QSAN
Official Document

Data Migration Guide

(From a QSM 3 Device to a QSM 4 Device)

Application Notes

March 2026

ANNOUNCEMENT

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Announcement
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PREFACE

Executive Summary

As data volumes continue to grow and the demands for business continuity increase, backup solutions have become particularly important in modern enterprises. Rsync is an efficient file synchronization and backup tool widely used for data transfer between different operating systems. In this solution, we will explore how to leverage Rsync to achieve efficient and reliable backups between QSAN's QSM 3 and QSM 4 operating systems. This technology not only offers flexibility and efficiency but also minimizes network bandwidth usage, ensuring the secure transfer of data across different platforms.

Audience

The primary audience for this solution includes enterprise IT professionals, system administrators, and decision-makers. IT professionals are responsible for data management and protection, system administrators need to be familiar with the configuration and management of backup tools, while decision-makers are concerned with data security and business continuity strategies. By understanding this backup solution, the audience will be able to grasp the technical advantages of effectively utilizing Rsync between QSM 3 and QSM 4 operating systems, ensuring the security of enterprise data and the continuous operation of the business.

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Technical Support

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- Via the Web: https://www.qsan.com/technical_support
- Via Telephone: +886-2-77206355
- (Service hours: 09:30 - 18:00, Monday - Friday, UTC+8)
- Via Skype Chat, Skype ID: qsan.support
- (Service hours: 09:30 - 02:00, Monday - Friday, UTC+8, Summer time: 09:30 - 01:00)
- Via Email: support@qsan.com

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Information, Tip, and Caution

This document uses the following symbols to draw attention to important safety and operational information.



INFORMATION

INFORMATION provides useful knowledge, definition, or terminology for reference.



TIP

TIP provides helpful suggestions for performing tasks more effectively.



CAUTION

CAUTION indicates that failure to take a specified action could result in damage to the system.

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1. CONFIGURATION SETTINGS

1.1. Environment and Topology

Demonstration Environment

- Source Storage
  - Model: XN5016R
    Memory: 16 GB per controller
    Firmware: QSM 3.5.1
    Data Port IP: 192.168.222.87
- Target Storage
  - Model: XN8116D
    Memory: 16 GB per controller
    Firmware: QSM 4.1.0
    Data Port IP: 192.168.195.2

Demonstration Topology (TBD)

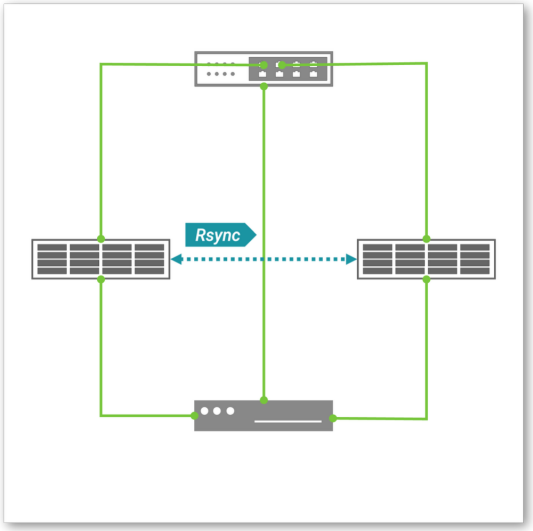


Figure 1-1 Data Migration Topology

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2. ENVIRONMENT CONFIGURATION

2.1. Configuration Steps

2.1.1. NAS Directory Creation

1. Create a shared directory on XN8016R (QSM 3)

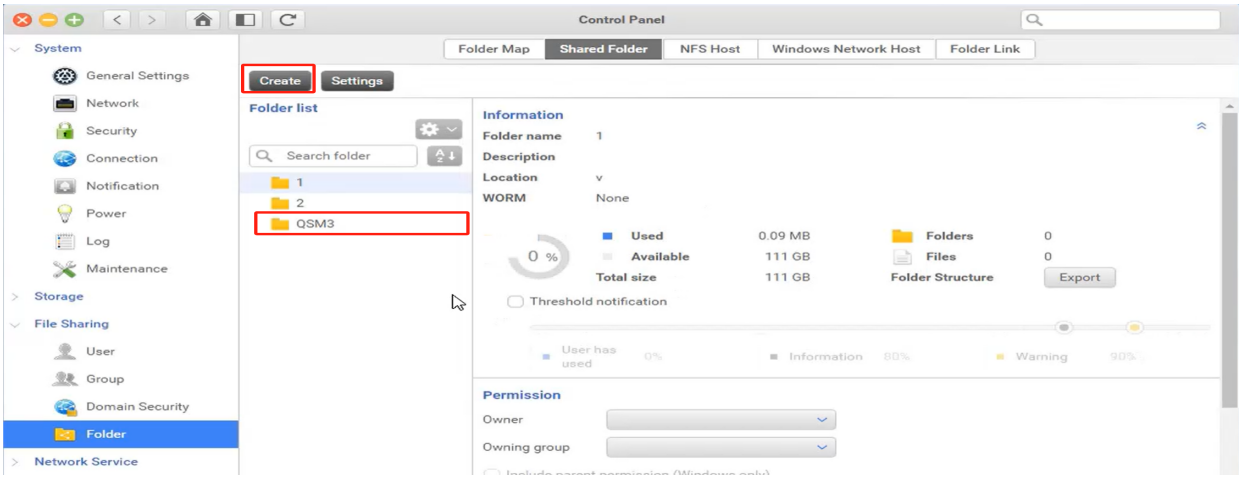


Figure 2-1 Create a Share Folder

2. Create a shared directory in XN8116D (QSM 4)

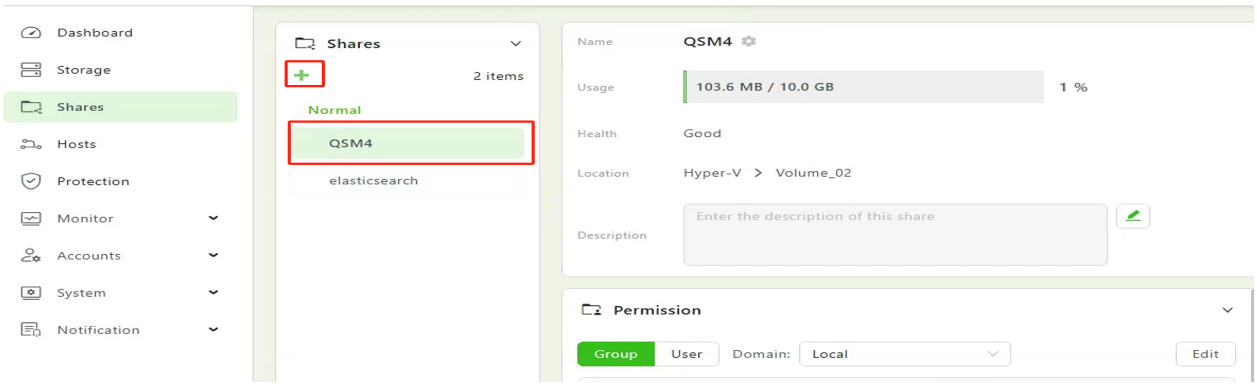


Figure 2-2 Create a Share Folder

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2.1.2. Check network connectivity

1. Check if the ip address of XN8116D (QSM4) can be ping at XN8016R (QSM 3)

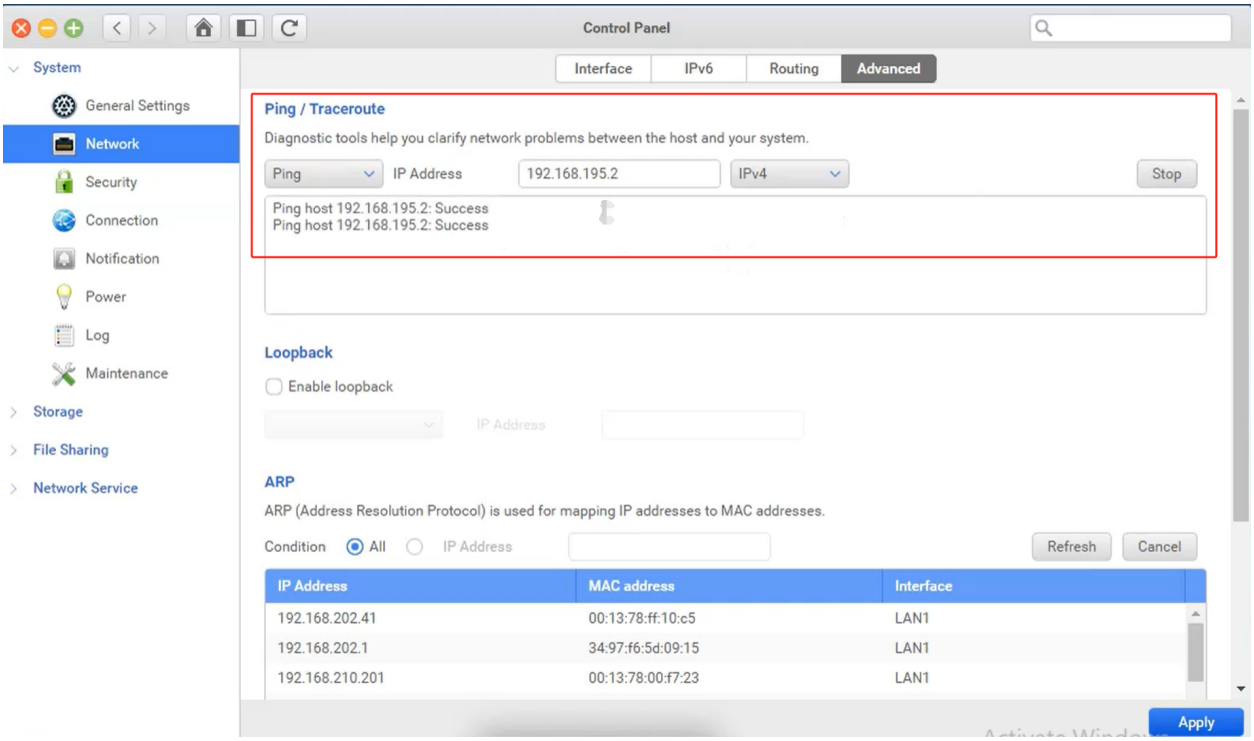


Figure 2-3 Ping IP

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2.1.3. QSM 4 Settings

1. Set the Rsync User on Protection → Rsync → Server

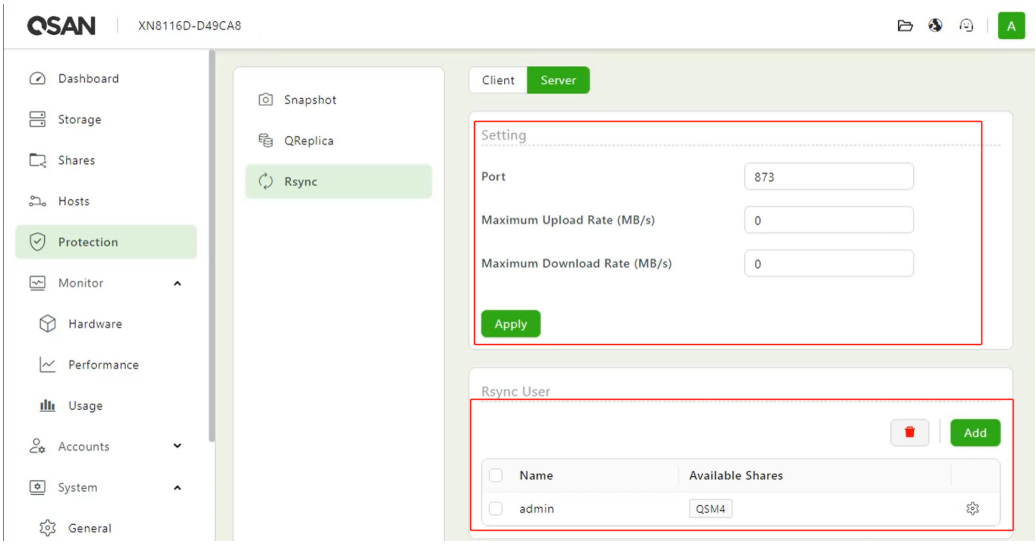


Figure 2-4 QSM 4 Settings

2. Collect the data and files to the shared directory in QSM 3 device.

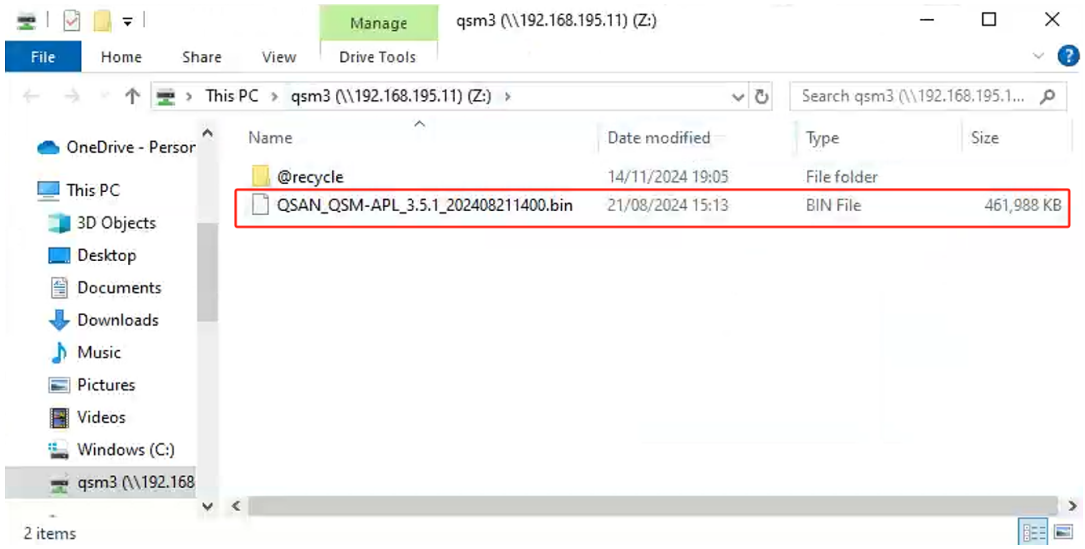


Figure 2-5 Upload data and files

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2.2. Rsync backup

1. Add a backup device to XN8016R (QSM 3)

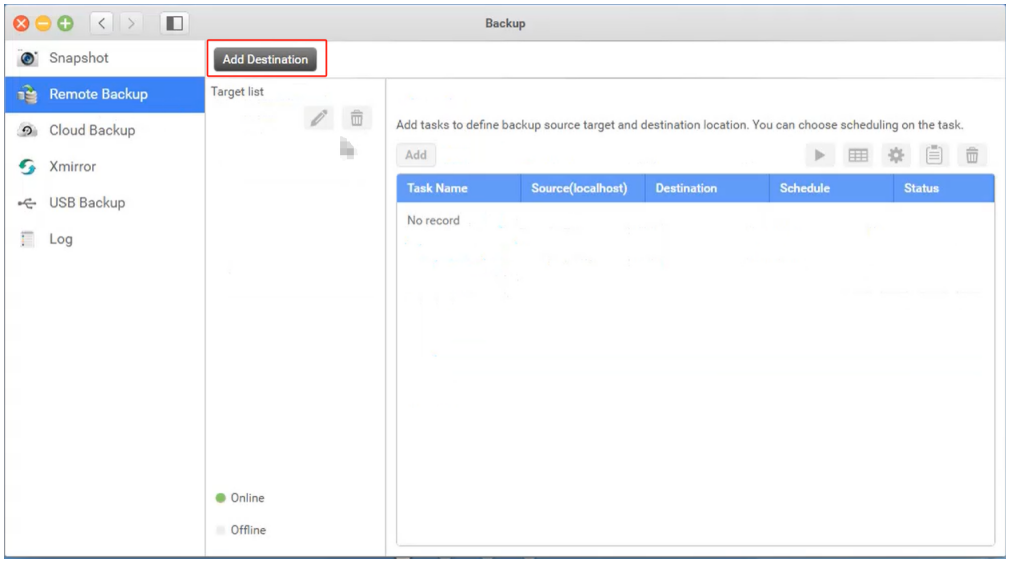


Figure 2-6 Add Destination

2. After filling in the target device information, click the test button whether the connection is successful

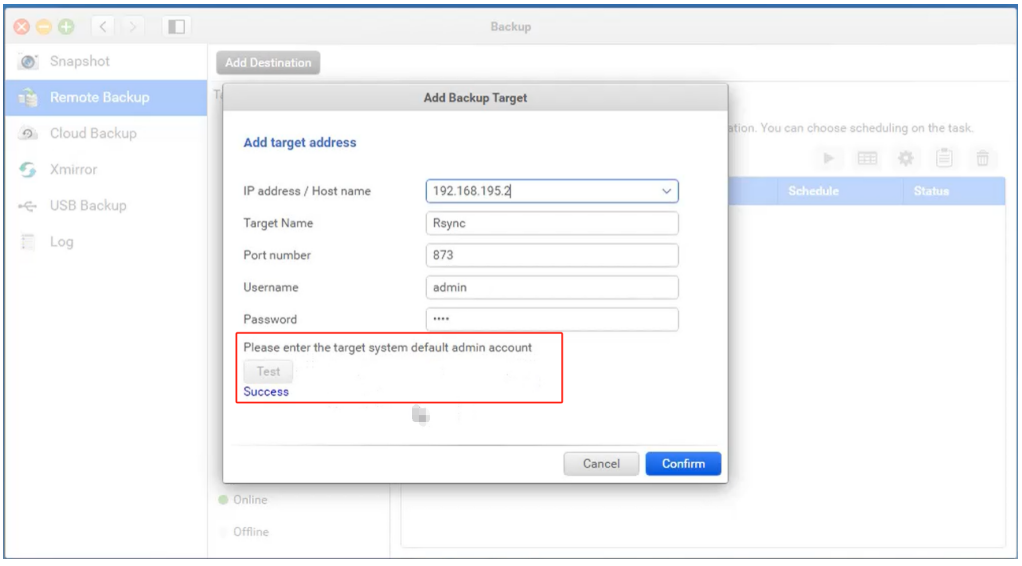


Figure 2-7 Test connection

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2.3. Storage Backup

1. Click ADD to add a backup job

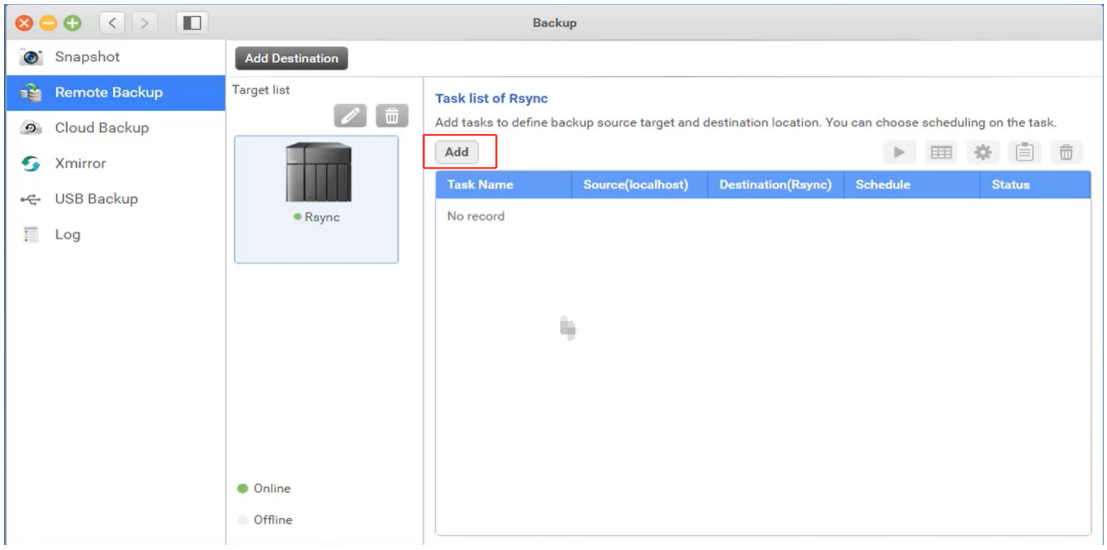


Figure 2-8 Add Backup Task - I

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2. Select the backup type, in this case we select Replication

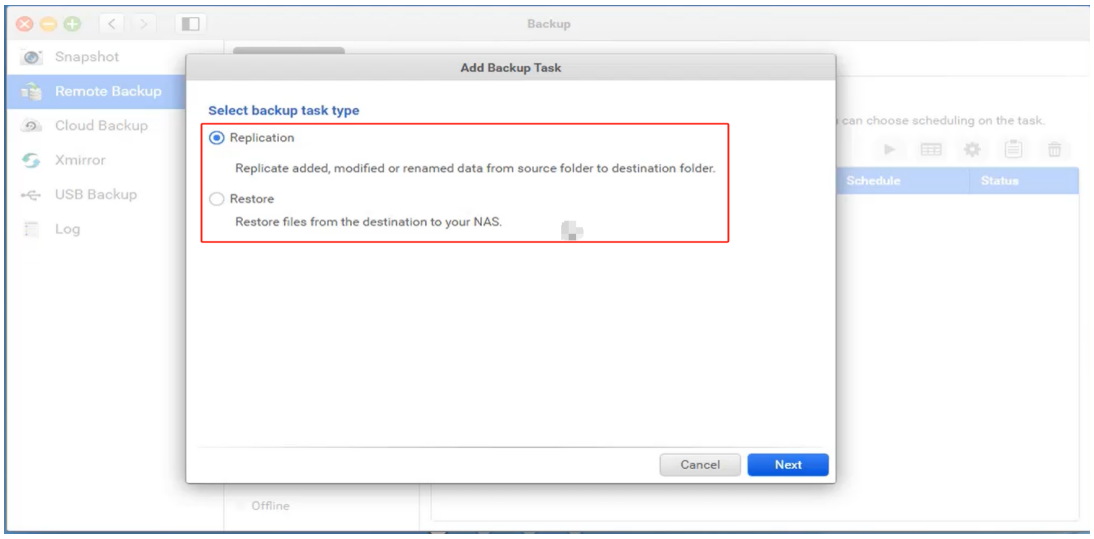


Figure 2-9 Add Backup Task - II

3. Set the task name

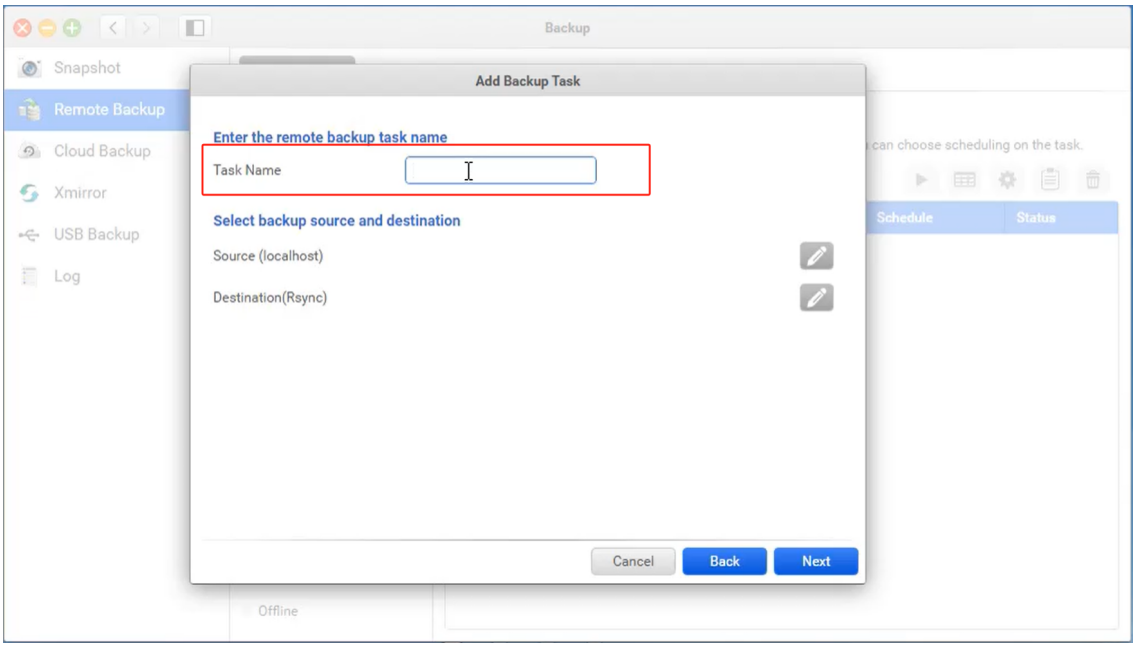


Figure. 2-10 Backup Setup

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4. Set the source location

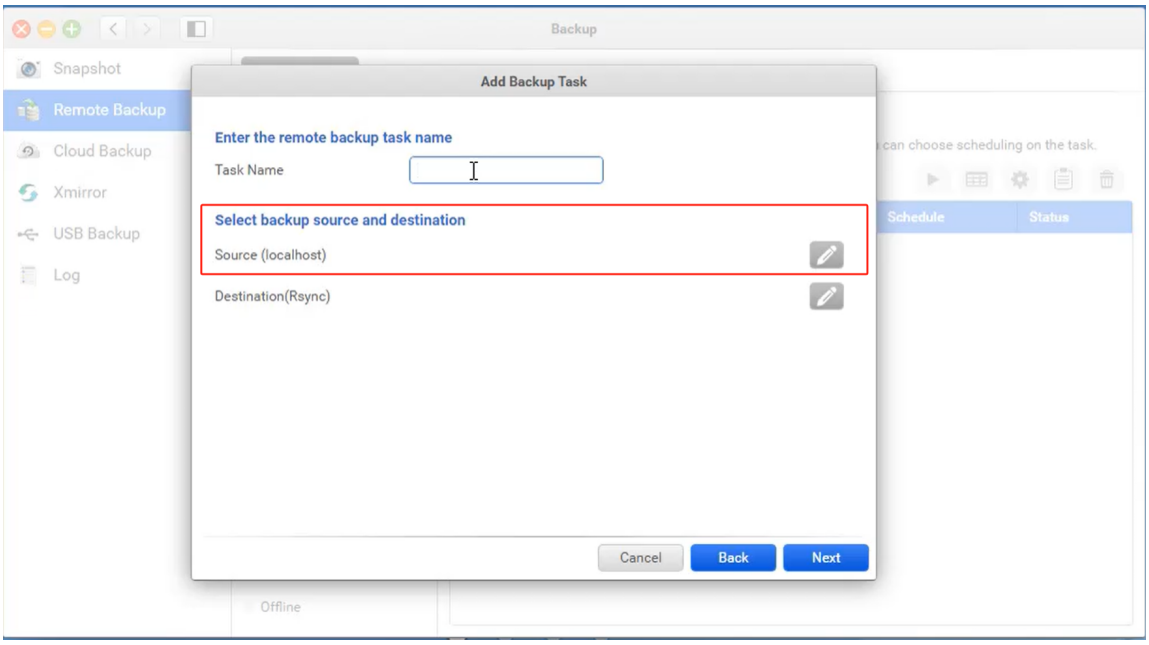


Figure 2-11 Add a Source device to the backup Task - I

5. Specifies the files to be backed up on the source side

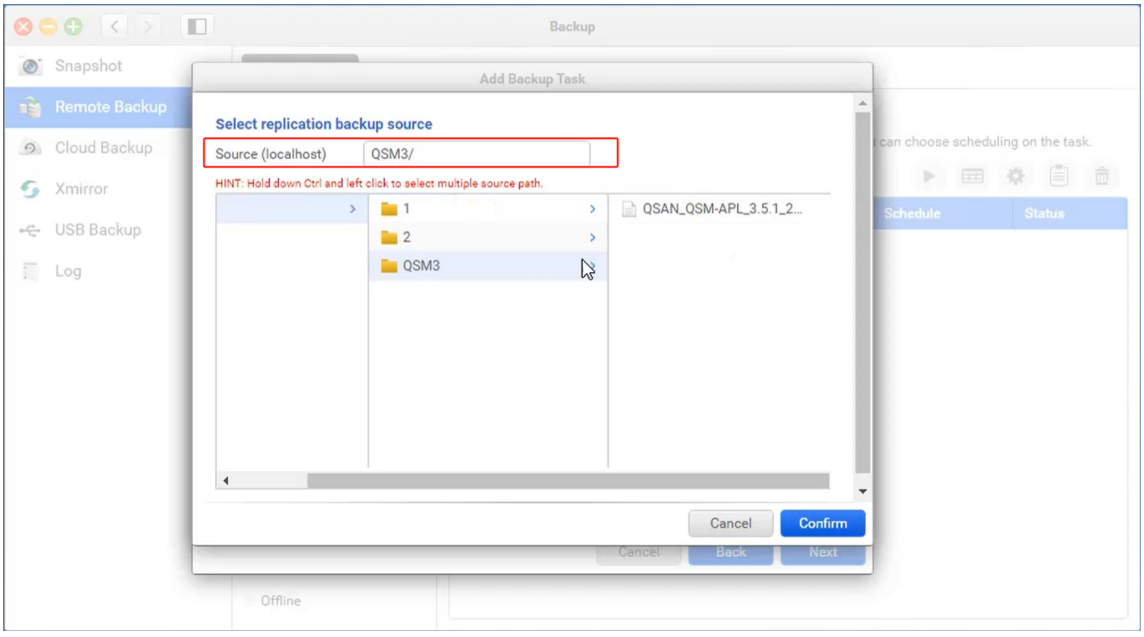


Figure 2-12 Add a Source device to the backup Task - II

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6. Set target location

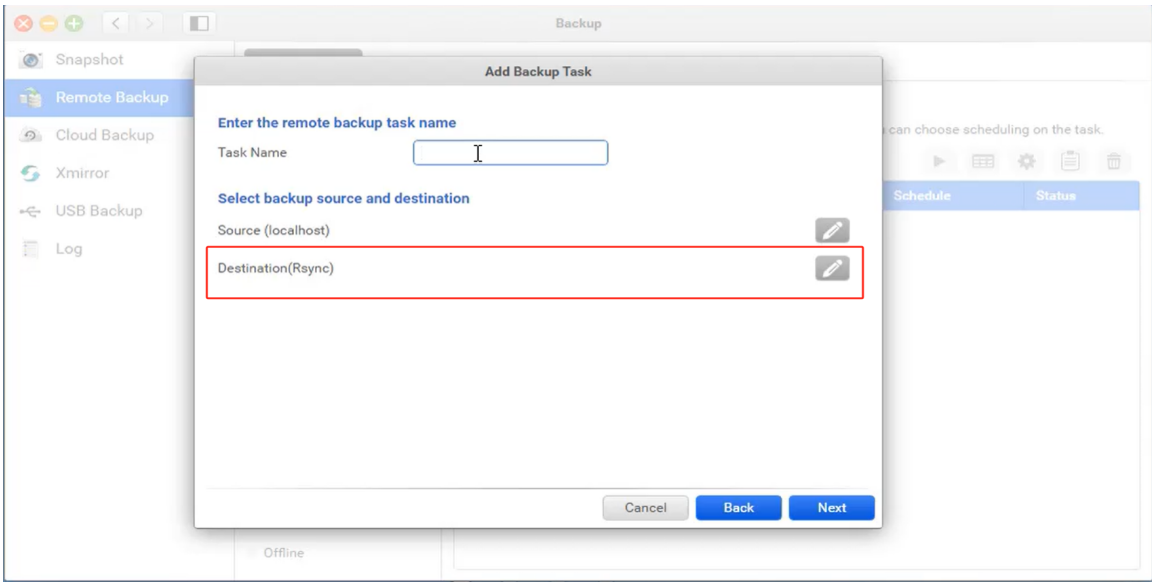


Figure 2-13 Connect to the Target - I

7. Specifies the destination location for backup data storage

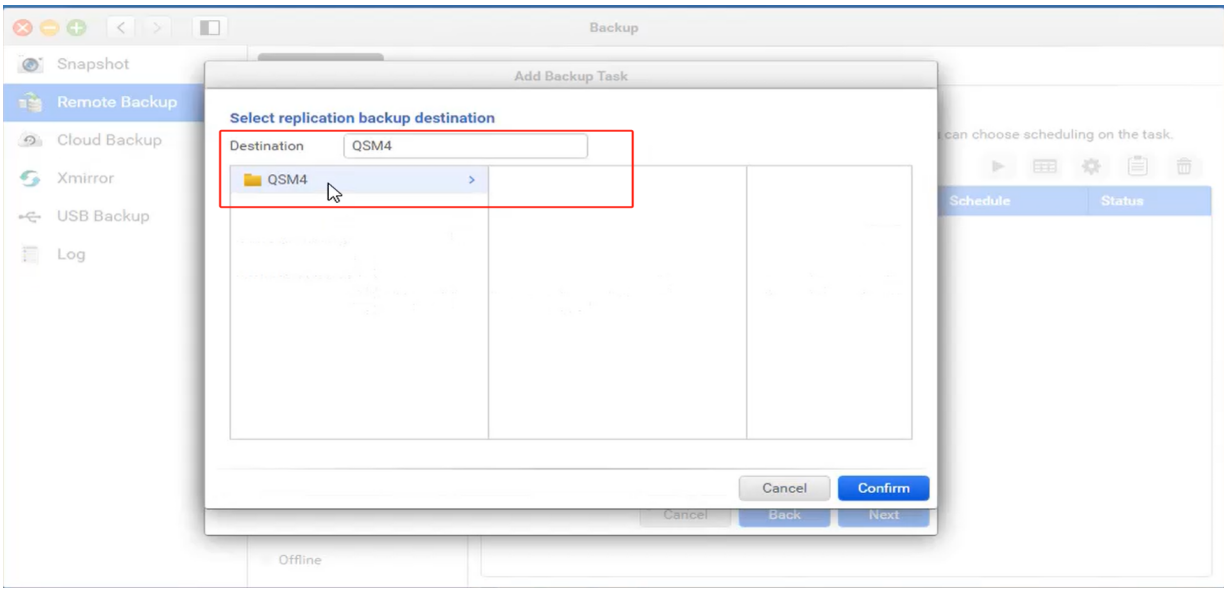


Figure 2-14 Connect to the Target - II

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8. Verify that the backup location is set correctly

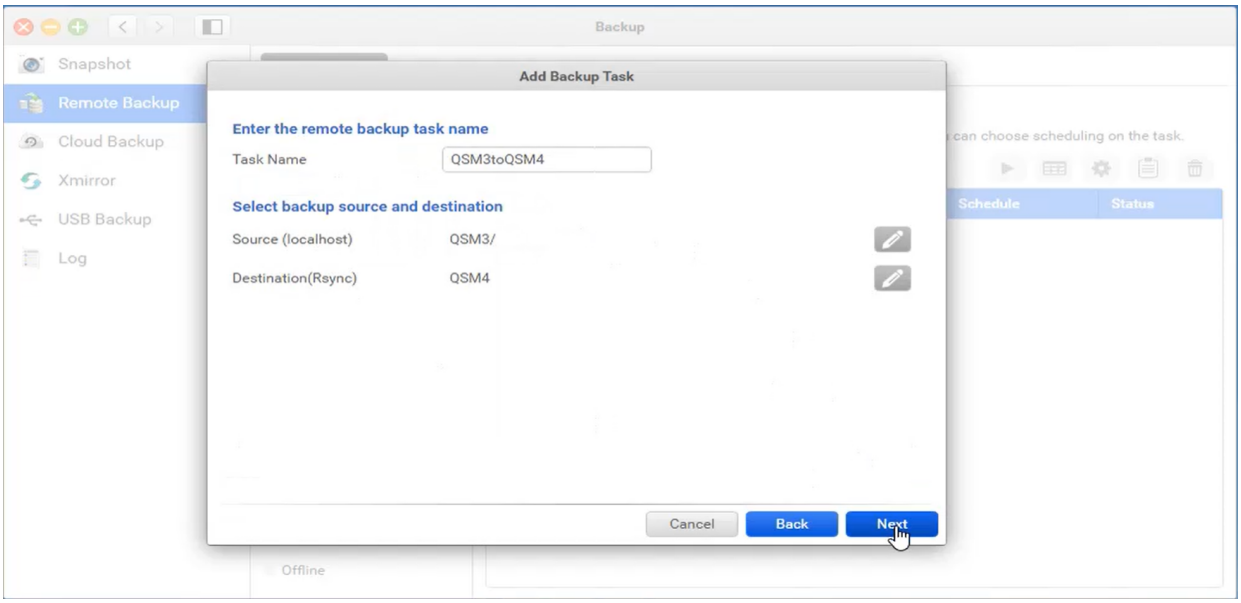


Figure 2-15 Backup Task

9. Set a backup schedule

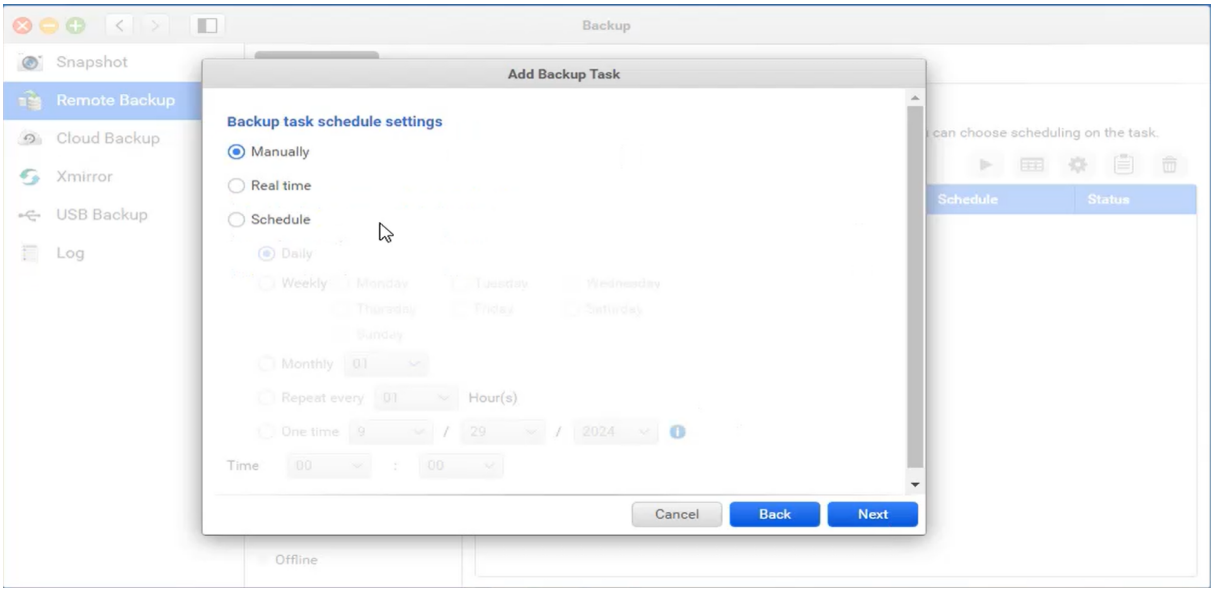


Figure 2-16 Setup the Backup schedule

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10. Confirm the Settings again

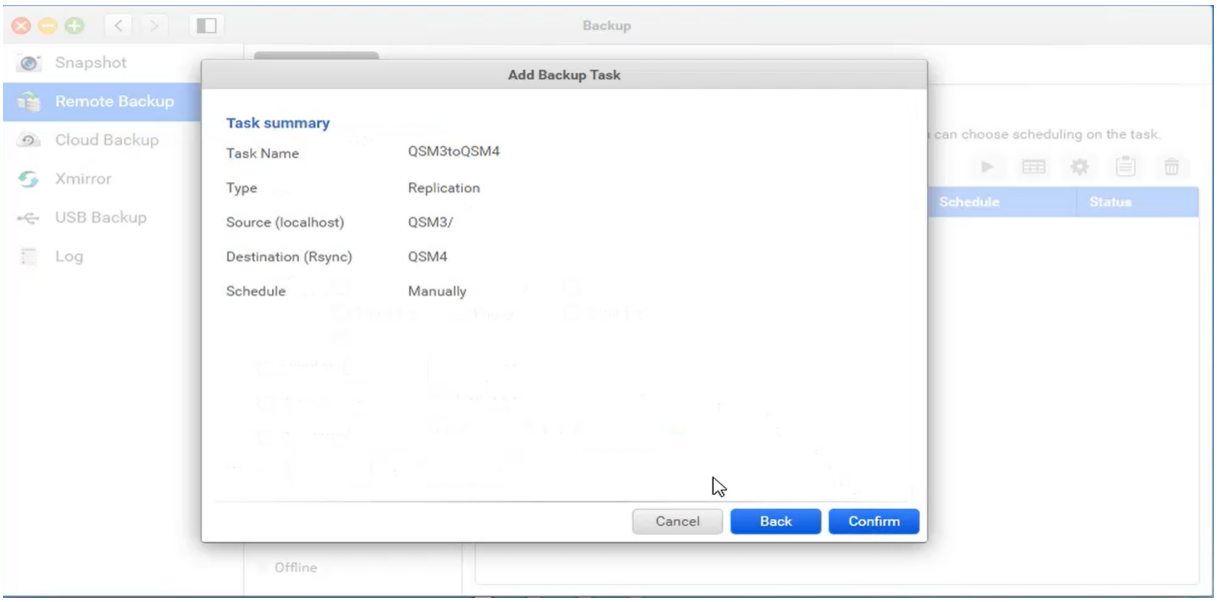


Figure 2-17 Check the Task Summary

11. Select a backup job and start executing it

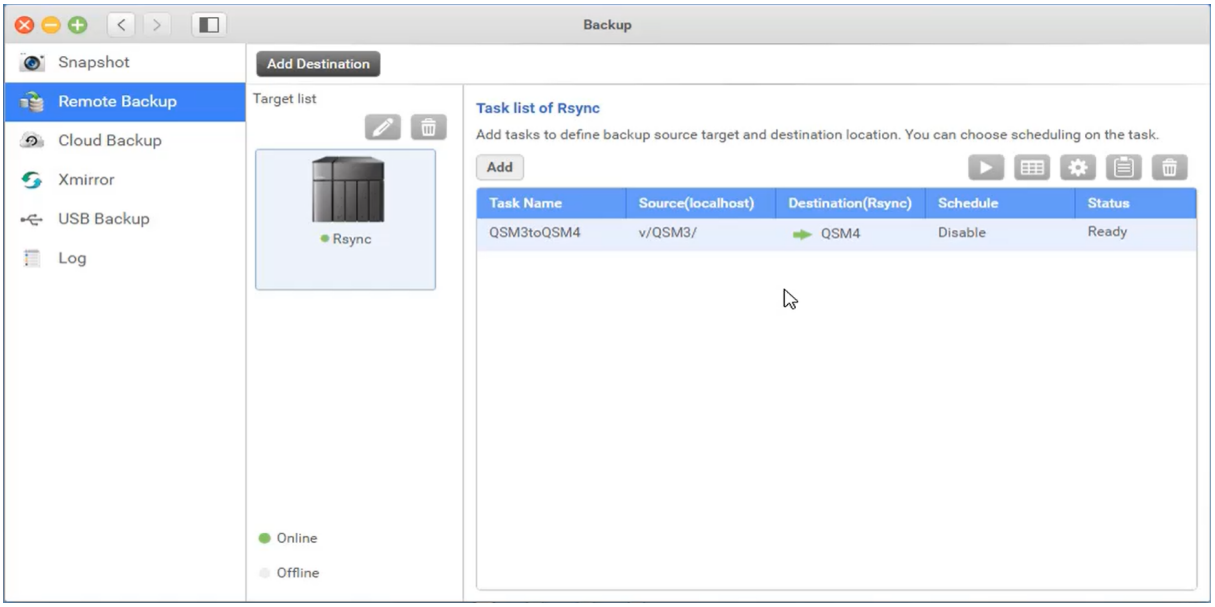


Figure 2-18 Operate the Backup Task

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12. Viewing backup progress

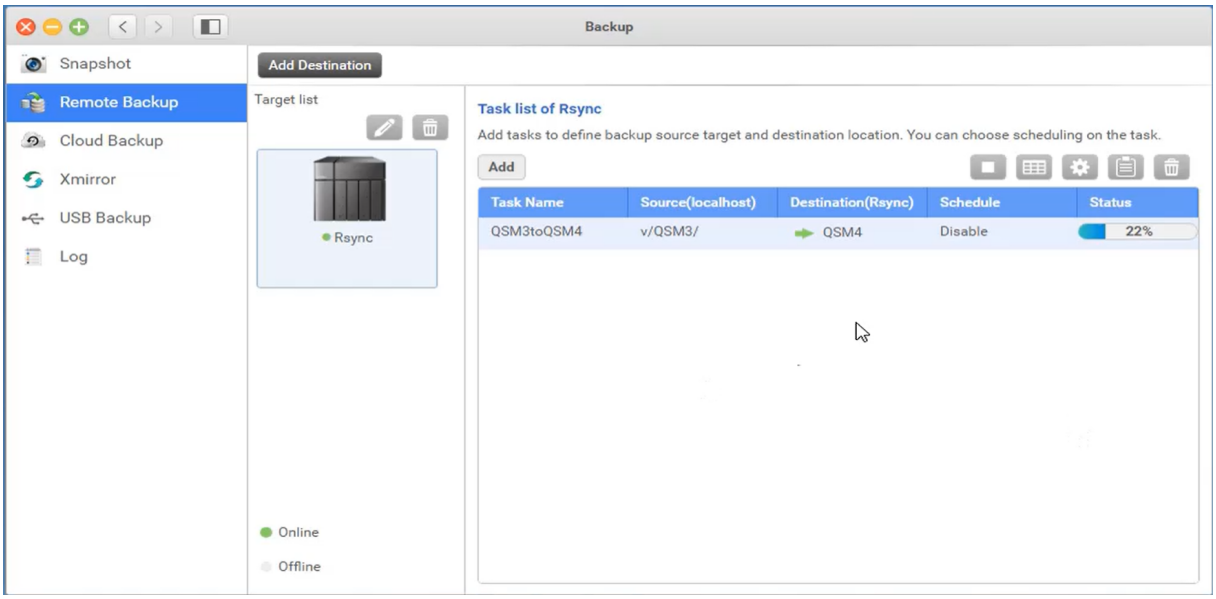


Figure 2-19 Check the Backup Status

13. Verify that all data is backed up on windows.

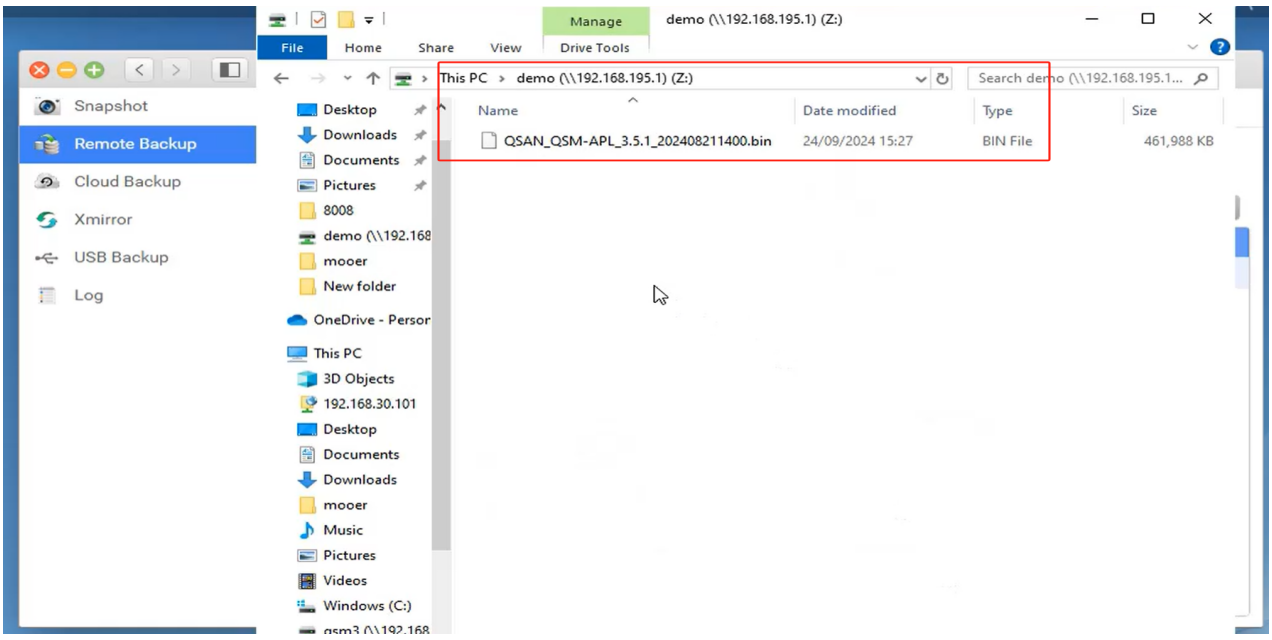


Figure 2-20 Check the data Status

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3. CONCLUSION

3.1. Conclusion

By implementing an Rsync backup strategy between QSM 3 and QSM 4 operating systems, enterprises can effectively enhance their data protection capabilities, ensuring swift recovery of business operations in the face of disasters and data loss. This solution not only offers an efficient backup and recovery mechanism but also reduces operational risks through automation and optimized configuration. As data volumes continue to grow, building a flexible and efficient backup strategy will become a crucial component of enterprise information technology management.

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4. APPENDIX

4.1. Apply To

- XCubeNXT Series
- XCubeNAS Series
- QSM 4
- QSM 3

4.2. Reference

Software Manual

- QSM4 Software Manual
- QSM3 Software Manual

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