

# NAKIVO Setup Guide

## Application Note

April 2024

# ANNOUNCEMENT

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**Announcement**

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# NOTICES

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This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

# PREFACE

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## Technical Support

Do you have any questions or need help trouble-shooting a problem? Please contact QSAN Support, we will reply to you as soon as possible.

- Via the Web: [https://www.qsan.com/technical\\_support](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](mailto:support@qsan.com)

## 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.

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### TIP

TIP provides helpful suggestions for performing tasks more effectively.

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## CAUTION

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

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# 1. NAKIVO INTRODUCTION

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## 1.1. What is NAKIVO Backup & Replication Software

NAKIVO Backup & Replication is an all-in-one backup, replication, anti-ransomware protection, disaster recovery and VM (Virtual Machine) monitoring solution that meets all the data protection needs of today's virtual and mixed environments.

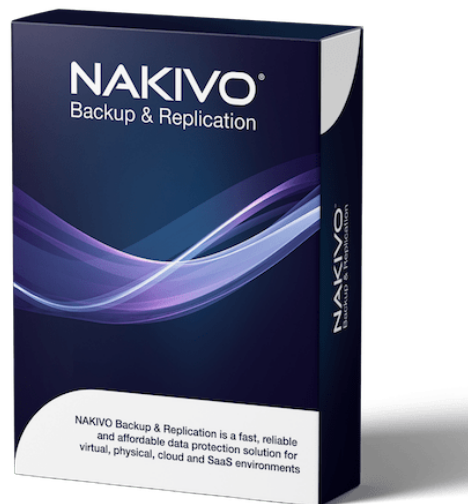


Figure 1-1 NAKIVO Backup & Replication Software

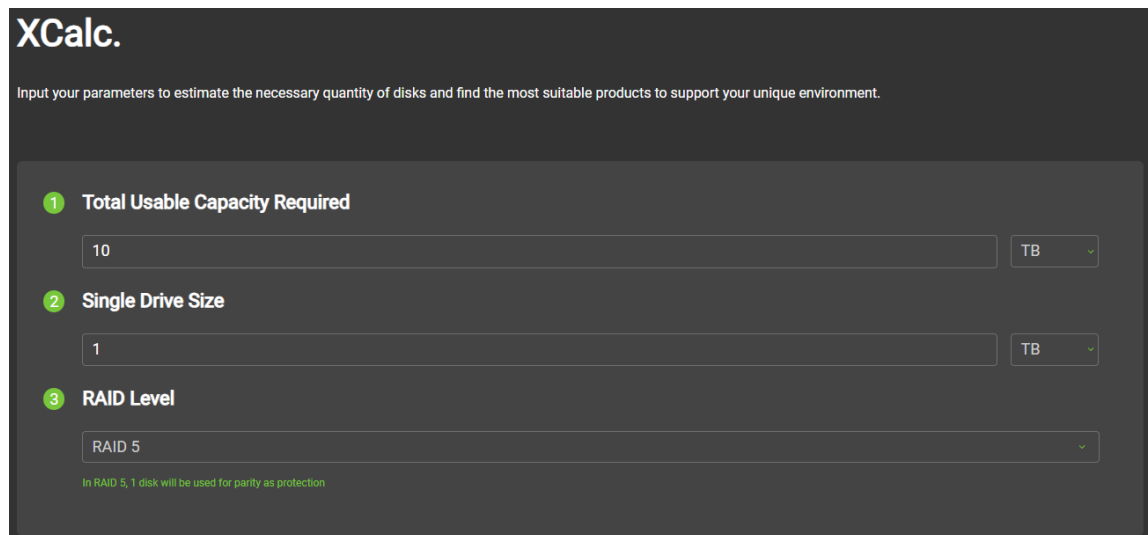
This document focuses on the seamless integration of NAKIVO Backup & Replication with QSAN storage solutions. In today's dynamic business environment, ensuring the security and accessibility of critical data is critical. NAKIVO's powerful backup and replication software combined with QSAN's reliable storage infrastructure provides a comprehensive solution customized to meet the ever-changing needs of modern enterprises. This document explores the synergies between NAKIVO and QSAN storage, focusing on how their combined capabilities can help organizations achieve their data protection, disaster recovery, and business continuity goals efficiently and effectively. Whether you are a small business or a large enterprise, the integration of NAKIVO with QSAN storage provides a scalable, cost-effective solution to protect your valuable data assets.

## 2. CONFIGURATION SETTINGS

In this chapter, we will take an in-depth look at backup solutions integrating NAKIVO software with QSAN storage.

### 2.1. Recommended Storage

1. Use [XCalc.](#) tool on the QSAN website to obtain recommended storages.
2. Enter the **Total Usable Capacity Required** and the desired **RAID Level**.



The screenshot shows the XCalc. tool interface. At the top, it says "XCalc." and "Input your parameters to estimate the necessary quantity of disks and find the most suitable products to support your unique environment." Below this, there are three numbered input fields:

- 1 Total Usable Capacity Required: Input field contains "10", unit dropdown is "TB".
- 2 Single Drive Size: Input field contains "1", unit dropdown is "TB".
- 3 RAID Level: Input field contains "RAID 5", dropdown arrow is visible.

Below the RAID Level field, there is a small green note: "In RAID 5, 1 disk will be used for parity as protection".

Figure 2-1 Use XCalc. Tool to Obtain Recommended Storages

3. Select the **Virtualization** option.

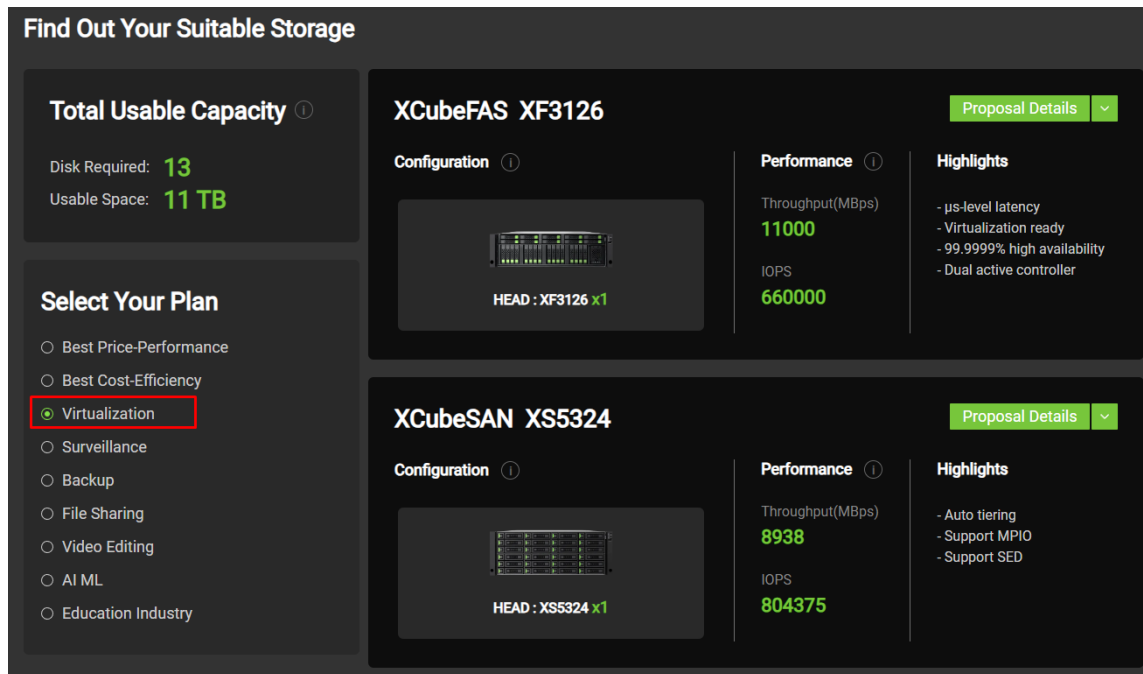


Figure 2-2 Select Virtualization Option

4. Select the model and click the **Proposal Details** button to view more.

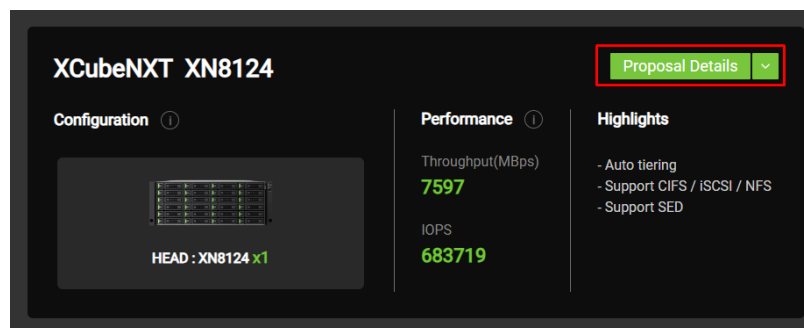


Figure 2-3 Click Proposal Details Button to View More

5. If necessary, click the **Export the Result** button to export the report.

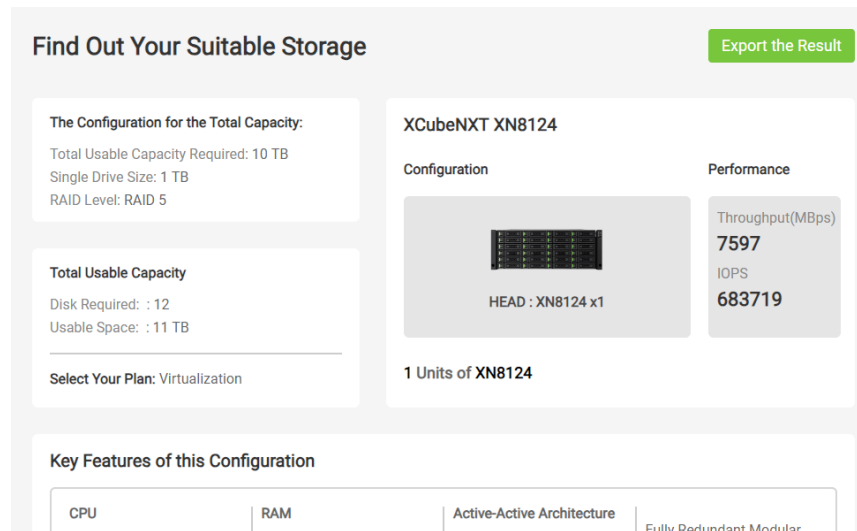


Figure 2-4 Click Export Button to Export Result

## 2.2. Environment and Topology

Configuring NAKIVO on the server is very simple and requires minimal hardware resources. In fact, NAKIVO's hardware requirements are very minimal. For added convenience and flexibility, NAKIVO can even be installed directly on a VM (Virtual Machine) hosted on the VMware ESXi server to be backed up. This means that you can leverage an existing Windows-based VM on an ESXi host to install NAKIVO, and then use that VM to perform a backup of the entire virtualized environment, including the VMs that reside on the ESXi server itself. This approach not only simplifies the setup process, but also optimizes resource utilization by integrating backup capabilities into the virtualized infrastructure.

### Demonstration Environment

- Server
  - CPU: 4 cores
  - Memory: 4 GB
  - Disk: 100 GB
- Storage
  - Model: XCubeFAS 3126D
  - Memory: 16 GB per controller
  - Disk: 12 x 3.2 TB NVMe SSD

- Pool: RAID 6  
Volume: 2 TB file volume  
Protocol: 16 Gb FC

OR

- Storage
  - Model: XCubeNXT 8124D  
Memory: 16 GB per controller  
Disk: 12 x 10 TB Nearline SAS HDD
  - Pool: RAID 6  
Volume: 2 TB file volume  
Protocol: CIFS

### Demonstration Topology

The connection is very simple, here is the brief one and any topology that will work if the logical connection is pingable.

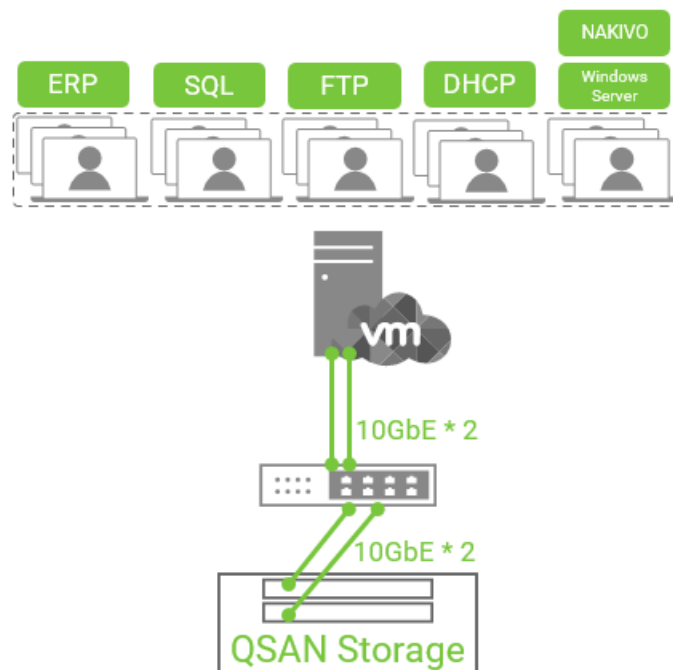


Figure 2-5 Demonstration Topology

## 2.3. Configure Backup Steps

In this use case scenario, we will explore a simple procedure to perform a backup using NAKIVO Backup & Replication and store the backup data on an XCubeNXT storage solution. This configuration ensures the security and accessibility of critical data, providing a reliable solution for data protection and disaster recovery needs.

1. Click the “+” icon to add the first inventory.

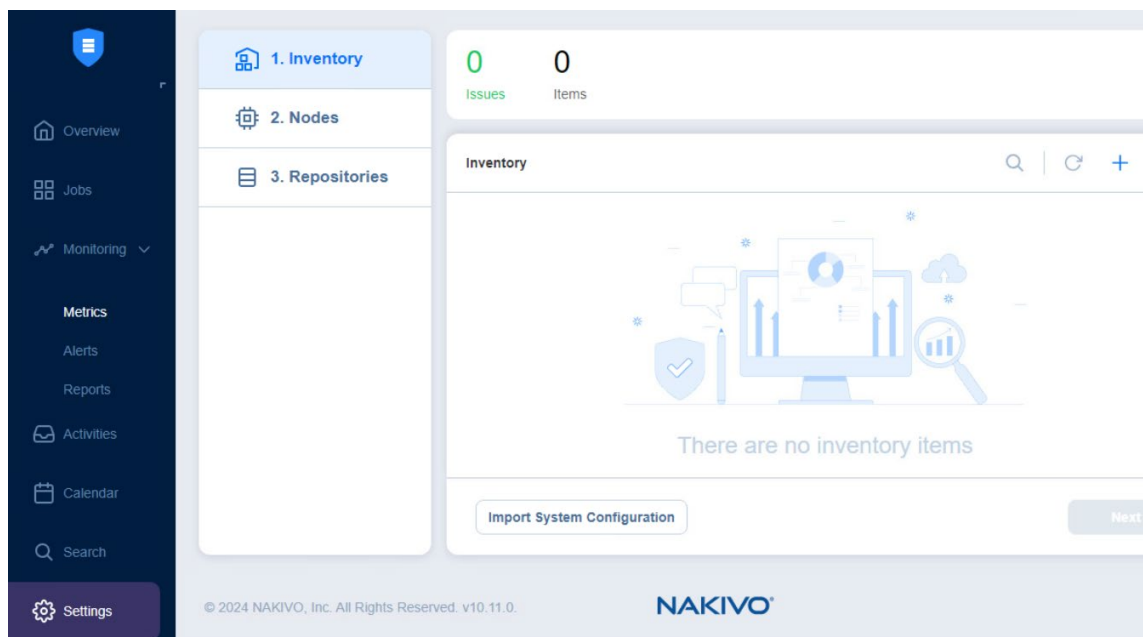


Figure 2-6 Add an Inventory Step 1



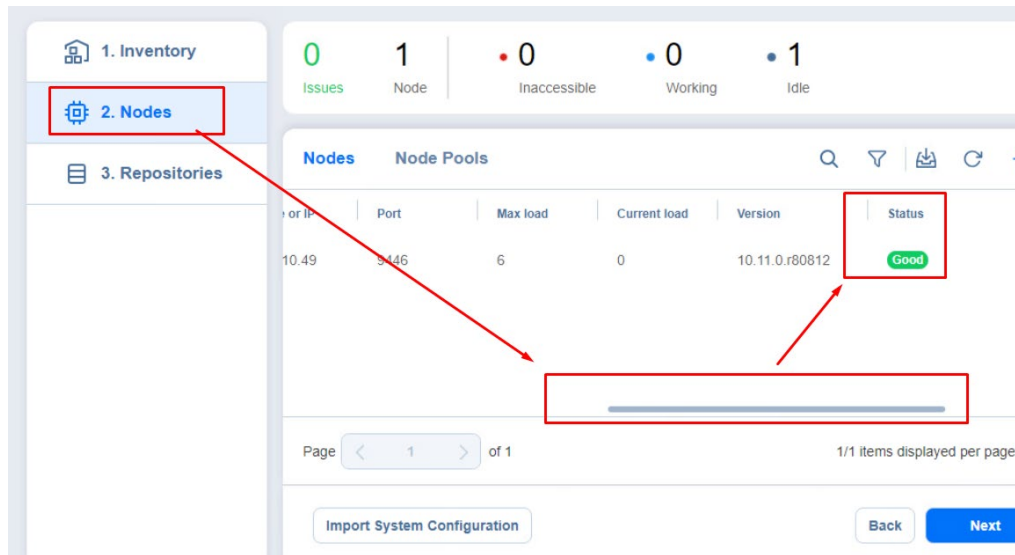


Figure 2-9 Check the Result

3. Click the “+” icon to add a repository. We are using XCubeNXT’s shared folder.

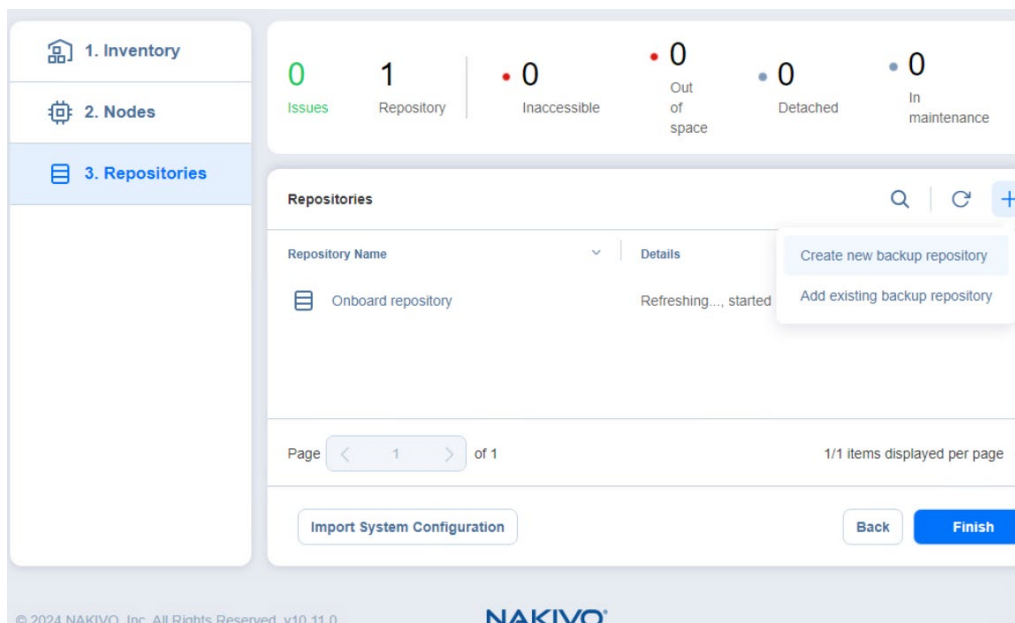


Figure 2-10 Add a Repository Step 1



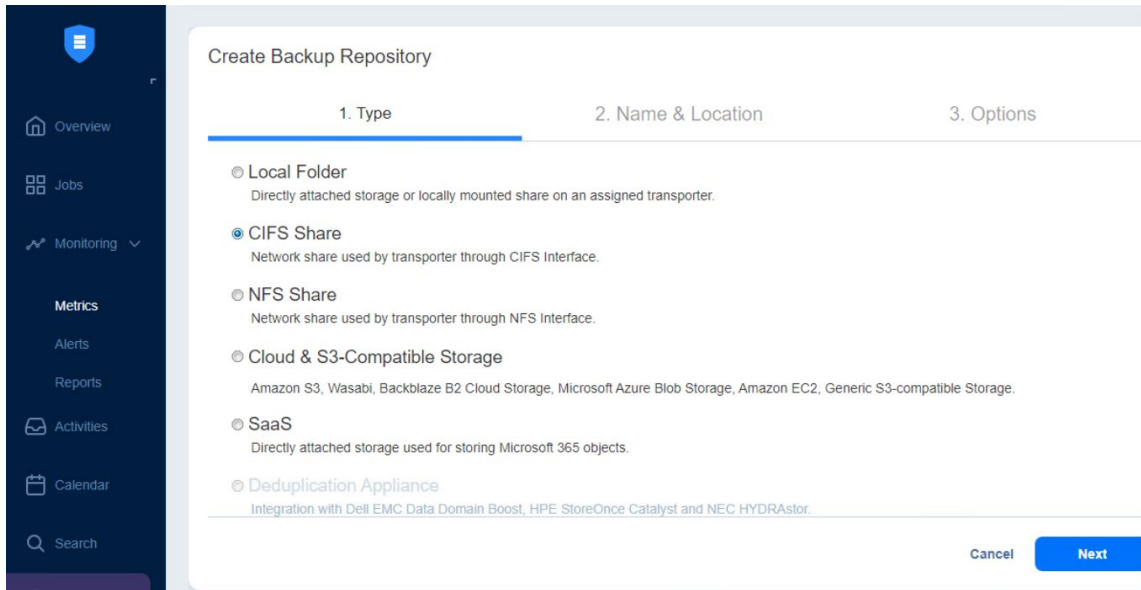


Figure 2-11 Add a Repository Step 2

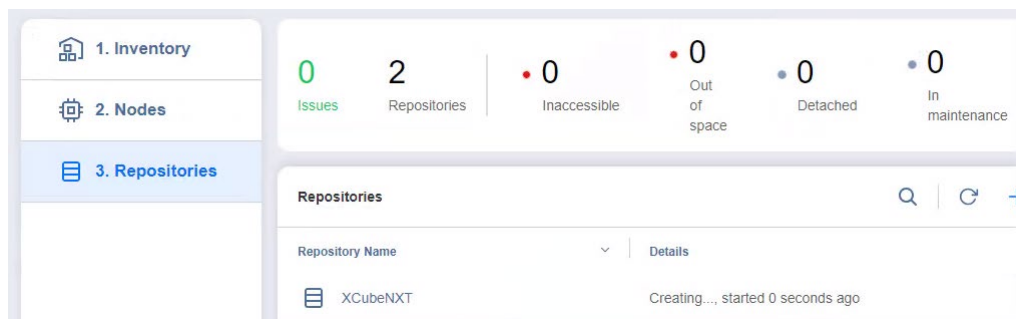


Figure 2-12 Add XCubeNXT

4. Go to Jobs menu and click the “+” icon to add the first backup job.

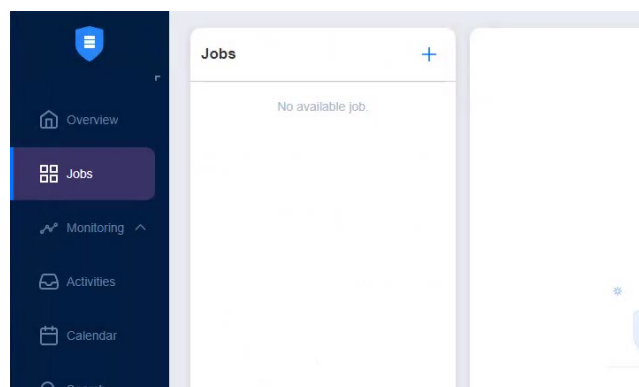


Figure 2-13 Add a Backup Job



Figure 2-14 Select Backup for VMware

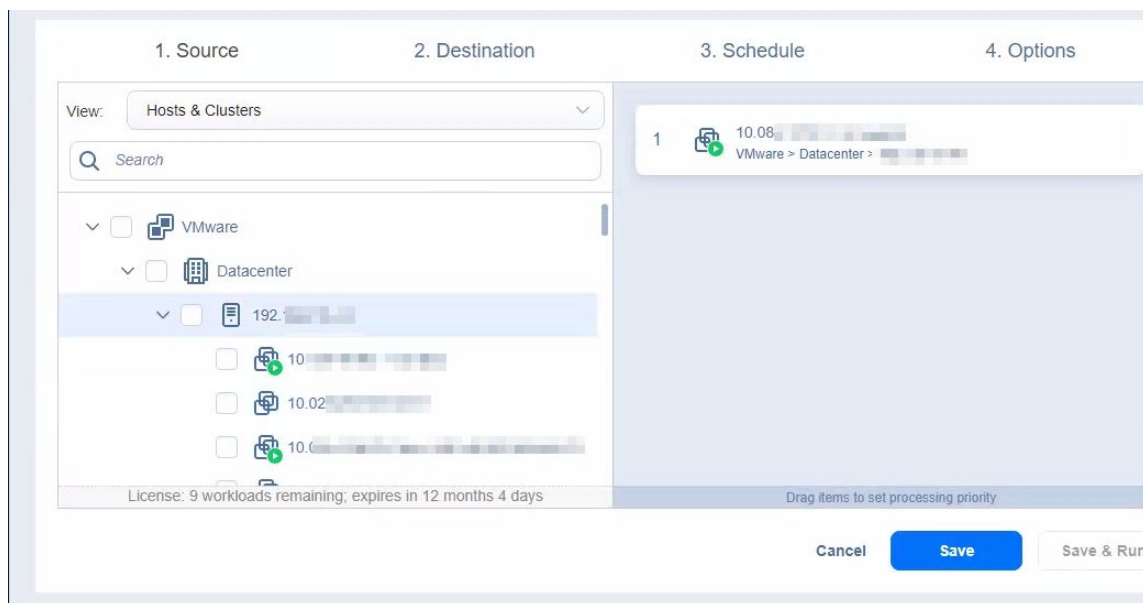


Figure 2-15 Select the Source

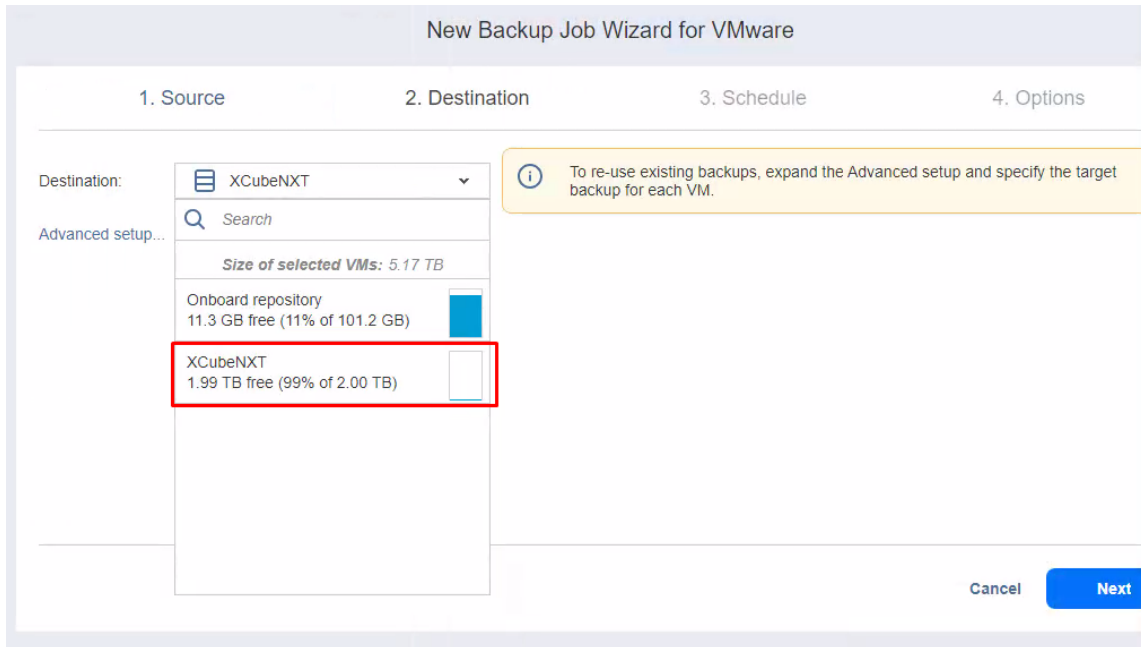


Figure 2-16 Select the Destination

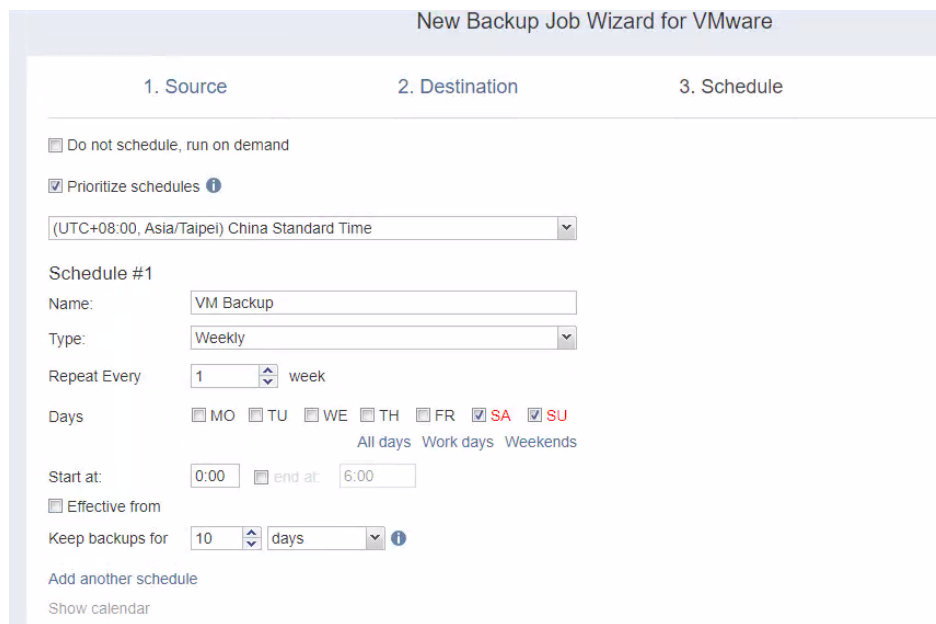


Figure 2-17 Select the Backup Schedule

- There are options that need to be adjusted in the last step. Please read and adjust the parameters you need. Here I use all the default settings.

- Complete the creation of the backup job and click the **Go** button to start the backup process. The GUI will notify you when completed.

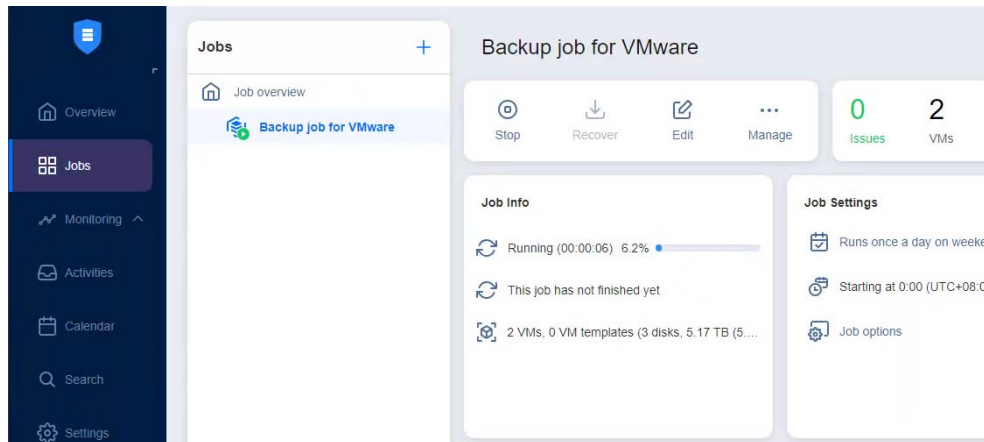


Figure 2-18 Backup Job Processing

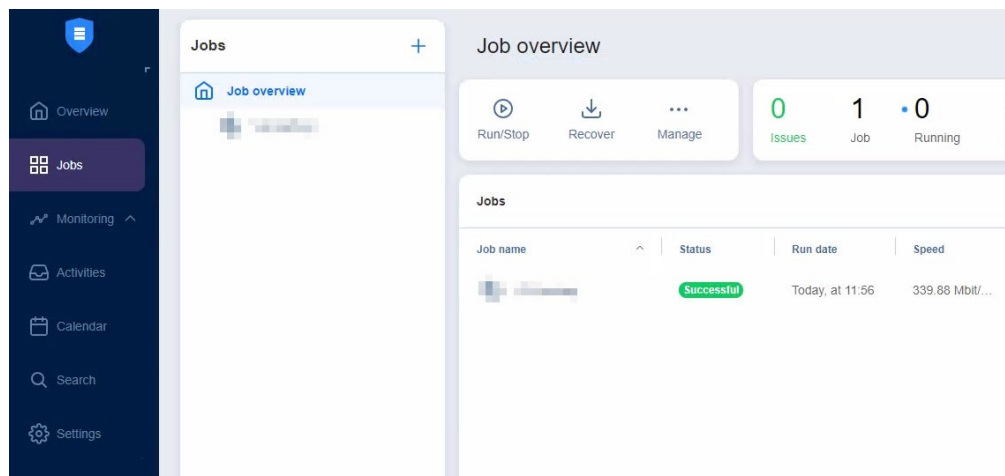


Figure 2-19 Backup Job Completed

## 2.4. Configure Recovery Steps

In this use case scenario, we will demonstrate the process of restoring a VM using NAKIVO Backup & Replication in the same environment previously configured for a basic backup of the XCubeNXT storage solution. This scenario simulates an emergency situation in which an existing

VM needs to be restored after being deleted or damaged, highlighting the effectiveness of NAKIVO's recovery capabilities and the recovery performance of XCubeNXT.

7. There are many options for recovering a VM, we are using the **Full recovery for VMware** option. Deleting the production VM simulates its corruption scenario and perform a full recovery of VMware.

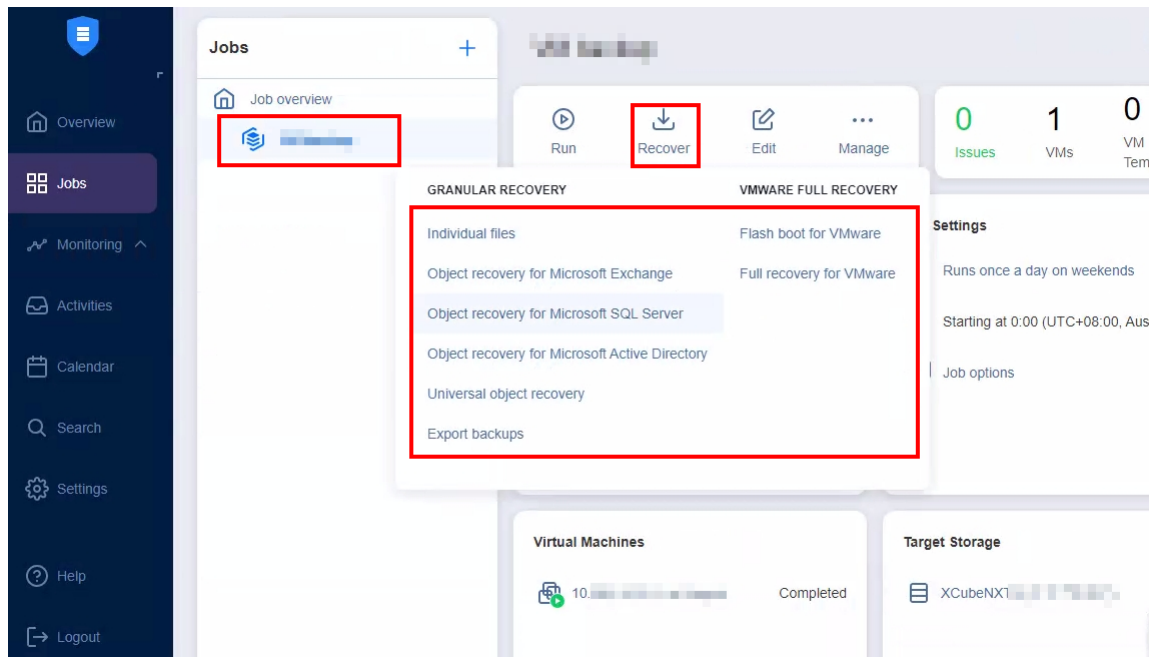


Figure 2-20 Full Recovery for VMware

8. Select the backup VM image and click the **Next** button.

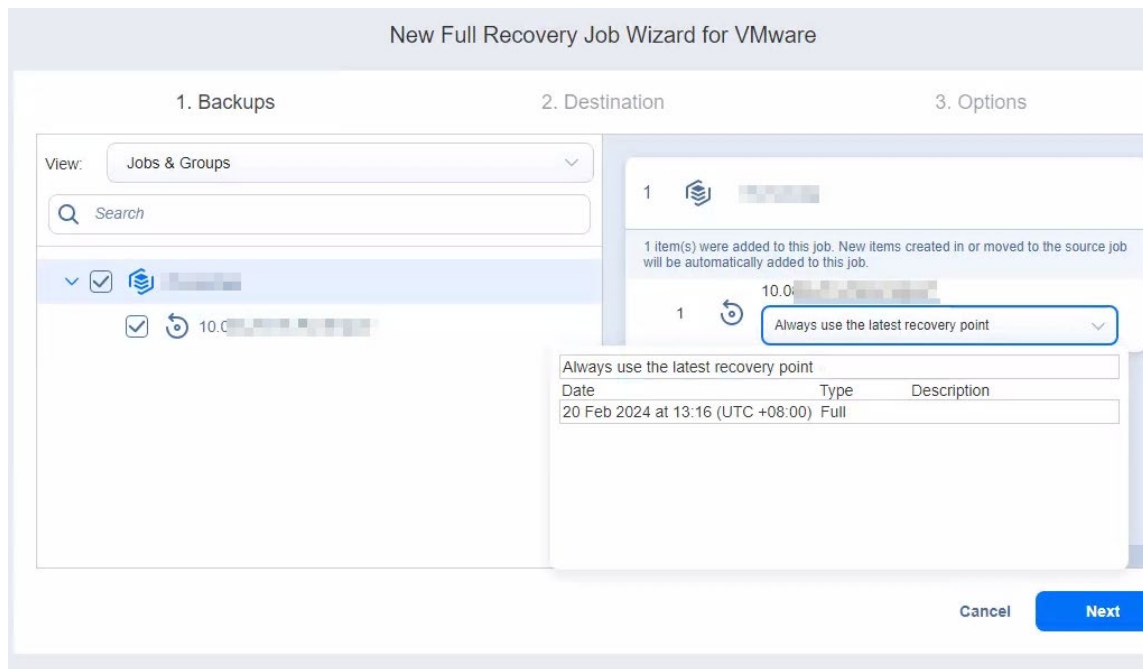


Figure 2-21 Select the Backup VM Image

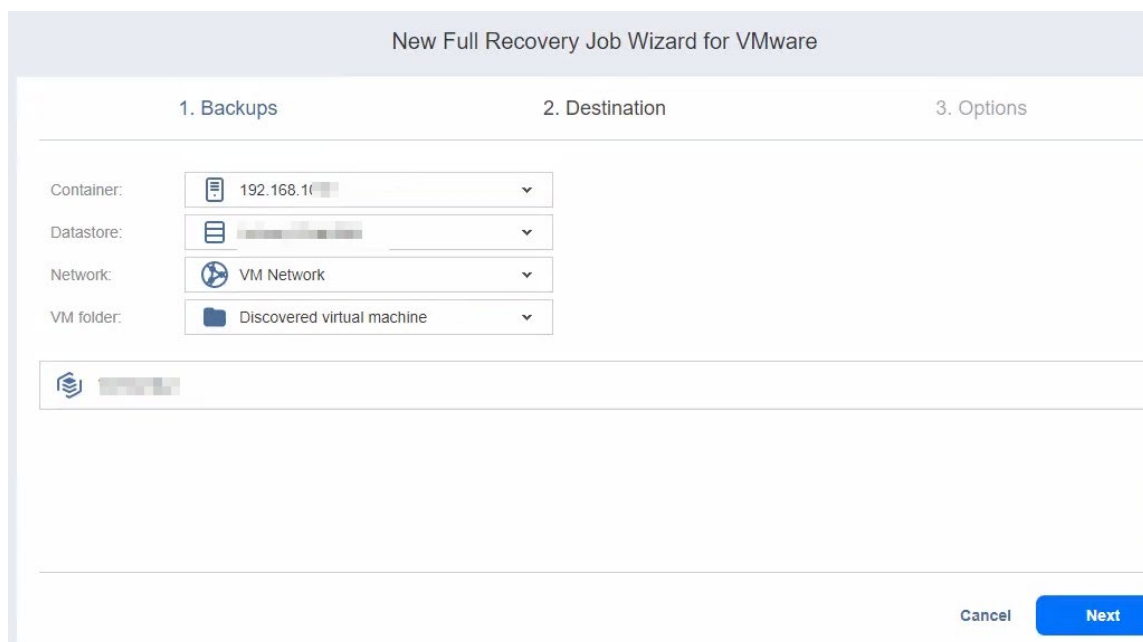


Figure 2-22 Select the Recovery Destination

9. Leave all options at their default values, then click the **Finish & Run** button.

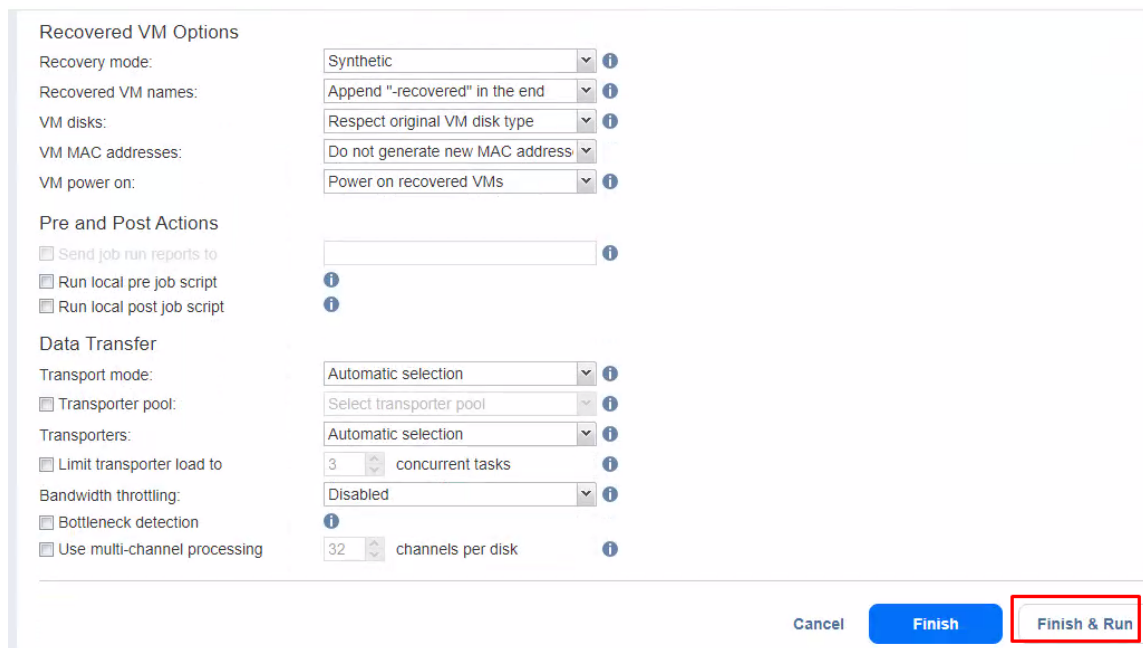


Figure 2-23 Click the Finish & Run Button

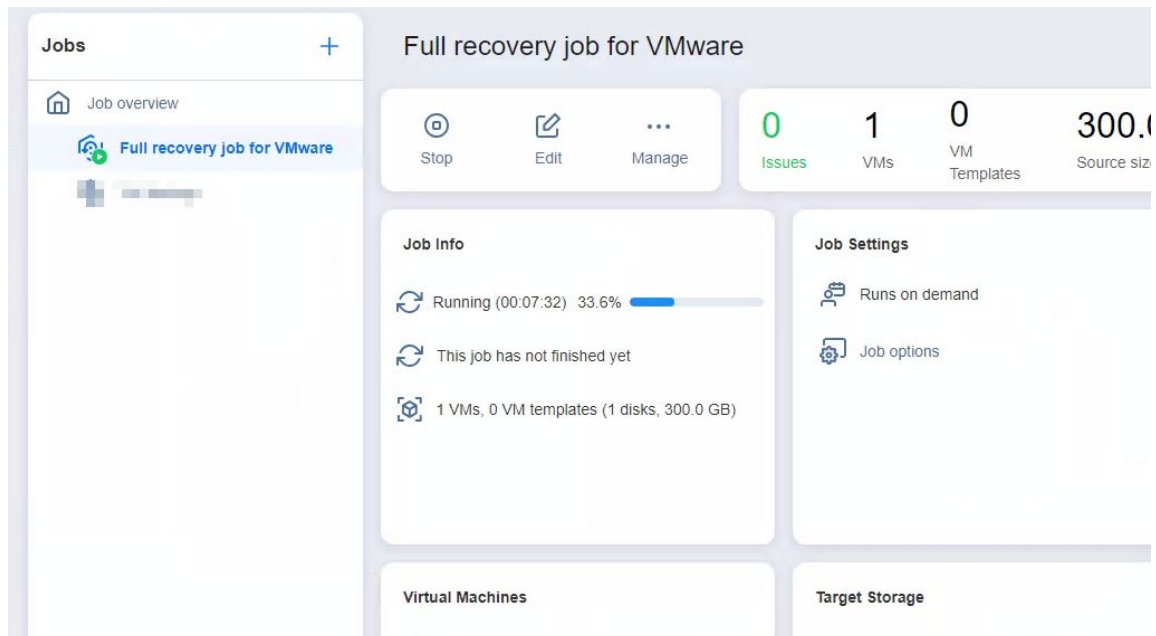


Figure 2-24 Recovery Job Processing

10. After the recovery job is completed, the VM returns to normal.

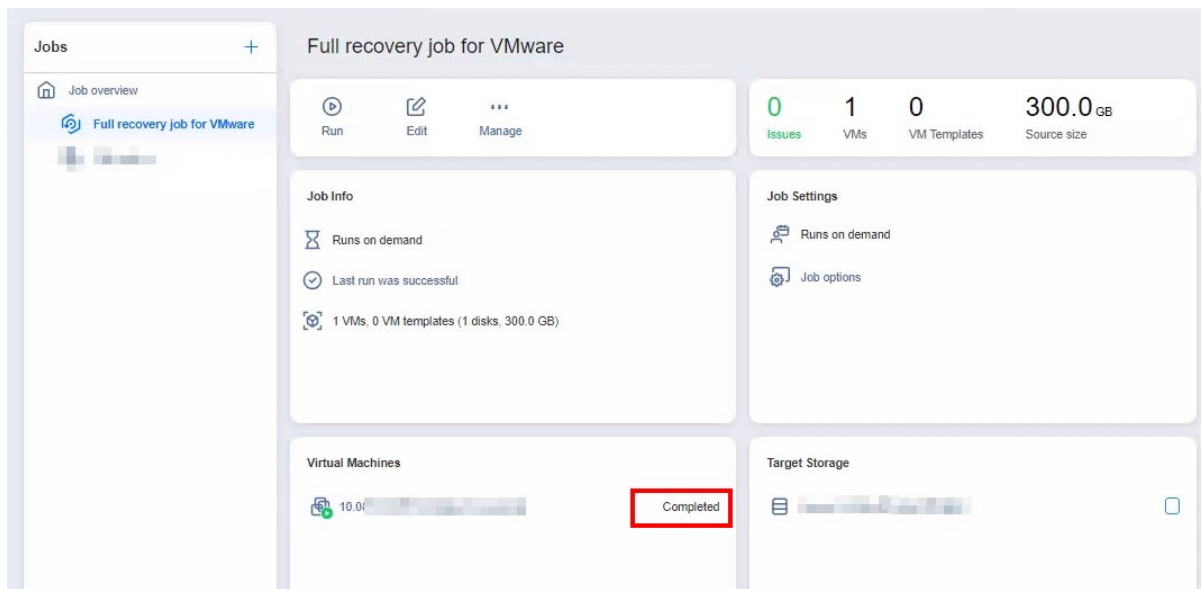


Figure 2-25 Recovery Job Completed



### 3. CONCLUSION

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The combination of NAKIVO Backup & Replication and QSAN storage solutions provides a powerful and efficient method for data protection and disaster recovery in virtualized environments. By using NAKIVO's simple yet powerful features, organizations can easily perform backups of VMware ESXi environments and securely store data on QSAN storage. Additionally, NAKIVO's seamless VM recovery capabilities quickly restore critical VMs, ensuring minimal downtime and maximum business continuity.

## 4. APPENDIX

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### 4.1. Apply To

- XEVO firmware 2.3.3 and later
- QSN firmware 4.0.1 and later

### 4.2. Reference

Product Page

- [XCubeFAS Series](#)
- [XCubeNXT 8100 Series](#)

Document

- [XEVO Software Manual](#)
- [QSM 4 Software Manual](#)