Integration with Veeam Immutable Backup

Application Note

October 2021

ANNOUNCEMENT

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NOTICES

This document is applicable to the following models:

- XCubeFAS with XEVO

- XCubeSAN with SANOS

- XCubeNXT, XCubeNAS with QSM

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PREFACE

Executive Summary

Nowadays, the most valuable kind of information takes on everywhere from the internet. Digital data is the life blood of business, government, and our everyday virtual lives. One of the most critical risks facing every organization is the threat of a ransomware attack. Ransomware can strike any internet-accessible device without warning and then quickly spread throughout your entire infrastructure. An attack can disable business operations and cost significant time and real money to resolve.

Veeam supports immutable backup, starting from Backup & Replication V11 which is an untouched version of that source data that is always recoverable and safe from any failure scenario. Veeam Backup & Replication v11(or higher) enables you to store your short-term retention backups locally onsite for fast recovery with the protection of immutability. In addition, you can now tier those backups into an immutable object storage offering offsite, giving you additional protection against unforeseen malicious activity or accidental deletion.

QSAN storage and Veeam provide an efficient and highly secure solution. It also optimizes IT resources and provides agility solutions for ever-increasing data.

Audience

This document is applicable for QSAN customers and partners who are familiar with QSAN products. Any settings which are configured with basic operations will not be detailed in this document. If there is any question, please refer to the user manuals of products, or contact QSAN support for further assistance.

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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: www.acnc.com/support

- Via Email: support@acnc.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.

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. INTRODUCTION TO VEEAM IMMUTABLE BACKUP

Immutable backup is a storage solution that prevents deletion and modification of your backups. In XCubeFAS, XCubeSAN, XCubeNXT, and XCubeNAS series products with Veeam Backup & Replication v11(or higher), immutable backup is supported and fully integrated. When you need to enlighten this function, you will need a QSAN NAS or SAN attached storage. This storage will run as a virtual machine but consider the implications on where this is running, and it is presented from.

Immutable backup was introduced in Veeam Backup & Replication v11 with the following configuration requirements:

- A Linux distribution (64-bit edition of Linux must be able to run 32-bit programs)

- The Linux distribution is advised to support the XFS file system (block clone technology)

- The Linux distribution must support the **chattr** command

- Veeam Backup & Replication v11 or higher/newer

- Veeam backup types used must be forward incremental with periodic synthetic or active full.

- Veeam backup copy jobs must have GFS points configured.

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2. INTEGRATION WITH VEEAM IMMUTABLE BACKUP

The integration of Veeam immutable backup provides many benefits for improved data security. We provide UI setting tutorial to illustrate how easy to keep your data safer.

2.1. XCubeNAS Integrate with Immutable Backup
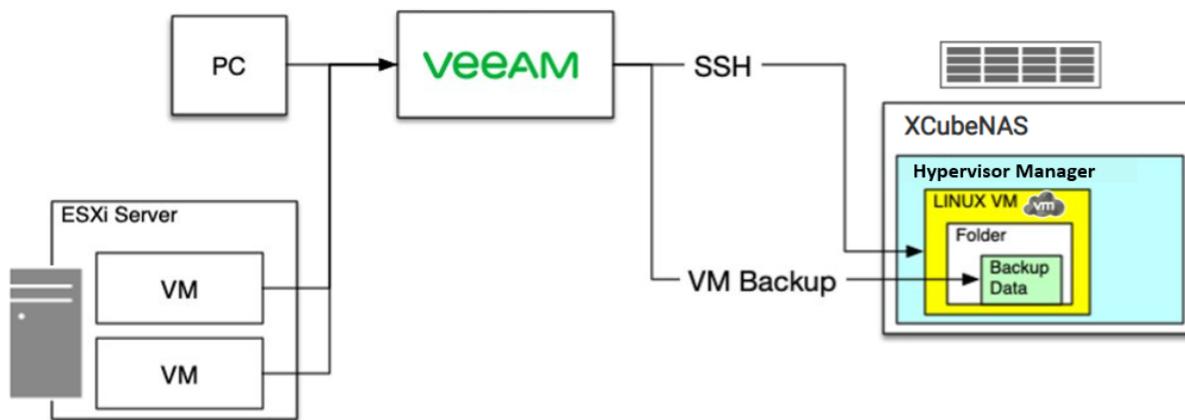
With this integration, all you need is a XCubeNAS apply with Veeam software. Hypervisor manager is function which develop by QSAN to create VM more efficiently. With only few steps and intuition UI, virtual environment can be set up within few minutes. Veeam's immutable backup function is integrated in QSAN's XCubeNAS for data repository, all the backup data store in XCubeNAS will be immutable to prevent for any cyber-attack. Moreover, XCubeNAS is highly scalable, business is no need to worry about the limited capacity for safely data backup and store by Integration of QSAN and Veeam.

Advantage

In this application, all you need is one QSAN XCubeNAS storage and enjoy the immutable backup function with one step of setting which is highly cost-effective. Hypervisor Manager function help you to create VM in one process. All the data will be safely store on XCubeNAS along with the backup period you set by Veeam.

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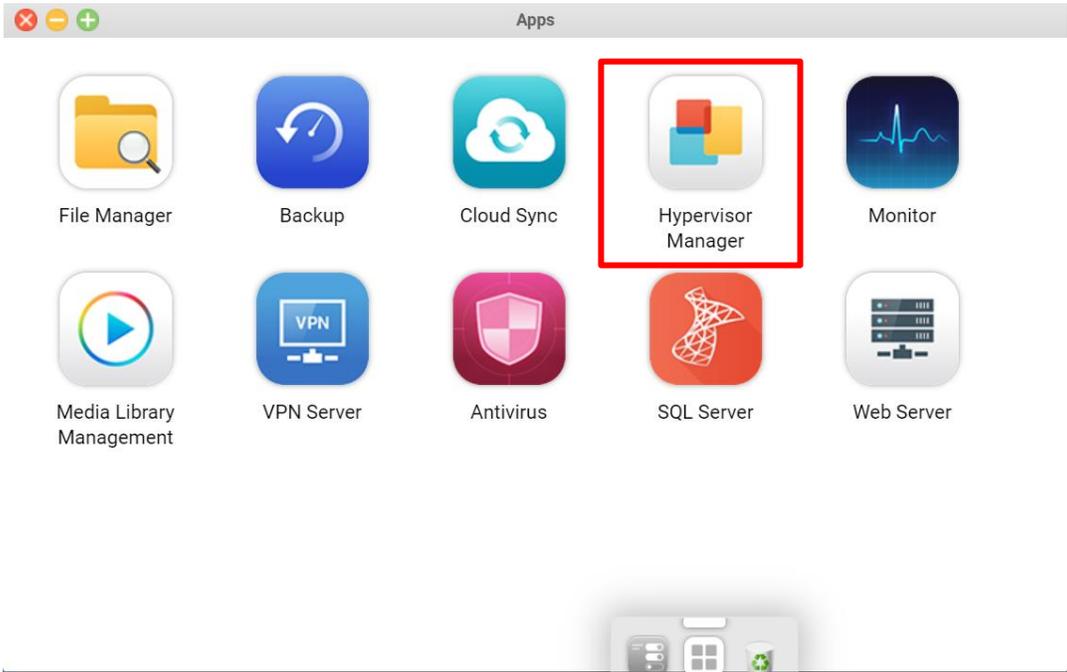
2.1.1.　　Setting Steps

Figure 1-1　　Choose Hypervisor Manager

Firstly, login your QSM, and click the Apps function.

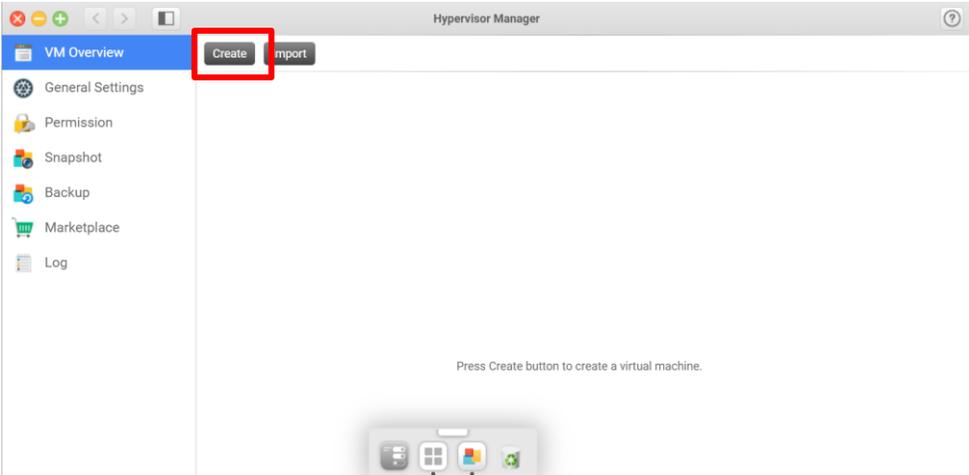When you see all the items in Apps, choosing the "Hypervisor Manager."

Figure 1-2　　Create Virtual Machines

Hypervisor Manager with user-friendly interface for running and managing various OS on VMs.

Press start button to create your own VMs.

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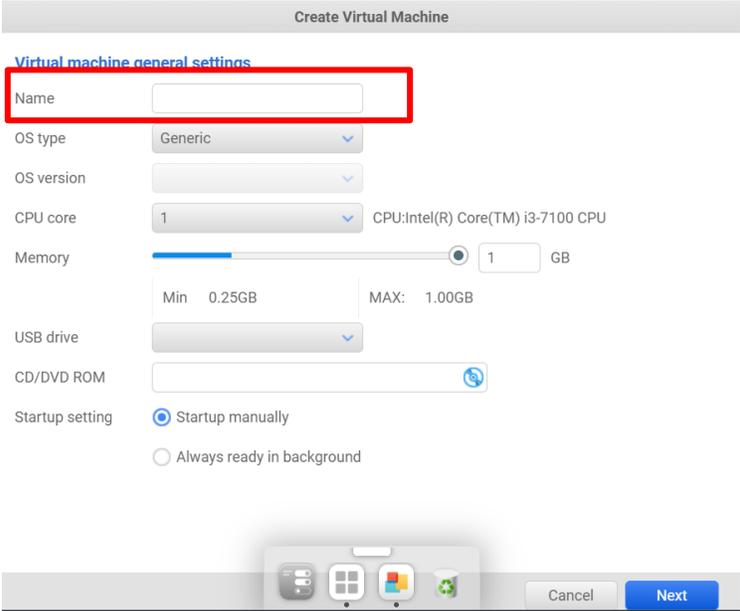www.qsan.com

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Figure 1-3 Create a Name for Virtual Machine

Before creating VMs, you have to do some general settings. Let's start from creating the NAME for your VM.

Next, you need to some hard disks for your virtual machine. After adding them, it will be more easily be copied or moved on the same or between hosts.
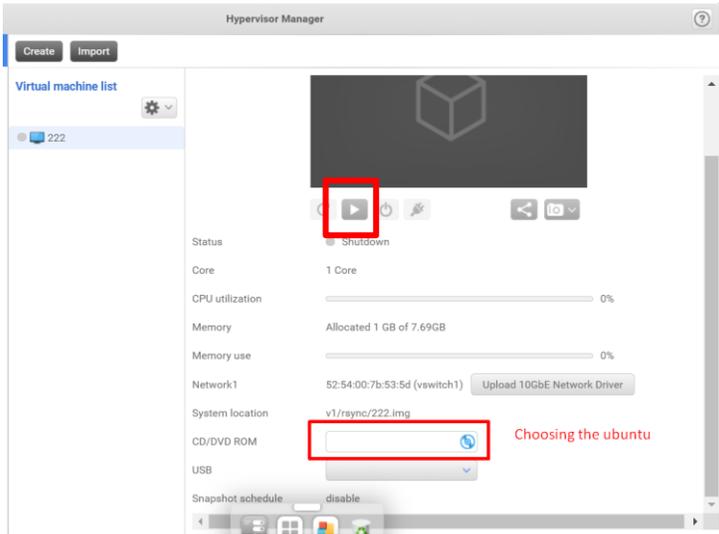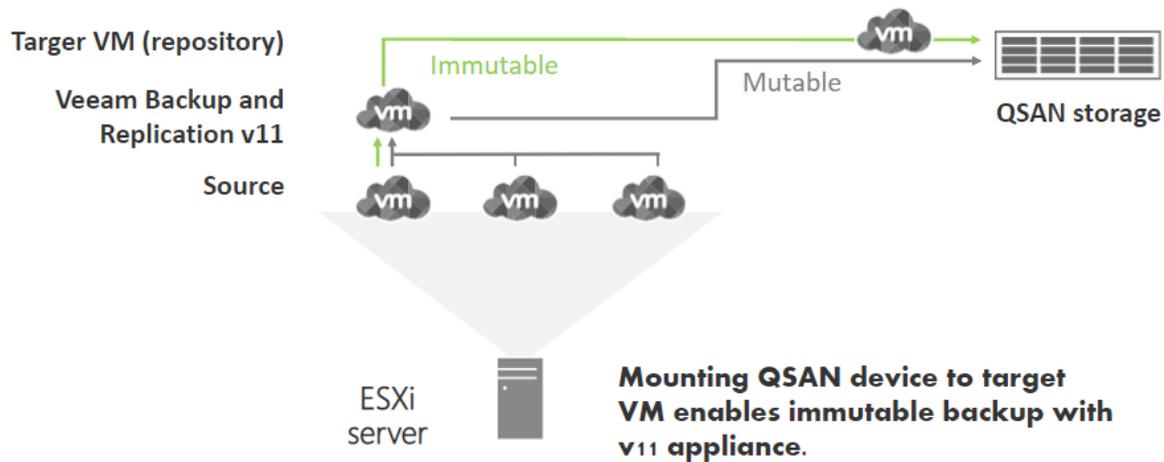

Figure 1-4 Choose the ubuntu

Lastly, choose the ubuntu resource and set up all the process by direction.

Now you can press the start button to run the virtual machine.

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2.2. Immutable Backup on All QSAN Storages

For most of the business with ESXi servers will create VM, storing data on VMs and apply Veeam Backup and Replication version 11(or higher) to backup data for virtual infrastructure. To meet Veeam's requirement, you may need to create an extra target VM for immutable repository. QSAN's storage is mounting on this VM for your safely real data store. Moreover, this feature is compatible with all QSAN products.

Advantage

In this application, it's suitable for company which is having an ESXi server. You will only need extra click on Veeam's UI to apply immutable backup function on all QSAN XCubeFAS, XCubeSAN, XCubeNAS and XCubeNXT. IT manager may reduce the effort of setting process and gain safe solution by QSAN and Veeam.

2.2.1. Setting Steps

The integration of Veeam immutable backup provides many benefits for improved data security. We provide UI setting tutorial to illustrate how easy to keep your data safer.
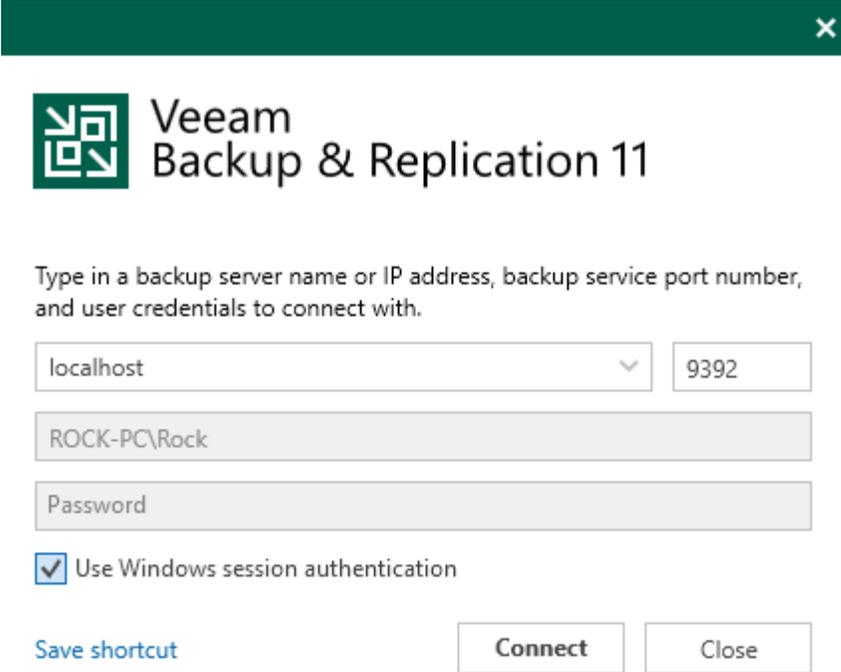
Figure 2-1   Download Veeam V11

Download Veeam Backup & Replication Version 11 (or higher)

TIP

IF YOU DON'T HAVE VEEAM AT HAND, YOU CAN ASK YOUR LOCAL VEEAM DEALER. IN ADDITION, VEEAM PROVIDES THE OFFICIAL VERSION AND TRIAL VERSION ON THE OFFICIAL WEBSITE, PLEASE CHECK OUT ON VEEAM'S OFFICIAL WEBSITE.
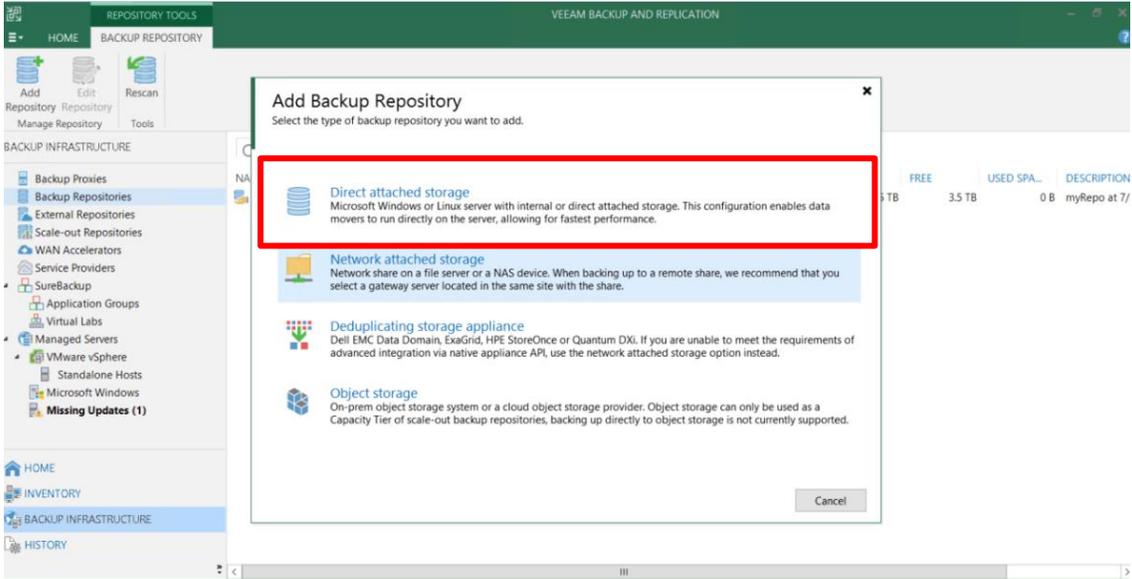

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Figure 2-2   Add Backup Repository

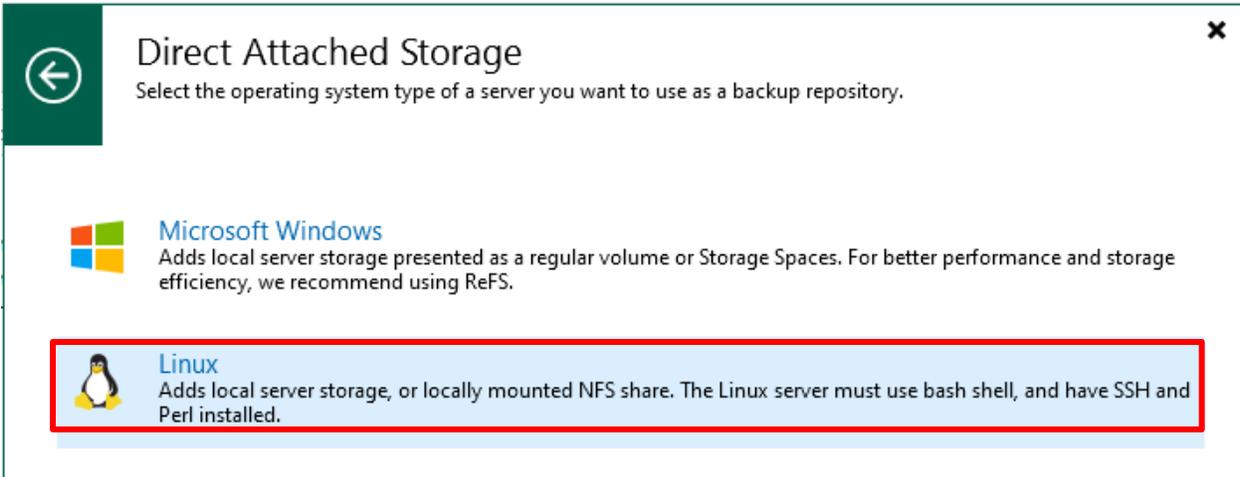Select "Direct attached storage" to add a backup repository.

Figure 2-3   Select Linux Operating System

Choose "Linux" for the operating system to turn the immutable backup function on.

INFORMATION

VEEAM'S IMMUTABLE BACKUP FUNCTION IS ONLY SUPPORTED IN HARDENED LINUX REPOSITORY

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New Linux Server

Name

Specify DNS name or IP address of Linux server. The server must have SSH and Perl installed.

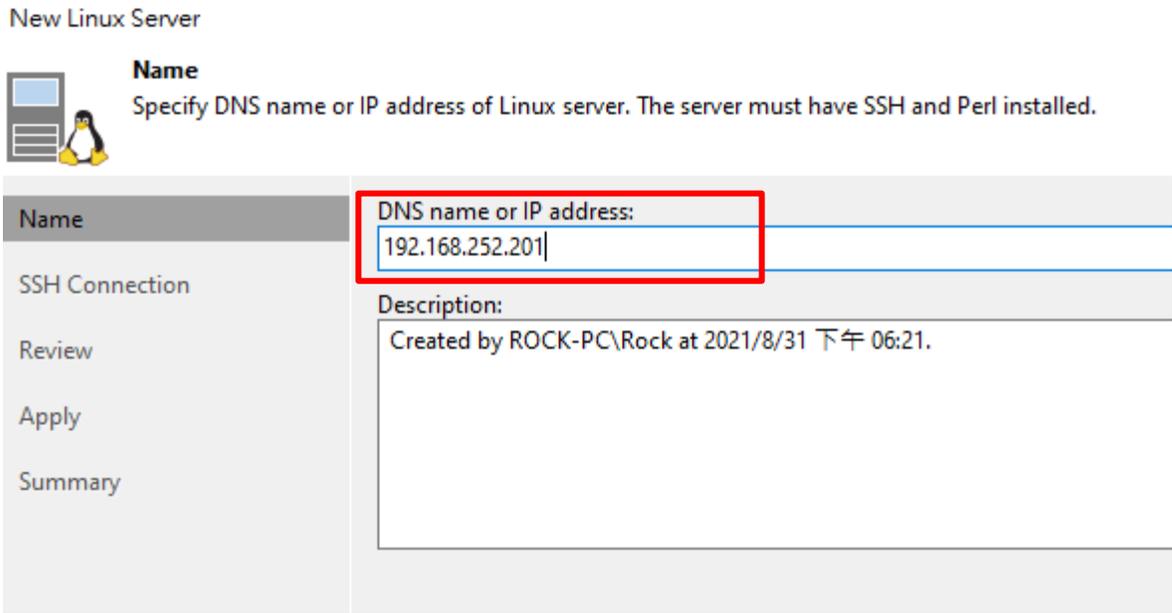|	
Name	DNS name or IP address:
SSH Connection	192.168.252.201
Review	Description:
Apply	Created by ROCK-PC\Rock at 2021/8/31 下午 06:21.
Summary	

Figure 2-4   Specify DNS Name or IP Address of Linux Server

The new server needs to have SSH and Perl installed, so type your QSAN's storage IP address on it.
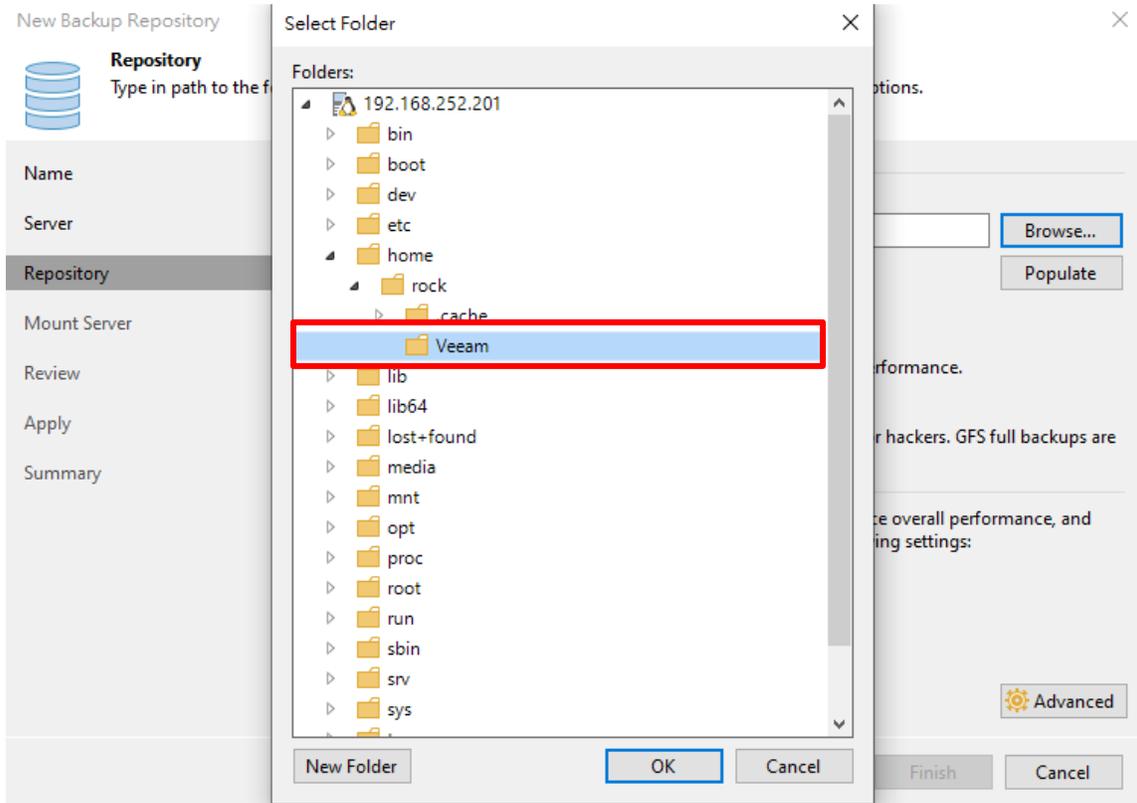
New Backup Repository

Repository
Type in path to the f...

Select Folder

Folders:

- ▲ 🖥 192.168.252.201
  - ▷ 📁 bin
  - ▷ 📁 boot
  - ▷ 📁 dev
  - ▷ 📁 etc
  - ▲ 📁 home
    - ▲ 📁 rock
      - ▷ 📁 cache
      - 📁 **Veeam**
  - ▷ 📁 lib
  - ▷ 📁 lib64
  - ▷ 📁 lost+found
  - ▷ 📁 media
  - ▷ 📁 mnt
  - ▷ 📁 opt
  - ▷ 📁 proc
  - ▷ 📁 root
  - ▷ 📁 run
  - ▷ 📁 sbin
  - ▷ 📁 srv
  - ▷ 📁 sys

New Folder   OK   Cancel

Name	
Server	Browse...
Repository	Populate
Mount Server	
Review	...formance.
Apply	...r hackers. GFS full backups are
Summary	...e overall performance, and ...ing settings:
	⚙ Advanced

Finish   Cancel

Figure 2-5   Select Folder for Repository

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Now you are mounting QSAN XCubeFAS/ XCubeSAN/ XCubeNAS/ XCubeNXT to repository. Select a folder to store your immutable backup date.
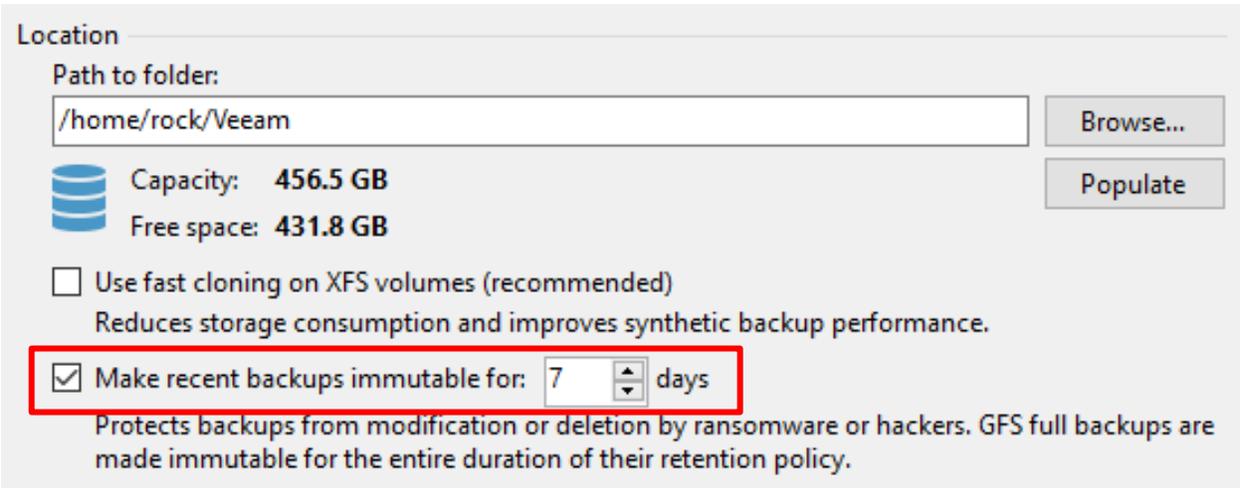

Figure 2-6   Click the function of immutable backup

You can check the capacity after selecting the folder. Now tick the checkbox to set up the period of immutable backup.
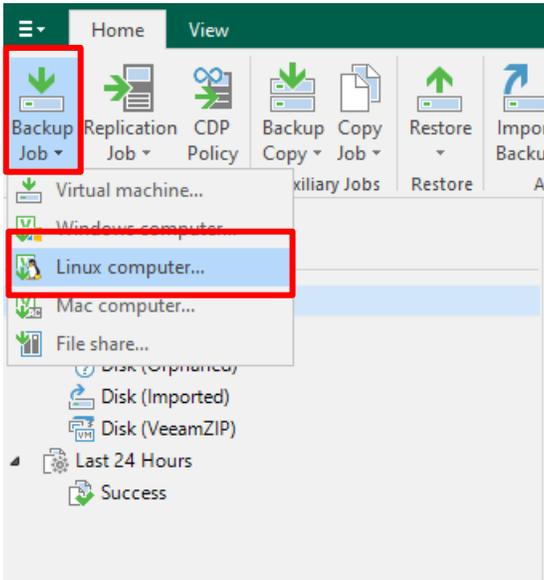

Figure 2-7   Add Backup Job

Next, create a backup job to the Linux computer for your VM data backup process.
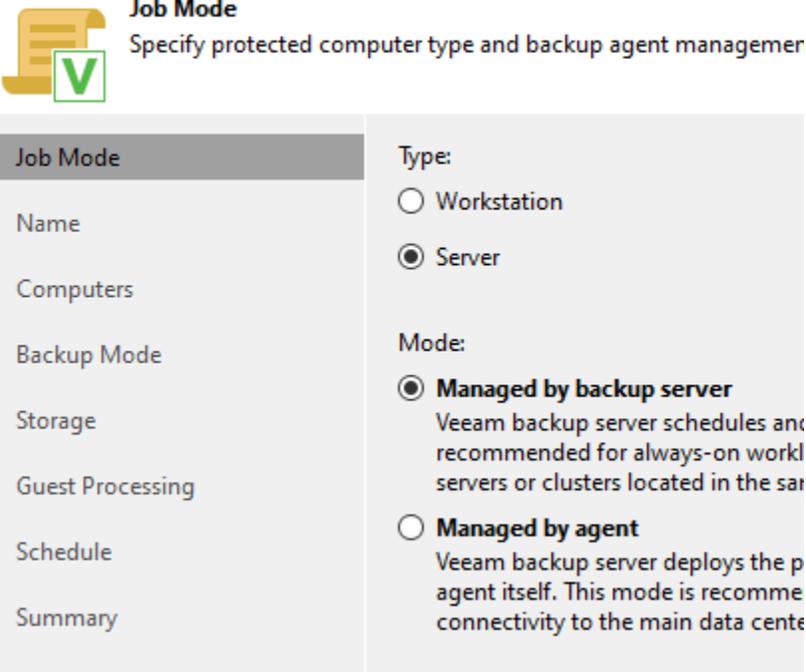
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Figure 2-8   Set Up the New Agent Backup

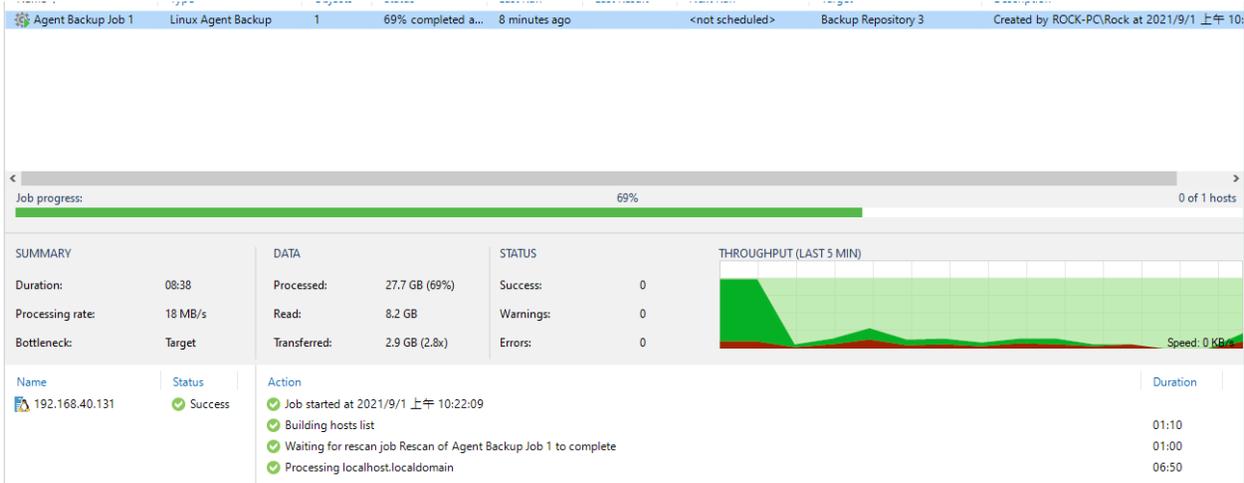Choose the "managed by backup server", and set up the new agent backup job in 7 steps.

Figure 2-9   Immutable Backup Job Progress

Then you can check the VM data are doing the immutable backup job in progress.

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3. CONCLUSION

To prevent for the data loss by the malicious cyber-attack, ransomware, QSAN is always dedicated to developing the security-first solution for our client. The integration of Veeam in all QSAN storage series of products provides many benefits for improved data security and storage management. The main features are:

- XCubeNAS along with our developed function, Hypervisor Manager, can create virtual environment within a short period of time. Integration with Veeam Version 11(or higher) immutable backup function help client to save immutable data more efficiently and safely.

- QSAN all products are supported in ESXi server where create VMs for Veeam backup application. No matter how many VMs are created, the huge database can immutably store on QSAN repository with highly protection.

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4.   APPENDIX

4.1.   Apply To

- XCubeFAS XF3126 / XF2026 FW 2.0.0 and later

- XCubeSAN XS5200 / XS3200 / XS1200 FW 2.0.0 and later

- XCubeNXT XN8000D FW 3.3.0 and later

- XCubeNAS XN8000 / XN7000 / XN5000 / XN3000 FW 3.3.0 and later

4.2.   Reference

Veeam Documentations

- What's new in Veeam V11

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