Veeam Backup and Replication Operational Guide

Volume 3

Based on Version 12

Focused on Microsoft Hyper-V

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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,

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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. Check out 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 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 Sun is a CISCO CERTIFIED INTERNETWORK EXPERT (CCIE No.4531) and MCSE, MCIPT, Citrix CCA with over twenty years in the planning, design, and implementation of network technologies and Management and system integration. Background includes hands-on experience with multi-platform, all LAN/WAN topologies, network administration, E-mail and Internet systems, security products, PCs and Servers environment. Expertise is analyzing users' needs and coordinating system designs from concept through implementation. Exceptional analysis, organization, communication, and interpersonal skills. Demonstrated ability to work independently or as an integral part of a team to achieve objectives and goals. Specialties: CCIE /CCNA / MCSE / MCITP / MCTS / MCSA / Solution Expert / CCA

Cary is a very active blogger at 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. In addition, 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 Back 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 (version21H2, 22H2), 10 (from version 1909 to version 22H2), 10 LTS (versions LTSB 1607, LTSC 1809, LTSC 2021)
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, RDP client version 7.0 or later. Option- Microsoft System Center Virtual Machine Manager 2019, 1807, 1801, Microsoft System Center 2016 Virtual Machine Manager Admin UI, Microsoft System Center 2012 R2 Virtual Machine Manager Admin UI, Microsoft

	System Center 2012 SP1 Virtual Machine Manager Admin UI.
Database	Microsoft SQL Server 2022, 2019, 2017, 2016, 2014, 2012

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, 11 (version21H2, 22H2), 10 (from version 1909 to version 22H2), 10 LTS (versions LTSB 1607, LTSC 1809, LTSC 2021)
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, 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

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, 11 (version21H2, 22H2), 10 (from version 1909 to version 22H2), 10 LTS (versions LTSB 1607, LTSC 1809, LTSC 2021)

Veeam Backup Repository Server

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

Components	Description
Windows OS Platform	Windows Server 2022, 2019, 2016, 2012 R2, 2012, 11 (version21H2, 22H2), 10 (from version 1909 to version 22H2), 10 LTS (versions LTSB 1607, LTSC 1809, LTSC 2021)
Linux distributions (64-bit versions)	CentOS 7.x, Debian 10.0 to 11.0, RHEL 7.0 to 9.1, Oracle Linux 7 (UEK3) to 9 (UEK R7), Oracle Linux 7 to 9 (RHCK), RHEL 7.0 to 9.1, SLES 12 SP4 or later, 15 SP1 or later, Ubuntu: 18.04 LTS, 20.04 LTS, and 22.04 LTS
Linux distributions (advanced XFS integration (fast clone))	Debian 10.x, and 11, RHEL 8.2 to 9.1, SLES 15 SP2, SP3, SP4, Ubuntu 18.04 LTS, 20.04 LTS, 22.04 LTS

Veeam Tape Server

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

Components	Description

Windows OS Platform	Windows Server 2022, 2019, 2016, 2012 R2, 2012, 11 (version21H2, 22H2), 10 (from version 1909 to version 22H2), 10 LTS (versions LTSB 1607, LTSC 1809, LTSC 2021)
Linux distributions (64-bit versions)	CentOS 7.x, Debian 10.0 to 11.0, Oracle Linux 7 (UEK3) to 9 (UEK R7), Oracle Linux 7 to 9 (RHCK), RHEL 7.0 to 9.1, SLES 12 SP4 or later, 15 SP1 or later, Ubuntu 18.04 LTS, 20.04 LTS, 22.04 LTS

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, 11 (version21H2, 22H2), 10 (from version 1909 to version 22H2), 0 LTS (versions LTSB 1607, LTSC 1809, LTSC 2021)

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, 11 (version21H2, 22H2), 10 (from version 1909 to version 22H2), 0 LTS (versions LTSB 1607, LTSC 1809, LTSC 2021)
Linux distributions	CentOS 7.x, Debian 10.0 to 11.0, Oracle Linux 7 (UEK3) to 9 (UEK R7), Oracle Linux 7 to 9 (RHCK), RHEL 7.0 to 9.1, SLES

	12 SP4 or later, 15 SP1 or later, Ubuntu 18.04 LTS, 20.04 LTS, 22.04 LTS

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
SharePoint	SharePoint 2022, 2019, 2016, 2013
SQL Server	SQL Server 2022 (only for Windows), 2019 (only for Windows), 2017 (only for Windows), 2016 SP2, 2014 SP3, 2012 SP4, 2008 R2 SP3, 2008 SP4
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
PostgreSQL	PostgreSQL 15, 14, 13, 12

Firewall Open 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	445 135
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

Veeam backup & replication manager server	Linux servers	TCP	22
		TCP	6162
		TCP	2500 to 3300
Linux Servers	Veeam backup & replication manager server	TCP	2500 to 3300

Veeam Backup Manager 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	TCP	8100
	Hyper-V Host server	TCP	445 135
		TCP	6160
		TCP	6162
		TCP	6163
		TCP	2500 to 3300
		TCP	49152 to 65535
	Veeam Backup & Replication	TCP	1433

	configuration database server		
	DNS server	UDP	53
	Veeam update notification server (dev.veeam.com)	HTTPS TCP	443
	Veeam update license server (vbr.butler.veeam.com, autolk.veeam.com)	TCP	443
	SMB3 server	TCP	6160
		TCP	6162
	Veeam backup & replication manager server	TCP	9501
		TCP	6172
Management client PC		TCP	3389
REST client		TCP	9419
SCVMM		TCP	8732

Veeam Backup & Replication Console

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

Sources	Target	Network Protocol	Port Number
Veeam backup & replication console server	Veeam backup & replication manager server	TCP	9392
		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
Veeam backup & replication manager server	Offhost backup proxy	TCP	6163
	SMB3 server	TCP	6163
	Offhost file proxy	TCP	6210

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 share is as a backup repository	TCP UDP	2049
		TCP UDP	111
	NFS share as a backup repository (version 3)	TCP UDP	mountd_port
		TCP UDP	statd_port
		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	xxx.blob.core.windows.net for the region of Global xxx.blob.core.chinacloudapi.cn for the region of China xxx.blob.core.cloudapi.de for the region of Germany xxx.blob.core.usgovcloudapi.net for the region of Government
		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
		TCP	443

Veeam gateway server	Azure Object Storage		
		HTTPS	xxx.blob.core.windows.net for the region of Global xxx.blob.core.chinacloudapi.cn for the region of China xxx.blob.core.cloudapi.de for the region of Germany xxx.blob.core.usgovcloudapi.net for the region of Government
		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
Veeam gateway server	Azure proxy appliance	TCP	443
		SSH	22

		HTTPS	Public/private IPv4 addresses of Azure appliance
Azure proxy appliance	Azure object storage	TCP	443
		HTTPS	xxx.blob.core.windows.net for the region of Global xxx.blob.core.chinacloudapi.cn for the region of China xxx.blob.core.cloudapi.de for the region of Germany xxx.blob.core.usgovcloudapi.net for the region of Government
		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
Veeam gateway server	Windows SMB (CIFS) backup repository	TCP	445 135

Technet24

	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
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

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		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 Agent 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

Log Shipping Server Connections

The Log Shipping Server connections require opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
	Log shipping server	TCP	445

Veeam backup and replication manager server			135
		TCP	6160
		TCP	6162
		TCP	49152 to 65535
Log shipping server	Veeam backup repository	TCP	2500 to 3300

SQL Guest OS Connections

The SQL Server connections require opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam Guest interaction proxy	SQL VM guest OS	TCP	445 135
		TCP	2500 to 3300
		TCP	6160 11731
		TCP	49152 to 65535
		TCP	6167

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SQL VM guest OS	Veeam Guest interaction proxy	TCP	2500 to 3300
	Veeam backup repository	TCP	2500 to 3300
	Log shipping server	TCP	2500 to 3300

Oracle Guest OS Connections

The Oracle Server connections require opening the following inbound and outbound ports.

Sources	Target	Network Protocol	Port Number
Veeam Guest interaction proxy	Oracle VM guest OS (Microsoft Windows)	TCP	445 135
		TCP	2500 to 3300
		TCP	6160 11731
		TCP	49152 to 65535
		TCP	6167
	Oracle VM guest OS (Linux)	TCP	22
		TCP	2500 to 3300

Oracle VM guest OS	Veeam Guest interaction proxy	TCP	2500 to 3300
	Veeam backup repository	TCP	2500 to 3300
	Log shipping server	TCP	2500 to 3300

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

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		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 helper host	TCP	22

Veeam backup and replication manager server		TCP	2500 to 3300
		TCP	6162
Veeam mount server	Veeam helper host	TCP	22
		TCP	2500 to 3300

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

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		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

The 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 Application Item of Active Directory Domain Controller Restore requires opening the following inbound and outbound ports.

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 (for Microsoft Windows server 2008 and later)

Application Item of Exchange Server Restore

The Exchange Server Restore Application Item requires opening the inbound and outbound ports.

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

The SQL Server Restore Application Item requires opening the inbound and outbound ports.

Technet24

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

Technet24

Chapter 2

Deployment

This chapter will walk you through installing and upgrading the Veeam Backup and Replication components. You must ensure that the devices meet the system requirements before installing or upgrading Veeam Backup and Replication components on the machine.

Veeam Backup and Replication v12 includes several new features and improvements, including:

- Direct-to-Object
- Direct-to-Cloud
- Immutable backups
- Hardened repository improvements
- Microsoft Azure Blob Storage immutability support
- HPE Storage immutability support
- Multi-factor authentication
- Kerberos-only authentication
- IPv6 support
- gMSA accounts for Windows
- Single-use credentials for Linux
- Automatic console lockouts
- Best practices analyzer
- Network-less discovery and deployment
- Dynamic protection scope
- in-cloud data flow

- Full portability
- PostgreSQL support for a configuration database
- VeeaMover
- Move backups between jobs
- Copy backups between repositories
- Multiple gateway server support
- Direct to archive
- Object storage as performance extent

These are only a few new features and improvements in Veeam Backup and Replication v12. Overall, the new release focuses on providing faster and more efficient backup and recovery, enhanced security, and greater flexibility and ease of management.

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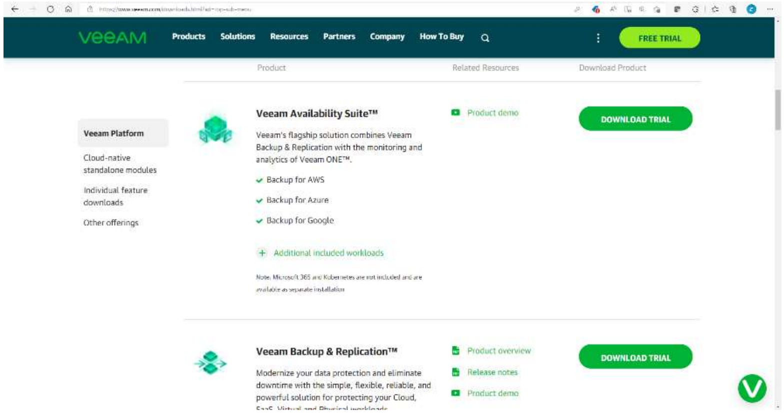
Install Veeam Backup and Replication v12 with PostgreSQL

When you install Veeam Backup & Replication, the Veeam Backup & Replication console is automatically installed on the backup server.

You can choose PostgreSQL as a Veeam Backup & Replication database. It has no size limit or computes restrictions and has improved performance over SQL Express.

Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and Replication manager server. 2. Download the Veeam Backup and Replication v12 ISO image file from the Veeam website sign-in required).	

veeam
Products
Solutions
Resources
Partners
Company
How To Buy
FREE TRIAL
Product
Related Resources
Download Product
Veeam Platform
Cloud-native standalone modules
Individual feature downloads
Other offerings
Product demo
DOWNLOAD TRIAL
Additional included workloads
Product overview
Release notes
Product demo
DOWNLOAD TRIAL

Veeam Availability Suite™

Veeam's flagship solution combines Veeam Backup & Replication with the monitoring and analytics of Veeam ONE™.

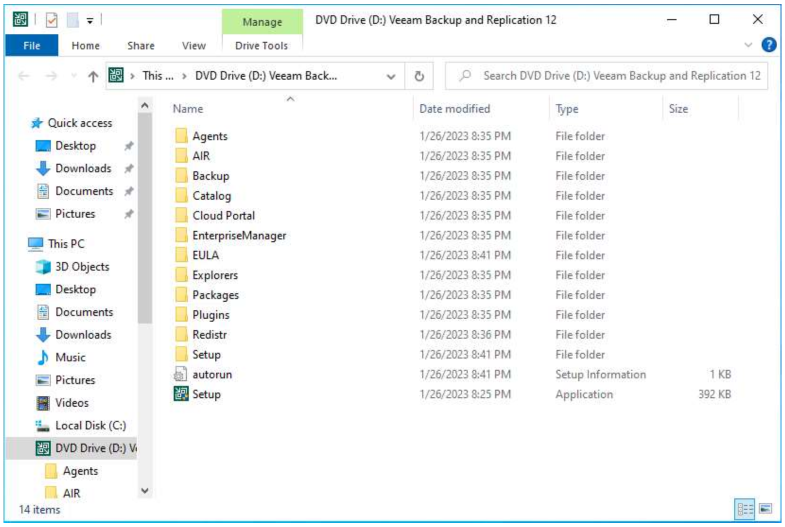
- ✓ Backup for AWS
- ✓ Backup for Azure
- ✓ Backup for Google

Note: Microsoft 365 and Kubernetes are not included and are available as separate installation

Veeam Backup & Replication™

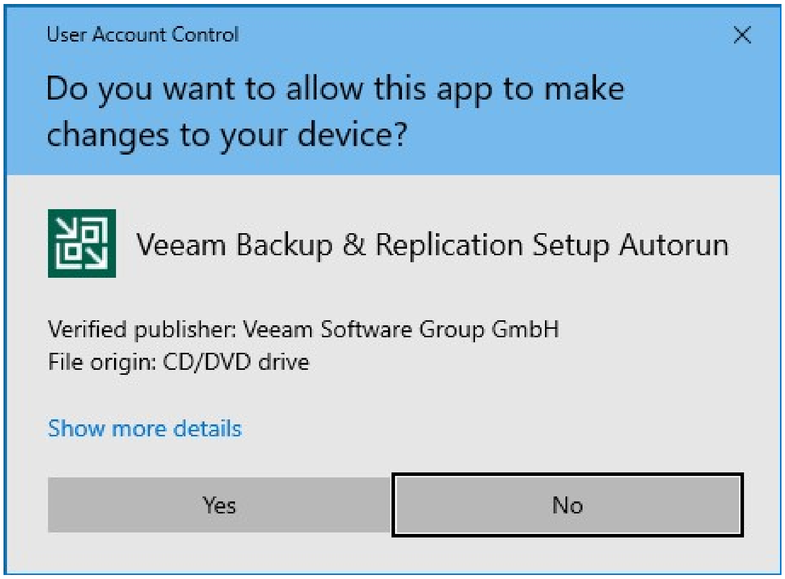
Modernize your data protection and eliminate downtime with the simple, flexible, reliable, and powerful solution for protecting your Cloud,

3. Mount the Veeam Backup and Replication v12 iso image file.
4. Run Setup.exe.


Manage
DVD Drive (D:) Veeam Backup and Replication 12
File
Home
Share
View
Drive Tools
This ... › DVD Drive (D:) Veeam Back...
Search DVD Drive (D:) Veeam Backup and Replication 12
Quick access
Desktop
Downloads
Documents
Pictures
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
DVD Drive (D:) V
Agents
AIR
14 items

Name	Date modified	Type	Size
Agents	1/26/2023 8:35 PM	File folder	
AIR	1/26/2023 8:35 PM	File folder	
Backup	1/26/2023 8:35 PM	File folder	
Catalog	1/26/2023 8:35 PM	File folder	
Cloud Portal	1/26/2023 8:35 PM	File folder	
EnterpriseManager	1/26/2023 8:35 PM	File folder	
EULA	1/26/2023 8:41 PM	File folder	
Explorers	1/26/2023 8:35 PM	File folder	
Packages	1/26/2023 8:35 PM	File folder	
Plugins	1/26/2023 8:35 PM	File folder	
Redistr	1/26/2023 8:36 PM	File folder	
Setup	1/26/2023 8:41 PM	File folder	
autorun	1/26/2023 8:41 PM	Setup Information	1 KB
Setup	1/26/2023 8:25 PM	Application	392 KB

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


User Account Control
Yes
No

Do you want to allow this app to make changes to your device?

Veeam Backup & Replication Setup Autorun

Verified publisher: Veeam Software Group GmbH
File origin: CD/DVD drive

Show more details

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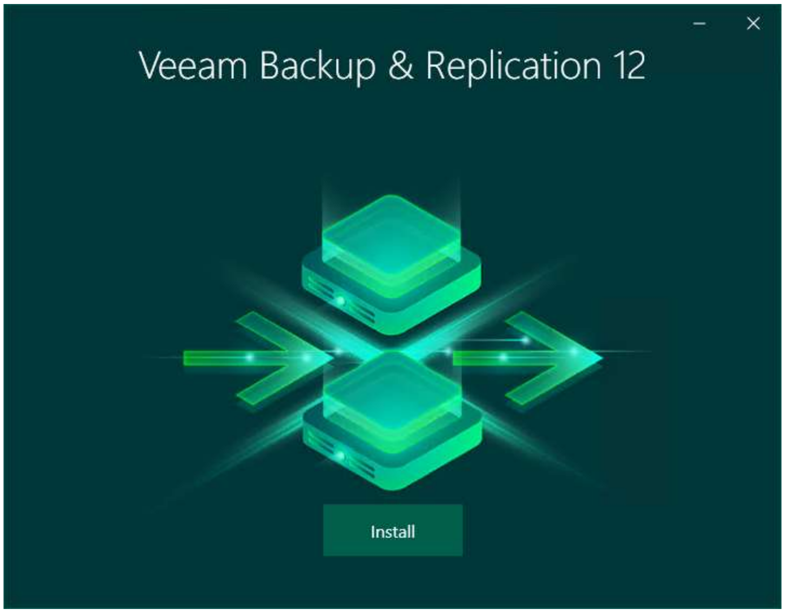
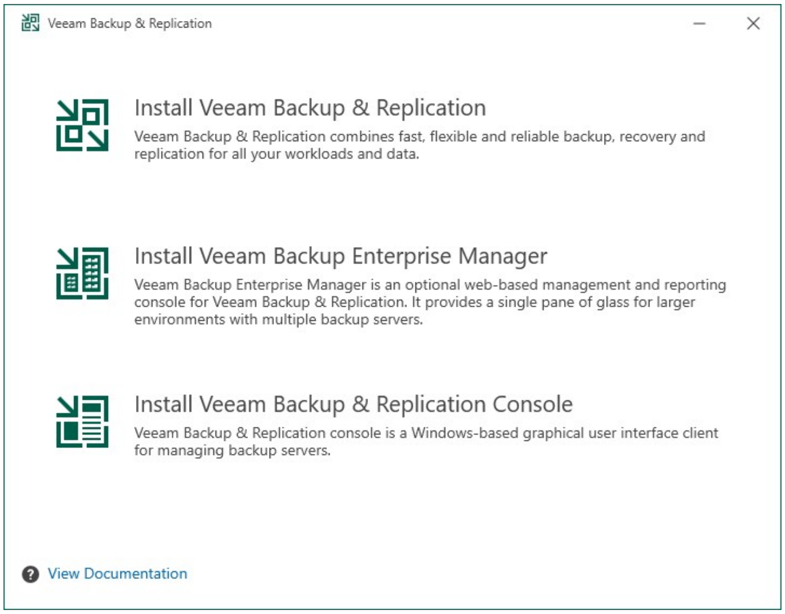
6. On the Veeam Backup & Replication 12 page, click Install.


Veeam Backup & Replication 12
Install

7. Select Install Veeam Backup & Replication on the Veeam Backup & Replication page.


Veeam Backup & Replication

Install Veeam Backup & Replication

Veeam Backup & Replication combines fast, flexible and reliable backup, recovery and replication for all your workloads and data.

Install Veeam Backup Enterprise Manager

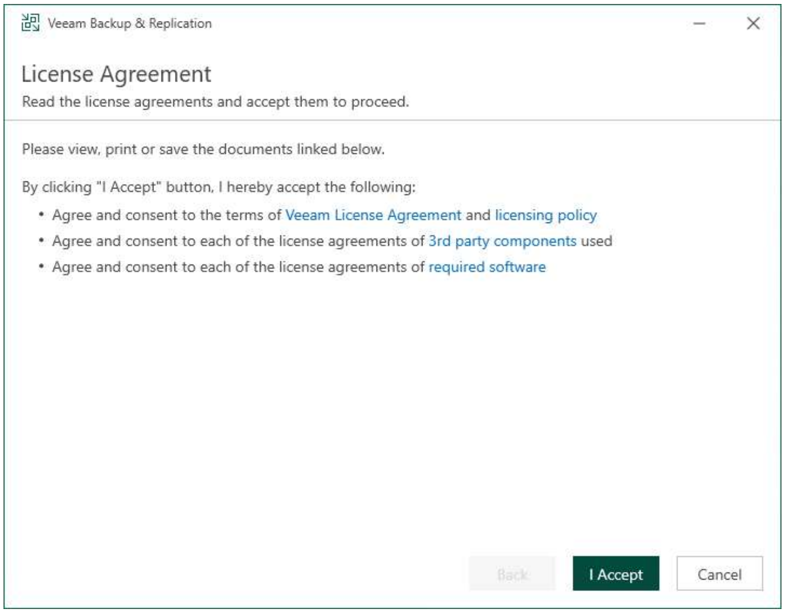
Veeam Backup Enterprise Manager is an optional web-based management and reporting console for Veeam Backup & Replication. It provides a single pane of glass for larger environments with multiple backup servers.

Install Veeam Backup & Replication Console

Veeam Backup & Replication console is a Windows-based graphical user interface client for managing backup servers.

View Documentation

8. Click I Accept on the License Agreement page.



License Agreement

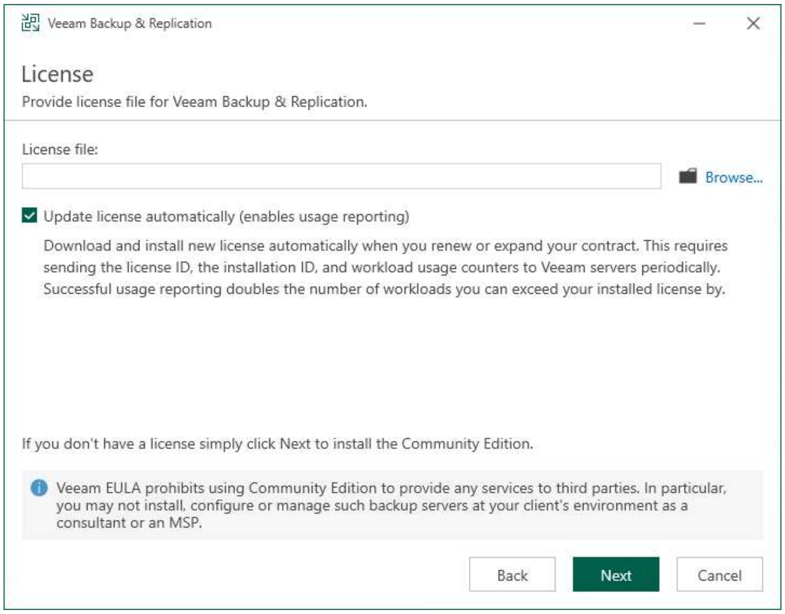
Read the license agreements and accept them to proceed.

Please view, print or save the documents linked below.

By clicking "I Accept" button, I hereby accept the following:

- Agree and consent to the terms of Veeam License Agreement and licensing policy
- Agree and consent to each of the license agreements of 3rd party components used
- Agree and consent to each of the license agreements of required software

9. Click Browse on the License page.



License

Provide license file for Veeam Backup & Replication.

License file:

☑ Update license automatically (enables usage reporting)

Download and install new license automatically when you renew or expand your contract. This requires sending the license ID, the installation ID, and workload usage counters to Veeam servers periodically. Successful usage reporting doubles the number of workloads you can exceed your installed license by.

If you don't have a license simply click Next to install the Community Edition.

Veeam EULA prohibits using Community Edition to provide any services to third parties. In particular, you may not install, configure or manage such backup servers at your client's environment as a consultant or an MSP.

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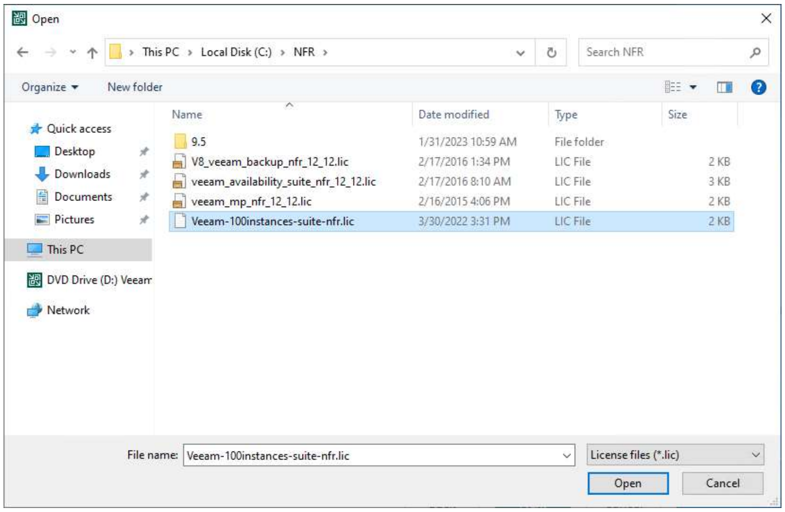
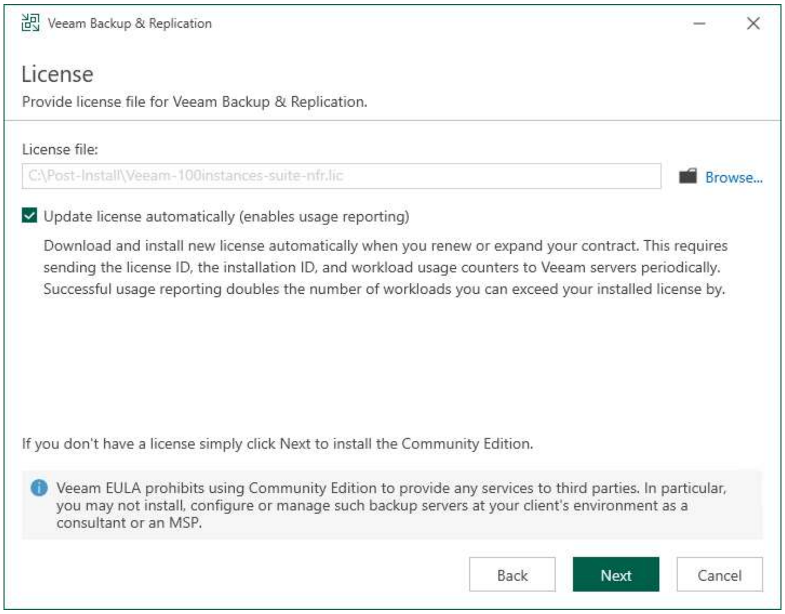
10. Select a license file for Veeam Backup & Replication and click Open.


Open
This PC › Local Disk (C:) › NFR ›
Search NFR
Organize
New folder
Quick access
Desktop
Downloads
Documents
Pictures
This PC
DVD Drive (D:) Veeam
Network
License files (*.lic)
Open
Cancel

Name	Date modified	Type	Size
9.5	1/31/2023 10:59 AM	File folder	
V8_veeam_backup_nfr_12_12.lic	2/17/2016 1:34 PM	LIC File	2 KB
veeam_availability_suite_nfr_12_12.lic	2/17/2016 8:10 AM	LIC File	3 KB
veeam_mp_nfr_12_12.lic	2/16/2015 4:06 PM	LIC File	2 KB
Veeam-100instances-suite-nfr.lic	3/30/2022 3:31 PM	LIC File	2 KB

File name: Veeam-100instances-suite-nfr.lic

11. On the License page, select Update license automatically (enable usage reporting). It will automatically download and install a new license when you renew or expand your contract.
12. Click Next.


Veeam Backup & Replication
Browse...
Back
Next
Cancel

License

Provide license file for Veeam Backup & Replication.

License file: C:\Post-Install\Veeam-100instances-suite-nfr.lic

☑ Update license automatically (enables usage reporting)

Download and install new license automatically when you renew or expand your contract. This requires sending the license ID, the installation ID, and workload usage counters to Veeam servers periodically. Successful usage reporting doubles the number of workloads you can exceed your installed license by.

If you don't have a license simply click Next to install the Community Edition.

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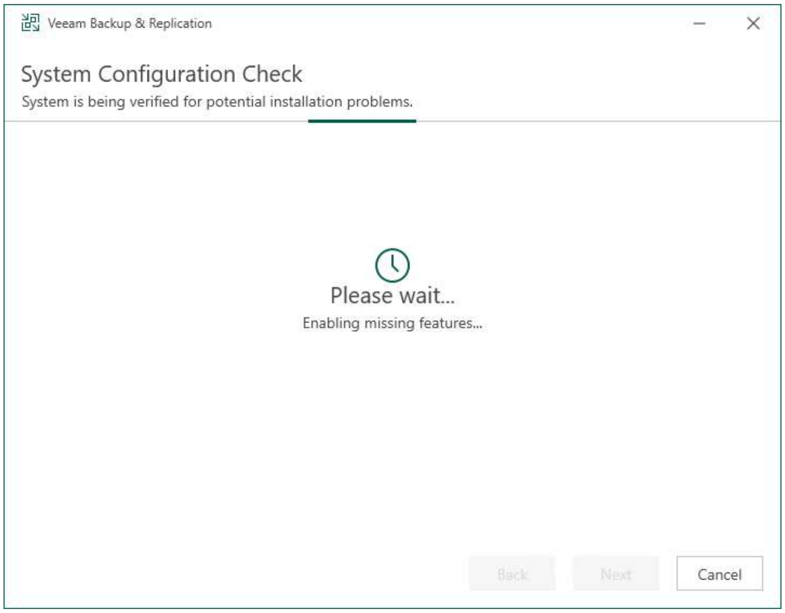
13. The setup wizard checks if the required software is installed on the machine during the System Configuration Check step. If required components are missing, the setup will attempt to install them independently. Rebooting is required after the components have been successfully installed. Click Reboot to restart the machine.



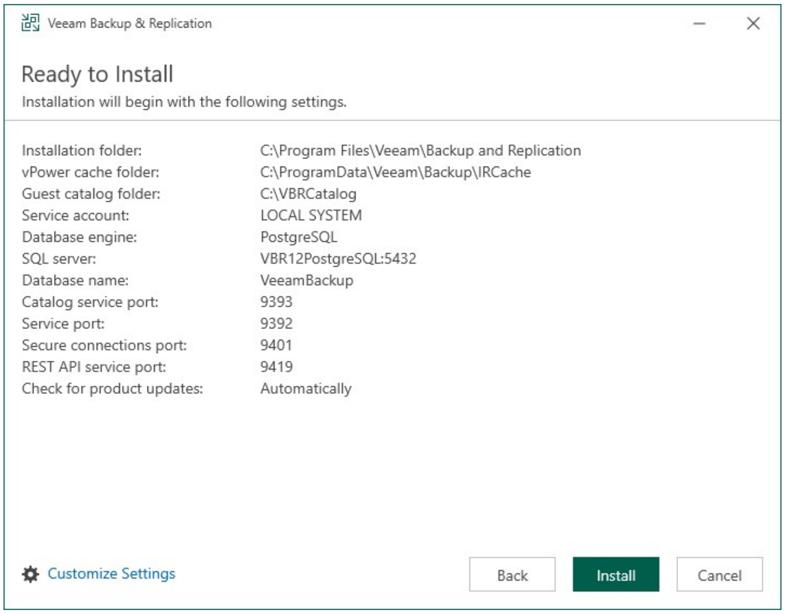
System Configuration Check

System is being verified for potential installation problems.

Please wait...

Enabling missing features...

14. Click Customize Settings on the Ready to Install page.



Ready to Install

Installation will begin with the following settings.

Installation folder:	C:\Program Files\Veeam\Backup and Replication
vPower cache folder:	C:\ProgramData\Veeam\Backup\IRCache
Guest catalog folder:	C:\VBRCatalog
Service account:	LOCAL SYSTEM
Database engine:	PostgreSQL
SQL server:	VBR12PostgreSQL:5432
Database name:	VeeamBackup
Catalog service port:	9393
Service port:	9392
Secure connections port:	9401
REST API service port:	9419
Check for product updates:	Automatically

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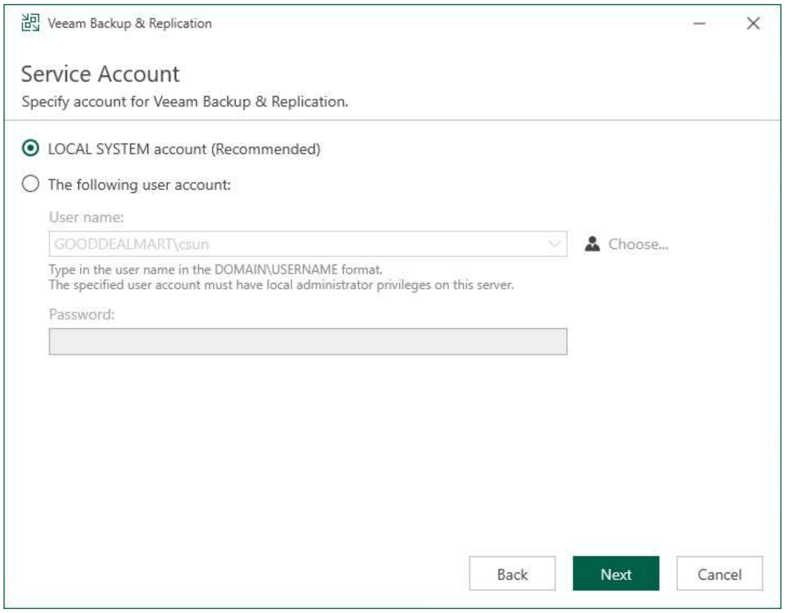
15. On the Service Account page, select LOCAL SYSTEM account and click Next.



Veeam Backup & Replication

Service Account

Specify account for Veeam Backup & Replication.

● LOCAL SYSTEM account (Recommended)

○ The following user account:

User name: GOODDEALMART\csun

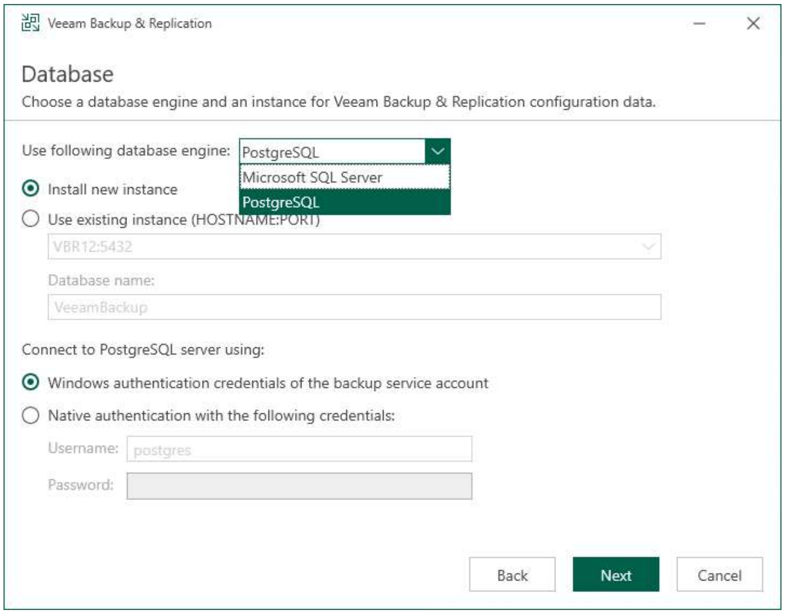
Choose...

Type in the user name in the DOMAIN\USERNAME format.
The specified user account must have local administrator privileges on this server.

Password:

Back
Next
Cancel

16. On the Database page, select PostgreSQL from the database engine drop-down list.
17. Select the Install a new instance option to install a new PostgreSQL instance. PostgreSQL 15.1 will be installed on the Veeam Backup & Replication server, and a database named VeeamBackup will be created.



Veeam Backup & Replication

Database

Choose a database engine and an instance for Veeam Backup & Replication configuration data.

Use following database engine: PostgreSQL

Microsoft SQL Server
PostgreSQL

● Install new instance

○ Use existing instance (HOSTNAME:PORT)

VBR12:5432

Database name: VeeamBackup

Connect to PostgreSQL server using:

● Windows authentication credentials of the backup service account

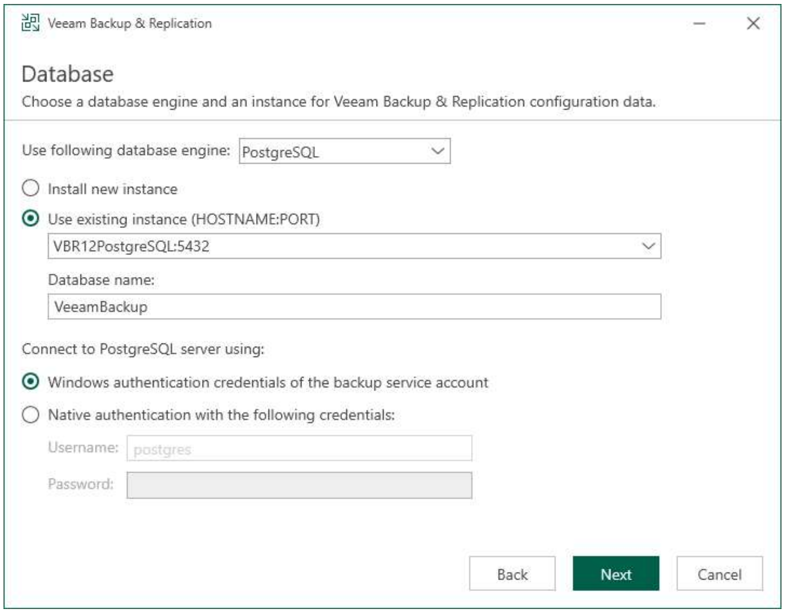
○ Native authentication with the following credentials:

Username: postgres

Password:

Back
Next
Cancel

18. Select the Use the existing instance option to use an already installed PostgreSQL instance. Then, in the HOSTNAME: PORT format, enter the instance name.
19. Enter a name for the Veeam Backup & Replication configuration database in the Database name field.
20. Select Windows authentication credentials of the backup service account to connect to PostgreSQL Server.
21. Click Next.



Database

Choose a database engine and an instance for Veeam Backup & Replication configuration data.

Use following database engine: PostgreSQL

○ Install new instance

● Use existing instance (HOSTNAME:PORT)

VBR12PostgreSQL:5432

Database name:

VeeamBackup

Connect to PostgreSQL server using:

● Windows authentication credentials of the backup service account

○ Native authentication with the following credentials:

Username: postgres

Password:

Note:

If you use an already installed PostgreSQL instance or make any changes to the machine hardware, you must perform additional PostgreSQL instance configuration. To accomplish this:

1. In the automatic mode, run the Set-VBRPSQLDatabaseServerLimits cmdlet.

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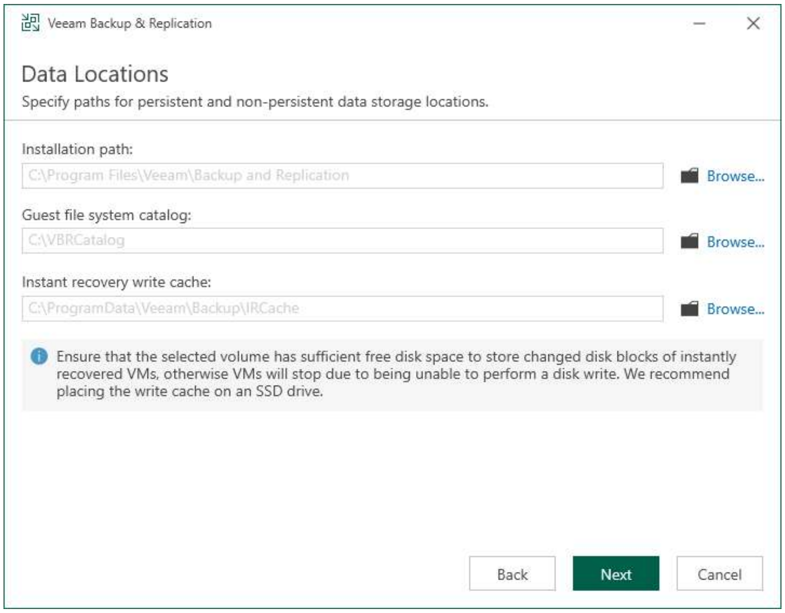
2. Start the PostgreSQL service again.

22. On the Data locations page, click Browse and select the path in the Installation path field.
23. Browse and select the path in the Guest file system catalog: field.
24. Click Browse and select the path in the Instant recovery write cache field.
25. Click Next.



Data Locations

Specify paths for persistent and non-persistent data storage locations.

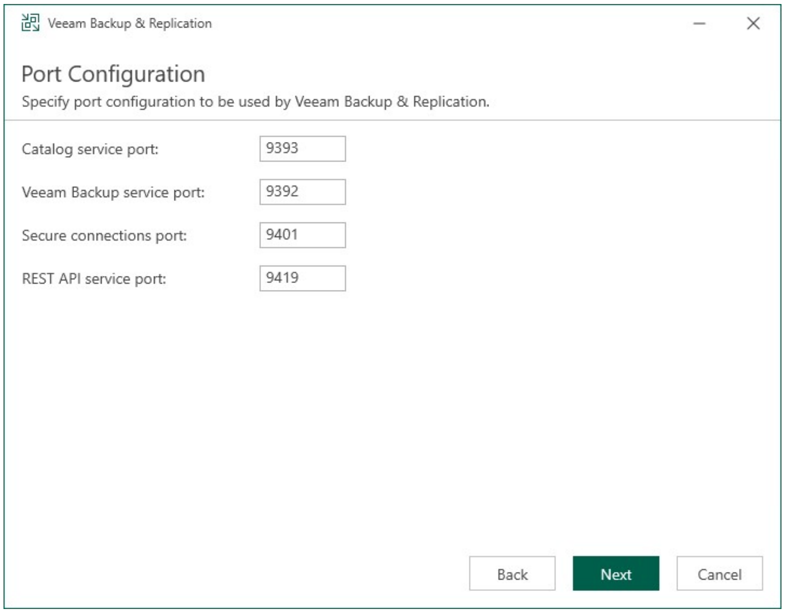
Installation path: C:\Program Files\Veeam\Backup and Replication

Guest file system catalog: C:\VBRCatalog

Instant recovery write cache: C:\ProgramData\Veeam\Backup\IRCache

Ensure that the selected volume has sufficient free disk space to store changed disk blocks of instantly recovered VMs, otherwise VMs will stop due to being unable to perform a disk write. We recommend placing the write cache on an SSD drive.

26. On the Port Configuration page, specify the port configuration to be used by Veeam Backup and Replication and click Next.



Port Configuration

Specify port configuration to be used by Veeam Backup & Replication.

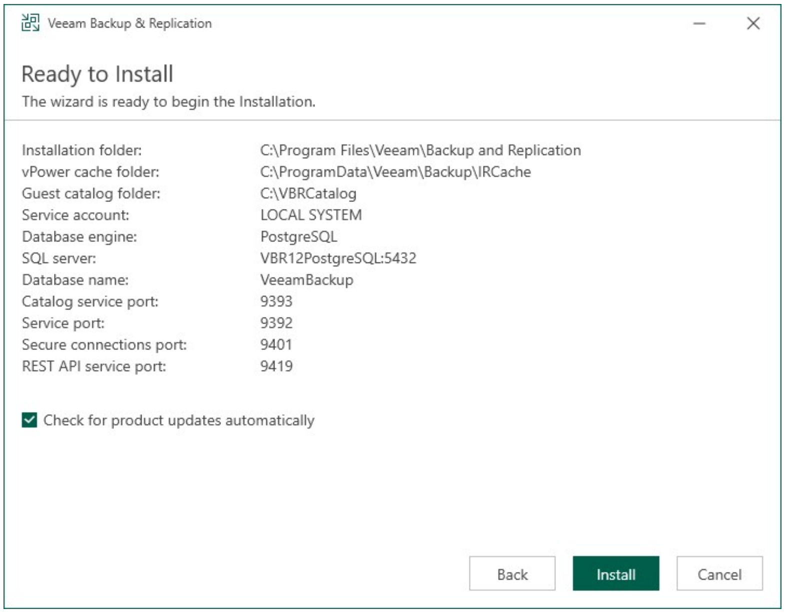
Catalog service port: 9393

Veeam Backup service port: 9392

Secure connections port: 9401

REST API service port: 9419

27. Click Install on the Ready to Install page.



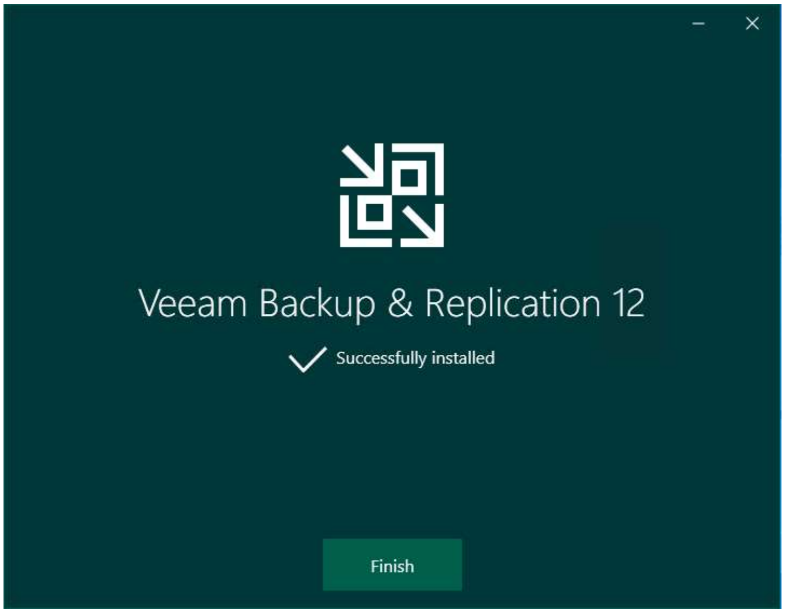
Ready to Install

The wizard is ready to begin the Installation.

Installation folder:	C:\Program Files\Veeam\Backup and Replication
vPower cache folder:	C:\ProgramData\Veeam\Backup\IRCache
Guest catalog folder:	C:\VBRCatalog
Service account:	LOCAL SYSTEM
Database engine:	PostgreSQL
SQL server:	VBR12PostgreSQL:5432
Database name:	VeeamBackup
Catalog service port:	9393
Service port:	9392
Secure connections port:	9401
REST API service port:	9419

☑ Check for product updates automatically

28. Click Finish on the Veeam Backup & Replication 12 Successfully installed page.



Veeam Backup & Replication 12

✓ Successfully installed

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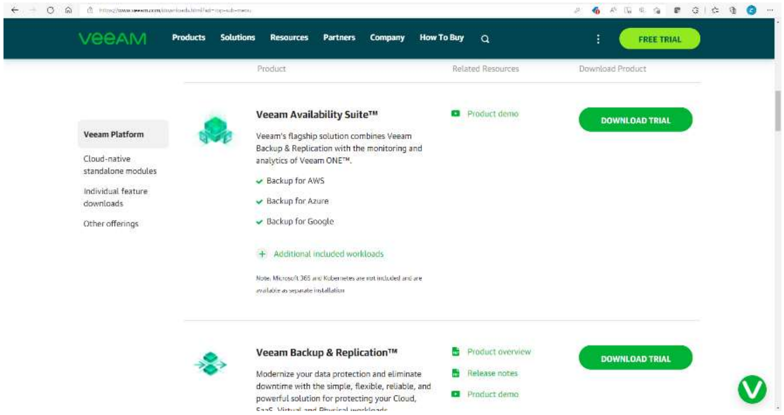
Install Veeam Backup and Replication v12 with Microsoft SQL (or SQL Express)

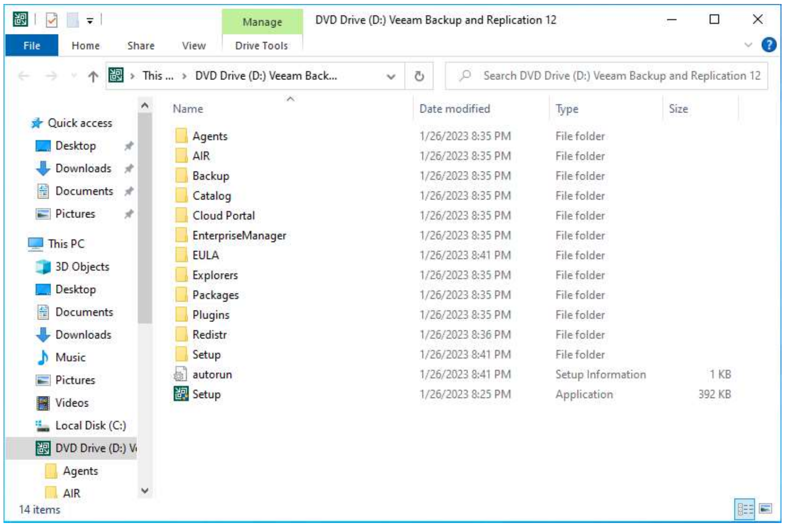
When you install Veeam Backup & Replication, the Veeam Backup & Replication console is automatically installed on the backup server.

You can choose Microsoft SQL as a Veeam Backup & Replication database. However, you installed a Microsoft SQL Server (or Express), either locally on the backup manager server or remotely. If Microsoft SQL Server is not already installed. In that case, the Veeam Backup & Replication won't install the Microsoft SQL Server Express Edition on the backup server automatically. You must install it before installing Veeam Backup and Replication v12 RTM version.

Microsoft SQL Server Express has a configuration data storage limit of 10 GB. The Express Edition is sufficient for the evaluation and small environments (500 VMs).

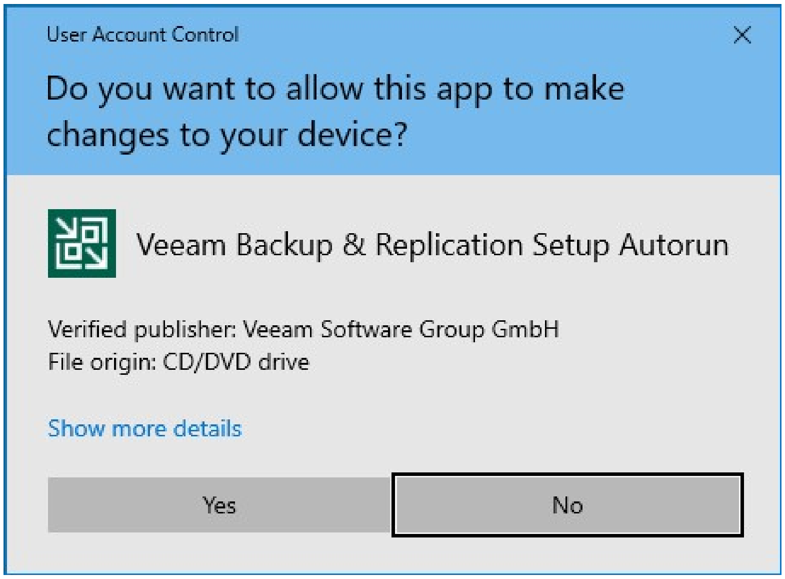
Instructions	Screenshot (if applicable)
1. Ensure the Microsoft SQL Server or Microsoft SQL Server Express is installed locally or remotely. 2. Log in to the Veeam Backup and Replication manager server. 3. Download the Veeam Backup and Replication v12 ISO image file from the Veeam website sign-in required).	 veeAM Products Solutions Resources Partners Company How To Buy FREE TRIAL Product Related Resources Download Product Veeam Platform Cloud-native standalone modules Individual feature downloads Other offerings Veeam Availability Suite™ Backup for AWS Backup for Azure Backup for Google Additional included workloads Product demo DOWNLOAD TRIAL Veeam Backup & Replication™ Product overview Release notes Product demo DOWNLOAD TRIAL Veeam's flagship solution combines Veeam Backup & Replication with the monitoring and analytics of Veeam ONE™. Note: Microsoft 365 and Kubernetes are not included and are available as separate installation Modernize your data protection and eliminate downtime with the simple, flexible, reliable, and powerful solution for protecting your Cloud,

4. Mount the Veeam Backup and Replication v12 iso image file.
5. Run Setup.exe.


Manage
DVD Drive (D:) Veeam Backup and Replication 12
File
Home
Share
View
Drive Tools
This ... › DVD Drive (D:) Veeam Back...
Search DVD Drive (D:) Veeam Backup and Replication 12
Quick access
Desktop
Downloads
Documents
Pictures
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
DVD Drive (D:) V
Agents
AIR
14 items

Name	Date modified	Type	Size
Agents	1/26/2023 8:35 PM	File folder	
AIR	1/26/2023 8:35 PM	File folder	
Backup	1/26/2023 8:35 PM	File folder	
Catalog	1/26/2023 8:35 PM	File folder	
Cloud Portal	1/26/2023 8:35 PM	File folder	
EnterpriseManager	1/26/2023 8:35 PM	File folder	
EULA	1/26/2023 8:41 PM	File folder	
Explorers	1/26/2023 8:35 PM	File folder	
Packages	1/26/2023 8:35 PM	File folder	
Plugins	1/26/2023 8:35 PM	File folder	
Redistr	1/26/2023 8:36 PM	File folder	
Setup	1/26/2023 8:41 PM	File folder	
autorun	1/26/2023 8:41 PM	Setup Information	1 KB
Setup	1/26/2023 8:25 PM	Application	392 KB

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


User Account Control
Show more details
Yes
No

Do you want to allow this app to make changes to your device?

Veeam Backup & Replication Setup Autorun

Verified publisher: Veeam Software Group GmbH
File origin: CD/DVD drive

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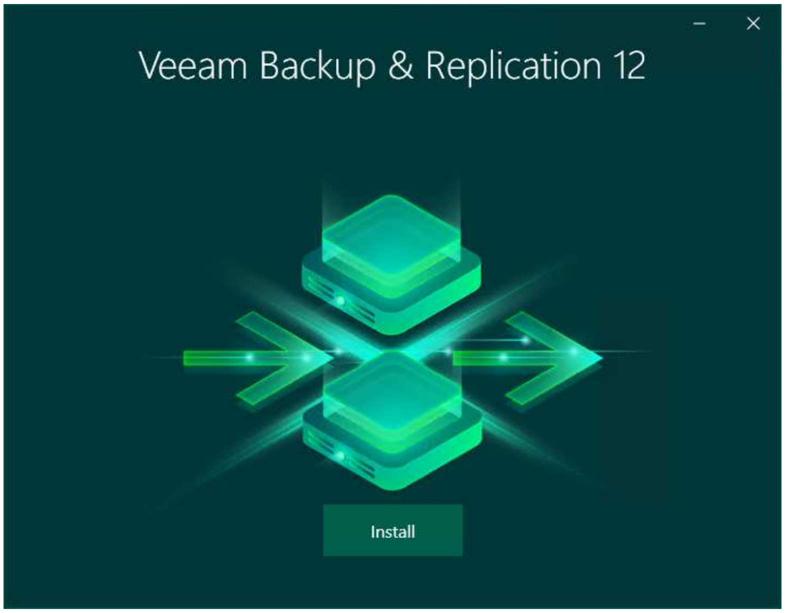
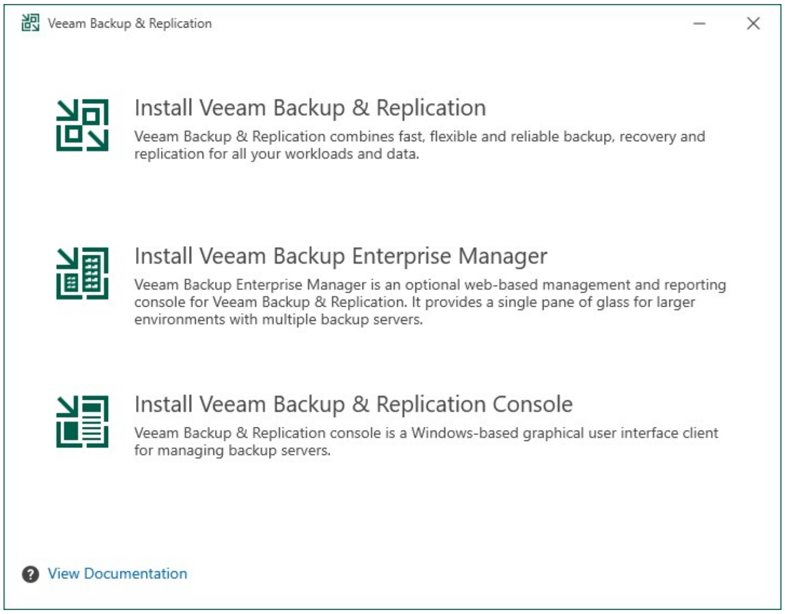
7. On the Veeam Backup & Replication 12 page, click Install.


Veeam Backup & Replication 12
Install

8. Select Install Veeam Backup & Replication on the Veeam Backup & Replication page.


Veeam Backup & Replication

Install Veeam Backup & Replication

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View Documentation

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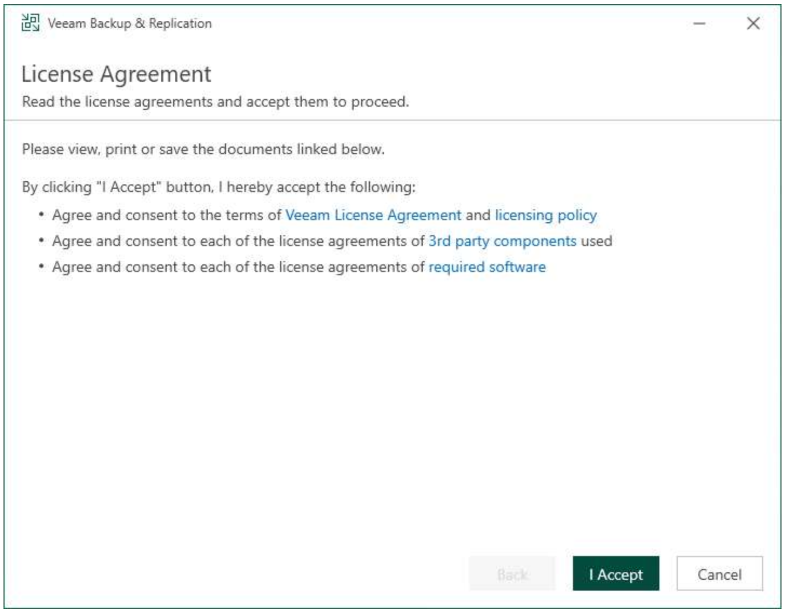

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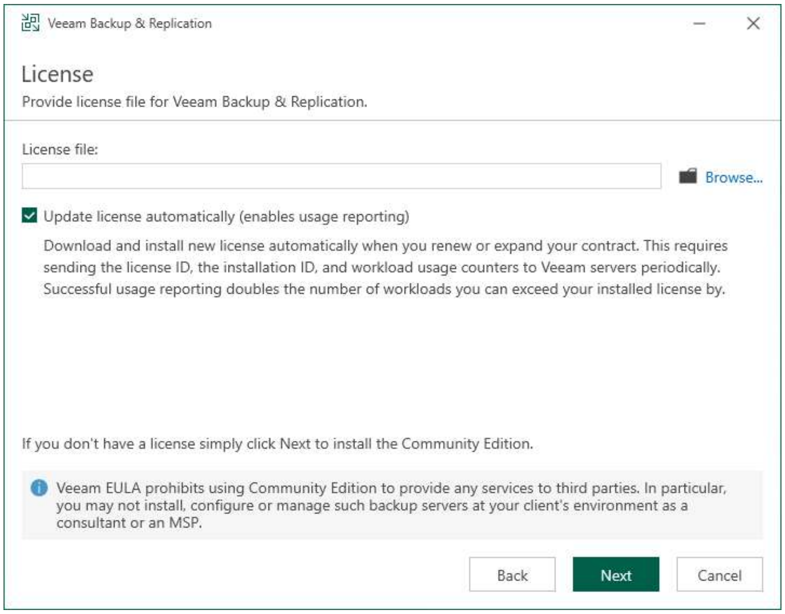
- Agree and consent to each of the license agreements of required software

10. Click Browse on the License page.



License

Provide license file for Veeam Backup & Replication.

License file:

☑ Update license automatically (enables usage reporting)

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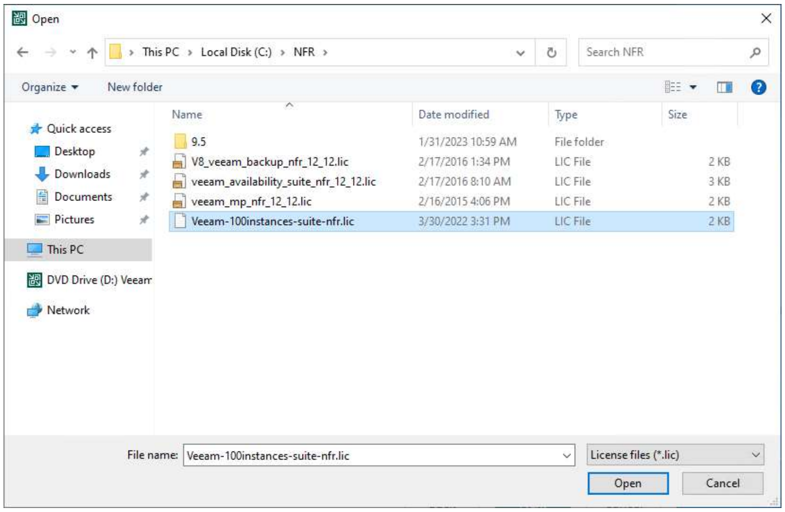
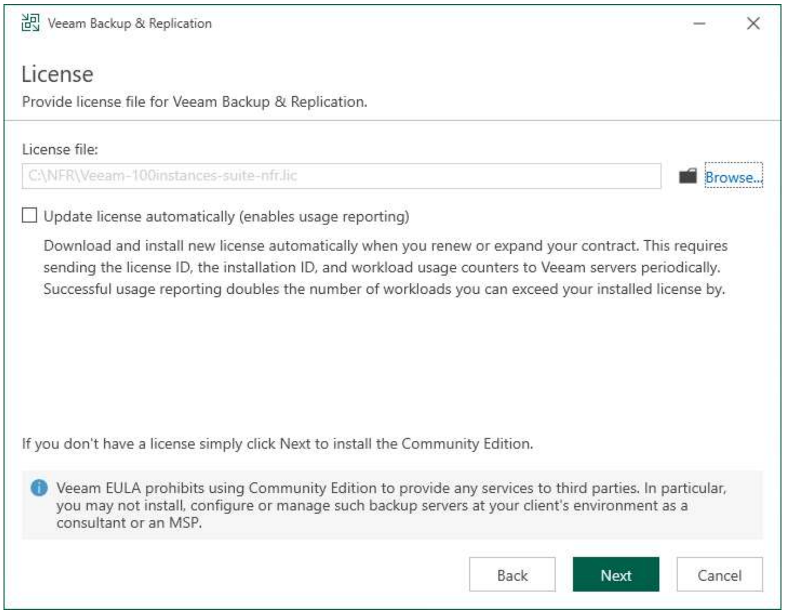
11. Select a license file for Veeam Backup & Replication and click Open.


Open
This PC > Local Disk (C:) > NFR >
Search NFR
Organize
New folder
Quick access
Desktop
Downloads
Documents
Pictures
This PC
DVD Drive (D:) Veeam
Network
License files (*.lic)
Open
Cancel

Name	Date modified	Type	Size
9.5	1/31/2023 10:59 AM	File folder	
V8_veeam_backup_nfr_12_12.lic	2/17/2016 1:34 PM	LIC File	2 KB
veeam_availability_suite_nfr_12_12.lic	2/17/2016 8:10 AM	LIC File	3 KB
veeam_mp_nfr_12_12.lic	2/16/2015 4:06 PM	LIC File	2 KB
Veeam-100instances-suite-nfr.lic	3/30/2022 3:31 PM	LIC File	2 KB

File name: Veeam-100instances-suite-nfr.lic

12. On the License page, select Update license automatically (enable usage reporting). It will automatically download and install a new license when you renew or expand your contract.
13. Click Next.


Veeam Backup & Replication
Browse...
Back
Next
Cancel

License

Provide license file for Veeam Backup & Replication.

License file: C:\NFR\Veeam-100instances-suite-nfr.lic

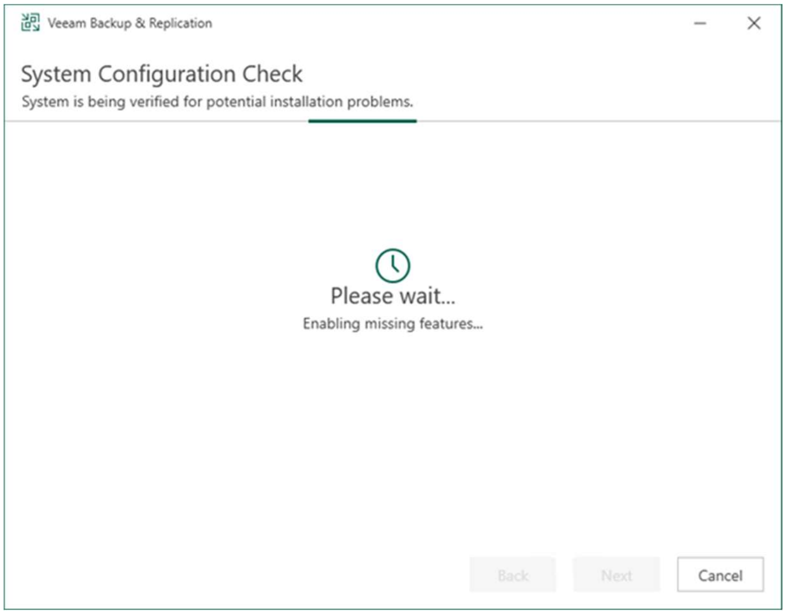
☐ Update license automatically (enables usage reporting)

Download and install new license automatically when you renew or expand your contract. This requires sending the license ID, the installation ID, and workload usage counters to Veeam servers periodically. Successful usage reporting doubles the number of workloads you can exceed your installed license by.

If you don't have a license simply click Next to install the Community Edition.

Veeam EULA prohibits using Community Edition to provide any services to third parties. In particular, you may not install, configure or manage such backup servers at your client's environment as a consultant or an MSP.

14. The setup wizard checks if the required software is installed on the machine during the System Configuration Check step. If required components are missing, the setup will attempt to install them independently. Rebooting is required after the components have been successfully installed. Click Reboot to restart the machine.



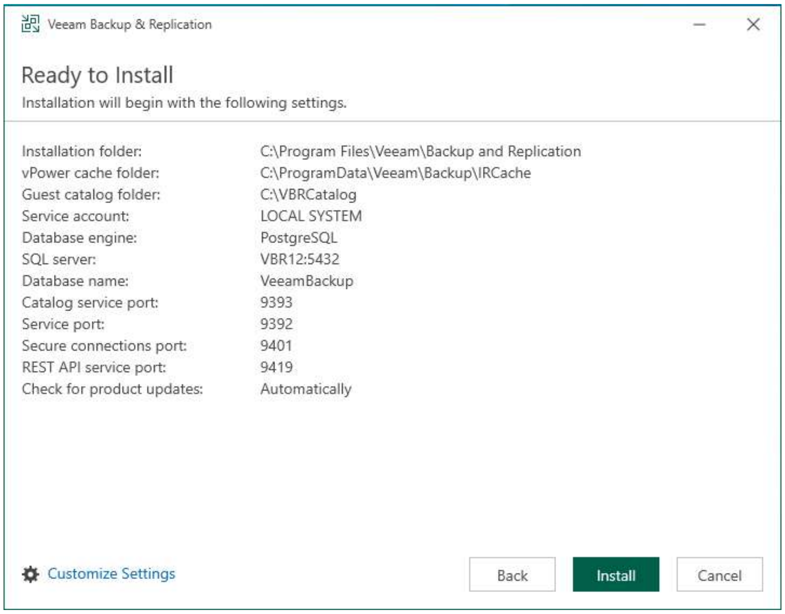
System Configuration Check

System is being verified for potential installation problems.

Please wait...

Enabling missing features...

15. Click Customize Settings on the Ready to Install page.



Ready to Install

Installation will begin with the following settings.

Installation folder: C:\Program Files\Veeam\Backup and Replication
vPower cache folder: C:\ProgramData\Veeam\Backup\IRCache
Guest catalog folder: C:\VBRCatalog
Service account: LOCAL SYSTEM
Database engine: PostgreSQL
SQL server: VBR12:5432
Database name: VeeamBackup
Catalog service port: 9393
Service port: 9392
Secure connections port: 9401
REST API service port: 9419
Check for product updates: Automatically

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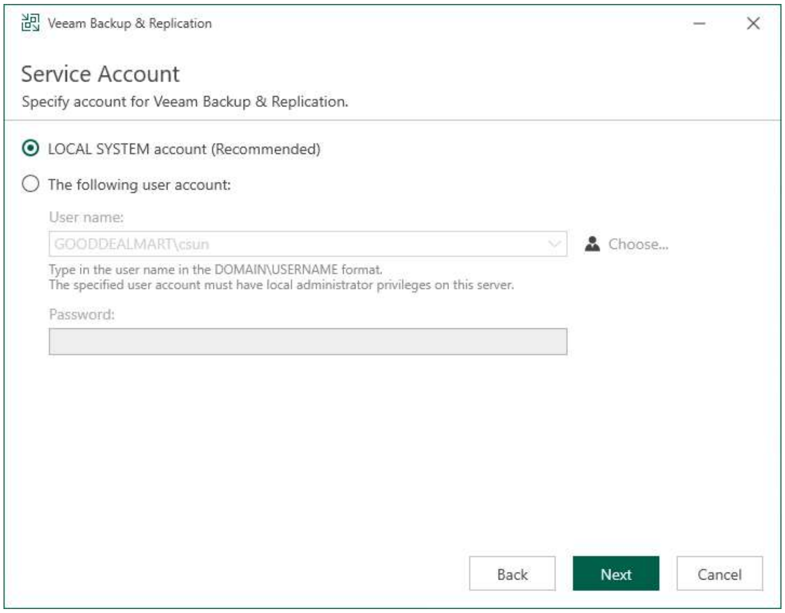
16. On the Service Account page, select LOCAL SYSTEM account and click Next.


Veeam Backup & Replication
Back
Next
Cancel
Choose...

Service Account

Specify account for Veeam Backup & Replication.

● LOCAL SYSTEM account (Recommended)

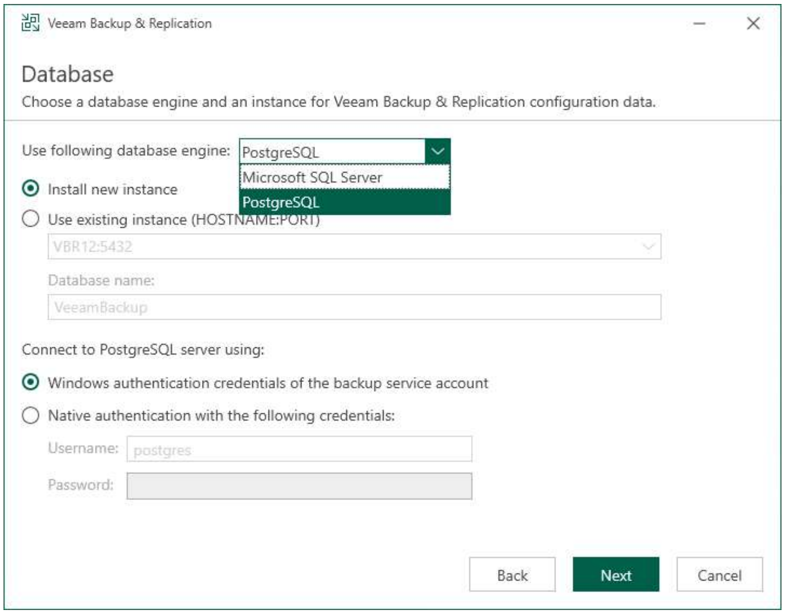
○ The following user account:

User name: GOODDEALMART\csun

Type in the user name in the DOMAIN\USERNAME format.
The specified user account must have local administrator privileges on this server.

Password:

17. On the Database page, select the Microsoft SQL Server from the database engine drop-down list.


Veeam Backup & Replication
Microsoft SQL Server
PostgreSQL
Back
Next
Cancel

Database

Choose a database engine and an instance for Veeam Backup & Replication configuration data.

Use following database engine: PostgreSQL

● Install new instance

○ Use existing instance (HOSTNAME:PORT)

VBR12:5432

Database name: VeeamBackup

Connect to PostgreSQL server using:

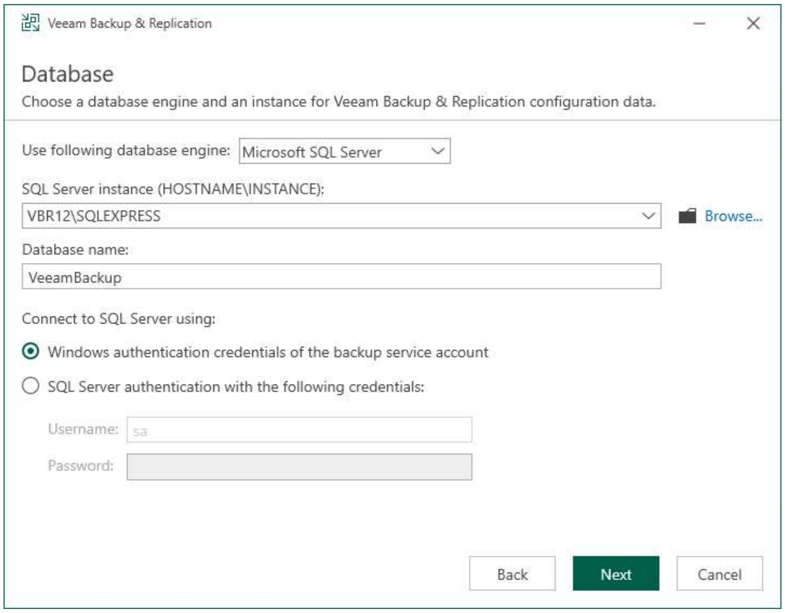
● Windows authentication credentials of the backup service account

○ Native authentication with the following credentials:

Username: postgres

Password:

18. Click Browse to select the SQL server and instance on the SQL Server instance session.
19. Select Windows authentication credentials of the backup service account to connect to SQL Server.
20. Click Next.



Veeam Backup & Replication

Database

Choose a database engine and an instance for Veeam Backup & Replication configuration data.

Use following database engine: Microsoft SQL Server

SQL Server instance (HOSTNAME\INSTANCE): VBR12\SQLEXPRESS

Database name: VeeamBackup

Connect to SQL Server using:

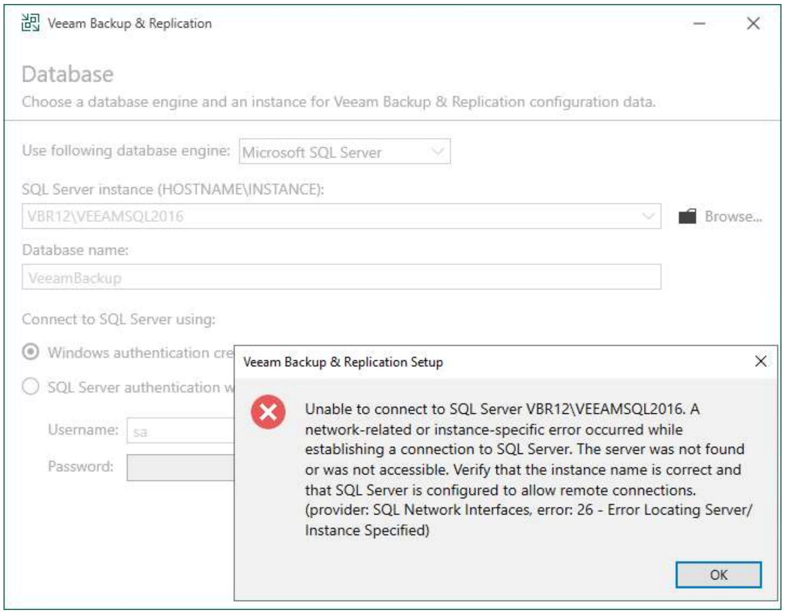
● Windows authentication credentials of the backup service account

○ SQL Server authentication with the following credentials:

Username: sa

Password:

21. The error message will pop up if the Microsoft SQL Server or Microsoft SQL Server Express does not install locally or remotely.



Veeam Backup & Replication

Database

Choose a database engine and an instance for Veeam Backup & Replication configuration data.

Use following database engine: Microsoft SQL Server

SQL Server instance (HOSTNAME\INSTANCE): VBR12\VEEAMSQL2016

Database name: VeeamBackup

Connect to SQL Server using:

● Windows authentication cre

○ SQL Server authentication w

Username: sa

Password:

Veeam Backup & Replication Setup

Unable to connect to SQL Server VBR12\VEEAMSQL2016. A network-related or instance-specific error occurred while establishing a connection to SQL Server. The server was not found or was not accessible. Verify that the instance name is correct and that SQL Server is configured to allow remote connections. (provider: SQL Network Interfaces, error: 26 - Error Locating Server/Instance Specified)

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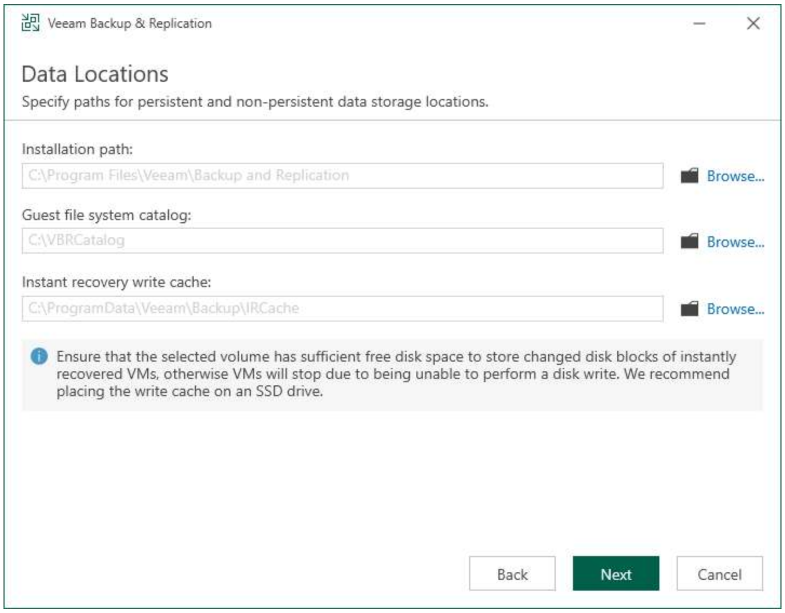
22. On the Data locations page, click Browse and select the path in the Installation path field.
23. Browse and select the path in the Guest file system catalog: field.
24. Click Browse and select the path in the Instant recovery write cache field.
25. Click Next.



Data Locations

Specify paths for persistent and non-persistent data storage locations.

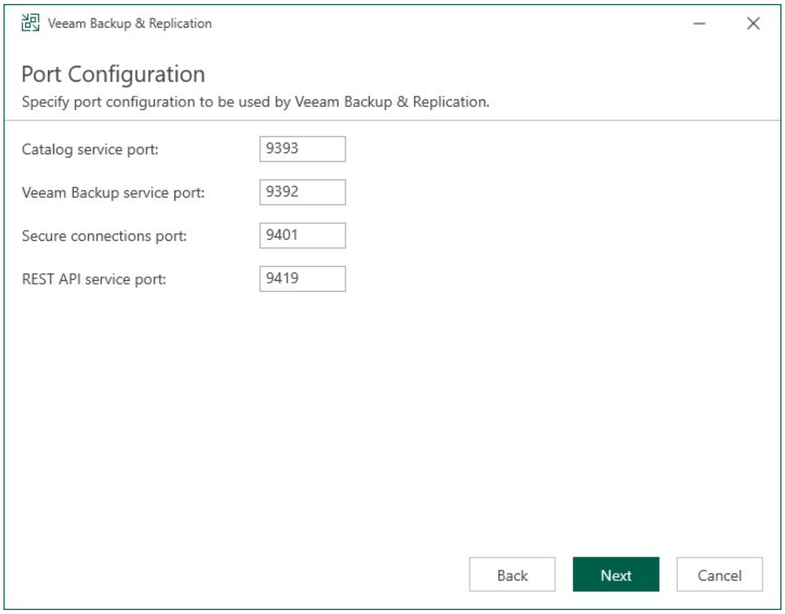
Installation path: C:\Program Files\Veeam\Backup and Replication

Guest file system catalog: C:\VBRCatalog

Instant recovery write cache: C:\ProgramData\Veeam\Backup\IRCache

Ensure that the selected volume has sufficient free disk space to store changed disk blocks of instantly recovered VMs, otherwise VMs will stop due to being unable to perform a disk write. We recommend placing the write cache on an SSD drive.

26. On the Port Configuration page, specify the port configuration to be used by Veeam Backup and Replication and click Next.



Port Configuration

Specify port configuration to be used by Veeam Backup & Replication.

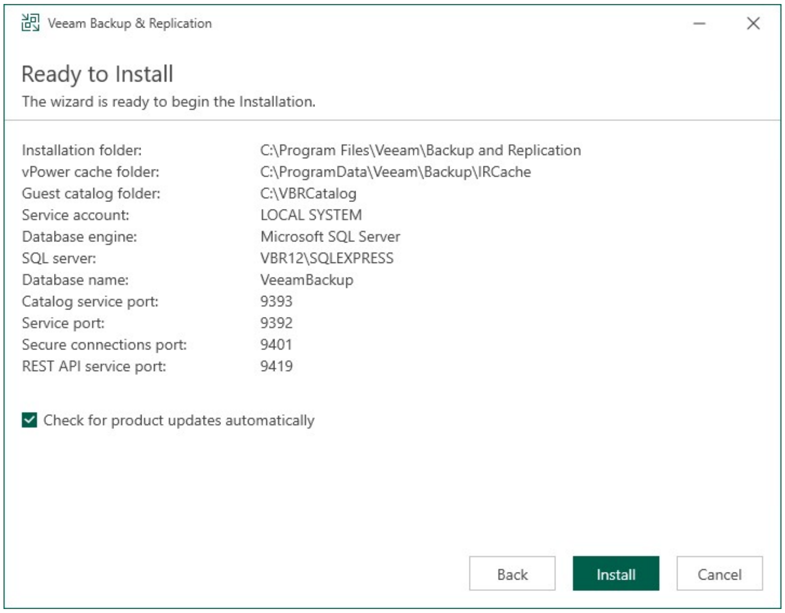
Catalog service port: 9393

Veeam Backup service port: 9392

Secure connections port: 9401

REST API service port: 9419

27. Click Install on the Ready to Install page.


Veeam Backup & Replication
Back
Install
Cancel

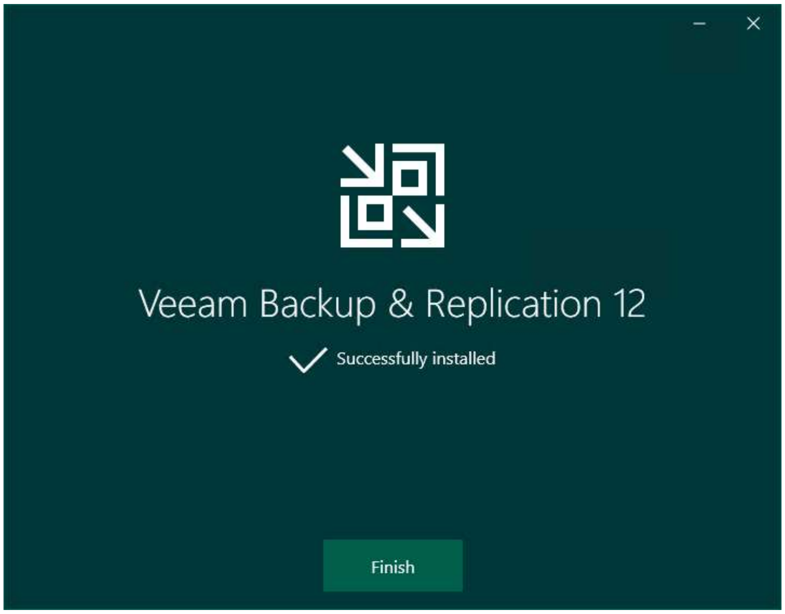
Ready to Install

The wizard is ready to begin the Installation.

Installation folder:	C:\Program Files\Veeam\Backup and Replication
vPower cache folder:	C:\ProgramData\Veeam\Backup\IRCache
Guest catalog folder:	C:\VBRCatalog
Service account:	LOCAL SYSTEM
Database engine:	Microsoft SQL Server
SQL server:	VBR12\SQLEXPRESS
Database name:	VeeamBackup
Catalog service port:	9393
Service port:	9392
Secure connections port:	9401
REST API service port:	9419

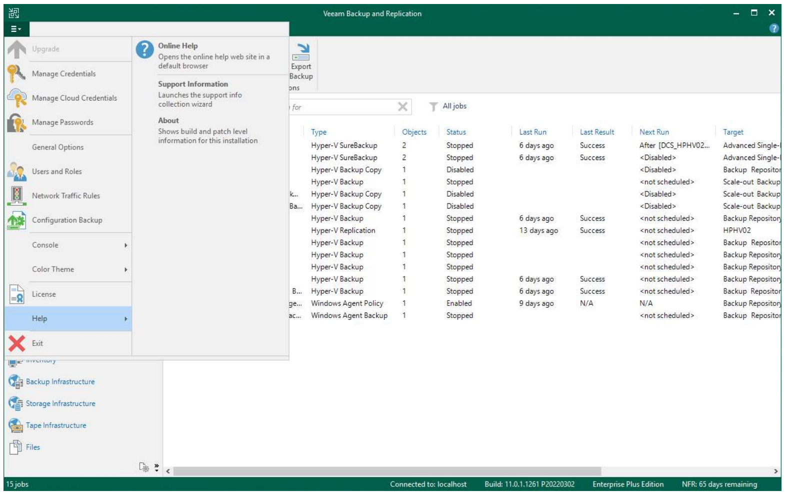
☑ Check for product updates automatically

28. Click Finish on the Veeam Backup & Replication 12 Successfully installed page.


Veeam Backup & Replication 12
✓ Successfully installed
Finish

Upgrade the Existing Veeam Backup and Replication to v12

Veeam Backup and Replication v12 launched on Feb 14, 2023. If you are still using an older version, it is time to upgrade it to v12. To upgrade Veeam Backup & Replication to version 12, you must have version 10a (build 10.0.1.4854) or later installed on the supported operating system.

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.	

Veeam Backup and Replication
Upgrade
Manage Credentials
Manage Cloud Credentials
Manage Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
Console
Color Theme
License
Help
Exit
Export Backup
All jobs
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files

Online Help
Opens the online help web site in a default browser

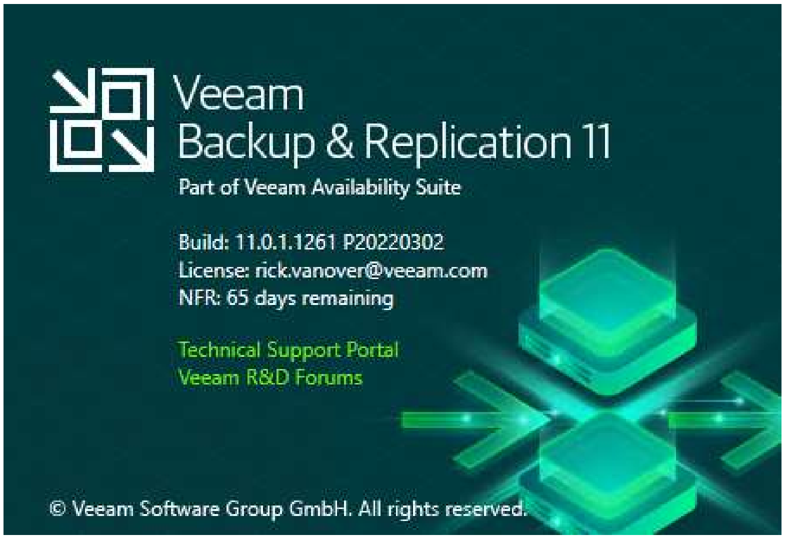
Support Information
Launches the support info collection wizard

About
Shows build and patch level information for this installation

	Type	Objects	Status	Last Run	Last Result	Next Run	Target
	Hyper-V SureBackup	2	Stopped	6 days ago	Success	After [DCS_HPHV02...	Advanced Single-
	Hyper-V SureBackup	2	Stopped	6 days ago	Success	<Disabled>	Advanced Single-
	Hyper-V Backup Copy	1	Disabled			<Disabled>	Backup Repositor
	Hyper-V Backup	1	Stopped			<not scheduled>	Scale-out Backup
k...	Hyper-V Backup Copy	1	Disabled			<Disabled>	Scale-out Backup
Ba...	Hyper-V Backup Copy	1	Disabled			<Disabled>	Scale-out Backup
	Hyper-V Backup	1	Stopped	6 days ago	Success	<not scheduled>	Backup Repository
	Hyper-V Replication	1	Stopped	13 days ago	Success	<not scheduled>	HPHV02
	Hyper-V Backup	1	Stopped			<not scheduled>	Backup Repositor
	Hyper-V Backup	1	Stopped			<not scheduled>	Backup Repository
	Hyper-V Backup	1	Stopped			<not scheduled>	Backup Repository
	Hyper-V Backup	1	Stopped	6 days ago	Success	<not scheduled>	Backup Repository
B...	Hyper-V Backup	1	Stopped	6 days ago	Success	<not scheduled>	Backup Repositor
ge...	Windows Agent Policy	1	Enabled	9 days ago	N/A	N/A	Backup Repository
ac...	Windows Agent Backup	1	Stopped			<not scheduled>	Backup Repositor

15 jobs Connected to: localhost Build: 11.0.1.1261 P20220302 Enterprise Plus Edition NFR: 65 days remaining

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



Veeam
Backup & Replication 11
Part of Veeam Availability Suite

Build: 11.0.1.1261 P20220302
License: rick.vanover@veeam.com
NFR: 65 days remaining

Technical Support Portal
Veeam R&D Forums

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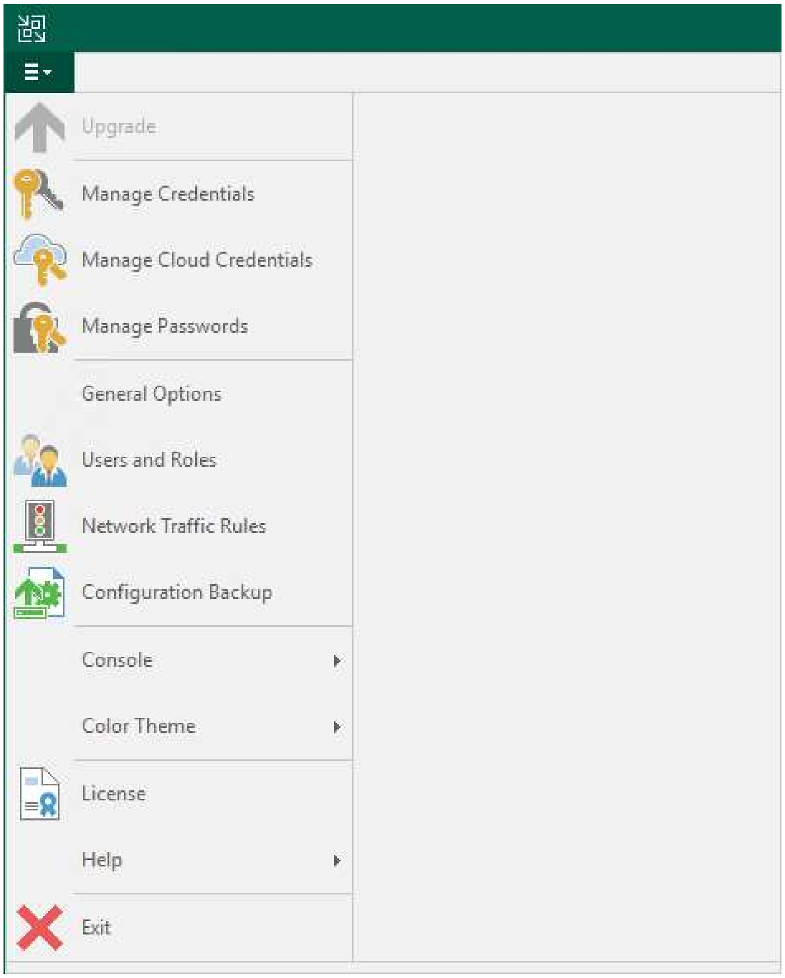
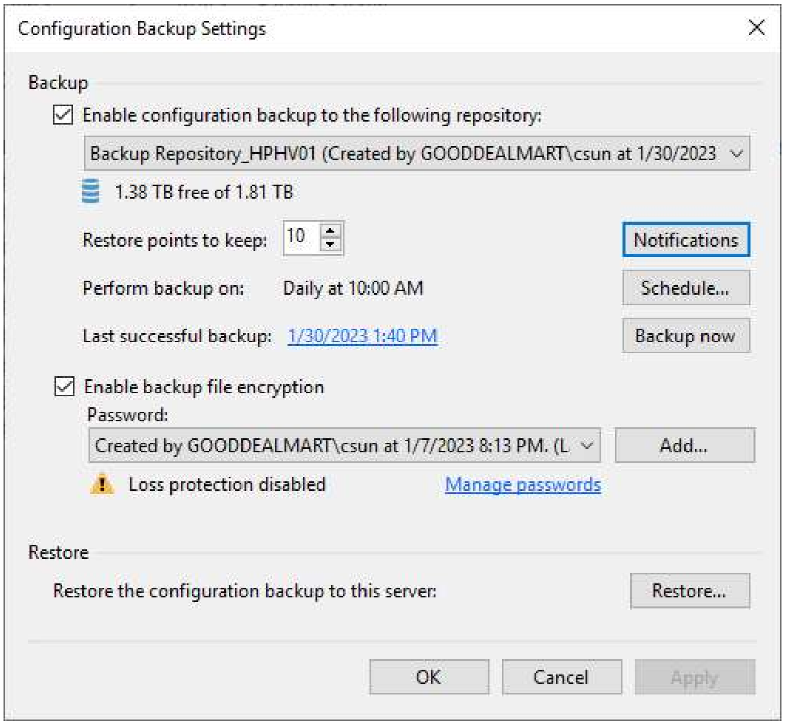
5. Drop down the main menu and select Configuration Backup.


Upgrade
Manage Credentials
Manage Cloud Credentials
Manage Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
Console
Color Theme
License
Help
Exit

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.



Configuration Backup Settings

Backup

☑ Enable configuration backup to the following repository:

Backup Repository_HPHV01 (Created by GOODDEALMART\csun at 1/30/2023

1.38 TB free of 1.81 TB

Restore points to keep: 10

Perform backup on: Daily at 10:00 AM

Last successful backup: 1/30/2023 1:40 PM

☑ Enable backup file encryption

Password:

Created by GOODDEALMART\csun at 1/7/2023 8:13 PM. (L

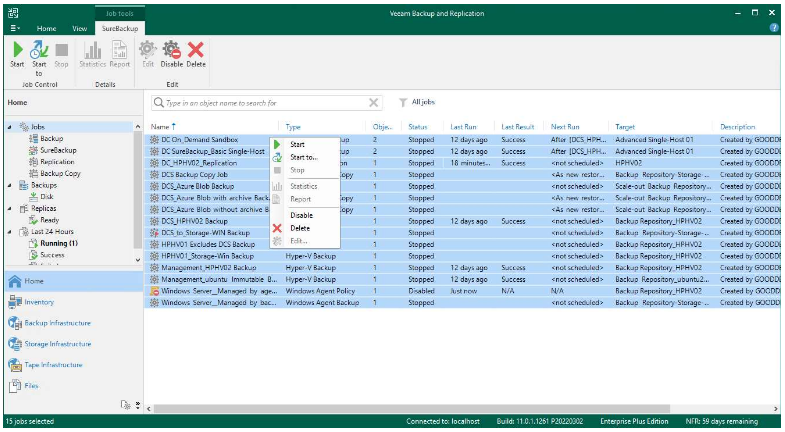
Loss protection disabled

Restore

Restore the configuration backup to this server:

Notifications
Schedule...
Backup now
Add...
Manage passwords
Restore...
OK
Cancel
Apply

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



Veeam Backup and Replication

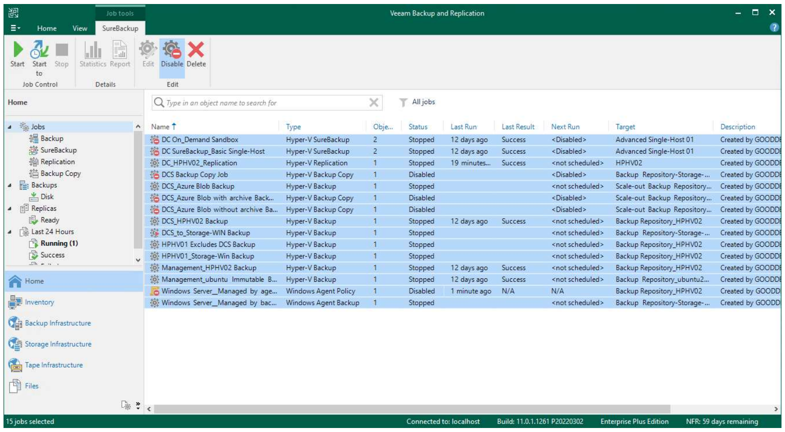
Name	Type	Obje...	Status	Last Run	Last Result	Next Run	Target	Description
DC On_Demand Sandbox	up	2	Stopped	12 days ago	Success	After [DCS_HPH...	Advanced Single-Host 01	Created by GOODD
DC SureBackup_Basic Single-Host	up	2	Stopped	12 days ago	Success	After [DCS_HPH...	Advanced Single-Host 01	Created by GOODD
DC_HPHV02_Replication	on	1	Stopped	18 minutes...	Success	<not scheduled>	HPHV02	Created by GOODD
DCS Backup Copy Job	opy	1	Stopped			<As new restor...	Backup Repository-Storage-...	Created by GOODD
DCS_Azure Blob Backup		1	Stopped			<not scheduled>	Scale-out Backup Repository...	Created by GOODD
DCS_Azure Blob with archive Back	opy	1	Stopped			<As new restor...	Scale-out Backup Repository...	Created by GOODD
DCS_Azure Blob without archive B	opy	1	Stopped			<As new restor...	Scale-out Backup Repository...	Created by GOODD
DCS_HPHV02 Backup		1	Stopped	12 days ago	Success	<not scheduled>	Backup Repository_HPHV02	Created by GOODD
DCS_to_Storage-WIN Backup		1	Stopped			<not scheduled>	Backup Repository-Storage-...	Created by GOODD
HPHV01 Excludes DCS Backup		1	Stopped			<not scheduled>	Backup Repository_HPHV02	Created by GOODD
HPHV01_Storage-Win Backup	Hyper-V Backup	1	Stopped			<not scheduled>	Backup Repository_HPHV02	Created by GOODD
Management_HPHV02 Backup	Hyper-V Backup	1	Stopped	12 days ago	Success	<not scheduled>	Backup Repository_HPHV02	Created by GOODD
Management_ubuntu Immutable B...	Hyper-V Backup	1	Stopped	12 days ago	Success	<not scheduled>	Backup Repository_ubuntu2...	Created by GOODD
Windows Server_Managed by age...	Windows Agent Policy	1	Disabled	Just now	N/A	N/A	Backup Repository_HPHV02	Created by GOODD
Windows Server_Managed by bac...	Windows Agent Backup	1	Stopped			<not scheduled>	Backup Repository-Storage-...	Created by GOODD

15 jobs selected Connected to: localhost Build: 11.0.1.1261 P20220302 Enterprise Plus Edition NFR: 59 days remaining

Job tools
Home
View
SureBackup
Start
Start to
Stop
Job Control
Statistics
Report
Details
Edit
Disable
Delete
Edit
Home
Type in an object name to search for
All jobs
Jobs
Backup
SureBackup
Replication
Backup Copy
Backups
Disk
Replicas
Ready
Last 24 Hours
Running (1)
Success
Start
Start to...
Stop
Statistics
Report
Disable
Delete
Edit...
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files

Technet24

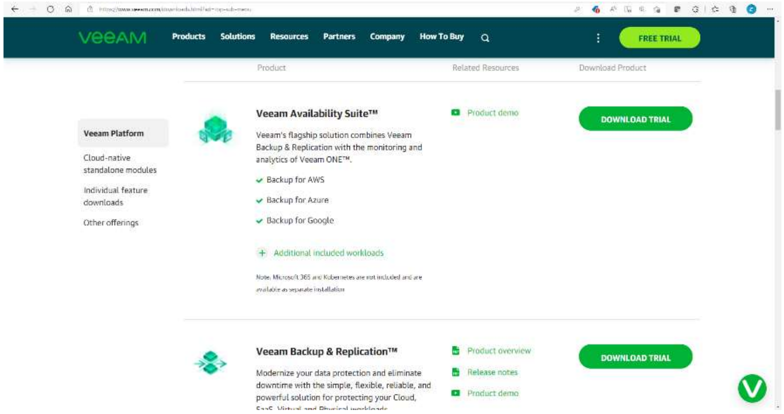
10. Make sure all jobs are disabled and close Veeam Backup & Replication Console.


Veeam Backup and Replication
Job tools
Home
View
SureBackup
Start
Start to
Stop
Statistics
Report
Edit
Disable
Delete
Job Control
Details
Edit
Home
Jobs
Backup
SureBackup
Replication
Backup Copy
Backups
Disk
Replicas
Ready
Last 24 Hours
Running (1)
Success
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
All jobs

Name	Type	Obje...	Status	Last Run	Last Result	Next Run	Target	Description
DC On_Demand Sandbox	Hyper-V SureBackup	2	Stopped	12 days ago	Success	<Disabled>	Advanced Single-Host 01	Created by GOODD
DC SureBackup_Basic Single-Host	Hyper-V SureBackup	2	Stopped	12 days ago	Success	<Disabled>	Advanced Single-Host 01	Created by GOODD
DC_HPHV02_Replication	Hyper-V Replication	1	Stopped	19 minutes...	Success	<not scheduled>	HPHV02	Created by GOODD
DCS Backup Copy Job	Hyper-V Backup Copy	1	Disabled			<Disabled>	Backup Repository-Storage-...	Created by GOODD
DCS_Azure Blob Backup	Hyper-V Backup	1	Stopped			<not scheduled>	Scale-out Backup Repository...	Created by GOODD
DCS_Azure Blob with archive Back...	Hyper-V Backup Copy	1	Disabled			<Disabled>	Scale-out Backup Repository...	Created by GOODD
DCS_Azure Blob without archive Ba...	Hyper-V Backup Copy	1	Disabled			<Disabled>	Scale-out Backup Repository...	Created by GOODD
DCS_HPHV02 Backup	Hyper-V Backup	1	Stopped	12 days ago	Success	<not scheduled>	Backup Repository_HPHV02	Created by GOODD
DCS_to_Storage-WIN Backup	Hyper-V Backup	1	Stopped			<not scheduled>	Backup Repository-Storage-...	Created by GOODD
HPHV01 Excludes DCS Backup	Hyper-V Backup	1	Stopped			<not scheduled>	Backup Repository_HPHV02	Created by GOODD
HPHV01_Storage-Win Backup	Hyper-V Backup	1	Stopped			<not scheduled>	Backup Repository_HPHV02	Created by GOODD
Management_HPHV02 Backup	Hyper-V Backup	1	Stopped	12 days ago	Success	<not scheduled>	Backup Repository_HPHV02	Created by GOODD
Management_ubuntu Immutable B...	Hyper-V Backup	1	Stopped	12 days ago	Success	<not scheduled>	Backup Repository_ubuntu2...	Created by GOODD
Windows Server_Managed by age...	Windows Agent Policy	1	Disabled	1 minute ago	N/A	N/A	Backup Repository_HPHV02	Created by GOODD
Windows Server_Managed by bac...	Windows Agent Backup	1	Stopped			<not scheduled>	Backup Repository-Storage-...	Created by GOODD

15 jobs selected Connected to: localhost Build: 11.0.1.1261 P20220302 Enterprise Plus Edition NFR: 59 days remaining

11. Download the Veeam Backup and Replication v12 iso image file from the Veeam website. (Sign-in required).


VEEAM
Products
Solutions
Resources
Partners
Company
How To Buy
FREE TRIAL
Product
Related Resources
Download Product
Veeam Platform
Cloud-native standalone modules
Individual feature downloads
Other offerings
Product demo
DOWNLOAD TRIAL
Additional included workloads
Product overview
Release notes
Product demo
DOWNLOAD TRIAL

Veeam Availability Suite™

Veeam's flagship solution combines Veeam Backup & Replication with the monitoring and analytics of Veeam ONE™.

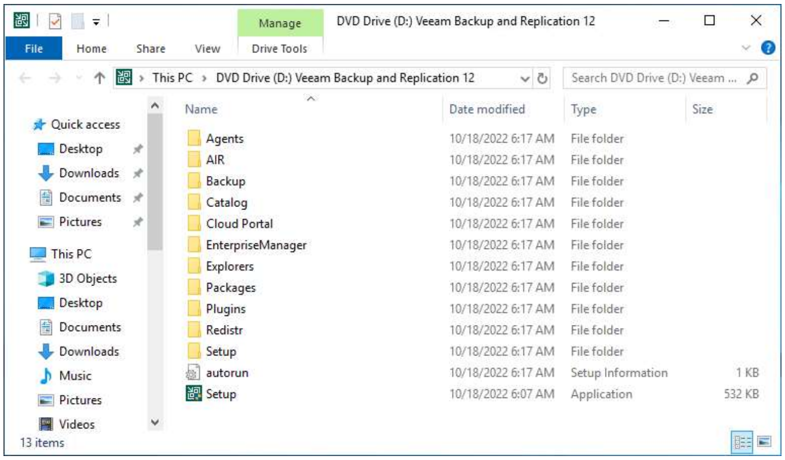
- ✓ Backup for AWS
- ✓ Backup for Azure
- ✓ Backup for Google

Note: Microsoft 365 and Kubernetes are not included and are available as separate installation

Veeam Backup & Replication™

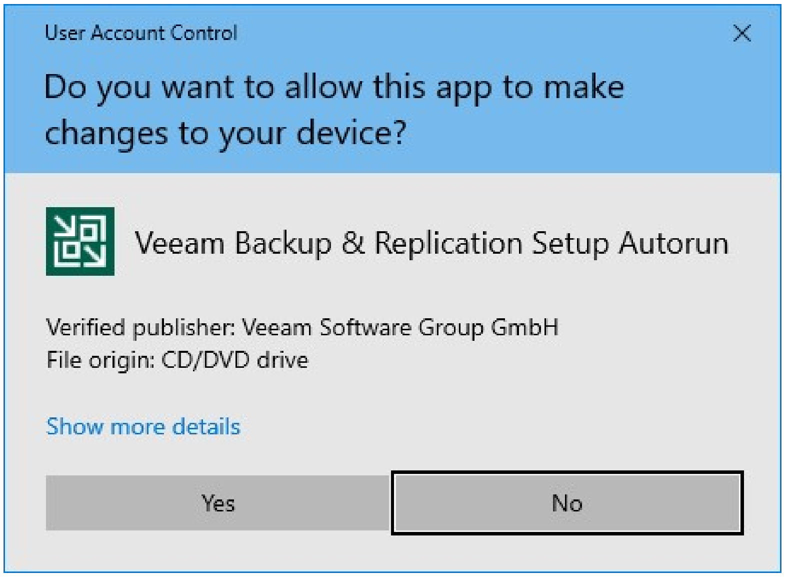
Modernize your data protection and eliminate downtime with the simple, flexible, reliable, and powerful solution for protecting your Cloud,

12. Mount the Veeam Backup & Replication v12 ISO image file.
13. Run Setup.exe.


Manage
DVD Drive (D:) Veeam Backup and Replication 12
File
Home
Share
View
Drive Tools
This PC › DVD Drive (D:) Veeam Backup and Replication 12
Search DVD Drive (D:) Veeam ...
Quick access
Desktop
Downloads
Documents
Pictures
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
13 items

Name	Date modified	Type	Size
Agents	10/18/2022 6:17 AM	File folder	
AIR	10/18/2022 6:17 AM	File folder	
Backup	10/18/2022 6:17 AM	File folder	
Catalog	10/18/2022 6:17 AM	File folder	
Cloud Portal	10/18/2022 6:17 AM	File folder	
EnterpriseManager	10/18/2022 6:17 AM	File folder	
Explorers	10/18/2022 6:17 AM	File folder	
Packages	10/18/2022 6:17 AM	File folder	
Plugins	10/18/2022 6:17 AM	File folder	
Redistr	10/18/2022 6:17 AM	File folder	
Setup	10/18/2022 6:17 AM	File folder	
autorun	10/18/2022 6:17 AM	Setup Information	1 KB
Setup	10/18/2022 6:07 AM	Application	532 KB

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



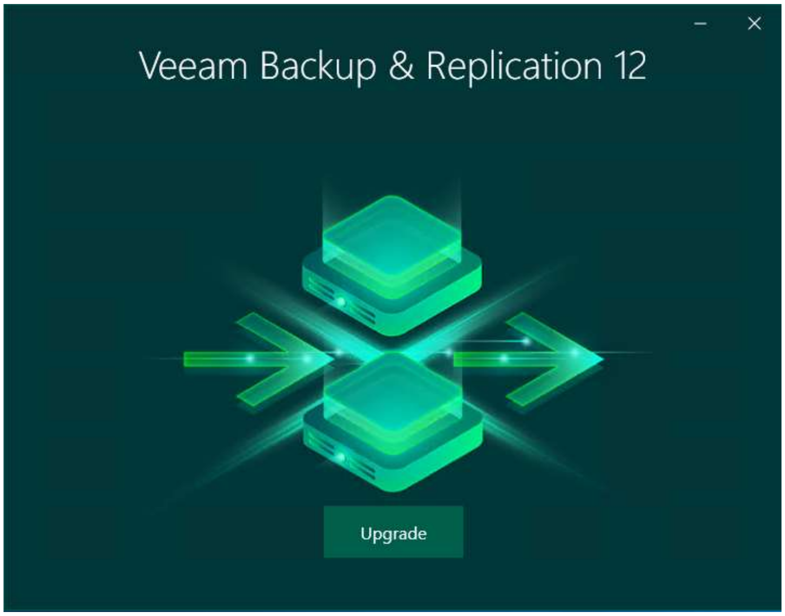
User Account Control

Do you want to allow this app to make changes to your device?

Veeam Backup & Replication Setup Autorun

Verified publisher: Veeam Software Group GmbH
File origin: CD/DVD drive

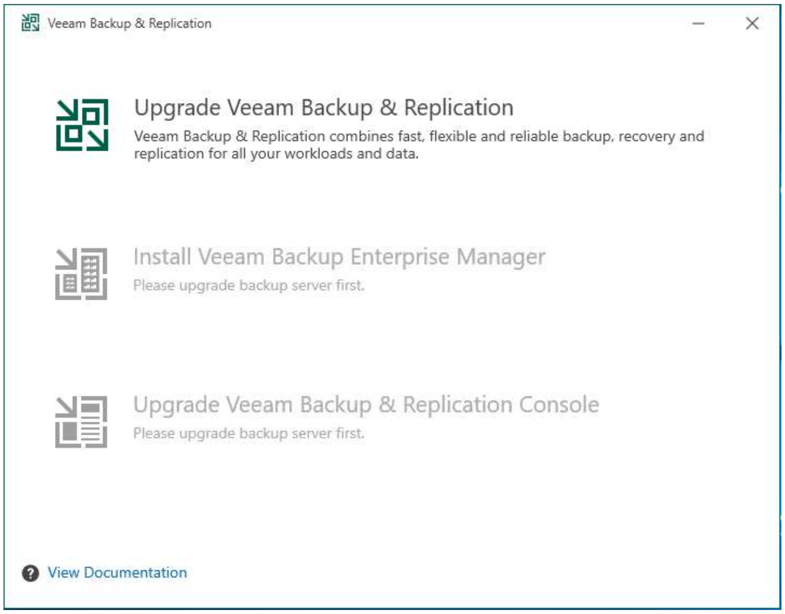
15. On the Veeam Backup & Replication 12 page, click Upgrade.



Veeam Backup & Replication 12

Technet24

16. On the Veeam Backup & Replication page, select Upgrade Veeam Backup & Replication.



Upgrade Veeam Backup & Replication

Veeam Backup & Replication combines fast, flexible and reliable backup, recovery and replication for all your workloads and data.

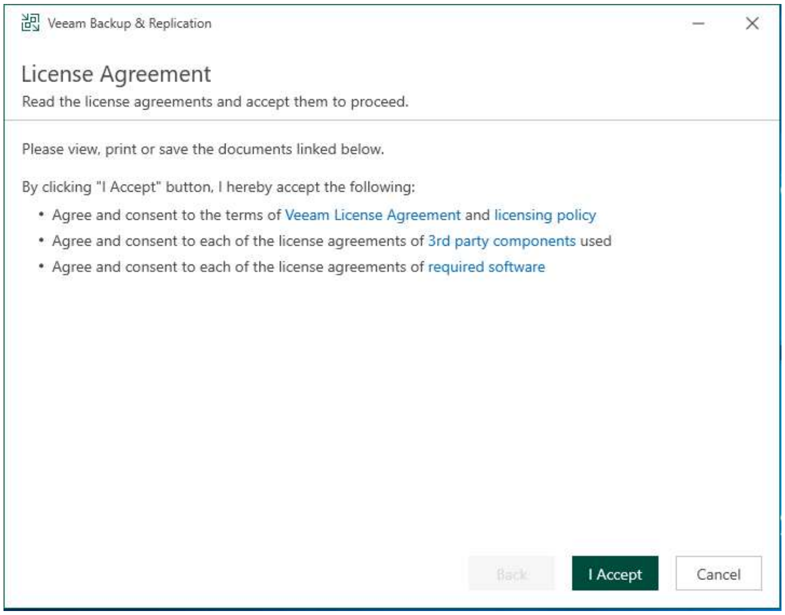
Install Veeam Backup Enterprise Manager

Please upgrade backup server first.

Upgrade Veeam Backup & Replication Console

Please upgrade backup server first.

17. On the License Agreement page, click I Accept.



License Agreement

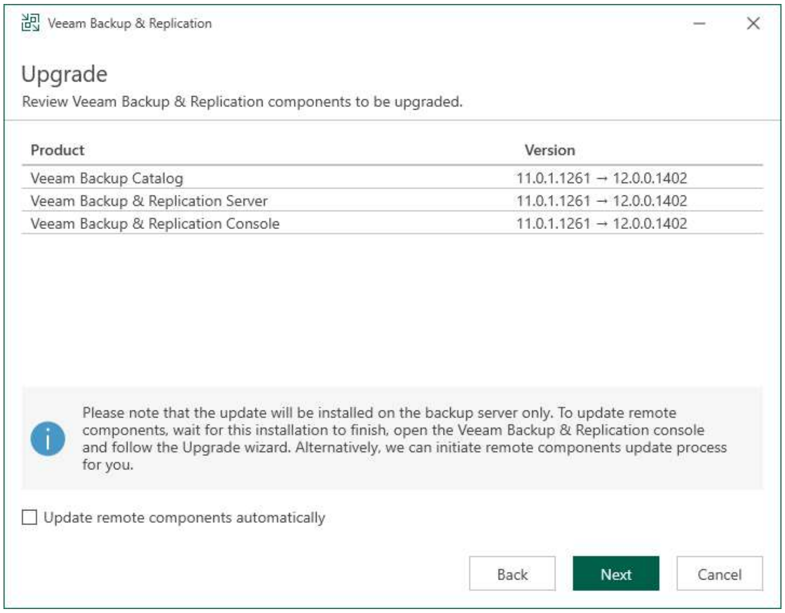
Read the license agreements and accept them to proceed.

Please view, print or save the documents linked below.

By clicking "I Accept" button, I hereby accept the following:

- Agree and consent to the terms of Veeam License Agreement and licensing policy
- Agree and consent to each of the license agreements of 3rd party components used
- Agree and consent to each of the license agreements of required software

18. On the Upgrade page, click Next.



Upgrade

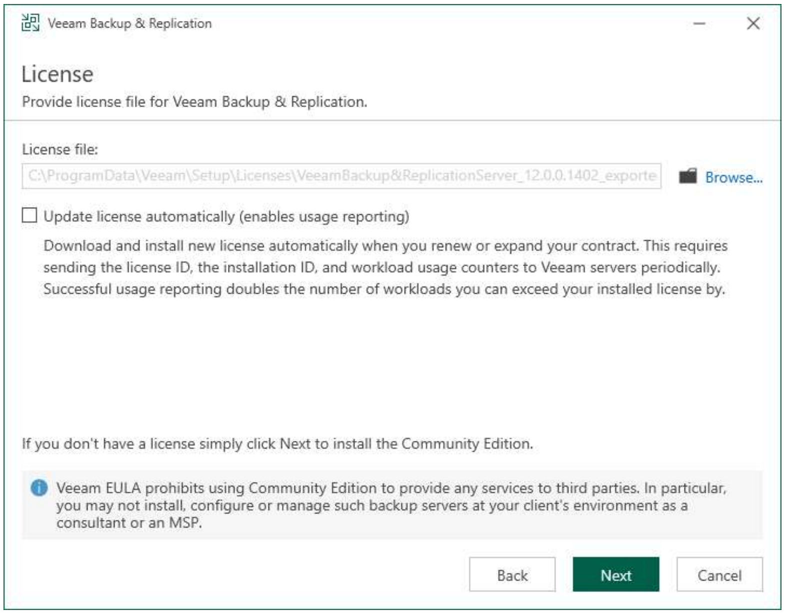
Review Veeam Backup & Replication components to be upgraded.

Product	Version
Veeam Backup Catalog	11.0.1.1261 → 12.0.0.1402
Veeam Backup & Replication Server	11.0.1.1261 → 12.0.0.1402
Veeam Backup & Replication Console	11.0.1.1261 → 12.0.0.1402

Please note that the update will be installed on the backup server only. To update remote components, wait for this installation to finish, open the Veeam Backup & Replication console and follow the Upgrade wizard. Alternatively, we can initiate remote components update process for you.

☐ Update remote components automatically

19. On the License page, click Browse.



License

Provide license file for Veeam Backup & Replication.

License file: C:\ProgramData\Veeam\Setup\Licenses\VeeamBackup&ReplicationServer_12.0.0.1402_exporte

☐ Update license automatically (enables usage reporting)

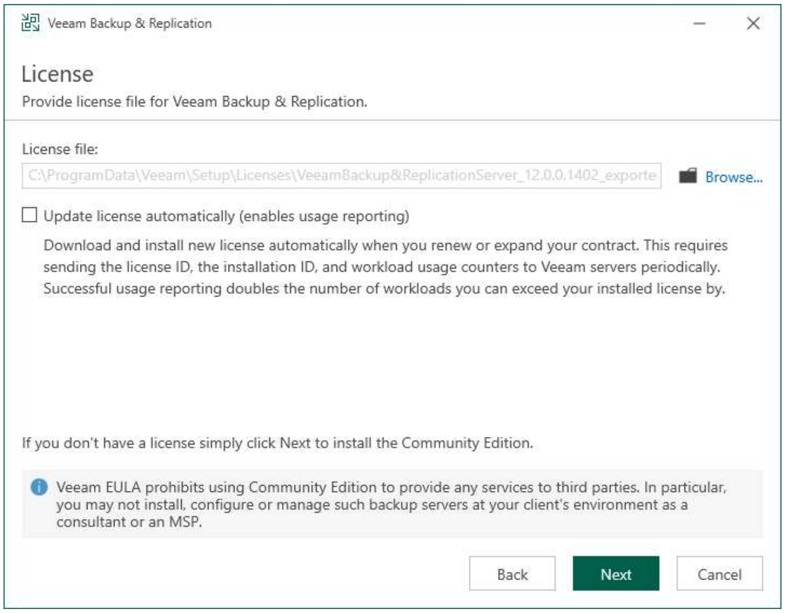
Download and install new license automatically when you renew or expand your contract. This requires sending the license ID, the installation ID, and workload usage counters to Veeam servers periodically. Successful usage reporting doubles the number of workloads you can exceed your installed license by.

If you don't have a license simply click Next to install the Community Edition.

Veeam EULA prohibits using Community Edition to provide any services to third parties. In particular, you may not install, configure or manage such backup servers at your client's environment as a consultant or an MSP.

Technet24

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



License

Provide license file for Veeam Backup & Replication.

License file:

C:\ProgramData\Veeam\Setup\Licenses\VeeamBackup&ReplicationServer_12.0.0.1402_exporte

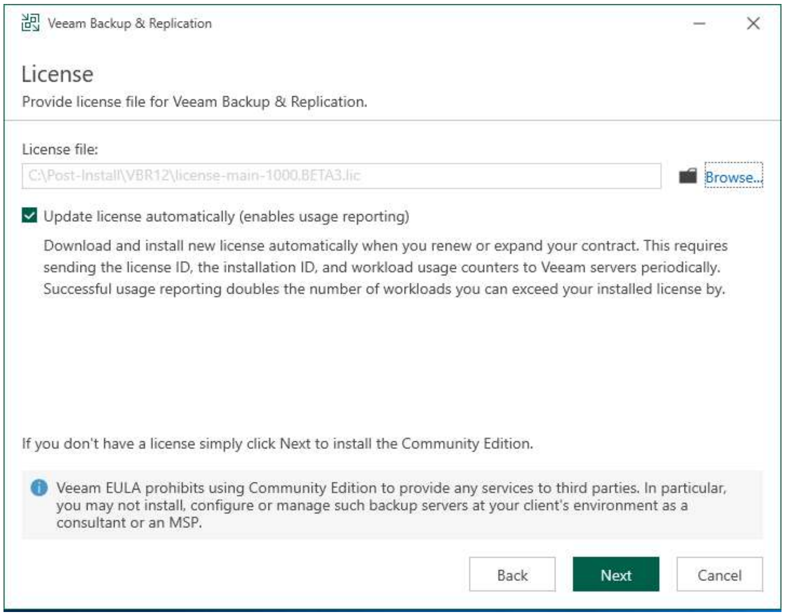
☐ Update license automatically (enables usage reporting)

Download and install new license automatically when you renew or expand your contract. This requires sending the license ID, the installation ID, and workload usage counters to Veeam servers periodically. Successful usage reporting doubles the number of workloads you can exceed your installed license by.

If you don't have a license simply click Next to install the Community Edition.

Veeam EULA prohibits using Community Edition to provide any services to third parties. In particular, you may not install, configure or manage such backup servers at your client's environment as a consultant or an MSP.

21. Select Update license automatically (enable usage reporting) on the License page and click Next.



License

Provide license file for Veeam Backup & Replication.

License file:

C:\Post-Install\VBR12\license-main-1000.BETA3.lic

☑ Update license automatically (enables usage reporting)

Download and install new license automatically when you renew or expand your contract. This requires sending the license ID, the installation ID, and workload usage counters to Veeam servers periodically. Successful usage reporting doubles the number of workloads you can exceed your installed license by.

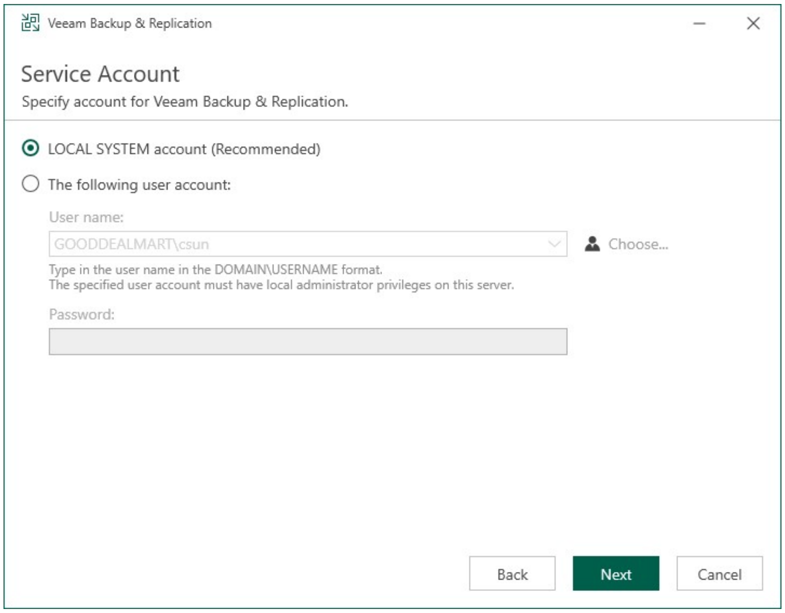
If you don't have a license simply click Next to install the Community Edition.

Veeam EULA prohibits using Community Edition to provide any services to third parties. In particular, you may not install, configure or manage such backup servers at your client's environment as a consultant or an MSP.

22. Select LOCAL SYSTEM account or specify another user account on the Service Account page 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.



Service Account

Specify account for Veeam Backup & Replication.

● LOCAL SYSTEM account (Recommended)

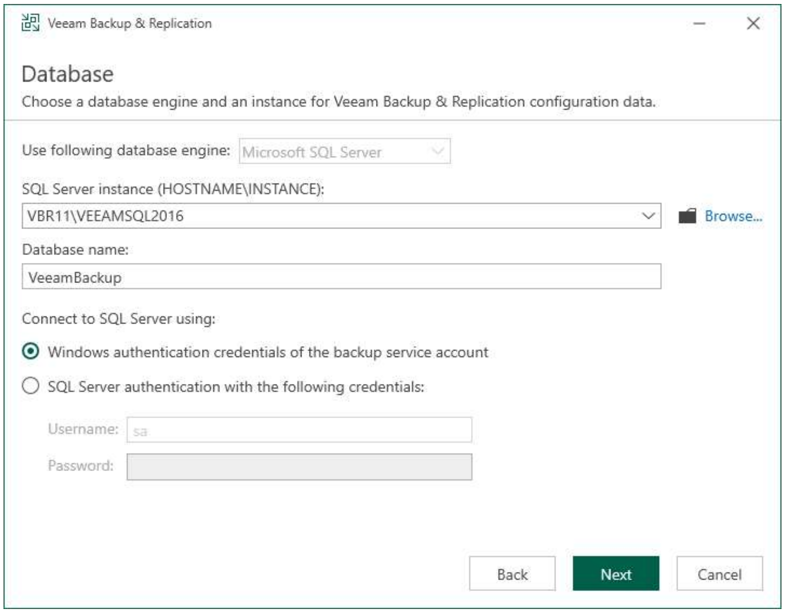
○ The following user account:

User name: GOODDEALMART\csun

Type in the user name in the DOMAIN\USERNAME format.
The specified user account must have local administrator privileges on this server.

Password:

23. On the Database page, click Next.



Database

Choose a database engine and an instance for Veeam Backup & Replication configuration data.

Use following database engine: Microsoft SQL Server

SQL Server instance (HOSTNAME\INSTANCE): VBR11\VEEAMSQL2016

Database name: VeeamBackup

Connect to SQL Server using:

● Windows authentication credentials of the backup service account

○ SQL Server authentication with the following credentials:

Username: sa

Password:

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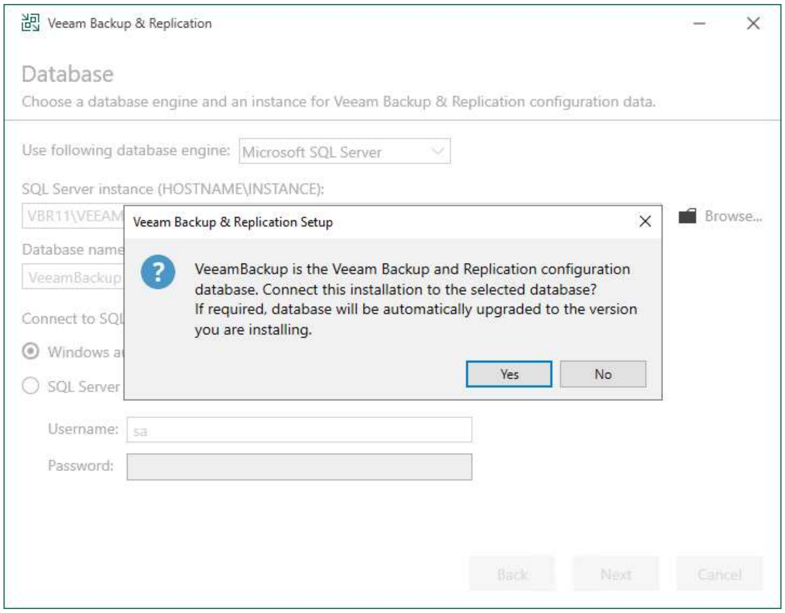
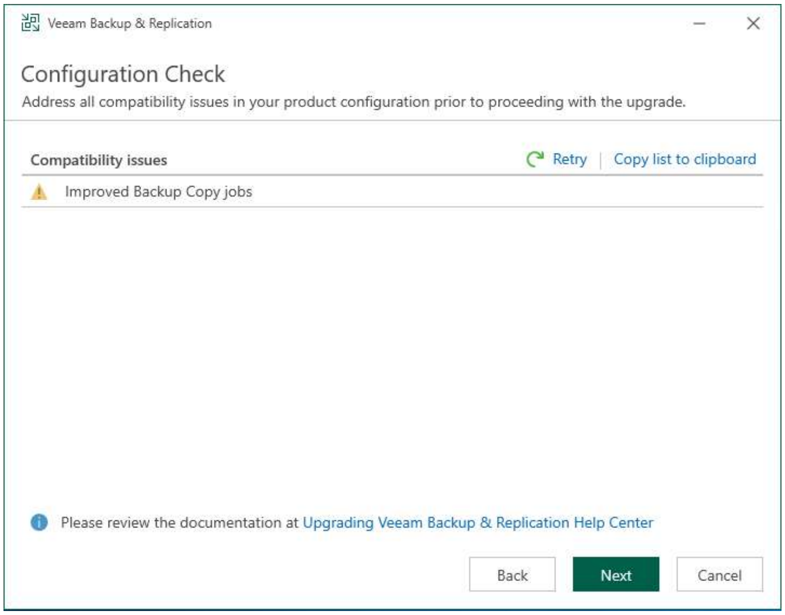
24. Click Yes on the question pop-up message. Veeam will automatically upgrade the database to the version you are installing.



Veeam Backup & Replication
Database
Choose a database engine and an instance for Veeam Backup & Replication configuration data.
Use following database engine: Microsoft SQL Server
SQL Server instance (HOSTNAME\INSTANCE):
VBR11\VEEAM
Browse...
Database name
VeeamBackup
Connect to SQL
Windows a
SQL Server
Username: sa
Password:
Back
Next
Cancel
Veeam Backup & Replication Setup
Yes
No

VeeamBackup is the Veeam Backup and Replication configuration database. Connect this installation to the selected database?
If required, database will be automatically upgraded to the version you are installing.

25. If the Configuration Check page returns errors, resolve them before upgrading. If the check produces warning or information messages, you can proceed with the upgrade and deal with them later.
26. Click Next.

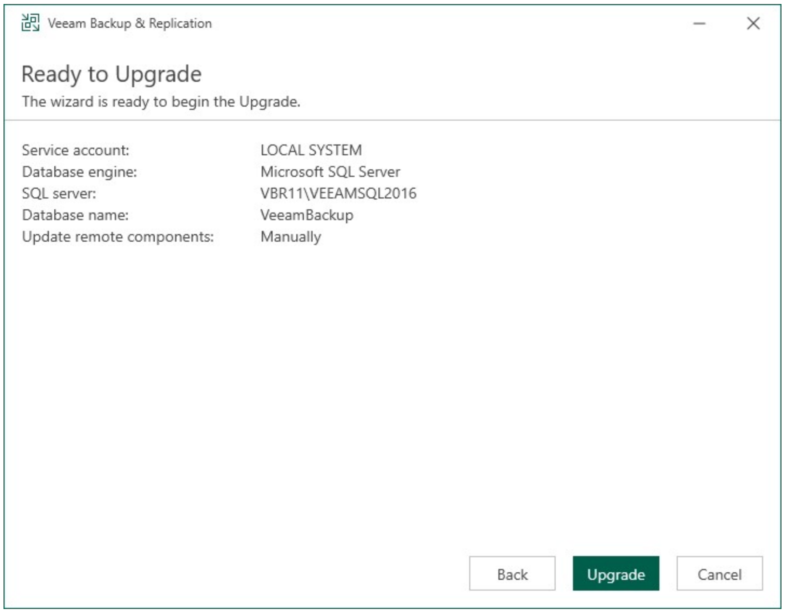


Veeam Backup & Replication
Configuration Check
Address all compatibility issues in your product configuration prior to proceeding with the upgrade.
Compatibility issues
Retry
Copy list to clipboard
Back
Next
Cancel

⚠ Improved Backup Copy jobs

Please review the documentation at Upgrading Veeam Backup & Replication Help Center

27. On the Ready to Upgrade page, click Upgrade.

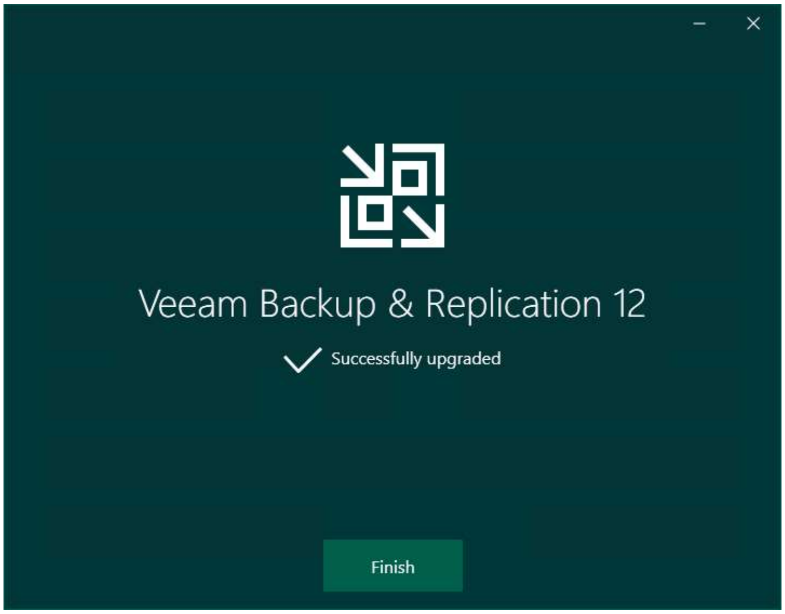

Veeam Backup & Replication
Back
Upgrade
Cancel

Ready to Upgrade

The wizard is ready to begin the Upgrade.

Service account: LOCAL SYSTEM
Database engine: Microsoft SQL Server
SQL server: VBR11\VEEAMSQL2016
Database name: VeeamBackup
Update remote components: Manually

28. On the Veeam Backup & Replication 12 successfully upgraded page, click Finish.



Veeam Backup & Replication 12

✓ Successfully upgraded

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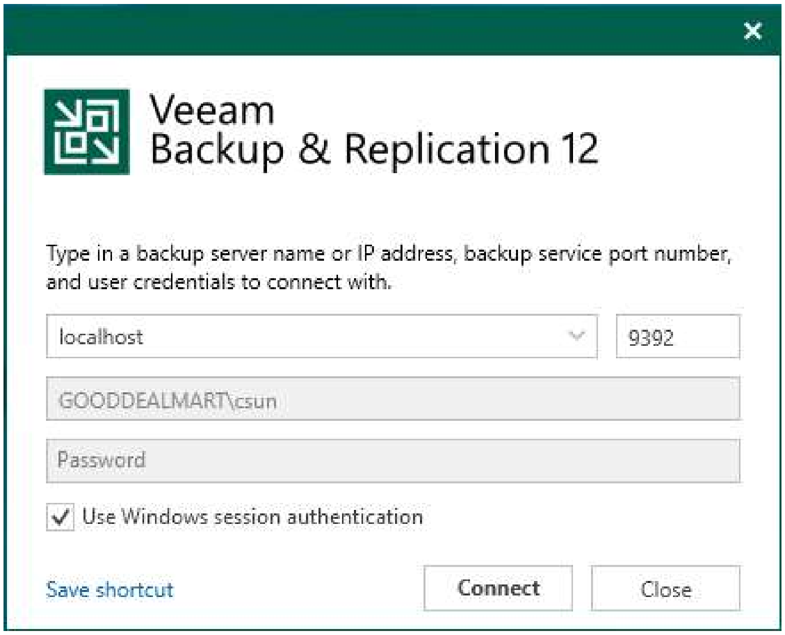
29. Open Veeam Backup & Replication management console and click Connect.


Veeam
Backup & Replication 12

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

localhost 9392

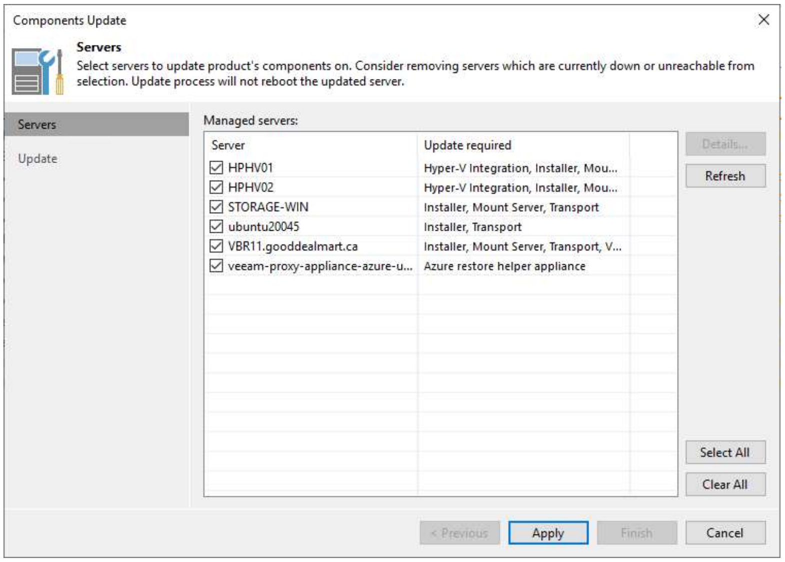
GOODDEALMART\csun

Password

☑ Use Windows session authentication

Save shortcut
Connect
Close

30. Select the all servers checkbox on the Components Update page and click Apply.


Components Update
Servers
Update

Servers

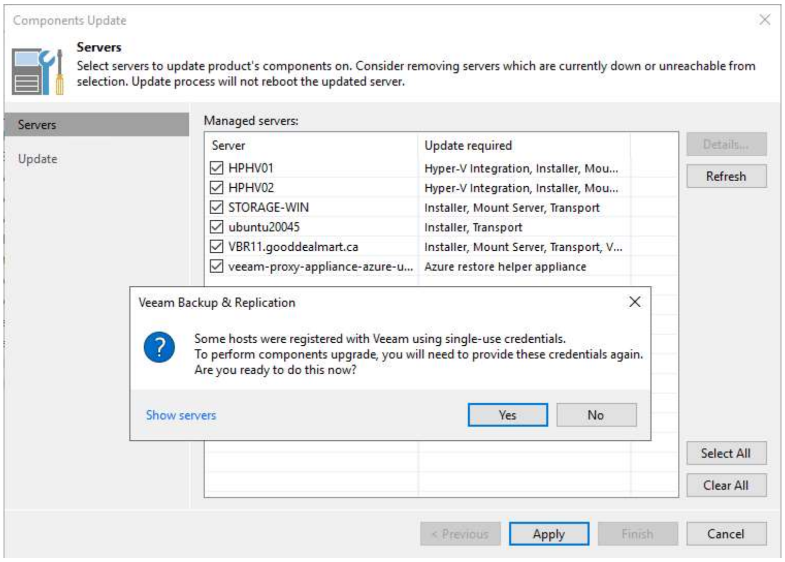
Select servers to update product's components on. Consider removing servers which are currently down or unreachable from selection. Update process will not reboot the updated server.

Managed servers:

Server	Update required
☑ HPHV01	Hyper-V Integration, Installer, Mou...
☑ HPHV02	Hyper-V Integration, Installer, Mou...
☑ STORAGE-WIN	Installer, Mount Server, Transport
☑ ubuntu20045	Installer, Transport
☑ VBR11.gooddealmart.ca	Installer, Mount Server, Transport, V...
☑ veeam-proxy-appliance-azure-u...	Azure restore helper appliance

Details...
Refresh
Select All
Clear All
< Previous
Apply
Finish
Cancel

31. Click Show servers on the provide signal-use credentials question page.


Components Update
Servers
Update
Details...
Refresh
Select All
Clear All
< Previous
Apply
Finish
Cancel
Show servers
Yes
No

Servers

Select servers to update product's components on. Consider removing servers which are currently down or unreachable from selection. Update process will not reboot the updated server.

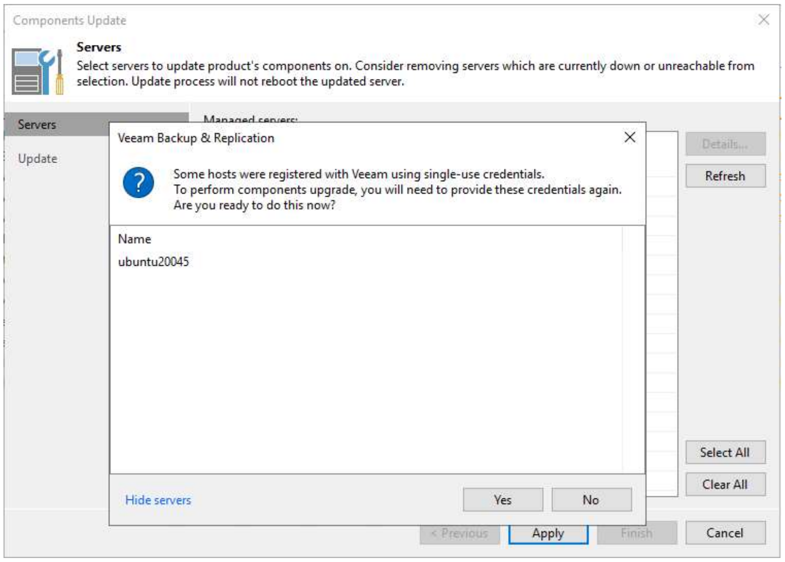
Managed servers:

Server	Update required
☑ HPHV01	Hyper-V Integration, Installer, Mou...
☑ HPHV02	Hyper-V Integration, Installer, Mou...
☑ STORAGE-WIN	Installer, Mount Server, Transport
☑ ubuntu20045	Installer, Transport
☑ VBR11.gooddealmart.ca	Installer, Mount Server, Transport, V...
☑ veeam-proxy-appliance-azure-u...	Azure restore helper appliance

Veeam Backup & Replication

Some hosts were registered with Veeam using single-use credentials.
To perform components upgrade, you will need to provide these credentials again.
Are you ready to do this now?

32. Review the Server listing and click Yes.


Components Update
Servers
Update
Details...
Refresh
Select All
Clear All
< Previous
Apply
Finish
Cancel
Hide servers
Yes
No

Servers

Select servers to update product's components on. Consider removing servers which are currently down or unreachable from selection. Update process will not reboot the updated server.

Veeam Backup & Replication

Some hosts were registered with Veeam using single-use credentials.
To perform components upgrade, you will need to provide these credentials again.
Are you ready to do this now?

Name
ubuntu20045

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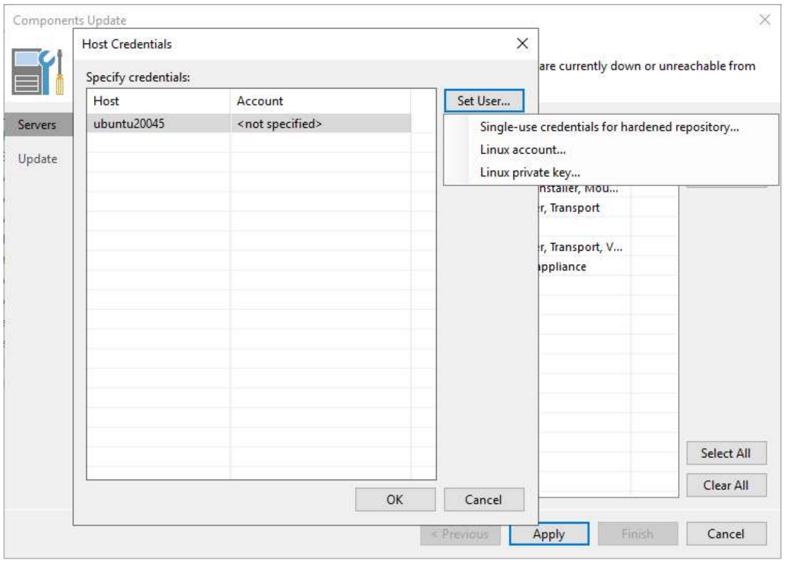
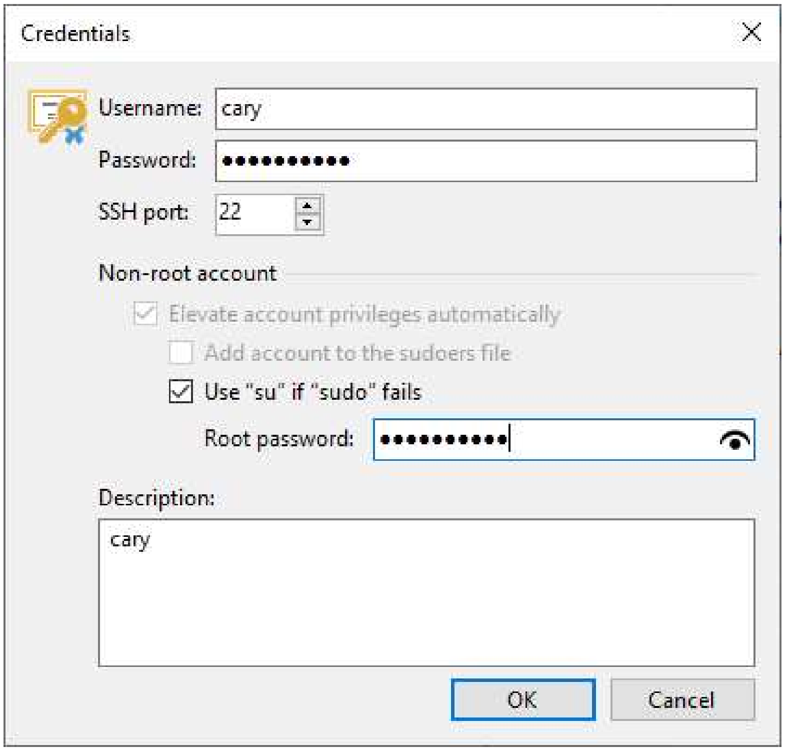
33. On the Host Credentials page, select the host, click Set User and select Singal-use credentials for the hardened repository.


Components Update
Host Credentials
Servers
Update
are currently down or unreachable from
Set User...
Single-use credentials for hardened repository...
Linux account...
Linux private key...
nstaller, Mou...
r, Transport
r, Transport, V...
ppliance
Select All
Clear All
OK
Cancel
< Previous
Apply
Finish
Cancel

Specify credentials:

Host	Account
ubuntu20045	<not specified>

34. Enter your credential information and click OK.


Credentials
OK
Cancel

Username: cary

Password: ●●●●●●●●●●●

SSH port: 22

Non-root account

☑ Elevate account privileges automatically

☐ Add account to the sudoers file

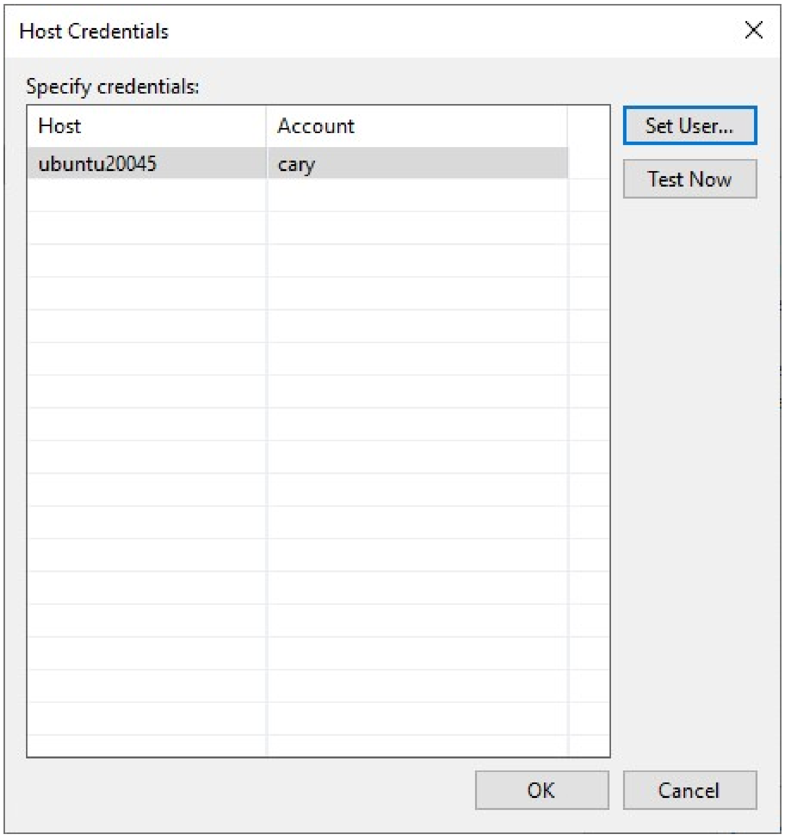
☑ Use "su" if "sudo" fails

Root password: ●●●●●●●●●●●

Description:

cary

35. Click Test Now on the Host Credentials page.

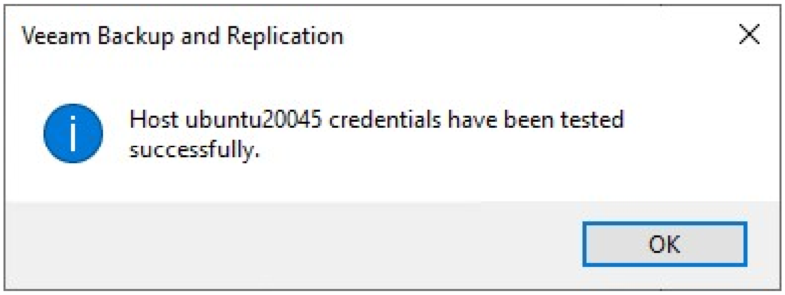


Host Credentials

Specify credentials:

Host	Account
ubuntu20045	cary

36. Ensure the credential has been tested successfully and click OK.



Veeam Backup and Replication

Host ubuntu20045 credentials have been tested successfully.

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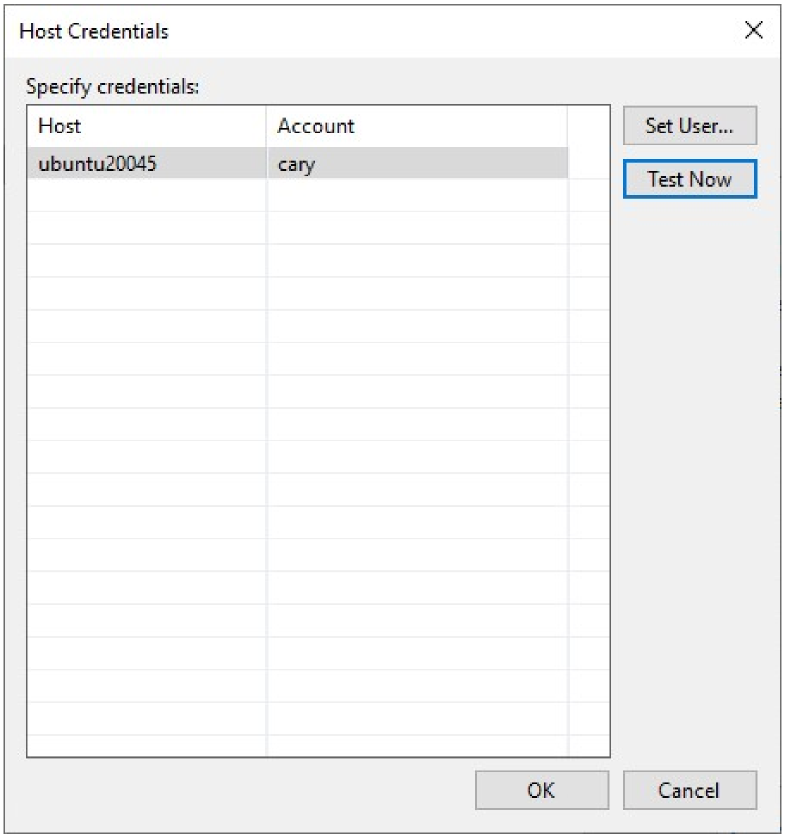
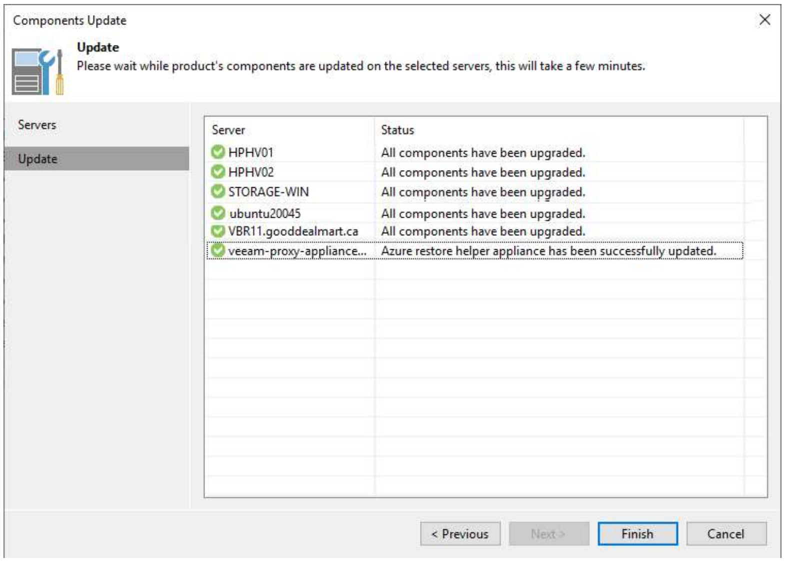
37. Click OK on the Host Credentials page.



Host Credentials
Specify credentials:
Set User...
Test Now
OK
Cancel

Host	Account
ubuntu20045	cary

38. Ensure the components update successfully for selected servers and click Finish.



Components Update

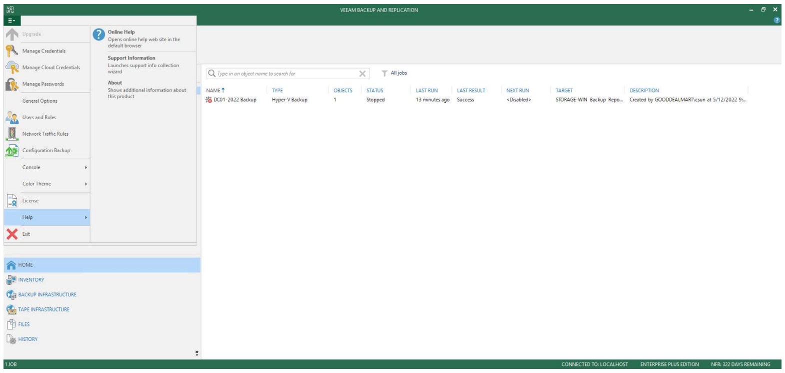
Update

Please wait while product's components are updated on the selected servers, this will take a few minutes.

Server	Status
HPHV01	All components have been upgraded.
HPHV02	All components have been upgraded.
STORAGE-WIN	All components have been upgraded.
ubuntu20045	All components have been upgraded.
VBR11.gooddealmart.ca	All components have been upgraded.
veeam-proxy-appliance...	Azure restore helper appliance has been successfully updated.

Servers
Update
< Previous
Next >
Finish
Cancel

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



VEEAM BACKUP AND REPLICATION

Online Help
Opens online help web site in the default browser

Support Information
Launches support info collection wizard

About
Shows additional information about this product

Type in an object name to search for

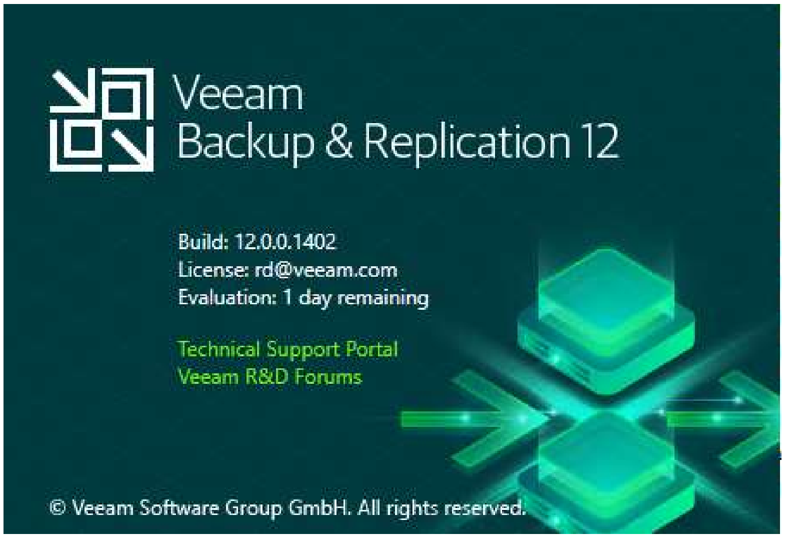
NAME	TYPE	OBJECTS	STATUS	LAST RUN	LAST RESULT	NEXT RUN	TARGET	DESCRIPTION
DC01-2022 Backup	Hyper-V Backup	1	Stopped	13 minutes ago	Success	<Disabled>	STORAGE-WIN Backup Repo...	Created by GOODDEALMART\csun at 5/12/2022 9:...

1 JOB CONNECTED TO: LOCALHOST ENTERPRISE PLUS EDITION NFR: 322 DAYS REMAINING

Upgrade
Manage Credentials
Manage Cloud Credentials
Manage Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
Console
Color Theme
License
Help
Exit
All jobs
HOME
INVENTORY
BACKUP INFRASTRUCTURE
TAPE INFRASTRUCTURE
FILES
HISTORY

Technet24

40. Ensure the existing Veeam Backup and Replication version is upgraded.



Veeam
Backup & Replication 12

Build: 12.0.0.1402
License: rd@veeam.com
Evaluation: 1 day remaining

Technical Support Portal
Veeam R&D Forums

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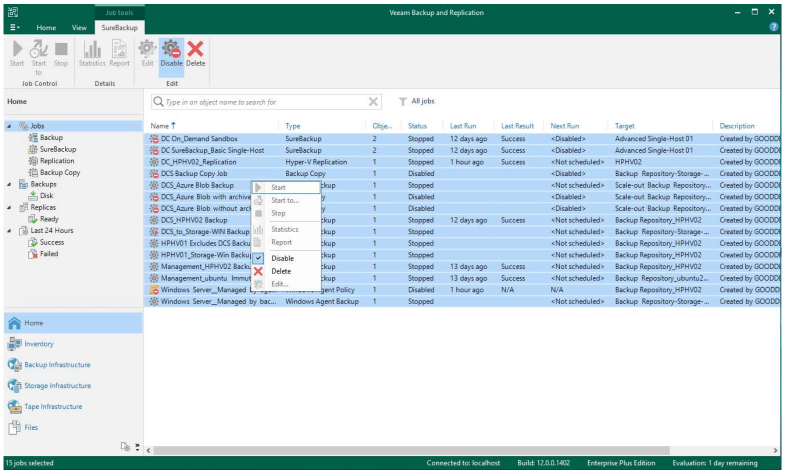
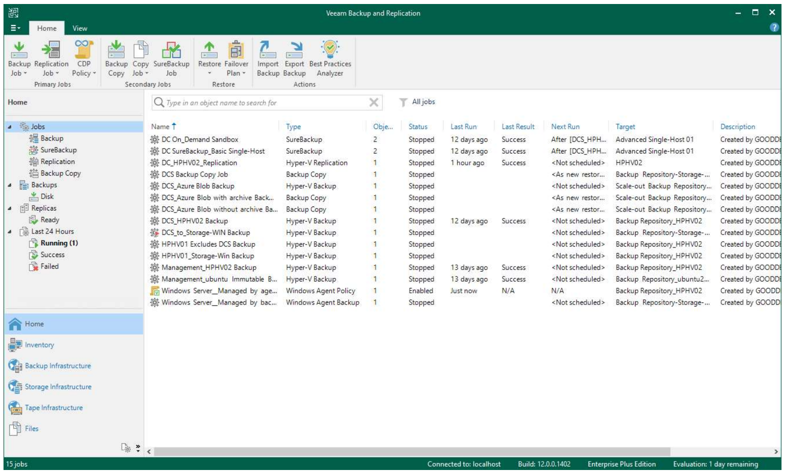
41. On the Home page, select Jobs.
42. Right-click jobs and unselect Disable to enable all jobs.


Job tools
Veeam Backup and Replication
Home
View
SureBackup
Start
Start to
Stop
Job Control
Statistics
Report
Details
Edit
Disable
Delete
Edit
Type in an object name to search for
All jobs
Home
Jobs
Backup
SureBackup
Replication
Backup Copy
Backups
Disk
Replicas
Ready
Last 24 Hours
Success
Failed
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Start
Start to...
Stop
Statistics
Report
Disable
Delete
Edit...

Name	Type	Obje...	Status	Last Run	Last Result	Next Run	Target	Description
DC On_Demand Sandbox	SureBackup	2	Stopped	12 days ago	Success	<Disabled>	Advanced Single-Host 01	Created by GOODD
DC SureBackup_Basic Single-Host	SureBackup	2	Stopped	12 days ago	Success	<Disabled>	Advanced Single-Host 01	Created by GOODD
DC_HPHV02_Replication	Hyper-V Replication	1	Stopped	1 hour ago	Success	<Not scheduled>	HPHV02	Created by GOODD
DCS Backup Copy Job	Backup Copy	1	Disabled			<Disabled>	Backup Repository-Storage-...	Created by GOODD
DCS_Azure Blob Backup	ckup	1	Stopped			<Not scheduled>	Scale-out Backup Repository...	Created by GOODD
DCS_Azure Blob with archive	y	1	Disabled			<Disabled>	Scale-out Backup Repository...	Created by GOODD
DCS_Azure Blob without arch	y	1	Disabled			<Disabled>	Scale-out Backup Repository...	Created by GOODD
DCS_HPHV02 Backup	ckup	1	Stopped	12 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GOODD
DCS_to_Storage-WIN Backup	ckup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GOODD
HPHV01 Excludes DCS Backu	ckup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GOODD
HPHV01_Storage-Win Backu	ckup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GOODD
Management_HPHV02 Backu	ckup	1	Stopped	13 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GOODD
Management_ubuntu Immut	ckup	1	Stopped	13 days ago	Success	<Not scheduled>	Backup Repository_ubuntu2...	Created by GOODD
Windows Server_Managed	gent Policy	1	Disabled	1 hour ago	N/A	N/A	Backup Repository_HPHV02	Created by GOODD
Windows Server_Managed by bac...	Windows Agent Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GOODD

15 jobs selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
Evaluation: 1 day remaining

43. Ensure all jobs are enabled.


Veeam Backup and Replication
Home
View
Backup Job
Replication Job
CDP Policy
Primary Jobs
Backup Copy
Copy Job
SureBackup Job
Secondary Jobs
Restore
Failover Plan
Restore
Import Backup
Export Backup
Best Practices Analyzer
Actions
Home
Jobs
Backup
SureBackup
Replication
Backup Copy
Backups
Disk
Replicas
Ready
Last 24 Hours
Running (1)
Success
Failed
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
All jobs

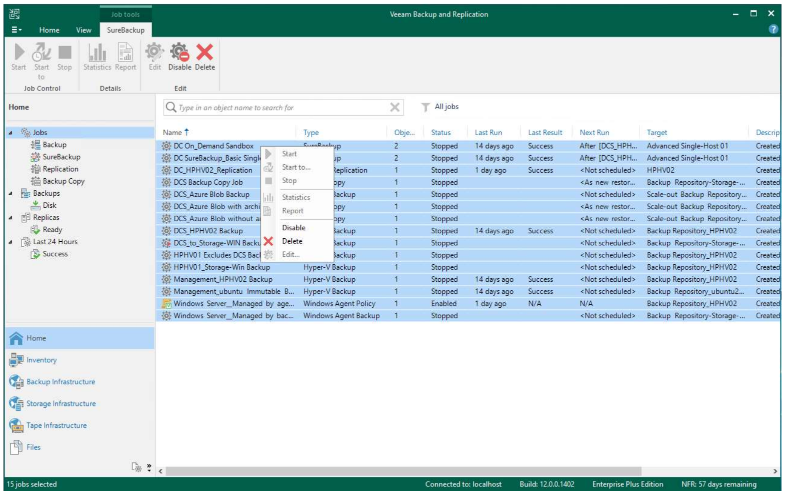
Name	Type	Obje...	Status	Last Run	Last Result	Next Run	Target	Description
DC On_Demand Sandbox	SureBackup	2	Stopped	12 days ago	Success	After [DCS_HPH...	Advanced Single-Host 01	Created by GOODD
DC SureBackup_Basic Single-Host	SureBackup	2	Stopped	12 days ago	Success	After [DCS_HPH...	Advanced Single-Host 01	Created by GOODD
DC_HPHV02_Replication	Hyper-V Replication	1	Stopped	1 hour ago	Success	<Not scheduled>	HPHV02	Created by GOODD
DCS Backup Copy Job	Backup Copy	1	Stopped			<As new restor...	Backup Repository-Storage-...	Created by GOODD
DCS_Azure Blob Backup	Hyper-V Backup	1	Stopped			<Not scheduled>	Scale-out Backup Repository...	Created by GOODD
DCS_Azure Blob with archive Back...	Backup Copy	1	Stopped			<As new restor...	Scale-out Backup Repository...	Created by GOODD
DCS_Azure Blob without archive Ba...	Backup Copy	1	Stopped			<As new restor...	Scale-out Backup Repository...	Created by GOODD
DCS_HPHV02 Backup	Hyper-V Backup	1	Stopped	12 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GOODD
DCS_to_Storage-WIN Backup	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GOODD
HPHV01 Excludes DCS Backup	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GOODD
HPHV01_Storage-Win Backup	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GOODD
Management_HPHV02 Backup	Hyper-V Backup	1	Stopped	13 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GOODD
Management_ubuntu Immutable B...	Hyper-V Backup	1	Stopped	13 days ago	Success	<Not scheduled>	Backup Repository_ubuntu2...	Created by GOODD
Windows Server__Managed by age...	Windows Agent Policy	1	Enabled	Just now	N/A	N/A	Backup Repository_HPHV02	Created by GOODD
Windows Server__Managed by bac...	Windows Agent Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GOODD

15 jobs Connected to: localhost Build: 12.0.0.1402 Enterprise Plus Edition Evaluation: 1 day remaining

Technet24

Migrate the Existing Veeam Backup and Replication to the new server with PostgreSQL

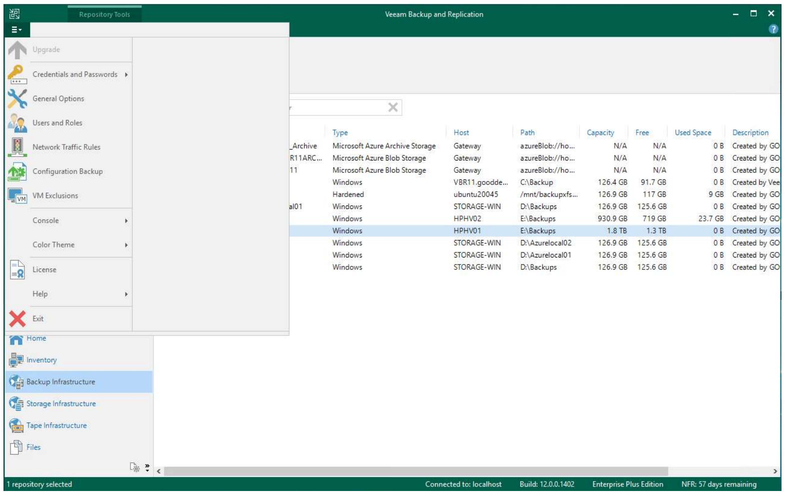
PostgreSQL is free and has no size limit or compute restrictions has improved performance over SQL Express.

Instructions	Screenshot (if applicable)
1. Log in to the existing Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console. 3. Select and right-click all jobs. 4. Select Disable.	

Veeam Backup and Replication
Job tools
Home
View
SureBackup
Start
Start to
Stop
Job Control
Statistics
Report
Details
Edit
Disable
Delete
Edit
Home
Jobs
Backup
SureBackup
Replication
Backup Copy
Backups
Disk
Replicas
Ready
Last 24 Hours
Success
Type in an object name to search for
All jobs
Start
Start to...
Stop
Statistics
Report
Disable
Delete
Edit...
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
15 jobs selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 57 days remaining

Name	Type	Obje...	Status	Last Run	Last Result	Next Run	Target	Descrip
DC On_Demand Sandbox	SureBackup	2	Stopped	14 days ago	Success	After [DCS_HPH...	Advanced Single-Host 01	Created
DC SureBackup_Basic Singl	up	2	Stopped	14 days ago	Success	After [DCS_HPH...	Advanced Single-Host 01	Created
DC_HPHV02_Replication	Replication	1	Stopped	1 day ago	Success	<Not scheduled>	HPHV02	Created
DCS Backup Copy Job	py	1	Stopped			<As new restor...	Backup Repository-Storage-...	Created
DCS_Azure Blob Backup	Backup	1	Stopped			<Not scheduled>	Scale-out Backup Repository...	Created
DCS_Azure Blob with archi	py	1	Stopped			<As new restor...	Scale-out Backup Repository...	Created
DCS_Azure Blob without a	py	1	Stopped			<As new restor...	Scale-out Backup Repository...	Created
DCS_HPHV02 Backup	Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created
DCS_to_Storage-WIN Backu	Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created
HPHV01 Excludes DCS Bac	Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created
HPHV01_Storage-Win Backup	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created
Management_HPHV02 Backup	Hyper-V Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created
Management_ubuntu Immutable B...	Hyper-V Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_ubuntu2...	Created
Windows Server__Managed by age...	Windows Agent Policy	1	Enabled	1 day ago	N/A	N/A	Backup Repository_HPHV02	Created
Windows Server__Managed by bac...	Windows Agent Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created

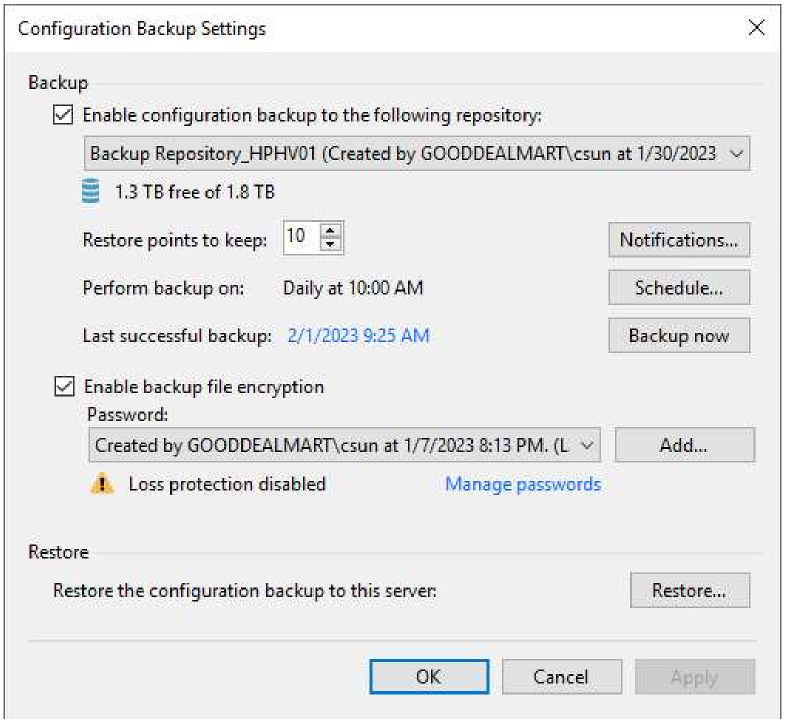
5. Drop down the main menu and select Configuration Backup.


Repository Tools
Veeam Backup and Replication
Upgrade
Credentials and Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
VM Exclusions
Console
Color Theme
License
Help
Exit
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files

	Type	Host	Path	Capacity	Free	Used Space	Description
_Archive	Microsoft Azure Archive Storage	Gateway	azureBlob://ho...	N/A	N/A	0 B	Created by GO
R11ARC...	Microsoft Azure Blob Storage	Gateway	azureBlob://ho...	N/A	N/A	0 B	Created by GO
11	Microsoft Azure Blob Storage	Gateway	azureBlob://ho...	N/A	N/A	0 B	Created by GO
	Windows	VBR11.goodde...	C:\Backup	126.4 GB	91.7 GB	0 B	Created by Vee
	Hardened	ubuntu20045	/mnt/backupxfs...	126.9 GB	117 GB	9 GB	Created by GO
al01	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0 B	Created by GO
	Windows	HPHV02	E:\Backups	930.9 GB	719 GB	23.7 GB	Created by GO
	Windows	HPHV01	E:\Backups	1.8 TB	1.3 TB	0 B	Created by GO
	Windows	STORAGE-WIN	D:\Azurelocal02	126.9 GB	125.6 GB	0 B	Created by GO
	Windows	STORAGE-WIN	D:\Azurelocal01	126.9 GB	125.6 GB	0 B	Created by GO
	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0 B	Created by GO

1 repository selected   Connected to: localhost   Build: 12.0.0.1402   Enterprise Plus Edition   NFR: 57 days remaining

6. Click Backup now on the Configuration Backup Settings page.


Configuration Backup Settings
Backup
Notifications...
Schedule...
Backup now
Add...
Manage passwords
Restore
Restore...
OK
Cancel
Apply

☑ Enable configuration backup to the following repository:

Backup Repository_HPHV01 (Created by GOODDEALMART\csun at 1/30/2023

1.3 TB free of 1.8 TB

Restore points to keep: 10

Perform backup on: Daily at 10:00 AM

Last successful backup: 2/1/2023 9:25 AM

☑ Enable backup file encryption

Password:

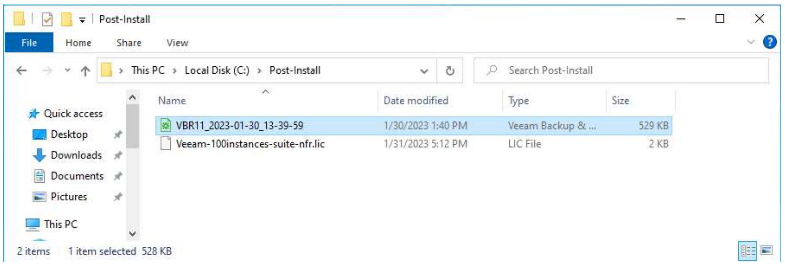
Created by GOODDEALMART\csun at 1/7/2023 8:13 PM. (L

Loss protection disabled

Restore the configuration backup to this server:

Technet24

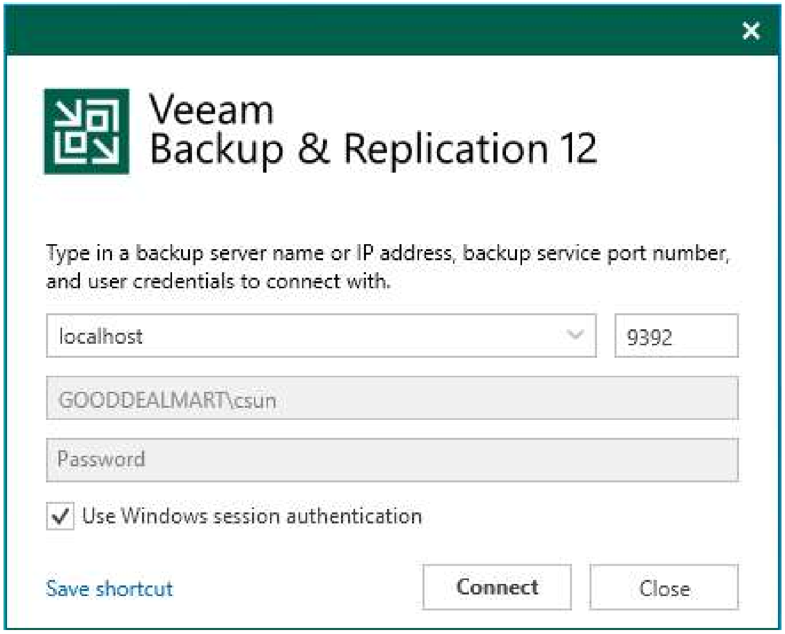
7. Copy the configuration file from the backup repository to the new Backup and Replication manager server.


Post-Install
File
Home
Share
View
This PC › Local Disk (C:) › Post-Install
Search Post-Install
Quick access
Desktop
Downloads
Documents
Pictures
This PC

Name	Date modified	Type	Size
VBR11_2023-01-30_13-39-59	1/30/2023 1:40 PM	Veeam Backup & ...	529 KB
Veeam-100instances-suite-nfr.lic	1/31/2023 5:12 PM	LIC File	2 KB

2 items 1 item selected 528 KB

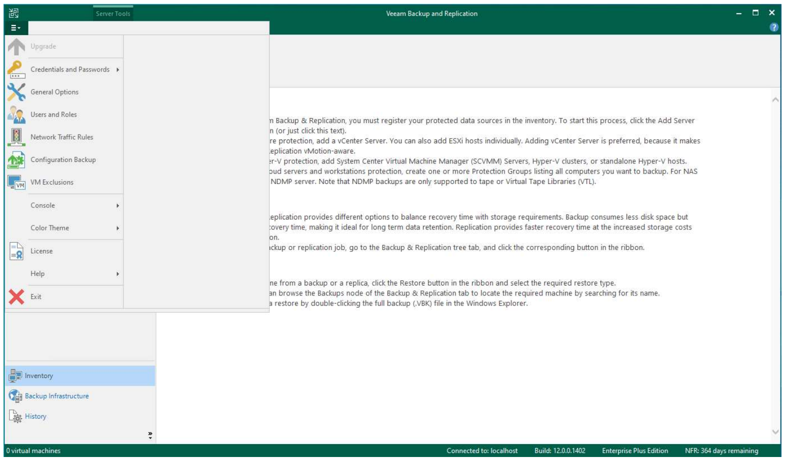
8. Log in to the new Veeam Backup and Replication manager server.
9. Open the Veeam Backup & Replication Console, and click Connect.


Veeam
Backup & Replication 12
Save shortcut
Connect
Close

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

localhost
9392
GOODDEALMART\csun
Password
☑ Use Windows session authentication

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

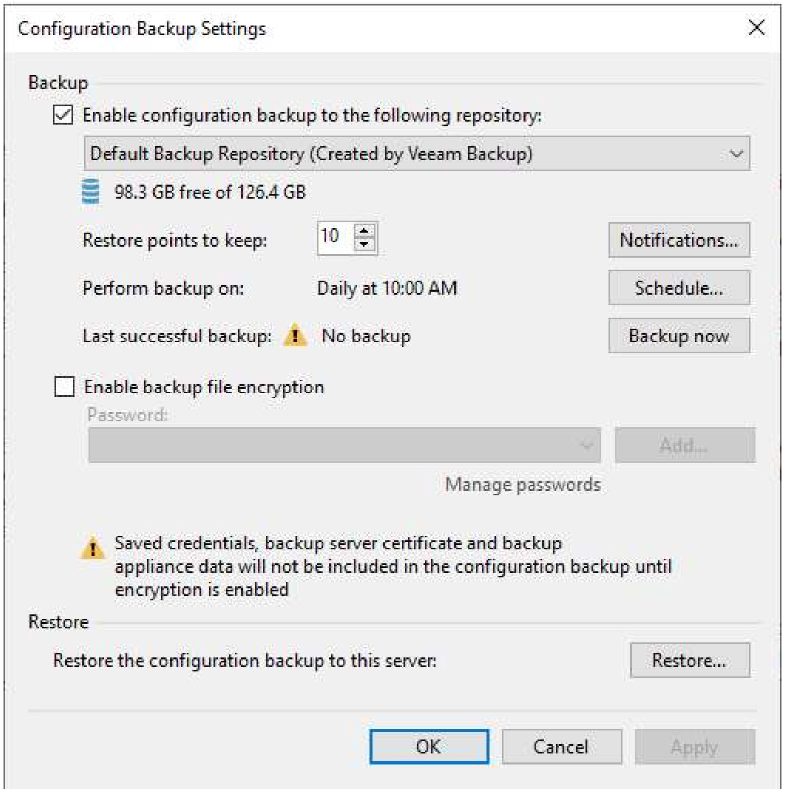

Server Tools
Veeam Backup and Replication
Upgrade
Credentials and Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
VM Exclusions
Console
Color Theme
License
Help
Exit
Inventory
Backup Infrastructure
History
0 virtual machines
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 364 days remaining

n Backup & Replication, you must register your protected data sources in the inventory. To start this process, click the Add Server
n (or just click this text).
re protection, add a vCenter Server. You can also add ESXi hosts individually. Adding vCenter Server is preferred, because it makes
eplication vMotion-aware.
er-V protection, add System Center Virtual Machine Manager (SCVMM) Servers, Hyper-V clusters, or standalone Hyper-V hosts.
oud servers and workstations protection, create one or more Protection Groups listing all computers you want to backup. For NAS
NDMP server. Note that NDMP backups are only supported to tape or Virtual Tape Libraries (VTL).

eplication provides different options to balance recovery time with storage requirements. Backup consumes less disk space but
covery time, making it ideal for long term data retention. Replication provides faster recovery time at the increased storage costs
on.
ckup or replication job, go to the Backup & Replication tree tab, and click the corresponding button in the ribbon.

ne from a backup or a replica, click the Restore button in the ribbon and select the required restore type.
an browse the Backups node of the Backup & Replication tab to locate the required machine by searching for its name.
a restore by double-clicking the full backup (.VBK) file in the Windows Explorer.

11. Click Restore on the Configuration Backup Settings page.



Configuration Backup Settings

Backup

☑ Enable configuration backup to the following repository:

Default Backup Repository (Created by Veeam Backup)

98.3 GB free of 126.4 GB

Restore points to keep: 10

Perform backup on: Daily at 10:00 AM

Last successful backup: ⚠ No backup

☐ Enable backup file encryption

Password:

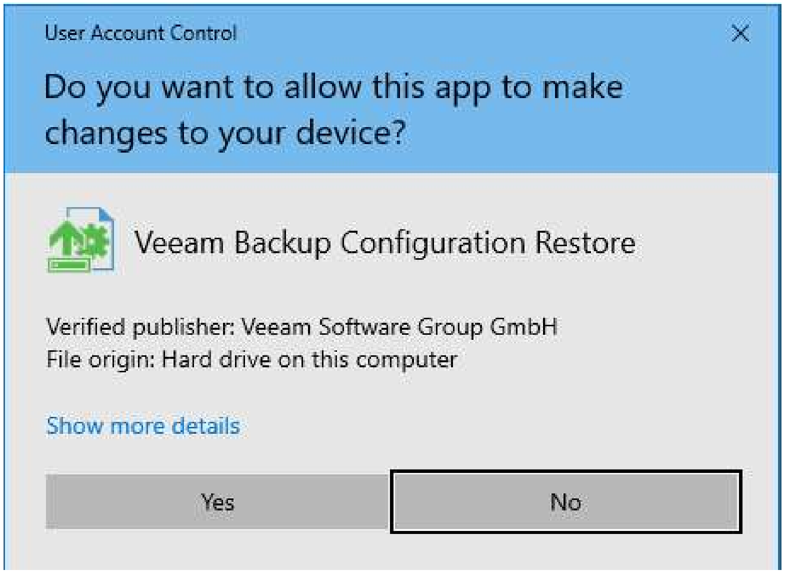
⚠ Saved credentials, backup server certificate and backup appliance data will not be included in the configuration backup until encryption is enabled

Restore

Restore the configuration backup to this server:

Notifications...
Schedule...
Backup now
Add...
Manage passwords
Restore...
OK
Cancel
Apply

12. Click Yes on the User Account Control page.



User Account Control

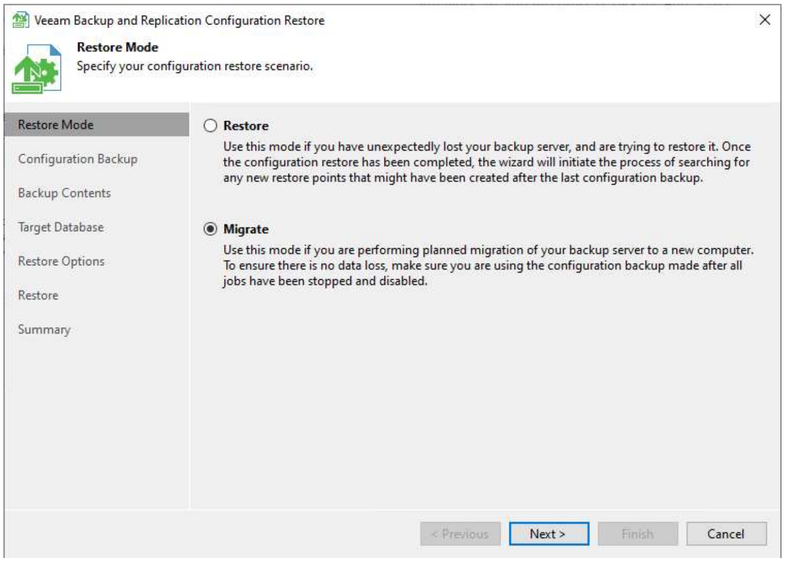
Do you want to allow this app to make changes to your device?

Veeam Backup Configuration Restore

Verified publisher: Veeam Software Group GmbH
File origin: Hard drive on this computer

Show more details
Yes
No

13. Select Migrate on the Restore Mode page.



Veeam Backup and Replication Configuration Restore

Restore Mode

Specify your configuration restore scenario.

○ **Restore**

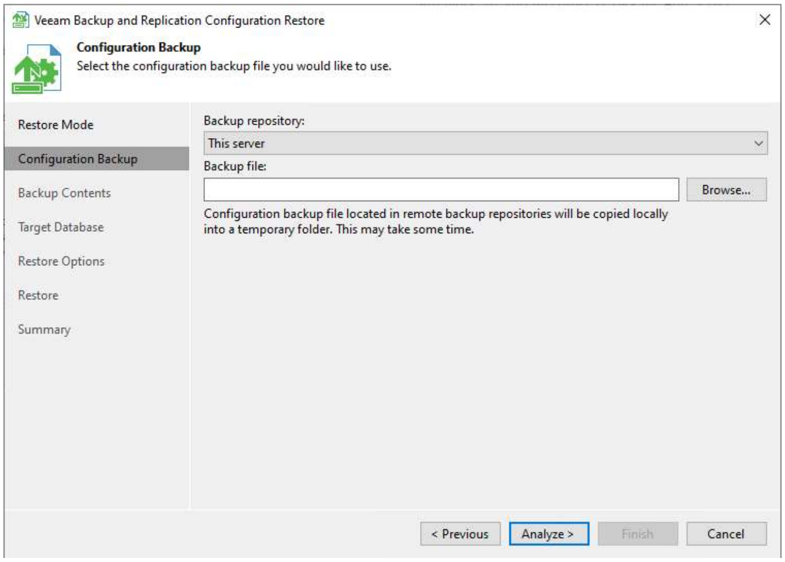
Use this mode if you have unexpectedly lost your backup server, and are trying to restore it. Once the configuration restore has been completed, the wizard will initiate the process of searching for any new restore points that might have been created after the last configuration backup.

● **Migrate**

Use this mode if you are performing planned migration of your backup server to a new computer. To ensure there is no data loss, make sure you are using the configuration backup made after all jobs have been stopped and disabled.

Restore Mode
Configuration Backup
Backup Contents
Target Database
Restore Options
Restore
Summary
< Previous
Next >
Finish
Cancel

14. Select this server in the Backup repository field on the Configuration Backup page.
15. Click Browse in the Backup file field.



Veeam Backup and Replication Configuration Restore

Configuration Backup

Select the configuration backup file you would like to use.

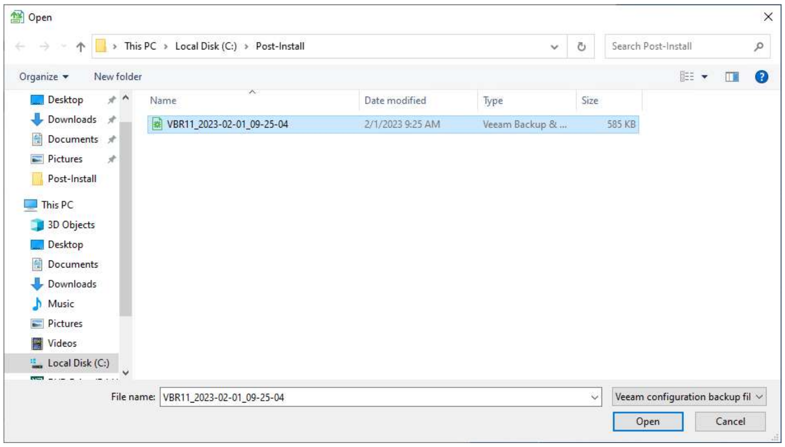
Backup repository: This server

Backup file:

Configuration backup file located in remote backup repositories will be copied locally into a temporary folder. This may take some time.

Restore Mode
Configuration Backup
Backup Contents
Target Database
Restore Options
Restore
Summary
Browse...
< Previous
Analyze >
Finish
Cancel

16. Select the backup configuration file and click Open.



Open

This PC › Local Disk (C:) › Post-Install

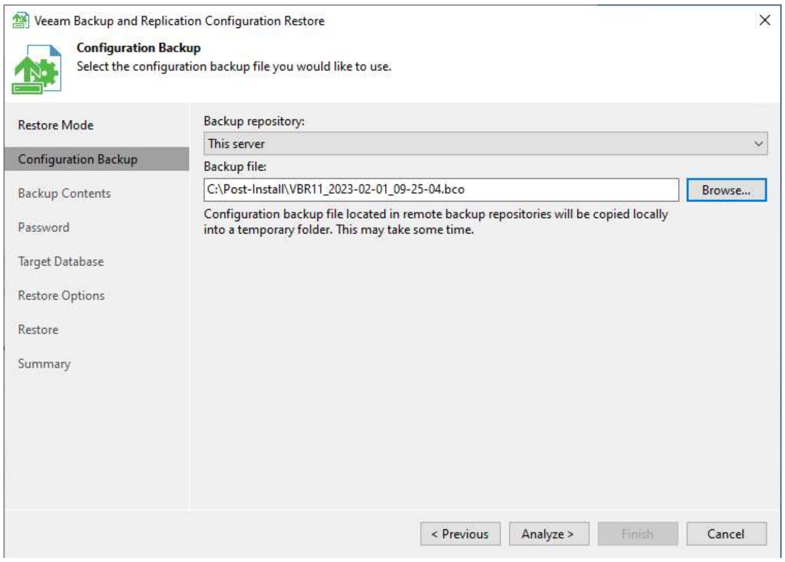
Name	Date modified	Type	Size
VBR11_2023-02-01_09-25-04	2/1/2023 9:25 AM	Veeam Backup & ...	585 KB

File name: VBR11_2023-02-01_09-25-04

Veeam configuration backup fil

Search Post-Install
Organize
New folder
Desktop
Downloads
Documents
Pictures
Post-Install
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Open
Cancel

17. Click Analyze on the Configuration Backup page.



Veeam Backup and Replication Configuration Restore

Configuration Backup

Select the configuration backup file you would like to use.

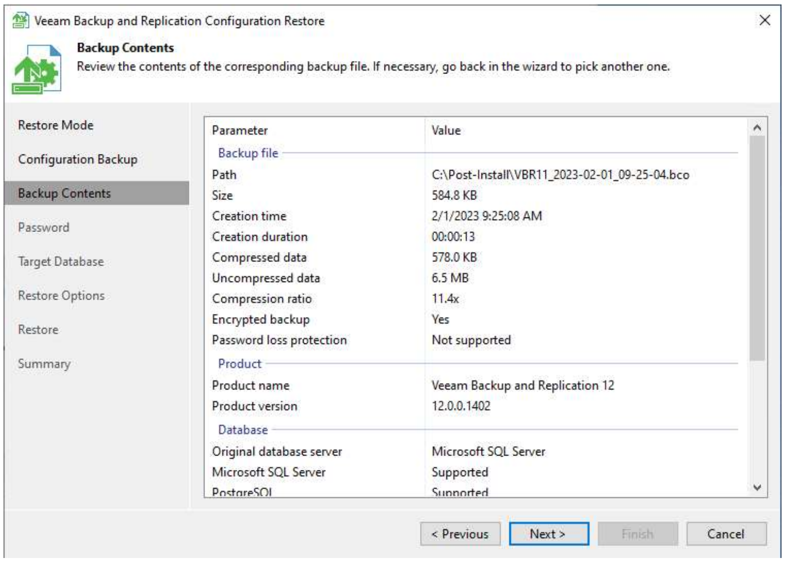
Backup repository: This server

Backup file: C:\Post-Install\VBR11_2023-02-01_09-25-04.bco

Configuration backup file located in remote backup repositories will be copied locally into a temporary folder. This may take some time.

Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Summary
Browse...
< Previous
Analyze >
Finish
Cancel

18. Click Next on the Backup Contents page.



Veeam Backup and Replication Configuration Restore

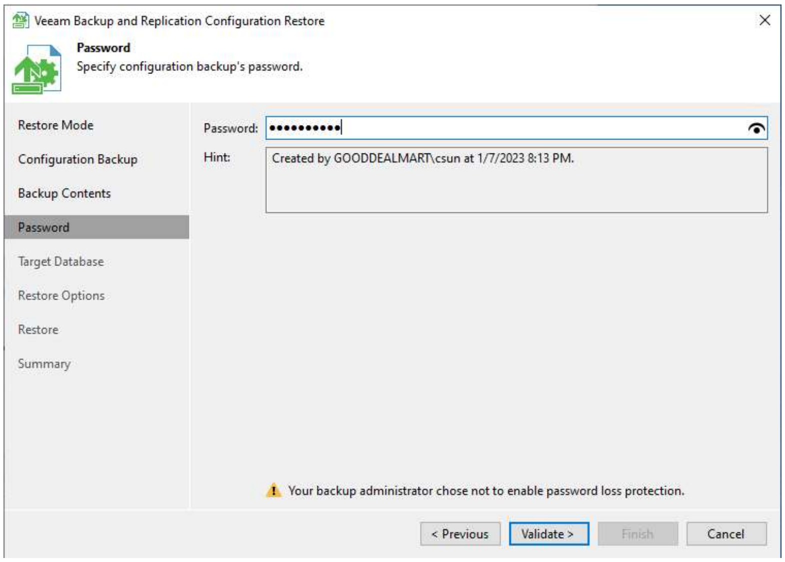
Backup Contents

Review the contents of the corresponding backup file. If necessary, go back in the wizard to pick another one.

Parameter	Value
Backup file	
Path	C:\Post-Install\VBR11_2023-02-01_09-25-04.bco
Size	584.8 KB
Creation time	2/1/2023 9:25:08 AM
Creation duration	00:00:13
Compressed data	578.0 KB
Uncompressed data	6.5 MB
Compression ratio	11.4x
Encrypted backup	Yes
Password loss protection	Not supported
Product	
Product name	Veeam Backup and Replication 12
Product version	12.0.0.1402
Database	
Original database server	Microsoft SQL Server
Microsoft SQL Server	Supported
PostgreSQL	Supported

Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Summary
< Previous
Next >
Finish
Cancel

19. On the Password page, enter the password of the configuration file in the Password field.
20. Enter the description in the Hint field.
21. Click Validate.


Veeam Backup and Replication Configuration Restore
Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Summary
< Previous
Validate >
Finish
Cancel

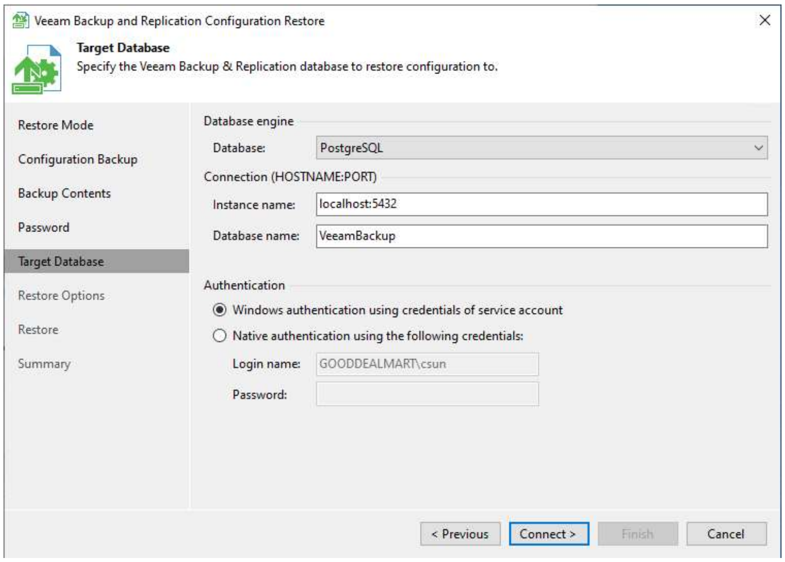
Password
Specify configuration backup's password.

Password: ••••••••••

Hint: Created by GOODDEALMART\csun at 1/7/2023 8:13 PM.

⚠ Your backup administrator chose not to enable password loss protection.

22. Select PostgreSQL from the Database drop-down list on the Target Database page.
23. Enter the instance name and Database name in the Connection session.
24. Select Windows authentication using the service account credentials in the Authentication session.


Veeam Backup and Replication Configuration Restore
Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Summary
< Previous
Connect >
Finish
Cancel

Target Database
Specify the Veeam Backup & Replication database to restore configuration to.

Database engine

Database: PostgreSQL

Connection (HOSTNAME:PORT)

Instance name: localhost:5432

Database name: VeeamBackup

Authentication

● Windows authentication using credentials of service account

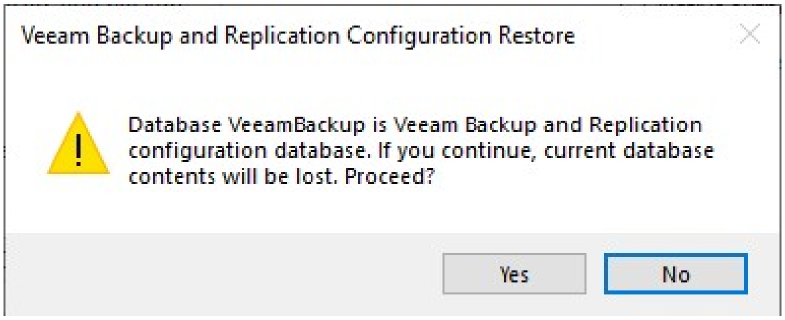
○ Native authentication using the following credentials:

Login name: GOODDEALMART\csun

Password:

Technet24

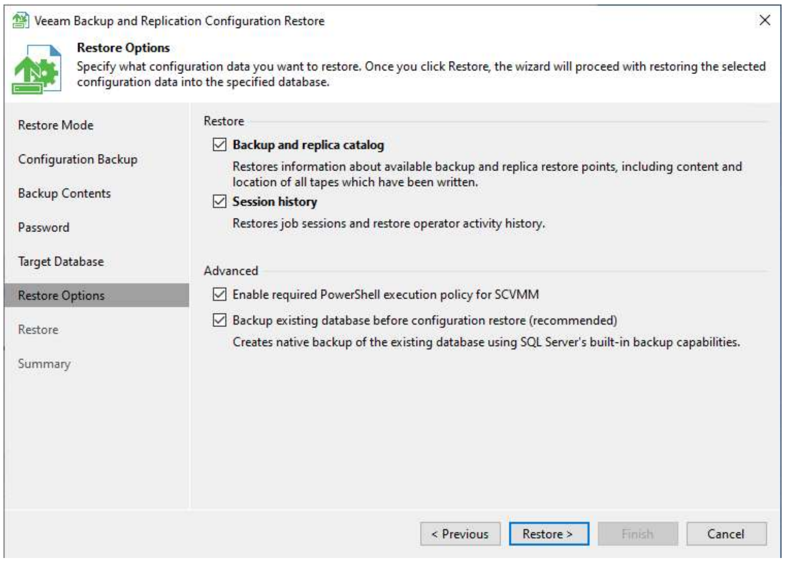
25. Click Yes on the warning message.



Veeam Backup and Replication Configuration Restore

Database VeeamBackup is Veeam Backup and Replication configuration database. If you continue, current database contents will be lost. Proceed?

26. Select the Backup and replica catalog checkbox on the Restore Options page.
27. Select the Session history checkbox.
28. Select Enable required PowerShell execution policy for SCVMM checkbox.
29. Select Backup existing database before configuration restore (recommended).
30. Click Restore.



Veeam Backup and Replication Configuration Restore

Restore Options

Specify what configuration data you want to restore. Once you click Restore, the wizard will proceed with restoring the selected configuration data into the specified database.

Restore

☑ **Backup and replica catalog**

Restores information about available backup and replica restore points, including content and location of all tapes which have been written.

☑ **Session history**

Restores job sessions and restore operator activity history.

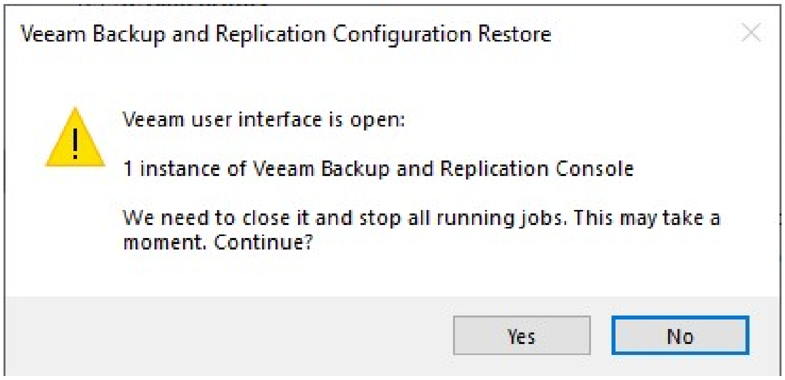
Advanced

☑ Enable required PowerShell execution policy for SCVMM

☑ Backup existing database before configuration restore (recommended)

Creates native backup of the existing database using SQL Server's built-in backup capabilities.

31. Click Yes on the close console and stop all running jobs warning messages.



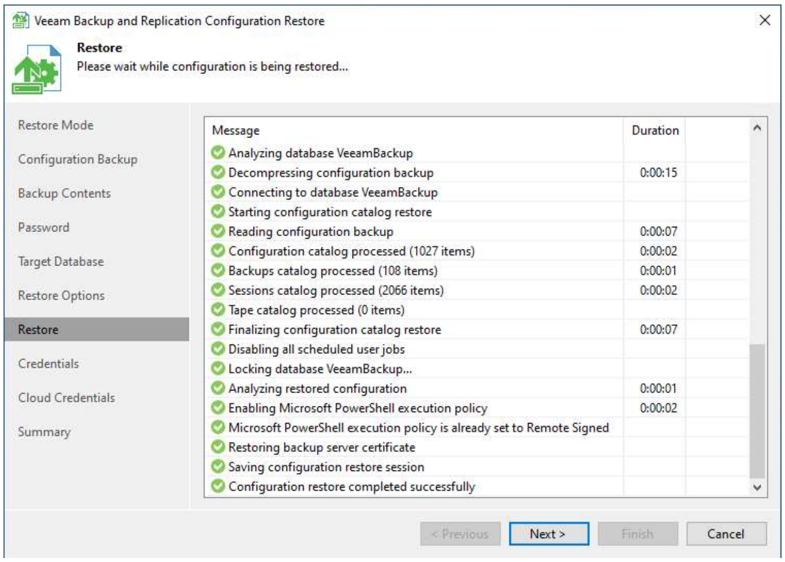
Veeam Backup and Replication Configuration Restore

Veeam user interface is open:

1 instance of Veeam Backup and Replication Console

We need to close it and stop all running jobs. This may take a moment. Continue?

32. On the Restore page, ensure the Configuration restore is completed successfully and click Next.

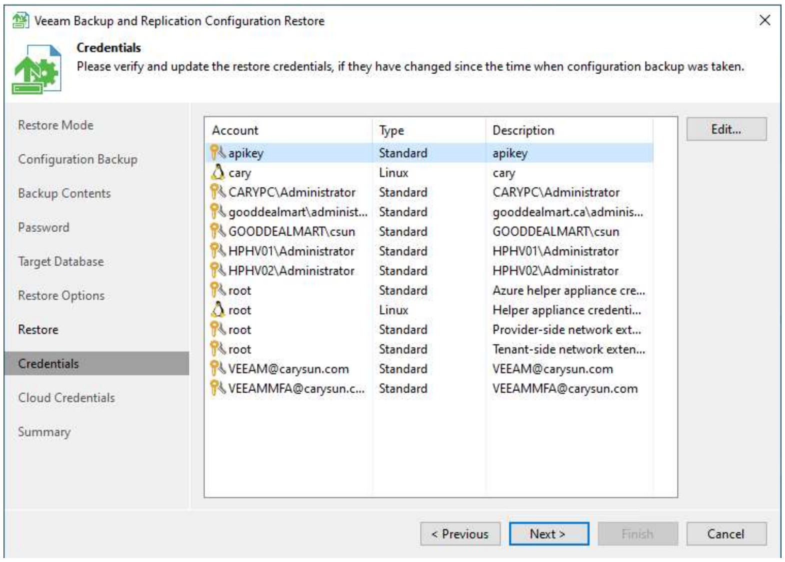

Veeam Backup and Replication Configuration Restore
Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Credentials
Cloud Credentials
Summary
< Previous
Next >
Finish
Cancel

Restore

Please wait while configuration is being restored...

Message	Duration
Analyzing database VeeamBackup	
Decompressing configuration backup	0:00:15
Connecting to database VeeamBackup	
Starting configuration catalog restore	
Reading configuration backup	0:00:07
Configuration catalog processed (1027 items)	0:00:02
Backups catalog processed (108 items)	0:00:01
Sessions catalog processed (2066 items)	0:00:02
Tape catalog processed (0 items)	
Finalizing configuration catalog restore	0:00:07
Disabling all scheduled user jobs	
Locking database VeeamBackup...	
Analyzing restored configuration	0:00:01
Enabling Microsoft PowerShell execution policy	0:00:02
Microsoft PowerShell execution policy is already set to Remote Signed	
Restoring backup server certificate	
Saving configuration restore session	
Configuration restore completed successfully	

33. On the Credentials page, ensure all credentials are up-to-date and click Next.

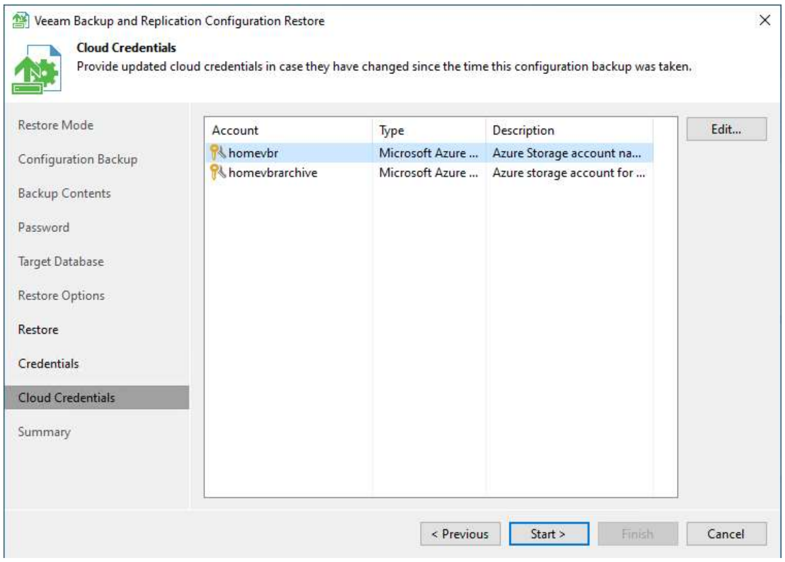

Veeam Backup and Replication Configuration Restore
Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Credentials
Cloud Credentials
Summary
Edit...
< Previous
Next >
Finish
Cancel

Credentials

Please verify and update the restore credentials, if they have changed since the time when configuration backup was taken.

Account	Type	Description
apikey	Standard	apikey
cary	Linux	cary
CARYPC\Administrator	Standard	CARYPC\Administrator
gooddealmart\administ...	Standard	gooddealmart.ca\adminis...
GOODDEALMART\csun	Standard	GOODDEALMART\csun
HPHV01\Administrator	Standard	HPHV01\Administrator
HPHV02\Administrator	Standard	HPHV02\Administrator
root	Standard	Azure helper appliance cre...
root	Linux	Helper appliance credenti...
root	Standard	Provider-side network ext...
root	Standard	Tenant-side network exten...
VEEAM@carysun.com	Standard	VEEAM@carysun.com
VEEAMMFA@carysun.c...	Standard	VEEAMMFA@carysun.com

34. Ensure all credentials are up-to-date on the Cloud Credentials page and click Start.

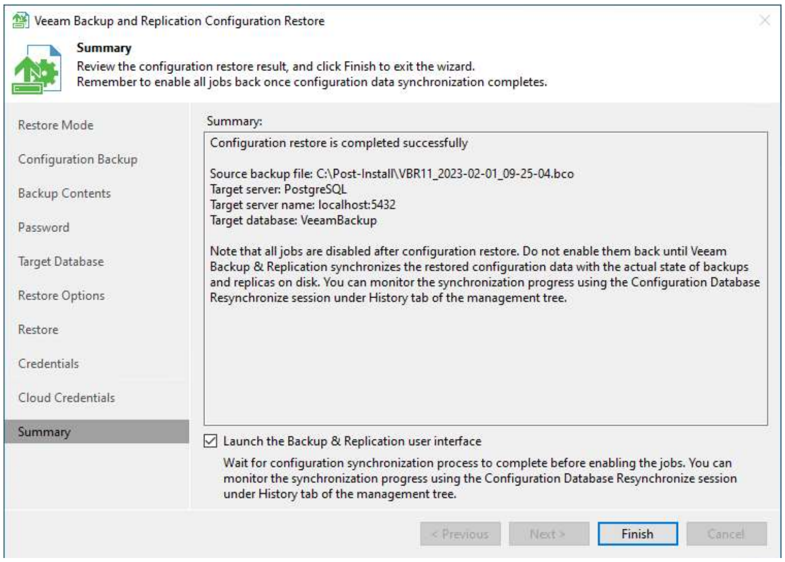

Veeam Backup and Replication Configuration Restore
Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Credentials
Cloud Credentials
Summary
Edit...
< Previous
Start >
Finish
Cancel

Cloud Credentials

Provide updated cloud credentials in case they have changed since the time this configuration backup was taken.

Account	Type	Description
homevbr	Microsoft Azure ...	Azure Storage account na...
homevbrarchive	Microsoft Azure ...	Azure storage account for ...

35. Click Finish on the Summary page.


Veeam Backup and Replication Configuration Restore
Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Credentials
Cloud Credentials
Summary
< Previous
Next >
Finish
Cancel

Summary

Review the configuration restore result, and click Finish to exit the wizard.
Remember to enable all jobs back once configuration data synchronization completes.

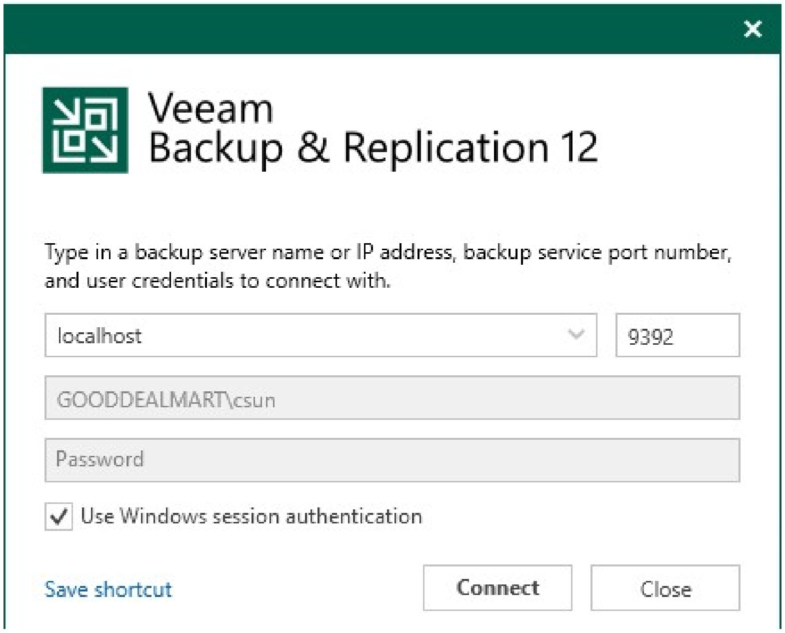
Summary:

```
Configuration restore is completed successfully

Source backup file: C:\Post-Install\VBR11_2023-02-01_09-25-04.bco
Target server: PostgreSQL
Target server name: localhost:5432
Target database: VeeamBackup

Note that all jobs are disabled after configuration restore. Do not enable them back until Veeam
Backup & Replication synchronizes the restored configuration data with the actual state of backups
and replicas on disk. You can monitor the synchronization progress using the Configuration Database
Resynchronize session under History tab of the management tree.
```

☑ Launch the Backup & Replication user interface

Wait for configuration synchronization process to complete before enabling the jobs. You can monitor the synchronization progress using the Configuration Database Resynchronize session under History tab of the management tree.

36. Open Veeam Backup & Replication console and click Connect.



Veeam
Backup & Replication 12

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

localhost 9392

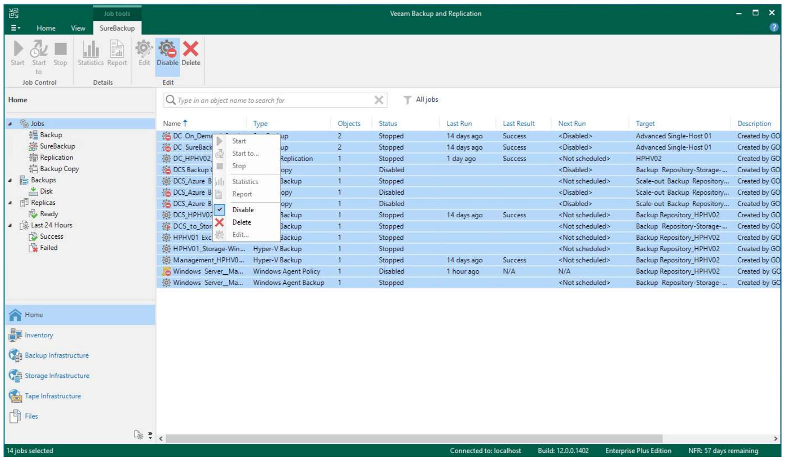
GOODDEALMART\csun

Password

☑ Use Windows session authentication

Save shortcut
Connect
Close

37. Select and right-click all jobs, and unselect Disable to enable all jobs.



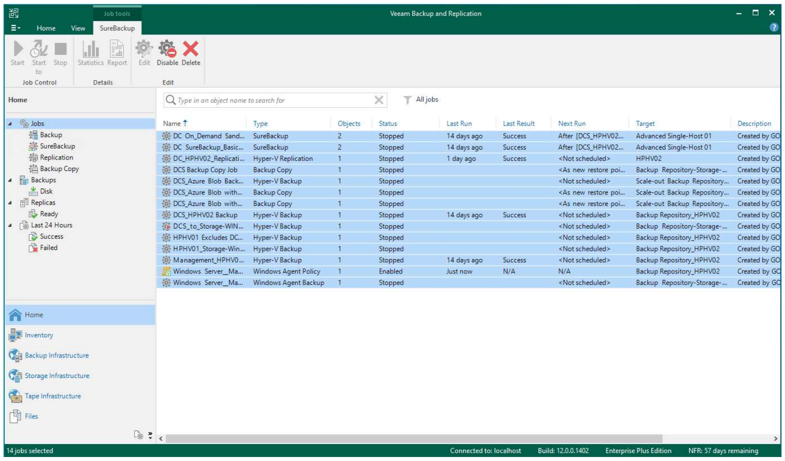
Veeam Backup and Replication
Job tools
Home
View
SureBackup
Start
Start to
Stop
Statistics
Report
Edit
Disable
Delete
Job Control
Details
Edit
Home
Type in an object name to search for
All jobs
Jobs
Backup
SureBackup
Replication
Backup Copy
Backups
Disk
Replicas
Ready
Last 24 Hours
Success
Failed
Start
Start to...
Stop
Statistics
Report
Disable
Delete
Edit...
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files

Name	Type	Objects	Status	Last Run	Last Result	Next Run	Target	Description
DC On_Dema	up	2	Stopped	14 days ago	Success	<Disabled>	Advanced Single-Host 01	Created by GO
DC SureBack	up	2	Stopped	14 days ago	Success	<Disabled>	Advanced Single-Host 01	Created by GO
DC_HPHV02	Replication	1	Stopped	1 day ago	Success	<Not scheduled>	HPHV02	Created by GO
DCS Backup	opy	1	Disabled			<Disabled>	Backup Repository-Storage-...	Created by GO
DCS_Azure B	Backup	1	Stopped			<Not scheduled>	Scale-out Backup Repository...	Created by GO
DCS_Azure B	opy	1	Disabled			<Disabled>	Scale-out Backup Repository...	Created by GO
DCS_Azure B	opy	1	Disabled			<Disabled>	Scale-out Backup Repository...	Created by GO
DCS_HPHV02	Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GO
DCS_to_Stor	Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GO
HPHV01 Exc	Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GO
HPHV01_Storage-Win...	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GO
Management_HPHV0...	Hyper-V Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GO
Windows Server_Ma...	Windows Agent Policy	1	Disabled	1 hour ago	N/A	N/A	Backup Repository_HPHV02	Created by GO
Windows Server_Ma...	Windows Agent Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GO

14 jobs selected Connected to: localhost Build: 12.0.0.1402 Enterprise Plus Edition NFR: 57 days remaining

Technet24

38. Ensure all jobs are re-enabled.


Job tools
Home
View
SureBackup
Veeam Backup and Replication
Start
Start to
Stop
Job Control
Statistics
Report
Details
Edit
Disable
Delete
Edit
Home
Jobs
Backup
SureBackup
Replication
Backup Copy
Backups
Disk
Replicas
Ready
Last 24 Hours
Success
Failed
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
All jobs

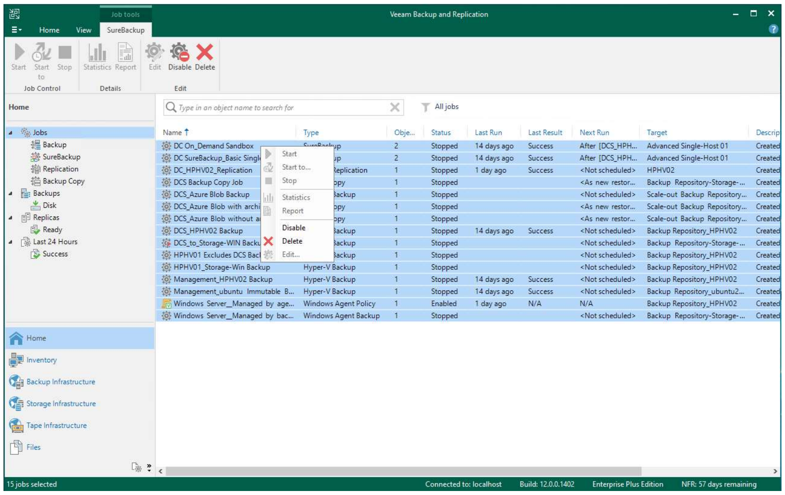
Name	Type	Objects	Status	Last Run	Last Result	Next Run	Target	Description
DC On_Demand Sand...	SureBackup	2	Stopped	14 days ago	Success	After [DCS_HPHV02...	Advanced Single-Host 01	Created by GO
DC SureBackup_Basic...	SureBackup	2	Stopped	14 days ago	Success	After [DCS_HPHV02...	Advanced Single-Host 01	Created by GO
DC_HPHV02_Replicati...	Hyper-V Replication	1	Stopped	1 day ago	Success	<Not scheduled>	HPHV02	Created by GO
DCS Backup Copy Job	Backup Copy	1	Stopped			<As new restore poi...	Backup Repository-Storage-...	Created by GO
DCS_Azure Blob Back...	Hyper-V Backup	1	Stopped			<Not scheduled>	Scale-out Backup Repository...	Created by GO
DCS_Azure Blob with...	Backup Copy	1	Stopped			<As new restore poi...	Scale-out Backup Repository...	Created by GO
DCS_Azure Blob with...	Backup Copy	1	Stopped			<As new restore poi...	Scale-out Backup Repository...	Created by GO
DCS_HPHV02 Backup	Hyper-V Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GO
DCS_to_Storage-WIN...	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GO
HPHV01 Excludes DC...	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GO
HPHV01_Storage-Win...	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GO
Management_HPHV0...	Hyper-V Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GO
Windows Server_Ma...	Windows Agent Policy	1	Enabled	Just now	N/A	N/A	Backup Repository_HPHV02	Created by GC
Windows Server_Ma...	Windows Agent Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GC

14 jobs selected

Connected to: localhost   Build: 12.0.0.1402   Enterprise Plus Edition   NFR: 57 days remaining

Migrate the Existing Veeam Backup and Replication to the new server with Microsoft SQL

Microsoft SQL Server (or Express), either locally on the backup manager server or remotely. Microsoft SQL Server Express has a configuration data storage limit of 10 GB. The Express Edition is sufficient for the evaluation and small environments (500 VMs).

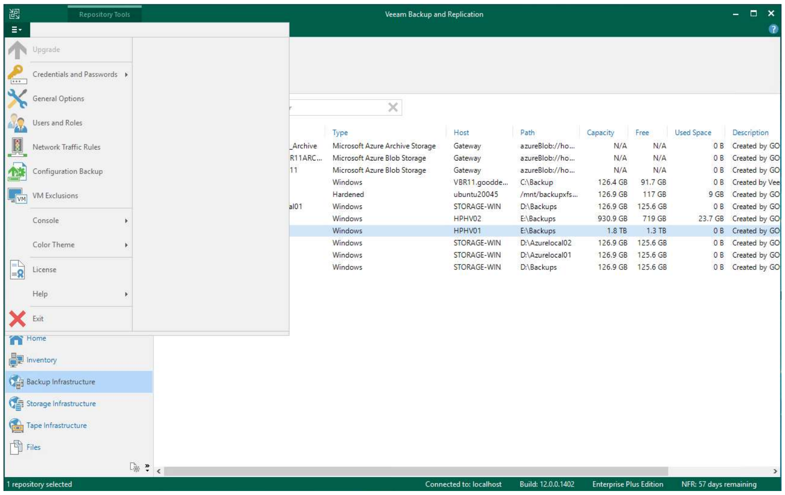
Instructions	Screenshot (if applicable)
1. Log in to the existing Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console. 3. Select and right-click all jobs. 4. Select Disable.	

Job tools
Veeam Backup and Replication
Home
View
SureBackup
Start
Start to
Stop
Statistics
Report
Edit
Disable
Delete
Job Control
Details
Edit
Home
Type in an object name to search for
All jobs
Jobs
Backup
SureBackup
Replication
Backup Copy
Backups
Disk
Replicas
Ready
Last 24 Hours
Success
Start
Start to...
Stop
Statistics
Report
Disable
Delete
Edit...
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files

Name	Type	Obje...	Status	Last Run	Last Result	Next Run	Target	Descrip
DC On_Demand Sandbox	SureBackup	2	Stopped	14 days ago	Success	After [DCS_HPH...	Advanced Single-Host 01	Created
DC SureBackup_Basic Singl	up	2	Stopped	14 days ago	Success	After [DCS_HPH...	Advanced Single-Host 01	Created
DC_HPHV02_Replication	eplication	1	Stopped	1 day ago	Success	<Not scheduled>	HPHV02	Created
DCS Backup Copy Job	opy	1	Stopped			<As new restor...	Backup Repository-Storage-...	Created
DCS_Azure Blob Backup	ackup	1	Stopped			<Not scheduled>	Scale-out Backup Repository...	Created
DCS_Azure Blob with archi	opy	1	Stopped			<As new restor...	Scale-out Backup Repository...	Created
DCS_Azure Blob without a	opy	1	Stopped			<As new restor...	Scale-out Backup Repository...	Created
DCS_HPHV02 Backup	ackup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created
DCS_to_Storage-WIN Backu	ackup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created
HPHV01 Excludes DCS Bac	ackup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created
HPHV01_Storage-Win Backup	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created
Management_HPHV02 Backup	Hyper-V Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created
Management_ubuntu Immutable B...	Hyper-V Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_ubuntu2...	Created
Windows Server_Managed by age...	Windows Agent Policy	1	Enabled	1 day ago	N/A	N/A	Backup Repository_HPHV02	Created
Windows Server_Managed by bac...	Windows Agent Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created

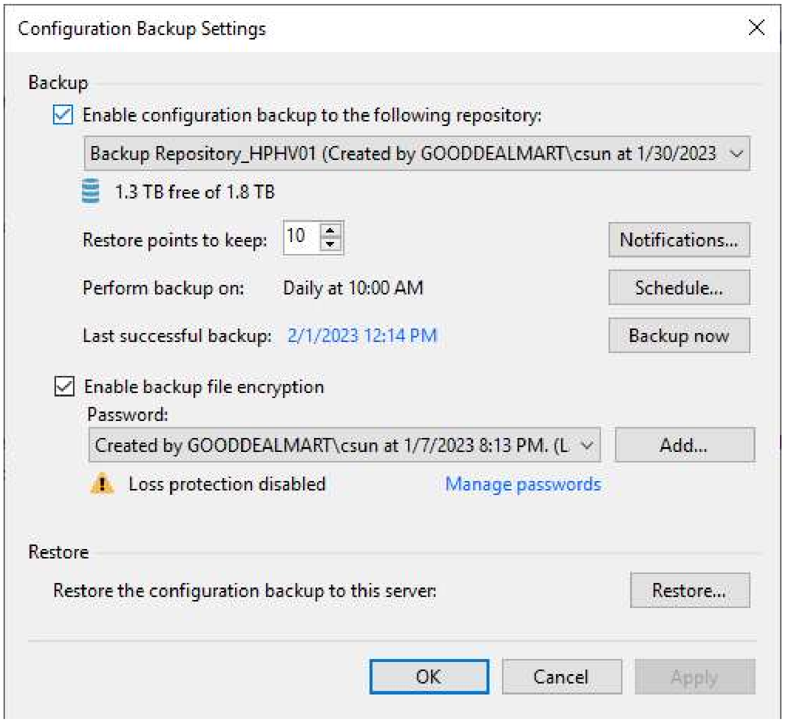
15 jobs selected Connected to: localhost Build: 12.0.0.1402 Enterprise Plus Edition NFR: 57 days remaining

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


Repository Tools
Veeam Backup and Replication
Upgrade
Credentials and Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
VM Exclusions
Console
Color Theme
License
Help
Exit
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
1 repository selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 57 days remaining

---

6. Click Backup now on the Configuration Backup Settings page.



Configuration Backup Settings

Backup

☑ Enable configuration backup to the following repository:

Backup Repository_HPHV01 (Created by GOODDEALMART\csun at 1/30/2023

1.3 TB free of 1.8 TB

Restore points to keep: 10

Perform backup on: Daily at 10:00 AM

Last successful backup: 2/1/2023 12:14 PM

☑ Enable backup file encryption

Password:

Created by GOODDEALMART\csun at 1/7/2023 8:13 PM. (L

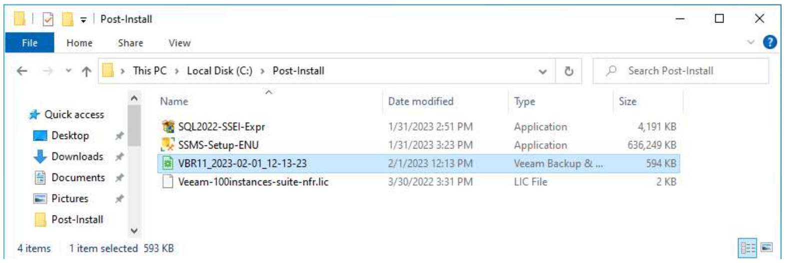
Loss protection disabled

Restore

Restore the configuration backup to this server:

Notifications...
Schedule...
Backup now
Add...
Manage passwords
Restore...
OK
Cancel
Apply

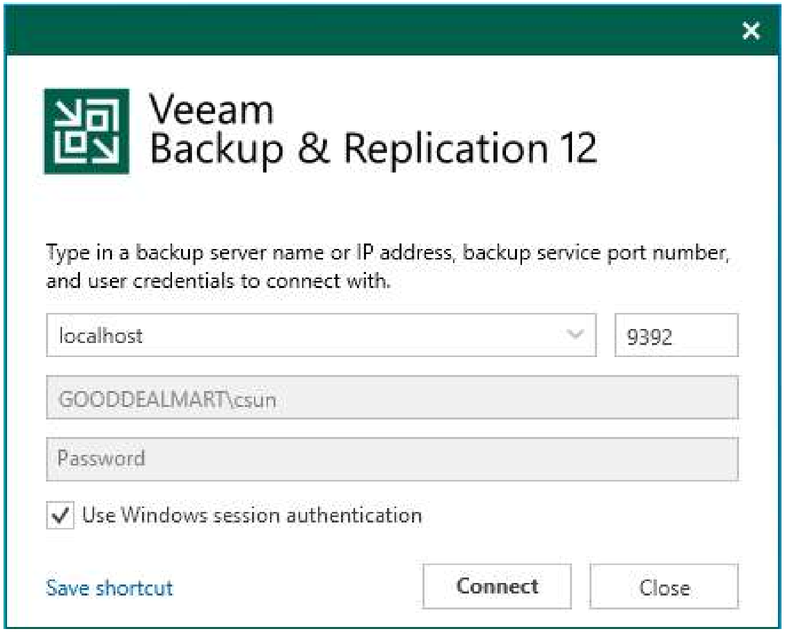
7. Copy the configuration file from the backup repository to the new Backup and Replication manager server.


Post-Install
File
Home
Share
View
This PC › Local Disk (C:) › Post-Install
Search Post-Install
Quick access
Desktop
Downloads
Documents
Pictures
Post-Install

Name	Date modified	Type	Size
SQL2022-SSEI-Expr	1/31/2023 2:51 PM	Application	4,191 KB
SSMS-Setup-ENU	1/31/2023 3:23 PM	Application	636,249 KB
VBR11_2023-02-01_12-13-23	2/1/2023 12:13 PM	Veeam Backup & ...	594 KB
Veeam-100instances-suite-nfr.lic	3/30/2022 3:31 PM	LIC File	2 KB

4 items 1 item selected 593 KB

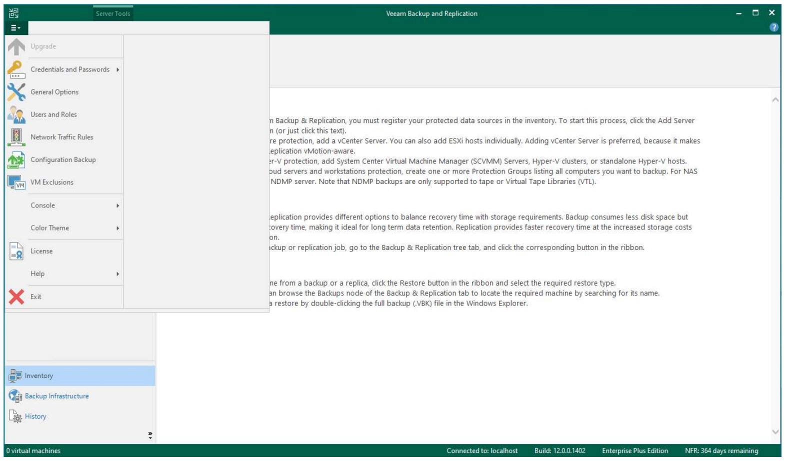
8. Log in to the new Veeam Backup and Replication manager server.
9. Open the Veeam Backup & Replication Console, and click Connect.


Veeam
Backup & Replication 12
Save shortcut
Connect
Close

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

localhost
9392
GOODDEALMART\csun
Password
☑ Use Windows session authentication

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


Server Tools
Veeam Backup and Replication
Upgrade
Credentials and Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
VM Exclusions
Console
Color Theme
License
Help
Exit
Inventory
Backup Infrastructure
History

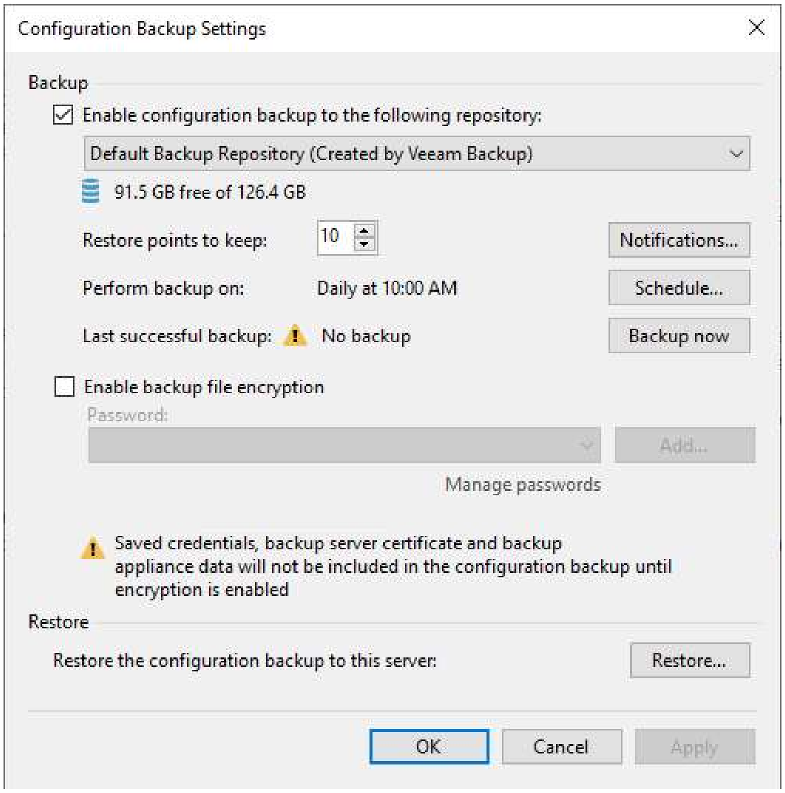
n Backup & Replication, you must register your protected data sources in the inventory. To start this process, click the Add Server
n (or just click this text).
re protection, add a vCenter Server. You can also add ESXi hosts individually. Adding vCenter Server is preferred, because it makes
eplication vMotion-aware.
er-V protection, add System Center Virtual Machine Manager (SCVMM) Servers, Hyper-V clusters, or standalone Hyper-V hosts.
oud servers and workstations protection, create one or more Protection Groups listing all computers you want to backup. For NAS
NDMP server. Note that NDMP backups are only supported to tape or Virtual Tape Libraries (VTL).

eplication provides different options to balance recovery time with storage requirements. Backup consumes less disk space but
covery time, making it ideal for long term data retention. Replication provides faster recovery time at the increased storage costs
on.
ckup or replication job, go to the Backup & Replication tree tab, and click the corresponding button in the ribbon.

ne from a backup or a replica, click the Restore button in the ribbon and select the required restore type.
an browse the Backups node of the Backup & Replication tab to locate the required machine by searching for its name.
a restore by double-clicking the full backup (.VBK) file in the Windows Explorer.

0 virtual machines
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 364 days remaining

11. Click Restore on the Configuration Backup Settings page.


Configuration Backup Settings
Backup
Notifications...
Schedule...
Backup now
Add...
Manage passwords
Restore
Restore...
OK
Cancel
Apply

☑ Enable configuration backup to the following repository:

Default Backup Repository (Created by Veeam Backup)

91.5 GB free of 126.4 GB

Restore points to keep: 10

Perform backup on: Daily at 10:00 AM

Last successful backup: No backup

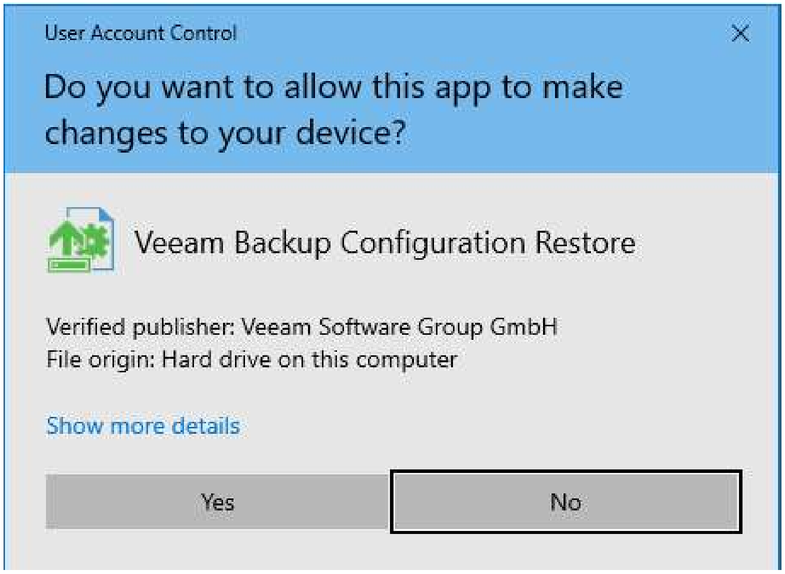
☐ Enable backup file encryption

Password:

Saved credentials, backup server certificate and backup appliance data will not be included in the configuration backup until encryption is enabled

Restore the configuration backup to this server:

12. Click Yes on the User Account Control page.



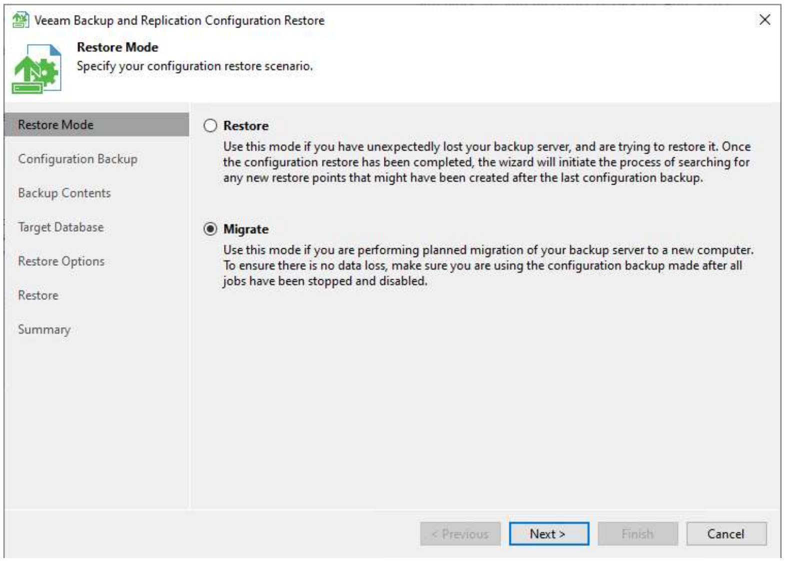
User Account Control
Yes
No
Show more details

Do you want to allow this app to make changes to your device?

Veeam Backup Configuration Restore

Verified publisher: Veeam Software Group GmbH
File origin: Hard drive on this computer

13. Select Migrate on the Restore Mode page.



Veeam Backup and Replication Configuration Restore
Restore Mode
Configuration Backup
Backup Contents
Target Database
Restore Options
Restore
Summary
< Previous
Next >
Finish
Cancel

Restore Mode
Specify your configuration restore scenario.

○ **Restore**
Use this mode if you have unexpectedly lost your backup server, and are trying to restore it. Once the configuration restore has been completed, the wizard will initiate the process of searching for any new restore points that might have been created after the last configuration backup.

● **Migrate**
Use this mode if you are performing planned migration of your backup server to a new computer. To ensure there is no data loss, make sure you are using the configuration backup made after all jobs have been stopped and disabled.

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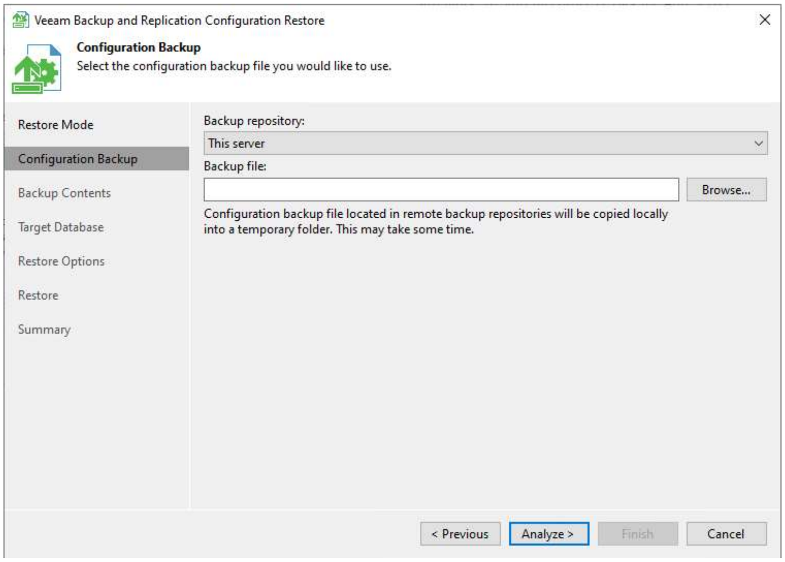
14. Select this server in the Backup repository field on the Configuration Backup page.
15. Click Browse in the Backup file field.



Veeam Backup and Replication Configuration Restore

Configuration Backup

Select the configuration backup file you would like to use.

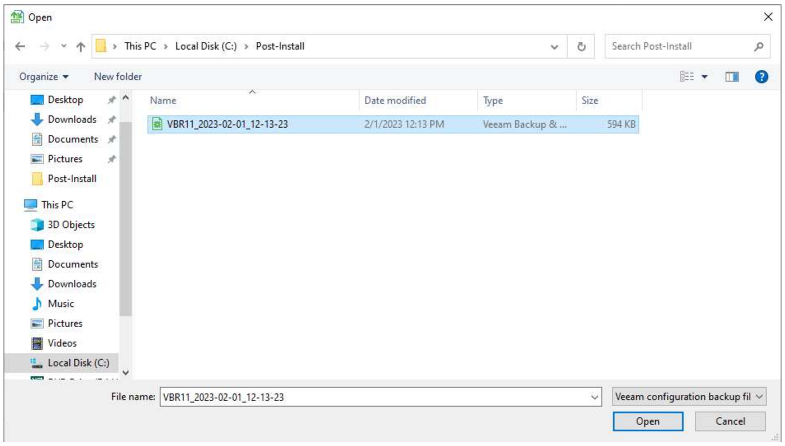
Backup repository: This server

Backup file:

Configuration backup file located in remote backup repositories will be copied locally into a temporary folder. This may take some time.

Restore Mode
Configuration Backup
Backup Contents
Target Database
Restore Options
Restore
Summary
Browse...
< Previous
Analyze >
Finish
Cancel

16. Select the backup configuration file and click Open.



Open

This PC › Local Disk (C:) › Post-Install

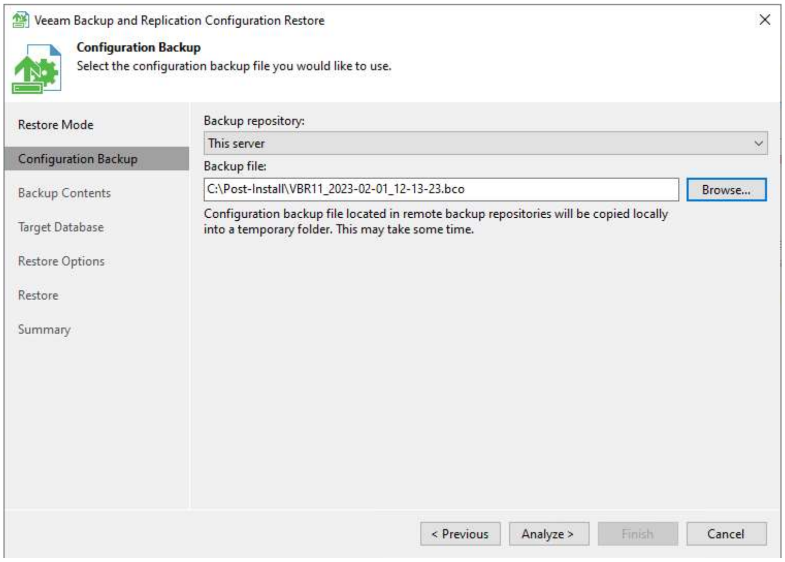
Name	Date modified	Type	Size
VBR11_2023-02-01_12-13-23	2/1/2023 12:13 PM	Veeam Backup & ...	594 KB

File name: VBR11_2023-02-01_12-13-23

Veeam configuration backup fil

Search Post-Install
Organize
New folder
Desktop
Downloads
Documents
Pictures
Post-Install
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Open
Cancel

17. Click Analyze on the Configuration Backup page.



Veeam Backup and Replication Configuration Restore

Configuration Backup

Select the configuration backup file you would like to use.

Restore Mode
Configuration Backup
Backup Contents
Target Database
Restore Options
Restore
Summary

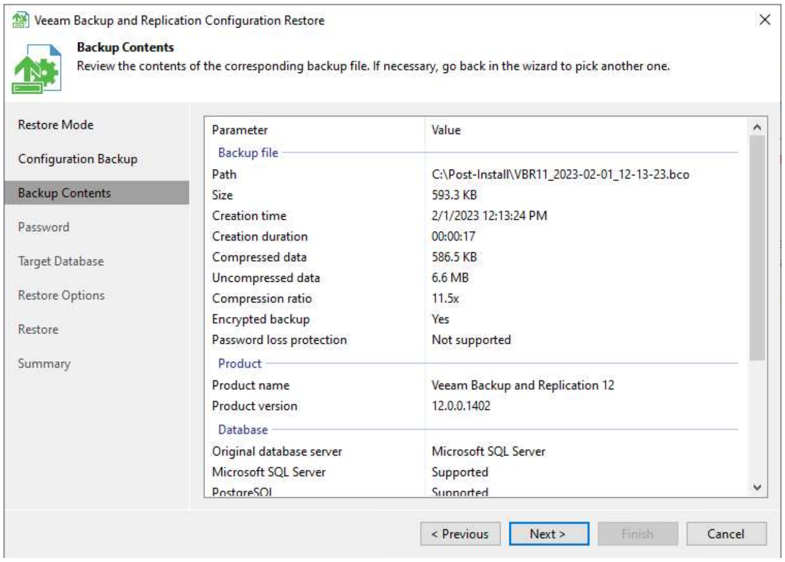
Backup repository: This server

Backup file: C:\Post-Install\VBR11_2023-02-01_12-13-23.bco

Configuration backup file located in remote backup repositories will be copied locally into a temporary folder. This may take some time.

Browse...
< Previous
Analyze >
Finish
Cancel

18. Click Next on the Backup Contents page.



Veeam Backup and Replication Configuration Restore

Backup Contents

Review the contents of the corresponding backup file. If necessary, go back in the wizard to pick another one.

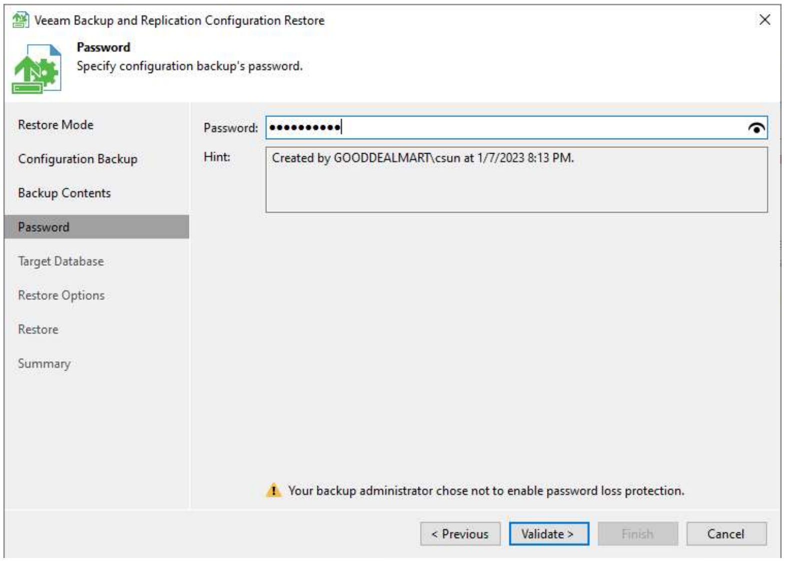
Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Summary

Parameter	Value
Backup file	
Path	C:\Post-Install\VBR11_2023-02-01_12-13-23.bco
Size	593.3 KB
Creation time	2/1/2023 12:13:24 PM
Creation duration	00:00:17
Compressed data	586.5 KB
Uncompressed data	6.6 MB
Compression ratio	11.5x
Encrypted backup	Yes
Password loss protection	Not supported
Product	
Product name	Veeam Backup and Replication 12
Product version	12.0.0.1402
Database	
Original database server	Microsoft SQL Server
Microsoft SQL Server	Supported
PostgreSQL	Supported

< Previous
Next >
Finish
Cancel

Technet24

19. On the Password page, enter the password of the configuration file in the Password field.
20. Enter the description in the Hint field.
21. Click Validate.



Veeam Backup and Replication Configuration Restore

Password

Specify configuration backup's password.

Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Summary

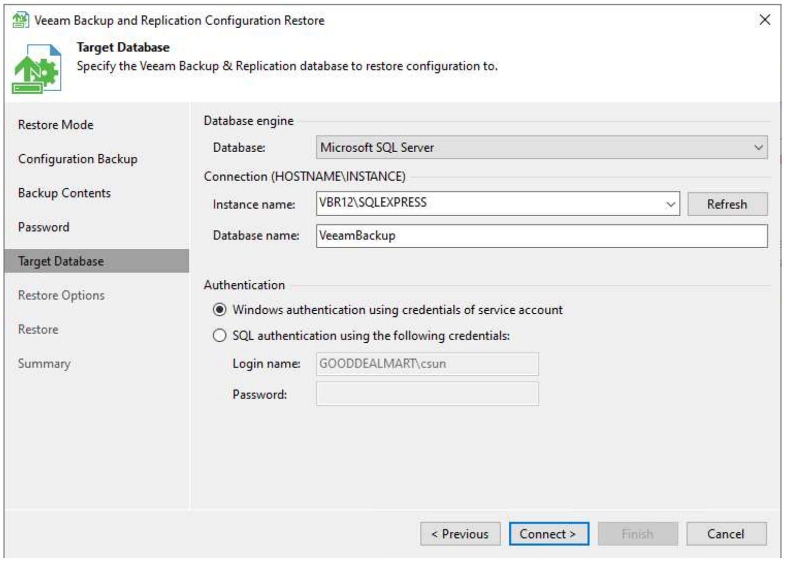
Password: ••••••••••

Hint: Created by GOODDEALMART\csun at 1/7/2023 8:13 PM.

⚠ Your backup administrator chose not to enable password loss protection.

< Previous
Validate >
Finish
Cancel

22. Select Microsoft SQL Server from the Database drop-down list on the Target Database page.
23. Enter the instance name and Database name in the Connection session.
24. Select Windows authentication using the service account credentials in the Authentication session.



Veeam Backup and Replication Configuration Restore

Target Database

Specify the Veeam Backup & Replication database to restore configuration to.

Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Summary

Database engine

Database: Microsoft SQL Server

Connection (HOSTNAME\INSTANCE)

Instance name: VBR12\SQLEXPRESS

Database name: VeeamBackup

Authentication

● Windows authentication using credentials of service account

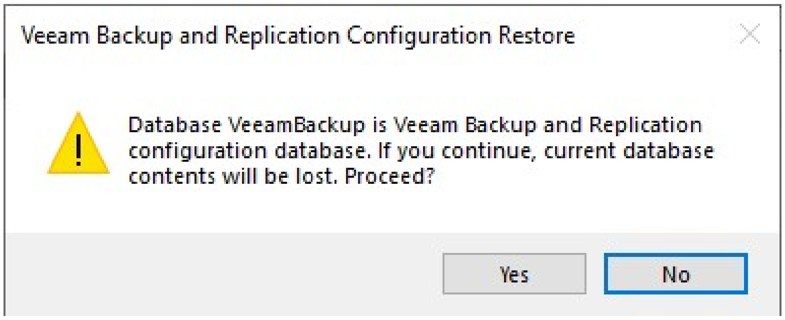
○ SQL authentication using the following credentials:

Login name: GOODDEALMART\csun

Password:

Refresh
< Previous
Connect >
Finish
Cancel

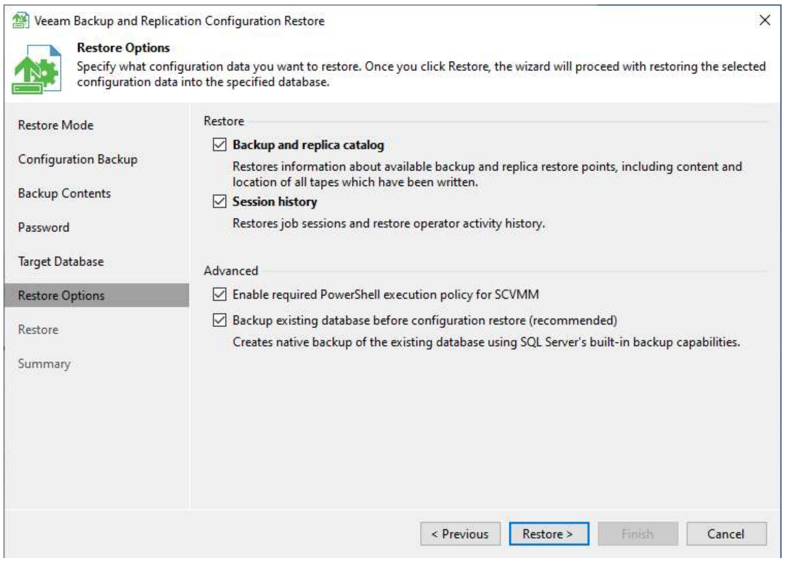
25. Click Yes on the warning message.



Veeam Backup and Replication Configuration Restore

Database VeeamBackup is Veeam Backup and Replication configuration database. If you continue, current database contents will be lost. Proceed?

26. Select the Backup and replica catalog checkbox on the Restore Options page.
27. Select the Session history checkbox.
28. Select Enable required PowerShell execution policy for SCVMM checkbox.
29. Select Backup existing database before configuration restore (recommended).
30. Click Restore.



Veeam Backup and Replication Configuration Restore

Restore Options

Specify what configuration data you want to restore. Once you click Restore, the wizard will proceed with restoring the selected configuration data into the specified database.

Restore

☑ **Backup and replica catalog**

Restores information about available backup and replica restore points, including content and location of all tapes which have been written.

☑ **Session history**

Restores job sessions and restore operator activity history.

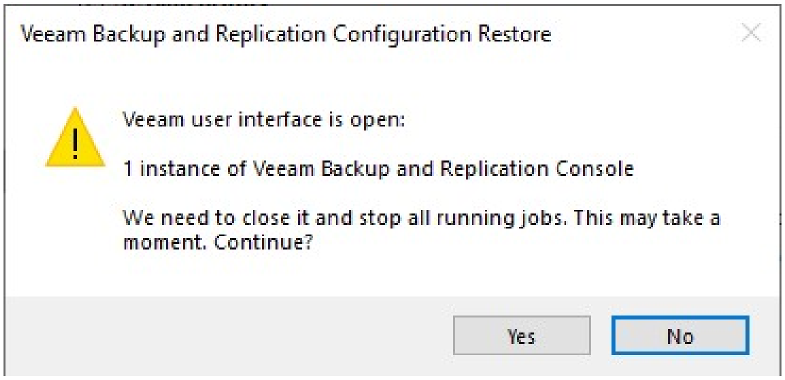
Advanced

☑ Enable required PowerShell execution policy for SCVMM

☑ Backup existing database before configuration restore (recommended)

Creates native backup of the existing database using SQL Server's built-in backup capabilities.

31. Click Yes on the warning message.



Veeam Backup and Replication Configuration Restore

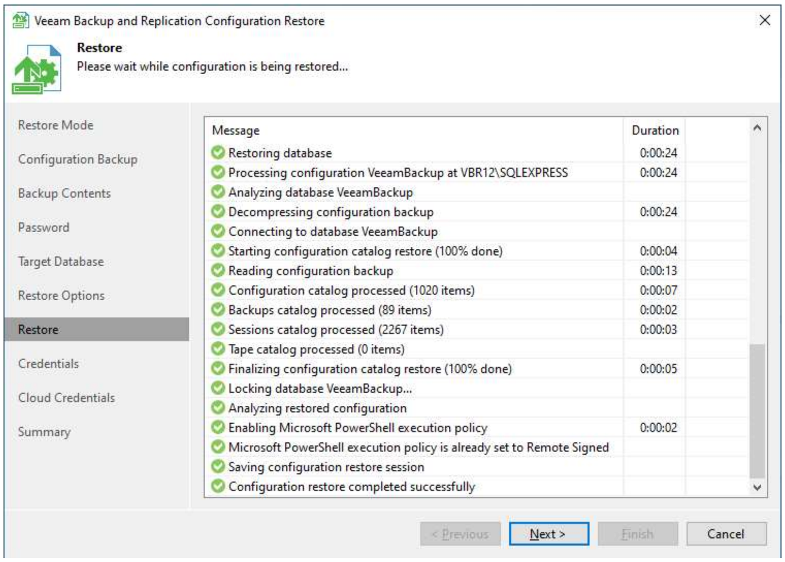
Veeam user interface is open:

1 instance of Veeam Backup and Replication Console

We need to close it and stop all running jobs. This may take a moment. Continue?

Technet24

32. On the Restore page, ensure the Configuration restore is completed successfully and click Next.



Veeam Backup and Replication Configuration Restore

Restore

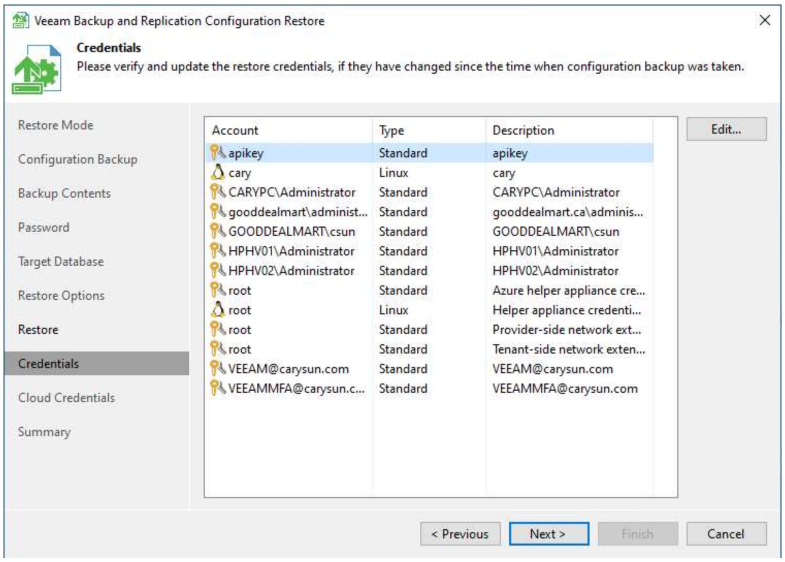
Please wait while configuration is being restored...

Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Credentials
Cloud Credentials
Summary

Message	Duration
✓ Restoring database	0:00:24
✓ Processing configuration VeeamBackup at VBR12\SQLEXPRESS	0:00:24
✓ Analyzing database VeeamBackup	
✓ Decompressing configuration backup	0:00:24
✓ Connecting to database VeeamBackup	
✓ Starting configuration catalog restore (100% done)	0:00:04
✓ Reading configuration backup	0:00:13
✓ Configuration catalog processed (1020 items)	0:00:07
✓ Backups catalog processed (89 items)	0:00:02
✓ Sessions catalog processed (2267 items)	0:00:03
✓ Tape catalog processed (0 items)	
✓ Finalizing configuration catalog restore (100% done)	0:00:05
✓ Locking database VeeamBackup...	
✓ Analyzing restored configuration	
✓ Enabling Microsoft PowerShell execution policy	0:00:02
✓ Microsoft PowerShell execution policy is already set to Remote Signed	
✓ Saving configuration restore session	
✓ Configuration restore completed successfully	

< Previous
Next >
Finish
Cancel

33. On the Credentials page, ensure all credentials are up-to-date and click Next.



Veeam Backup and Replication Configuration Restore

Credentials

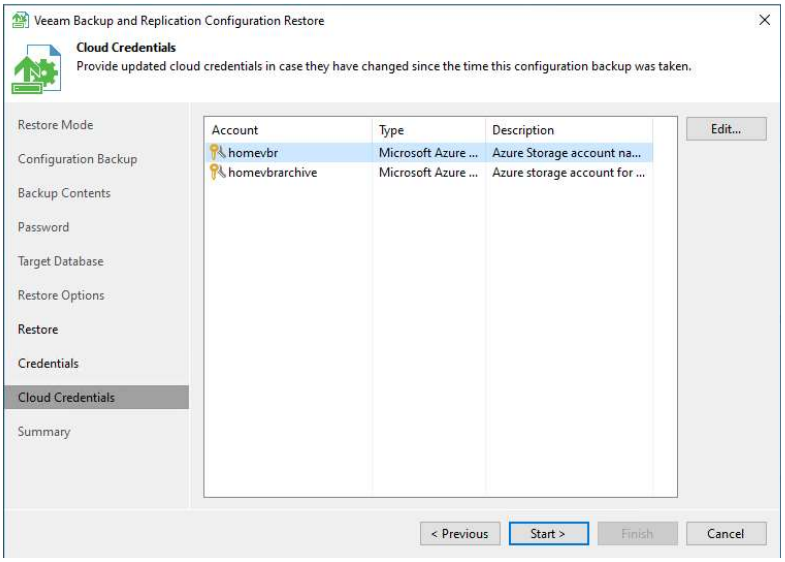
Please verify and update the restore credentials, if they have changed since the time when configuration backup was taken.

Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Credentials
Cloud Credentials
Summary
Edit...

Account	Type	Description
apikey	Standard	apikey
cary	Linux	cary
CARYPC\Administrator	Standard	CARYPC\Administrator
gooddealmart\administ...	Standard	gooddealmart.ca\adminis...
GOODDEALMART\csun	Standard	GOODDEALMART\csun
HPHV01\Administrator	Standard	HPHV01\Administrator
HPHV02\Administrator	Standard	HPHV02\Administrator
root	Standard	Azure helper appliance cre...
root	Linux	Helper appliance credenti...
root	Standard	Provider-side network ext...
root	Standard	Tenant-side network exten...
VEEAM@carysun.com	Standard	VEEAM@carysun.com
VEEAMMFA@carysun.c...	Standard	VEEAMMFA@carysun.com

< Previous
Next >
Finish
Cancel

34. Ensure all credentials are up-to-date on the Cloud Credentials page and click Start.

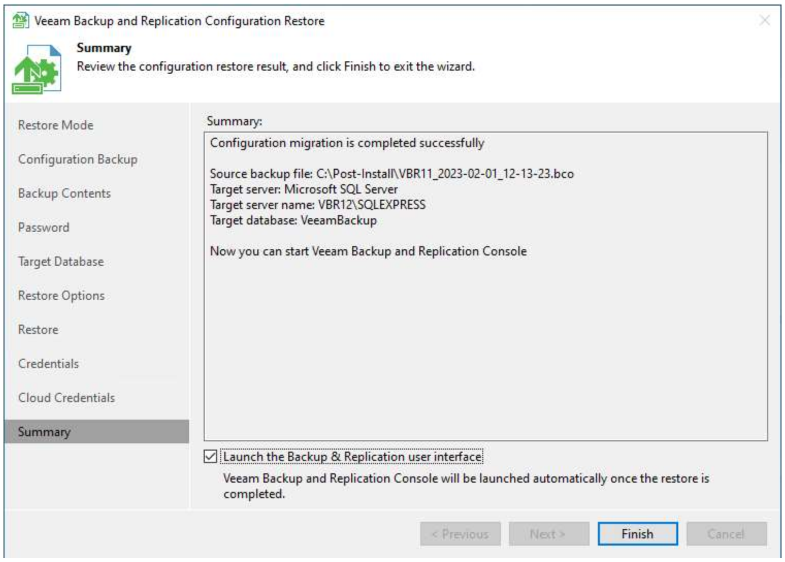

Veeam Backup and Replication Configuration Restore
Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Credentials
Cloud Credentials
Summary
Edit...
< Previous
Start >
Finish
Cancel

Cloud Credentials

Provide updated cloud credentials in case they have changed since the time this configuration backup was taken.

Account	Type	Description
homevbr	Microsoft Azure ...	Azure Storage account na...
homevbrarchive	Microsoft Azure ...	Azure storage account for ...

35. Click Finish on the Summary page.


Veeam Backup and Replication Configuration Restore
Restore Mode
Configuration Backup
Backup Contents
Password
Target Database
Restore Options
Restore
Credentials
Cloud Credentials
Summary
< Previous
Next >
Finish
Cancel

Summary

Review the configuration restore result, and click Finish to exit the wizard.

Summary:

Configuration migration is completed successfully

Source backup file: C:\Post-Install\VBR11_2023-02-01_12-13-23.bco
Target server: Microsoft SQL Server
Target server name: VBR12\SQLEXPRESS
Target database: VeeamBackup

Now you can start Veeam Backup and Replication Console

☑ Launch the Backup & Replication user interface

Veeam Backup and Replication Console will be launched automatically once the restore is completed.

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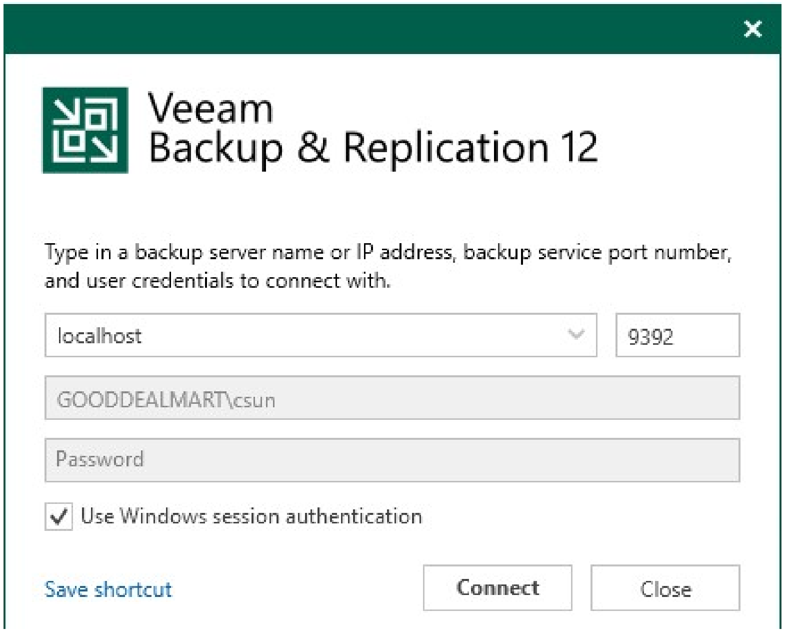
36. Open Veeam Backup & Replication console and click Connect.

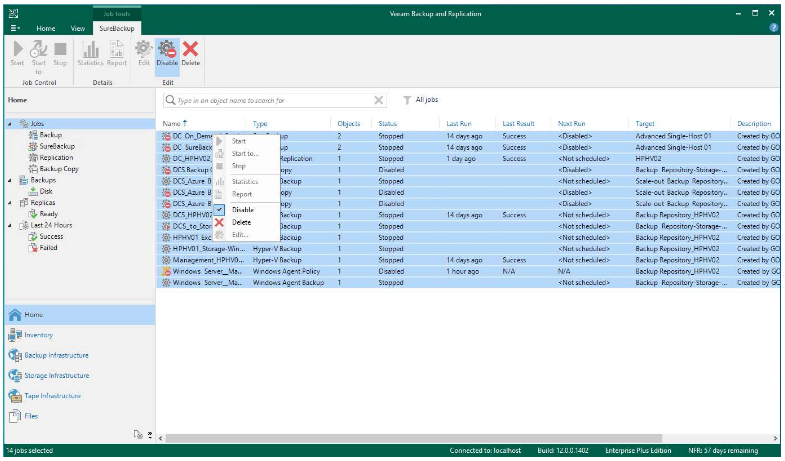

Veeam
Backup & Replication 12
Use Windows session authentication
Save shortcut
Connect
Close

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

localhost
9392
GOODDEALMART\csun
Password

☑ Use Windows session authentication

37. Select and right-click all jobs, and unselect Disable to enable all jobs.

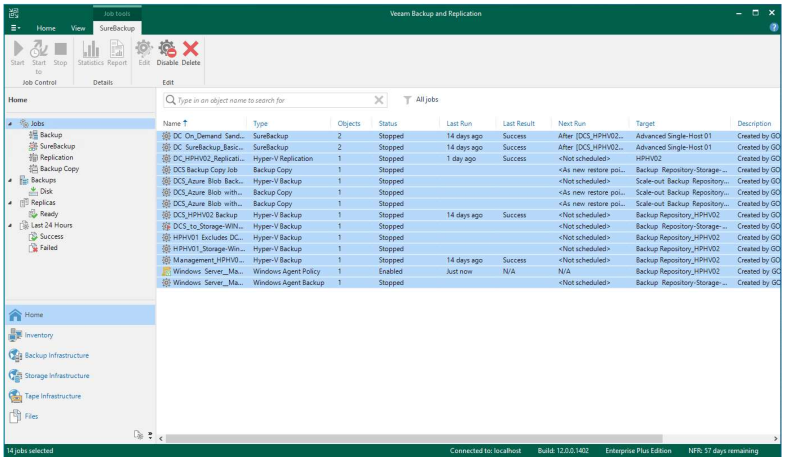

Job tools
Home
View
SureBackup
Start
Start to
Stop
Job Control
Statistics
Report
Details
Edit
Disable
Delete
Edit
Veeam Backup and Replication
Home
Jobs
Backup
SureBackup
Replication
Backup Copy
Backups
Disk
Replicas
Ready
Last 24 Hours
Success
Failed
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
All jobs
Start
Start to...
Stop
Statistics
Report
Disable
Delete
Edit...

Name	Type	Objects	Status	Last Run	Last Result	Next Run	Target	Description
DC On_Dema	up	2	Stopped	14 days ago	Success	<Disabled>	Advanced Single-Host 01	Created by GO
DC SureBack	up	2	Stopped	14 days ago	Success	<Disabled>	Advanced Single-Host 01	Created by GO
DC_HPHV02_	Replication	1	Stopped	1 day ago	Success	<Not scheduled>	HPHV02	Created by GO
DCS Backup (	opy	1	Disabled			<Disabled>	Backup Repository-Storage-...	Created by GO
DCS_Azure B	Backup	1	Stopped			<Not scheduled>	Scale-out Backup Repository...	Created by GO
DCS_Azure B	opy	1	Disabled			<Disabled>	Scale-out Backup Repository...	Created by GO
DCS_Azure B	opy	1	Disabled			<Disabled>	Scale-out Backup Repository...	Created by GO
DCS_HPHV02	Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GO
DCS_to_Stor	Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GO
HPHV01 Exc	Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GO
HPHV01_Storage-Win...	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GO
Management_HPHV0...	Hyper-V Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GO
Windows Server__Ma...	Windows Agent Policy	1	Disabled	1 hour ago	N/A	N/A	Backup Repository_HPHV02	Created by GO
Windows Server__Ma...	Windows Agent Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GO

14 jobs selected

Connected to: localhost Build: 12.0.0.1402 Enterprise Plus Edition NFR: 57 days remaining

38. Ensure all jobs are re-enabled.


Job tools
Home
View
SureBackup
Veeam Backup and Replication
Start
Start to
Stop
Statistics
Report
Edit
Disable
Delete
Job Control
Details
Edit
Home
Jobs
Backup
SureBackup
Replication
Backup Copy
Backups
Disk
Replicas
Ready
Last 24 Hours
Success
Failed
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
All jobs
14 jobs selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 57 days remaining

Name	Type	Objects	Status	Last Run	Last Result	Next Run	Target	Description
DC On_Demand Sand...	SureBackup	2	Stopped	14 days ago	Success	After [DCS_HPHV02...	Advanced Single-Host 01	Created by GO
DC SureBackup_Basic...	SureBackup	2	Stopped	14 days ago	Success	After [DCS_HPHV02...	Advanced Single-Host 01	Created by GO
DC_HPHV02_Replicati...	Hyper-V Replication	1	Stopped	1 day ago	Success	<Not scheduled>	HPHV02	Created by GO
DCS Backup Copy Job	Backup Copy	1	Stopped			<As new restore poi...	Backup Repository-Storage-...	Created by GO
DCS_Azure Blob Back...	Hyper-V Backup	1	Stopped			<Not scheduled>	Scale-out Backup Repository...	Created by GO
DCS_Azure Blob with...	Backup Copy	1	Stopped			<As new restore poi...	Scale-out Backup Repository...	Created by GO
DCS_Azure Blob with...	Backup Copy	1	Stopped			<As new restore poi...	Scale-out Backup Repository...	Created by GO
DCS_HPHV02 Backup	Hyper-V Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GO
DCS_to_Storage-WIN...	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GO
HPHV01 Excludes DC...	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GO
HPHV01_Storage-Win...	Hyper-V Backup	1	Stopped			<Not scheduled>	Backup Repository_HPHV02	Created by GO
Management_HPHV0...	Hyper-V Backup	1	Stopped	14 days ago	Success	<Not scheduled>	Backup Repository_HPHV02	Created by GO
Windows Server_Ma...	Windows Agent Policy	1	Enabled	Just now	N/A	N/A	Backup Repository_HPHV02	Created by GC
Windows Server_Ma...	Windows Agent Backup	1	Stopped			<Not scheduled>	Backup Repository-Storage-...	Created by GC

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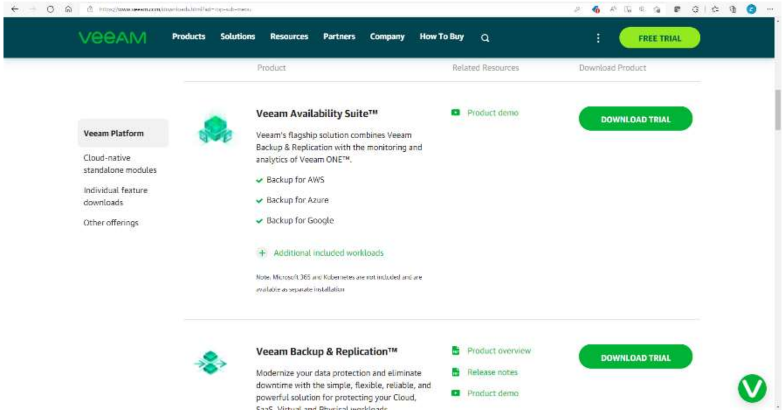
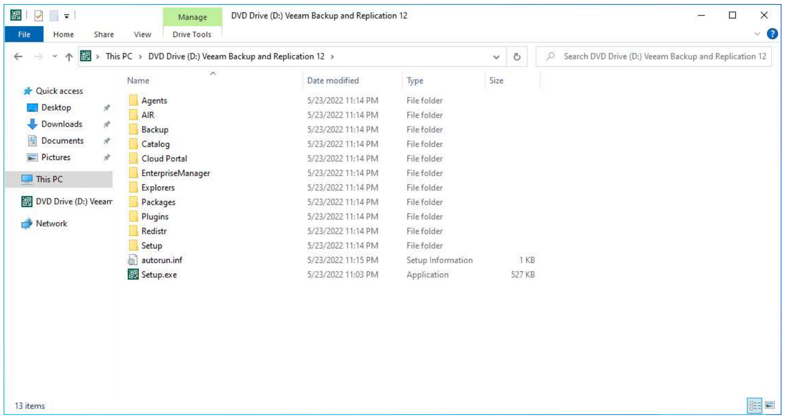
Install Veeam Backup and Replication Console 12

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 machine. 2. Download the Veeam Backup and Replication v12 ISO image file from the Veeam website sign-in required).	
3. Mount Veeam Backup & Replication v12 iso image file. 4. Run Setup.exe.	

veeam
Products
Solutions
Resources
Partners
Company
How To Buy
FREE TRIAL
Product
Related Resources
Download Product
Veeam Platform
Cloud-native standalone modules
Individual feature downloads
Other offerings

Veeam Availability Suite™

Veeam's flagship solution combines Veeam Backup & Replication with the monitoring and analytics of Veeam ONE™.

- ✓ Backup for AWS
- ✓ Backup for Azure
- ✓ Backup for Google

+ Additional included workloads
Product demo
DOWNLOAD TRIAL

Note: Microsoft 365 and Kubernetes are not included and are available as separate installation

Veeam Backup & Replication™

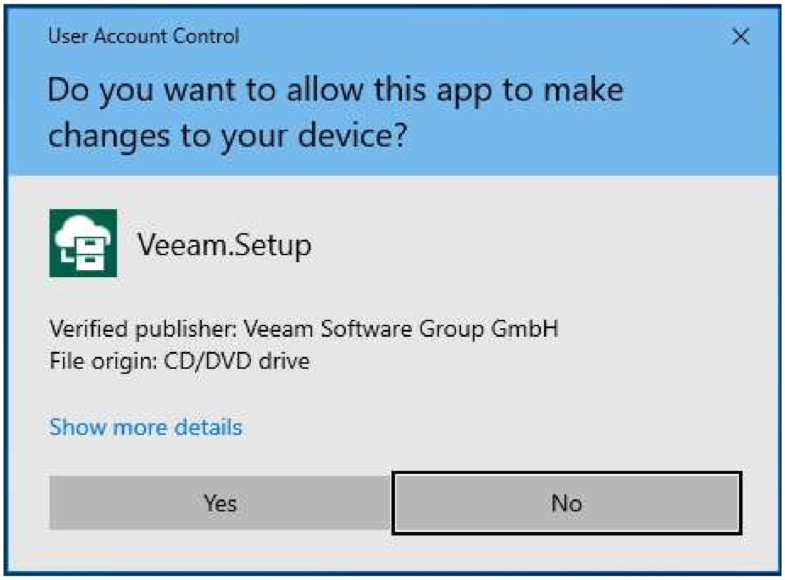
Modernize your data protection and eliminate downtime with the simple, flexible, reliable, and powerful solution for protecting your Cloud,

Product overview
Release notes
Product demo
DOWNLOAD TRIAL

Manage
DVD Drive (D:) Veeam Backup and Replication 12
File
Home
Share
View
Drive Tools
This PC › DVD Drive (D:) Veeam Backup and Replication 12 ›
Search DVD Drive (D:) Veeam Backup and Replication 12
Quick access
Desktop
Downloads
Documents
Pictures
This PC
DVD Drive (D:) Veeam
Network
13 items

Name	Date modified	Type	Size
Agents	5/23/2022 11:14 PM	File folder	
AIR	5/23/2022 11:14 PM	File folder	
Backup	5/23/2022 11:14 PM	File folder	
Catalog	5/23/2022 11:14 PM	File folder	
Cloud Portal	5/23/2022 11:14 PM	File folder	
EnterpriseManager	5/23/2022 11:14 PM	File folder	
Explorers	5/23/2022 11:14 PM	File folder	
Packages	5/23/2022 11:14 PM	File folder	
Plugins	5/23/2022 11:14 PM	File folder	
Redistr	5/23/2022 11:14 PM	File folder	
Setup	5/23/2022 11:14 PM	File folder	
autorun.inf	5/23/2022 11:15 PM	Setup Information	1 KB
Setup.exe	5/23/2022 11:03 PM	Application	527 KB

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



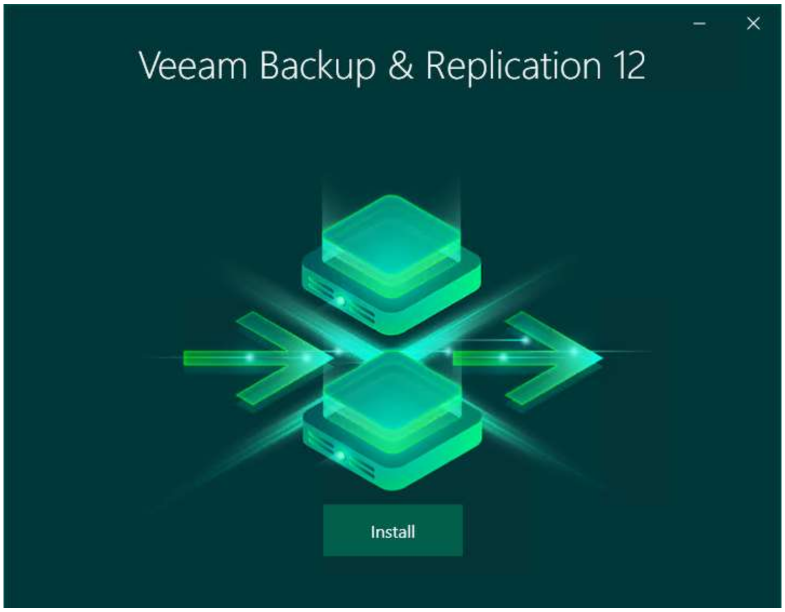
User Account Control

Do you want to allow this app to make changes to your device?

Veeam.Setup

Verified publisher: Veeam Software Group GmbH
File origin: CD/DVD drive

6. On the Veeam Backup & Replication 12 page, click Install.



Veeam Backup & Replication 12

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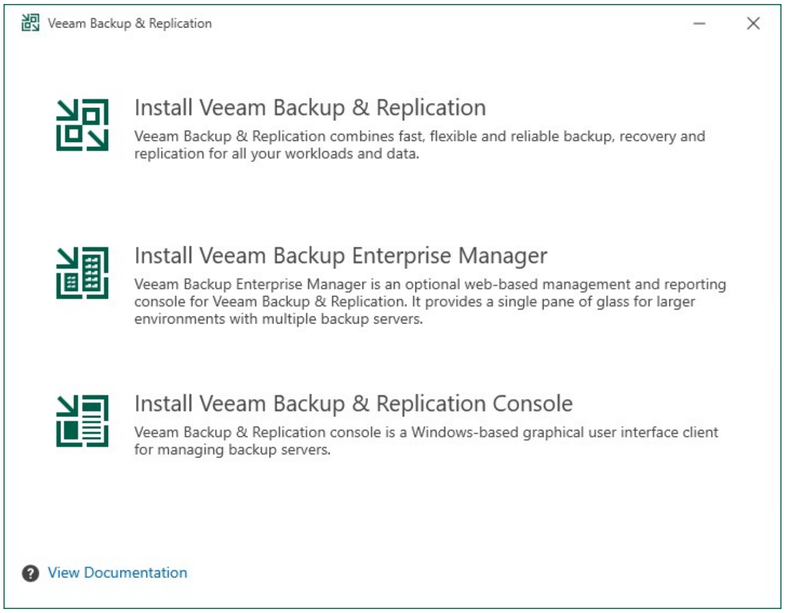
7. Select Install Veeam Backup & Replication Console on the Veeam Backup & Replication page

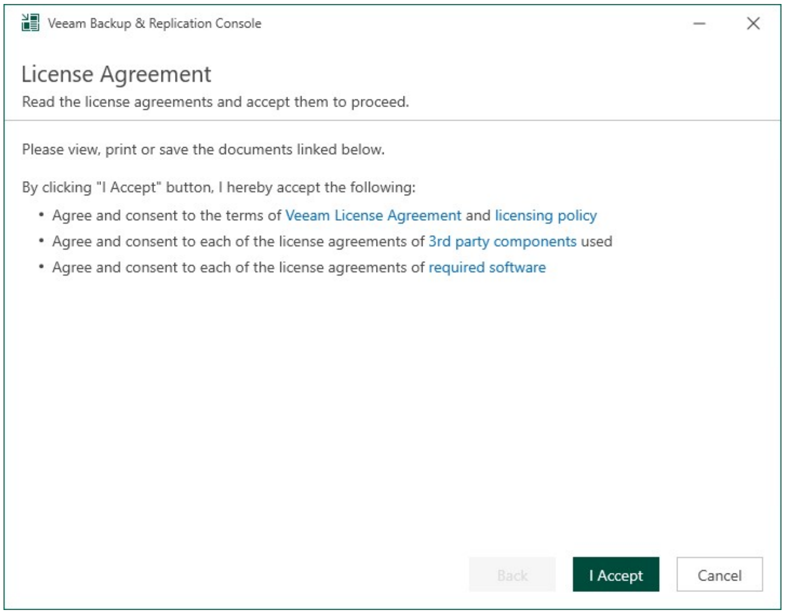

Veeam Backup & Replication
Install Veeam Backup & Replication
Install Veeam Backup Enterprise Manager
Install Veeam Backup & Replication Console
View Documentation

Veeam Backup & Replication combines fast, flexible and reliable backup, recovery and replication for all your workloads and data.

Veeam Backup Enterprise Manager is an optional web-based management and reporting console for Veeam Backup & Replication. It provides a single pane of glass for larger environments with multiple backup servers.

Veeam Backup & Replication console is a Windows-based graphical user interface client for managing backup servers.

8. Click I Accept on the License Agreement page.


Veeam Backup & Replication Console
License Agreement
Back
I Accept
Cancel

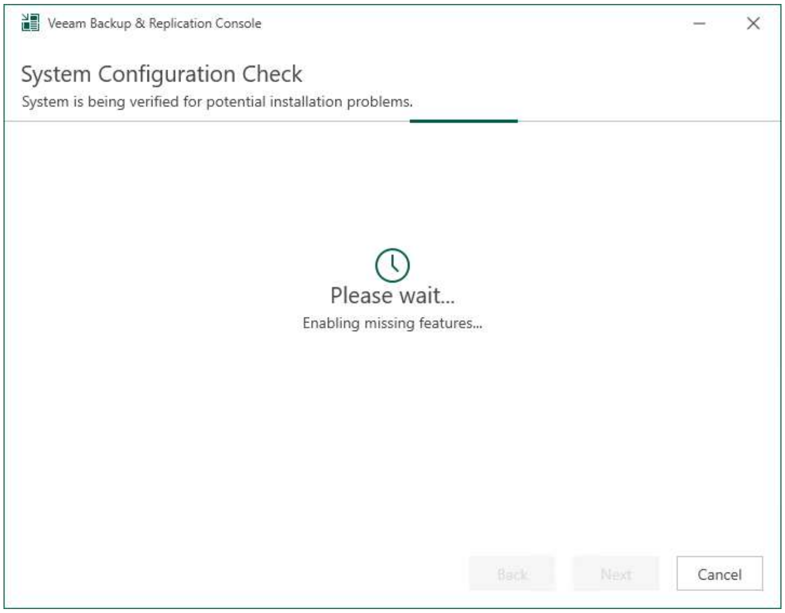
Read the license agreements and accept them to proceed.

Please view, print or save the documents linked below.

By clicking "I Accept" button, I hereby accept the following:

- Agree and consent to the terms of Veeam License Agreement and licensing policy
- Agree and consent to each of the license agreements of 3rd party components used
- Agree and consent to each of the license agreements of required software

9. The setup wizard checks if the required software is installed on the machine during the System Configuration Check step. If required components are missing, the setup will attempt to install them independently. Rebooting is required after the components have been successfully installed. Click Reboot to restart the machine.


Veeam Backup & Replication Console
Back
Next
Cancel

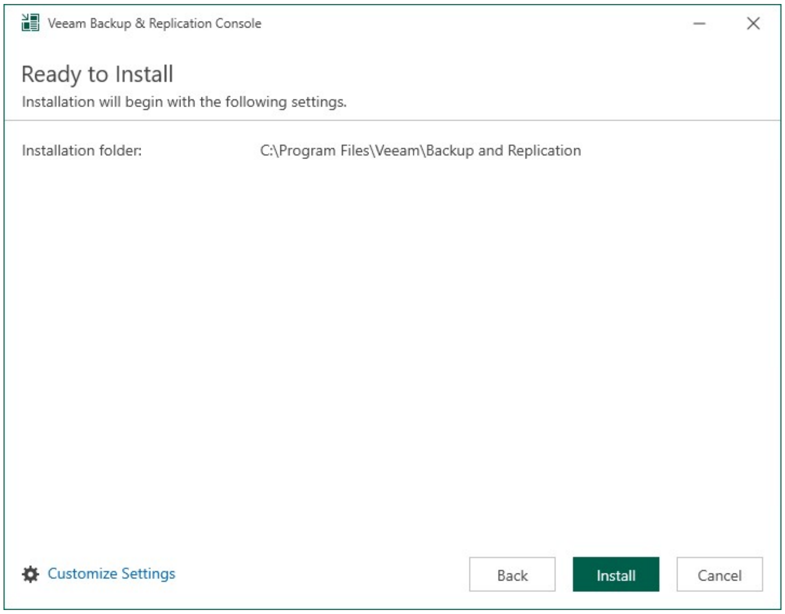
System Configuration Check

System is being verified for potential installation problems.

Please wait...

Enabling missing features...

10. Click Customize Settings on the Ready to Install page.


Veeam Backup & Replication Console
Customize Settings
Back
Install
Cancel

Ready to Install

Installation will begin with the following settings.

Installation folder: C:\Program Files\Veeam\Backup and Replication

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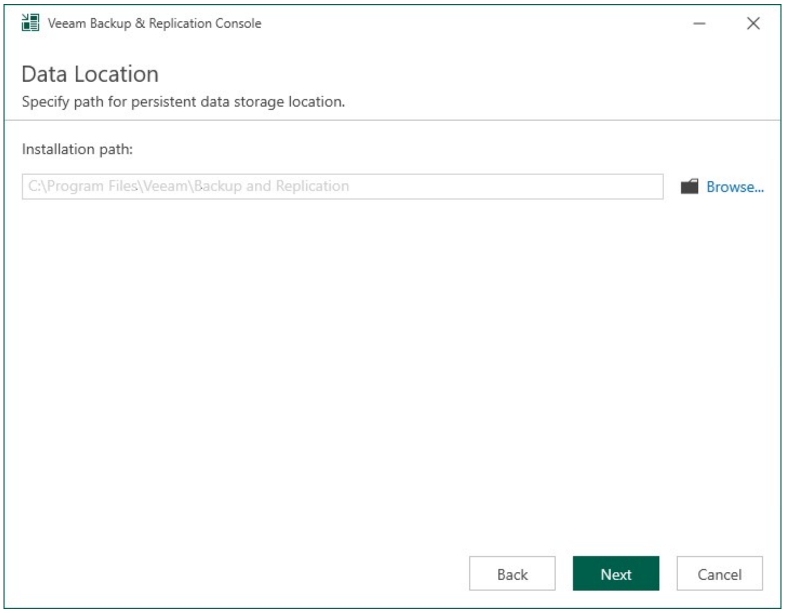
11. On the Data locations page, click Browse and select the path in the Installation path field.
12. Click Next.

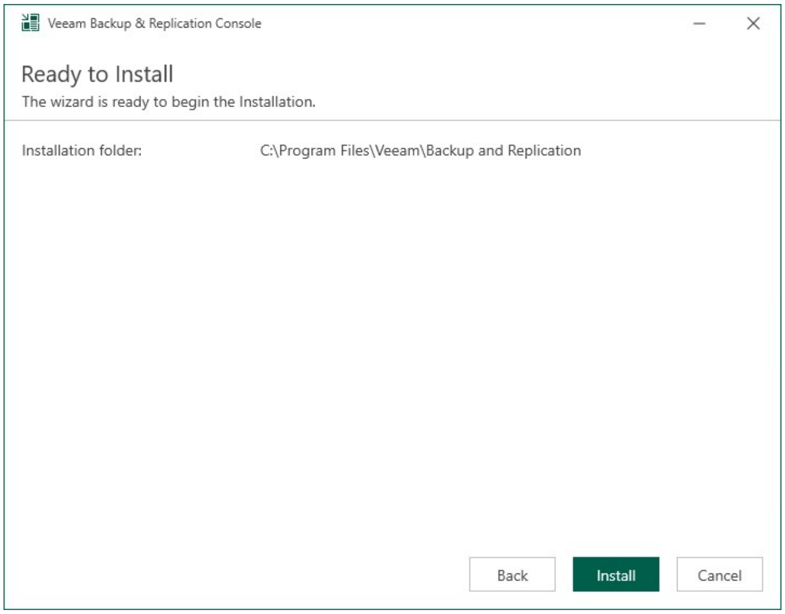

Veeam Backup & Replication Console
Browse...
Back
Next
Cancel

Data Location

Specify path for persistent data storage location.

Installation path: C:\Program Files\Veeam\Backup and Replication

13. Click Install on the Ready to Install page.

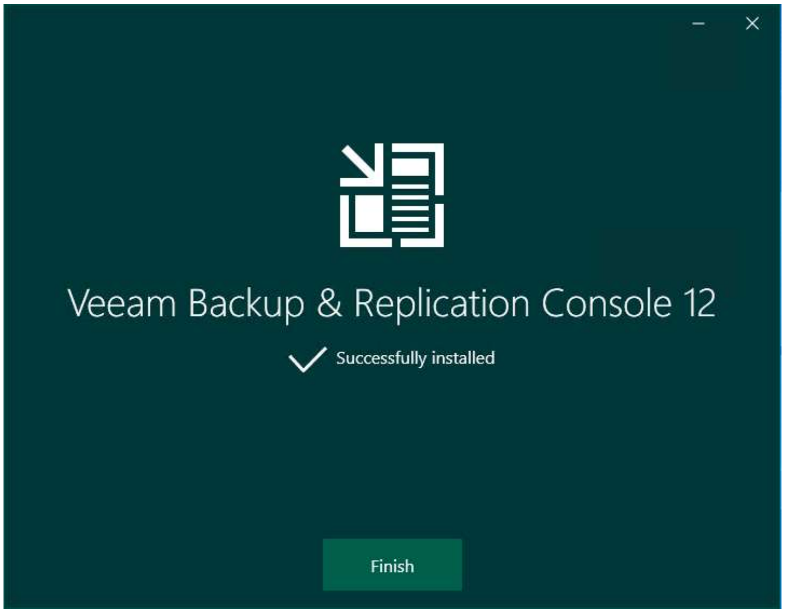

Veeam Backup & Replication Console
Back
Install
Cancel

Ready to Install

The wizard is ready to begin the Installation.

Installation folder: C:\Program Files\Veeam\Backup and Replication

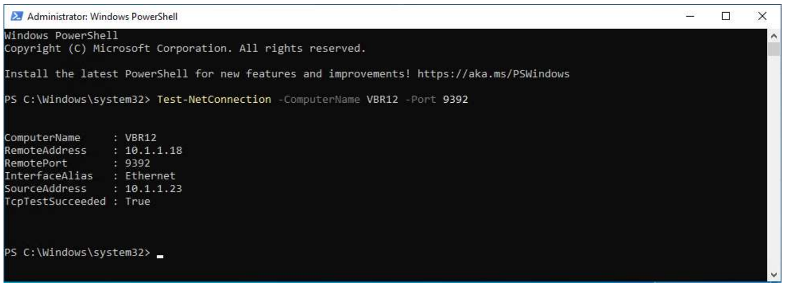
14. Click Finish on the Veeam Backup & Replication 12 Successfully installed page.



Veeam Backup & Replication Console 12

Successfully installed

15. 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.



```
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 VBR12 -Port 9392


ComputerName     : VBR12
RemoteAddress    : 10.1.1.18
RemotePort       : 9392
InterfaceAlias   : Ethernet
SourceAddress    : 10.1.1.23
TcpTestSucceeded : True



PS C:\Windows\system32> _
```

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

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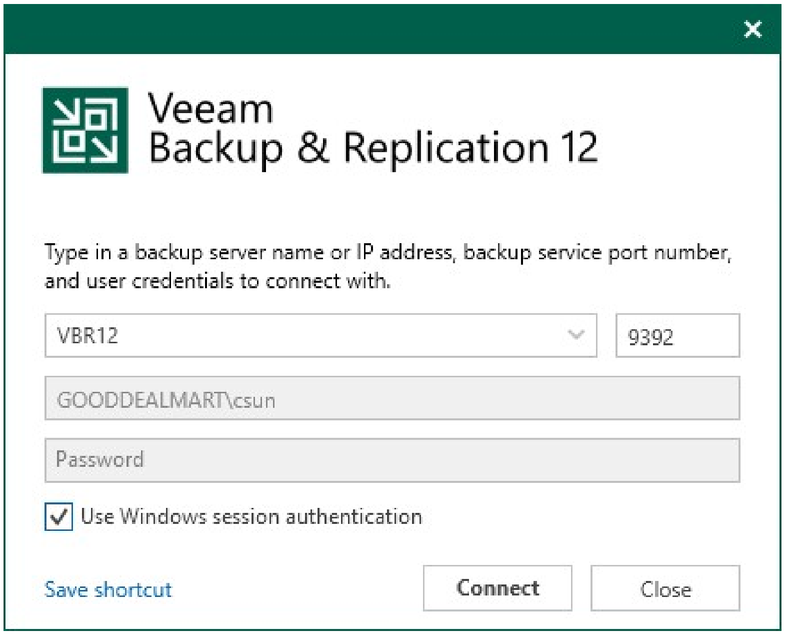
16. Open the Veeam Backup & Replication Console, click Connect, enter the Backup & Replication manager server name or IP address, and click Connect.


Veeam
Backup & Replication 12

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

VBR12 | 9392

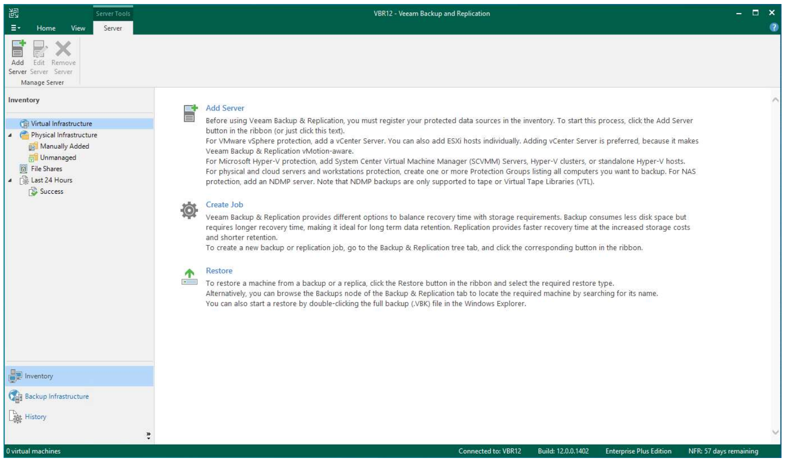
GOODDEALMART\csun

Password

☑ Use Windows session authentication

Save shortcut
Connect
Close

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


Server Tools
Home
View
Server
VBR12 - Veeam Backup and Replication
Add Server
Edit Server
Remove Server
Manage Server
Inventory
Virtual Infrastructure
Physical Infrastructure
Manually Added
Unmanaged
File Shares
Last 24 Hours
Success
Inventory
Backup Infrastructure
History

Add Server

Before using Veeam Backup & Replication, you must register your protected data sources in the inventory. To start this process, click the Add Server button in the ribbon (or just click this text).
For VMware vSphere protection, add a vCenter Server. You can also add ESXi hosts individually. Adding vCenter Server is preferred, because it makes Veeam Backup & Replication vMotion-aware.
For Microsoft Hyper-V protection, add System Center Virtual Machine Manager (SCVMM) Servers, Hyper-V clusters, or standalone Hyper-V hosts.
For physical and cloud servers and workstations protection, create one or more Protection Groups listing all computers you want to backup. For NAS protection, add an NDMP server. Note that NDMP backups are only supported to tape or Virtual Tape Libraries (VTL).

Create Job

Veeam Backup & Replication provides different options to balance recovery time with storage requirements. Backup consumes less disk space but requires longer recovery time, making it ideal for long term data retention. Replication provides faster recovery time at the increased storage costs and shorter retention.
To create a new backup or replication job, go to the Backup & Replication tree tab, and click the corresponding button in the ribbon.

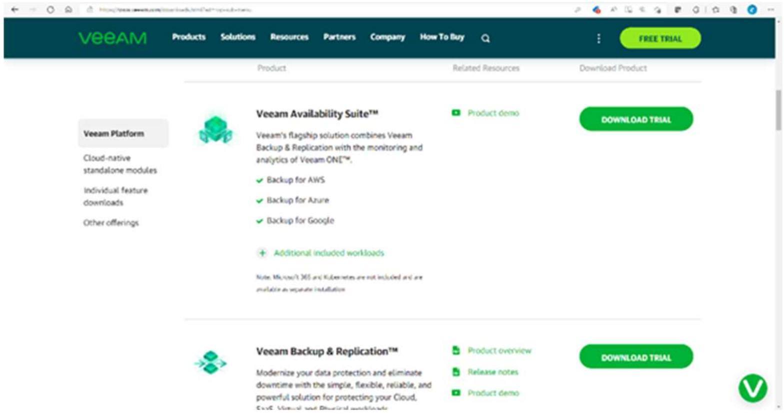
Restore

To restore a machine from a backup or a replica, click the Restore button in the ribbon and select the required restore type.
Alternatively, you can browse the Backups node of the Backup & Replication tab to locate the required machine by searching for its name.
You can also start a restore by double-clicking the full backup (.VBK) file in the Windows Explorer.

0 virtual machines | Connected to: VBR12 | Build: 12.0.0.1402 | Enterprise Plus Edition | NFR: 57 days remaining

Upgrade to Veeam Backup and Replication Console 12

To gain remote access to Veeam Backup & Replication v12, you must first upgrade the Veeam Backup & Replication console to v12 on a dedicated machine.

Instructions	Screenshot (if applicable)
1. Log in to the existing Veeam Backup and replication manager console machine. 2. Download the Veeam Backup and Replication v12 iso image file from the Veeam website. (Sign-in required).	

veeAM
Products
Solutions
Resources
Partners
Company
How To Buy
FREE TRIAL
Product
Related Resources
Download Product
Veeam Platform
Cloud-native standalone modules
Individual feature downloads
Other offerings
Veeam Availability Suite™
Product demo
DOWNLOAD TRIAL
Backup for AWS
Backup for Azure
Backup for Google
Additional included workloads
Veeam Backup & Replication™
Product overview
Release notes
Product demo
DOWNLOAD TRIAL

Veeam's flagship solution combines Veeam Backup & Replication with the monitoring and analytics of Veeam ONE™.

Modernize your data protection and eliminate downtime with the simple, flexible, reliable, and powerful solution for protecting your Cloud,

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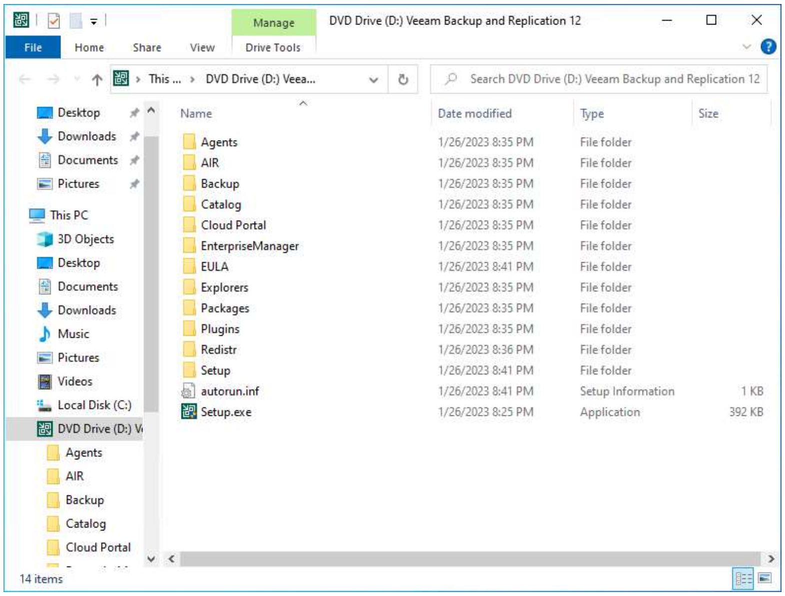
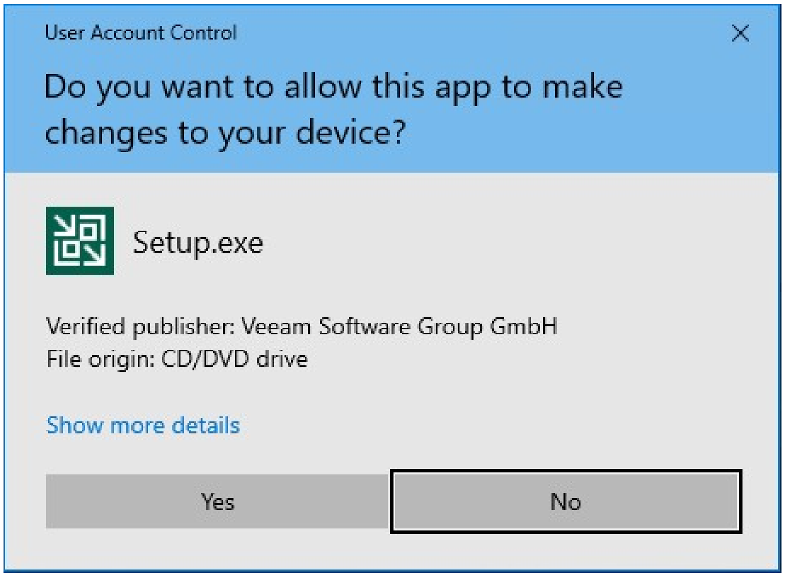
3. Mount the Veeam Backup & Replication v12 ISO image file.
4. Run Setup.exe.


Manage
DVD Drive (D:) Veeam Backup and Replication 12
File
Home
Share
View
Drive Tools
This ... › DVD Drive (D:) Veea...
Search DVD Drive (D:) Veeam Backup and Replication 12
Desktop
Downloads
Documents
Pictures
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
DVD Drive (D:) V
Agents
AIR
Backup
Catalog
Cloud Portal
14 items

Name	Date modified	Type	Size
Agents	1/26/2023 8:35 PM	File folder	
AIR	1/26/2023 8:35 PM	File folder	
Backup	1/26/2023 8:35 PM	File folder	
Catalog	1/26/2023 8:35 PM	File folder	
Cloud Portal	1/26/2023 8:35 PM	File folder	
EnterpriseManager	1/26/2023 8:35 PM	File folder	
EULA	1/26/2023 8:41 PM	File folder	
Explorers	1/26/2023 8:35 PM	File folder	
Packages	1/26/2023 8:35 PM	File folder	
Plugins	1/26/2023 8:35 PM	File folder	
Redistr	1/26/2023 8:36 PM	File folder	
Setup	1/26/2023 8:41 PM	File folder	
autorun.inf	1/26/2023 8:41 PM	Setup Information	1 KB
Setup.exe	1/26/2023 8:25 PM	Application	392 KB

5. Click Yes on the User Account Control page.

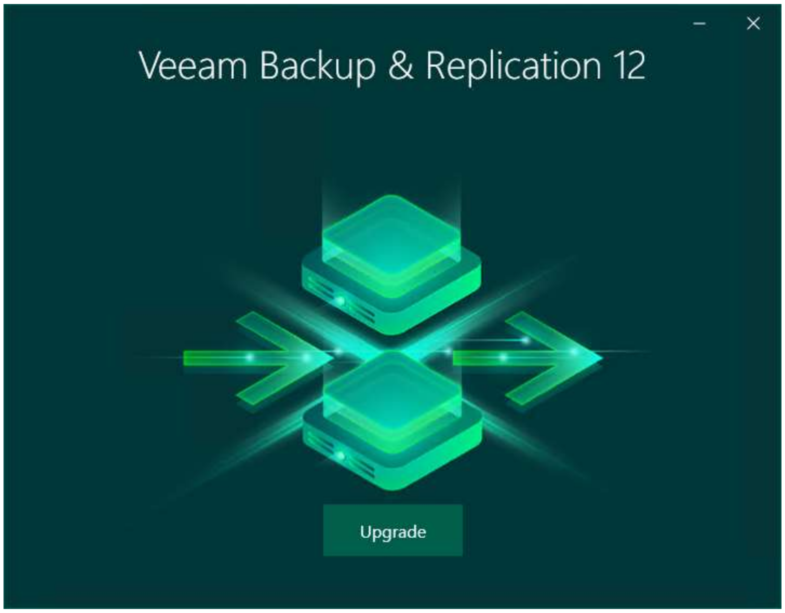

User Account Control
Show more details
Yes
No

Do you want to allow this app to make changes to your device?

Setup.exe

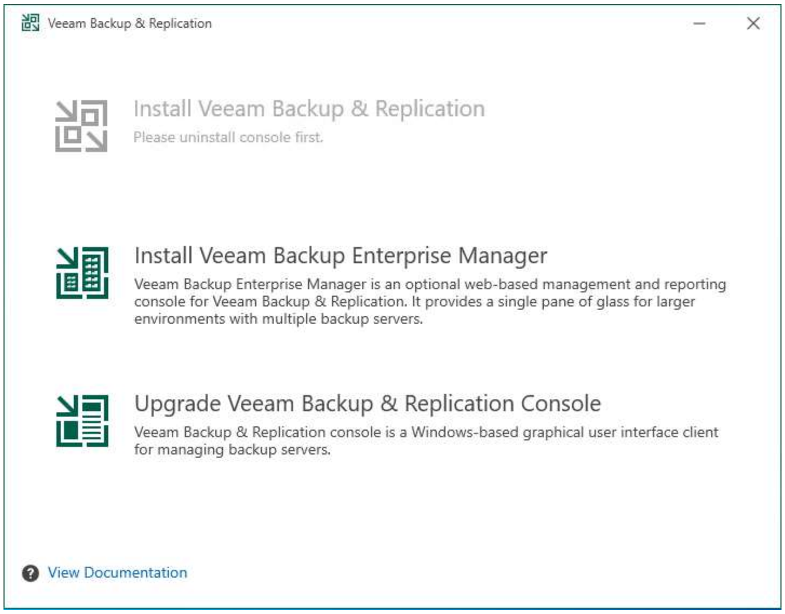
Verified publisher: Veeam Software Group GmbH
File origin: CD/DVD drive

6. Click Upgrade on the Veeam Backup & Replication 12 page.



Veeam Backup & Replication 12
Upgrade

7. Select Upgrade Veeam Backup & Replication Console on the Veeam Backup & Replication page.



Veeam Backup & Replication

Install Veeam Backup & Replication

Please uninstall console first.

Install Veeam Backup Enterprise Manager

Veeam Backup Enterprise Manager is an optional web-based management and reporting console for Veeam Backup & Replication. It provides a single pane of glass for larger environments with multiple backup servers.

Upgrade Veeam Backup & Replication Console

Veeam Backup & Replication console is a Windows-based graphical user interface client for managing backup servers.

View Documentation

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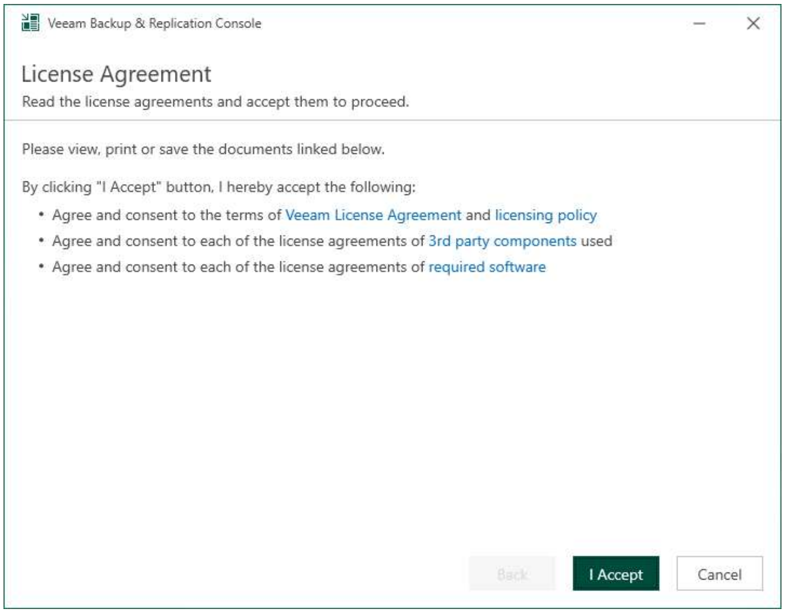
8. On the License Agreement page, click I Accept.


Veeam Backup & Replication Console

License Agreement

Read the license agreements and accept them to proceed.

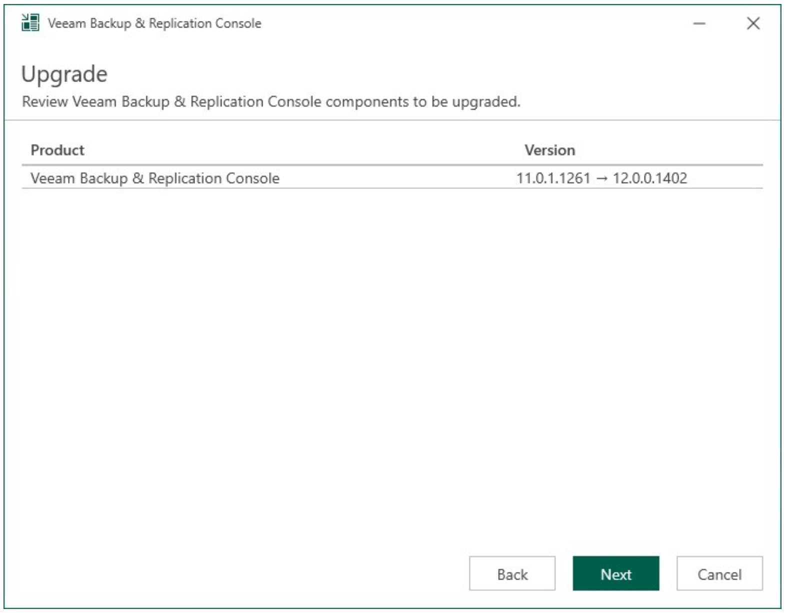
Please view, print or save the documents linked below.

By clicking "I Accept" button, I hereby accept the following:

- Agree and consent to the terms of Veeam License Agreement and licensing policy
- Agree and consent to each of the license agreements of 3rd party components used
- Agree and consent to each of the license agreements of required software

Back
I Accept
Cancel

9. On the Upgrade page, click Next.


Veeam Backup & Replication Console

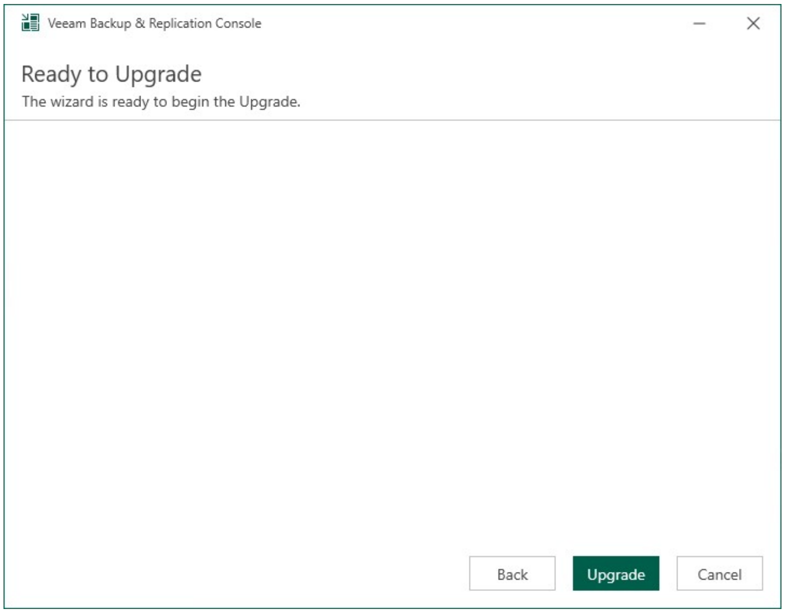
Upgrade

Review Veeam Backup & Replication Console components to be upgraded.

Product	Version
Veeam Backup & Replication Console	11.0.1.1261 → 12.0.0.1402

Back
Next
Cancel

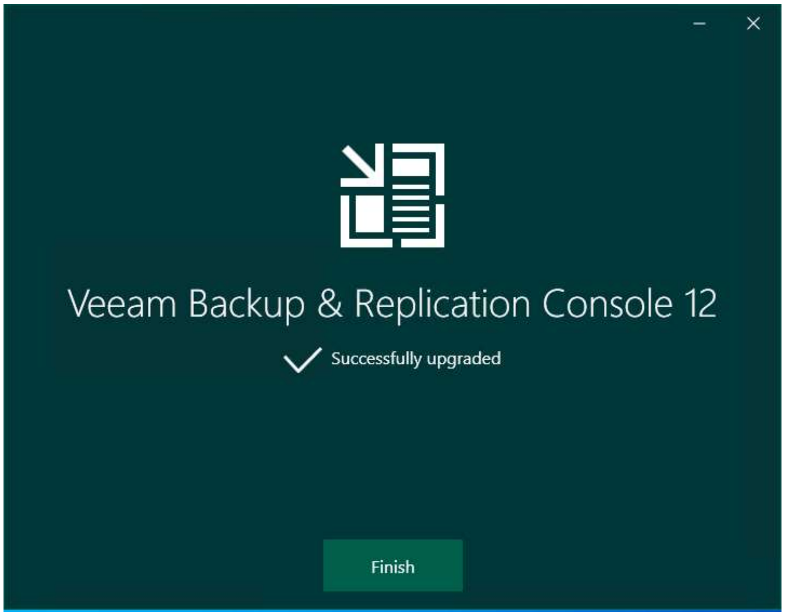
10. Click Upgrade on the Ready to Upgrade page.


Veeam Backup & Replication Console
Back
Upgrade
Cancel

Ready to Upgrade

The wizard is ready to begin the Upgrade.

11. Click Finish on the Veeam Backup & Replication Console 12 successfully upgraded page.



Veeam Backup & Replication Console 12

Successfully upgraded

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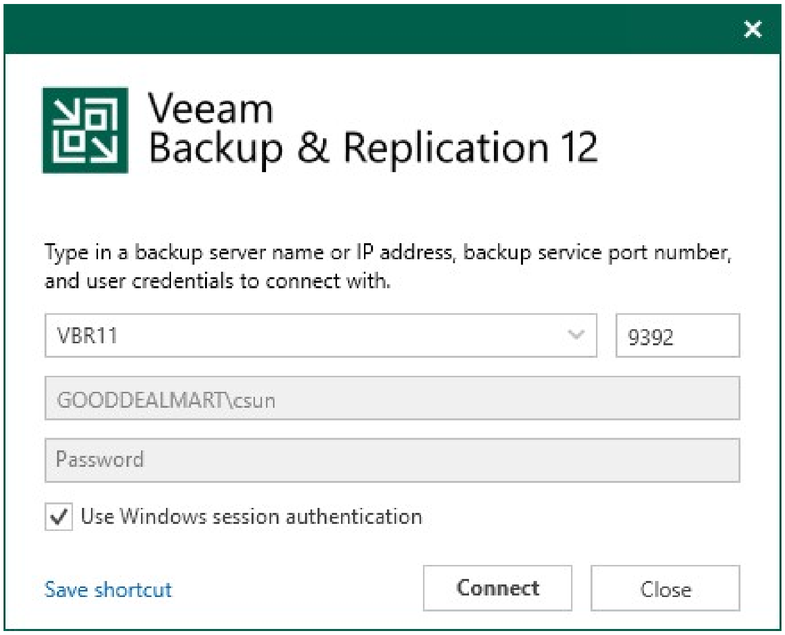
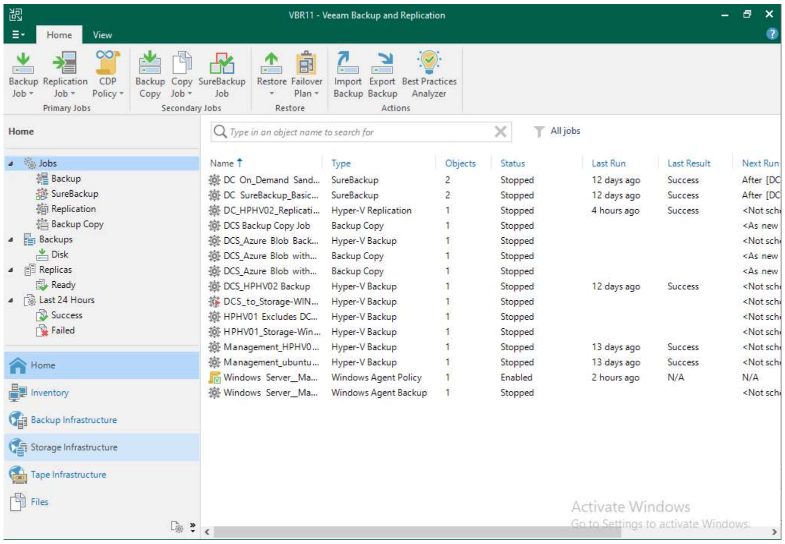
12. Open Veeam and Replication Console 12 and click Connect.


Veeam
Backup & Replication 12
Save shortcut
Connect
Close

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

13. Ensure connection to Veeam Backup and Replication manager server is successful.


VBR11 - Veeam Backup and Replication
Home
View
Backup Job
Replication Job
CDP Policy
Primary Jobs
Backup Copy
Copy Job
SureBackup Job
Secondary Jobs
Restore
Failover Plan
Restore
Import Backup
Export Backup
Best Practices Analyzer
Actions
Home
Jobs
Backup
SureBackup
Replication
Backup Copy
Backups
Disk
Replicas
Ready
Last 24 Hours
Success
Failed
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
All jobs
Activate Windows
Go to Settings to activate Windows.

Name	Type	Objects	Status	Last Run	Last Result	Next Run
DC On_Demand Sand...	SureBackup	2	Stopped	12 days ago	Success	After [DC
DC SureBackup_Basic...	SureBackup	2	Stopped	12 days ago	Success	After [DC
DC_HPHV02_Replicati...	Hyper-V Replication	1	Stopped	4 hours ago	Success	<Not sch
DCS Backup Copy Job	Backup Copy	1	Stopped			<As new
DCS_Azure Blob Back...	Hyper-V Backup	1	Stopped			<Not sch
DCS_Azure Blob with...	Backup Copy	1	Stopped			<As new
DCS_Azure Blob with...	Backup Copy	1	Stopped			<As new
DCS_HPHV02 Backup	Hyper-V Backup	1	Stopped	12 days ago	Success	<Not sch
DCS_to_Storage-WIN...	Hyper-V Backup	1	Stopped			<Not sch
HPHV01 Excludes DC...	Hyper-V Backup	1	Stopped			<Not sch
HPHV01_Storage-Win...	Hyper-V Backup	1	Stopped			<Not sch
Management_HPHV0...	Hyper-V Backup	1	Stopped	13 days ago	Success	<Not sch
Management_ubuntu...	Hyper-V Backup	1	Stopped	13 days ago	Success	<Not sch
Windows Server_Ma...	Windows Agent Policy	1	Enabled	2 hours ago	N/A	N/A
Windows Server_Ma...	Windows Agent Backup	1	Stopped			<Not sch

Chapter 3

Configuration

This chapter will review the initial configurations of Veeam Backup and Replication. These include:

- Add Virtualization Servers and Hosts
- Add Physical Machines
- Add Backup Repositories
- Generation Settings

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

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Virtualization Servers and Hosts

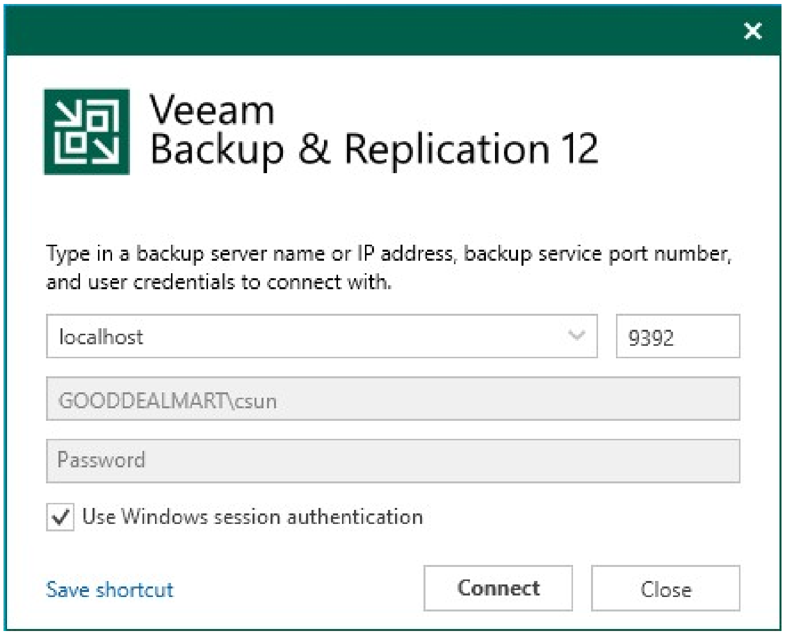
Veeam Backup & Replication allows you to build a scalable backup infrastructure for many environments. Physical and virtual machines can be added to the backup infrastructure and assigned different roles. In addition, Veeam Backup and Replication components can coexist on the same machine.

The Backup Infrastructure can be expanded with the following types of servers and hosts:

- Microsoft Hyper-V Standalone Servers
- Microsoft Hyper-V Cluster Servers
- Microsoft SMB3 Servers
- Microsoft Windows Servers
- Linux Server

Add 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.

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.	

Veeam Backup & Replication 12

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

localhost

9392

GOODDEALMART\csun

Password

☑ Use Windows session authentication

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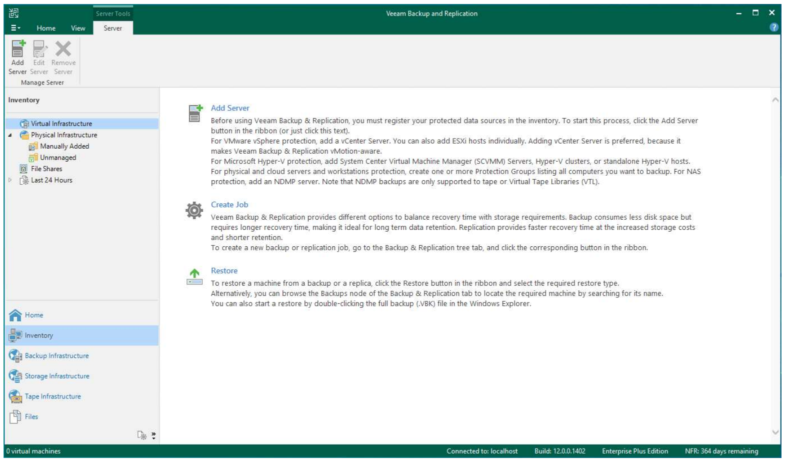
3. On the Home page, select Inventory.
4. On the Inventory page, select Virtual Infrastructure and click Add Server.


Veeam Backup and Replication
Server Tools
Home
View
Server
Add Server
Edit Server
Remove Server
Manage Server
Inventory
Virtual Infrastructure
Physical Infrastructure
Manually Added
Unmanaged
File Shares
Last 24 Hours
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files

Add Server

Before using Veeam Backup & Replication, you must register your protected data sources in the inventory. To start this process, click the Add Server button in the ribbon (or just click this text).
For VMware vSphere protection, add a vCenter Server. You can also add ESXi hosts individually. Adding vCenter Server is preferred, because it makes Veeam Backup & Replication vMotion-aware.
For Microsoft Hyper-V protection, add System Center Virtual Machine Manager (SCVMM) Servers, Hyper-V clusters, or standalone Hyper-V hosts.
For physical and cloud servers and workstations protection, create one or more Protection Groups listing all computers you want to backup. For NAS protection, add an NDMP server. Note that NDMP backups are only supported to tape or Virtual Tape Libraries (VTL).

Create Job

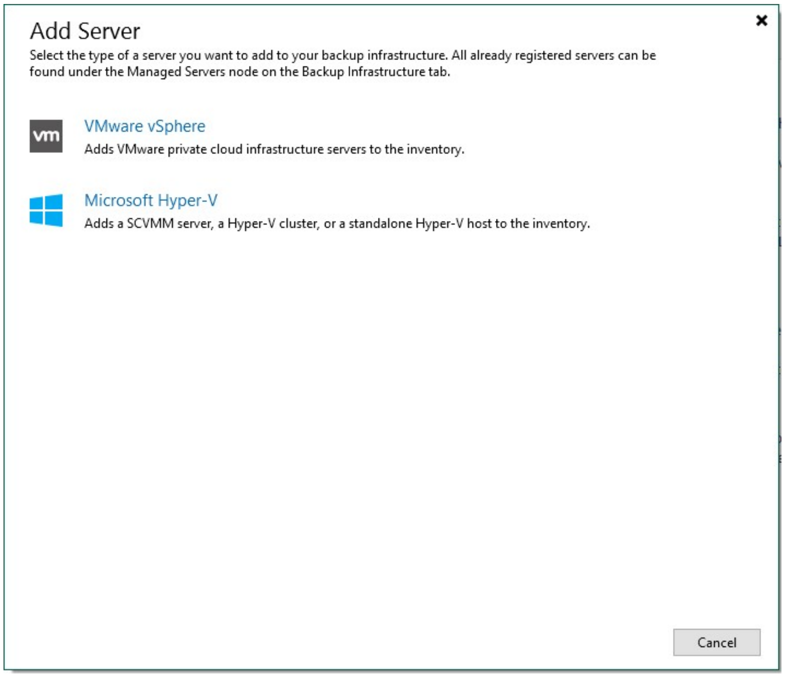
Veeam Backup & Replication provides different options to balance recovery time with storage requirements. Backup consumes less disk space but requires longer recovery time, making it ideal for long term data retention. Replication provides faster recovery time at the increased storage costs and shorter retention.
To create a new backup or replication job, go to the Backup & Replication tree tab, and click the corresponding button in the ribbon.

Restore

To restore a machine from a backup or a replica, click the Restore button in the ribbon and select the required restore type.
Alternatively, you can browse the Backups node of the Backup & Replication tab to locate the required machine by searching for its name.
You can also start a restore by double-clicking the full backup (.VBK) file in the Windows Explorer.

0 virtual machines   Connected to: localhost   Build: 12.0.0.1402   Enterprise Plus Edition   NFR: 364 days remaining

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

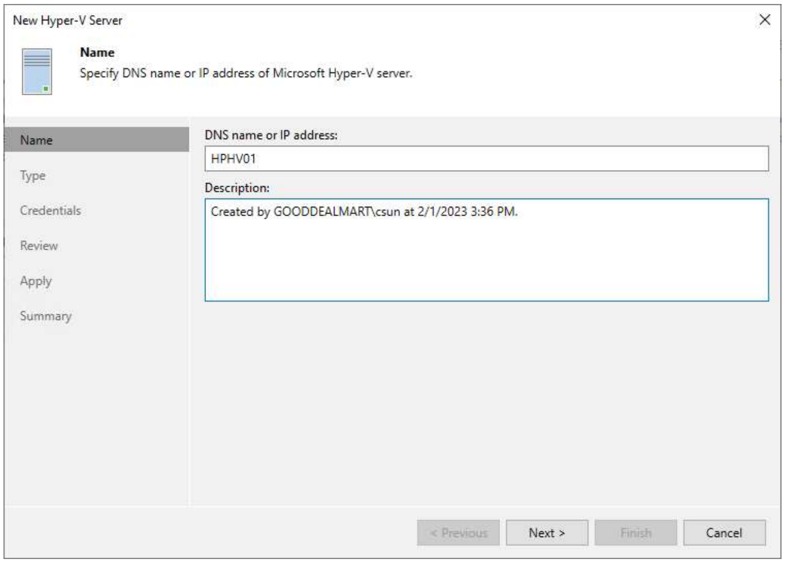

Add Server

Select the type of a server you want to add to your backup infrastructure. All already registered servers can be found under the Managed Servers node on the Backup Infrastructure tab.

VMware vSphere
Adds VMware private cloud infrastructure servers to the inventory.

Microsoft Hyper-V
Adds a SCVMM server, a Hyper-V cluster, or a standalone Hyper-V host to the inventory.

6. Enter the Microsoft Hyper-V server's full DNS name or IP address on the Name page.
7. Give a brief description in the Description field for future reference and click Next.


New Hyper-V Server
Name
Type
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

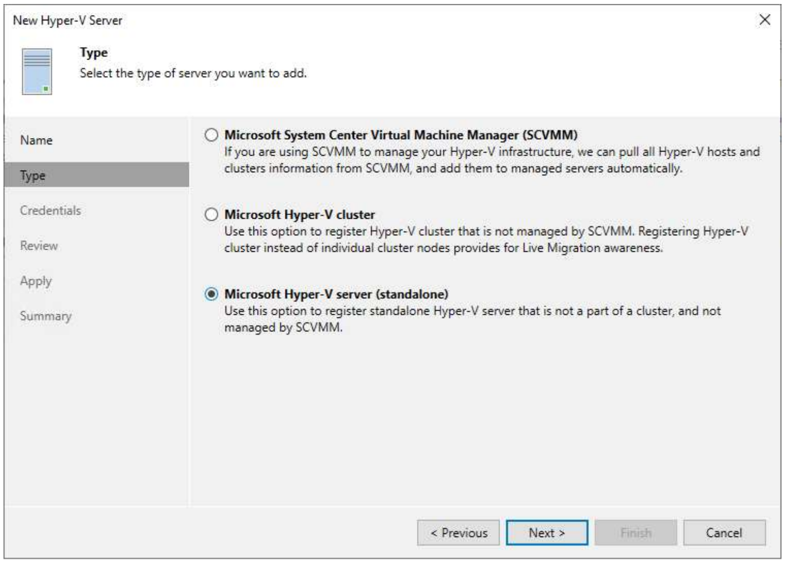
Name

Specify DNS name or IP address of Microsoft Hyper-V server.

DNS name or IP address: HPHV01

Description: Created by GOODDEALMART\csun at 2/1/2023 3:36 PM.

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


New Hyper-V Server
Name
Type
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Type

Select the type of server you want to add.

○ **Microsoft System Center Virtual Machine Manager (SCVMM)**
If you are using SCVMM to manage your Hyper-V infrastructure, we can pull all Hyper-V hosts and clusters information from SCVMM, and add them to managed servers automatically.

○ **Microsoft Hyper-V cluster**
Use this option to register Hyper-V cluster that is not managed by SCVMM. Registering Hyper-V cluster instead of individual cluster nodes provides for Live Migration awareness.

● **Microsoft Hyper-V server (standalone)**
Use this option to register standalone Hyper-V server that is not a part of a cluster, and not managed by SCVMM.

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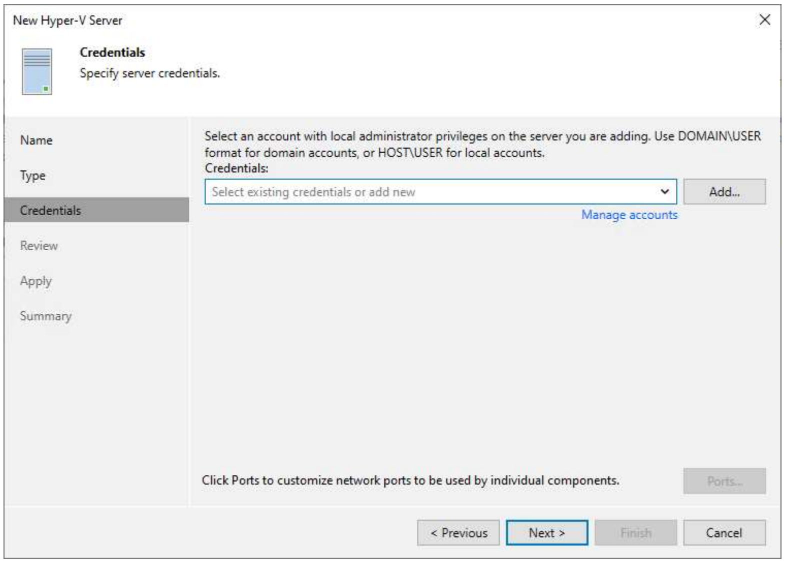
9. Select an account from the Credentials drop-down list on the Credentials page or click Add on the right to add the credentials.

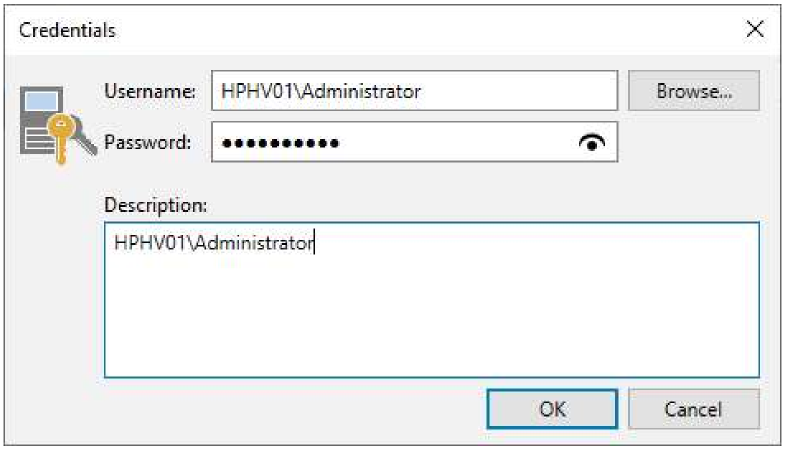

New Hyper-V Server
Credentials
Specify server credentials.
Name
Type
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

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: Select existing credentials or add new

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

10. On the Credentials page, enter a user name in the Username field. You can also click Browse to select an existing user account.
11. Enter the password In the Password field.
12. Give a brief description in the Description field for future reference and click OK.

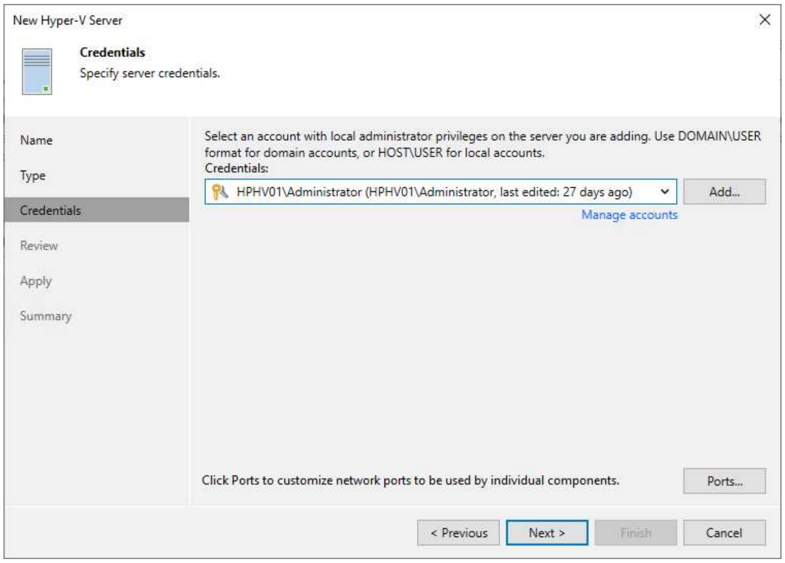

Credentials
Browse...
OK
Cancel

Username: HPHV01\Administrator

Password: ●●●●●●●●●●●

Description: HPHV01\Administrator

13. On the Credentials page, click Ports.


New Hyper-V Server
Credentials
Specify server credentials.
Name
Type
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

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: 27 days ago)

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

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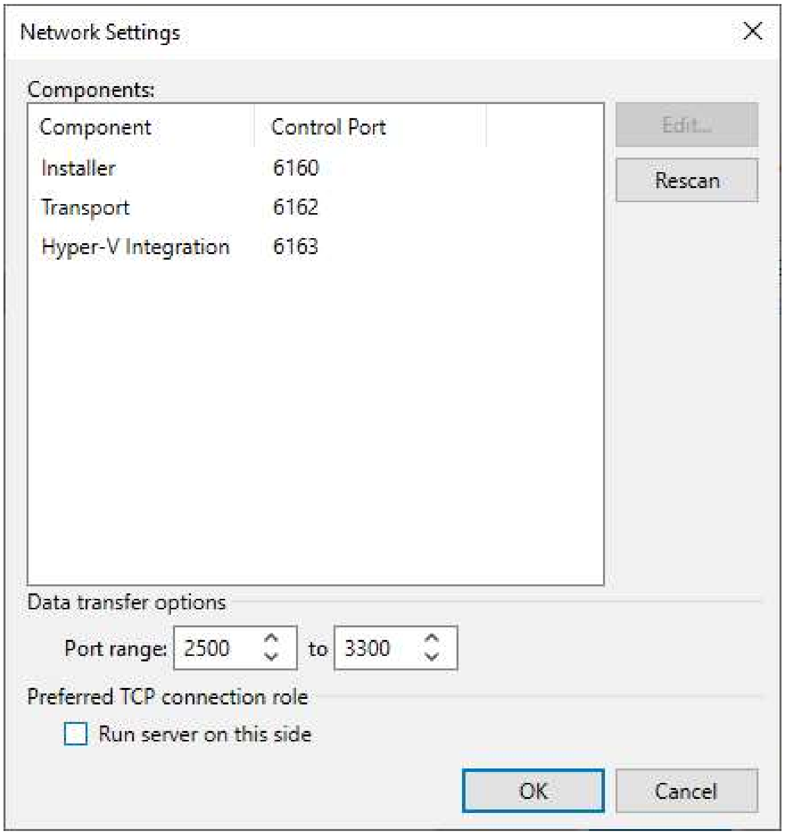
14. If necessary, change the network ports used by Veeam Backup & Replication components on the Network Settings page.
15. Configure connection settings for file copy operations in the Network Settings window's Data transfer options section. Provide a set of ports for transmission channels between the source and target hosts (one port per task).
16. Select the Run server on this side checkbox in the Preferred TCP connection role section. The outside client cannot connect to the server on the NAT network in the NAT scenario. As a result, services that require external connection initiation may be disrupted.
17. Click OK.



Components:

Component	Control Port
Installer	6160
Transport	6162
Hyper-V Integration	6163

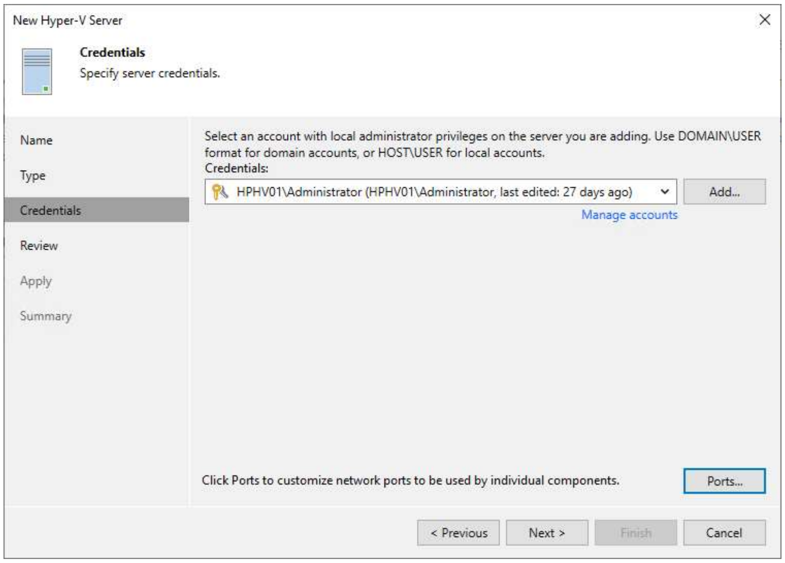
Data transfer options

Port range: 2500 to 3300

Preferred TCP connection role

☐ Run server on this side

18. Click Next on the Credentials page.


New Hyper-V Server
Name
Type
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

Credentials

Specify server credentials.

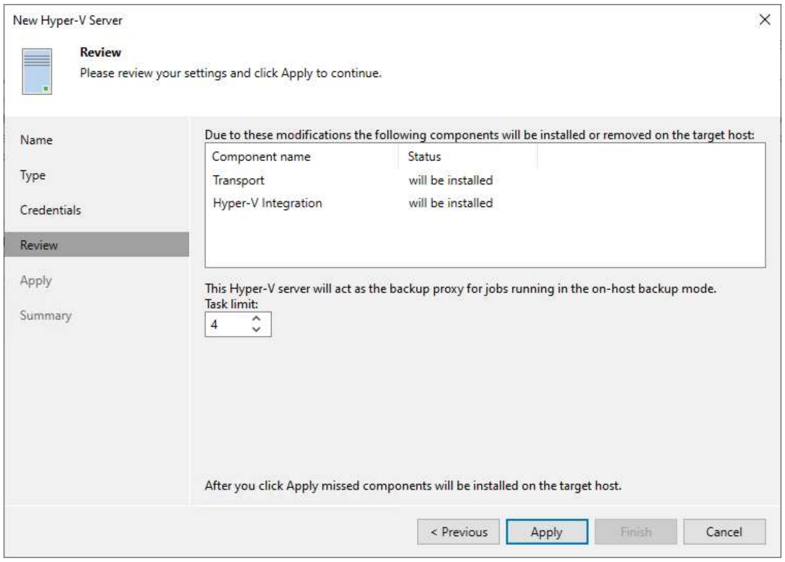
Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER format for domain accounts, or HOST\USER for local accounts.

Credentials: HPHV01\Administrator (HPHV01\Administrator, last edited: 27 days ago)

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

---

19. If you add a standalone Microsoft Hyper-V host on the Review page, specify the number of tasks the Microsoft Hyper-V host must handle concurrently in the Max concurrent tasks field.
20. Click Apply.


New Hyper-V Server
Name
Type
Credentials
Review
Apply
Summary
< Previous
Apply
Finish
Cancel

Review

Please review your settings and click Apply to continue.

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.

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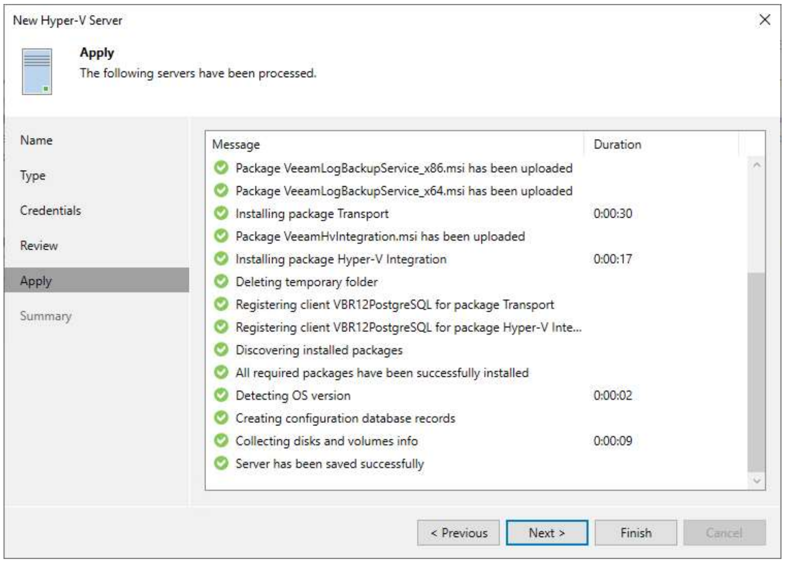
21. Click Next on the Apply page.

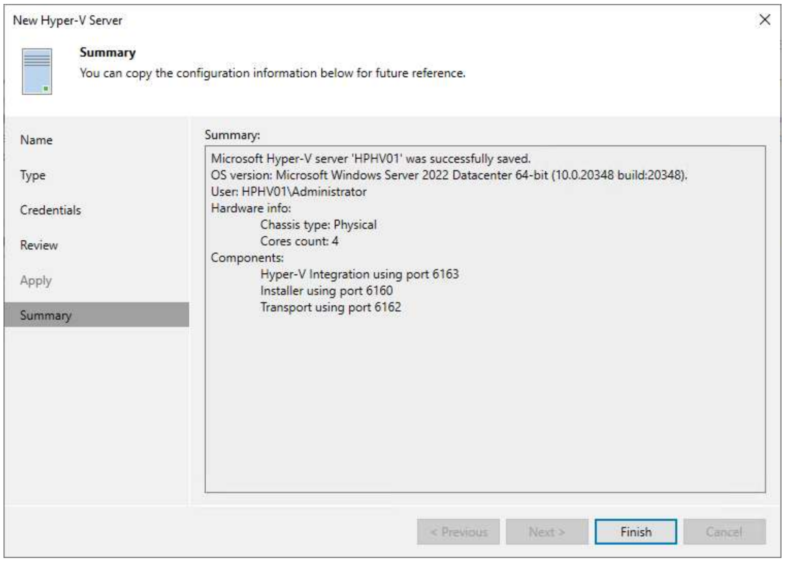

New Hyper-V Server
Name
Type
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Apply

The following servers have been processed.

Message	Duration
✓ Package VeeamLogBackupService_x86.msi has been uploaded	
✓ Package VeeamLogBackupService_x64.msi has been uploaded	
✓ Installing package Transport	0:00:30
✓ Package VeeamHvIntegration.msi has been uploaded	
✓ Installing package Hyper-V Integration	0:00:17
✓ Deleting temporary folder	
✓ Registering client VBR12PostgreSQL for package Transport	
✓ Registering client VBR12PostgreSQL for package Hyper-V Inte...	
✓ Discovering installed packages	
✓ All required packages have been successfully installed	
✓ Detecting OS version	0:00:02
✓ Creating configuration database records	
✓ Collecting disks and volumes info	0:00:09
✓ Server has been saved successfully	

22. Click Finish on the Summary page.


New Hyper-V Server
Name
Type
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Summary

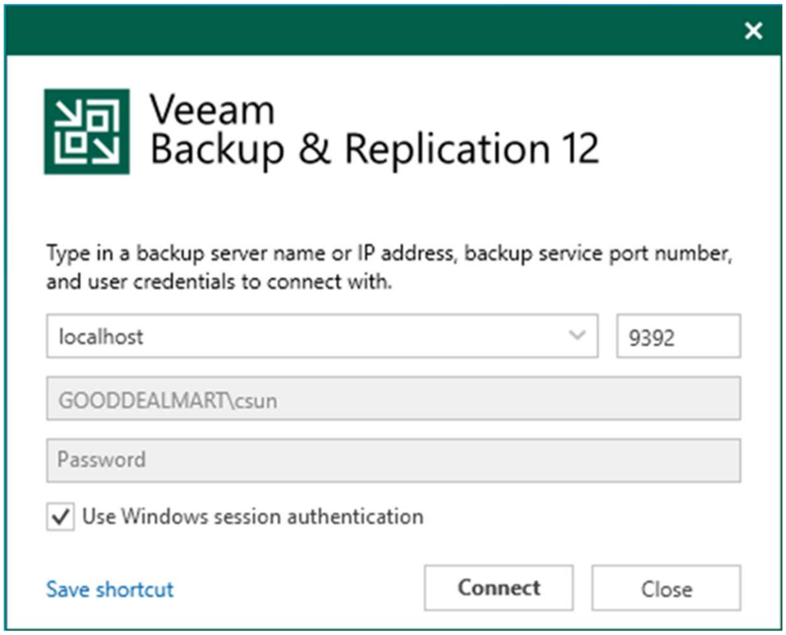
You can copy the configuration information below for future reference.

Summary:

```
Microsoft Hyper-V server 'HPHV01' was successfully saved.
OS version: Microsoft Windows Server 2022 Datacenter 64-bit (10.0.20348 build:20348).
User: HPHV01\Administrator
Hardware info:
        Chassis type: Physical
        Cores count: 4
Components:
        Hyper-V Integration using port 6163
        Installer using port 6160
        Transport using port 6162
```

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.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication

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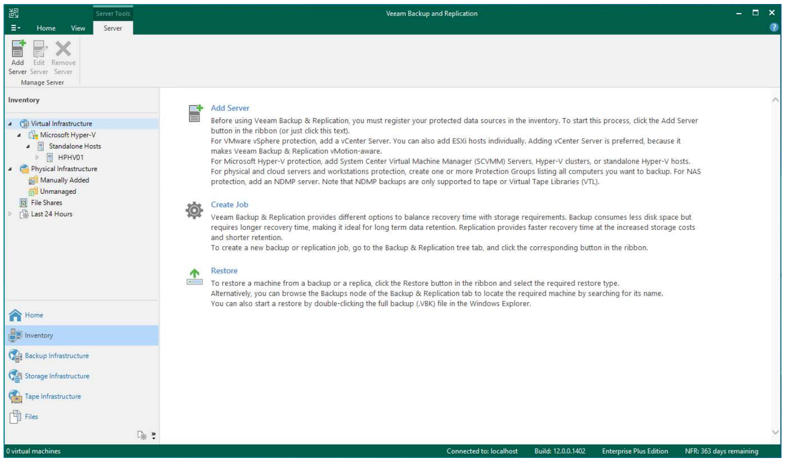
3. On the Home page, select Inventory.
4. On the Inventory page, select Virtual Infrastructure and click Add Server.


Server Tools
Veeam Backup and Replication
Home
View
Server
Add Server
Edit Server
Remove Server
Manage Server
Inventory
Virtual Infrastructure
Microsoft Hyper-V
Standalone Hosts
HPHV01
Physical Infrastructure
Manually Added
Unmanaged
File Shares
Last 24 Hours
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
0 virtual machines
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 363 days remaining

Add Server

Before using Veeam Backup & Replication, you must register your protected data sources in the inventory. To start this process, click the Add Server button in the ribbon (or just click this text).
For VMware vSphere protection, add a vCenter Server. You can also add ESXi hosts individually. Adding vCenter Server is preferred, because it makes Veeam Backup & Replication vMotion-aware.
For Microsoft Hyper-V protection, add System Center Virtual Machine Manager (SCVMM) Servers, Hyper-V clusters, or standalone Hyper-V hosts.
For physical and cloud servers and workstations protection, create one or more Protection Groups listing all computers you want to backup. For NAS protection, add an NDMP server. Note that NDMP backups are only supported to tape or Virtual Tape Libraries (VTL).

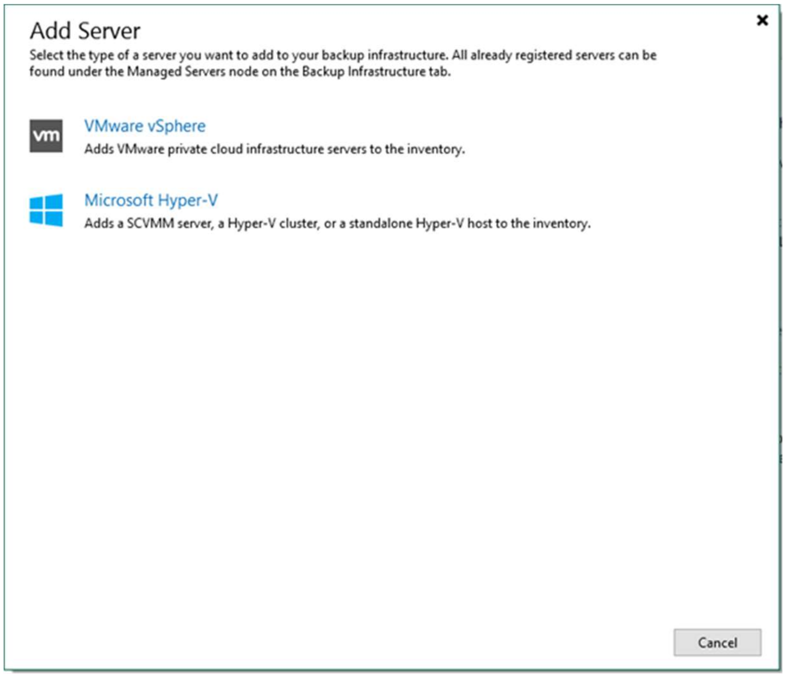
Create Job

Veeam Backup & Replication provides different options to balance recovery time with storage requirements. Backup consumes less disk space but requires longer recovery time, making it ideal for long term data retention. Replication provides faster recovery time at the increased storage costs and shorter retention.
To create a new backup or replication job, go to the Backup & Replication tree tab, and click the corresponding button in the ribbon.

Restore

To restore a machine from a backup or a replica, click the Restore button in the ribbon and select the required restore type.
Alternatively, you can browse the Backups node of the Backup & Replication tab to locate the required machine by searching for its name.
You can also start a restore by double-clicking the full backup (.VBK) file in the Windows Explorer.

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



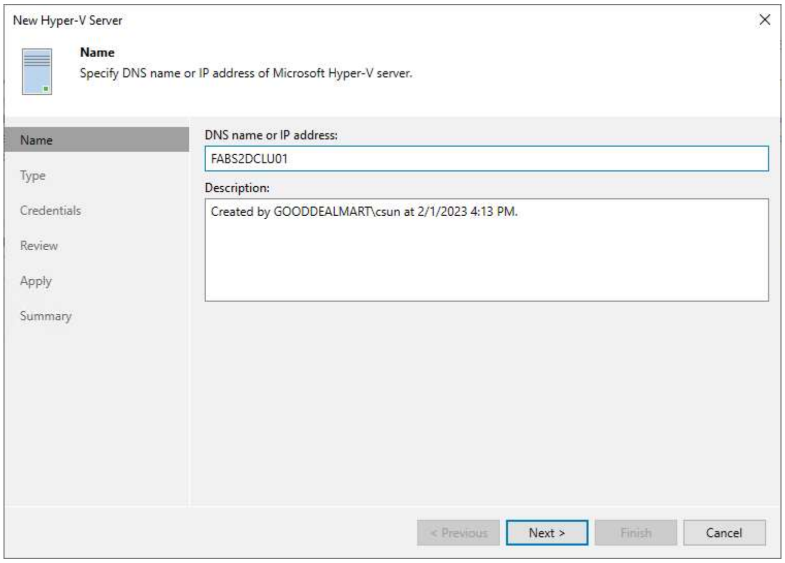
Add Server

Select the type of a server you want to add to your backup infrastructure. All already registered servers can be found under the Managed Servers node on the Backup Infrastructure tab.

VMware vSphere
Adds VMware private cloud infrastructure servers to the inventory.

Microsoft Hyper-V
Adds a SCVMM server, a Hyper-V cluster, or a standalone Hyper-V host to the inventory.

6. Enter the Microsoft Hyper-V Cluster's full DNS name or IP address on the Name page.
7. Give a brief description in the Description field for future reference and click Next.



New Hyper-V Server

Name

Specify DNS name or IP address of Microsoft Hyper-V server.

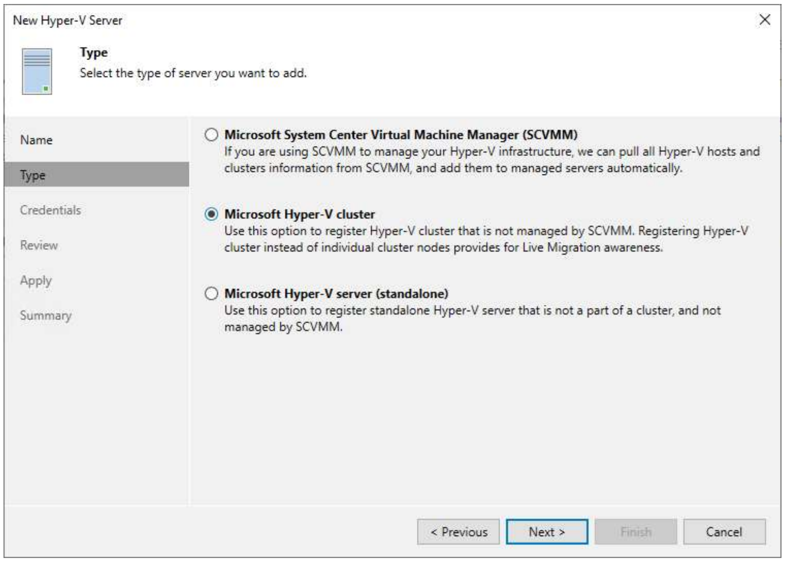
DNS name or IP address: FABS2DCLU01

Description: Created by GOODDEALMART\csun at 2/1/2023 4:13 PM.

Name
Type
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

---

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



New Hyper-V Server

Type

Select the type of server you want to add.

○ **Microsoft System Center Virtual Machine Manager (SCVMM)**
If you are using SCVMM to manage your Hyper-V infrastructure, we can pull all Hyper-V hosts and clusters information from SCVMM, and add them to managed servers automatically.

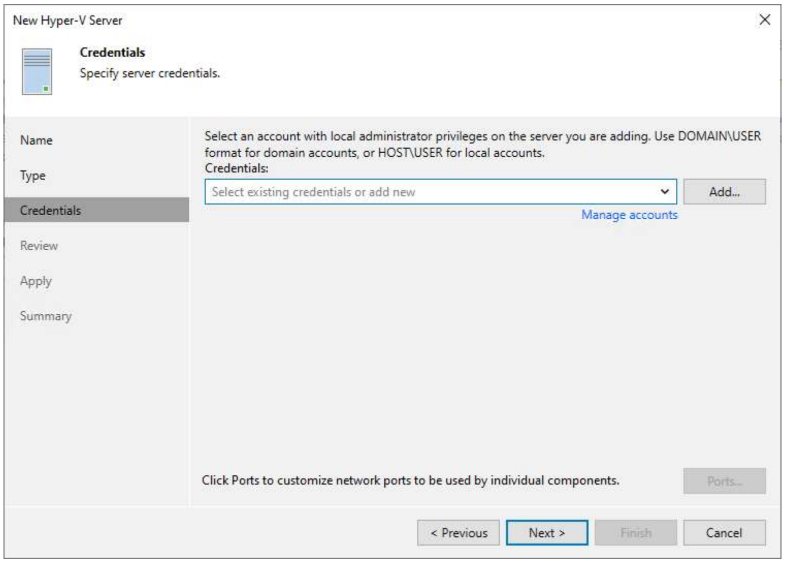
● **Microsoft Hyper-V cluster**
Use this option to register Hyper-V cluster that is not managed by SCVMM. Registering Hyper-V cluster instead of individual cluster nodes provides for Live Migration awareness.

○ **Microsoft Hyper-V server (standalone)**
Use this option to register standalone Hyper-V server that is not a part of a cluster, and not managed by SCVMM.

Name
Type
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Technet24

9. Select an account from the Credentials drop-down list on the Credentials page or click Add on the right to add the credentials.



New Hyper-V Server

Credentials

Specify server credentials.

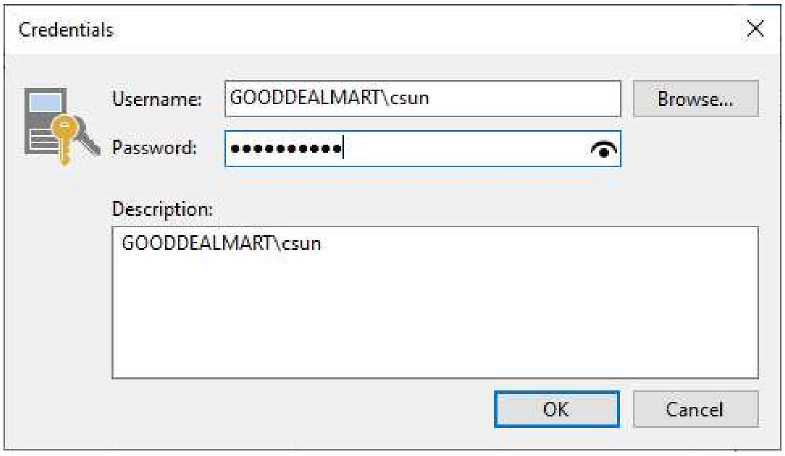
Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER format for domain accounts, or HOST\USER for local accounts.

Credentials: Select existing credentials or add new

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

Name
Type
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

10. On the Credentials page, enter a user name in the Username field. You can also click Browse to select an existing user account.
11. Enter the password In the Password field.
12. Give a brief description in the Description field for future reference and click OK.



Credentials

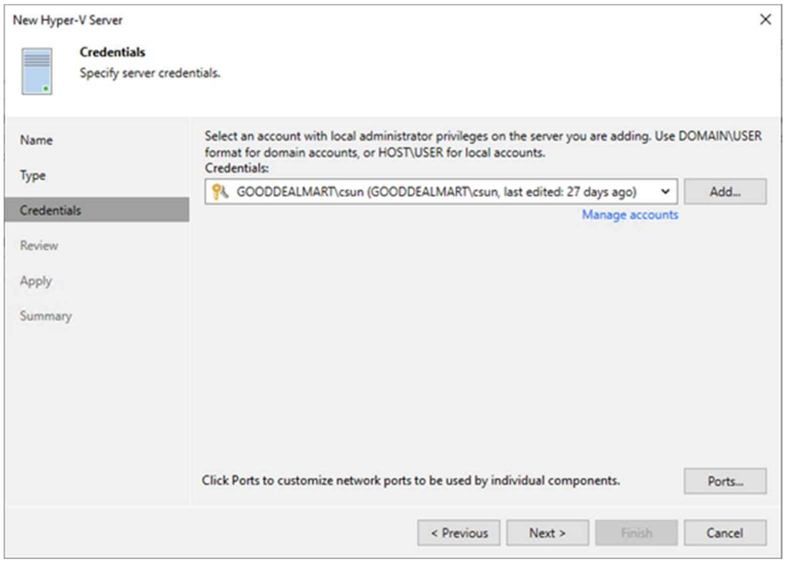
Username: GOODDEALMART\csun

Password: ••••••••••

Description: GOODDEALMART\csun

Browse...
OK
Cancel

13. On the Credentials page, click Ports.



New Hyper-V Server
Credentials
Specify server credentials.
Name
Type
Credentials
Review
Apply
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: GOODDEALMART\csun (GOODDEALMART\csun, last edited: 27 days ago)

Add...
Manage accounts

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

Ports...
< Previous
Next >
Finish
Cancel

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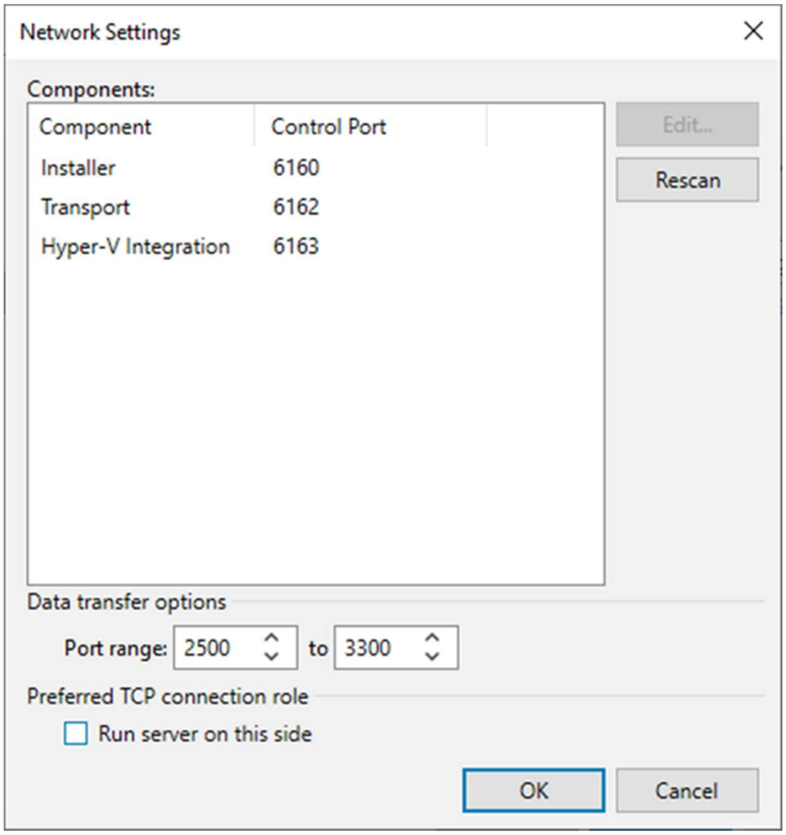
14. If necessary, change the network ports used by Veeam Backup & Replication components on the Network Settings page.
15. Configure connection settings for file copy operations in the Network Settings window's Data transfer options section. Provide a set of ports for transmission channels between the source and target hosts (one port per task).
16. Select the Run server on this side checkbox in the Preferred TCP connection role section. The outside client cannot connect to the server on the NAT network in the NAT scenario. As a result, services that require external connection initiation may be disrupted.
17. Click OK.


Network Settings

Components:

Component	Control Port
Installer	6160
Transport	6162
Hyper-V Integration	6163

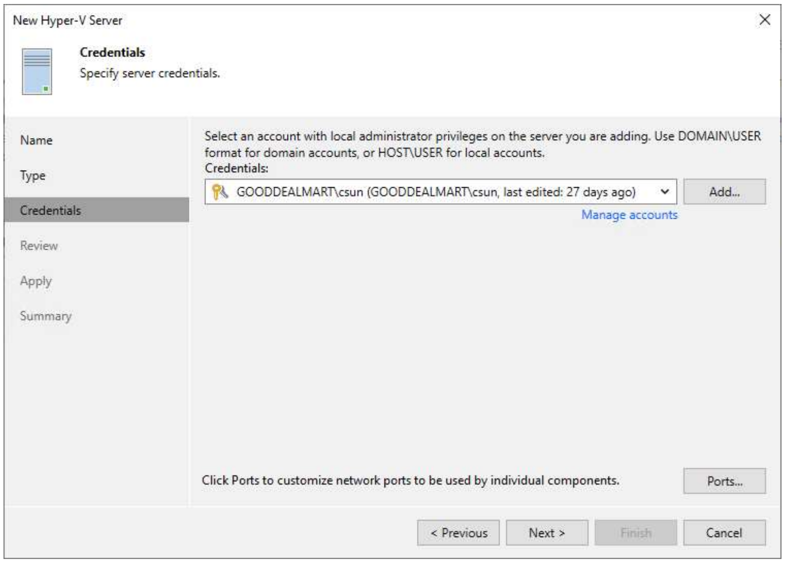
Data transfer options

Port range: 2500 to 3300

Preferred TCP connection role

☐ Run server on this side

18. On the Credentials page, click Next.

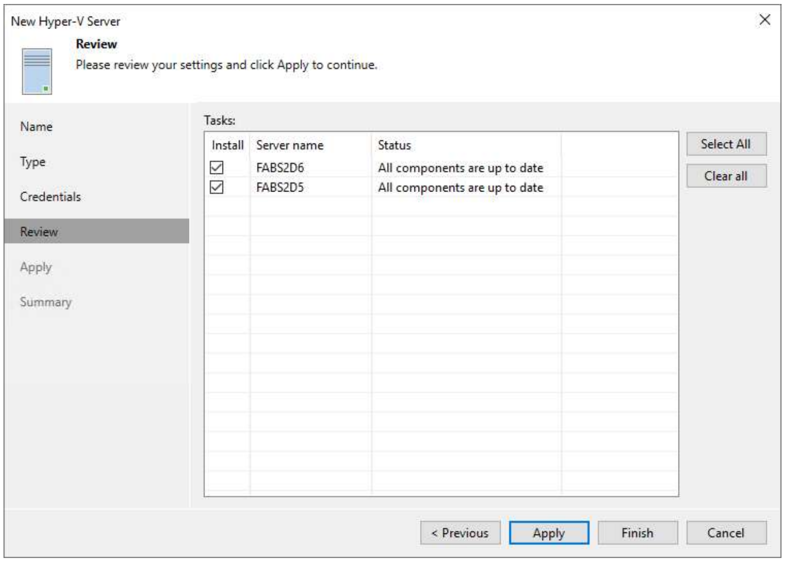

New Hyper-V Server
Credentials
Specify server credentials.
Name
Type
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

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: GOODDEALMART\csun (GOODDEALMART\csun, last edited: 27 days ago)

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

19. Select all servers' checkboxes on the Review page and click Apply.


New Hyper-V Server
Review
Name
Type
Credentials
Review
Apply
Summary
Select All
Clear all
< Previous
Apply
Finish
Cancel

Please review your settings and click Apply to continue.

Tasks:

Install	Server name	Status
☑	FABS2D6	All components are up to date
☑	FABS2D5	All components are up to date

20. Click Next on the Apply page.

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21. Click Finish on the Summary page.

Add Microsoft SMB3 Servers

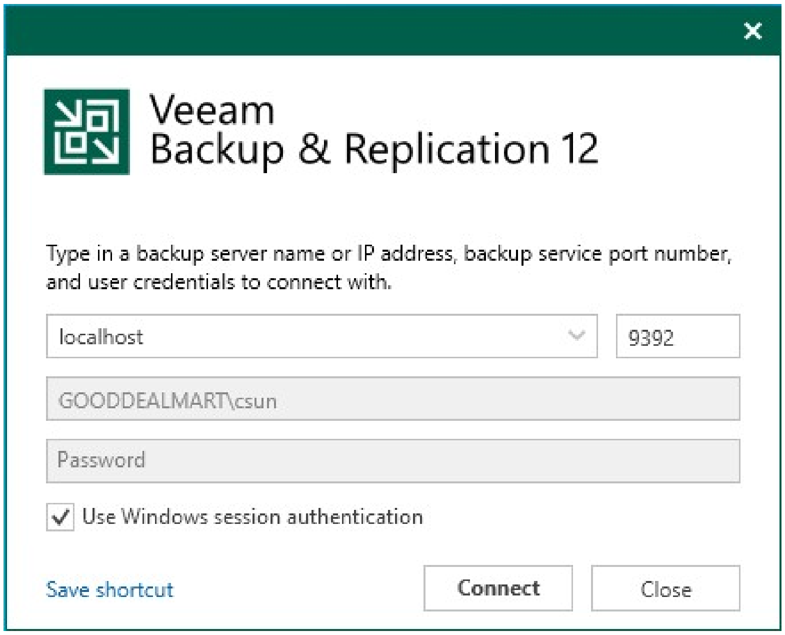
Veeam Backup & Replication can perform backup, replication, and file copy operations on Microsoft Hyper-V VMs whose discs are located on Microsoft SMB3 file shares.

If a Microsoft SMB3 server or cluster is not added to the backup infrastructure, Veeam Backup & Replication cannot process such VMs using the changed block tracking mechanism.

If VMs with discs on SMB3 shared folders are registered on Microsoft Hyper-V Server 2016 or later, a Microsoft SMB3 server is not required. However, if the Microsoft SMB3 server is not added, you cannot specify the Max snapshots, and latency control settings for SMB3 shared folders.

Note:

You cannot use Microsoft SMB3 shared folder as storage for VM replicas.

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.	

Veeam
Backup & Replication 12

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

localhost | 9392

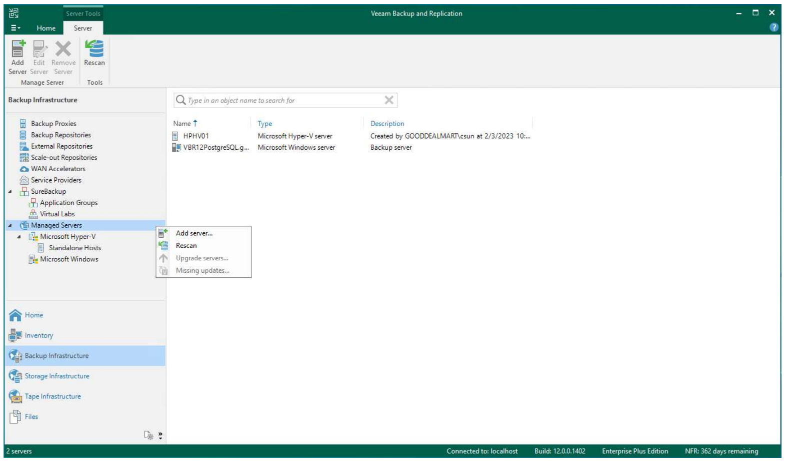
GOODDEALMART\csun

Password

☑ Use Windows session authentication

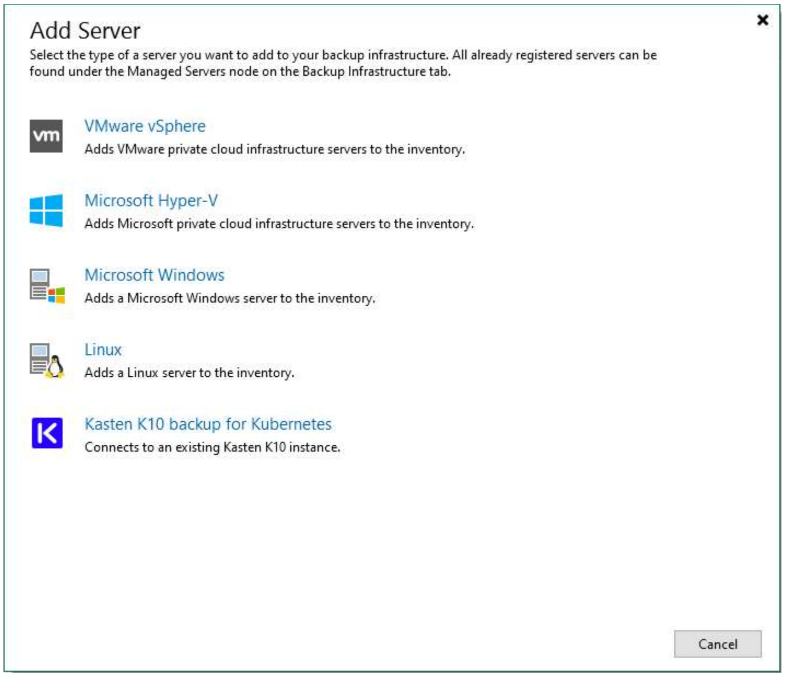
Technet24

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


Server Tools
Veeam Backup and Replication
Home
Server
Add Server
Edit Server
Remove Server
Rescan
Manage Server
Tools
Backup Infrastructure
Type in an object name to search for
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Add server...
Rescan
Upgrade servers...
Missing updates...
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
2 servers
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 362 days remaining

Name	Type	Description
HPHV01	Microsoft Hyper-V server	Created by GOODDEALMART\csun at 2/3/2023 10:...
VBR12PostgreSQL.g...	Microsoft Windows server	Backup server

6. Select Microsoft Hyper-V on the Add Server Page.


Add Server

Select the type of a server you want to add to your backup infrastructure. All already registered servers can be found under the Managed Servers node on the Backup Infrastructure tab.

VMware vSphere
Adds VMware private cloud infrastructure servers to the inventory.

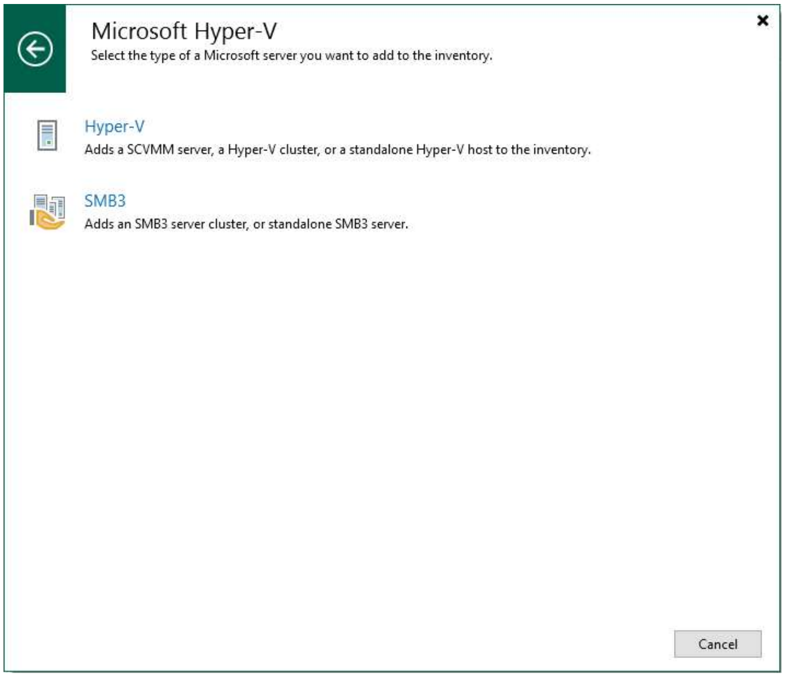
Microsoft Hyper-V
Adds Microsoft private cloud infrastructure servers to the inventory.

Microsoft Windows
Adds a Microsoft Windows server to the inventory.

Linux
Adds a Linux server to the inventory.

Kasten K10 backup for Kubernetes
Connects to an existing Kasten K10 instance.

7. Select SMB3 on the Microsoft Hyper-V page.

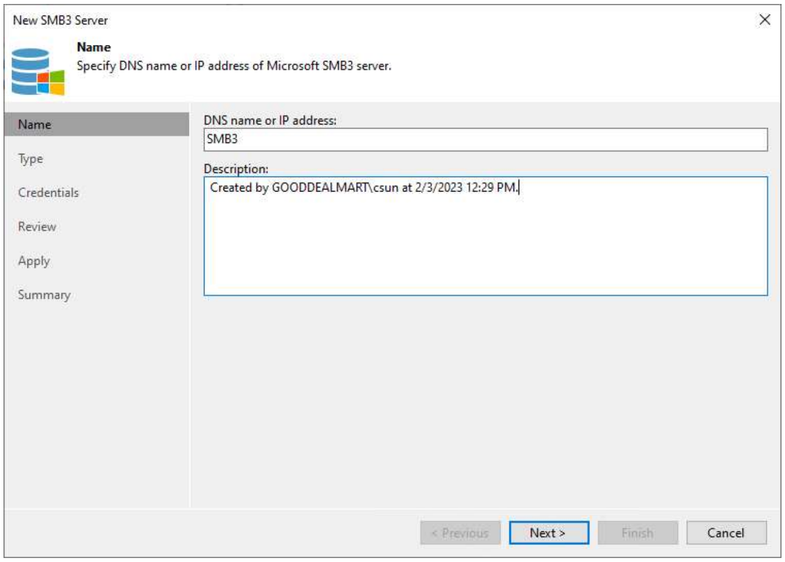

Microsoft Hyper-V
Hyper-V
SMB3
Cancel

Select the type of a Microsoft server you want to add to the inventory.

Adds a SCVMM server, a Hyper-V cluster, or a standalone Hyper-V host to the inventory.

Adds an SMB3 server cluster, or standalone SMB3 server.

8. Enter the Microsoft SMB3 server's full DNS name or IP address on the Name page.
9. Give a brief description in the Description field for future reference and click Next.


New SMB3 Server
Name
Type
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

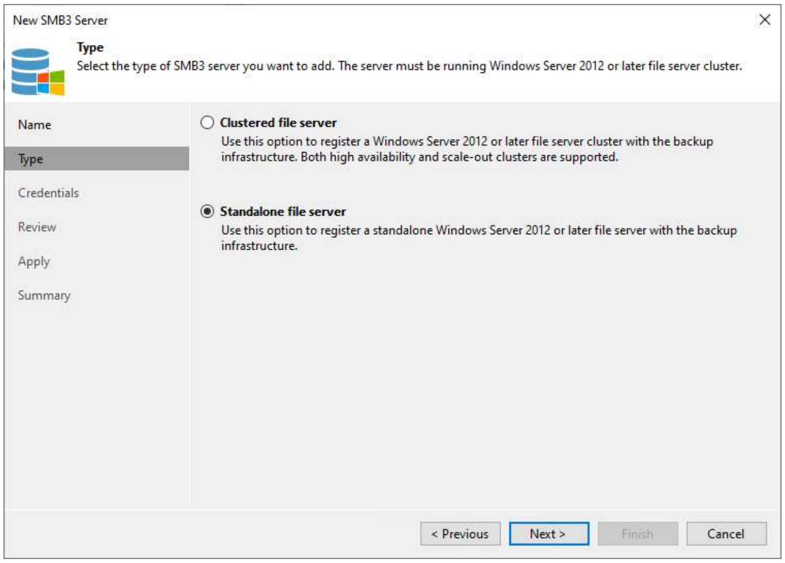
Name
Specify DNS name or IP address of Microsoft SMB3 server.

DNS name or IP address: SMB3

Description: Created by GOODDEALMART\csun at 2/3/2023 12:29 PM.

Technet24

10. On the Type page, Choose the type of Microsoft SMB3 server you want to add and click Next.



New SMB3 Server

Type

Select the type of SMB3 server you want to add. The server must be running Windows Server 2012 or later file server cluster.

○ **Clustered file server**

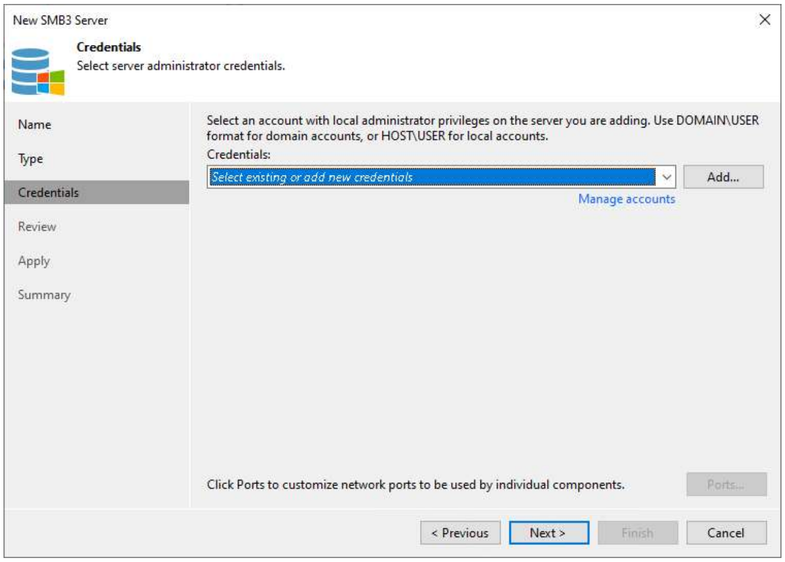
Use this option to register a Windows Server 2012 or later file server cluster with the backup infrastructure. Both high availability and scale-out clusters are supported.

● **Standalone file server**

Use this option to register a standalone Windows Server 2012 or later file server with the backup infrastructure.

Name
Type
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

11. Select an account from the Credentials drop-down list on the Credentials page or click Add on the right to add the credentials.



New SMB3 Server

Credentials

Select server administrator credentials.

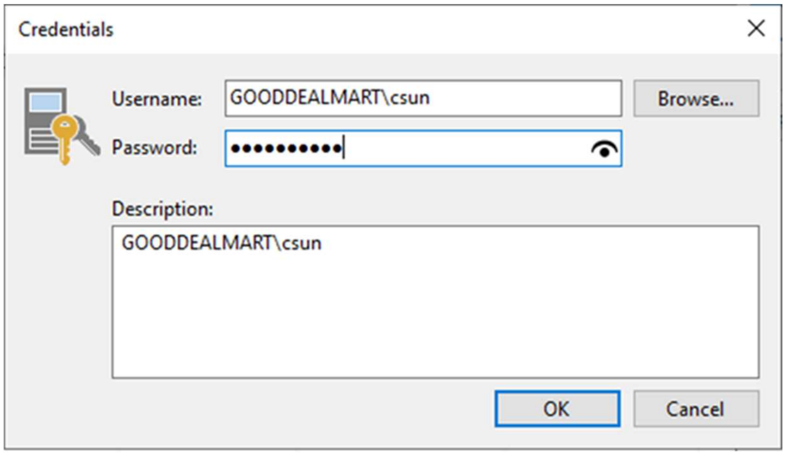
Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER format for domain accounts, or HOST\USER for local accounts.

Credentials: *Select existing or add new credentials*

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

Name
Type
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

12. On the Credentials page, enter a user name in the Username field. You can also click Browse to select an existing user account.
13. Enter the password In the Password field.
14. Give a brief description in the Description field for future reference and click OK.



Credentials

Username: GOODDEALMART\csun

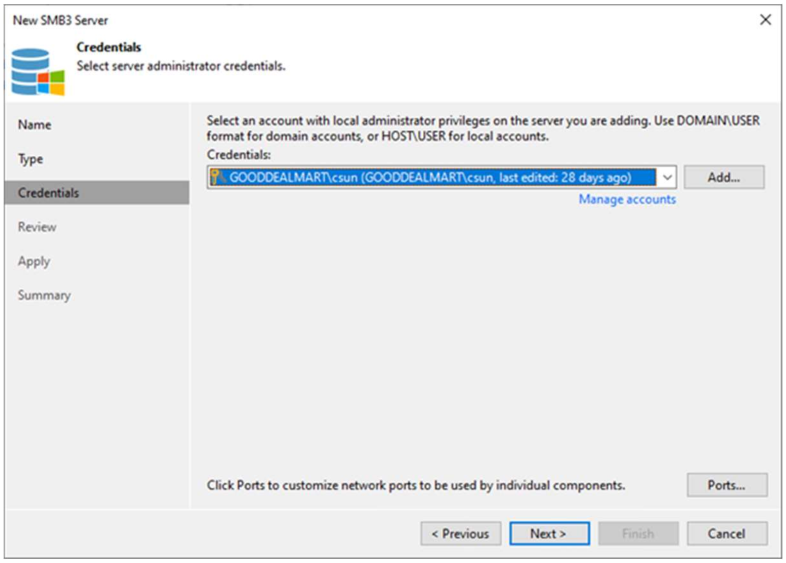
Password: ••••••••••

Description:

GOODDEALMART\csun

Browse...
OK
Cancel

15. On the Credentials page, click Ports.



New SMB3 Server

Credentials

Select server administrator credentials.

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: GOODDEALMART\csun (GOODDEALMART\csun, last edited: 28 days ago)

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

Name
Type
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

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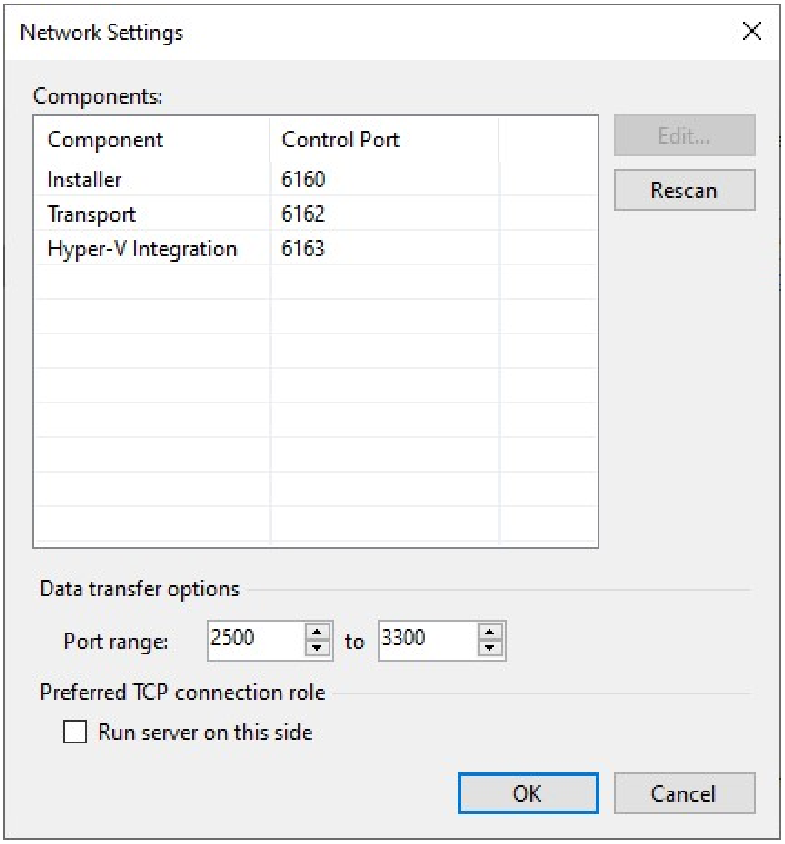
16. If necessary, change the network ports used by Veeam Backup & Replication components on the Network Settings page.
17. Configure connection settings for file copy operations in the Network Settings window's Data transfer options section. Provide a set of ports for transmission channels between the source and target hosts (one port per task).
18. Select the Run server on this side checkbox in the Preferred TCP connection role section. The outside client cannot connect to the server on the NAT network in the NAT scenario. As a result, services that require external connection initiation may be disrupted.
19. Click OK.



Components:

Component	Control Port
Installer	6160
Transport	6162
Hyper-V Integration	6163

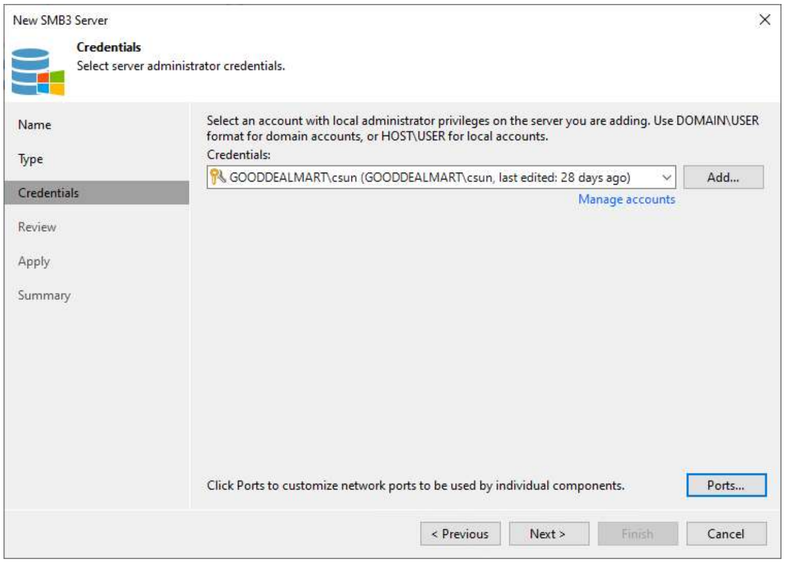
Data transfer options

Port range: 2500 to 3300

Preferred TCP connection role

☐ Run server on this side

20. Click Next on the Credentials page.



New SMB3 Server

Credentials

Select server administrator credentials.

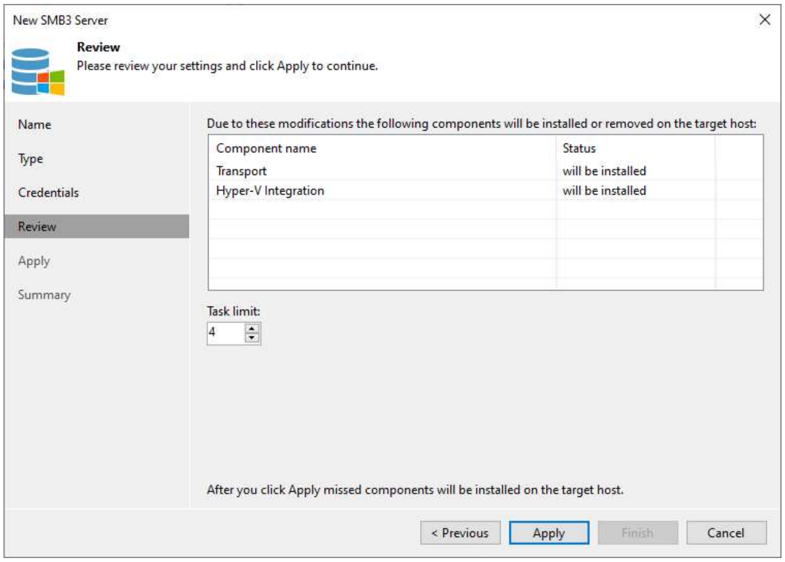
Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER format for domain accounts, or HOST\USER for local accounts.

Credentials: GOODDEALMART\csun (GOODDEALMART\csun, last edited: 28 days ago)

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

Name
Type
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

21. If you add a standalone Microsoft Hyper-V host on the Review page, specify the number of tasks the Microsoft Hyper-V host must handle concurrently in the Task limit field.
22. Click Apply.



New SMB3 Server

Review

Please review your settings and click Apply to continue.

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

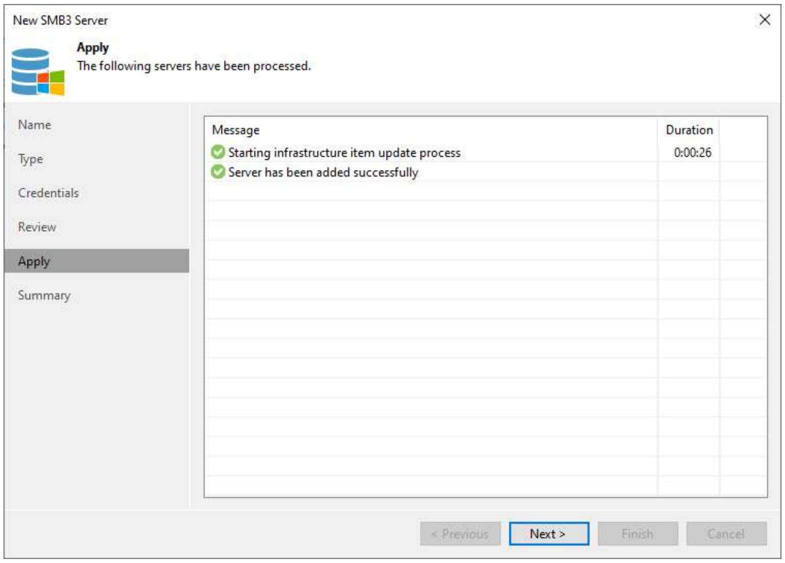
Task limit: 4

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

Name
Type
Credentials
Review
Apply
Summary
< Previous
Apply
Finish
Cancel

Technet24

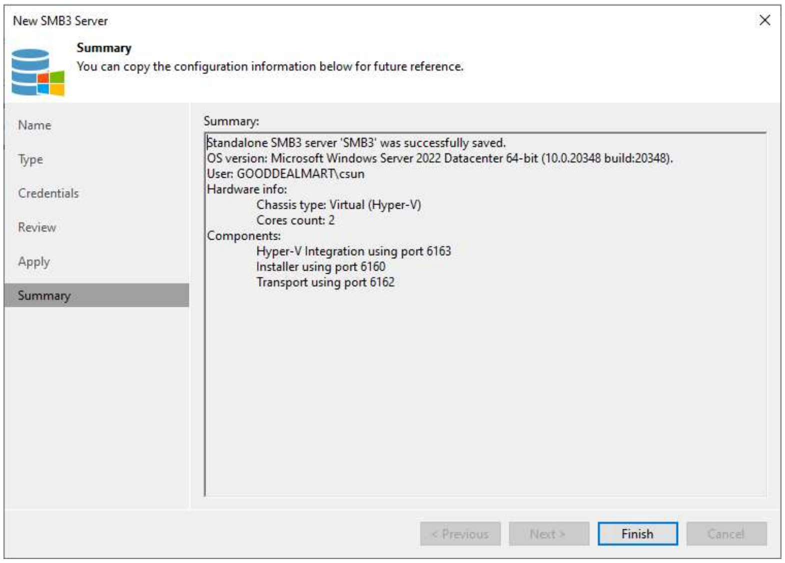
23. Click Next on the Apply page.


New SMB3 Server
Apply
Name
Type
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

The following servers have been processed.

Message	Duration
Starting infrastructure item update process	0:00:26
Server has been added successfully	

Click Finish on the Summary page.

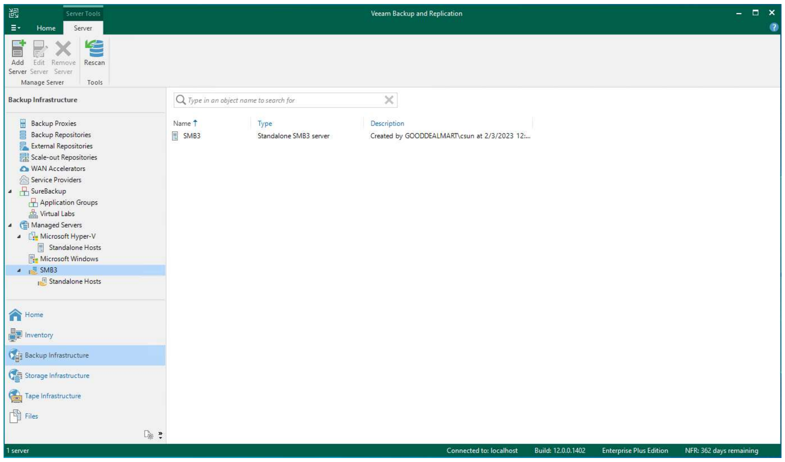

New SMB3 Server
Summary
Name
Type
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

You can copy the configuration information below for future reference.

Summary:

```
Standalone SMB3 server 'SMB3' was successfully saved.
OS version: Microsoft Windows Server 2022 Datacenter 64-bit (10.0.20348 build:20348).
User: GOODDEALMART\csun
Hardware info:
        Chassis type: Virtual (Hyper-V)
        Cores count: 2
Components:
        Hyper-V Integration using port 6163
        Installer using port 6160
        Transport using port 6162
```

24. Ensure the new Microsoft SMB3 server is added.


Server Tools
Veeam Backup and Replication
Home
Server
Add Server
Edit Server
Remove Server
Rescan
Manage Server
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
1 server
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 362 days remaining

Name	Type	Description
SMB3	Standalone SMB3 server	Created by GOODDEALMART\csun at 2/3/2023 12:...

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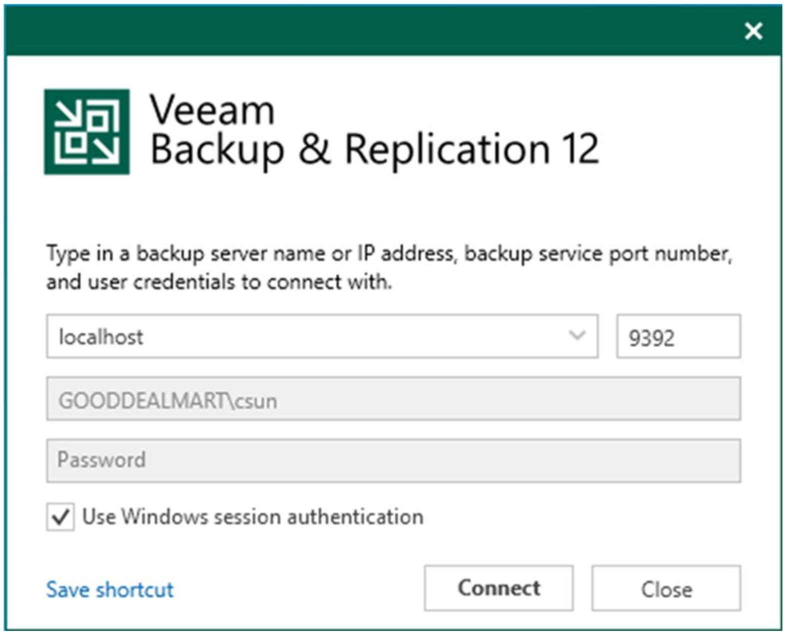
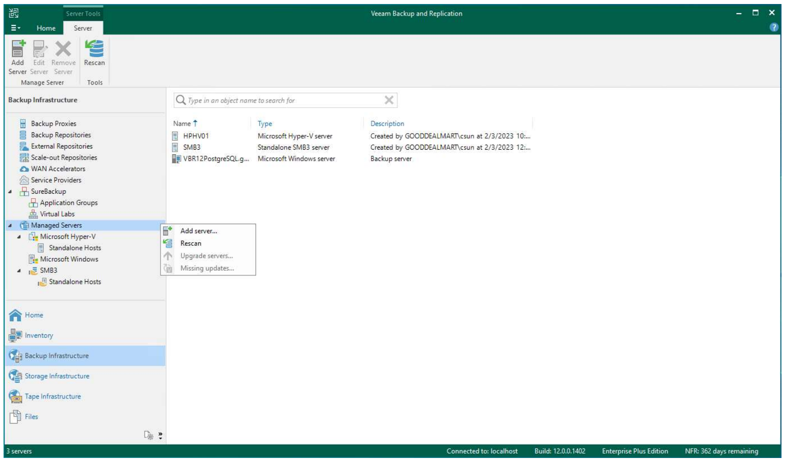
Add Microsoft Windows Servers

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.

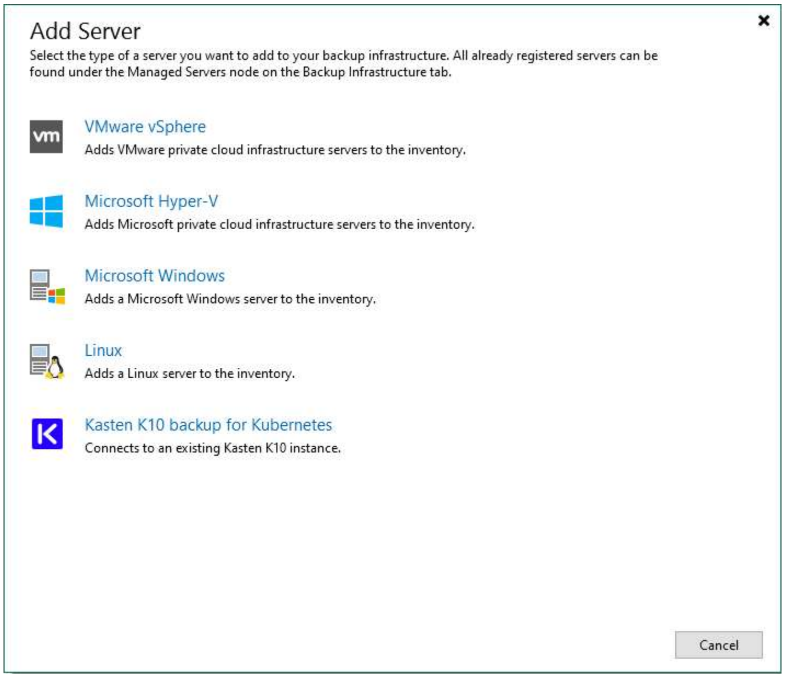
Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication

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


Server Tools
Home
Server
Veeam Backup and Replication
Add Server
Edit Server
Remove Server
Rescan
Manage Server
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
SMB3
Standalone Hosts
Add server...
Rescan
Upgrade servers...
Missing updates...
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
3 servers
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 362 days remaining

Name	Type	Description
HPHV01	Microsoft Hyper-V server	Created by GOODDEALMART\csun at 2/3/2023 10:...
SMB3	Standalone SMB3 server	Created by GOODDEALMART\csun at 2/3/2023 12:...
VBR12PostgreSQL.g...	Microsoft Windows server	Backup server

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



Add Server

Select the type of a server you want to add to your backup infrastructure. All already registered servers can be found under the Managed Servers node on the Backup Infrastructure tab.

VMware vSphere
Adds VMware private cloud infrastructure servers to the inventory.

Microsoft Hyper-V
Adds Microsoft private cloud infrastructure servers to the inventory.

Microsoft Windows
Adds a Microsoft Windows server to the inventory.

Linux
Adds a Linux server to the inventory.

Kasten K10 backup for Kubernetes
Connects to an existing Kasten K10 instance.

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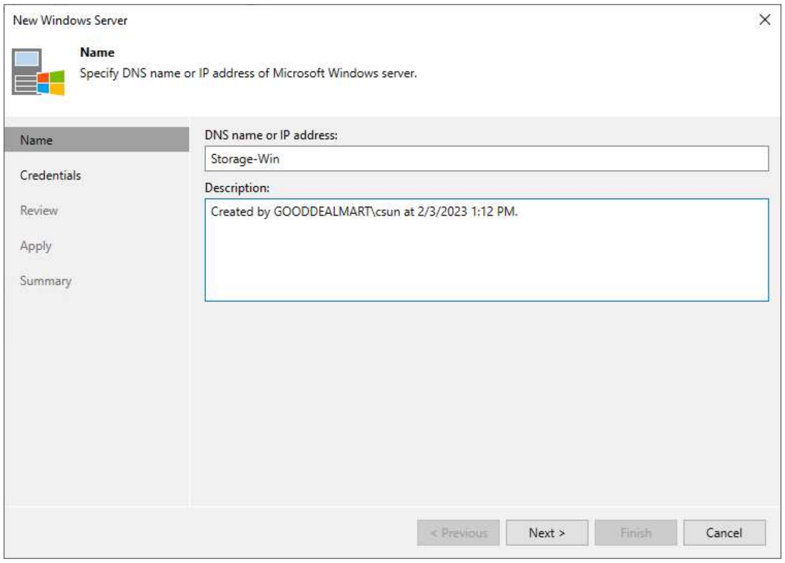
7. Enter the Microsoft Windows server's full DNS name or IP address on the Name page.
8. Give a brief description in the Description field for future reference and click Next.


New Windows Server

Name

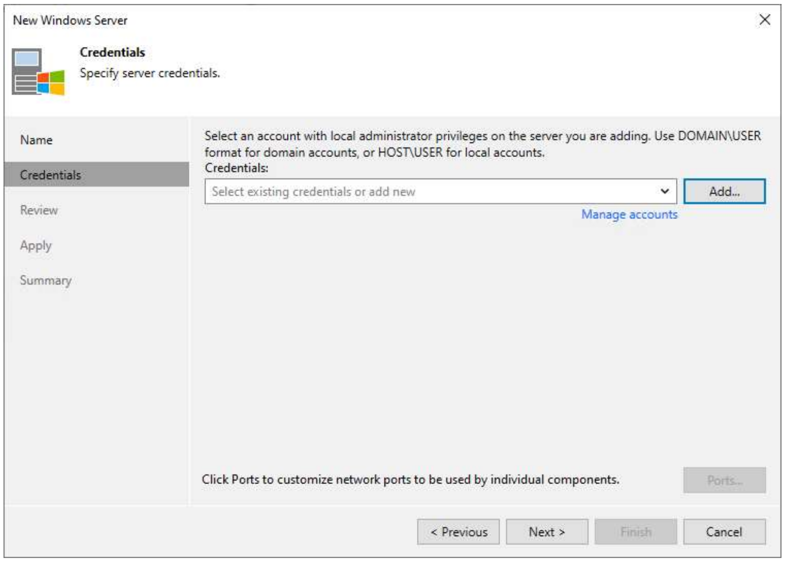
Specify DNS name or IP address of Microsoft Windows server.

DNS name or IP address: Storage-Win

Description: Created by GOODDEALMART\csun at 2/3/2023 1:12 PM.

Name
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

9. Select an account from the Credentials drop-down list on the Credentials page or click Add on the right to add the credentials.


New Windows Server

Credentials

Specify server credentials.

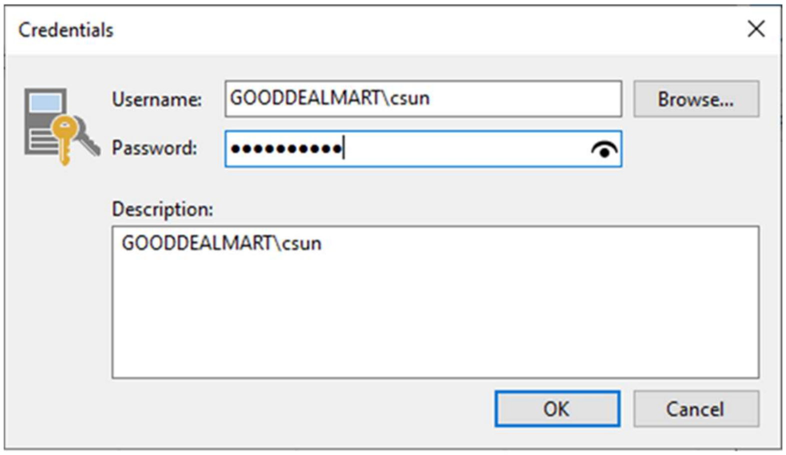
Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER format for domain accounts, or HOST\USER for local accounts.

Credentials: Select existing credentials or add new

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

Name
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

10. On the Credentials page, enter a user name in the Username field. You also can click Browse to select an existing user account.
11. Enter the password In the Password field.
12. Give a brief description in the Description field for future reference and click OK.

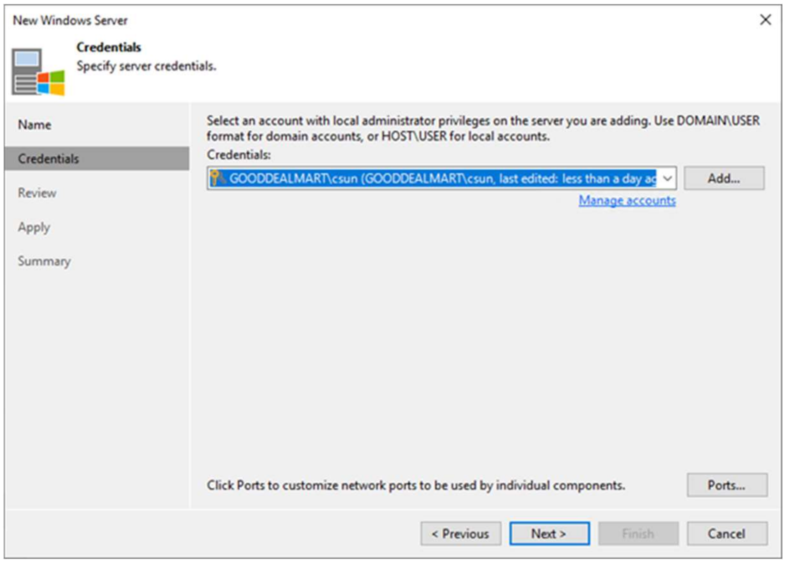

Credentials
Browse...
OK
Cancel

Username: GOODDEALMART\csun

Password: ••••••••••

Description: GOODDEALMART\csun

13. On the Credentials page, click Ports.


New Windows Server
Credentials
Specify server credentials.
Name
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

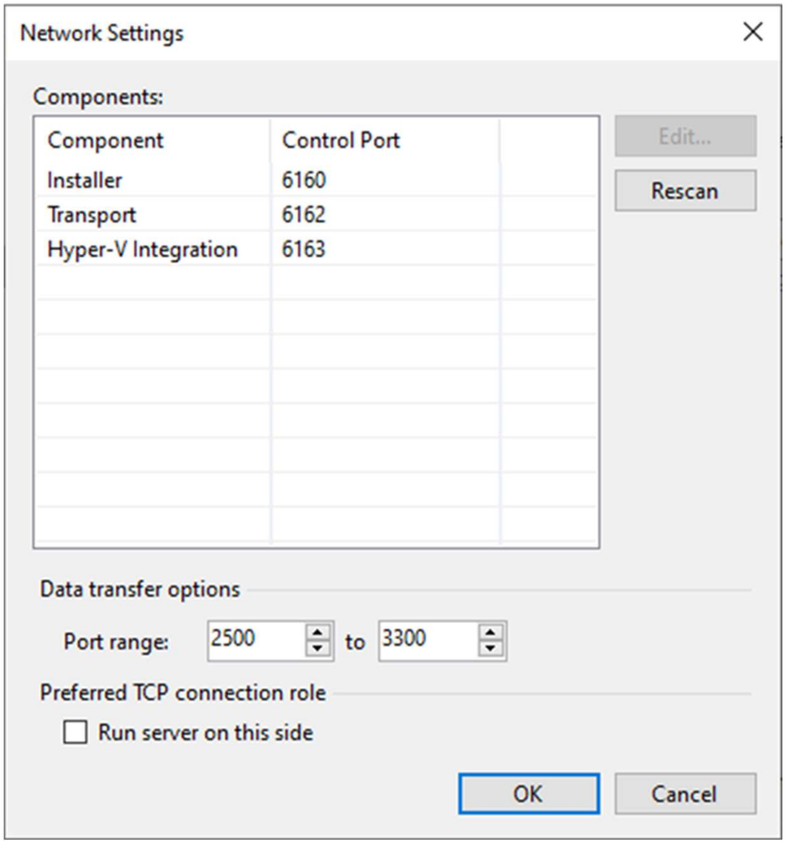
Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER format for domain accounts, or HOST\USER for local accounts.

Credentials: GOODDEALMART\csun (GOODDEALMART\csun, last edited: less than a day ag

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

Technet24

14. If necessary, change the network ports used by Veeam Backup & Replication components on the Network Settings page.
15. Configure connection settings for file copy operations in the Network Settings window's Data transfer options section. Provide a set of ports for transmission channels between the source and target hosts (one port per task).
16. Select the Run server on this side checkbox in the Preferred TCP connection role section. The outside client cannot connect to the server on the NAT network in the NAT scenario. As a result, services that require external connection initiation may be disrupted.
17. Click OK.



Network Settings

Components:

Component	Control Port
Installer	6160
Transport	6162
Hyper-V Integration	6163

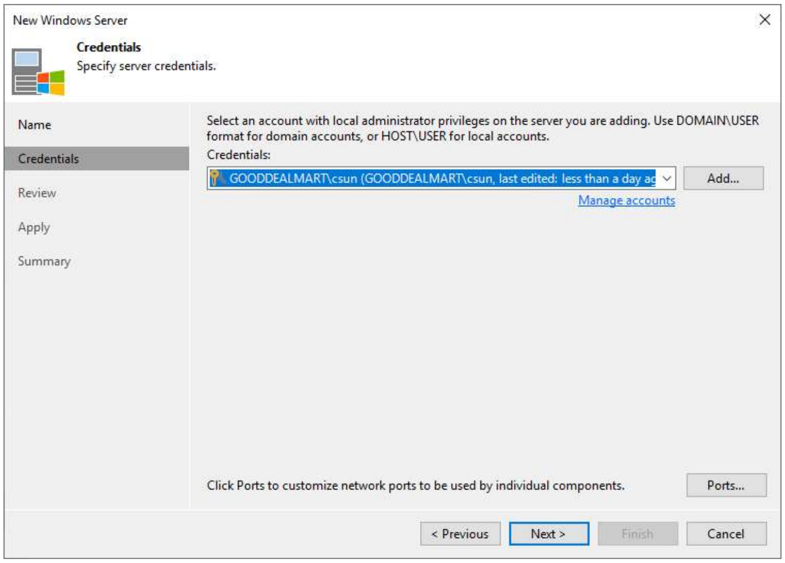
Data transfer options

Port range: 2500 to 3300

Preferred TCP connection role

☐ Run server on this side

18. On the Credentials page, click Next.



New Windows Server

Credentials

Specify server credentials.

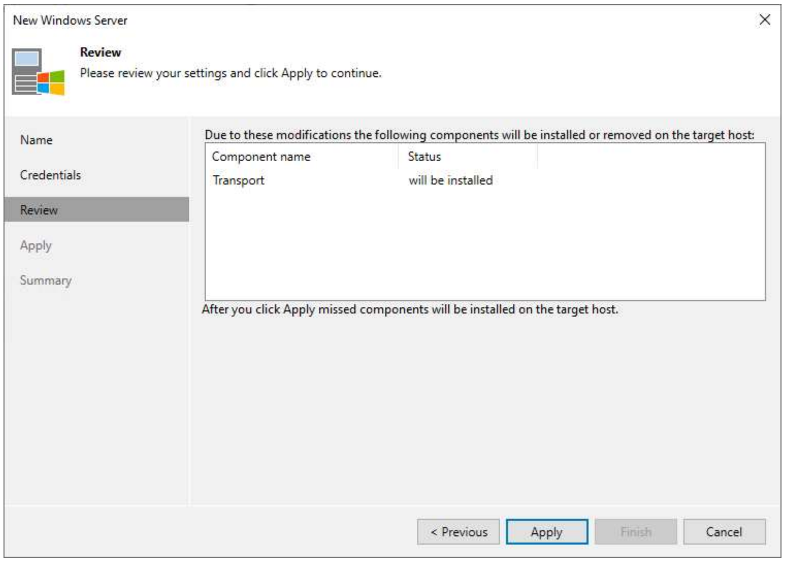
Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER format for domain accounts, or HOST\USER for local accounts.

Credentials: GOODDEALMART\csun (GOODDEALMART\csun, last edited: less than a day ag

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

Name
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

19. On the Review page, click Apply.



New Windows Server

Review

Please review your settings and click Apply to continue.

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

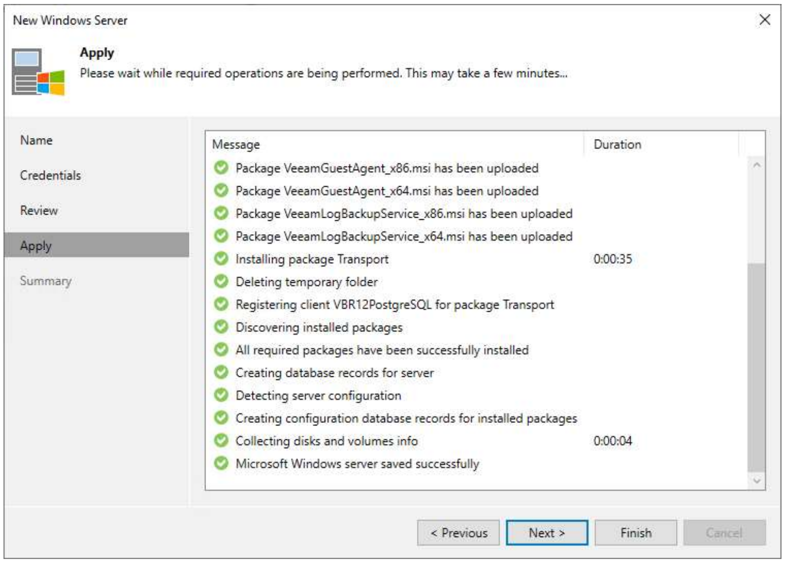
Component name	Status
Transport	will be installed

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

Name
Credentials
Review
Apply
Summary
< Previous
Apply
Finish
Cancel

Technet24

20. Click Next on the Apply page.

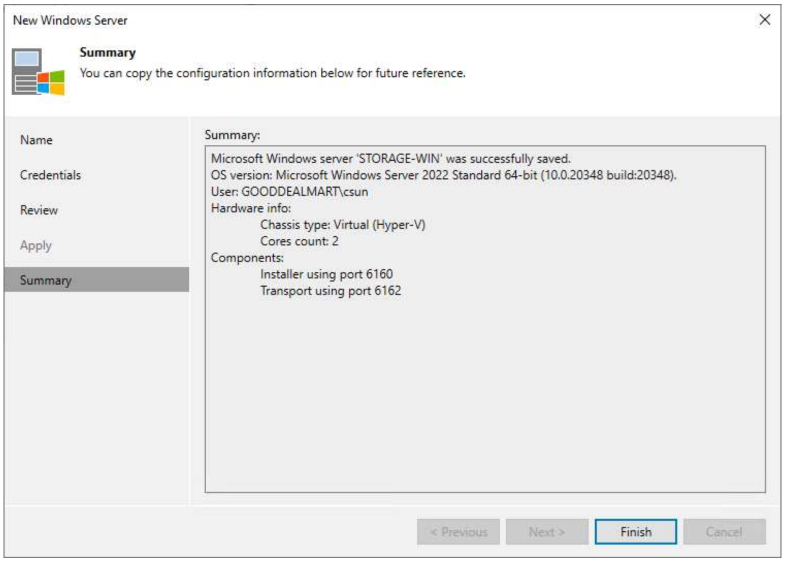

New Windows Server
Name
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Apply

Please wait while required operations are being performed. This may take a few minutes...

Message	Duration
✓ Package VeeamGuestAgent_x86.msi has been uploaded	
✓ Package VeeamGuestAgent_x64.msi has been uploaded	
✓ Package VeeamLogBackupService_x86.msi has been uploaded	
✓ Package VeeamLogBackupService_x64.msi has been uploaded	
✓ Installing package Transport	0:00:35
✓ Deleting temporary folder	
✓ Registering client VBR12PostgreSQL for package Transport	
✓ Discovering installed packages	
✓ All required packages have been successfully installed	
✓ Creating database records for server	
✓ Detecting server configuration	
✓ Creating configuration database records for installed packages	
✓ Collecting disks and volumes info	0:00:04
✓ Microsoft Windows server saved successfully	

21. Click Finish on the Summary page.


New Windows Server
Name
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

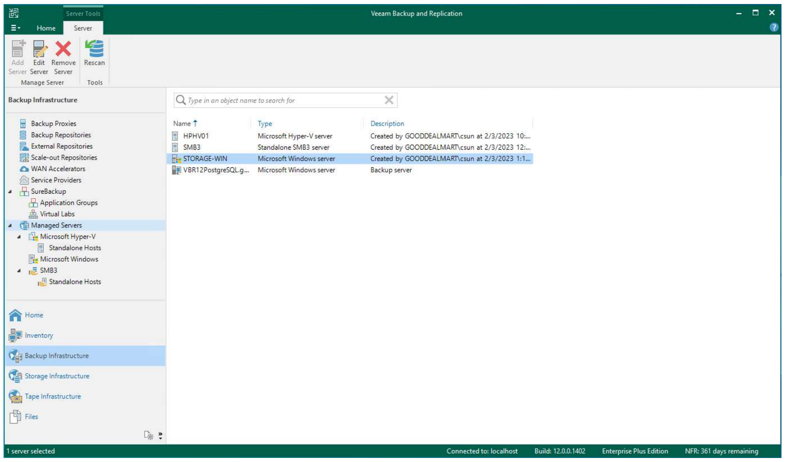
Summary

You can copy the configuration information below for future reference.

Summary:

```
Microsoft Windows server 'STORAGE-WIN' was successfully saved.
OS version: Microsoft Windows Server 2022 Standard 64-bit (10.0.20348 build:20348).
User: GOODDEALMART\csun
Hardware info:
        Chassis type: Virtual (Hyper-V)
        Cores count: 2
Components:
        Installer using port 6160
        Transport using port 6162
```

22. Ensure the new Microsoft Windows server is added.

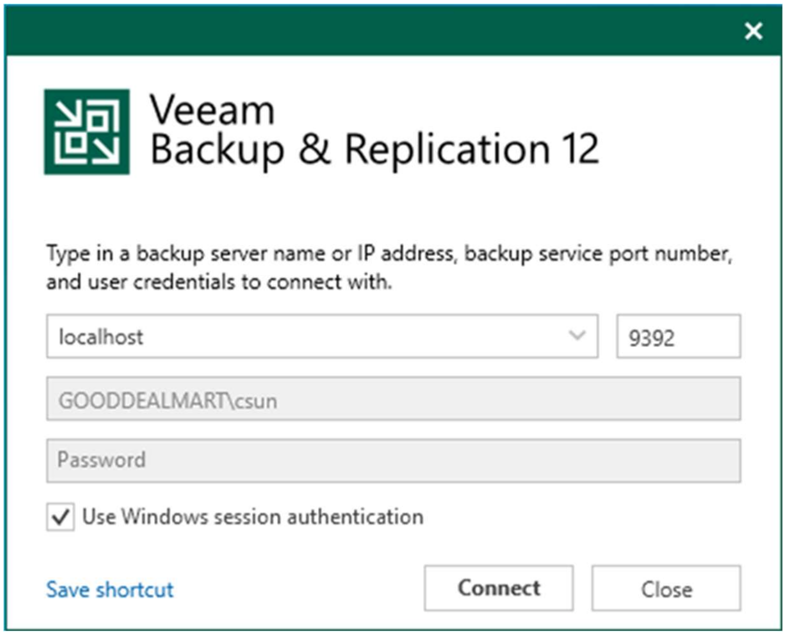

Veeam Backup and Replication
Server Tools
Home
Server
Add Server
Edit Server
Remove Server
Rescan
Manage Server
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
1 server selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 361 days remaining

Name	Type	Description
HPHV01	Microsoft Hyper-V server	Created by GOODDEALMART\csun at 2/3/2023 10:...
SMB3	Standalone SMB3 server	Created by GOODDEALMART\csun at 2/3/2023 12:...
STORAGE-WIN	Microsoft Windows server	Created by GOODDEALMART\csun at 2/3/2023 1:1...
VBR12PostgreSQL.g...	Microsoft Windows server	Backup server

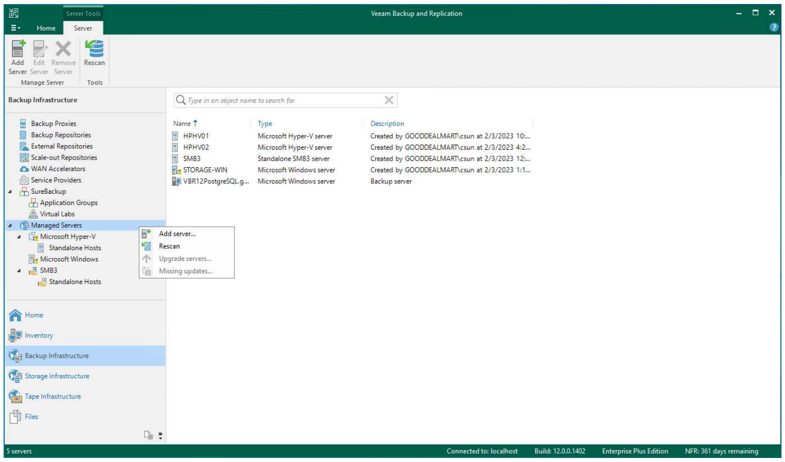
Technet24

Add 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.

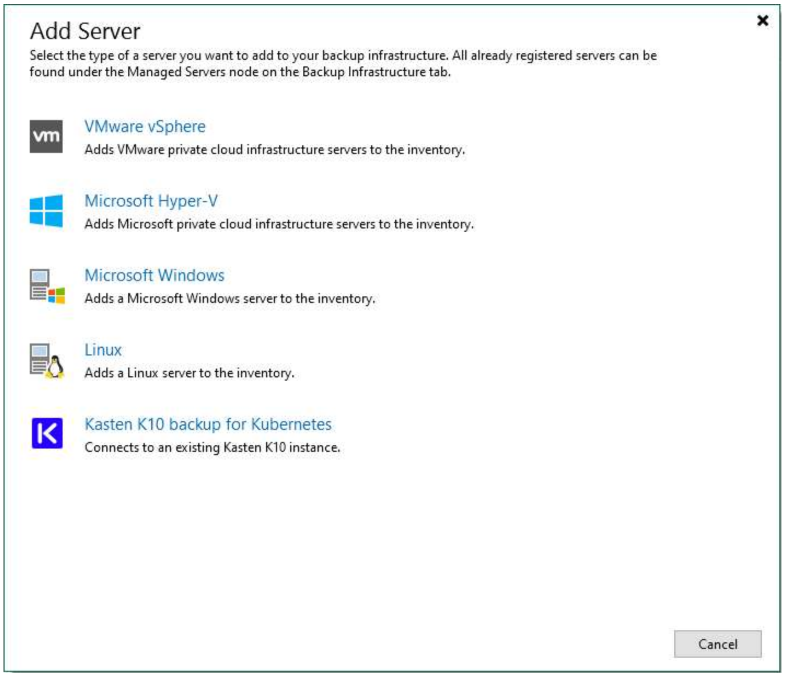
Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication Save shortcut Connect Close

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


Server Tools
Veeam Backup and Replication
Home
Server
Add Server
Edit Server
Remove Server
Rescan
Manage Server
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
SMB3
Standalone Hosts
Add server...
Rescan
Upgrade servers...
Missing updates...
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
5 servers
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 361 days remaining

Name	Type	Description
HPHV01	Microsoft Hyper-V server	Created by GOODDEALMART\csun at 2/3/2023 10:...
HPHV02	Microsoft Hyper-V server	Created by GOODDEALMART\csun at 2/3/2023 4:2...
SMB3	Standalone SMB3 server	Created by GOODDEALMART\csun at 2/3/2023 12:...
STORAGE-WIN	Microsoft Windows server	Created by GOODDEALMART\csun at 2/3/2023 1:1...
VBR12PostgreSQL.g...	Microsoft Windows server	Backup server

6. Select Linux on the Add Server page.



Add Server

Select the type of a server you want to add to your backup infrastructure. All already registered servers can be found under the Managed Servers node on the Backup Infrastructure tab.

VMware vSphere
Adds VMware private cloud infrastructure servers to the inventory.

Microsoft Hyper-V
Adds Microsoft private cloud infrastructure servers to the inventory.

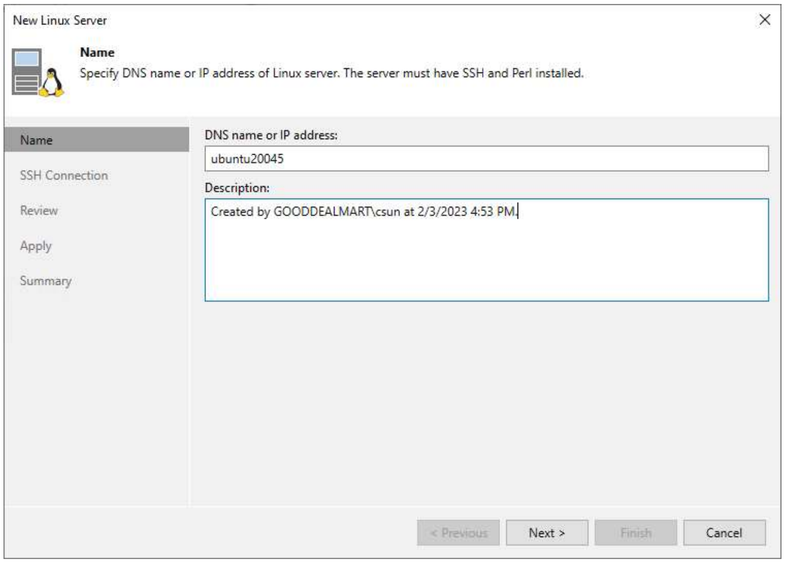
Microsoft Windows
Adds a Microsoft Windows server to the inventory.

Linux
Adds a Linux server to the inventory.

Kasten K10 backup for Kubernetes
Connects to an existing Kasten K10 instance.

Technet24

7. Enter the Linux server's full DNS name or IP address on the Name page.
8. Give a brief description in the Description field for future reference and click Next.


New Linux Server
Name
SSH Connection
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Name

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

DNS name or IP address: ubuntu20045

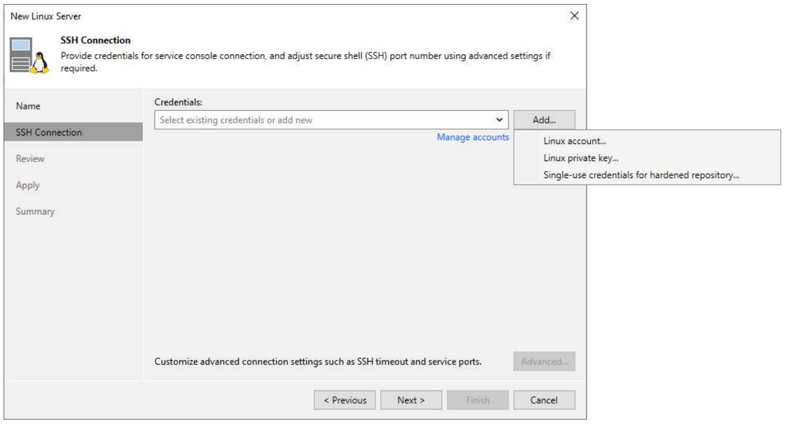
Description: Created by GOODDEALMART\csun at 2/3/2023 4:53 PM.

---

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

Note:

These credentials are not saved by Veeam Backup & Replication. They are only used to install Veeam Data Mover on the server. These credentials reduce the rights of the Veeam Data Mover. Single-use or temporary credentials are recommended options for a hardened repository.


New Linux Server
Name
SSH Connection
Review
Apply
Summary
Add...
Manage accounts
Linux account...
Linux private key...
Single-use credentials for hardened repository...
Advanced...
< Previous
Next >
Finish
Cancel

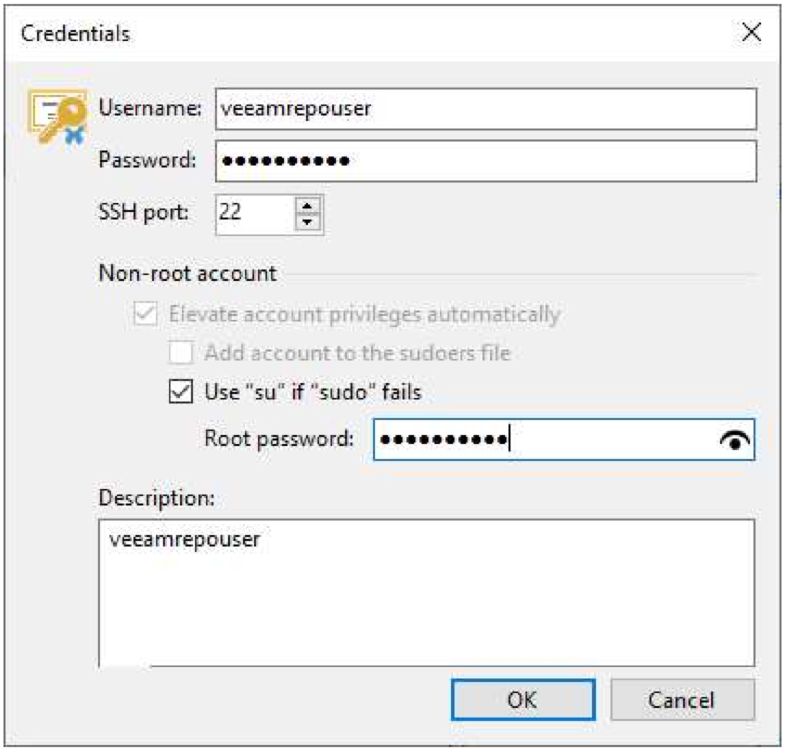
SSH Connection

Provide credentials for service console connection, and adjust secure shell (SSH) port number using advanced settings if required.

Credentials: Select existing credentials or add new

Customize advanced connection settings such as SSH timeout and service ports.

10. On the Credentials page, Enter a username
11. Enter a user name in the Username field.
12. Enter a password in the Password field.
13. Enter 22 in the SSH port field.
14. Give a brief description in the Description field for future reference and click OK.


Credentials
Non-root account
OK
Cancel

Username: veeamrepouser

Password: ●●●●●●●●●●

SSH port: 22

☑ Elevate account privileges automatically

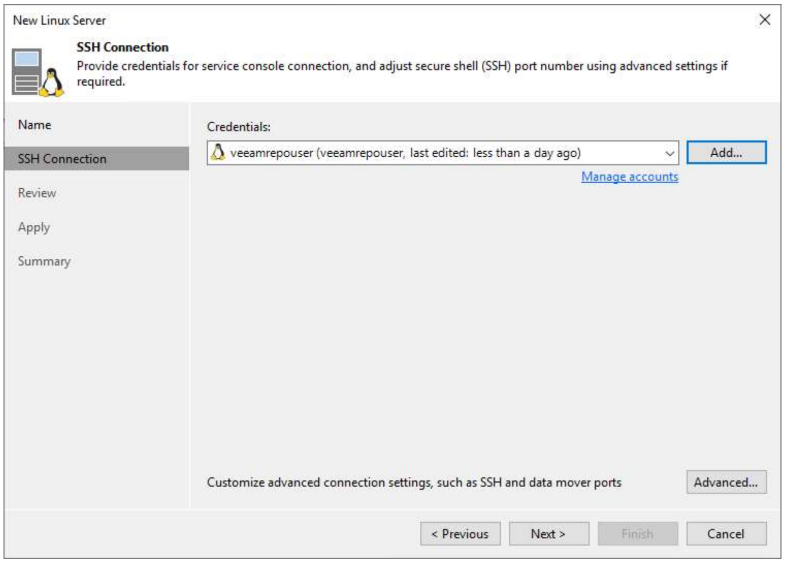
☐ Add account to the sudoers file

☑ Use "su" if "sudo" fails

Root password: ●●●●●●●●●●●

Description: veeamrepouser

15. On the SSH Connection page, click Advanced.


New Linux Server
Name
SSH Connection
Review
Apply
Summary
Add...
Manage accounts
Advanced...
< Previous
Next >
Finish
Cancel

SSH Connection

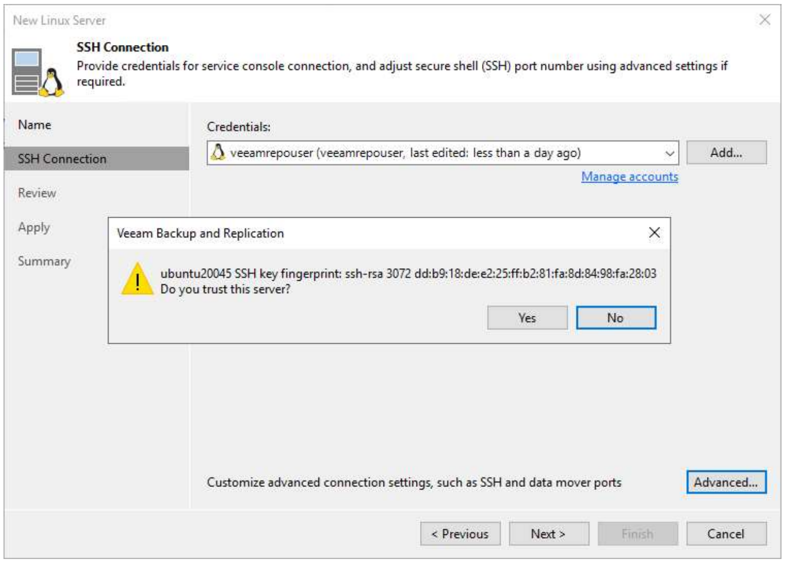
Provide credentials for service console connection, and adjust secure shell (SSH) port number using advanced settings if required.

Credentials: veeamrepouser (veeamrepouser, last edited: less than a day ago)

Customize advanced connection settings, such as SSH and data mover ports

Technet24

16. Select Yes on the trust warning message page.



New Linux Server
Name
SSH Connection
Review
Apply
Summary
Add...
Manage accounts
Yes
No
Advanced...
< Previous
Next >
Finish
Cancel

SSH Connection

Provide credentials for service console connection, and adjust secure shell (SSH) port number using advanced settings if required.

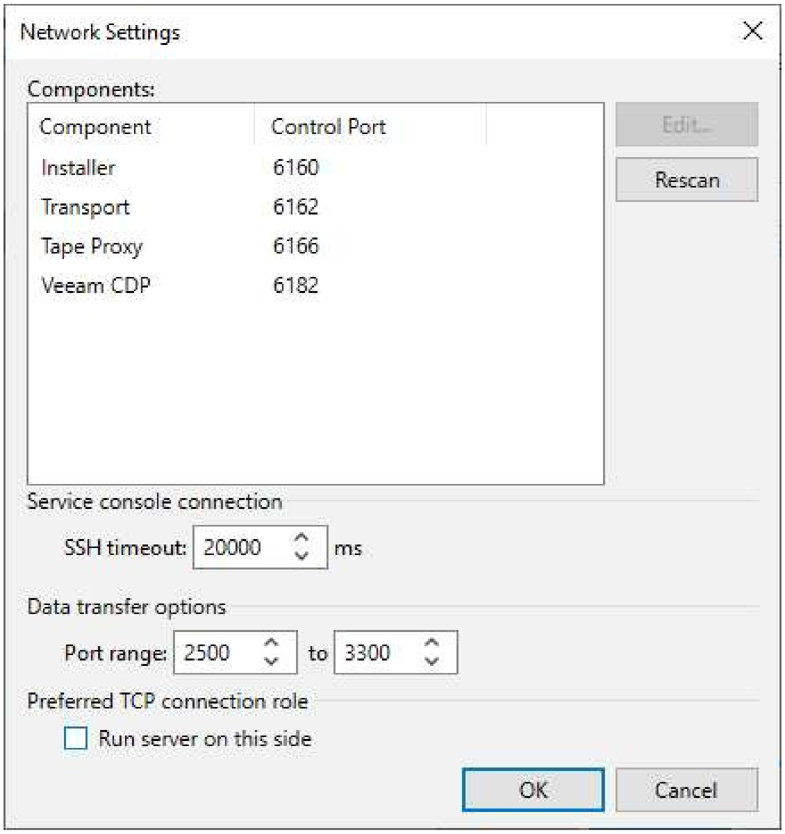
Credentials: veeamrepouser (veeamrepouser, last edited: less than a day ago)

Veeam Backup and Replication

ubuntu20045 SSH key fingerprint: ssh-rsa 3072 dd:b9:18:de:e2:25:ff:b2:81:fa:8d:84:98:fa:28:03
Do you trust this server?

Customize advanced connection settings, such as SSH and data mover ports

17. If necessary, change the network ports used by Veeam Backup & Replication components on the Network Settings page.
18. In the Service console connection section, enter an SSH timeout. The default timeout is set to 20000 ms.
19. Configure connection settings for file copy operations in the Network Settings window's Data transfer options section. Provide a set of ports for transmission channels between the source and target hosts (one port per task).
20. Select the Run server on this side checkbox in the Preferred TCP connection role section. The outside client cannot connect to the server on the NAT network in the NAT scenario. As a result, services that require external connection initiation may be disrupted.



Network Settings

Components:

Component	Control Port
Installer	6160
Transport	6162
Tape Proxy	6166
Veeam CDP	6182

Service console connection

SSH timeout: 20000 ms

Data transfer options

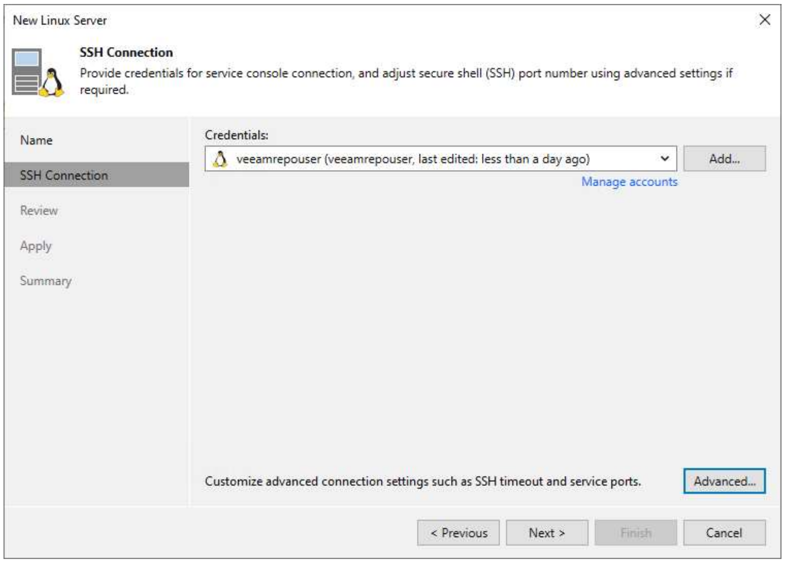
Port range: 2500 to 3300

Preferred TCP connection role

☐ Run server on this side

21. Click OK.

22. Click Next on the SSH Connection page.



New Linux Server

SSH Connection

Provide credentials for service console connection, and adjust secure shell (SSH) port number using advanced settings if required.

Name
SSH Connection
Review
Apply
Summary

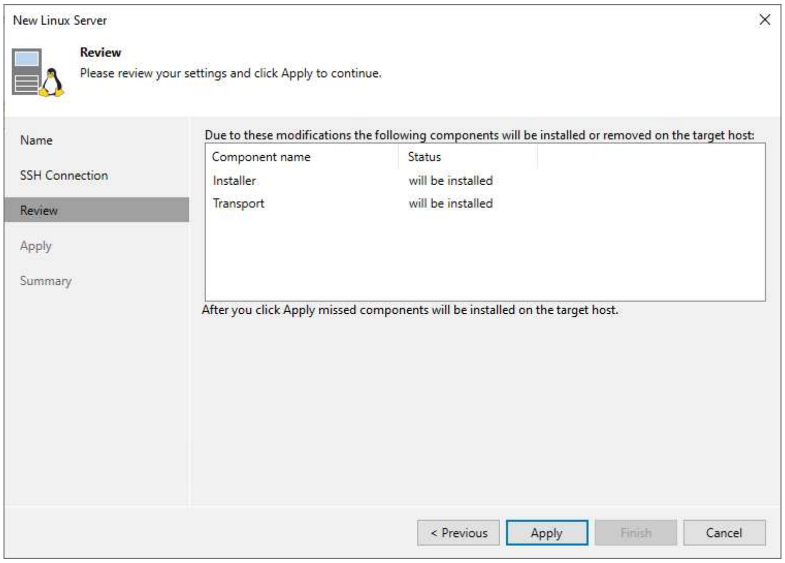
Credentials: veeamrepouser (veeamrepouser, last edited: less than a day ago)

Add...
Manage accounts

Customize advanced connection settings such as SSH timeout and service ports.

Advanced...
< Previous
Next >
Finish
Cancel

23. Click Apply on the Review page.



New Linux Server

Review

Please review your settings and click Apply to continue.

Name
SSH Connection
Review
Apply
Summary

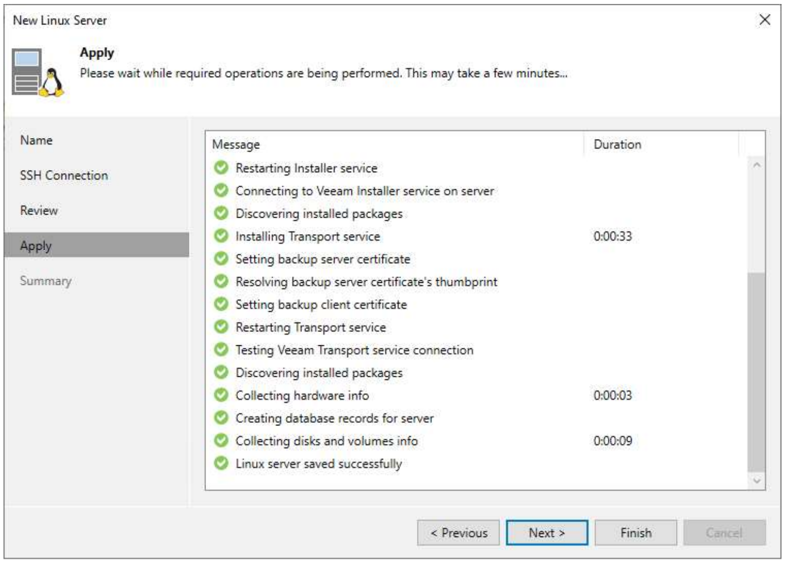
Due to these modifications the following components will be installed or removed on the target host:

Component name	Status
Installer	will be installed
Transport	will be installed

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

< Previous
Apply
Finish
Cancel

24. Click Next on the Apply page.



New Linux Server

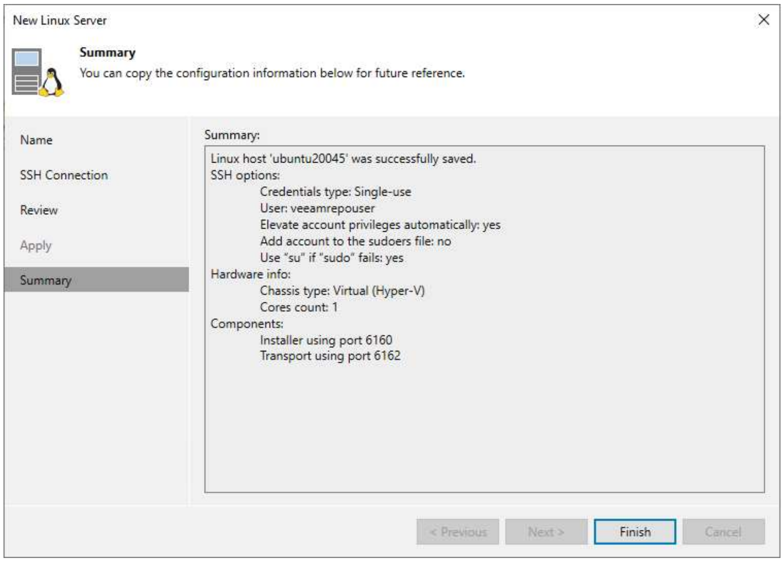
Apply

Please wait while required operations are being performed. This may take a few minutes...

Message	Duration
Restarting Installer service	
Connecting to Veeam Installer service on server	
Discovering installed packages	
Installing Transport service	0:00:33
Setting backup server certificate	
Resolving backup server certificate's thumbprint	
Setting backup client certificate	
Restarting Transport service	
Testing Veeam Transport service connection	
Discovering installed packages	
Collecting hardware info	0:00:03
Creating database records for server	
Collecting disks and volumes info	0:00:09
Linux server saved successfully	

Name
SSH Connection
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

25. Click Finish on the Summary page.



New Linux Server

Summary

You can copy the configuration information below for future reference.

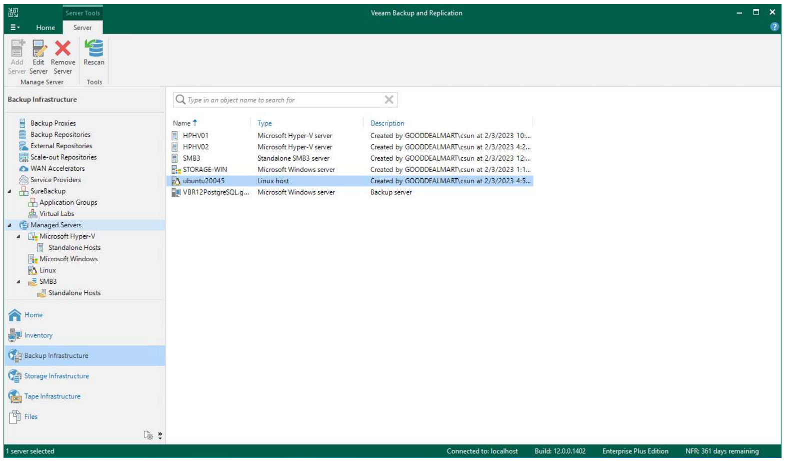
Summary:

```
Linux host 'ubuntu20045' was successfully saved.
SSH options:
        Credentials type: Single-use
        User: veeamrepouser
        Elevate account privileges automatically: yes
        Add account to the sudoers file: no
        Use "su" if "sudo" fails: yes
Hardware info:
        Chassis type: Virtual (Hyper-V)
        Cores count: 1
Components:
        Installer using port 6160
        Transport using port 6162
```

Name
SSH Connection
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Technet24

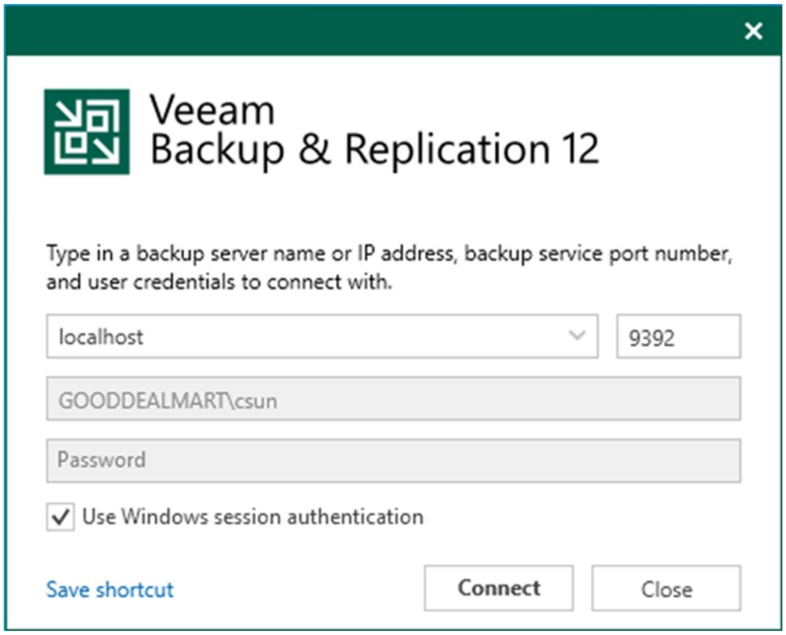
26. Ensure the new Linux server is added.


Veeam Backup and Replication
Server Tools
Home
Server
Add Server
Edit Server
Remove Server
Rescan
Manage Server
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
1 server selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 361 days remaining

Name	Type	Description
HPHV01	Microsoft Hyper-V server	Created by GOODDEALMART\csun at 2/3/2023 10:...
HPHV02	Microsoft Hyper-V server	Created by GOODDEALMART\csun at 2/3/2023 4:2...
SMB3	Standalone SMB3 server	Created by GOODDEALMART\csun at 2/3/2023 12:...
STORAGE-WIN	Microsoft Windows server	Created by GOODDEALMART\csun at 2/3/2023 1:1...
ubuntu20045	Linux host	Created by GOODDEALMART\csun at 2/3/2023 4:5...
VBR12PostgreSQL.g...	Microsoft Windows server	Backup server

Add 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.

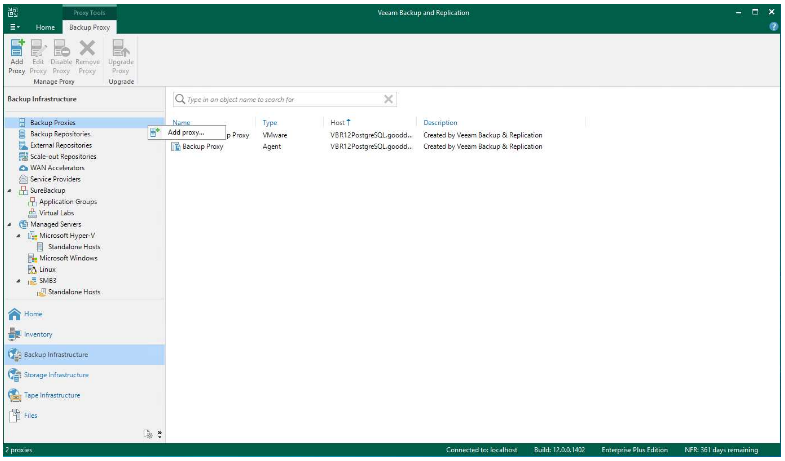
Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication

Technet24

3. On the Home page, select Backup Infrastructure.

4. On the Backup Infrastructure page, select Backup Proxies.

5. Right-click Backup Proxies and select Add Proxies.

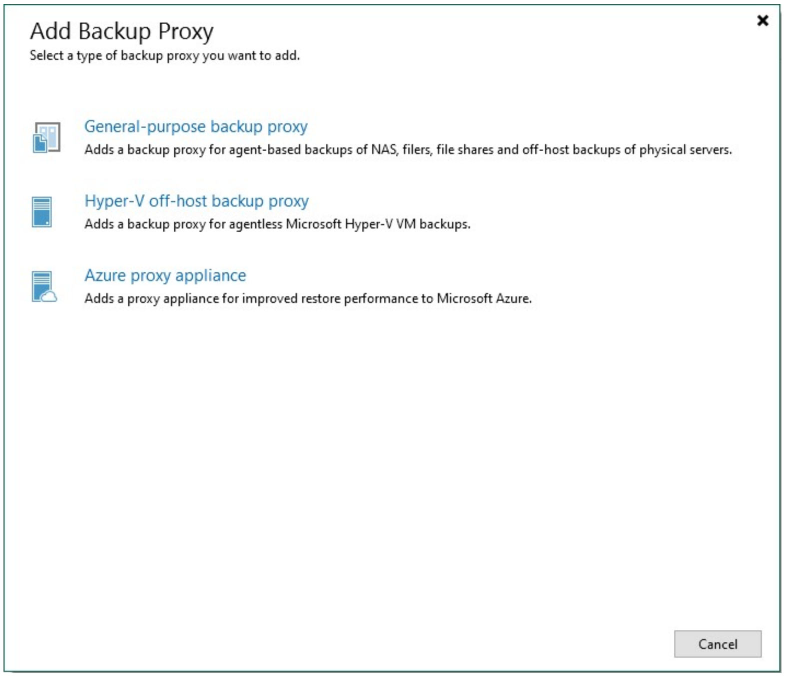

Proxy Tools
Veeam Backup and Replication
Home
Backup Proxy
Add Proxy
Edit Proxy
Disable Proxy
Remove Proxy
Upgrade Proxy
Manage Proxy
Upgrade
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Add proxy...
Type in an object name to search for

Name	Type	Host	Description
p Proxy	VMware	VBR12PostgreSQL.goodd...	Created by Veeam Backup & Replication
Backup Proxy	Agent	VBR12PostgreSQL.goodd...	Created by Veeam Backup & Replication

2 proxies

Connected to: localhost Build: 12.0.0.1402 Enterprise Plus Edition NFR: 361 days remaining

6. Select Hyper-V off-host backup proxy on the Add Backup Proxy page.



Add Backup Proxy

Select a type of backup proxy you want to add.

General-purpose backup proxy

Adds a backup proxy for agent-based backups of NAS, filers, file shares and off-host backups of physical servers.

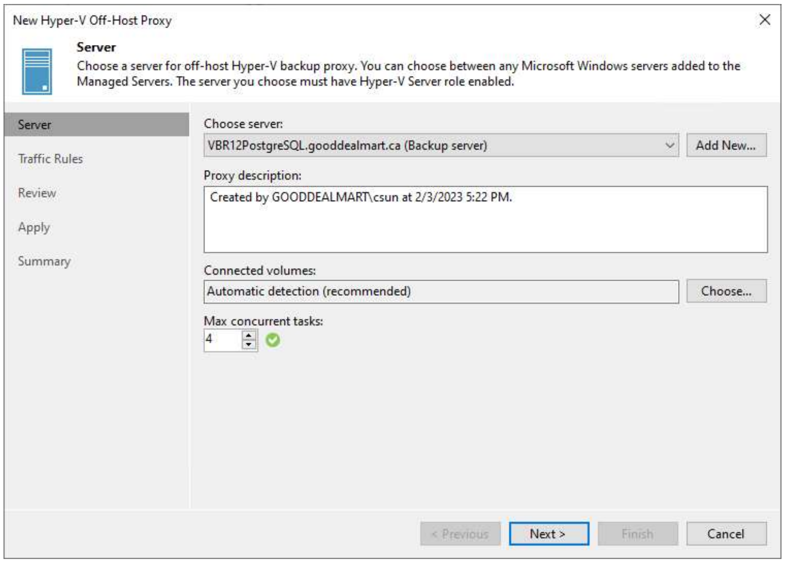
Hyper-V off-host backup proxy

Adds a backup proxy for agentless Microsoft Hyper-V VM backups.

Azure proxy appliance

Adds a proxy appliance for improved restore performance to Microsoft Azure.

7. Click Add New in the Choose server field on the Server page.



New Hyper-V Off-Host Proxy

Server

Choose a server for off-host Hyper-V backup proxy. You can choose between any Microsoft Windows servers added to the Managed Servers. The server you choose must have Hyper-V Server role enabled.

Server
Traffic Rules
Review
Apply
Summary

Choose server: VBR12PostgreSQL.gooddealmart.ca (Backup server)

Add New...

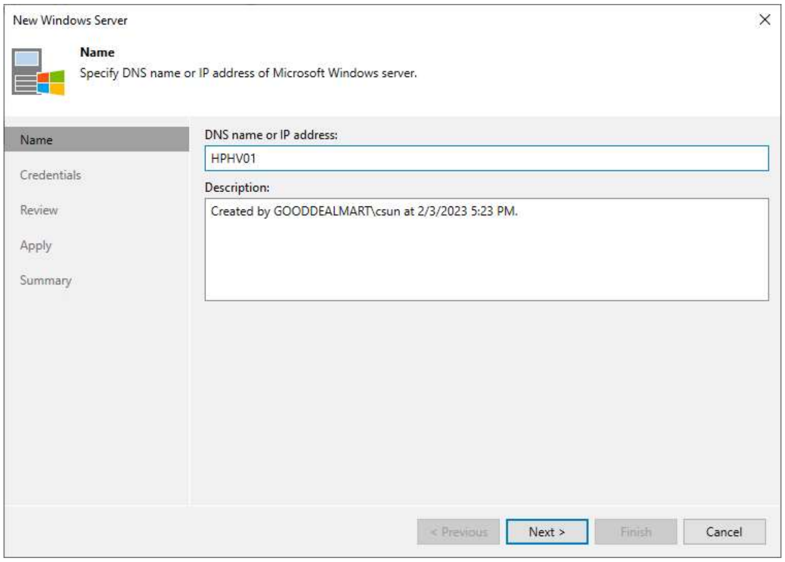
Proxy description: Created by GOODDEALMART\csun at 2/3/2023 5:22 PM.

Connected volumes: Automatic detection (recommended)

Max concurrent tasks: 4

< Previous
Next >
Finish
Cancel

8. Enter the Microsoft Windows server's full DNS name or IP address on the Name page.
9. Give a brief description in the Description field for future reference and click Next.



New Windows Server

Name

Specify DNS name or IP address of Microsoft Windows server.

Name
Credentials
Review
Apply
Summary

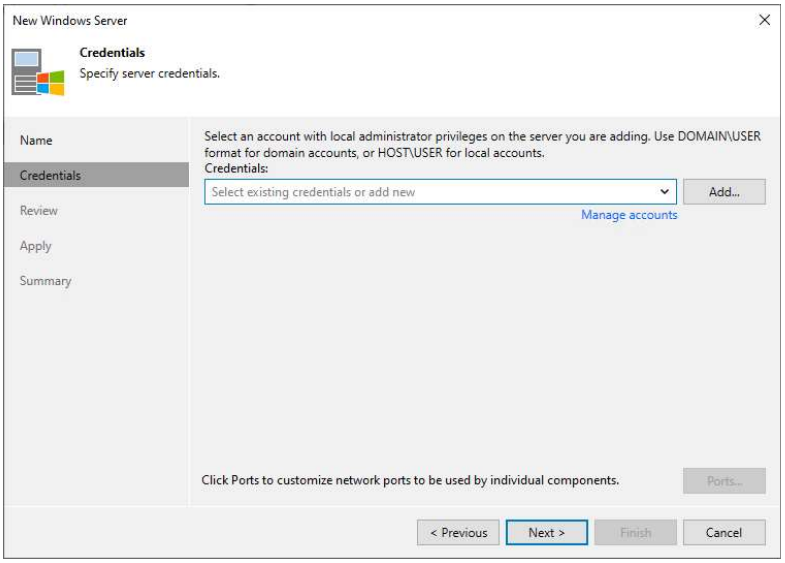
DNS name or IP address: HPHV01

Description: Created by GOODDEALMART\csun at 2/3/2023 5:23 PM.

< Previous
Next >
Finish
Cancel

Technet24

10. Select an account from the Credentials drop-down list on the Credentials page or click Add on the right to add the credentials.


New Windows Server
Name
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

Credentials
Specify server credentials.

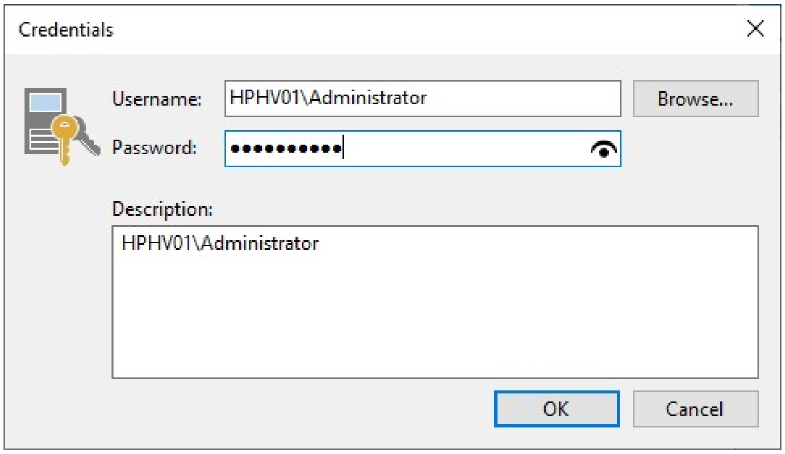
Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER format for domain accounts, or HOST\USER for local accounts.

Credentials: Select existing credentials or add new

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

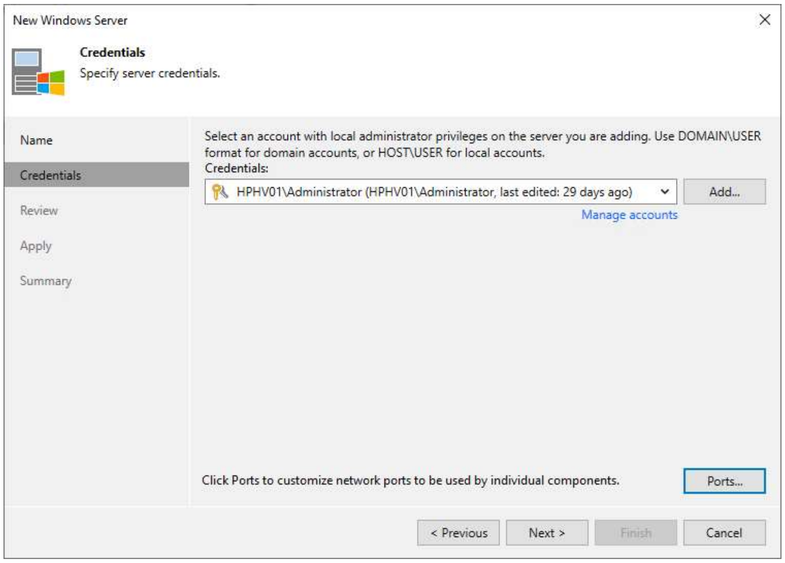
---

11. On the Credentials page, enter a user name in the Username field. You also can click Browse to select an existing user account.
12. Enter the password In the Password field.
13. Give a brief description in the Description field for future reference and click OK.


Credentials
Browse...
OK
Cancel

Username: HPHV01\Administrator
Password: ••••••••••
Description: HPHV01\Administrator

14. On the Credentials page, click Ports.



New Windows Server

Credentials

Specify server credentials.

Name
Credentials
Review
Apply
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: 29 days ago)

Add...
Manage accounts

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

Ports...
< Previous
Next >
Finish
Cancel

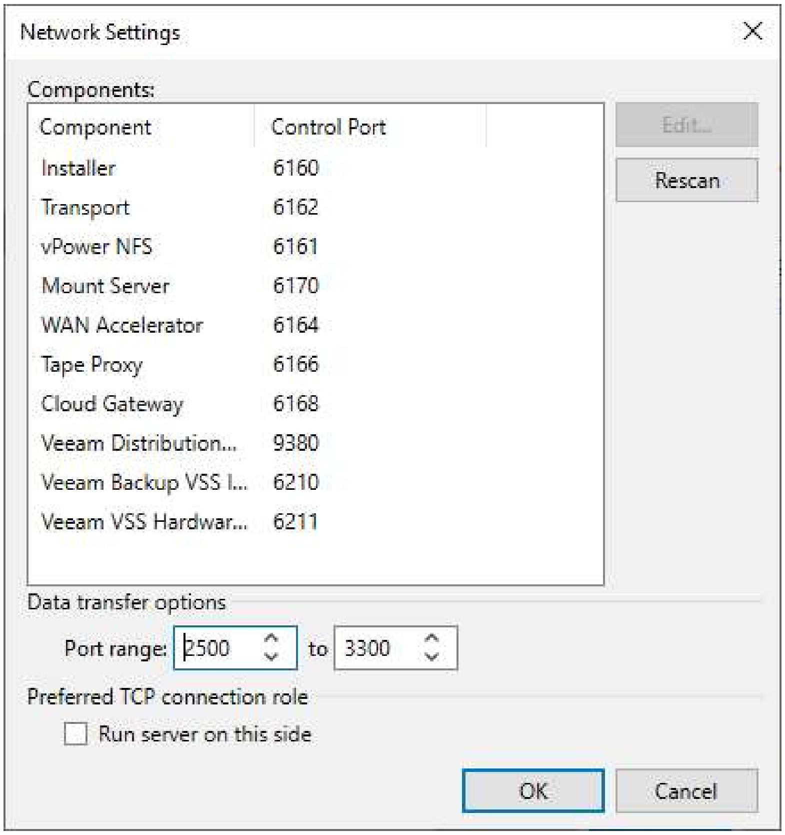
Technet24

15. If necessary, change the network ports used by Veeam Backup & Replication components on the Network Settings page.

16. Configure connection settings for file copy operations in the Network Settings window's Data transfer options section. Provide a set of ports for transmission channels between the source and target hosts (one port per task).

17. Select the Run server on this side checkbox in the Preferred TCP connection role section. The outside client cannot connect to the server on the NAT network in the NAT scenario. As a result, services that require external connection initiation may be disrupted.

18. Click OK.



Components:

Component	Control Port
Installer	6160
Transport	6162
vPower NFS	6161
Mount Server	6170
WAN Accelerator	6164
Tape Proxy	6166
Cloud Gateway	6168
Veeam Distribution...	9380
Veeam Backup VSS I...	6210
Veeam VSS Hardwar...	6211

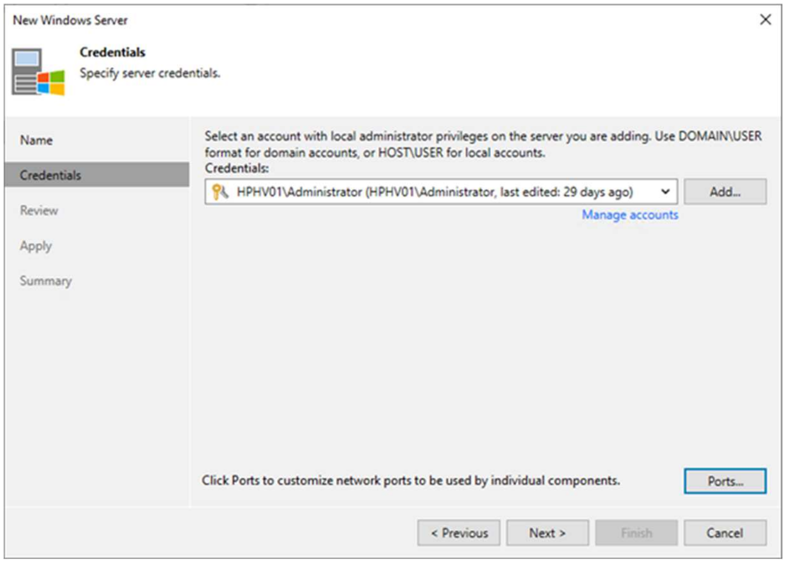
Data transfer options

Port range: 2500 to 3300

Preferred TCP connection role

☐ Run server on this side

19. Click Next on the Credentials page.


New Windows Server
Name
Credentials
Review
Apply
Summary
Add...
Manage accounts
Ports...
< Previous
Next >
Finish
Cancel

Credentials

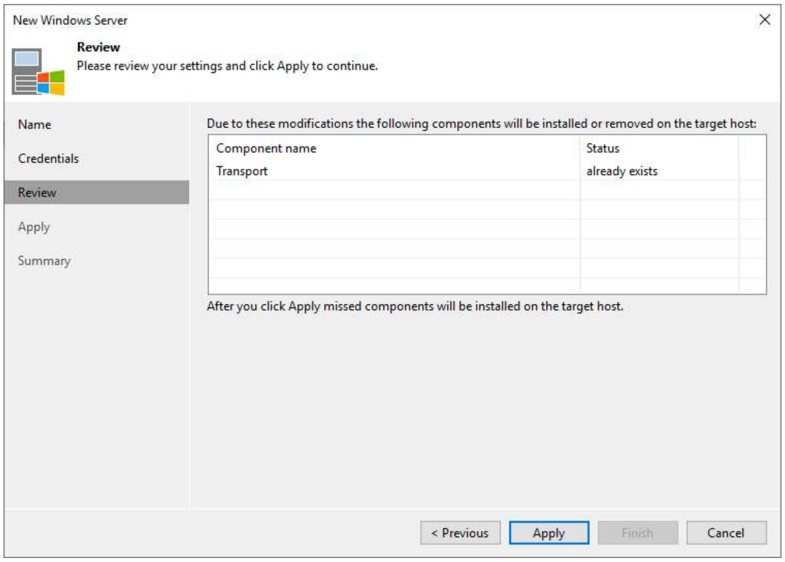
Specify server credentials.

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: 29 days ago)

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

20. Click Apply on the Review page.


New Windows Server
Name
Credentials
Review
Apply
Summary
< Previous
Apply
Finish
Cancel

Review

Please review your settings and click Apply to continue.

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

Component name	Status
Transport	already exists

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

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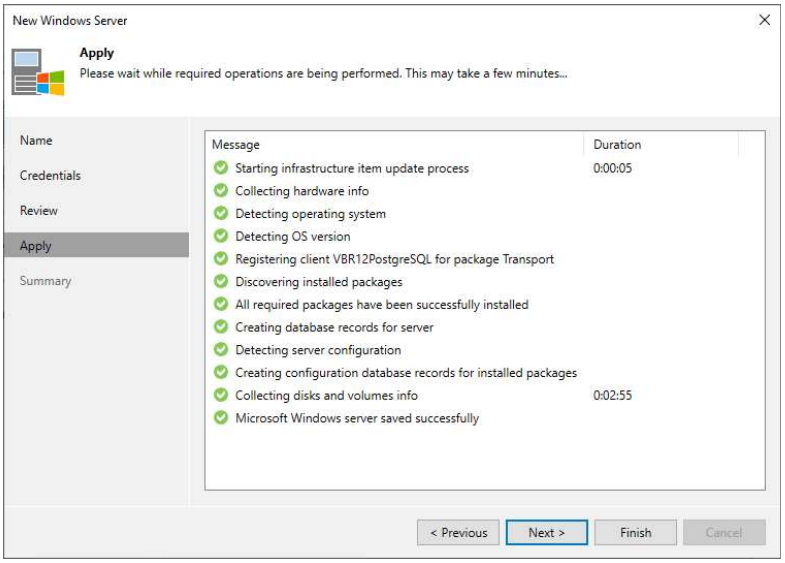
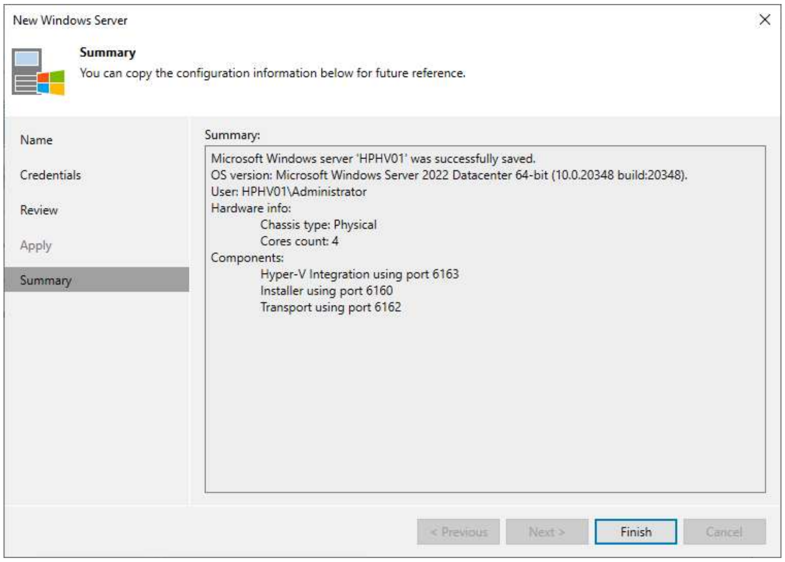
21. On the Apply page, click Next.


New Windows Server
Apply
Name
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Please wait while required operations are being performed. This may take a few minutes...

Message	Duration
✓ Starting infrastructure item update process	0:00:05
✓ Collecting hardware info	
✓ Detecting operating system	
✓ Detecting OS version	
✓ Registering client VBR12PostgreSQL for package Transport	
✓ Discovering installed packages	
✓ All required packages have been successfully installed	
✓ Creating database records for server	
✓ Detecting server configuration	
✓ Creating configuration database records for installed packages	
✓ Collecting disks and volumes info	0:02:55
✓ Microsoft Windows server saved successfully	

22. Click Finish on the Summary page.

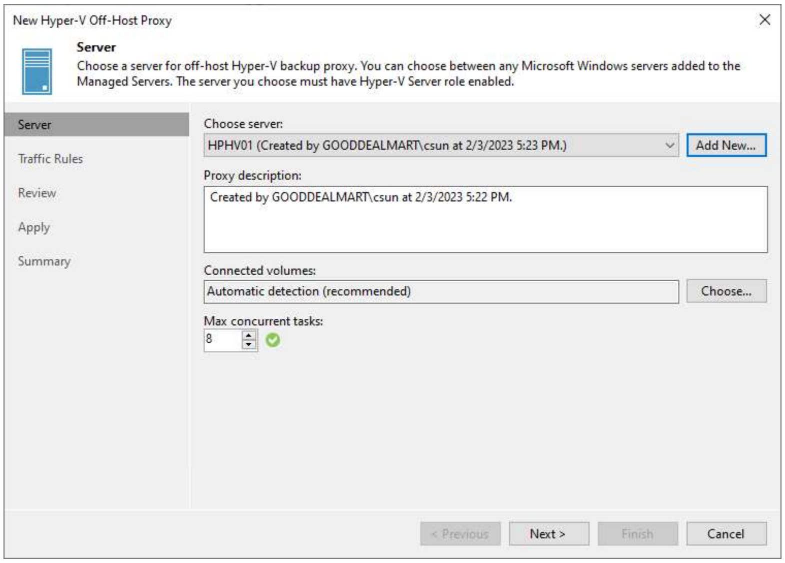

New Windows Server
Summary
Name
Credentials
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

You can copy the configuration information below for future reference.

Summary:

```
Microsoft Windows server 'HPHV01' was successfully saved.
OS version: Microsoft Windows Server 2022 Datacenter 64-bit (10.0.20348 build:20348).
User: HPHV01\Administrator
Hardware info:
        Chassis type: Physical
        Cores count: 4
Components:
        Hyper-V Integration using port 6163
        Installer using port 6160
        Transport using port 6162
```

23. Give a brief description in the Proxy description field for future reference.
24. In the Connected volumes field, leave the default settings.
25. Enter the number of tasks the off-host backup proxy must handle concurrently in the Max concurrent tasks field.
26. Click Next.


New Hyper-V Off-Host Proxy
Server
Traffic Rules
Review
Apply
Summary
Add New...
Choose...
< Previous
Next >
Finish
Cancel

Server

Choose a server for off-host Hyper-V backup proxy. You can choose between any Microsoft Windows servers added to the Managed Servers. The server you choose must have Hyper-V Server role enabled.

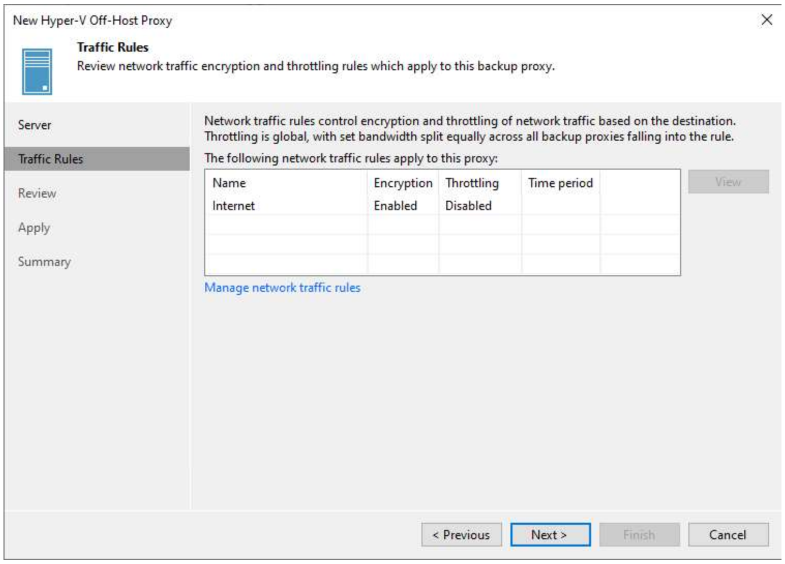
Choose server: HPHV01 (Created by GOODDEALMART\csun at 2/3/2023 5:23 PM.)

Proxy description: Created by GOODDEALMART\csun at 2/3/2023 5:22 PM.

Connected volumes: Automatic detection (recommended)

Max concurrent tasks: 8

27. On the Traffic Rules page, click Next.
28. 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.


New Hyper-V Off-Host Proxy
Server
Traffic Rules
Review
Apply
Summary
View
Manage network traffic rules
< Previous
Next >
Finish
Cancel

Traffic Rules

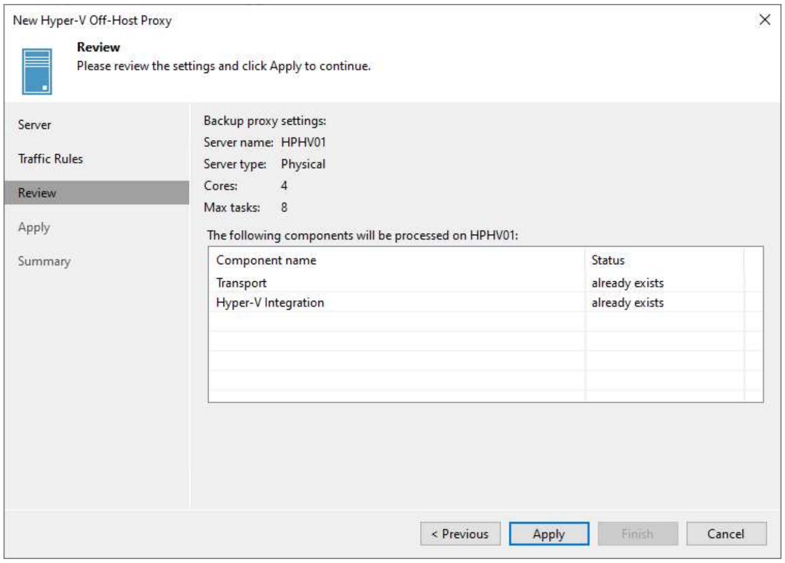
Review network traffic encryption and throttling rules which apply to this backup proxy.

Network traffic rules control encryption and throttling of network traffic based on the destination. Throttling is global, with set bandwidth split equally across all backup proxies falling into the rule.

The following network traffic rules apply to this proxy:

Name	Encryption	Throttling	Time period
Internet	Enabled	Disabled	

29. Click Apply on the Review page.


New Hyper-V Off-Host Proxy
Server
Traffic Rules
Review
Apply
Summary
< Previous
Apply
Finish
Cancel

Review

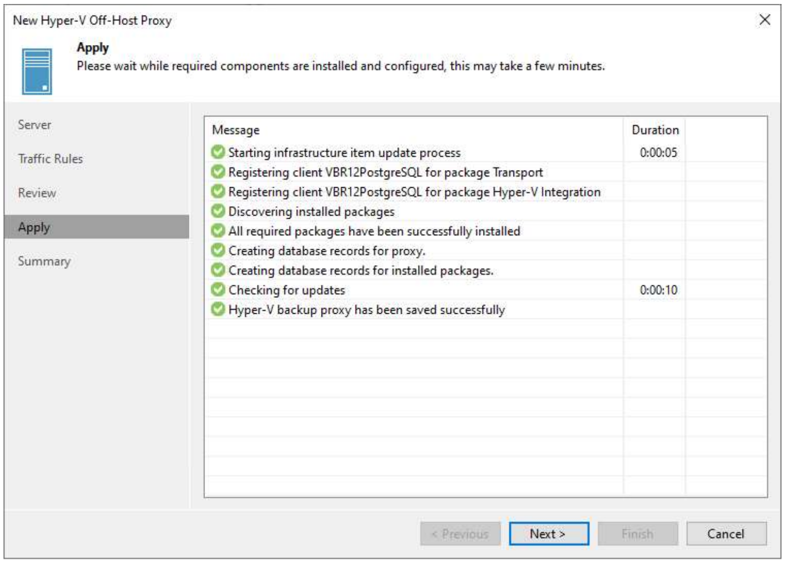
Please review the settings and click Apply to continue.

Backup proxy settings:
Server name: HPHV01
Server type: Physical
Cores: 4
Max tasks: 8

The following components will be processed on HPHV01:

Component name	Status
Transport	already exists
Hyper-V Integration	already exists

30. Click Next on the Apply page.

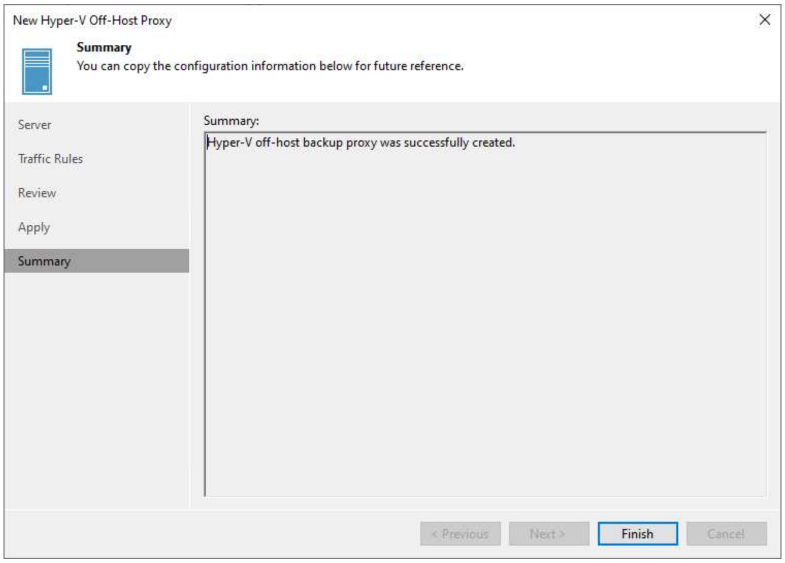

New Hyper-V Off-Host Proxy
Server
Traffic Rules
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Apply

Please wait while required components are installed and configured, this may take a few minutes.

Message	Duration
✓ Starting infrastructure item update process	0:00:05
✓ Registering client VBR12PostgreSQL for package Transport	
✓ Registering client VBR12PostgreSQL for package Hyper-V Integration	
✓ Discovering installed packages	
✓ All required packages have been successfully installed	
✓ Creating database records for proxy.	
✓ Creating database records for installed packages.	
✓ Checking for updates	0:00:10
✓ Hyper-V backup proxy has been saved successfully	

31. Click Finish on the Summary page.


New Hyper-V Off-Host Proxy
Server
Traffic Rules
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

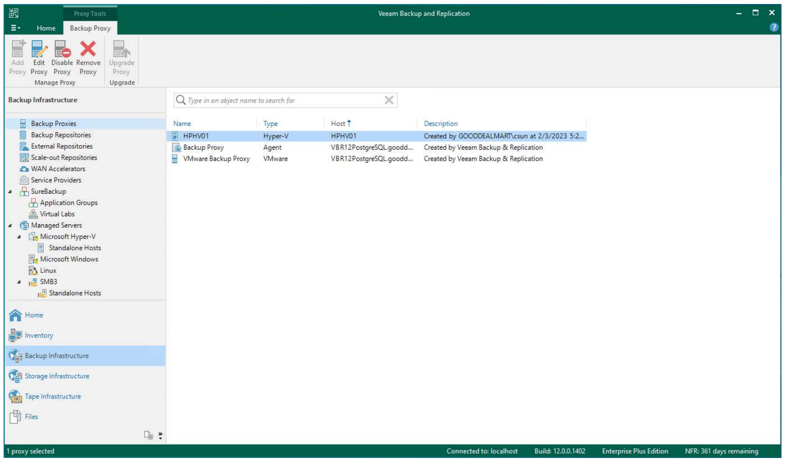
Summary

You can copy the configuration information below for future reference.

Summary:

Hyper-V off-host backup proxy was successfully created.

32. Ensure the new Off-Host Backup proxy server is added.


Veeam Backup and Replication
Proxy Tools
Home
Backup Proxy
Add Proxy
Edit Proxy
Disable Proxy
Remove Proxy
Upgrade Proxy
Manage Proxy
Upgrade
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
1 proxy selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 361 days remaining

Name	Type	Host	Description
HPHV01	Hyper-V	HPHV01	Created by GOODDEALMART\csun at 2/3/2023 5:2...
Backup Proxy	Agent	VBR12PostgreSQL.goodd...	Created by Veeam Backup & Replication
VMware Backup Proxy	VMware	VBR12PostgreSQL.goodd...	Created by Veeam Backup & Replication

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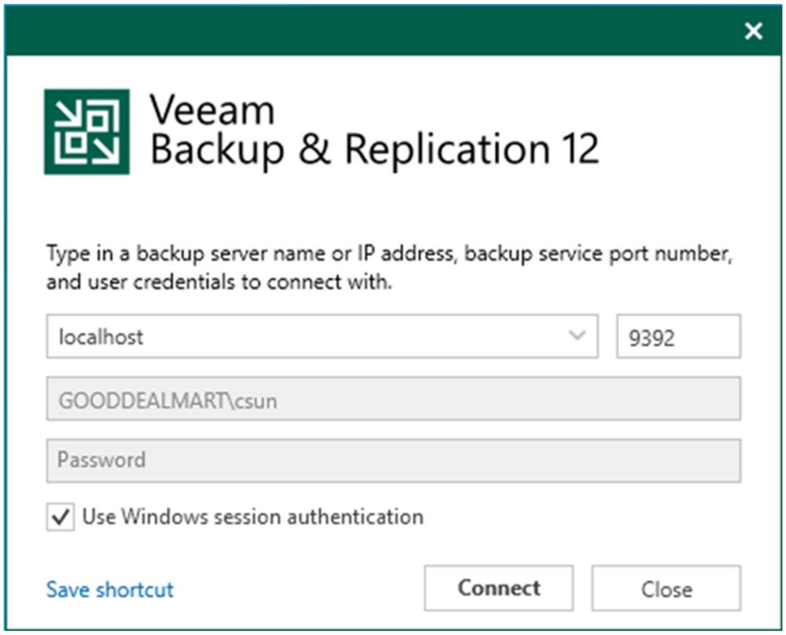
Add WAN Acceleration

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:

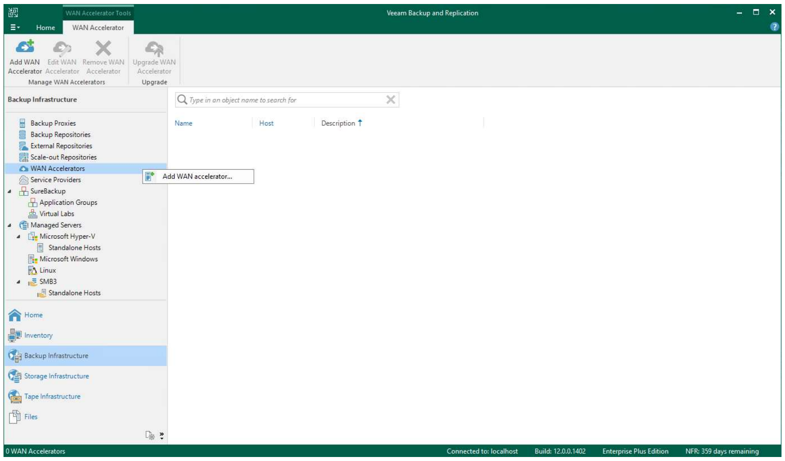
The Veeam Universal License includes WAN acceleration. Veeam Backup & Replication Enterprise or Enterprise Plus editions are required when using a legacy socket-based licence.

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.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication Save shortcut Connect Close

3. On the Home page, select Backup Infrastructure.

4. On the Backup Infrastructure page, select WAN Accelerators.

5. Right-click WAN Accelerators and select Add WAN Accelerator.

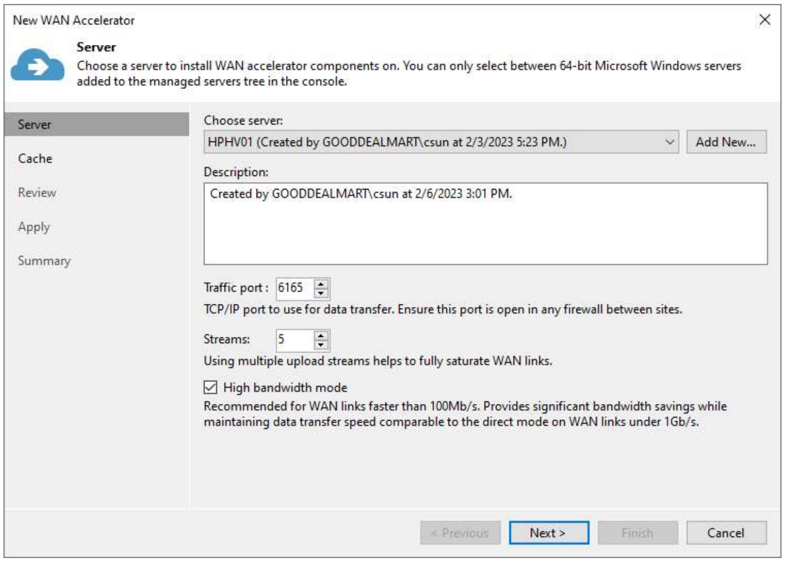

WAN Accelerator Tools
Veeam Backup and Replication
Home
WAN Accelerator
Add WAN Accelerator
Edit WAN Accelerator
Remove WAN Accelerator
Upgrade WAN Accelerator
Manage WAN Accelerators
Upgrade
Backup Infrastructure
Type in an object name to search for
Name
Host
Description
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Add WAN accelerator...
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
0 WAN Accelerators
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 359 days remaining

6. Select a Microsoft Windows server from the Choose server drop-down list on the Server page.

7. Give a brief description in the Description field for future reference.

8. Specify the port number in the Traffic port field.

9. 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. However, the link still needs to be fully utilized the number of streams may be increased. According to



New WAN Accelerator

Server

Choose a server to install WAN accelerator components on. You can only select between 64-bit Microsoft Windows servers added to the managed servers tree in the console.

Server
Cache
Review
Apply
Summary

Choose server: HPHV01 (Created by GOODDEALMART\csun at 2/3/2023 5:23 PM.)

Add New...

Description: Created by GOODDEALMART\csun at 2/6/2023 3:01 PM.

Traffic port : 6165

TCP/IP port to use for data transfer. Ensure this port is open in any firewall between sites.

Streams: 5

Using multiple upload streams helps to fully saturate WAN links.

☑ High bandwidth mode

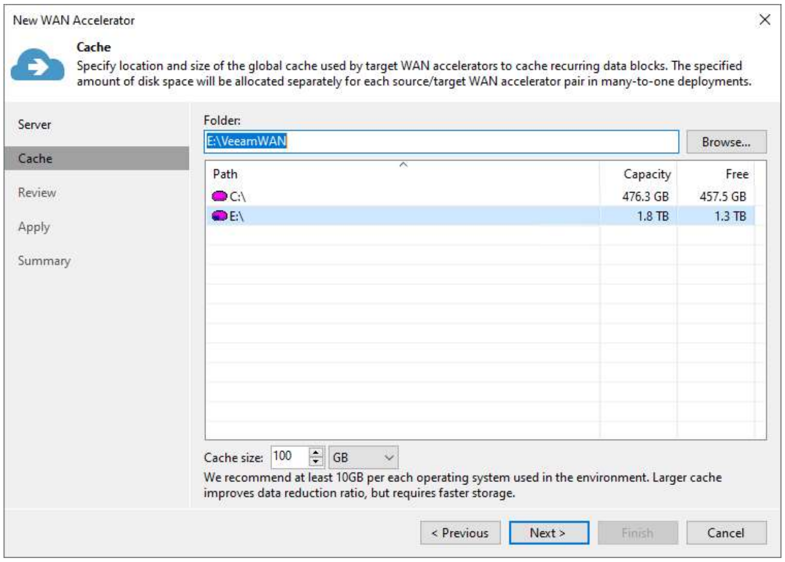
Recommended for WAN links faster than 100Mb/s. Provides significant bandwidth savings while maintaining data transfer speed comparable to the direct mode on WAN links under 1Gb/s.

< Previous
Next >
Finish
Cancel

Technet24

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

10. Veeam recommends using the High bandwidth mode option if your network bandwidth exceeds 100 Mbps. This mode offers significant bandwidth savings on WAN links less than 1 Gbps than the direct method.
11. Click Next.



Cache

Specify location and size of the global cache used by target WAN accelerators to cache recurring data blocks. The specified amount of disk space will be allocated separately for each source/target WAN accelerator pair in many-to-one deployments.

Folder: E:\VeeamWAN

Path	Capacity	Free
C:\	476.3 GB	457.5 GB
E:\	1.8 TB	1.3 TB

Cache size: 100 GB

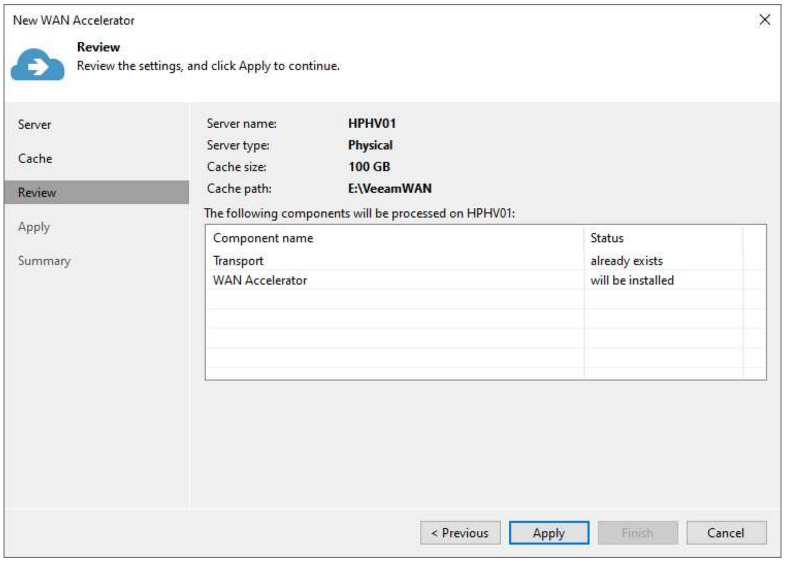
We recommend at least 10GB per each operating system used in the environment. Larger cache improves data reduction ratio, but requires faster storage.

12. Specify a path to the folder in the Folder field on the Cache page.
13. Specify the size for the global cache in the Cache size field.
14. 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.

15. On the Review page, click Apply.

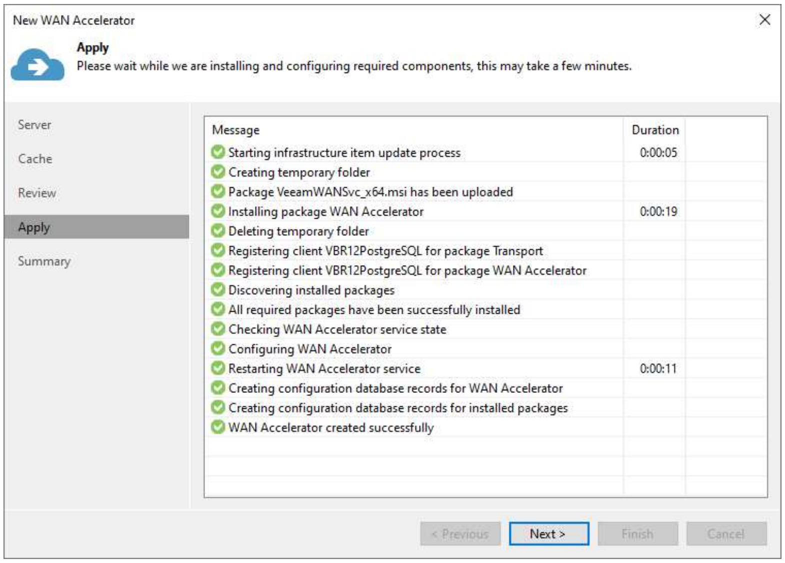

New WAN Accelerator
Review
Review the settings, and click Apply to continue.
Server
Cache
Review
Apply
Summary
< Previous
Apply
Finish
Cancel

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

The following components will be processed on HPHV01:

Component name	Status
Transport	already exists
WAN Accelerator	will be installed

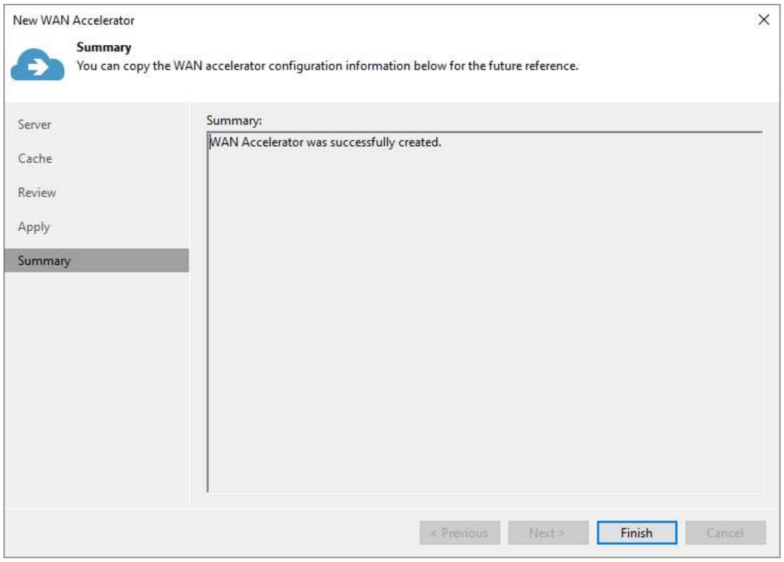
16. Click Next on the Apply page.


New WAN Accelerator
Apply
Server
Cache
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

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

Message	Duration
Starting infrastructure item update process	0:00:05
Creating temporary folder	
Package VeeamWANSvc_x64.msi has been uploaded	
Installing package WAN Accelerator	0:00:19
Deleting temporary folder	
Registering client VBR12PostgreSQL for package Transport	
Registering client VBR12PostgreSQL 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	

17. Click Finish on the Summary page.

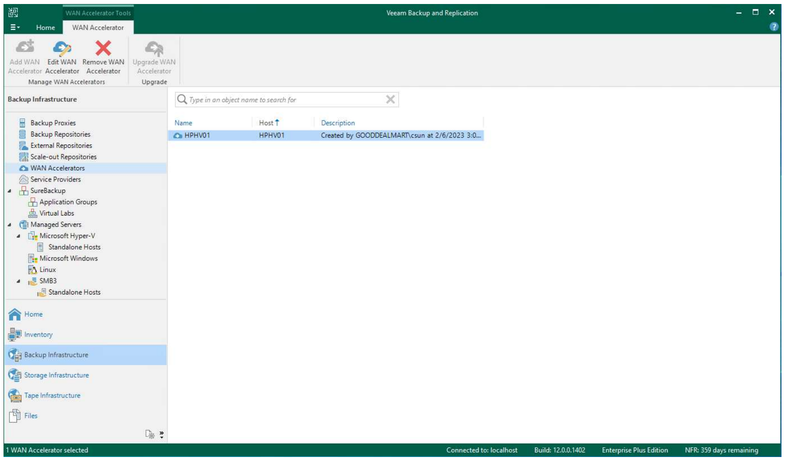

New WAN Accelerator
Summary
Server
Cache
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

You can copy the WAN accelerator configuration information below for the future reference.

Summary:

WAN Accelerator was successfully created.

18. Verify that the WAN Accelerator has been added.


WAN Accelerator Tools
Veeam Backup and Replication
Home
WAN Accelerator
Add WAN Accelerator
Edit WAN Accelerator
Remove WAN Accelerator
Manage WAN Accelerators
Upgrade WAN Accelerator
Upgrade
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for

Name	Host	Description
HPHV01	HPHV01	Created by GOODDEALMART\csun at 2/6/2023 3:0...

1 WAN Accelerator selected   Connected to: localhost   Build: 12.0.0.1402   Enterprise Plus Edition   NFR: 359 days remaining

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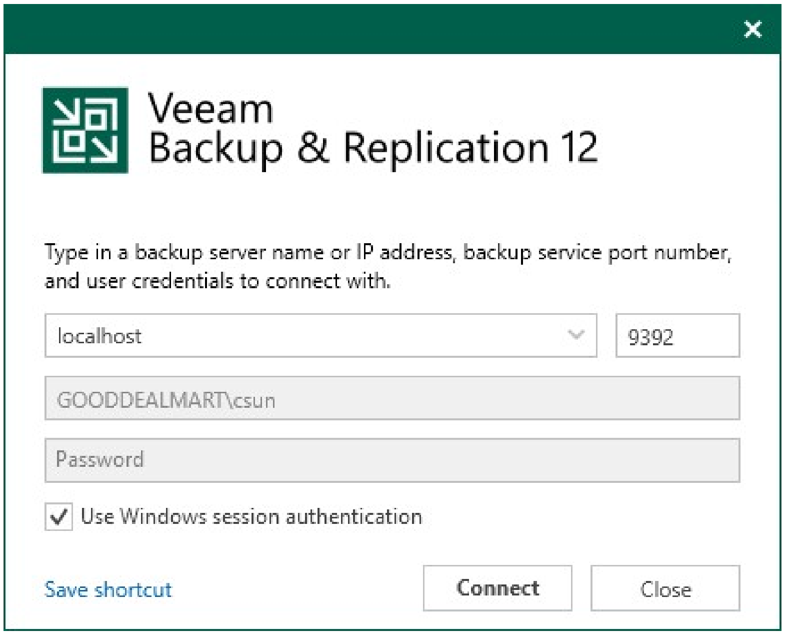
Physical Machines

Veeam Backup & Replication is a centralized control center for deploying and managing Veeam Agent, including Veeam Agent for Microsoft Windows, Linux, IBM AIX, Oracle Solaris, and Mac. Physical machines you want to protect with Veeam Agents are organized into protection groups in Veeam Backup & Replication. A protection group groups together protected computers of the same type. To simplify the management of such computers, Whether you create a protection group for laptops, workstations, servers or any other type of computer, Veeam Backup & Replication allows you to group them for dedicated and targeted protection easily. A separate protection group can also be used for Veeam Agent computers that you manage differently than other machines in your infrastructure.

You can use protection groups to automate the Veeam Agent deployment and management on computers in the infrastructure. When you configure a protection group, you can specify scheduling options for protected computer discovery and Veeam Agent deployment. As a result, you do not need to install, configure, and run Veeam Agent on each computer whose data you wish to protect. Instead, you can use the Veeam Backup & Replication console to remotely perform all Veeam Agent deployment, administration, data protection, and disaster recovery tasks.

Add Veeam Agent to On-Premises Microsoft Windows Physical machines

You can back up and restore the On-Premises physical machines running Windows operating systems. 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.	

Veeam Backup & Replication 12

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

localhost 9392

GOODDEALMART\csun

Password

☑ Use Windows session authentication

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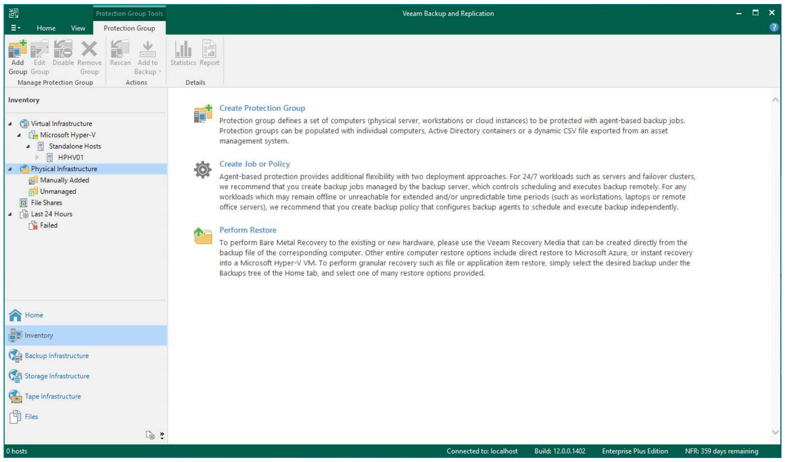
3. Select Inventory on the Home page.
4. On the Inventory page, select Physical Infrastructure and click Create Protection Group.


Protection Group Tools
Veeam Backup and Replication
Home
View
Protection Group
Add Group
Edit Group
Disable
Remove Group
Rescan
Add to Backup
Statistics
Report
Manage Protection Group
Actions
Details
Inventory
Virtual Infrastructure
Microsoft Hyper-V
Standalone Hosts
HPHV01
Physical Infrastructure
Manually Added
Unmanaged
File Shares
Last 24 Hours
Failed
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
0 hosts
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 359 days remaining

Create Protection Group

Protection group defines a set of computers (physical server, workstations or cloud instances) to be protected with agent-based backup jobs. Protection groups can be populated with individual computers, Active Directory containers or a dynamic CSV file exported from an asset management system.

Create Job or Policy

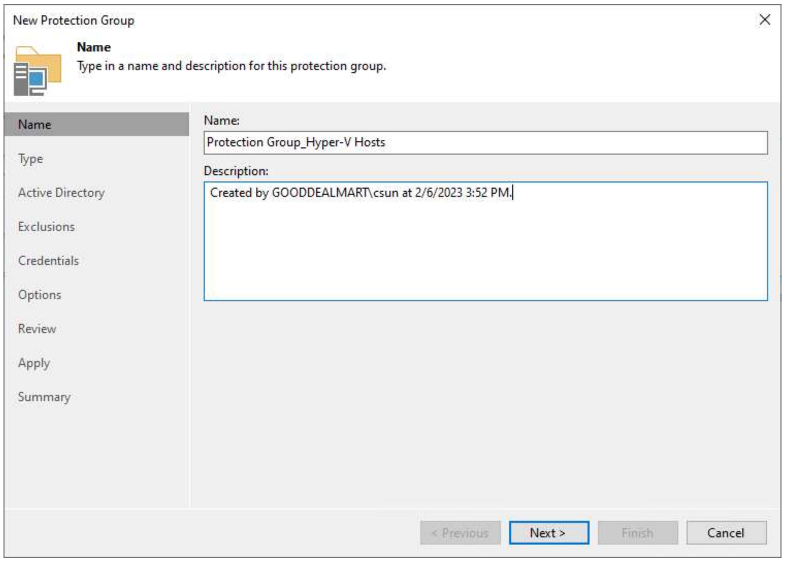
Agent-based protection provides additional flexibility with two deployment approaches. For 24/7 workloads such as servers and failover clusters, we recommend that you create backup jobs managed by the backup server, which controls scheduling and executes backup remotely. For any workloads which may remain offline or unreachable for extended and/or unpredictable time periods (such as workstations, laptops or remote office servers), we recommend that you create backup policy that configures backup agents to schedule and execute backup independently.

Perform Restore

To perform Bare Metal Recovery to the existing or new hardware, please use the Veeam Recovery Media that can be created directly from the backup file of the corresponding computer. Other entire computer restore options include direct restore to Microsoft Azure, or instant recovery into a Microsoft Hyper-V VM. To perform granular recovery such as file or application item restore, simply select the desired backup under the Backups tree of the Home tab, and select one of many restore options provided.

---

5. On the Name page, specify a protection group name.
6. Give a brief description in the Description field for future reference and click Next.


New Protection Group
Name
Type
Active Directory
Exclusions
Credentials
Options
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

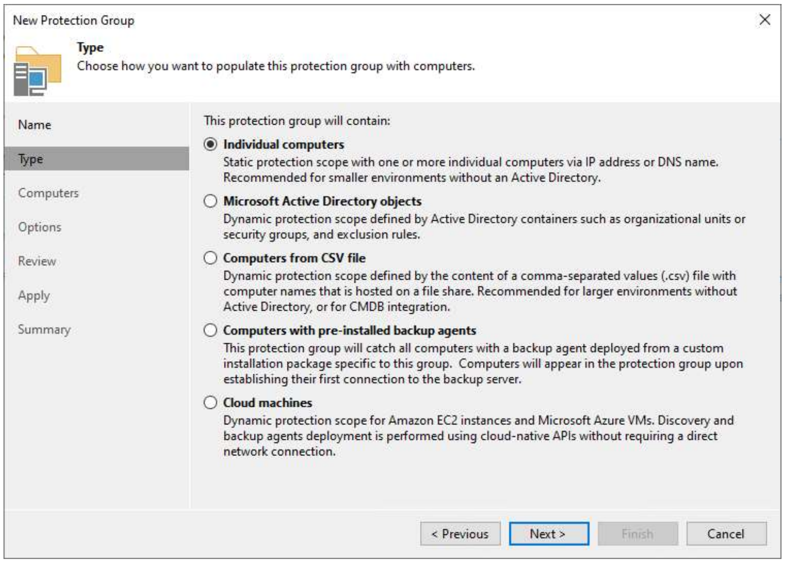
Name

Type in a name and description for this protection group.

Name: Protection Group_Hyper-V Hosts

Description: Created by GOODDEALMART\csun at 2/6/2023 3:52 PM.

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



Type

Choose how you want to populate this protection group with computers.

This protection group will contain:

● **Individual computers**
Static protection scope with one or more individual computers via IP address or DNS name. Recommended for smaller environments without an Active Directory.

○ **Microsoft Active Directory objects**
Dynamic protection scope defined by Active Directory containers such as organizational units or security groups, and exclusion rules.

○ **Computers from CSV file**
Dynamic protection scope defined by the content of a comma-separated values (.csv) file with computer names that is hosted on a file share. Recommended for larger environments without Active Directory, or for CMDB integration.

○ **Computers with pre-installed backup agents**
This protection group will catch all computers with a backup agent deployed from a custom installation package specific to this group. Computers will appear in the protection group upon establishing their first connection to the backup server.

○ **Cloud machines**
Dynamic protection scope for Amazon EC2 instances and Microsoft Azure VMs. Discovery and backup agents deployment is performed using cloud-native APIs without requiring a direct network connection.

   - Individual computers: add specific computers to the protection group.
   - Microsoft Active Directory objects: select this option to add one or several Active Directory objects to the protection group.
   - Computers from CSV file: add to the protection scope computers listed in a CSV file.
   - Computers with pre-installed agents: create a protection group for pre-installed Veeam Agents.
   - Cloud machines: select this option to add Amazon EC2 instances or

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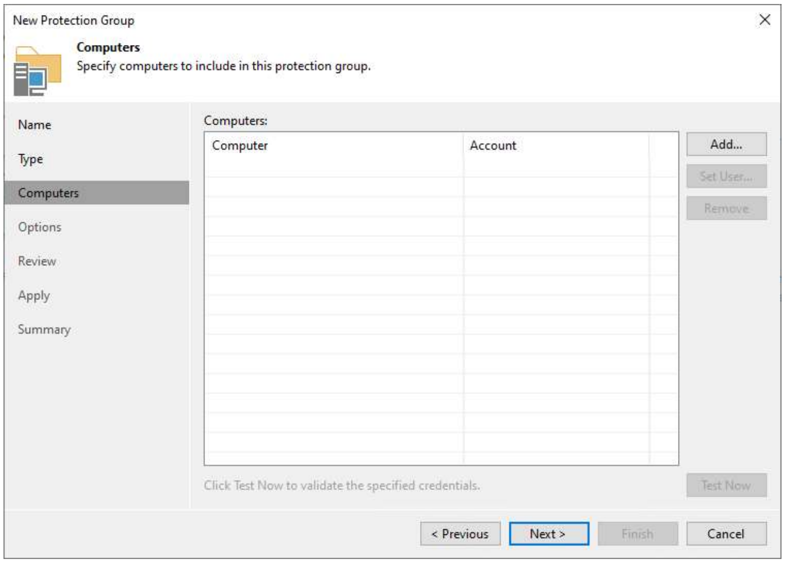
Microsoft Azure virtual machines.

8. Click Add on the Computers page.



New Protection Group

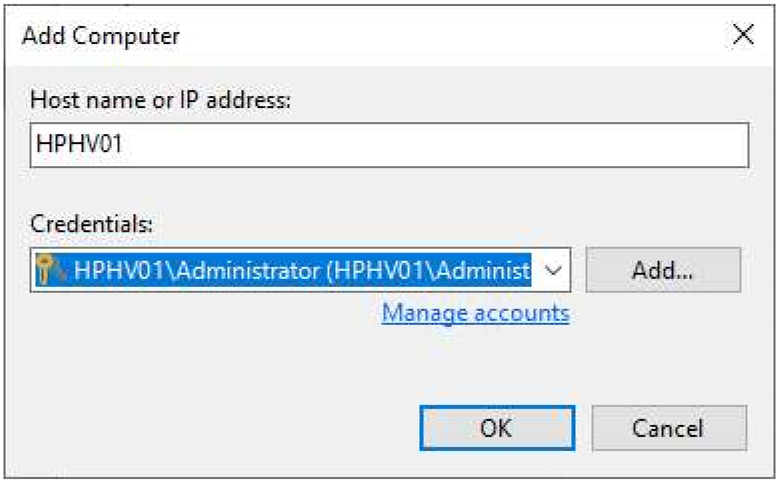
Computers

Specify computers to include in this protection group.

Click Test Now to validate the specified credentials.

Name
Type
Computers
Options
Review
Apply
Summary
Computers:
Computer
Account
Add...
Set User...
Remove
Test Now
< Previous
Next >
Finish
Cancel

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



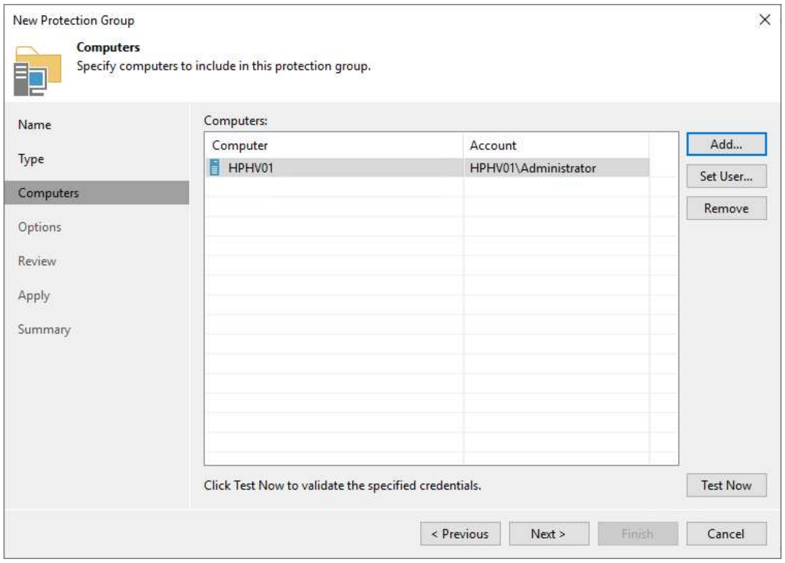
Add Computer

Host name or IP address: HPHV01

Credentials: HPHV01\Administrator (HPHV01\Administ

Add...
Manage accounts
OK
Cancel

12. Click Test Now on the Computers page.



New Protection Group

Computers

Specify computers to include in this protection group.

Name
Type
Computers
Options
Review
Apply
Summary

Computers:

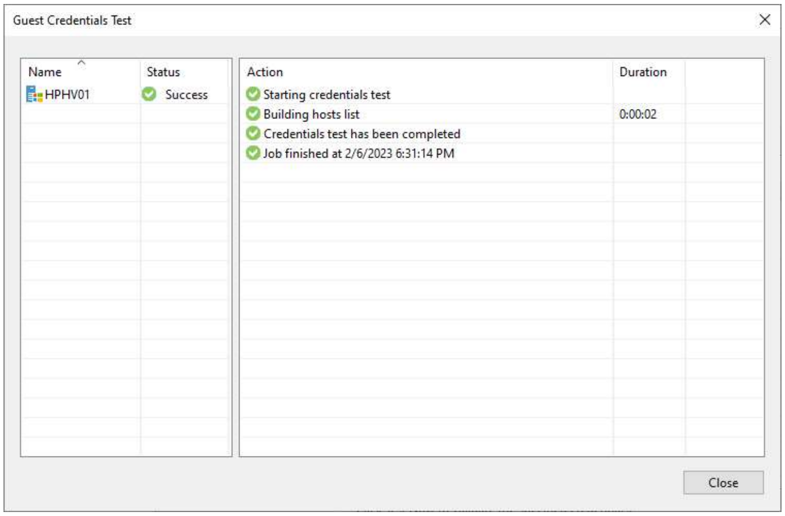
Computer	Account
HPHV01	HPHV01\Administrator

Add...
Set User...
Remove

Click Test Now to validate the specified credentials.

Test Now
< Previous
Next >
Finish
Cancel

13. On the Guest Credentials Test page and click Close.



Guest Credentials Test

Name	Status
HPHV01	Success

Action	Duration
Starting credentials test	
Building hosts list	0:00:02
Credentials test has been completed	
Job finished at 2/6/2023 6:31:14 PM	

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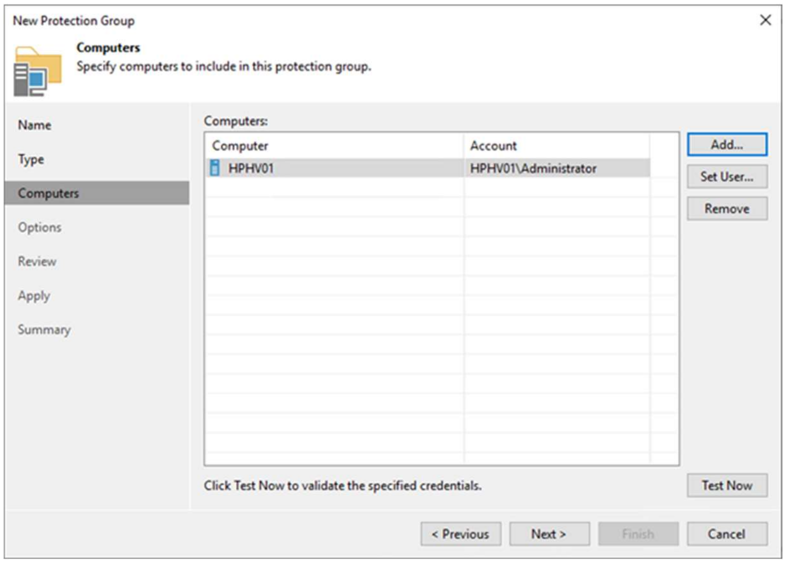
14. Click Next on the Computers page.


New Protection Group

Computers

Specify computers to include in this protection group.

Name
Type
Computers
Options
Review
Apply
Summary

Computers:

Computer	Account
HPHV01	HPHV01\Administrator

Add...
Set User...
Remove

Click Test Now to validate the specified credentials.

Test Now
< Previous
Next >
Finish
Cancel

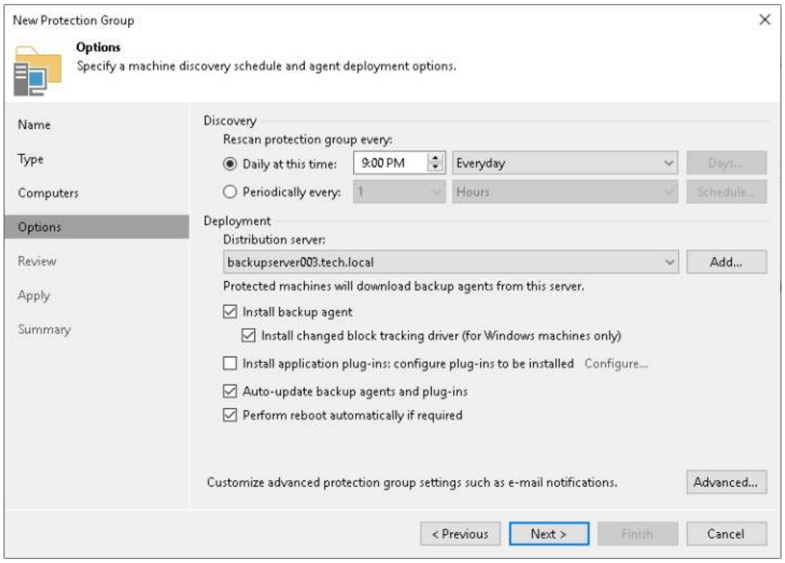
---

15. On the Options page, in the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group.

16. In the Deployment section, select a Microsoft Windows server from the Distribution server list to serve as a distribution server.

17. Select the Install Backup agent checkbox.

18. Select the Install changed block tracking driver (for


New Protection Group

Options

Specify a machine discovery schedule and agent deployment options.

Name
Type
Computers
Options
Review
Apply
Summary

Discovery

Rescan protection group every:

● Daily at this time: 9:00 PM Everyday

○ Periodically every: 1 Hours

Days...
Schedule...

Deployment

Distribution server:

backupserver003.tech.local

Add...

Protected machines will download backup agents from this server.

☑ Install backup agent

☑ Install changed block tracking driver (for Windows machines only)

☐ Install application plug-ins: configure plug-ins to be installed Configure...

☑ Auto-update backup agents and plug-ins

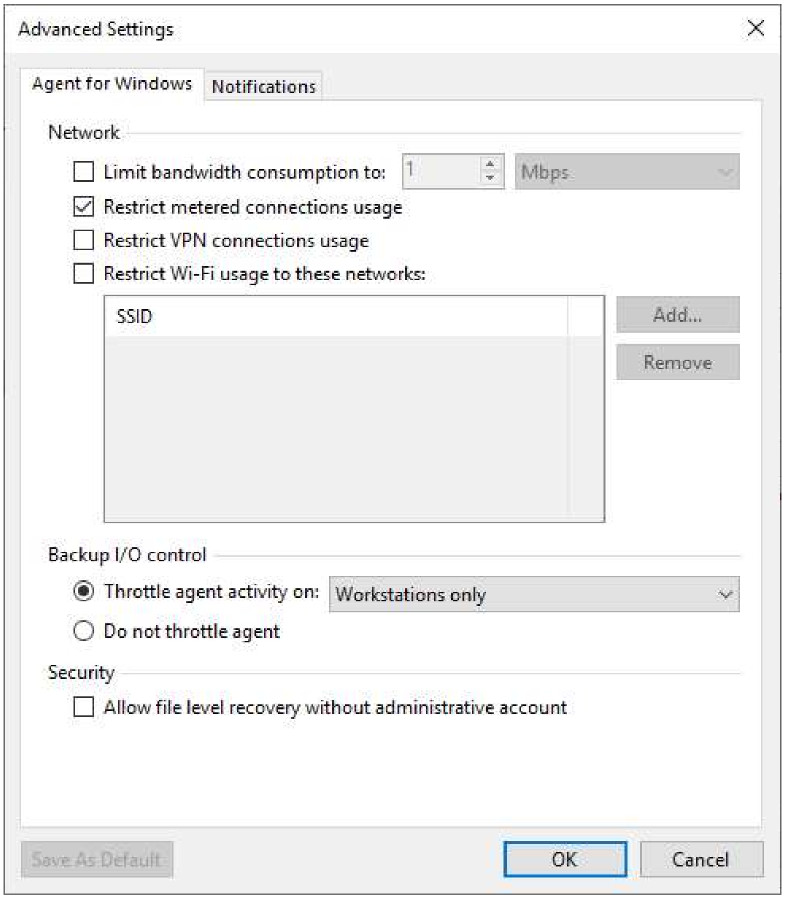
☑ Perform reboot automatically if required

Customize advanced protection group settings such as e-mail notifications.

Advanced...
< Previous
Next >
Finish
Cancel

Windows machines only) checkbox.

19. Click Advanced to customize advanced protection group settings.



Network

☐ Limit bandwidth consumption to: 1 Mbps

☑ Restrict metered connections usage

☐ Restrict VPN connections usage

☐ Restrict Wi-Fi usage to these networks:

SSID

Backup I/O control

● Throttle agent activity on: Workstations only

○ Do not throttle agent

Security

☐ Allow file level recovery without administrative account

20. 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

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your computer is on such connection.

- Restrict VPN connection usage: Veeam Agent for Microsoft Windows will automatically detect a VPN connection and 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.

21. 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, Servers, or All hosts.

22. 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.

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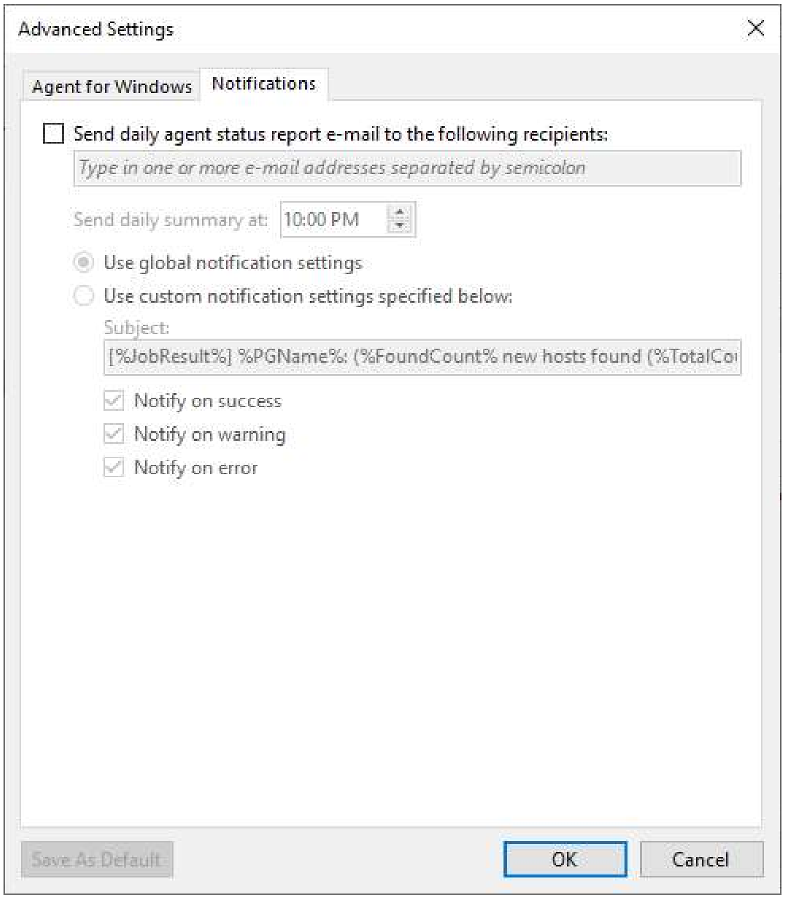
23. On the Advanced page, select Notifications.



Advanced Settings
Agent for Windows
Notifications

☐ Send daily agent status report e-mail to the following recipients:

Type in one or more e-mail addresses separated by semicolon

Send daily summary at: 10:00 PM

● Use global notification settings

○ Use custom notification settings specified below:

Subject:

[%JobResult%] %PGName%: (%FoundCount% new hosts found (%TotalCo

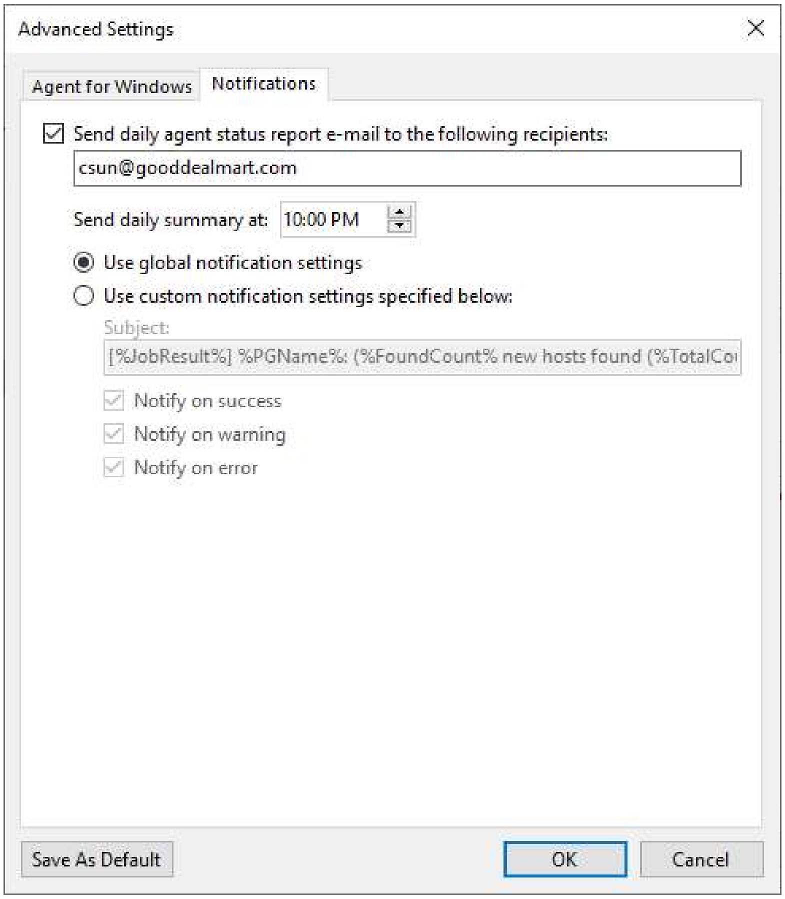
☑ Notify on success

☑ Notify on warning

☑ Notify on error

Save As Default
OK
Cancel

24. On the Notification page, select Send daily agent status report e-mail to the following recipients: checkbox and enter an email address.
25. Enter several addresses separated by a semicolon.
26. You can use global notification settings or specify custom notification settings and click OK.


Advanced Settings
Agent for Windows
Notifications

☑ Send daily agent status report e-mail to the following recipients:
csun@gooddealmart.com

Send daily summary at: 10:00 PM

● Use global notification settings
○ Use custom notification settings specified below:

Subject:
[%JobResult%] %PGName%: (%FoundCount% new hosts found (%TotalCo

☑ Notify on success
☑ Notify on warning
☑ Notify on error

Save As Default
OK
Cancel

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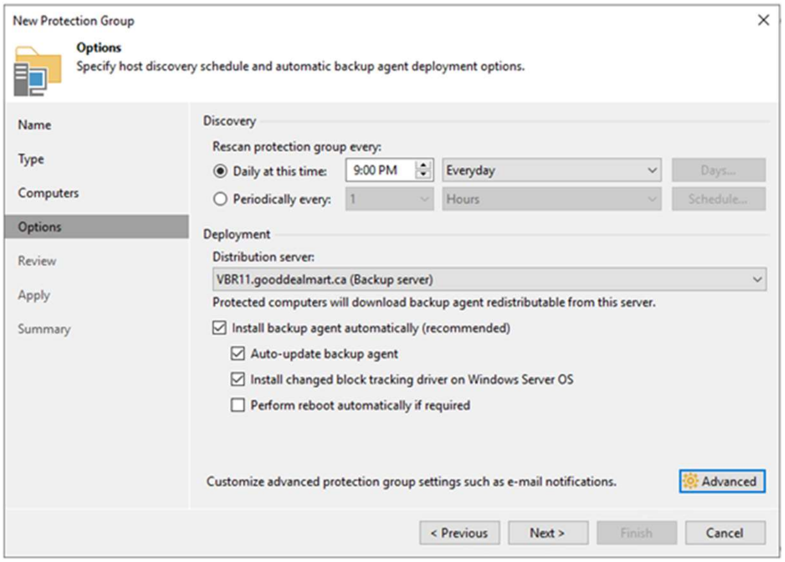
27. On the Options page, click Next.



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

○ Periodically every: 1 Hours

Days...
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

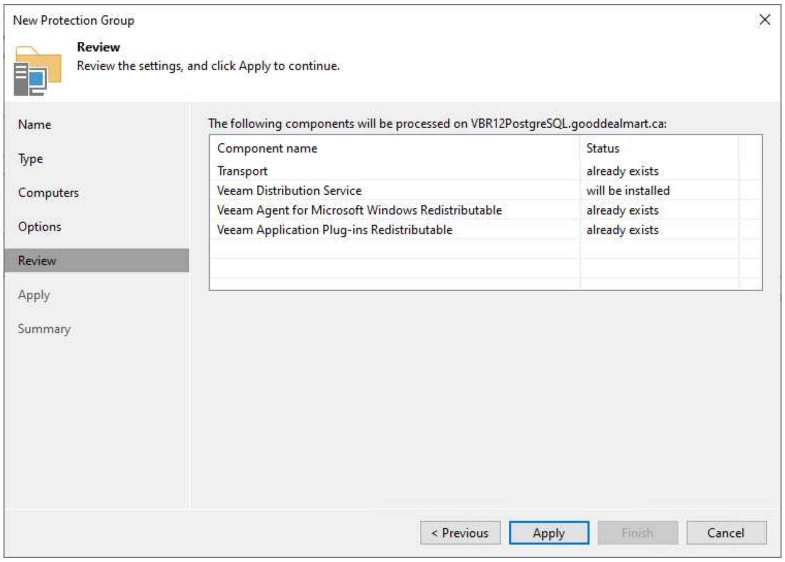
☐ Perform reboot automatically if required

Customize advanced protection group settings such as e-mail notifications.

Advanced
< Previous
Next >
Finish
Cancel

---

28. On the Review page, click Apply.



New Protection Group

Review

Review the settings, and click Apply to continue.

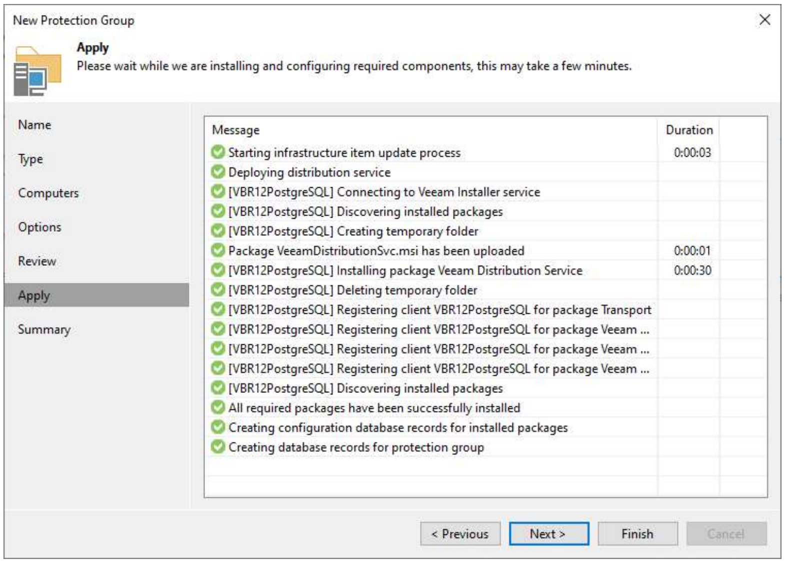
Name
Type
Computers
Options
Review
Apply
Summary

The following components will be processed on VBR12PostgreSQL.gooddealmart.ca:

Component name	Status
Transport	already exists
Veeam Distribution Service	will be installed
Veeam Agent for Microsoft Windows Redistributable	already exists
Veeam Application Plug-ins Redistributable	already exists

< Previous
Apply
Finish
Cancel

29. Click Next on the Apply page.

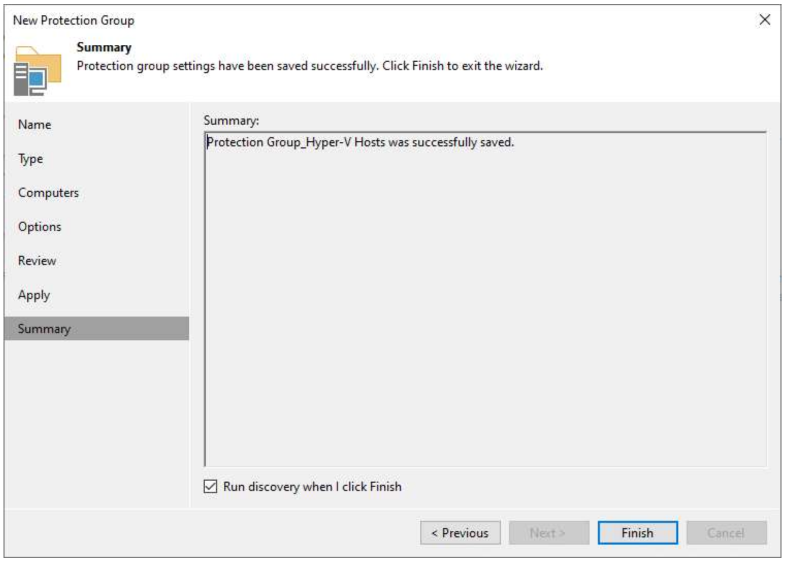

New Protection Group
Name
Type
Computers
Options
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Apply

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

Message	Duration
Starting infrastructure item update process	0:00:03
Deploying distribution service	
[VBR12PostgreSQL] Connecting to Veeam Installer service	
[VBR12PostgreSQL] Discovering installed packages	
[VBR12PostgreSQL] Creating temporary folder	
Package VeeamDistributionSvc.msi has been uploaded	0:00:01
[VBR12PostgreSQL] Installing package Veeam Distribution Service	0:00:30
[VBR12PostgreSQL] Deleting temporary folder	
[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Transport	
[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Veeam ...	
[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Veeam ...	
[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Veeam ...	
[VBR12PostgreSQL] Discovering installed packages	
All required packages have been successfully installed	
Creating configuration database records for installed packages	
Creating database records for protection group	

30. On the Summary page, select Run discovery when I click the Finish checkbox and click Finish.


New Protection Group
Name
Type
Computers
Options
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Summary

Protection group settings have been saved successfully. Click Finish to exit the wizard.

Summary:

Protection Group_Hyper-V Hosts was successfully saved.

☑ Run discovery when I click Finish

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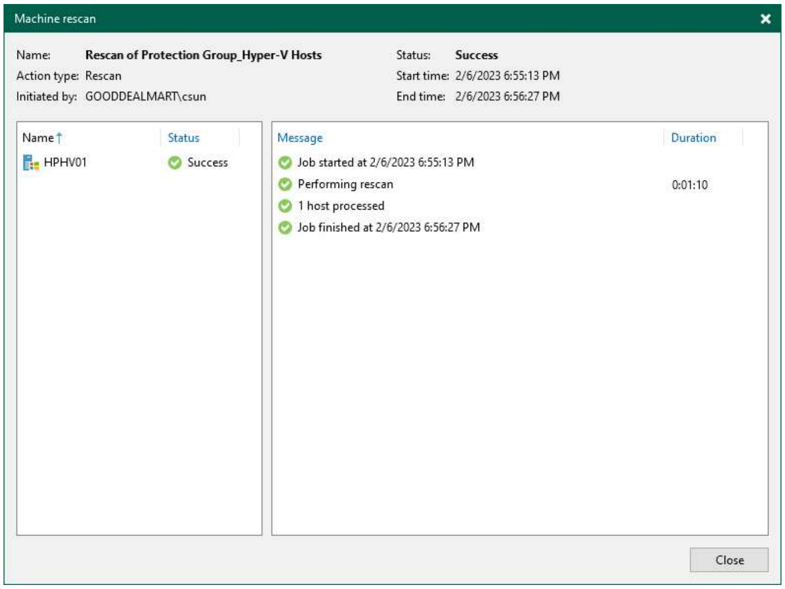
31. Ensure the operation is complete without error on the Agents discovery session page.


Machine rescan
Close

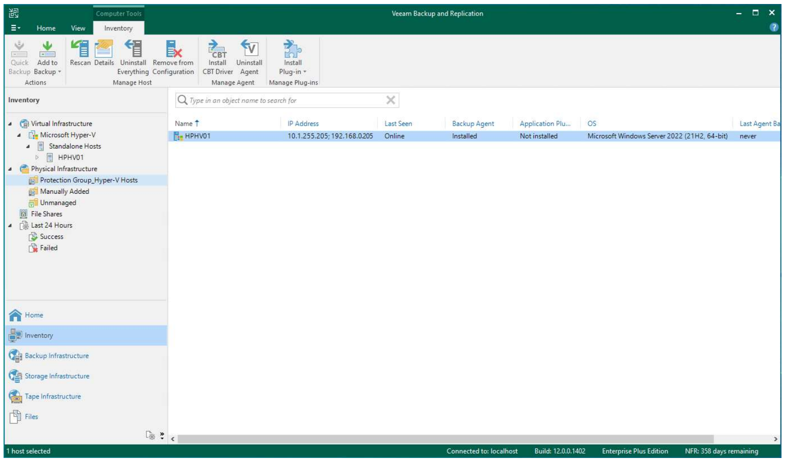
Name: **Rescan of Protection Group_Hyper-V Hosts**
Action type: Rescan
Initiated by: GOODDEALMART\csun

Status: **Success**
Start time: 2/6/2023 6:55:13 PM
End time: 2/6/2023 6:56:27 PM

Name ↑	Status
HPHV01	✓ Success

Message	Duration
✓ Job started at 2/6/2023 6:55:13 PM	
✓ Performing rescan	0:01:10
✓ 1 host processed	
✓ Job finished at 2/6/2023 6:56:27 PM	

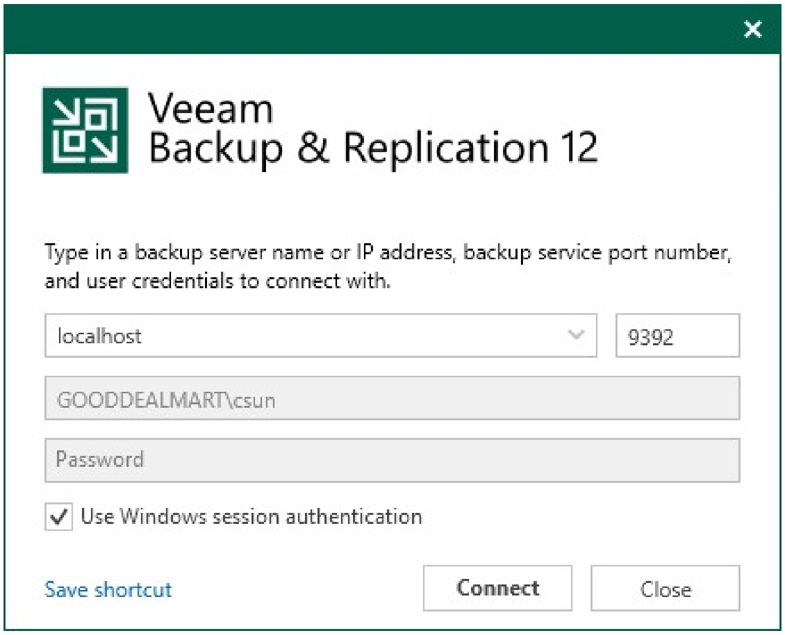
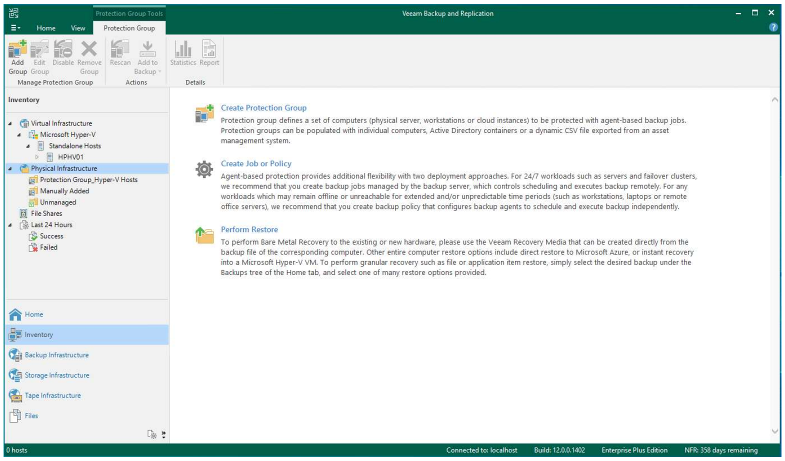
32. Verify that the protection group has been added.


Computer Tools
Veeam Backup and Replication
Home
View
Inventory
Quick Backup
Add to Backup
Actions
Rescan
Details
Uninstall Everything
Remove from Configuration
Manage Host
Install CBT Driver
Uninstall Agent
Manage Agent
Install Plug-in
Manage Plug-ins
Inventory
Type in an object name to search for
Virtual Infrastructure
Microsoft Hyper-V
Standalone Hosts
HPHV01
Physical Infrastructure
Protection Group_Hyper-V Hosts
Manually Added
Unmanaged
File Shares
Last 24 Hours
Success
Failed
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
1 host selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 358 days remaining

Name ↑	IP Address	Last Seen	Backup Agent	Application Plu...	OS	Last Agent Ba
HPHV01	10.1.255.205; 192.168.0.205	Online	Installed	Not installed	Microsoft Windows Server 2022 (21H2, 64-bit)	never

Add Veeam Agent to On-Premises Linux Physical machines

You can back up and restore the On-Premises physical machines running Linux operating systems. 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.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication Save shortcut Connect Close
3. Select Inventory on the Home page. 4. On the Inventory page, select Physical Infrastructure and click Create Protection Group.	 Veeam Backup and Replication Protection Group Tools Home View Protection Group Add Group, Edit Group, Disable, Remove Group (Manage Protection Group); Rescan, Add to Backup (Actions); Statistics, Report (Details) Inventory Virtual Infrastructure Microsoft Hyper-V Standalone Hosts HPHV01 Physical Infrastructure Protection Group_Hyper-V Hosts Manually Added Unmanaged File Shares Last 24 Hours Success Failed Home Inventory Backup Infrastructure Storage Infrastructure Tape Infrastructure Files **Create Protection Group** Protection group defines a set of computers (physical server, workstations or cloud instances) to be protected with agent-based backup jobs. Protection groups can be populated with individual computers, Active Directory containers or a dynamic CSV file exported from an asset management system. **Create Job or Policy** Agent-based protection provides additional flexibility with two deployment approaches. For 24/7 workloads such as servers and failover clusters, we recommend that you create backup jobs managed by the backup server, which controls scheduling and executes backup remotely. For any workloads which may remain offline or unreachable for extended and/or unpredictable time periods (such as workstations, laptops or remote office servers), we recommend that you create backup policy that configures backup agents to schedule and execute backup independently. **Perform Restore** To perform Bare Metal Recovery to the existing or new hardware, please use the Veeam Recovery Media that can be created directly from the backup file of the corresponding computer. Other entire computer restore options include direct restore to Microsoft Azure, or instant recovery into a Microsoft Hyper-V VM. To perform granular recovery such as file or application item restore, simply select the desired backup under the Backups tree of the Home tab, and select one of many restore options provided. 0 hosts Connected to: localhost Build: 12.0.0.1402 Enterprise Plus Edition NFR: 358 days remaining

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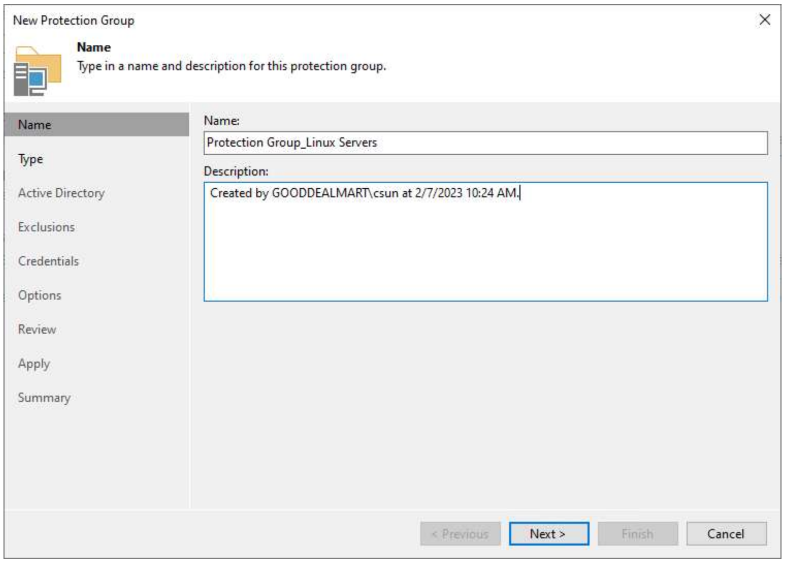
5. On the Name page, specify a protection group name.
6. Give a brief description in the Description field for future reference and click Next.
7. Select Specify protection scope for the created protection group on the Type page and click Next.
    - Individual computers: add specific computers to the protection group.
    - Microsoft Active Directory objects: select this option to add one or several Active Directory objects to the protection group.
    - Computers from CSV file: add to the protection scope computers listed in a CSV file.
    - Computers with pre-installed agents: create a protection group for pre-installed Veeam Agents.
    - Cloud machines: select this option to add Amazon

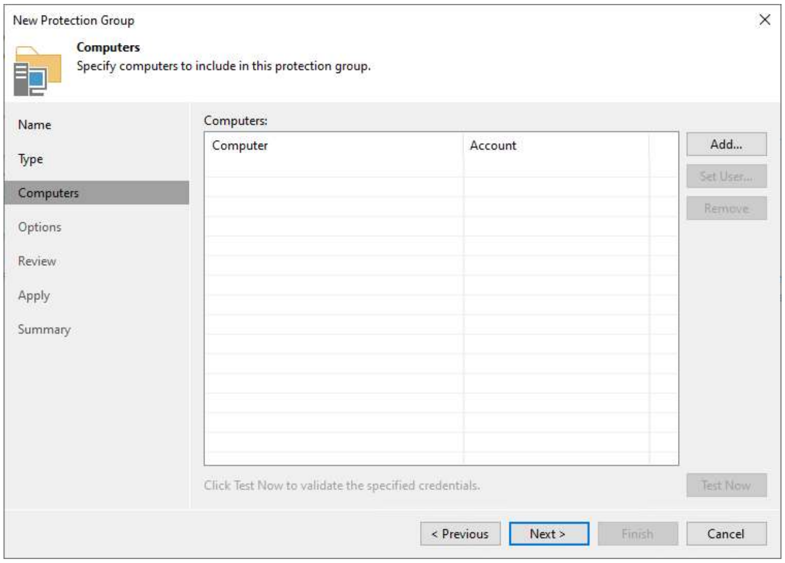

New Protection Group
Name
Type in a name and description for this protection group.
Name
Type
Active Directory
Exclusions
Credentials
Options
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Name: Protection Group_Linux Servers

Description: Created by GOODDEALMART\csun at 2/7/2023 10:24 AM.

EC2 instances or Microsoft Azure virtual machines.

8. Click Add on the Computers page.


New Protection Group

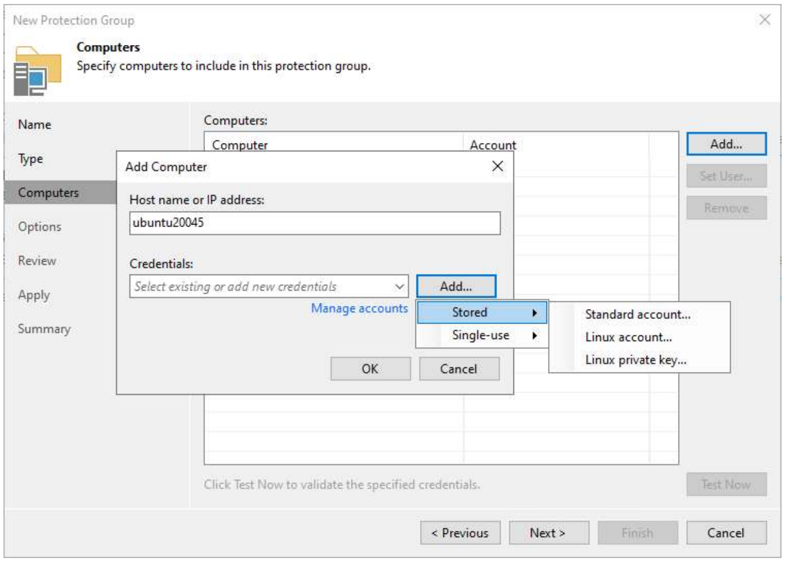
Computers

Specify computers to include in this protection group.

Click Test Now to validate the specified credentials.

Name
Type
Computers
Options
Review
Apply
Summary
Computers:
Computer
Account
Add...
Set User...
Remove
Test Now
< Previous
Next >
Finish
Cancel

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


New Protection Group

Computers

Specify computers to include in this protection group.

Add Computer

Host name or IP address: ubuntu20045

Credentials: Select existing or add new credentials

Click Test Now to validate the specified credentials.

Name
Type
Computers
Options
Review
Apply
Summary
Computers:
Computer
Account
Add...
Set User...
Remove
Add...
Manage accounts
Stored
Single-use
Standard account...
Linux account...
Linux private key...
OK
Cancel
Test Now
< Previous
Next >
Finish
Cancel

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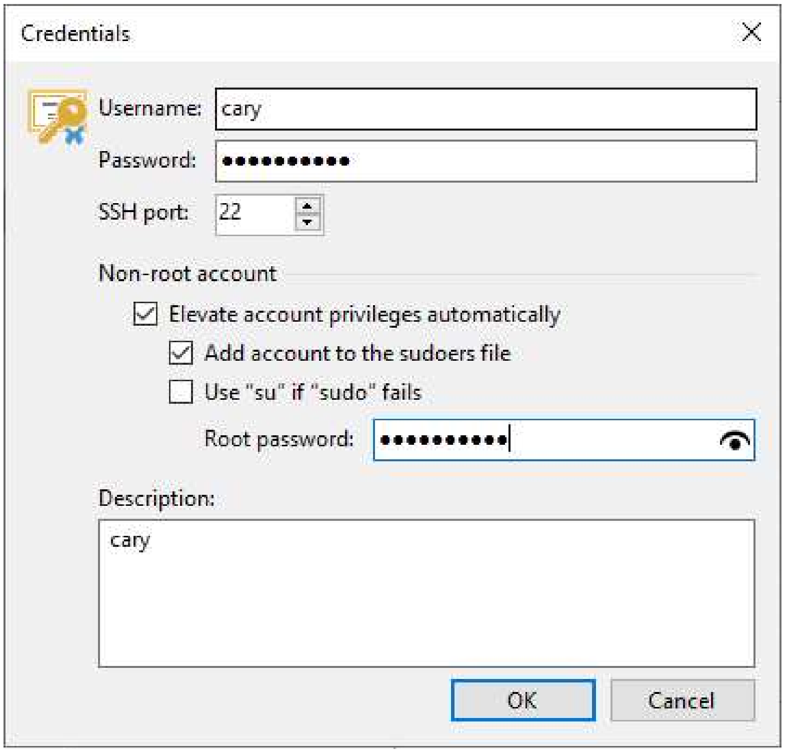
13. On the Credentials page, Enter a user name in the Username field.
14. Enter a password in the Password field.
15. Enter 22 in the SSH port field.
16. Select the Elvate account privileges automatically checkbox for a non-root user with root account privileges.
17. Select Add account to the sudoers file checkbox.
18. Enter the password in the Root password field.
19. Give a brief description in the Description field for future reference and click OK.



Credentials

Username: cary

Password: ●●●●●●●●●●●

SSH port: 22

Non-root account

☑ Elevate account privileges automatically

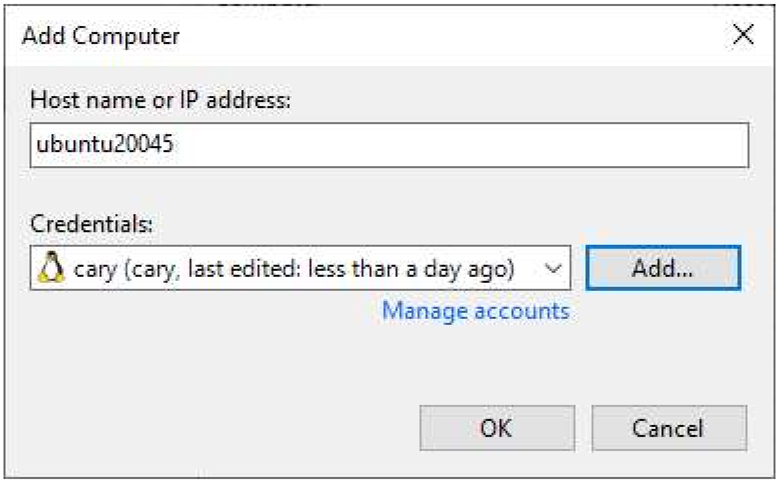
☑ Add account to the sudoers file

☐ Use "su" if "sudo" fails

Root password: ●●●●●●●●●●●

Description: cary

20. Click OK on the add Computer page.

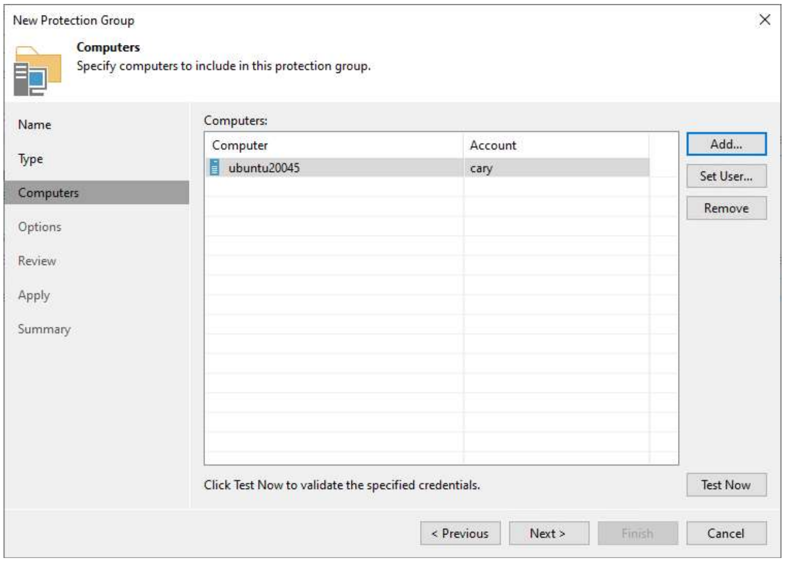


Add Computer

Host name or IP address: ubuntu20045

Credentials: cary (cary, last edited: less than a day ago)

21. Click Test Now on the Computers page.

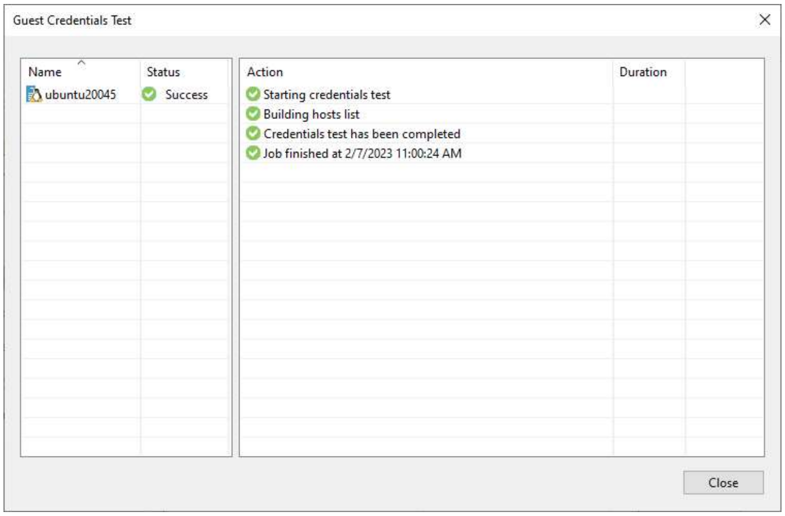

New Protection Group
Computers
Specify computers to include in this protection group.
Name
Type
Computers
Options
Review
Apply
Summary
Add...
Set User...
Remove
Test Now
< Previous
Next >
Finish
Cancel

Computers:

Computer	Account
ubuntu20045	cary

Click Test Now to validate the specified credentials.

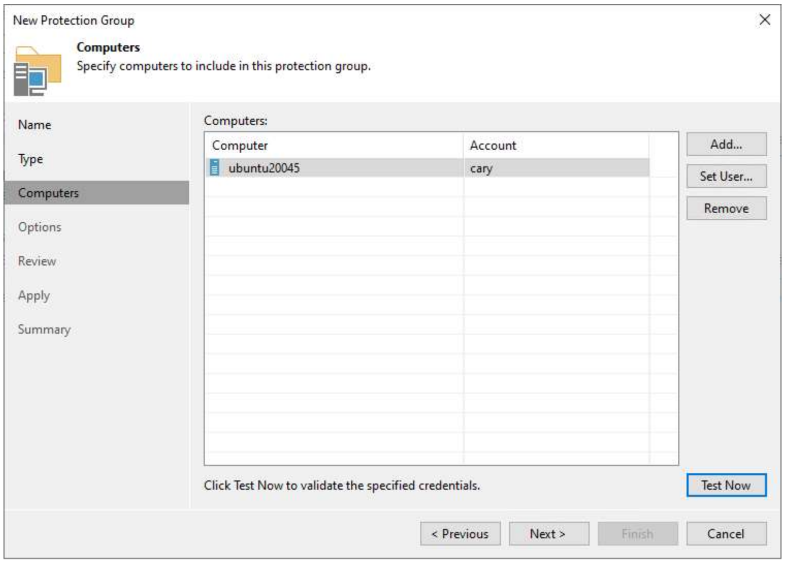
22. On the Guest Credentials Test page and click Close.


Guest Credentials Test
Close

Name	Status
ubuntu20045	Success

Action	Duration
Starting credentials test	
Building hosts list	
Credentials test has been completed	
Job finished at 2/7/2023 11:00:24 AM	

23. Click Next on the Computers page.



New Protection Group

Computers

Specify computers to include in this protection group.

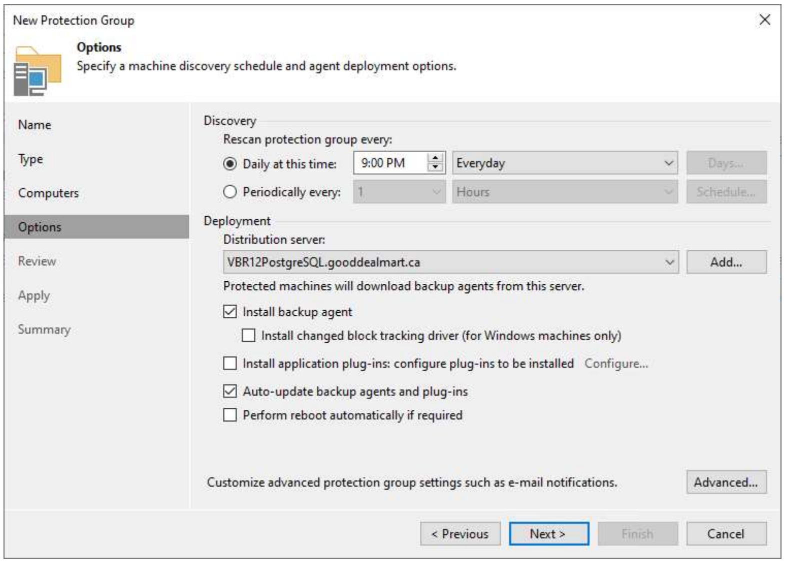
Computers:

Computer	Account
ubuntu20045	cary

Click Test Now to validate the specified credentials.

Name
Type
Computers
Options
Review
Apply
Summary
Add...
Set User...
Remove
Test Now
< Previous
Next >
Finish
Cancel

24. On the Options page, in the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group.
25. In the Deployment section, select a Microsoft Windows server from the Distribution server list to serve as a distribution server.
26. Select the Install Backup agent checkbox.
27. Click Advanced to customize advanced protection group settings.



New Protection Group

Options

Specify a machine discovery schedule and agent deployment options.

Discovery

Rescan protection group every:

● Daily at this time: 9:00 PM Everyday

○ Periodically every: 1 Hours

Deployment

Distribution server: VBR12PostgreSQL.gooddealmart.ca

Protected machines will download backup agents from this server.

☑ Install backup agent

☐ Install changed block tracking driver (for Windows machines only)

☐ Install application plug-ins: configure plug-ins to be installed Configure...

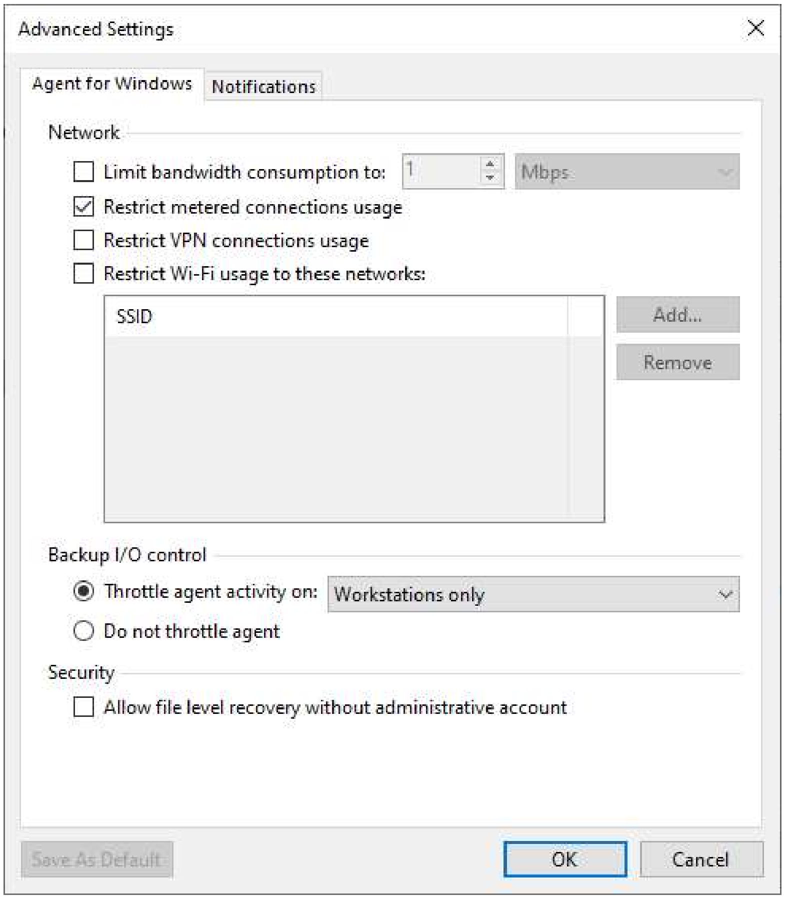
☑ Auto-update backup agents and plug-ins

☐ Perform reboot automatically if required

Customize advanced protection group settings such as e-mail notifications.

Name
Type
Computers
Options
Review
Apply
Summary
Days...
Schedule...
Add...
Advanced...
< Previous
Next >
Finish
Cancel

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



Advanced Settings

Network

☐ Limit bandwidth consumption to: 1 Mbps

☑ Restrict metered connections usage

☐ Restrict VPN connections usage

☐ Restrict Wi-Fi usage to these networks:

Backup I/O control

● Throttle agent activity on: Workstations only

○ Do not throttle agent

Security

☐ Allow file level recovery without administrative account

- 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

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

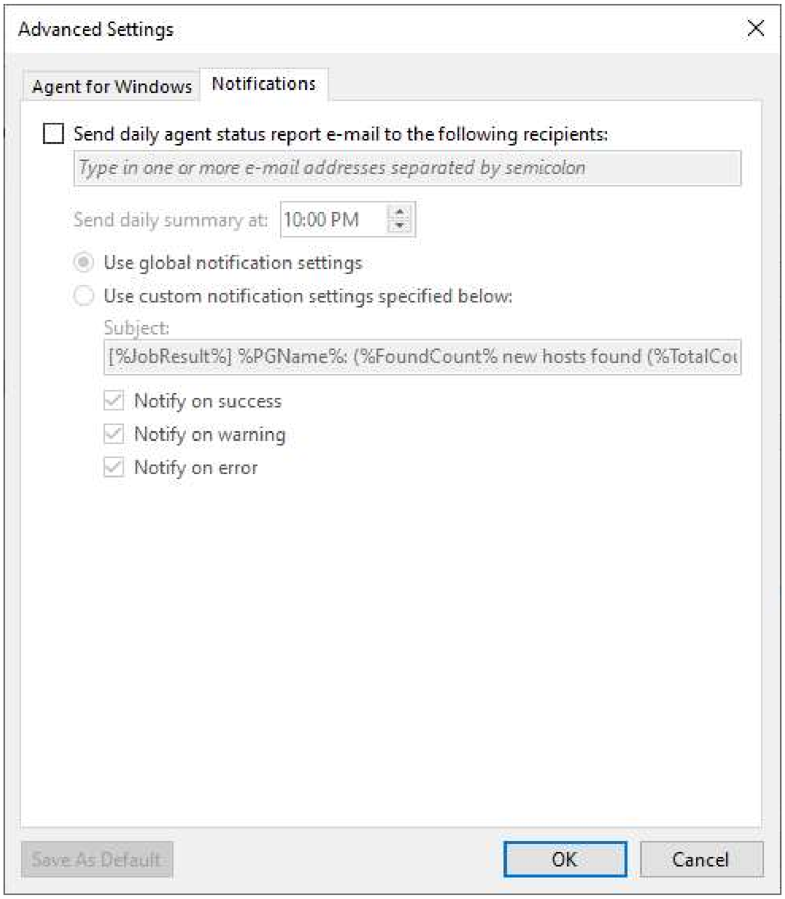
- Restrict Wi-Fi usage to these networks: restrict usage of wireless networks for Veeam Agent running on Microsoft Windows workstations.

29. 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, Servers, or All hosts.

30. 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.

31. On the Advanced page, select Notifications.



Advanced Settings

Agent for Windows | Notifications

☐ Send daily agent status report e-mail to the following recipients:

Type in one or more e-mail addresses separated by semicolon

Send daily summary at: 10:00 PM

● Use global notification settings

○ Use custom notification settings specified below:

Subject:

[%JobResult%] %PGName%: (%FoundCount% new hosts found (%TotalCo

☑ Notify on success

☑ Notify on warning

☑ Notify on error

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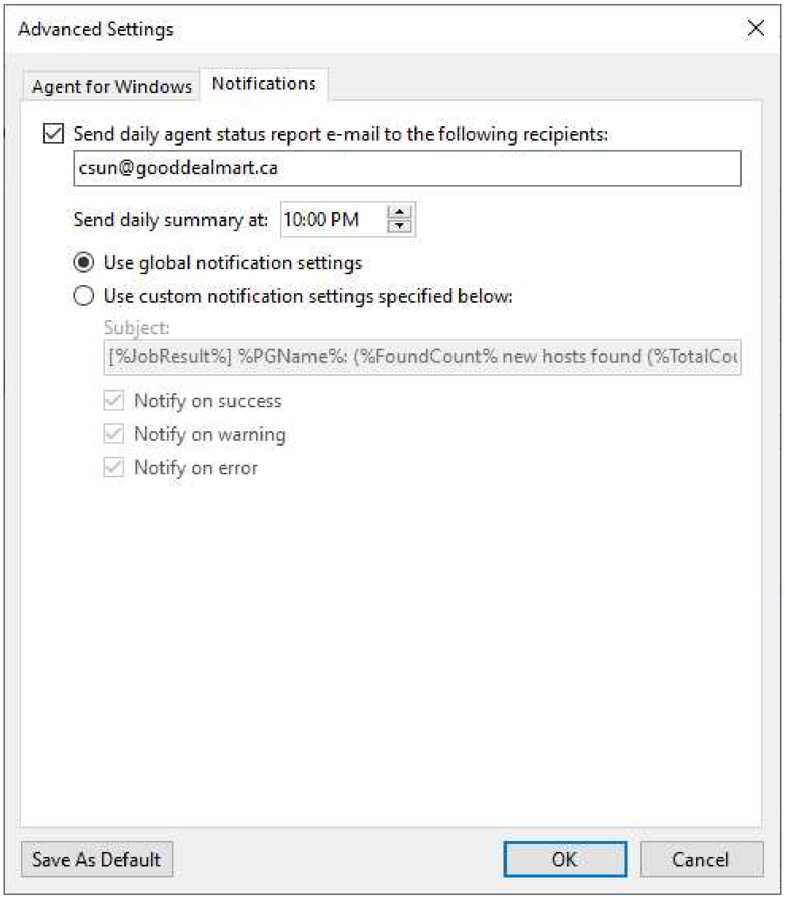
32. On the Notification page, select Send daily agent status report e-mail to the following recipients: checkbox and enter an email address.
33. Enter several addresses separated by a semicolon.
34. You can use global notification settings or specify custom notification settings and click OK.



Advanced Settings
Agent for Windows
Notifications
Save As Default
OK
Cancel

☑ Send daily agent status report e-mail to the following recipients:
csun@gooddealmart.ca

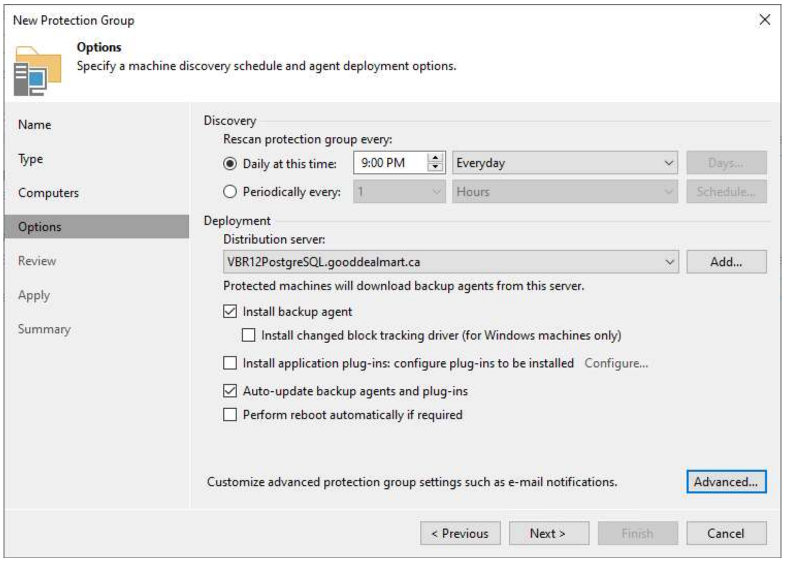
Send daily summary at: 10:00 PM

● Use global notification settings
○ Use custom notification settings specified below:

Subject:
[%JobResult%] %PGName%: (%FoundCount% new hosts found (%TotalCo

☑ Notify on success
☑ Notify on warning
☑ Notify on error

35. On the Options page, click Next.



New Protection Group

Options

Specify a machine discovery schedule and agent deployment options.

Name
Type
Computers
Options
Review
Apply
Summary

Discovery

Rescan protection group every:

● Daily at this time: 9:00 PM Everyday

○ Periodically every: 1 Hours

Deployment

Distribution server: VBR12PostgreSQL.gooddealmart.ca

Protected machines will download backup agents from this server.

☑ Install backup agent

☐ Install changed block tracking driver (for Windows machines only)

☐ Install application plug-ins: configure plug-ins to be installed

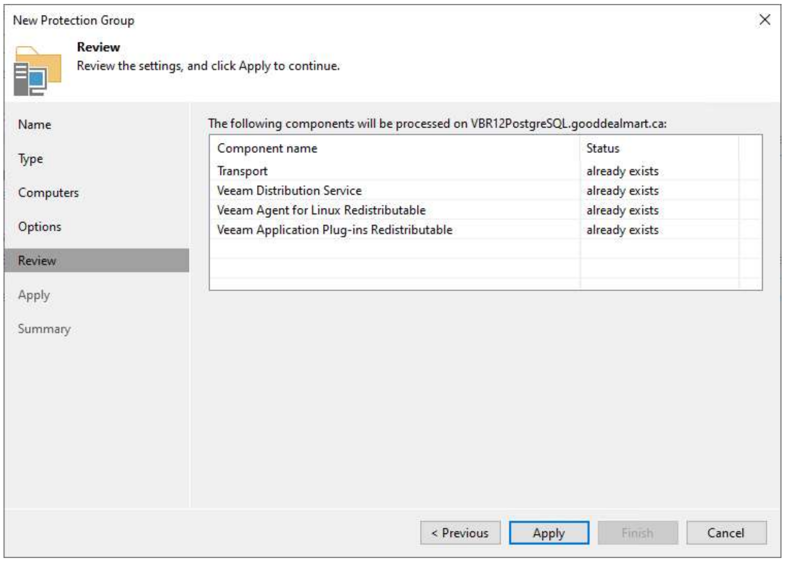
☑ Auto-update backup agents and plug-ins

☐ Perform reboot automatically if required

Customize advanced protection group settings such as e-mail notifications.

Days...
Schedule...
Add...
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

36. Click Apply on the Review page.



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 VBR12PostgreSQL.gooddealmart.ca:

Component name	Status
Transport	already exists
Veeam Distribution Service	already exists
Veeam Agent for Linux Redistributable	already exists
Veeam Application Plug-ins Redistributable	already exists

< Previous
Apply
Finish
Cancel

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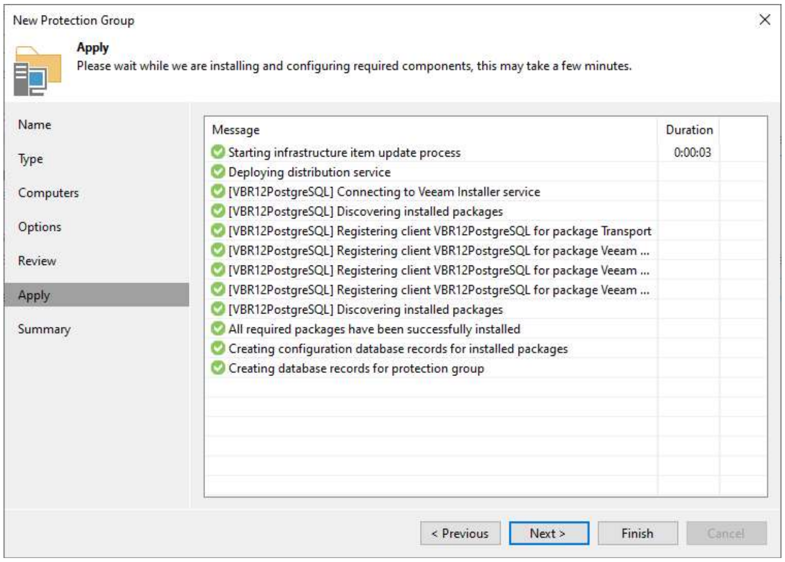
37. Click Next on the Apply page.

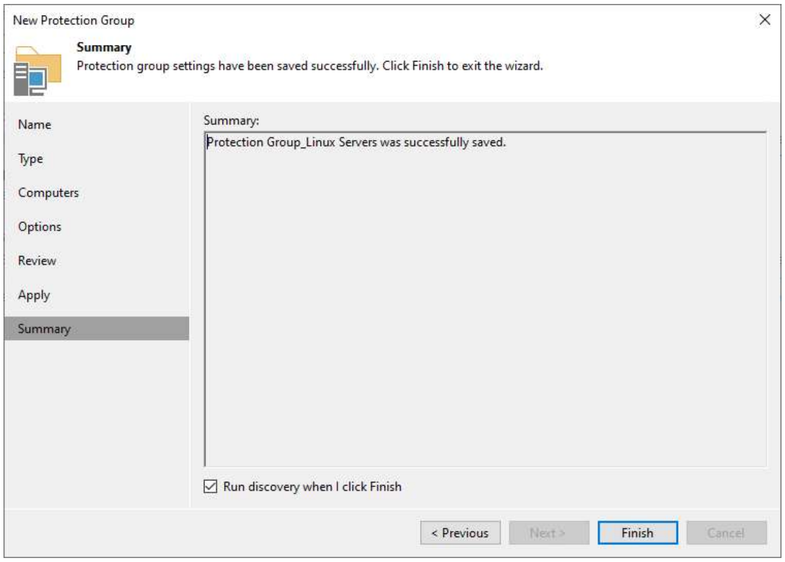

New Protection Group
Name
Type
Computers
Options
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Apply

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

Message	Duration
✓ Starting infrastructure item update process	0:00:03
✓ Deploying distribution service	
✓ [VBR12PostgreSQL] Connecting to Veeam Installer service	
✓ [VBR12PostgreSQL] Discovering installed packages	
✓ [VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Transport	
✓ [VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Veeam ...	
✓ [VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Veeam ...	
✓ [VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Veeam ...	
✓ [VBR12PostgreSQL] Discovering installed packages	
✓ All required packages have been successfully installed	
✓ Creating configuration database records for installed packages	
✓ Creating database records for protection group	

38. On the Summary page, select the Run discovery when I click the Finish checkbox and click Finish.


New Protection Group
Name
Type
Computers
Options
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Summary

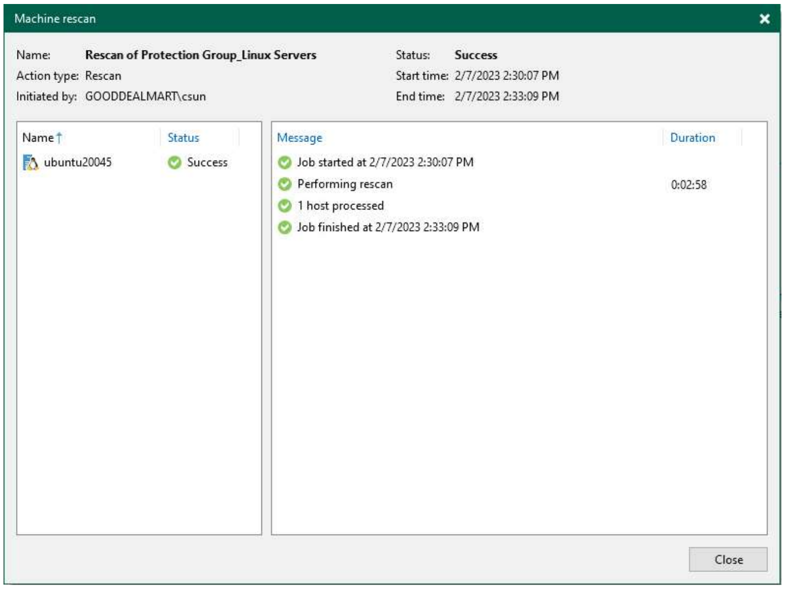
Protection group settings have been saved successfully. Click Finish to exit the wizard.

Summary:

Protection Group_Linux Servers was successfully saved.

☑ Run discovery when I click Finish

39. Verify the Machine rescan result and click Close.

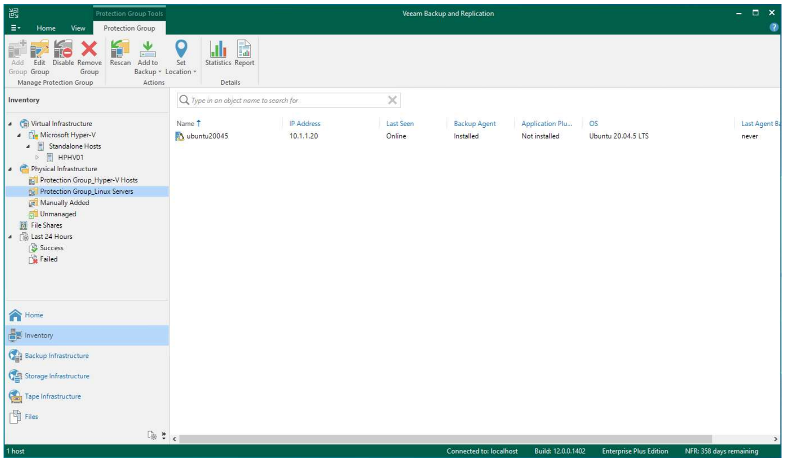

Machine rescan
Close

Name: **Rescan of Protection Group_Linux Servers**
Action type: Rescan
Initiated by: GOODDEALMART\csun
Status: **Success**
Start time: 2/7/2023 2:30:07 PM
End time: 2/7/2023 2:33:09 PM

Name ↑	Status
ubuntu20045	✓ Success

Message	Duration
✓ Job started at 2/7/2023 2:30:07 PM	
✓ Performing rescan	0:02:58
✓ 1 host processed	
✓ Job finished at 2/7/2023 2:33:09 PM	

40. Verify that the protection group has been added.


Protection Group Tools
Veeam Backup and Replication
Home
View
Protection Group
Add Group
Edit Group
Disable
Remove Group
Manage Protection Group
Rescan
Add to Backup
Set Location
Actions
Statistics
Report
Details
Inventory
Type in an object name to search for
Virtual Infrastructure
Microsoft Hyper-V
Standalone Hosts
HPHV01
Physical Infrastructure
Protection Group_Hyper-V Hosts
Protection Group_Linux Servers
Manually Added
Unmanaged
File Shares
Last 24 Hours
Success
Failed
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
1 host
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 358 days remaining

Name ↑	IP Address	Last Seen	Backup Agent	Application Plu...	OS	Last Agent Ba
ubuntu20045	10.1.1.20	Online	Installed	Not installed	Ubuntu 20.04.5 LTS	never

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Backup Repository

Veeam stores backup files and metadata for replicated virtual machines in a backup repository. You can use the following storage types to set up a backup repository:

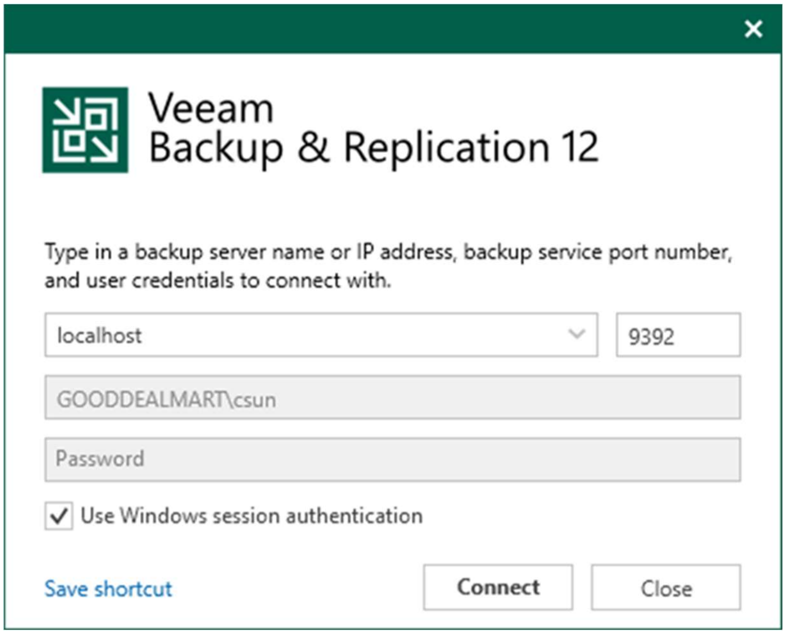
- Microsoft Windows server with local or network storage.
- Linux server with local or network storage.
- Linux server with a hardened repository.
- SMB (CIF) share network attached storage.
- NFS Share network attached storage.
- Deduplicatings storage appliances.
- Object storage.

Do not configure multiple backup repositories pointing to the exact location or using the same path.

Add the Microsoft Windows server’s local directory as a 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)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console and click Connect.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication

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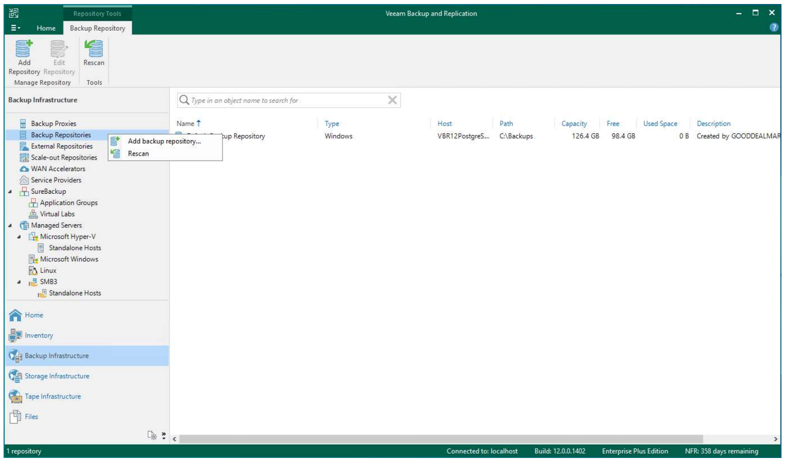
3. Select Backup Infrastructure on the Home page.
4. Select Backup Repositories on the Backup Infrastructure page.
5. Right-click Backup Repositories and select Add backup repository.

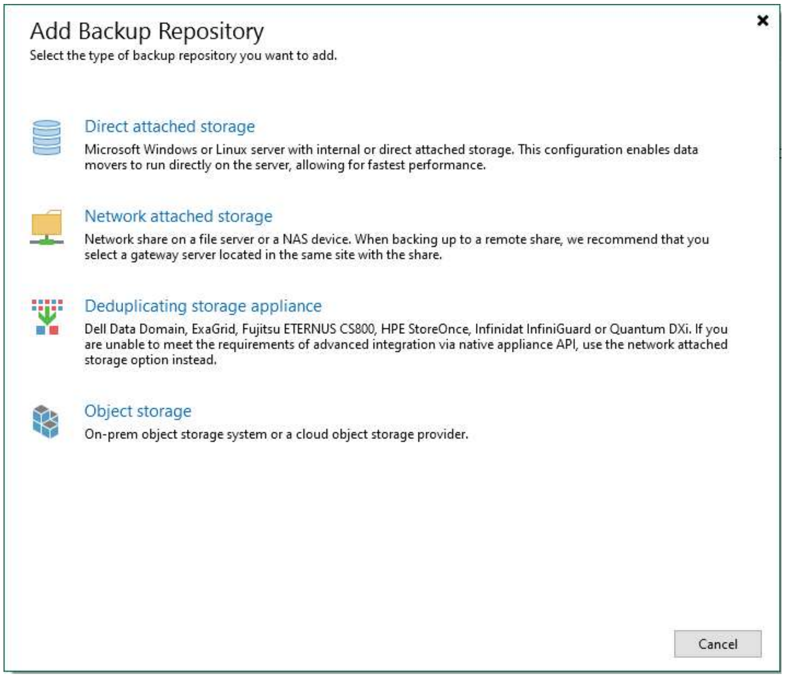

Repository Tools
Home
Backup Repository
Veeam Backup and Replication
Add Repository
Edit Repository
Manage Repository
Rescan
Tools
Backup Infrastructure
Type in an object name to search for
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Add backup repository...
Rescan
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files

Name	Type	Host	Path	Capacity	Free	Used Space	Description
up Repository	Windows	VBR12PostgreS...	C:\Backups	126.4 GB	98.4 GB	0 B	Created by GOODDEALMAR

1 repository
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 358 days remaining

---

6. Select Direct attached storage on the Add Backup Repository page.



Add Backup Repository

Select the type of backup repository you want to add.

Direct attached storage

Microsoft Windows or Linux server with internal or direct attached storage. This configuration enables data movers to run directly on the server, allowing for fastest performance.

Network attached storage

Network share on a file server or a NAS device. When backing up to a remote share, we recommend that you select a gateway server located in the same site with the share.

Deduplicating storage appliance

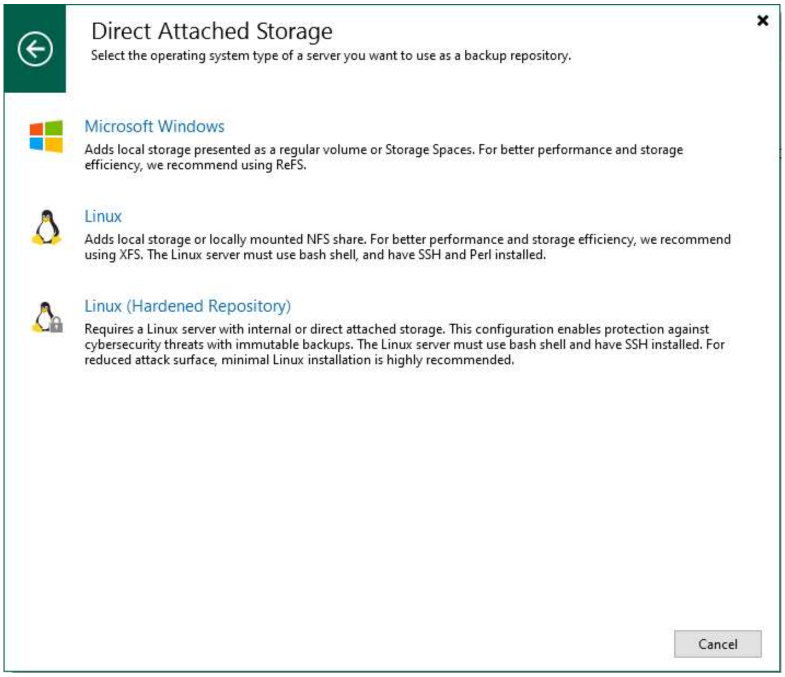
Dell Data Domain, ExaGrid, Fujitsu ETERNUS CS800, HPE StoreOnce, Infinidat InfiniGuard or Quantum DXi. If you are unable to meet the requirements of advanced integration via native appliance API, use the network attached storage option instead.

Object storage

On-prem object storage system or a cloud object storage provider.

---

7. Select Microsoft Windows on the Direct Attached Storage page.



Direct Attached Storage

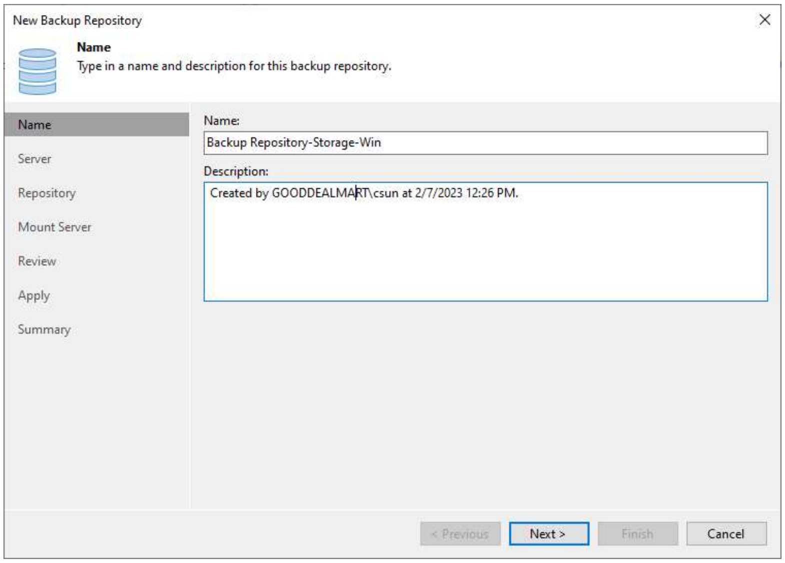
Select the operating system type of a server you want to use as a backup repository.

Microsoft Windows
Adds local storage presented as a regular volume or Storage Spaces. For better performance and storage efficiency, we recommend using ReFS.

Linux
Adds local storage or locally mounted NFS share. For better performance and storage efficiency, we recommend using XFS. The Linux server must use bash shell, and have SSH and Perl installed.

Linux (Hardened Repository)
Requires a Linux server with internal or direct attached storage. This configuration enables protection against cybersecurity threats with immutable backups. The Linux server must use bash shell and have SSH installed. For reduced attack surface, minimal Linux installation is highly recommended.

8. On the Name page, specify a Backup Repository name.
9. Give a brief description in the Description field for future reference and click Next.



New Backup Repository

Name
Type in a name and description for this backup repository.

Name: Backup Repository-Storage-Win

Description: Created by GOODDEALMART\csun at 2/7/2023 12:26 PM.

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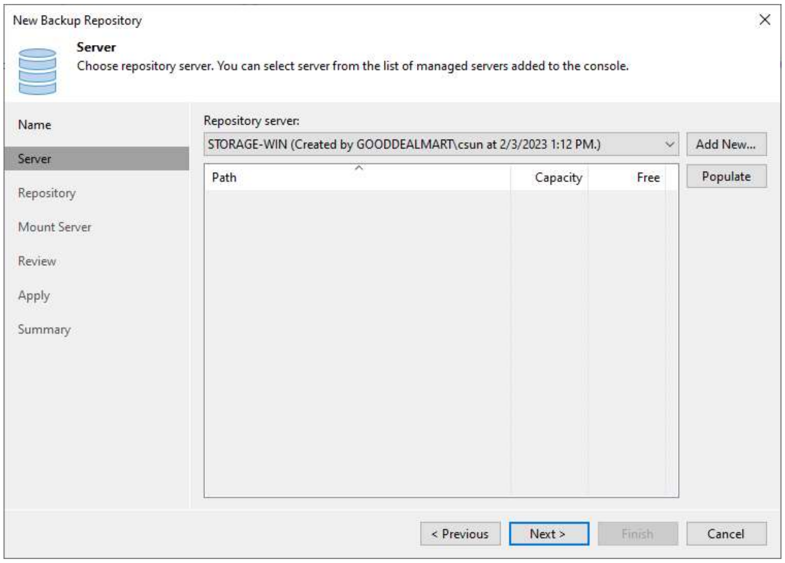
10. On the Server page, select the Microsoft Windows server from the Repository server drop-down list and click Populate.



New Backup Repository

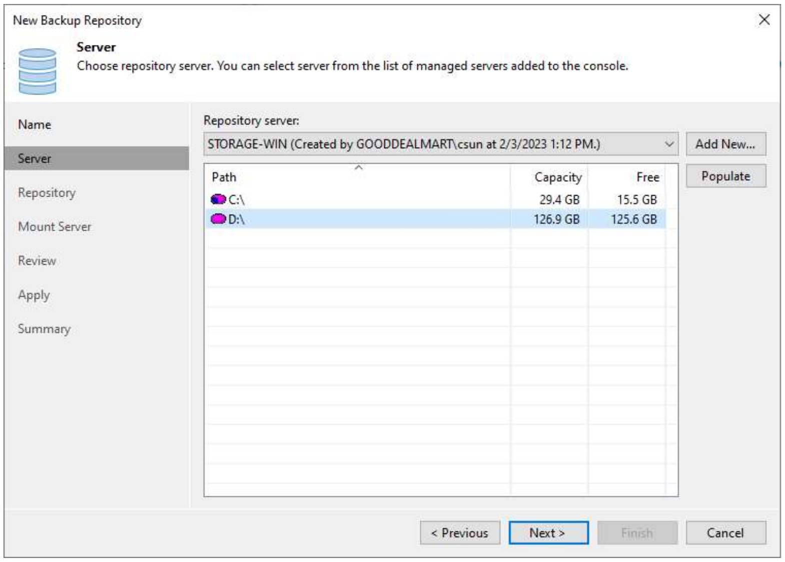
Server

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

Repository server: STORAGE-WIN (Created by GOODDEALMART\csun at 2/3/2023 1:12 PM.)

Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Populate
Path
Capacity
Free
< Previous
Next >
Finish
Cancel

11. Select the disk and click Next.



New Backup Repository

Server

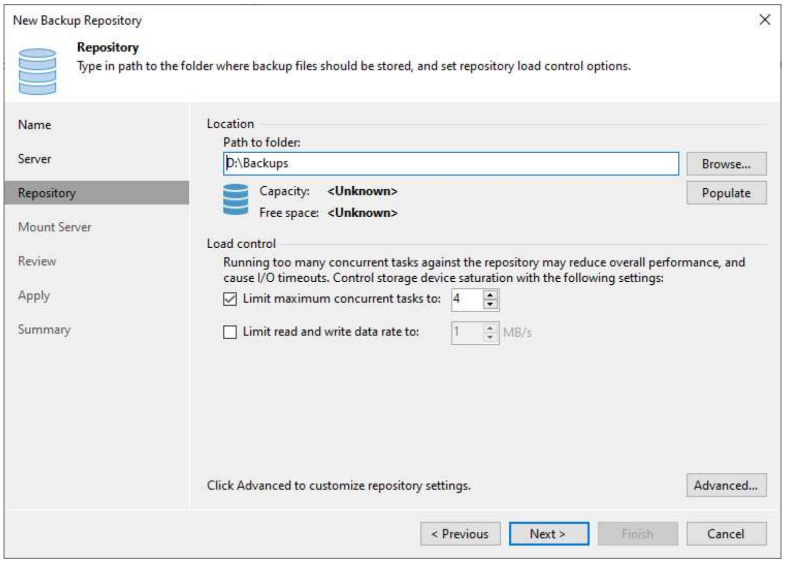
Choose repository server. You can select server from the list of managed servers added to the console.

Repository server: STORAGE-WIN (Created by GOODDEALMART\csun at 2/3/2023 1:12 PM.)

Path	Capacity	Free
C:\	29.4 GB	15.5 GB
D:\	126.9 GB	125.6 GB

Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Populate
< Previous
Next >
Finish
Cancel

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


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Browse...
Populate
Advanced...
< Previous
Next >
Finish
Cancel

Repository

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

Location

Path to folder: D:\Backups

Capacity: **<Unknown>**

Free space: **<Unknown>**

Load control

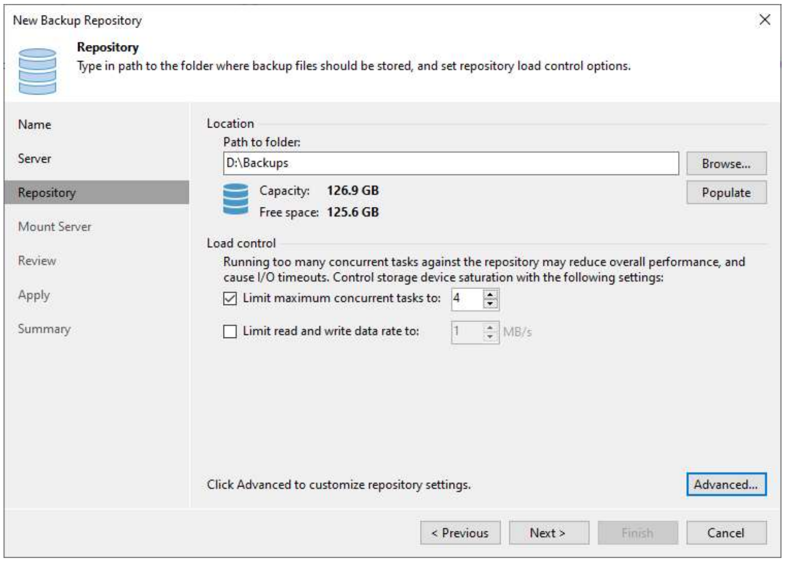
Running too many concurrent tasks against the repository may reduce overall performance, and cause I/O timeouts. Control storage device saturation with the following settings:

☑ Limit maximum concurrent tasks to: 4

☐ Limit read and write data rate to: 1 MB/s

Click Advanced to customize repository settings.

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


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Browse...
Populate
Advanced...
< Previous
Next >
Finish
Cancel

Repository

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

Location

Path to folder: D:\Backups

Capacity: **126.9 GB**

Free space: **125.6 GB**

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.

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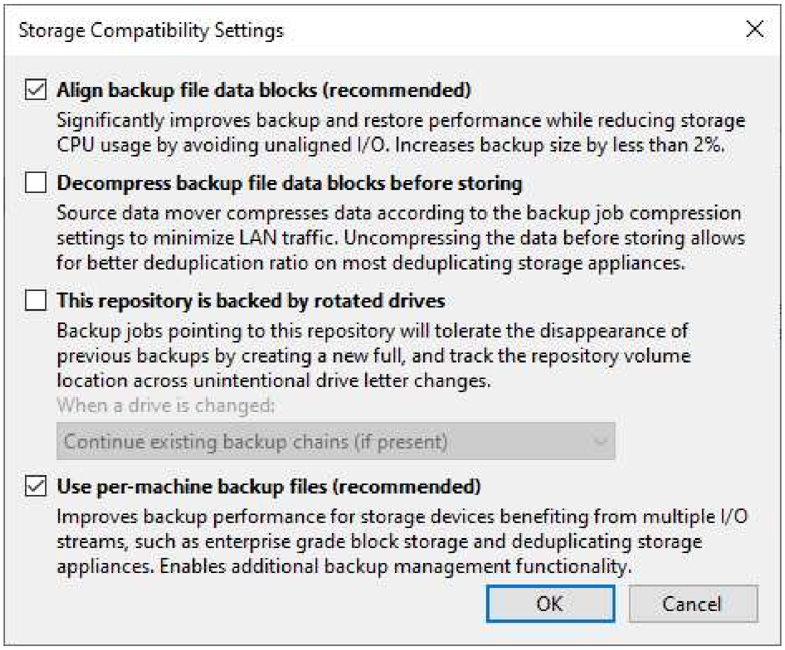
15. On the Storage Compatibility Settings, select Align backup file data blocks (recommended) checkbox
16. Select Use per-machine backup files and click OK.

Note:

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



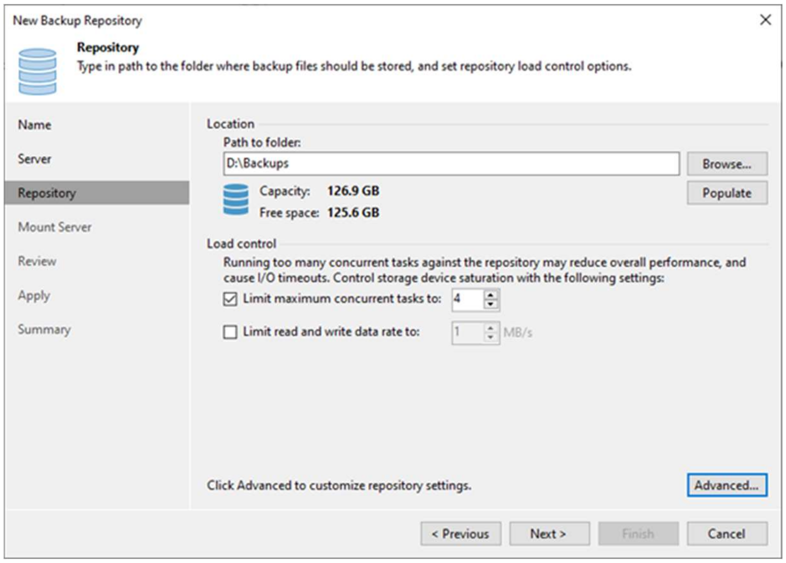
☑ **Align backup file data blocks (recommended)**
Significantly improves backup and restore performance while reducing storage CPU usage by avoiding unaligned I/O. Increases backup size by less than 2%.

☐ **Decompress backup file data blocks before storing**
Source data mover compresses data according to the backup job compression settings to minimize LAN traffic. Uncompressing the data before storing allows for better deduplication ratio on most deduplicating storage appliances.

☐ **This repository is backed by rotated drives**
Backup jobs pointing to this repository will tolerate the disappearance of previous backups by creating a new full, and track the repository volume location across unintentional drive letter changes.
When a drive is changed:
Continue existing backup chains (if present)

☑ **Use per-machine backup files (recommended)**
Improves backup performance for storage devices benefiting from multiple I/O streams, such as enterprise grade block storage and deduplicating storage appliances. Enables additional backup management functionality.

17. Click Next on the Repository page.



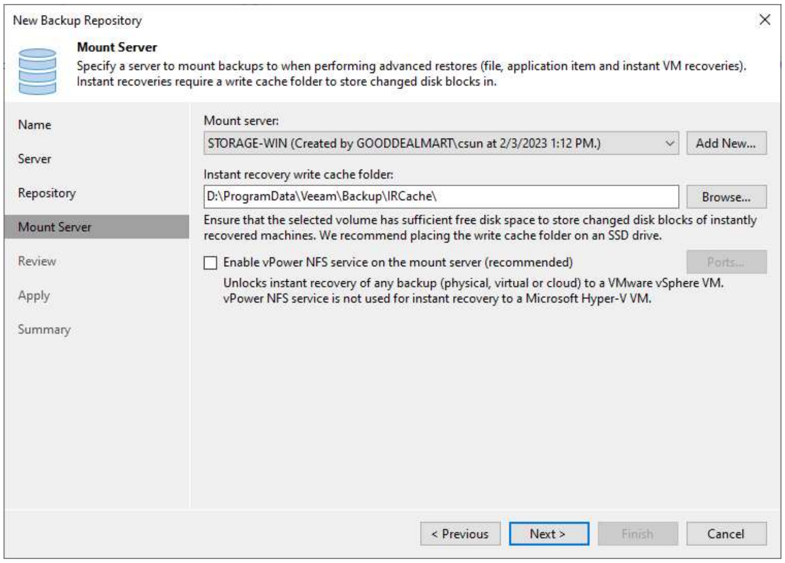
Repository
Type in path to the folder where backup files should be stored, and set repository load control options.

Location
Path to folder: D:\Backups
Capacity: 126.9 GB
Free space: 125.6 GB

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.

18. Select a mount server from the Mount server drop-down list on the Mount Server page.
19. Select a folder in the Instant recovery write cache folder field for writing cache during mount operations.
20. Unselect Enable vPower NFS service on the mount server because the vPower NFS service is not used for instant recovery to a Microsoft Hyper-V VM.
21. Click Next.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Browse...
Ports...
< Previous
Next >
Finish
Cancel

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.

Mount server:
STORAGE-WIN (Created by GOODDEALMART\csun at 2/3/2023 1:12 PM.)

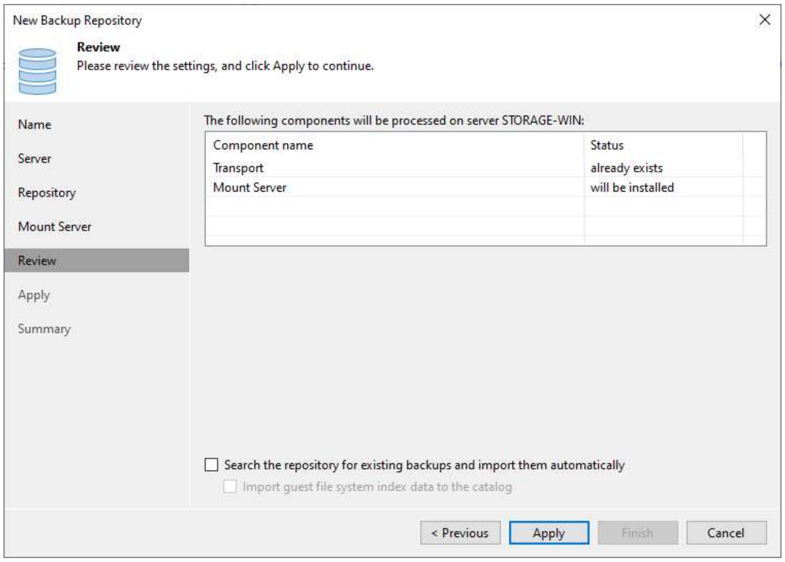
Instant recovery write cache folder:
D:\ProgramData\Veeam\Backup\IRCache\

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

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

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.

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


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Apply
Finish
Cancel

Review

Please review the settings, and click Apply to continue.

The following components will be processed on server STORAGE-WIN:

Component name	Status
Transport	already exists
Mount Server	will be installed

☐ Search the repository for existing backups and import them automatically

☐ Import guest file system index data to the catalog

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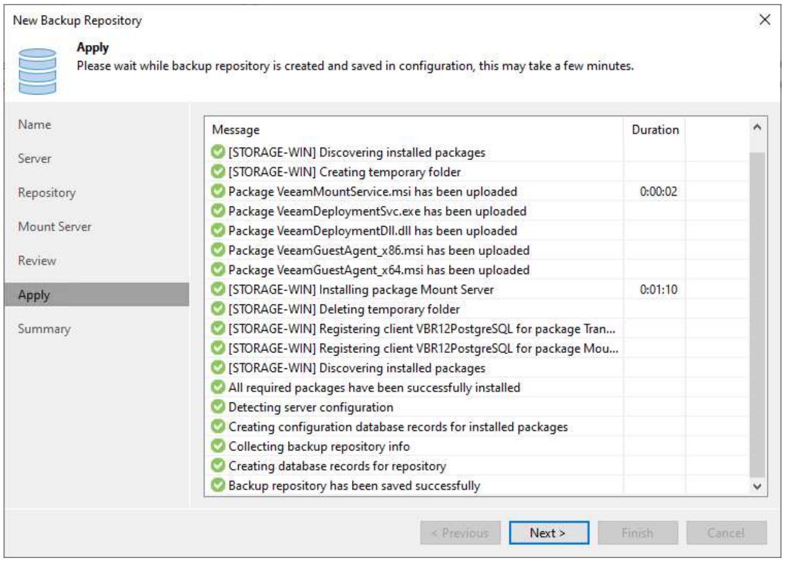
index files previously created by Veeam Backup & Replication.

25. Click Next on the Apply page.



New Backup Repository

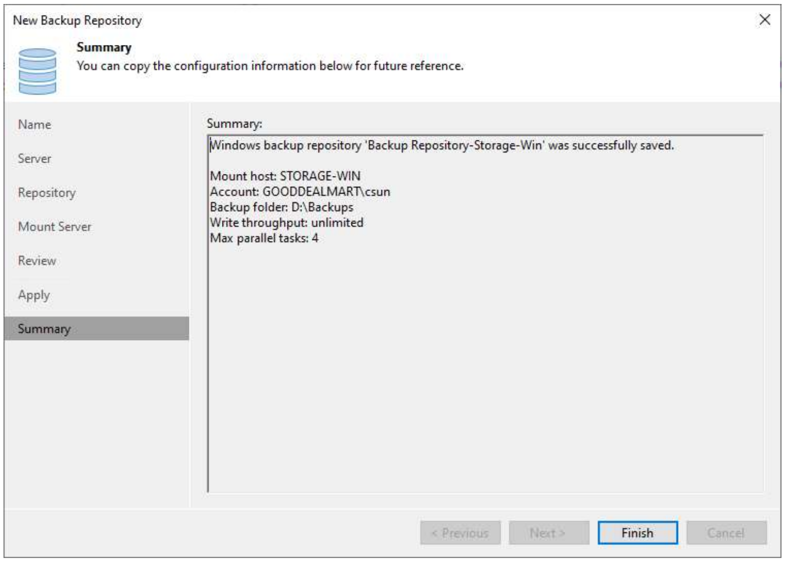
Apply

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

Message	Duration
[STORAGE-WIN] Discovering installed packages	
[STORAGE-WIN] Creating temporary folder	
Package VeeamMountService.msi has been uploaded	0:00:02
Package VeeamDeploymentSvc.exe has been uploaded	
Package VeeamDeploymentDll.dll has been uploaded	
Package VeeamGuestAgent_x86.msi has been uploaded	
Package VeeamGuestAgent_x64.msi has been uploaded	
[STORAGE-WIN] Installing package Mount Server	0:01:10
[STORAGE-WIN] Deleting temporary folder	
[STORAGE-WIN] Registering client VBR12PostgreSQL for package Tran...	
[STORAGE-WIN] Registering client VBR12PostgreSQL for package Mou...	
[STORAGE-WIN] Discovering installed packages	
All required packages have been successfully installed	
Detecting server configuration	
Creating configuration database records for installed packages	
Collecting backup repository info	
Creating database records for repository	
Backup repository has been saved successfully	

Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

26. Click Finish on the Summary page.



New Backup Repository

Summary

You can copy the configuration information below for future reference.

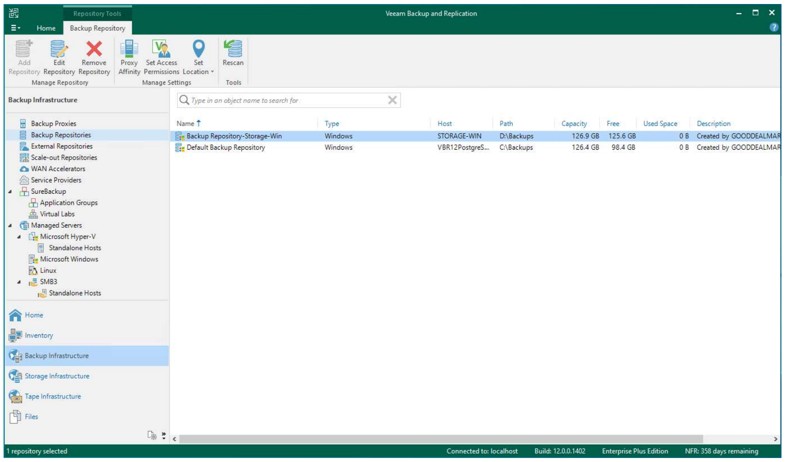
Summary:

Windows backup repository 'Backup Repository-Storage-Win' was successfully saved.

Mount host: STORAGE-WIN
Account: GOODDEALMART\csun
Backup folder: D:\Backups
Write throughput: unlimited
Max parallel tasks: 4

Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

27. Verify that the new Backup Repository has been added.


Repository Tools
Veeam Backup and Replication
Home
Backup Repository
Add Repository
Edit Repository
Remove Repository
Manage Repository
Proxy Affinity
Set Access Permissions
Set Location
Manage Settings
Rescan
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for

Name	Type	Host	Path	Capacity	Free	Used Space	Description
Backup Repository-Storage-Win	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0 B	Created by GOODDEALMAR
Default Backup Repository	Windows	VBR12PostgreS...	C:\Backups	126.4 GB	98.4 GB	0 B	Created by GOODDEALMAR

1 repository selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 358 days remaining

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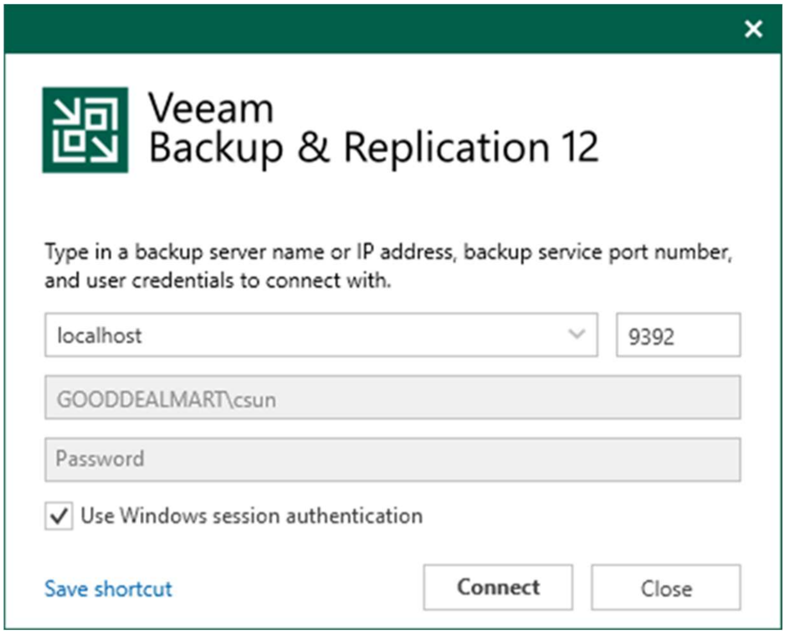
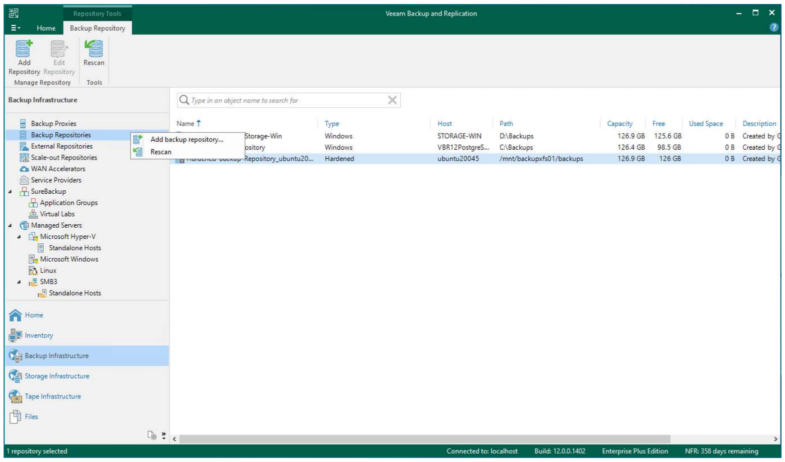
Add the Linux server's local directory as a Backup Repository

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.

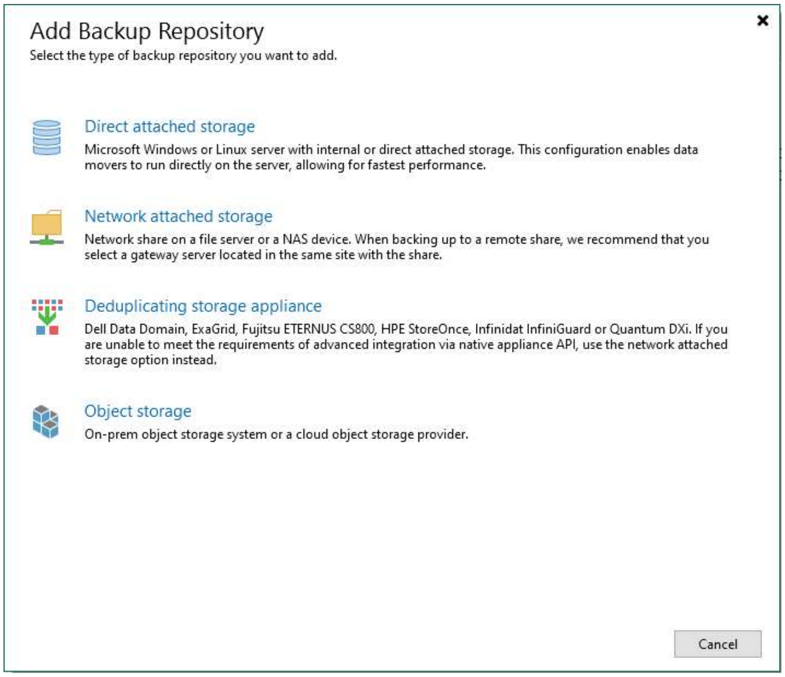
Instructions	Screenshot (if applicable)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console, and click Connect.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication

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


Veeam Backup and Replication
Repository Tools
Home
Backup Repository
Add Repository
Edit Repository
Rescan
Manage Repository
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Add backup repository...
Rescan
Type in an object name to search for
1 repository selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 358 days remaining

Name	Type	Host	Path	Capacity	Free	Used Space	Description
Storage-Win	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0 B	Created by
ository	Windows	VBR12PostgreS...	C:\Backups	126.4 GB	98.5 GB	0 B	Created by
Repository_ubuntu20...	Hardened	ubuntu20045	/mnt/backupxfs01/backups	126.9 GB	126 GB	0 B	Created by

6. Select Direct attached storage on the Add Backup Repository page.



Add Backup Repository

Select the type of backup repository you want to add.

Direct attached storage

Microsoft Windows or Linux server with internal or direct attached storage. This configuration enables data movers to run directly on the server, allowing for fastest performance.

Network attached storage

Network share on a file server or a NAS device. When backing up to a remote share, we recommend that you select a gateway server located in the same site with the share.

Deduplicating storage appliance

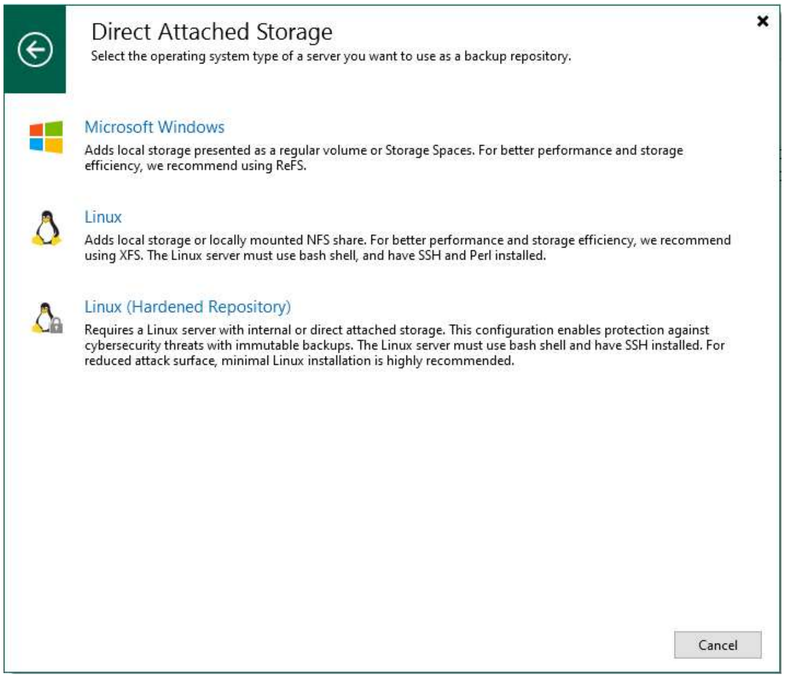
Dell Data Domain, ExaGrid, Fujitsu ETERNUS CS800, HPE StoreOnce, Infinidat InfiniGuard or Quantum DXi. If you are unable to meet the requirements of advanced integration via native appliance API, use the network attached storage option instead.

Object storage

On-prem object storage system or a cloud object storage provider.

Technet24

7. Select Linux on the Direct Attached Storage page.



Direct Attached Storage

Select the operating system type of a server you want to use as a backup repository.

Microsoft Windows

Adds local storage presented as a regular volume or Storage Spaces. For better performance and storage efficiency, we recommend using ReFS.

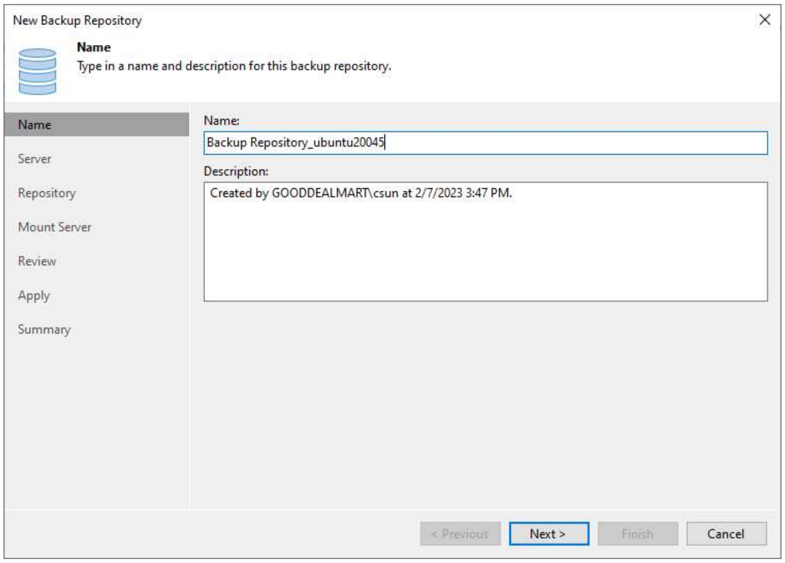
Linux

Adds local storage or locally mounted NFS share. For better performance and storage efficiency, we recommend using XFS. The Linux server must use bash shell, and have SSH and Perl installed.

Linux (Hardened Repository)

Requires a Linux server with internal or direct attached storage. This configuration enables protection against cybersecurity threats with immutable backups. The Linux server must use bash shell and have SSH installed. For reduced attack surface, minimal Linux installation is highly recommended.

8. On the Name page, specify a Backup Repository name.
9. Give a brief description in the Description field for future reference and click Next.



New Backup Repository

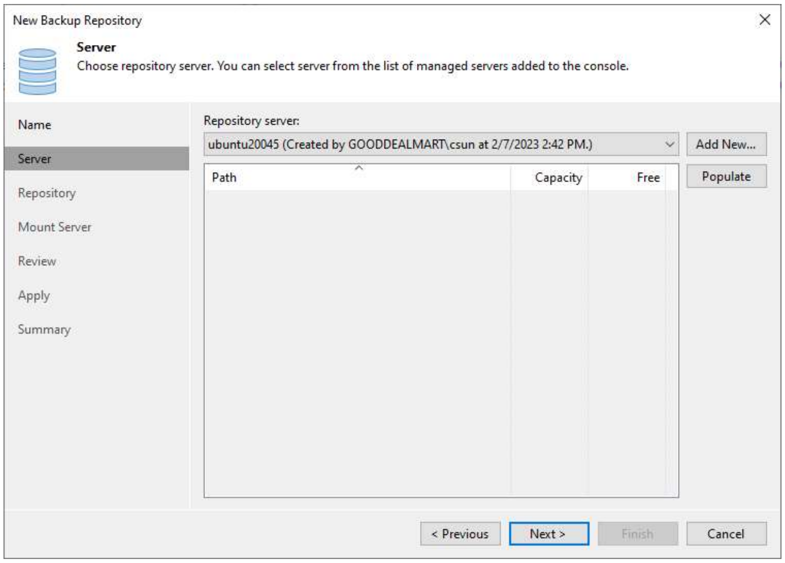
Name

Type in a name and description for this backup repository.

Name: Backup Repository_ubuntu20045

Description: Created by GOODDEALMART\csun at 2/7/2023 3:47 PM.

10. On the Server page, select the Linux server from the Repository server drop-down list and click Populate.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Populate
< Previous
Next >
Finish
Cancel

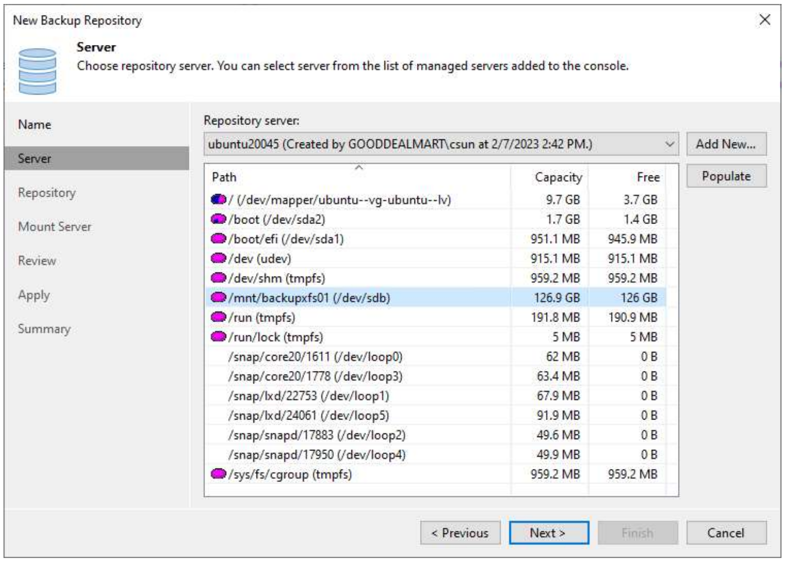
Server

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

Repository server: ubuntu20045 (Created by GOODDEALMART\csun at 2/7/2023 2:42 PM.)

Path	Capacity	Free

11. Select the disk and click Next.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Populate
< Previous
Next >
Finish
Cancel

Server

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

Repository server: ubuntu20045 (Created by GOODDEALMART\csun at 2/7/2023 2:42 PM.)

Path	Capacity	Free
/ (/dev/mapper/ubuntu--vg-ubuntu--lv)	9.7 GB	3.7 GB
/boot (/dev/sda2)	1.7 GB	1.4 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/backupxfs01 (/dev/sdb)	126.9 GB	126 GB
/run (tmpfs)	191.8 MB	190.9 MB
/run/lock (tmpfs)	5 MB	5 MB
/snap/core20/1611 (/dev/loop0)	62 MB	0 B
/snap/core20/1778 (/dev/loop3)	63.4 MB	0 B
/snap/lxd/22753 (/dev/loop1)	67.9 MB	0 B
/snap/lxd/24061 (/dev/loop5)	91.9 MB	0 B
/snap/snapd/17883 (/dev/loop2)	49.6 MB	0 B
/snap/snapd/17950 (/dev/loop4)	49.9 MB	0 B
/sys/fs/cgroup (tmpfs)	959.2 MB	959.2 MB

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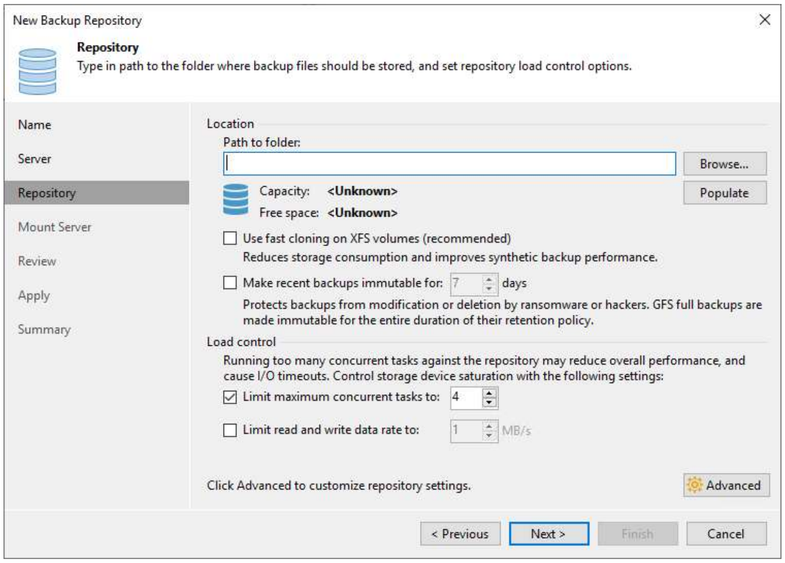
12. On the Repository page, click Browser for Path to folder.



New Backup Repository

Repository

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

Location

Path to folder:

Capacity: **<Unknown>**

Free space: **<Unknown>**

☐ 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:

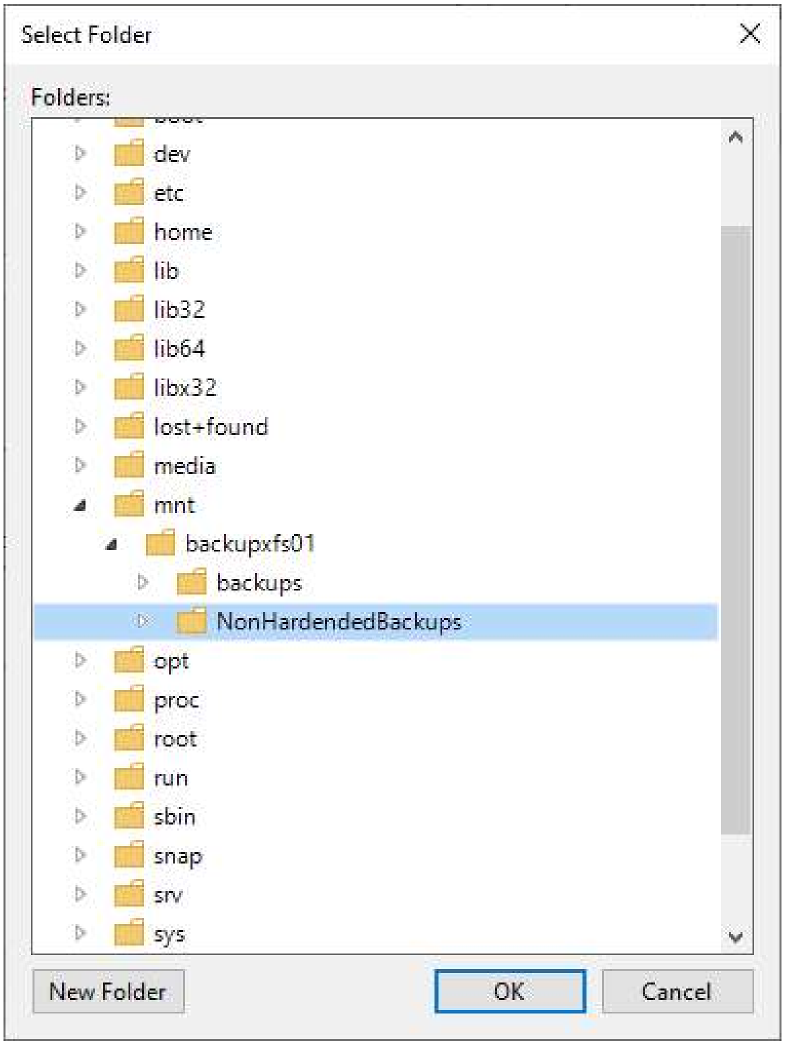
☑ Limit maximum concurrent tasks to: 4

☐ Limit read and write data rate to: 1 MB/s

Click Advanced to customize repository settings.

Name
Server
Repository
Mount Server
Review
Apply
Summary
Browse...
Populate
Advanced
< Previous
Next >
Finish
Cancel

13. On the Select Folder page, expand the server.
14. Select the NonHardenedBackups folder and click OK.


Select Folder
Folders:
boot
dev
etc
home
lib
lib32
lib64
libx32
lost+found
media
mnt
backupxfs01
backups
NonHardendedBackups
opt
proc
root
run
sbin
snap
srv
sys
New Folder
OK
Cancel

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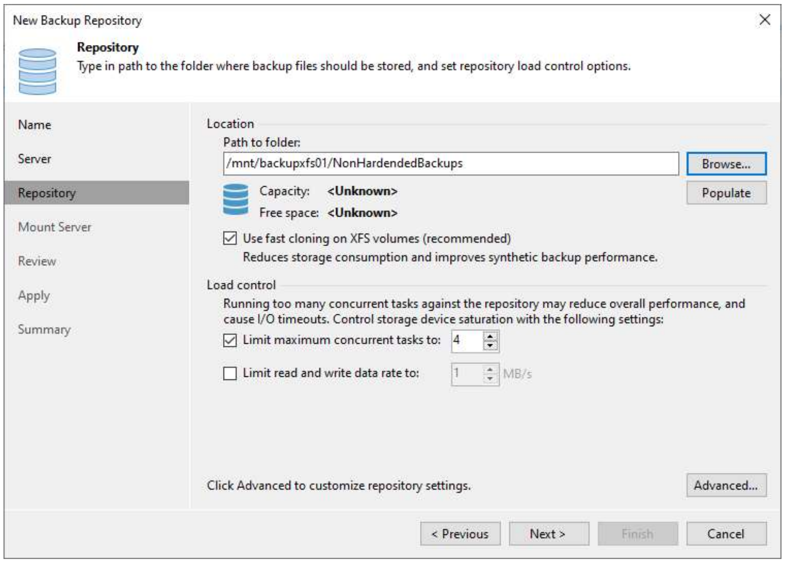
15. On the Repository page, click Populate.



New Backup Repository

Repository

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

Location

Path to folder: /mnt/backupxfs01/NonHardendedBackups

Capacity: **<Unknown>**

Free space: **<Unknown>**

☑ Use fast cloning on XFS volumes (recommended)

Reduces storage consumption and improves synthetic backup performance.

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:

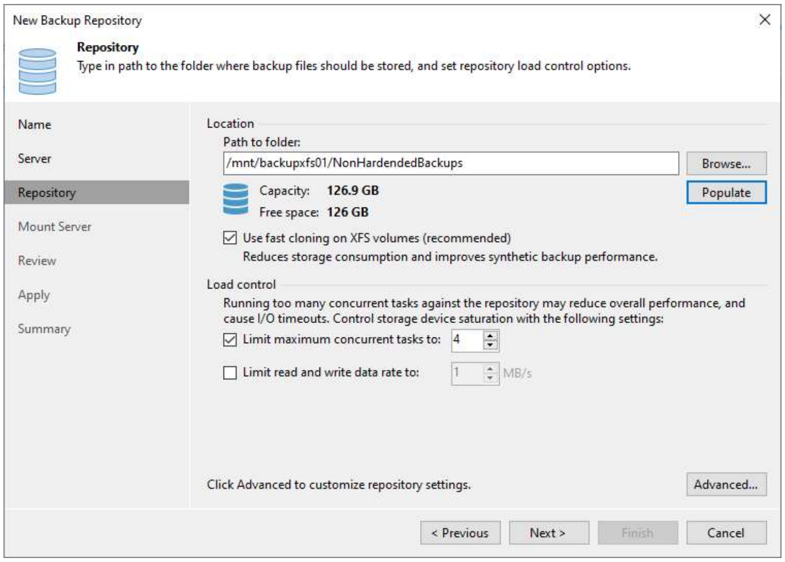
☑ Limit maximum concurrent tasks to: 4

☐ Limit read and write data rate to: 1 MB/s

Click Advanced to customize repository settings.

Name
Server
Repository
Mount Server
Review
Apply
Summary
Browse...
Populate
Advanced...
< Previous
Next >
Finish
Cancel

16. On the Repository page, select Use fast closing on XFS volumes.
17. Use the Load control settings to manage the load on the backup repository and avoid storage I/O timeouts.
18. Click Advanced.



New Backup Repository

Repository

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

Location

Path to folder: /mnt/backupxfs01/NonHardendedBackups

Capacity: **126.9 GB**

Free space: **126 GB**

☑ Use fast cloning on XFS volumes (recommended)

Reduces storage consumption and improves synthetic backup performance.

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

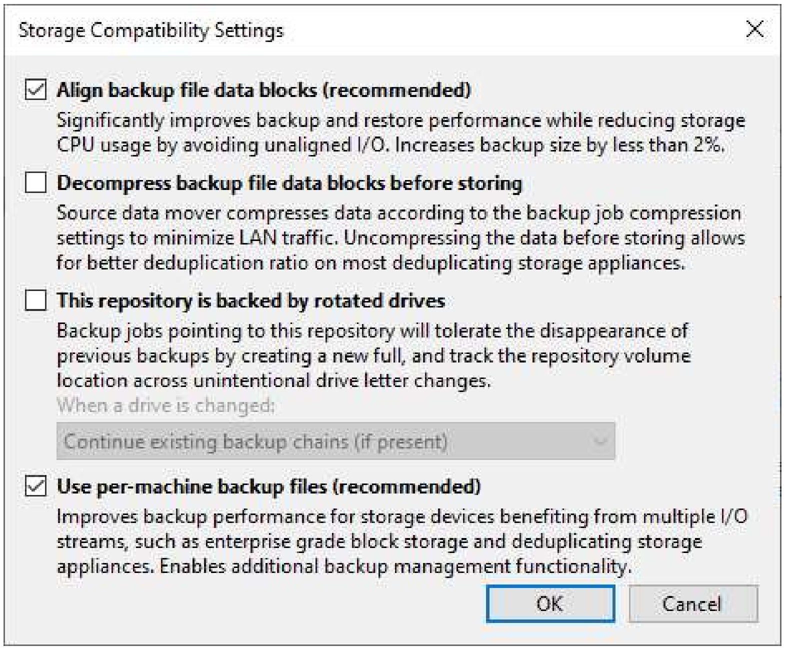
Click Advanced to customize repository settings.

Name
Server
Repository
Mount Server
Review
Apply
Summary
Browse...
Populate
Advanced...
< Previous
Next >
Finish
Cancel

19. On the Storage Compatibility Settings, select Align backup file data blocks (recommended) checkbox
20. 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.


Storage Compatibility Settings

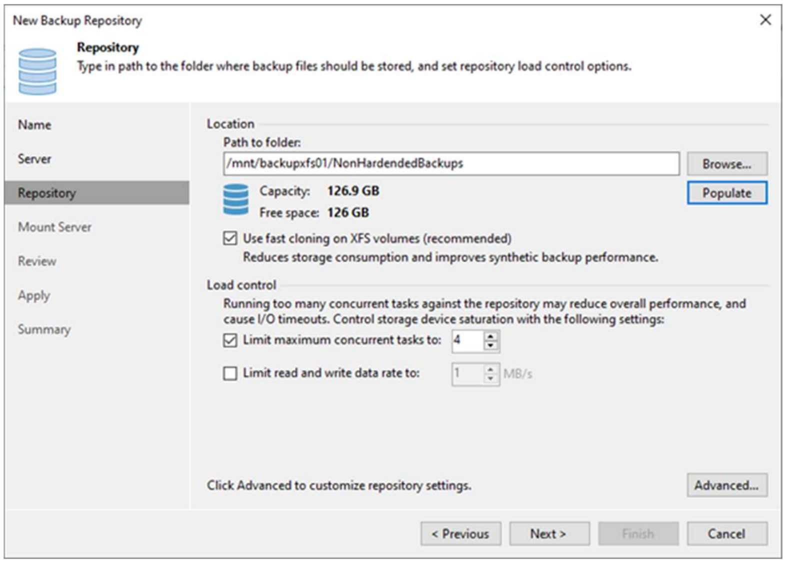
☑ **Align backup file data blocks (recommended)**
Significantly improves backup and restore performance while reducing storage CPU usage by avoiding unaligned I/O. Increases backup size by less than 2%.

☐ **Decompress backup file data blocks before storing**
Source data mover compresses data according to the backup job compression settings to minimize LAN traffic. Uncompressing the data before storing allows for better deduplication ratio on most deduplicating storage appliances.

☐ **This repository is backed by rotated drives**
Backup jobs pointing to this repository will tolerate the disappearance of previous backups by creating a new full, and track the repository volume location across unintentional drive letter changes.
When a drive is changed:
Continue existing backup chains (if present)

☑ **Use per-machine backup files (recommended)**
Improves backup performance for storage devices benefiting from multiple I/O streams, such as enterprise grade block storage and deduplicating storage appliances. Enables additional backup management functionality.

21. On the Repository page, click Next.


New Backup Repository

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

Location
Path to folder: /mnt/backupxfs01/NonHardendedBackups
Capacity: 126.9 GB
Free space: 126 GB
☑ Use fast cloning on XFS volumes (recommended)
Reduces storage consumption and improves synthetic backup performance.

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.

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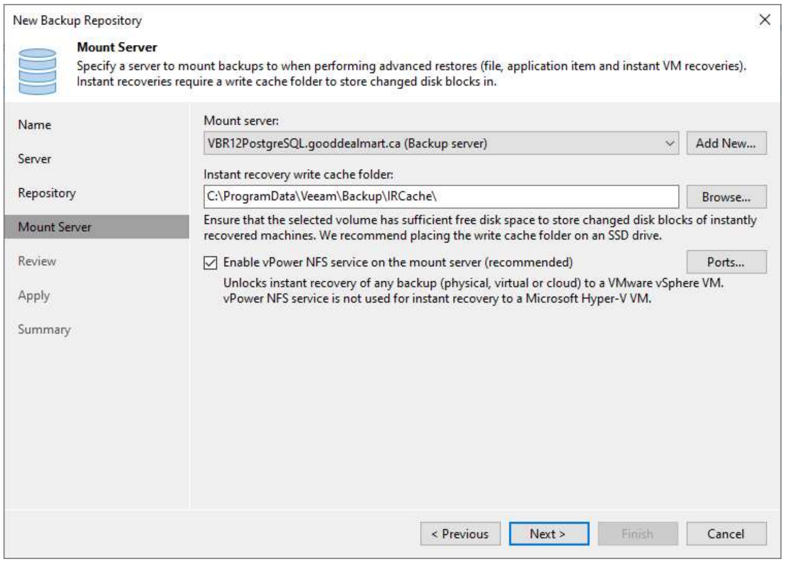
22. Select a mount server from the Mount server drop-down list on the Mount Server page.
23. Select a folder in the Instant recovery write cache folder field for writing cache during mount operations.
24. Select Enable vPower NFS service on the mount server (recommend) and click Ports.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Browse...
Ports...
< Previous
Next >
Finish
Cancel

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.

Mount server: VBR12PostgreSQL.gooddealmart.ca (Backup server)

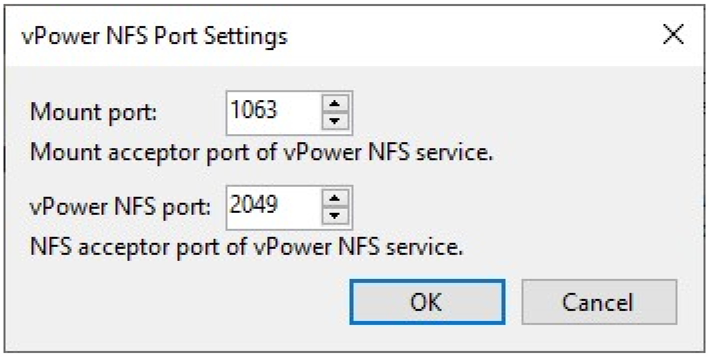
Instant recovery write cache folder: C:\ProgramData\Veeam\Backup\IRCache\

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

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

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.

25. Review the ports settings on the vPower NFS Port Settings and click OK.


vPower NFS Port Settings
OK
Cancel

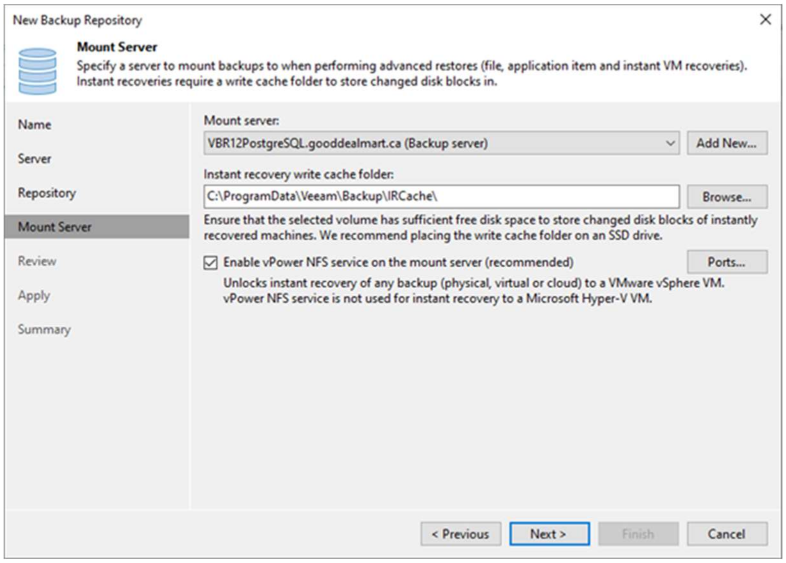
Mount port: 1063

Mount acceptor port of vPower NFS service.

vPower NFS port: 2049

NFS acceptor port of vPower NFS service.

26. Click Next on the Mount Server page.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Browse...
Ports...
< Previous
Next >
Finish
Cancel

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.

Mount server: VBR12PostgreSQL.gooddealmart.ca (Backup server)

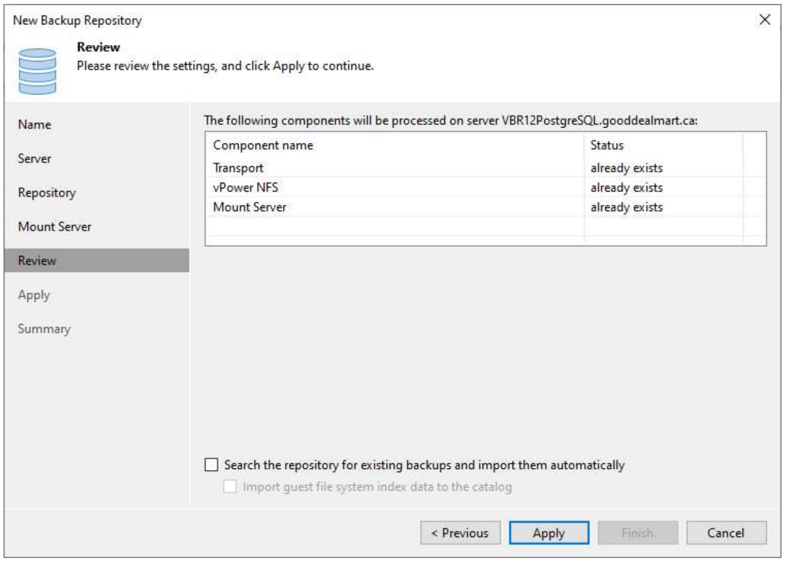
Instant recovery write cache folder: C:\ProgramData\Veeam\Backup\IRCache\

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

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

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.

27. Click Apply on the Review page.
28. Select the Search the repository for existing backups and import them automatically checkbox if the backup repository contains backups previously created with Veeam Backup & Replication.
29. Select the Import guest file system index data to the catalog checkbox if the backup repository contains guest file system index files previously created by Veeam Backup & Replication.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Apply
Finish
Cancel

Review

Please review the settings, and click Apply to continue.

The following components will be processed on server VBR12PostgreSQL.gooddealmart.ca:

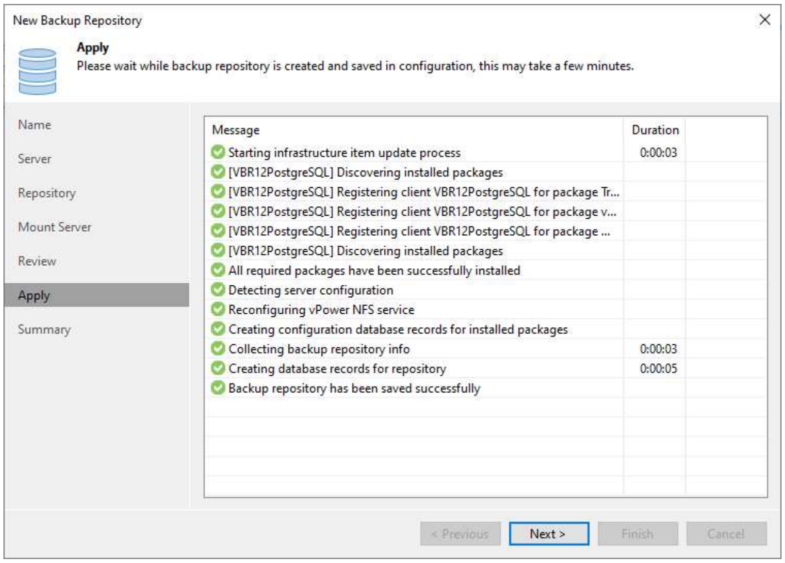
Component name	Status
Transport	already exists
vPower NFS	already exists
Mount Server	already exists

☐ Search the repository for existing backups and import them automatically

☐ Import guest file system index data to the catalog

Technet24

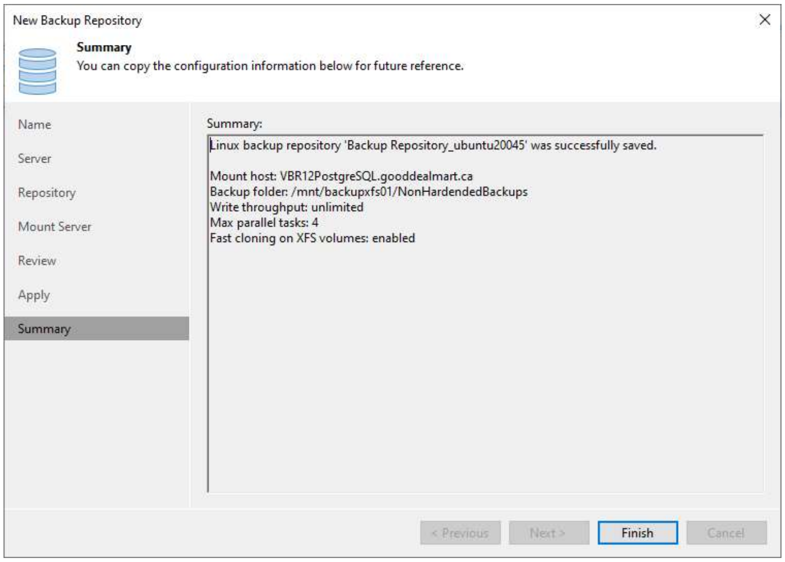
30. Click Next on the Apply page.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

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

Message	Duration
✓ Starting infrastructure item update process	0:00:03
✓ [VBR12PostgreSQL] Discovering installed packages	
✓ [VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Tr...	
✓ [VBR12PostgreSQL] Registering client VBR12PostgreSQL for package v...	
✓ [VBR12PostgreSQL] Registering client VBR12PostgreSQL for package ...	
✓ [VBR12PostgreSQL] Discovering installed packages	
✓ All required packages have been successfully installed	
✓ Detecting server configuration	
✓ Reconfiguring vPower NFS service	
✓ Creating configuration database records for installed packages	
✓ Collecting backup repository info	0:00:03
✓ Creating database records for repository	0:00:05
✓ Backup repository has been saved successfully	

31. Click Finish on the Summary page.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

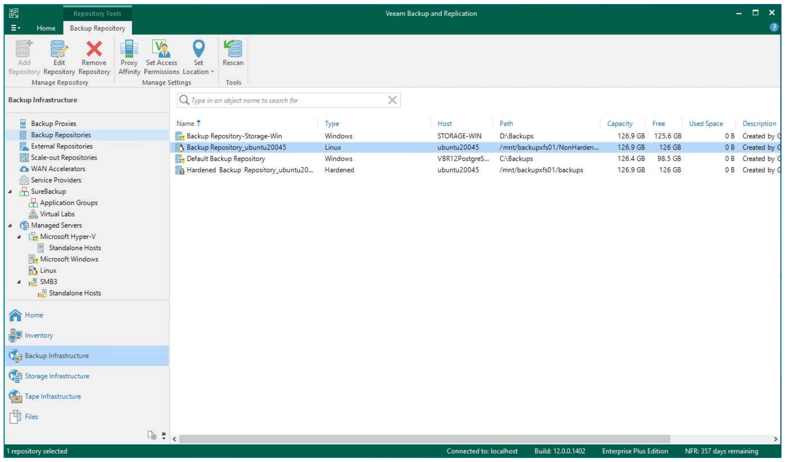
Summary
You can copy the configuration information below for future reference.

Summary:

```
Linux backup repository 'Backup Repository_ubuntu20045' was successfully saved.

Mount host: VBR12PostgreSQL.gooddealmart.ca
Backup folder: /mnt/backupxfs01/NonHardendedBackups
Write throughput: unlimited
Max parallel tasks: 4
Fast cloning on XFS volumes: enabled
```

32. Verify that the Linux Backup Repository has been added.



Repository Tools
Veeam Backup and Replication
Home
Backup Repository
Add Repository
Edit Repository
Remove Repository
Manage Repository
Proxy Affinity
Set Access Permissions
Set Location
Manage Settings
Rescan
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
1 repository selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 357 days remaining

Name	Type	Host	Path	Capacity	Free	Used Space	Description
Backup Repository-Storage-Win	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0 B	Created by
Backup Repository_ubuntu20045	Linux	ubuntu20045	/mnt/backupxfs01/NonHarden...	126.9 GB	126 GB	0 B	Created by
Default Backup Repository	Windows	VBR12PostgreS...	C:\Backups	126.4 GB	98.5 GB	0 B	Created by
Hardened Backup Repository_ubuntu20...	Hardened	ubuntu20045	/mnt/backupxfs01/backups	126.9 GB	126 GB	0 B	Created by

Technet24

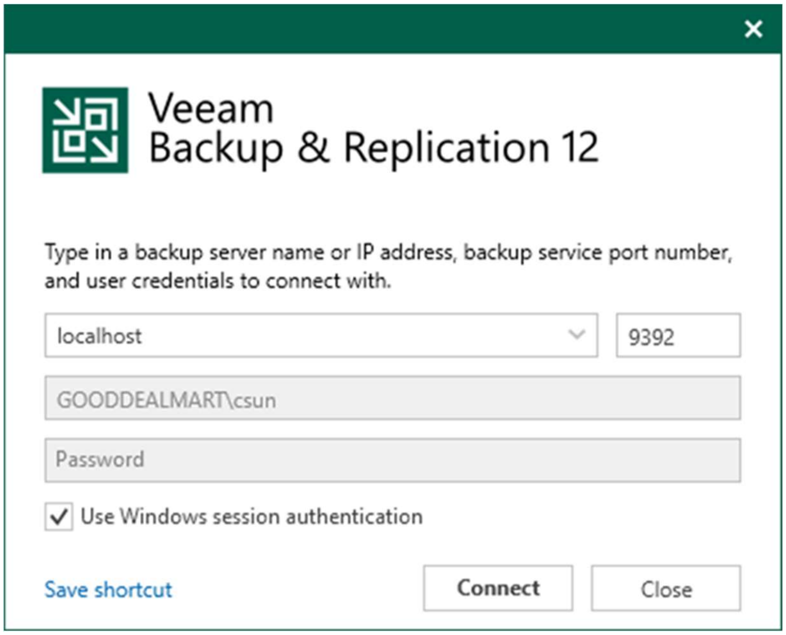
Add the Linux server's local directory as a Hardened Backup Repository

You can add a hardened repository based on a Linux server to your backup infrastructure to protect your backup files from loss due to malware activity or unplanned actions. The hardened repository supports the following features:

- Immutability: You specify the period when you add a hardened repository, and backup files must be immutable.
- Single-use credentials: Credentials will only be used once to add the Linux server to the backup infrastructure. The backup infrastructure does not store these credentials. Therefore, the attacker cannot access the hardened repository even if the Veeam Backup & Replication server is compromised.

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.


Veeam
Backup & Replication 12

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

localhost 9392

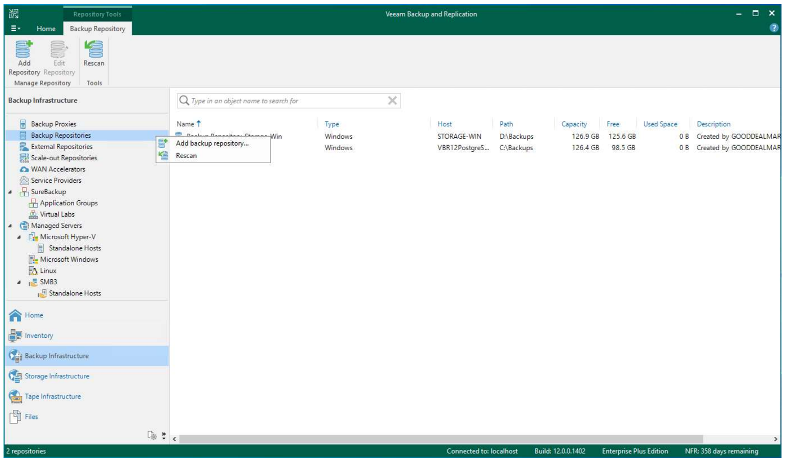
GOODDEALMART\csun

Password

☑ Use Windows session authentication

Save shortcut
Connect
Close

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


Repository Tools
Veeam Backup and Replication
Home
Backup Repository
Add Repository
Edit Repository
Rescan
Manage Repository
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
Add backup repository...
Rescan

Name	Type	Host	Path	Capacity	Free	Used Space	Description
[illegible]	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0 B	Created by GOODDEALMAR
	Windows	VBR12PostgreS...	C:\Backups	126.4 GB	98.5 GB	0 B	Created by GOODDEALMAR

2 repositories

Connected to: localhost Build: 12.0.0.1402 Enterprise Plus Edition NFR: 358 days remaining

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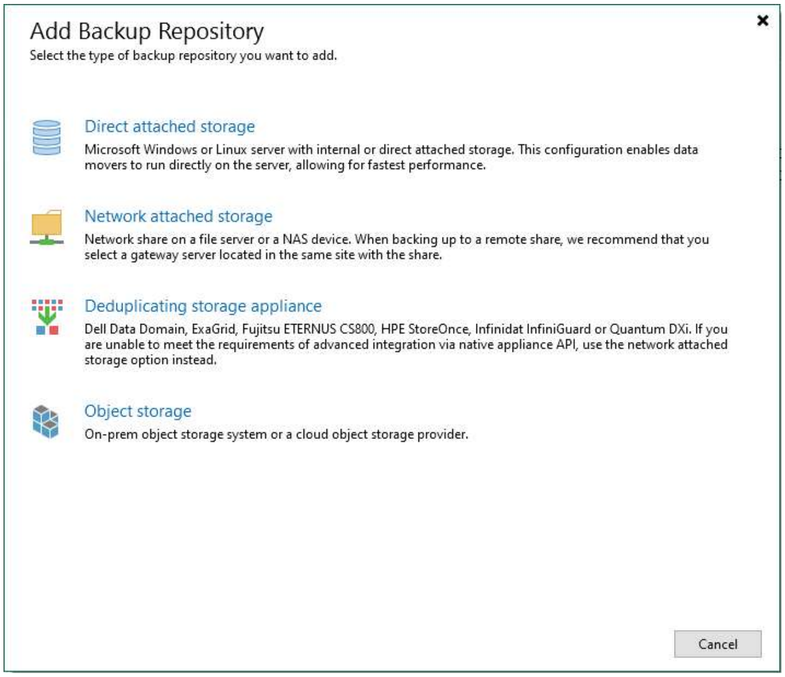
6. Select Direct attached storage on the Add Backup Repository page.



Add Backup Repository

Select the type of backup repository you want to add.

Direct attached storage

Microsoft Windows or Linux server with internal or direct attached storage. This configuration enables data movers to run directly on the server, allowing for fastest performance.

Network attached storage

Network share on a file server or a NAS device. When backing up to a remote share, we recommend that you select a gateway server located in the same site with the share.

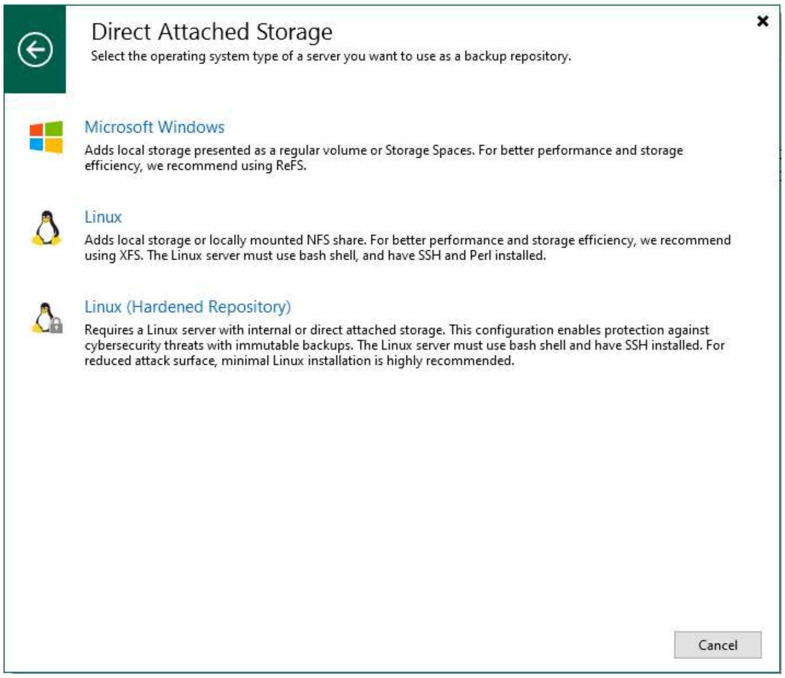
Deduplicating storage appliance

Dell Data Domain, ExaGrid, Fujitsu ETERNUS CS800, HPE StoreOnce, Infinidat InfiniGuard or Quantum DXi. If you are unable to meet the requirements of advanced integration via native appliance API, use the network attached storage option instead.

Object storage

On-prem object storage system or a cloud object storage provider.

7. Select Linux (Hardened Repository) on the Direct Attached Storage page.



Direct Attached Storage

Select the operating system type of a server you want to use as a backup repository.

Microsoft Windows

Adds local storage presented as a regular volume or Storage Spaces. For better performance and storage efficiency, we recommend using ReFS.

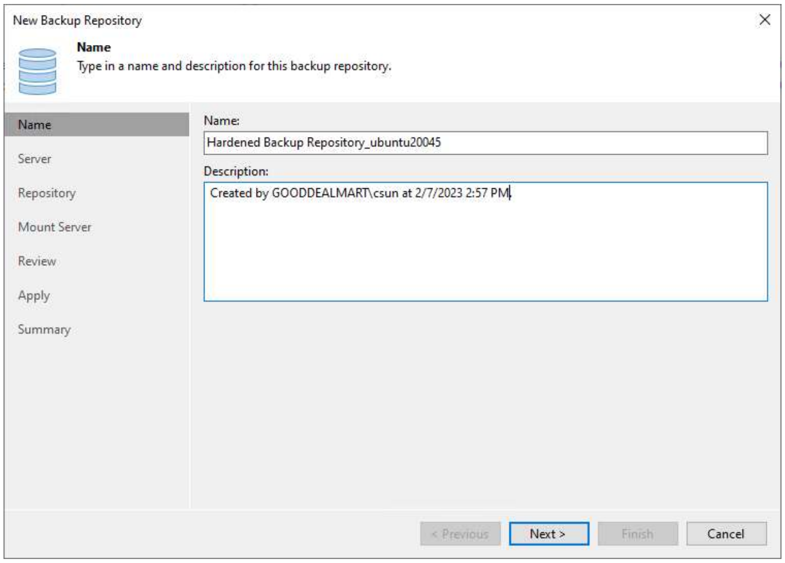
Linux

Adds local storage or locally mounted NFS share. For better performance and storage efficiency, we recommend using XFS. The Linux server must use bash shell, and have SSH and Perl installed.

Linux (Hardened Repository)

Requires a Linux server with internal or direct attached storage. This configuration enables protection against cybersecurity threats with immutable backups. The Linux server must use bash shell and have SSH installed. For reduced attack surface, minimal Linux installation is highly recommended.

8. On the Name page, specify a Backup Repository name.
9. Give a brief description in the Description field for future reference and click Next.



New Backup Repository

Name

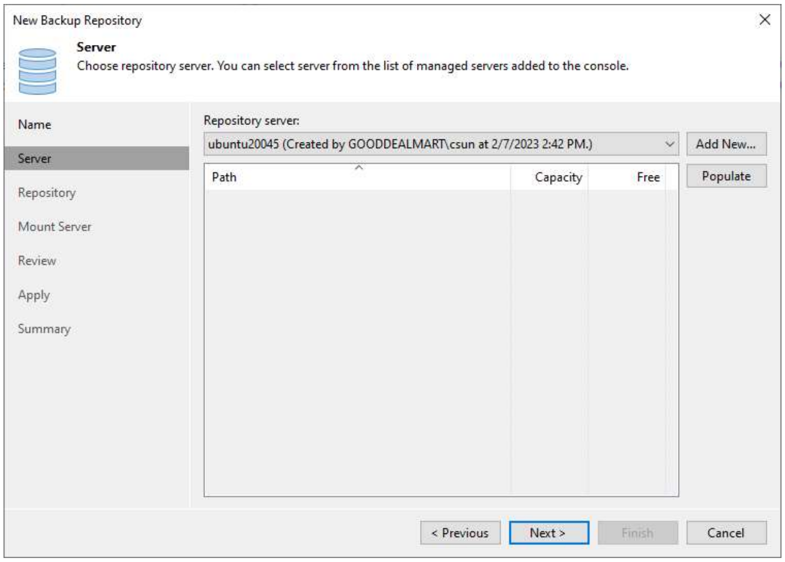
Type in a name and description for this backup repository.

Name: Hardened Backup Repository_ubuntu20045

Description: Created by GOODDEALMART\csun at 2/7/2023 2:57 PM

Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

10. On the Server page, select the Linux server from the Repository server drop-down list and click Populate.



New Backup Repository

Server

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

Repository server: ubuntu20045 (Created by GOODDEALMART\csun at 2/7/2023 2:42 PM.)

Path	Capacity	Free

Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Populate
< Previous
Next >
Finish
Cancel

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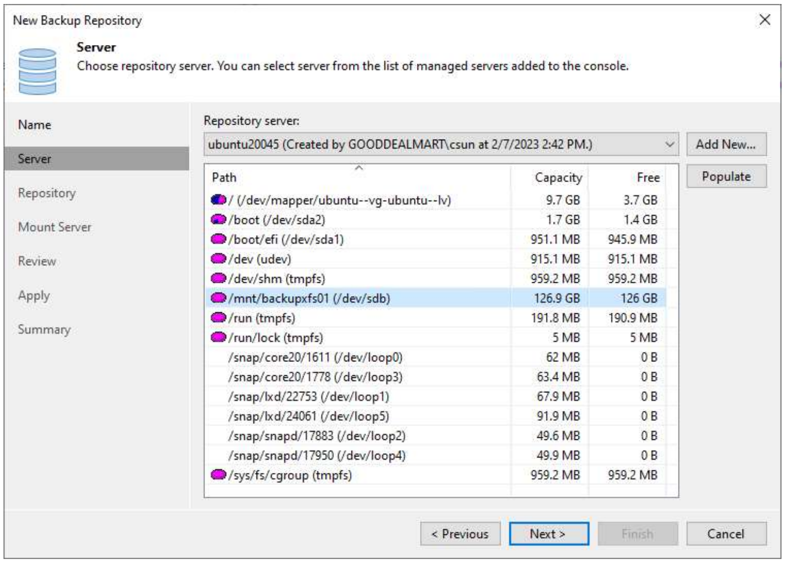
11. Select the disk and click Next.



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:

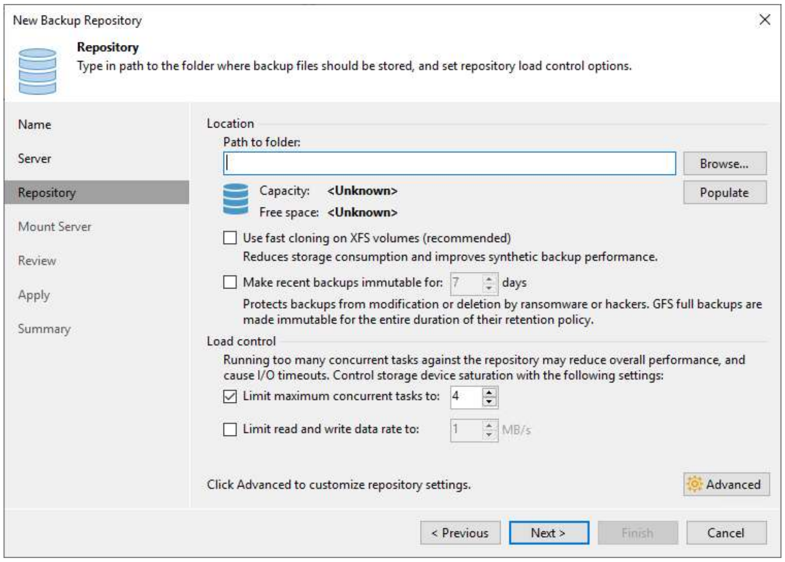
ubuntu20045 (Created by GOODDEALMART\csun at 2/7/2023 2:42 PM.)

Add New...
Populate

Path	Capacity	Free
/ (/dev/mapper/ubuntu--vg-ubuntu--lv)	9.7 GB	3.7 GB
/boot (/dev/sda2)	1.7 GB	1.4 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/backupxfs01 (/dev/sdb)	126.9 GB	126 GB
/run (tmpfs)	191.8 MB	190.9 MB
/run/lock (tmpfs)	5 MB	5 MB
/snap/core20/1611 (/dev/loop0)	62 MB	0 B
/snap/core20/1778 (/dev/loop3)	63.4 MB	0 B
/snap/lxd/22753 (/dev/loop1)	67.9 MB	0 B
/snap/lxd/24061 (/dev/loop5)	91.9 MB	0 B
/snap/snapd/17883 (/dev/loop2)	49.6 MB	0 B
/snap/snapd/17950 (/dev/loop4)	49.9 MB	0 B
/sys/fs/cgroup (tmpfs)	959.2 MB	959.2 MB

< Previous
Next >
Finish
Cancel

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...
Populate

Capacity: **<Unknown>**

Free space: **<Unknown>**

☐ 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:

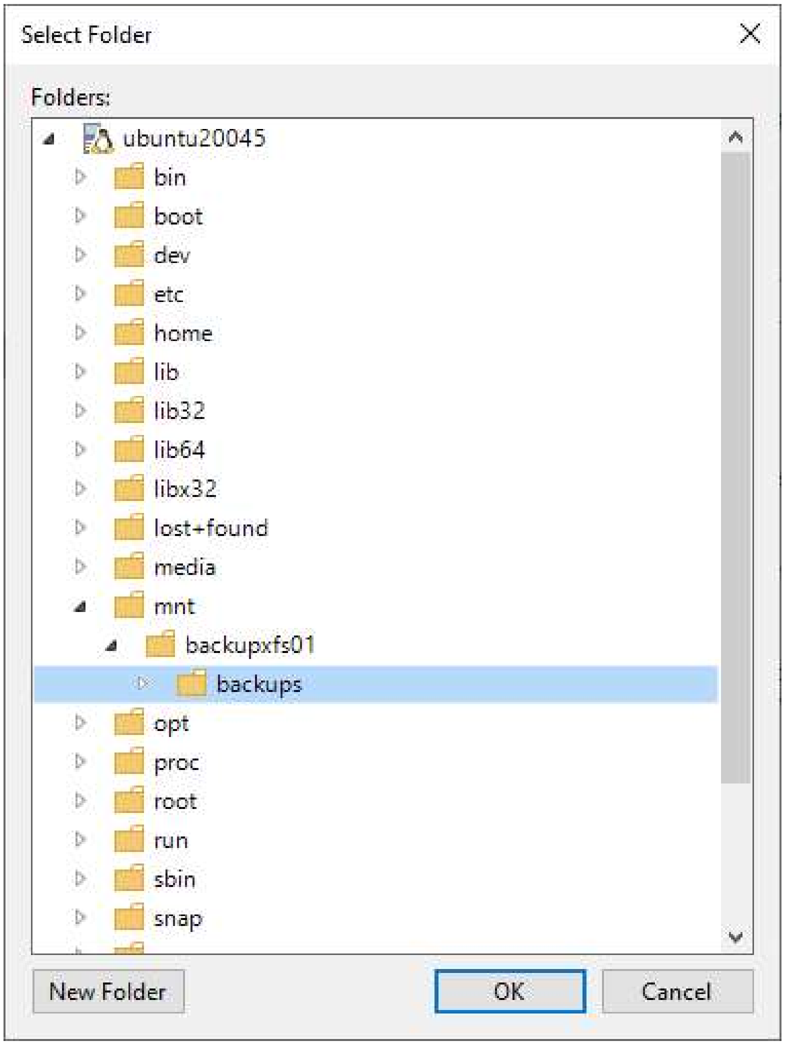
☑ Limit maximum concurrent tasks to: 4

☐ Limit read and write data rate to: 1 MB/s

Click Advanced to customize repository settings.

Advanced
< Previous
Next >
Finish
Cancel

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


Select Folder
Folders:
ubuntu20045
bin
boot
dev
etc
home
lib
lib32
lib64
libx32
lost+found
media
mnt
backupxfs01
backups
opt
proc
root
run
sbin
snap
New Folder
OK
Cancel

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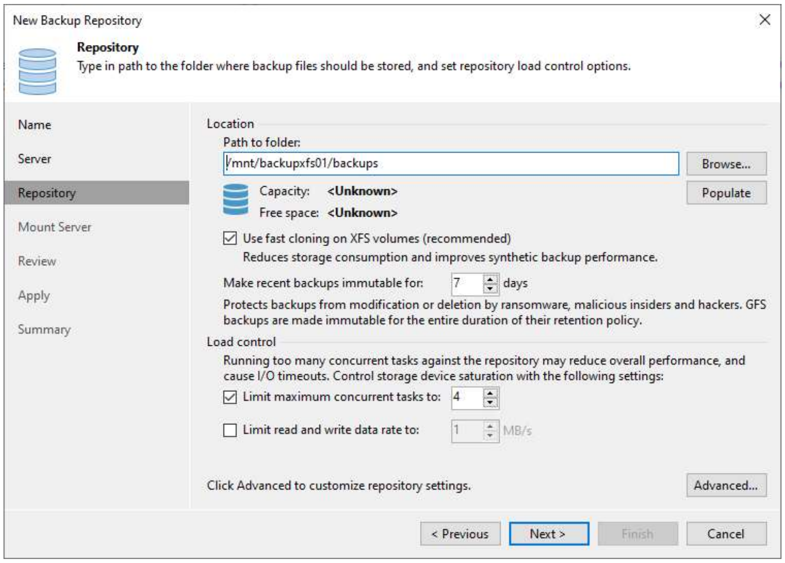
15. On the Repository page, click Populate.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Browse...
Populate
Advanced...
< Previous
Next >
Finish
Cancel

Repository

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

Location

Path to folder: /mnt/backupxfs01/backups

Capacity: **<Unknown>**

Free space: **<Unknown>**

☑ 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, malicious insiders and hackers. GFS backups are made immutable for the entire duration of their retention policy.

Load control

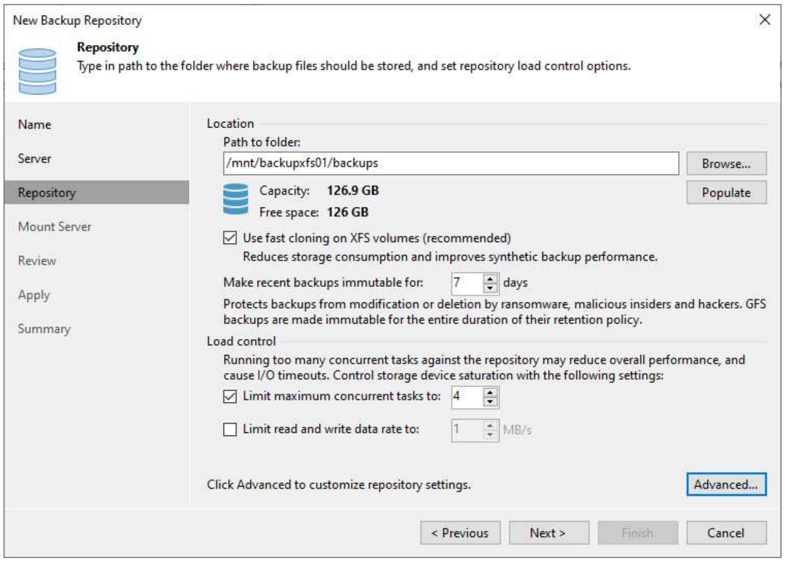
Running too many concurrent tasks against the repository may reduce overall performance, and cause I/O timeouts. Control storage device saturation with the following settings:

☑ Limit maximum concurrent tasks to: 4

☐ Limit read and write data rate to: 1 MB/s

Click Advanced to customize repository settings.

16. On the Repository page, select Use fast closing on XFS volumes.
17. Select Make recent backup immutable for 7 days. After that, it depends on your requirement.
18. Use the Load control settings to manage the load on the backup repository and avoid storage I/O timeouts.
19. Click Advanced.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Browse...
Populate
Advanced...
< Previous
Next >
Finish
Cancel

Repository

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

Location

Path to folder: /mnt/backupxfs01/backups

Capacity: **126.9 GB**

Free space: **126 GB**

☑ 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, malicious insiders and hackers. GFS 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

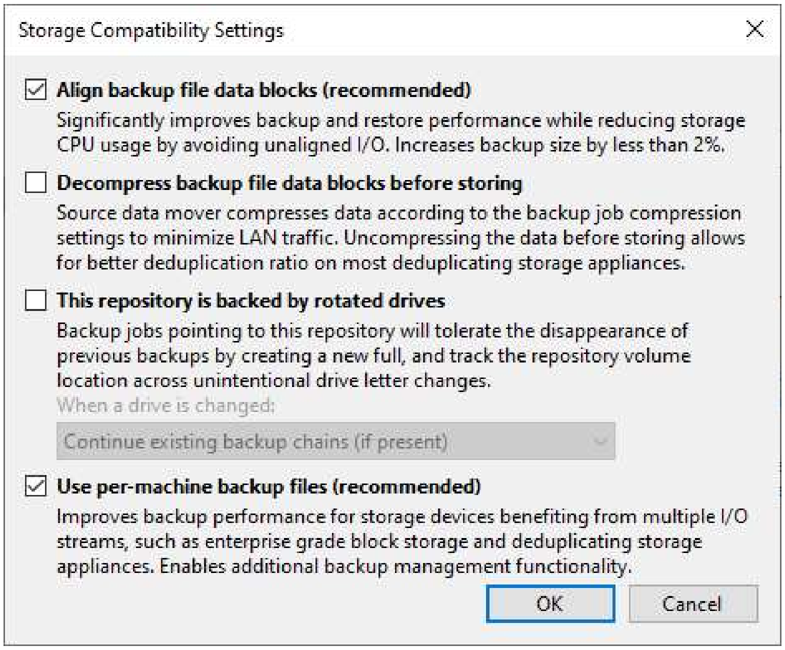
☐ Limit read and write data rate to: 1 MB/s

Click Advanced to customize repository settings.

20. On the Storage Compatibility Settings, select Align backup file data blocks (recommended) checkbox
21. 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.



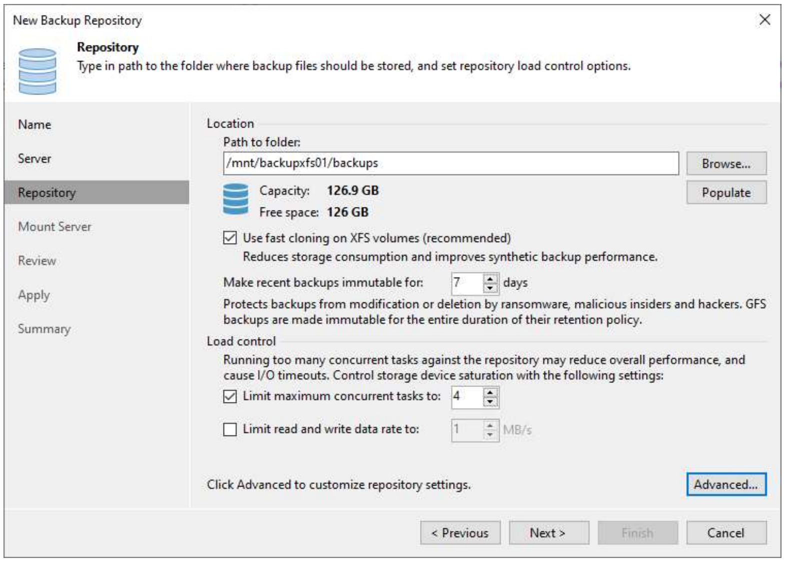
☑ **Align backup file data blocks (recommended)**
Significantly improves backup and restore performance while reducing storage CPU usage by avoiding unaligned I/O. Increases backup size by less than 2%.

☐ **Decompress backup file data blocks before storing**
Source data mover compresses data according to the backup job compression settings to minimize LAN traffic. Uncompressing the data before storing allows for better deduplication ratio on most deduplicating storage appliances.

☐ **This repository is backed by rotated drives**
Backup jobs pointing to this repository will tolerate the disappearance of previous backups by creating a new full, and track the repository volume location across unintentional drive letter changes.
When a drive is changed: Continue existing backup chains (if present)

☑ **Use per-machine backup files (recommended)**
Improves backup performance for storage devices benefiting from multiple I/O streams, such as enterprise grade block storage and deduplicating storage appliances. Enables additional backup management functionality.

22. On the Repository page, click Next.



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

Location
Path to folder: /mnt/backupxfs01/backups
Capacity: **126.9 GB**
Free space: **126 GB**
☑ 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, malicious insiders and hackers. GFS 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.

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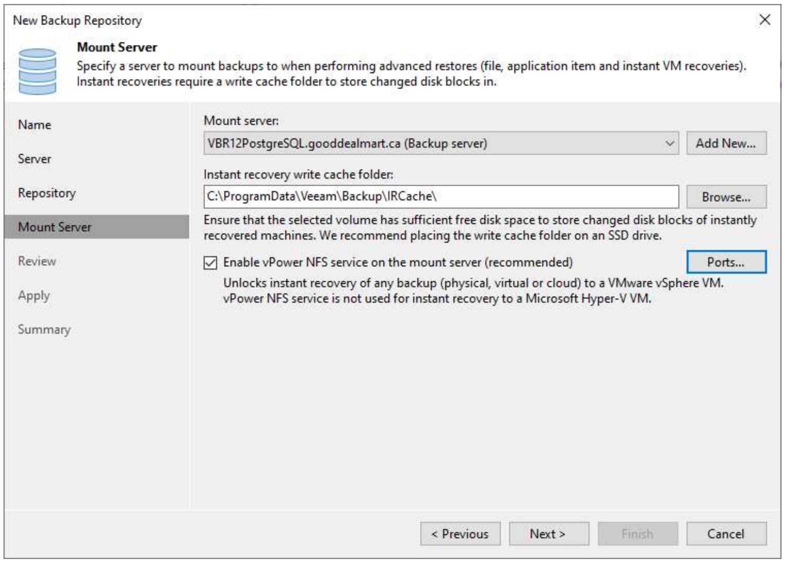
23. Select a mount server from the Mount server drop-down list on the Mount Server page.
24. Select a folder in the Instant recovery write cache folder field for writing cache during mount operations.
25. Select Enable vPower NFS service on the mount server (recommend) and click Ports.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Browse...
Ports...
< Previous
Next >
Finish
Cancel

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.

Mount server: VBR12PostgreSQL.gooddealmart.ca (Backup server)

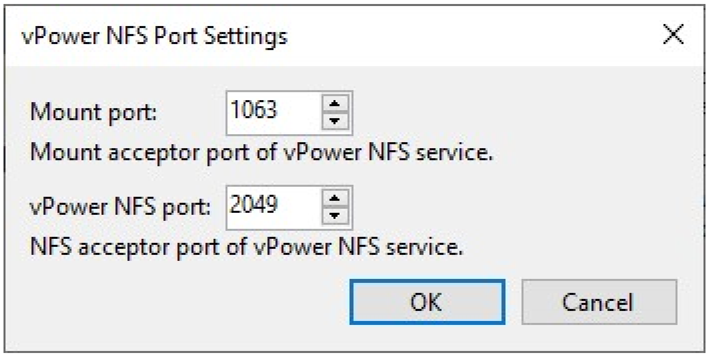
Instant recovery write cache folder: C:\ProgramData\Veeam\Backup\IRCache\

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

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

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.

26. Review the ports settings on the vPower NFS Port Settings page and click OK.


vPower NFS Port Settings
OK
Cancel

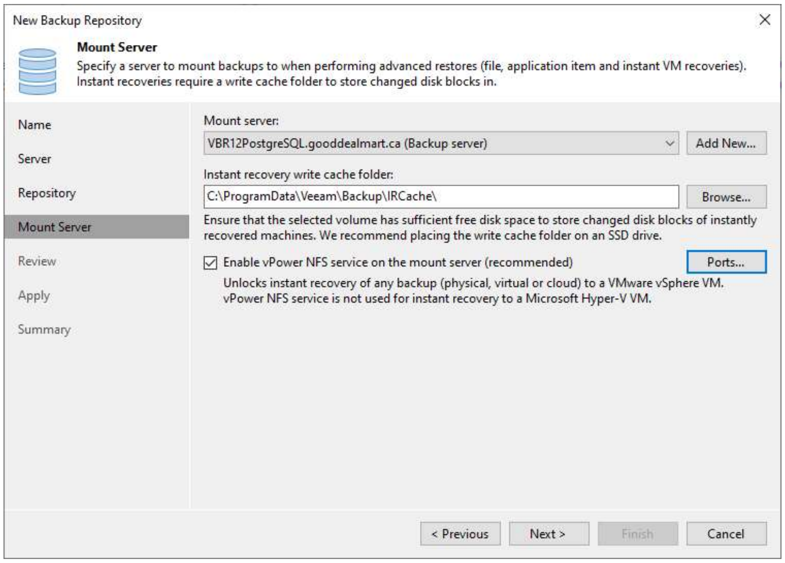
Mount port: 1063

Mount acceptor port of vPower NFS service.

vPower NFS port: 2049

NFS acceptor port of vPower NFS service.

27. Click Next on the Mount Server page.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Browse...
Ports...
< Previous
Next >
Finish
Cancel

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.

Mount server: VBR12PostgreSQL.gooddealmart.ca (Backup server)

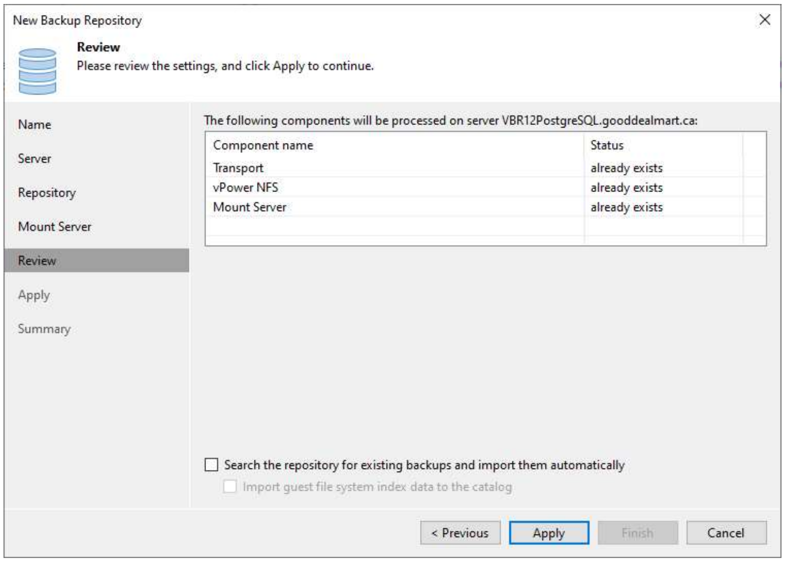
Instant recovery write cache folder: C:\ProgramData\Veeam\Backup\IRCache\

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

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

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.

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


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Apply
Finish
Cancel

Review

Please review the settings, and click Apply to continue.

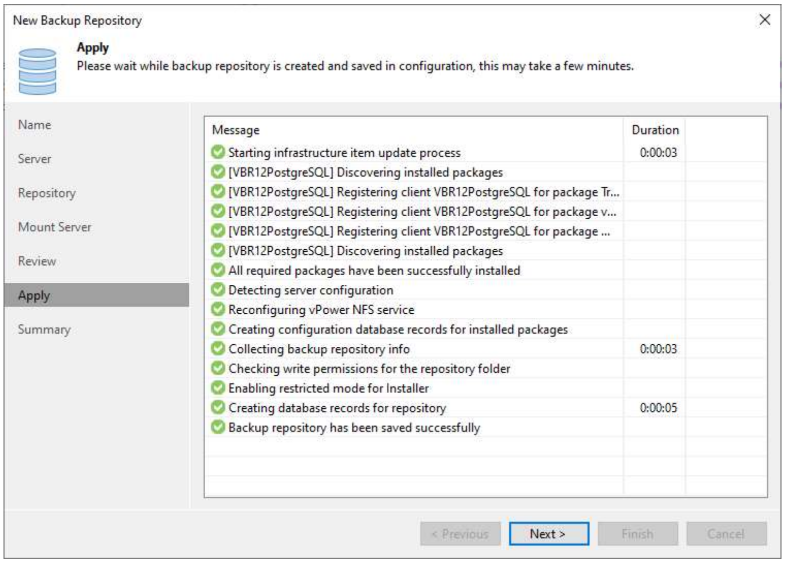
The following components will be processed on server VBR12PostgreSQL.gooddealmart.ca:

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

31. Click Next on the Apply page.

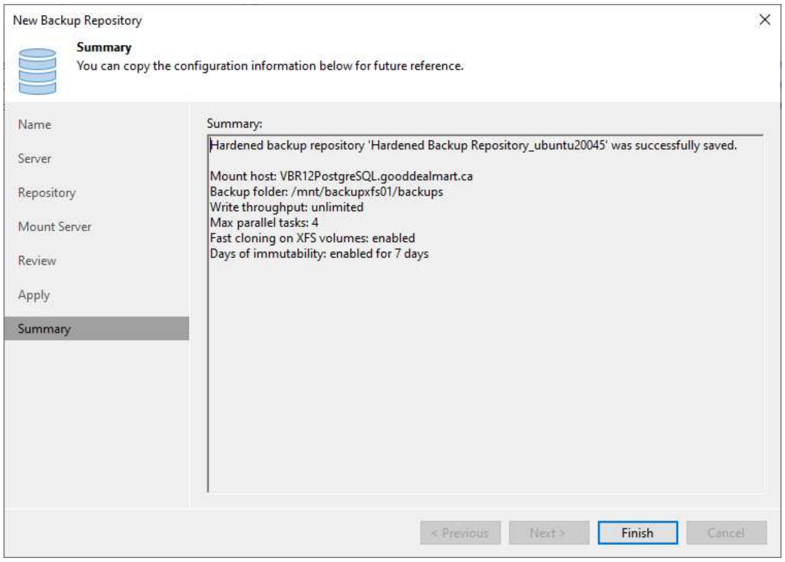

New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Apply

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

```
Message                                                                        Duration
Starting infrastructure item update process                                    0:00:03
[VBR12PostgreSQL] Discovering installed packages
[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Tr...
[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package v...
[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package ...
[VBR12PostgreSQL] Discovering installed packages
All required packages have been successfully installed
Detecting server configuration
Reconfiguring vPower NFS service
Creating configuration database records for installed packages
Collecting backup repository info                                              0:00:03
Checking write permissions for the repository folder
Enabling restricted mode for Installer
Creating database records for repository                                       0:00:05
Backup repository has been saved successfully
```

32. Click Finish on the Summary page.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Summary

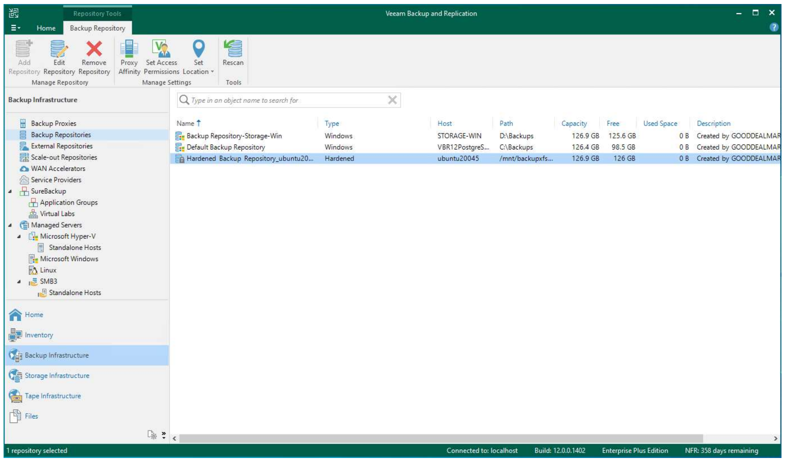
You can copy the configuration information below for future reference.

Summary:

```
Hardened backup repository 'Hardened Backup Repository_ubuntu20045' was successfully saved.

Mount host: VBR12PostgreSQL.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
```

33. Verify that the Hardened Backup Repository has been added.


Veeam Backup and Replication
Repository Tools
Home
Backup Repository
Add Repository
Edit Repository
Remove Repository
Manage Repository
Proxy Affinity
Set Access Permissions
Set Location
Manage Settings
Rescan
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
1 repository selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 358 days remaining

Name	Type	Host	Path	Capacity	Free	Used Space	Description
Backup Repository-Storage-Win	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0 B	Created by GOODDEALMAR
Default Backup Repository	Windows	VBR12PostgreS...	C:\Backups	126.4 GB	98.5 GB	0 B	Created by GOODDEALMAR
Hardened Backup Repository_ubuntu20...	Hardened	ubuntu20045	/mnt/backupxfs...	126.9 GB	126 GB	0 B	Created by GOODDEALMAR

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

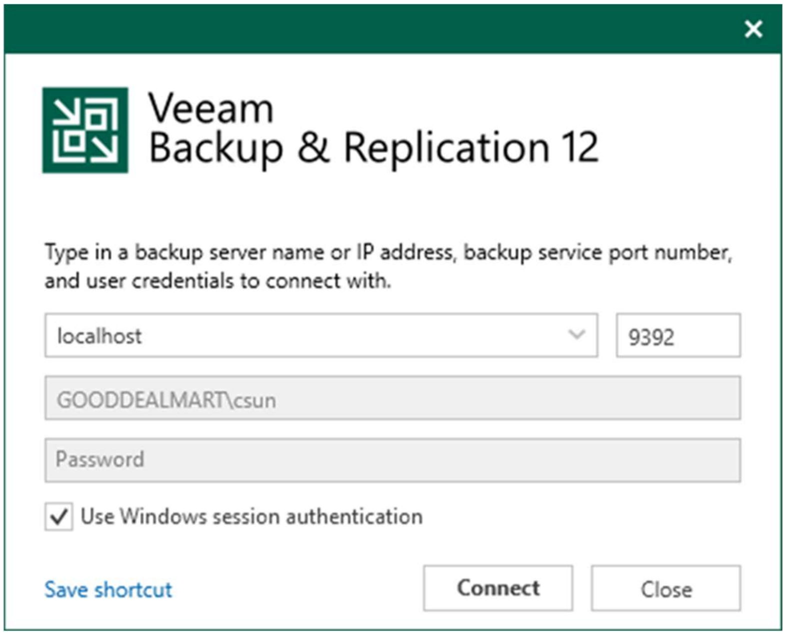
You can use network-attached storage (SMB or CIFS Shares) as backup repositories with Veeam Backup and Replication. A network-attached storage (NAS) device can be a shared folder on your computer or any other physical device accessed via the Server Message Block (SMB) protocol.

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)

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


Veeam
Backup & Replication 12
Save shortcut
Connect
Close

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

localhost 9392

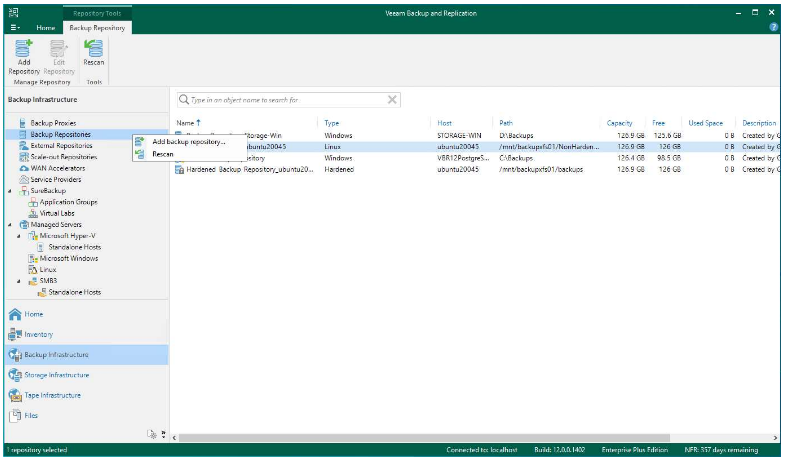
GOODDEALMART\csun

Password

☑ Use Windows session authentication

---

3. Select Backup Infrastructure on the Home page.
4. Select Backup Repositories on the Backup Infrastructure page.
5. Right-click Backup Repositories and select Add backup repository.


Repository Tools
Home
Backup Repository
Add Repository
Edit Repository
Rescan
Manage Repository
Tools
Veeam Backup and Replication
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
Add backup repository...
Rescan

Name	Type	Host	Path	Capacity	Free	Used Space	Description
torage-Win	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0 B	Created by
buntu20045	Linux	ubuntu20045	/mnt/backupxfs01/NonHarden...	126.9 GB	126 GB	0 B	Created by
sitory	Windows	VBR12PostgreS...	C:\Backups	126.4 GB	98.5 GB	0 B	Created by
Hardened Backup Repository_ubuntu20...	Hardened	ubuntu20045	/mnt/backupxfs01/backups	126.9 GB	126 GB	0 B	Created by

1 repository selected Connected to: localhost Build: 12.0.0.1402 Enterprise Plus Edition NFR: 357 days remaining

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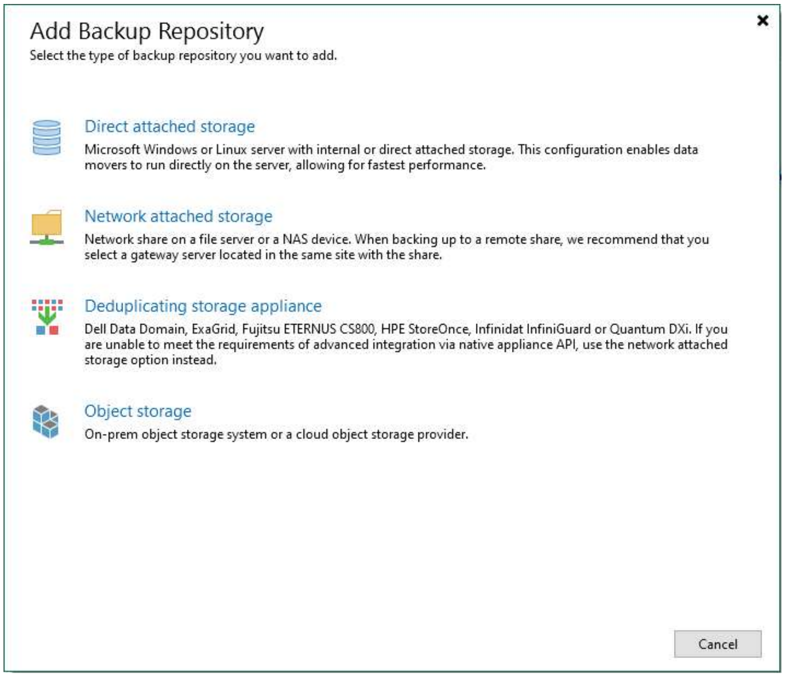
6. On the Add Backup Repository page, select Network attached storage.



Add Backup Repository

Select the type of backup repository you want to add.

Direct attached storage

Microsoft Windows or Linux server with internal or direct attached storage. This configuration enables data movers to run directly on the server, allowing for fastest performance.

Network attached storage

Network share on a file server or a NAS device. When backing up to a remote share, we recommend that you select a gateway server located in the same site with the share.

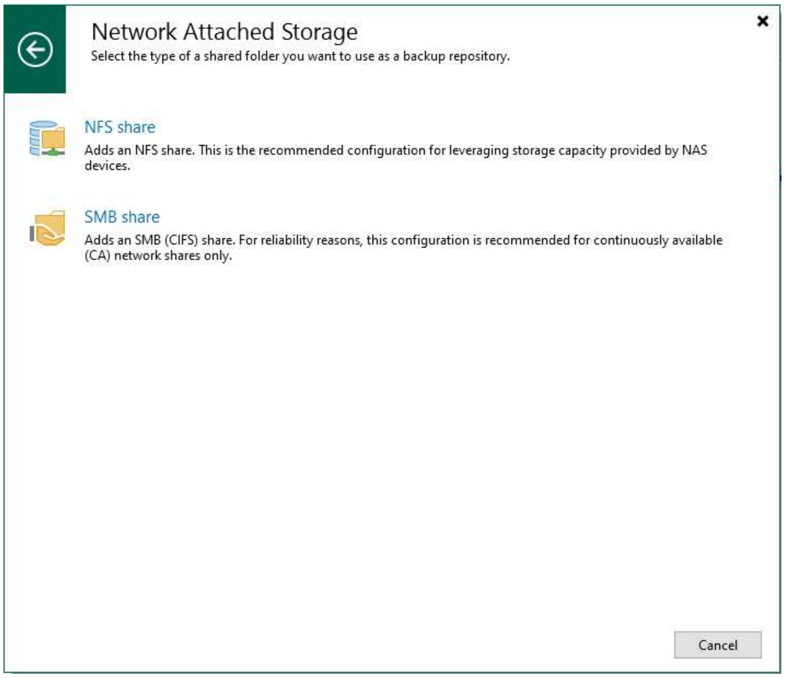
Deduplicating storage appliance

Dell Data Domain, ExaGrid, Fujitsu ETERNUS CS800, HPE StoreOnce, Infinidat InfiniGuard or Quantum DXi. If you are unable to meet the requirements of advanced integration via native appliance API, use the network attached storage option instead.

Object storage

On-prem object storage system or a cloud object storage provider.

7. Select SMB share on the Network Attached Storage.



Network Attached Storage

Select the type of a shared folder you want to use as a backup repository.

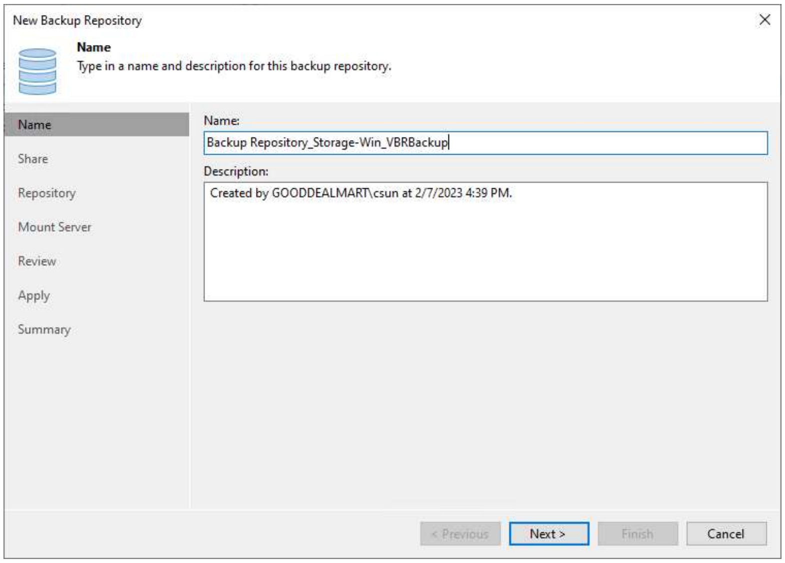
NFS share

Adds an NFS share. This is the recommended configuration for leveraging storage capacity provided by NAS devices.

SMB share

Adds an SMB (CIFS) share. For reliability reasons, this configuration is recommended for continuously available (CA) network shares only.

8. On the Name page, specify a Backup Repository name.
9. Give a brief description in the Description field for future reference and click Next.



New Backup Repository

Name

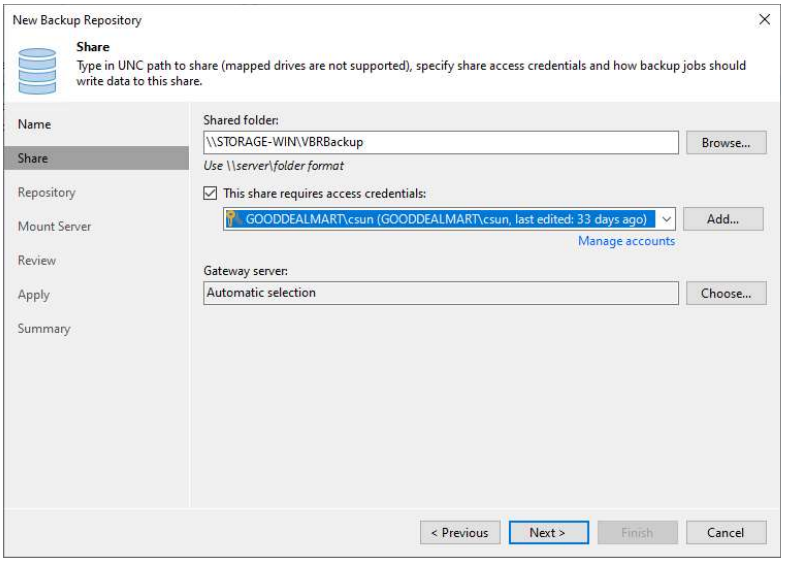
Type in a name and description for this backup repository.

Name: Backup Repository_Storage-Win_VBRBackup

Description: Created by GOODDEALMART\csun at 2/7/2023 4:39 PM.

Name
Share
Repository
Mount Server
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

10. On the Share page, enter the share folder name in the Share folder field.
11. Select This share requires access credentials checkbox and select a credential from the drop-down list.
12. Select Automatic selection or click Choose to select the Gateway server.
13. Click Next.



New Backup Repository

Share

Type in UNC path to share (mapped drives are not supported), specify share access credentials and how backup jobs should write data to this share.

Shared folder: \\STORAGE-WIN\VBRBackup

Use \\server\folder format

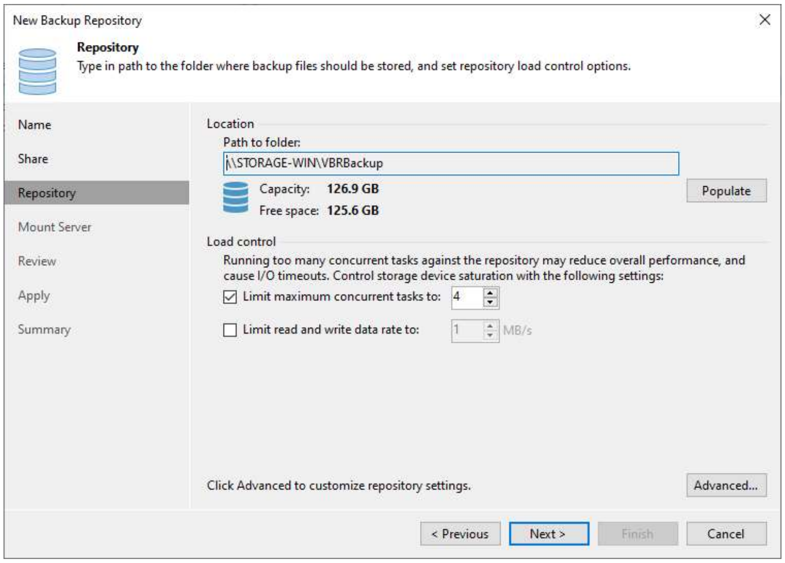
☑ This share requires access credentials: GOODDEALMART\csun (GOODDEALMART\csun, last edited: 33 days ago)

Gateway server: Automatic selection

Name
Share
Repository
Mount Server
Review
Apply
Summary
Browse...
Add...
Manage accounts
Choose...
< Previous
Next >
Finish
Cancel

Technet24

14. Use the Load control settings to manage the load on the backup repository and avoid storage I/O timeouts.
15. Click Advanced.



Repository

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

Location

Path to folder: \\STORAGE-WIN\VBRBackup

Capacity: 126.9 GB

Free space: 125.6 GB

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

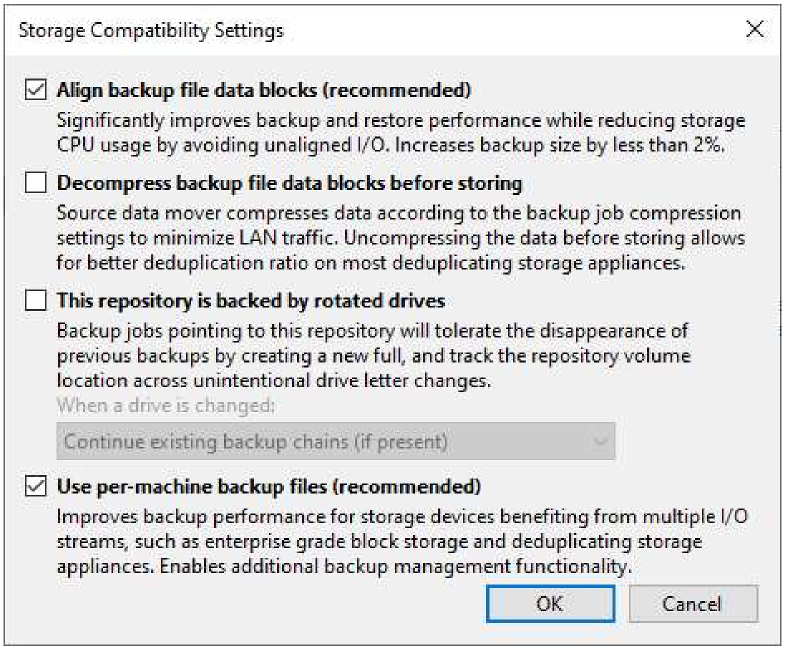
☐ Limit read and write data rate to: 1 MB/s

Click Advanced to customize repository settings.

16. On the Storage Compatibility Settings, select Align backup file data blocks (recommended) checkbox
17. 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.



☑ **Align backup file data blocks (recommended)**

Significantly improves backup and restore performance while reducing storage CPU usage by avoiding unaligned I/O. Increases backup size by less than 2%.

☐ **Decompress backup file data blocks before storing**

Source data mover compresses data according to the backup job compression settings to minimize LAN traffic. Uncompressing the data before storing allows for better deduplication ratio on most deduplicating storage appliances.

☐ **This repository is backed by rotated drives**

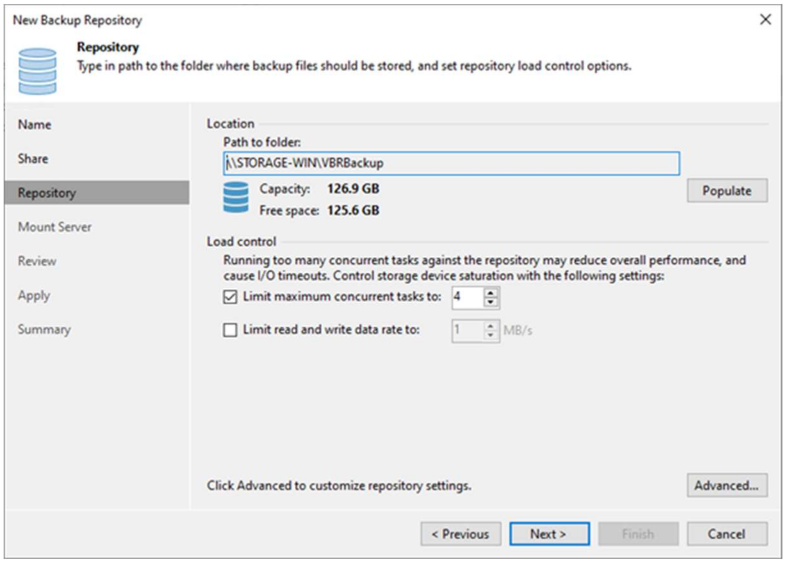
Backup jobs pointing to this repository will tolerate the disappearance of previous backups by creating a new full, and track the repository volume location across unintentional drive letter changes.

When a drive is changed: Continue existing backup chains (if present)

☑ **Use per-machine backup files (recommended)**

Improves backup performance for storage devices benefiting from multiple I/O streams, such as enterprise grade block storage and deduplicating storage appliances. Enables additional backup management functionality.

18. Click Next on the Repository page.


New Backup Repository
Name
Share
Repository
Mount Server
Review
Apply
Summary
Populate
Advanced...
< Previous
Next >
Finish
Cancel

Repository

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

Location

Path to folder: \\STORAGE-WIN\VBRBackup

Capacity: 126.9 GB

Free space: 125.6 GB

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:

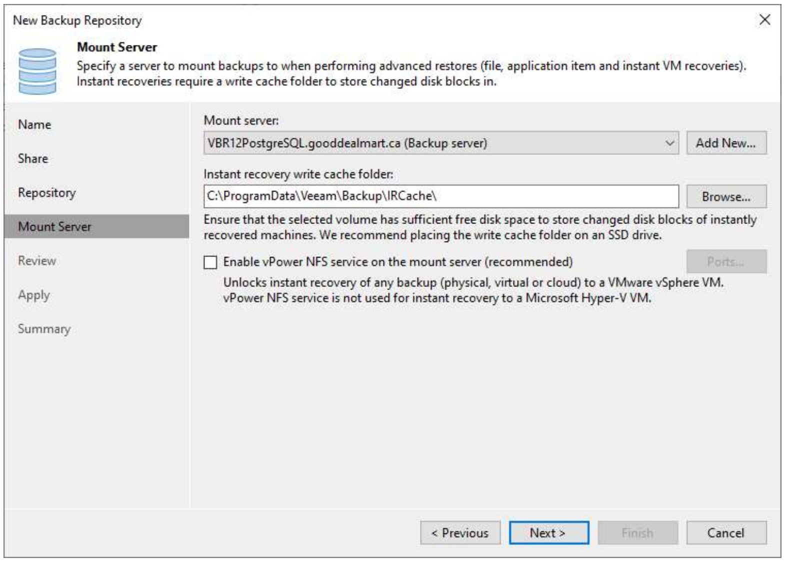
☑ Limit maximum concurrent tasks to: 4

☐ Limit read and write data rate to: 1 MB/s

Click Advanced to customize repository settings.

---

19. Select a mount server from the Mount server drop-down list on the Mount Server page.
20. Select a folder in the Instant recovery write cache folder field for writing cache during mount operations.
21. Unselect Enable vPower NFS service on the mount server because the vPower NFS service is not used for instant recovery to a Microsoft Hyper-V VM.
22. Click Next.


New Backup Repository
Name
Share
Repository
Mount Server
Review
Apply
Summary
Add New...
Browse...
Ports...
< Previous
Next >
Finish
Cancel

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.

Mount server: VBR12PostgreSQL.gooddealmart.ca (Backup server)

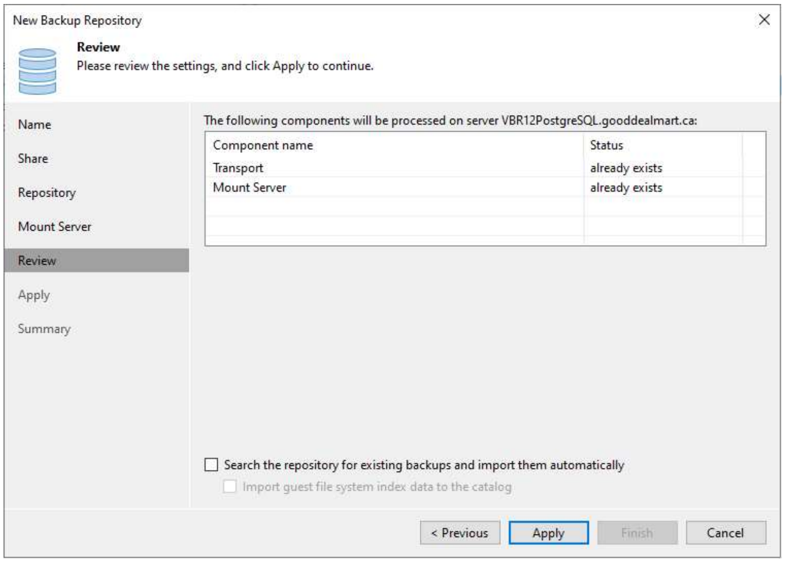
Instant recovery write cache folder: C:\ProgramData\Veeam\Backup\IRCache\

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

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

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.

23. Click Apply on the Review page.
24. Select the Search the repository for existing backups and import them automatically checkbox if the backup repository contains backups previously created with Veeam Backup & Replication.
25. Select the Import guest file system index data to the catalog checkbox if the backup repository contains guest file system index files previously created by Veeam Backup & Replication.


New Backup Repository
Name
Share
Repository
Mount Server
Review
Apply
Summary
< Previous
Apply
Finish
Cancel

Review

Please review the settings, and click Apply to continue.

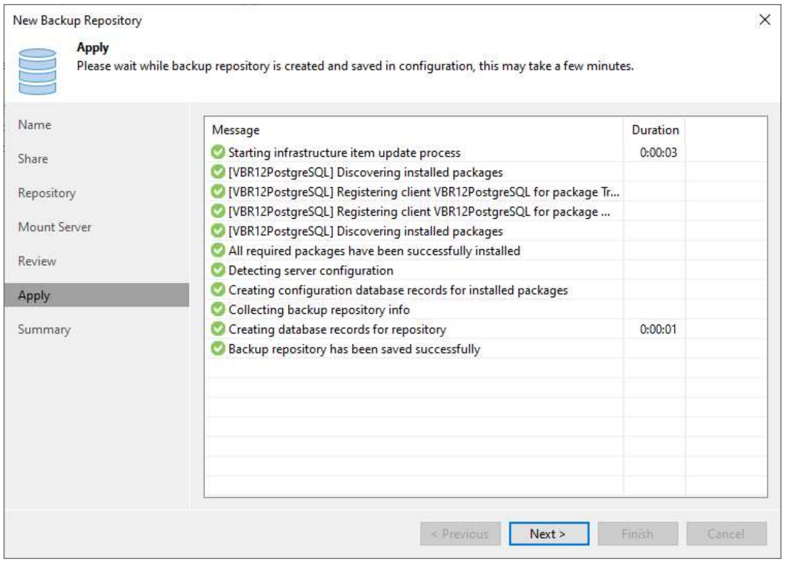
The following components will be processed on server VBR12PostgreSQL.gooddealmart.ca:

Component name	Status
Transport	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

26. Click Next on the Apply page.

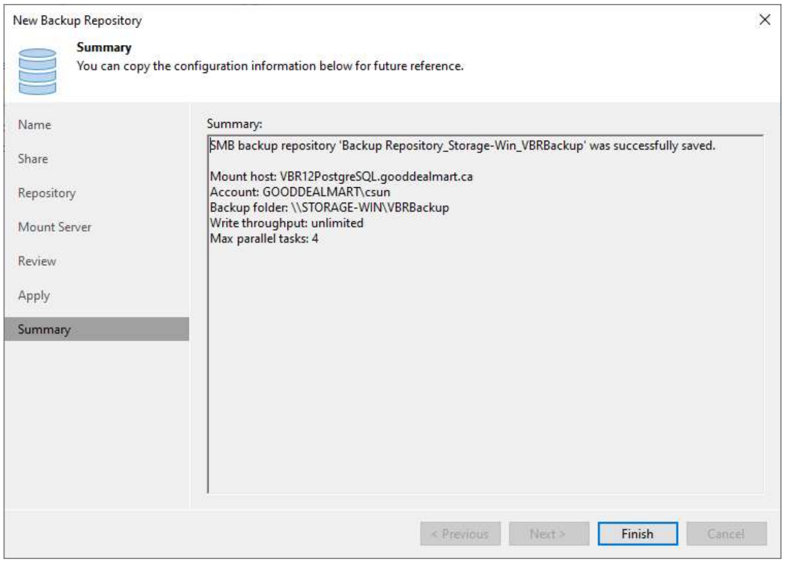

New Backup Repository
Name
Share
Repository
Mount Server
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Apply

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

Message	Duration
✓ Starting infrastructure item update process	0:00:03
✓ [VBR12PostgreSQL] Discovering installed packages	
✓ [VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Tr...	
✓ [VBR12PostgreSQL] Registering client VBR12PostgreSQL for package ...	
✓ [VBR12PostgreSQL] Discovering installed packages	
✓ All required packages have been successfully installed	
✓ Detecting server configuration	
✓ Creating configuration database records for installed packages	
✓ Collecting backup repository info	
✓ Creating database records for repository	0:00:01
✓ Backup repository has been saved successfully	

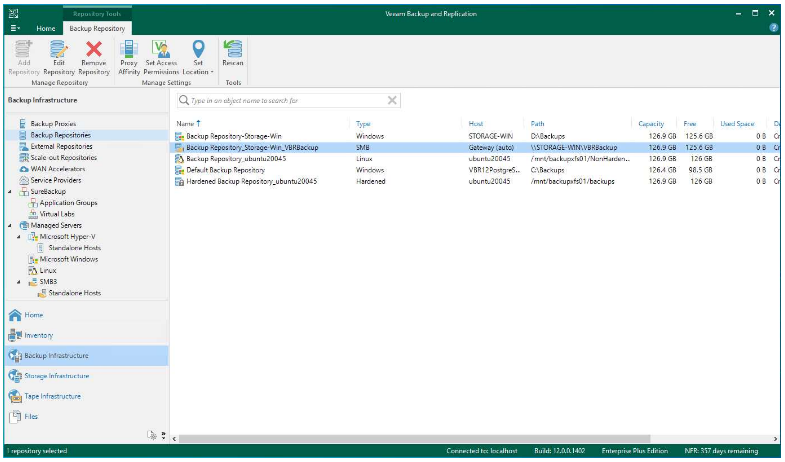
27. Click Finish on the Summary page.


New Backup Repository
Summary
You can copy the configuration information below for future reference.
Name
Share
Repository
Mount Server
Review
Apply
Summary
Summary:
< Previous
Next >
Finish
Cancel

SMB backup repository 'Backup Repository_Storage-Win_VBRBackup' was successfully saved.

Mount host: VBR12PostgreSQL.gooddealmart.ca
Account: GOODDEALMART\csun
Backup folder: \\STORAGE-WIN\VBRBackup
Write throughput: unlimited
Max parallel tasks: 4

28. Verify that the Backup Repository has been added.


Repository Tools
Home
Backup Repository
Veeam Backup and Replication
Add Repository
Edit Repository
Remove Repository
Manage Repository
Proxy Affinity
Set Access Permissions
Set Location
Manage Settings
Rescan
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for
1 repository selected
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 357 days remaining

Name	Type	Host	Path	Capacity	Free	Used Space	De
Backup Repository-Storage-Win	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0 B	Cr
Backup Repository_Storage-Win_VBRBackup	SMB	Gateway (auto)	\\STORAGE-WIN\VBRBackup	126.9 GB	125.6 GB	0 B	Cr
Backup Repository_ubuntu20045	Linux	ubuntu20045	/mnt/backupxfs01/NonHarden...	126.9 GB	126 GB	0 B	Cr
Default Backup Repository	Windows	VBR12PostgreS...	C:\Backups	126.4 GB	98.5 GB	0 B	Cr
Hardened Backup Repository_ubuntu20045	Hardened	ubuntu20045	/mnt/backupxfs01/backups	126.9 GB	126 GB	0 B	Cr

Technet24

Add the Microsoft Windows server's Rotated Drives as a Backup Repository

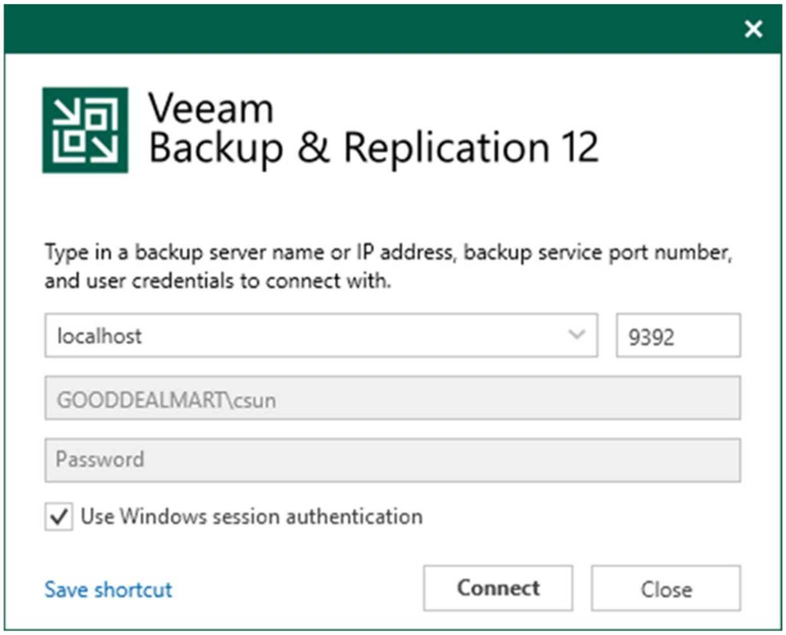
This scenario is helpful if you want to store backups on multiple external hard drives that you intend to move between locations. The drives that are rotated can be detachable USB or eSATA hard drives.

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.



Veeam
Backup & Replication 12

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

localhost 9392

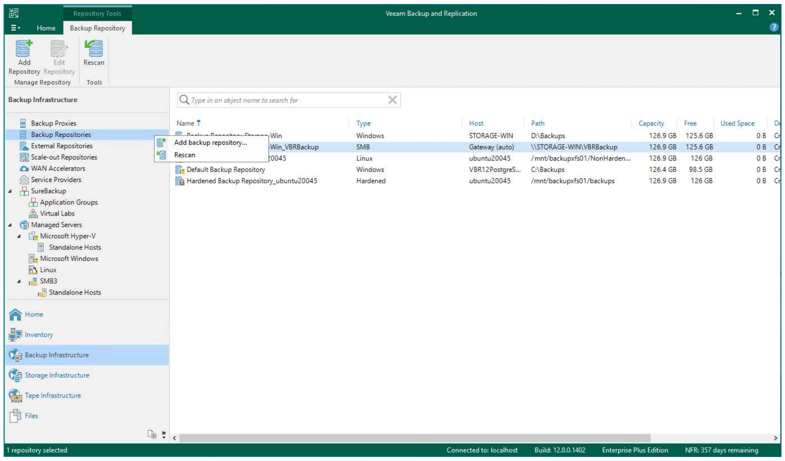
GOODDEALMART\csun

Password

☑ Use Windows session authentication

Save shortcut
Connect
Close

3. Select Backup Infrastructure on the Home page.
4. Select Backup Repositories on the Backup Infrastructure page.
5. Right-click Backup Repositories and select Add backup repository.



Repository Tools
Veeam Backup and Replication
Home
Backup Repository
Add Repository
Edit Repository
Rescan
Manage Repository
Tools
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Add backup repository...
Rescan
Type in an object name to search for

Name	Type	Host	Path	Capacity	Free	Used Space	De
Backup Repository Storage-Win	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0 B	Cr
Win_VBRBackup	SMB	Gateway (auto)	\\STORAGE-WIN\VBRBackup	126.9 GB	125.6 GB	0 B	Cr
20045	Linux	ubuntu20045	/mnt/backupxfs01/NonHarden...	126.9 GB	126 GB	0 B	Cr
Default Backup Repository	Windows	VBR12PostgreS...	C:\Backups	126.4 GB	98.5 GB	0 B	Cr
Hardened Backup Repository_ubuntu20045	Hardened	ubuntu20045	/mnt/backupxfs01/backups	126.9 GB	126 GB	0 B	Cr

1 repository selected
Connected to: localhost Build: 12.0.0.1402 Enterprise Plus Edition NFR: 357 days remaining

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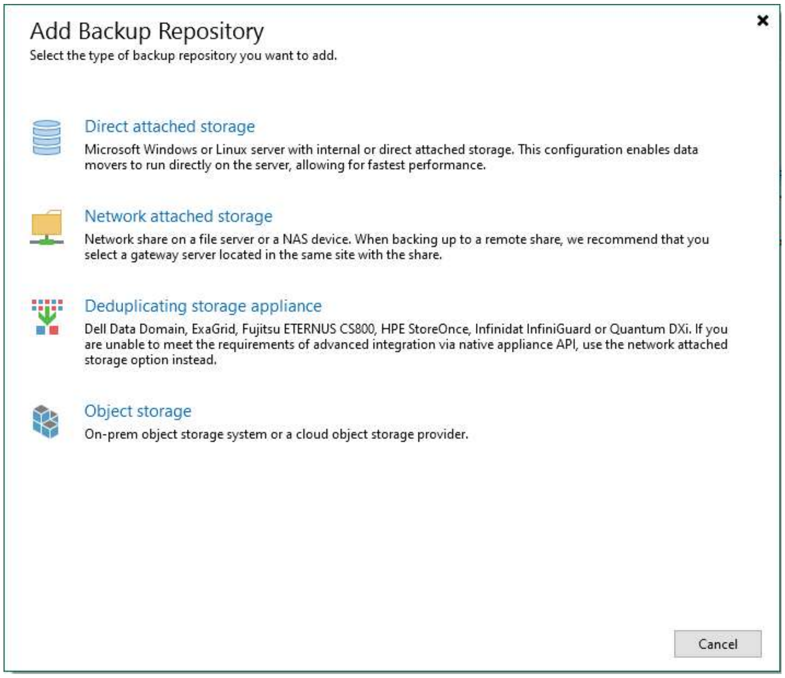
6. Select Direct attached storage on the Add Backup Repository page.



Add Backup Repository

Select the type of backup repository you want to add.

Direct attached storage

Microsoft Windows or Linux server with internal or direct attached storage. This configuration enables data movers to run directly on the server, allowing for fastest performance.

Network attached storage

Network share on a file server or a NAS device. When backing up to a remote share, we recommend that you select a gateway server located in the same site with the share.

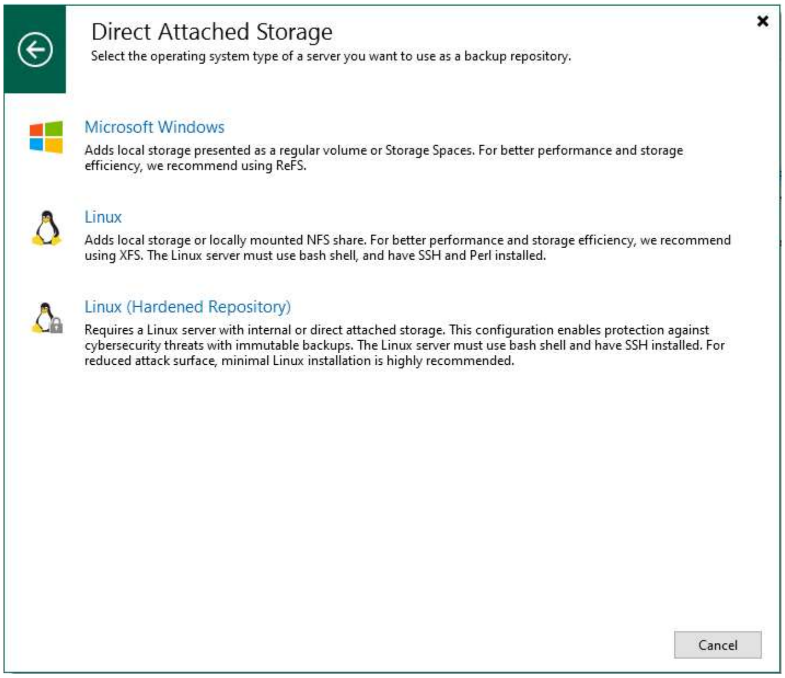
Deduplicating storage appliance

Dell Data Domain, ExaGrid, Fujitsu ETERNUS CS800, HPE StoreOnce, Infinidat InfiniGuard or Quantum DXi. If you are unable to meet the requirements of advanced integration via native appliance API, use the network attached storage option instead.

Object storage

On-prem object storage system or a cloud object storage provider.

7. Select Microsoft Windows on the Direct Attached Storage page.



Direct Attached Storage

Select the operating system type of a server you want to use as a backup repository.

Microsoft Windows

Adds local storage presented as a regular volume or Storage Spaces. For better performance and storage efficiency, we recommend using ReFS.

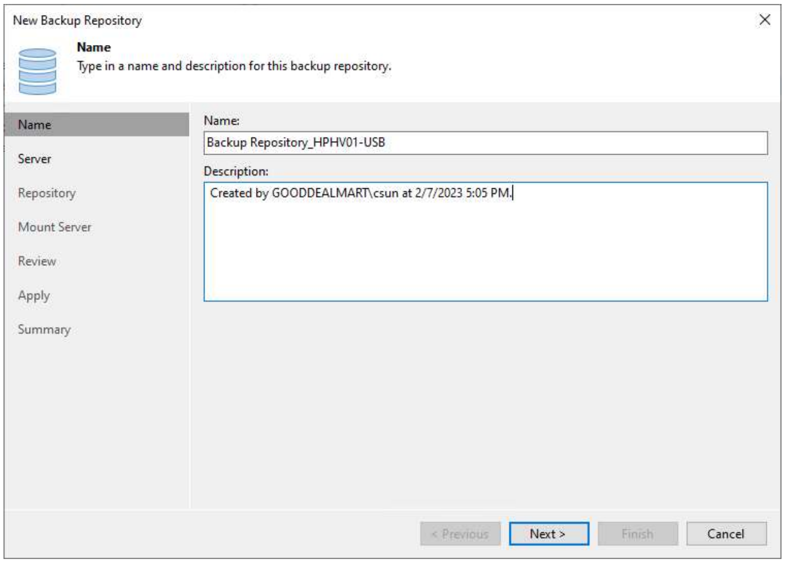
Linux

Adds local storage or locally mounted NFS share. For better performance and storage efficiency, we recommend using XFS. The Linux server must use bash shell, and have SSH and Perl installed.

Linux (Hardened Repository)

Requires a Linux server with internal or direct attached storage. This configuration enables protection against cybersecurity threats with immutable backups. The Linux server must use bash shell and have SSH installed. For reduced attack surface, minimal Linux installation is highly recommended.

8. On the Name page, specify a Backup Repository name.
9. Give a brief description in the Description field for future reference and click Next.



New Backup Repository

Name

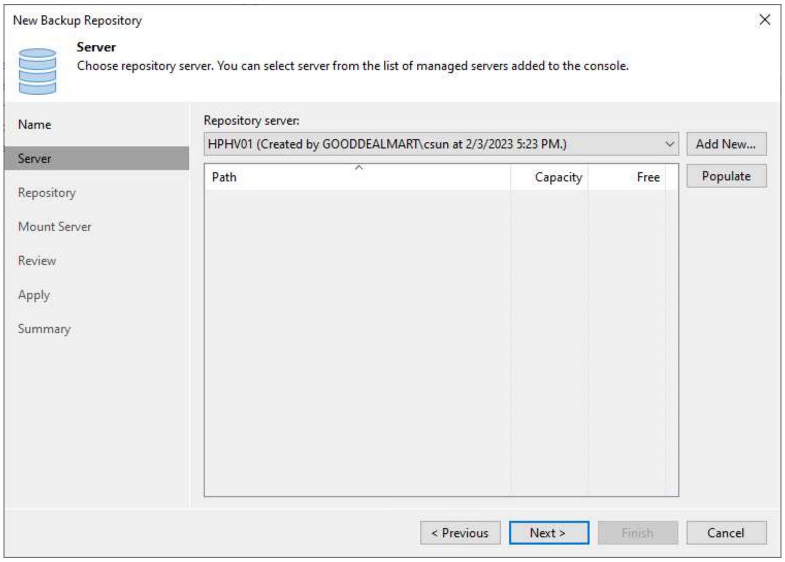
Type in a name and description for this backup repository.

Name: Backup Repository_HPHV01-USB

Description: Created by GOODDEALMART\csun at 2/7/2023 5:05 PM.

Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

10. On the Server page, select the Microsoft Windows server from the Repository server drop-down list and click Populate.



New Backup Repository

Server

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

Repository server: HPHV01 (Created by GOODDEALMART\csun at 2/3/2023 5:23 PM.)

Path	Capacity	Free

Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Populate
< Previous
Next >
Finish
Cancel

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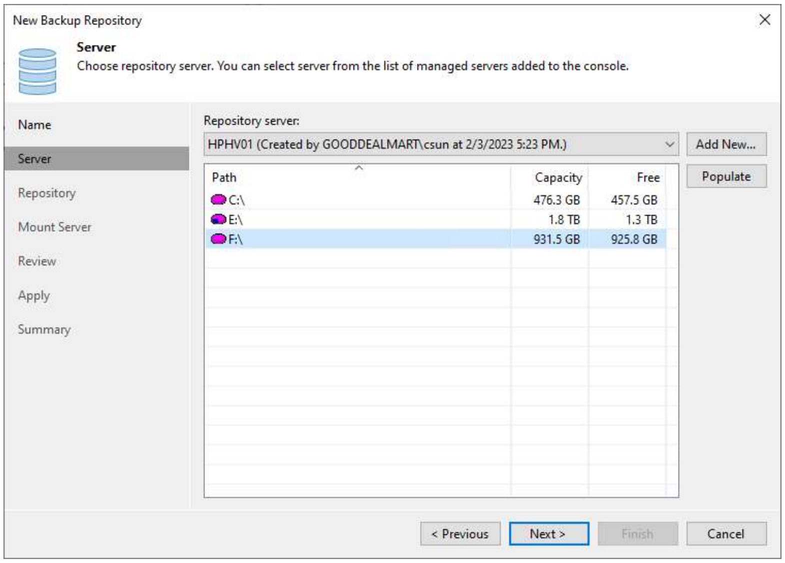
11. Select the disk and click Next.


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Add New...
Populate
< Previous
Next >
Finish
Cancel

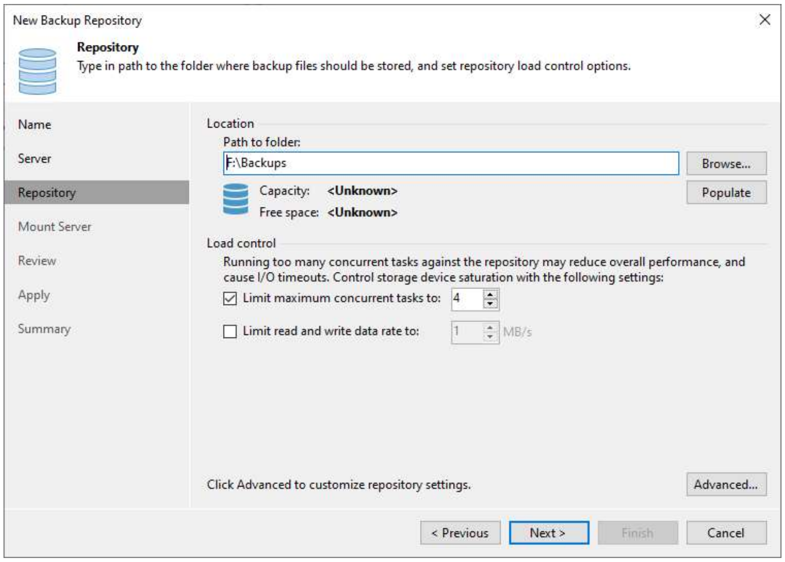
Server

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

Repository server: HPHV01 (Created by GOODDEALMART\csun at 2/3/2023 5:23 PM.)

Path	Capacity	Free
C:\	476.3 GB	457.5 GB
E:\	1.8 TB	1.3 TB
F:\	931.5 GB	925.8 GB

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


New Backup Repository
Name
Server
Repository
Mount Server
Review
Apply
Summary
Browse...
Populate
Advanced...
< Previous
Next >
Finish
Cancel

Repository

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

Location

Path to folder: F:\Backups

Capacity: **<Unknown>**

Free space: **<Unknown>**

Load control

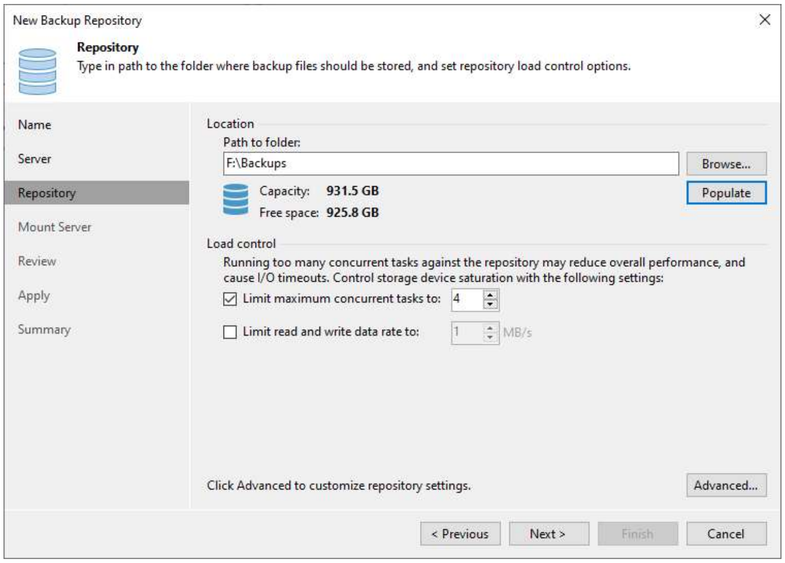
Running too many concurrent tasks against the repository may reduce overall performance, and cause I/O timeouts. Control storage device saturation with the following settings:

☑ Limit maximum concurrent tasks to: 4

☐ Limit read and write data rate to: 1 MB/s

Click Advanced to customize repository settings.

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



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

Location
Path to folder: F:\Backups
Capacity: **931.5 GB**
Free space: **925.8 GB**

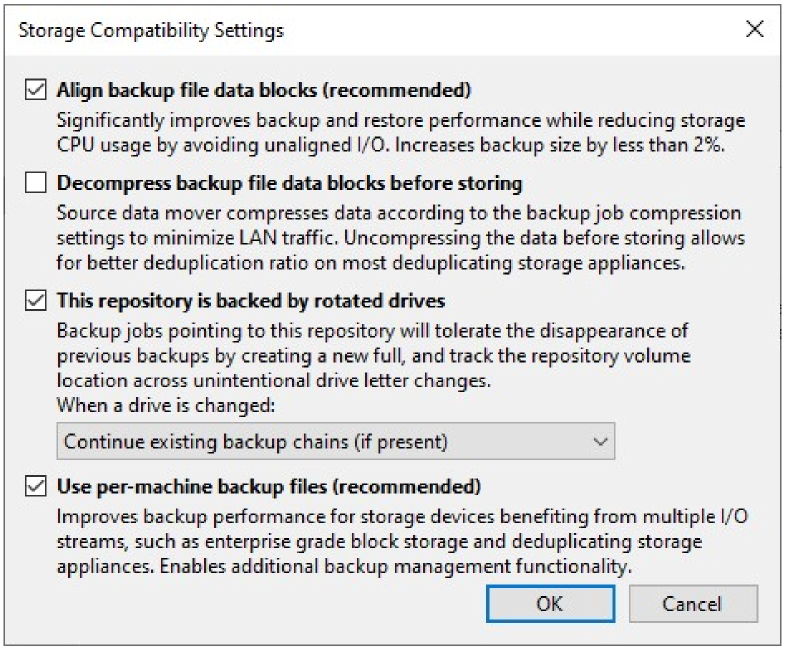
Load control
Running too many concurrent tasks against the repository may reduce overall performance, and cause I/O timeouts. Control storage device saturation with the following settings:
☑ Limit maximum concurrent tasks to: 4
☐ Limit read and write data rate to: 1 MB/s

Click Advanced to customize repository settings.

15. On the Storage Compatibility Settings, select Align backup file data blocks (recommended) checkbox
16. Select This repository is backed by rotated drives checkbox and Specify how Veeam Backup & Replication should react when a drive is swapped.
17. Select Use per-machine backup files and click OK.

Note:

Select Decompress backup file data blocks before storing if



☑ **Align backup file data blocks (recommended)**
Significantly improves backup and restore performance while reducing storage CPU usage by avoiding unaligned I/O. Increases backup size by less than 2%.

☐ **Decompress backup file data blocks before storing**
Source data mover compresses data according to the backup job compression settings to minimize LAN traffic. Uncompressing the data before storing allows for better deduplication ratio on most deduplicating storage appliances.

☑ **This repository is backed by rotated drives**
Backup jobs pointing to this repository will tolerate the disappearance of previous backups by creating a new full, and track the repository volume location across unintentional drive letter changes.
When a drive is changed: Continue existing backup chains (if present)

☑ **Use per-machine backup files (recommended)**
Improves backup performance for storage devices benefiting from multiple I/O streams, such as enterprise grade block storage and deduplicating storage appliances. Enables additional backup management functionality.

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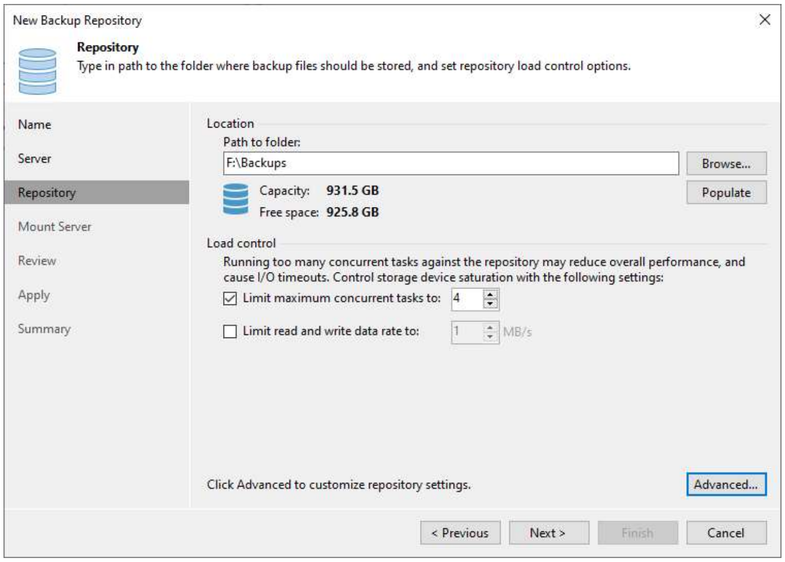
you use a deduplicating storage feature or appliance.

18. Click Next on the Repository page.



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: F:\Backups

Capacity: 931.5 GB

Free space: 925.8 GB

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:

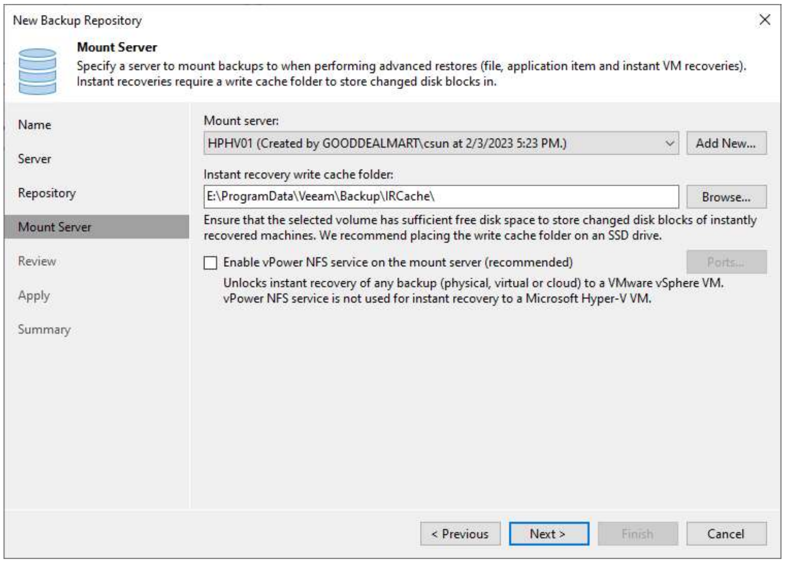
☑ Limit maximum concurrent tasks to: 4

☐ Limit read and write data rate to: 1 MB/s

Click Advanced to customize repository settings.

Browse...
Populate
Advanced...
< Previous
Next >
Finish
Cancel

19. Select a mount server from the Mount server drop-down list on the Mount Server page. The mount server is required for file-level and application items restoration.
20. Select a folder in the Instant recovery write cache folder field for writing cache during mount operations.
21. Unselect Enable vPower NFS service on the mount server because the



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: HPHV01 (Created by GOODDEALMART\csun at 2/3/2023 5:23 PM.)

Instant recovery write cache folder: E:\ProgramData\Veeam\Backup\IRCache\

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

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

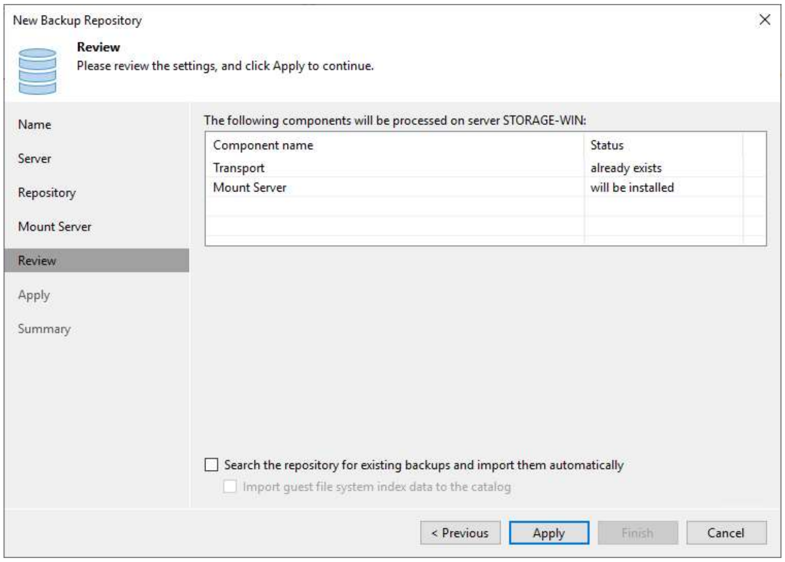
Unlocks instant recovery of any backup (physical, virtual or cloud) to a VMware vSphere VM. vPower NFS service is not used for instant recovery to a Microsoft Hyper-V VM.

Add New...
Browse...
Ports...
< Previous
Next >
Finish
Cancel

vPower NFS service is not used for instant recovery to a Microsoft Hyper-V VM.

22. Click Next.

23. Click Apply on the Review page.
24. Select the Search the repository for existing backups and import them automatically checkbox if the backup repository contains backups previously created with Veeam Backup & Replication.
25. Select the Import guest file system index data to the catalog checkbox if the backup repository contains guest file system index files previously created by Veeam Backup & Replication.



New Backup Repository

Review

Please review the settings, and click Apply to continue.

The following components will be processed on server STORAGE-WIN:

Component name	Status
Transport	already exists
Mount Server	will be installed

☐ Search the repository for existing backups and import them automatically

☐ Import guest file system index data to the catalog

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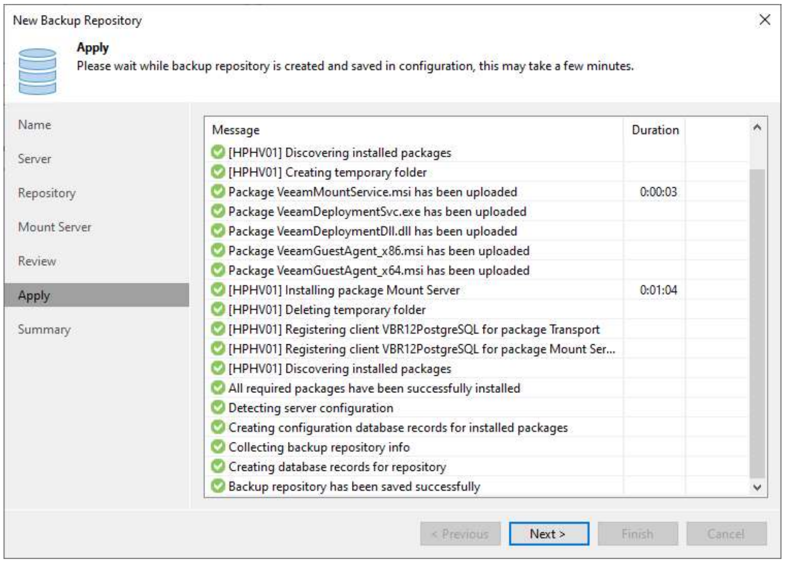
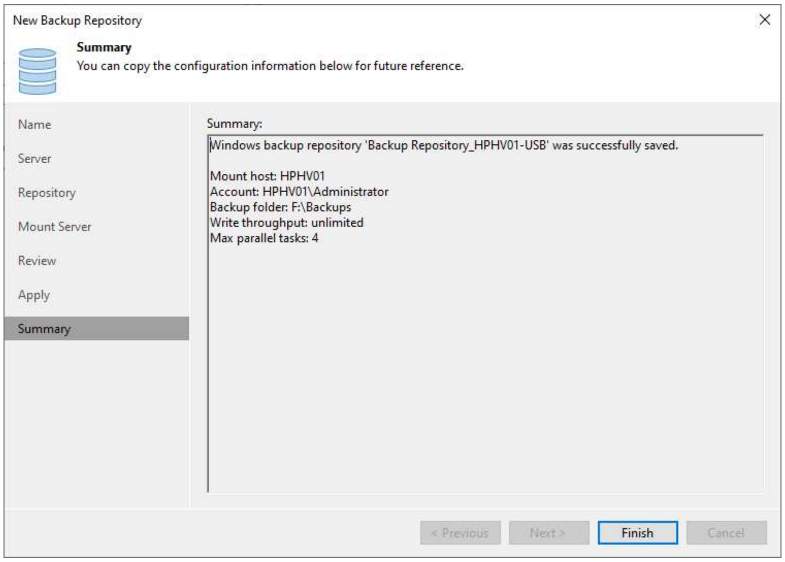
26. Click Next on the Apply page.


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
< Previous
Next >
Finish
Cancel

Message	Duration
✓ [HPHV01] Discovering installed packages	
✓ [HPHV01] Creating temporary folder	
✓ Package VeeamMountService.msi has been uploaded	0:00:03
✓ Package VeeamDeploymentSvc.exe has been uploaded	
✓ Package VeeamDeploymentDll.dll has been uploaded	
✓ Package VeeamGuestAgent_x86.msi has been uploaded	
✓ Package VeeamGuestAgent_x64.msi has been uploaded	
✓ [HPHV01] Installing package Mount Server	0:01:04
✓ [HPHV01] Deleting temporary folder	
✓ [HPHV01] Registering client VBR12PostgreSQL for package Transport	
✓ [HPHV01] Registering client VBR12PostgreSQL for package Mount Ser...	
✓ [HPHV01] Discovering installed packages	
✓ All required packages have been successfully installed	
✓ Detecting server configuration	
✓ Creating configuration database records for installed packages	
✓ Collecting backup repository info	
✓ Creating database records for repository	
✓ Backup repository has been saved successfully	

27. Click Finish on the Summary page.

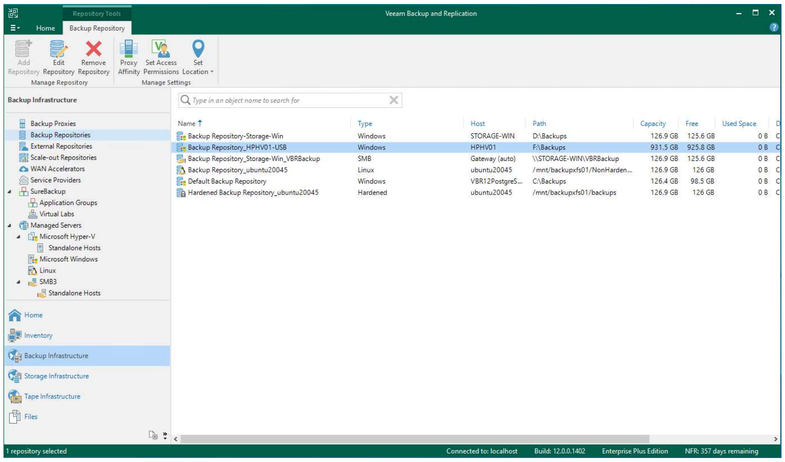

New Backup Repository
Summary
You can copy the configuration information below for future reference.
Name
Server
Repository
Mount Server
Review
Apply
Summary
< Previous
Next >
Finish
Cancel

Summary:

Windows backup repository 'Backup Repository_HPHV01-USB' was successfully saved.

Mount host: HPHV01
Account: HPHV01\Administrator
Backup folder: F:\Backups
Write throughput: unlimited
Max parallel tasks: 4

28. Verify that the Rotated Drives Backup Repository has been added.



Veeam Backup and Replication
Repository Tools
Home
Backup Repository
Add Repository
Edit Repository
Remove Repository
Manage Repository
Proxy Affinity
Set Access Permissions
Set Location
Manage Settings
Backup Infrastructure
Backup Proxies
Backup Repositories
External Repositories
Scale-out Repositories
WAN Accelerators
Service Providers
SureBackup
Application Groups
Virtual Labs
Managed Servers
Microsoft Hyper-V
Standalone Hosts
Microsoft Windows
Linux
SMB3
Standalone Hosts
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
Type in an object name to search for

Name	Type	Host	Path	Capacity	Free	Used Space
Backup Repository-Storage-Win	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0 B
Backup Repository_HPHV01-USB	Windows	HPHV01	F:\Backups	931.5 GB	925.8 GB	0 B
Backup Repository_Storage-Win_VBRBackup	SMB	Gateway (auto)	\\STORAGE-WIN\VBRBackup	126.9 GB	125.6 GB	0 B
Backup Repository_ubuntu20045	Linux	ubuntu20045	/mnt/backupxfs01/NonHarden...	126.9 GB	126 GB	0 B
Default Backup Repository	Windows	VBR12PostgreS...	C:\Backups	126.4 GB	98.5 GB	0 B
Hardened Backup Repository_ubuntu20045	Hardened	ubuntu20045	/mnt/backupxfs01/backups	126.9 GB	126 GB	0 B

1 repository selected

Connected to: localhost Build: 12.0.0.1402 Enterprise Plus Edition NFR: 357 days remaining

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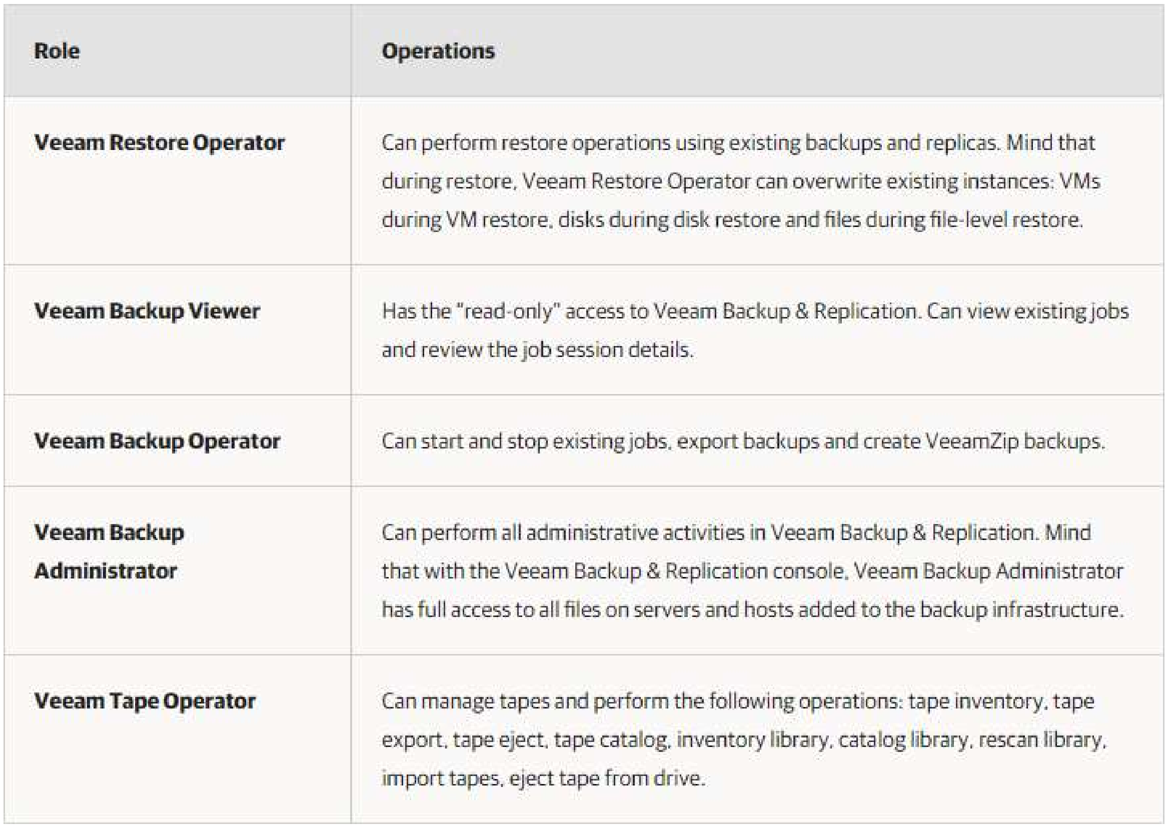
General and User Roles Settings

All jobs, backup infrastructure components, and other backup server-managed objects have general settings applied to them.
Users or groups who intend to work with Veeam Backup & Replication can be assigned one of the following roles.



Role	Operations
Veeam Restore Operator	Can perform restore operations using existing backups and replicas. Mind that during restore, Veeam Restore Operator can overwrite existing instances: VMs during VM restore, disks during disk restore and files during file-level restore.
Veeam Backup Viewer	Has the "read-only" access to Veeam Backup & Replication. Can view existing jobs and review the job session details.
Veeam Backup Operator	Can start and stop existing jobs, export backups and create VeeamZip backups.
Veeam Backup Administrator	Can perform all administrative activities in Veeam Backup & Replication. Mind that with the Veeam Backup & Replication console, Veeam Backup Administrator has full access to all files on servers and hosts added to the backup infrastructure.
Veeam Tape Operator	Can manage tapes and perform the following operations: tape inventory, tape export, tape eject, tape catalog, inventory library, catalog library, rescan library, import tapes, eject tape from drive.

Even if you exclude built-in administrator accounts (Domain\Administrator and Machine\Administrator) from all Veeam Backup & Replication roles, they have full access to Veeam Backup & Replication. So, for example, users added to the Administrators group will still have access to Veeam Backup & Replication if the Administrators group is removed from the Veeam Backup & Replication roles.

The Veeam Backup Administrator role must be assigned to the user account that runs the Veeam Backup Service. Users in the Administrators group are automatically assigned the Veeam Backup Administrator role during installation. If you change the default settings, ensure that you assign the appropriate user account as the Veeam Backup Administrator role. It is recommended that the Veeam Backup Administrator role be explicitly assigned to the user account rather than the group.

It is strongly advised to enable multi-factor authentication to protect administrator accounts from compromise (MFA).

If you enable MFA, remember that Veeam Backup & Replication must be run from the service account with MFA disabled.

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Configure Multi-Factor Authentication for Users

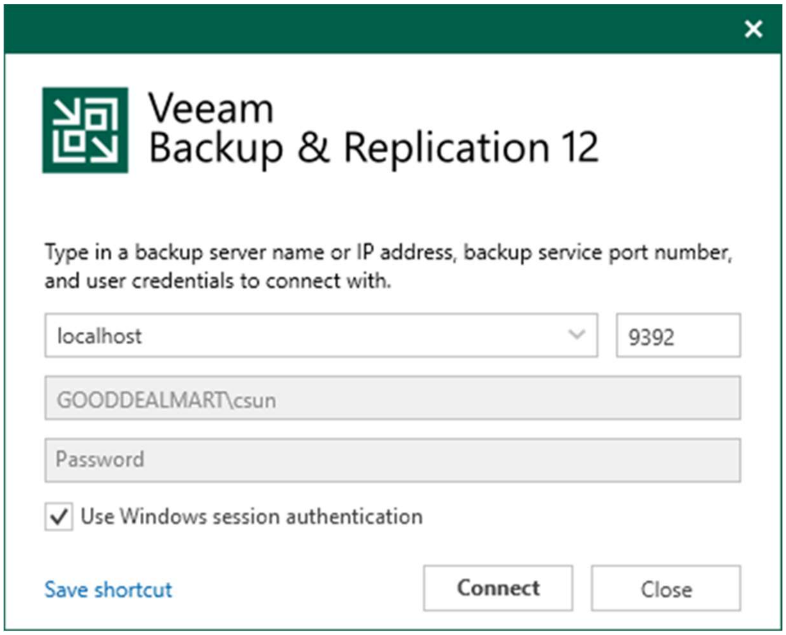
Multi-factor authentication (MFA) is supported by Veeam Backup & Replication for additional user verification. A one-time password (OTP) generated in the mobile authenticator application is a secondary verification method. With login and password credentials, it creates a more secure environment and keeps user accounts safe.

MFA has the following requirements and limitations:

- Users can only manage MFA with the Veeam Backup Administrator role.
- Veeam Backup & Replication Community Edition does not support MFA.
- Veeam Backup Enterprise Manager does not natively support MFA.
- User groups are not supported. You can enable MFA only for user accounts.
- MFA works only for interactive login.
- Push notifications for mobile devices are not supported. Only the mobile authenticator application provides an OTP code.

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.



Veeam Backup & Replication 12

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

localhost 9392

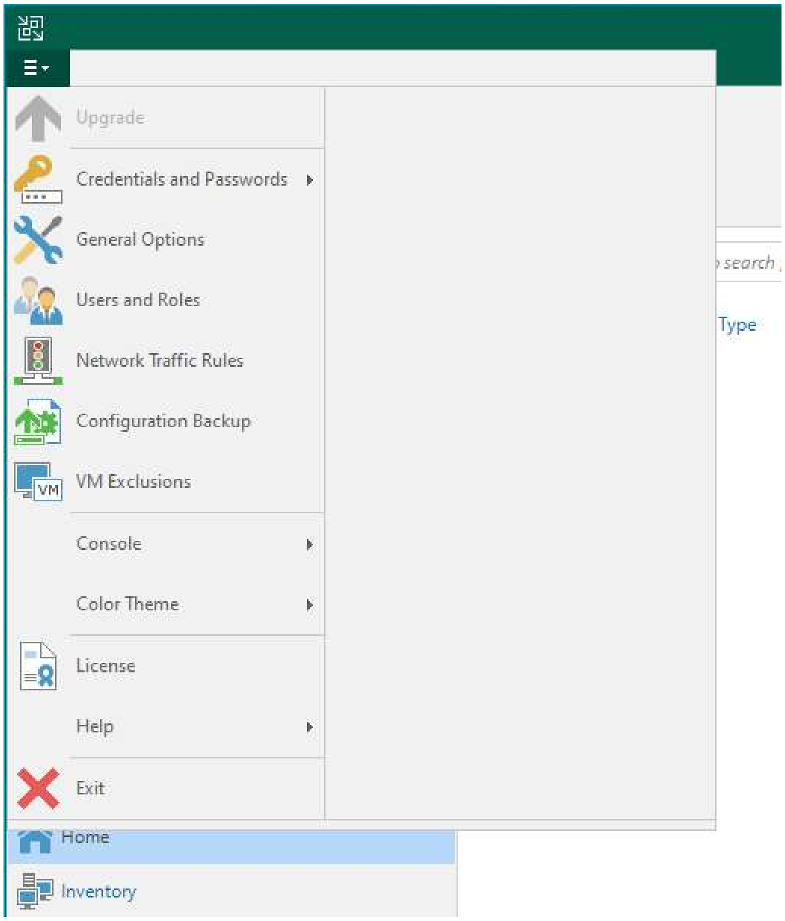
GOODDEALMART\csun

Password

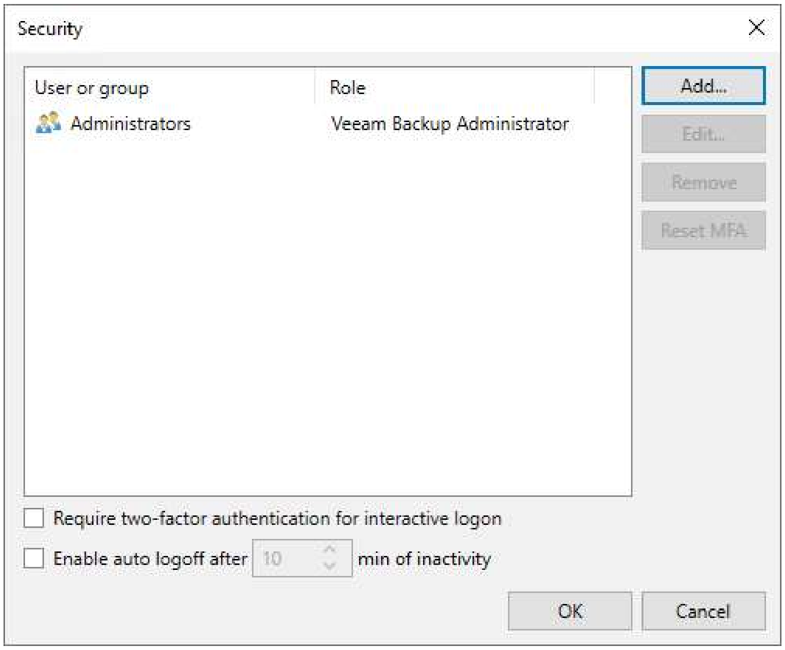
☑ Use Windows session authentication

Technet24

3. Select Users and Roles from the main menu.

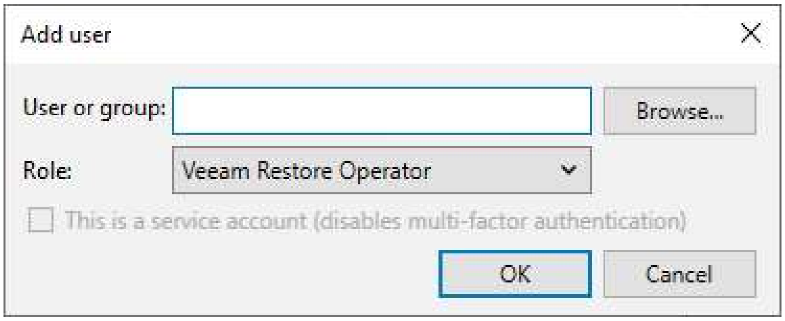

Upgrade
Credentials and Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
VM Exclusions
Console
Color Theme
License
Help
Exit
Home
Inventory
search
Type

4. Click Add on the Security page.



Security
User or group
Role
Administrators
Veeam Backup Administrator
Add...
Edit...
Remove
Reset MFA
☐ Require two-factor authentication for interactive logon
☐ Enable auto logoff after 10 min of inactivity
OK
Cancel

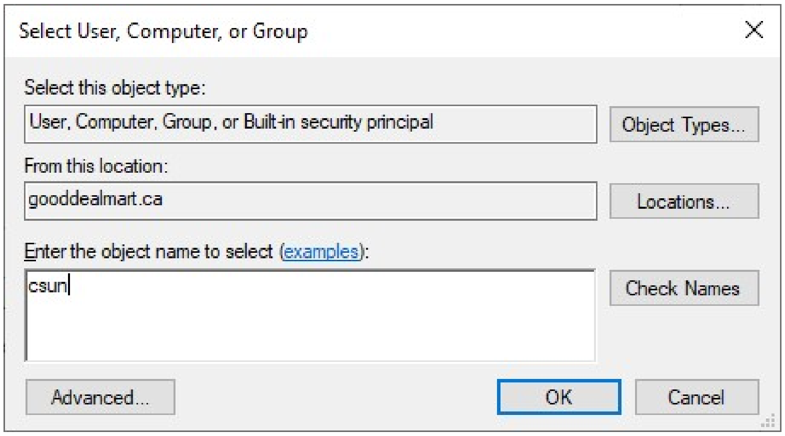
5. On the Add user page, click Browse in the User or group field.



Add user
User or group:
Browse...
Role: Veeam Restore Operator
☐ This is a service account (disables multi-factor authentication)
OK
Cancel

Technet24

6. Enter a user name on the Select User, Computer, or Group page and click Check Names.



Select User, Computer, or Group

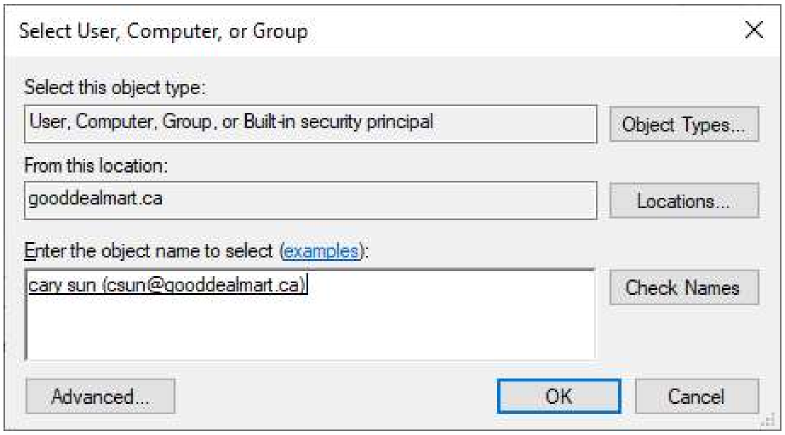
Select this object type: User, Computer, Group, or Built-in security principal

From this location: gooddealmart.ca

Enter the object name to select (examples): csun

Object Types...
Locations...
Check Names
Advanced...
OK
Cancel

7. Click OK on the Select User, Computer, or Group page.



Select User, Computer, or Group

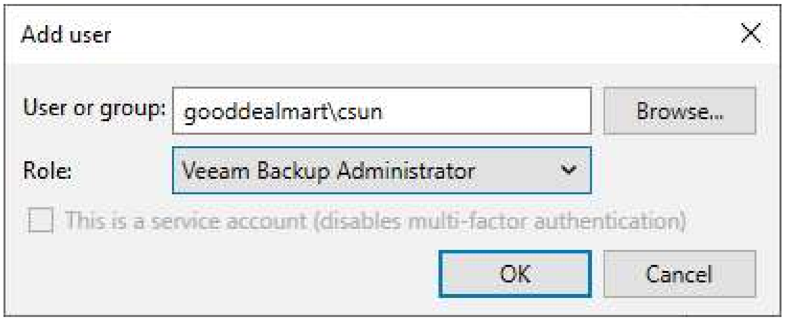
Select this object type: User, Computer, Group, or Built-in security principal

From this location: gooddealmart.ca

Enter the object name to select (examples): cary sun (csun@gooddealmart.ca)

Object Types...
Locations...
Check Names
Advanced...
OK
Cancel

8. Select a role from the Role drop-down list on the Add user page and click OK.



Add user

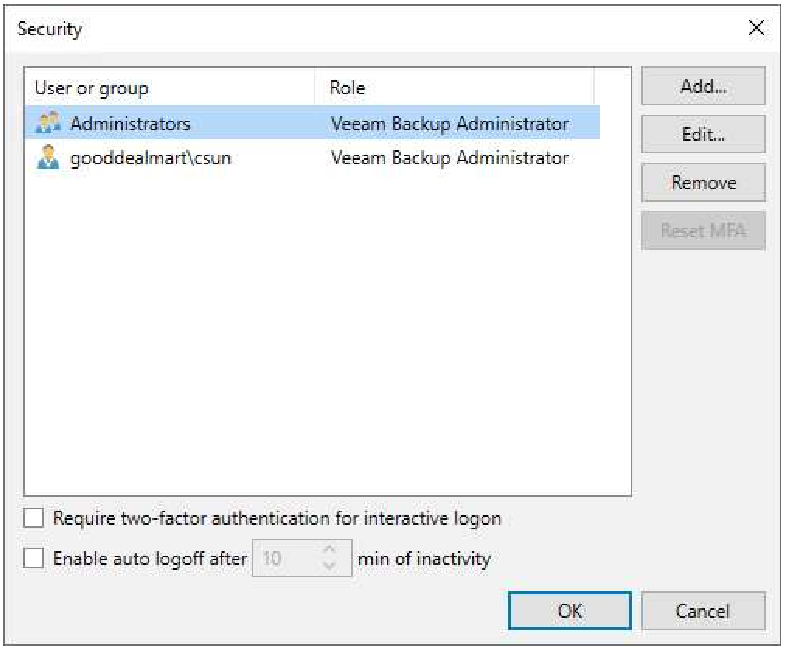
User or group: gooddealmart\csun

Role: Veeam Backup Administrator

☐ This is a service account (disables multi-factor authentication)

Browse...
OK
Cancel

9. On the Security page, select the Administrators group and click Remove.

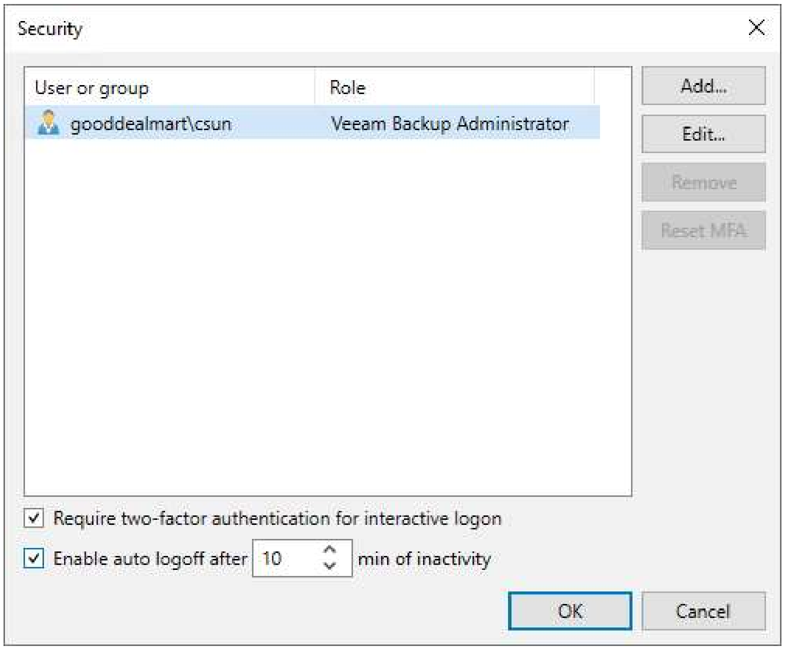

Security
Add...
Edit...
Remove
Reset MFA
OK
Cancel

User or group	Role
Administrators	Veeam Backup Administrator
gooddealmart\csun	Veeam Backup Administrator

☐ Require two-factor authentication for interactive logon

☐ Enable auto logoff after 10 min of inactivity

10. Select the new user.
11. Select the Require two-factor authentication for interactive Log in checkbox.
12. Select Enable auto logoff after a period min of inactivity.
13. Click OK.


Security
Add...
Edit...
Remove
Reset MFA
OK
Cancel

User or group	Role
gooddealmart\csun	Veeam Backup Administrator

☑ Require two-factor authentication for interactive logon

☑ Enable auto logoff after 10 min of inactivity

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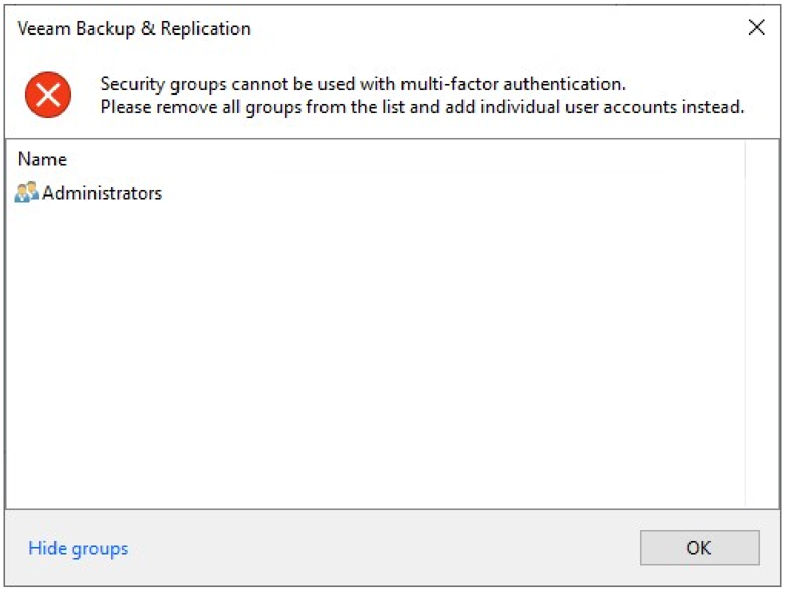
14. Please remove all unsupported security groups from the list if the error message pops up.

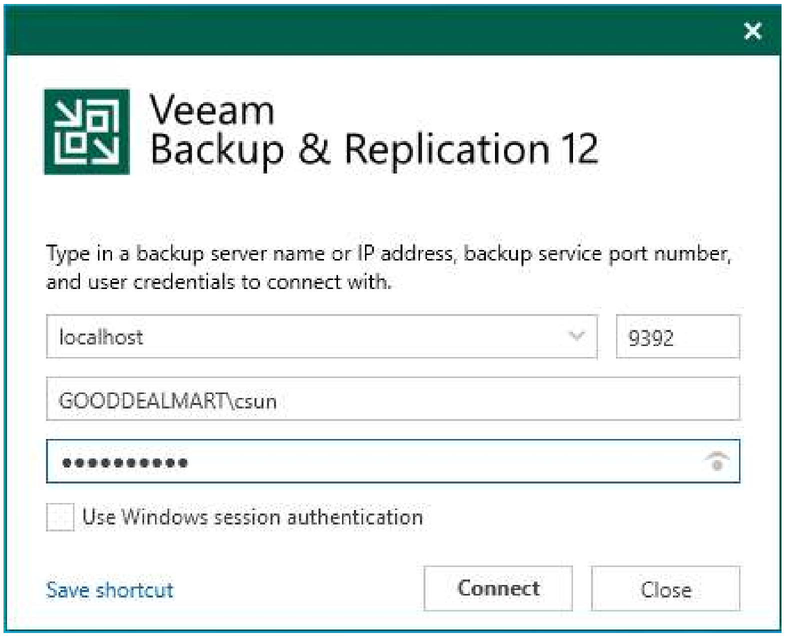


Veeam Backup & Replication

Security groups cannot be used with multi-factor authentication.
Please remove all groups from the list and add individual user accounts instead.

Name
Administrators

15. Close Veeam Backup and Replication console and reopen it.
16. Enter the user name and password on the Veeam Backup & Replication 12 page.



Veeam
Backup & Replication 12

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

localhost
9392
GOODDEALMART\csun
●●●●●●●●●●●

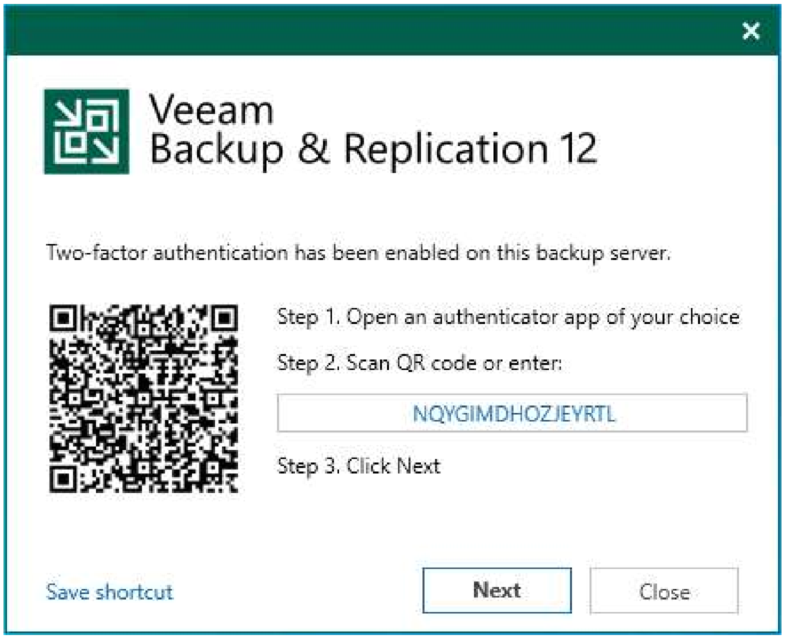
☐ Use Windows session authentication

17. Open an Authentication APP from your device and select Add (+).

Note:

I have tried Microsoft and google authentication apps.

18. Scan the QR code or enter the code.



Veeam
Backup & Replication 12

Two-factor authentication has been enabled on this backup server.

Step 1. Open an authenticator app of your choice

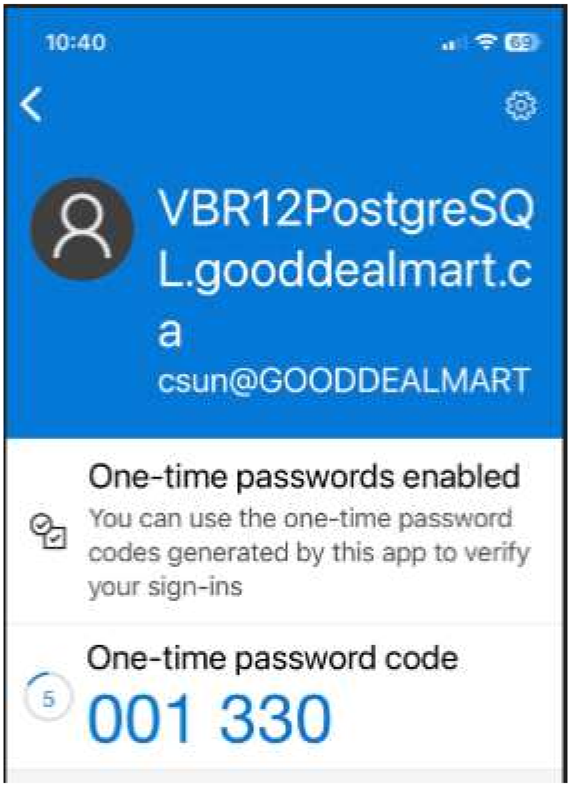
Step 2. Scan QR code or enter:

NQYGIMDHOZJEYRTL

Step 3. Click Next

Save shortcut
Next
Close

19. Ensure the account add to your device successfully.



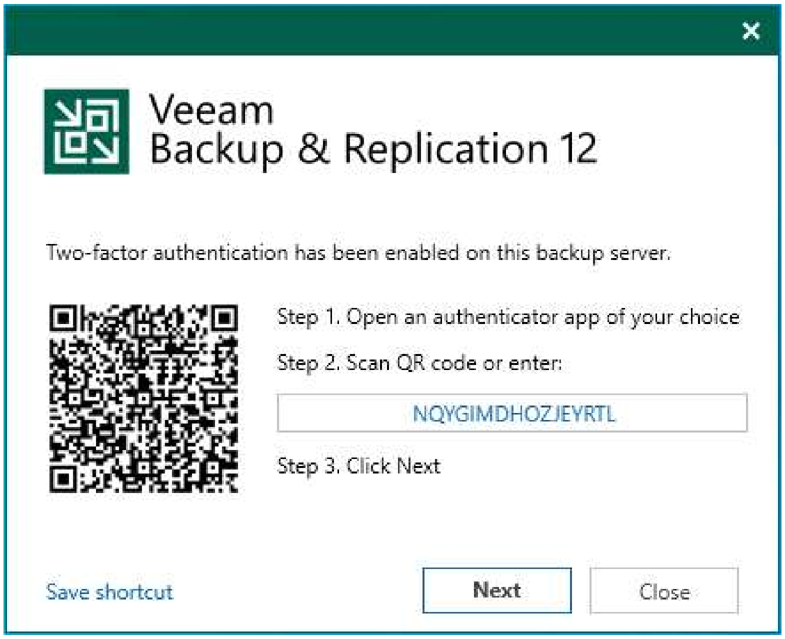
VBR12PostgreSQL.gooddealmart.ca
csun@GOODDEALMART

One-time passwords enabled
You can use the one-time password codes generated by this app to verify your sign-ins

One-time password code

001 330

20. Click Next on the Two-factor authentication enabled on this backup server page.



Veeam
Backup & Replication 12

Two-factor authentication has been enabled on this backup server.

Step 1. Open an authenticator app of your choice

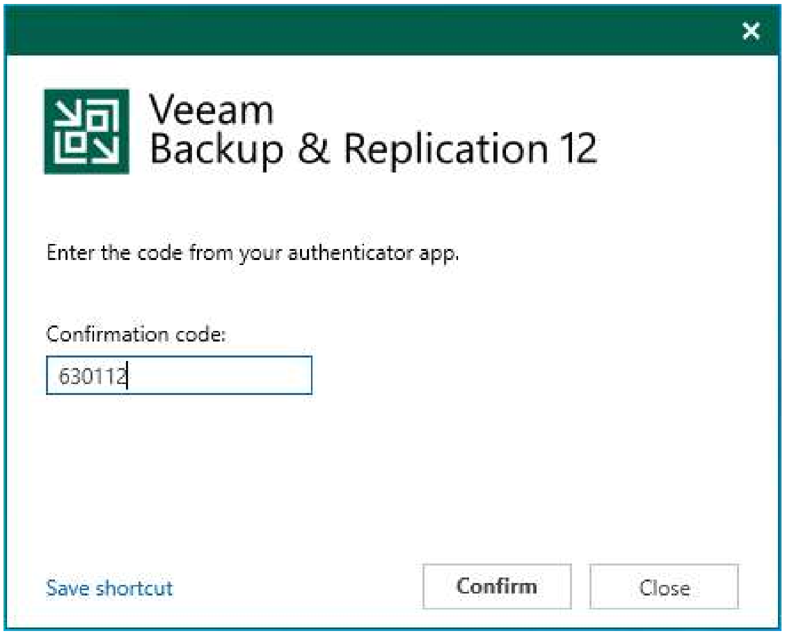
Step 2. Scan QR code or enter:

NQYGIMDHOZJEYRTL

Step 3. Click Next

Save shortcut
Next
Close

21. Enter the one-time password code in the Confirmation code field and click Confirm.



Veeam
Backup & Replication 12

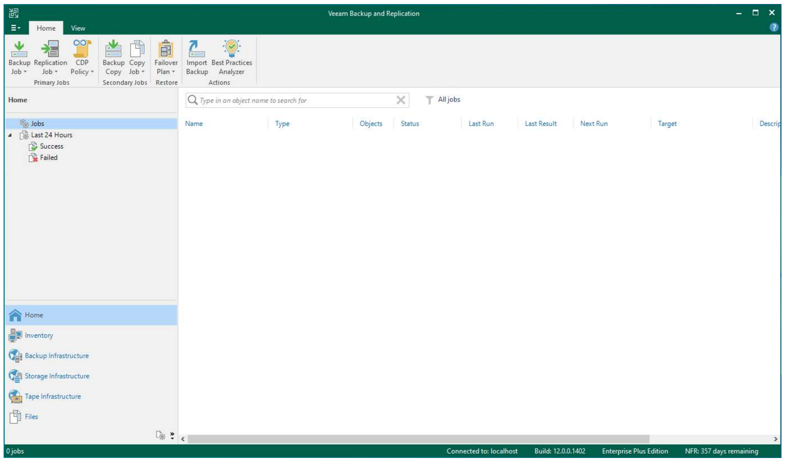
Enter the code from your authenticator app.

Confirmation code: 630112

Save shortcut
Confirm
Close

Technet24

22. Ensure that the open Veeam Backup and Replication console is successful.


Veeam Backup and Replication
Home
View
Backup Job
Replication Job
CDP Policy
Primary Jobs
Backup Copy
Copy Job
Secondary Jobs
Failover Plan
Restore
Import Backup
Best Practices Analyzer
Actions
Home
Jobs
Last 24 Hours
Success
Failed
Type in an object name to search for
All jobs
Name
Type
Objects
Status
Last Run
Last Result
Next Run
Target
Descrip
Home
Inventory
Backup Infrastructure
Storage Infrastructure
Tape Infrastructure
Files
0 jobs
Connected to: localhost
Build: 12.0.0.1402
Enterprise Plus Edition
NFR: 357 days remaining

Configure Group Managed Service Accounts (gMSA)

A Group Managed Service Account (gMSA) is a domain account that can be configured on the server. The Microsoft Windows operating system manages the password, so the administrator does not need to manage the password. Complex passwords are generated randomly and changed every 30 days, reducing the risk of brute force and dictionary attacks.

gMSA has the following requirements and limitations:

- Microsoft Windows Server 2012 and later support gMSAs.
- Backups of Linux target machines that are members of an Active Directory domain are not supported by gMSAs.
- Because gMSAs require a connection to the domain controller, these accounts can only be accessed via the network.
- If you use a gMSA to back up a machine, both the backup proxy and the target machine must have access to the domain controller to obtain the gMSA password. In addition, the gMSA must be added to a member of the Administrators group on the target machine (local or domain). Add to the member if Domain Administrator is only required for Microsoft Active Directory backups and local Administrator permissions are sufficient for all other supported applications.

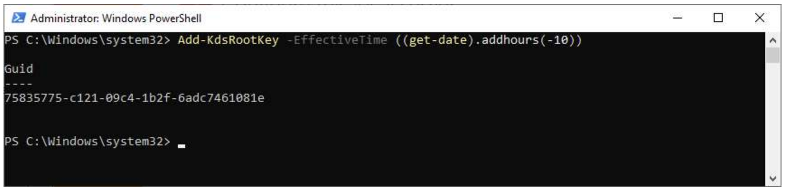
Note:

gMSA is supported for application-aware processing for backups or replicas of VMs running Microsoft Active Directory (domain controllers), Microsoft Exchange, Microsoft SQL Server, and Oracle 12c Release 2 and later. However, the gMSA cannot back up or replicate VMs that run Microsoft SharePoint.

Instructions	Screenshot (if applicable)

Technet24

1. Log in to the domain controller server.
2. Open Windows PowerShell and run as administrator.
3. Run the cmdlet below to generate a root key. Add-KdsRootKey –EffectiveTime ((get-date).addhours(-10))



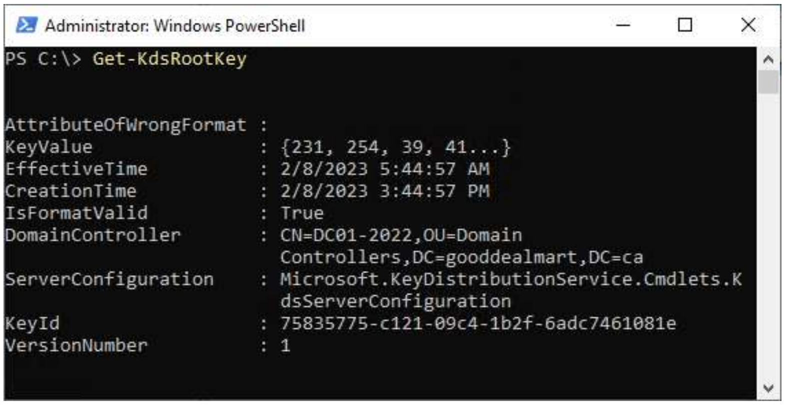
```
PS C:\Windows\system32> Add-KdsRootKey -EffectiveTime ((get-date).addhours(-10))

Guid
----
75835775-c121-09c4-1b2f-6adc7461081e


PS C:\Windows\system32> _
```

4. Run the cmdlet below to ensure the KDS root key has been created successfully.

   Get-KdsRootKey

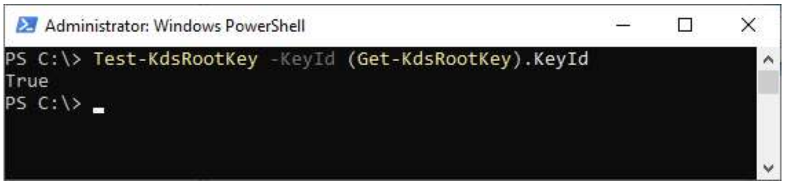


```
PS C:\> Get-KdsRootKey


AttributeOfWrongFormat :
KeyValue               : {231, 254, 39, 41...}
EffectiveTime          : 2/8/2023 5:44:57 AM
CreationTime           : 2/8/2023 3:44:57 PM
IsFormatValid          : True
DomainController       : CN=DC01-2022,OU=Domain
                         Controllers,DC=gooddealmart,DC=ca
ServerConfiguration    : Microsoft.KeyDistributionService.Cmdlets.K
                         dsServerConfiguration
KeyId                  : 75835775-c121-09c4-1b2f-6adc7461081e
VersionNumber          : 1
```

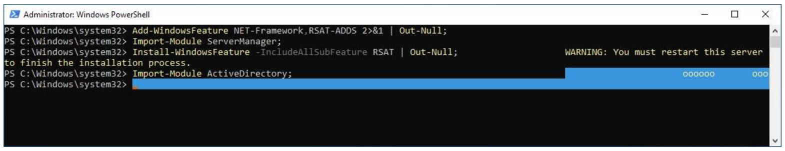
5. Run the cmdlet below to check the KDS key.

   Test-KdsRootKey -KeyId (Get-KdsRootKey).KeyId



```
PS C:\> Test-KdsRootKey -KeyId (Get-KdsRootKey).KeyId
True
PS C:\> _
```

6. Run the below cmdlet to enable gMSA. Add-WindowsFeature NET-Framework, RSAT-ADDS 2>&1 | Out-Null; Import-Module ServerManager;



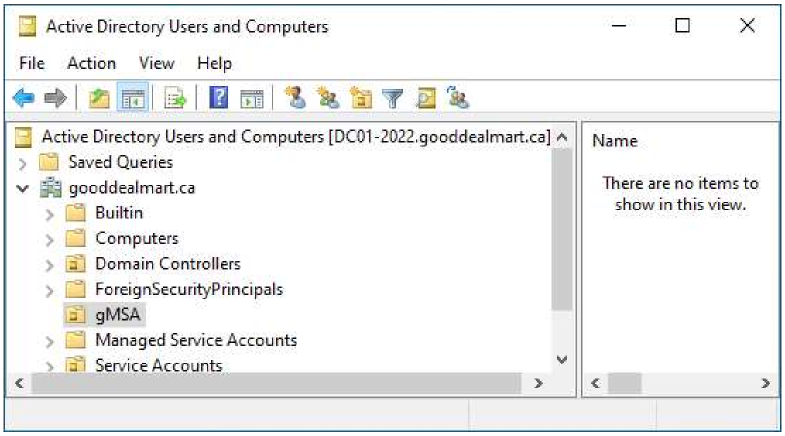
```
PS C:\Windows\system32> Add-WindowsFeature NET-Framework,RSAT-ADDS 2>&1 | Out-Null;
PS C:\Windows\system32> Import-Module ServerManager;
PS C:\Windows\system32> Install-WindowsFeature -IncludeAllSubFeature RSAT | Out-Null;                WARNING: You must restart this server
to finish the installation process.
PS C:\Windows\system32> Import-Module ActiveDirectory;                                                             oooooo        ooo
PS C:\Windows\system32>
```

Install-WindowsFeature -IncludeAllSubFeature RSAT | Out-Null; Import-Module ActiveDirectory;

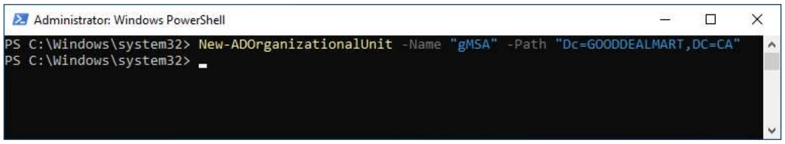
7. Restart the domain controller server.

8. Log in to the domain controller server.
9. Select the Active Directory Users and Computers item from the Tools drop-down list on the Server Manager page.
10. Create a new Active Directory OU.

Note: New-ADOrganizationalUnit -Name "gMSA" -Path "DC=GOODDEALMART, DC=CA."


Active Directory Users and Computers
File
Action
View
Help
Active Directory Users and Computers [DC01-2022.gooddealmart.ca]
Saved Queries
gooddealmart.ca
Builtin
Computers
Domain Controllers
ForeignSecurityPrincipals
gMSA
Managed Service Accounts
Service Accounts
Name

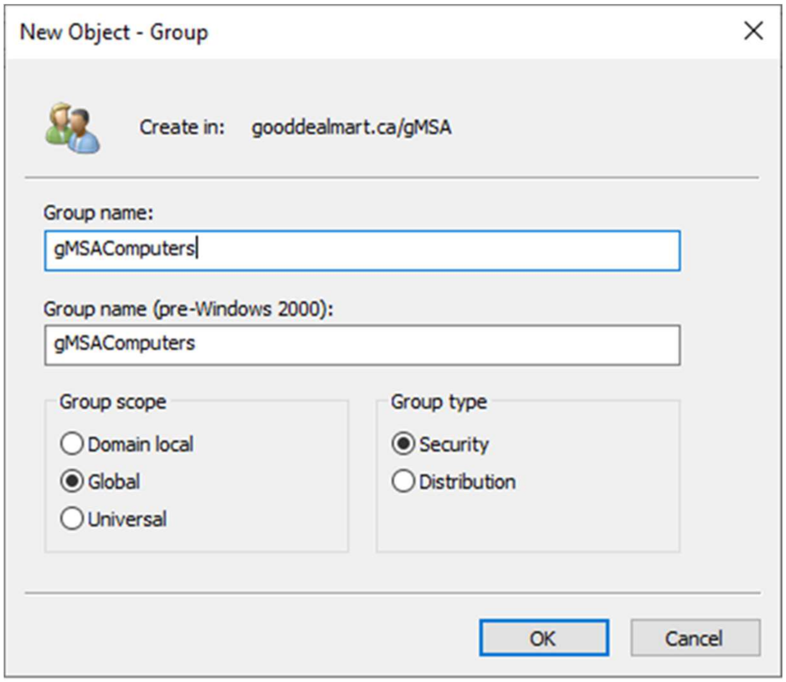
There are no items to show in this view.


Administrator: Windows PowerShell

```
PS C:\Windows\system32> New-ADOrganizationalUnit -Name "gMSA" -Path "Dc=GOODDEALMART,DC=CA"
PS C:\Windows\system32> _
```

11. Create a new security group for gMSA computers.

Note:
New-ADGroup -Name gMSAComputers -GroupCategory Security -GroupScope Global -Path "OU=gMSA, DC=GOODDEALMART, DC=CA."


New Object - Group
OK
Cancel

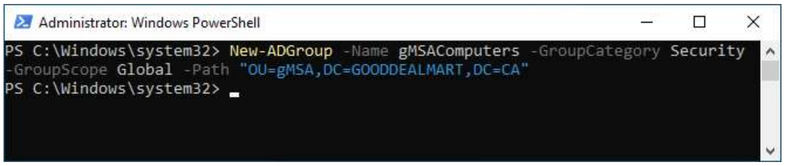
Create in: gooddealmart.ca/gMSA

Group name: gMSAComputers

Group name (pre-Windows 2000): gMSAComputers

Group scope
○ Domain local
● Global
○ Universal

Group type
● Security
○ Distribution

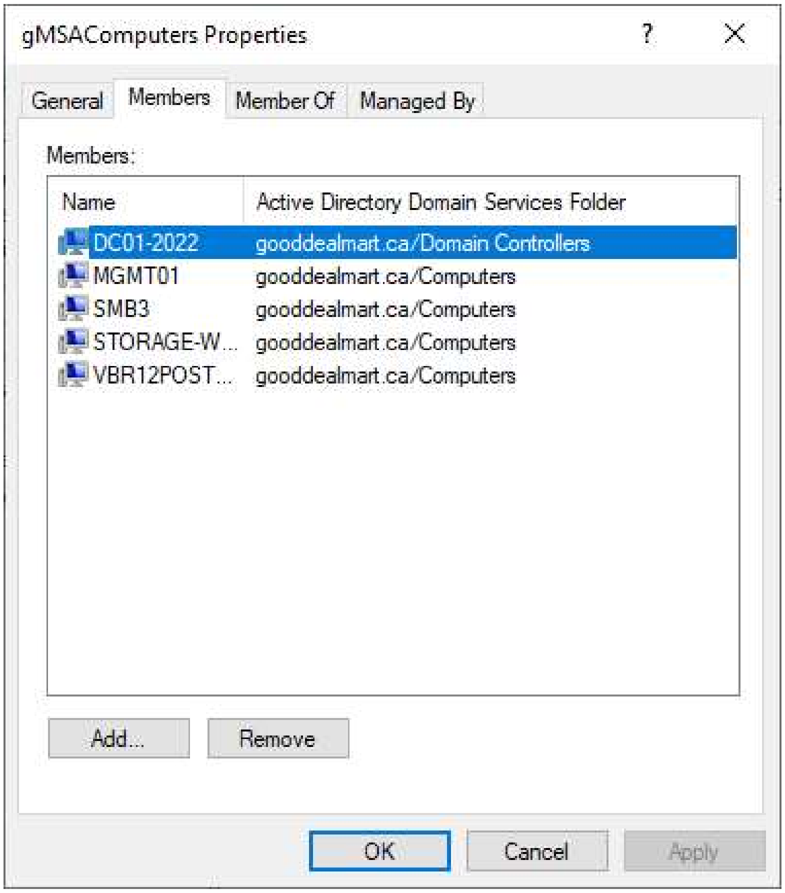

Administrator: Windows PowerShell

```
PS C:\Windows\system32> New-ADGroup -Name gMSAComputers -GroupCategory Security
-GroupScope Global -Path "OU=gMSA,DC=GOODDEALMART,DC=CA"
PS C:\Windows\system32> _
```

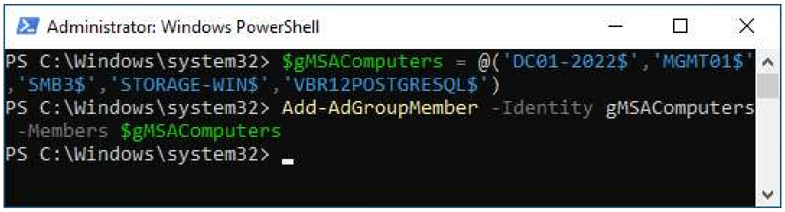
12. Add computer objects to the new security group. These computer objects will be allowed to use gMSA.

Note:
$gMSAComputers = @('DC01-2022$','MGMT01$','SMB3$','STORAGE-WIN$','VBR12POSTGRESQL$')

Add-AdGroupMember -Identity gMSAComputers -Members $gMSAComputers


gMSAComputers Properties
?
General
Members
Member Of
Managed By
Members:
Add...
Remove
OK
Cancel
Apply

Name	Active Directory Domain Services Folder
DC01-2022	gooddealmart.ca/Domain Controllers
MGMT01	gooddealmart.ca/Computers
SMB3	gooddealmart.ca/Computers
STORAGE-W...	gooddealmart.ca/Computers
VBR12POST...	gooddealmart.ca/Computers


Administrator: Windows PowerShell

```
PS C:\Windows\system32> $gMSAComputers = @('DC01-2022$','MGMT01$'
,'SMB3$','STORAGE-WIN$','VBR12POSTGRESQL$')
PS C:\Windows\system32> Add-AdGroupMember -Identity gMSAComputers
 -Members $gMSAComputers
PS C:\Windows\system32> _
```

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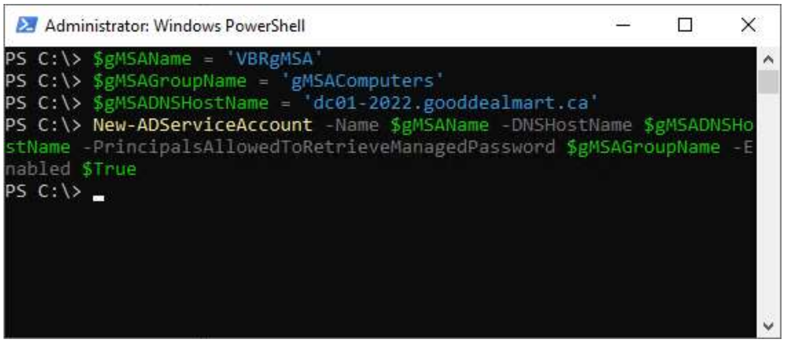
13. Open Windows PowerShell and run as administrator.
14. Run the below cmdlet to create a gMSA account.

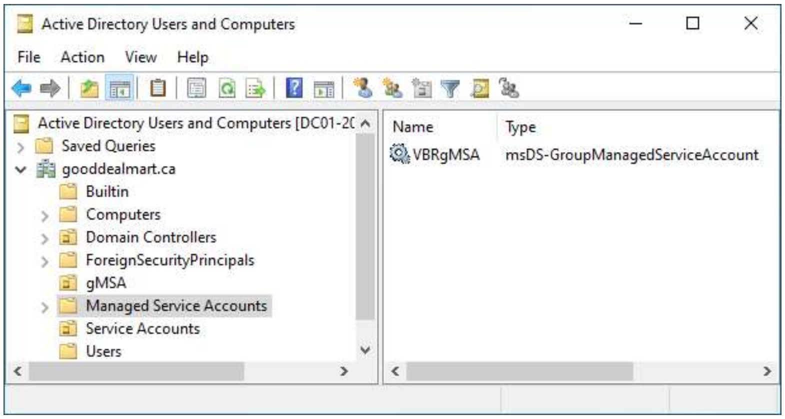
```
$gMSAName = 'VBRgMSA'
$gMSAGroupName = 'gMSAComputers'
$gMSADNSHostName = 'dc01-2022.gooddealmart.ca'

New-ADServiceAccount -Name $gMSAName -DNSHostName $gMSADNSHostName -PrincipalsAllowedToRetrieveManagedPassword $gMSAGroupName -Enabled $True
```


Administrator: Windows PowerShell

```
PS C:\> $gMSAName = 'VBRgMSA'
PS C:\> $gMSAGroupName = 'gMSAComputers'
PS C:\> $gMSADNSHostName = 'dc01-2022.gooddealmart.ca'
PS C:\> New-ADServiceAccount -Name $gMSAName -DNSHostName $gMSADNSHo
stName -PrincipalsAllowedToRetrieveManagedPassword $gMSAGroupName -E
nabled $True
PS C:\> _
```

15. Select the Active Directory Users and Computers from the Tools drop-down list on the Server Manager page.
16. Ensure the newly created VBRgMSA service account is shown in the Managed Service Accounts OU.

Note:
Use separate gMSAs accounts for critical

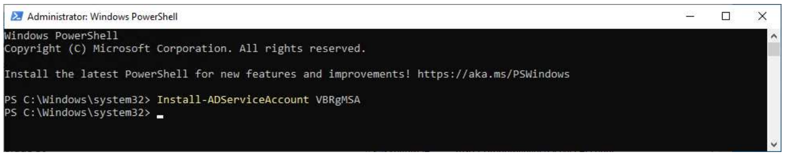

Active Directory Users and Computers
File
Action
View
Help
Active Directory Users and Computers [DC01-2(
Saved Queries
gooddealmart.ca
Builtin
Computers
Domain Controllers
ForeignSecurityPrincipals
gMSA
Managed Service Accounts
Service Accounts
Users

Name	Type
VBRgMSA	msDS-GroupManagedServiceAccount

backup infrastructure components to provide a more secure environment.

17. Run the below cmdlet to install gMSA on the domain controller as the target machine.

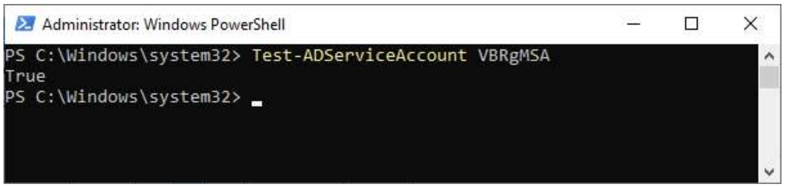
    Install-ADServiceAccount VBRgMSA


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> Install-ADServiceAccount VBRgMSA
PS C:\Windows\system32> _
```

18. Run the below cmdlet to ensure that the gMSA was successfully installed.

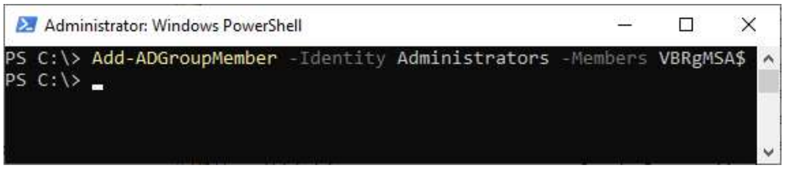
    Test-ADServiceAccount VBRgMSA


Administrator: Windows PowerShell

```
PS C:\Windows\system32> Test-ADServiceAccount VBRgMSA
True
PS C:\Windows\system32> _
```

19. Run the below cmdlet to Add the VBRgMSA service account to the domain Admins group.

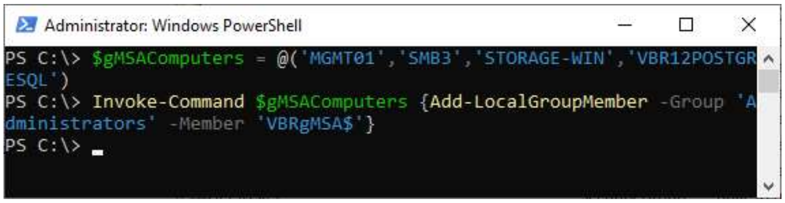
    Add-ADGroupMember -Identity Administrators -Members VBRgMSA$


Administrator: Windows PowerShell

```
PS C:\> Add-ADGroupMember -Identity Administrators -Members VBRgMSA$
PS C:\> _
```

20. Run the below cmdlet to Add the VBRgMSA service account to the Local Administrators group.

    $gMSAComputers = @('MGMT01','SMB3','STO


Administrator: Windows PowerShell

```
PS C:\> $gMSAComputers = @('MGMT01','SMB3','STORAGE-WIN','VBR12POSTGR
ESQL')
PS C:\> Invoke-Command $gMSAComputers {Add-LocalGroupMember -Group 'A
dministrators' -Member 'VBRgMSA$'}
PS C:\> _
```

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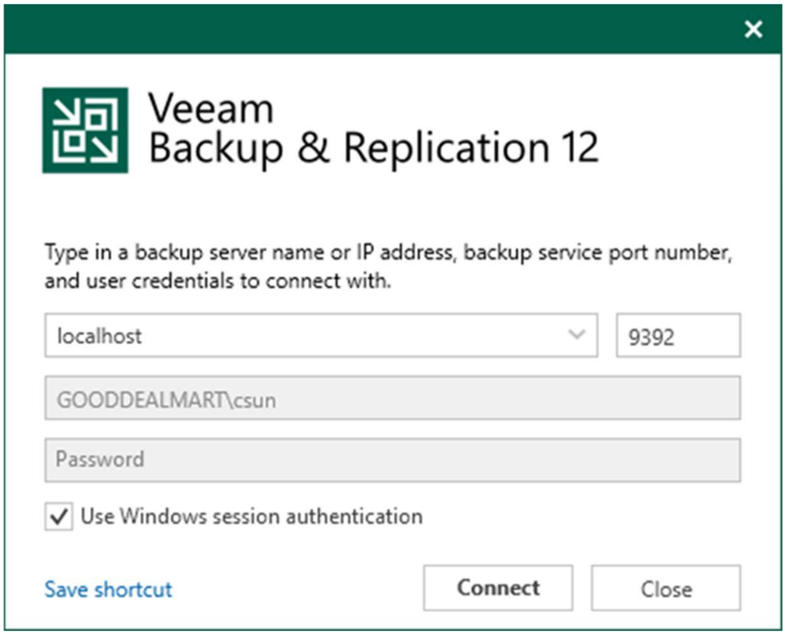
```
RAGE-WIN','VBR12POSTGRESQL')

Invoke-Command $gMSAComputers {Add-LocalGroupMember -Group ‘Administrators’ -Member ‘VBRgMSA$’}
```

21. Log in to the Veeam Backup and replication manager server.
22. Open the Veeam Backup & Replication Console and click Connect.



Veeam
Backup & Replication 12

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

localhost 9392

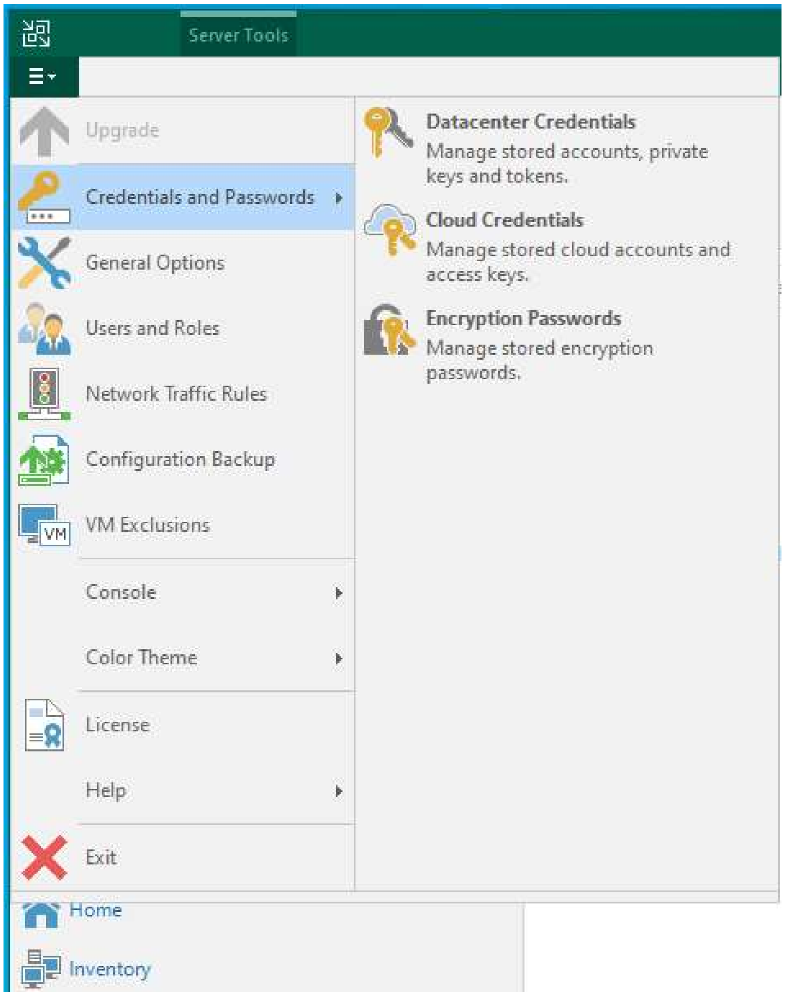
GOODDEALMART\csun

Password

☑ Use Windows session authentication

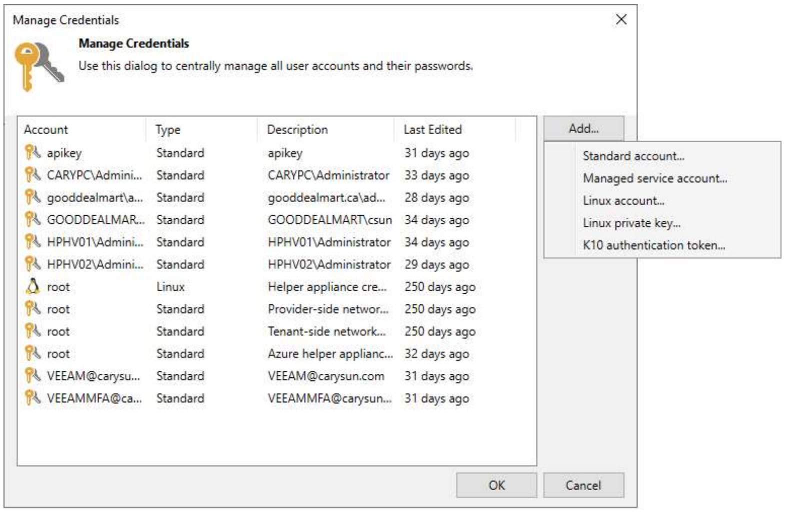
Save shortcut
Connect
Close

23. Select Credentials and Passwords from the main menu.
24. Select Datacenter Credentials.


Server Tools
Upgrade
Credentials and Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
VM Exclusions
Console
Color Theme
License
Help
Exit
Home
Inventory
Datacenter Credentials
Manage stored accounts, private keys and tokens.
Cloud Credentials
Manage stored cloud accounts and access keys.
Encryption Passwords
Manage stored encryption passwords.

Technet24

25. Click Add on the Manage Credentials page and select Managed service account.



Manage Credentials

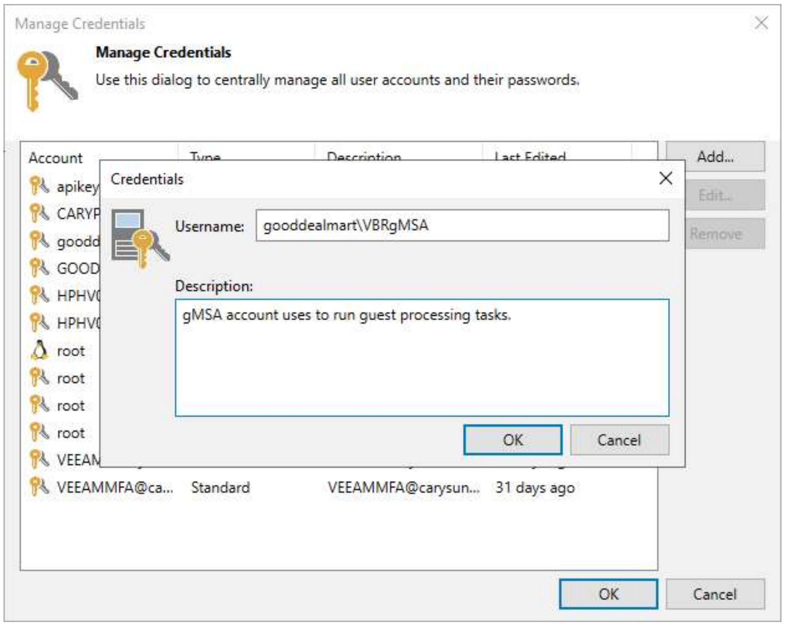
Manage Credentials

Use this dialog to centrally manage all user accounts and their passwords.

Account	Type	Description	Last Edited
apikey	Standard	apikey	31 days ago
CARYPC\Admini...	Standard	CARYPC\Administrator	33 days ago
gooddealmart\a...	Standard	gooddealmart.ca\ad...	28 days ago
GOODDEALMAR...	Standard	GOODDEALMART\csun	34 days ago
HPHV01\Admini...	Standard	HPHV01\Administrator	34 days ago
HPHV02\Admini...	Standard	HPHV02\Administrator	29 days ago
root	Linux	Helper appliance cre...	250 days ago
root	Standard	Provider-side networ...	250 days ago
root	Standard	Tenant-side network...	250 days ago
root	Standard	Azure helper applianc...	32 days ago
VEEAM@carysu...	Standard	VEEAM@carysun.com	31 days ago
VEEAMMFA@ca...	Standard	VEEAMMFA@carysun...	31 days ago

Add...
Standard account...
Managed service account...
Linux account...
Linux private key...
K10 authentication token...
OK
Cancel

26. Enter the new gMSA account in the Username field on the Credentials page.
27. Give a brief description in the Description field for future reference and click OK.



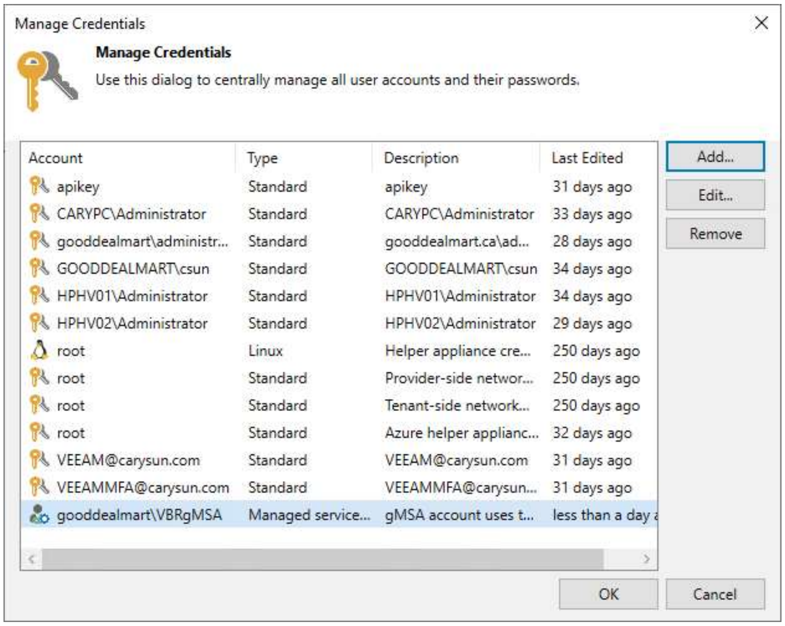
Credentials

Username: gooddealmart\VBRgMSA

Description: gMSA account uses to run guest processing tasks.

Manage Credentials
Manage Credentials
Use this dialog to centrally manage all user accounts and their passwords.
Add...
Edit...
Remove
OK
Cancel
OK
Cancel

28. Ensure the gMSA account is added to the Manage Credentials page and click OK.



Manage Credentials

Use this dialog to centrally manage all user accounts and their passwords.

Account	Type	Description	Last Edited
apikey	Standard	apikey	31 days ago
CARYPC\Administrator	Standard	CARYPC\Administrator	33 days ago
gooddealmart\administr...	Standard	gooddealmart.ca\ad...	28 days ago
GOODDEALMART\csun	Standard	GOODDEALMART\csun	34 days ago
HPHV01\Administrator	Standard	HPHV01\Administrator	34 days ago
HPHV02\Administrator	Standard	HPHV02\Administrator	29 days ago
root	Linux	Helper appliance cre...	250 days ago
root	Standard	Provider-side networ...	250 days ago
root	Standard	Tenant-side network...	250 days ago
root	Standard	Azure helper applianc...	32 days ago
VEEAM@carysun.com	Standard	VEEAM@carysun.com	31 days ago
VEEAMMFA@carysun.com	Standard	VEEAMMFA@carysun...	31 days ago
gooddealmart\VBRgMSA	Managed service...	gMSA account uses t...	less than a day

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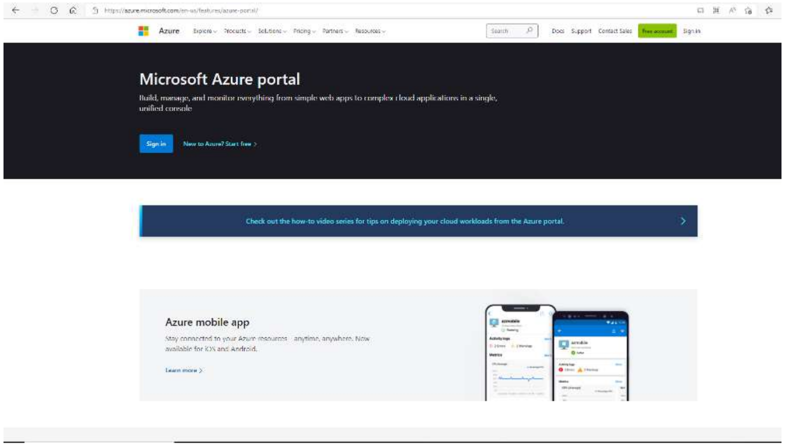
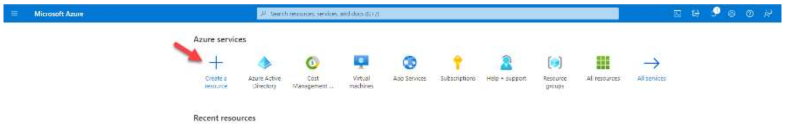
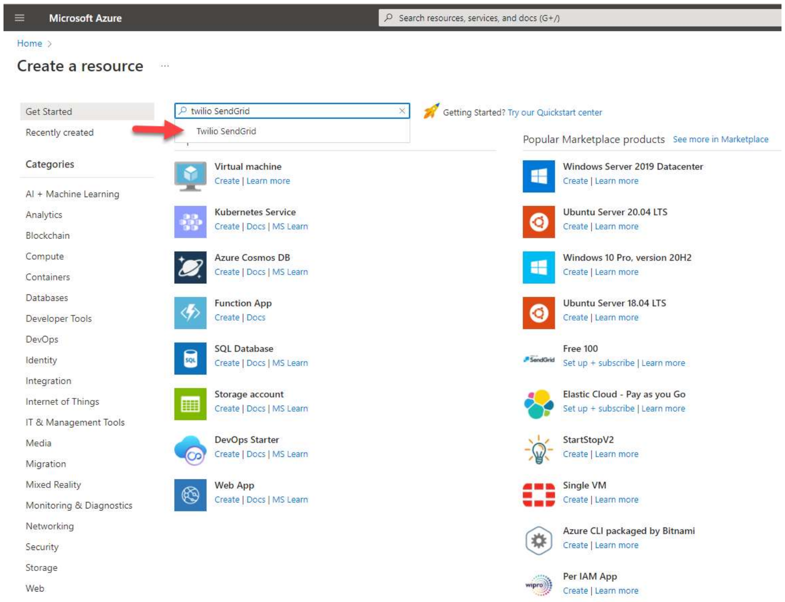
Configure Notification with Free SendGrid Account of Azure

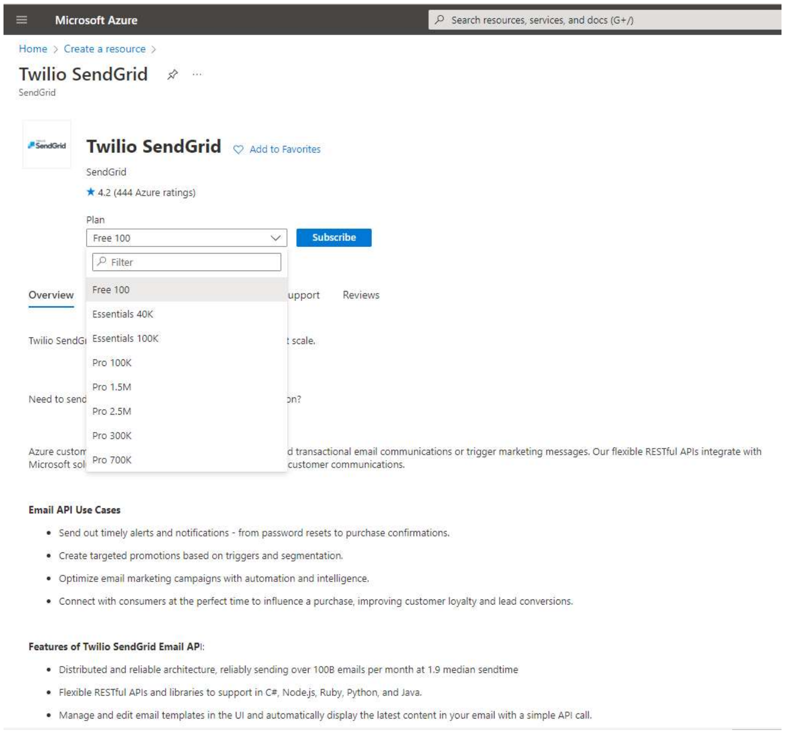
You can configure the SendGrid account as an SMTP relay for notification settings if you want Veeam Backup & Replication to send email notifications about backup job results.

Instructions	Screenshot (if applicable)
1. Sign in Azure portal with a global admin account. https://portal.azure.com	 https://azure.microsoft.com/en-us/features/azure-portal/ Microsoft Azure portal Build, manage, and monitor everything from simple web apps to complex cloud applications in a single, unified console Check out the how-to video series for tips on deploying your cloud workloads from the Azure portal. Azure mobile app Stay connected to your Azure resources—anytime, anywhere. Now available for iOS and Android. Azure Explore Products Solutions Pricing Partners Resources Search Docs Support Contact Sales Free account Sign in Sign in New to Azure? Start free > Learn more >
2. On the Azure services page, select +Create resource.	 Microsoft Azure Search resources, services, and docs (G+/) Azure services Create a resource Azure Active Directory Cost Management ... Virtual machines App Services Subscriptions Help + support Resource groups All resources All services Recent resources

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


Microsoft Azure
Search resources, services, and docs (G+/)
Home >
Create a resource
Get Started
Recently created
Categories
AI + Machine Learning
Analytics
Blockchain
Compute
Containers
Databases
Developer Tools
DevOps
Identity
Integration
Internet of Things
IT & Management Tools
Media
Migration
Mixed Reality
Monitoring & Diagnostics
Networking
Security
Storage
Web
twilio SendGrid
Twilio SendGrid
Getting Started? Try our Quickstart center
Virtual machine
Create | Learn more
Kubernetes Service
Create | Docs | MS Learn
Azure Cosmos DB
Create | Docs | MS Learn
Function App
Create | Docs
SQL Database
Create | Docs | MS Learn
Storage account
Create | Docs | MS Learn
DevOps Starter
Create | Docs | MS Learn
Web App
Create | Docs | MS Learn
Popular Marketplace products
See more in Marketplace
Windows Server 2019 Datacenter
Create | Learn more
Ubuntu Server 20.04 LTS
Create | Learn more
Windows 10 Pro, version 20H2
Create | Learn more
Ubuntu Server 18.04 LTS
Create | Learn more
Free 100
Set up + subscribe | Learn more
Elastic Cloud - Pay as you Go
Set up + subscribe | Learn more
StartStopV2
Create | Learn more
Single VM
Create | Learn more
Azure CLI packaged by Bitnami
Create | Learn more
Per IAM App
Create | Learn more

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


Microsoft Azure
Search resources, services, and docs (G+/)
Home > Create a resource >
Twilio SendGrid
SendGrid
Twilio SendGrid
Add to Favorites
SendGrid
★ 4.2 (444 Azure ratings)
Subscribe
Filter
Free 100
Essentials 40K
Essentials 100K
Pro 100K
Pro 1.5M
Pro 2.5M
Pro 300K
Pro 700K
Overview
upport
Reviews
Twilio SendGi
t scale.
Need to send
on?
Azure custom
Microsoft sol

Plan: Free 100

d transactional email communications or trigger marketing messages. Our flexible RESTful APIs integrate with customer communications.

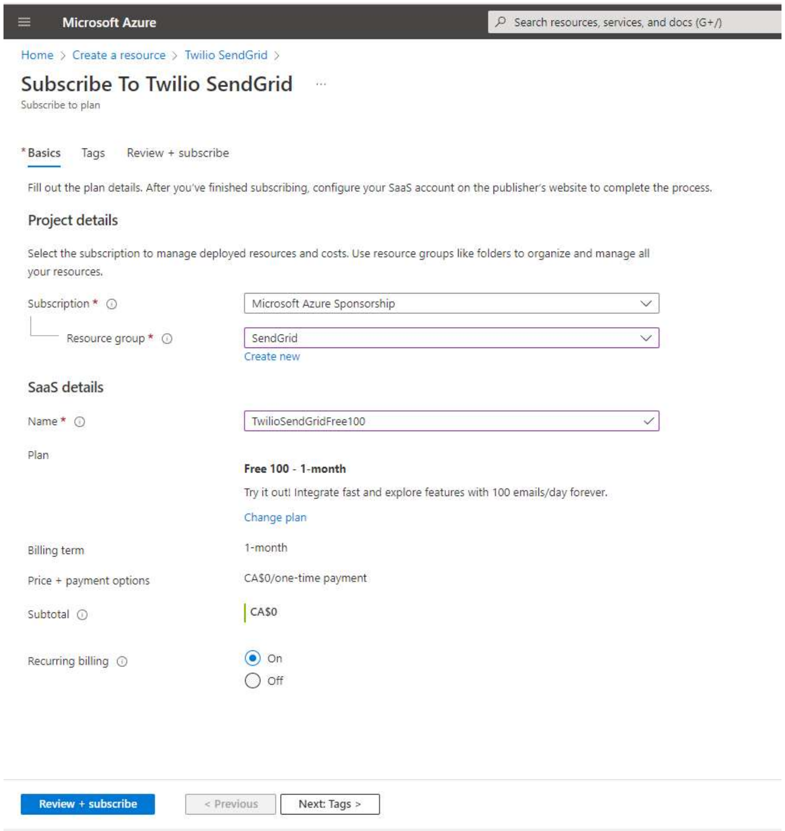
Email API Use Cases

- Send out timely alerts and notifications - from password resets to purchase confirmations.
- Create targeted promotions based on triggers and segmentation.
- Optimize email marketing campaigns with automation and intelligence.
- Connect with consumers at the perfect time to influence a purchase, improving customer loyalty and lead conversions.

Features of Twilio SendGrid Email API:

- Distributed and reliable architecture, reliably sending over 100B emails per month at 1.9 median sendtime
- Flexible RESTful APIs and libraries to support in C#, Node.js, Ruby, Python, and Java.
- Manage and edit email templates in the UI and automatically display the latest content in your email with a simple API call.

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


Microsoft Azure
Search resources, services, and docs (G+/)
Home > Create a resource > Twilio SendGrid >
*Basics
Tags
Review + subscribe
Create new
Change plan
Review + subscribe
< Previous
Next: Tags >

Subscribe To Twilio SendGrid

Subscribe to plan

Fill out the plan details. After you've finished subscribing, configure your SaaS account on the publisher's website to complete the process.

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription *: Microsoft Azure Sponsorship

Resource group *: SendGrid

SaaS details

Name *: TwilioSendGridFree100

Plan: **Free 100 - 1-month**

Try it out! Integrate fast and explore features with 100 emails/day forever.

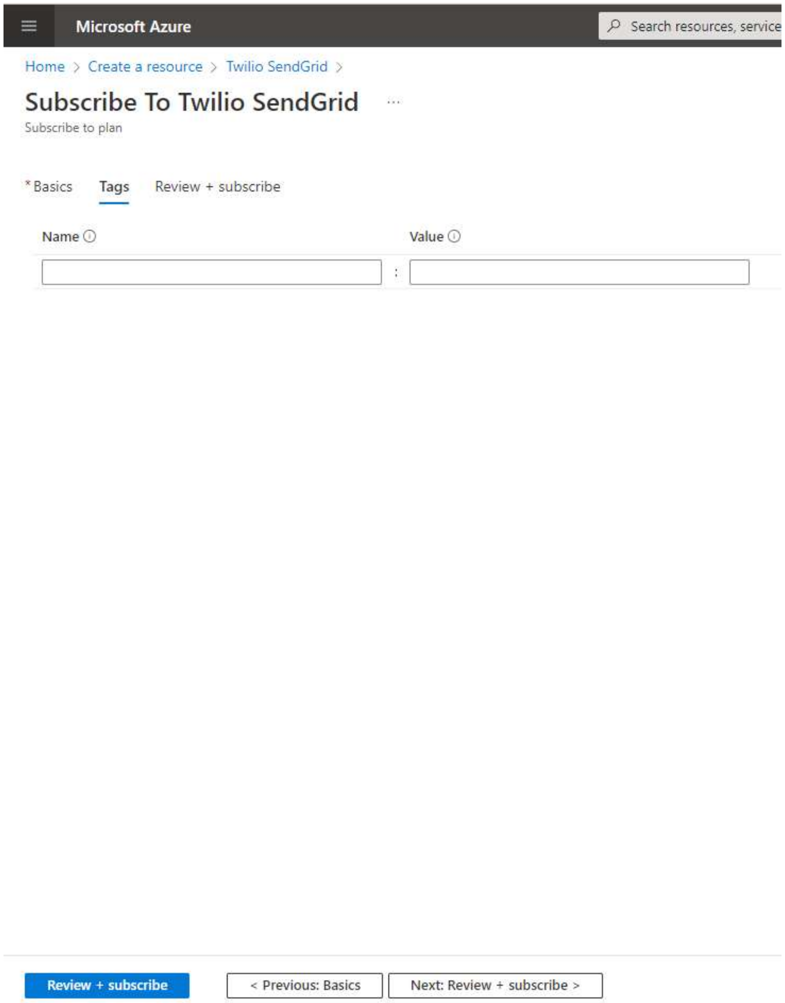
Billing term: 1-month

Price + payment options: CA$0/one-time payment

Subtotal: CA$0

Recurring billing: ● On ○ Off

6. On the Tags page, click Next: Review + subscribe.


Microsoft Azure
Search resources, service
Home > Create a resource > Twilio SendGrid >
Subscribe To Twilio SendGrid ...
Subscribe to plan
* Basics
Tags
Review + subscribe
Name
Value
Review + subscribe
< Previous: Basics
Next: Review + subscribe >

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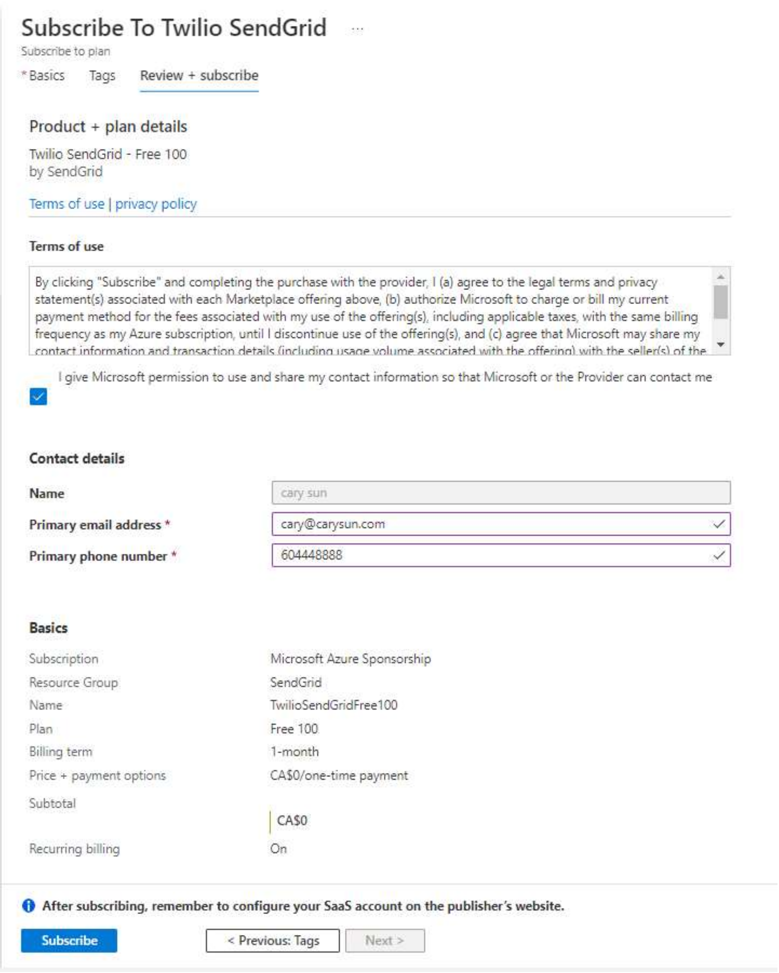
7. On the Review + subscribe page, select I give Microsoft permission to use and share my contact information so that Microsoft or the provider can contact me.



Subscribe To Twilio SendGrid

Subscribe to plan

Product + plan details

Twilio SendGrid - Free 100
by SendGrid

Terms of use

By clicking "Subscribe" and completing the purchase with the provider, I (a) agree to the legal terms and privacy statement(s) associated with each Marketplace offering above, (b) authorize Microsoft to charge or bill my current payment method for the fees associated with my use of the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s), and (c) agree that Microsoft may share my contact information and transaction details (including usage volume associated with the offering) with the seller(s) of the

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

Contact details

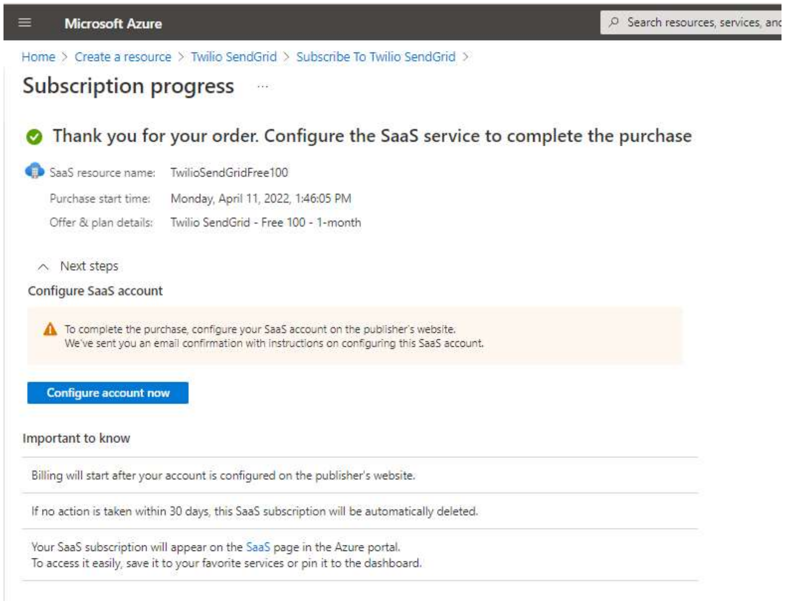
Name	cary sun
Primary email address *	cary@carysun.com
Primary phone number *	604448888

Basics

Subscription	Microsoft Azure Sponsorship
Resource Group	SendGrid
Name	TwilioSendGridFree100
Plan	Free 100
Billing term	1-month
Price + payment options	CA$0/one-time payment
Subtotal	CA$0
Recurring billing	On

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

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


Microsoft Azure
Search resources, services, and
Home > Create a resource > Twilio SendGrid > Subscribe To Twilio SendGrid >

Subscription progress

Thank you for your order. Configure the SaaS service to complete the purchase

SaaS resource name: TwilioSendGridFree100
Purchase start time: Monday, April 11, 2022, 1:46:05 PM
Offer & plan details: Twilio SendGrid - Free 100 - 1-month

Next steps

Configure SaaS account

To complete the purchase, configure your SaaS account on the publisher's website.
We've sent you an email confirmation with instructions on configuring this SaaS account.

Configure account now

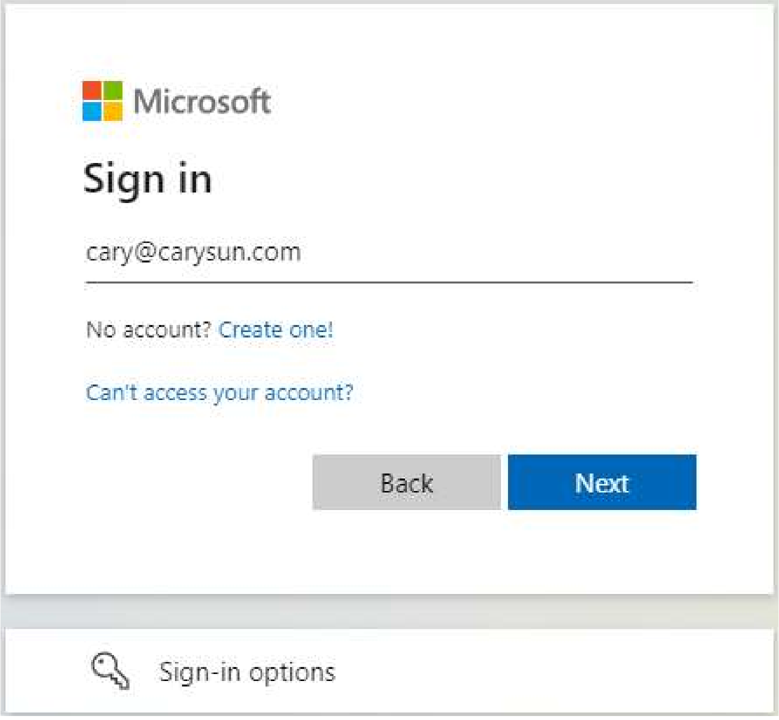
Important to know

Billing will start after your account is configured on the publisher's website.

If no action is taken within 30 days, this SaaS subscription will be automatically deleted.

Your SaaS subscription will appear on the SaaS page in the Azure portal.
To access it easily, save it to your favorite services or pin it to the dashboard.

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


Microsoft

Sign in

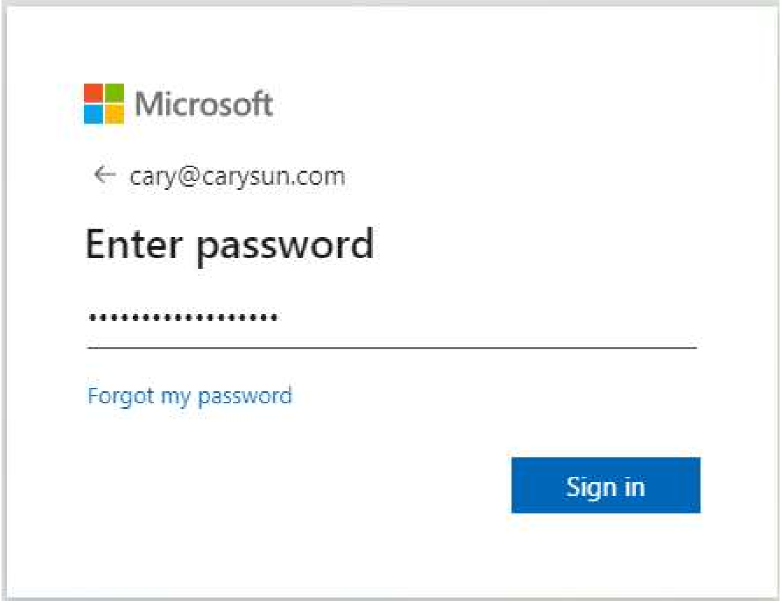
cary@carysun.com

No account? Create one!

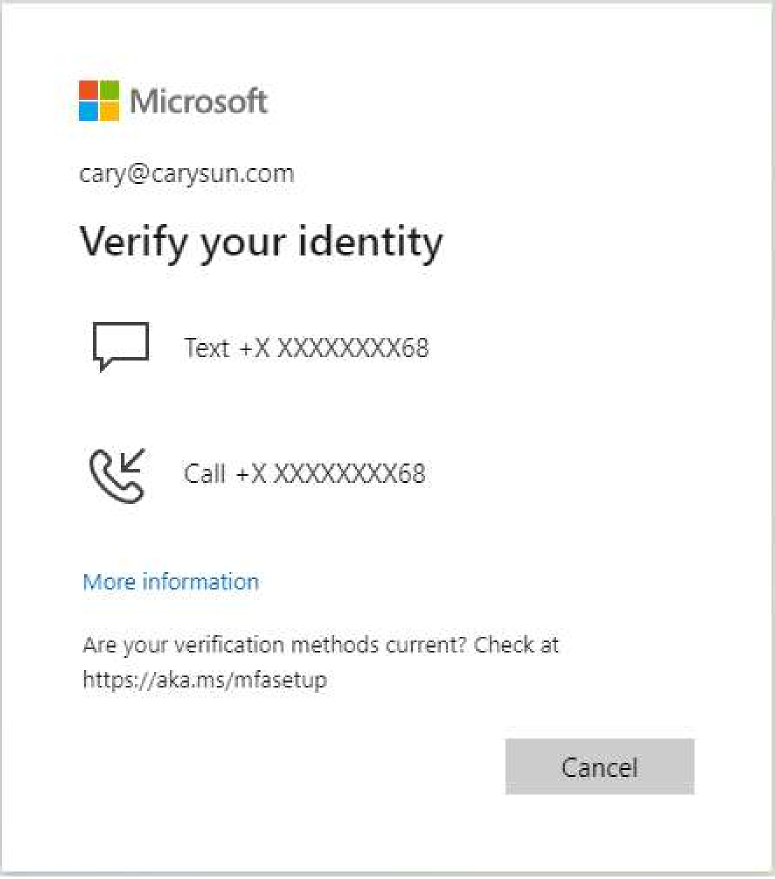
Can't access your account?

Back
Next
Sign-in options

10. Enter a password, and click Sign in.


Microsoft
← cary@carysun.com
Enter password
••••••••••••••••••
Forgot my password
Sign in

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



cary@carysun.com

Verify your identity

Text +X XXXXXXXX68

Call +X XXXXXXXX68

More information

Are your verification methods current? Check at https://aka.ms/mfasetup

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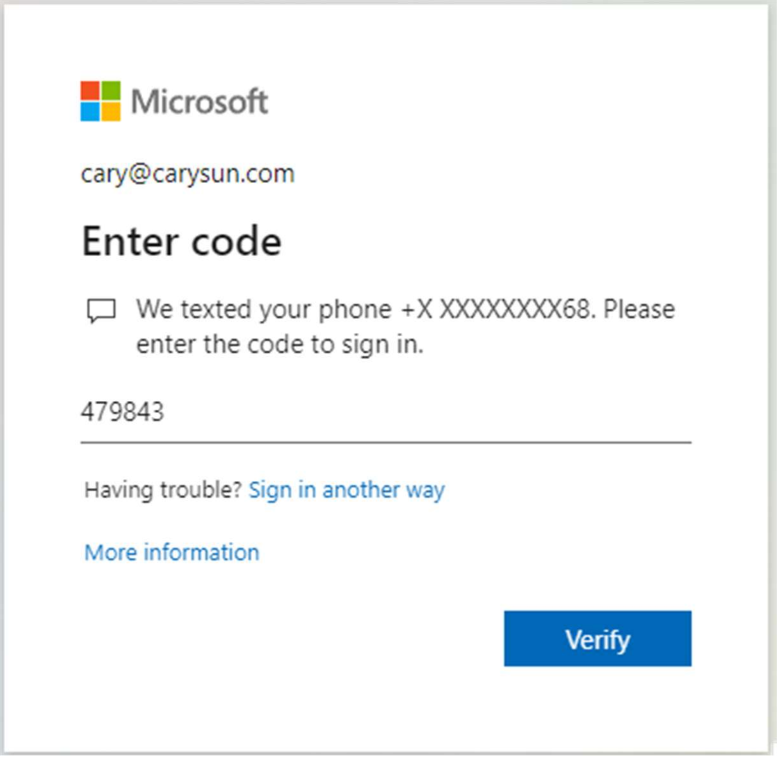
12. Enter the code, and click Verify.


Microsoft

cary@carysun.com

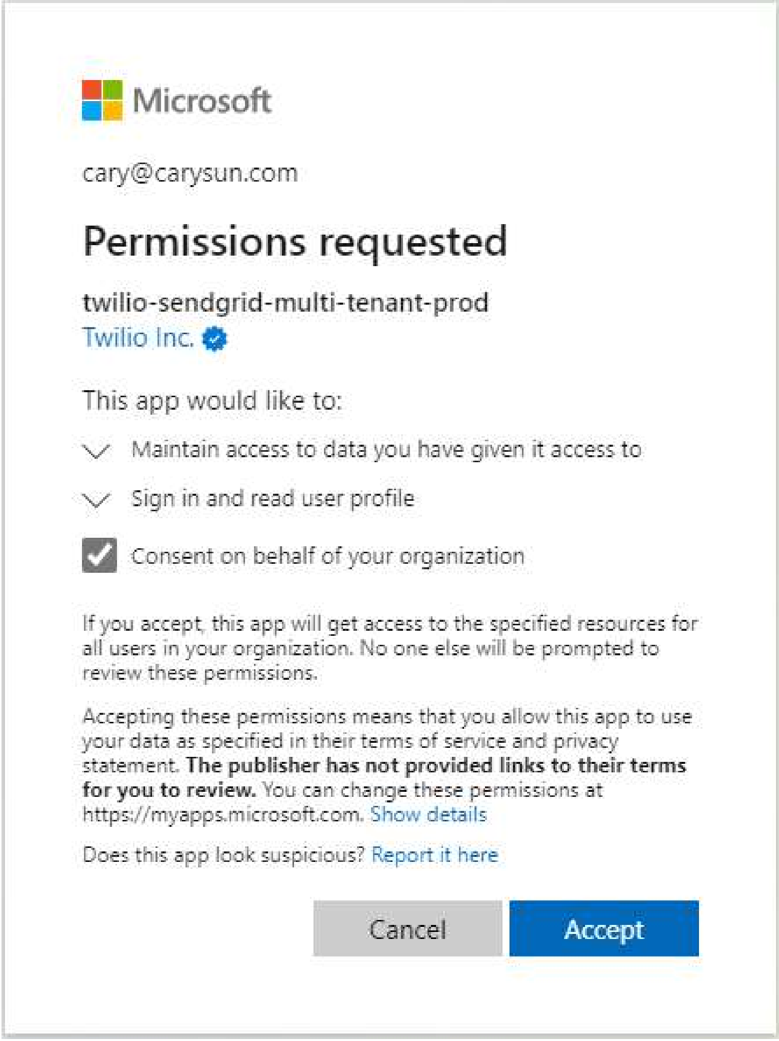
Enter code

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.



cary@carysun.com

Permissions requested

twilio-sendgrid-multi-tenant-prod
Twilio Inc.

This app would like to:

- Maintain access to data you have given it access to
- Sign in and read user profile

☑ Consent on behalf of your organization

If you accept, this app will get access to the specified resources for all users in your organization. No one else will be prompted to review these permissions.

Accepting these permissions means that you allow this app to use your data as specified in their terms of service and privacy statement. **The publisher has not provided links to their terms for you to review.** You can change these permissions at https://myapps.microsoft.com. Show details

Does this app look suspicious? Report it here

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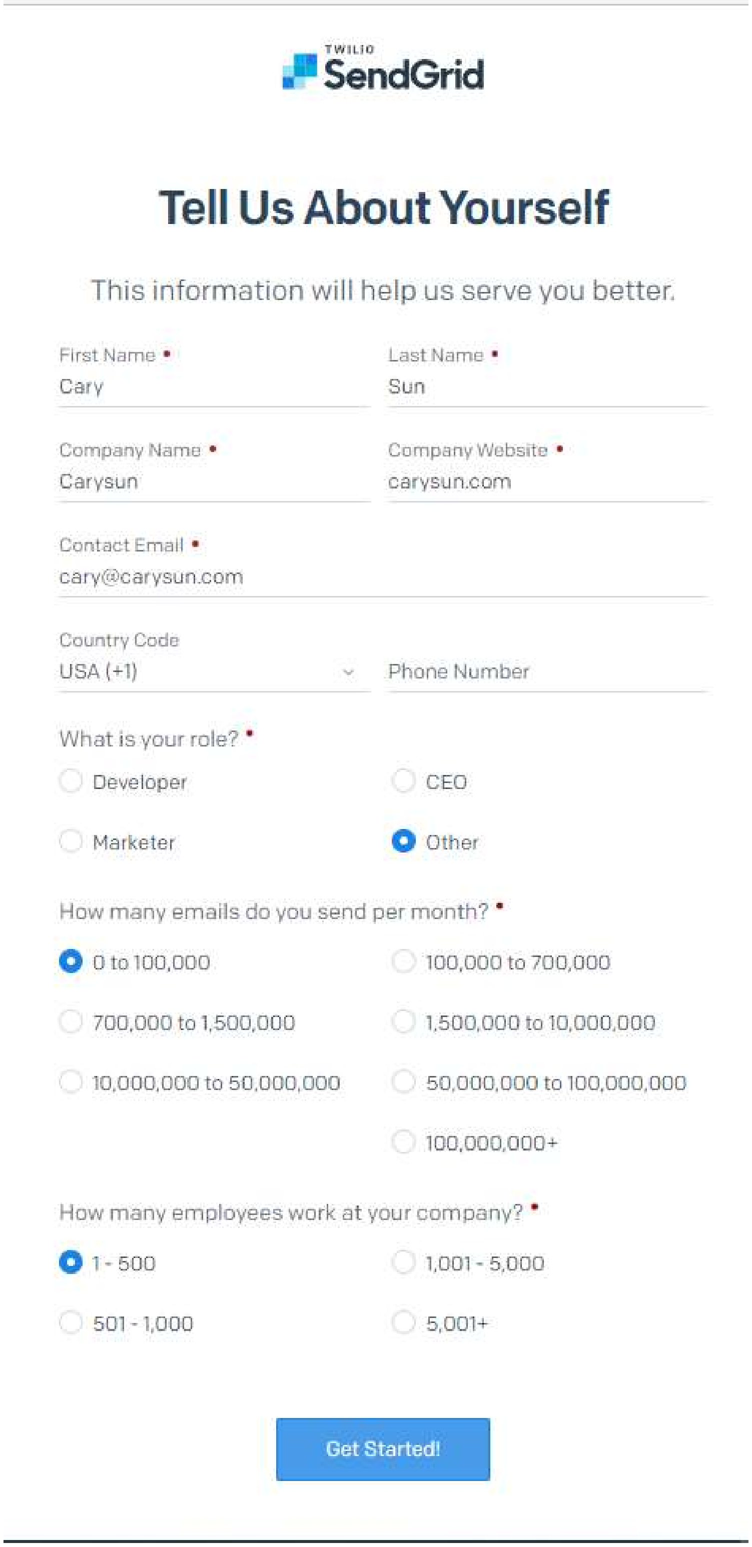
14. Fill in the information, and click Get Started!



Tell Us About Yourself

This information will help us serve you better.

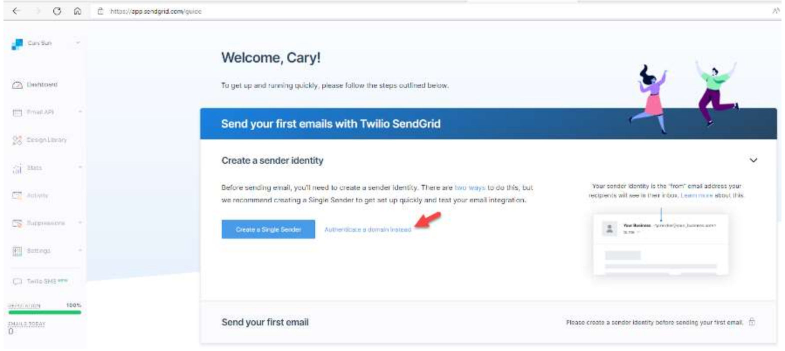
First Name • Cary
Last Name • Sun
Company Name • Carysun
Company Website • carysun.com
Contact Email • cary@carysun.com
Country Code USA (+1)
Phone Number

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+

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



Welcome, Cary!

To get up and running quickly, please follow the steps outlined below.

Send your first emails with Twilio SendGrid

Create a sender identity

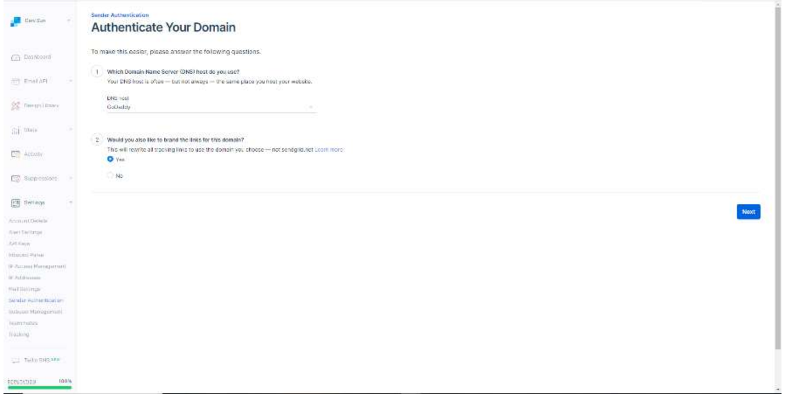
Before sending email, you'll need to create a sender identity. There are two ways to do this, but we recommend creating a Single Sender to get set up quickly and test your email integration.

Your sender identity is the "from" email address your recipients will see in their inbox. Learn more about this.

Send your first email

Please create a sender identity before sending your first email.

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.



Sender Authentication

Authenticate Your Domain

To make this easier, please answer the following questions.

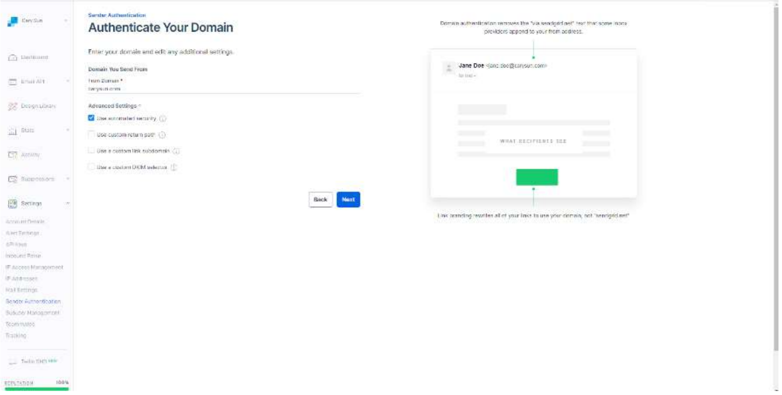
1 Which Domain Name Server (DNS) host do you use?
Your DNS host is often — but not always — the same place you host your website.

DNS host: GoDaddy

2 Would you also like to brand the links for this domain?
This will rewrite all tracking links to use the domain you choose — not sendgrid.net Learn more

● Yes
○ No

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



Sender Authentication

Authenticate Your Domain

Enter your domain and edit any additional settings.

Domain You Send From

From Domain *

Advanced Settings

☑ Use automated security
☐ Use custom return path
☐ Use a custom link subdomain
☐ Use a custom DKIM selector

Domain authentication removes the "via sendgrid.net" text that some inbox providers append to your from address.

Link branding rewrites all of your links to use your domain, not "sendgrid.net"

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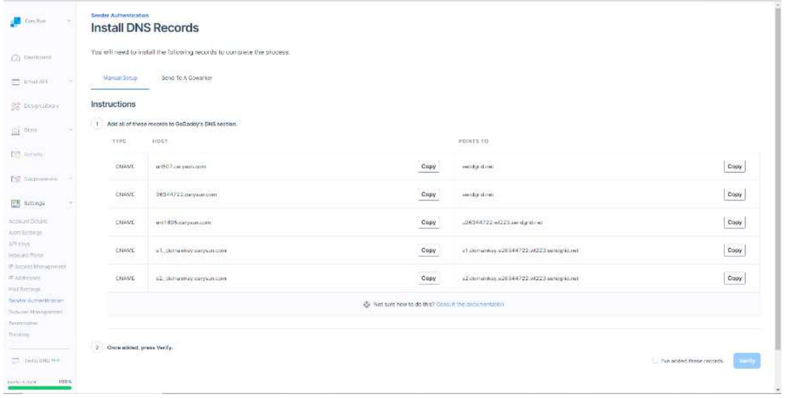
18. On the Install DNS Records page, copy and add all these records to your External DNS records.



Sender Authentication

Install DNS Records

You will need to install the following records to complete the process.

Manual Setup
Send To A Coworker

Instructions

1 Add all of these records to GoDaddy's DNS section.

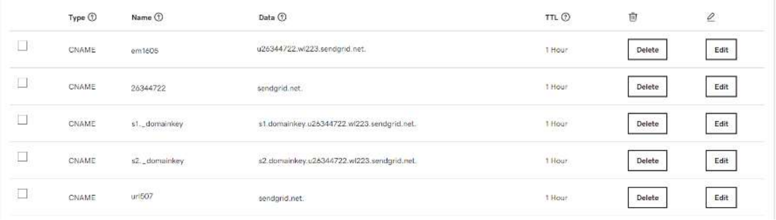
TYPE
HOST
POINTS TO
CNAME
Copy

Not sure how to do this? Consult the documentation

2 Once added, press Verify.

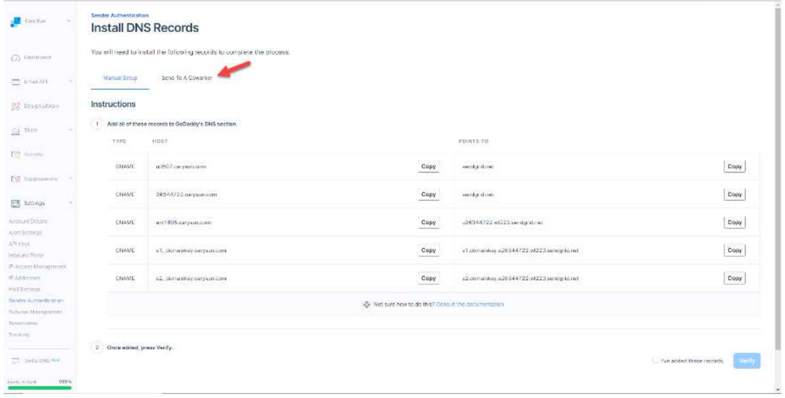
I've added these records.
Verify

19. In my case, add them to GoDaddy.



	Type	Name	Data	TTL		
☐	CNAME	em1605	u26344722.wl223.sendgrid.net.	1 Hour	Delete	Edit
☐	CNAME	26344722	sendgrid.net.	1 Hour	Delete	Edit
☐	CNAME	s1._domainkey	s1.domainkey.u26344722.wl223.sendgrid.net.	1 Hour	Delete	Edit
☐	CNAME	s2._domainkey	s2.domainkey.u26344722.wl223.sendgrid.net.	1 Hour	Delete	Edit
☐	CNAME	url507	sendgrid.net.	1 Hour	Delete	Edit

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



Sender Authentication

Install DNS Records

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Manual Setup
Send To A Coworker

Instructions

1 Add all of these records to GoDaddy's DNS section.

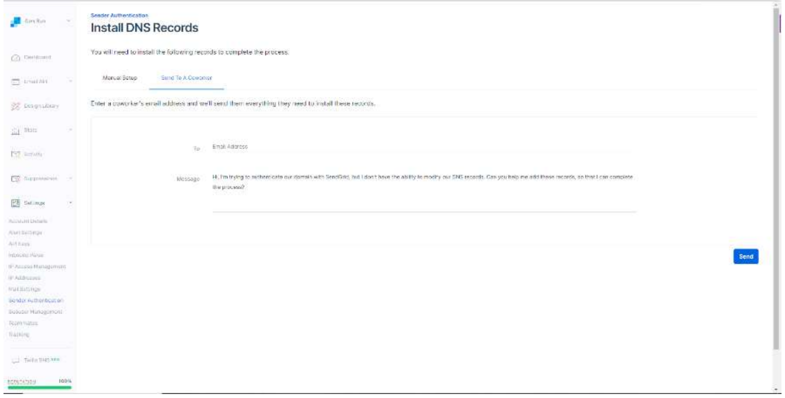
TYPE
HOST
POINTS TO
CNAME
Copy

Not sure how to do this? Consult the documentation

2 Once added, press Verify.

I've added these records.
Verify

21. Type your coworker’s email address, and click Send. Then, ask your coworker to add these DNS records.



Sender Authentication

Install DNS Records

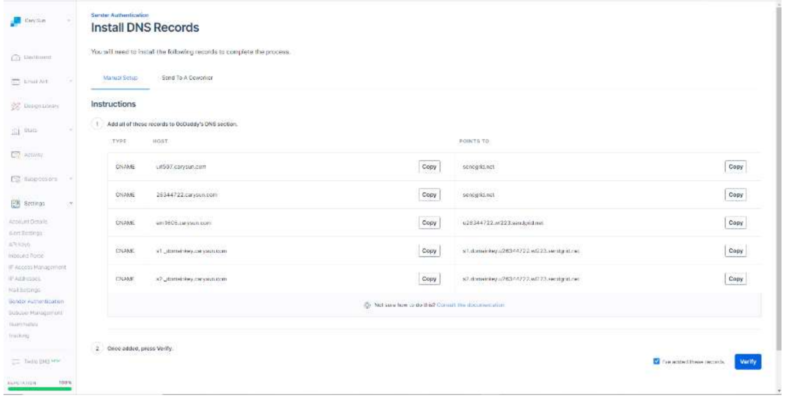
You will need to install the following records to complete the process.

Enter a coworker's email address and we'll send them everything they need to install these records.

To: Email Address

Message: Hi, I'm trying to authenticate our domain with SendGrid, but I don't have the ability to modify our DNS records. Can you help me add these records, so that I can complete the process?

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



Sender Authentication

Install DNS Records

You will need to install the following records to complete the process.

Instructions

1. Add all of these records to GoDaddy's DNS section.

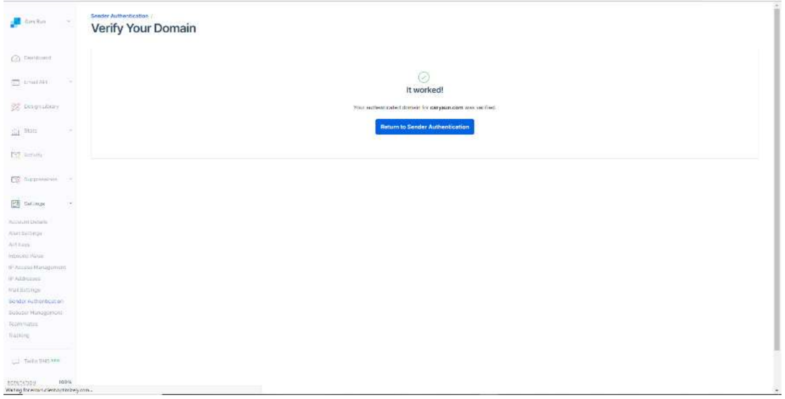
TYPE	HOST		POINTS TO	
CNAME	url507.carysun.com	Copy	sendgrid.net	Copy
CNAME	28344722.carysun.com	Copy	sendgrid.net	Copy
CNAME	em1606.carysun.com	Copy	u28344722.wl223.sendgrid.net	Copy
CNAME	s1._domainkey.carysun.com	Copy	s1.domainkey.u28344722.wl223.sendgrid.net	Copy
CNAME	s2._domainkey.carysun.com	Copy	s2.domainkey.u28344722.wl223.sendgrid.net	Copy

Not sure how to do this? Consult the documentation

2. Once added, press Verify.

☑ I've added these records.

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.



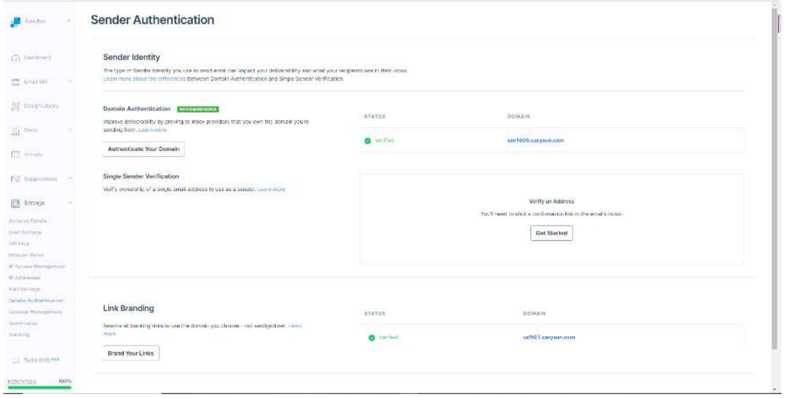
Sender Authentication /

Verify Your Domain

It worked!

Your authenticated domain for carysun.com was verified.

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


Sender Authentication
Sender Identity
Domain Authentication
RECOMMENDED
STATUS
DOMAIN
Verified
em1605.carysun.com
Authenticate Your Domain
Single Sender Verification
Verify an Address
Get Started
Link Branding
STATUS
DOMAIN
Verified
url507.carysun.com
Brand Your Links
Settings
100%

The type of Sender Identity you use to send email can impact your deliverability and what your recipients see in their inbox. Learn more about the differences between Domain Authentication and Single Sender Verification.

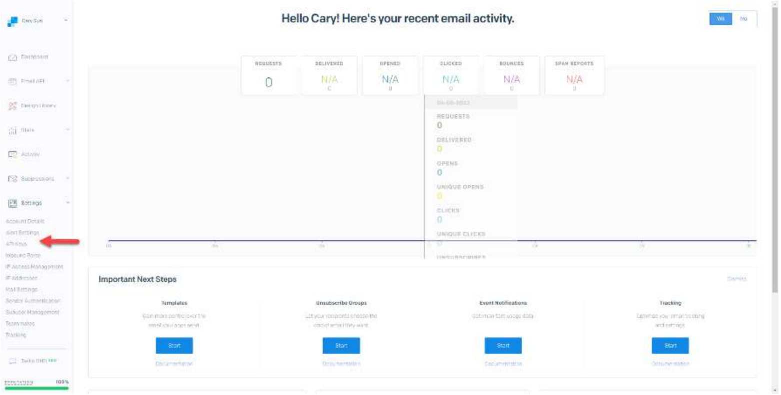
Improve deliverability by proving to inbox providers that you own the domain you're sending from. Learn more

Verify ownership of a single email address to use as a sender. Learn more

You'll need to click a confirmation link in the email's inbox.

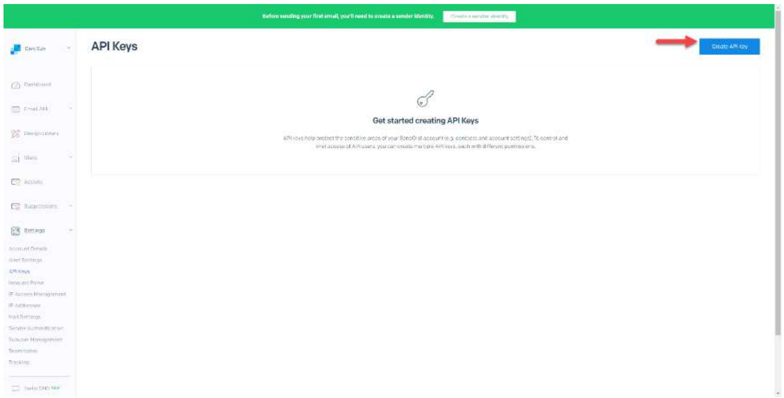
---

25. Under the Settings page, select API Keys.


Hello Cary! Here's your recent email activity.
REQUESTS
0
DELIVERED
N/A
OPENED
N/A
CLICKED
N/A
BOUNCES
N/A
SPAM REPORTS
N/A
REQUESTS
DELIVERED
OPENS
UNIQUE OPENS
CLICKS
UNIQUE CLICKS
Settings
API Keys
Important Next Steps
Templates
Unsubscribe Groups
Event Notifications
Tracking
Start
Start
Start
Start
Documentation
100%

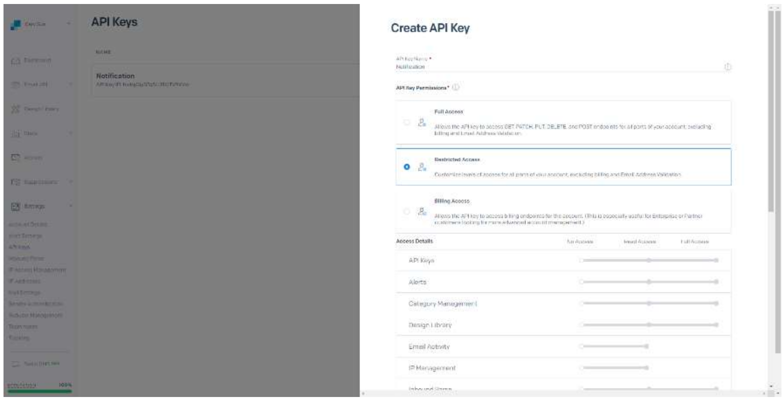
---

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


Before sending your first email, you'll need to create a sender identity.
Create a sender identity
API Keys
Create API Key
Get started creating API Keys
Settings
API Keys

---

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



API Keys
Create API Key

API Key Name * Notification

API Key Permissions *

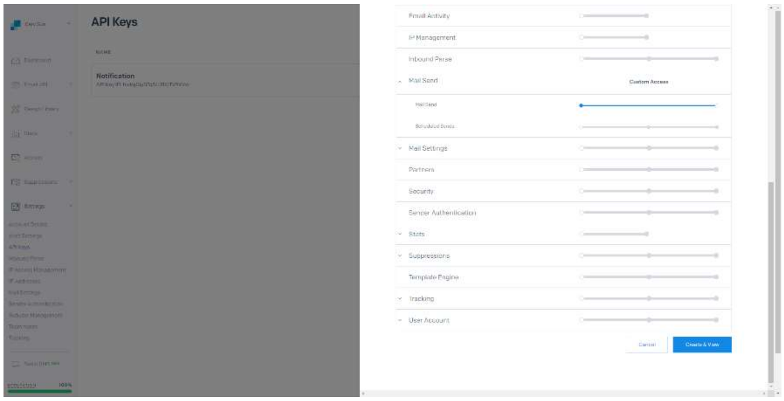
○ Full Access: Allows the API key to access GET, PATCH, PUT, DELETE, and POST endpoints for all parts of your account, excluding billing and Email Address Validation.

● Restricted Access: Customize levels of access for all parts of your account, excluding billing and Email Address Validation.

○ Billing Access: Allows the API key to access billing endpoints for the account. (This is especially useful for Enterprise or Partner customers looking for more advanced account management.)

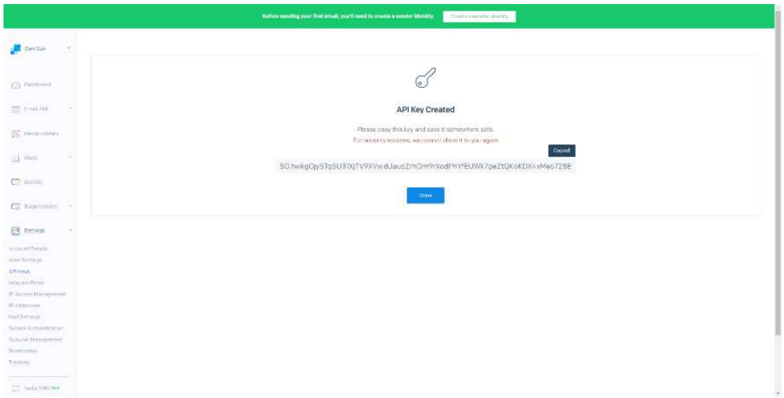
Access Details
No Access
Read Access
Full Access
API Keys
Alerts
Category Management
Design Library
Email Activity
IP Management

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



API Keys
Email Activity
IP Management
Inbound Parse
Mail Send
Custom Access
Mail Send
Scheduled Sends
Mail Settings
Partners
Security
Sender Authentication
Stats
Suppressions
Template Engine
Tracking
User Account
Cancel
Create & View

29. Copy the key on the API Key Created page, save it, and click Done.



Before sending your first email, you'll need to create a sender identity.
Create a sender identity
API Key Created

Please copy this key and save it somewhere safe.

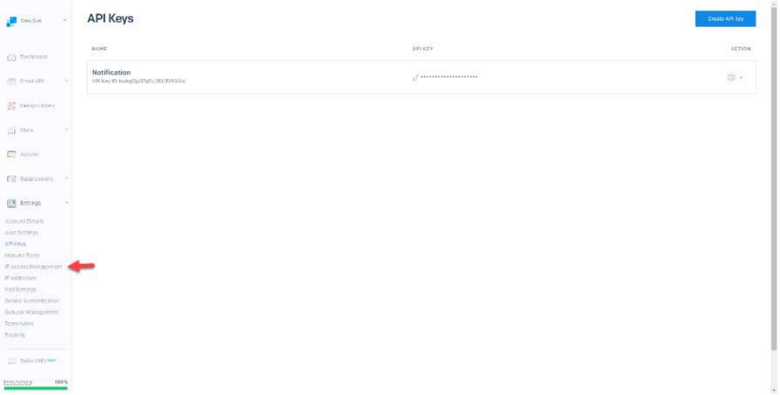
For security reasons, we cannot show it to you again.

Copied

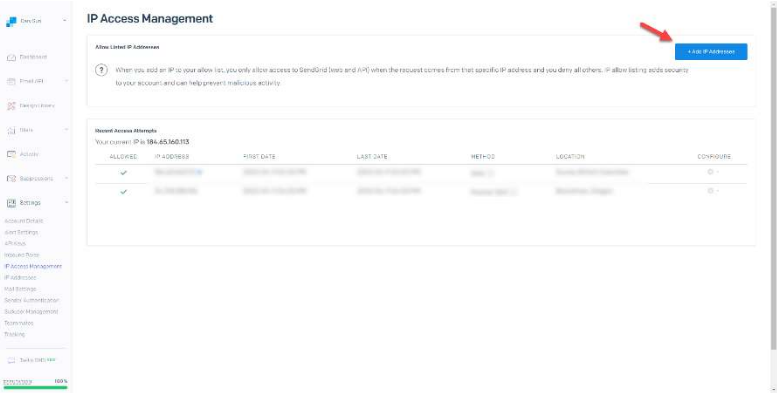
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

Done

30. Under settings, select IP Access Management.


API Keys
Create API Key
NAME
API KEY
ACTION
Notification
Settings
IP Access Management

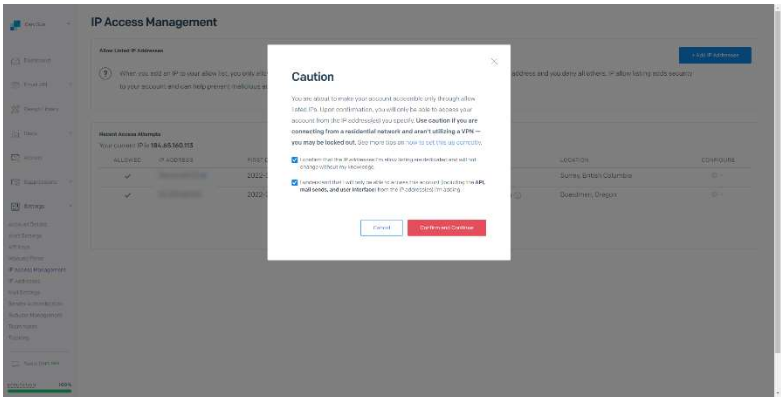
31. On the IP Access Management page, click +Add UP Address.


IP Access Management
Allow Listed IP Addresses
+ Add IP Addresses
Recent Access Attempts
ALLOWED
IP ADDRESS
FIRST DATE
LAST DATE
METHOD
LOCATION
CONFIGURE

When you add an IP to your allow list, you only allow access to SendGrid (web and API) when the request comes from that specific IP address and you deny all others. IP allow listing adds security to your account and can help prevent malicious activity.

Your current IP is 184.65.160.113

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


IP Access Management
Caution
Cancel
Confirm and Continue

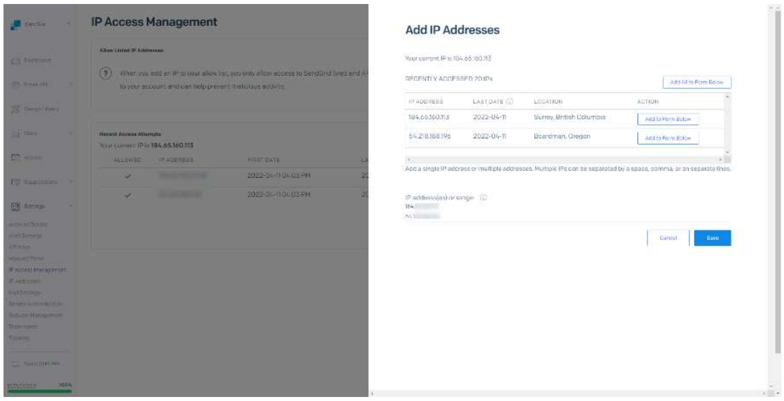
You are about to make your account accessible only through allow listed IPs. Upon confirmation, you will only be able to access your account from the IP address(es) you specify. **Use caution if you are connecting from a residential network and aren't utilizing a VPN — you may be locked out.** See more tips on how to set this up correctly.

☑ I confirm that the IP addresses I'm allow listing are dedicated and will not change without my knowledge.

☑ 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.

34. Click Confirm and Continue.

35. 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.



IP Access Management

Add IP Addresses

Your current IP is 184.65.160.113

RECENTLY ACCESSED 20 IPs

Add All to Form Below

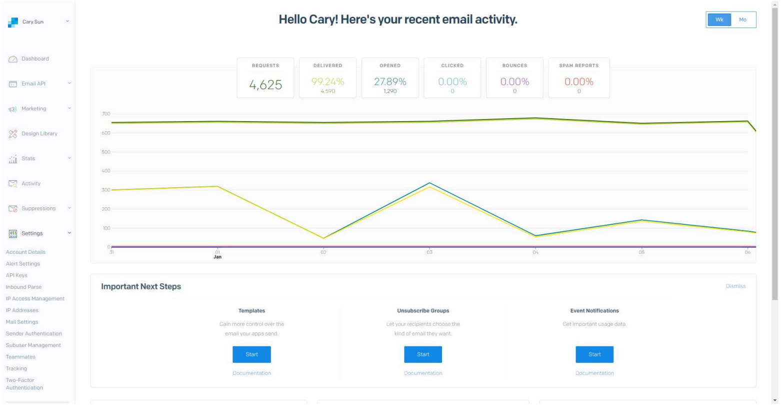
IP ADDRESS	LAST DATE	LOCATION	ACTION
184.65.160.113	2022-04-11	Surrey, British Columbia	Add to Form Below
54.218.168.196	2022-04-11	Boardman, Oregon	Add to Form Below

Add a single IP address or multiple addresses. Multiple IPs can be separated by a space, comma, or on separate lines.

IP address(es) or range
184.[redacted]
54.[redacted]

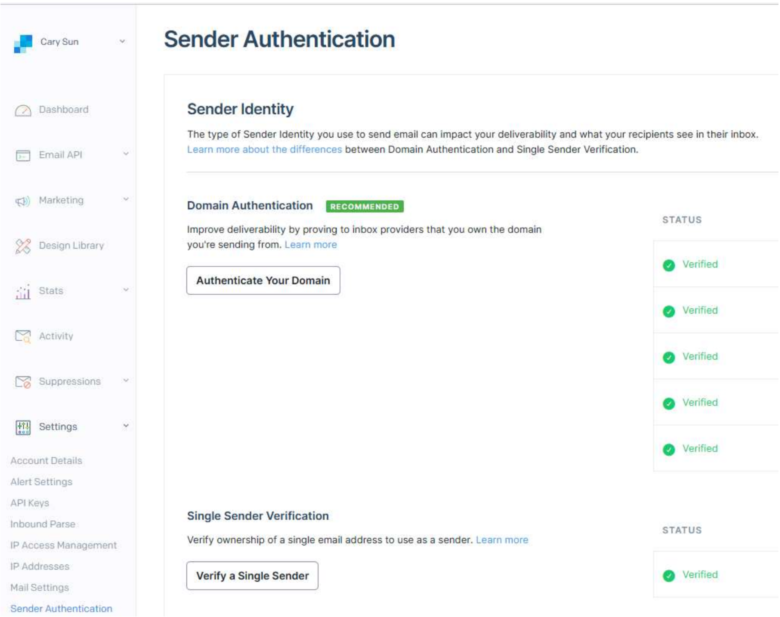
Cancel
Save

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



Hello Cary! Here's your recent email activity.
REQUESTS
4,625
DELIVERED
99.24%
OPENED
27.89%
CLICKED
0.00%
BOUNCES
0.00%
SPAM REPORTS
0.00%
Important Next Steps
Templates
Unsubscribe Groups
Event Notifications
Start
Dashboard
Email API
Marketing
Design Library
Stats
Activity
Suppressions
Settings
Account Details
Alert Settings
API Keys
Inbound Parse
IP Access Management
IP Addresses
Mail Settings
Sender Authentication
Subuser Management
Teammates
Tracking
Two-Factor Authentication

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


Cary Sun
Dashboard
Email API
Marketing
Design Library
Stats
Activity
Suppressions
Settings
Account Details
Alert Settings
API Keys
Inbound Parse
IP Access Management
IP Addresses
Mail Settings
Sender Authentication

Sender Authentication

Sender Identity

The type of Sender Identity you use to send email can impact your deliverability and what your recipients see in their inbox. Learn more about the differences between Domain Authentication and Single Sender Verification.

Domain Authentication RECOMMENDED

Improve deliverability by proving to inbox providers that you own the domain you're sending from. Learn more

Authenticate Your Domain

STATUS

Verified

Verified

Verified

Verified

Verified

Single Sender Verification

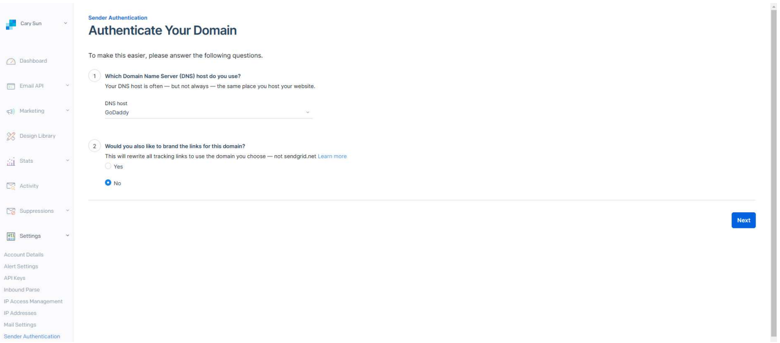
Verify ownership of a single email address to use as a sender. Learn more

Verify a Single Sender

STATUS

Verified

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


Cary Sun
Dashboard
Email API
Marketing
Design Library
Stats
Activity
Suppressions
Settings
Account Details
Alert Settings
API Keys
Inbound Parse
IP Access Management
IP Addresses
Mail Settings
Sender Authentication

Sender Authentication

Authenticate Your Domain

To make this easier, please answer the following questions.

1 Which Domain Name Server (DNS) host do you use?

Your DNS host is often — but not always — the same place you host your website.

DNS host
GoDaddy

2 Would you also like to brand the links for this domain?

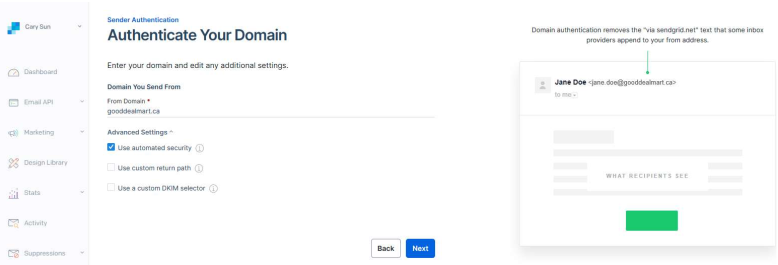
This will rewrite all tracking links to use the domain you choose — not sendgrid.net Learn more

○ Yes

● No

Next

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


Cary Sun
Dashboard
Email API
Marketing
Design Library
Stats
Activity
Suppressions

Sender Authentication

Authenticate Your Domain

Enter your domain and edit any additional settings.

Domain You Send From

From Domain *
gooddealmart.ca

Advanced Settings ^

☑ Use automated security

☐ Use custom return path

☐ Use a custom DKIM selector

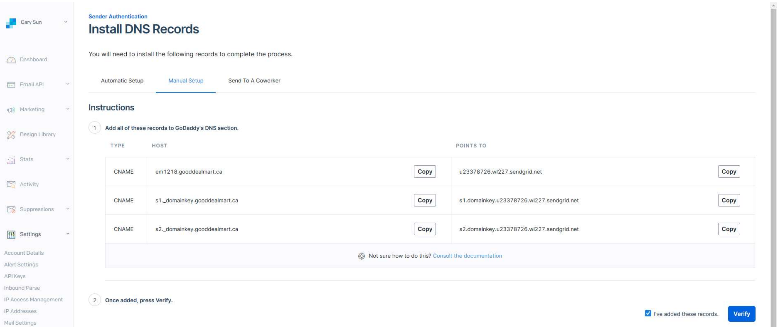
Back Next

Domain authentication removes the "via sendgrid.net" text that some inbox providers append to your from address.

Jane Doe <jane.doe@gooddealmart.ca>
to me

WHAT RECIPIENTS SEE

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


Cary Sun
Dashboard
Email API
Marketing
Design Library
Stats
Activity
Suppressions
Settings
Account Details
Alert Settings
API Keys
Inbound Parse
IP Access Management
IP Addresses
Mail Settings
Automatic Setup
Manual Setup
Send To A Coworker
Copy
Verify

Sender Authentication

Install DNS Records

You will need to install the following records to complete the process.

Instructions

1 Add all of these records to GoDaddy's DNS section.

TYPE	HOST	POINTS TO
CNAME	em1218.gooddealmart.ca	u23378726.wl227.sendgrid.net
CNAME	s1._domainkey.gooddealmart.ca	s1.domainkey.u23378726.wl227.sendgrid.net
CNAME	s2._domainkey.gooddealmart.ca	s2.domainkey.u23378726.wl227.sendgrid.net

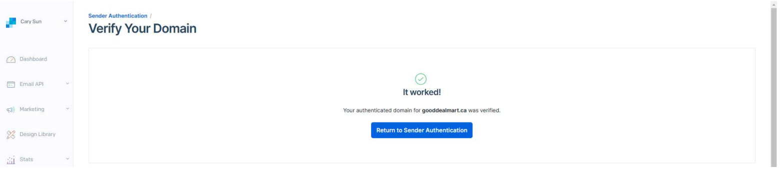
Not sure how to do this? Consult the documentation

2 Once added, press Verify.

☑ I've added these records.

---

43. On the Verify Your Domain page, ensure verification is successful and click Return to Send Authentication.


Cary Sun
Dashboard
Email API
Marketing
Design Library
Stats
Return to Sender Authentication

Sender Authentication /

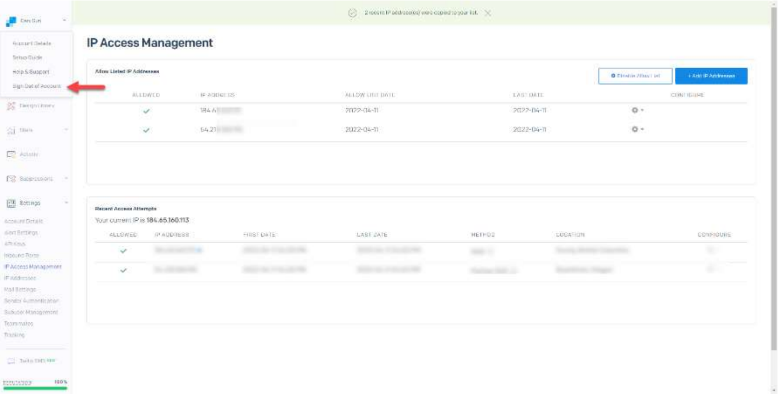
Verify Your Domain

It worked!

Your authenticated domain for **gooddealmart.ca** was verified.

---

44. Sign Out of Account.


Cary Sun
Account Details
Setup Guide
Help & Support
Sign Out of Account
Design Library
Stats
Activity
Suppressions
Settings
Account Details
Alert Settings
API Keys
Inbound Parse
IP Access Management
IP Addresses
Mail Settings
Sender Authentication
Subuser Management
Teammates
Tracking
Twilio SMS
Disable Allow List
+ Add IP Addresses

2 recent IP address(es) were copied to your list.

IP Access Management

Allow Listed IP Addresses

ALLOWED	IP ADDRESS	ALLOW LIST DATE	LAST DATE	CONFIGURE
✓	184.A[redacted]	2022-04-11	2022-04-11	⚙ ▾
✓	54.21[redacted]	2022-04-11	2022-04-11	⚙ ▾

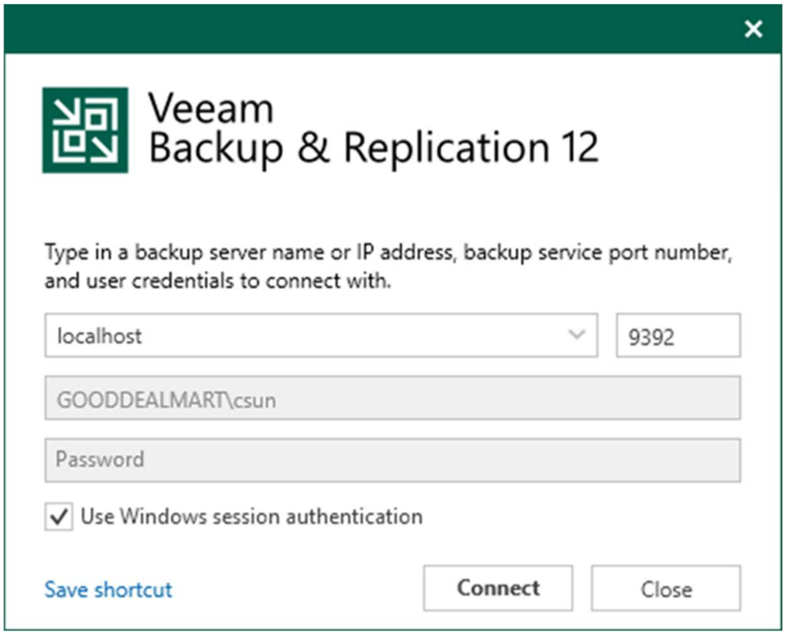
Recent Access Attempts

Your current IP is 184.65.160.113

ALLOWED	IP ADDRESS	FIRST DATE	LAST DATE	METHOD	LOCATION	CONFIGURE
✓	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	
✓	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	

Technet24

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



Veeam
Backup & Replication 12

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

localhost

9392

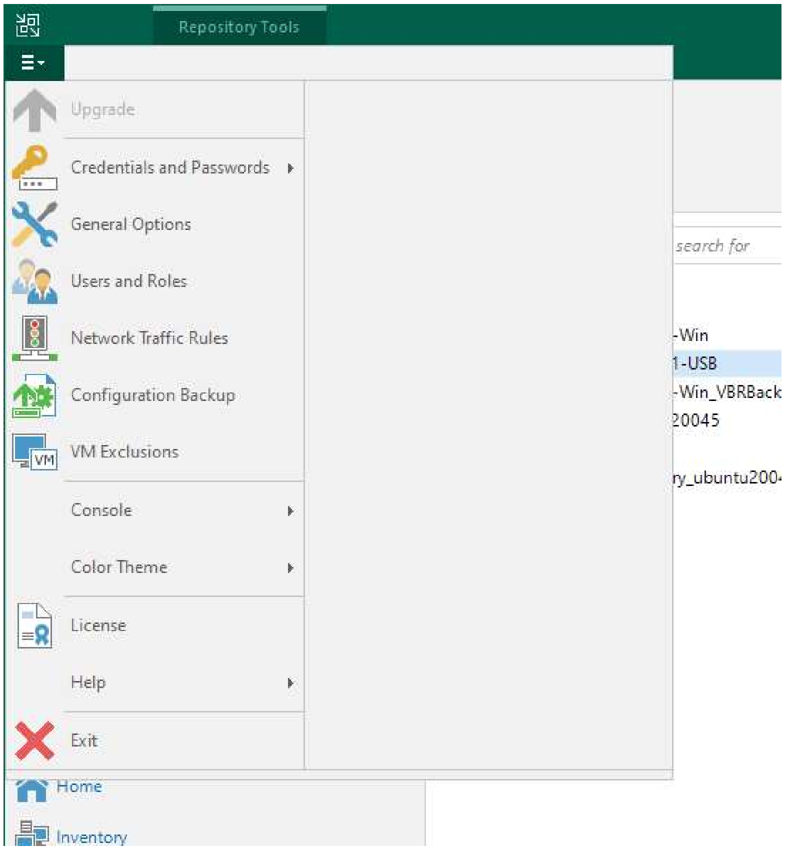
GOODDEALMART\csun

Password

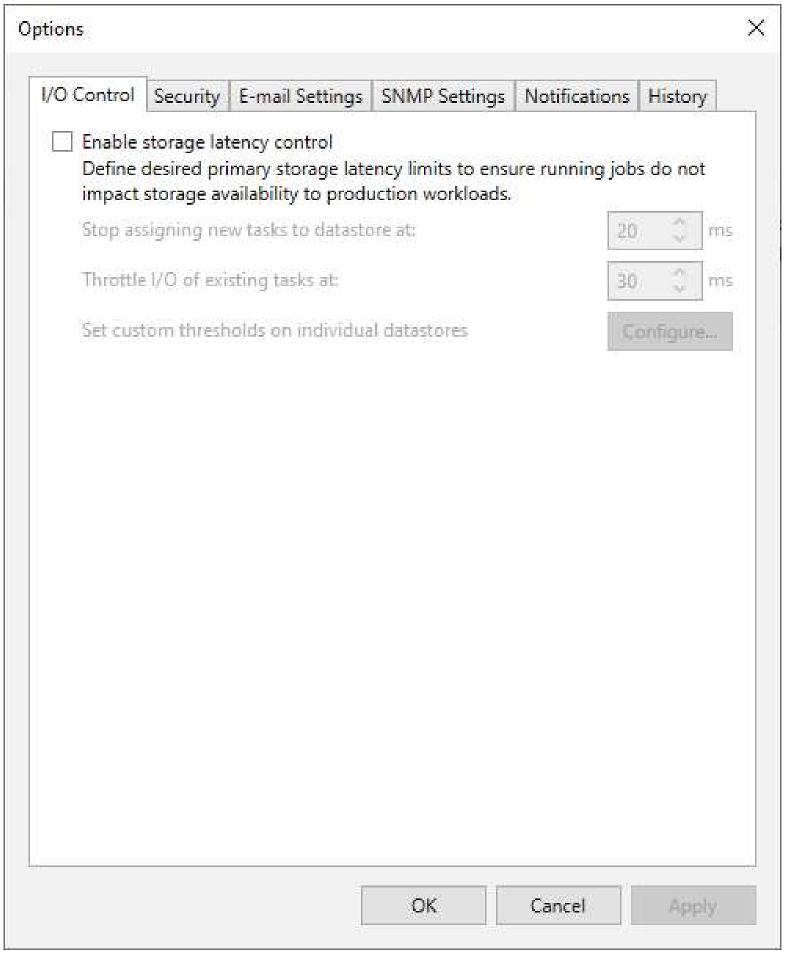
☑ Use Windows session authentication

Save shortcut
Connect
Close

47. Select General Options from the main menu.


Repository Tools
Upgrade
Credentials and Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
VM Exclusions
Console
Color Theme
License
Help
Exit
Home
Inventory
search for
-Win
1-USB
-Win_VBRBack
20045
ry_ubuntu200

48. On the Options page, select Email Settings.



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

☐ Enable storage latency control

Define desired primary storage latency limits to ensure running jobs do not impact storage availability to production workloads.

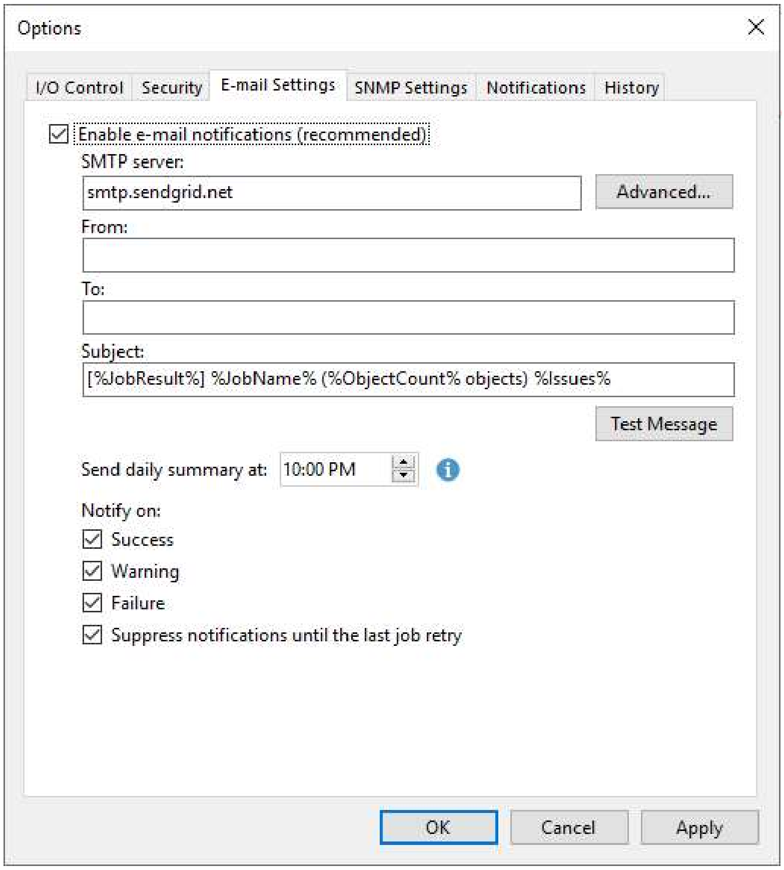
Stop assigning new tasks to datastore at: 20 ms

Throttle I/O of existing tasks at: 30 ms

Set custom thresholds on individual datastores

Configure...
OK
Cancel
Apply

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


Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Test Message
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.sendgrid.net

From:

To:

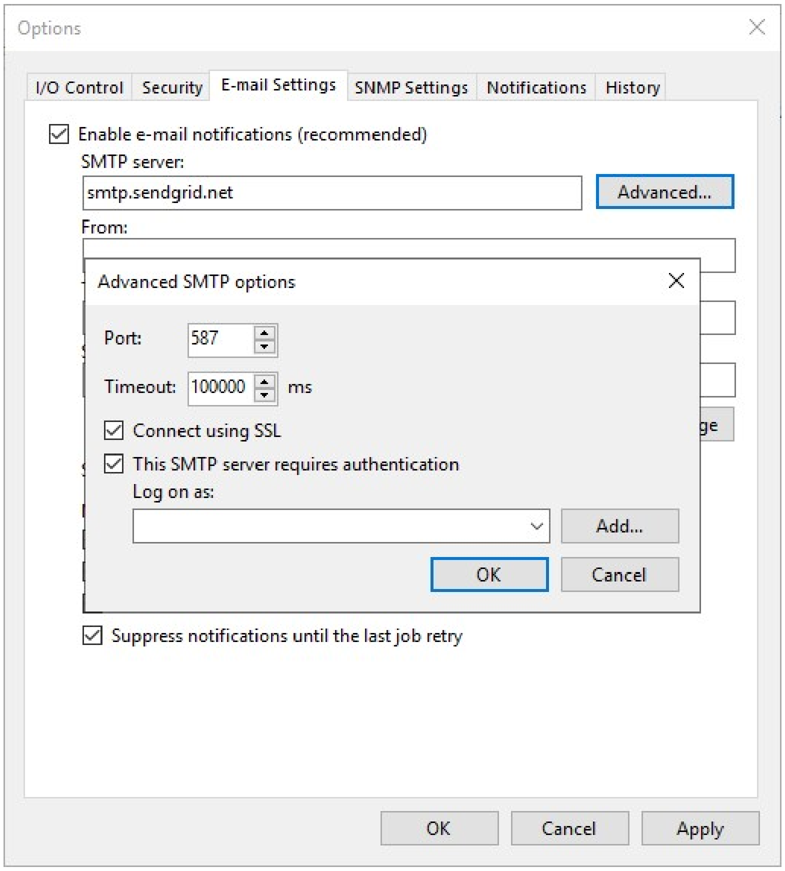
Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Send daily summary at: 10:00 PM

Notify on:
- ☑ Success
- ☑ Warning
- ☑ Failure
- ☑ Suppress notifications until the last job retry

Technet24

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



Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Add...
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.sendgrid.net

From:

Advanced SMTP options

Port: 587

Timeout: 100000 ms

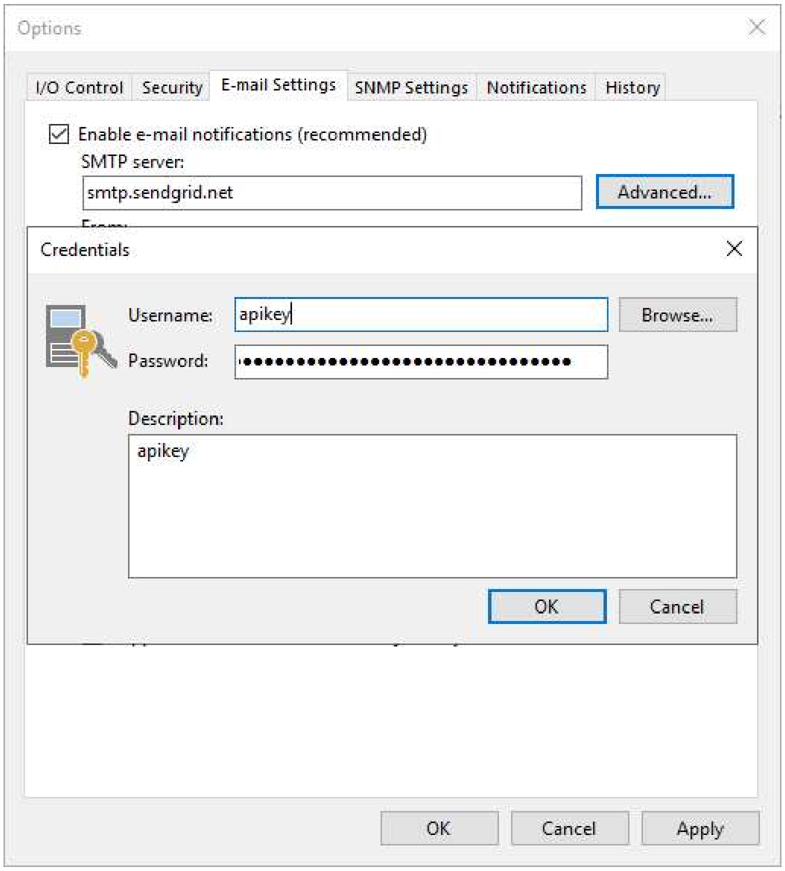
☑ Connect using SSL

☑ This SMTP server requires authentication

Log on as:

☑ Suppress notifications until the last job retry

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


Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Credentials
Browse...
OK
Cancel
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.sendgrid.net

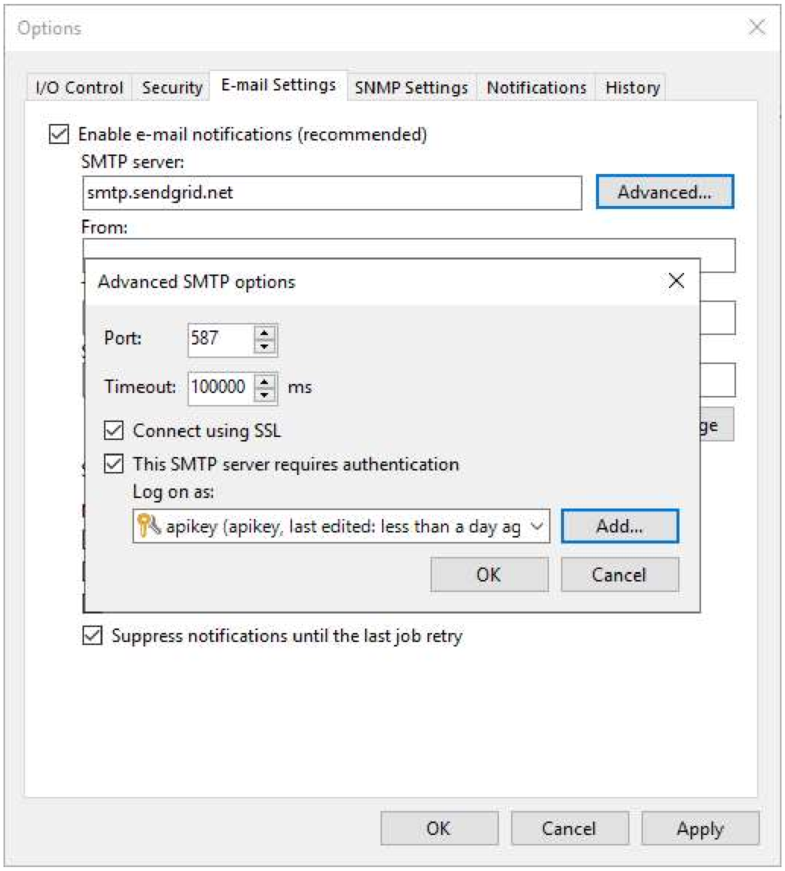
Username: apikey

Password: ••••••••••••••••••••••••••••••••••

Description: apikey

Technet24

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



Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Advanced SMTP options
Add...
OK
Cancel
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.sendgrid.net

From:

Port: 587

Timeout: 100000 ms

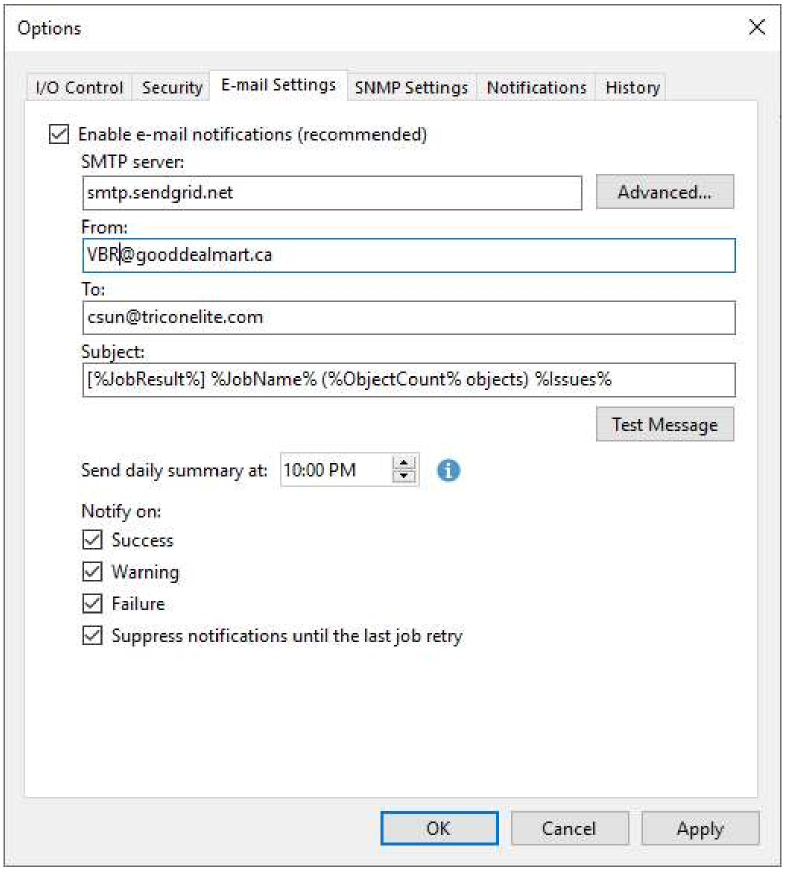
☑ Connect using SSL

☑ This SMTP server requires authentication

Log on as: apikey (apikey, last edited: less than a day ag

☑ Suppress notifications until the last job retry

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


Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Test Message
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.sendgrid.net

From: VBR@gooddealmart.ca

To: csun@triconelite.com

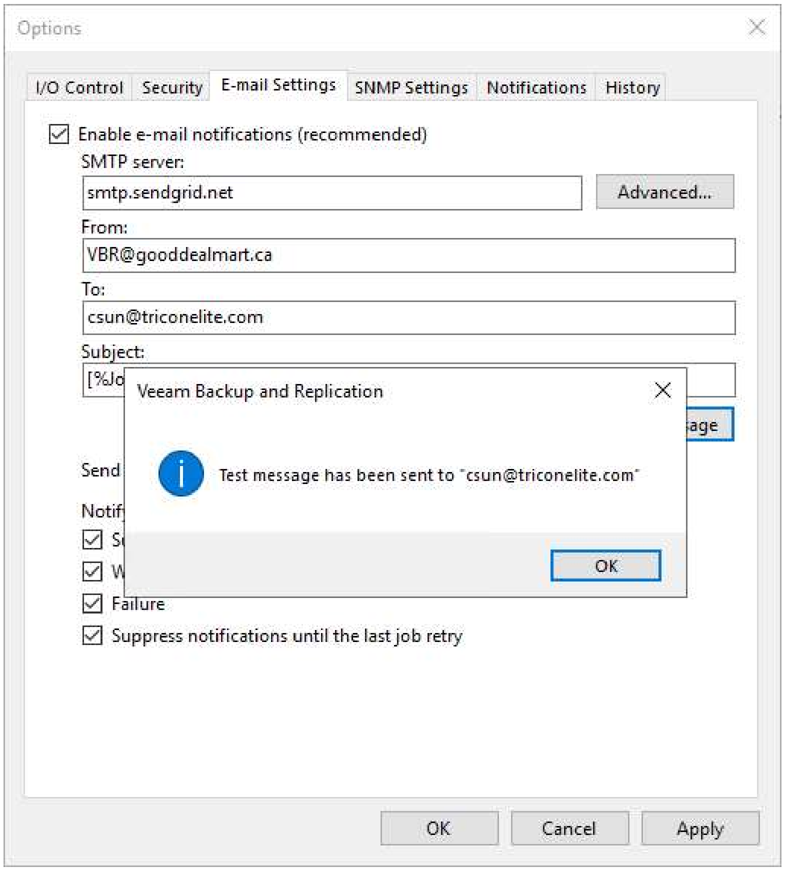
Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Send daily summary at: 10:00 PM

Notify on:
☑ Success
☑ Warning
☑ Failure
☑ Suppress notifications until the last job retry

Technet24

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



Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Send
Notif
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.sendgrid.net

From: VBR@gooddealmart.ca

To: csun@triconelite.com

Subject: [%Jo

Veeam Backup and Replication

Test message has been sent to "csun@triconelite.com"

OK

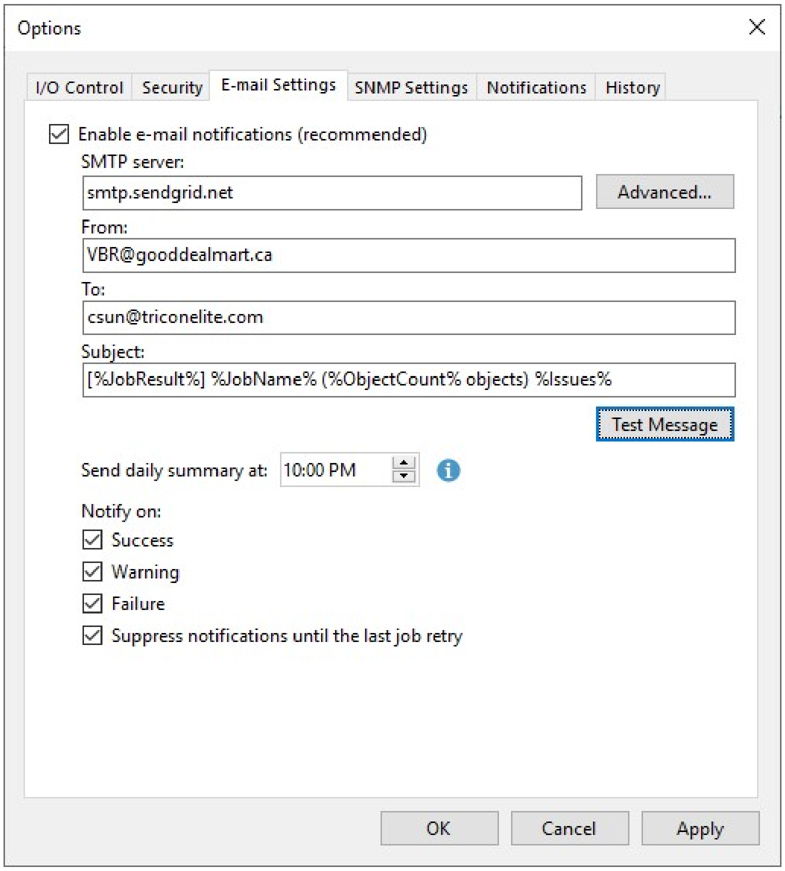
☑ S

☑ W

☑ Failure

☑ Suppress notifications until the last job retry

64. On the Options page, click OK.


Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Test Message
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.sendgrid.net

From: VBR@gooddealmart.ca

To: csun@triconelite.com

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

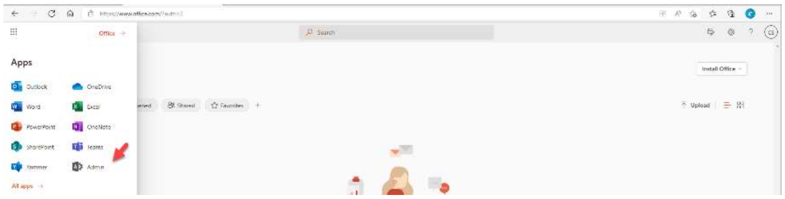
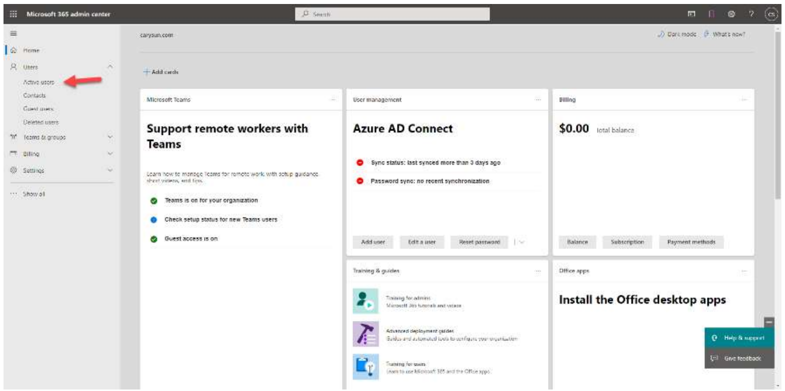
Send daily summary at: 10:00 PM

Notify on:
☑ Success
☑ Warning
☑ Failure
☑ Suppress notifications until the last job retry

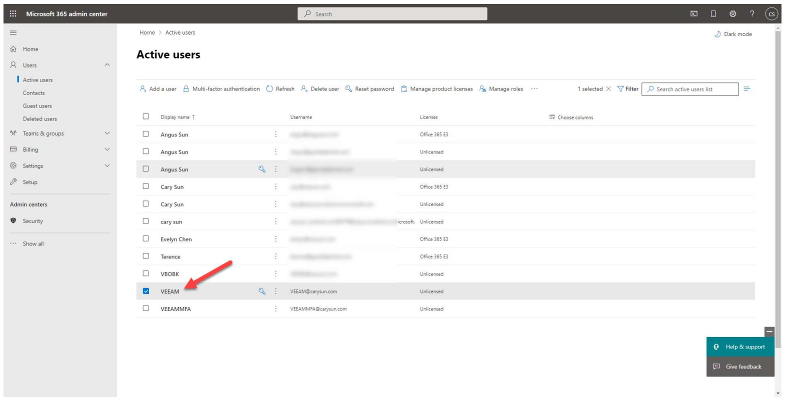
Technet24

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.	 Office Search Apps Outlook OneDrive Word Excel PowerPoint OneNote SharePoint Teams Yammer Admin All apps Install Office Shared Favorites Upload
2. On the Microsoft 365 admin center, expand Users and select Active users.	 Microsoft 365 admin center Search Home Users Active users Contacts Guest users Deleted users Teams & groups Billing Settings Show all Dark mode What's new? + Add cards Microsoft Teams Support remote workers with Teams Teams is on for your organization Check setup status for new Teams users Guest access is on User management Azure AD Connect Sync status: last synced more than 3 days ago Password sync: no recent synchronization Add user Edit a user Reset password Billing $0.00 Total balance Balance Subscription Payment methods Training & guides Office apps Install the Office desktop apps Help & support Give feedback

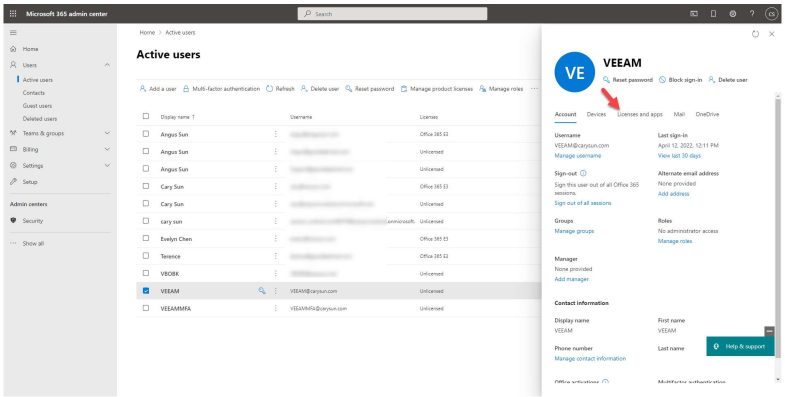
3. On the Active users' page, click Veeam service account (in my case, VEEAM).


Microsoft 365 admin center
Search
Home
Users
Active users
Contacts
Guest users
Deleted users
Teams & groups
Billing
Settings
Setup
Admin centers
Security
Show all
Home > Active users
Dark mode
Add a user
Multi-factor authentication
Refresh
Delete user
Reset password
Manage product licenses
Manage roles
1 selected
Filter
Search active users list
Choose columns
Help & support
Give feedback

Active users

	Display name ↑	Username	Licenses
☐	Angus Sun	[redacted]	Office 365 E3
☐	Angus Sun	[redacted]	Unlicensed
☐	Angus Sun	[redacted]	Unlicensed
☐	Cary Sun	[redacted]	Office 365 E3
☐	Cary Sun	[redacted]	Unlicensed
☐	cary sun	[redacted]	Unlicensed
☐	Evelyn Chen	[redacted]	Office 365 E3
☐	Terence	[redacted]	Office 365 E3
☐	VBOBK	[redacted]	Unlicensed
☑	VEEAM	VEEAM@carysun.com	Unlicensed
☐	VEEAMMFA	VEEAMMFA@carysun.com	Unlicensed

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


Microsoft 365 admin center
Search
VE
Reset password
Block sign-in
Delete user
Account
Devices
Licenses and apps
Mail
OneDrive
Help & support

VEEAM

Username
VEEAM@carysun.com
Manage username

Last sign-in
April 12, 2022, 12:11 PM
View last 30 days

Sign-out
Sign this user out of all Office 365 sessions.
Sign out of all sessions

Alternate email address
None provided
Add address

Groups
Manage groups

Roles
No administrator access
Manage roles

Manager
None provided
Add manager

Contact information

Display name
VEEAM

First name
VEEAM

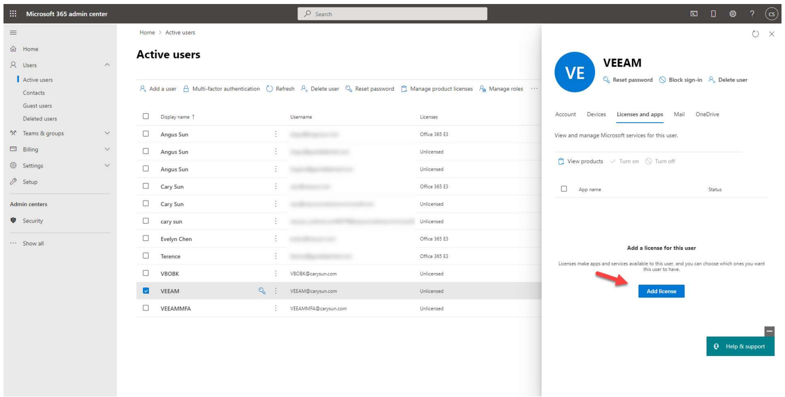
Phone number
Manage contact information

Last name

Office activations

Multifactor authentication

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


Microsoft 365 admin center
Search
VE
Reset password
Block sign-in
Delete user
Account
Devices
Licenses and apps
Mail
OneDrive
View products
Turn on
Turn off
Add license
Help & support

VEEAM

View and manage Microsoft services for this user.

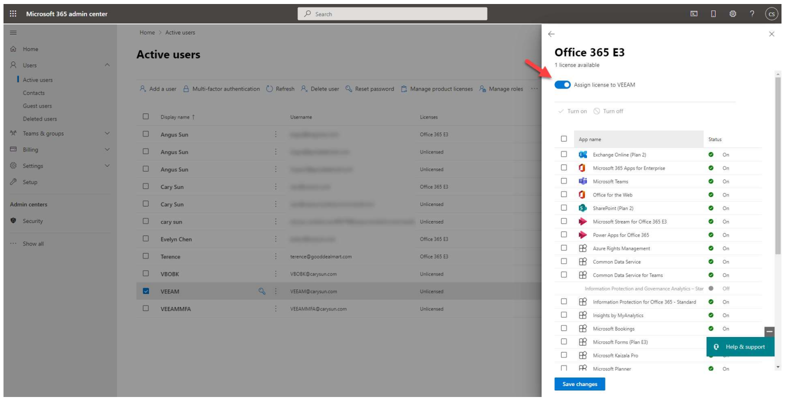
☐	App name	Status

Add a license for this user

Licenses make apps and services available to this user, and you can choose which ones you want this user to have.

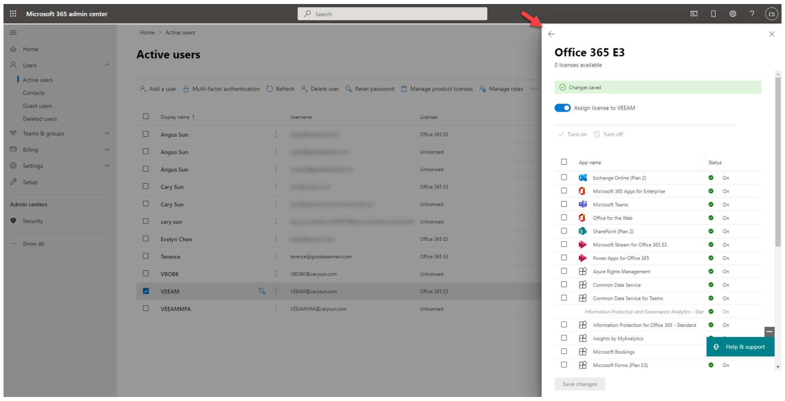
Technet24

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


Microsoft 365 admin center
Active users
Office 365 E3
1 license available
Assign license to VEEAM
App name
Status
Save changes

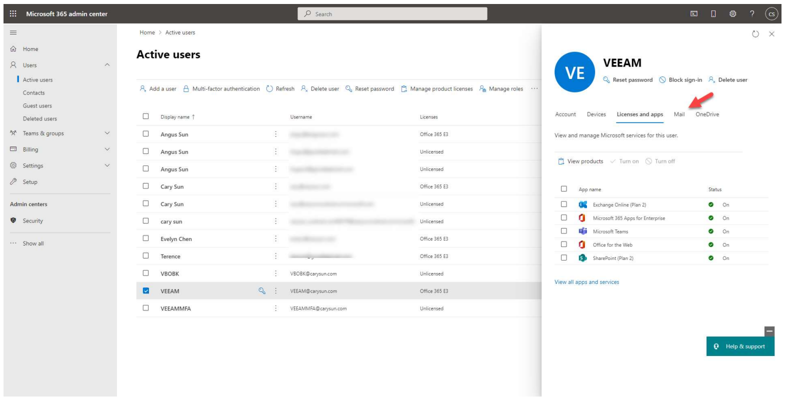
---

7. Click Back <--.

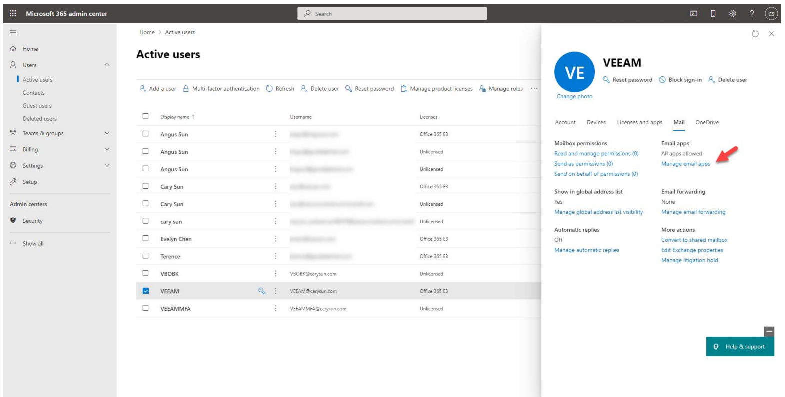

Microsoft 365 admin center
Active users
Office 365 E3
0 licenses available
Changes saved
Assign license to VEEAM
Save changes

---

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


Microsoft 365 admin center
Active users
VE
VEEAM
Reset password
Block sign-in
Delete user
Account
Devices
Licenses and apps
Mail
OneDrive
View all apps and services
Help & support

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


Microsoft 365 admin center
Search
Home
Users
Active users
Contacts
Guest users
Deleted users
Teams & groups
Billing
Settings
Setup
Admin centers
Security
Show all
Home > Active users
Active users
Add a user
Multi-factor authentication
Refresh
Delete user
Reset password
Manage product licenses
Manage roles
VE
VEEAM
Reset password
Block sign-in
Delete user
Change photo
Account
Devices
Licenses and apps
Mail
OneDrive
Help & support

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

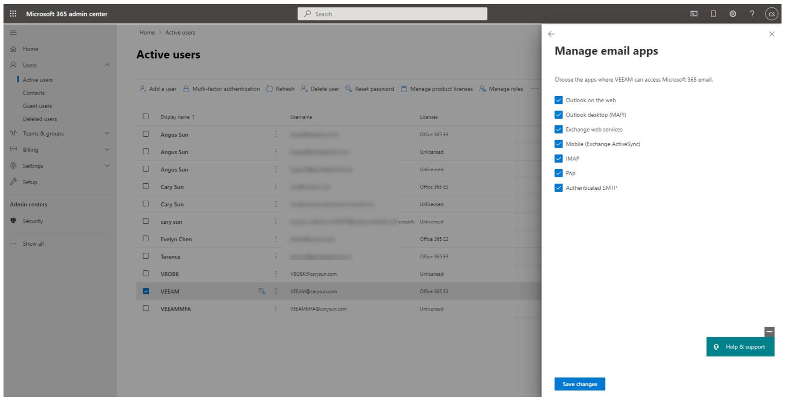
Show in global address list
Yes
Manage global address list visibility

Email forwarding
None
Manage email forwarding

Automatic replies
Off
Manage automatic replies

More actions
Convert to shared mailbox
Edit Exchange properties
Manage litigation hold

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


Microsoft 365 admin center
Search
Active users
Help & support
Save changes

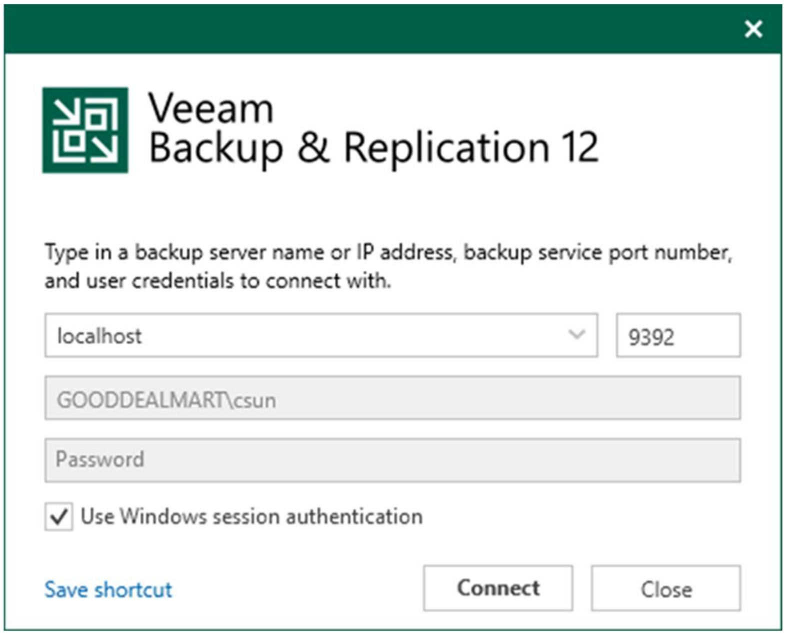
Manage email apps

Choose the apps where VEEAM can access Microsoft 365 email.

☑ Outlook on the web
☑ Outlook desktop (MAPI)
☑ Exchange web services
☑ Mobile (Exchange ActiveSync)
☑ IMAP
☑ Pop
☑ Authenticated SMTP

Technet24

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


Veeam
Backup & Replication 12

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

localhost 9392

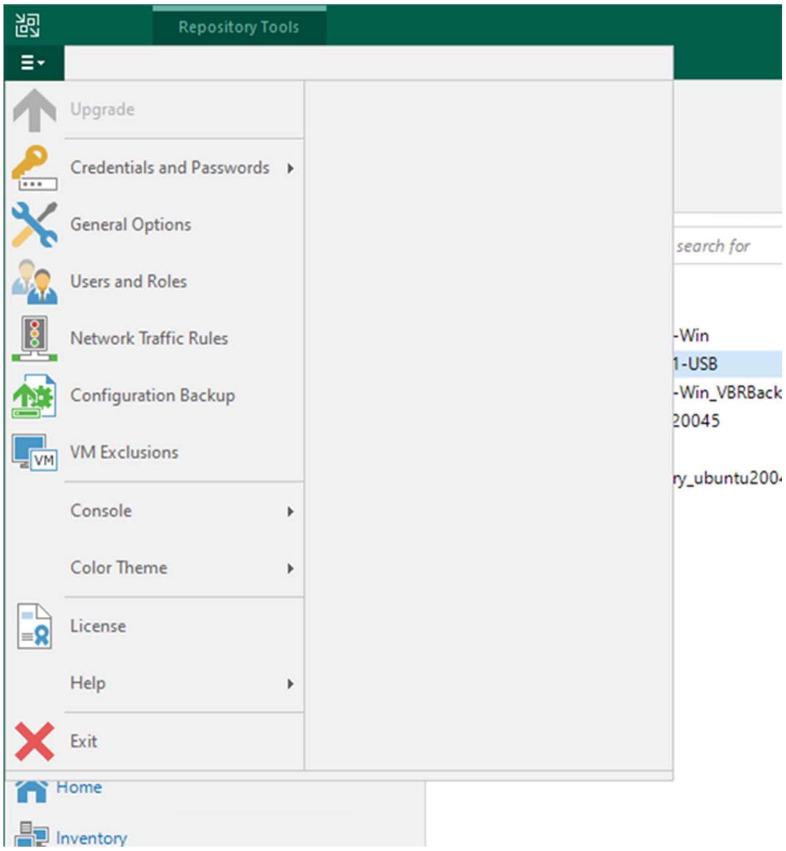
GOODDEALMART\csun

Password

☑ Use Windows session authentication

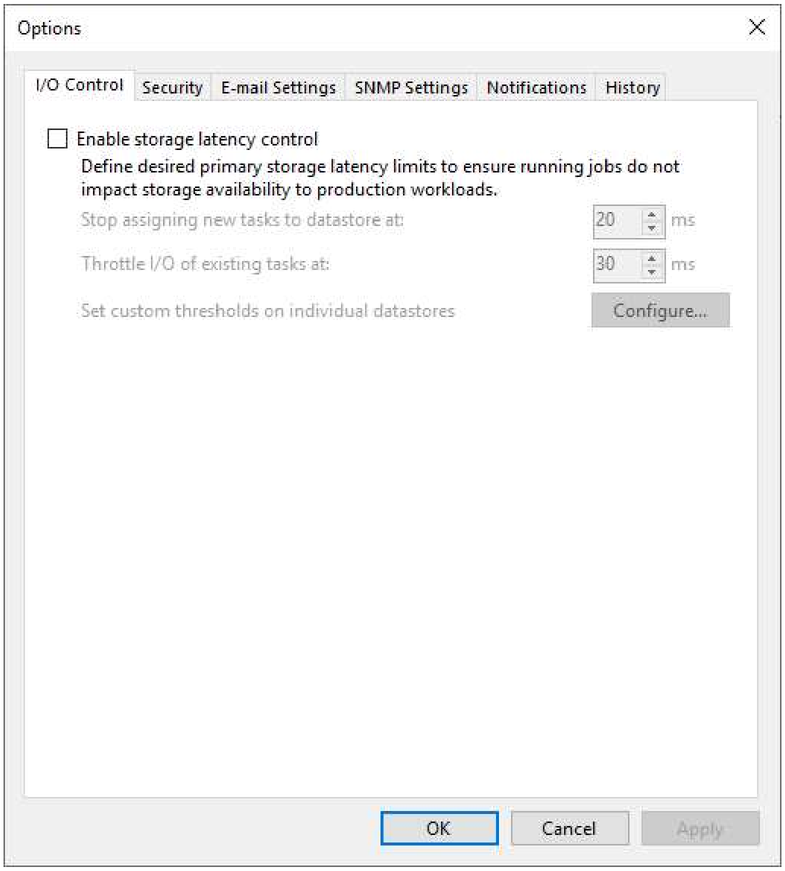
Save shortcut
Connect
Close

13. Select General Options from the main menu.


Repository Tools
Upgrade
Credentials and Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
VM Exclusions
Console
Color Theme
License
Help
Exit
Home
Inventory
search for
-Win
1-USB
-Win_VBRBack
20045
ry_ubuntu200

Technet24

14. On the Options page, select Email Settings.



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

☐ Enable storage latency control

Define desired primary storage latency limits to ensure running jobs do not impact storage availability to production workloads.

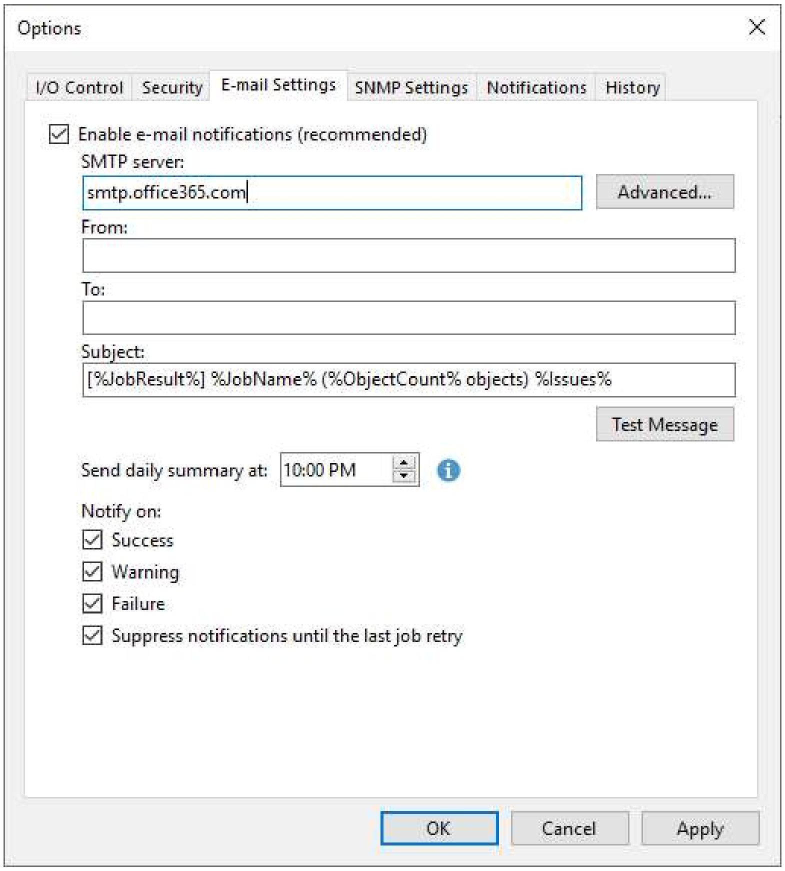
Stop assigning new tasks to datastore at: 20 ms

Throttle I/O of existing tasks at: 30 ms

Set custom thresholds on individual datastores

Configure...
OK
Cancel
Apply

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
From:
To:
Advanced...
Test Message
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com

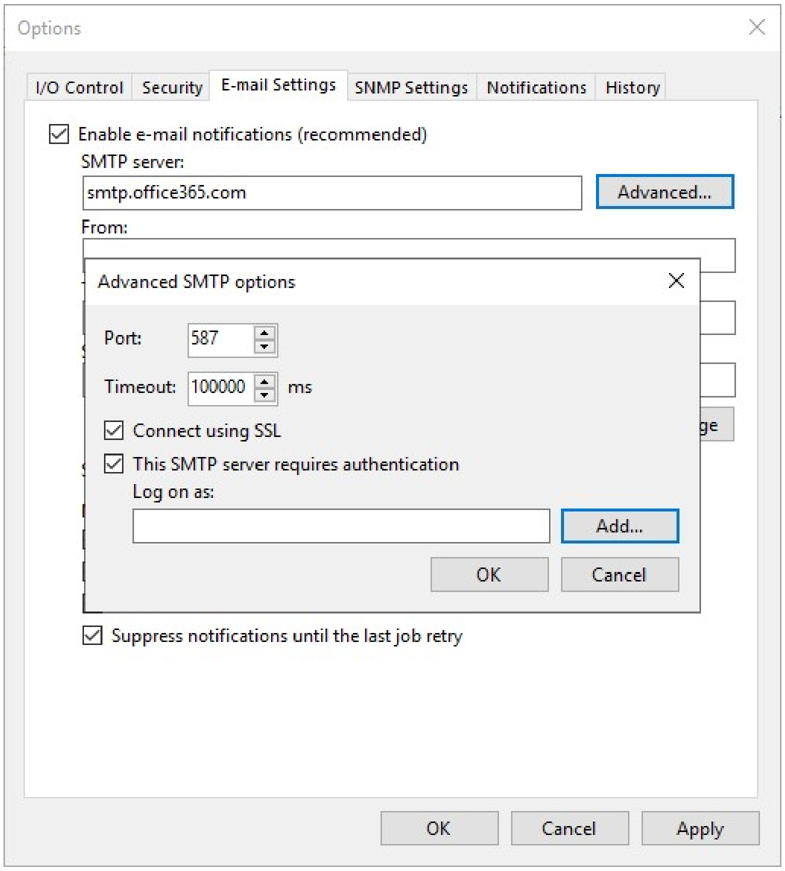
Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Send daily summary at: 10:00 PM

Notify on:
- ☑ Success
- ☑ Warning
- ☑ Failure
- ☑ Suppress notifications until the last job retry

Technet24

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.

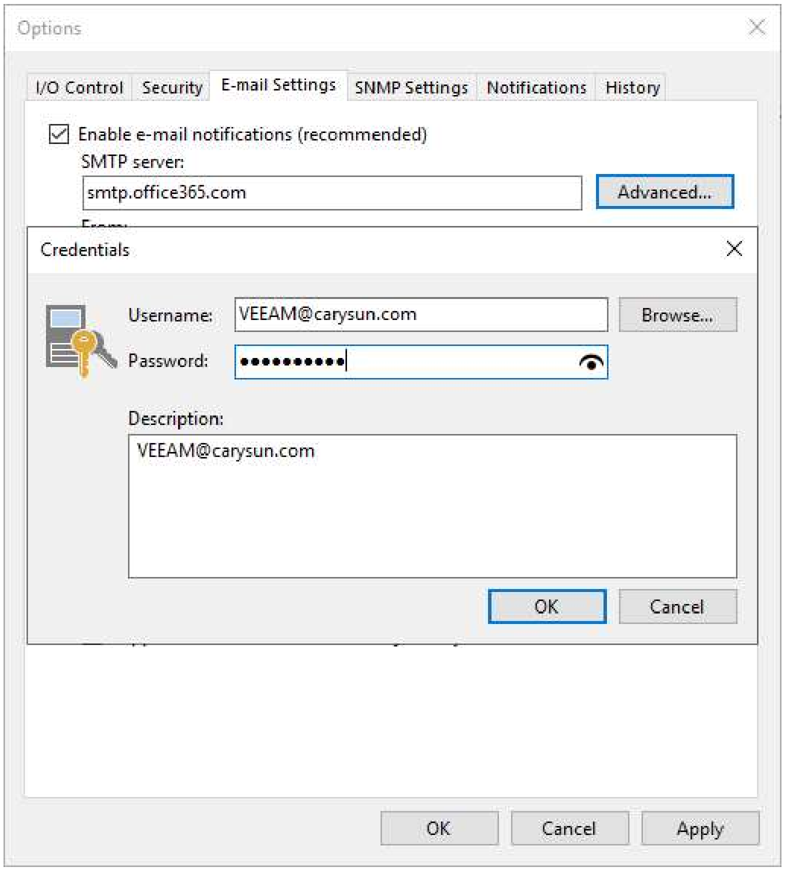

Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
From:
ge
Advanced SMTP options
Add...
OK
Cancel
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)
SMTP server: smtp.office365.com

Port: 587
Timeout: 100000 ms
☑ Connect using SSL
☑ This SMTP server requires authentication
Log on as:

☑ Suppress notifications until the last job retry

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.



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

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com

Advanced...
Credentials

Username: VEEAM@carysun.com

Browse...

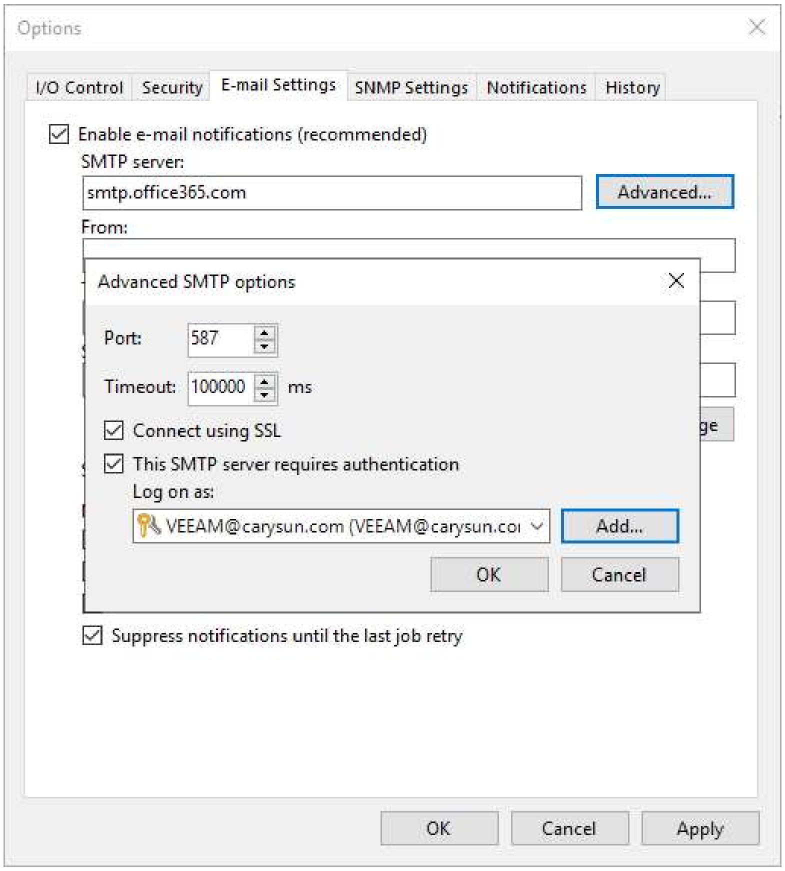
Password: ••••••••••

Description: VEEAM@carysun.com

OK
Cancel
OK
Cancel
Apply

Technet24

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



Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com

From:

Advanced SMTP options

Port: 587

Timeout: 100000 ms

☑ Connect using SSL

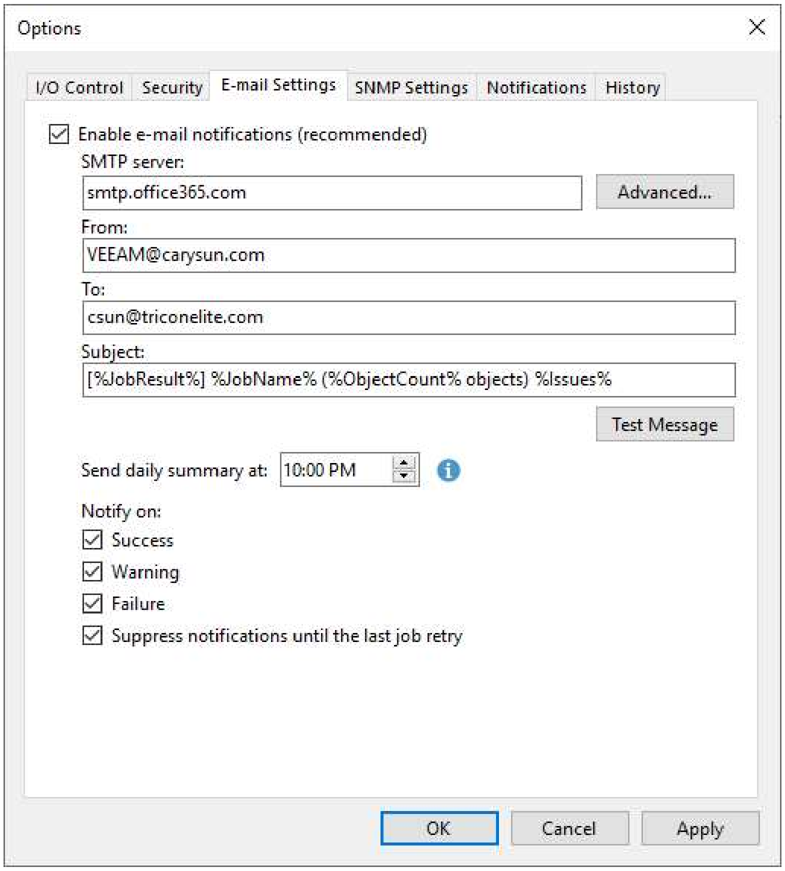
☑ This SMTP server requires authentication

Log on as: VEEAM@carysun.com (VEEAM@carysun.coı

Add...
OK
Cancel

☑ Suppress notifications until the last job retry

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.


Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Test Message
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com

From: VEEAM@carysun.com

To: csun@triconelite.com

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

Send daily summary at: 10:00 PM

Notify on:

☑ Success

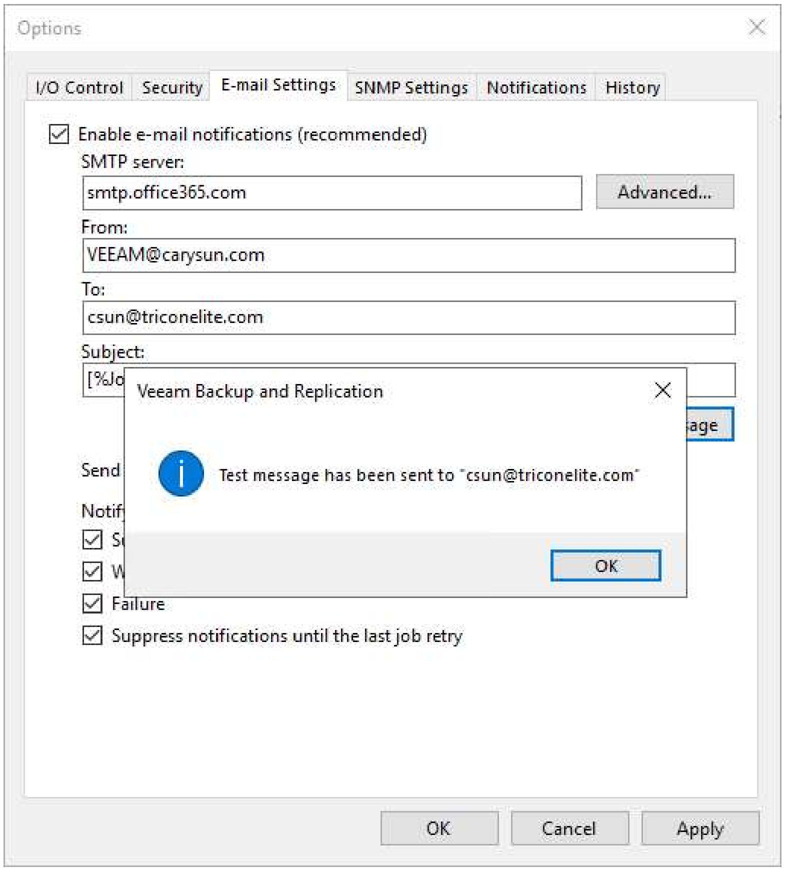
☑ Warning

☑ Failure

☑ Suppress notifications until the last job retry

Technet24

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



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: [%Jo

age
Send
Notif

☑ S

☑ W

☑ Failure

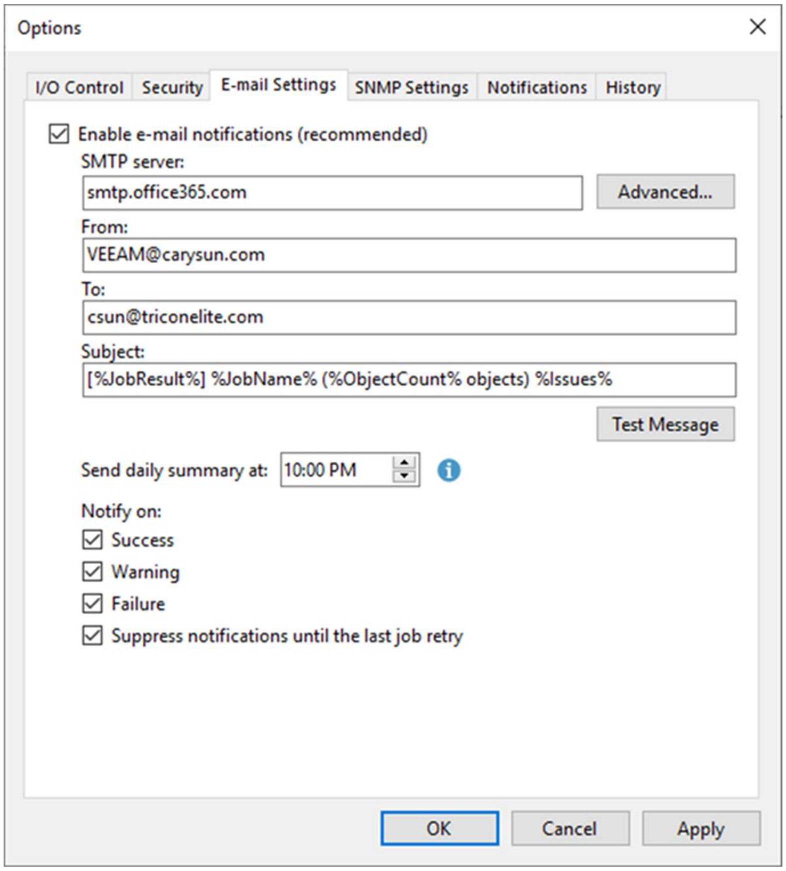
☑ Suppress notifications until the last job retry

Veeam Backup and Replication

Test message has been sent to "csun@triconelite.com"

OK
OK
Cancel
Apply

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.



Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Test Message
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com

From: VEEAM@carysun.com

To: csun@triconelite.com

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

Send daily summary at: 10:00 PM

Notify on:

☑ Success

☑ Warning

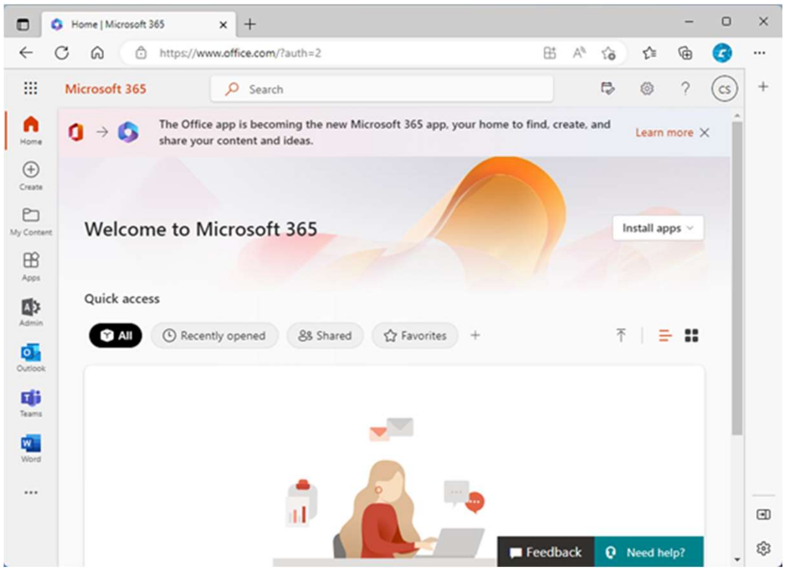
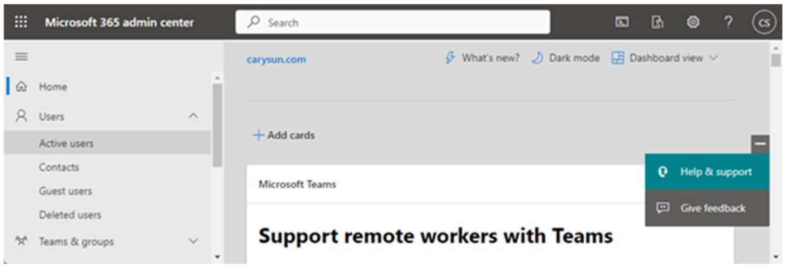
☑ Failure

☑ Suppress notifications until the last job retry

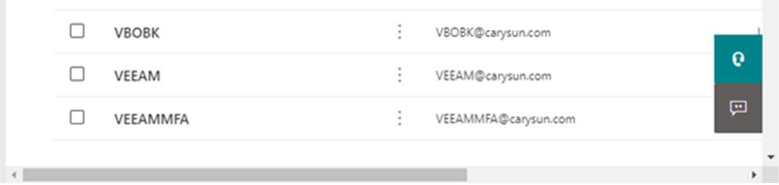
Technet24

Configure Notification with Microsoft Office 365 MFA Account

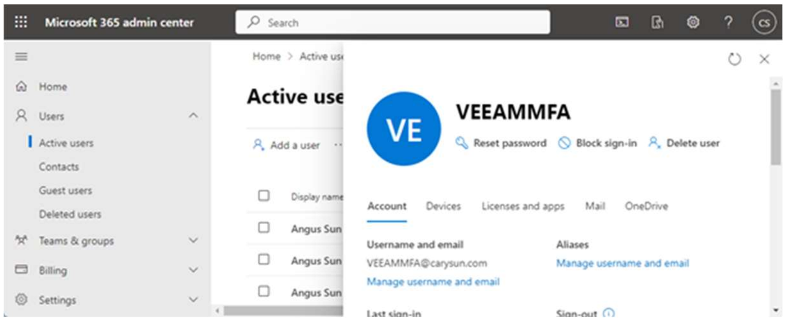
You can configure Microsoft Office 365 MFA account for notification settings if you want Veeam Backup & Replication to send email notifications about backup job results.

Instructions	Screenshot (if applicable)
1. Sign in Office 365 portal with a Global Admin account, and select Admin.	 The Office app is becoming the new Microsoft 365 app, your home to find, create, and share your content and ideas. Welcome to Microsoft 365
2. On the Microsoft 365 admin center, expand Users and select Active users.	 Support remote workers with Teams

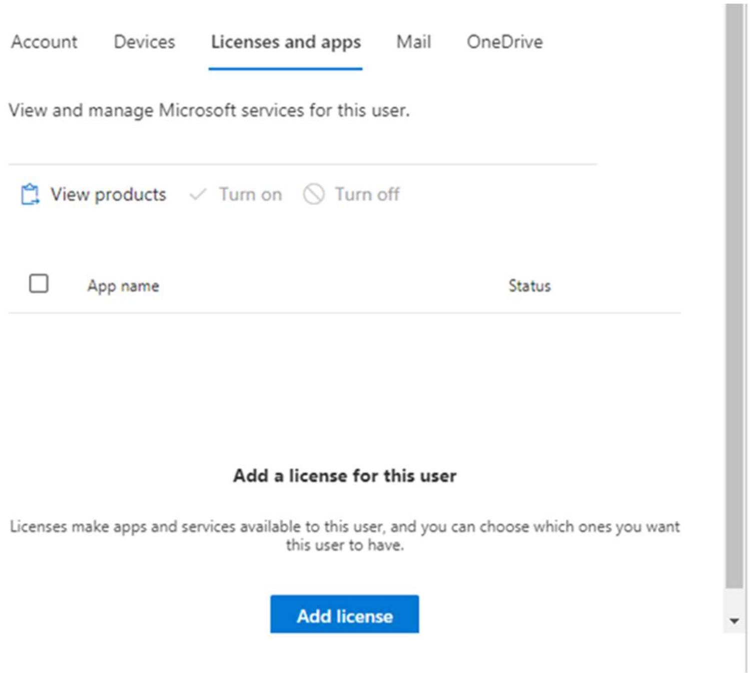
3. On the Active users' page, click Veeam service account (VEEAMMFA, in my case).


☐ VBOBK
VBOBK@carysun.com
☐ VEEAM
VEEAM@carysun.com
☐ VEEAMMFA
VEEAMMFA@carysun.com

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


Microsoft 365 admin center
Search
Home
Users
Active users
Contacts
Guest users
Deleted users
Teams & groups
Billing
Settings
Home > Active us
Active use
Add a user
Display name
Angus Sun
Angus Sun
Angus Sun
VE
VEEAMMFA
Reset password
Block sign-in
Delete user
Account
Devices
Licenses and apps
Mail
OneDrive
Username and email
VEEAMMFA@carysun.com
Manage username and email
Aliases
Manage username and email
Last sign-in
Sign-out

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


Account
Devices
Licenses and apps
Mail
OneDrive

View and manage Microsoft services for this user.

View products
Turn on
Turn off
☐ App name
Status

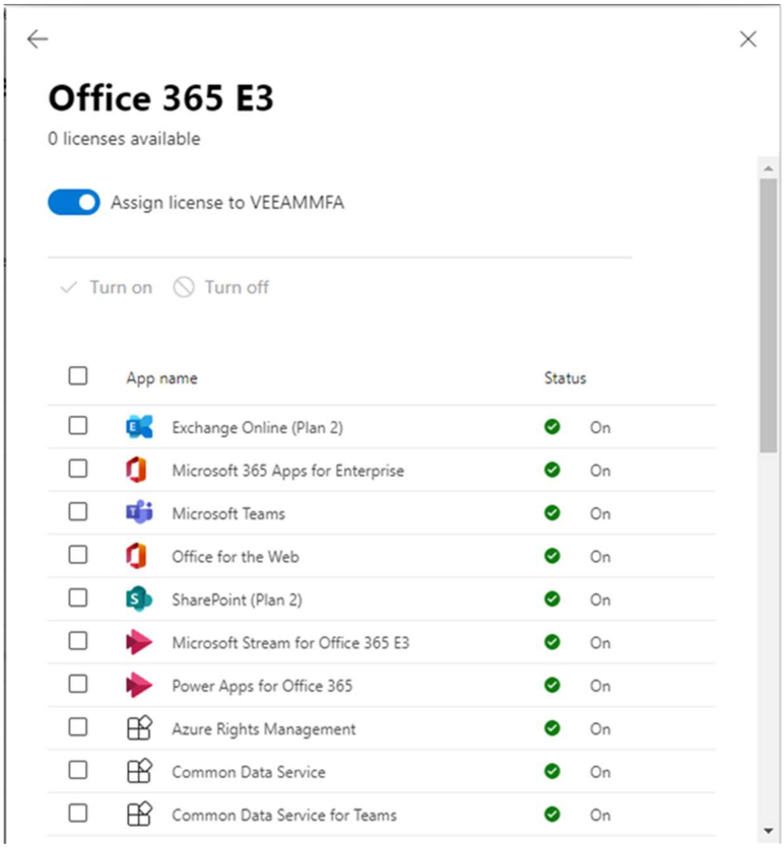
Add a license for this user

Licenses make apps and services available to this user, and you can choose which ones you want this user to have.

Add license

Technet24

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



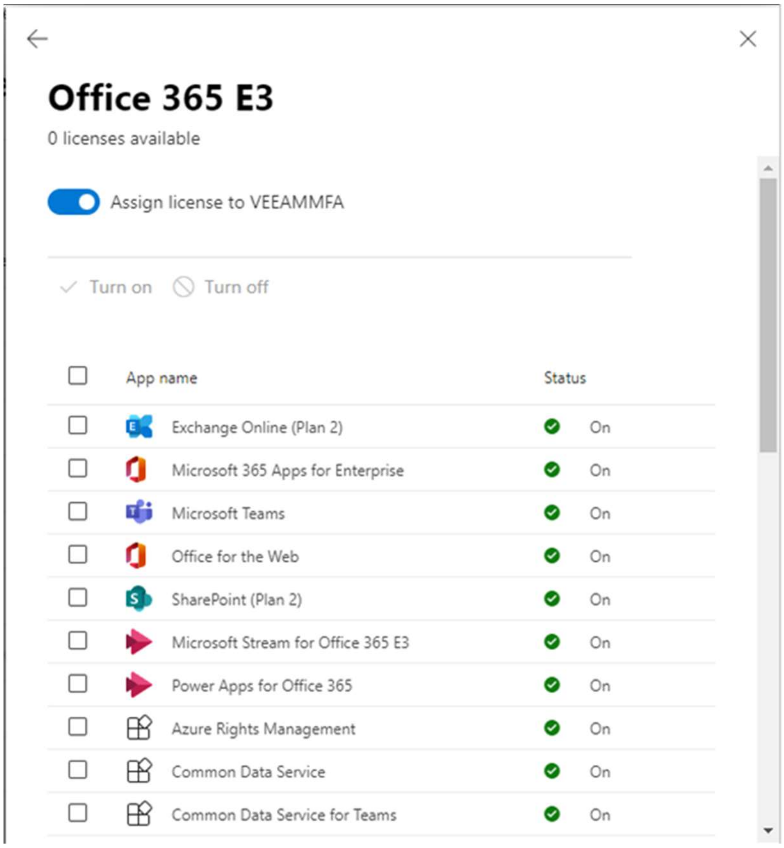
Office 365 E3

0 licenses available

Assign license to VEEAMMFA

☐	App name	Status
☐	Exchange Online (Plan 2)	✓ On
☐	Microsoft 365 Apps for Enterprise	✓ On
☐	Microsoft Teams	✓ On
☐	Office for the Web	✓ On
☐	SharePoint (Plan 2)	✓ On
☐	Microsoft Stream for Office 365 E3	✓ On
☐	Power Apps for Office 365	✓ On
☐	Azure Rights Management	✓ On
☐	Common Data Service	✓ On
☐	Common Data Service for Teams	✓ On

7. Click Back <--.



Office 365 E3

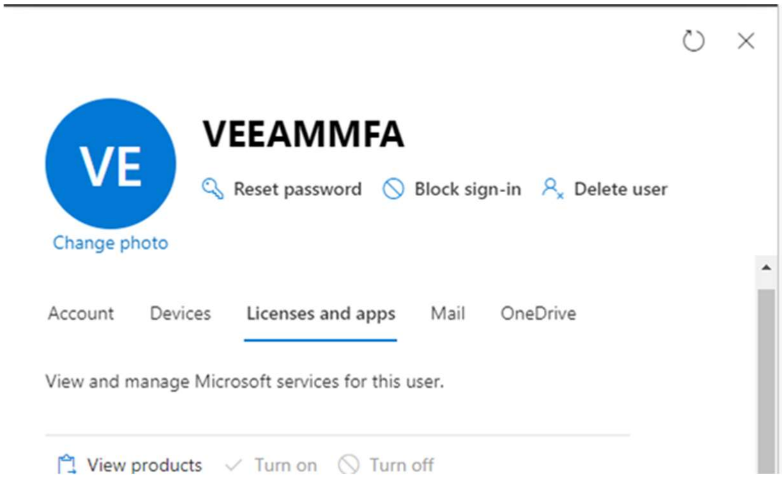
0 licenses available

Assign license to VEEAMMFA

☐	App name	Status
☐	Exchange Online (Plan 2)	On
☐	Microsoft 365 Apps for Enterprise	On
☐	Microsoft Teams	On
☐	Office for the Web	On
☐	SharePoint (Plan 2)	On
☐	Microsoft Stream for Office 365 E3	On
☐	Power Apps for Office 365	On
☐	Azure Rights Management	On
☐	Common Data Service	On
☐	Common Data Service for Teams	On

Turn on
Turn off

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



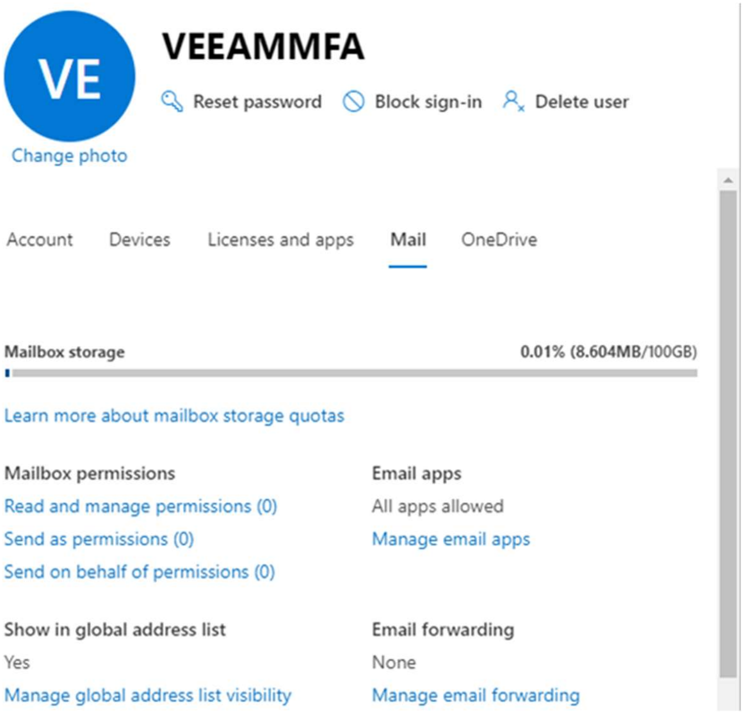
VEEAMMFA

View and manage Microsoft services for this user.

VE
Change photo
Reset password
Block sign-in
Delete user
Account
Devices
Licenses and apps
Mail
OneDrive
View products
Turn on
Turn off

Technet24

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



VE
Change photo

VEEAMMFA

Reset password
Block sign-in
Delete user
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

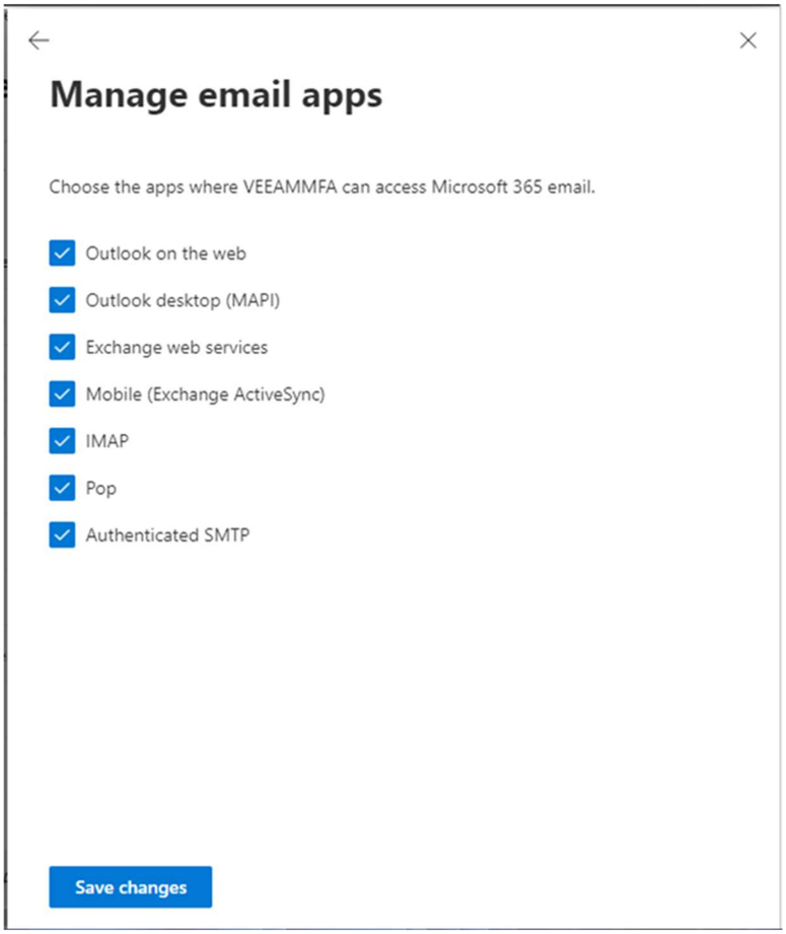
Show in global address list: Yes

Manage global address list visibility

Email forwarding: None

Manage email forwarding

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



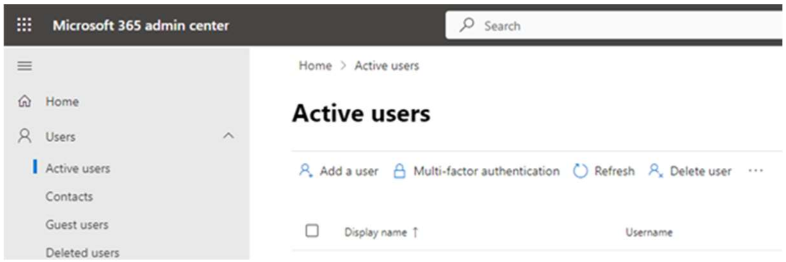
Manage email apps

Choose the apps where VEEAMMFA can access Microsoft 365 email.

☑ Outlook on the web
☑ Outlook desktop (MAPI)
☑ Exchange web services
☑ Mobile (Exchange ActiveSync)
☑ IMAP
☑ Pop
☑ Authenticated SMTP

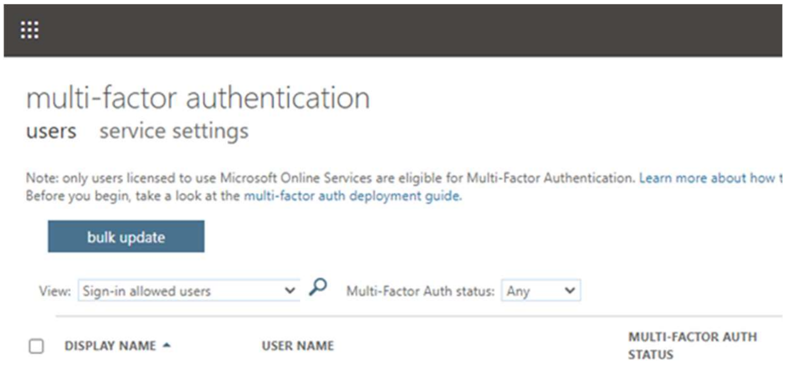
Save changes

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



Microsoft 365 admin center
Search
Home
Users
Active users
Contacts
Guest users
Deleted users
Home > Active users
Active users
Add a user
Multi-factor authentication
Refresh
Delete user
Display name ↑
Username

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



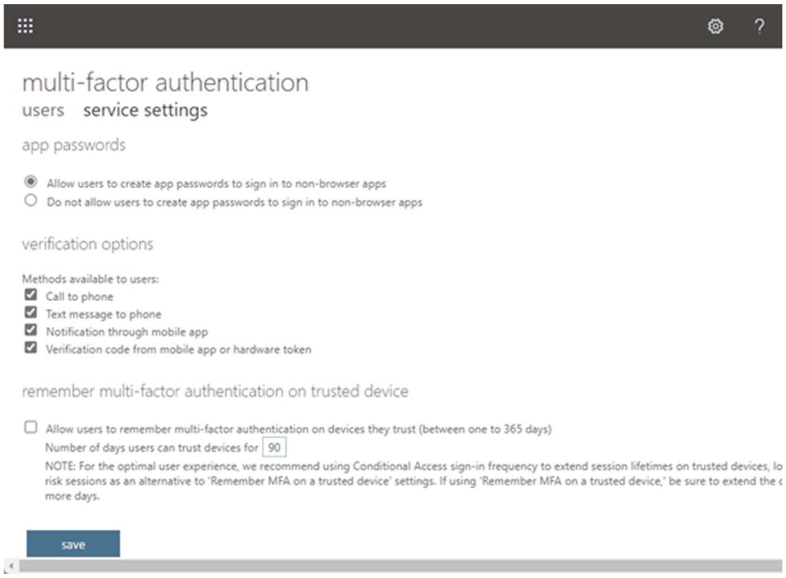
multi-factor authentication

Note: only users licensed to use Microsoft Online Services are eligible for Multi-Factor Authentication. Learn more about how t
Before you begin, take a look at the multi-factor auth deployment guide.

View: Sign-in allowed users
Multi-Factor Auth status: Any

☐	DISPLAY NAME ▲	USER NAME	MULTI-FACTOR AUTH STATUS

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.



multi-factor authentication

app passwords

● Allow users to create app passwords to sign in to non-browser apps
○ Do not allow users to create app passwords to sign in to non-browser apps

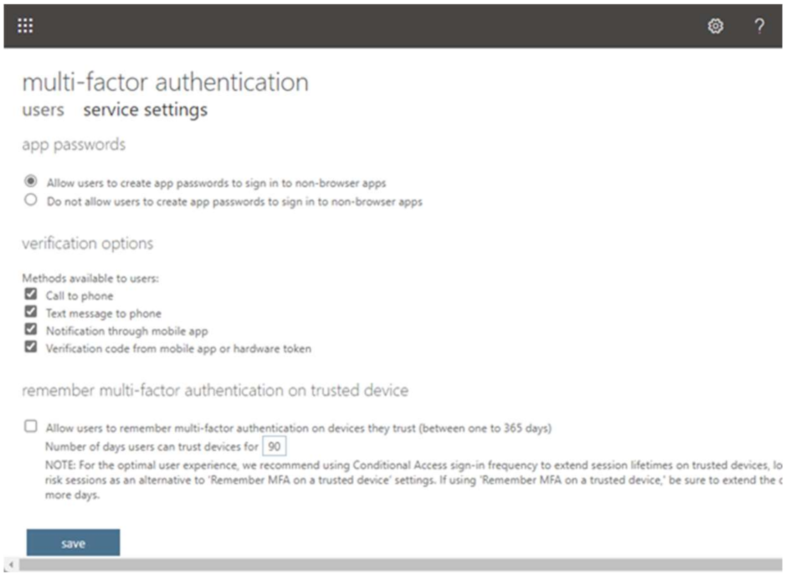
verification options

Methods available to users:
☑ Call to phone
☑ Text message to phone
☑ Notification through mobile app
☑ Verification code from mobile app or hardware token

remember multi-factor authentication on trusted device

☐ Allow users to remember multi-factor authentication on devices they trust (between one to 365 days)
Number of days users can trust devices for 90
NOTE: For the optimal user experience, we recommend using Conditional Access sign-in frequency to extend session lifetimes on trusted devices, lo
risk sessions as an alternative to 'Remember MFA on a trusted device' settings. If using 'Remember MFA on a trusted device,' be sure to extend the
more days.

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



multi-factor authentication

users service settings

app passwords

● Allow users to create app passwords to sign in to non-browser apps
○ Do not allow users to create app passwords to sign in to non-browser apps

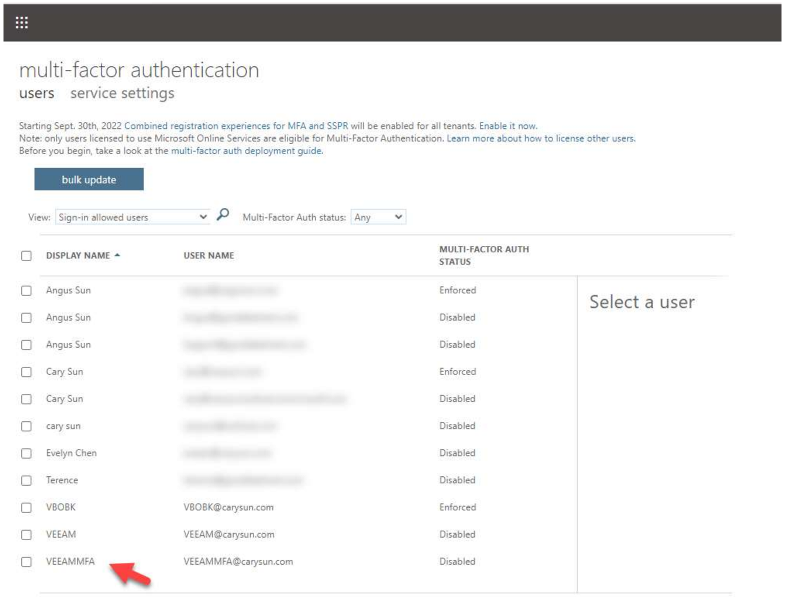
verification options

Methods available to users:
☑ Call to phone
☑ Text message to phone
☑ Notification through mobile app
☑ Verification code from mobile app or hardware token

remember multi-factor authentication on trusted device

☐ Allow users to remember multi-factor authentication on devices they trust (between one to 365 days)
Number of days users can trust devices for 90
NOTE: For the optimal user experience, we recommend using Conditional Access sign-in frequency to extend session lifetimes on trusted devices, lo risk sessions as an alternative to 'Remember MFA on a trusted device' settings. If using 'Remember MFA on a trusted device,' be sure to extend the more days.

16. If the Veeam service account is non-MFA, follow the steps below to enable MFA.
17. On the users' page, click Veeam service account.



multi-factor authentication

users service settings

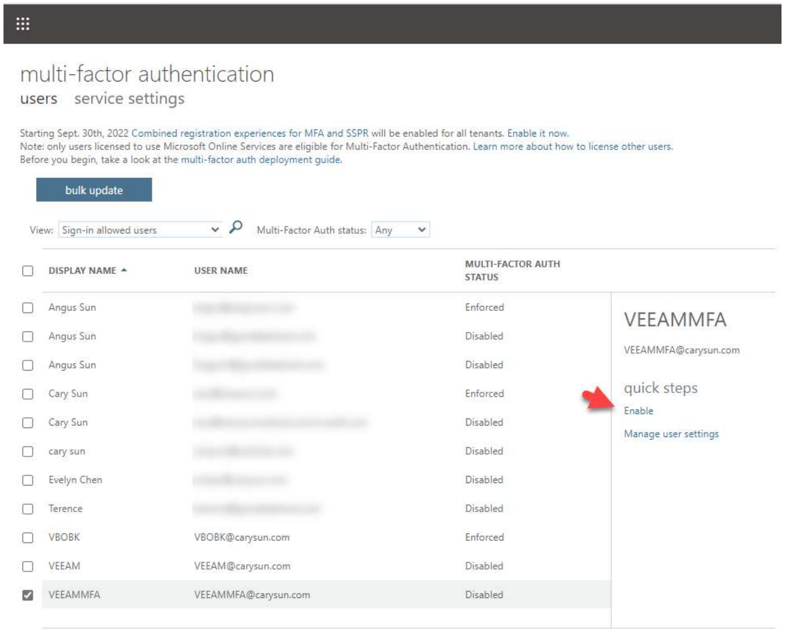
Starting Sept. 30th, 2022 Combined registration experiences for MFA and SSPR will be enabled for all tenants. Enable it now.
Note: only users licensed to use Microsoft Online Services are eligible for Multi-Factor Authentication. Learn more about how to license other users.
Before you begin, take a look at the multi-factor auth deployment guide.

View: Sign-in allowed users
Multi-Factor Auth status: Any

☐	DISPLAY NAME	USER NAME	MULTI-FACTOR AUTH STATUS
☐	Angus Sun	[redacted]	Enforced
☐	Angus Sun	[redacted]	Disabled
☐	Angus Sun	[redacted]	Disabled
☐	Cary Sun	[redacted]	Enforced
☐	Cary Sun	[redacted]	Disabled
☐	cary sun	[redacted]	Disabled
☐	Evelyn Chen	[redacted]	Disabled
☐	Terence	[redacted]	Disabled
☐	VBOBK	VBOBK@carysun.com	Enforced
☐	VEEAM	VEEAM@carysun.com	Disabled
☐	VEEAMMFA	VEEAMMFA@carysun.com	Disabled

Technet24

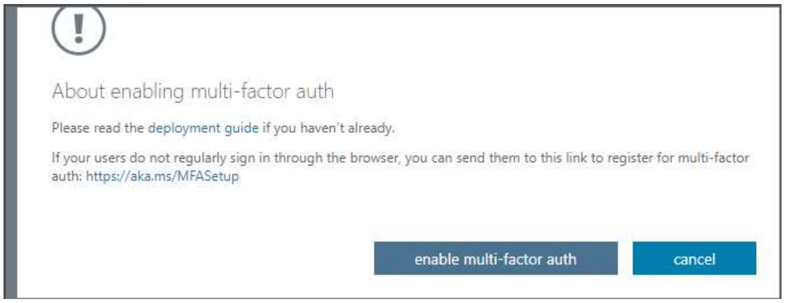
18. On the quick steps page, select Enable.


multi-factor authentication
users
service settings
bulk update
View: Sign-in allowed users
Multi-Factor Auth status: Any
VEEAMMFA
VEEAMMFA@carysun.com
quick steps
Enable
Manage user 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.

☐	DISPLAY NAME	USER NAME	MULTI-FACTOR AUTH STATUS
☐	Angus Sun	[redacted]	Enforced
☐	Angus Sun	[redacted]	Disabled
☐	Angus Sun	[redacted]	Disabled
☐	Cary Sun	[redacted]	Enforced
☐	Cary Sun	[redacted]	Disabled
☐	cary sun	[redacted]	Disabled
☐	Evelyn Chen	[redacted]	Disabled
☐	Terence	[redacted]	Disabled
☐	VBOBK	VBOBK@carysun.com	Enforced
☐	VEEAM	VEEAM@carysun.com	Disabled
☑	VEEAMMFA	VEEAMMFA@carysun.com	Disabled

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

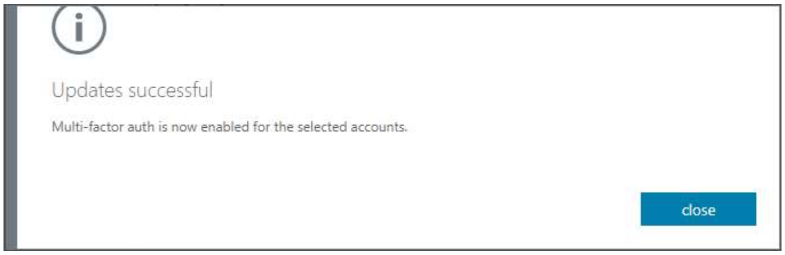

enable multi-factor auth
cancel

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

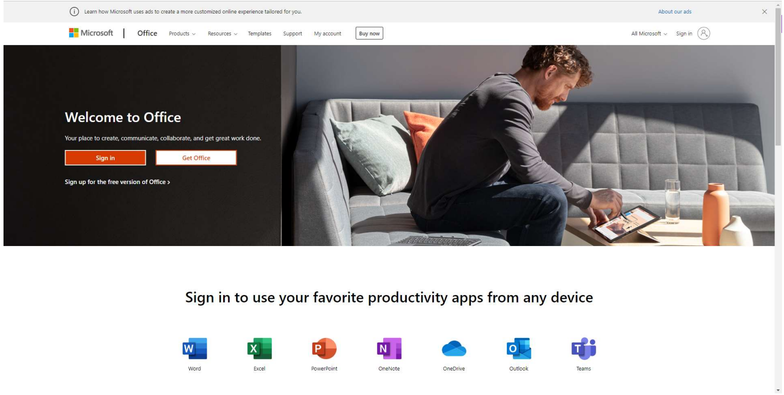
20. On the Updates, successful page, click Close.



Updates successful

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

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



Learn how Microsoft uses ads to create a more customized online experience tailored for you.

Welcome to Office

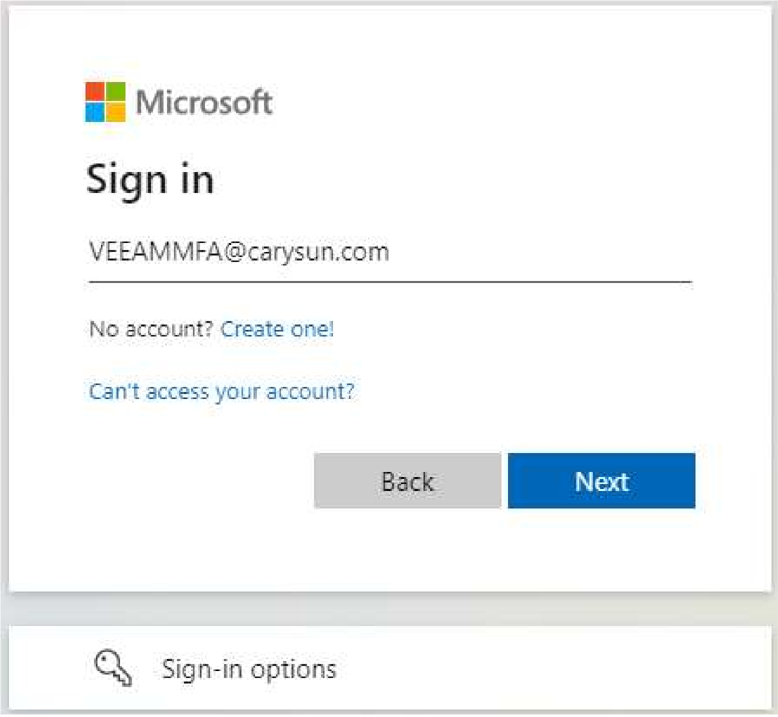
Your place to create, communicate, collaborate, and get great work done.

Sign up for the free version of Office ›

Sign in to use your favorite productivity apps from any device

About our ads
Microsoft
Office
Products
Resources
Templates
Support
My account
Buy now
All Microsoft
Sign in
Sign in
Get Office
Word
Excel
PowerPoint
OneNote
OneDrive
Outlook
Teams

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



Sign in

VEEAMMFA@carysun.com

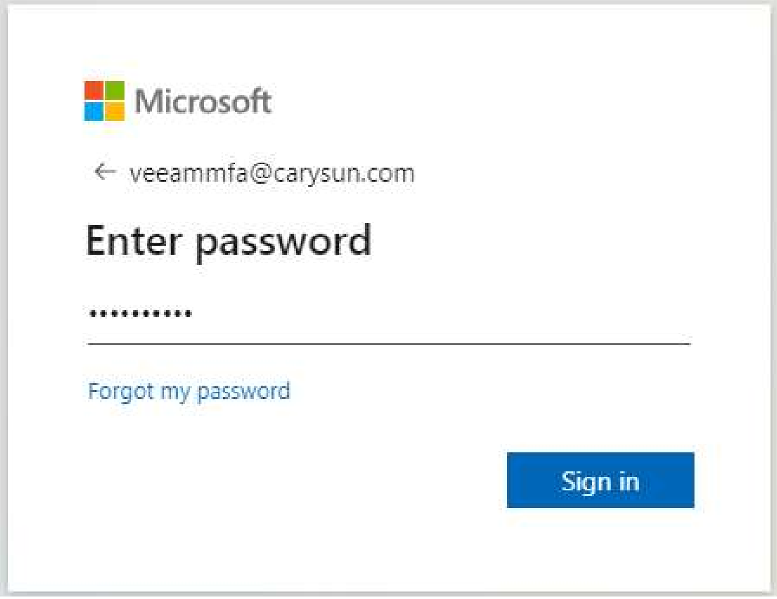
No account? Create one!

Can't access your account?

Microsoft
Back
Next
Sign-in options

Technet24

23. Enter the password.



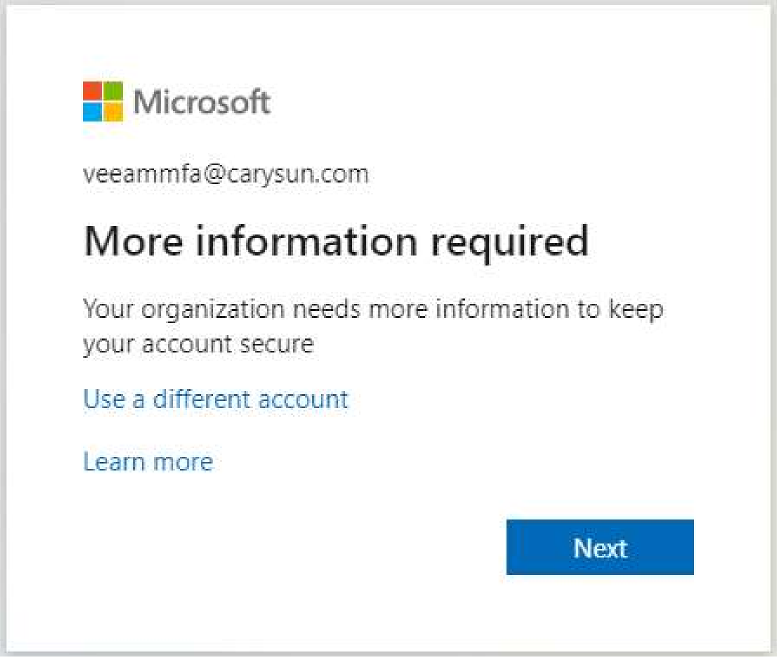
veeammfa@carysun.com

Enter password

••••••••••

Microsoft
Forgot my password
Sign in

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



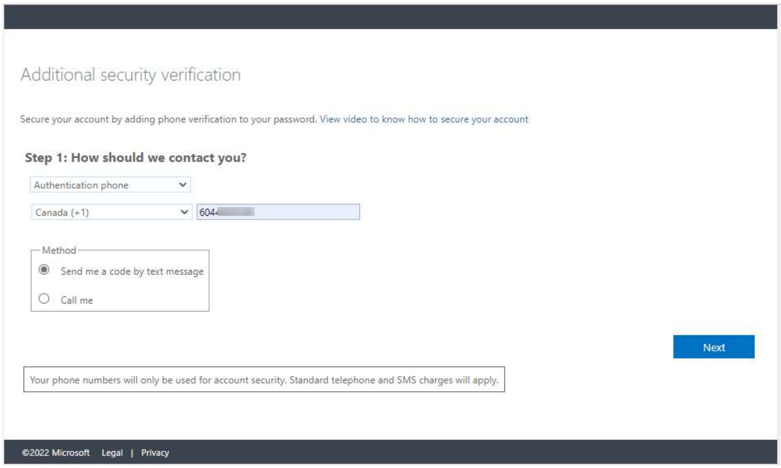
veeammfa@carysun.com

More information required

Your organization needs more information to keep your account secure

Microsoft
Use a different account
Learn more
Next

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

Canada (+1) 604[redacted]

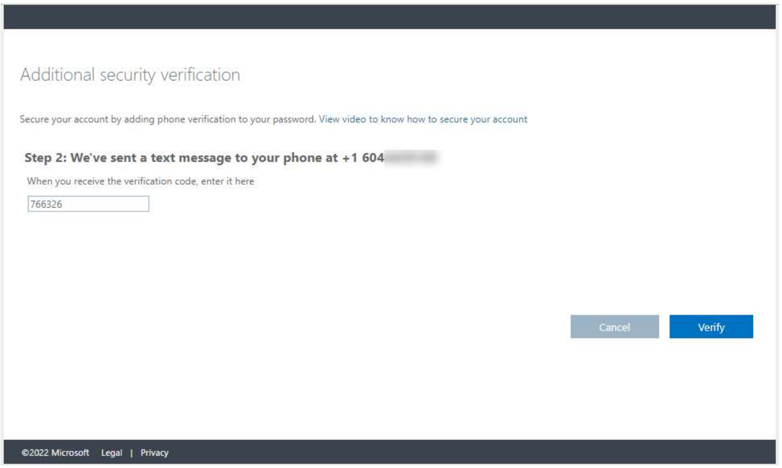
Method

● Send me a code by text message

○ Call me

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

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

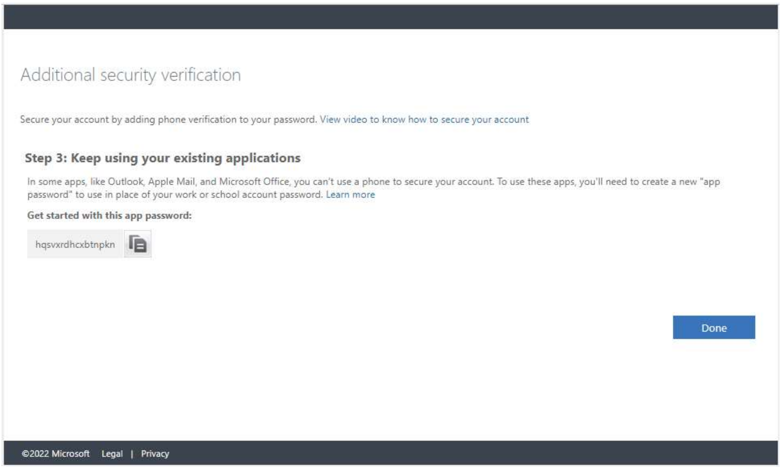
Step 2: We've sent a text message to your phone at +1 604[redacted]

When you receive the verification code, enter it here

766326

Technet24

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



Additional security verification

Secure your account by adding phone verification to your password. View video to know how to secure your account

Step 3: Keep using your existing applications

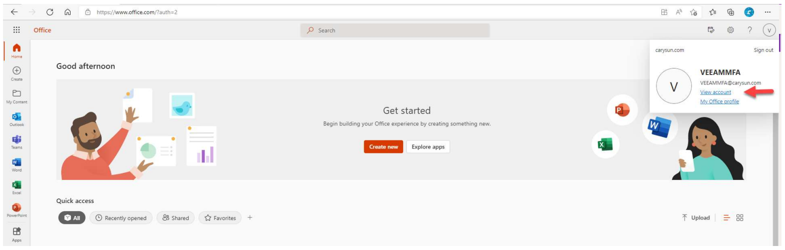
In some apps, like Outlook, Apple Mail, and Microsoft Office, you can't use a phone to secure your account. To use these apps, you'll need to create a new "app password" to use in place of your work or school account password. Learn more

Get started with this app password:

hqsvxrdhcxbtnpkn

Done
©2022 Microsoft Legal | Privacy

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.



https://www.office.com/?auth=2

Good afternoon

Get started

Begin building your Office experience by creating something new.

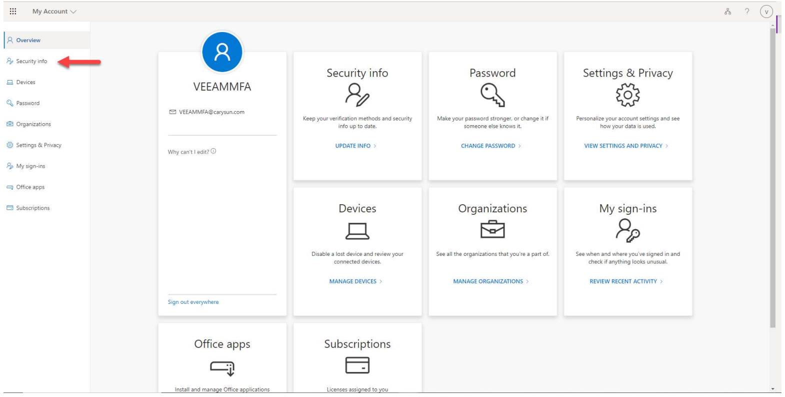
carysun.com

VEEAMMFA

VEEAMMFA@carysun.com

Office
Search
Home
Create
My Content
Outlook
Teams
Word
Excel
PowerPoint
Apps
Create new
Explore apps
Sign out
V
View account
My Office profile
Quick access
All
Recently opened
Shared
Favorites
Upload

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



VEEAMMFA

VEEAMMFA@carysun.com

Keep your verification methods and security info up to date.

Make your password stronger, or change it if someone else knows it.

Personalize your account settings and see how your data is used.

Disable a lost device and review your connected devices.

See all the organizations that you're a part of.

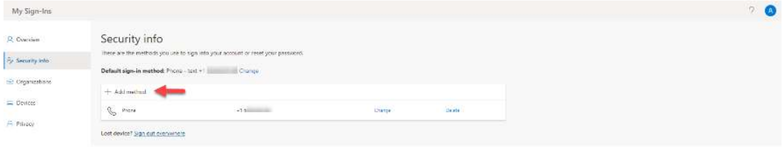
See when and where you've signed in and check if anything looks unusual.

Install and manage Office applications

Licenses assigned to you

My Account
Overview
Security info
Devices
Password
Organizations
Settings & Privacy
My sign-ins
Office apps
Subscriptions
Why can't I edit?
Sign out everywhere
Security info
UPDATE INFO
Password
CHANGE PASSWORD
Settings & Privacy
VIEW SETTINGS AND PRIVACY
Devices
MANAGE DEVICES
Organizations
MANAGE ORGANIZATIONS
My sign-ins
REVIEW RECENT ACTIVITY
Office apps
Subscriptions

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



My Sign-Ins
Overview
Security info
Organizations
Devices
Privacy

Security info

These are the methods you use to sign into your account or reset your password.

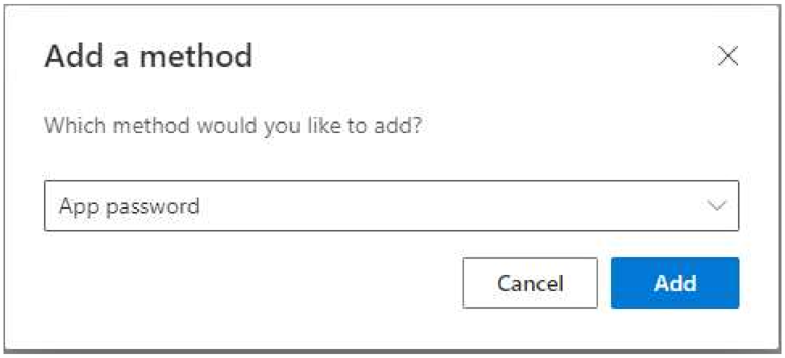
Default sign-in method: Phone - text +1 [redacted] Change

+ Add method

Phone +1 [redacted] Change Delete

Lost device? Sign out everywhere

32. On the Add Method, select App password and click Add.

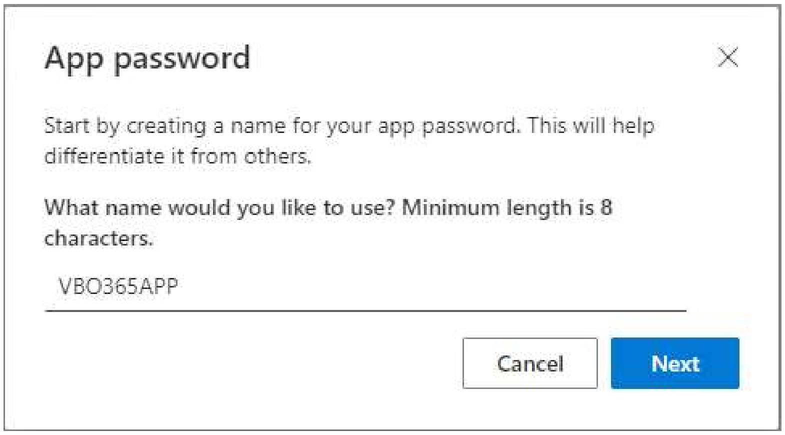


Add a method

Which method would you like to add?

App password

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



App password

Start by creating a name for your app password. This will help differentiate it from others.

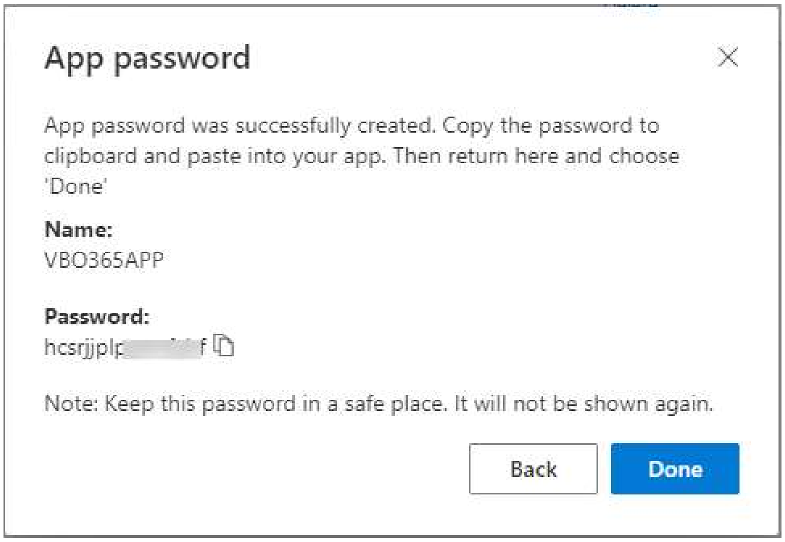
What name would you like to use? Minimum length is 8 characters.

VBO365APP

Cancel
Next

Technet24

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



App password

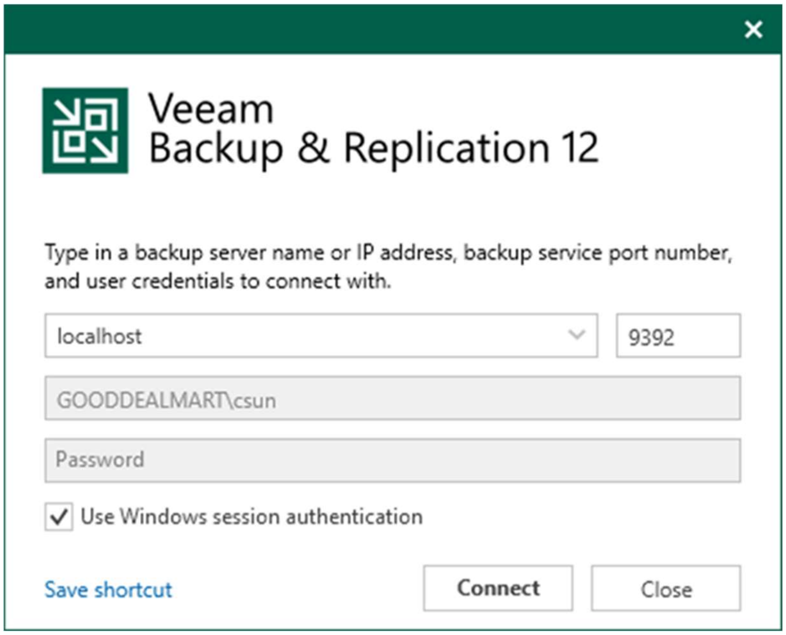
App password was successfully created. Copy the password to clipboard and paste into your app. Then return here and choose 'Done'

Name:
VBO365APP

Password:
hcsrjjpl[redacted]f

Note: Keep this password in a safe place. It will not be shown again.

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



Veeam
Backup & Replication 12

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

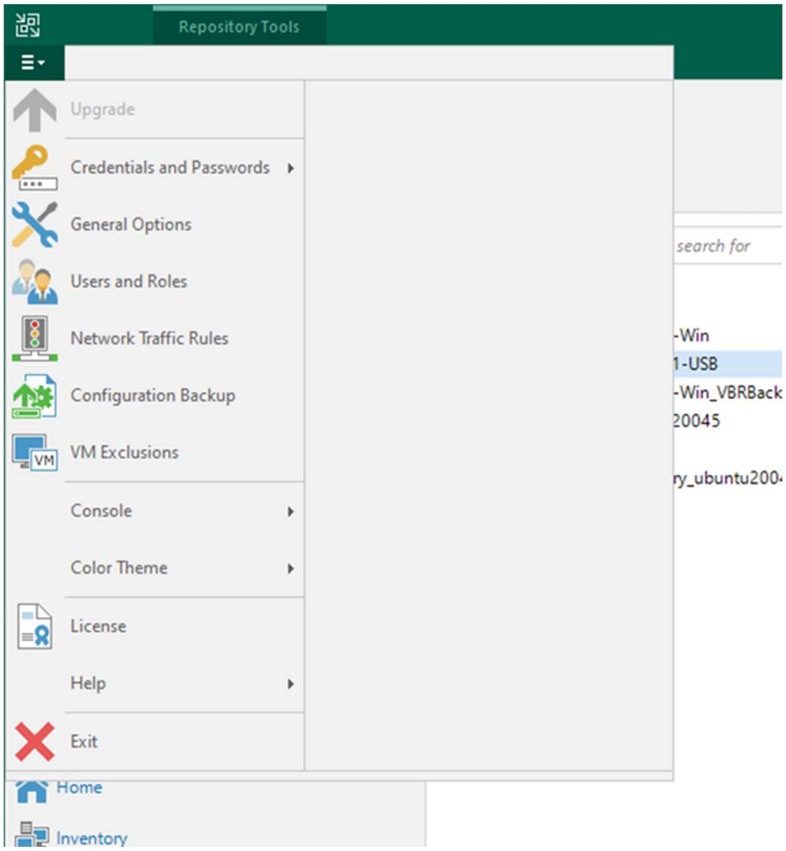
localhost | 9392

GOODDEALMART\csun

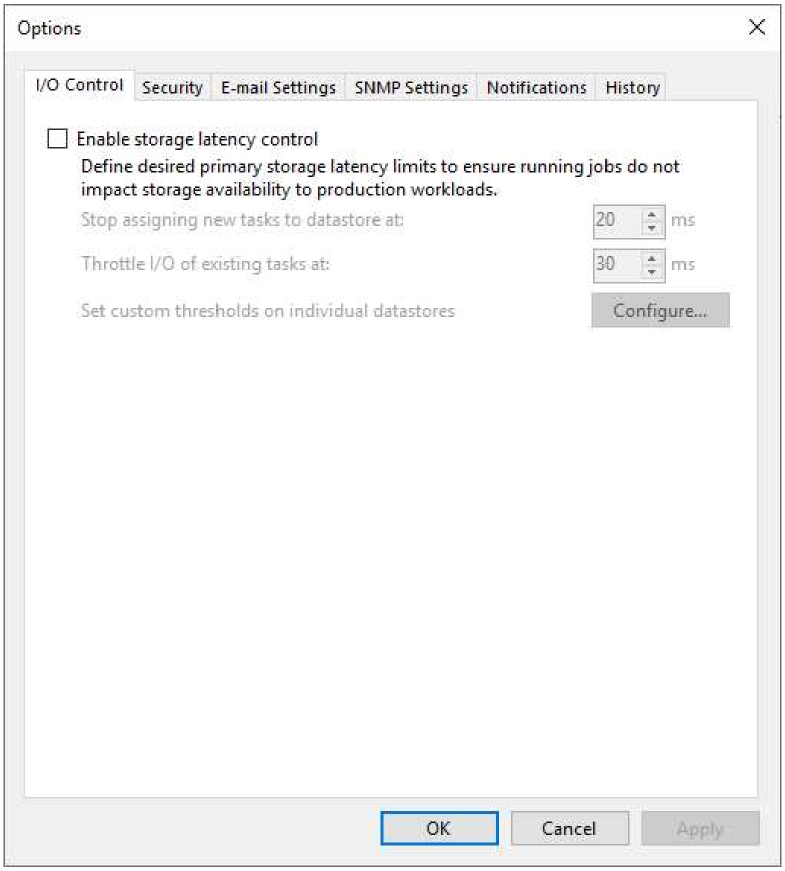
Password

☑ Use Windows session authentication

38. Select General Options from the main menu.


Repository Tools
Upgrade
Credentials and Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
VM Exclusions
Console
Color Theme
License
Help
Exit
Home
Inventory
search for
-Win
1-USB
-Win_VBRBack
20045
ry_ubuntu200

39. On the Options page, select Email Settings.



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

☐ Enable storage latency control

Define desired primary storage latency limits to ensure running jobs do not impact storage availability to production workloads.

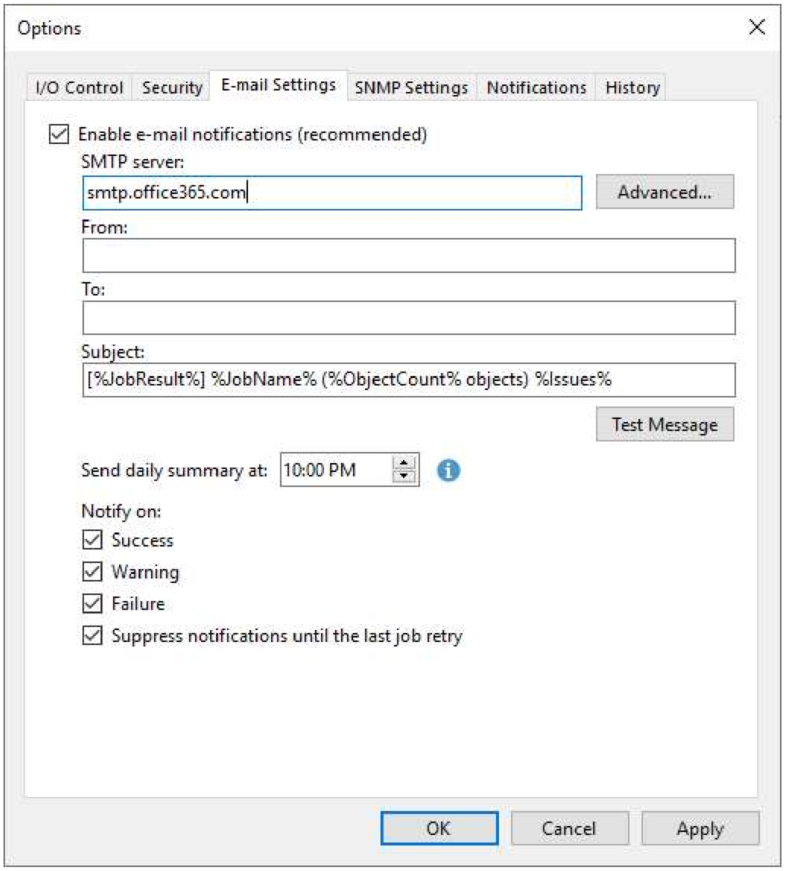
Stop assigning new tasks to datastore at: 20 ms

Throttle I/O of existing tasks at: 30 ms

Set custom thresholds on individual datastores

Configure...
OK
Cancel
Apply

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.


Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Test Message
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com

From:

To:

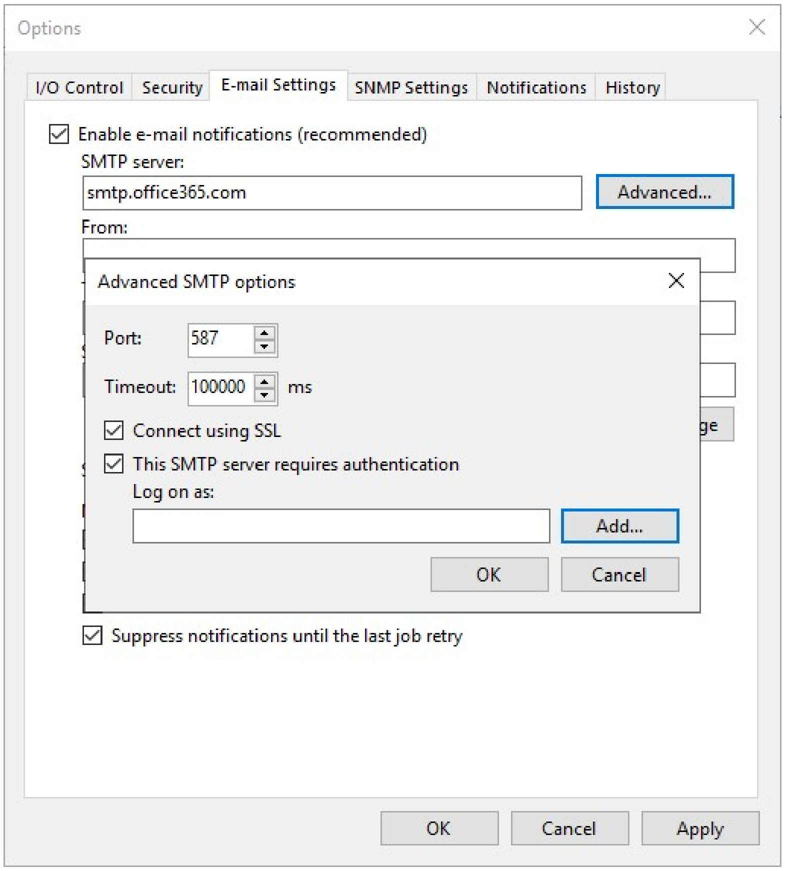
Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues%

Send daily summary at: 10:00 PM

Notify on:
- ☑ Success
- ☑ Warning
- ☑ Failure
- ☑ Suppress notifications until the last job retry

Technet24

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.



Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
From:
Advanced SMTP options
Add...
OK
Cancel
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com

Port: 587

Timeout: 100000 ms

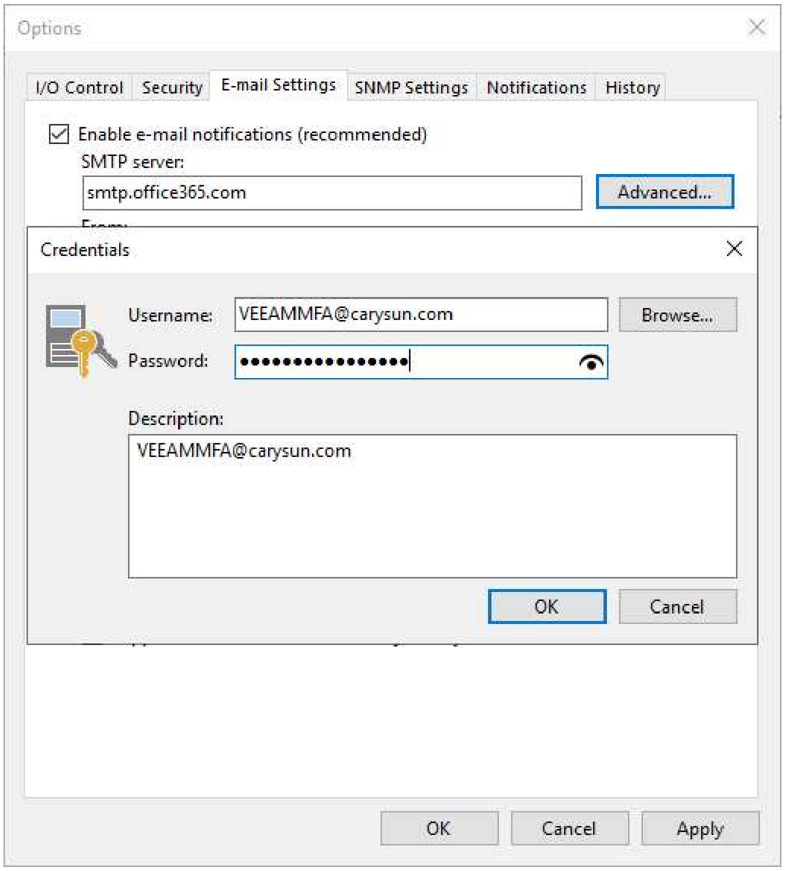
☑ Connect using SSL

☑ This SMTP server requires authentication

Log on as:

☑ Suppress notifications until the last job retry

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.



☑ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com

Username: VEEAMMFA@carysun.com

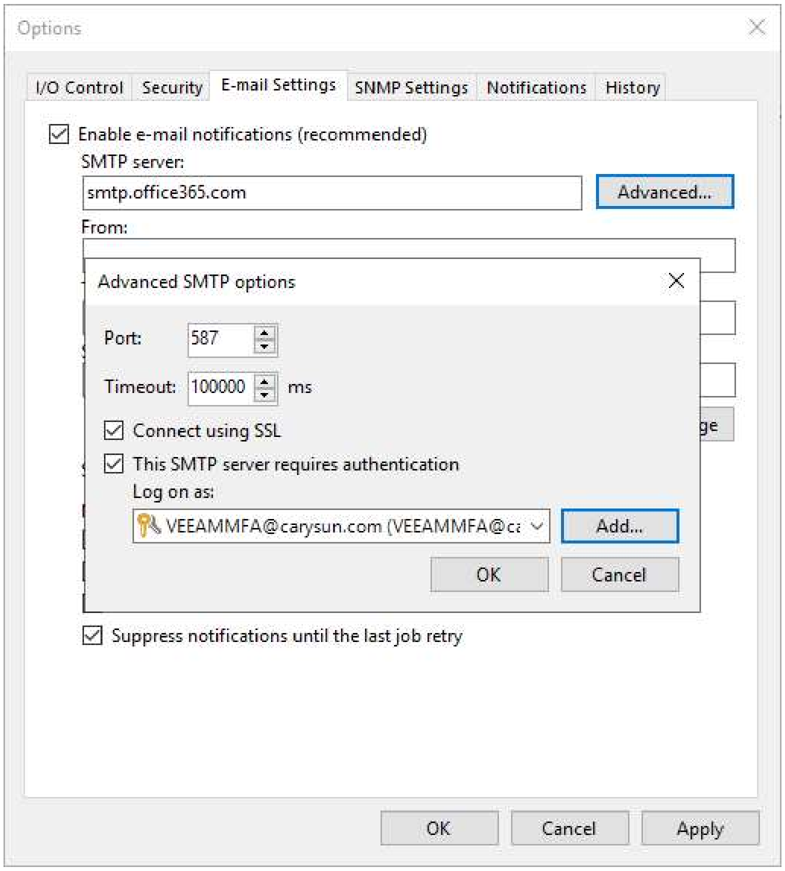
Password: ••••••••••••••••

Description: VEEAMMFA@carysun.com

Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Credentials
Browse...
OK
Cancel
OK
Cancel
Apply

Technet24

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


Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
OK
Cancel
Apply
Advanced SMTP options
Add...
OK
Cancel

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com

From:

Port: 587

Timeout: 100000 ms

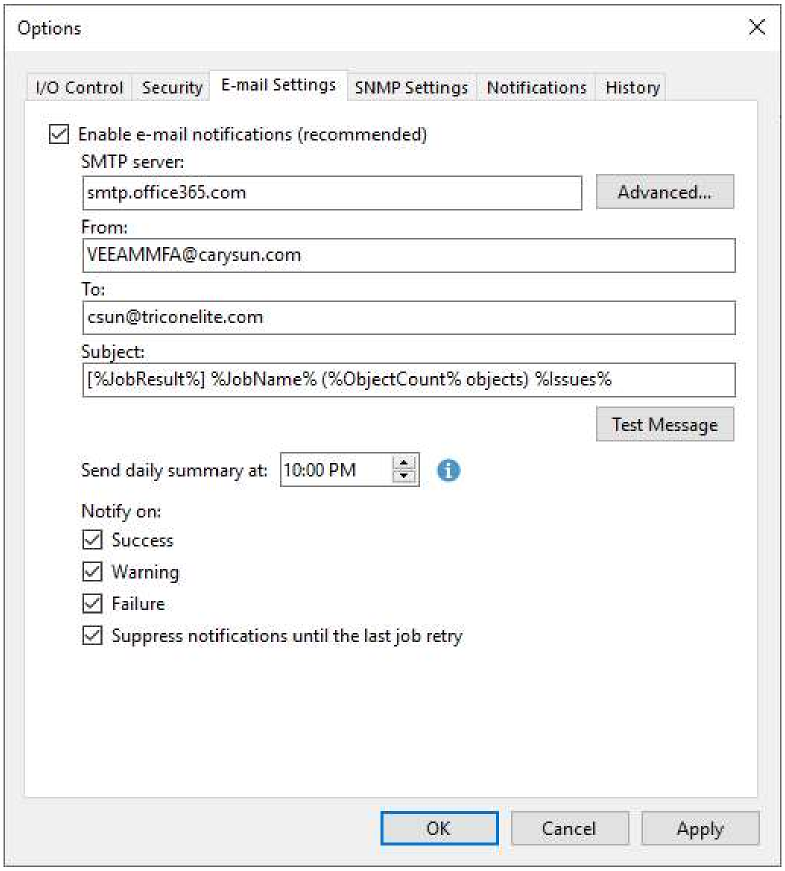
☑ Connect using SSL

☑ This SMTP server requires authentication

Log on as: VEEAMMFA@carysun.com (VEEAMMFA@ca

☑ Suppress notifications until the last job retry

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.


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

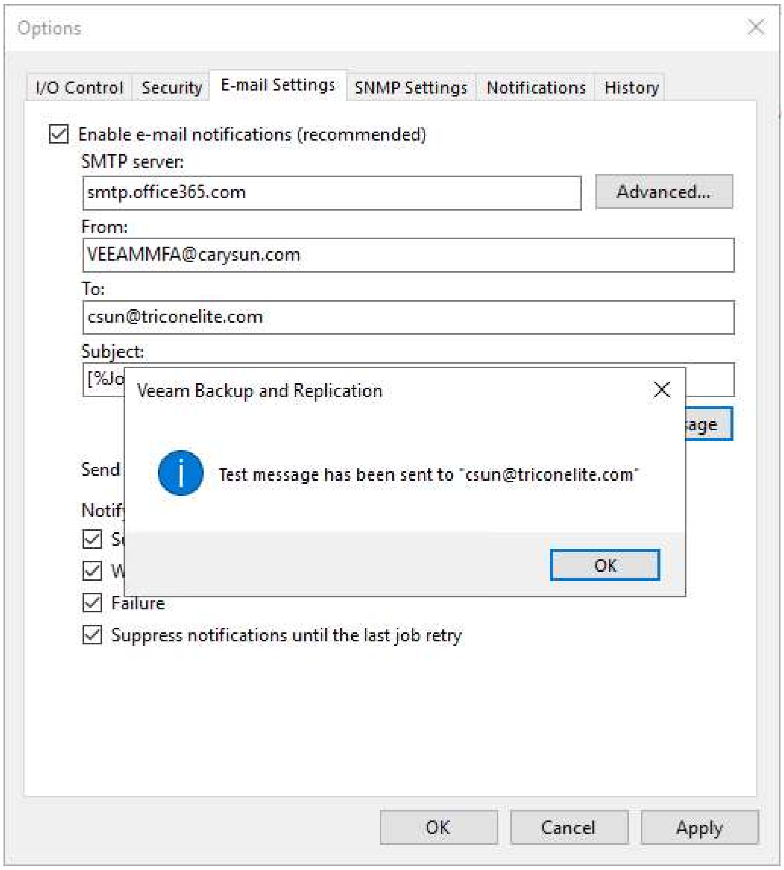
☑ Failure

☑ Suppress notifications until the last job retry

OK
Cancel
Apply

Technet24

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



Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Send
Notif
S
W
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com

From: VEEAMMFA@carysun.com

To: csun@triconelite.com

Subject: [%Jo

☑ Failure

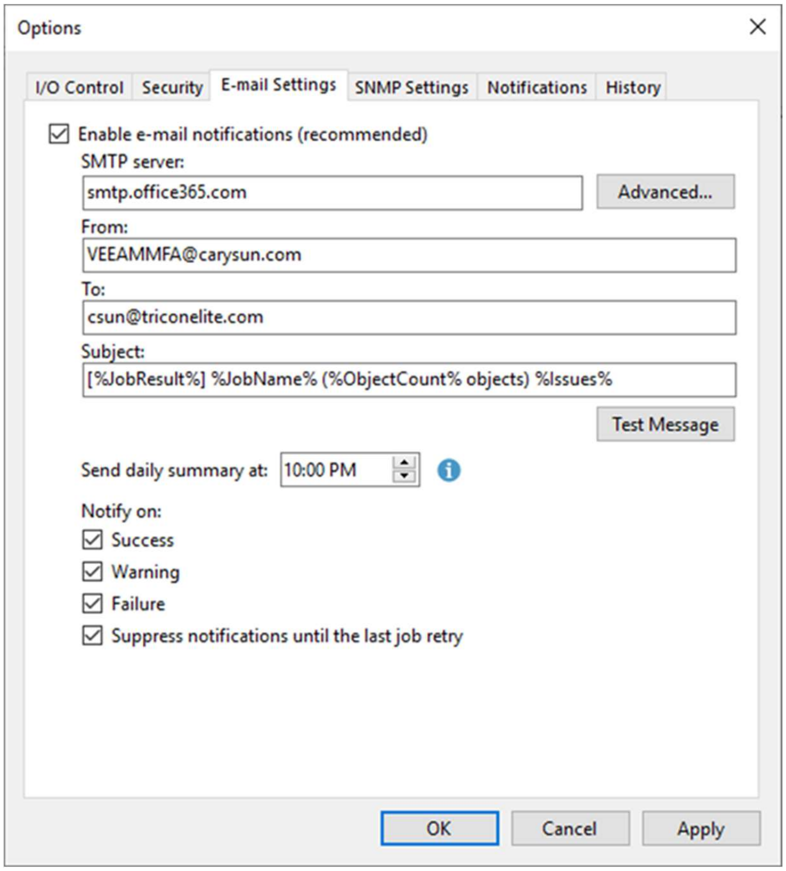
☑ Suppress notifications until the last job retry

Veeam Backup and Replication

Test message has been sent to "csun@triconelite.com"

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.



Options
I/O Control
Security
E-mail Settings
SNMP Settings
Notifications
History
Advanced...
Test Message
OK
Cancel
Apply

☑ Enable e-mail notifications (recommended)

SMTP server: smtp.office365.com

From: VEEAMMFA@carysun.com

To: csun@triconelite.com

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

Send daily summary at: 10:00 PM

Notify on:

☑ Success

☑ Warning

☑ Failure

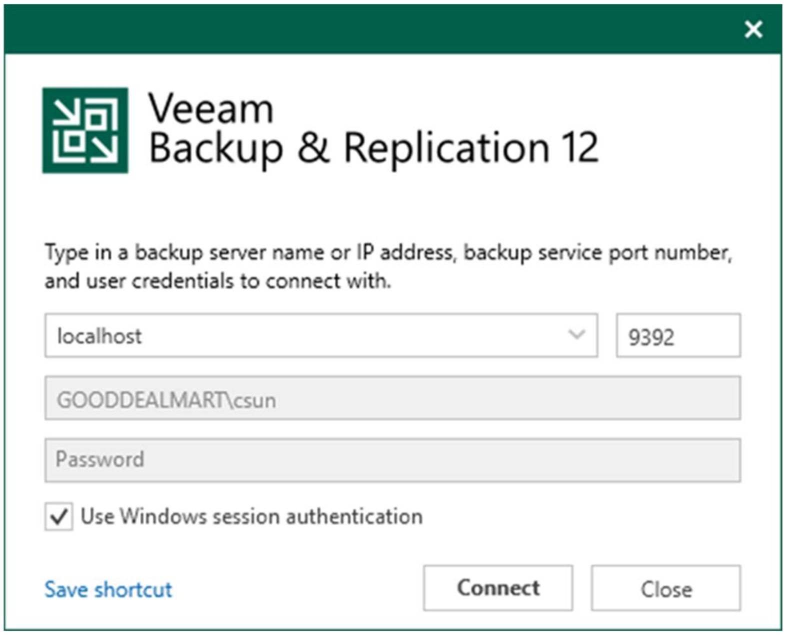
☑ Suppress notifications until the last job retry

Technet24

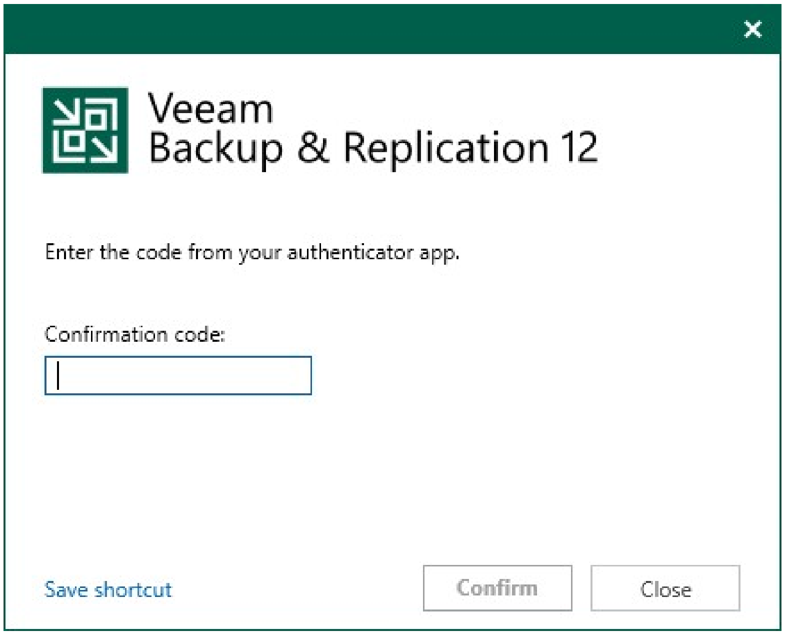
Enable Configuration Backup

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.

You can also use configuration backups to restore the configuration from one backup server to another in the backup infrastructure. For example, Veeam Backup & Replication exports configuration data from the database and saves it to the backup repository during configuration 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.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication

3. Enter the MFA Confirmation code and click Confirm.



Veeam
Backup & Replication 12

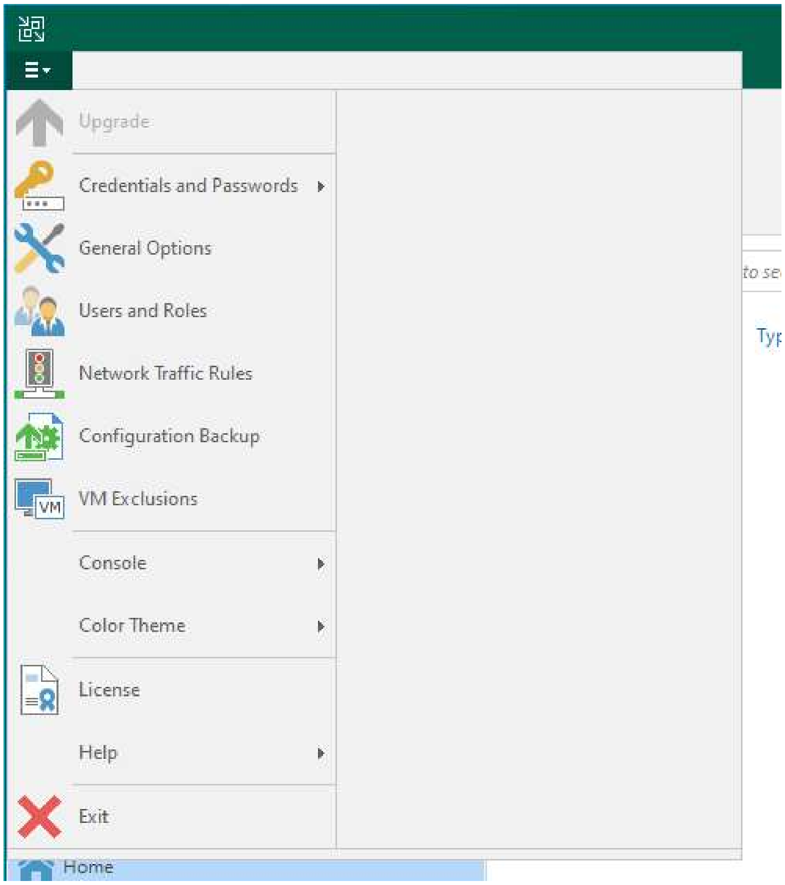
Enter the code from your authenticator app.

Confirmation code:

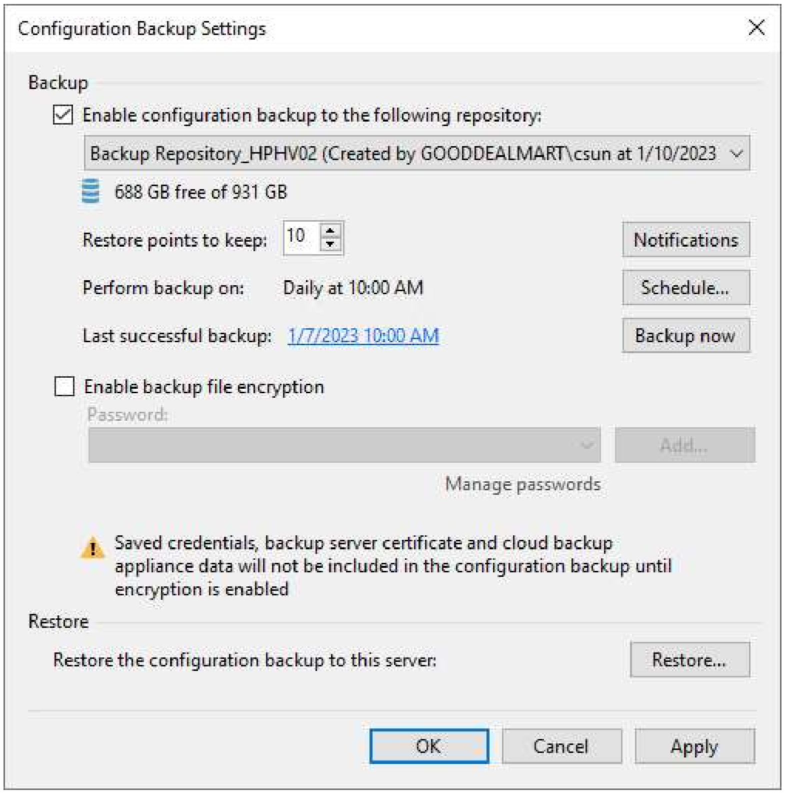
Save shortcut
Confirm
Close

Technet24

4. Select Configuration Backup from the Man menu.


Upgrade
Credentials and Passwords
General Options
Users and Roles
Network Traffic Rules
Configuration Backup
VM Exclusions
Console
Color Theme
License
Help
Exit
Home

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



Configuration Backup Settings

Backup

☑ Enable configuration backup to the following repository:

Backup Repository_HPHV02 (Created by GOODDEALMART\csun at 1/10/2023

688 GB free of 931 GB

Restore points to keep: 10

Perform backup on: Daily at 10:00 AM

Last successful backup: 1/7/2023 10:00 AM

☐ Enable backup file encryption

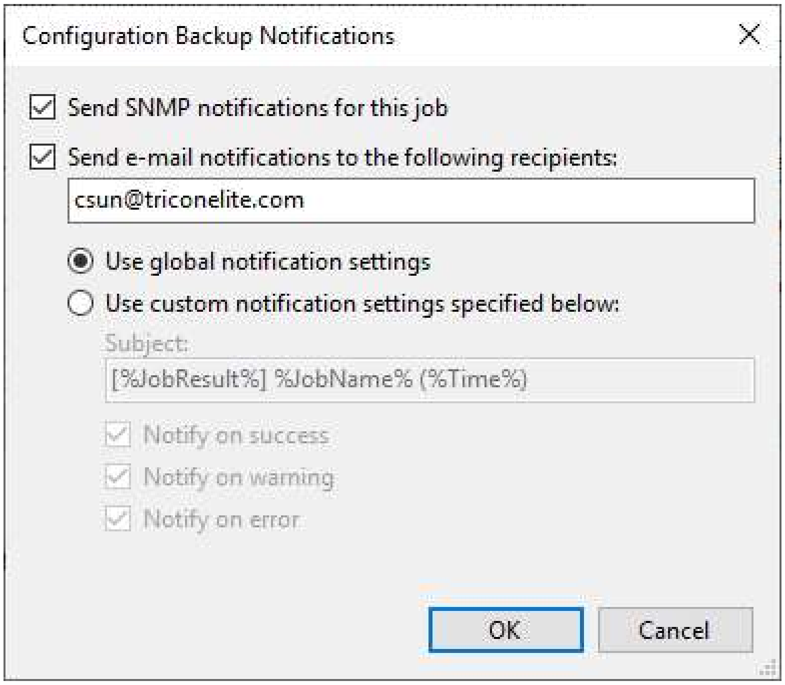
Password:

Saved credentials, backup server certificate and cloud backup appliance data will not be included in the configuration backup until encryption is enabled

Restore

Restore the configuration backup to this server:

9. Select Send SNMP notification on this job checkbox's Configuration Backup Notification page. If necessary.
10. 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.
11. Select the Use global notification settings checkbox.
12. Click OK.



Configuration Backup Notifications

☑ Send SNMP notifications for this job

☑ Send e-mail notifications to the following recipients:

csun@triconelite.com

● Use global notification settings

○ Use custom notification settings specified below:

Subject:

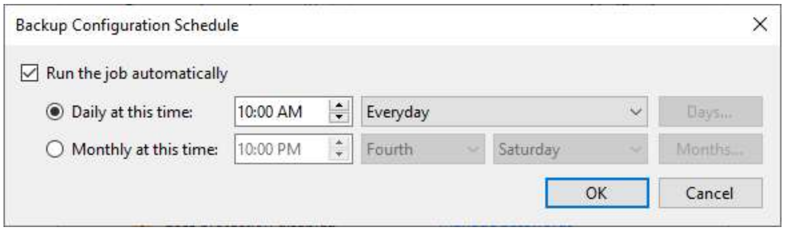
[%JobResult%] %JobName% (%Time%)

☑ Notify on success

☑ Notify on warning

☑ Notify on error

13. Click Schedule on the Configuration Backup Settings page.
14. On the Backup Configuration Schedule page, select Run the job automatically checkbox.
15. Select Daily at this time, enter the backup time in the time field and select every day from the drop-down list.



Backup Configuration Schedule

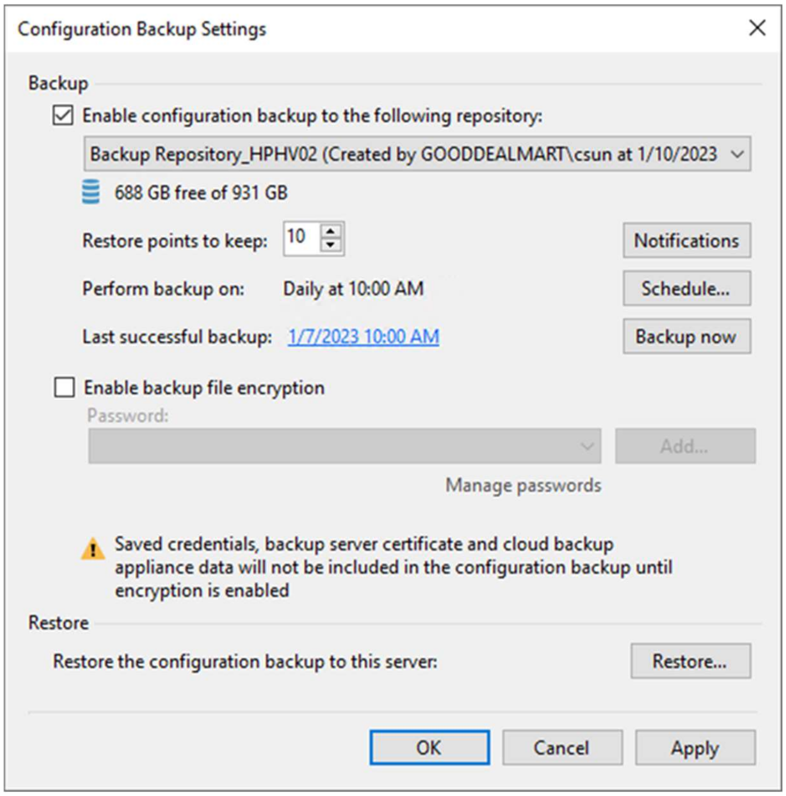
☑ Run the job automatically

● Daily at this time: 10:00 AM Everyday

○ Monthly at this time: 10:00 PM Fourth Saturday

16. Click OK.

17. On the Configuration Backup Settings page, click Backup now if you want to back up manually.



Configuration Backup Settings

Backup

☑ Enable configuration backup to the following repository:

Backup Repository_HPHV02 (Created by GOODDEALMART\csun at 1/10/2023

688 GB free of 931 GB

Restore points to keep: 10

Perform backup on: Daily at 10:00 AM

Last successful backup: 1/7/2023 10:00 AM

☐ Enable backup file encryption

Password:

Saved credentials, backup server certificate and cloud backup appliance data will not be included in the configuration backup until encryption is enabled

Restore

Restore the configuration backup to this server:

Notifications
Schedule...
Backup now
Add...
Manage passwords
Restore...
OK
Cancel
Apply

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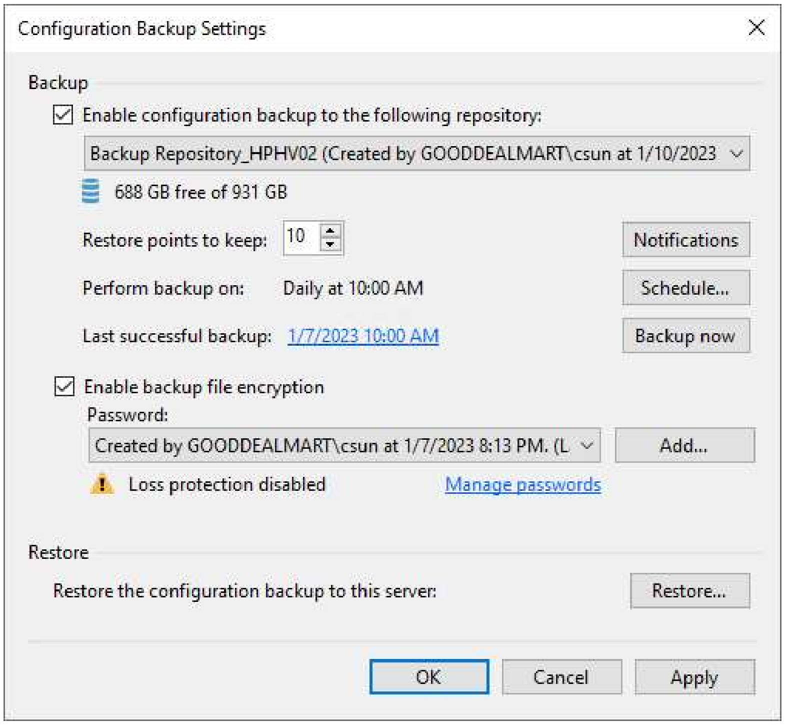
18. Select Enable backup file encryption on the Configuration Backup Settings page.
19. Select a password from the Password drop-down list or click Add to create a password.
20. Click OK.



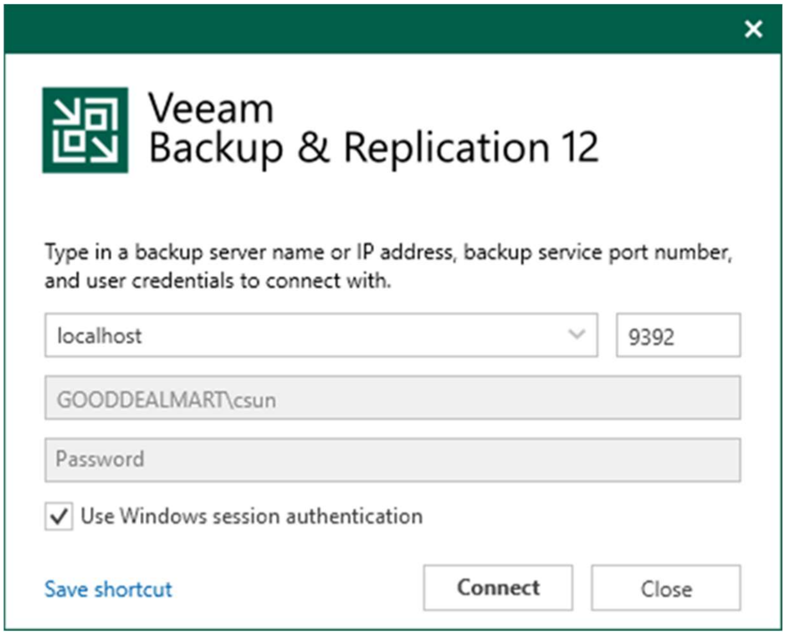
Configuration Backup Settings
Backup
Restore
Notifications
Schedule...
Backup now
Add...
Manage passwords
Restore...
OK
Cancel
Apply

☑ Enable configuration backup to the following repository:
Backup Repository_HPHV02 (Created by GOODDEALMART\csun at 1/10/2023
688 GB free of 931 GB
Restore points to keep: 10
Perform backup on: Daily at 10:00 AM
Last successful backup: 1/7/2023 10:00 AM
☑ Enable backup file encryption
Password:
Created by GOODDEALMART\csun at 1/7/2023 8:13 PM. (L
⚠ Loss protection disabled
Restore the configuration backup to this server:

Configure Best Practices Analyzer

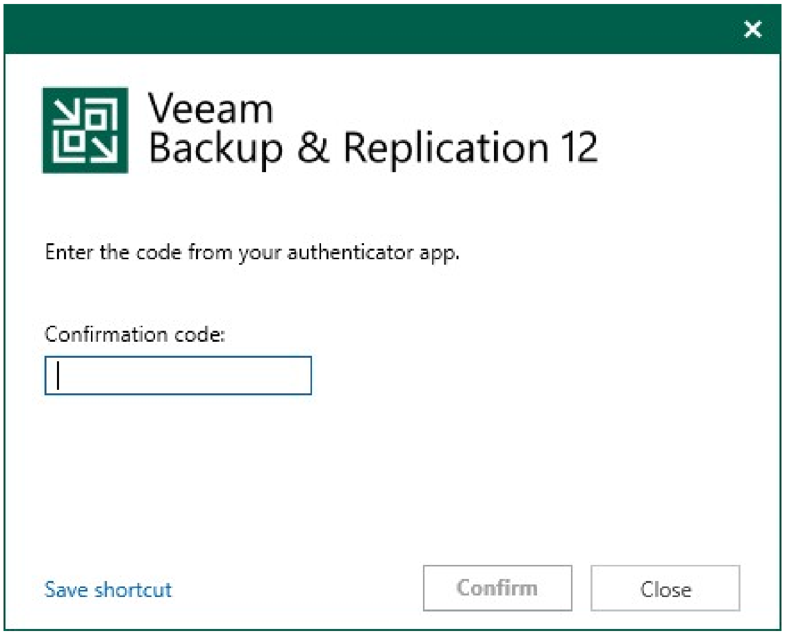
Veeam Backup & Replication includes a built-in tool that checks your backup server configuration to ensure it adheres to the Microsoft Windows Server operating system and Veeam backup infrastructure components security best practices.

The tool Best Practices Analyzer examines the following configuration parameters.

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.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication Save shortcut Connect Close

Technet24

3. Enter the MFA Confirmation code and click Confirm.



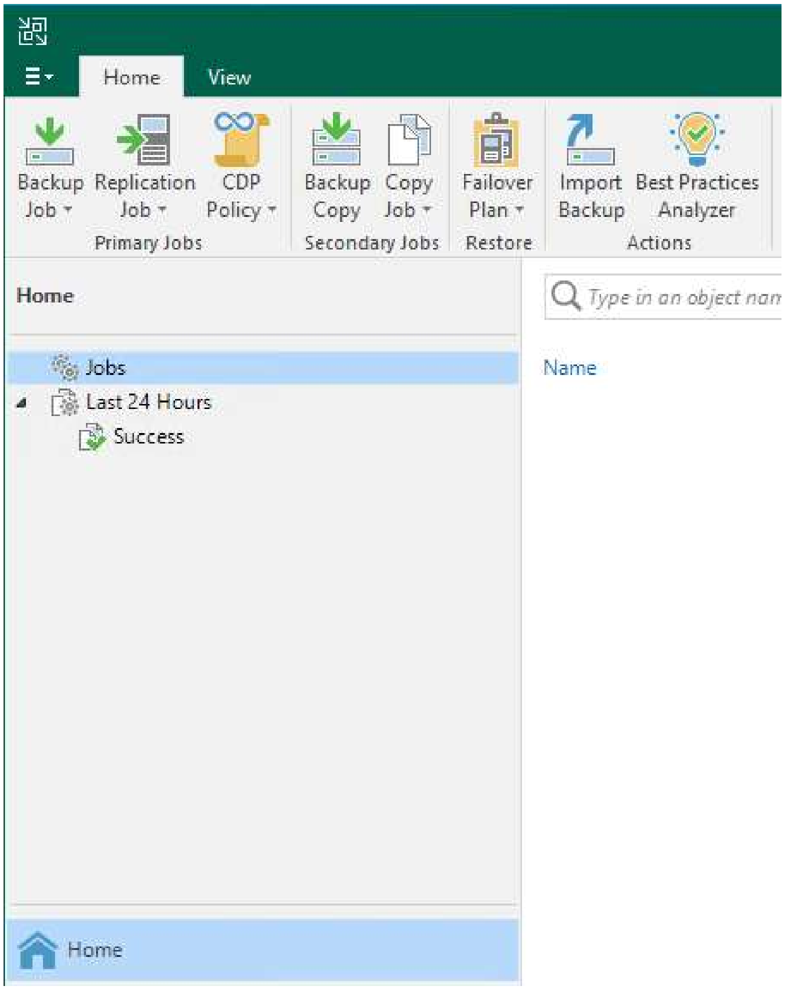
Veeam
Backup & Replication 12

Enter the code from your authenticator app.

Confirmation code:

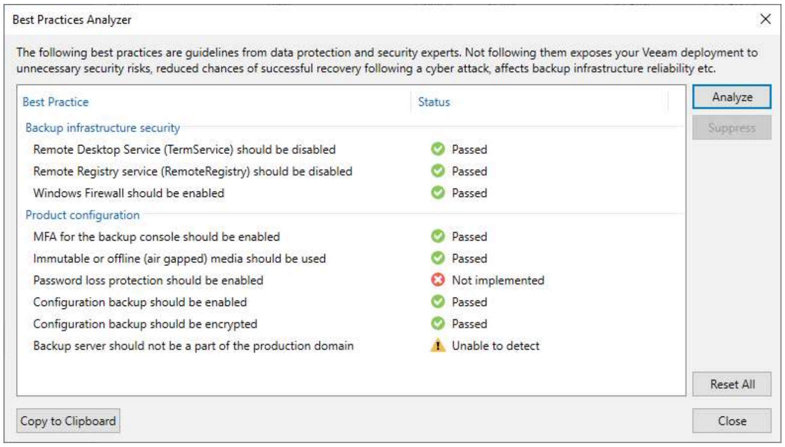
Save shortcut
Confirm
Close

4. Select the Best Practices Analyzer on the Home page.


Home
View
Backup Job
Replication Job
CDP Policy
Backup Copy
Copy Job
Failover Plan
Import Backup
Best Practices Analyzer
Primary Jobs
Secondary Jobs
Restore
Actions
Home
Type in an object nam
Jobs
Last 24 Hours
Success
Name
Home

Technet24

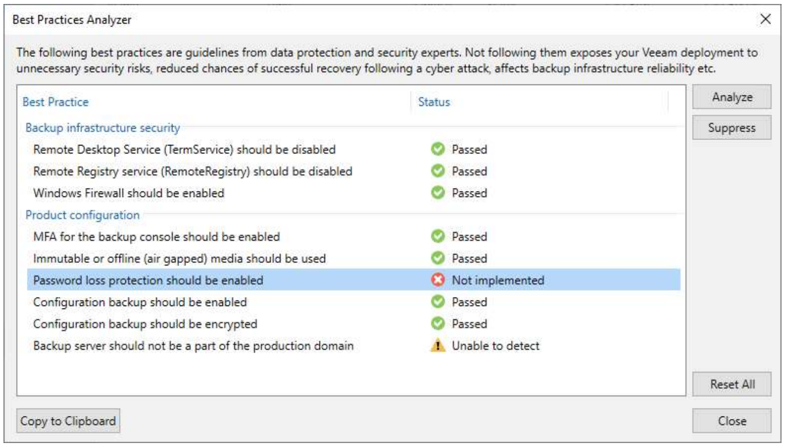
5. On the Best Practices Analyzer page, click Analyze after setting up the parameters as recommended and ensure that the status is changed to Passed.



The following best practices are guidelines from data protection and security experts. Not following them exposes your Veeam deployment to unnecessary security risks, reduced chances of successful recovery following a cyber attack, affects backup infrastructure reliability etc.

Best Practice	Status
Backup infrastructure security	
Remote Desktop Service (TermService) should be disabled	✓ Passed
Remote Registry service (RemoteRegistry) should be disabled	✓ Passed
Windows Firewall should be enabled	✓ Passed
Product configuration	
MFA for the backup console should be enabled	✓ Passed
Immutable or offline (air gapped) media should be used	✓ Passed
Password loss protection should be enabled	✗ Not implemented
Configuration backup should be enabled	✓ Passed
Configuration backup should be encrypted	✓ Passed
Backup server should not be a part of the production domain	⚠ Unable to detect

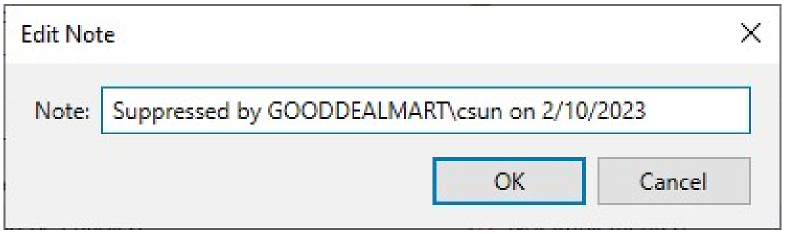
6. Select the parameter and click Suppress to skip the security check.



The following best practices are guidelines from data protection and security experts. Not following them exposes your Veeam deployment to unnecessary security risks, reduced chances of successful recovery following a cyber attack, affects backup infrastructure reliability etc.

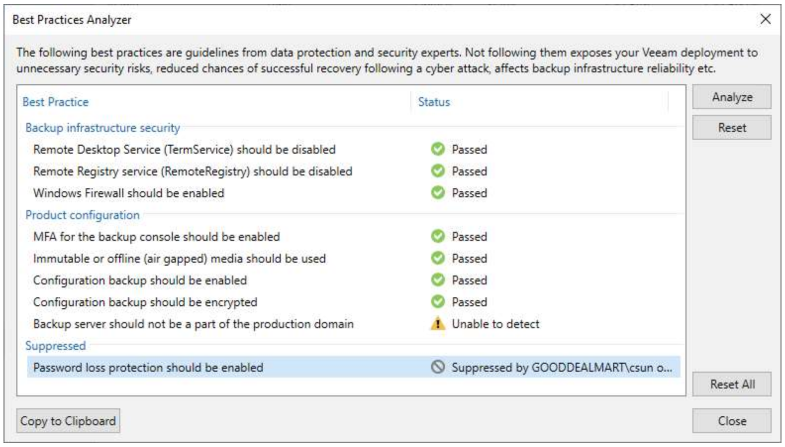
Best Practice	Status
Backup infrastructure security	
Remote Desktop Service (TermService) should be disabled	✓ Passed
Remote Registry service (RemoteRegistry) should be disabled	✓ Passed
Windows Firewall should be enabled	✓ Passed
Product configuration	
MFA for the backup console should be enabled	✓ Passed
Immutable or offline (air gapped) media should be used	✓ Passed
Password loss protection should be enabled	✗ Not implemented
Configuration backup should be enabled	✓ Passed
Configuration backup should be encrypted	✓ Passed
Backup server should not be a part of the production domain	⚠ Unable to detect

7. Comment briefly on the Note field on the Edit Note page for future reference, and click OK.



Note: Suppressed by GOODDEALMART\csun on 2/10/2023

8. Click Close on the Best Practices Analyzer page.



The following best practices are guidelines from data protection and security experts. Not following them exposes your Veeam deployment to unnecessary security risks, reduced chances of successful recovery following a cyber attack, affects backup infrastructure reliability etc.

Best Practice	Status
Backup infrastructure security	
Remote Desktop Service (TermService) should be disabled	✓ Passed
Remote Registry service (RemoteRegistry) should be disabled	✓ Passed
Windows Firewall should be enabled	✓ Passed
Product configuration	
MFA for the backup console should be enabled	✓ Passed
Immutable or offline (air gapped) media should be used	✓ Passed
Configuration backup should be enabled	✓ Passed
Configuration backup should be encrypted	✓ Passed
Backup server should not be a part of the production domain	⚠ Unable to detect
Suppressed	
Password loss protection should be enabled	⊘ Suppressed by GOODDEALMART\csun o...

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Chapter 4

Backup

Veeam Backup is a software application for data protection and disaster recovery in virtualized environments. It provides backup, recovery, replication, and continuous data protection for VMware vSphere and Microsoft Hyper-V virtual machines, physical servers, and cloud-based workloads.

Veeam Backup & Replication creates VM image-level backups. Image-level backups can be used for various restore scenarios, such as Instant Recovery, restoring full VM, recovery VM file, recovery file-level, etc.

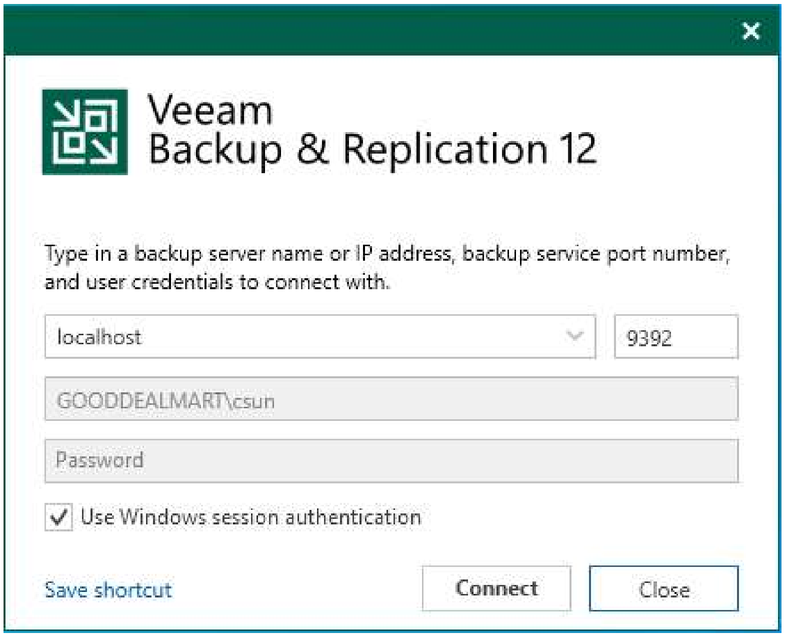
Veeam Backup offers several features that help protect data, including:

- Backup and replication: Veeam Backup provides backup and replication of virtual machines, physical servers, and cloud workloads. Backups can be scheduled, and Veeam Backup offers several backup methods, including incremental and full backups.
- Recovery: Veeam Backup allows quick and easy recovery of virtual machines, files, and application items, including granular-level recovery for emails and SharePoint items.
- Monitoring and reporting: Veeam Backup provides monitoring and reporting of backup and replication jobs, allowing administrators to identify issues and ensure backups are running as expected quickly.
- Cloud integration: Veeam Backup integrates with several cloud providers, including AWS, Microsoft Azure, and Google Cloud Platform, allowing backups to be stored in the cloud.

Veeam Backup is a powerful, flexible data protection and disaster recovery solution in virtualized environments.

Create 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 back up 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.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication

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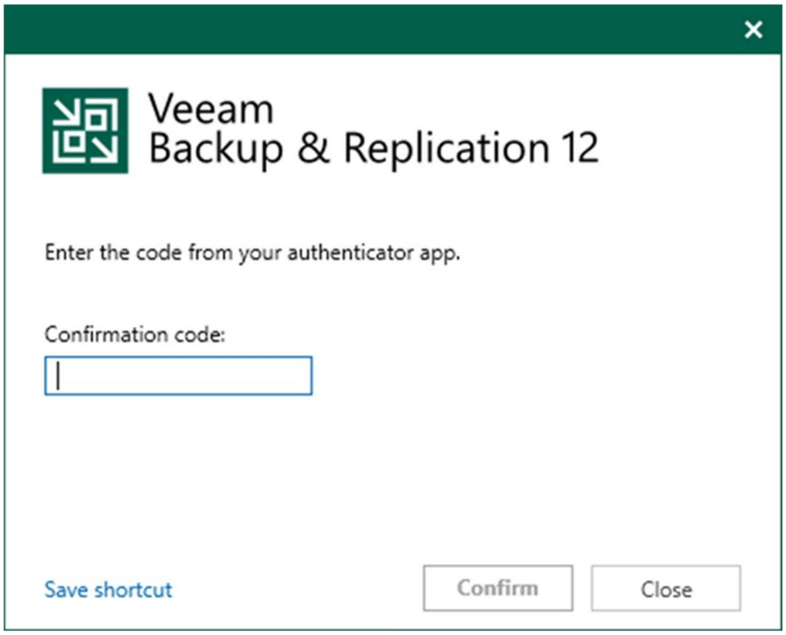
3. Enter the MFA Confirmation code and click Confirm.



Veeam
Backup & Replication 12

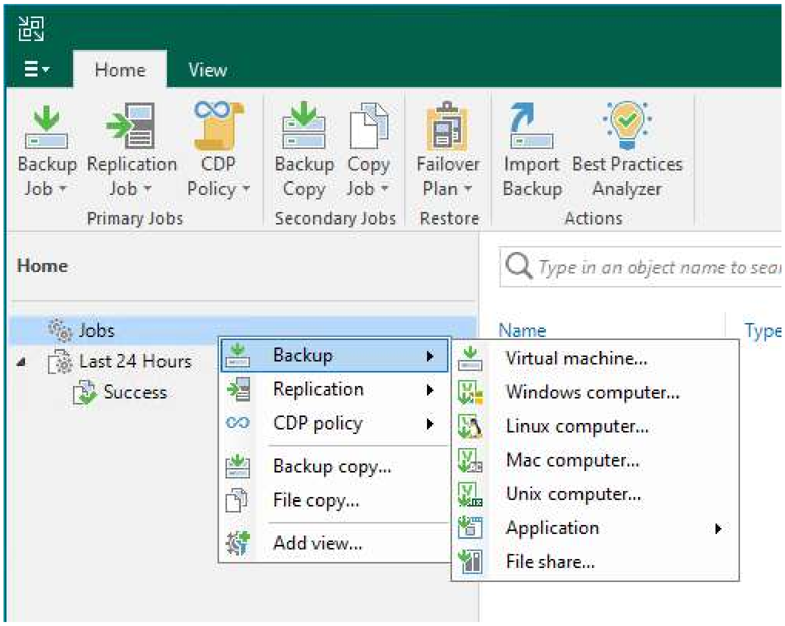
Enter the code from your authenticator app.

Confirmation code:

Save shortcut
Confirm
Close

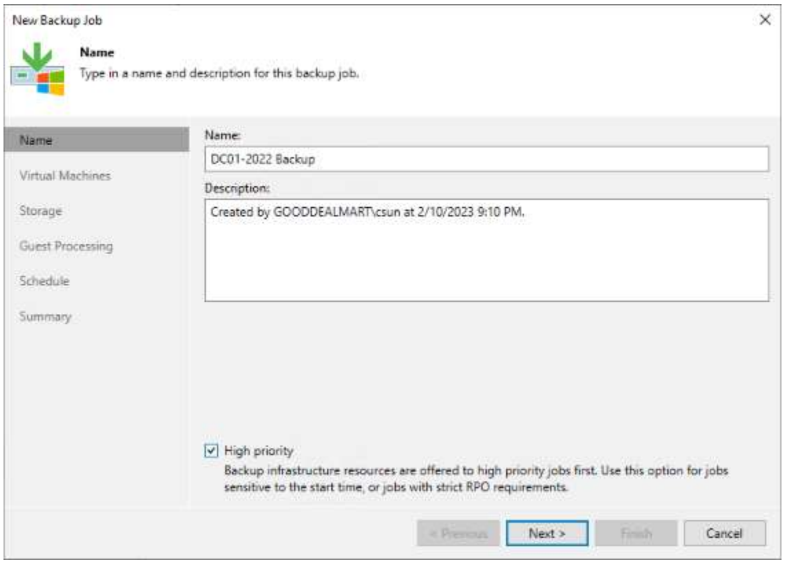
---

4. Select Jobs on the Home page and right-click Jobs.
5. Select Backup and click Virtual machine.



Home
View
Backup Job
Replication Job
CDP Policy
Primary Jobs
Backup Copy
Copy Job
Secondary Jobs
Failover Plan
Restore
Import Backup
Best Practices Analyzer
Actions
Home
Type in an object name to sear
Jobs
Last 24 Hours
Success
Name
Type
Backup
Replication
CDP policy
Backup copy...
File copy...
Add view...
Virtual machine...
Windows computer...
Linux computer...
Mac computer...
Unix computer...
Application
File share...

6. On the Name page, enter a name for the backup job in the Name field.
7. Give a brief description in the Description field for the future.
8. Select the High priority checkbox if you want this job to allocate resources in the first place.
9. Click Next.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

Name

Type in a name and description for this backup job.

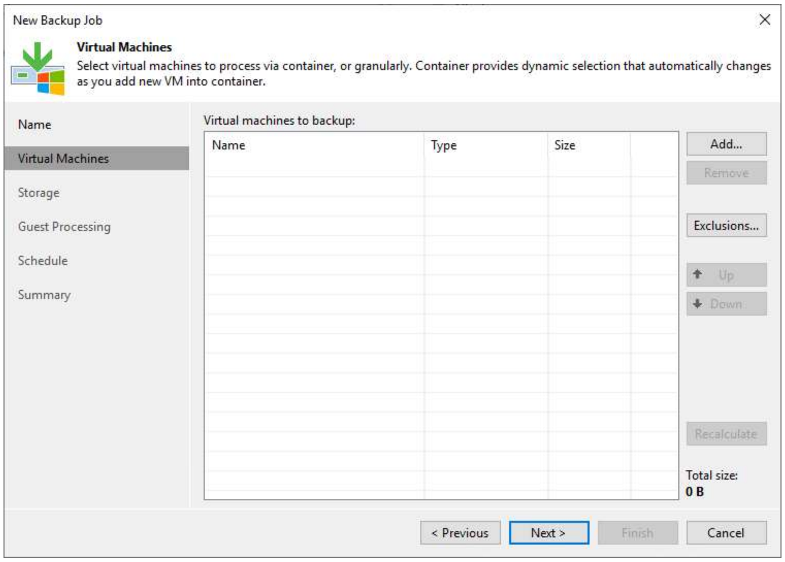
Name: DC01-2022 Backup

Description: Created by GOODDEALMART\csun at 2/10/2023 9:10 PM.

☑ High priority

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.

10. Click Add on the Virtual Machines page.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Virtual machines to backup:
Name
Type
Size
Add...
Remove
Exclusions...
Up
Down
Recalculate
< Previous
Next >
Finish
Cancel

Virtual Machines

Select virtual machines to process via container, or granularly. Container provides dynamic selection that automatically changes as you add new VM into container.

Total size: 0 B

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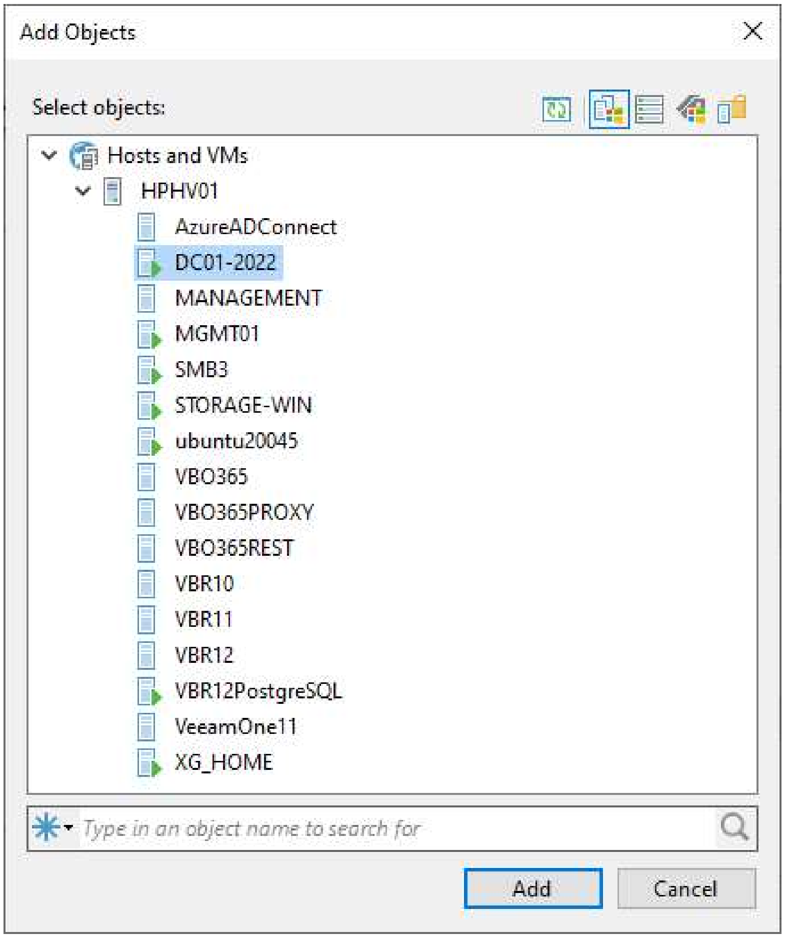
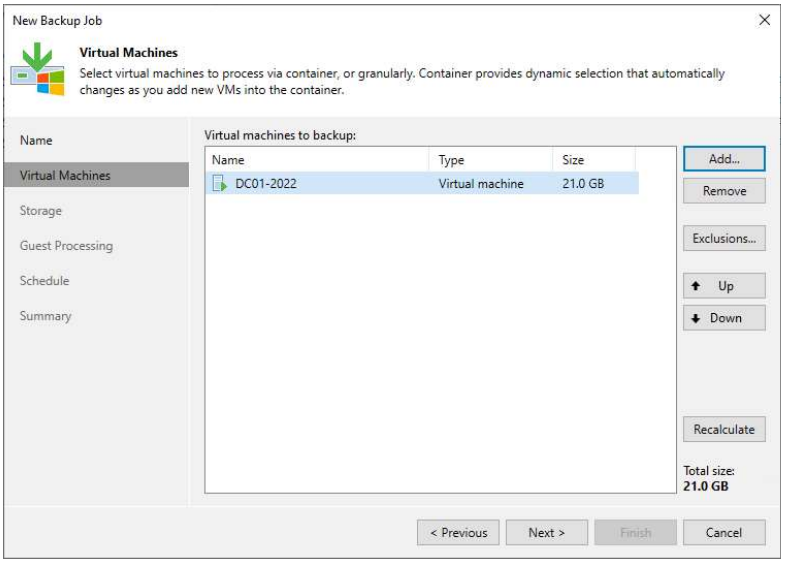
11. Select the VM from the Select objects list on the Add Objects page and click Add.
12. If you have multiple VMS that needs to back up in the same backup job, you can repeat the step to add them.


Add Objects
Select objects:
Hosts and VMs
HPHV01
AzureADConnect
DC01-2022
MANAGEMENT
MGMT01
SMB3
STORAGE-WIN
ubuntu20045
VBO365
VBO365PROXY
VBO365REST
VBR10
VBR11
VBR12
VBR12PostgreSQL
VeeamOne11
XG_HOME
Type in an object name to search for
Add
Cancel

13. Click Next on the Virtual Machines page.



New Backup Job

Virtual Machines

Select virtual machines to process via container, or granularly. Container provides dynamic selection that automatically changes as you add new VMs into the container.

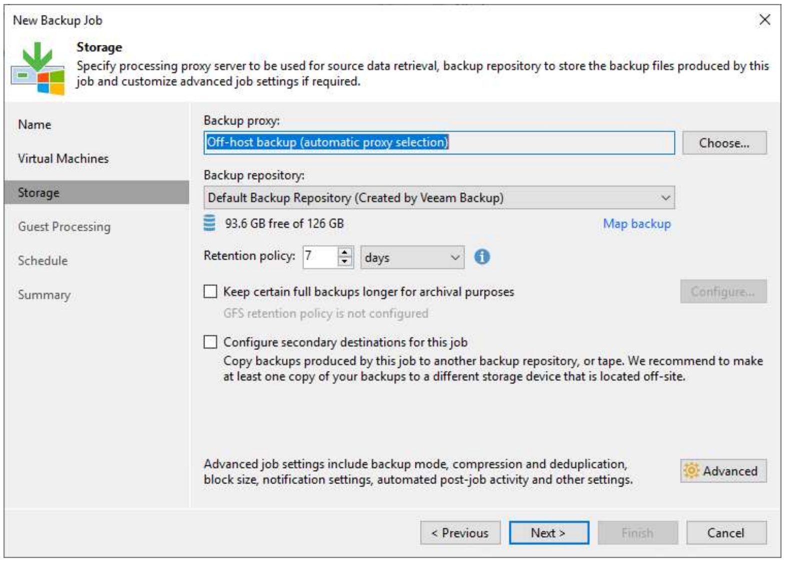
Virtual machines to backup:

Name	Type	Size
DC01-2022	Virtual machine	21.0 GB

Total size:
21.0 GB

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Add...
Remove
Exclusions...
Up
Down
Recalculate
< Previous
Next >
Finish
Cancel

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



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.

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

Backup repository: Default Backup Repository (Created by Veeam Backup)

93.6 GB free of 126 GB

Retention policy: 7 days

☐ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

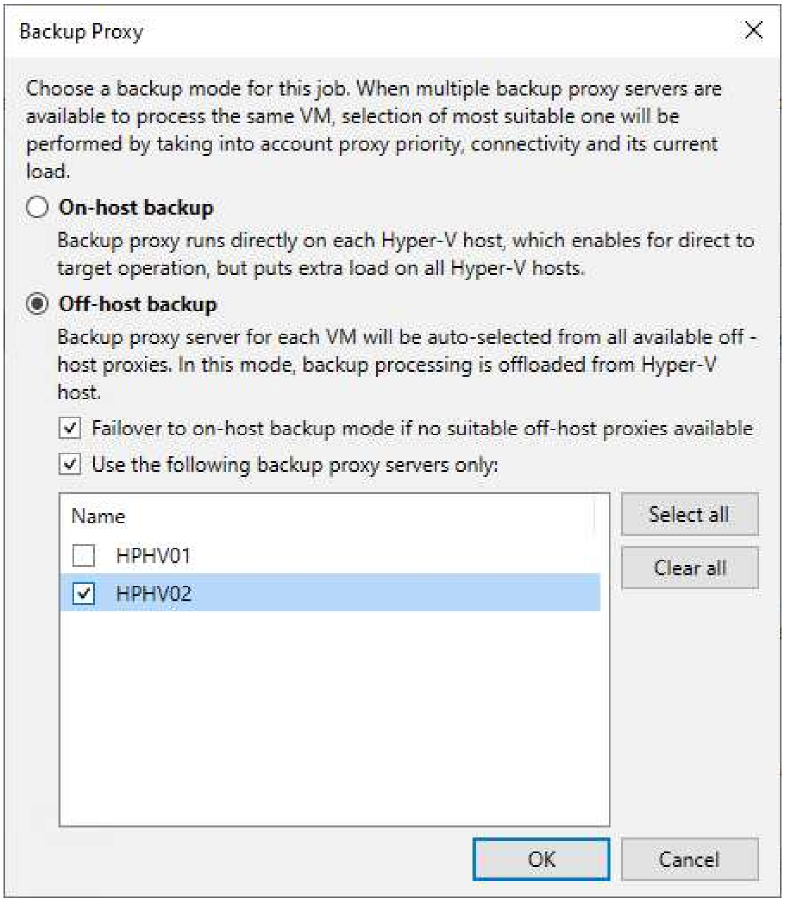
☐ Configure secondary destinations for this job

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.

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced
< Previous
Next >
Finish
Cancel

Technet24



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
☑ HPHV02

15. 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.

16. 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.

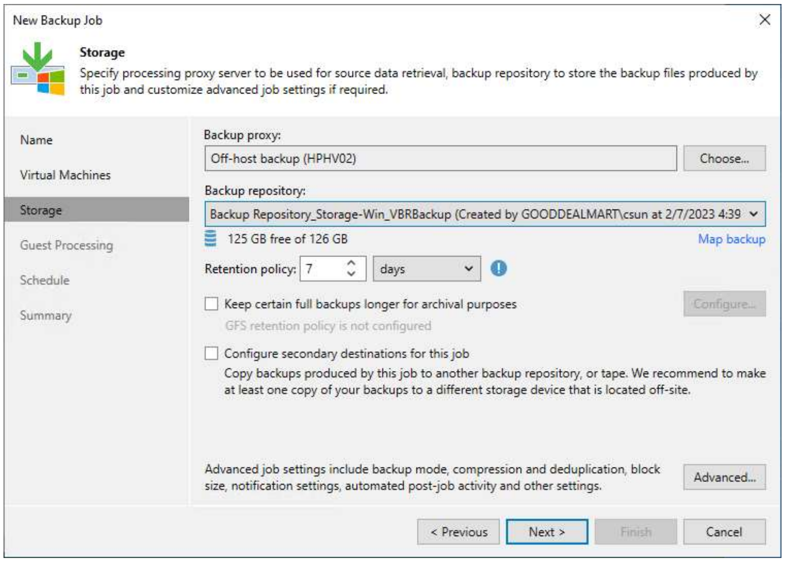
17. If the off-host backup mode is selected for the job, but no off-host backup proxies are available when the job begins, Veeam Backup & Replication will transition to on-host backup mode.

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

proxies are available in the checkbox. Still, the job will fail to start if off-host backup proxies are unavailable or configured properly.

19. Click OK.

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



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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository_Storage-Win_VBRBackup (Created by GOODDEALMART\csun at 2/7/2023 4:39

125 GB free of 126 GB

Retention policy: 7 days

☐ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

☐ Configure secondary destinations for this job

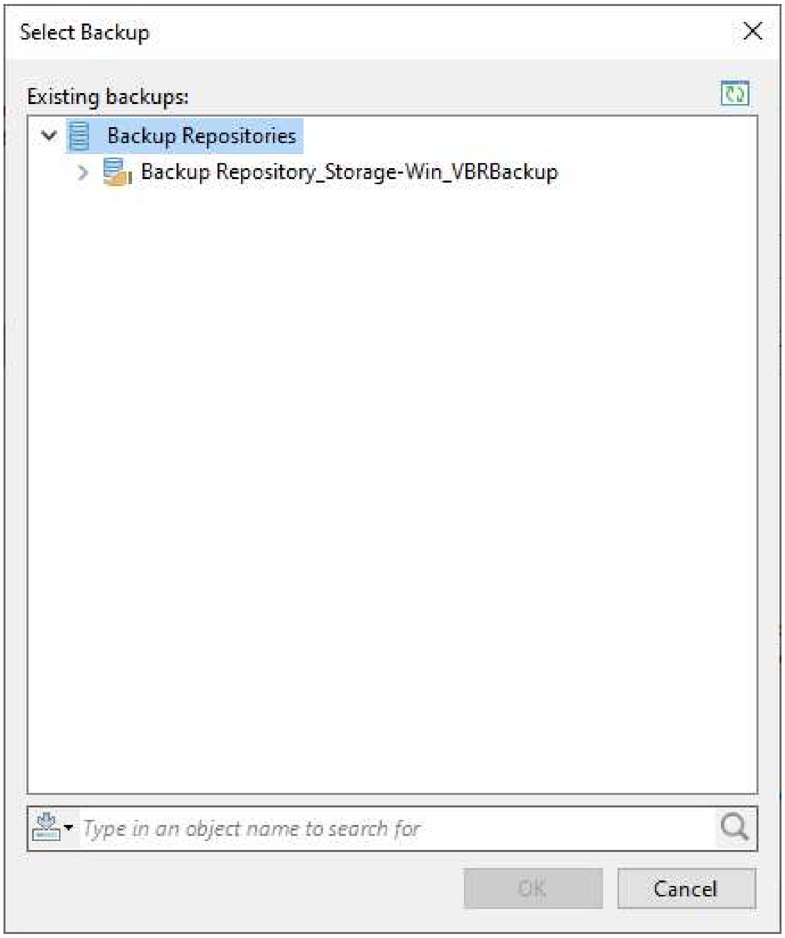
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

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

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

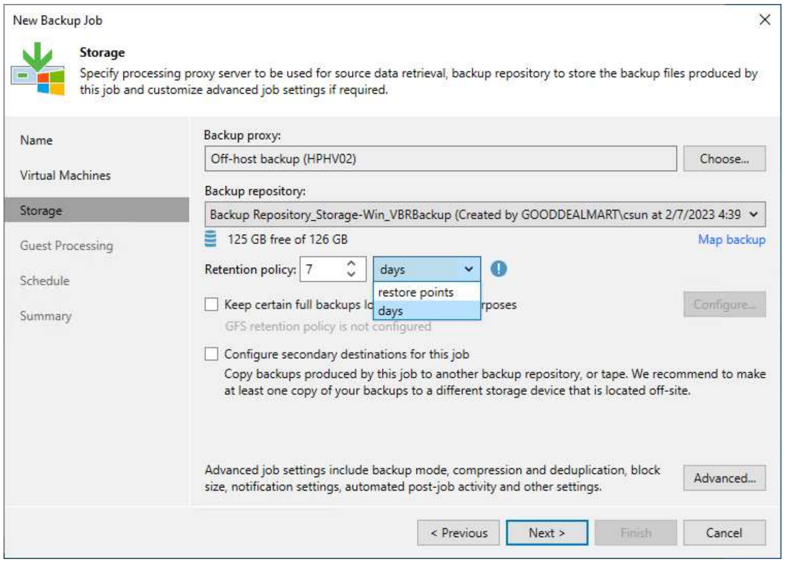
Technet24

21. 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.


Select Backup
Existing backups:
Backup Repositories
Backup Repository_Storage-Win_VBRBackup
Type in an object name to search for
OK
Cancel

22. Set the retention policy settings for restore points in the Retention Policy field.

23. Select days or restore points from the drop-down list.



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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository_Storage-Win_VBRBackup (Created by GOODDEALMART\csun at 2/7/2023 4:39

125 GB free of 126 GB

Retention policy: 7 days

☐ Keep certain full backups lo[nger for archival pu]rposes

GFS retention policy is not configured

☐ Configure secondary destinations for this job

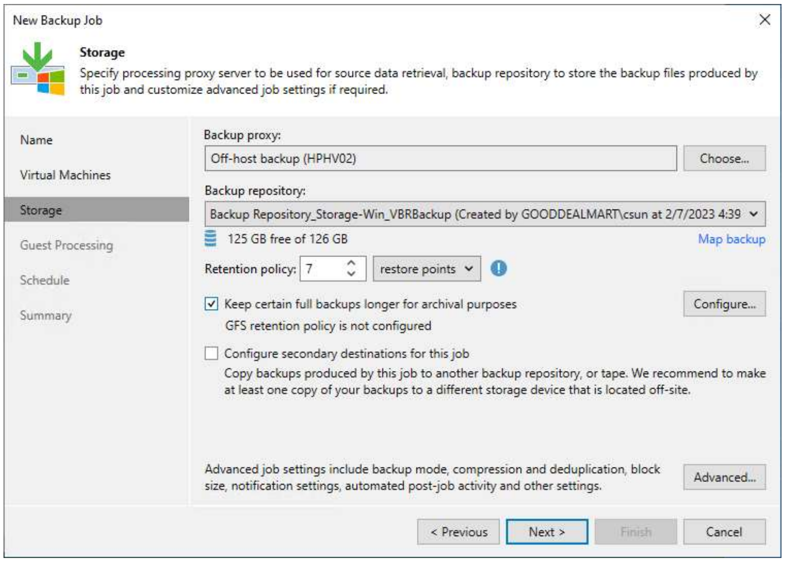
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

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

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
restore points
days
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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

25. Select the Keep certain full backups for longer for archival purposes. Then, if you need it, click Configure.



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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository_Storage-Win_VBRBackup (Created by GOODDEALMART\csun at 2/7/2023 4:39

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

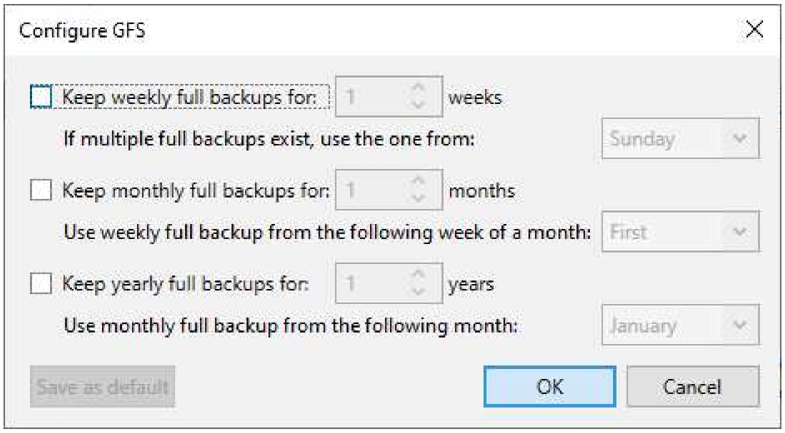
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

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

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

Technet24

26. 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.
27. Select the Keep monthly full backups for check box, and specify the months you want to prevent restore points from being modified and deleted.
28. Select the Keep yearly full backups for check box, and specify the years you want to prevent restore points from being modified and deleted.
29. Click OK.


Configure GFS

☐ Keep weekly full backups for: 1 weeks

If multiple full backups exist, use the one from: Sunday

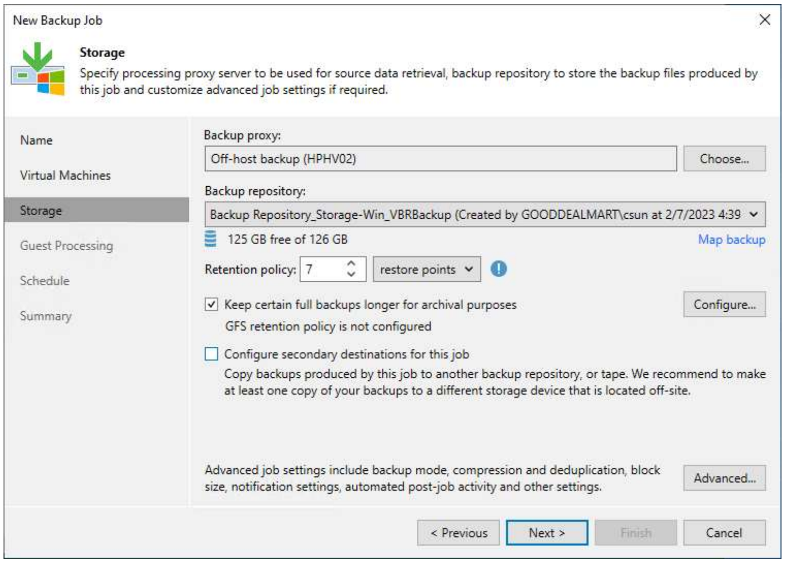
☐ Keep monthly full backups for: 1 months

Use weekly full backup from the following week of a month: First

☐ Keep yearly full backups for: 1 years

Use monthly full backup from the following month: January

30. On the Storage page, click Advanced.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository_Storage-Win_VBRBackup (Created by GOODDEALMART\csun at 2/7/2023 4:39

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

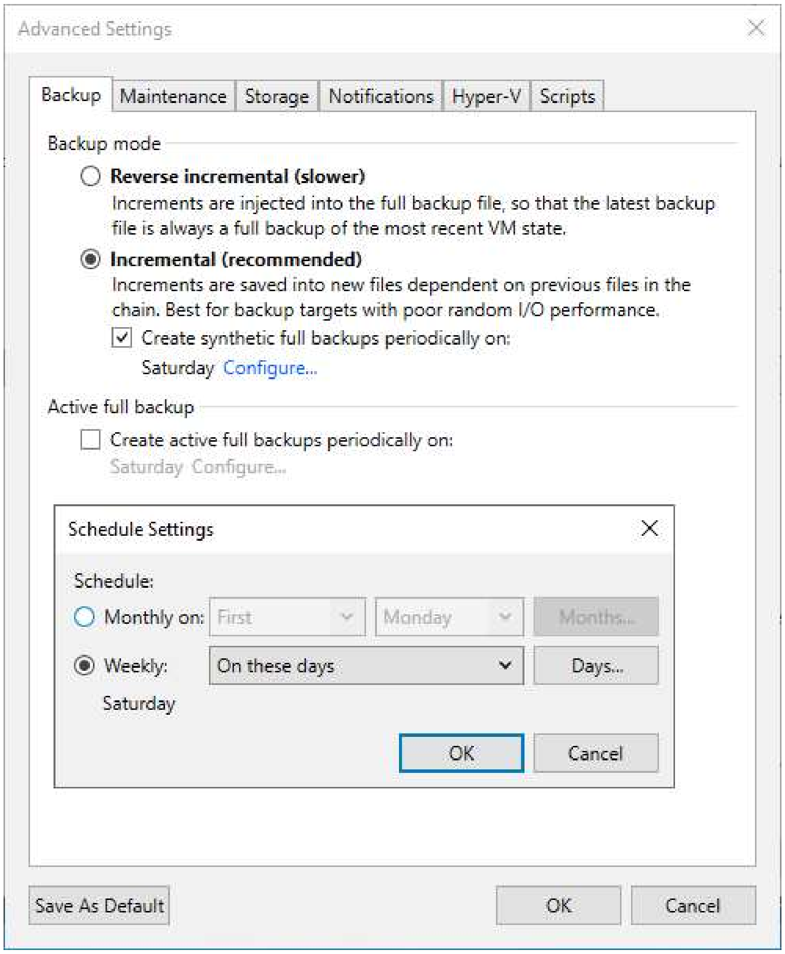
☐ Configure secondary destinations for this job

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.

Technet24

31. On the Backup page, select Incremental (recommended).
32. Select create synthetic full backups periodically or active full backups periodically checkbox.
33. Click Configure to schedule full backups periodically and click OK.



Advanced Settings

Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Backup mode

○ **Reverse incremental (slower)**
Increments are injected into the full backup file, so that the latest backup file is always a full backup of the most recent VM state.

● **Incremental (recommended)**
Increments are saved into new files dependent on previous files in the chain. Best for backup targets with poor random I/O performance.

☑ Create synthetic full backups periodically on:
Saturday Configure...

Active full backup

☐ Create active full backups periodically on:
Saturday Configure...

Schedule Settings

Schedule:

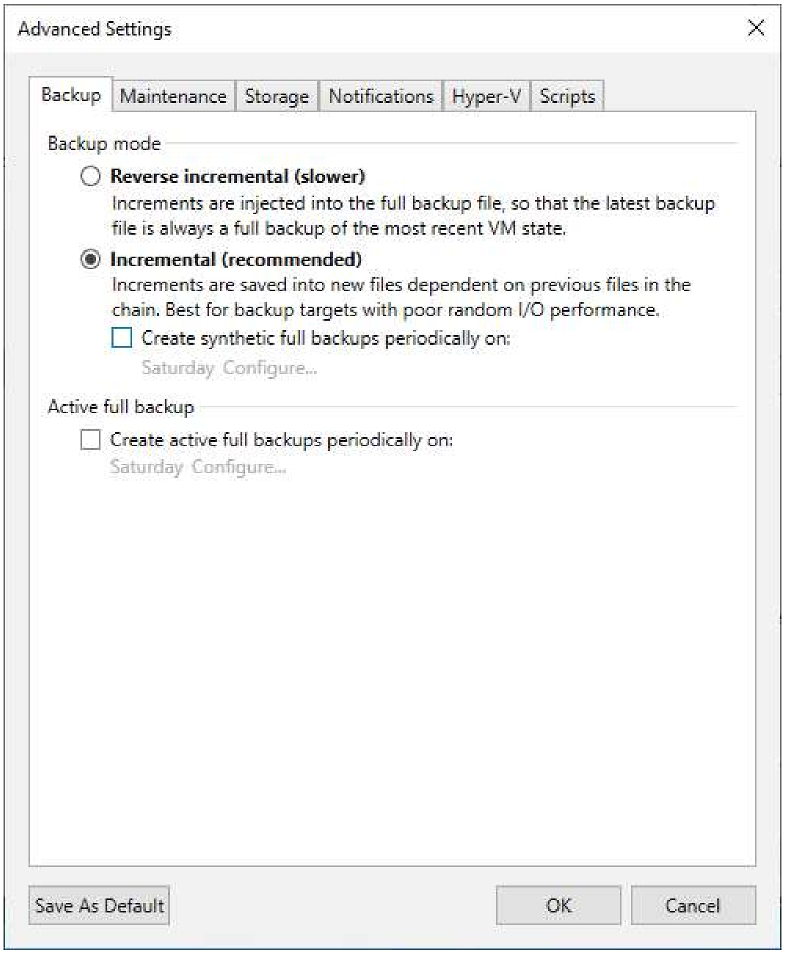
○ Monthly on: First Monday Months...

● Weekly: On these days Days...

Saturday

OK
Cancel
Save As Default
OK
Cancel

34. Select Incremental and disable synthetic full or active full backups to create a forever forward incremental backup chain if needed.



Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Backup mode

○ **Reverse incremental (slower)**
Increments are injected into the full backup file, so that the latest backup file is always a full backup of the most recent VM state.

● **Incremental (recommended)**
Increments are saved into new files dependent on previous files in the chain. Best for backup targets with poor random I/O performance.

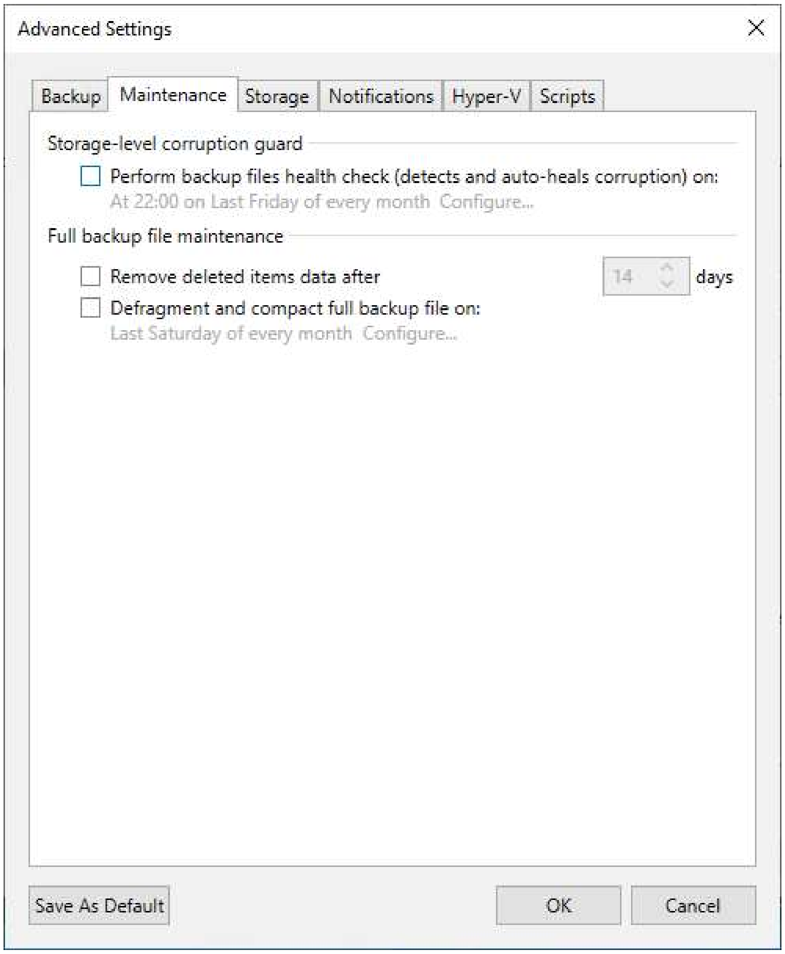
☐ Create synthetic full backups periodically on:
Saturday Configure...

Active full backup

☐ Create active full backups periodically on:
Saturday Configure...

Save As Default
OK
Cancel

35. On the Advanced Settings, select Maintenance.



Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Storage-level corruption guard

☐ Perform backup files health check (detects and auto-heals corruption) on:
At 22:00 on Last Friday of every month Configure...

Full backup file maintenance

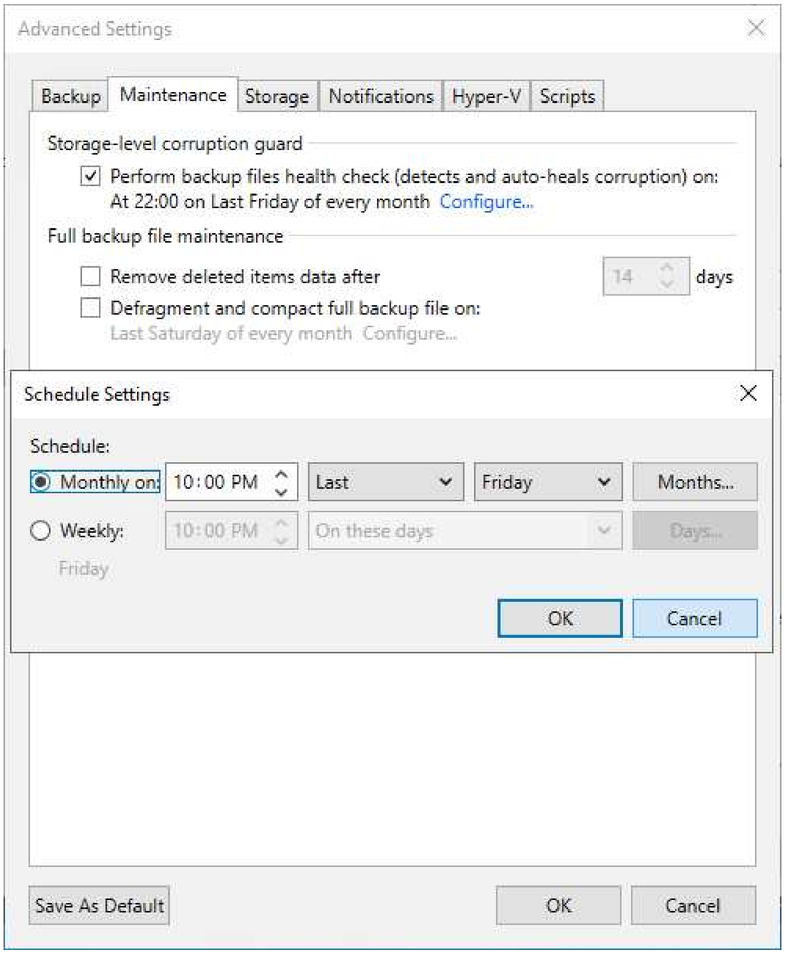
☐ Remove deleted items data after 14 days

☐ Defragment and compact full backup file on:
Last Saturday of every month Configure...

Save As Default
OK
Cancel

36. 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.

37. Click Configure to set a timetable for the health check.


Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Storage-level corruption guard

☑ Perform backup files health check (detects and auto-heals corruption) on:
At 22:00 on Last Friday of every month Configure...

Full backup file maintenance

☐ Remove deleted items data after 14 days
☐ Defragment and compact full backup file on:
Last Saturday of every month Configure...

Schedule Settings

Schedule:

● Monthly on: 10:00 PM Last Friday Months...
○ Weekly: 10:00 PM On these days Days...
Friday

OK
Cancel
Save As Default
OK
Cancel

Technet24

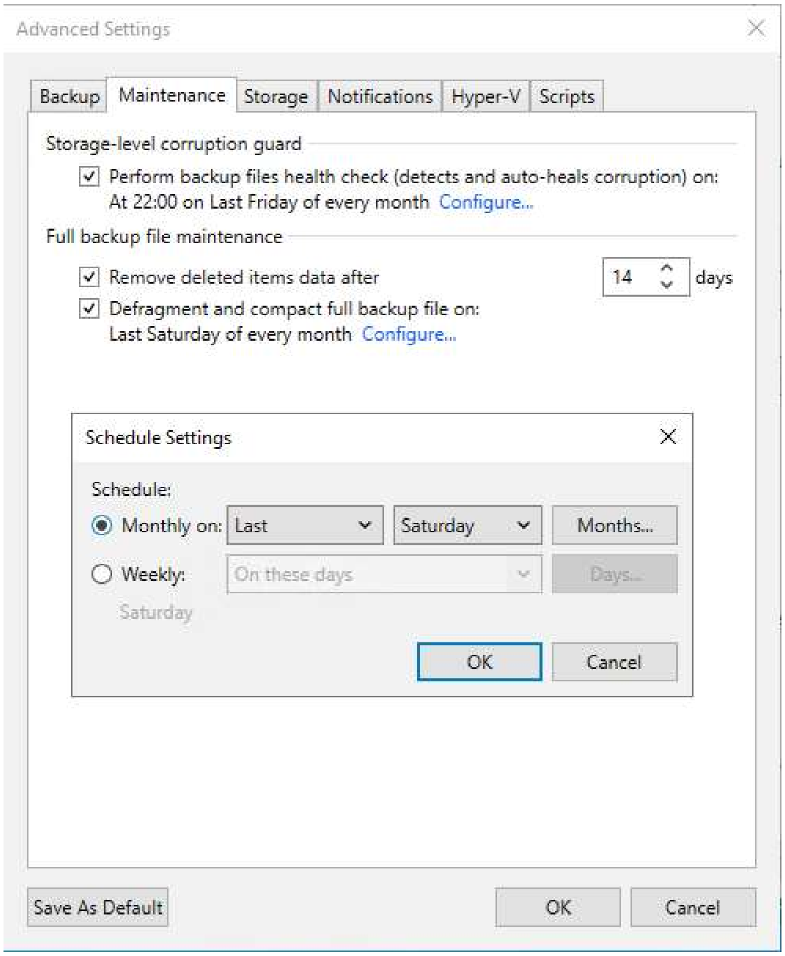
38. Select the Remove deleted items data after the checkbox and enter the few days you want backup data for deleted VMs to be kept.

39. Select the Defragment and compact full backup file checkbox and click Configure.

40. Set the schedule for the compact operation to compact a full backup periodically.

Note:

GFS retention is not compatible with defragment and compact functionality.



Advanced Settings

Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Storage-level corruption guard

☑ Perform backup files health check (detects and auto-heals corruption) on:
At 22:00 on Last Friday of every month Configure...

Full backup file maintenance

☑ Remove deleted items data after 14 days

☑ Defragment and compact full backup file on:
Last Saturday of every month Configure...

Schedule Settings

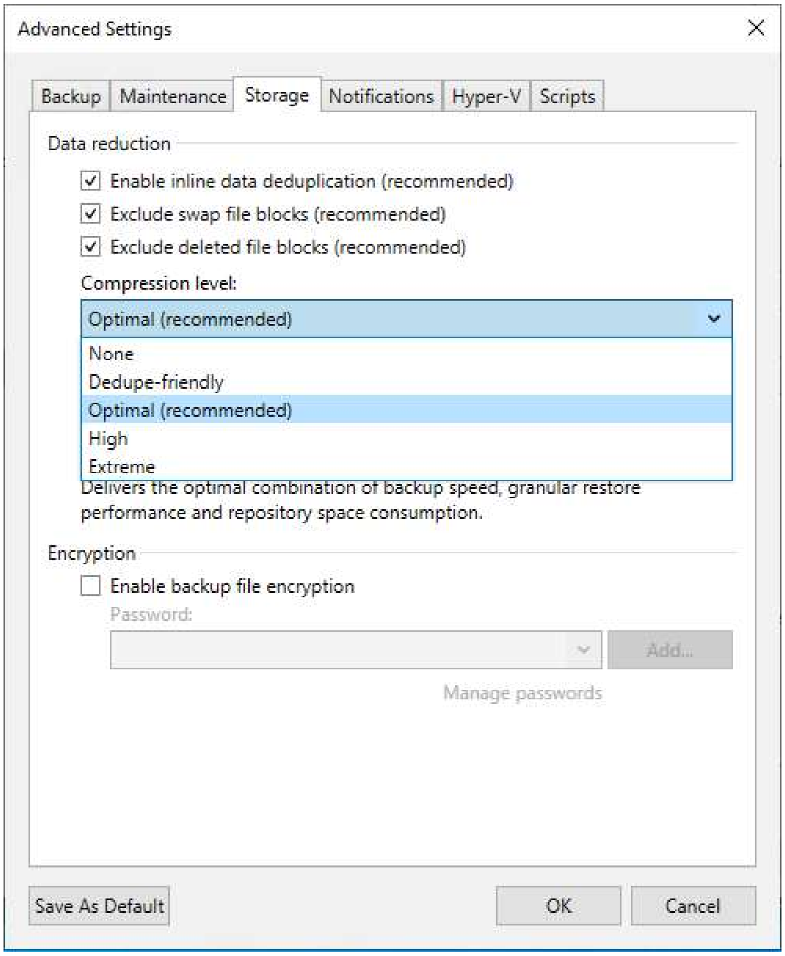
Schedule:

● Monthly on: Last Saturday

○ Weekly: On these days
Saturday

Months...
Days...
OK
Cancel
Save As Default
OK
Cancel

41. On Advanced Settings, select Storage.
42. Select the Enable inline data deduplication (recommended) checkbox.
43. Select the Exclude swap file blocks (recommended) checkbox.
44. Select the Exclude deleted file blocks (recommended) checkbox.
45. Select the compression level for the backup from the drop-down list.


Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Data reduction

☑ Enable inline data deduplication (recommended)
☑ Exclude swap file blocks (recommended)
☑ Exclude deleted file blocks (recommended)

Compression level: Optimal (recommended)

None
Dedupe-friendly
Optimal (recommended)
High
Extreme

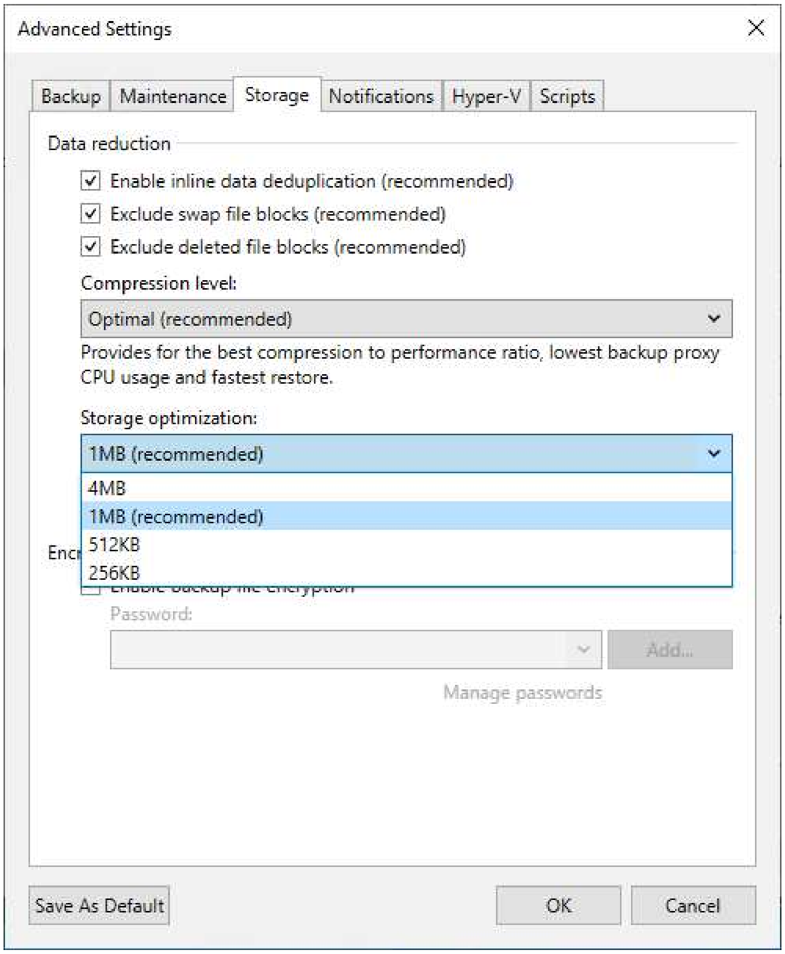
Delivers the optimal combination of backup speed, granular restore performance and repository space consumption.

Encryption

☐ Enable backup file encryption

Password:
Add...
Manage passwords
Save As Default
OK
Cancel

46. Select the Storage optimization for the backup from the drop-down list.



Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Save As Default
OK
Cancel
Add...
Manage passwords

Data reduction

☑ Enable inline data deduplication (recommended)

☑ Exclude swap file blocks (recommended)

☑ Exclude deleted file blocks (recommended)

Compression level: Optimal (recommended)

Provides for the best compression to performance ratio, lowest backup proxy CPU usage and fastest restore.

Storage optimization: 1MB (recommended)

- 4MB
- 1MB (recommended)
- 512KB
- 256KB

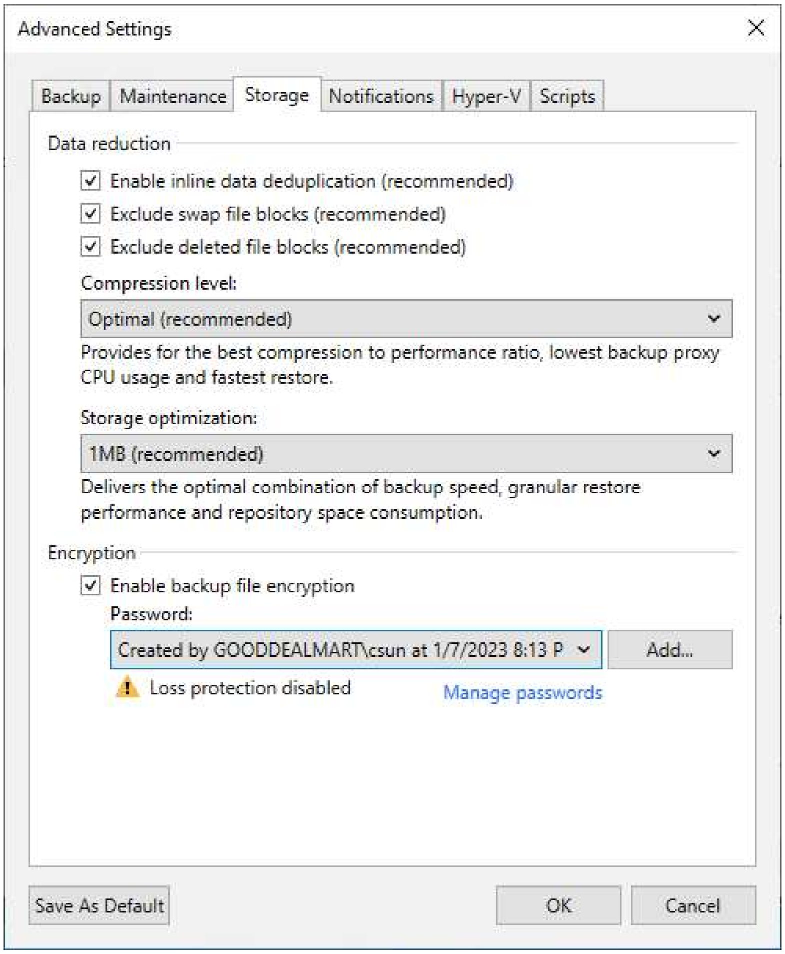
Enc

☐ Enable backup file encryption

Password:

47. Select the Enable backup file encryption checkbox to encrypt the content of backup files.

48. Select a password from the drop-down list. Then, if you still need to do, click Add or use the Manage passwords link to create a new password.


Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Add...
Manage passwords
Save As Default
OK
Cancel

Data reduction

☑ Enable inline data deduplication (recommended)
☑ Exclude swap file blocks (recommended)
☑ Exclude deleted file blocks (recommended)

Compression level: Optimal (recommended)

Provides for the best compression to performance ratio, lowest backup proxy CPU usage and fastest restore.

Storage optimization: 1MB (recommended)

Delivers the optimal combination of backup speed, granular restore performance and repository space consumption.

Encryption

☑ Enable backup file encryption

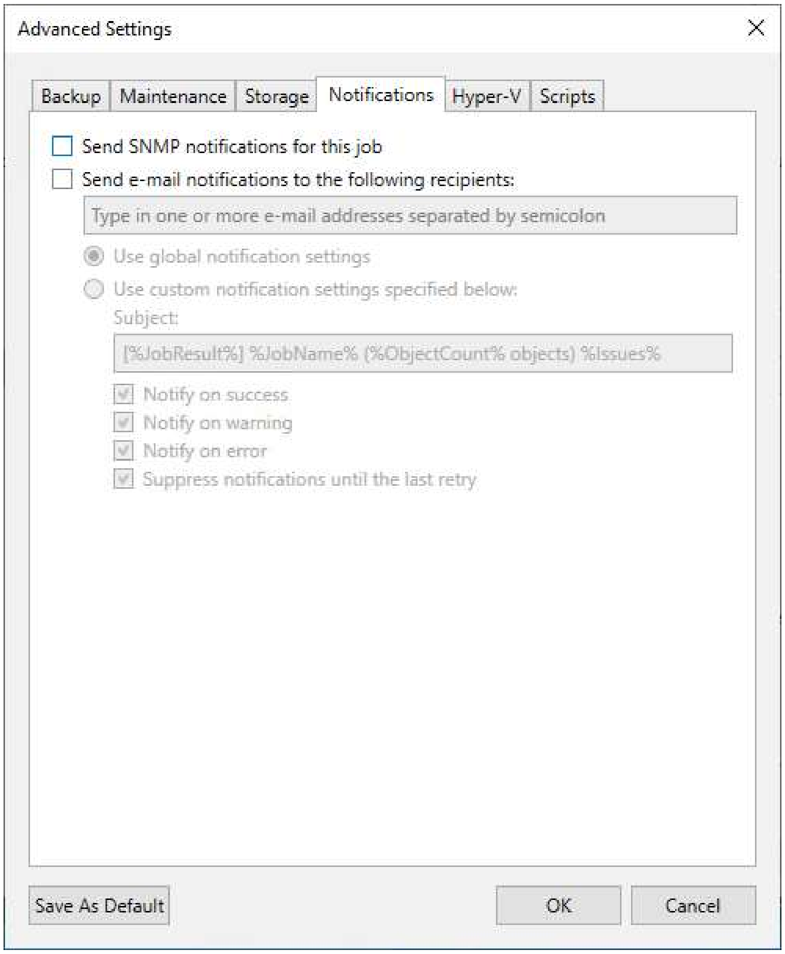
Password: Created by GOODDEALMART\csun at 1/7/2023 8:13 P

⚠ Loss protection disabled

Technet24

49. On the Advanced Settings, select Notifications.

50. Keep the default settings.


Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

☐ Send SNMP notifications for this job

☐ Send e-mail notifications to the following recipients:

Type in one or more e-mail addresses separated by semicolon

● Use global notification settings

○ Use custom notification settings specified below:

Subject:

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

☑ Notify on success

☑ Notify on warning

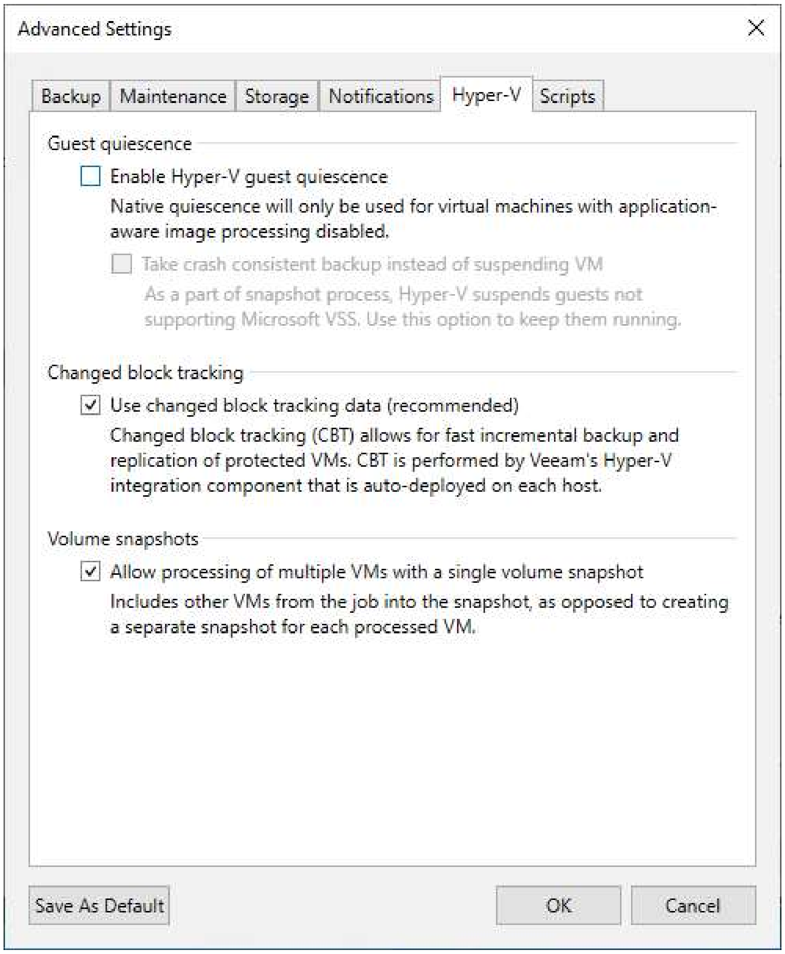
☑ Notify on error

☑ Suppress notifications until the last retry

Save As Default
OK
Cancel

51. On the Advanced Settings, select Hyper-V.

52. Keep the default settings.



Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Save As Default
OK
Cancel

Guest quiescence

☐ Enable Hyper-V guest quiescence

Native quiescence will only be used for virtual machines with application-aware image processing disabled.

☐ Take crash consistent backup instead of suspending VM

As a part of snapshot process, Hyper-V suspends guests not supporting Microsoft VSS. Use this option to keep them running.

Changed block tracking

☑ Use changed block tracking data (recommended)

Changed block tracking (CBT) allows for fast incremental backup and replication of protected VMs. CBT is performed by Veeam's Hyper-V integration component that is auto-deployed on each host.

Volume snapshots

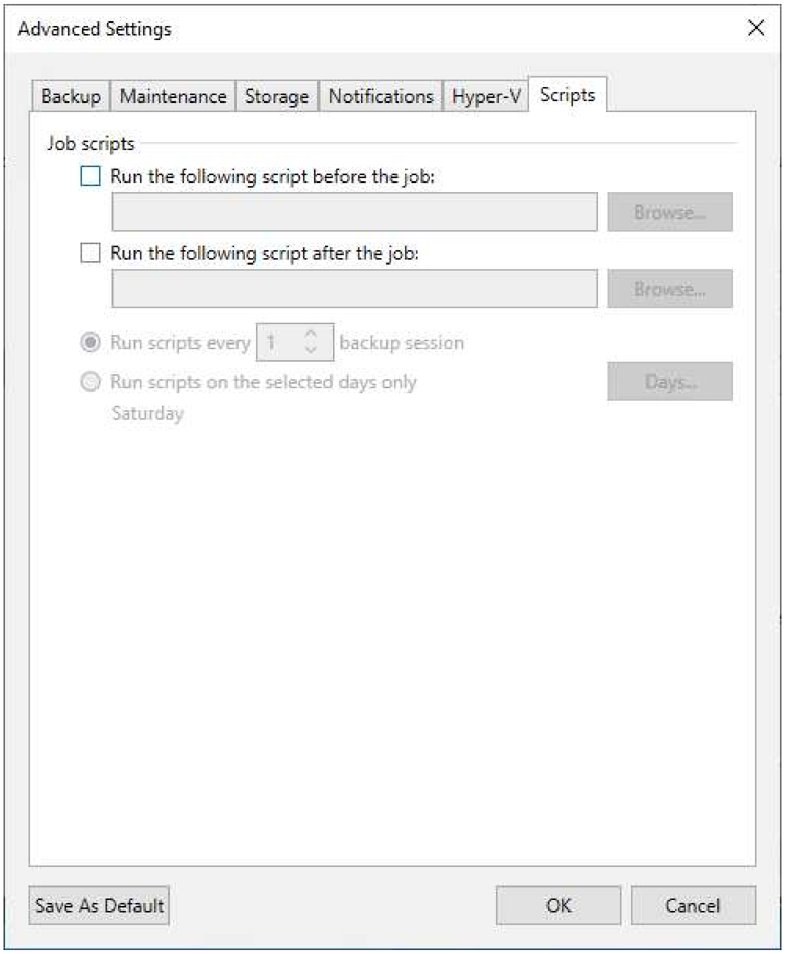
☑ Allow processing of multiple VMs with a single volume snapshot

Includes other VMs from the job into the snapshot, as opposed to creating a separate snapshot for each processed VM.

Technet24

53. On the Advanced Settings page, click Scripts and keep the default settings.

54. Click OK.



Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Browse...
Browse...
Days...
Save As Default
OK
Cancel

Job scripts

☐ Run the following script before the job:

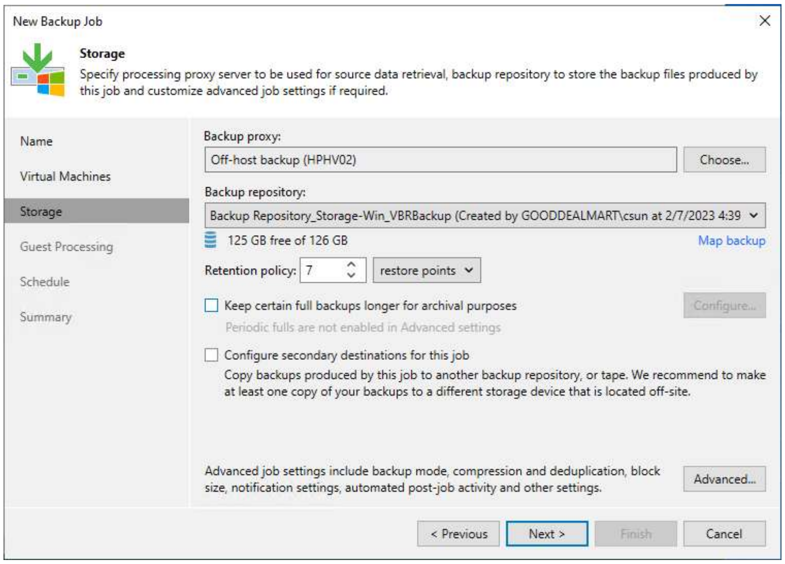
☐ Run the following script after the job:

● Run scripts every 1 backup session

○ Run scripts on the selected days only

Saturday

55. 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 (HPHV02)

Backup repository: Backup Repository_Storage-Win_VBRBackup (Created by GOODDEALMART\csun at 2/7/2023 4:39

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 secondary destinations for this job

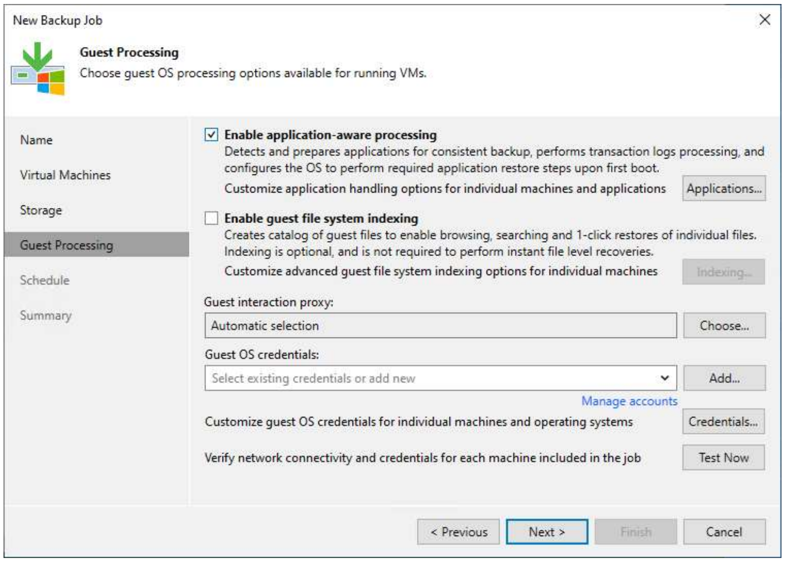
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

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

Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

56. 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.

57. Select the Enable application-aware processing checkbox on the Guest Processing page and click Applications.



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

☐ **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

Guest interaction proxy: Automatic selection

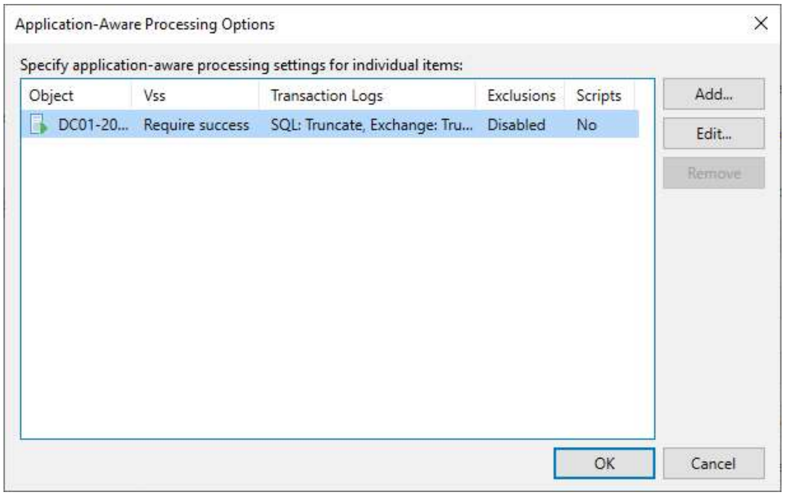
Guest OS credentials: Select existing credentials or add new

Customize guest OS credentials for individual machines and operating systems

Verify network connectivity and credentials for each machine included in the job

Applications...
Indexing...
Choose...
Add...
Manage accounts
Credentials...
Test Now
< Previous
Next >
Finish
Cancel

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

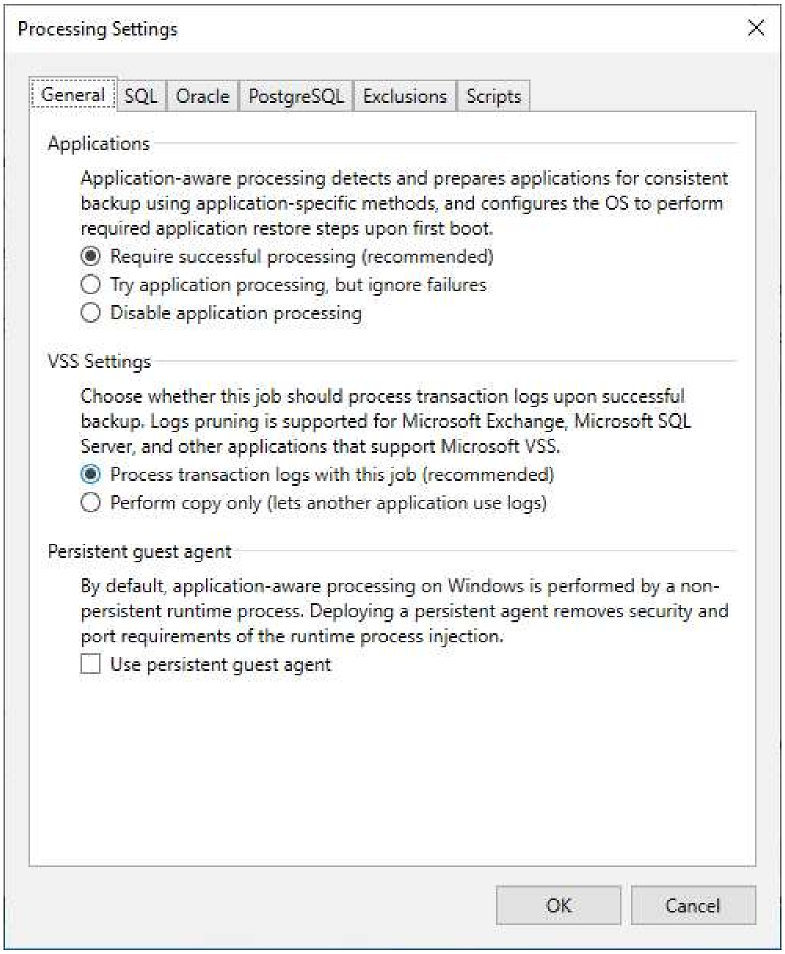

Application-Aware Processing Options
Add...
Edit...
Remove
OK
Cancel

Specify application-aware processing settings for individual items:

Object	Vss	Transaction Logs	Exclusions	Scripts
DC01-20...	Require success	SQL: Truncate, Exchange: Tru...	Disabled	No

59. On the Processing Settings, click General.

60. Keep the default settings.



Processing Settings

Applications

Application-aware processing detects and prepares applications for consistent backup using application-specific methods, and configures the OS to perform required application restore steps upon first boot.

● Require successful processing (recommended)

○ Try application processing, but ignore failures

○ Disable application processing

VSS Settings

Choose whether this job should process transaction logs upon successful backup. Logs pruning is supported for Microsoft Exchange, Microsoft SQL Server, and other applications that support Microsoft VSS.

● Process transaction logs with this job (recommended)

○ Perform copy only (lets another application use logs)

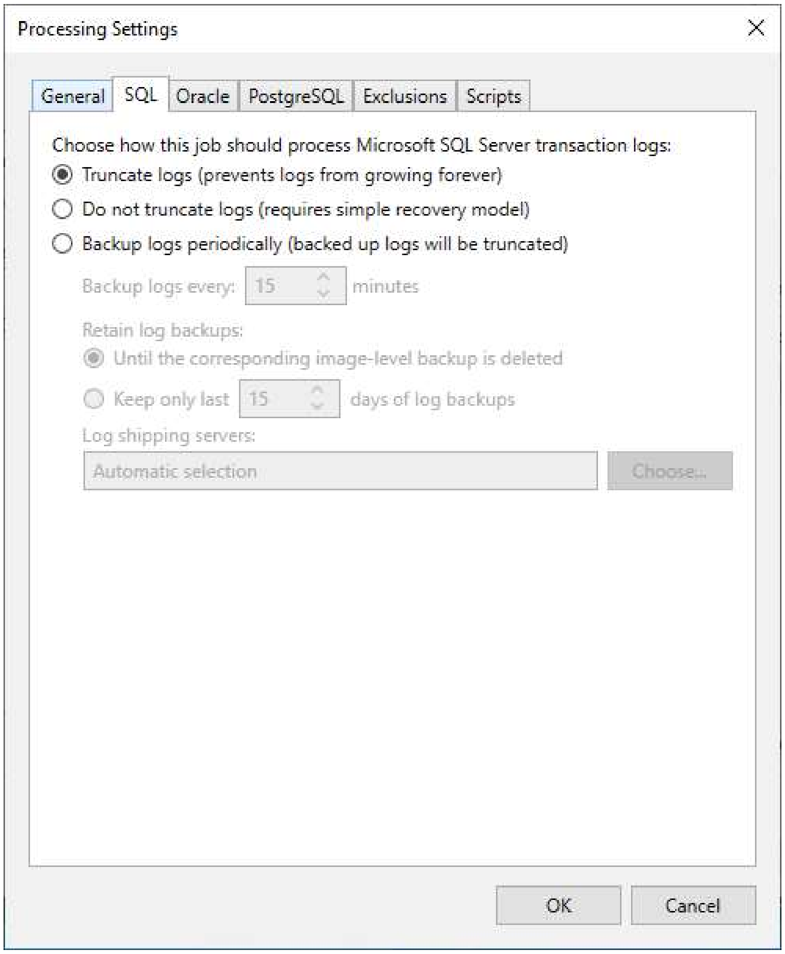
Persistent guest agent

By default, application-aware processing on Windows is performed by a non-persistent runtime process. Deploying a persistent agent removes security and port requirements of the runtime process injection.

☐ Use persistent guest agent

Technet24

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



Processing Settings

Choose how this job should process Microsoft SQL Server transaction logs:

● Truncate logs (prevents logs from growing forever)

○ Do not truncate logs (requires simple recovery model)

○ Backup logs periodically (backed up logs will be truncated)

Backup logs every: 15 minutes

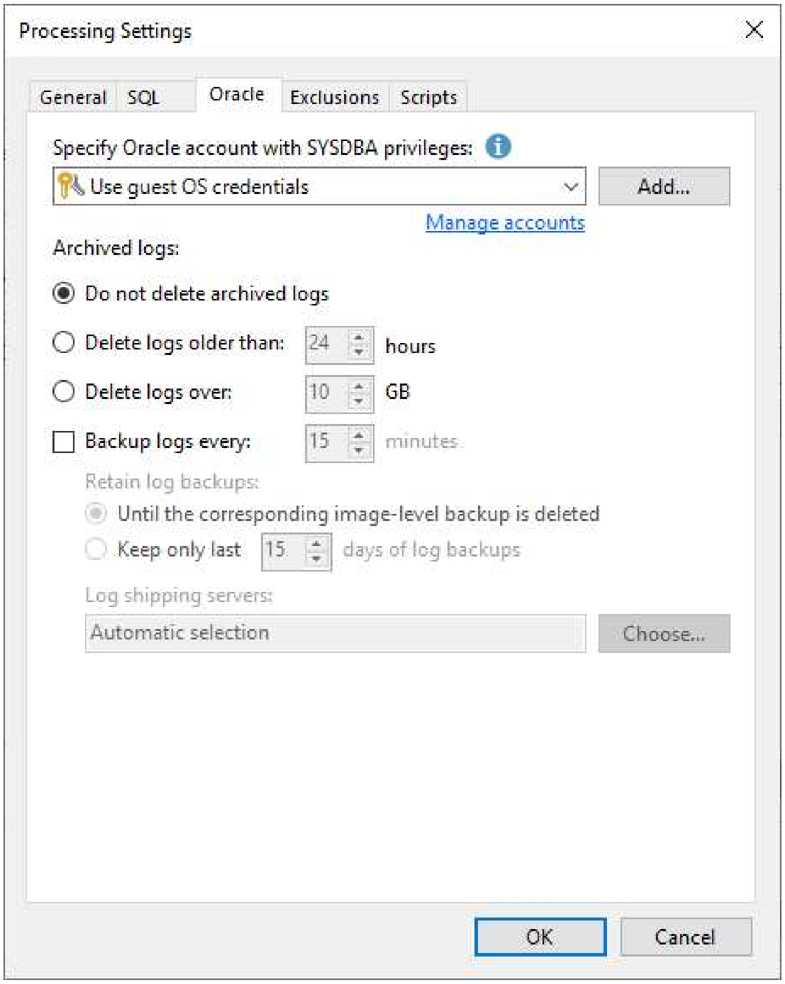
Retain log backups:

● Until the corresponding image-level backup is deleted

○ Keep only last 15 days of log backups

Log shipping servers: Automatic selection

63. On the Processing Settings page, click Oracle if the VM is an Oracle Server.
64. Select a user account from the drop-down list.
65. Select Do not delete archived logs checkbox.



Processing Settings

General
SQL
Oracle
Exclusions
Scripts

Specify Oracle account with SYSDBA privileges: Use guest OS credentials

Add...
Manage accounts

Archived logs:

● Do not delete archived logs

○ Delete logs older than: 24 hours

○ Delete logs over: 10 GB

☐ Backup logs every: 15 minutes

Retain log backups:

● Until the corresponding image-level backup is deleted

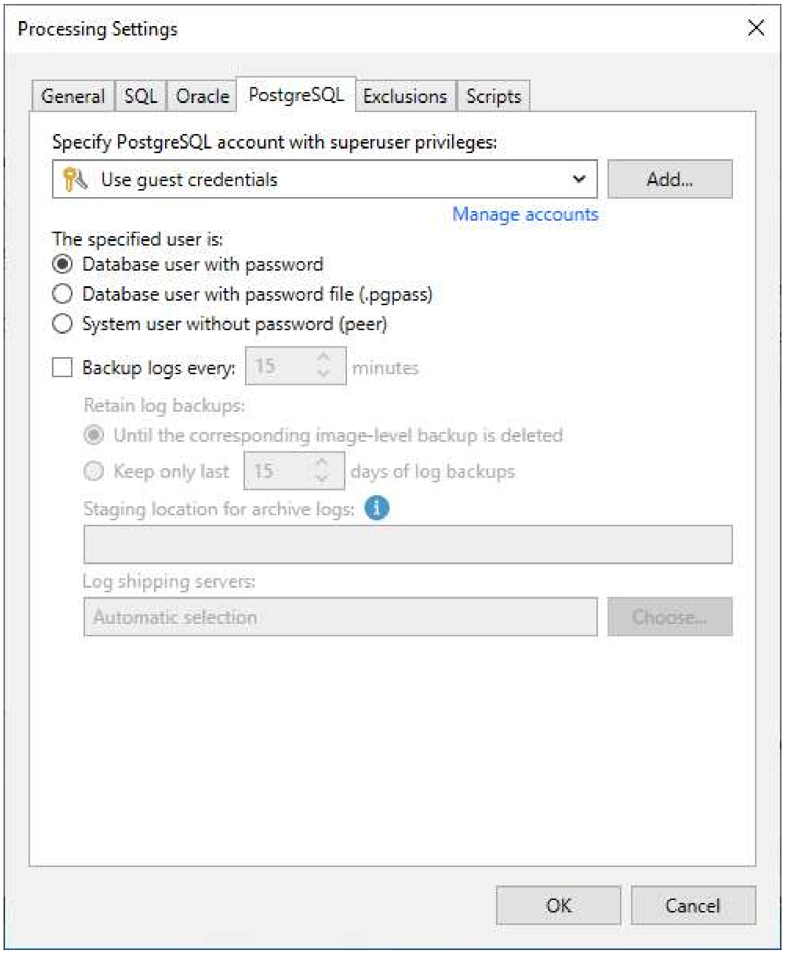
○ Keep only last 15 days of log backups

Log shipping servers: Automatic selection

Choose...
OK
Cancel

Technet24

66. On the Processing Settings page, click PostgreSQL if the VM is a PostgreSQL Server VM.
67. Select a user account from the drop-down list.
68. Select Database user with password checkbox.



Processing Settings

General
SQL
Oracle
PostgreSQL
Exclusions
Scripts

Specify PostgreSQL account with superuser privileges: Use guest credentials

Add...
Manage accounts

The specified user is:
● Database user with password
○ Database user with password file (.pgpass)
○ System user without password (peer)

☐ Backup logs every: 15 minutes

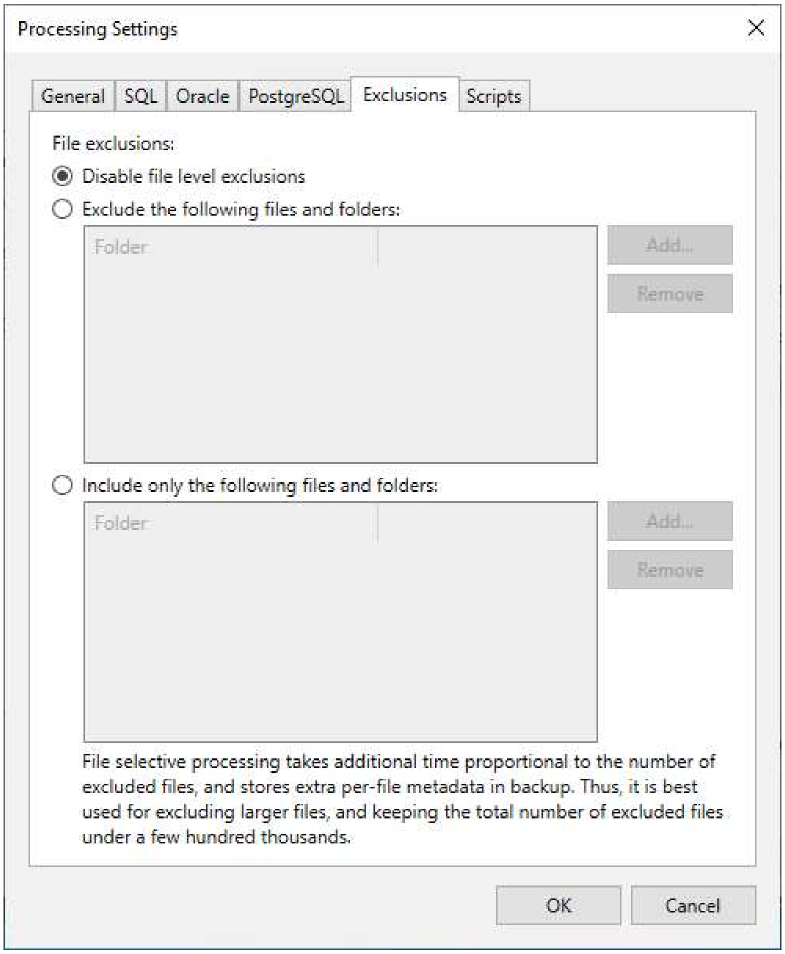
Retain log backups:
● Until the corresponding image-level backup is deleted
○ Keep only last 15 days of log backups

Staging location for archive logs:

Log shipping servers: Automatic selection

Choose...
OK
Cancel

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



Processing Settings

General
SQL
Oracle
PostgreSQL
Exclusions
Scripts

File exclusions:

● Disable file level exclusions

○ Exclude the following files and folders:

Folder
Add...
Remove

○ Include only the following files and folders:

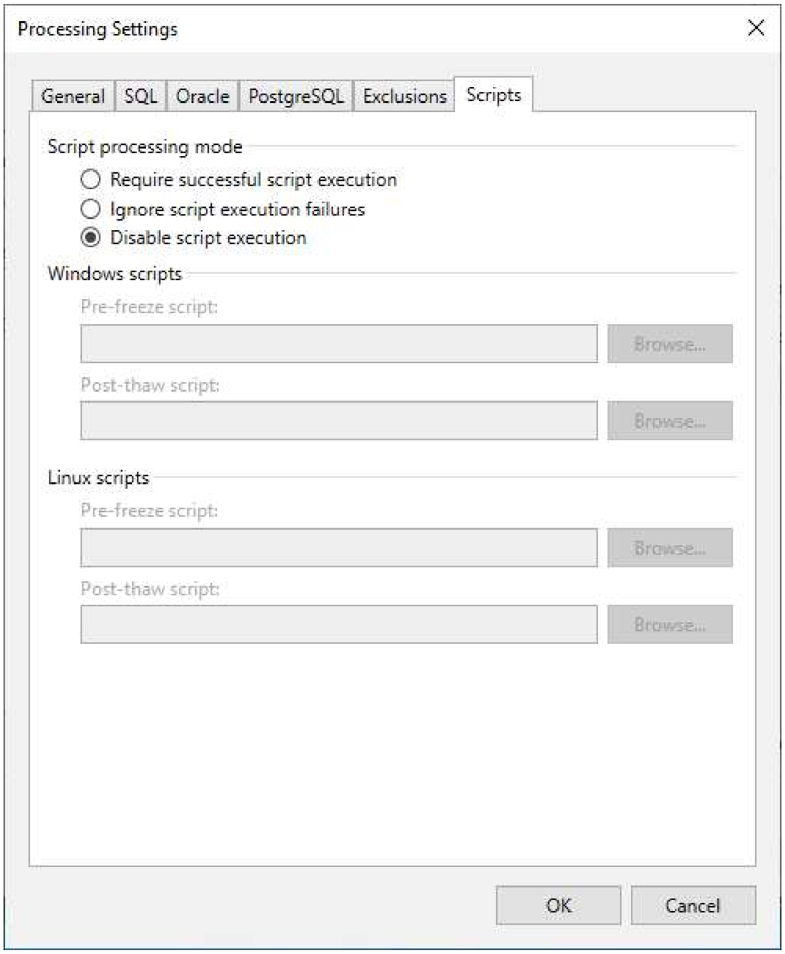
Folder
Add...
Remove

File selective processing takes additional time proportional to the number of excluded files, and stores extra per-file metadata in backup. Thus, it is best used for excluding larger files, and keeping the total number of excluded files under a few hundred thousands.

Technet24

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

71. Click OK.


Processing Settings
General
SQL
Oracle
PostgreSQL
Exclusions
Scripts
Browse...
Browse...
Browse...
Browse...
OK
Cancel

Script processing mode

○ Require successful script execution
○ Ignore script execution failures
● Disable script execution

Windows scripts

Pre-freeze script:

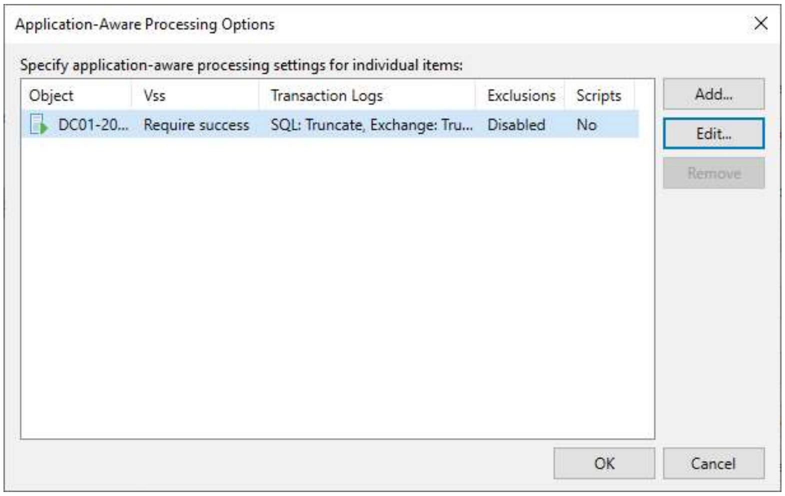
Post-thaw script:

Linux scripts

Pre-freeze script:

Post-thaw script:

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



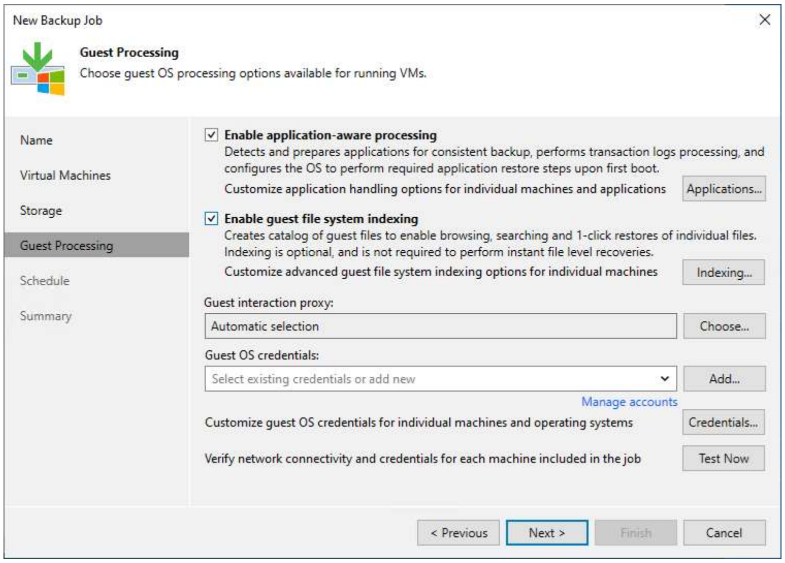
Application-Aware Processing Options

Specify application-aware processing settings for individual items:

Object	Vss	Transaction Logs	Exclusions	Scripts
DC01-20...	Require success	SQL: Truncate, Exchange: Tru...	Disabled	No

Add...
Edit...
Remove
OK
Cancel

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



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

☑ **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

Guest interaction proxy: Automatic selection

Guest OS credentials: Select existing credentials or add new

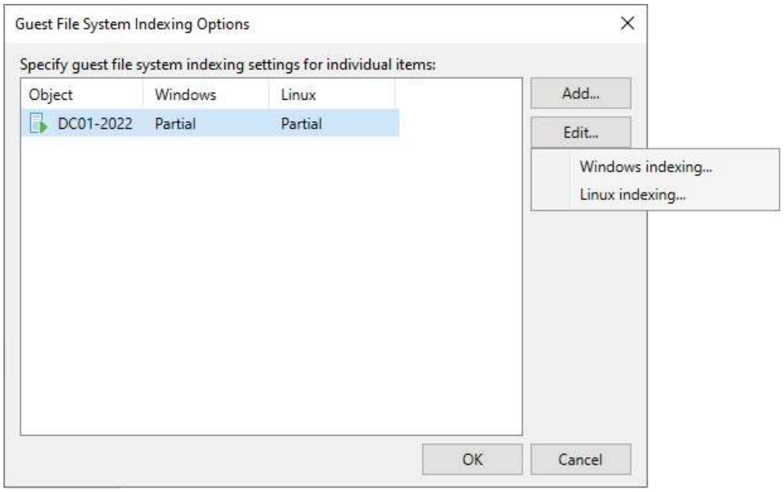
Customize guest OS credentials for individual machines and operating systems

Verify network connectivity and credentials for each machine included in the job

Applications...
Indexing...
Choose...
Add...
Manage accounts
Credentials...
Test Now
< Previous
Next >
Finish
Cancel

Technet24

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



Guest File System Indexing Options

Specify guest file system indexing settings for individual items:

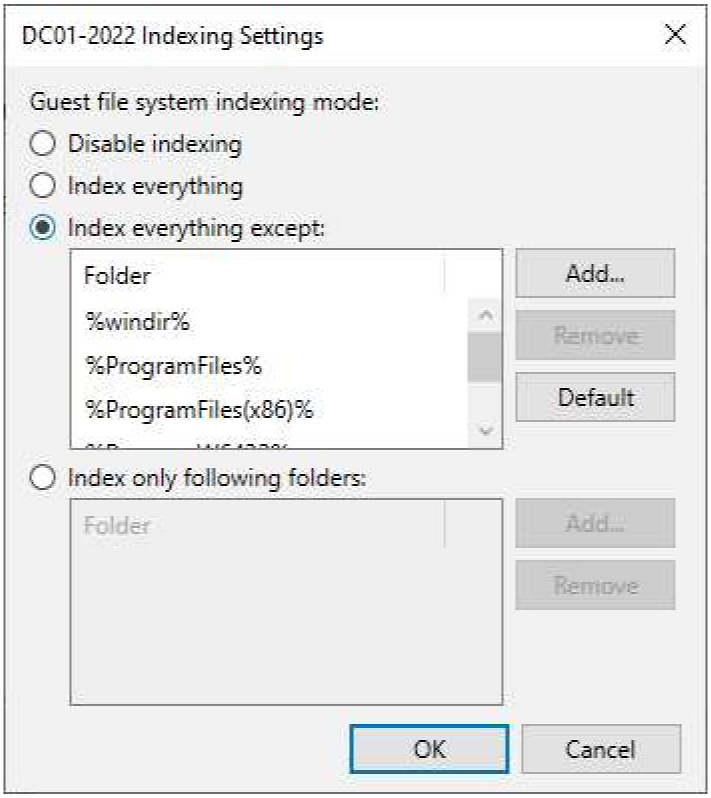
Object	Windows	Linux
DC01-2022	Partial	Partial

Add...
Edit...
Windows indexing...
Linux indexing...
OK
Cancel

---

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

76. Click OK.



DC01-2022 Indexing Settings

Guest file system indexing mode:

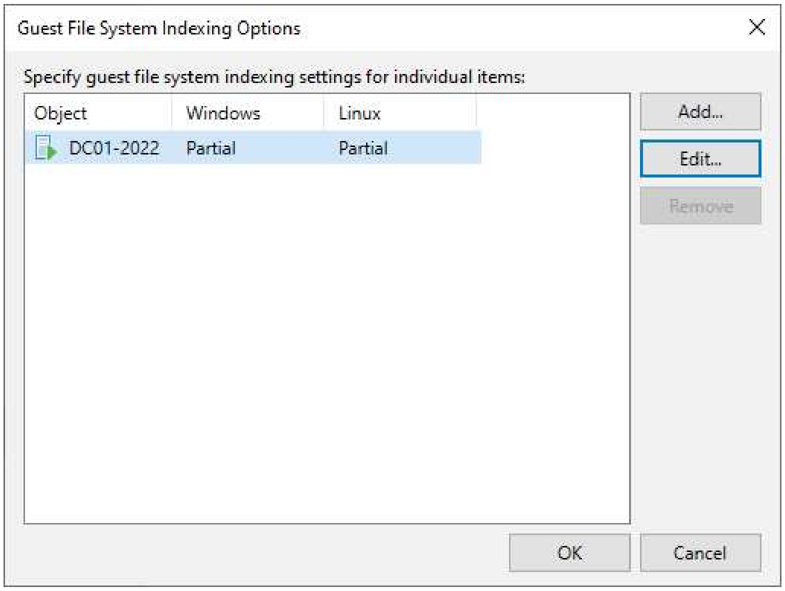
○ Disable indexing
○ Index everything
● Index everything except:

Folder
%windir%
%ProgramFiles%
%ProgramFiles(x86)%

○ Index only following folders:

Folder
Add...
Remove
Default
Add...
Remove
OK
Cancel

77. Click OK on the Guest file system indexing mode page.



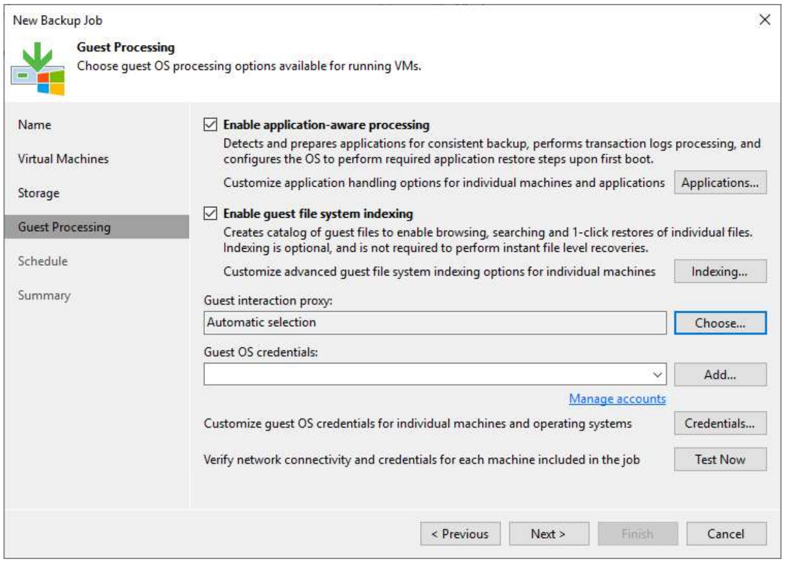
Guest File System Indexing Options

Specify guest file system indexing settings for individual items:

Object	Windows	Linux
DC01-2022	Partial	Partial

Add...
Edit...
Remove
OK
Cancel

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



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

☑ **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

Guest interaction proxy: Automatic selection

Guest OS credentials:

Customize guest OS credentials for individual machines and operating systems

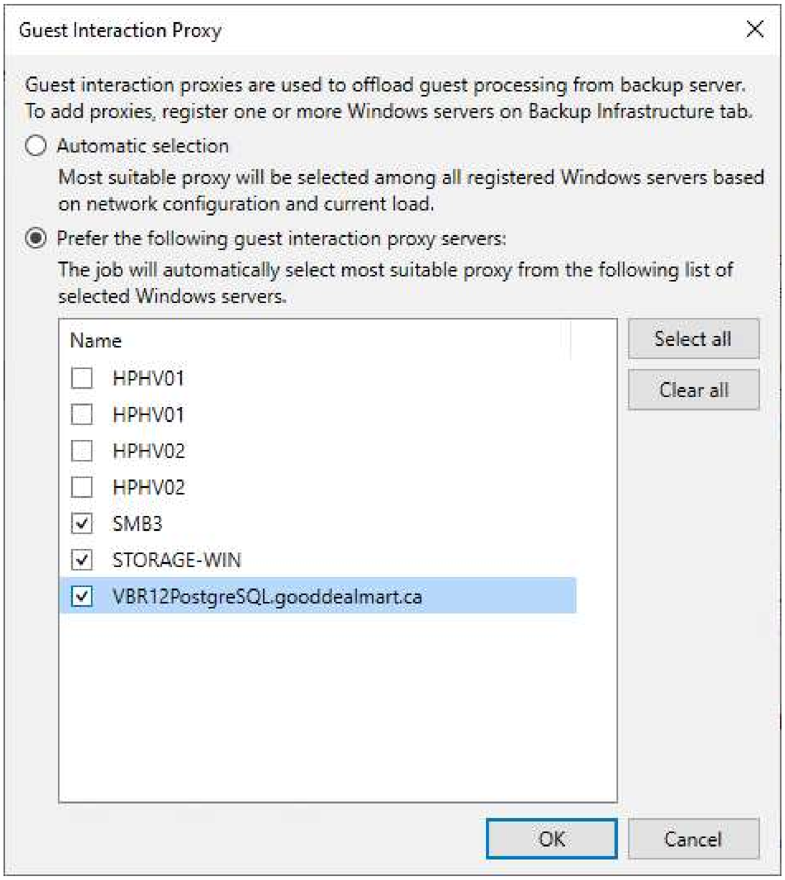
Verify network connectivity and credentials for each machine included in the job

Applications...
Indexing...
Choose...
Add...
Manage accounts
Credentials...
Test Now
< Previous
Next >
Finish
Cancel

Technet24

79. On the Guest Interaction Proxy page, select the domain member servers as the Guest Interaction proxy when you use gMSA as the guest OS credential.

80. Click OK.



Guest Interaction Proxy

Guest interaction proxies are used to offload guest processing from backup server. To add proxies, register one or more Windows servers on Backup Infrastructure tab.

○ Automatic selection

Most suitable proxy will be selected among all registered Windows servers based on network configuration and current load.

● Prefer the following guest interaction proxy servers:

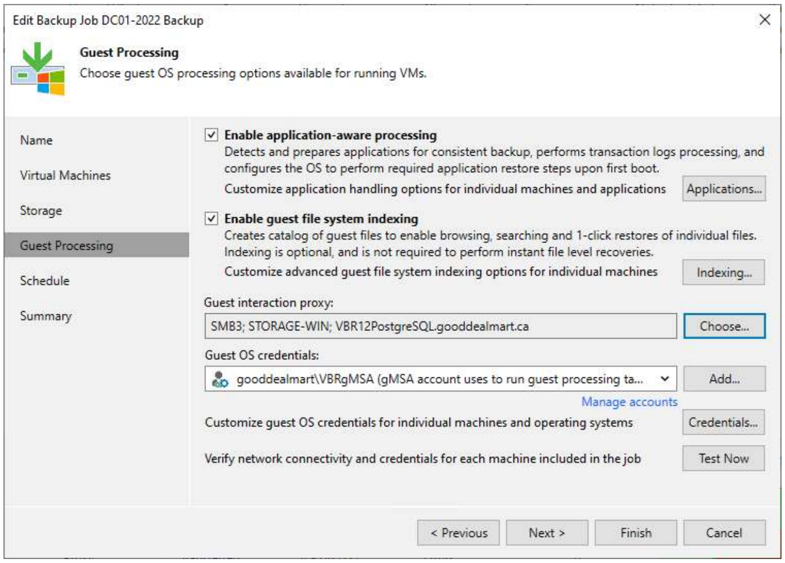
The job will automatically select most suitable proxy from the following list of selected Windows servers.

Name
☐ HPHV01
☐ HPHV01
☐ HPHV02
☐ HPHV02
☑ SMB3
☑ STORAGE-WIN
☑ VBR12PostgreSQL.gooddealmart.ca

81. Choose a user account on the Guest Processing page with sufficient permissions from the Guest OS credentials drop-down list.

82. If you have multiple VMs at the same job, click Credentials to Customize guest OS credentials for individual machines and operating systems.

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



Edit Backup Job DC01-2022 Backup

Guest Processing

Choose guest OS processing options available for running VMs.

☑ **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

☑ **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

Guest interaction proxy: SMB3; STORAGE-WIN; VBR12PostgreSQL.gooddealmart.ca

Guest OS credentials: gooddealmart\VBRgMSA (gMSA account uses to run guest processing ta...

Customize guest OS credentials for individual machines and operating systems

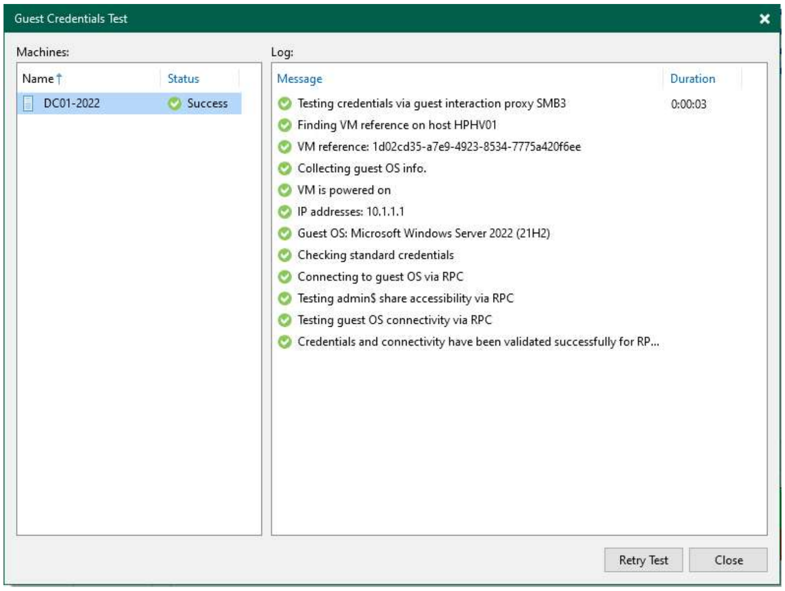
Verify network connectivity and credentials for each machine included in the job

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Applications...
Indexing...
Choose...
Add...
Manage accounts
Credentials...
Test Now
< Previous
Next >
Finish
Cancel

Technet24

84. On the Guest Credentials Test page, ensure verification success for each machine.

85. Click Close.


Guest Credentials Test
Retry Test
Close

Machines:

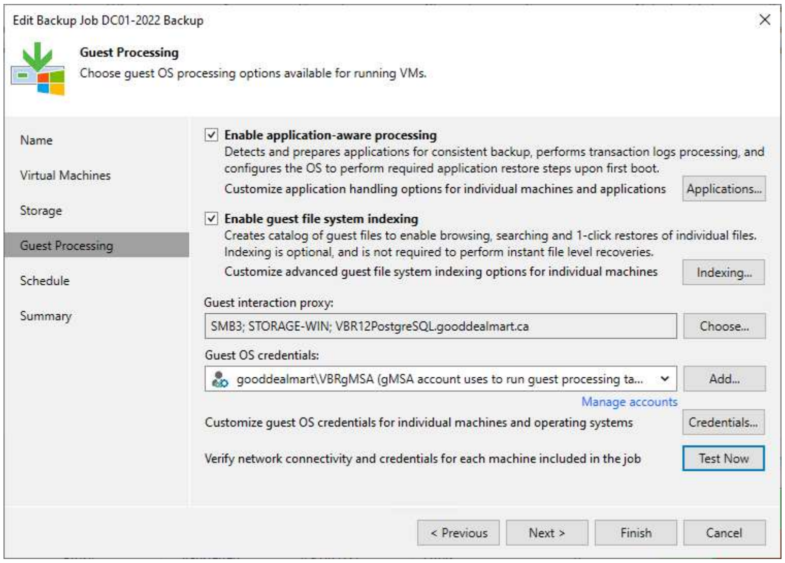
Name	Status
DC01-2022	Success

Log:

Message	Duration
Testing credentials via guest interaction proxy SMB3	0:00:03
Finding VM reference on host HPHV01	
VM reference: 1d02cd35-a7e9-4923-8534-7775a420f6ee	
Collecting guest OS info.	
VM is powered on	
IP addresses: 10.1.1.1	
Guest OS: Microsoft Windows Server 2022 (21H2)	
Checking standard credentials	
Connecting to guest OS via RPC	
Testing admin$ share accessibility via RPC	
Testing guest OS connectivity via RPC	
Credentials and connectivity have been validated successfully for RP...	

---

86. Click Next on the Guest Processing page.


Edit Backup Job DC01-2022 Backup
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Applications...
Indexing...
Choose...
Add...
Manage accounts
Credentials...
Test Now
< Previous
Next >
Finish
Cancel

Guest Processing

Choose guest OS processing options available for running VMs.

☑ **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

☑ **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

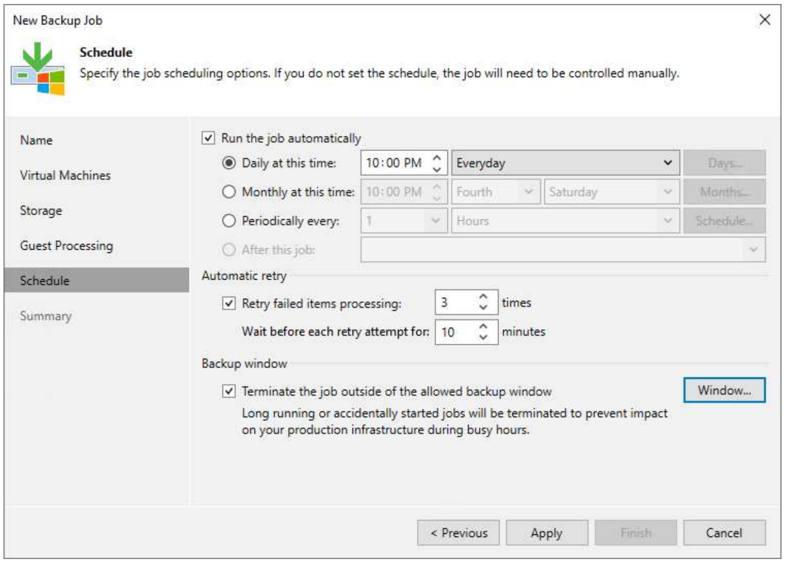
Guest interaction proxy: SMB3; STORAGE-WIN; VBR12PostgreSQL.gooddealmart.ca

Guest OS credentials: gooddealmart\VBRgMSA (gMSA account uses to run guest processing ta...

Customize guest OS credentials for individual machines and operating systems

Verify network connectivity and credentials for each machine included in the job

87. Select Run the job automatically checkbox on the Schedule page and select your specified schedule.
88. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
89. 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.
90. Click Apply.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Days...
Months...
Schedule...
Window...
< Previous
Apply
Finish
Cancel

Schedule

Specify the job scheduling options. If you do not set the schedule, the job will need to be controlled manually.

☑ Run the job automatically

● Daily at this time: 10:00 PM Everyday

○ Monthly at this time: 10:00 PM Fourth Saturday

○ Periodically every: 1 Hours

○ After this job:

Automatic retry

☑ Retry failed items processing: 3 times

Wait before each retry attempt for: 10 minutes

Backup window

☑ Terminate the job outside of the allowed backup window

Long running or accidentally started jobs will be terminated to prevent impact on your production infrastructure during busy hours.

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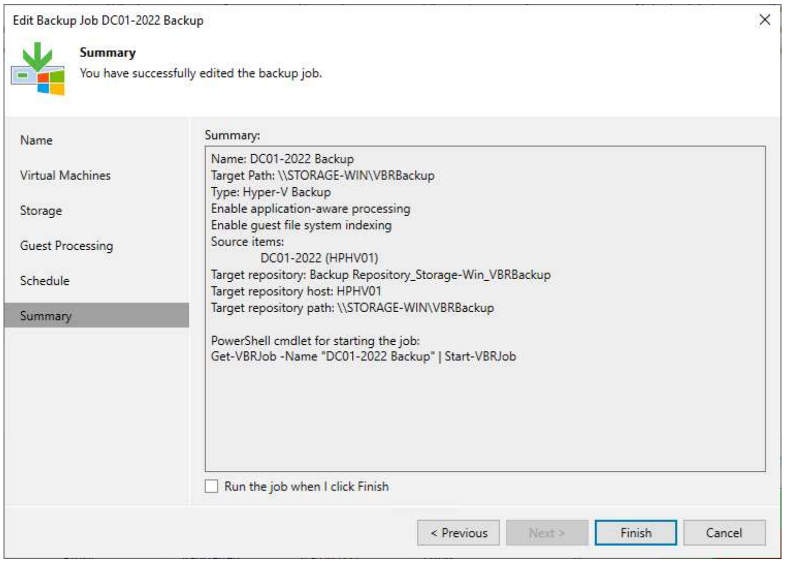
91. Click Finish on the Summary page.


Edit Backup Job DC01-2022 Backup
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

Summary

You have successfully edited the backup job.

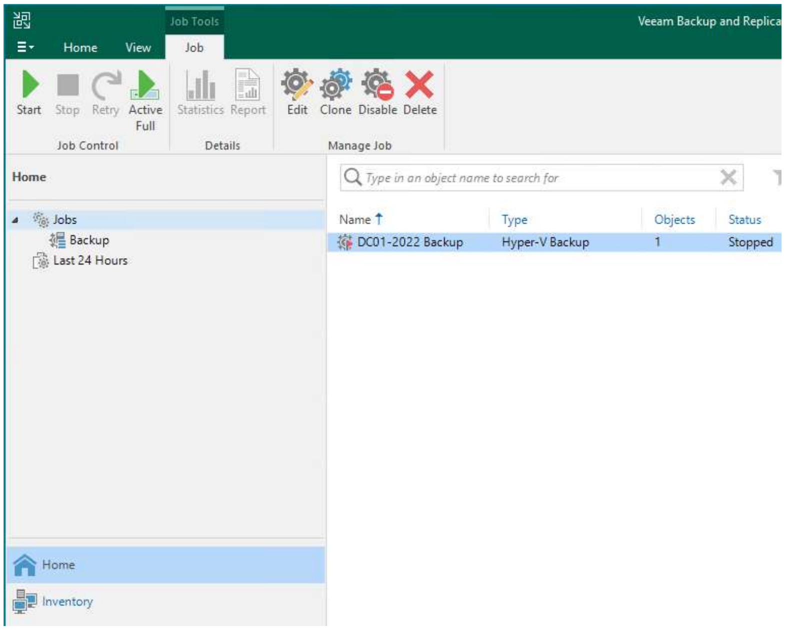
Summary:

```
Name: DC01-2022 Backup
Target Path: \\STORAGE-WIN\VBRBackup
Type: Hyper-V Backup
Enable application-aware processing
Enable guest file system indexing
Source items:
        DC01-2022 (HPHV01)
Target repository: Backup Repository_Storage-Win_VBRBackup
Target repository host: HPHV01
Target repository path: \\STORAGE-WIN\VBRBackup

PowerShell cmdlet for starting the job:
Get-VBRJob -Name "DC01-2022 Backup" | Start-VBRJob
```

☐ Run the job when I click Finish

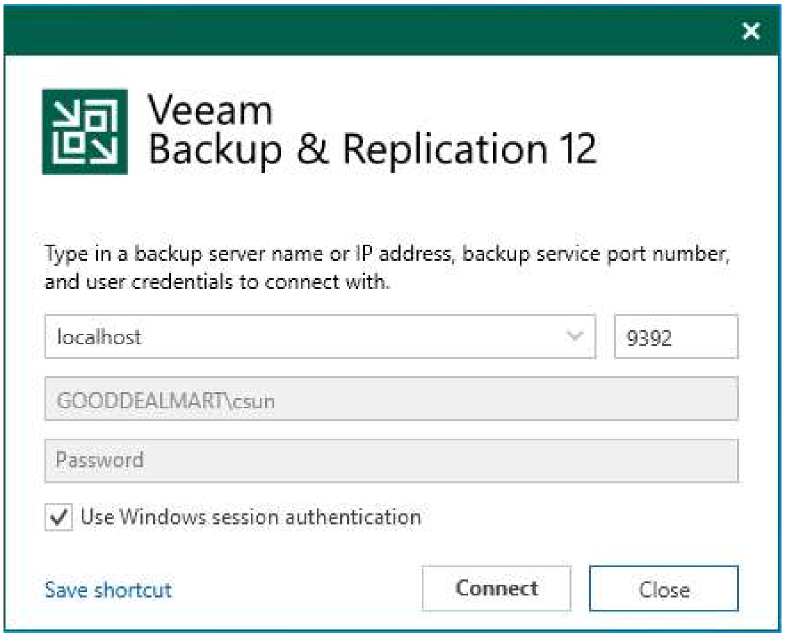
92. Verify that the backup job has been added.


Job Tools
Veeam Backup and Replica
Home
View
Job
Start
Stop
Retry
Active Full
Statistics
Report
Edit
Clone
Disable
Delete
Job Control
Details
Manage Job
Home
Type in an object name to search for
Jobs
Backup
Last 24 Hours
Home
Inventory

Name ↑	Type	Objects	Status
DC01-2022 Backup	Hyper-V Backup	1	Stopped

Create an Immutable Backup job to backup the specified VMs

Immutable Backup is a Veeam Backup & Replication feature that protects against ransomware attacks by preventing malicious software from modifying or deleting backup data. Immutable backup means that once data is written to a backup repository, it cannot be modified, overwritten, or deleted until a specified retention period has passed. This can prevent ransomware from corrupting or encrypting backup data because the malware cannot modify or delete the backup files.

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.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication

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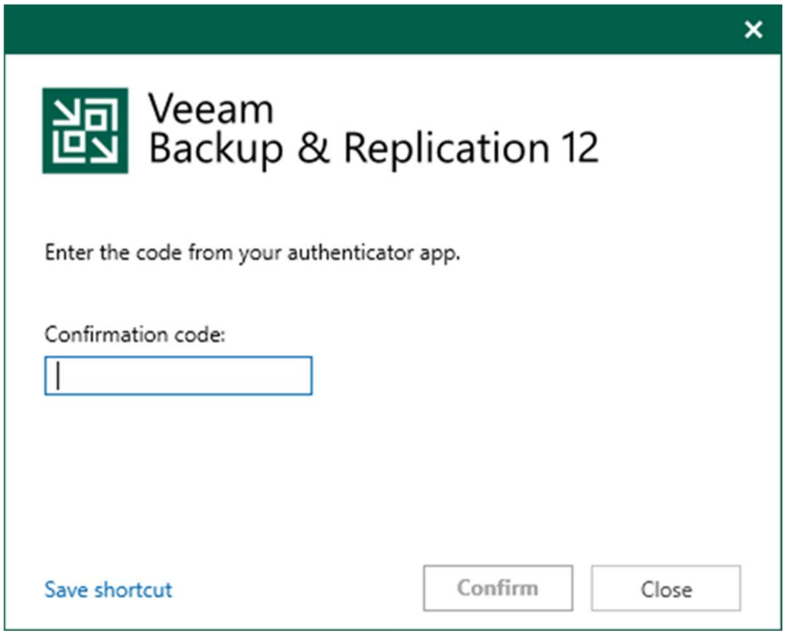
3. Enter the MFA Confirmation code and click Confirm.

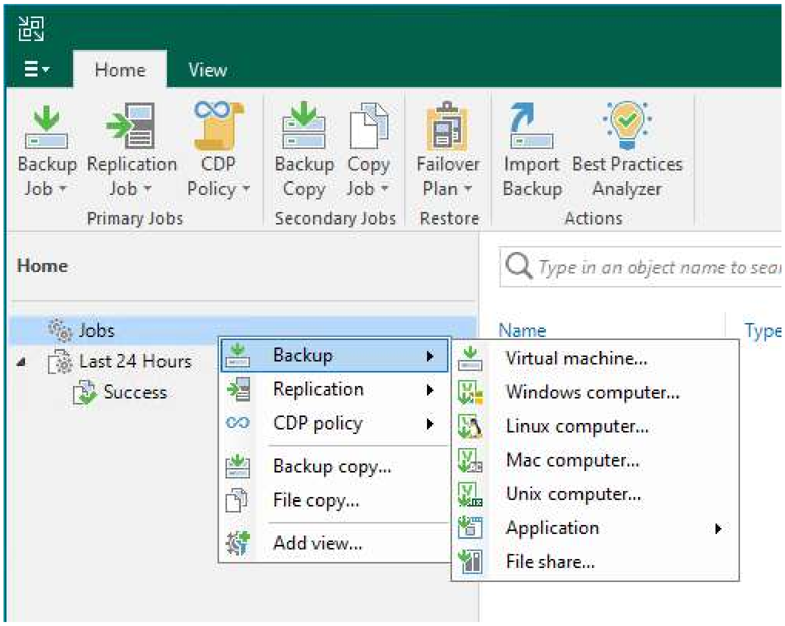

Veeam
Backup & Replication 12

Enter the code from your authenticator app.

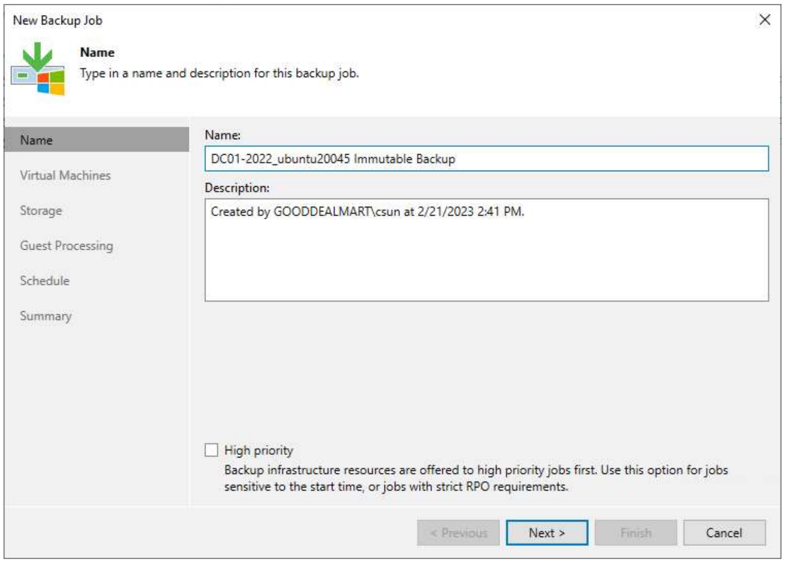
Confirmation code:

Save shortcut
Confirm
Close

4. Select Jobs on the Home page and right-click Jobs.
5. Select Backup and click Virtual machine.


Home
View
Backup Job
Replication Job
CDP Policy
Primary Jobs
Backup Copy
Copy Job
Secondary Jobs
Failover Plan
Restore
Import Backup
Best Practices Analyzer
Actions
Home
Type in an object name to sea
Jobs
Last 24 Hours
Success
Name
Type
Backup
Replication
CDP policy
Backup copy...
File copy...
Add view...
Virtual machine...
Windows computer...
Linux computer...
Mac computer...
Unix computer...
Application
File share...

6. On the Name page, enter a name for the backup job in the Name field.
7. Give a brief description in the Description field for the future.
8. Click Next.


New Backup Job
Name
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

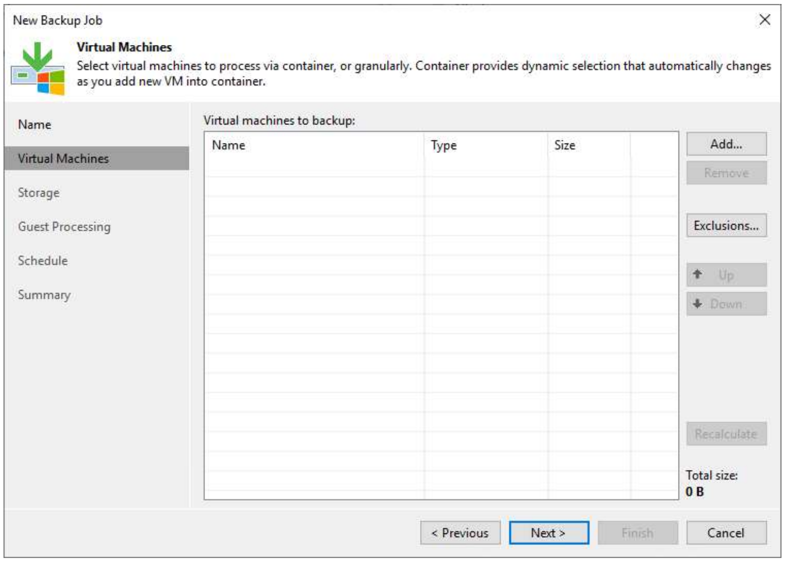
Type in a name and description for this backup job.

Name: DC01-2022_ubuntu20045 Immutable Backup

Description: Created by GOODDEALMART\csun at 2/21/2023 2:41 PM.

☐ High priority
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.

9. Click Add on the Virtual Machines page.


New Backup Job
Virtual Machines
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Virtual machines to backup:
Name
Type
Size
Add...
Remove
Exclusions...
Up
Down
Recalculate
< Previous
Next >
Finish
Cancel

Select virtual machines to process via container, or granularly. Container provides dynamic selection that automatically changes as you add new VM into container.

Total size: 0 B

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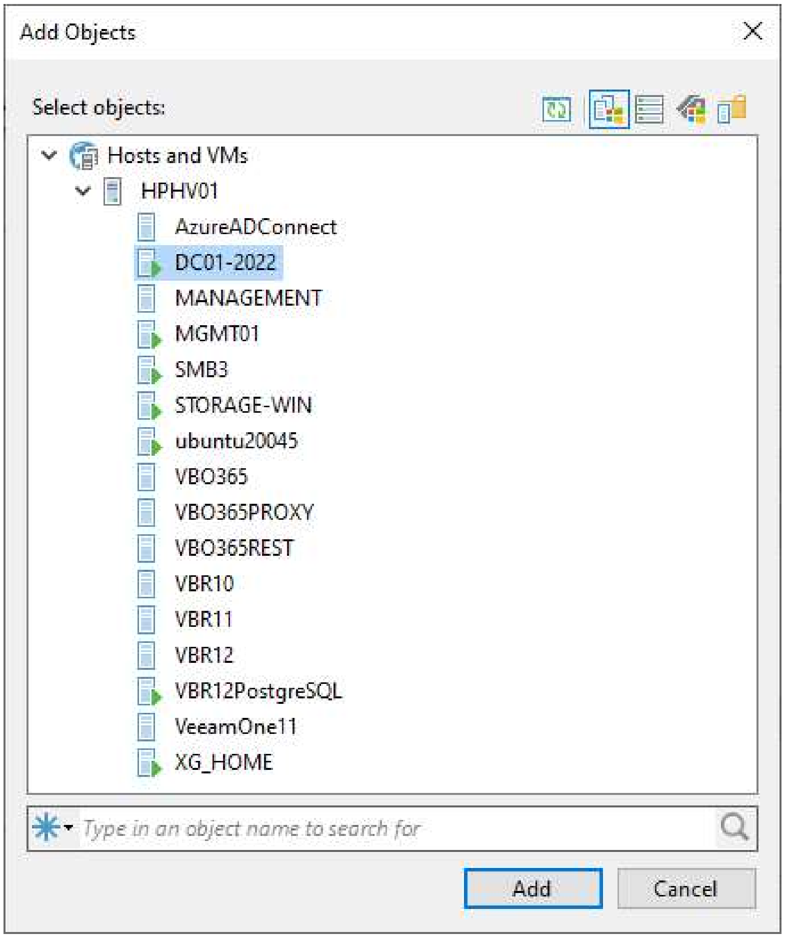
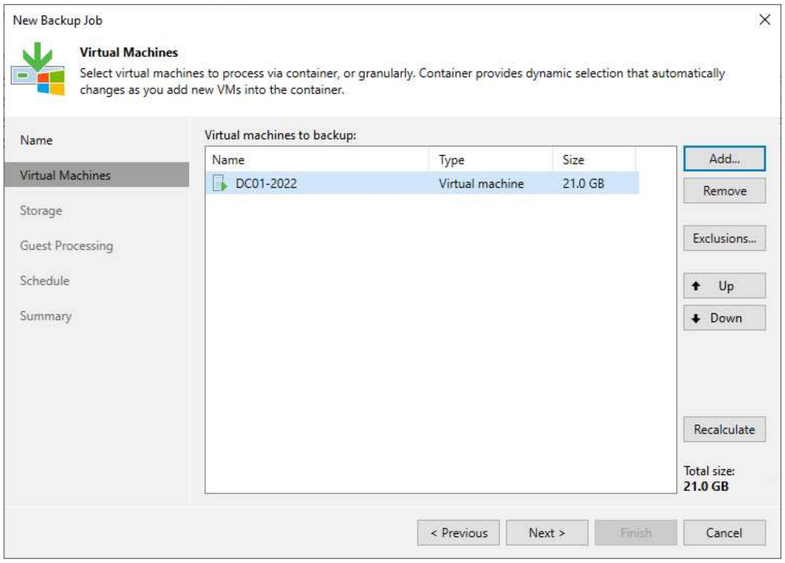
10. Select the VM from the Select objects list on the Add Objects page and click Add.
11. If you have multiple VMS that needs to back up in the same backup job, you can repeat the step to add them.


Add Objects
Select objects:
Hosts and VMs
HPHV01
AzureADConnect
DC01-2022
MANAGEMENT
MGMT01
SMB3
STORAGE-WIN
ubuntu20045
VBO365
VBO365PROXY
VBO365REST
VBR10
VBR11
VBR12
VBR12PostgreSQL
VeeamOne11
XG_HOME
Type in an object name to search for
Add
Cancel

12. Click Next on the Virtual Machines page.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Add...
Remove
Exclusions...
Up
Down
Recalculate
< Previous
Next >
Finish
Cancel

Virtual Machines

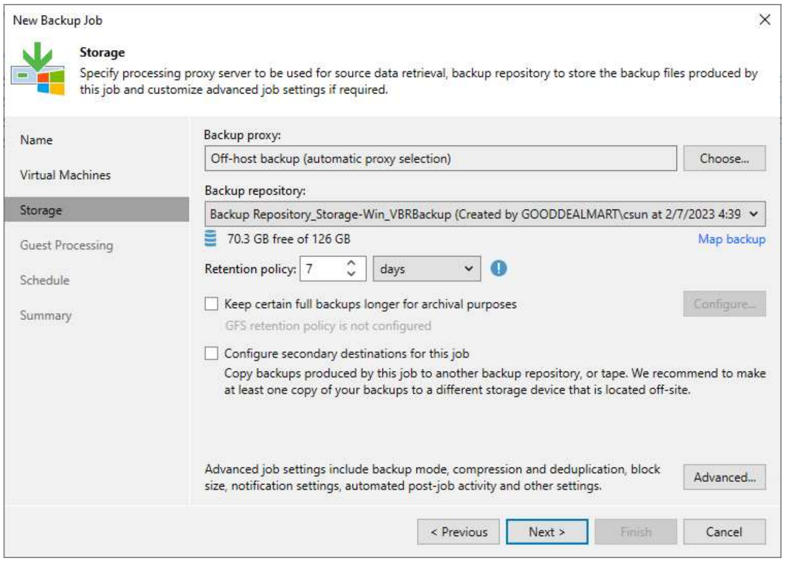
Select virtual machines to process via container, or granularly. Container provides dynamic selection that automatically changes as you add new VMs into the container.

Virtual machines to backup:

Name	Type	Size
DC01-2022	Virtual machine	21.0 GB

Total size:
21.0 GB

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


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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.

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

Backup repository: Backup Repository_Storage-Win_VBRBackup (Created by GOODDEALMART\csun at 2/7/2023 4:39

70.3 GB free of 126 GB

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.

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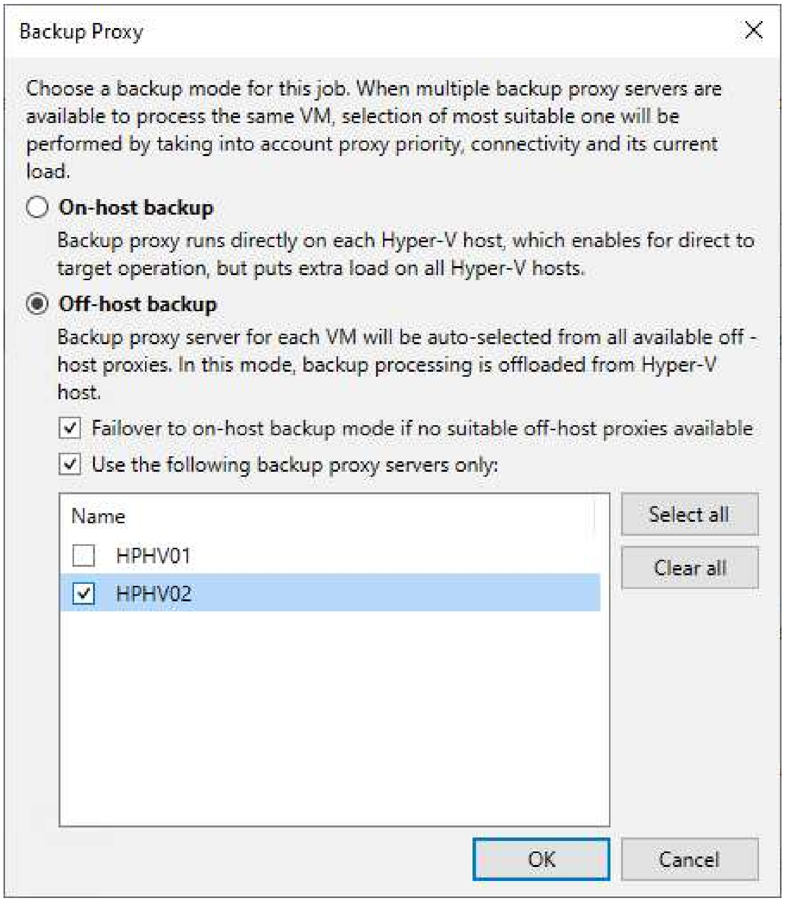
14. On the Backup Proxy page, if you select On-host backup mode, the source Microsoft HyperV host will serve as both the source host and the backup proxy. In this mode, Veeam Data Mover runs directly on the source host, which speeds up data retrieval but places additional strain on the host.

15. 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.

16. 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.

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



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

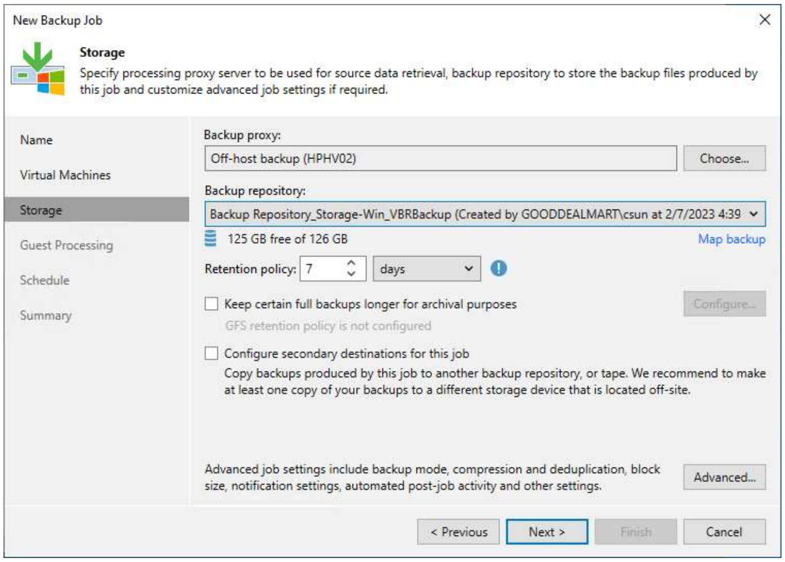
☑ Use the following backup proxy servers only:

Name
☐ HPHV01
☑ HPHV02

proxies are available in the checkbox. Still, the job will fail to start if off-host backup proxies are unavailable or configured properly.

18. Click OK.

19. Select the Hardened backup repository from the Backup repository drop-down list.



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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository_Storage-Win_VBRBackup (Created by GOODDEALMART\csun at 2/7/2023 4:39

125 GB free of 126 GB

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.

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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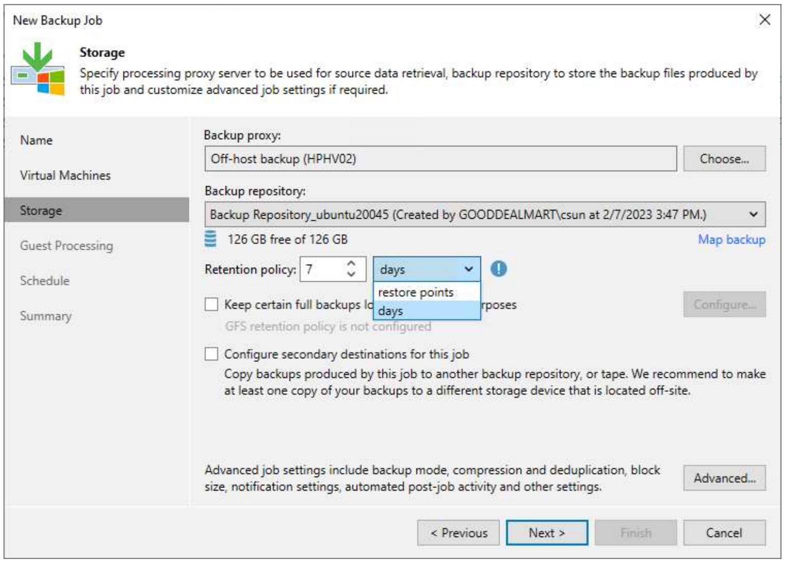
20. Set the retention policy settings for restore points in the Retention Policy field.

21. Select days or restore points from the drop-down list.



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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository_ubuntu20045 (Created by GOODDEALMART\csun at 2/7/2023 3:47 PM.)

126 GB free of 126 GB

Retention policy: 7 days

☐ Keep certain full backups lo… …rposes

GFS retention policy is not configured

☐ Configure secondary destinations for this job

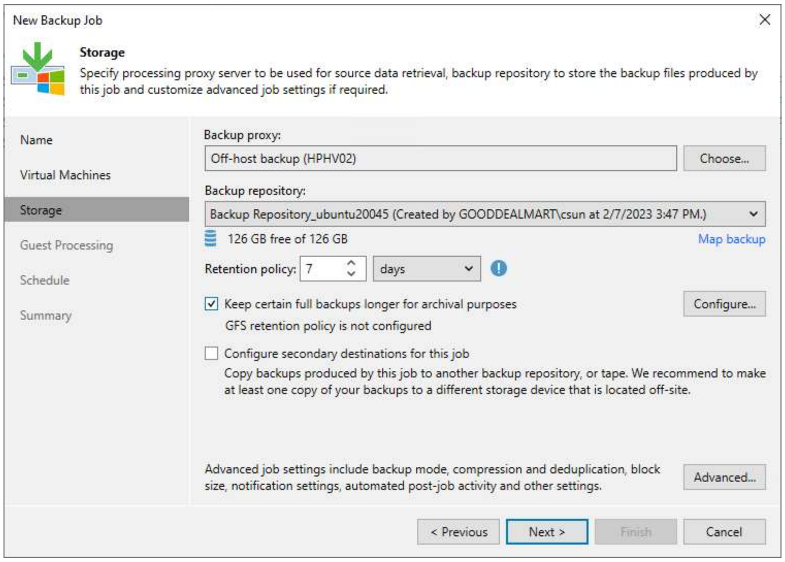
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

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

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
restore points
days
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

22. You can configure GFS retention policy settings for the backup job 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 checkbox and click Configure.



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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository_ubuntu20045 (Created by GOODDEALMART\csun at 2/7/2023 3:47 PM.)

126 GB free of 126 GB

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.

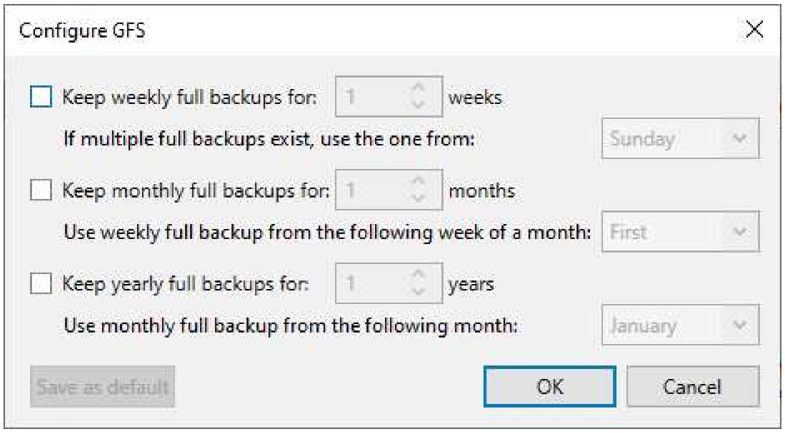
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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.



Configure GFS

☐ Keep weekly full backups for: 1 weeks
If multiple full backups exist, use the one from: Sunday
☐ Keep monthly full backups for: 1 months
Use weekly full backup from the following week of a month: First
☐ Keep yearly full backups for: 1 years
Use monthly full backup from the following month: January

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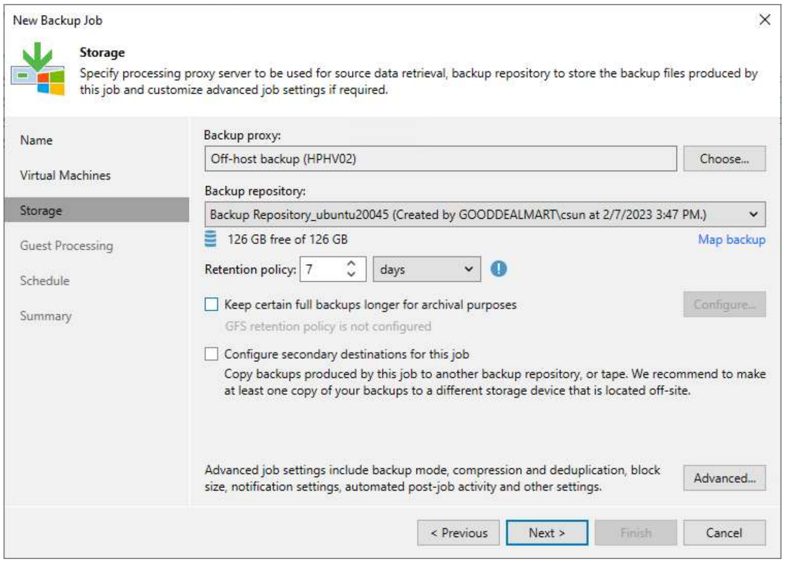
28. On the Storage page, click Advanced.



New Backup Job
Storage
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository_ubuntu20045 (Created by GOODDEALMART\csun at 2/7/2023 3:47 PM.)

126 GB free of 126 GB

Retention policy: 7 days

☐ Keep certain full backups longer for archival purposes

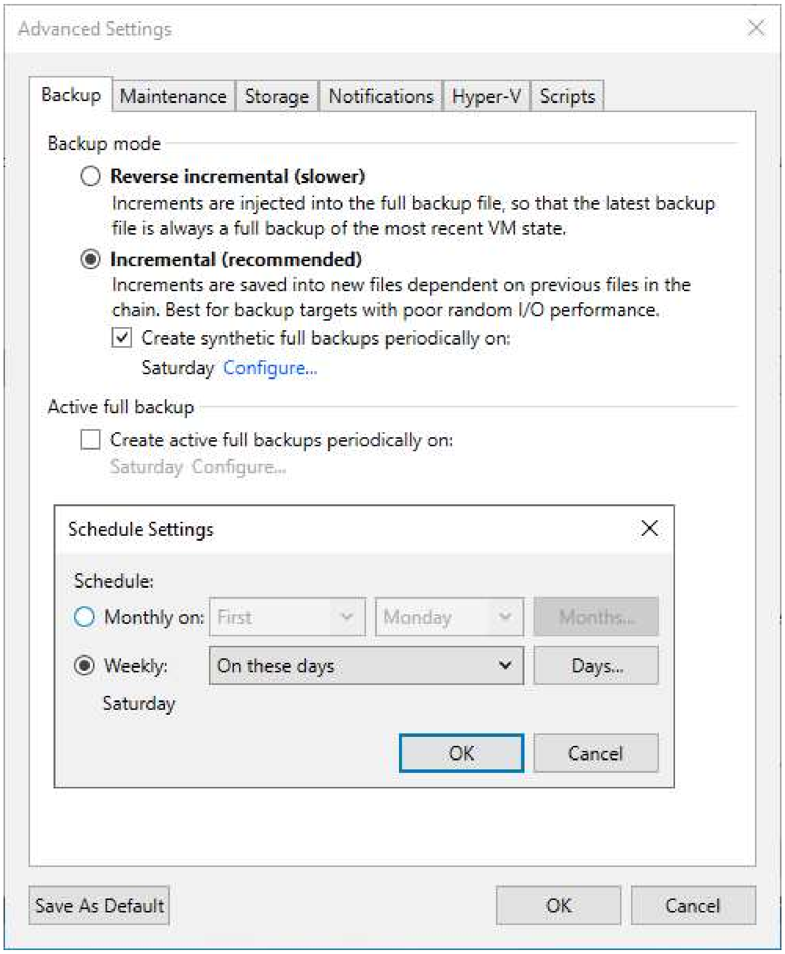
GFS retention policy is not configured

☐ 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.

29. On the Backup page, select Incremental (recommended).
30. Select create synthetic full backups periodically or active full backups periodically checkbox.
31. Click Configure to schedule full backups periodically and click OK.


Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Save As Default
OK
Cancel
Schedule Settings
Months...
Days...
OK
Cancel

Backup mode

○ **Reverse incremental (slower)**
Increments are injected into the full backup file, so that the latest backup file is always a full backup of the most recent VM state.

● **Incremental (recommended)**
Increments are saved into new files dependent on previous files in the chain. Best for backup targets with poor random I/O performance.

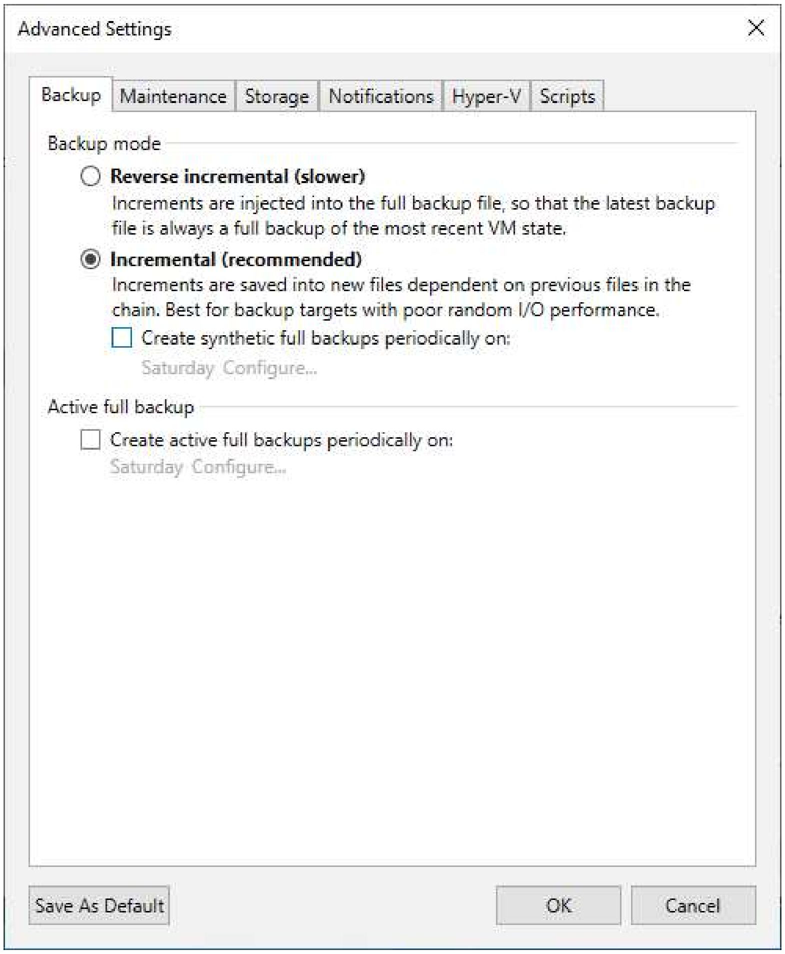
☑ Create synthetic full backups periodically on:
Saturday Configure...

Active full backup

☐ Create active full backups periodically on:
Saturday Configure...

Schedule:
○ Monthly on: First Monday
● Weekly: On these days
Saturday

32. Select Incremental and disable synthetic full or active full backups to create a forever forward incremental backup chain if needed.



Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Backup mode

○ **Reverse incremental (slower)**
Increments are injected into the full backup file, so that the latest backup file is always a full backup of the most recent VM state.

● **Incremental (recommended)**
Increments are saved into new files dependent on previous files in the chain. Best for backup targets with poor random I/O performance.

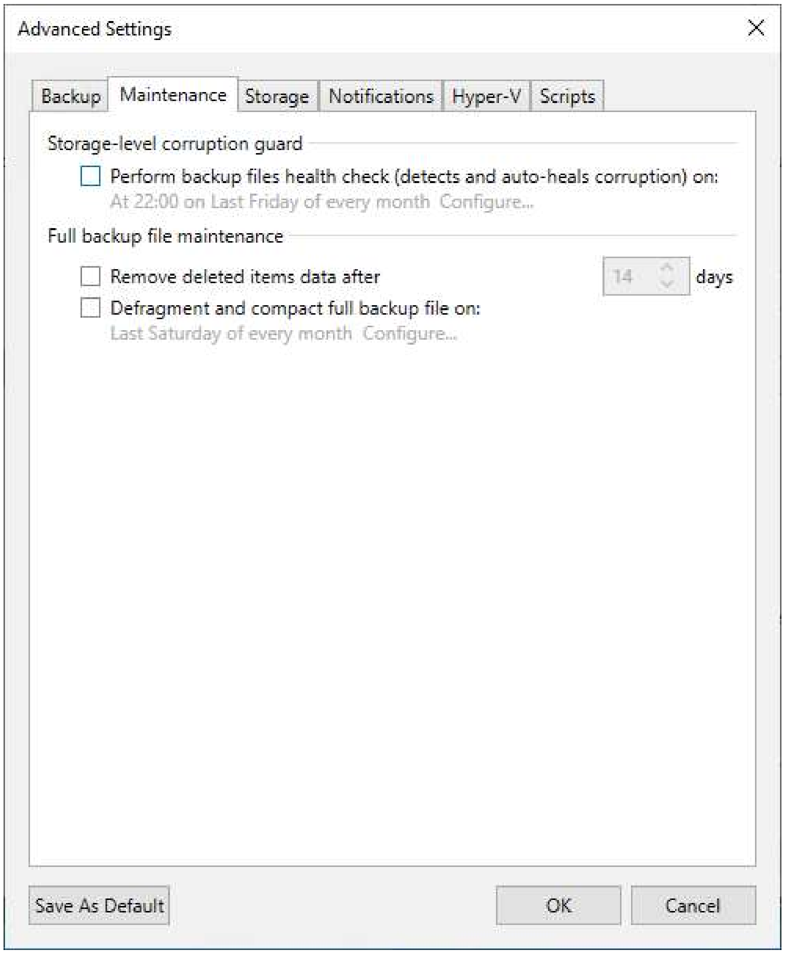
☐ Create synthetic full backups periodically on:
Saturday Configure...

Active full backup

☐ Create active full backups periodically on:
Saturday Configure...

Save As Default
OK
Cancel

33. On the Advanced Settings, select Maintenance.



Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Storage-level corruption guard

☐ Perform backup files health check (detects and auto-heals corruption) on:
At 22:00 on Last Friday of every month Configure...

Full backup file maintenance

☐ Remove deleted items data after 14 days

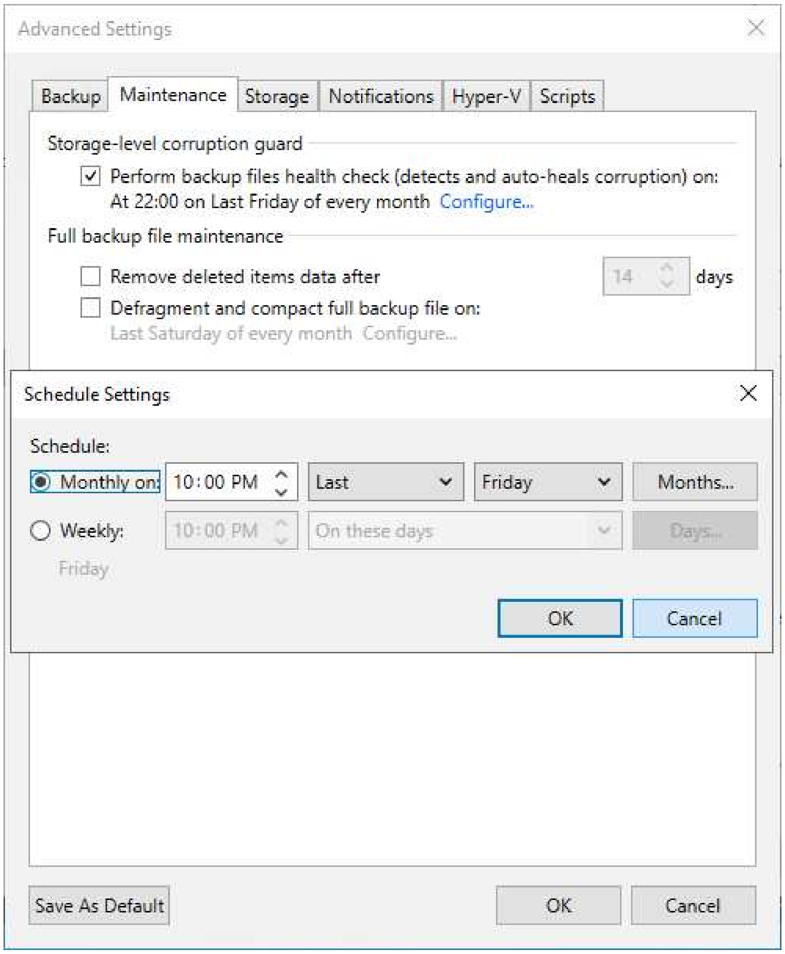
☐ Defragment and compact full backup file on:
Last Saturday of every month Configure...

Save As Default
OK
Cancel

Technet24

34. 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.

35. Click Configure to set a timetable for the health check.



Advanced Settings

Storage-level corruption guard

☑ Perform backup files health check (detects and auto-heals corruption) on:
At 22:00 on Last Friday of every month Configure...

Full backup file maintenance

☐ Remove deleted items data after 14 days

☐ Defragment and compact full backup file on:
Last Saturday of every month Configure...

Schedule Settings

Schedule:

● Monthly on: 10:00 PM Last Friday

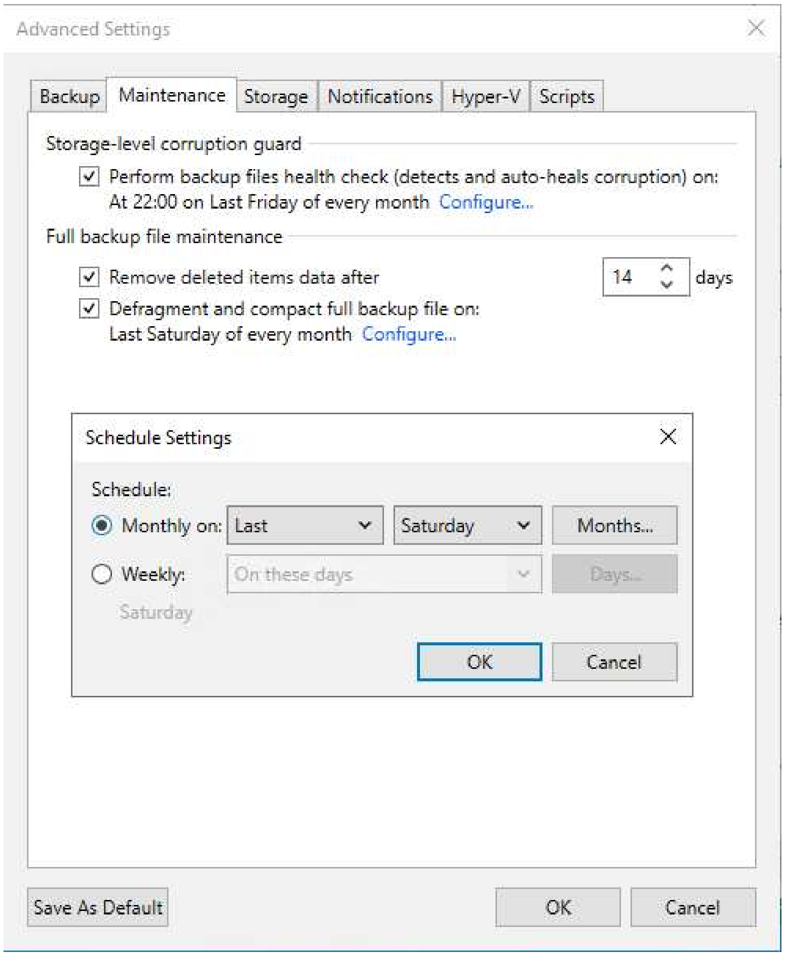
○ Weekly: 10:00 PM On these days
Friday

Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Months...
Days...
OK
Cancel
Save As Default
OK
Cancel

36. Select the Remove deleted items data after the checkbox and enter the few days you want backup data for deleted VMs to be kept.
37. Select the Defragment and compact full backup file checkbox and click Configure.
38. Set the schedule for the compact operation to compact a full backup periodically.

Note:

GFS retention is not compatible with defragment and compact functionality.


Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Save As Default
OK
Cancel

Storage-level corruption guard

☑ Perform backup files health check (detects and auto-heals corruption) on:
At 22:00 on Last Friday of every month Configure...

Full backup file maintenance

☑ Remove deleted items data after 14 days

☑ Defragment and compact full backup file on:
Last Saturday of every month Configure...

Schedule Settings

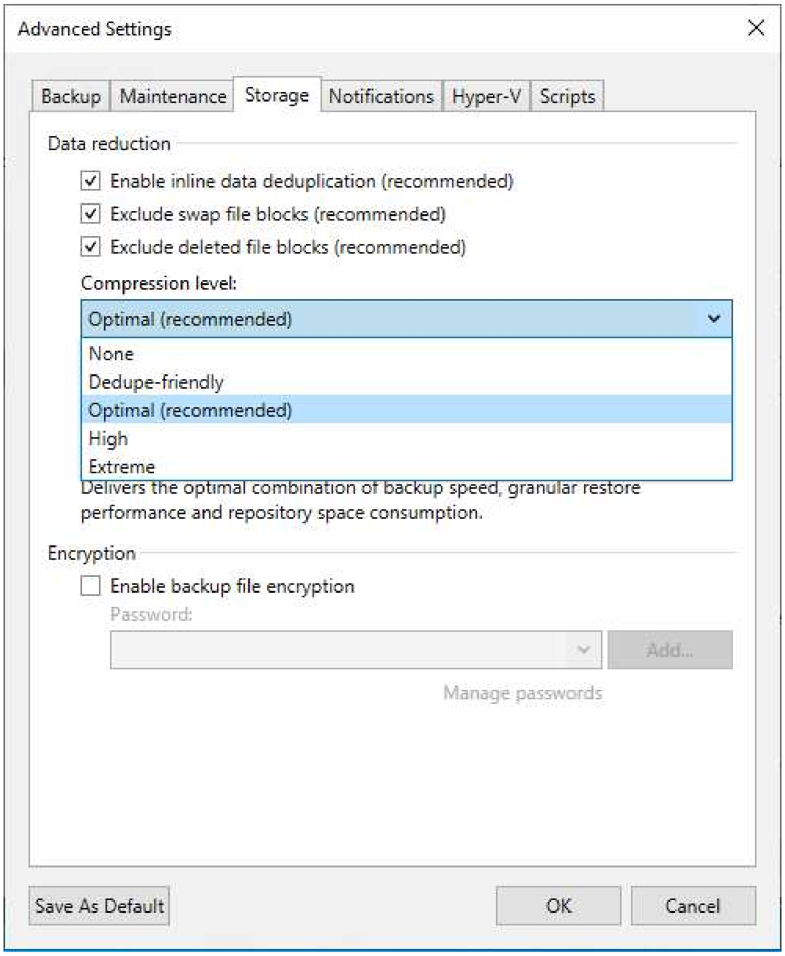
Schedule:

● Monthly on: Last Saturday

○ Weekly: On these days
Saturday

Months...
Days...
OK
Cancel

39. On Advanced Settings, select Storage.
40. Select the Enable inline data deduplication (recommended) checkbox.
41. Select the Exclude swap file blocks (recommended) checkbox.
42. Select the Exclude deleted file blocks (recommended) checkbox.
43. Select the compression level for the backup from the drop-down list.



Advanced Settings

Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Data reduction

☑ Enable inline data deduplication (recommended)

☑ Exclude swap file blocks (recommended)

☑ Exclude deleted file blocks (recommended)

Compression level: Optimal (recommended)

None
Dedupe-friendly
Optimal (recommended)
High
Extreme

Delivers the optimal combination of backup speed, granular restore performance and repository space consumption.

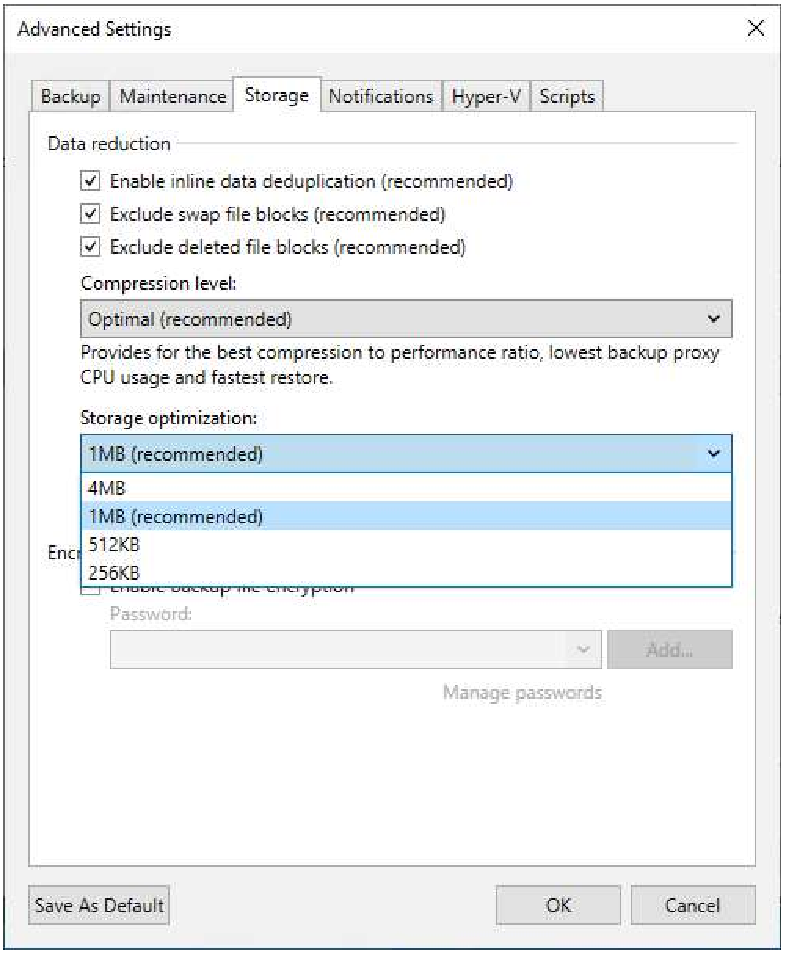
Encryption

☐ Enable backup file encryption

Password:

Add...
Manage passwords
Save As Default
OK
Cancel

44. Select the Storage optimization for the backup from the drop-down list.



Advanced Settings

Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Data reduction

☑ Enable inline data deduplication (recommended)

☑ Exclude swap file blocks (recommended)

☑ Exclude deleted file blocks (recommended)

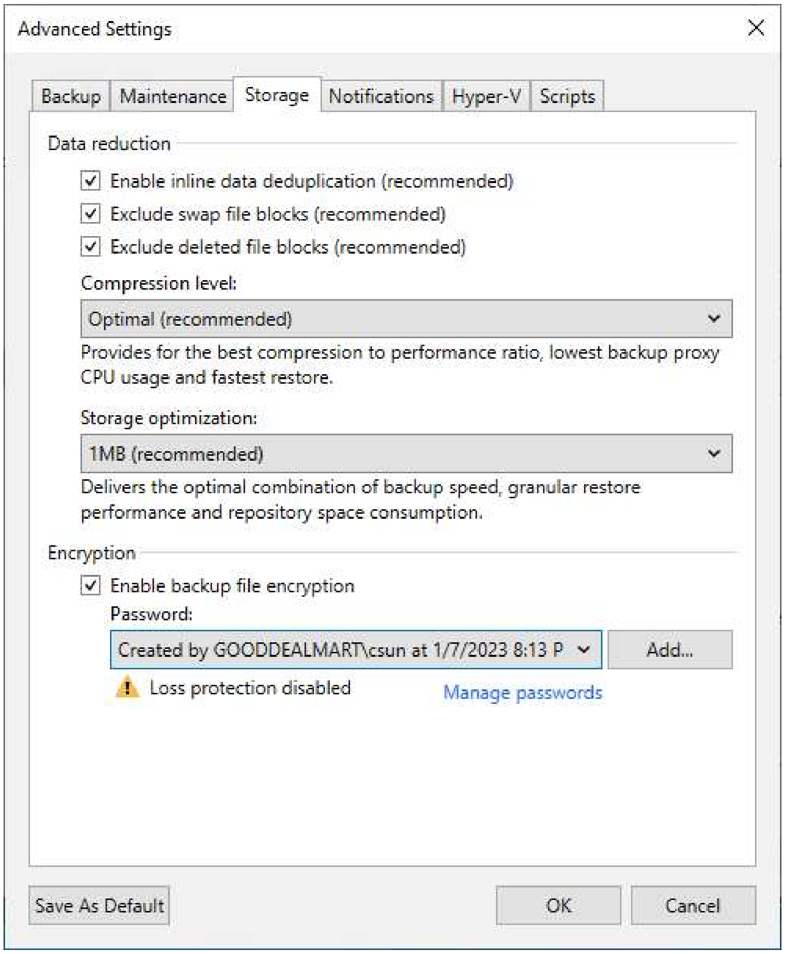
Compression level: Optimal (recommended)

Provides for the best compression to performance ratio, lowest backup proxy CPU usage and fastest restore.

Storage optimization: 1MB (recommended)

4MB
1MB (recommended)
512KB
256KB
Password:
Add...
Manage passwords
Save As Default
OK
Cancel

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



Advanced Settings

Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Data reduction

☑ Enable inline data deduplication (recommended)
☑ Exclude swap file blocks (recommended)
☑ Exclude deleted file blocks (recommended)

Compression level: Optimal (recommended)

Provides for the best compression to performance ratio, lowest backup proxy CPU usage and fastest restore.

Storage optimization: 1MB (recommended)

Delivers the optimal combination of backup speed, granular restore performance and repository space consumption.

Encryption

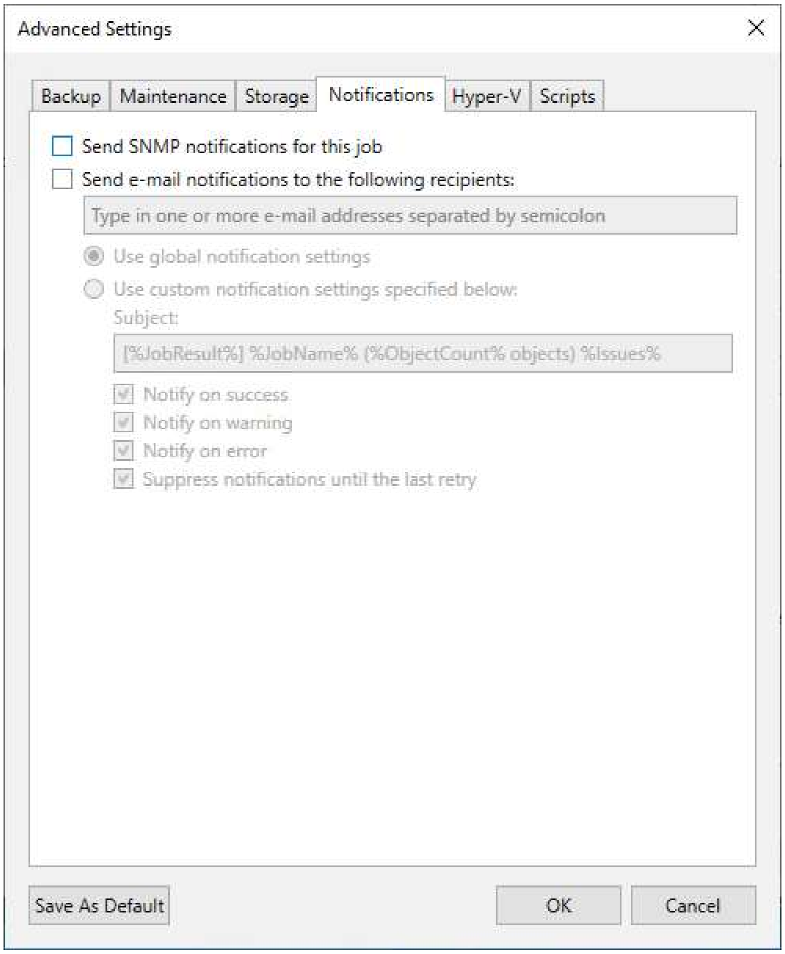
☑ Enable backup file encryption

Password: Created by GOODDEALMART\csun at 1/7/2023 8:13 P

⚠ Loss protection disabled

Add...
Manage passwords
Save As Default
OK
Cancel

47. Select Notifications on the Advanced Settings.
48. Keep the default settings.



Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

☐ Send SNMP notifications for this job

☐ Send e-mail notifications to the following recipients:

Type in one or more e-mail addresses separated by semicolon

● Use global notification settings

○ Use custom notification settings specified below:

Subject:

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

☑ Notify on success

☑ Notify on warning

☑ Notify on error

☑ Suppress notifications until the last retry

Save As Default
OK
Cancel

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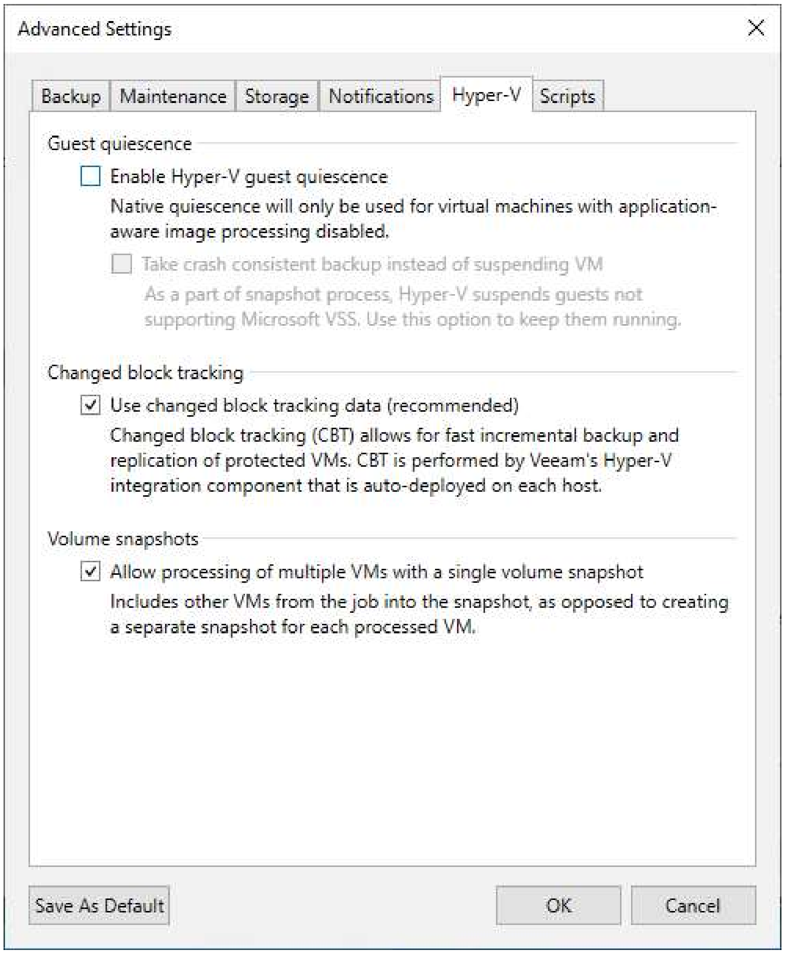
49. Select Hyper-V on the Advanced Settings.
50. Keep the default settings.



Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Guest quiescence

☐ Enable Hyper-V guest quiescence

Native quiescence will only be used for virtual machines with application-aware image processing disabled.

☐ Take crash consistent backup instead of suspending VM

As a part of snapshot process, Hyper-V suspends guests not supporting Microsoft VSS. Use this option to keep them running.

Changed block tracking

☑ Use changed block tracking data (recommended)

Changed block tracking (CBT) allows for fast incremental backup and replication of protected VMs. CBT is performed by Veeam's Hyper-V integration component that is auto-deployed on each host.

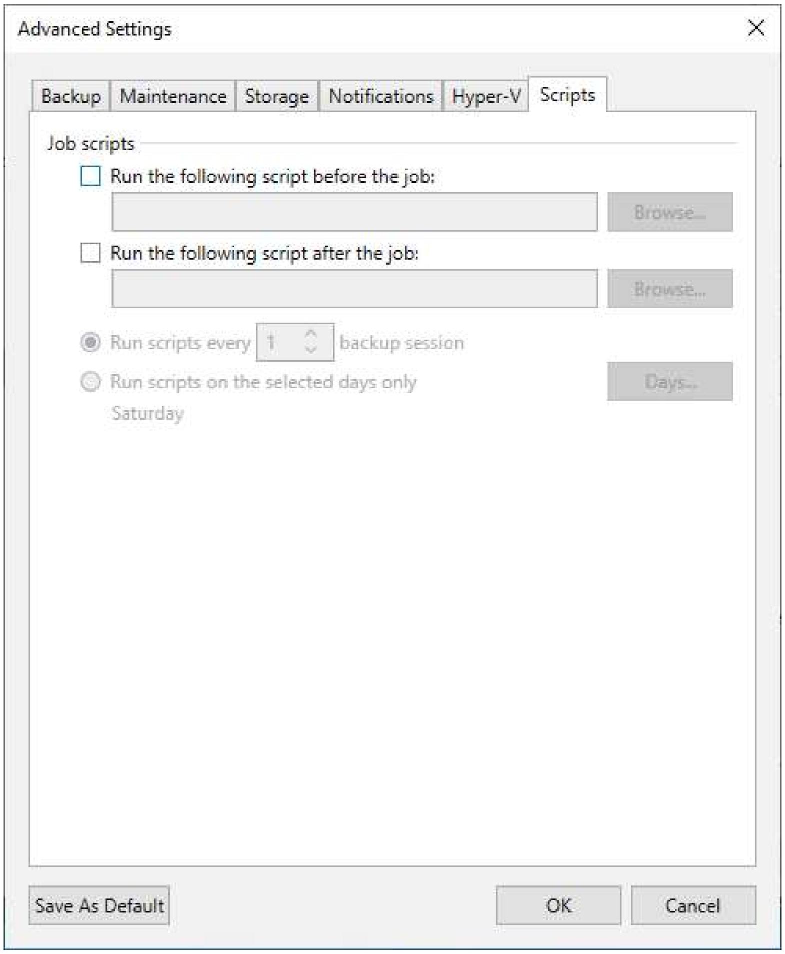
Volume snapshots

☑ Allow processing of multiple VMs with a single volume snapshot

Includes other VMs from the job into the snapshot, as opposed to creating a separate snapshot for each processed VM.

Save As Default
OK
Cancel

51. On the Advanced Settings page, select Scripts and keep the default settings.
52. Click OK.


Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Job scripts

☐ Run the following script before the job:

☐ Run the following script after the job:

● Run scripts every 1 backup session

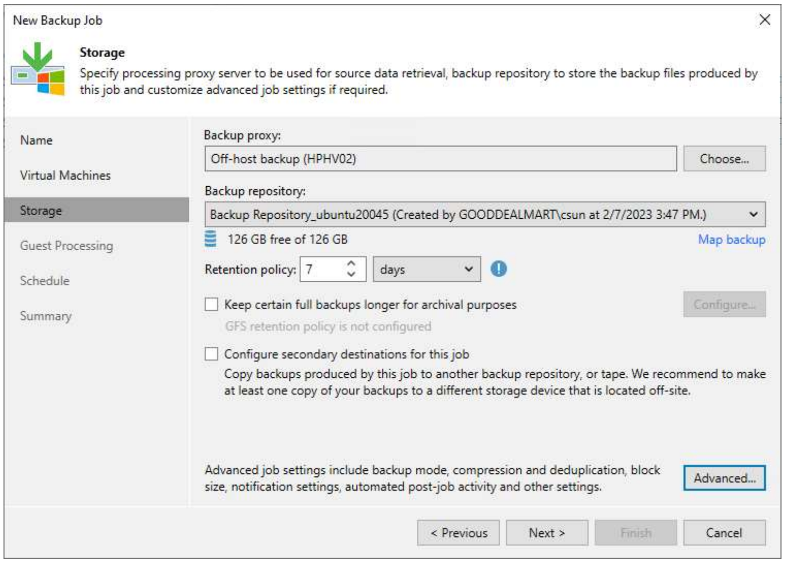
○ Run scripts on the selected days only

Saturday

Browse...
Browse...
Days...
Save As Default
OK
Cancel

Technet24

53. Click Next on the Storage page.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository_ubuntu20045 (Created by GOODDEALMART\csun at 2/7/2023 3:47 PM.)

126 GB free of 126 GB

Retention policy: 7 days

☐ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

☐ Configure secondary destinations for this job

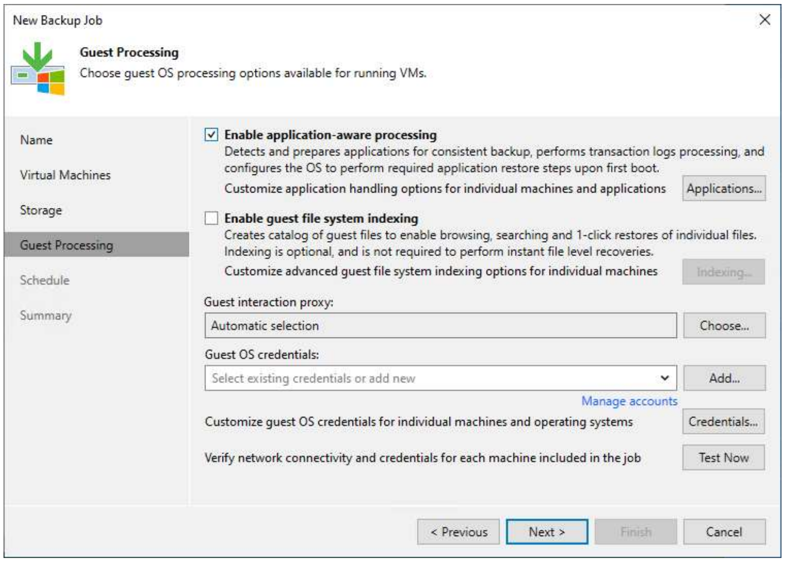
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

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

---

54. 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.

55. Select the Enable application-aware processing checkbox on the Guest Processing page and click Applications.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Applications...
Indexing...
Choose...
Add...
Manage accounts
Credentials...
Test Now
< Previous
Next >
Finish
Cancel

Guest Processing

Choose guest OS processing options available for running VMs.

☑ **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

☐ **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

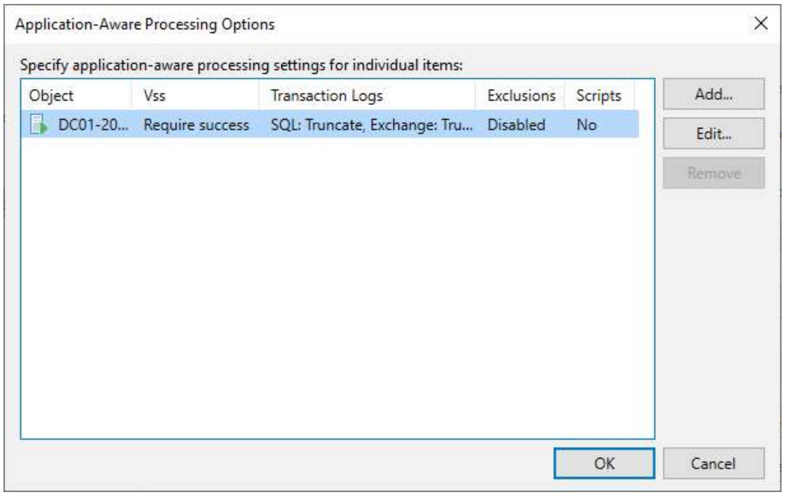
Guest interaction proxy: Automatic selection

Guest OS credentials: Select existing credentials or add new

Customize guest OS credentials for individual machines and operating systems

Verify network connectivity and credentials for each machine included in the job

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



Application-Aware Processing Options
Add...
Edit...
Remove
OK
Cancel

Specify application-aware processing settings for individual items:

Object	Vss	Transaction Logs	Exclusions	Scripts
DC01-20...	Require success	SQL: Truncate, Exchange: Tru...	Disabled	No

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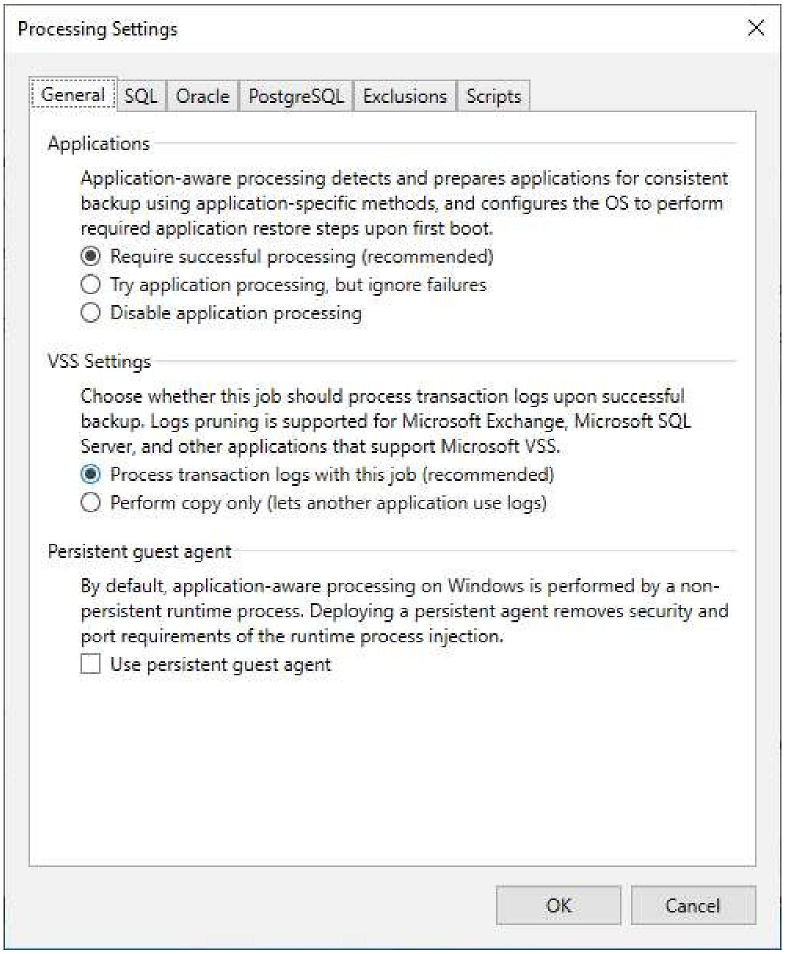
57. On the Processing Settings, click General.
58. Keep the default settings.



Applications

Application-aware processing detects and prepares applications for consistent backup using application-specific methods, and configures the OS to perform required application restore steps upon first boot.

● Require successful processing (recommended)
○ Try application processing, but ignore failures
○ Disable application processing

VSS Settings

Choose whether this job should process transaction logs upon successful backup. Logs pruning is supported for Microsoft Exchange, Microsoft SQL Server, and other applications that support Microsoft VSS.

● Process transaction logs with this job (recommended)
○ Perform copy only (lets another application use logs)

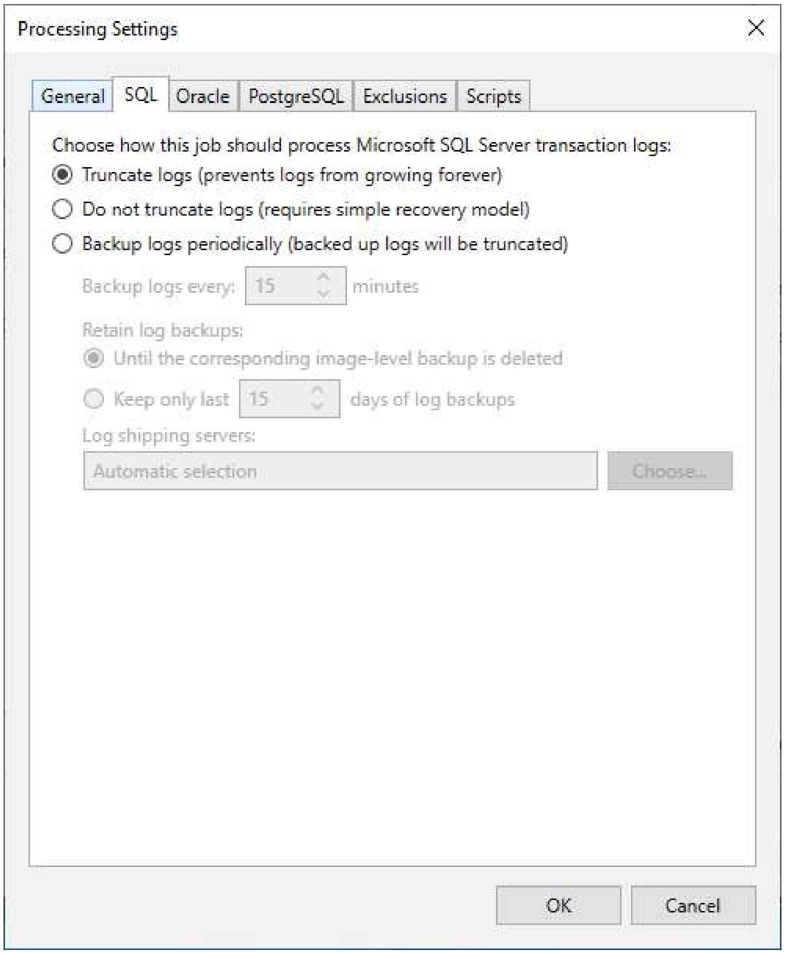
Persistent guest agent

By default, application-aware processing on Windows is performed by a non-persistent runtime process. Deploying a persistent agent removes security and port requirements of the runtime process injection.

☐ Use persistent guest 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.



Processing Settings

Choose how this job should process Microsoft SQL Server transaction logs:

● Truncate logs (prevents logs from growing forever)

○ Do not truncate logs (requires simple recovery model)

○ Backup logs periodically (backed up logs will be truncated)

Backup logs every: 15 minutes

Retain log backups:

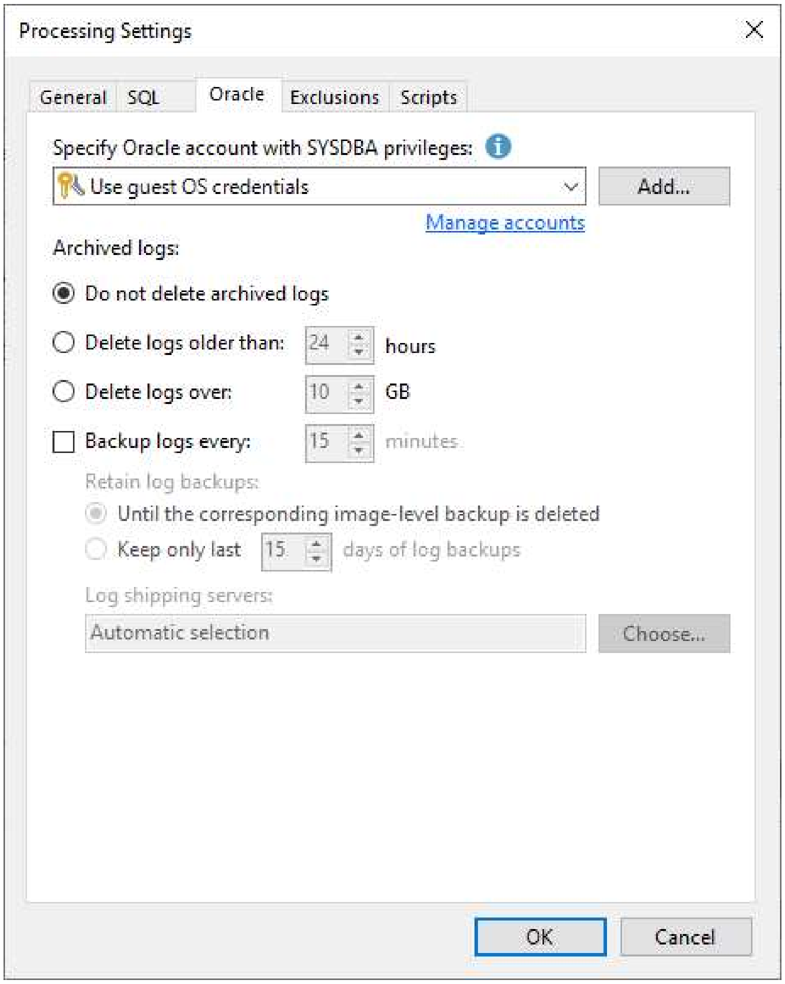
● Until the corresponding image-level backup is deleted

○ Keep only last 15 days of log backups

Log shipping servers:

Automatic selection

61. On the Processing Settings page, click Oracle if the VM is an Oracle Server.
62. Select a user account from the drop-down list.
63. Select Do not delete archived logs checkbox.



Processing Settings

General
SQL
Oracle
Exclusions
Scripts

Specify Oracle account with SYSDBA privileges:

Use guest OS credentials

Add...
Manage accounts

Archived logs:

● Do not delete archived logs

○ Delete logs older than: 24 hours

○ Delete logs over: 10 GB

☐ Backup logs every: 15 minutes

Retain log backups:

● Until the corresponding image-level backup is deleted

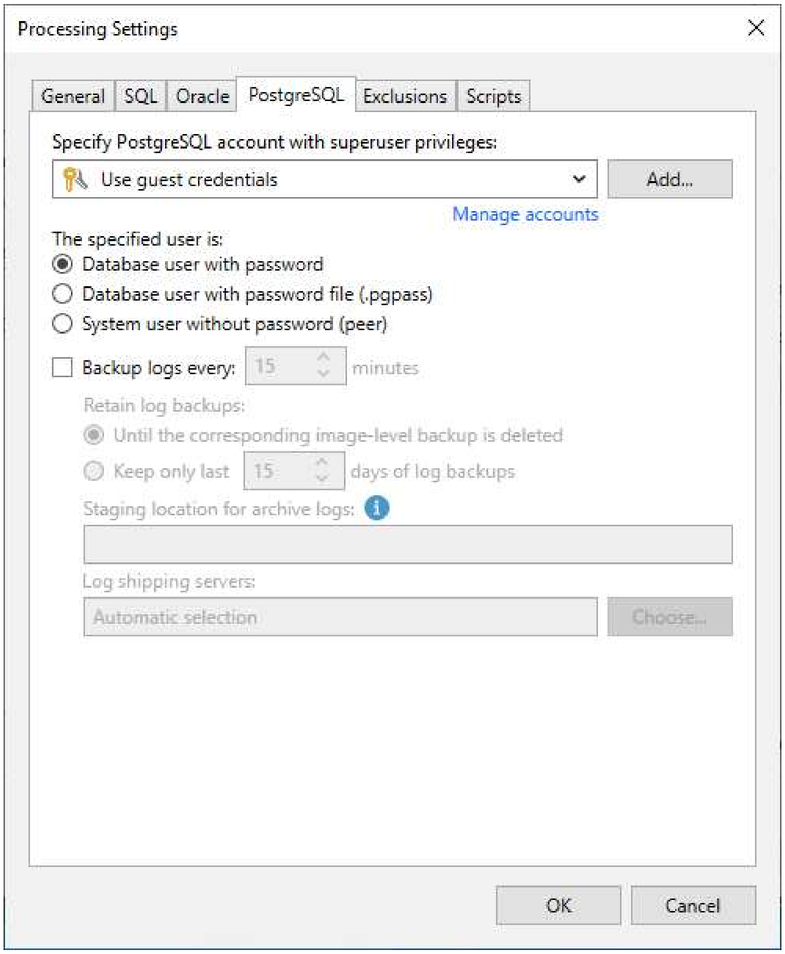
○ Keep only last 15 days of log backups

Log shipping servers:

Automatic selection

Choose...
OK
Cancel

64. On the Processing Settings page, click PostgreSQL if the VM is a PostgreSQL Server VM.
65. Select a user account from the drop-down list.
66. Select Database user with password checkbox.



Processing Settings

Specify PostgreSQL account with superuser privileges:

Use guest credentials

The specified user is:

● Database user with password

○ Database user with password file (.pgpass)

○ System user without password (peer)

☐ Backup logs every: 15 minutes

Retain log backups:

● Until the corresponding image-level backup is deleted

○ Keep only last 15 days of log backups

Staging location for archive logs:

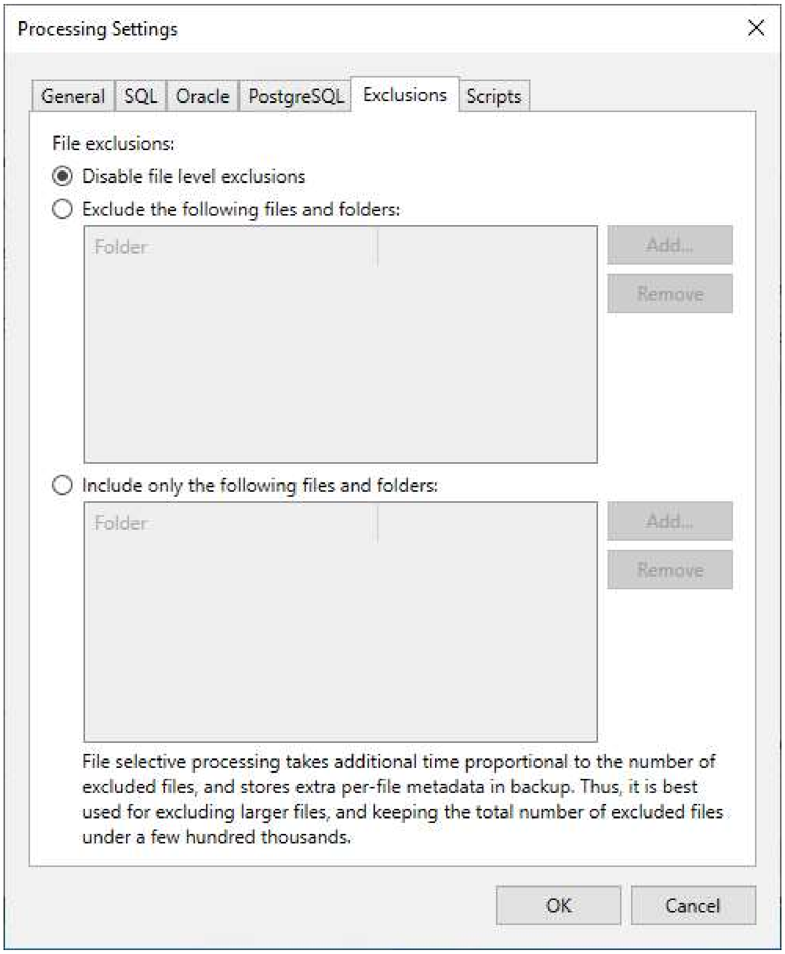
Log shipping servers:

Automatic selection

General
SQL
Oracle
PostgreSQL
Exclusions
Scripts
Add...
Manage accounts
Choose...
OK
Cancel

Technet24

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


Processing Settings
General
SQL
Oracle
PostgreSQL
Exclusions
Scripts
Folder
Add...
Remove
Folder
Add...
Remove
OK
Cancel

File exclusions:

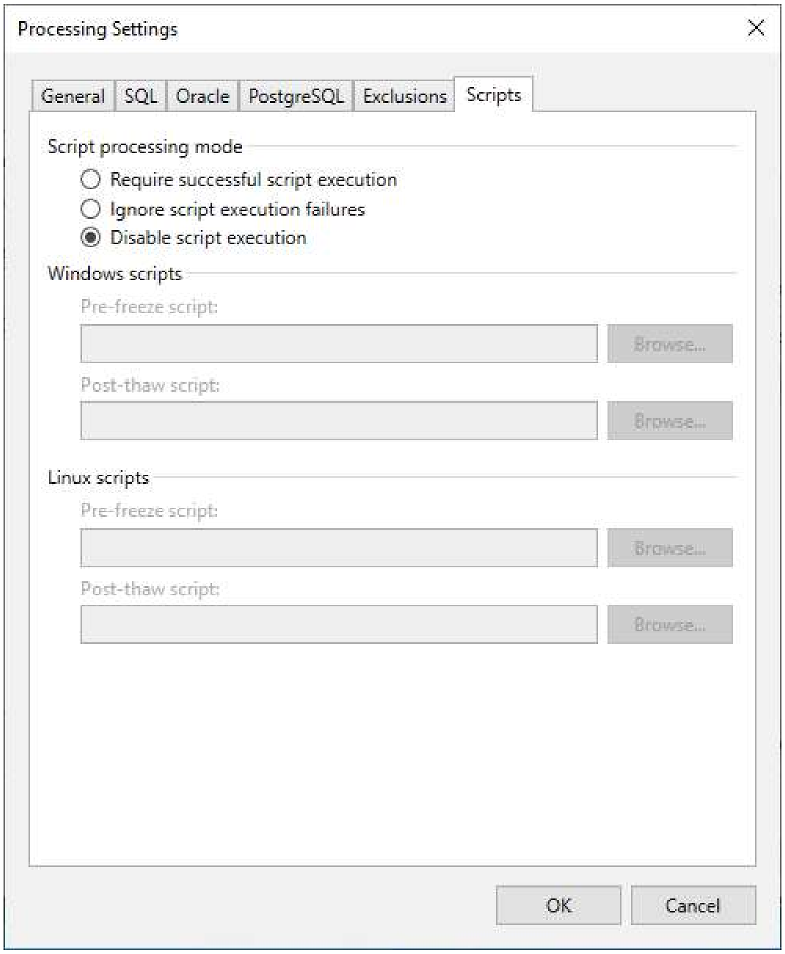
● Disable file level exclusions

○ Exclude the following files and folders:

○ Include only the following files and folders:

File selective processing takes additional time proportional to the number of excluded files, and stores extra per-file metadata in backup. Thus, it is best used for excluding larger files, and keeping the total number of excluded files under a few hundred thousands.

68. On the Processing Settings page, click Scripts and keep the default settings.
69. Click OK.


Processing Settings
General
SQL
Oracle
PostgreSQL
Exclusions
Scripts
Browse...
OK
Cancel

Script processing mode
○ Require successful script execution
○ Ignore script execution failures
● Disable script execution

Windows scripts
Pre-freeze script:
Post-thaw script:

Linux scripts
Pre-freeze script:
Post-thaw script:

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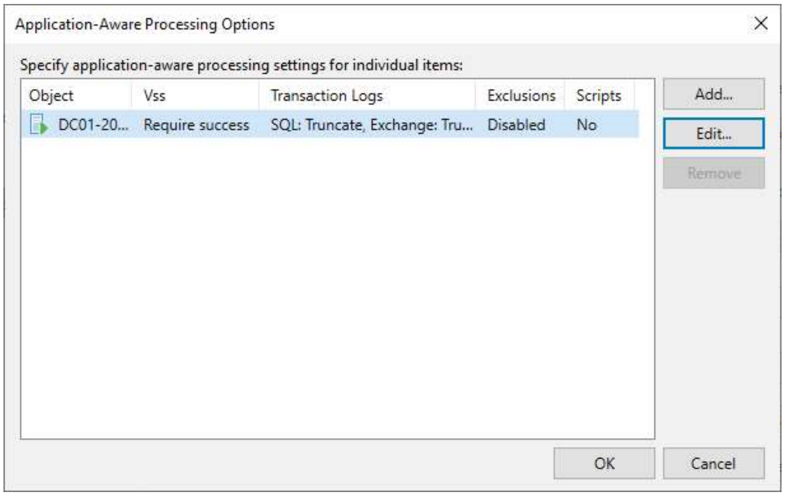
70. On the Application-Aware Processing Options page, click OK.



Application-Aware Processing Options

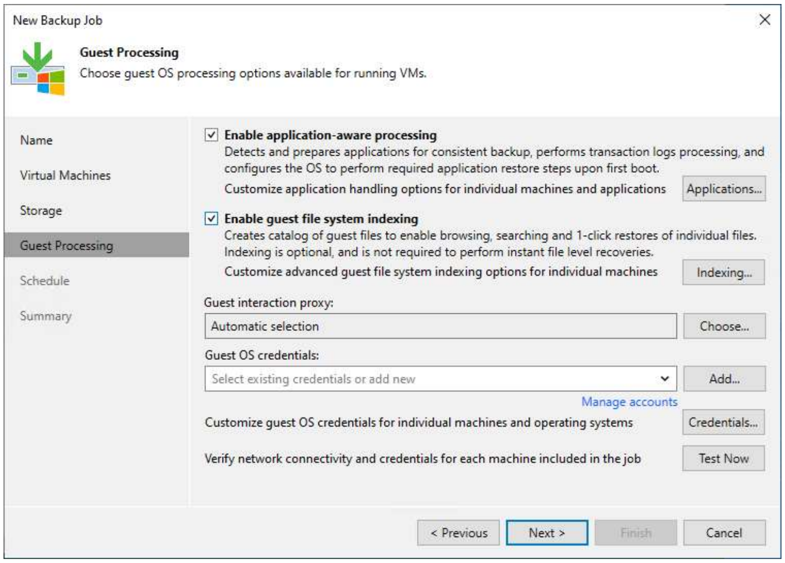
Specify application-aware processing settings for individual items:

Object	Vss	Transaction Logs	Exclusions	Scripts
DC01-20...	Require success	SQL: Truncate, Exchange: Tru...	Disabled	No

Add...
Edit...
Remove
OK
Cancel

---

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



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

☑ **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

Guest interaction proxy: Automatic selection

Guest OS credentials: Select existing credentials or add new

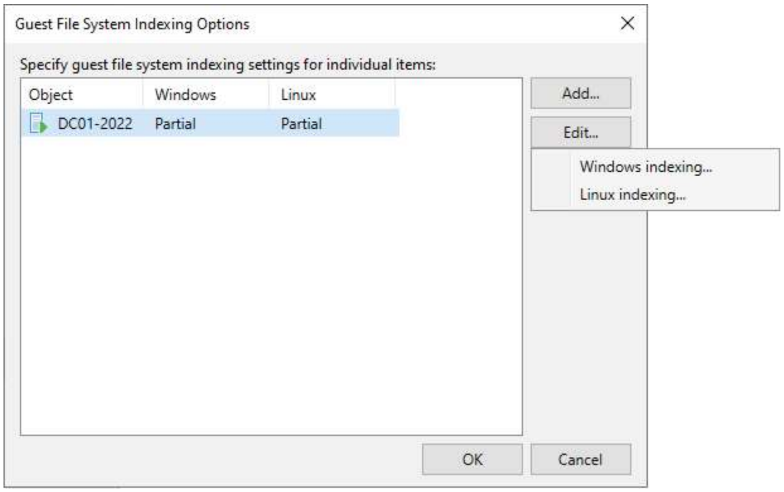
Customize guest OS credentials for individual machines and operating systems

Verify network connectivity and credentials for each machine included in the job

Applications...
Indexing...
Choose...
Add...
Manage accounts
Credentials...
Test Now
< Previous
Next >
Finish
Cancel

---

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


Guest File System Indexing Options
Add...
Edit...
Windows indexing...
Linux indexing...
OK
Cancel

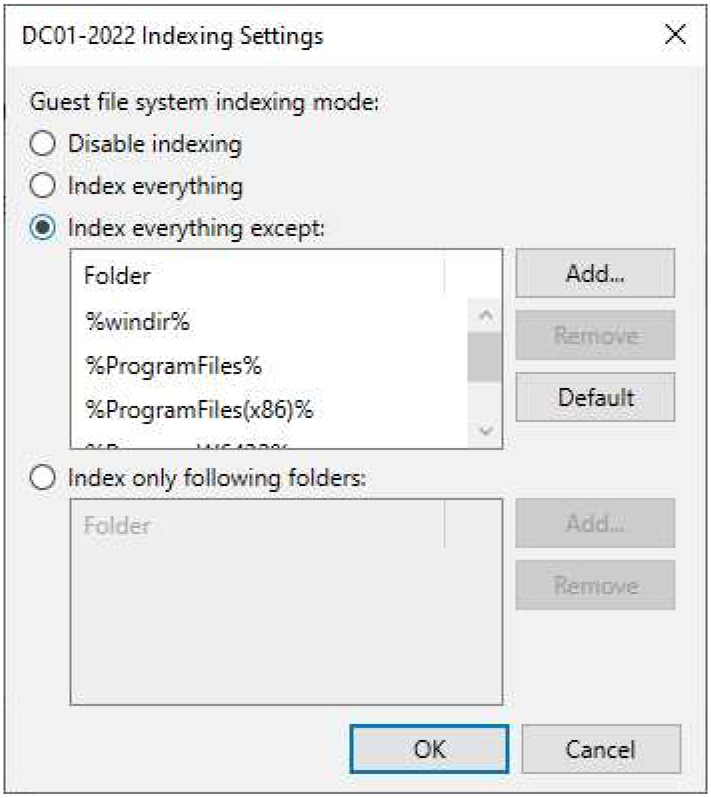
Specify guest file system indexing settings for individual items:

Object	Windows	Linux
DC01-2022	Partial	Partial

---

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

74. Click OK.


DC01-2022 Indexing Settings
Add...
Remove
Default
Add...
Remove
OK
Cancel

Guest file system indexing mode:

○ Disable indexing
○ Index everything
● Index everything except:

Folder
%windir%
%ProgramFiles%
%ProgramFiles(x86)%

○ Index only following folders:

Folder

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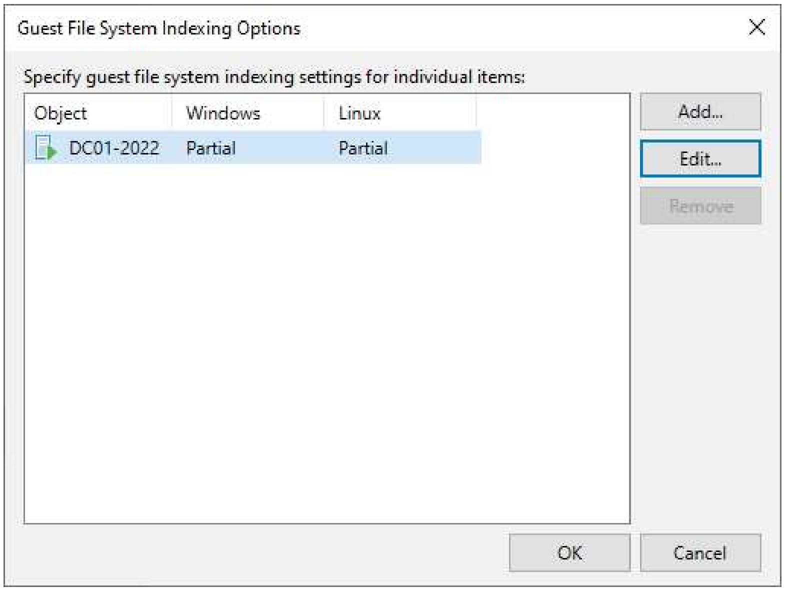
75. Click OK on the Guest file system indexing mode page.



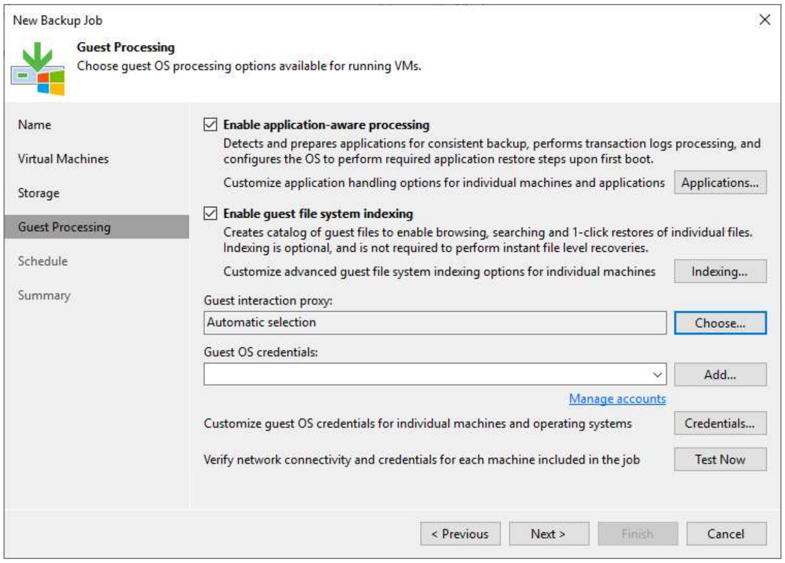
Guest File System Indexing Options

Specify guest file system indexing settings for individual items:

Object	Windows	Linux
DC01-2022	Partial	Partial

Add...
Edit...
Remove
OK
Cancel

76. Keep the default Automatic selection setting in the Guest interaction proxy field.



New Backup Job

Guest Processing

Choose guest OS processing options available for running VMs.

☑ **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

☑ **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

Guest interaction proxy: Automatic selection

Guest OS credentials:

Customize guest OS credentials for individual machines and operating systems

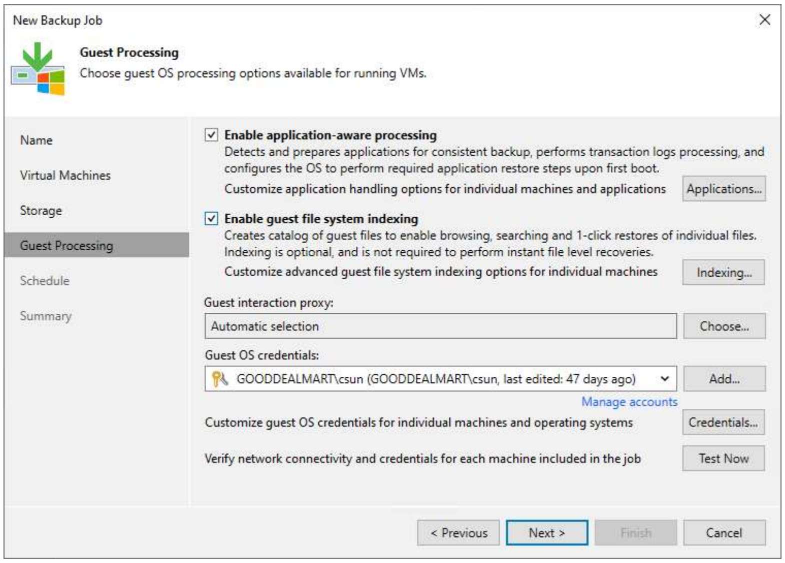
Verify network connectivity and credentials for each machine included in the job

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Applications...
Indexing...
Choose...
Add...
Manage accounts
Credentials...
Test Now
< Previous
Next >
Finish
Cancel

77. Choose a user account on the Guest Processing page with sufficient permissions from the Guest OS credentials drop-down list.

78. If you have multiple VMs at the same job, click Credentials to Customize guest OS credentials for individual machines and operating systems.

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



New Backup Job

Guest Processing

Choose guest OS processing options available for running VMs.

☑ **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

☑ **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

Guest interaction proxy: Automatic selection

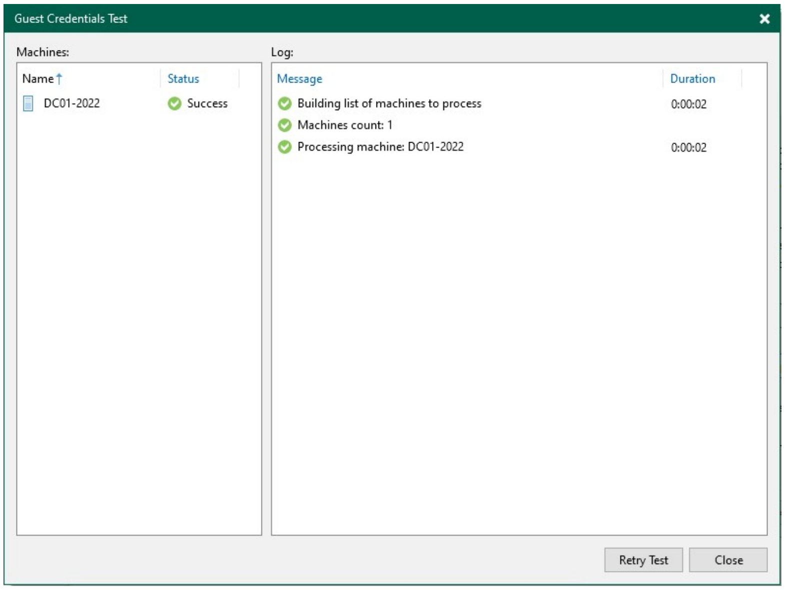
Guest OS credentials: GOODDEALMART\csun (GOODDEALMART\csun, last edited: 47 days ago)

Customize guest OS credentials for individual machines and operating systems

Verify network connectivity and credentials for each machine included in the job

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Applications...
Indexing...
Choose...
Add...
Manage accounts
Credentials...
Test Now
< Previous
Next >
Finish
Cancel

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


Guest Credentials Test
Retry Test
Close

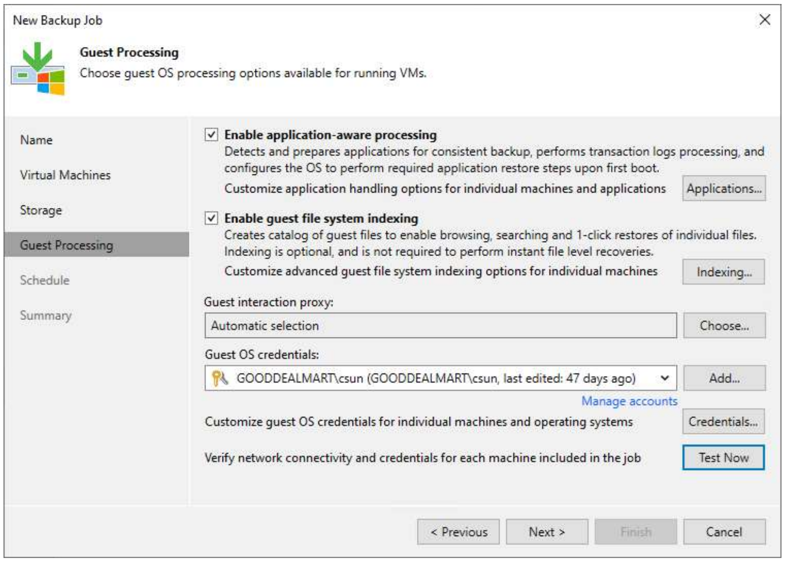
Machines:

Name ↑	Status
DC01-2022	✓ Success

Log:

Message	Duration
✓ Building list of machines to process	0:00:02
✓ Machines count: 1	
✓ Processing machine: DC01-2022	0:00:02

82. Click Next on the Guest Processing page.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Applications...
Indexing...
Choose...
Add...
Manage accounts
Credentials...
Test Now
< Previous
Next >
Finish
Cancel

Guest Processing

Choose guest OS processing options available for running VMs.

☑ **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

☑ **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

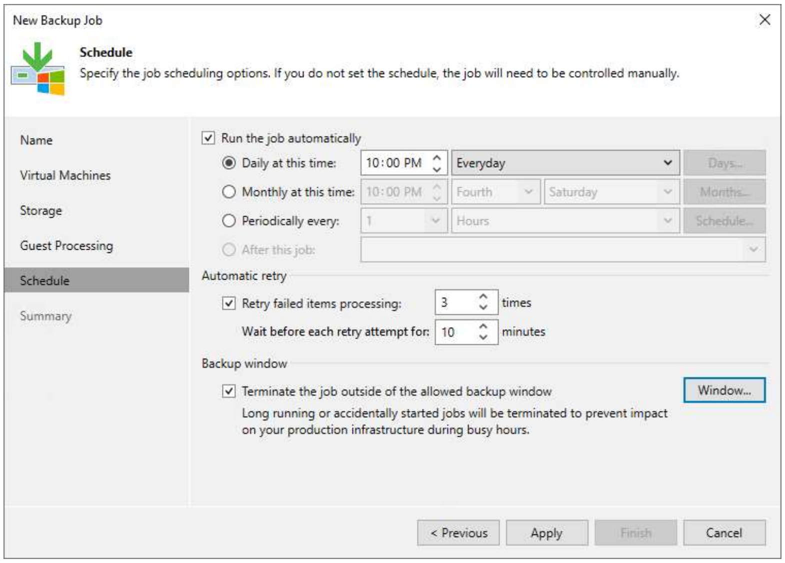
Guest interaction proxy: Automatic selection

Guest OS credentials: GOODDEALMART\csun (GOODDEALMART\csun, last edited: 47 days ago)

Customize guest OS credentials for individual machines and operating systems

Verify network connectivity and credentials for each machine included in the job

83. Select Run the job automatically checkbox on the Schedule page and select your specified schedule.
84. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
85. 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.
86. Click Apply.



New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Days...
Months...
Schedule...
Window...
< Previous
Apply
Finish
Cancel

Schedule

Specify the job scheduling options. If you do not set the schedule, the job will need to be controlled manually.

☑ Run the job automatically

● Daily at this time: 10:00 PM Everyday

○ Monthly at this time: 10:00 PM Fourth Saturday

○ Periodically every: 1 Hours

○ After this job:

Automatic retry

☑ Retry failed items processing: 3 times

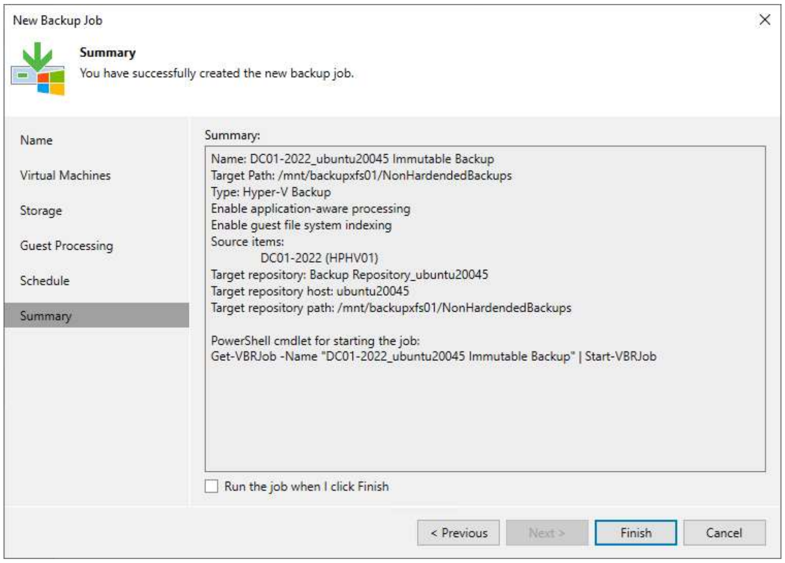
Wait before each retry attempt for: 10 minutes

Backup window

☑ Terminate the job outside of the allowed backup window

Long running or accidentally started jobs will be terminated to prevent impact on your production infrastructure during busy hours.

87. Click Finish on the Summary page.


New Backup Job
Summary
You have successfully created the new backup job.
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

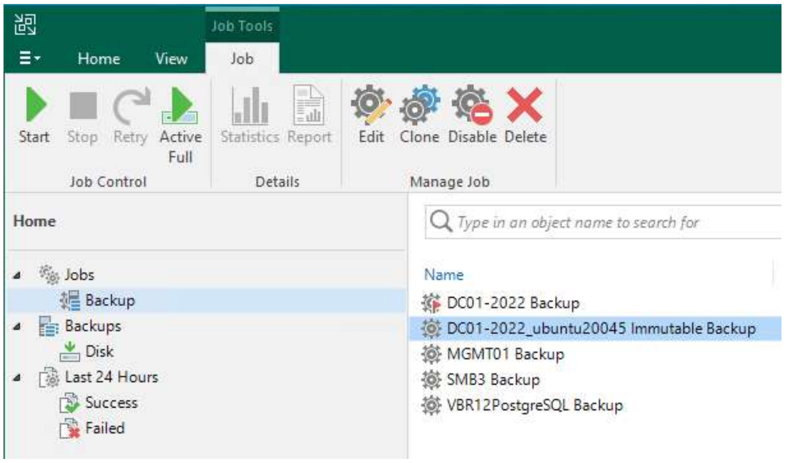
Summary:

```
Name: DC01-2022_ubuntu20045 Immutable Backup
Target Path: /mnt/backupxfs01/NonHardendedBackups
Type: Hyper-V Backup
Enable application-aware processing
Enable guest file system indexing
Source items:
        DC01-2022 (HPHV01)
Target repository: Backup Repository_ubuntu20045
Target repository host: ubuntu20045
Target repository path: /mnt/backupxfs01/NonHardendedBackups

PowerShell cmdlet for starting the job:
Get-VBRJob -Name "DC01-2022_ubuntu20045 Immutable Backup" | Start-VBRJob
```

☐ Run the job when I click Finish

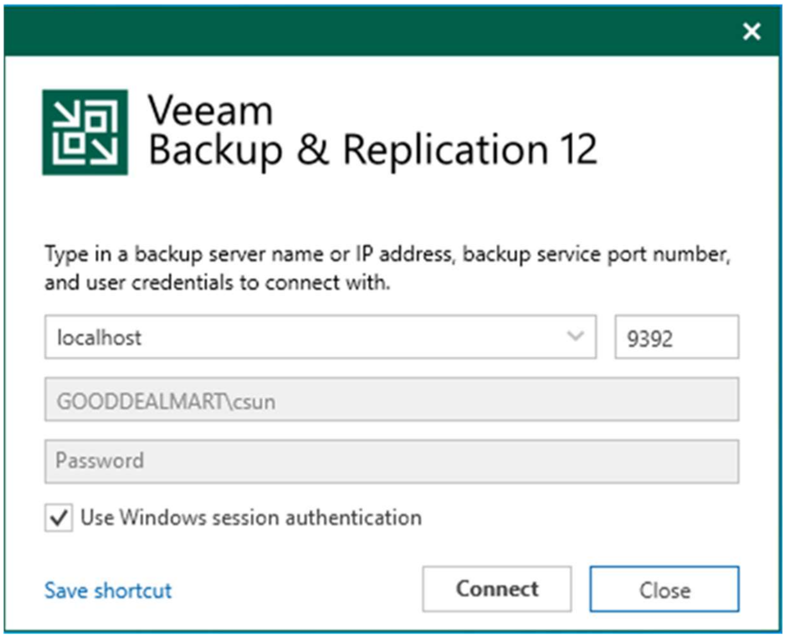
88. Verify that the backup job has been added.


Job Tools
Home
View
Job
Start
Stop
Retry
Active Full
Statistics
Report
Edit
Clone
Disable
Delete
Job Control
Details
Manage Job
Home
Type in an object name to search for
Jobs
Backup
Backups
Disk
Last 24 Hours
Success
Failed
Name

DC01-2022 Backup
DC01-2022_ubuntu20045 Immutable Backup
MGMT01 Backup
SMB3 Backup
VBR12PostgreSQL Backup

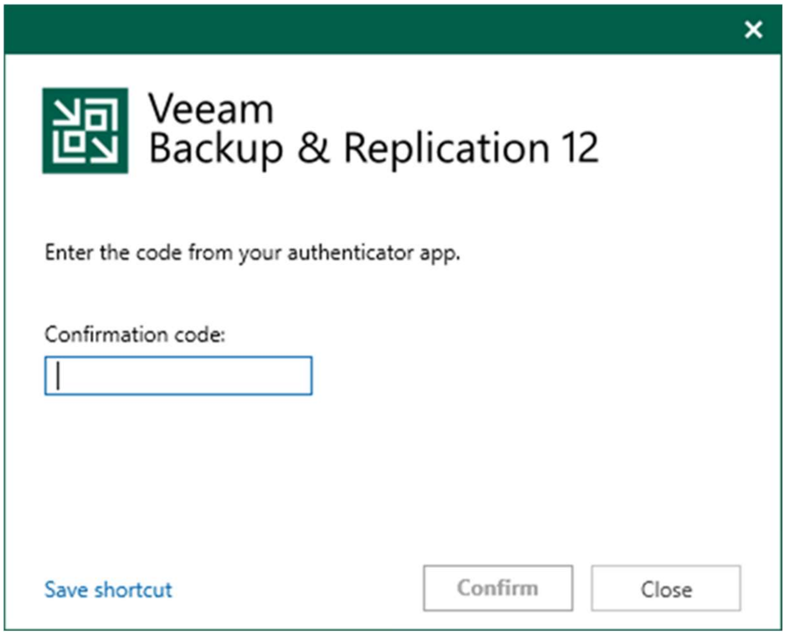
Create a Backup job to backup the specified Physical Machines (Managed by Backup Server Mode)

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)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console and click Connect.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication

Technet24

3. Enter the MFA Confirmation code and click Confirm.



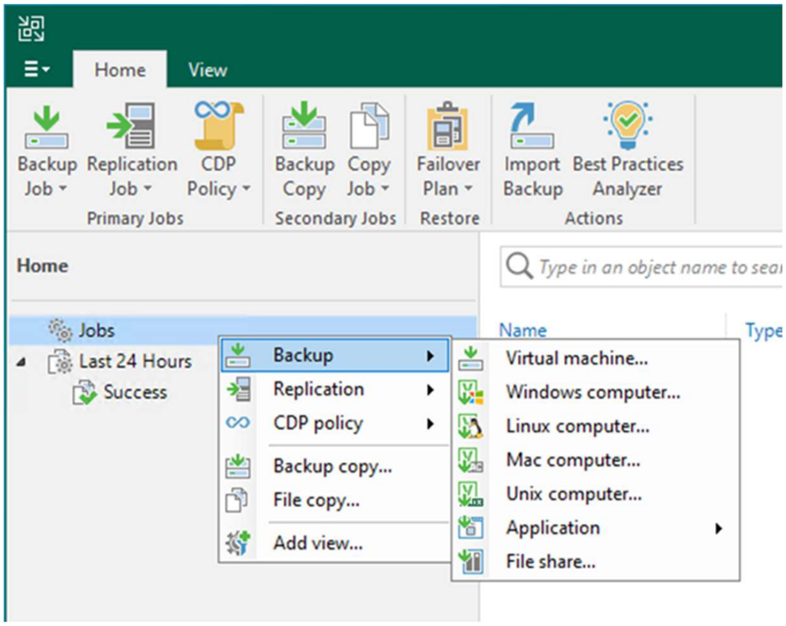
Veeam
Backup & Replication 12

Enter the code from your authenticator app.

Confirmation code:

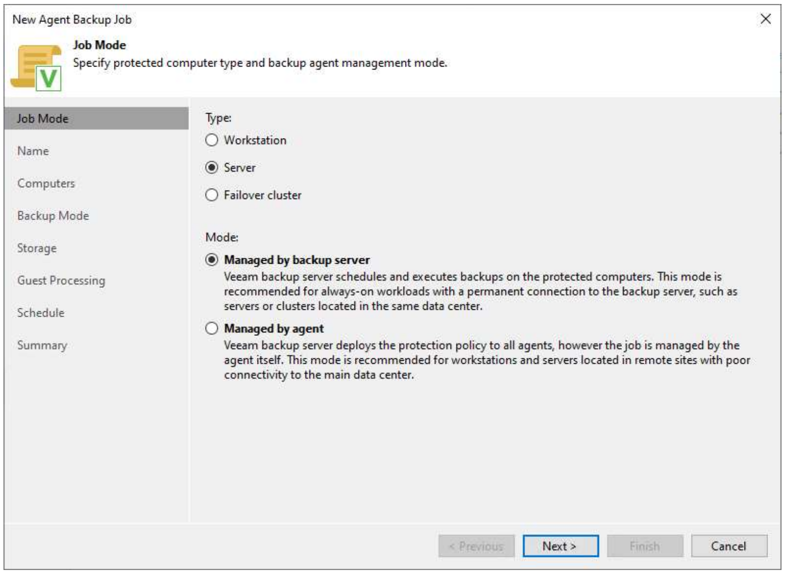
Save shortcut
Confirm
Close

4. Select Jobs on the Home page and right-click Jobs.
5. Select Backup and click Windows computer.



Home
View
Backup Job
Replication Job
CDP Policy
Primary Jobs
Backup Copy
Copy Job
Secondary Jobs
Failover Plan
Restore
Import Backup
Best Practices Analyzer
Actions
Home
Type in an object name to sea
Jobs
Last 24 Hours
Success
Name
Type
Backup
Replication
CDP policy
Backup copy...
File copy...
Add view...
Virtual machine...
Windows computer...
Linux computer...
Mac computer...
Unix computer...
Application
File share...

6. Select Managed by backup server mode on the Job Mode page and click Next.



New Agent Backup Job

Job Mode

Specify protected computer type and backup agent management mode.

Job Mode
Name
Computers
Backup Mode
Storage
Guest Processing
Schedule
Summary

Type:

○ Workstation

● Server

○ Failover cluster

Mode:

● **Managed by backup server**

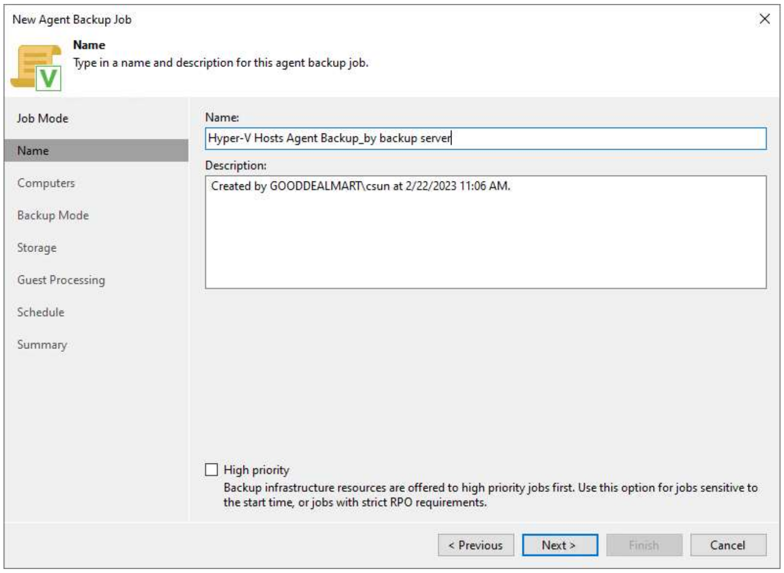
Veeam backup server schedules and executes backups on the protected computers. This mode is recommended for always-on workloads with a permanent connection to the backup server, such as servers or clusters located in the same data center.

○ **Managed by agent**

Veeam backup server deploys the protection policy to all agents, however the job is managed by the agent itself. This mode is recommended for workstations and servers located in remote sites with poor connectivity to the main data center.

< Previous
Next >
Finish
Cancel

7. On the Name page, enter a name for the backup job in the Name field.
8. Give a brief description in the Description field for the future.
9. Click Next.



New Agent Backup Job

Name

Type in a name and description for this agent backup job.

Job Mode
Name
Computers
Backup Mode
Storage
Guest Processing
Schedule
Summary

Name: Hyper-V Hosts Agent Backup_by backup server

Description: Created by GOODDEALMART\csun at 2/22/2023 11:06 AM.

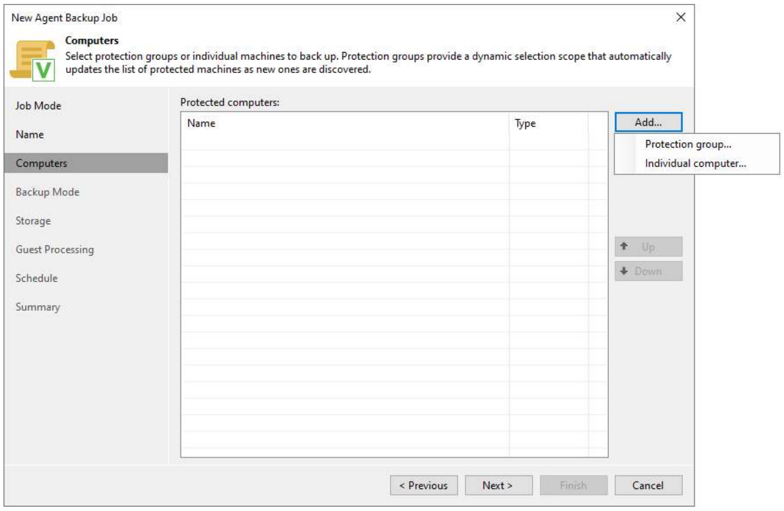
☐ High priority

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.

< Previous
Next >
Finish
Cancel

Technet24

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

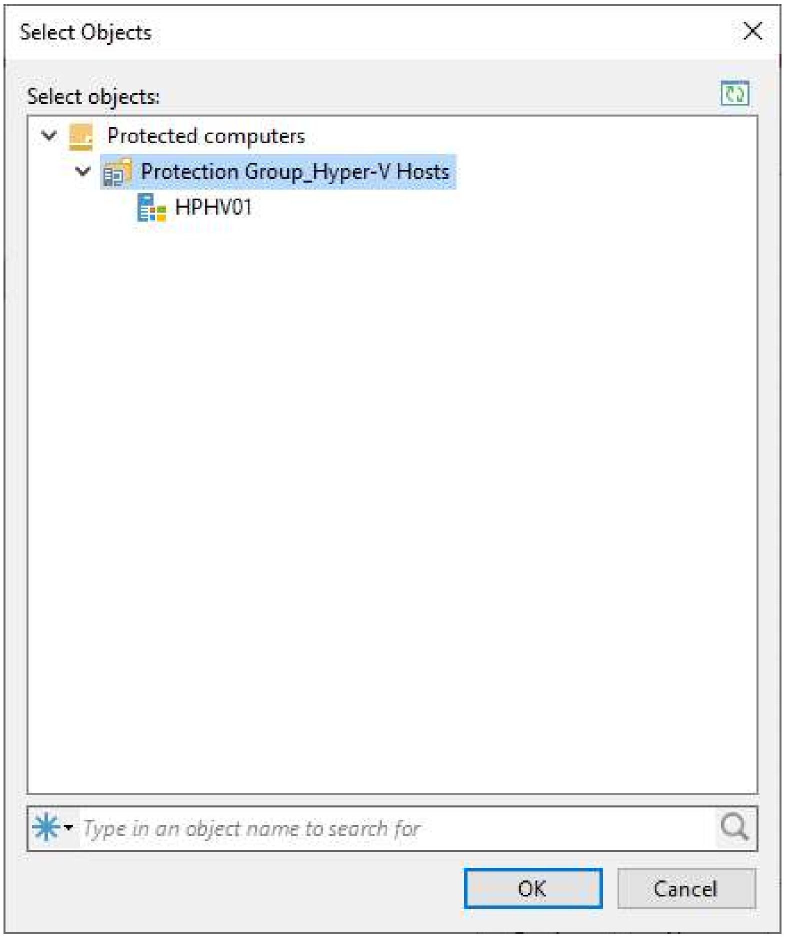


Select protection groups or individual machines to back up. Protection groups provide a dynamic selection scope that automatically updates the list of protected machines as new ones are discovered.

New Agent Backup Job
Computers
Job Mode
Name
Computers
Backup Mode
Storage
Guest Processing
Schedule
Summary
Protected computers:
Name
Type
Add...
Protection group...
Individual computer...
Up
Down
< Previous
Next >
Finish
Cancel

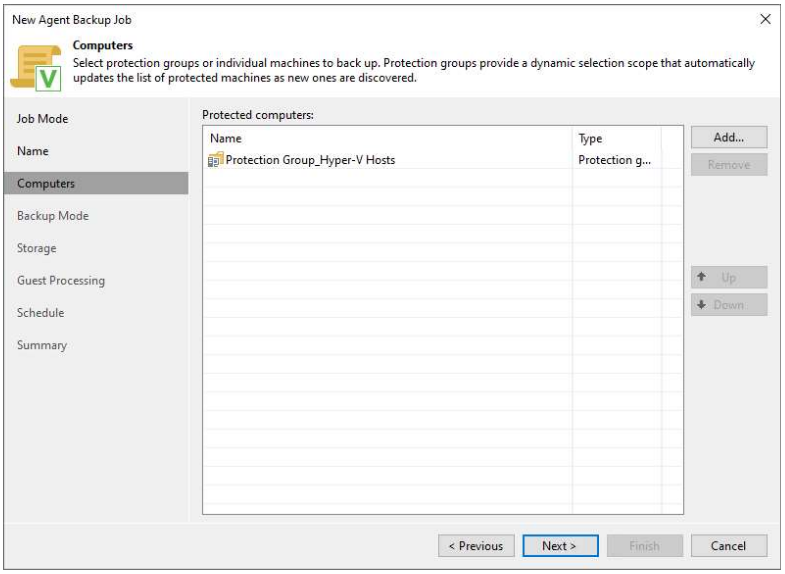
11. Select the protection group on the Select Objects page and click OK.

12. You can select multiple protection groups for the same backup job and repeat the step to add them.


Select Objects
Select objects:
Protected computers
Protection Group_Hyper-V Hosts
HPHV01
Type in an object name to search for
OK
Cancel

Technet24

13. Click Next on the Computers page.



New Agent Backup Job

Computers

Select protection groups or individual machines to back up. Protection groups provide a dynamic selection scope that automatically updates the list of protected machines as new ones are discovered.

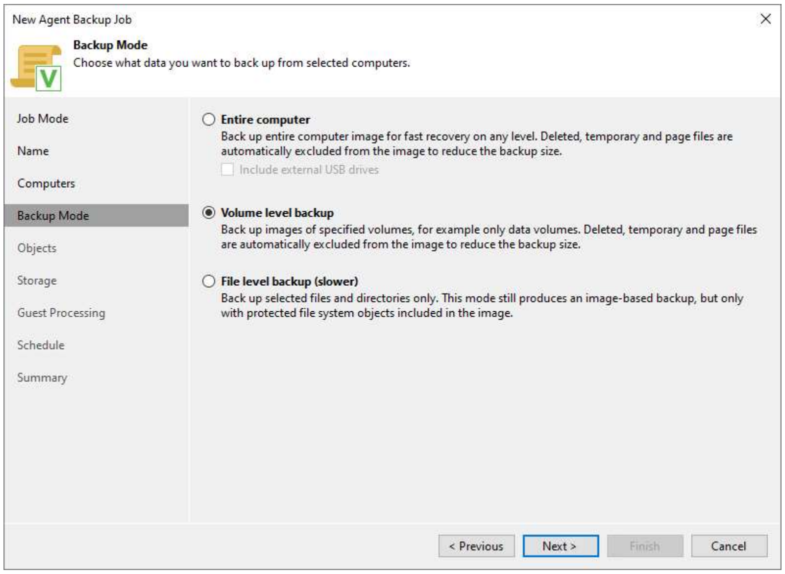
Protected computers:

Name	Type
Protection Group_Hyper-V Hosts	Protection g...

Job Mode
Name
Computers
Backup Mode
Storage
Guest Processing
Schedule
Summary
Add...
Remove
Up
Down
< Previous
Next >
Finish
Cancel

---

14. Select Volume level backup mode on the Backup Mode page to back up the specified computer volumes and click Next.



New Agent Backup Job

Backup Mode

Choose what data you want to back up from selected computers.

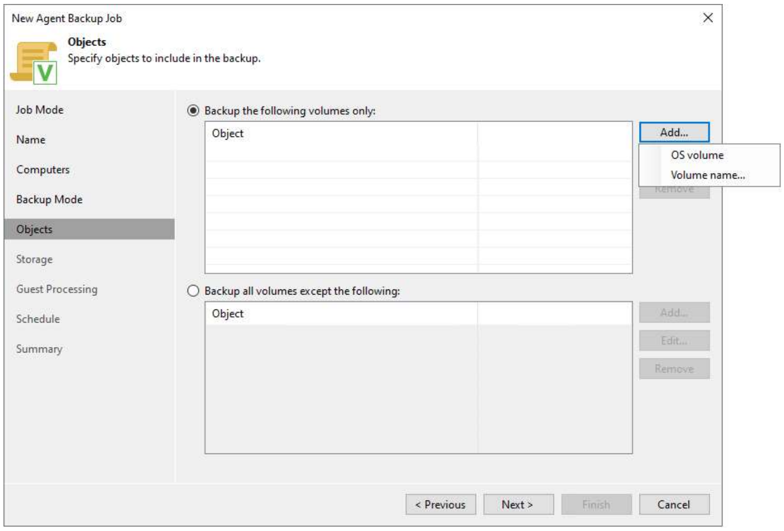
○ **Entire computer**
Back up entire computer image for fast recovery on any level. Deleted, temporary and page files are automatically excluded from the image to reduce the backup size.
☐ Include external USB drives

● **Volume level backup**
Back up images of specified volumes, for example only data volumes. Deleted, temporary and page files are automatically excluded from the image to reduce the backup size.

○ **File level backup (slower)**
Back up selected files and directories only. This mode still produces an image-based backup, but only with protected file system objects included in the image.

Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

15. On the Objects page, select Backup the following volumes only.
16. Click Add and select OS volume.
17. Click Next



New Agent Backup Job

Objects

Specify objects to include in the backup.

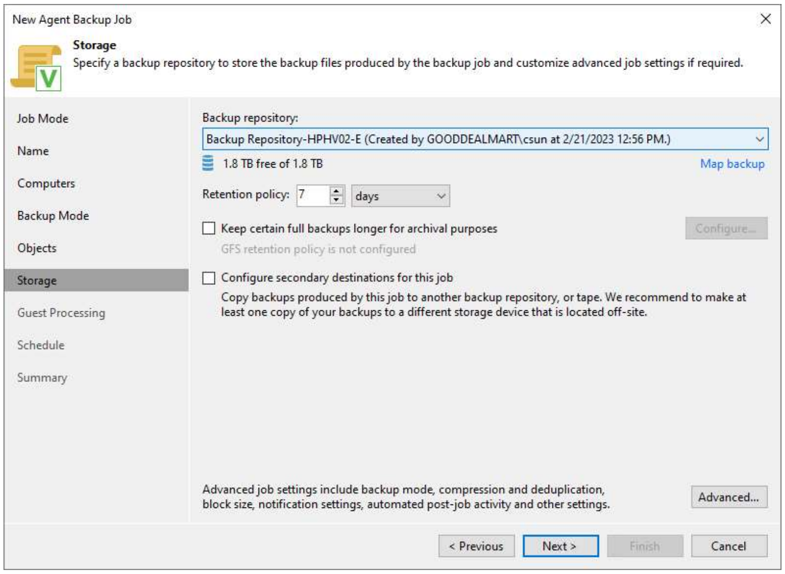
● Backup the following volumes only:

○ Backup all volumes except the following:

Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
Object
Add...
OS volume
Volume name...
Remove
Object
Add...
Edit...
Remove
< Previous
Next >
Finish
Cancel

---

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



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.

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.8 TB free of 1.8 TB

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.

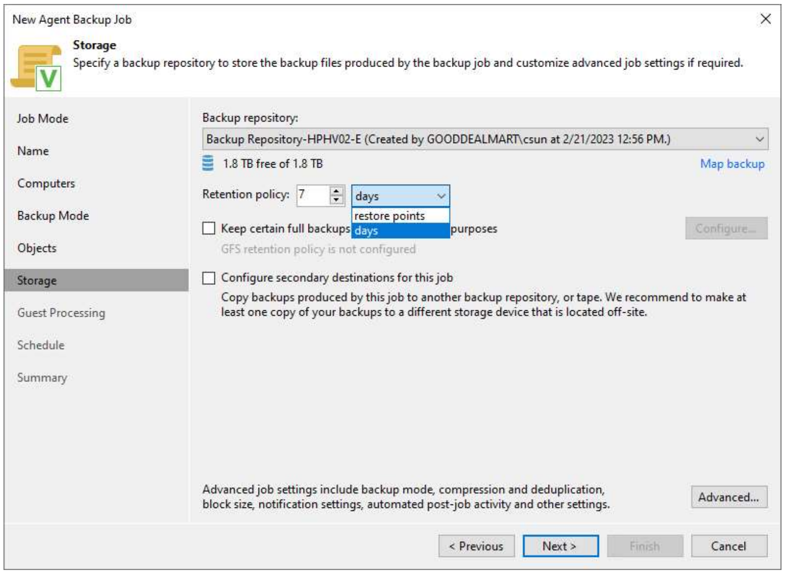
Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings.

Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

Technet24

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.



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.

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.8 TB free of 1.8 TB

Retention policy: 7 days

☐ Keep certain full backups purposes

GFS retention policy is not configured

☐ Configure secondary destinations for this job

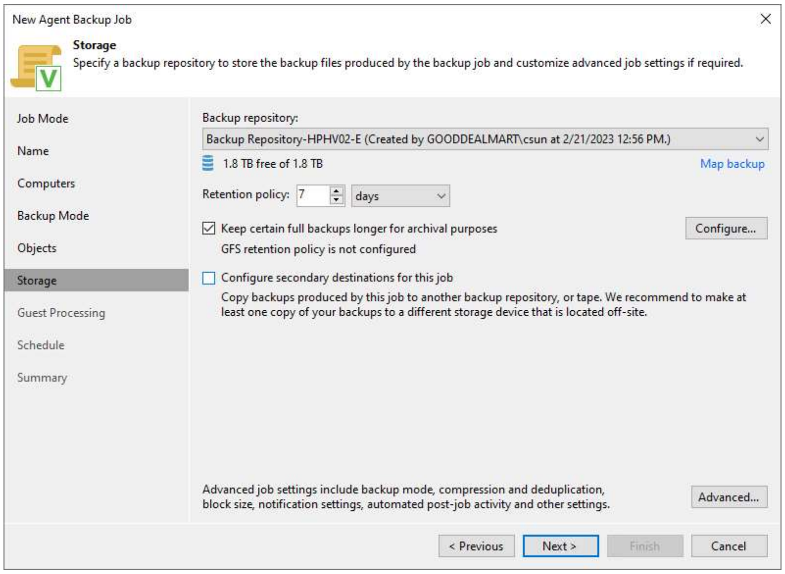
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

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

Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
Map backup
restore points
days
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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

22. Select the Keep certain full backups for longer for archival purposes. Then, if you need it, click Configure.



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.

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.8 TB free of 1.8 TB

Retention policy: 7 days

☑ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

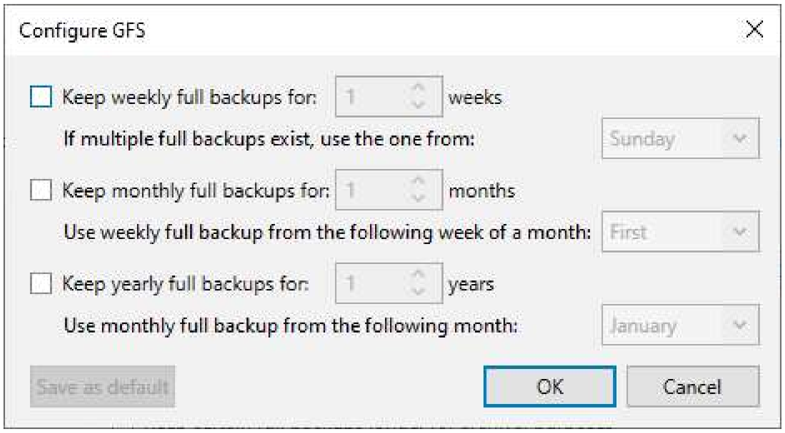
☐ Configure secondary destinations for this job

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.

Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

23. 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.
24. Select the Keep monthly full backups for check box, and specify the months you want to prevent restore points from being modified and deleted.
25. Select the Keep yearly full backups for check box, and specify the years you want to prevent restore points from being modified and deleted.
26. Click OK.



Configure GFS

☐ Keep weekly full backups for: 1 weeks

If multiple full backups exist, use the one from: Sunday

☐ Keep monthly full backups for: 1 months

Use weekly full backup from the following week of a month: First

☐ Keep yearly full backups for: 1 years

Use monthly full backup from the following month: January

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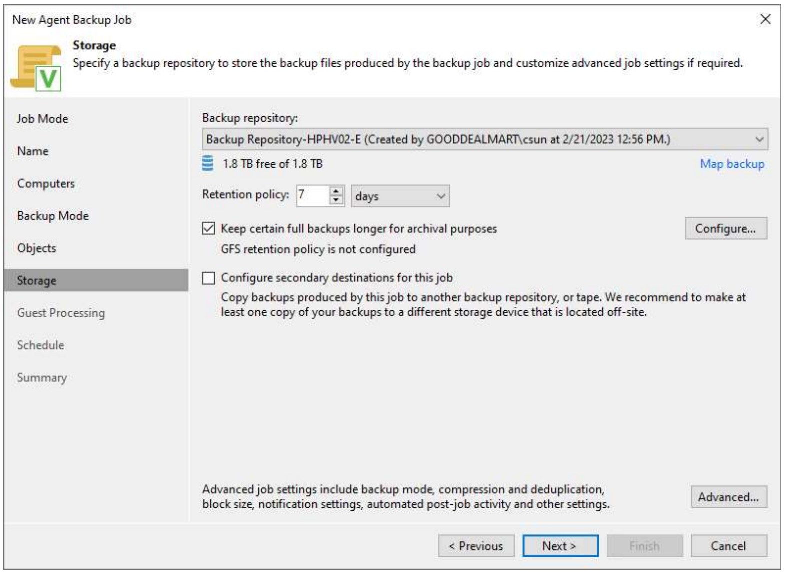
27. On the Storage page, click Advanced.


New Agent Backup Job
Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

Storage

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

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.8 TB free of 1.8 TB

Retention policy: 7 days

☑ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

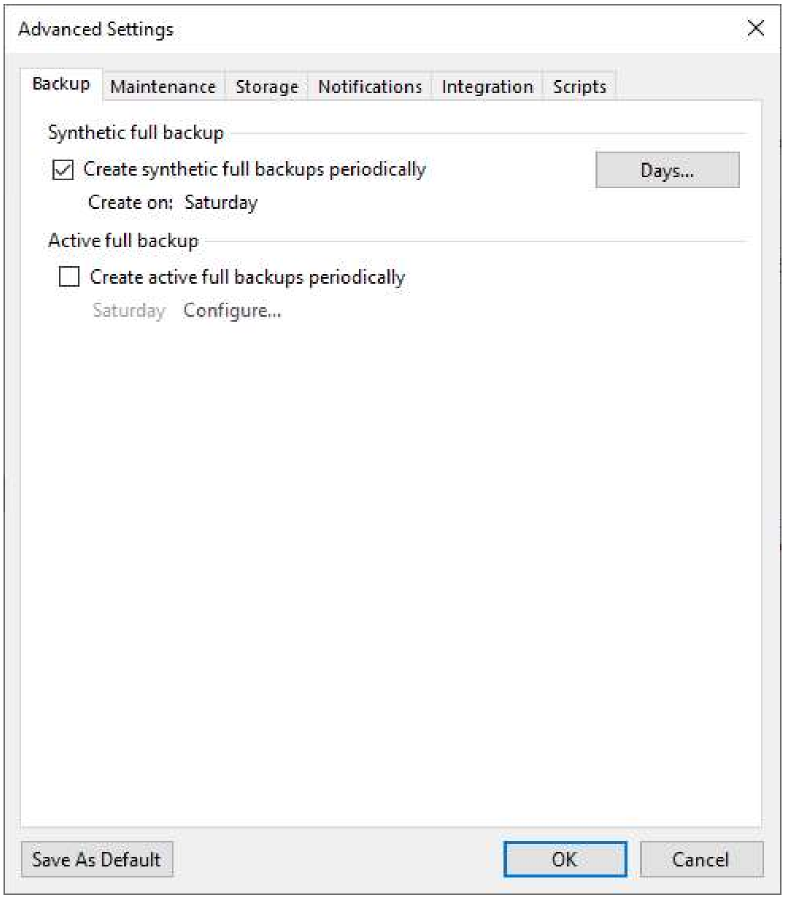
☐ Configure secondary destinations for this job

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.

28. Select Create synthetic full backups or Active full backups periodically checkbox.

29. Schedule full backups periodically and click OK.



Advanced Settings

Backup
Maintenance
Storage
Notifications
Integration
Scripts

Synthetic full backup

☑ Create synthetic full backups periodically

Days...

Create on: Saturday

Active full backup

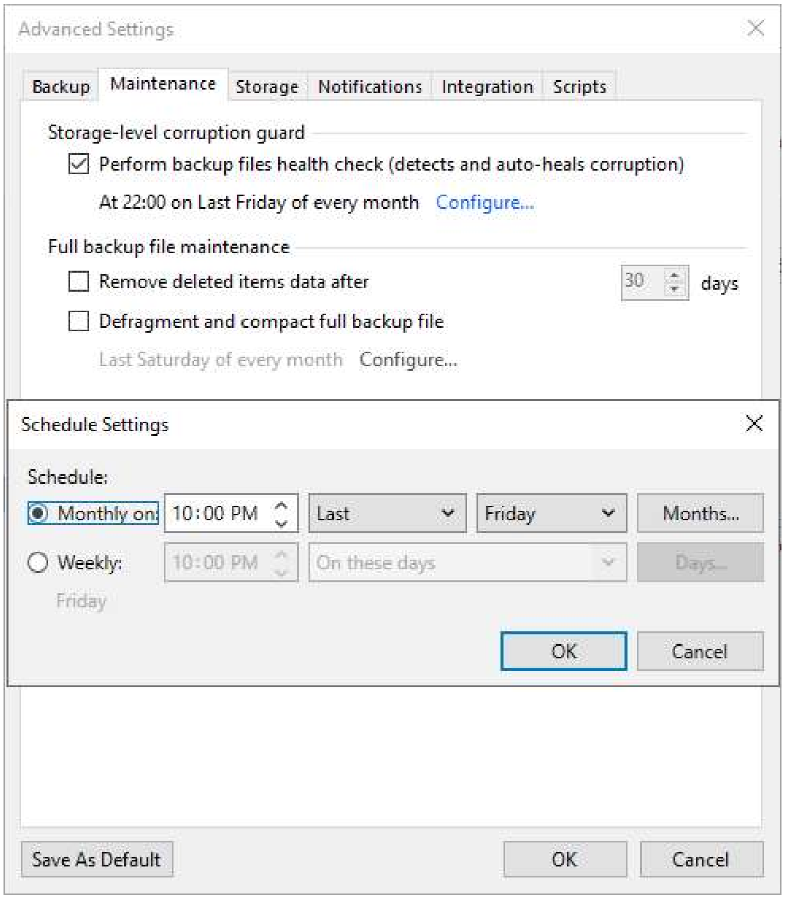
☐ Create active full backups periodically

Saturday

Configure...
Save As Default
OK
Cancel

Technet24

30. On the Advanced Settings, select Maintenance.
31. 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.
32. Click Configure to set a timetable for the health check.


Advanced Settings
Backup
Maintenance
Storage
Notifications
Integration
Scripts
Configure...
Configure...
Schedule Settings
Months...
Days...
OK
Cancel
Save As Default
OK
Cancel

Storage-level corruption guard

☑ Perform backup files health check (detects and auto-heals corruption)

At 22:00 on Last Friday of every month

Full backup file maintenance

☐ Remove deleted items data after 30 days

☐ Defragment and compact full backup file

Last Saturday of every month

Schedule:

● Monthly on: 10:00 PM Last Friday

○ Weekly: 10:00 PM On these days

Friday

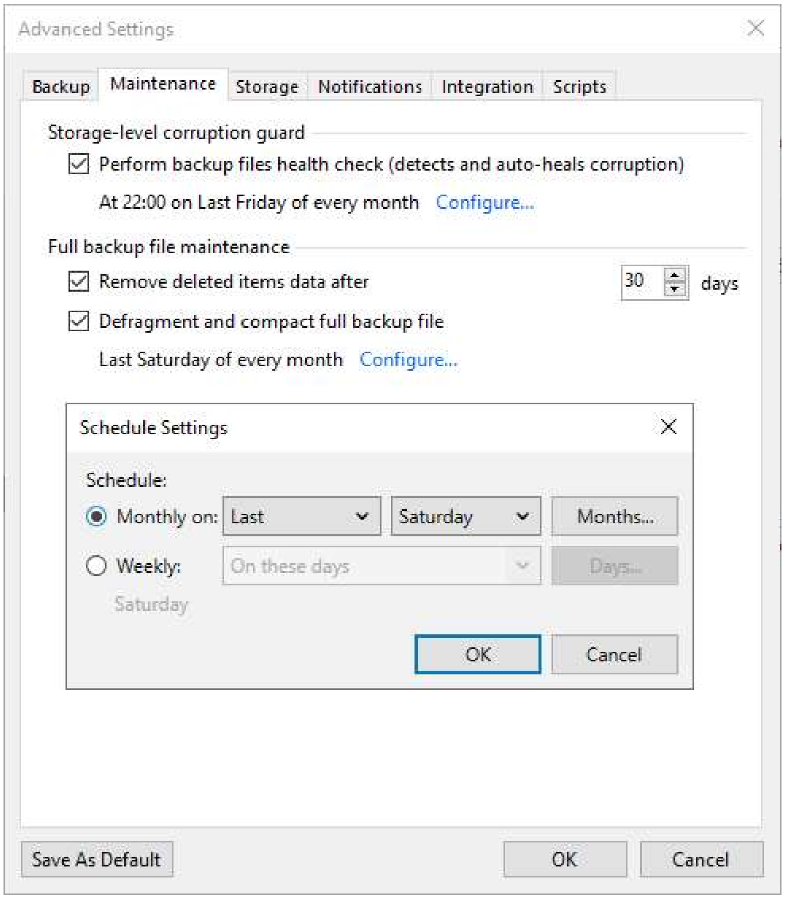
33. Select the Remove deleted items data after the checkbox and enter the few days you want backup data for deleted VMs to be kept.

34. Select the Defragment and compact full backup file checkbox and click Configure.

35. Set the schedule for the compact operation to compact a full backup periodically.

Note:

You don’t need to enable the defragment and compact functionality checkbox if GFS retention is enabled.


Advanced Settings
Backup
Maintenance
Storage
Notifications
Integration
Scripts
Save As Default
OK
Cancel

Storage-level corruption guard

☑ Perform backup files health check (detects and auto-heals corruption)

At 22:00 on Last Friday of every month Configure...

Full backup file maintenance

☑ Remove deleted items data after 30 days

☑ Defragment and compact full backup file

Last Saturday of every month Configure...

Schedule Settings

Schedule:

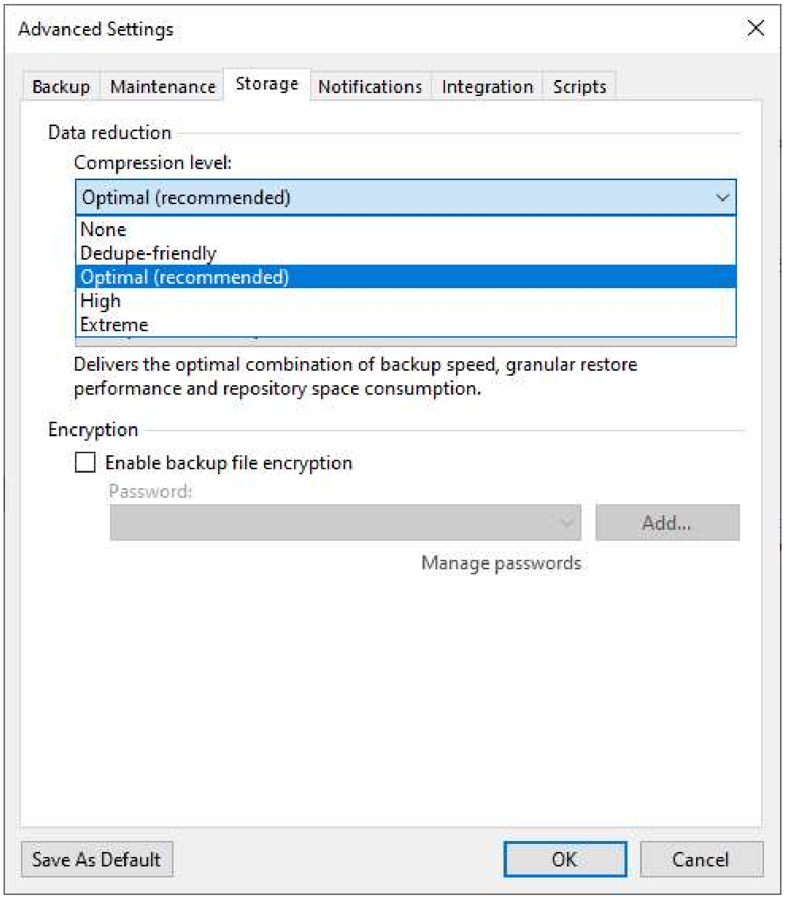
● Monthly on: Last Saturday Months...

○ Weekly: On these days Days...

Saturday

Technet24

36. On Advanced Settings, select Storage.
37. Select the Compression level from the drop-down list.



Advanced Settings

Backup
Maintenance
Storage
Notifications
Integration
Scripts

Data reduction

Compression level: Optimal (recommended)

None
Dedupe-friendly
Optimal (recommended)
High
Extreme

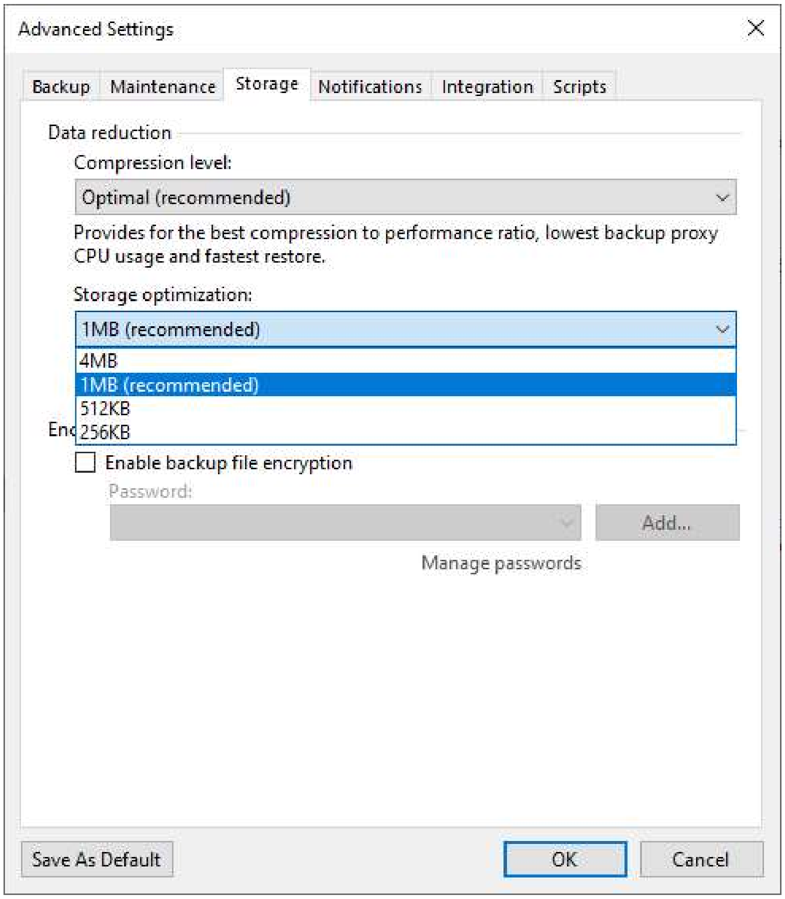
Delivers the optimal combination of backup speed, granular restore performance and repository space consumption.

Encryption

☐ Enable backup file encryption

Password:
Add...
Manage passwords
Save As Default
OK
Cancel

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



Advanced Settings
Backup
Maintenance
Storage
Notifications
Integration
Scripts
Data reduction

Compression level: Optimal (recommended)

Provides for the best compression to performance ratio, lowest backup proxy CPU usage and fastest restore.

Storage optimization: 1MB (recommended)

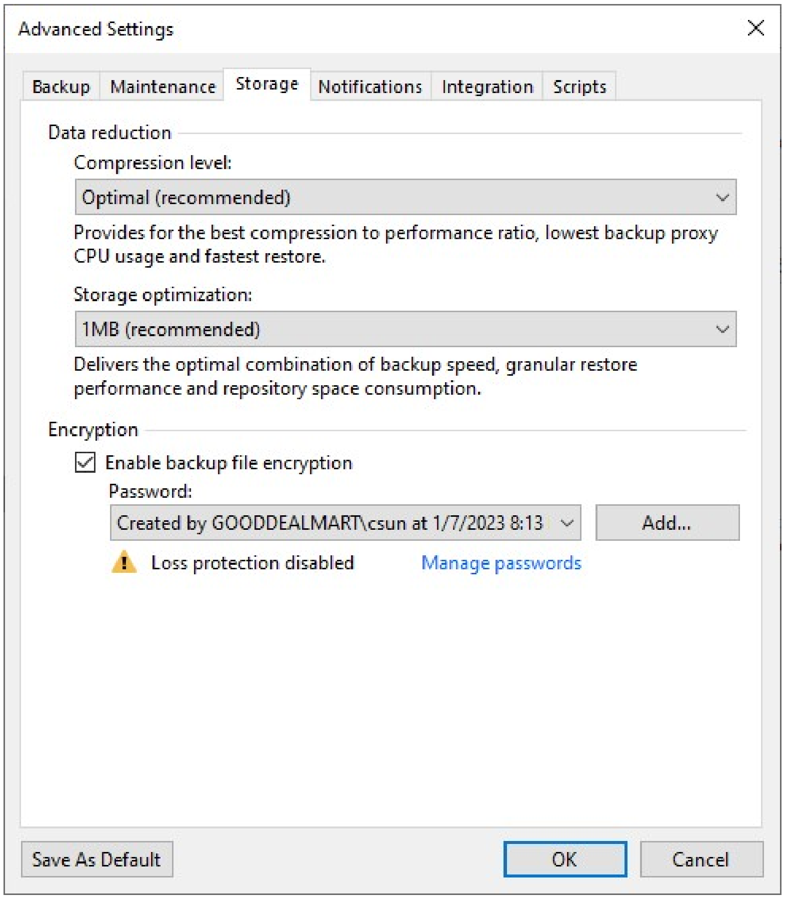
4MB
1MB (recommended)
512KB
256KB
Enc

☐ Enable backup file encryption

Password:
Add...
Manage passwords
Save As Default
OK
Cancel

Technet24

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


Advanced Settings
Backup
Maintenance
Storage
Notifications
Integration
Scripts

Data reduction

Compression level: Optimal (recommended)

Provides for the best compression to performance ratio, lowest backup proxy CPU usage and fastest restore.

Storage optimization: 1MB (recommended)

Delivers the optimal combination of backup speed, granular restore performance and repository space consumption.

Encryption

☑ Enable backup file encryption

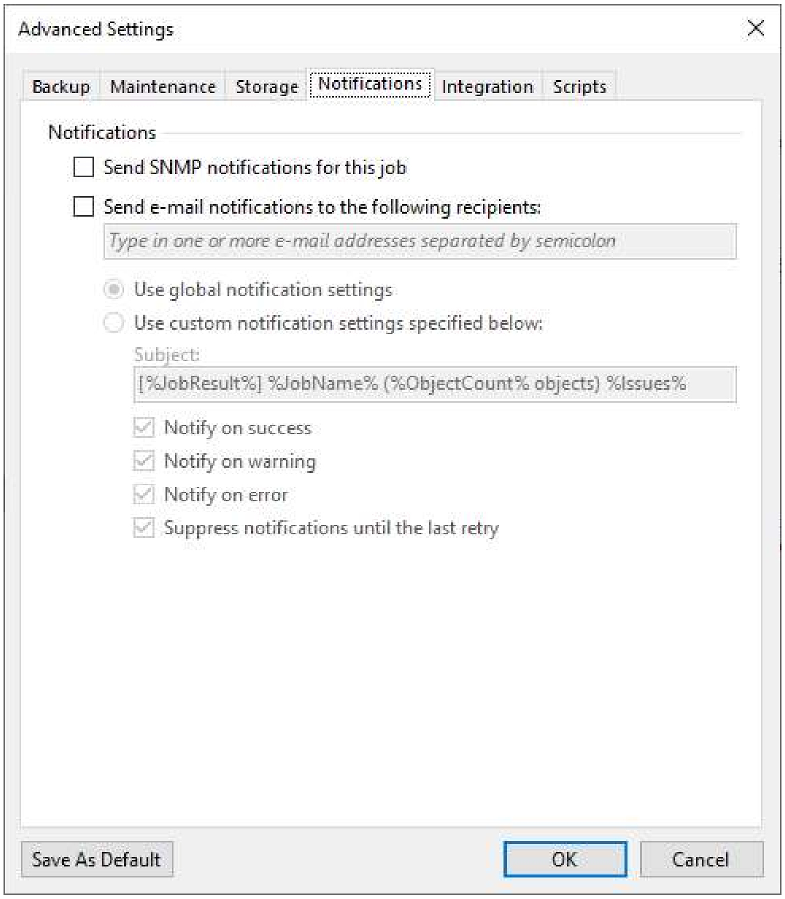
Password: Created by GOODDEALMART\csun at 1/7/2023 8:13

Loss protection disabled

Add...
Manage passwords
Save As Default
OK
Cancel

41. On the Advanced Settings, select Notifications.

42. Keep the default settings.



Advanced Settings
Backup
Maintenance
Storage
Notifications
Integration
Scripts

Notifications

☐ Send SNMP notifications for this job

☐ Send e-mail notifications to the following recipients:

Type in one or more e-mail addresses separated by semicolon

● Use global notification settings

○ Use custom notification settings specified below:

Subject:

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

☑ Notify on success

☑ Notify on warning

☑ Notify on error

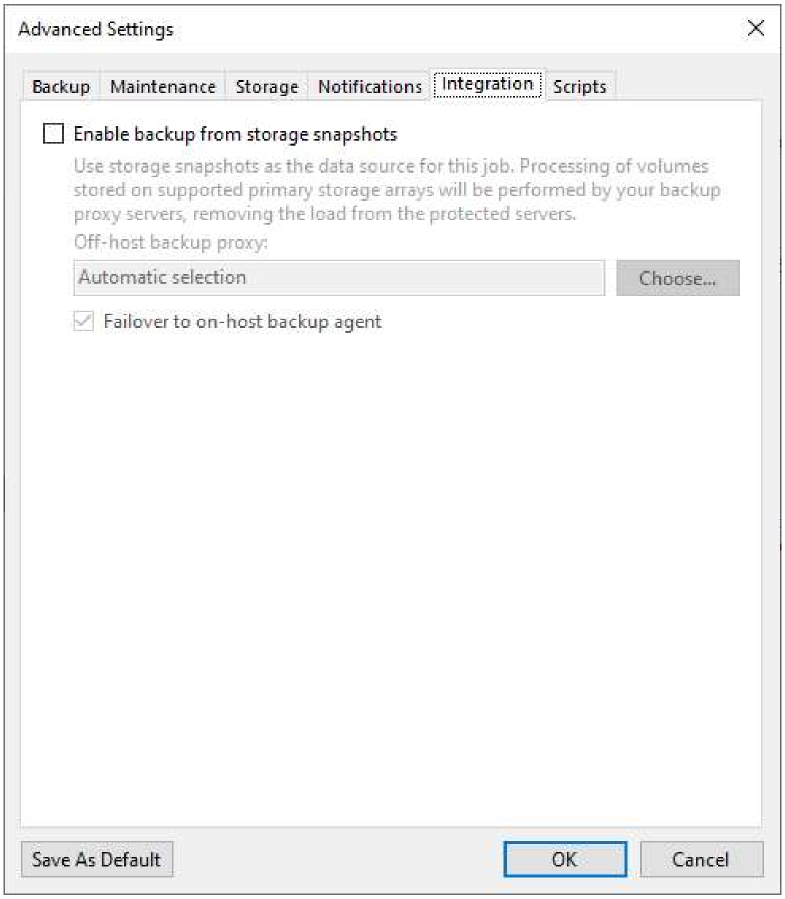
☑ Suppress notifications until the last retry

Save As Default
OK
Cancel

Technet24

43. On the Advanced Settings, select Integration.

44. Keep the default settings.



Advanced Settings

Backup
Maintenance
Storage
Notifications
Integration
Scripts

☐ Enable backup from storage snapshots

Use storage snapshots as the data source for this job. Processing of volumes stored on supported primary storage arrays will be performed by your backup proxy servers, removing the load from the protected servers.

Off-host backup proxy: Automatic selection

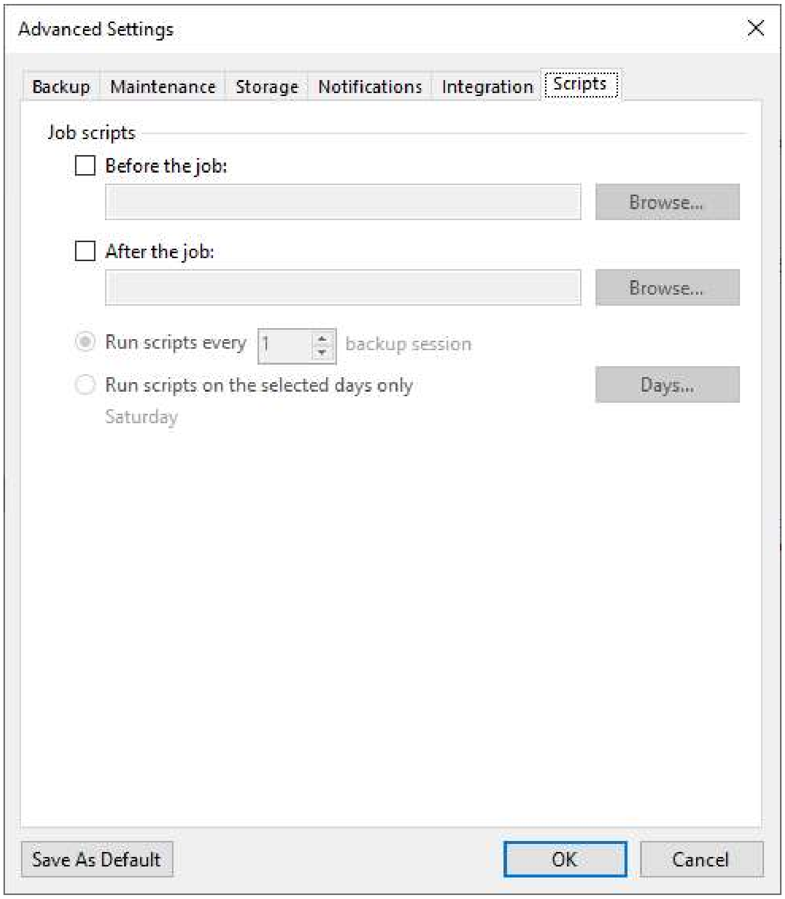
Choose...

☑ Failover to on-host backup agent

Save As Default
OK
Cancel

45. On the Advanced Settings page, select Scripts.

46. Keep the default settings and click OK.



Advanced Settings

Backup
Maintenance
Storage
Notifications
Integration
Scripts

Job scripts

☐ Before the job:

☐ After the job:

● Run scripts every 1 backup session

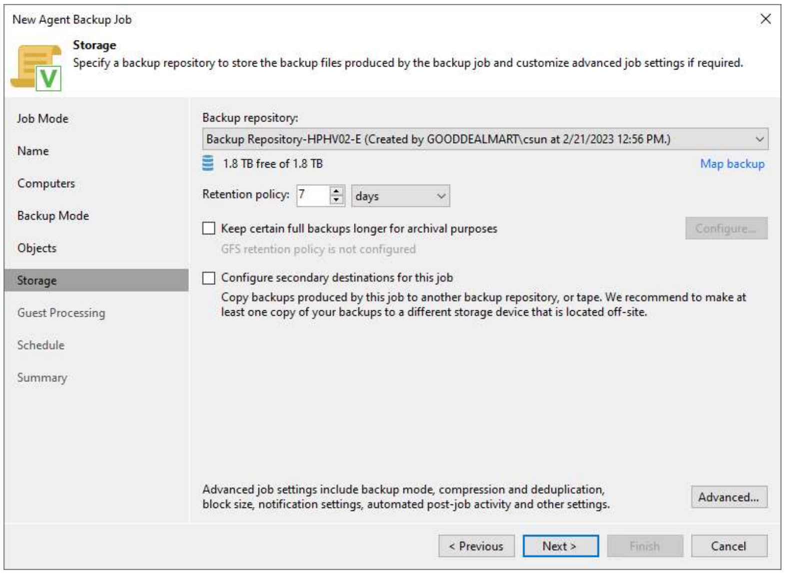
○ Run scripts on the selected days only

Saturday

Browse...
Browse...
Days...
Save As Default
OK
Cancel

Technet24

47. On the Storage page, click Next.



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.

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.8 TB free of 1.8 TB

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.

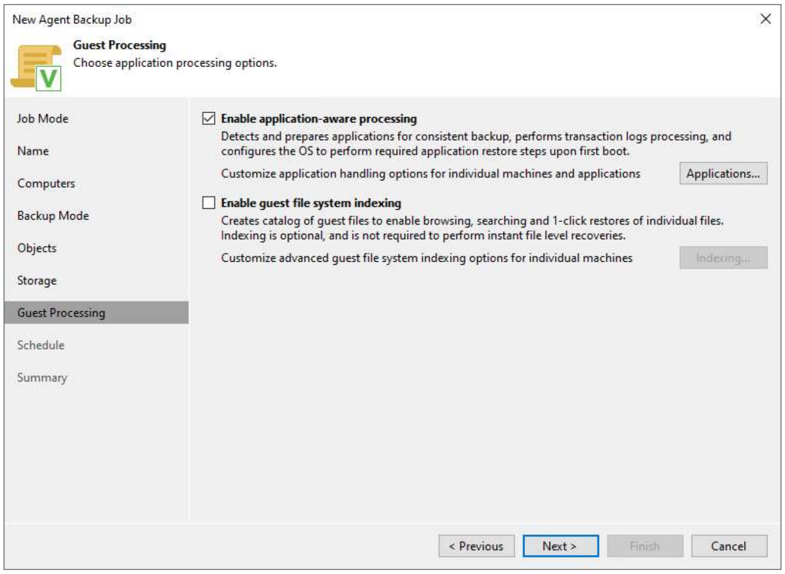
Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings.

Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

---

48. 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.

49. Select the Enable application-aware processing checkbox on the Guest Processing



New Agent Backup Job

Guest Processing

Choose application processing 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

☐ **Enable guest file system indexing**

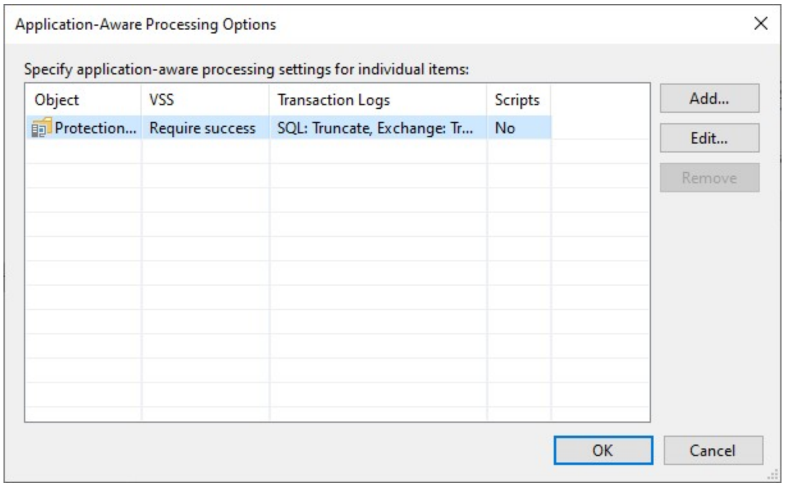
Creates catalog of guest files to enable browsing, searching and 1-click restores of individual files. Indexing is optional, and is not required to perform instant file level recoveries.

Customize advanced guest file system indexing options for individual machines

Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
Applications...
Indexing...
< Previous
Next >
Finish
Cancel

page, and click Applications.

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



Application-Aware Processing Options

Specify application-aware processing settings for individual items:

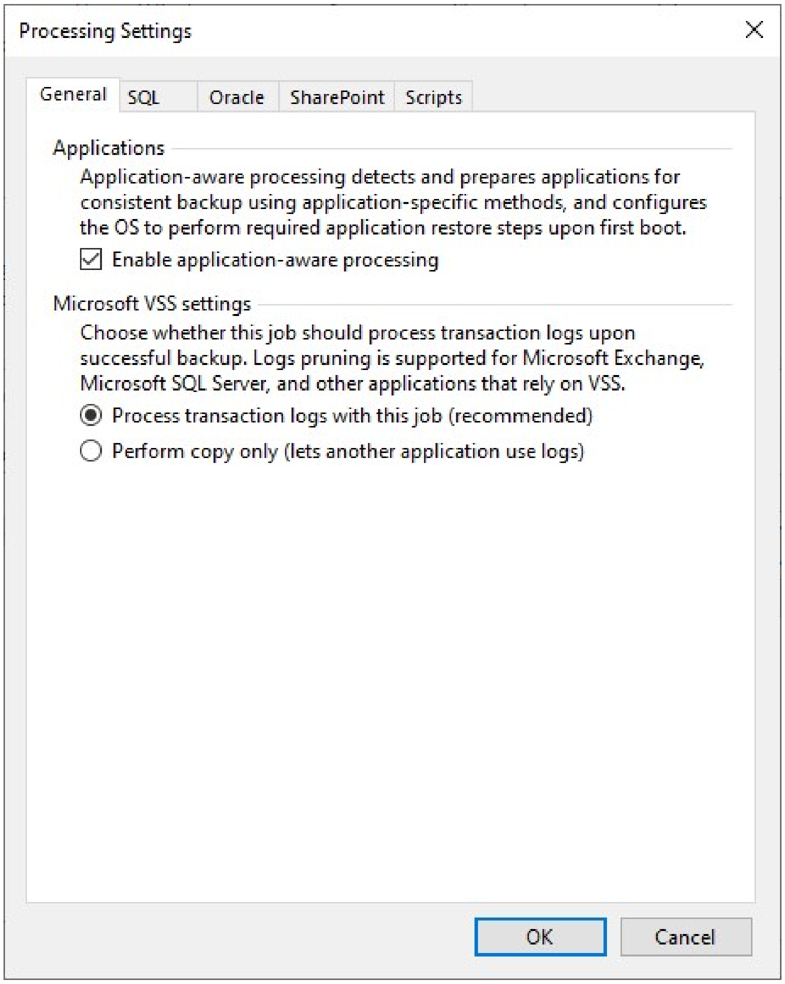
Object	VSS	Transaction Logs	Scripts
Protection...	Require success	SQL: Truncate, Exchange: Tr...	No

Technet24

51. On the Processing Settings page, select General.

52. Select Enable application-aware processing checkbox.

53. Select Process transaction logs with this job (recommended).



Applications

Application-aware processing detects and prepares applications for consistent backup using application-specific methods, and configures the OS to perform required application restore steps upon first boot.

☑ Enable application-aware processing

Microsoft VSS settings

Choose whether this job should process transaction logs upon successful backup. Logs pruning is supported for Microsoft Exchange, Microsoft SQL Server, and other applications that rely on VSS.

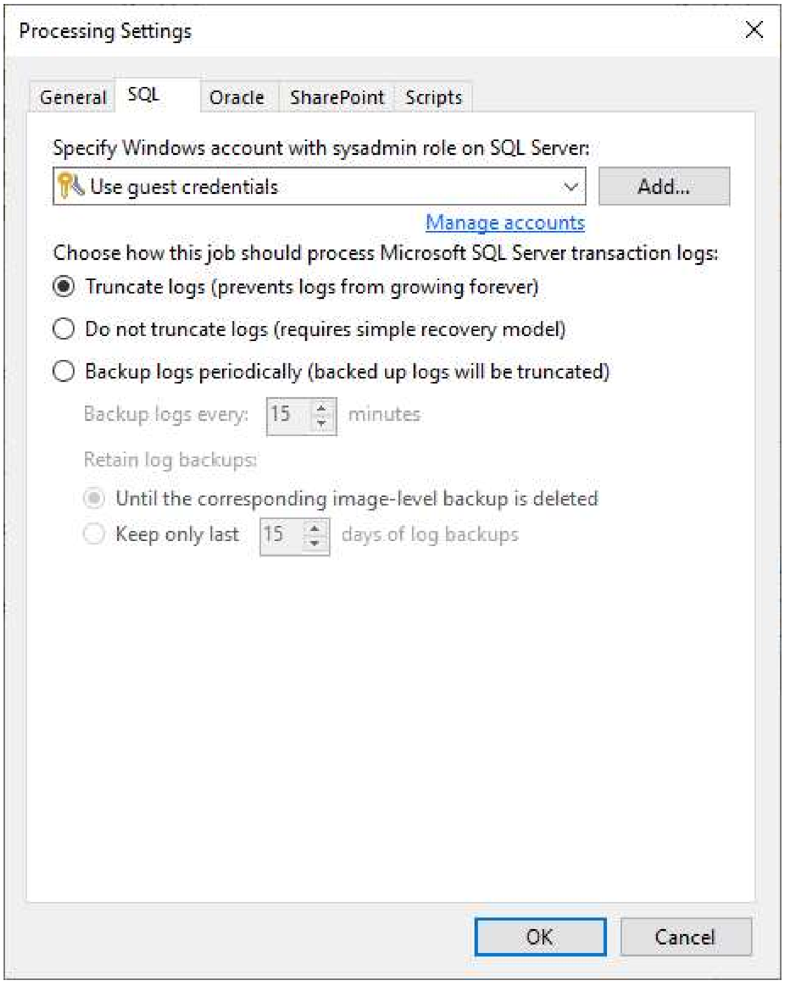
● Process transaction logs with this job (recommended)

○ Perform copy only (lets another application use logs)

54. On the Processing Settings page, click SQL if the Physical Machine is a Microsoft SQL Server.

55. Select a user account from the drop-down list.

56. Select Truncate logs (Prevents logs from growing forever).



Processing Settings
General
SQL
Oracle
SharePoint
Scripts
Add...
Manage accounts
OK
Cancel

Specify Windows account with sysadmin role on SQL Server:

Use guest credentials

Choose how this job should process Microsoft SQL Server transaction logs:

● Truncate logs (prevents logs from growing forever)

○ Do not truncate logs (requires simple recovery model)

○ Backup logs periodically (backed up logs will be truncated)

Backup logs every: 15 minutes

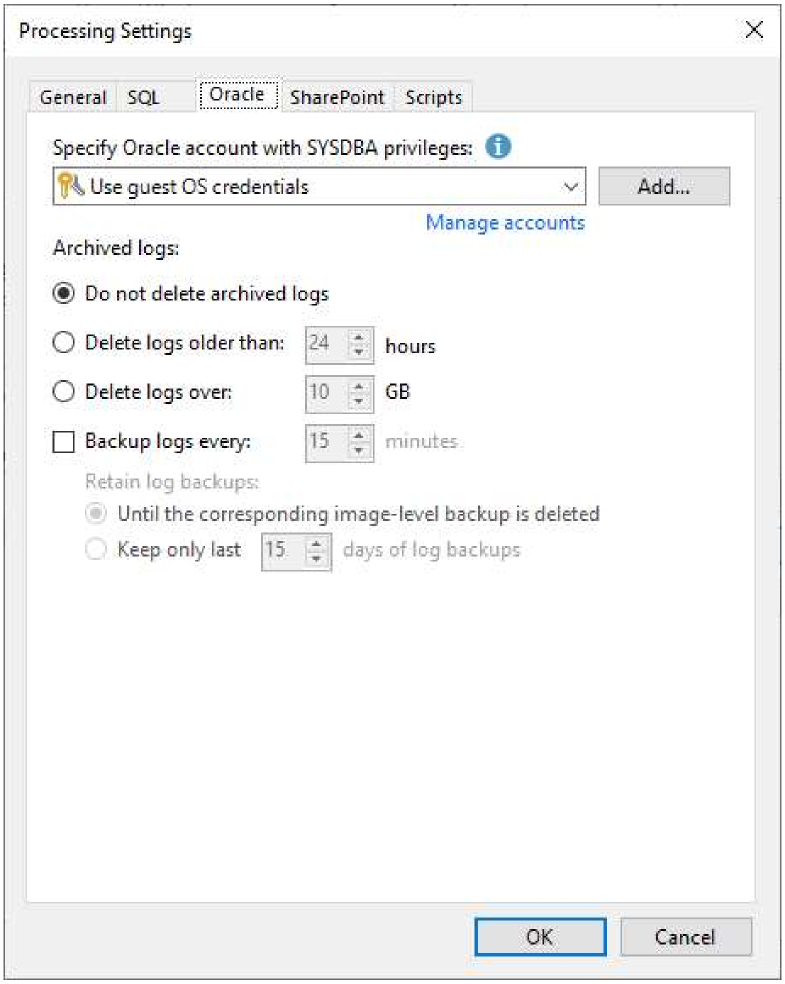
Retain log backups:

● Until the corresponding image-level backup is deleted

○ Keep only last 15 days of log backups

Technet24

57. Select Oracle on the Processing Settings page if the Physical Machine is an Oracle Server.
58. Select a user account from the drop-down list.
59. Select Do not delete archived logs.



Processing Settings

General
SQL
Oracle
SharePoint
Scripts

Specify Oracle account with SYSDBA privileges: Use guest OS credentials

Add...
Manage accounts

Archived logs:

● Do not delete archived logs

○ Delete logs older than: 24 hours

○ Delete logs over: 10 GB

☐ Backup logs every: 15 minutes

Retain log backups:

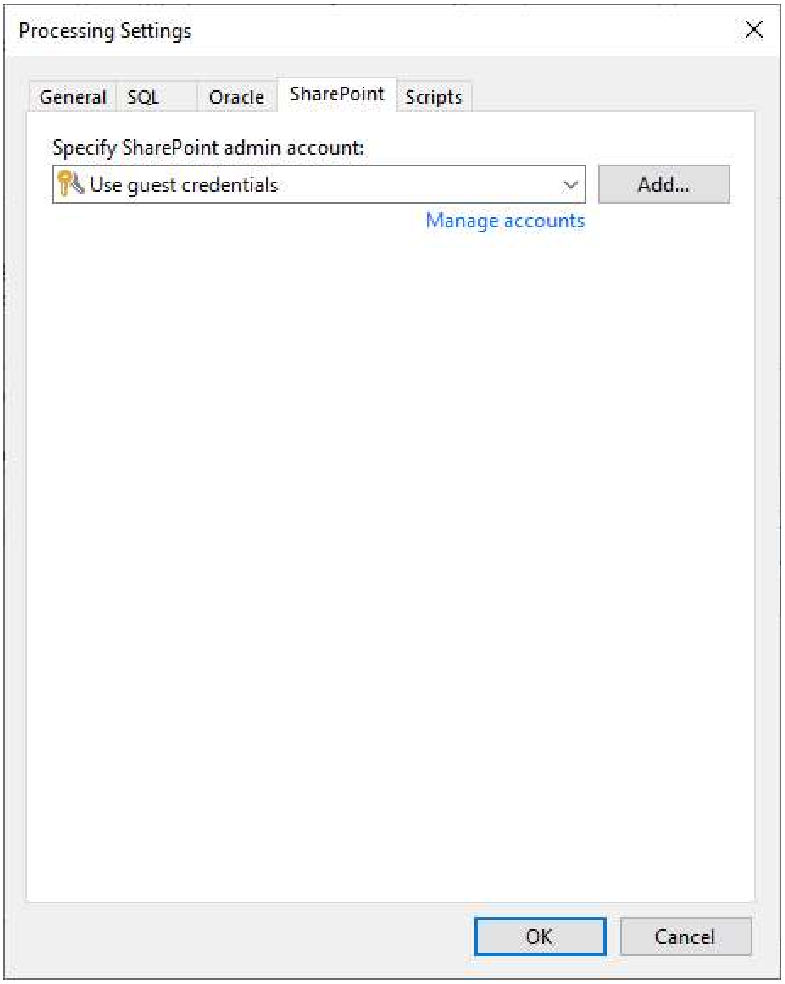
● Until the corresponding image-level backup is deleted

○ Keep only last 15 days of log backups

OK
Cancel

60. On the Processing Settings page, select SharePoint if the Physical Machine is a SharePoint Server.

61. Select a user account from the drop-down list.



Processing Settings

Specify SharePoint admin account:

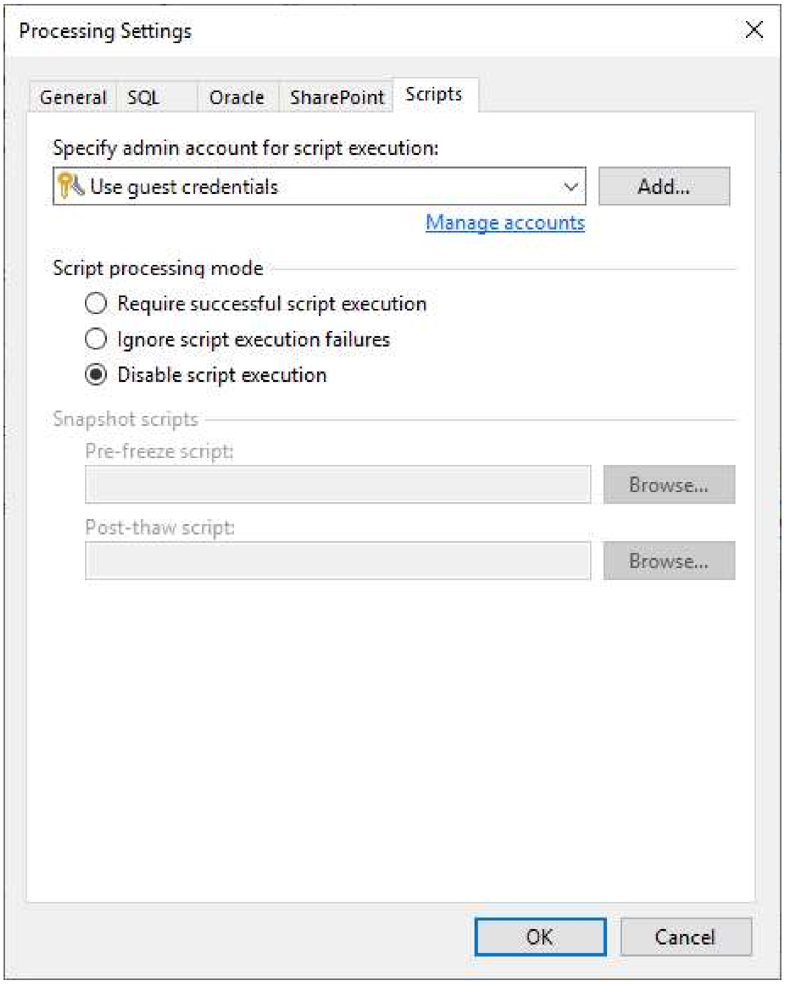
Use guest credentials

General
SQL
Oracle
SharePoint
Scripts
Add...
Manage accounts
OK
Cancel

Technet24

62. On the Processing Settings page, select Scripts.

63. Keep the default settings and click OK.



Processing Settings

General
SQL
Oracle
SharePoint
Scripts

Specify admin account for script execution: Use guest credentials

Add...
Manage accounts

Script processing mode

○ Require successful script execution

○ Ignore script execution failures

● Disable script execution

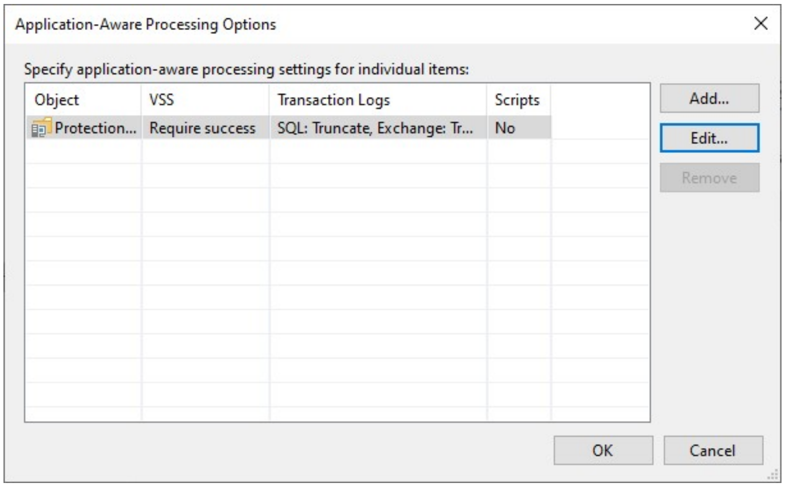
Snapshot scripts

Pre-freeze script:

Post-thaw script:

Browse...
Browse...
OK
Cancel

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

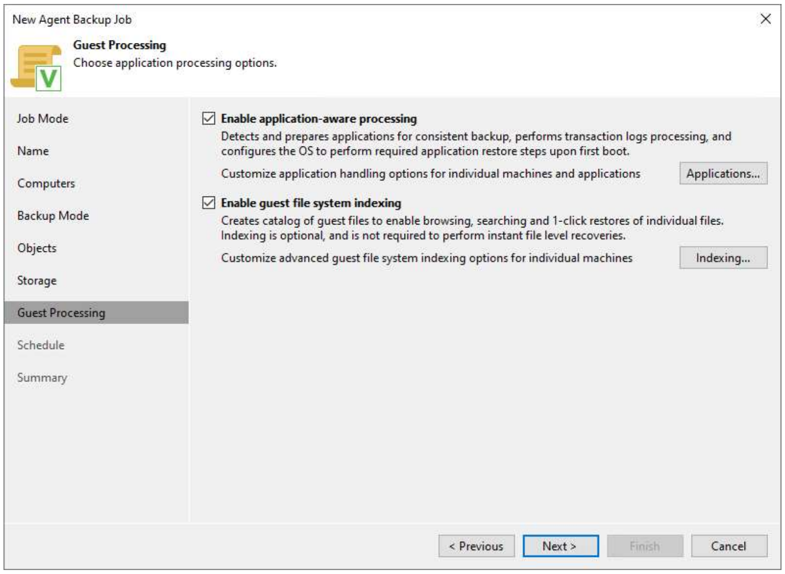

Application-Aware Processing Options
Add...
Edit...
Remove
OK
Cancel

Specify application-aware processing settings for individual items:

Object	VSS	Transaction Logs	Scripts
Protection...	Require success	SQL: Truncate, Exchange: Tr...	No

---

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


New Agent Backup Job
Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
Applications...
Indexing...
< Previous
Next >
Finish
Cancel

Guest Processing

Choose application processing 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

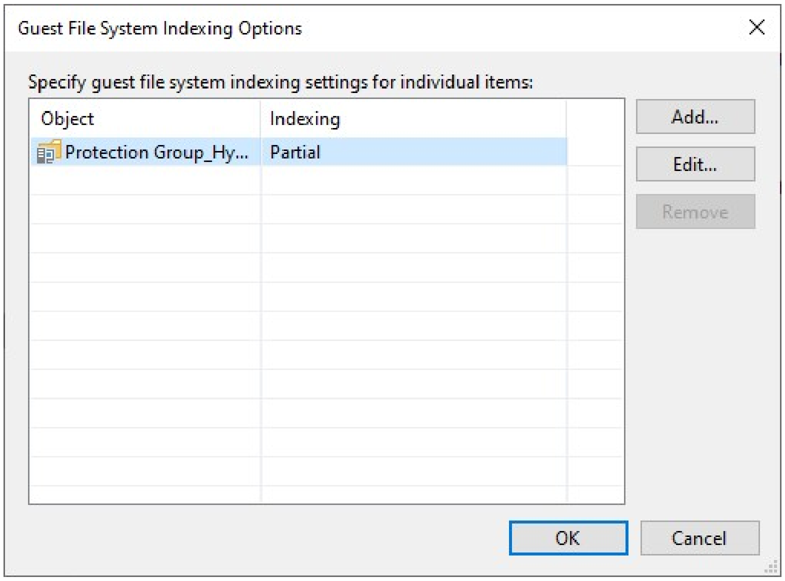
☑ **Enable guest file system indexing**

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

Technet24

66. On the Guest File System Indexing Options page, select the Object, click Edit and.

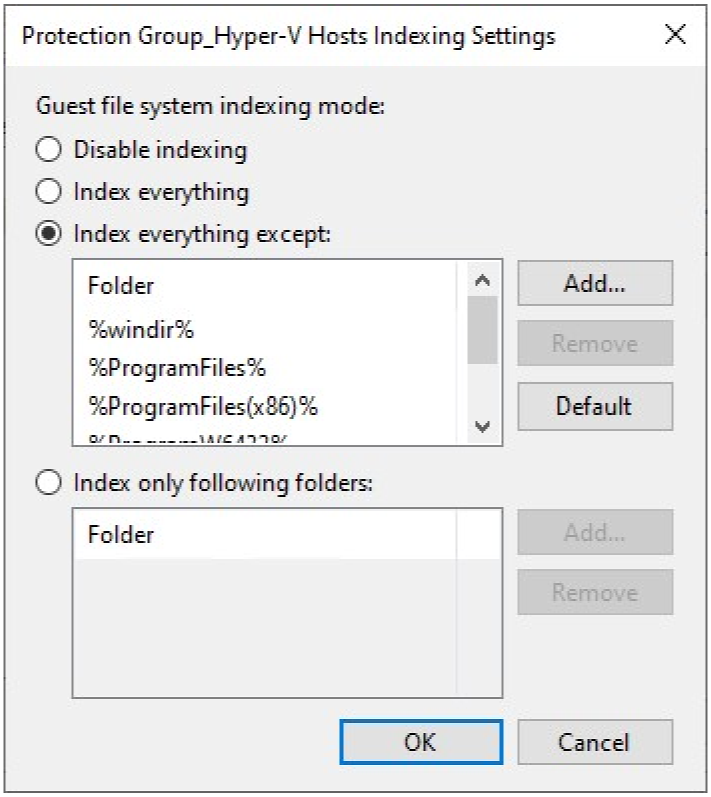


Guest File System Indexing Options

Specify guest file system indexing settings for individual items:

Object	Indexing
Protection Group_Hy...	Partial

67. On the Guest file system indexing mode page, keep the default settings.
68. Click OK.



Protection Group_Hyper-V Hosts Indexing Settings

Guest file system indexing mode:

○ Disable indexing
○ Index everything
● Index everything except:

Folder
%windir%
%ProgramFiles%
%ProgramFiles(x86)%

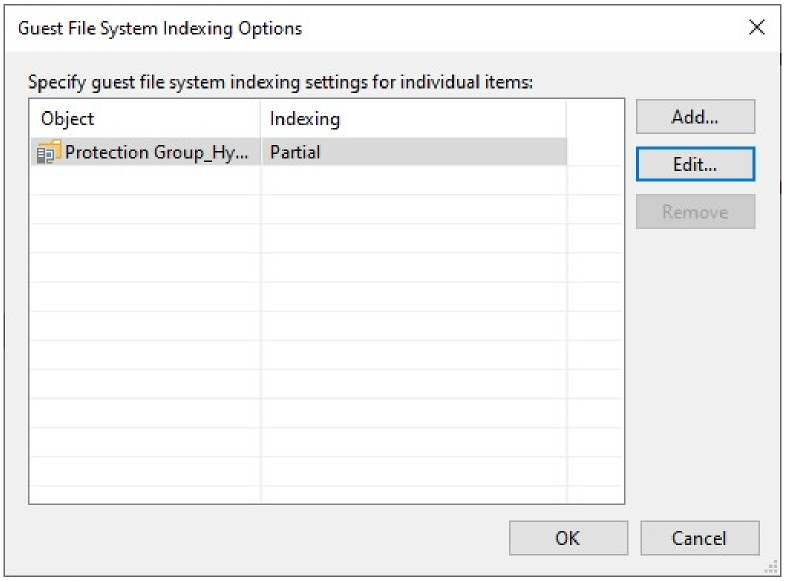
○ Index only following folders:

Folder

Add...
Remove
Default
Add...
Remove
OK
Cancel

Technet24

69. On the Guest File System Indexing Options page, click OK.



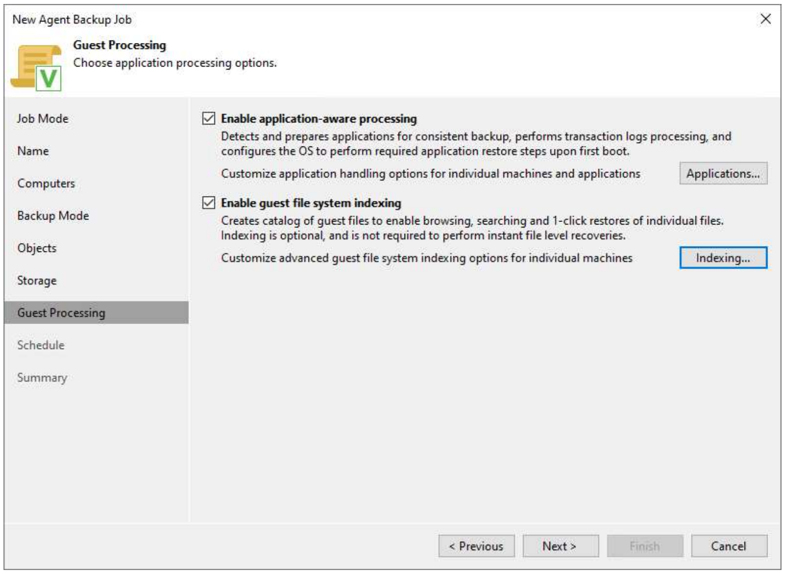
Guest File System Indexing Options

Specify guest file system indexing settings for individual items:

Object	Indexing
Protection Group_Hy...	Partial

Add...
Edit...
Remove
OK
Cancel

70. On the Guest Processing page, click Next.



New Agent Backup Job

Guest Processing

Choose application processing 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

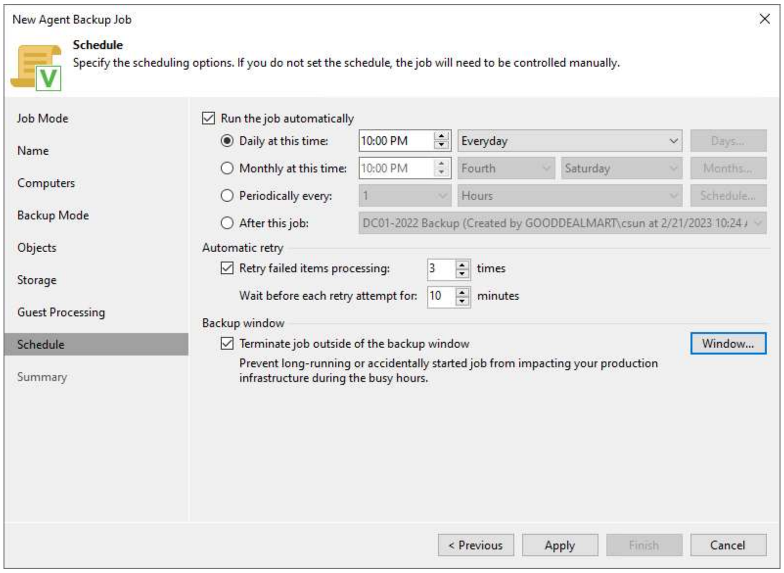
☑ **Enable guest file system indexing**

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

Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
Applications...
Indexing...
< Previous
Next >
Finish
Cancel

71. Select Run the job automatically checkbox on the Schedule page and select your specified schedule.
72. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
73. 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.
74. Click Apply.



New Agent Backup Job

Schedule

Specify the scheduling options. If you do not set the schedule, the job will need to be controlled manually.

☑ Run the job automatically

● Daily at this time: 10:00 PM Everyday

○ Monthly at this time: 10:00 PM Fourth Saturday

○ Periodically every: 1 Hours

○ After this job: DC01-2022 Backup (Created by GOODDEALMART\csun at 2/21/2023 10:24

Automatic retry

☑ Retry failed items processing: 3 times

Wait before each retry attempt for: 10 minutes

Backup window

☑ Terminate job outside of the backup window

Prevent long-running or accidentally started job from impacting your production infrastructure during the busy hours.

Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
Days...
Months...
Schedule...
Window...
< Previous
Apply
Finish
Cancel

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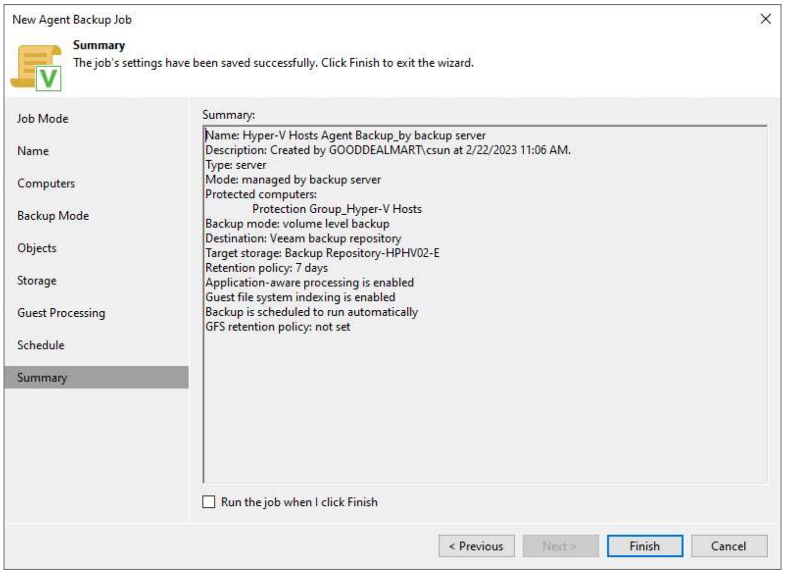
75. On the Summary page, click Finish.


New Agent Backup Job
Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

Summary

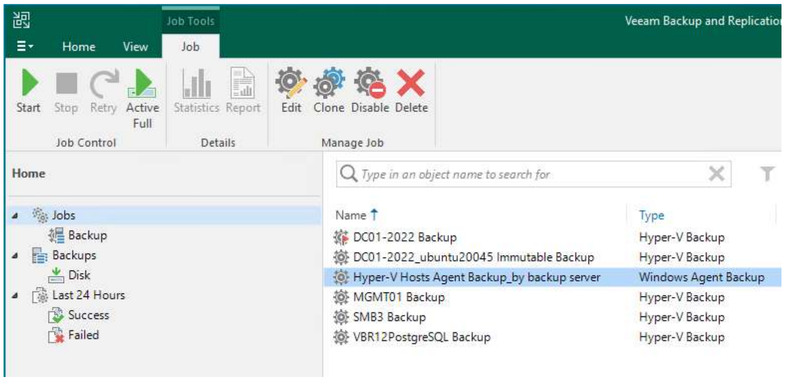
The job's settings have been saved successfully. Click Finish to exit the wizard.

Summary:

Name: Hyper-V Hosts Agent Backup_by backup server
Description: Created by GOODDEALMART\csun at 2/22/2023 11:06 AM.
Type: server
Mode: managed by backup server
Protected computers:
Protection Group_Hyper-V Hosts
Backup mode: volume level backup
Destination: Veeam backup repository
Target storage: Backup Repository-HPHV02-E
Retention policy: 7 days
Application-aware processing is enabled
Guest file system indexing is enabled
Backup is scheduled to run automatically
GFS retention policy: not set

☐ Run the job when I click Finish

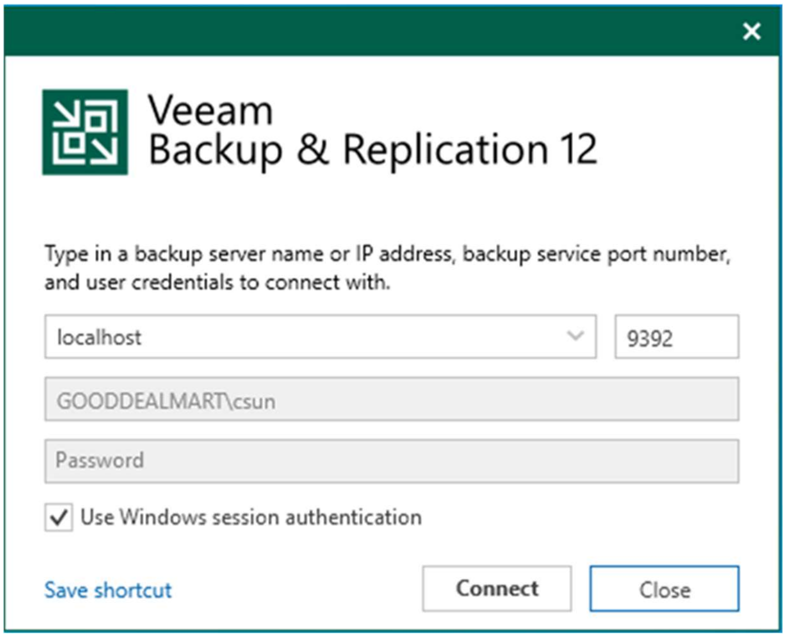
76. Verify that the backup job has been added


Job Tools
Veeam Backup and Replicatio
Home
View
Job
Start
Stop
Retry
Active Full
Statistics
Report
Edit
Clone
Disable
Delete
Job Control
Details
Manage Job
Home
Type in an object name to search for
Jobs
Backup
Backups
Disk
Last 24 Hours
Success
Failed

Name ↑	Type
DC01-2022 Backup	Hyper-V Backup
DC01-2022_ubuntu20045 Immutable Backup	Hyper-V Backup
Hyper-V Hosts Agent Backup_by backup server	Windows Agent Backup
MGMT01 Backup	Hyper-V Backup
SMB3 Backup	Hyper-V Backup
VBR12PostgreSQL Backup	Hyper-V Backup

Create a Backup job to backup the specified Physical Machines (Managed by Agent 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)
1. Log in to the Veeam Backup and replication manager server. 2. Open the Veeam Backup & Replication Console and click Connect.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication

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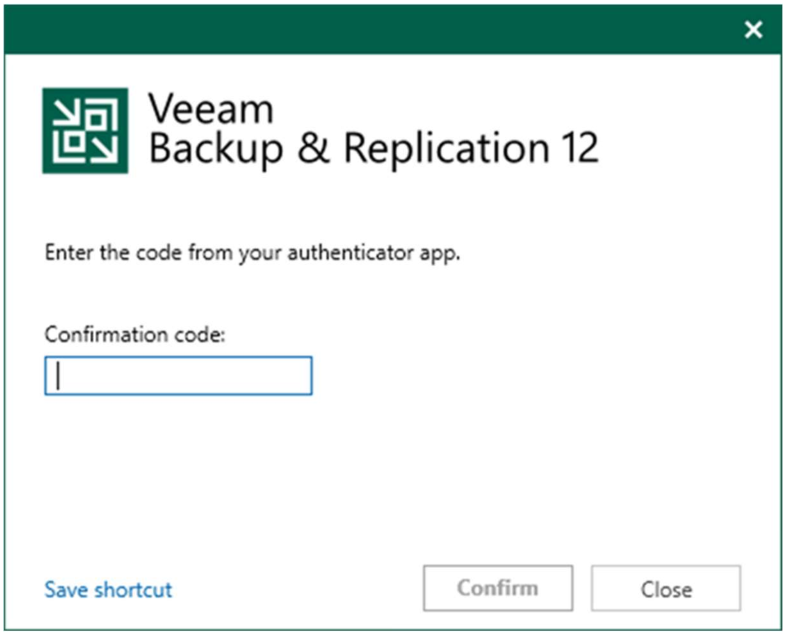
3. Enter the MFA Confirmation code and click Confirm.



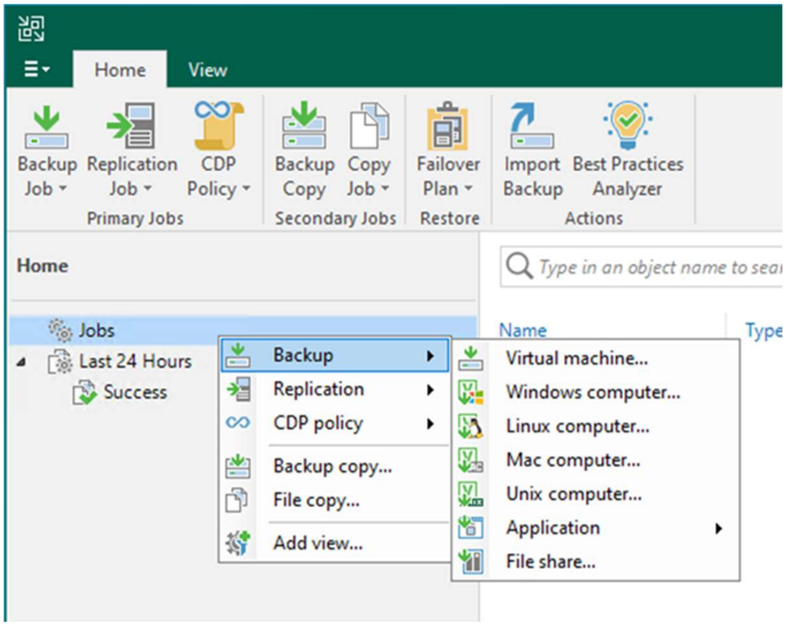
Veeam Backup & Replication 12

Enter the code from your authenticator app.

Confirmation code:

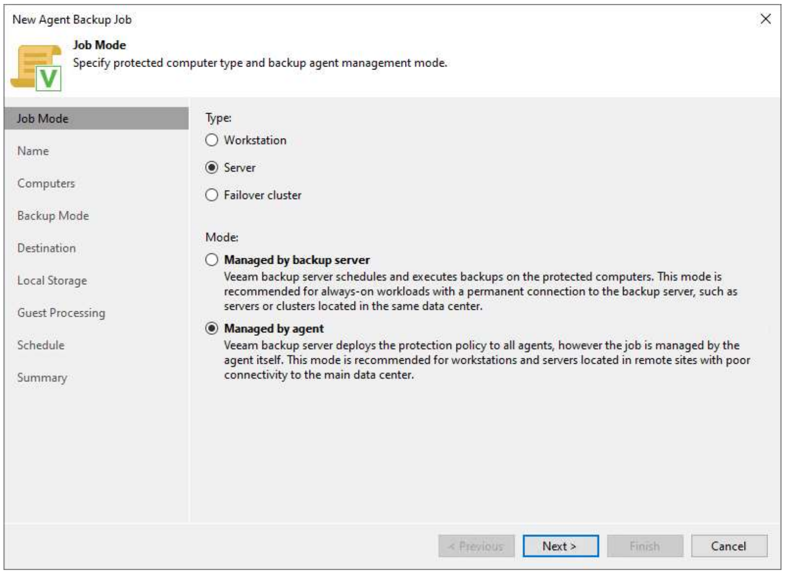
Save shortcut
Confirm
Close

4. Select Jobs on the Home page and right-click Jobs.
5. Select Backup and click Windows computer.



Home
View
Backup Job
Replication Job
CDP Policy
Primary Jobs
Backup Copy
Copy Job
Secondary Jobs
Failover Plan
Restore
Import Backup
Best Practices Analyzer
Actions
Home
Type in an object name to sea
Jobs
Last 24 Hours
Success
Name
Type
Backup
Replication
CDP policy
Backup copy...
File copy...
Add view...
Virtual machine...
Windows computer...
Linux computer...
Mac computer...
Unix computer...
Application
File share...

6. On the Job Mode page, select Managed by agent mode and click Next.


New Agent Backup Job
Job Mode
Job Mode
Name
Computers
Backup Mode
Destination
Local Storage
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

Specify protected computer type and backup agent management mode.

Type:

○ Workstation

● Server

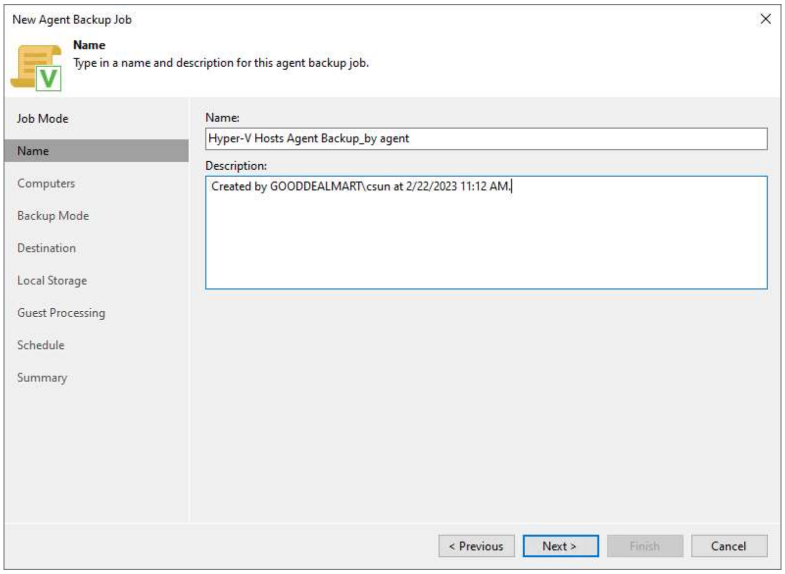
○ Failover cluster

Mode:

○ **Managed by backup server**
Veeam backup server schedules and executes backups on the protected computers. This mode is recommended for always-on workloads with a permanent connection to the backup server, such as servers or clusters located in the same data center.

● **Managed by agent**
Veeam backup server deploys the protection policy to all agents, however the job is managed by the agent itself. This mode is recommended for workstations and servers located in remote sites with poor connectivity to the main data center.

7. On the Name page, enter a name for the backup job in the Name field.
8. Give a brief description in the Description field for the future.
9. Click Next.


New Agent Backup Job
Name
Job Mode
Name
Computers
Backup Mode
Destination
Local Storage
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

Type in a name and description for this agent backup job.

Name: Hyper-V Hosts Agent Backup_by agent

Description: Created by GOODDEALMART\csun at 2/22/2023 11:12 AM.

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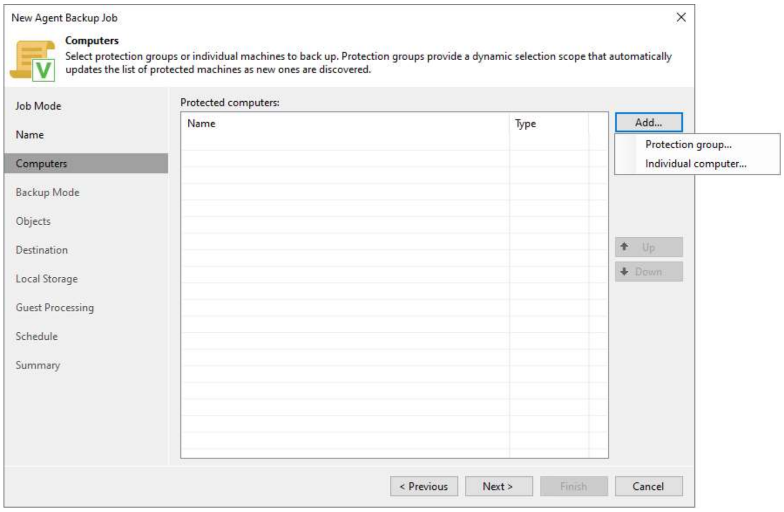
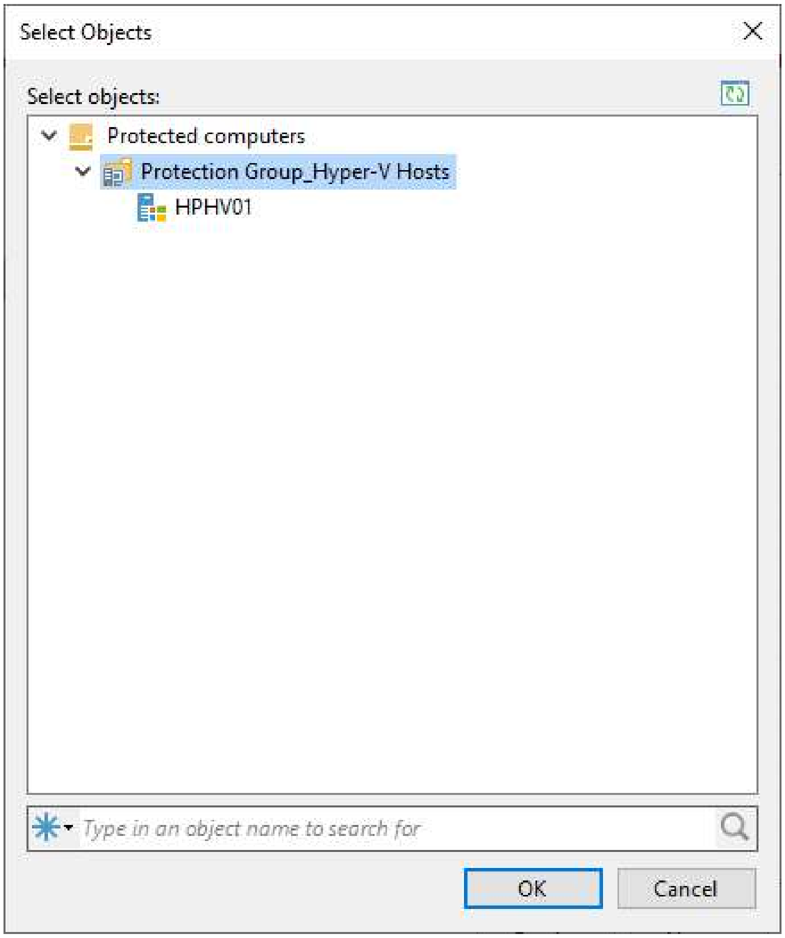
10. On the Computers page, click Add and select Protection group.


New Agent Backup Job
Computers
Job Mode
Name
Computers
Backup Mode
Objects
Destination
Local Storage
Guest Processing
Schedule
Summary
Protected computers:
Name
Type
Add...
Protection group...
Individual computer...
Up
Down
< Previous
Next >
Finish
Cancel

Select protection groups or individual machines to back up. Protection groups provide a dynamic selection scope that automatically updates the list of protected machines as new ones are discovered.

11. Select the protection group on the Select Objects page and click OK.
12. You can select multiple protection groups for the same backup job and repeat the step to add them.


Select Objects

Select objects:

Protected computers
Protection Group_Hyper-V Hosts
HPHV01

Type in an object name to search for
OK
Cancel

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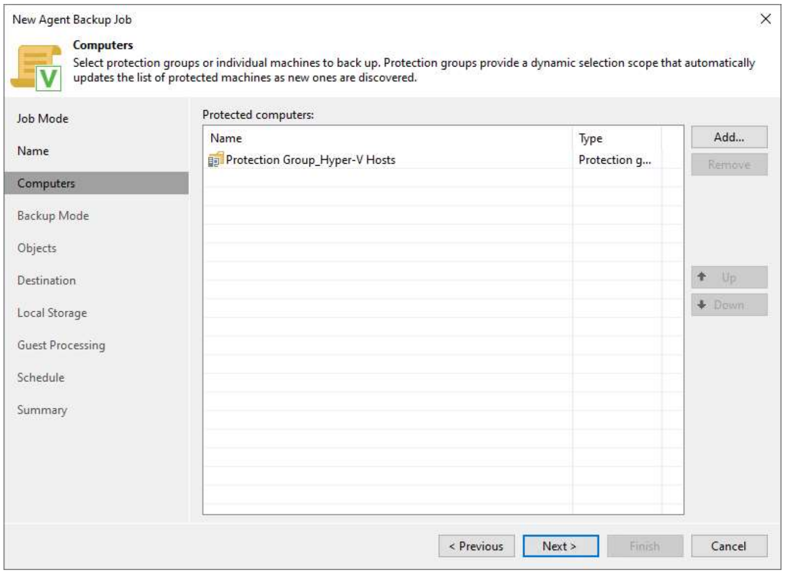
13. Click Next on the Computers page.


New Agent Backup Job

Computers

Select protection groups or individual machines to back up. Protection groups provide a dynamic selection scope that automatically updates the list of protected machines as new ones are discovered.

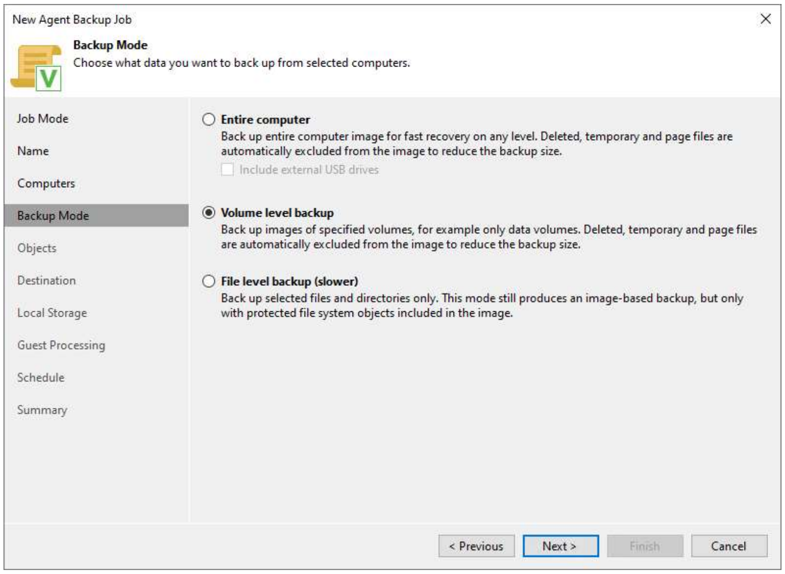
Protected computers:

Name	Type
Protection Group_Hyper-V Hosts	Protection g...

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Local Storage
Guest Processing
Schedule
Summary
Add...
Remove
Up
Down
< Previous
Next >
Finish
Cancel

---

14. Select Volume level backup mode on the Backup Mode page to back up the specified computer volumes and click Next.


New Agent Backup Job

Backup Mode

Choose what data you want to back up from selected computers.

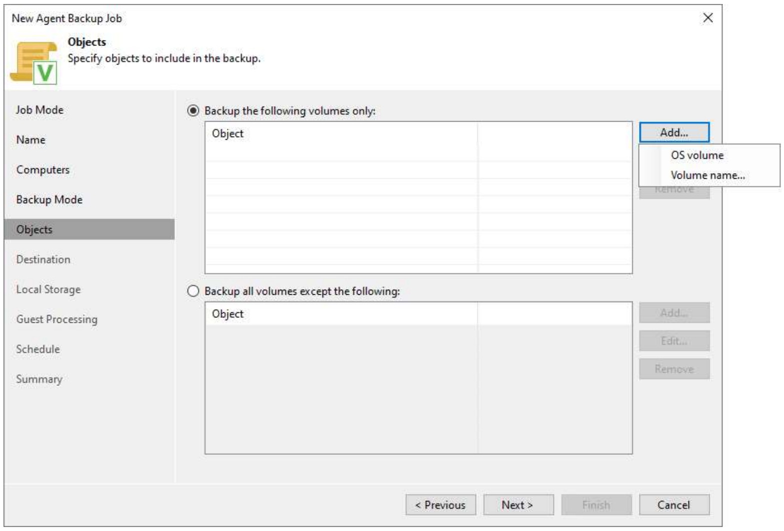
○ **Entire computer**
Back up entire computer image for fast recovery on any level. Deleted, temporary and page files are automatically excluded from the image to reduce the backup size.
☐ Include external USB drives

● **Volume level backup**
Back up images of specified volumes, for example only data volumes. Deleted, temporary and page files are automatically excluded from the image to reduce the backup size.

○ **File level backup (slower)**
Back up selected files and directories only. This mode still produces an image-based backup, but only with protected file system objects included in the image.

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Local Storage
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

15. On the Objects page, select Backup the following volumes only.
16. Click Add and select OS volume.
17. Click Next



New Agent Backup Job

Objects

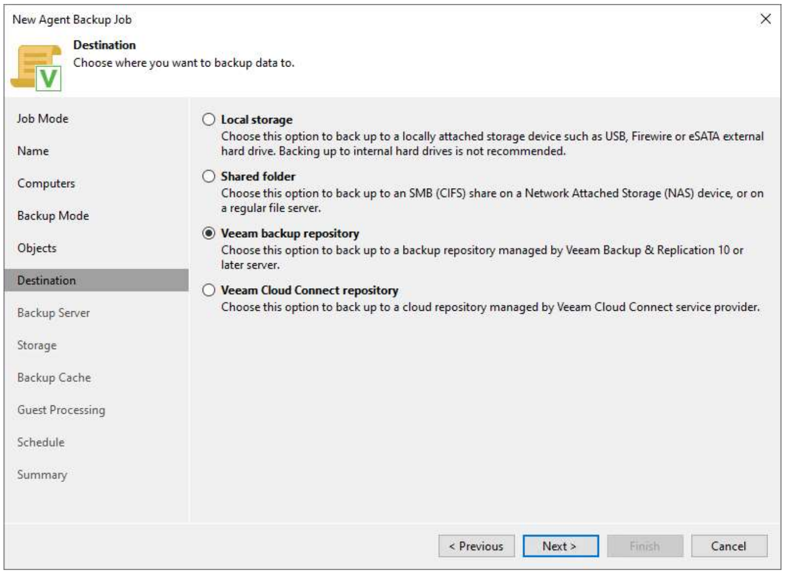
Specify objects to include in the backup.

● Backup the following volumes only:

○ Backup all volumes except the following:

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Local Storage
Guest Processing
Schedule
Summary
Object
Add...
OS volume
Volume name...
Remove
Object
Add...
Edit...
Remove
< Previous
Next >
Finish
Cancel

18. Select the Veeam backup repository and click Next.



New Agent Backup Job

Destination

Choose where you want to backup data to.

○ **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.

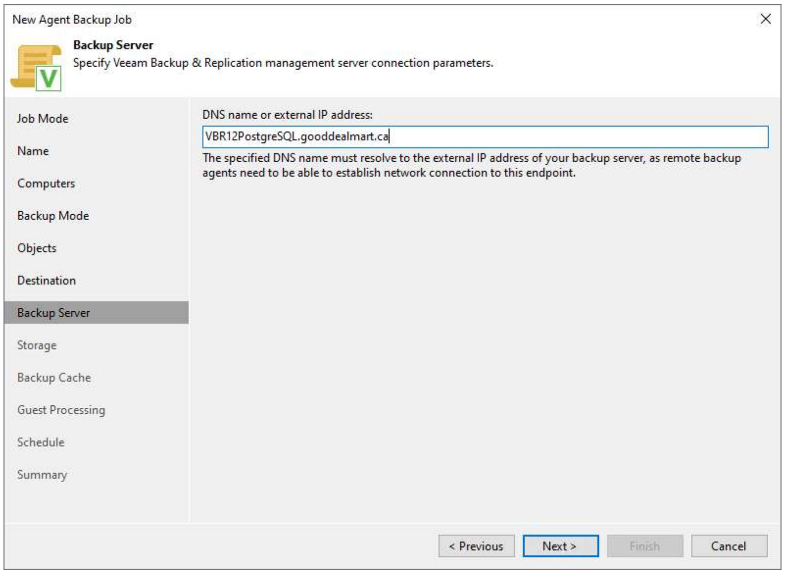
● **Veeam backup repository**
Choose this option to back up to a backup repository managed by Veeam Backup & Replication 10 or later server.

○ **Veeam Cloud Connect repository**
Choose this option to back up to a cloud repository managed by Veeam Cloud Connect service provider.

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

Technet24

19. Enter the Veeam Backup and Replication manager server name or IP address in the DNS name or external IP address field on the Backup Server page.



New Agent Backup Job

Backup Server

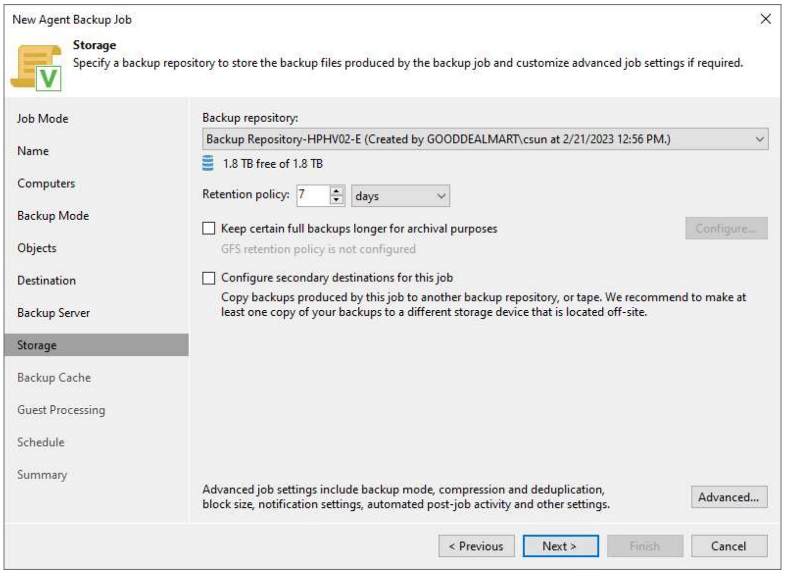
Specify Veeam Backup & Replication management server connection parameters.

DNS name or external IP address: VBR12PostgreSQL.gooddealmart.ca

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.

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

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



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.

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.8 TB free of 1.8 TB

Retention policy: 7 days

☐ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

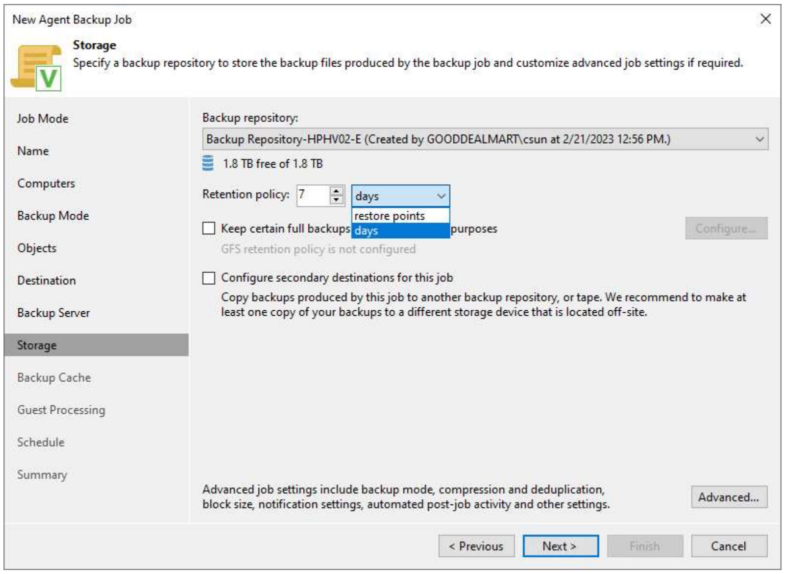
☐ Configure secondary destinations for this job

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.

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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



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.

Backup repository:

Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.8 TB free of 1.8 TB

Retention policy: 7 days

☐ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

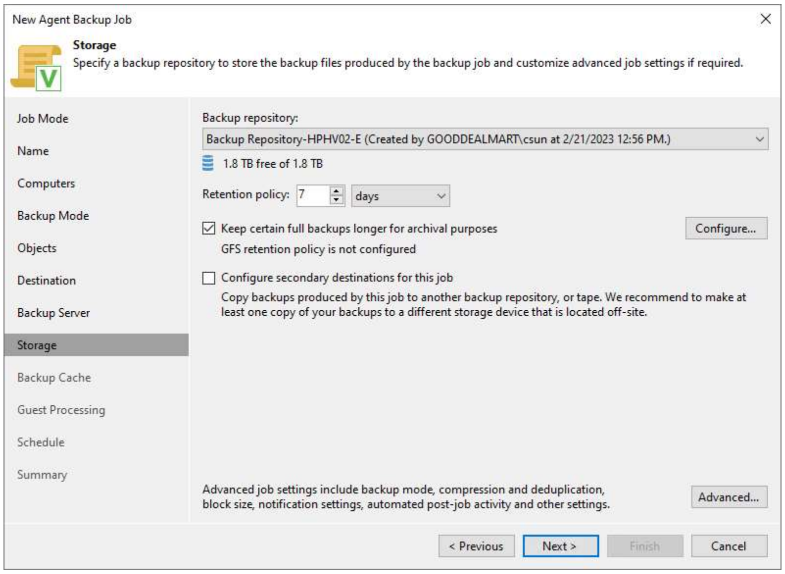
☐ Configure secondary destinations for this job

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.

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
restore points
days
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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



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.

Backup repository:

Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.8 TB free of 1.8 TB

Retention policy: 7 days

☑ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

☐ Configure secondary destinations for this job

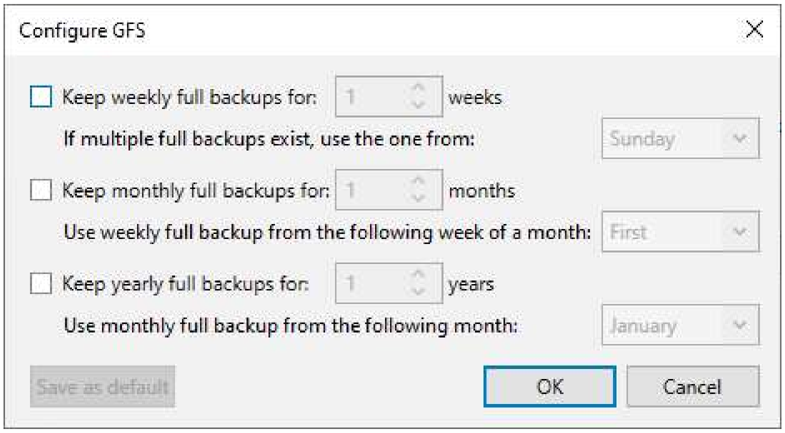
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

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

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

Technet24

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



Configure GFS

☐ Keep weekly full backups for: 1 weeks

If multiple full backups exist, use the one from: Sunday

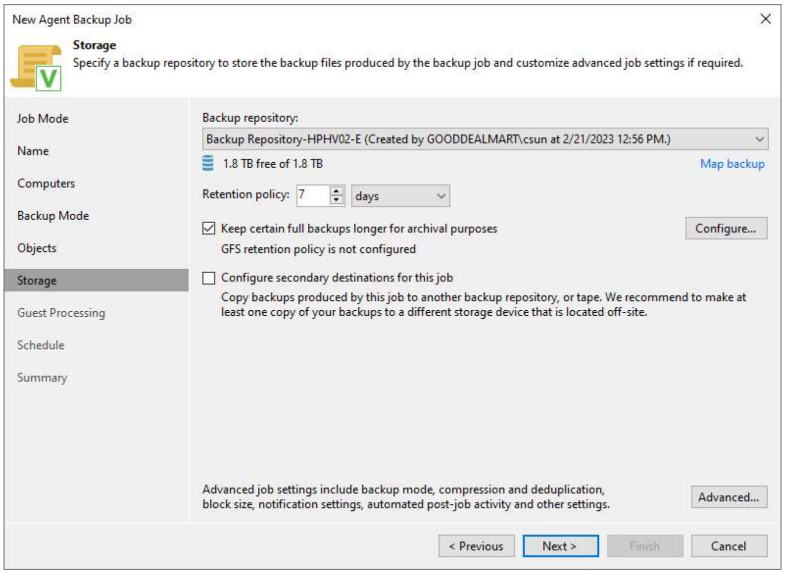
☐ Keep monthly full backups for: 1 months

Use weekly full backup from the following week of a month: First

☐ Keep yearly full backups for: 1 years

Use monthly full backup from the following month: January

29. On the Storage page, click Advanced.



New Agent Backup Job
Storage
Job Mode
Name
Computers
Backup Mode
Objects
Storage
Guest Processing
Schedule
Summary
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.8 TB free of 1.8 TB

Retention policy: 7 days

☑ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

☐ Configure secondary destinations for this job

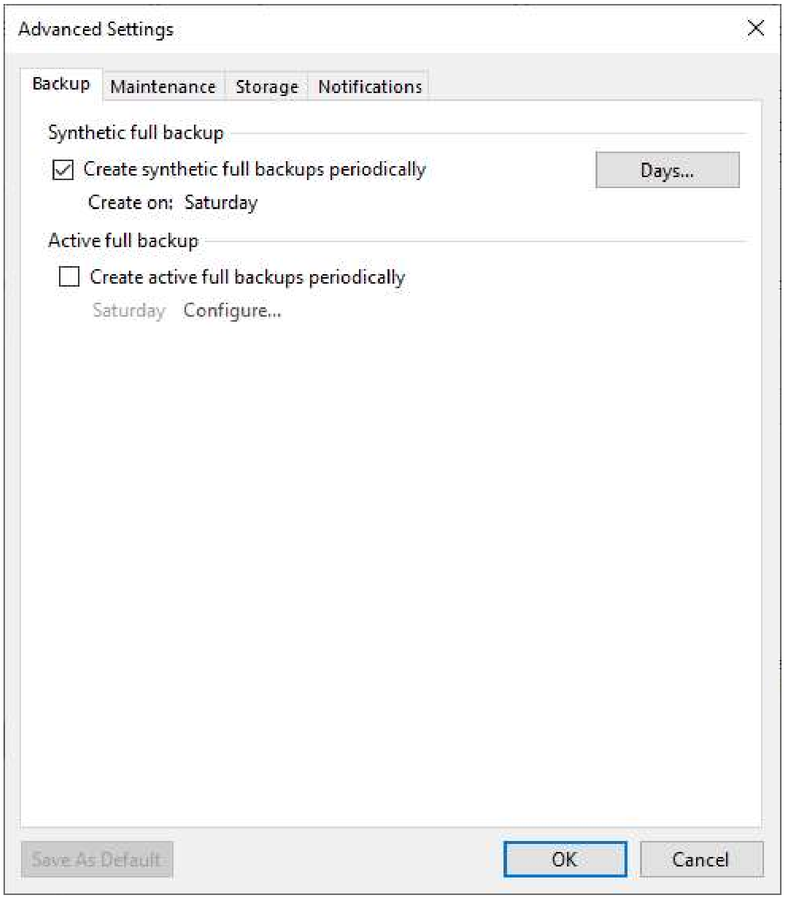
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

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

Technet24

30. Select Create synthetic full backups or Active full backups periodically checkbox.

31. Schedule full backups periodically and click OK.



Advanced Settings

Backup
Maintenance
Storage
Notifications

Synthetic full backup

☑ Create synthetic full backups periodically

Days...

Create on: Saturday

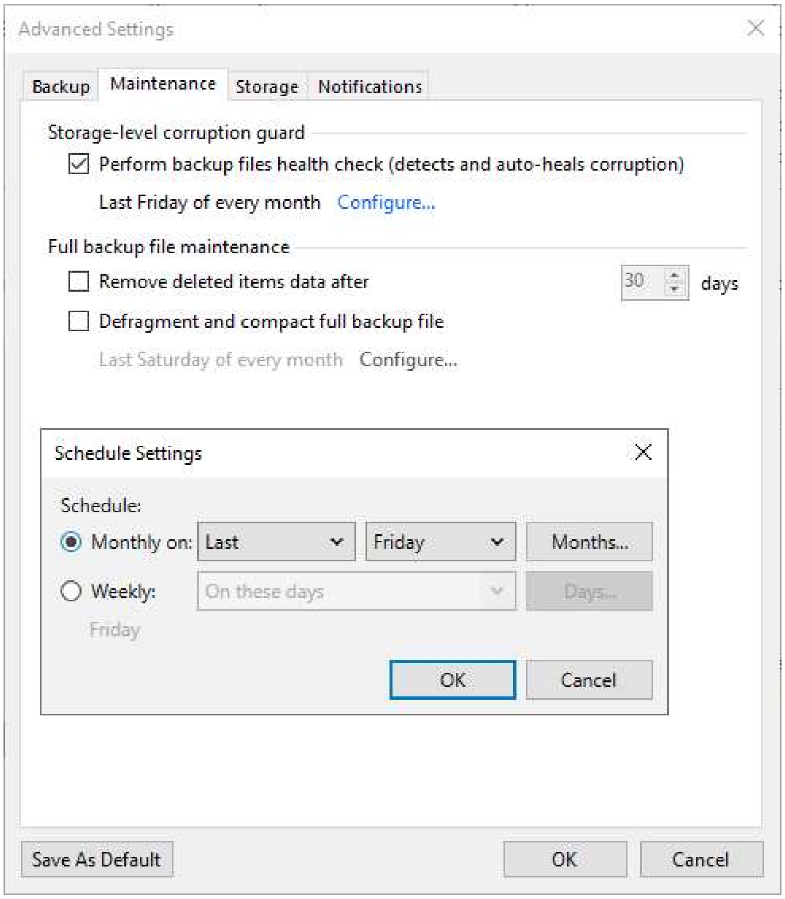
Active full backup

☐ Create active full backups periodically

Saturday

Configure...
Save As Default
OK
Cancel

32. On the Advanced Settings, select Maintenance.
33. 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.
34. Click Configure to set a timetable for the health check.


Advanced Settings
Backup
Maintenance
Storage
Notifications

Storage-level corruption guard

☑ Perform backup files health check (detects and auto-heals corruption)

Last Friday of every month Configure...

Full backup file maintenance

☐ Remove deleted items data after 30 days

☐ Defragment and compact full backup file

Last Saturday of every month Configure...

Schedule Settings

Schedule:

● Monthly on: Last Friday

○ Weekly: On these days

Friday

Months...
Days...
OK
Cancel
Save As Default
OK
Cancel

Technet24

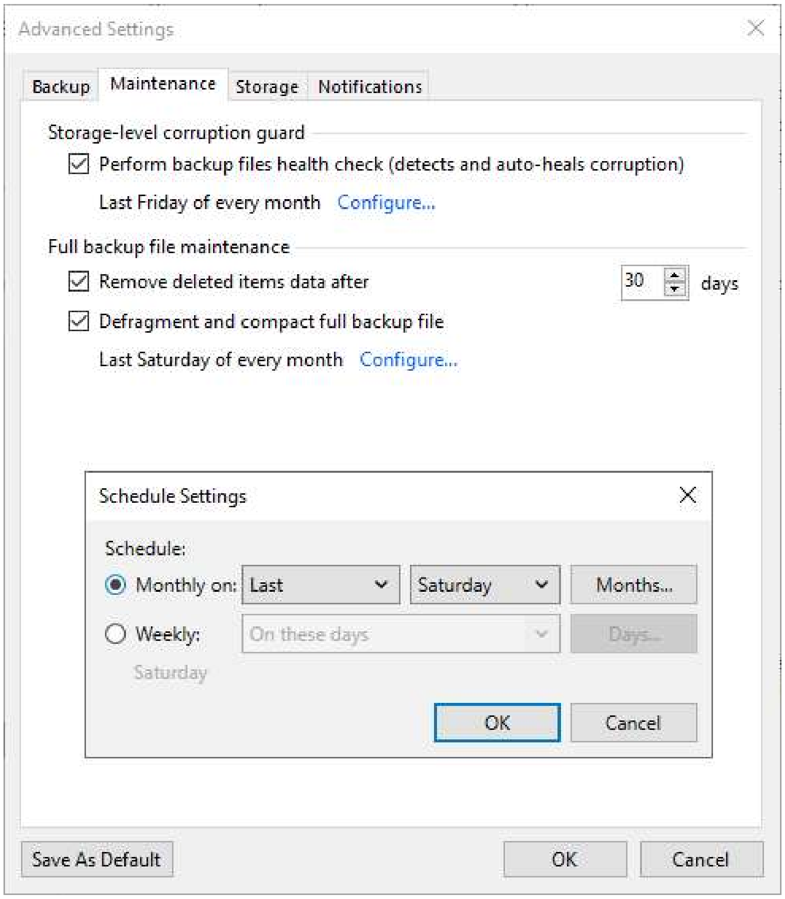
35. Select the Remove deleted items data after the checkbox and enter the few days you want backup data for deleted VMs to be kept.

36. Select the Defragment and compact full backup file checkbox and click Configure.

37. Set the schedule for the compact operation to compact a full backup periodically.

Note:

You don’t need to enable the defragment and compact functionality checkbox if GFS retention is enabled.


Advanced Settings
Backup
Maintenance
Storage
Notifications

Storage-level corruption guard

☑ Perform backup files health check (detects and auto-heals corruption)

Last Friday of every month Configure...

Full backup file maintenance

☑ Remove deleted items data after 30 days

☑ Defragment and compact full backup file

Last Saturday of every month Configure...

Schedule Settings

Schedule:

● Monthly on: Last Saturday

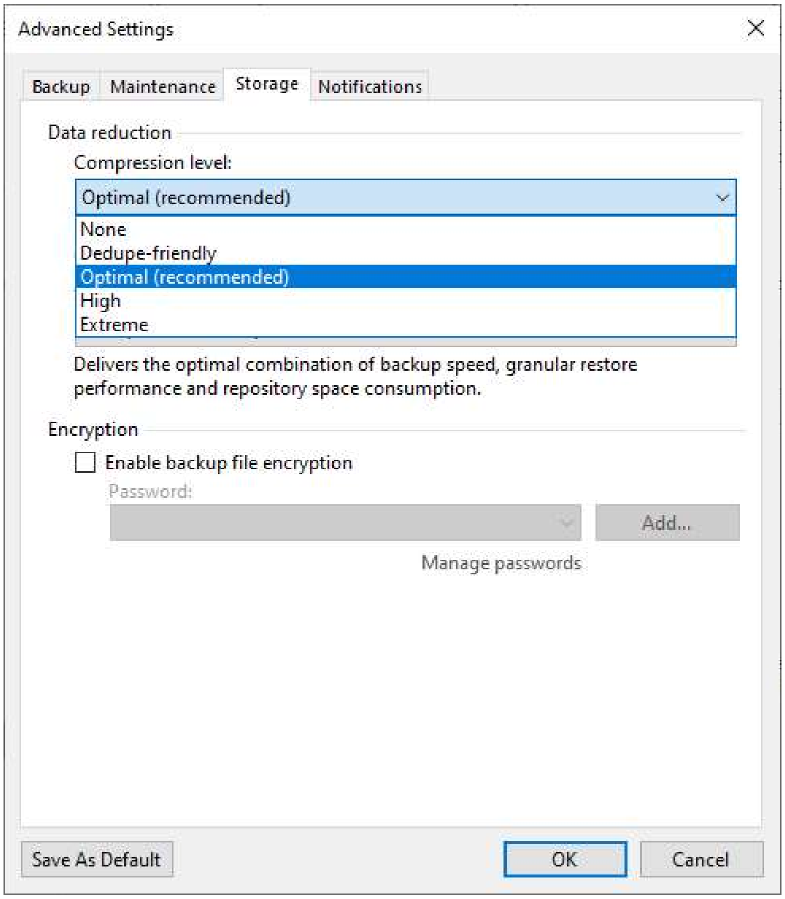
○ Weekly: On these days

Saturday

Months...
Days...
OK
Cancel
Save As Default
OK
Cancel

38. On Advanced Settings, select Storage.

39. Select the Compression level from the drop-down list.



Advanced Settings

Data reduction

Compression level: Optimal (recommended)

Delivers the optimal combination of backup speed, granular restore performance and repository space consumption.

Encryption

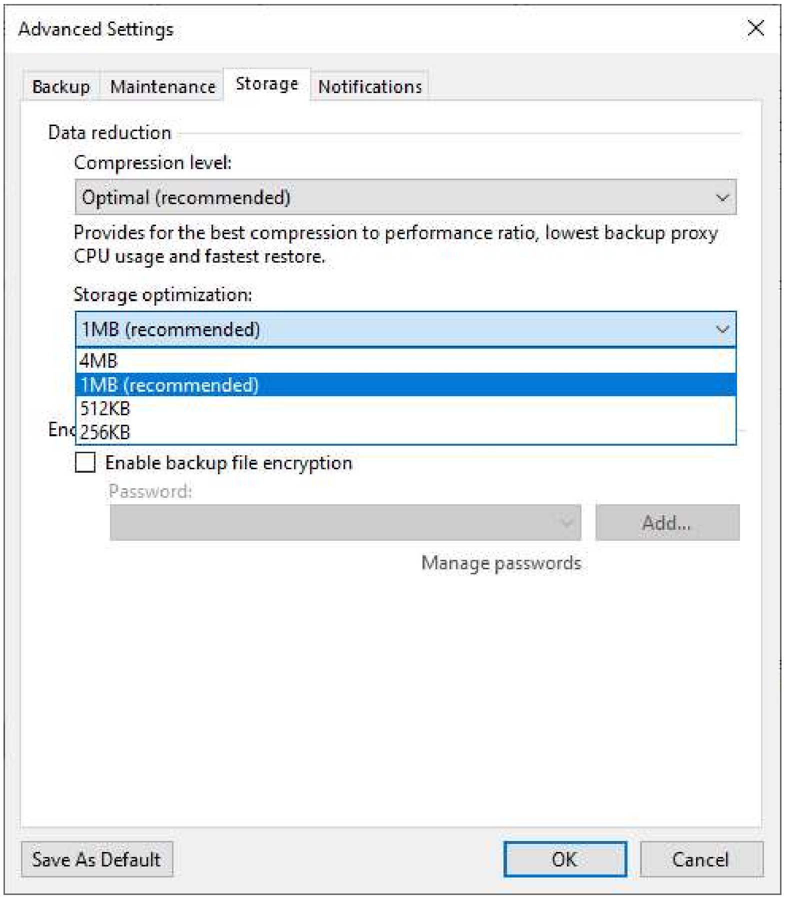
☐ Enable backup file encryption

Password:

Backup
Maintenance
Storage
Notifications
None
Dedupe-friendly
Optimal (recommended)
High
Extreme
Add...
Manage passwords
Save As Default
OK
Cancel

Technet24

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



Advanced Settings
Backup
Maintenance
Storage
Notifications
Data reduction
Encryption
Save As Default
OK
Cancel
Add...
Manage passwords

Compression level: Optimal (recommended)

Provides for the best compression to performance ratio, lowest backup proxy CPU usage and fastest restore.

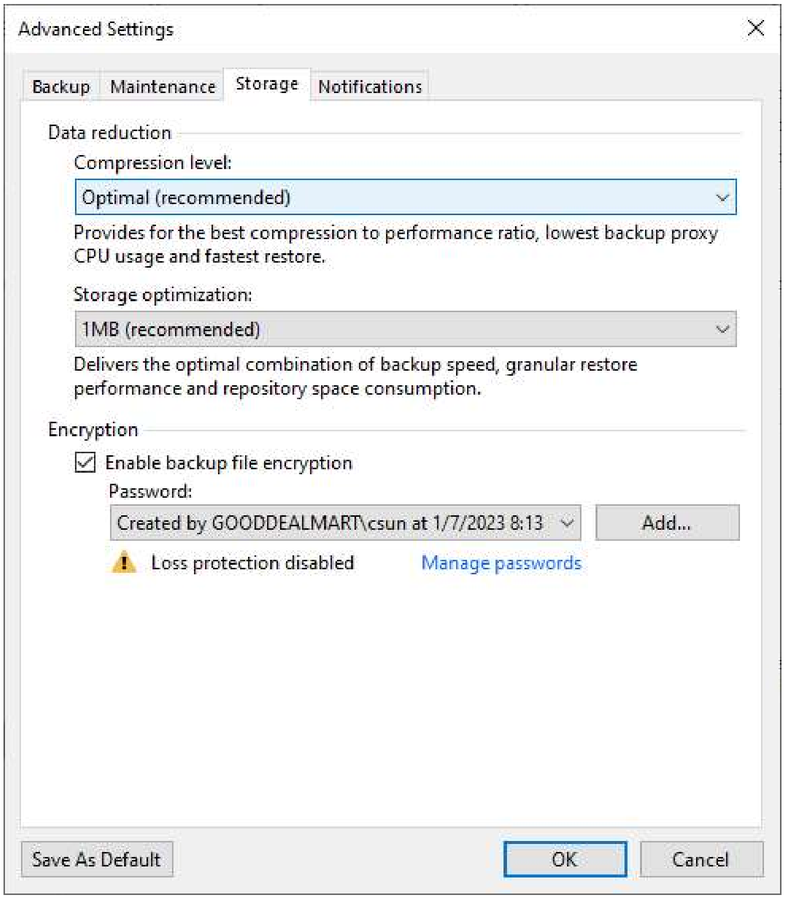
Storage optimization: 1MB (recommended)

- 4MB
- 1MB (recommended)
- 512KB
- 256KB

☐ Enable backup file encryption

Password:

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


Advanced Settings
Backup
Maintenance
Storage
Notifications
Save As Default
OK
Cancel
Add...
Manage passwords

Data reduction

Compression level: Optimal (recommended)

Provides for the best compression to performance ratio, lowest backup proxy CPU usage and fastest restore.

Storage optimization: 1MB (recommended)

Delivers the optimal combination of backup speed, granular restore performance and repository space consumption.

Encryption

☑ Enable backup file encryption

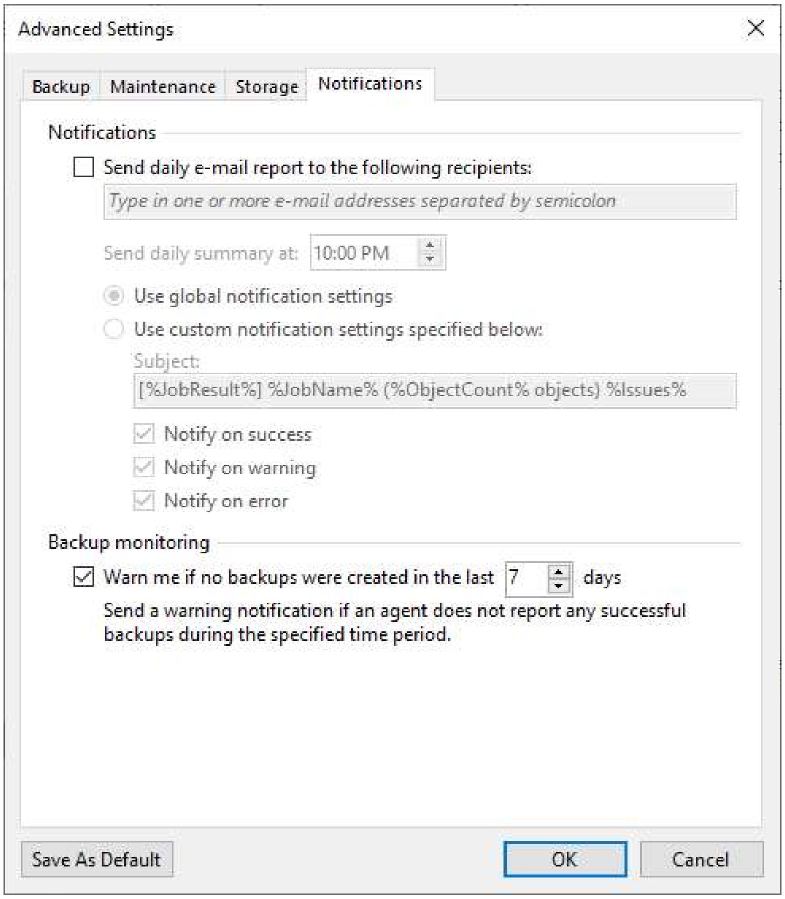
Password: Created by GOODDEALMART\csun at 1/7/2023 8:13

⚠ Loss protection disabled

Technet24

43. On the Advanced Settings, select Notifications.

44. Keep the default settings and click OK.


Advanced Settings
Backup
Maintenance
Storage
Notifications

Notifications

☐ Send daily e-mail report to the following recipients:

Type in one or more e-mail addresses separated by semicolon

Send daily summary at: 10:00 PM

● Use global notification settings

○ Use custom notification settings specified below:

Subject:

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

☑ Notify on success

☑ Notify on warning

☑ Notify on error

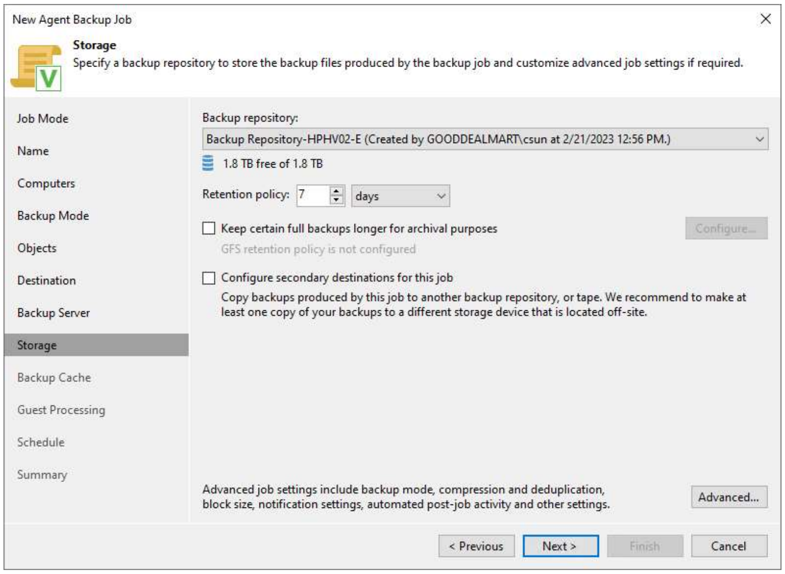
Backup monitoring

☑ Warn me if no backups were created in the last 7 days

Send a warning notification if an agent does not report any successful backups during the specified time period.

Save As Default
OK
Cancel

45. On the Storage page, click Next.



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.

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.8 TB free of 1.8 TB

Retention policy: 7 days

☐ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

☐ Configure secondary destinations for this job

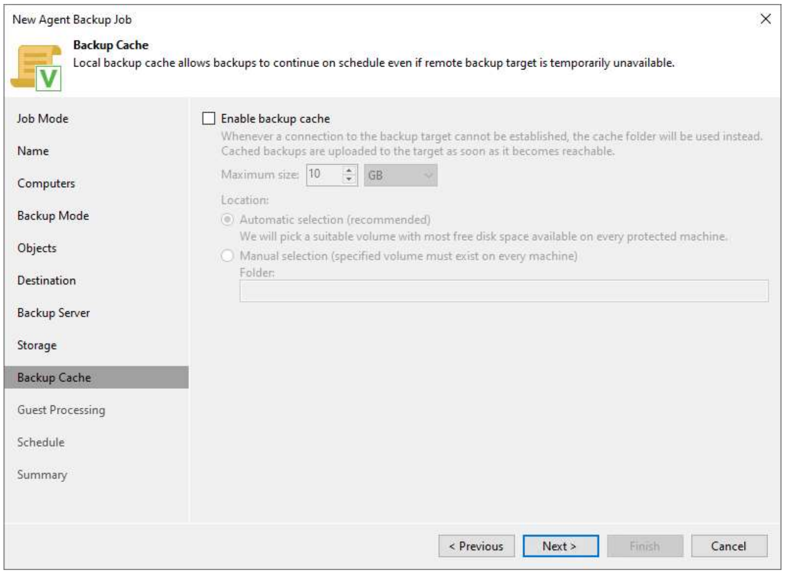
Copy backups produced by this job to another backup repository, or tape. We recommend to make at least one copy of your backups to a different storage device that is located off-site.

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

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

---

46. On the Backup Cache page, keep the default settings and click Next.



New Agent Backup Job

Backup Cache

Local backup cache allows backups to continue on schedule even if remote backup target is temporarily unavailable.

☐ Enable backup cache

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: 10 GB

Location:

● Automatic selection (recommended)

We will pick a suitable volume with most free disk space available on every protected machine.

○ Manual selection (specified volume must exist on every machine)

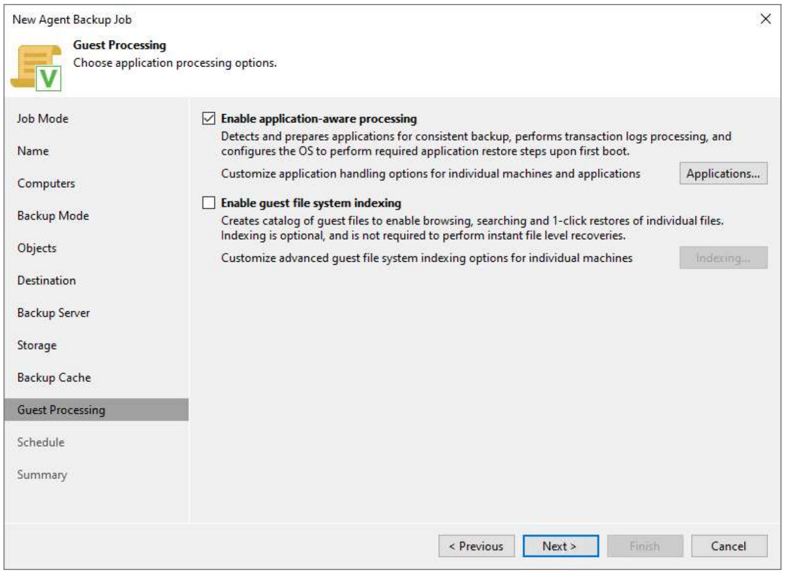
Folder:

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

Technet24

47. 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.

48. Select the Enable application-aware processing checkbox on the Guest Processing page, and click Applications.



New Agent Backup Job

Guest Processing

Choose application processing 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

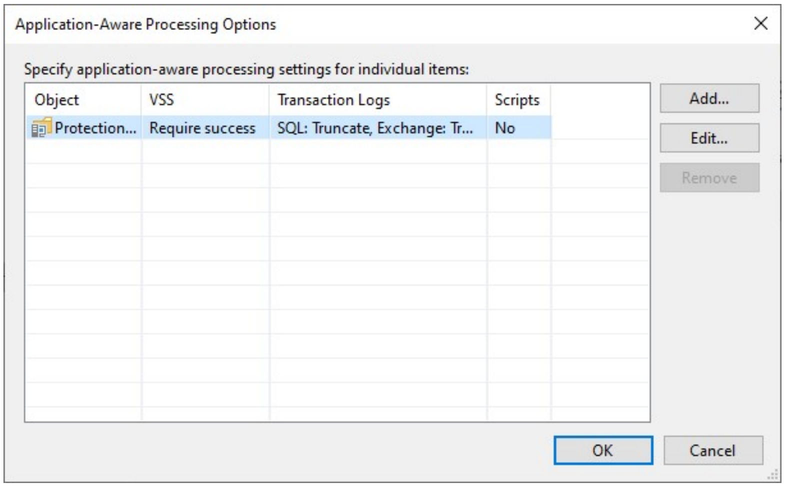
☐ **Enable guest file system indexing**

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

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
Applications...
Indexing...
< Previous
Next >
Finish
Cancel

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



Application-Aware Processing Options

Specify application-aware processing settings for individual items:

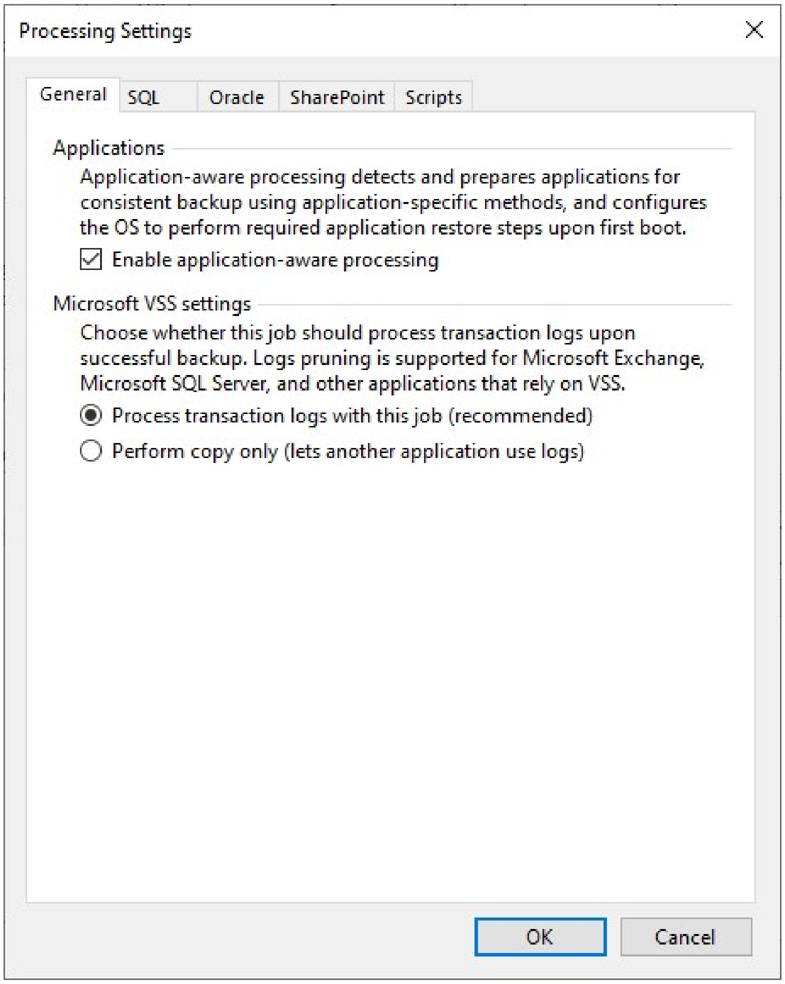
Object	VSS	Transaction Logs	Scripts
Protection...	Require success	SQL: Truncate, Exchange: Tr...	No

Add...
Edit...
Remove
OK
Cancel

50. On the Processing Settings page, select General.

51. Select Enable application-aware processing checkbox.

52. Select Process transaction logs with this job (recommended).



Applications

Application-aware processing detects and prepares applications for consistent backup using application-specific methods, and configures the OS to perform required application restore steps upon first boot.

☑ Enable application-aware processing

Microsoft VSS settings

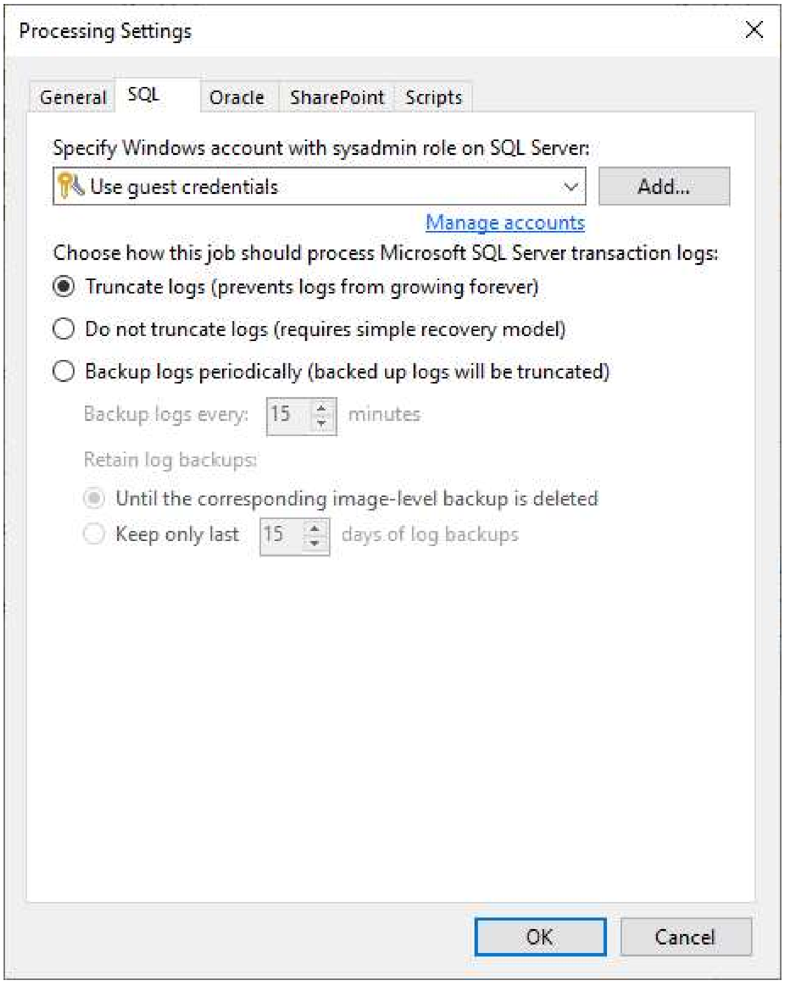
Choose whether this job should process transaction logs upon successful backup. Logs pruning is supported for Microsoft Exchange, Microsoft SQL Server, and other applications that rely on VSS.

● Process transaction logs with this job (recommended)

○ Perform copy only (lets another application use logs)

Technet24

53. On the Processing Settings page, click SQL if the Physical Machine is a Microsoft SQL Server.
54. Select a user account from the drop-down list.
55. Select Truncate logs (Prevents logs from growing forever).


Processing Settings
General
SQL
Oracle
SharePoint
Scripts
Add...
Manage accounts
OK
Cancel

Specify Windows account with sysadmin role on SQL Server: Use guest credentials

Choose how this job should process Microsoft SQL Server transaction logs:

● Truncate logs (prevents logs from growing forever)

○ Do not truncate logs (requires simple recovery model)

○ Backup logs periodically (backed up logs will be truncated)

Backup logs every: 15 minutes

Retain log backups:

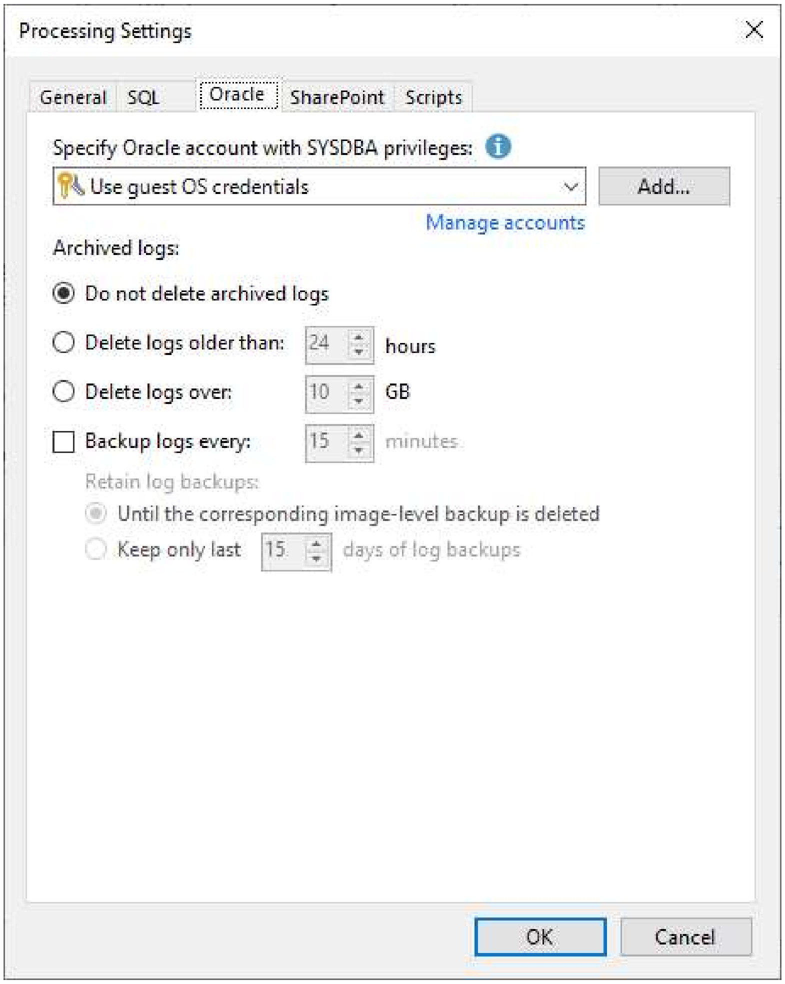
● Until the corresponding image-level backup is deleted

○ Keep only last 15 days of log backups

56. Select Oracle on the Processing Settings page if the Physical Machine is an Oracle Server.

57. Select a user account from the drop-down list.

58. Select Do not delete archived logs.



Processing Settings

General
SQL
Oracle
SharePoint
Scripts

Specify Oracle account with SYSDBA privileges: Use guest OS credentials

Add...
Manage accounts

Archived logs:

● Do not delete archived logs

○ Delete logs older than: 24 hours

○ Delete logs over: 10 GB

☐ Backup logs every: 15 minutes

Retain log backups:

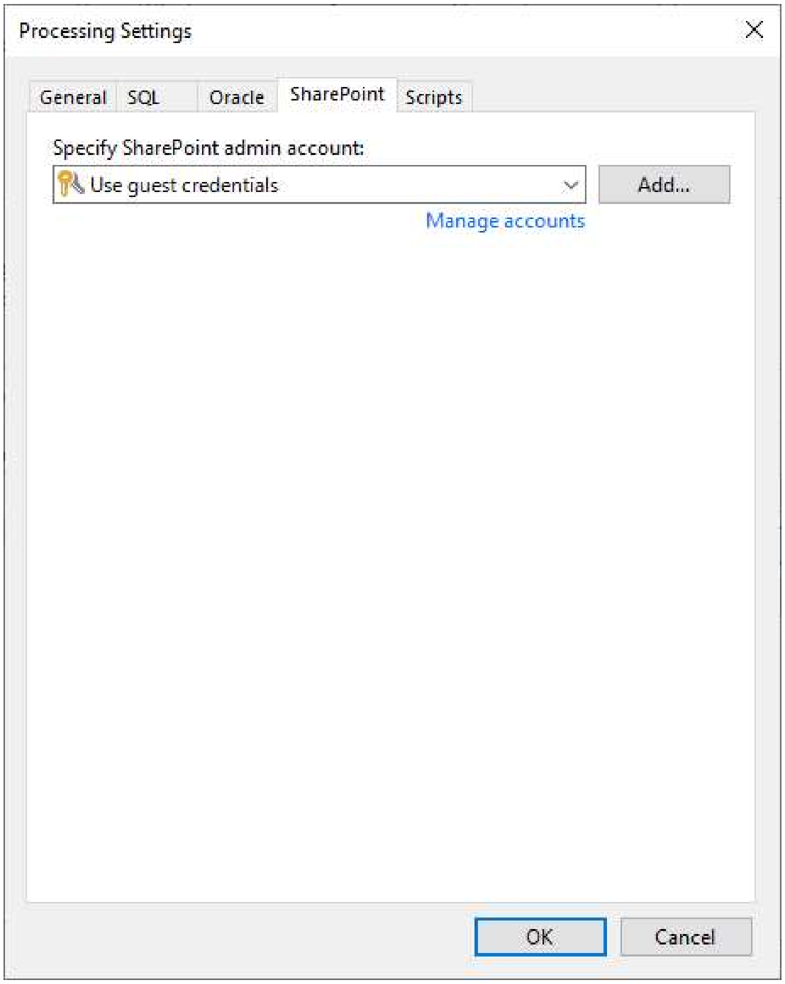
● Until the corresponding image-level backup is deleted

○ Keep only last 15 days of log backups

OK
Cancel

59. On the Processing Settings page, select SharePoint if the Physical Machine is a SharePoint Server.

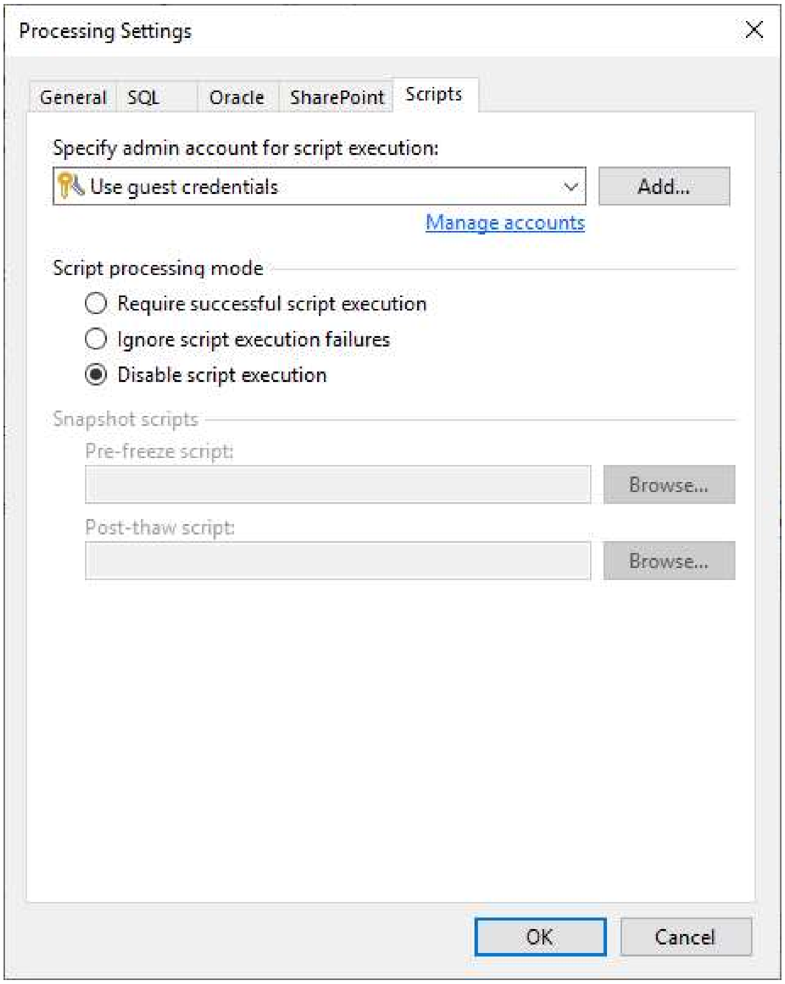
60. Select a user account from the drop-down list.


Processing Settings
General
SQL
Oracle
SharePoint
Scripts
Add...
Manage accounts
OK
Cancel

Specify SharePoint admin account: Use guest credentials

61. On the Processing Settings page, select Scripts.

62. Keep the default settings and click OK.



Processing Settings

Specify admin account for script execution: Use guest credentials

Script processing mode

○ Require successful script execution

○ Ignore script execution failures

● Disable script execution

Snapshot scripts

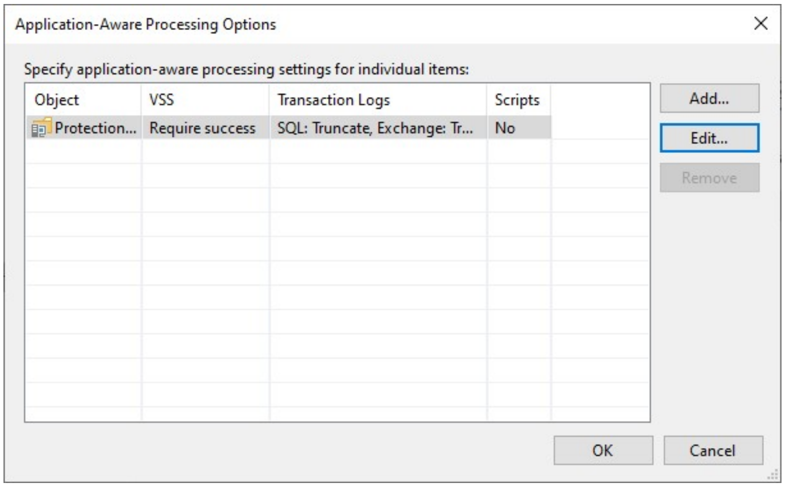
Pre-freeze script:

Post-thaw script:

General
SQL
Oracle
SharePoint
Scripts
Add...
Manage accounts
Browse...
Browse...
OK
Cancel

Technet24

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



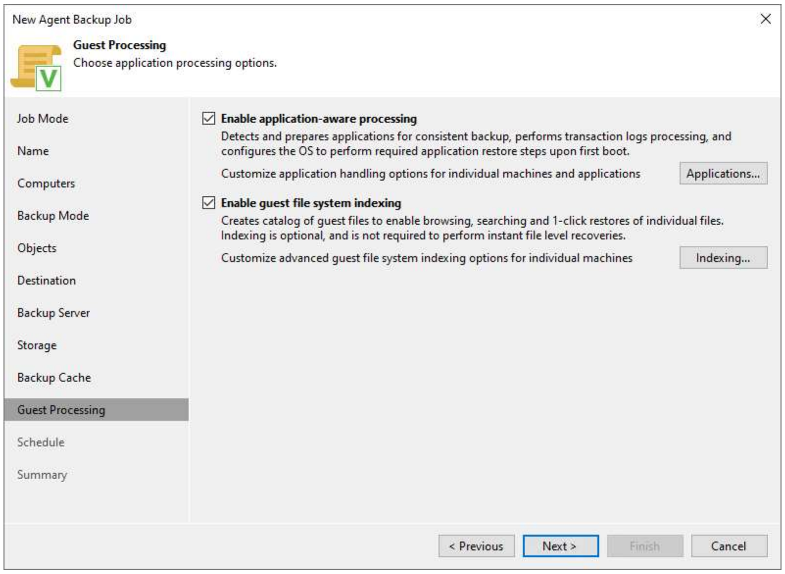
Application-Aware Processing Options

Specify application-aware processing settings for individual items:

Object	VSS	Transaction Logs	Scripts
Protection...	Require success	SQL: Truncate, Exchange: Tr...	No

Add...
Edit...
Remove
OK
Cancel

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



New Agent Backup Job

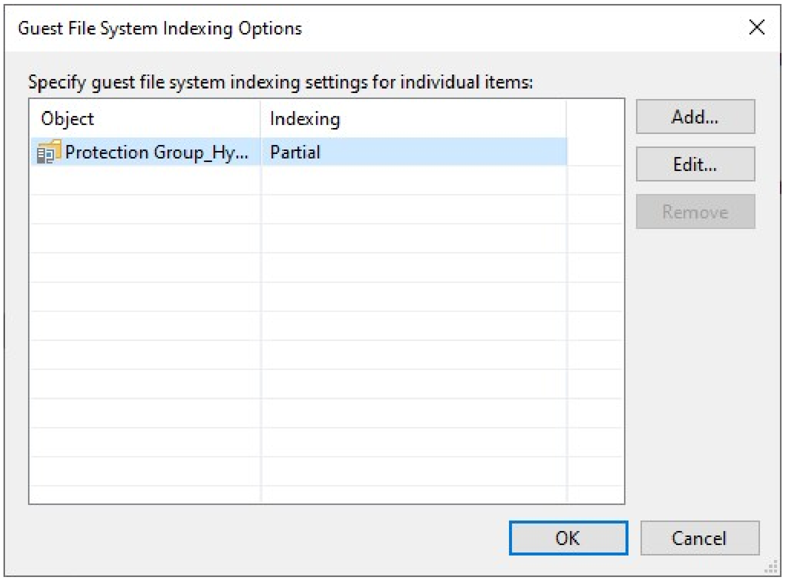
Guest Processing
Choose application processing options.

☑ **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

☑ **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

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
Applications...
Indexing...
< Previous
Next >
Finish
Cancel

65. On the Guest File System Indexing Options page, select the Object, click Edit and.



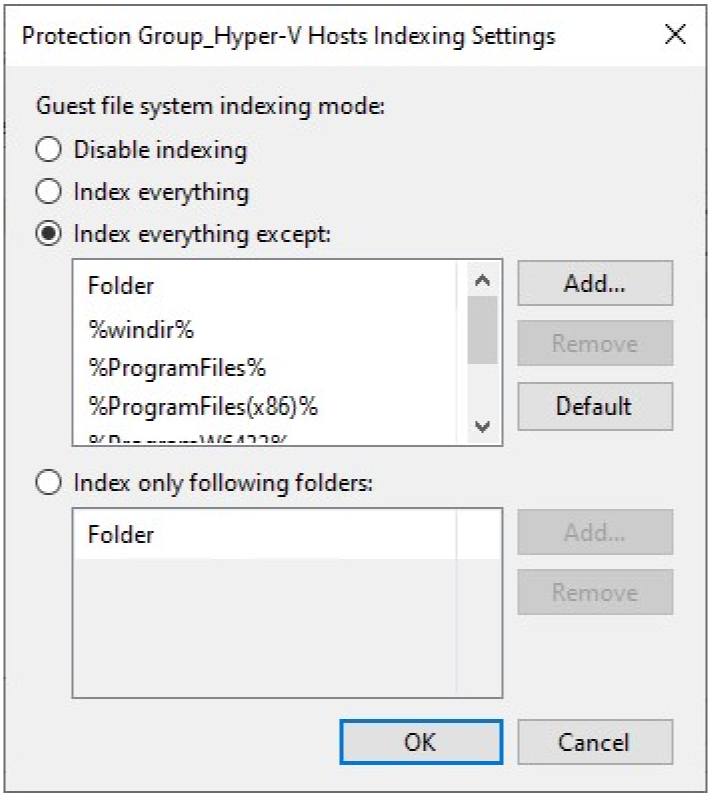
Guest File System Indexing Options
Add...
Edit...
Remove
OK
Cancel

Specify guest file system indexing settings for individual items:

Object	Indexing
Protection Group_Hy...	Partial

Technet24

66. On the Guest file system indexing mode page, keep the default settings.
67. Click OK.



Protection Group_Hyper-V Hosts Indexing Settings

Guest file system indexing mode:

○ Disable indexing
○ Index everything
● Index everything except:

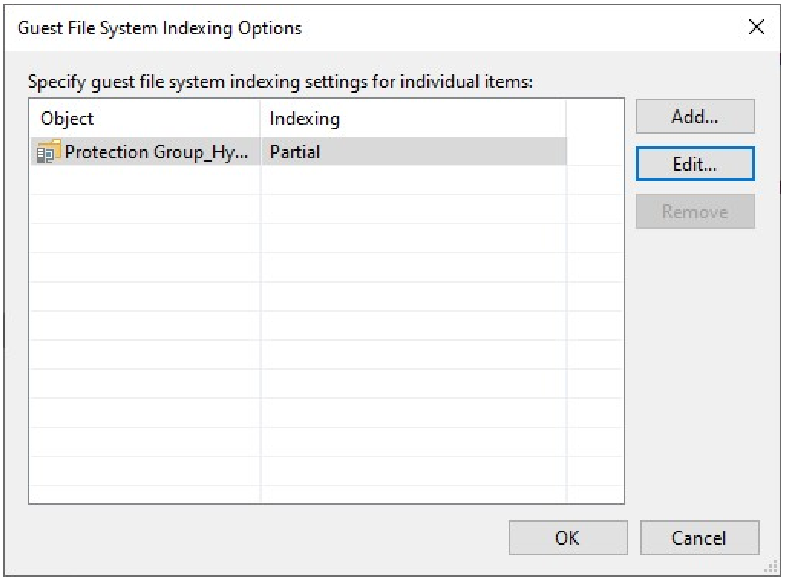
Folder
%windir%
%ProgramFiles%
%ProgramFiles(x86)%

○ Index only following folders:

Folder

Add...
Remove
Default
Add...
Remove
OK
Cancel

68. On the Guest File System Indexing Options page, click OK.



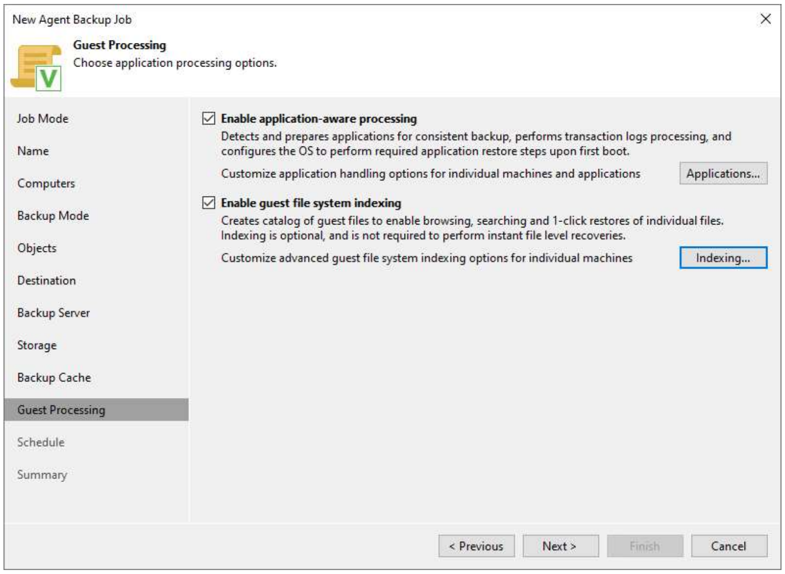
Guest File System Indexing Options

Specify guest file system indexing settings for individual items:

Object	Indexing
Protection Group_Hy...	Partial

Add...
Edit...
Remove
OK
Cancel

69. On the Guest Processing page, click Next.



New Agent Backup Job

Guest Processing

Choose application processing 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

☑ **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

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
Applications...
Indexing...
< Previous
Next >
Finish
Cancel

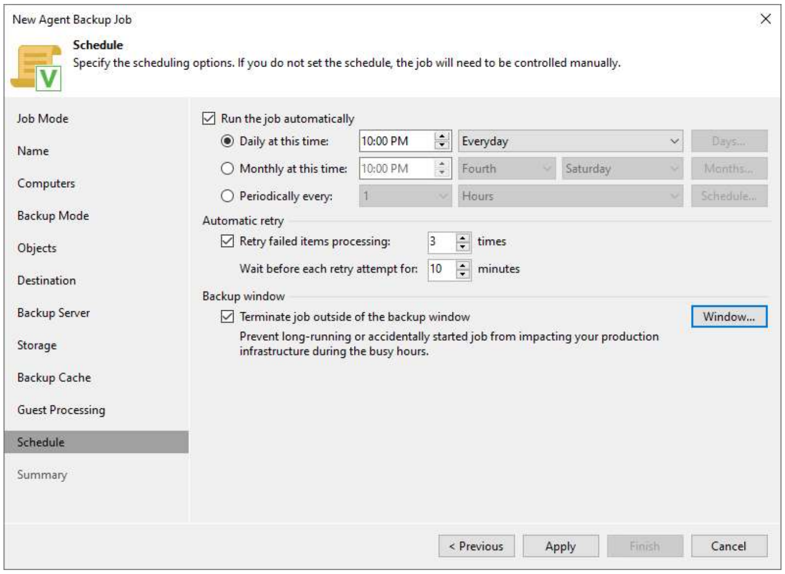
Technet24

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

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

72. 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.

73. Click Apply.



New Agent Backup Job

Schedule

Specify the scheduling options. If you do not set the schedule, the job will need to be controlled manually.

☑ Run the job automatically

● Daily at this time: 10:00 PM Everyday

○ Monthly at this time: 10:00 PM Fourth Saturday

○ Periodically every: 1 Hours

Automatic retry

☑ Retry failed items processing: 3 times

Wait before each retry attempt for: 10 minutes

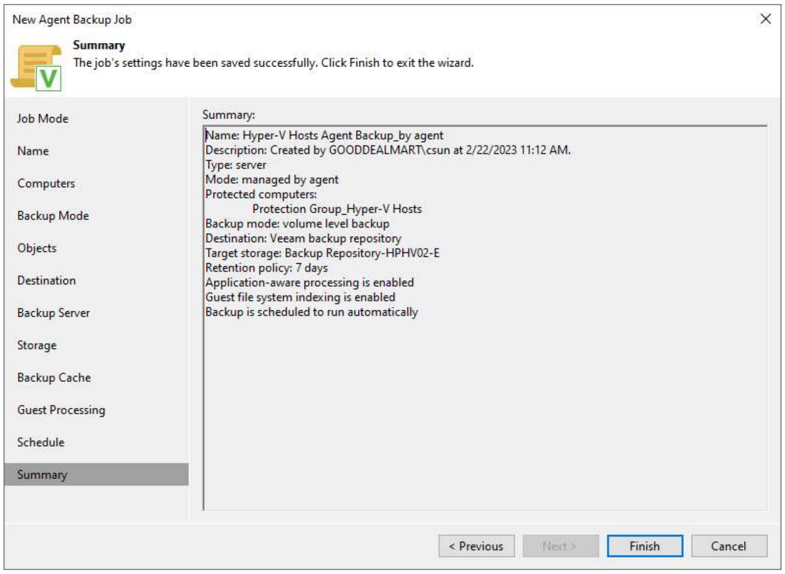
Backup window

☑ Terminate job outside of the backup window

Prevent long-running or accidentally started job from impacting your production infrastructure during the busy hours.

Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
Days...
Months...
Schedule...
Window...
< Previous
Apply
Finish
Cancel

74. On the Summary page, click Finish.


New Agent Backup Job
Job Mode
Name
Computers
Backup Mode
Objects
Destination
Backup Server
Storage
Backup Cache
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

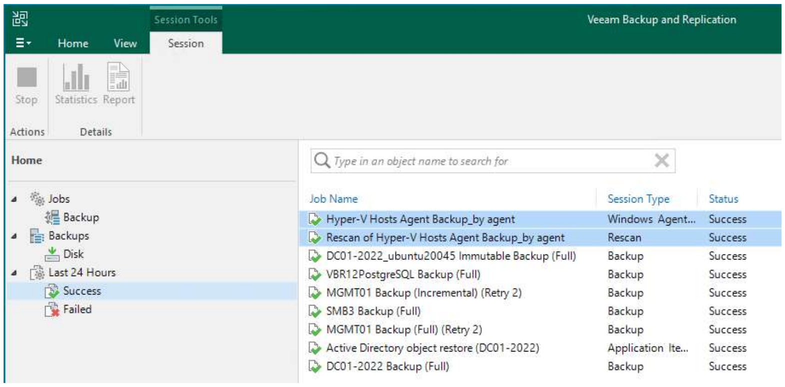
Summary

The job's settings have been saved successfully. Click Finish to exit the wizard.

Summary:

Name: Hyper-V Hosts Agent Backup_by agent
Description: Created by GOODDEALMART\csun at 2/22/2023 11:12 AM.
Type: server
Mode: managed by agent
Protected computers:
    Protection Group_Hyper-V Hosts
Backup mode: volume level backup
Destination: Veeam backup repository
Target storage: Backup Repository-HPHV02-E
Retention policy: 7 days
Application-aware processing is enabled
Guest file system indexing is enabled
Backup is scheduled to run automatically

75. Verify that the Machine rescan and Job configured are completed without issues.


Session Tools
Veeam Backup and Replication
Home
View
Session
Stop
Statistics
Report
Actions
Details
Home
Jobs
Backup
Backups
Disk
Last 24 Hours
Success
Failed
Type in an object name to search for

Job Name	Session Type	Status
Hyper-V Hosts Agent Backup_by agent	Windows Agent...	Success
Rescan of Hyper-V Hosts Agent Backup_by agent	Rescan	Success
DC01-2022_ubuntu20045 Immutable Backup (Full)	Backup	Success
VBR12PostgreSQL Backup (Full)	Backup	Success
MGMT01 Backup (Incremental) (Retry 2)	Backup	Success
SMB3 Backup (Full)	Backup	Success
MGMT01 Backup (Full) (Retry 2)	Backup	Success
Active Directory object restore (DC01-2022)	Application Ite...	Success
DC01-2022 Backup (Full)	Backup	Success

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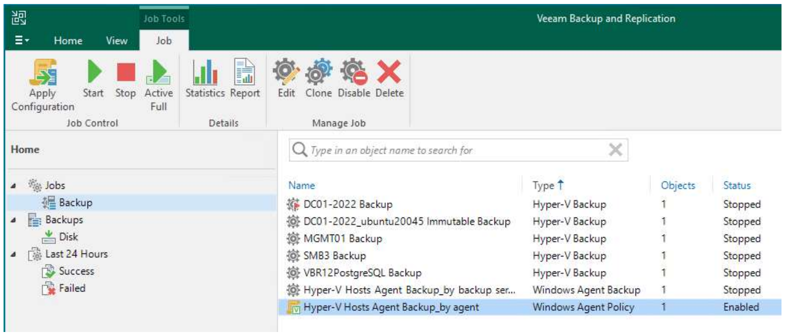
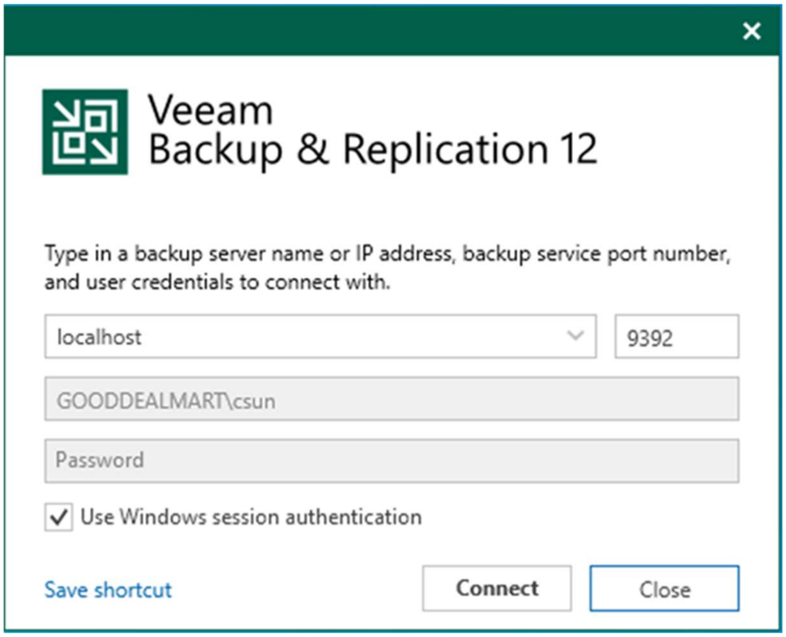
76. Verify that the backup job has been added


Job Tools
Veeam Backup and Replication
Home
View
Job
Apply Configuration
Start
Stop
Active Full
Job Control
Statistics
Report
Details
Edit
Clone
Disable
Delete
Manage Job
Home
Jobs
Backup
Backups
Disk
Last 24 Hours
Success
Failed
Type in an object name to search for

Name	Type ↑	Objects	Status
DC01-2022 Backup	Hyper-V Backup	1	Stopped
DC01-2022_ubuntu20045 Immutable Backup	Hyper-V Backup	1	Stopped
MGMT01 Backup	Hyper-V Backup	1	Stopped
SMB3 Backup	Hyper-V Backup	1	Stopped
VBR12PostgreSQL Backup	Hyper-V Backup	1	Stopped
Hyper-V Hosts Agent Backup_by backup ser...	Windows Agent Backup	1	Stopped
Hyper-V Hosts Agent Backup_by agent	Windows Agent Policy	1	Enabled

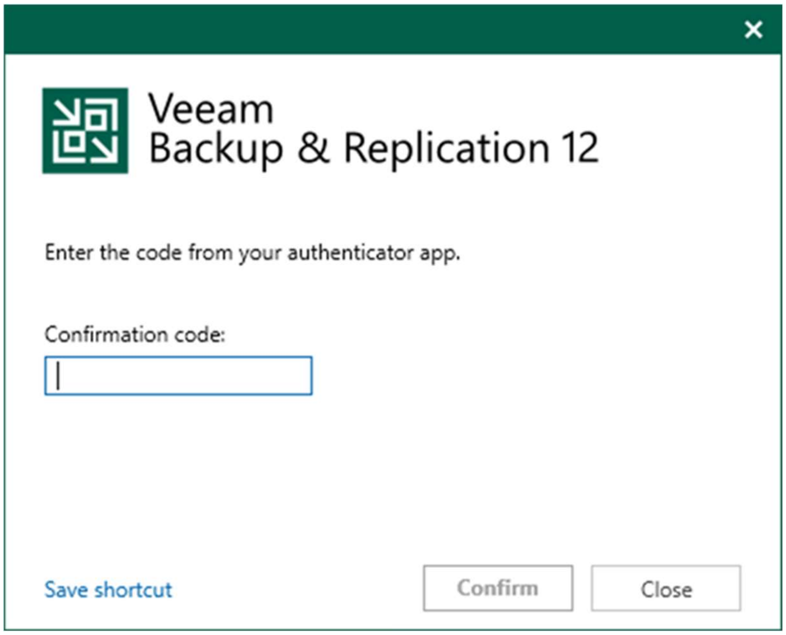
Create a Backup job to backup all VMS of the Hyper-V Host

This procedure creates a backup job to back up all VMS of the production Hyper-V host. The new VMS will be backed up automatically after the backup job is created. You don't need to modify the backup job settings.

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.	 Veeam Backup & Replication 12 Type in a backup server name or IP address, backup service port number, and user credentials to connect with. localhost 9392 GOODDEALMART\csun Password ☑ Use Windows session authentication Save shortcut Connect Close

Technet24

3. Enter the MFA Confirmation code and click Confirm.

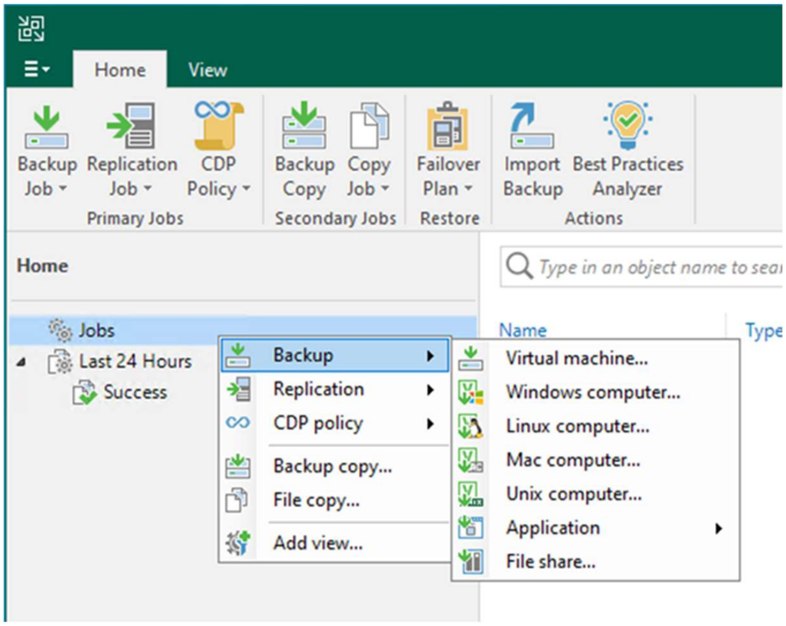

Veeam
Backup & Replication 12
Save shortcut
Confirm
Close

Enter the code from your authenticator app.

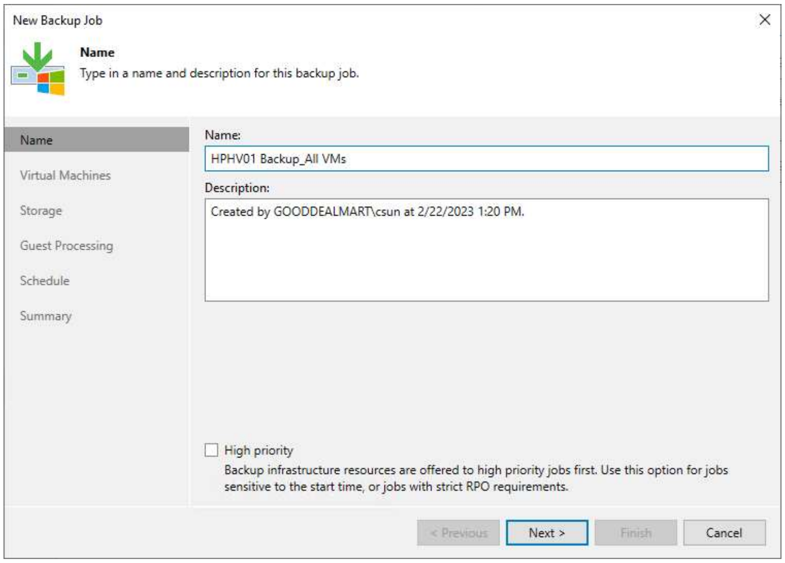
Confirmation code:

4. Select Jobs on the Home page and right-click Jobs.

5. Select Backup and click Virtual machine.


Home
View
Backup Job
Replication Job
CDP Policy
Primary Jobs
Backup Copy
Copy Job
Secondary Jobs
Failover Plan
Restore
Import Backup
Best Practices Analyzer
Actions
Home
Type in an object name to sea
Jobs
Last 24 Hours
Success
Name
Type
Backup
Replication
CDP policy
Backup copy...
File copy...
Add view...
Virtual machine...
Windows computer...
Linux computer...
Mac computer...
Unix computer...
Application
File share...

6. On the Name page, enter a name for the backup job in the Name field.
7. Give a brief description in the Description field for the future.
8. Select the High priority checkbox if you want this job to allocate resources in the first place.
9. Click Next.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

Name

Type in a name and description for this backup job.

Name: HPHV01 Backup_All VMs

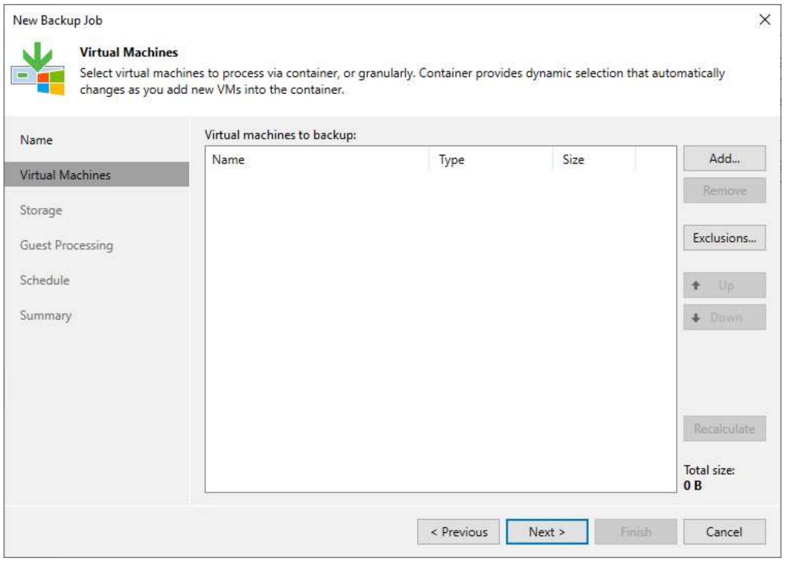
Description: Created by GOODDEALMART\csun at 2/22/2023 1:20 PM.

☐ High priority

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.

---

10. Click Add on the Virtual Machines page.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Add...
Remove
Exclusions...
Up
Down
Recalculate
< Previous
Next >
Finish
Cancel

Virtual Machines

Select virtual machines to process via container, or granularly. Container provides dynamic selection that automatically changes as you add new VMs into the container.

Virtual machines to backup:

Name	Type	Size

Total size: 0 B

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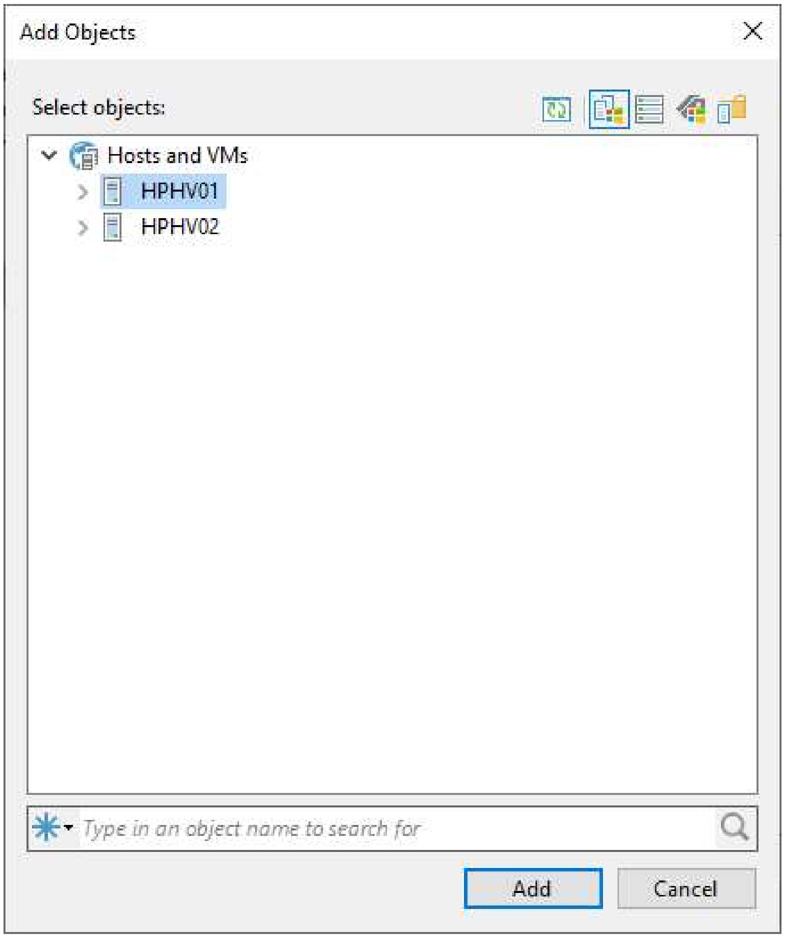
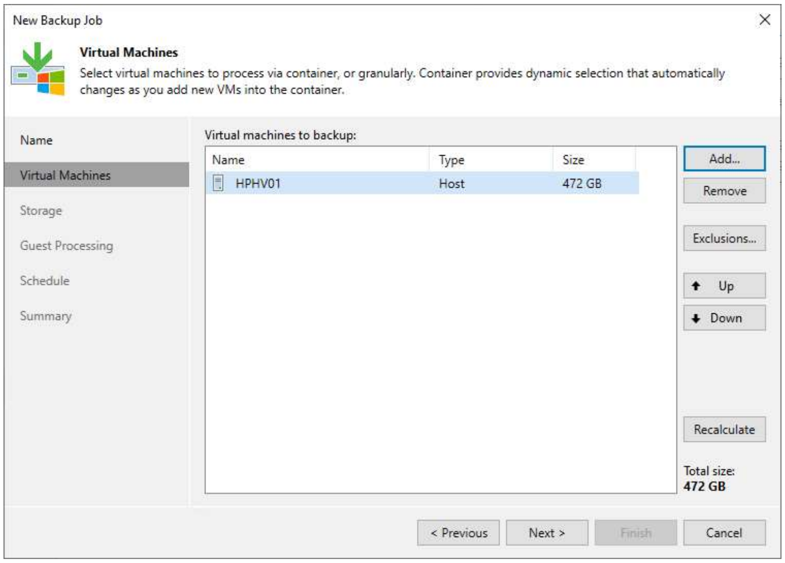
11. Select the Host from the Select objects list on the Add Objects page and click Add.
12. If you have multiple Hosts that need to back up in the same backup job, you can repeat the step to add them.


Add Objects
Select objects:
Hosts and VMs
HPHV01
HPHV02
Type in an object name to search for
Add
Cancel

13. Click Next on the Virtual Machines page.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Add...
Remove
Exclusions...
Up
Down
Recalculate
< Previous
Next >
Finish
Cancel

Virtual Machines

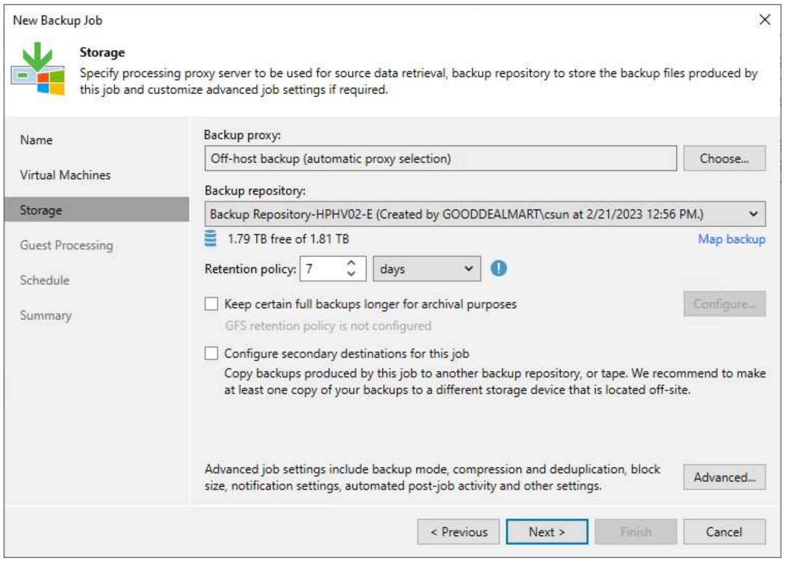
Select virtual machines to process via container, or granularly. Container provides dynamic selection that automatically changes as you add new VMs into the container.

Virtual machines to backup:

Name	Type	Size
HPHV01	Host	472 GB

Total size:
472 GB

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


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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.

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

Backup repository:
Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.79 TB free of 1.81 TB

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.

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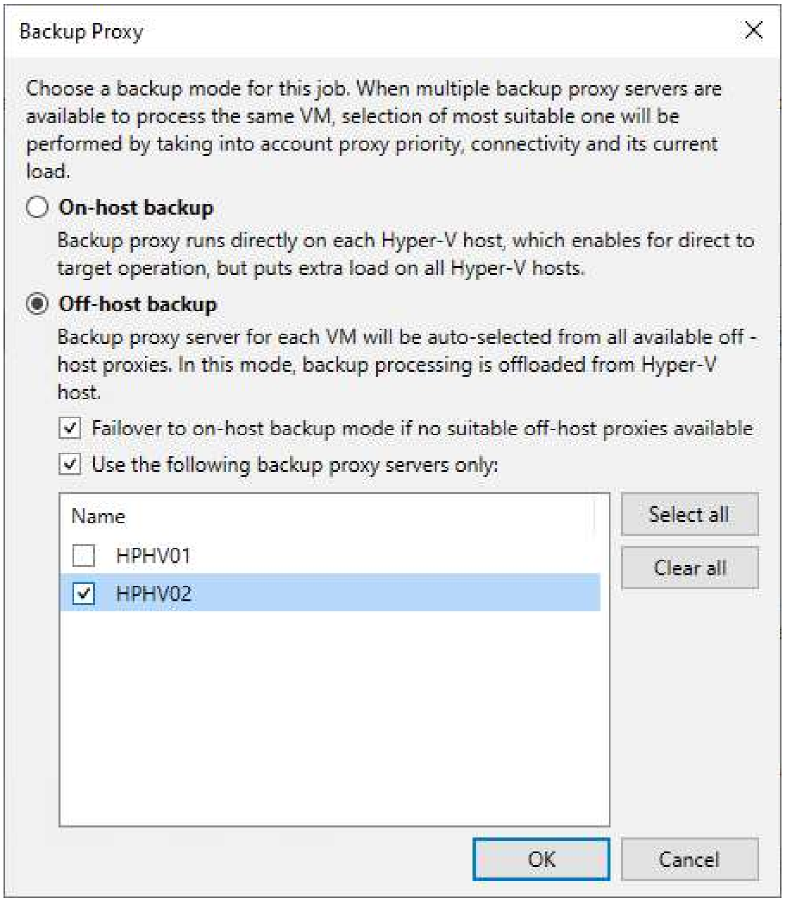
15. On the Backup Proxy page, if you select On-host backup mode, the source Microsoft HyperV host will serve as both the source host and the backup proxy. In this mode, Veeam Data Mover runs directly on the source host, which speeds up data retrieval but places additional strain on the host.

16. 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.

17. 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.

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



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:

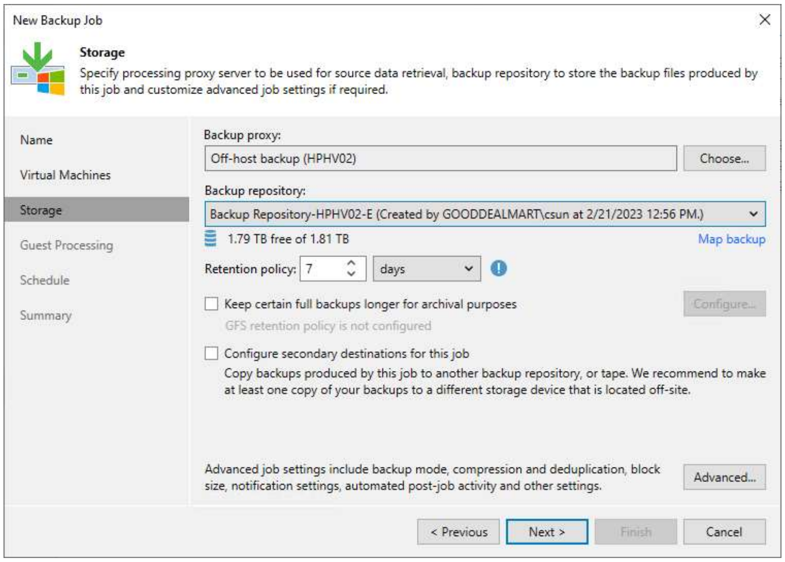
Name
☐ HPHV01
☑ HPHV02

proxies are available in the checkbox. Still, the job will fail to start if off-host backup proxies are unavailable or configured properly.

19. Click OK.

---

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


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.79 TB free of 1.81 TB

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.

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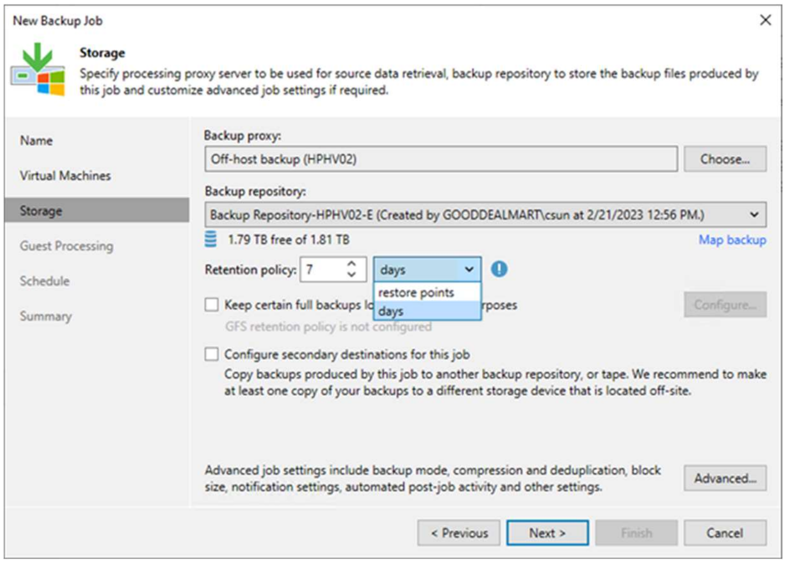
21. Set the retention policy settings for restore points in the Retention Policy field.
22. Select days or restore points from the drop-down list.



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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.79 TB free of 1.81 TB

Retention policy: 7 days

☐ Keep certain full backups lo[...]rposes

GFS retention policy is not configured

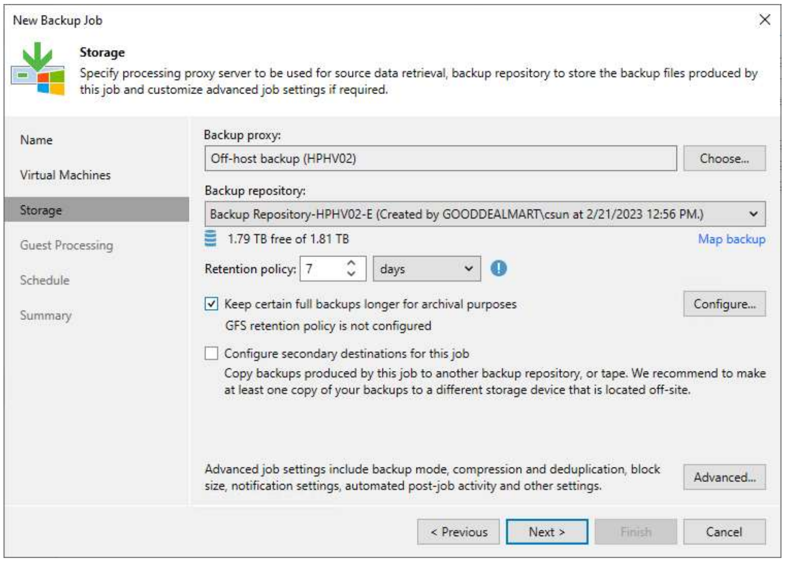
☐ Configure secondary destinations for this job

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.

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
restore points
days
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

23. 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.
24. Select Keep certain full backups for longer for archival purposes and click Configure.



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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.79 TB free of 1.81 TB

Retention policy: 7 days

☑ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

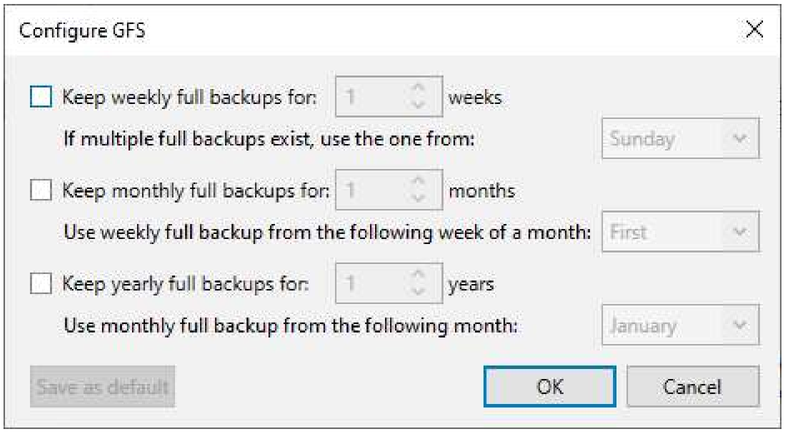
☐ Configure secondary destinations for this job

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.

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

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



Configure GFS

☐ Keep weekly full backups for: 1 weeks

If multiple full backups exist, use the one from: Sunday

☐ Keep monthly full backups for: 1 months

Use weekly full backup from the following week of a month: First

☐ Keep yearly full backups for: 1 years

Use monthly full backup from the following month: January

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

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

28. Click OK.

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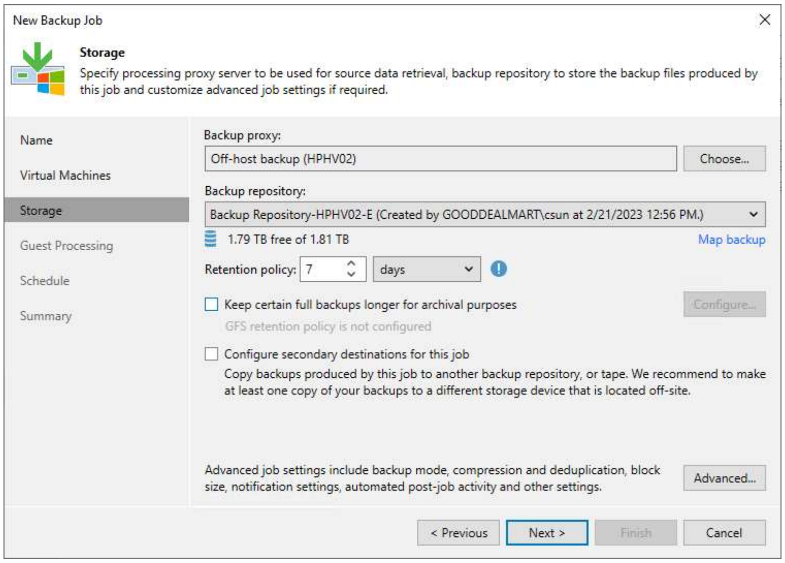
29. On the Storage page, click Advanced.



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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.79 TB free of 1.81 TB

Retention policy: 7 days

☐ Keep certain full backups longer for archival purposes

GFS retention policy is not configured

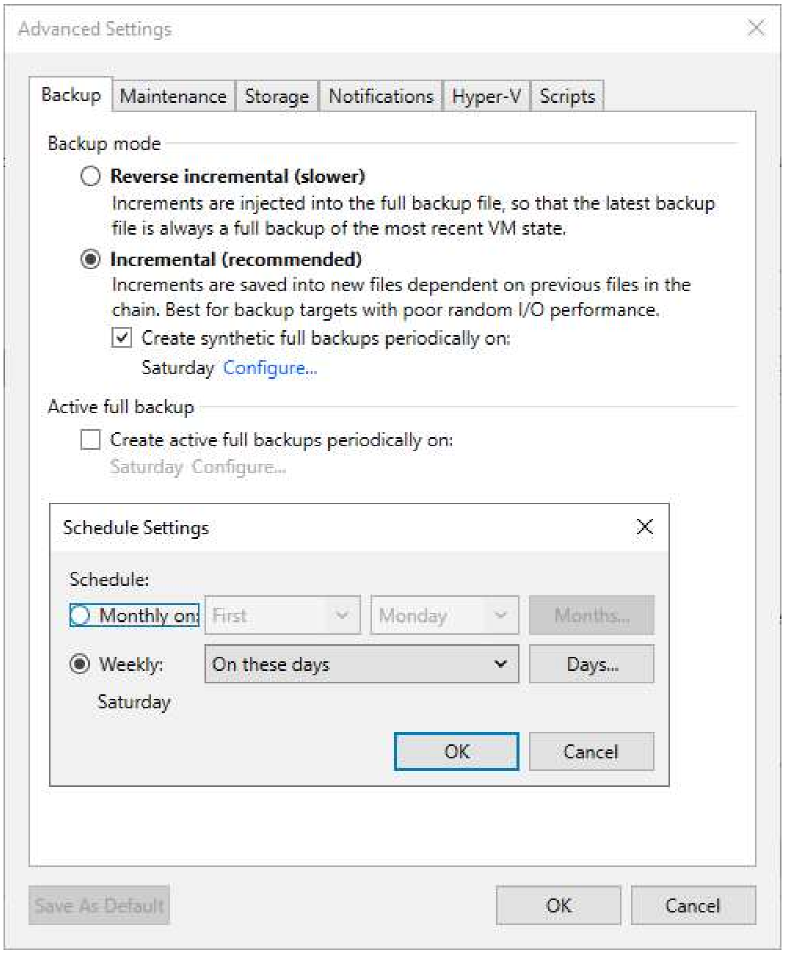
☐ Configure secondary destinations for this job

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.

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

30. On the Backup page, select Incremental (recommended).
31. Select create synthetic full backups periodically or active full backups periodically checkbox.
32. Click Configure to schedule full backups periodically and click OK.



Advanced Settings

Backup mode

○ **Reverse incremental (slower)**
Increments are injected into the full backup file, so that the latest backup file is always a full backup of the most recent VM state.

● **Incremental (recommended)**
Increments are saved into new files dependent on previous files in the chain. Best for backup targets with poor random I/O performance.

☑ Create synthetic full backups periodically on:
Saturday Configure...

Active full backup

☐ Create active full backups periodically on:
Saturday Configure...

Schedule Settings

Schedule:

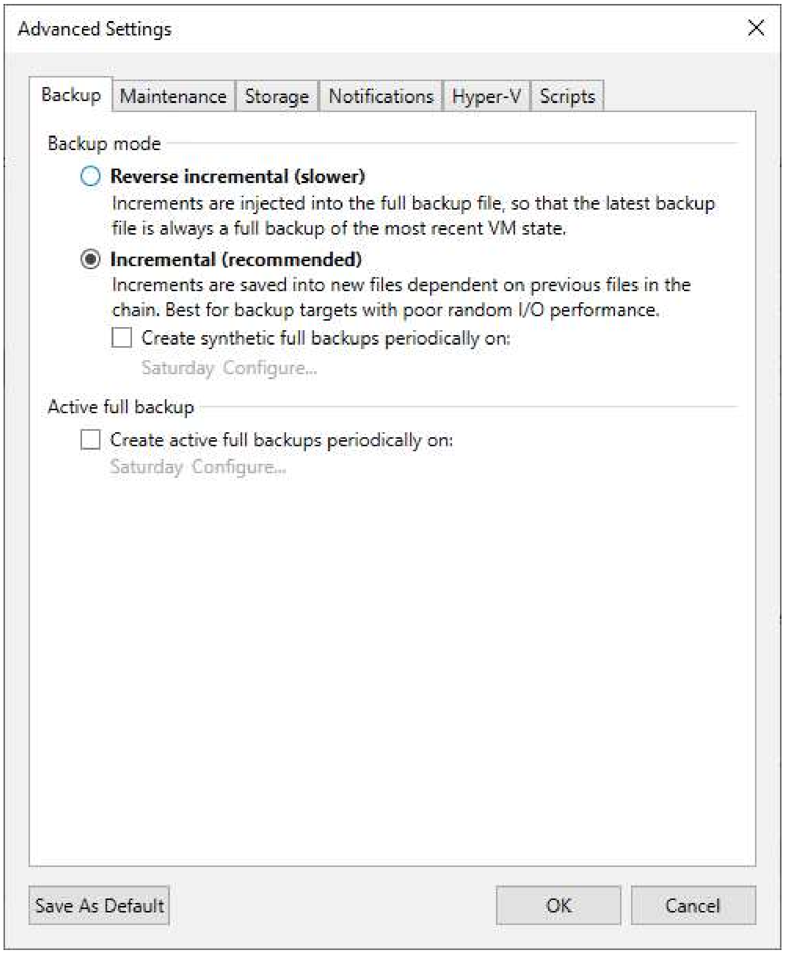
○ Monthly on: First Monday

● Weekly: On these days

Saturday

Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Months...
Days...
OK
Cancel
Save As Default
OK
Cancel

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



Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Backup mode

○ **Reverse incremental (slower)**
Increments are injected into the full backup file, so that the latest backup file is always a full backup of the most recent VM state.

● **Incremental (recommended)**
Increments are saved into new files dependent on previous files in the chain. Best for backup targets with poor random I/O performance.

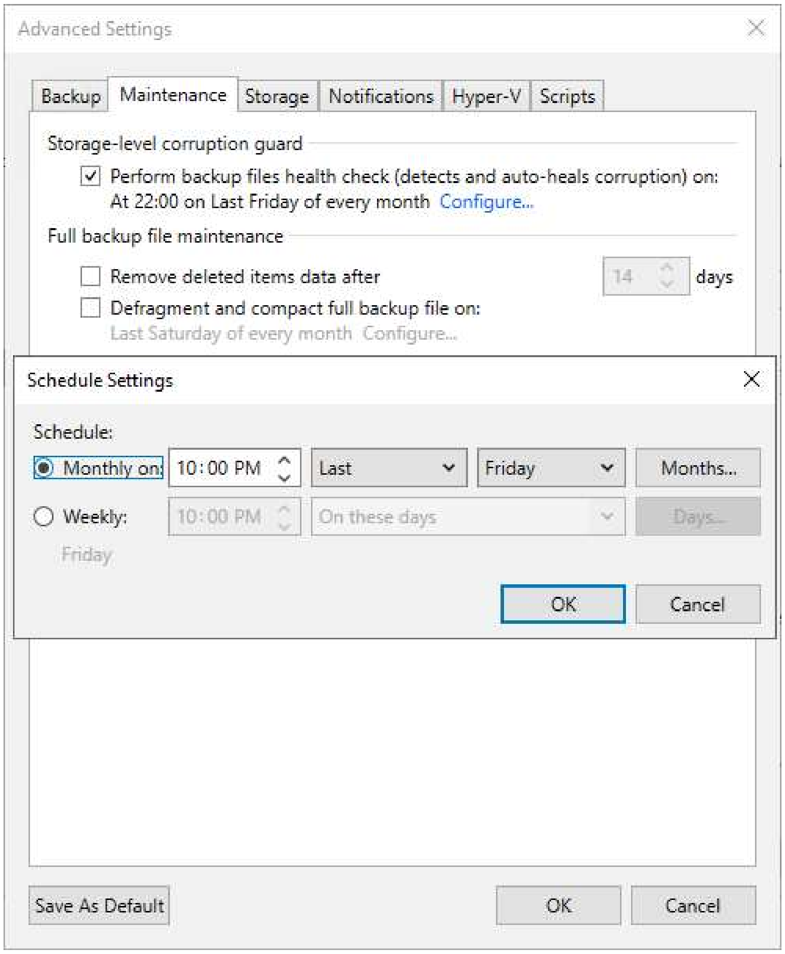
☐ Create synthetic full backups periodically on:
Saturday Configure...

Active full backup

☐ Create active full backups periodically on:
Saturday Configure...

Save As Default
OK
Cancel

34. On the Advanced Settings, Maintenance.
35. 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.
36. Click Configure to set a timetable for the health check.


Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Configure...
Configure...
Schedule Settings
Months...
Days...
OK
Cancel
Save As Default
OK
Cancel

Storage-level corruption guard

☑ Perform backup files health check (detects and auto-heals corruption) on:
At 22:00 on Last Friday of every month

Full backup file maintenance

☐ Remove deleted items data after 14 days
☐ Defragment and compact full backup file on:
Last Saturday of every month

Schedule:
● Monthly on: 10:00 PM Last Friday
○ Weekly: 10:00 PM On these days
Friday

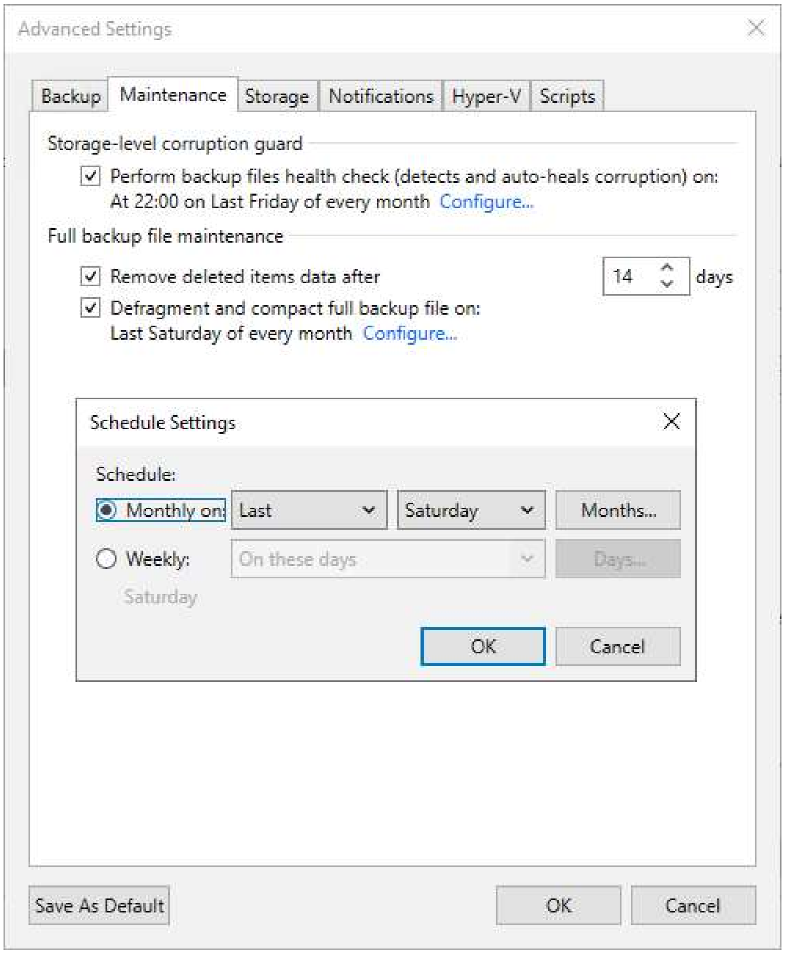
37. Select the Remove deleted items data after the checkbox and enter the few days you want backup data for deleted VMs to be kept.

38. Select the Defragment and compact full backup file checkbox and click Configure.

39. Set the schedule for the compact operation to compact a full backup periodically.

Note:

GFS retention is not compatible with defragment and compact functionality.



Advanced Settings

Storage-level corruption guard

☑ Perform backup files health check (detects and auto-heals corruption) on:
At 22:00 on Last Friday of every month Configure...

Full backup file maintenance

☑ Remove deleted items data after 14 days

☑ Defragment and compact full backup file on:
Last Saturday of every month Configure...

Schedule Settings

Schedule:

● Monthly on: Last Saturday

○ Weekly: On these days

Saturday

Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Months...
Days...
OK
Cancel
Save As Default
OK
Cancel

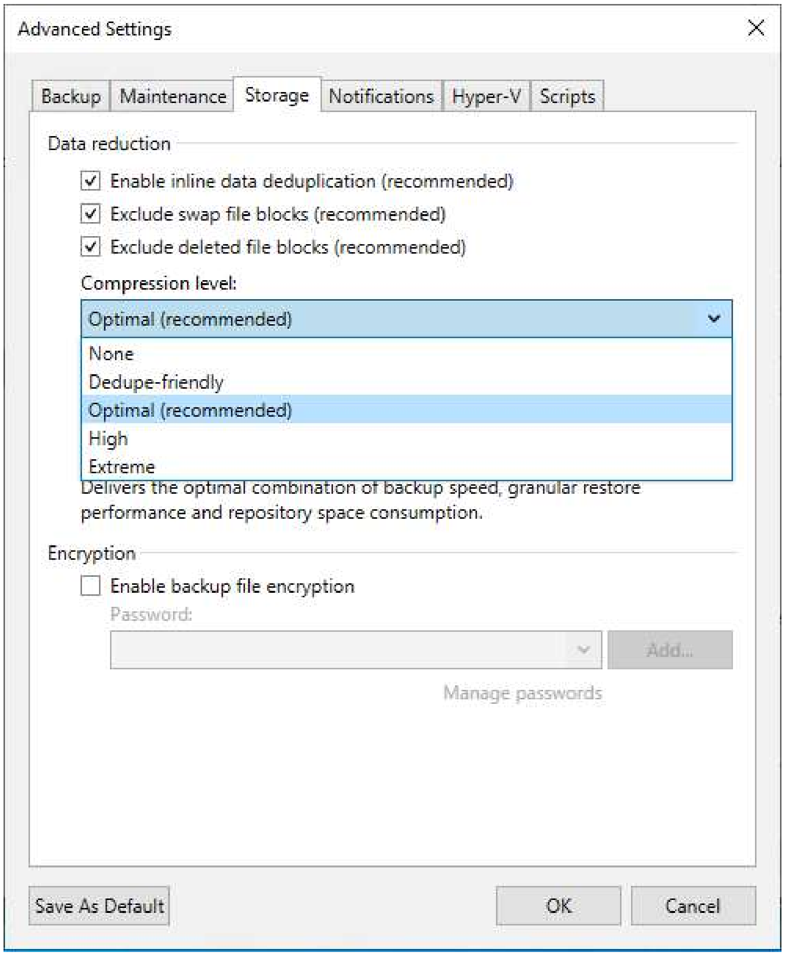
40. On Advanced Settings, select Storage.

41. Select the Enable inline data deduplication (recommended) checkbox.

42. Select the Exclude swap file blocks (recommended) checkbox.

43. Select the Exclude deleted file blocks (recommended) checkbox.

44. Select the compression level for the backup from the drop-down list.


Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Data reduction

☑ Enable inline data deduplication (recommended)

☑ Exclude swap file blocks (recommended)

☑ Exclude deleted file blocks (recommended)

Compression level: Optimal (recommended)

None
Dedupe-friendly
Optimal (recommended)
High
Extreme

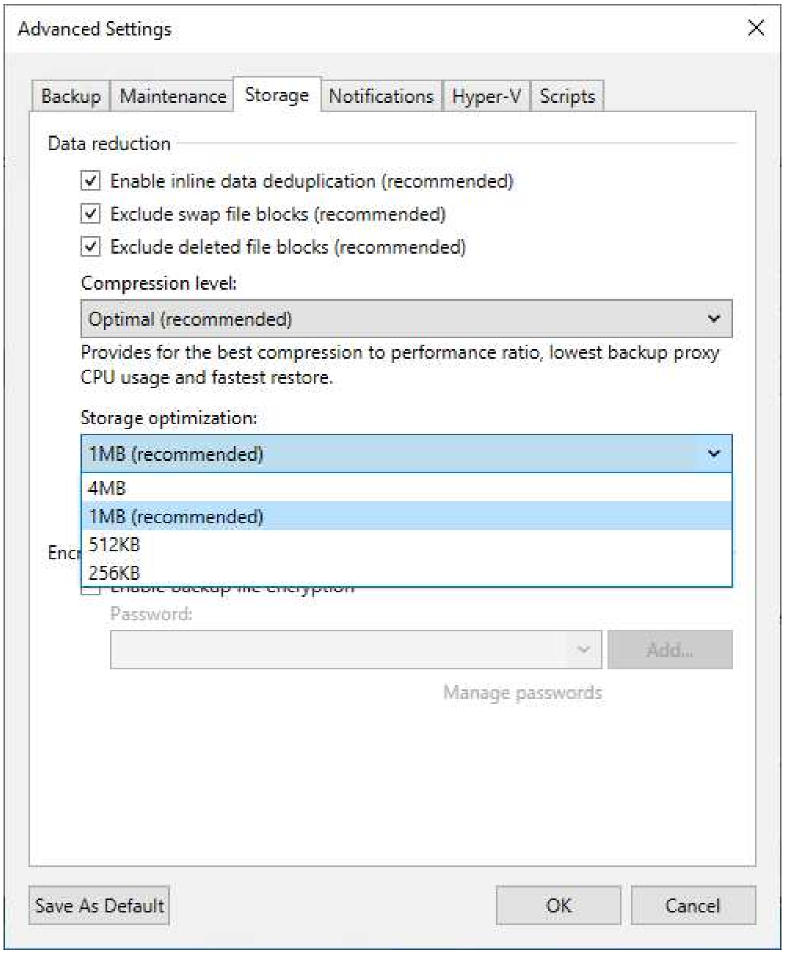
Delivers the optimal combination of backup speed, granular restore performance and repository space consumption.

Encryption

☐ Enable backup file encryption

Password:
Add...
Manage passwords
Save As Default
OK
Cancel

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


Advanced Settings
Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts
Save As Default
OK
Cancel
Add...
Manage passwords

Data reduction

☑ Enable inline data deduplication (recommended)

☑ Exclude swap file blocks (recommended)

☑ Exclude deleted file blocks (recommended)

Compression level: Optimal (recommended)

Provides for the best compression to performance ratio, lowest backup proxy CPU usage and fastest restore.

Storage optimization: 1MB (recommended)

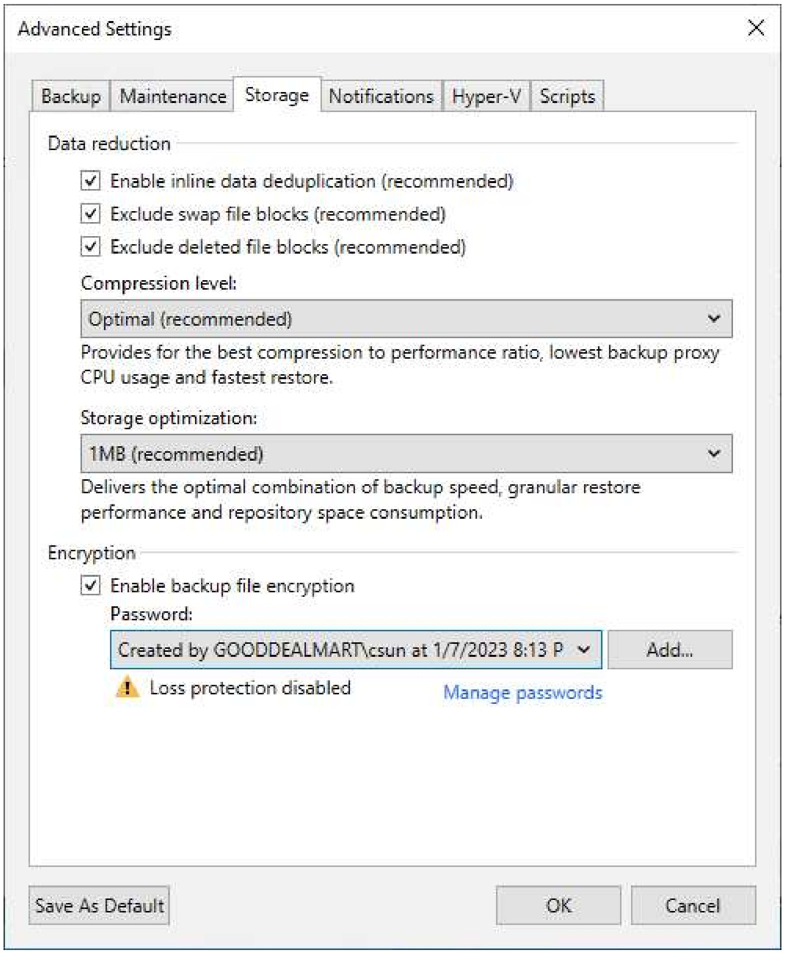
- 4MB
- 1MB (recommended)
- 512KB
- 256KB

Enc

☐ Enable backup file encryption

Password:

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



Advanced Settings

Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Data reduction

☑ Enable inline data deduplication (recommended)

☑ Exclude swap file blocks (recommended)

☑ Exclude deleted file blocks (recommended)

Compression level: Optimal (recommended)

Provides for the best compression to performance ratio, lowest backup proxy CPU usage and fastest restore.

Storage optimization: 1MB (recommended)

Delivers the optimal combination of backup speed, granular restore performance and repository space consumption.

Encryption

☑ Enable backup file encryption

Password: Created by GOODDEALMART\csun at 1/7/2023 8:13 P

Loss protection disabled

Add...
Manage passwords
Save As Default
OK
Cancel

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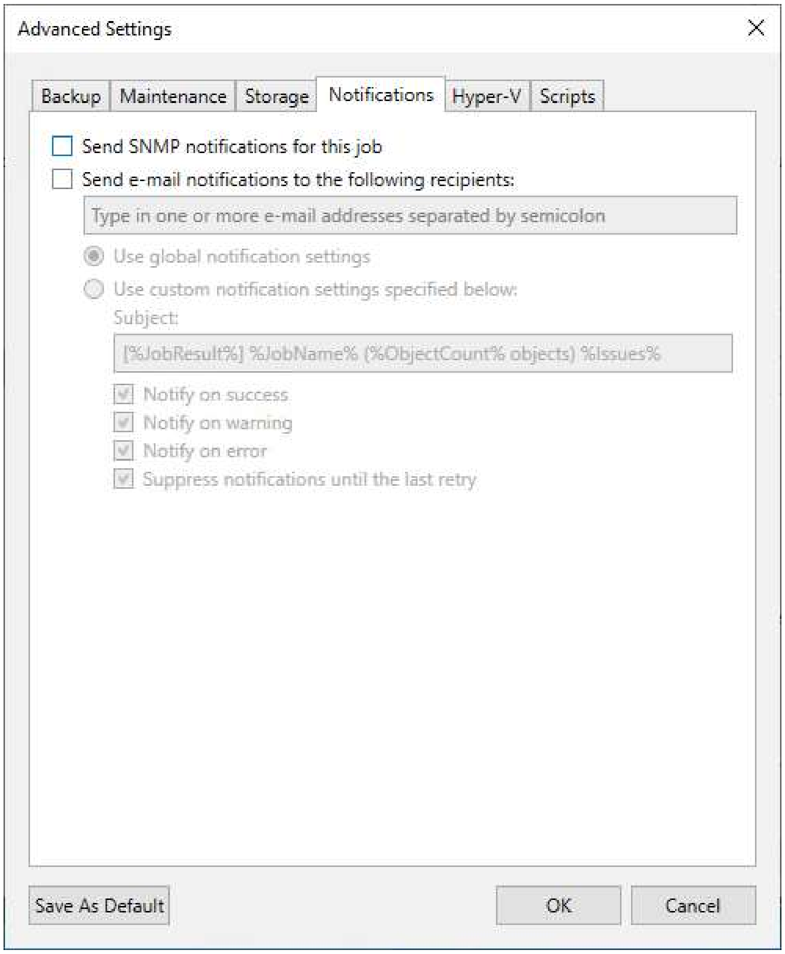
48. On the Advanced Settings, select Notifications.

49. Keep the default settings.



Advanced Settings

Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

☐ Send SNMP notifications for this job

☐ Send e-mail notifications to the following recipients:

Type in one or more e-mail addresses separated by semicolon

● Use global notification settings

○ Use custom notification settings specified below:

Subject:

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

☑ Notify on success

☑ Notify on warning

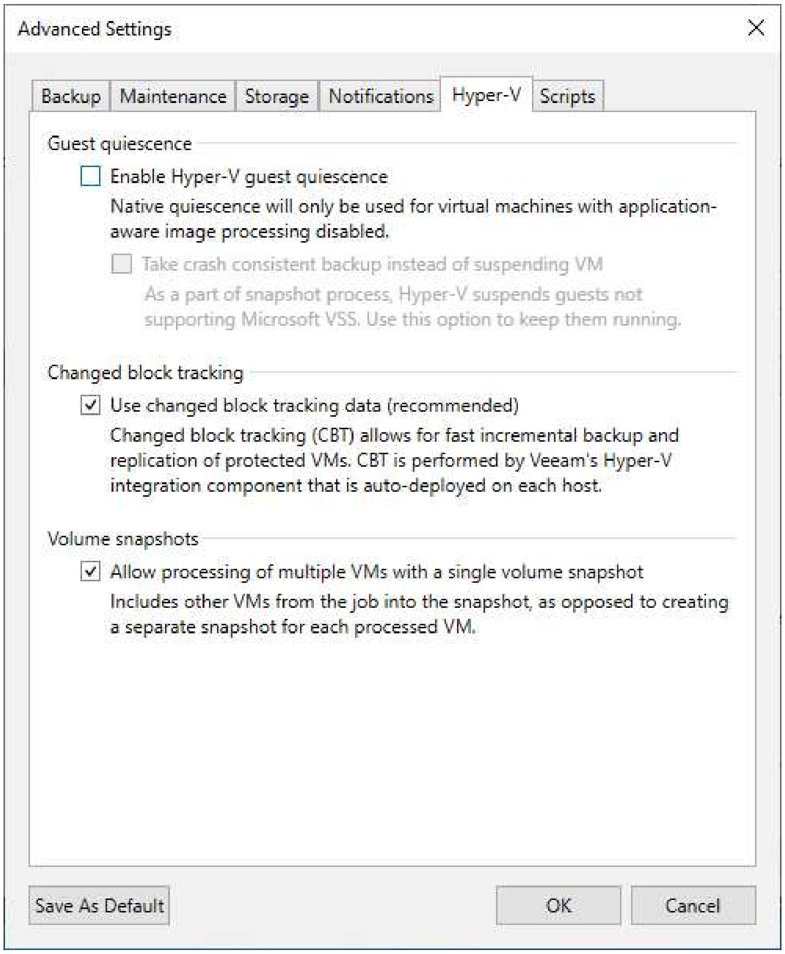
☑ Notify on error

☑ Suppress notifications until the last retry

Save As Default
OK
Cancel

50. On the Advanced Settings, select Hyper-V.

51. Keep the default settings.



Advanced Settings

Guest quiescence

☐ Enable Hyper-V guest quiescence

Native quiescence will only be used for virtual machines with application-aware image processing disabled.

☐ Take crash consistent backup instead of suspending VM

As a part of snapshot process, Hyper-V suspends guests not supporting Microsoft VSS. Use this option to keep them running.

Changed block tracking

☑ Use changed block tracking data (recommended)

Changed block tracking (CBT) allows for fast incremental backup and replication of protected VMs. CBT is performed by Veeam's Hyper-V integration component that is auto-deployed on each host.

Volume snapshots

☑ Allow processing of multiple VMs with a single volume snapshot

Includes other VMs from the job into the snapshot, as opposed to creating a separate snapshot for each processed VM.

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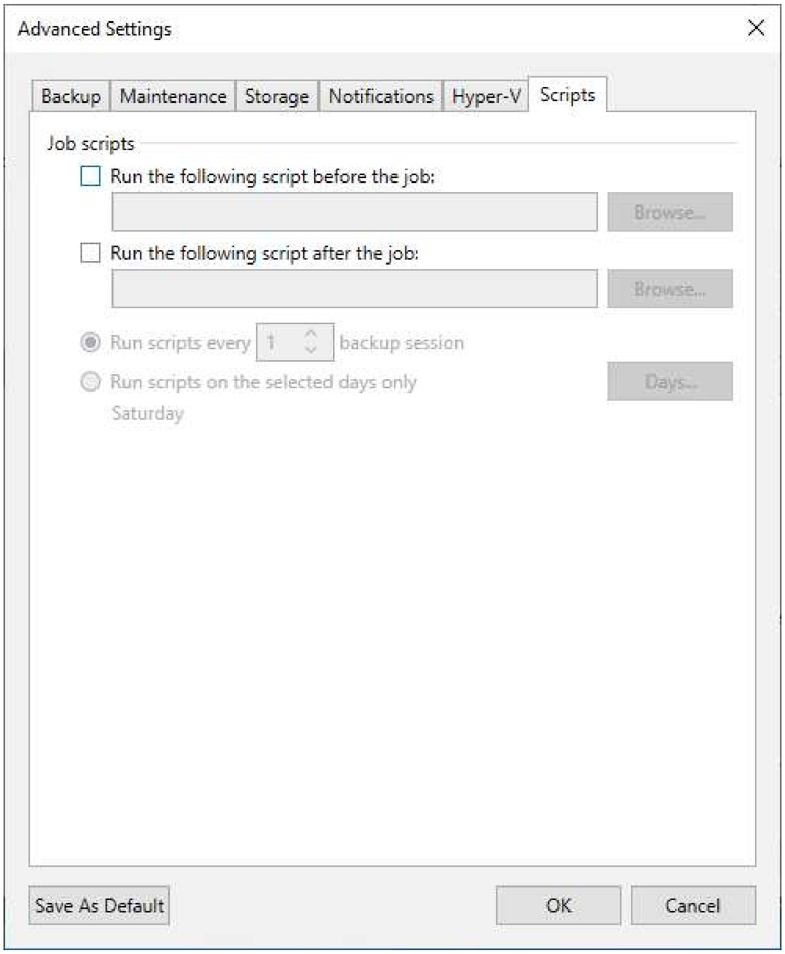
52. On the Advanced Settings page, click Scripts and keep the default settings.

53. Click OK.



Advanced Settings

Backup
Maintenance
Storage
Notifications
Hyper-V
Scripts

Job scripts

☐ Run the following script before the job:

☐ Run the following script after the job:

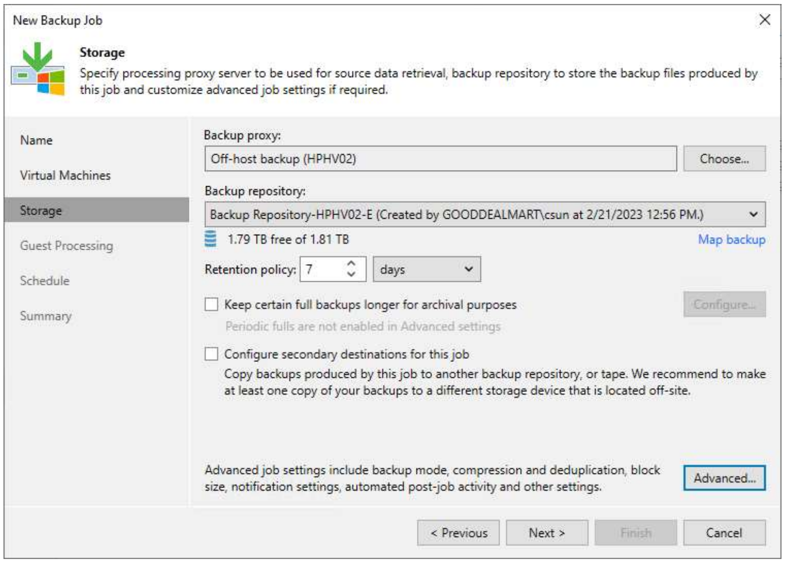
● Run scripts every 1 backup session

○ Run scripts on the selected days only

Saturday

Browse...
Browse...
Days...
Save As Default
OK
Cancel

54. Click Next on the Storage page.



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.

Backup proxy: Off-host backup (HPHV02)

Backup repository: Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)

1.79 TB free of 1.81 TB

Retention policy: 7 days

☐ Keep certain full backups longer for archival purposes

Periodic fulls are not enabled in Advanced settings

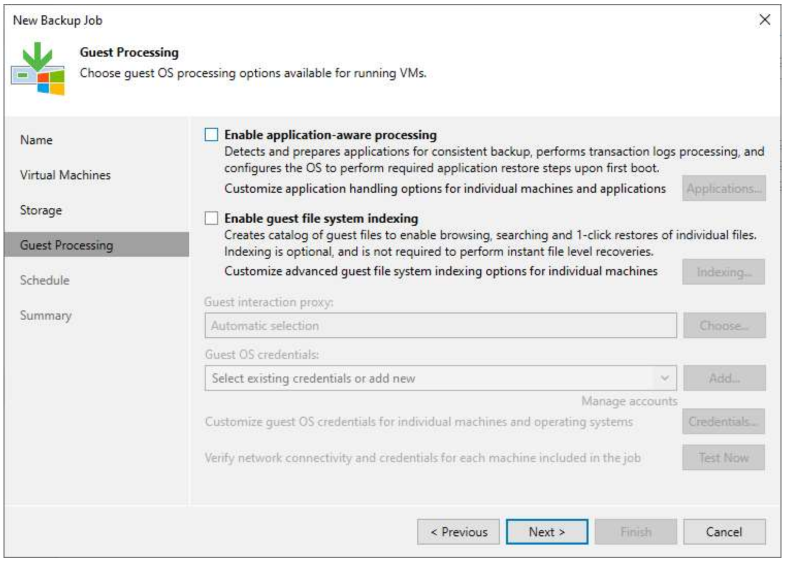
☐ Configure secondary destinations for this job

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.

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Choose...
Map backup
Configure...
Advanced...
< Previous
Next >
Finish
Cancel

55. Click Next on the Guess Processing page.



New Backup Job

Guest Processing

Choose guest OS processing options available for running VMs.

☐ **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

☐ **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

Guest interaction proxy: Automatic selection

Guest OS credentials: Select existing credentials or add new

Customize guest OS credentials for individual machines and operating systems

Verify network connectivity and credentials for each machine included in the job

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Applications...
Indexing...
Choose...
Add...
Manage accounts
Credentials...
Test Now
< Previous
Next >
Finish
Cancel

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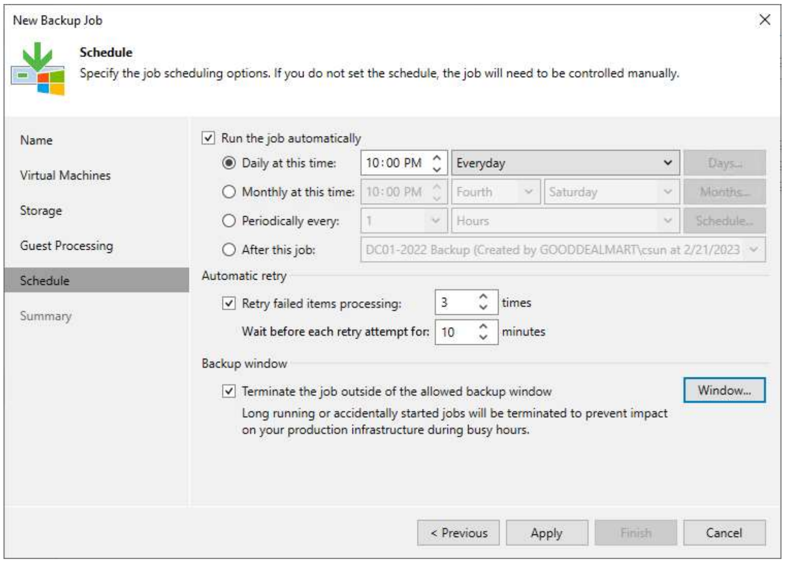
56. Select Run the job automatically checkbox on the Schedule page and select your specified schedule.
57. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
58. Define the time interval the backup job must complete in the Backup window section.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



New Backup Job

Schedule

Specify the job scheduling options. If you do not set the schedule, the job will need to be controlled manually.

☑ Run the job automatically

● Daily at this time: 10:00 PM Everyday

○ Monthly at this time: 10:00 PM Fourth Saturday

○ Periodically every: 1 Hours

○ After this job: DC01-2022 Backup (Created by GOODDEALMART\csun at 2/21/2023

Automatic retry

☑ Retry failed items processing: 3 times

Wait before each retry attempt for: 10 minutes

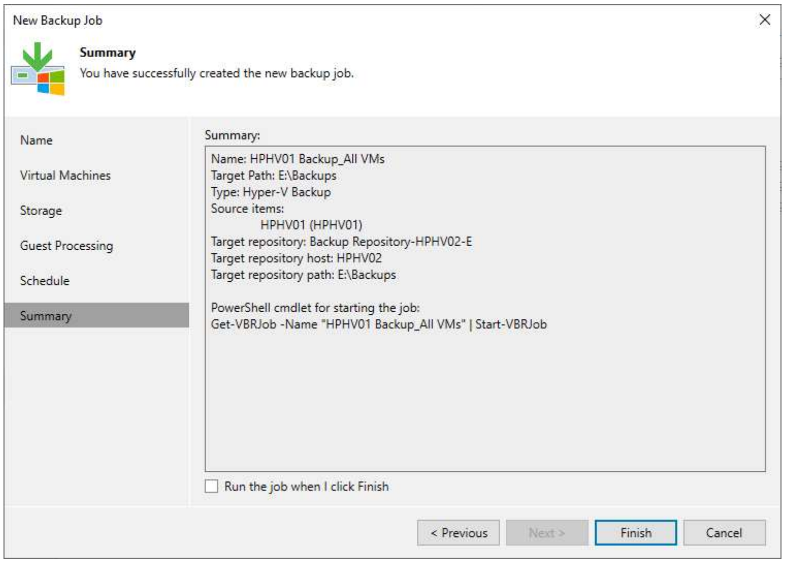
Backup window

☑ Terminate the job outside of the allowed backup window

Long running or accidentally started jobs will be terminated to prevent impact on your production infrastructure during busy hours.

Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
Days...
Months...
Schedule...
Window...
< Previous
Apply
Finish
Cancel

60. Click Finish on the Summary page.


New Backup Job
Name
Virtual Machines
Storage
Guest Processing
Schedule
Summary
< Previous
Next >
Finish
Cancel

Summary

You have successfully created the new backup job.

Summary:

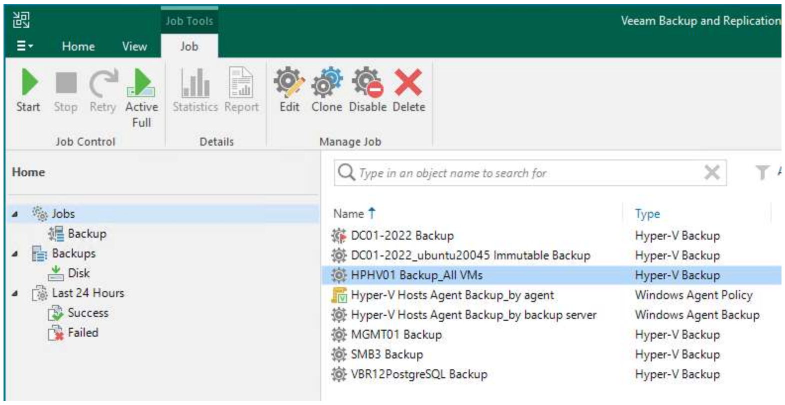
Name: HPHV01 Backup_All VMs
Target Path: E:\Backups
Type: Hyper-V Backup
Source items:
HPHV01 (HPHV01)
Target repository: Backup Repository-HPHV02-E
Target repository host: HPHV02
Target repository path: E:\Backups

PowerShell cmdlet for starting the job:

```
Get-VBRJob -Name "HPHV01 Backup_All VMs" | Start-VBRJob
```

☐ Run the job when I click Finish

61. Verify that the backup job has been added.


Job Tools
Veeam Backup and Replication
Home
View
Job
Start
Stop
Retry
Active Full
Statistics
Report
Edit
Clone
Disable
Delete
Job Control
Details
Manage Job
Home
Type in an object name to search for
Jobs
Backup
Backups
Disk
Last 24 Hours
Success
Failed

Name	Type
DC01-2022 Backup	Hyper-V Backup
DC01-2022_ubuntu20045 Immutable Backup	Hyper-V Backup
HPHV01 Backup_All VMs	Hyper-V Backup
Hyper-V Hosts Agent Backup_by agent	Windows Agent Policy
Hyper-V Hosts Agent Backup_by backup server	Windows Agent Backup
MGMT01 Backup	Hyper-V Backup
SMB3 Backup	Hyper-V Backup
VBR12PostgreSQL Backup	Hyper-V Backup

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