

Veeam Backup and Replication Operations Guide

Volume 1

Based on Version 11a

Focused on Microsoft Hyper-V

By:

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PUBLISHED BY

MVPDays Publishing
<http://www.mvpdays.com>

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ISBN: TBD

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Feedback Information

We’d like to hear from you! If you have any comments about how we could improve the quality of this book, please don’t hesitate to contact us by visiting www.checkyourlogs.net or emailing feedback@mvpdays.com.

Foreward

Here is another book by Dave, Cristal, Cary and Emile; what a significant milestone!

Ask yourself one question: Why? There are so many technologies, but why do we use what we use? Why do we do what we do? The answer is how. It's how we use something. I like to explain sometimes compliance in this way. No product or technology is inherently compliant. It's how it is implemented and how it is audited. The same goes for technology implementations; it's about how we use them. The how is the why.

Operations are still cool. There are so many razzle-dazzle job titles and buzzwords in the market today, but in the end, Operations are Operations. DevOps, PlatformOps, SRE (Sire Reliability Engineer), Platform Engineering... I do not need to go on, but no technology will take care of itself across all disciplines. How it is used, implemented, monitored, etc., matters today. Technology still needs humans and their knowledge.

Expert advice is the difference. We all learn from each other. When taking on the next new challenge, where does one go first? We look for resources to consume. Blogs, books like this, and social profiles; the established experts are the trusted advisors in the technology space. Call it community, social sharing, or what you want; we all find ourselves going to the go-to experts of a particular space.

Above and Beyond. What Dave, Cristal, Cary and Emile put forth in this book is outstanding in their practicing advice for technology. They could easily focus on their professional responsibilities and keep them narrow. But writing a book is hard work! Editing a book is hard work! I've not discussed this with them, but I'm sure they aren't doing it for the money of writing a book. They write this book because they go above and beyond, share, and care.

I'm sure you will enjoy this book, and a big congratulations on this book, Dave, Cristal, Cary and Emile.

Best Regards,

A handwritten signature in black ink, appearing to read 'Rick W. Vanover'.

Rick W. Vanover [Microsoft MVP](#), [VMware vExpert](#), [Cisco Champion](#)

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Dave Kawula – Microsoft MVP

Dave is a Microsoft Most Valuable Professional (MVP) with over 20 years of experience in the IT industry. His background includes data communications networks within multi-server environments, and he has led architecture teams for virtualization, System Centers, Exchange, Active Directory, and Internet gateways. Very active within the Microsoft technical and consulting teams, Dave has provided deep-dive technical knowledge and subject matter expertise on various System centers and operating system topics.

Dave is well-known as an evangelist for Microsoft, 1E, and Veeam technologies. Locating Dave is easy as he speaks at conferences and sessions each year, including TechEd, Ignite, MVP Days Community Roadshow, and VeeamOn.

Recently Dave has been honoured to take on the role of Conference Co-Chair of TechMentor and Cyber Security & Ransomware Live with fellow MVP Sami Laiho. The lineup of speakers and attendees attending this conference over the past 20 years is fantastic. Come down to Redmond or Orlando in 2018 and meet him in person. Checkout his speaking site at

<https://sessionize.com/dave-kawula/>

He recently tied for 1st place out of 1800 speakers at the Microsoft Ignite Conference in Orlando.

As the founder and Managing Principal Consultant at TriCon Elite Consulting, Dave is a leading technology expert for local customers and large international enterprises, providing optimal guidance and methodologies to achieve and maintain an efficient infrastructure.

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Cristal Kawula – Microsoft MVP

Cristal Kawula co-founded MVPDays Community Roadshow and #MVPHour live Twitter Chat. She was also a Technical Advisory board member and the President of TriCon Elite Consulting. Cristal is the only 2nd Woman worldwide to receive the prestigious Veeam Vanguard award.

Cristal speaks at Microsoft Ignite, MVPDays, and other local user groups. In addition, she has been instrumental in founding MVPDays Publishing and has helped author over 25 + books.

At conferences like Microsoft Ignite, she has led community meetups on Women in IT, Parenting in IT, Diversity in Tech, and becoming a Community Rockstar.

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Cary is a very active blogger at [checkyourlogs.net](http://www.checkyourlogs.net) and is permanently available online for questions from the community. His passion for technology is contagious, improving everyone around him at what they do.

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Emile Cabot – Microsoft MVP

Emile started in the industry during the mid-90s working at an ISP and designing celebrity websites. He has a solid operational background specializing in Systems Management and collaboration solutions. He has spent many years performing infrastructure analyses and solution implementations for organizations ranging from 20 to over 200,000 employees. Coupling his wealth of experience with a small partner network, Emile works very closely with TriCon Elite, 1E, and Veeam to deliver low-cost solutions with minimal infrastructure requirements.

He actively volunteers as a member of the Canadian Ski Patrol, providing over 250 hours each year for first aid services and public education at Castle Mountain Resort and in the community.

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Introduction

This book aims to showcase the fantastic expertise of our guest speakers of MVPDays Online. They have so much passion, expertise, and expert knowledge that it only seemed fitting to write it down in a book.

This book aims to show how to be operationally proficient using Veeam Backup and Replication, Veeam One and various other Veeam products and tools. We hope you find immense value in reviewing this guide and encourage you to share your operational knowledge and skills with others in the community.

Sample Files

All sample files for this book can be downloaded from <http://www.checkyourlogs.net> and www.github.com/mvpdays

Additional Resources

In addition to all the tips and tricks provided in this book, you can find extra resources like articles and video recordings on our blog <http://www.checkyourlogs.net>

Chapter 1

Prerequisites

This chapter will go over the system and port requirements. Before installing the Veeam Backup and Replication, all conditions must be met.

System Requirements

Before installing Veeam Backup and Replication, please ensure the virtual environment and servers meet system requirements.

Veeam Backup and Replication Manager Server

Please ensure the server meets the following system requirements for the Veeam backup and replication manager server.

Components	Description
OS Platform	Windows Server 2022, 2019, 2016, 2012 R2, 2012, 11 (version 21H2), 10 (from version 1803, 21H1, 21H2), 8.1, 7 SP1
OS Features	.NET Framework 4.7.2 or later, Windows Installer 4.5, PowerShell 5.1, SQL Server Management Objects, SQL Server System CLR Types, Report Viewer Redistributable 2015, Universal C Runtime, Firefox, Google Chrome, Microsoft Edge, or Microsoft Internet Explorer 11.0 or later, RDP client version 7.0 or later. Option- System Center Virtual Server Manager 2019, 1807, 1801, System Center 2016 Virtual Server Manager Admin UI, System Center 2012 R2 Virtual Server Manager Admin

	UI, System Center 2012 SP1 Virtual Server Manager Admin UI.
Database	Microsoft SQL Server 2019, 2017, 2016, 2014, 2012, 2008 R2, 2008

Veeam Backup and Replication Console Server

Before installing the Veeam backup and replication console server, please ensure the server meets the system requirements.

Components	Description
OS Platform	Windows Server 2022, 2019, 2016, 2012 R2, 2012, 2008 R2 SP1, 11 (version 21H2), 10 (from version 1803, 21H1, 21H2), 8.1, 7 SP1
OS Features	.NET Framework 4.7.2 or later, Windows Installer 4.5, PowerShell 5.1, Firefox, Google Chrome, Microsoft Edge, or Microsoft Internet Explorer 11.0 or later, and RDP client version 7.0 or later.

Veeam Backup and Replication Off-Host Backup Proxy Server

Please ensure the server meets the following system requirements for Veeam backup and replication off-host backup proxy server.

Components	Description
OS Platform	Windows Server 2022, 2019, 2016, 2012 R2, 2012, 2008 R2 SP1

Veeam Backup and Replication Proxy Server for NAS Backup

Please ensure the server meets the system requirements of the Veeam backup and replication proxy server.

Components	Description
OS Platform	Windows Server 2022, 2019, 2016, 2012 R2, 2012, 2008 R2 SP1, 11 (version 21H2), 10 (from version 1803, 21H1, 21H2), 8.1, 7 SP1

Veeam Backup Repository Server

Please ensure the server meets the following Veeam backup repository server system requirements.

permanently	Description
Windows OS Platform	Windows Server 2022, 2019contagious passion for technologysio,n21H2), 10 (from version 1803, 21H1, 21H2), 8.1, 7 SP1
Linux distributions	CentOS 7 to 8.3, 8.41, 8.5, CentOS Stream, Debian 9.0 to 10.8, 11.0, Fedora 30 to 33, 34, 35, RHEL 6.0 to 8.3, 8.4, 8.5, openSUSE Leap 15.2, 15.3, Tumbleweed, Oracle Linux 6 (UEK3) to 8.3 (UEK R6 and UEK R6 U2), Oracle Linux 6 to 8.3, 8.4, and 8.5 (RHCK), SLES 11 SP4, 12 SP1-SP5, 15 SP0-SP2, SP3, Ubuntu 14.04 LTS, 16.04 LTS, 18permanently9.10, 20.04 LTS, 21.04, 21.10,

Veeam Tape Server

Please ensure the server meets the following system requirements for the Veeam Tape Server.

Components	Description
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Windows OS Platform	Windows Server 2022, 2019, 2016, 2012 R2, 2012, 2008 R2 SP1, 11 (version 21H2), 10 (from version 1803, 21H1, 21H2), 8.1, 7 SP1
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Veeam WAN Accelerator

Please ensure the server meets the following Veeam WAN accelerator server system requirements.

Components	Description
Windows OS Platform	Windows Server 2022, 2019, 2016, 2012 R2, 2012, 2008 R2 SP1, 11 (version 21H2), 10 (from version 1803, 21H1, 21H2), 8.1, 7 SP1

Veeam Backup & Replication Gateway Server

Please ensure the server meets the following system requirements for the Veeam backup and replication gateway server.

Components	Description
Windows OS Platform	Windows Server 2022, 2019, 2016, 2012 R2, 2012, 2008 R2 SP1, 11 (version 21H2), 10 (from version 1803, 21H1, 21H2), 8.1, 7 SP1
Linux distributions	CentOS 7 to 8.3, 8.4, 8.5, CentOS Stream, Debian 9.0 to 10.8, 11.0, Fedora 30 to 33, 34, 35, RHEL 6.0 to 8.3, 8.4, 8.5, openSUSE Leap 15.2, 15.3, Tumbleweed, Oracle Linux 6 (UEK3) to 8.3 (UEK R6 and UEK R6 U2), Oracle Linux 6 to 8.3, 8.4, and 8.5 (RHCK), SLES 11 SP4, 12 SP1-SP5, 15 SP0-SP2, SP3, Ubuntu 14.04 LTS, 16.04 LTS, 18.04 LTS, 19.10, 20.04 LTS, 21.04, 21.10,

Supported Applications

Veeam supports the following list of application-aware backups.

Components	Description
Active Directory	Windows Server 2022, 2019, 2016, 2012 R2, 2012, 2008 R2, 2008
Exchange	Exchange 2019, 2016, 2013 SP1, 2013, 2010 SP1, 2010 SP2, 2010 SP3
SharePoint	SharePoint 2019, 2016, 2013, 2010
Microsoft SQL Server	SQL Server 2005 SP4, 2008 SP4, 2008 R2 SP3, 2012 SP4, 2014 SP3, 2016 SP2, 2017, 2019 2019
Oracle (Windows OS)	Oracle Database 11g Release 2, 12c Release 1, 12C Release 2, 18c, 19c, 21c
Oracle (Linux OS)	Oracle Database 11g Release 2, 12c Release 1, 12C Release 2, 18c, 19c, 21c

Firewall Ports Requirements

You should only open the ports required for an application to run in a production environment. Locking an environment is required for most Cyber Security audits and best practices. The list below is the Port requirements for Veeam Backup and Replication. This list will help you securely build your environment, and these firewall rules for the required ports are automatically created when you install the Veeam Backup & Replication servers. However, some Linux distributions need to have manual firewall rules created.

Windows Servers

Windows servers require the following inbound and outbound ports opened. The inbound/outbound ports must be opened for Windows servers as Veeam backup infrastructure components or enable application-aware processing.

Sources	Target	Network Protocol	Port Number
Veeam backup & replication manager server	Windows server	TCP	445
Microsoft Hyper-V server or Off-host backup proxy		TCP	6160
Veeam backup repository		TCP	2500 to 3300
Veeam gateway server		TCP	6162
Veeam mount server		TCP	49152 to 65535
Veeam WAN accelerator server			
Veeam tape server			

Linux Servers

Linux servers require the following inbound and outbound ports opened. The inbound/outbound ports must be opened for Windows servers as Veeam backup infrastructure components or enable application-aware processing.

Sources	Target	Network Protocol	Port Number
	Linux servers	TCP	22

Veeam backup & replication manager server		TCP	6162
		TCP	2500 to 3300
Linux Servers	Veeam backup & replication manager server	TCP	2500 to 3300

Veeam Backup and Replication er Server

The Veeam Backup and Replication Servers require the following inbound and outbound ports opened.

Sources	Target	Network Protocol	Port Number
Veeam backup & replication manager server	SCVMM server	WCF	8100
		TCP	8732
	Hyper-V Host server	TCP	445 135
		TCP	6160
		TCP	6162
		TCP	6163
		TCP	2500 to 3300

		TCP	49152 to 65535
	Veeam Backup & Replication configuration database server	TCP	1433
	DNS server	UDP	53
	Veeam update notification server (dev.veeam.com)	HTTPS TCP	443
	Veeam license update server (vbr.butler.veeam.com, autolk.veeam.com)	TCP	443

Veeam Backup & Replication Console

The Veeam Backup & Replication Console application requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
		TCP	9392

Veeam backup & replication console server	Veeam backup & replication manager server	TCP	10003
		TCP	9396
Veeam backup & replication console server	Veeam Mount server	TCP	2500 to 3300

Veeam Backup Proxy server

The Veeam Backup Proxy server requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Windows Hyper-V server/ Off-host backup proxy	Windows server	TCP	49152 to 65535
	SMB (CIFS) share	TCP	445 135
	NFS share	TCP, UDP	111 2049
	Veeam Gateway server	TCP UDP	49152 to 65535
Windows Hyper-V server		TCP	2500 to 3300

SMB3 server	Veeam backup proxy server (onhost or offhost)	TCP	2500 to 3300
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Windows and Linux-based Backup Repository

The Windows and Linux-based Backup Repositories require opening the inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam backup proxy server	Veeam backup repository	TCP	2500 to 3300
Veeam source backup repository	Veeam target backup repository	TCP	2500 to 3300
Veeam source backup repository	Azure Object storage repository gateway server	TCP	2500 to 3300
Veeam Backup repository/ secondary backup repository	Cache repository in NAS backup	TCP	2500 to 3300
Windows server running vPower NFS Service	Veeam backup repository gateway server as a backup repository	TCP	2500 to 3300

NFS Share Backup Repository

The NFS Share Backup Repository requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam gateway server / Veeam backup proxy	NFS is shared as a backup repository	TCP	2049
		UDP	
		TCP	111
		UDP	
	NFS share as a backup repository (version 3)	TCP	mountd_port
		UDP	
		TCP	statd_port
		UDP	
		TCP	lockd_port
		UDP	lockd_port

Windows SMB Backup Repository

The SMB Backup Repository requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam gateway server / Veeam backup proxy	Windows SMB (CIFS) backup repository	TCP	445
			135

Azure Object Storage Repository

The Azure Object Storage repository requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam gateway server	Azure Object Storage	TCP	443
		HTTPS	*.blob.core.windows.net for the Global region *.blob.core.chinacloudapi.cn for China region *.blob.core.cloudapi.de for the Germany region *.blob.core.usgovcloudapi.net for Government region
		TCP	80
		HTTP	ocsp.digicert.com ocsp.msocsp.com *.d-trust.net

External Repository

The External Repository requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
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Veeam gateway server	Azure Object Storage	TCP	443
		HTTPS	*.blob.core.windows.net for Global region *.blob.core.chinacloudapi.cn for China region *.blob.core.cloudapi.de for Germany region *.blob.core.usgovcloudapi.net for Government region
		TCP	80
		HTTP	ocsp.digicert.com ocsp.msocsp.com *.d-trust.net

Azure Archive Object Storage Repository

The Azure Archive Object Storage Repository requires opening the inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
	Azure proxy appliance	TCP	443

Veeam gateway server		SSH	22
		HTTPS	Public/private IPv4 addresses of Azure appliance
Azure proxy appliance	Azure object storage	TCP	443
		HTTPS	*.blob.core.windows.net for Global region *.blob.core.chinacloudapi.cn for China region *.blob.core.cloudapi.de for Germany region *.blob.core.usgovcloudapi.net for Government region
		TCP	80
		HTTP	ocsp.digicert.com ocsp.msocsp.com *.d-trust.net

Veeam Gateway Server

The Veeam Gateway Server requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
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Veeam gateway server	Windows SMB (CIFS) backup repository	TCP	445 135
	NFS shares the backup repository	TCP, UDP	111, 2409

Veeam Tape Server

The Veeam Tape Server requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam backup and replication manager server	Veeam tape server	TCP	6166
		TCP	2500 to 3300
Veeam tape server	Veeam backup and replication manager server	TCP	2500 to 3300

Veeam WAN Accelerator Server

The Veeam WAN Accelerator Server requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
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Veeam backup and replication manager server	Veeam WAN accelerator server	TCP	6160
		TCP	6162
		TCP	6164
Veeam WAN accelerator server	Veeam backup and replication manager server	TCP	2500 to 3300
	Veeam WAN accelerator server	TCP	6164
		TCP	6165

Veeam Guest Interaction Proxy with Non-Persistent Runtime Components

The Veeam Guest Interaction Proxy with non-persistent Runtime Components requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam backup and replication manager server	VM guest Linux OS	TCP	22
	Veeam Guest interaction proxy	TCP	6190
		TCP	6290

		TCP	445
Veeam Guest interaction proxy	VM guest Windows OS	TCP	445 135
		TCP	49152 to 65535
		TCP	6167
	VM guest Linux OS	TCP	22
VM guest OS	Veeam Guest interaction proxy	TCP	2500 to 3300

Veeam Guest Interaction Proxy with Persistent Agent Components

The Veeam Guest Interaction Proxy with persistent Runtime Components requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam Guest interaction proxy	VM guest OS	TCP	6160 11731
		TCP	6167
		TCP	6173 2500

Veeam Mount Server

The Veeam Mount Server requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam Mount server	Veeam backup and replication manager server	TCP	9401
	Veeam Backup repository	TCP	2500 to 3300
Veeam backup and replication manager server	Veeam Mount server	TCP	445
		TCP	2500 to 3300
		TCP	6160
		TCP	6162
		TCP	6170
		TCP	49152 to 65535

Veeam Helper Appliance

The Veeam Helper Appliance requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam helper appliance	Veeam Backup repository	TCP	2500 to 3300
Veeam backup and replication manager server	Veeam helper appliance	TCP	22
		TCP	2500 to 3300
Veeam mount server	Veeam helper appliance	TCP	22
		TCP	2500 to 3300

Veeam Helper Host

The Veeam Helper Host requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam helper host	Veeam Backup repository	TCP	2500 to 3300
Veeam backup and replication manager server	Veeam helper host	TCP	22
		TCP	2500 to 3300
		TCP	6162
	Veeam helper host	TCP	22

Veeam mount server		TCP	2500 to 3300
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VM Guest OS

The VM Guest OS requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
VM guest OS	Veeam helper appliance	TCP	21
Veeam helper appliance	VM guest Linux or Unix OS	TCP	20
		TCP	2500 to 3300
Veeam helper host	VM guest Linux or Unix OS	TCP	2500 to 3300
Veeam backup and replication manager server	VM guest Linux or Unix OS	TCP	22
Veeam mount server	VM guest Windows OS	TCP	445 135
		TCP	6160 11731
		TCP	6173

			2500
		TCP	49152 to 65535
Veeam backup and replication manager server	VM guest OS	TCP	2500 to 3300

Veeam U-AIR

Veeam U-AIR requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam U-AIR	Veeam Backup Enterprise manager server	TCP	9394

Application Item of Active Directory Domain Controller Restore

The following inbound and outbound ports must be opened to utilize the Application Item level restores.

Sources	Target	Network Protocol	Port Number
		TCP	135

Veeam backup and replication manager server	Active directory VM guest OS	TCP UDP	389
		TCP	636 3268 3269
		TCP	49152 to 65535

Application Item of Exchange Server Restore

The following inbound and outbound ports must be opened to utilize the Application Item of Exchange Server restores.

Sources	Target	Network Protocol	Port Number
Veeam backup and replication manager server	Exchange 2003/2007 CAS Server	TCP	80 443
	Exchange 2010/2013/2016/2019 CAS Server	TCP	443

Application Item of SQL Server Restore

To utilize the Application Item of SQL Server, the following inbound and outbound ports must be opened.

Sources	Target	Network Protocol	Port Number
Veeam backup and replication manager server	SQL VM guest OS	TCP	1433 1434 and other

Azure Proxy Server

The Azure Proxy Server requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam backup and replication manager server / Backup Repository server	Azure Proxy server	TCP	443

Azure Helper Appliance

The Azure Helper Appliance requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam backup and replication manager server	Azure helper appliance	TCP	22

Azure Stack

Azure Stack requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam backup and replication manager server	Azure stack	TCP	443 30024

SMTP Server

The SMTP Server requires opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam backup and replication manager server	SMTP server	TCP	25

Chapter 2

Deployment

This chapter will explain installing and upgrading Veeam Backup and Replication components. To install or upgrade the machine's Veeam Backup and Replication components, you must ensure the devices meet the system requirements.

When writing this book, the most current Veeam Backup and replication version is Version 11.0.1.1261 P20220302. However, staying with the latest patching and version cadence provided by Veeam Software is highly recommended. Critical fixes for both functionality and security are included in the latest versions.

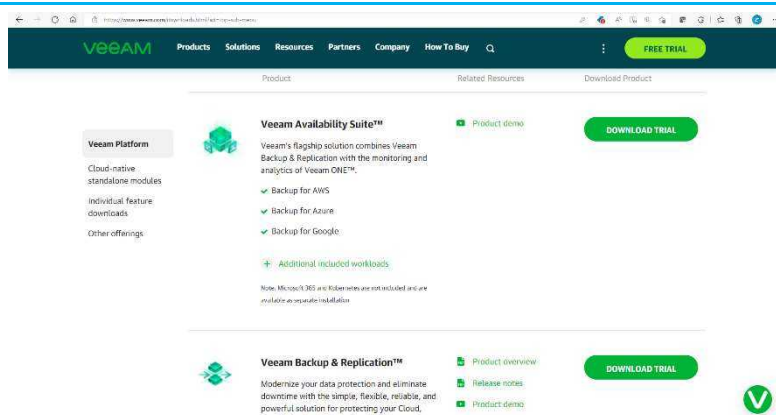
Install Veeam Backup and Replication v11a

Veeam released Veeam Backup and Replication v11a on September 27, 2021, and this version has many new features.

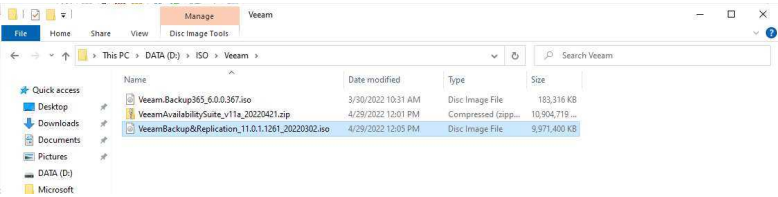
Instructions

Screenshot (if applicable)

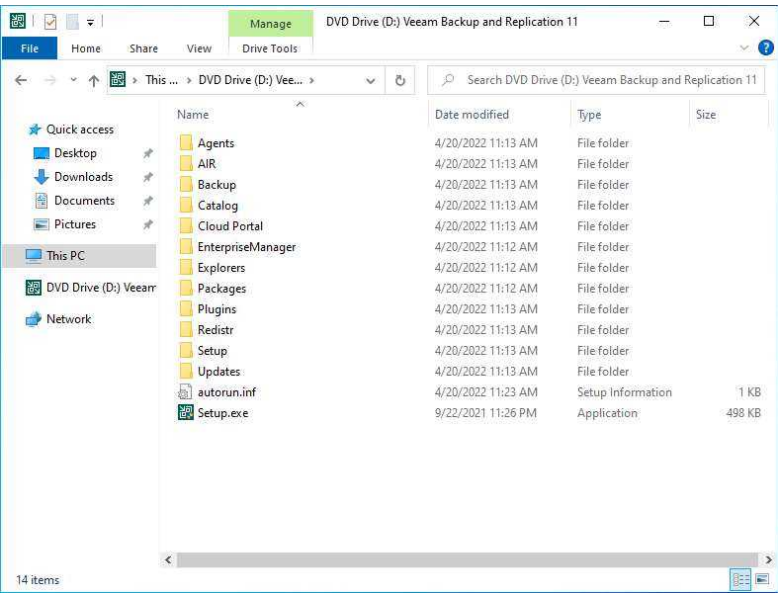
1. Log in to the Veeam Backup and Replication manager server.
2. Download the Veeam Backup and Replication v11a ISO image file from the Veeam website sign-in (required).



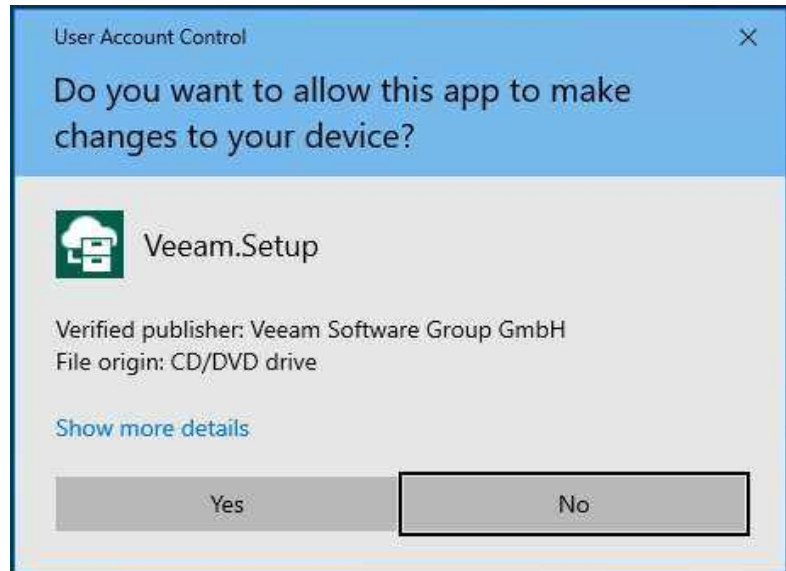
3. Mount
VeeamBackup&Replicatio
n_11.0.1.1261_20220302.
iso file.



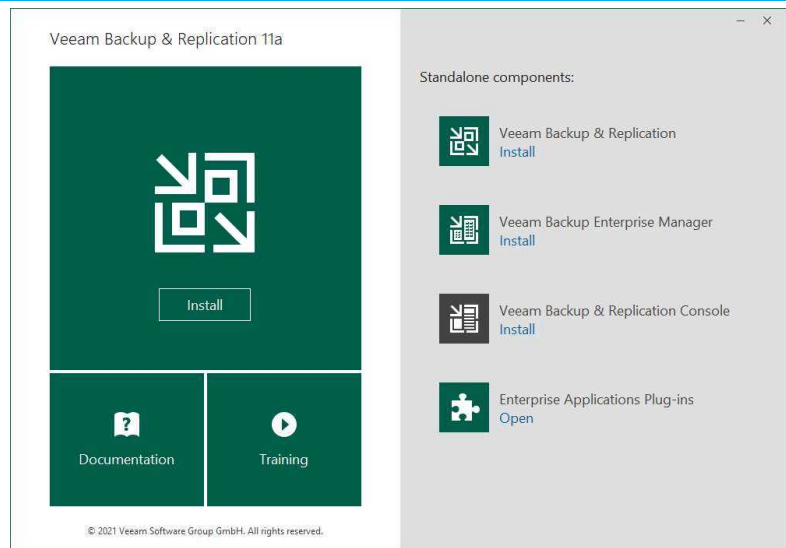
4. Run Setup.exe.



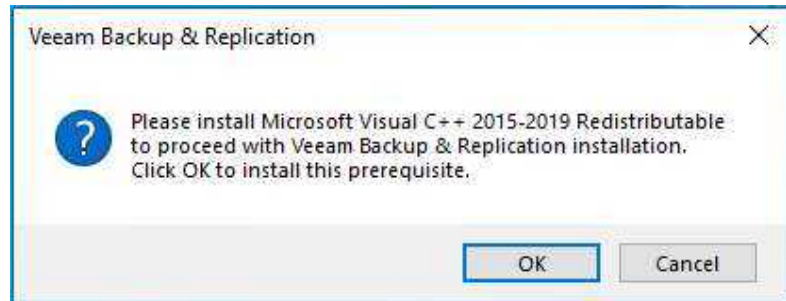
5. On the User Access Control page, click Yes.



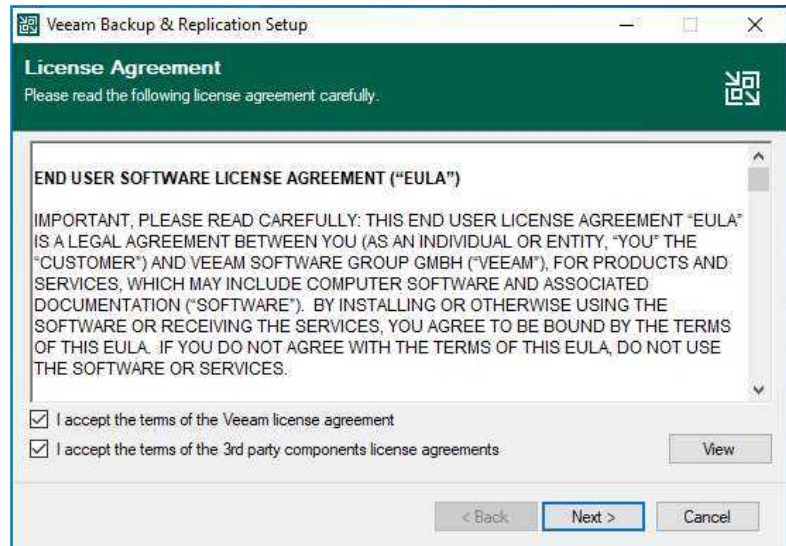
6. On the Veeam Backup & Replication 11a page, click Install.



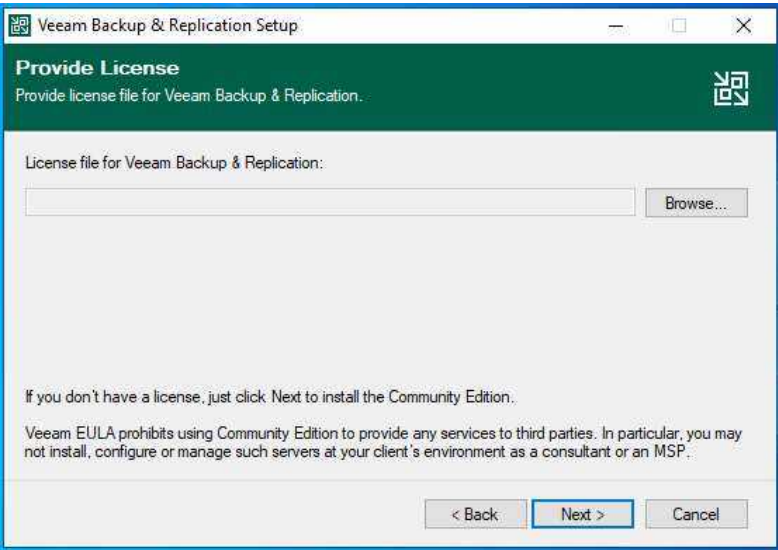
7. On the Please Install prerequisite page, click OK.



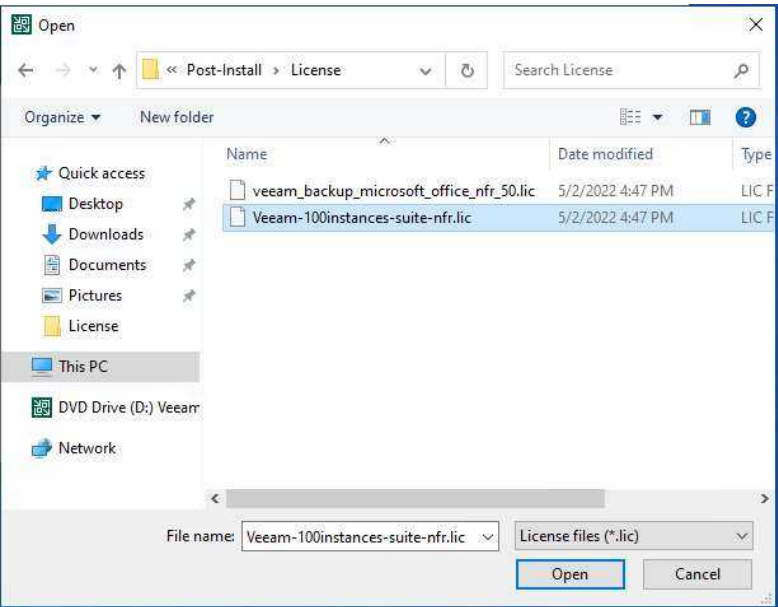
8. On the License Agreement page, select I accept the terms of the Veeam license agreement checkbox
9. Select I accept the terms of the 3rd party components license agreements, click Next.



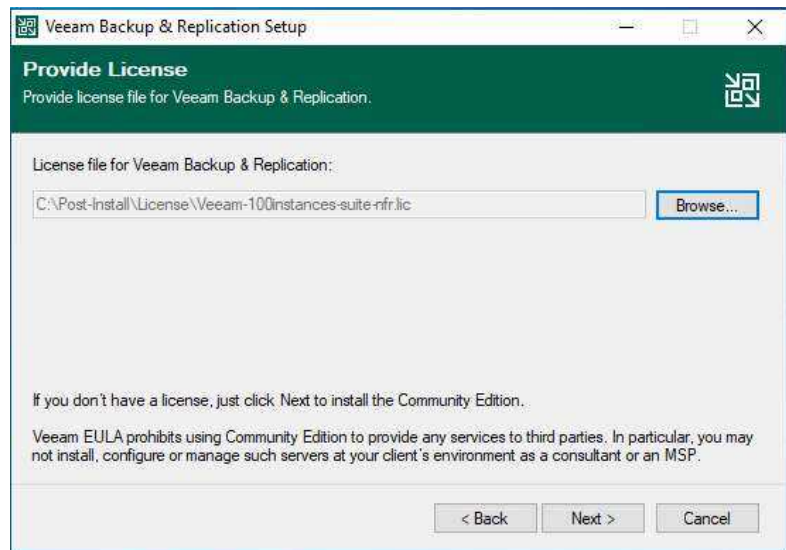
10. Click Browse on the Provide License page.



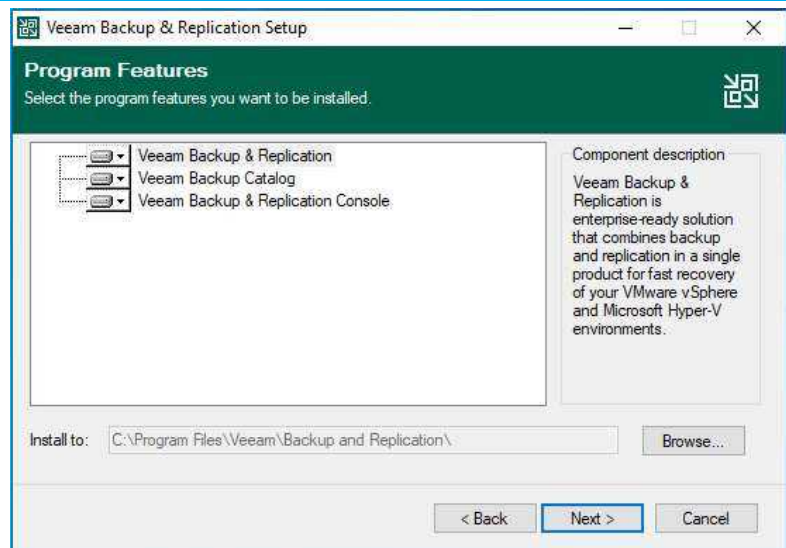
11. Select a license file for Veeam Backup & Replication and click Open.



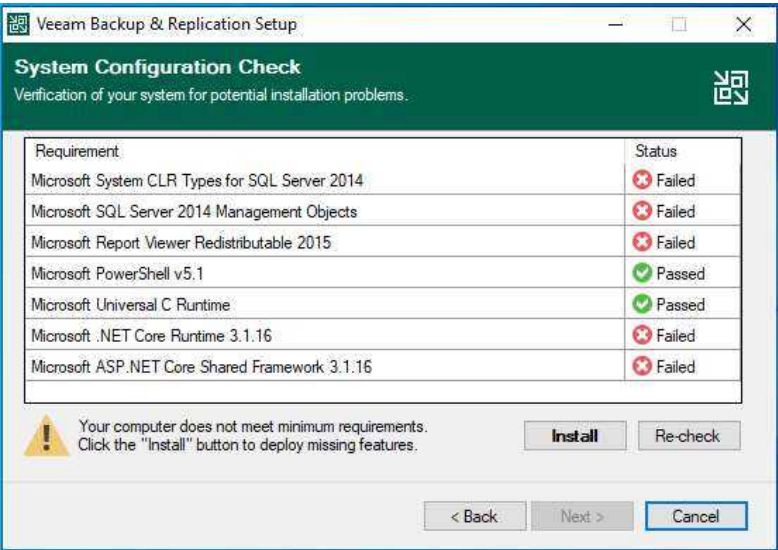
12. On the Provide License page, click Next.



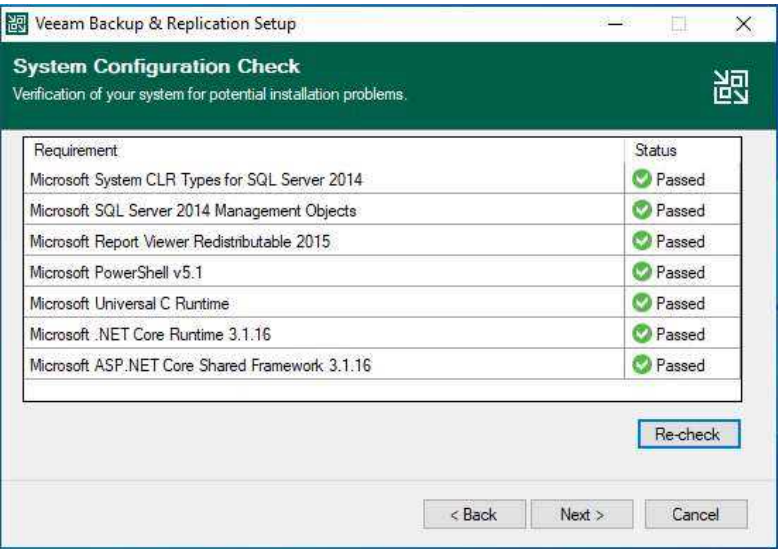
13. On the Program Features page, click Next.



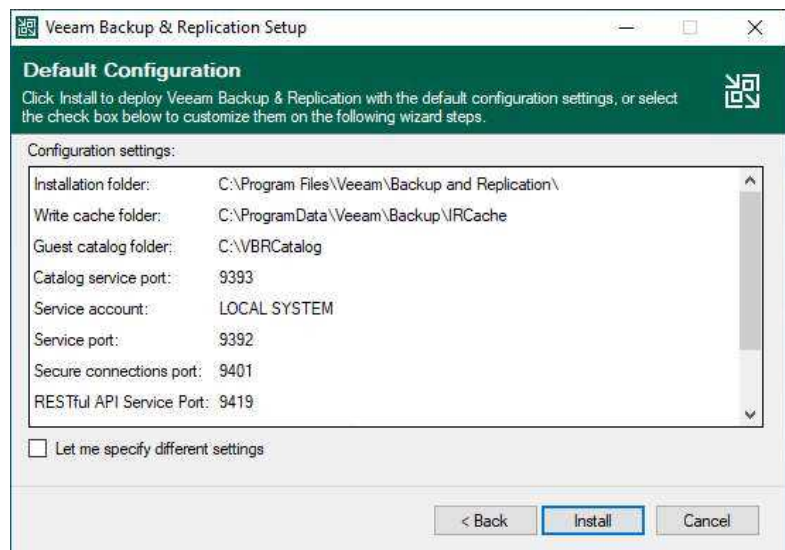
14. On the System Configuration Check page, if required software components are missing, click Install to install the missing features.



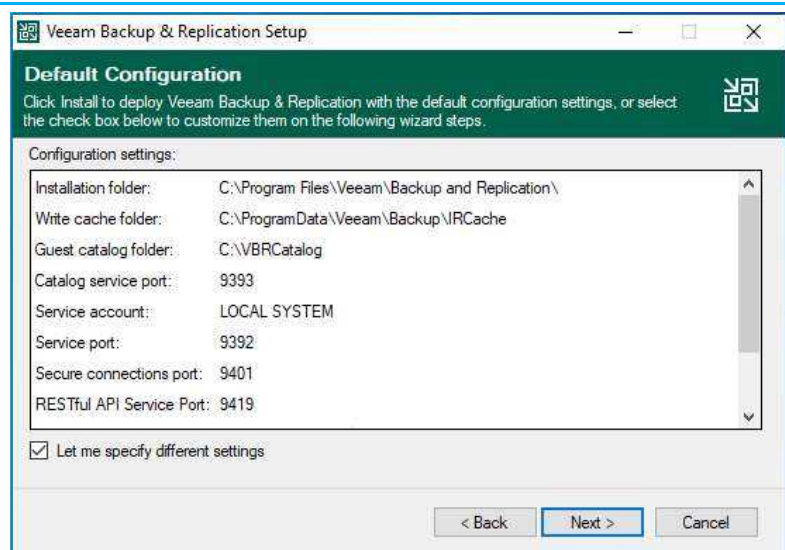
15. Click Next after installing the missing components.



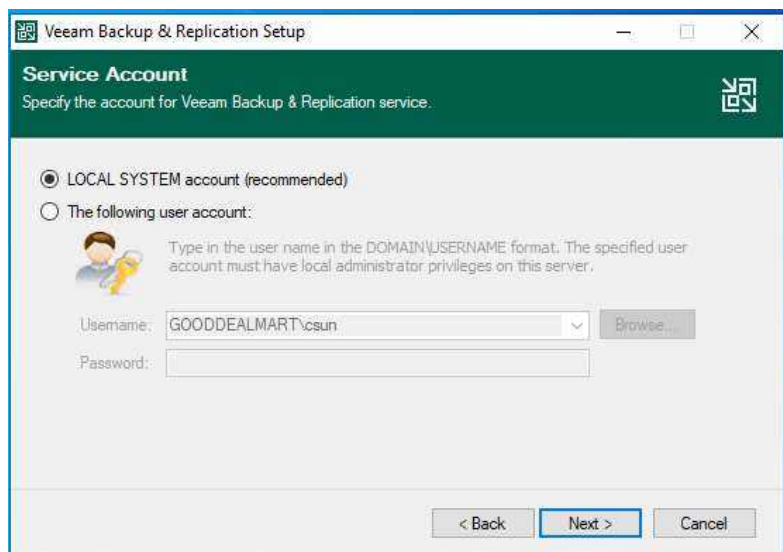
16. On the Default Configuration page, click Install.



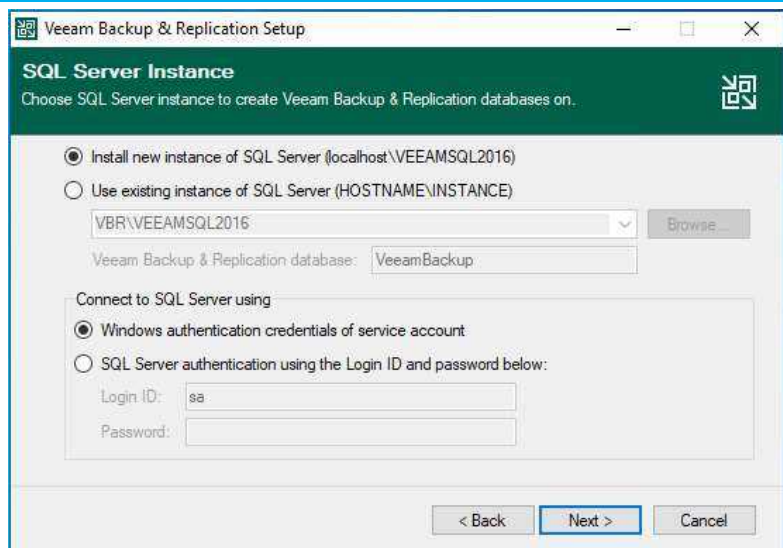
17. If you want to specify custom installation settings, select. Let me specify different settings and click Next.



18. On the Service Account page, select LOCAL SYSTEM account and click Next.

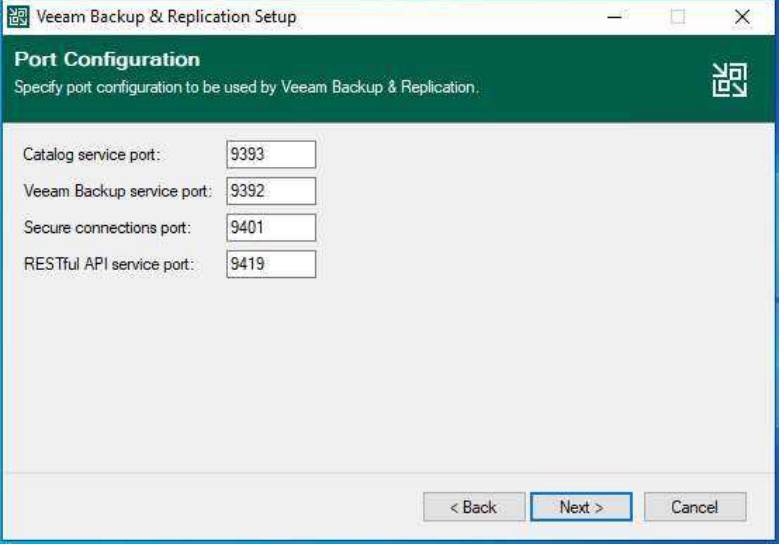


19. On the SQL Server Instance page, If a Microsoft SQL Server is not installed locally or remotely, select Install a new instance of SQL Server.
20. If you want to use the existing instance of SQL Server, enter the instance name in the HOSTNAME\INSTANCE format.
21. Enter a database name for the Veeam Backup & Replication configuration database in the Database field.



22. Select Microsoft Windows authentication or SQL Server authentication. If you select the SQL Server authentication, enter the credentials of the SQL Server account, and click Next.

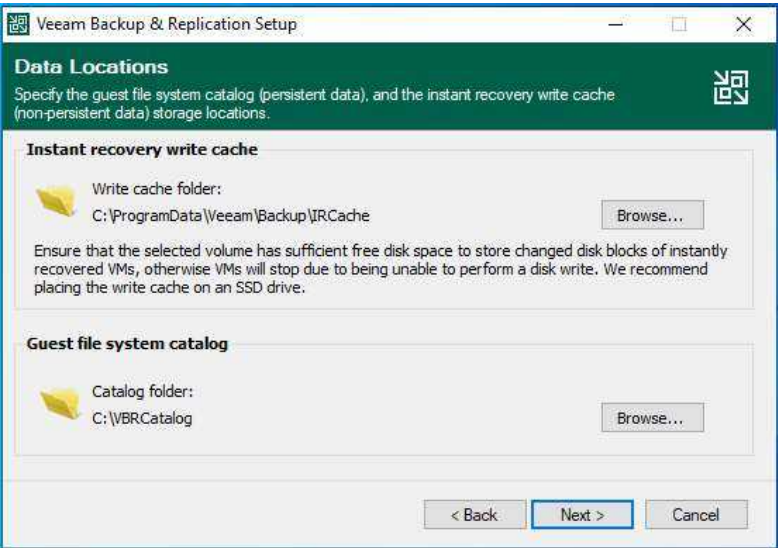
23. On the Port Configuration page, customize port number values that will be used for communication between backup infrastructure components and click Next.



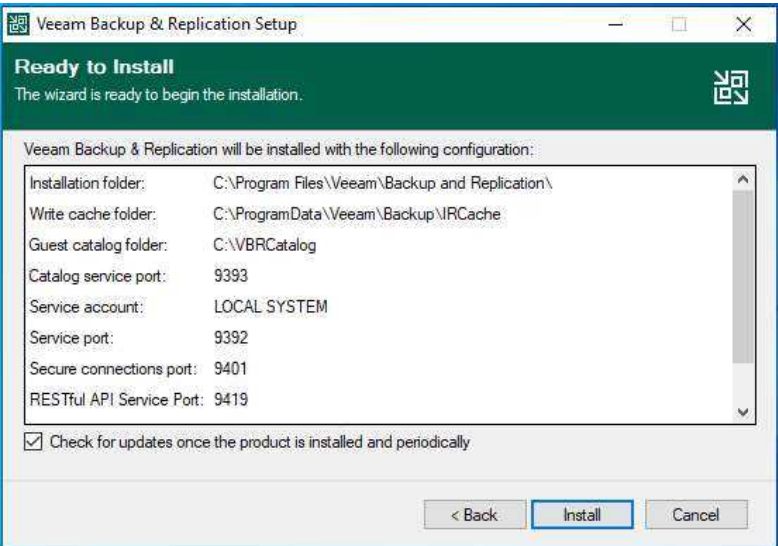
The screenshot shows the 'Veeam Backup & Replication Setup' window, specifically the 'Port Configuration' page. The page has a dark green header with the title 'Port Configuration' and a subtitle 'Specify port configuration to be used by Veeam Backup & Replication.'. Below the header, there are four rows of text labels followed by input boxes: 'Catalog service port:' with '9393', 'Veeam Backup service port:' with '9392', 'Secure connections port:' with '9401', and 'RESTful API service port:' with '9419'. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

Service	Port
Catalog service port:	9393
Veeam Backup service port:	9392
Secure connections port:	9401
RESTful API service port:	9419

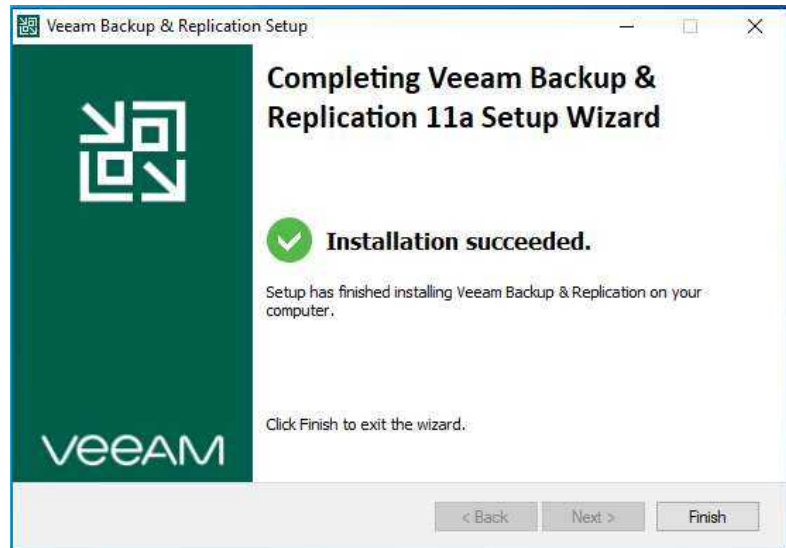
24. On the Data Locations page, specify where the write cache and indexing data must be stored, and click Next.



25. On the Ready to Install page, verify Veeam Backup & Replication installation settings, select Check for updates once the product is installed and periodically click Install.



26. Click Finish on the Completing Veeam Backup & Replication 11a Setup Wizard page.

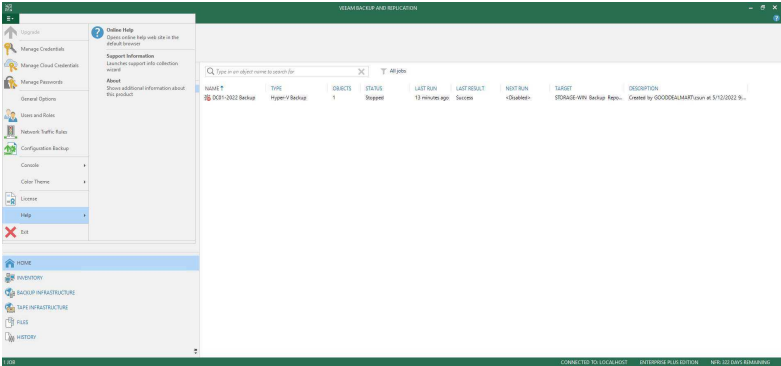


Upgrade the Existing Veeam Backup and Replication to v11a

Veeam Backup and Replication v11a were released on September 27, 2021. If you are still using an older version of Veeam and Replication, it is time to upgrade it to v11a. Veeam Backup & Replication v11a is the newer version 11 that addresses issues reported by customers on the original build and adds the following new features and enhancements.

Note:

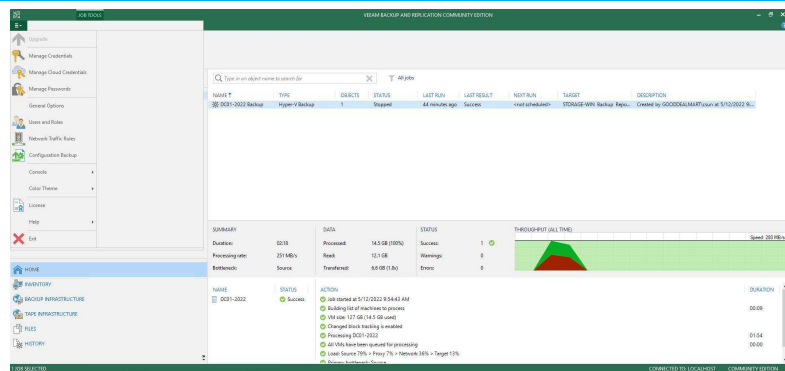
The earlier version must be Veeam Backup and Replication 9.5 Update 4b (build 9.5.4.2866) or later.

Instructions	Screenshot (if applicable)
1. Log in to the existing Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console. 3. Drop down the main menu, select Help, and click About to check Veeam Backup & Replication version.	 The screenshot shows the Veeam Backup and Replication console interface. On the left is a navigation pane with a tree view containing 'HOME', 'PROXY', 'BACKUP INFRASTRUCTURE', 'TAPE INFRASTRUCTURE', 'FILES', and 'HISTORY'. The 'Help' menu is open, showing options like 'Online Help', 'Support Information', 'About', 'General Options', 'Data and Rules', 'Network Traffic Rules', 'Configuration Backup', 'Console', 'Color Theme', 'License', and 'Exit'. The 'About' option is selected, displaying a 'Support Information' dialog box. This dialog box includes a search bar, a 'Show additional information about this product' link, and a table of backup jobs. The table has columns for NAME, TYPE, OBJECTS, STATUS, LAST RUN, LAST RESULT, NEXT RUN, and TARGET. One job is listed: 'DCH-2022 Backup' of type 'Image to Backup' with 1 object, status 'Stopped', last run '13 minutes ago', last result 'Success', next run '<Disabled>', and target 'STORAGE VMM Backup Rep...'. The status bar at the bottom indicates 'CONNECTED TO 100 AGENTS', 'RESTORE PROTECTION', and '100 100 DAYS REMAINING'.

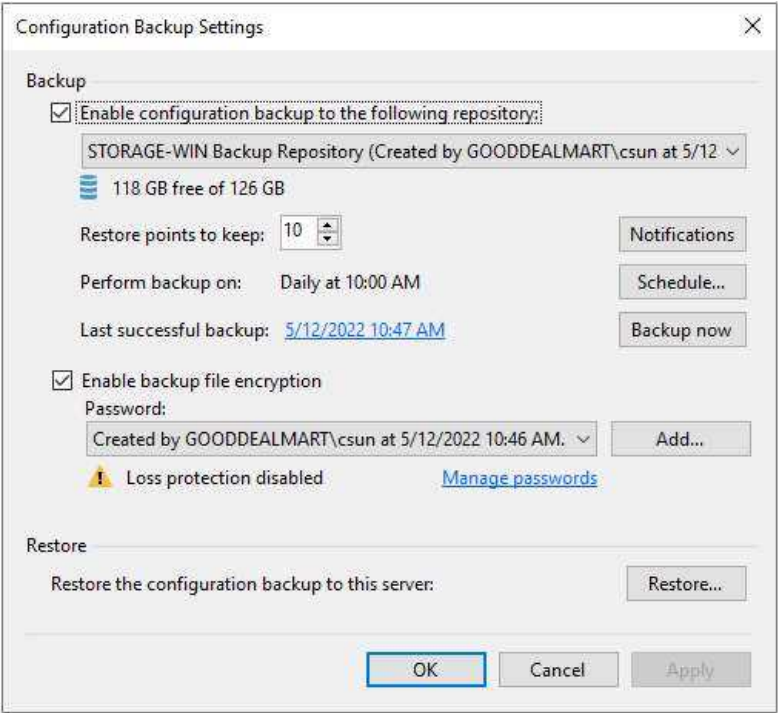
4. Make sure the existing Veeam Backup and Replication version meets the requirements.



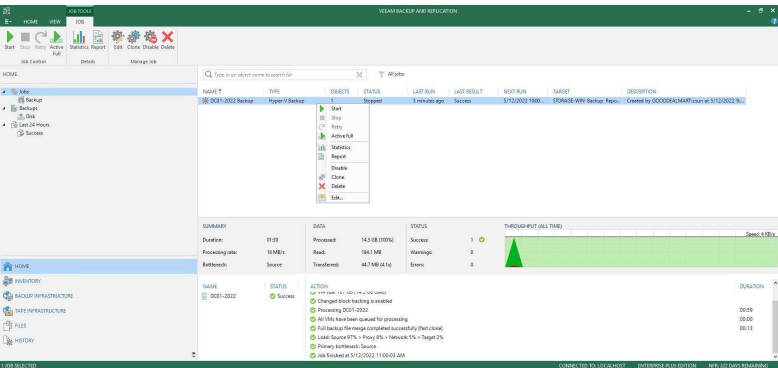
5. Drop down the main menu and select Configuration Backup.



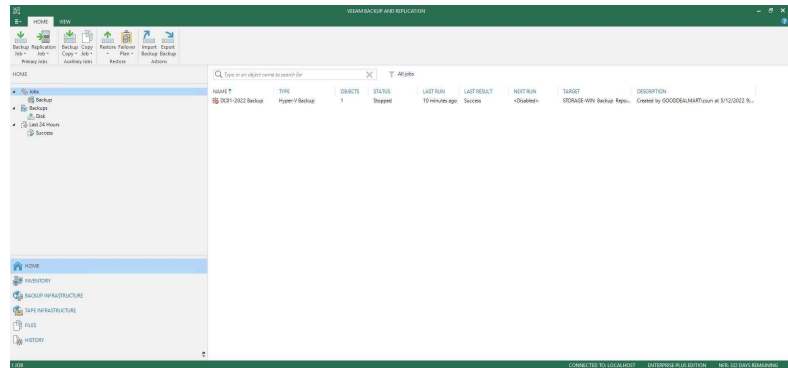
- 6. On the Configuration Backup Settings page, select Backup now to back up the current configuration.
- 7. Click OK to close the Configuration Backup Settings after the backup is completed.



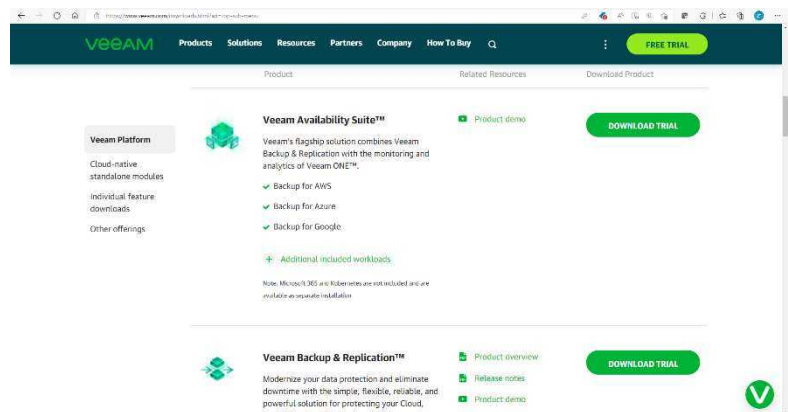
- 8. On the Home page, select Jobs.
- 9. Right-click jobs and select Disable to disable all jobs.



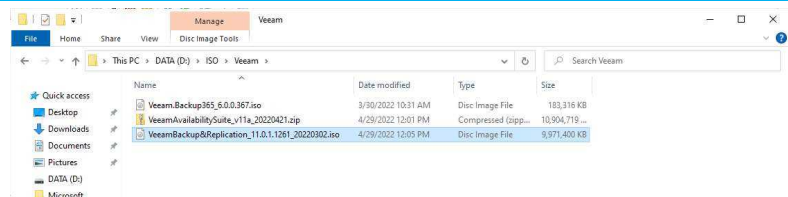
10. Make sure all jobs are disabled and close Veeam Backup & Replication Console.



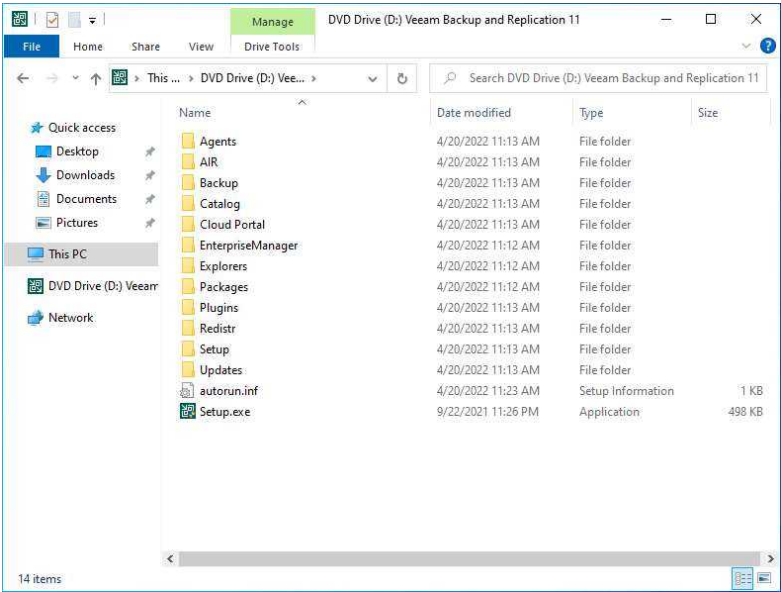
11. Download the Veeam Backup and Replication v11a ISO image file from the Veeam website. (Sign-in required).



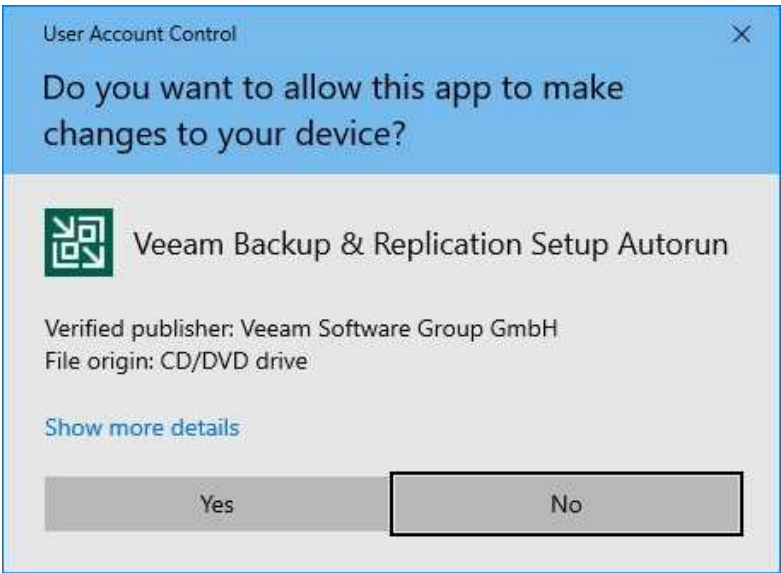
12. Mount VeeamBackup&Replication_11.0.1.1261_20220302.iso file.



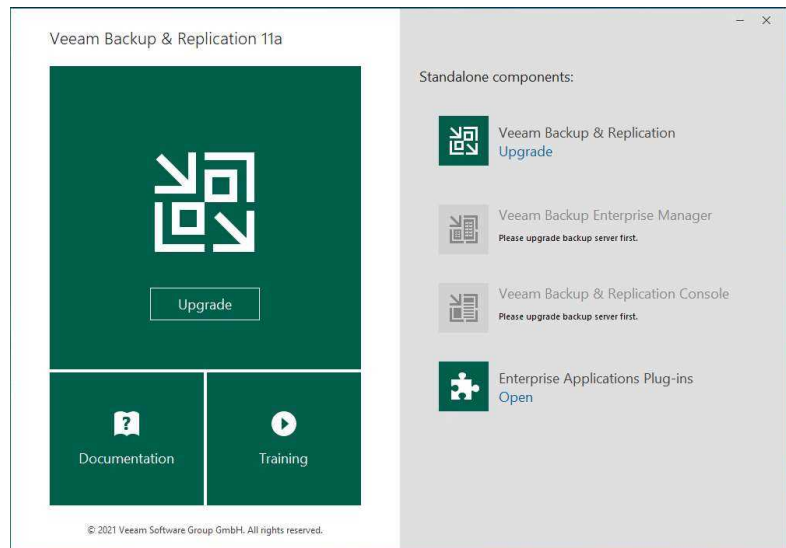
13. Run Setup.exe.



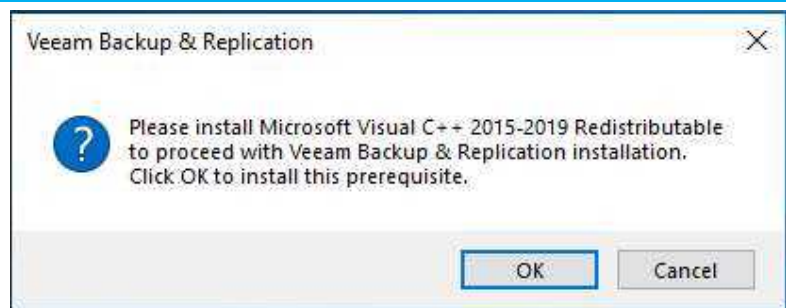
14. On the User Account Control page, click Yes.



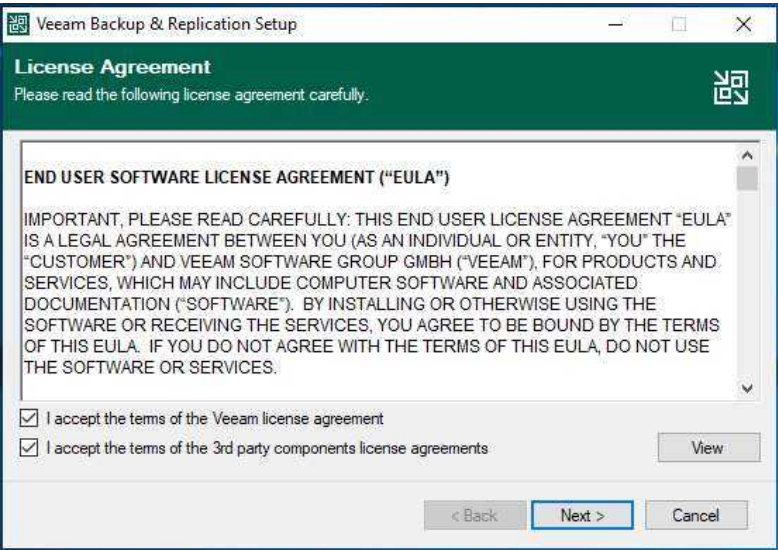
15. On the Veeam Backup & Replication 11a page, click Upgrade.



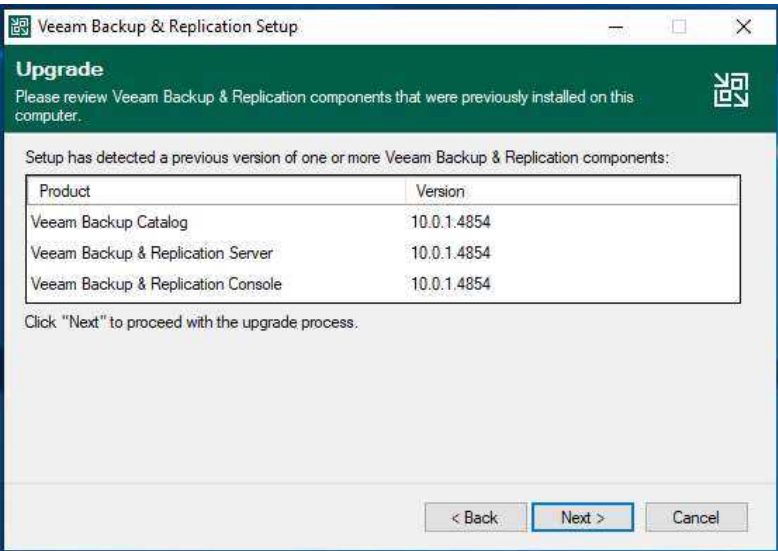
16. Click OK to install this prerequisite.



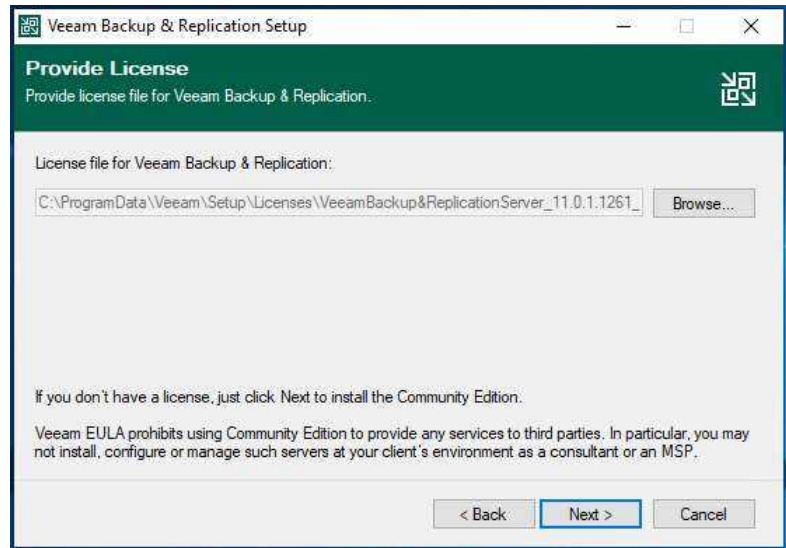
- 17. On the License Agreement page, select I accept the terms of the Veeam license agreement checkbox
- 18. Select I accept the terms of the 3rd party components license agreements checkbox and click Next.



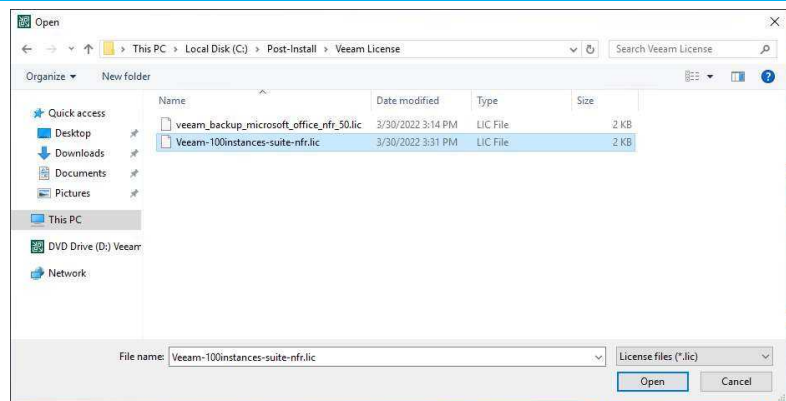
- 19. On the Upgrade page, click Next.



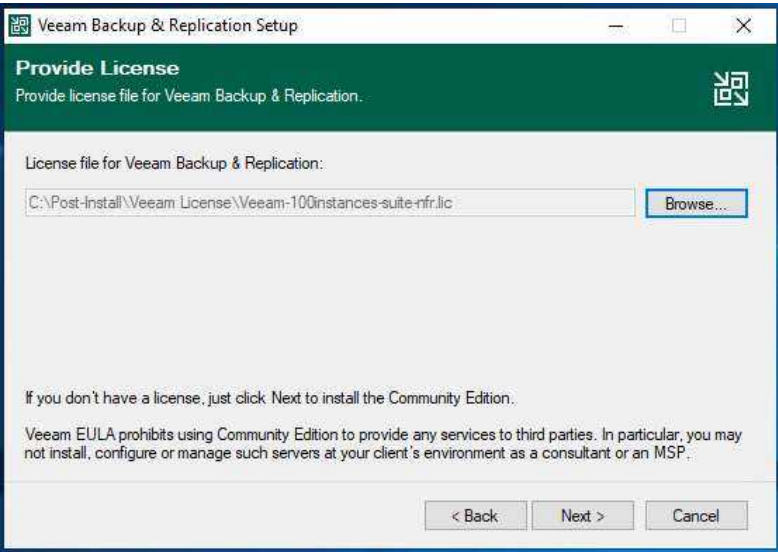
20. On the Provide License page, click Browse.



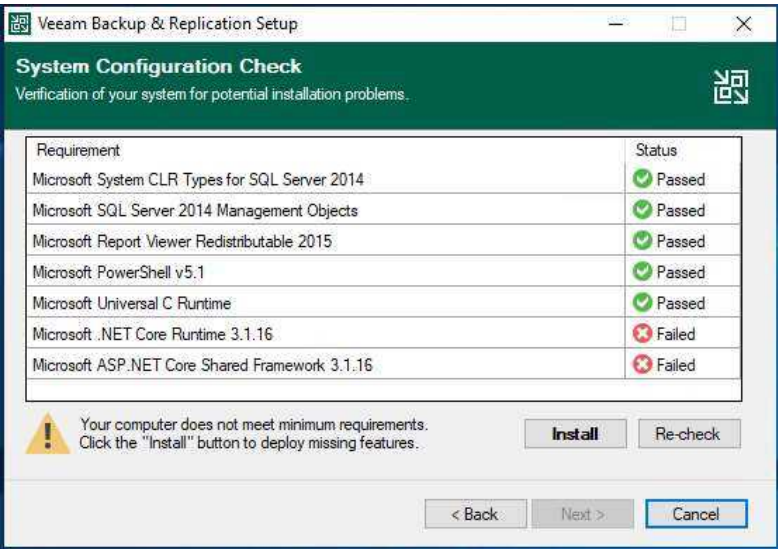
21. Select the Veeam Backup and Replication license file, and click Open.



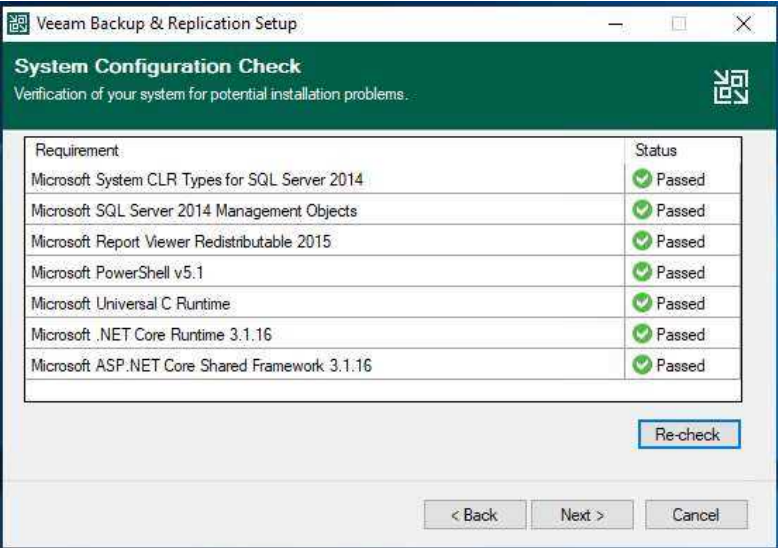
22. On the Provide License page, click Next.



23. On the System Configuration Check page, click Install to deploy missing features.



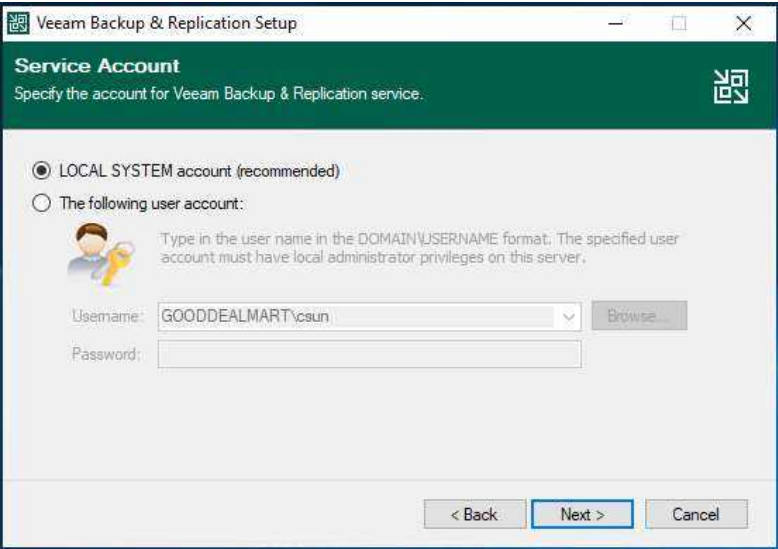
24. Click Next after installing the missing features.



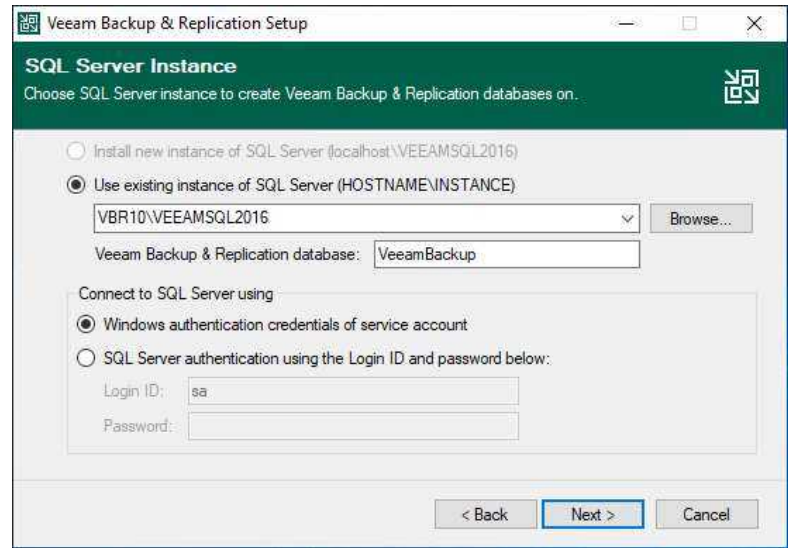
25. Select the LOCAL SYSTEM account on the Service Account page, specify another user account, and click Next.

Note:

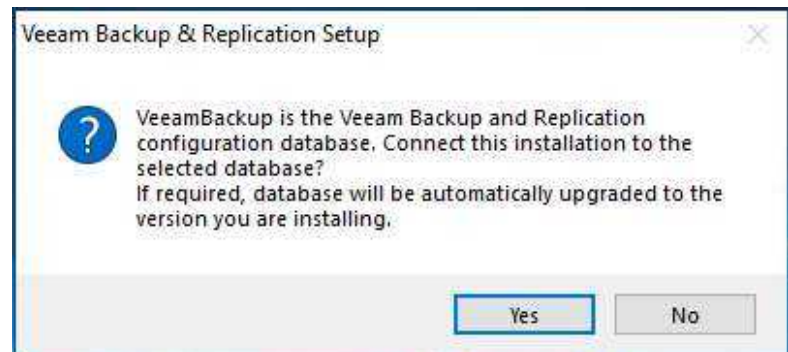
If you would like to use the specified user account, the user account must be a member of the Administrators group on the Veeam Backup & Replication machine. Also, it must have db_owner rights for the configuration database.



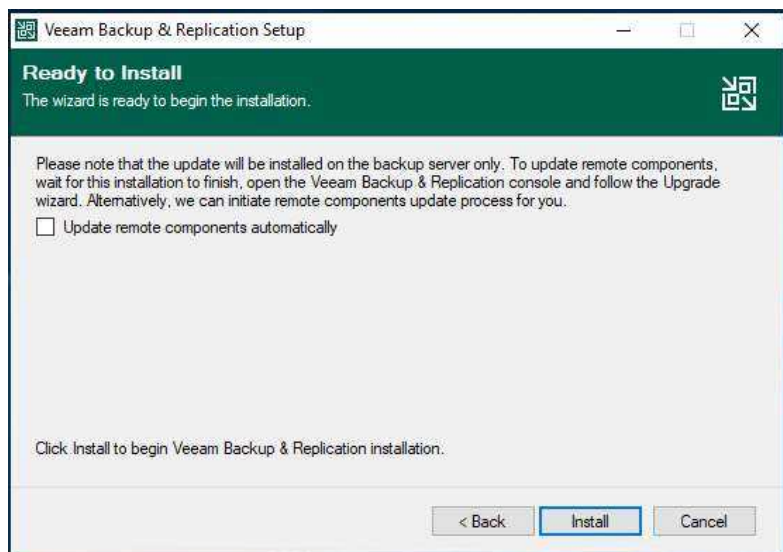
26. On the SQL Server Instance page, click Next.



27. Click Yes on the question pop-up message. Veeam will automatically upgrade the database to the version you are installing.



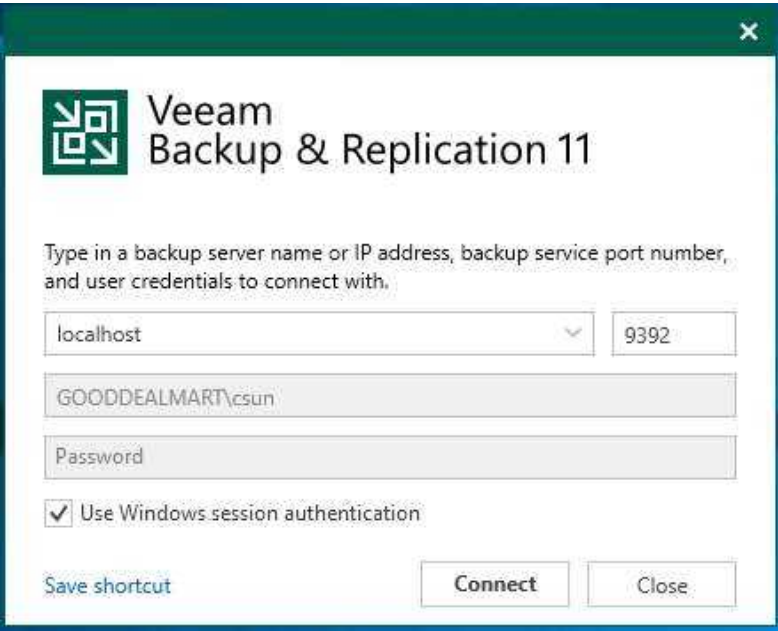
28. Click Install on the Ready to Install page.



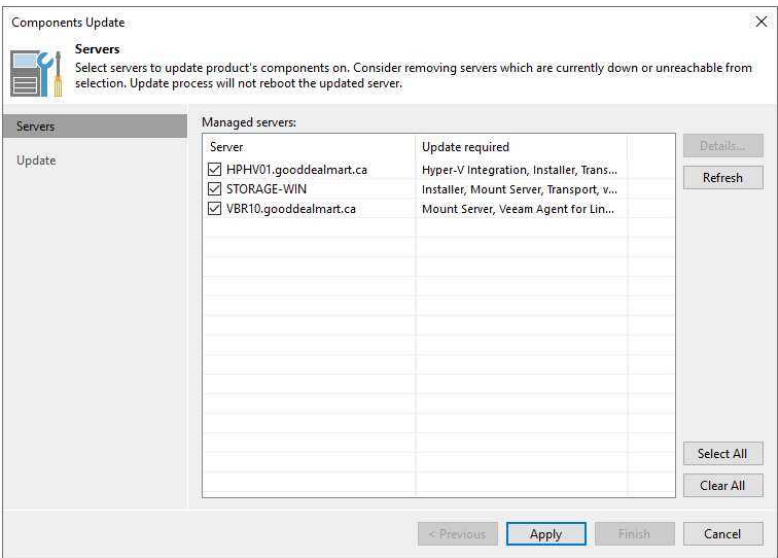
29. On the Completing Veeam Backup & Replication 11a Setup Wizard page, ensure the installation succeeded, and click Finish.



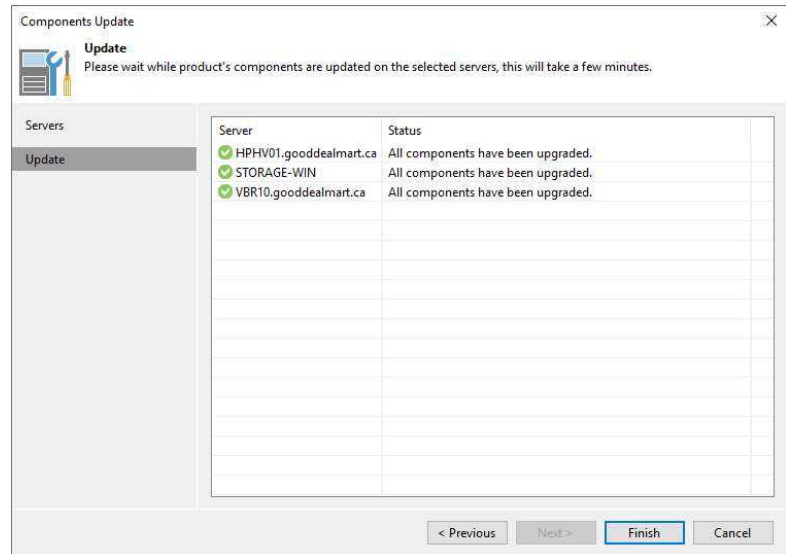
30. Open Veeam Backup & Replication management console and click Connect.



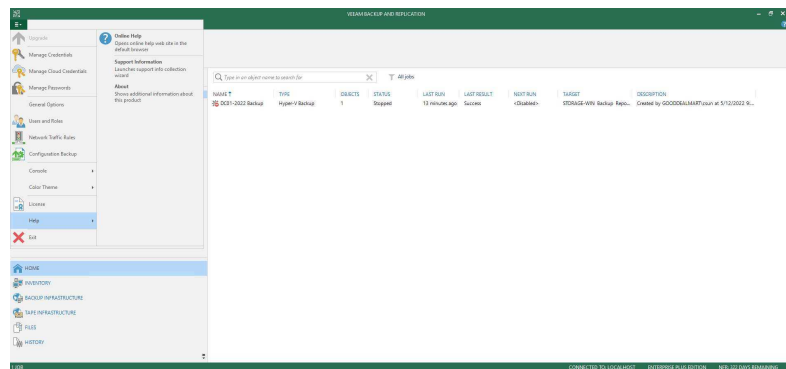
31. On the Components Update page, select the servers and click Appl



32. Make sure the components update succeeds for selected servers and click Finish.



33. Drop down the main menu, select Help, and click About to check Veeam Backup & Replication version.

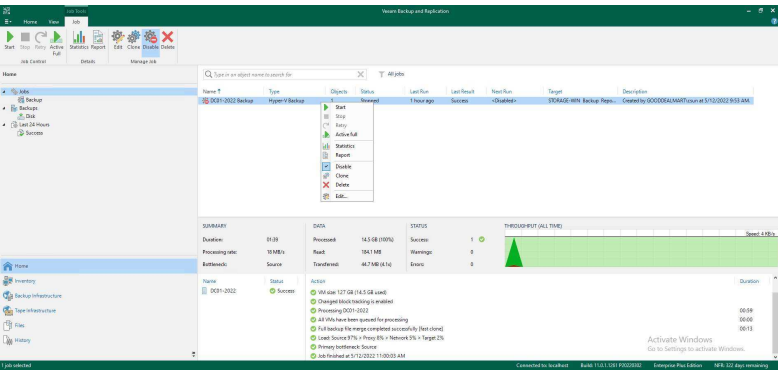


34. Make sure the existing Veeam Backup and Replication version is upgraded.

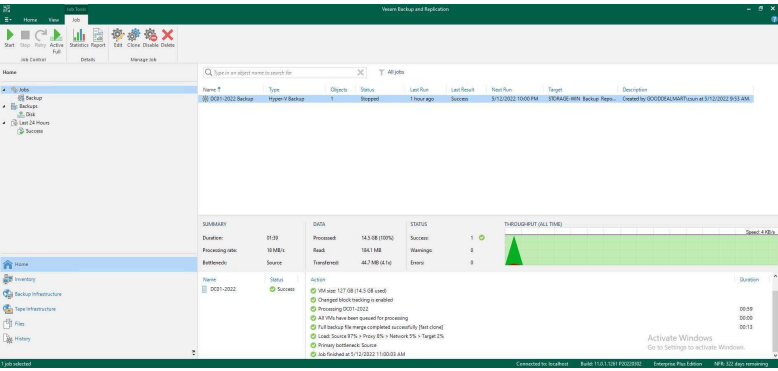


35. On the Home page, select Jobs.

36. Right-click jobs and unselect Disable to enable all jobs.



37. Make sure all jobs are enabled.



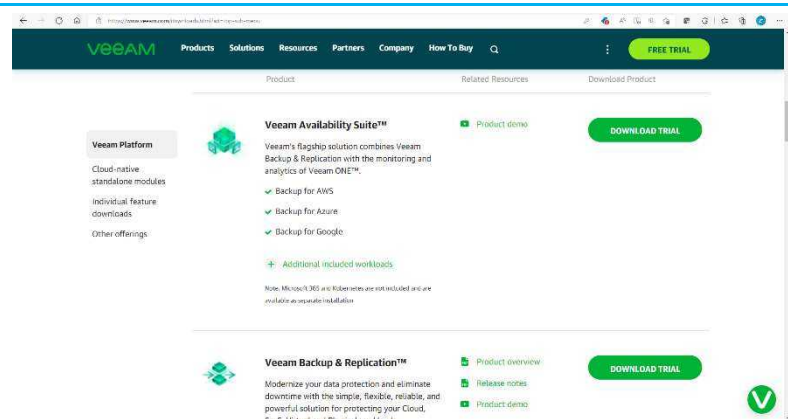
Install Veeam Backup and Replication Console

When you install Veeam Backup & Replication, the Veeam Backup & Replication console is automatically installed on the backup server. If you want to access Veeam Backup & Replication remotely, you can install the Veeam Backup & Replication console on a dedicated machine.

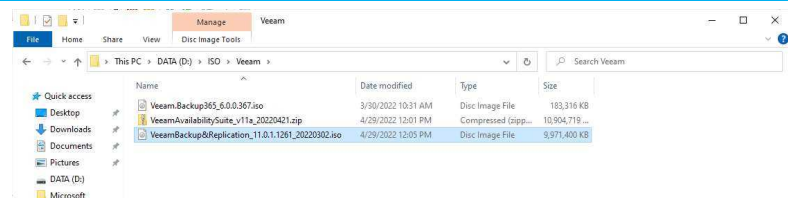
Instructions

Screenshot (if applicable)

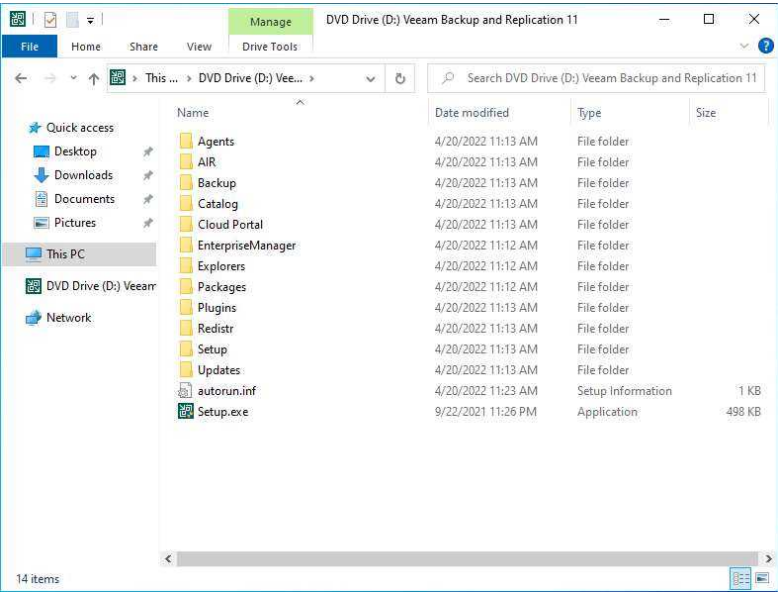
1. Log in to the Veeam Backup and Replication manager console server.
2. Download the Veeam Backup and Replication v11a ISO image file from the Veeam website. (Sign-in required).



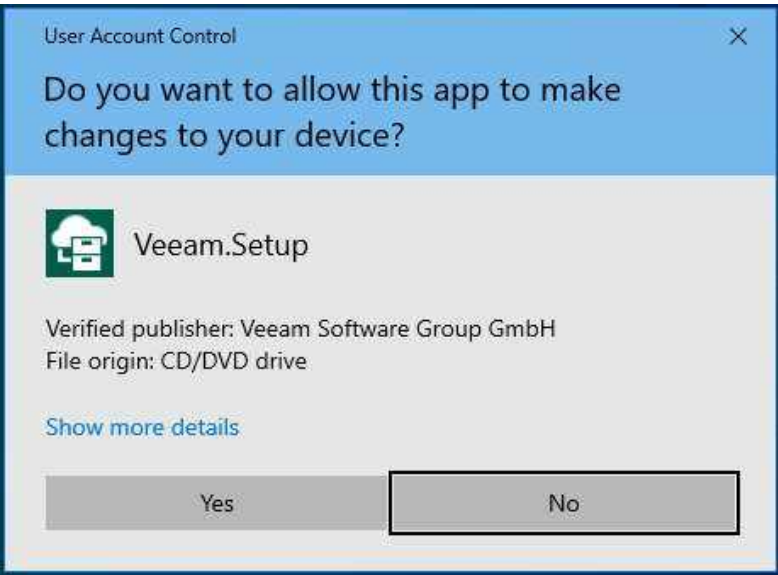
3. Mount VeeamBackup&Replication_11.0.1.1261_20220302.iso file.



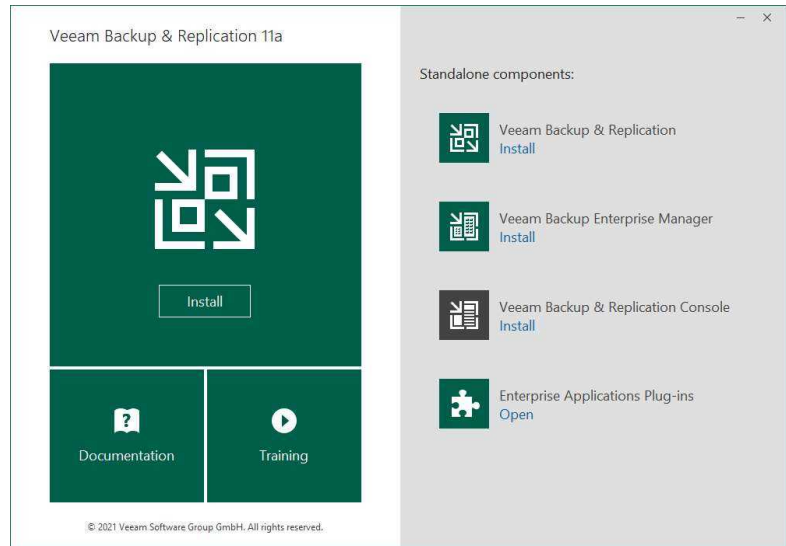
4. Run Setup.exe.



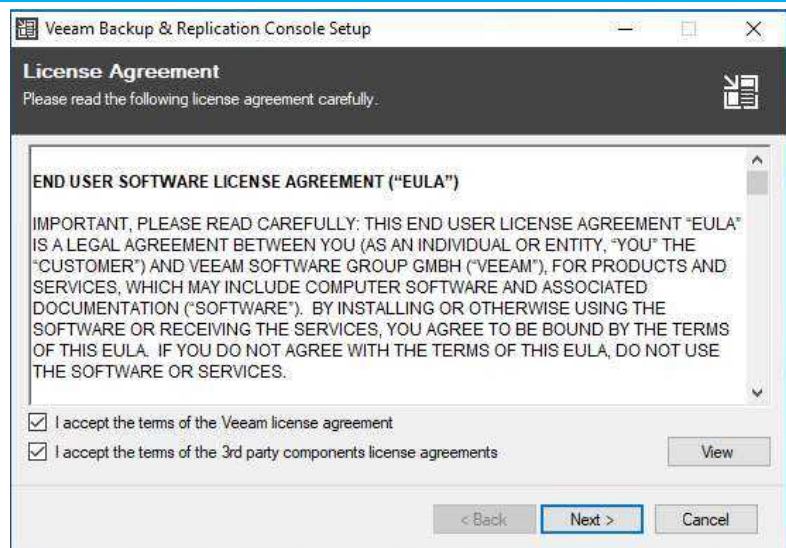
5. On the User Access Control page, click Yes.



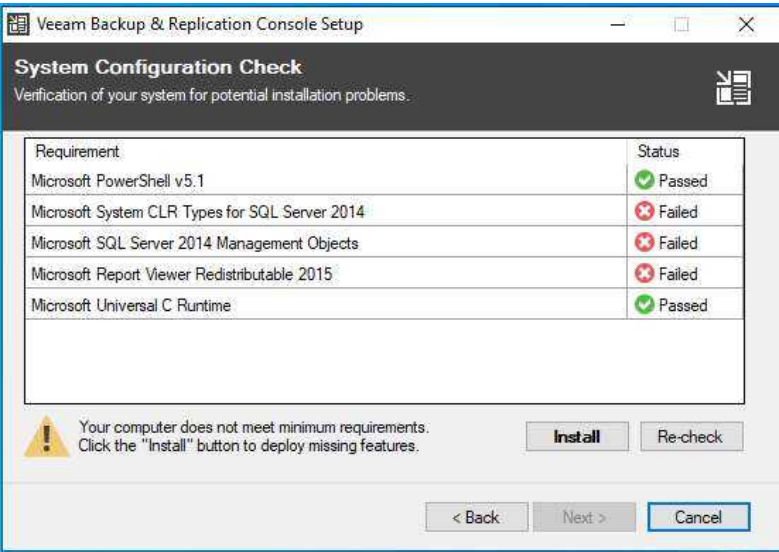
6. On the Veeam Backup & Replication Console page, click Install.



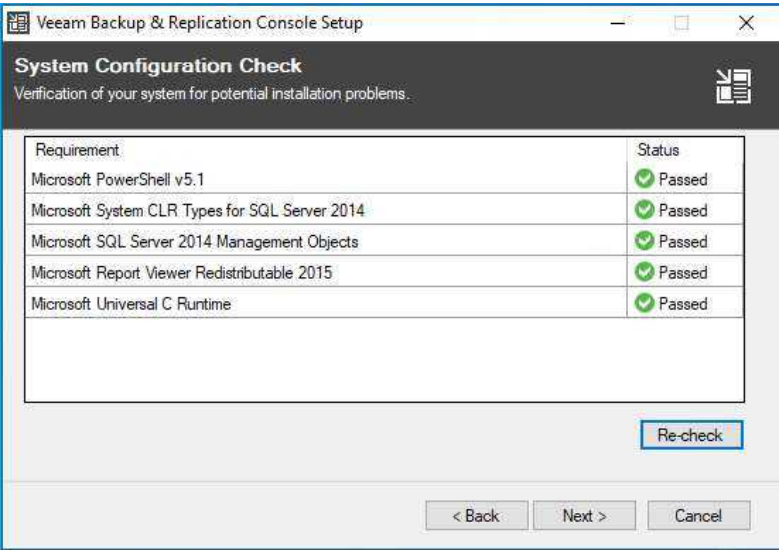
7. On the License Agreement page, select I accept the Veeam license agreement checkbox terms.
8. Select I accept the terms of the 3rd party components license agreements checkbox.
9. Click Next.



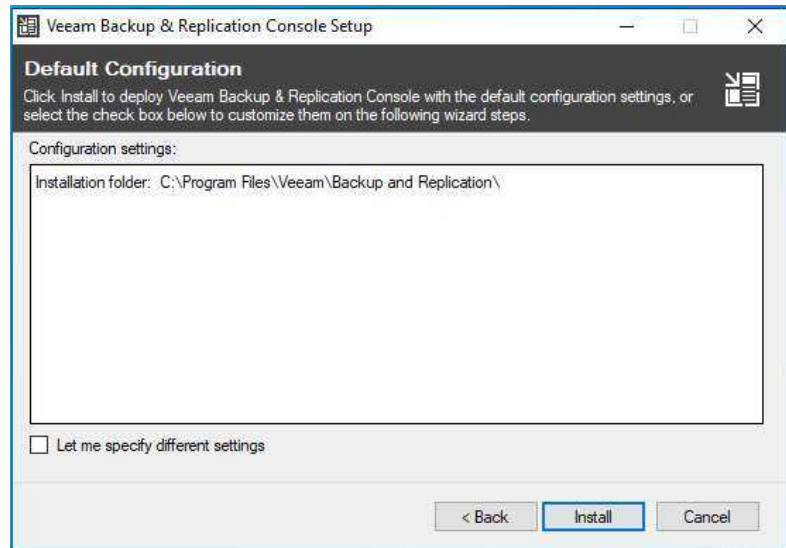
10. On the System Configuration Check page, the setup wizard checks if all prerequisite software is installed on the machine. If required software components are missing, the setup wizard will offer you to install them. To install missing components automatically, click Install.



11. Click Next after installing the missing components.



12. On the Default Configuration page, click Install.

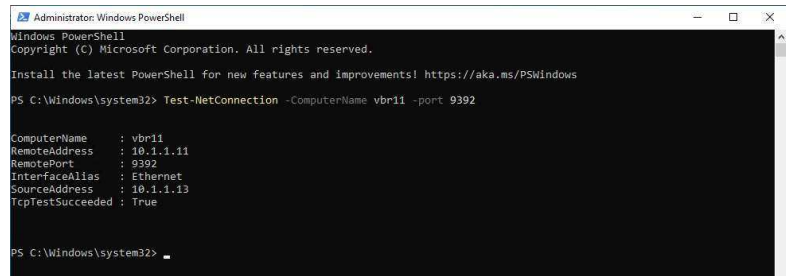


13. Click Finish on the Completing Veeam Backup & Replication 11a Setup Wizard page.



14. Verify that the Veeam Backup Service is running on the Veeam Backup Server, and then test connectivity to that service from the remote machine using the following PowerShell cmdlet.

Test-NetConnection -
ComputerName
<hostname/ip> -Port 9392



```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

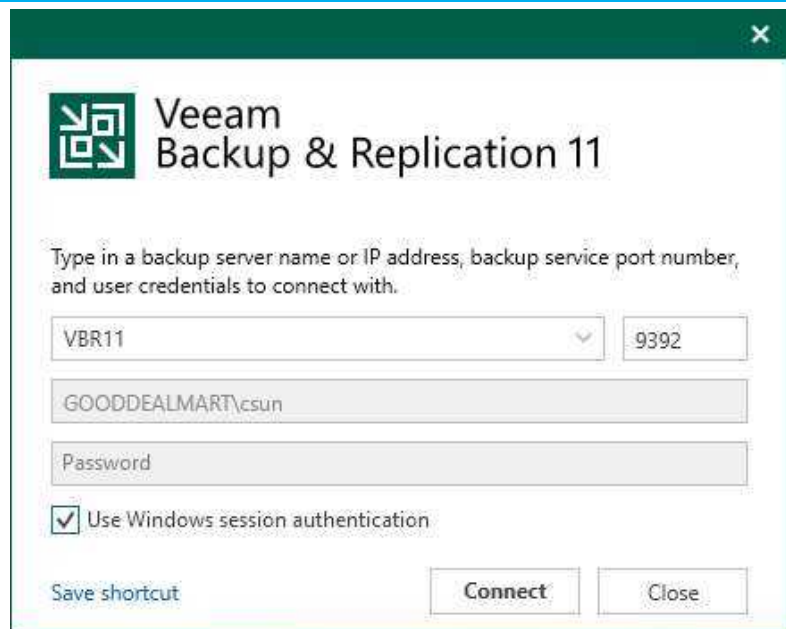
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Windows\system32> Test-NetConnection -ComputerName vbr11 -port 9392

ComputerName : vbr11
RemoteAddress : 10.1.1.11
RemotePort    : 9392
InterfaceAlias : Ethernet
SourceAddress  : 10.1.1.13
TcpTestSucceeded : True

PS C:\Windows\system32>
```

15. Open the Veeam Backup & Replication Console, click Connect, enter the Backup & Replication manager server name or IP address, and click Connect.



Veeam Backup & Replication 11

Type in a backup server name or IP address, backup service port number, and user credentials to connect with.

VBR11 9392

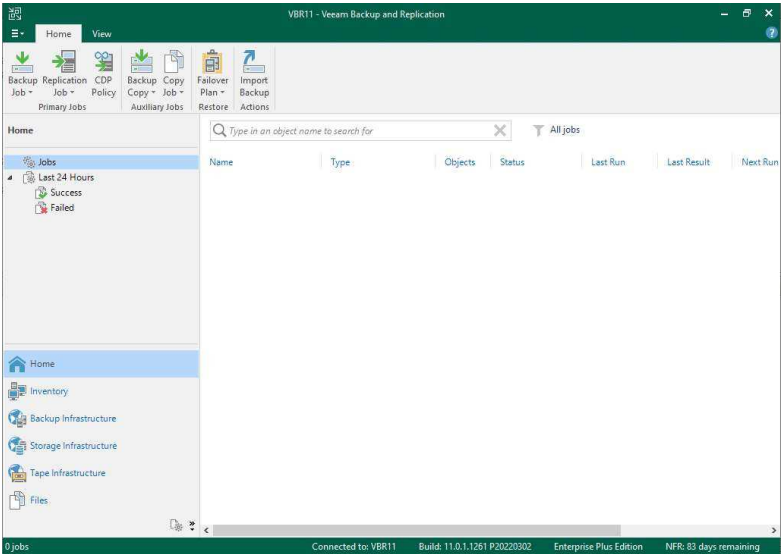
GOODDEALMART\csun

Password

☒ Use Windows session authentication

Save shortcut Connect Close

16. Ensure you can connect to the Veeam Backup & Replication manager server without issue.



Chapter 3

Configuration

This chapter will review the initial configurations of Veeam Backup for Microsoft Office 365. These include:

- Virtual Infrastructure
- Backup Infrastructure
- Backup Repositories
- Cloud Repositories
- Backup and Replication

These steps must be configured before setting up Backup Jobs, covered in the next chapter.

Configuring Inventory

The Veeam backup and Replication inventory module consists of several components:

Virtual Infrastructure

Physical Infrastructure

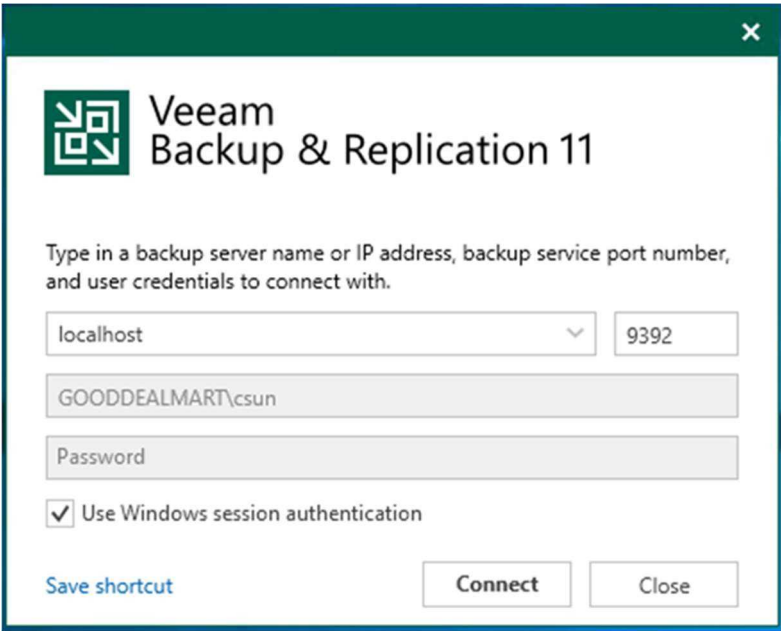
File Shares.

The following server and host categories can be added to the virtual infrastructure:

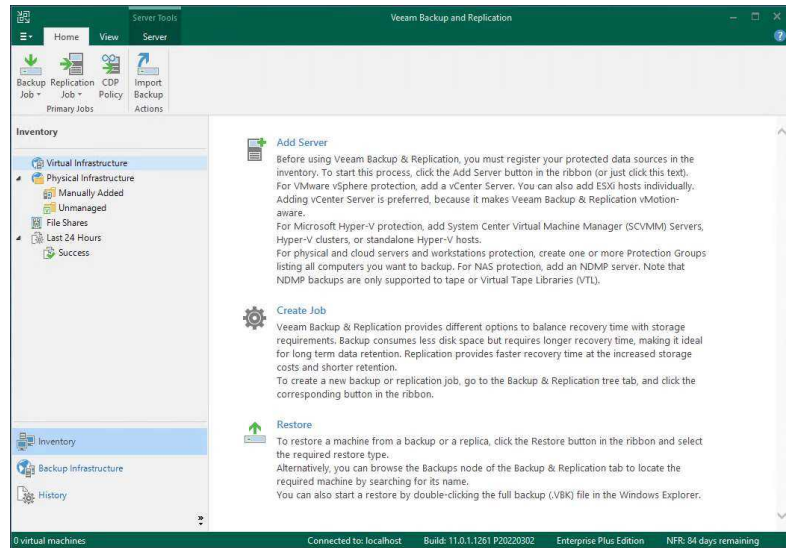
- Microsoft Hyper-V Standalone Hosts
- Microsoft Clusters
- Microsoft System Center Virtual Machine Manager (SCVMM)
- Microsoft Physical Hosts
- File Shares

Add Microsoft Hyper-V Standalone Hosts

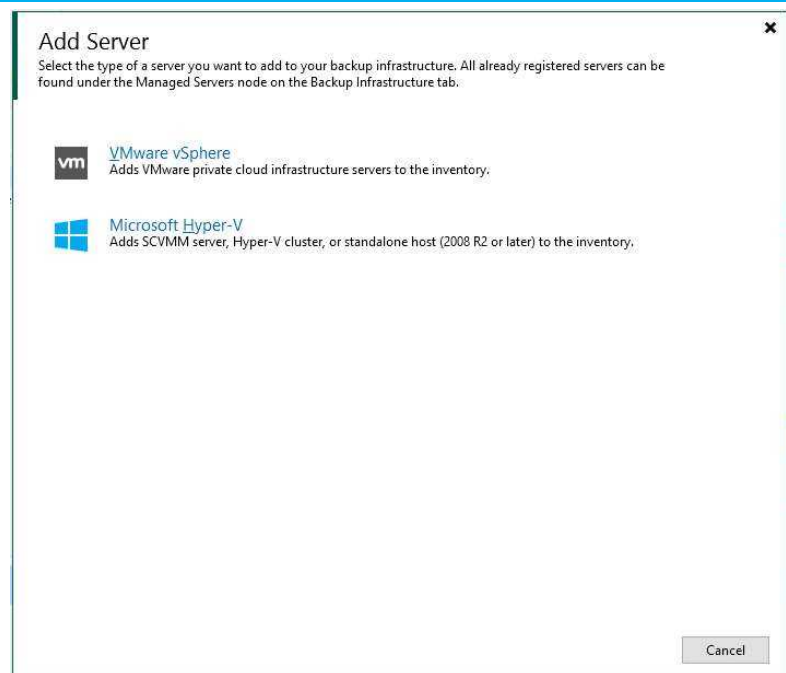
You must add the Microsoft Hyper-V standalone hosts you plan to use as source and target for backup, replication and other activities.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 A screenshot of the Veeam Backup & Replication 11 console window. The window has a dark green title bar with a close button (X) in the top right corner. The main content area is white and contains the Veeam logo (a green square with white geometric shapes) and the text "Veeam Backup & Replication 11". Below this, there is a prompt: "Type in a backup server name or IP address, backup service port number, and user credentials to connect with." There are three input fields: the first is a dropdown menu showing "localhost" with a downward arrow; the second is a text box containing "9392"; the third is a text box containing "GOODDEALMART\csun". Below these fields is a text box labeled "Password". At the bottom left, there is a checkbox labeled "Use Windows session authentication" which is checked. At the bottom right, there are three buttons: "Save shortcut" (in blue text), "Connect" (in a grey box), and "Close" (in a grey box).

3. On the Home page, select Inventory.
4. On the Inventory page, select Virtual Infrastructure and click Add Server.



5. On the Add Server page, select Microsoft Hyper-V.



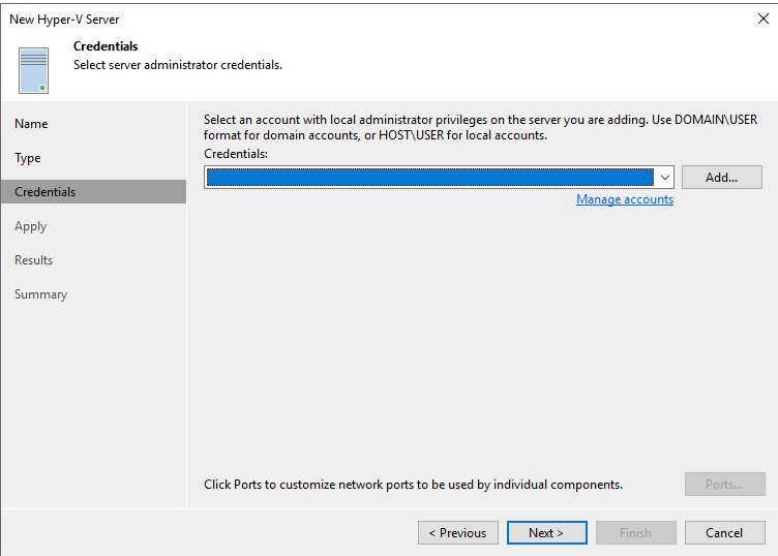
6. On the Name page, specify a DNS name, IP address, and description for the Microsoft Hyper-V server and click Next.

The screenshot shows the 'New Hyper-V Server' wizard at the 'Name' step. The left sidebar lists 'Name', 'Type', 'Credentials', 'Apply', 'Results', and 'Summary'. The main area has a title 'Name' and a subtitle 'Specify DNS name or IP address of Microsoft Hyper-V server.' Below this, there is a text box for 'DNS name or IP address' containing 'HPHV01' and a larger text box for 'Description' containing 'Created by GOODDEALMART\csun at 1/5/2023 12:02 PM'. At the bottom right are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

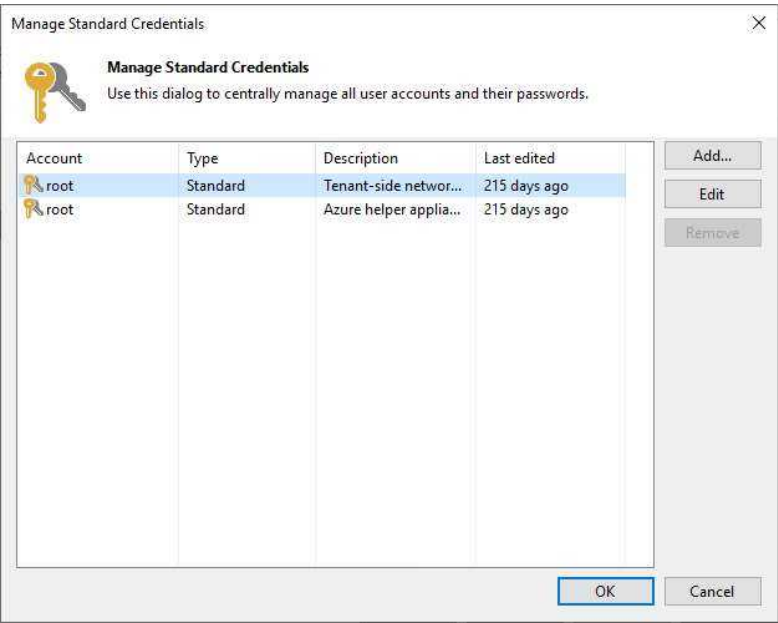
7. Select Microsoft Hyper-V server (standalone) on the Type page and click Next.

The screenshot shows the 'New Hyper-V Server' wizard at the 'Type' step. The left sidebar lists 'Name', 'Type', 'Credentials', 'Apply', 'Results', and 'Summary'. The main area has a title 'Type' and a subtitle 'Select the type of server you want to add.' Below this, there are three radio button options: 'Microsoft System Center Virtual Machine Manager (SCVMM)' (unselected), 'Microsoft Hyper-V cluster' (unselected), and 'Microsoft Hyper-V server (standalone)' (selected). Each option has a brief description. At the bottom right are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

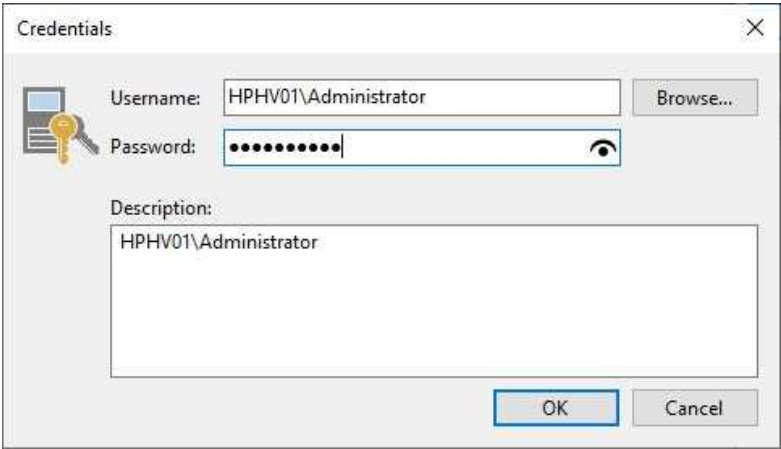
8. To add the credentials, select Add on the right or the Manage accounts link on the Credentials page.



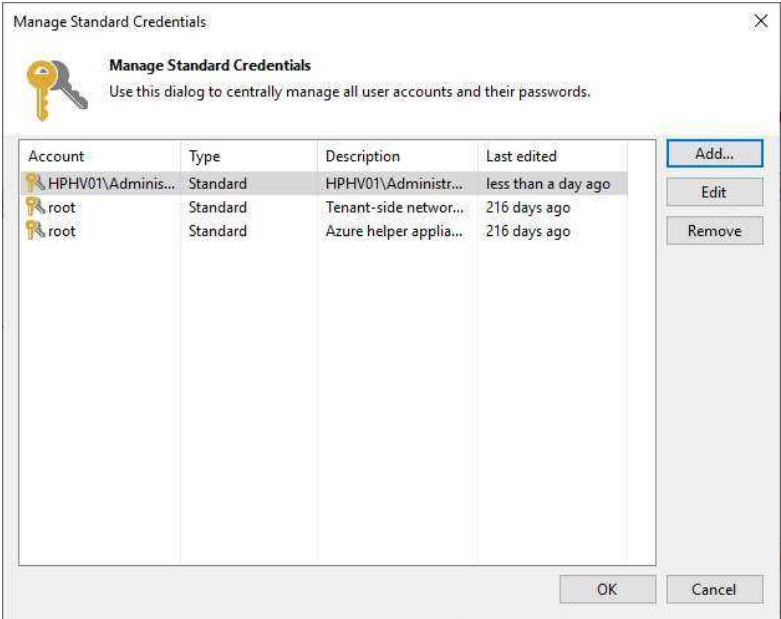
9. On the Manage Standard Credentials page, click Add.



- 10. On the Credentials page, enter a user name you want to add in the Username field.
- 11. In the Password field, enter a password for the account you want to add.
- 12. Enter a description in the Description field and click OK.



- 13. On the Manage Standard Credentials page, click OK.



14. On the Credentials page, click Next.

New Hyper-V Server

Credentials
Select server administrator credentials.

Name

Type

Credentials

Apply

Results

Summary

Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER format for domain accounts, or HOST\USER for local accounts.

Credentials:

HPHV01\Administrator (HPHV01\Administrator, last edited: less than a day ago) Add...

[Manage accounts](#)

Click Ports to customize network ports to be used by individual components. Ports...

< Previous Next > Finish Cancel

15. On the Apply page, click Apply.

New Hyper-V Server

Apply
Please review your settings and click Apply to continue.

Name

Type

Credentials

Apply

Results

Summary

Due to these modifications the following components will be installed or removed on the target host:

Component name	Status
Transport	will be installed
Hyper-V Integration	will be installed

This Hyper-V server will act as the backup proxy for jobs running in the on-host backup mode.

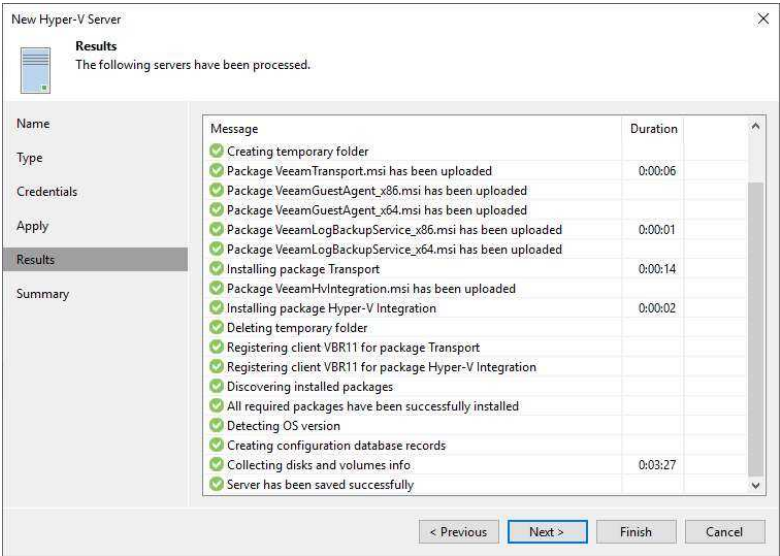
Task limit:

4

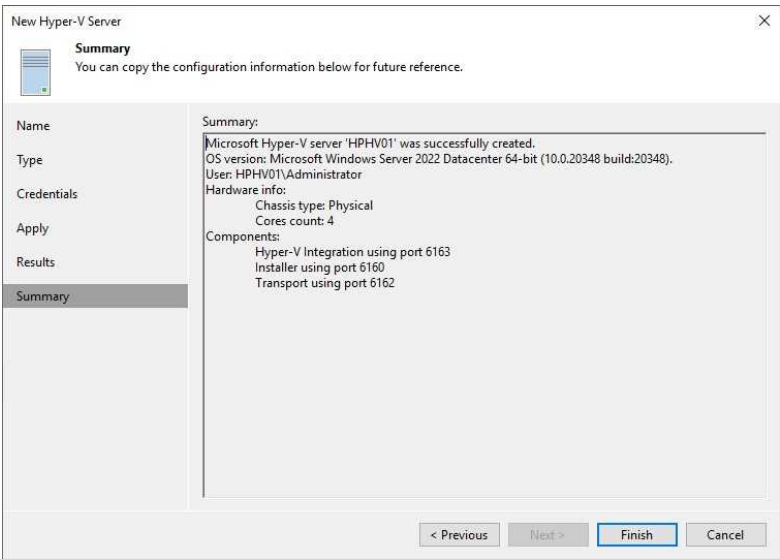
After you click Apply missed components will be installed on the target host.

< Previous Apply Finish Cancel

16. On the Results page, ensure Veeam completes the Microsoft Hyper-V server adding procedure without error and click Next.



17. On the Summary page, review the details of the Microsoft Hyper-V server and click Finish.



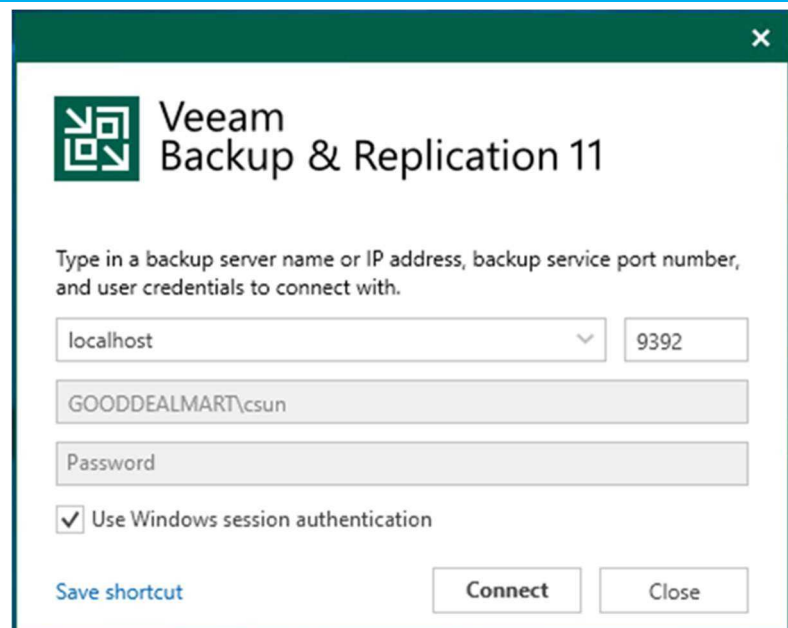
Add Microsoft Hyper-V Clusters

You must add the Microsoft Hyper-V clusters you plan to use as source and target for backup, replication and other activities.

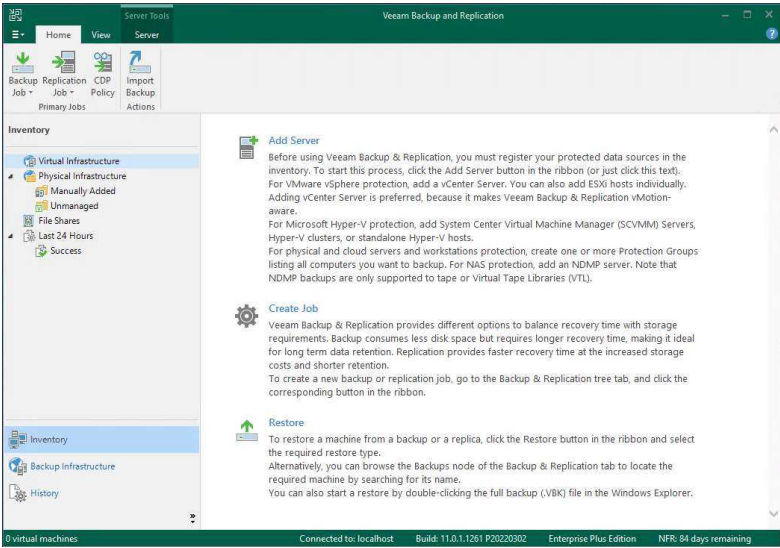
Instructions

Screenshot (if applicable)

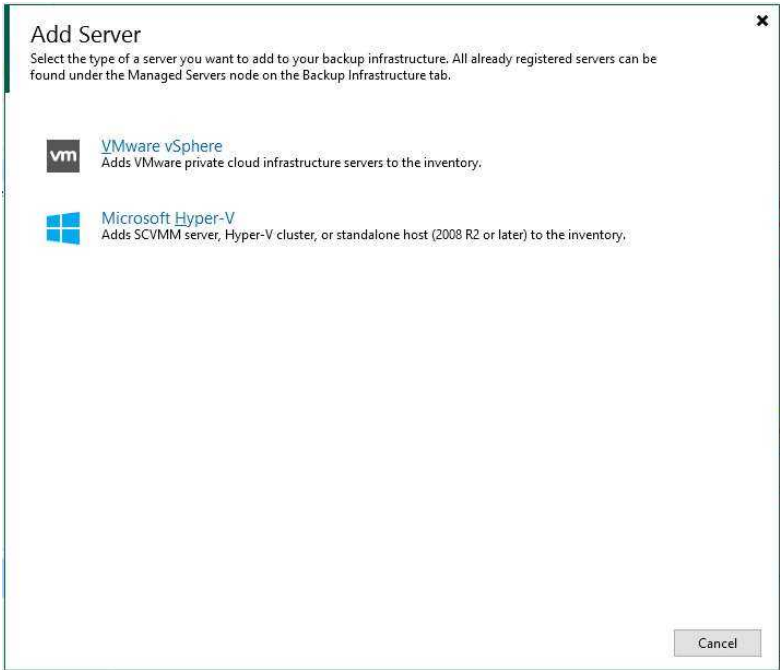
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



- 3. On the Home page, select Inventory.
- 4. On the Inventory page, select Virtual Infrastructure and click Add Server.



- 5. On the Add Server page, select Microsoft Hyper-V.



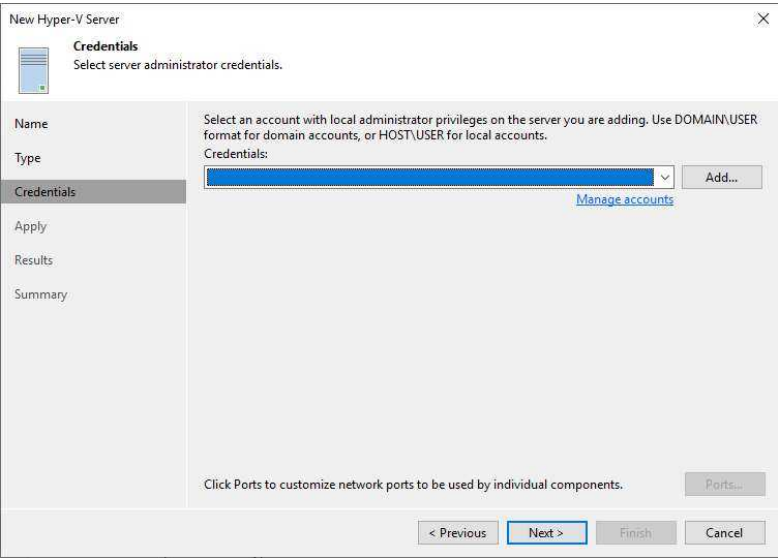
- On the Name page, enter a DNS name, IP address, and description for the Microsoft Hyper-V cluster and click Next.

The screenshot shows the 'New Hyper-V Server' wizard at the 'Name' step. The left sidebar lists the steps: Name, Type, Credentials, Apply, Results, and Summary. The main area has a title 'Name' and a subtitle 'Specify DNS name or IP address of Microsoft Hyper-V server.' Below this, there is a text box for 'DNS name or IP address' containing 'FABS2DCLU01' and a larger text box for 'Description' containing 'Created by GOODDEALMART\csun at 1/5/2023 3:08 PM.' At the bottom right, there are four buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

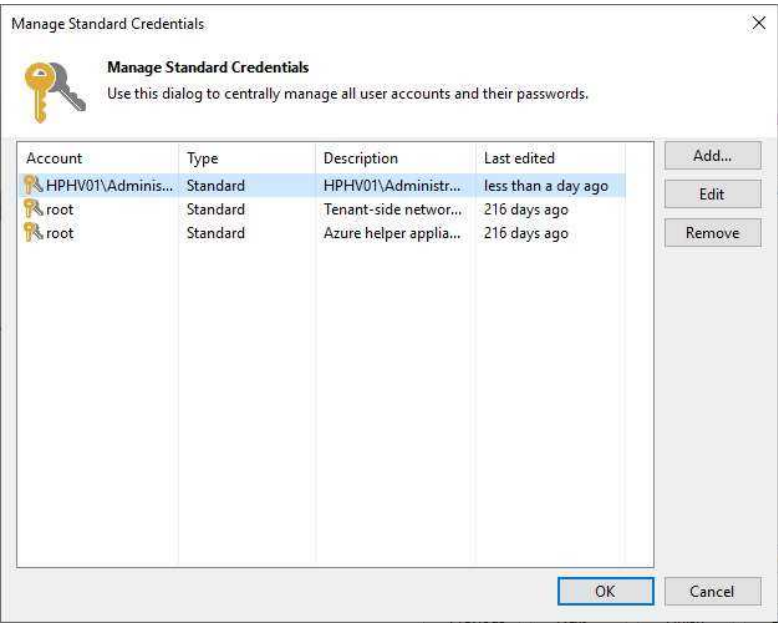
- On the Type page, select Microsoft Hyper-V cluster and click Next.

The screenshot shows the 'New Hyper-V Server' wizard at the 'Type' step. The left sidebar lists the steps: Name, Type, Credentials, Apply, Results, and Summary. The main area has a title 'Type' and a subtitle 'Select the type of server you want to add.' Below this, there are three radio button options: 'Microsoft System Center Virtual Machine Manager (SCVMM)' (unselected), 'Microsoft Hyper-V cluster' (selected), and 'Microsoft Hyper-V server (standalone)' (unselected). Each option has a brief description. At the bottom right, there are four buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

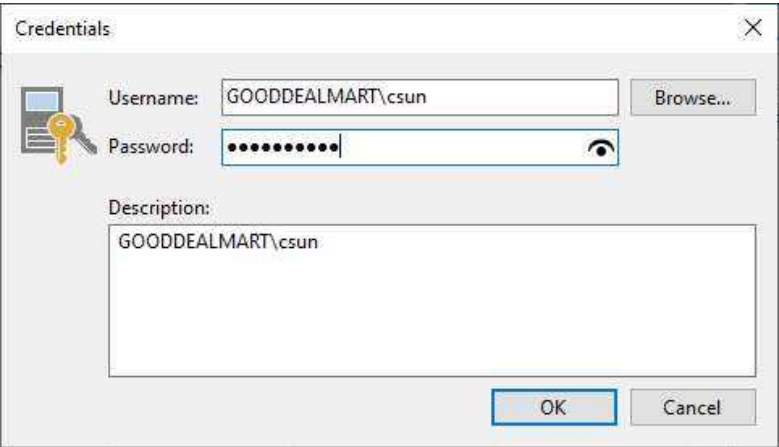
8. To add the credentials, select Add on the right or the Manage accounts link on the Credentials page.



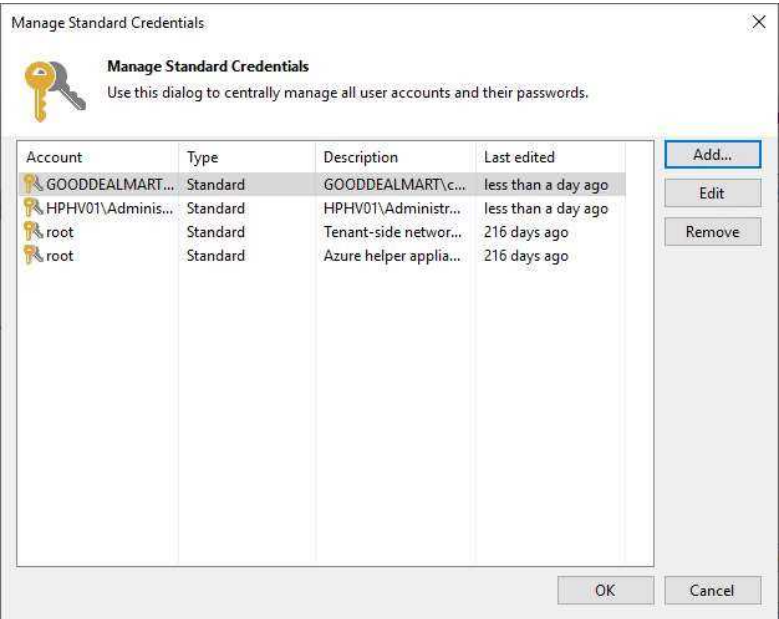
9. On the Manage Standard Credentials page, click Add.



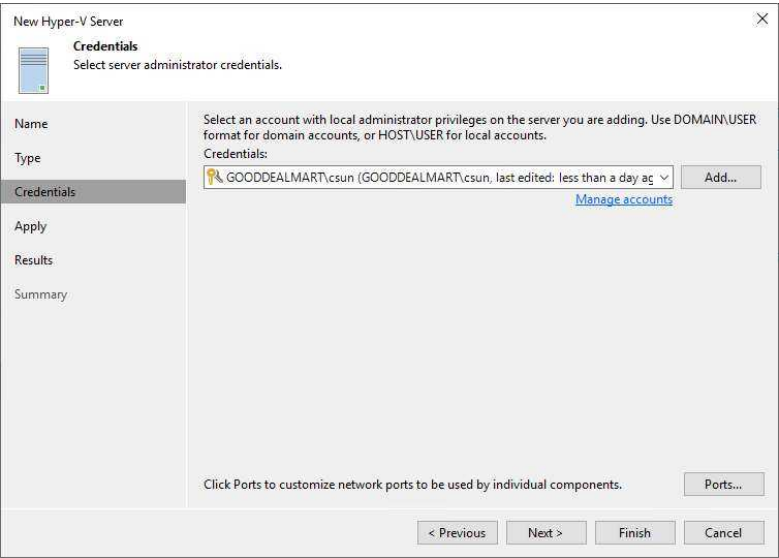
- 10. On the Credentials page, enter a domain user name for the account you want to add in the Username field.
- 11. Enter a password in the Password field.
- 12. Enter a description in the Description field, and click OK.



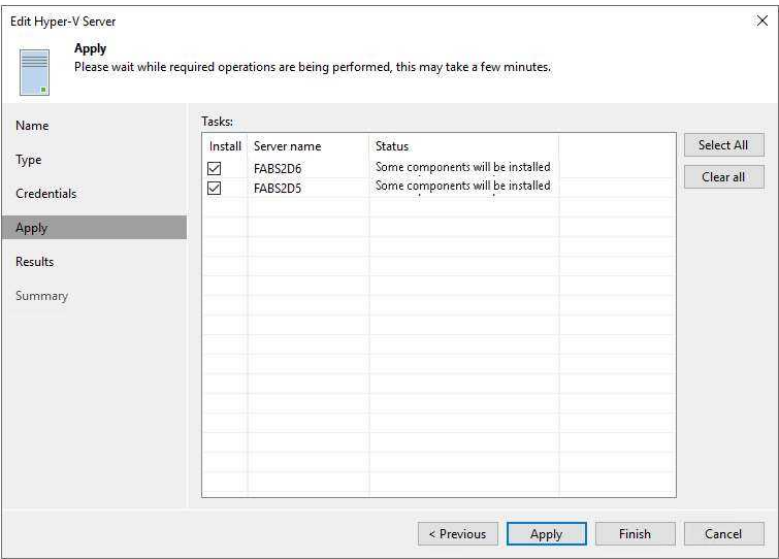
- 13. On the Manage Standard Credentials page, click OK.



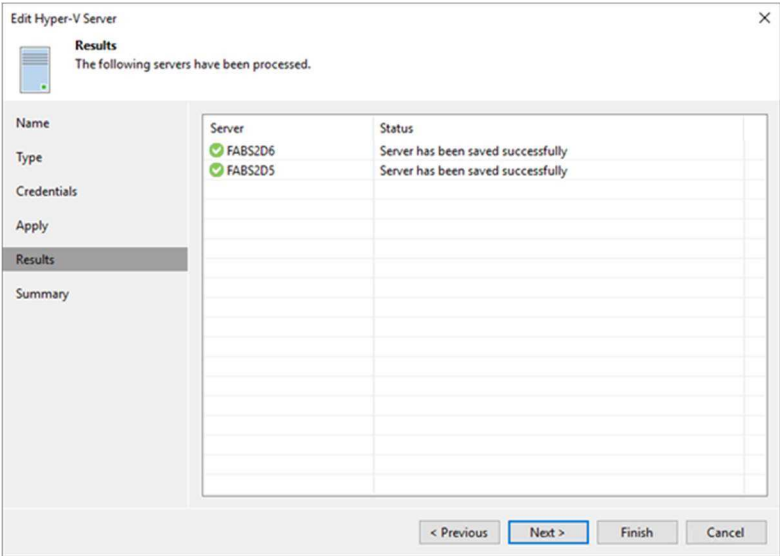
14. On the Credentials page, click Next.



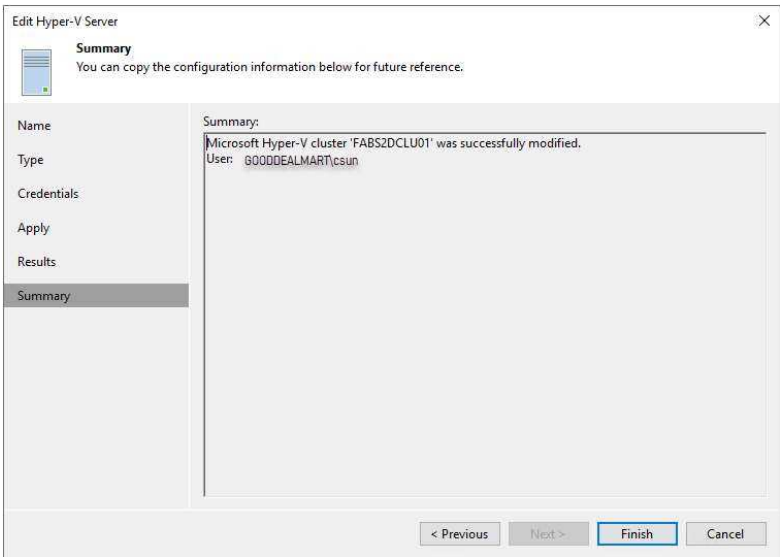
15. On the Apply page, click Select All and then click Apply.



16. On the Results page, ensure Veeam completes the adding the Microsoft Hyper-V cluster process without error and click Next.



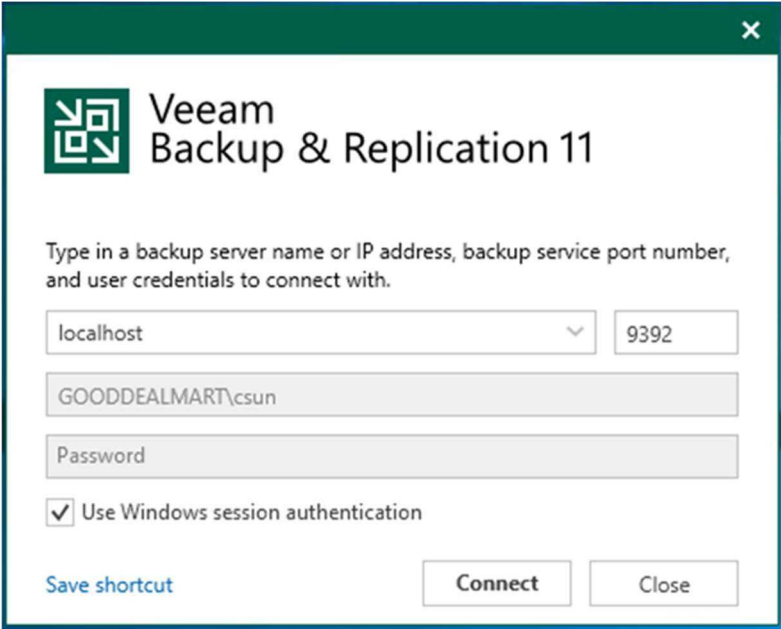
17. On the Summary page, review the details of the Microsoft Hyper-V server and click Finish.



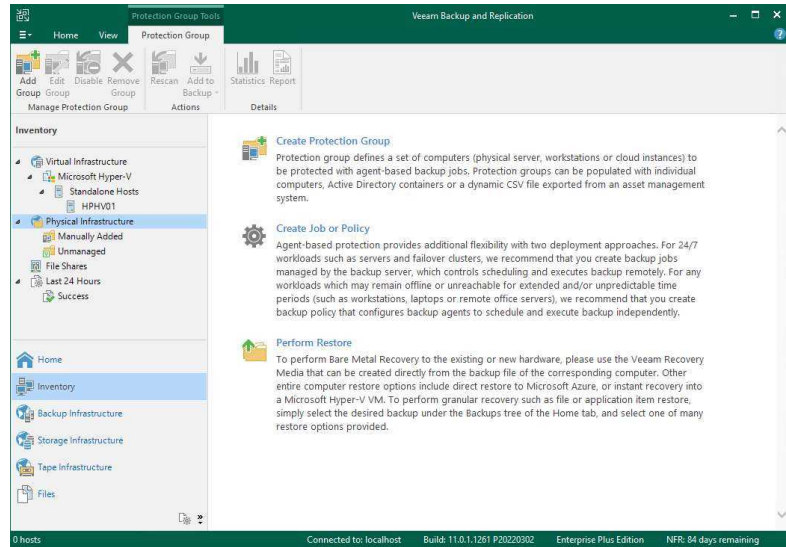
Add Veeam Agent to Microsoft Windows Physical machines

Veeam Backup & Replication is a centralized control center for deploying and managing Veeam Agent, including Veeam Agent for Microsoft Windows, Veeam Agent for Linux, Veeam Agent for IBM AIX, Veeam Agent for Oracle Solaris and Veeam Agent for Mac.

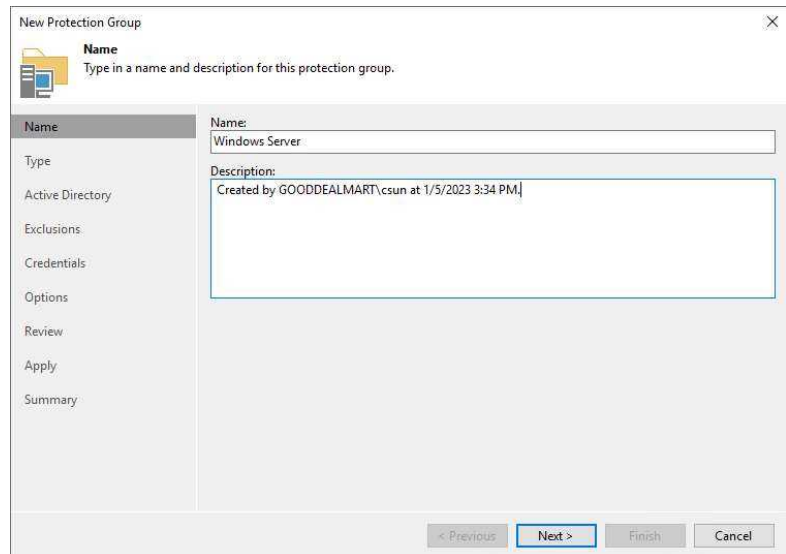
Physical machines running Windows, Linux, Unix, or macOS can be backed up and restored. Backup agents are installed on each computer by Veeam Backup & Replication.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 The screenshot shows the 'Veeam Backup & Replication 11' console window. It features a dark green header with the Veeam logo and title. Below the header, there is a text prompt: 'Type in a backup server name or IP address, backup service port number, and user credentials to connect with.' This is followed by four input fields: a dropdown menu currently showing 'localhost', a text box with '9392', a text box with 'GOODDEALMART\csun', and a password field labeled 'Password'. Below these fields is a checkbox labeled 'Use Windows session authentication' which is checked. At the bottom of the window, there are three buttons: 'Save shortcut' (in blue text), 'Connect', and 'Close'.

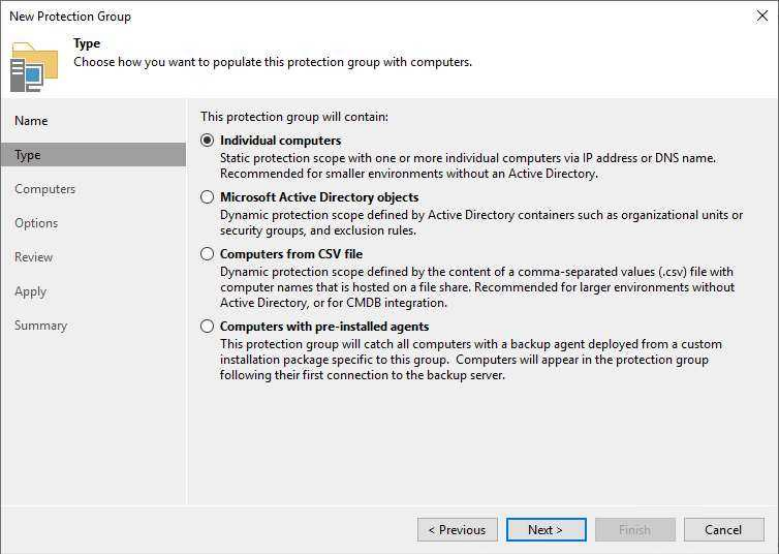
3. On the Home page, select Inventory.
4. On the Inventory page, select Physical Infrastructure and click Create Protection Group.



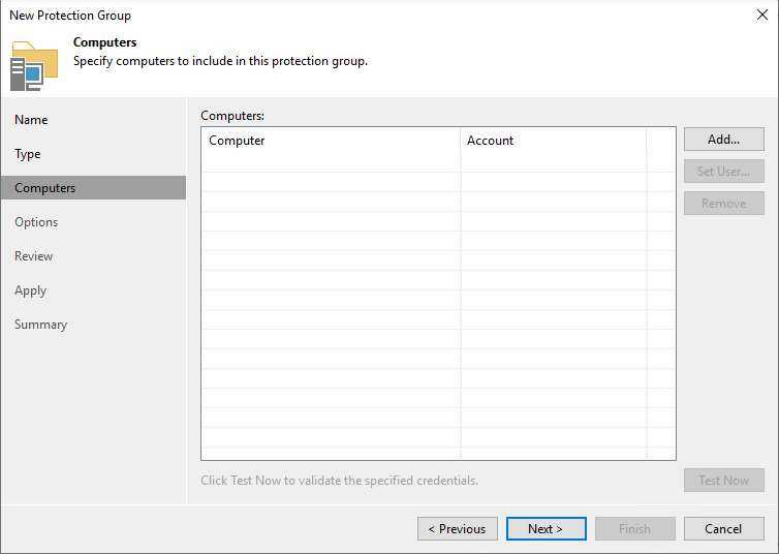
5. On the Name page, specify a protection group name and description for the protection group and click Next.



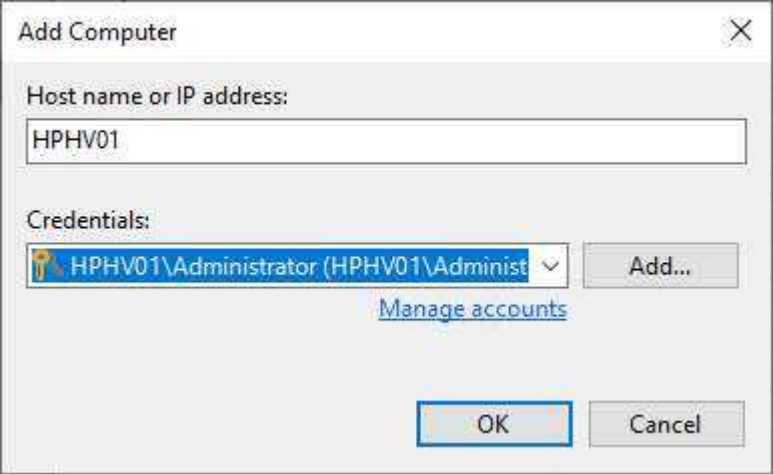
6. Select Specify protection scope for the created protection group on the Type page and click Next.



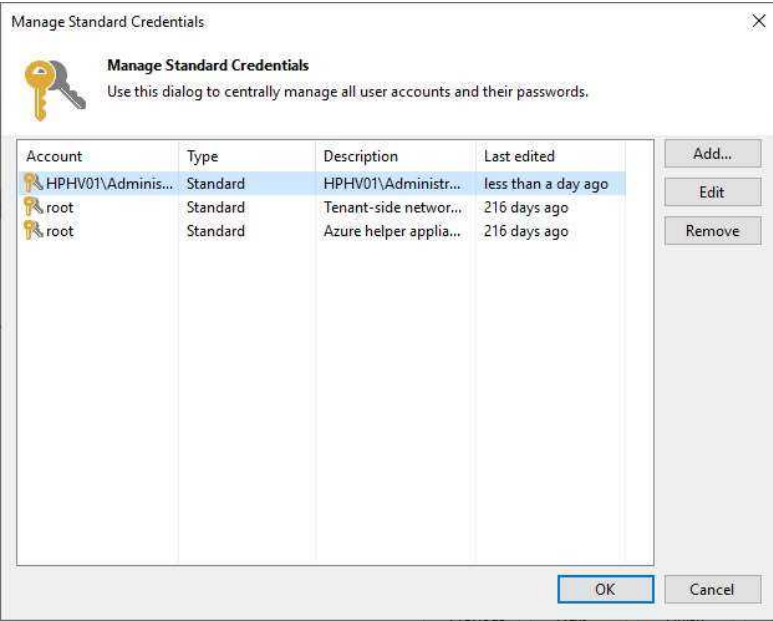
7. On the Computers page, click Add.



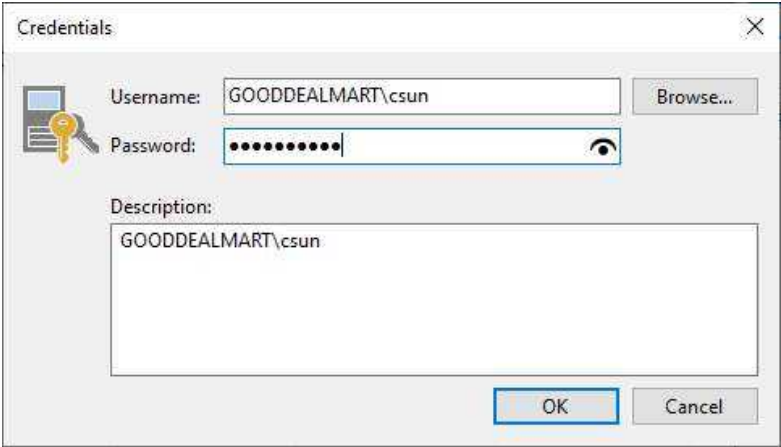
- 8. Specify a DNS name or IP address on the Add Computer page.
- 9. From the Credentials list, select a user account with administrative permissions on the computer and click OK.
- 10. If you still need to set up credentials beforehand, click the Manage accounts link or Add on the right.



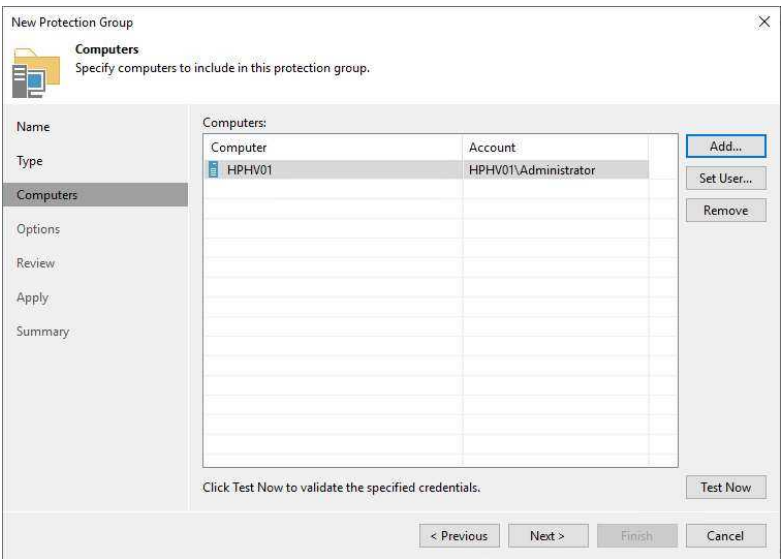
- 11. On the Manage Credentials page, select the administrator account and click Add.



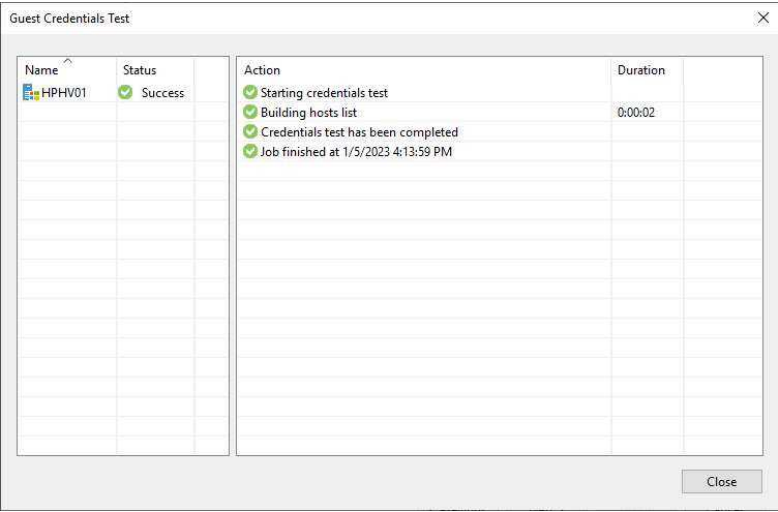
- 12. On the Credentials page, enter a domain user name for the account you want to add in the Username field.
- 13. Enter a password in the Password field.
- 14. Enter a description in the Description field, and click OK.



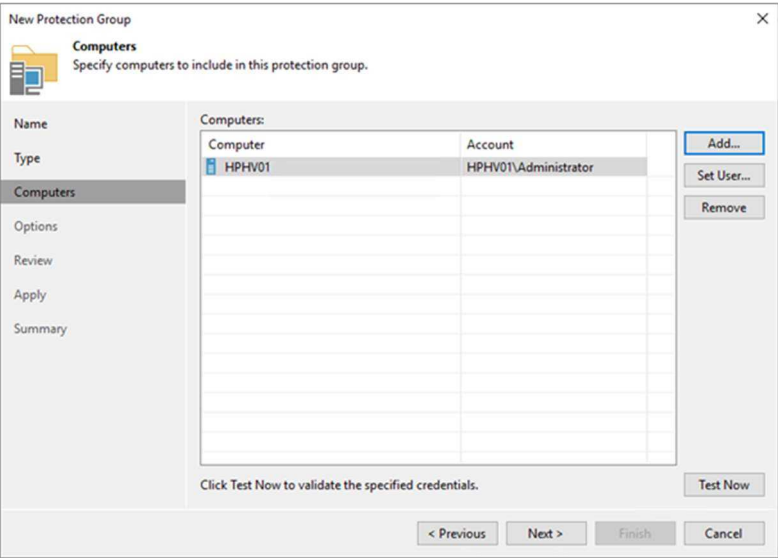
- 15. On the Computers page, click Test Now.



16. On the Guest Credentials Test page, ensure the status is successful and click Close.



17. On the Computers page, click Next.



18. On the Options page, in the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group.
19. In the Deployment section, from the Distribution server list, select a Microsoft Windows server that you plan to use as a distribution server.
20. Select the Install changed block tracking driver on Windows Server OS check box if you want to install the advanced changed block tracking (CBT) driver on servers protected with Veeam Agent for Microsoft Windows.
21. Click Advanced to customize advanced protection group settings.

The screenshot shows the 'New Protection Group' dialog box with the 'Options' tab selected. The 'Options' tab is divided into two sections: 'Discovery' and 'Deployment'.

Discovery Section:

- Rescan protection group every:** ☒ Daily at this time: 9:00 PM, Everyday, Days...
- ☐ Periodically every: 1, Hours, Schedule...

Deployment Section:

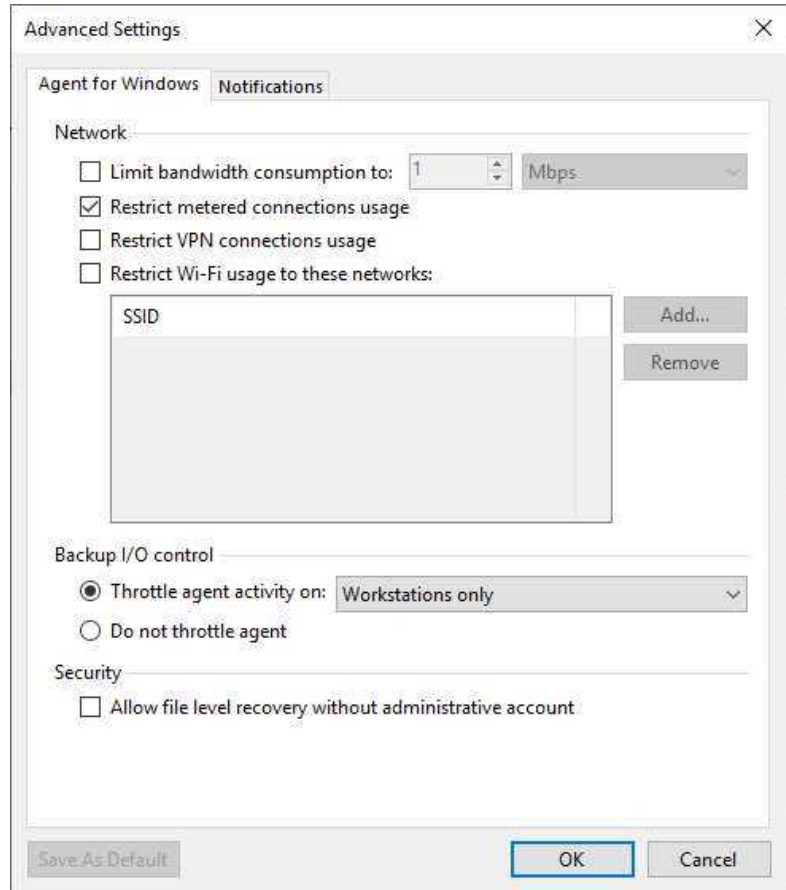
- Distribution server:** VBR11.gooddealmart.ca (Backup server)
- Protected computers will download backup agent redistributable from this server.
- ☒ Install backup agent automatically (recommended)
- ☒ Auto-update backup agent
- ☒ Install changed block tracking driver on Windows Server OS
- ☐ Perform reboot automatically if required

At the bottom of the 'Deployment' section, there is a link: 'Customize advanced protection group settings such as e-mail notifications. [Advanced](#)'.

At the bottom of the dialog box, there are four buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

22. On the Advanced Settings page, specify the below settings that will be deployed on computers included in the protection group and click OK.

- Limiting bandwidth consumption: specify the maximum speed for transferring backed-up data from the Veeam Agent computer to the target location.
- Restrict metered connections usage: Veeam Agent automatically detects metered connections and does not perform backup when your computer is on such connection.
- Restrict VPN connection usage: Veeam Agent for Microsoft Windows will



automatically detect a VPN connection and will not perform a backup when the Veeam Agent computer is on such a connection.

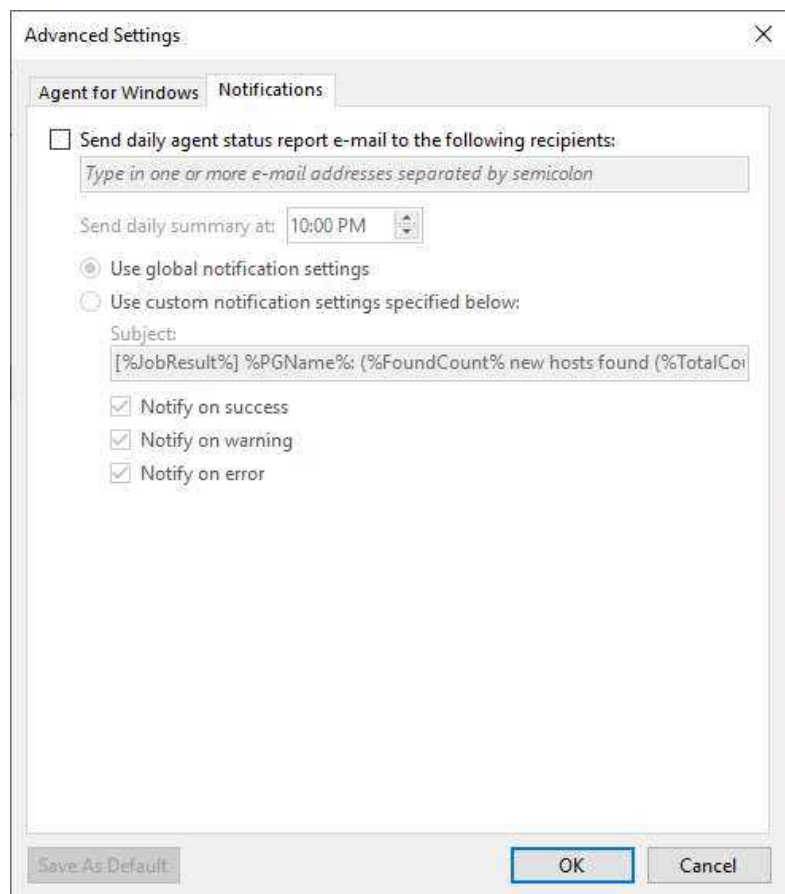
- Restrict Wi-Fi usage to these networks: restrict usage of wireless networks for Veeam Agent running on Microsoft Windows workstations.

23. Backup I/O settings: You can instruct Veeam Agent for Microsoft Windows to throttle its activities during backup.

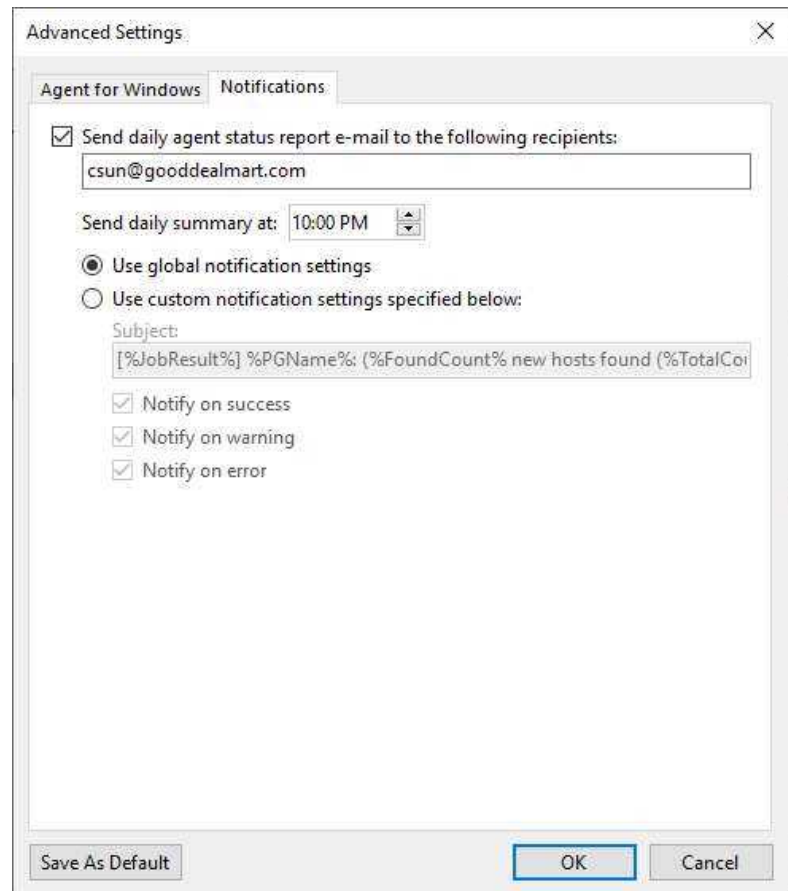
- Throttle agent activity on the type of computers to throttle Veeam Agent backup activities: Workstations only, Servers only or All hosts.

24. Security settings: You can allow user accounts that do not have administrative privileges on a Veeam Agent computer to perform a file-level restore on this computer.

25. On the Advanced page, select Notifications.



26. On the Notification page, select Send daily agent status report e-mail to the following recipients and enter an email address for each recipient. Multiple addresses can be entered, separated by a semicolon.
27. You can use global notification settings or specify custom notification settings and click OK.



28. On the Options page, click Next.

New Protection Group

Options
Specify host discovery schedule and automatic backup agent deployment options.

Name

Type

Computers

Options

Review

Apply

Summary

Discovery

Rescan protection group every:

☒ Daily at this time: 9:00 PM Everyday Days...

☐ Periodically every: 1 Hours Schedule...

Deployment

Distribution server: VBR11.gooddealmart.ca (Backup server)

Protected computers will download backup agent redistributable from this server.

☒ Install backup agent automatically (recommended)

☒ Auto-update backup agent

☒ Install changed block tracking driver on Windows Server OS

☐ Perform reboot automatically if required

Customize advanced protection group settings such as e-mail notifications. [Advanced](#)

< Previous Next > Finish Cancel

29. On the Review page, click Apply.

New Protection Group

Review
Review the settings, and click Apply to continue.

Name

Type

Computers

Options

Review

Apply

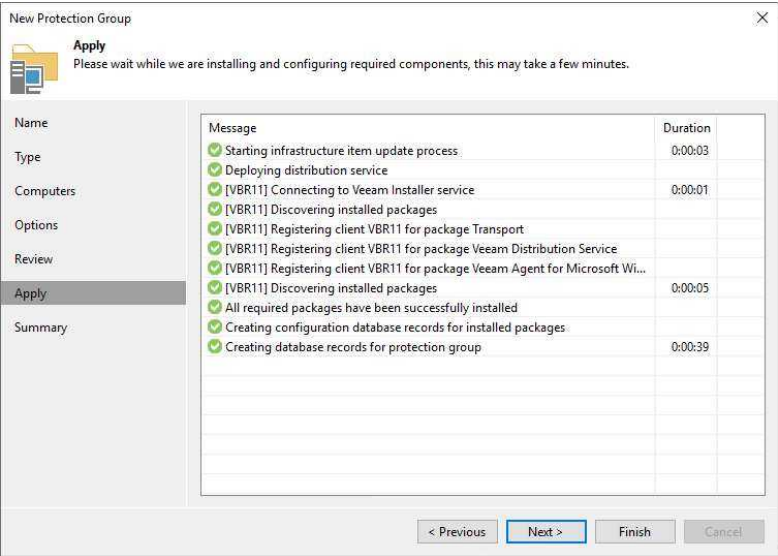
Summary

The following components will be processed on VBR11.gooddealmart.ca:

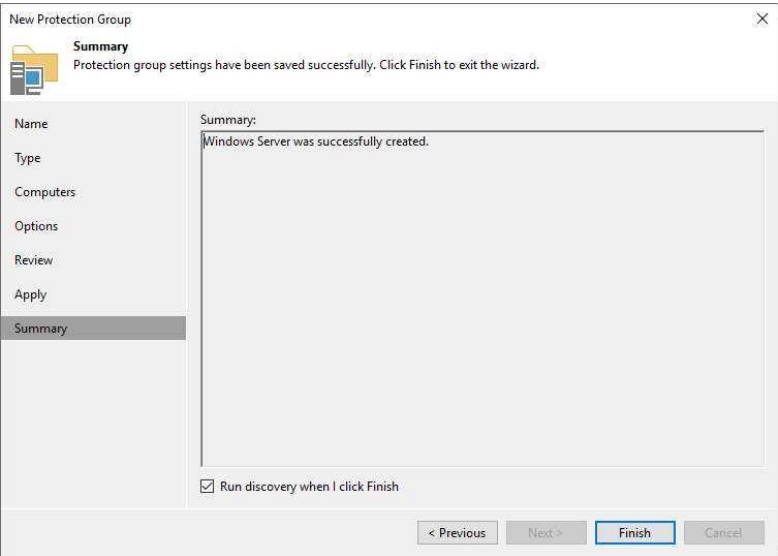
Component name	Status
Transport	already exists
Veeam Distribution Service	already exists
Veeam Agent for Microsoft Windows Redistributable	already exists

< Previous **Apply** Finish Cancel

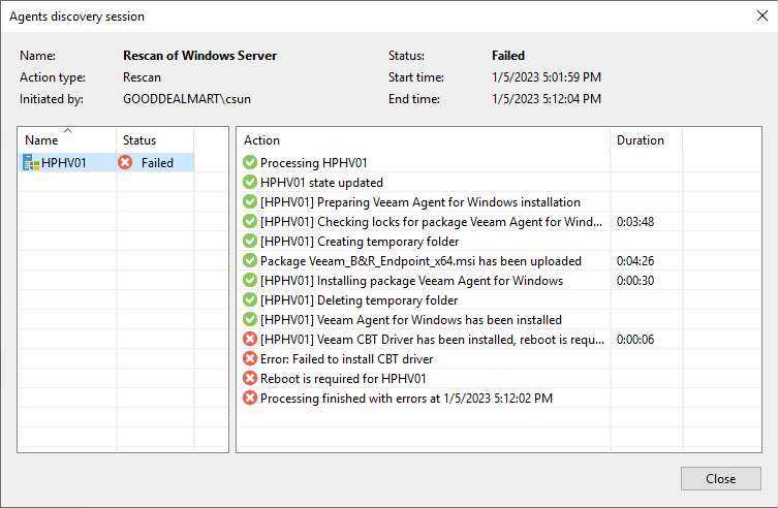
30. On the Apply page, ensure the operation is complete without error, and click Next.



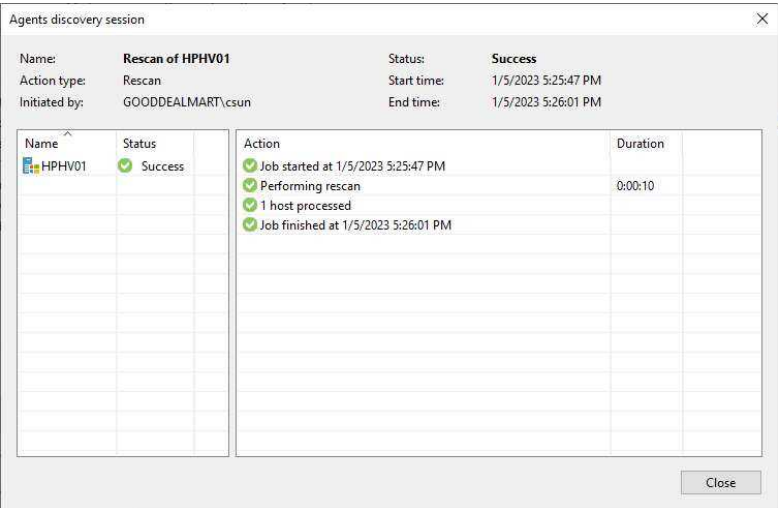
31. On the Summary page, click Finish.



32. The Computers need to reboot if you select install changed block tracking driver on Windows Server OS.



33. Ensure the operation is complete without error on the Agents discovery session page.



Configuring Backup Infrastructure

The backup infrastructure of Veeam Backup & Replication consists of Backup proxy servers, Backup Repositories, Object storage repositories, Scale-out Repositories, External Repositories, WAN Accelerators, and Managed Servers.

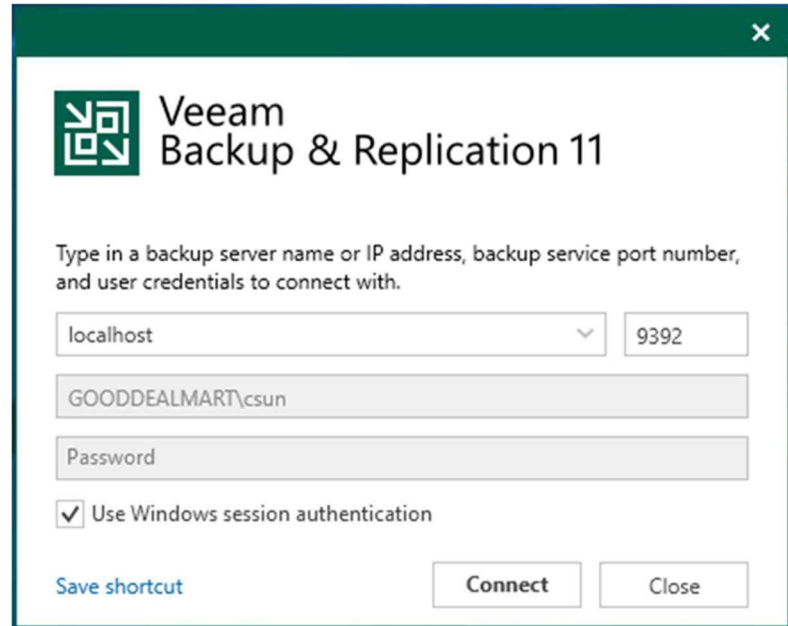
You can install Veeam Backup & Replication components on the same physical or virtual machine. Alternatively, you can set them up separately for a more scalable approach.

Adding Microsoft Hyper-V Standalone Servers

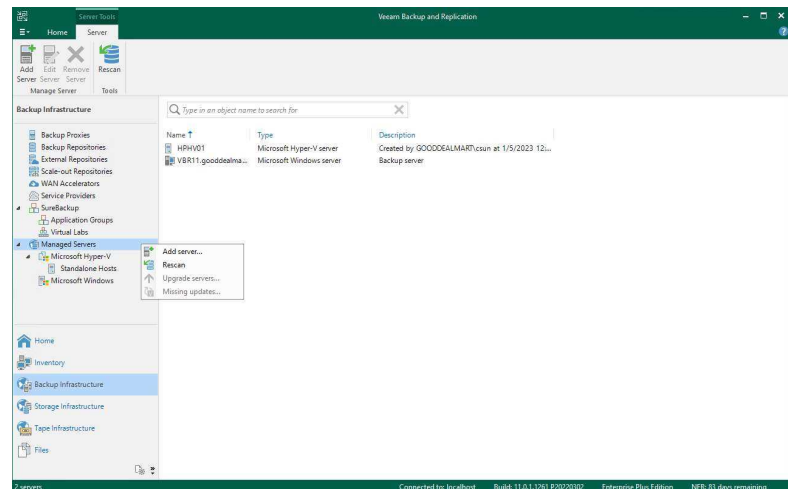
You must add the Microsoft Hyper-V standalone hosts you plan to use as source and target for backup, replication and other activities. You can add them from Inventory or Backup Infrastructure.

Instructions	Screenshot (if applicable)
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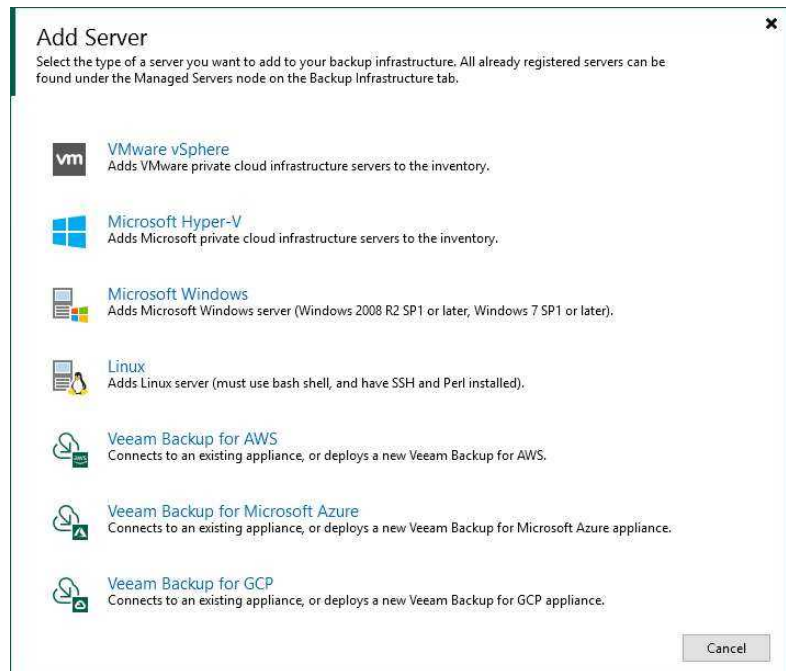
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



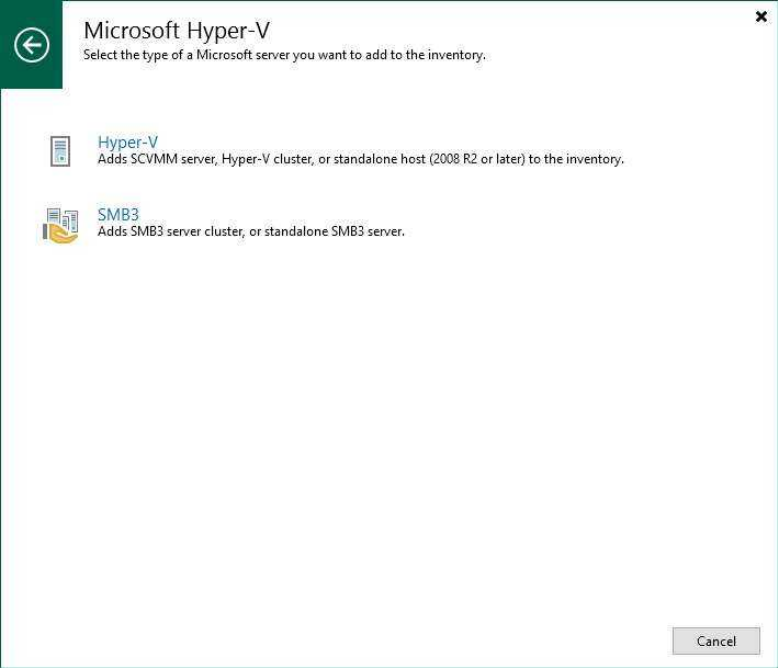
3. On the Home page, select Backup Infrastructure.
4. On the Backup Infrastructure page, select Managed Servers, right-click Managed Servers and select Add Server.



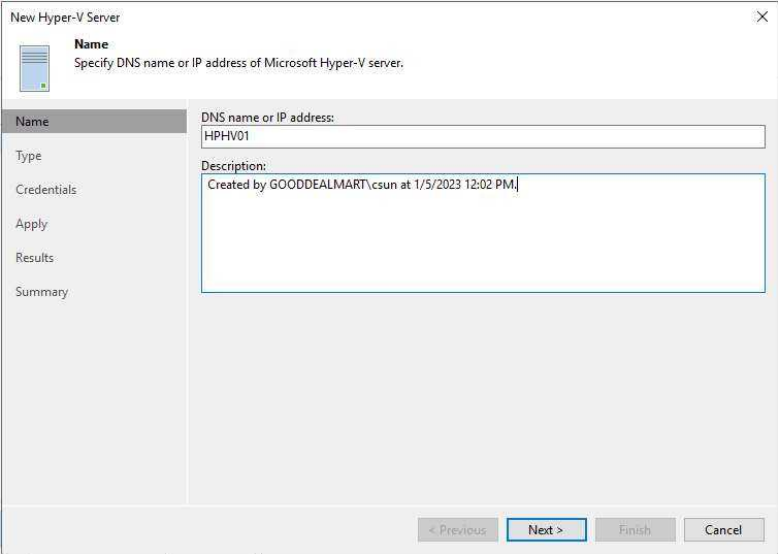
5. On the Add Server page, select Microsoft Hyper-V.



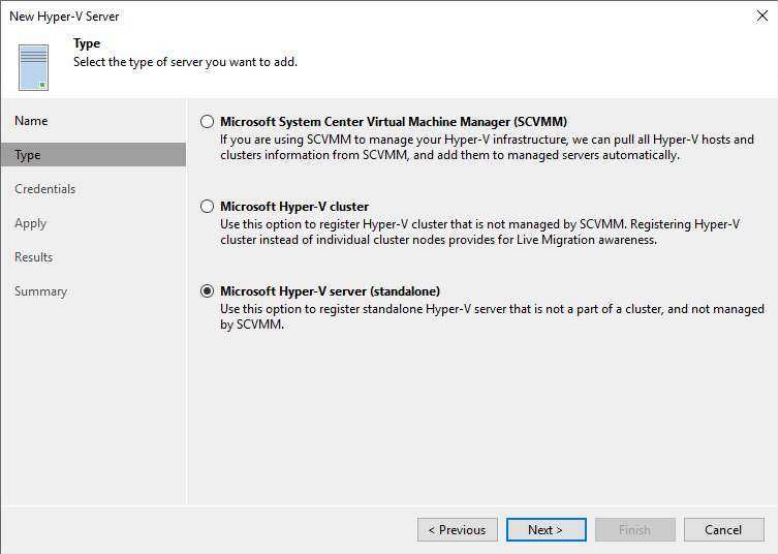
6. On the Microsoft Hyper-V page, select Hyper-V.



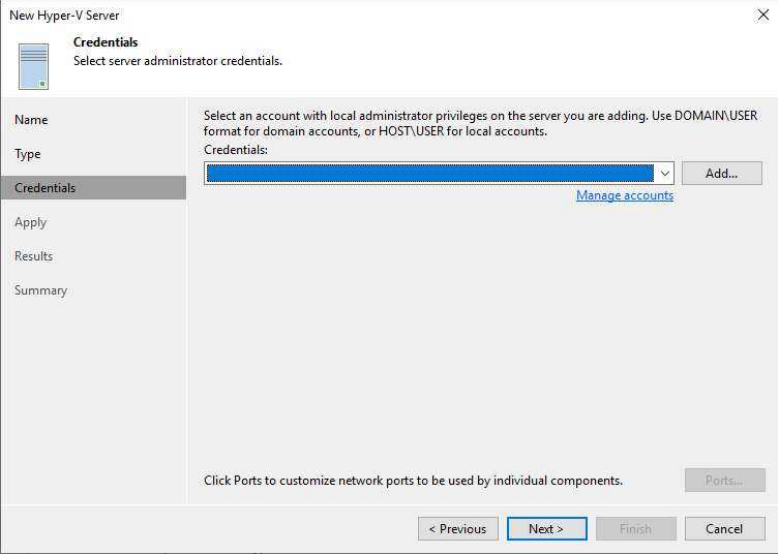
7. On the Name page, specify a DNS name, IP address, and description for the Microsoft Hyper-V server and click Next.



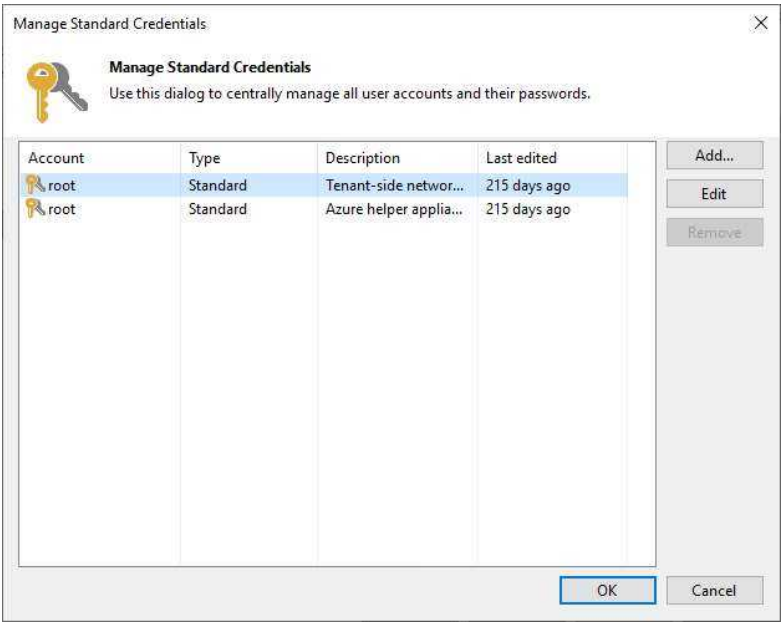
8. Select Microsoft Hyper-V server (standalone) on the Type page and click Next.



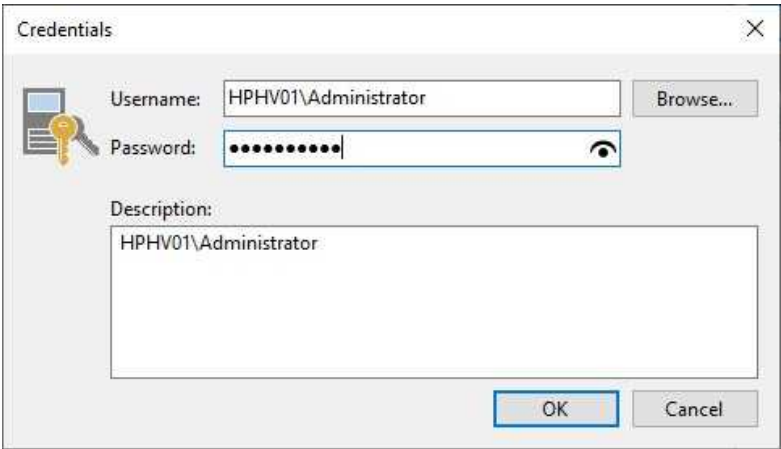
9. On the Credentials page, click the Manage accounts link or click Add on the right to add the credentials.



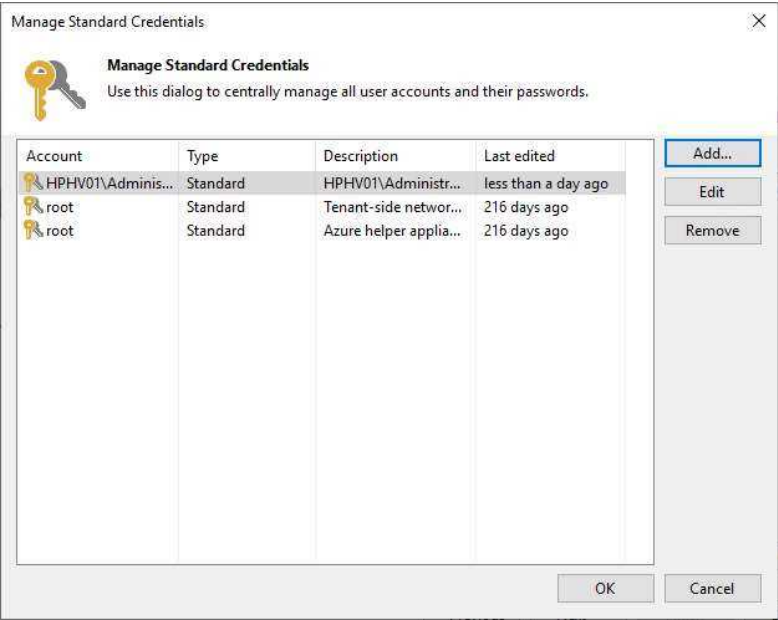
10. On the Manage Standard Credentials page, click Add.



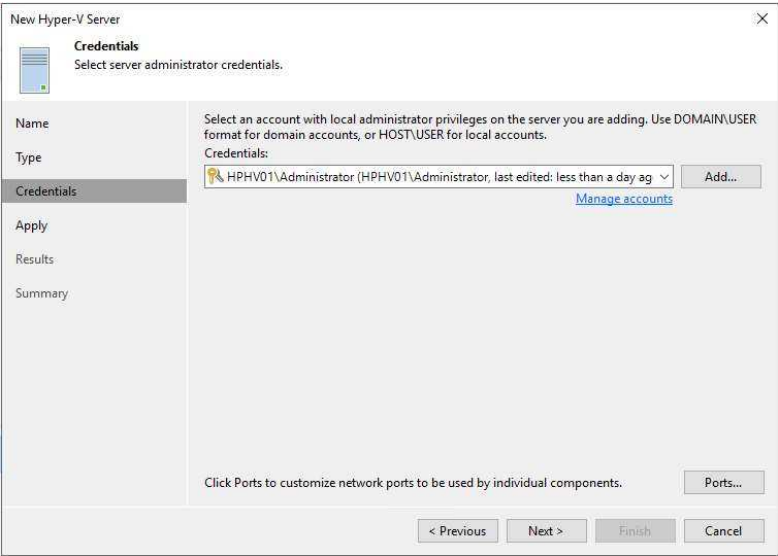
11. On the Credentials page, enter a user name in the Username field.
12. Enter a password in the Password field.
13. Enter a description in the Description field and click OK.



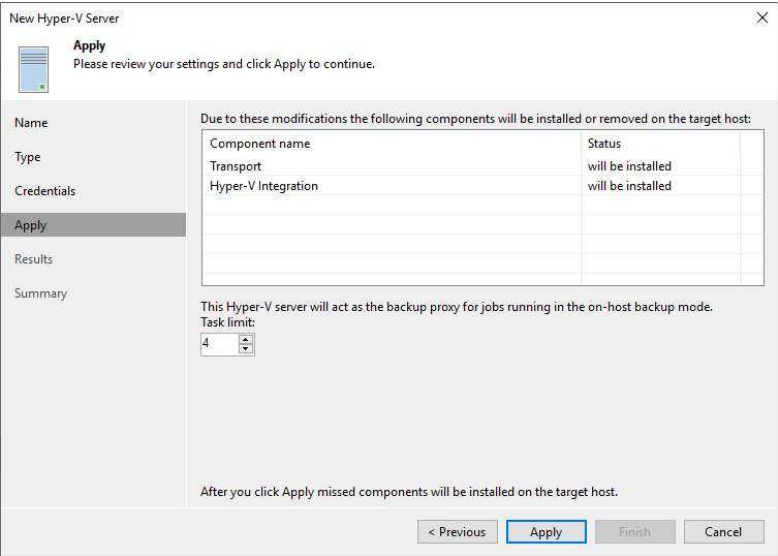
14. On the Manage Standard Credentials page, click OK.



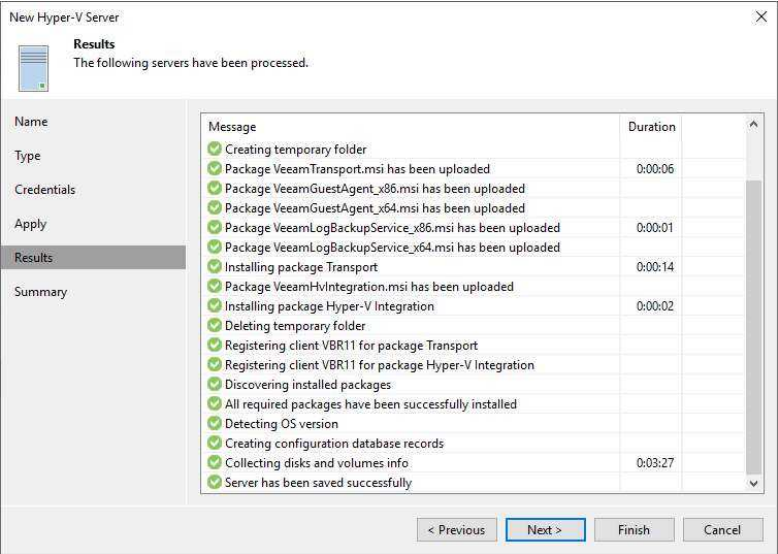
15. On the Credentials page, click Next.



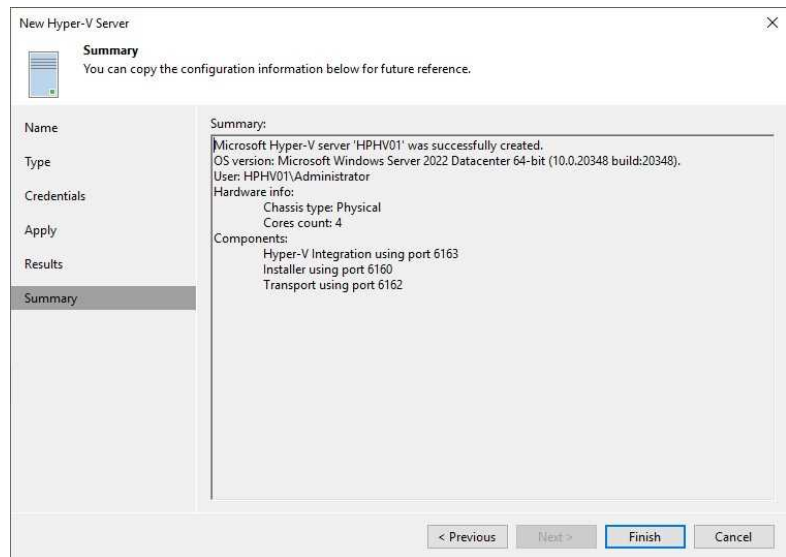
16. On the Apply page, click Apply.



17. On the Results page, complete the Microsoft Hyper-V server adding procedure without error, and click Next.

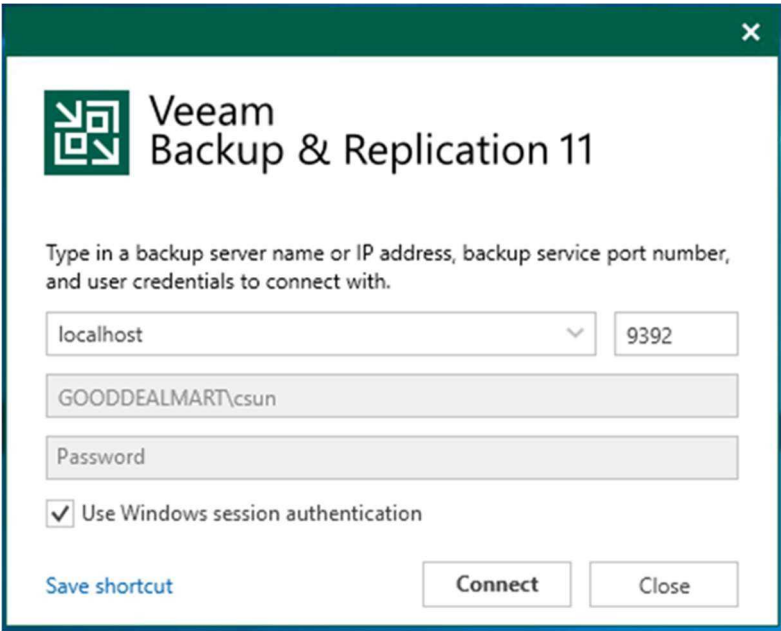


18. On the Summary page, review the details of the Microsoft Hyper-V server and click Finish.

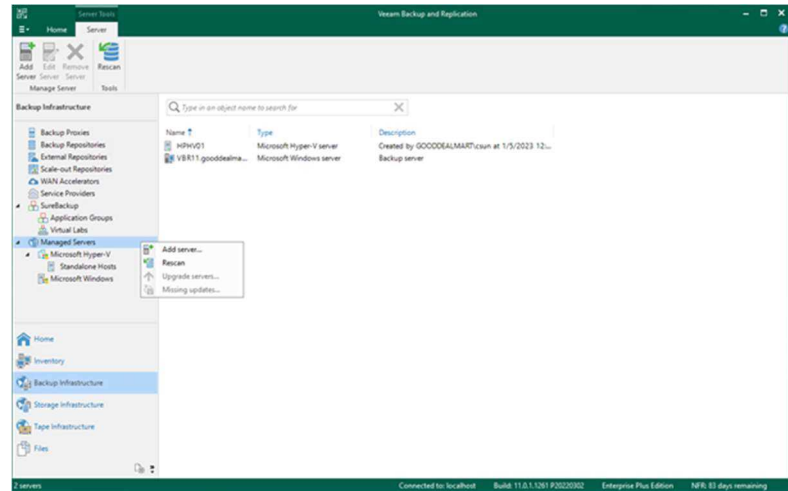


Adding Microsoft Hyper-V Clusters

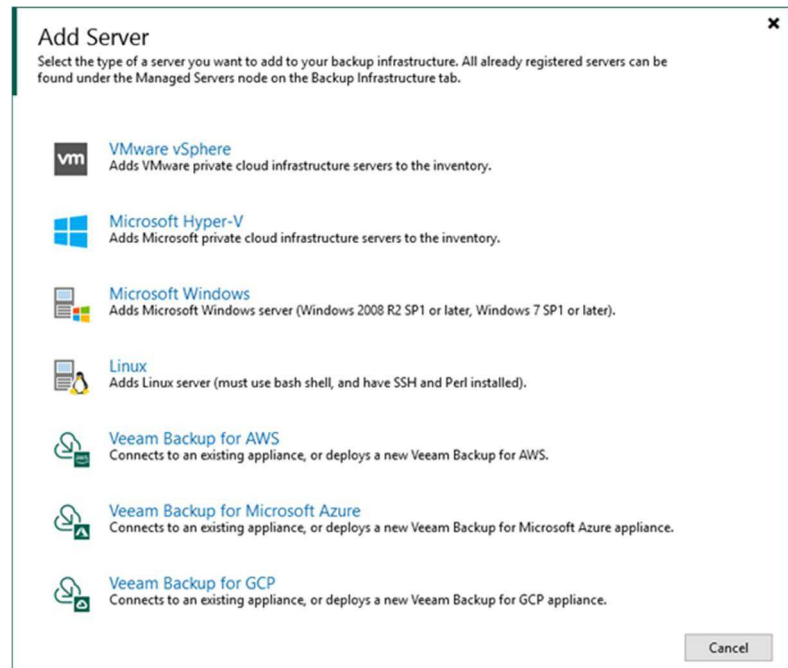
You must add the Microsoft Hyper-V clusters you plan to use as source and target for backup, replication and other activities. You can add them from Inventory or Backup Infrastructure.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 The screenshot shows a window titled "Veeam Backup & Replication 11" with a close button (X) in the top right corner. The window contains the Veeam logo and the text "Type in a backup server name or IP address, backup service port number, and user credentials to connect with." Below this text are four input fields: a dropdown menu with "localhost" selected, a text box with "9392", a text box with "GOODDEALMART\csun", and a text box with "Password". There is a checkbox labeled "Use Windows session authentication" which is checked. At the bottom of the window are three buttons: "Save shortcut", "Connect", and "Close".

3. On the Home page, select Backup Infrastructure.
4. On the Backup Infrastructure page, select Managed Servers, right-click Managed Servers, and select Add Server.



5. On the Add Server page, select Microsoft Hyper-V.



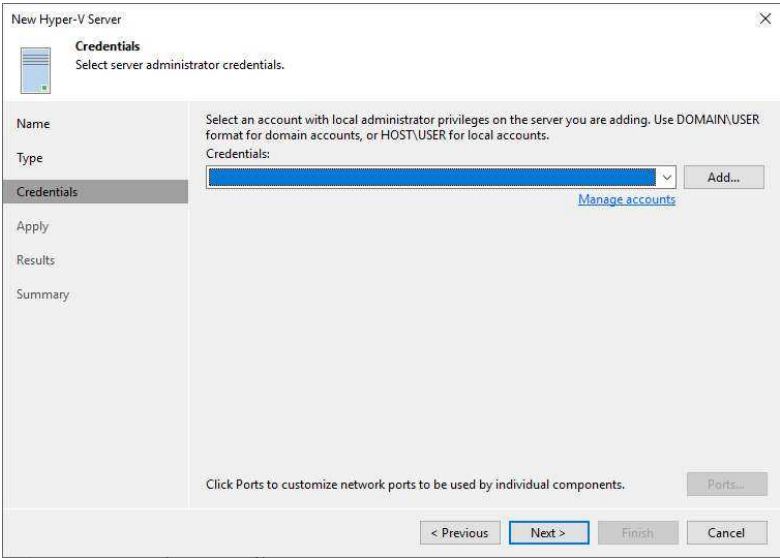
- On the Name page, specify a DNS name, IP address, and description for the Microsoft Hyper-V cluster and click Next.

The screenshot shows the 'New Hyper-V Server' wizard at the 'Name' step. The left sidebar lists the steps: Name, Type, Credentials, Apply, Results, and Summary. The main area is titled 'Name' and contains the instruction 'Specify DNS name or IP address of Microsoft Hyper-V server.' There are two input fields: 'DNS name or IP address' with the value 'FABS2DCLU01' and 'Description' with the value 'Created by GOODDEALMART\csun at 1/5/2023 3:08 PM.' At the bottom, there are four buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

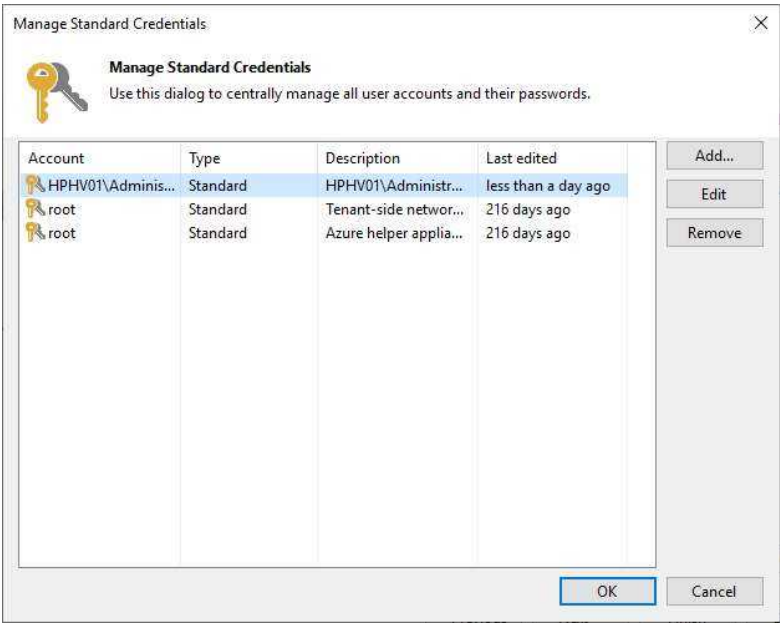
- On the Type page, select Microsoft Hyper-V cluster and click Next.

The screenshot shows the 'New Hyper-V Server' wizard at the 'Type' step. The left sidebar lists the steps: Name, Type, Credentials, Apply, Results, and Summary. The main area is titled 'Type' and contains the instruction 'Select the type of server you want to add.' There are three radio button options: 'Microsoft System Center Virtual Machine Manager (SCVMM)' (unselected), 'Microsoft Hyper-V cluster' (selected), and 'Microsoft Hyper-V server (standalone)' (unselected). Each option has a brief description. At the bottom, there are four buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

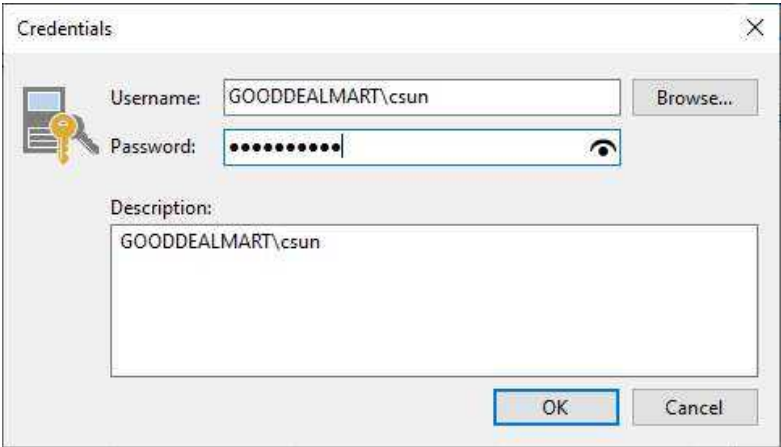
8. On the Credentials page, click the Manage accounts link or Add on the right to add the credentials.



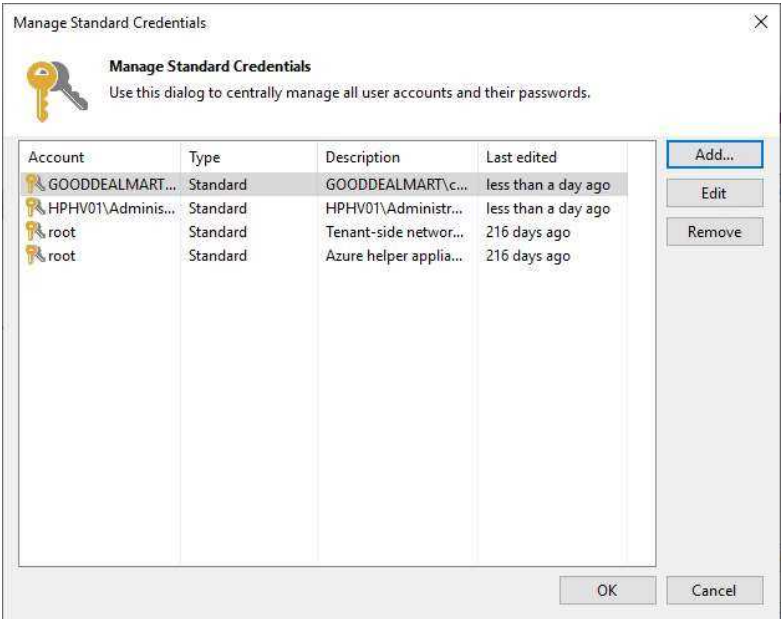
9. On the Manage Standard Credentials page, click Add.



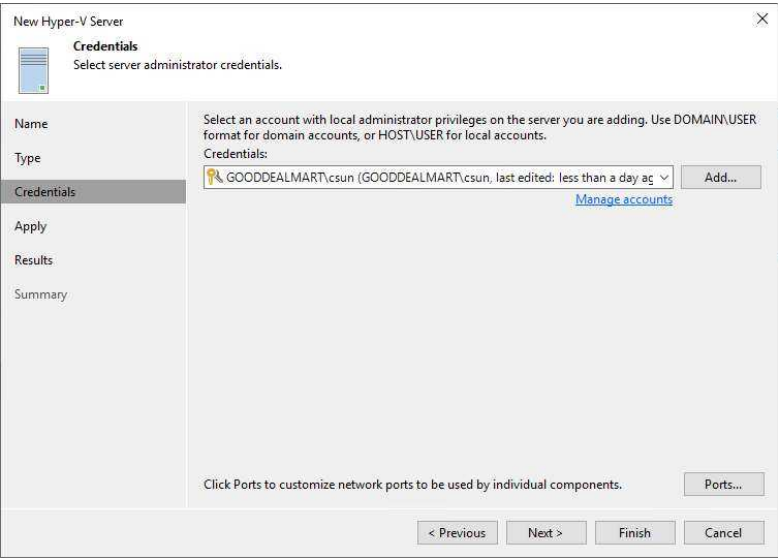
- 10. On the Credentials page, enter a domain user name for the account you want to add in the Username field.
- 11. Enter a password In the Password field.
- 12. Enter a description in the Description field, and click OK.



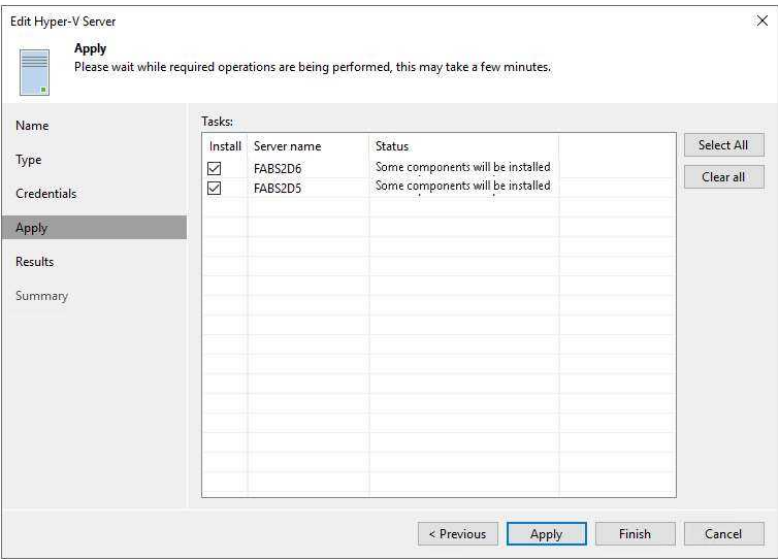
- 13. On the Manage Standard Credentials page, click OK.



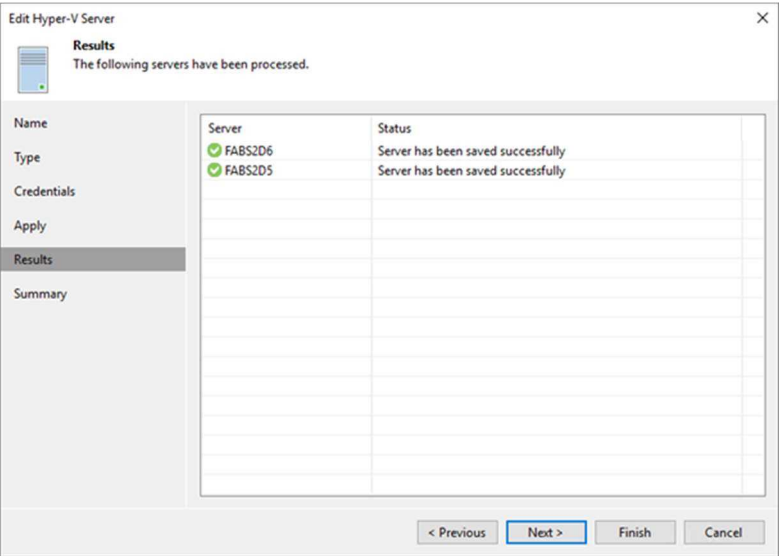
14. On the Credentials page, click Next.



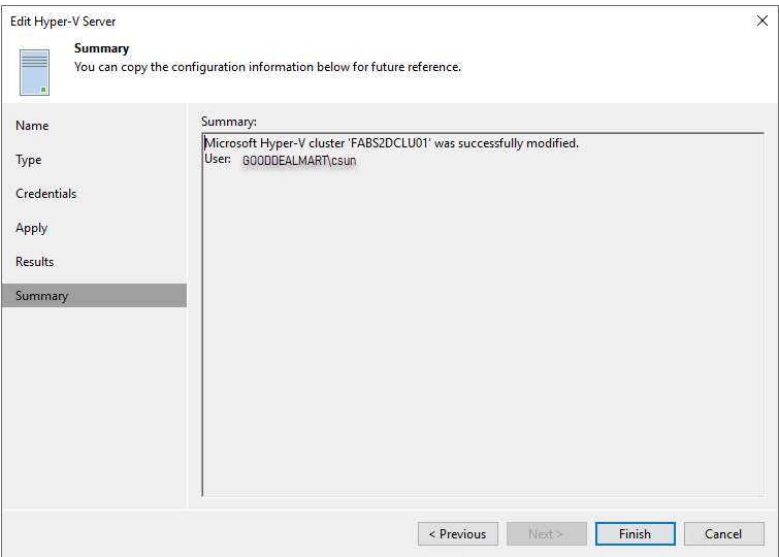
15. On the Apply page, click Select All and then click Apply.



16. On the Results page, complete the Microsoft Hyper-V cluster adding procedure without error, and click Next.

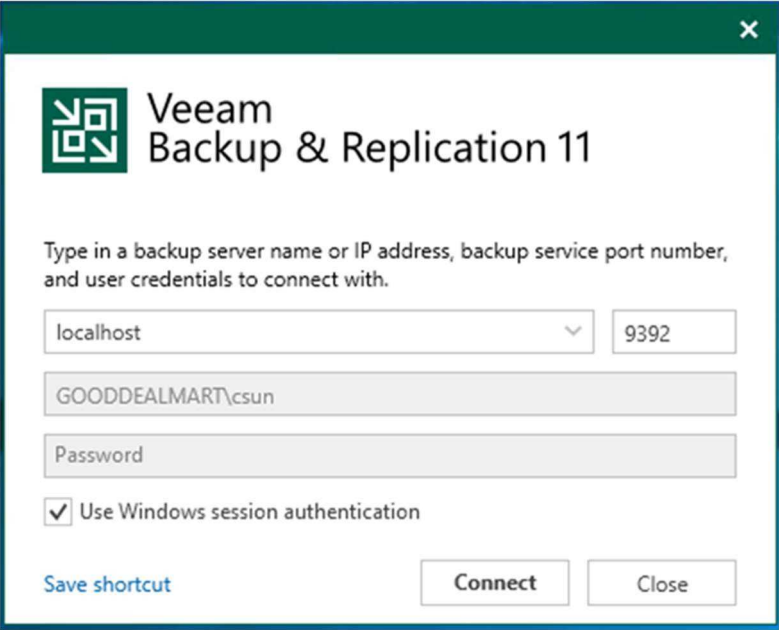


17. On the Summary page, review the details of the Microsoft Hyper-V server and click Finish.

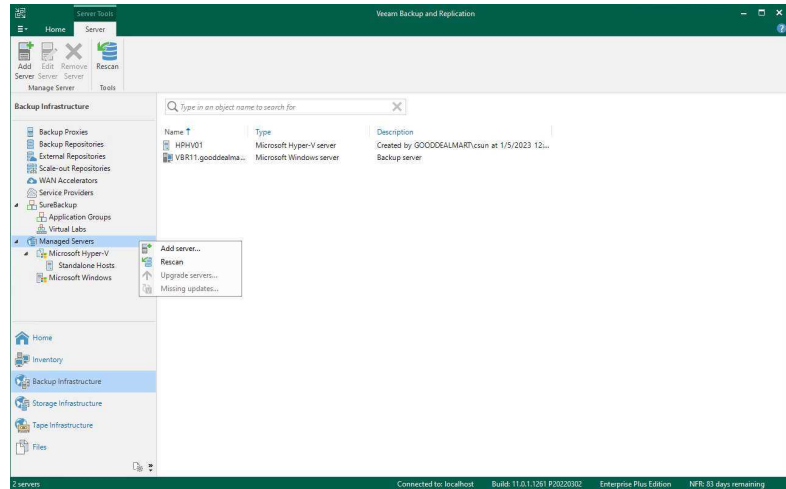


Adding Microsoft Windows Servers

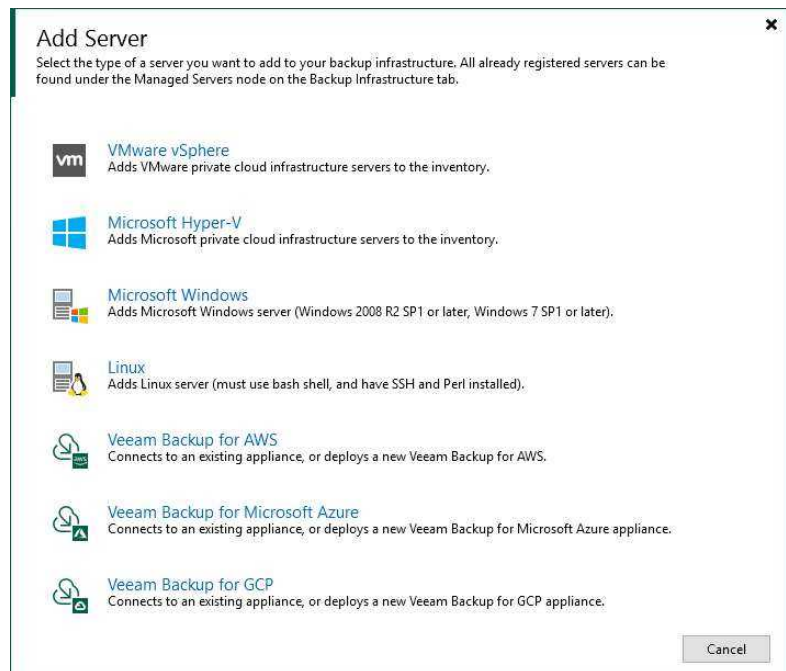
Suppose you plan to use as backup infrastructure components and servers that you plan to use for various types of restore operations. In that case, you must add the Microsoft Windows servers to the backup infrastructure.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 The screenshot shows the 'Veeam Backup & Replication 11' console window. It features a dark green header with the Veeam logo and title. Below the header, there is a text prompt: 'Type in a backup server name or IP address, backup service port number, and user credentials to connect with.' This is followed by three input fields: a dropdown menu showing 'localhost', a text box containing '9392', and a text box containing 'GOODDEALMART\csun'. Below these fields is a checkbox labeled 'Use Windows session authentication' which is checked. At the bottom of the window, there are three buttons: 'Save shortcut' (in blue text), 'Connect', and 'Close'.

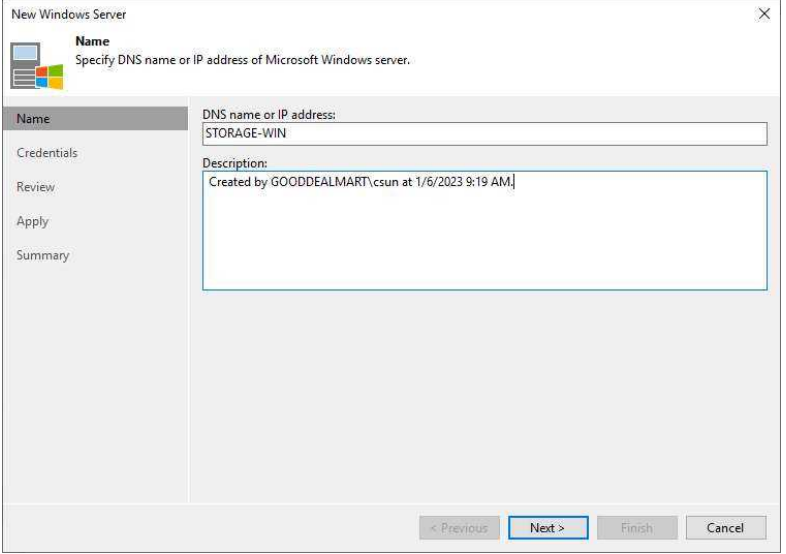
3. On the Home page, select Backup Infrastructure.
4. On the Backup Infrastructure page, select Managed Servers, right-click Managed Servers, and select Add Server.



5. On the Add Server page, select Microsoft Windows.

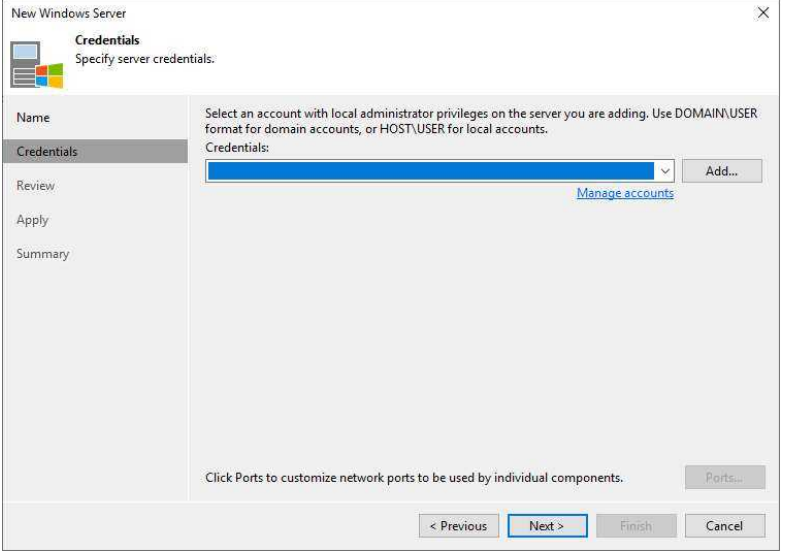


- On the Name page, specify a DNS name, IP address, and description for the Microsoft Windows server and click Next.



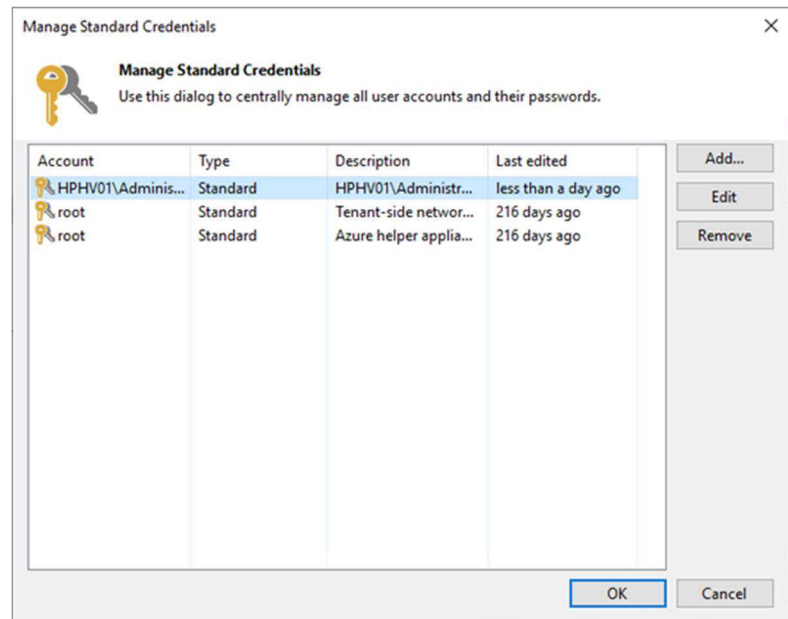
The screenshot shows the 'New Windows Server' wizard at the 'Name' step. The left sidebar has 'Name' selected. The main area has a 'DNS name or IP address' field containing 'STORAGE-WIN' and a 'Description' text area containing 'Created by GOODDEALMART\csun at 1/6/2023 9:19 AM'. At the bottom are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

- On the Credentials page, click the Manage accounts link or Add on the right to add the credentials.

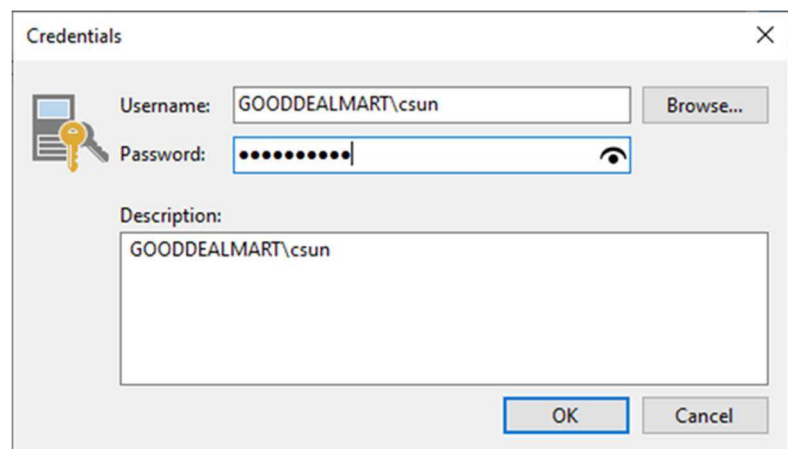


The screenshot shows the 'New Windows Server' wizard at the 'Credentials' step. The left sidebar has 'Credentials' selected. The main area has instructions to 'Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER format for domain accounts, or HOST\USER for local accounts.' Below this is a 'Credentials' dropdown menu, an 'Add...' button, and a 'Manage accounts' link. At the bottom, there is a 'Ports...' button and navigation buttons '< Previous', 'Next >', 'Finish', and 'Cancel'.

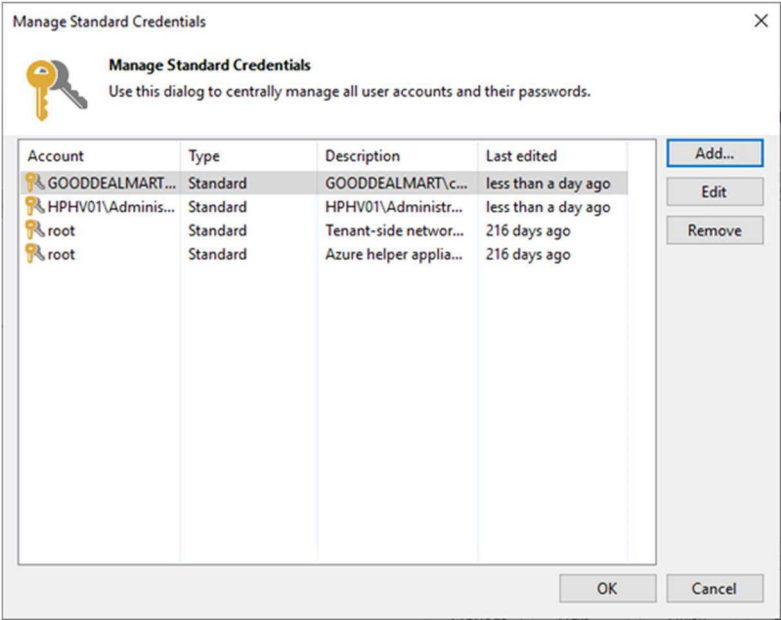
8. On the Manage Standard Credentials page, click Add.



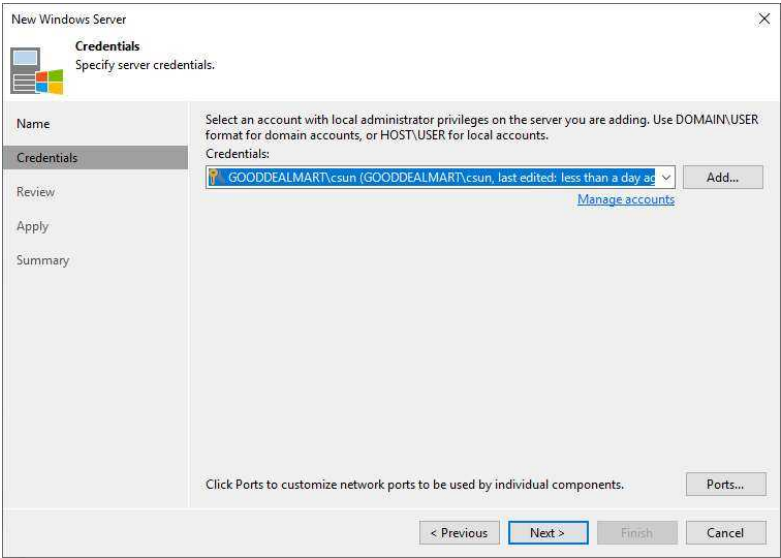
9. On the Credentials page, enter a domain user name for the account you want to add in the Username field.
10. Enter a password in the Password field.
11. Enter a description in the Description field, and click OK.



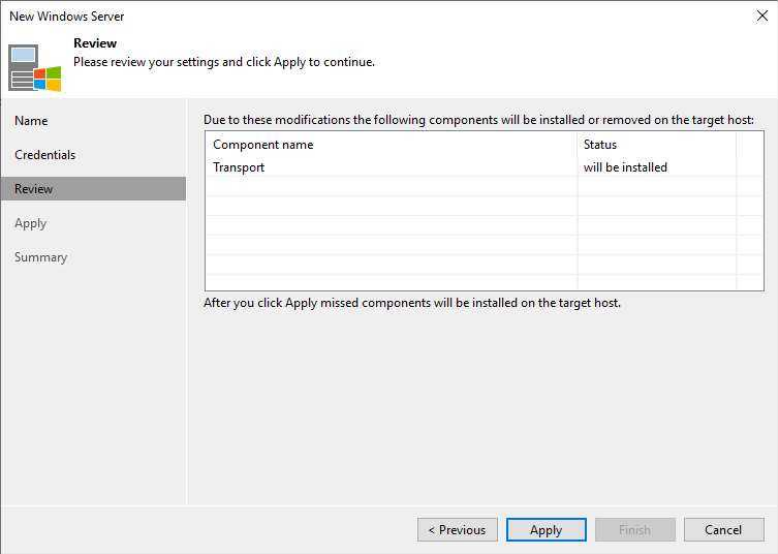
12. On the Manage Standard Credentials page, click OK.



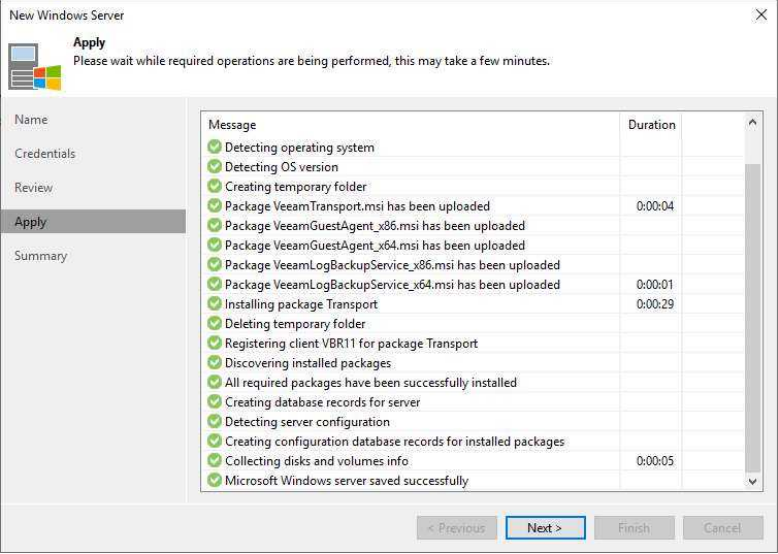
13. On the Credentials page, click Next.



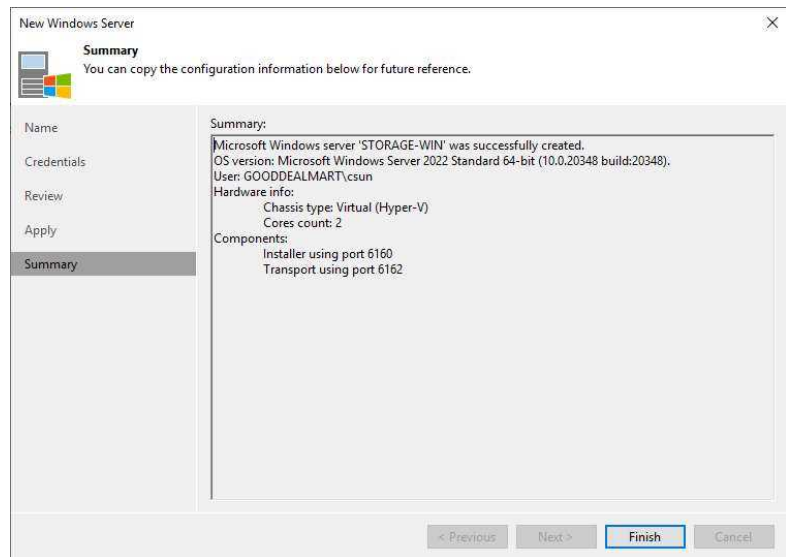
14. On the Review page, click Apply.



15. On the Apply page, complete the Microsoft Windows server adding procedure without error, and click Next.

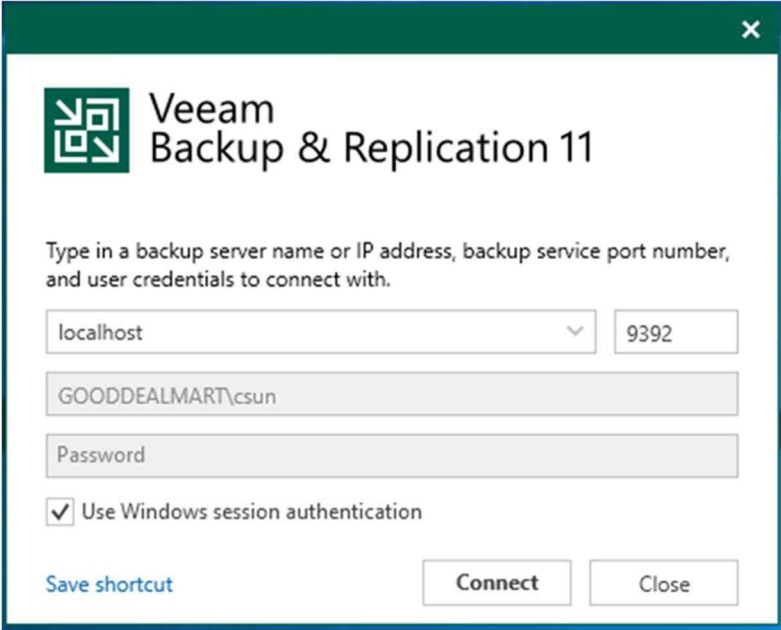


16. On the Summary page, review the details of the Microsoft Windows server, and click Finish.

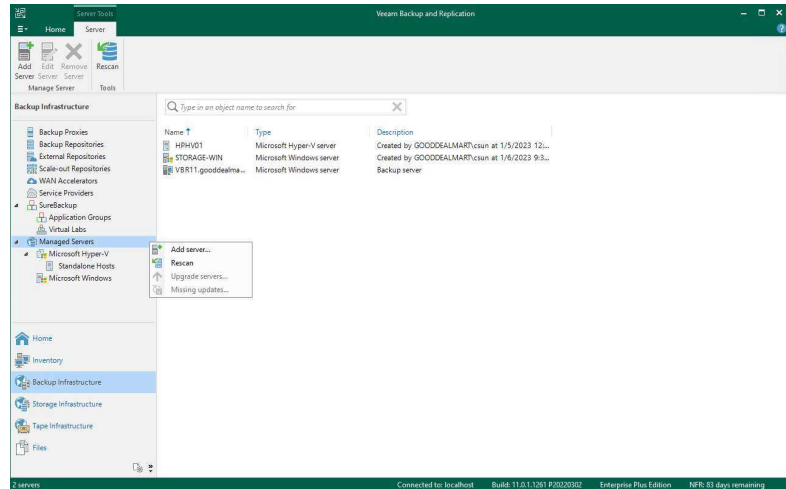


Adding Linux Server for a hardened repository

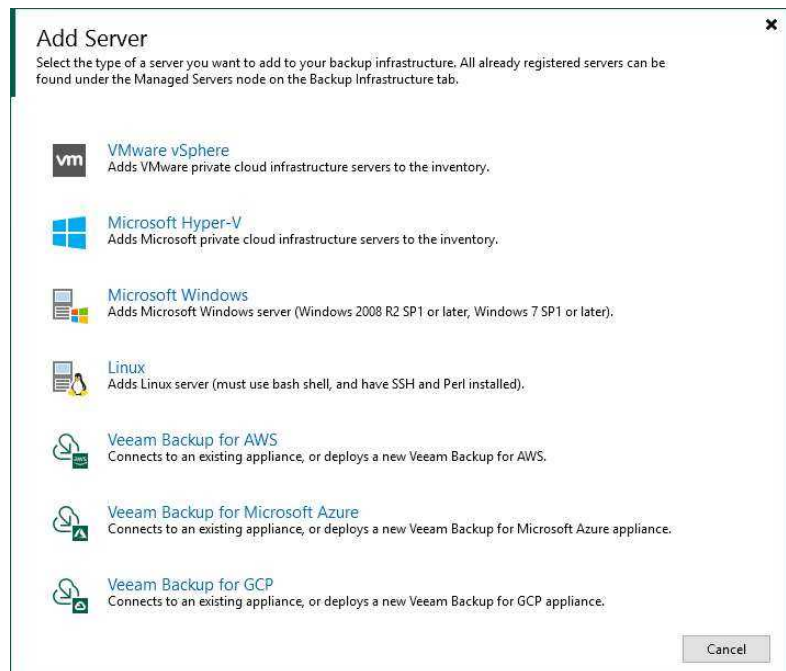
Suppose you plan to use backup infrastructure components and servers that you plan to use for various types of restore operations. In that case, you must add the Linux servers to the backup infrastructure.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 The screenshot shows the Veeam Backup & Replication 11 console window. It has a dark green title bar with a close button. The main area is white with the Veeam logo and title. Below the title, there is a prompt: "Type in a backup server name or IP address, backup service port number, and user credentials to connect with." There are four input fields: a dropdown menu with "localhost" selected, a text box with "9392", a text box with "GOODDEALMART\csun", and a password field labeled "Password". Below these fields is a checkbox labeled "Use Windows session authentication" which is checked. At the bottom, there is a "Save shortcut" link and two buttons: "Connect" and "Close".

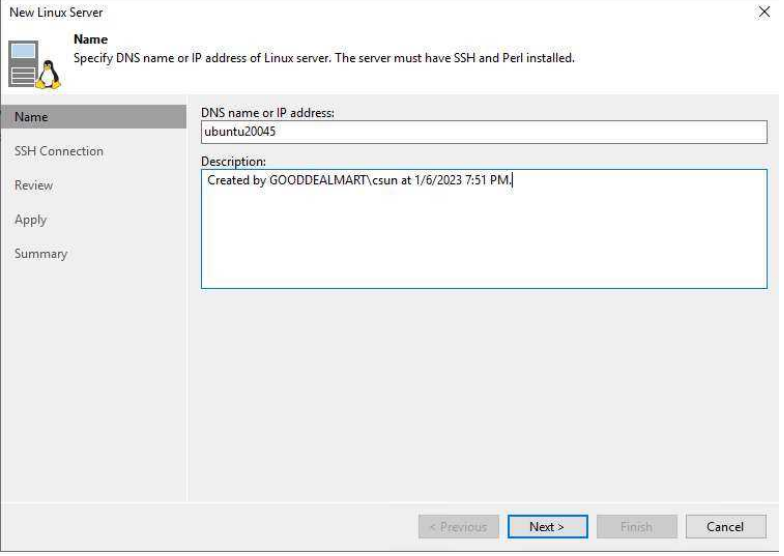
3. On the Home page, select Backup Infrastructure.
4. On the Backup Infrastructure page, select Managed Servers, right-click Managed Servers, and select Add Server.



5. On the Add Server page, select Linux.

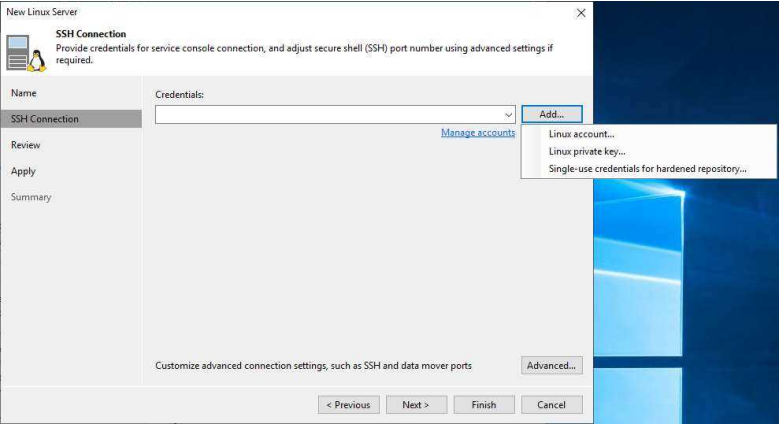


- On the Name page, specify the Linux server's DNS name, IP address, and description and click Next.



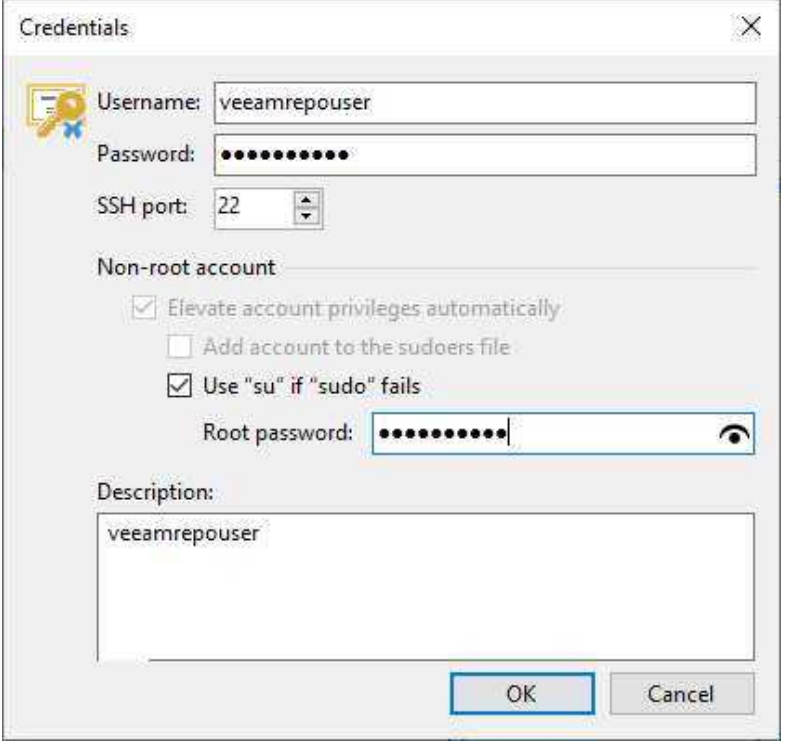
The screenshot shows the 'New Linux Server' wizard with the 'Name' page selected. The page title is 'Name' with a subtitle 'Specify DNS name or IP address of Linux server. The server must have SSH and Perl installed.' The left sidebar has 'Name' selected, with other options being 'SSH Connection', 'Review', 'Apply', and 'Summary'. The main area has two input fields: 'DNS name or IP address:' with the value 'ubuntu20045' and 'Description:' with the value 'Created by GOODDEALMART\csun at 1/6/2023 7:51 PM'. At the bottom are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

- Click Add on the SSH Connection page and select Single-use credential for the hardened repository.



The screenshot shows the 'New Linux Server' wizard with the 'SSH Connection' page selected. The page title is 'SSH Connection' with a subtitle 'Provide credentials for service console connection, and adjust secure shell (SSH) port number using advanced settings if required.' The left sidebar has 'SSH Connection' selected, with other options being 'Name', 'Review', 'Apply', and 'Summary'. The main area has a 'Credentials:' dropdown menu with an 'Add...' button next to it. A 'Manage accounts' link is also visible. Below the dropdown is a section for 'Customize advanced connection settings, such as SSH and data mover ports' with an 'Advanced...' button. At the bottom are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'. A context menu is open over the 'Add...' button, showing options: 'Linux account...', 'Linux private key...', and 'Single-use credentials for hardened repository...'.

8. On the Credentials page, enter a user name in the Username field.
9. Enter a password in the Password field.
10. In the SSH port field, select 22, and click OK.
11. If you are using a non-root account, select Add account to the sudoers file, select Use "su" if "sudo" fails and enter the Root password.

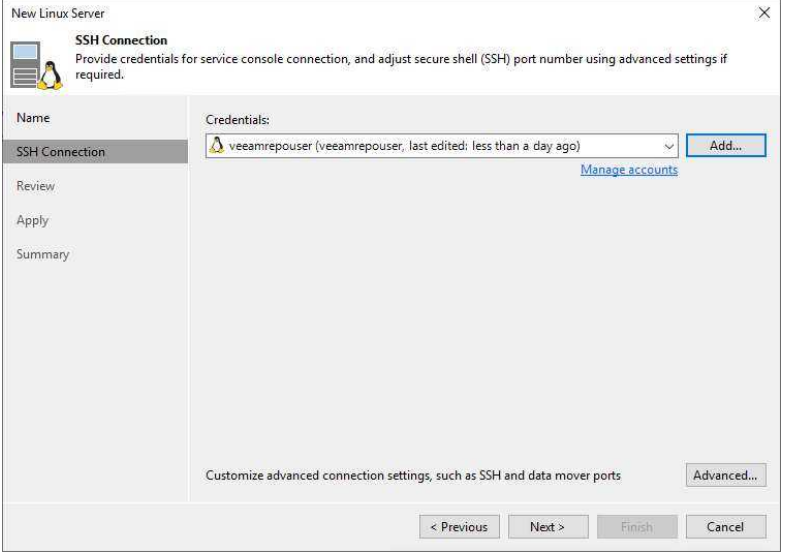


The 'Credentials' dialog box is shown with the following fields and options:

- Username:** veeamrepouser
- Password:** (masked with dots)
- SSH port:** 22
- Non-root account:**
 - ☒ Elevate account privileges automatically
 - ☐ Add account to the sudoers file
 - ☒ Use "su" if "sudo" fails
 - Root password:** (masked with dots)
- Description:** veeamrepouser

Buttons: OK, Cancel

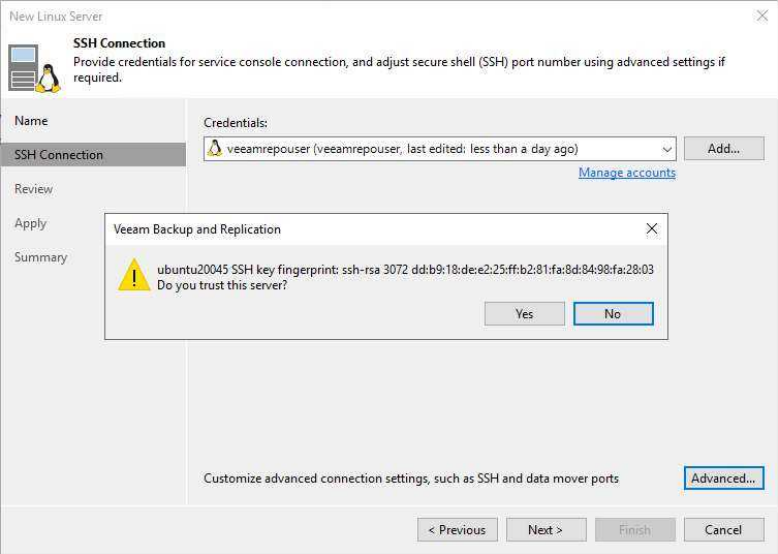
12. On the SSH Connection page, click Advanced.



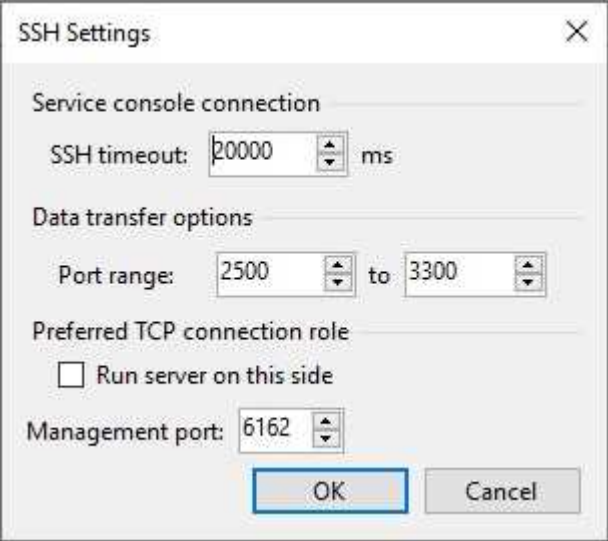
The 'New Linux Server' dialog box, SSH Connection page, is shown with the following fields and options:

- Name:** SSH Connection
- Credentials:** veeamrepouser (veeamrepouser, last edited: less than a day ago)
- Buttons:** Add..., Manage accounts
- Advanced settings:** Customize advanced connection settings, such as SSH and data mover ports. Advanced...
- Navigation:** < Previous, Next >, Finish, Cancel

13. Select Yes on the trust warning message page.



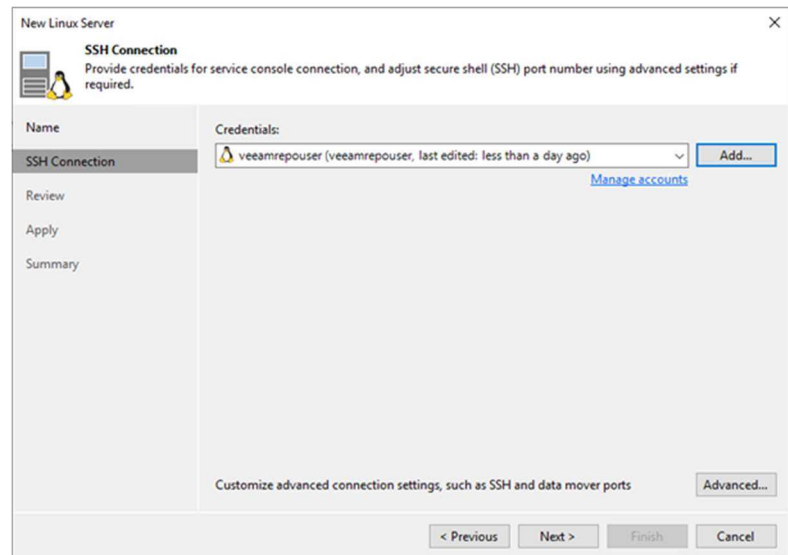
14. On the SSH Settings page, click OK.
15. Enter an SSH timeout in the Service console connection section. The default SSH timeout is 20000 ms.
16. Configure connection settings for file copy operations in the Data transfer options section. Provide a set of ports for transmission channels between the source and target hosts (one port per task). Veeam Backup & Replication uses the port



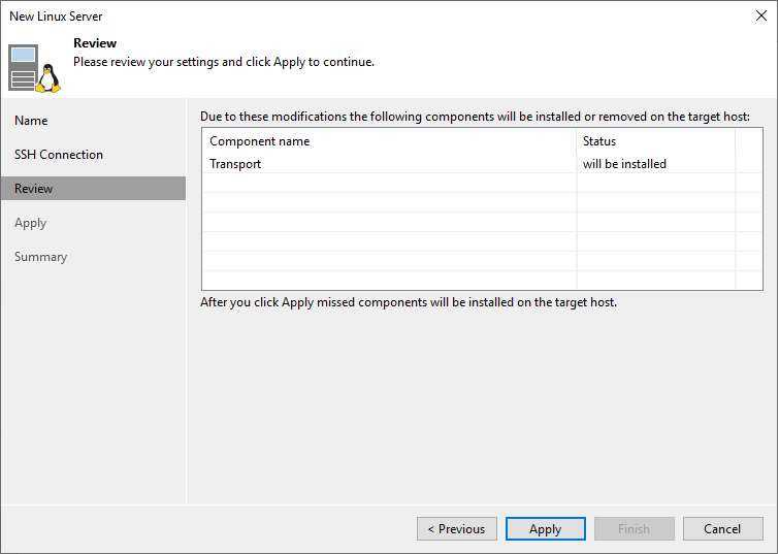
range 2500-3300 by default.

17. By default, port 6162 is open. Veeam Data Mover uses this port.

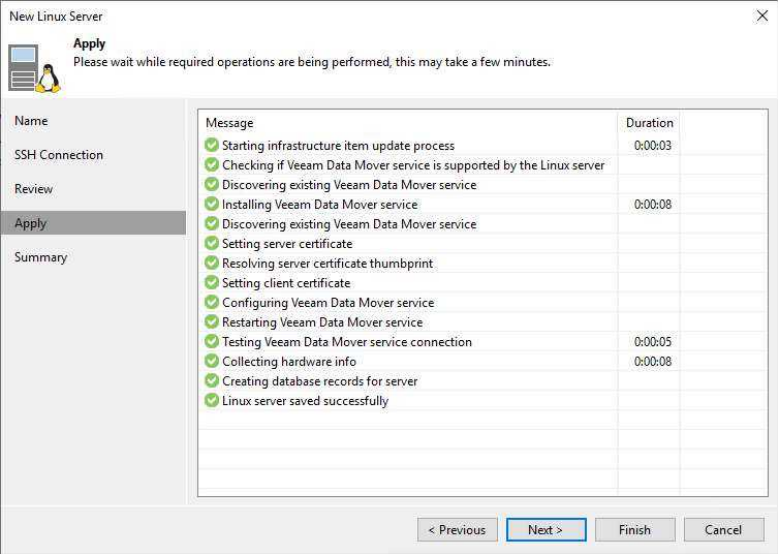
18. On the SSH Connection page, click Next.



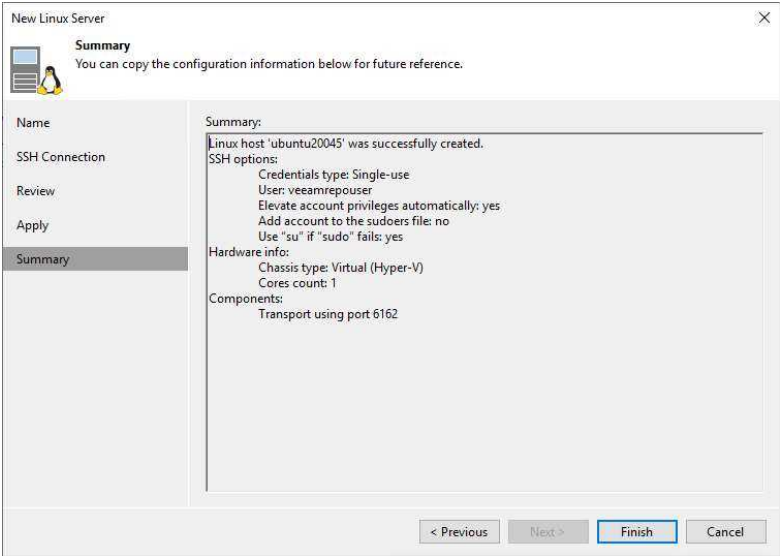
19. On the Review page, click Apply.



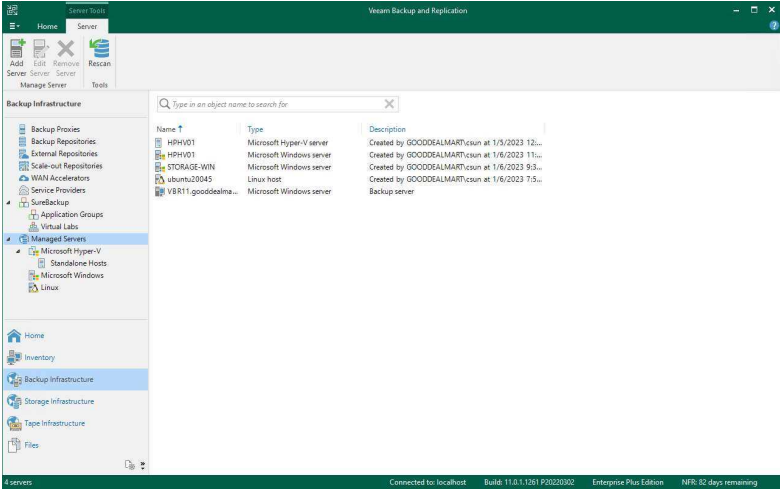
20. On the Apply page, complete the procedure of Linux server adding without error, and click Next.



21. On the Summary page, review the details of the Linux server, and click Finish

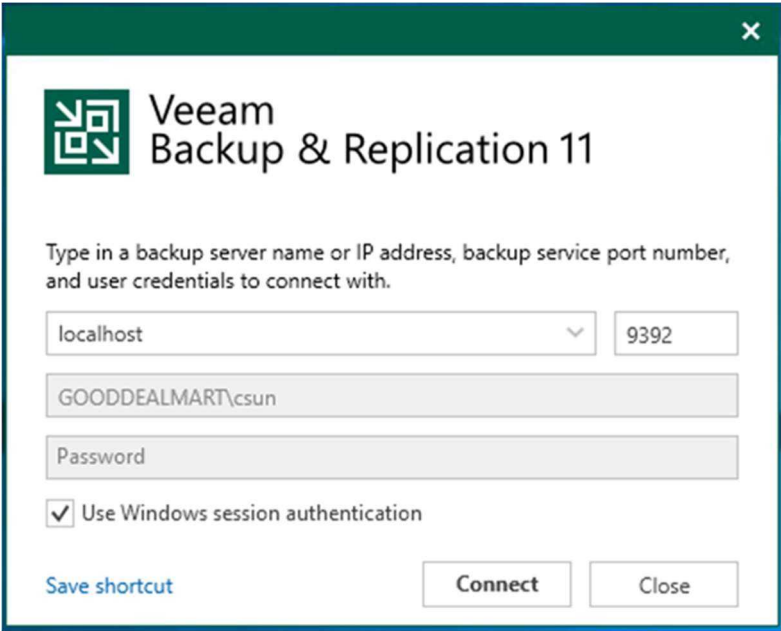


22. Verify that the Linux server has been added

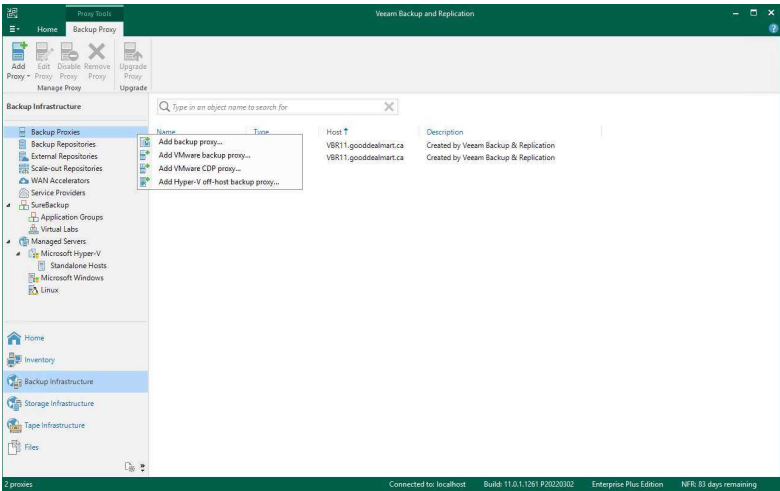


Adding Off-Host Backup proxy servers

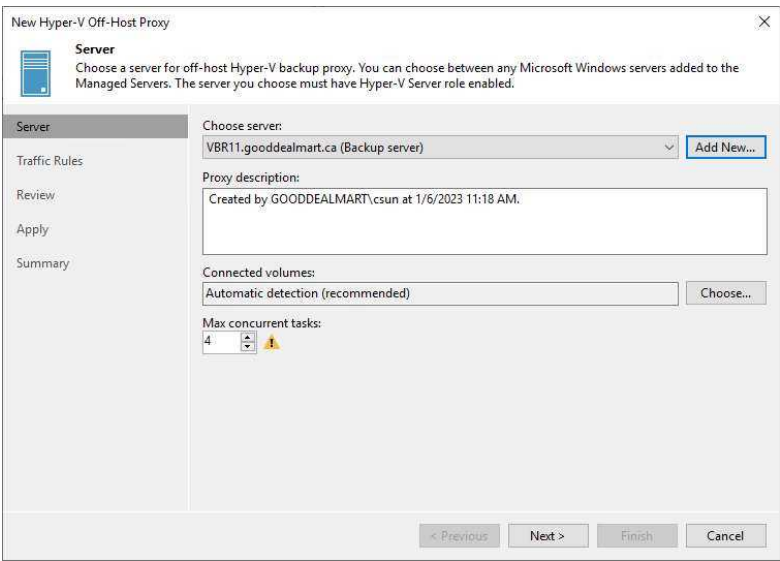
Off-Host Backup proxy servers will retrieve VM data from the source datastore, process it and transfer it to the destination. The off-host backup proxy removes unwanted overhead on the production Hyper-V host.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 The screenshot shows the 'Veeam Backup & Replication 11' console window. It has a dark green title bar with a close button. The main area is white with the Veeam logo and title. Below the title, there is a prompt: 'Type in a backup server name or IP address, backup service port number, and user credentials to connect with.' There are four input fields: a dropdown menu showing 'localhost', a text box with '9392', a text box with 'GOODDEALMART\csun', and a text box with 'Password'. Below these fields is a checkbox labeled 'Use Windows session authentication' which is checked. At the bottom left is a link 'Save shortcut'. At the bottom right are two buttons: 'Connect' and 'Close'.

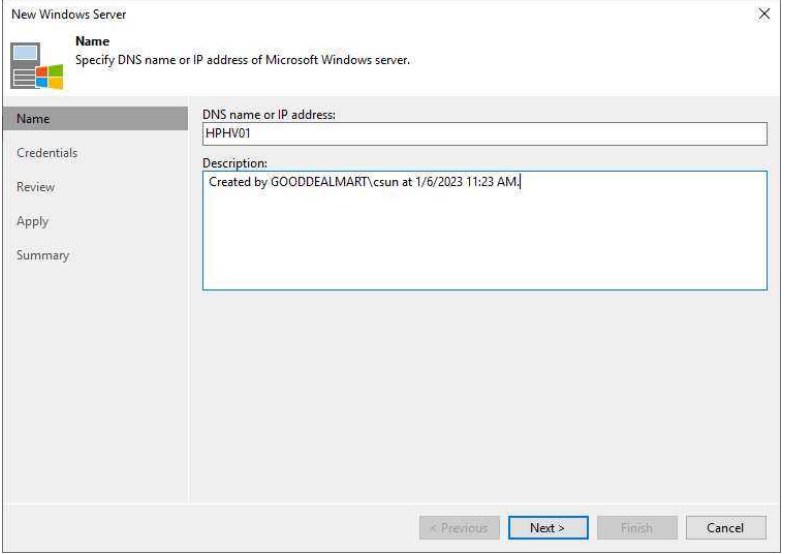
- 3. On the Home page, select Backup Infrastructure.
- 4. On the Backup Infrastructure page, select Backup Proxies, right-click Backup Proxies, and select Add Hyper-V off-host backup proxy.



- 5. On the Server page, click Add New.

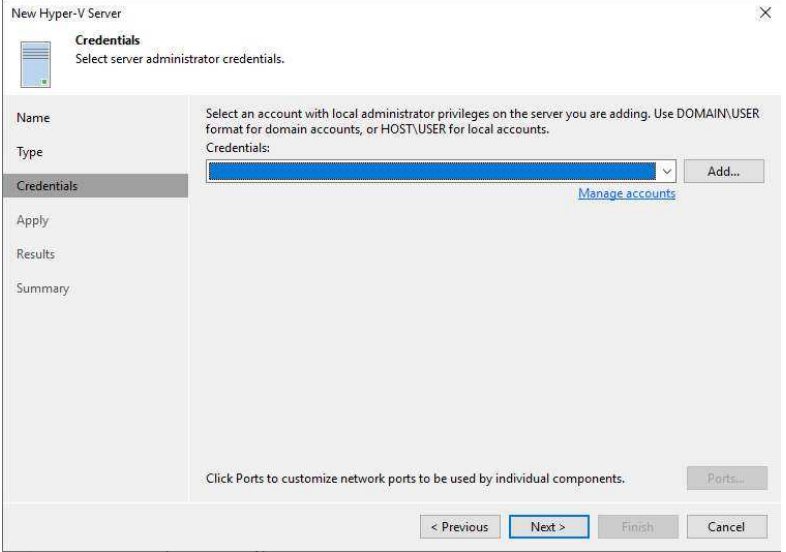


- On the Name page, specify a DNS name, IP address, and description for the Microsoft Hyper-V server and click Next.



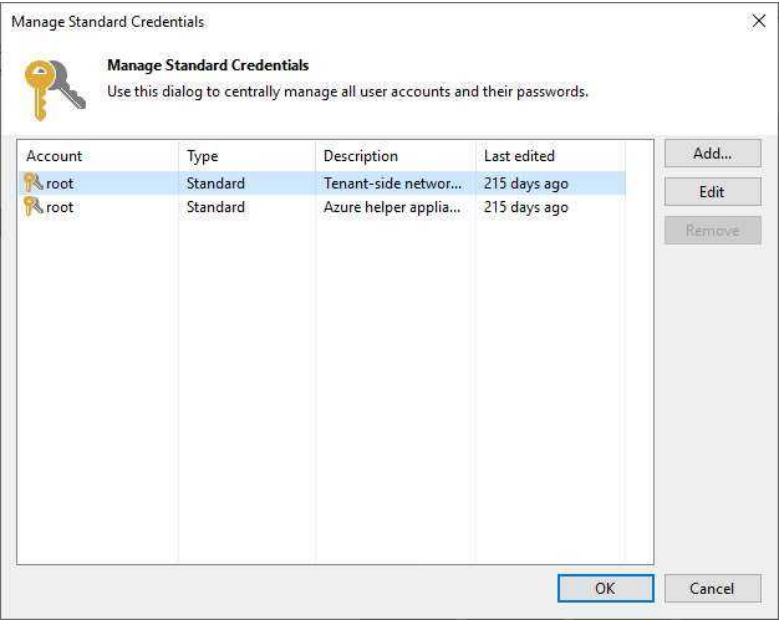
The screenshot shows the 'New Windows Server' wizard, specifically the 'Name' page. The title bar reads 'New Windows Server'. The page has a sidebar on the left with options: Name (selected), Credentials, Review, Apply, and Summary. The main area is titled 'Name' and contains the instruction 'Specify DNS name or IP address of Microsoft Windows server.' Below this, there are two input fields: 'DNS name or IP address' with the value 'HPHV01' and 'Description' with the value 'Created by GOODDEALMART\csun at 1/6/2023 11:23 AM'. At the bottom right, there are four buttons: '< Previous', 'Next >' (highlighted with a blue border), 'Finish', and 'Cancel'.

- On the Credentials page, select the existing credential. If you lack the credential, click the Manage accounts link or Add on the right.

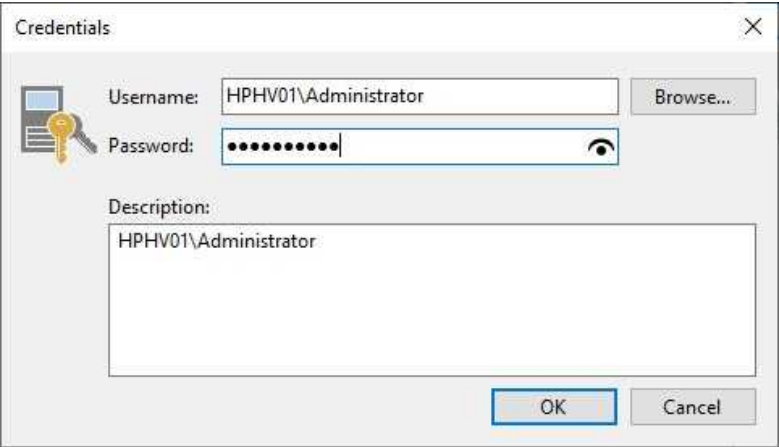


The screenshot shows the 'New Hyper-V Server' wizard, specifically the 'Credentials' page. The title bar reads 'New Hyper-V Server'. The page has a sidebar on the left with options: Name, Type, Credentials (selected), Apply, Results, and Summary. The main area is titled 'Credentials' and contains the instruction 'Select server administrator credentials.' Below this, there is a text box with the instruction 'Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER format for domain accounts, or HOST\USER for local accounts.' Below the text box is a dropdown menu for 'Credentials' and an 'Add...' button. A link 'Manage accounts' is visible below the dropdown. At the bottom right, there is a 'Ports...' button. At the bottom, there are four buttons: '< Previous', 'Next >' (highlighted with a blue border), 'Finish', and 'Cancel'.

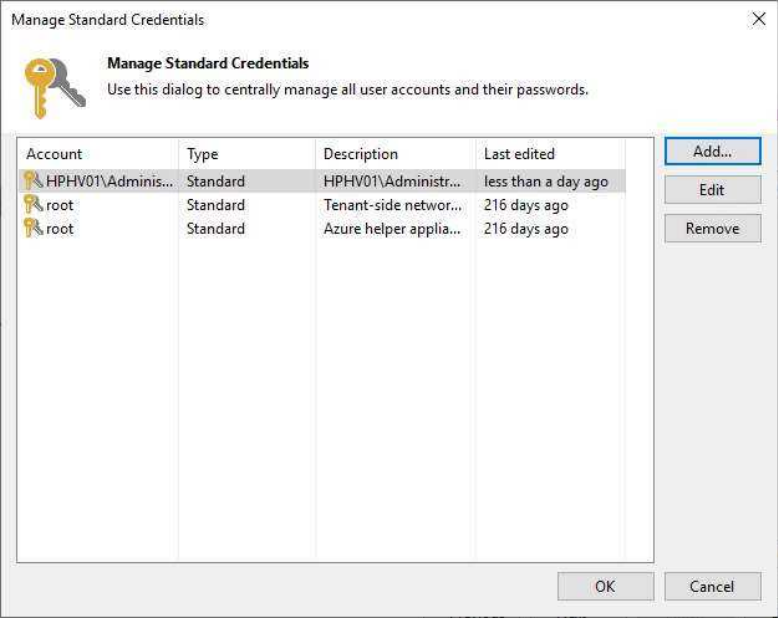
8. On the Manage Standard Credentials page, click Add.



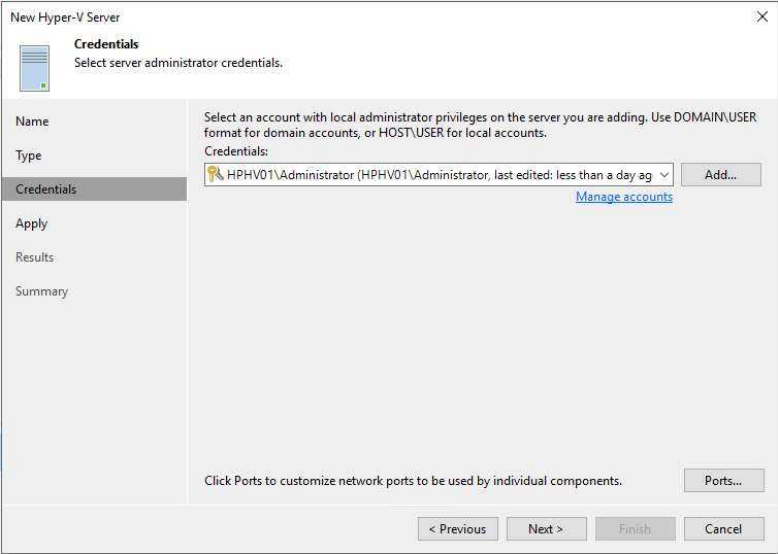
9. On the Credentials page, enter a user name in the Username field.
10. In the Password field, enter a password.
11. Enter a description in the Description field and click OK.



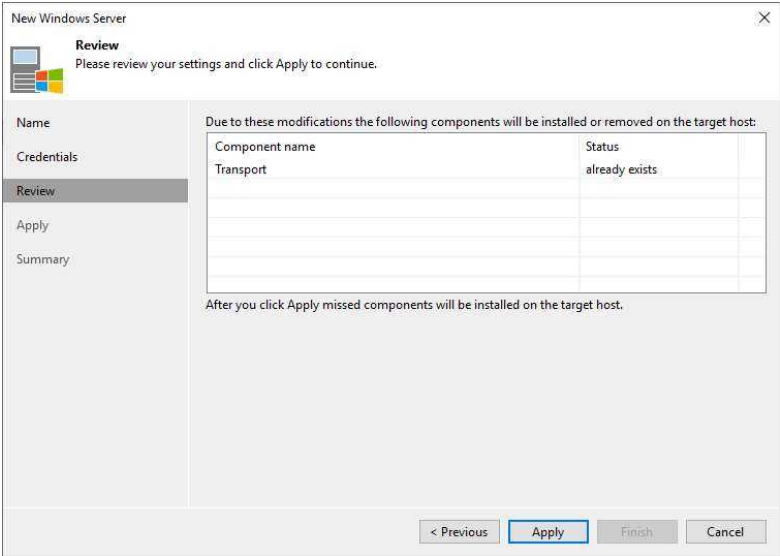
12. On the Manage Standard Credentials page, click OK.



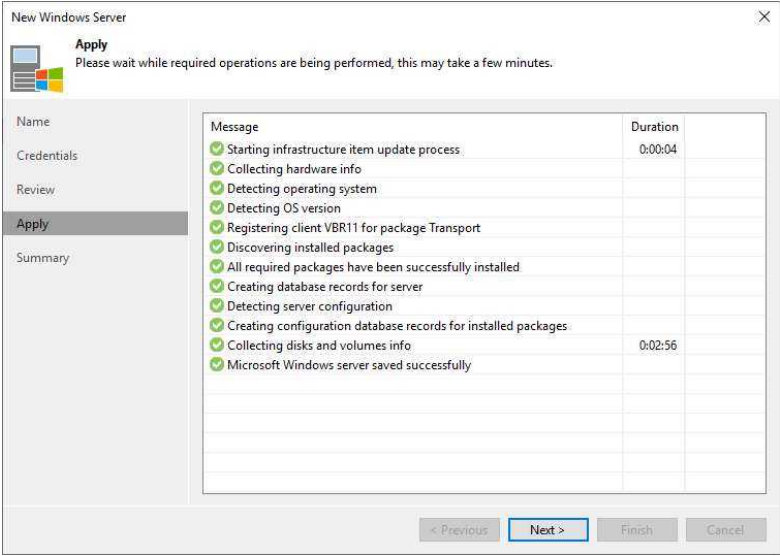
13. On the Credentials page, click Next.



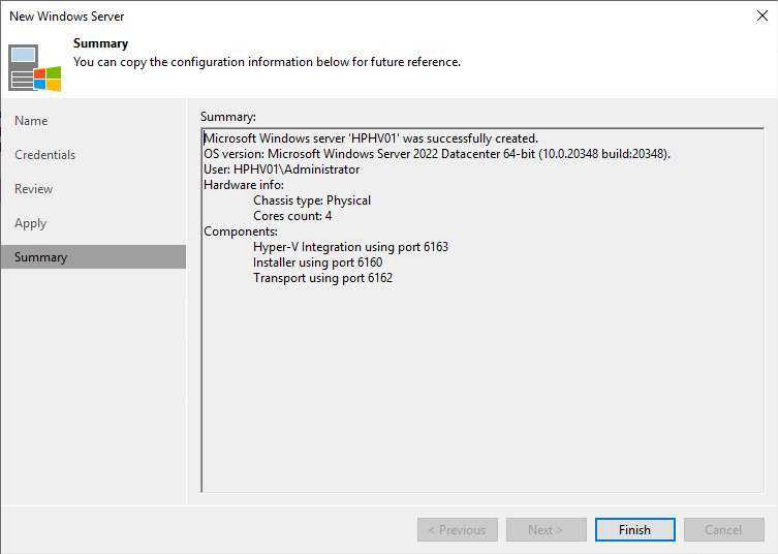
14. On the Review page, click Apply.



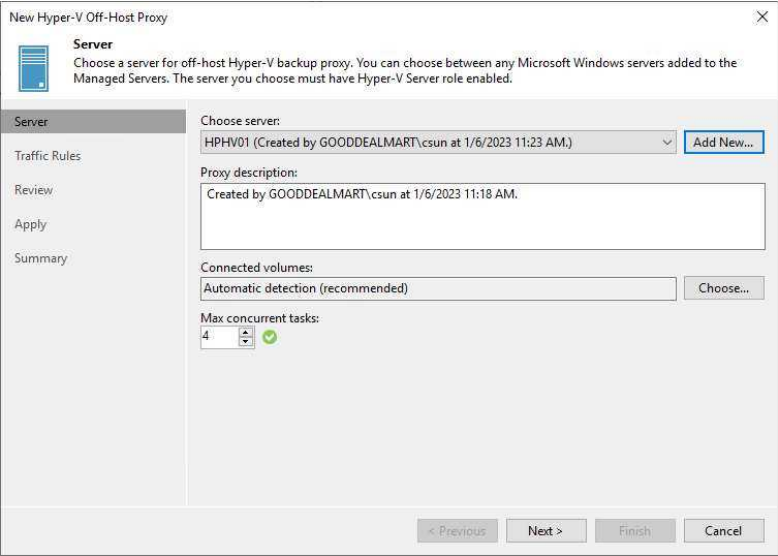
15. On the Apply page, click Next.



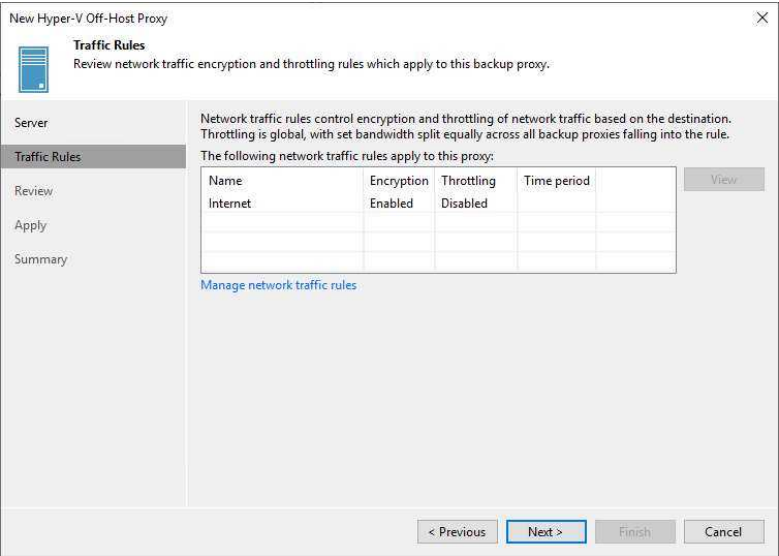
16. On the Summary page, review the details of the Microsoft Hyper-V server and click Finish.



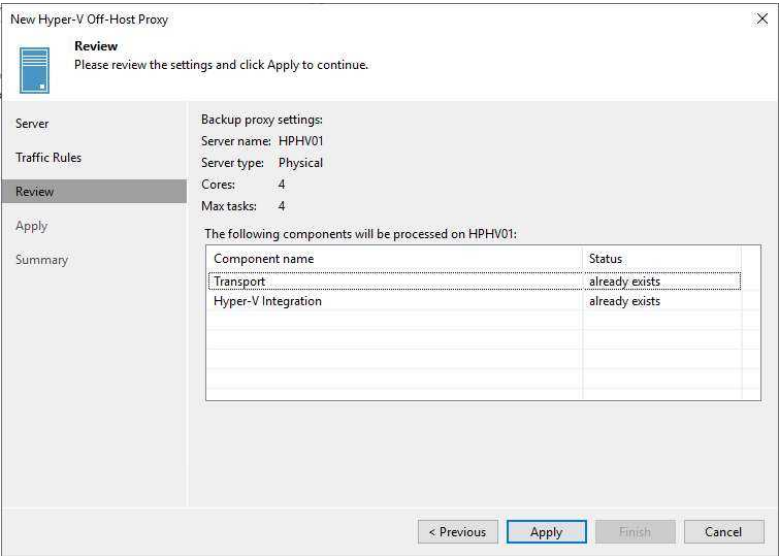
17. On the Server page, click Next.
18. In the Proxy description field, describe future references.
19. In the Connected volumes field, leave the default.
20. Enter the number of tasks the off-host backup proxy must handle concurrently in the Max concurrent tasks field.



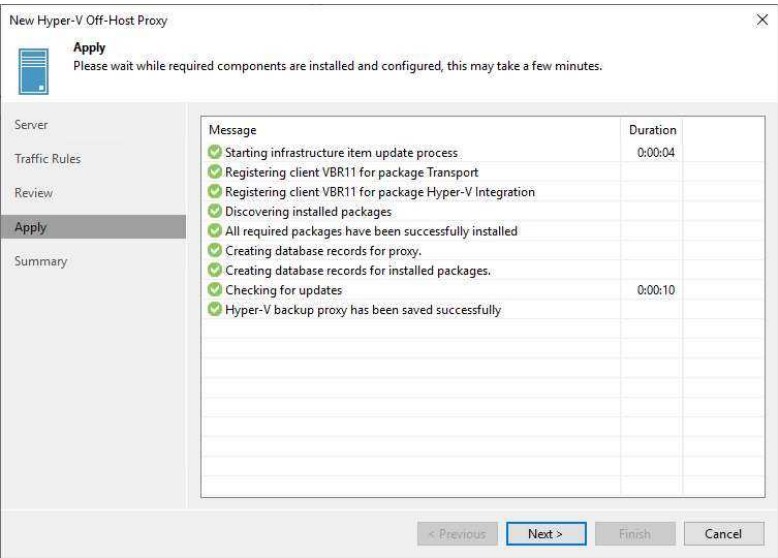
- 21. On the Traffic Rules page, click Next.
- 22. You can open global network traffic settings and modify them directly from the New Hyper-V Off-Host Proxy wizard. To do this, click the Manage network traffic rules link at the bottom of the wizard.



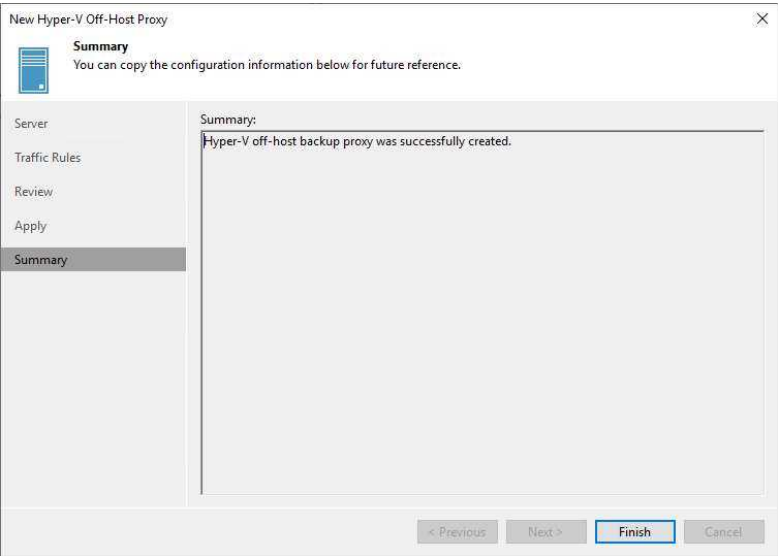
- 23. On the Review page, click Apply.



24. On the Apply page, complete the Hyper-V backup proxy adding procedure without error, and click Next.



25. On the Summary page, click Finish.



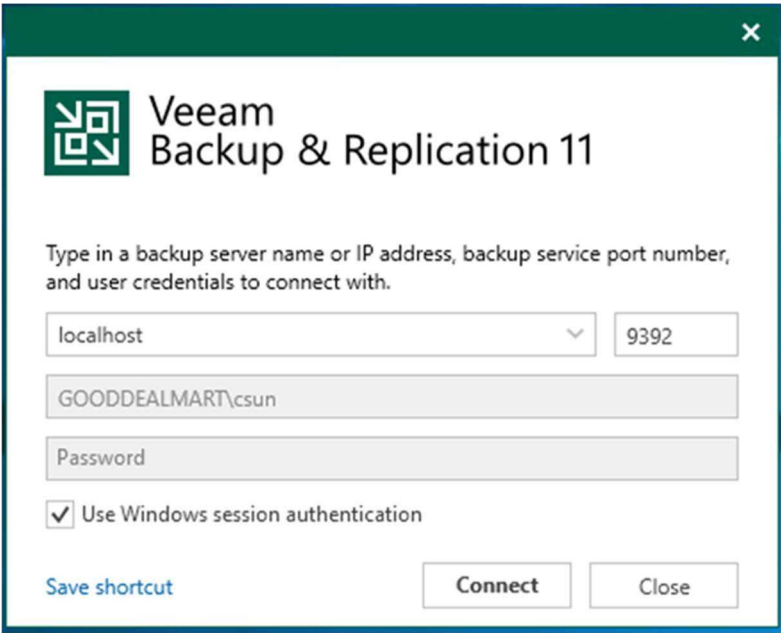
Adding a local directory on the Microsoft Windows server as Backup Repository

You can add the following types of storage to the Microsoft Windows server as a backup repository:

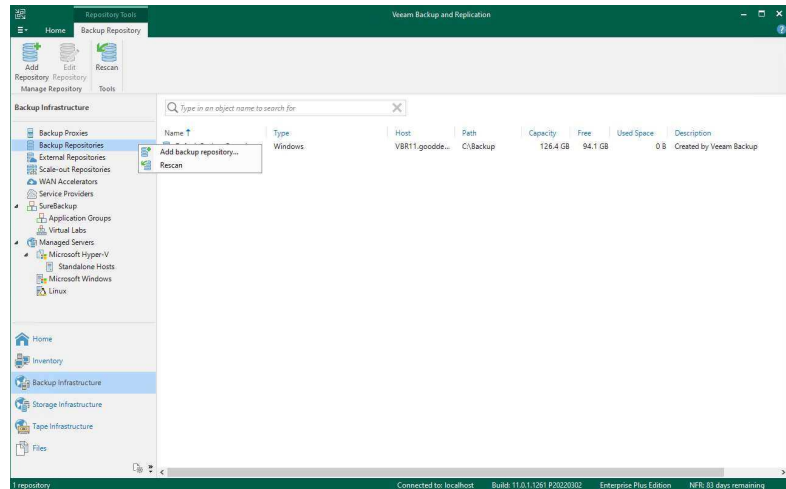
- A local disk.
- A directly attached disk-based storage (such as a USB hard drive).
- SCSI/FC SAN LUN in case the server is connected to the SAN fabric.

Instructions	Screenshot (if applicable)
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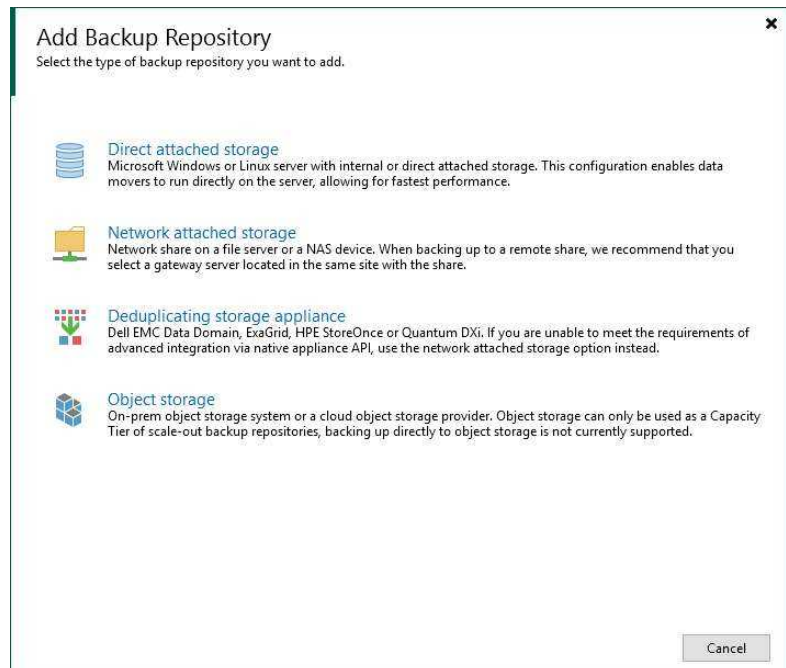
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



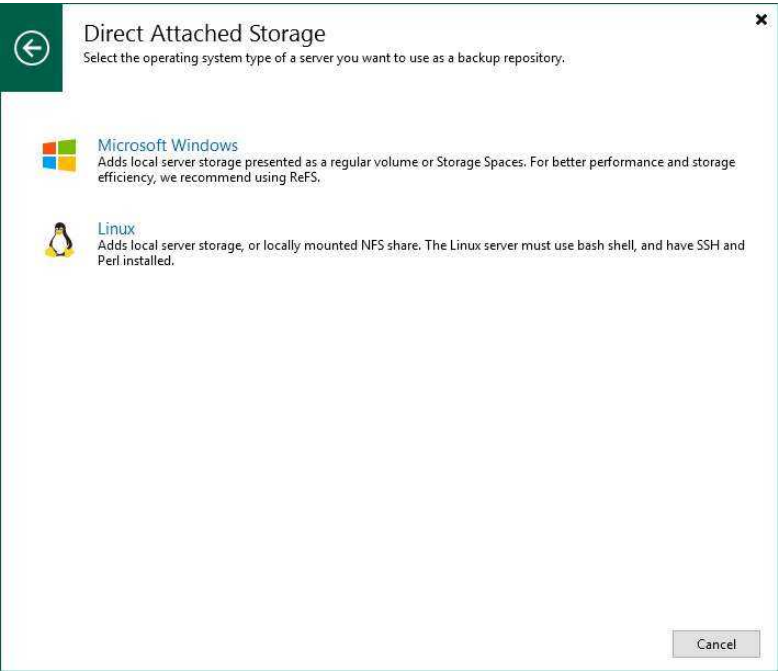
3. On the Home page, select Backup Infrastructure.
4. On the Backup Infrastructure page, select Backup Repositories, right-click Backup Repositories, and select Add backup repository.



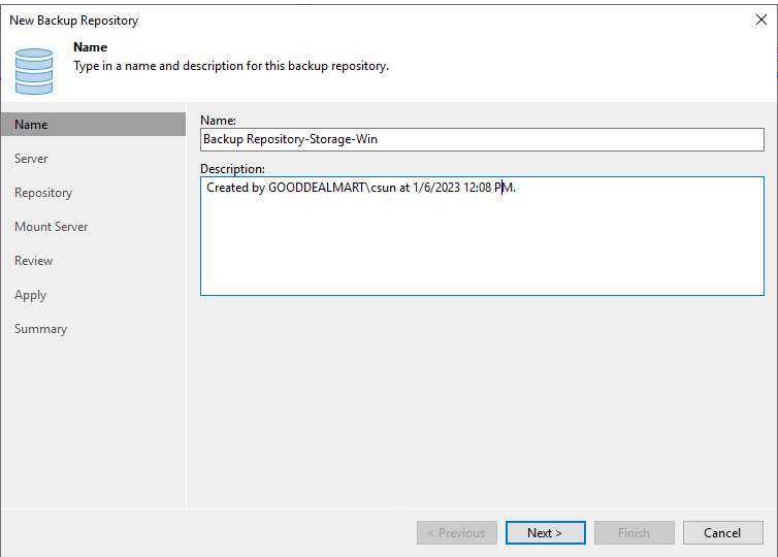
5. On the Add Backup Repository page, select Direct attached storage.



- 6. On the Direct Attached Storage page, select Microsoft Windows.



- 7. On the Name page, specify in the Name field.
- 8. In the Description field, describe future references.
- 9. Click Next.



10. On the **Server** page, select the **Microsoft Windows** server you want to use as a backup repository and click **Populate**.

New Backup Repository

 **Server**
Choose repository server. You can select server from the list of managed servers added to the console.

Name

Server

Repository

Mount Server

Review

Apply

Summary

Repository server:
STORAGE-WIN (Created by GOODDEALMART\csun at 1/6/2023 9:33 AM.)

Add New...

Path	Capacity	Free
------	----------	------

Populate

< Previous

Next >

Finish

Cancel

11. Select the disk and click Next.

New Backup Repository

Server

Choose repository server. You can select server from the list of managed servers added to the console.

Name

Server

Repository

Mount Server

Review

Apply

Summary

Repository server:

STORAGE-WIN (Created by GOODDEALMART\csun at 1/6/2023 9:33 AM.)

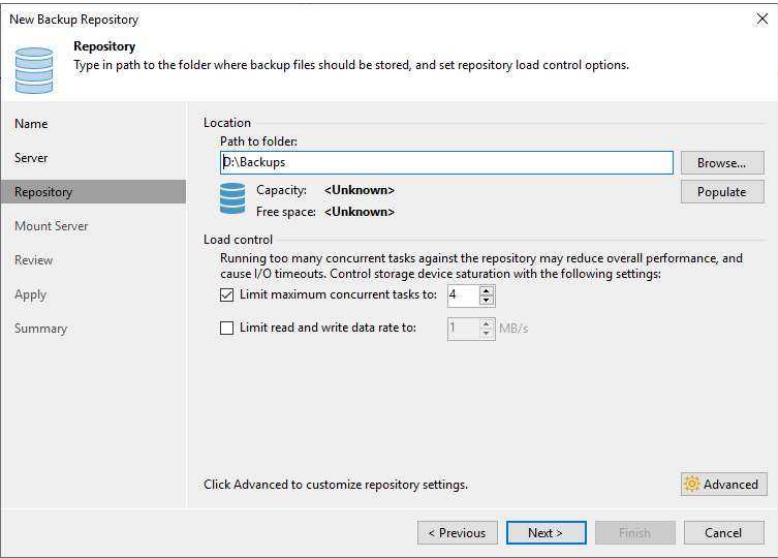
Path	Capacity	Free
C:\	29.4 GB	14.8 GB
D:\	126.9 GB	125.6 GB

Add New...

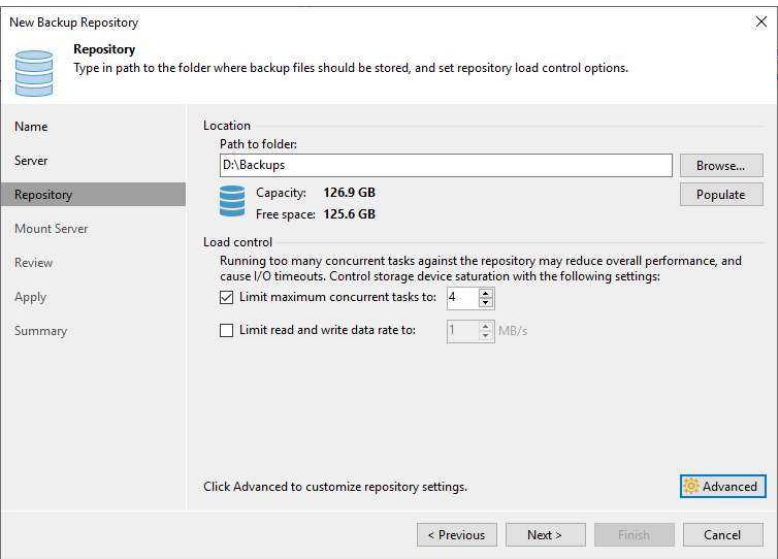
Populate

< Previous Next > Finish Cancel

12. On the Repository page, click Populate to review the disk capacity and free space.



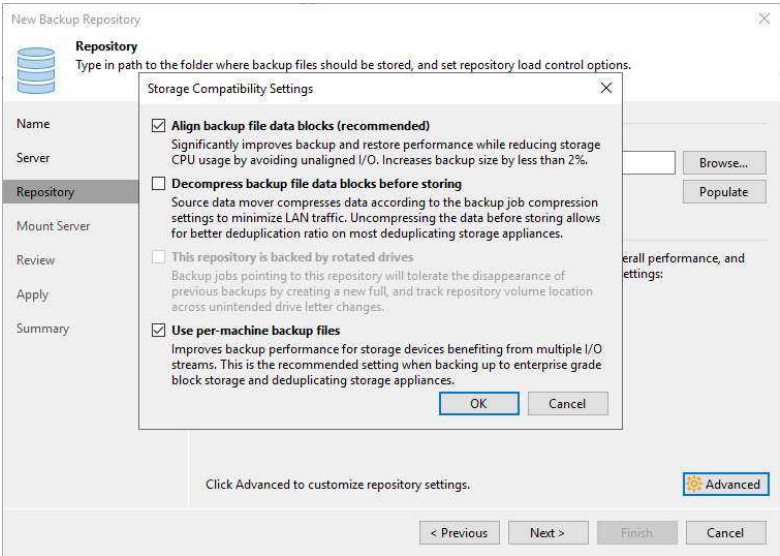
13. Use the Load control settings to manage the load on the backup repository and avoid storage I/O timeouts if you need it.
14. Click Advanced.



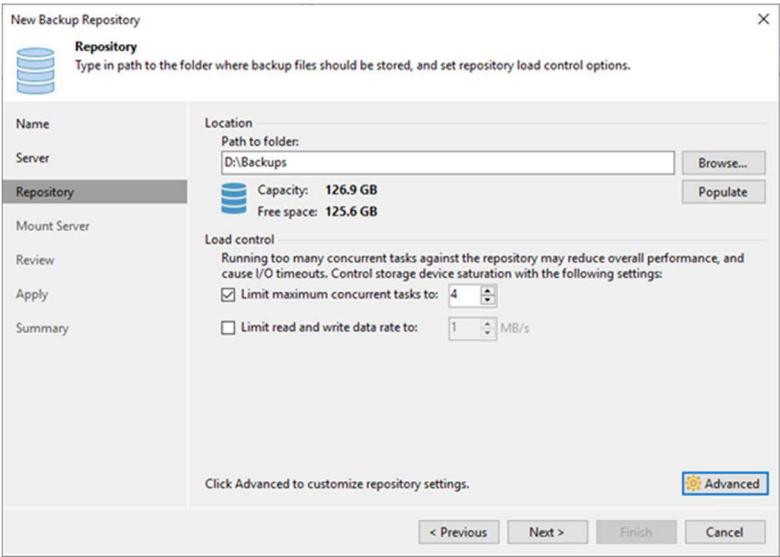
15. On the Storage Compatibility Settings, select Align backup file data blocks, select Use per-machine backup files, and click OK.

Note:

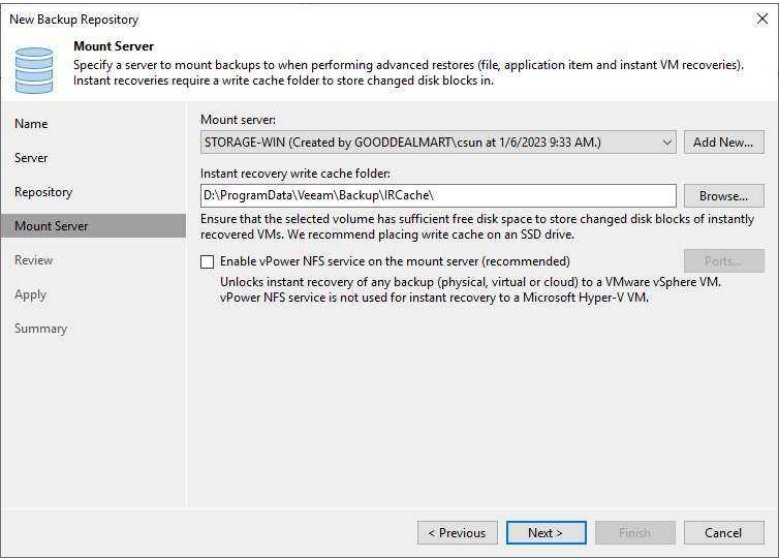
Select Decompress backup file data blocks before storing if you use a deduplicating storage feature or appliance.



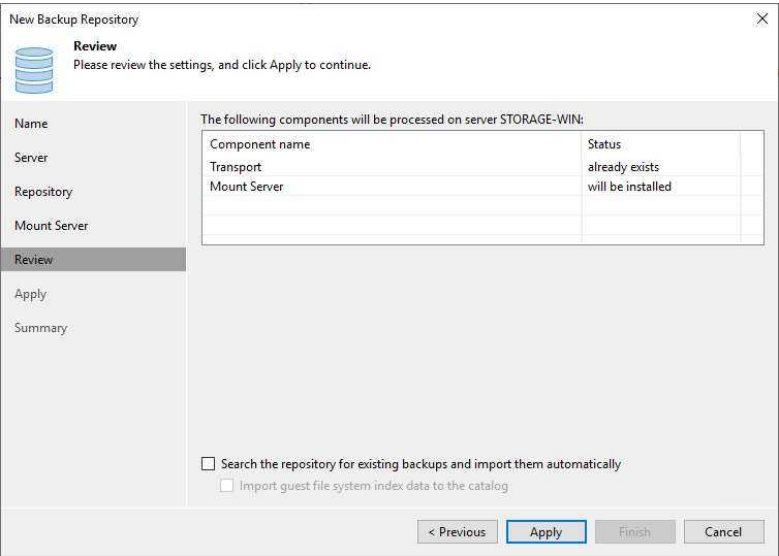
16. On the Repository page, click Next.



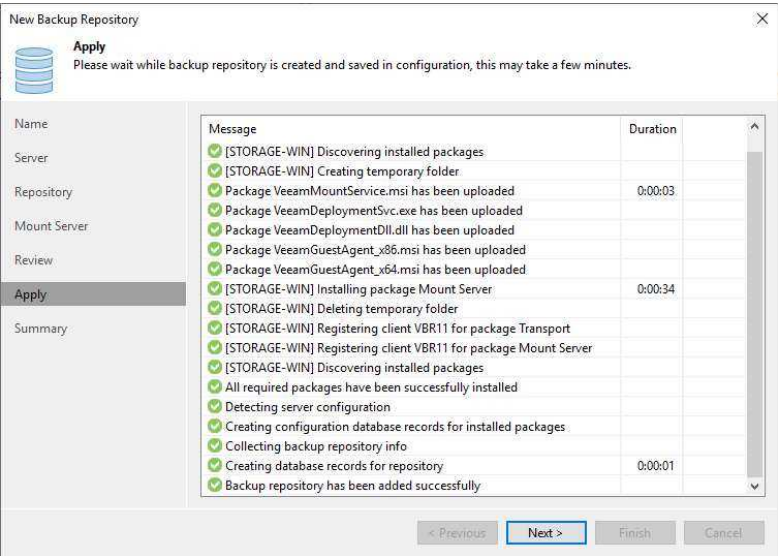
- 17. Select a server from the Mount server drop-down list on the Mount Server page. The mount server is required for the restoration of file-level and application items.
- 18. Select a folder in the Instant recovery write cache folder field.
- 19. Unselect Enable vPower NFS service on the mount server, vPower NFS settings are not applicable in Microsoft Hyper-V environments.
- 20. Click Next.



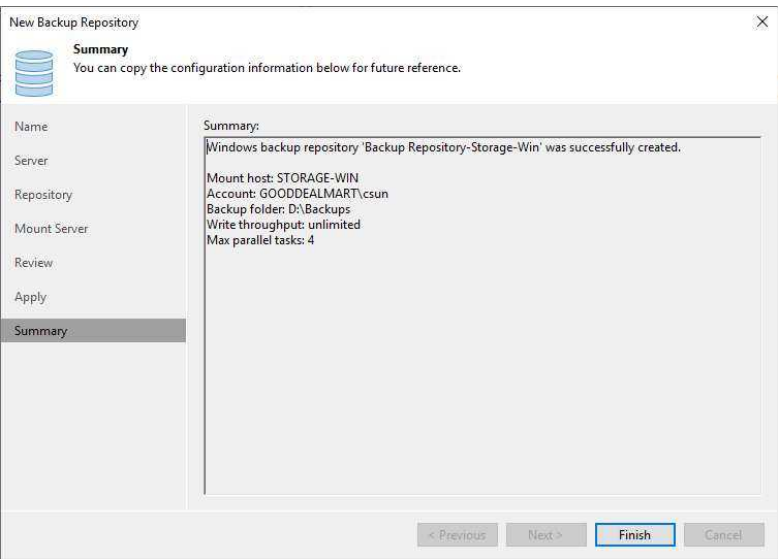
- 21. On the Review page, click Apply.
- 22. Select the Search the repository for existing backups and import them automatically if the backup repository contains backups previously created with Veeam Backup & Replication.
- 23. Select Import guest file system index data to the catalog and click Apply.



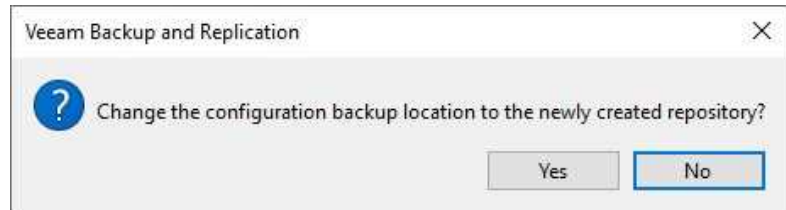
24. On the Apply page, complete the procedure of adding the backup repository without error and click Next.



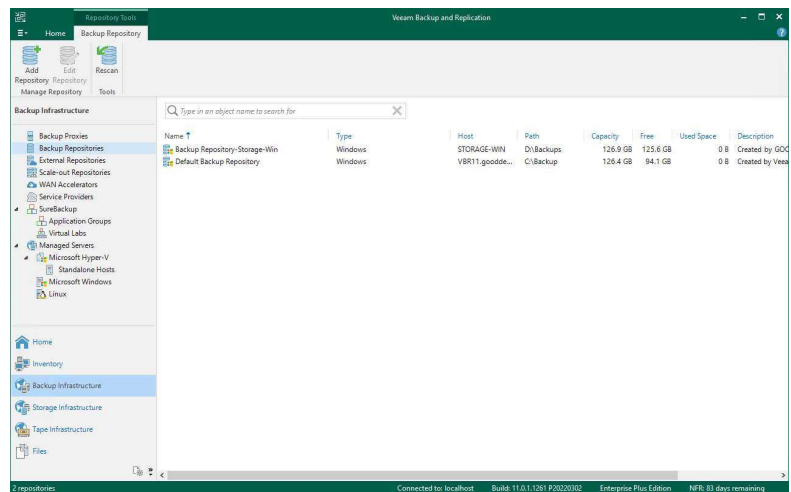
25. On the Summary page, click Finish.



26. Click Yes to change the configuration backup location if this is the first new create backup repository, and you will be asking.



27. Verify that the Backup Repository has been added.



Adding a local directory on the Linux server as a Hardened Backup Repository

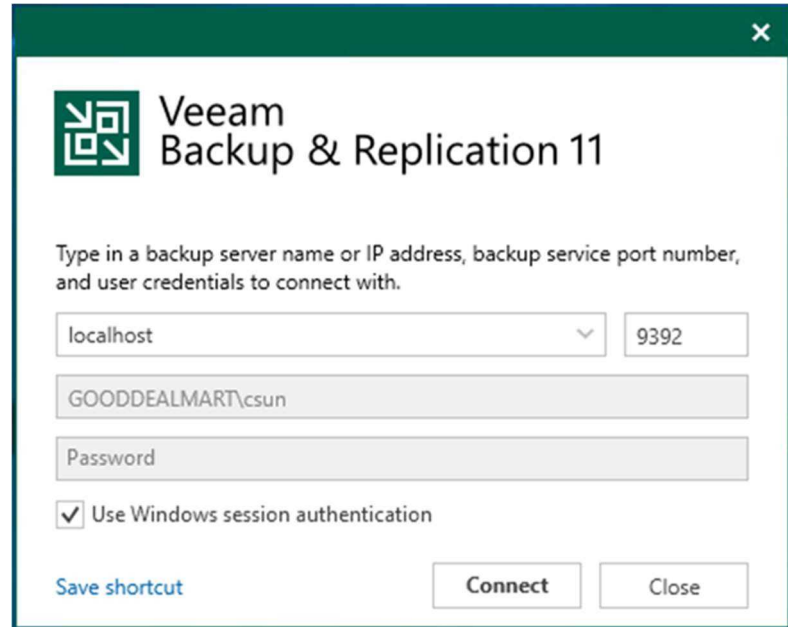
You can add the following types of storage to the Linux server as a backup repository:

- A local disk.
- A directly attached disk-based storage (such as a USB hard drive).
- NFS share.
- SCSI/FC SAN LUN in case the server is connected to the SAN fabric.

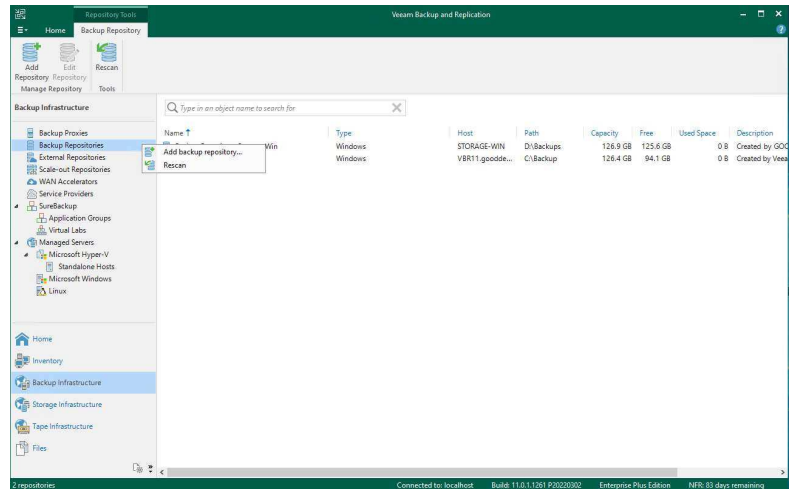
Instructions

Screenshot (if applicable)

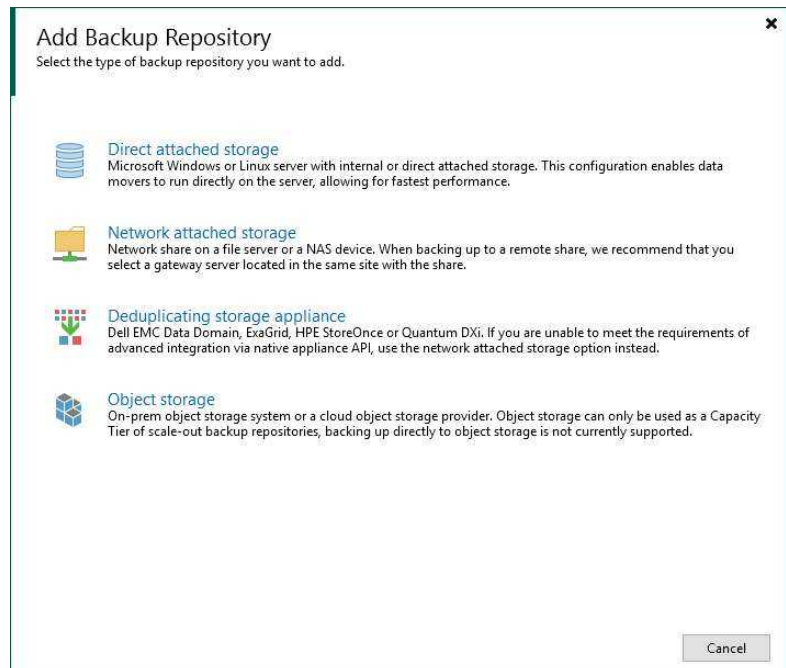
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



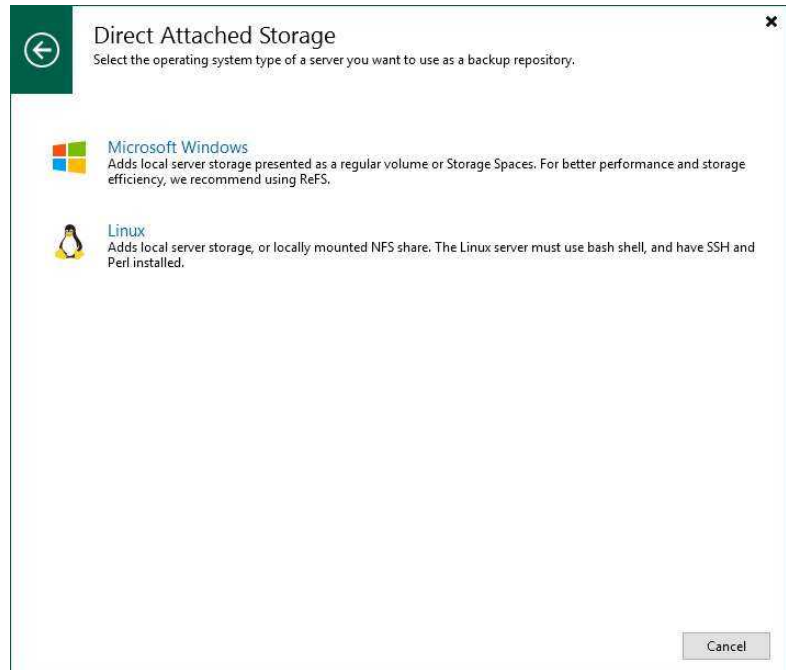
3. On the Home page, select Backup Infrastructure.
4. On the Backup Infrastructure page, select Backup Repositories, right-click Backup Repositories, and select Add backup repository.



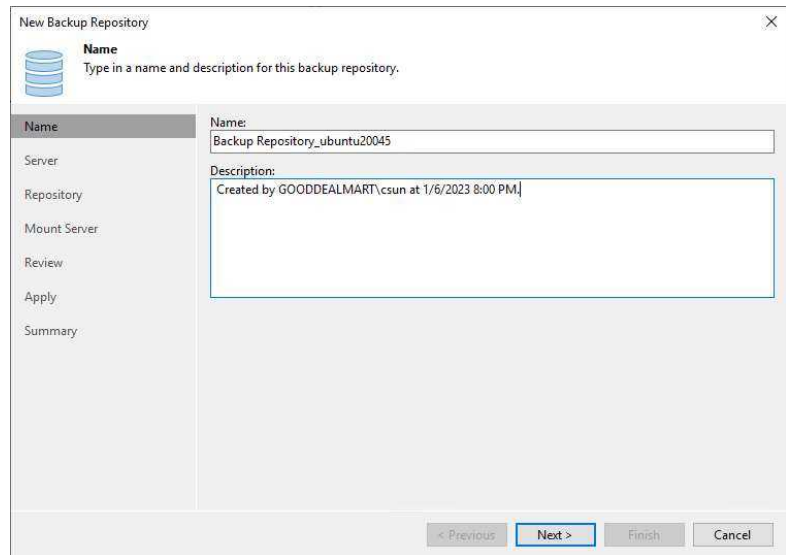
5. On the Add Backup Repository page, select Direct attached storage.



6. On the Direct Attached Storage page, select Linux.



7. On the Name page, specify in the Name field.
8. In the Description field, describe future references.
9. Click Next.



10. On the Server page, select the Linux server and click Populate.

New Backup Repository

Server

Choose repository server. You can select server from the list of managed servers added to the console.

Name

Server

Repository

Mount Server

Review

Apply

Summary

Repository server:

ubuntu20045 (Created by GOODDEALMART\csun at 1/6/2023 7:51 PM.)

Add New...

Path

Capacity

Free

Populate

< Previous

Next >

Finish

Cancel

11. Select the disk and click Next.

New Backup Repository

Server

Choose repository server. You can select server from the list of managed servers added to the console.

Name

Server

Repository

Mount Server

Review

Apply

Summary

Repository server:

ubuntu20045 (Created by GOODDEALMART\csun at 1/6/2023 7:51 PM.)

▼

Path	Capacity	Free
/ (/dev/mapper/ubuntu--vg-ubuntu--lv)	9.7 GB	4.7 GB
/boot (/dev/sda2)	1.7 GB	1.5 GB
/boot/efi (/dev/sda1)	951.1 MB	945.9 MB
/dev (udev)	915.1 MB	915.1 MB
/dev/shm (tmpfs)	959.2 MB	959.2 MB
/mnt/backupsfs01 (/dev/sdb)	126.9 GB	126 GB
/run (tmpfs)	191.8 MB	190.9 MB
/run/lock (tmpfs)	5 MB	5 MB
/run/user/1000 (tmpfs)	191.8 MB	191.8 MB
/snap/core20/1611 (/dev/loop0)	62 MB	0 B
/snap/xd/22753 (/dev/loop2)	67.9 MB	0 B
/snap/snapd/16292 (/dev/loop1)	47 MB	0 B
/sys/fs/cgroup (tmpfs)	959.2 MB	959.2 MB

12. On the Repository page, click Browser for Path to folder.

New Backup Repository

Repository

Type in path to the folder where backup files should be stored, and set repository load control options.

Name

Server

Repository

Mount Server

Review

Apply

Summary

Location

Path to folder:

Browse...

Capacity: <Unknown>

Free space: <Unknown>

Populate

☐ Use fast cloning on XFS volumes (recommended)

Reduces storage consumption and improves synthetic backup performance.

☐ Make recent backups immutable for:

7

 days

Protects backups from modification or deletion by ransomware or hackers. GFS full backups are made immutable for the entire duration of their retention policy.

Load control

Running too many concurrent tasks against the repository may reduce overall performance, and cause I/O timeouts. Control storage device saturation with the following settings:

☒ Limit maximum concurrent tasks to:

4

☐ Limit read and write data rate to:

1

 MB/s

Click Advanced to customize repository settings.

Advanced

< Previous

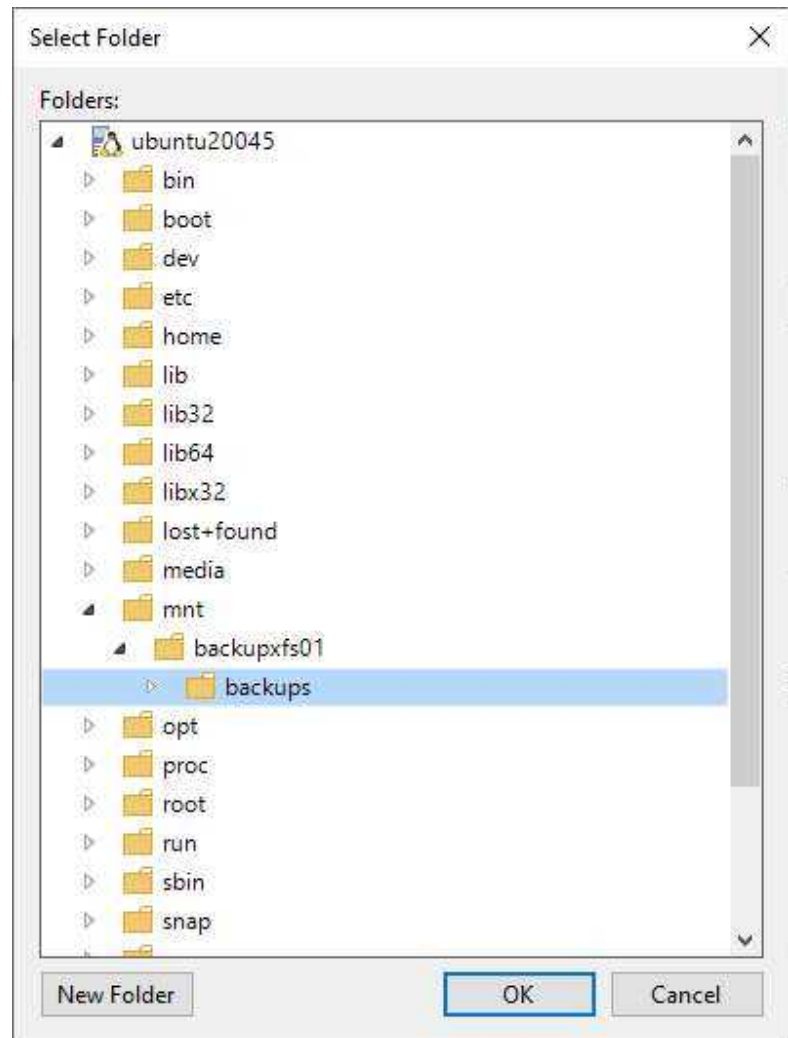
Next >

Finish

Cancel

157

13. On the Select Folder page, expand the server, select the backup folder, and click OK.



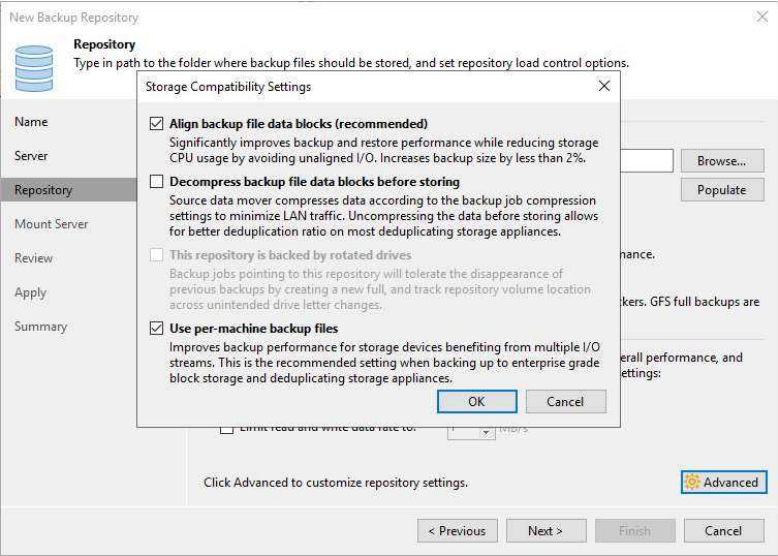
14. On the Repository page, click Populate for Path to folder.

The screenshot shows the 'New Backup Repository' dialog box with the 'Repository' tab selected. The 'Path to folder' field is empty, and the 'Populate' button is highlighted. The 'Capacity' and 'Free space' are both listed as '<Unknown>'. The 'Load control' section has 'Limit maximum concurrent tasks to' set to 4 and 'Limit read and write data rate to' set to 1 MB/s. The 'Advanced' button is visible at the bottom right.

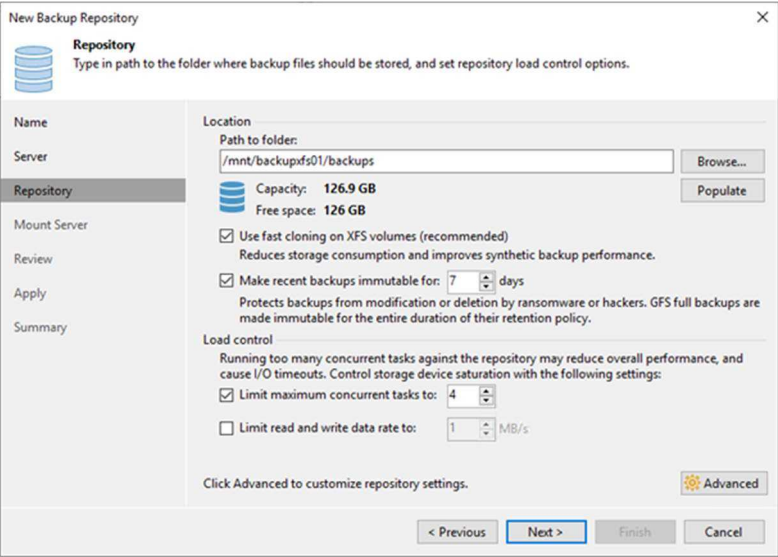
15. On the Repository page, select Use fast cloning on XFS volumes.
16. Select Make recent backup immutable for 7 days. It depends on your requirement.
17. Use the Load control settings to manage the backup repository's load and avoid potential storage I/O timeouts if needed.
18. Click Advanced.

The screenshot shows the 'New Backup Repository' dialog box with the 'Repository' tab selected. The 'Path to folder' field is filled with '/mnt/backupxfs01/backups'. The 'Capacity' is 126.9 GB and 'Free space' is 126 GB. The 'Load control' section has 'Limit maximum concurrent tasks to' set to 4 and 'Limit read and write data rate to' set to 1 MB/s. The 'Advanced' button is visible at the bottom right.

19. On the Storage Compatibility Settings, select Align backup file data blocks, select Use per-machine backup files, and click OK.



20. On the Repository page, click Next.



- 21. On the Mount Server page, select a server. The mount server is required for the restoration of file-level and application items.
- 22. Select a folder in the Instant recovery write cache folder field.
- 23. Click Next.

New Backup Repository

Mount Server

Specify a server to mount backups to when performing advanced restores (file, application item and instant VM recoveries). Instant recoveries require a write cache folder to store changed disk blocks in.

Name

Server

Repository

Mount Server

Review

Apply

Summary

Mount server:

VBR11.gooddealmart.ca (Backup server)

Add New...

Instant recovery write cache folder:

C:\ProgramData\Veeam\Backup\IRCach\

Browse...

Ensure that the selected volume has sufficient free disk space to store changed disk blocks of instantly recovered VMs. We recommend placing write cache on an SSD drive.

☒ Enable vPower NFS service on the mount server (recommended)

Ports...

Unlocks instant recovery of any backup (physical, virtual or cloud) to a VMware vSphere VM. vPower NFS service is not used for instant recovery to a Microsoft Hyper-V VM.

< Previous

Next >

Finish

Cancel

- 24. On the Review page, click Apply.
- 25. Select the Search the repository for existing backups and import them automatically if the backup repository contains backups previously created with Veeam Backup & Replication.
- 26. Select the Import guest file system index data to the catalog if the backup repository contains previously created Veeam Backup & Replication guest file system index files.

New Backup Repository

Review

Please review the settings, and click Apply to continue.

Name

Server

Repository

Mount Server

Review

Apply

Summary

The following components will be processed on server VBR11.gooddealmart.ca:

Component name	Status
Transport	already exists
vPower NFS	already exists
Mount Server	already exists

☐ Search the repository for existing backups and import them automatically

☐ Import guest file system index data to the catalog

< Previous

Apply

Finish

Cancel

27. On the Apply page, ensure to complete the procedure of the backup repository adding without error and click Next.

New Backup Repository

Apply

Please wait while backup repository is created and saved in configuration, this may take a few minutes.

Name

Server

Repository

Mount Server

Review

Apply

Summary

Message

Duration

Starting infrastructure item update process0:00:02

[VBR11] Discovering installed packages

[VBR11] Registering client VBR11 for package Transport

[VBR11] Registering client VBR11 for package Mount Server

[VBR11] Discovering installed packages

All required packages have been successfully installed

Detecting server configuration

Creating configuration database records for installed packages

Collecting backup repository info

Checking write permissions for the repository folder...

Creating database records for repository0:00:05

Backup repository has been added successfully

< Previous

Next >

Finish

Cancel

28. On the Summary page, click Finish.

New Backup Repository

Summary

You can copy the configuration information below for future reference.

Name

Server

Repository

Mount Server

Review

Apply

Summary

Summary:

Linux backup repository 'Backup Repository_ubuntu20045' was successfully created.

Mount host: VBR11.gooddealmart.ca

Backup folder: /mnt/backupxfs01/backups

Write throughput: unlimited

Max parallel tasks: 4

Fast cloning on XFS volumes: enabled

Days of immutability: enabled for 7 days

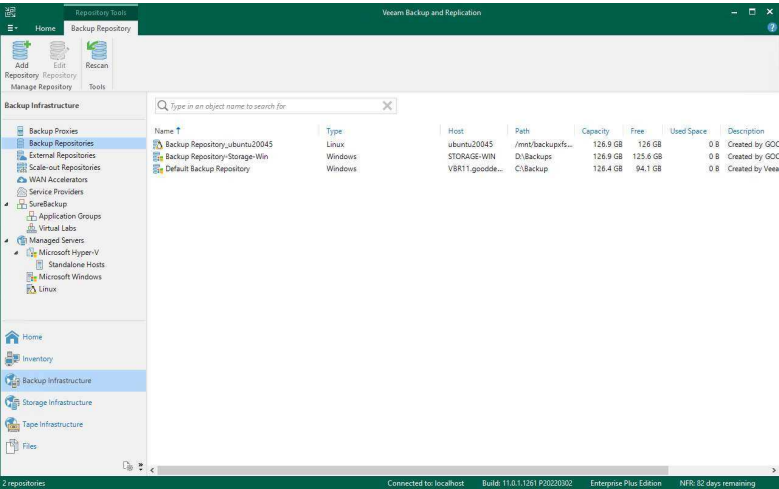
< Previous

Next >

Finish

Cancel

29. Verify that the Backup Repository has been added.



Adding Network Attached Storage (SMB or CIFS Shares) as Backup Repository

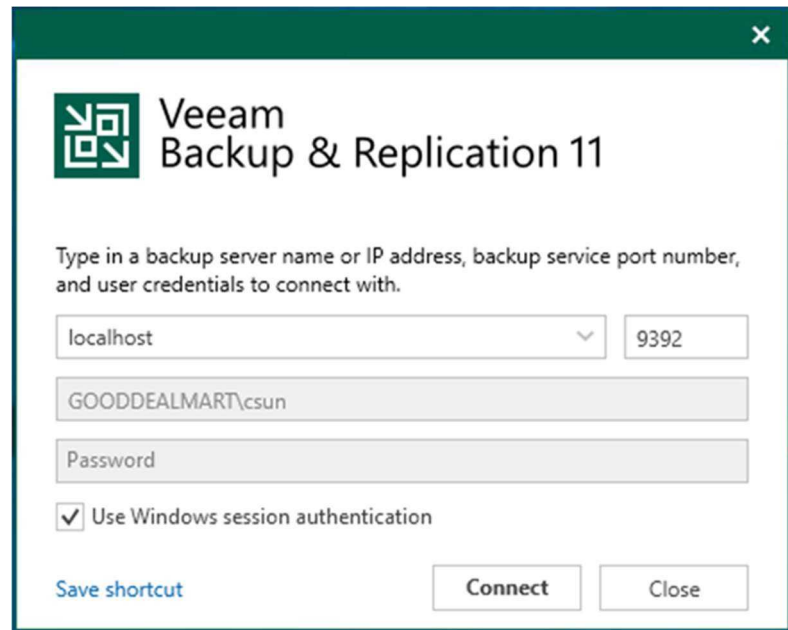
You can use network-attached storage (SMB or CIFS Shares) as backup repositories with Veeam Backup and Replication. A network-attached storage (NAS) device can be a shared folder on your computer or any other physical device accessed via the Server Message Block (SMB) protocol.

Note:

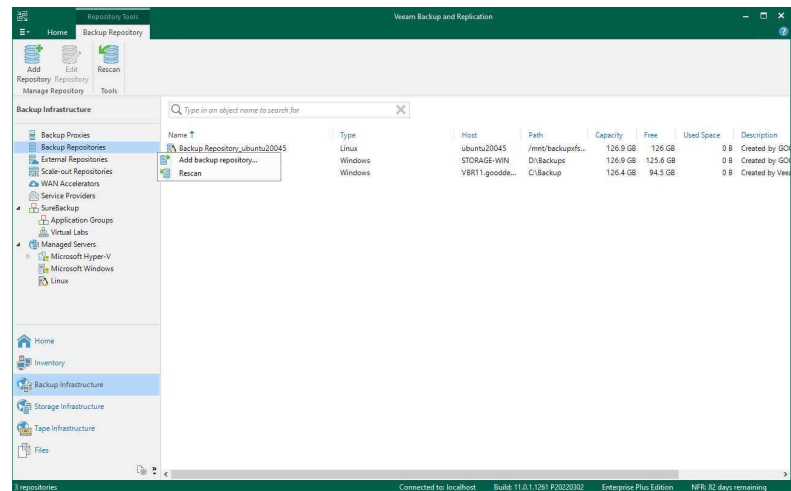
- You must deploy a gateway server because an SMB share cannot host Veeam Data Movers. However, Veeam Backup & Replication will automatically deploy a Veeam Data Mover on this gateway server.
- It is recommended that you deploy an additional gateway server in the remote site, closer to the SMB repository, if you plan to move VM data to an off-site SMB repository over a WAN link,

Instructions	Screenshot (if applicable)
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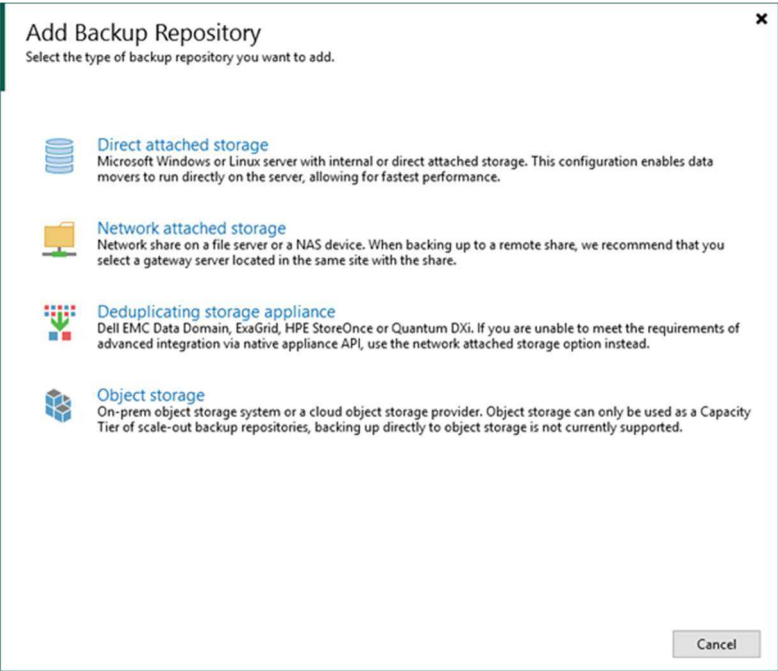
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



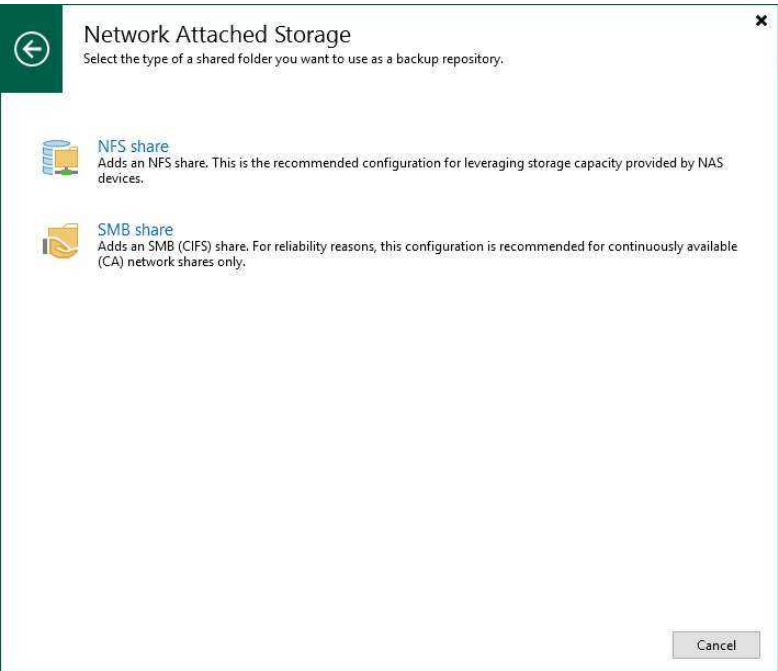
3. On the Home page, select Backup Infrastructure.
4. On the Backup Infrastructure page, select Backup Repositories, right-click Backup Repositories and select Add backup repository.



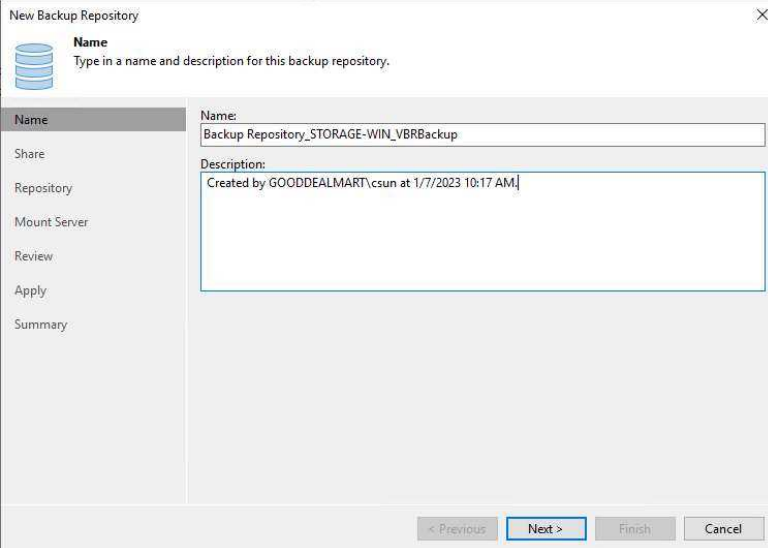
5. On the Add Backup Repository page, select Network attached storage.



6. On the Network Attached Storage, select SMB share.

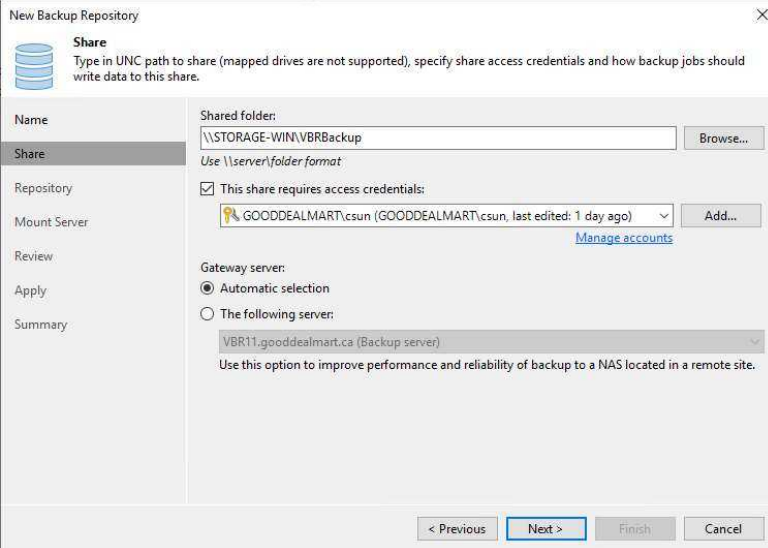


7. On the Name page, specify in the Name field.
8. In the Description field, describe future references.
9. Click Next.



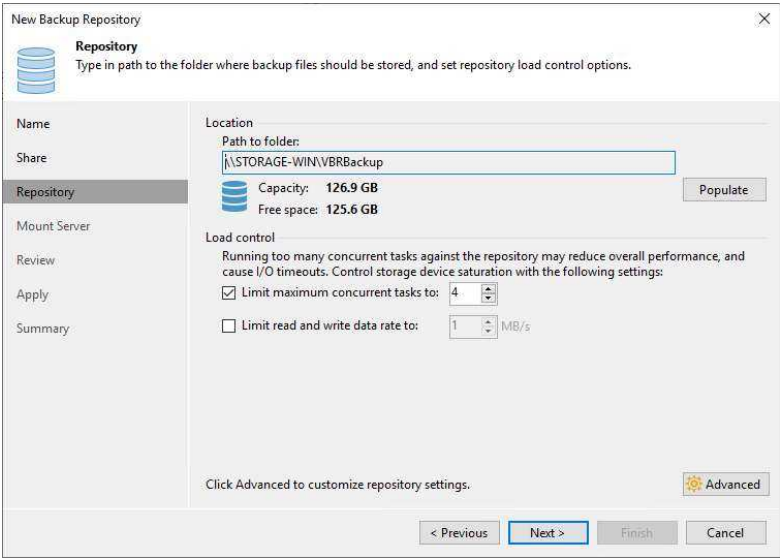
The screenshot shows the 'New Backup Repository' wizard at the 'Name' step. The left sidebar has a 'Name' icon and a list of steps: Name, Share, Repository, Mount Server, Review, Apply, and Summary. The main area has a 'Name' field with the text 'Backup Repository_STORAGE-WIN_VBRBackup' and a 'Description' field with the text 'Created by GOODDEALMART\csun at 1/7/2023 10:17 AM'. At the bottom are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

10. On the Share page, enter the share folder name, select This share requires access credentials, and select the managed account from the drop-down list.
11. Select Automatic selection or specify the server as the Gateway server.
12. Click Next.



The screenshot shows the 'New Backup Repository' wizard at the 'Share' step. The left sidebar has a 'Share' icon and the same list of steps. The main area has a 'Shared folder' field with the text '\\STORAGE-WIN\VBRBackup' and a 'Browse...' button. Below it is a checkbox 'This share requires access credentials:' which is checked, and a dropdown menu showing 'GOODDEALMART\csun (GOODDEALMART\csun, last edited: 1 day ago)' with an 'Add...' button and a 'Manage accounts' link. There is also a 'Gateway server' section with a radio button for 'Automatic selection' (which is selected) and a dropdown for 'The following server:' showing 'VBR11.gooddealmart.ca (Backup server)'. A note below says 'Use this option to improve performance and reliability of backup to a NAS located in a remote site.' At the bottom are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

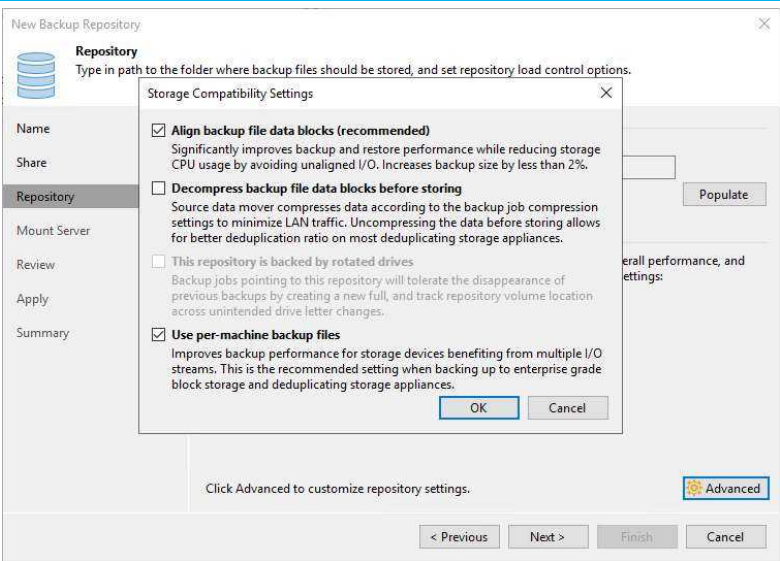
- 13. On the Repository page, click Populate to review the disk capacity and free space.
- 14. Use the Load control settings to manage the backup repository's load and avoid potential storage I/O timeouts if necessary.
- 15. Click Advanced.



- 16. On the Storage Compatibility Settings, select Align backup file data blocks, select Use per-machine backup files, and click OK.

Note:

Select Decompress backup file data blocks before storing if you use a deduplicating storage feature or appliance.



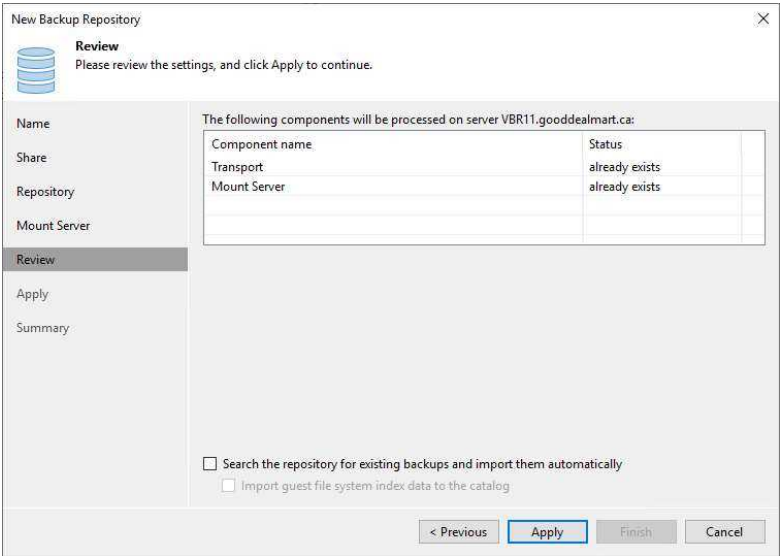
17. On the Repository page, click Next.

The screenshot shows the 'New Backup Repository' dialog box with the 'Repository' tab selected. The left sidebar contains links for Name, Share, Repository, Mount Server, Review, Apply, and Summary. The main area is titled 'Repository' and includes a description: 'Type in path to the folder where backup files should be stored, and set repository load control options.' The 'Location' section has a 'Path to folder:' text box containing '\\STORAGE-WIN\VBRBackup' and a 'Populate' button. Below this, storage statistics show 'Capacity: 126.9 GB' and 'Free space: 125.6 GB'. The 'Load control' section contains a warning about concurrent tasks and two checkboxes: 'Limit maximum concurrent tasks to:' (checked, set to 4) and 'Limit read and write data rate to:' (unchecked, set to 1 MB/s). An 'Advanced' button is at the bottom right. Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

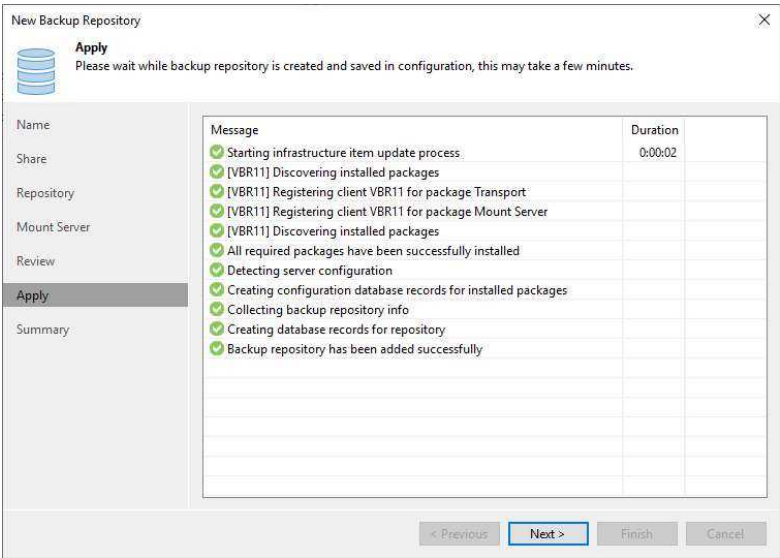
18. On the Mount Server page, select a server from the drop-down list.
19. Select a folder in the Instant recovery write cache folder field.
20. Unselect Enable vPower NFS service on the mount server, vPower NFS settings are not applicable in Microsoft Hyper-V environments.
21. Click Next.

The screenshot shows the 'New Backup Repository' dialog box with the 'Mount Server' tab selected. The left sidebar is the same as the previous tab. The main area is titled 'Mount Server' and includes a description: 'Specify a server to mount backups to when performing advanced restores (file, application item and instant VM recoveries). Instant recoveries require a write cache folder to store changed disk blocks in.' The 'Mount server:' section has a dropdown menu showing 'VBR11.gooddealmart.ca (Backup server)' and an 'Add New...' button. The 'Instant recovery write cache folder:' section has a text box containing 'C:\ProgramData\Veeam\Backup\IRCache\' and a 'Browse...' button. A note states: 'Ensure that the selected volume has sufficient free disk space to store changed disk blocks of instantly recovered VMs. We recommend placing write cache on an SSD drive.' There is an unchecked checkbox for 'Enable vPower NFS service on the mount server (recommended)' and a 'Ports...' button. A descriptive text below the checkbox explains that vPower NFS service is not used for instant recovery to a Microsoft Hyper-V VM. Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

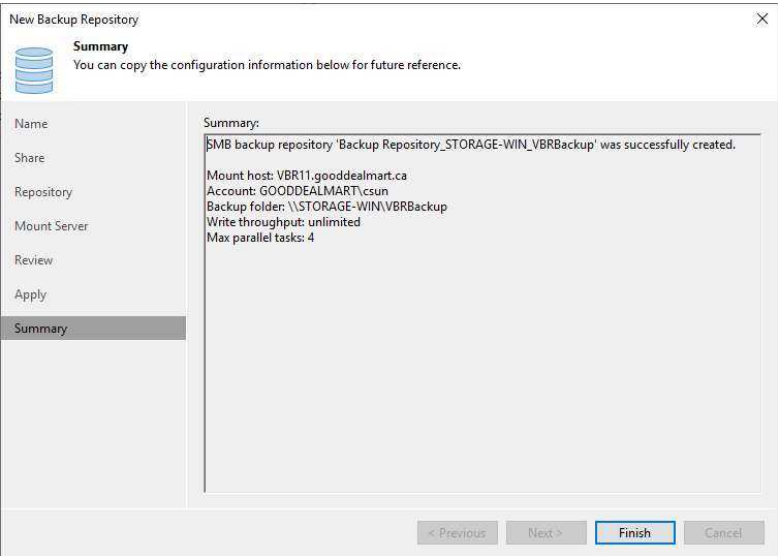
- 22. On the Review page, click Apply.
- 23. Select the Search the repository for existing backups and import them automatically if the backup repository contains backups previously created with Veeam Backup & Replication.
- 24. Select the Import guest file system index data to the catalog if the backup repository contains index files for guest file systems previously created by Veeam Backup & Replication.



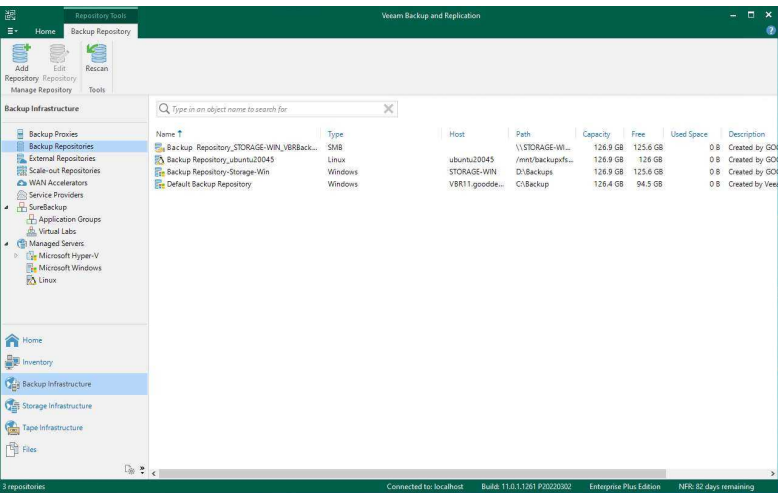
- 25. On the Apply page, complete the procedure of adding the backup repository without error, and click Next.



26. On the Summary page,
click Finish



27. Verify that the Backup
Repository has been
added.



Adding Rotated Drives on the Microsoft Windows server as Backup Repository

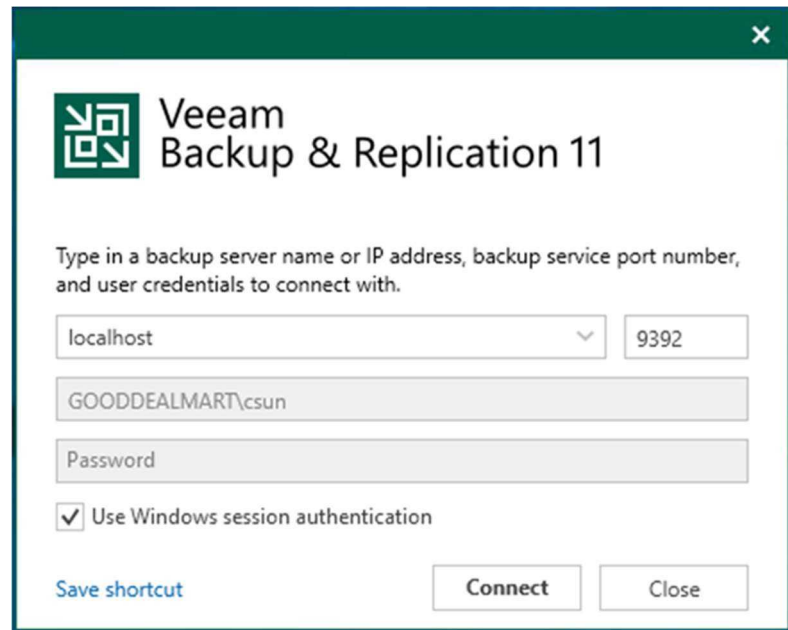
This scenario is helpful if you want to store backups on multiple external hard drives that you intend to move between locations. The drives that are rotated can be detachable USB or eSATA hard drives.

There are some limitations as below:

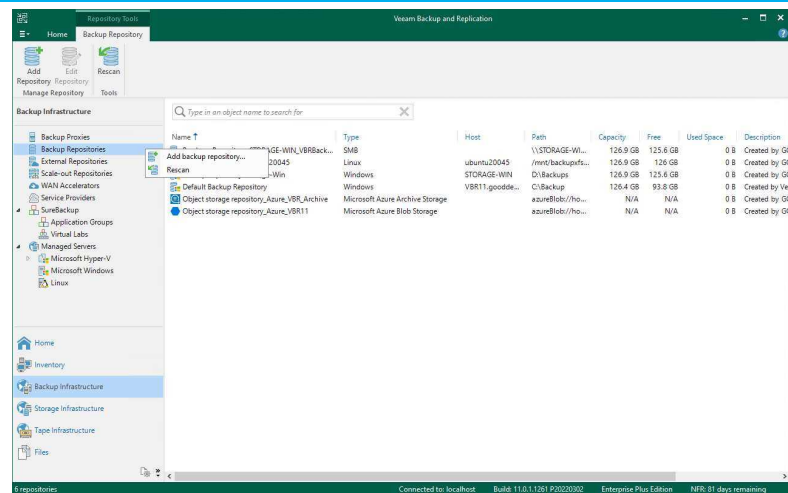
- Only one repository with rotated drives can be created on a single managed server.
- You cannot store archive full backups (GFS backups) created with backup jobs or backup copy jobs in backup repositories with a rotated drive.
- You cannot store per-machine backup files in backup repositories with rotated drives.
- You cannot rescan backup repositories with rotated drives.
- Scale-out backup repositories do not support rotated drives.
- Repositories with rotated drives are not supported as primary backup repositories, archive repositories, and secondary target repositories for NAS backup.

Instructions	Screenshot (if applicable)
--------------	----------------------------

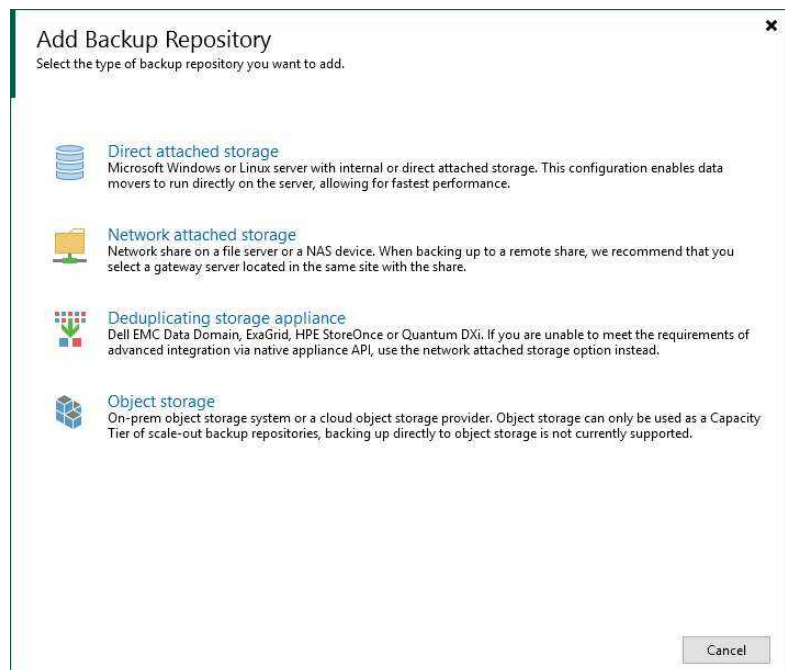
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



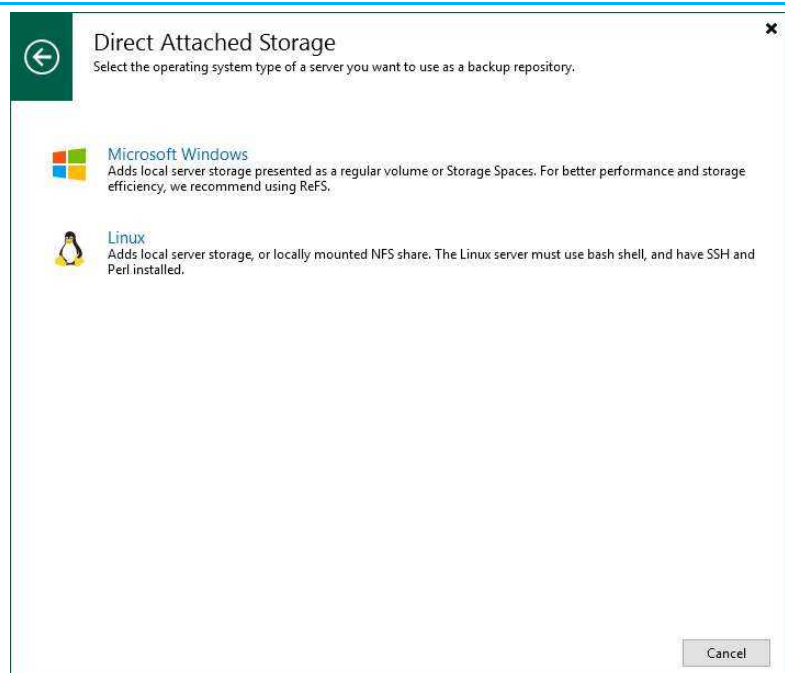
3. On the Home page, select Backup Infrastructure.
4. On the Backup Infrastructure page, select Backup Repositories, right-click Backup Repositories, and select Add backup repository.



5. On the Add Backup Repository page, select Direct attached storage.



6. On the Direct Attached Storage page, select Microsoft Windows.



- 7. On the Name page, specify in the Name field.
- 8. In the Description field, describe future references.
- 9. Click Next.

New Backup Repository

Name

Type in a name and description for this backup repository.

Name

Server

Repository

Mount Server

Review

Apply

Summary

Name:

Backup Repository_HPHV01-USB

Description:

Created by GOODDEALMART\csun at 1/7/2023 5:38 PM.

< Previous

Next >

Finish

Cancel

- 10. On the Server page, select the Microsoft Windows server you want to use as a backup repository and click Populate.

New Backup Repository

Server

Choose repository server. You can select server from the list of managed servers added to the console.

Name

Server

Repository

Mount Server

Review

Apply

Summary

Repository server:

HPHV01 (Created by GOODDEALMART\csun at 1/5/2023 12:46 PM.)

Add New...

Path	Capacity	Free
------	----------	------

Populate

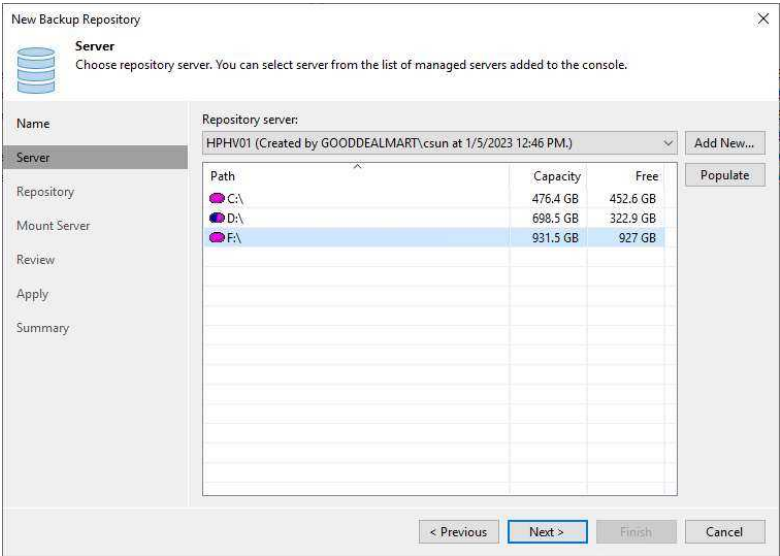
< Previous

Next >

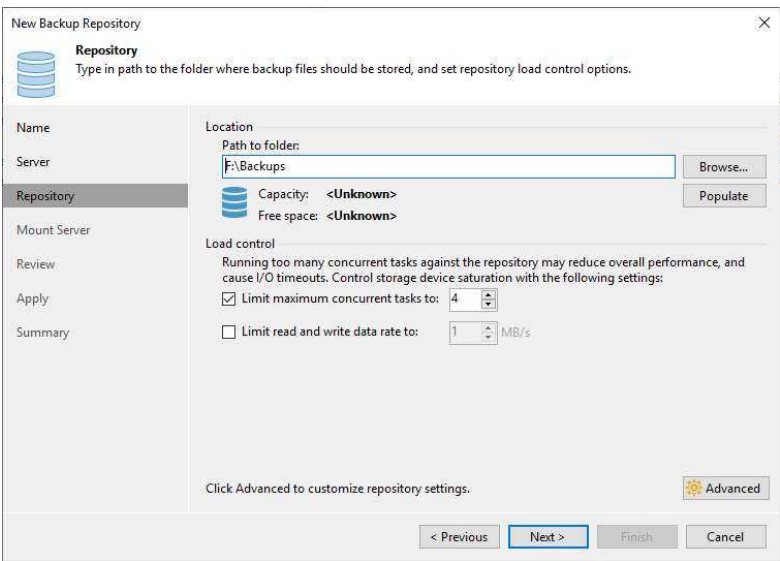
Finish

Cancel

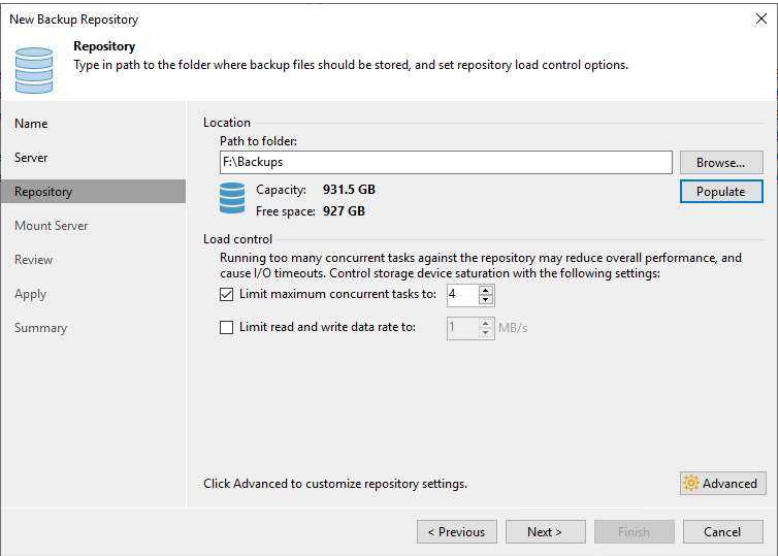
11. Select the rotated disk drive you want to use as a backup repository, and click Next.



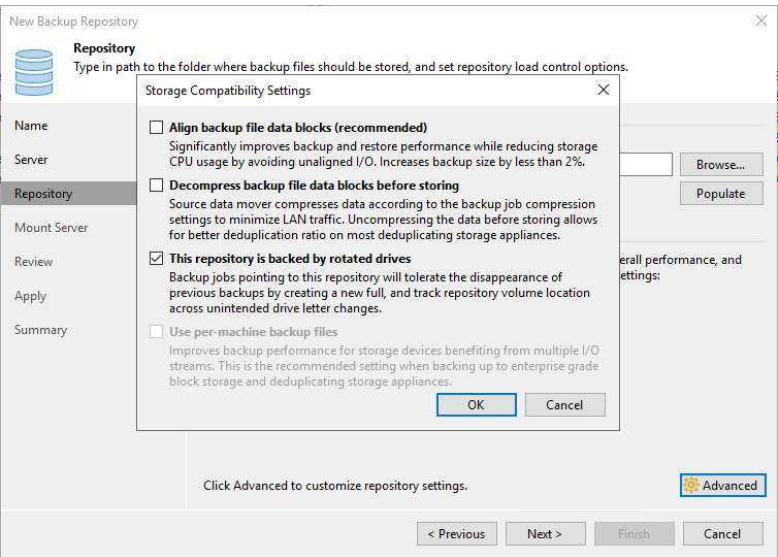
12. On the Repository page, click Populate to review the disk capacity and free space.



- 13. Use the Load control settings to manage the load on the backup repository and avoid storage I/O timeouts if you require it.
- 14. Click Advanced.



- 15. On the Storage Compatibility Settings, select This repository is backed by rotated drives, and click OK.



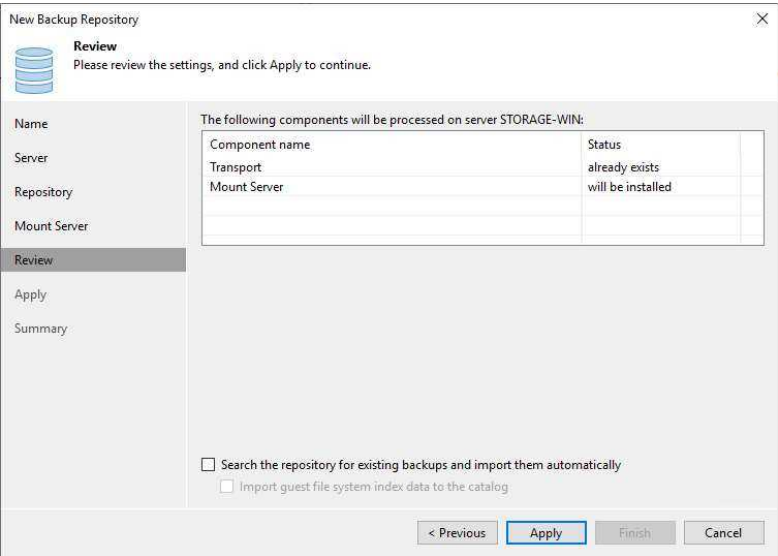
16. On the Repository page, click Next.

The screenshot shows the 'New Backup Repository' dialog box with the 'Repository' tab selected. The left sidebar contains links for Name, Server, Repository, Mount Server, Review, Apply, and Summary. The main area is titled 'Repository' and includes the instruction: 'Type in path to the folder where backup files should be stored, and set repository load control options.' Under the 'Location' section, the 'Path to folder:' is set to 'F:\Backups' with a 'Browse...' button. Below this, the 'Capacity' is 931.5 GB and 'Free space' is 927 GB, with a 'Populate' button. The 'Load control' section contains a warning about concurrent tasks and two checkboxes: 'Limit maximum concurrent tasks to:' (set to 4) and 'Limit read and write data rate to:' (set to 1 MB/s). At the bottom right is an 'Advanced' button. Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

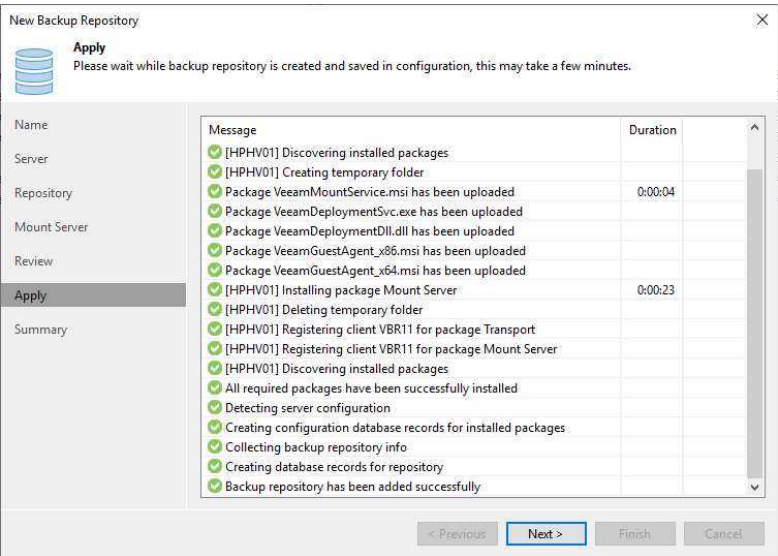
17. On the Mount Server page, select a server from the drop-down list.
18. Select a folder in the Instant recovery write cache folder field.
19. Unselect Enable vPower NFS service on the mount server, vPower NFS settings are not applicable in Microsoft Hyper-V environments.
20. Click Next.

The screenshot shows the 'New Backup Repository' dialog box with the 'Mount Server' tab selected. The left sidebar is the same as the previous tab. The main area is titled 'Mount Server' and includes the instruction: 'Specify a server to mount backups to when performing advanced restores (file, application item and instant VM recoveries). Instant recoveries require a write cache folder to store changed disk blocks in.' Under the 'Mount server:' section, a dropdown menu shows 'HPHV01 (Created by GOODDEALMART\csun at 1/5/2023 12:46 PM.)' with an 'Add New...' button. Below this, the 'Instant recovery write cache folder:' is set to 'F:\ProgramData\Veeam\Backup\IRCach\' with a 'Browse...' button. A note states: 'Ensure that the selected volume has sufficient free disk space to store changed disk blocks of instantly recovered VMs. We recommend placing write cache on an SSD drive.' There is an unchecked checkbox for 'Enable vPower NFS service on the mount server (recommended)' and a 'Ports...' button. A sub-note says: 'Unlocks instant recovery of any backup (physical, virtual or cloud) to a VMware vSphere VM. vPower NFS service is not used for instant recovery to a Microsoft Hyper-V VM.' Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

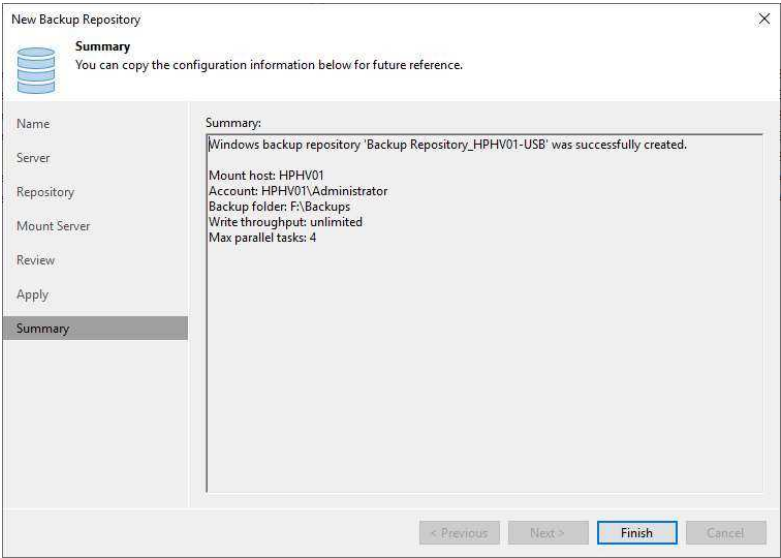
- 21. On the Review page, click Apply.
- 22. Select the Search the repository for existing backups and import them automatically if the backup repository contains backups previously created with Veeam Backup & Replication.
- 23. Select the Import guest file system index data to the catalog if the backup repository contains guest file system index files previously created by Veeam Backup & Replication.



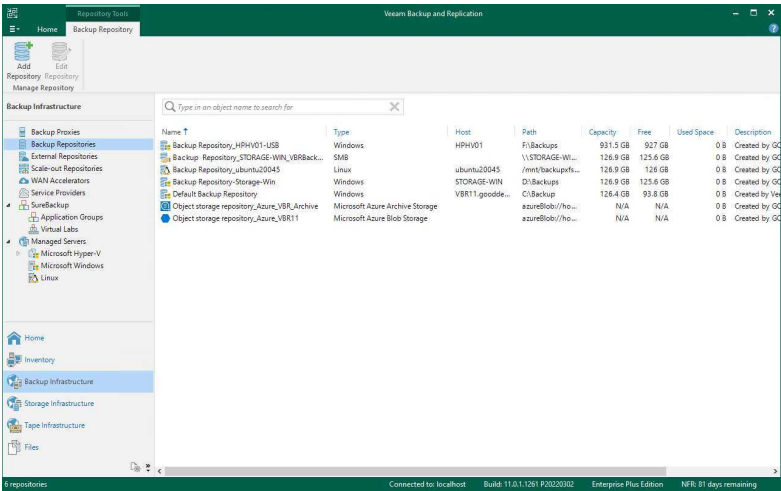
- 24. On the Apply page, ensure Veeam completes adding the backup repository process without error, and click Next.



25. On the Summary page, click Finish.



26. Verify that the Backup Repository has been added.

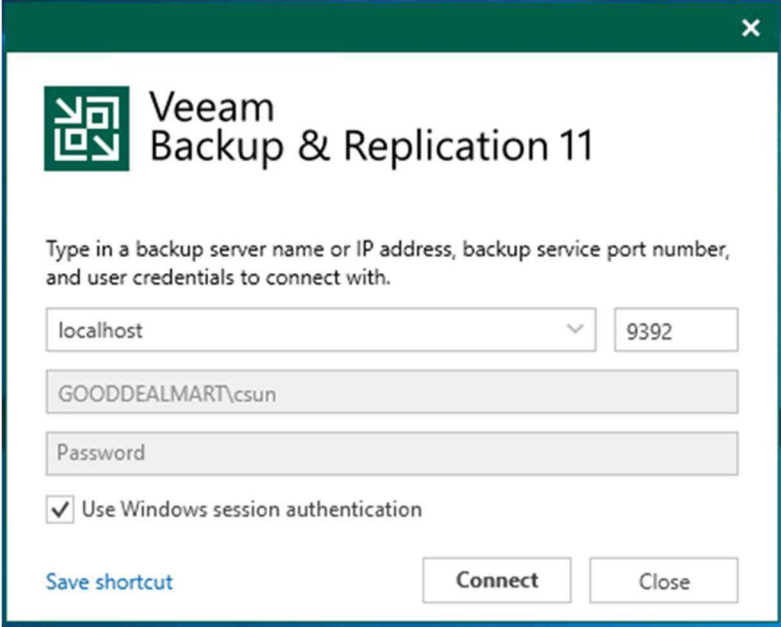


Adding WAN Acceleration

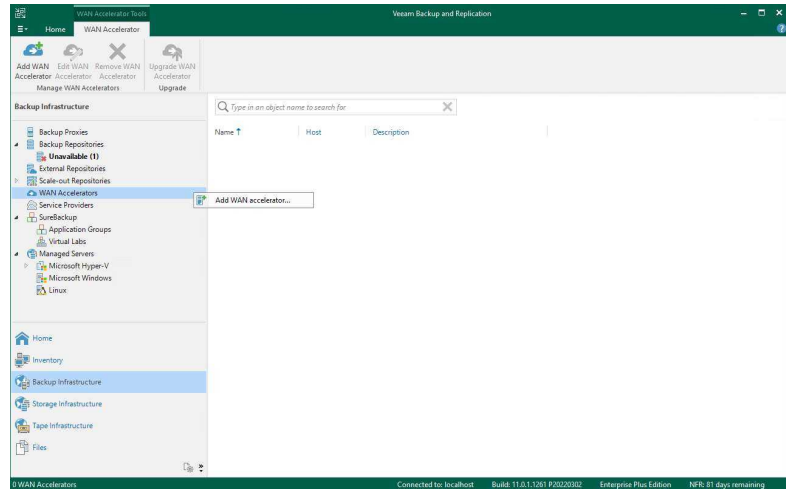
Veeam's WAN acceleration technology optimizes data transfer to remote locations. It is explicitly designed for off-site backup copy and replication jobs. You must deploy a pair of WAN accelerators in your backup infrastructure to enable WAN acceleration and data deduplication technologies.

Note:

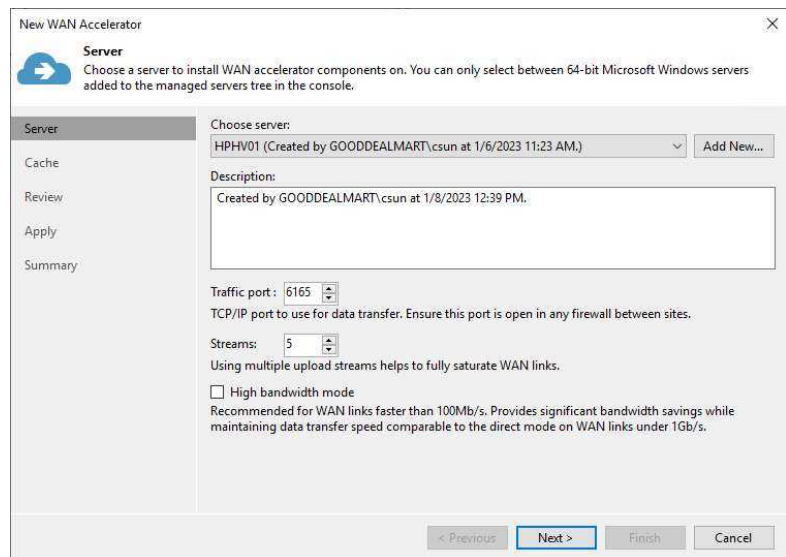
The Veeam Universal License includes WAN acceleration. Veeam Backup & Replication Enterprise or Enterprise Plus editions are required when using a legacy socket-based licence.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	

3. On the Home page, select Backup Infrastructure.
4. On the Backup Infrastructure page, select WAN Accelerators, right-click WAN Accelerators, and select Add WAN Accelerator.



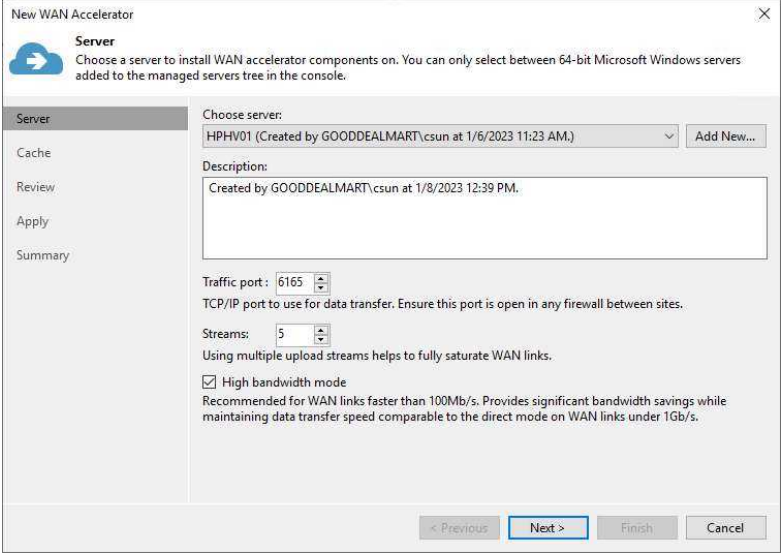
5. Select a Microsoft Windows server from the Choose server drop-down list on the Server page.
6. Describe comments in the Description.
7. Specify the number of the port in the Traffic port field.
8. Specify the number of connections in the Streams field. If the link has low latency and high bandwidth, the default setting (5 streams) may sufficiently saturate it thoroughly. The link still needs to be fully utilized the number of streams may be increased.



According to tests, multiplying the link speed by 1.5 is a good best practice for estimating the number of streams required for high latency.

9. If your network bandwidth exceeds 100 Mbps, Veeam recommends using the High bandwidth mode option. On WAN links less than 1 Gbps, this mode offers significant bandwidth savings compared to the direct method.

10. Click Next.



The screenshot shows the 'New WAN Accelerator' wizard window. The 'Server' tab is selected in the left sidebar. The main area contains the following fields and options:

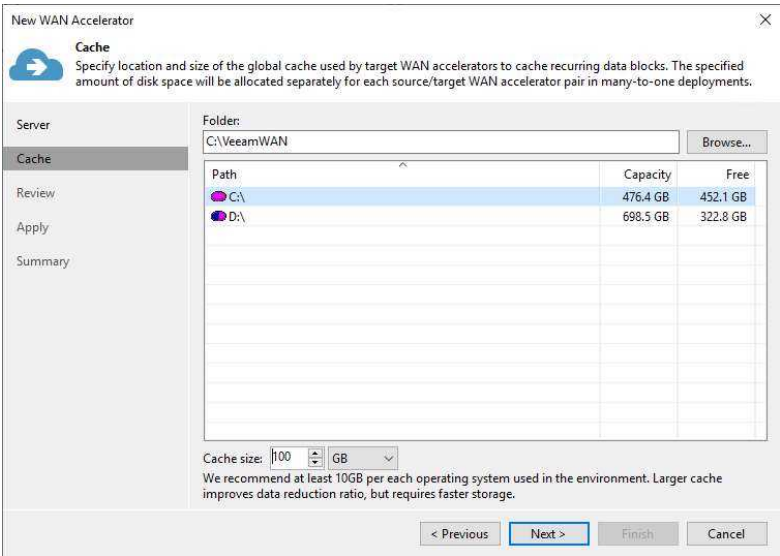
- Choose server:** A dropdown menu showing 'HPHV01 (Created by GOODDEALMART\csun at 1/6/2023 11:23 AM.)' with an 'Add New...' button next to it.
- Description:** A text box containing 'Created by GOODDEALMART\csun at 1/8/2023 12:39 PM.'
- Traffic port:** A spinner box set to '6165'. Below it, a note says: 'TCP/IP port to use for data transfer. Ensure this port is open in any firewall between sites.'
- Streams:** A spinner box set to '5'. Below it, a note says: 'Using multiple upload streams helps to fully saturate WAN links.'
- High bandwidth mode:** A checked checkbox. Below it, a note says: 'Recommended for WAN links faster than 100Mb/s. Provides significant bandwidth savings while maintaining data transfer speed comparable to the direct mode on WAN links under 1Gb/s.'

At the bottom right, there are four buttons: '< Previous' (disabled), 'Next >' (highlighted with a blue border), 'Finish' (disabled), and 'Cancel'.

- 11. Specify a path to the folder in the Folder field on the Cache page.
- 12. Specify the size for the global cache in the Cache size field.
- 13. Click Next.

Note:

If both WAN accelerators (source and target) are set to High bandwidth, WAN acceleration does not use the global cache. However, remember that you can deactivate the High bandwidth mode and return to the Low bandwidth mode anytime.



14. On the Review page, click Apply.

New WAN Accelerator

Review
Review the settings, and click Apply to continue.

Server
Cache
Review
Apply
Summary

Server name: **HPHV01**
Server type: **Physical**
Cache size: **100 GB**
Cache path: **C:\VeeamWAN**

The following components will be processed on HPHV01:

Component name	Status
Transport	already exists
WAN Accelerator	will be installed

< Previous **Apply** Finish Cancel

15. On the Apply page, complete the procedure of WAN Accelerator adding without error, and click Next.

New WAN Accelerator

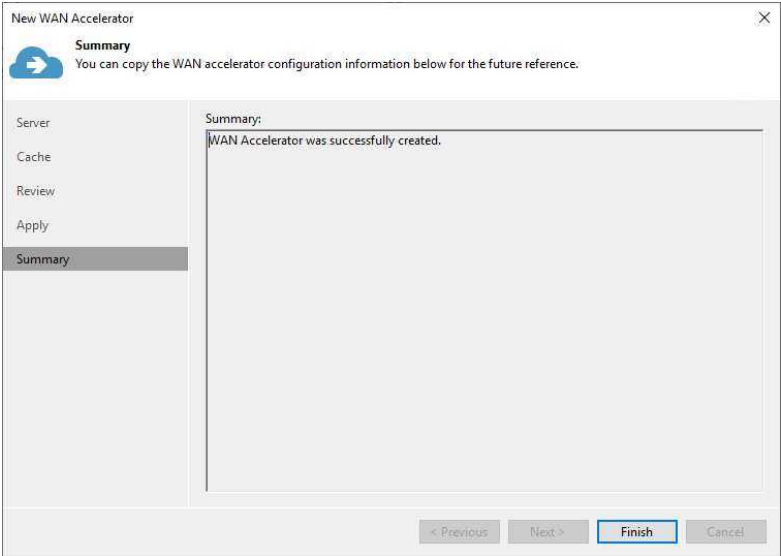
Apply
Please wait while we are installing and configuring required components, this may take a few minutes.

Server
Cache
Review
Apply
Summary

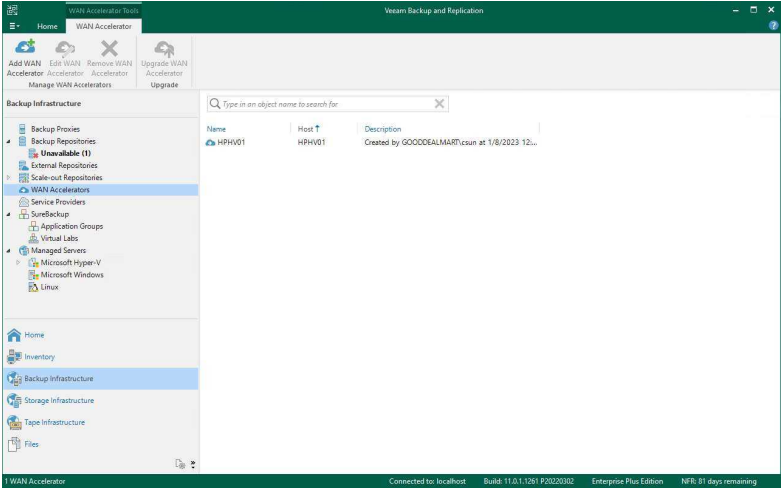
Message	Duration
✓ Starting infrastructure item update process	0:00:05
✓ Creating temporary folder	
✓ Package VeeamWANSvc_x64.msi has been uploaded	
✓ Installing package WAN Accelerator	0:00:03
✓ Deleting temporary folder	
✓ Registering client VBRI11 for package Transport	
✓ Registering client VBRI11 for package WAN Accelerator	
✓ Discovering installed packages	
✓ All required packages have been successfully installed	
✓ Checking WAN Accelerator service state	
✓ Configuring WAN Accelerator	
✓ Restarting WAN Accelerator service	0:00:11
✓ Creating configuration database records for WAN Accelerator	
✓ Creating configuration database records for installed packages	
✓ WAN Accelerator created successfully	

< Previous **Next >** Finish Cancel

16. On the Summary page, click Finish.



17. Verify that the WAN Accelerator has been added.



General Settings

All jobs, backup infrastructure components, and other backup server-managed objects have general settings applied to them.

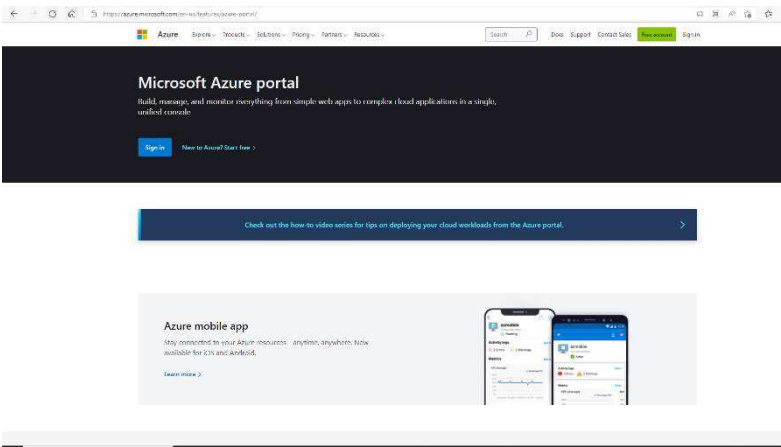
Configure Notification with Free SendGrid Account of Azure

You can configure the SendGrid account as an SMTP relay for notification settings if you want Veeam Backup & Replication to send email notifications about backup job results.

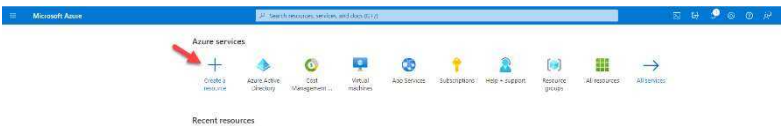
Instructions	Screenshot (if applicable)
--------------	----------------------------

- 1. Sign in Azure portal with a global admin account.

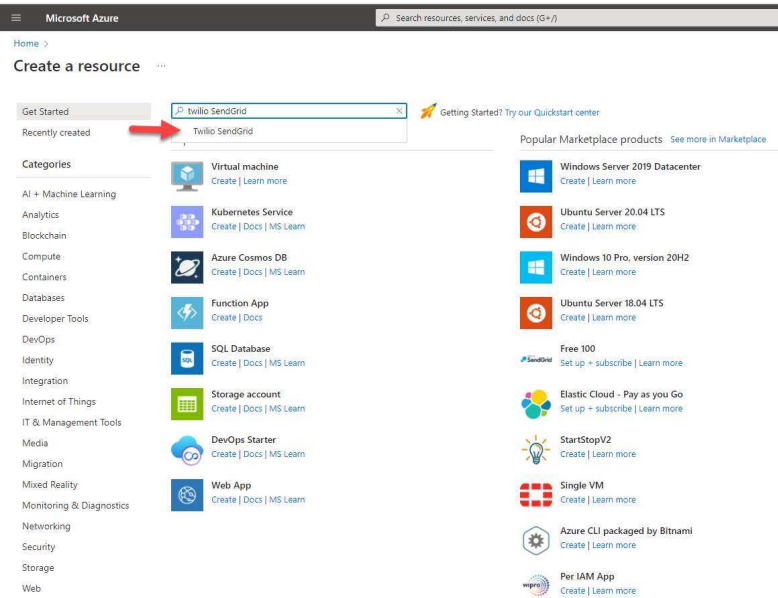
<https://portal.azure.com>



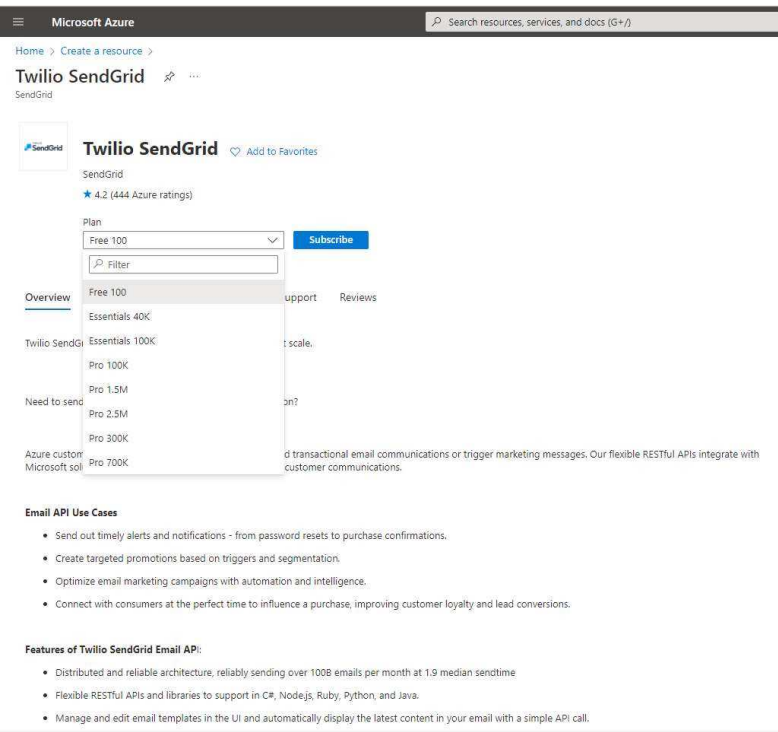
- 2. On the Azure services page, select +Create resource.



3. On the Create a resource page, search and select Twilio SendGrid.



4. On the Create Twilio SendGrid page, select subscribe Plan and click Subscribe.



5. On the Create SendGrid Account page, select Basics, file in all the information and then click Next: Tags.

Microsoft Azure

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Subscription *

Resource group *

Microsoft Azure Sponsorship

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SaaS details

Name *

Plan

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Billing term

Price + payment options

Subtotal

Recurring billing

1-month

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☒ I give Microsoft permission to use and share my contact information so that Microsoft or the Provider can contact me

Contact details

Name	cary sun
Primary email address *	cary@carysun.com ✓
Primary phone number *	604448888 ✓

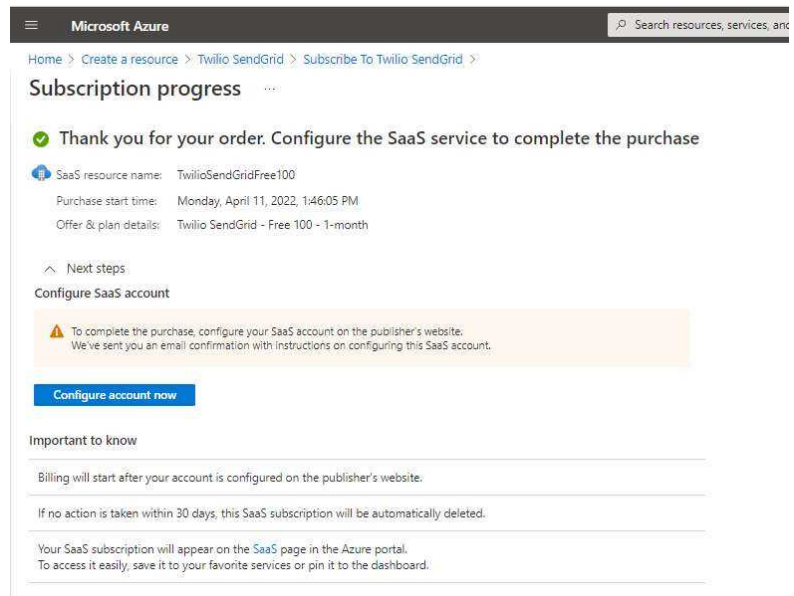
Basics

Subscription	Microsoft Azure Sponsorship
Resource Group	SendGrid
Name	TwilioSendGridFree100
Plan	Free 100
Billing term	1-month
Price + payment options	CAS0/one-time payment
Subtotal	CAS0
Recurring billing	On

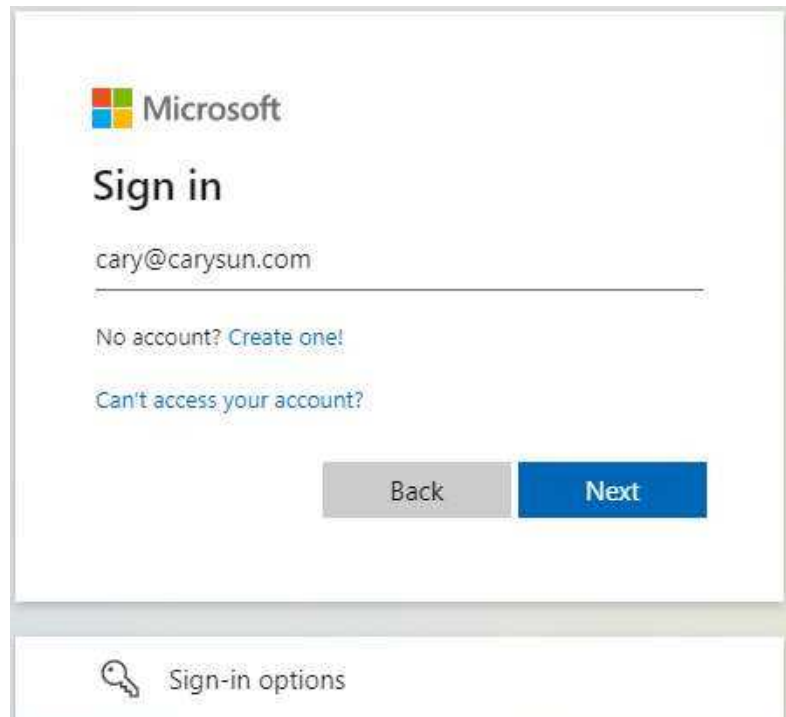
After subscribing, remember to configure your SaaS account on the publisher's website.

[Subscribe](#) [< Previous: Tags](#) [Next >](#)

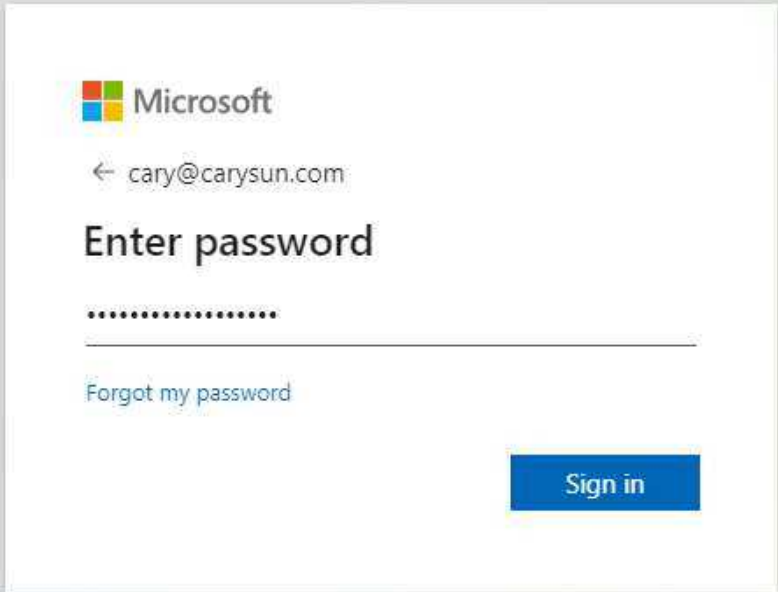
- On the Configure SaaS account page, click Configure account now.



- On the Microsoft Sign-in page, enter your account name and click Next.



10. Enter a password, and click Sign in.

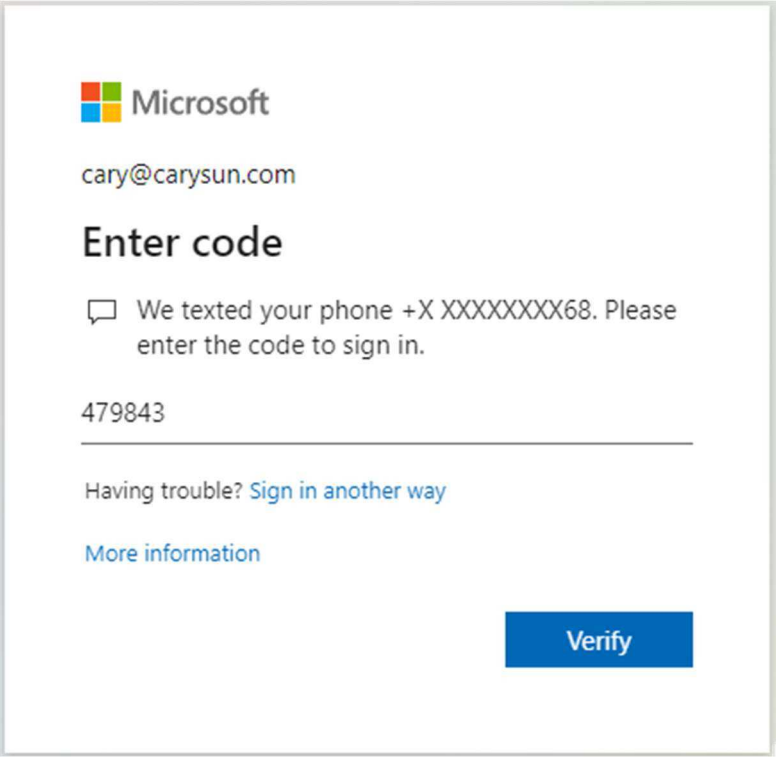


The image shows a Microsoft sign-in page. At the top left is the Microsoft logo. Below it, the email address 'cary@carysun.com' is displayed with a back arrow to its left. The main heading is 'Enter password'. Below this is a password input field represented by a series of dots. Under the input field is a link that says 'Forgot my password'. In the bottom right corner, there is a blue rectangular button with the text 'Sign in' in white.

11. On the Verify your identity page, select the identity method.



12. Enter the code, and click Verify.



A screenshot of a Microsoft sign-in verification screen. At the top is the Microsoft logo. Below it is the email address 'cary@carysun.com'. The main heading is 'Enter code'. A message with a speech bubble icon says: 'We texted your phone +X XXXXXXXX68. Please enter the code to sign in.' Below this is a text input field containing the code '479843'. Under the input field are two links: 'Having trouble? Sign in another way' and 'More information'. In the bottom right corner is a blue button labeled 'Verify'.

Microsoft

cary@carysun.com

Enter code

💬 We texted your phone +X XXXXXXXX68. Please enter the code to sign in.

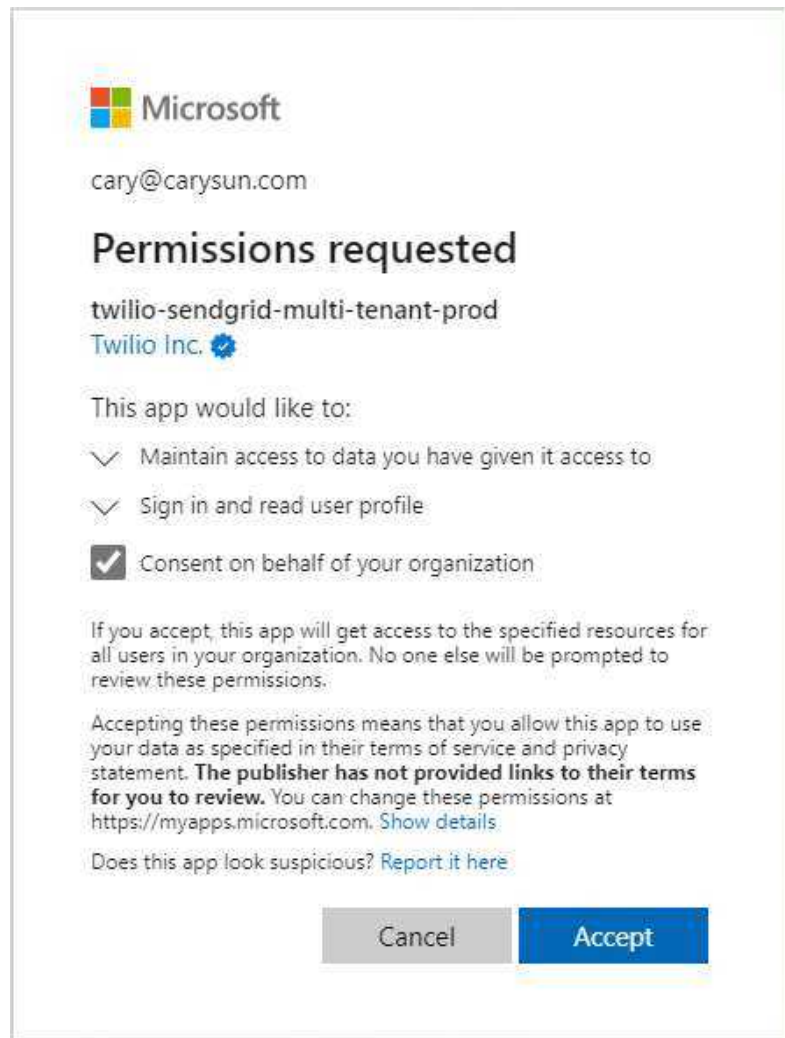
479843

Having trouble? [Sign in another way](#)

[More information](#)

Verify

13. On the Permissions requested page, select Consent on behalf of your organization and click Accept.



14. Fill in the information,
and click Get Started!



Tell Us About Yourself

This information will help us serve you better.

First Name • Cary	Last Name • Sun
Company Name • Carysun	Company Website • carysun.com
Contact Email • cary@carysun.com	
Country Code USA (+1) ▾	Phone Number

What is your role? •

☐ Developer ☐ CEO

☐ Marketer ☒ Other

How many emails do you send per month? •

☒ 0 to 100,000 ☐ 100,000 to 700,000

☐ 700,000 to 1,500,000 ☐ 1,500,000 to 10,000,000

☐ 10,000,000 to 50,000,000 ☐ 50,000,000 to 100,000,000

☐ 100,000,000+

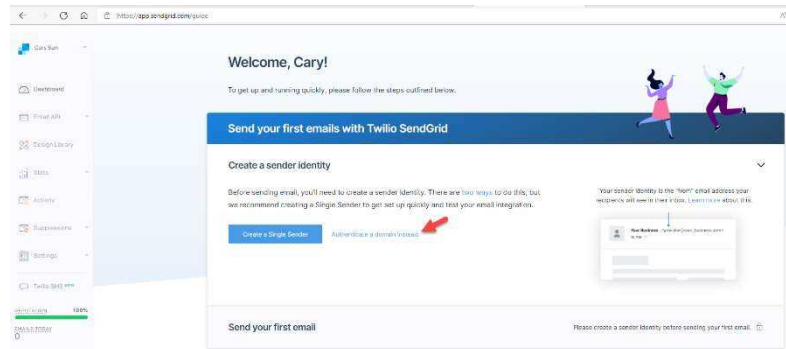
How many employees work at your company? •

☒ 1- 500 ☐ 1,001 - 5,000

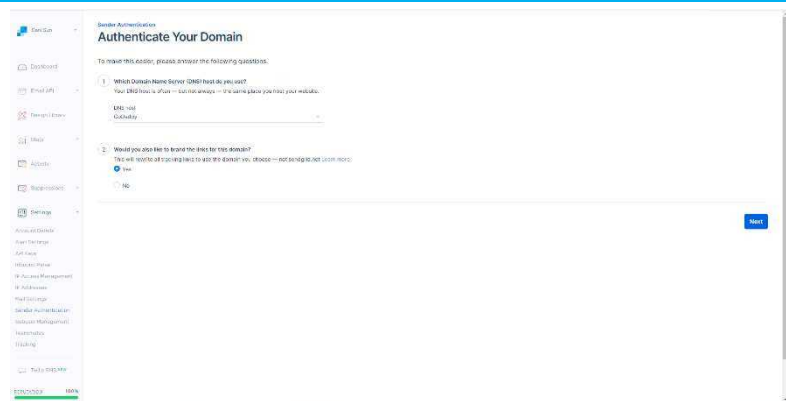
☐ 501 - 1,000 ☐ 5,001+

Get Started!

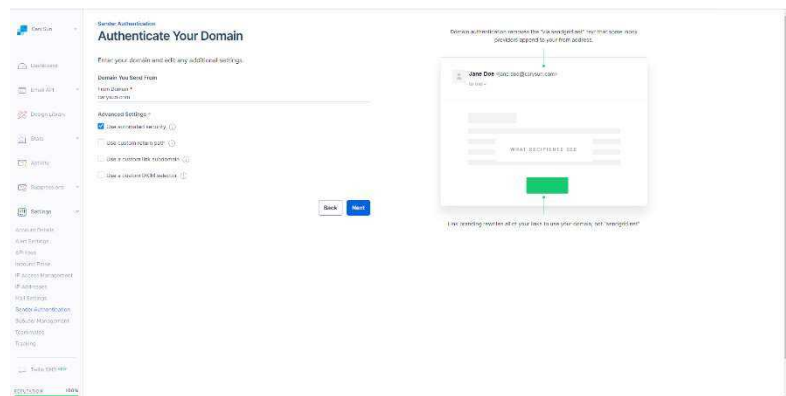
15. On the SendGrid Welcome page, select Authentication a domain instead.



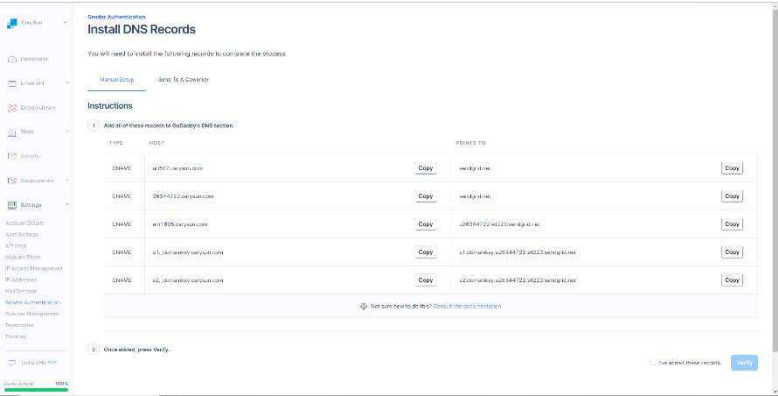
16. On the Authenticate Your Domain page, select your DNS host, select Yes to rewrite all tracking links to use your chosen domain –not sendgrid.net, and click Next.



17. Enter your domain name on the Domain You Send From page, and click Next.



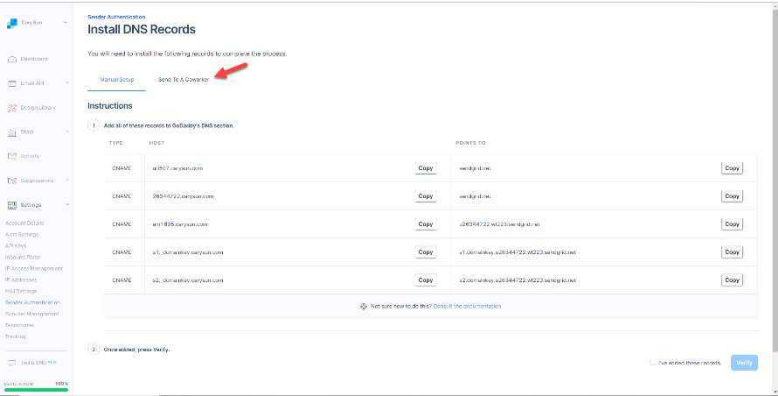
18. On the Install DNS Records page, copy and add all these records to your External DNS records.



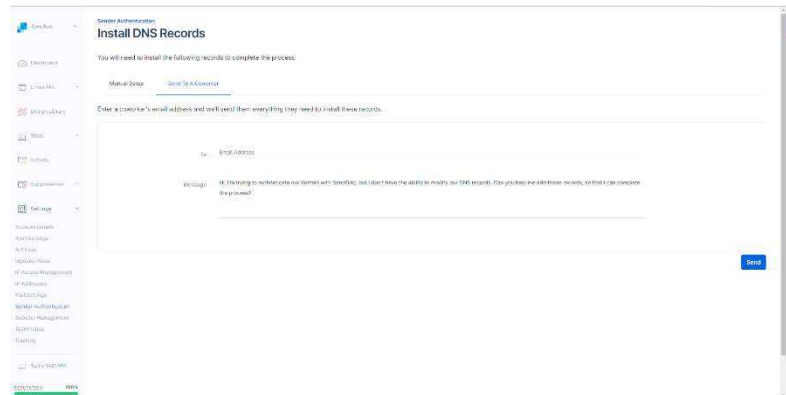
19. In my case, add them to GoDaddy.

Type	Name	Data	TTL	Delete	Edit
CNAME	en1606	u26344722.wl223.sendgrid.net.	1 Hour	Delete	Edit
CNAME	26344722	sendgrid.net.	1 Hour	Delete	Edit
CNAME	st1_domainkey	st1_domainkey.u26344722.wl223.sendgrid.net.	1 Hour	Delete	Edit
CNAME	st2_domainkey	st2_domainkey.u26344722.wl223.sendgrid.net.	1 Hour	Delete	Edit
CNAME	ur1507	sendgrid.net.	1 Hour	Delete	Edit

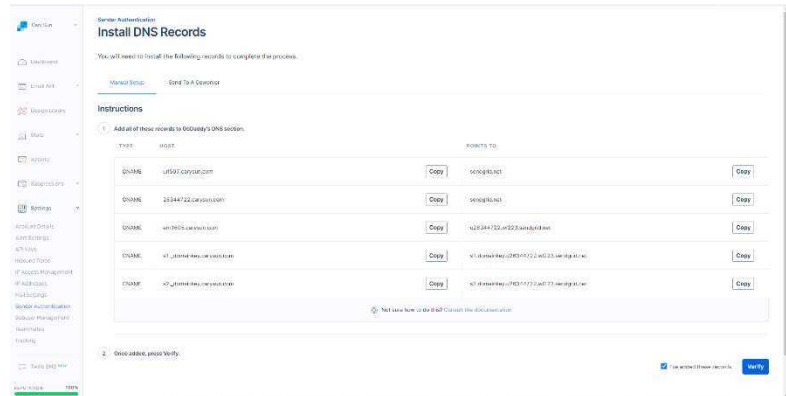
20. If you cannot add DNS records, select Send To A Coworker.



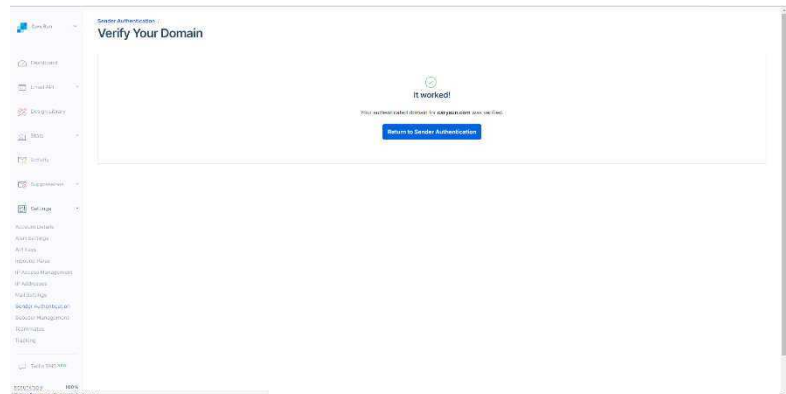
21. Type your coworker's email address, and click Send. Ask your coworker to add these DNS records.



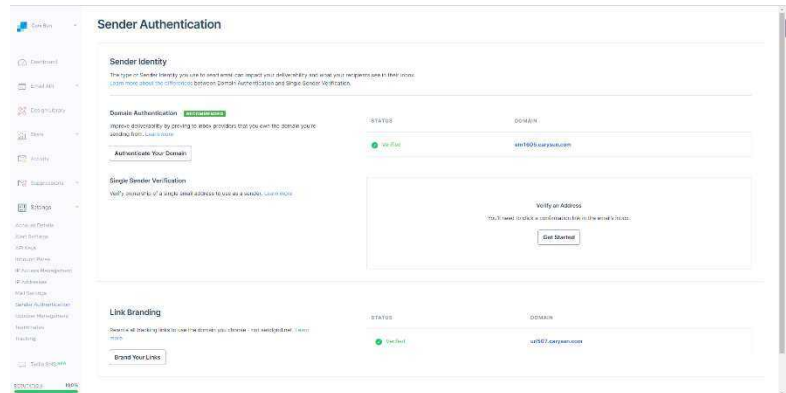
22. On the Install DNS Records page, select I've added these records, click Verify.



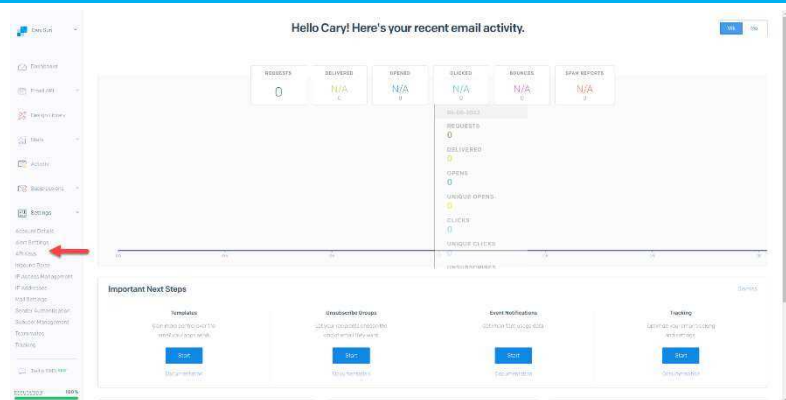
23. On the Verify Your Domain page, make sure your authenticated domain for the domain name was verified without issues and click Return to Sender Authentication.



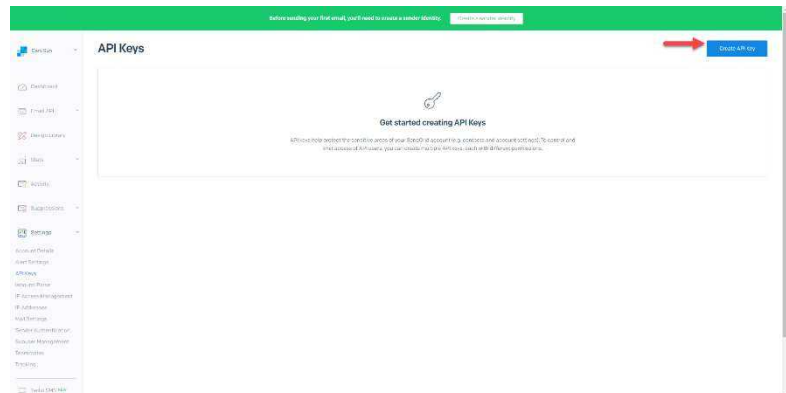
24. On the Sender Authentication page, ensure Domain Authentication and link Branding status is Verified.



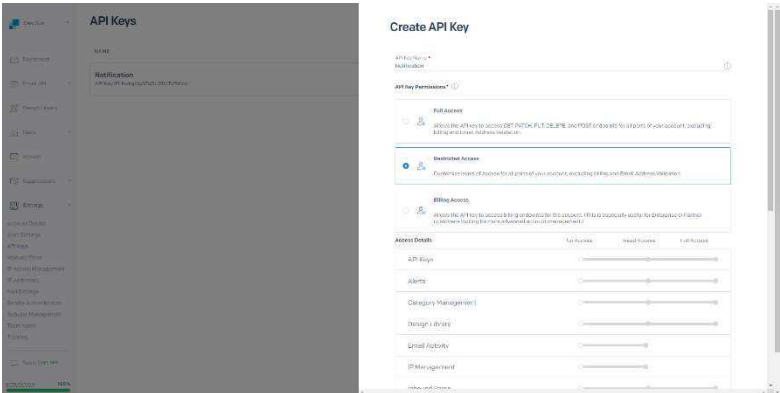
25. Under the Settings page, select API Keys.



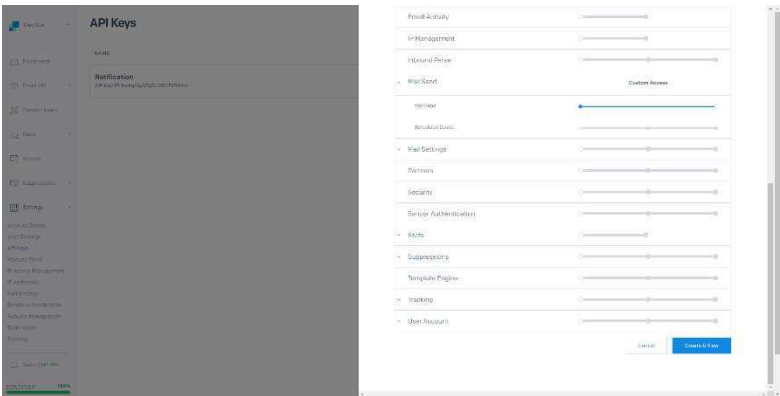
26. On the API Keys page, select Create API Key.



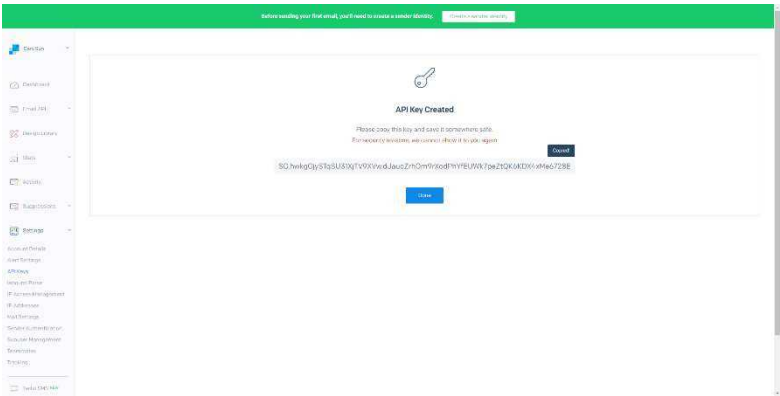
27. On the Create API Key page, type the API Key Name and select Restricted Access as API Key Permissions.



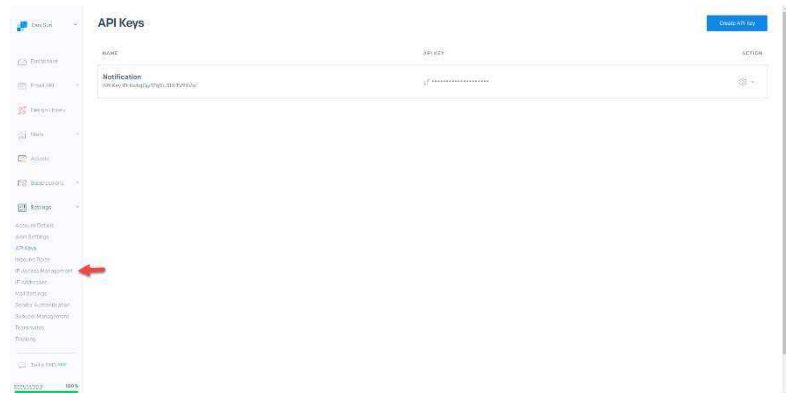
28. Enable Mail Activity as Access Details, click Create & View.



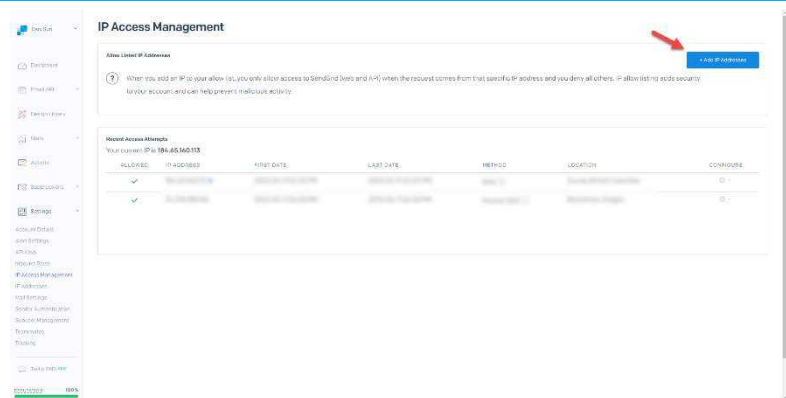
29. On the API Key Created page, copy the key.
30. Save it and click Done.



31. Under settings, select IP Access Management.

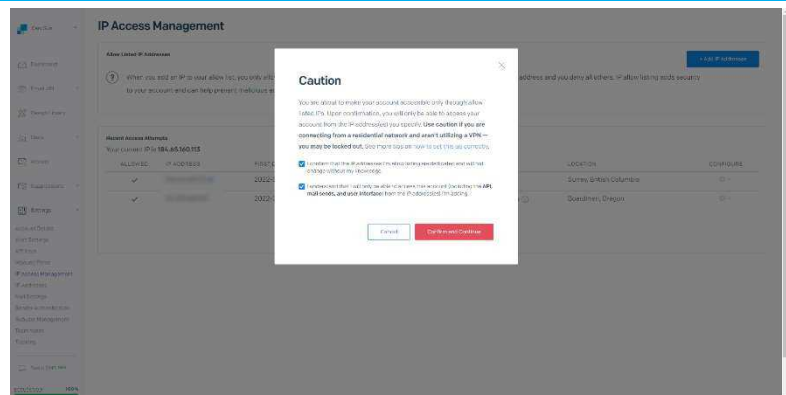


32. On the IP Access Management page, click +Add IP Address.



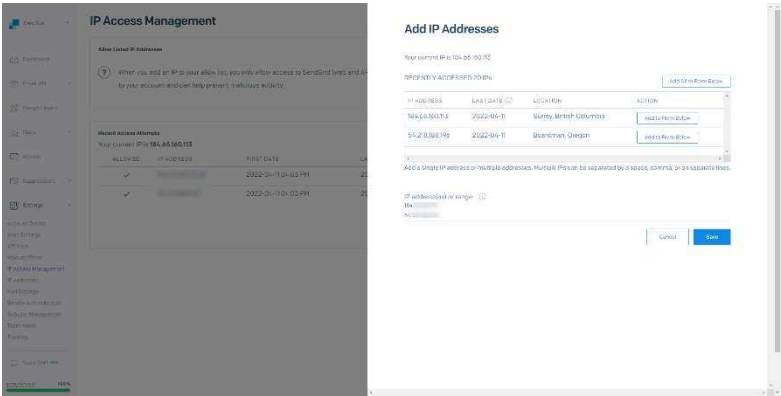
33. On the Caution page, select I confirm that the IP addresses I'm allow listing are dedicated and will not change without my knowledge checkbox.

34. Select I understand that I will only be able to access this account (including the API, mail sends, and user interface) from the IP address(es) I'm adding checkbox.

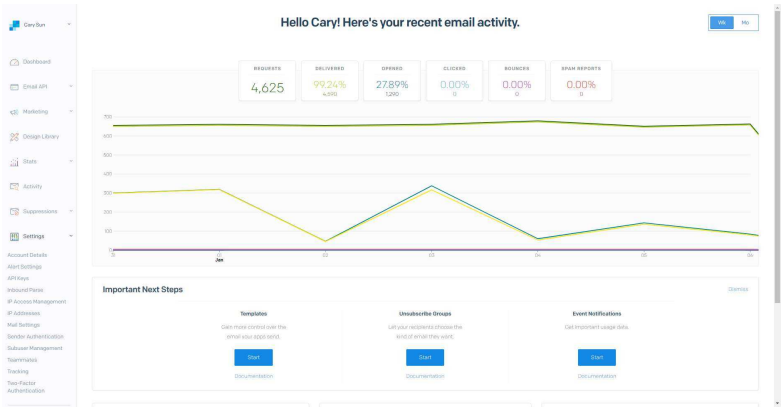


35. Click Confirm and Continue.

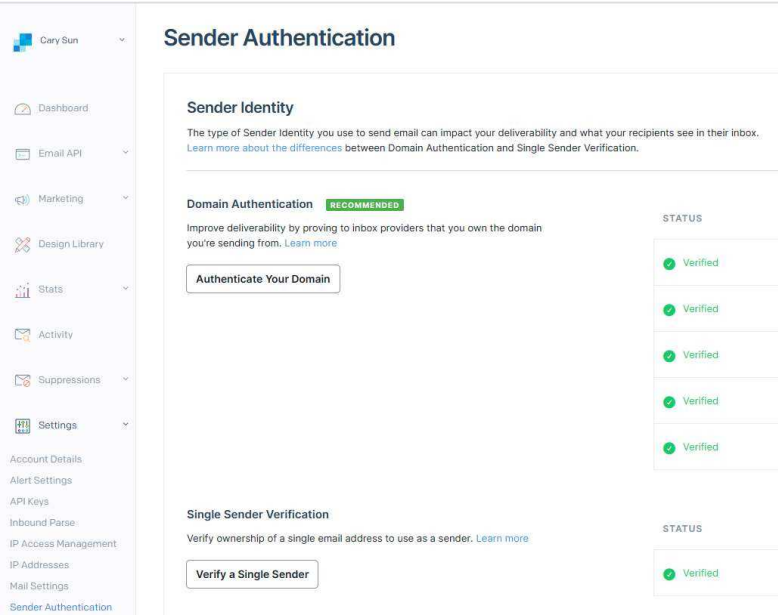
36. On the Add IP Addresses page, add IP addresses or ranges you would like to allow access to SendGrid. Make sure to include the public IP address of the Veeam management server and click Save.



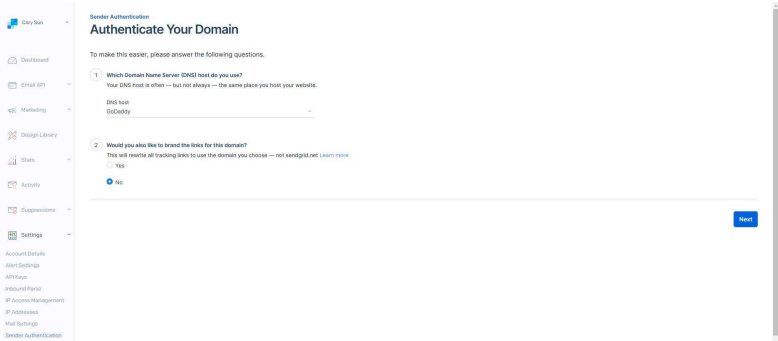
37. On the Home page, expand Settings and click Sender Authentication.



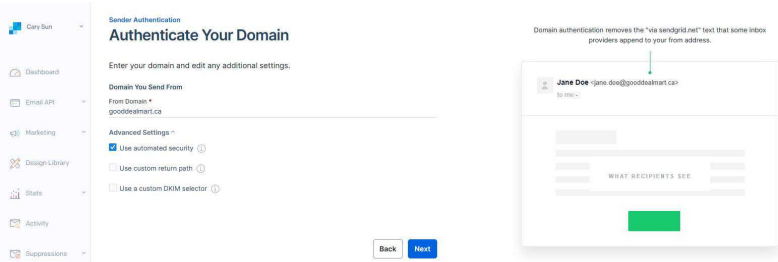
38. On the Sender Authentication page, click Authenticate Your Domain.



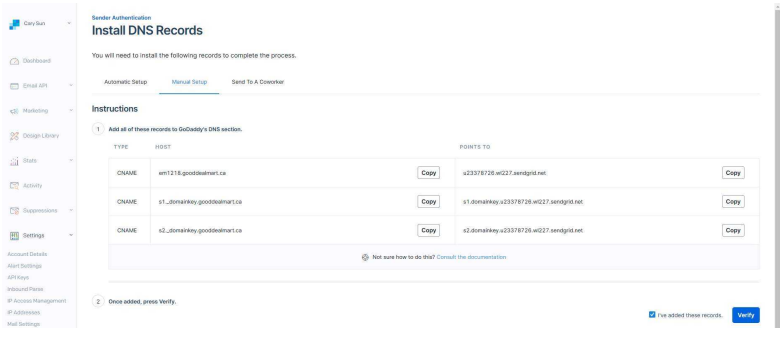
39. Specify your DNS host from the drop-down list on the Authenticate Your Domain page.
40. Select No at Would you also like to brand the links for this domain?
41. Click Next.



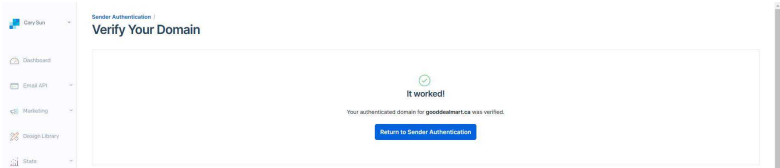
42. On the Domain, You send From page, specify your FQDN name, and click Next.



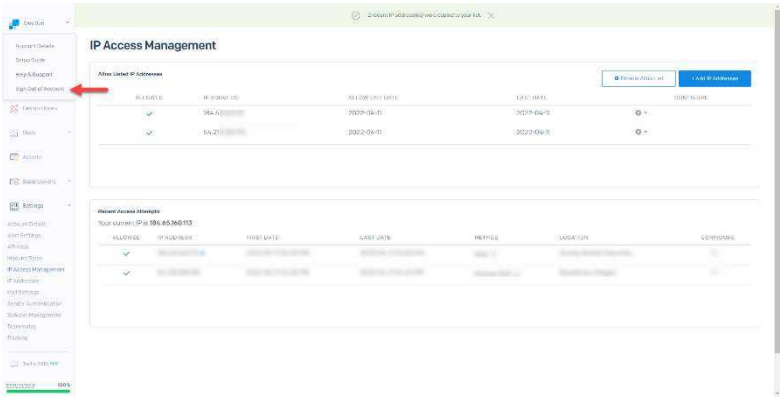
43. Add those CNAME records to your domain on the Install DNS Records page, select I've added these records, and click Verify.



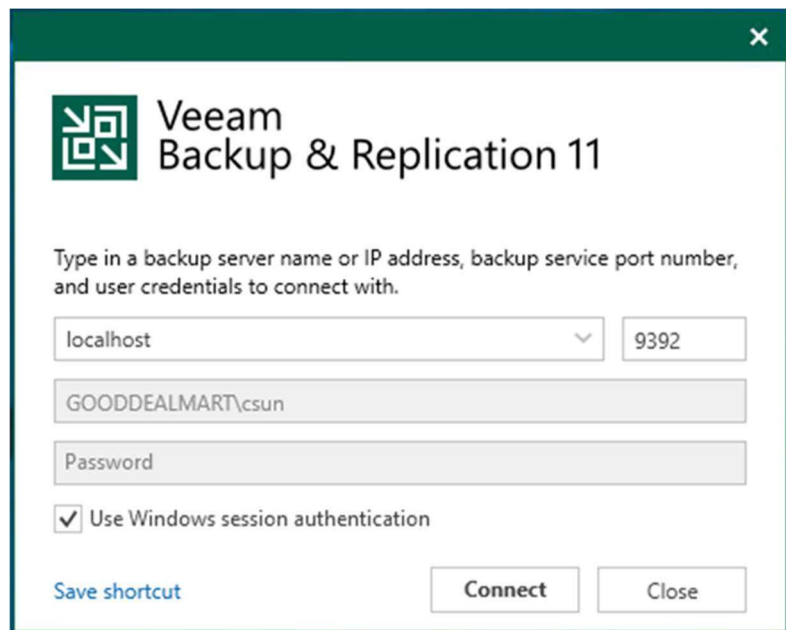
44. Verify your domain successfully on the Verify Your Domain page and click Return to Send Authentication.



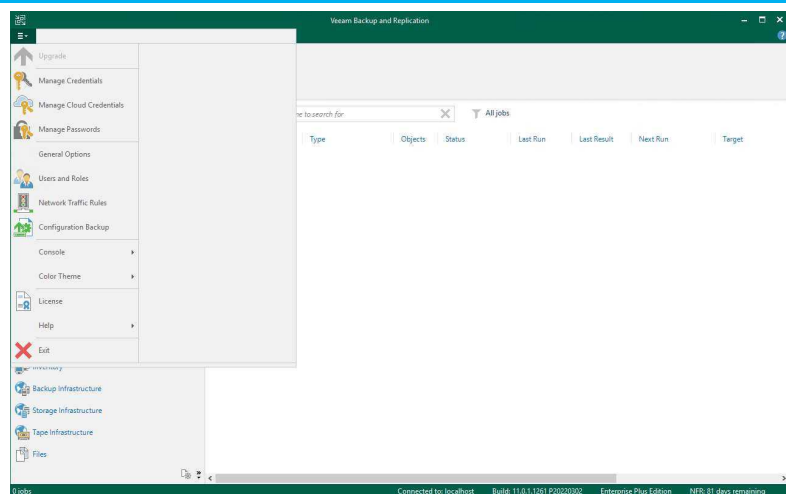
45. Sign Out of Account.



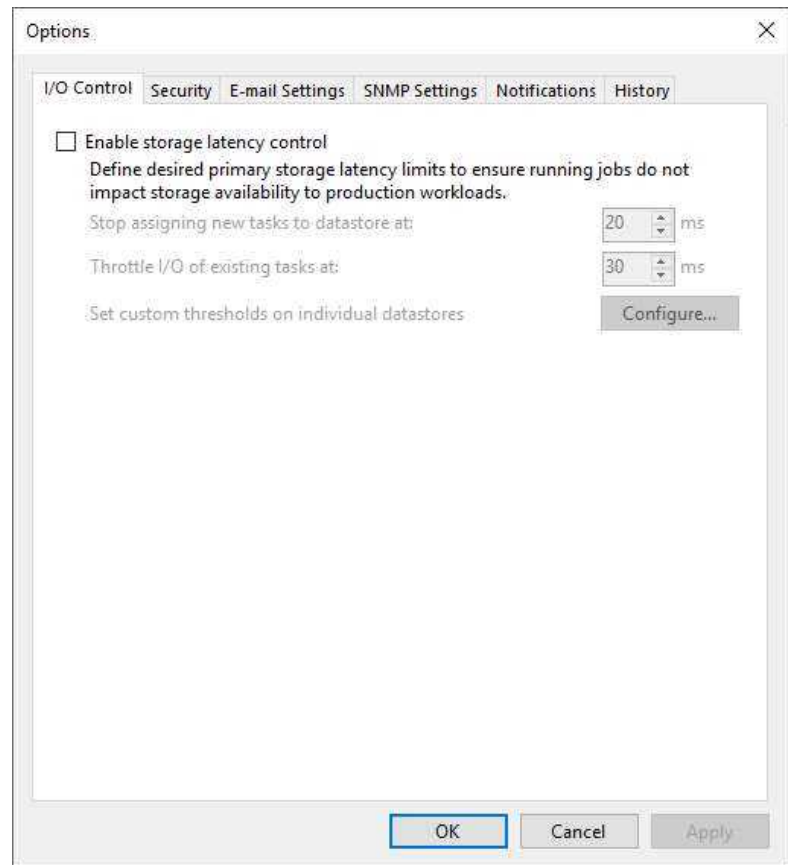
46. Log in to the Veeam Backup and replication manager server.
47. Open the Veeam Backup & Replication Console, and click Connect.



48. Select General Options from the main menu.



49. On the Options page,
select Email Settings.



50. Select Enable e-mail notification (recommend) on the Email Settings page.
51. In the SMTP server field, enter smtp.sendgrid.net, and click Advanced.

Options

I/O Control Security E-mail Settings SNMP Settings Notifications History

☒ Enable e-mail notifications (recommended)

SMTP server:
smtp.sendgrid.net Advanced...

From:

To:

Subject:
[%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Test Message

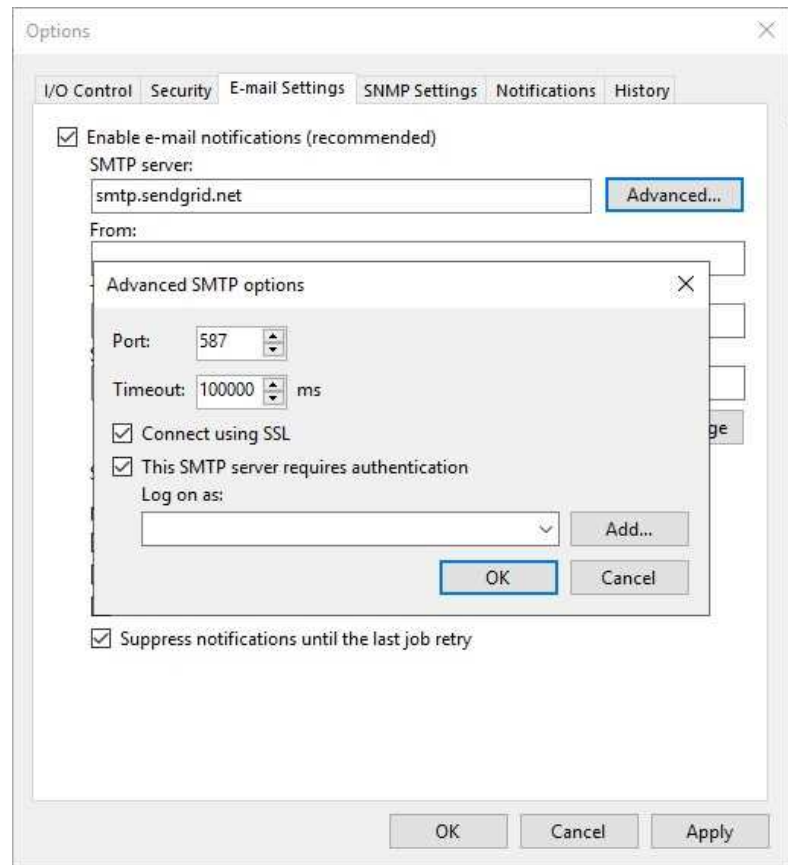
Send daily summary at: 10:00 PM ⓘ

Notify on:

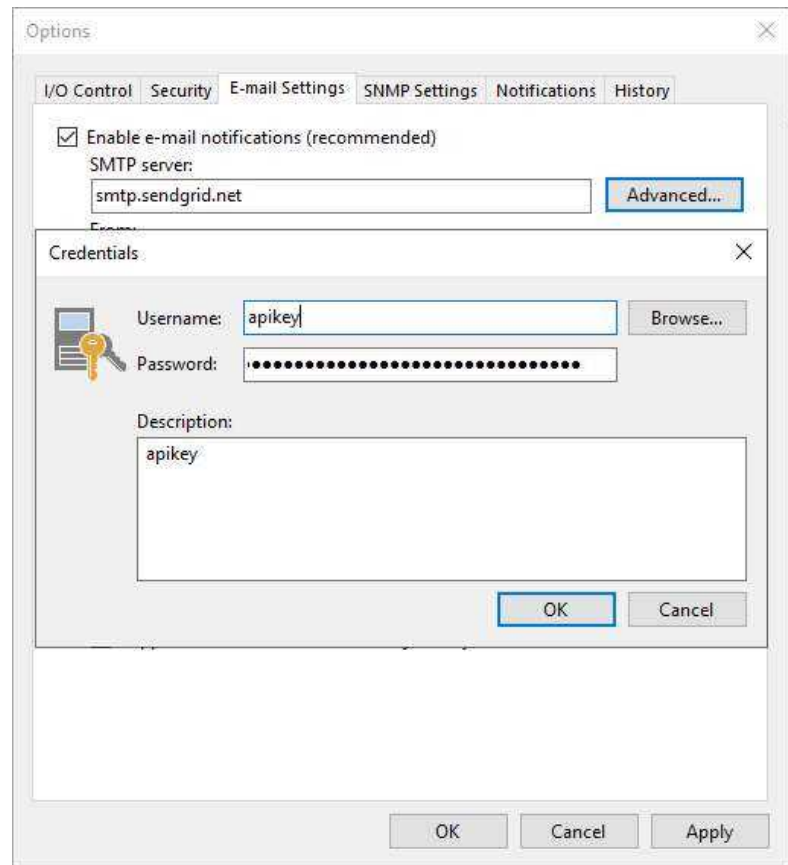
- ☒ Success
- ☒ Warning
- ☒ Failure
- ☒ Suppress notifications until the last job retry

OK Cancel Apply

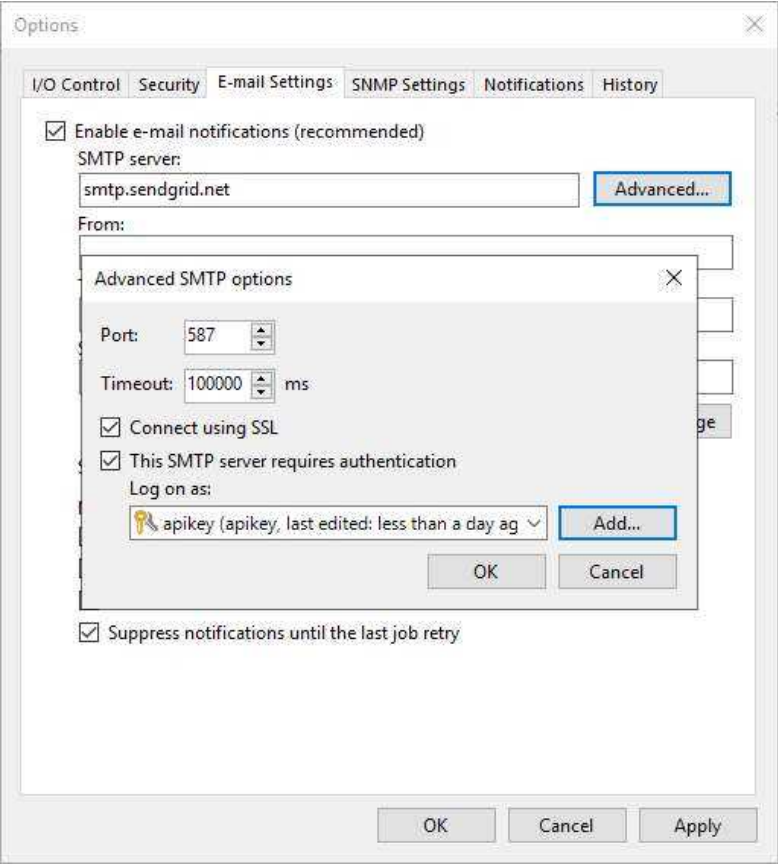
52. On the Advanced SMTP options page, type 587 in the Port field.
53. Use 100000 milliseconds as the Timeout.
54. Select Connect using SSL.
55. Select This SMTP server requires authentication.
56. Click Add to add a credential as Log on as account.



57. Type apikey as Username.
58. Paste the apikey number as a password.
59. Click OK.



60. On the Advanced SMTP options page, click OK.



61. In the From field, enter an email address you want to use as a sender.
62. In the To field, enter an email address of a notification recipient. To specify multiple email addresses, use a semicolon.
63. Click Test Message.

The screenshot shows the 'Options' dialog box with the 'E-mail Settings' tab selected. The 'Enable e-mail notifications (recommended)' checkbox is checked. The 'SMTP server' field contains 'smtp.sendgrid.net'. The 'From' field contains 'VBR@gooddealmart.ca'. The 'To' field contains 'csun@triconelite.com'. The 'Subject' field contains '[%JobResult%] %JobName% (%ObjectCount% objects) %Issues%'. There is a 'Test Message' button. The 'Send daily summary at' field is set to '10:00 PM'. The 'Notify on' section has four checked options: 'Success', 'Warning', 'Failure', and 'Suppress notifications until the last job retry'. At the bottom are 'OK', 'Cancel', and 'Apply' buttons.

Options

I/O Control Security E-mail Settings SNMP Settings Notifications History

☒ Enable e-mail notifications (recommended)

SMTP server: smtp.sendgrid.net Advanced...

From: VBR@gooddealmart.ca

To: csun@triconelite.com

Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Test Message

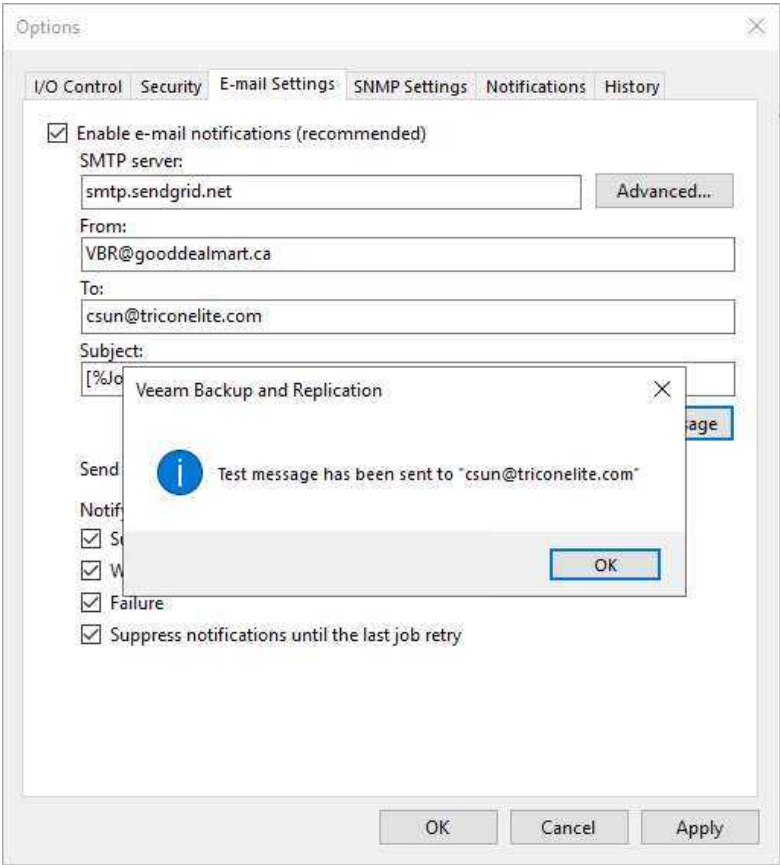
Send daily summary at: 10:00 PM ⓘ

Notify on:

- ☒ Success
- ☒ Warning
- ☒ Failure
- ☒ Suppress notifications until the last job retry

OK Cancel Apply

64. Verify the test message sent successfully, and click OK.



65. On the Options page, click OK.

The screenshot shows the 'Options' dialog box with the 'E-mail Settings' tab selected. The 'Enable e-mail notifications (recommended)' checkbox is checked. The 'SMTP server' field contains 'smtp.sendgrid.net' with an 'Advanced...' button to its right. The 'From:' field contains 'VBR@gooddealmart.ca'. The 'To:' field contains 'csun@triconelite.com'. The 'Subject:' field contains a template string: '[%JobResult%] %JobName% (%ObjectCount% objects) %Issues%'. A 'Test Message' button is located to the right of the subject field. Below these fields, the 'Send daily summary at:' is set to '10:00 PM' with a time selector and an information icon. Under the 'Notify on:' section, four checkboxes are checked: 'Success', 'Warning', 'Failure', and 'Suppress notifications until the last job retry'. At the bottom of the dialog are 'OK', 'Cancel', and 'Apply' buttons.

Options

I/O Control Security E-mail Settings SNMP Settings Notifications History

☒ Enable e-mail notifications (recommended)

SMTP server: smtp.sendgrid.net Advanced...

From: VBR@gooddealmart.ca

To: csun@triconelite.com

Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Test Message

Send daily summary at: 10:00 PM ⓘ

Notify on:

- ☒ Success
- ☒ Warning
- ☒ Failure
- ☒ Suppress notifications until the last job retry

OK Cancel Apply

Configure Notification with Microsoft Office 365 NON-MFA Account

You can configure Microsoft Office 365 non-MFA account for notification settings if you want Veeam Backup & Replication to send email notifications about backup job results.

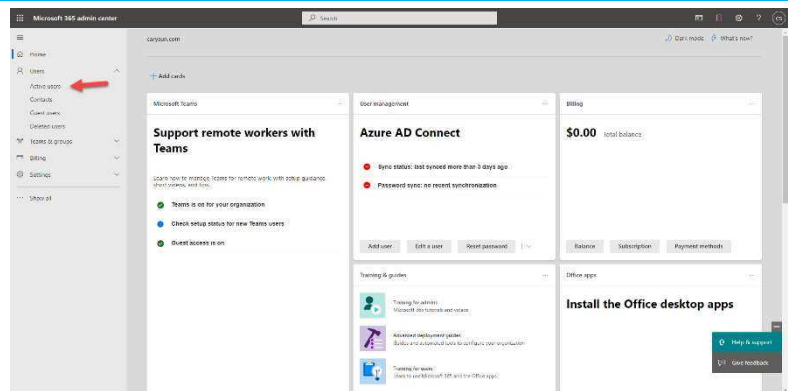
Instructions

Screenshot (if applicable)

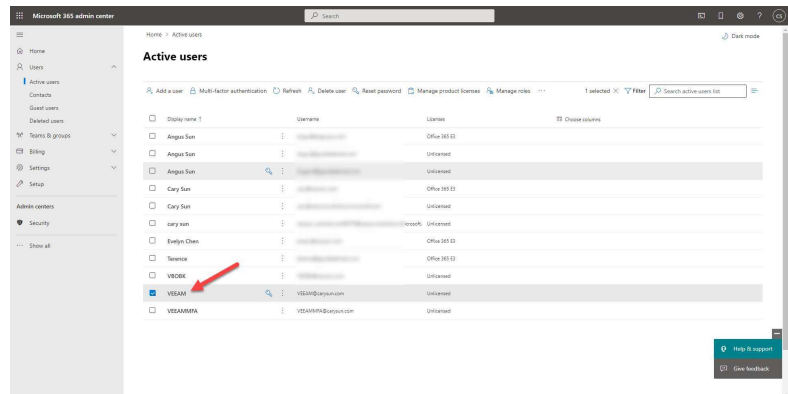
1. Sign in Office 365 portal with a Global Admin account, and select Admin.



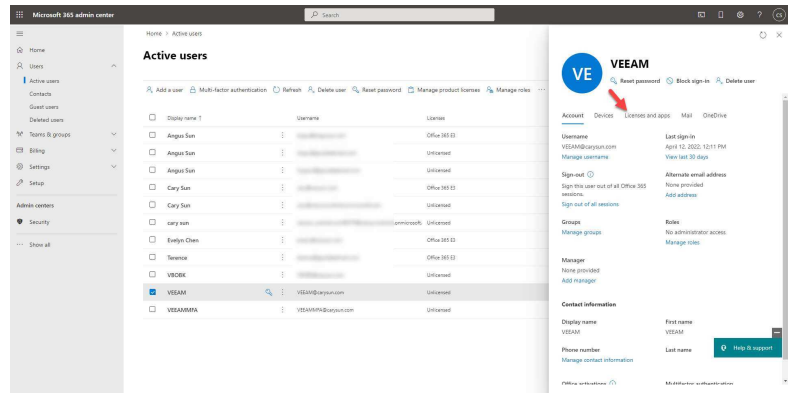
2. On the Microsoft 365 admin center, expand Users and select Active users.



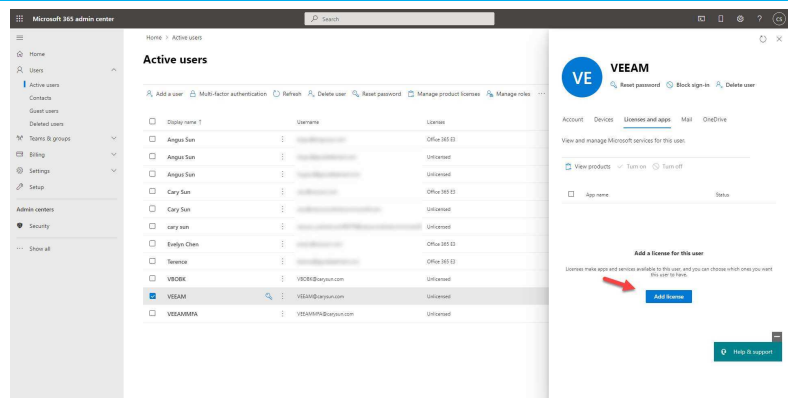
3. On the Active user's page, click Veeam service account (in my case, VEEAM).



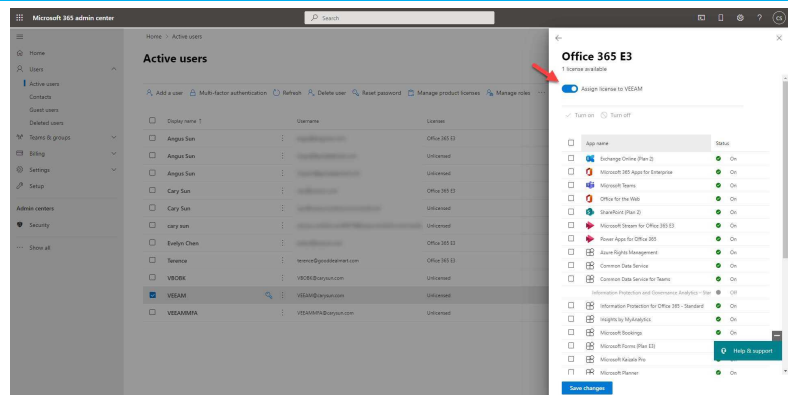
- On the account page, select License and apps.



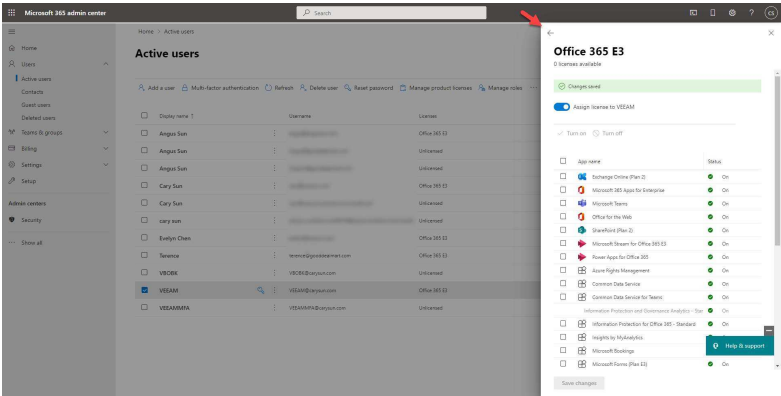
- On the License and apps page, click Add license.



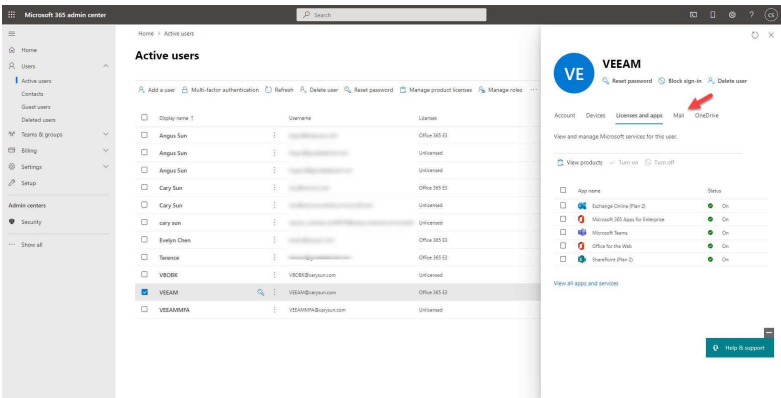
- On the Office 365 license page, enable Assign license to VESAM, and click Save changes.



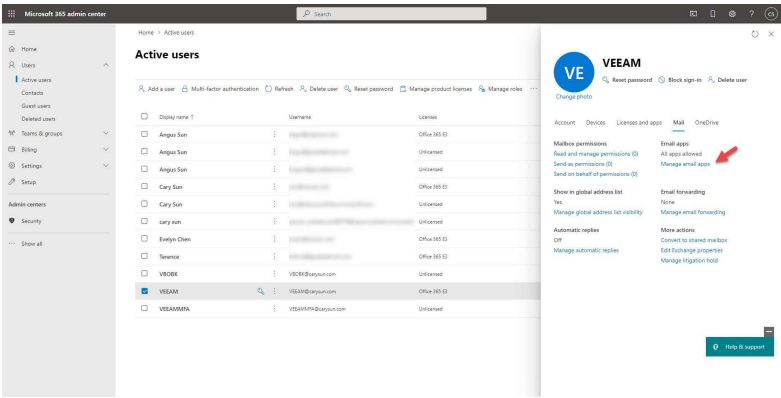
7. Click Back <--.



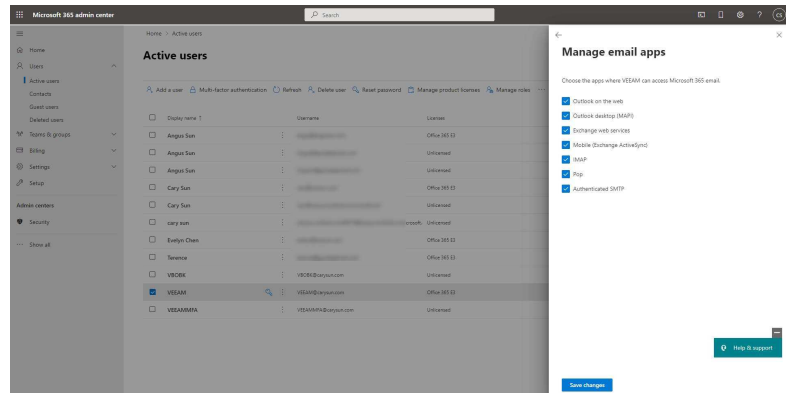
8. On the account page, select Mail. It would be preferable to wait a few minutes before preparing a mailbox for the user.



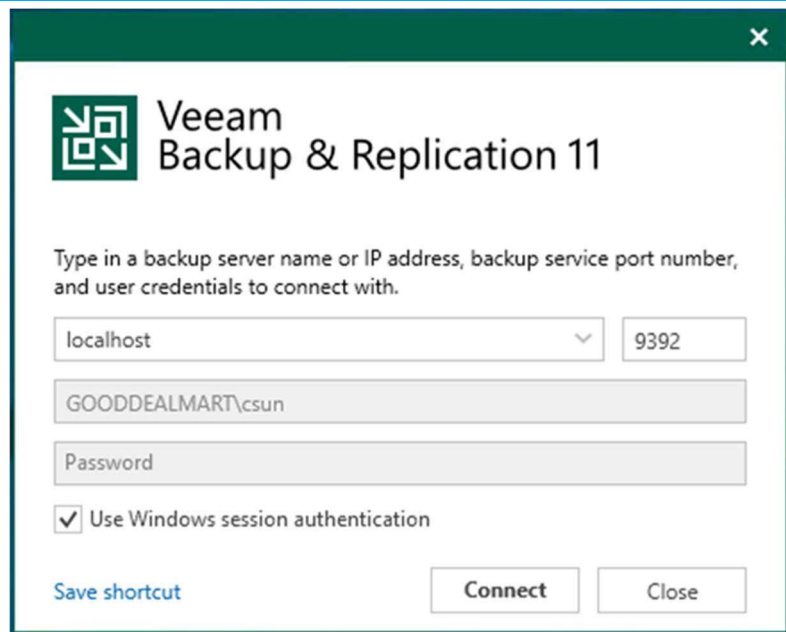
9. On the Mail page, select Manage email apps.



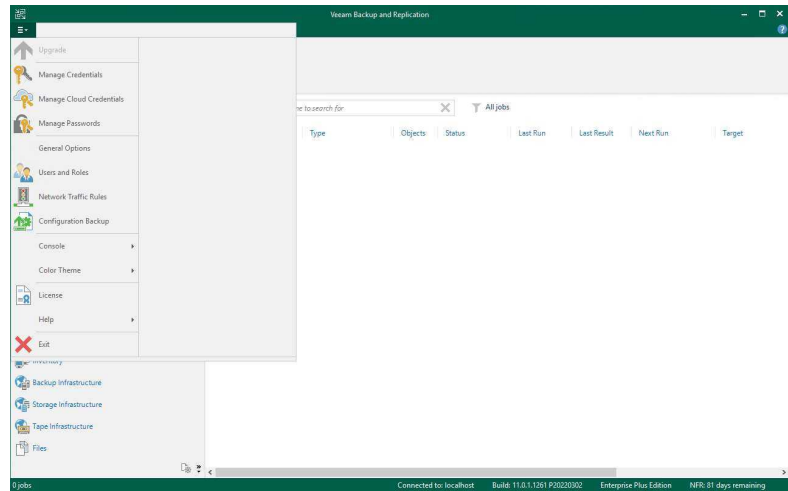
10. On the Manage email apps, select Authenticated SMTP and click Save changes.



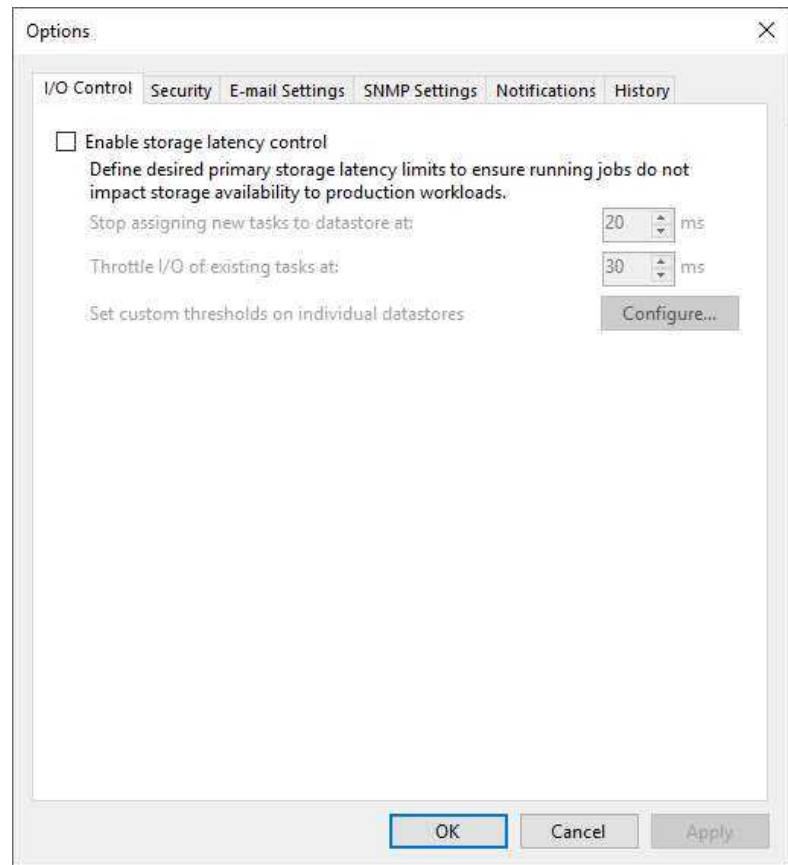
11. Log in to the Veeam Backup and replication manager server.
12. Open the Veeam Backup & Replication Console, and click Connect.



13. Select General Options from the main menu.



14. On the Options page,
select Email Settings.



15. Select Enable e-mail notification (recommend) on the Email Settings page.
16. In the SMTP server field, enter smtp.sendgrid.net, and click Advanced.

Options

I/O Control Security E-mail Settings SNMP Settings Notifications History

☒ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com Advanced...

From:

To:

Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Test Message

Send daily summary at: 10:00 PM ⓘ

Notify on:

☒ Success

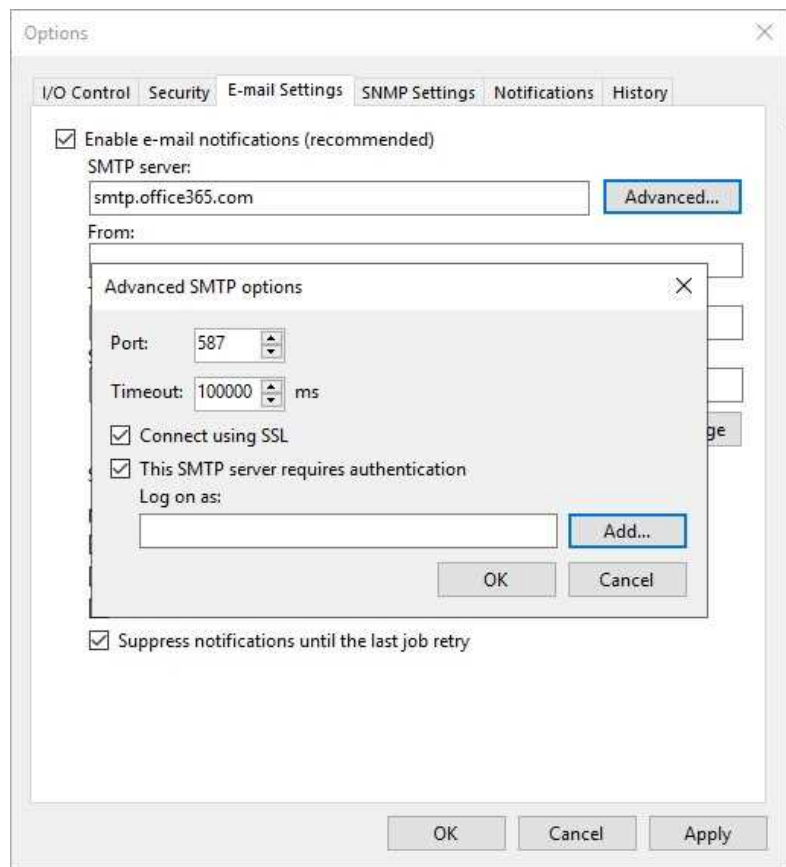
☒ Warning

☒ Failure

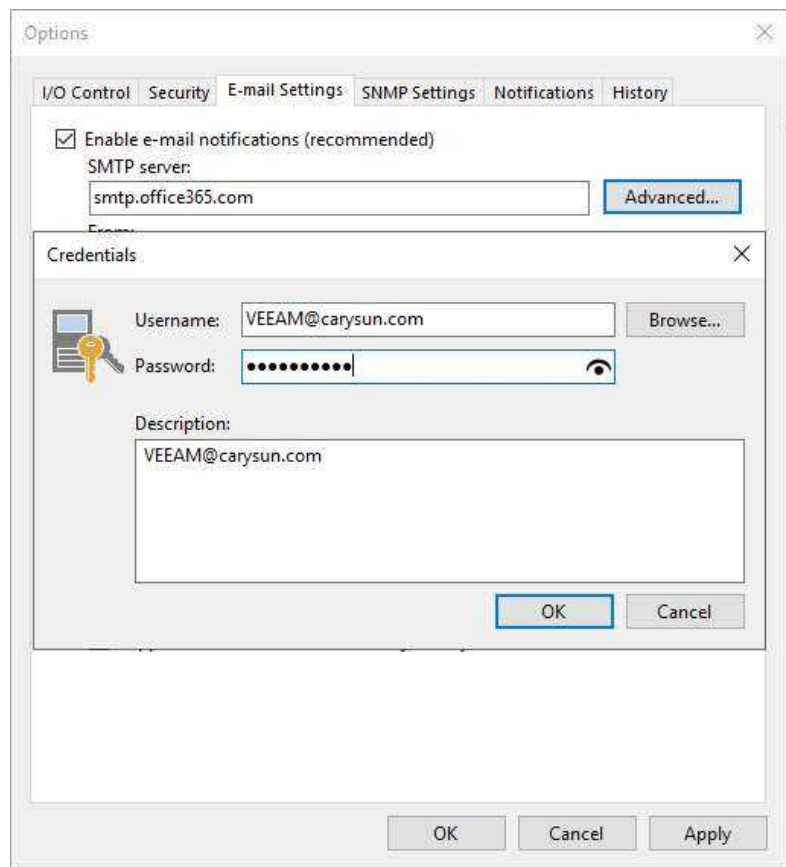
☒ Suppress notifications until the last job retry

OK Cancel Apply

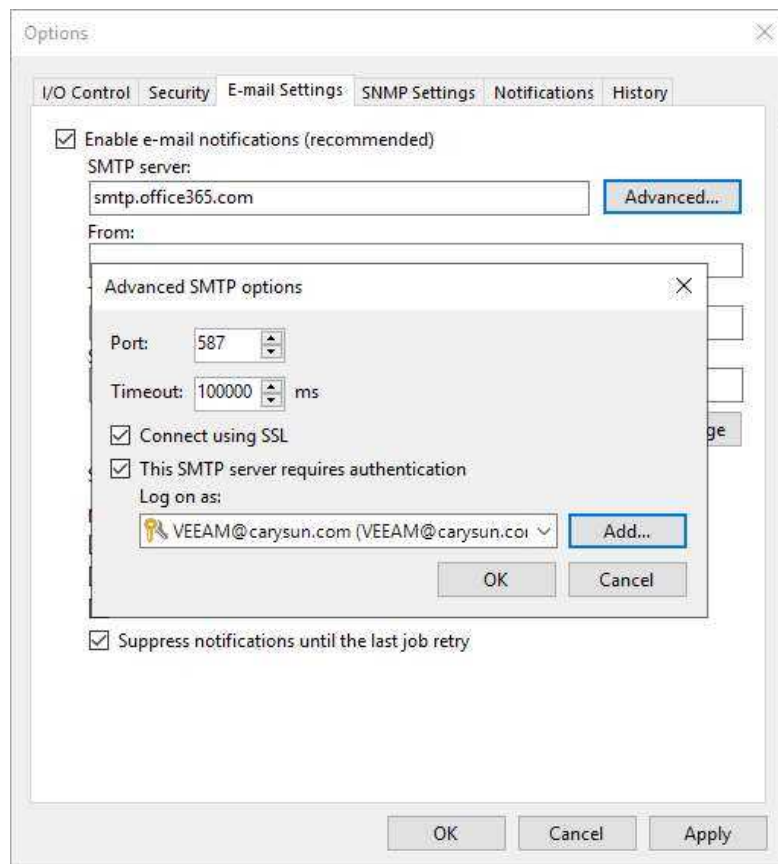
17. On the Advanced SMTP options page, enter 587 in the Port field.
18. Use 100000 milliseconds as the Timeout.
19. Select Connect using SSL.
20. Select This SMTP server requires authentication.
21. Click Add to add a credential as Log on as account.



22. The SMTP server requires authentication. Type the office 365 service account (VEEAM@carysun.com in my case) as Username, enter the account password, and click OK.



23. On the Advanced SMTP options page, click OK.



24. In the From field, enter an email address you want to use as a sender.
25. In the To field, enter an email address of a notification recipient. To specify multiple email addresses, use a semicolon.
26. Click Test Message.

The screenshot shows the 'Options' dialog box with the 'E-mail Settings' tab selected. The 'Enable e-mail notifications (recommended)' checkbox is checked. The 'SMTP server' field contains 'smtp.office365.com'. The 'From' field contains 'VEEAM@carysun.com'. The 'To' field contains 'csun@triconelite.com'. The 'Subject' field contains '[%JobResult%] %JobName% (%ObjectCount% objects) %Issues%'. There is a 'Test Message' button. The 'Send daily summary at' field is set to '10:00 PM'. The 'Notify on' section has four checked options: 'Success', 'Warning', 'Failure', and 'Suppress notifications until the last job retry'. At the bottom are 'OK', 'Cancel', and 'Apply' buttons.

Options

I/O Control Security E-mail Settings SNMP Settings Notifications History

☒ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com Advanced...

From: VEEAM@carysun.com

To: csun@triconelite.com

Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Test Message

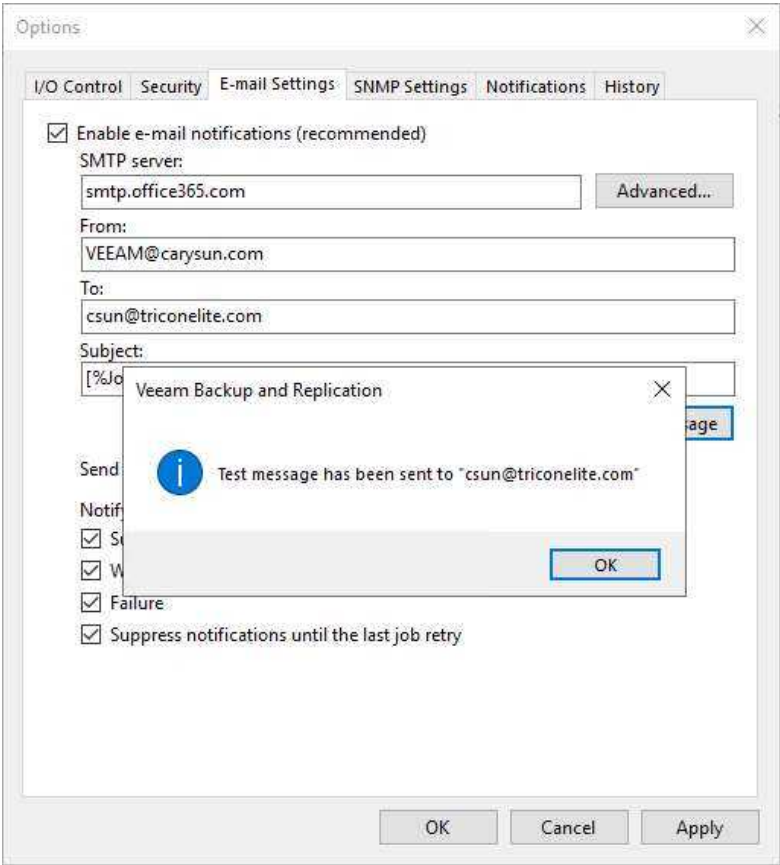
Send daily summary at: 10:00 PM ⓘ

Notify on:

- ☒ Success
- ☒ Warning
- ☒ Failure
- ☒ Suppress notifications until the last job retry

OK Cancel Apply

27. Ensure the test email was successfully sent to recipients, and click OK.



28. On the Email Settings page, System notifications are sent by default whenever a backup job session ends with the following states: Success, Warning, or Failure. Keep the default settings, and click OK.

The screenshot shows the 'Options' dialog box with the 'E-mail Settings' tab selected. The dialog has a close button (X) in the top right corner. The tabs at the top are: I/O Control, Security, E-mail Settings (selected), SNMP Settings, Notifications, and History.

Inside the 'E-mail Settings' tab, the following options are visible:

- ☒ Enable e-mail notifications (recommended)
- SMTP server: Advanced...
- From:
- To:
- Subject:
- Test Message
- Send daily summary at: i
- Notify on:
 - ☒ Success
 - ☒ Warning
 - ☒ Failure
 - ☒ Suppress notifications until the last job retry

At the bottom of the dialog are three buttons: OK, Cancel, and Apply.

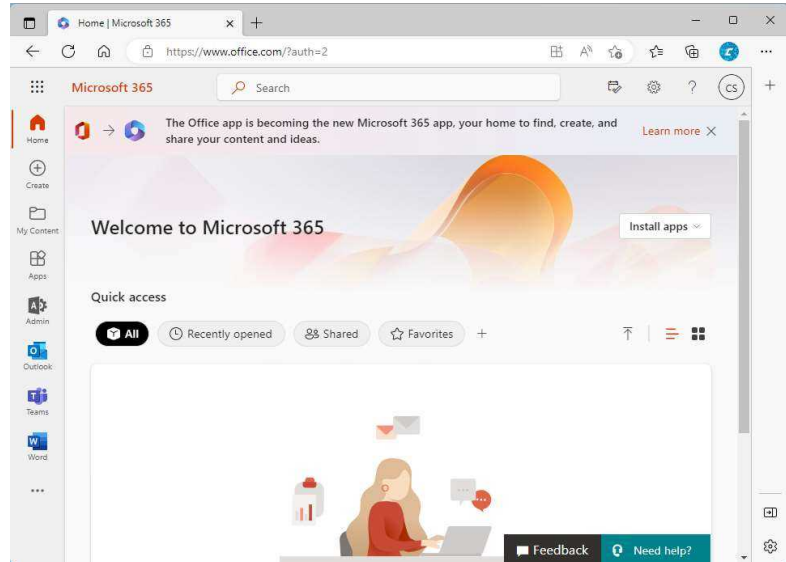
Configure Notification with Microsoft Office 365 MFA Account

You can configure Microsoft Office 365 MFA account for notification settings if you want Veeam Backup & Replication to send email notifications about backup job results.

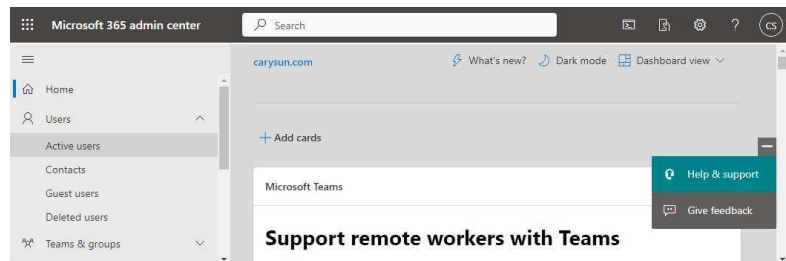
Instructions

Screenshot (if applicable)

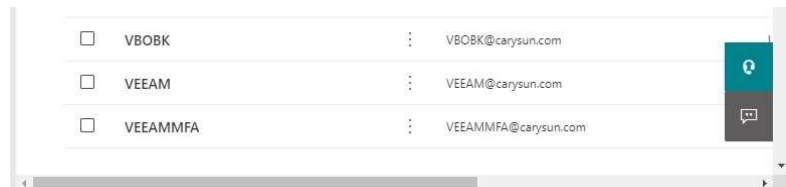
1. Sign in Office 365 portal with a Global Admin account, and select Admin.



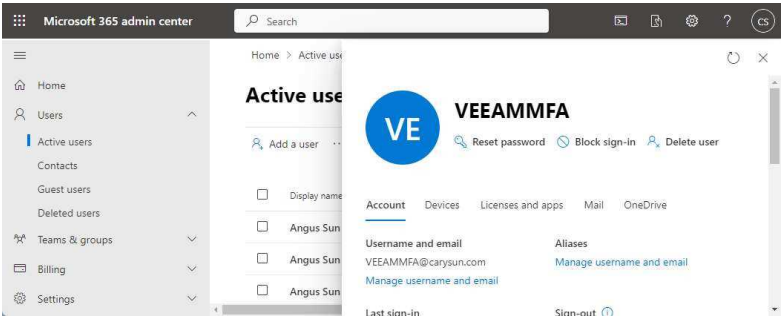
2. On the Microsoft 365 admin center, expand Users and select Active users.



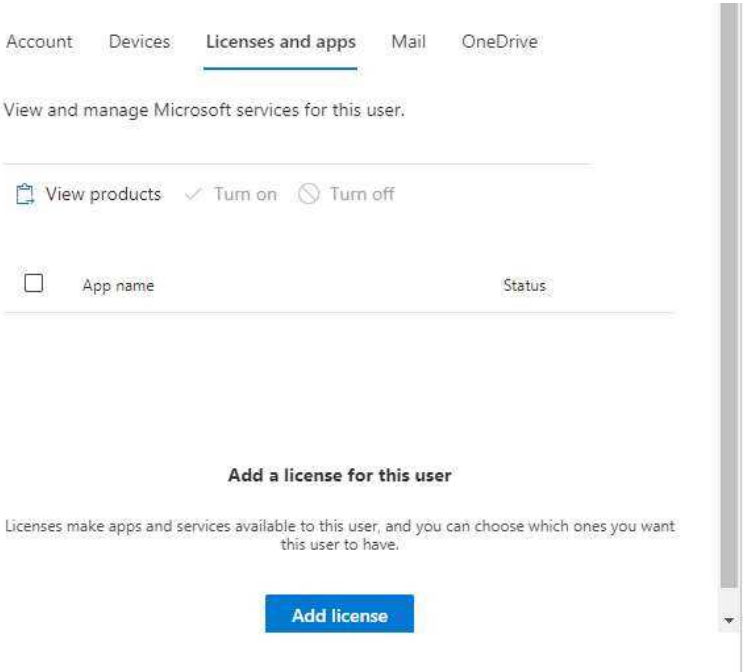
3. On the Active user's page, click Veeam service account (VEEAMMFA, in my case).



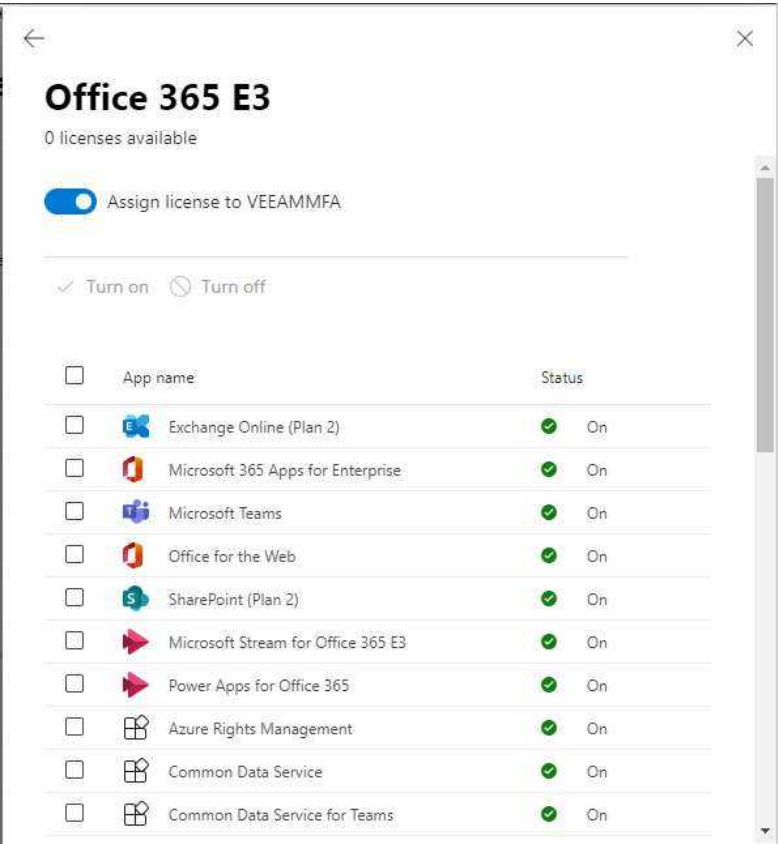
4. On the account page, select License and apps.



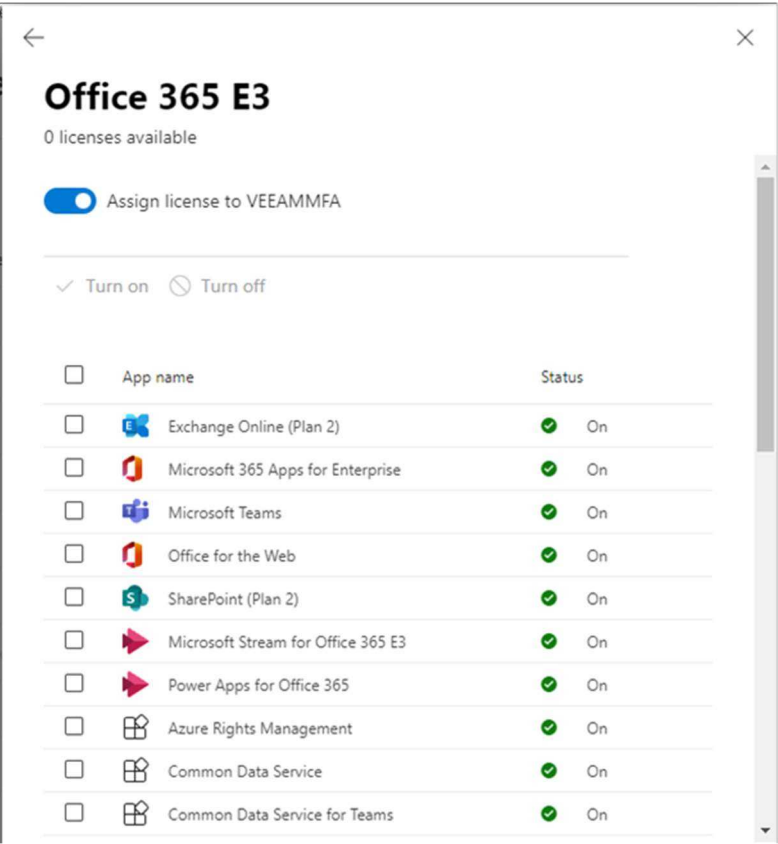
5. On the License and apps page, click Add license.



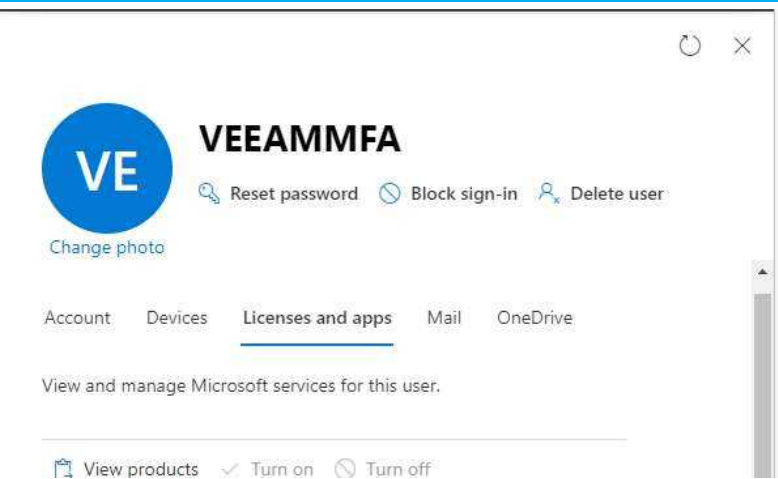
6. On the Office 365 license page, enable Assign license to the account, and click Save changes.



7. Click Back <--.



8. On the account page, select Mail. It would be preferable to wait a few minutes before preparing a mailbox for the user.



9. On the Mail page, select Manage email apps.



VEEAMMFA

[Reset password](#) [Block sign-in](#) [Delete user](#)

[Change photo](#)

Account

Devices

Licenses and apps

Mail

OneDrive

Mailbox storage

0.01% (8.604MB/100GB)

[Learn more about mailbox storage quotas](#)

Mailbox permissions

[Read and manage permissions \(0\)](#)

[Send as permissions \(0\)](#)

[Send on behalf of permissions \(0\)](#)

Email apps

[All apps allowed](#)

[Manage email apps](#)

Show in global address list

Yes

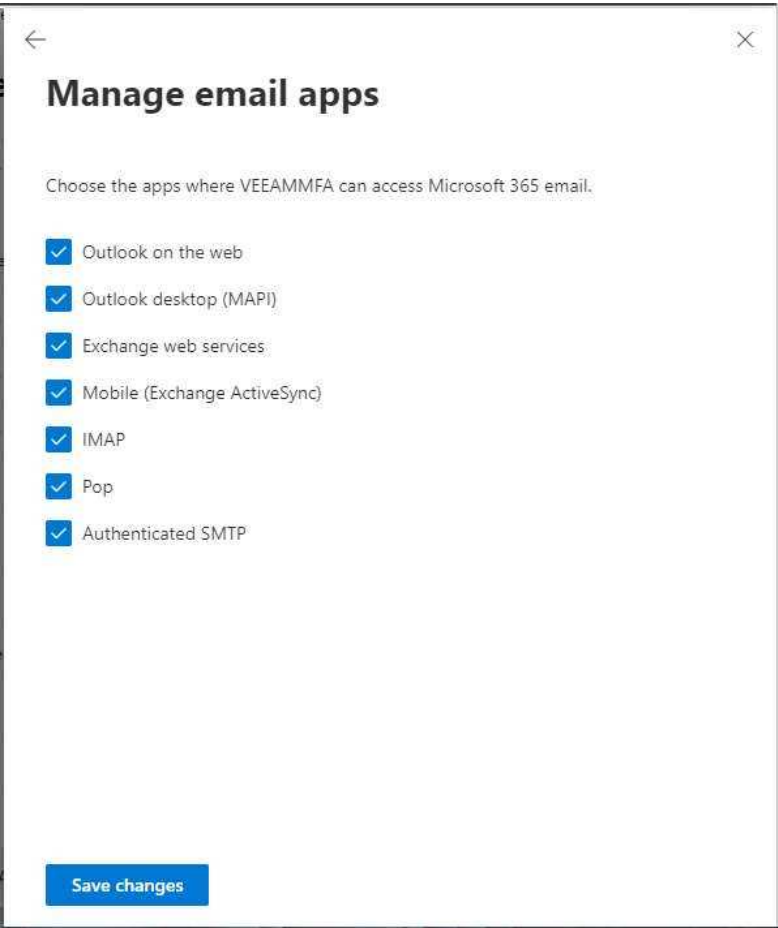
[Manage global address list visibility](#)

Email forwarding

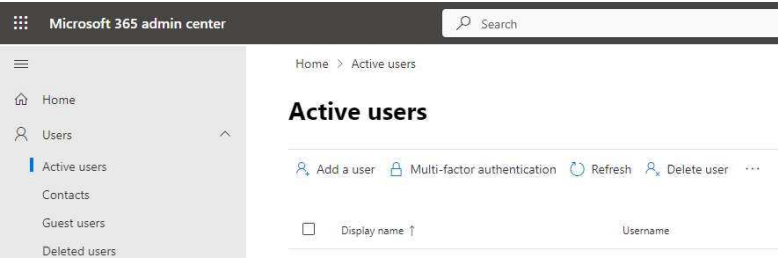
None

[Manage email forwarding](#)

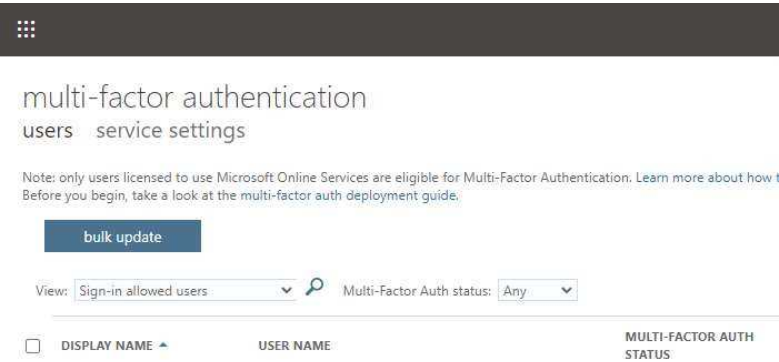
10. On the Manage email apps page, select Authenticated SMTP and click Save changes.



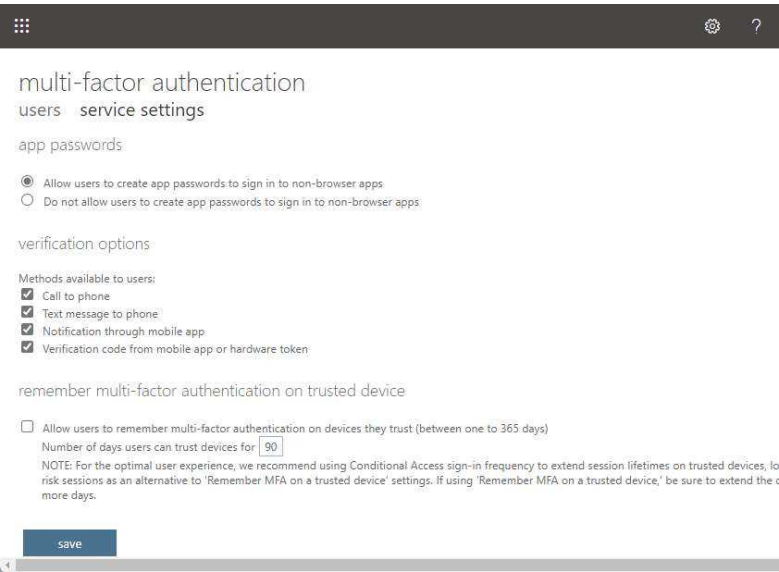
11. On the Active Users page, select Multi-factor authentication.



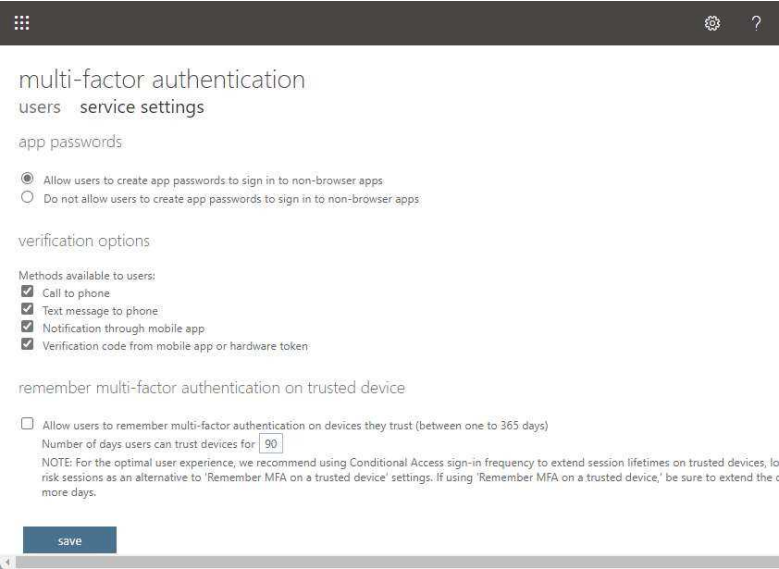
- 12. Sign in with a Global admin account.
- 13. On the multi-factor authentication page, select service settings.



- 14. On the service settings page, select Allow users to create an app password to sign in to non-browser apps, click save and then sign out from the office 365 portal.

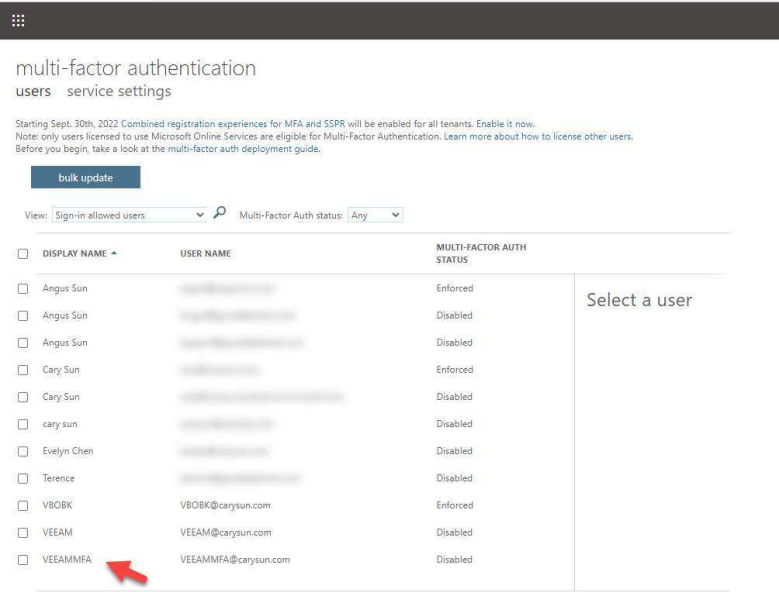


15. On the multi-factor authentication page, select users.



16. If the Veeam service account is non-MFA, follow the steps below to enable MFA.

17. On the user's page, click Veeam service account.



18. On the quick steps page, select Enable.

multi-factor authentication

users service settings

Starting Sept. 30th, 2022 Combined registration experiences for MFA and SSPR will be enabled for all tenants. Enable it now.

Note: only users licensed to use Microsoft Online Services are eligible for Multi-Factor Authentication. Learn more about how to license other users.

Before you begin, take a look at the multi-factor auth deployment guide.

bulk update

View: Sign-in allowed users

Multi-Factor Auth status: Any

☐	DISPLAY NAME	USER NAME	MULTI-FACTOR AUTH STATUS
☐	Angus Sun	angus.sun@carlsun.com	Enforced
☐	Angus Sun	angus.sun@carlsun.com	Disabled
☐	Angus Sun	angus.sun@carlsun.com	Disabled
☐	Cary Sun	cary.sun@carlsun.com	Enforced
☐	Cary Sun	cary.sun@carlsun.com	Disabled
☐	cary sun	cary.sun@carlsun.com	Disabled
☐	Evelyn Chen	evelyn.chen@carlsun.com	Disabled
☐	Terence	terence@carlsun.com	Disabled
☐	VBOBK	VBOBK@carlsun.com	Enforced
☐	VEEAM	VEEAM@carlsun.com	Disabled
☒	VEEAMMFA	VEEAMMFA@carlsun.com	Disabled

VEEAMMFA

VEEAMMFA@carlsun.com

quick steps

Enable

Manage user settings

19. Click enable multi-factor auth on the About helping multi-factor auth page.

!

About enabling multi-factor auth

Please read the deployment guide if you haven't already.

If your users do not regularly sign in through the browser, you can send them to this link to register for multi-factor auth: <https://aka.ms/MFASetup>

enable multi-factor auth

cancel

20. On the Updates, successful page, click Close.

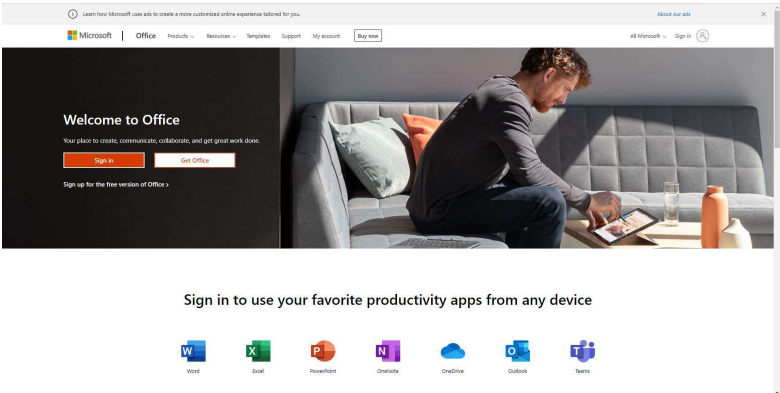
i

Updates successful

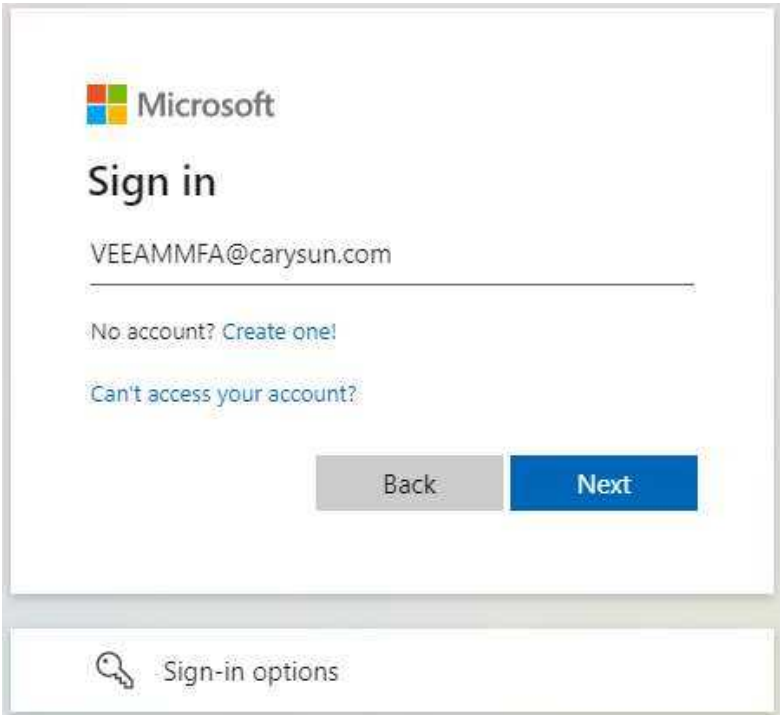
Multi-factor auth is now enabled for the selected accounts.

close

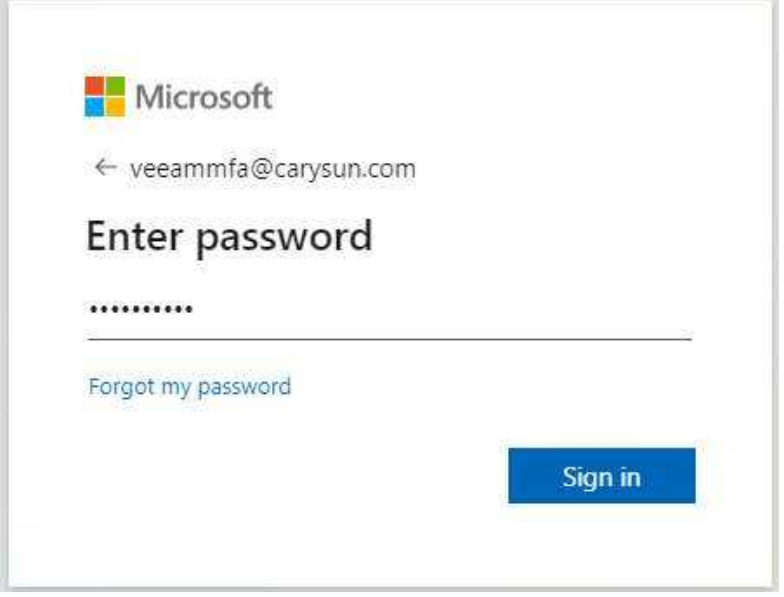
21. Sign in Office 365 portal with a Veeam service account



22. On the Sign in page, enter the Veeam services account email address.



23. Enter password.



The screenshot shows the Microsoft login interface. At the top is the Microsoft logo. Below it is a back arrow and the email address 'veeammf@carsun.com'. The main heading is 'Enter password'. There is a password input field with dots for the password. Below the field is a link that says 'Forgot my password'. In the bottom right corner is a blue button labeled 'Sign in'.

24. On the More information required page, click Next.



The screenshot shows the 'More information required' page in the Microsoft login process. It features the Microsoft logo at the top, followed by the email address 'veeammf@carsun.com'. The heading is 'More information required'. Below this, a message states: 'Your organization needs more information to keep your account secure'. There are two links: 'Use a different account' and 'Learn more'. A blue button labeled 'Next' is located in the bottom right corner.

25. Select Fill in the information on the Step 1 page and click Next.

Additional security verification

Secure your account by adding phone verification to your password. [View video to know how to secure your account](#)

Step 1: How should we contact you?

Authentication phone: [dropdown]
Country/region: Canada (+1) [dropdown] 604 [text box]

Method:
☒ Send me a code by text message
☐ Call me

[Next](#)

Your phone numbers will only be used for account security. Standard telephone and SMS charges will apply.

©2022 Microsoft Legal | Privacy

26. On the Step 2 page, enter the verification code and click Verify.

Additional security verification

Secure your account by adding phone verification to your password. [View video to know how to secure your account](#)

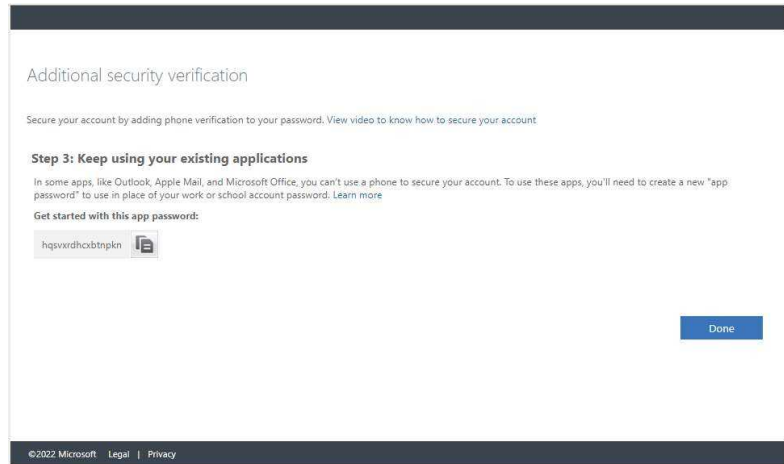
Step 2: We've sent a text message to your phone at +1 604 [text box]

When you receive the verification code, enter it here:
[766326]

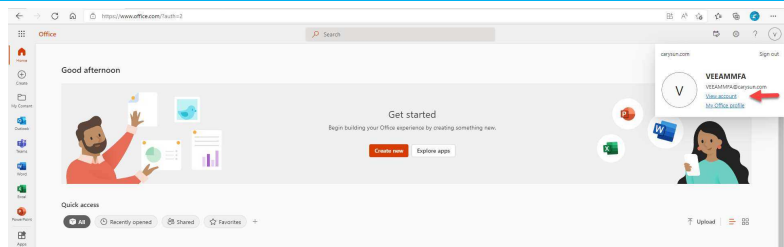
[Cancel](#) [Verify](#)

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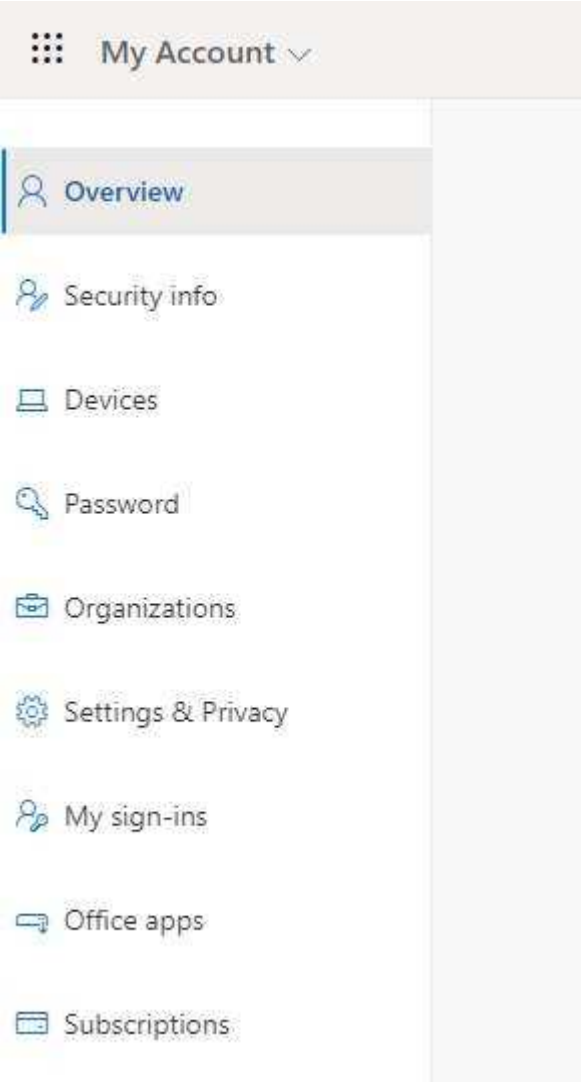
27. In Step 3, copy and save the app password, and click Done.



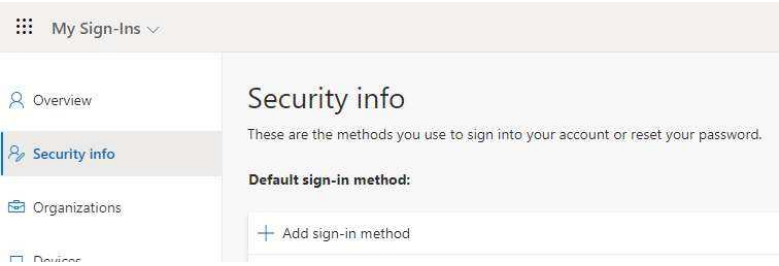
28. If the Veeam service account is an existing MFA account, follow the below steps to add App password authentication.
29. Sign in to the Office 365 portal with the Veeam service account and select View account.



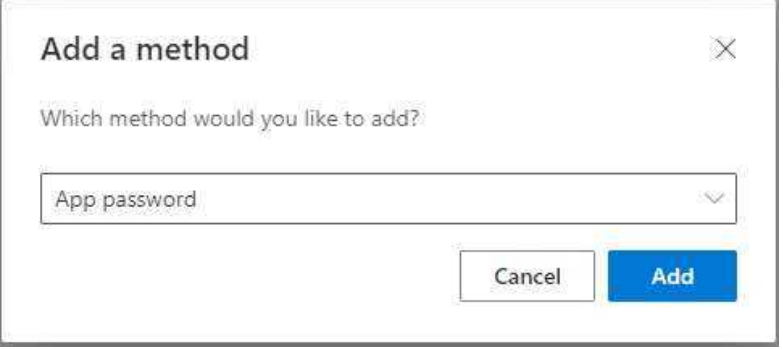
30. On the My account page, select Security info.



31. On the Security info page, select the +Add method.

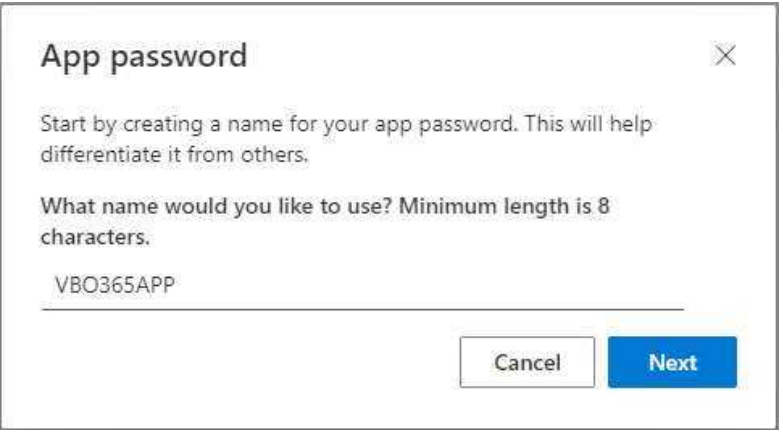


32. On a method, select App password and click Add.



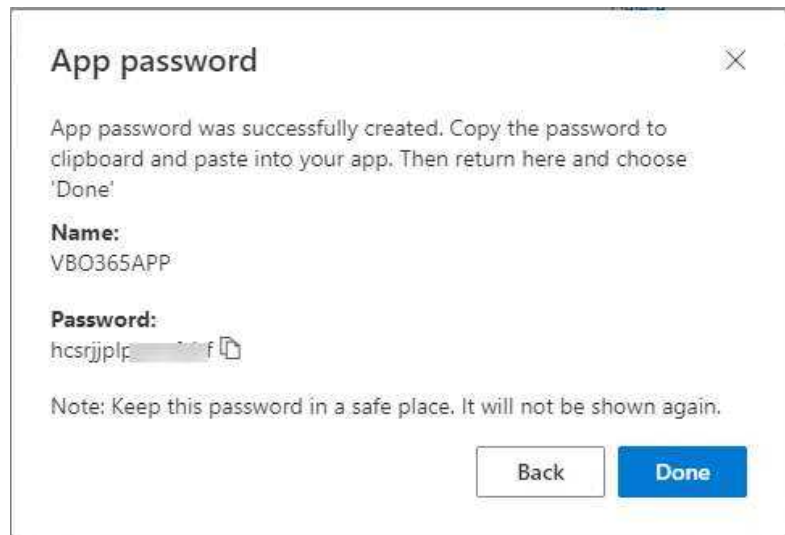
The screenshot shows a dialog box titled "Add a method" with a close button (X) in the top right corner. Below the title, it asks "Which method would you like to add?". There is a dropdown menu with "App password" selected. At the bottom right, there are two buttons: "Cancel" and "Add".

33. Type VBO365APP as the name of the App password, and click Next.

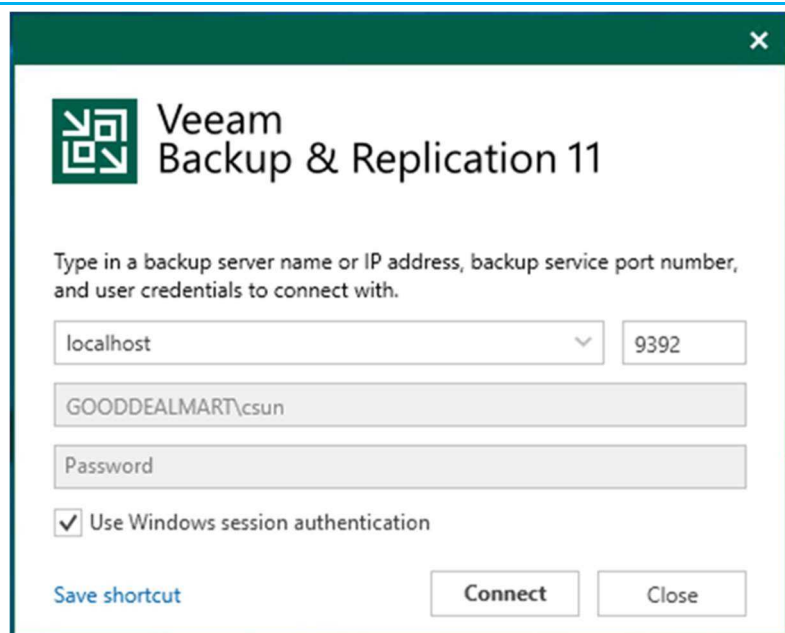


The screenshot shows a dialog box titled "App password" with a close button (X) in the top right corner. Below the title, it says "Start by creating a name for your app password. This will help differentiate it from others." followed by "What name would you like to use? Minimum length is 8 characters." There is a text input field containing "VBO365APP". At the bottom right, there are two buttons: "Cancel" and "Next".

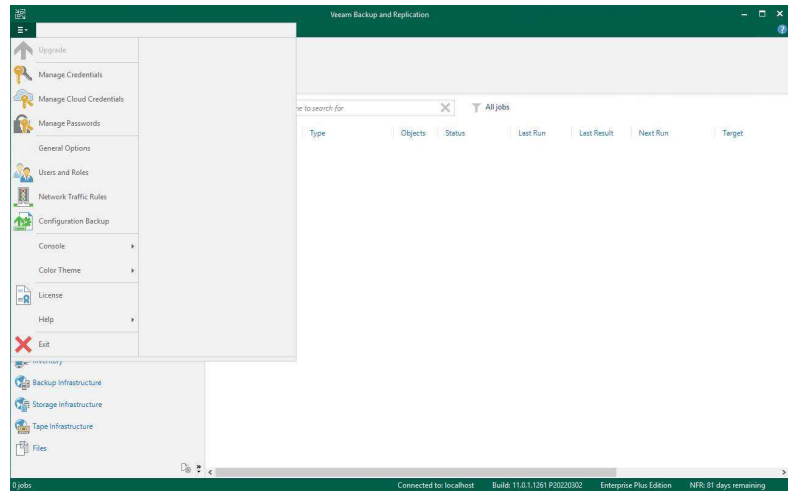
34. Copy and keep the password in a safe place. It will not be shown again.
35. Click Done.



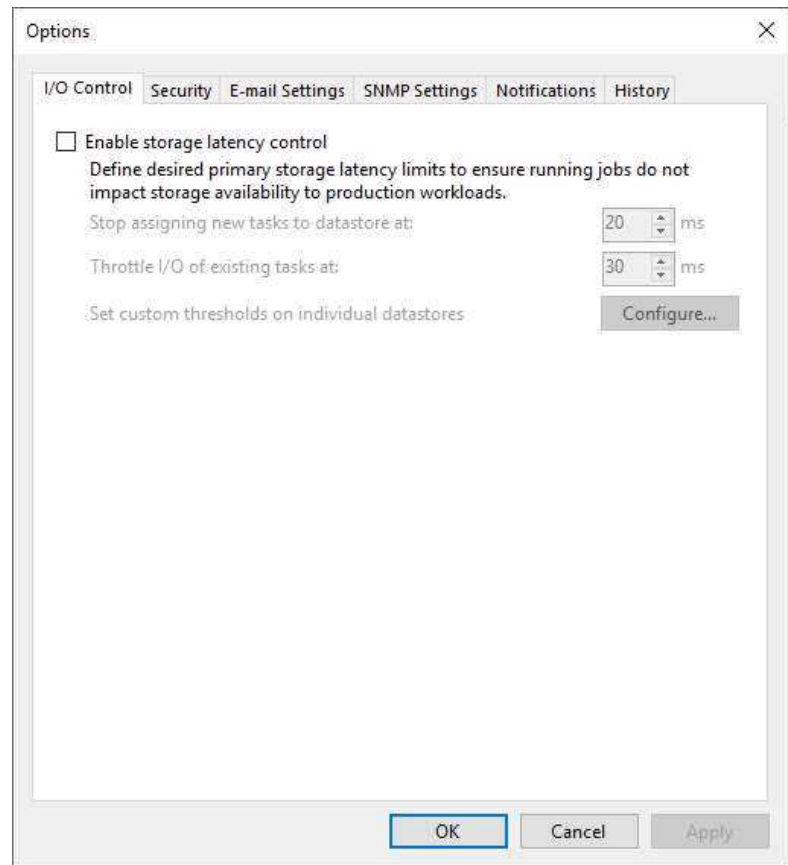
36. Log in to the Veeam Backup and replication manager server.
37. Open the Veeam Backup & Replication Console, and click Connect.



38. Select General Options from the main menu.



39. On the Options page,
select Email Settings.



40. Select Enable e-mail notification (recommend) on the Email Settings page.
41. In the SMTP server field, enter smtp.sendgrid.net and click Advanced.

The screenshot shows the 'Options' dialog box with the 'E-mail Settings' tab selected. The 'Enable e-mail notifications (recommended)' checkbox is checked. The 'SMTP server' field contains 'smtp.office365.com'. The 'From:', 'To:', and 'Subject:' fields are empty. The 'Subject' field has a placeholder text: '[%JobResult%] %JobName% (%ObjectCount% objects) %Issues%'. The 'Send daily summary at:' field is set to '10:00 PM'. The 'Notify on:' section has four checked options: 'Success', 'Warning', 'Failure', and 'Suppress notifications until the last job retry'. The 'Advanced...' button is visible next to the 'SMTP server' field. The 'Test Message' button is at the bottom right. The 'OK', 'Cancel', and 'Apply' buttons are at the bottom of the dialog box.

Options

I/O Control Security E-mail Settings SNMP Settings Notifications History

☒ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com Advanced...

From:

To:

Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Test Message

Send daily summary at: 10:00 PM ⓘ

Notify on:

☒ Success

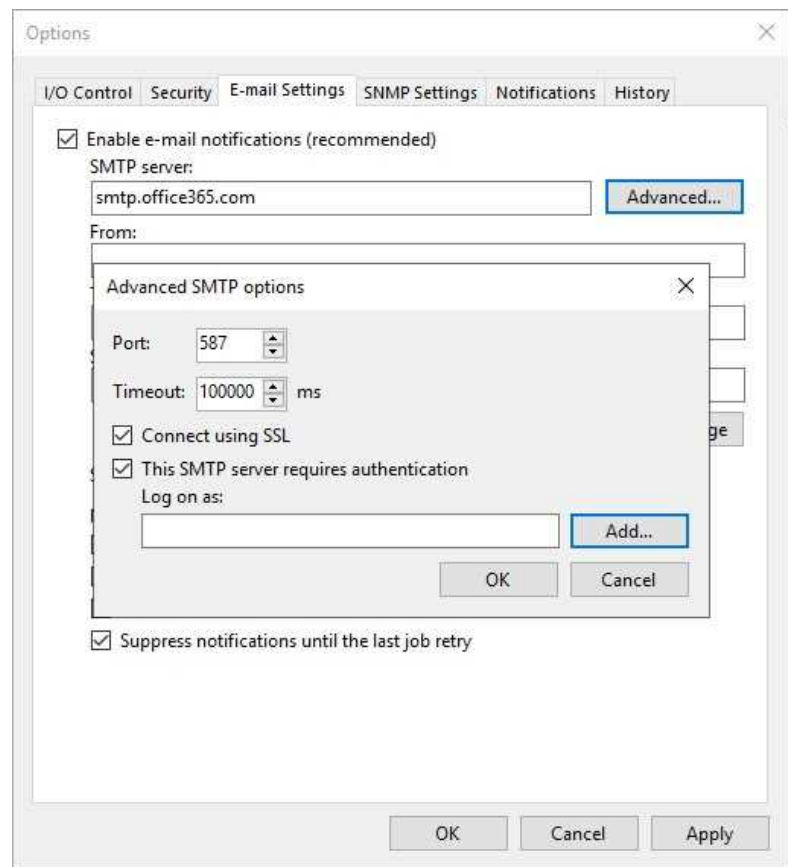
☒ Warning

☒ Failure

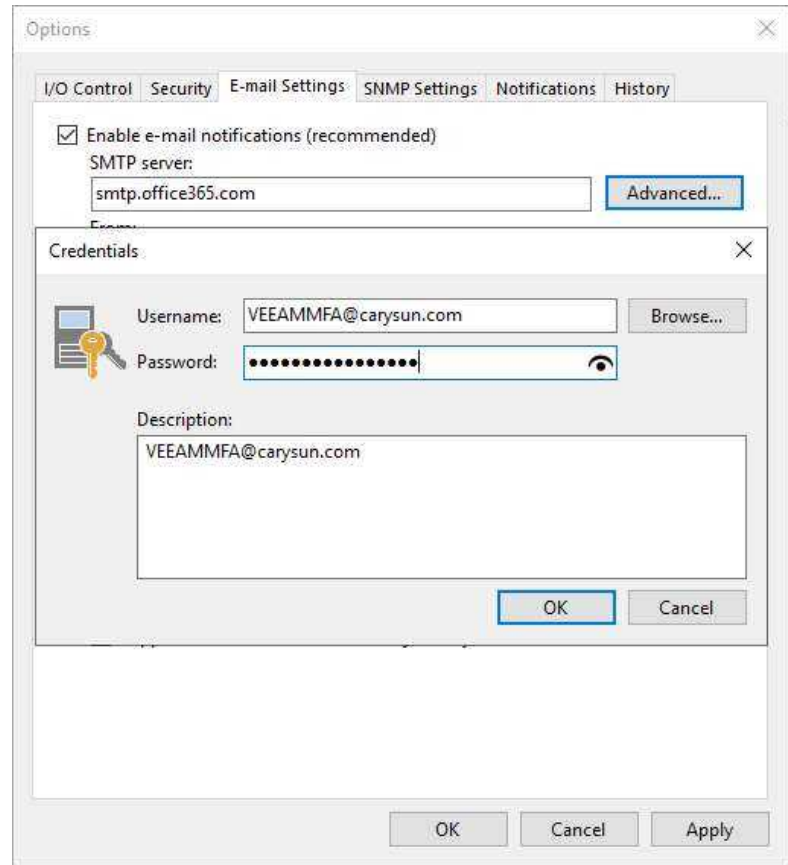
☒ Suppress notifications until the last job retry

OK Cancel Apply

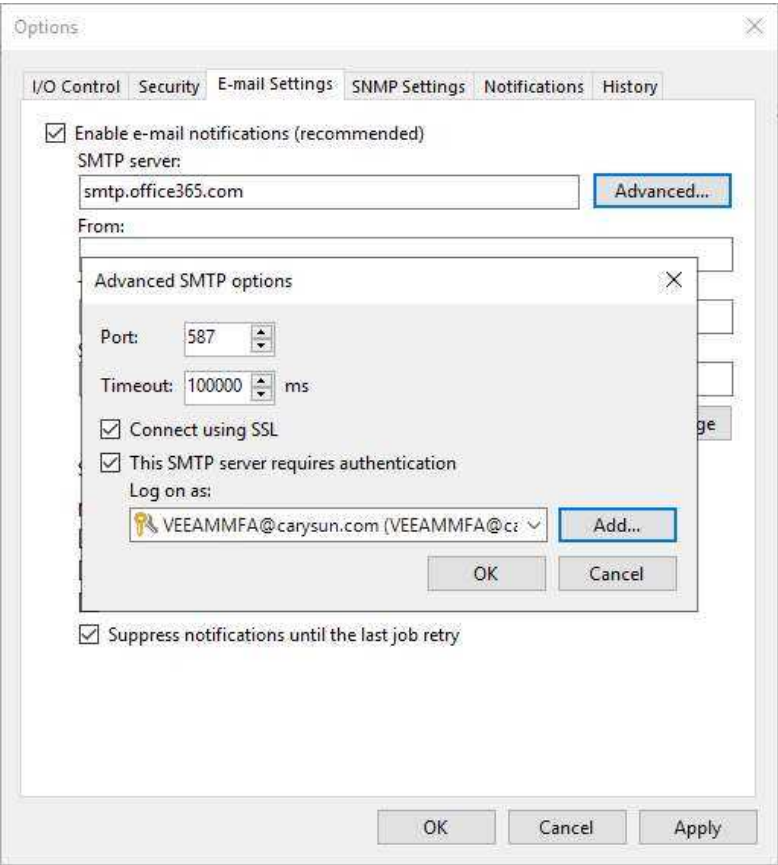
42. On the Advanced SMTP options page, enter 587 in the Port field.
43. Use 100000 milliseconds as the Timeout.
44. Select Connect using SSL.
45. Select This SMTP server requires authentication.
46. Click Add to add a credential as Log on as account.



47. The SMTP server requires authentication, type the office 365 service account (VEEAMMFA@carysun.com in my case) as Username, enter the App password as the password, and click OK.



48. On the Advanced SMTP options page, click OK.



49. In the From field, enter the Veeam service account's email address as a sender.
50. In the To field, enter an email address of a notification recipient. To specify multiple email addresses, use a semicolon.
51. Click Test Message.

The screenshot shows the 'Options' dialog box with the 'E-mail Settings' tab selected. The 'Enable e-mail notifications (recommended)' checkbox is checked. The 'SMTP server' field contains 'smtp.office365.com'. The 'From' field contains 'VEEAMMFA@carysun.com'. The 'To' field contains 'csun@triconelite.com'. The 'Subject' field contains '[%JobResult%] %JobName% (%ObjectCount% objects) %Issues%'. There is a 'Test Message' button. The 'Send daily summary at' dropdown is set to '10:00 PM'. Under 'Notify on:', the checkboxes for 'Success', 'Warning', 'Failure', and 'Suppress notifications until the last job retry' are all checked. At the bottom are 'OK', 'Cancel', and 'Apply' buttons.

Options

I/O Control Security E-mail Settings SNMP Settings Notifications History

☒ Enable e-mail notifications (recommended)

SMTP server:
smtp.office365.com Advanced...

From:
VEEAMMFA@carysun.com

To:
csun@triconelite.com

Subject:
[%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Test Message

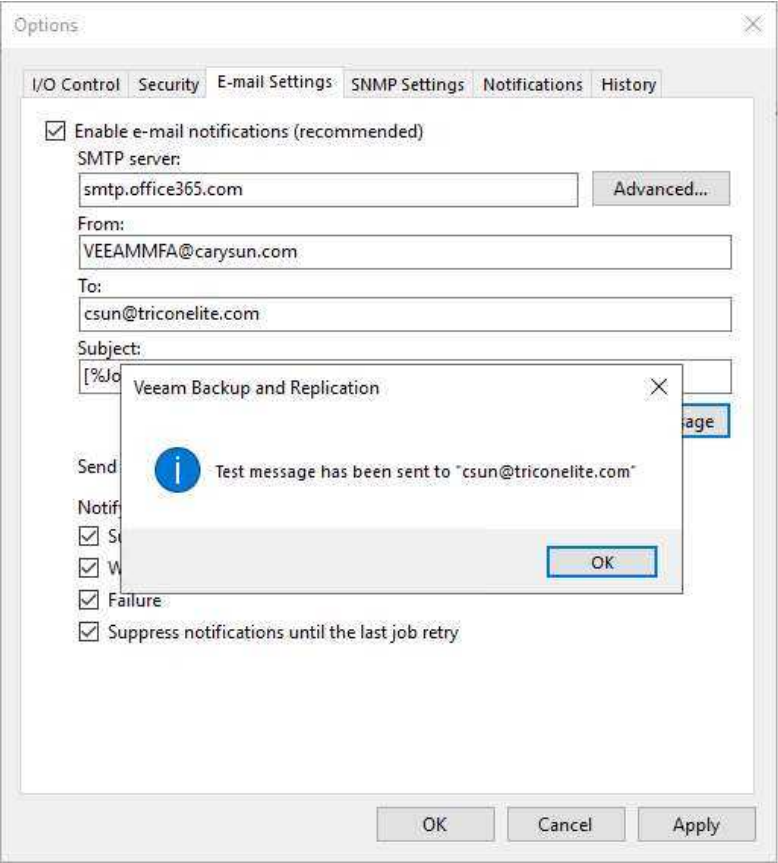
Send daily summary at: 10:00 PM ⓘ

Notify on:

- ☒ Success
- ☒ Warning
- ☒ Failure
- ☒ Suppress notifications until the last job retry

OK Cancel Apply

52. Ensure the test email was successfully sent to recipients, and click OK.



53. On the Notifications page, system notifications are sent by default whenever a backup job session ends with the following states: Success, Warning, or Failure. Keep the default settings, and click OK.

The screenshot shows the 'Options' dialog box with the 'E-mail Settings' tab selected. The 'Enable e-mail notifications (recommended)' checkbox is checked. The SMTP server is set to 'smtp.office365.com'. The 'From' field is 'VEEAMMFA@canysun.com' and the 'To' field is 'csun@triconelite.com'. The 'Subject' field contains a template: '[%JobResult%] %JobName% (%ObjectCount% objects) %Issues%'. There is a 'Test Message' button. The 'Send daily summary at' is set to '10:00 PM'. Under 'Notify on:', all four checkboxes are checked: 'Success', 'Warning', 'Failure', and 'Suppress notifications until the last job retry'. At the bottom are 'OK', 'Cancel', and 'Apply' buttons.

Options

I/O Control Security E-mail Settings SNMP Settings Notifications History

☒ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com Advanced...

From: VEEAMMFA@canysun.com

To: csun@triconelite.com

Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Test Message

Send daily summary at: 10:00 PM ⓘ

Notify on:

- ☒ Success
- ☒ Warning
- ☒ Failure
- ☒ Suppress notifications until the last job retry

OK Cancel Apply

Chapter 4

Backup and Backup Copy

Veeam Backup & Replication creates VM image-level backups. It treats virtual machines as objects rather than a collection of files. Veeam Backup & Replication copies the entire VM image at a block level when you backup a VM. Image-level backups can be used for various restore scenarios, such as Instant Recovery, restoring full VM, recovery VM file, recovery file-level, etc.

Typically, backup technology is used for VMs with shorter RTOs. When the primary virtual machine fails, restoring VM data from a deduplicated and compressed backup file takes some time.

The backup copy process is job-driven. Veeam Backup & Replication fully automates backup copying. It allows you to specify retention settings to keep the desired number of restore points and full backups for archival purposes.

The primary goal of backup is to protect your data from disasters and virtual or physical machine failures. On the other hand, having only one backup does not provide the necessary level of security. The primary backup and production data may be destroyed, leaving you with no backups from which to restore data.

It is recommended that you follow the 3-2-1 rule when developing a successful data protection and disaster recovery plan:

3: At least three copies of your data are required: the original production data and two backups.

2: You must store copies of your data on at least two media types: local disc and cloud.

1: At least one backup must be kept off-site, such as in the cloud or a remote location.

As a result, you must have at least two backups, each in a different location. If your production data and local backup are destroyed in a disaster, you can still recover from your off-site backup.

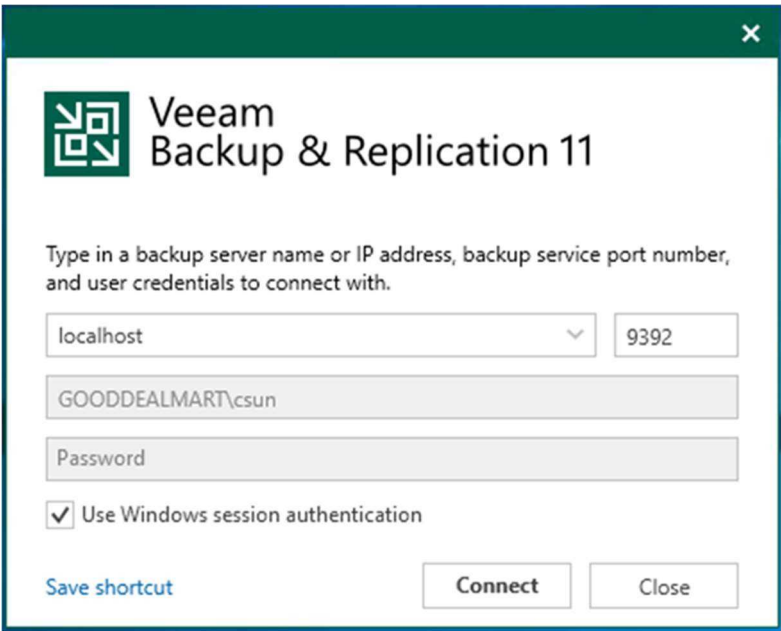
Enable Configuration Backup

The configuration database of Veeam Backup & Replication can be backed up and restored. If the backup server fails, you can quickly reinstall it and restore its configuration from a backup configuration.

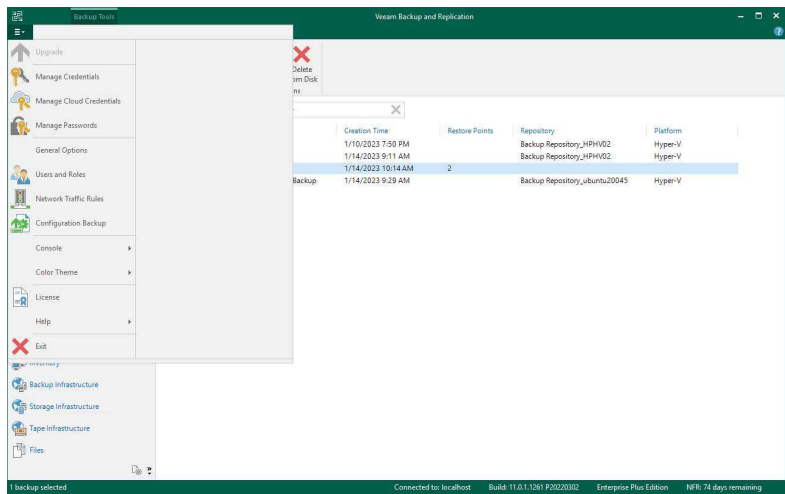
Configuration Backups can also be used to back up and restore Veeam Servers. This is useful for the upgrade, wipe reload scenarios and disaster recovery.

Instructions	Screenshot (if applicable)
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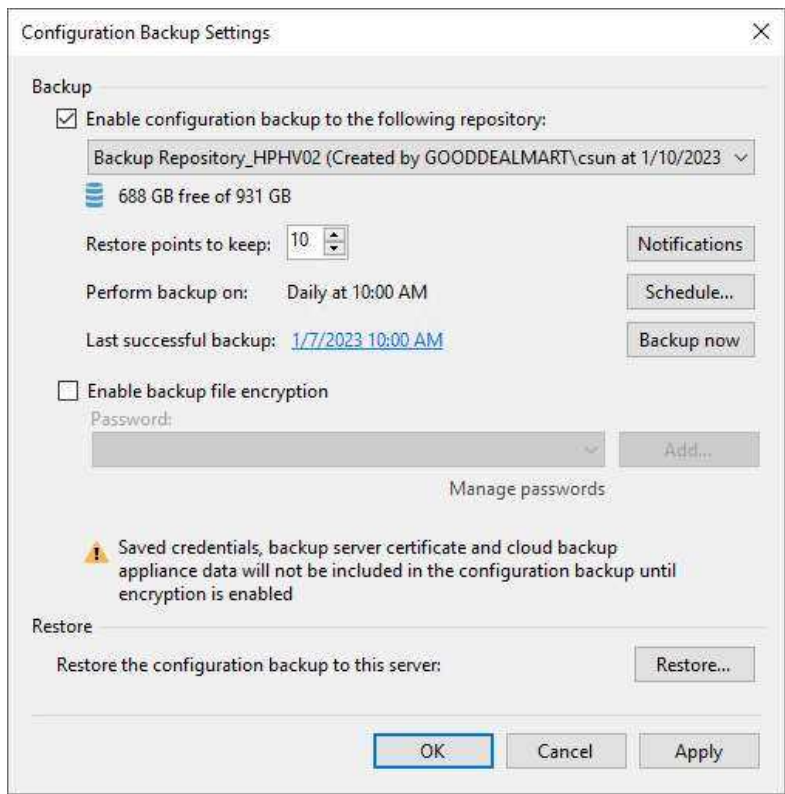
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



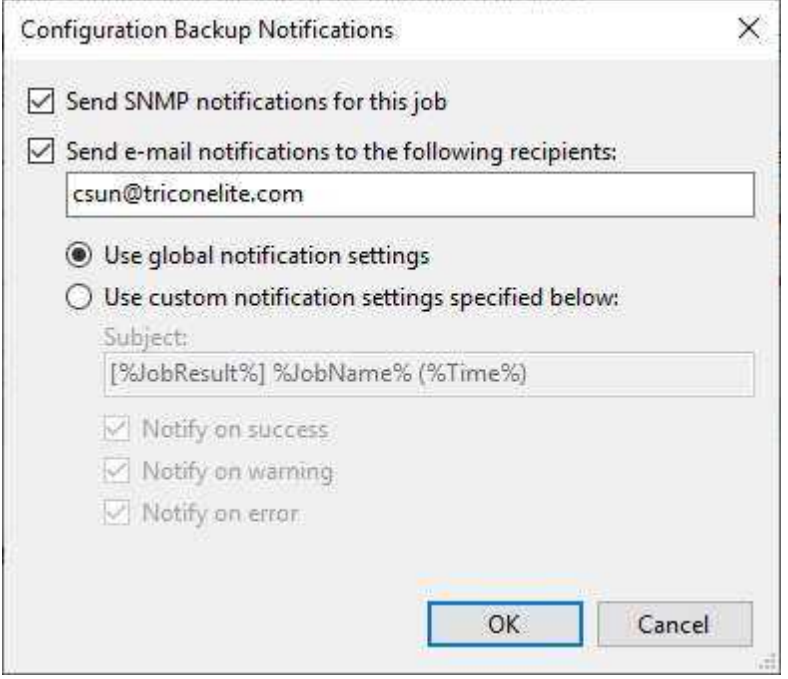
- 3. Select Configuration Backup from the Man menu.



- 4. Select Enable configuration backup to the following repository checkbox on the Configuration Backup Settings page.
- 5. Select the backup repository from the drop-down list.
- 6. Specify the number of restore points in the Restore points to keep the field.
- 7. Click Notifications.



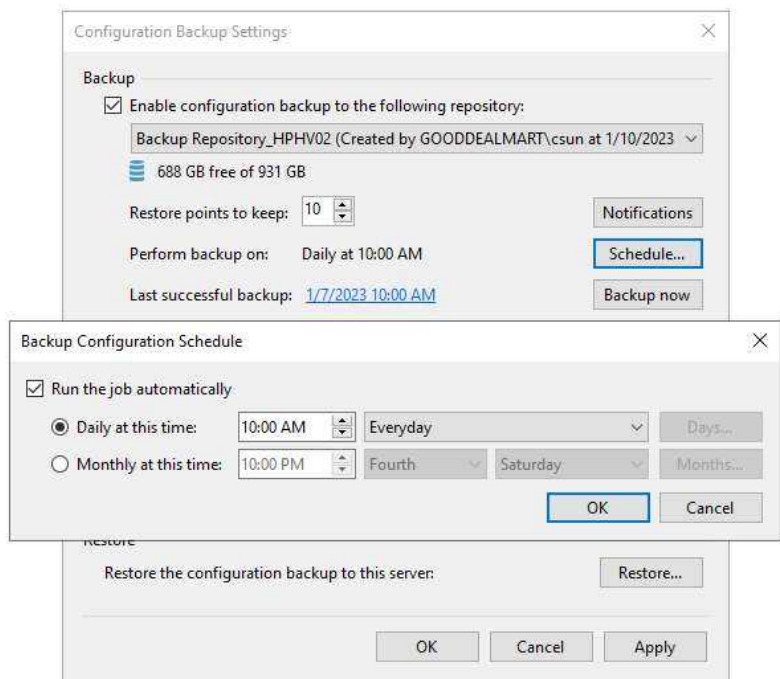
8. Select Send SNMP notification on the Configuration Backup Notification page for this job checkbox. If necessary.
9. Select Send e-mail notifications to the following recipients check box and enter a recipient's email address. You can enter multiple addresses, each email address separated by a semicolon.
10. Select the Use global notification settings checkbox.
11. Click OK.



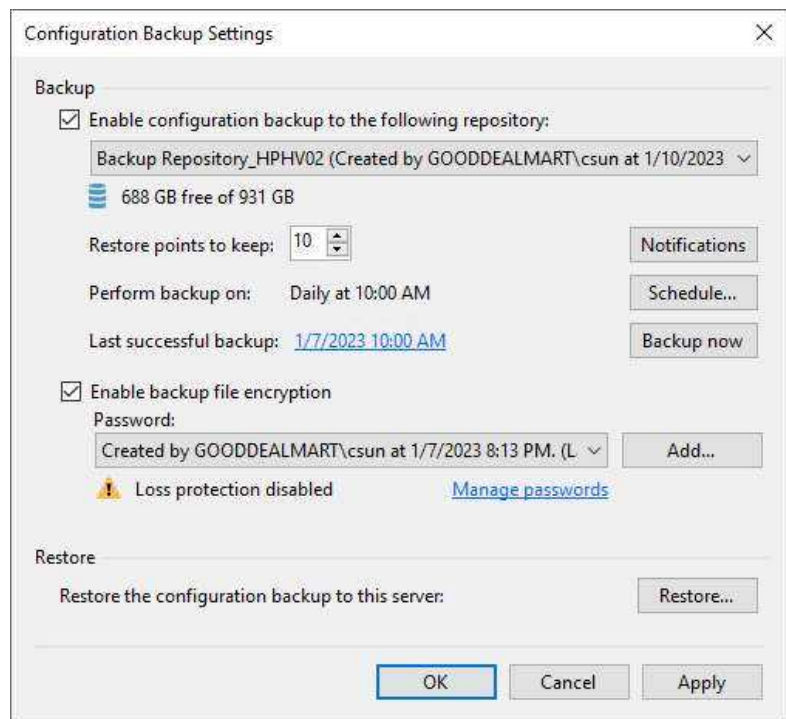
The image shows a Windows-style dialog box titled "Configuration Backup Notifications". It has a close button (X) in the top right corner. The dialog contains the following elements:

- A checked checkbox labeled "Send SNMP notifications for this job".
- A checked checkbox labeled "Send e-mail notifications to the following recipients:". Below this is a text input field containing the email address "csun@triconelite.com".
- Two radio buttons for notification settings:
 - The first radio button is selected and labeled "Use global notification settings".
 - The second radio button is labeled "Use custom notification settings specified below:". Below it is a "Subject:" label and a text input field containing the placeholder text "[%JobResult%] %JobName% (%Time%)".
- Three checked checkboxes at the bottom:
 - "Notify on success"
 - "Notify on warning"
 - "Notify on error"
- At the bottom right, there are two buttons: "OK" and "Cancel". The "OK" button is highlighted with a blue border.

12. Click Schedule, specify the schedule according to which configuration backup must be created and click OK.
13. Click Backup now if you want to back up manually.



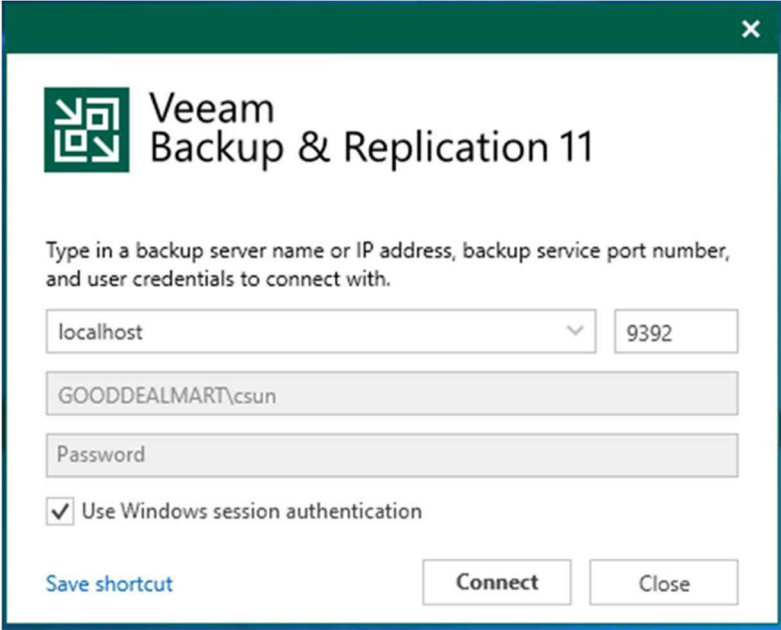
14. Select Enable backup file encryption on the Configuration Backup Settings page.
15. Select a password from the Password drop-down list or click Add to create a password.
16. Click OK.



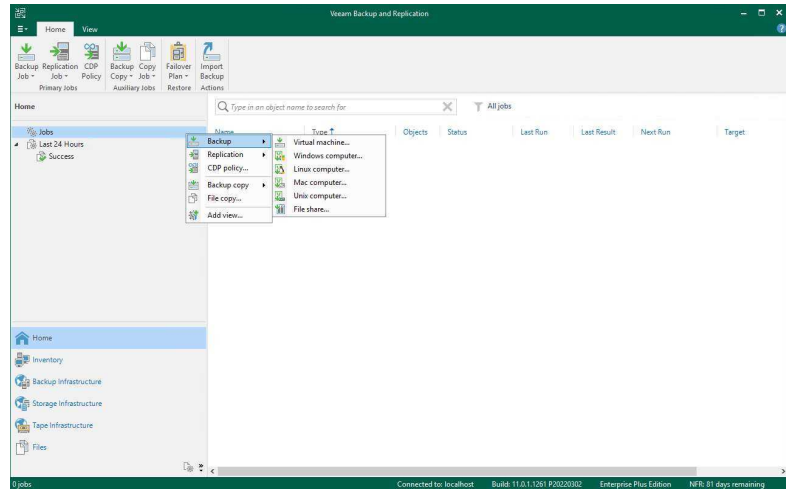
Creating a Backup job to backup the specified VMs

To backup VMs, you must first create a backup job. The backup job specifies how, where, and when VM data should be backed up. A single job can process one or more virtual machines. Jobs can be started by hand or scheduled for a specific time.

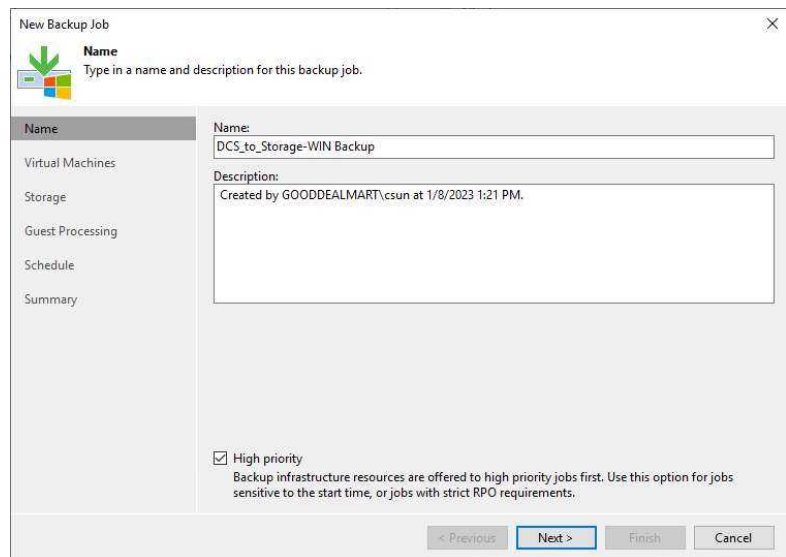
This procedure creates a backup job to backup the production VMs specified.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	

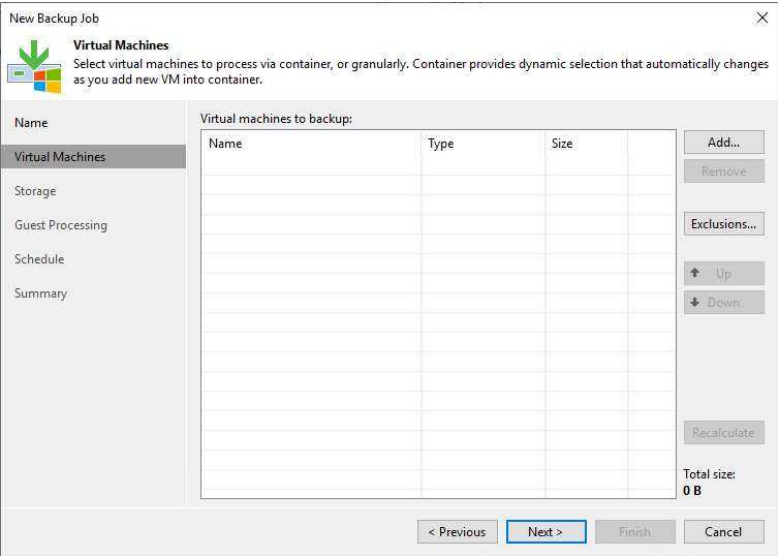
- On the Home page, select Jobs, right-click Jobs, select Backup and click Virtual machine.



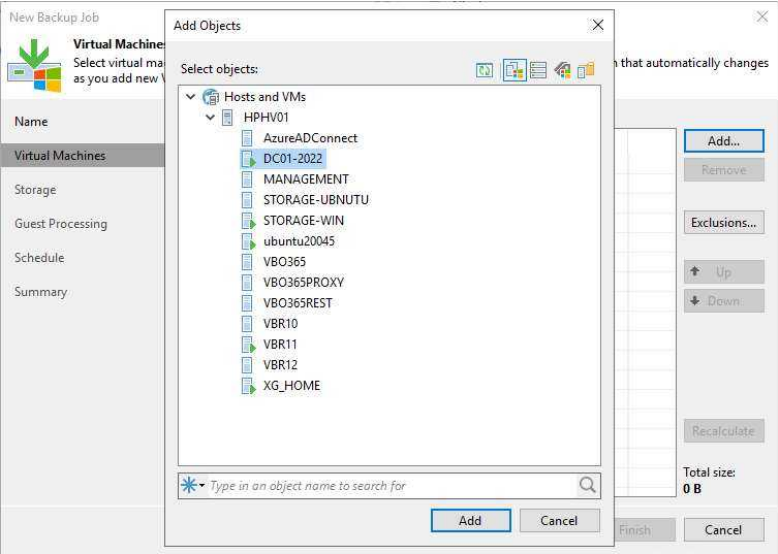
- On the Name page, enter a name in the Name field.
- Describe the Description field.
- Select the High priority check box if you want the resource scheduler of Veeam Backup & Replication to prioritize this job higher than similar jobs and allocate resources to it in the first place.
- Click Next.



8. On the Virtual Machines page, click Add.



9. Select the VM in the list on the Add Objects page and click Add.
10. If you have multiple VMS that needs backup in the same backup job, you can repeat the step to add them.



11. On the Virtual Machines page, click Next.

The screenshot shows the 'New Backup Job' wizard in Veeam Backup & Replication. The 'Virtual Machines' tab is selected in the left sidebar. The main area is titled 'Virtual Machines' and contains a table for 'Virtual machines to backup:'. The table has columns for Name, Type, and Size. One VM is listed: 'DC01-2022' with Type 'VM' and Size '17.5 GB'. To the right of the table are buttons for 'Add...', 'Remove', 'Exclusions...', 'Up', 'Down', and 'Recalculate'. At the bottom right, it shows 'Total size: 17.5 GB'. At the bottom of the wizard are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

Name	Type	Size
DC01-2022	VM	17.5 GB

12. On the Storage, click Choose to select a backup proxy if you don't want to use the default Off-host backup (automatic proxy selection) setting.

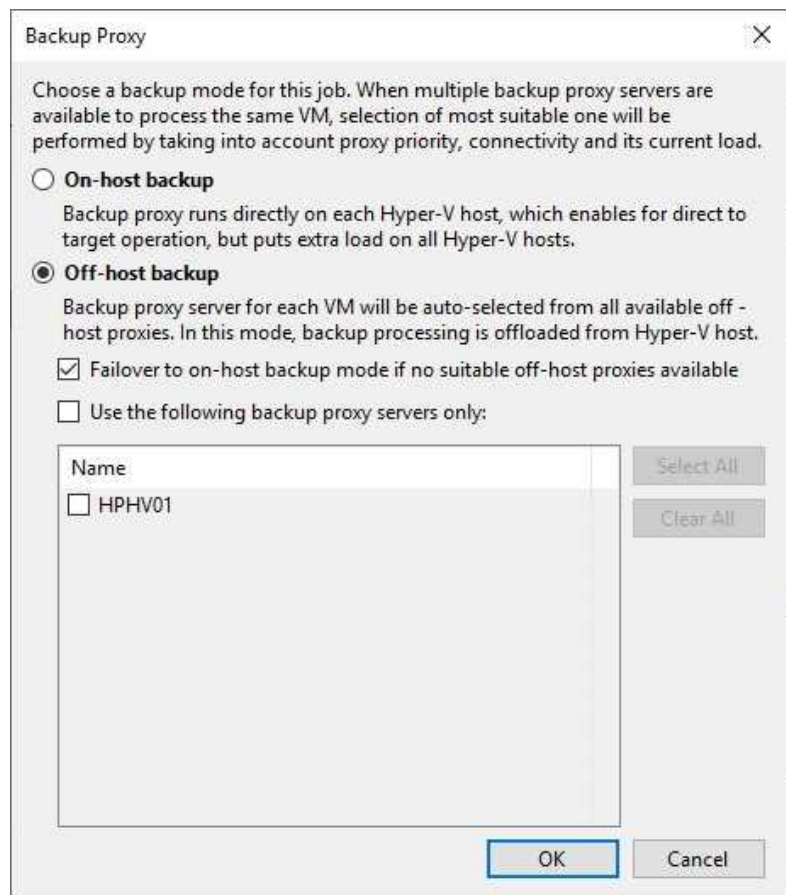
The screenshot shows the 'New Backup Job' wizard in Veeam Backup & Replication, now on the 'Storage' tab. The 'Storage' tab is selected in the left sidebar. The main area is titled 'Storage' and contains settings for the backup proxy and repository. The 'Backup proxy:' dropdown is set to 'Off-host backup (automatic proxy selection)'. The 'Backup repository:' dropdown is set to 'Default Backup Repository (Created by Veeam Backup)'. Below this, it shows '93.6 GB free of 126 GB' and a 'Map backup' link. The 'Retention policy:' is set to '7 days'. There are checkboxes for 'Keep certain full backups longer for archival purposes' and 'Configure secondary destinations for this job'. At the bottom, there is an 'Advanced' link. At the bottom of the wizard are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

13. On the Backup Proxy page, if you select On-host backup mode, the source Microsoft HyperV host will serve as both the source host and the backup proxy. In this mode, Veeam Data Mover runs directly on the source host, which speeds up data retrieval but places additional strain on the host.

14. If you select Off-host backup mode, Veeam Data Mover will run on a dedicated off-host backup proxy. All backup processing operations from the source host are routed to the off-host backup proxy in this model.

15. If the off-host backup mode is selected for the job, but there are no off-host backup proxies available when the job begins, Veeam Backup & Replication will transition to on-host backup mode.

16. You unselect the Failover to on-host backup mode if no suitable off-host



proxies available
checkbox, but if off-host
backup proxies are not
available or are not
configured properly, the
job will fail to start.

17. Click OK.

18. Select the backup
repository from the
Backup repository drop-
down list where the
created backup files must
be saved.

The screenshot shows the 'New Backup Job' dialog box with the 'Storage' tab selected. The left sidebar contains tabs for Name, Virtual Machines, Storage (selected), Guest Processing, Schedule, and Summary. The main area is titled 'Storage' and includes a description: 'Specify processing proxy server to be used for source data retrieval, backup repository to store the backup files produced by this job and customize advanced job settings if required.' Below this, there are several configuration options: 'Backup proxy' set to 'Off-host backup (automatic proxy selection)' with a 'Choose...' button; 'Backup repository' set to 'Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 1:)' with a 'Map backup' link; 'Retention policy' set to '7 days'; and two checkboxes: 'Keep certain full backups longer for archival purposes' (unchecked) and 'Configure secondary destinations for this job' (unchecked). At the bottom, there is an 'Advanced' button and a note about advanced job settings. Navigation buttons at the bottom include '< Previous', 'Next >', 'Finish', and 'Cancel'.

New Backup Job

Storage
Specify processing proxy server to be used for source data retrieval, backup repository to store the backup files produced by this job and customize advanced job settings if required.

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary

Backup proxy:
Off-host backup (automatic proxy selection) Choose...

Backup repository:
Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 1:)
125 GB free of 126 GB Map backup

Retention policy: 7 days

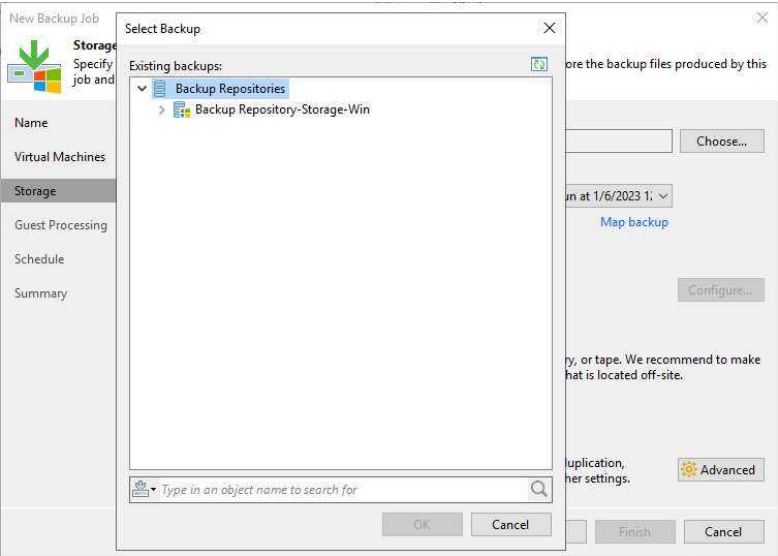
☐ Keep certain full backups longer for archival purposes
GFS retention policy is not configured

☐ Configure secondary destinations for this job
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

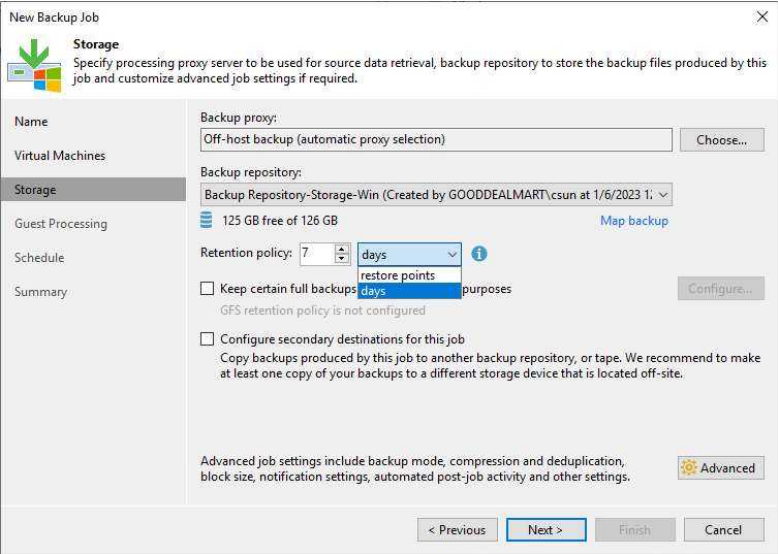
Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings. Advanced

< Previous Next > Finish Cancel

19. Click Map backup is helpful if you want to point the job to existing backups in this new repository. Backup job mapping can also be used if the configuration database becomes corrupt and you need to reconfigure backup jobs.



20. Set the retention policy settings for restore points in the Retention Policy field.
21. Select days or restore points from the drop-down list.



22. You can configure the backup job's GFS retention policy settings to ignore the short-term retention policy for some full backups and store them for long-term archiving.

23. Select the Keep certain full backups for longer for archival purposes. If you need it, click Configure.

The screenshot shows the 'New Backup Job' wizard with the 'Storage' tab selected. The 'Backup proxy' is set to 'Off-host backup (automatic proxy selection)'. The 'Backup repository' is 'Backup Repository-Storage-Win (Created by GOODDEALMART\csun on 1/6/2023 1:...)'. The 'Retention policy' is set to '7 restore points'. The 'Keep certain full backups longer for archival purposes' checkbox is checked, and the 'Configure...' button is visible. The 'Advanced' button is also present at the bottom right.

24. Select the Keep weekly full backups for check box, and specify the number of weeks you want to prevent restore points from being modified and deleted.

25. Select the Keep monthly full backups for check box, and specify the months you want to prevent restore points from being modified and deleted.

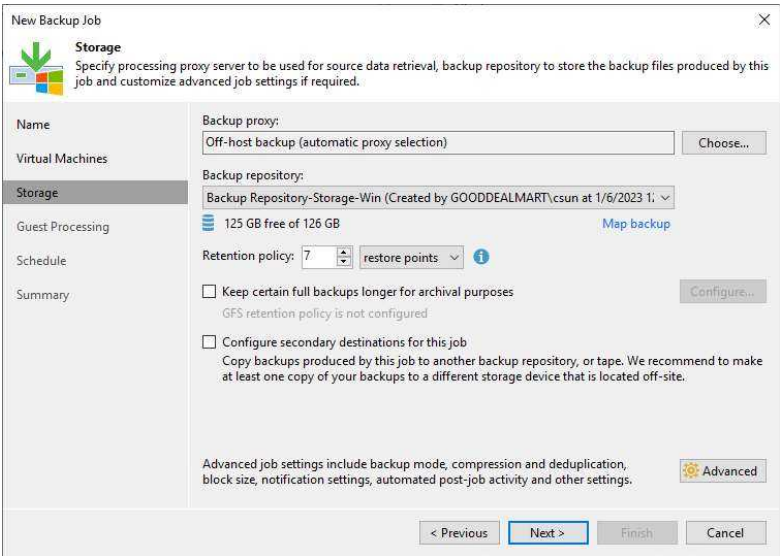
26. Select the Keep yearly full backups for check box, and specify the years you want to prevent restore points from being modified and deleted.

The screenshot shows the 'New Backup Job' wizard with the 'Storage' tab selected. The 'Configure GFS' dialog box is open, showing the 'Keep weekly full backups for' checkbox selected with a value of '1' weeks. The 'If multiple full backups exist, use the one from' dropdown is set to 'Sunday'. The 'Keep monthly full backups for' checkbox is also selected with a value of '1' months. The 'Use weekly full backup from the following week of a month' dropdown is set to 'First'. The 'Keep yearly full backups for' checkbox is selected with a value of '1' years. The 'Use monthly full backup from the following month' dropdown is set to 'January'. The 'OK' button is highlighted.

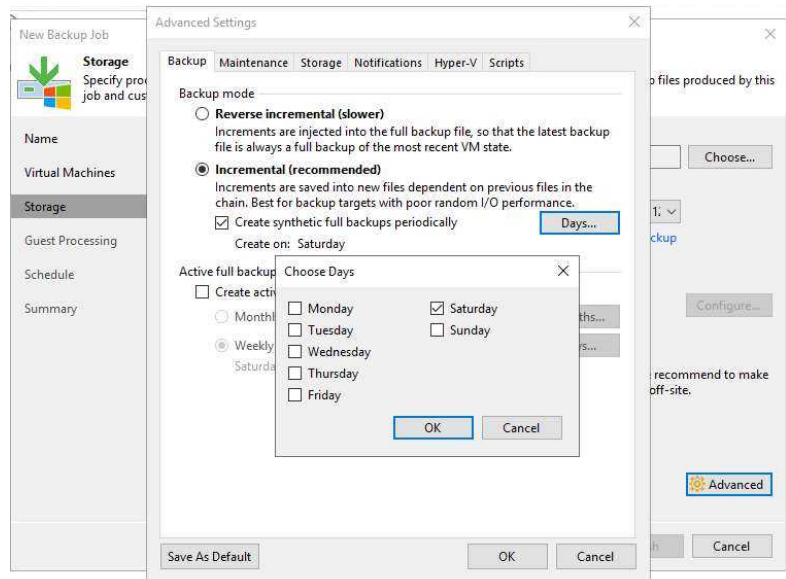
points from being modified and deleted.

27. Click OK.

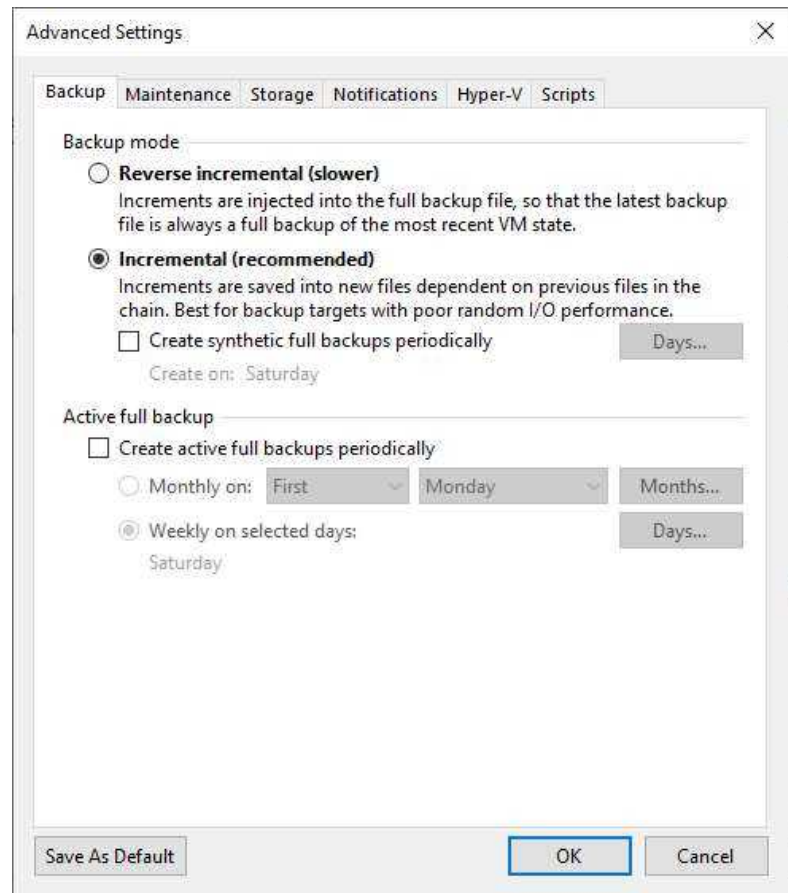
28. On the Storage page, click Advanced.



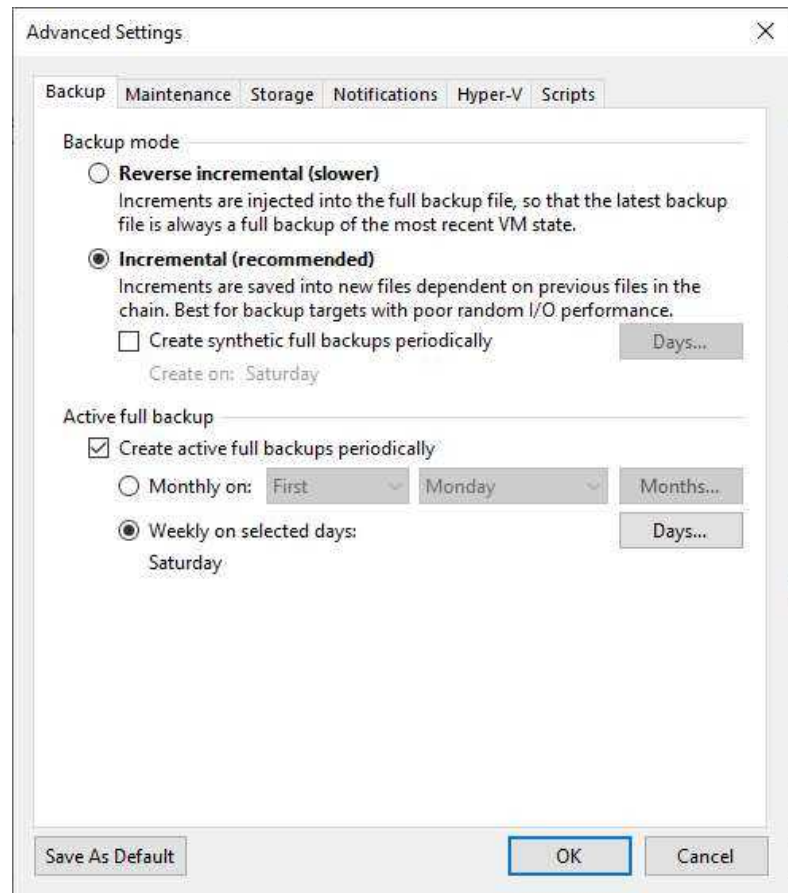
29. On the Backup page, there are two backup modes. You need to select one.
30. Select Reverse Incremental (slower) to create a reverse incremental backup chain.
31. Select Incremental and enable synthetic full and active full backups.
32. Click Days to schedule full synthetic backups on the necessary weekdays, and click OK.



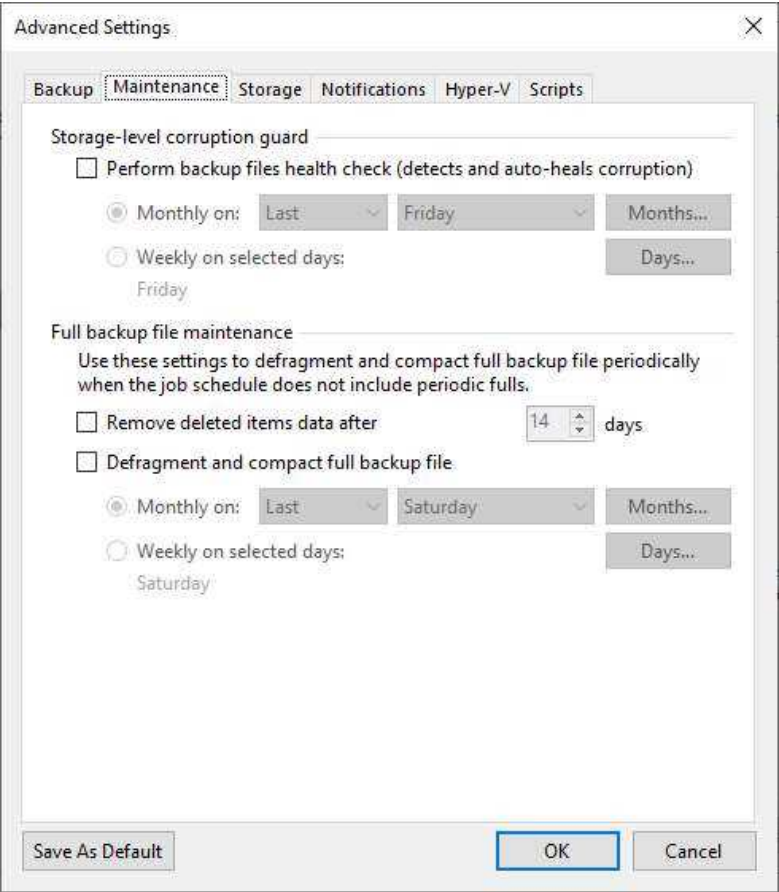
33. Select Incremental and disable synthetic full and active full backups to create a forever forward incremental backup chain.



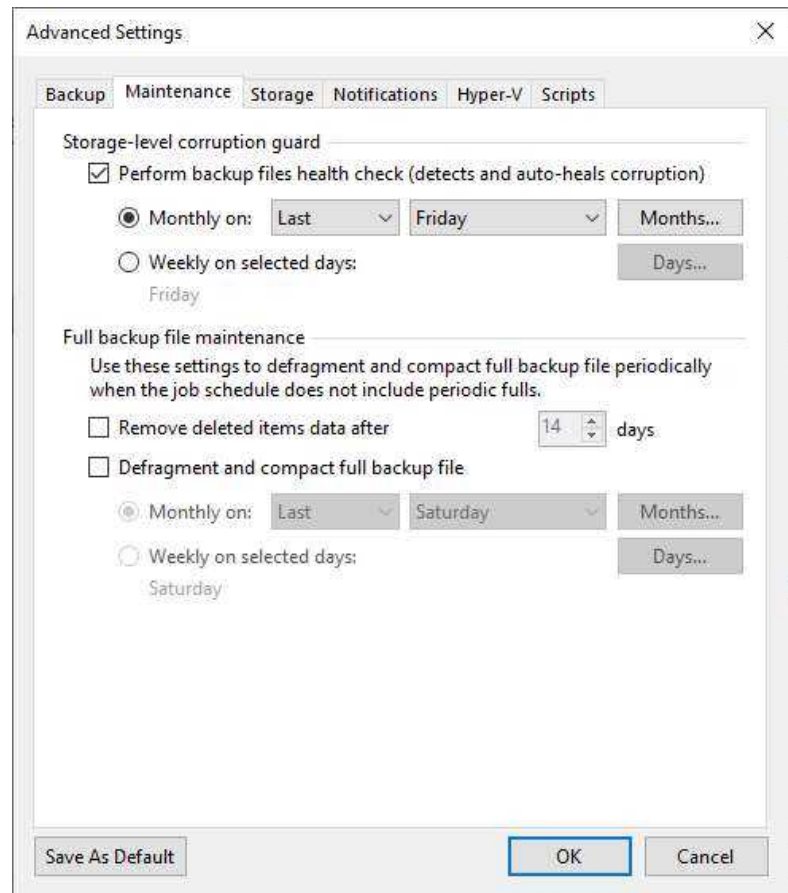
34. Select the Create active full backups periodically checkbox to create full backups regularly if needed.
35. Select the Monthly or Weekly on selected days options to define scheduling settings.



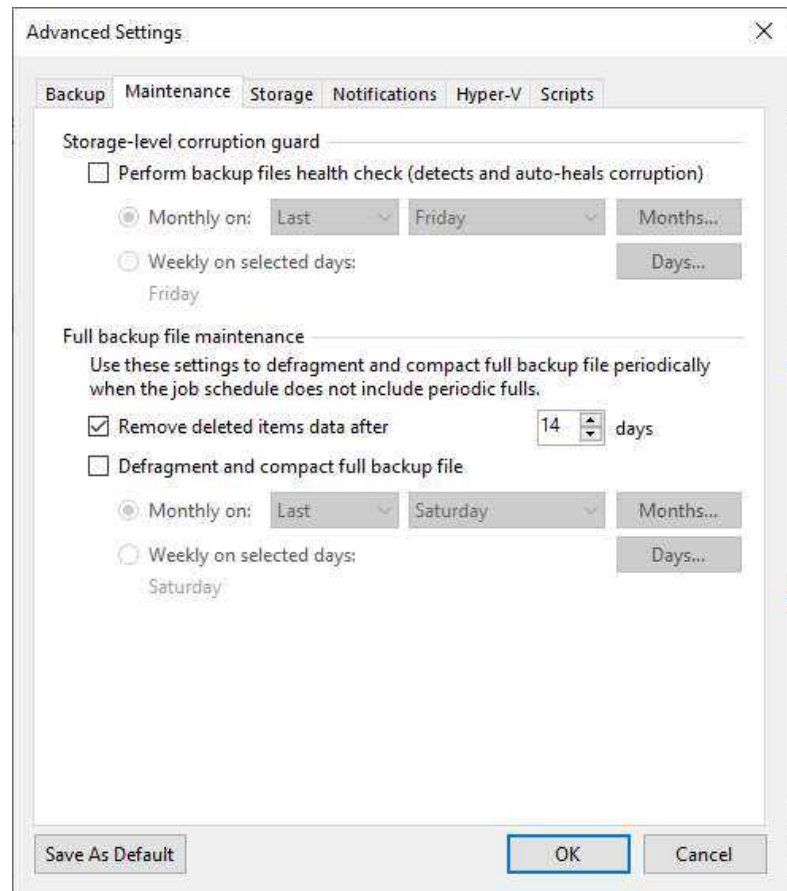
36. On the Advanced Settings, select Maintenance.



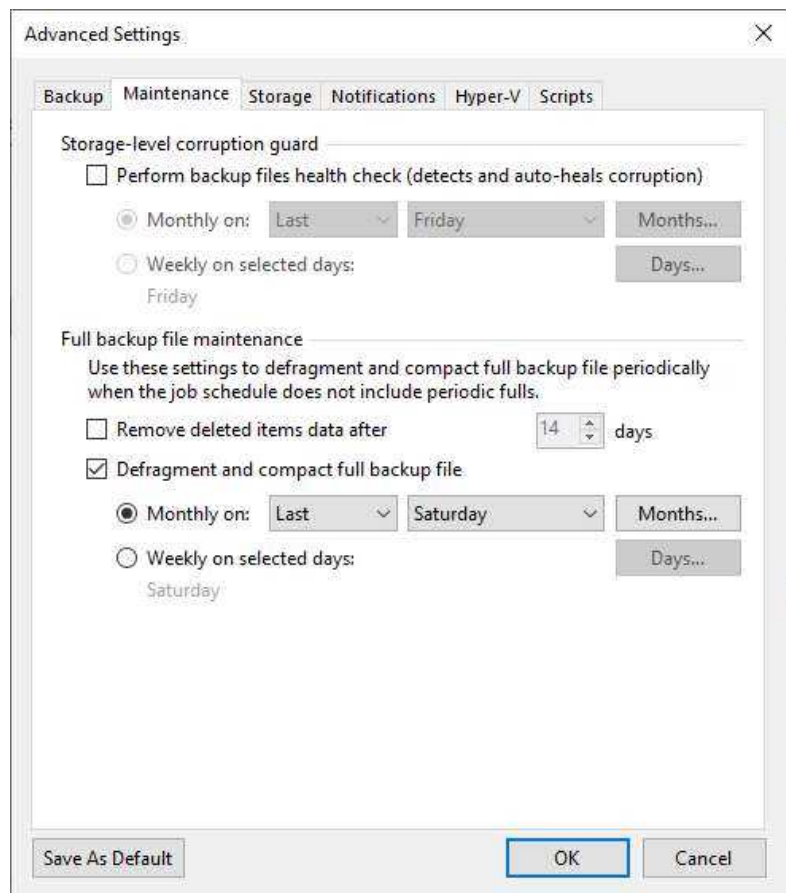
37. To regularly perform a health check on the backup chain's most recent restore point, select the Perform backup files health check (detects and auto-heals corruption) checkbox in the Storage-level corruption guard section and set a timetable for the health check.



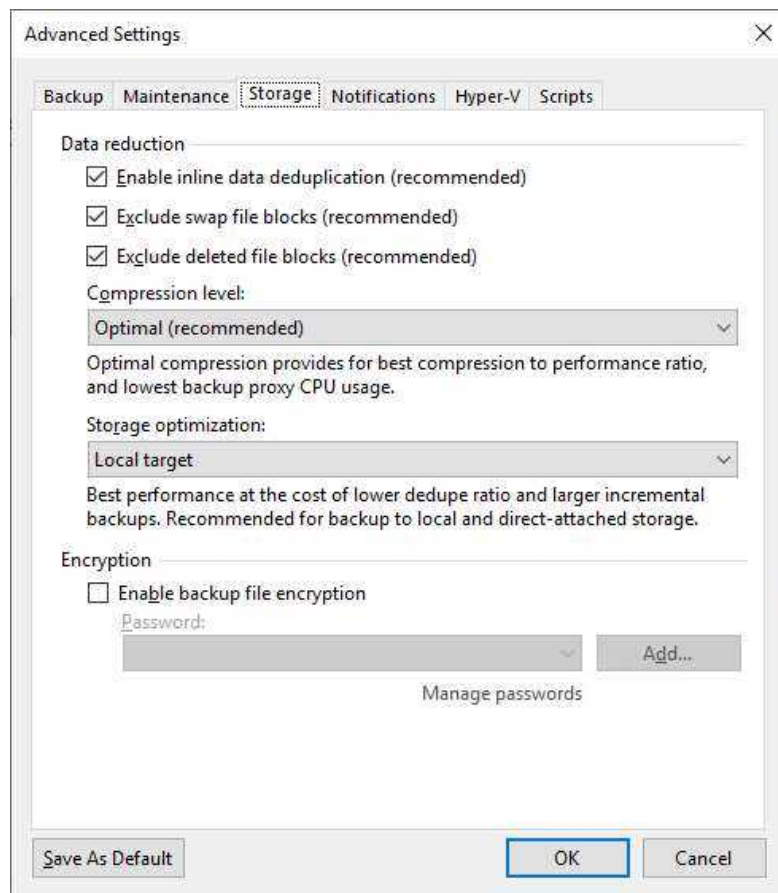
38. Select the Remove deleted items data after the check box and enter the days you want backup data for deleted VMs to be kept.



39. Check the box next to Defragment and compact the full backup file and specify the schedule for the compact operation to fully compact a full backup periodically.



40. On Advanced Settings, click Storage.
41. Select the Enable inline data deduplication checkbox.
42. Select the Exclude swap file blocks checkbox.
43. Select the Exclude deleted file blocks checkbox.
44. Select the compression level for the backup from the drop-down list.
 - None: if you intend to keep backup and virtual machine replica files on storage devices that support hardware compression and deduplication.
 - Dedupe-friendly: if you want to decrease the load on the backup proxy.
 - Optimal: It provides the best ratio between the



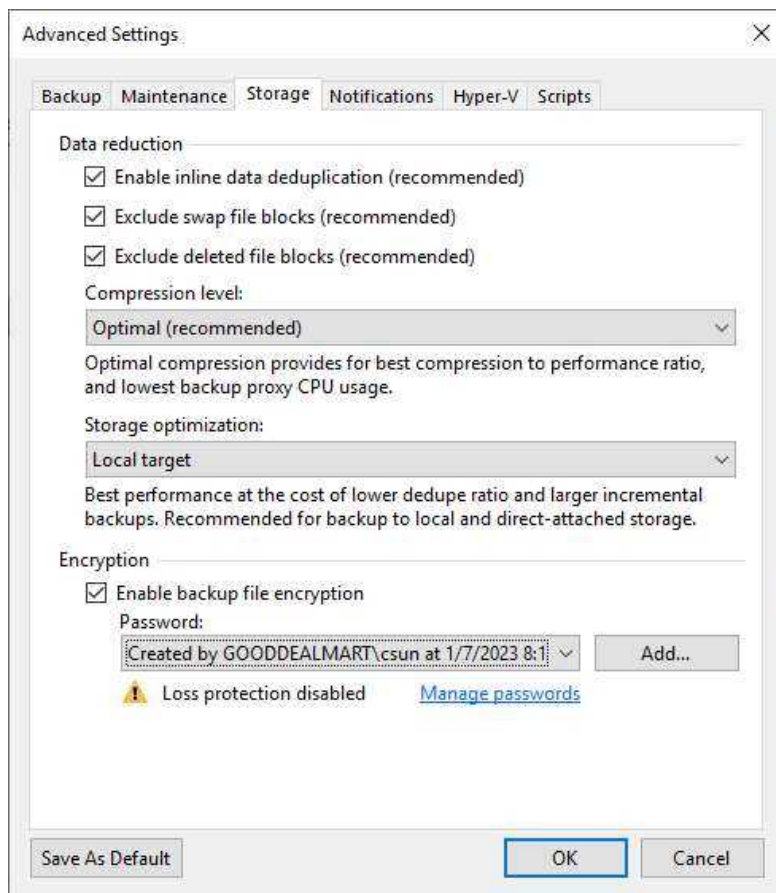
file size and the procedure's time.

- High: provides an additional 10% compression ratio over the Optimal level at about 10x higher CPU usage.
- Extreme: provides the smallest file size but reduces the performance.

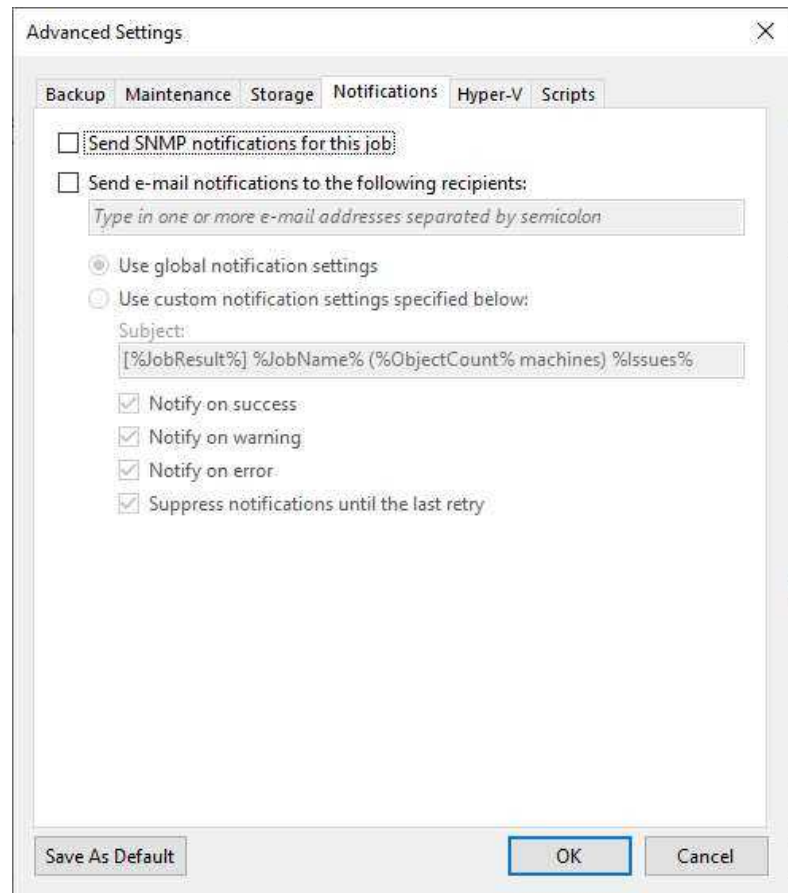
45. Select Storage optimization from the drop-down list.

Storage optimization option	Block size	Description
Local target (large blocks)	4096 KB	Recommended for files that are larger than 16 TB. This option will provide the lowest deduplication ratio and the largest size of incremental files.
Local target	1024 KB	Recommended for backup and replication to SAN, DAS or local storage. This option provides the fastest job performance but reduces the deduplication ratio, because with larger data blocks it is less likely to find identical blocks.
LAN target	512 KB	Recommended for backup and replication to NAS, and on-site backup and replication. This option provides a better deduplication ratio and reduces the size of a file because of reduced data block sizes.
WAN target	256 KB	Recommended if you are planning to use WAN for off-site backup and replication. This option provides the maximum deduplication ratio and the smallest size of files that allows you to reduce the amount of traffic over WAN.

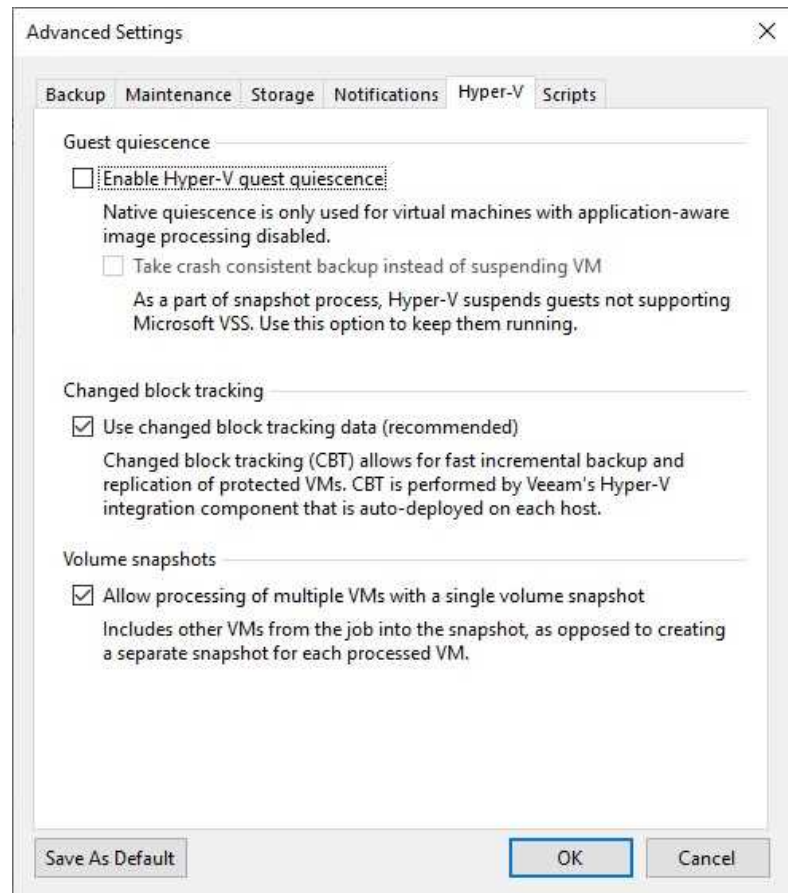
46. Select the Enable backup file encryption checkbox to encrypt the content of backup files.
47. Select a password from the drop-down list. If you still need to do, click Add or use the Manage passwords link to create a new password.



48. On the Advanced Settings, select Notifications.
49. Keep the default settings.



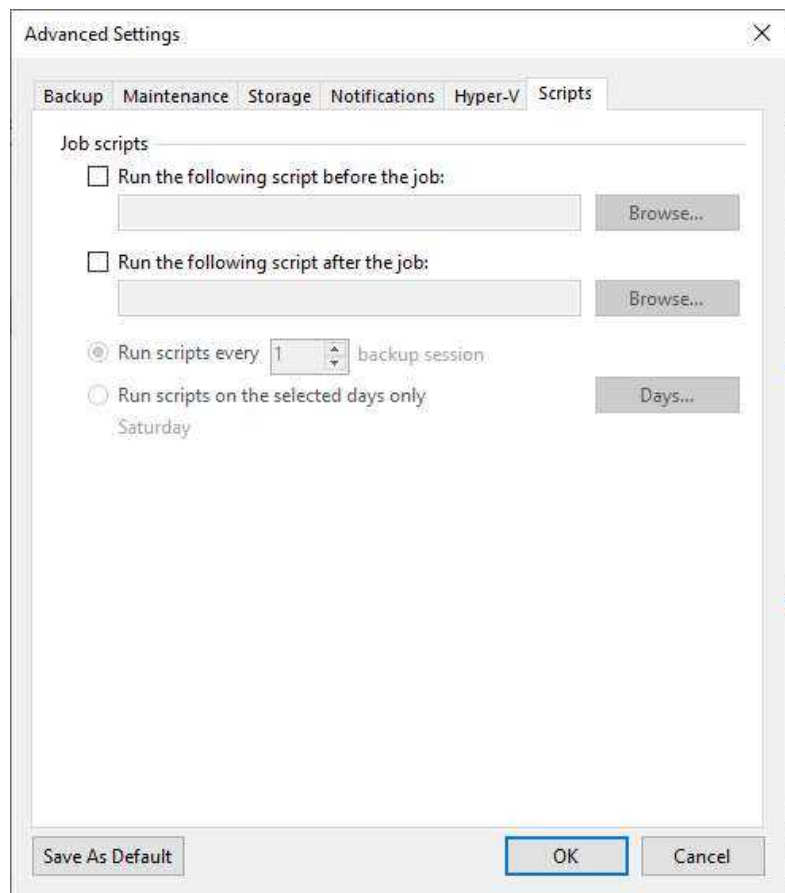
50. On the Advanced Settings, select Hyper-V.
51. Select the Enable Hyper-V guest quiescence check box if application-aware processing cannot be used for some reason.
52. Select the Take crash consistent backup instead of suspending VM check box if you do not want to suspend VMs in the job.
53. Select the Use changed block tracking data (recommended) check box.
54. Select the Allow processing of multiple VMs with a single volume snapshot check box.



55. On the Advanced Settings page, click Scripts.

56. Select the Run the following script before the job and Run the following script after the job check boxes. Then, click Browse to select executable files from a backup server's local folder if you want to run custom scripts before and after the backup job.

57. Click OK.



58. On the Storage page, click Next.

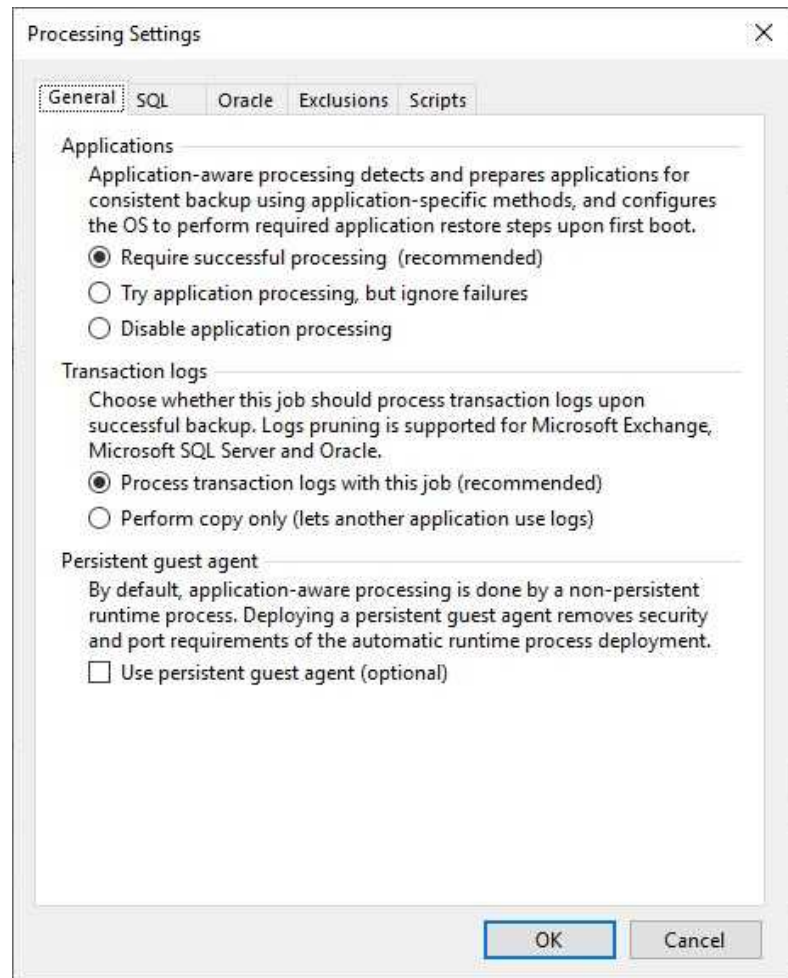
The screenshot shows the 'New Backup Job' wizard with the 'Storage' tab selected. The left sidebar contains links for Name, Virtual Machines, Storage, Guest Processing, Schedule, and Summary. The main area is titled 'Storage' and includes instructions: 'Specify processing proxy server to be used for source data retrieval, backup repository to store the backup files produced by this job and customize advanced job settings if required.' The configuration options include: 'Backup proxy' set to 'Off-host backup (automatic proxy selection)' with a 'Choose...' button; 'Backup repository' set to 'Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 1: ...)' with '125 GB free of 126 GB' and a 'Map backup' link; 'Retention policy' set to '7 restore points'; and two unchecked checkboxes: 'Keep certain full backups longer for archival purposes' (with a 'Configure...' button) and 'Configure secondary destinations for this job' (with a description: 'Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.'). At the bottom, there is an 'Advanced' button and a note: 'Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings.' Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

59. When you add VMs running VSS-aware applications to the backup job, you can enable application-aware processing to create a transactionally consistent backup. The transactionally consistent backup ensures that applications on VMs can be recovered without data loss.

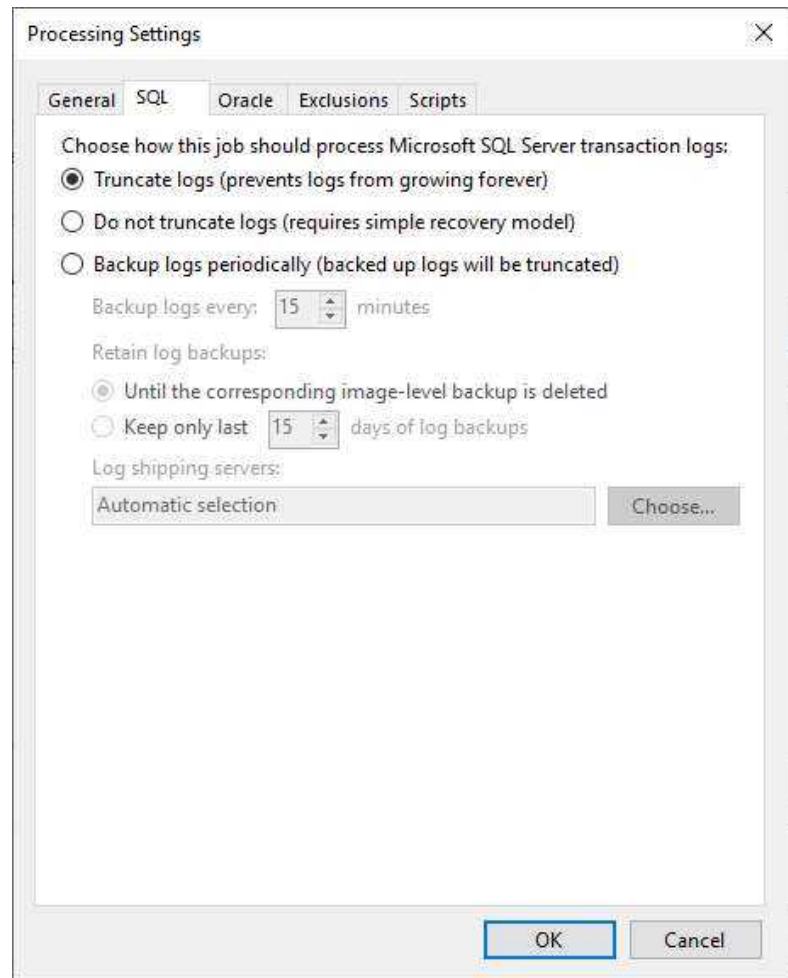
60. Select the Enable application-aware processing check box on the Guest Processing page and click Applications.

The screenshot shows the 'New Backup Job' wizard with the 'Guest Processing' tab selected. The left sidebar is the same as in the previous screenshot. The main area is titled 'Guest Processing' and includes instructions: 'Choose guest OS processing options available for running VMs.' The configuration options include: 'Enable application-aware processing' checked (with a description: 'Detects and prepares applications for consistent backup, performs transaction logs processing, and configures the OS to perform required application restore steps upon first boot.' and a link to 'Applications...'); 'Enable guest file system indexing' unchecked (with a description: 'Creates catalog of guest files to enable browsing, searching and 1-click restores of individual files. Indexing is optional, and is not required to perform instant file level recoveries.' and a link to 'Indexing...'); 'Guest interaction proxy' set to 'Automatic selection' with a 'Choose...' button; 'Guest OS credentials' with a dropdown menu, an 'Add...' button, and a link to 'Manage accounts'; a 'Customize guest OS credentials for individual machines and operating systems' section with a 'Credentials...' button; and a 'Verify network connectivity and credentials for each machine included in the job' section with a 'Test Now' button. Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

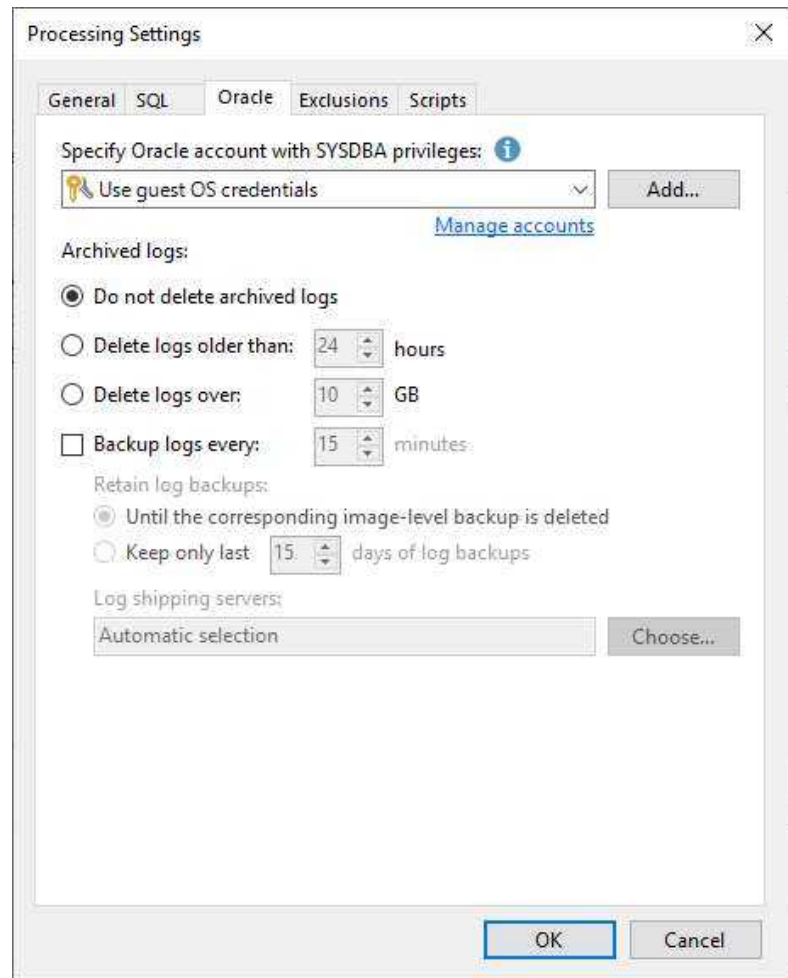
62. On the Processing Settings, click General.
63. Suppose you need Veeam Backup & Replication to stop the backup process if any error occurs during application-aware processing. Select Require successful processing (recommend).
64. Suppose you must continue the backup process even if there is an error during application-aware processing. Select Try application processing but ignore failures.
65. Select Disable application processing to disable application-aware processing for the VM.
66. Select Process transaction logs with this job for process transaction logs.
67. Select Perform copy only to let another application use
68. Select the Use persistent guest agent (optional) checkbox to enable persistent agent.



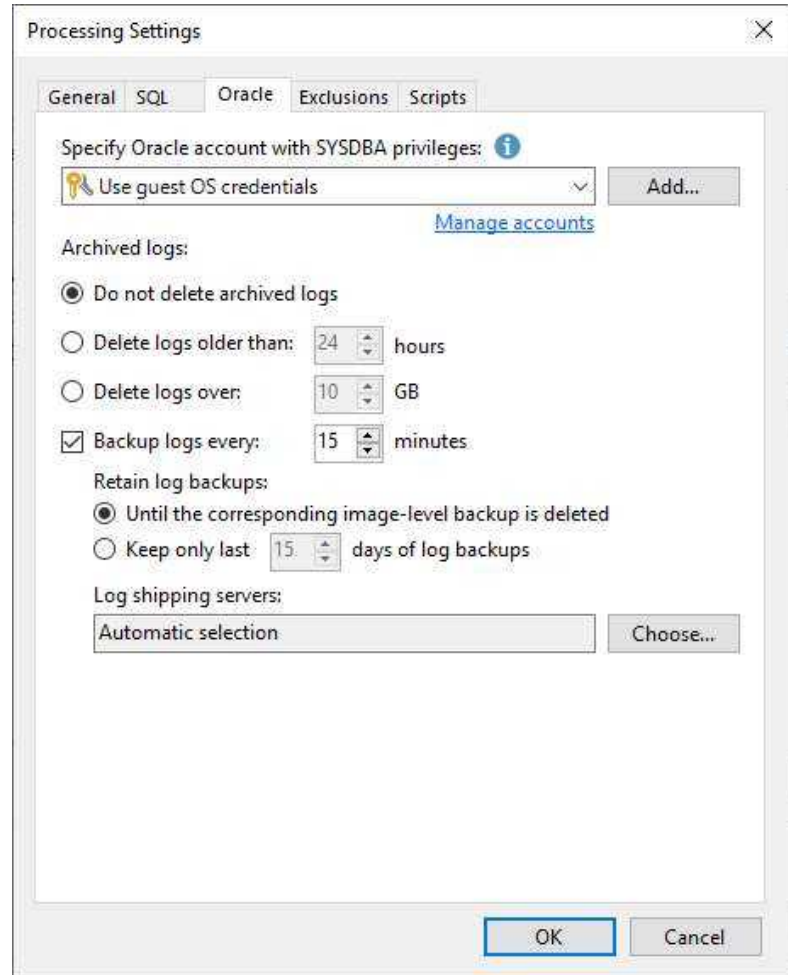
69. On the Processing Settings page, click SQL if the VM is a Microsoft SQL Server VM.
70. Select Truncate logs (Prevents logs from growing forever) to truncate transaction logs after a successful backup.



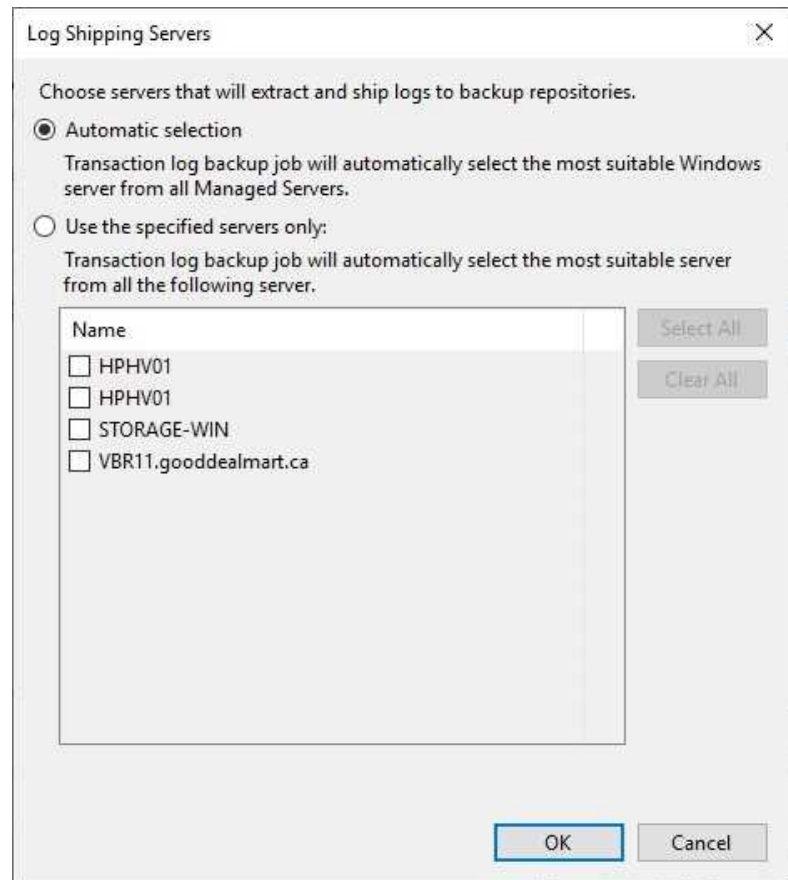
71. On the Processing Settings page, click Oracle if the VM is an Oracle Server.
72. Select a user account from the drop-down list.
73. Select Do not delete archived logs if you need Veeam Backup & Replication to preserve archived logs on the VM guest OS.



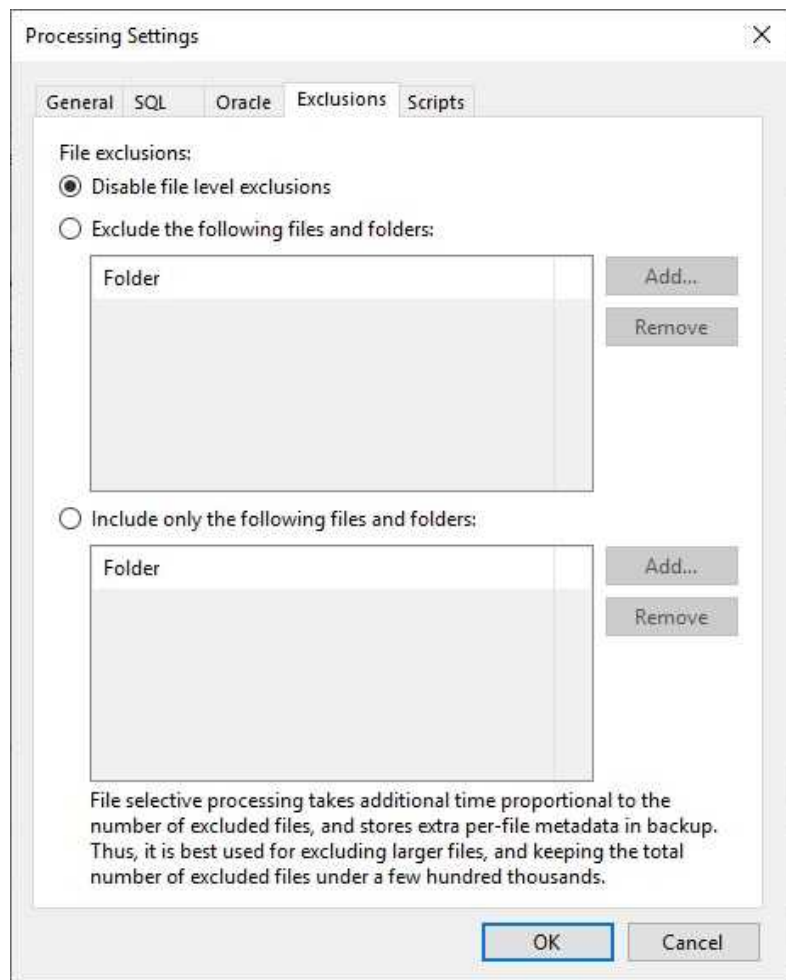
74. Select the retention policy settings for archived logs in the Retain log backups section.
75. Click Choose In the Log shipping servers.



76. On the Log Shipping Servers page, Select Automatic selection if you need Veeam Backup & Replication to choose an optimal log shipping server automatically.
77. Select Use the specified servers only and select checkboxes next to those you want to use as log shipping servers.
78. Click OK.

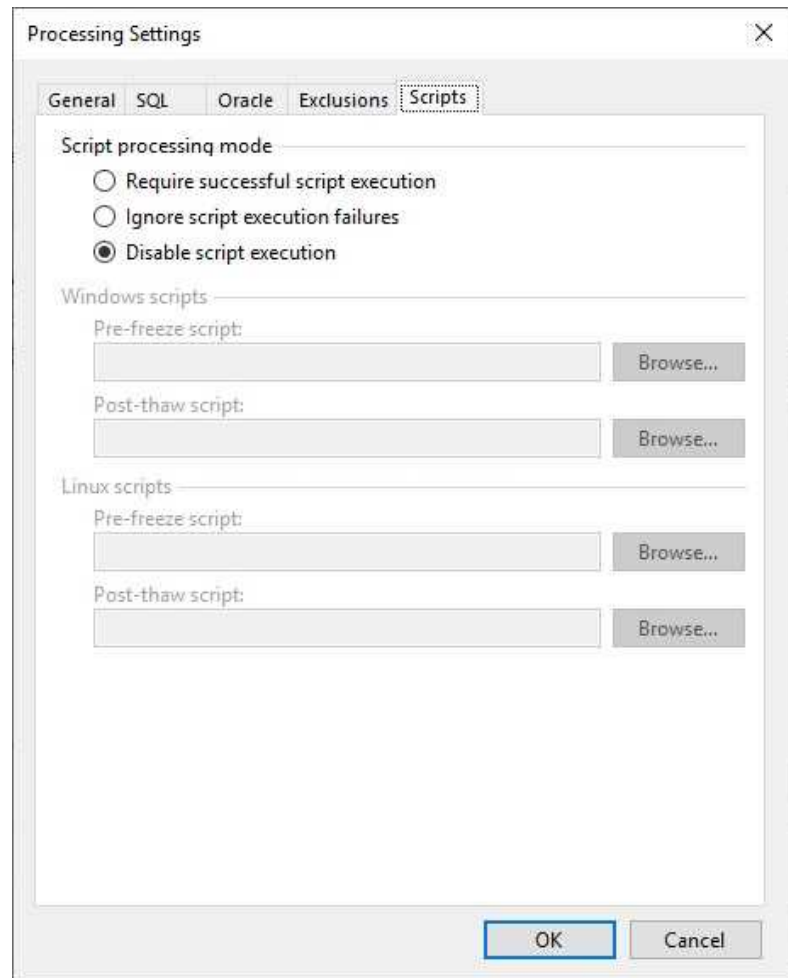


79. On the Processing Settings page, click Exclusions and keep the default settings.

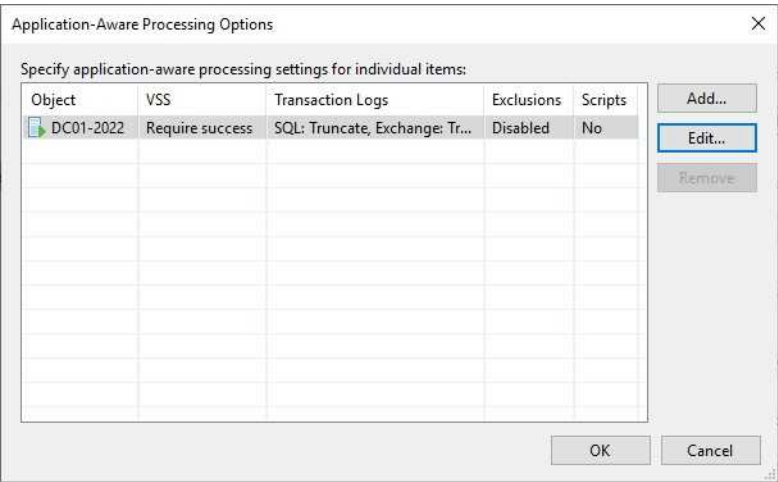


80. On the Processing Settings page, click Scripts and keep the default settings.

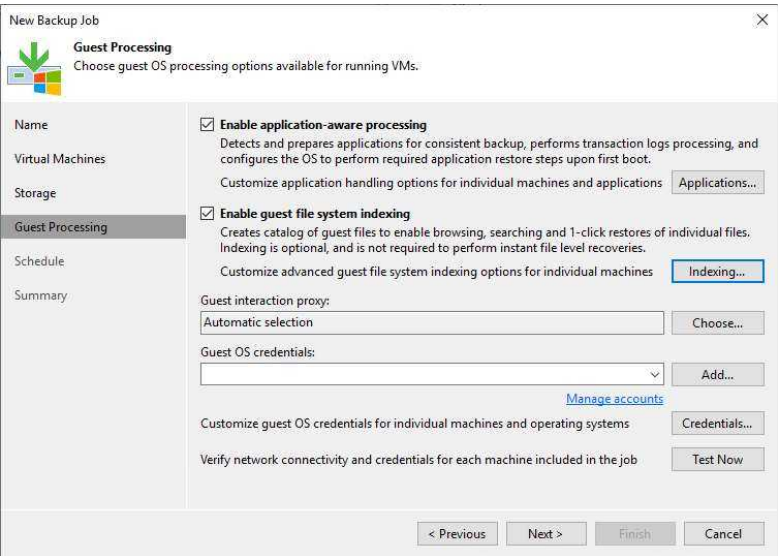
81. Click OK.



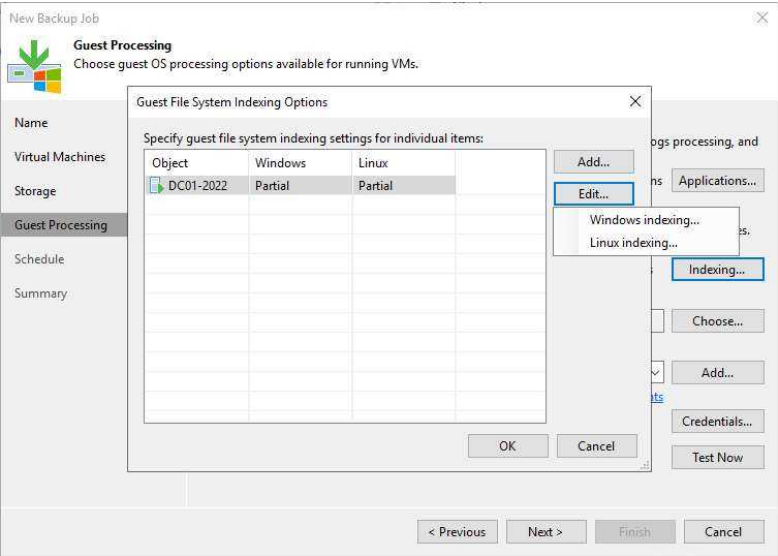
82. On the Application-Aware Processing Options page, click OK.



83. Select the Enable guest file system indexing checkbox and click Indexing.

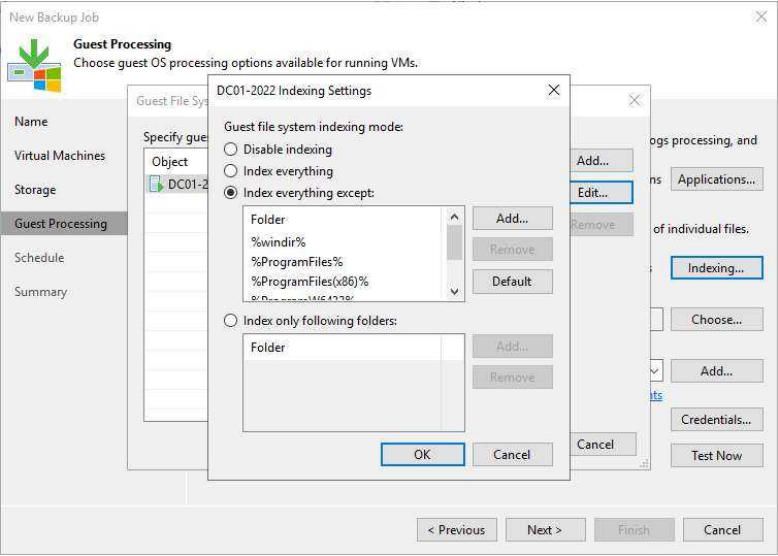


84. On the Guest File System Indexing Options page, select the VM, click Edit and select Windows indexing.

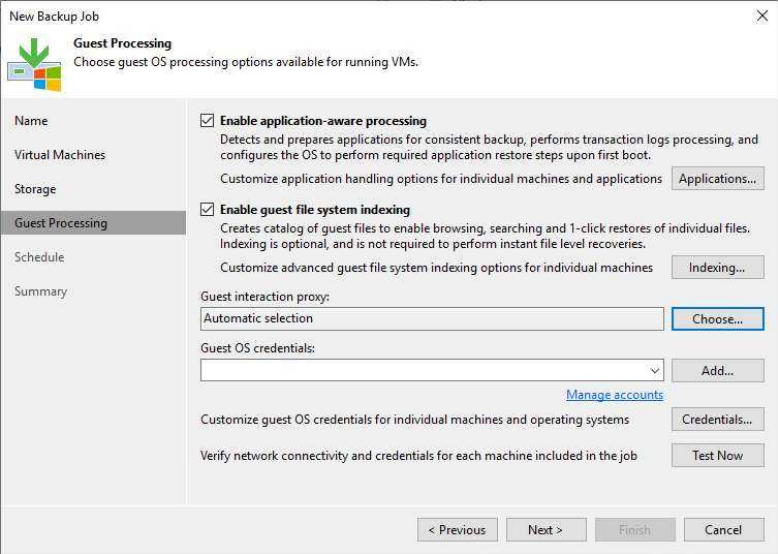


85. On the Guest file system indexing mode page, keep the default settings.

86. Click OK.



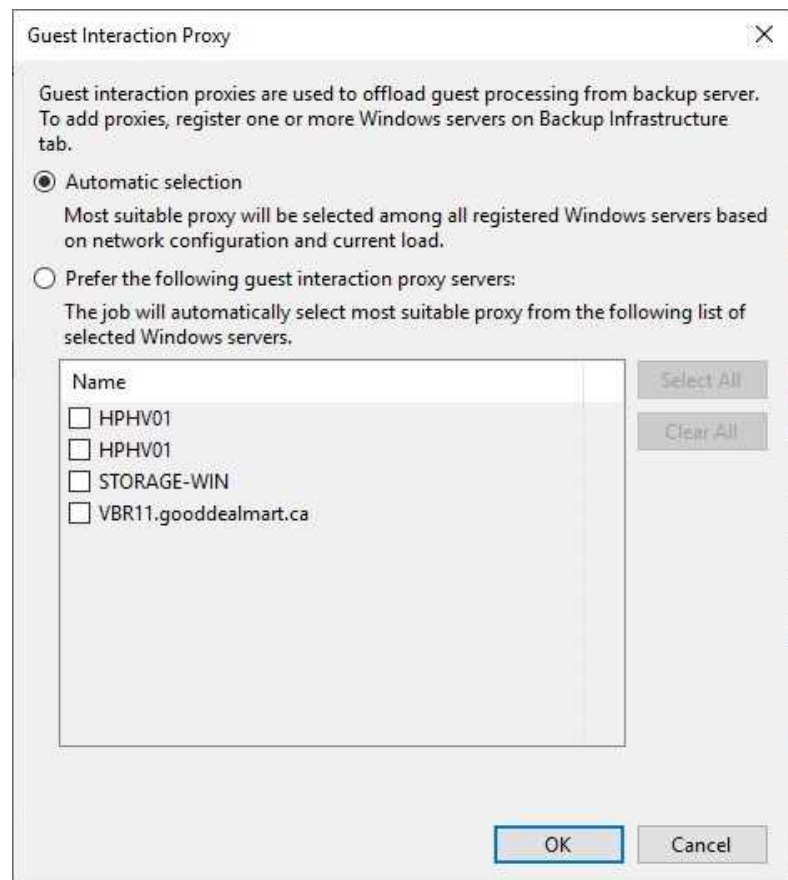
87. Click Choose on the Guest interaction proxy field on the Guest Processing page.



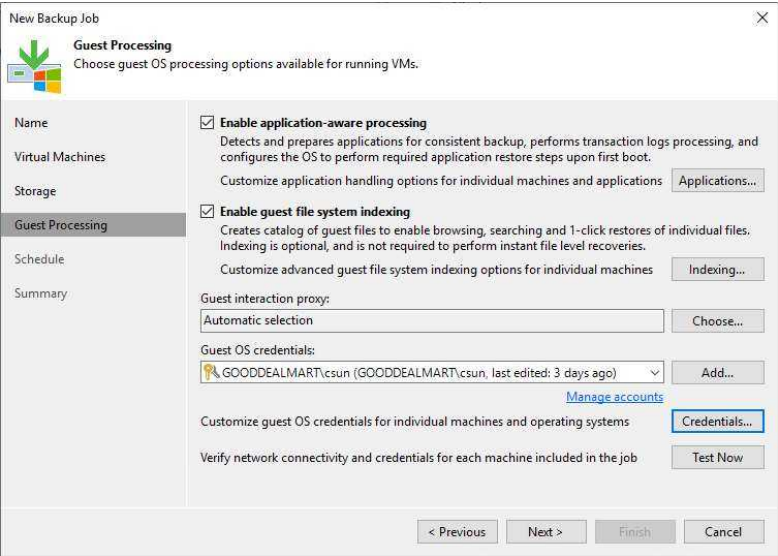
88. On the Guest Interaction Proxy page, select Automatic selection to let Veeam Backup & Replication automatically select the guest interaction proxy.

89. Select Prefer the following guest interaction proxy servers to explicitly define which servers will perform the guest interaction proxy role.

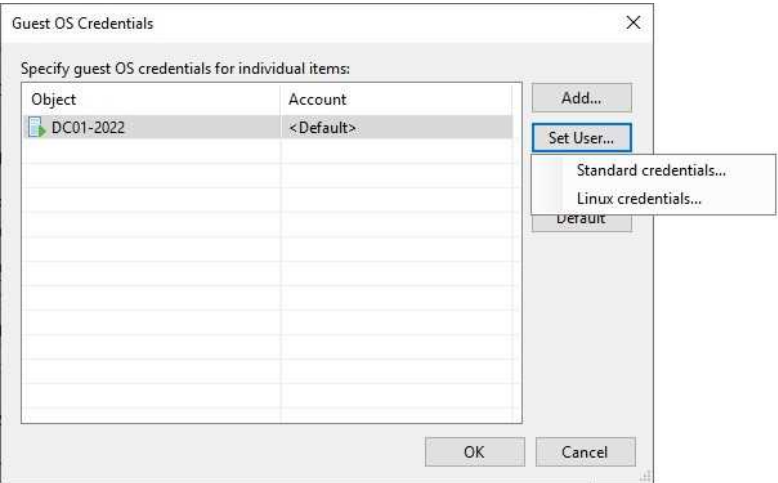
90. Click OK.



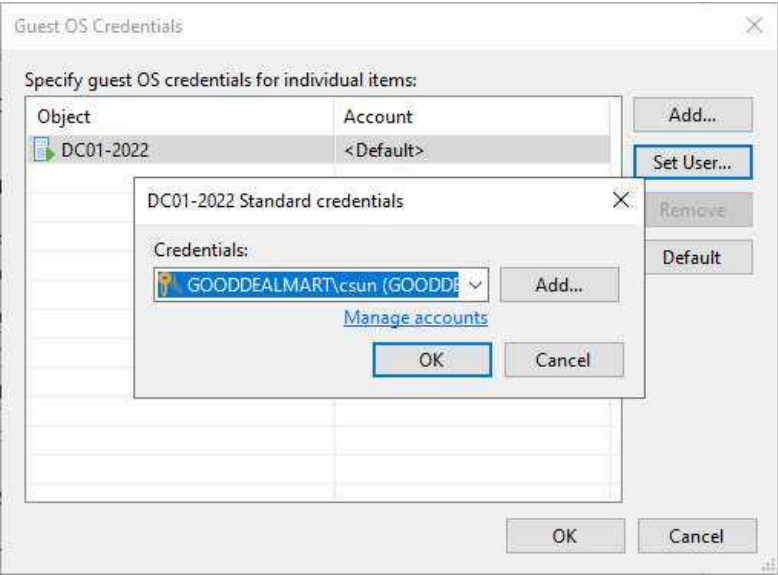
- 91. Choose a user account on the Guest Processing page with sufficient permissions from the Guest OS credentials drop-down list.
- 92. Click Credentials to Customize guest OS credentials for individual machines and operating systems.



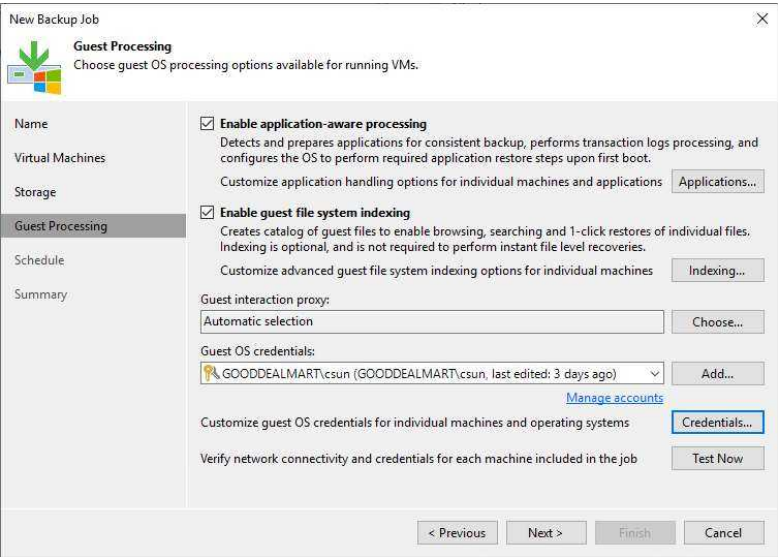
- 93. On the Guest OS Credentials page, select the VM and click Set User.
- 94. Select Standard credentials.



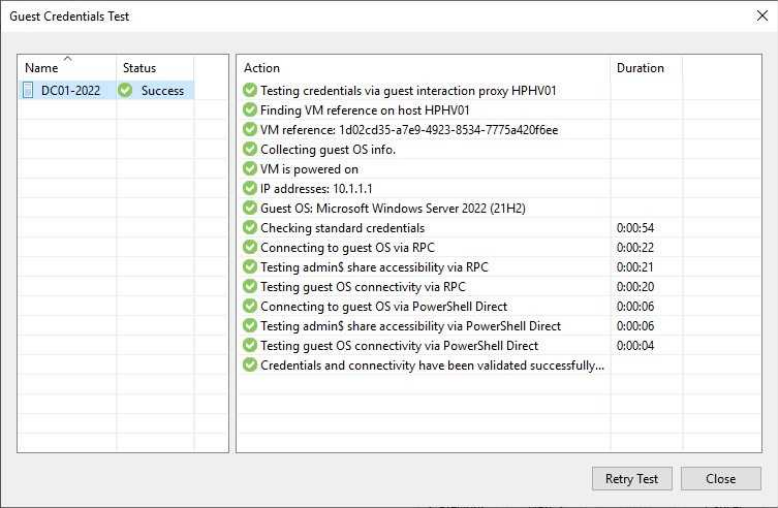
- 95. Choose a user from the Credentials drop-down list, and click OK.
- 96. Repeat the steps for each VM.



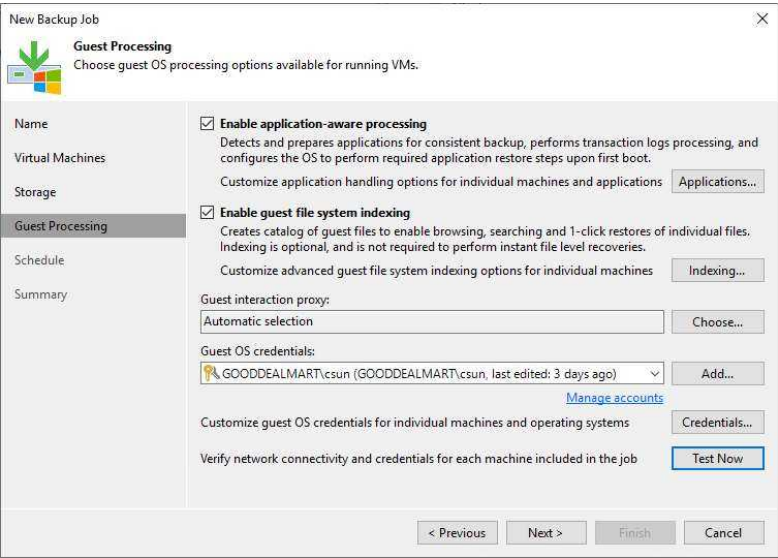
- 97. On the Guest Processing page, click Test Now to verify network connectivity and credentials for each machine included in the job.



98. On the Guest Credentials Test page, ensure verification success for each machine.
99. Click Close.



100. On the Guest Processing page, click Next.



101. Select Run the job automatically on the Schedule page and select your specified schedule.

102. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.

103. Define the time interval the backup job must complete in the Backup window section. The backup window ensures that the job does not overlap with production hours and that there is no unnecessary overhead on the production environment.

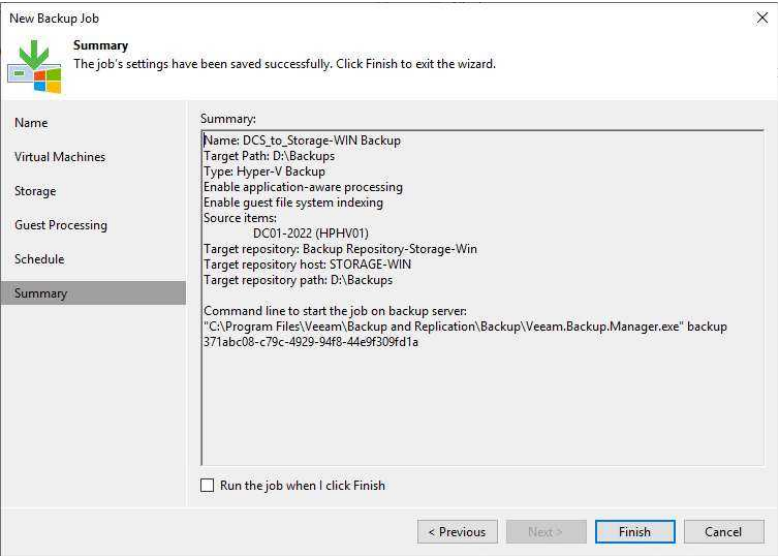
104. Click Apply.

The screenshot shows the 'New Backup Job' dialog box with the 'Schedule' tab selected. The dialog has a sidebar on the left with tabs: Name, Virtual Machines, Storage, Guest Processing, Schedule (selected), and Summary. The main area is titled 'Schedule' and contains the following options:

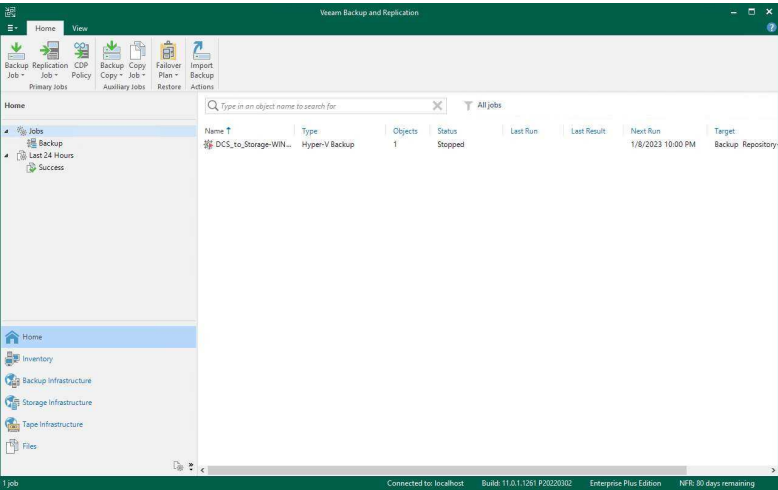
- ☒ Run the job automatically
 - ☒ Daily at this time: 10:00 PM, Everyday (Days...)
 - ☐ Monthly at this time: 10:00 PM, Fourth, Saturday (Months...)
 - ☐ Periodically every: 1, Hours (Schedule...)
 - ☐ After this job: (dropdown)
- Automatic retry
 - ☒ Retry failed items processing: 3 times
 - Wait before each retry attempt for: 10 minutes
- Backup window
 - ☐ Terminate job if it exceeds allowed backup window (Window...)
 - If the job does not complete within allocated backup window, it will be terminated to prevent snapshot commit during production hours.

At the bottom of the dialog are four buttons: '< Previous', 'Apply' (highlighted with a blue border), 'Finish', and 'Cancel'.

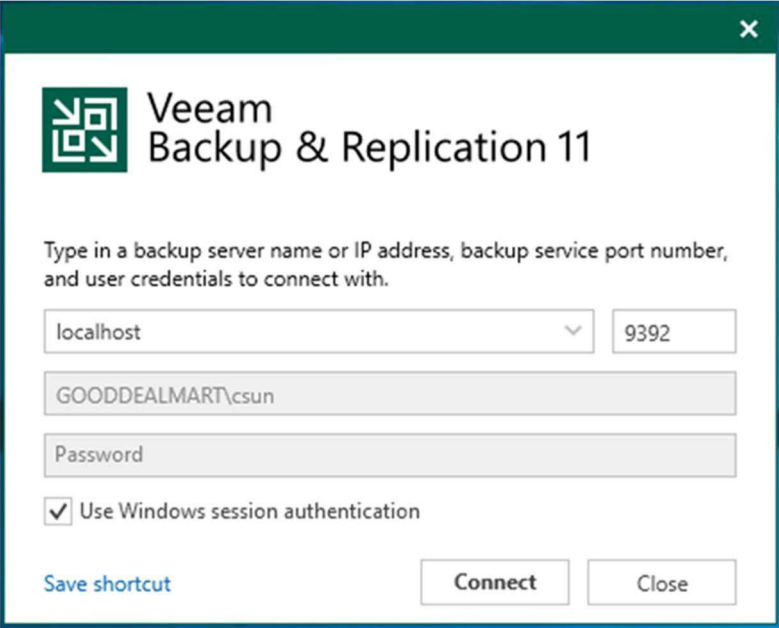
105. On the Summary page, click Finish.



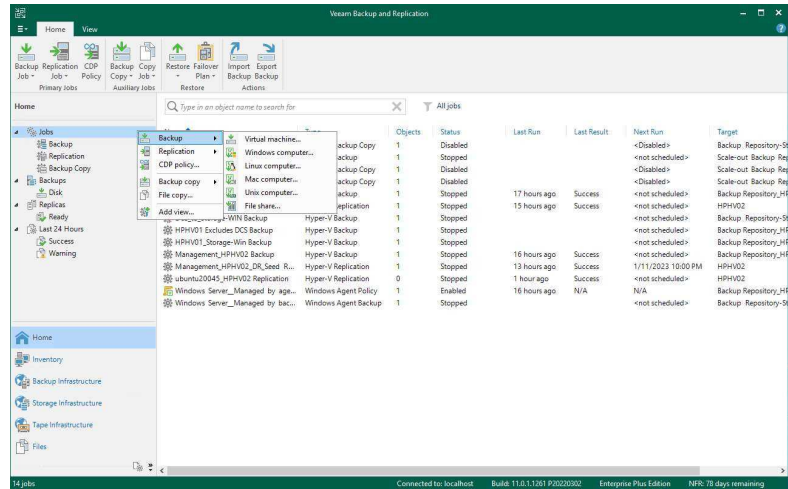
106. Verify that the backup job has been added.



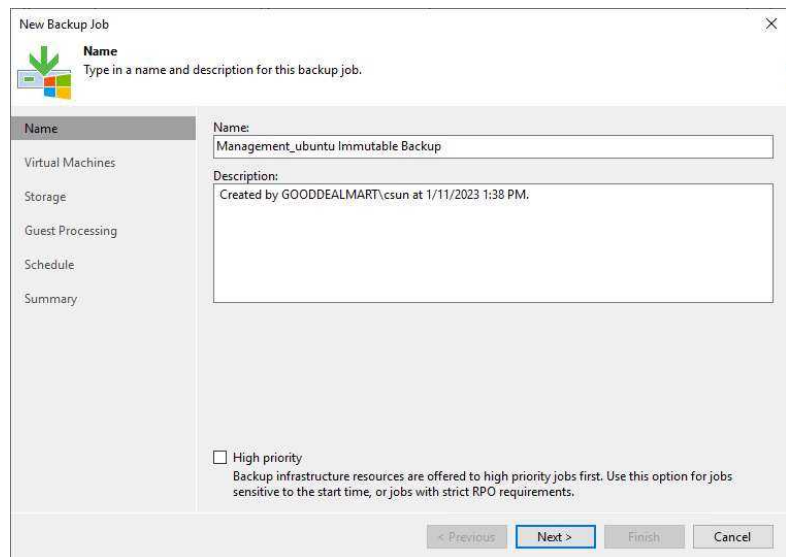
Creating an Immutable Backup job to backup the specified VMs

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 The screenshot shows the 'Veeam Backup & Replication 11' connection dialog box. It has a dark green header with the Veeam logo and title. Below the header, it says 'Type in a backup server name or IP address, backup service port number, and user credentials to connect with.' There are four input fields: a dropdown menu with 'localhost' selected, a text box with '9392', a text box with 'GOODDEALMART\csun', and a password field labeled 'Password'. Below these fields is a checkbox labeled 'Use Windows session authentication' which is checked. At the bottom, there is a 'Save shortcut' link and two buttons: 'Connect' and 'Close'.

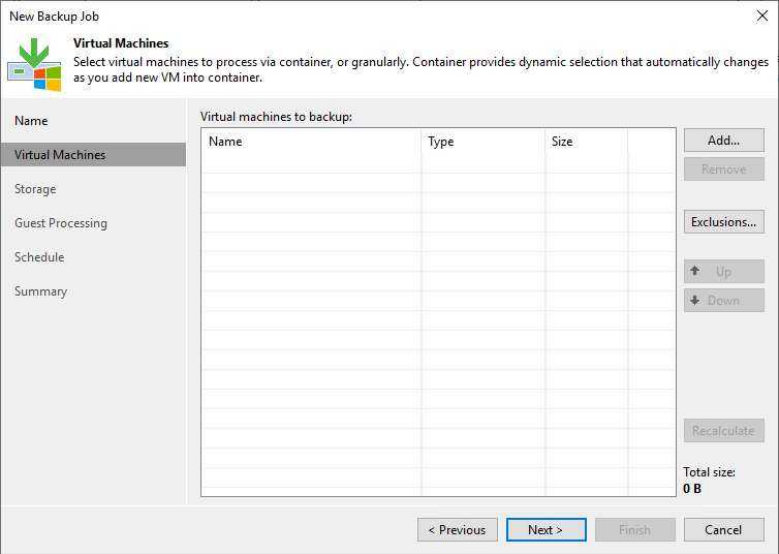
- On the Home page, select Jobs, right-click Jobs, select Backup and click Virtual machine.



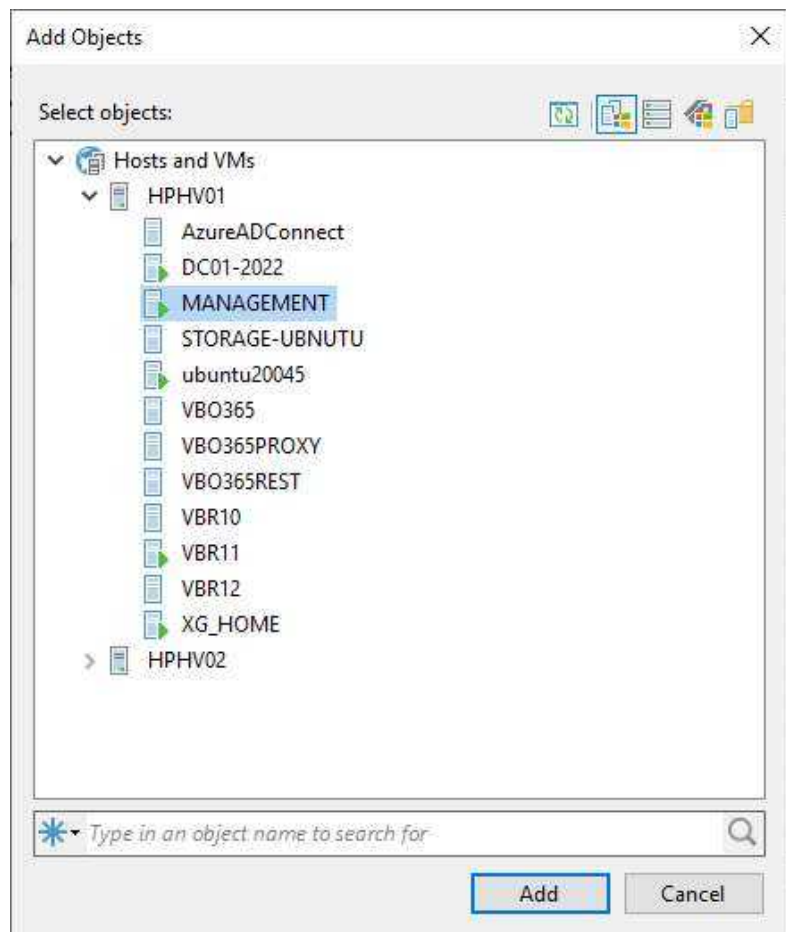
- On the Name page, enter a name in the Name field.
- Describe the Description field.
- Select the High priority check box if you want the resource scheduler of Veeam Backup & Replication to prioritize this job higher than similar jobs and allocate resources to it in the first place.
- Click Next.



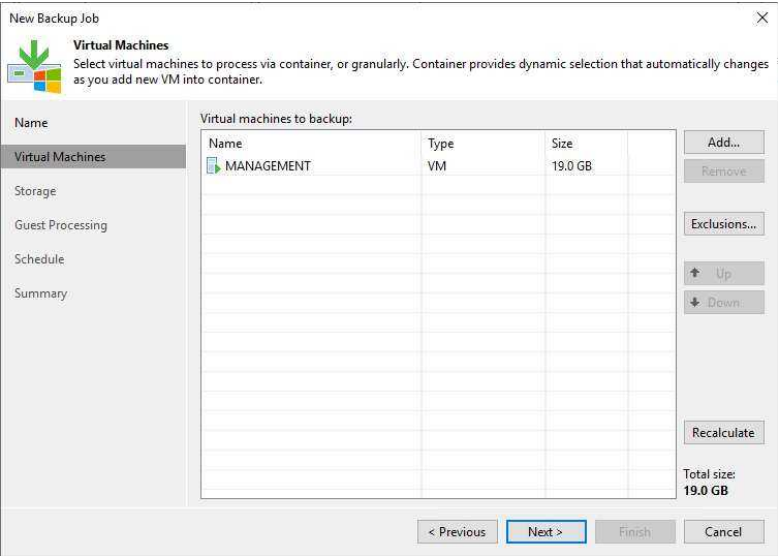
8. On the Virtual Machines page, click Add.



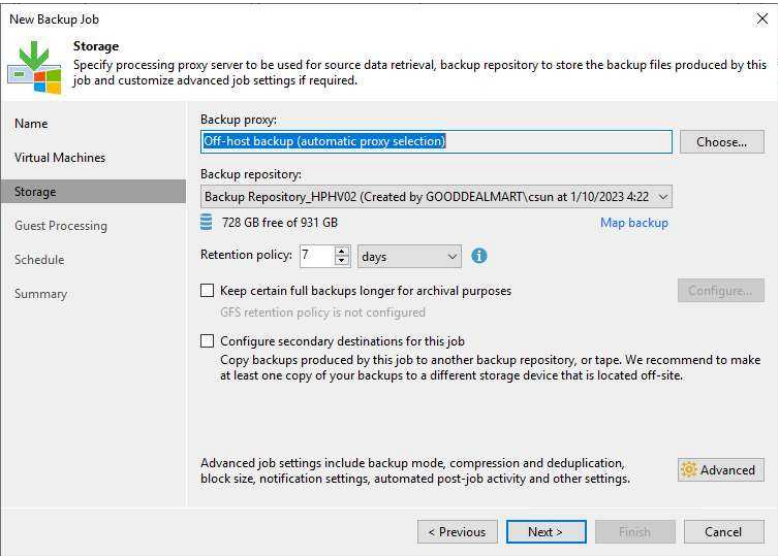
9. Select the VM in the list on the Add Objects page and click Add.
10. If you have multiple VMS that needs to back up in the same backup job, you can repeat the step to add them.



11. On the Virtual Machines page, click Next.



12. On the Storage, click Choose to select a backup proxy if you don't want to use the default Off-host backup (automatic proxy selection) setting.



13. On the Backup Proxy page, if you select On-host backup mode, the source Microsoft HyperV host will serve as both the source host and the backup proxy. In this mode, Veeam Data Mover runs directly on the source host, which speeds up data retrieval but places additional strain on the host.

14. If you select Off-host backup mode, Veeam Data Mover will run on a dedicated off-host backup proxy. All backup processing operations from the source host are routed to the off-host backup proxy in this mode.

15. If the off-host backup mode is selected for the job, but there are no off-host backup proxies available when the job begins, Veeam Backup & Replication will automatically switch to on-host backup mode.

16. You unselect the Failover to on-host backup mode

Backup Proxy

Choose a backup mode for this job. When multiple backup proxy servers are available to process the same VM, selection of most suitable one will be performed by taking into account proxy priority, connectivity and its current load.

☐ On-host backup
Backup proxy runs directly on each Hyper-V host, which enables for direct to target operation, but puts extra load on all Hyper-V hosts.

☒ Off-host backup
Backup proxy server for each VM will be auto-selected from all available off-host proxies. In this mode, backup processing is offloaded from Hyper-V host.

☒ Failover to on-host backup mode if no suitable off-host proxies available

☐ Use the following backup proxy servers only:

Name
☐ HPHV01

Select All

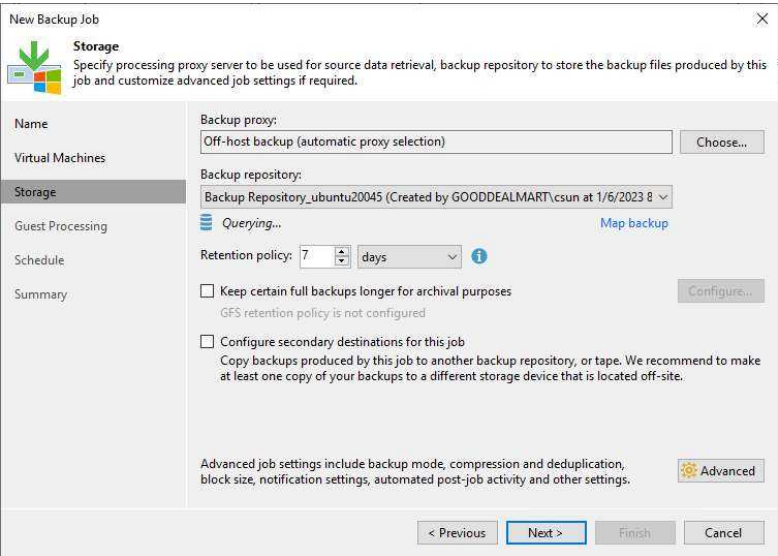
Clear All

OK Cancel

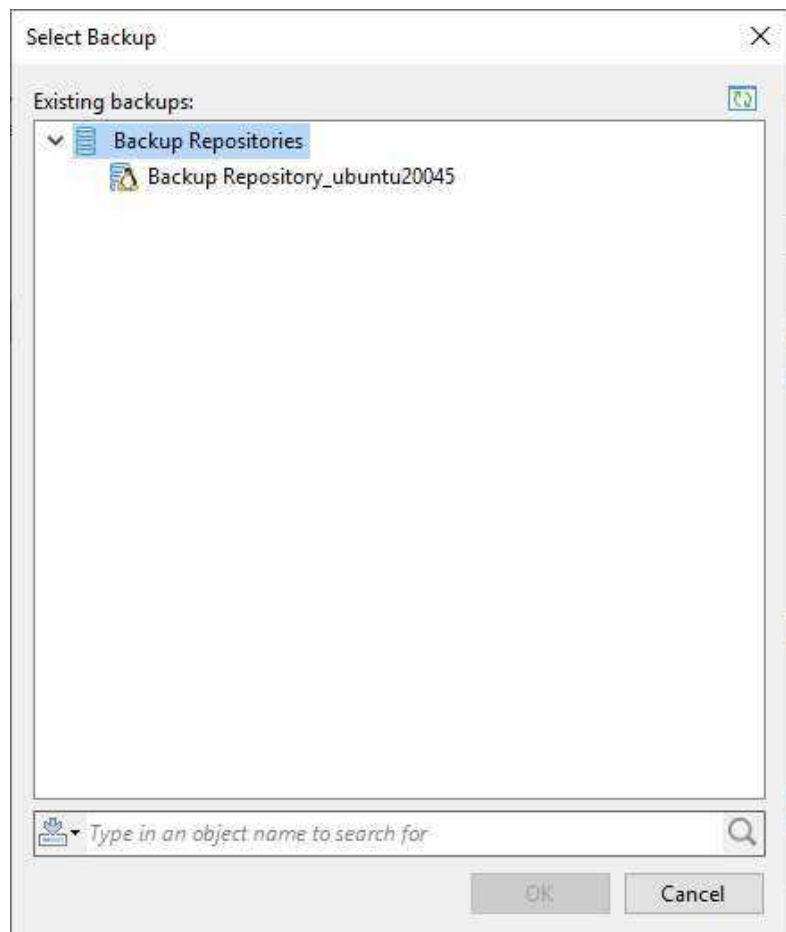
if no suitable off-host proxies available checkbox, but if off-host backup proxies are not available or are not configured properly, the job will fail to start.

17. Click OK.

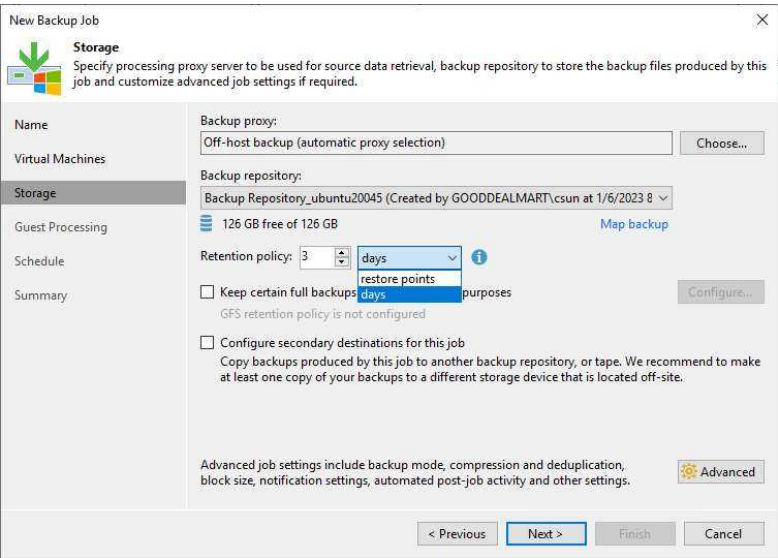
18. Select the immutable backup repository from the Backup repository drop-down list where the created backup files must be saved.



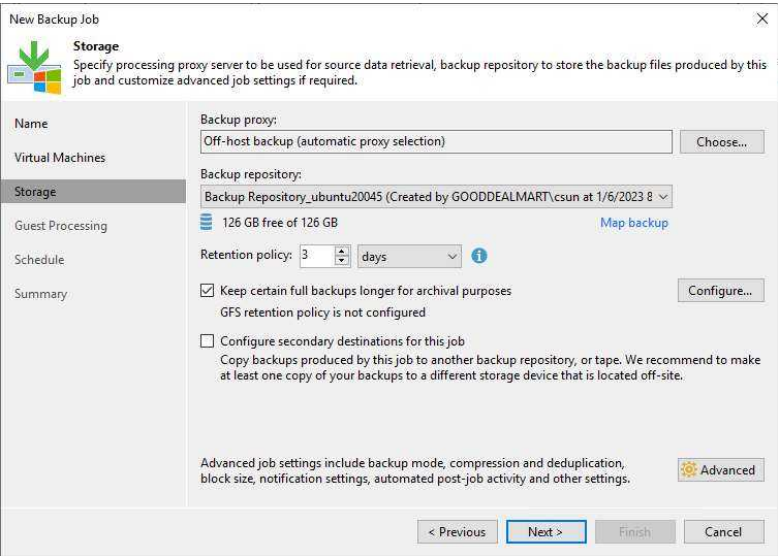
19. Click Map backup is helpful if you want to point the job to existing backups in this new repository. Backup job mapping can also be used if the configuration database becomes corrupt and you need to reconfigure backup jobs.



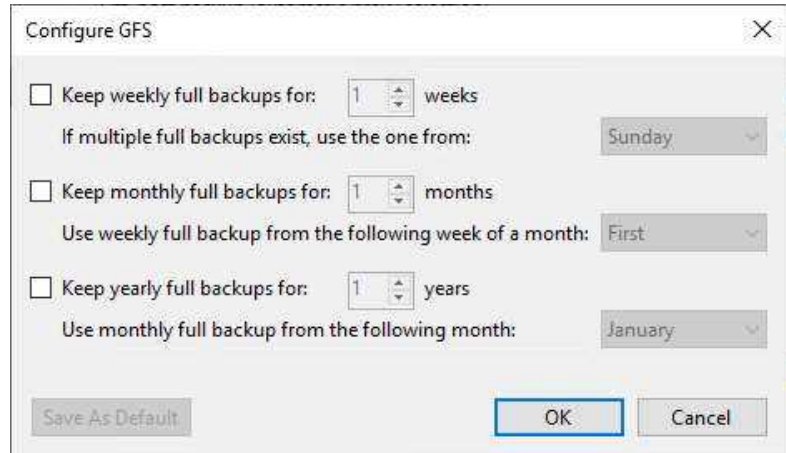
- 20. Set the retention policy settings for restore points in the Retention Policy field.
- 21. Select days or restore points from the drop-down list.



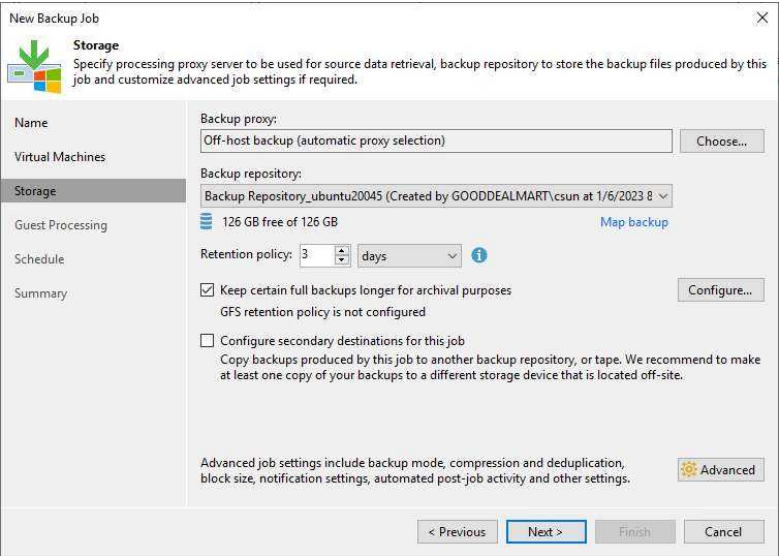
- 22. You can configure the backup job's GFS retention policy settings to ignore the short-term retention policy for some full backups and store them for long-term archiving.
- 23. Select the Keep certain full backups for longer for archival purposes. If you need it, click Configure.



24. Select the Keep weekly full backups for check box, and specify the number of weeks you want to prevent restore points from being modified and deleted.
25. Select the Keep monthly full backups for check box, and specify the months you want to prevent restore points from being modified and deleted.
26. Select the Keep yearly full backups for check box, and specify the years you want to prevent restore points from being modified and deleted.
27. Click OK.



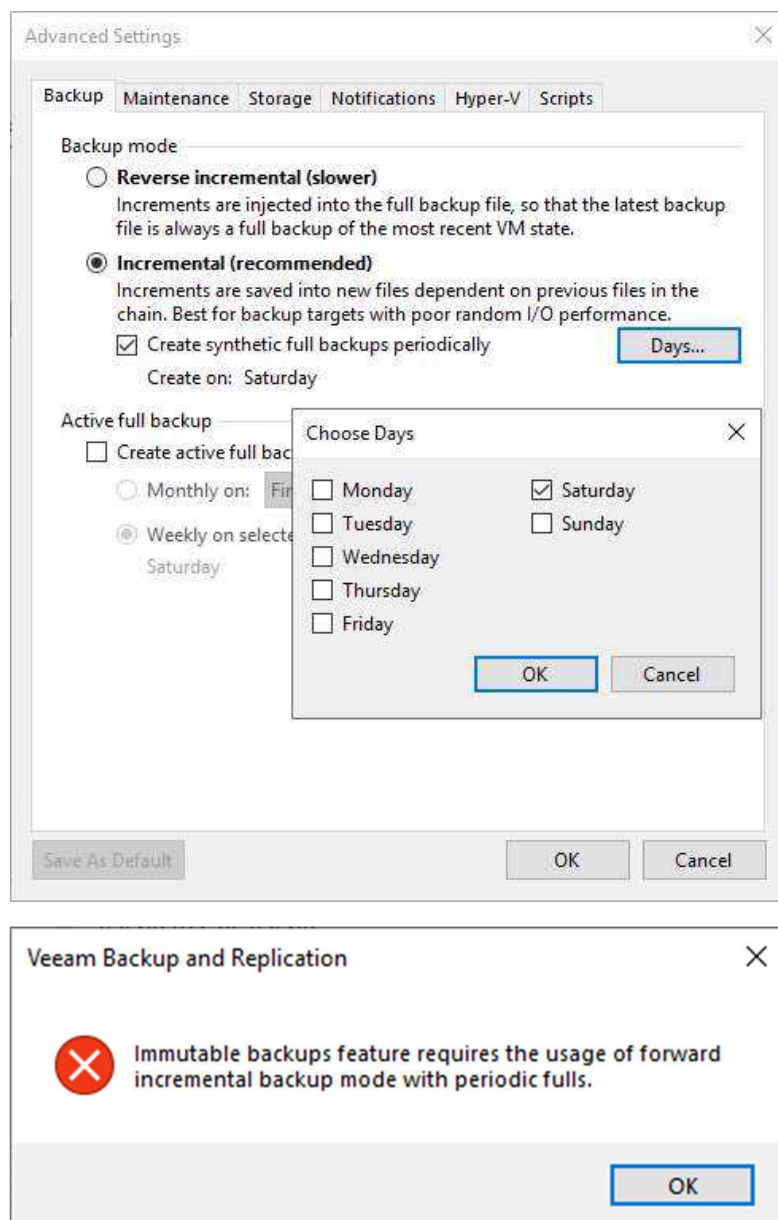
28. On the Storage page,
click Advanced.



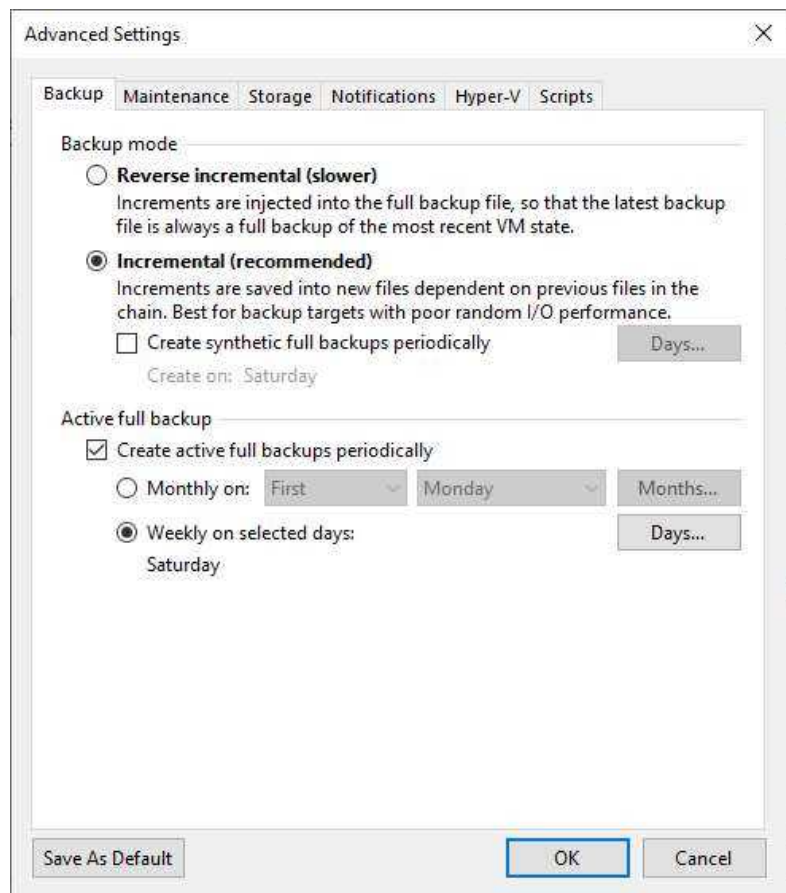
29. Select Incremental (recommended) and enable synthetic full and active full backups. Click Days to schedule full synthetic backups on the necessary weekdays, and click OK.

Note:

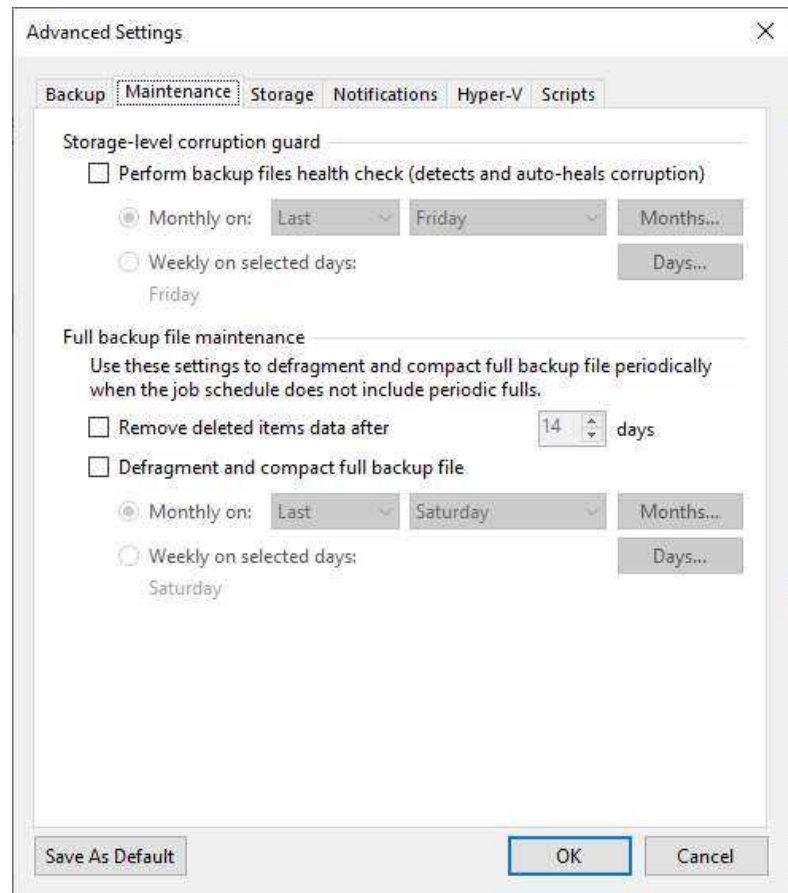
The immutable backups feature requires the usage of forward incremental backup mode with period fulls.



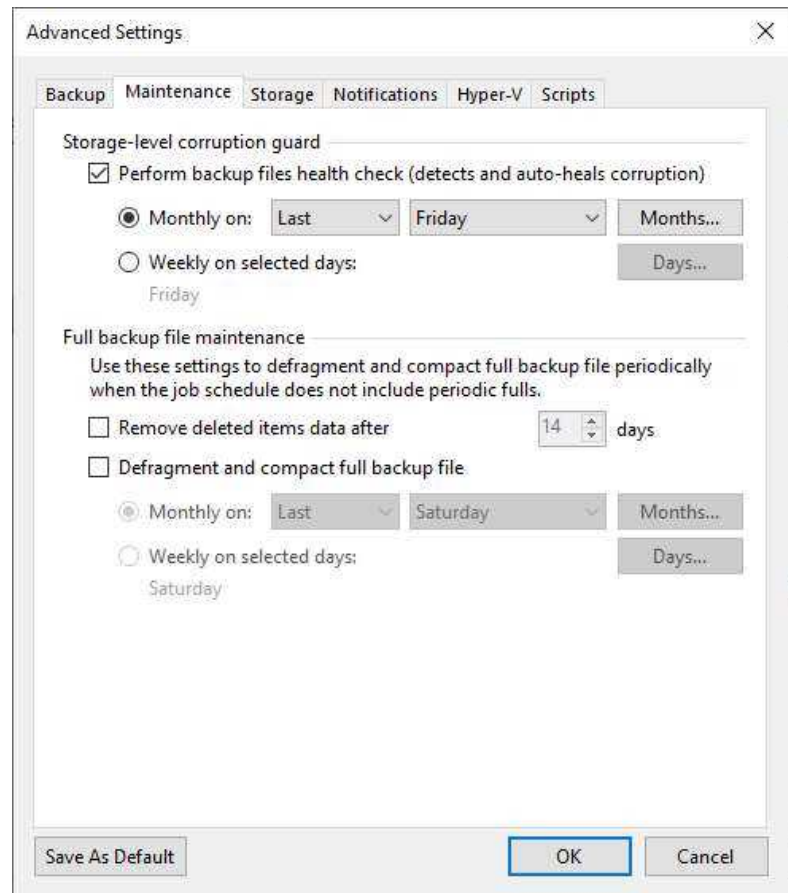
30. Select the Create active full backups periodically checkbox to create full backups regularly if needed.
31. Select the Monthly or Weekly on selected days options to define scheduling settings.



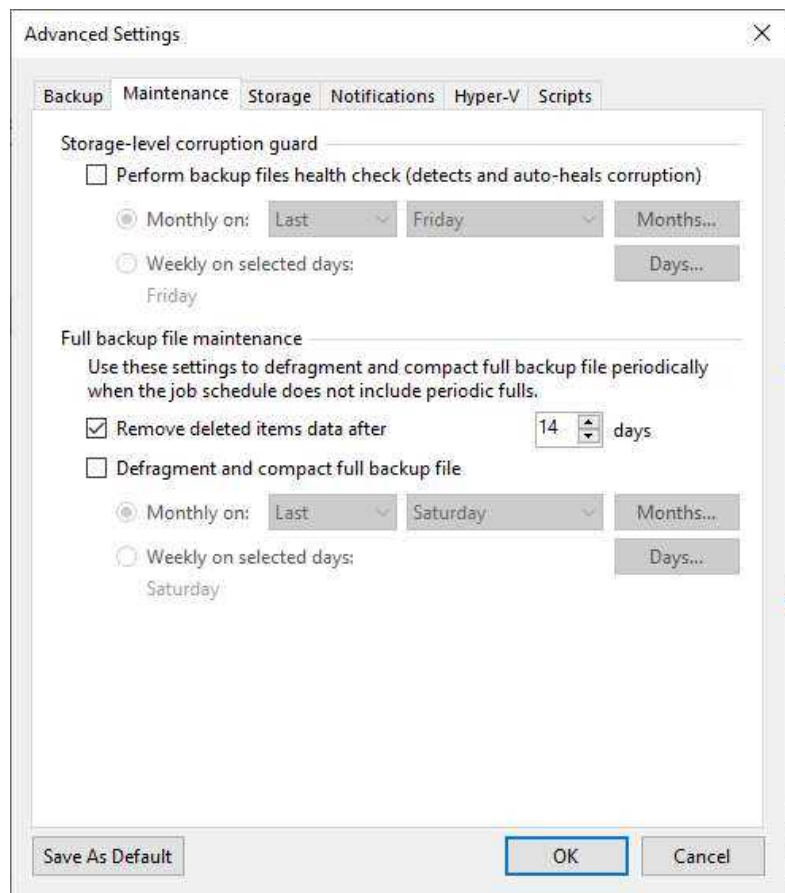
32. On the Advanced Settings, select Maintenance.



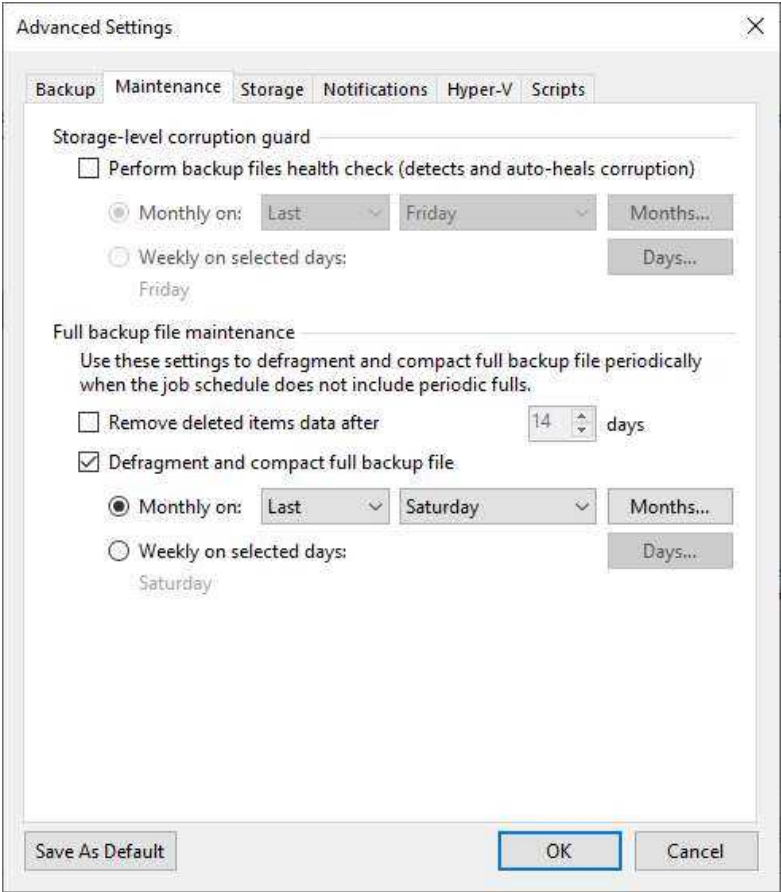
33. To regularly perform a health check in the backup chain, select the Perform backup files health check (detects and auto-heals corruption) checkbox in the Storage-level corruption guard and specify a schedule for the health check.



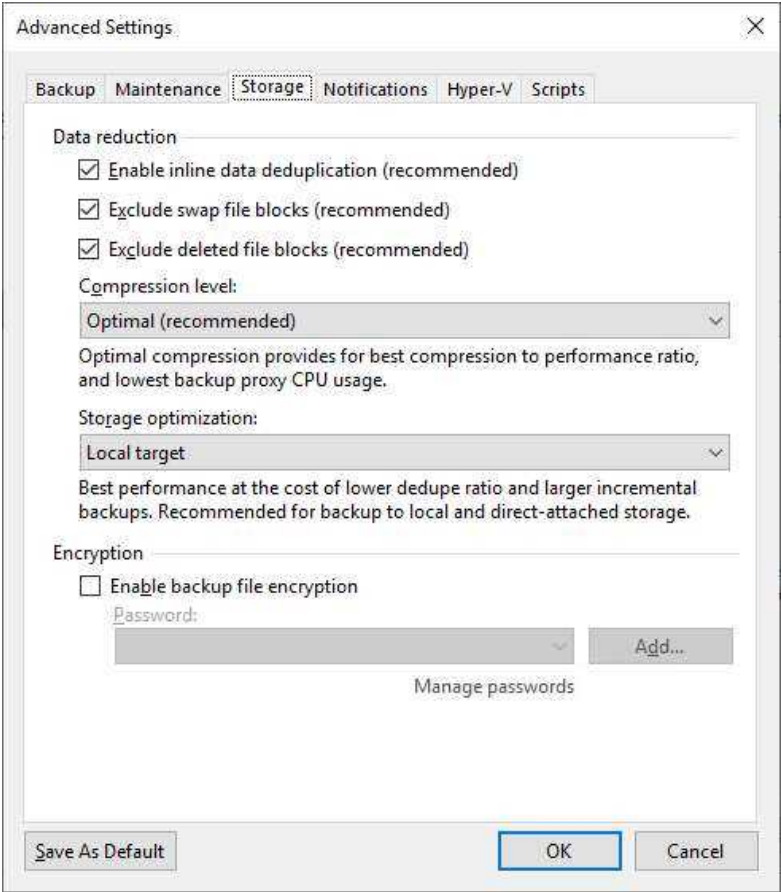
34. Select the Remove deleted items data after the check box and enter the days you want backup data for deleted VMs to be kept.



35. Select the Defragment and compact full backup file checkbox and specify the schedule for the compact operation to compact a full backup periodically.



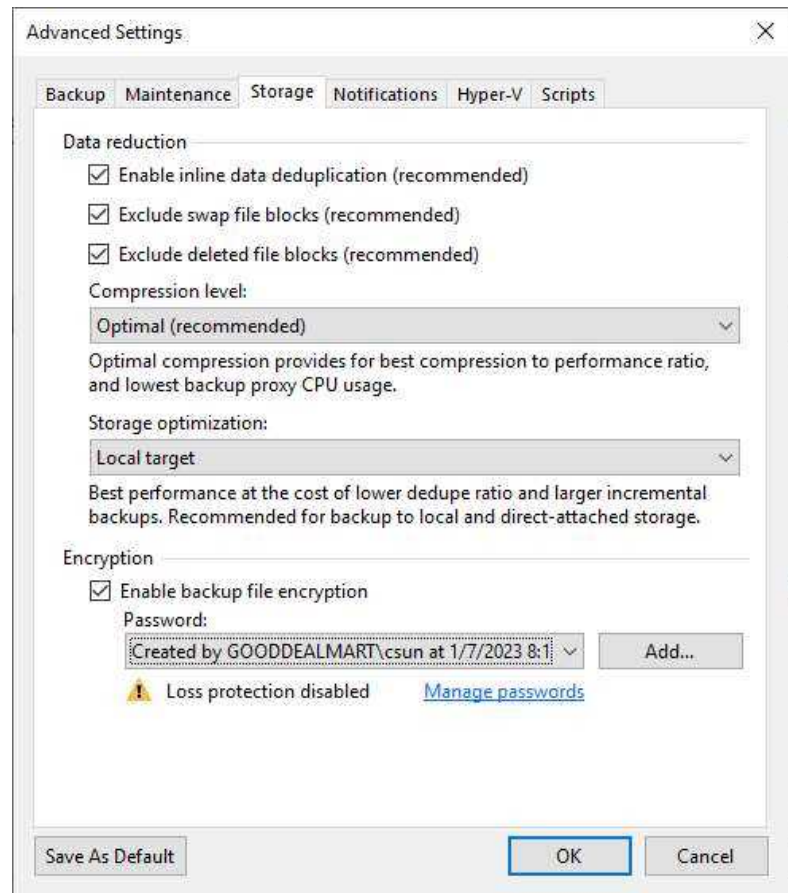
- 36. On Advanced Settings, click Storage.
- 37. Select the Enable inline data deduplication checkbox.
- 38. Select the Exclude swap file blocks checkbox.
- 39. Select the Exclude deleted file blocks checkbox.
- 40. Select the compression level for the backup from the drop-down list.



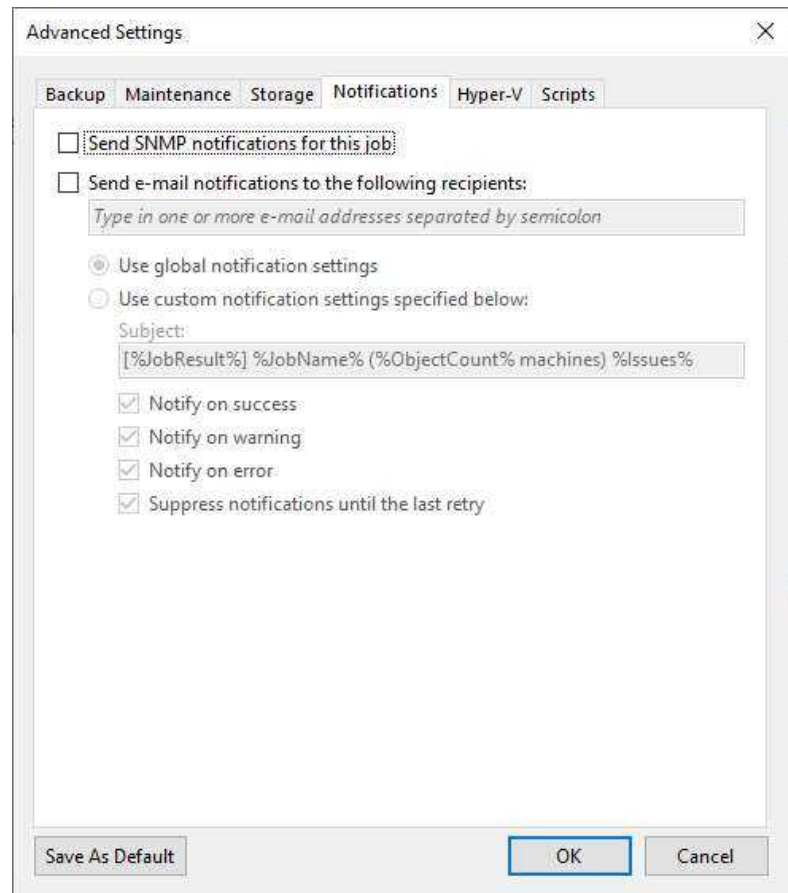
- 41. Select Storage optimization from the drop-down list.

Storage optimization option	Block size	Description
Local target (large blocks)	4096 KB	Recommended for files that are larger than 16 TB. This option will provide the lowest deduplication ratio and the largest size of incremental files.
Local target	1024 KB	Recommended for backup and replication to SAN, DAS or local storage. This option provides the fastest job performance but reduces the deduplication ratio, because with larger data blocks it is less likely to find identical blocks.
LAN target	512 KB	Recommended for backup and replication to NAS, and on-site backup and replication. This option provides a better deduplication ratio and reduces the size of a file because of reduced data block sizes.
WAN target	256 KB	Recommended if you are planning to use WAN for off-site backup and replication. This option provides the maximum deduplication ratio and the smallest size of files that allows you to reduce the amount of traffic over WAN.

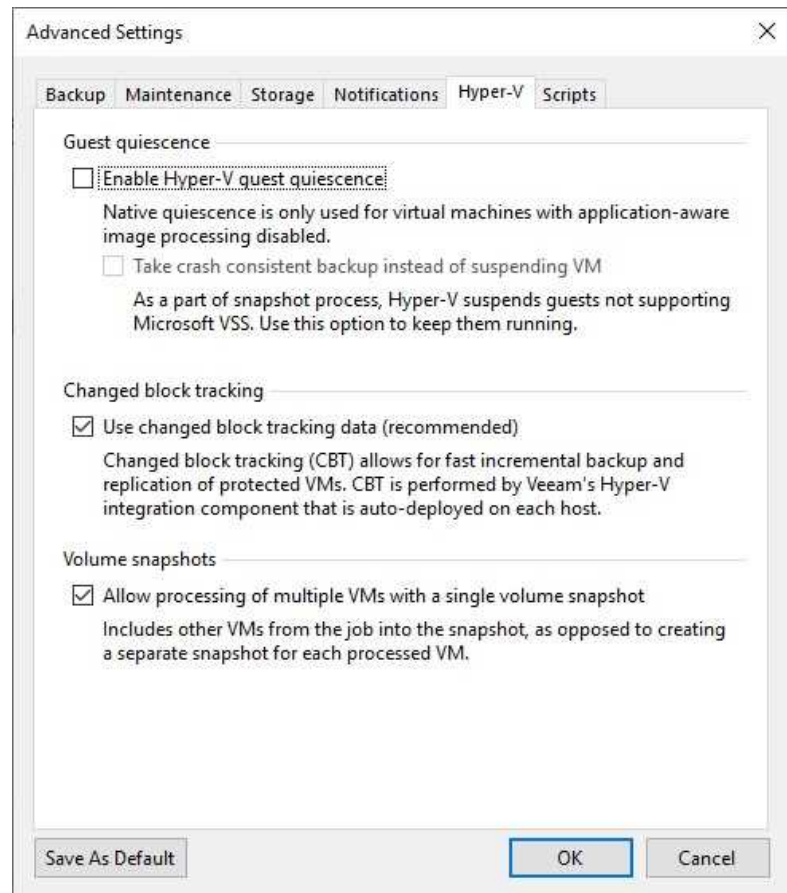
42. Select the Enable backup file encryption checkbox to encrypt the content of backup files.
43. Select a password from the drop-down list. If you haven't done so, click Add or use the Manage passwords link to create a new password.



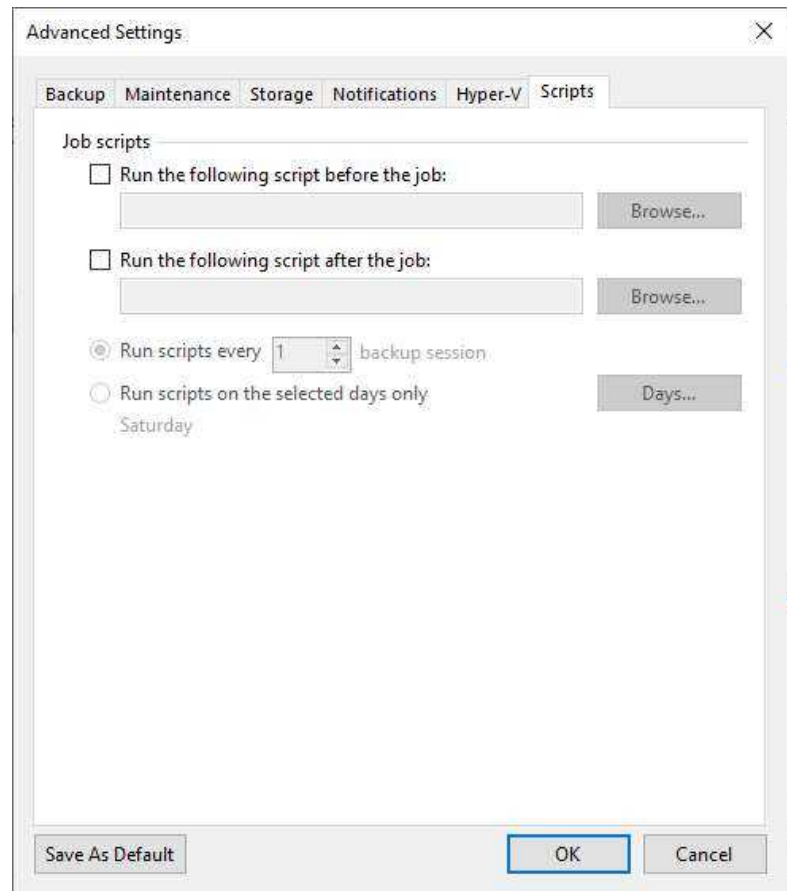
44. On the Advanced Settings, select Notifications.
45. Keep the default settings.



46. On the Advanced Settings, select Hyper-V.
47. Select the Enable Hyper-V guest quiescence check box if application-aware processing cannot be used for some reason.
48. Select the Take crash consistent backup instead of suspending VM check box if you do not want to suspend VMs in the job.
49. Select the Use changed block tracking data (recommended) check box.
50. Select the Allow processing of multiple VMs with a single volume snapshot check box.



51. On the Advanced Settings page, click Scripts.
52. Keep the default settings.
53. Click OK.



54. On the Storage page, click Next.

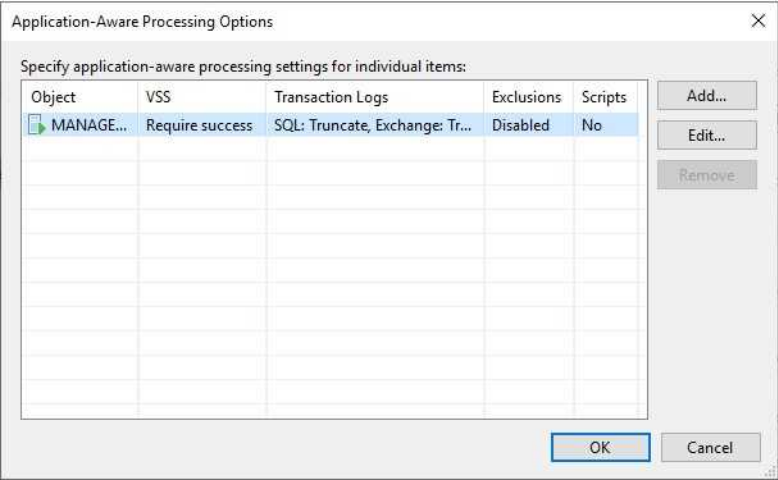
The screenshot shows the 'New Backup Job' wizard with the 'Storage' tab selected. The left sidebar contains links for Name, Virtual Machines, Storage, Guest Processing, Schedule, and Summary. The main area is titled 'Storage' and includes a description: 'Specify processing proxy server to be used for source data retrieval, backup repository to store the backup files produced by this job and customize advanced job settings if required.' The configuration options include: 'Backup proxy' set to 'Off-host backup (automatic proxy selection)' with a 'Choose...' button; 'Backup repository' set to 'Backup Repository_ubuntu20045 (Created by GOODDEALMART\csun at 1/6/2023 8)' with a 'Map backup' link; 'Retention policy' set to '3 days'; and two checkboxes: 'Keep certain full backups longer for archival purposes' (unchecked) and 'Configure secondary destinations for this job' (unchecked). At the bottom, there is an 'Advanced' button and navigation buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

55. When you add VMs running VSS-aware applications to the backup job, you can enable application-aware processing to create a transactionally consistent backup. The transactionally consistent backup ensures that applications on VMs can be recovered without data loss.

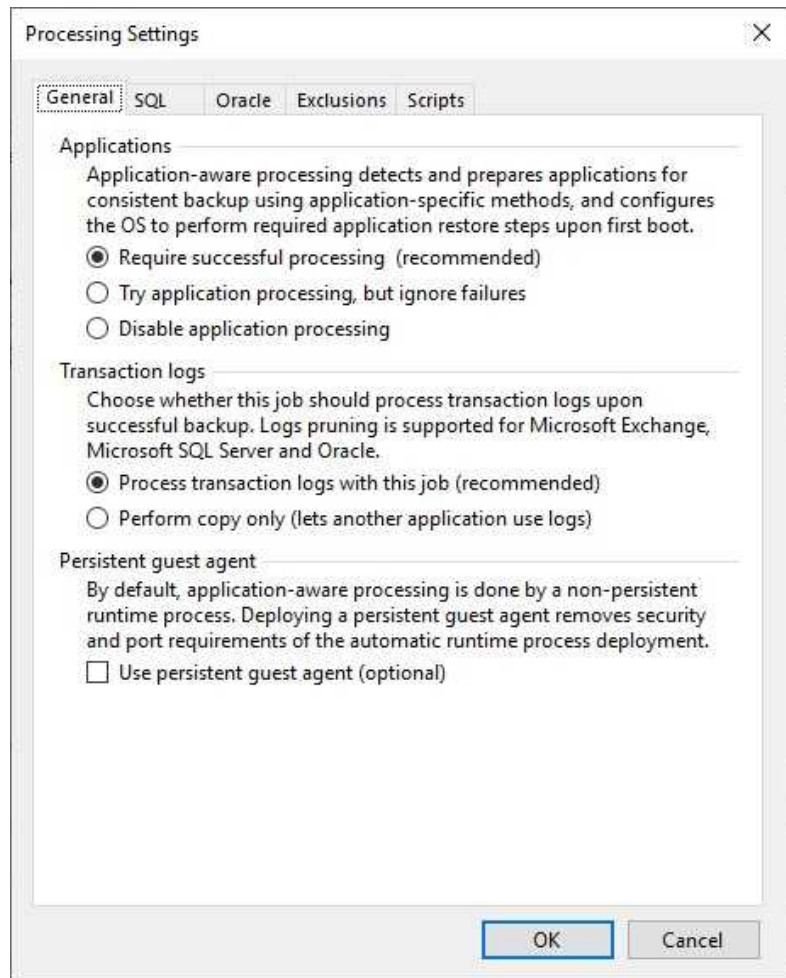
The screenshot shows the 'New Backup Job' wizard with the 'Guest Processing' tab selected. The left sidebar contains links for Name, Virtual Machines, Storage, Guest Processing, Schedule, and Summary. The main area is titled 'Guest Processing' and includes a description: 'Choose guest OS processing options available for running VMs.' The configuration options include: 'Enable application-aware processing' (checked) with a description and an 'Applications...' button; 'Enable guest file system indexing' (unchecked) with a description and an 'Indexing...' button; 'Guest interaction proxy' set to 'Automatic selection' with a 'Choose...' button; 'Guest OS credentials' with a dropdown menu, an 'Add...' button, and a 'Manage accounts' link; and 'Verify network connectivity and credentials for each machine included in the job' with a 'Test Now' button. At the bottom, there is a 'Credentials...' button and navigation buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

56. Select the Enable application-aware processing check box on the Guest Processing page, and click Applications.

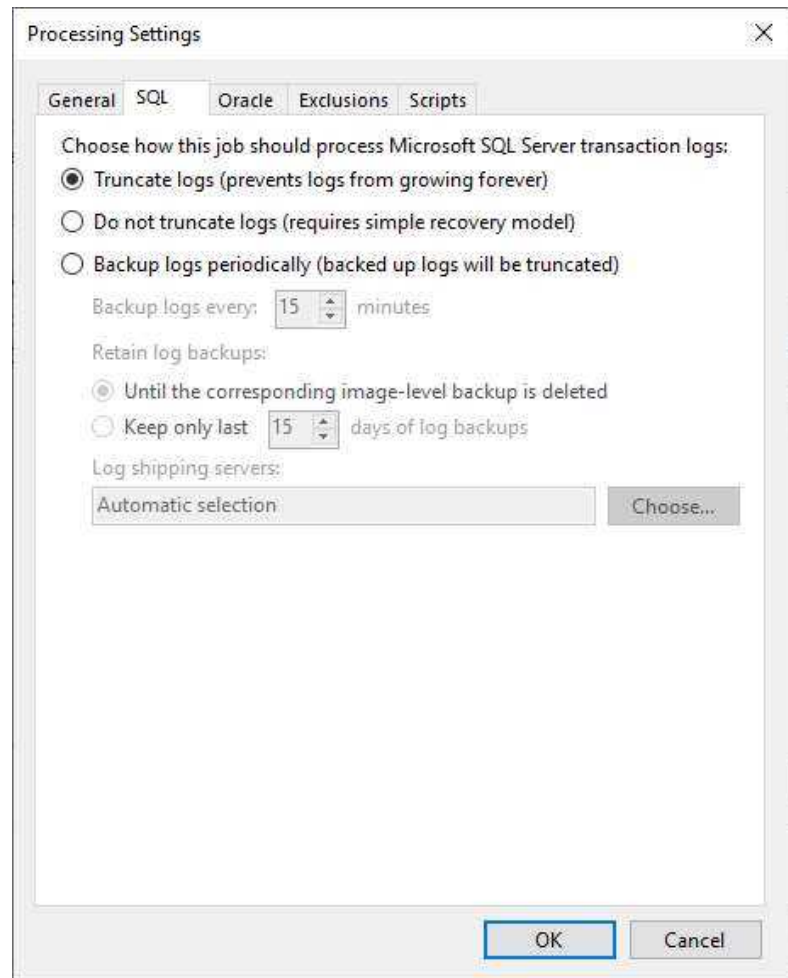
57. On the Application-Aware Processing Options page, select the VM, and click Edit.



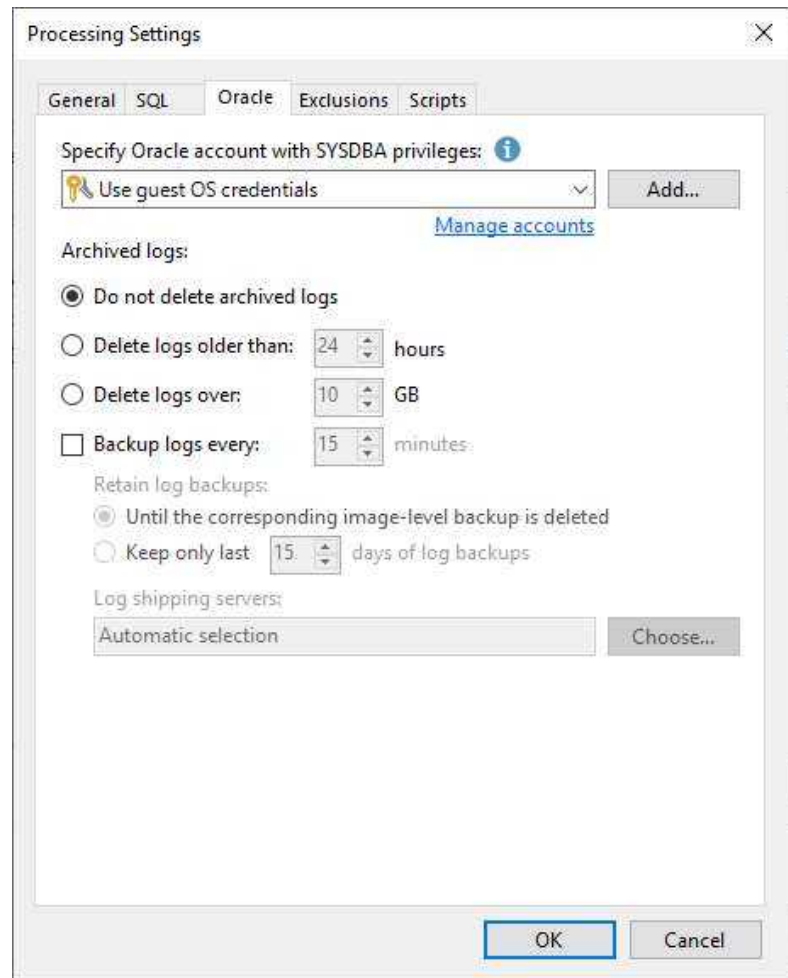
58. On the Processing Settings, click General.
59. Suppose you need Veeam Backup & Replication to stop the backup process if any error occurs during application-aware processing. Select Require successful processing (recommend).
60. Suppose you must continue the backup process even if there is an error during application-aware processing. Select Try application processing but ignore failures.
61. Select Disable application processing to disable application-aware processing for the VM.
62. Select Process transaction logs with this job (recommend).
63. Select Perform copy only to let another application use
64. Select the Use persistent guest agent (optional) checkbox to enable persistent agent.



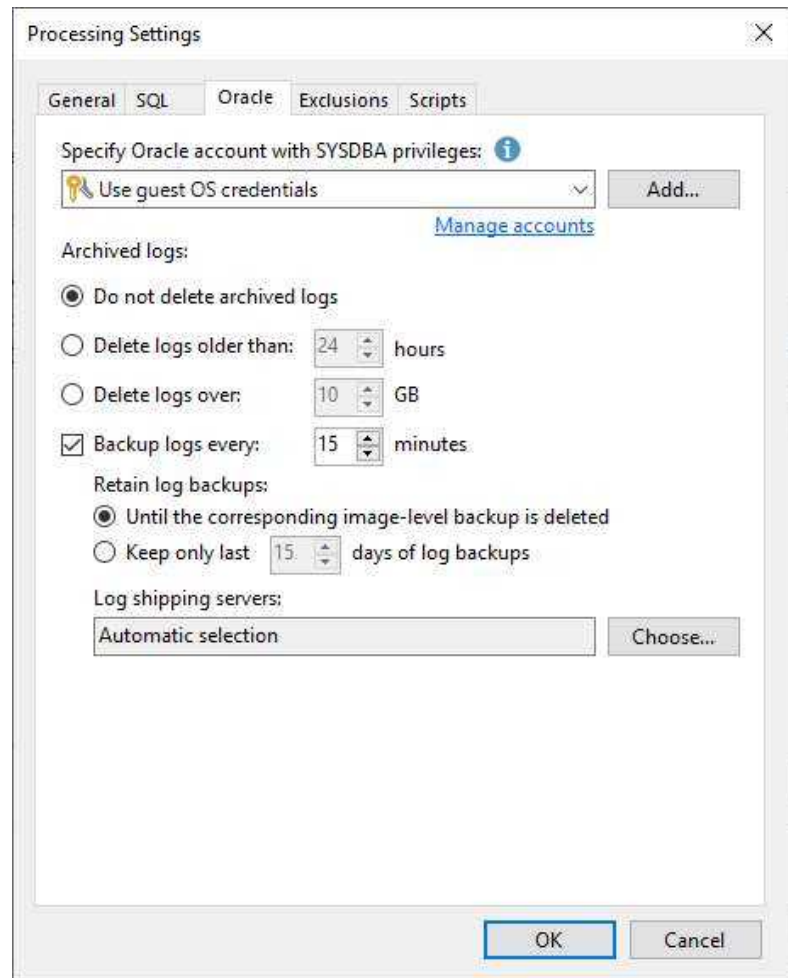
65. On the Processing Settings page, click SQL if the VM is a Microsoft SQL Server VM.
66. Select Truncate logs (Prevents logs from growing forever) to truncate transaction logs after a successful backup.



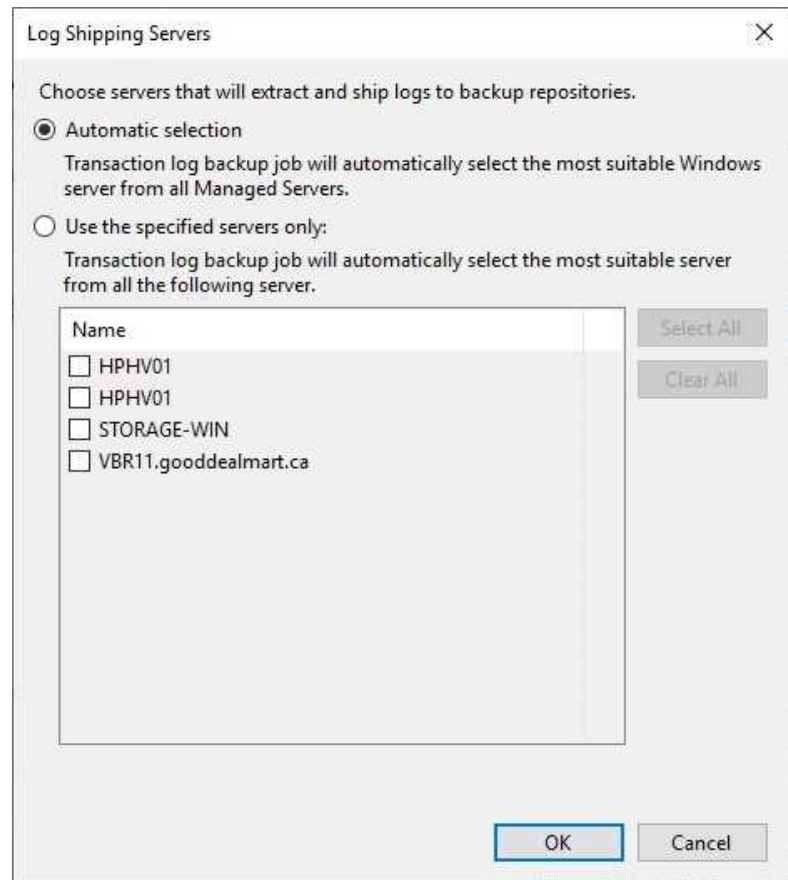
67. On the Processing Settings page, click Oracle if the VM is an Oracle Server.
68. Select a user account from the drop-down list.
69. Select Do not delete archived logs if you need Veeam Backup & Replication to preserve archived logs on the VM guest OS.



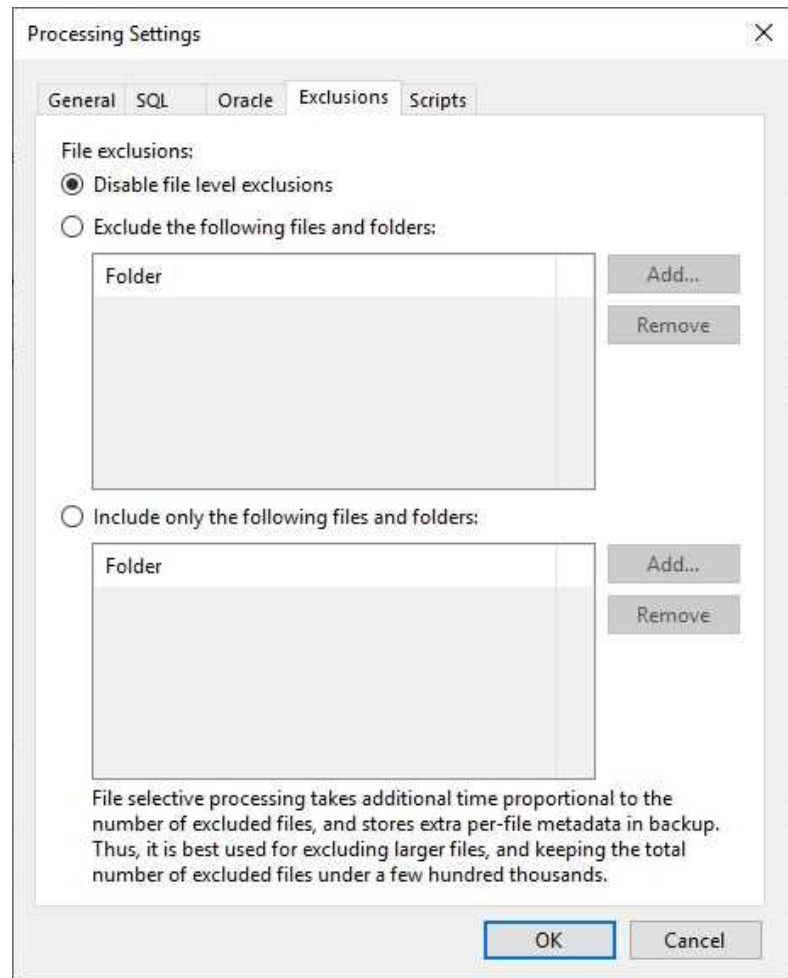
70. Select the retention policy settings for archived logs in the Retain log backups section.
71. Click Choose In the Log shipping servers.



72. On the Log Shipping Servers page, Select Automatic selection if you need Veeam Backup & Replication to choose an optimal log shipping server automatically.
73. Select Use the specified servers only and then select check boxes next to those you want to use as log shipping servers.
74. Click OK.

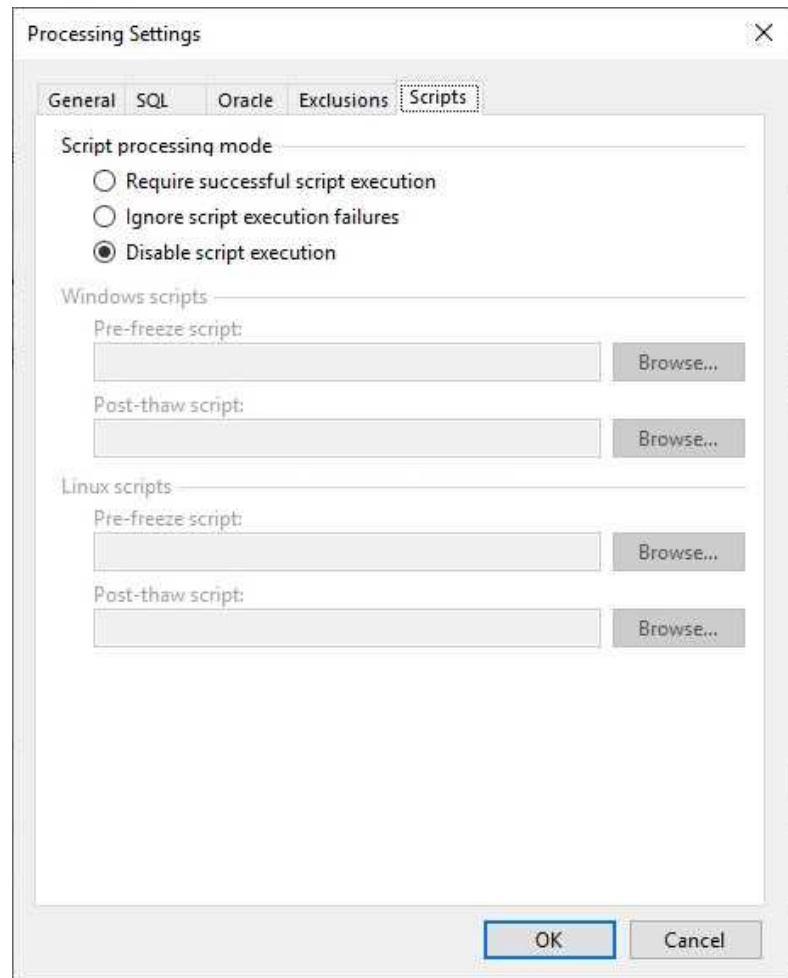


75. On the Processing Settings page, click Exclusions and keep the default settings.

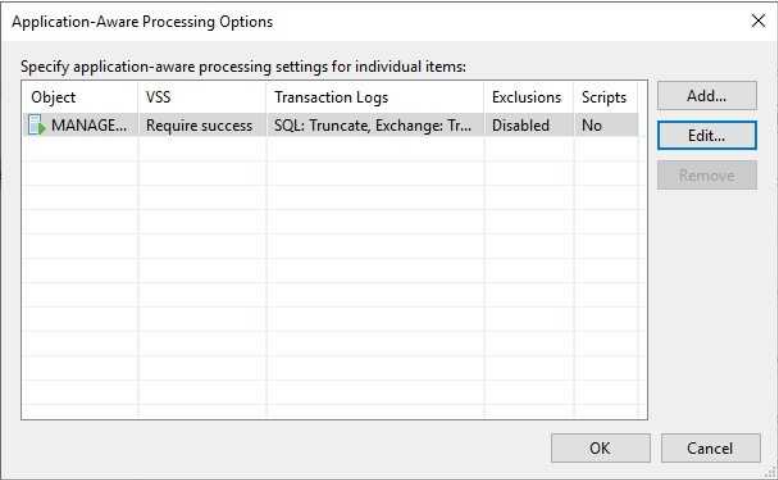


76. On the Processing Settings page, click Scripts and keep the default settings.

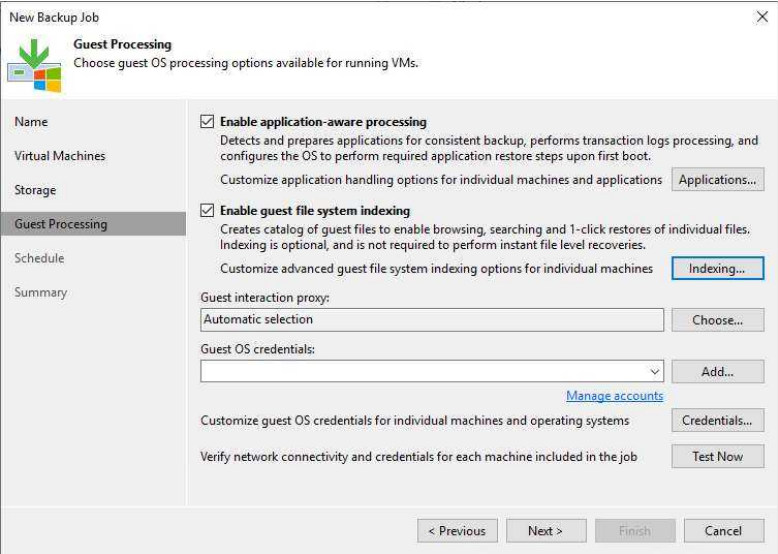
77. Click OK.



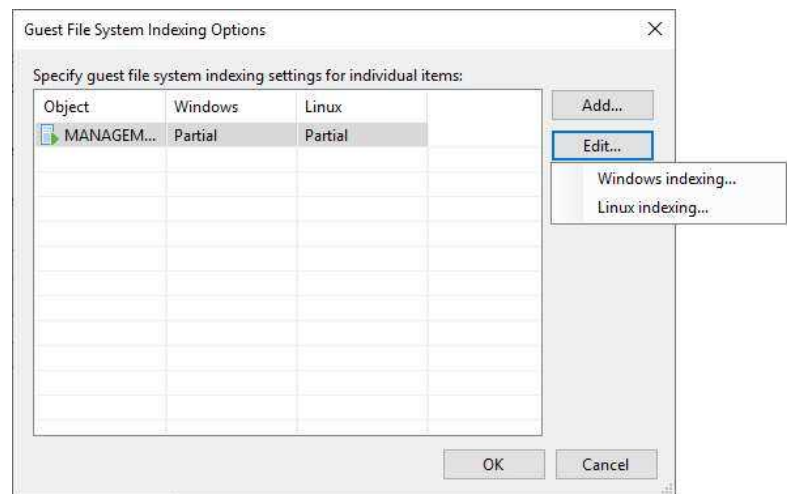
78. On the Application-Aware Processing Options page, click OK.



79. Select the Enable guest file system indexing checkbox and click Indexing.

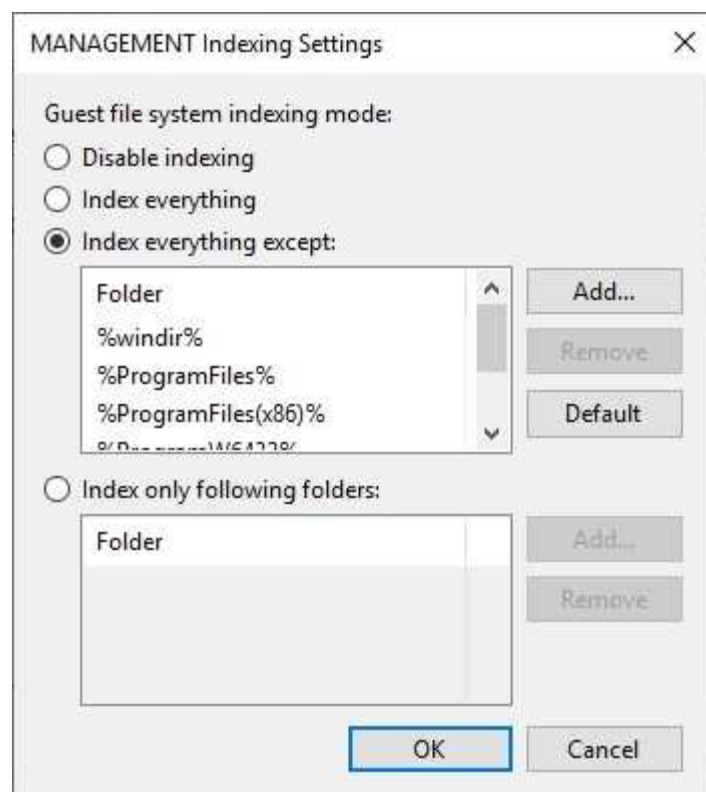


80. On the Guest File System Indexing Options page, select the VM, click Edit and select Windows indexing.

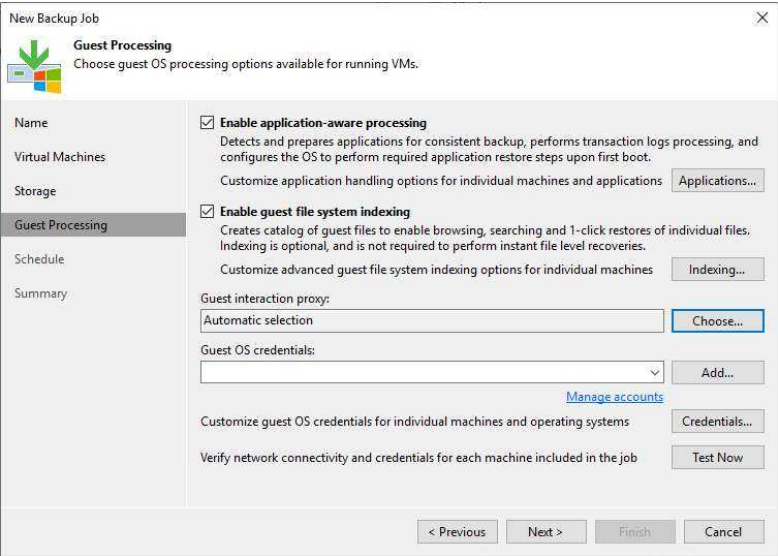


81. On the Guest file system indexing mode page, keep the default settings.

82. Click OK.



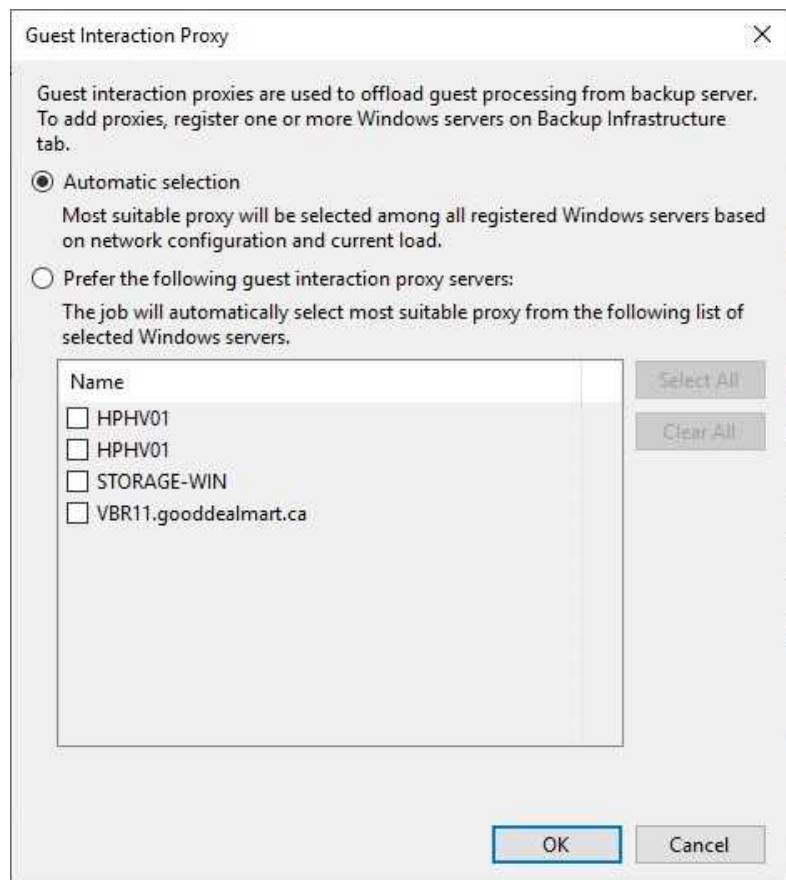
83. Click Choose on the Guest interaction proxy field on the Guest Processing page.



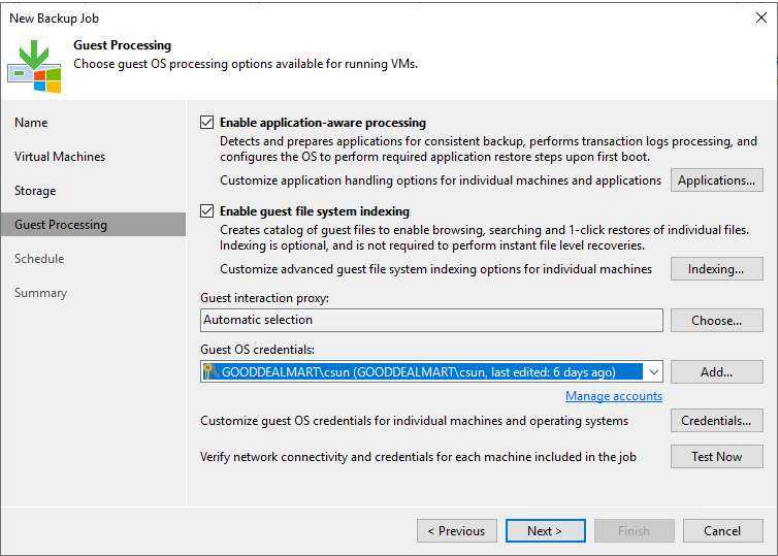
84. On the Guest Interaction Proxy page, select Automatic selection to let Veeam Backup & Replication automatically select the guest interaction proxy.

85. Select Prefer the following guest interaction proxy servers to explicitly define which servers will perform the guest interaction proxy role.

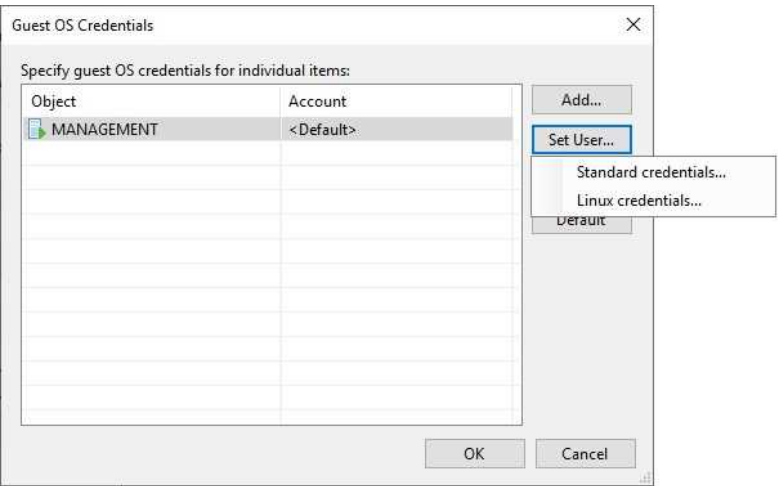
86. Click OK.



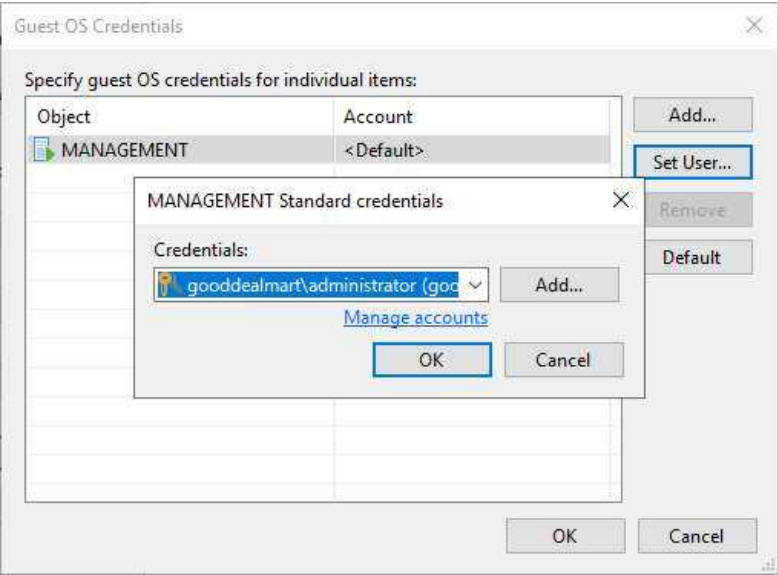
- 87. Choose a user account on the Guest Processing page with sufficient permissions from the Guest OS credentials drop-down list.
- 88. Click Credentials to Customize guest OS credentials for individual machines and operation systems.



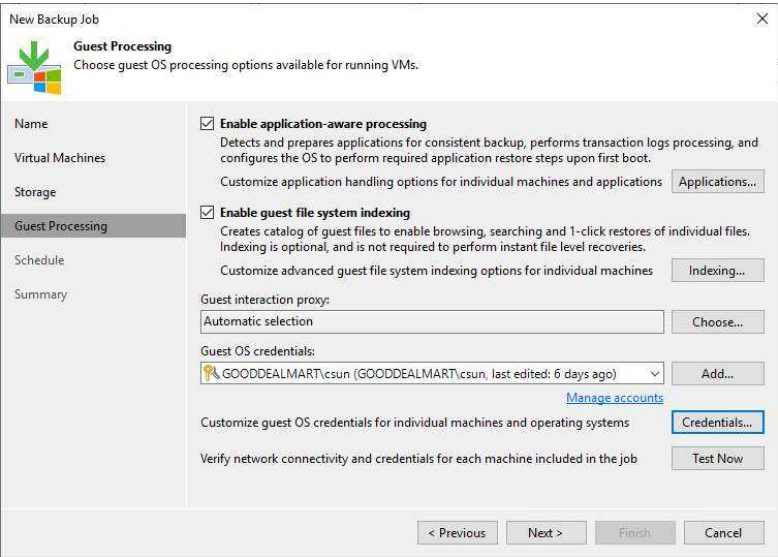
- 89. On the Guest OS Credentials page, select the VM, and click Set User.
- 90. Select Standard credentials.



- 91. Choose a user from the Credentials drop-down list, and click OK.
- 92. Repeat the steps for each VM.

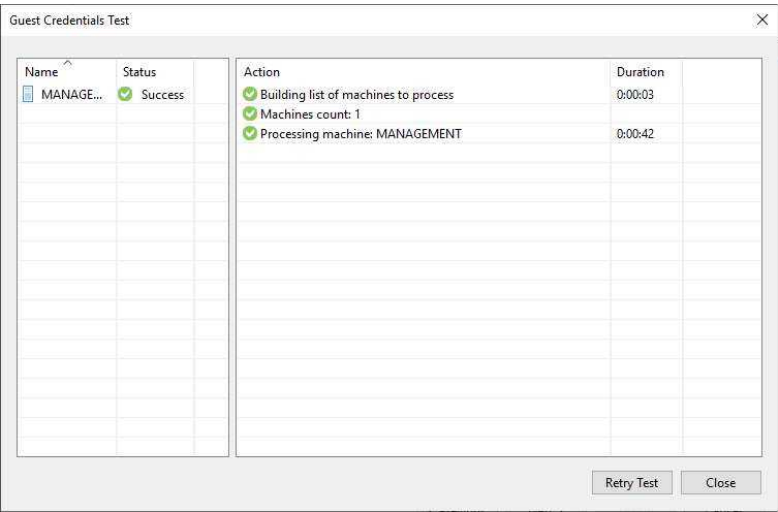


- 93. On the Guest Processing page, click Test Now to verify network connectivity and credentials for each machine included in the job.

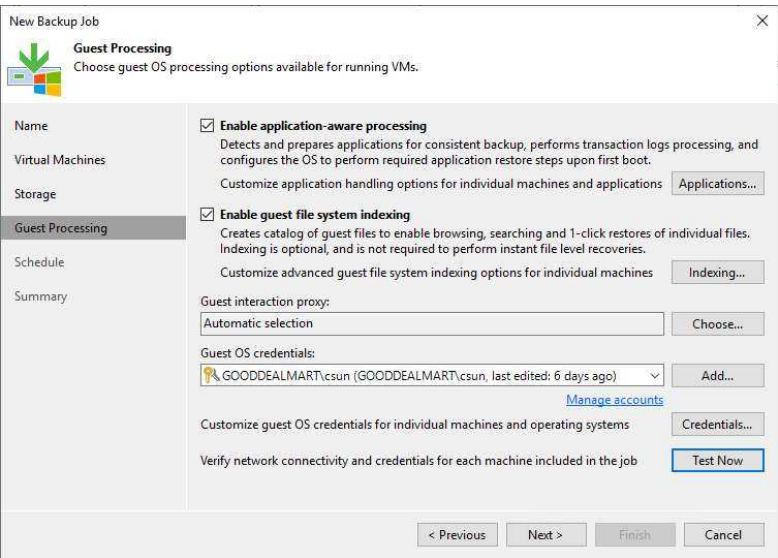


94. On the Guest Credentials Test page, verify each machine's success.

95. Click Close.



96. On the Guest Processing page, click Next.



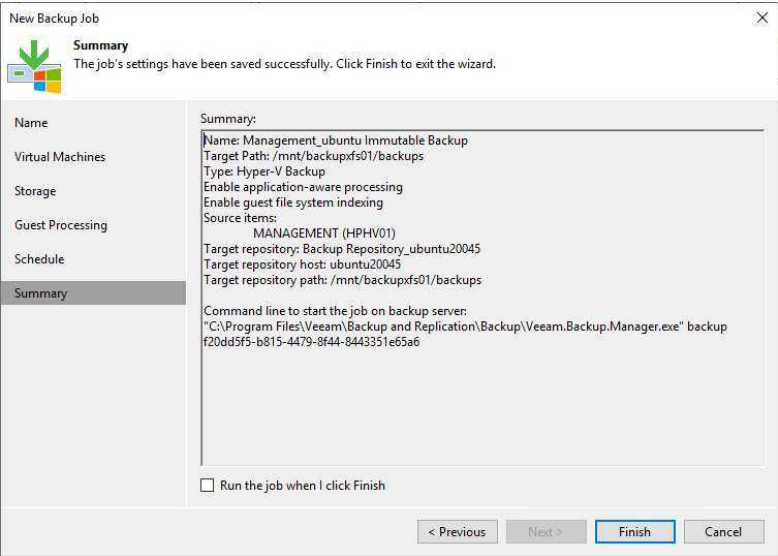
97. Select Run the job automatically on the Schedule page and select your specified schedule.
98. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
99. Define the time interval the backup job must complete in the Backup window section. The backup window ensures that the job does not overlap with production hours and that there is no unnecessary overhead on the production environment.
100. Click Apply.

The screenshot shows the 'New Backup Job' dialog box with the 'Schedule' tab selected. The dialog has a sidebar on the left with tabs: Name, Virtual Machines, Storage, Guest Processing, Schedule (selected), and Summary. The main area is titled 'Schedule' and contains the following options:

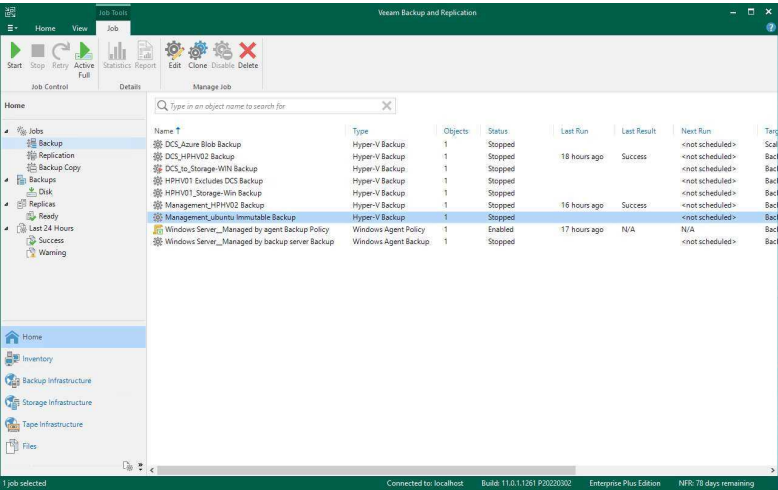
- ☐ Run the job automatically
- ☒ Daily at this time: 10:00 PM, Everyday, Days...
- ☐ Monthly at this time: 10:00 PM, Fourth, Saturday, Months...
- ☐ Periodically every: 1, Hours, Schedule...
- ☐ After this job: DCS_Azure Blob Backup (Created by GOODDEALMART\csun at 1/9/2)
- Automatic retry**
 - ☒ Retry failed items processing: 3 times
 - Wait before each retry attempt for: 10 minutes
- Backup window**
 - ☐ Terminate job if it exceeds allowed backup window (Window... button)
 - If the job does not complete within allocated backup window, it will be terminated to prevent snapshot commit during production hours.

At the bottom, there are buttons: < Previous, Apply (highlighted), Finish, and Cancel.

101. On the Summary page, click Finish.



102. Verify the backup job has been added

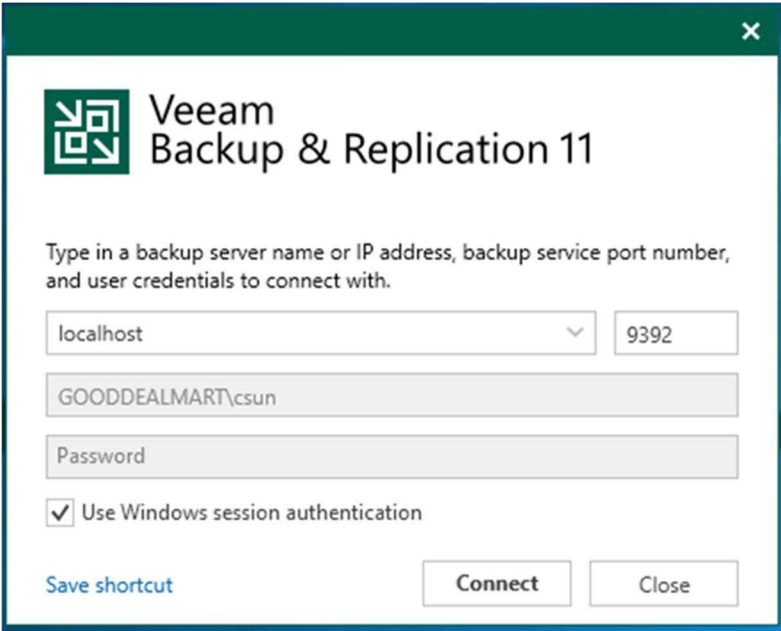


Creating a Backup job to backup the specified Physical Machines (Managed by Backup Server Mode)

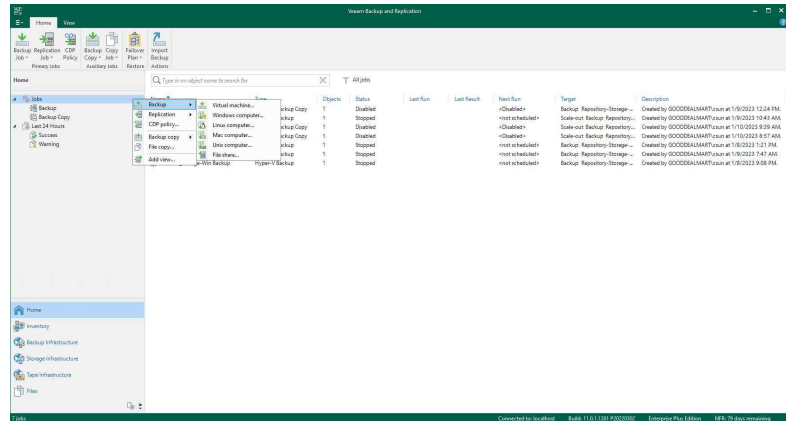
This procedure uses the managed backup server mode to create a backup job to back up the specific physical production machines.

Instructions	Screenshot (if applicable)
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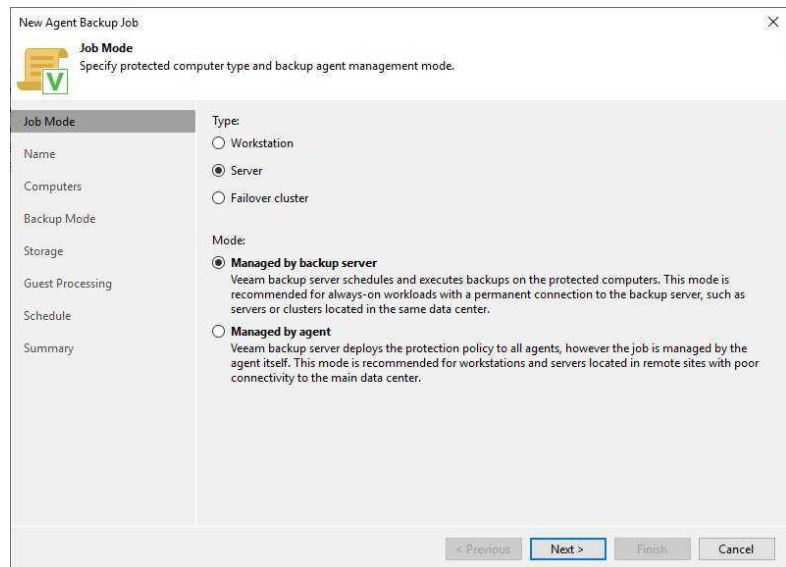
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



- On the Home page, select Jobs, right-click Jobs, select Backup and click Windows computer.



- Select the type of protected machines and Job on the Job Mode page and click Next.
- Select the Workstation type to back up data about workstations or laptops.
- Select the Server type if you want to back up data on standalone servers.
- Select the Failover cluster type if you want to back up data on a failover cluster.
- Two modes can be chosen if you select the Server type.
- Select the Managed by backup server mode.



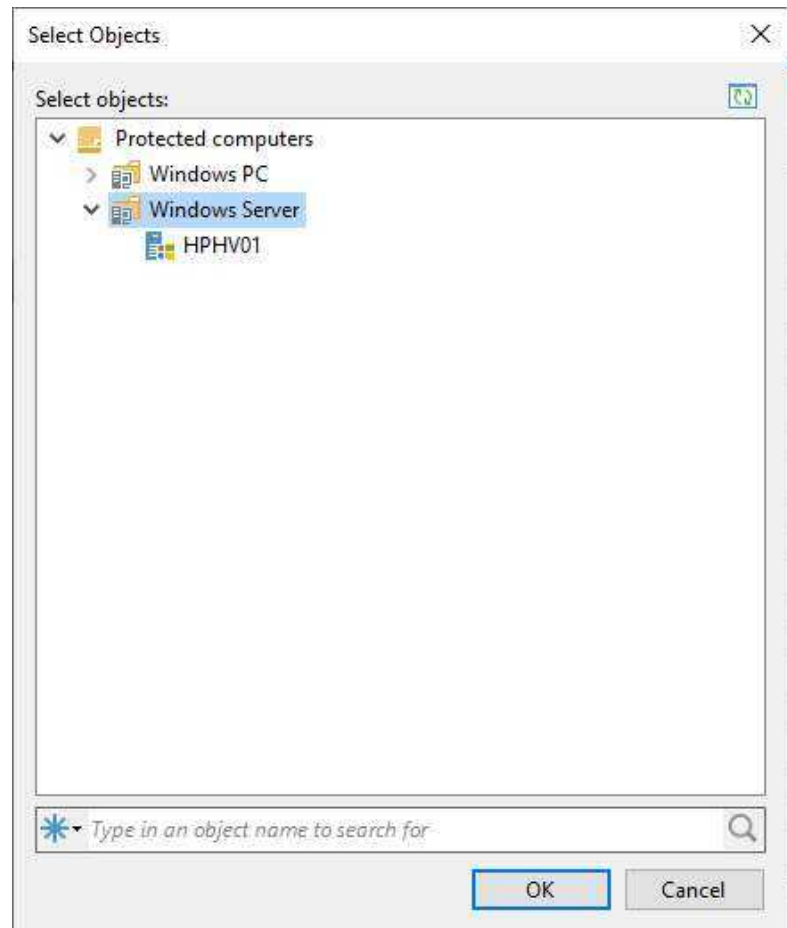
- 10. On the Name page, enter a name in the Name field.
- 11. Describe the Description field.
- 12. Select the High priority check box if you want the resource scheduler of Veeam Backup & Replication to prioritize this job higher than similar jobs and allocate resources to it in the first place.
- 13. Click Next.

The screenshot shows the 'New Agent Backup Job' dialog box with the 'Name' tab selected. The 'Name' field contains 'Windows Server_Managed by backup server Backup'. The 'Description' field contains 'Created by GOODDEALMART\csun at 1/10/2023 10:25 AM.'. The 'High priority' checkbox is unchecked. The 'Next >' button is highlighted.

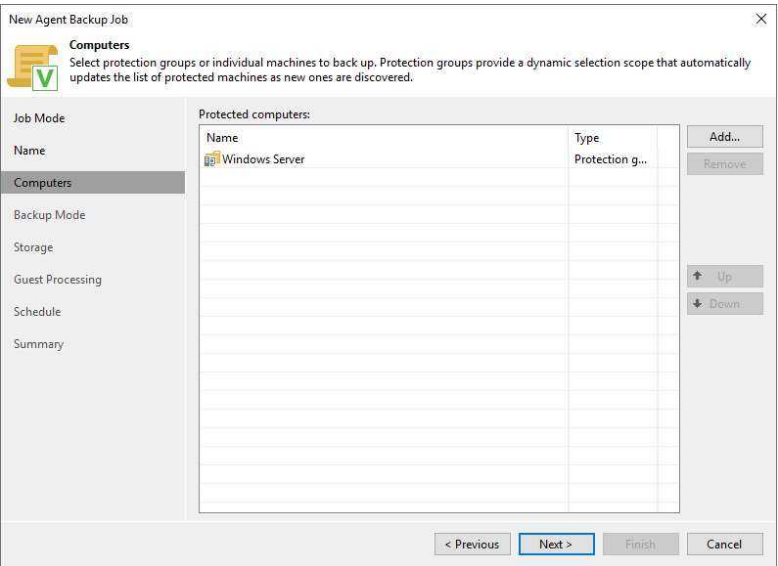
- 14. On the Computers page, click Add and select Protection group.

The screenshot shows the 'New Agent Backup Job' dialog box with the 'Computers' tab selected. The 'Protected computers' table is empty. The 'Add...' button is highlighted, and a context menu is open showing 'Protection group...' and 'Individual computer...'. The 'Next >' button is highlighted.

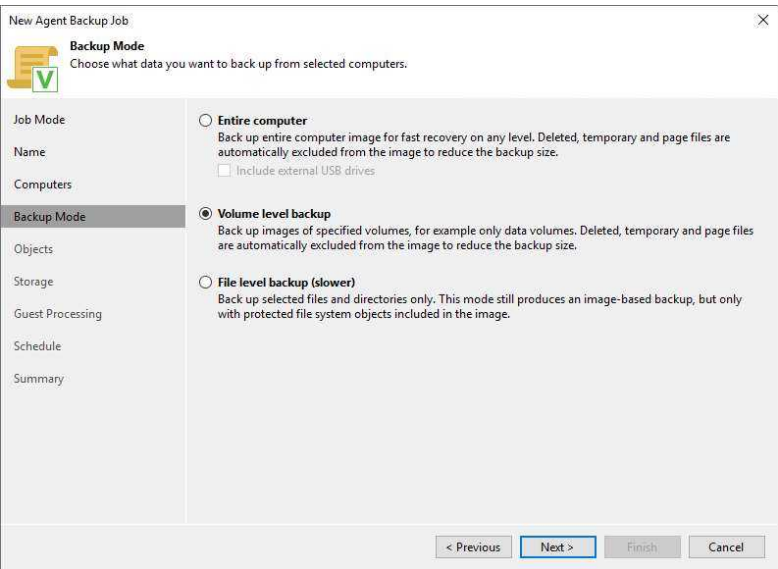
15. Select the protection group in the list on the Select Objects page and click OK.
16. If you have multiple protection groups that need backup in the same backup job, you can repeat the step to add them.



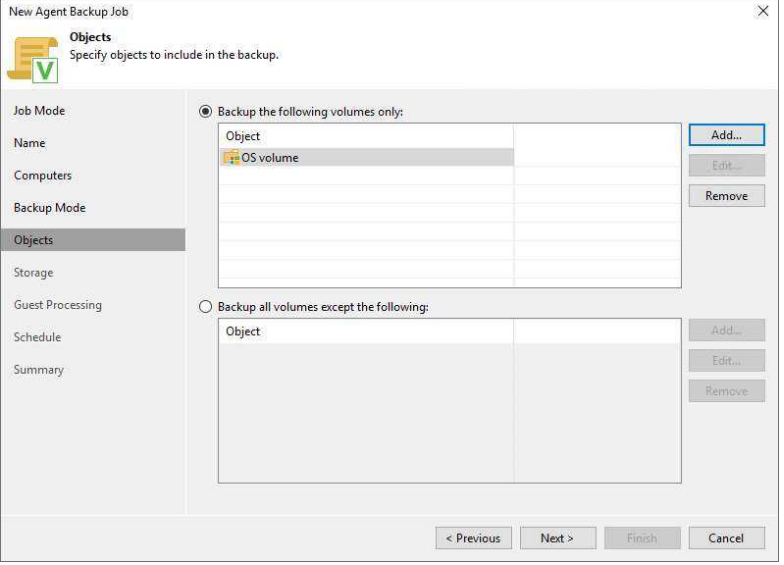
17. On the Computers page, click Next.



18. On the Backup Mode page, there are three backup modes.
19. Select the Entire computer backup mode if you want to back up the entire image. Select Include external USB drives if required.
20. Select Volume level backup mode for specific computer volumes.
21. Select File-level backup (slower) mode for individual folders on your computer.
22. Click Next.

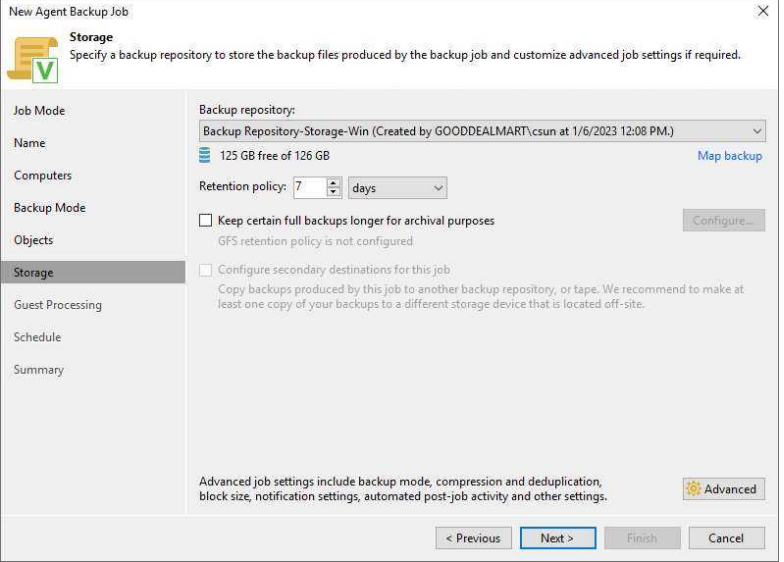


23. On the Objects page, select Backup the following volumes only.
24. Click Add to specify the backup scope and click Next.
25. Select the Backup all volumes except the following volumes except the following, and click Add to exclude objects you do not need from the backup scope.
26. Click Next.



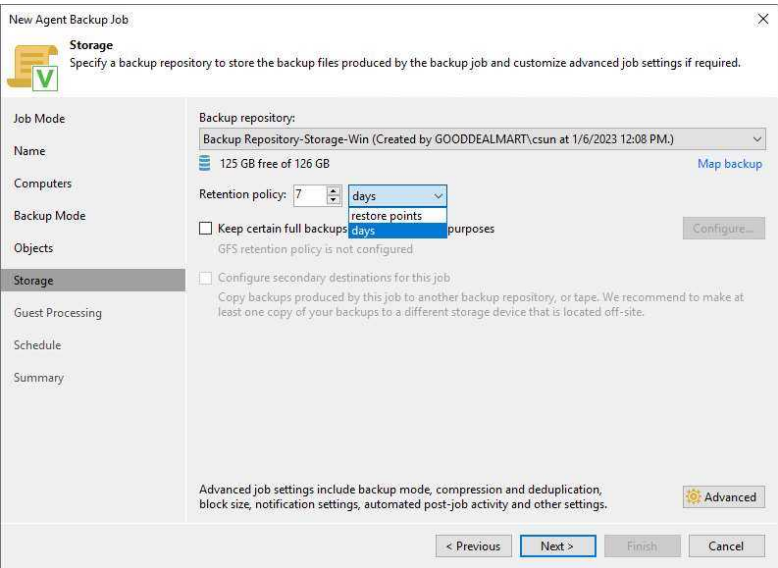
The screenshot shows the 'New Agent Backup Job' dialog box with the 'Objects' tab selected. The left sidebar contains a list of tabs: Job Mode, Name, Computers, Backup Mode, Objects (selected), Storage, Guest Processing, Schedule, and Summary. The main area is titled 'Specify objects to include in the backup.' and has two radio button options. The first option, 'Backup the following volumes only:', is selected. Below it is a table with one row containing 'OS volume'. To the right of the table are 'Add...', 'Edit...', and 'Remove' buttons. The second option, 'Backup all volumes except the following:', is unselected and has an empty table below it with similar 'Add...', 'Edit...', and 'Remove' buttons. At the bottom of the dialog are '< Previous', 'Next >', 'Finish', and 'Cancel' buttons.

27. Select the backup repository from the Backup repository drop-down list on the Storage page.

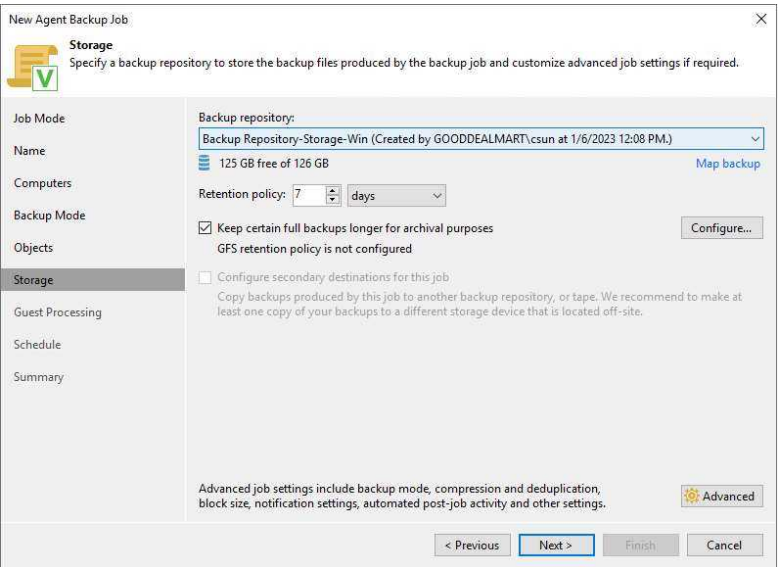


The screenshot shows the 'New Agent Backup Job' dialog box with the 'Storage' tab selected. The left sidebar is the same as in the previous screenshot, but 'Storage' is now selected. The main area is titled 'Specify a backup repository to store the backup files produced by the backup job and customize advanced job settings if required.' It features a 'Backup repository:' dropdown menu showing 'Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 12:08 PM.)'. Below this, it shows '125 GB free of 126 GB' and a 'Map backup' link. There is a 'Retention policy:' field set to '7 days'. Two checkboxes are present: 'Keep certain full backups longer for archival purposes' (unchecked) and 'Configure secondary destinations for this job' (unchecked). Below the second checkbox is a note: 'Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.' At the bottom right, there is an 'Advanced' button with a gear icon. At the bottom of the dialog are '< Previous', 'Next >', 'Finish', and 'Cancel' buttons.

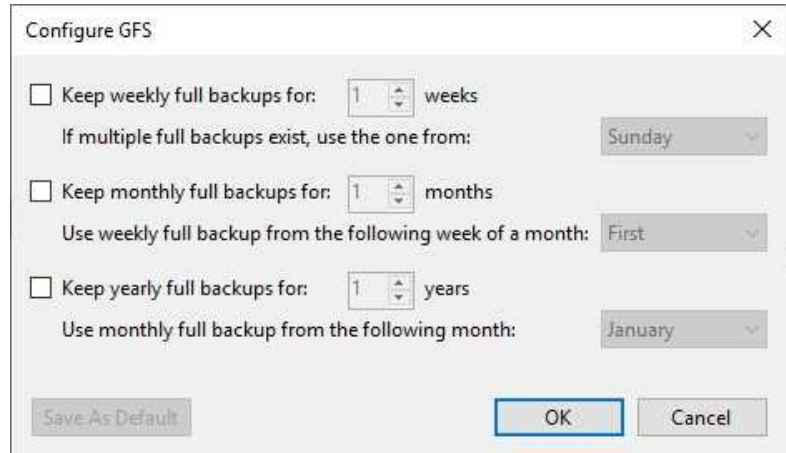
- 28. Set the retention policy settings for restore points in the Retention Policy field.
- 29. Select days or restore points from the drop-down list.



- 30. You can configure the backup job's GFS retention policy settings to ignore the short-term retention policy for some full backups and store them for long-term archiving.
- 31. Select the Keep certain full backups for longer for archival purposes. If you need it, click Configure.



32. Select the Keep weekly full backups for check box, and specify the number of weeks you want to prevent restore points from being modified and deleted.
33. Select the Keep monthly full backups for check box, and specify the months you want to prevent restore points from being modified and deleted.
34. Select the Keep yearly full backups for check box, and specify the years you want to prevent restore points from being modified and deleted.
35. Click OK.



36. On the Storage page, click Advanced.

New Agent Backup Job

Storage

Specify a backup repository to store the backup files produced by the backup job and customize advanced job settings if required.

Job Mode

Name

Computers

Backup Mode

Objects

Storage

Guest Processing

Schedule

Summary

Backup repository:

Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 12:08 PM.)

125 GB free of 126 GB

Retention policy: 7 5 days

☐ Keep certain full backups longer for archival purposes

Configure...

☐ Configure secondary destinations for this job

Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings.

Advanced

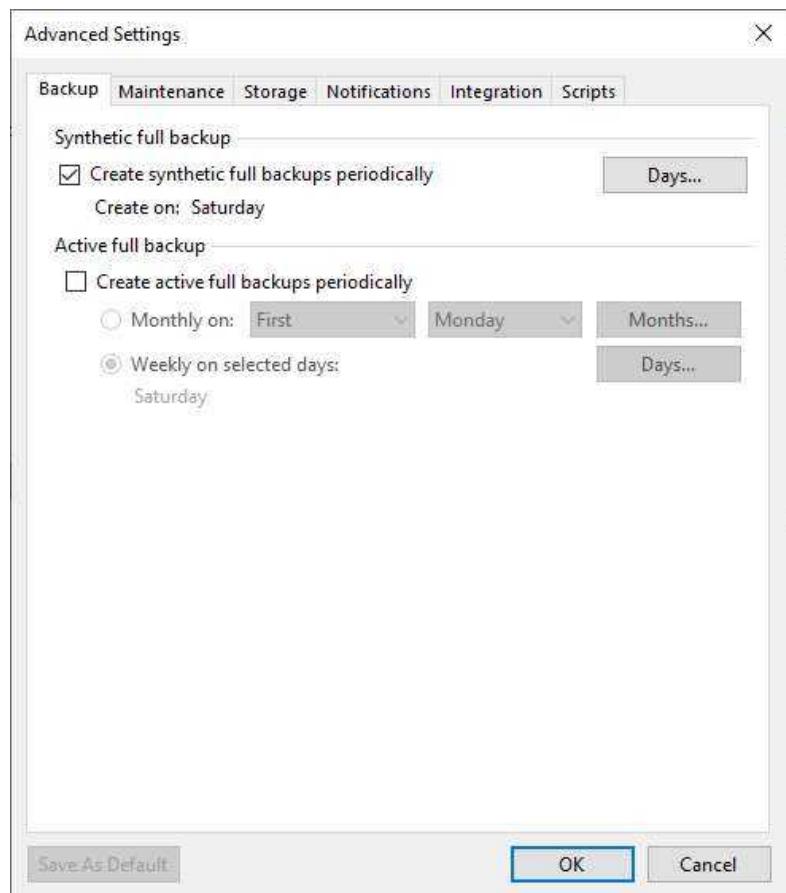
< Previous

Next >

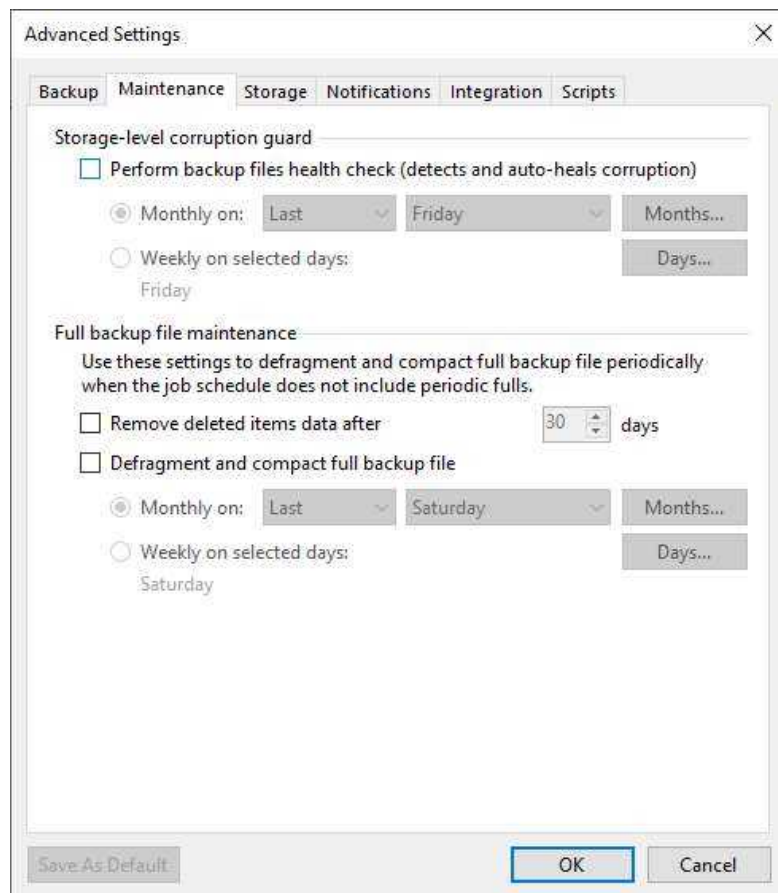
Finish

Cancel

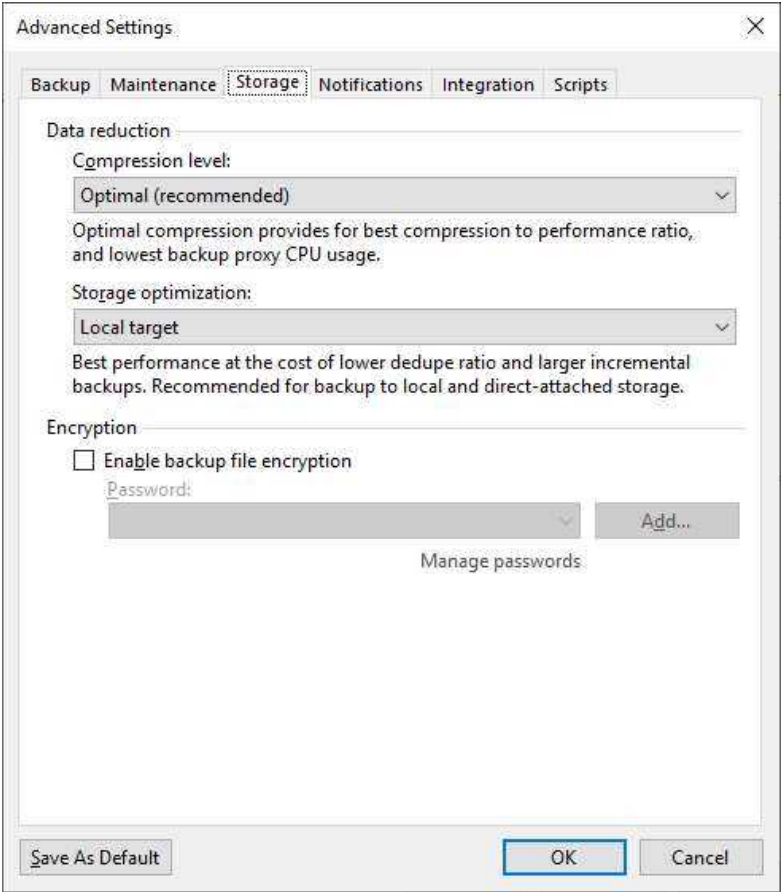
37. Select Create synthetic full backups periodically checkbox to create full synthetic backups periodically.
38. Select the Create active full backups periodically checkbox if you want to create active full backups regularly.



39. On the Advanced Settings, select Maintenance.
40. To regularly perform a health check in the backup chain, select the Perform backup files health check (detects and auto-heals corruption) checkbox in the Storage-level corruption guard and specify a schedule for the health check.
41. Select the Remove deleted items data after the check box and enter the days you want backup data for deleted VMs to be kept if required.
42. Select the Defragment and compact full backup file check box and specify the schedule for the compact operation to compact a full backup if required periodically.



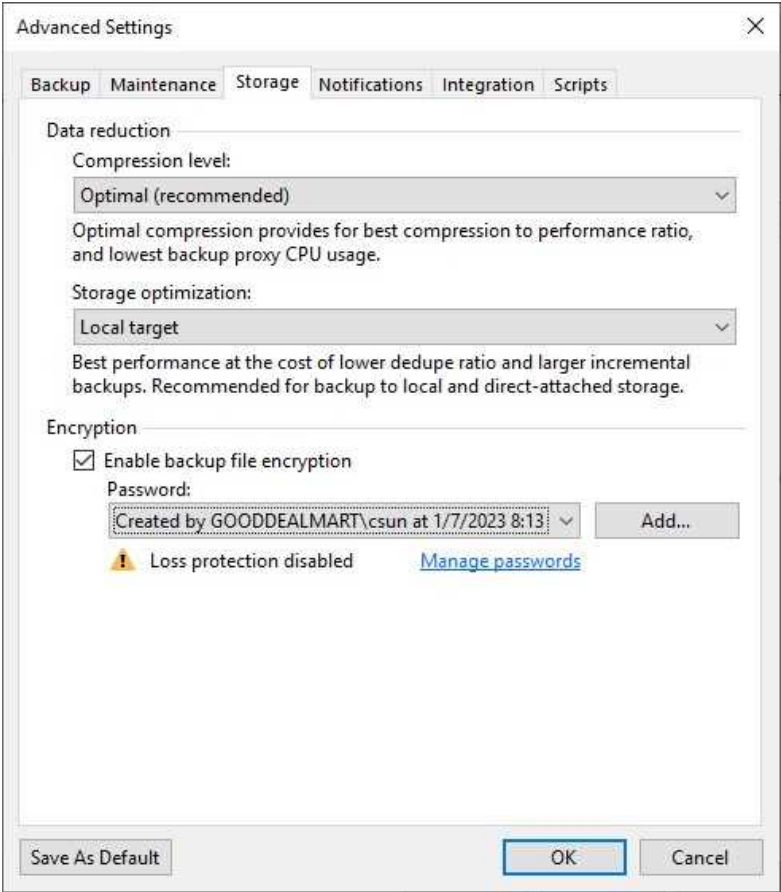
- 43. On the Storage page, click OK.
- 44. Select the compression level for the backup from the drop-down list.



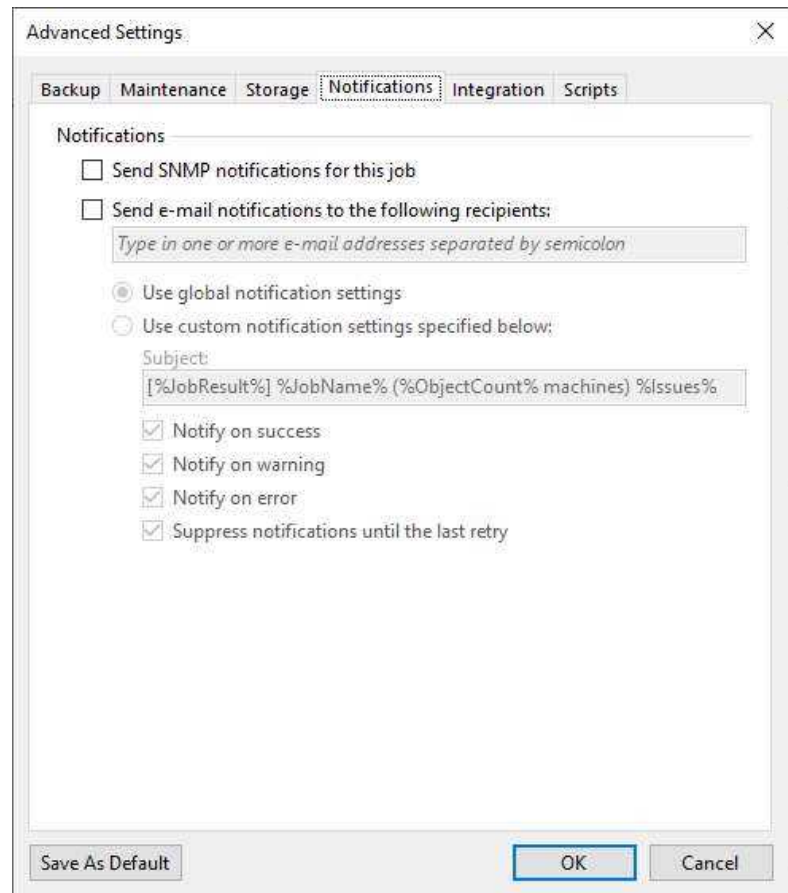
- 45. Select Storage optimization from the drop-down list.

Storage optimization option	Block size	Description
Local target (large blocks)	4096 KB	Recommended for files that are larger than 16 TB. This option will provide the lowest deduplication ratio and the largest size of incremental files.
Local target	1024 KB	Recommended for backup and replication to SAN, DAS or local storage. This option provides the fastest job performance but reduces the deduplication ratio, because with larger data blocks it is less likely to find identical blocks.
LAN target	512 KB	Recommended for backup and replication to NAS, and on-site backup and replication. This option provides a better deduplication ratio and reduces the size of a file because of reduced data block sizes.
WAN target	256 KB	Recommended if you are planning to use WAN for off-site backup and replication. This option provides the maximum deduplication ratio and the smallest size of files that allows you to reduce the amount of traffic over WAN.

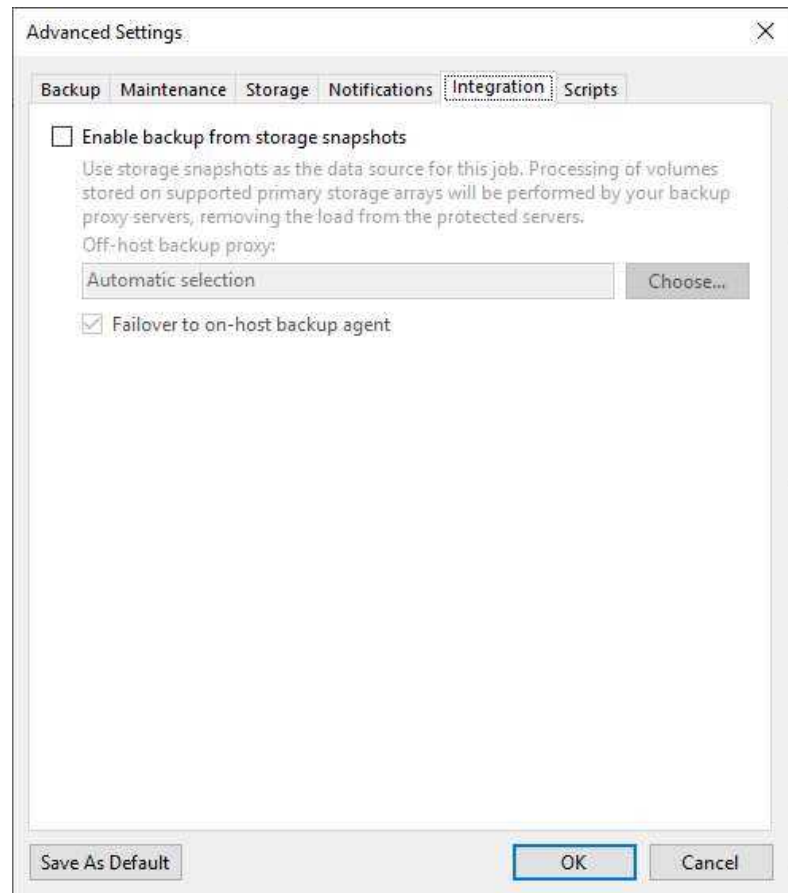
- 46. Select the Enable backup file encryption checkbox to encrypt the content of backup files.
- 47. Select a password from the drop-down list. If you haven't done so, click Add or use the Manage passwords link to create a new password.



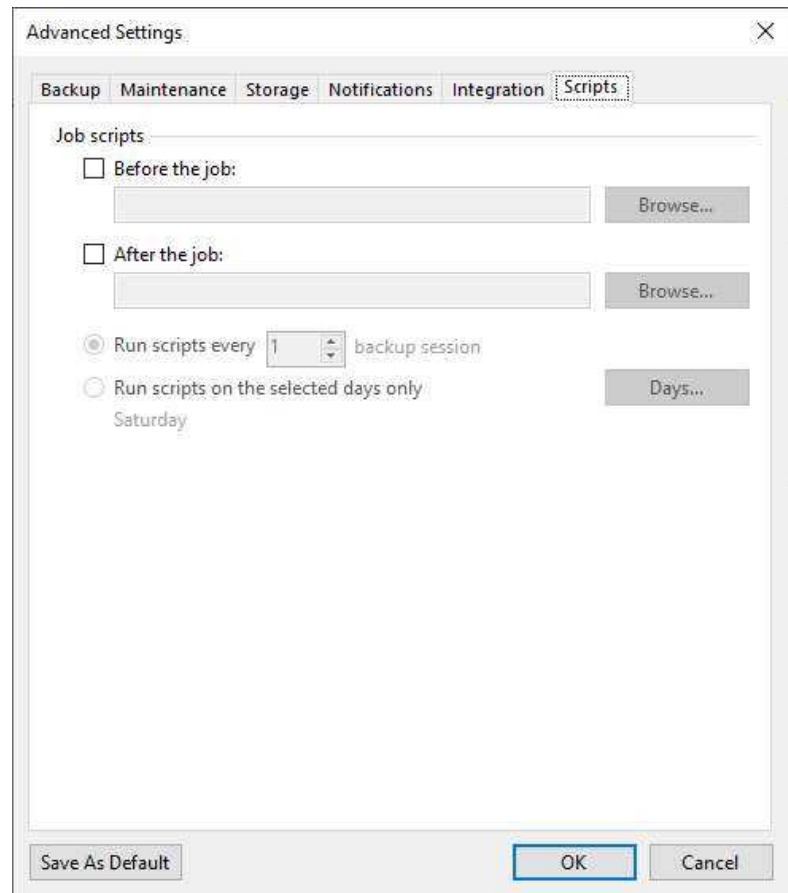
48. On the Advanced Settings, select Notifications.
49. Keep the default settings.



50. On the Advanced Settings, select Integration.
51. Select the Enable backup from storage snapshots checkbox on the Integration page if required.



52. On the Advanced Settings page, click Scripts.
53. Select the Before the job check box if required.
54. Select the After the job check box if required.
55. Click OK.



56. On the Storage page, click Next.

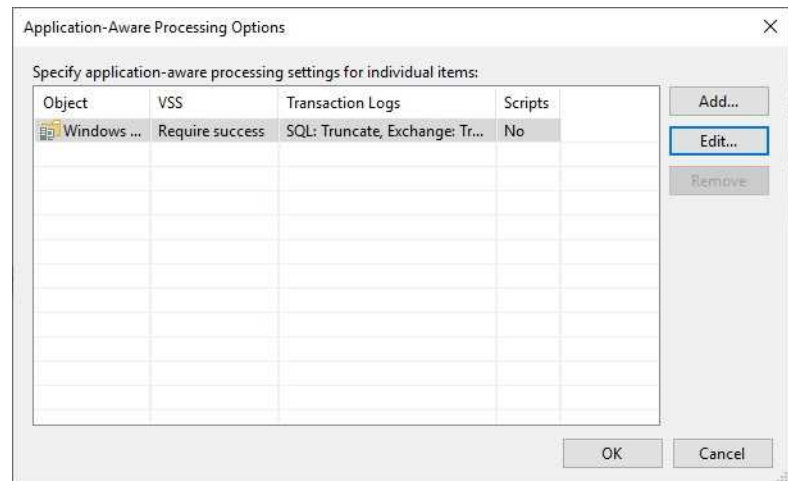
The screenshot shows the 'New Agent Backup Job' wizard with the 'Storage' tab selected. The left sidebar lists 'Job Mode', 'Name', 'Computers', 'Backup Mode', 'Objects', 'Storage' (selected), 'Guest Processing', 'Schedule', and 'Summary'. The main area is titled 'Storage' and 'Specify a backup repository to store the backup files produced by the backup job and customize advanced job settings if required.' It shows a 'Backup repository:' dropdown set to 'Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 12:08 PM.)' with '125 GB free of 126 GB' and a 'Map backup' link. Below this is a 'Retention policy:' set to '7 days'. There are two checkboxes: 'Keep certain full backups longer for archival purposes' (unchecked) and 'Configure secondary destinations for this job' (unchecked). The 'Advanced' button is highlighted. At the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel' buttons.

57. When you add Physical machines running VSS-aware applications to the backup job, you can enable application-aware processing to create a transactionally consistent backup. The transactionally consistent backup ensures that applications on VMs can be recovered without data loss.

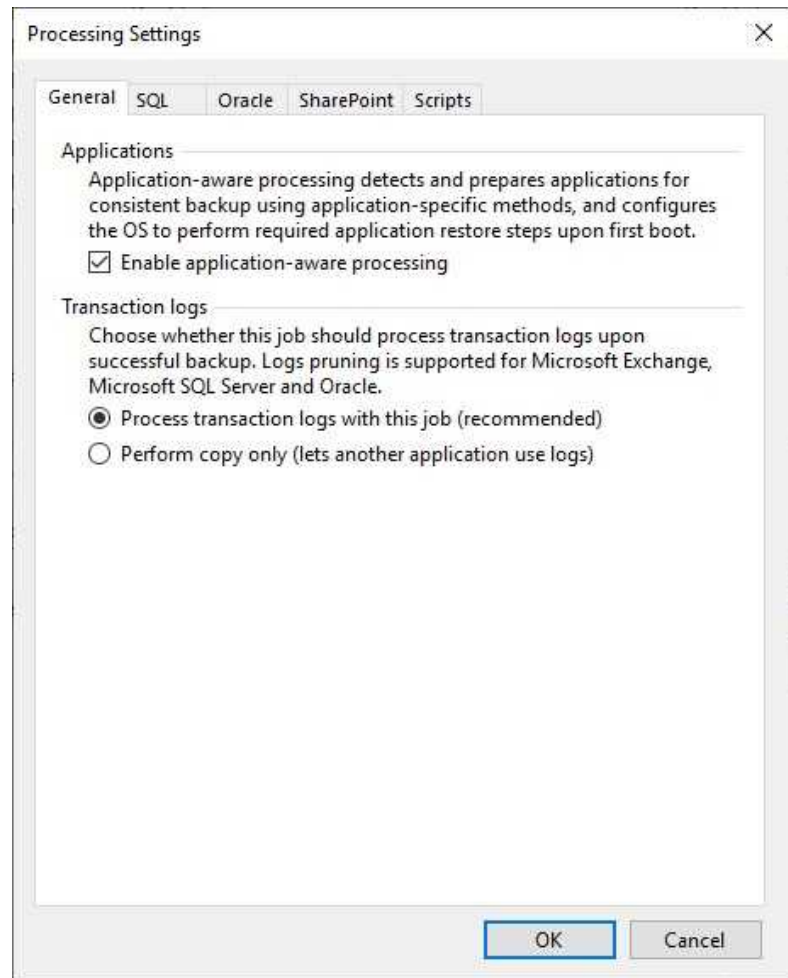
The screenshot shows the 'New Agent Backup Job' wizard with the 'Guest Processing' tab selected. The left sidebar is the same as the previous screenshot, but 'Guest Processing' is now selected. The main area is titled 'Guest Processing' and 'Choose application processing options.' It has two checkboxes: 'Enable application-aware processing' (checked) and 'Enable guest file system indexing' (unchecked). The 'Applications...' button is highlighted. At the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel' buttons.

58. Select the Enable application-aware processing check box on the Guest Processing page and click Applications.

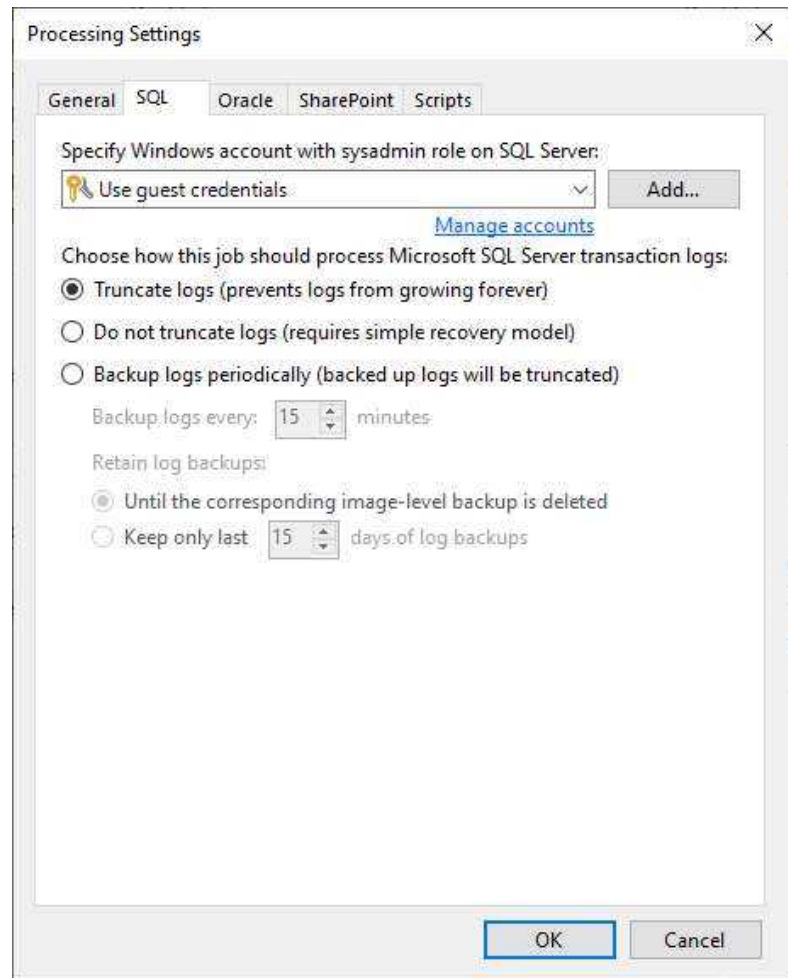
59. On the Application-Aware Processing Options page, select the Object, and click Edit.



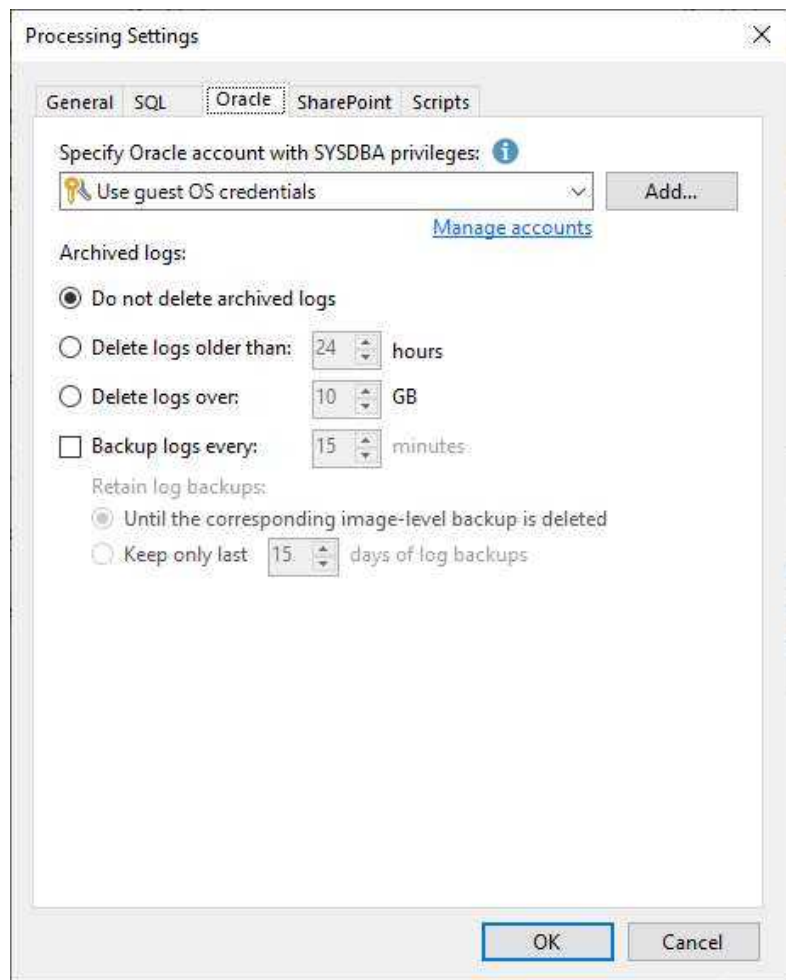
60. On the Processing Settings, click General.
61. Make sure that the Enable application-aware processing checkbox is selected.
62. Select Process transaction logs with this job (recommend).
63. Select Perform copy only to let another application use logs.



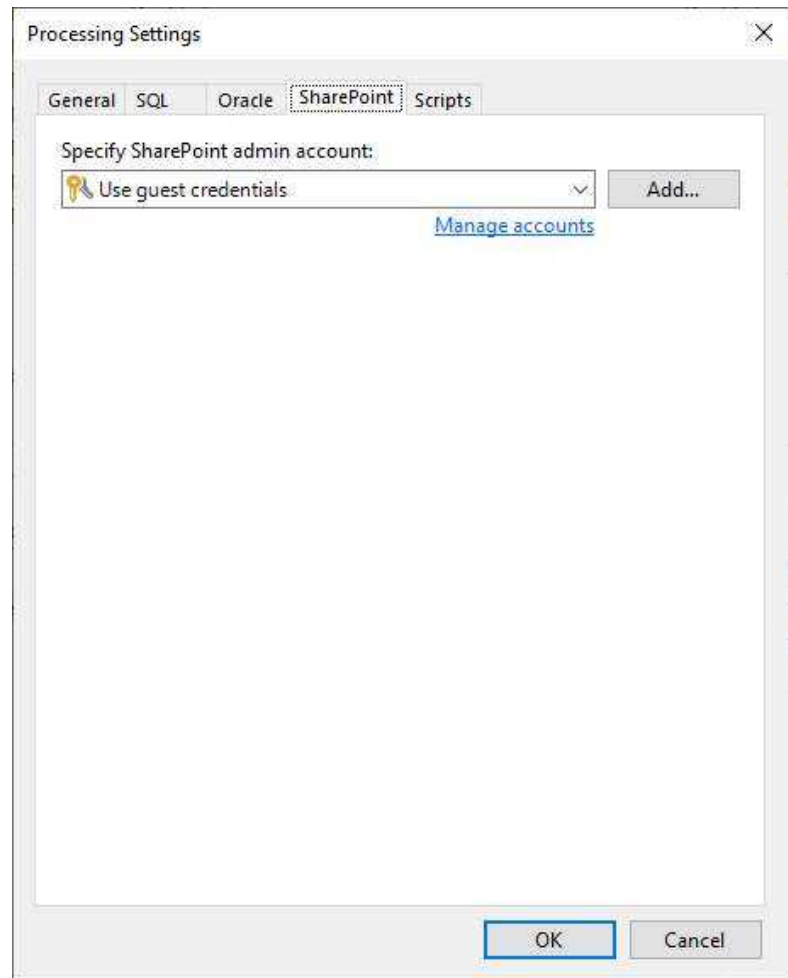
64. On the Processing Settings page, click SQL if the Physical Machine is a Microsoft SQL Server.
65. Select from the Specify Microsoft SQL Server account with database admin privileges list a user account with access permissions on the database.
66. Select Truncate logs (Prevents logs from growing forever) to truncate transaction logs after a successful backup.



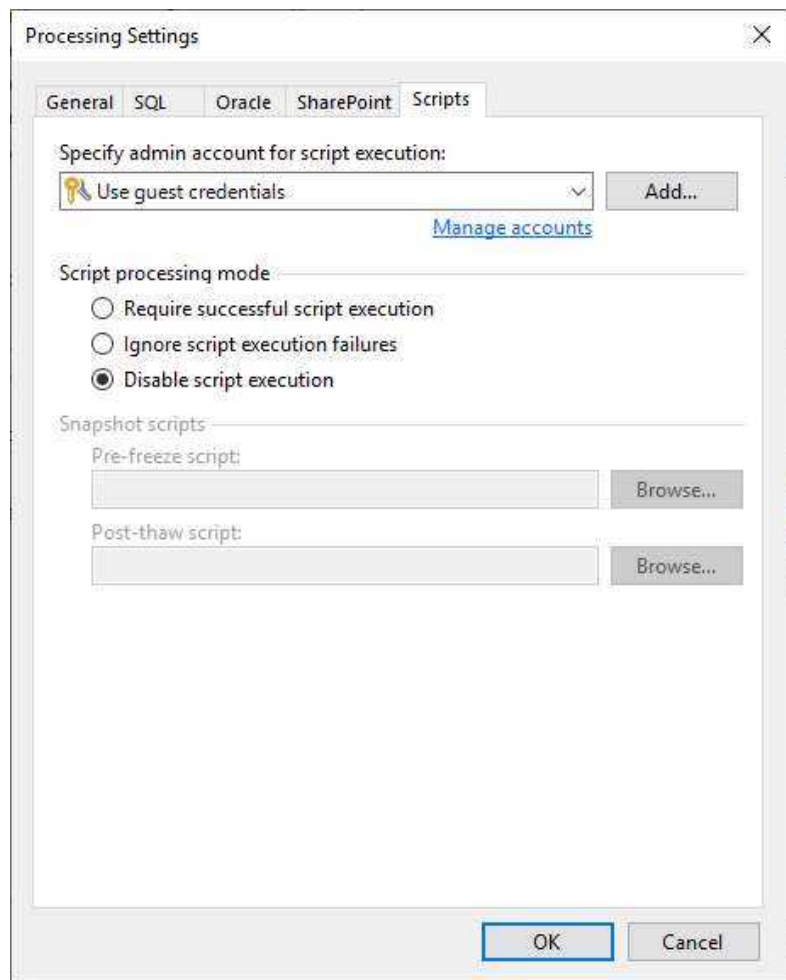
67. Click Oracle on the Processing Settings page if the Physical Machine is an Oracle Server.
68. Select a user account from the drop-down list.
69. Select Do not delete archived logs if you need Veeam Backup & Replication to preserve archived logs on the VM guest OS.



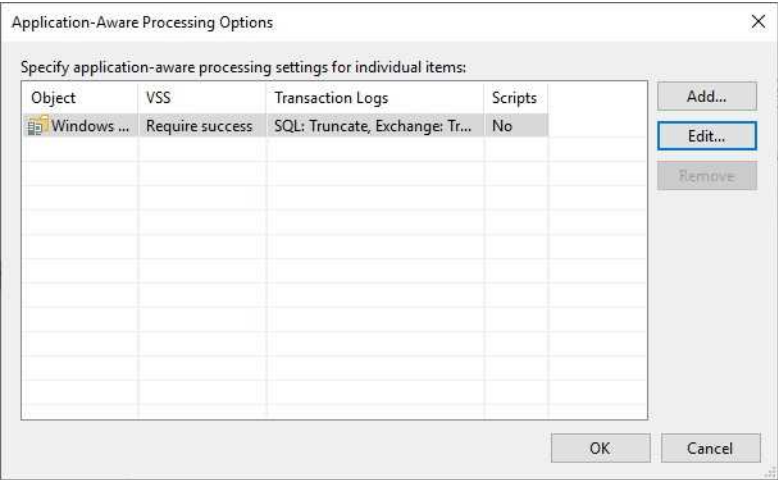
70. On the Processing Settings page, click SharePoint if the Physical Machine is a SharePoint Server.
71. Select a user account from the drop-down list.



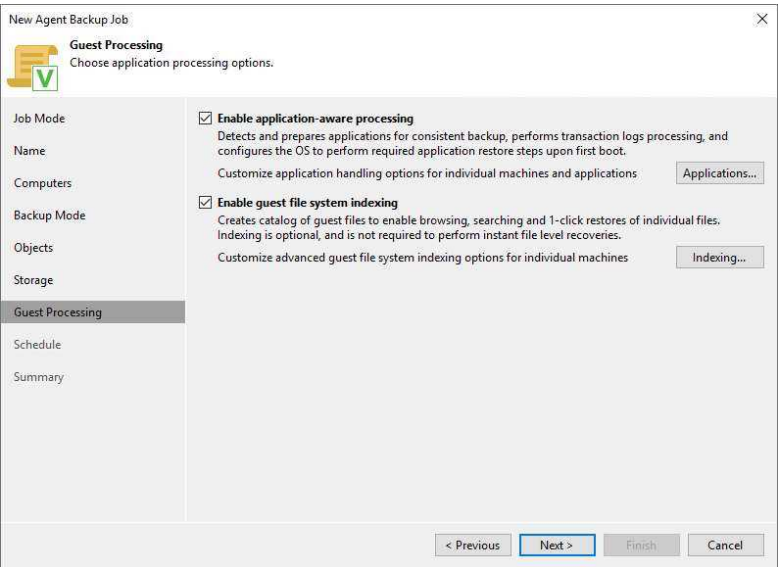
72. ON the Processing Settings page, click Scripts.
73. In the Specify admin account for script execution section, specify a user account.
74. Select Disable script execution.
75. Select Require successful script execution if required.
76. Select Ignore script execution failures if required.
77. Click OK.



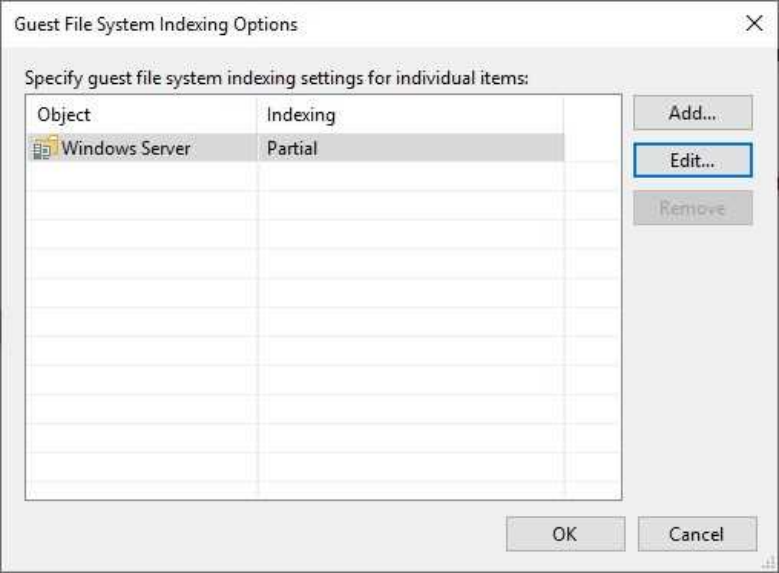
78. On the Application-Aware Processing Options page, click OK.



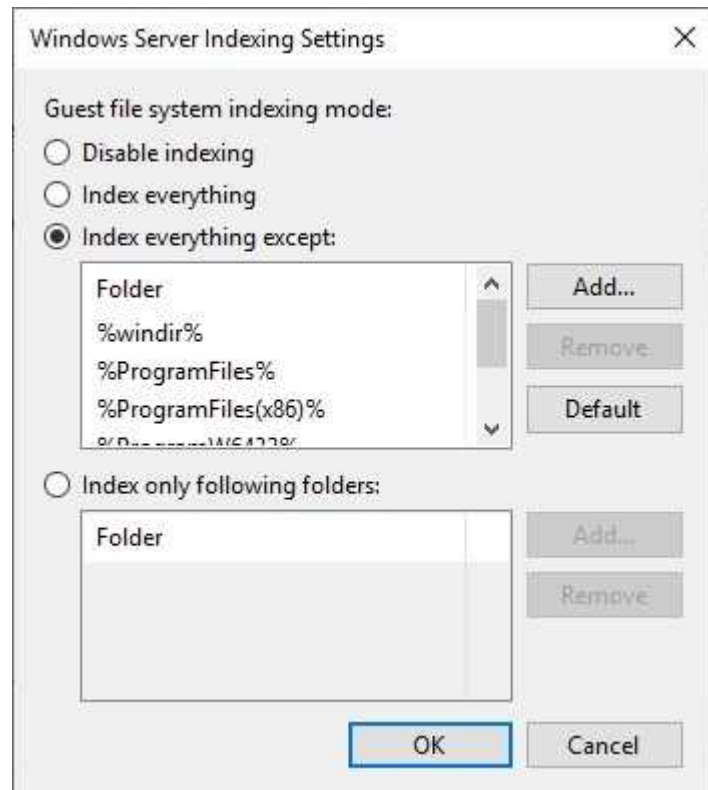
79. Select the Enable guest file system indexing checkbox and click Indexing.



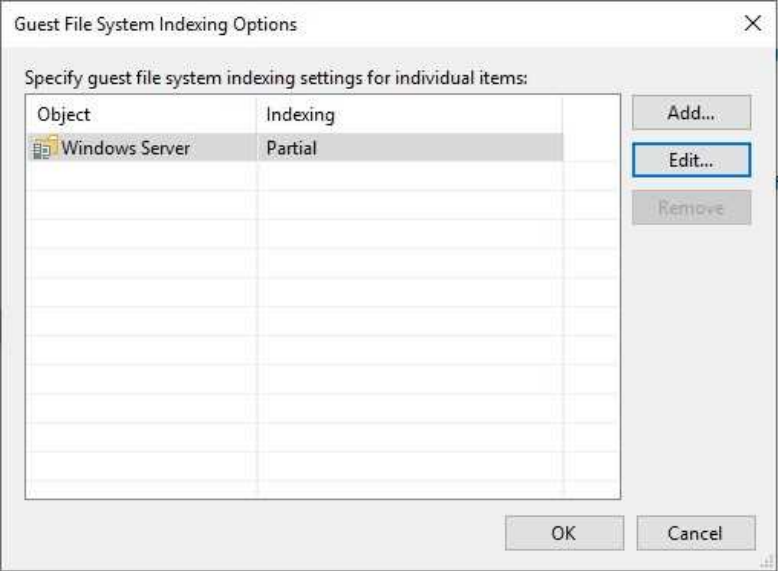
80. On the Guest File System Indexing Options page, select the Object, click Edit and.



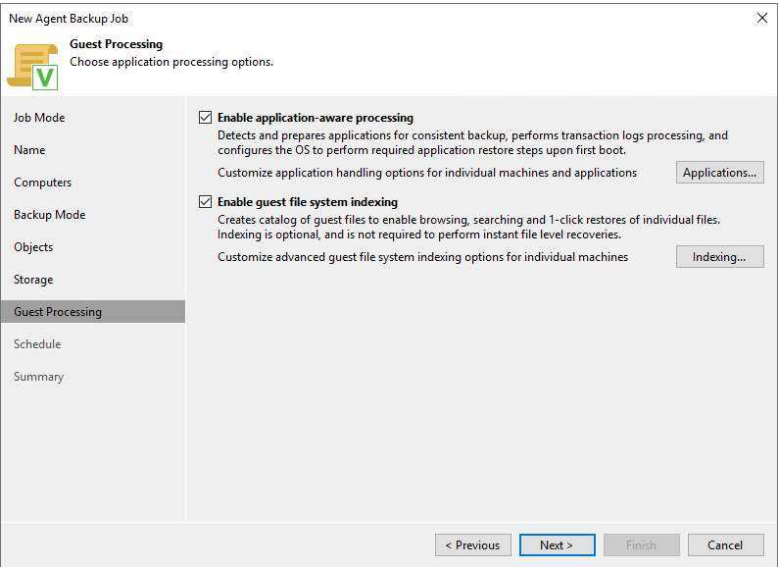
81. On the Guest file system indexing mode page, keep the default settings.
82. Click OK.



83. On the Guest File System Indexing Options page, click OK.



84. On the Guest Processing page, click Next.



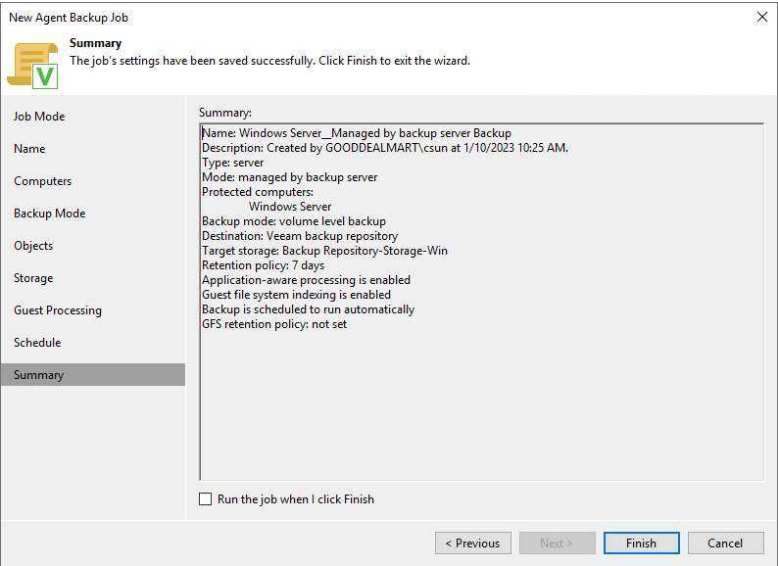
85. Select Run the job automatically on the Schedule page and select your specified schedule.
86. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
87. Define the time interval the backup job must complete in the Backup window section. The backup window ensures that the job does not overlap with production hours and that there is no unnecessary overhead on the production environment.
88. Click Apply.

The screenshot shows the 'New Agent Backup Job' dialog box with the 'Schedule' tab selected. The dialog has a sidebar on the left with tabs: Job Mode, Name, Computers, Backup Mode, Objects, Storage, Guest Processing, Schedule (selected), and Summary. The main area is titled 'Schedule' and contains the following options:

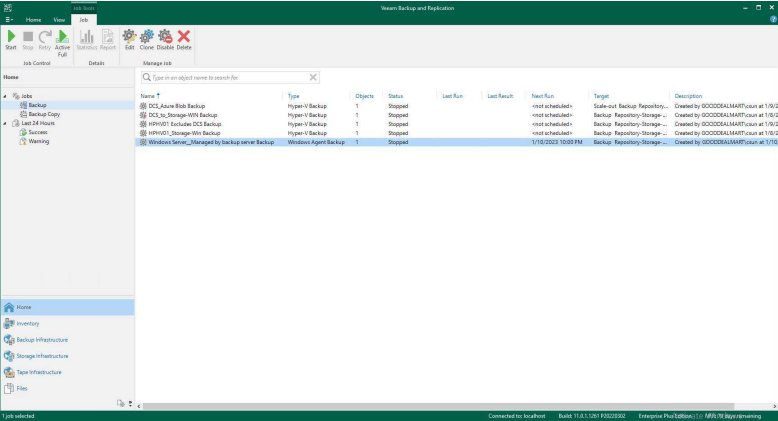
- ☒ Run the job automatically
 - ☒ Daily at this time: 10:00 PM, Everyday (Days...)
 - ☐ Monthly at this time: 10:00 PM, Fourth, Saturday, Months... (Months...)
 - ☐ Periodically every: 1, Hours, Schedule... (Schedule...)
 - ☐ After this job: DCS_Azure Blob Backup (Created by GOODDEALMART\csun at 1/9/2023 10)
- Automatic retry
 - ☒ Retry failed items processing: 3 times
 - Wait before each retry attempt for: 10 minutes
- Backup window
 - ☐ Terminate job if it exceeds allowed backup window (Window...)
 - If the job does not complete within allocated backup window, it will be terminated to prevent snapshot commit during production hours.

At the bottom right, there are four buttons: '< Previous', 'Apply' (highlighted with a blue border), 'Finish', and 'Cancel'.

89. On the Summary page, click Finish.



90. Verify the backup job has been added

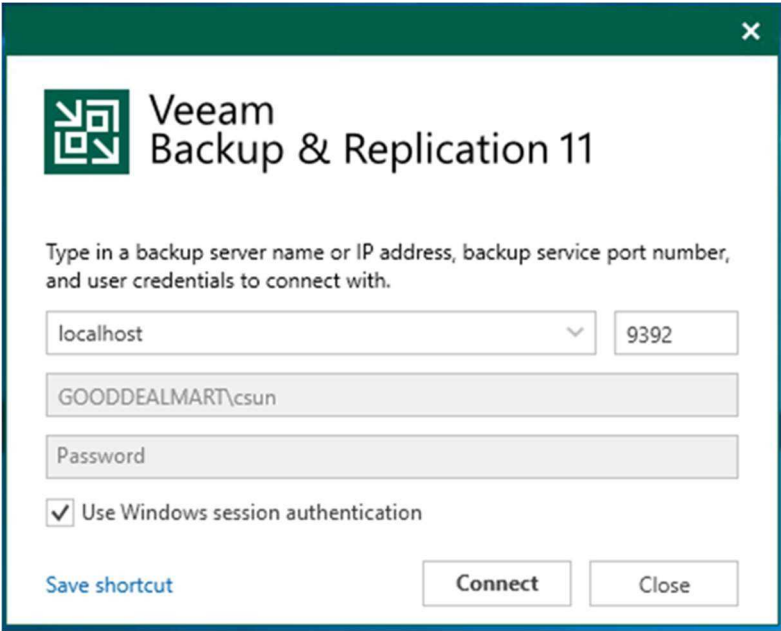


Creating a Backup job to backup the specified Physical Machines (Managed by Agent Mode)

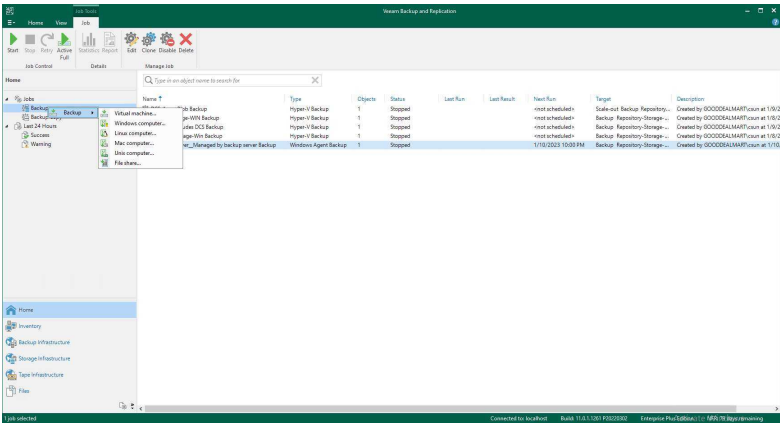
This procedure uses the managed-by-agent mode to create a backup job to backup the specific production physical machines.

Instructions	Screenshot (if applicable)
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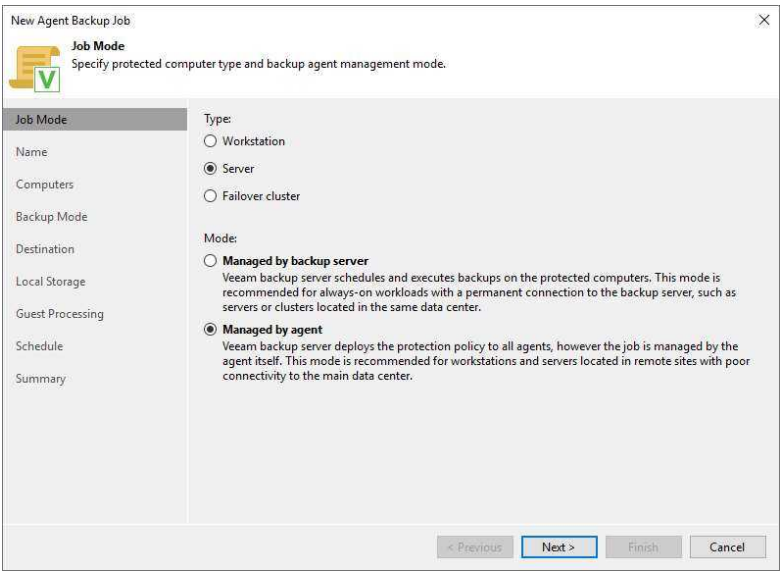
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



- 3. On the Home page, select Jobs.
- 4. Right-click Jobs, select Backup and click Windows computer.



- 5. On the Job Mode page, select the type of protected machine.
- 6. Select Managed by agent mode and click Next.



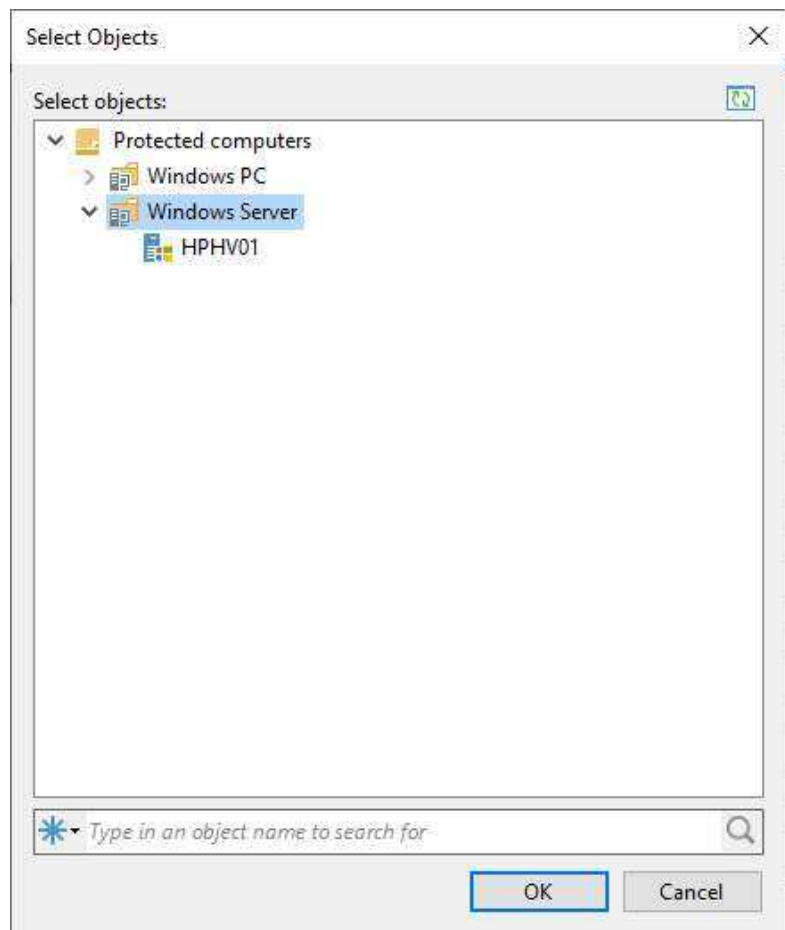
- 7. On the Name page, enter a name in the Name field.
- 8. Describe the Description field.
- 9. Select the High priority check box if you want the resource scheduler of Veeam Backup & Replication to prioritize this job higher than similar jobs and allocate resources to it in the first place.
- 10. Click Next.

The screenshot shows the 'New Agent Backup Job' dialog box with the 'Name' tab selected. The 'Name' field contains 'Windows Server_Managed by agent Backup Policy'. The 'Description' field contains 'Created by GOODDEALMART\csun at 1/10/2023 12:13 PM.'. The 'Job Mode' tab is also visible in the left sidebar. At the bottom, there are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

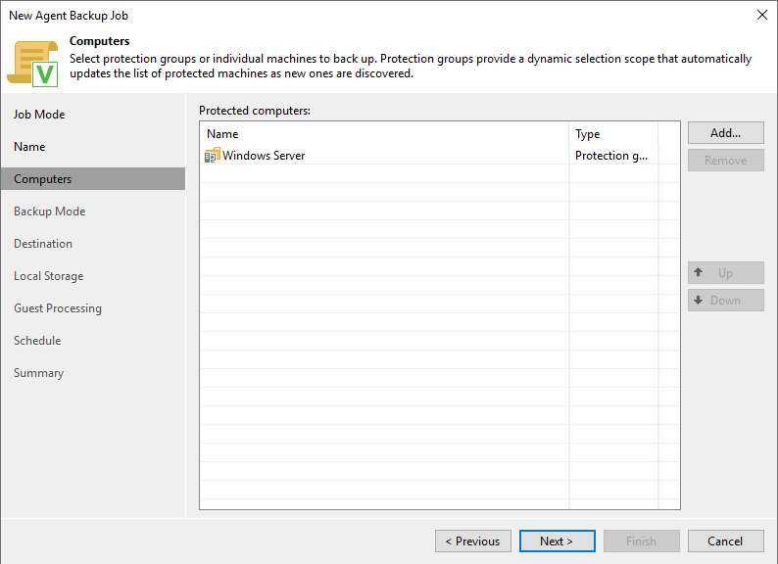
- 11. On the Computers page, click Add and select Protection group.

The screenshot shows the 'New Agent Backup Job' dialog box with the 'Computers' tab selected. The 'Protected computers' table is empty. The 'Add...' button is highlighted, and a context menu is open showing 'Protection group...' and 'Individual computer...'. The 'Job Mode' tab is also visible in the left sidebar. At the bottom, there are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

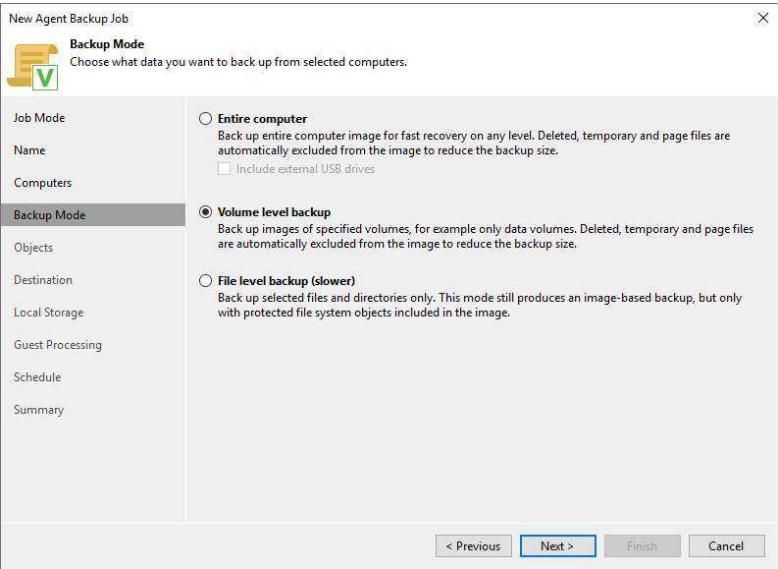
12. Select the protection group on the Select Objects page and click OK.
13. If multiple protection groups need to backup in the same backup job, you can repeat the step to add them.



14. On the Computers page, click Next.



15. On the Backup Mode page, there are three backup modes.
16. Select the Entire computer backup mode if you want to back up the entire image. Select Include external USB drives if required.
17. Select Volume level backup mode for specific computer volumes.
18. Select File-level backup (slower) for individual folders on your computer.
19. Click Next.



20. On the Objects page, select Backup the following volumes only.
21. Click Add to specify the backup scope and click Next.
22. Select the Backup all volumes except the following, and click Add to exclude objects you do not need from the backup scope.
23. Click Next.

New Agent Backup Job

Objects
Specify objects to include in the backup.

Job Mode

Name

Computers

Backup Mode

Objects

Destination

Local Storage

Guest Processing

Schedule

Summary

☒ Backup the following volumes only:

Object
OS volume

Add... Edit... Remove

☐ Backup all volumes except the following:

Object

Add... Edit... Remove

< Previous Next > Finish Cancel

24. Select Local storage for backup to a removable device and local drive on the Destination page.
25. Select the Shared folder for backup to the network shared folder.
26. Select the Veeam backup repository if you want to save a backup on a backup repository managed by the Veeam backup server. The Veeam Agent backup job is configured.
27. Select the Veeam Cloud Connect repository for backup to the Veeam

New Agent Backup Job

Destination
Choose where you want to backup data to.

Job Mode

Name

Computers

Backup Mode

Objects

Destination

Backup Server

Storage

Backup Cache

Guest Processing

Schedule

Summary

☐ Local storage
Choose this option to back up to a locally attached storage device such as USB, Firewire or eSATA external hard drive. Backing up to internal hard drives is not recommended.

☐ Shared folder
Choose this option to back up to an SMB (CIFS) share on a Network Attached Storage (NAS) device, or on a regular file server.

☒ Veeam backup repository
Choose this option to back up to a backup repository managed by Veeam Backup & Replication 10 or later server.

☐ Veeam Cloud Connect repository
Choose this option to back up to a cloud repository managed by Veeam Cloud Connect service provider.

< Previous Next > Finish Cancel

Cloud Connect service provider.

28. Click Next.

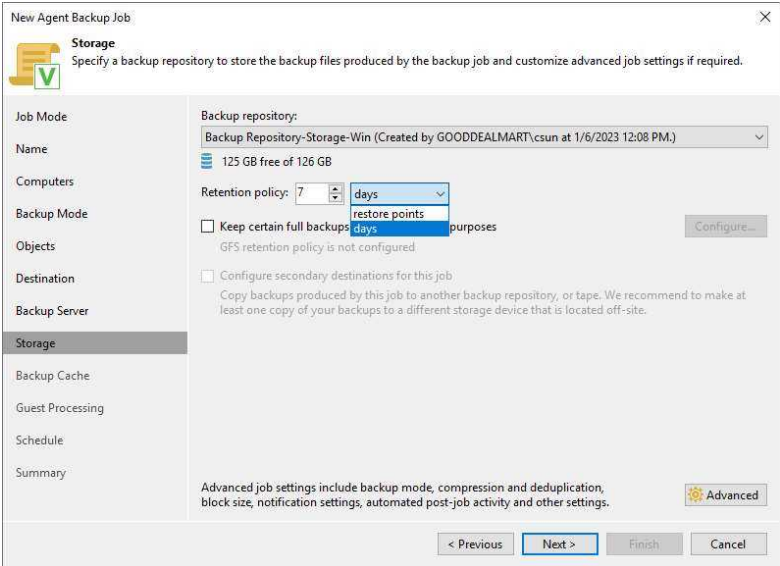
29. On the Backup Server page, enter the DNS name or IP address in the DNS name or external IP address field.

The screenshot shows the 'New Agent Backup Job' wizard with the 'Backup Server' page selected. The left sidebar lists the steps: Job Mode, Name, Computers, Backup Mode, Objects, Destination, Backup Server (selected), Storage, Backup Cache, Guest Processing, Schedule, and Summary. The main area is titled 'Backup Server' and contains the instruction 'Specify Veeam Backup & Replication management server connection parameters.' Below this, there is a field for 'DNS name or external IP address' with the value 'VBR11.gooddealmart.ca' entered. A note states: 'The specified DNS name must resolve to the external IP address of your backup server, as remote backup agents need to be able to establish network connection to this endpoint.' At the bottom, there are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'.

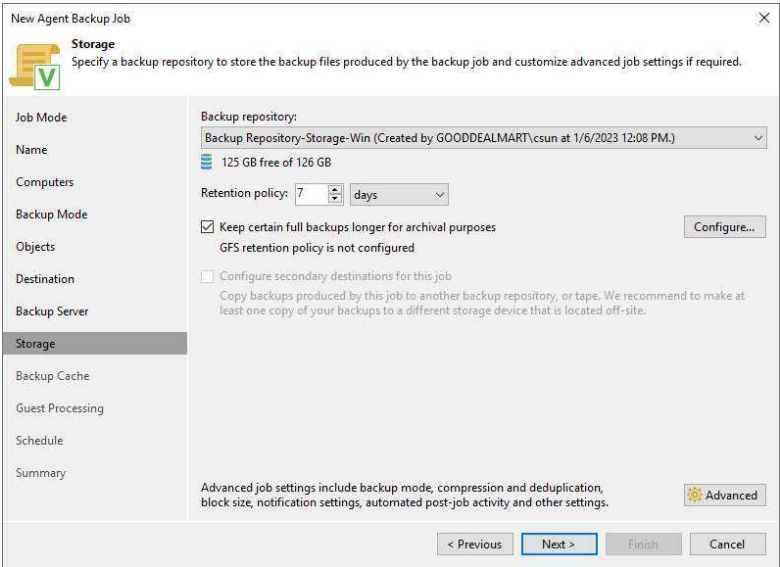
30. Select the backup repository from the Backup repository drop-down list on the Storage page.

The screenshot shows the 'New Agent Backup Job' wizard with the 'Storage' page selected. The left sidebar lists the steps: Job Mode, Name, Computers, Backup Mode, Objects, Destination, Backup Server, Storage (selected), Backup Cache, Guest Processing, Schedule, and Summary. The main area is titled 'Storage' and contains the instruction 'Specify a backup repository to store the backup files produced by the backup job and customize advanced job settings if required.' Below this, there is a 'Backup repository:' section with a dropdown menu showing 'Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 12:08 PM.)'. Below the dropdown, it shows '125 GB free of 126 GB'. There is a 'Retention policy:' section with a dropdown set to '7' and 'days'. Below this, there are two checkboxes: 'Keep certain full backups longer for archival purposes' (unchecked) and 'Configure secondary destinations for this job' (unchecked). A 'Configure...' button is next to the first checkbox. A note states: 'Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.' At the bottom, there are buttons for '< Previous', 'Next >', 'Finish', and 'Cancel'. An 'Advanced' button with a gear icon is also present.

- 31. Set the retention policy settings for restore points in the Retention Policy field.
- 32. Select days or restore points from the drop-down list.



- 33. You can configure the backup job's GFS retention policy settings to ignore the short-term retention policy for some full backups and store them for long-term archiving.
- 34. Select the Keep certain full backups for longer for archival purposes. If you need it, click Configure.

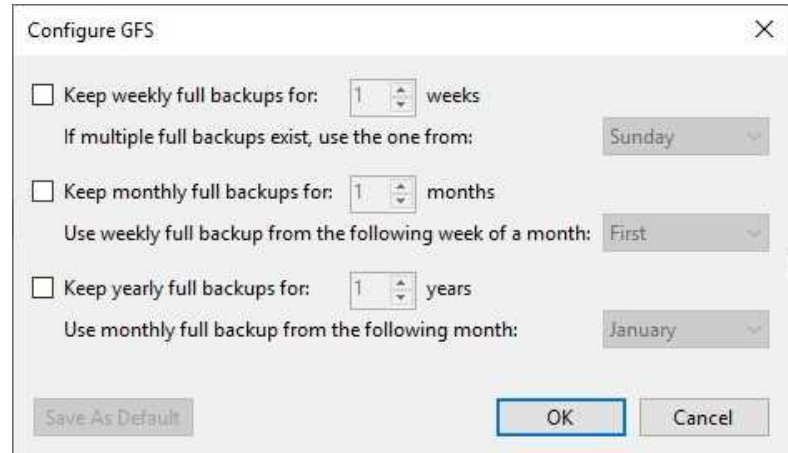


35. Select the Keep weekly full backups for check box, and specify the weeks you want to prevent restore points from being modified and deleted.

36. Select the Keep monthly full backups for check box, and specify the months you want to prevent restore points from being modified and deleted.

37. Select the Keep yearly full backups for check box, and specify the years you want to prevent restore points from being modified and deleted.

38. Click OK.



39. On the Storage page, click Advanced.

New Agent Backup Job

Storage

Specify a backup repository to store the backup files produced by the backup job and customize advanced job settings if required.

Job Mode

Name

Computers

Backup Mode

Objects

Destination

Backup Server

Storage

Backup Cache

Guest Processing

Schedule

Summary

Backup repository:

Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 12:08 PM.)

125 GB free of 126 GB

Retention policy: 7 2 days

☐ Keep certain full backups longer for archival purposes

Configure...

GFS retention policy is not configured

☐ Configure secondary destinations for this job

Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings.

Advanced

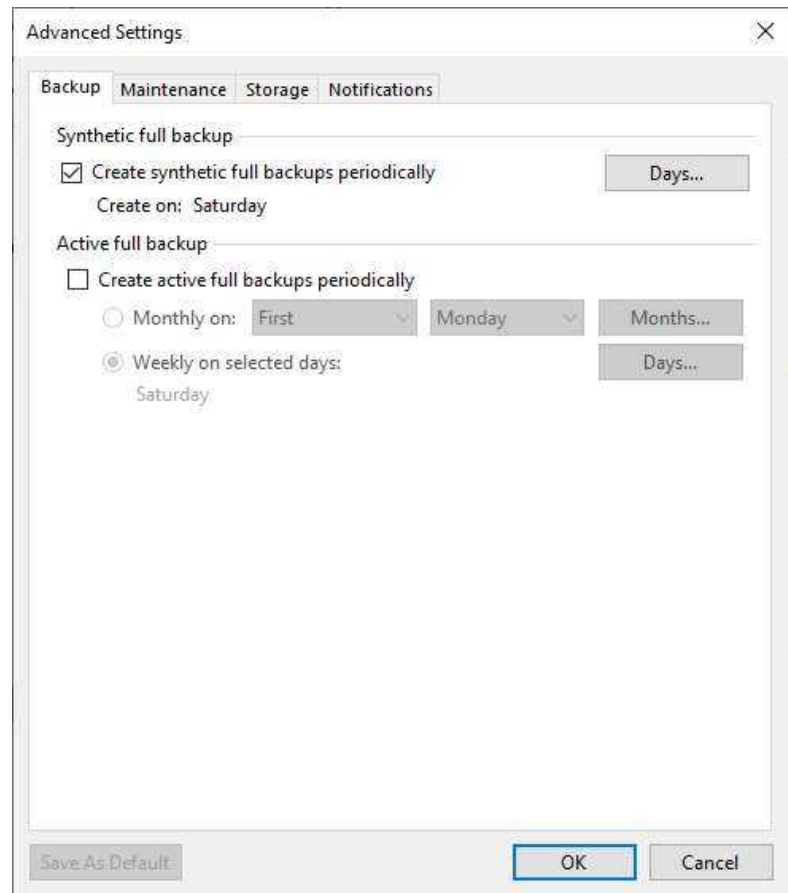
< Previous

Next >

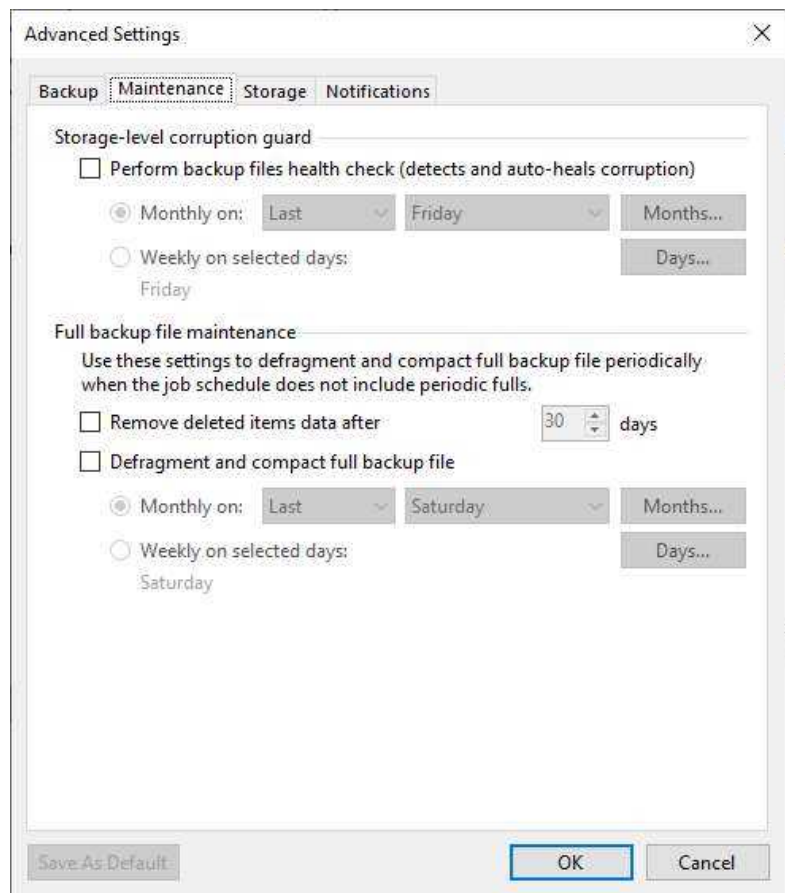
Finish

Cancel

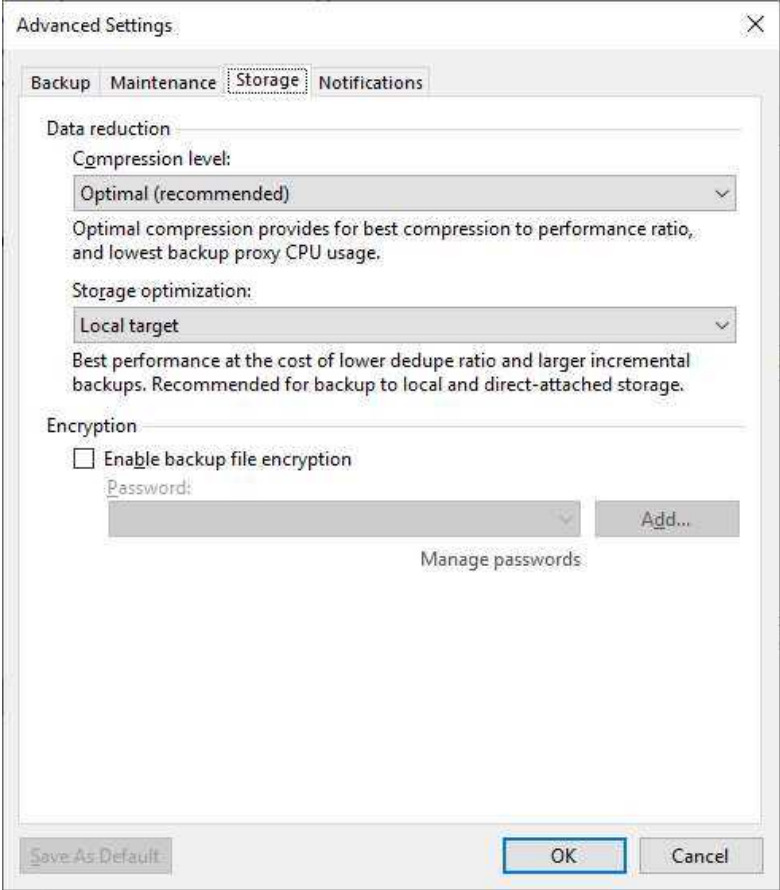
40. The Create synthetic full backups periodically checkbox if you want to create full synthetic backups periodically.
41. Select the Create active full backups periodically checkbox to create active full backups periodically.



42. On the Advanced Settings, select Maintenance.
43. Select the Perform backup files health check (detect and auto-heals corruption) checkbox and specify the schedule for the health check if required.
44. Select the Remove deleted items data after the check box and enter the days you want backup data for deleted VMs to be kept if required.
45. Select the Defragment and compact full backup file check box and specify the schedule for the compact operation to compact a full backup if required periodically.



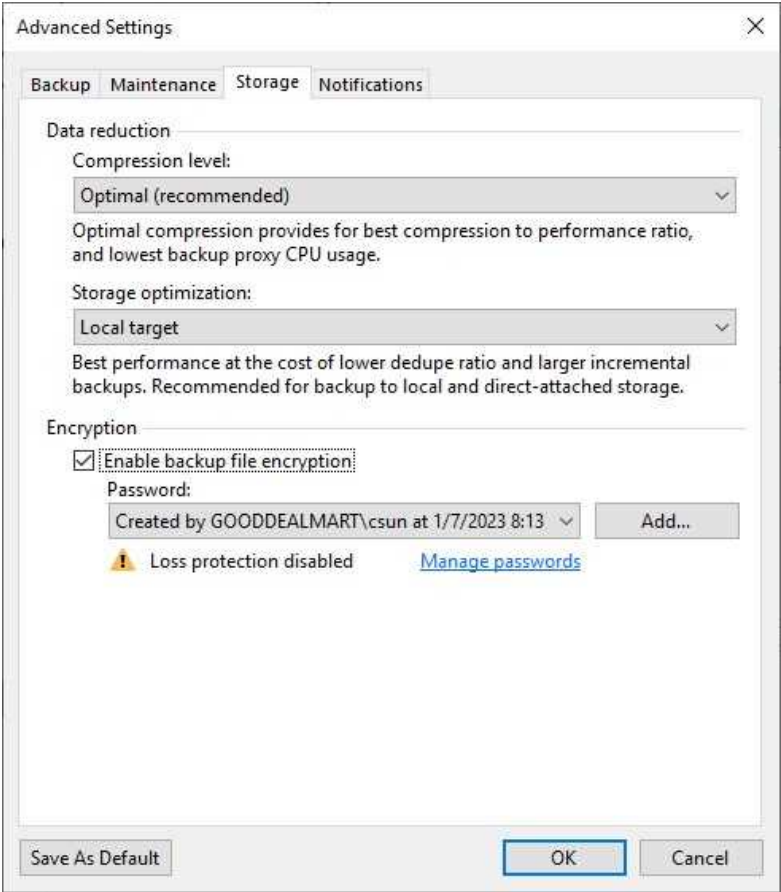
- 46. On the Storage page, click OK.
- 47. Select the compression level for the backup from the drop-down list.



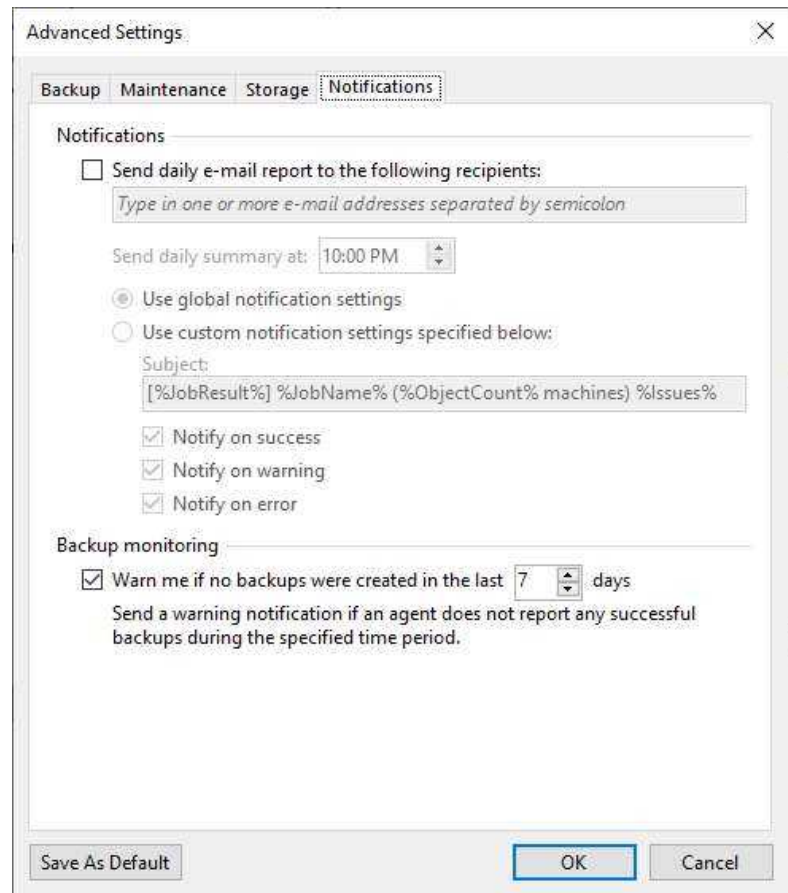
- 48. Select Storage optimization from the drop-down list.

Storage optimization option	Block size	Description
Local target (large blocks)	4096 KB	Recommended for files that are larger than 16 TB. This option will provide the lowest deduplication ratio and the largest size of incremental files.
Local target	1024 KB	Recommended for backup and replication to SAN, DAS or local storage. This option provides the fastest job performance but reduces the deduplication ratio, because with larger data blocks it is less likely to find identical blocks.
LAN target	512 KB	Recommended for backup and replication to NAS, and on-site backup and replication. This option provides a better deduplication ratio and reduces the size of a file because of reduced data block sizes.
WAN target	256 KB	Recommended if you are planning to use WAN for off-site backup and replication. This option provides the maximum deduplication ratio and the smallest size of files that allows you to reduce the amount of traffic over WAN.

- 49. Select the Enable backup file encryption checkbox to encrypt the content of backup files.
- 50. Select a password from the drop-down list. If you haven't done so, click Add or use the Manage passwords link to create a new password.



51. On the Advanced Settings, select Notifications.
52. Keep the default settings and click OK.



53. On the Storage page, click Next.

The screenshot shows the 'New Agent Backup Job' wizard with the 'Storage' tab selected. The left sidebar lists the steps: Job Mode, Name, Computers, Backup Mode, Objects, Destination, Backup Server, Storage (selected), Backup Cache, Guest Processing, Schedule, and Summary. The main area is titled 'Storage' and contains the following settings: 'Backup repository:' is set to 'Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 12:08 PM.)' with a dropdown arrow; '125 GB free of 126 GB' is displayed; 'Retention policy:' is set to '7 days'; there are two unchecked checkboxes: 'Keep certain full backups longer for archival purposes' and 'Configure secondary destinations for this job'; a 'Configure...' button is next to the first checkbox; a note states 'GFS retention policy is not configured'; another note says 'Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.'; an 'Advanced' button with a gear icon is at the bottom right; and navigation buttons '< Previous', 'Next >', 'Finish', and 'Cancel' are at the bottom.

54. On the Backup Cache page, if required, select the Enable backup cache checkbox and specify the size for the backup cache in the Maximum size field.

55. Select Automatic selection for Veeam Agent to automatically pick a location for the backup cache.

56. Or select Manual selection if you want to manually specify a location for the backup cache and specify a path to the folder on a

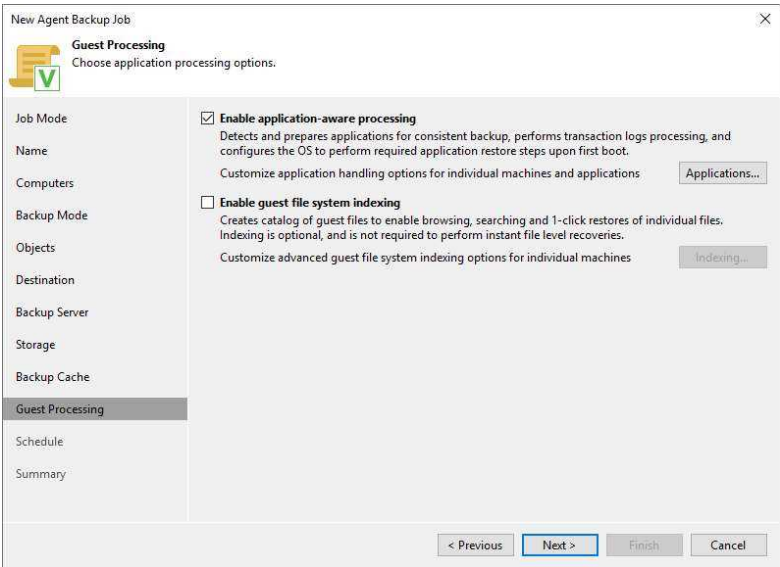
The screenshot shows the 'New Agent Backup Job' wizard with the 'Backup Cache' tab selected. The left sidebar is the same as in the previous screenshot, with 'Backup Cache' now selected. The main area is titled 'Backup Cache' and contains the following settings: a description 'Local backup cache allows backups to continue on schedule even if remote backup target is temporarily unavailable.'; an unchecked checkbox 'Enable backup cache'; a note 'Whenever a connection to the backup target cannot be established, the cache folder will be used instead. Cached backups are uploaded to the target as soon as it becomes reachable.'; 'Maximum size:' is set to '10 GB'; 'Location:' has two radio button options: 'Automatic selection (recommended)' (which is selected) and 'Manual selection (specified volume must exist on every machine)'; a 'Folder:' text input field is below the manual selection option; and navigation buttons '< Previous', 'Next >', 'Finish', and 'Cancel' are at the bottom.

protected computer in the Folder field.

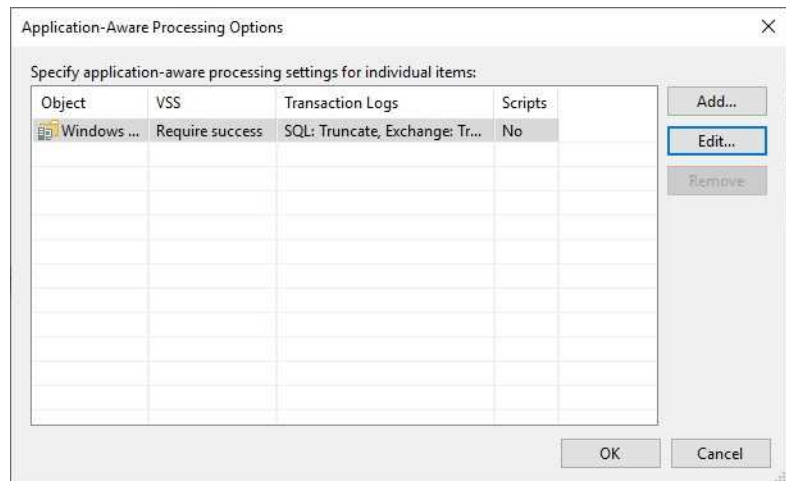
57. Click Next.

58. When you add Physical machines running VSS-aware applications to the backup job, you can enable application-aware processing to create a transactionally consistent backup. The transactionally consistent backup ensures that machines can recover applications without data loss.

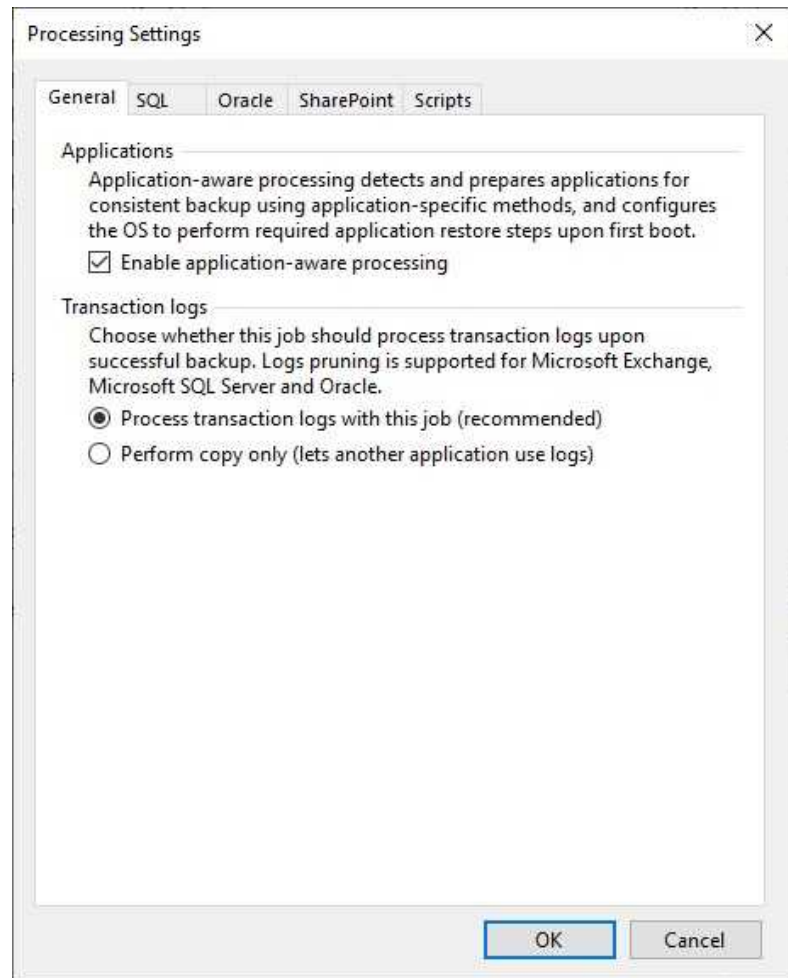
59. Select the Enable application-aware processing check box on the Guest Processing page and click Applications.



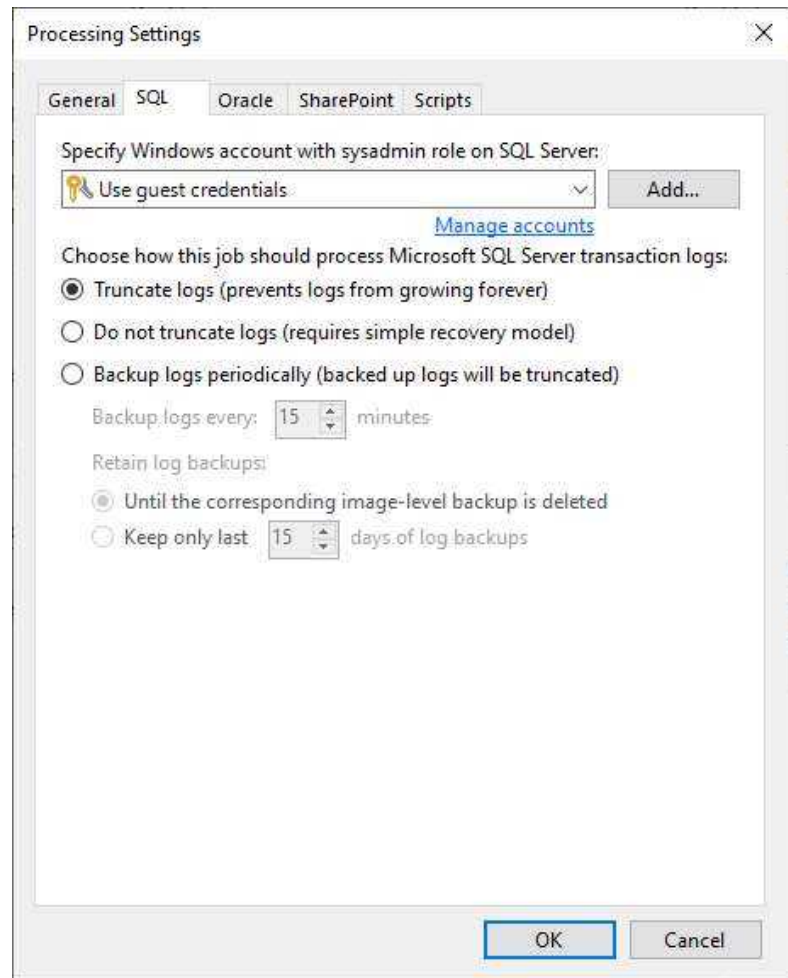
60. On the Application-Aware Processing Options page, select the Object, and click Edit.



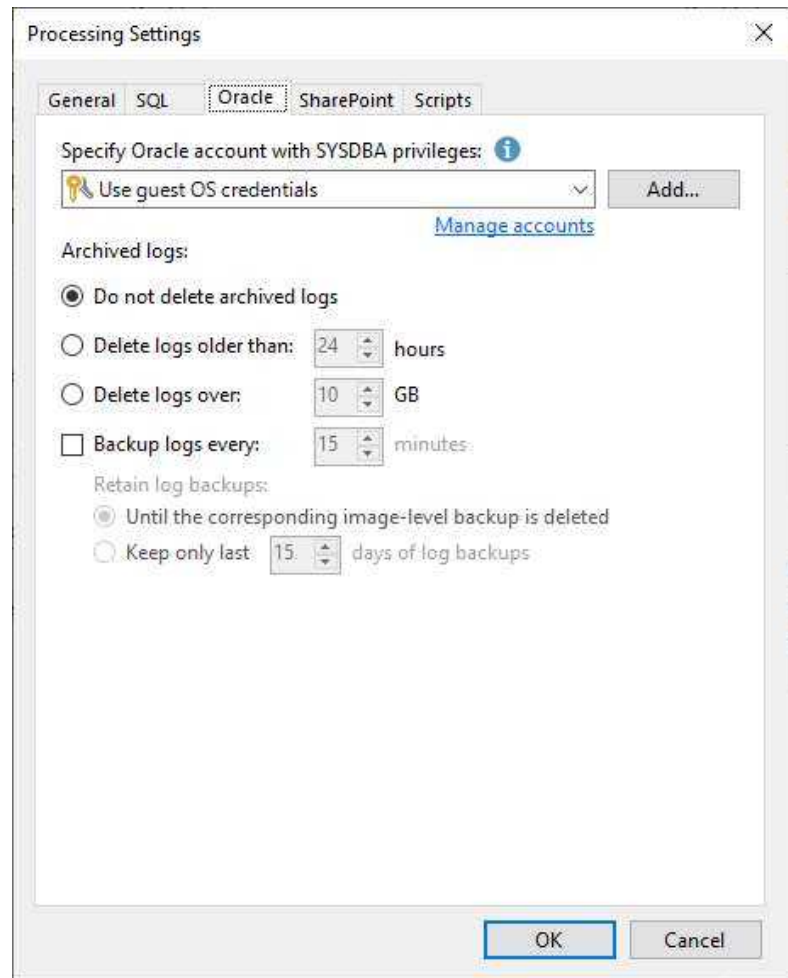
61. On the Processing Settings, click General.
62. Make sure that the Enable application-aware processing checkbox is selected.
63. Select Process transaction logs with this job (recommended)



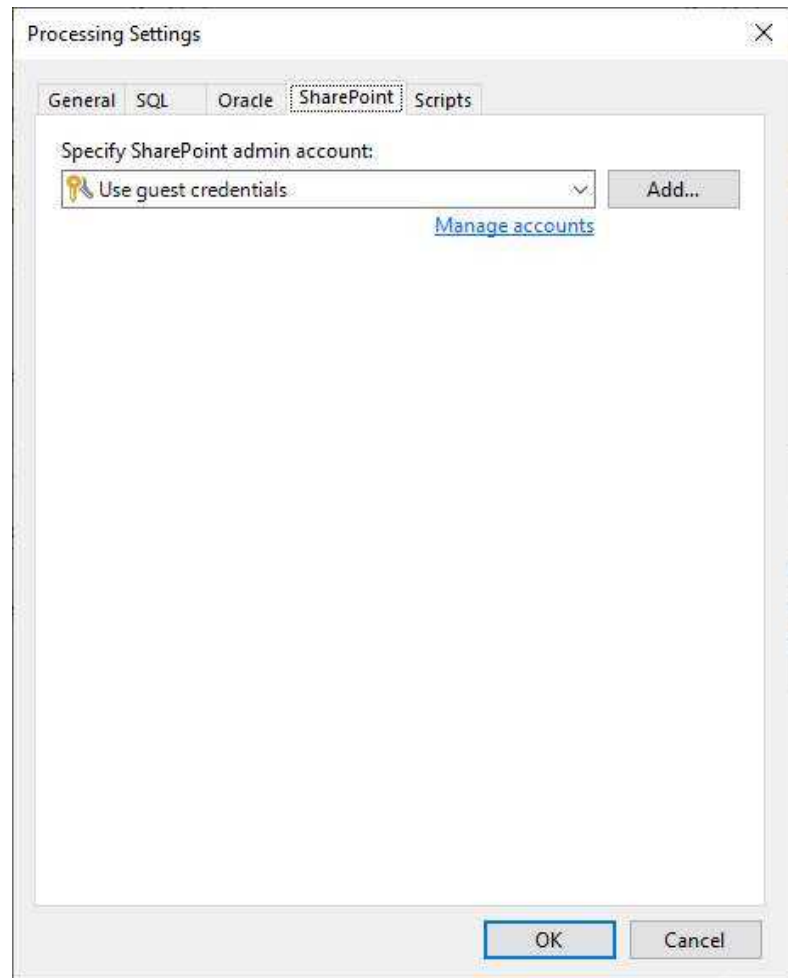
64. On the Processing Settings page, click SQL if the Physical Machine is a Microsoft SQL Server.
65. Select from the Specify Microsoft SQL Server account with database admin privileges list a user account with access permissions on the database.



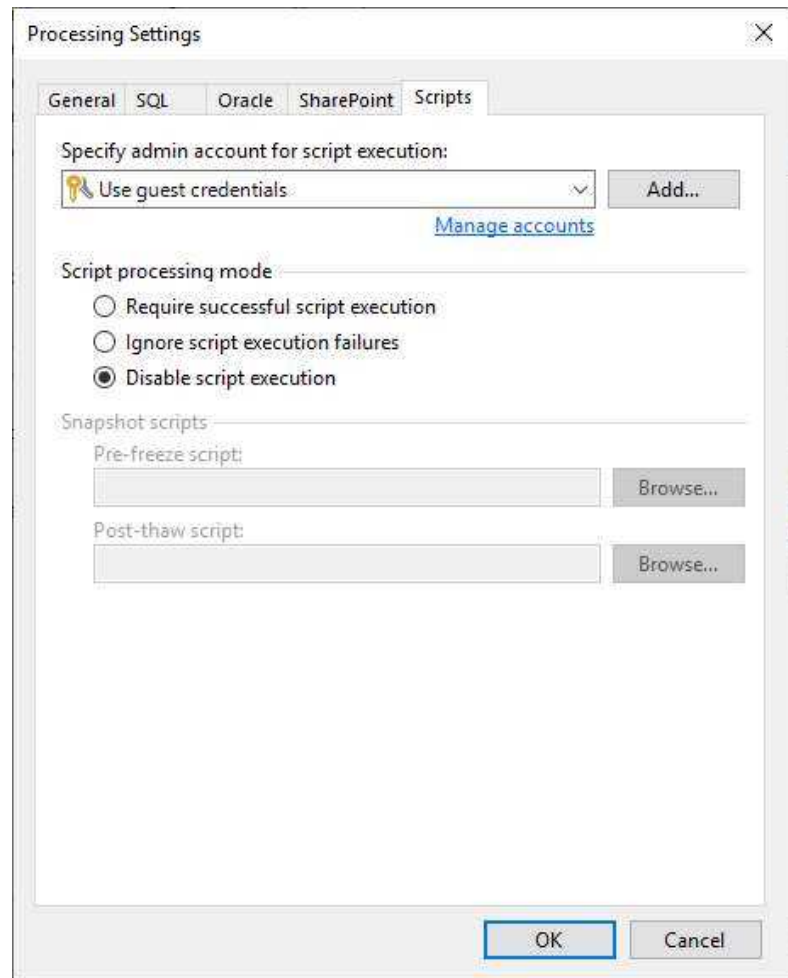
66. Click Oracle on the Processing Settings page if the Physical Machine is an Oracle Server.
67. Select a user account from the drop-down list.
68. Select Do not delete archived logs if you need Veeam Backup & Replication to preserve archived logs on the VM guest OS.



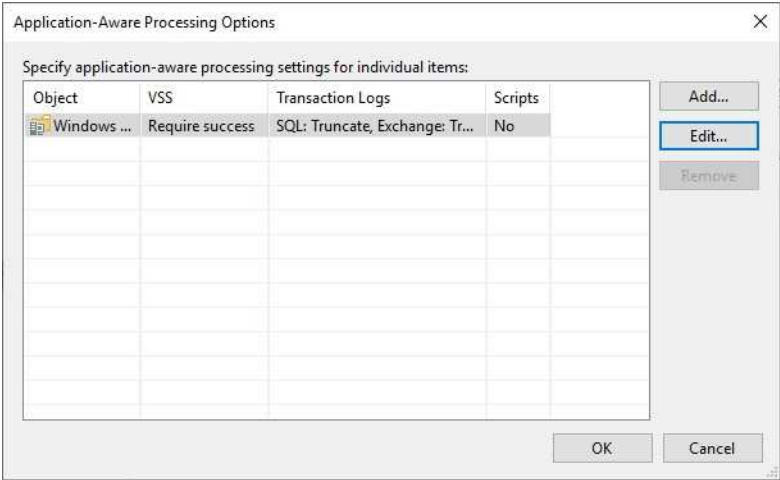
69. On the Processing Settings page, click SharePoint if the Physical Machine is a SharePoint Server.
70. Select a user account from the drop-down list.



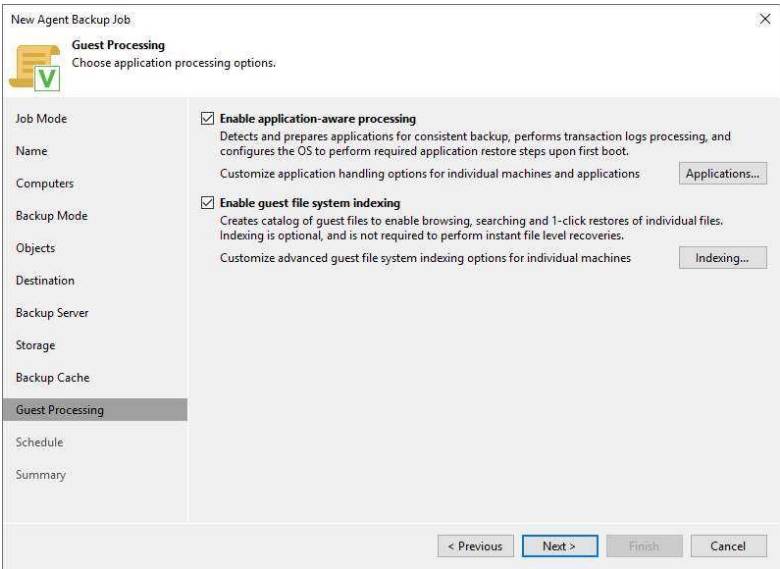
71. ON the Processing Settings page, click Scripts.
72. In the Specify admin account for script execution section, specify a user account.
73. Select Disable script execution.
74. Select Require successful script execution if required.
75. Select Ignore script execution failures if required.
76. Click OK.



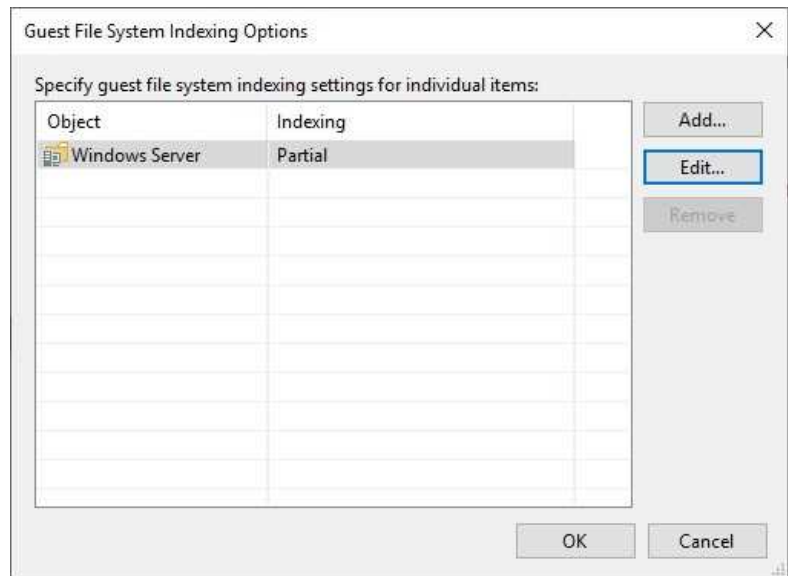
77. On the Application-Aware Processing Options page, click OK.



78. Select the Enable guest file system indexing checkbox and click Indexing.

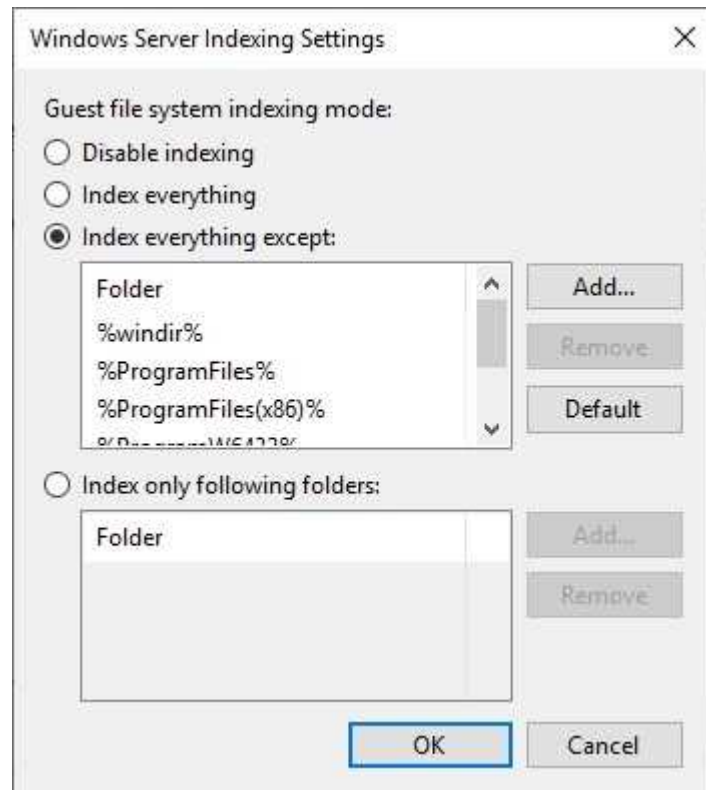


79. On the Guest File System Indexing Options page, select the Object, click Edit and.

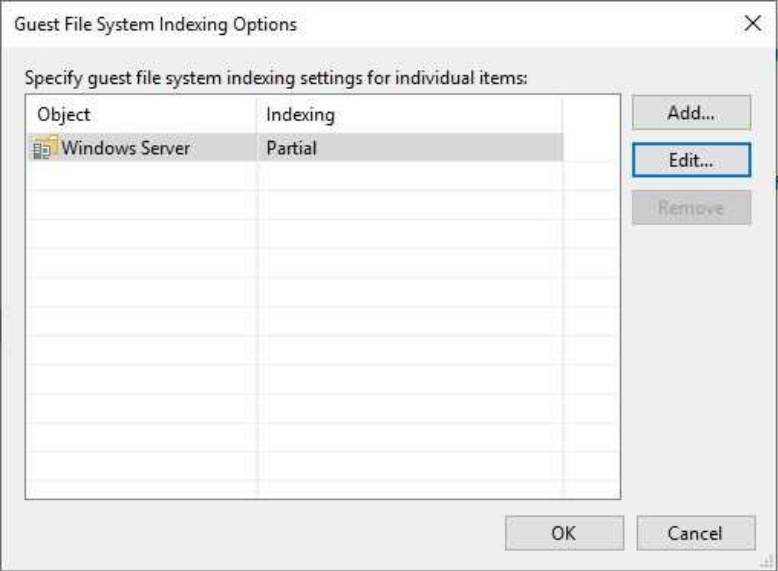


80. On the Guest file system indexing mode page, keep the default settings.

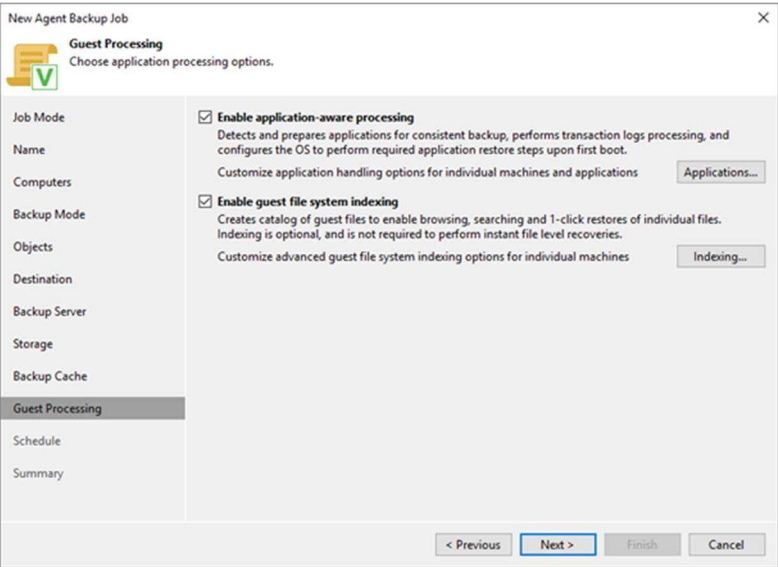
81. Click OK.



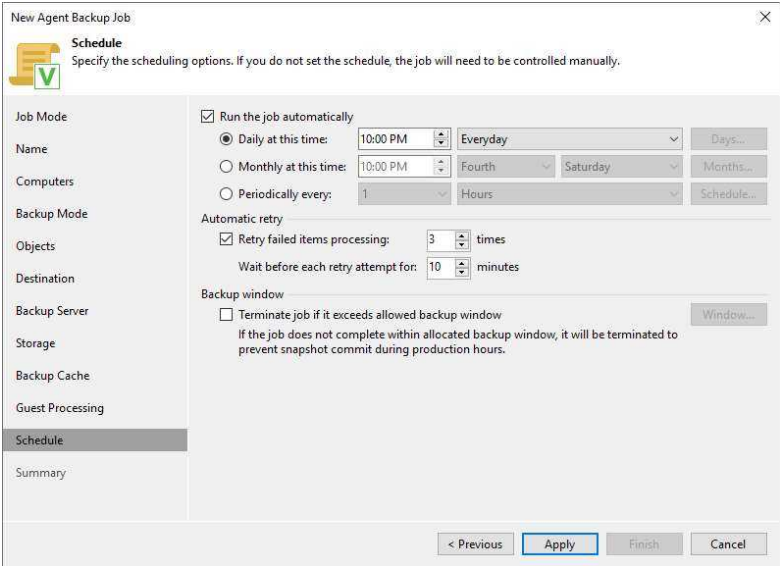
82. On the Guest File System Indexing Options page, click OK.



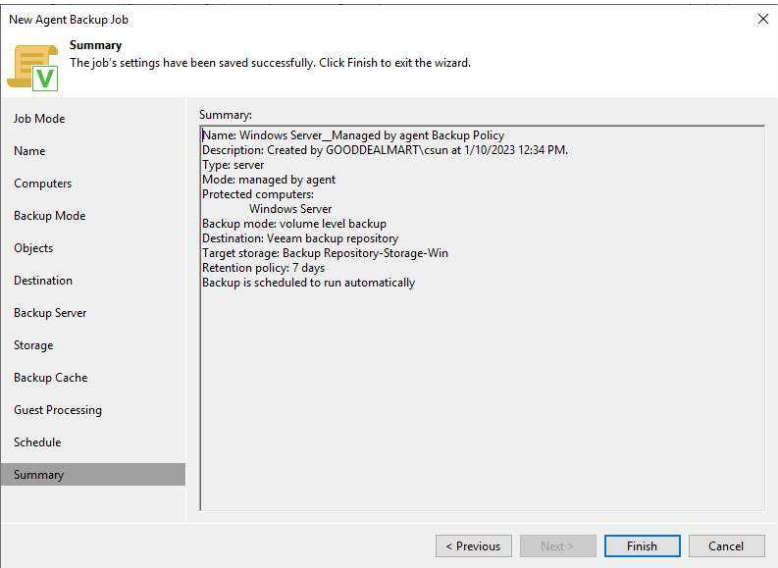
83. On the Guest Processing page, click Next.



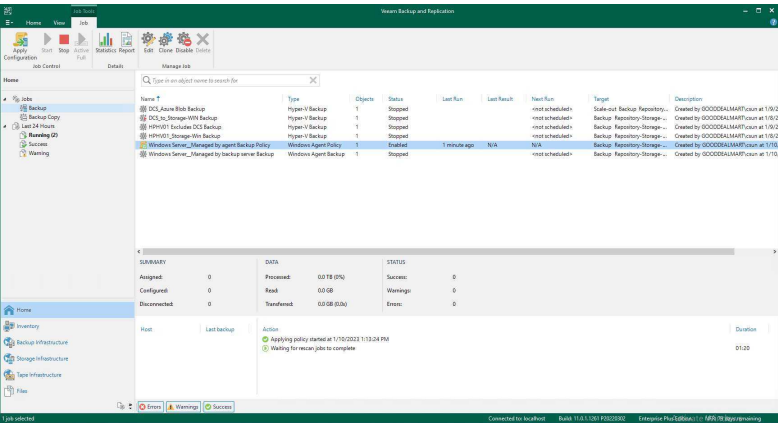
- 84. Select Run the job automatically on the Schedule page and select your specified schedule.
- 85. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
- 86. Define the time interval the backup job must complete in the Backup window section. The backup window ensures that the job does not overlap with production hours and that there is no unnecessary overhead on the production environment.
- 87. Click Apply.



88. On the Summary page, click Finish.



89. Verify the backup job has been added

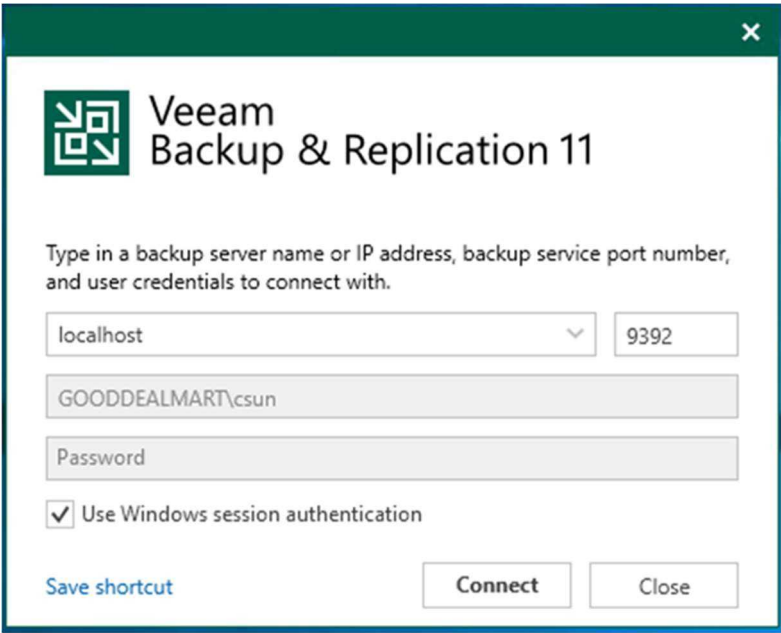


Creating a Backup job to backup all VMS of the Hyper-V Host

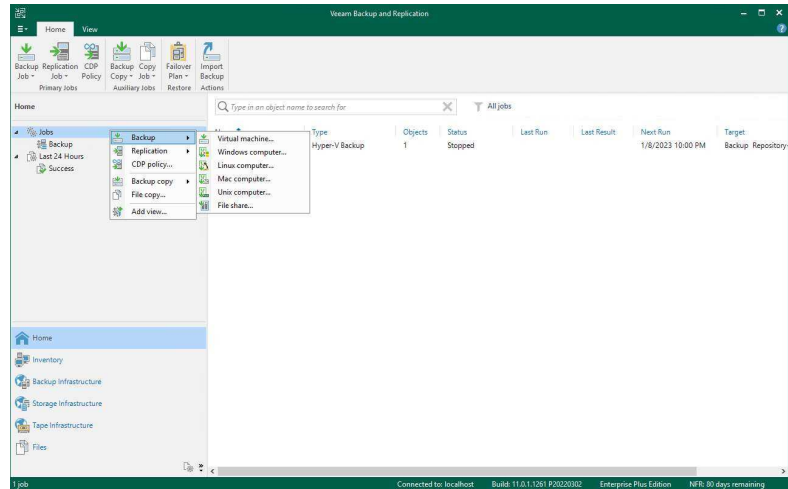
This procedure creates a backup job to backup all VMS of the production Hyper-V host. The new VMS will be backup after the backup job is created. You don't need to modify the backup job settings.

Instructions	Screenshot (if applicable)
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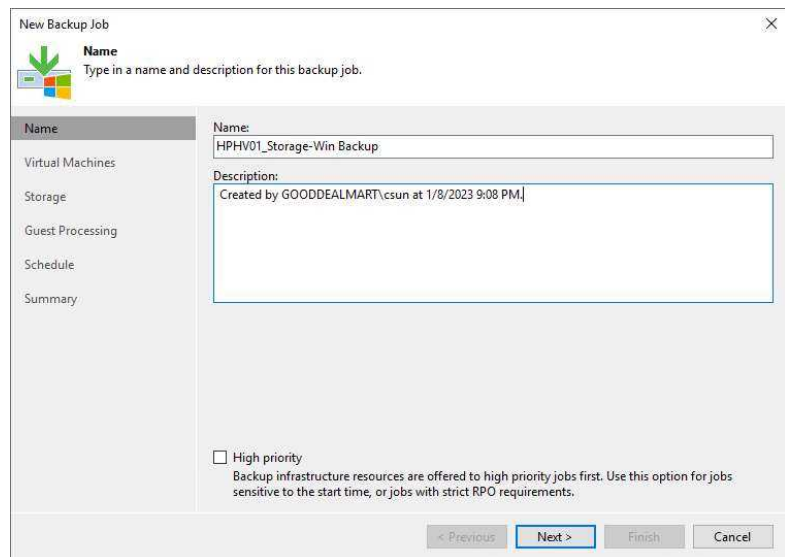
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



- On the Home page, select Jobs, right-click Jobs, select Backup and click Virtual machine.



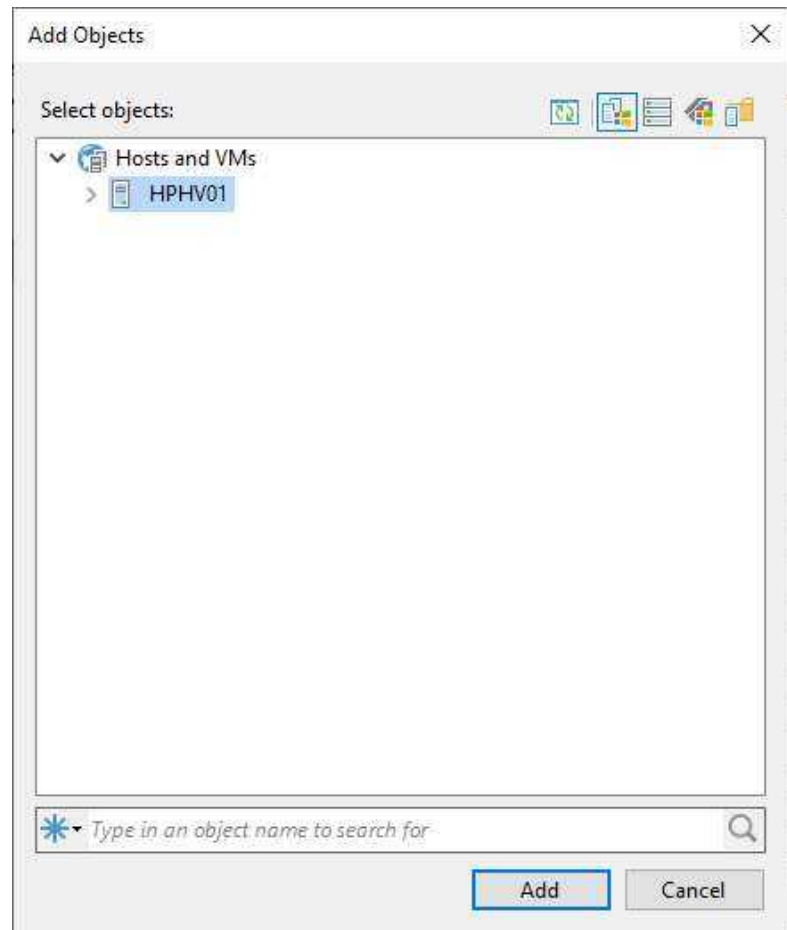
- On the Name page, enter a name in the Name field.
- Describe the Description field.
- Select the High priority check box if you want the resource scheduler of Veeam Backup & Replication to prioritize this job higher than similar jobs and allocate resources to it in the first place.
- Click Next.



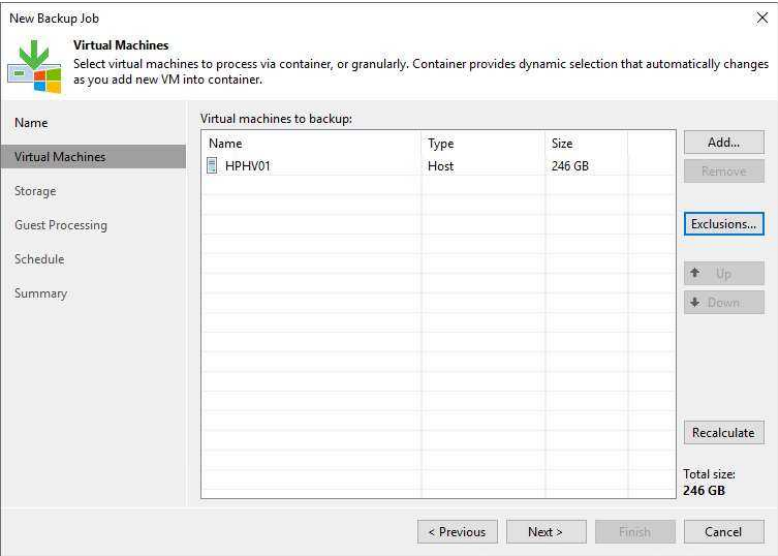
- On the Virtual Machines page, click Add.

[illegible]

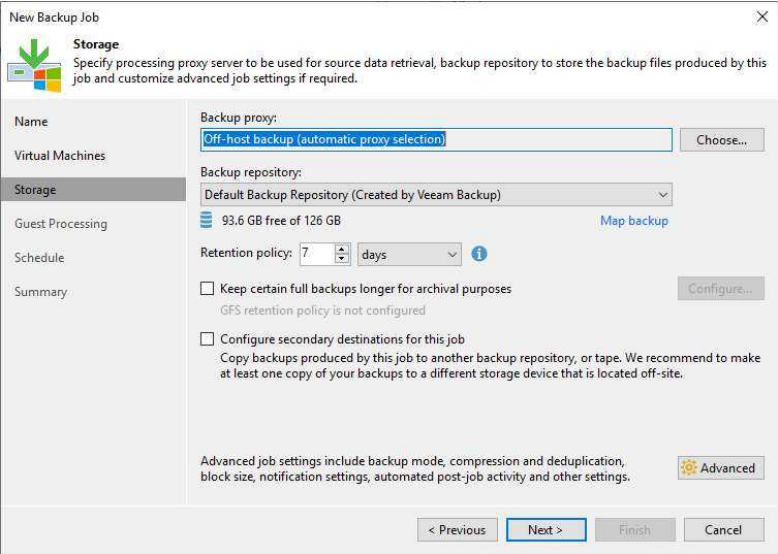
9. Select the Host on the Add Objects page list and click Add.
10. If multiple Hosts need to backup in the same backup job, you can repeat the step to add them.



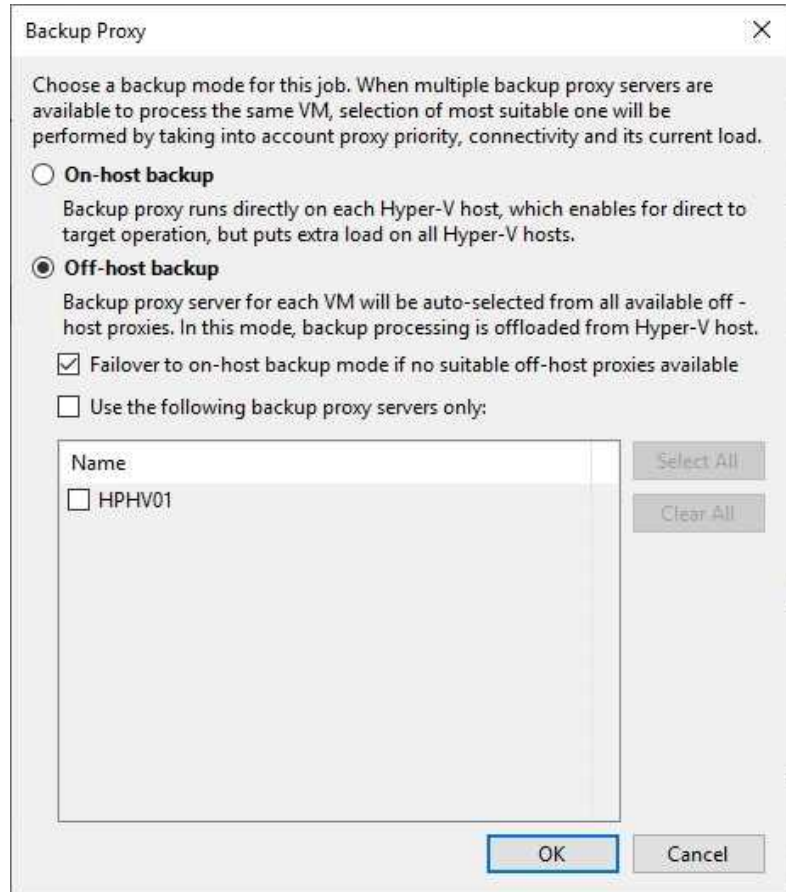
11. On the Virtual Machines page, click Next.



12. On the Storage, click Choose to select a backup proxy if you don't want to use the default Off-host backup (automatic proxy selection) setting.



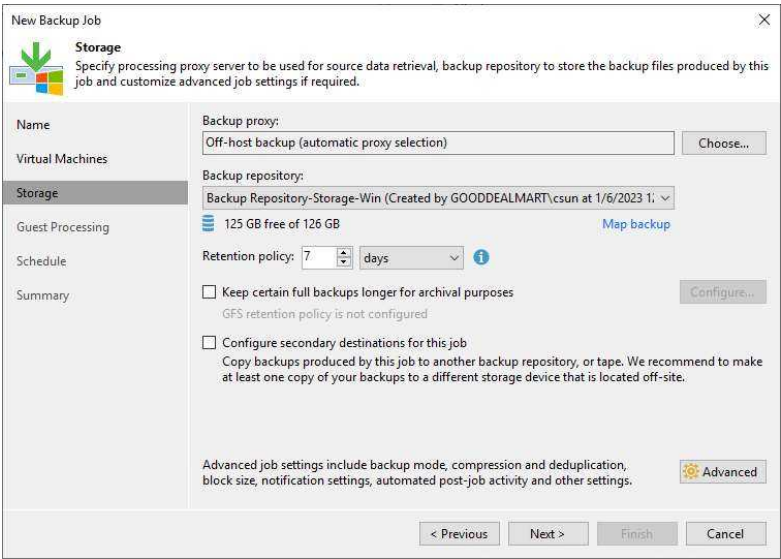
13. On the Backup Proxy page, if you select On-host backup mode, the source Microsoft HyperV host will serve as both the source host and the backup proxy. In this mode, Veeam Data Mover runs directly on the source host, which speeds up data retrieval but places additional strain on the host.
14. If you select Off-host backup mode, Veeam Data Mover will run on a dedicated off-host backup proxy. All backup processing operations from the source host are routed to the off-host backup proxy in this model.
15. If the off-host backup mode is selected for the job, but there are no off-host backup proxies available when the job begins, Veeam Backup & Replication will transition to on-host backup mode.
16. You unselect the Failover to on-host backup mode if no suitable off-host



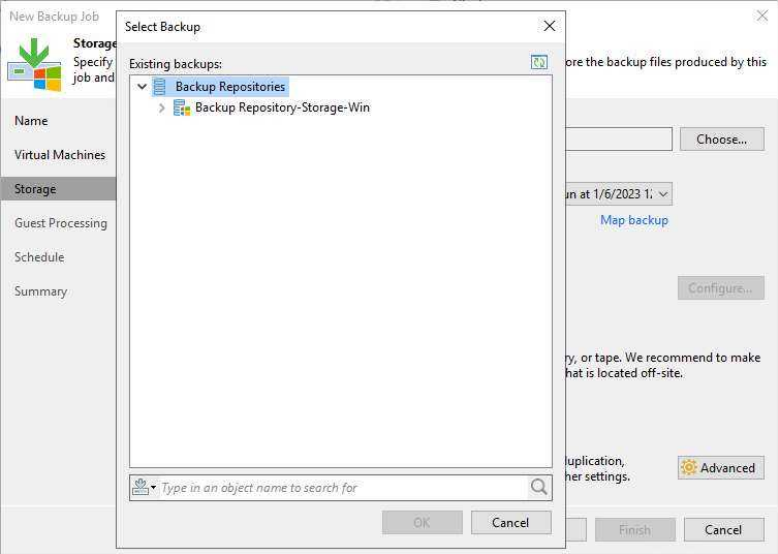
proxies available
checkbox, but if off-host
backup proxies are not
available or are not
configured properly, the
job will fail to start.

17. Click OK.

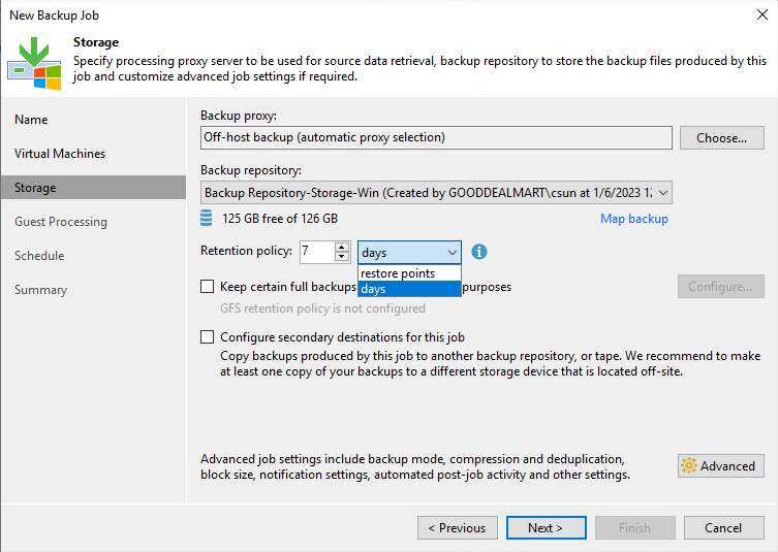
18. Select the backup
repository from the
Backup repository drop-
down list where the
created backup files must
be saved.



19. Click Map backup is helpful if you have relocated backup files to a new backup repository and want to point the job to existing backups in this new backup repository. Backup job mapping can also be used if the configuration database becomes corrupt and you need to reconfigure backup jobs.

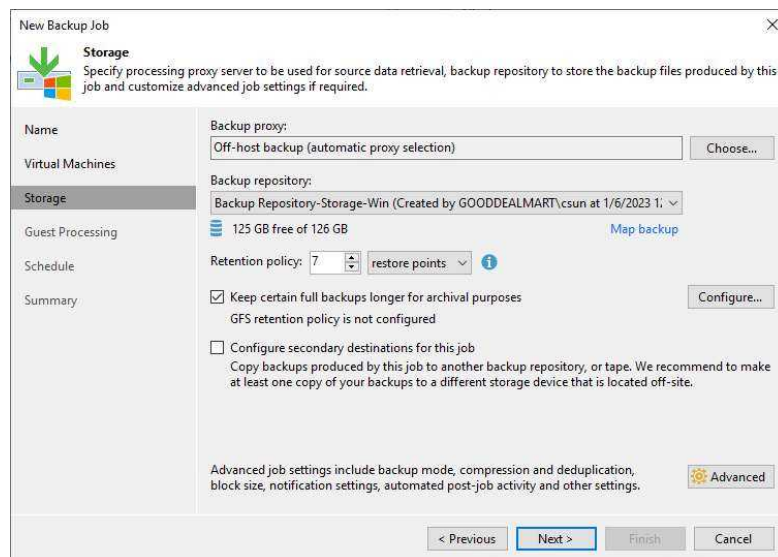


20. Set the retention policy settings for restore points in the Retention Policy field.
21. Select days or restore points from the drop-down list.



22. You can configure the backup job's GFS retention policy settings to ignore the short-term retention policy for some full backups and store them for long-term archiving.

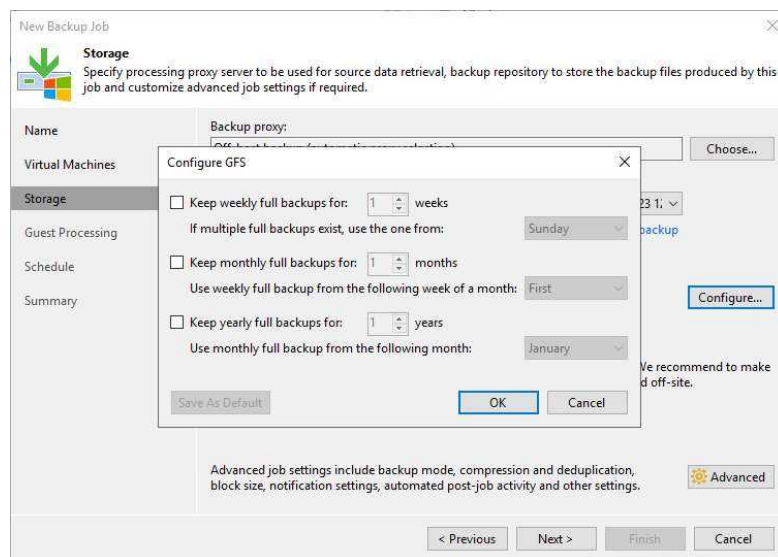
23. Select the Keep certain full backups for longer for archival purposes. If you need it, click Configure.



24. Select the Keep weekly full backups for check box, and specify the number of weeks you want to prevent restore points from being modified and deleted.

25. Select the Keep monthly full backups for check box, and specify the months you want to prevent restore points from being modified and deleted.

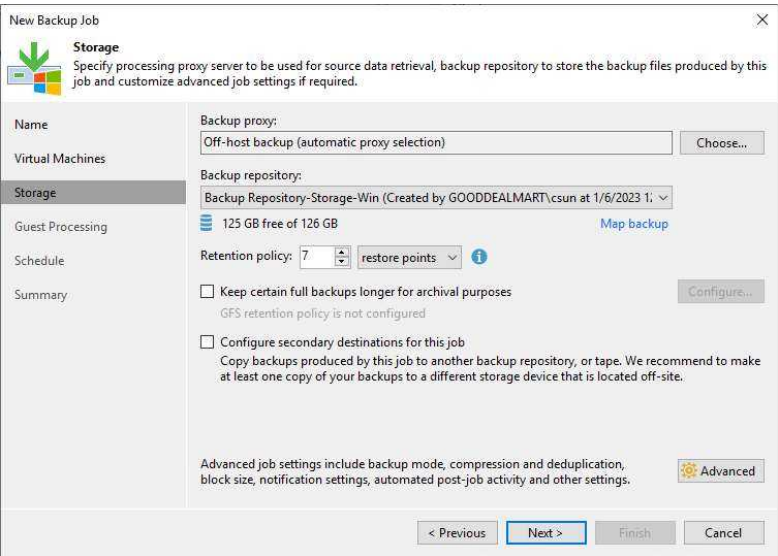
26. Select the Keep yearly full backups for check box, and specify the years you want to prevent restore



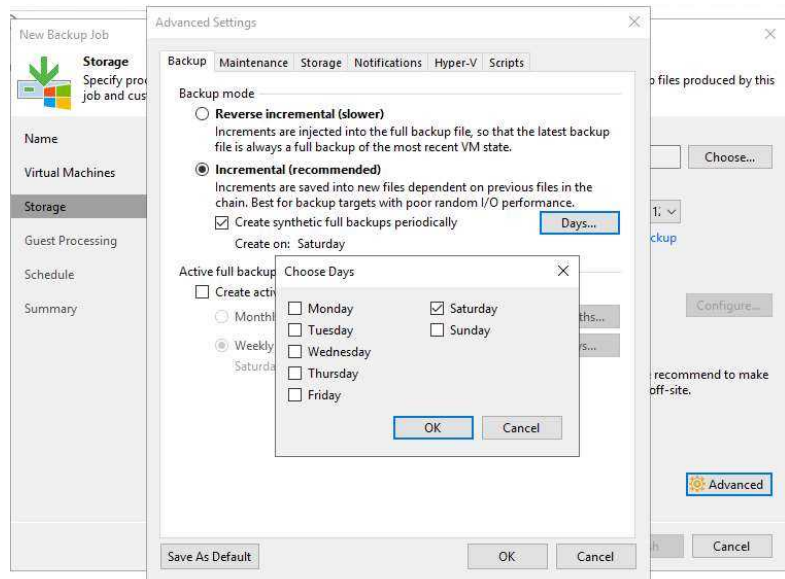
points from being modified and deleted.

27. Click OK.

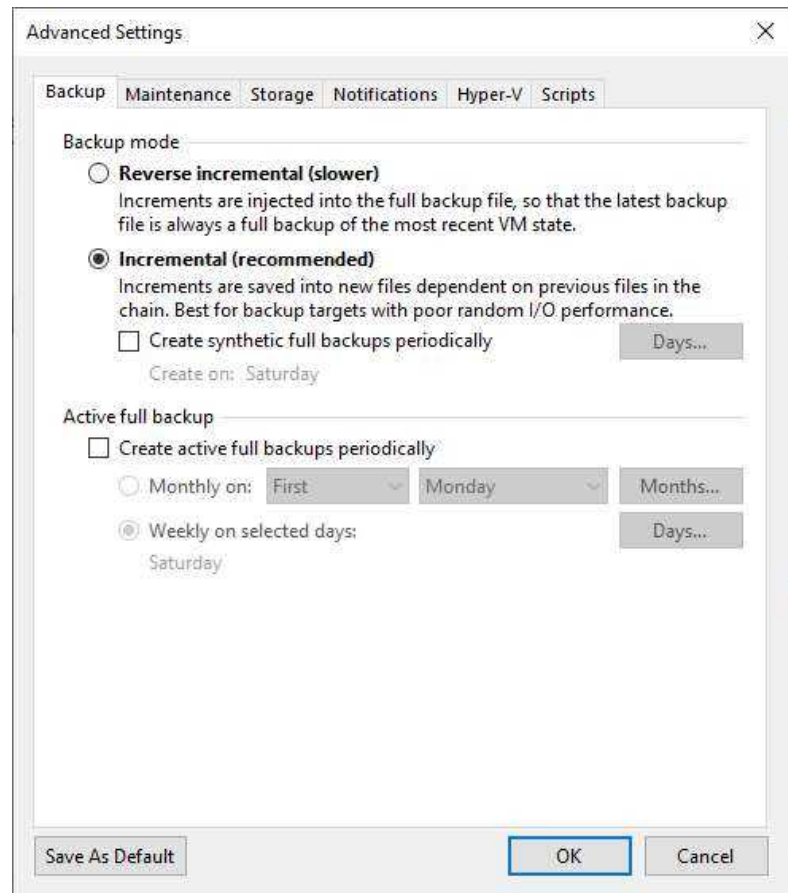
28. On the Storage page, click Advanced.



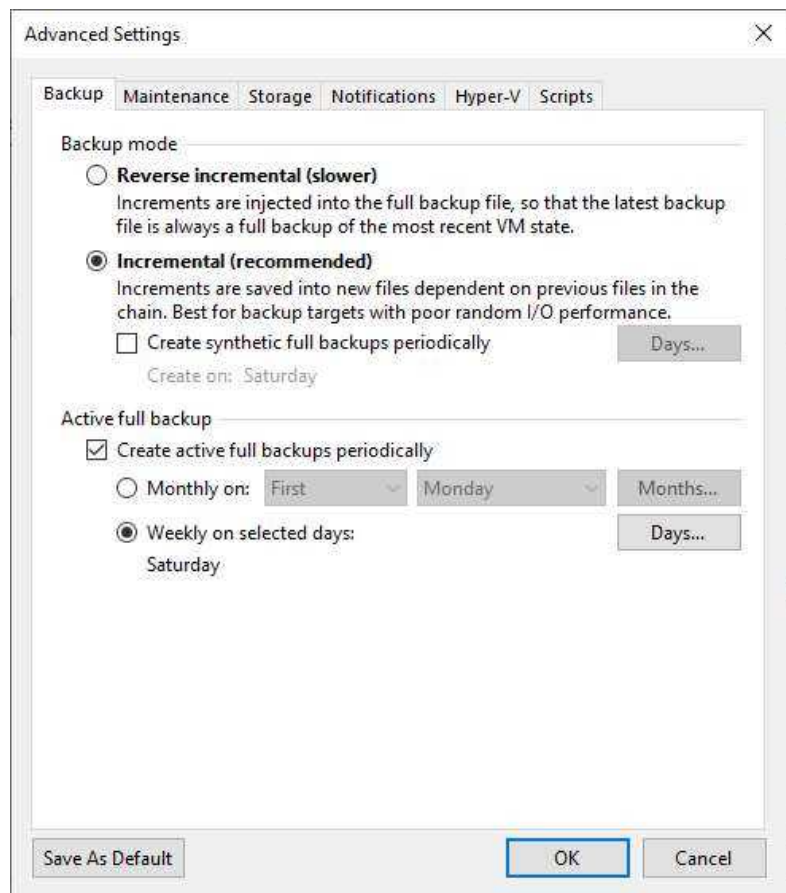
29. There are two backup modes on the Backup page, and you must select one.
30. Select Reverse Incremental (slower) to create a reverse incremental backup chain.
31. Select Incremental and enable synthetic full and active full backups. Click Days to schedule full synthetic backups on the necessary weekdays, and click OK.



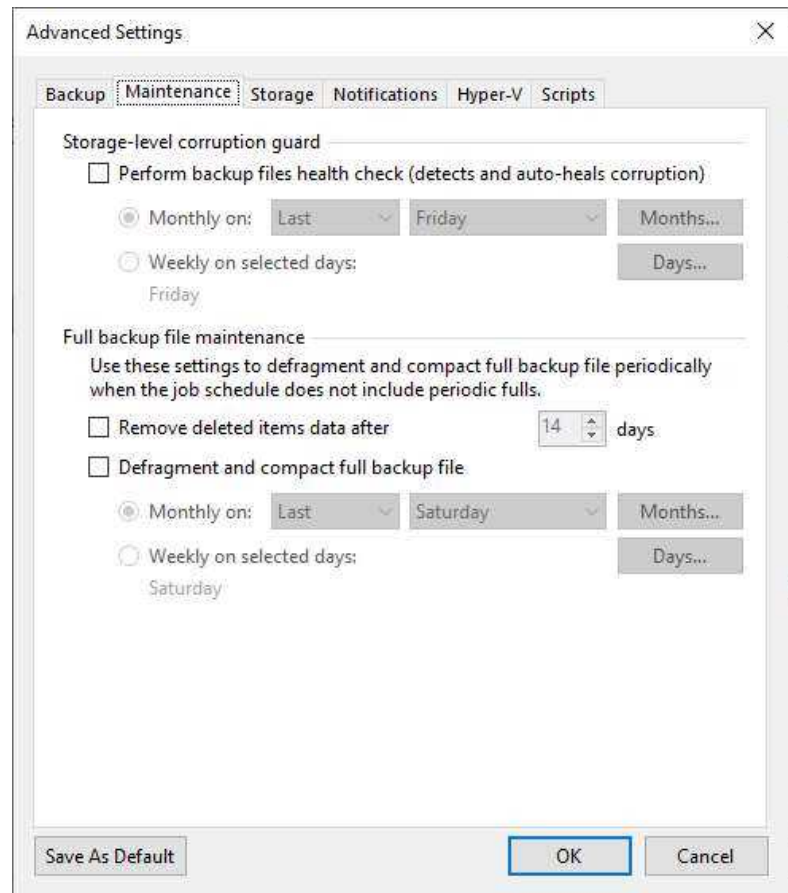
32. Select Incremental and disable synthetic full and active full backups to create a forever forward incremental backup chain.



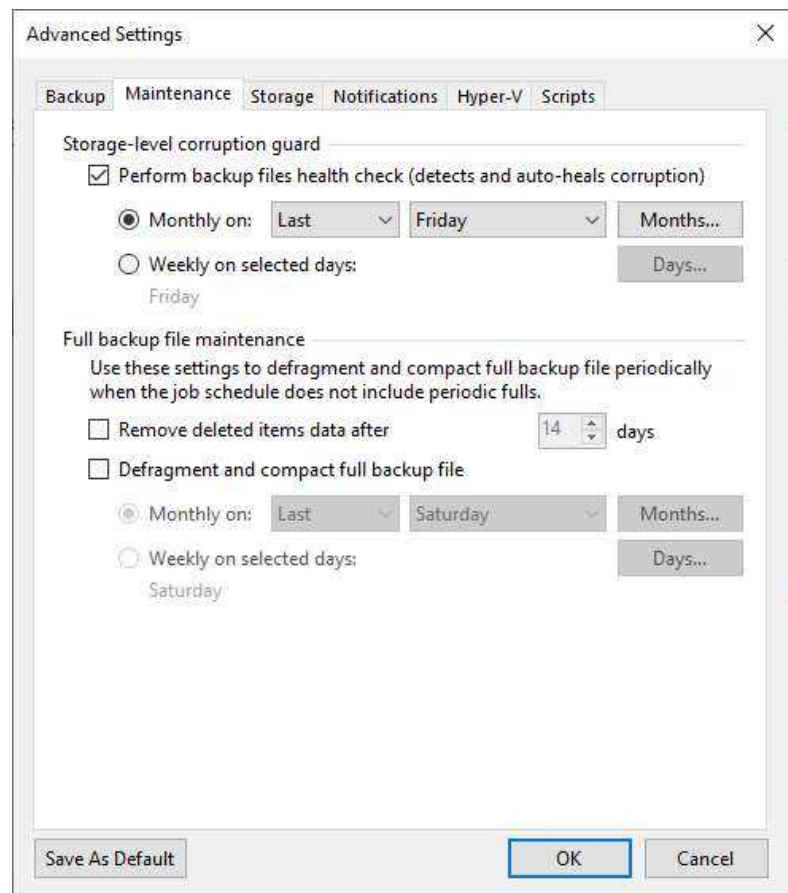
33. Select the Create active full backups periodically checkbox to create full backups regularly if needed.
34. Select the Monthly or Weekly on selected days options to define scheduling settings.



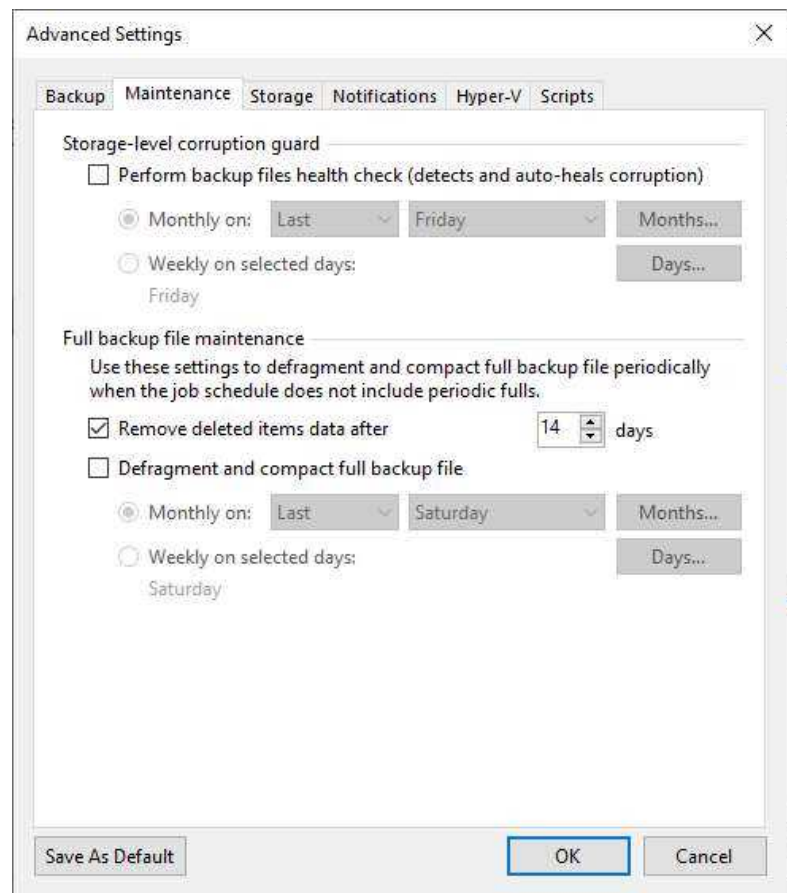
35. On the Advanced Settings, Maintenance.



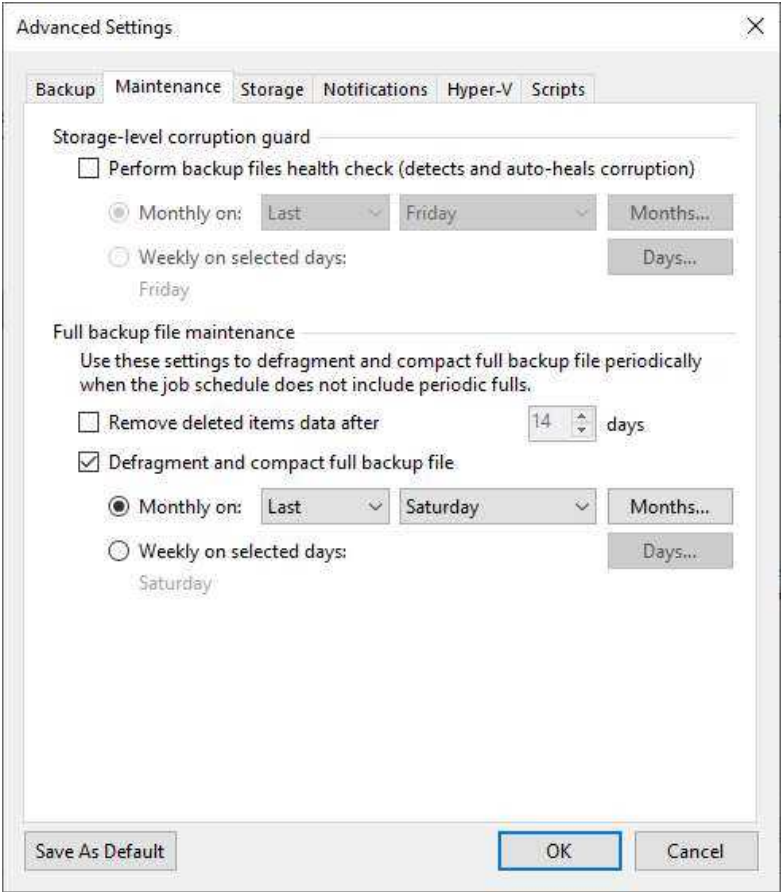
36. To regularly perform a health check in the backup chain, check the Perform backup files health check (detects and auto-heals corruption) checkbox in the Storage-level corruption guard section and specify a schedule for the health check.



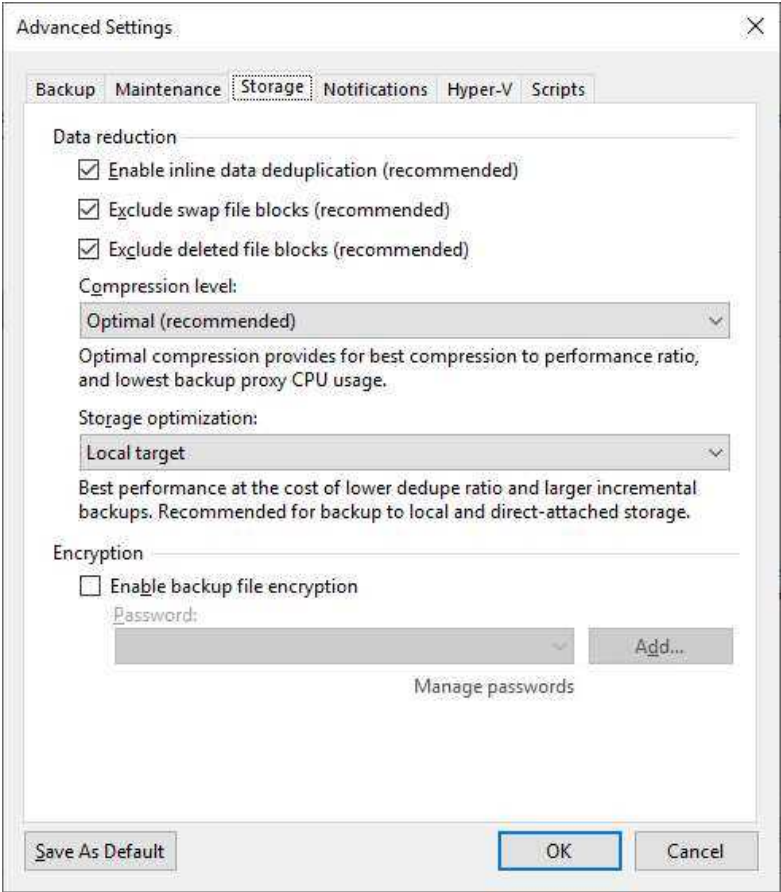
37. Select the Remove deleted items data after the check box and enter the days you want backup data for deleted VMs to be kept.



38. Select the Defragment and compact full backup file check box and specify the schedule for the compact operation to compact a full backup periodically.



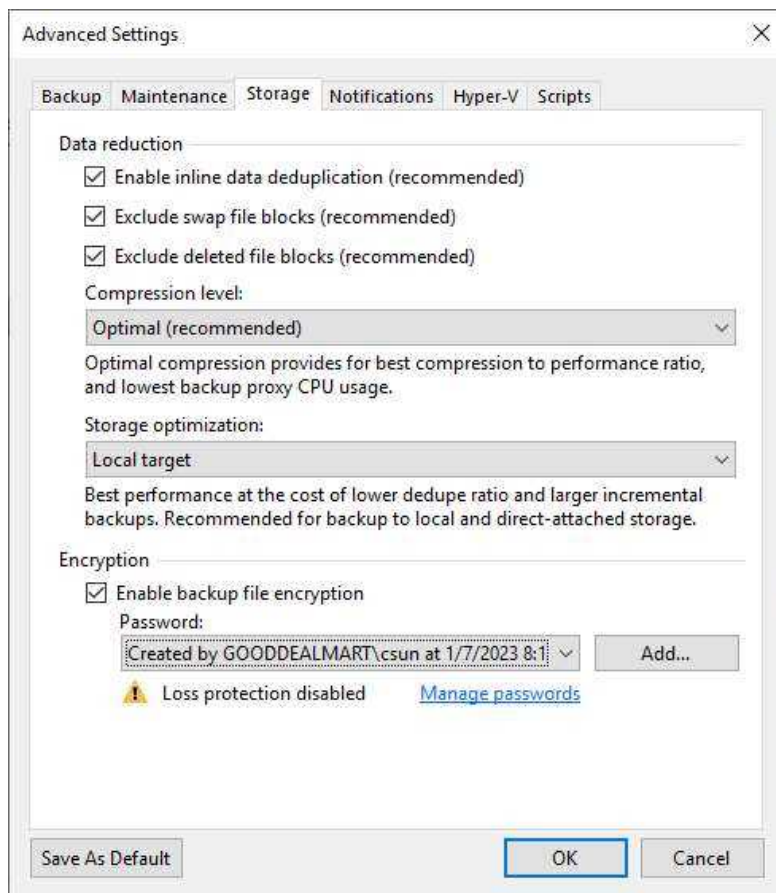
- 39. On Advanced Settings, click Storage.
- 40. Select the Enable inline data deduplication checkbox.
- 41. Select the Exclude swap file blocks checkbox.
- 42. Select the Exclude deleted file blocks checkbox.
- 43. Select the compression level for the backup from the drop-down list.



- 44. Select Storage optimization from the drop-down list.

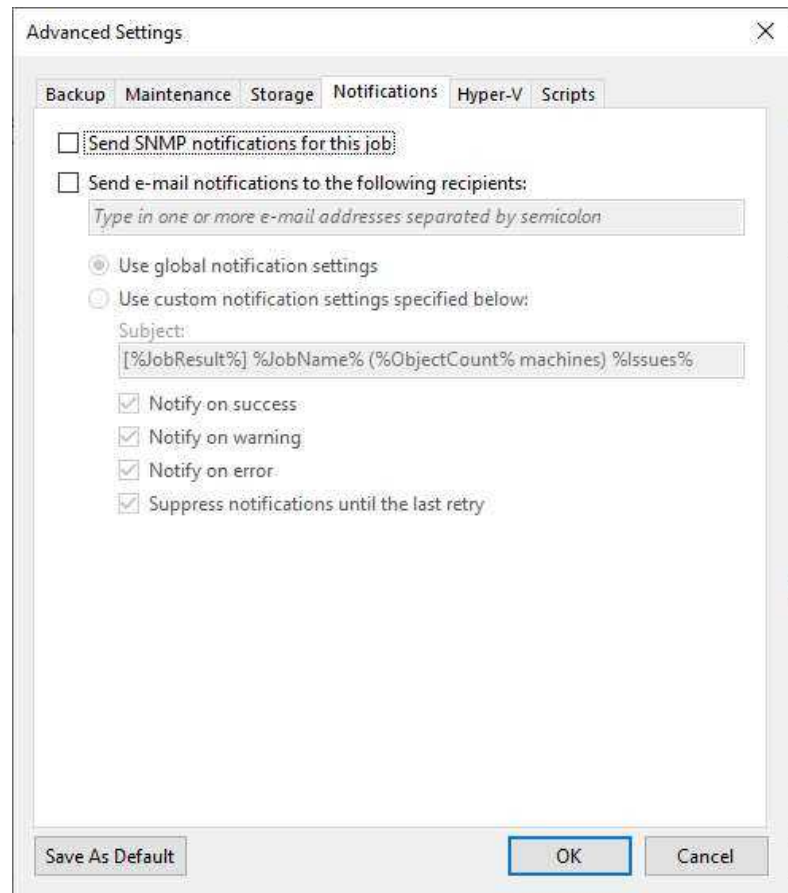
Storage optimization option	Block size	Description
Local target (large blocks)	4096 KB	Recommended for files that are larger than 16 TB. This option will provide the lowest deduplication ratio and the largest size of incremental files.
Local target	1024 KB	Recommended for backup and replication to SAN, DAS or local storage. This option provides the fastest job performance but reduces the deduplication ratio, because with larger data blocks it is less likely to find identical blocks.
LAN target	512 KB	Recommended for backup and replication to NAS, and on-site backup and replication. This option provides a better deduplication ratio and reduces the size of a file because of reduced data block sizes.
WAN target	256 KB	Recommended if you are planning to use WAN for off-site backup and replication. This option provides the maximum deduplication ratio and the smallest size of files that allows you to reduce the amount of traffic over WAN.

45. Select the Enable backup file encryption checkbox to encrypt the content of backup files.
46. Select a password from the drop-down list. If you haven't done so, click Add or use the Manage passwords link to create a new password.

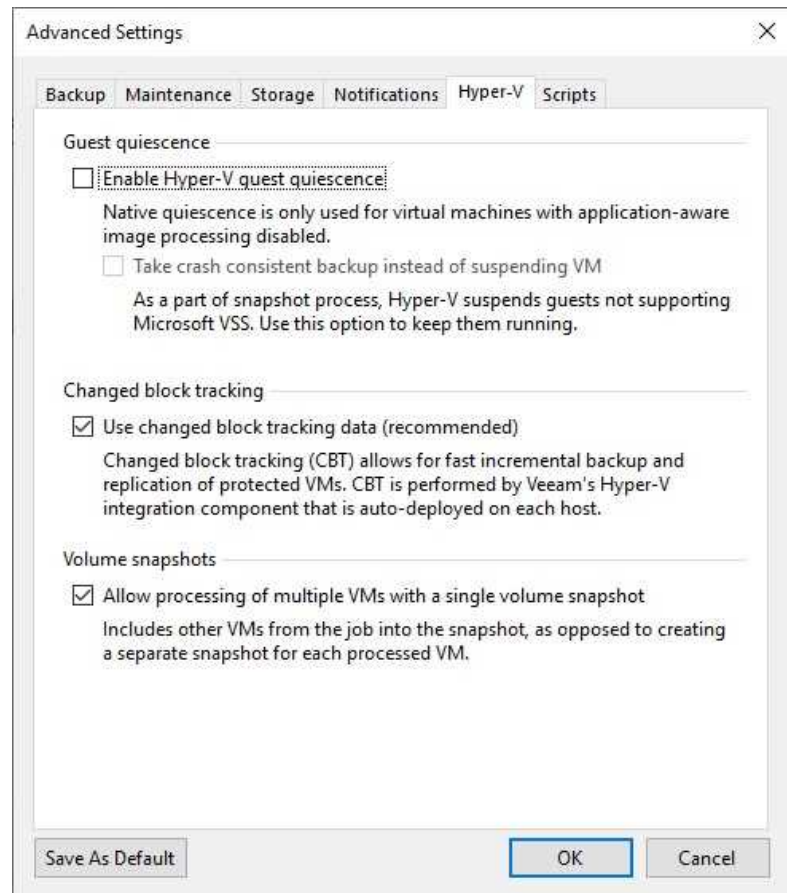


47. On the Advanced Settings, select Notifications.

48. Keep the default settings.

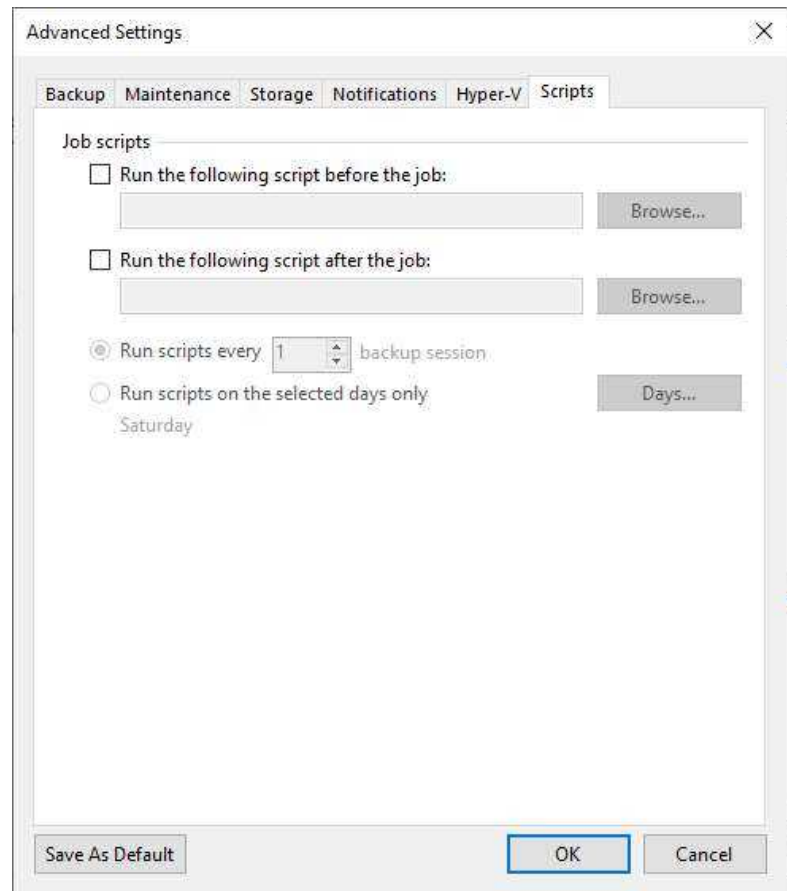


49. On the Advanced Settings, select Hyper-V.
50. Select the Enable Hyper-V guest quiescence check box if application-aware processing cannot be used for some reason.
51. Select the Take crash consistent backup instead of suspending VM check box if you do not want to suspend VMs in the job.
52. Select the Use changed block tracking data (recommended) check box.
53. Select the Allow processing of multiple VMs with a single volume snapshot check box.



54. On the Advanced Settings page, click Scripts.

55. Keep the default settings and click OK.



56. On the Storage page, click Next.

New Backup Job

Storage
Specify processing proxy server to be used for source data retrieval, backup repository to store the backup files produced by this job and customize advanced job settings if required.

Name

Virtual Machines

Storage

Guest Processing

Schedule

Summary

Backup proxy:
Off-host backup (automatic proxy selection) [Choose...](#)

Backup repository:
Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 1: [Map backup](#))
125 GB free of 126 GB

Retention policy: 7 [restore points](#)

☐ **Keep certain full backups longer for archival purposes**
Periodic fulls are not enabled in Advanced settings [Configure...](#)

☐ **Configure secondary destinations for this job**
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings. [Advanced](#)

< Previous Next > Finish Cancel

57. On the Guest Processing page, click Next.

New Backup Job

Guest Processing
Choose guest OS processing options available for running VMs.

Name

Virtual Machines

Storage

Guest Processing

Schedule

Summary

☐ **Enable application-aware processing**
Detects and prepares applications for consistent backup, performs transaction logs processing, and configures the OS to perform required application restore steps upon first boot.
Customize application handling options for individual machines and applications [Applications...](#)

☐ **Enable guest file system indexing**
Creates catalog of guest files to enable browsing, searching and 1-click restores of individual files. Indexing is optional, and is not required to perform instant file level recoveries.
Customize advanced guest file system indexing options for individual machines [Indexing...](#)

Guest interaction proxy:
Automatic selection [Choose...](#)

Guest OS credentials:
[Add...](#)

Manage accounts
Customize guest OS credentials for individual machines and operating systems [Credentials...](#)

Verify network connectivity and credentials for each machine included in the job [Test Now](#)

< Previous Next > Finish Cancel

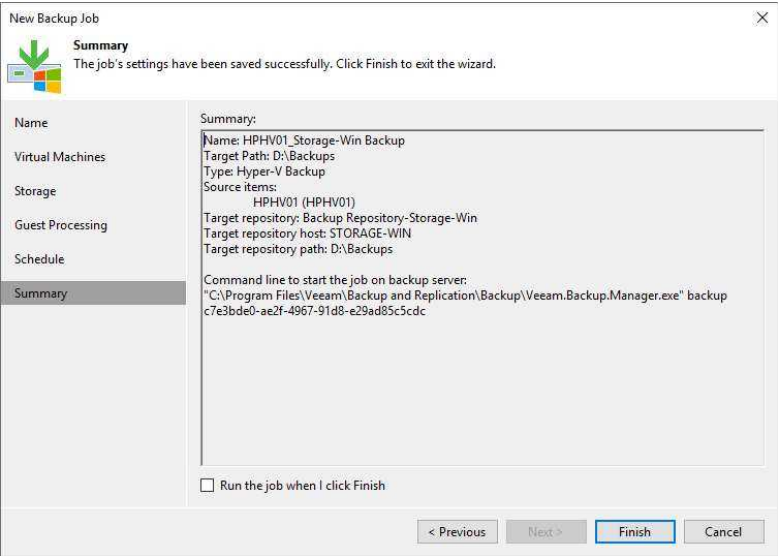
58. Select Run the job automatically on the Schedule page and select your specified schedule.
59. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
60. Define the time interval the backup job must complete in the Backup window section. The backup window ensures that the job does not overlap with production hours and that there is no unnecessary overhead on the production environment.
61. Click Apply.

The screenshot shows the 'New Backup Job' dialog box with the 'Schedule' tab selected. The dialog has a sidebar on the left with tabs: Name, Virtual Machines, Storage, Guest Processing, Schedule (selected), and Summary. The main area is titled 'Schedule' and contains the following options:

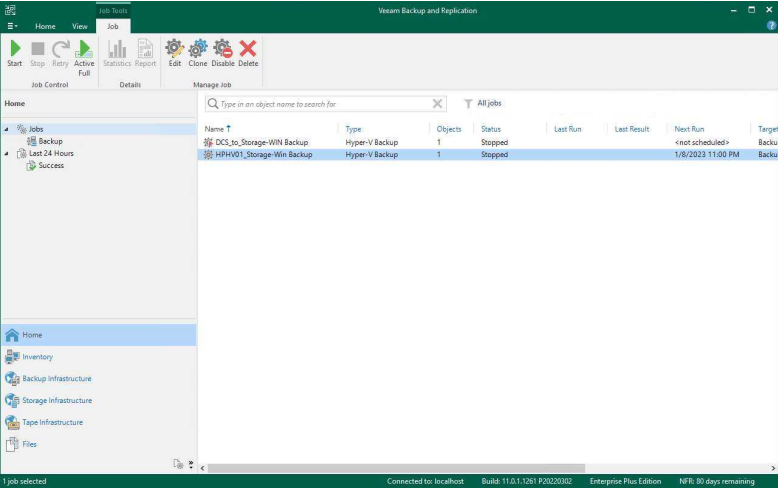
- ☒ Run the job automatically
- ☒ Daily at this time: 11:00 PM, Everyday, Days...
- ☐ Monthly at this time: 10:00 PM, Fourth, Saturday, Months...
- ☐ Periodically every: 1, Hours, Schedule...
- ☐ After this job: DCS_to_Storage-WIN Backup (Created by GOODDEALMART\csun at ...)
- Automatic retry**
 - ☒ Retry failed items processing: 3 times
 - Wait before each retry attempt for: 10 minutes
- Backup window**
 - ☐ Terminate job if it exceeds allowed backup window (Window...)
 - If the job does not complete within allocated backup window, it will be terminated to prevent snapshot commit during production hours.

At the bottom, there are buttons: < Previous, Apply (highlighted with a blue border), Finish, and Cancel.

62. On the Summary page, click Finish.

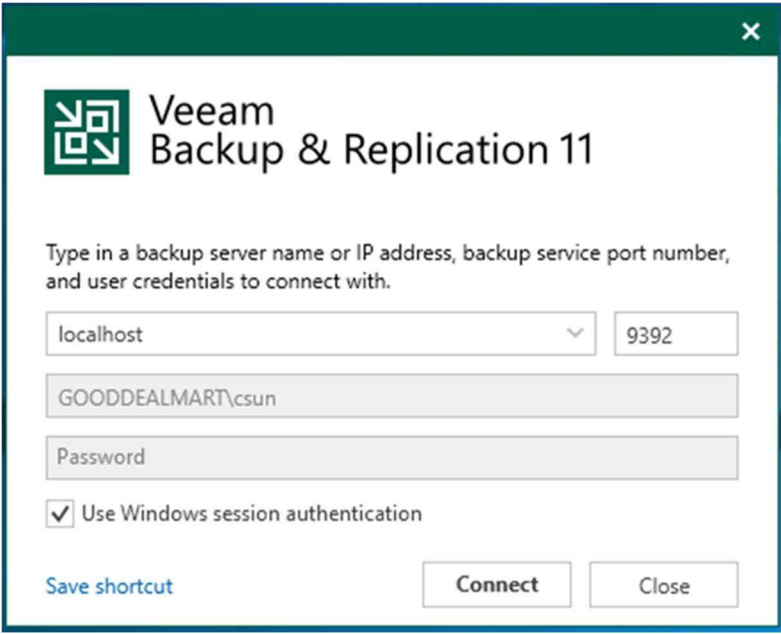


63. Verify the backup job has been added

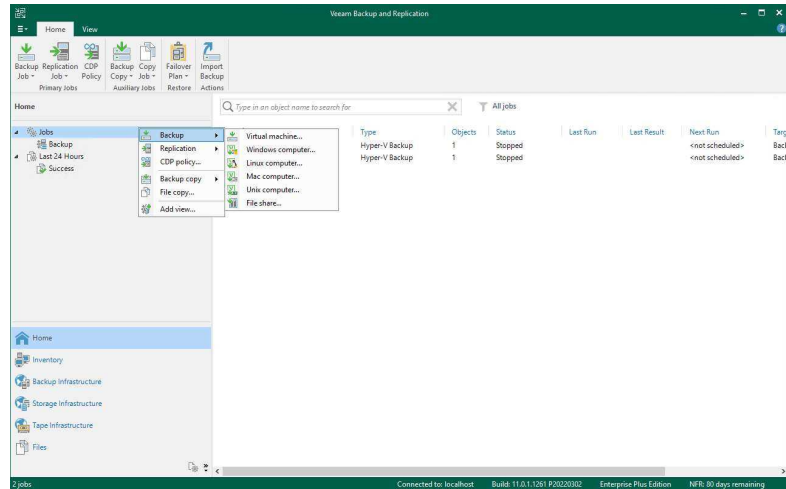


Creating a Backup job to backup the VMS portion of the Hyper-V Host

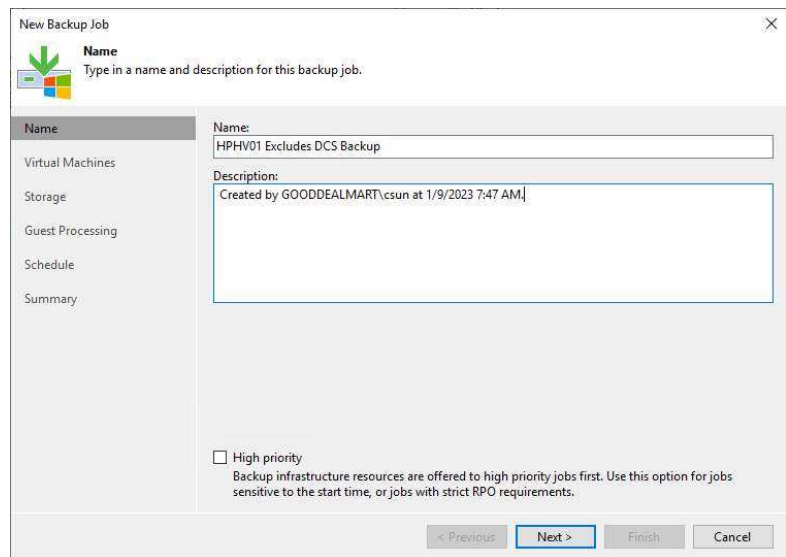
This process creates a backup job to backup the VMS of the Hyper-V host but not all of them.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 The screenshot shows the 'Veeam Backup & Replication 11' connection dialog box. It has a green title bar with a close button. The main area is white with the Veeam logo and title. Below the title, it says 'Type in a backup server name or IP address, backup service port number, and user credentials to connect with.' There are four input fields: a dropdown menu with 'localhost' selected, a text box with '9392', a text box with 'GOODDEALMART\csun', and a password field labeled 'Password'. Below these fields is a checkbox labeled 'Use Windows session authentication' which is checked. At the bottom, there are three buttons: 'Save shortcut' (in blue text), 'Connect', and 'Close'.

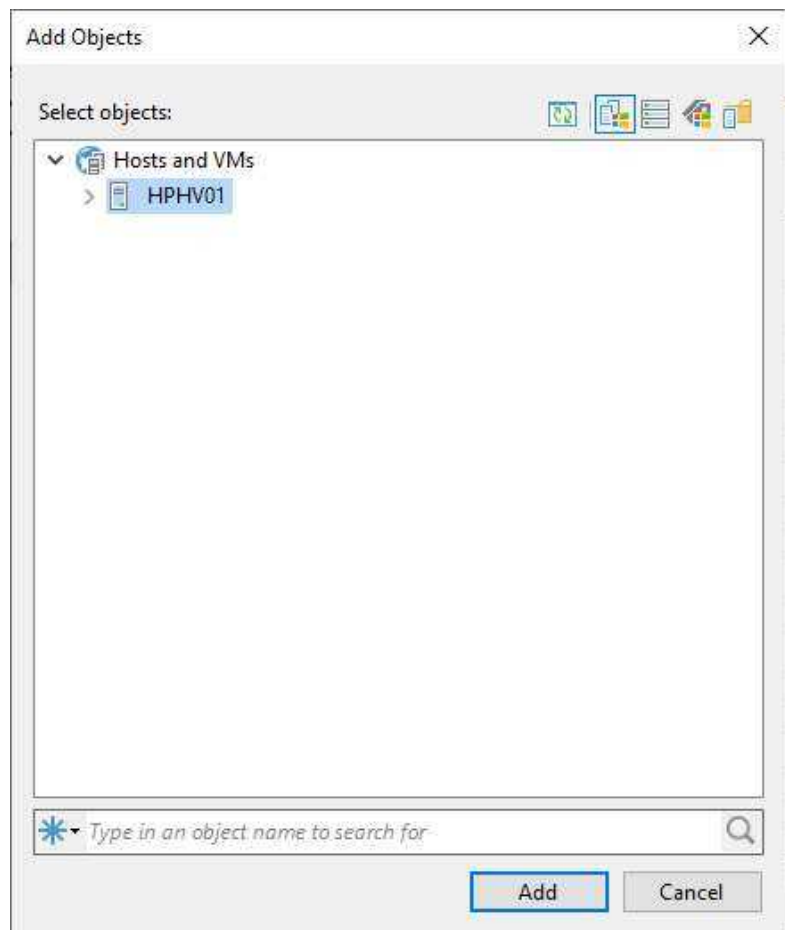
- On the Home page, select Jobs, right-click Jobs, select Backup and click Virtual machine.



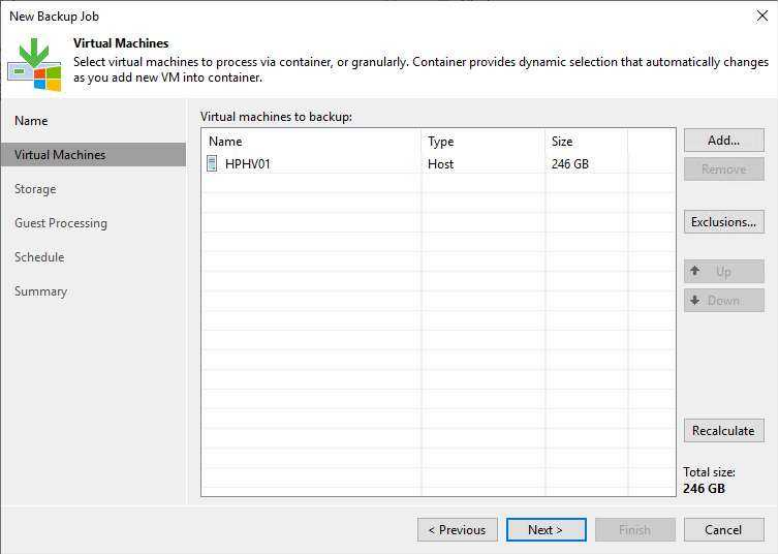
- On the Name page, enter a name in the Name field.
- Describe the Description field.
- Select the High priority check box if you want the resource scheduler of Veeam Backup & Replication to prioritize this job higher than similar jobs and allocate resources to it in the first place.
- Click Next.



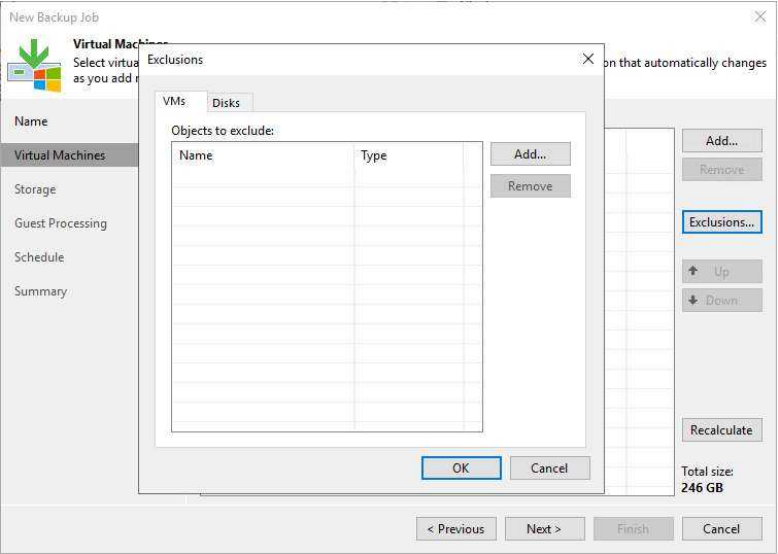
9. Select the Host on the Add Objects page list and click Add.
10. If multiple Hosts need to backup in the same backup job, you can repeat the step to add them.



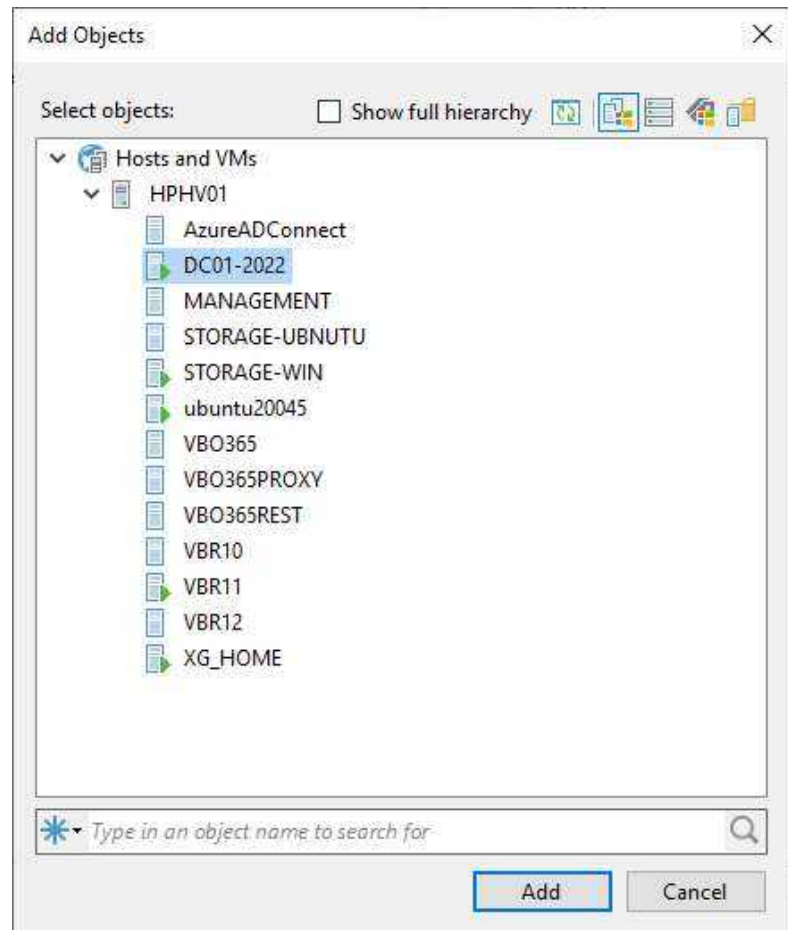
11. On the Virtual Machines page, click Exclusions.



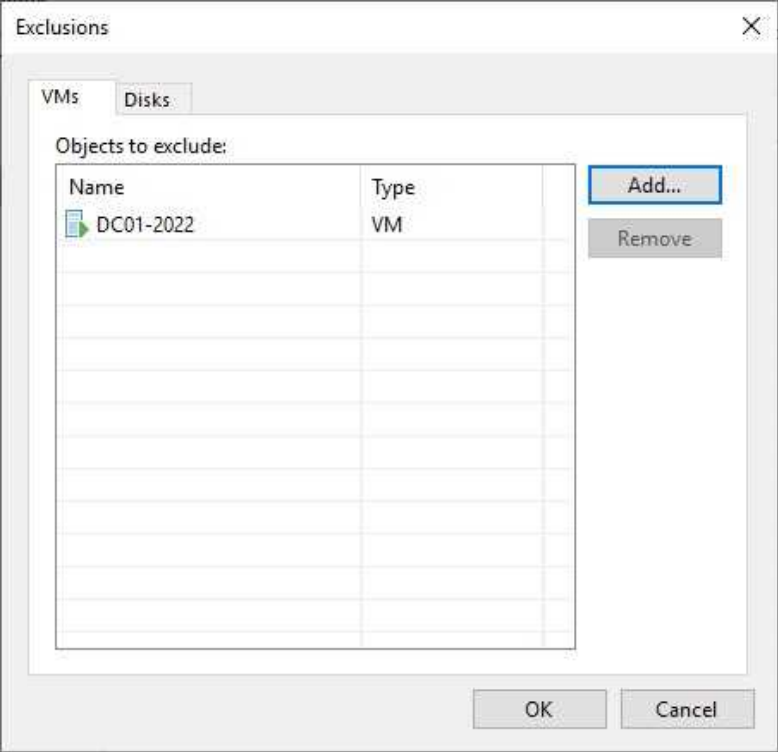
12. On the Exclusions page, select VMS and click Add.



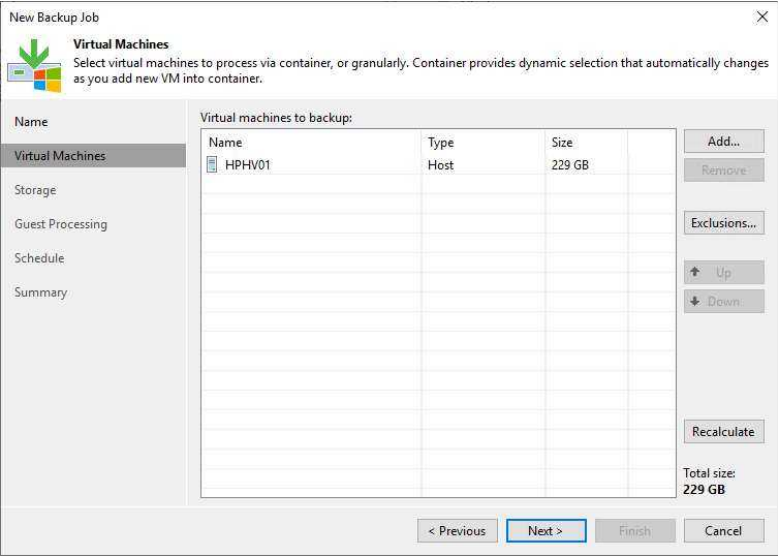
13. On the Add Objects page, expand the host.
14. Select the VM you want to exclude and click Add.



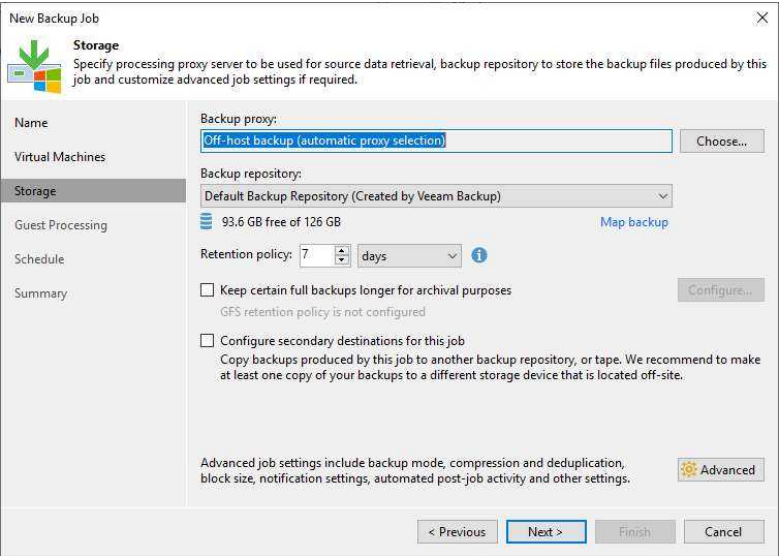
15. On the Exclusions page, click OK.



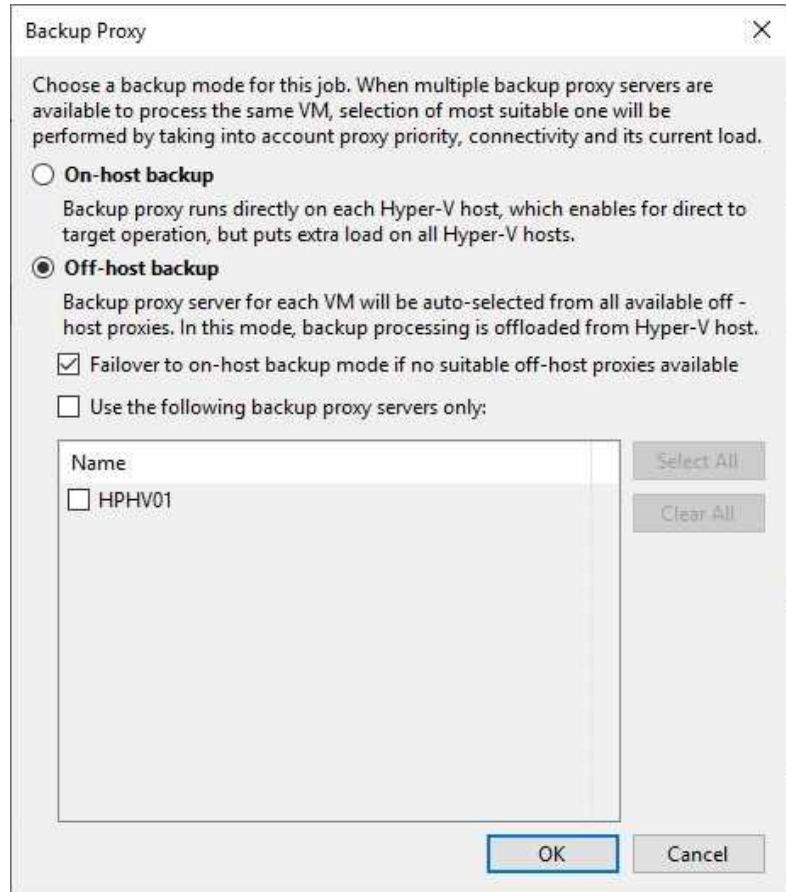
16. On the Virtual Machines page, click Next.



17. On the Storage, click
Choose to select a backup
proxy if you don't want to
use the default Off-host
backup (automatic proxy
selection) setting.



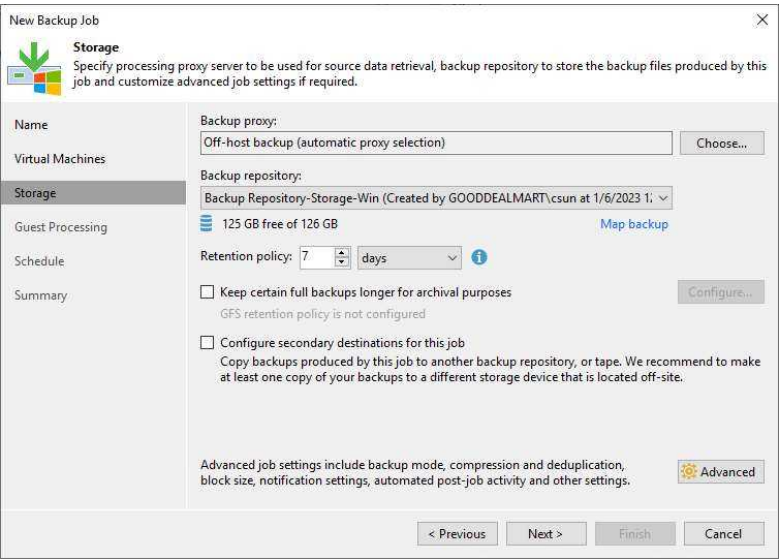
18. On the Backup Proxy page, if you select On-host backup mode, the source Microsoft HyperV host will serve as both the source host and the backup proxy. In this mode, Veeam Data Mover runs directly on the source host, which speeds up data retrieval but places additional strain on the host.
19. If you select Off-host backup mode, Veeam Data Mover will run on a dedicated off-host backup proxy. All backup processing operations from the source host are routed to the off-host backup proxy in this model.
20. If the off-host backup mode is selected for the job, but no off-host backup proxies are available when the job begins, Veeam Backup & Replication will transition to on-host backup mode.
21. You unselect the Failover to on-host backup mode if no suitable off-host



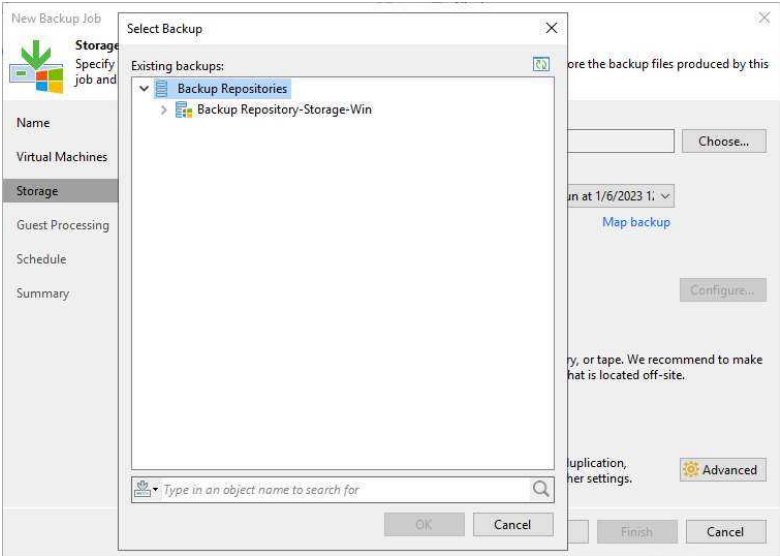
proxies available
checkbox, but if off-host
backup proxies are not
available or are not
configured properly, the
job will fail to start.

22. Click OK.

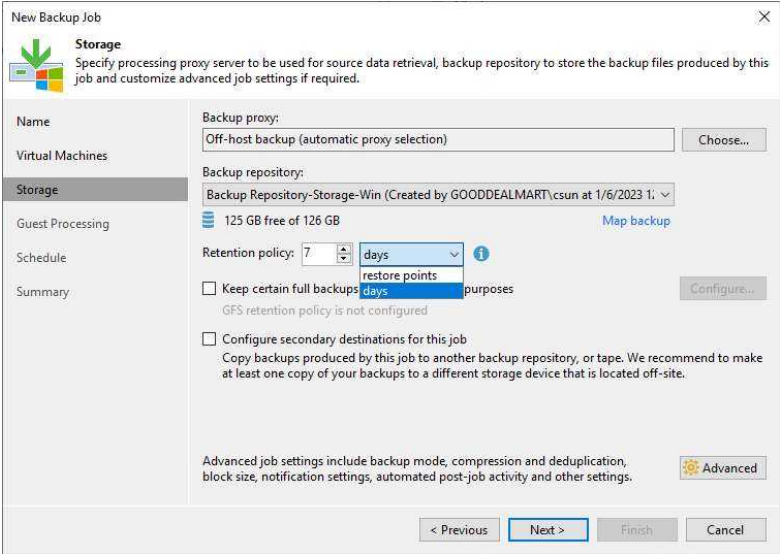
23. Select the backup
repository from the
Backup repository drop-
down list where the
created backup files must
be saved.



24. Click Map backup is helpful if you have relocated backup files to a new backup repository and want to point the job to existing backups in this new backup repository. Backup job mapping can also be used if the configuration database becomes corrupt and you need to reconfigure backup jobs.

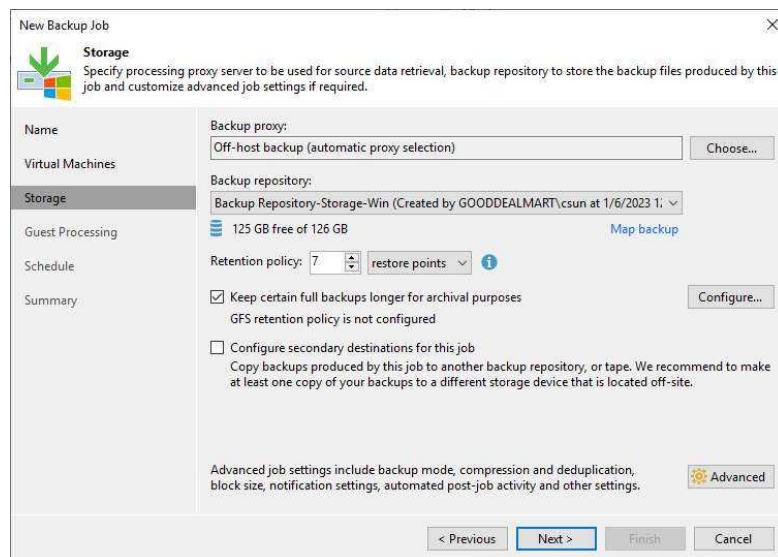


25. Set the retention policy settings for restore points in the Retention Policy field.
26. Select days or restore points from the drop-down list.



27. You can configure the backup job's GFS retention policy settings to ignore the short-term retention policy for some full backups and store them for long-term archiving.

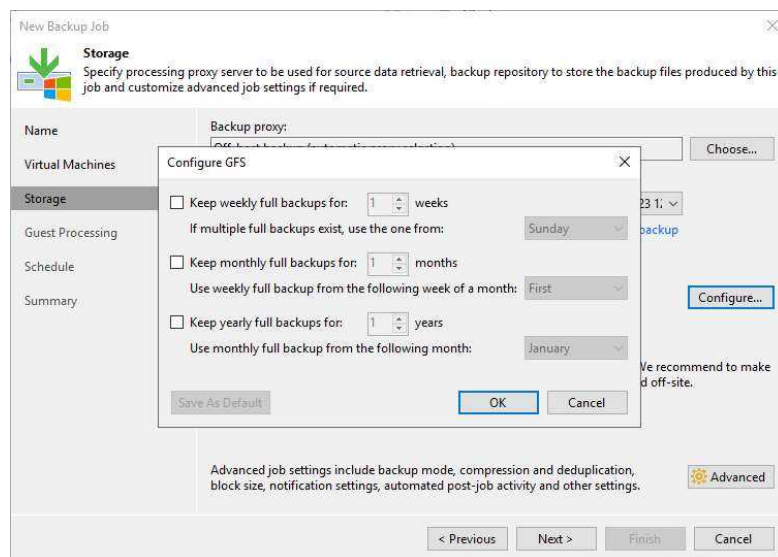
28. Select the Keep certain full backups for longer for archival purposes. If you need it, click Configure.



29. Select the Keep weekly full backups for check box, and specify the number of weeks you want to prevent restore points from being modified and deleted.

30. Select the Keep monthly full backups for check box, and specify the months you want to prevent restore points from being modified and deleted.

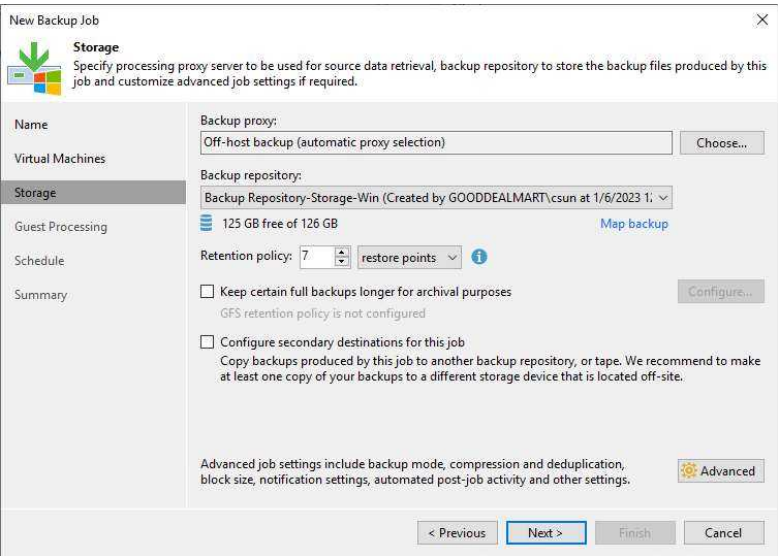
31. Select the Keep yearly full backups for check box, and specify the years you want to prevent restore



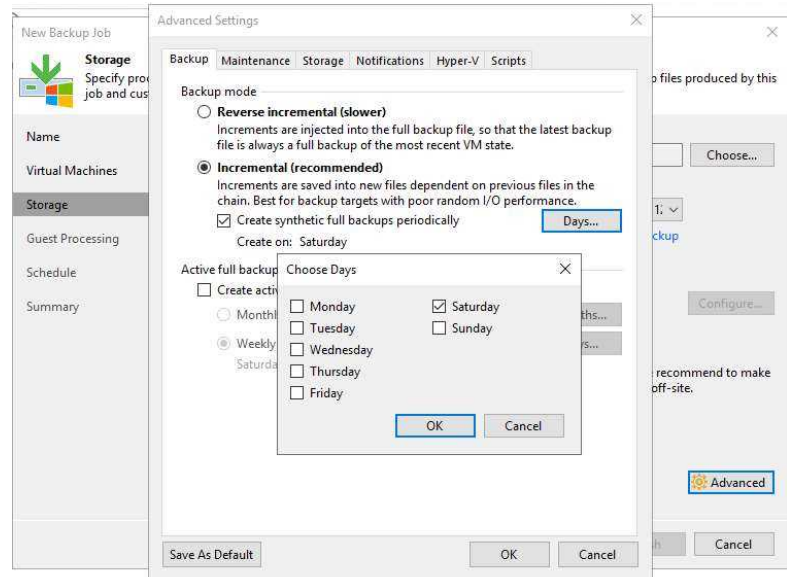
points from being modified and deleted.

32. Click OK.

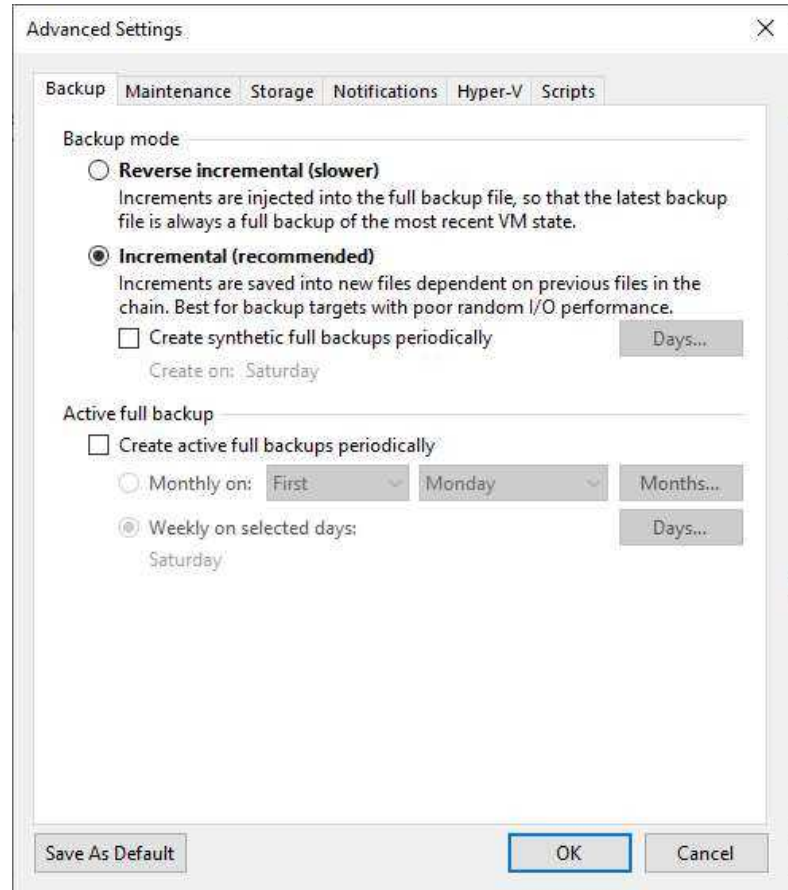
33. On the Storage page, click Advanced.



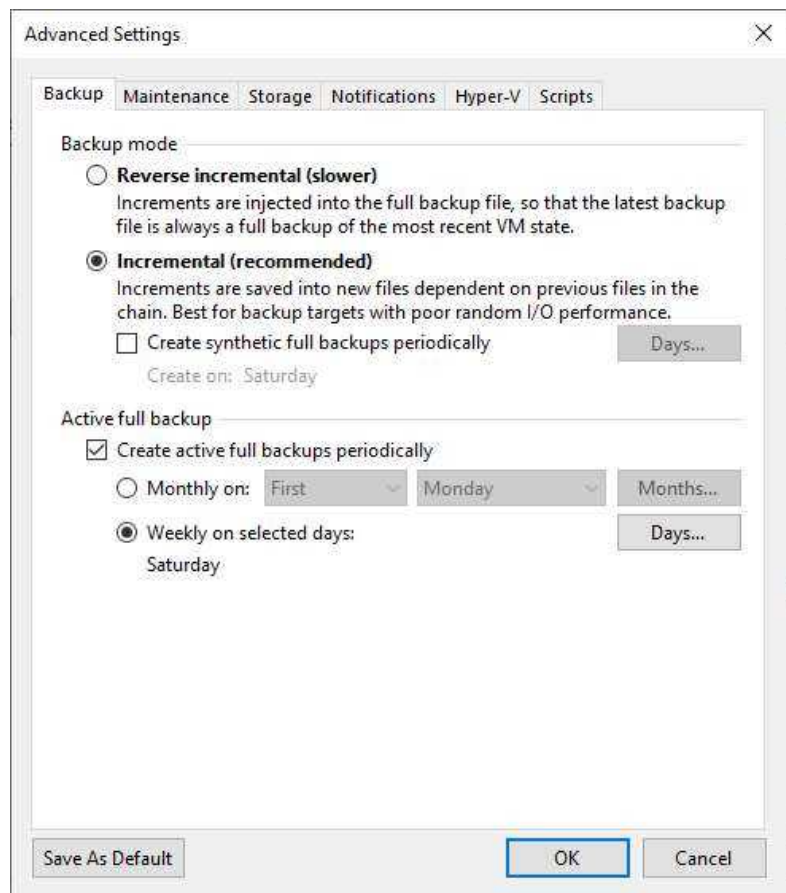
34. There are two backup modes on the Backup page, and you must select one.
35. Select Reverse Incremental (slower) to create a reverse incremental backup chain.
36. Select Incremental and enable synthetic full and active full backups. Click Days to schedule full synthetic backups on the necessary weekdays, and click OK.



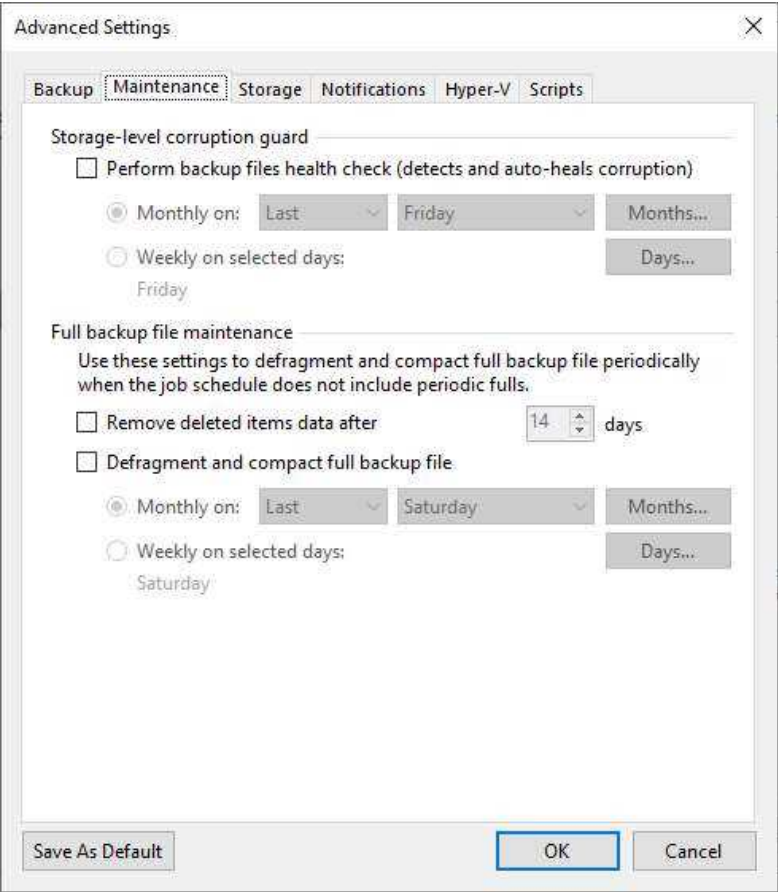
37. Select Incremental and disable synthetic full and active full backups to create a forever forward incremental backup chain.



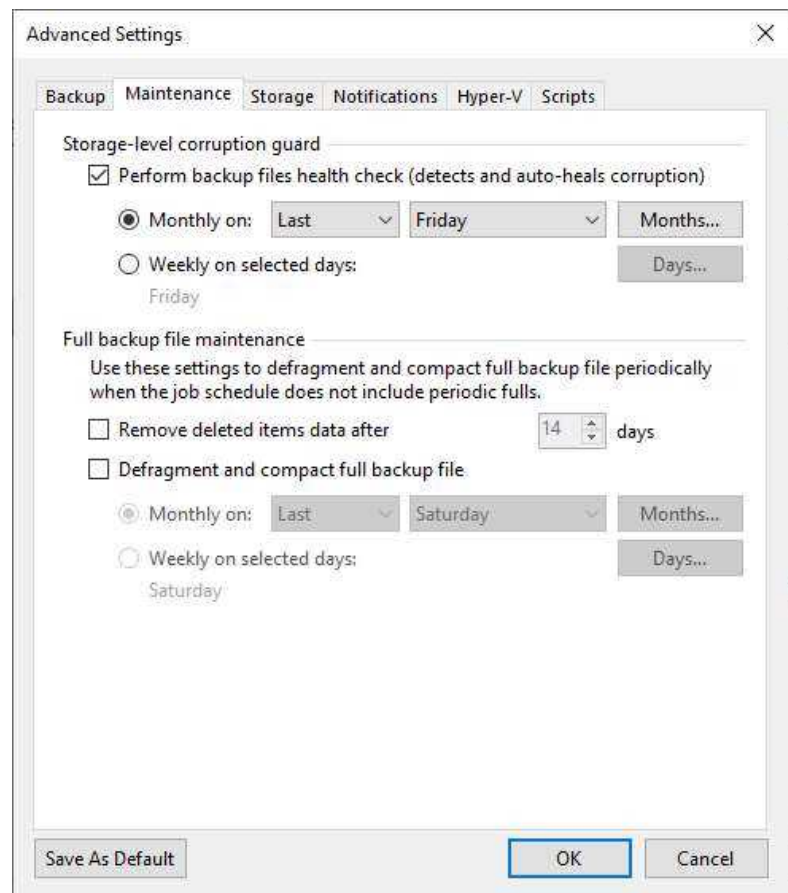
38. Select the Create active full backups periodically checkbox to create full backups regularly if needed.
39. Select the Monthly or Weekly on selected days options to define scheduling settings.



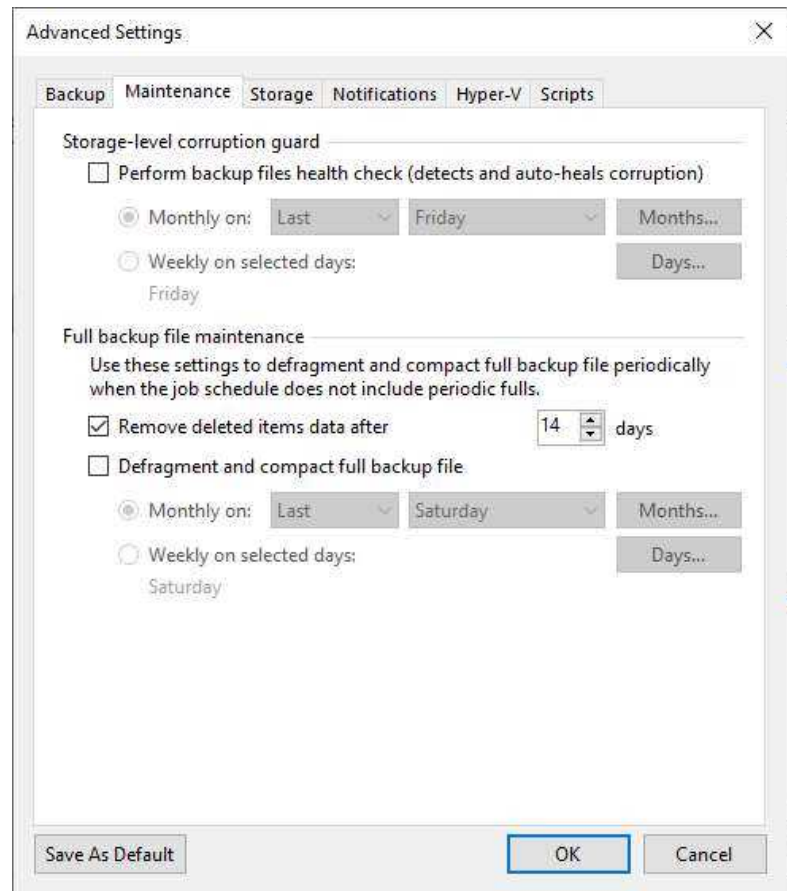
40. On the Advanced
Settings, Maintenance.



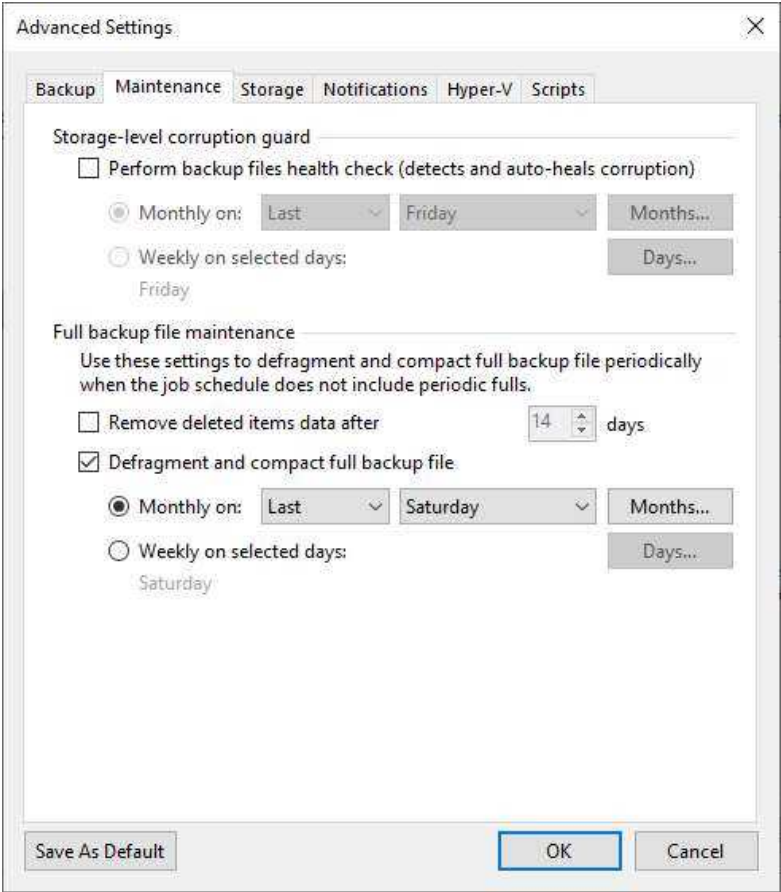
41. To regularly perform a health check in the backup chain, check the Perform backup files health check (detects and auto-heals corruption) checkbox in the Storage-level corruption guard section and specify a schedule for the health check.



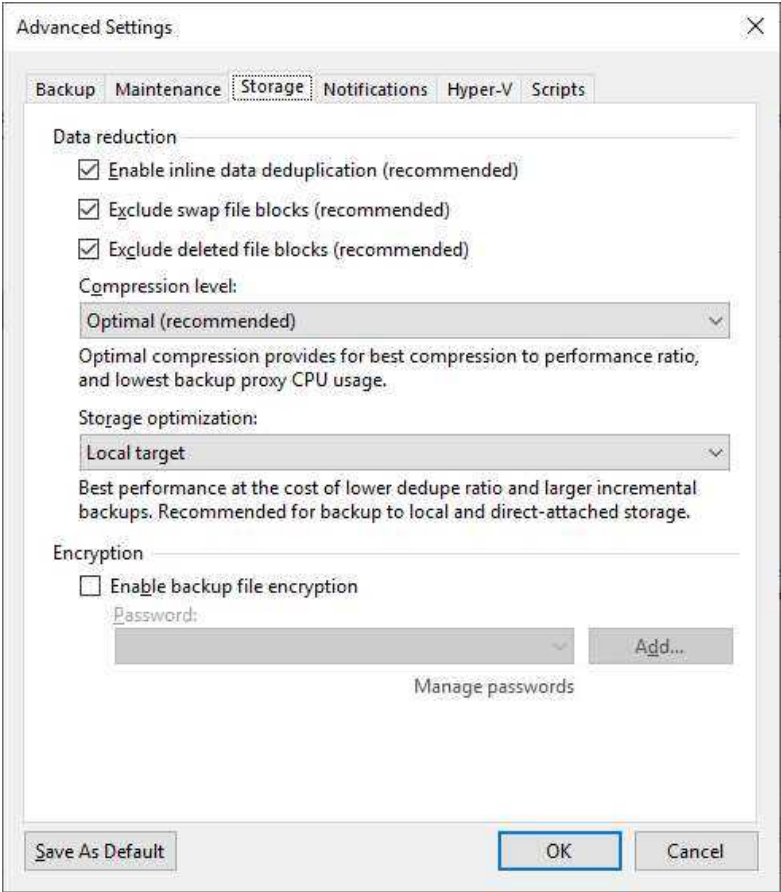
42. Select the Remove deleted items data after the check box and enter the days you want backup data for deleted VMs to be kept.



43. Select the Defragment and compact full backup file check box and specify the schedule for the compact operation to compact a full backup periodically.



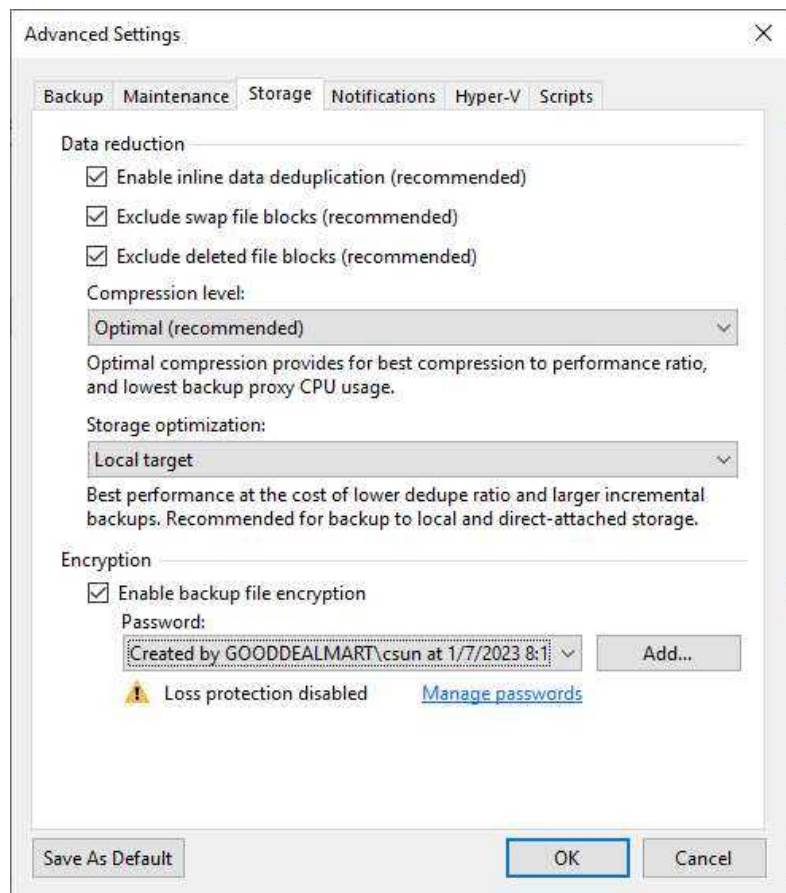
- 44. On Advanced Settings, click Storage.
- 45. Select the Enable inline data deduplication checkbox.
- 46. Select the Exclude swap file blocks checkbox.
- 47. Select the Exclude deleted file blocks checkbox.
- 48. Select the compression level for the backup from the drop-down list.



- 49. Select Storage optimization from the drop-down list.

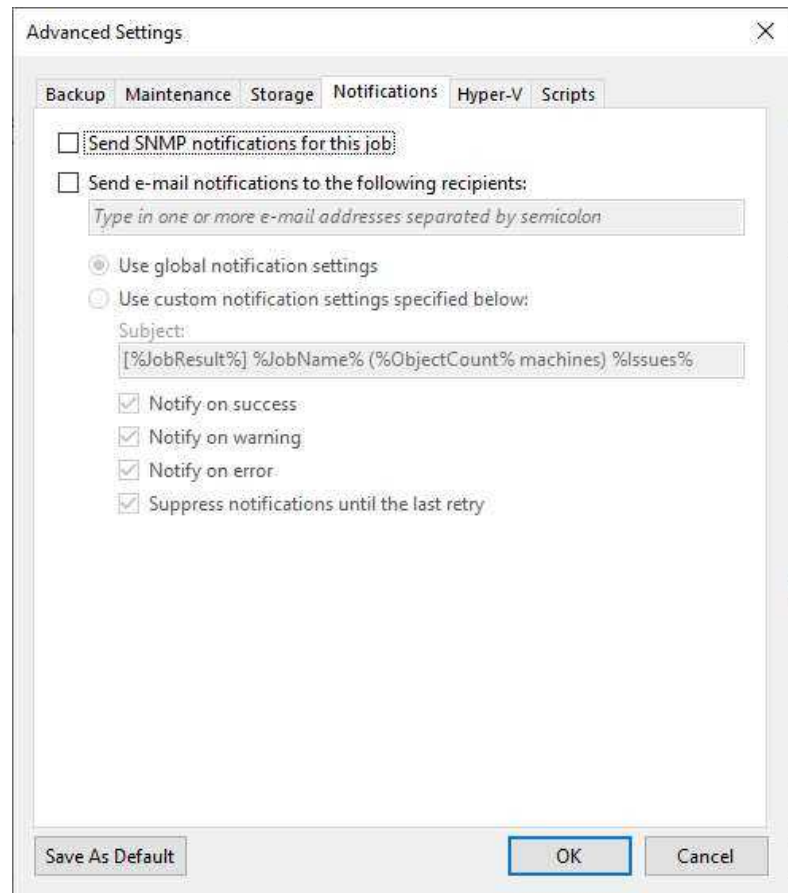
Storage optimization option	Block size	Description
Local target (large blocks)	4096 KB	Recommended for files that are larger than 16 TB. This option will provide the lowest deduplication ratio and the largest size of incremental files.
Local target	1024 KB	Recommended for backup and replication to SAN, DAS or local storage. This option provides the fastest job performance but reduces the deduplication ratio, because with larger data blocks it is less likely to find identical blocks.
LAN target	512 KB	Recommended for backup and replication to NAS, and on-site backup and replication. This option provides a better deduplication ratio and reduces the size of a file because of reduced data block sizes.
WAN target	256 KB	Recommended if you are planning to use WAN for off-site backup and replication. This option provides the maximum deduplication ratio and the smallest size of files that allows you to reduce the amount of traffic over WAN.

50. Select the Enable backup file encryption checkbox to encrypt the content of backup files.
51. Select a password from the drop-down list. If you haven't done so, click Add or use the Manage passwords link to create a new password.

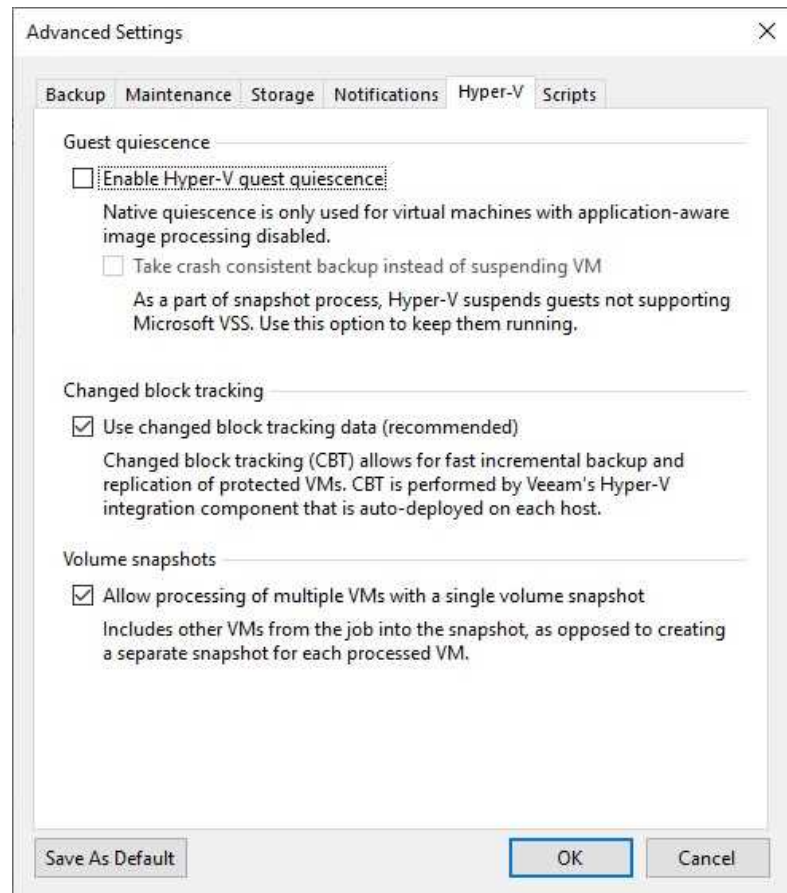


52. On the Advanced Settings, select Notifications.

53. Keep the default settings.

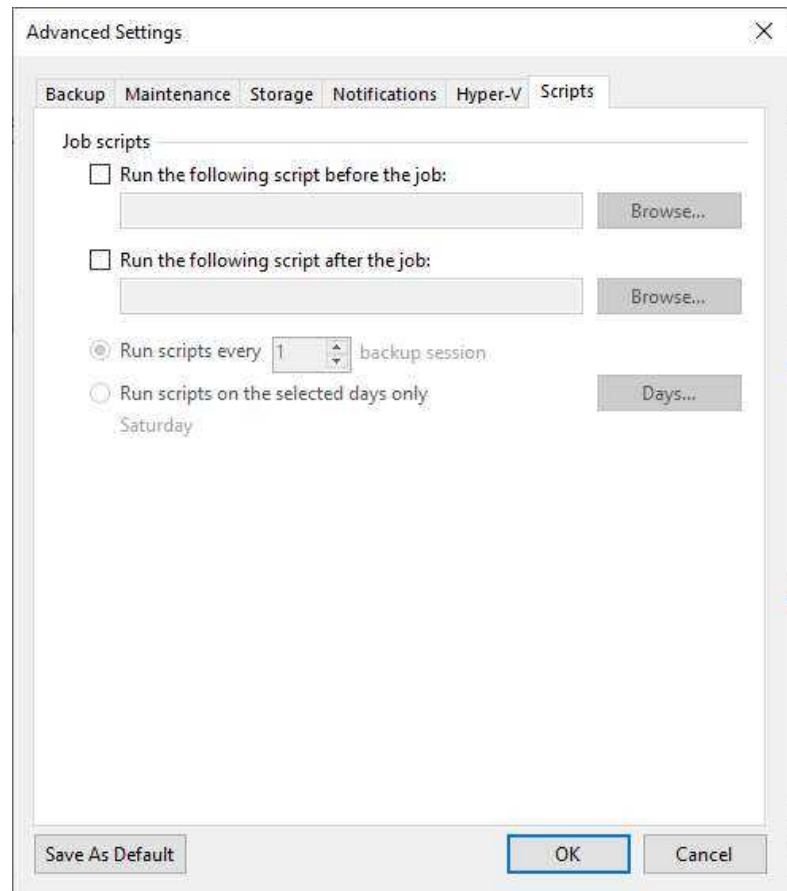


54. On the Advanced Settings, select Hyper-V.
55. Select the Enable Hyper-V guest quiescence check box if application-aware processing cannot be used for some reason.
56. Select the Take crash consistent backup instead of suspending VM check box if you do not want to suspend VMs in the job.
57. Select the Use changed block tracking data (recommended) check box.
58. Select the Allow processing of multiple VMs with a single volume snapshot check box.



59. On the Advanced Settings page, click Scripts.

60. Keep the default settings and click OK.



61. On the Storage page, click Next.

New Backup Job

Storage
Specify processing proxy server to be used for source data retrieval, backup repository to store the backup files produced by this job and customize advanced job settings if required.

Name

Virtual Machines

Storage

Guest Processing

Schedule

Summary

Backup proxy:
Off-host backup (automatic proxy selection) Choose...

Backup repository:
Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 1: 12:00 PM) 125 GB free of 126 GB Map backup

Retention policy: 7 restore points

☐ Keep certain full backups longer for archival purposes
Periodic fulls are not enabled in Advanced settings Configure...

☐ Configure secondary destinations for this job
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings. Advanced

< Previous Next > Finish Cancel

62. On the Guest Processing page, click Next.

New Backup Job

Guest Processing
Choose guest OS processing options available for running VMs.

Name

Virtual Machines

Storage

Guest Processing

Schedule

Summary

☐ Enable application-aware processing
Detects and prepares applications for consistent backup, performs transaction logs processing, and configures the OS to perform required application restore steps upon first boot. Customize application handling options for individual machines and applications Applications...

☐ Enable guest file system indexing
Creates catalog of guest files to enable browsing, searching and 1-click restores of individual files. Indexing is optional, and is not required to perform instant file level recoveries. Customize advanced guest file system indexing options for individual machines Indexing...

Guest interaction proxy:
Automatic selection Choose...

Guest OS credentials:
Add...

Manage accounts
Customize guest OS credentials for individual machines and operating systems Credentials...

Verify network connectivity and credentials for each machine included in the job Test Now

< Previous Next > Finish Cancel

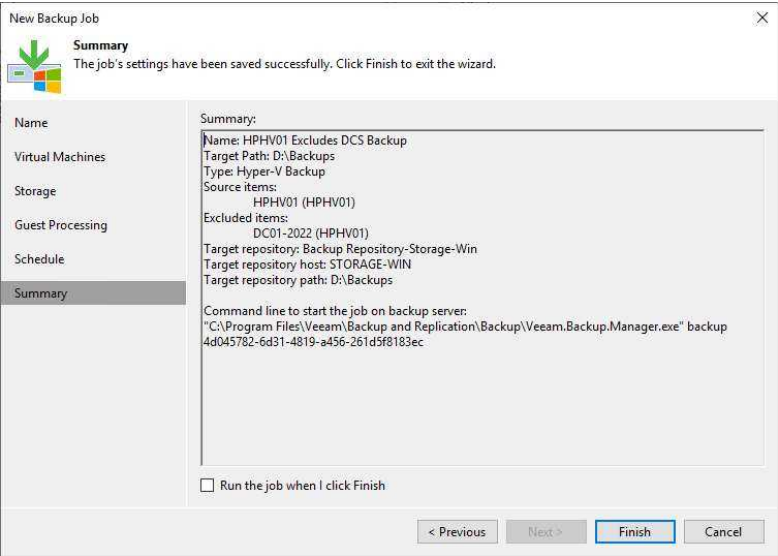
63. Select Run the job automatically on the Schedule page and select your specified schedule.
64. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
65. Define the time interval the backup job must complete in the Backup window section. The backup window ensures that the job does not overlap with production hours and that there is no unnecessary overhead on the production environment.
66. Click Apply.

The screenshot shows the 'New Backup Job' dialog box with the 'Schedule' tab selected. The dialog has a sidebar on the left with tabs: Name, Virtual Machines, Storage, Guest Processing, Schedule (selected), and Summary. The main area is titled 'Schedule' and contains the following options:

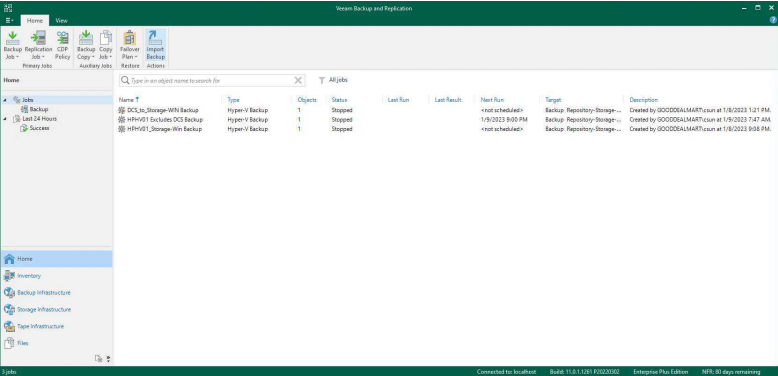
- ☒ Run the job automatically
 - ☒ Daily at this time: 9:00 PM, Everyday, Days...
 - ☐ Monthly at this time: 10:00 PM, Fourth, Saturday, Months...
 - ☐ Periodically every: 1, Hours, Schedule...
 - ☐ After this job: DCS_to_Storage-WIN Backup (Created by GOODDEALMART\csun at ...)
- Automatic retry
 - ☒ Retry failed items processing: 3 times
 - Wait before each retry attempt for: 10 minutes
- Backup window
 - ☐ Terminate job if it exceeds allowed backup window (Window...)
 - If the job does not complete within allocated backup window, it will be terminated to prevent snapshot commit during production hours.

At the bottom of the dialog are buttons: < Previous, Apply (highlighted with a blue border), Finish, and Cancel.

67. On the Summary page, click Finish.



68. Verify the backup job has been added

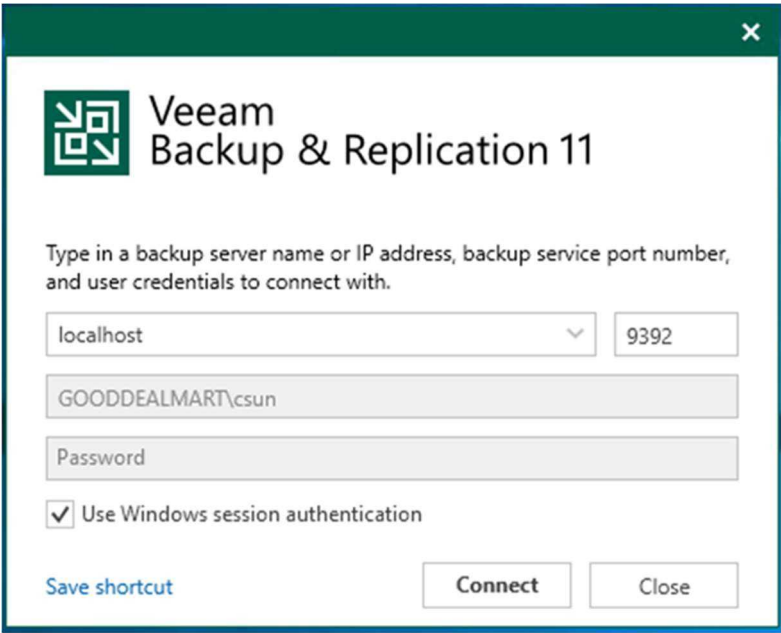


Creating a Backup job using Azure Blob repositories as Cloud Redundant Data

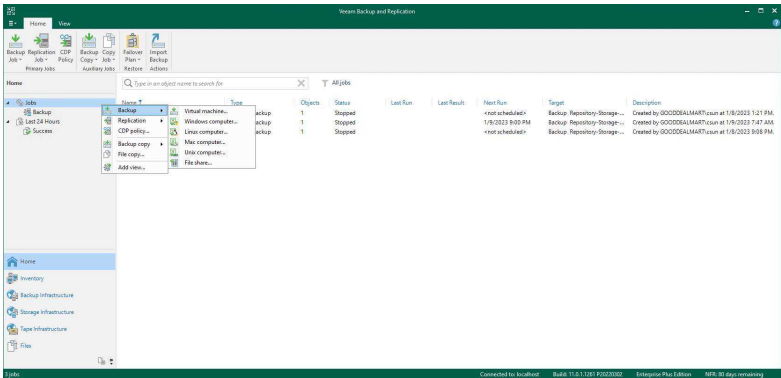
This procedure immediately creates a backup job to sync backup files with Azure cloud and off-loads Azure blob after performing a full backup. It would be best to have a scale-out repository ready before beginning this backup job.

Instructions	Screenshot (if applicable)
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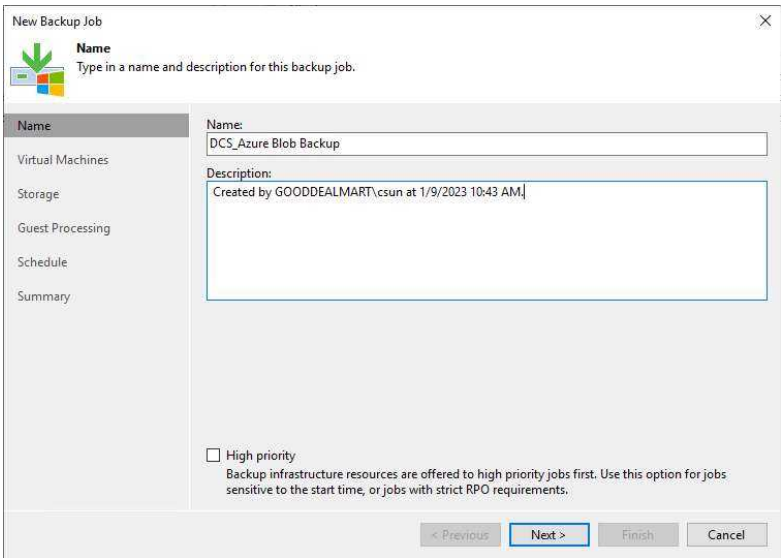
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



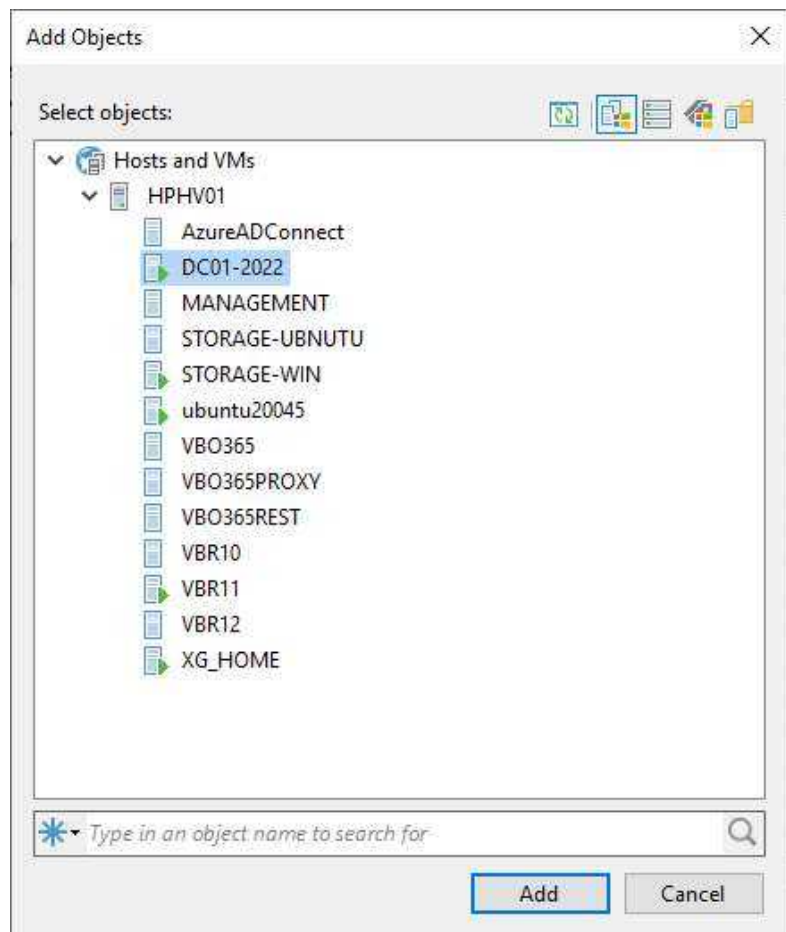
- 3. On the Home page, select Jobs, right-click Jobs, select Backup and click Virtual machine.



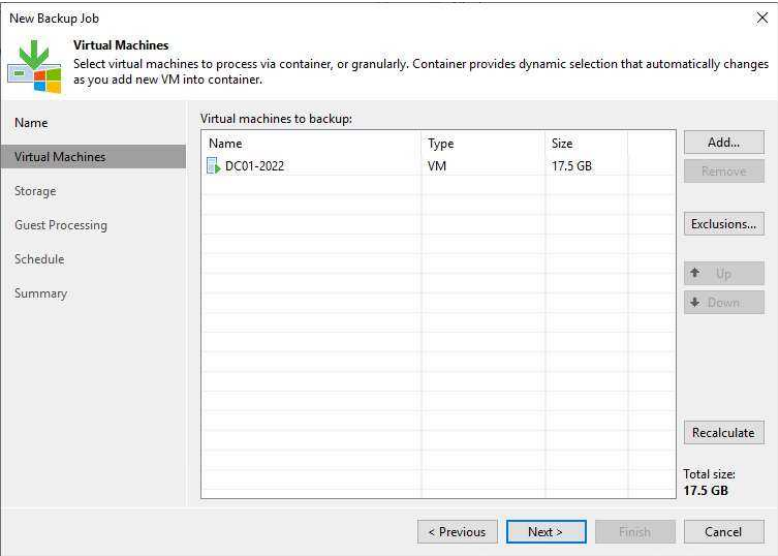
- 4. On the Name page, enter a name in the Name field.
- 5. Describe the Description field.
- 6. Select the High priority check box if you want the resource scheduler of Veeam Backup & Replication to prioritize this job higher than similar jobs and allocate resources to it in the first place.
- 7. Click Next.



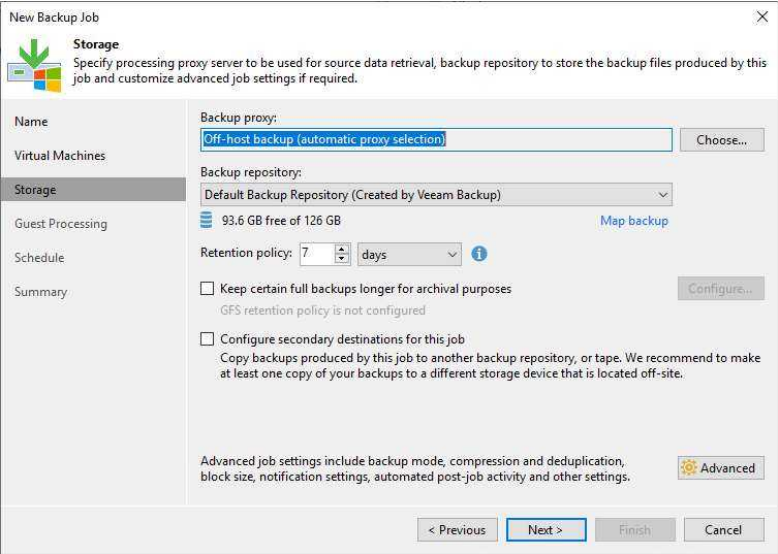
9. Select the VM in the list on the Add Objects page and click Add.
10. If you have multiple VMS that needs to back up in the same backup job, you can repeat the step to add them.



11. On the Virtual Machines page, click Next.



12. On the Storage, click Choose to select a backup proxy if you don't want to use the default Off-host backup (automatic proxy selection) setting.

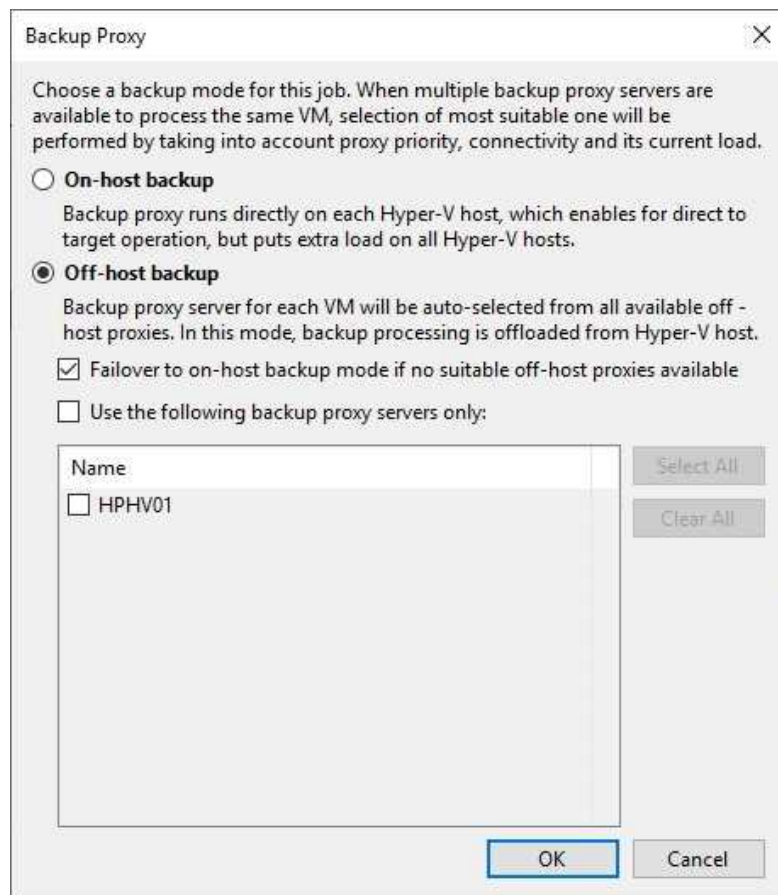


13. On the Backup Proxy page, if you select On-host backup mode, the source Microsoft HyperV host will serve as both the source host and the backup proxy. In this mode, Veeam Data Mover runs directly on the source host, which speeds up data retrieval but places additional strain on the host.

14. If you select Off-host backup mode, Veeam Data Mover will run on a dedicated off-host backup proxy. All backup processing operations from the source host are routed to the off-host backup proxy in this model.

15. If the off-host backup mode is selected for the job, but there are no off-host backup proxies available when the job begins, Veeam Backup & Replication will transition to on-host backup mode.

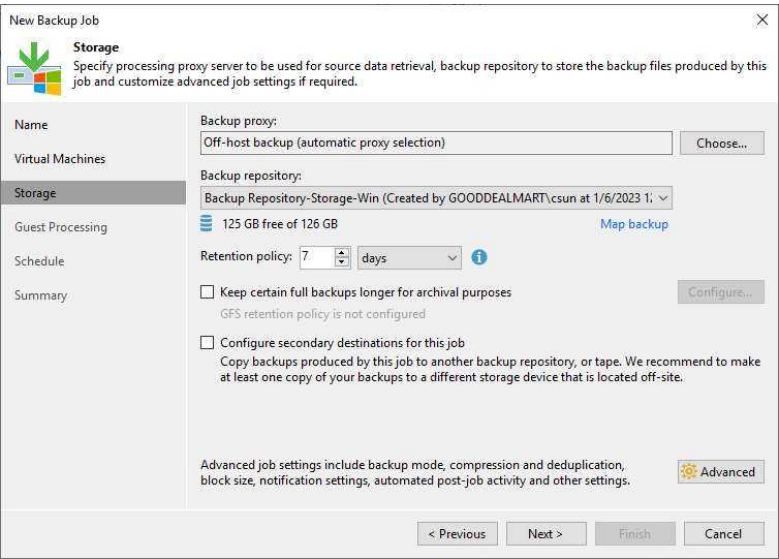
16. You unselect the Failover to on-host backup mode if no suitable off-host



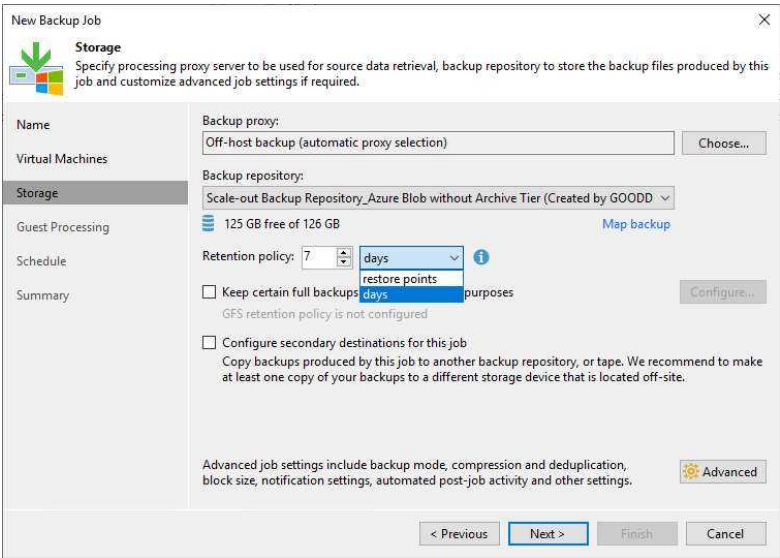
proxies available
checkbox, but if off-host
backup proxies are not
available or are not
configured properly, the
job will fail to start.

17. Click OK.

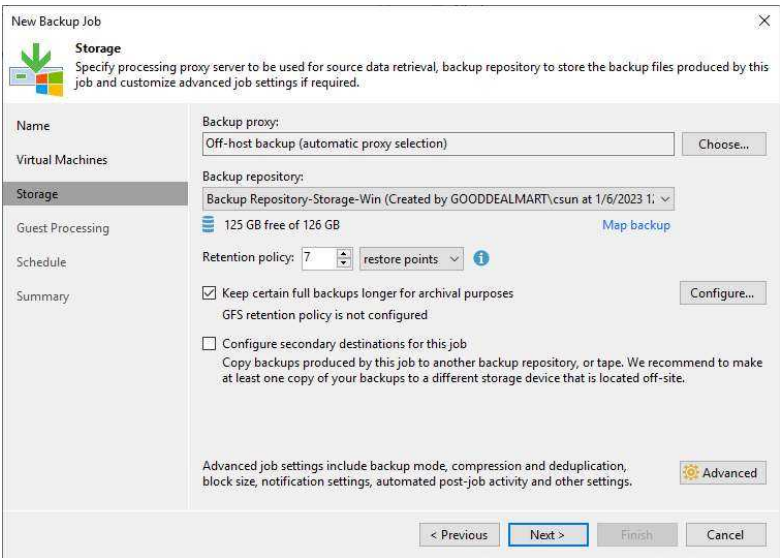
18. Select the Scale-out
backup repository from
the Backup repository
drop-down list.



- 19. Set the retention policy settings for restore points in the Retention Policy field.
- 20. Select days or restore points from the drop-down list.



- 21. You can configure the backup job's GFS retention policy settings to ignore the short-term retention policy for some full backups and store them for long-term archiving.



22. On the Storage page,
click Advanced.

New Backup Job

Storage
Specify processing proxy server to be used for source data retrieval, backup repository to store the backup files produced by this job and customize advanced job settings if required.

Name

Virtual Machines

Storage

Guest Processing

Schedule

Summary

Backup proxy:
Off-host backup (automatic proxy selection) Choose...

Backup repository:
Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 1: 12:00 PM) Map backup

125 GB free of 126 GB

Retention policy: 7 restore points

☐ Keep certain full backups longer for archival purposes
GFS retention policy is not configured

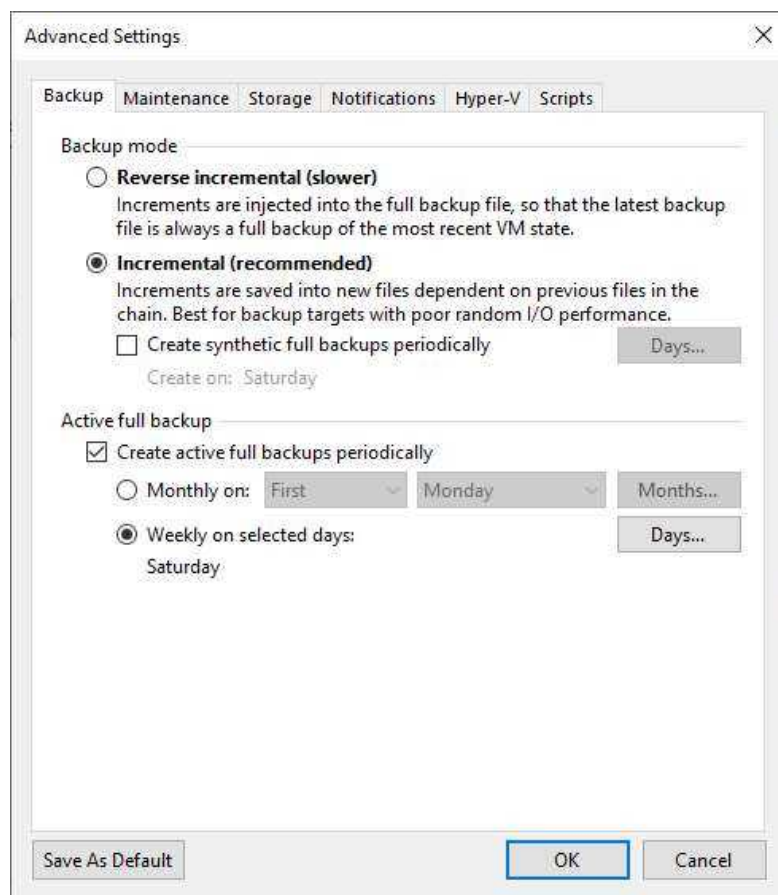
☐ Configure secondary destinations for this job
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings.

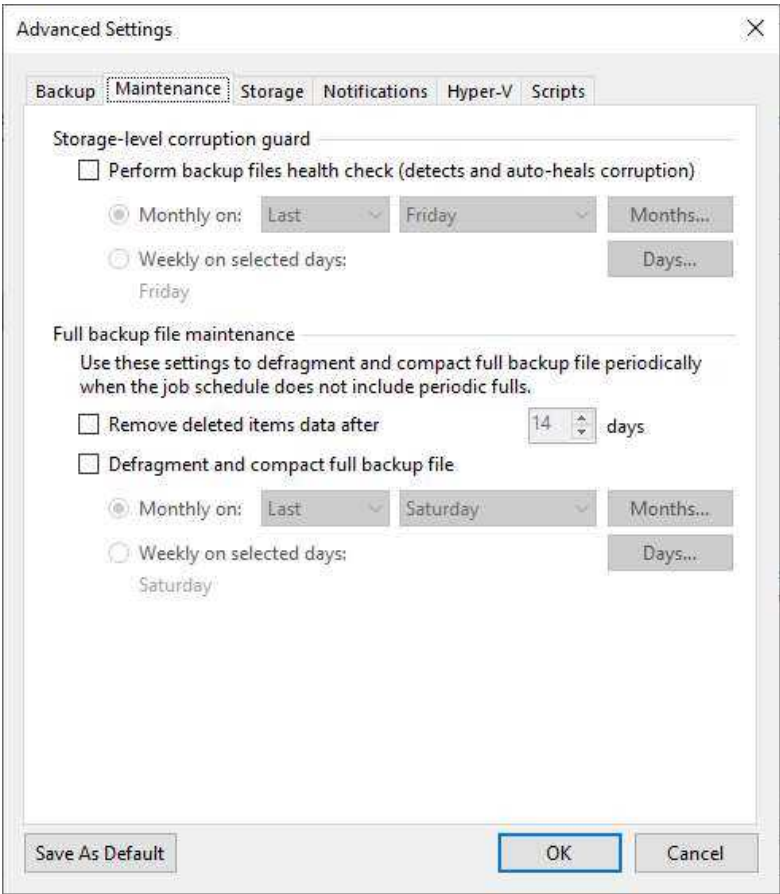
Advanced

< Previous Next > Finish Cancel

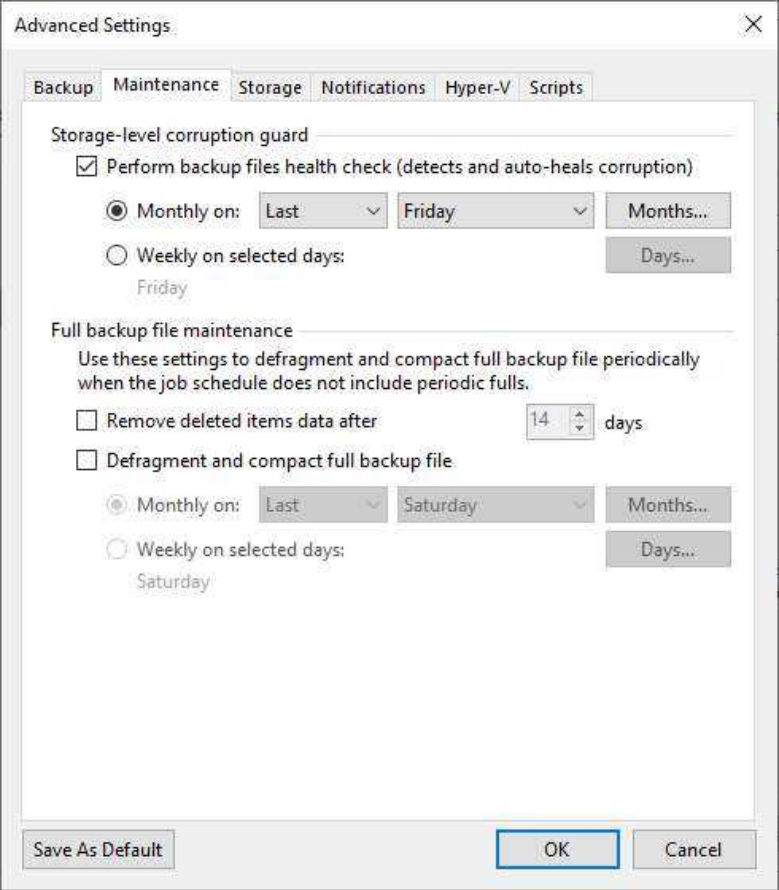
23. On the Backup page, Select Incrementally and disable synthetic full.
24. In the Active full backup session, select Create active full backups periodically check box.
25. Select the Monthly on or Weekly on selected days options to define scheduling settings.
26. After creating a full backup file, all backup files start to upload from the local directory to the Azure blob.



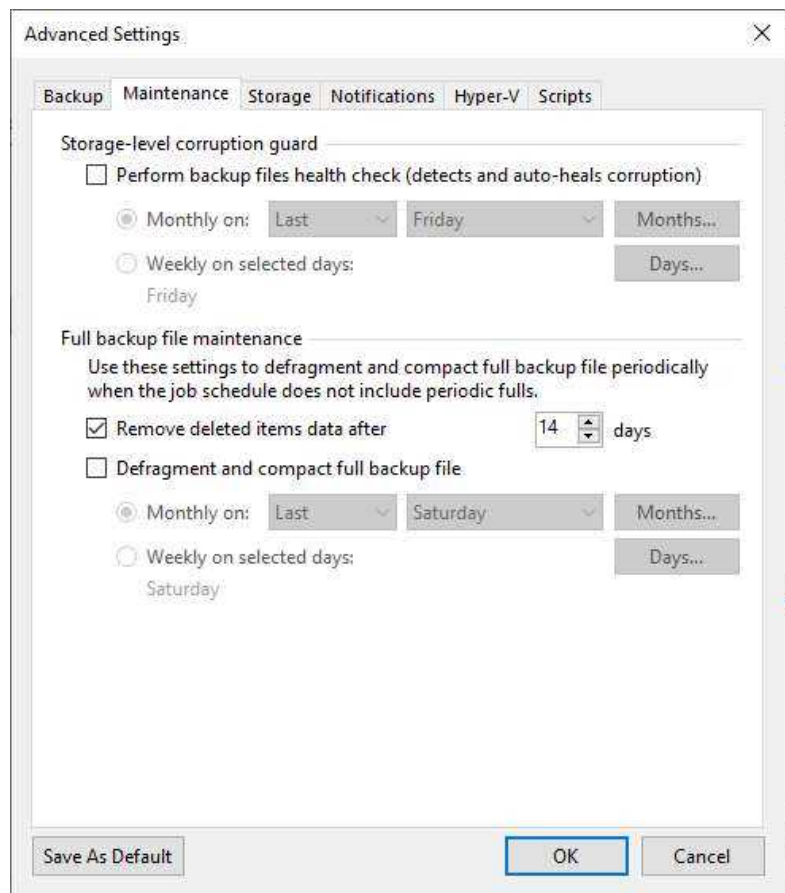
27. On the Advanced
Settings, Maintenance.



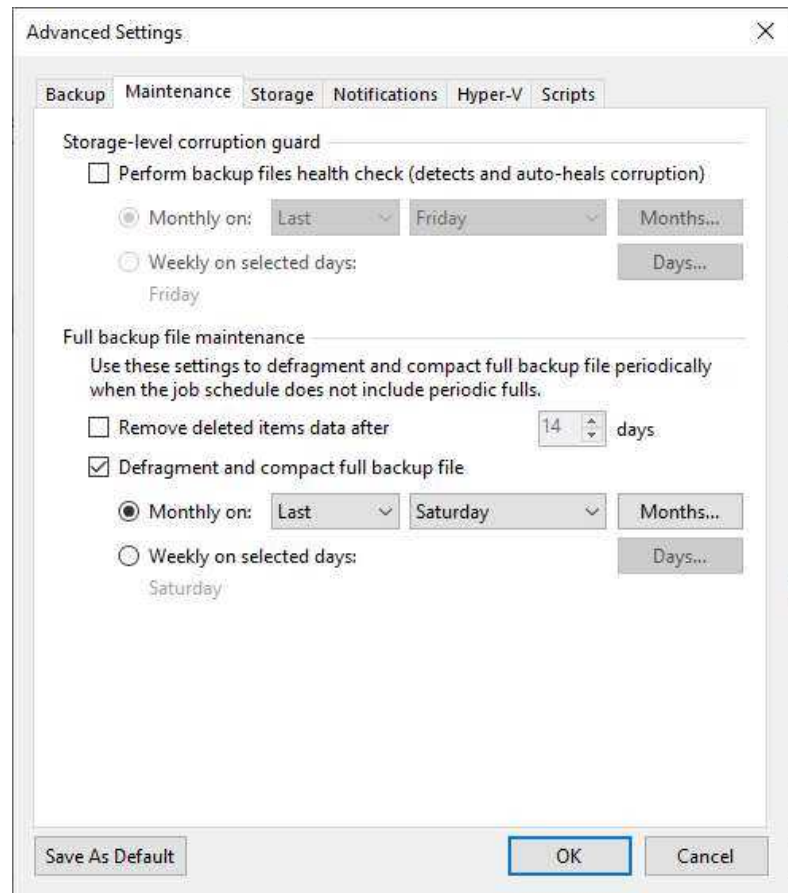
28. To regularly perform a health check in the backup chain, check the Perform backup files health check (detects and auto-heals corruption) checkbox in the Storage-level corruption guard section and specify a schedule for the health check.



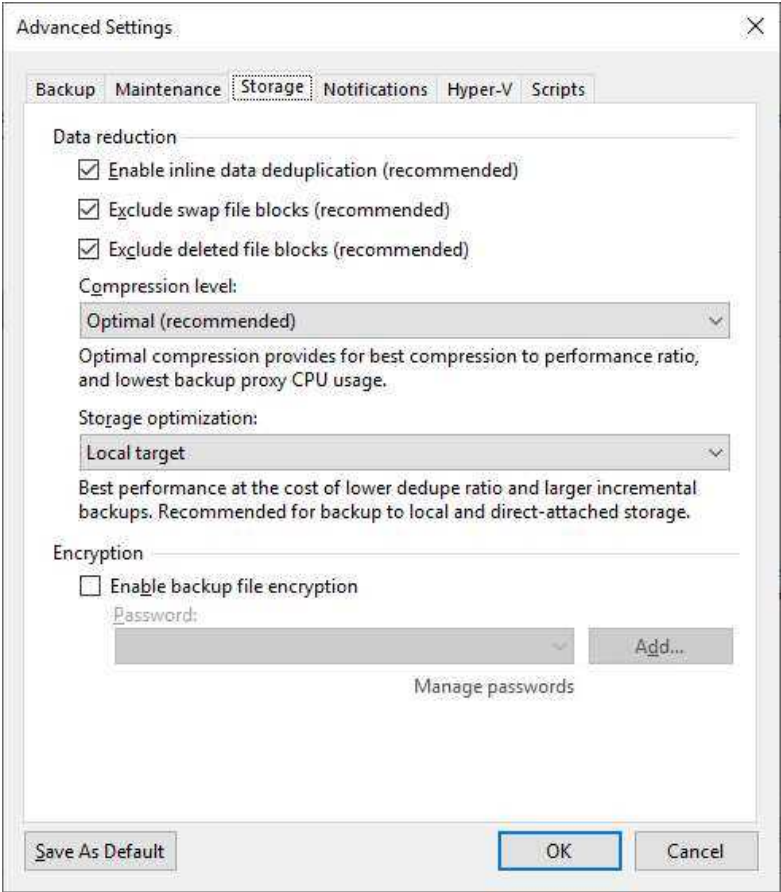
29. Select the Remove deleted items data after the check box and enter the days you want backup data for deleted VMs to be kept.



30. Select the Defragment and compact full backup file check box and specify the schedule for the compact operation to compact a full backup periodically.



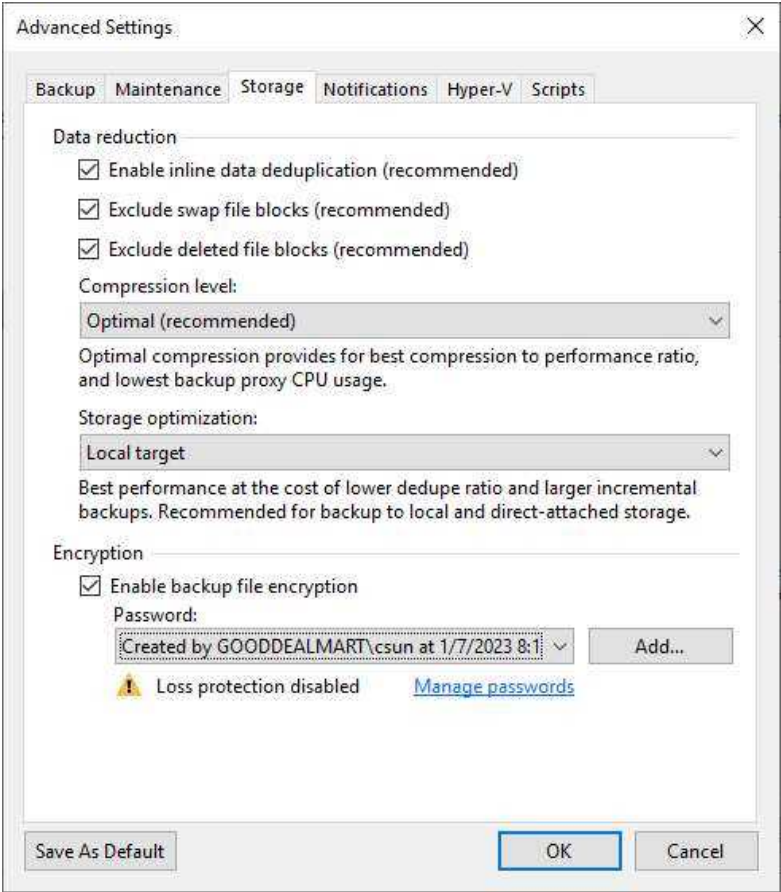
- 31. On Advanced Settings, click Storage.
- 32. Select the Enable inline data deduplication check box.
- 33. Select Exclude swap file blocks checkbox.
- 34. Select the Exclude deleted file blocks check box.
- 35. Select the compression level for the backup from the drop-down list.



- 36. Select Storage optimization from the drop-down list.

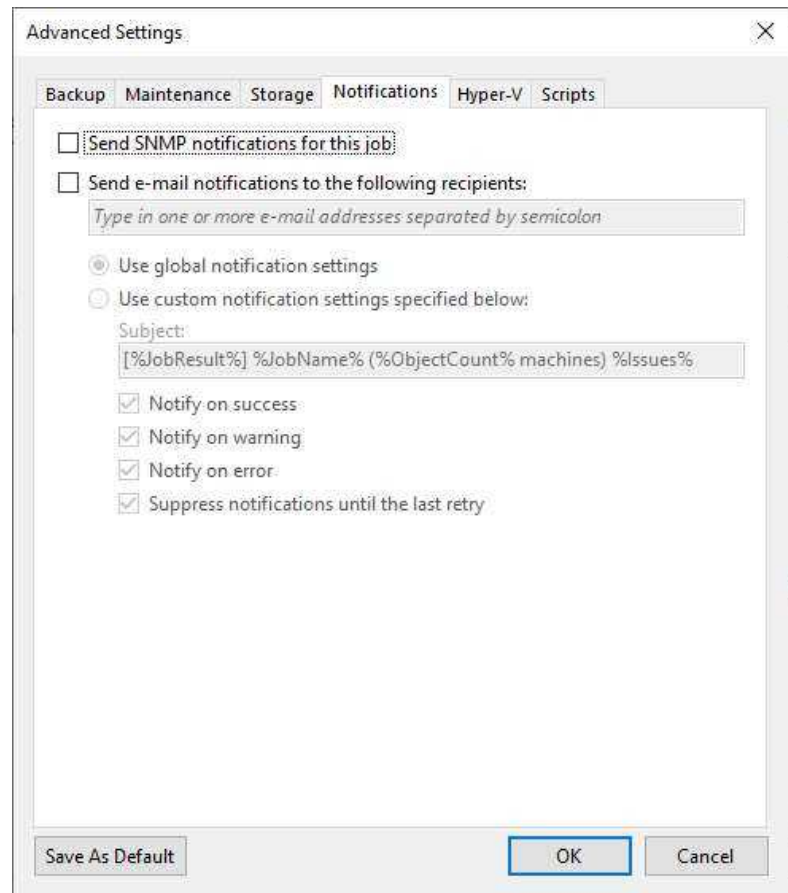
Storage optimization option	Block size	Description
Local target (large blocks)	4096 KB	Recommended for files that are larger than 16 TB. This option will provide the lowest deduplication ratio and the largest size of incremental files.
Local target	1024 KB	Recommended for backup and replication to SAN, DAS or local storage. This option provides the fastest job performance but reduces the deduplication ratio, because with larger data blocks it is less likely to find identical blocks.
LAN target	512 KB	Recommended for backup and replication to NAS, and on-site backup and replication. This option provides a better deduplication ratio and reduces the size of a file because of reduced data block sizes.
WAN target	256 KB	Recommended if you are planning to use WAN for off-site backup and replication. This option provides the maximum deduplication ratio and the smallest size of files that allows you to reduce the amount of traffic over WAN.

- 37. Select the Enable backup file encryption checkbox to encrypt the content of backup files.
- 38. Select a password from the drop-down list. If you haven't done so, click Add or use the Manage passwords link to create a new password.

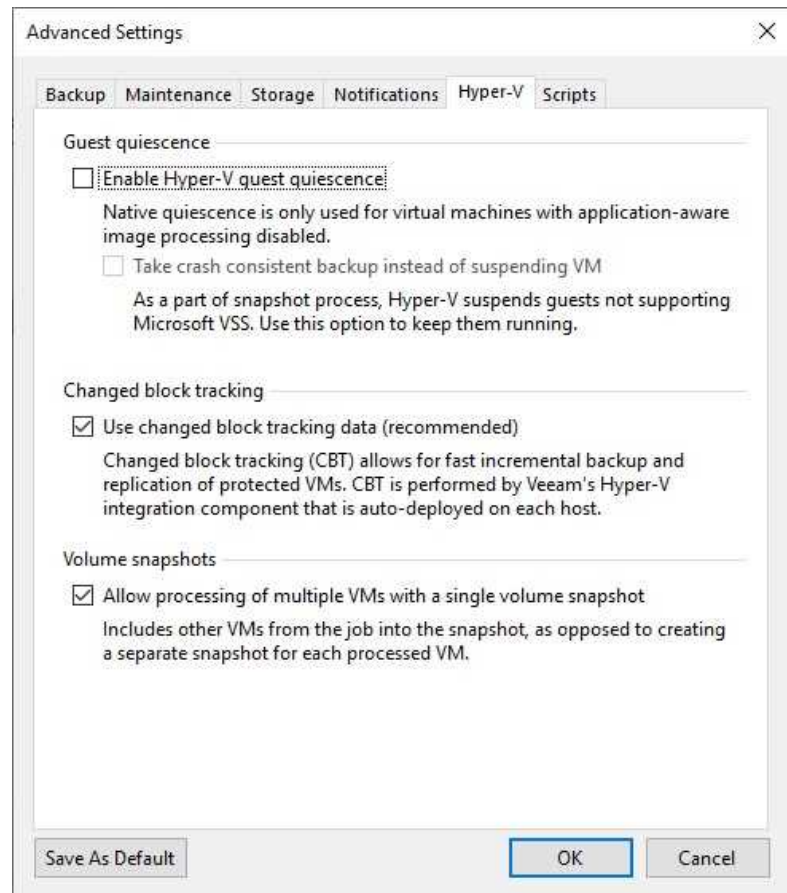


39. On the Advanced Settings, select Notifications.

40. Keep the default settings.

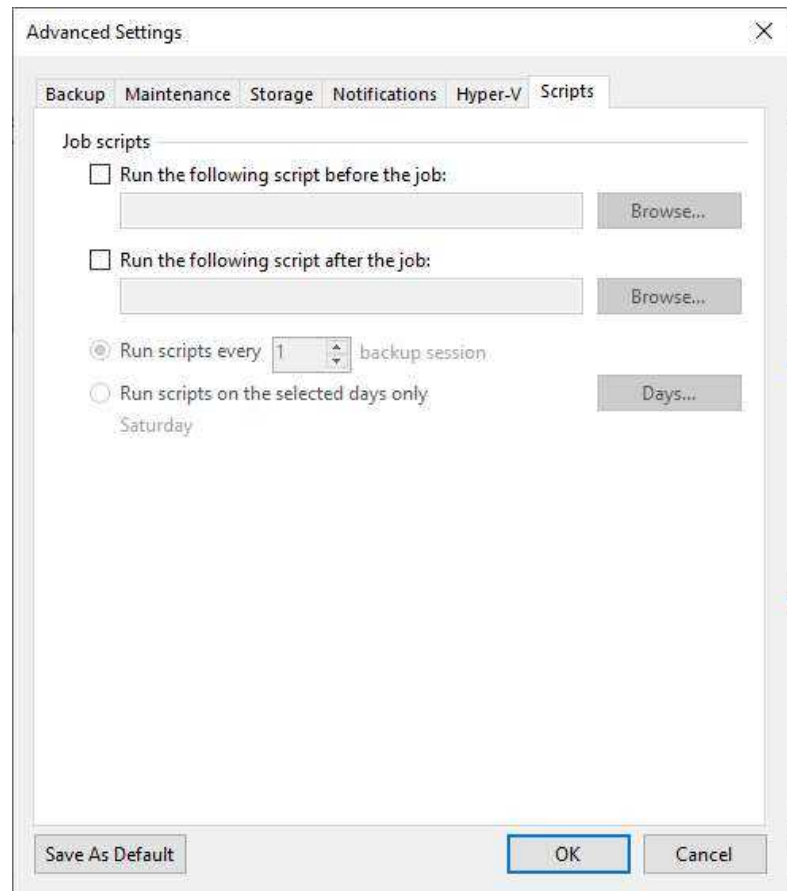


41. On the Advanced Settings, select Hyper-V.
42. Select the Enable Hyper-V guest quiescence check box if application-aware processing cannot be used for some reason.
43. Select the Take crash consistent backup instead of suspending VM check box if you do not want to suspend VMs in the job.
44. Select the Use changed block tracking data (recommended) check box.
45. Select the Allow processing of multiple VMs with a single volume snapshot check box.



46. On the Advanced Settings page, click Scripts.

47. Keep the default settings and click OK.



48. On the Storage page, click Next.

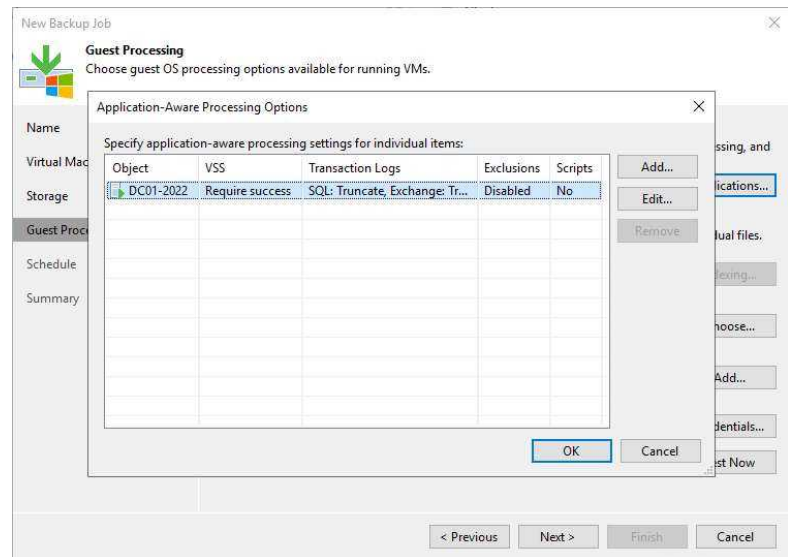
The screenshot shows the 'New Backup Job' wizard with the 'Storage' tab selected. The left sidebar contains links for Name, Virtual Machines, Storage, Guest Processing, Schedule, and Summary. The main content area is titled 'Storage' and includes a description: 'Specify processing proxy server to be used for source data retrieval, backup repository to store the backup files produced by this job and customize advanced job settings if required.' The configuration options include: 'Backup proxy' set to 'Off-host backup (automatic proxy selection)' with a 'Choose...' button; 'Backup repository' set to 'Scale-out Backup Repository_Azure Blob without Archive Tier (Created by GOOOD)' with '125 GB free of 126 GB' and a 'Map backup' link; 'Retention policy' set to '7 days'; and two checkboxes: 'Keep certain full backups longer for archival purposes' (unchecked) and 'Configure secondary destinations for this job' (unchecked). An 'Advanced' button is at the bottom right. Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

49. When you add VMs running VSS-aware applications to the backup job, you can enable application-aware processing to create a transactionally consistent backup. The transactionally consistent backup ensures that applications on VMs can be recovered without data loss.

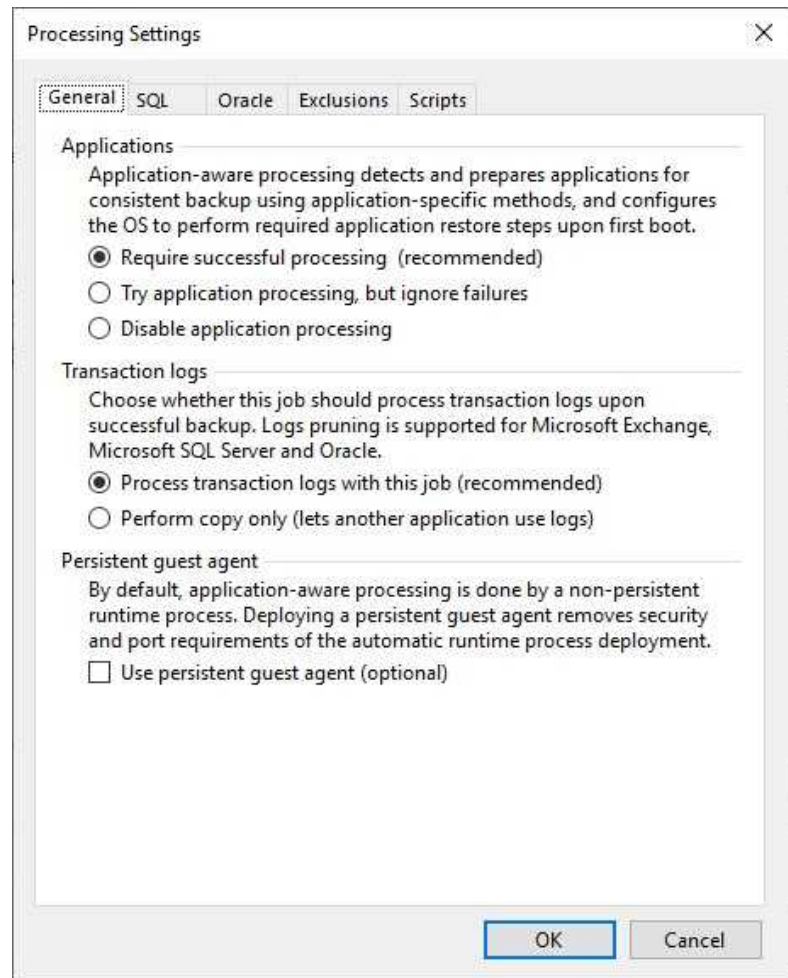
50. Select the Enable application-aware processing check box on the Guest Processing page and click Applications.

The screenshot shows the 'New Backup Job' wizard with the 'Guest Processing' tab selected. The left sidebar is the same as the previous screenshot. The main content area is titled 'Guest Processing' and includes a description: 'Choose guest OS processing options available for running VMs.' The configuration options include: 'Enable application-aware processing' checked, with a description and an 'Applications...' button; 'Enable guest file system indexing' unchecked, with a description and an 'Indexing...' button; 'Guest interaction proxy' set to 'Automatic selection' with a 'Choose...' button; 'Guest OS credentials' with a dropdown menu, an 'Add...' button, and a 'Manage accounts' link; and a 'Test Now' button. Navigation buttons at the bottom are '< Previous', 'Next >', 'Finish', and 'Cancel'.

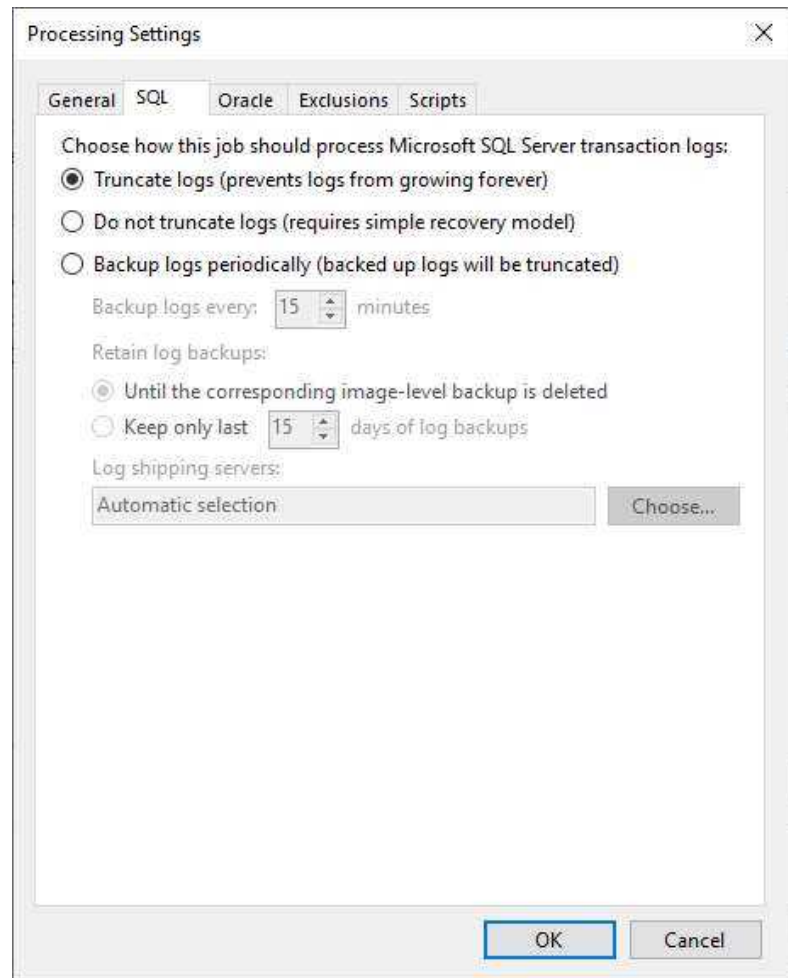
51. On the Application-Aware Processing Options page, select the VM, and click Edit.



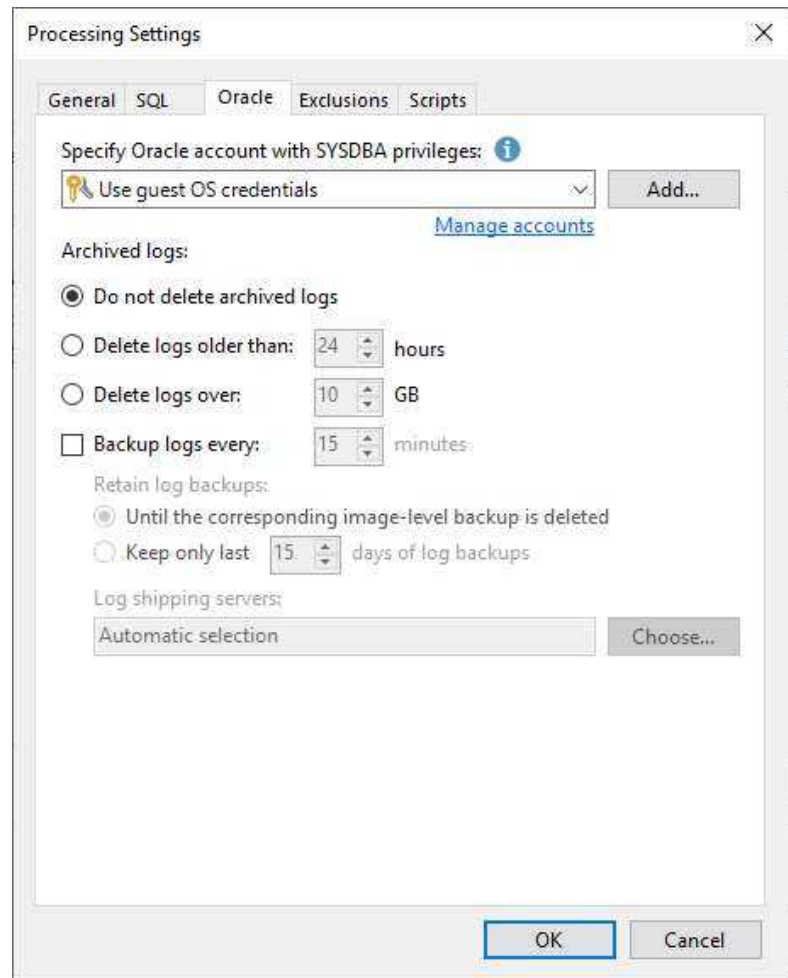
52. On the Processing Settings, click General.
53. Suppose you need Veeam Backup & Replication to stop the backup process if any error occurs during application-aware processing. Select Require successful processing (recommend).
54. Suppose you must continue the backup process even if there is an error during application-aware processing. Select Try application processing but ignore failures.
55. Select Disable application processing to disable application-aware processing for the VM.
56. Select Process transaction logs with this job (recommend).
57. Select Perform copy only to let another application use
58. Select the Use persistent guest agent (optional) checkbox to enable persistent agent.



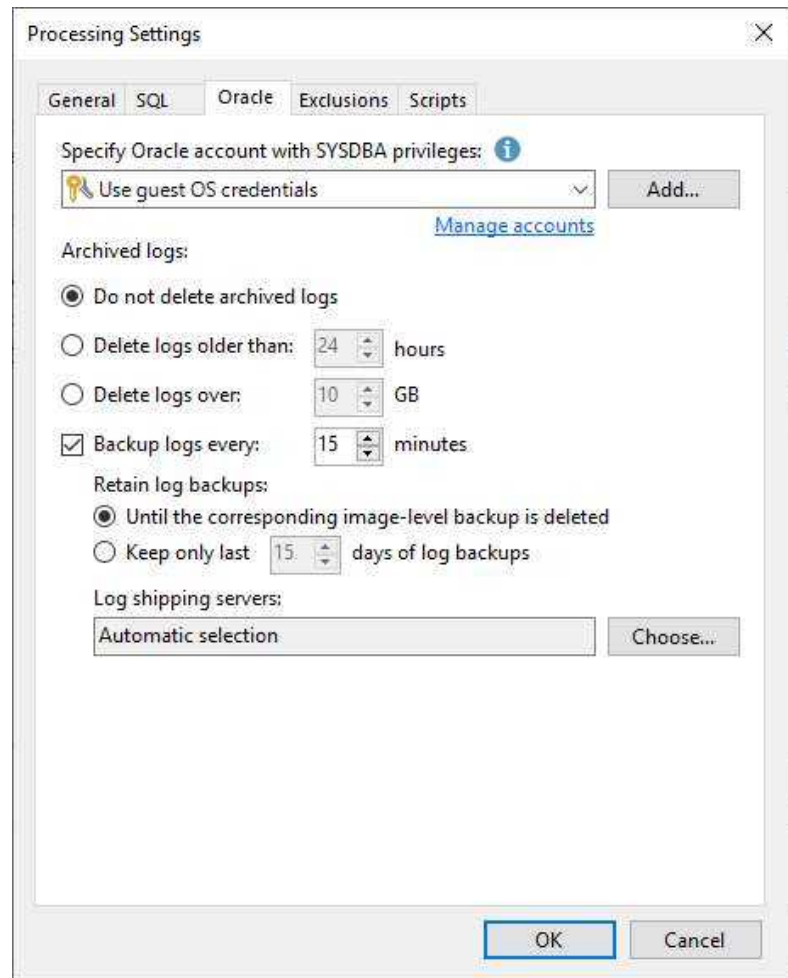
59. On the Processing Settings page, click SQL if the VM is a Microsoft SQL Server VM.
60. Select Truncate logs (Prevents logs from growing forever) to truncate transaction logs after a successful backup.
61. Click OK.



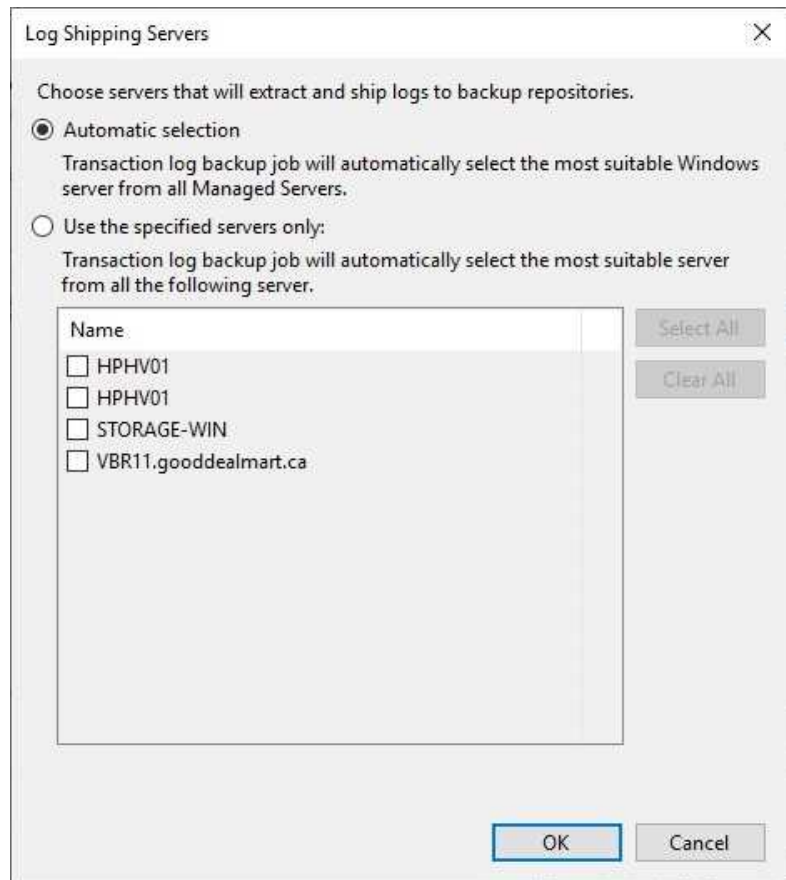
62. On the Processing Settings page, click Oracle if the VM is an Oracle Server.
63. Select a user account from the drop-down list.
64. Select Do not delete archived logs if you need Veeam Backup & Replication to preserve archived logs on the VM guest OS.



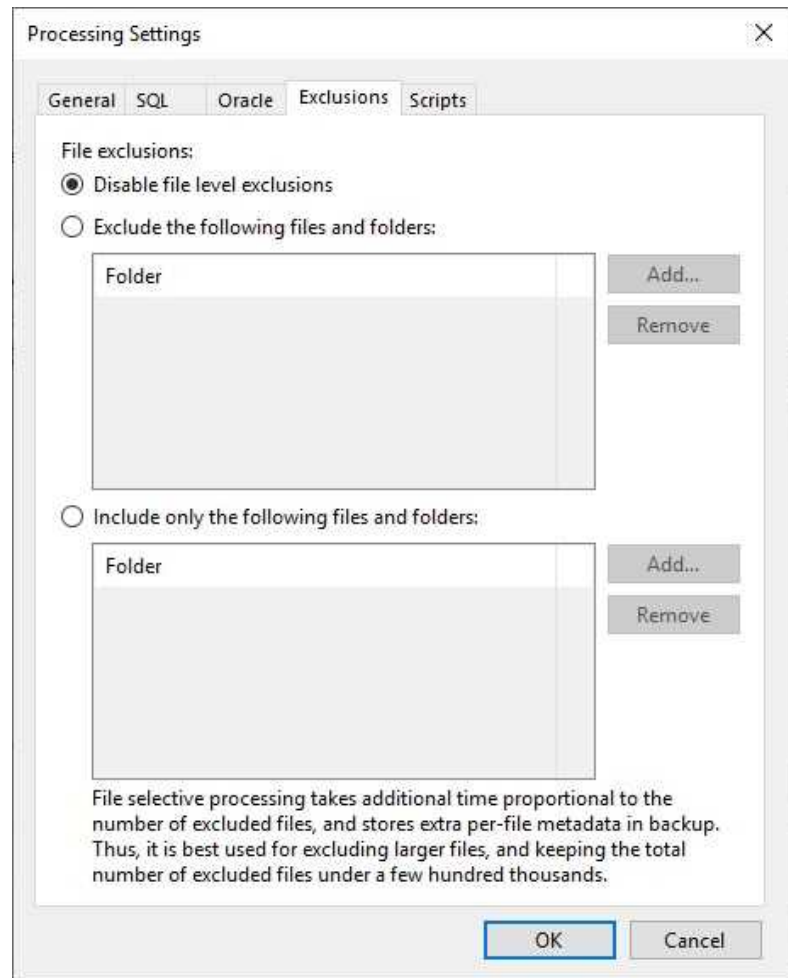
65. Select the retention policy settings for archived logs in the Retain log backups section.
66. Click Choose In the Log shipping servers.



67. On the Log Shipping Servers page, Select Automatic selection if you need Veeam Backup & Replication to choose an optimal log shipping server automatically.
68. Select Use the specified servers only and then select check boxes next to those you want to use as log shipping servers.
69. Click OK.

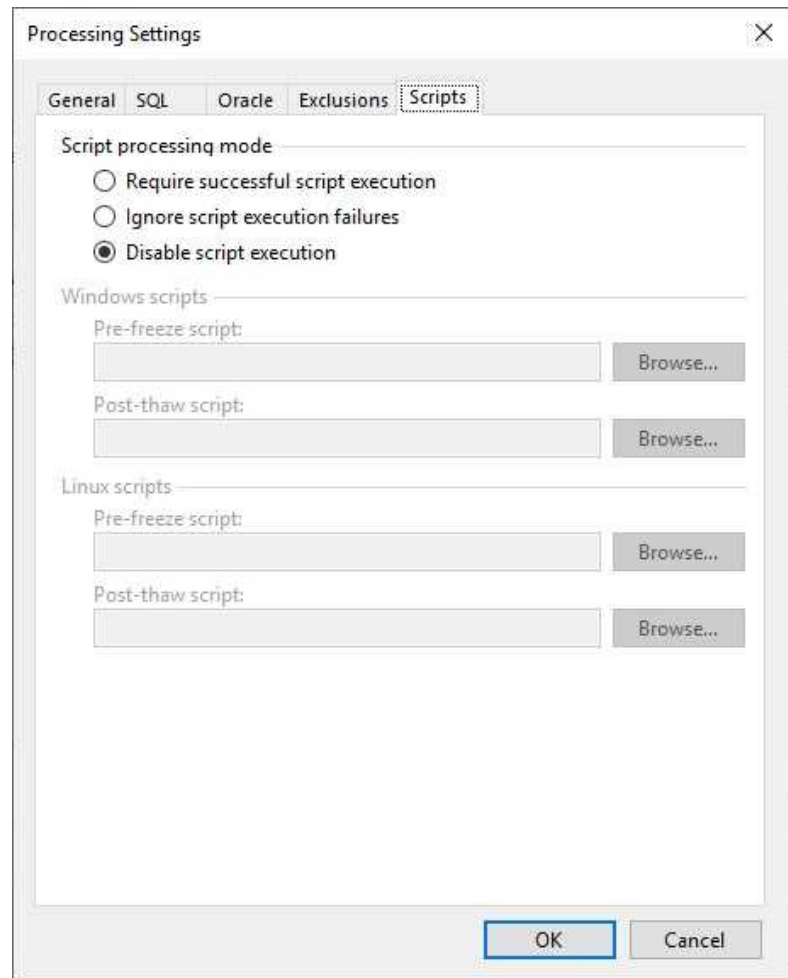


70. On the Processing Settings page, click Exclusions and keep the default settings.

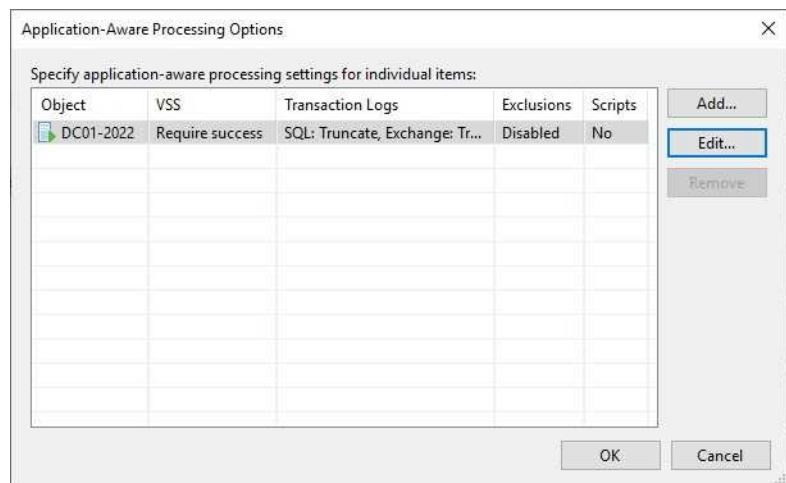


71. On the Processing Settings page, click Scripts and keep the default settings.

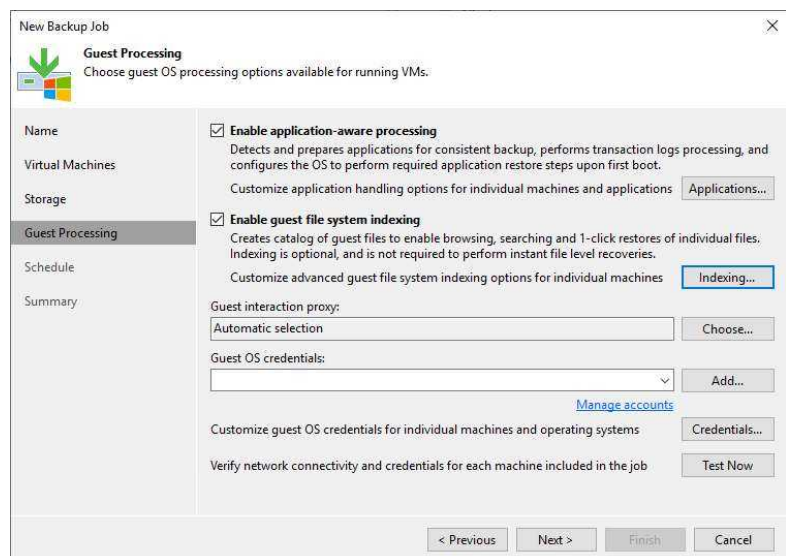
72. Click OK.



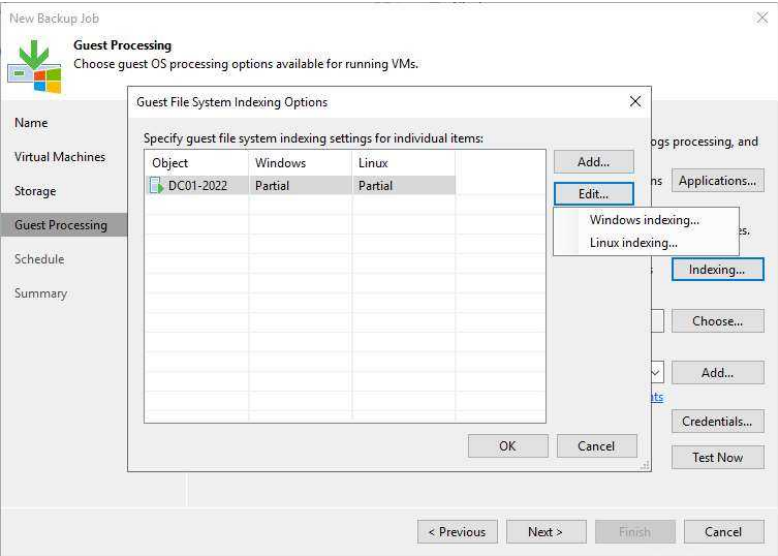
73. On the Application-Aware Processing Options page, click OK.



74. Select the Enable guest file system indexing checkbox and click Indexing.

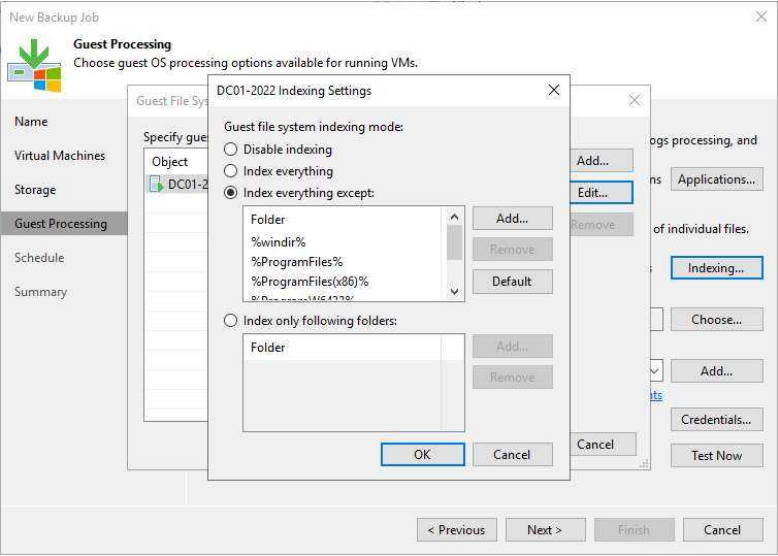


75. On the Guest File System Indexing Options page, select the VM, click Edit and select Windows indexing.

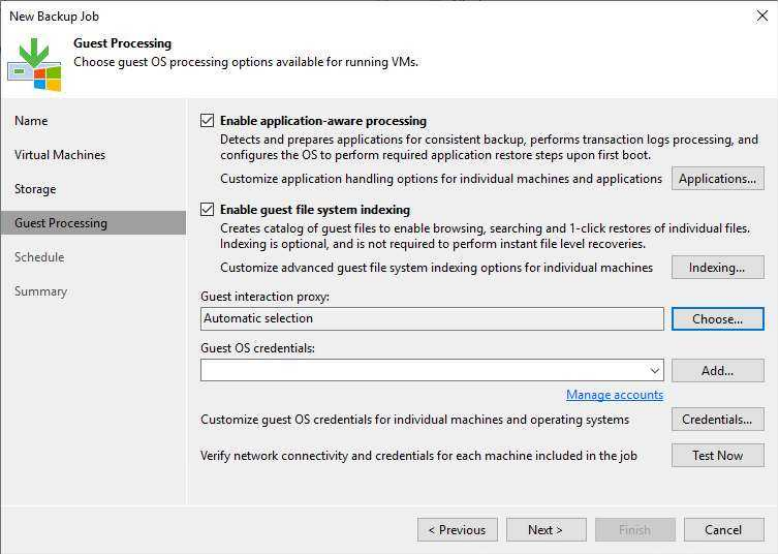


76. On the Guest file system indexing mode page, keep the default settings.

77. Click OK.



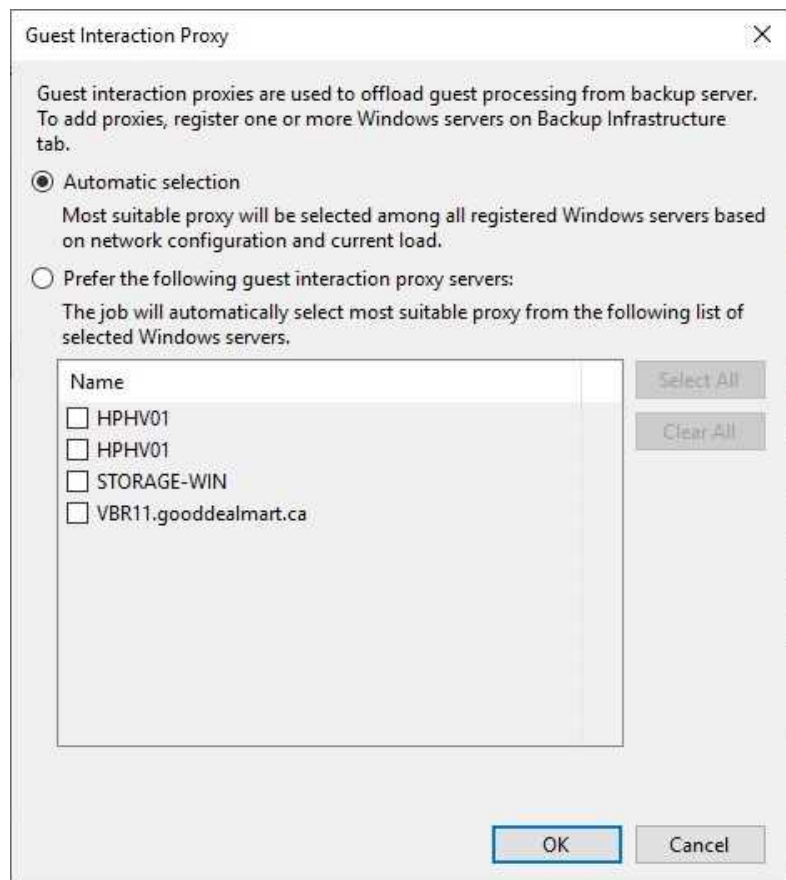
78. Click Choose on the Guest interaction proxy field on the Guest Processing page.



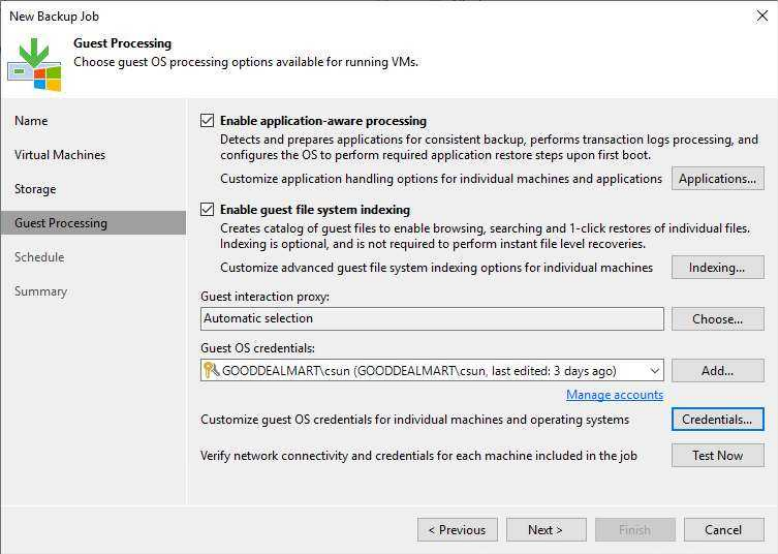
79. On the Guest Interaction Proxy page, select Automatic selection to let Veeam Backup & Replication automatically select the guest interaction proxy.

80. Select Prefer the following guest interaction proxy servers to explicitly define which servers will perform the guest interaction proxy role.

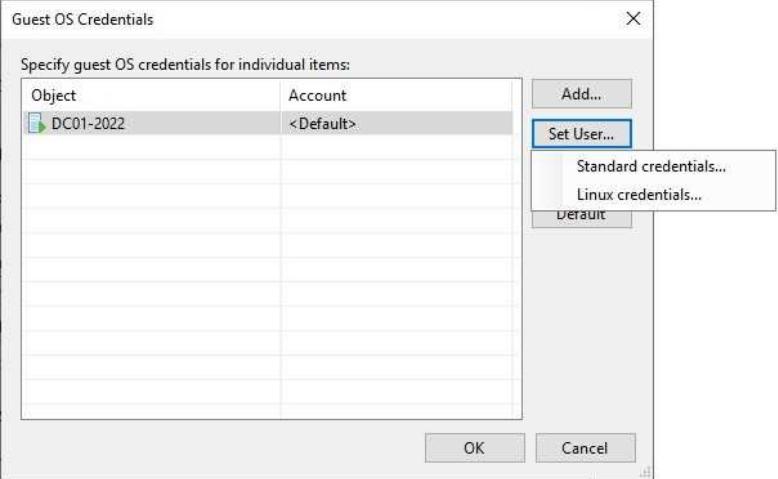
81. Click OK.



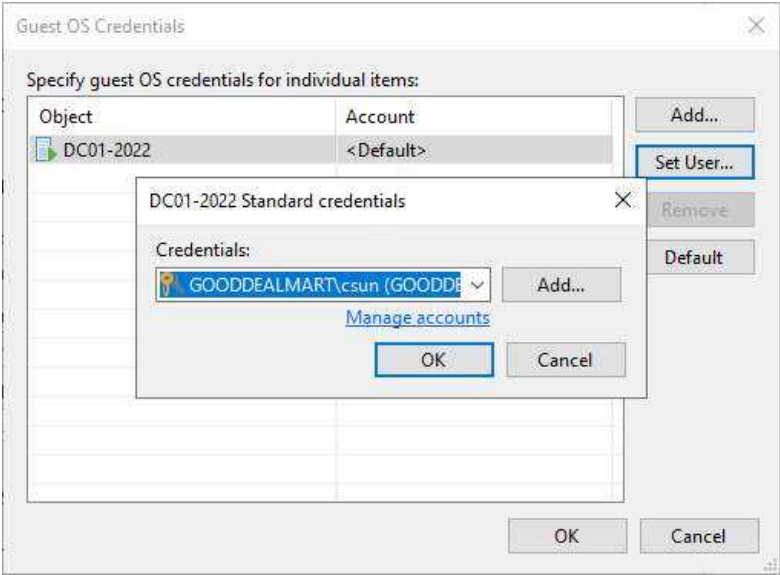
- 82. Choose a user account on the Guest Processing page with sufficient permissions from the Guest OS credentials drop-down list.
- 83. Click Credentials to Customize guest OS credentials for individual machines and operation systems.



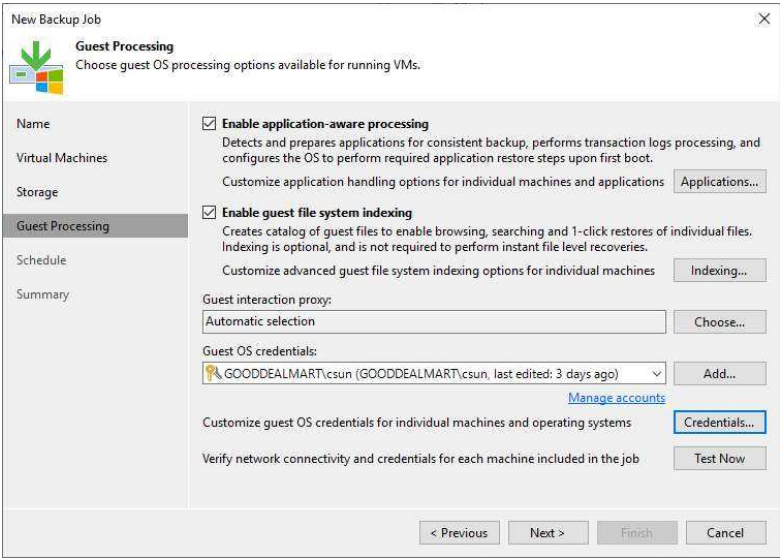
- 84. On the Guest OS Credentials page, select the VM, and click Set User.
- 85. Select Standard credentials.



- 86. Choose a user from the Credentials drop-down list, and click OK.
- 87. Repeat the steps for each VM.

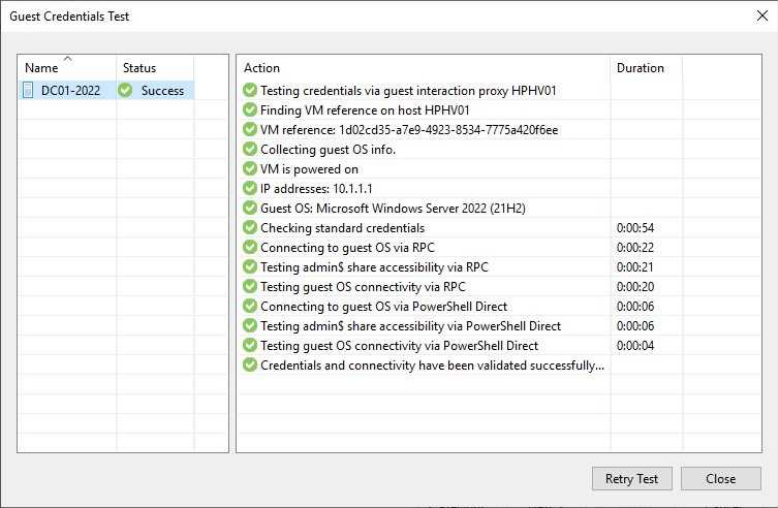


- 88. On the Guest Processing page, click Test Now to verify network connectivity and credentials for each machine included in the job.

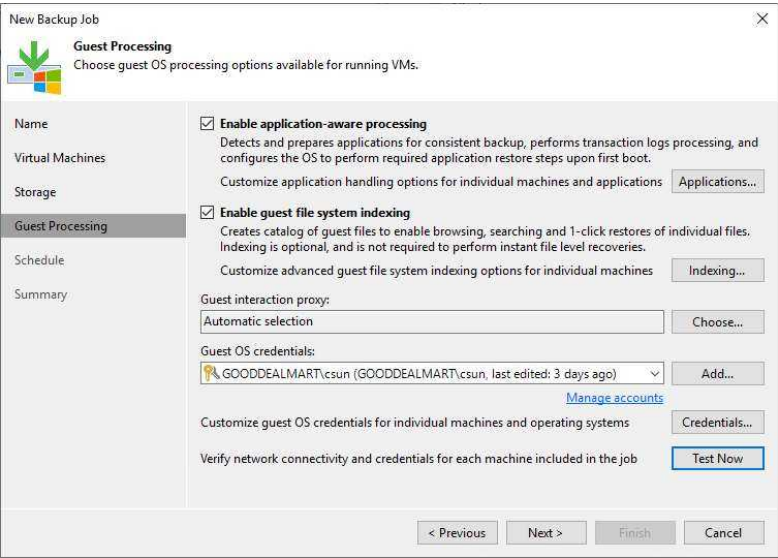


89. On the Guest Credentials Test page, verify each machine's success.

90. Click Close.



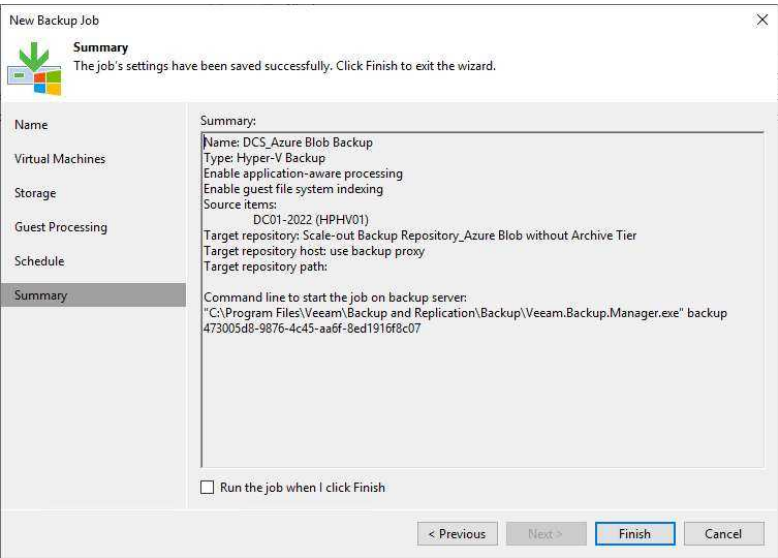
91. On the Guest Processing page, click Next.



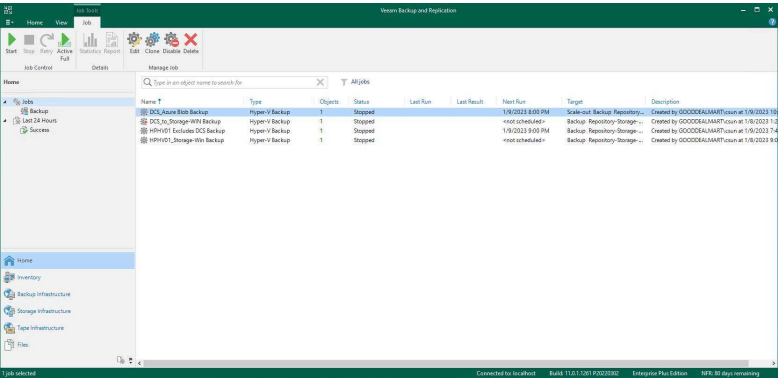
92. Select Run the job automatically on the Schedule page and select your specified schedule.
93. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
94. Define the time interval the backup job must complete in the Backup window section. The backup window ensures that the job does not overlap with production hours and that there is no unnecessary overhead on the production environment.
95. Click Apply.

The screenshot shows the 'New Backup Job' dialog box with the 'Schedule' tab selected. The dialog has a sidebar on the left with tabs: Name, Virtual Machines, Storage, Guest Processing, Schedule (selected), and Summary. The main area is titled 'Schedule' with a subtitle 'Specify the job scheduling options. If you do not set the schedule, the job will need to be controlled manually.' Below this, there are four radio button options for scheduling: 'Daily at this time' (selected), 'Monthly at this time', 'Periodically every', and 'After this job'. The 'Daily at this time' option is configured with a time of 8:00 PM, frequency of Everyday, and a 'Days...' button. The 'Monthly at this time' option is configured with a time of 10:00 PM, frequency of Fourth, day of Saturday, and a 'Months...' button. The 'Periodically every' option is configured with a value of 1 and a unit of Hours, with a 'Schedule...' button. The 'After this job' option is configured with a dropdown menu showing 'DCS_to_Storage-WIN Backup (Created by GOODDEALMART\csun at ...)'. Below these options is the 'Automatic retry' section, which has a checked checkbox 'Retry failed items processing:' set to 3 times, and a 'Wait before each retry attempt for:' set to 10 minutes. The 'Backup window' section has an unchecked checkbox 'Terminate job if it exceeds allowed backup window' and a 'Window...' button. At the bottom of the dialog are four buttons: '< Previous', 'Apply' (highlighted with a blue border), 'Finish', and 'Cancel'.

96. On the Summary page, click Finish.

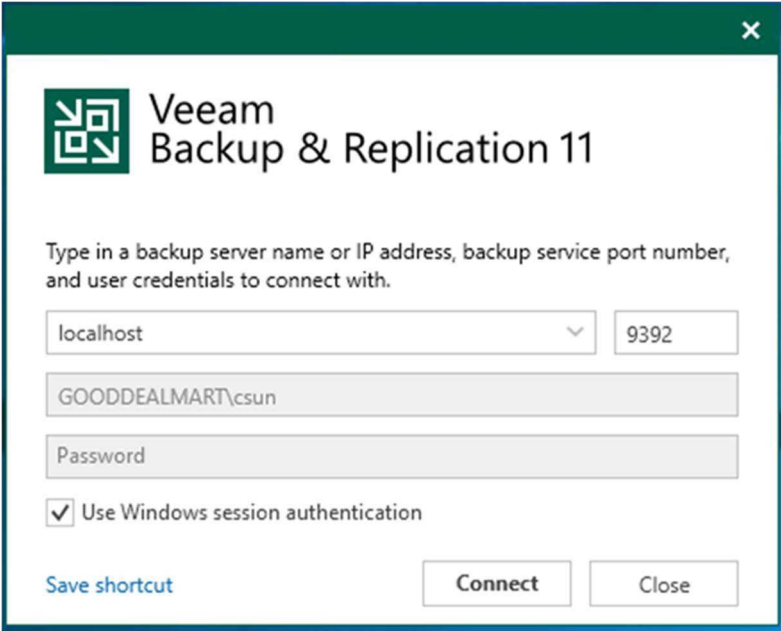


97. Verify the backup job has been added

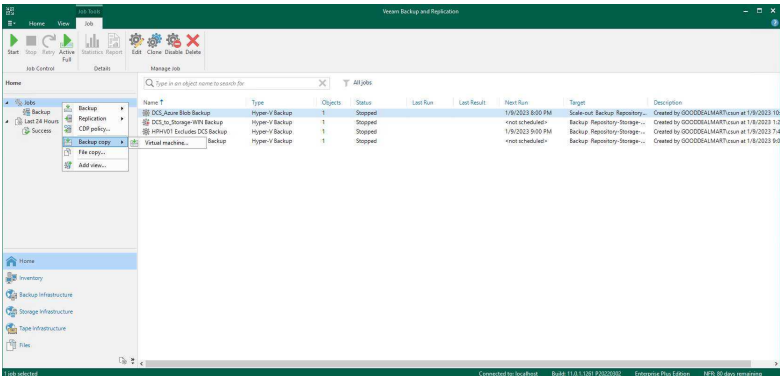


Creating a Backup Copy Job from the backup job

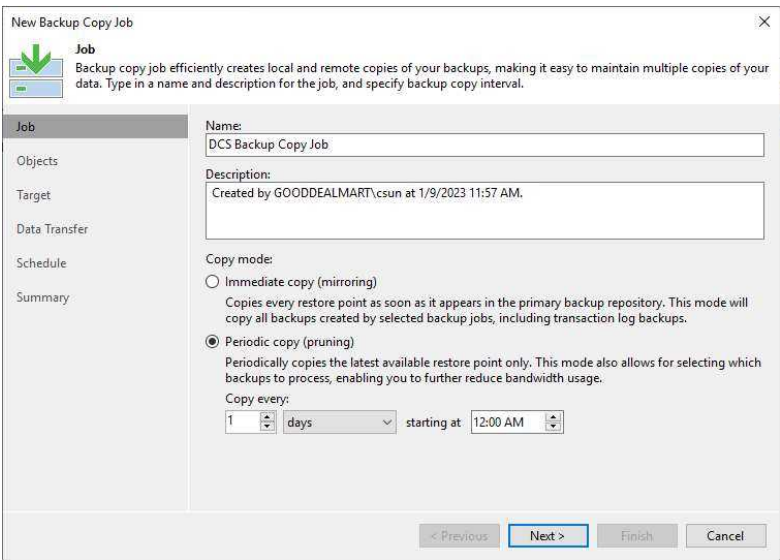
The backup copy process is job-driven. Veeam Backup & Replication fully automates backup copying. It allows you to specify retention settings to keep the desired number of restore points and full backups for archival purposes.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	

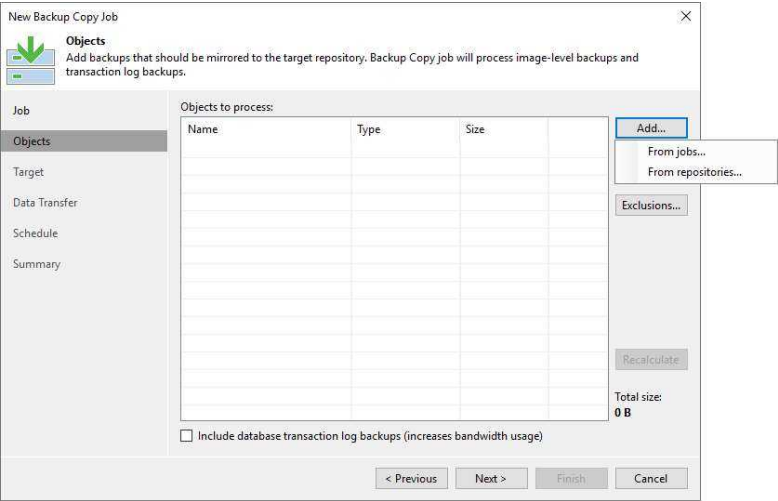
3. On the Home page, select Jobs, right-click Jobs, select Backup copy and click Virtual machine.



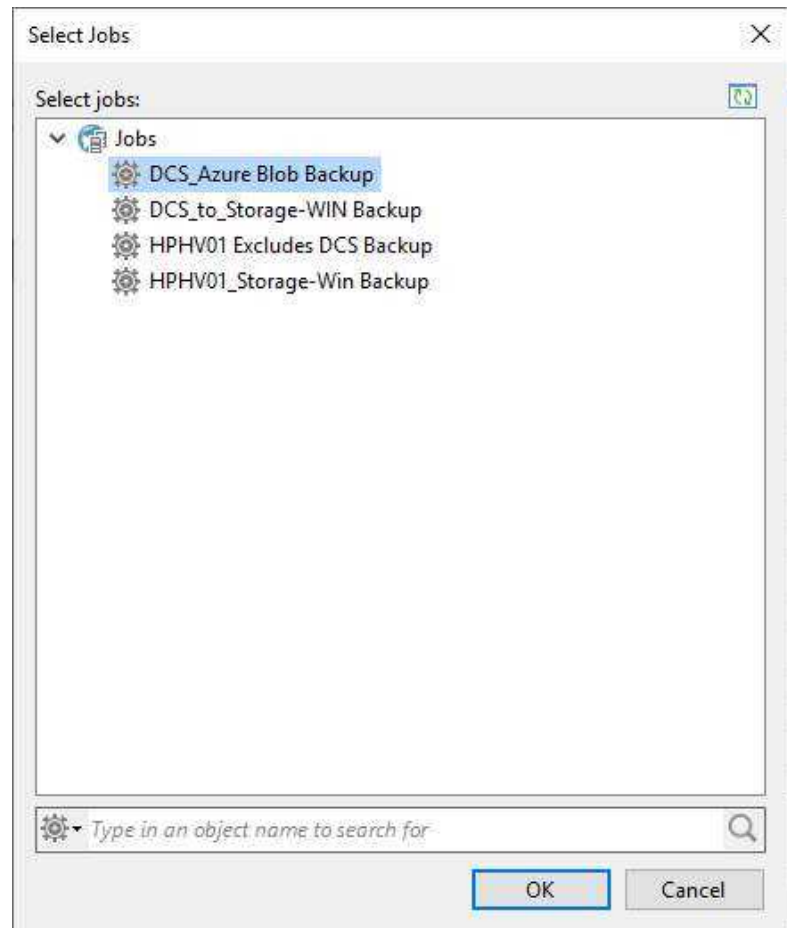
4. On the Name page, enter a name in the Name field.
5. Describe the Description field.
6. In the copy mode session, select a backup copy mode. You cannot change the set mode after configuring the backup copy job.
7. Click Next.



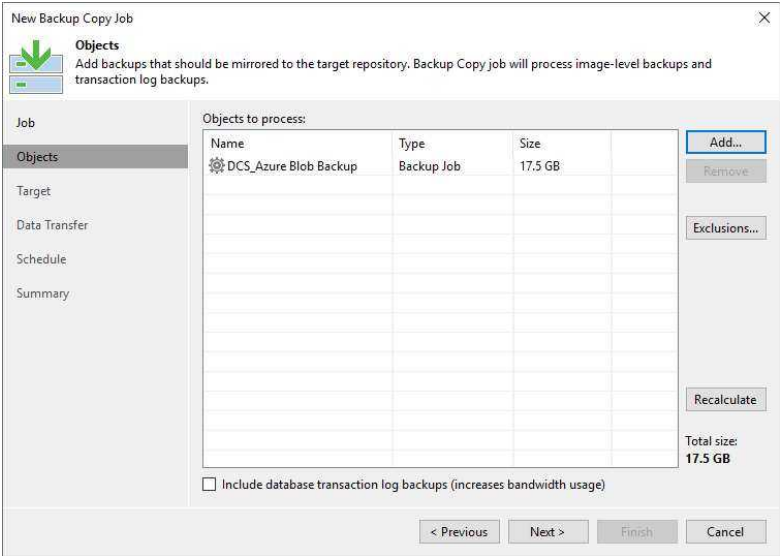
8. On the Objects page, click Add and select From jobs.



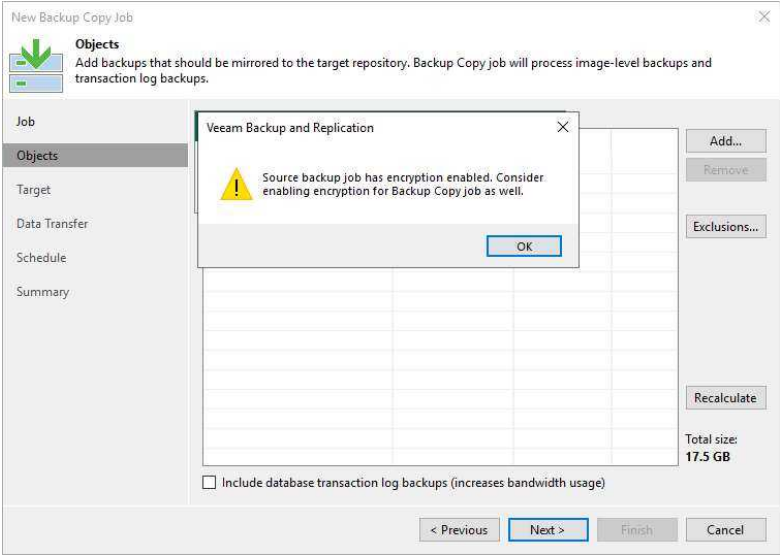
9. Select the job from the jobs list on the Select jobs page and click OK.



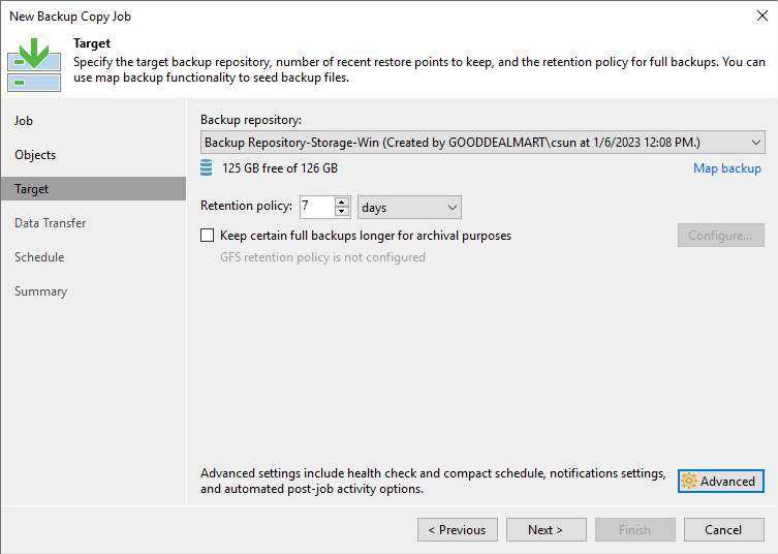
- 10. On the Objects page, click Next.
- 11. Select Include database transacting log backups (increases bandwidth usage) If required.



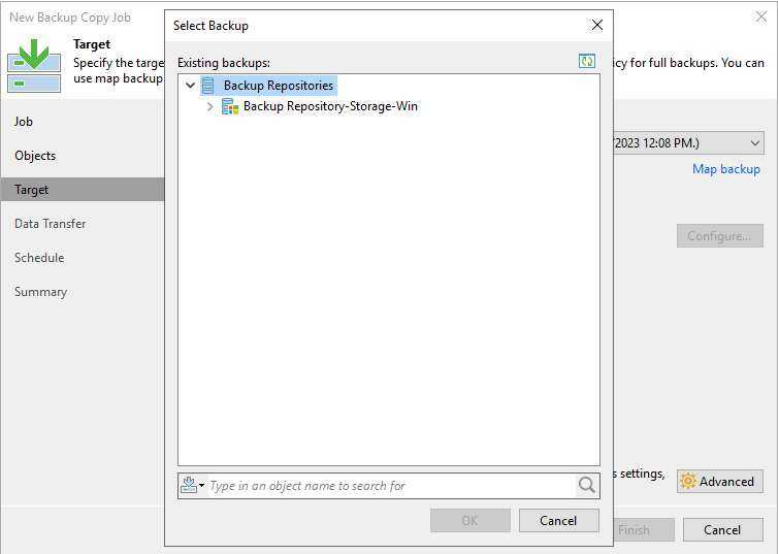
- 12. Click OK in the encryption-enabled warning message if the source backup job has encryption enabled.



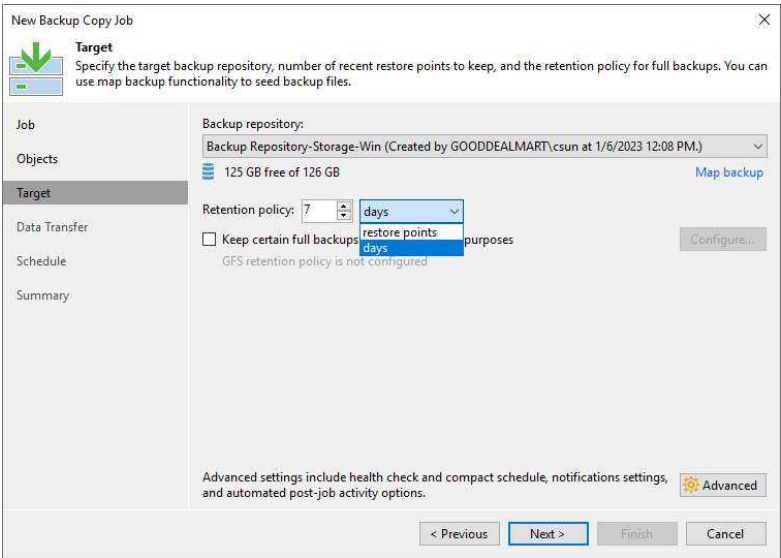
13. On the Target page, select the backup repository from the drop-down list.



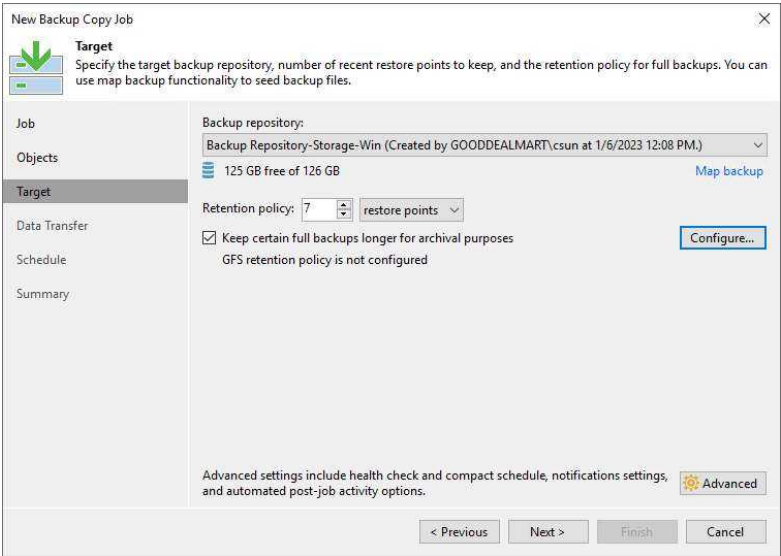
14. Click Map backup if required. It is helpful if you have relocated backup copy files to a new backup repository and want to point the job to existing backups in this new backup repository. Backup copy job mapping can also be used if the configuration database becomes corrupt and you need to reconfigure backup jobs.



- 15. Set the retention policy settings for restore points in the Retention Policy field.
- 16. Select days or restore points from the drop-down list.



- 17. For long-term archiving, you can configure GFS retention policy settings for the backup copy job
- 18. Select Keep specific full backups for longer for archival purposes, and click Configure.

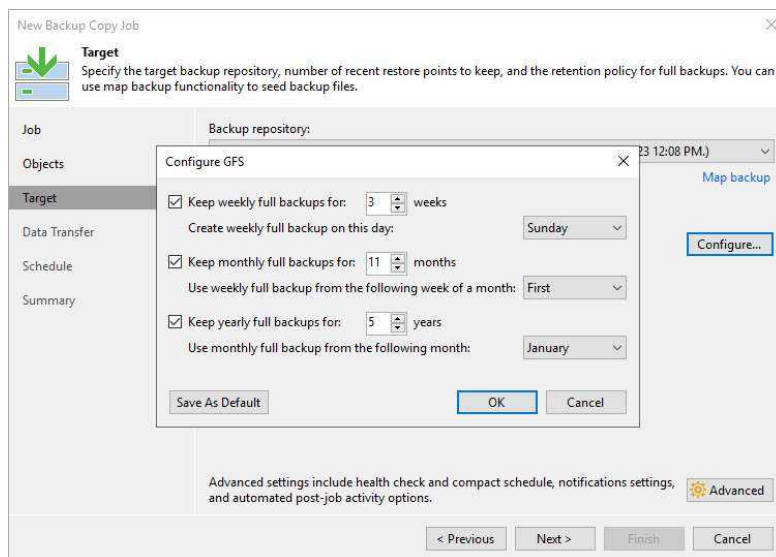


19. On the Configure GFS page, select the Keep weekly full backups for check box, and specify the number of weeks you want to prevent restore points from being modified and deleted.

20. Select the Keep monthly full backups for check box, and specify the months you want to prevent restore points from being modified and deleted.

21. Select the Keep yearly full backups for check box, and specify the years you want to prevent restore points from being modified and deleted.

22. Click OK.



23. On the Target page, click Advanced.

Target

Specify the target backup repository, number of recent restore points to keep, and the retention policy for full backups. You can use map backup functionality to seed backup files.

Job

Objects

Target

Data Transfer

Schedule

Summary

Backup repository:

Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 12:08 PM.)

125 GB free of 126 GB

Retention policy: 7 restore points

☒ Keep certain full backups longer for archival purposes

3 weekly, 11 monthly, 5 yearly

Advanced settings include health check and compact schedule, notifications settings, and automated post-job activity options.

Map backup

Configure...

Advanced

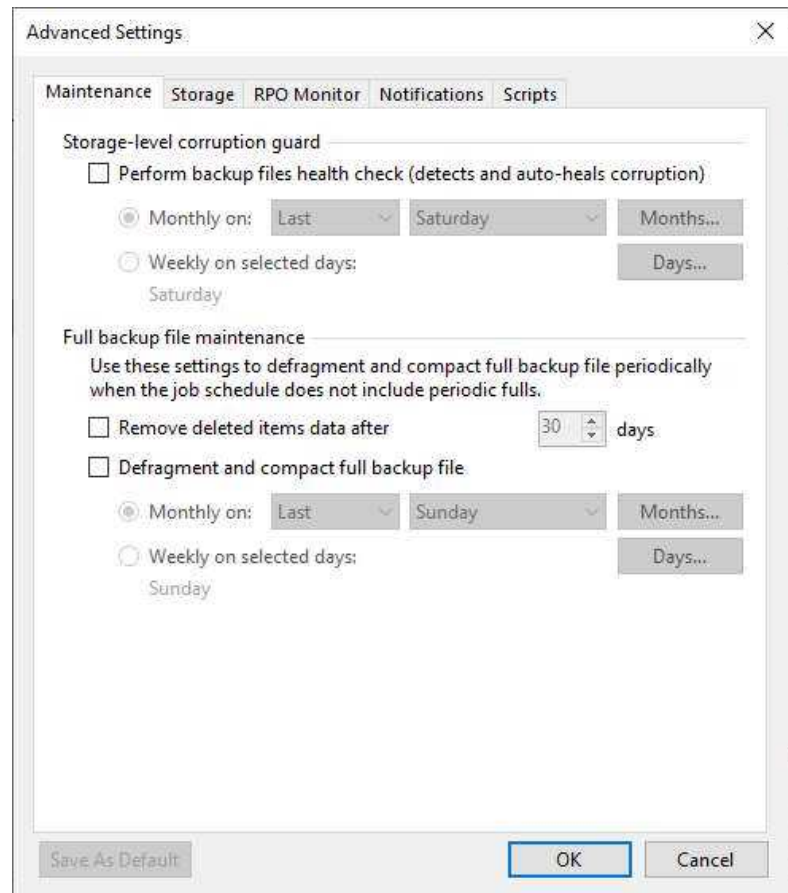
< Previous

Next >

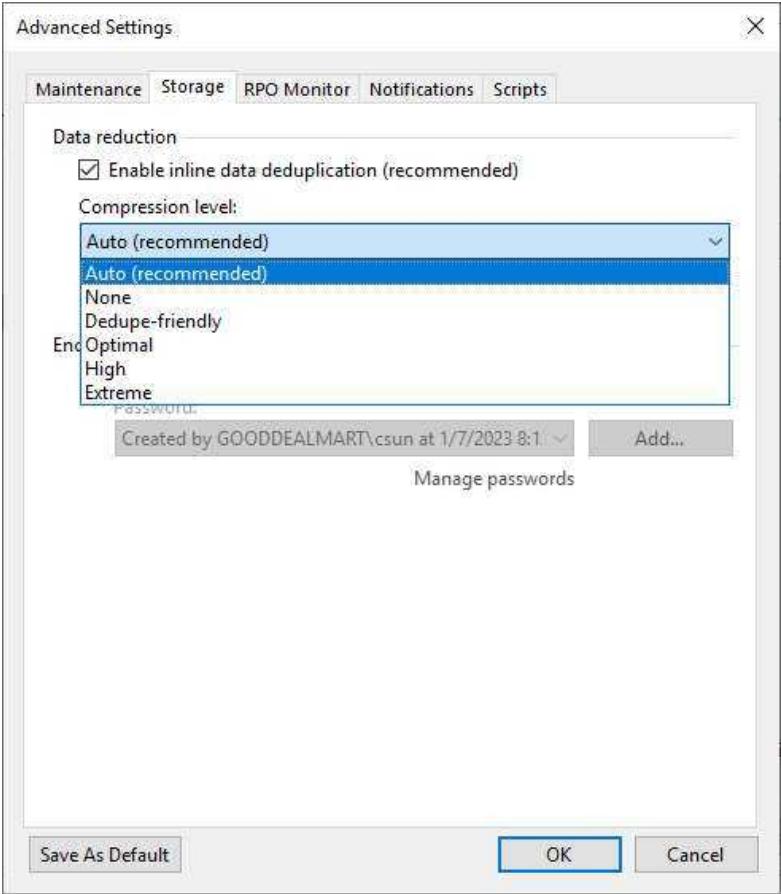
Finish

Cancel

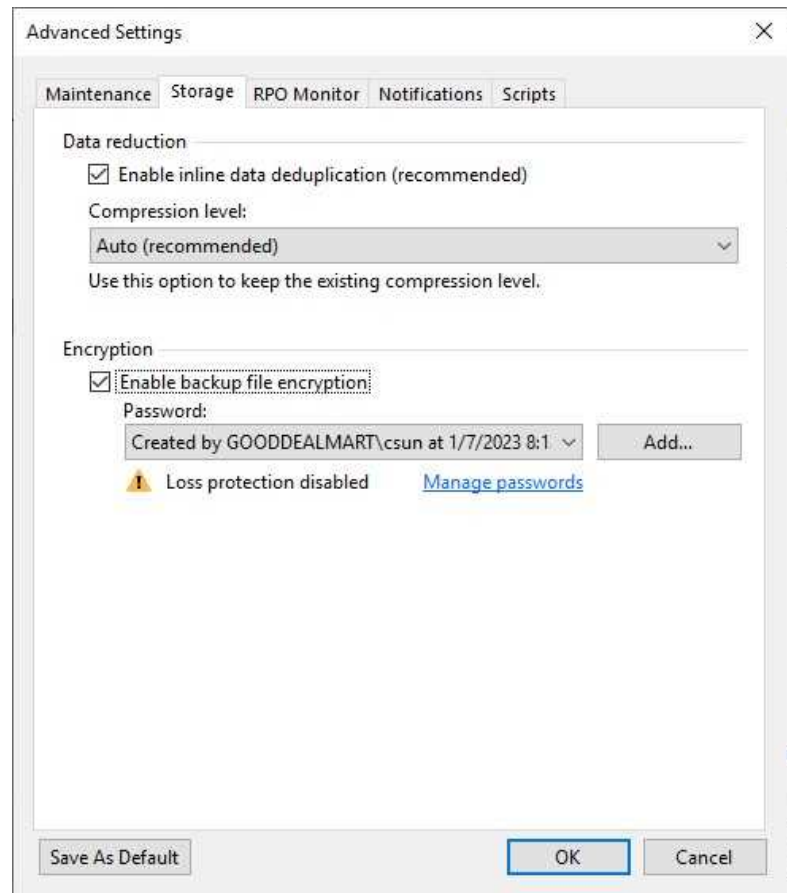
24. On the Advanced Settings, click Maintenance.
25. Select the Perform backup files health check (detects and auto-heals corruption) checkbox and specify the schedule for the health check if required.
26. Select the Remove deleted items data after the checkbox and specify the retention days settings for deleted workloads if required.
27. Select the Defragment and compact full backup file checkbox and specify the schedule for the compacting operation if required.



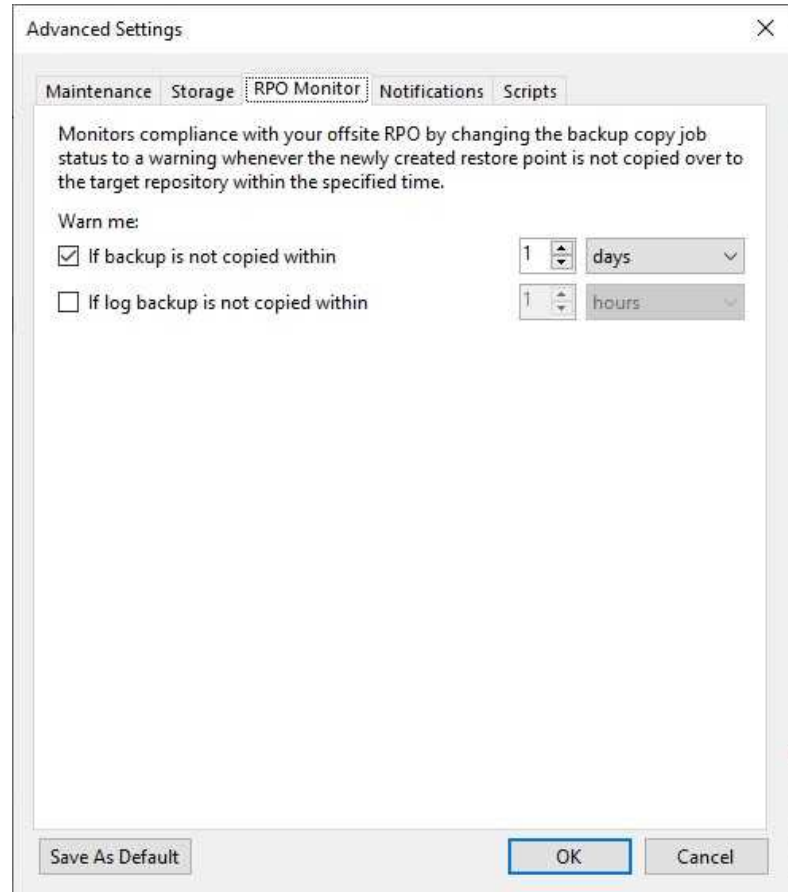
- 28. On Advanced Settings, click Storage.
- 29. Select the Enable inline data deduplication check box.
- 30. Select the compression level for the backup copy from the drop-down list.



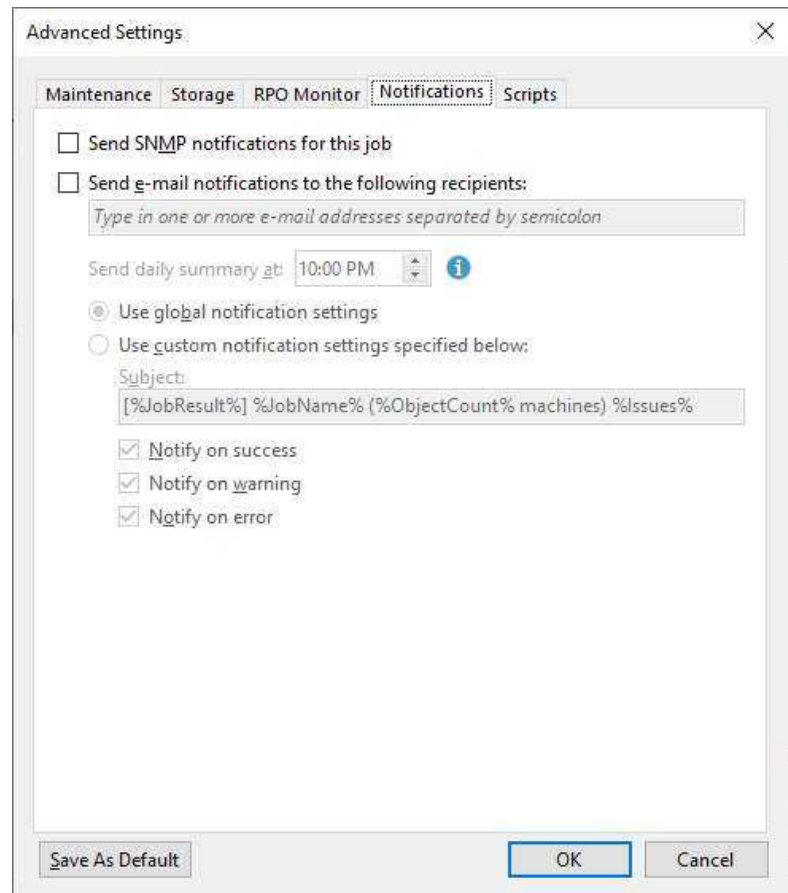
31. Select the Enable backup file encryption checkbox to encrypt the content of backup files.
32. Select a password from the drop-down list. If you haven't done so, click Add or use the Manage passwords link to create a new password.



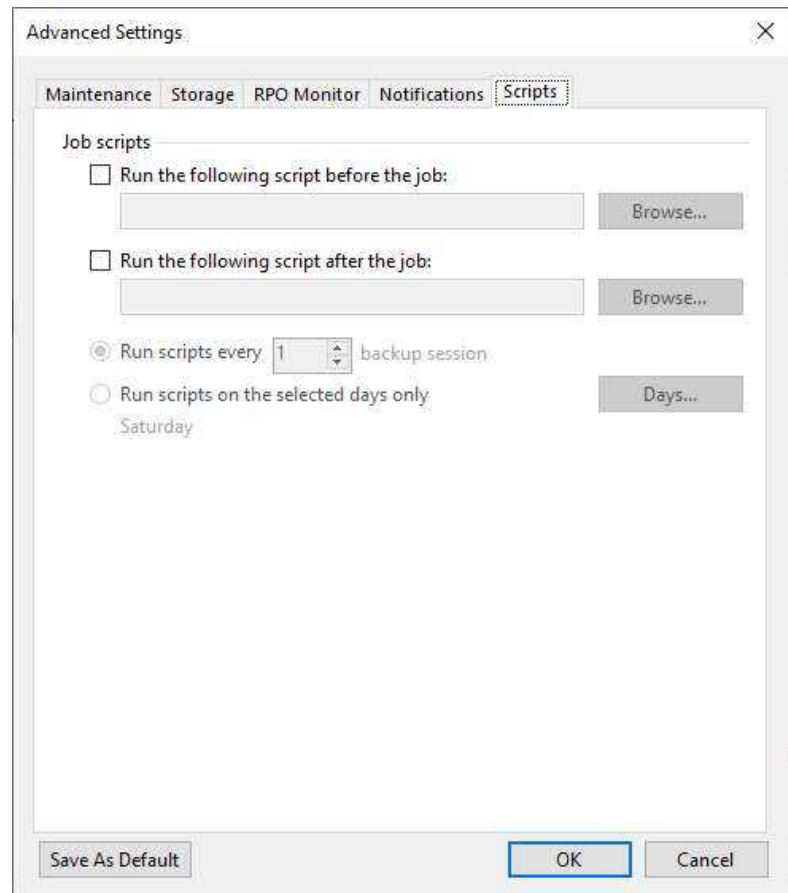
33. On the Advanced Settings page, select RPO Monitor.
34. Select the Alert me if a backup is not copied within the checkbox, and specify the desired RPO in minutes, hours or days.
35. Select Alert me if the log backup is not copied within the checkbox.
36. If you have enabled copying of log backups, specify the desired RPO in minutes, hours or days.



37. On the Advanced Settings, select Notifications.
38. Keep the default settings.



39. On the Advanced Settings page, click Scripts.
40. Keep the default settings and click OK.



41. On the Target page, click Next.

The screenshot shows the 'New Backup Copy Job' wizard with the 'Target' tab selected. The 'Target' section is highlighted in the left sidebar. The main content area shows the 'Backup repository' as 'Backup Repository-Storage-Win (Created by GOODDEALMART\csun at 1/6/2023 12:08 PM.)' with 125 GB free of 126 GB. The 'Retention policy' is set to 7 restore points. A checkbox 'Keep certain full backups longer for archival purposes' is checked, with options for 3 weekly, 11 monthly, and 5 yearly. A 'Map backup' link is visible. At the bottom, there is an 'Advanced' button and navigation buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

42. On the Data Transfer page, Select Direct if you plan to copy backup files over high-speed connections.

43. Select the Through built-in WAN accelerators if you copy backup files over WAN or slow connections.

44. Select a WAN accelerator configured in the source site from the Source WAN accelerator drop-down list.

45. Select a WAN accelerator configured in the target site from the Target WAN

The screenshot shows the 'New Backup Copy Job' wizard with the 'Data Transfer' tab selected. The 'Data Transfer' section is highlighted in the left sidebar. The main content area shows two options: 'Direct' (selected) and 'Through built-in WAN accelerators'. The 'Direct' option is described as sending object data directly from source to target repository. The 'Through built-in WAN accelerators' option is described as sending object data through WAN accelerators. Below these options are two drop-down menus for 'Source WAN accelerator' and 'Target WAN accelerator'. At the bottom, there are navigation buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

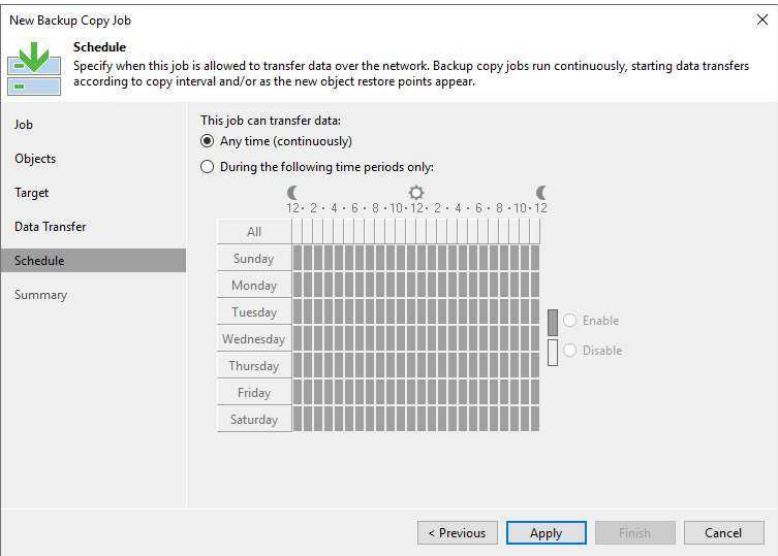
accelerator drop-down list.

46. Click Next.

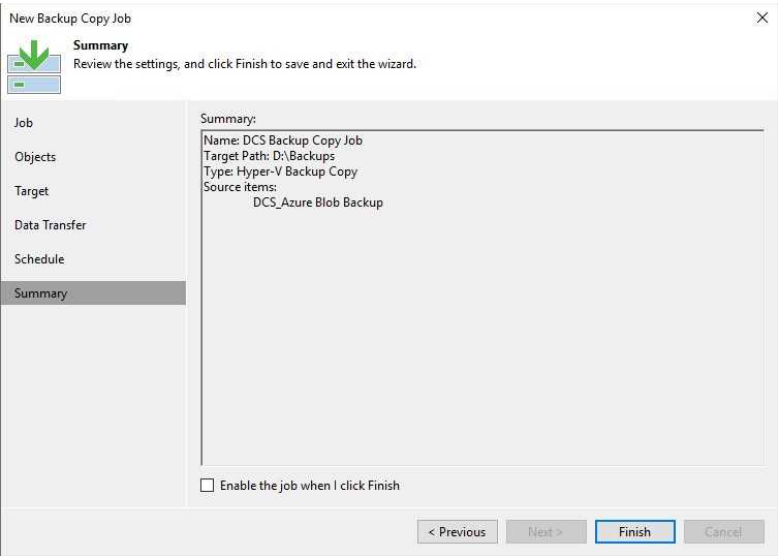
47. On the Schedule page, select Any time (continuously) if this job can transfer data at any time.

48. Select During the following periods only if required.

49. Click Apply.



50. Select Enable the job on the Summary page when I click the Finish checkbox. If you want to start the job after creating it, click Finish.



Chapter 5

Replication

Veeam replication is a data protection and disaster recovery solution that enables businesses to replicate virtual machines (VMs) and their data in an offsite location. This helps to ensure that critical data is protected and available in case of a disaster or other unexpected events that could disrupt business operations.

Veeam replication creates a copy of the virtual machine and its data on a remote server in another data center or a cloud environment. This copy is then kept in sync with the original VM so that any changes made to the original are also reflected in the replica.

The replica can be quickly activated in a disaster to restore services and minimize downtime. Veeam replication also provides several features to ensure the reliability and security of the replicated data, including encryption, compression, and bandwidth throttling.

Veeam replication is a powerful tool for businesses that must ensure their critical data's availability and reliability. In addition, it can help minimize the impact of disasters and other unexpected events.

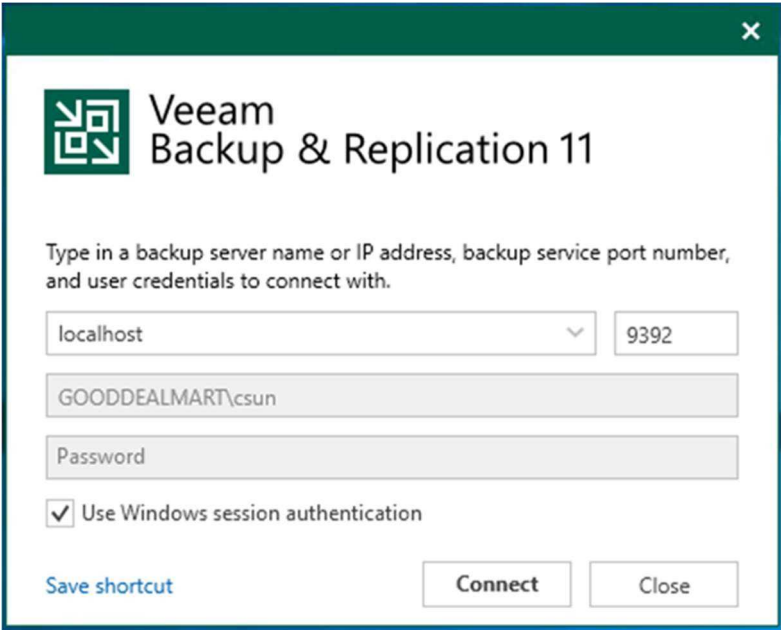
Creating a Replication job to replicate the specified VMs at the same site

A replication job must be configured before you can create VM replicas. The replication job specifies how, where, and when VM data is replicated. A single job can process one or more virtual machines.

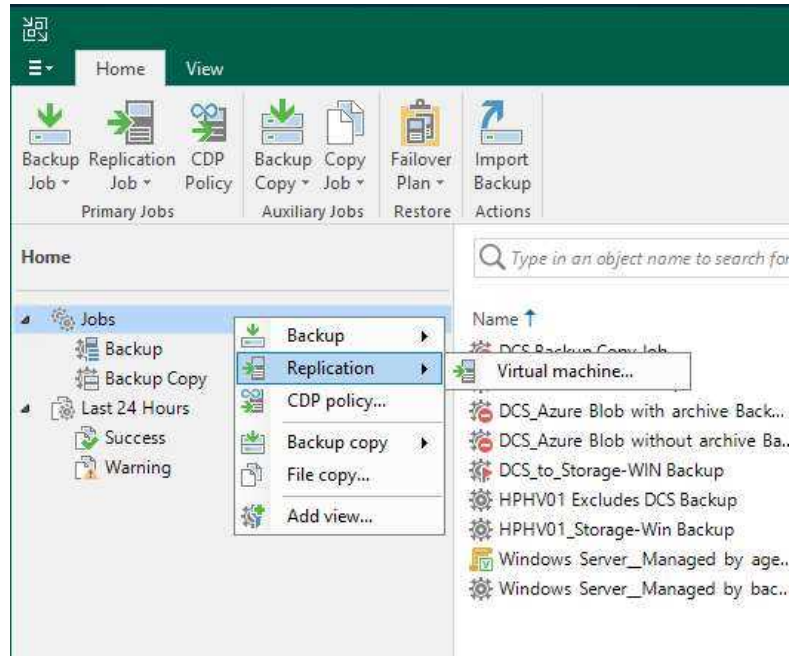
This procedure creates a replication job to replicate the specified production virtual machines at the same production site.

Instructions	Screenshot (if applicable)
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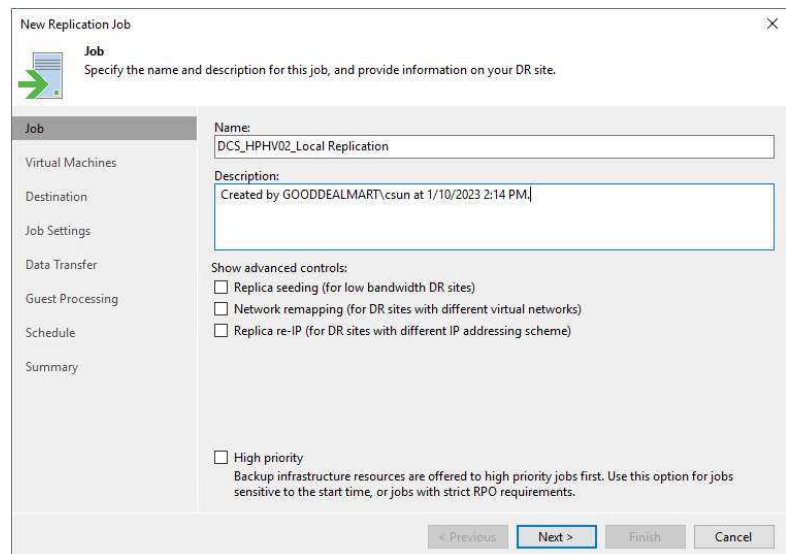
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



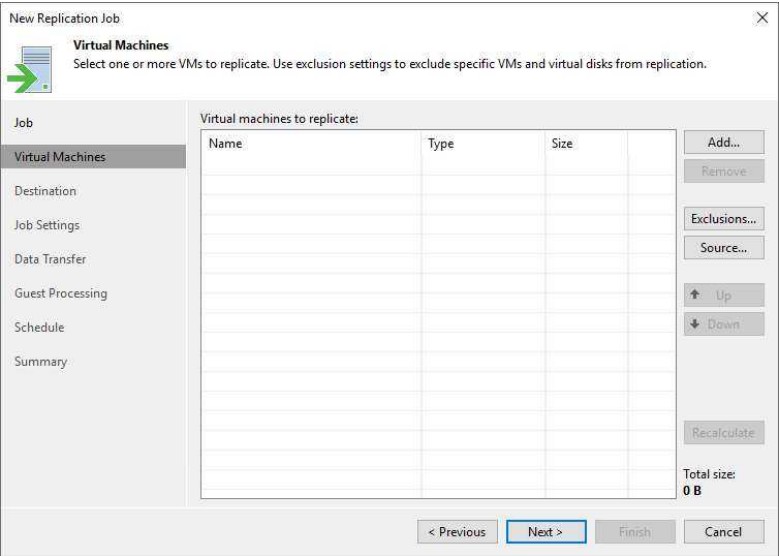
3. On the Home page, select Jobs.
4. Right-click Jobs, select Replication
5. Click Virtual machine.



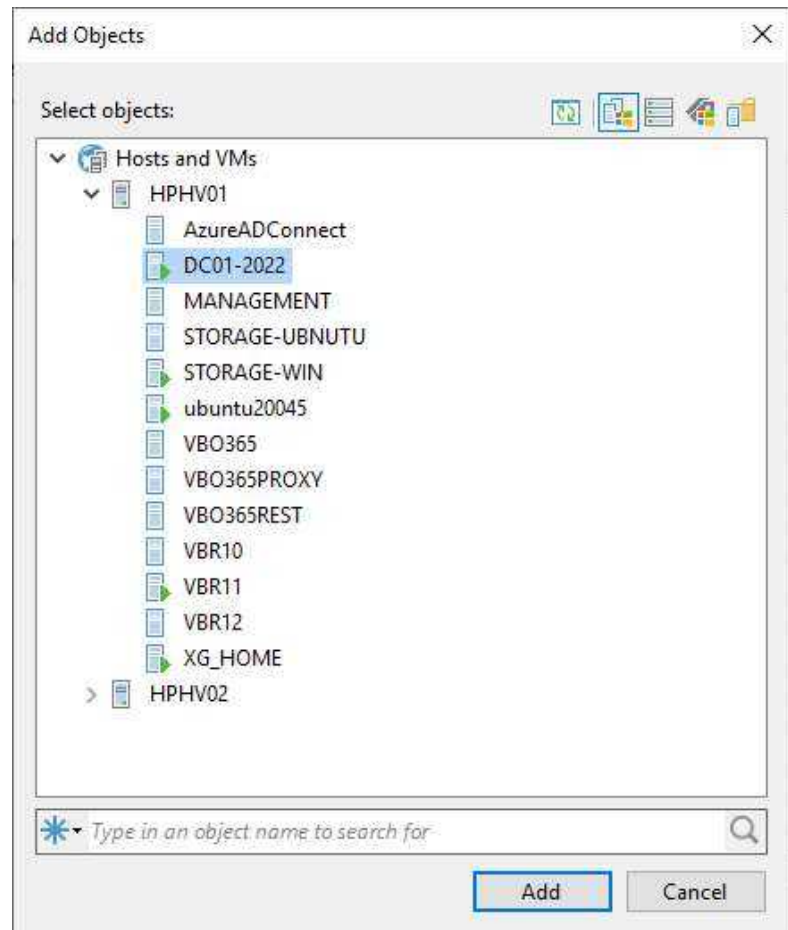
6. On the Job page, enter a name for the replication job in the Name field.
7. Describe the Description field.
8. Select the High priority check box if required.
9. Click Next.



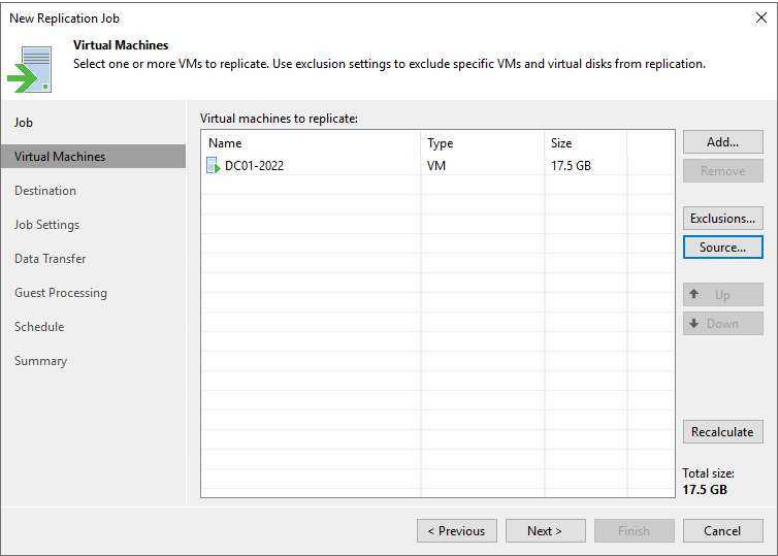
10. On the Virtual Machines page, click Add.



11. Select the objects in the list on the Add Objects page and click Add.



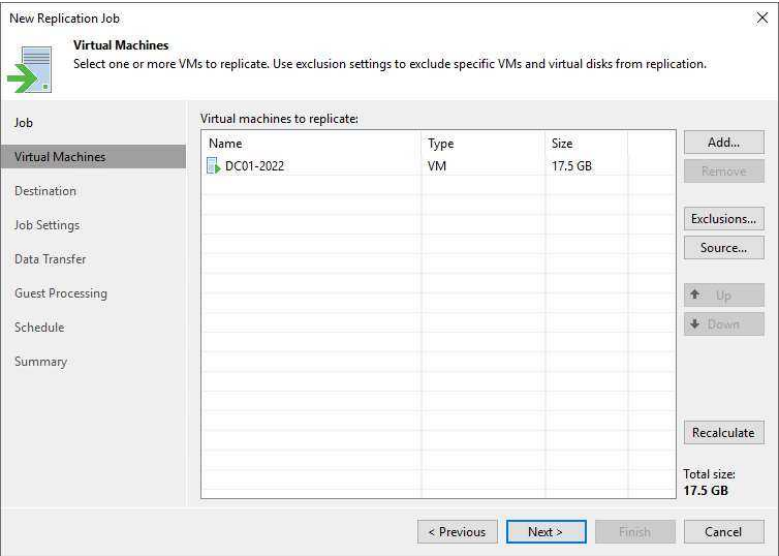
12. On the Virtual machines page, click Source.



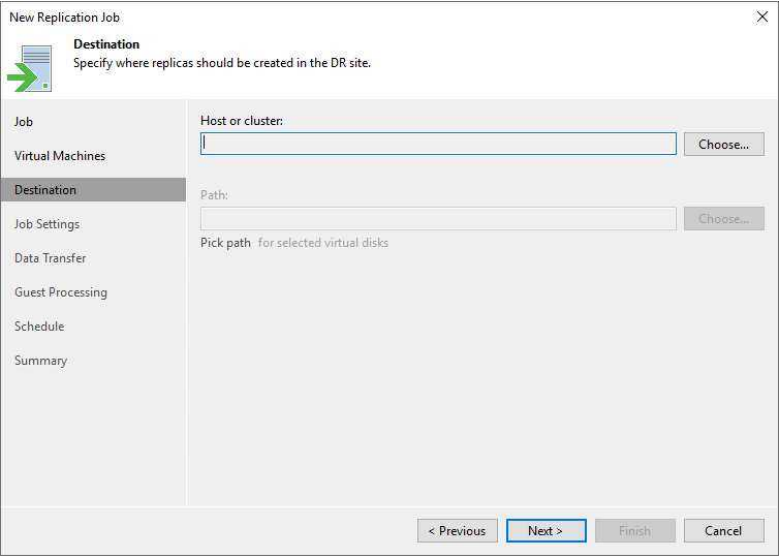
13. Select the From production storage (actual VM state) on the Source Repositories page. Veeam Replication will retrieve VM data from data stores connected to the source Microsoft Hyper-V host.
14. Select Form backup files (latest VM state available in backups) if required. Veeam Replication will read VM data from the backup chain already in the selected backup repository.
15. Click OK.



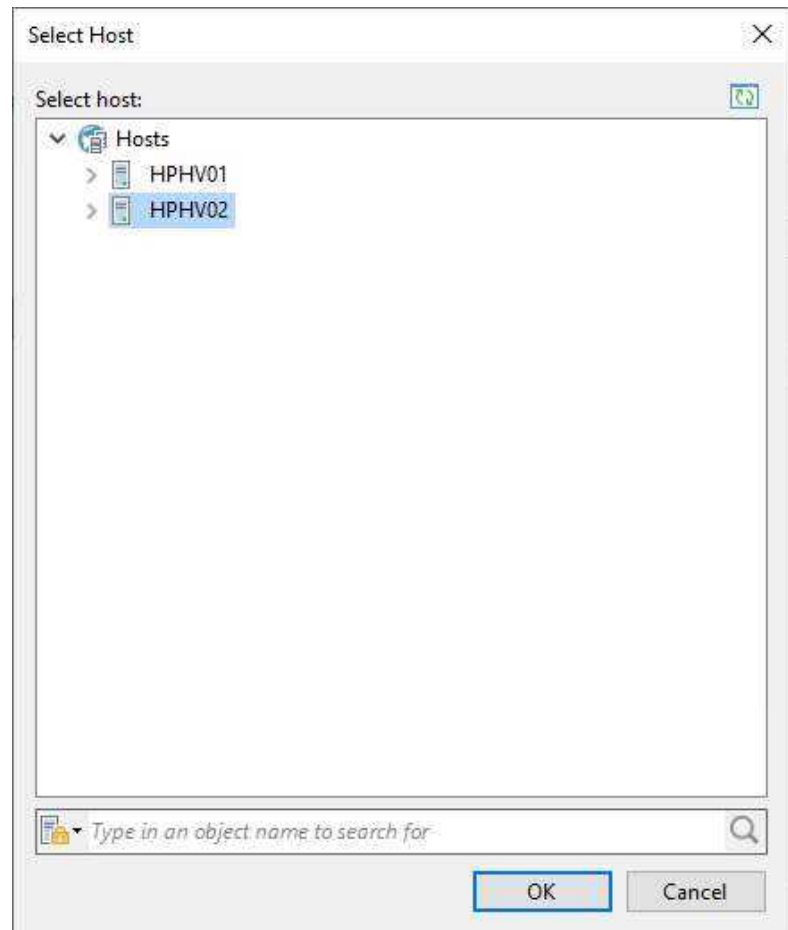
16. On the Virtual Machines page, click Next.



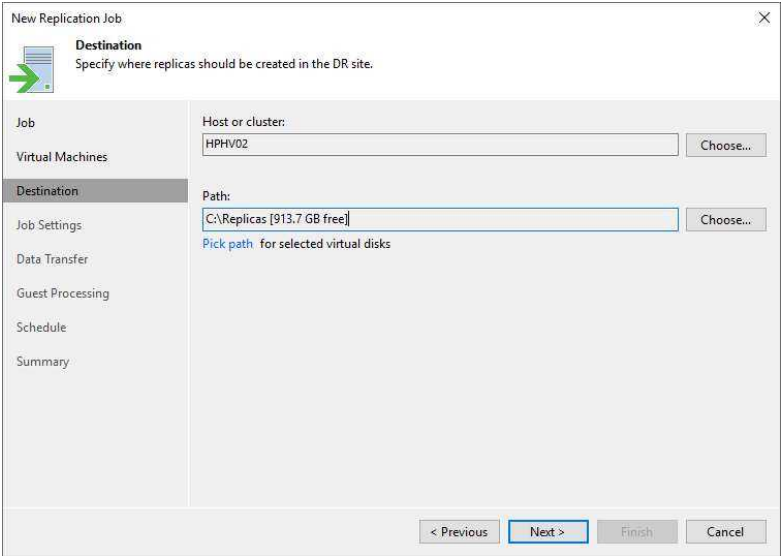
17. On the Destination page, click Choose in the Host or cluster session.



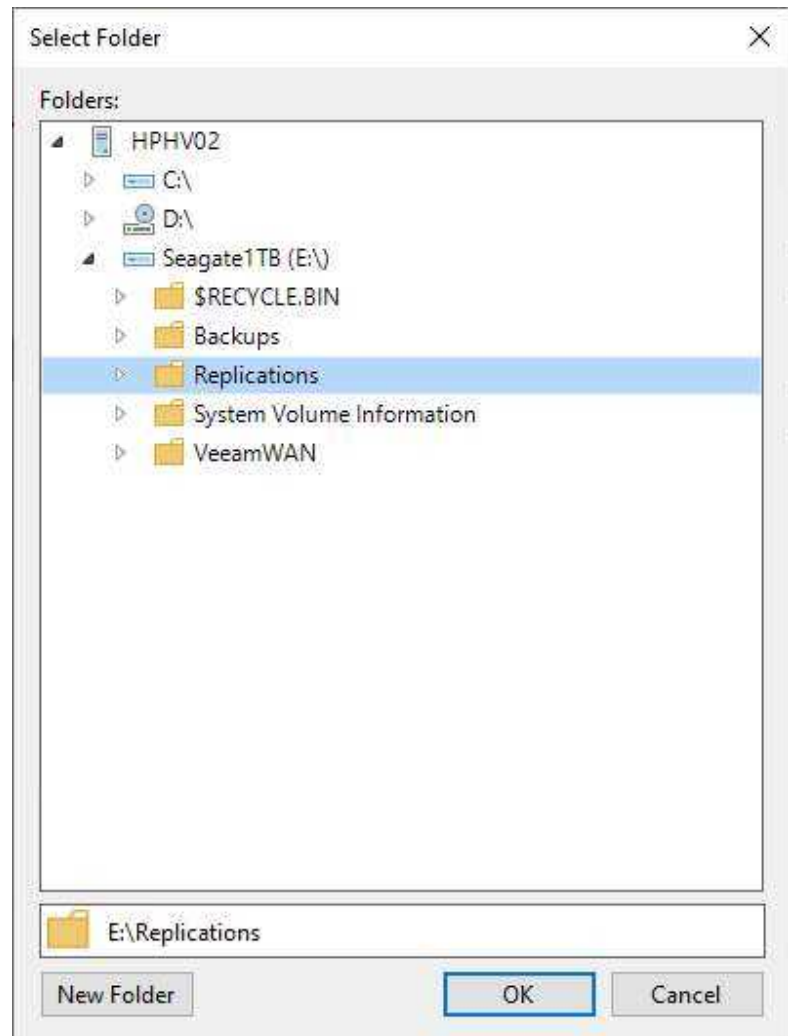
18. Select the destination host server on the Select Host page and click OK.



19. On the Destination page, click Choose in the Path session.



20. On the Folders page, specify a path to the folder where VM replica files must be stored, and click OK.



21. On the Destination page, click Next.

New Replication Job

Destination

Specify where replicas should be created in the DR site.

Job

Virtual Machines

Destination

Job Settings

Data Transfer

Guest Processing

Schedule

Summary

Host or cluster:

HPHV02

Choose...

Path:

E:\Replications [925.8 GB free]

Choose...

[Pick path](#) for selected virtual disks

< Previous

Next >

Finish

Cancel

22. Select the Repository for metadata from the drop-down list on the Job Settings page.

Note:

- This setting must be specified only for snapshot replicas. Legacy replicas do not use a backup repository for storing metadata.
- You cannot store VM replica metadata on deduplicating storage appliances.

Source/Target	Target 2008 R2	Target 2012-2022 ¹
Data source: production storage		
Source 2008 R2	Legacy	Snapshot
Source 2012-2022	Not supported	Snapshot
Data source: backup		
Source 2008 R2	Not supported	Snapshot
Source 2012-2022	Not supported	Snapshot

- You cannot store replica metadata in a scale-out backup repository.

23. Enter a suffix that will be appended to the original VM names in the Replica name suffix field.

24. Enter the number of restore points in the field.

25. Click Advanced.

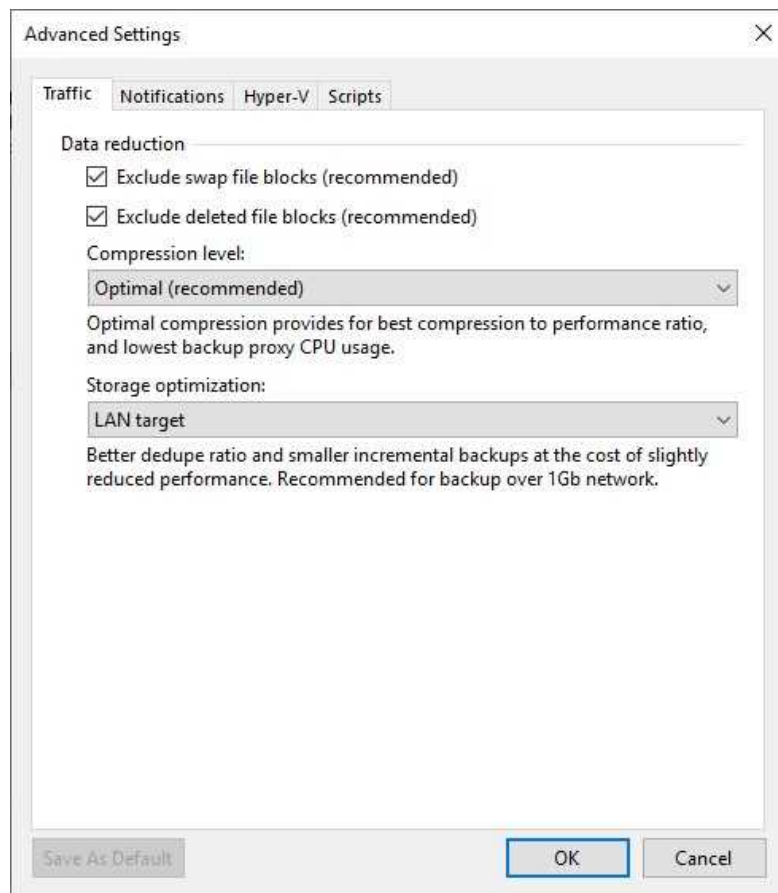
The screenshot shows the 'New Replication Job' dialog box with the 'Job Settings' tab selected. The dialog has a sidebar on the left with tabs: Job, Virtual Machines, Destination, Job Settings (selected), Data Transfer, Guest Processing, Schedule, and Summary. The main area contains the following settings:

- Repository for replica metadata:** A dropdown menu showing 'Backup Repository_HPHV02 (Created by GOODDEALMART\csun at 1/10/2023 4:22 PM.)' with a small icon of a document and a green arrow.
- 925 GB free of 931 GB**
- Replica settings:** A section with a label 'VM name suffix:' followed by a text input field containing '_replica'.
- Retention policy:** A section with a label 'Restore points:' followed by a numeric input field containing '7' and a small up/down arrow icon.

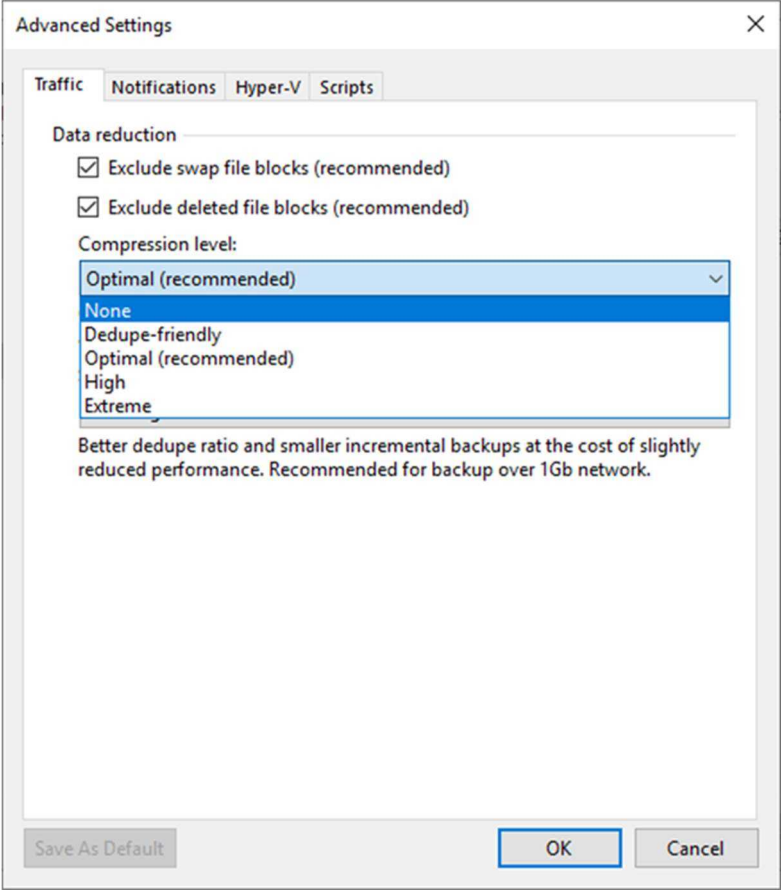
At the bottom of the main area, there is a text label 'To view or edit additional backup job settings, click Advanced.' and a button with a gear icon labeled 'Advanced'.

The bottom of the dialog features four buttons: '< Previous', 'Next >' (highlighted with a blue border), 'Finish', and 'Cancel'.

26. On Advanced Settings, click Traffic.
27. Select the Exclude swap file blocks checkbox (recommended). Veeam Backup & Replication excludes data blocks of the hiberfil.sys and pagefile.sys system files from replicas.
28. Select the Exclude deleted file blocks (recommended) checkbox. Veeam Backup & Replication does not copy deleted file blocks ("dirty" blocks on the VM guest OS) to the target location.



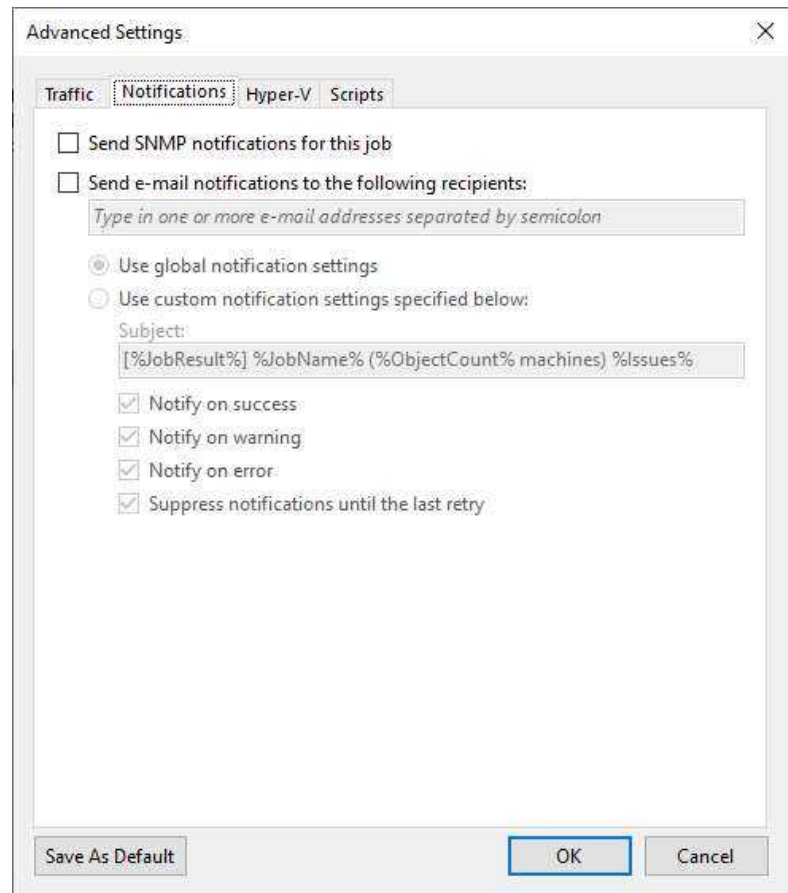
29. Select the compression level for replicas from the drop-down list.



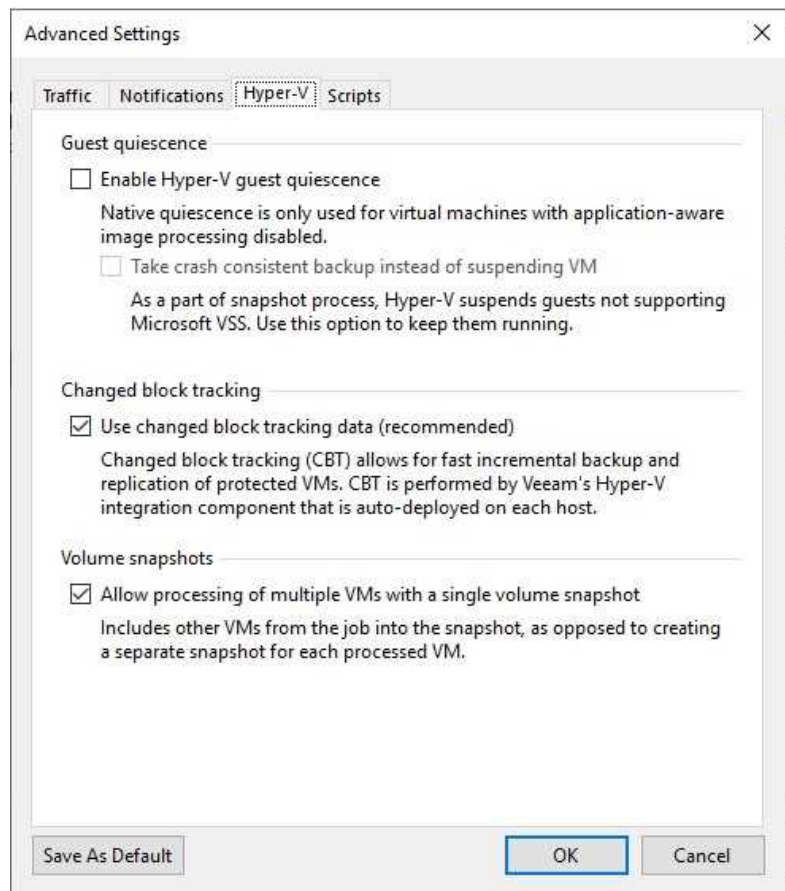
30. Select Storage optimization from the drop-down list.

Storage optimization option	Block size	Description
Local target (large blocks)	4096 KB	Recommended for files that are larger than 16 TB. This option will provide the lowest deduplication ratio and the largest size of incremental files.
Local target	1024 KB	Recommended for backup and replication to SAN, DAS or local storage. This option provides the fastest job performance but reduces the deduplication ratio, because with larger data blocks it is less likely to find identical blocks.
LAN target	512 KB	Recommended for backup and replication to NAS, and on-site backup and replication. This option provides a better deduplication ratio and reduces the size of a file because of reduced data block sizes.
WAN target	256 KB	Recommended if you are planning to use WAN for off-site backup and replication. This option provides the maximum deduplication ratio and the smallest size of files that allows you to reduce the amount of traffic over WAN.

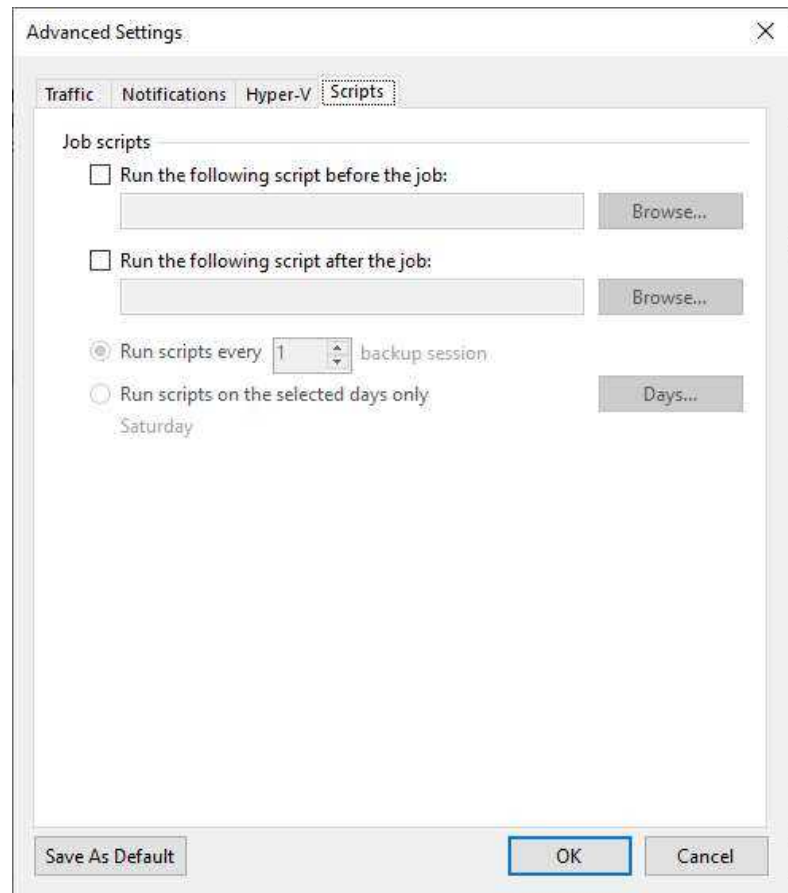
31. On the Advanced Settings, select Notifications.
32. Select Send SNMP notifications for this job checkbox. In addition, Veeam will send traps to the NMS when events occur, such as when a backup job fails or a replication job encounters an error.
33. Select Send email notifications to the following recipient checkbox, If you want to receive email notifications about the job completion status.



34. On the Advanced Settings, select Hyper-V.
35. Select the Enable Hyper-V guest quiescence check box if application-aware processing cannot be used for some reason.
36. Select the Take crash consistent backup instead of suspending VM check box if you do not want to suspend VMs in the job.
37. Select the Use changed block tracking data (recommended) check box.
38. Select the Allow processing of multiple VMs with a single volume snapshot check box.



39. On the Advanced Settings page, click Scripts.
40. Keep the default settings and click OK.



41. On the Job Settings page, click Next.

New Replication Job

Job Settings
Specify backup repository located in the source site to host metadata in, replica suffix and retention policy, and customize advanced job settings if required.

Job
Virtual Machines
Destination
Job Settings
Data Transfer
Guest Processing
Schedule
Summary

Repository for replica metadata:
Backup Repository_HPHV02 (Created by GOODDEALMART\csun at 1/10/2023 4:22 PM.)

925 GB free of 931 GB

Replica settings
VM name suffix:

Retention policy
Restore points:

To view or edit additional backup job settings, click Advanced.

[Advanced](#)

< Previous Next > Finish Cancel

42. Click Choose to specify Source Proxy on the Data Transfer page.

New Replication Job

Data Transfer
Choose how VM data should be transferred to the target site.

Job
Virtual Machines
Destination
Job Settings
Data Transfer
Guest Processing
Schedule
Summary

Source proxy:
 [Choose...](#)

Data transfer mode:
☒ **Direct**
Best for local and off-site replication over fast links.

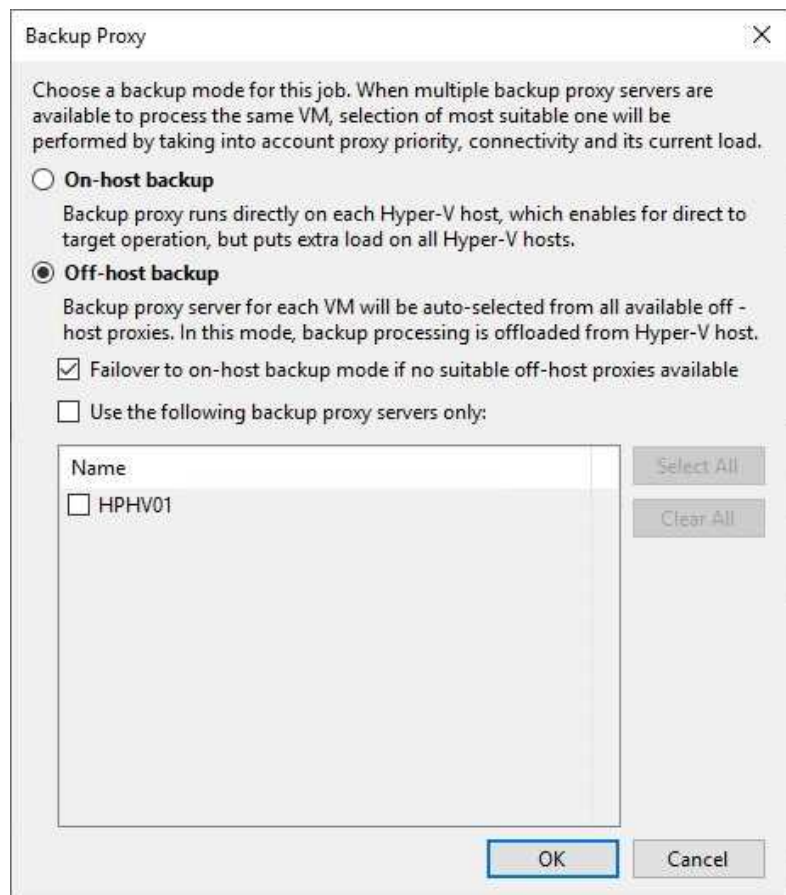
☐ **Through built-in WAN accelerators**
Best for off-site replication over slow links due to significant bandwidth savings.

Source WAN accelerator:

Target WAN accelerator:

< Previous **Next >** Finish Cancel

43. On the Backup Proxy page, Veeam Backup & Replication automatically selects off-host backup proxies and select the Failover to on-host backup mode. Suppose no suitable off-host proxies are available checkbox by default. Then, you can use the following backup proxy servers only checkbox and choose one or multiple off-host backup proxies from the list if necessary.
44. Select On-host backup If you want to use the Microsoft Hyper-V host as the source host and backup proxy.
45. Click OK.



46. On the Data Transfer mode session, select Direct if you plan to copy backup files over high-speed connections.

New Replication Job

Data Transfer
Choose how VM data should be transferred to the target site.

Job

Virtual Machines

Destination

Job Settings

Data Transfer

Guest Processing

Schedule

Summary

Source proxy:
Off-host backup (automatic proxy selection) Choose...

Data transfer mode:

☒ **Direct**
Best for local and off-site replication over fast links.

☐ **Through built-in WAN accelerators**
Best for off-site replication over slow links due to significant bandwidth savings.

Source WAN accelerator:

Target WAN accelerator:

< Previous Next > Finish Cancel

47. On the Data Transfer mode session, select Direct if you plan to copy backup files over high-speed connections.

48. Select the Through built-in WAN accelerators if you transfer data over WAN or slow connections.

49. Select a WAN accelerator configured in the source site from the Source WAN accelerator drop-down list.

50. Select a WAN accelerator configured in the target site from the Target WAN

New Replication Job

Data Transfer
Choose how VM data should be transferred to the target site.

Job

Virtual Machines

Destination

Job Settings

Data Transfer

Guest Processing

Schedule

Summary

Source proxy:
Off-host backup (automatic proxy selection) Choose...

Data transfer mode:

☐ **Direct**
Best for local and off-site replication over fast links.

☒ **Through built-in WAN accelerators**
Best for off-site replication over slow links due to significant bandwidth savings.

Source WAN accelerator:
HPHV01 (Created by GOODDEALMART\csun at 1/8/2023 12:39 PM.)

Target WAN accelerator:
HPHV02 (Created by GOODDEALMART\csun at 1/10/2023 4:20 PM.)

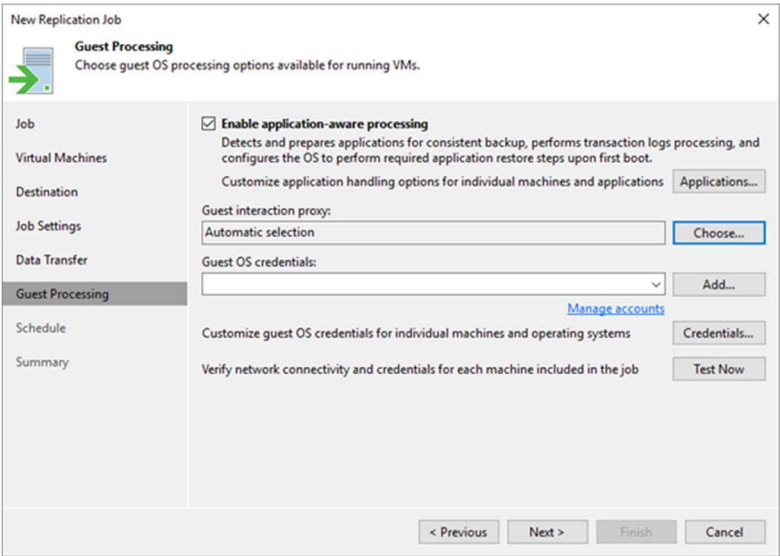
< Previous Next > Finish Cancel

accelerator drop-down list.

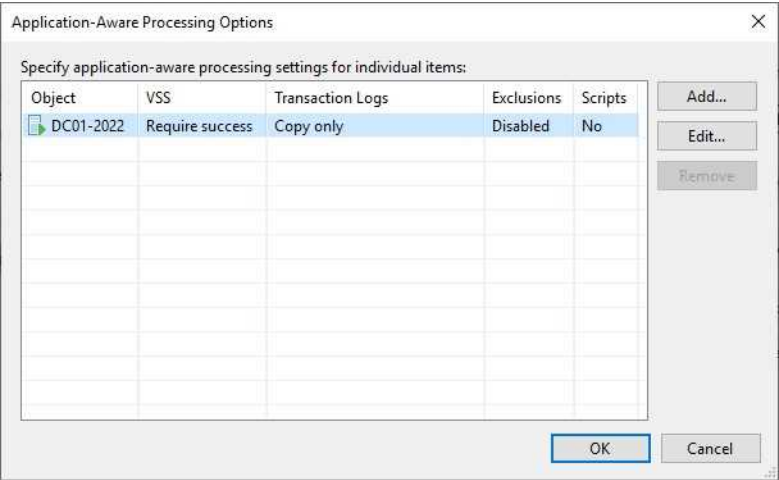
51. Click Next.

52. When you add VMs running VSS-aware applications to the backup job, you can enable application-aware processing to create a transactionally consistent backup. The transactionally consistent backup ensures that applications on VMs can be recovered without data loss.

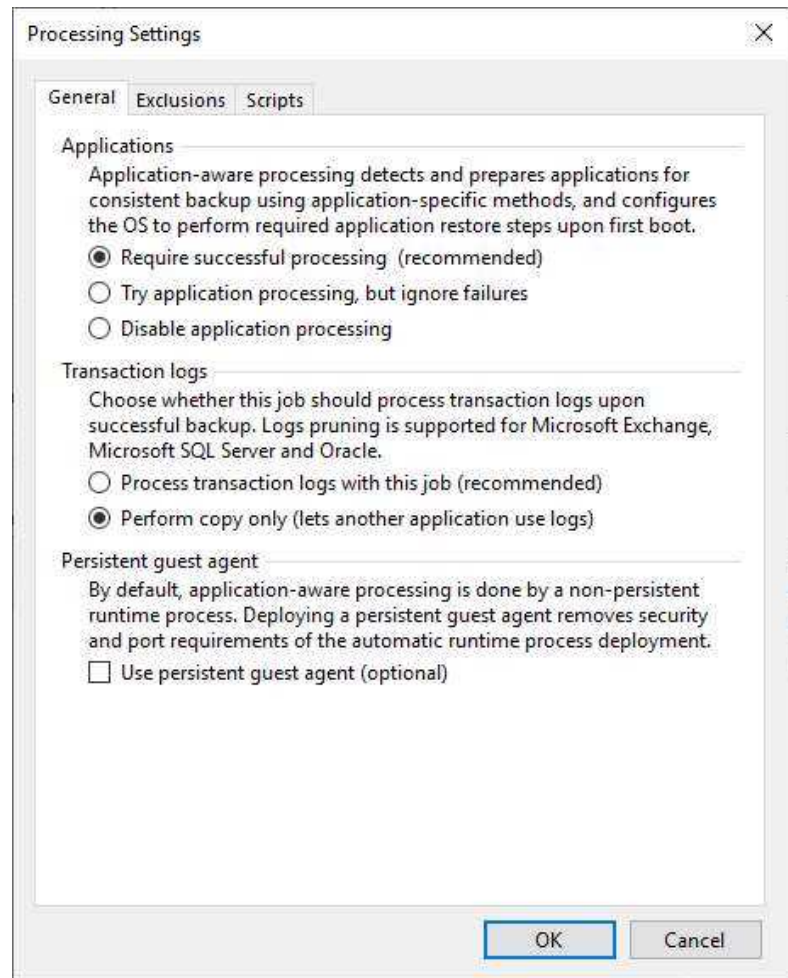
53. Select the Enable application-aware processing checkbox on the Guest Processing page, and click Applications.



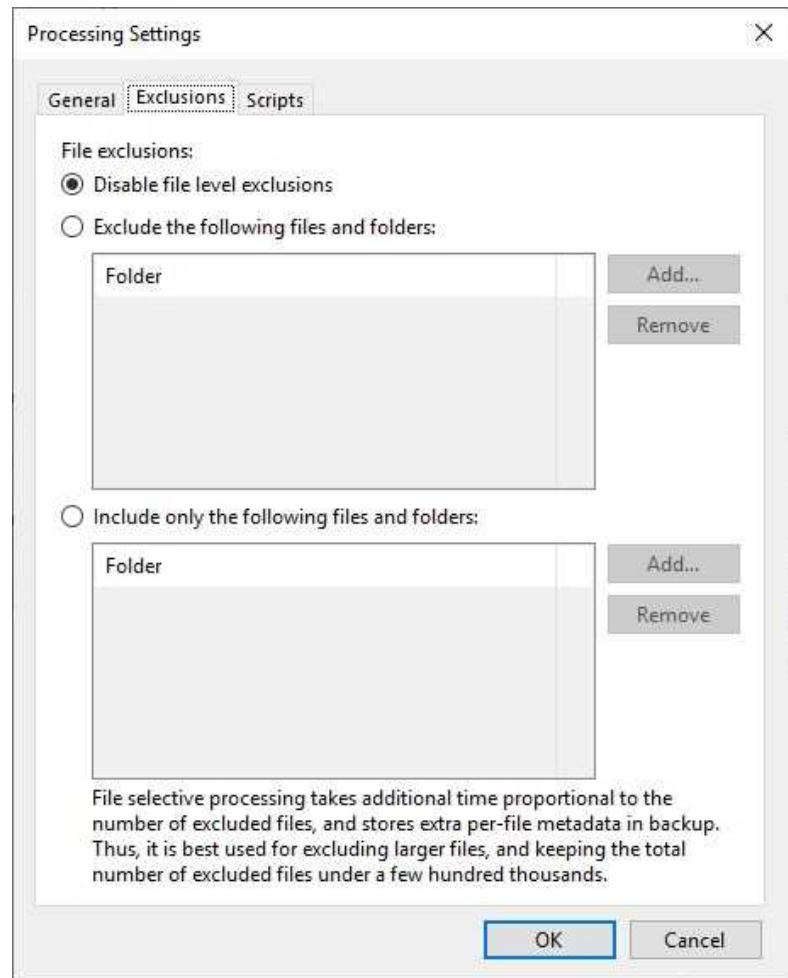
54. On the Application-Aware Processing Options page, select the Object, and click Edit.



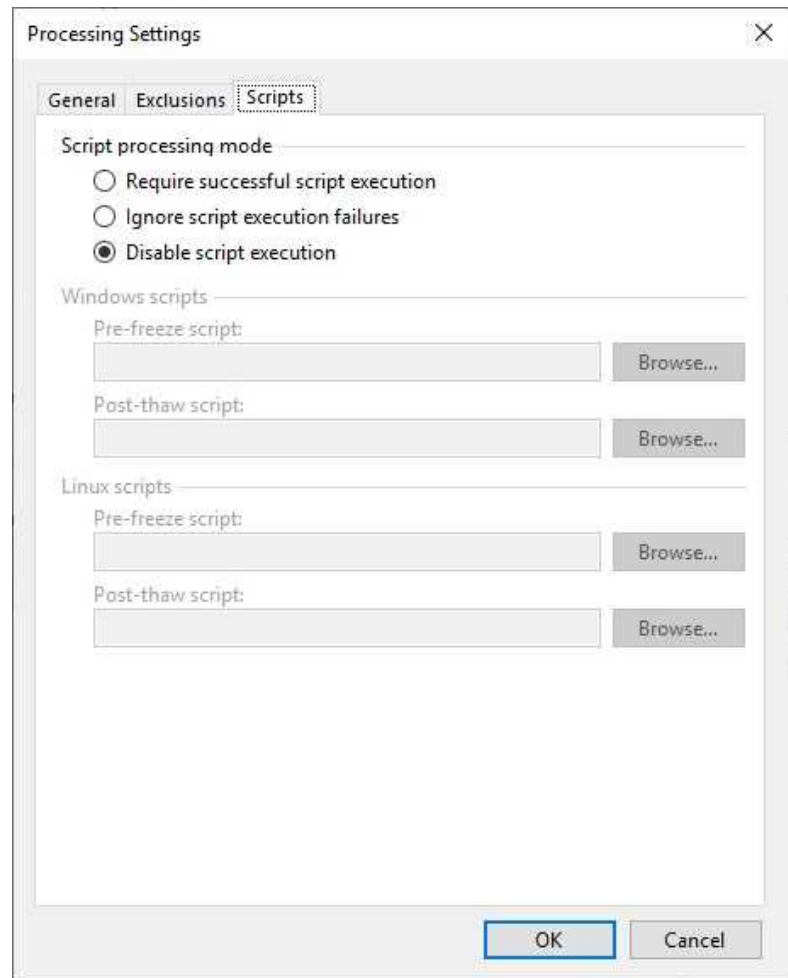
55. On the Processing Settings, click General.
56. Suppose you need Veeam Backup & Replication to stop the backup process if any error occurs during application-aware processing. Select Require successful processing (recommend).
57. Suppose you must continue the backup process even if there is an error during application-aware processing. Select Try application processing, but ignore failures.
58. Select Disable application processing to disable application-aware processing for the VM.
59. Select Process transaction logs with this job (recommended) to process transaction logs.
60. Select Perform copy only to let another application use
61. Select the Use persistent guest agent (optional) checkbox to enable persistent agent.



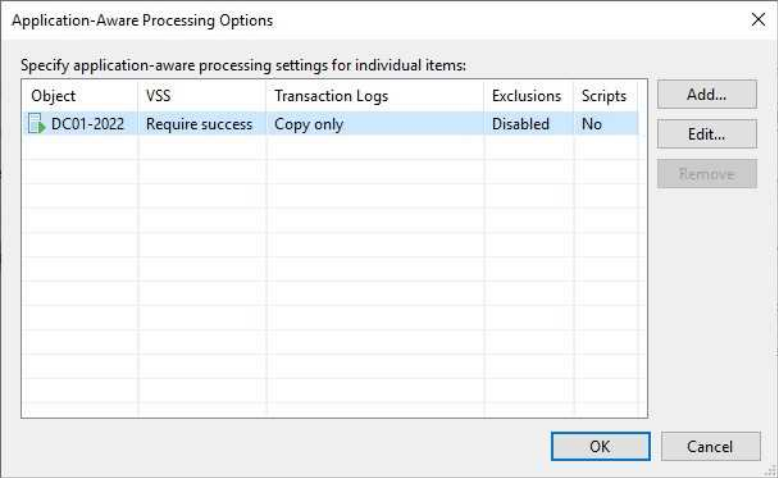
62. On the Processing Settings page, click Exclusions and keep the default settings.



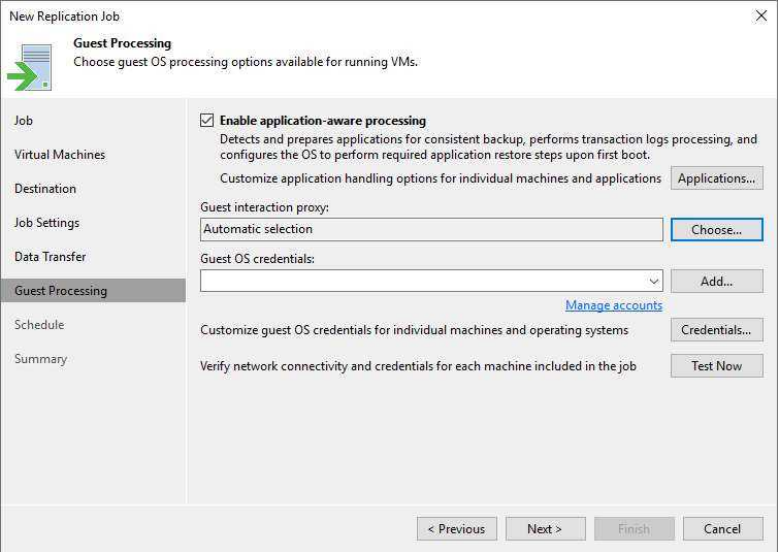
63. On the Processing Settings page, click Scripts.
64. Select Disable script execution and click OK.



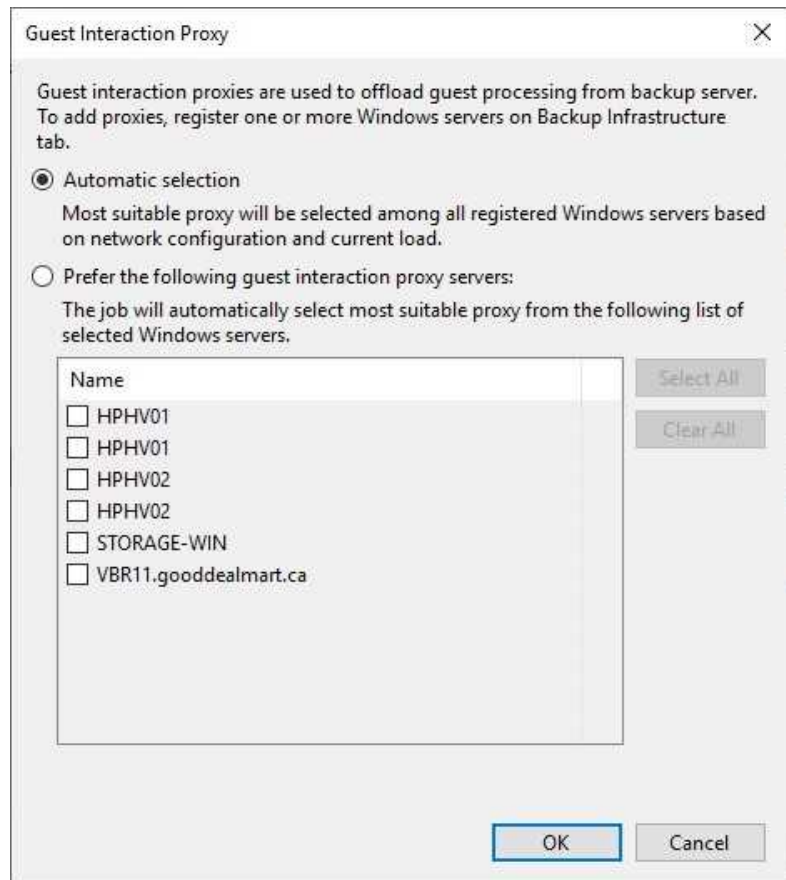
65. On the Application-Aware Processing Options page, click OK.



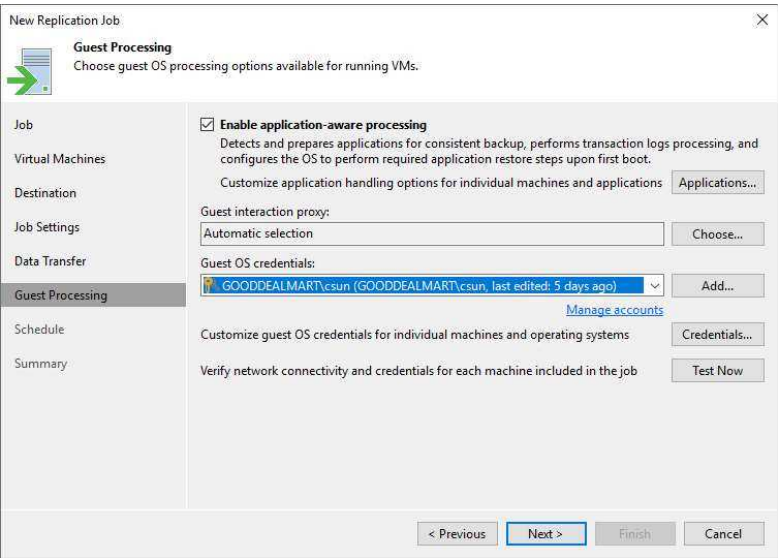
66. Click Choose on the Guest interaction proxy field on the Guest Processing page.



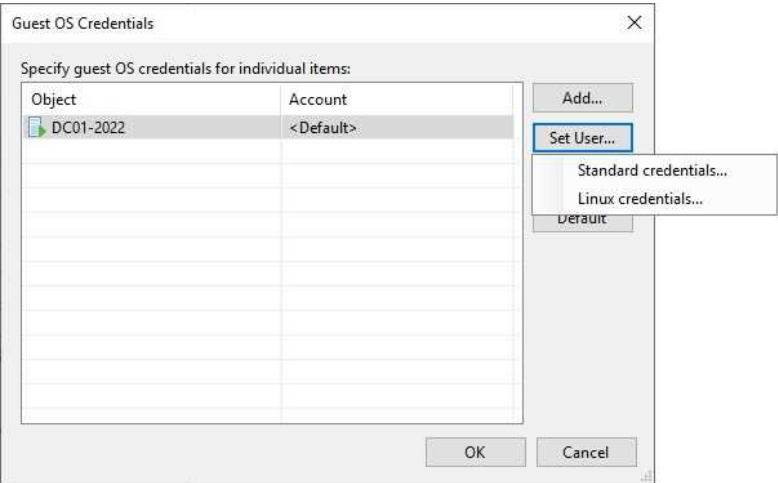
67. On the Guest Interaction Proxy page, select Automatic selection to let Veeam Backup & Replication automatically select the guest interaction proxy.
68. Select Prefer the following guest interaction proxy servers to explicitly define which servers will perform the guest interaction proxy role.
69. Click OK.



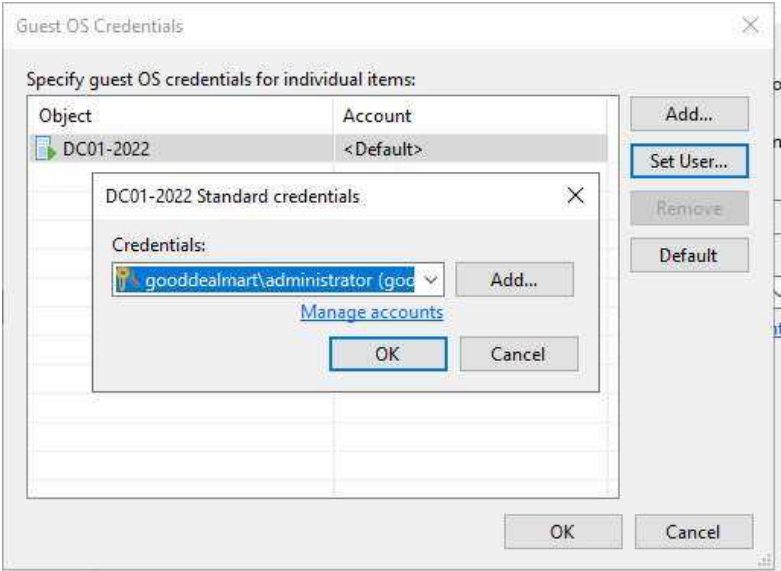
- 70. Choose a user account on the Guest Processing page with sufficient permissions from the Guest OS credentials drop-down list.
- 71. Click Credentials to Customize guest OS credentials for individual machines and operating systems.



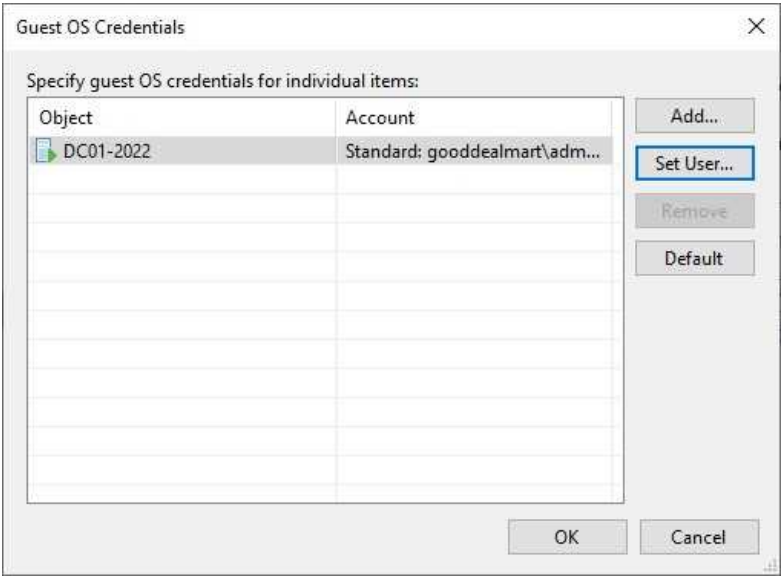
- 72. On the Guest OS Credentials page, select the VM, and click Set User.
- 73. Select Standard credentials.



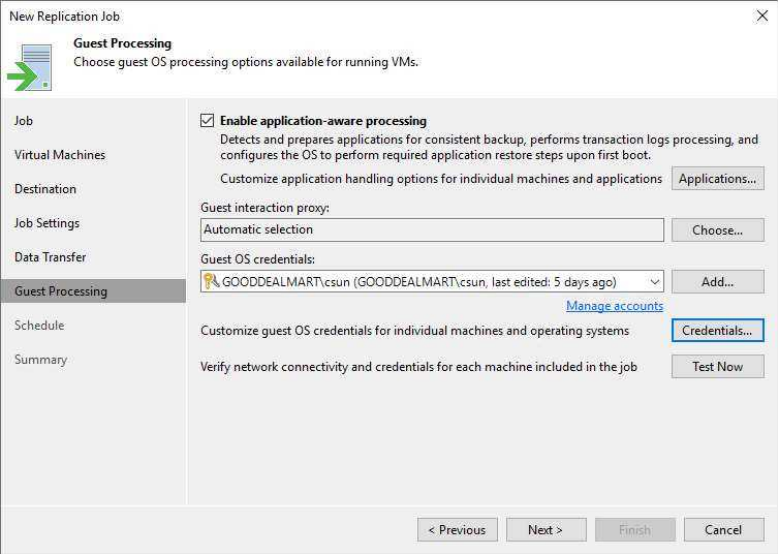
- 74. Choose a user from the Credentials drop-down list, and click OK.
- 75. Repeat the steps for each VM.



- 76. On the Guest OS Credentials page, click OK.

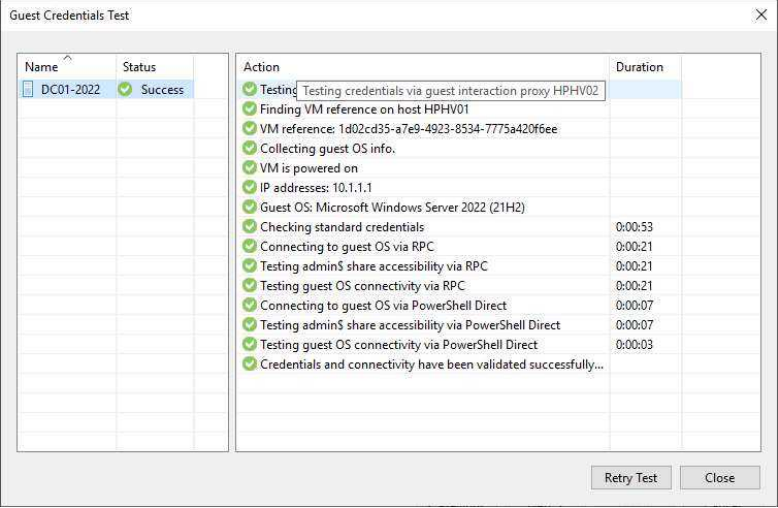


77. On the Guest Processing page, click Test Now to verify network connectivity and credentials for each machine included in the job.

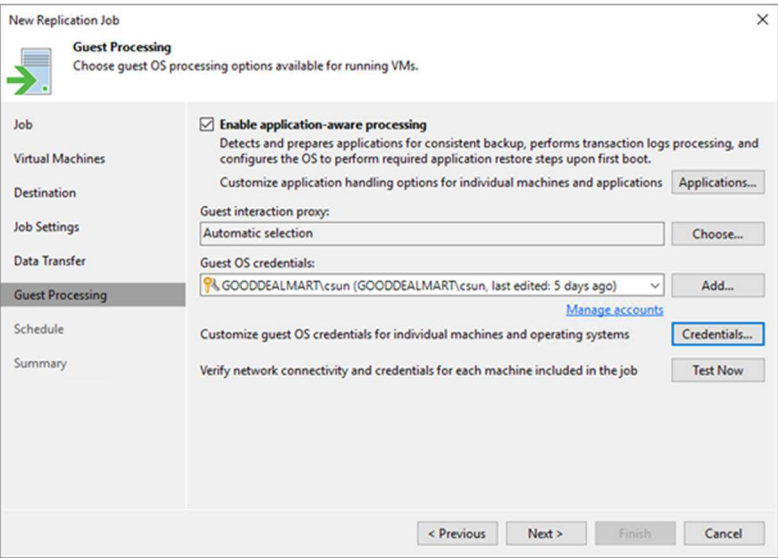


78. On the Guest Credentials Test page, verify each machine's success.

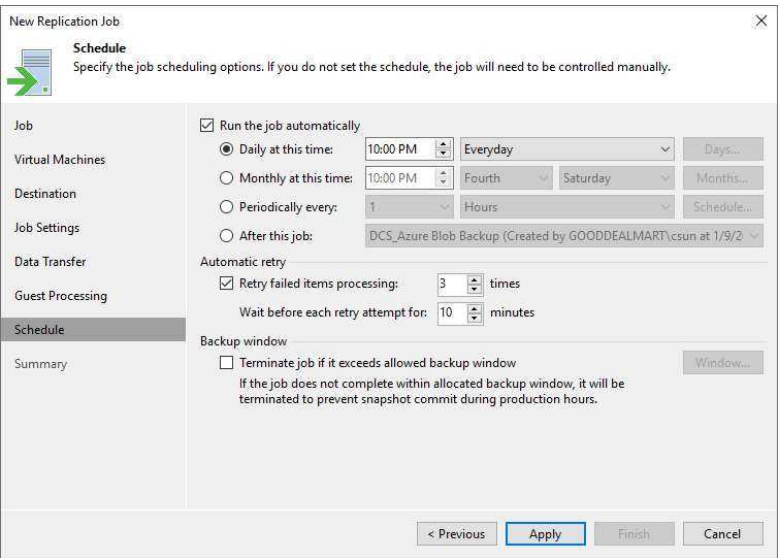
103. Click Close.



79. On the Guest Processing page, click Next.



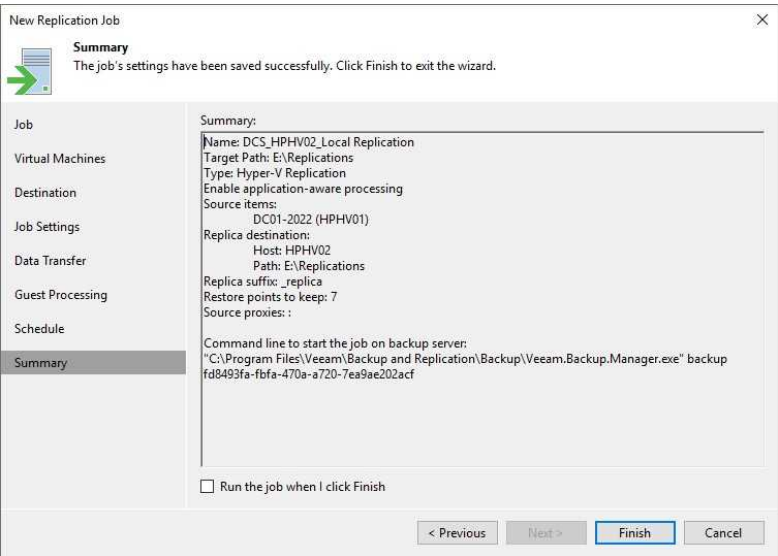
80. Select Run the job automatically on the Schedule page and select your specified schedule.
81. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
82. Define the time interval the backup job must complete in the Backup window section. The backup window ensures that the job does not overlap with production hours and that there is no unnecessary overhead on



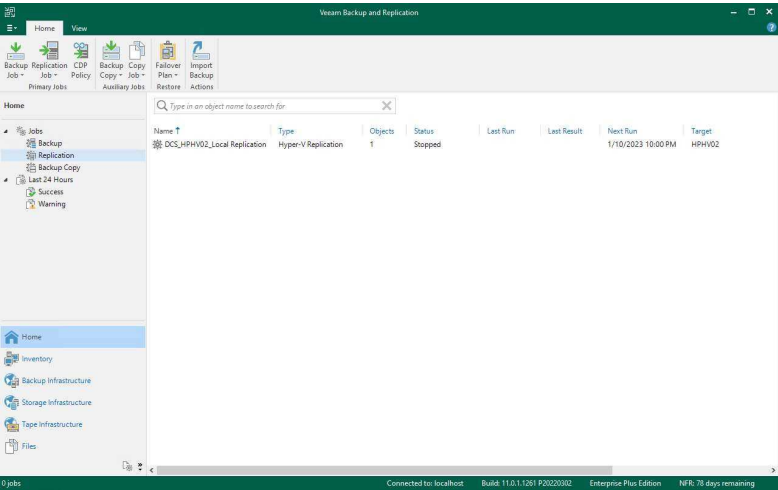
the production environment.

83. Click Apply.

84. On the Summary page, click Finish.



85. Verify the job has been added

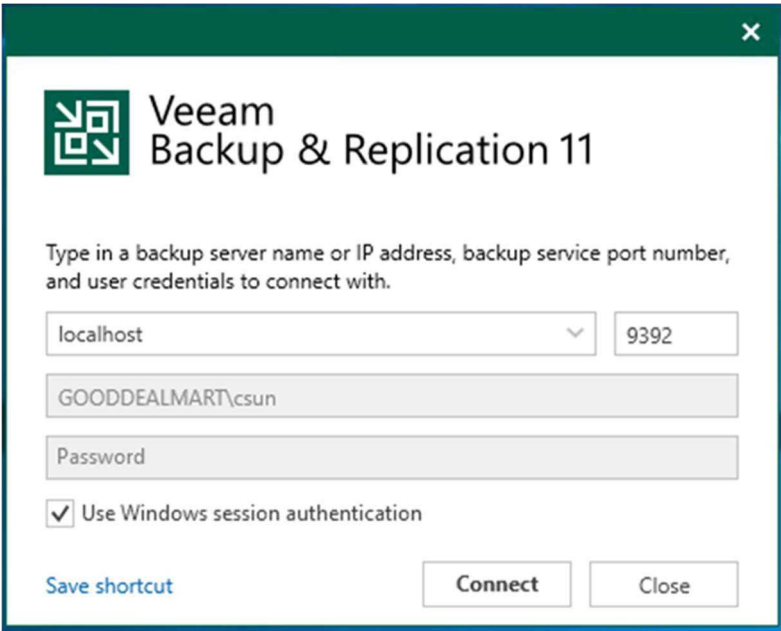


Creating a Replication job without seeding to replicate the specified VMs to the Disaster Recovery site

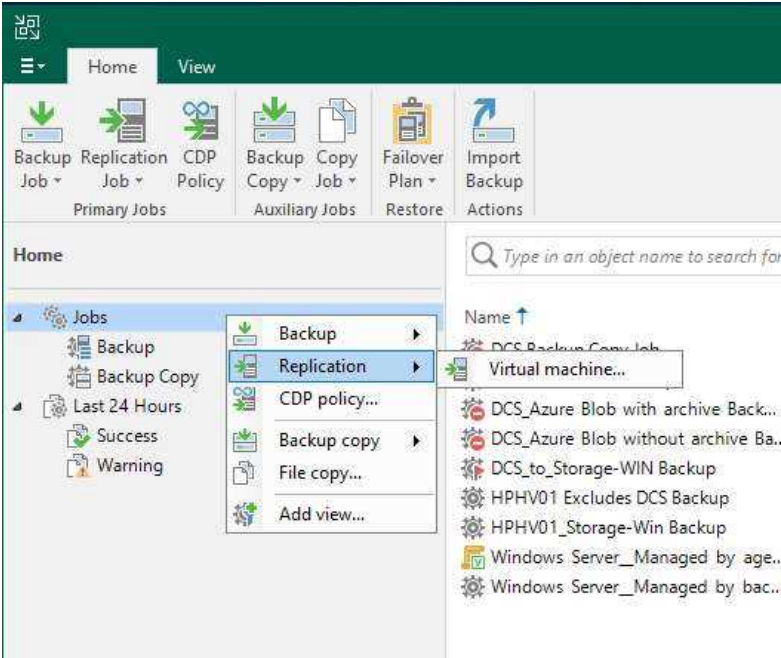
This procedure creates a replication job to replicate the specified VMs to the disaster recovery site. If a disaster strikes and the production VM stops working correctly, you can fail over to its replica.

Instructions	Screenshot (if applicable)
--------------	----------------------------

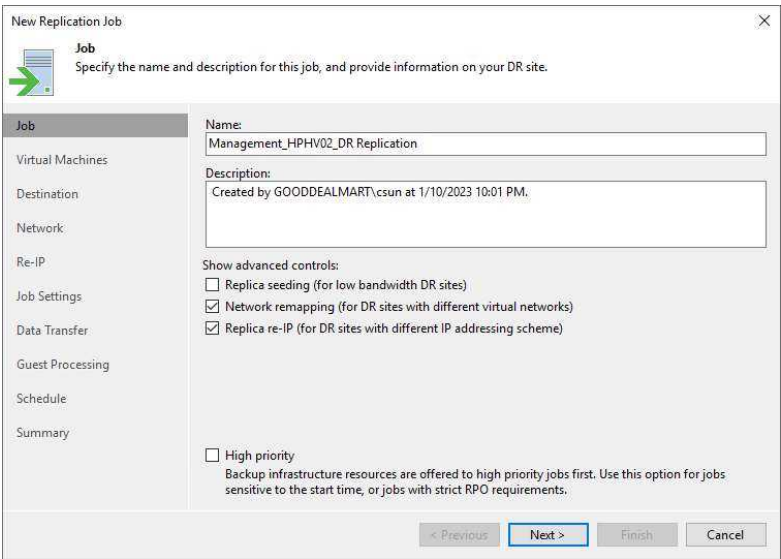
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



- 3. On the Home page, select Jobs, right-click Jobs, select Replication and click Virtual machine.

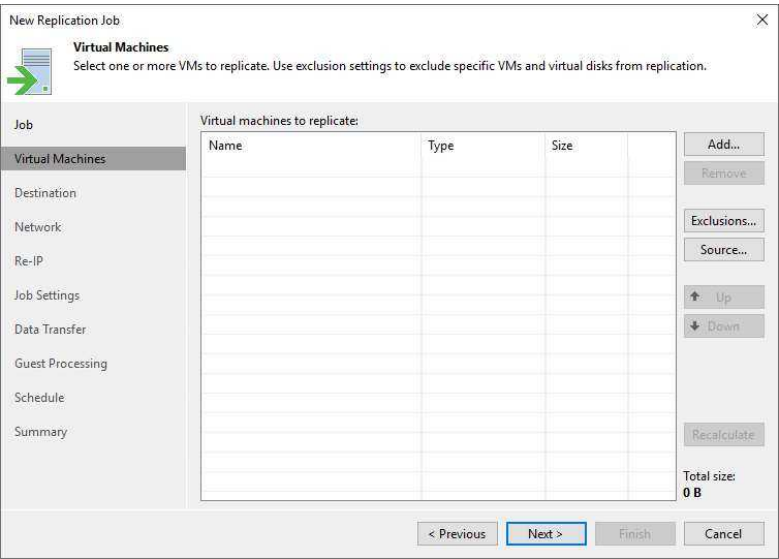


- 4. On the Job page, enter a name for the replication job in the Name field.
- 5. Describe the Description field.
- 6. Select Network remapping (for DR sites with different virtual networks).
- 7. Replica re-IP (for DR sites with different IP addressing schemes).
- 8. Select the High priority check box if required.

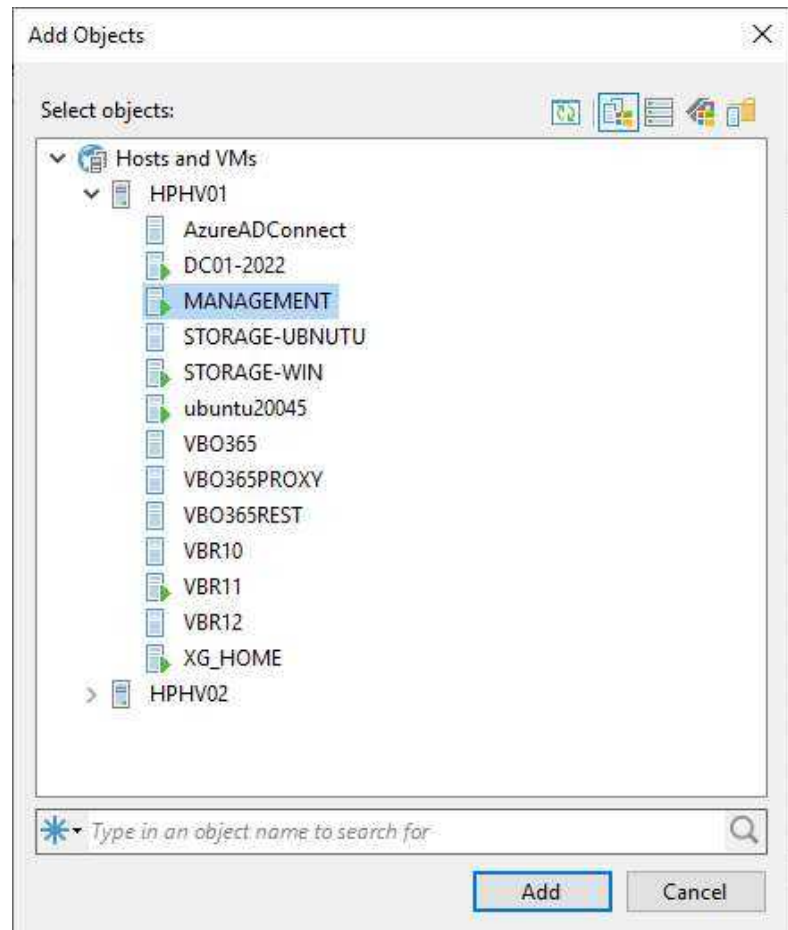


9. Click Next.

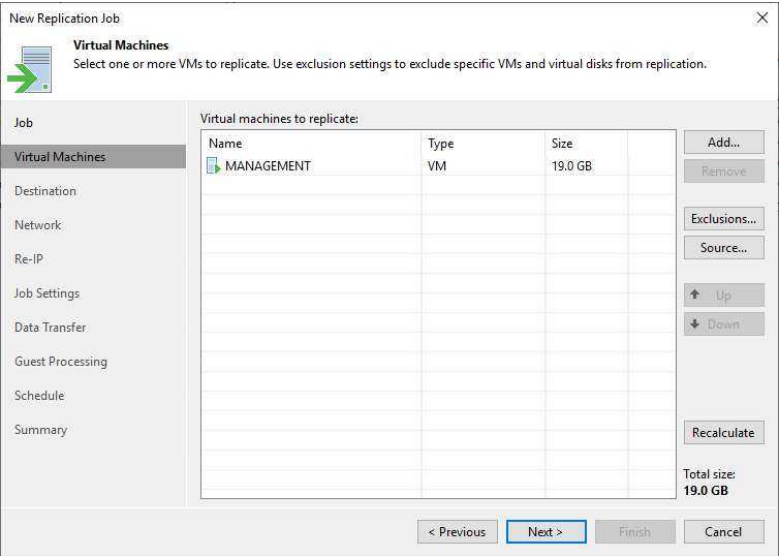
10. On the Virtual Machines page, click Add.



11. Select the objects in the list on the Add Objects page and click Add.



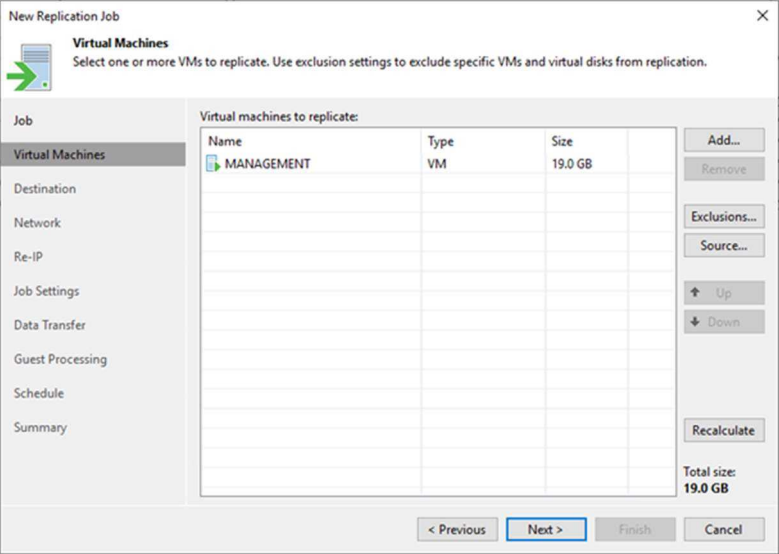
12. On the Virtual machines page, click Source.



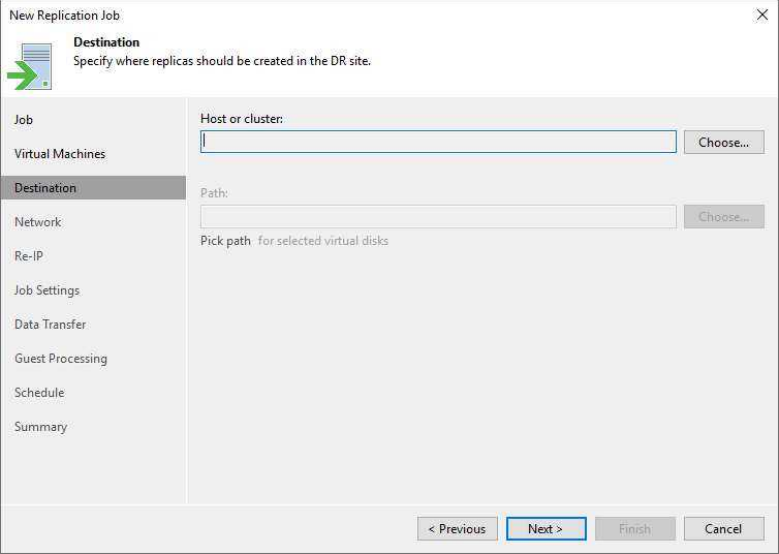
13. Select the From production storage (actual VM state) on the Source Repositories page. Veeam Replication will retrieve VM data from data stores connected to the source Microsoft Hyper-V host.
14. Or select Form backup files (latest VM state available in backups) if required. Veeam Backup & Replication will read VM data from the backup chain already existing in the selected backup repository.
15. Click OK.



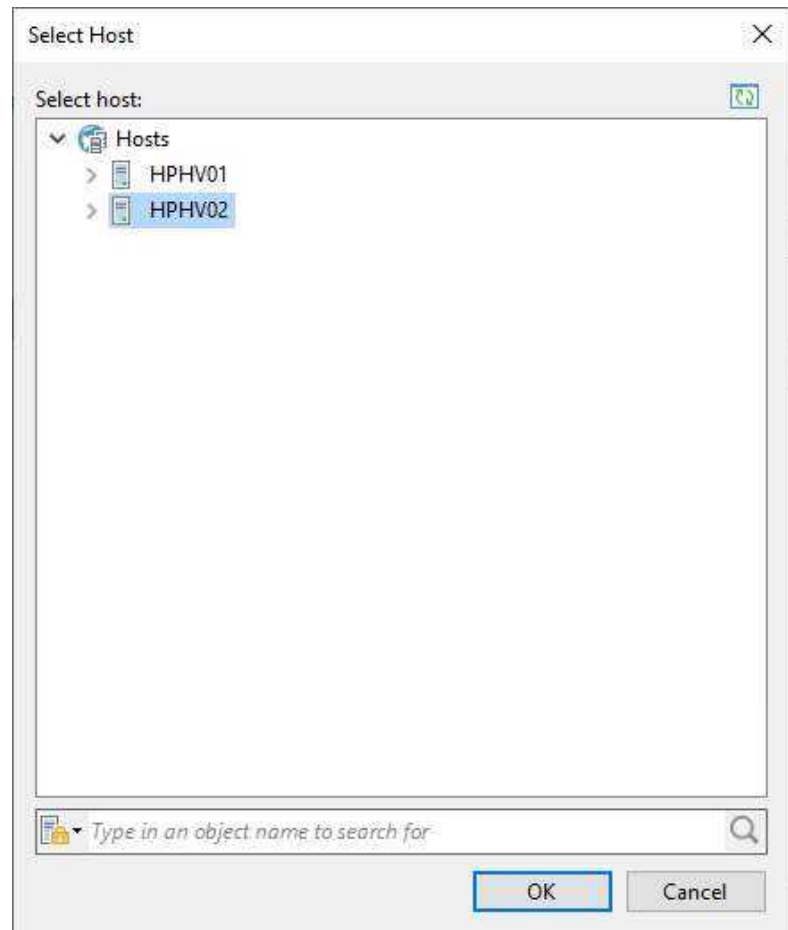
16. On the Virtual Machines page, click Next.



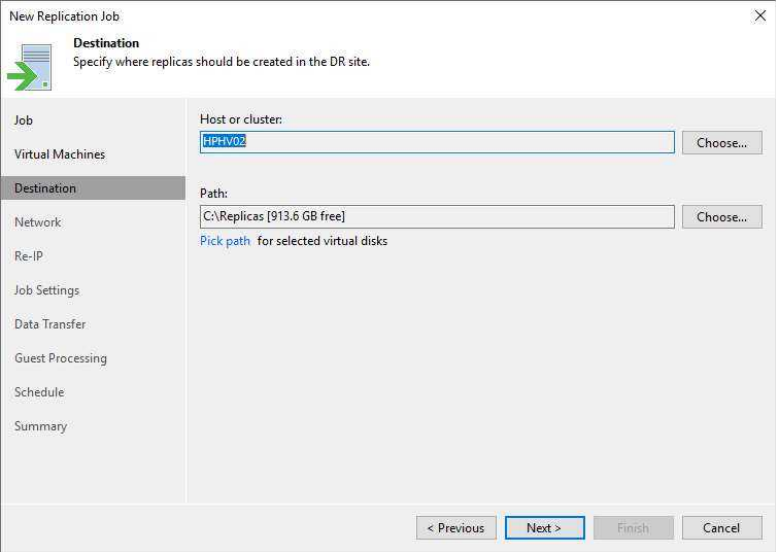
17. On the Destination page, click Choose in the Host or cluster session.



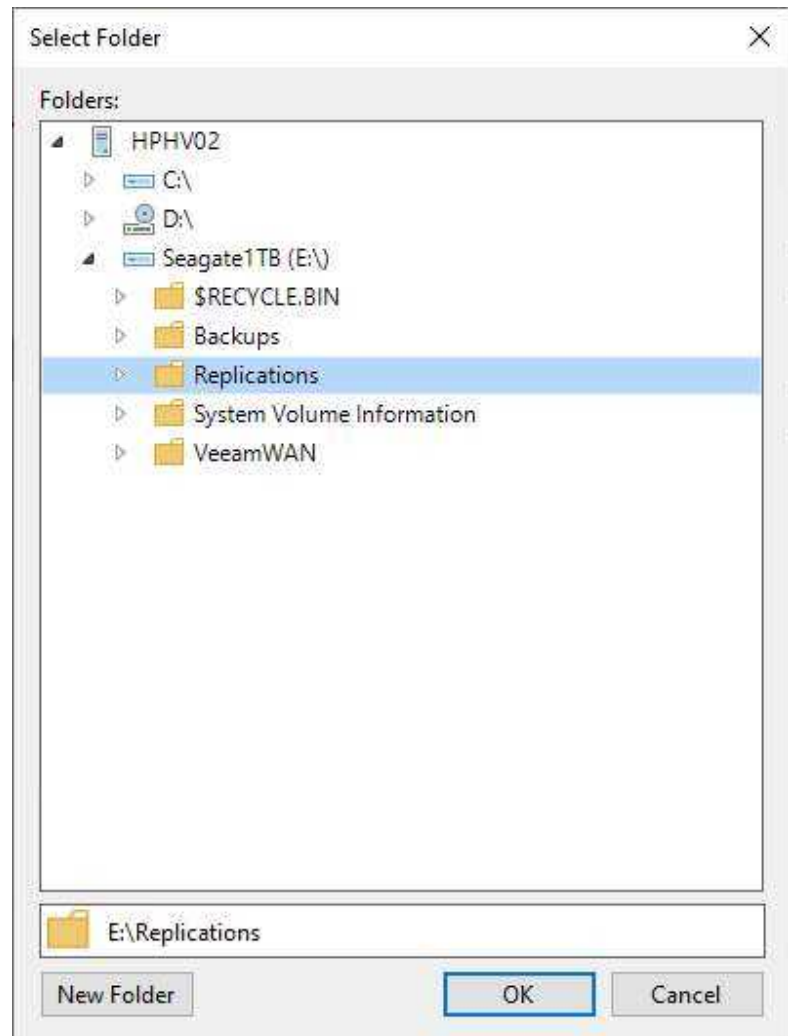
18. Select the destination host server on the Select Host page, and click OK.



19. On the Destination page, click Choose in the Path session.



20. On the Folders page, specify a path to the folder where VM replica files must be stored, and click OK.



21. On the Destination page, click Next.

New Replication Job

Destination
Specify where replicas should be created in the DR site.

Job

Virtual Machines

Destination

Network

Re-IP

Job Settings

Data Transfer

Guest Processing

Schedule

Summary

Host or cluster: HPHV02 Choose...

Path: E:\Replications [890.3 GB free] Choose...

[Pick path](#) for selected virtual disks

< Previous Next > Finish Cancel

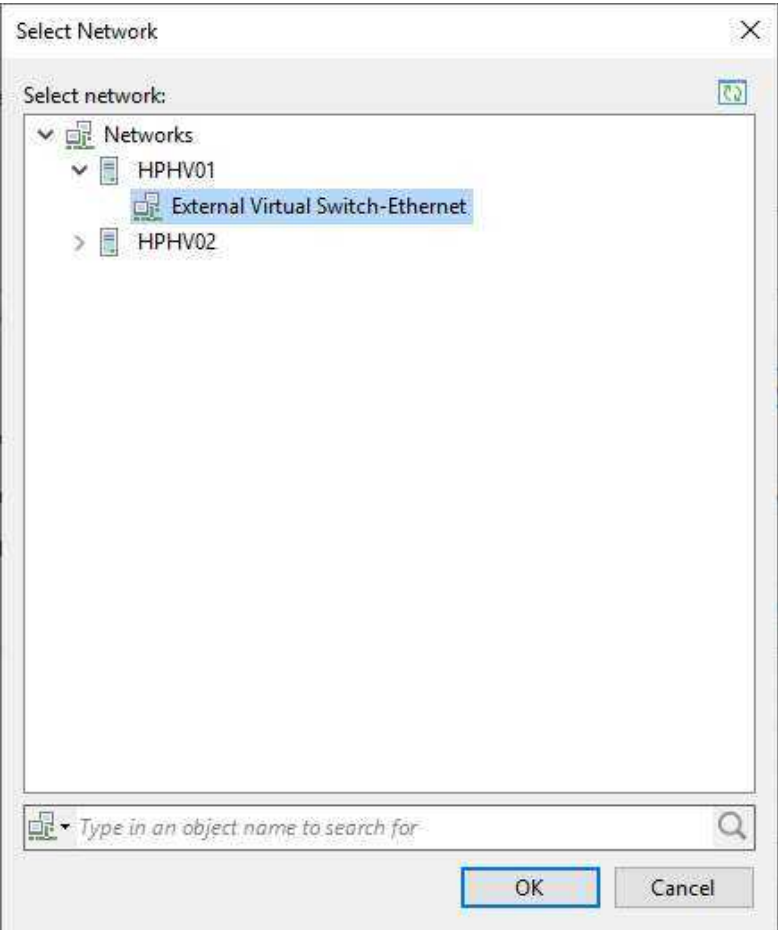
22. On the Network page, click Add.

[illegible]

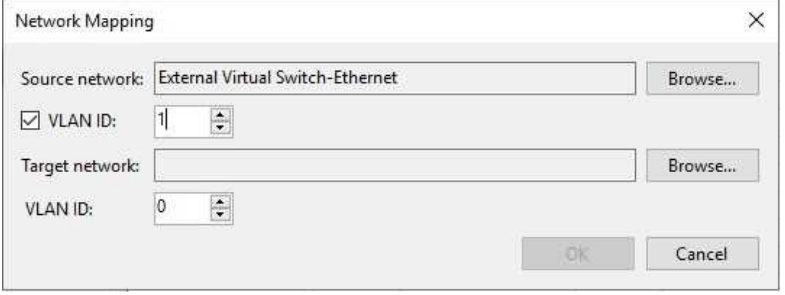
23. On the Network Mapping page, click Browse in the Source network session.



24. Select the production network on the Select Network page to which the original VMs are connected and click OK.



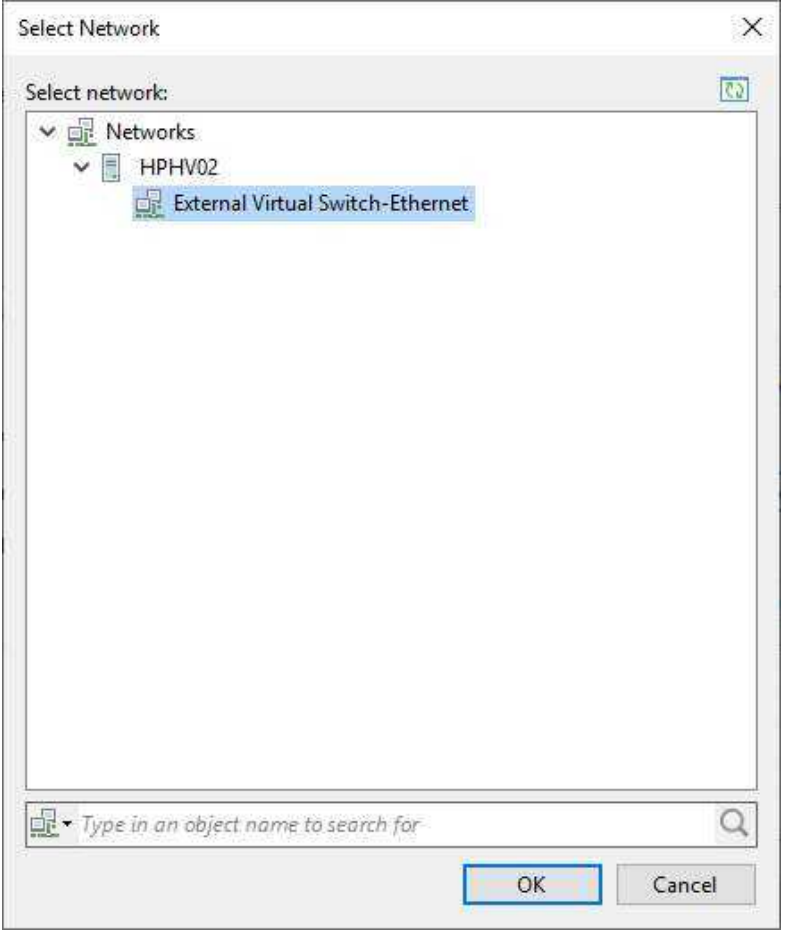
25. If you use VLAN IDs for networking, select the VLAN ID check box and enter the VLAN ID of the source network.
26. On the Network Mapping page, click Browse in the Target network session.



The 'Network Mapping' dialog box contains the following fields and controls:

- Source network:** A text box containing 'External Virtual Switch-Ethernet' with a 'Browse...' button to its right.
- VLAN ID:** A checked checkbox followed by a spinner box showing the value '1'.
- Target network:** An empty text box with a 'Browse...' button to its right.
- VLAN ID:** A spinner box showing the value '0'.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

27. Select the DR site network on the Select Network page to which replicas will be connected and click OK.



The 'Select Network' dialog box displays a tree view of available networks:

- Select network:** A header with a search icon.
- Networks:** A collapsed tree view.
- HPHV02:** An expanded tree view containing:
 - External Virtual Switch-Ethernet:** The selected network, highlighted with a blue selection box.

At the bottom, there is a search bar with the placeholder text 'Type in an object name to search for' and a search icon. Below the search bar are 'OK' and 'Cancel' buttons.

28. If you use VLAN IDs for networking, select the VLAN ID check box and enter the VLAN ID of the target network.
29. Click OK.

Network Mapping

Source network: External Virtual Switch-Ethernet Browse...

☒ VLAN ID: 1

Target network: External Virtual Switch-Ethernet(switch: [1EBABCD2-B4AA-44E...]) Browse...

VLAN ID: 100

OK Cancel

30. On the Network page, click Next.

New Replication Job

Network

Select how virtual networks map to each other between production and DR sites.

Job	Network connections:				Add...
Virtual Machines	Source network:	VLAN ID	Target network:	VLAN ID	Edit...
Destination	External Virtual S...	1	External Virtual...	100	Remove
Network					
Re-IP					
Job Settings					
Data Transfer					
Guest Processing					
Schedule					
Summary					

< Previous Next > Finish Cancel

31. On the Re-IP page, click Add.

New Replication Job

Re-IP

Specify re-IP rules to apply to replicas to meet DR site's IP addressing scheme. This is only supported for Microsoft Windows guests.

Job

Virtual Machines

Destination

Network

Re-IP

Job Settings

Data Transfer

Guest Processing

Schedule

Summary

Re-IP rules:

Source IP address	Target IP address	Description
-------------------	-------------------	-------------

Add...

Edit...

Remove

< Previous

Next >

Finish

Cancel

- 32. On the New Re-IP Rule page, Enter the IP numbering scheme used at the production site in the Source VM section.
- 33. Enter the IP numbering scheme used at the DR site in the Target VM section.
- 34. Describe the rule in the Description field.
- 35. Click OK.

New Re-IP Rule

Source VM

IP address:

10 . 1 . * . *

Subnet mask:

255 . 255 . 0 . 0

Target VM

IP address:

10 . 100 . * . *

Subnet mask:

255 . 255 . 0 . 0

Default gateway:

10 . 100 . 255 . 254

Preferred DNS server:

10 . 100 . 1 . 1

Alternate DNS server:

. . .

Preferred WINS server:

. . .

Alternate WINS server:

. . .

Description

OK

Cancel

36. On the Re-IP page, click Next.

New Replication Job

Re-IP

Specify re-IP rules to apply to replicas to meet DR site's IP addressing scheme. This is only supported for Microsoft Windows guests.

Job

Virtual Machines

Destination

Network

Re-IP

Job Settings

Data Transfer

Guest Processing

Schedule

Summary

Re-IP rules:

Source IP address	Target IP address	Description
10.1.*.*	10.100.*.*	

Add...

Edit...

Remove

< Previous

Next >

Finish

Cancel

37. Select the Repository for replica metadata from the drop-down list on the Job Settings page.

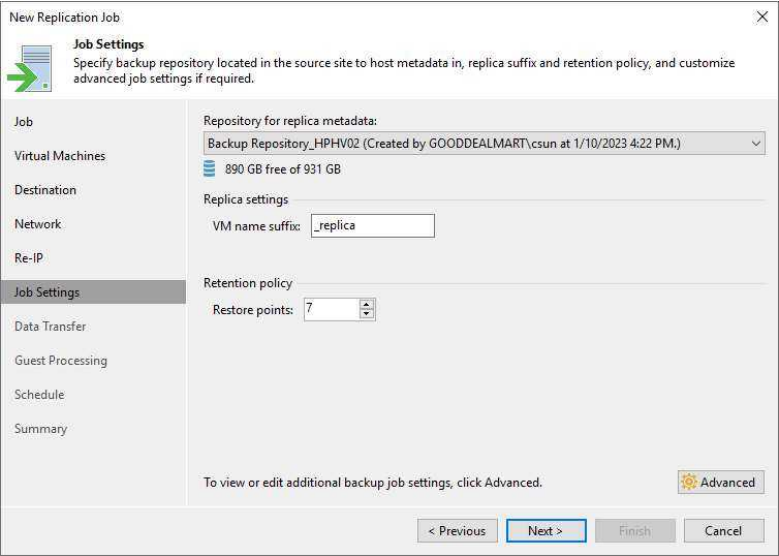
Note:

- This setting must be specified only for snapshot replicas. Legacy replicas do not use a backup repository for storing metadata.
- You cannot store VM replica metadata on deduplicating storage appliances.

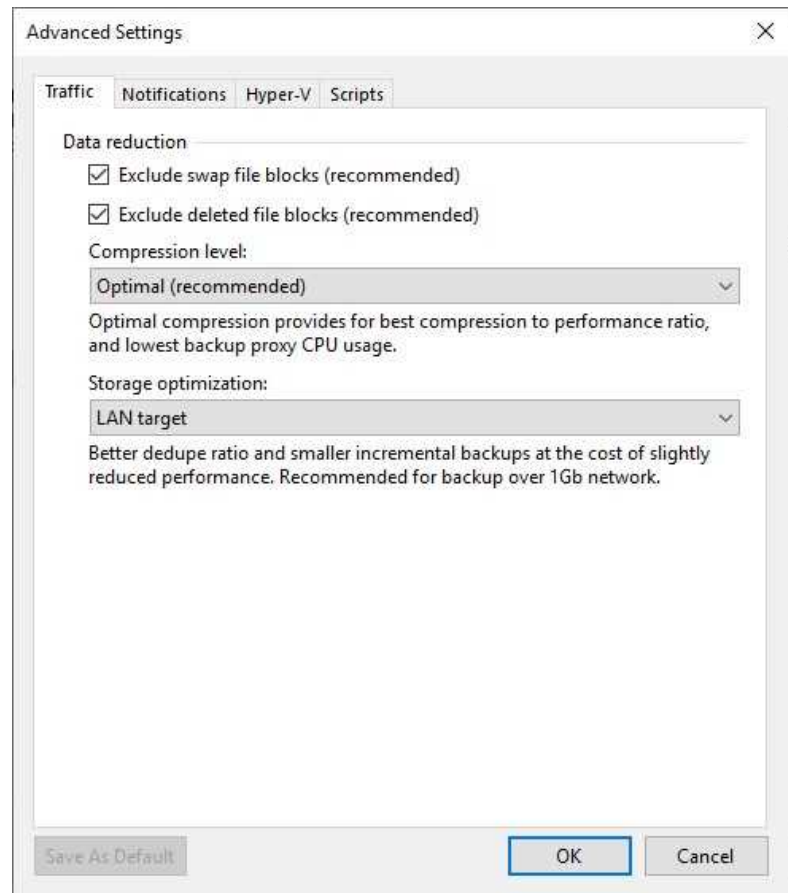
Source/Target	Target 2008 R2	Target 2012-2022 ¹
Data source: production storage		
Source 2008 R2	Legacy	Snapshot
Source 2012-2022	Not supported	Snapshot
Data source: backup		
Source 2008 R2	Not supported	Snapshot
Source 2012-2022	Not supported	Snapshot

- You cannot store replica metadata in a scale-out backup repository.

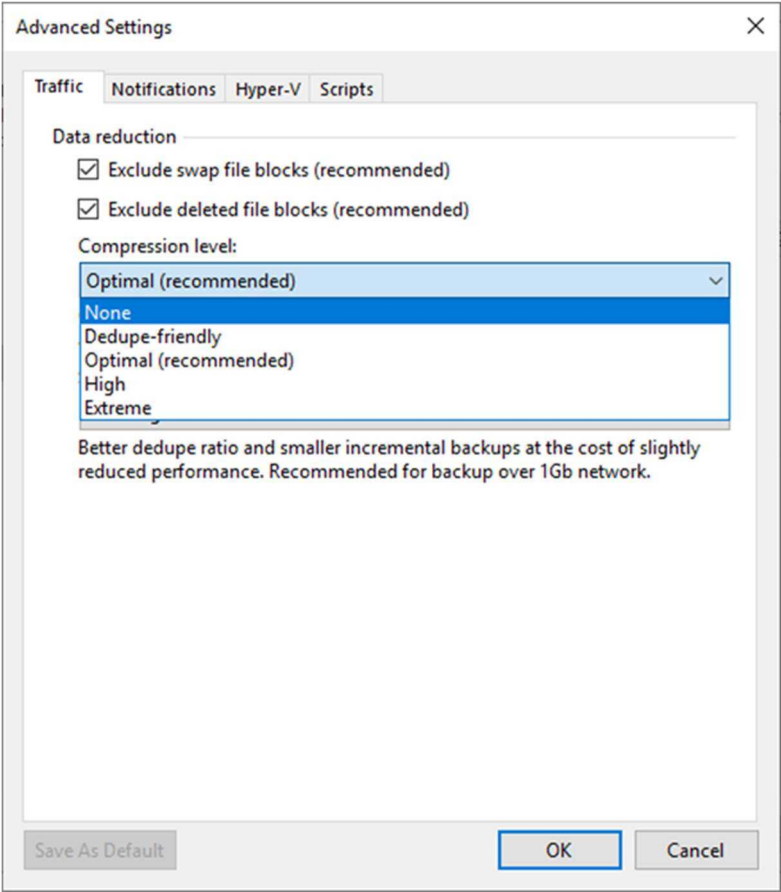
- 38. Enter a suffix that will be appended to the original VM names in the Replica name suffix field.
- 39. Enter the number of restore points in the field.
- 40. Click Advanced.



41. On Advanced Settings, click Traffic.
42. Select the Exclude swap file blocks checkbox (recommended). Veeam Backup & Replication excludes data blocks of the hiberfil.sys and pagefile.sys system files from replicas.
43. Select the Exclude deleted file blocks (recommended) checkbox, Veeam Backup & Replication does not copy deleted file blocks ("dirty" blocks on the VM guest OS) to the target location.



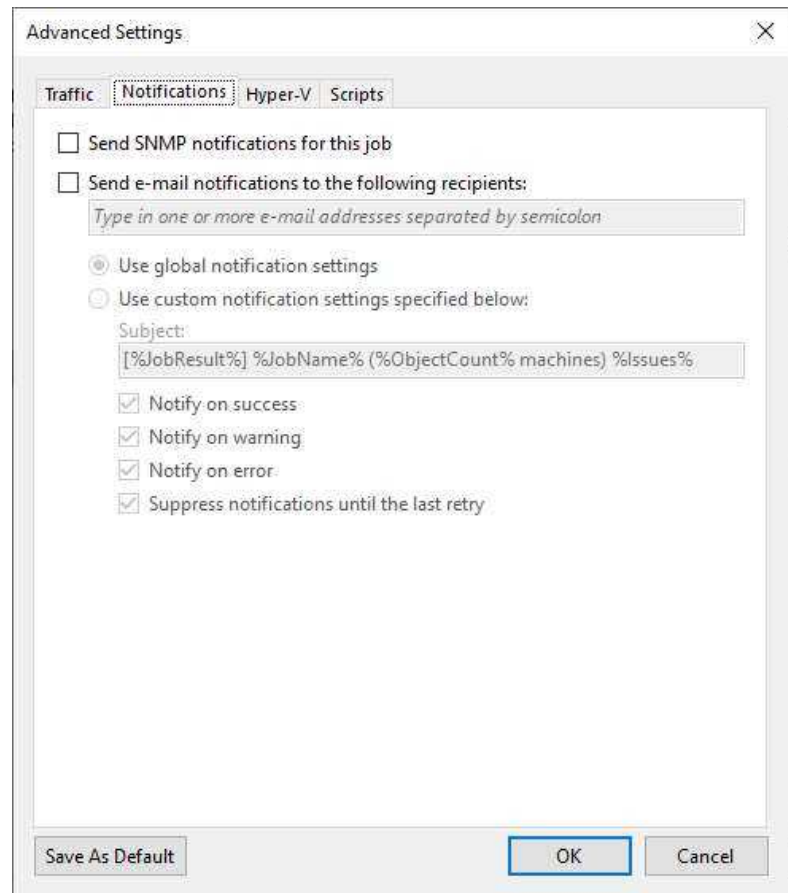
44. Select the compression level for replicas from the drop-down list.



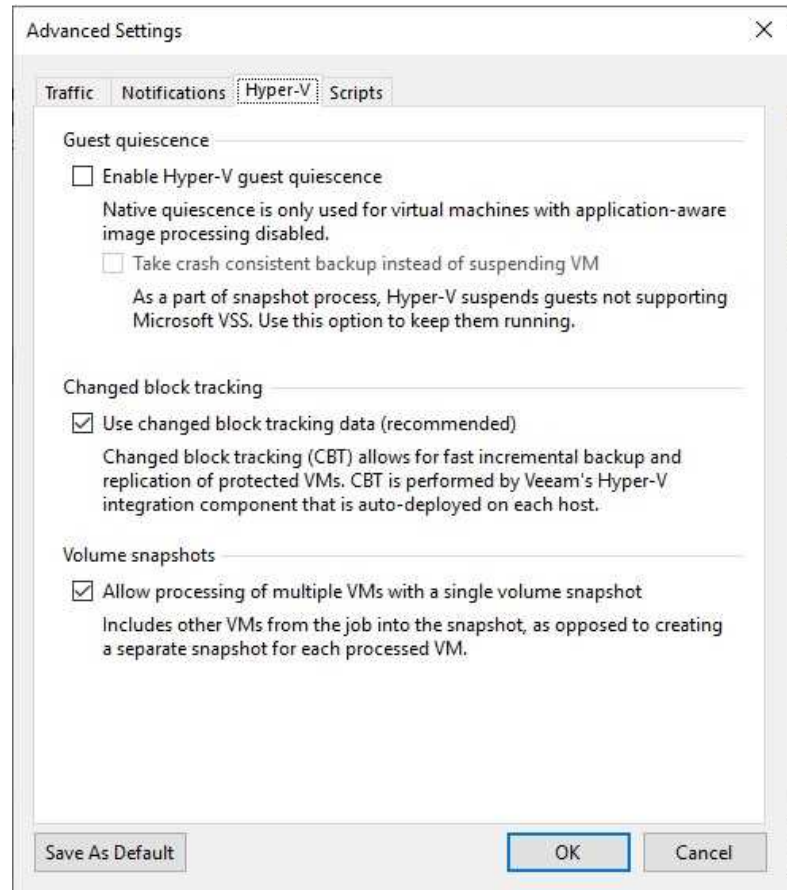
45. Select Storage optimization from the drop-down list.

Storage optimization option	Block size	Description
Local target (large blocks)	4096 KB	Recommended for files that are larger than 16 TB. This option will provide the lowest deduplication ratio and the largest size of incremental files.
Local target	1024 KB	Recommended for backup and replication to SAN, DAS or local storage. This option provides the fastest job performance but reduces the deduplication ratio, because with larger data blocks it is less likely to find identical blocks.
LAN target	512 KB	Recommended for backup and replication to NAS, and on-site backup and replication. This option provides a better deduplication ratio and reduces the size of a file because of reduced data block sizes.
WAN target	256 KB	Recommended if you are planning to use WAN for off-site backup and replication. This option provides the maximum deduplication ratio and the smallest size of files that allows you to reduce the amount of traffic over WAN.

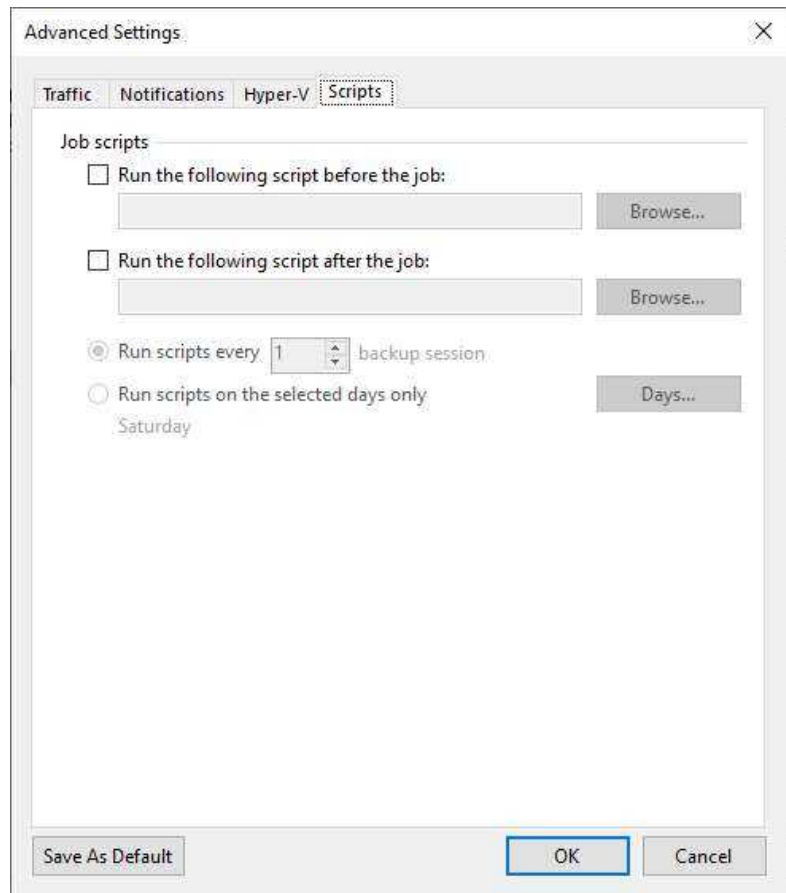
46. On the Advanced Settings, select Notifications.
47. Select Send SNMP notifications for this job checkbox. In addition, Veeam will send traps to the NMS when events occur, such as when a backup job fails or a replication job encounters an error.
48. Select Send email notifications to the following recipients checkbox, If you want to receive email notifications about the job completion status.



49. On the Advanced Settings, select Hyper-V.
50. Select the Enable Hyper-V guest quiescence check box if application-aware processing cannot be used for some reason.
51. Select the Take crash consistent backup instead of suspending VM check box if you do not want to suspend VMs in the job.
52. Select the Use changed block tracking data (recommended) check box.
53. Select the Allow processing of multiple VMs with a single volume snapshot check box.



54. On the Advanced Settings page, click Scripts.
55. Keep the default settings and click OK.



56. On the Job Settings page, click Next.

Job Settings

Specify backup repository located in the source site to host metadata in, replica suffix and retention policy, and customize advanced job settings if required.

Job

Virtual Machines

Destination

Network

Re-IP

Job Settings

Data Transfer

Guest Processing

Schedule

Summary

Repository for replica metadata:
Backup Repository_HPHV02 (Created by GOODDEALMART\csun at 1/10/2023 4:22 PM.)

890 GB free of 931 GB

Replica settings
VM name suffix:

Retention policy
Restore points:

To view or edit additional backup job settings, click Advanced.

Advanced

< Previous

Next >

Finish

Cancel

57. Click Choose to specify Source Proxy on the Data Transfer page.

Data Transfer

Choose how VM data should be transferred to the target site.

Job

Virtual Machines

Destination

Network

Re-IP

Job Settings

Data Transfer

Guest Processing

Schedule

Summary

Source proxy:
 Choose...

Data transfer mode:
☒ Direct
Best for local and off-site replication over fast links.
☐ Through built-in WAN accelerators
Best for off-site replication over slow links due to significant bandwidth savings.
Source WAN accelerator:
Target WAN accelerator:

< Previous

Next >

Finish

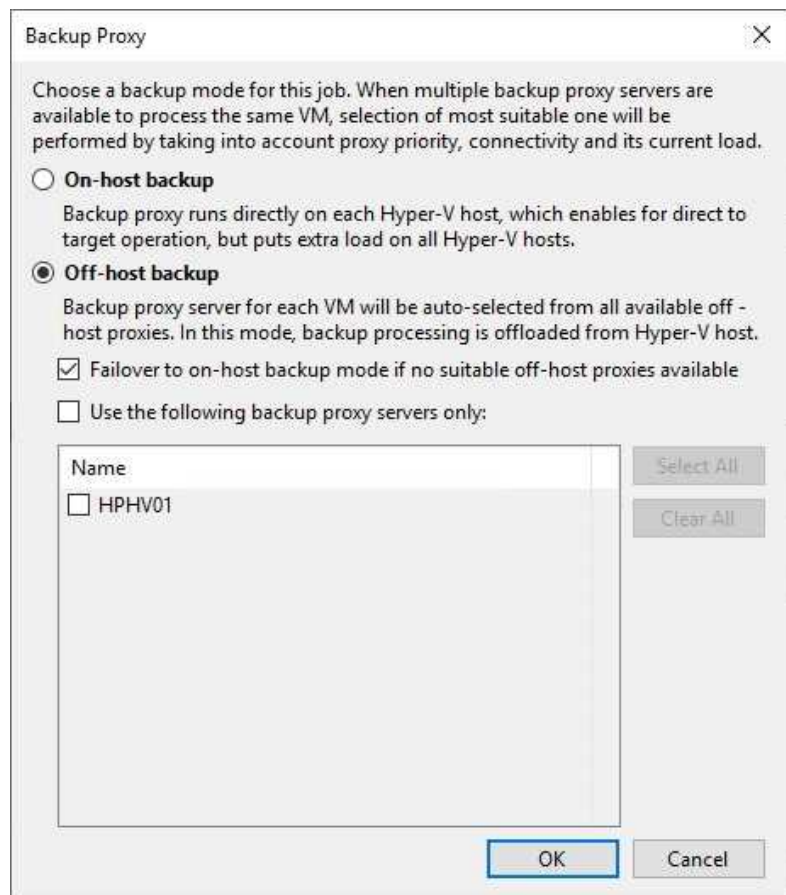
Cancel

58. On the Backup Proxy page, Veeam Backup & Replication automatically selects off-host backup proxies and select the Failover to on-host backup mode if no suitable off-host proxies are available checkbox by default.

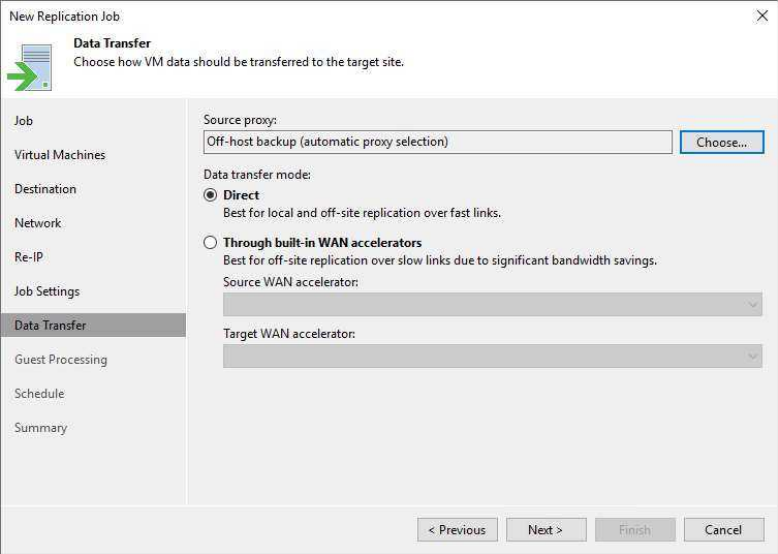
59. Select Use the following backup proxy servers only check box and choose one or multiple off-host backup proxies from the list if necessary.

60. Select On-host backup If you want to use the Microsoft Hyper-V host as the source host and backup proxy.

61. Click OK.



62. On the Data Transfer mode session, select Direct if you plan to copy backup files over high-speed connections.

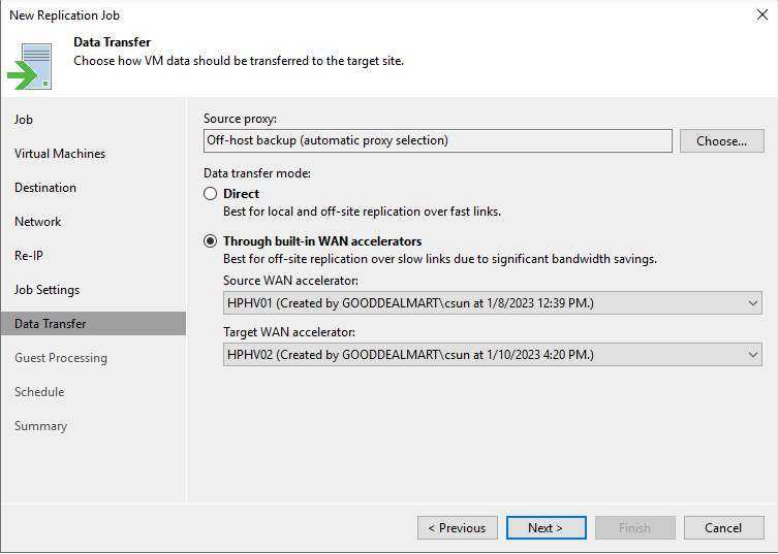


63. On the Data Transfer mode session, select Direct if you plan to copy backup files over high-speed connections.

64. Select the Through built-in WAN accelerators if you transfer data over WAN or slow connections.

65. Select a WAN accelerator configured in the source site from the Source WAN accelerator drop-down list.

66. Select a WAN accelerator configured in the target site from the Target WAN

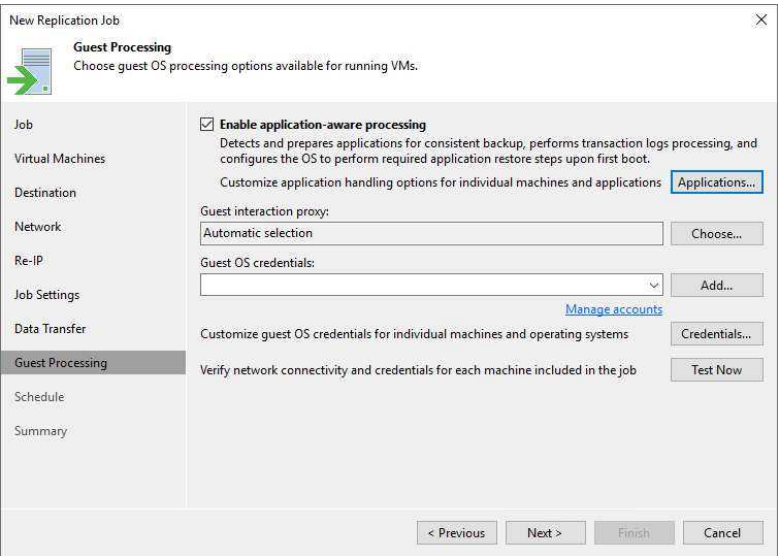


accelerator drop-down list.

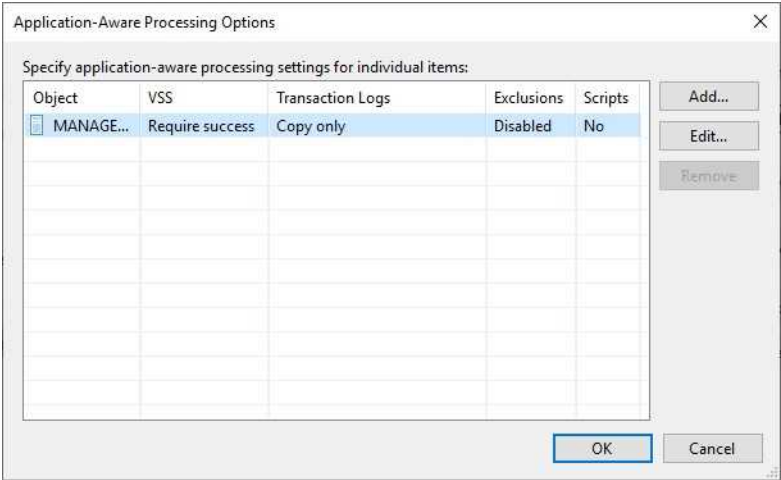
67. Click Next.

68. When you add VMs running VSS-aware applications to the replication job, you can enable application-aware processing to create a transactionally consistent replica. The transactionally consistent replicas ensure that applications on VMs can be recovered without data loss.

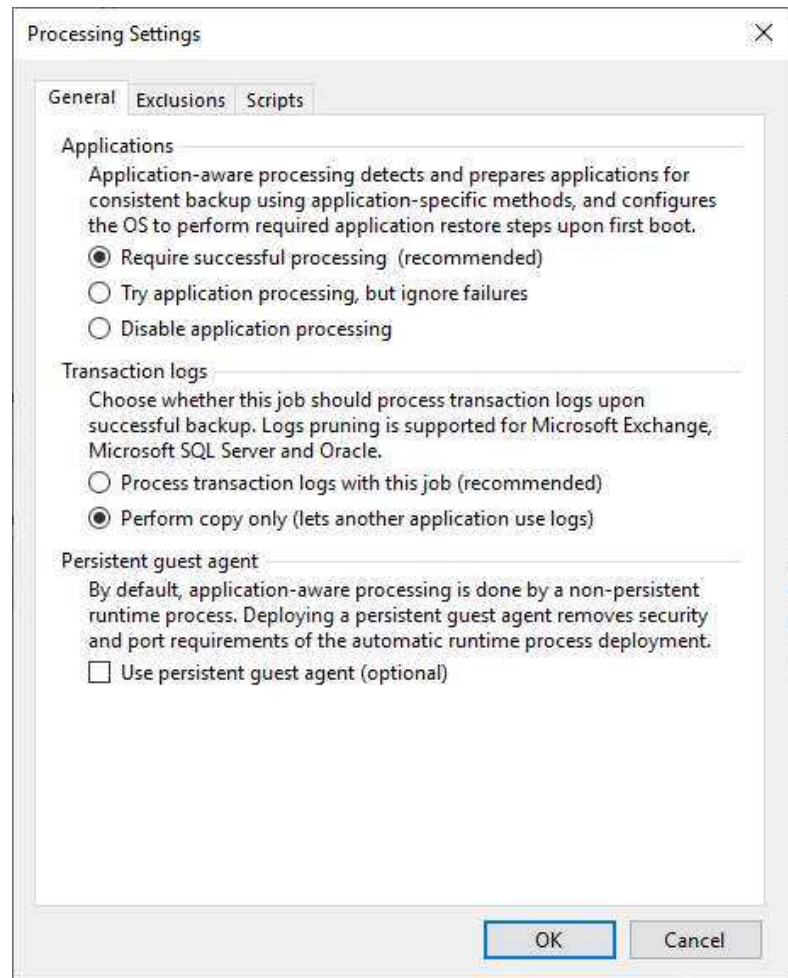
69. Select the Enable application-aware processing check box on the Guest Processing page, and click Applications.



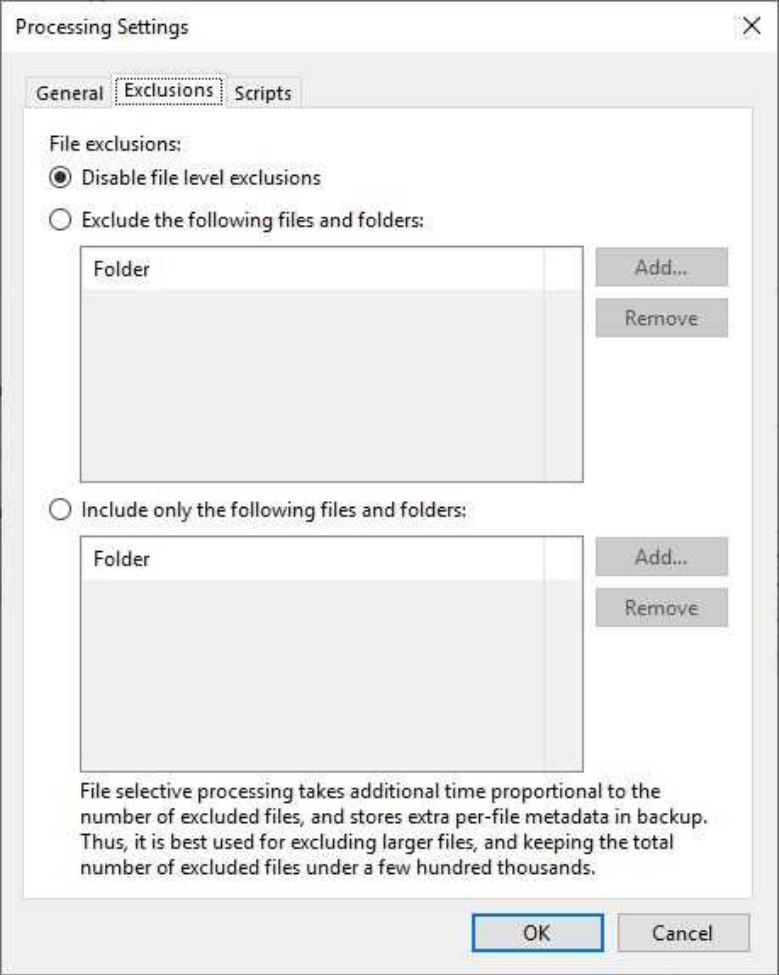
70. On the Application-Aware Processing Options page, select the Object, and click Edit.



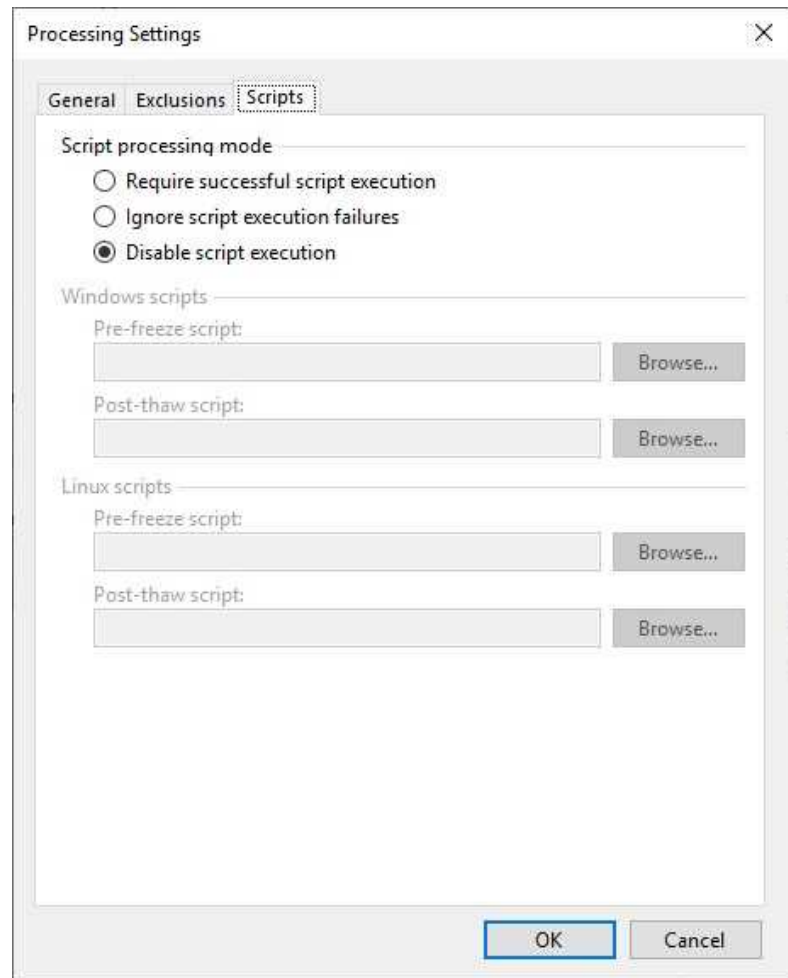
71. On the Processing Settings, click General.
72. Suppose you need Veeam Backup & Replication to stop the backup process if any error occurs during application-aware processing. Select Require successful processing (recommend).
73. Suppose you must continue the backup process even if there is an error during application-aware processing. Select Try application processing but ignore failures.
74. Select Disable application processing to disable application-aware processing for the VM.
75. Select Process transaction logs with this job (recommended) to process transaction logs.
76. Select Perform copy only to let another application use
77. Select the Use persistent guest agent (optional) checkbox to enable persistent agent.



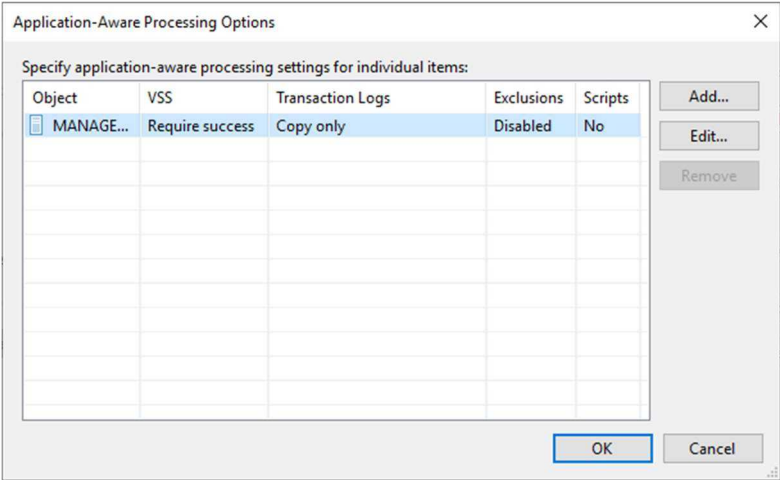
78. On the Processing Settings page, click Exclusions and keep the default settings.



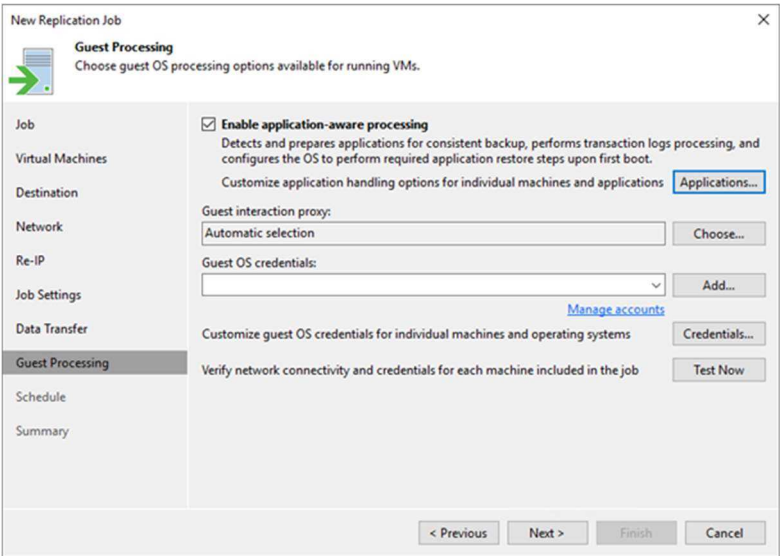
79. On the Processing Settings page, click Scripts.
80. Select Disable script execution and click OK.



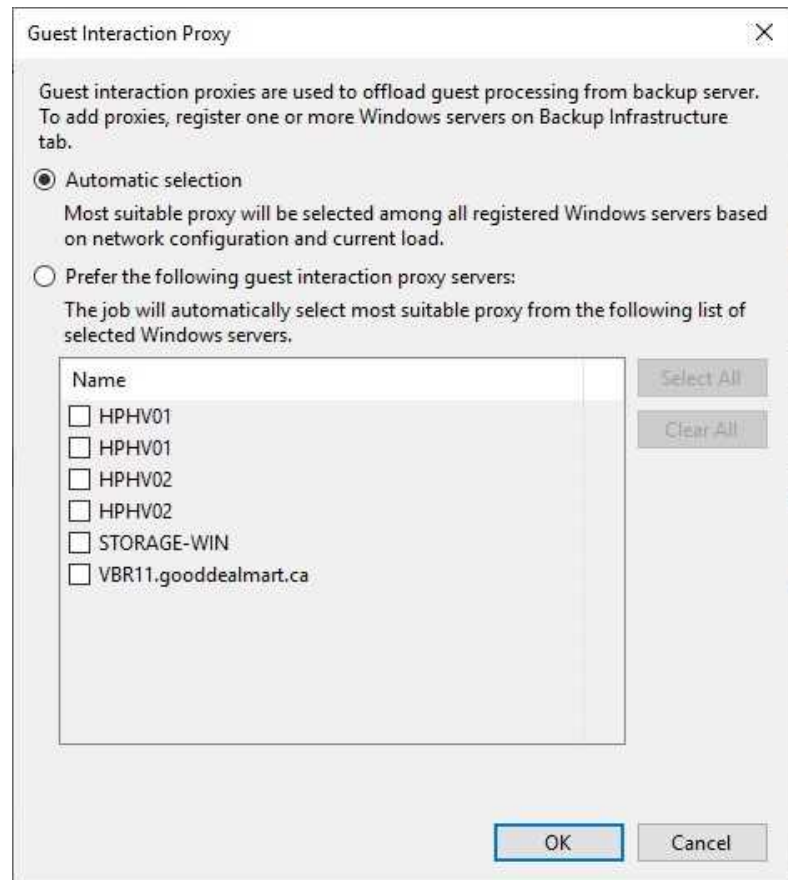
81. On the Application-Aware Processing Options page, click OK.



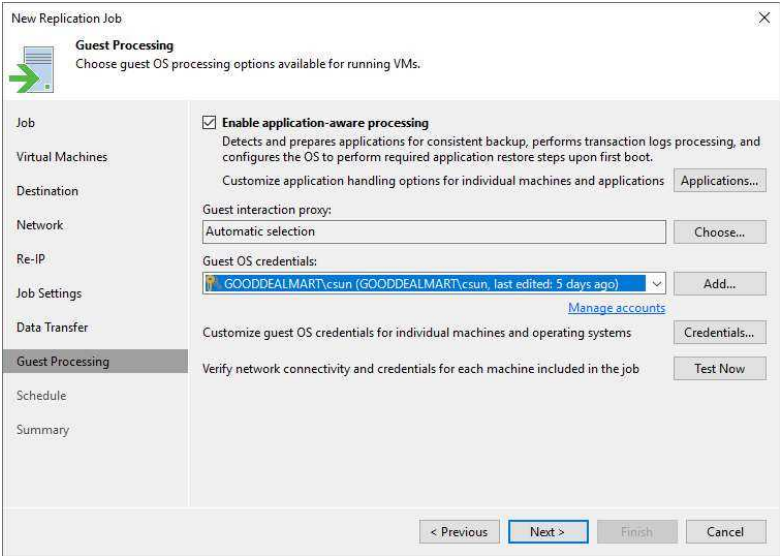
82. Click Choose in the Guest interaction proxy field.



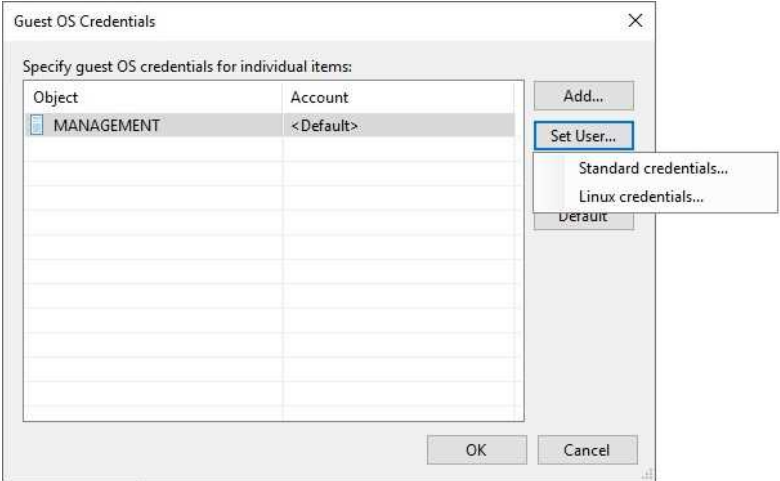
83. On the Guest Interaction Proxy page, select Automatic selection to let Veeam Backup & Replication automatically select the guest interaction proxy.
84. Select Prefer the following guest interaction proxy servers to explicitly define which servers will perform the guest interaction proxy role.
85. Click OK.



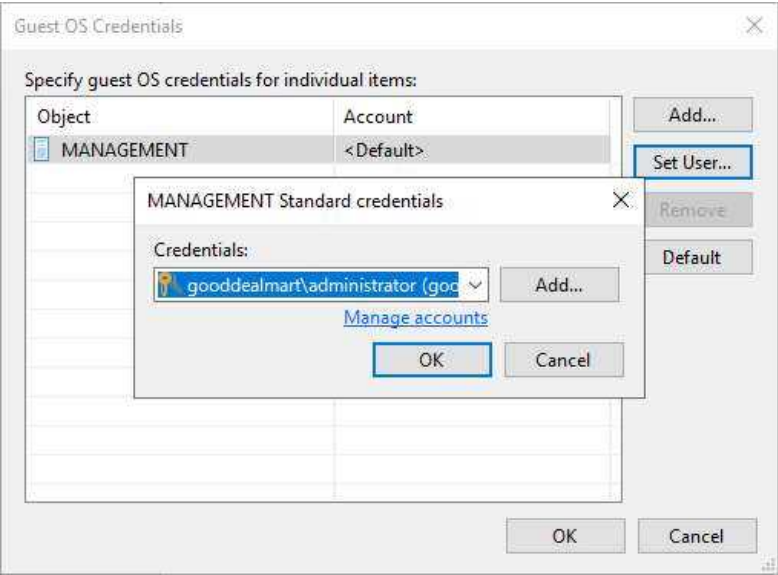
- 86. Choose a user account on the Guest Processing page with sufficient permissions from the Guest OS credentials drop-down list.
- 87. Click Credentials to Customize guest OS credentials for individual machines and operating systems.



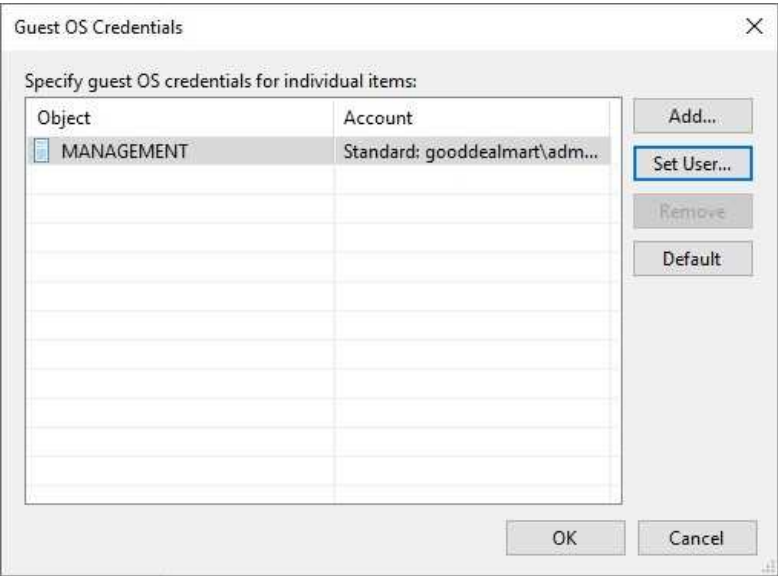
- 88. On the Guest OS Credentials page, select the VM, and click Set User.
- 89. Select Standard credentials.



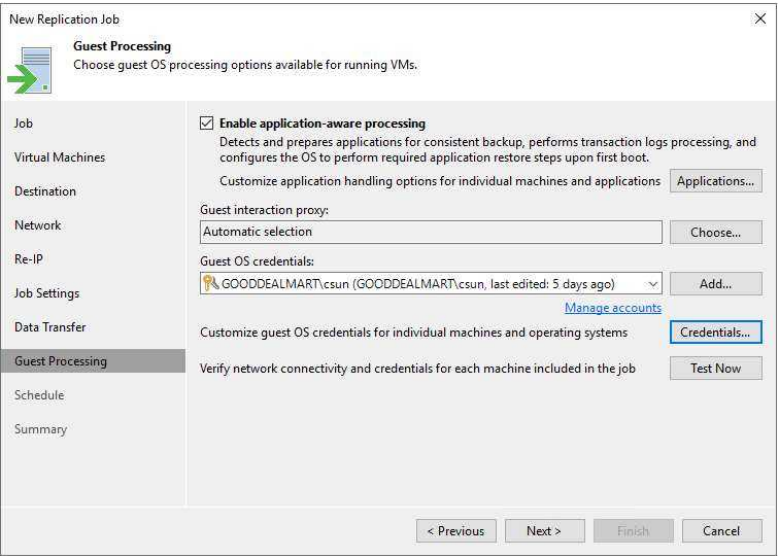
- 90. Choose a user from the Credentials drop-down list, and click OK.
- 91. Repeat the steps for each VM.



- 92. On the Guest OS Credentials page, click OK.

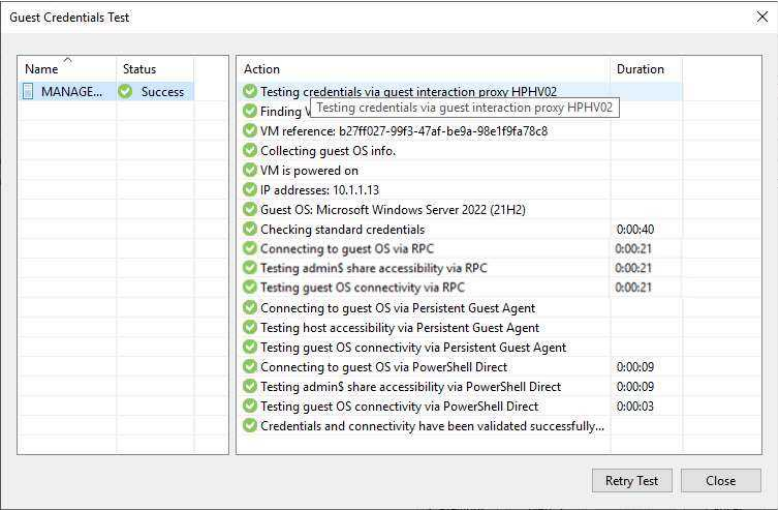


93. On the Guest Processing page, click Test Now to verify network connectivity and credentials for each machine included in the job.



94. On the Guest Credentials Test page, verify each machine's success.

95. Click Close.



96. On the Guest Processing page, click Next.

The screenshot shows the 'New Replication Job' dialog box with the 'Guest Processing' tab selected. The left sidebar lists 'Job', 'Virtual Machines', 'Destination', 'Network', 'Re-IP', 'Job Settings', 'Data Transfer', 'Guest Processing' (highlighted), 'Schedule', and 'Summary'. The main area contains the following options:

- ☒ **Enable application-aware processing**
Detects and prepares applications for consistent backup, performs transaction logs processing, and configures the OS to perform required application restore steps upon first boot.
Customize application handling options for individual machines and applications [Applications...](#)
- Guest interaction proxy: Automatic selection [Choose...](#)
- Guest OS credentials: GOODDEALMART\csun (GOODDEALMART\csun, last edited: 5 days ago) [Add...](#) [Manage accounts](#)
- Customize guest OS credentials for individual machines and operating systems [Credentials...](#)
- Verify network connectivity and credentials for each machine included in the job [Test Now](#)

At the bottom are buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'.

97. Select Run the job automatically on the Schedule page and select your specified schedule.

98. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.

99. Define the time interval the backup job must complete in the Backup window section. The backup window ensures that the job does not overlap with production hours and that there is no unnecessary overhead on

The screenshot shows the 'New Replication Job' dialog box with the 'Schedule' tab selected. The left sidebar lists 'Job', 'Virtual Machines', 'Destination', 'Network', 'Re-IP', 'Job Settings', 'Data Transfer', 'Guest Processing', 'Schedule' (highlighted), and 'Summary'. The main area contains the following options:

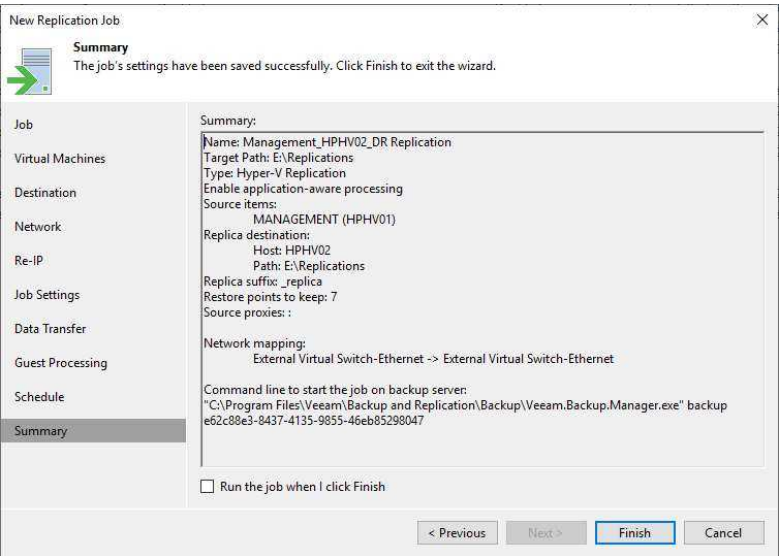
- ☒ **Run the job automatically**
 - ☒ Daily at this time: 10:00 PM, Everyday [Days...](#)
 - ☐ Monthly at this time: 10:00 PM, Fourth, Saturday [Months...](#)
 - ☐ Periodically every: 1, Hours [Schedule...](#)
 - ☐ After this job: DCS_Azure Blob Backup (Created by GOODDEALMART\csun at 1/9/2)
- Automatic retry**
 - ☒ Retry failed items processing: 3 times
 - Wait before each retry attempt for: 10 minutes
- Backup window**
 - ☐ Terminate job if it exceeds allowed backup window [Window...](#)
 - If the job does not complete within allocated backup window, it will be terminated to prevent snapshot commit during production hours.

At the bottom are buttons: '< Previous', 'Apply', 'Finish', and 'Cancel'.

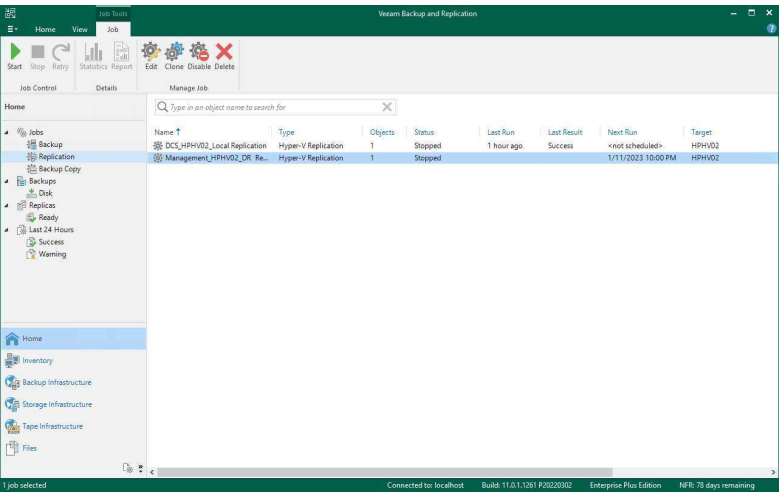
the production environment.

100. Click Apply.

101. On the Summary page, click Finish.



102. Verify the job has been added



Creating a Replication job with seeding to replicate the specified VMs to the Disaster Recovery site

This procedure creates a replication job with seeding to replicate the specified VMs to the disaster recovery site. If a disaster strikes and the production VM stops working correctly, you can fail over to its replica.

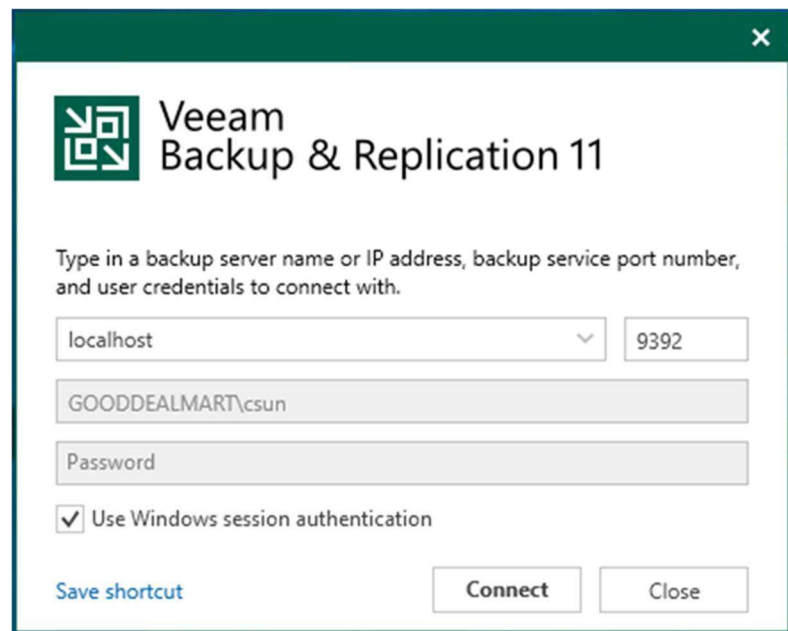
As a prerequisite for replica seeding, you must create a backup of the VM you intend to replicate. Replica seeding and mapping are two technologies that help to reduce network traffic. Veeam Backup & Replication does not need to transfer all VM data from the source host to the target host across sites during the first session of a replication job using these technologies (during the initial replication).

Configure replica mapping if you have ready-to-use copies of the original VMs on the host in the DR site. These can be restored virtual machines (VMs) or replicas created by other replication jobs. Veeam Backup & Replication will use these ready-to-use VMs as replicas after synchronizing their states with the most current state of the original VMs. You can also use replica mapping to reconfigure or recreate replication jobs, such as splitting one replication job into multiple jobs.

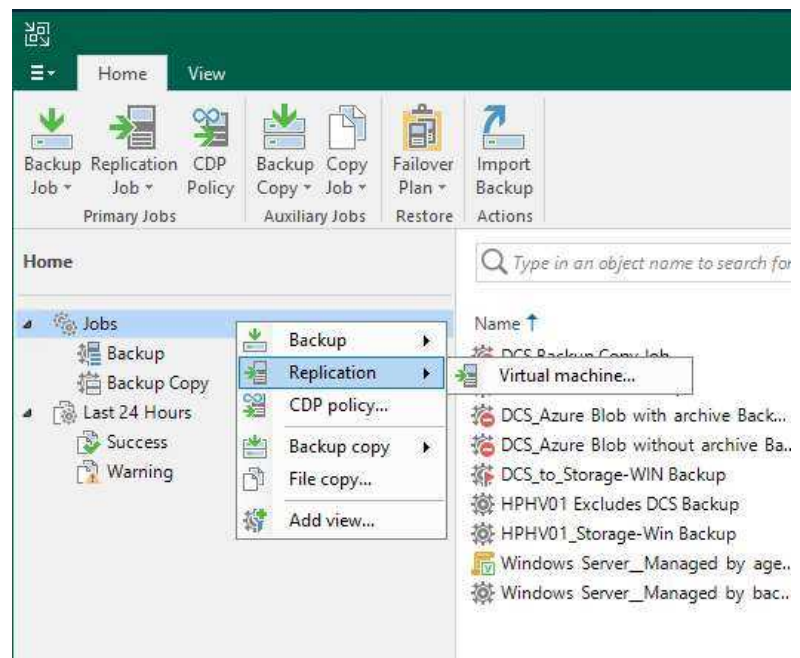
If seeding or mapping is enabled in a replication job, it must be applied to all VMs. It will be skipped if a VM does not have a seed or is not mapped to an existing VM.

Instructions	Screenshot (if applicable)
--------------	----------------------------

1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



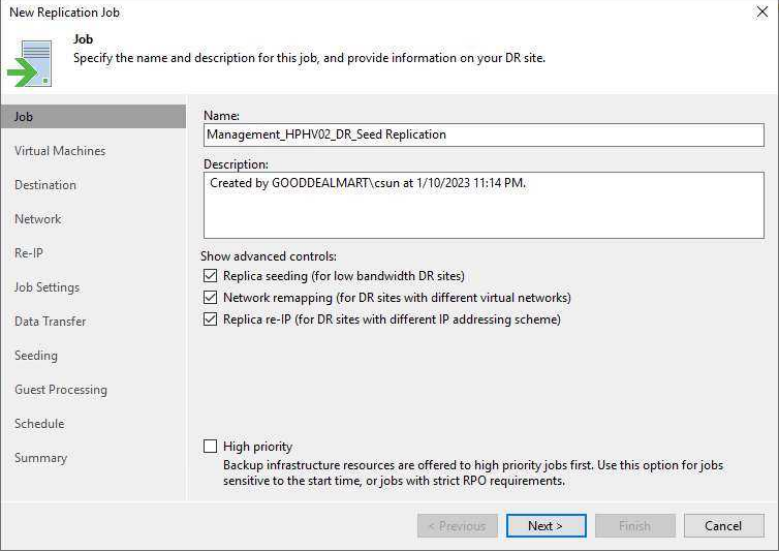
3. On the Home page, select Jobs, right-click Jobs, select Replication and click Virtual machine.



4. On the Job page, enter a name for the replication job in the Name field.
5. Describe the Description field.
6. Select Replica seeding (for low bandwidth DR sites).

Note:

As a prerequisite for replica seeding, you must create a backup of a VM you intend to replicate.



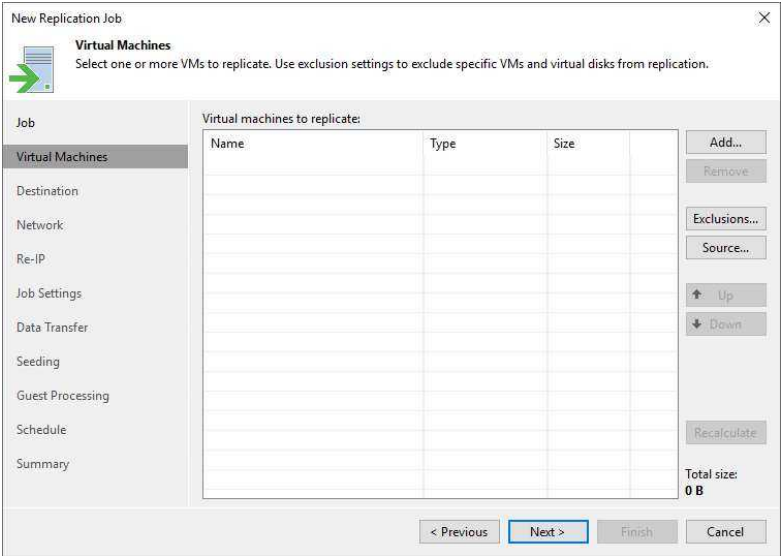
The screenshot shows the 'New Replication Job' wizard, specifically the 'Job' page. The window title is 'New Replication Job'. Below the title bar, there is a green arrow icon and the text 'Job Specify the name and description for this job, and provide information on your DR site.' The left sidebar contains a list of steps: Job, Virtual Machines, Destination, Network, Re-IP, Job Settings, Data Transfer, Seeding, Guest Processing, Schedule, and Summary. The 'Job' step is currently selected. The main area contains the following fields and options:

- Name:** A text box containing 'Management_HPHV02_DR_Seed Replication'.
- Description:** A text box containing 'Created by GOODDEALMART\csun at 1/10/2023 11:14 PM.'.
- Show advanced controls:** A section with three checked checkboxes:
 - ☒ Replica seeding (for low bandwidth DR sites)
 - ☒ Network remapping (for DR sites with different virtual networks)
 - ☒ Replica re-IP (for DR sites with different IP addressing scheme)
- High priority:** An unchecked checkbox with the text 'Backup infrastructure resources are offered to high priority jobs first. Use this option for jobs sensitive to the start time, or jobs with strict RPO requirements.'

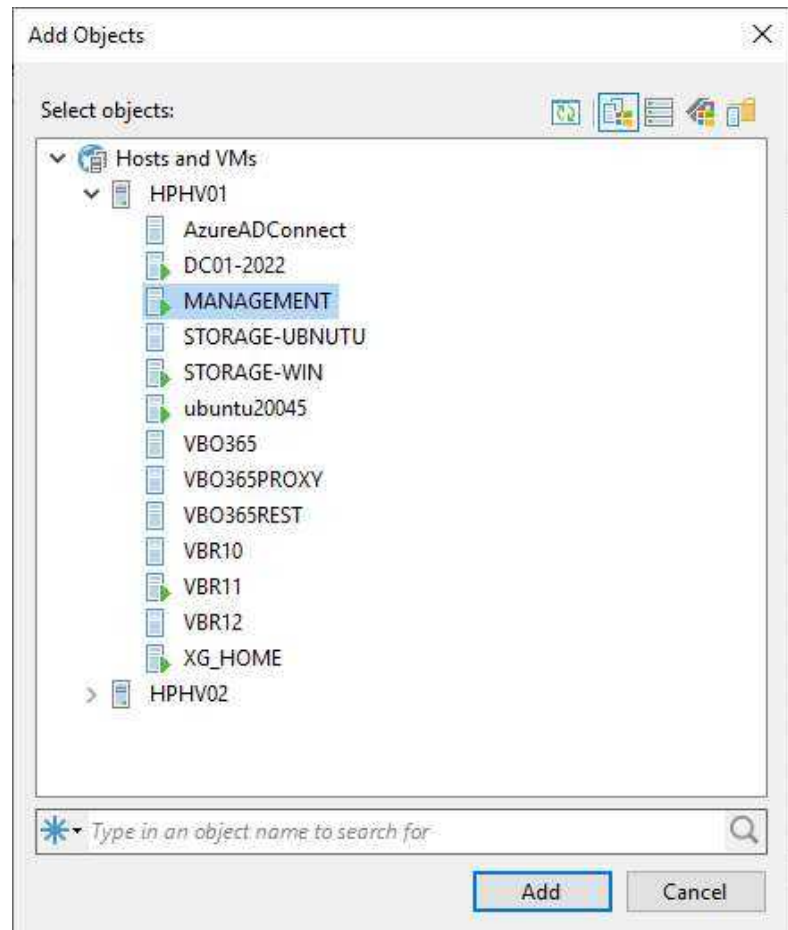
At the bottom of the window, there are four buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

7. Select Network remapping (for DR sites with different virtual networks).
 8. Replica re-IP (for DR sites with different IP addressing schemes).
 9. Select the High priority check box if required.
 10. Click Next.
-

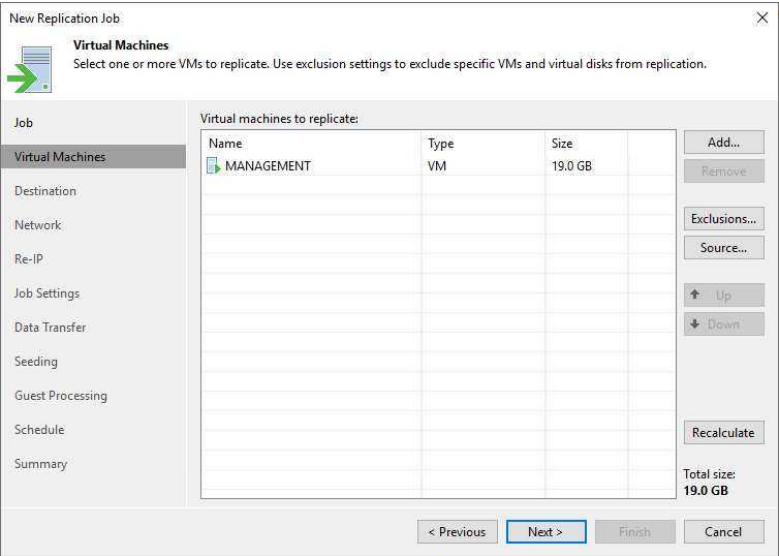
11. On the Virtual Machines page, click Add.



12. Select the objects in the list on the Add Objects page and click Add.



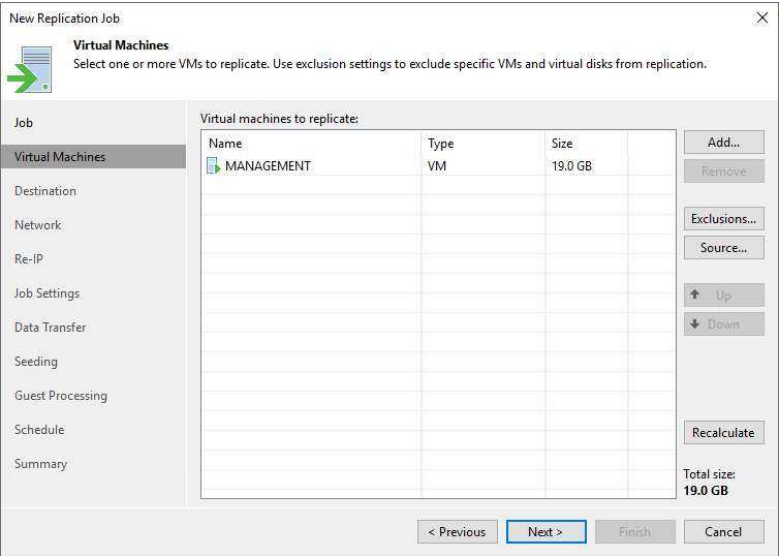
13. On the Virtual Machines page, click Source.



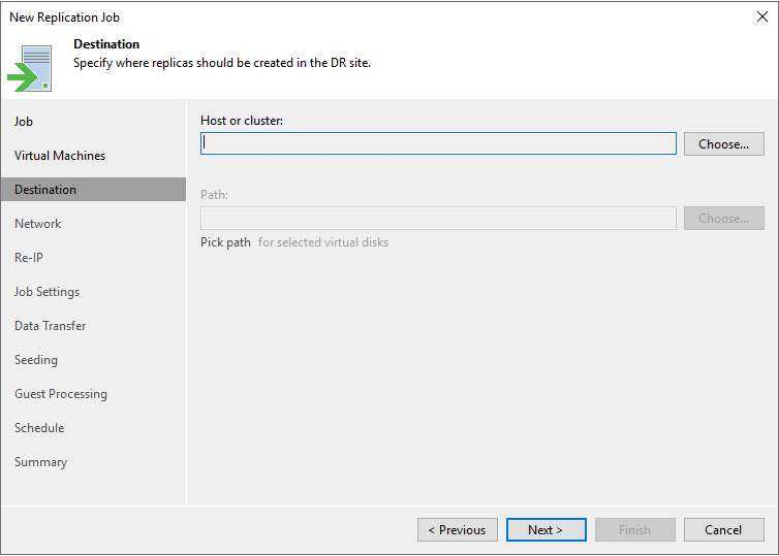
14. Select the From production storage (actual VM state) on the Source Repositories page. Veeam Replication will retrieve VM data from data stores connected to the source Microsoft Hyper-V host.
15. Or select Form backup files (latest VM state available in backups) if required. Veeam Backup & Replication will read VM data from the backup chain already existing in the selected backup repository.
16. Click OK.



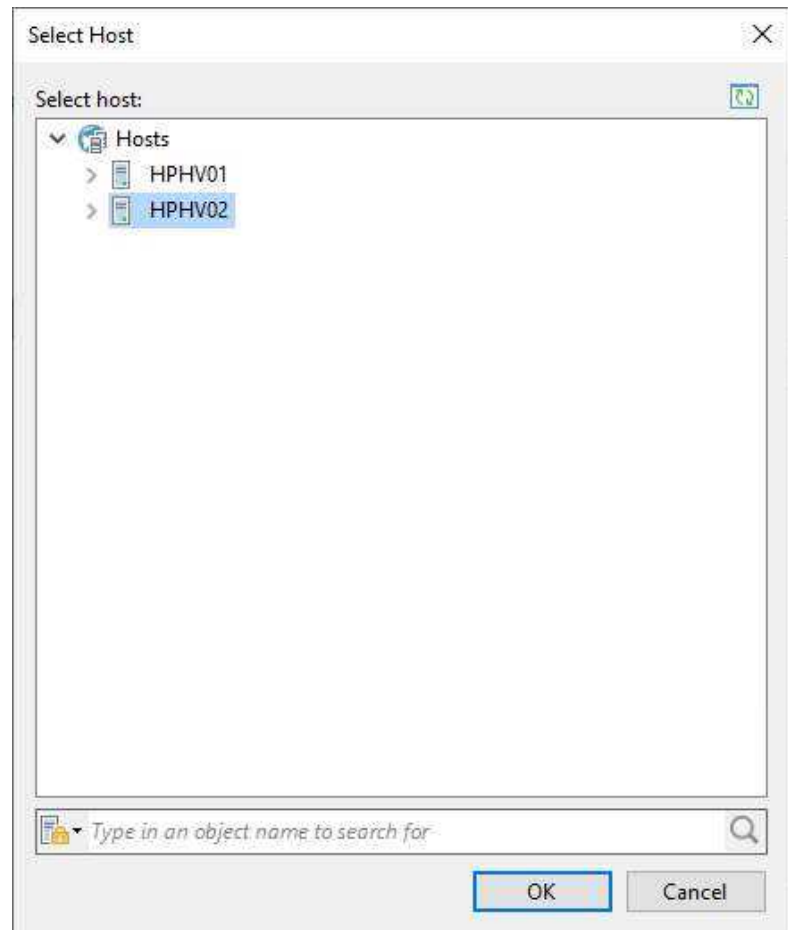
17. On the Virtual Machines page, click Next.



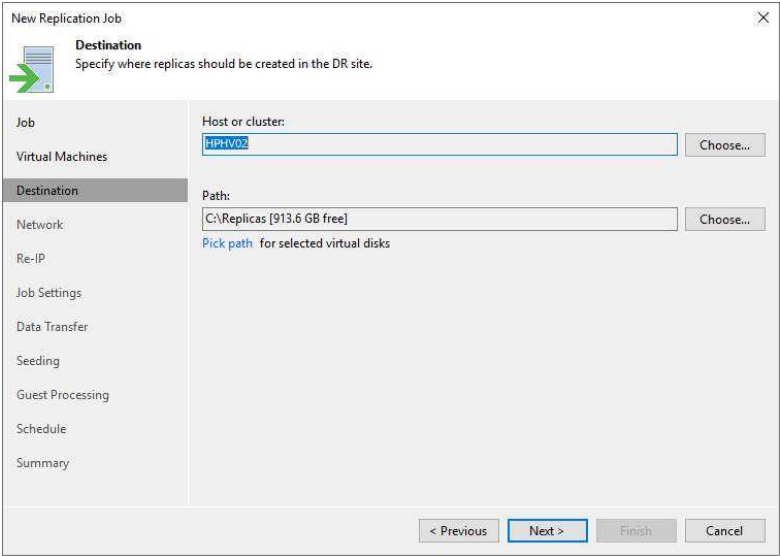
18. On the Destination page, click Choose in the Host or cluster session.



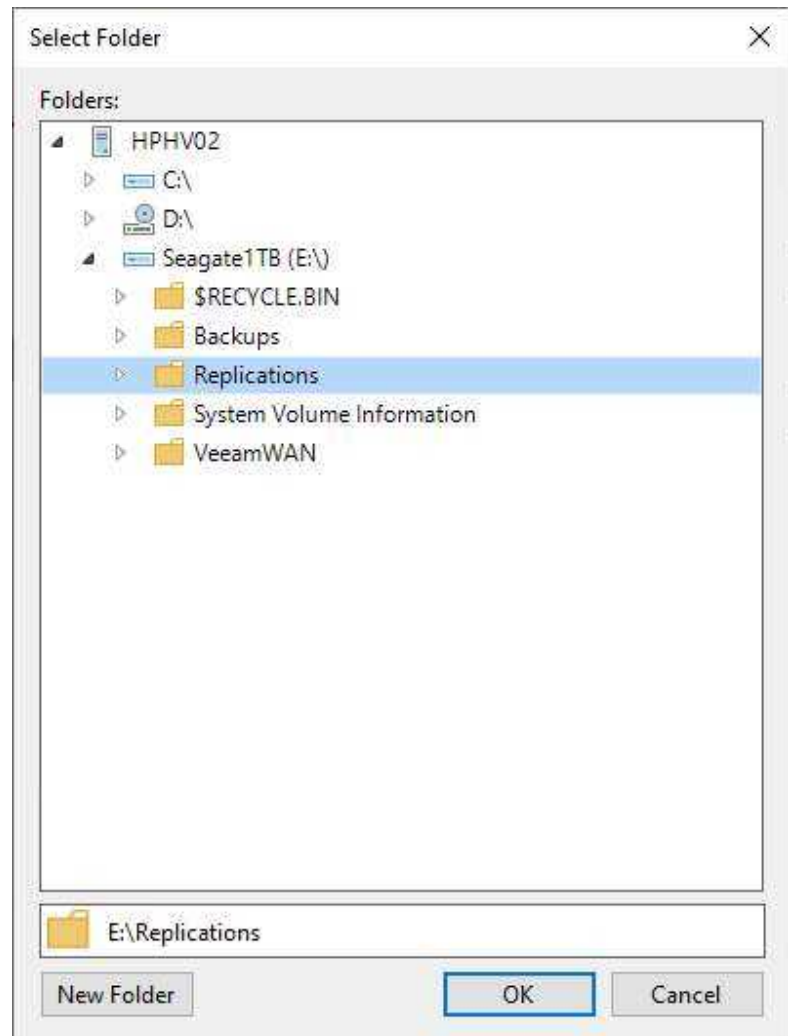
19. Select the destination host server on the Select Host page, and click OK.



20. On the Destination page, click Choose in the Path session.



21. On the Folders page, specify a path to the folder where VM replica files must be stored, and click OK.



22. On the Destination page, click Next.

New Replication Job

Destination

Specify where replicas should be created in the DR site.

Job

Virtual Machines

Destination

Network

Re-IP

Job Settings

Data Transfer

Seeding

Guest Processing

Schedule

Summary

Host or cluster:

HPIV02

Choose...

Path:

E:\Replications [900.3 GB free]

Choose...

[Pick path](#) for selected virtual disks

< Previous

Next >

Finish

Cancel

23. On the Network page, click Add.

New Replication Job

Network

Select how virtual networks map to each other between production and DR sites.

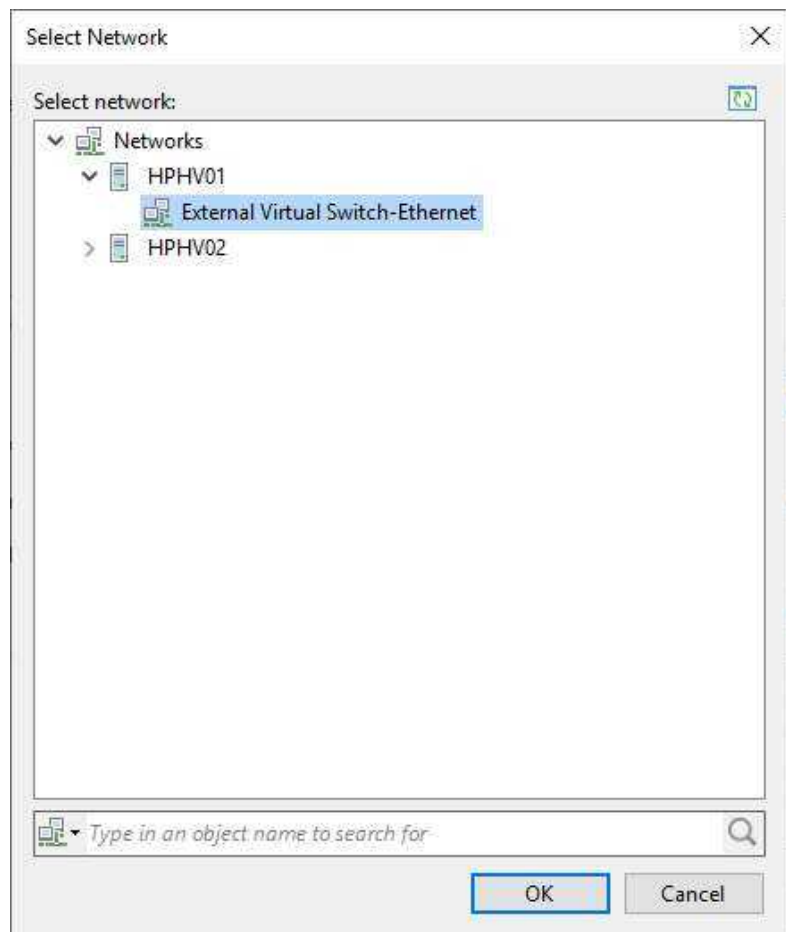
Job	Network connections:				Add...
Virtual Machines	Source network	VLAN ID	Target network	VLAN ID	Edit...
Destination					Remove
Network					
Re-IP					
Job Settings					
Data Transfer					
Seeding					
Guest Processing					
Schedule					
Summary					

< Previous Next > Finish Cancel

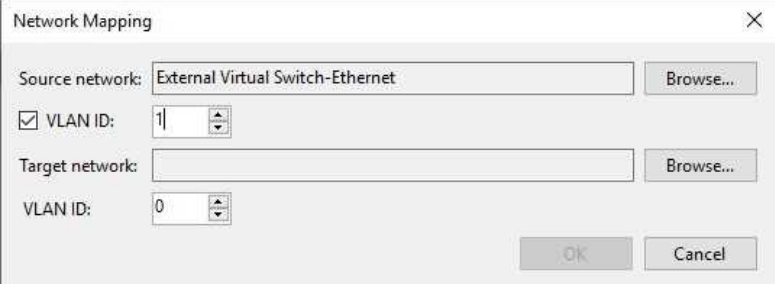
24. On the Network Mapping page, click Browse in the Source network session.



25. Select the production network on the Select Network page to which the original VMs are connected and click OK.

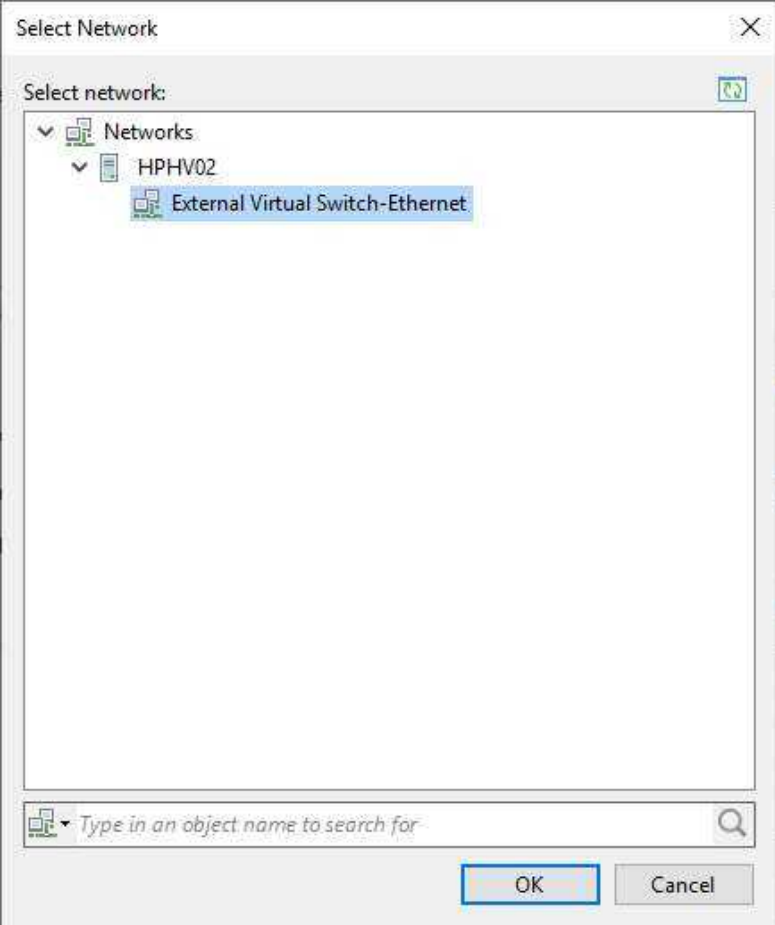


26. If you use VLAN IDs for networking, select the VLAN ID check box and enter the VLAN ID of the source network.
27. On the Network Mapping page, click Browse in the Target network session.



The 'Network Mapping' dialog box is shown. It has a title bar with a close button. The 'Source network' field contains 'External Virtual Switch-Ethernet' with a 'Browse...' button to its right. Below this, the 'VLAN ID' checkbox is checked, and the 'VLAN ID' field contains '1'. The 'Target network' field is empty with a 'Browse...' button to its right. Below this, the 'VLAN ID' field contains '0'. At the bottom right are 'OK' and 'Cancel' buttons.

28. Select the DR site network on the Select Network page to which replicas will be connected and click OK.



The 'Select Network' dialog box is shown. It has a title bar with a close button. The 'Select network:' label is at the top left. Below it is a tree view showing a hierarchy: 'Networks' (expanded) -> 'HPHV02' (expanded) -> 'External Virtual Switch-Ethernet' (selected and highlighted in blue). At the bottom is a search bar with a magnifying glass icon and the placeholder text 'Type in an object name to search for'. Below the search bar are 'OK' and 'Cancel' buttons.

29. If you use VLAN IDs for networking, select the VLAN ID check box and enter the VLAN ID of the target network.
30. Click OK.

Network Mapping

Source network: External Virtual Switch-Ethernet Browse...

☒ VLAN ID: 1

Target network: External Virtual Switch-Ethernet(switch: [1EBABCD2-B4AA-44E Browse...

VLAN ID: 100

OK Cancel

31. On the Network page, click Next.

New Replication Job

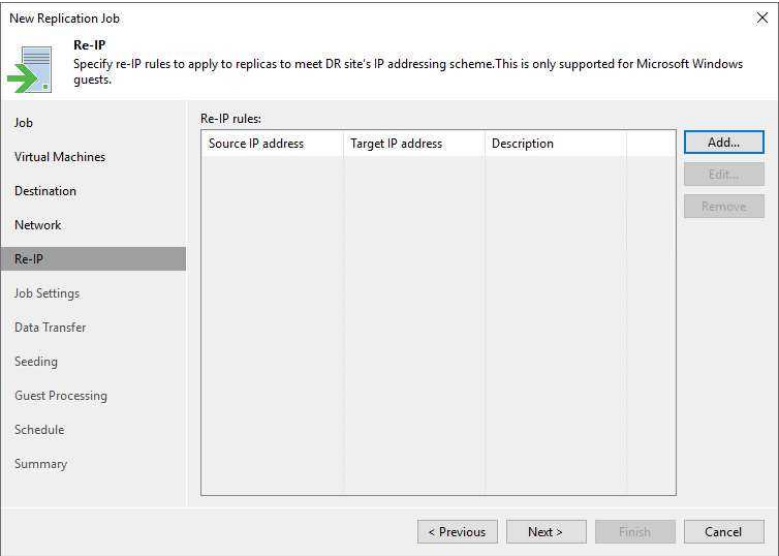
Network

Select how virtual networks map to each other between production and DR sites.

Job	Network connections:				Add...
Virtual Machines	Source network	VLAN ID	Target network	VLAN ID	Edit...
Destination	[Icon] External Virtual S...	1	[Icon] External Virtual...	100	Remove
Network					
Re-IP					
Job Settings					
Data Transfer					
Seeding					
Guest Processing					
Schedule					
Summary					

< Previous Next > Finish Cancel

32. On the Re-IP page, click Add.



33. On the New Re-IP Rule page, Enter the IP numbering scheme used at the production site in the Source VM section.
34. Enter the IP numbering scheme used at the DR site in the Target VM section.
35. Describe the rule in the Description field.
36. Click OK.

New Re-IP Rule

Source VM

IP address: 10 . 1 . * . *

Subnet mask: 255 . 255 . 0 . 0

Target VM

IP address: 10 . 100 . * . *

Subnet mask: 255 . 255 . 0 . 0

Default gateway: 10 . 100 . 255 . 254

Preferred DNS server: 10 . 100 . 1 . 1

Alternate DNS server: . . .

Preferred WINS server: . . .

Alternate WINS server: . . .

Description

OK Cancel

37. On the Re-IP page, click Next.

New Replication Job

Re-IP
Specify re-IP rules to apply to replicas to meet DR site's IP addressing scheme. This is only supported for Microsoft Windows guests.

Job	Re-IP rules:			
	Source IP address	Target IP address	Description	
Virtual Machines	10.1.*.*	10.100.*.*		Add...
Destination				Edit...
Network				Remove
Re-IP				
Job Settings				
Data Transfer				
Seeding				
Guest Processing				
Schedule				
Summary				

< Previous Next > Finish Cancel

38. Select the Repository for replica metadata from the drop-down list on the Job Settings page.

Note:

- This setting must be specified only for snapshot replicas. Legacy replicas do not use a backup repository for storing metadata.
- You cannot store VM replica metadata on deduplicating storage appliances.

Source/Target	Target 2008 R2	Target 2012-2022 ¹
Data source: production storage		
Source 2008 R2	Legacy	Snapshot
Source 2012-2022	Not supported	Snapshot
Data source: backup		
Source 2008 R2	Not supported	Snapshot
Source 2012-2022	Not supported	Snapshot

- You cannot store replica metadata in a scale-out backup repository.

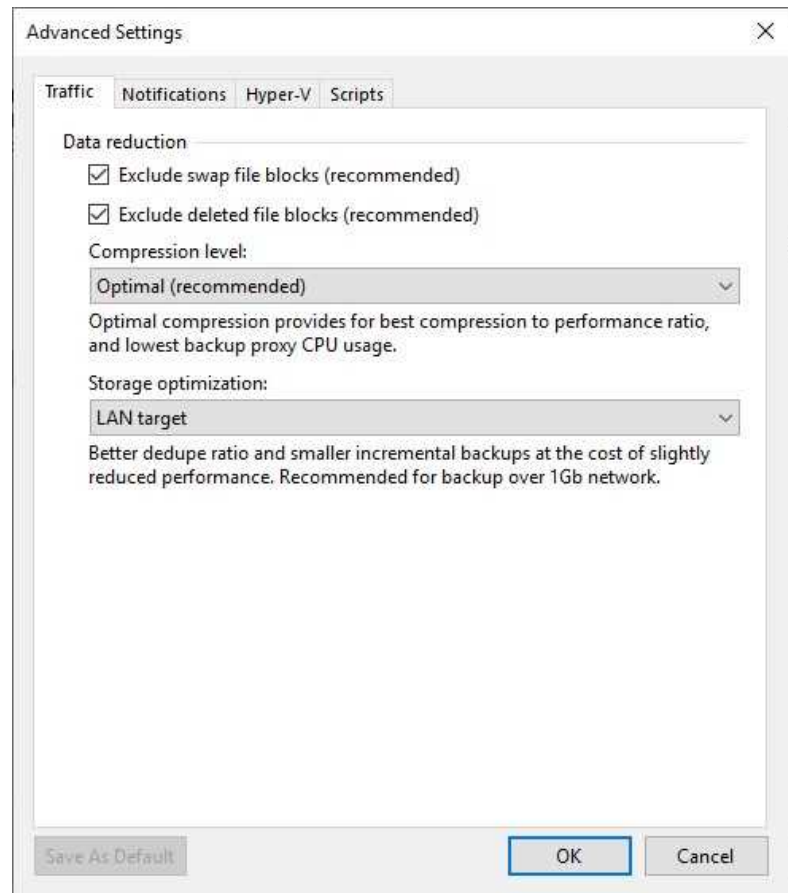
39. Enter a suffix that will be appended to the original VM names in the Replica name suffix field.
40. Enter the number of restore points in the field.
41. Click Advanced.

The screenshot shows the 'New Replication Job' dialog box with the 'Job Settings' tab selected. The dialog has a sidebar on the left with the following options: Job, Virtual Machines, Destination, Network, Re-IP, Job Settings (selected), Data Transfer, Seeding, Guest Processing, Schedule, and Summary. The main area contains the following settings:

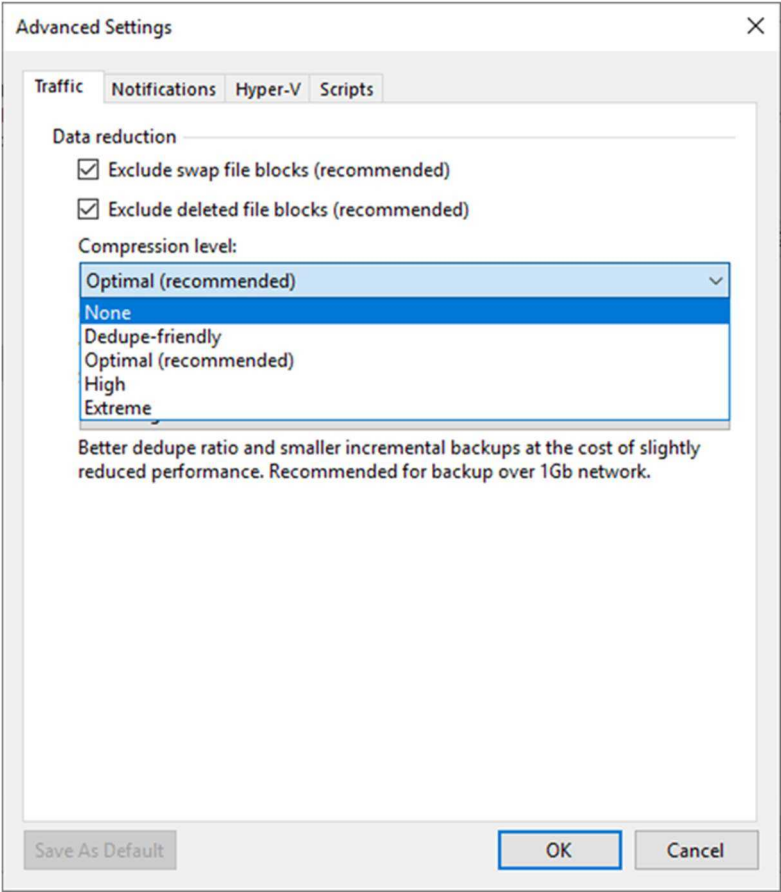
- Repository for replica metadata:** A dropdown menu showing 'Backup Repository_HPHV02 (Created by GOODDEALMART\csun at 1/10/2023 4:22 PM.)' with 900 GB free of 931 GB.
- Replica settings:** A section with a 'VM name suffix' text box containing '_replica'.
- Retention policy:** A section with a 'Restore points' spinner box set to '7'.

At the bottom right, there is a link that says 'To view or edit additional backup job settings, click Advanced.' followed by an 'Advanced' button with a gear icon. At the very bottom, there are four buttons: '< Previous', 'Next >' (highlighted with a blue border), 'Finish', and 'Cancel'.

42. On Advanced Settings, click Traffic.
43. Select the Exclude swap file blocks checkbox (recommended). Veeam Backup & Replication excludes data blocks of the hiberfil.sys and pagefile.sys system files from replicas.
44. Select the Exclude deleted file blocks (recommended) checkbox, Veeam Backup & Replication does not copy deleted file blocks ("dirty" blocks on the VM guest OS) to the target location.



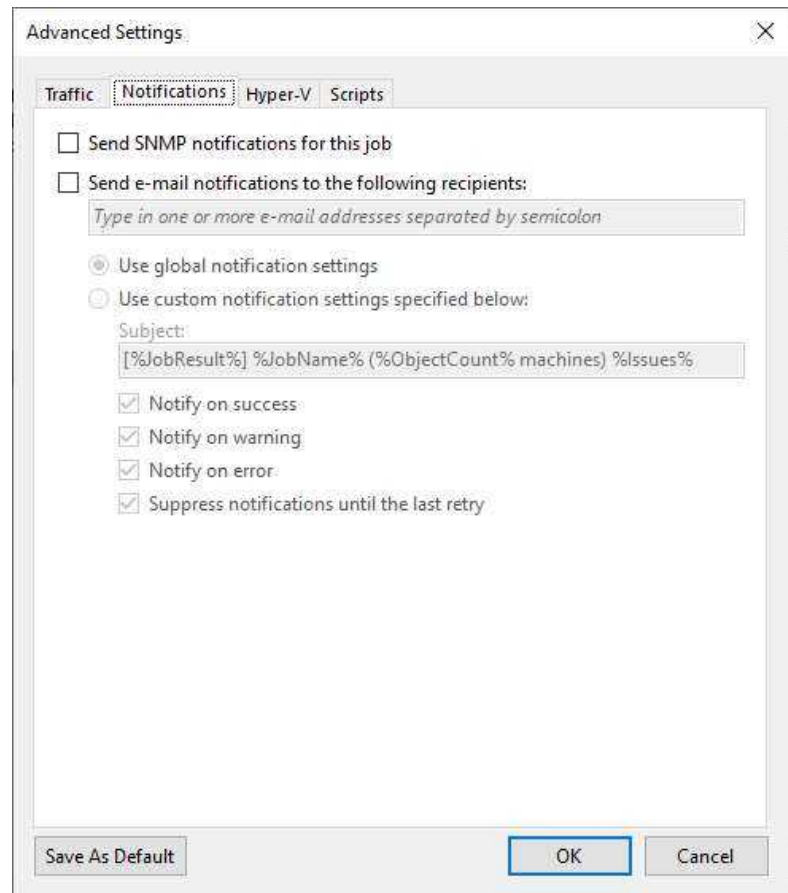
45. Select the compression level for replicas from the drop-down list.



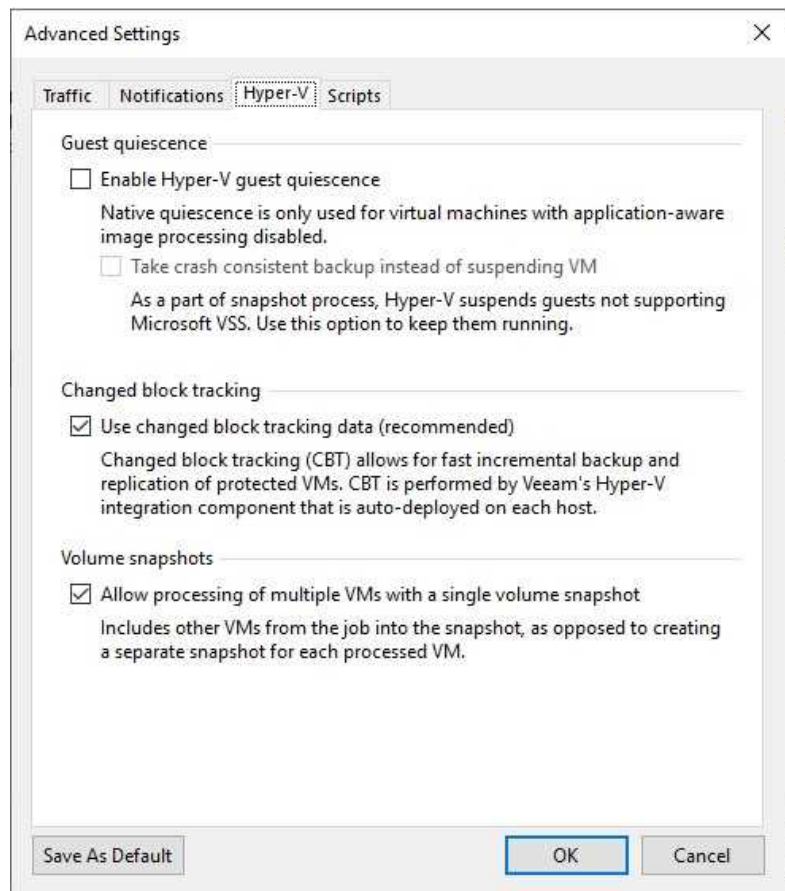
46. Select Storage optimization from the drop-down list.

Storage optimization option	Block size	Description
Local target (large blocks)	4096 KB	Recommended for files that are larger than 16 TB. This option will provide the lowest deduplication ratio and the largest size of incremental files.
Local target	1024 KB	Recommended for backup and replication to SAN, DAS or local storage. This option provides the fastest job performance but reduces the deduplication ratio, because with larger data blocks it is less likely to find identical blocks.
LAN target	512 KB	Recommended for backup and replication to NAS, and on-site backup and replication. This option provides a better deduplication ratio and reduces the size of a file because of reduced data block sizes.
WAN target	256 KB	Recommended if you are planning to use WAN for off-site backup and replication. This option provides the maximum deduplication ratio and the smallest size of files that allows you to reduce the amount of traffic over WAN.

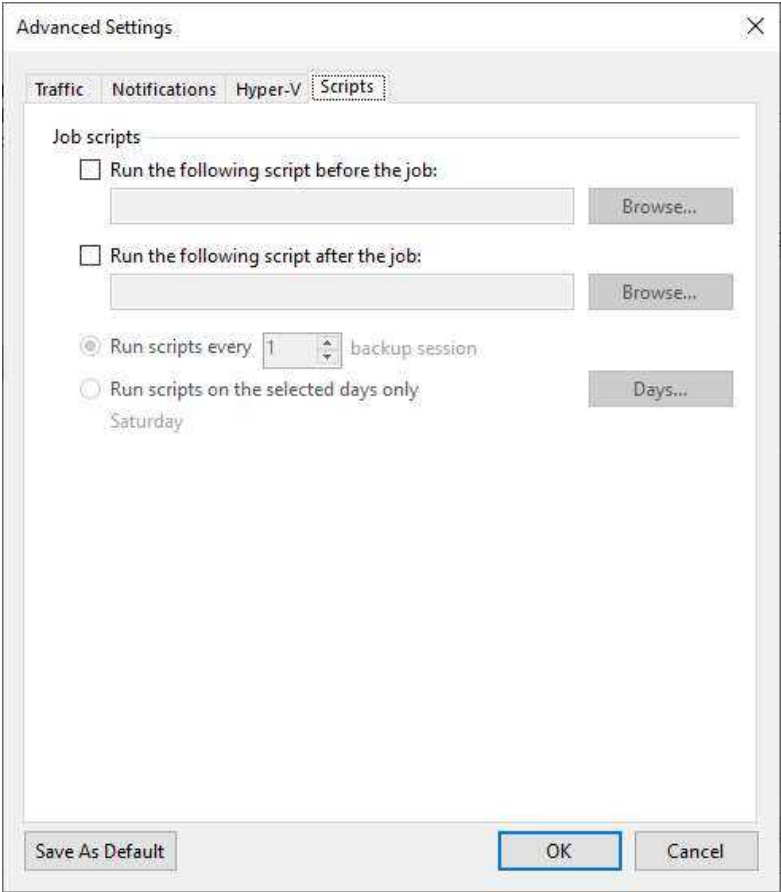
47. On the Advanced Settings, select Notifications.
48. Select Send SNMP notifications for this job checkbox. In addition, Veeam will send traps to the NMS when events occur, such as when a backup job fails or a replication job encounters an error.
49. Select Send email notifications to the following recipients checkbox, If you want to receive email notifications about the job completion status.



50. On the Advanced Settings, select Hyper-V.
51. Select the Enable Hyper-V guest quiescence check box if application-aware processing cannot be used for some reason.
52. Select the Take crash consistent backup instead of suspending VM check box if you do not want to suspend VMs in the job.
53. Select the Use changed block tracking data (recommended) check box.
54. Select the Allow processing of multiple VMs with a single volume snapshot check box.



- 55. On the Advanced Settings page, click Scripts.
- 56. Keep the default settings and click OK.



57. On the Job Settings page, click Next.

New Replication Job

Job Settings
Specify backup repository located in the source site to host metadata in, replica suffix and retention policy, and customize advanced job settings if required.

Job
Virtual Machines
Destination
Network
Re-IP
Job Settings
Data Transfer
Seeding
Guest Processing
Schedule
Summary

Repository for replica metadata:
Backup Repository_HPHV02 (Created by GOODDEALMART\csun at 1/10/2023 4:22 PM.)

900 GB free of 931 GB

Replica settings
VM name suffix:

Retention policy
Restore points:

To view or edit additional backup job settings, click Advanced.

[Advanced](#)

< Previous Next > Finish Cancel

58. Click Choose to specify Source Proxy on the Data Transfer page.

New Replication Job

Data Transfer
Choose how VM data should be transferred to the target site.

Job
Virtual Machines
Destination
Network
Re-IP
Job Settings
Data Transfer
Seeding
Guest Processing
Schedule
Summary

Source proxy:
 [Choose...](#)

Data transfer mode:
☒ **Direct**
Best for local and off-site replication over fast links.

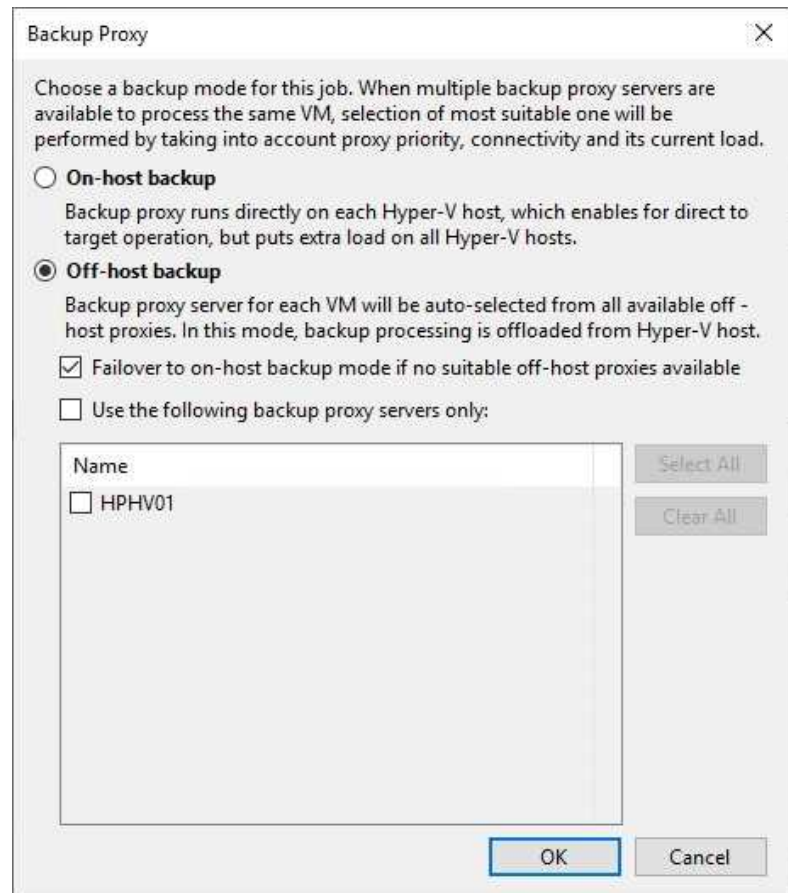
☐ **Through built-in WAN accelerators**
Best for off-site replication over slow links due to significant bandwidth savings.

Source WAN accelerator:

Target WAN accelerator:

< Previous **Next >** Finish Cancel

59. On the Backup Proxy page, Veeam Backup & Replication automatically selects off-host backup proxies and select the Failover to on-host backup mode if no suitable off-host proxies are available checkbox by default.
60. Select Use the following backup proxy servers only check box and choose one or multiple off-host backup proxies from the list if necessary.
61. Select On-host backup If you want to use the Microsoft Hyper-V host as the source host and backup proxy.
62. Click OK.



63. On the Data Transfer mode session, select Direct if you plan to copy backup files over high-speed connections.

New Replication Job

Data Transfer
Choose how VM data should be transferred to the target site.

Job

Virtual Machines

Destination

Network

Re-IP

Job Settings

Data Transfer

Seeding

Guest Processing

Schedule

Summary

Source proxy:
Off-host backup (automatic proxy selection) Choose...

Data transfer mode:

☒ **Direct**
Best for local and off-site replication over fast links.

☐ **Through built-in WAN accelerators**
Best for off-site replication over slow links due to significant bandwidth savings.

Source WAN accelerator:

Target WAN accelerator:

< Previous Next > Finish Cancel

64. On the Data Transfer mode session, select Direct if you plan to copy backup files over high-speed connections.

65. Select the Through built-in WAN accelerators if you transfer data over WAN or slow connections.

66. Select a WAN accelerator configured in the source site from the Source WAN accelerator drop-down list.

67. Select a WAN accelerator configured in the target site from the Target WAN

New Replication Job

Data Transfer
Choose how VM data should be transferred to the target site.

Job

Virtual Machines

Destination

Network

Re-IP

Job Settings

Data Transfer

Seeding

Guest Processing

Schedule

Summary

Source proxy:
Off-host backup (automatic proxy selection) Choose...

Data transfer mode:

☐ **Direct**
Best for local and off-site replication over fast links.

☒ **Through built-in WAN accelerators**
Best for off-site replication over slow links due to significant bandwidth savings.

Source WAN accelerator:
HPHV01 (Created by GOODDEALMART\csun at 1/8/2023 12:39 PM.)

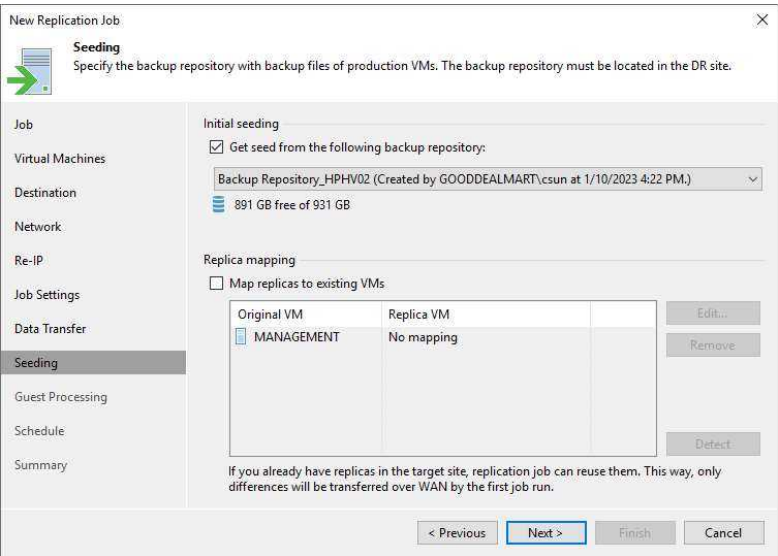
Target WAN accelerator:
HPHV02 (Created by GOODDEALMART\csun at 1/10/2023 4:20 PM.)

< Previous Next > Finish Cancel

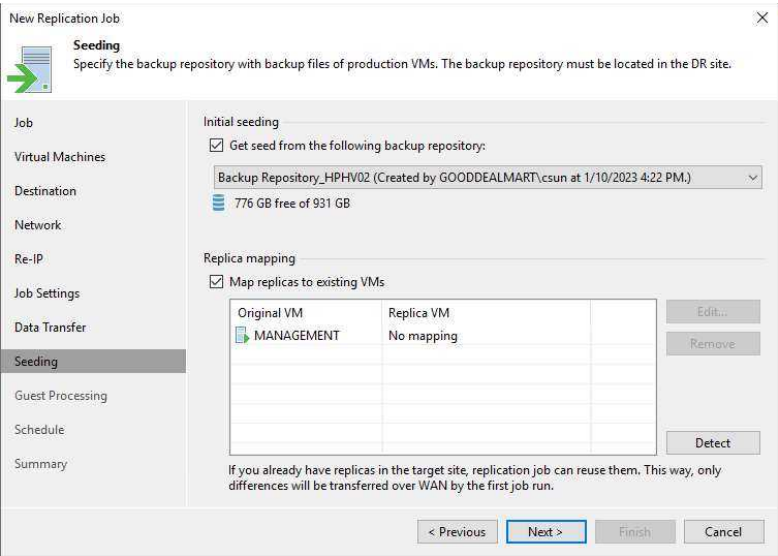
accelerator drop-down list.

68. Click Next.

69. Select Get seed from the following backup repository checkbox in the Initial seeding.
70. Choose the repository where your replica seeds are stored from the list of available backup repositories.



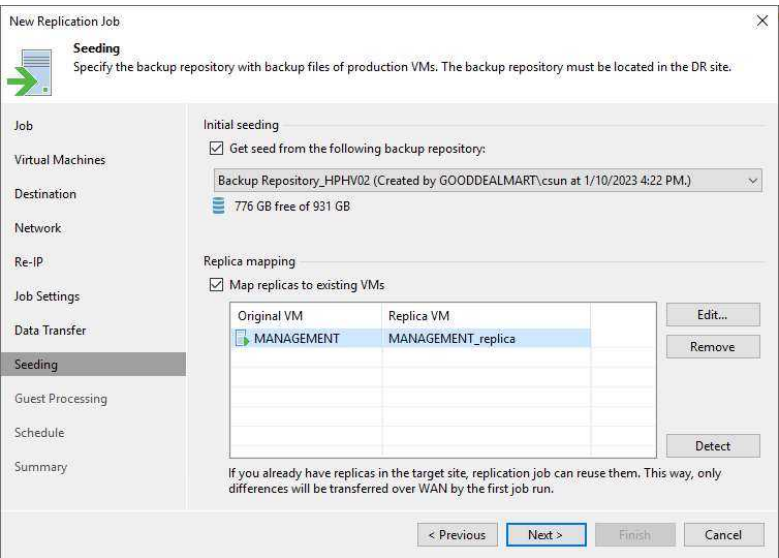
71. Configure replica mapping if you have ready-to-use copies of the original VMs on the host in the DR site. These can be restored virtual machines (VMs) or replicas created by other replication jobs. Veeam Backup & Replication will use these ready-to-use VMs as replicas after synchronizing their states with the most current state of the original VMs. You can also use replica



mapping to reconfigure or recreate replication jobs, such as splitting one replication job into multiple jobs.

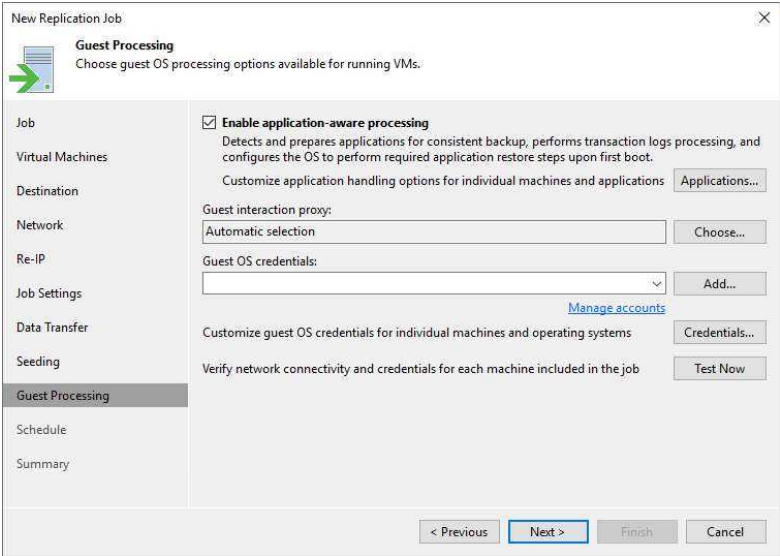
- 72. Select Map replicas to exist Vms, and click Detect.

- 73. On the Seeding page, click Next.

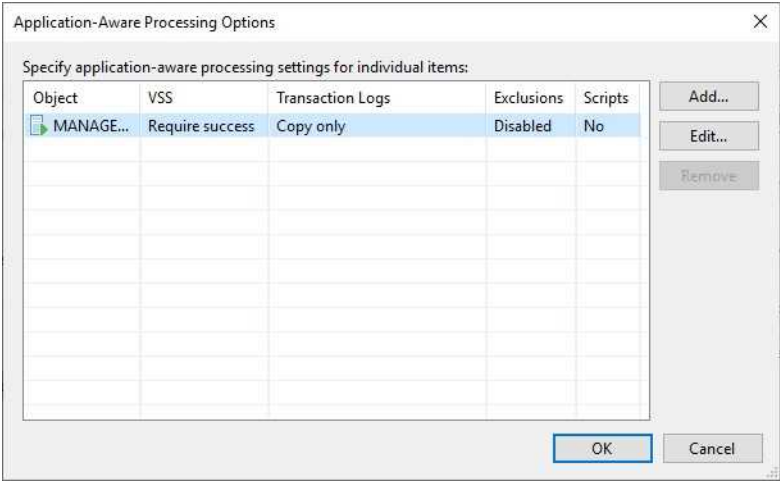


74. When you add VMs running VSS-aware applications to the replica job, you can enable application-aware processing to create a transactionally consistent replica. The transactionally consistent replication ensures that applications on VMs can be recovered without data loss.

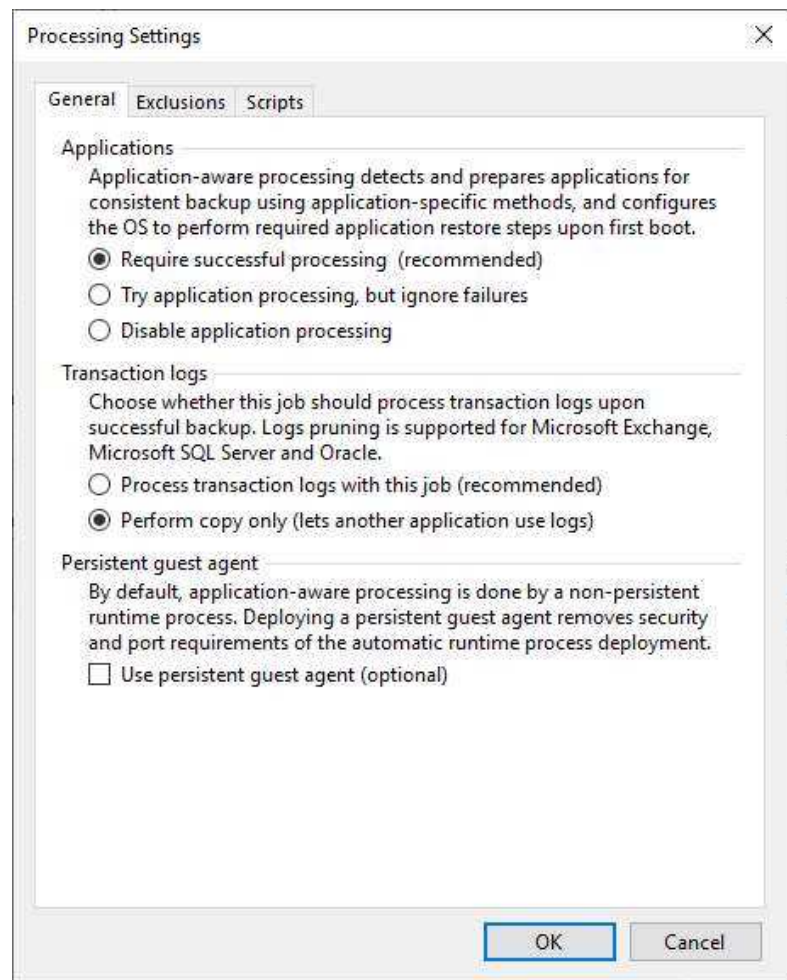
75. Select the Enable application-aware processing checkbox on the Guest Processing page, and click Applications.



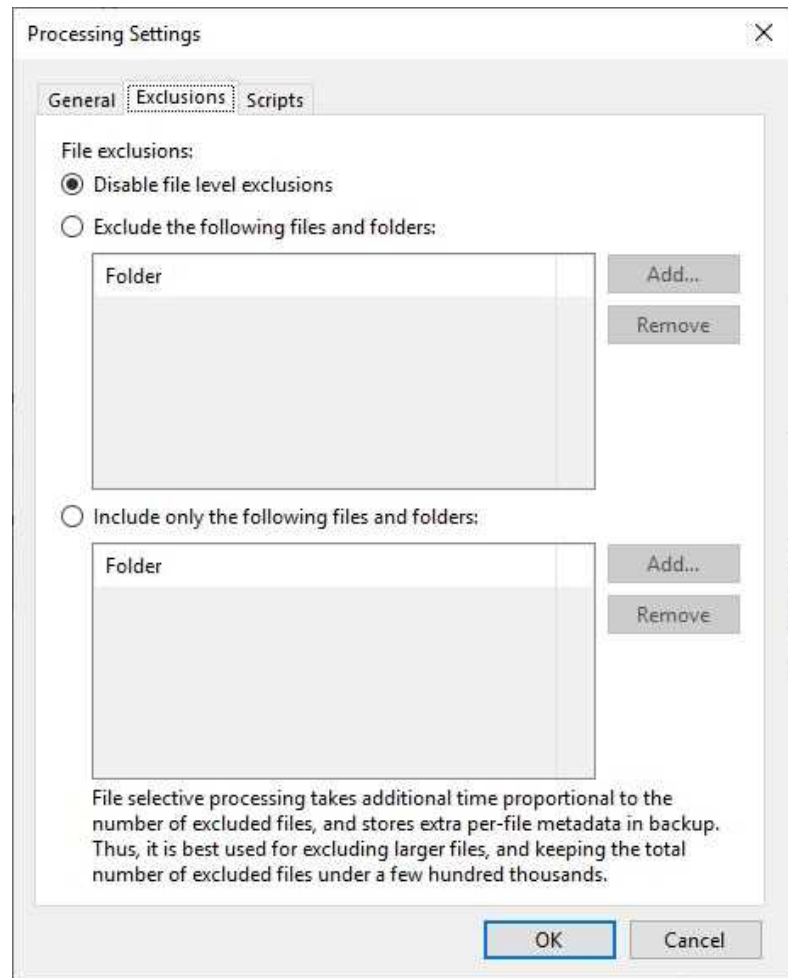
76. On the Application-Aware Processing Options page, select the Object, and click Edit.



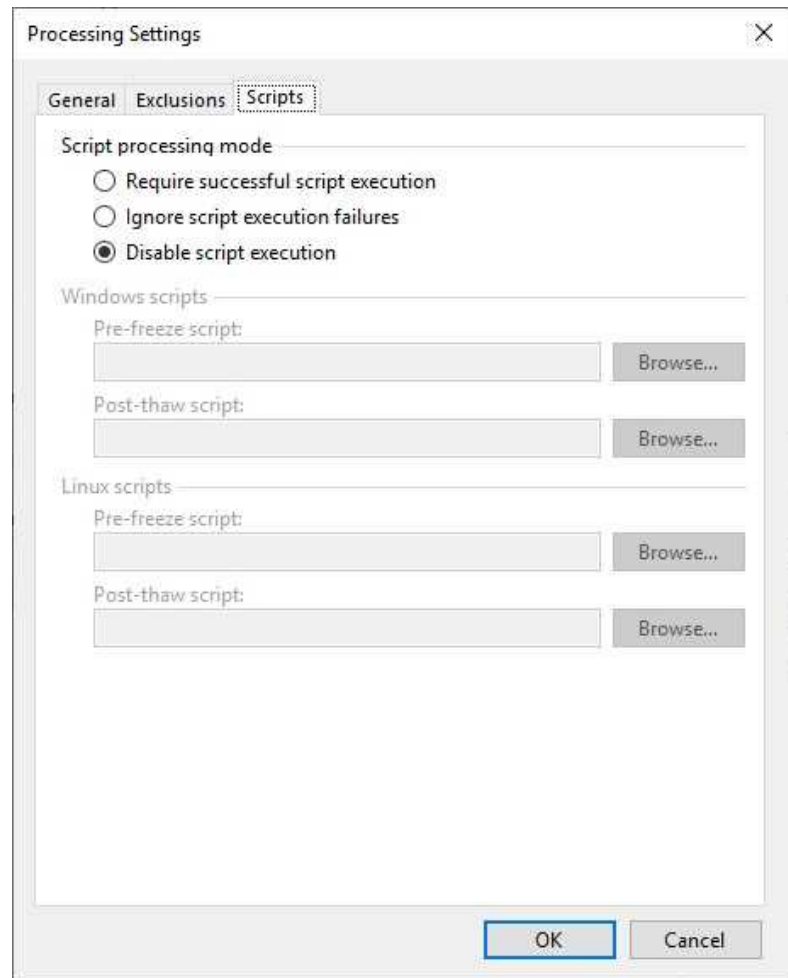
77. On the Processing Settings, click General.
78. Suppose you need Veeam Backup & Replication to stop the backup process if any error occurs during application-aware processing. Then, select Require successful processing (recommend).
79. Suppose you must continue the backup process even if there is an error during application-aware processing. Select Try application processing but ignore failures.
80. Select Disable application processing to disable application-aware processing for the VM.
81. Select Process transaction logs with this job (recommended) to process transaction logs.
82. Select Perform copy only to let another application use
83. Select the Use persistent guest agent (optional) checkbox to enable persistent agent.



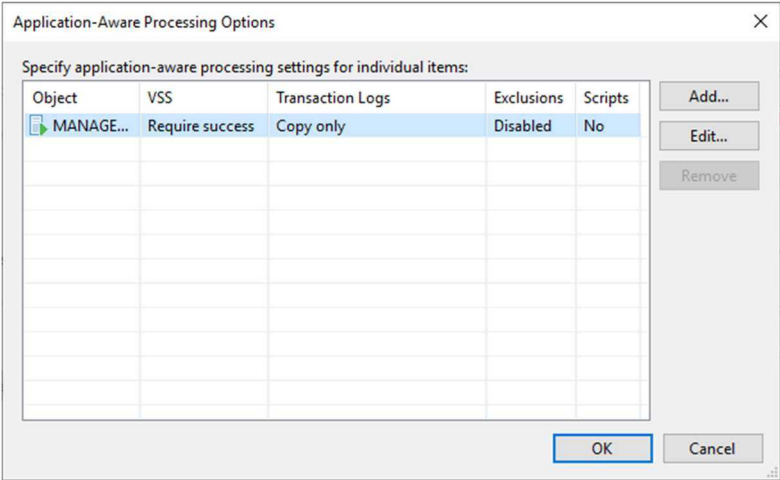
84. On the Processing Settings page, click Exclusions and keep the default settings.



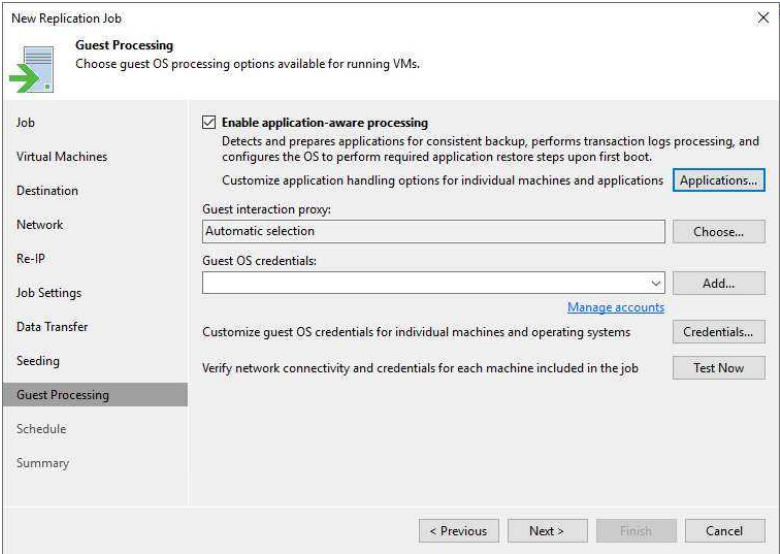
85. On the Processing Settings page, click Scripts.
86. Select Disable script execution and click OK.



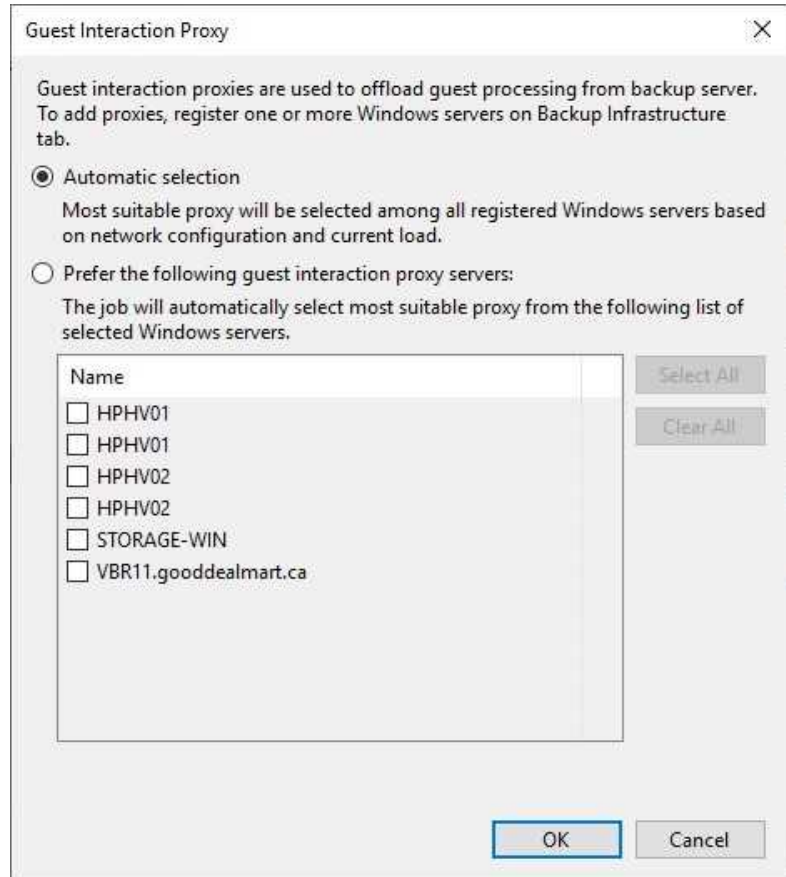
87. On the Application-Aware Processing Options page, click OK.



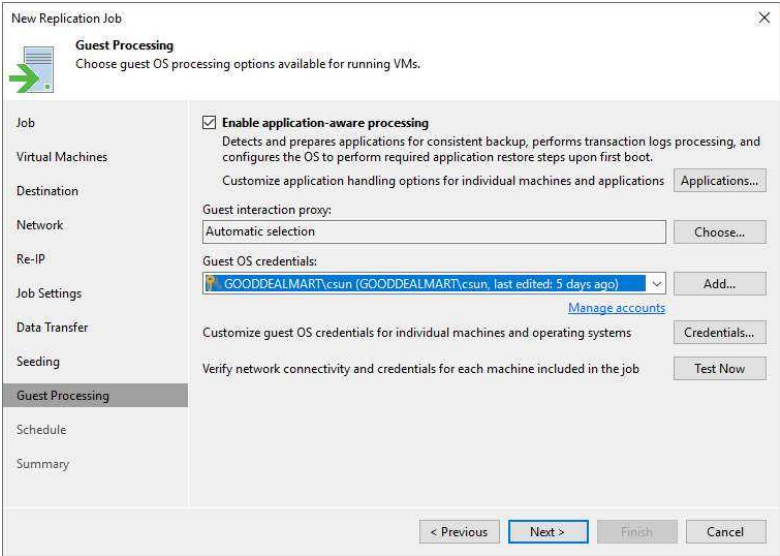
88. Click Choose on the Guest interaction proxy field on the Guest Processing page.



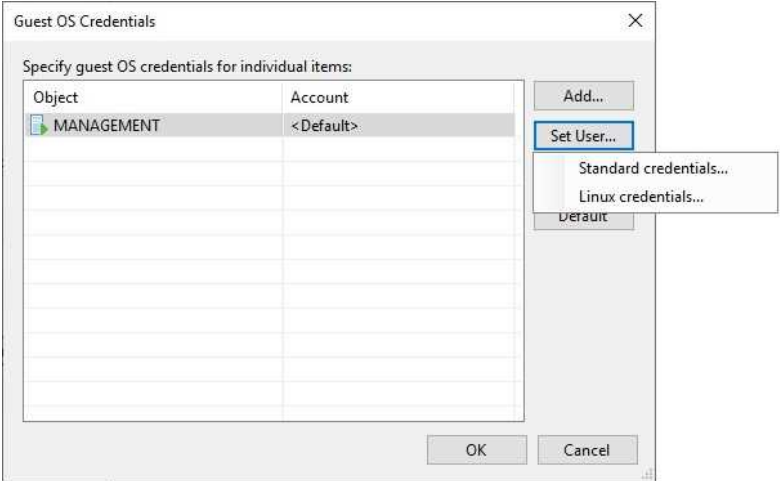
89. On the Guest Interaction Proxy page, select Automatic selection to let Veeam Backup & Replication automatically select the guest interaction proxy.
90. Select Prefer the following guest interaction proxy servers to explicitly define which servers will perform the guest interaction proxy role.
91. Click OK.



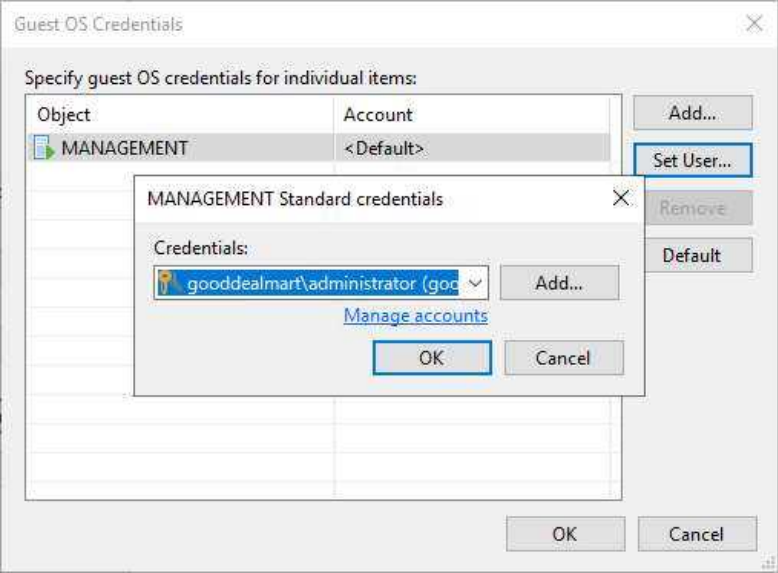
- 92. Choose a user account on the Guest Processing page with sufficient permissions from the Guest OS credentials drop-down list.
- 93. Click Credentials to Customize guest OS credentials for individual machines and operating systems.



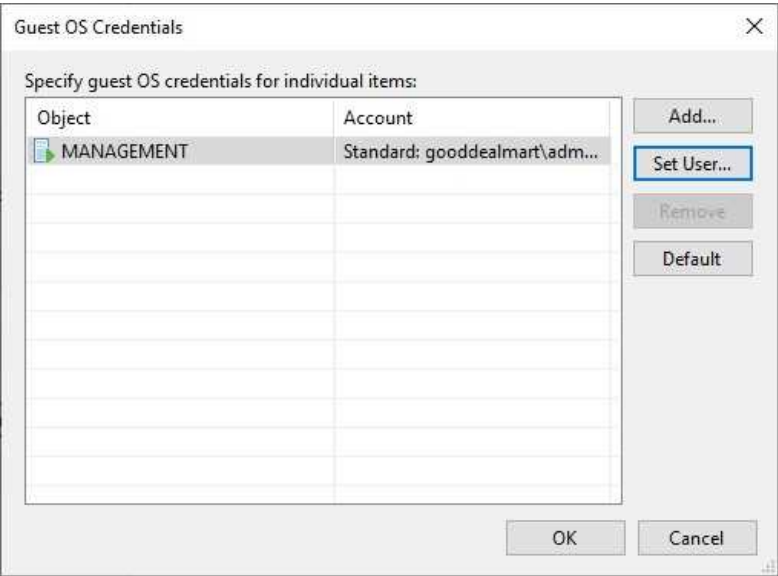
- 94. On the Guest OS Credentials page, select the VM, and click Set User.
- 95. Select Standard credentials.



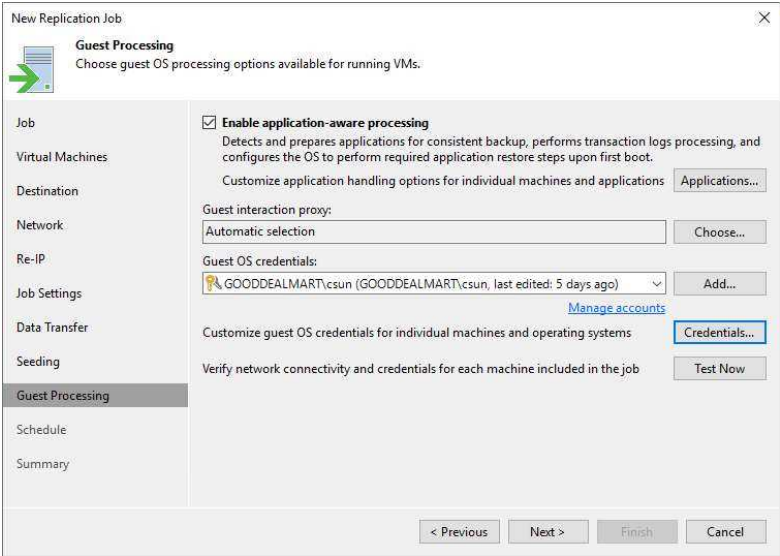
- 96. Choose a user from the Credentials drop-down list, and click OK.
- 97. Repeat the steps for each VM.



- 98. On the Guest OS Credentials page, click OK.

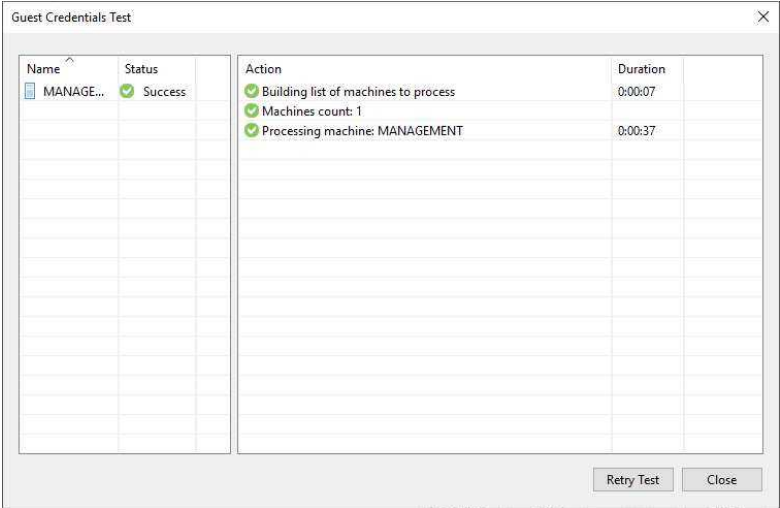


99. On the Guest Processing page, click Test Now to verify network connectivity and credentials for each machine included in the job.

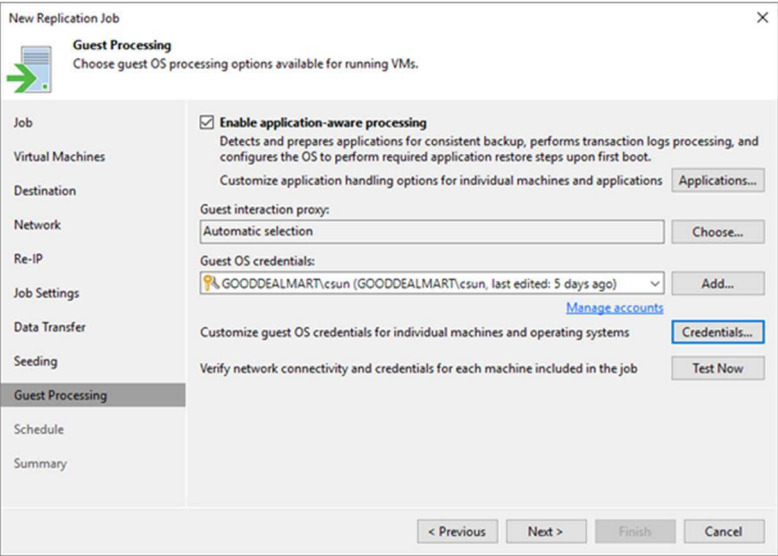


100. On the Guest Credentials Test page, make sure to verify the success of each machine.

101. Click Close.



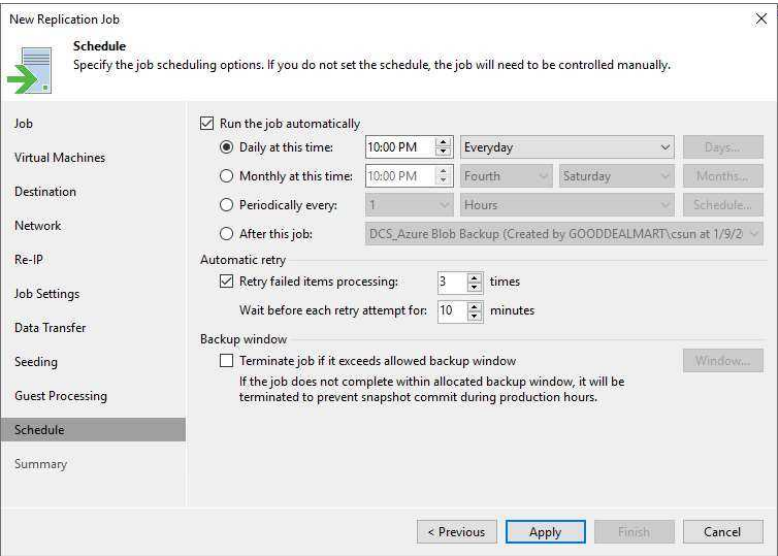
102. On the Guest Processing page, click Next.



103. Select Run the job automatically on the Schedule page and select your specified schedule.

104. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.

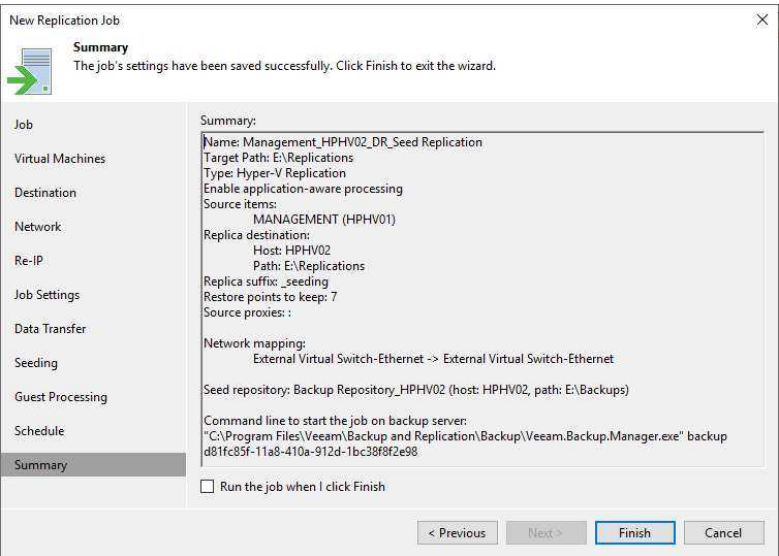
105. Define the time interval the backup job must complete in the Backup window section. The backup window ensures that the job does not overlap with production hours and that there is no unnecessary overhead on



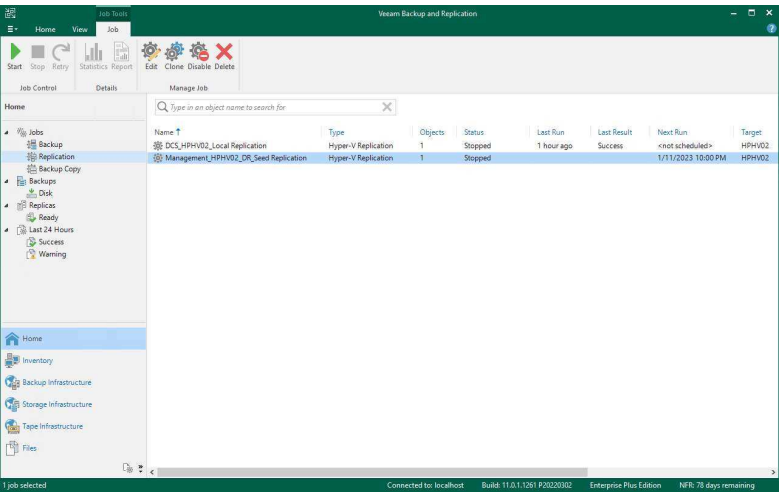
the production environment.

106. Click Apply.

107. On the Summary page, click Finish.



108. Verify the job has been added

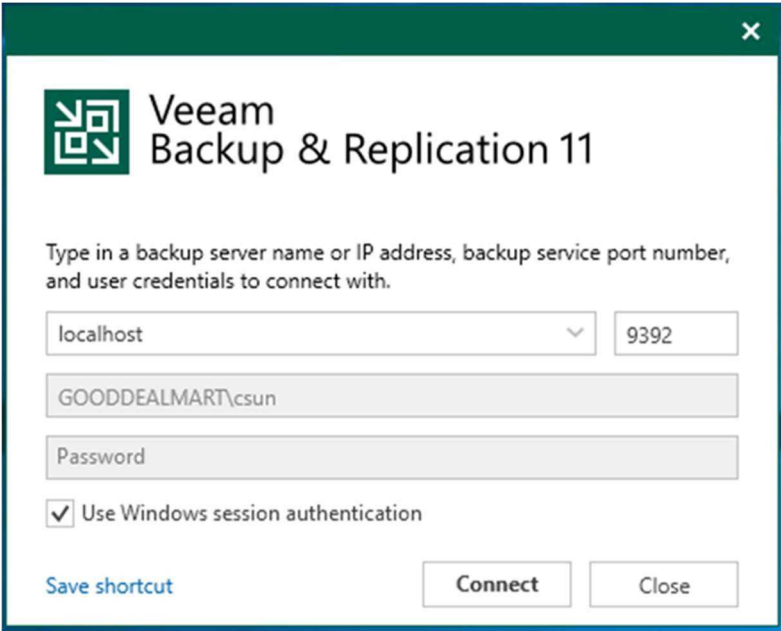


Failover Virtual Machine to Disaster Recovery Site

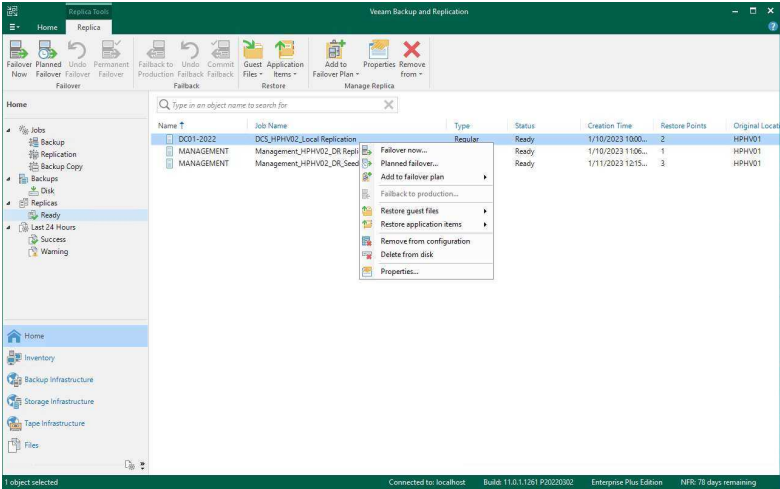
Failing over a virtual machine to a disaster recovery site involves replicating the virtual machine and its data to the disaster recovery site and activating the replicated copy in case of a disaster or other disruptive event that renders the original virtual machine unavailable.

Instructions	Screenshot (if applicable)
--------------	----------------------------

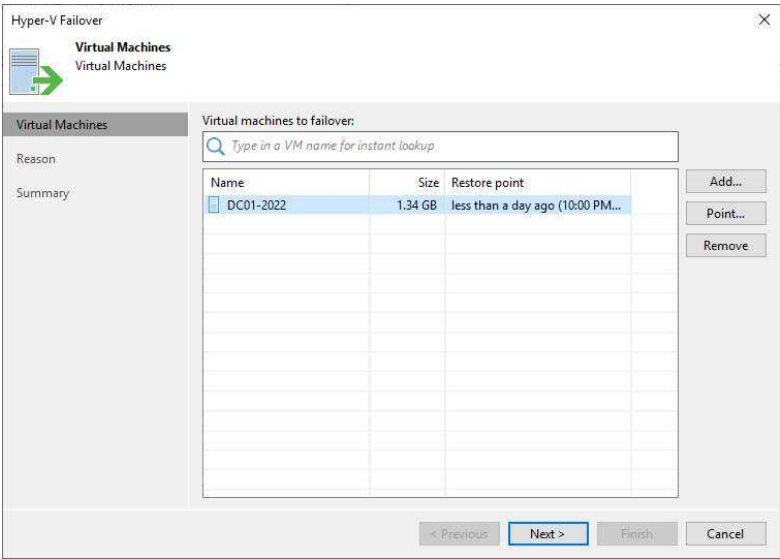
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



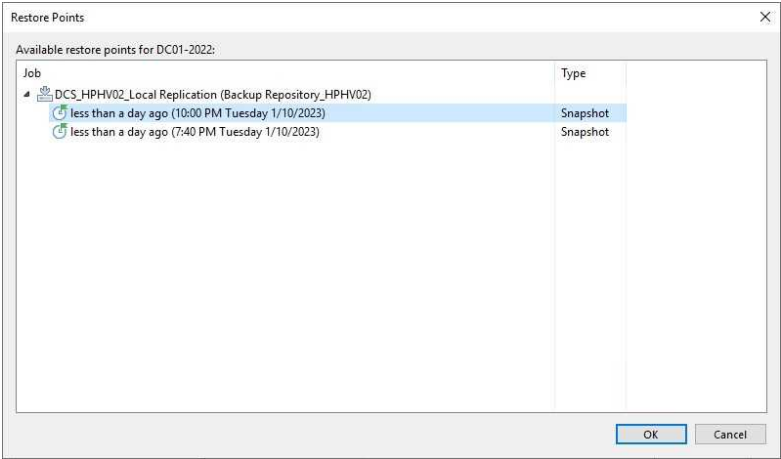
- 3. On the Home page, expand Replicas. Select Ready.
- 4. Right-click the virtual machine, and select Failover now.



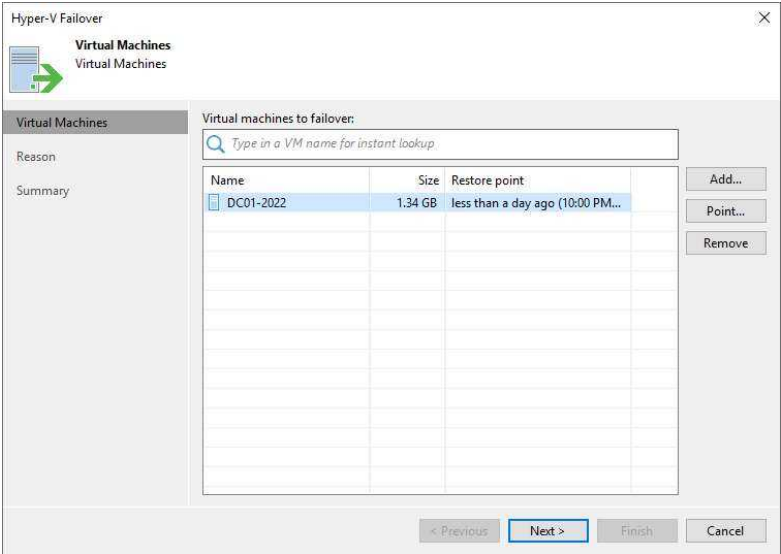
- 5. Select the virtual machine and click Point on the Virtual Machines page.



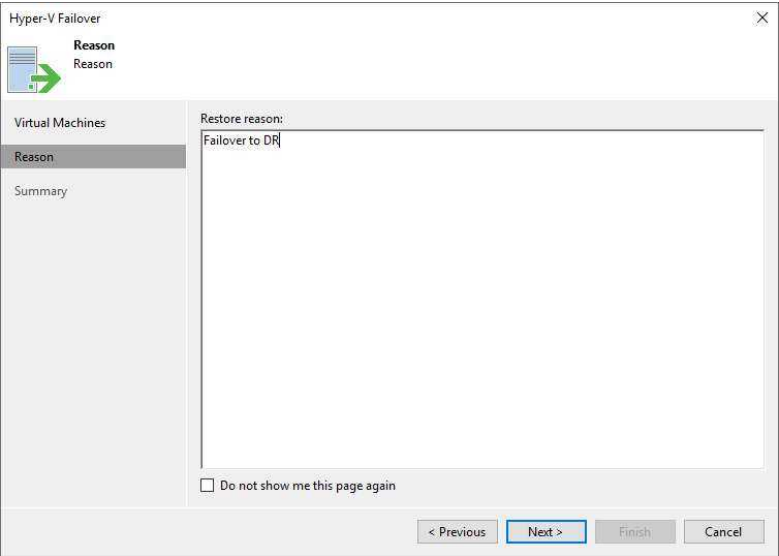
- 6. Expand the Job name on the Restore Point page, select the necessary restore point, and click OK.



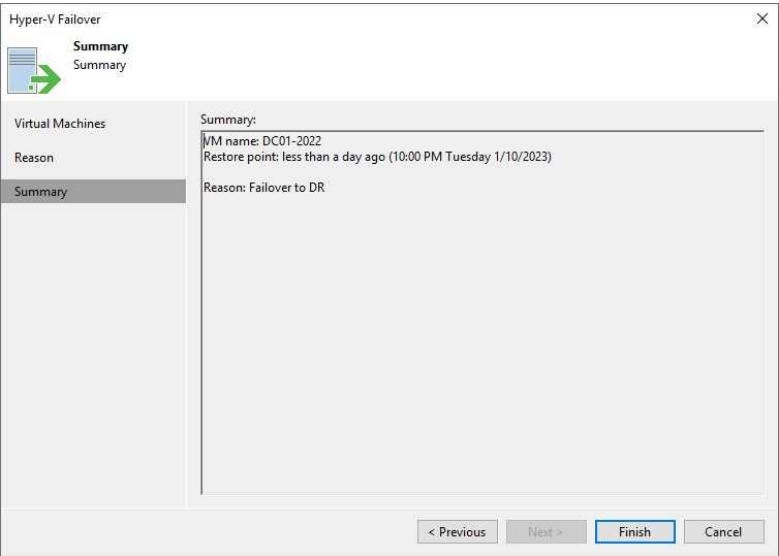
- 7. On the Virtual Machines page, click Next.



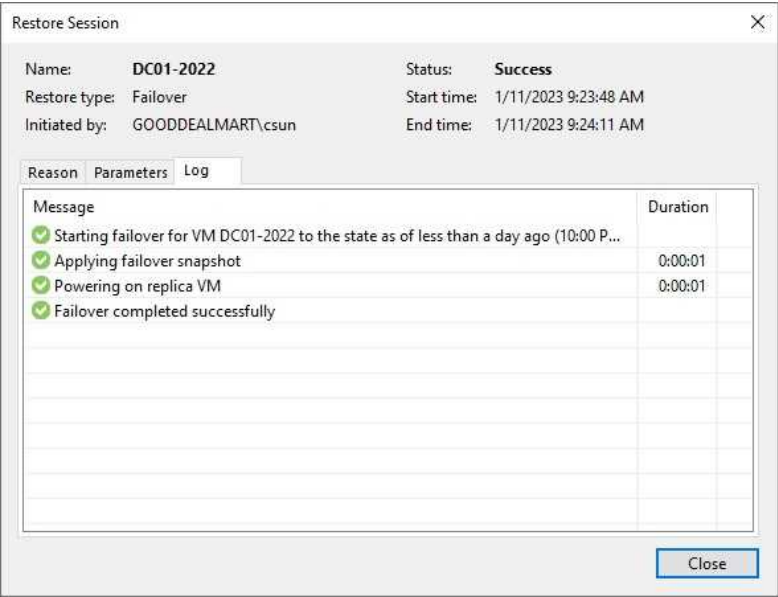
8. On the Reason page, the Restore reason, click Next.



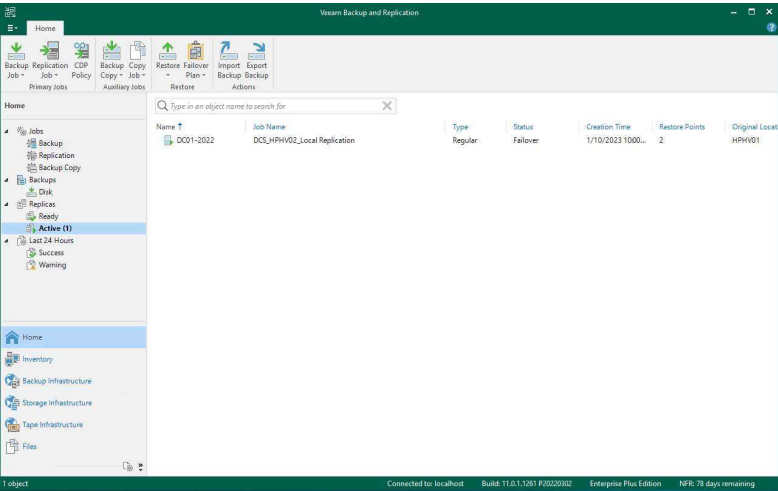
9. On the Summary page, click Finish.



10. Select log on the Restore Session page, ensure the failover completed processes successfully, and click Closed.

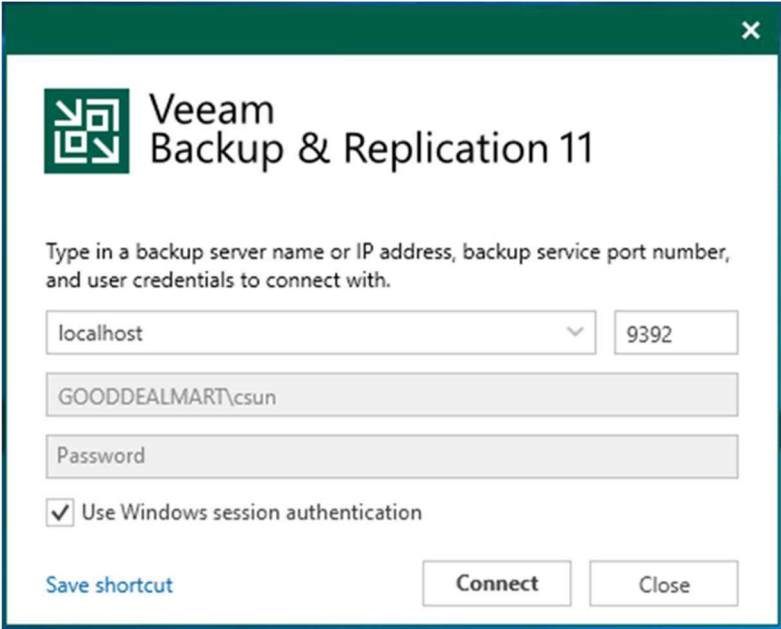


11. On the Home page, expand Replicas and select Active. The virtual machine status shows Failover.

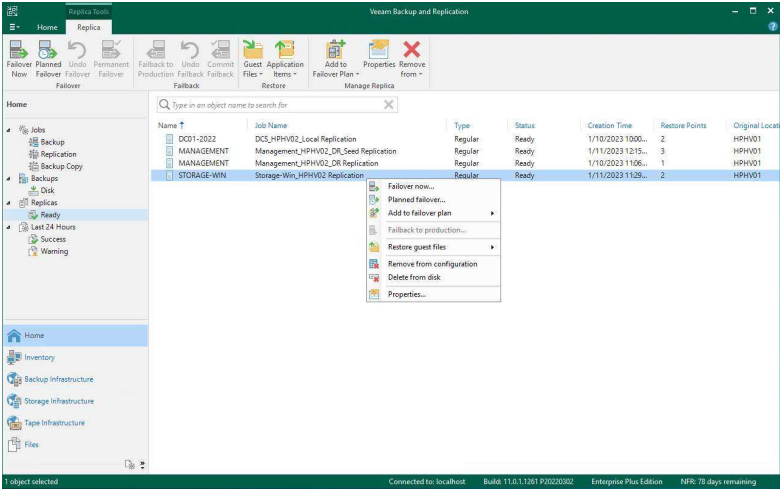


Planned Failover Virtual Machine to Disaster Recovery Site

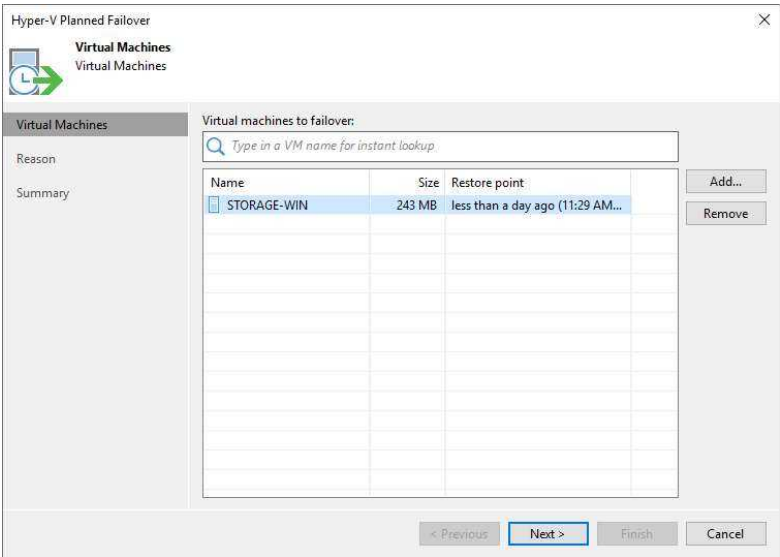
Planned failover is the smooth manual switching from a primary VM to its replica with minor downtime. Planned failover is proper when you know primary VMs are planning to go offline, and you need to switch the workload from the original VMs to their replicas as soon as possible. For example, you can use planned failover to perform data center migration, maintenance, or software upgrades on primary VMs. You can also perform planned failover if you see signs of an impending disaster.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 The screenshot shows the 'Veeam Backup & Replication 11' connection window. It has a dark green title bar with a close button. The main area is white with the Veeam logo and title. Below the title, it says 'Type in a backup server name or IP address, backup service port number, and user credentials to connect with.' There are four input fields: a dropdown menu showing 'localhost', a text box with '9392', a text box with 'GOODDEALMART\csun', and a password field labeled 'Password'. Below these is a checkbox labeled 'Use Windows session authentication' which is checked. At the bottom, there is a 'Save shortcut' link and two buttons: 'Connect' and 'Close'.

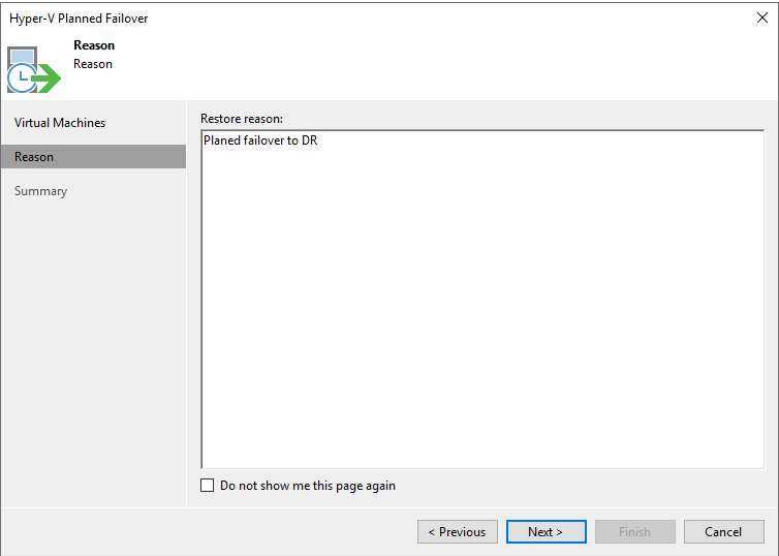
- 3. On the Home page, expand Replicas. Select Ready.
- 4. Right-click the virtual machine, and select Planned failover.



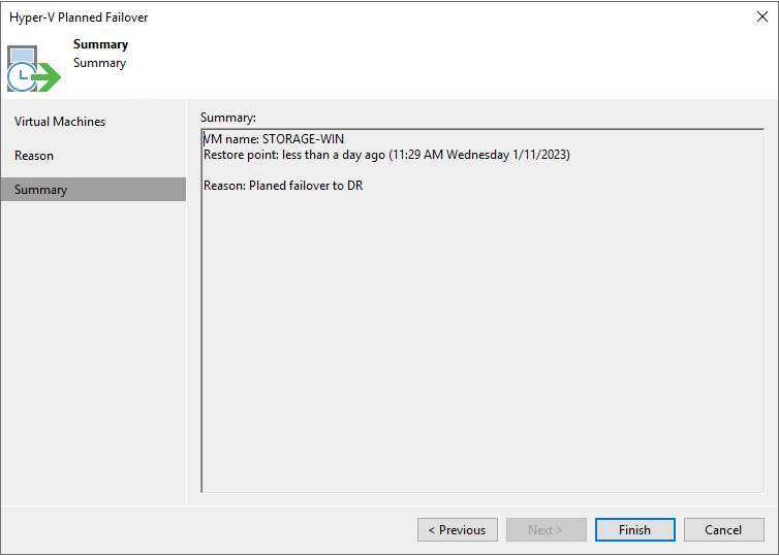
- 5. On the Virtual Machines page, click Next.



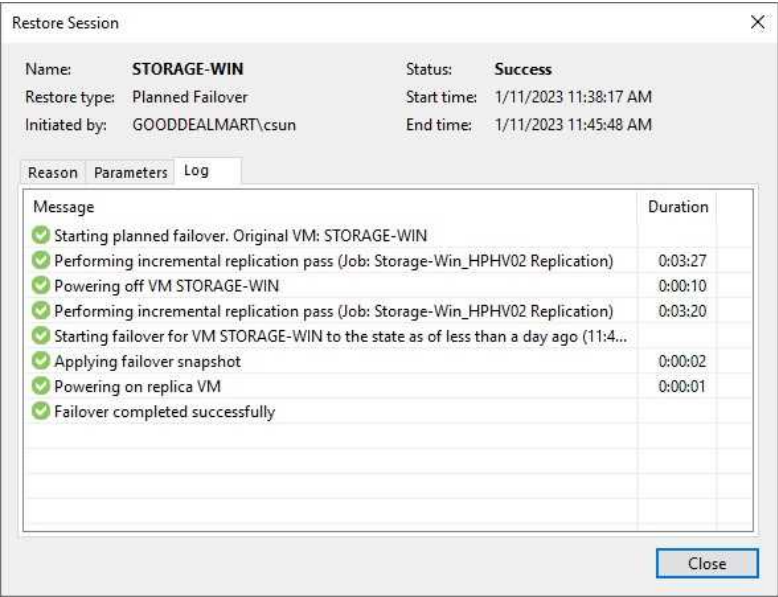
6. On the Reason page, the Restore reason, click Next.



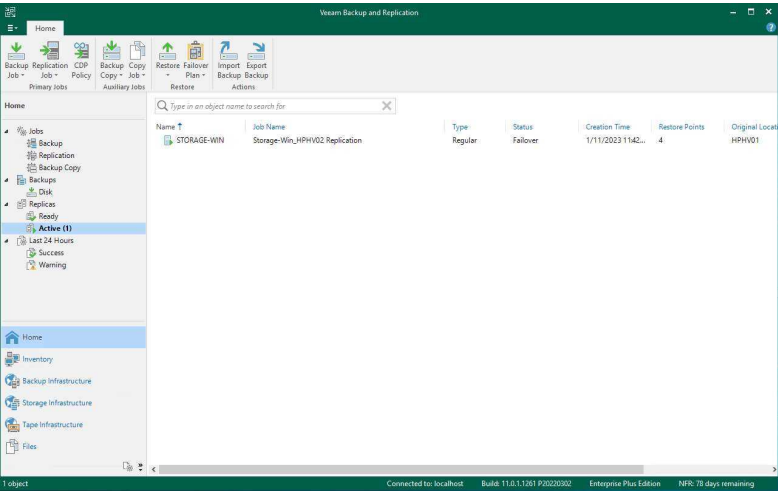
7. On the Summary page, click Finish.



8. On the Restore Session page, select log, ensure the planned failover processes were completed successfully, and click Closed.



9. On the Home page, expand Replicas and select Active. The virtual machine status shows Failover.

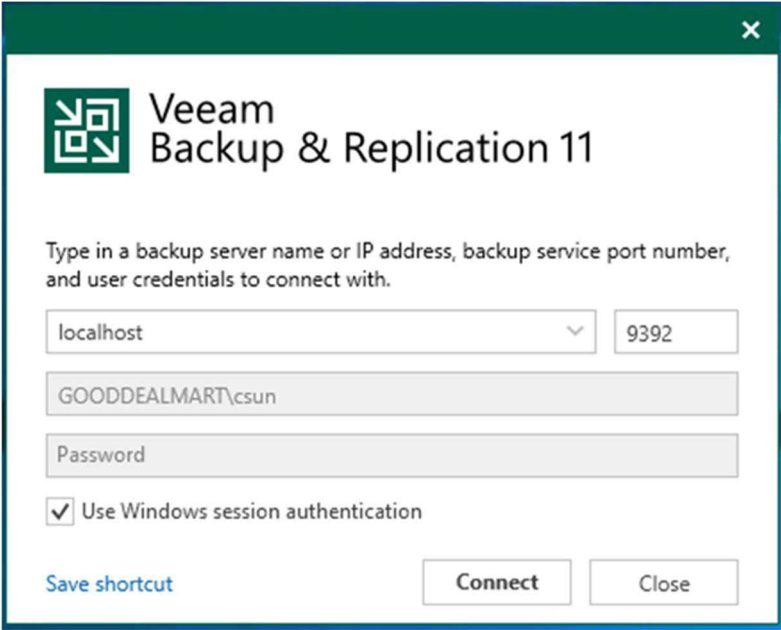


Failover Undo the Virtual Machine to Production Site

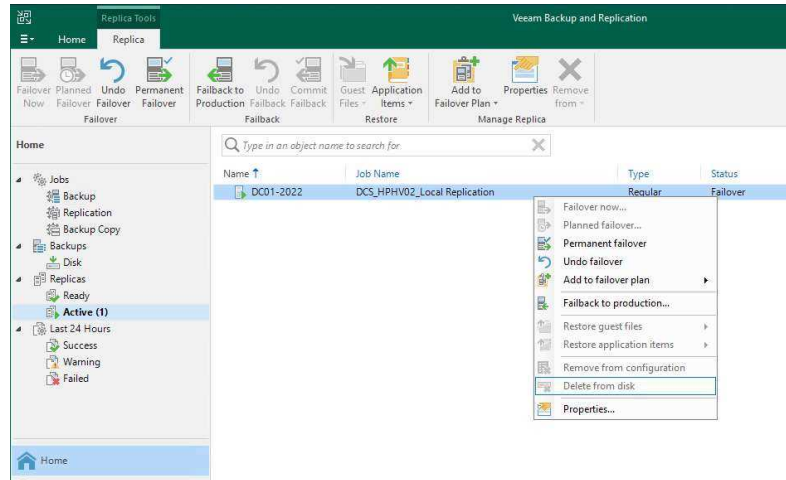
One method for completing failover is to use failover undo. When you undo failover, you return to the original VM from a VM replica. When a virtual machine replica is in the Failover state, Veeam Backup & Replication discards all changes made to the replica. This is because the Failover state is intended to temporarily restore the virtual machine to operation quickly in the event of a disaster.

Instructions	Screenshot (if applicable)
--------------	----------------------------

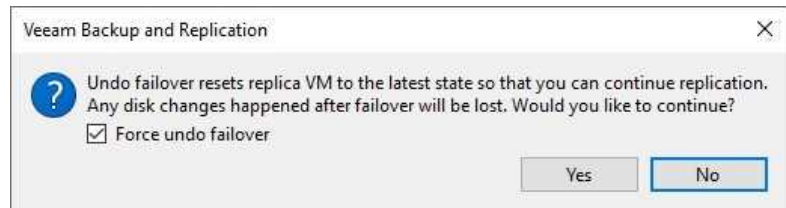
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



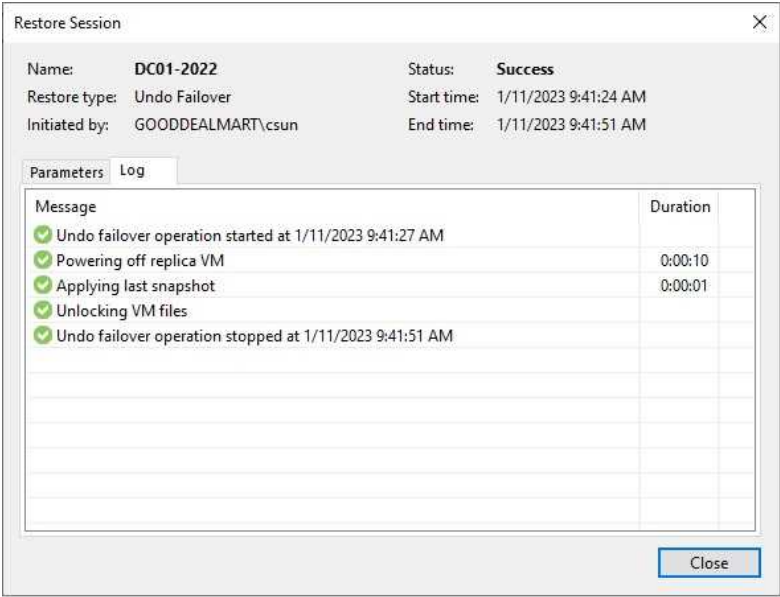
3. On the Home page, expand Replicas. Select Active.
4. Right-click the virtual machine, and select Undo failover.



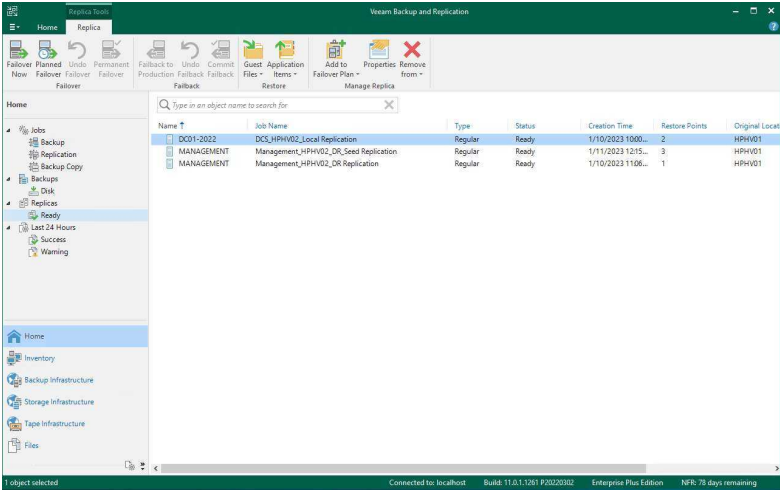
5. On the Veeam Backup and Replication display windows, select Force undo failover and click Yes.



- 6. On the Restore Session page, select Log.
- 7. Ensure the undo failover is completed successfully and click Closed.



- 8. On the Home page, expand Replicas and the virtual machine to regular type and Ready status.



Failback of the Virtual Machine to the Production Site

Failback is returning operations to the primary site after a disaster recovery event. It reverses the failover process by replicating any changes made to the virtual machine during the Failover state back to the primary site and then redirecting users and applications to the primary site.

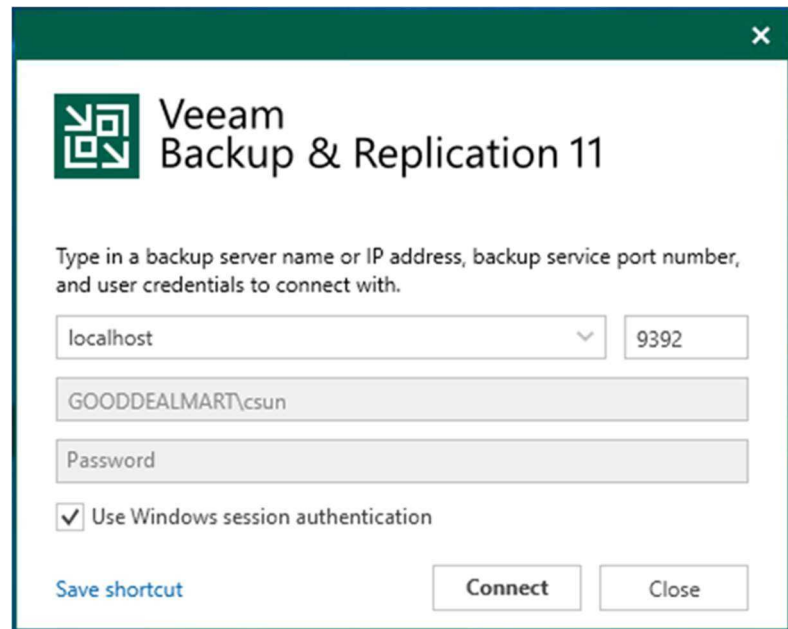
Veeam Backup & Replication provides the following failback options:

- Failback to the original VM in the original location.
- Failback to a VM already recovered to a new location. This VM must be retrieved before you perform failback.
- Failback to a VM from a replica in a different location or to any site with different settings. During the failback process, the VM will be recovered from the replica.

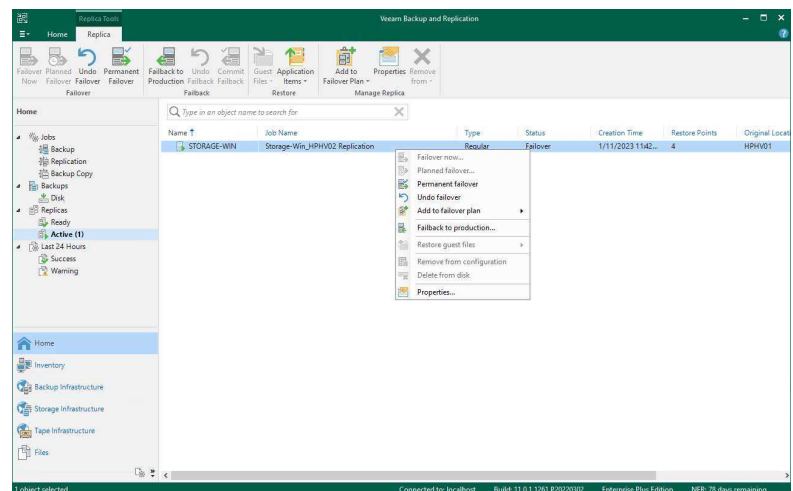
Because Veeam Backup & Replication only needs to transfer differences between the original/recovered VM and VM replica, the first two options help reduce recovery time and network traffic. Veeam Backup & Replication must transfer the entire VM data, including its configuration and virtual disc content, for the third option. Choose the third option if you cannot use the original VM or restore it from a backup.

Instructions	Screenshot (if applicable)
--------------	----------------------------

1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



3. On the Home page, expand Replicas. Select Active.
4. Right-click the virtual machine, and select Failback to production.



5. Click **Populate** on the **Virtual Machine** page to update the replicas ready for the failback list.
6. Select the replicas and click **Next**.

[illegible]

7. On the Destination page, select Failback to the original VM if you want to return to the original VMs that reside on the source hosts.
8. Select Quick rollback (sync changed blocks only) If you want to fasten failback, and the original VMs had problems at the guest OS level.
9. Click Next.

Failback



Destination

Choose the destination for failback operation.

Replicas

Destination

Summary

☒ **Failback to the original VM**

Use if your production site is restored without any infrastructure changes, and the original VM is still present at the same location. Only differences between existing virtual disks and their actual state on replica will be transferred over the network.

☐ **Failback to the original VM restored in a different location**

Use if you have restored the original VM from backup to a location that is different from original. Only differences between existing virtual disks and their actual state on replica will be transferred over the network.

☐ **Failback to the specified location (advanced)**

Use if you do not have original VM remains available anywhere in the failback destination site. Actual state of entire replica's virtual disks will be transferred to the destination site, resulting in significant network traffic.

☐ **Quick rollback (sync changed blocks only)**

Accelerates failback from failovers triggered by a software problem or a user error. Do not use this option if the disaster was caused by a hardware or storage issue, or by a power loss.

< Previous

Next >

Finish

Cancel

10. Select Failback to the original VM restored in a different location if the original VMs have already been recovered to a new location and you want to switch to the recovered VMs from their replicas.

Note:

If you select this option, you will proceed to the Target VM.

Failback



Destination

Choose the destination for failback operation.

Replicas

Destination

Target VM

Summary

☐ **Failback to the original VM**

Use if your production site is restored without any infrastructure changes, and the original VM is still present at the same location. Only differences between existing virtual disks and their actual state on replica will be transferred over the network.

☒ **Failback to the original VM restored in a different location**

Use if you have restored the original VM from backup to a location that is different from original. Only differences between existing virtual disks and their actual state on replica will be transferred over the network.

☐ **Failback to the specified location (advanced)**

Use if you do not have original VM remains available anywhere in the failback destination site. Actual state of entire replica's virtual disks will be transferred to the destination site, resulting in significant network traffic.

☐ **Quick rollback (sync changed blocks only)**

Accelerates failback from failovers triggered by a software problem or a user error. Do not use this option if the disaster was caused by a hardware or storage issue, or by a power loss.

< Previous

Next >

Finish

Cancel

Failback



Target VM
Specify existing failback destination VM for each replica VM.

Replicas	Replica VM	Production VM	
Destination	 STORAGE-WIN	STORAGE-WIN	
Target VM			
Summary			

< Previous

Next >

Finish

Cancel

11. Select **Failback to the specified location to recover VMs from replicas**. You can recover VMs to a new location or any location but with different settings (such as network settings, virtual disk type, configuration file path and so on).

Failback



Destination

Choose the destination for failback operation.

Replicas

Destination

Host

Datstore

Network

Name

Summary

☐ **Failback to the original VM**
Use if your production site is restored without any infrastructure changes, and the original VM is still present at the same location. Only differences between existing virtual disks and their actual state on replica will be transferred over the network.

☐ **Failback to the original VM restored in a different location**
Use if you have restored the original VM from backup to a location that is different from original. Only differences between existing virtual disks and their actual state on replica will be transferred over the network.

☒ **Failback to the specified location (advanced)**
Use if you do not have original VM remains available anywhere in the failback destination site. Actual state of entire replica's virtual disks will be transferred to the destination site, resulting in significant network traffic.

☐ **Quick rollback (sync changed blocks only)**
Accelerates failback from failovers triggered by a software problem or a user error. Do not use this option if the disaster was caused by a hardware or storage issue, or by a power loss.

< Previous

Next >

Finish

Cancel

Failback

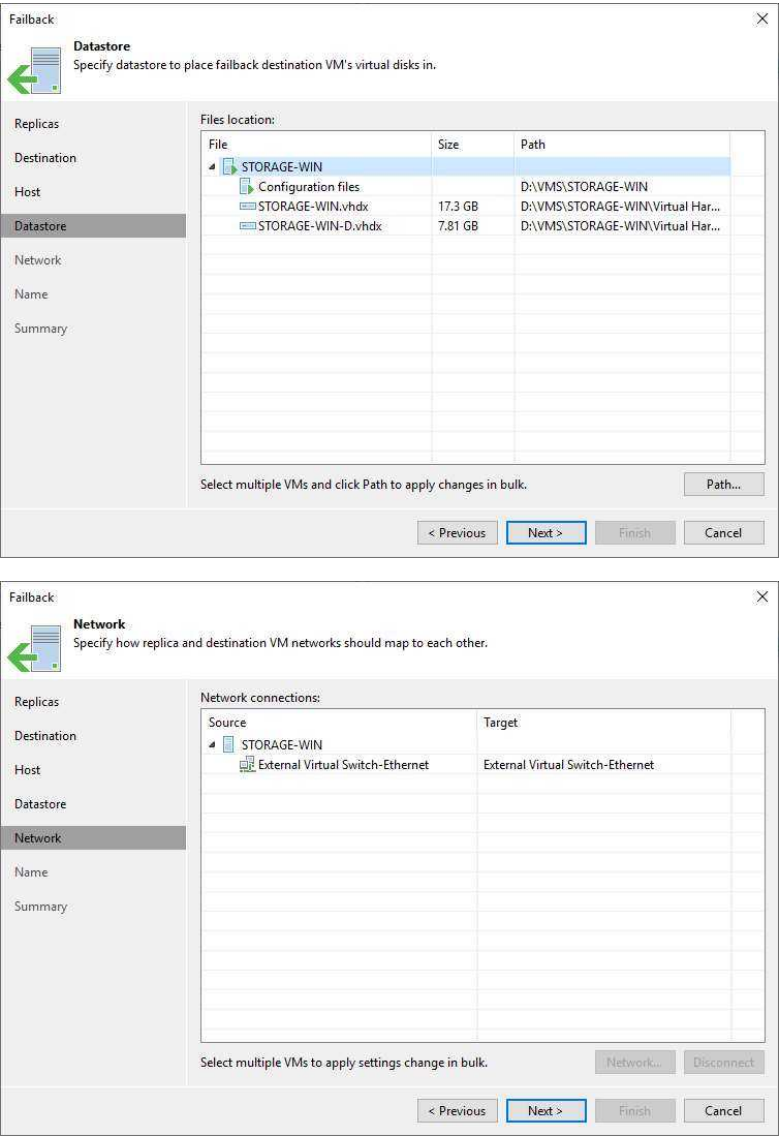
Host

Specify host to place failback destination VM on.

VM location:		
Name	Host	Cluster Resource
STORAGE-WIN	HPHV01	

Select multiple VMs and click Host to apply changes in bulk.

< Previous Next > Finish Cancel



Failback

Name

Specify new virtual machine name, and whether you would like unique identifier preserved.

Replicas

Destination

Host

Datastore

Network

Name

Summary

Virtual machines:

Name	New name	VM UUID
☐ STORAGE-WIN	☐ STORAGE-WIN	Create new

Select multiple VMs to apply settings change in bulk.

Name...

VM UUID...

< Previous

Next >

Finish

Cancel

12. Select Power on the target VM after restoring and click Finish on the Summary page.

Failback

Summary

Replicas

Destination

Summary

Summary:

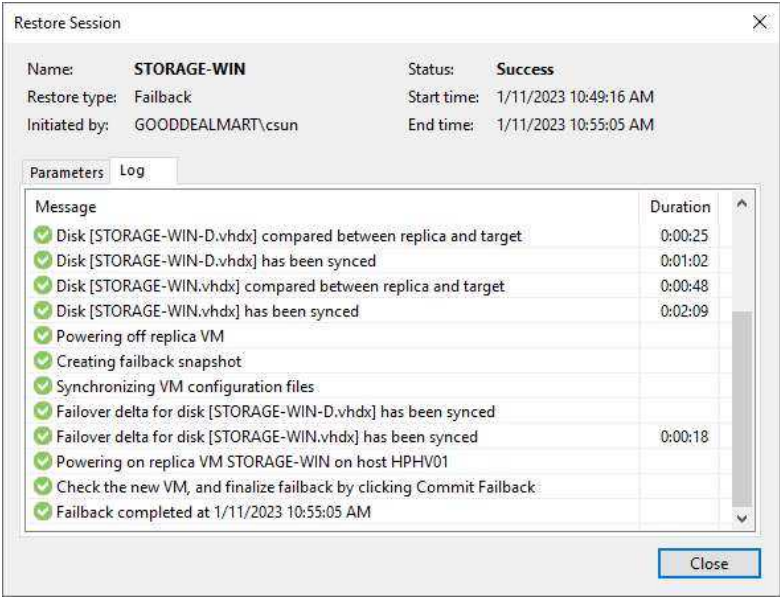
Original VM name: STORAGE-WIN
Target VM name: STORAGE-WIN
Target host: HPHV01

☒ Power on target VM after restoring

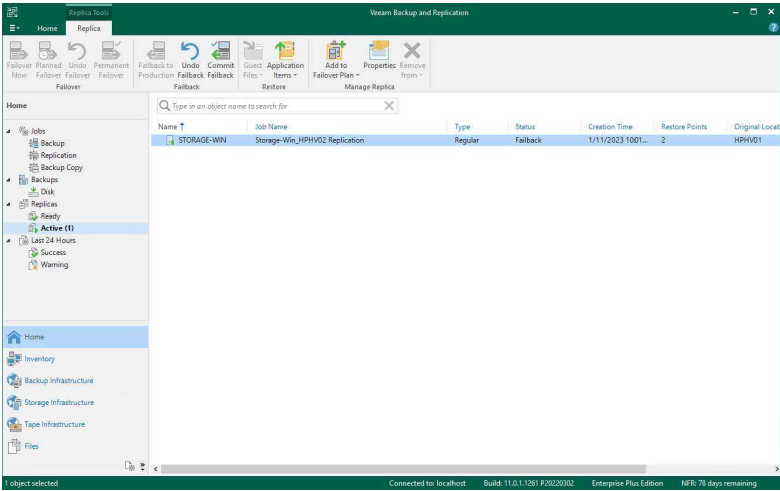
Replica VM will be powered off for the duration of failback.

< Previous Next > **Finish** Cancel

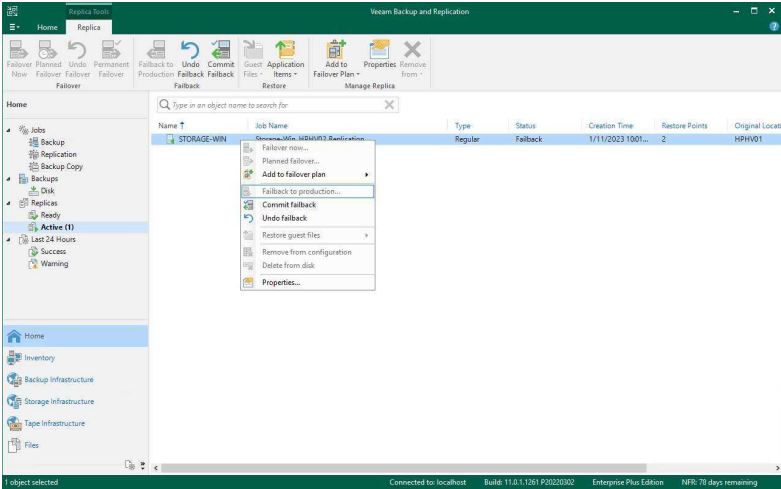
- 13. On the Restore Session page, select Log.
- 14. Ensure the failback is completed successfully and click Closed.



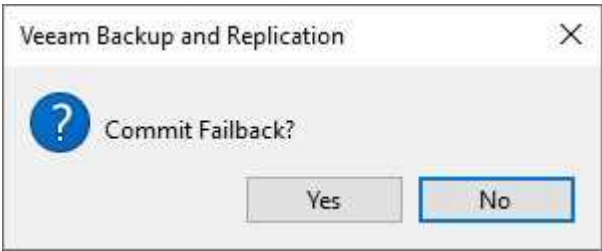
- 15. On the Home page, expand Replicas and select Active.
- 16. The VM status changed from Failover to Failback.



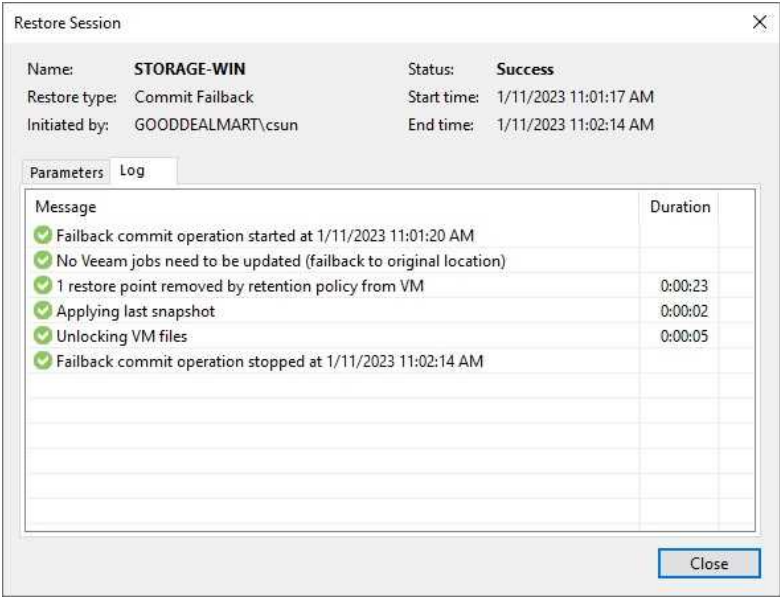
17. Right-click the VM and select Commit failback.



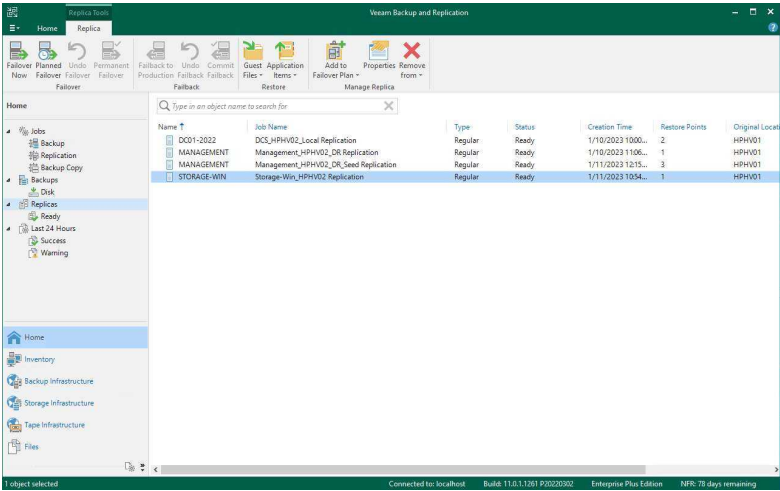
18. Click Yes in the Commit Failback display windows.



19. On the Restore Session page, select log, make sure the undo failover is completed successfully, click Closed



20. On the Home page, add Replicas and the virtual machine to regular type and Ready status.



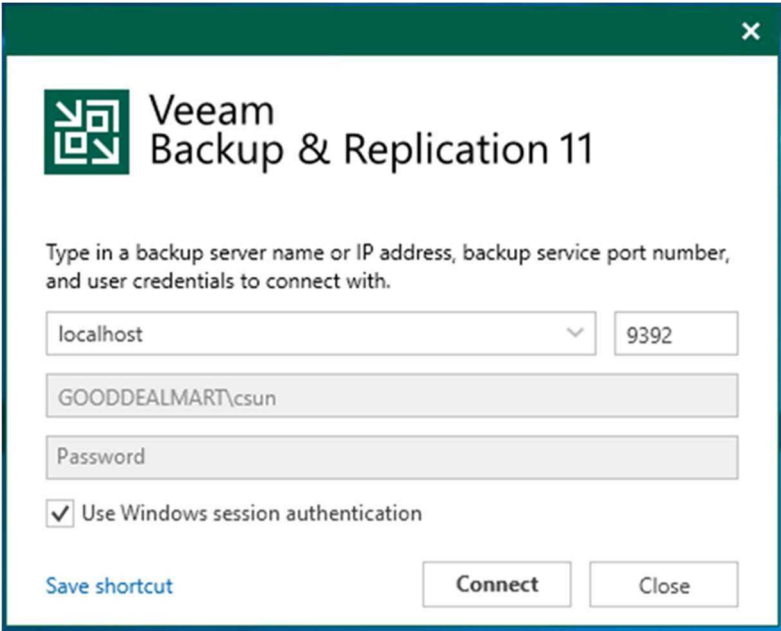
Permanent Failover of the Virtual Machine to the Disaster Recovery Site

Permanent failover is one method of completing failover. Permanent failover means permanently switching from the original VM to its replica.

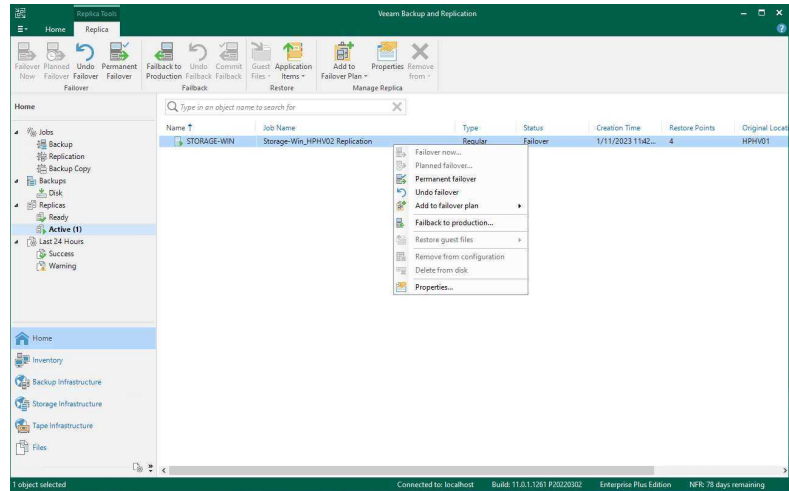
The VM replica ceases to be a replica due to permanent failover and becomes the production VM.

Instructions	Screenshot (if applicable)
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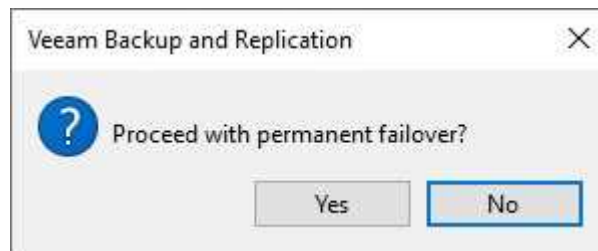
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



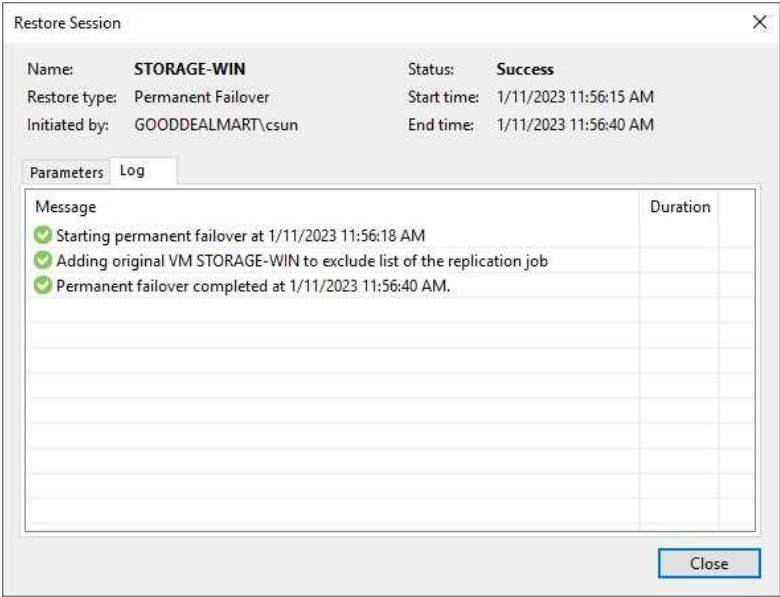
3. On the Home page, expand Replicas. Select the Active.
4. Right-click the virtual machine, and select the Permanent failover.



5. Click Yes in the Process with the permanent failover display window.



- 6. On the Restore Session page, select Log.
- 7. Ensure the permanent failover is completed successfully and click Closed.
- 8. Delete the existing replication job and create a new one for the VM.



Chapter 6

Data Restore

Veeam Backup & Replication supports the following recovery methods:

- VM recovery entails restoring entire virtual machines (VMs) to various data protection environments, such as VMware vSphere, Hyper-V, Amazon EC2, etc.
- Disk export enables you to convert discs from various workloads (EC2 instances, Microsoft Azure VMs, and so on) to VMDK, VHD, or VHDX formats.
- Recovery of VM files, guest OS files and folders, and application items.
- Veeam Data Integration API — to retrieve backup content via iSCSI or FUSE and analyze data stored in this backup.
- Secure restore entails scanning data with antivirus software before restoring it to production.

Note:

Backward compatibility is provided by Veeam Backup & Replication: backups created with previous product versions can be restored with later product versions. Backups created with later product versions, on the other hand, cannot be restored with previous product versions.

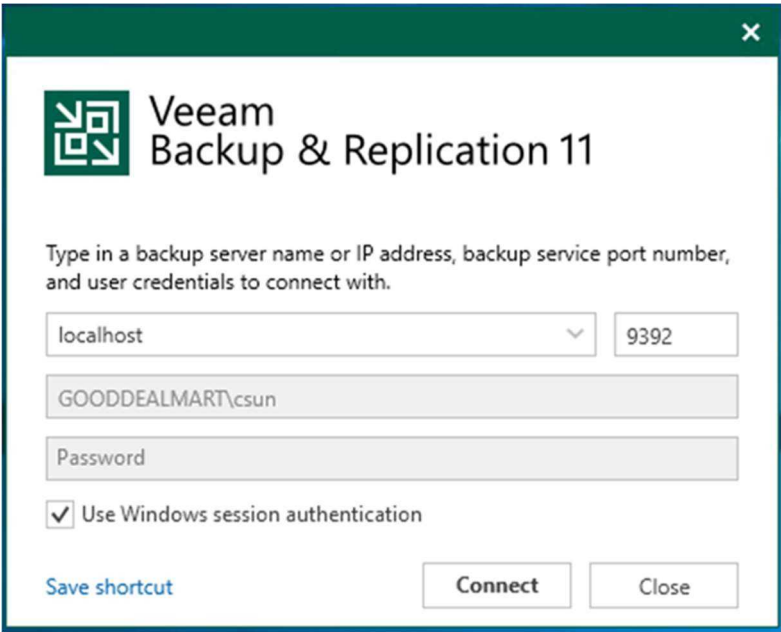
Restore the Entire VM to the Original Location

If the original VM fails, you can use Veeam Backup & Replication to restore an entire VM from a backup file to the most recent state or a previous point.

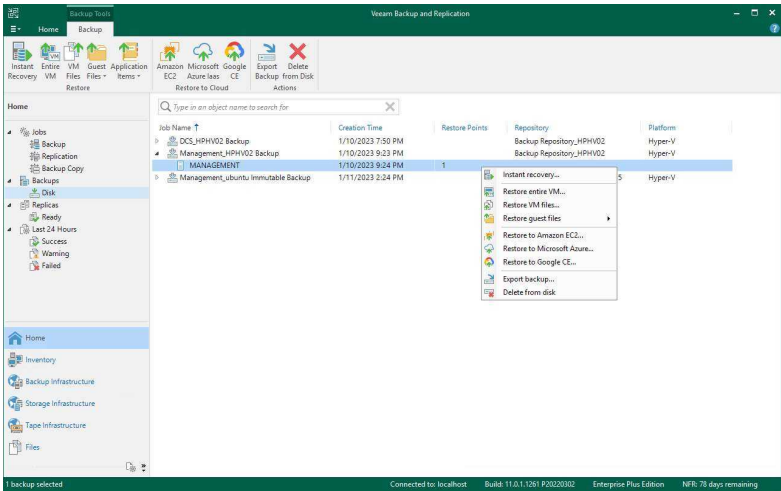
Before the entire VM restore can occur, the VM image must be fully extracted to the production storage. Veeam Backup & Replication copies the VM data from the backup repository to the chosen storage, registers the VM on the desired Hyper-V host, and, if necessary, powers it on.

Instructions	Screenshot (if applicable)
--------------	----------------------------

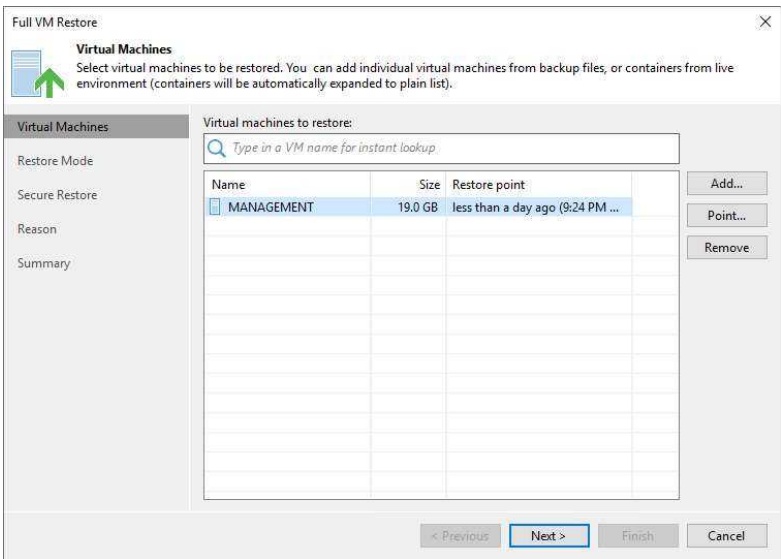
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



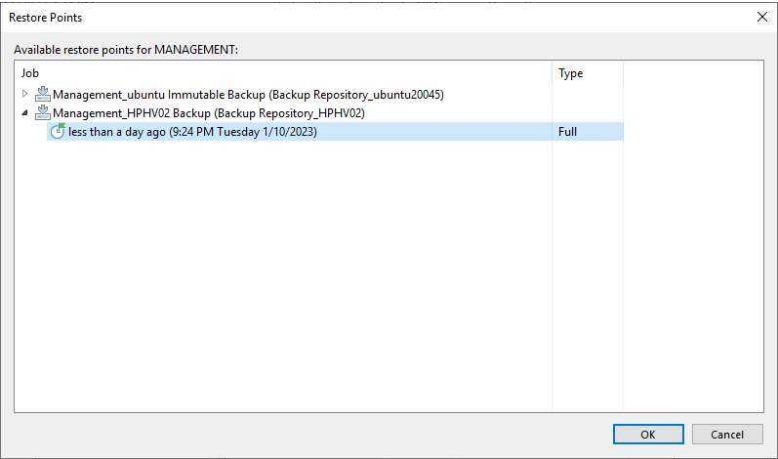
- 3. On the Home page, expand Backups. Select the Disk.
- 4. Expand the backup job name, right-click the virtual machine, and select Restore the entire VM.



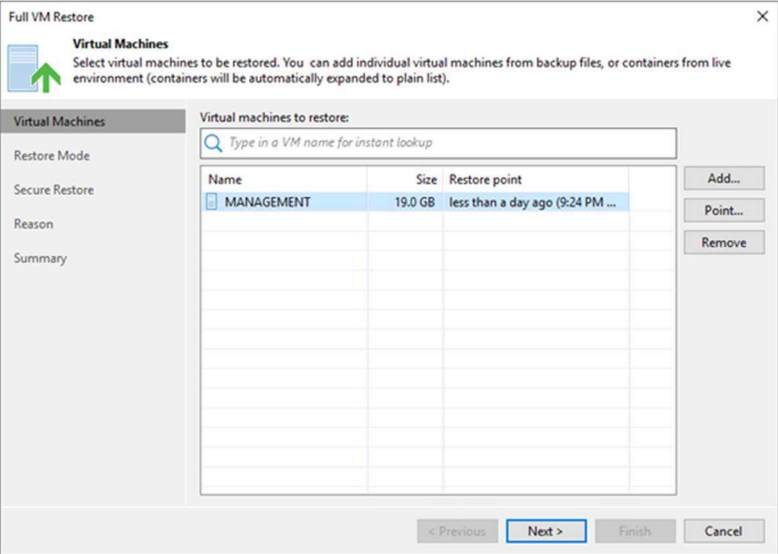
- 5. Select the virtual machine and click Point on the Virtual Machine page.



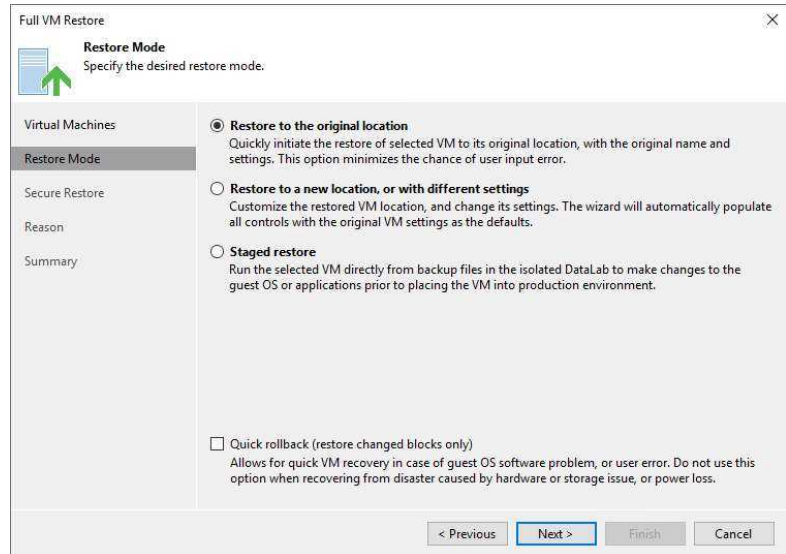
- 6. Expand the backup job on the Restore Point page, select the restore point, and click OK.



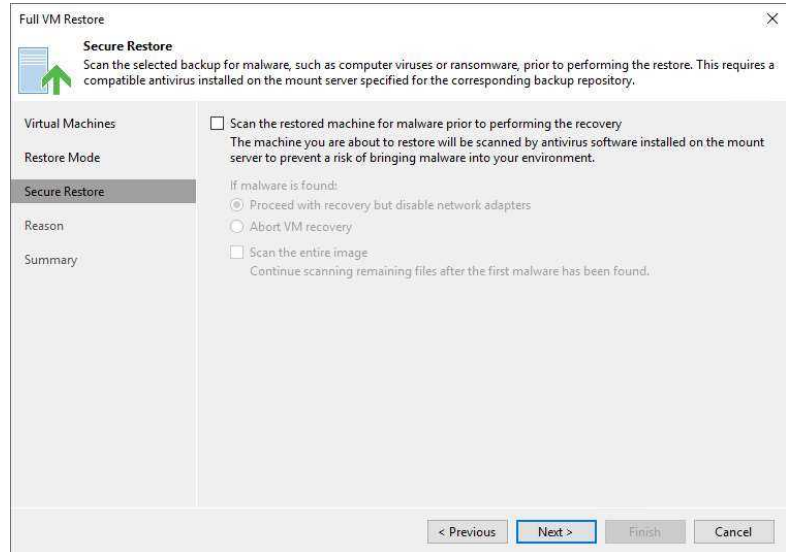
- 7. On the Virtual Machines page, click Next.



8. On the Restore Mode page, select Restore to the original location.
9. Select the Quick rollback (restore changed blocks only) checkbox If you restore a VM following a problem at the VM guest OS level.
10. Click Next.



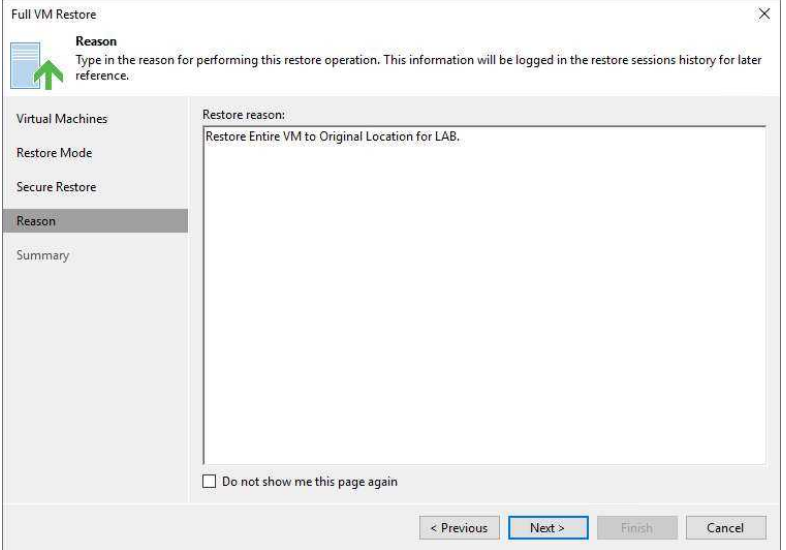
11. Check the following prerequisites before performing a secure restore:
 - Support Microsoft Windows only.
 - The antivirus software must be installed on the mount server and support the command line interface (CLI).
 - The antivirus configuration file must be configured on the mount server.
 - Veeam Backup & Replication does not



perform malware scans for disks or volumes that cannot be mounted to the mount server.

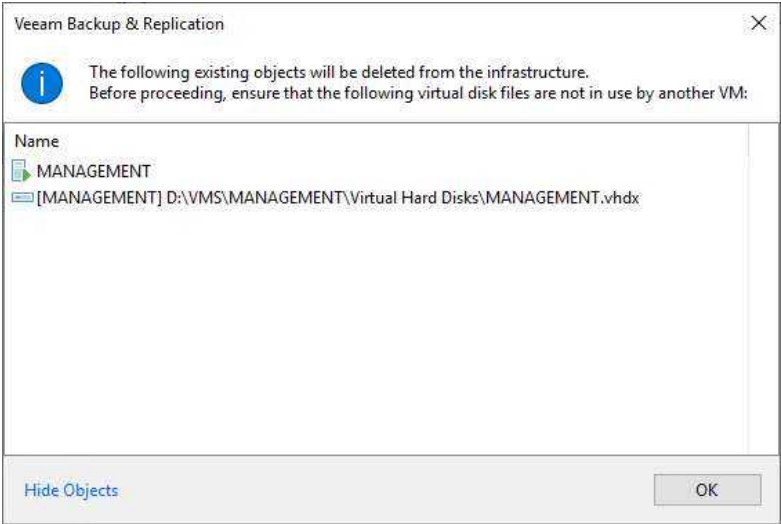
12. Select the Scan the restored machine for malware before performing the recovery check box.
13. Click Next.

14. On the Reason page, enter a reason for restoring the selected VMs.

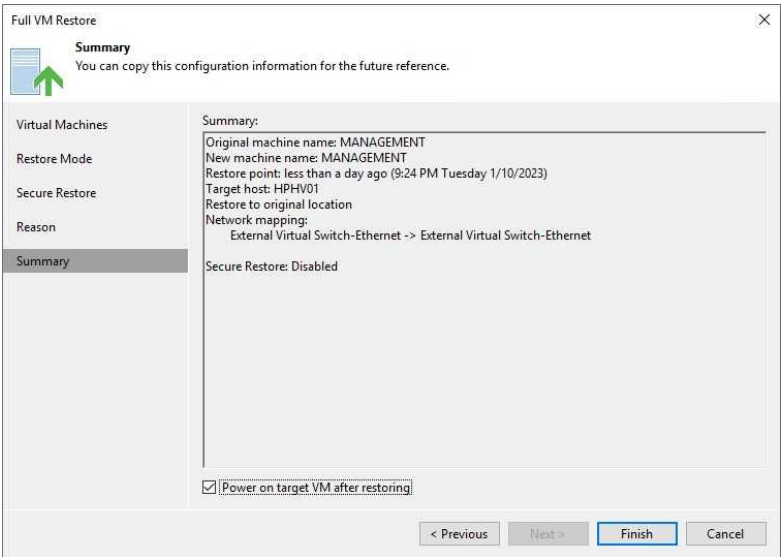


The screenshot shows the 'Full VM Restore' wizard window. The 'Reason' tab is selected in the left-hand navigation pane. The main area contains a text box for 'Restore reason:' with the text 'Restore Entire VM to Original Location for LAB.' entered. Below the text box is a checkbox labeled 'Do not show me this page again'. At the bottom right, there are four buttons: '< Previous', 'Next >', 'Finish', and 'Cancel'. The 'Next >' button is highlighted with a blue border.

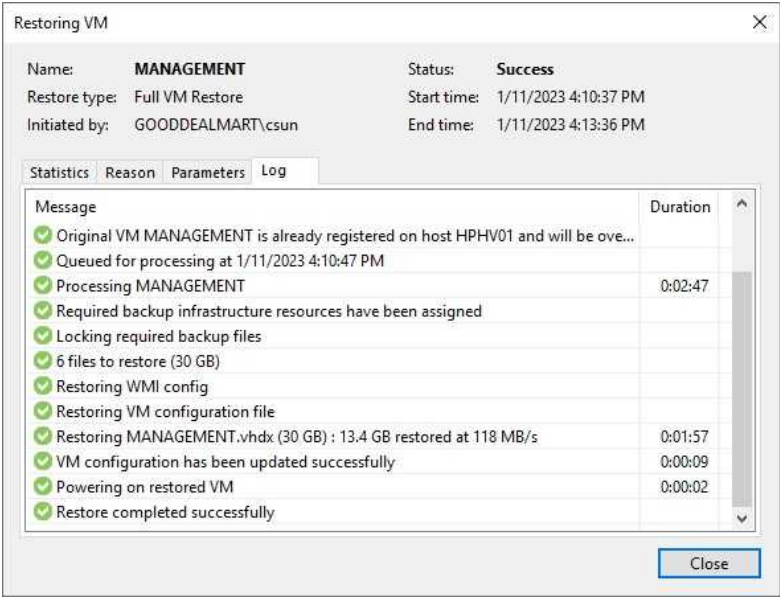
15. Click OK on the object will be deleted the warning message.



16. Select Power on the target VM after restoring and click Finish on the Summary page.

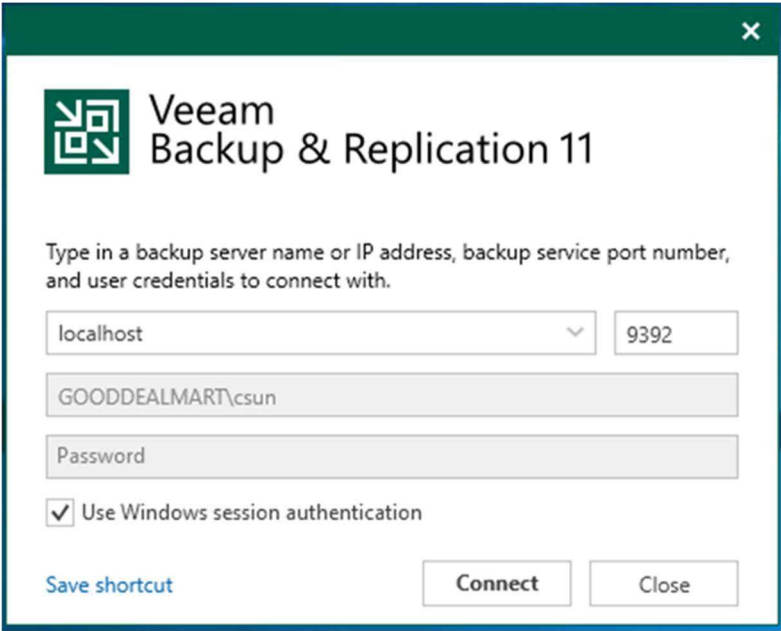


- 17. On the Restoring VM page, select Log.
- 18. Ensure the restore VM is completed successfully and click Closed.

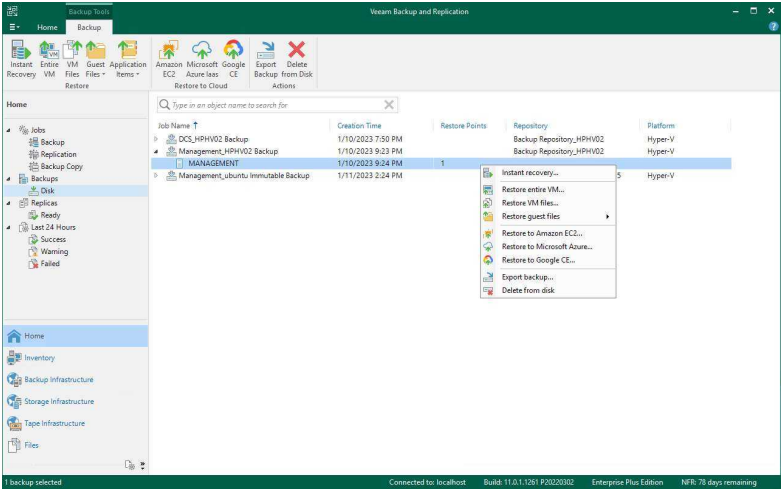


Restore the Entire VM to the New Location

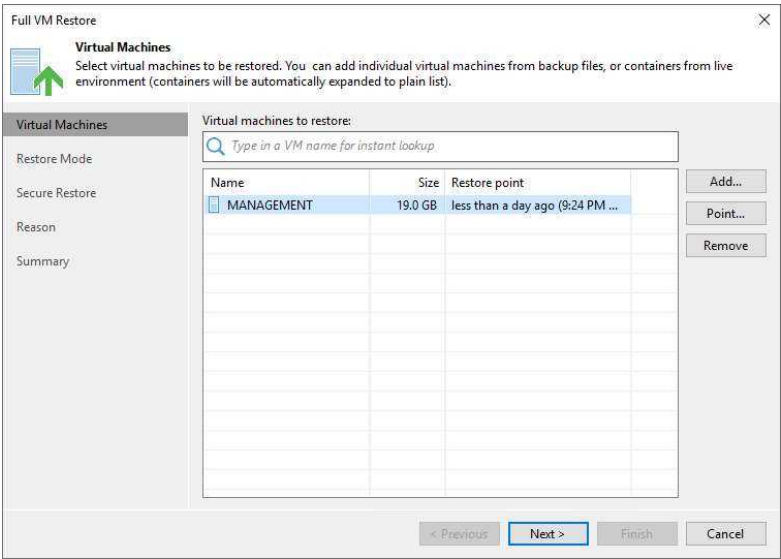
Existing jobs do not need to be updated that process the original/recovered VMs if you restore them to the same host and choose to preserve VM UUIDs. However, if you configure restore differently and want to process the recovered VMs, you must edit existing jobs or create new ones.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 The screenshot shows the 'Veeam Backup & Replication 11' connection window. It has a dark green title bar with a close button. The main area is white with the Veeam logo and title. Below the title, it says 'Type in a backup server name or IP address, backup service port number, and user credentials to connect with.' There are three input fields: a dropdown menu showing 'localhost', a text box with '9392', and a text box with 'GOODDEALMART\csun'. Below these is a 'Password' field. A checkbox labeled 'Use Windows session authentication' is checked. At the bottom, there is a 'Save shortcut' link and two buttons: 'Connect' and 'Close'.

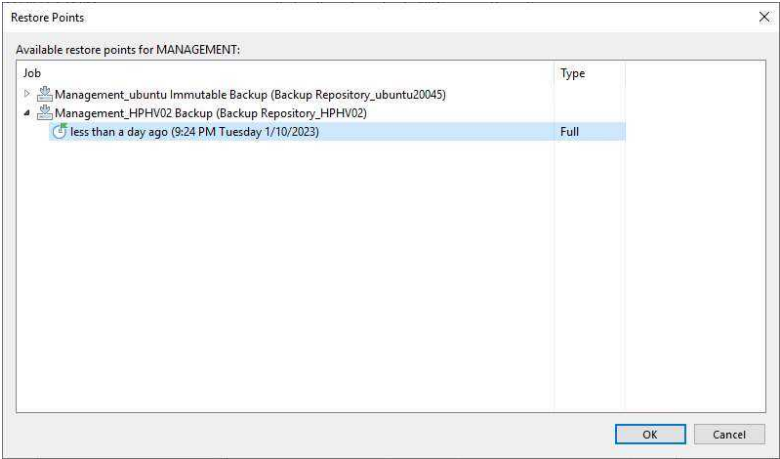
- 3. On the Home page, expand Backups. Select the Disk.
- 4. Expand the backup job name, right-click the virtual machine, and select Restore the entire VM.



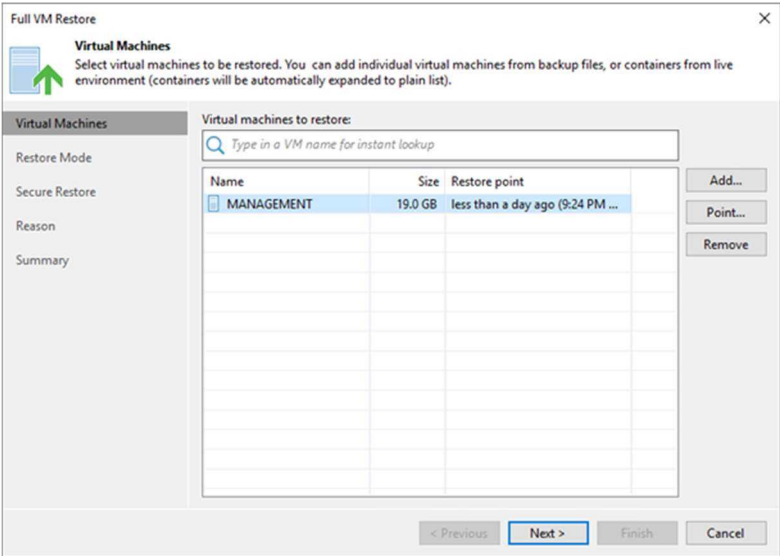
- 5. Select the virtual machine and click Point on the Virtual Machine page.



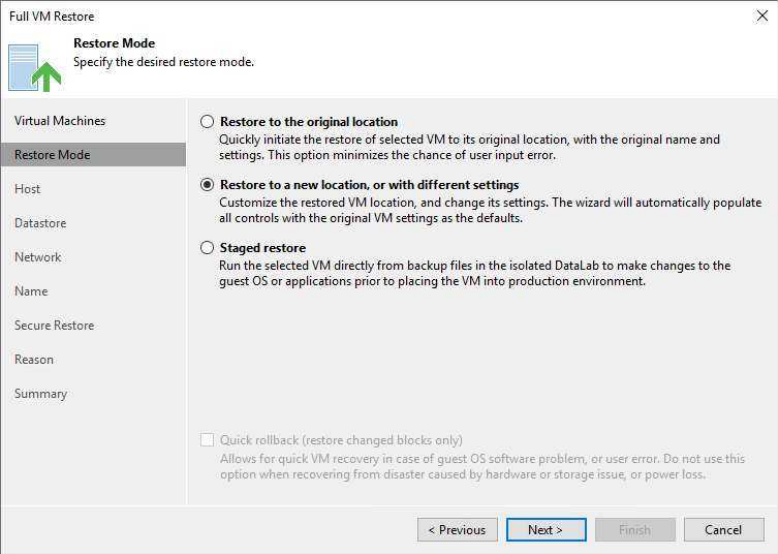
- 6. Expand the backup job on the Restore Point page, select the restore point, and click OK.



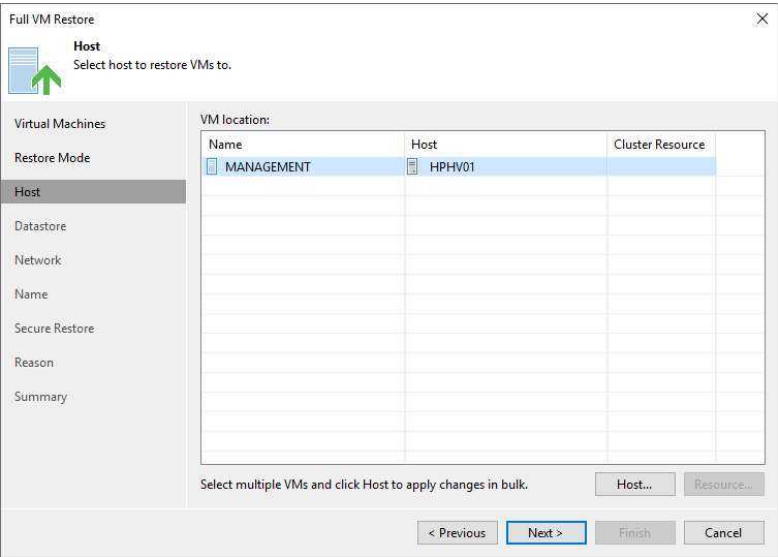
- 7. On the Virtual Machines page, click Next.



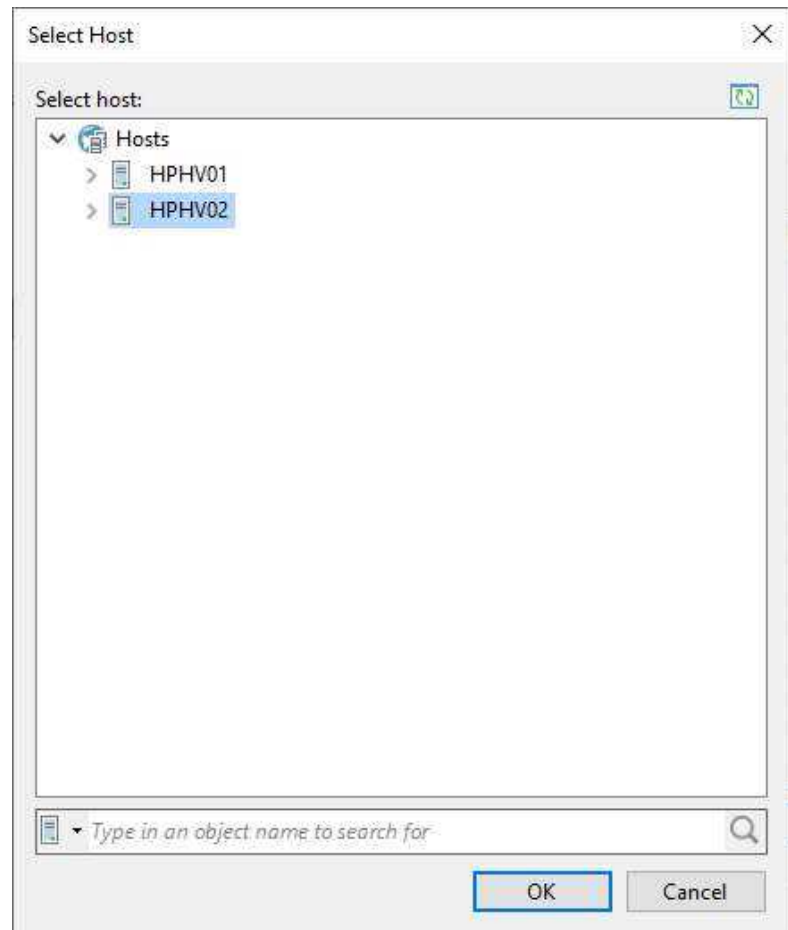
8. Select Restore to a new location or with different settings on the Restore Mode page and click Next.



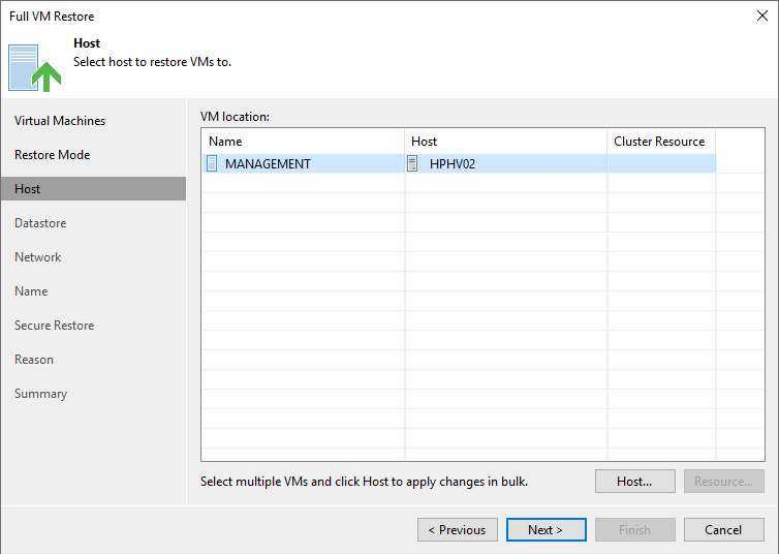
9. On the Host page, select the virtual machine and click Host.



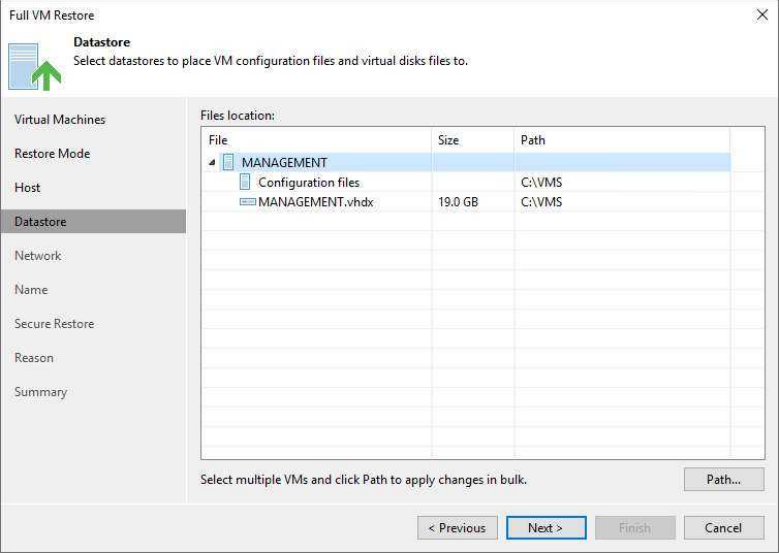
10. On the Host page, select the target host, and click OK.



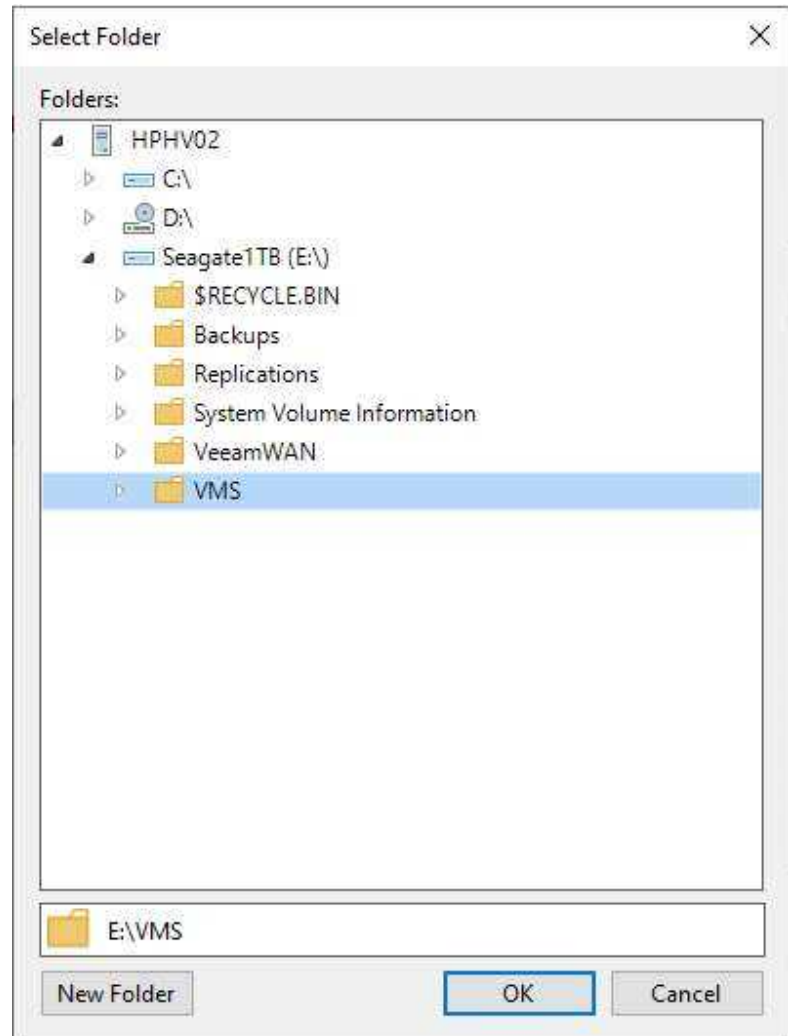
11. On the Host page, click Next.



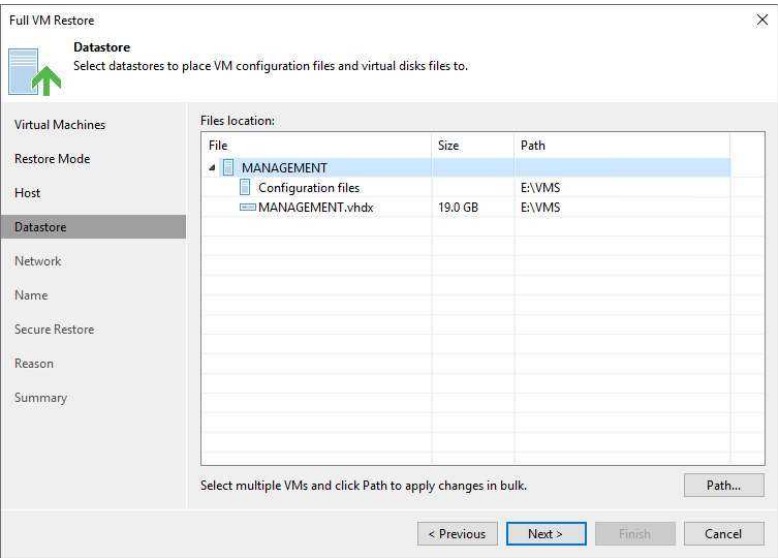
12. On the Datastore page, select the virtual machine and click Path.



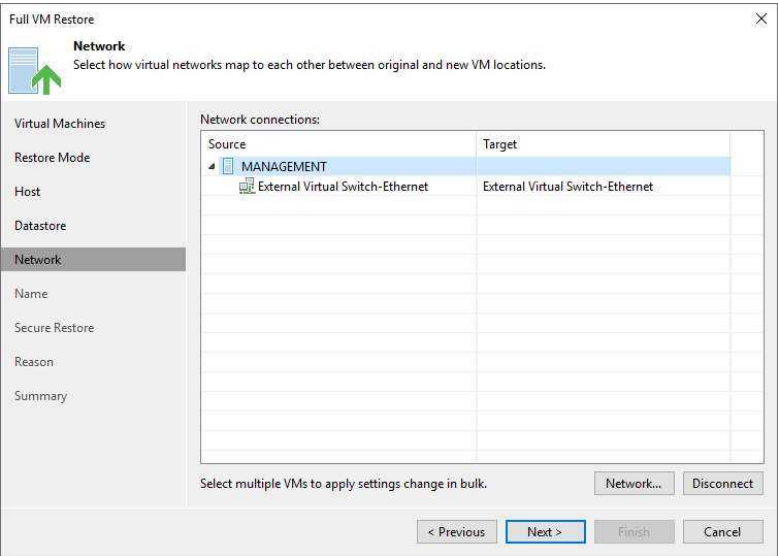
13. Select the target folder and click OK on the Select Folder page.



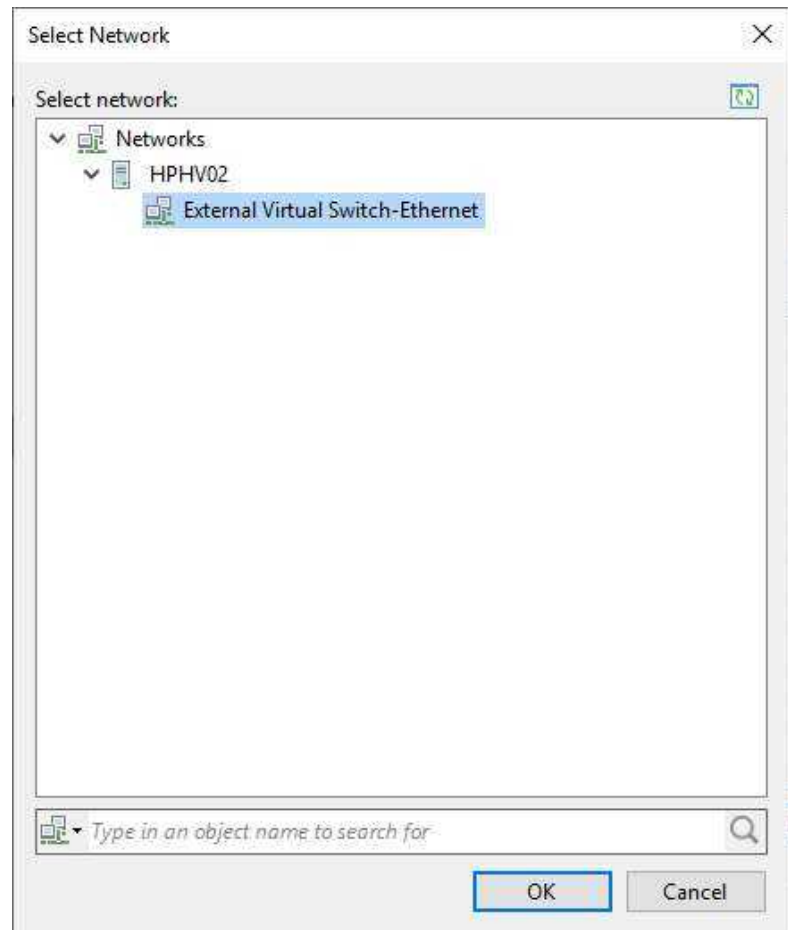
14. On the Datastore page, click Next.



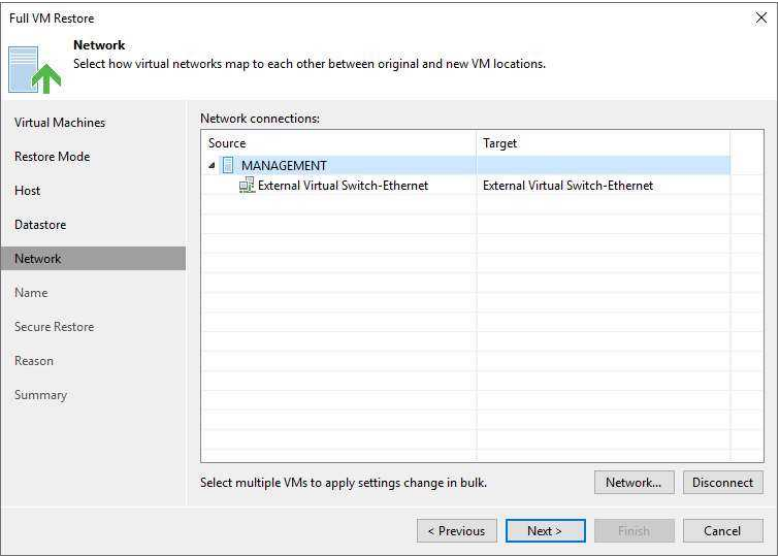
15. On the Network page, select the virtual machine and click Network.
16. If the restored VM does not need to connect to any virtual network, select the VM in the list and click Disconnected.



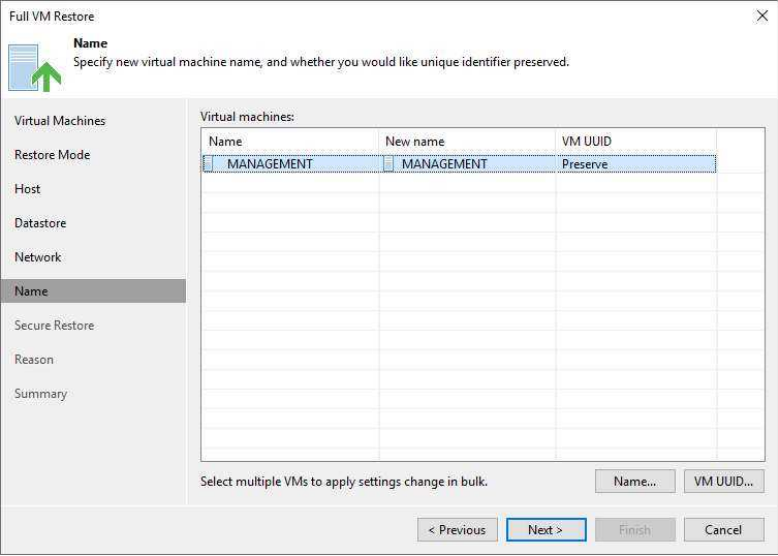
17. On the Select Network page, select the network for restoring the VM and click OK.



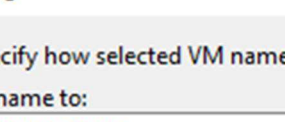
18. On the Network page, click Next.



19. On the Name page, select the virtual machine and click Name.



20. On the Change Name page, enter a new name or change the name by adding a prefix and suffix to the regular VM name.
21. Click OK.



Change Name

Specify how selected VM name should be changed.

Set name to:

MANAGEMENT

☐ Add prefix:

new_

☒ Add suffix:

_restored

OK Cancel

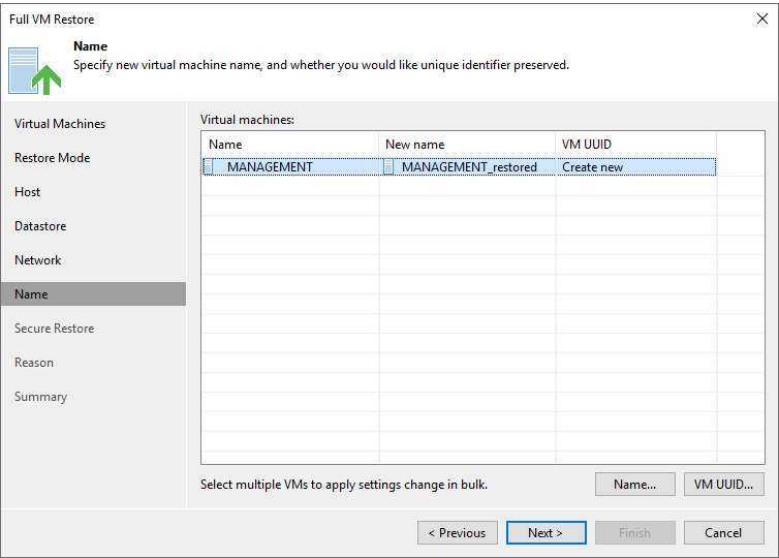
22. On the Name page, select the virtual machine and click VM UUID.

[illegible]

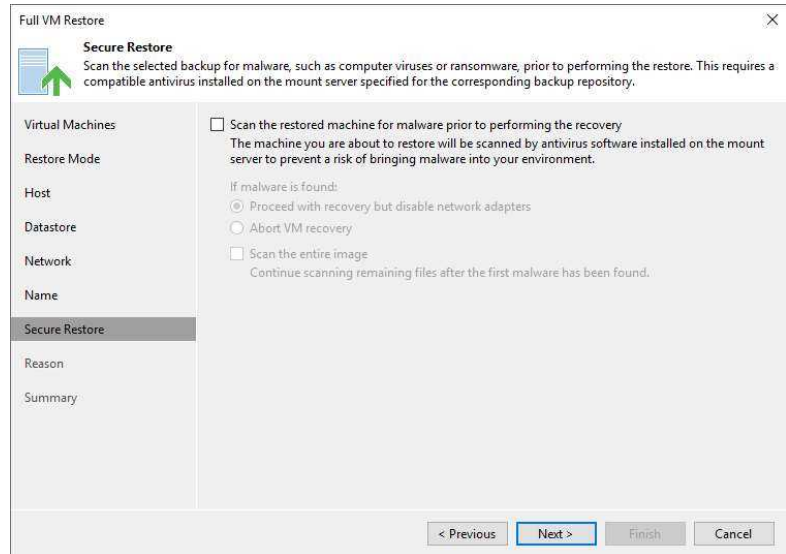
- 23. On the BIOS UUID Settings, Select Preserve existing VM ID if the original VM was decommissioned.
- 24. Click OK.



- 25. On the Name page, click Next.



26. Check the following prerequisites before performing a secure restore:
27. Support Microsoft Windows only.
28. The antivirus software must be installed on the mount server and support the command line interface (CLI).
29. The antivirus configuration file must be configured on the mount server.
30. Veeam Backup & Replication does not perform malware scans for disks or volumes that cannot be mounted to the mount server.
31. Select the Scan the restored machine for malware before performing the recovery check box.
32. Click Next.



33. On the Reason page, enter a reason for restoring the selected VMs and click Next.

Full VM Restore

Reason
Type in the reason for performing this restore operation. This information will be logged in the restore sessions history for later reference.

Virtual Machines
Restore Mode
Host
Datastore
Network
Name
Secure Restore
Reason
Summary

Restore reason:
Restore Entire VM to the New Location.

☐ Do not show me this page again

< Previous **Next >** Finish Cancel

34. On the Summary page, click Finish.

Full VM Restore

Summary
You can copy this configuration information for the future reference.

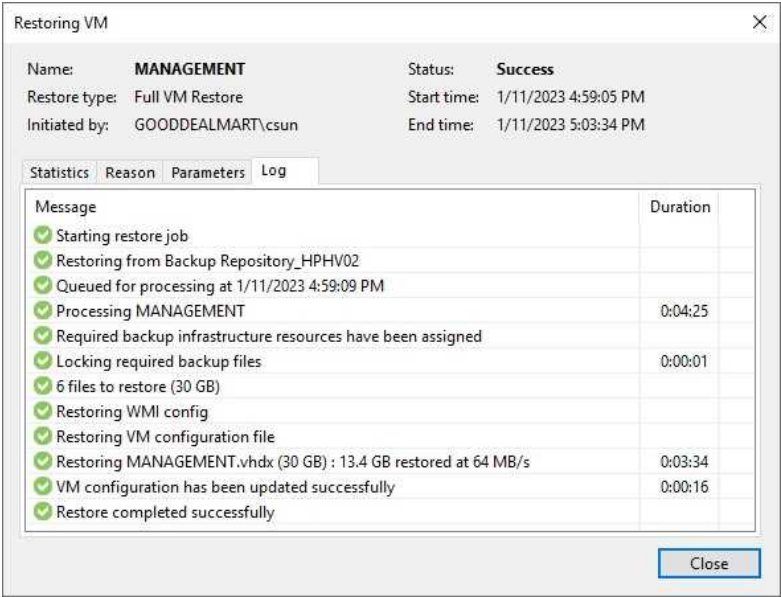
Virtual Machines
Restore Mode
Host
Datastore
Network
Name
Secure Restore
Reason
Summary

Summary:
Original machine name: MANAGEMENT
New machine name: MANAGEMENT_restored
Restore point: less than a day ago (9:24 PM Tuesday 1/10/2023)
Target host: HPHV02
Target folder: E:\VMS
Network mapping:
 External Virtual Switch-Ethernet -> External Virtual Switch-Ethernet
Secure Restore: Disabled

☐ Power on target VM after restoring

< Previous Next > **Finish** Cancel

- 35. On the Restoring VM page, select Log.
- 36. Ensure the restore VM is completed successfully and click Closed.



Restore VM Files

If corrupted, you can restore VM files (.XML, .VMCX, .VMRS,.VMGS,.VHD,.VHDX). This option is an excellent alternative to restoring the entire VM. However, you can only restore a single VM file.

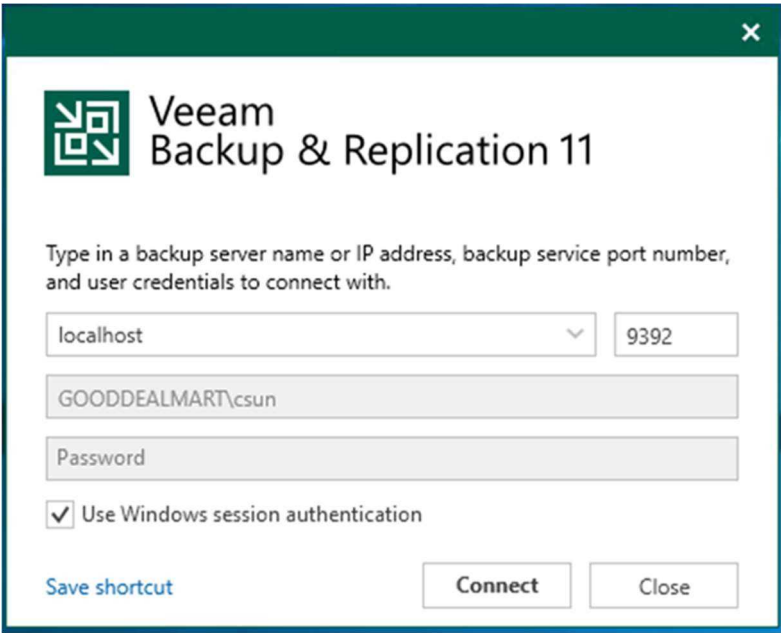
When you perform a VM file restore, the VM file is restored directly from regular image-level backups without de-staging VM images from backups first. VM files can be converted to either the original or a new location.

Note:

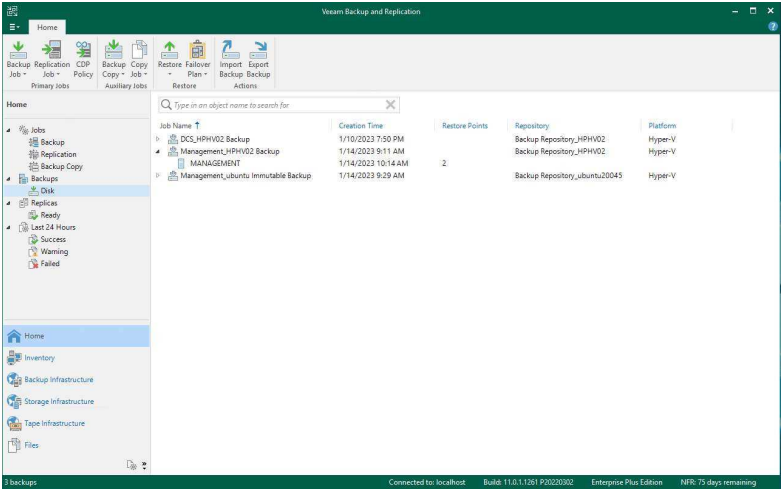
If you recover a .VMCX file and import it to Microsoft Hyper-V, the VM will be registered under the Veeam Recovery Checkpoint-(<GUID>) name. After import, you can rename the VM if required.

Instructions	Screenshot (if applicable)
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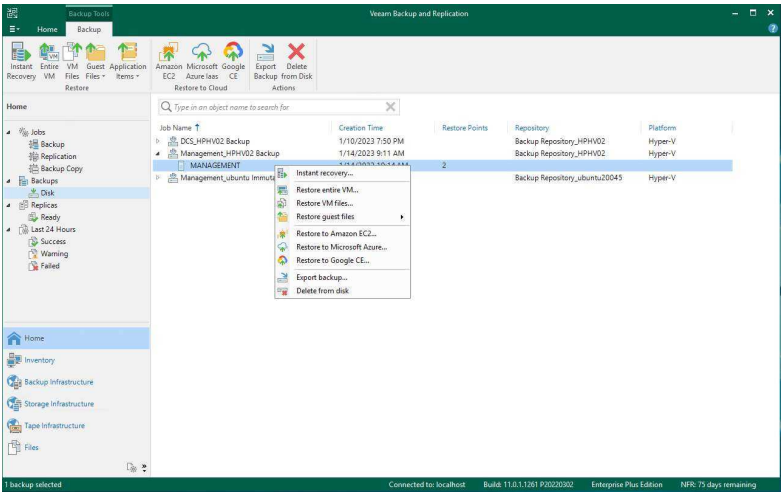
1. Log in to the Veeam Backup and replication manager server.
2. Open the Veeam Backup & Replication Console, and click Connect.



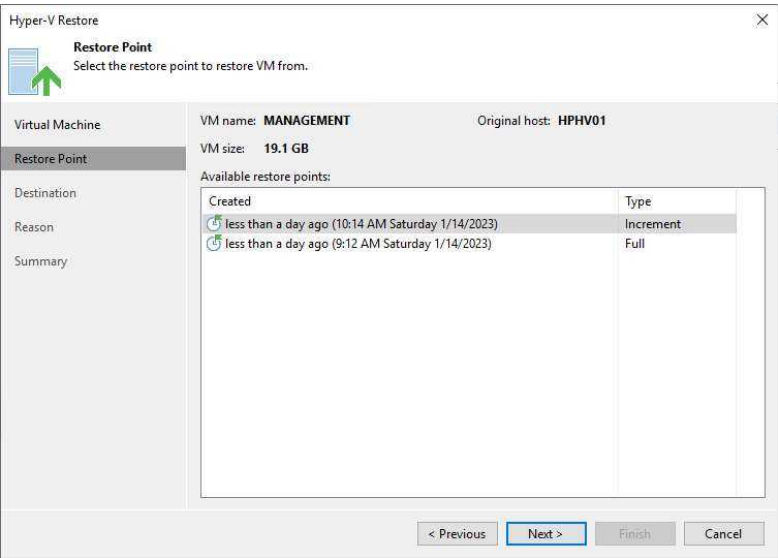
- 3. On the Home page, expand Backups.
- 4. Select the Disk and expand the backup job name.



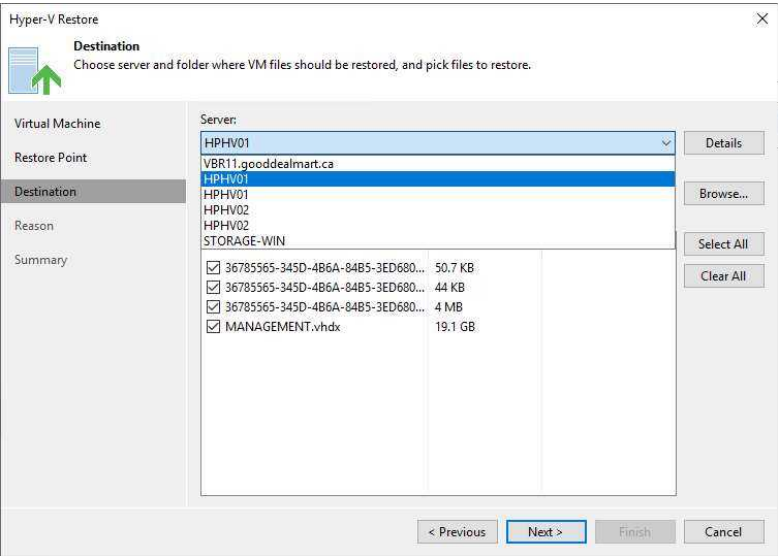
- 5. Right-click the virtual machine and select Restore VM files.



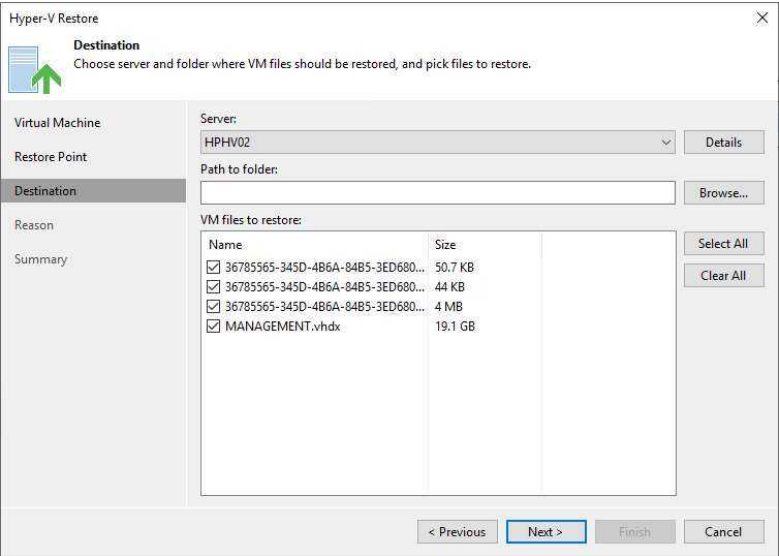
6. Select the restore point on the Restore Point page and click Next.



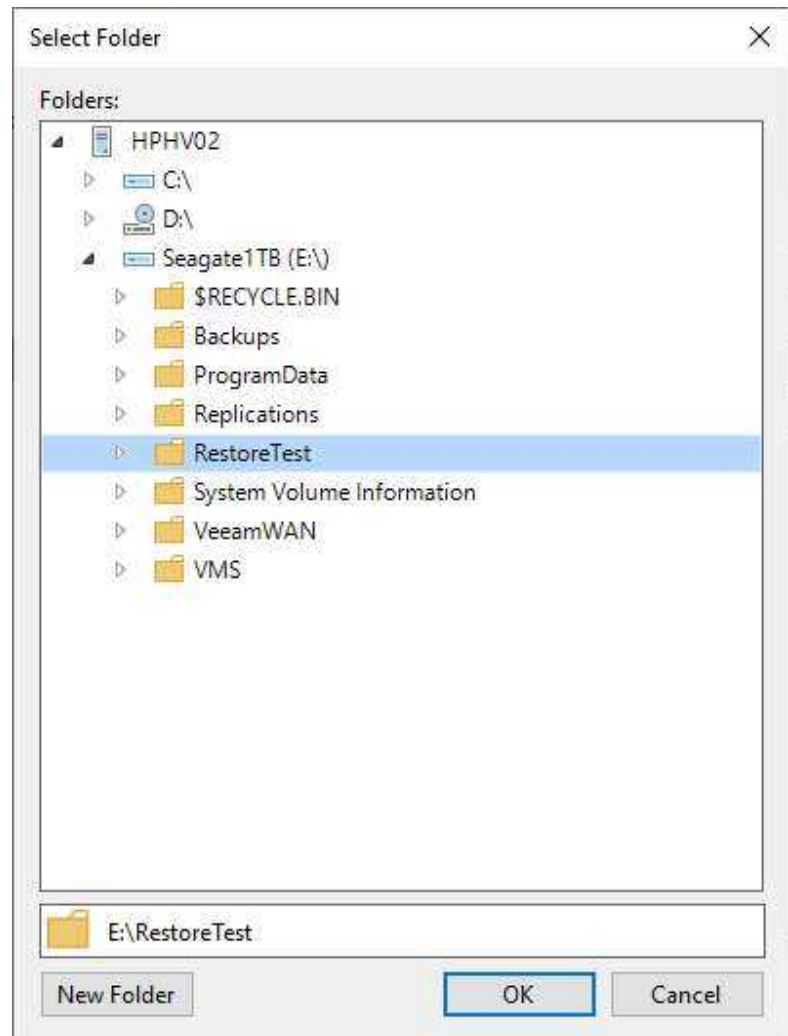
7. On the Destination page, select the server from the drop-down.



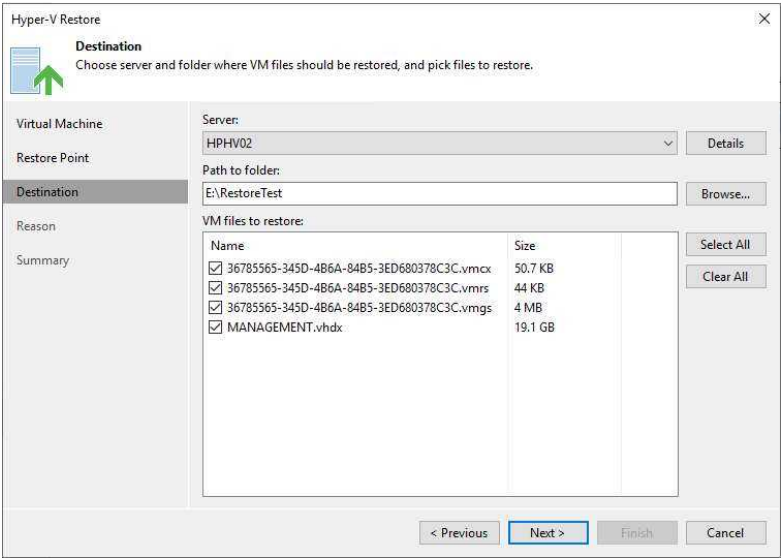
8. Click Browser in the path to folder session.



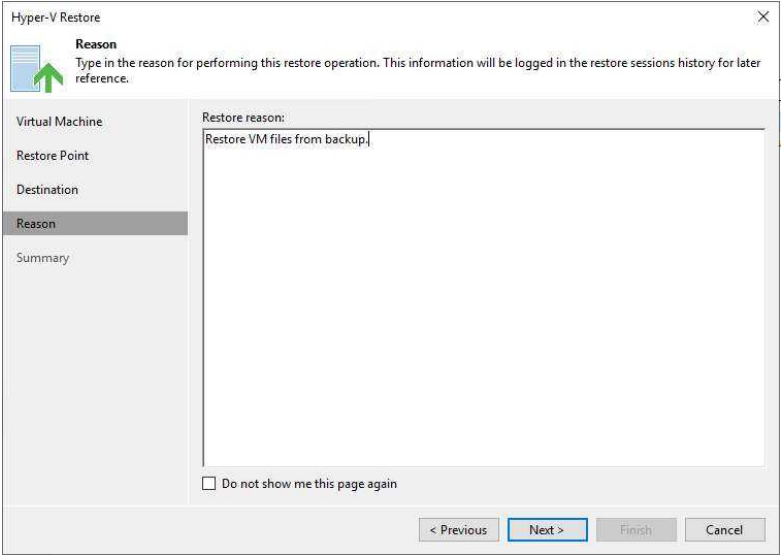
9. On the Select Folder page, select the folder. Click OK.



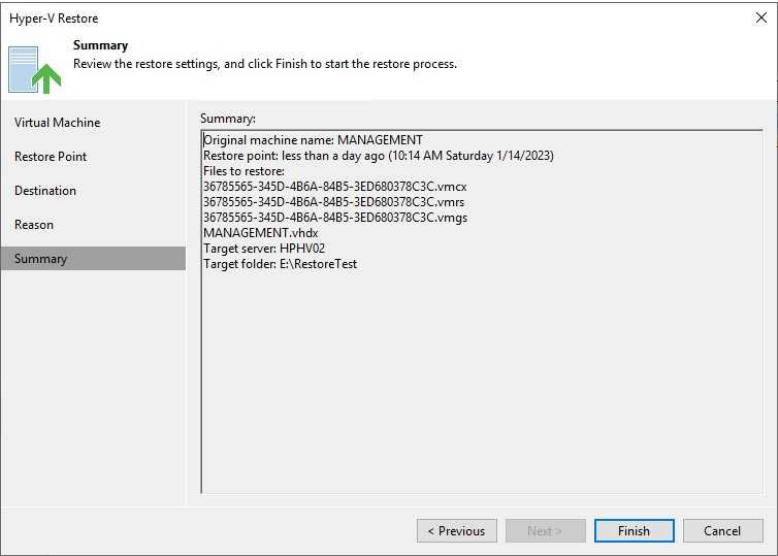
10. Select the files check box from the VM files to restore list, and click Next.



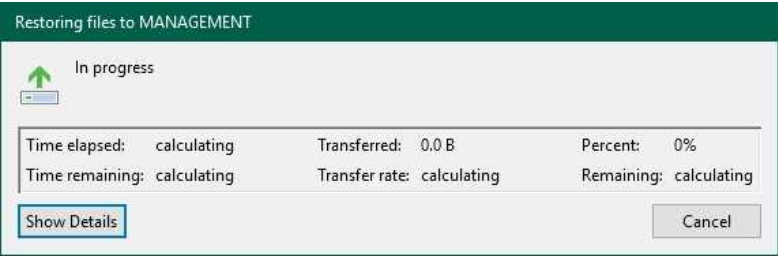
11. On the Reason page, enter the reason for restoring the selected VMs and click Next.



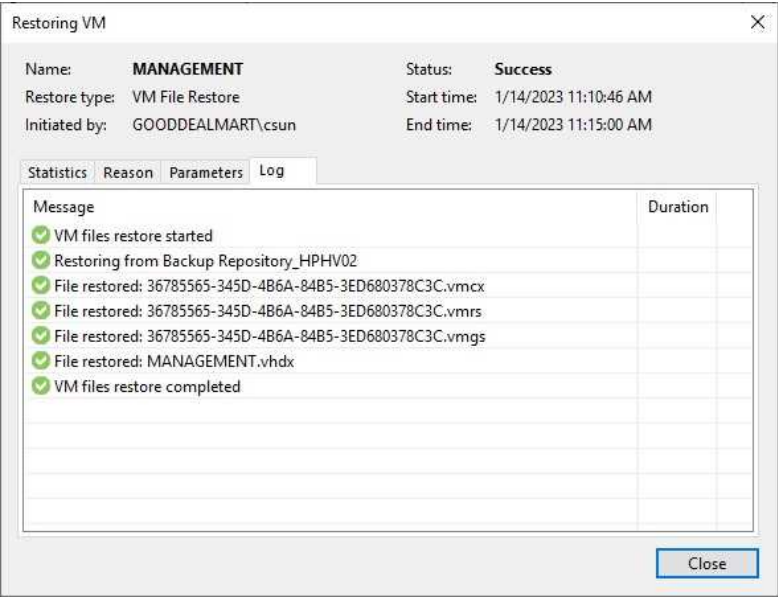
12. On the Summary page, click Finish.



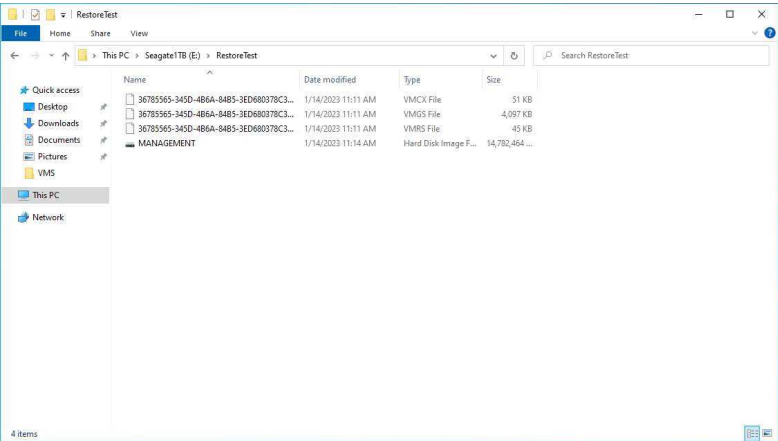
13. On the Restoring VM page, click Show Details.



14. Select log on the Restoring VM page, ensure the restore VM files are completed successfully and click Closed.



15. Verify restored VM files.



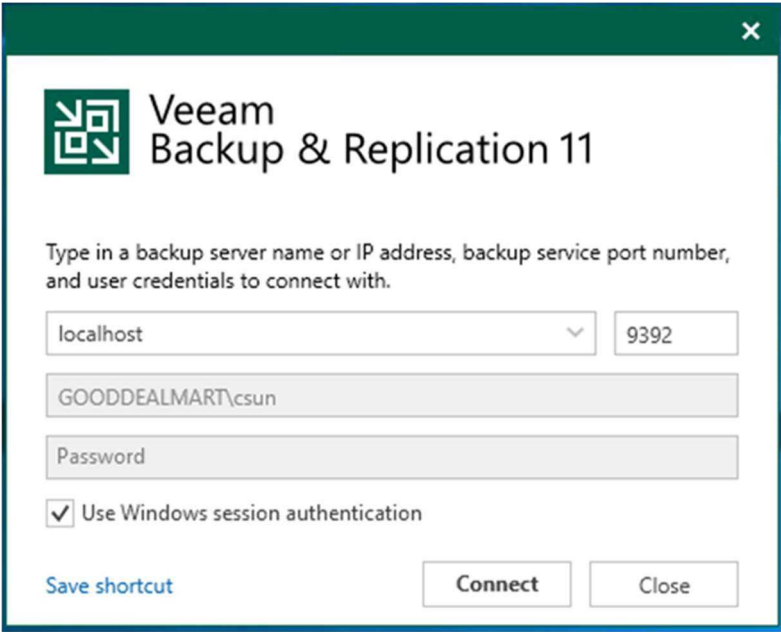
Restore Guest Files (or Folder) for Microsoft Windows

You can restore files from Microsoft Windows VMs with NTFS, FAT, and ReFS file systems using the restore from FAT, NTFS, and ReFS methods.

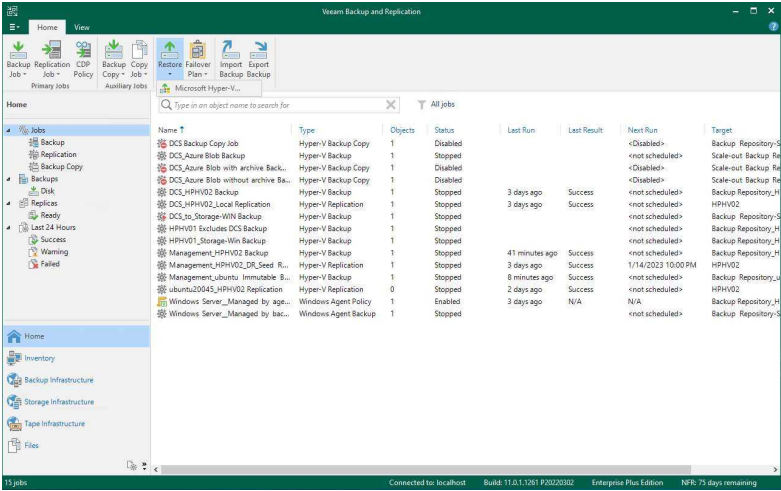
You can restore files to their original or new location, use Microsoft Windows File Explorer to work with the converted files or launch application item restore for the files.

Instructions	Screenshot (if applicable)
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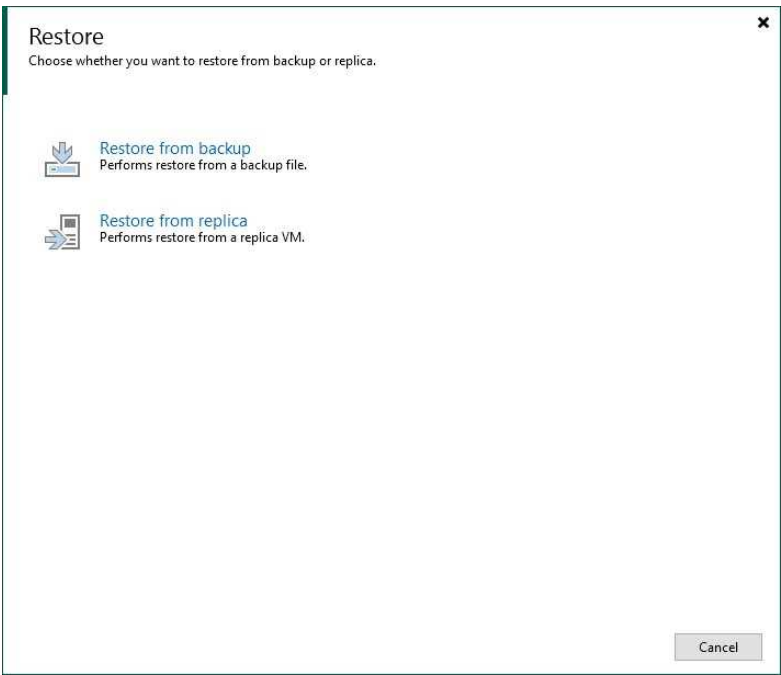
- 17. Log in to the Veeam Backup and replication manager server.
- 18. Open the Veeam Backup & Replication Console, and click Connect.



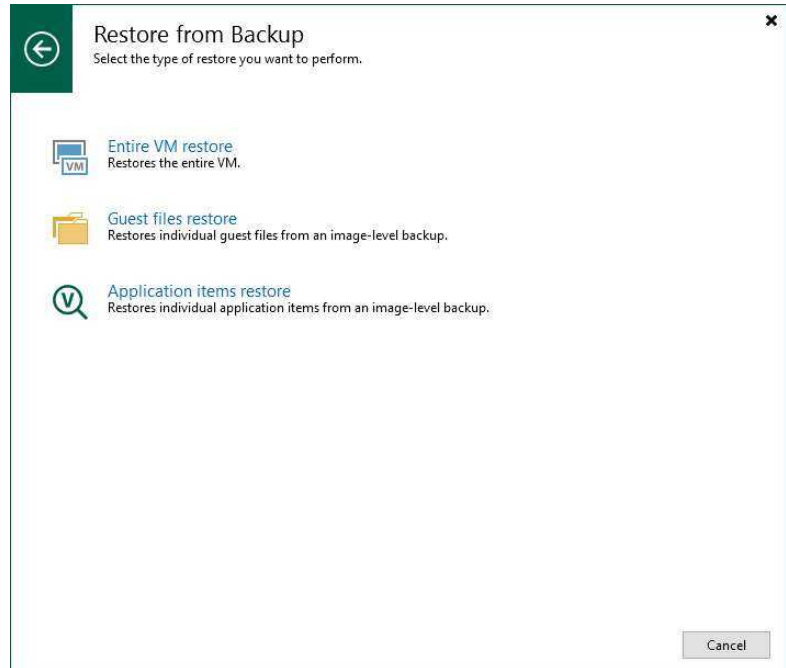
19. On the Home page, click Restore and select Microsoft Hyper-V.



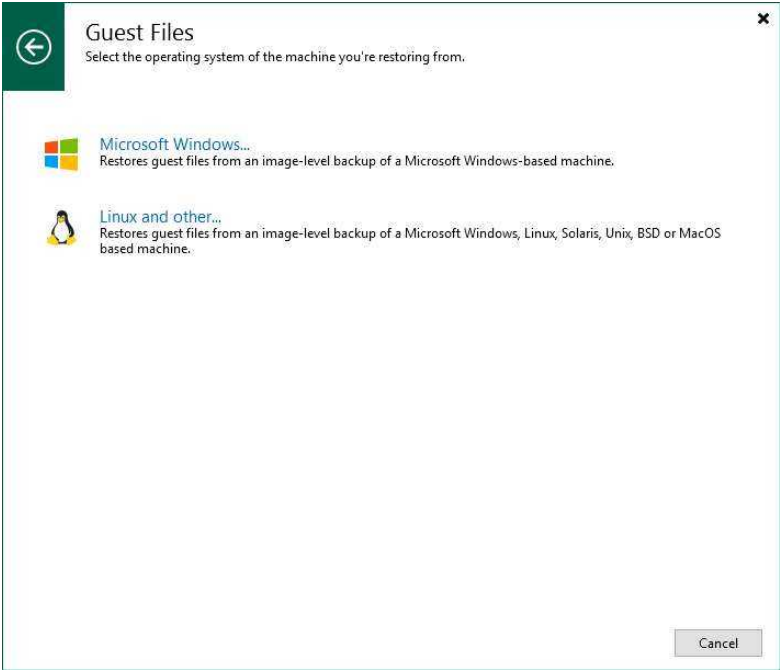
20. On the Restore page, select Restore from backup.



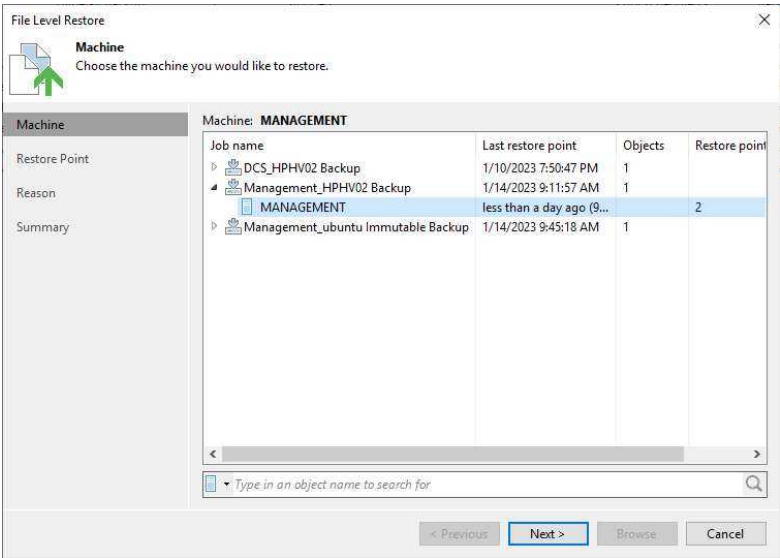
21. On the Restore from a Backup page, select Guest files restore.



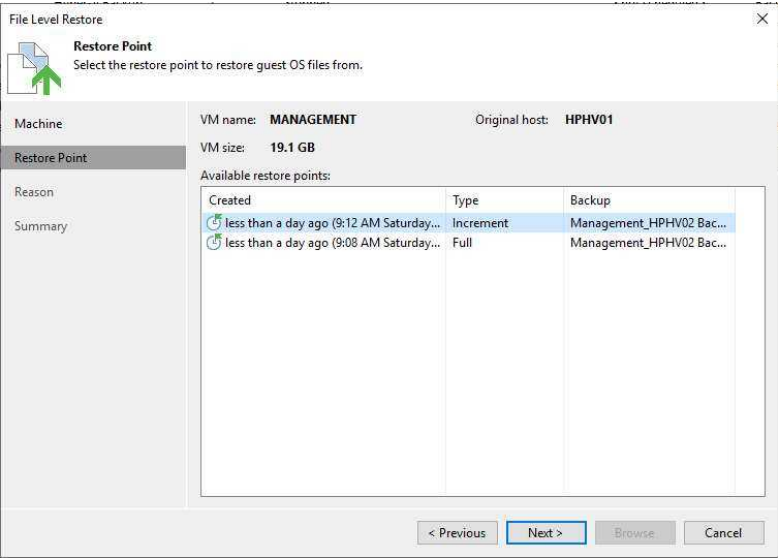
22. On the Guest files page, select Microsoft Windows.



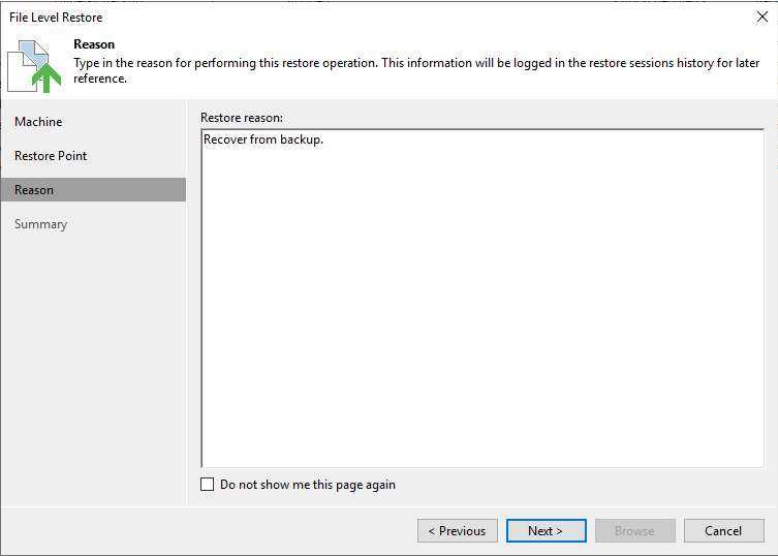
23. On the Machine page, expand the backup job.
24. Select the machine and click Next.



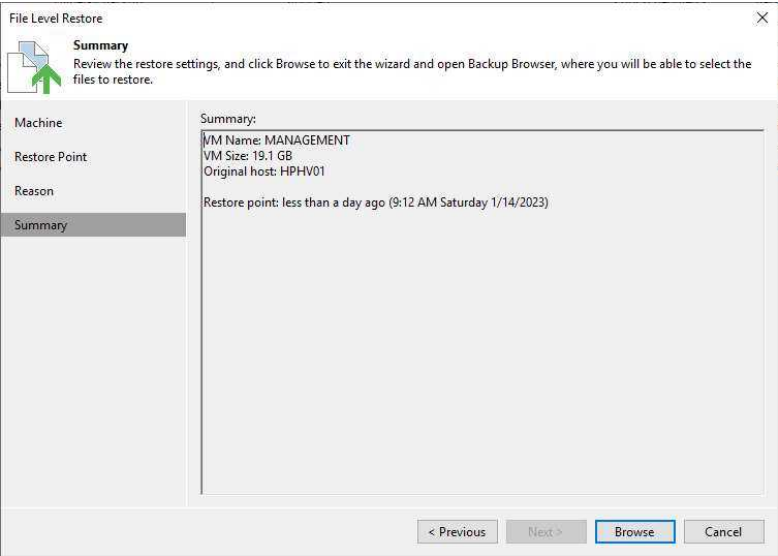
25. Select the restore point on the Restore Point page and click Next.



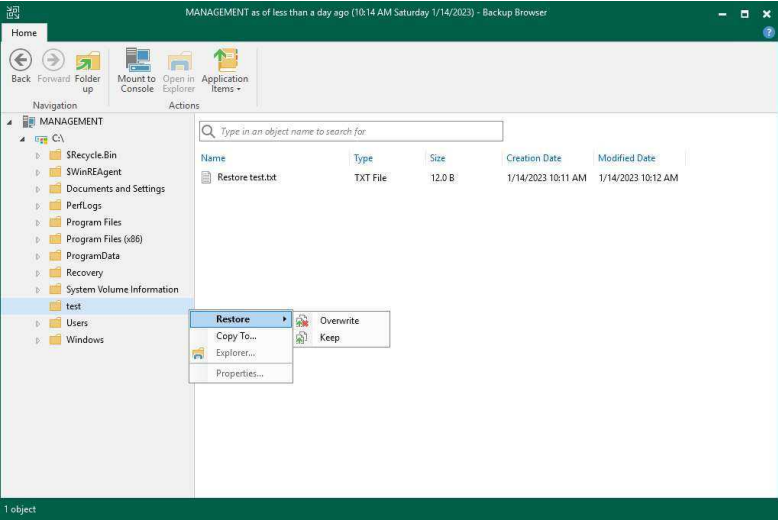
26. On the Reason page, enter the reason for restoring the selected VMs and click Next.



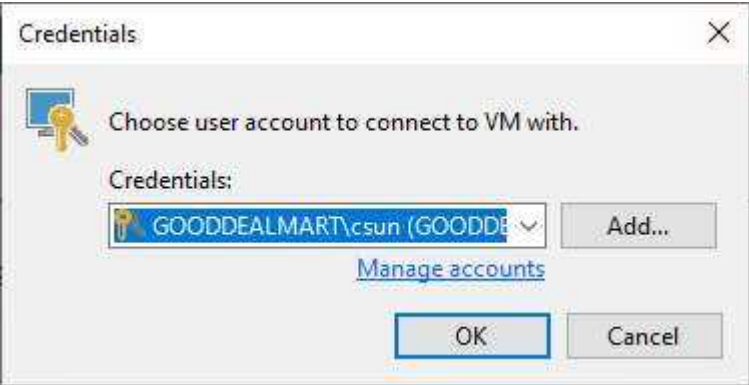
27. On the Summary page, click Browse.



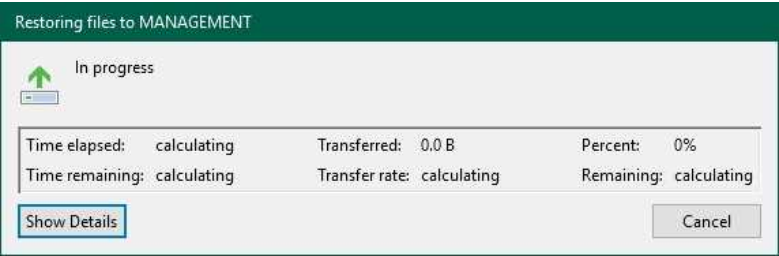
28. On the Backup Browser page, expand the disk, select the file or folder, and right-click the file or folder.
29. Select Restore and click Overwrite or Keep.



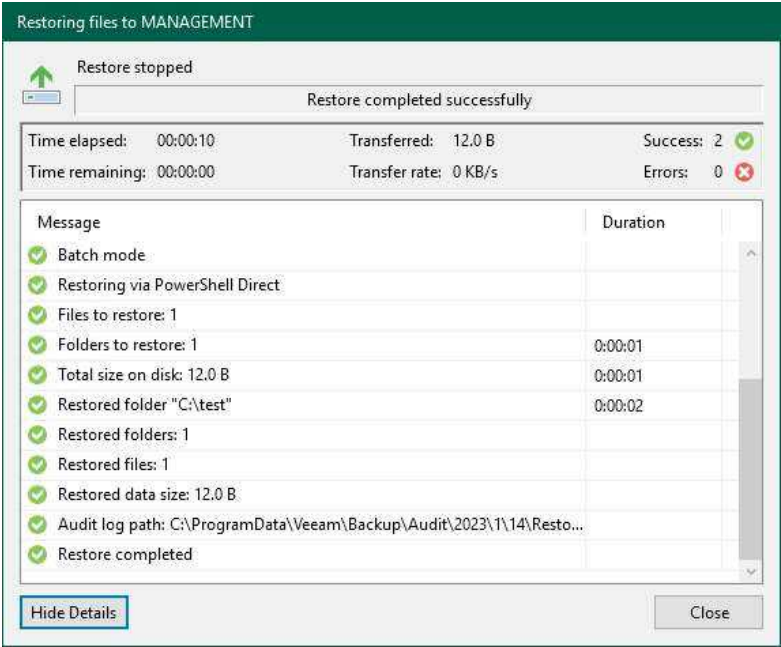
30. Select an account from the Credentials drop-down list on the Credentials page and click OK.



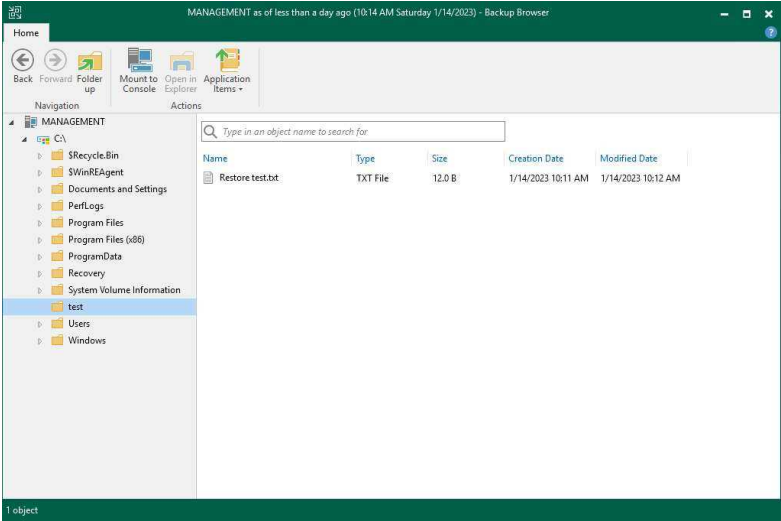
31. On the Restoring files page, click Show Details.



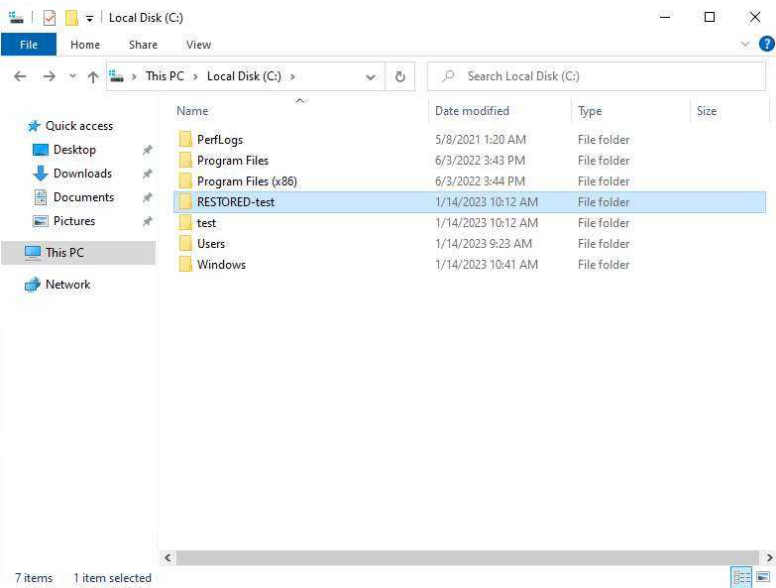
32. On the Restoring files page, ensure the file or folder restore is successful and click Close.



33. Close the Backup Browser.



34. Verify the restored file or folder.



Chapter 7

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- www.checkyourlogs.net

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