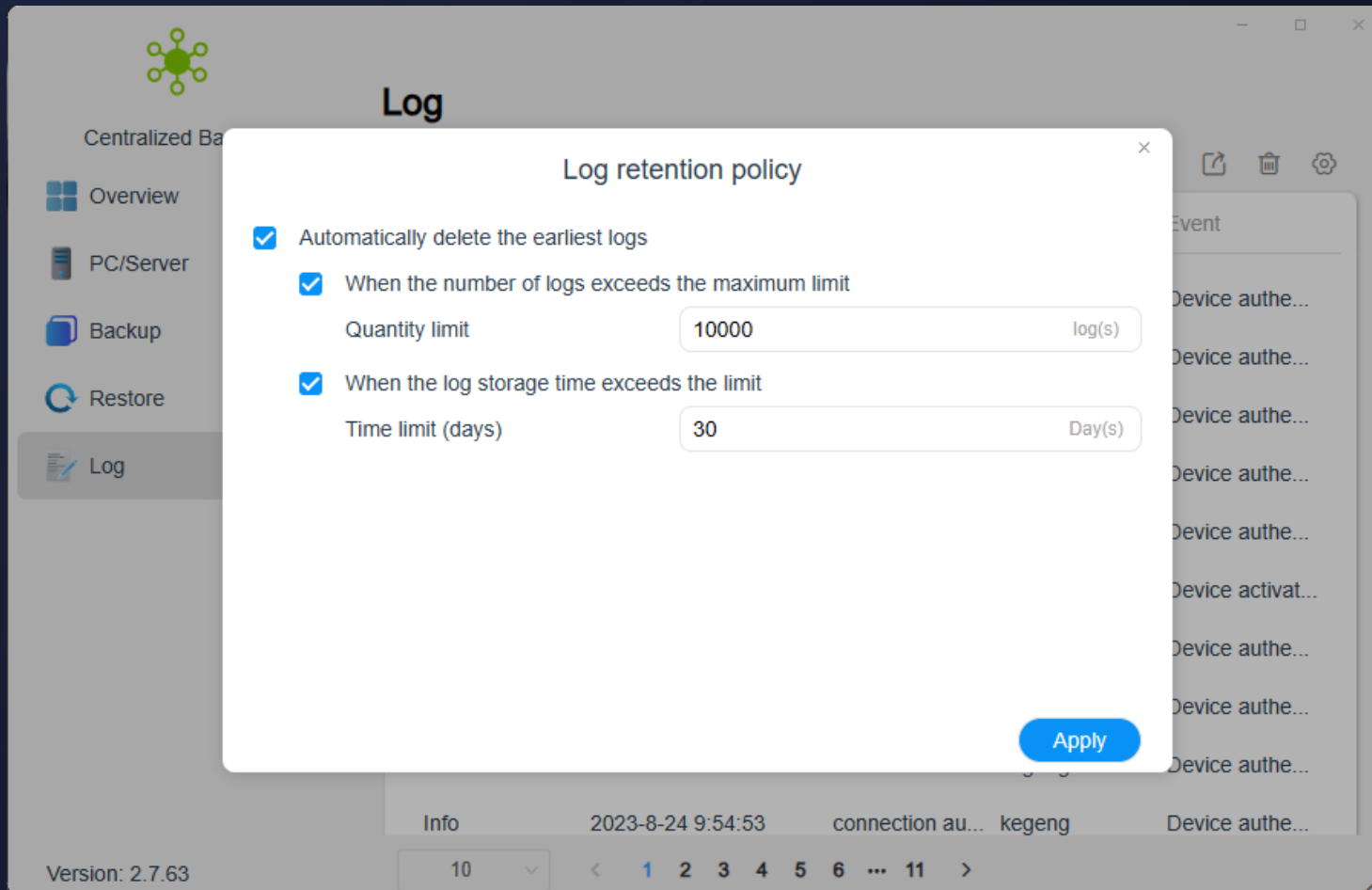
Refresh: Refresh the current page

Export: Export the currently selected log entry

Delete: Delete the current log entry

Settings: Set the log retention policy

Log panel settings



■ Retention strategy

You can set the maximum storage number of logs, maximum storage time (days), and log deletion policy in the application.



Thank you

The End ◀◀◀