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,

 Rick W. Vanover
 Microsoft MVP, VMware vExpert, Cisco Champion

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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 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 <u>http://www.checkyourlogs.net</u> and <u>www.github.com/mvpdays</u>

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

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

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

	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 &	Windows server	ТСР	445
replication manager server			135
Microsoft Hyper-V server		ТСР	6160
or Off-host backup proxy			
Veeam backup repository		ТСР	2500 to 3300
Veeam gateway server		ТСР	6162
Veeam mount server		ТСР	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 &	Linux servers	ТСР	22
replication manager server			
		ТСР	6162
		ТСР	2500 to 3300
Linux Servers	Veeam backup & replication manager server	ТСР	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	SCVMM server	ТСР	8100
server	Hyper-V Host server	ТСР	445
			135
		ТСР	6160
		ТСР	6162
		ТСР	6163
		ТСР	2500 to 3300
		ТСР	49152 to 65535
	Veeam Backup & Replication	ТСР	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)	ТСР	443
	SMB3 server	ТСР	6160
		ТСР	6162
	Veeam backup & replication manager	ТСР	9501
	server	ТСР	6172
Management client PC		ТСР	3389
REST client		ТСР	9419
SCVMM		ТСР	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	ТСР	9392
		ТСР	10003
		ТСР	9396
Veeam backup & replication console server	Veeam Mount server	ТСР	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	ТСР	49152 to 65535
	SMB (CIFS) share	ТСР	445
			135
	NFS share	TCP, UDP	111 2049
	Veeam Gateway	ТСР	49152 to 65535
	server	UDP	
Windows Hyper-V server		ТСР	2500 to 3300

SMB3 server	Veeam backup proxy server (onhost or offhost)	ТСР	2500 to 3300
Veeam backup & replication manager server	Offhost backup proxy	ТСР	6163
	SMB3 server	ТСР	6163
	Offhost file proxy	ТСР	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	ТСР	2500 to 3300
Veeam source backup repository	Veeam target backup repository	ТСР	2500 to 3300
Veeam source backup repository	Azure Object storage repository gateway server	ТСР	2500 to 3300
Veeam Backup repository/ secondary backup repository	Cache repository in NAS backup	ТСР	2500 to 3300
Windows server running vPower NFS Service	Veeam backup repository gateway server as a backup repository	ТСР	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 /	NFS share is as a	ТСР	2049
Veeam backup proxy	backup repository	UDP	
		ТСР	111
		UDP	
	NFS share as a	ТСР	mountd_port
	backup repository (version 3)	UDP	
		ТСР	statd_port
		UDP	
		ТСР	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	ТСР	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	ТСР	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
		ТСР	80
		НТТР	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
		ТСР	443

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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
		ТСР	80
		НТТР	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	ТСР	443
		SSH	22

		HTTPS	Public/private IPv4 addresses of Azure appliance
Azure proxy appliance	Azure object storage	ТСР	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
		ТСР	80
		НТТР	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	Windows SMB (CIFS)	ТСР	445
server	backup repository		135

NFS shares the backup	TCP, UDP	111, 2409
repository		

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	ТСР	6166
		ТСР	2500 to 3300
Veeam tape server	Veeam backup and replication manager server	ТСР	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	ТСР	6160
		ТСР	6162

		ТСР	6164
Veeam WAN accelerator server	Veeam backup and replication manager server	ТСР	2500 to 3300
	Veeam WAN accelerator server	ТСР	6164
		ТСР	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	ТСР	22
	Veeam Guest interaction proxy	ТСР	6190
		ТСР	6290
		ТСР	445
Veeam Guest	VM guest Windows	ТСР	445
interaction proxy	OS		135
		ТСР	49152 to 65535

		ТСР	6167
	VM guest Linux OS	ТСР	22
VM guest OS	Veeam Guest interaction proxy	ТСР	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	Ŭ	ТСР	6160 11731
		ТСР	6167
		ТСР	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	ТСР	445

Veeam backup and replication manager			135
server		ТСР	6160
		ТСР	6162
		ТСР	49152 to 65535
Log shipping server	Veeam backup repository	ТСР	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	ТСР	445 135
		ТСР	2500 to 3300
		ТСР	6160
			11731
		ТСР	49152 to 65535
		ТСР	6167

SQL VM guest OS	Veeam Guest interaction proxy	ТСР	2500 to 3300
	Veeam backup repository	ТСР	2500 to 3300
	Log shipping server	ТСР	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	Oracle VM guest OS	ТСР	445
interaction proxy	(Microsoft Windows)		135
		ТСР	2500 to 3300
		ТСР	6160
			11731
		ТСР	49152 to 65535
		ТСР	6167
	Oracle VM guest OS (Linux)	ТСР	22
		ТСР	2500 to 3300

Oracle VM guest OS	Veeam Guest interaction proxy	ТСР	2500 to 3300
	Veeam backup repository	ТСР	2500 to 3300
	Log shipping server	ТСР	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	ТСР	9401
	Veeam Backup repository	ТСР	2500 to 3300
Veeam backup and replication manager	Veeam Mount server	ТСР	445
server		ТСР	2500 to 3300
		ТСР	6160
		ТСР	6162
		ТСР	6170

	TCP 49152 t	to 65535
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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	ТСР	2500 to 3300
Veeam backup and replication manager	Veeam helper appliance	ТСР	22
server		ТСР	2500 to 3300
Veeam mount server	Veeam helper appliance	ТСР	22
		ТСР	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	ТСР	2500 to 3300
	Veeam helper host	ТСР	22

Veeam backup and replication manager		ТСР	2500 to 3300
server		ТСР	6162
Veeam mount server	Veeam helper host	ТСР	22
		ТСР	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	ТСР	21
Veeam helper appliance	VM guest Linux or Unix OS	ТСР	20
		ТСР	2500 to 3300
Veeam helper host	VM guest Linux or Unix OS	ТСР	2500 to 3300
Veeam backup and replication manager server	VM guest Linux or Unix OS	ТСР	22
Veeam mount server	VM guest Windows OS	ТСР	445 135

		ТСР	6160 11731
		ТСР	6173 2500
		ТСР	49152 to 65535
Veeam backup and replication manager server	VM guest OS	ТСР	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	ТСР	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
		ТСР	135

Veeam backup and replication manager server	Active directory VM guest OS	TCP UDP	389
		ТСР	636
			3268
			3269
		ТСР	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	ТСР	80 443
	Exchange 2010/2013/2016/2019 CAS Server	ТСР	443

Application Item of SQL Server Restore

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

Sources	Target	Network Protocol	Port Number
Veeam backup and replication manager server	SQL VM guest OS	ТСР	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	ТСР	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	ТСР	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	ТСР	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	ТСР	25

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.

Install Veeam Backup and Replication v12 with PostgreSQL

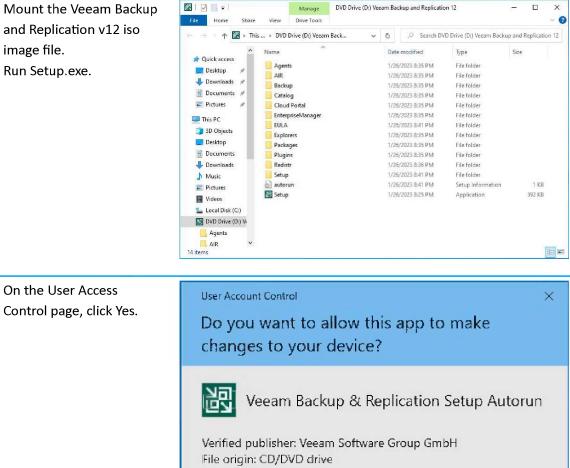
When you install Veeam Backup & Replication, the Veeam Backup & Replication console is automatically installed on the backup server.

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.

Ins	tructions			Screenshot (if ap	plicable)		
1.	Log in to the Veeam	é → 8 é é esteremente	orduces Soluti		To Buy Q	a Griegegi	÷ 1 6
2.	Backup and Replication manager server. Download the Veeam Backup and Replication v12 ISO image file from the Veeam website sign-in required).	Veean Matform Cloud-notive standalose modules Individual feature downloads Other offenings		Product: Vecam Availability Suite ¹⁰⁰ Vecam's flagable adulter combines Vecam scalado & Anatonian with the monomorphic editors of Vecam OVE*, w Backup for Asson w Backup for Asson # Additional Included workloots: None Hough 158 or Kalan encode mitability and are robbits and an influence	Related Resources	Downlast Product	
	1		*	Vecam Backup & Replication ¹⁴ Modernice your data protection and eliminate downtime with the simple, flexible, reliable, and powerful solution for protection your Cloud, SwS: Without and Bruning another we	 Product overview Release notes Product demo 	DOWNLOAD TRIAL	V

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

5.

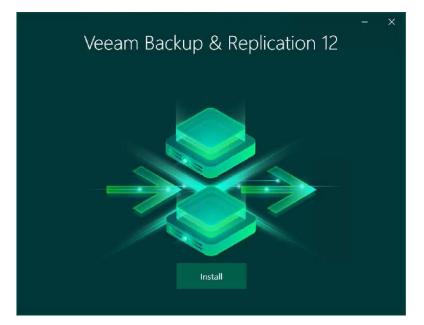


Show more details

Yes

No

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



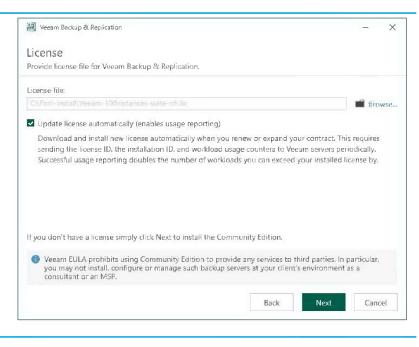
 Select Install Veeam Backup & Replication on the Veeam Backup & Replication page. Veeam Backup & Replication – ×
 Install Veeam Backup & Replication Veeam Backup & Replication combines fast, flexible and reliable backup, recovery and replication for all your workloads and data.
 Install Veeam Backup 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.

8.	Click I Accept on the License Agreement page.	 Veeam Backup & Replication – × 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.	I Accept Cancel Image: Veeam Backup & Replication - X License Provide license file for Veeam Backup & Replication.
		License file:
		Back Next Cancel

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

Open						
→ * ↑ <mark>.</mark> •	Fhis PC → Local Disk (C:) → NFR →	~	Ö	Search NFR		۶
Organize 🔻 New fo	der				88 • 🔳	(
Y Quick access Desktop Downloads Documents Pictures Pictures VD Drive (D:) Veea Network	VE_veeam_backup_nfr_12_12.lic veeam_vailability_suite_nfr_12_12.lic veeam_mp_nfr_12_12.lic Veeam=100instances-suite-nfr.lic	Date modified 1/31/2023 10:59 AM 2/17/2016 1:34 PM 2/17/2016 8:10 AM 2/16/2015 4:06 PM 3/30/2022 3:31 PM	1.0.4	folder File File	Size 2 КВ 3 КВ 2 КВ 2 КВ	
File	name: Veeam-100instances-suite-nfr.lic		Ŷ	License files	(*.lic)	4

- 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.



13. The setup wizard checks if Veeam Backup & Replication × the required software is System Configuration Check System is being verified for potential installation problems. installed on the machine during the System Configuration Check step. If required components (\mathbf{r}) are missing, the setup will Please wait... attempt to install them Enabling missing features... independently. Rebooting is required after the components have been successfully installed. Click Reboot to restart the machine. Cancel 14. Click Customize Settings 🐻 Veeam Backup & Replication × on the Ready to Install Ready to Install page. 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 PostgreSQL Database engine: SQL server: VBR12PostgreSQL:5432 VeeamBackup Database name: Catalog service port: 9393 9392 Service port: Secure connections port: 9401 REST API service port: 9419 Check for product updates: Automatically 🔅 Customize Settings Back Cancel Install

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

	ce Account		
Specify	account for Veeam Backup & Replication.		
	CAL SYSTEM account (Recommended)		
() The	e following user account:		
Us	er name:		
		L Choose	
	: specified user account must have local administrator privileges on this server. soword:		
* 8.8 L			

- On the Database page, select PostgreSQL from the database engine dropdown 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.

Database					
Choose a datab	ase engine and	an instance for Veeam	Backup & Replication	n configuration data	э.
Jse following c	atabase engine:	PostgreSQL	\sim		
Install new	nstance	Microsoft SQL Server			
) Use existing	instance (HOST	PostgreSQL NAMEPORI)			
VBR12:543					
Database n	ame:				
VeeamBac					
Windows and the second seco	uthentication cre	sing: dentials of the backup he following credentia			
O Native auth	uthentication cre entication with t	dentials of the backup			
 Windows and Windows and Windo	uthentication cre entication with t	dentials of the backup			

- 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.

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:

 In the automatic mode, run the Set-VBRPSQLDatabaseServe rLimits cmdlet.

	Backup & Replication	-	×
Databa	ase		
Choose a	database engine and an instance for Veeam Backup & Replication configuration data.		
Use follov	ving database engine: PostgreSQL 🗸		
() Install	I new instance		
💿 Use e	xisting instance (HOSTNAME:PORT)		
VBR1	I2PostgreSQL:5432		
Datab	ase name:		
Veea	mBackup		
Connect t	to PostgreSQL server using:		
121400000000000000000000000000000000000	to PostgreSQL server using: ows authentication credentials of the backup service account		
• Winde			
• Winde	ows authentication credentials of the backup service account e authentication with the following credentials:		
 Winda Native 	ows authentication credentials of the backup service account e authentication with the following credentials: name: postgres		
 Winde Native Usern 	ows authentication credentials of the backup service account e authentication with the following credentials: name: postgres		
 Winde Native Usern 	ows authentication credentials of the backup service account e authentication with the following credentials: name: postgres		

- 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.

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

CAProgram Files/Weeam/Lackup and Replication Guest file system catalog: CAVBRCatalog Instant recovery write cache: CAProgramData/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	Specify paths for persistent and non-persistent da	a storage locations.
Guest file system catalog: CAVBRCatalog Brows Instant recovery write cache: CAProgramData/VeeamUsachup/IRCache Brows Catalog 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	Installation path:	
CiVERCatalog Brows Instant recovery write cache: CiVERCathe Brows Instant vecamultadeup/IRCache Brows Instant 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	C\Program Files\Veeam\Backup and Replication	Brows
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placing the write cache on an 550 drive.		
	() Ensure that the selected volume has sufficien	free disk space to store changed disk blocks of instantly
	Ensure that the selected volume has sufficien recovered VMs, otherwise VMs will stop due	free disk space to store changed disk blocks of instantly
	Ensure that the selected volume has sufficien recovered VMs, otherwise VMs will stop due	free disk space to store changed disk blocks of instantly

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 Veeam Backup & Replication _ Х 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 LOCAL SYSTEM Service account: PostgreSQL Database engine: VBR12PostgreSQL:5432 VeeamBackup SQL server: Database name: 9393 Catalog service port: Service port: 9392 Secure connections port: 9401 9419 REST API service port: Check for product updates automatically Back Install Cancel 28. Click Finish on the Veeam Backup & Replication 12 Successfully installed page. Veeam Backup & Replication 12 V Successfully installed Finish

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.

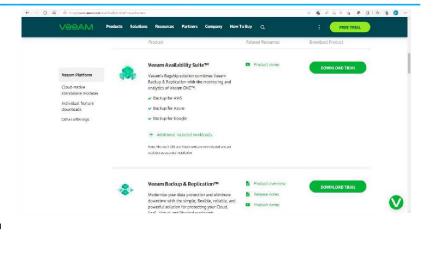
You can choose Microsoft SQL as a Veeam Backup & Replication database. However, you installed a Microsoft SQL Server (or Express), either locally on the backup manager server or remotely. If Microsoft SQL Server is not already installed. In that case, the Veeam Backup & Replication won't install the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

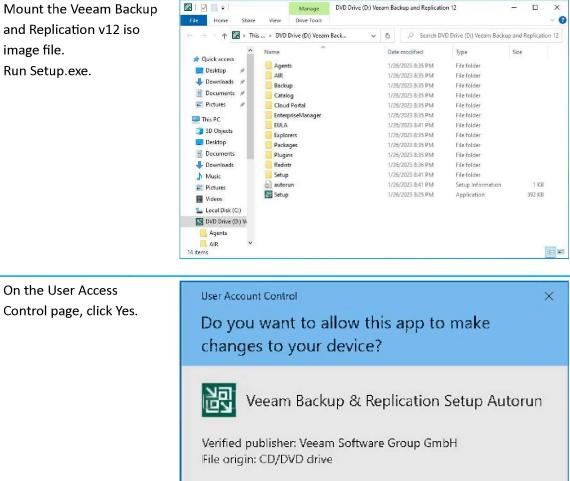
Screenshot (if applicable)

- 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.
- Download the Veeam Backup and Replication v12 ISO image file from the Veeam website sign-in required).



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

6.



Show more details

Yes

No

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



 Select Install Veeam Backup & Replication on the Veeam Backup & Replication page. Vecam Backup & Replication – ×
 Install Vecam Backup & Replication Vecam Backup & Replication combines fast, flexible and reliable backup, recovery and replication for all your workloads and data.
 Install Vecam Backup Enterprise Manager Vecam Backup Enterprise Manager is an optional web-based management and reporting console for Vecam Backup & Replication. It provides a single pane of glass for larger environments with multiple backup servers.
 Install Vecam Backup & Replication Console Vecam Backup & Replication console is a Windows-based graphical user interface client for managing backup servers.
 View Documentation

I Accept Cancel Cancel Veeam Backup & Replication - × License Provide license file for Veeam Backup & Replication.
Frome file: I 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. If you don't have a license simply click Next to install the Community Edition. If you don't have a license simply click Next to install the Community Edition.

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

Open						
> • 🛧 📕 •	This PC > Local Disk (C:) > NFR. >	~	Ğ	Search NFR		۶
Organize 🔻 New fo	lder				BE • 🔲	
Documents	V8_veeam_backup_nfr_12_12.lic veeam_backup_nfr_12_12.lic veeam_availability_suite_nfr_12_12.lic veeam_mp_nfr_12_12.lic Veeam-100instances-suite-nfr.lic	Date modified 1/31/2023 10:59 AM 2/17/2016 1:34 PM 2/17/2016 8:10 AM 2/16/2015 8:06 PM 3/30/2022 3:31 PM	Type File LIC I LIC I LIC I	folder File File	Size 2 KB 3 KB 2 KB 2 KB	
File	name: Veeam-100instances-suite-nfr.lic		Ý	License files	(*.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.

License		
Provide license file for Veeam Backup & Replication	L	
License file:		
C:\NFR\Veeam-100instances-suite-nit-lic		Browse
Update license automatically (enables usage rep	orting)	
Download and install new license automatically		
sending the license ID, the installation ID, and w Successful usage reporting doubles the number		
	of workloads you can exceed your install	
Successful usage reporting doubles the number	of workloads you can exceed your install It the Community Edition. on to provide any services to third parties	led license by.

14. The setup wizard checks if Veeam Backup & Replication \times the required software is System Configuration Check System is being verified for potential installation problems. installed on the machine during the System Configuration Check step. If required components (are missing, the setup will Please wait... attempt to install them Enabling missing features... independently. Rebooting is required after the components have been successfully installed. Click Reboot to restart the machine. Cancel 15. Click Customize Settings Veeam Backup & Replication × on the Ready to Install Ready to Install Installation will begin with the following settings. page. Installation folder: C:\Program Files\Veeam\Backup and Replication vPower cache folder: C:\ProgramData\Veeam\Backup\IRCache C:\VBRCatalog Guest catalog folder: LOCAL SYSTEM Service account: PostgreSQL Database engine: VBR12:5432 SOL server: VeeamBackup Database name: Catalog service port: 9393 Service port: 9392 Secure connections port: 9401 REST API service port: 9419 Check for product updates: Automatically Customize Settings Back Install Cancel

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

16. On the Service Account page, select LOCAL SYSTEM account and click Next.	Veeam Backup & Replication – × Service Account Specify account for Veeam Backup & Replication. Include Content of Veeam Backup & Replication. Content of Veeam Backup & Replicatio
17. On the Database page, select the Microsoft SQL Server from the database	Back Next Cancel Back Next Cancel
engine drop-down list.	Use following database engine: PostgreSQL Install new instance PostgreSQL Server PostgreSQL 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

 Click Browse to select the SQL server and instance on the SQL Server instance session. Veeam Backup & Replication

- 19. Select Windows authentication credentials of the backup service account to connect to SQL Server.
- 20. Click Next.

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

Use following database engine: N	licrosoft SQL Server 🛛 🗸	
SQL Server instance (HOSTNAME)	NSTANCE):	
VBR12\SQLEXPRESS		V 🖬 Brow
Database name:		
VeeamBackup		
Connect to SQL Server using:		
-	ntials of the backup service account	
O SQL Server authentication with	the following credentials:	
Username: sa		
Password:		
L		
	Back	Next Cance
Veeam Backup & Replication		-
Database	instance for Veeam Backup & Replication con	– Fguration data.
Database		Figuration data.
Database Choose a database engine and an	licrosoft SQL Server	Figuration data.
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Database Choose a database engine and an Use following database engine: N SQL Server Instance (HOSTNAME) VBR12/VEEAMSOL2016 Database name: VeeamBackup Connect to SQL Server using: O Windows authentication cre SQL Server authentication w	eeam Backup & Replication Setup	12\VEEAMSQL2016. A error occurred while rer. The server was not foun
Database Choose a database engine and an Use following database engine: N SQL Server instance (HOSTNAMEX VBR12/VERAMSOL2016 Database name: VeeamBackup Connect to SQL Server using: O Windows authentication cre SQL Server authentication w Username: Sa	II:crosoft SQL Server NSTANCE): exam Backup & Replication Setup Unable to connect to SQL Server VBR network-related or instance-specific e establishing a connection to SQL Server	12\VEEAMSQL2016. A error occurred while err. The server was not foun instance name is correct and remote connections.

-

X

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

Guest file system catalog: C:\VBRCatalog Instant recovery write cache:			
Installation path: CLProgram Files/Veeam\Backup and Replication Guest file system catalog: CAVBRCatalog Instant recovery write cache: CAProgramData\Veeam\Backup\IRCache Brows 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.	Data Locations		
C:\Program Files\Veeam\Backup and Replication Image: Brows Guest file system catalog: Image: Brows C:\VBRCatalog Image: Brows Instant recovery write cache: Image: Brows C:\ProgramData\Veeam\Backup\IRCache Image: Brows Image: Brows Image: Brows </th <th>Specify paths for persistent and</th> <th>non-persistent data storage locations.</th> <th></th>	Specify paths for persistent and	non-persistent data storage locations.	
Guest file system catalog: C\VBRCatalog Instant recovery write cache: C\ProgramData\Veeam\Backup\IRCache Brows Composition 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.	Installation path:		
C <td>C:\Program Files\Veeam\Backu</td> <td>p and Replication</td> <td>Browse</td>	C:\Program Files\Veeam\Backu	p and Replication	Browse
Instant recovery write cache: C <td>Guest file system catalog:</td> <td></td> <td></td>	Guest file system catalog:		
C:\ProgramData\Veeam\Backup\IRCache Brows C:\ProgramData\Veeam\Backup\IRCache Brows C: 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.	C:\VBRCatalog		Browse
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.	Instant recovery write cache:		
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.	C:\ProgramData\Veeam\Backu		Browse
Back Next Cancel			
		Back	Next Cancel
🗟 Veearn Backup & Replication 🛛 🗕	證 Veearn Backup & Replication	Back	
-		Back	
Port Configuration	Port Configuration		
	Port Configuration		Next Cancel
Port Configuration	Port Configuration Specify port configuration to be	e used by Veeam Backup & Replication.	
Port Configuration Specify port configuration to be used by Veeam Backup & Replication.	Port Configuration Specify port configuration to be Catalog service port:	e used by Veeam Backup & Replication.	

9419

REST API service port:

Cancel

Back

Next

27. Click Install on the Ready Veeam Backup & Replication _ Х 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 LOCAL SYSTEM Service account: Microsoft SQL Server Database engine: VBR12\SQLEXPRESS SQL server: Database name: VeeamBackup 9393 Catalog service port: Service port: 9392 Secure connections port: 9401 9419 REST API service port: Check for product updates automatically Back Install Cancel 28. Click Finish on the Veeam Backup & Replication 12 Successfully installed page. Veeam Backup & Replication 12 V Successfully installed Finish

Instructions

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.

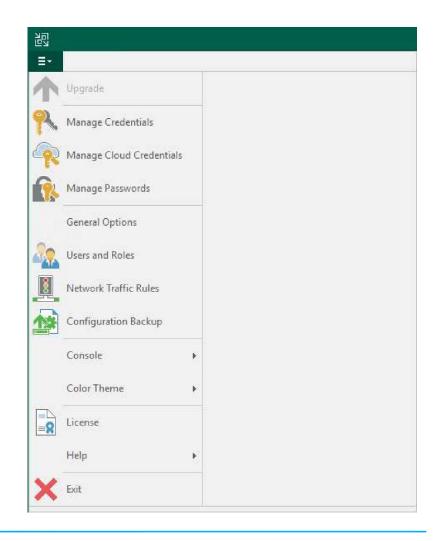
	Log in to the existing	2년		Veeam Backup and Rep					- • ×
<u>2</u> .	Veeam Backup and replication manager server. Open the Veeam Backup	Upprade Verse Chedentials Verse Chedentials Verse Chedentials Verse Chedentials Verse Verse Vers	Contract Help Open: The collect help web site in a default torward Support Information Launches the support Information Collection water About Default and static help information for the installation	Type Backup Jist Type Hyper/VSureBackup Hyper/VSureBackup Hyper/VSureBackup Hyper/VSureBackup Hyper/VSureBackup Hyper/VSureBackup Execution Hyper/VSureBackup Hyper/VSureBackup Execution Hyper/VSureBackup Hyper/	Clijects Status 2 Stopped 2 Stopped 1 Disabled 1 Disabled 1 Disabled	Last Run 6 days ago 6 days ago	Last Result Success Success	Next Run After (DCS,HPHV02 <visabled> <visabled> <visabled> <visabled></visabled></visabled></visabled></visabled>	Target Advanced Sing Backup Repos Scale-out Back Scale-out Back Scale-out Back
3.	& Replication Console. Drop down the main menu, select Help, and click About to check	Console Console Console Color Theme Help Kore Color		Hyper-V Backup Hyper-V Backup Hyper-V Backup Hyper-V Backup Hyper-V Backup Bu-Hyper-V Backup Bu-Hyper-V Backup Bu-Windows Agent Policy ac	1 Stopped 1 Stopped 1 Stopped 1 Stopped 1 Stopped 1 Stopped 1 Stopped 1 Stopped 1 Stopped 1 Stopped	6 days ago 13 days ago 6 days ago 6 days ago 9 days ago	Success Success Success Success N/A	<pre><not scheduled=""> <not scheduled=""> N/A <not scheduled=""></not></not></not></not></not></not></not></not></not></pre>	Backup Reposit HPHV02 Backup Reposit Backup Reposit Backup Reposit Backup Reposit Backup Reposit Backup Reposit Backup Reposit
	Veeam Backup & Replication version.	Recently	0, 2 ,						

Screenshot (if applicable)

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



 Drop down the main menu and select Configuration Backup.



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

Enable configuration backup to the following repository:	
Backup Repository_HPHV01 (Created by GOODDEALMART\csu	ın at 1/30/2023 🔻
🗧 1.38 TB free of 1.81 TB	
Restore points to keep: 10 🛬	Notifications
Perform backup on: Daily at 10:00 AM	Schedule
Last successful backup: 1/30/2023 1:40 PM	Backup now
 Enable backup file encryption Password: 	
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Created by GOODDEALMART\csun at 1/7/2023 8:13 PM. (L $ \sim$	
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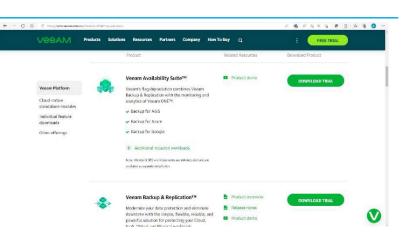
- 8. On the Home page, select Jobs.
- 9. Right-click jobs and select Disable to disable all jobs.

Start Start Stop to Job Control										
Home	Q Type in an object name to search ;	for		×	T All jobs					
a 🍇 Jobs	A Name T	Туре		Obje	Status	Last Run	Last Result	Next Run	Target	Description
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 Make sure all jobs are disabled and close Veeam Backup & Replication Console.

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a 🎭 Jobs	^	Name 1	Type	Cbje	Status	Last Run	Last Result	Next Run	Target	Description
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游 SureBackup		M DC SureBackup Basic Single-Host	Hyper-V SureBackup	2	Stopped	12 days app	Success	<disabled></disabled>	Advanced Single-Host 01	Created by GOODE
瘤 Replication		60 DC HPHV02 Replication	Hyper-V Replication	1	Stopped	19 minutes	Success	<not scheduled=""></not>	HPHV02	Created by GOODE
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Backups		105 DCS Azure Blob Backup	Hyper-V Backup	1	Stopped			<not scheduled=""></not>	Scale-out Backup Repository	Created by GOODI
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Success		405 HPHV01 Storage-Win Backup	Hyper-V Backup	1	Stopped			<not scheduled=""></not>	Backup Repository HPHV02	Created by GOOD
A	~	(0) Management HPHV02 Backup	Hyper-V Backup	1	Stopped	12 days ago	Success	<not scheduled=""></not>	Backup Repository HPHV02	Created by GOOD
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		Windows Server Managed by age.	Windows Agent Policy	1	Disabled	1 minute ago	N/A	N/A	Backup Repository HPHV02	Created by GOOD
E Inventory		Windows Server_Managed by bac	Windows Agent Backup	1	Stopped			<not scheduled=""></not>	Backup Repository-Storage	Created by GOOD
Backup Infrastructure										
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 Download the Veeam Backup and Replication v12 iso image file from the Veeam website. (Signin required).



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

Date modified	Search DVD Drive (D:	
	Type	Size
		JILE
10/18/2022 6:17 AM	File folder	
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10/18/2022 6:17 AM	File folder	
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		855
	10/18/2022 6:17 AM 10/18/2022 6:17 AM	10/18/2022 6:17 AM File folder 10/18/2022 6:17 AM File folder

14. On the User Account User Account Control × Control page, click Yes. Do you want to allow this app to make changes to your device? Veeam Backup & Replication Setup Autorun Б Verified publisher: Veeam Software Group GmbH File origin: CD/DVD drive Show more details Yes No 15. On the Veeam Backup & Veeam Backup & Replication 12 Replication 12 page, click Upgrade. Upgrade

16. On the Veeam Backup & Replication page, selectUpgrade Veeam Backup & Replication.



17. On the License Agreement page, click Accept.

License Agreement		
Read the license agreements and accept them to pro-	eed.	
Please view, print or save the documents linked below	6	
By clicking "I Accept" button, I hereby accept the follo	wing:	
Agree and consent to the terms of Veeam License	Agreement and licensing policy	
 Agree and consent to each of the license agreem 	ents of 3rd party components used	
 Agree and consent to each of the license agreem 	ents of required software	
	lierke I Accept	

18. On the Upgrade page,	🔯 Veeam Backup & Replication	- X
click Next.	Upgrade Review Veeam Backup & Repfication components to be upgraded.	
		Veeam Backup Catalog
	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	
		Back Next Cancel
19. On the License page, click	월급 Igy Veeam Backup & Replication	- ×
Browse.		
	License	
	Provide license file for Veeam Backup & Replication.	
	License file:	
	C\ProgramOuta\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.	
	you may not install, configure or manage such backup servers at your client's environment as a consultant or an MSP.	
		Back Next Cancel

20. Select the Veeam Backup and Replication license file, and click Open.	Veeam Backup & Replication License Provide license file for Veeam Backup & Replication. License file:	- ×
	CAProgramData Weeam Setup Licenses Weeam Backup & Replication Server, 12.0.0.1402, exported Update license automatically (enables usage reporting) Download and install new license automatically when you renew or expand your contract. This re- sending the license ID, the installation ID, and workload usage counters to Veeam servers periodic Successful usage reporting doubles the number of workloads you can exceed your installed license	cally.
	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 parti you may not install, configure or manage such backup servers at your client's environment as a consultant or an MSP.	cular,
21. Select Update license	Back Next	Cancel

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

License file:		
C\Post-Install\V6R12\license-main-1000.8E1/3.lic		11 8rc
Update license automatically (enables usage reporting)		
Download and install new license automatically when y-	. ,	
sending the license ID, the installation ID, and workload Successful usage reporting doubles the number of work	-	
If you don't have a license simply click Next to install the C	Community Edition.	
		d parties. In particular
Ø Veeam EULA prohibits using Community Edition to pr you may not install, configure or manage such backup	rovide any services to this	
Vēeam EULA prohibits using Community Edition to pa	rovide any services to this	
Veeam EULA prohibits using Community Edition to pr you may not install, configure or manage such backup	rovide any services to this	

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.

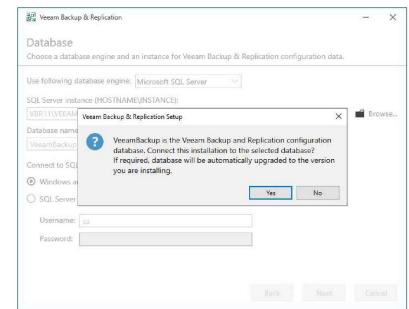
23. On the Database page, click Next.

Veeam Backup & Replication		-	X
Service Account			
Specify account for Veeam Backup & Replication.			
LOCAL SYSTEM account (Recommended)			
The following user account:			
User name:			
GOODDEALMART\csun	L Choose		
The specified user account must have local administrator privileges on this serve Password:			

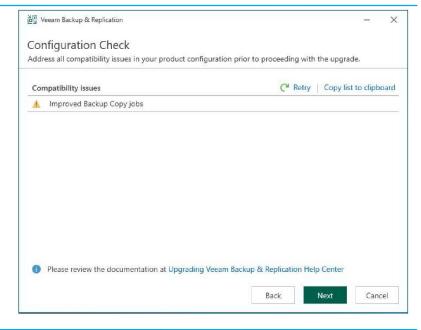
Database		
Choose a datal	base engine and an instance for Veeam Backup & Replication configuration data.	
Use following d	database engine: Microsoft SQL Server	
SQL Server inst	tance (HOSTNAME\INSTANCE):	
VBR11\VEEAM	/ISQL2016 ~	Brows
Database name	e:	
VeeamBackup)	
Connect to SQ	L Server using: authentication credentials of the backup service account	
• Windows a	authentication credentials of the backup service account	
 Windows a SQL Server 	authentication credentials of the backup service account	
 Windows a SQL Server Username: 	authentication credentials of the backup service account	
 Windows a SQL Server Username: 	authentication credentials of the backup service account	

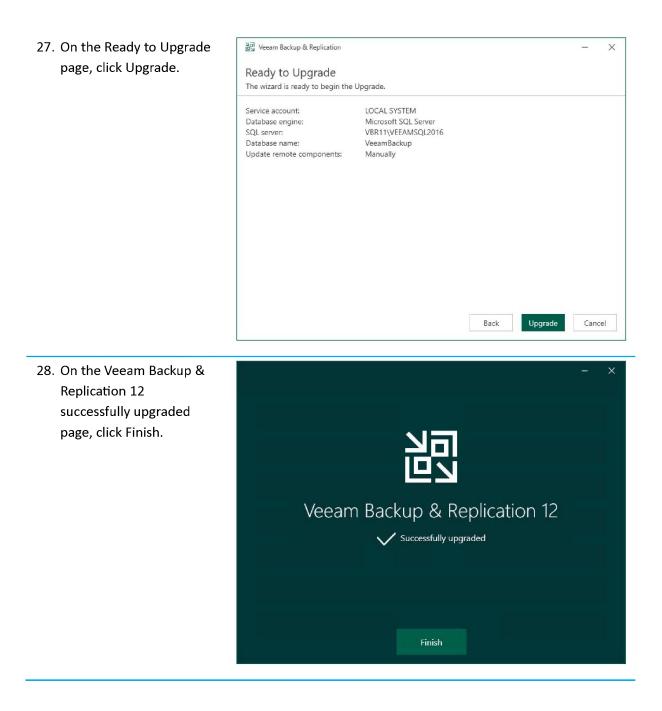
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24. Click Yes on the question pop-up message. Veeam will automatically upgrade the database to the version you are installing.



- 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.

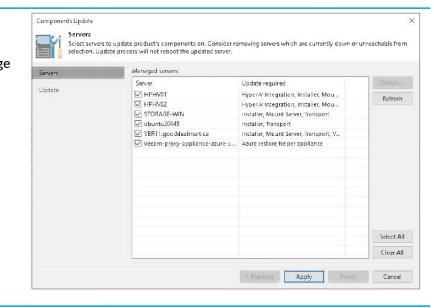




29. Open Veeam Backup & Replication management console and click Connect.

Veeam Backup &	Replication 1	2
Type in a backup server name o and user credentials to connect localhost		ce port number, 9392
GOODDEALMART\csun		
Password		
✔ Use Windows session auther	ntication	

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



31. Click Show servers on the provide signal-use	Components Upo Select select	ers t servers to upo	date product's components on. Consider re rocess will not reboot the updated server.	moving servers which are	currently down or un	reachable from
credentials question page.	Servers		Managed servers:			
	Servers		Server	Update required		The table of
	Update		HPHV01		-flee Mary	
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			✓ ubuntu20045	Installer, Transport	rensport	
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			veeam-proxy-appliance-azure-u			
		-				
		Veeam B	ackup & Replication		×	
		2	Some hosts were registered with Veeam o To perform components upgrade, you w Are you ready to do this now?			
		Show s	ervers	Yes	No	
						Select All
						Clear All
32. Review the Server listing and click Yes.		ers t servers to upo	date product's components on. Consider re	moving servers which are	currently down or un	reachable from
	select	tion. Update pr	rocess will not reboot the updated server.			
	Servers	(Manager			
		Veeam Back	up & Replication		×	Details
	Update	To To	ome hosts were registered with Veeam using o perform components upgrade, you will ne re you ready to do this now?		entials again.	Refresh
		Name				-
		ubuntu2004	5			
						Select All
		Hide server	2	Yes	No	Clear All
				< Previous App	ly Finish	Cancel

 On the Host Credentials page, select the host, click Set User and select Singaluse credentials for the hardened repository.

1.5	Host Credentials			×	i i i i i i i i i i i i i i i i i i i	
T.	Specify credentials:				are currently down or u	inreachable from
	Host	Account		Set User		
vers date		<not specified=""></not>		Single-us Linux acc Linux priv		d repository
					nstalier, Mou r, Transport r, Transport, V ippliance	
						Select Al
			ОК	Cancel		Clear Al

34. Enter your credential information and click OK.

Ser User	name: cary		
Pass	word:		
SSH	port: 22 🌻		
Non	-root account		
5	🖉 Elevate account privi	leges automatically	
	Add account to t	he sudoers file	
	🗹 Use "su" if "sudo'	' fails	
	Root password:	•••••	
Desc	ription:		
cary	/		

35. Click Test Now on the Host Credentials page.

pecify credentials:		 _
Host	Account	Set User
ubuntu20045	cary	Test Now
		-

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

Veeam Backup and Replication

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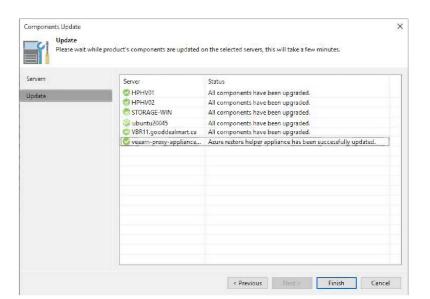
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37. Click OK on the Host Credentials page.

pecify credentials:		
Host	Account	Set User
ubuntu20045	cary	Test Now

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



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

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🔧 Manage Creckertials	Support Information										
Manage Cloud Credentials	Laurches support info collection witted About Shows additional information about this product	Q. Type in an object norm	In second for		X T Alie						
Manage Passwords		NAMET	TYPE	OBJECTS	STATUS	LASTRUN	LASTRESULT	NEXT FLIN	TARGET	DESCRIPTION	
Central Options		B D001-2022 Backup	Hyper-V Backup	1	Stopped	13 minutes ago		«Disabled»		Greated by 6000064LM487/csun at 5/12/2023	9
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Network Traffic Rules											
Configuration Backup											
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19 9.65											
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40. Ensure the existing Veeam Backup and Replication version is upgraded.



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

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Start Stop Job Control	Edit Disable Delete									
lome	Q. Type in an object name to search	for		\times	T All jobs					
Solobs	Name 1	Type		Obje	Status	Last Run	Last Result	Next Run	Target	Description
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i SureBackup	CC SureBackup_Basic Single-Host	SureBack	up	2	Stopped	12 days ago	Success	<disabled></disabled>	Advanced Single-Host 01	Created by GOODD
19 Replication	DC HPHV02 Replication	Hyper-V	Replication	1	Stopped	1 hour ago	Success	<not scheduled=""></not>	HPHV02	Created by GOODD
描 Backup Copy	CCS Backup Copy Job	Eackup C	opy	1	Disabled			<disabled></disabled>	Backup Repository-Storage	Created by GOODD
Backups	10 DCS_Azure Blob Backup	Start	skup	1	Stopped			«Not scheduled»	Scale-out Backup Repository	Created by GOODD
📥 Disk	BCS Azure Blob with archive	Start to	y	1	Disabled			<disabled></disabled>	Scale-out Backup Repository	Created by GOODE
📳 Replicas	CCS_Azure Blob without arc	Stop	y.	1	Disabled			<disabled></disabled>	Scale-out Backup Repository	Created by GOODE
Ready	OCS_HPHV02 Backup	Stob	skup	1	Stopped	12 days ago	Success	«Not scheduled»	Backup Repository_HPHV02	Created by GOODD
Last 24 Hours	G DCS_to_Storage-WIN Backup	Statistics	ckup	1	Stopped			<not scheduled=""></not>	Backup Repository-Storage	Created by GOODD
Success	🔅 HPHV01 Excludes DCS Backu	Report	ckup	1	Stopped			<not scheduled=""></not>	Backup Repository_HPHV02	Created by GOODD
Failed	HPHV01_Storage-Win Backur	Disable	ckup	1	Stopped			«Not scheduled»	Backup Repository_HPHV02	Created by GOODD
	🔅 Management_HPHV02 Backs	Delete	skup	1	Stopped	13 days ago	Success	<not scheduled=""></not>	Backup Repository_HPHV02	Created by GOODD
	Management_ubuntu Immut		skup	1	Stopped	13 days ago	Success	«Not scheduled»	Backup Repository_ubuntu2	Created by GOODD
	B Windows Server_Managed L	Edit	gent Policy	1	Disabled	1 hour ago	N/A	N/A	Backup Repository_HPHV02	Created by GOODE
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43. Ensure all jobs are enabled.

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	New 7 & CO, Sunderlang, Bair Songle-Hott, & DC O, Sunderlang, Bair Songle-Hott, & DC, Hinky C, Gey, Joh & CCL, Jaar Bio Juha Sarkang & DCL, Jack Bio Juha Sarkang & DCL, The Sarkang & HortVO (Sarange-WI) Backang &	Hyper-V Backup Hyper-V Backup Hyper-V Backup Hyper-V Backup Hyper-V Backup Hyper-V Backup Windows Agent Policy	Obje 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Status Stopped Stopped Stopped Stopped Stopped Stopped Stopped Stopped Stopped Stopped Stopped Stopped Stopped Stopped	Last Run 12 days ago 12 days ago 1 hour ago 12 days ago 13 days ago Just now	Last Result Success Success Success Success Success Success N/A	Next Run After [DCS, HPH., After [DCS, HPH., (Not scheduled) <as new="" restor.,<br=""><as new="" restor.,<br=""><as new="" restor.,<br=""><as new="" restor.,<br=""><not scheduled)<br=""><not scheduled<br=""><not scheduled<br=""><not scheduled<br=""><not scheduled<br=""><not scheduled<br=""><not scheduled<br=""><not scheduled<="" th=""><th>Target Advanced Single-Host 01 Advanced Single-Host 01 HPHV02 Eachup Reporting-Songe Scale-out Backup Reporting Backup Reporting-Songe Backup Reporting-HPHV02 Backup Reporting-HPHV02</th><th>Description Created by GOC Created by GOC</th></not></not></not></not></not></not></not></not></as></as></as></as>	Target Advanced Single-Host 01 Advanced Single-Host 01 HPHV02 Eachup Reporting-Songe Scale-out Backup Reporting Backup Reporting-Songe Backup Reporting-HPHV02 Backup Reporting-HPHV02	Description Created by GOC Created by GOC
A Home									
Backup Infrastructure									
Files	G							_	

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	胡 (rich Inoli) Veeum Reckup and Replication 클카 Home: View SureEckup	- ¤ ×
Veeam Backup and	Start Start Stop Starting Report bit to the start Stop Starting Report bit to the start Stop Detects bit to the start Stop Detects	
replication manager	Home Q Type in an object name to search for X T All jobs	
server.		01 Create
2. Open the Veeam Backup	Backup Capy Bockup Bochup Bockup Bockup Bockup Bockup Bockup	ository Create
& Replication Console.	Benfances Box Box B	HV02 Create
3. Select and right-click all	③ Boncess ③ HPH/ID Exclude DCS Bate ③ Edit. jeckup 1 Stopped - Vet schedulet Backup Repository, H ③ HPH/ID Storber Wyper VBackup 1 Stopped - Vet schedulet Backup Repository, H ④ Mongement/HPM/ID Storbup 1 Stopped 14 days spo Succes (Missterballet) Backup Repository, H ④ Mongement/HPM/ID Storbup 1 Storpet 14 days spo Succes - Vet schedulet) - Backup Repository, H ④ Mongement/HPM/ID Storbup 1	IV02 Create IV02 Create IV02 Create
jobs.	Management-Luburku Immutabe Bu., Myper-V Backup 1 Stopped 14 days ago Success «Not scheduled» Backup Repository, M Windows Semet-Managed by ago., Windows Agent Policy 1 Enabled 1 days ago NVA NA Backup Repository, M Windows Semet-Managed by Buck Windows Agent Sackup 1 Stopped	IV02 Create
4. Select Disable.	Hume	
	Cigi Beckup Infrastructure	
	Trans Vision Trans Tra	

 Drop down the main menu and select Configuration Backup.

舰 ≣•	Repository Tools			d Replication					- • ×
♠	Upgrade								
2	Credentials and Passwords +								
K	General Options		×						
2	Users and Roles								
			Type	Host	Path	Capacity	Free	Used Space	Description
	Network Traffic Rules	Archive	Microsoft Azure Archive Storage	Gateway	azureBlob://ho	N/A	N/A		Created by C
-		R11ARC	Microsoft Azure Blob Storage	Gateway	azureBlob://ho	N/A	N/A		Created by 0
a)	Configuration Backup	11	Microsoft Azure Blob Storage	Gateway	azureBlob://ho	N/A	N/A		Created by (
			Windows	V8R11.goodde	C:\Backup	126.4 G8	91.7 GB	0.8	Created by V
VH	VM Exclusions		Hardened	ubuntu20045	/mnt/backupxfs	126.9 G8	117 G8	9 GB	Created by
		al01	Windows	STORAGE-WIN	D:\Backups	126.9 G8	125.6 GB	0.8	Created by I
	Console +		Windows	HPHV02	E:\Backups	930.9 G8	719 GB	23.7 GB	Created by
			Windows	HPHV01	E:\Backups	1.8 TB	1.3 TB	0.8	Created by
	Color Theme +		Windows	STORAGE-WIN	D:\Azurelocal02	126.9 G8	125.6 GB		Created by
			Windows	STORAGE-WIN	D:\Azurelocal01	126.9 GB	125.6 GB	08	Created by
8	License		Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0.8	Created by
×									
	Help +								
K	Exit								
ĩ,	Home								
图 :	inventory								
į.	Backup Infrastructure								
3	Storage Infrastructure								
	Tape Infrastructure								
Ð F	Files								
	De e	/							
	sitory selected	•		ected to: localhost	Build: 12.0.0.1402	Enterprise F	_	NFR: 57 days r	

 Click Backup now on the Configuration Backup Settings page.

Jackup	
Enable configuration backup to the following repository:	
Backup Repository_HPHV01 (Created by GOODDEALMART\csu	un at 1/30/2023 🗸
🧧 1.3 TB free of 1.8 TB	
Restore points to keep: 10 🚖	Notifications
Perform backup on: Daily at 10:00 AM	Schedule
Last successful backup: 2/1/2023 9:25 AM	Backup now
Enable backup file encryption Password:	
Created by GOODDEALMART\csun at 1/7/2023 8:13 PM. (L $ \sim$	Add
Loss protection disabled Manage password	s
lestore	
Restore the configuration backup to this server:	Restore

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

📙 🛛 🖀 🗢 🛛 Post-Install

😫 Dacuments 🤘

Home Share View

🐳 👻 🕇 📑 > This PC → Local Disk (C:) → Post-Install

Quick access
 Desktop
 Deswinders

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

Veeam		
Backup & R	Replication 12	2
Type in a backup server name or land user credentials to connect w		e port number,
		e port number, 9392
and user credentials to connect w		
nd user credentials to connect w localhost		
Iocalhost GOODDEALMART\csun	ith. ~	

🗴 🐉 🔎 Search Post-Install

Туре

Date modified

-

Size

×

0

 Drop down the main menu and select Configuration Backup.

		Veeam Backup and Replication	
N 11			
1 ×	pgrade		
P c	redentials and Passwords 🔸		
K 6	eneral Options		
0 U	sers and Roles	n Backup & Replication, you must register your protected data sources in the inventory. To start this process, click the Add Server	
N.	etwork Traffic Rules	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	
~	onfiguration Backup	epication vMotion-aware. In-V protection, add System Center Virtual Machine Manager (SCVMM) Servers, Hyper-V clusters, or standalone Hyper-V hosts.	
VM VI	M Exclusions	bud 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).	
ç	onsole +		
с	olor Theme +	eplication provides different options to balance recovery time with storage requirements. Backup consumes less disk space but overy time, making it ideal for long term data retention. Replication provides faster recovery time at the increased storage costs	
8	cense	on. ickup or replication job, go to the Backup & Replication tree tab, and click the corresponding button in the ribbon.	
	elp 🔸		
X 6	it	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.	

 Click Restore on the Configuration Backup Settings page.

Enable config	uration backup to the following repositor	ıy:
Default Back	up Repository (Created by Veeam Backup)
98.3 GB fr	ee of 126.4 GB	
Restore points	s to keep: 10 🚔	Notifications
Perform back	up on: Daily at 10:00 AM	Schedule
Last successfu	ul backup: 🤼 No backup	Backup now
appliance	Manage p dentials, backup server certificate and ba data will not be included in the configur n is enabled	ckup
Rescore	guration backup to this server:	Restore
Restore the config		

12.	Click Yes on the User
	Account Control page.

12. Click Yes on the User Account Control page.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		x is app to make
	Verified publi	isher: Veeam Softwar ard drive on this com	
		Yes	No
13. Select Migrate on the	🚁 Veeam Backup and Replicat	ion Configuration Restore	×
Restore Mode page.	Restore Mode	uration restore scenario.	
	Restore Mode Canfiguration Backup Backup Contents Target Database Restore Options Restore Summary	the configuration restore has be any new restore points that migh	vectedly lost your backup server, and are trying to restore it. Once en completes, the wizard will initiate the process of searching for it have been created after the last configuration backup. ung planned migration of your backup server to a new computer, nake sure you are using the configuration backup made after all billed.
			Provisor Next> Finith Cancel

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

Restore Mode Backup repository: This server Canl guration Backup Backup file Backup Contents Image: Configuration backup file located in remote backup repositories will be copied locally into a temporary folder. This may take some time. Target Database Configuration backup file located in remote backup repositories will be copied locally into a temporary folder. This may take some time. Restore Options Restore Summary	Configuration Ba	cation Configuration Restore oc kep uration backup file you would like to use.	c
Configuration Backup Backup file: Backup Contents Browse Target Database Configuration backup file located in remote backup repositories will be copied locally into a temporary folder. This may take some time. Browse Restore Options Restore Browse Browse	Restore Mode		~
Configuration backup file located in remote backup repositories will be copied locally Target Database into a temporary folder. This may take some time. Restore Options Restore	Configuration Backup		
Target Database into a temporary folder. This may take some time. Restore Options Restore	Backup Contents		Browse
	Restore Options Restore	Configuration backup file located in remote backup repositories will be copied locally into a temporary folder. This may take some time.	
		< Previous Analyze >	Cancel

 Select the backup configuration file and click Open.

😭 Open								
← → ~ ↑	This PC	→ Local Disk (C:) → Post-Install		v	ō	Search I	Post-Install	۶
Organize 👻 New fo	older						(iii •	
🔜 Desktop 🛷	^ N	lame	Date modified	Туре	Size			
🕹 Downloads 💉		B VBR11_2023-02-01_09-25-04	2/1/2023 9:25 AM	Veeam Backup &		585 KB		
🔂 Documents 🖈								
E Pictures 📌								
Post-Install								
This PC								
3D Objects								
Desktop								
Documents Downloads								
Music								
Pictures								
Videos								
🏭 Local Disk (C:)								
	~	-						
File	e name:	VBR11_2023-02-01_09-25-04			Ŷ	Veeam	configuration bac	ckup fil ∨
						0	pen C	ancel

17. Click Analyze on the Configuration Backup page.

Restore Mode	Backup repository:	
0.04.000	This server	
SonTiguration Backup	Backup files	1
Backup Contents	Ct/Post-Install/VBR11_2023-02-01_09-25-04.bco	Browse
Target Database Restore Options Restore Summary	into a temporary folder. This may take some time.	

18. Click Next on the Backup Contents page.

Backup Contents Review the content		necessary, go back in the wizard to pick another one.
Restore Mode	Patameter	Value
	Constanting Market and	4905
Configuration Backup	Backup file	
Destrue Contrate	Path	C/Post-Install/VBR11_2023-02-01_09-25-04.bco
Backup Contents	Size	584.8 KB
Password	Creation time	2/1/2023 9:25:08 AM
	Creation duration	00:00:13
Target Database	Compressed data	578.0 KB
	Uncompressed data	6.5 MB
Restore Options	Compression ratio	11.4x
Restore	Encrypted backup	Yes
ACTOR.	Password loss protection	Not supported
Summary	Product	
	Product name	Veearn Backup and Replication 12
	Product version	12.0.0.1402
	Database	
	Original database server	Microsoft SQL Server
	Microsoft SOL Server	Supported
	PostareSOL	Supported
		2000.0045.0

- 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.

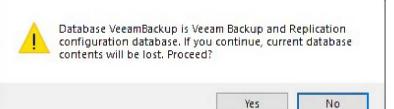
Specify configura	ition backup's pa	ssword.
Restore Mode	Password:	••••••
Configuration Backup	Hint:	Created by GOODDEALMART\csun at 1/7/2023 8:13 PM.
Backup Contents		
Password		
Target Database		
Restore Options		
Restore		
Summary		
		1. Your backup administrator chose not to enable password loss 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.

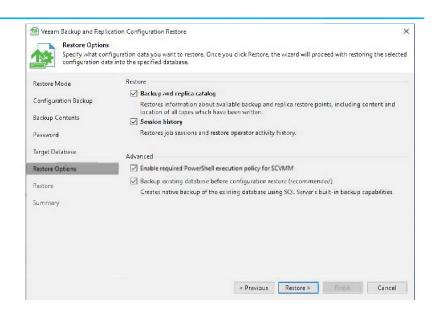
Restore Mode	Database engine — Database:	PostgreSQL
Configuration Backup		
Backup Contents	Connection (HOST	
Password	Instance name:	localhost:5432
*835W010	Database name:	VeeamBackup
farget Database		
Restore Options	Authentication	
Restore	-	hentication using credentials of service account
Aescore	O Native auther	tication using the following credentials:
Summary	Login name:	GOODDEALMART\csun
	Password:	

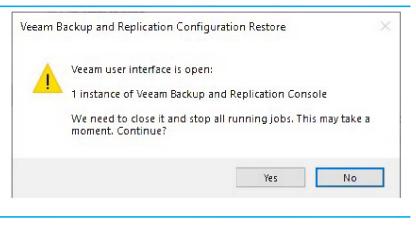
25. Click Yes on the warning message.

Veeam Backup and Replication Configuration Restore



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





32. On the Restore page,ensure the Configurationrestore is completedsuccessfully and clickNext.

Please wait while	configuration is being restored		
Restore Mode	Message	Duration	,
	C Analyzing database VeeamBackup		
Configuration Backup	O Decompressing configuration backup	0:00:15	
Backup Contents	Connecting to database VeeamBackup		
	Starting configuration catalog restore		
Password	C Reading configuration backup	0:00:07	
	Configuration catalog processed (1027 items)	0:00:02	
Target Database	Sackups catalog processed (108 items)	0:00:01	
Restore Options	Sessions catalog processed (2066 items)	0:00:02	
Nestore options	Tape catalog processed (0 items)		
Restore	Finalizing configuration catalog restore	0:00:07	
	Disabling at scheduled user jobs		
Credentials	C Locking database VeeamBackup		
	Analyzing restored configuration	0:00:01	
Cloud Credentials	C Enabling Microsoft PowerShell execution policy	0:00:02	
Summary	Signed Microsoft PowerShell execution policy is already set to Remote Signed		
	Restoring backup server certificate		
	Saving configuration restore session		
	Configuration restore completed successfully		

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

Type Standard Linux	Description apikey cary	Edit
Linux		
	Catry	
and the second se	early and a second s	
Administrator Standard	CARYP C\Administrator	
mart\administ Standard	gooddealmart.ca\adminis	
ALMART\csun Standard	GOODDEALMART\csun	
Administrator Standard	HPHV01\Administrator	
-		
A@carysun.c Standard	VEEAMMFA@carysun.com	
	ALMART\csun Standard	ALMARTicsun Standard GOODDEALMARTicsun Administrator Standard HPHV0TAdministrator Administrator Standard HPHV0TAdministrator Standard Azure helper appliance cre Linux Helper appliance credenti Standard Provider-side network ext Standard Tenant-side network ext arysun.com Standard VEEAM@carysun.com

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

Restore Mode	Account	Type	Description	Edi
Configuration Backup	Pk homevbr	Microsoft Azure	Azure Storage account na	
carrigolation backup	😤 homeybrarchive	Microsoft Azure	Azure storage account for	
Backup Contents				
Password				
Target Database				
Restore Options				
Restore				
Credentials				
Cloud Credentials				
Summary				

35. Click Finish on the Summary page.

and a solution of history and a solution

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

Veeam Backup &	Replication	12	
ype in a backup server name Ind user credentials to connec		vice	port number,
GOODDEALMART\csun			9392
Password			
Password Use Windows session auth 	entication		

37. Select and jobs, and to enable

right-click all	記 王・Home View SureBackup				Veeam Backup a	and Replication				- = ×
nselect Disable	Start Stop Job Control Details	t Disable Delete								
ll jobs.	Home	Q. Type in an object no	vne to search for		X T All jobs					
	a 🎭 Jobs	Name 1	Туре	Objects	Status	Last Run	Last Result	Next Run	Target	Description
	提 Backup	BDC On Dema	and the second se	2	Stopped	14 days ago	Success	<disabled></disabled>	Advanced Single-Host 01	Created by G
	後 SureBackup	A DC SureBack	tart up	2	Stopped	14 days ago	Success	<disabled></disabled>	Advanced Single-Host 01	Created by G
	德 Replication	S DC HPHV02	tert to Replication	1	Stopped	1 day ago	Success	<not scheduled=""></not>	HPHV02	Created by G
	語 Backup Copy	B DCS Backup (S	top opy	1	Disabled			<disabled></disabled>	Backup Repository-Storage	
	🖌 🚰 Backups		tatistics Backup	1	Stopped			<not scheduled=""></not>	Scale-out Backup Repository	
	Disk		eport PPy	1	Disabled			<disabled></disabled>	Scale-out Backup Repository-	
	▲ p [[] B Replicas	Sta DCS Anure R	0001	1	Disabled			<disabled></disabled>	Scale-out Backup Repository	
	Ready	tes pos HPHVD1	isable Backup	1	Stopped	14 days app	Success	<not scheduled=""></not>	Backup Repository_HPHV02	Created by 0
	A Stast 24 Hours		elete Backup	1	Stopped			<not scheduled=""></not>	Backup Repository-Storage	Created by 0
	Success	被 HPHV01 Exc 参 E	dit Backup	1	Stopped			<not scheduled=""></not>	Backup Repository HPHV02	Created by C
	Failed	HPHV01_Storage-Wi	n Hyper-V Backup	1	Stopped			<not scheduled=""></not>	Backup Repository_HPHV02	Created by 0
	and the second sec	Management, HPHV		1	Stopped	14 days ago	Success	<not scheduled=""></not>	Backup Repository_HPHV02	Created by C
		Kindows Server Ma	Windows Agent Policy	1	Disabled	1 hour ago	N/A	N/A	Backup Repository HPHV02	Created by C
		谢 Windows Server_Ma	Windows Agent Backup	1	Stopped			<not scheduled=""></not>	Backup Repository-Storage	
	A Home									
	Inventory									
	Backup Infrastructure									
	Storage Infrastructure									
	Tape Infrastructure									
	🖺 files									
	C _{lip}	* <								
	14 jobs selected					Connected to	localhost Bu	ild: 12.0.0.1402 Enter	prise Plus Edition NFR: 57 days r	emtinina

38. Ensure all jobs are reenabled.

Start Start Stop to Job Control Details	Edit Disable Delete								
Home	Q. Type in an object name	to search for		X T Alljobs					
# 🐁 Jobs	Name 1	Type	Objects	Status	Last Run	Last Result	Next Run	Target	Descriptio
掘 Backup	DC On_Demand Sand	SureBackup	2	Stopped	14 days ago	Success	After [DCS_HPHV02	Advanced Single-Host 01	Created by
are SureBackup	DC SureBackup_Basic	SureBackup	2	Stopped	14 days ago	Success	After [DCS_HPHV02	Advanced Single-Host 01	Created by
细 Replication	(6) DC_HPHV02_Replicati	Hyper-V Replication	1	Stopped	1 day ago	Success	<not scheduled=""></not>	HPHV02	Created by
描 Backup Copy	谢 DCS Backup Copy Job	Backup Copy	1	Stopped			<as new="" poi<="" restore="" td=""><td>Backup Repository-Storage</td><td>Created by</td></as>	Backup Repository-Storage	Created by
a 🔛 Backups	OCS_Azure Blob Back	Hyper-V Backup	1	Stopped			<not scheduled=""></not>	Scale-out Backup Repository	Created by
📥 Disk	0 DCS_Azure Blob with	Backup Copy	1	Stopped			<as new="" poi<="" restore="" td=""><td>Scale-out Backup Repository</td><td>Created by</td></as>	Scale-out Backup Repository	Created by
▲ (☐) Replicas	(0) DCS_Azure Blob with	Backup Copy	1	Stopped			«As new restore poi	Scale-out Backup Repository	Created b
🗳 Ready	DCS_HPHV02 Backup	Hyper-V Backup	1	Stopped	14 days ago	Success	<not scheduled=""></not>	Backup Repository_HPHV02	Created by
 Last 24 Hours 	DCS_to_Storage-WIN	Hyper-V Backup	1	Stopped			<not scheduled=""></not>	Backup Repository-Storage	Created b
Success	HPHV01 Excludes DC	Hyper-V Backup	1	Stopped			<not scheduled=""></not>	Backup Repository_HPHV02	Created by
🙀 Failed	前 HPHV01_Storage-Win	Hyper-V Backup	1	Stopped			<not scheduled=""></not>	Backup Repository_HPHV02	Created by
	Management_HPHV0	Hyper-V Backup	1	Stopped	14 days ago	Success	<not scheduled=""></not>	Backup Repository_HPHV02	Created by
	Windows Server_Ma	Windows Agent Policy	1	Enabled	Just now	N/A	N/A	Backup Repository_HPHV02	Created by
	僻 Windows Server_Ma	Windows Agent Backup	1	Stopped			<not scheduled=""></not>	Backup Repository-Storage	Created b
A Home									
Inventory									
Backup Infrastructure									
Can Storage Infrastructure									
Tape Infrastructure									
Files.									
	De t a								

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)

- 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.

Start Start Stop Statistics Report to Job Control Details	Edit Disable Delete Edit								
Home	Q Type in an object name to sear	rch for	\times	T All jobs					
. Sobs	Name 1	Type	Obje	Status	Last Run	Last Result	Next Run	Target	
很冒 Backup	BC On_Demand Sandbox	CumBashyp	2	Stopped	14 days ago	Success	After [DCS_HPH		
譜 SureBackup	🔅 DC SureBackup_Basic Single	Start	2	Stopped	14 days ago	Success	After [DCS_HPH		
續 Replication	DC_HPHV02_Replication	Start to., Replication	1	Stopped	1 day ago	Success	<not scheduled=""></not>	HPHV02	
描 Backup Copy	🔅 DCS Backup Copy Job 📃	Stop ppy	1	Stopped			<as new="" restor<="" td=""><td>Backup Repository-Storage</td><td></td></as>	Backup Repository-Storage	
 Backups 	DCS_Azure Blob Backup	Statistics Sackup	1	Stopped			<not scheduled=""></not>	Scale-out Backup Repository	
Disk	DCS_Azure Blob with archi	Report Ppy	1	Stopped			<as new="" restor<="" td=""><td>Scale-out Backup Repository</td><td></td></as>	Scale-out Backup Repository	
Beplicas	DCS_Azure Blob without a	Disable bashue	1	Stopped			<as new="" restor<="" td=""><td>Scale-out Backup Repository</td><td></td></as>	Scale-out Backup Repository	
Ready	DCS_HPHV02 Backup	packup	1	Stopped	14 days ago	Success	<not scheduled=""></not>	Backup Repository_HPHV02	
Dig Last 24 Hours Success	DCS_to_Storage-WIN Backu X		1	Stopped			<not scheduled=""></not>	Backup Repository-Storage	
(Jo success	HPHV01 Excludes DCS Bac	Edit Backup	1	Stopped			<not scheduled=""></not>	Backup Repository_HPHV02	
	HPHV01_Storage-Win Backup Management HPHV02 Backup	Hyper-V Backup Hyper-V Backup		Stopped	14 days ago		<not scheduled=""></not>	Backup Repository_HPHV02	
				Stopped	14 days ago 14 days ago	Success Success	<not scheduled=""> <not scheduled=""></not></not>	Backup Repository_HPHV02	
	Windows Server_Managed by			Stopped Enabled	1 day ago	N/A	N/A	Backup Repository_ubuntu2 Backup Repository_HPHV02	
	Windows Server_Managed by			Stopped	i day ago	N/A	<not scheduled=""></not>	Backup Repository_NPHY02 Backup Repository-Storage	
	the minority server_managed by	baca. Windows Agent baci	up i	stopped			sinot scheduled 2	Backup Repusitory-storage	
f Home									
Inventory									
Backup Infrastructure									
Storage Infrastructure									
Tape Infrastructure									

 Drop down the main menu and select Configuration Backup.

認 ヨ•	Repository Tools			d Replication					- • ×
个	Upgrade								
2	Credentials and Passwords +								
K	General Options		×						
2	Users and Roles		Туре	Host	Path	Capacity	Free	Used Space	Description
8	Network Traffic Rules	Archive	Microsoft Azure Archive Storage	Gateway	azureBlob://ho	N/A	N/A		Created by G
<u>,</u>	retwork tranic nules	R11ARC.		Gateway	azureBlob://ho	N/A	N/A		Created by C
	Configuration Backup	11	Microsoft Azure Blob Storage	Gateway	azureBlob://ho	N/A	N/A		Created by C
2	Comgulation backup		Windows	V8R11.goodde	C:\Backup	126.4 GB	91.7 GB	0.8	Created by V
VH	VM Exclusions		Hardened	ubuntu20045	/mnt/backupxfs	126.9 GB	117 GB	9 GB	Created by C
VH	The contraction of the contracti	a101	Windows	STORAGE-WIN	Dt\Backups	126.9 G8	125.6 GB		Created by (
	Console +		Windows	HPHV02	E:\Backups	930.9 GB	719 G8	23.7 GB	Created by
	conset.		Windows	HPHV01	E\\Backups	1.8 TB	1.3 TB	0.8	Created by
	Color Theme		Windows	STORAGE-WIN	D:\Azurelocal02	126.9 G8	125.6 GB	0.8	Created by 0
			Windows	STORAGE-WIN	D:\Azurelocal01	126.9 GB	125.6 GB	0.8	Created by C
8	License		Windows	STORAGE-WIN	D:\Backups	126.9 G8	125.6 GB	0.8	Created by C
×									
	Help +								
×	Exit								
й н									
夏 日	wentory								
in B	lackup Infrastructure								
a s	torage Infrastructure								
Т	ape Infrastructure								
T) Fi	iles								
	De e								

 Click Backup now on the Configuration Backup Settings page.

	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 🚖	Notifications
	Perform backup on: Daily at 10:00 AM	Schedule
	Last successful backup: 2/1/2023 12:14 PM	Backup now
\square	Enable backup file encryption Password:	
	Created by GOODDEALMART\csun at 1/7/2023 8:13 PM. (L $ \lor$	Add
	Loss protection disabled Manage passwords	
Resto	re	3 F
Re	store the configuration backup to this server:	Restore

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

📙 🛛 🔄 🖛 🕴 Post-Install

Home Share View

🗉 👻 🛧 📑 > This PC 🔹 Local Disk (C:) > Post-Install

- 26

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

Ouick access		Date modified	Туре	Size
Desistan 🕷 SQ	L2022-SSEI-Expr	1/31/2023 2:51 PM	Application	4,191 KB
Developeda at	MS-Setup-ENU	1/31/2023 3:23 PM	Application	636,249 KB
₩ VBI	R11_2023-02-01_12-13-23 earn-100instances-suite-nfr.lic	2/1/2023 12:13 PM 3/30/2022 3:31 PM	Veeam Backup 8t.	= 594 KB 2 KB
Pictures /	earn- isoinstances-suite-ntrilic	3/30/2022 3:31 PM	LIL FIE	< RB
Post-Install				
~				
is 1 item selected 593 KB				
11-				
Nn Ve	eam			
		1999 (1999 - 1 999 - 1994 - 1997 - 1		
		anlicat	ion 12	
L-NI Ka	C V I I O O F			
EN Ba	ickup & F	replicat		ç.
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ШЛ Ва	ickup & r	epiicat		
Ва Ва	ickup & F	replicat		2
Type in a backu	p server name or	IP address, bad		
Type in a backu		IP address, bad		
Type in a backu	p server name or	IP address, bad		
Type in a backu and user creder	p server name or	IP address, bad		e port numbe
Type in a backu	p server name or	IP address, bad		
Type in a backu and user creder	p server name or	IP address, bad		e port numbe
Type in a backu and user creder localhost	p server name or ntials to connect v	IP address, bad		e port numbe
Type in a backu and user creder	p server name or ntials to connect v	IP address, bad		e port numbe
Type in a backu and user creder localhost	p server name or ntials to connect v	IP address, bad		e port numbe
Type in a backu and user creder localhost	p server name or ntials to connect v	IP address, bad		e port numbe
Type in a backu and user creder localhost GOODDEALM	p server name or ntials to connect v	IP address, bad		e port numbe
Type in a backu and user creder localhost	p server name or ntials to connect v	IP address, bad		e port numbe
Type in a backu and user creder localhost GOODDEALM	p server name or ntials to connect v	IP address, bad		e port numbe
Type in a backu and user creder localhost GOODDEALM Password	p server name or ntials to connect v ART\csun	IP address, bad vith.		e port numbe
Type in a backu and user creder localhost GOODDEALM Password	p server name or ntials to connect v	IP address, bad vith.		e port numbe
Type in a backu and user creder localhost GOODDEALM Password	p server name or ntials to connect v ART\csun	IP address, bad vith.		e port numbe
Type in a backu and user creder localhost GOODDEALM Password	p server name or ntials to connect v ART\csun	IP address, bad vith.		e port numbe
Type in a backu and user creder localhost GOODDEALM Password Vse Windov	p server name or ntials to connect v ART\csun	IP address, bad vith. tication	-kup service	e port numbe
Type in a backu and user creder localhost GOODDEALM Password	p server name or ntials to connect v ART\csun	IP address, bad vith. tication		e port numbe
Type in a backu and user creder localhost GOODDEALM Password Vse Windov	p server name or ntials to connect v ART\csun	IP address, bad vith. tication	-kup service	e port numbe

×

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✓ Ů Ø Search Post-Install

 Drop down the main menu and select Configuration Backup.

General)	tals and Passwords • Options nd Roles k Traffic Rules aretion Backup	n Bachap & Replication, you must register your protected data sources in the inventory. To start this process, click the Add Server In Gry Jati data Set to the Sector. The protection, and a viceter's Server. You can also add ESD hosts individually. Adding «Center Server is preferred, because it makes and a vicetaria Server. You can also add SSD hosts individually. Adding «Center Server is preferred, because it makes and a vicetaria Server. You can also add SSD hosts individually. Adding «Center Server is preferred, because it makes and a vicetaria server. And a vicetaria Server. You can also add SSD hosts individually. Adding «Center Server is preferred, because it makes and a vicetaria server and vicetaria preferred. The and an one not host host individually on set individue. To NAS	
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Configue	aration Backup	in for just disk his test, in potentialis, and a viceters Server. You can also add ESD hosts individually, Adding viCeter's Server is preferred, because it makes politication Medicana sum: politication Medicana sum: politication Medicana sum: one of the manufacture of the manufacture of the manufacture of the manufacture of the politication medication of the manufacture of the manufacture of the manufacture of the manufacture of the politication deviation of the manufacture of the manufacture of the manufacture of the Medication of the manufacture of the Medication of the manufacture of the Medication of the manufacture of the manuf	
VM Exclu		r ^{-V} protection, add System Center Virtual Machine Manager (SCV/MM) Servers, Hyper-V dusters, or standalone Hyper-V hosts. pud servers and workstations protection, create one or more Protection Groups listing all computers you want to backup. For NAS	
	lusions		
		NDMP server: Note that NDMP backups are only supported to tape or Virtual Tape Libraries (VTL).	
Color Th	heme +	eplication provides different options to balance recovery time with storage requirements. Backup consumes less disk space but overy time, making it ideal for long term data retention. Replication provides faster recovery time at the increased storage costs	
License		on. ckup or replication job, go to the Backup & Replication tree tab, and click the corresponding button in the ribbon.	
Help			
		ne from a backup or a replica, cick 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.	
🕻 Exit		a restore by double-clicking the full backup (VBK) file in the Windows Explorer.	

11. Click Restore on the Configuration Backup Settings page.

	up	
	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:	Notifications
	Perform backup on: Daily at 10:00 AM	Schedule
	Last successful backup: 🤼 No backup	Backup now
		~ Add
	Password:	
	Manage pass	wards
	Saved credentials, backup server certificate and backu appliance data will not be included in the configuratio encryption is enabled	
Rest	ore -	
R	estore the configuration backup to this server:	Restore

12. Click Yes on the User Account Control page.		ant to allow this ap o your device?	× p to make
	Verified publis	am Backup Configura sher: Veeam Software Grou rd drive on this computer etails	
		Yes	No
13. Select Migrate on the	😭 Veeam Backup and Replicatio	on Configuration Restore	×
Restore Mode page.	Restore Mode	ration restore scenario.	
1 0			
	Restore Mode Configuration Backup Backup Contents Target Database Restore Options Restore Summary	the configuration restore has been complete any new restore points that might have been Migrate Use this mode if you are performing planned	your backup server, and are trying to restore it. Once d, the wizard will initiate the process of searching for created after the last configuration backup. migration of your backup server to a new computer. a are using the configuration backup made after all
		< Prev	Next > Cancel

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

store Mode	Backup repository:	
	This server	
infiguration Backup	Backup file:	
ckup Contents		Browse
rget Database store Options store	into a temporary folder. This may take some time.	
mmaiy		

 Select the backup configuration file and click Open.

Image: Ck Image	dall (ET ♥
Urganze = Newtoiser ■ Destapp # ^ Name Date modified Type Size ■ Downloads # [d] V0811_2023-02-00_12-13-23 2/1/2023 12:13 PM Vexam fluckup de _ 594 kBl ■ Pictures # Pictures # Post-Install	(FT •
Downloads # Id VBR11_2023-02-01_12-13-23 2/1/2023 12:13 PM Verson Bicktop R 394 KB Pictures # Post-Initial	
Decuments # Potence Potence Potence	
Pictares // Post-install	
Post-Install	
🕎 This PC	
30 Objects	
E Desktop	
Documents	
🐣 Downloads	
Music	
Pictures	
🖀 Videos	
Local Disk (C)	
U_ Local Disc (Cc)	

17. Click Analyze on the Configuration Backup page.

Restore Mode	Backup repository:	
20 20 20	This server	
Configuration Backup	Backup file:	
Backup Contents	C:\Post-Install\VBR11_2023-02-01_12-13-23.bco	Brows
Restore Options Summary		

18. Click Next on the Backup Contents page.

Review the conter	nts of the corresponding backup file. If r	necessary, go back in the wizard to pick another one.
Restore Mode	Parameter	Value
Configuration Backup	Backup file	
соптушалот васкир	Path	C\Post-Install\VBR11_2023-02-01_12-13-23.bco
Backup Contents	Size	593.3 KB
The Second Second	Creation time	2/1/2023 12:13:24 PM
Password	Creation duration	00:00:17
Target Database	Compressed data	586.5 KB
inger betabete	Uncompressed data	6.6 MB
Restore Options	Compression ratio	11.5x
	Encrypted backup	Yes
Restore	Password loss protection	Not supported
Summary	Product	
	Product name	Veeam Backup and Replication 12
	Product version	12.0.0.1402
	Database	
	Original database server	Microsoft SQL Server
	Microsoft SOL Server	Supported
	PostareSOL	Supported

- 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.

Password Specify configura	tion backup's pa	ssword.
Restore Mode Configuration Backup Backup Contents	Password: Hint:	Created by GOODDEALMART\csun at 1/7/2023 8:13 PM.
Password		<u></u>
farget Database		
Restore Options		
Restore		
Summary		
		🧘 Your backup administrator chose not to enable password loss protection.

- 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.

Restore Mode	Database engine		
Configuration Backup	Database:	Microsoft SQL Server	
	Connection (HOST	NAME\INSTANCE)	
Backup Contents	Instance name:	VBR12\SQLEXPRESS	∽ Refresh
Password	Database name:	VeeamBackup	
farget Database			
Restore Options	Authentication		
vestore options	(Windows auth	ientication using credentials of service account	
lestore	O SQL authentic	ation using the following credentials:	
Summary	Login name:	GOODDEALMART\csun	
	Password:		

25. Click Yes on the warning Veeam Backup and Replication Configuration Restore message. Database VeeamBackup is Veeam Backup and Replication configuration database. If you continue, current database contents will be lost. Proceed? Yes No 26. Select the Backup and 🕋 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. replica catalog checkbox on the Restore Options Restore Restore Mode page. Backup and replica catalog Configuration Backup Restores information about available backup and replica restore points, including content and location of all tapes which have been written. 27. Select the Session history Backup Contents Session history Restores job sessions and restore operator activity history. checkbox. Password Target Database 28. Select Enable required Advanced Bestone Options Enable required PowerShell execution policy for SCVMM PowerShell execution Backup existing database before configuration restore (recommended) Restore Creates native backup of the existing database using SQL Server's built-in backup capabilities. policy for SCVMM Summary checkbox. 29. Select Backup existing database before configuration restore < Previous Restore > Finish Cancel (recommended). 30. Click Restore. 31. Click Yes on the warning Veeam Backup and Replication Configuration Restore message. 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? Yes No

32. On the Restore page,ensure the Configurationrestore is completedsuccessfully and clickNext.

Please wart write	configuration is being restored		
Restare Made	Message	Duration	~
C C 1 D C	Restoring database	0:00:24	
Configuration Backup	Processing configuration VeeamBackup at VBR12\SQLEXPRESS	0:00:24	
Backup Contents	O Analyzing database VeeamBackup		
	Decompressing configuration backup		
Password	Connecting to database VeeamBackup		
Target Database	Starting configuration catalog restore (100% done)	0:00:04	
	C Reading configuration backup	0:00:13	
Restore Options	Configuration catalog processed (1020 items)	0:00:07	
	S Backups catalog processed (89 items)	0:00:02	
Restore	Sessions catalog processed (2267 items)	0:00:03	
Credentials	Tape catalog processed (0 items)		_
	C Finalizing configuration catalog restore (100% done)	0:00:05	
Cloud Credentials	Cocking database VeeamBackup		
	Analyzing restored configuration		
Summary	C Enabling Microsoft PowerShell execution policy	0:00:02	
	O Microsoft PowerShell execution policy is already set to Remote Signed		
	Saving configuration restore session		
	Configuration restore completed successfully		

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

Restore Mode	Account	Туре	Description	Edit
Configuration Backup	Rapikey	Standard	apikey	
contriguistical operation	🛆 cary	Linux	cary	
Backup Contents	CARYPC\Administrator	Standard	CARYP C\Administrator	
	👯 gooddealmart\administ		gooddealmart.ca\adminis	
Password	R GOODDEALMART\csun	Standard	GOODDEALMART\csun	
Target Database	R HPHV01\Administrator	Standard	HPHV01\Administrator	
	R HPHV02\Administrator	Standard	HPHV02\Administrator	
Restore Options	Root	Standard	Azure helper appliance cre	
	A root	Linux	Helper appliance credenti	
Restore	1 root	Standard	Provider-side network ext	
Credentials	Root	Standard Standard	Tenant-side network exten	
	VEEAM@carysun.com		VEEAM@carysun.com VEEAMMFA@carysun.com	
Cloud Credentials	IS RECAINIVITAL@carysun.c	seandard	veEAMMINEA@carysun.com	
Summary				

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

Restore Mode	Account	Type	Description	Ed
Configuration Backup	P & homevbr	Microsoft Azure	Azure Storage account na	
	% homevbrarchive	Microsoft Azure	Azure storage account for	
Backup Contents				
Password				
Target Database				
Restore Options				
Restore				
Credentials				
Cloud Credentials				
Summary				

35. Click Finish on the Summary page.

Summary Review the config	uration restore result, and click Finish to exit the wizard.
Restore Mode	Summary: Configuration migration is completed successfully
Configuration Backup Backup Contents	Source backup file: CAPost-Install/VBR11_2023-02-01_12-13-23.bco Target server: Microsoft SQL_Server Target server name: VBR12/SQLEXPRESS
Password Target Database	Target database. VeeamBackup Now you can start Veeam Backup and Replication Console
Restore Options Restore	
Credentials Cloud Credentials	
Summary	
	☑ Launch the Backup & Replication user interface
	Veeam Backup and Replication Console will be launched automatically once the restore is completed.

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

Veeam			
Backup &	Replication 1	2	
ype in a backup server name c			port number
nd user credentials to connect		ice	port number,
localhost	`		9392
GOODDEALMART\csun			
GOODDEALMART\csun Password			
	ntication		

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

elect Disable	Start Stop to Job Control Details	Ent Databit Defen	
obs.	Home	Q, Type in an abject name to search for X Y All jobs Name † Type Objects Status Last Run Last Refut Next Run Targe	et Description
	 1) Backup 2) Storbeckup 2) Replication 3) Replication 4) Replication	Bit DC StartBack With the second	Received System Created by CO. Non-exc Single-Host DI. Created by CO. Non-exc Single-Reportance Created by CO.
	Home Mone Mone	• : «	

38. Ensure all jobs are reenabled.

Start Start Stop to Job Control Details	Edit								
Home	Q. Type in an object name	to search for		X T Alljobs					
# Sobs	Name 1	Type	Objects	Status	Last Run	Last Result	Next Run	Target	Desc
疆 Backup	DC On_Demand Sand	SureBackup	2	Stopped	14 days ago	Success	After [DCS_HPHV02	Advanced Single-Host 01	Creat
SureBackup	DC SureBackup_Basic	SureBackup	2	Stopped	14 days ago	Success	After [DCS_HPHV02	Advanced Single-Host 01	Crea
销) Replication	OC_HPHV02_Replicati	Hyper-V Replication	1	Stopped	1 day ago	Success	<not scheduled=""></not>	HPHV02	Creat
描 Backup Copy	DCS Backup Copy Job	Backup Copy	1	Stopped			<as new="" poi<="" restore="" td=""><td>Backup Repository-Storage</td><td>Creat</td></as>	Backup Repository-Storage	Creat
 Backups 	() DCS_Azure Blob Back	Hyper-V Backup	1	Stopped			<not scheduled=""></not>	Scale-out Backup Repository	Creat
📥 Disk	(6) DCS_Azure Blob with	Backup Copy	1	Stopped			<as new="" poi<="" restore="" td=""><td>Scale-out Backup Repository</td><td></td></as>	Scale-out Backup Repository	
	(i) DCS_Azure Blob with	Backup Copy	1	Stopped			«As new restore poi	Scale-out Backup Repository	Creat
🗳 Ready	DCS_HPHV02 Backup	Hyper-V Backup	1	Stopped	14 days ago	Success	<not scheduled=""></not>	Backup Repository_HPHV02	Creat
 Last 24 Hours 	DCS_to_Storage-WIN	Hyper-V Backup	1	Stopped			<not scheduled=""></not>	Backup Repository-Storage	Creat
Success	HPHV01 Excludes DC	Hyper-V Backup	1	Stopped			<not scheduled=""></not>	Backup Repository_HPHV02	Creat
Failed	HPHV01_Storage-Win		1	Stopped			<not scheduled=""></not>	Backup Repository_HPHV02	Creat
	Management_HPHV0	Hyper-V Backup	1	Stopped	14 days ago	Success	<not scheduled=""></not>	Backup Repository_HPHV02	Creat
	B Windows Server_Ma	Windows Agent Policy	1	Enabled	Just now	N/A	N/A	Backup Repository_HPHV02	Creat
	Windows Server_Ma	Windows Agent Backup	1	Stopped			<not scheduled=""></not>	Backup Repository-Storage	Creat
A Home									
Inventory									
Call Backup Infrastructure									
Storage Infrastructure									
Cape Infrastructure									
Files									
	De ₹ .								

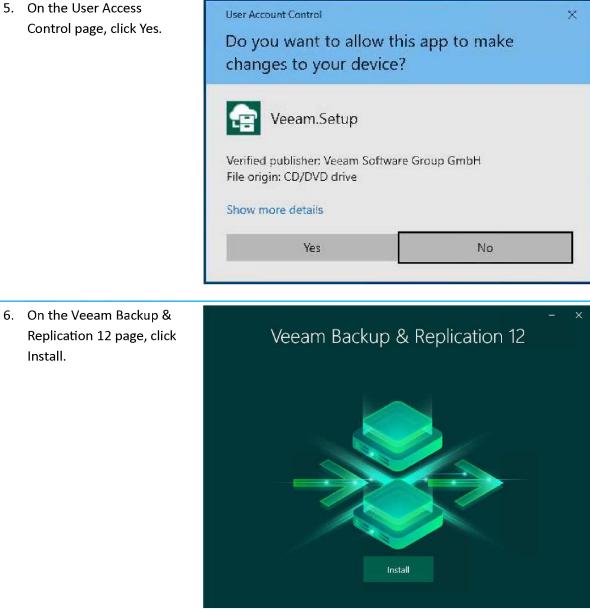
Install Veeam Backup and Replication Console 12

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.

 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. 	1.	Log in to the Veeam		Products Solutions Resources Partners Company	How To Bury Q	E C C C C C C C C C C C C C C C C C C C
 Mount Veeam Backup & Replication v12 iso image file. Run Setup.exe. Run Setup.exe. 	2.	manager console machine. Download the Veeam Backup and Replication v12 ISO image file from the Veeam website sign-in	Cloud-native standslone modules Individual feature downloads	Veezam Availability Suite** Veezam Availability Suite** Veezam Regulator contraining analytics of Veezam ORE **.	Product dome and	
Replication v12 iso image file. 4. Run Setup.exe. Image fiture	2			Nodernize your data protection and elimit downfrom with the impire, faculta, relation powerful solution for protecting your Doug Event Nament was transferred containers	ate 📑 Relaase notes	C
file. 4. Run Setup.exe. Factors Files 5. Codd foral 52/2022 114 PM Filefolder 5. Codd foral 52/2022 114 PM Filefold		Mount veean backup &			v 0 .	Search DVD Drive (D:) Veeam Backup and Replication
4. Run Setup.exe. 4. Condotat 4. Run Setup.exe 5. Condotat 5. Condotat 5. Condotat 5. Condotat 5. Condotat 5. Condotat 5. Condotat 5. Condotat 5. Condotat 5. Condotat 5. Condotat 5. Condotat 5. Condotat 5. Co	5.	Replication v12 iso image	← → * ↑ 📾 > This PC → DVD D			
	5.		Agents	Date modified 5/23/2022 11:14 PM	File folder	

Install.

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



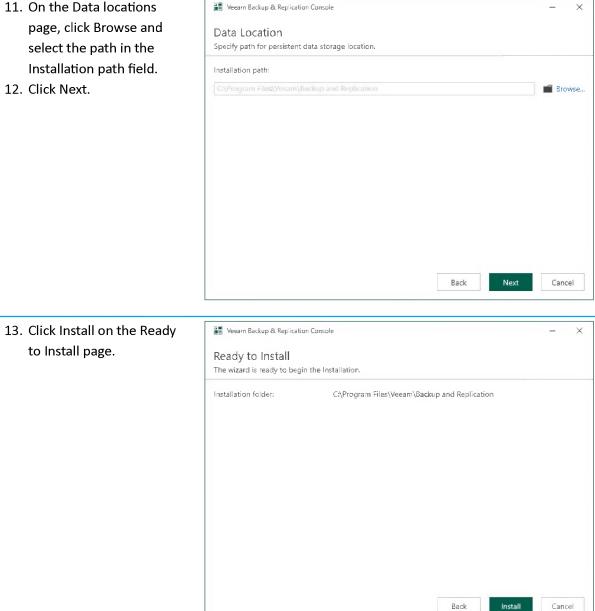
 Select Install Veeam Backup & Replication Console on the Veeam Backup & Replication page Veeam Backup & Replication – ×
 Install Veeam Backup & Replication
 Veeam Backup & Replication combines fast, flexible and reliable backup, recovery and replication for all your workleads and data.
 Install Veeam 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.

8. Click I Accept on the License Agreement page.

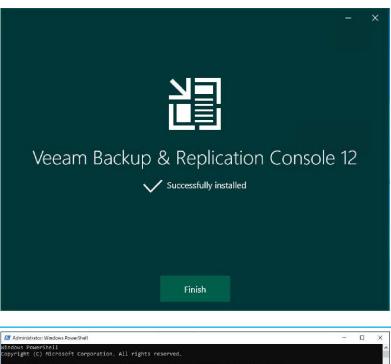
	일률 Veeam Backup & Replication Console	-	×
oage.	License Agreement		
	Read the license agreements and accept them to proceed.		
	Please view, print or save the documents linked below.		
	By clicking "I Accept" button, I hereby accept the following:		
	Agree and consent to the terms of Veeam License Agreement 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 		
	Batck I Accept	Can	cel .

9. The setup wizard checks if Veeam Backup & Replication Console X the required software is System Configuration Check System is being verified for potential installation problems. installed on the machine during the System Configuration Check step. If required components (0)are missing, the setup will Please wait ... attempt to install them Enabling missing features... independently. Rebooting is required after the components have been successfully installed. Click Reboot to restart the machine. Cancel 10. Click Customize Settings Veeam Backup & Replication Console × on the Ready to Install Ready to Install page. Installation will begin with the following settings. Installation folder: C:\Program Files\Veeam\Backup and Replication 🔅 Customize Settings Back Cancel install

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



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



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.

Test-NetConnection -ComputerName <hostname/ip> -Port 9392 Administrator Windows PowerShell

Administrator Windows PowerShell

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

S C:\Windows\system32> Test-NetConnection -ComputerName VBR12 -Port 9392

apputerName : VBR12
emoteAddress : 16.1.1.18
emoteAddress : 16.1.1.18
cplestSucceeded : True

S C:\Windows\system32> _

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.

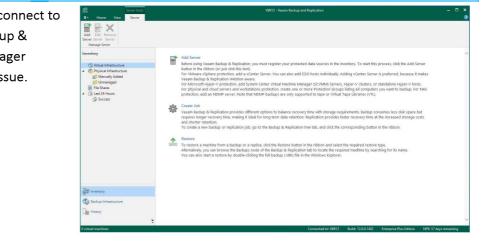
 VBR12
 9392

 GOODDEALMART\csun
 9392

 Password
 9392

 Image: Connect Close
 Connect Close

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



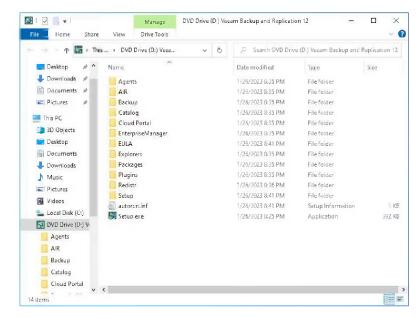
×

Upgrade to Veeam Backup and Replication Console 12

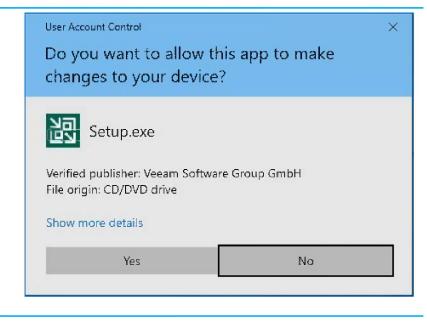
To gain remote access to Veeam Backup & Replication v12, you must first upgrade the Veeam Backup & Replication console to v12 on a dedicated machine.

Ins	tructions		5	Screenshot (if a	pplicable)		
1.	Log in to the existing		Products Solution		kow To Bury Q		a a o
	Veeam Backup and			Product	Related Resources	Download Product	
	replication manager			Veeam Availability Suite***	Product demo	DOWNLOAD TRIAL	- i
	console machine.	Veeam Platform	S	Veeam's flagship solution combines Veeam Backup & Replication with the monitoring and analytics of Veeam ONE TM .		CONNECTED TRACE	- 1
2.	Download the Veeam	standalone modules Individual feature		 Backup for AWS 			
	Backup and Replication	downloads Other offerings		Backup for Azure Backup for Google			
	v12 iso image file from			Additional included workloads Note: Microsoft 205 and Ridemetes are not included and are			
	the Veeam website. (Sign-			endelte as separate indefinition			
	in required).		*	Veeam Backup & Replication ¹¹⁶ Modernize your data protection and eliminate downtime with the simple, flexible, reliable, an powerful solution for protecting your Could, Evol. View-II was Brusted avoidstate	Product overview Release notes Product demo	DOWINE GAID TRAAL	♥.

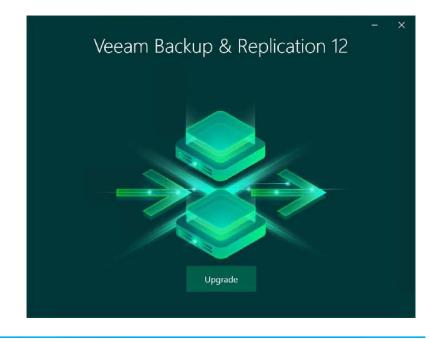
- Mount the Veeam Backup & Replication v12 ISO image file.
- 4. Run Setup.exe.



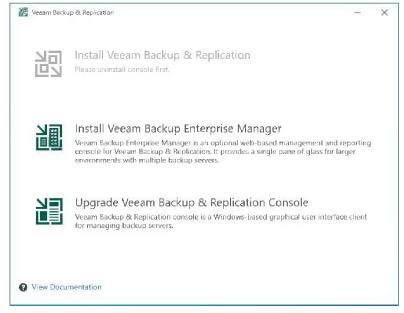
5. Click Yes on the User Account Control page.



 Click Upgrade on the Veeam Backup & Replication 12 page.

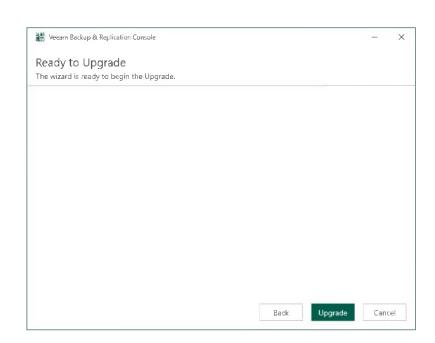


 Select Upgrade Veeam Backup & Replication Console on the Veeam Backup & Replication page.

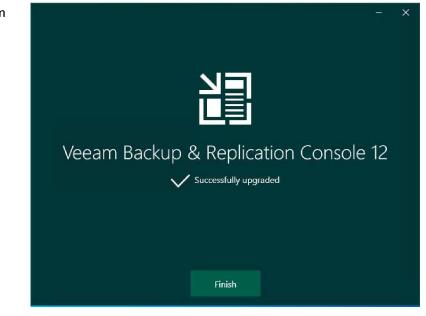


8.	On the License	Veeam Backup & Replication Console	- ×
	Agreement page, click	License Agreement	
	Accept.	Read the license agreements and accept them to proceed.	
		Please view, print or save the documents linked below.	
		By clicking "I Accept" button, I hereby accept the following:	
		Agree and consent 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,	禮書 Veeam Backup & Replication Console	– ×
9.		Vecari backup o repication console	
	click Next.	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.



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



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

Veeam Backup 8	& Replication 12	
Type in a backup server name and user credentials to conne VBR11	e or IP address, backup service ect with.	port number 9392
GOODDEALMART\csun		
Password		
✓ Use Windows session aut	hentication	

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

記 王· Home View	VBR11 -	Veeam Backup and Replicat					- 8 ×
Backup Replication CDP Job + Job + Policy - Copy	Copy SureBackup Job ~ Job condary Jobs Restore Failove Restore Failove	r Import Export Best Pra Backup Backup Analy Actions	etices				
Home	Q, Type in an object name	e to search for		X T AI	jobs		
4 🖏 Jobs	Name T	Туре	Objects	Status	Last Run	Last Result	Next Ru
3 Backup	谚 DC On Demand Sand	SureBackup	2	Stopped	12 days ago	Success	After [[
a SureBackup	DC SureBackup_Basic	SureBackup	2	Stopped	12 days ago	Success	After [D
瘤 Replication	谢 DC_HPHV02_Replicati	Hyper-V Replication	1	Stopped	4 hours ago	Success	<not so<="" td=""></not>
信 Backup Copy	DCS Backup Copy Job	Backup Copy	1	Stopped			<as ne<="" td=""></as>
4 🚰 Backups	谢 DCS_Azure Blob Back	Hyper-V Backup	1	Stopped			<not so<="" td=""></not>
🖞 Disk	谢 DCS_Azure Blob with	Backup Copy	1	Stopped			<as ne<="" td=""></as>
 Replicas 	餘 DCS_Azure Blob with	Backup Copy	1	Stopped			<as ne<="" td=""></as>
🖓 Ready	藥 DCS_HPHV02 Backup	Hyper-V Backup	1	Stopped	12 days ago	Success	<not so<="" td=""></not>
Last 24 Hours	BCS_to_Storage-WIN	Hyper-V Backup	1	Stopped			<not sc<="" td=""></not>
Success	蒙 HPHV01 Excludes DC	Hyper-V Backup	1	Stopped			<not so<="" td=""></not>
🕞 Failed	藥 HPHV01_Storage-Win		1	Stopped			<not so<="" td=""></not>
	小 Management_HPHV0		1	Stopped	13 days ago	Success	≺Not so
A Home	嶽 Management_ubuntu		1	Stopped	13 days ago	Success	<not so<="" td=""></not>
	Windows Server_Ma	Windows Agent Policy	1	Enabled	2 hours ago	N/A	N/A
Inventory	擲 Windows Server_Ma	Windows Agent Backup	1	Stopped			<not sc<="" td=""></not>
Backup Infrastructure							
Storage Infrastructure							
Tape Infrastructure							
Files					Activate Wir	ndows	
	Care e				Ga to Settings to		iows.

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.

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	Screensho	ot (if applicable)	
 Log in to the Veeam Backup and replication manager server. Open the Veeam Backup 	Veeam Backup & R	Replication 12	
& Replication Console, and click Connect.			
	Type in a backup server name or l and user credentials to connect w		
		vith.	port number, 9392
	and user credentials to connect w	vith.	

- 3. On the Home page, select Inventory.
- On the Inventory page, select Virtual Infrastructure and click Add Server.
- Image: state in the state is a state in the state in
- 5. On the Add Server page, select Microsoft Hyper-V.

Add Server



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

ew Hyper-V Server		>
Name Specify DNS	name or IP address of Microsoft Hyper-V server.	
lame	DNS name or IP address:	
	HPHV01	
ype	Description:	
redentials	Created by GOODDEALMART\csun at 2/1/2023 3:36 PM.	
eview		
pply		
immary		
	< Previous Next > Finish C	ancel
		ana an

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

select the ty	pe of server you want to add.
Name	O Microsoft System Center Virtual Machine Manager (SCVMM) If you are using SCVMM to manage your Hyper-V infrastructure, we can pull all Hyper-V ho
Туре	clusters information from SCVMM, and add them to managed servers automatically.
Credentials	O Microsoft Hyper-V cluster
Review	Use this option to register Hyper-V cluster that is not managed by SCVMM. Registering Hy cluster instead of individual cluster nodes provides for Live Migration awareness.
Apply	Microsoft Hyper-V server (standalone)
Summary	 Microsoft ryper-v server (Gandadone) Use this option to register standalone Hyper-V server that is not a part of a cluster, and no managed by SCVMM.

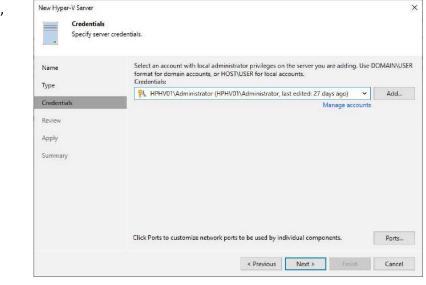
 Select an account from the Credentials dropdown list on the Credentials page or click Add on the right to add the credentials.

New Hyper-V Server Credentia Specify se	Is ver credentials.	3
Name Type	Select an account with local administrator privileges on the server you are adding. Use DO format for domain accounts, or HOST\USER for local accounts. Credentials	MAIN\USEF
-76-	Select existing credentials or add new	Add
Review Apply Summary	Click Ports to customize network ports to be used by individual components.	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.
- Give a brief description in the Description field for future reference and click OK.

Username:	HPHV01\Administrator	Browse.
Password:	•••••	
HPHV01\A		

13. On the Credentials page, click Ports.



- 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.

and the second second second second		
omponents:	1	
Component	Control Port	Edit
Installer	6160	Rescan
Transport	6162	1
Hyper-V Integration	6163	
, i i i i i i i i i i i i i i i i i i i		
		ly.
Data transfer options Port range: 2500	C 3300 C	
Port range: 2500		
Data transfer options Port range: 2500 Preferred TCP connection Run server on ti	on role	<u>\</u>
Port range: 2500 Preferred TCP connection	on role his side	OK Cancel

18. Click Next on the Credentials page.	New Hyper-V Server X Credentials Specify server credentials.		
	Name 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.		
	Type Type Pk HPHV01\Administrator (HPHV01\Administrator, last edited: 27 days ago) ✓ Add		
	Credentials Manage accounts		
	Review Apply Summary		
	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	New Hyper-V Server × Review Please review your settings and click Apply to continue.		
the number of tasks the Microsoft Hyper-V host must handle concurrently	Name Due to these modifications the following components will be installed or removed on the target host: Type Component name Status Transport will be installed Credentials Hyper-V Integration will be installed		
in the Max concurrent tasks field. 20. Click Apply.	Apply This Hyper-V server will act as the backup proxy for jobs running in the on-host backup mode. Task limit:		
	After you click Apply missed components will be installed on the target host.		

21. Click Next on the Apply page.	New Hyper-V Server	servers have been processed.	×
	Name Type	Message O Package VeeamLogBackupService_x86.msi has been uploaded O Package VeeamLogBackupService_x64.msi has been uploaded O	uration
	Credentials Review	Package VeeamHvIntegration.msi has been uploaded	00:30
	Apply	Installing package Hyper-V Integration O Deleting temporary folder	00:17
	Summary	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 O Creating configuration database records	00:02
22. Click Finish on the Summary page.	New Hyper-V Server	he configuration information below for future reference.	>
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		ne consignation mornation below for future reserves.	
	Name Type Credentials Review Apply Summary	Summary: Microsoft Hyper-V server 'HPHV01' was successfully saved. OS version: Microsoft Windows Server 2022 Datacenter 64-bit (10.0.203 Usen: HPHV01\dministrator Hardware info: Chassis type: Physical Cores count: 4 Components: Hyper-V Integration using port 6163 Installer using port 6160 Transport using port 6162	48 build: 20348).

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)			
 Log in to the Veeam Backup and replication manager server. 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			

- 3. On the Home page, select Inventory.
- On the Inventory page, select Virtual Infrastructure and click Add Server.
- <complex-block>

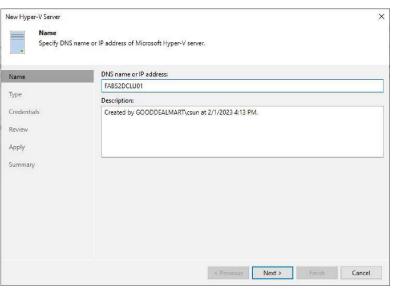
 Image: Internet internet
- 5. On the Add Server page, select Microsoft Hyper-V.

Add Server

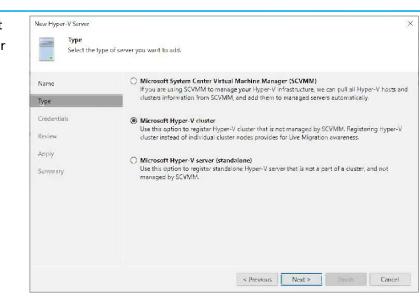
V. Select the type of a server you want to add to your backup infrastructure. All already registered servers can be found under the Managed Servers node on the Backup infrastructure tab. Image: VMware vSphere Adds VMware private cloud infrastructure servers to the inventory. Image: Microsoft Hyper-V Adds a SCVMM server, a Hyper-V cluster, or a standalone Hyper-V host to the inventory. Image: Microsoft Hyper-V Adds a SCVMM server, a Hyper-V cluster, or a standalone Hyper-V host to the inventory.

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



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



 Select an account from the Credentials dropdown list on the Credentials page or click Add on the right to add the credentials.

lew Hyper-V Server Credentials Specify serv	s rer credentials.	
• Name Type	Select an account with local administrator privileges on the server you are adding. Use DC format for domain accounts, or HOST\USER for local accounts. Credentials:)main\usei
ijpe	Select existing credentials or add new	Add
Review	Manage accounts	
Apply Summary	Click Bath to suctamize actuarly parts to be used by individual components	
Apply	Click Ports to customize network ports to be used by individual components.	Ports

- 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.

	Username:	GOODDEALMART\csun	Browse
R	Password:	•••••	•
	Description:		
	GOODDEA	LMART\csun	

13. On the Credentials page, New Hyper-V Server × Credentials click Ports. Specify server credentials. Select an account with local administrator privileges on the server you are adding. Use DOMAIN\USER formati for domain accounts, or HOST\USER for local accounts. Name Туре 🕺 GOODDEALMART\csun (GOODDEALMART\csun, last edited: 27 days ago) 👻 Add... Credentials Manage accounts Review Apply Summary Click Ports to customize network ports to be used by individual components. Ports... < Previous Next > Finish Cancel

- 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		Edit
Installer	6160		Rescan
Transport	6162		
Hyper-V Integration	6163		
Data transfer options			
Port range: 2500	🗘 to 3300 🗘		
Preferred TCP connection	n role		
Run server on thi	s side		
	[ОК	Cancel

18. On the Credentials page, click Next.	New Hyper-V Server Credentials Specify server of	redentials.			×
	Name	Select format Creder	for domain accoun	al administrator privileges on the server you are ac ts, or HOST\USER for local accounts.	dding. Use DOMAIN\USER
	Туре	S NO OCCU		un (GOODDEALMART\csun, last edited: 27 days a	qo) 🗸 Add
	Credentials				e accounts
	Review				
	Apply				
	Summary				
19. Select all servers' checkboxes on the Review	New Hyper-V Server Review Please review yc		irts to customize ne		Ports
page and click Apply.		Tasks:			
	Name	Instal	Server name	Status	Select All
	Туре		FABS2D6	All components are up to date	Clear all
	Credentials		FABS2D5	All components are up to date	
	Review				
	Apply				
	Summary			< Previous Apply	Finish Cencel

20. Click Next on the Apply page.

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)

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

Veeam Backup & F	Replication 12
Type in a backup server name or and user credentials to connect v	IP address, backup service port number, vith.
localhost	✓ 9392
GOODDEALMART\csun	∽ 9392
	✓ 9392
GOODDEALMART\csun	

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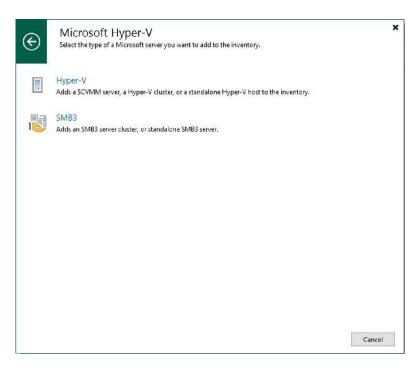
- 3. On the Home page, select Backup Infrastructure.
- On the Backup Infrastructure page, select Managed Servers.
- 5. Right-click Managed Servers and select Add Server.

문 Server Tools 표· Home Server			Veeam Backup and Replication			
Add Edf Remove Server Server Manage Server Tools						
Backup Infrastructure	Q. Type in an object nam	e to search for	\times			
Backup Provies Backup Repositories Backup Repositories Scale-ord Repositories Scale-ord Repositories Service Providers Service Providers Service Providers Service Transformulation Scale	Name † HPHN01 WRR12PostgreSQLg	Type Microsoft Hyper-V server Microsoft Windows server	Decription Granted by GOODDEALMARTycsun at 2/3/2023 10: Backup server			
Commentation Construction C	Add server Rescan Upgrade servers Missing updetes					
A Home						
Backup Infrastructure						
Storage Infrastructure						
Tape Infrastructure						
Files						
servers	Dge 🐮		Connected to: localhost	Build: 12.0.0.1402	Enterprise Plus Edition	NFR: 362 days remaining

 Select Microsoft Hyper-V on the Add Server Page.

vm	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.	
K	Kasten K10 backup for Kubernetes	
	Connects to an existing Kasten K10 instance.	
		Canc

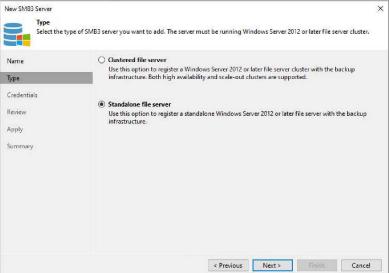
7. Select SMB3 on the Microsoft Hyper-V page.



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

Name	DNS name or IP address:
	SMB3
Туре	Description:
Credentials	Created by GOODDEALMART\csun at 2/3/2023 12:29 PM.
Review	
Apply	
Summary	

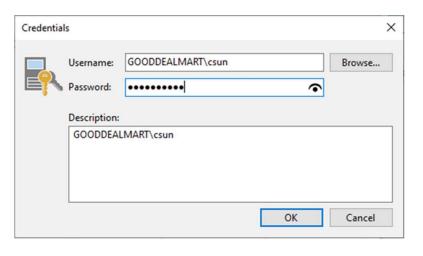
10. On the Type page, Choose the type of Microsoft SMB3 server you want to add and click Next.



 Select an account from the Credentials dropdown list on the Credentials page or click Add on the right to add the credentials.

Credentials	
Select server	r administrator credentials.
Name Type	Select an account with local administrator privileges on the server you are adding. Use DOMAIN format for domain accounts, or HOST\USER for local accounts. Credentials:
	Select existing or add new credentials 🗸 🗸 Add.
Credentials	Manage accounts
Review	
Apply	
Summary	
	Click Ports to customize network ports to be used by individual components.

- 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.
- Give a brief description in the Description field for future reference and click OK.
- 15. On the Credentials page, click Ports.



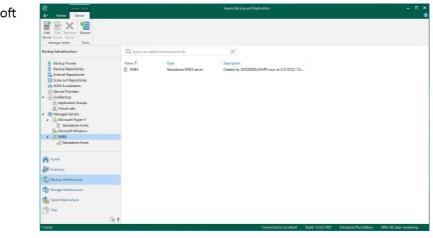
Select serve	radministrator credentials.
Name Type Credentials	Select an account with local administrator privileges on the server you are adding. Use DOMAIN/USE format for domain accounts, or HOST/USER for local accounts. Credentials:
Review Apply Summary	Manage accounts
	Click Ports to customize network ports to be used by individual components.
	< Previous Next > Cancel

- 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.
- Х Network Settings Components: Control Port Component Installer 6160 Rescan 6162 Transport Hyper-V Integration 6163 Data transfer options * 2500 🔹 to 3300 Port range: Preferred TCP connection role Run server on this side OK Cancel

20. Click Next on the New SMB3 Server × Credentials Credentials page. 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. Name Credentials: Туре 🕅 GOODDEALMART\csun (GOODDEALMART\csun, last edited: 28 days ago) 🗸 🗸 Add... Credentials Manage accounts Review Apply Summary Click Ports to customize network ports to be used by individual components. Ports... < Previous Next > Finish Cancel 21. If you add a standalone New SMB3 Server × Review Microsoft Hyper-V host on Please review your settings and click Apply to continue. the Review page, specify Due to these modifications the following components will be installed or removed on the target host: Name the number of tasks the Component name Status Туре Transport will be installed Microsoft Hyper-V host Hyper-V Integration will be installed Credentials must handle concurrently Review Apply in the Task limit field. Summary 22. Click Apply. Task limit: 4 + After you click Apply missed components will be installed on the target host. < Previous Apply Fresh Cancel

23. Click Next on the Apply page.	New SMB3 Server Apply The following	servers have been processed.	×
	Name Type Credentials Review Apply Summary	Message Starting infrastructure item update process Server has been added successfully	Duration 0:00:26
Click Finish on the Summary page.	New SM83 Server Summary You can copy Name Type Credentials	Kext > Next > Summary: Standalone SMB3 server 'SMB3' was successfully saved. OS version: Microsoft Windows Server 2022 Datacenter 64-bit (10.0.20348 User GOODDEALMART.csun Hardware info:	Finich Cancel
	Review Apply Summary	Chassis type: Virtual (Hyper-V) Cares count: 2 Components: Hyper-V Integration using port 5163 Installer using port 5160 Transport using port 6162	
		< Previour Next >	Finish Cancel

24. Ensure the new Microsoft SMB3 server is added.

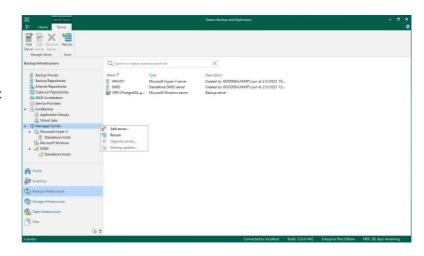


Add Microsoft Windows Servers

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.

nstructions	Screenshot (if applicable)		
 Log in to the Veeam Backup and replication manager server. 	کے Veeam		
2. Open the Veeam Backup	Backup & Repl	lication 12	
& Replication Console, and click Connect.	Type in a backup server name or IP addr and user credentials to connect with.		
-	Type in a backup server name or IP addr		
	Type in a backup server name or IP addr and user credentials to connect with.		port number,
	Type in a backup server name or IP addr and user credentials to connect with. localhost		port number,
	Type in a backup server name or IP addr and user credentials to connect with. localhost GOODDEALMART\csun	ress, backup service	port number,

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

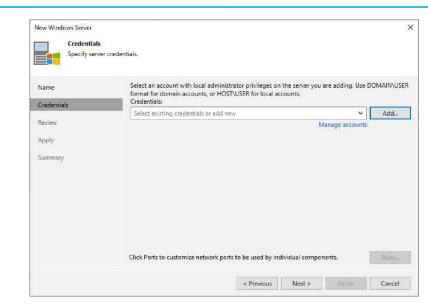


Select t	he type of a server you want to add to your backup infrastructure. All already registered servers can be	
found	under the Managed Servers node on the Backup Infrastructure tab.	
vm	VMware vSphere	
	Adds VMware private cloud infrastructure servers to the inventory.	
	Microsoft Hyper-V	
	Adds 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.	
K	Kasten K10 backup for Kubernetes	
	Connects to an existing Kasten K10 instance.	
		Car

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

New Windows Server		×
Name Specify DNS	S name or IP address of Microsoft Windows server. DNS name or IP address:	
Credentials	Storage-Win Description:	
Review Apply Summary	Created by GOODDEALMART\csun at 2/3/2023 1:12 PM.	
	< Previous Next > F	nish Cancel

 Select an account from the Credentials dropdown list on the Credentials page or click Add on the right to add the credentials.



- 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.
- 13. On the Credentials page, click Ports.

Credentia	ls		×
	Username: Password:	GOODDEALMART\csun	Browse
	Description: GOODDEAL	.MART\csun OK	Cancel

Specify serv	er credentials.	
Name Credentials	Select an account with local administrator privileges on the server you are adding. Use DC format for domain accounts, or HOST/USER for local accounts. Credentials:	DMAIN\USE
	COODDEALMART\csun (GOODDEALMART\csun, last edited: less than a day ag	Add
Review	Manage accounts	
Apply		
Summary		
	Click Ports to customize network ports to be used by individual components.	Ports
		Cancel

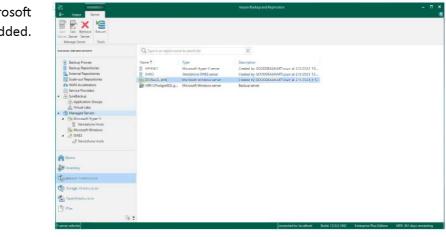
- If necessary, change the network ports used by Veeam Backup & Replication components on the Network Settings page.
- 15. Configure connection settings for file copy operations in the Network Settings window's Data transfer options section. Provide a set of ports for transmission channels between the 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		Edit
Installer		6160		Rescan
Transport		6162		
Hyper-V Integr	ation	6163		
Data transfer an				
Data transfer op	_			
Port range:	2500	🗘 to 33	00 🜲	
Preferred TCP co	onnecti	on role		
Run serve	r on thi	s side		
			OK	Cancel

18. On the Credentials page, click Next.	New Windows Server Credentials Specify server crede Name	entials. Select an account with local administrator privileges on the server you are adding. Use DOMAIN format for domain accounts, or HOST\USER for local accounts.	× \USER
	Credentials	Credentials:	
	Review	GOODDEALMART\csun (GOODDEALMART\csun, last edited: less than a day ag Ad Manage accounts	d
	Apply	monge seconds	
	Summary		
		Click Ports to customize network ports to be used by individual components. Por < Previous Next > Finish Car	
10 On the Deview we are alight	New Windows Server		×
19. On the Review page, click Apply.	Review	settings and click Apply to continue.	
	Name	Due to these modifications the following components will be installed or removed on the target	host
		Component name Status	
	Credentials	Transport will be installed	
	Review		
	Apply		
	Summary		
		After you click Apply missed components will be installed on the target host.	
		< Previous Apply Finish Car	cel

20. Click Next on the Apply page.	New Windows Server Apply Please wait w	while required operations are being performed. This may take a few minutes
	Name Credentials Review Apply Summary	Message Duration Package VecamGuestAgent_x86.msi has been uploaded ^ Package VecamLogBackupService_x86.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 installed packages * Detecting server configuration * Collecting disks and volumes info 0.00:04. Microsoft Windows server saved successfully *
21. Click Finish on the Summary page.	New Windows Server Summary You can copy	< Previous Next > Finish Cancel
	Name Credentials Review Apply Summary	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
		< Previous Next > Finish Cancel.

22. Ensure the new Microsoft Windows server is added.



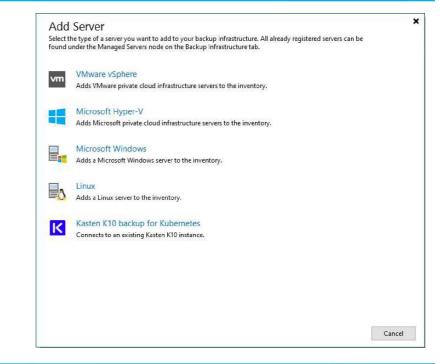
Add Linux Server for a hardened repository

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.

nstructions	Screenshot (if applicable)		
L. Log in to the Veeam Backup and replication manager server.	Veeam Backup & Rep		
2. Open the Veeam Backup	Backup & Rep	plication 12	
& Replication Console, and click Connect.	Type in a backup server name or IP add and user credentials to connect with.		
& Replication Console,	Type in a backup server name or IP add		
& Replication Console,	Type in a backup server name or IP add and user credentials to connect with.		port number,
& Replication Console,	Type in a backup server name or IP add and user credentials to connect with. localhost		port number,
& Replication Console,	Type in a backup server name or IP add and user credentials to connect with. localhost GOODDEALMART\csun	dress, backup service	port number,

- 3. On the Home page, select Backup Infrastructure.
- On the Backup Infrastructure page, select Managed Servers.
- 5. Right-click Managed Servers and select Add Server.
- 6. Select Linux on the Add Server page.

원 Server Tools 클 Home Server						
Add Edit Remove Server Server Manage Server Tools						
Backup Infrastructure	Q. Type in an object nom	e to search for	×			
Backup Provies Backup Repositories Estemal Repositories Sarke Provides Sarke Provides Sarke Provides Sarke Provides Sarke Application Groups Wythut Labs	Name T HHHV01 HHHV02 SM83 StrackACE-WIN WB12PostgreSQLg	Type Microsoft Hyper-V server Microsoft Hyper-V server Sandalone SMB3 server Microsoft Windows server Microsoft Windows server	Description Created by GOODDEALMART.csum at 2/3/2023 10. Created by GOODDEALMART.csum at 2/3/2023 42. Created by GOODDEALMART.csum at 2/3/2023 11. Created by GOODDEALMART.csum at 2/3/2023 11. Backup server			
Managed Servers						
Standalone Hosts	Add server Rescen Upgrade servers Missing updates					
A Home						
型利 Inventory						
Backup Infrastructure						
Storage Infrastructure						
Tape Infrastructure						
The Files						
	De e					
5 servers			Connected to: localhost	Build: 12.0.0.1402	Enterprise Plus Edition	NFR: 361 days remaining



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

New Linux Server Name Specify DNS n	ame or IP address of Linux server. The server must have SSH and Perl installed.	>
Name	DNS name or IP address:	
	ubuntu20045	
SSH Connection	Description:	
Apply Summary	Created by GOODDEALMART\csun at 2/3/2023 4:53 PM.	
	< Previous Next > Finish Cancer	el

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

Note:

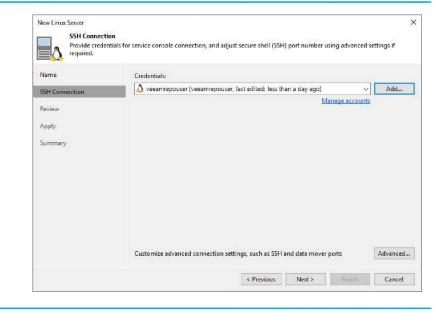
These credentials are not saved by Veeam Backup & Replication. They are only used to install Veeam Data Mover on the server. These credentials reduce the rights of the Veeam Data Mover. Single-use or temporary credentials are recommended options for a hardened repository.

Select existing credentials or add new		
seeccessing credentials of add new	Add	
	Linux p	rivate key rivate key use credentials for hardened repository
	Manage accounts	Linux p

- 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.
- Give a brief description in the Description field for future reference and click OK.

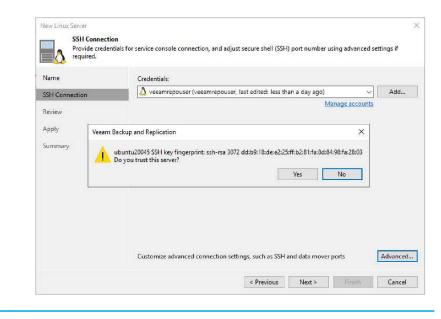
Creden	itials			×
3	Username:	veeamrepouse	r	
	Password:	•••••		
	SSH port:	22		
	Non-root a	ccount		
	🖂 Efev	ate account priv	ileges automatically	
		Add account to 1		
		Jse "su" if "sudo	o" fails	
	ł	Root password:	•••••	•
	Description			
	veeamrep	ouser		
			ОК	Cancel

15. On the SSH Connection page, click Advanced.



160

16. Select Yes on the trust warning message page.



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

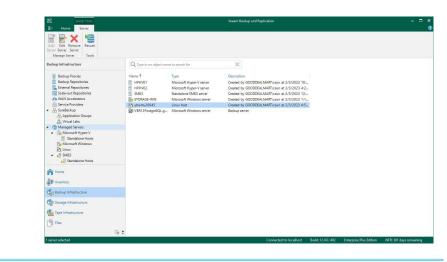
etwork Settings		
Components:		
Component	Control Port	Edit
Installer	6160	Rescan
Transport	6162	
Tape Proxy	6166	
Veeam CDP	6182	
		8
SSH timeout:	20000 🗘 ms	
SSH timeout:	20000 🗘 ms	
Service console cor SSH timeout: Data transfer option Port range: 25	20000 🗘 ms	
SSH timeout:	20000 \$ ms ns 00 \$ to 3300 \$ ection role	

21. Click OK.

22. Click Next on the SSH Connection page.	New Linux Server SSH Connecti Provide creder required.	ion ntials for service console connection, and adjust secure shell (SSH) port number using advanced settings if
		Credentials
	Name	Add
	SSH Connection	Manage accounts
	Review	
	Apply	
	Summary	
23. Click Apply on the Review	N New Linux Server Review	Customize advanced connection settings such as SSH timeout and service ports. Advanced < Previous Next > Finish Cancel X
page.	Name	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
	SSH Connection	Installer will be installed
	Review	Transport will be installed
	Apply	
	Summary	
	Summery	After you click Apply missed components will be installed on the target host.
		Arter 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	ile required operations are being performed. This may take a few minut	×
	Name SSH Connection Review Apply Summary	Message Prestarting Installer service Connecting to Veeam Installer service on server Discovering Installed packages Installing Transport service Setting backup server certificate Resolving backup server certificate's thumbprint Setting backup dient certificate Restarting Transport service Testing Veeam Transport service Discovering installed packages Collecting hardware info Coreating disks and volumes info	Duration 0:00:33 0:00:03 0:00:09
25. Click Finish on the Summary page.	New Linux Server	< Previous Net	xt > Finish Cancel
	Name SSH Connection Review Apply Summary	Summary: Linux host 'ubuntu20045' was successfully seved. SSH options: Credentials type: Single-use Usen vecenmepouser Elevate account privileges automatically, yes Add account no the sudoest 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	
		< Previous Ner	tt > Finish Caricel

26. Ensure the new Linux server is added.

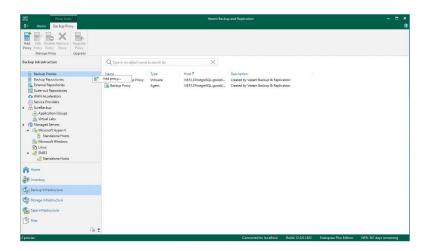


Add Off-Host Backup proxy servers

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.

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

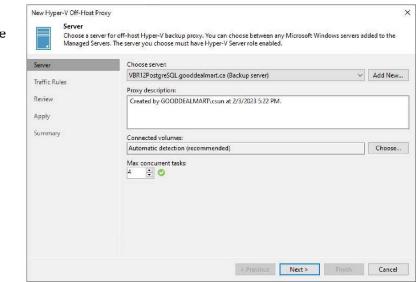
- 3. On the Home page, select Backup Infrastructure.
- On the Backup Infrastructure page, select Backup Proxies.
- 5. Right-click Backup Proxies and select Add Proxies.



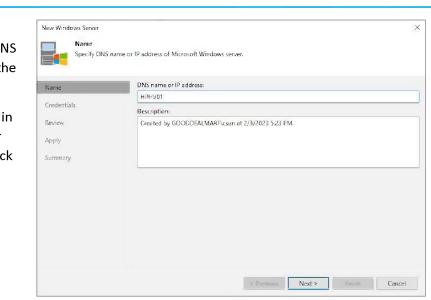
 Select Hyper-V off-host backup proxy on the Add Backup Proxy page.

	Backup Proxy a type of backup proxy you want to add.
Select	r type of backup proxy you want to add.
	General-purpose backup proxy
_1	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.
	Cancel

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



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



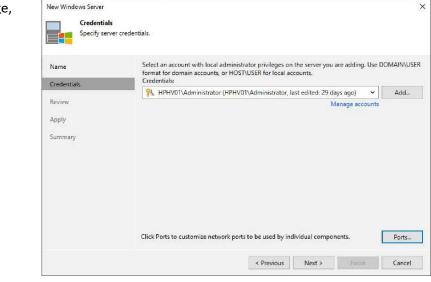
10. Select an account from the Credentials dropdown list on the Credentials page or click Add on the right to add the credentials.

	Select an account with local administrator privileges on the server you are adding	Use DOMAIN
Name Credentials	format for domain accounts, or HOST/USER for local accounts. Credentials	, oscibolinanti
creaenoas	Select existing credentials or add new	Y Add
Review	Manage acc	ounts
Apply		
Summary		

- 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.
- Give a brief description in the Description field for future reference and click OK.

	Jsername:	HPHV01\Administra	tor		Browse
<mark>المج</mark>	assword:	•••••		•	
C	Description:				
[HPHV01\A	dministrator			

14. On the Credentials page, click Ports.



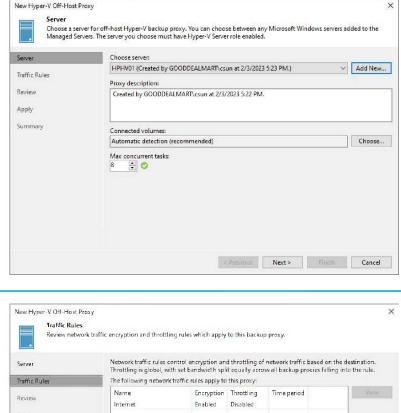
- If necessary, change the network ports used by Veeam Backup & Replication components on the Network Settings page.
- 16. Configure connection settings for file copy operations in the Network Settings window's Data transfer options section. Provide a set of ports for transmission channels between the 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.

Transport 6162 vPower NFS 6161	Port	Rescan
Transport 6162 vPower NFS 6161		Rescan
vPower NFS 6161		
and the second se		
Mount Server 6170		
WAN Accelerator 6164		
Tape Proxy 6166		
Cloud Gateway 6168		
Veeam Distribution 9380		
Veeam Backup VSS I 6210		
Veeam VSS Hardwar 6211		
)ata transfer options		<u></u>
Port range: 2500 🗘 to	3300 🗘	
referred TCP connection role		

Credentials page.	New Windows Server Credential Specify sen	s ver credentials.	
	Name Credentials	Select an account with local administrator privileg format for domain accounts, or HOST\USER for lo Credentials:	ges on the server you are adding. Use DOMAIN\USER ccal accounts.
	credentidis	R HPHV01\Administrator (HPHV01\Administrator	ator, last edited: 29 days ago) 🗸 Add
	Review		Manage accounts
	Apply		
	Summary		
		Click Ports to customize network ports to be used < Previc	
20. Click Apply on the Rev	View New Windows Server		
20. Click Apply on the Rev page.	Review	w your settings and click Apply to continue.	
	Review		nents will be installed or removed on the target host
	Name Review Please revier		nents will be installed or removed on the target host Status
	Name Credentials	Due to these modifications the following compo	nents will be installed or removed on the target host:
	Name Review Please revier	Due to these modifications the following compor Component name	
	Name Credentials	Due to these modifications the following compor Component name	nents will be installed or removed on the target host. Status
	Review Please review Name Credentials Review Apply	Due to these modifications the following compor Component name	Status
	Name Credentials Review	Due to these modifications the following compor Component name	Status
	Review Please review Name Credentials Review Apply	Due to these modifications the following compor Component name	Status already exists
	Review Please review Name Credentials Review Apply	Due to these modifications the following compor Component name Transport	Status already exists
	Review Please review Name Credentials Review Apply	Due to these modifications the following compor Component name Transport	Status already exists
	Review Please review Name Credentials Review Apply	Due to these modifications the following compor Component name Transport	nents will be installed or removed on the target host Status already exists
20. Click Apply on the Rev page.	Review Please review Name Credentials Review Apply	Due to these modifications the following compor Component name Transport	Status already exists
	Review Please review Name Credentials Review Apply	Due to these modifications the following compor Component name Transport	Status already exists
	Review Please review Name Credentials Review Apply	Due to these modifications the following compor Component name Transport	Status already exists
	Review Please review Name Credentials Review Apply	Due to these modifications the following compor Component name Transport	Status already exists

21. On the Apply page, click Next.	New Windows Server X Apply Please wait while required operations are being performed. This may take a few minutes				
	Name Credentials Review Apply Summery	Message Duration Starting infrastructure item update process 0.00.05 Collecting hardware info 0.00.05 Detecting operating system 0.00.05 Detecting of version 0.00.05 Registering client VBR12PostgreSQL for package Transport 0.00.05 Discovering installed packages 0.00.05 All required packages have been successfully installed 0.00.05 Creating database records for server 0.00.05 Detecting configuration 0.00.05 Creating disks and volumes info 0.00.255 Microsoft Windows server saved successfully 0.00.255			
22. Click Finish on the Summary page.	New Windows Server Summary You can copy the co	< Previous Next > Finish Cancel			
	Name Credentials Review Apply Summary	Summay: Microsoft Windows server 'HPHV01' was successfully saved. OS version: Microsoft Windows Server 2022 Datacenter 64-bit (10.0.20348 build:20348). Usen IPHV01Vd.ministrator Hardware info: Chassis type: Physical Cores count: 4 Components: Hyper-V Integration using port 6163 Instaler using port 6160 Transport using port 6162			
		Services Next > Finish Cancel			

- 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.
- 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
 X

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

 Server
 Network traffic nules control encryption and throttling of network traffic based on the destination. Throttling is global, with set bandwicht pile equally across all backup proxes falling into the rule.

 Traffic Rules
 The following network traffic rules control encryption

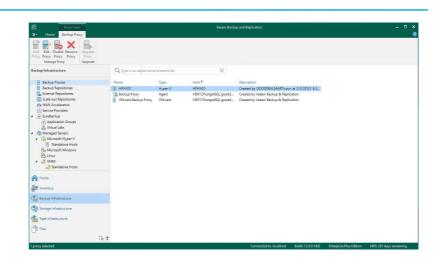
 Review
 Name

 Apply
 Name

 Summary
 Manage network traffic rules

page.	Review Please review	the settings and click Apply to continue.	
	Server	Backup proxy settings:	
	Traffic Rules	Server name: HPHV01	
		Server type: Physical Cores: 4	
	Review	Max tasks: 8	
	Apply	The following components will be processed on HPHV01:	
	Summary		atus
	Sarranay		eady exists
			eady exists
Click Next on the Apply	New Hyper-V Off-Host P	< Previous Apply	Finish Can
0. Click Next on the Apply page.	New Hyper-V Off-Host P Apply Please wait w		
	Apply	roxy hile required components are installed and configured, this may take a few minutes	
	Apply Please wait w Server	roxy hile required components are installed and configured, this may take a few minutes. Message	Duration
0. Click Next on the Apply page.	Apply Please wait w	roxy hile required components are installed and configured, this may take a few minutes	
	Apply Please wait w Server	roxy thile required components are installed and configured, this may take a few minutes. Message Starting infrastructure item update process C Registering client VBR12PostgreSQL for package Transport Registering client VBR12PostgreSQL for package Hyper-V Integration	Duration
	Apply Please wait w Server Traffic Rules Review	Intervention of the second sec	Duration
	Apply Please wait w Server Traffic Rules	Intervention of the second sec	Duration
	Apply Please wait w Server Traffic Rules Review	roxy while required components are installed and configured, this may take a few minutes. Message Starting infrastructure item update process 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.	Duration
	Apply Please wait w Server Traffic Rules Review Apply	Intervention of the second sec	Duration
	Apply Please wait w Server Traffic Rules Review Apply	hile required components are installed and configured, this may take a few minutes. Message Starting infrastructure item update process 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.	Duration 0:00:05
	Apply Please wait w Server Traffic Rules Review Apply	Intervention of the second sec	Duration 0:00:05
	Apply Please wait w Server Traffic Rules Review Apply	Intervention of the second sec	Duration 0:00:05
	Apply Please wait w Server Traffic Rules Review Apply	Intervention of the second sec	Duration 0:00:05
	Apply Please wait w Server Traffic Rules Review Apply	Intervention of the second sec	Duration 0:00:05
	Apply Please wait w Server Traffic Rules Review Apply	Intervention of the second sec	Duration 0:00:05
	Apply Please wait w Server Traffic Rules Review Apply	Intervention of the second sec	Duration 0:00:05

- 31. Click Finish on the Summary page.
- 32. Ensure the new Off-Host Backup proxy server is added.



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)			
 Log in to the Veeam Backup and replication manager server. 	Veeam	×		
 Open the Veeam Backup & Replication Console and click Connect. 	Type in a backup server name or IP address, backup s and user credentials to connect with.			
	localhost	✓ 9392		
	GOODDEALMART\csun			
	Password			
	\checkmark Use Windows session authentication			
	Save shortcut Connect	Close		

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

BS WAN Accelerator Tools				Vécam Backup	and Replication			
Home WAN Accelerator								
Add WAN Edit WAN Remove WAN Accelerator Accelerator Manage WAN Accelerators	e WAN erator							
Backup Infrastructure	Q. Type in an object	name to search for		\times				
Backup Proxies Backup Repositories External Repositories Scale-out Repositories	Name	Host	Description †					
Service Providers	Add WAN accelerator							
Construction Groups Application Groups Application Groups Monaul Lats Monaul Lats Monaul Lats Monaul Construction Mon								
A Home								
9 Inventory								
Backup Infrastructure								
Storage Infrastructure								
Tape Infrastructure								
The Files								
C ₂	÷							
WAN Accelerators	5001. 				Connected to: localhost	Build: 12.0.0.1402	Enterprise Plus Edition	NER: 359 days remaining

- Select a Microsoft Windows server from the Choose server drop-down list on the Server page.
- Give a brief description in the Description field for future reference.
- 8. Specify the port number in the Traffic port field.
- 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

lew WAN Accelerator	×
Server	
	erver to install WAN accelerator components on. You can only select between 64-bit Microsoft Windows servers ie managed servers tree in the console.
Server	Choose server.
c	HPHV01 (Created by GOODDEALMART\csun at 2/3/2023 5:23 PM.) V Add New
Cache	Description:
Review	Created by GOODDEALMART\csun at 2/6/2023 3:01 PM.
Apply	
Summary	
	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

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.
- 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.

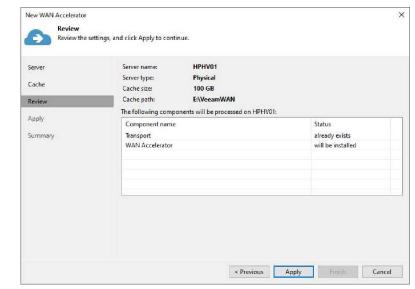
Note:

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

amount of di	k space will be allocated separately for each source/target	erators to cache recurring data blocks. Th t WAN accelerator pair in many-to-one of	
erver	Folder:		
erver	E:\VeeamWAN		Browse
lache	Path	Capacity	Free
eview	C:	476.3 GB	457.5 GB
	e civ	470.5 GB	457.5 GB
ppły	and the second s	10 10	15 10
ummary			
	Cache size: 100 🖨 GB 🗸		
			er cache
	improves data reduction ratio, but requires raste	a storage.	
	Cache size: 100 GB We recommend at least 10GB per each operating improves data reduction ratio, but requires faste	er storage.	er cache Ca

bandwidth mode and return to the Low bandwidth mode anytime.

15. On the Review page, click Apply.



 Click Next on the Apply page. 	New WAN Accelerator Apply Please wait	while we are installing and configuring required components, this may take a few min	uter
F0			
	Server	Message	Duration
		Starting infrastructure item update process	0:00:05
	Cache	Creating temporary folder	
	Review	Package VeeamWANSvc_x64.msi has been uploaded	
		Installing package WAN Accelerator	0:00:19
	Apply	Deleting temporary folder	
		Registering client VBR12PostgreSQL for package Transport	
	Summary	Registering client VBR12PostgreSQL for package WAN Accelerator	
		O Discovering installed packages	
		All required packages have been successfully installed	
		😒 Checking WAN Accelerator service state	
		Configuring WAN Accelerator	
		C Restarting WAN Accelerator service	0:00:11
		Creating configuration database records for WAN Accelerator	
		Creating configuration database records for installed packages	
		S WAN Accelerator created successfully	
		Previous Next >	trian g canco
.7. Click Finish on the Summary page.	New WAN Accelerator Summary You can cop	by the WAN accelerator configuration information below for the future reference.	
	Summary You can co		
	Summary	Summary:	
	Summary You can co		
	Server	Summary:	
	Server	Summary:	
	Server Cache Review	Summary:	
	Server Cache	Summary:	
	Server Cache Review Apply	Summary:	
	Server Cache Review	Summary:	
	Server Cache Review Apply	Summary:	

 Verify that the WAN Accelerator has been added.

CLO X C	~				
Add WAN Edit WAN Remove WAN Upgran	Je WAN Ierator				
Manage WAN Accelerators Upg	prade				
Backup Infrastructure	Q. Type in an ob	ject name to search for	×		
🗄 Backup Proxies	Name	Host 1	Description		
Backup Repositories External Repositories	Ca HPHV01	HPHV01	Created by GOODDEALMART\csun at 2/6/2023	3:0	
Scale-out Repositories					
Ca WAN Accelerators					
Service Providers					
Application Groups					
A Virtual Labs					
Managed Servers Microsoft Hyper-V					
Standalone Hosts					
Microsoft Windows					
Linux					
Standalone Hosts					
A Home					
Inventory					
*					
Backup Infrastructure					
Storage Infrastructure					
Can Tape Infrastructure					
The Files					
G					
	10.05			ted to: localhost Build: 12.0.0.1402	Enterprise Plus Edition NFR:

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.

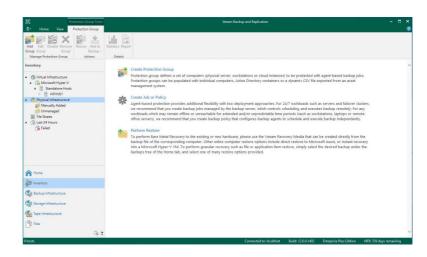
You can use protection groups to automate the Veeam Agent deployment and management on computers in the infrastructure. When you configure a protection group, you can specify scheduling options for protected computer discovery and Veeam Agent deployment. As a result, you do not need to install, configure, 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.

Ins	tructions	Screenshot (if applicable)		
1.	Log in to the Veeam			×
	Backup and replication manager server.	Veeam	N7 400	21
2.	& Replication Console,	Backup & Replica	tion 12	2
	and click Connect.	Type in a backup server name or IP address, b and user credentials to connect with.	ackup servio	e port number,
	and click Connect.		ackup servie ~	e port number, 9392
	and click Connect.	and user credentials to connect with.		1
	and click Connect.	and user credentials to connect with.		1
	and click Connect.	and user credentials to connect with. localhost GOODDEALMART\csun		1

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



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

New Protection Group Name Type in a name	e and description for this protection group.
Name	Name
	Protection Group_Hyper-V Hosts
Туре	Description:
Active Directory Exclusions Credentials Options Review Apply Summary	Created by GOODDEALMART\csun at 2/6/2023 3:52 PM.
	< Previous Next > Finish Cancel

- 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 EC2 instances or

New Protection Group	×
Choose how	v you want to populate this protection group with computers.
Name	This protection group will contain:
Туре	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.
Computers Options	O Microsoft Active Directory objects Dynamic protection scope defined by Active Directory containers such as organizational units or security groups, and exclusion rules.
Review Apply	Camputers 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.
Summary	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.
	< Previous Next > Finish Cancel

Microsoft Azure virtual machines.

8. Click Add on the Computers page.

Specify co	mputers to include in this protection group		
Vame	Computers:	and the form	
jype	Computer	Account	Add
Computers			Set User
			Remove
Options			
Review			
Apply			
ummary			
,			
	Click Test Now to validate the	specified credentials.	

- 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.
- If you need to set up credentials beforehand, click the Manage accounts link or Add on the right.

Host name or IP address:	
HPHV01	
The density has	
Credentials:	
Credentials:	or (HPHV01\Administ 🗸 Add
	or (HPHV01\Administ ~ Add
	or (HPHV01\Administ \checkmark Add Manage accounts

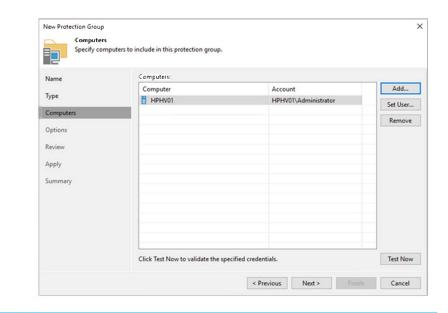
12. Click Test Now on the Computers page.

Specify cor			
Name	Computers:	and the state	
Туре	Computer	Account	Add
	HPHV01	HPHV01\Administra	tor Set Us
Computers			Reme
Options			
Review			
Apply			
Summary			
	Click Test Now to validate the		Test N

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

lame	Status	Action	Duration	
HPHV01	Success	Starting credentials test Building hosts list	0:00:02	
		O Credentials test has been completed		
		Job finished at 2/6/2023 6:31:14 PM		

14. Click Next on the Computers page.



- 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

Specify a machin	e discovery schedule and agent d	eployment optio	ns.		
Name	Discovery Rescan protection grou	p every:			
Fype	Daily at this time:	9:00 PM	Everyday	Ŷ	Days
Computers	O Periodically every:	1	Hours		Schedule
Options	Deployment Distribution server:				
Review	backupserver003.tech.	local		~	Add
Apply Summary		t alock tracking dis lug-inst configure p agents and plue	ver (for Windows machin a plug-ins to be installed g-ins	es only)	

Windows machines only) checkbox.

- 19. Click Advanced to customize advanced protection group settings.
- 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

Agent f	or Windows Notifications			
Netw	ork			
	Limit bandwidth consump	tion to: 1	Mbps	-
	Restrict metered connection		initip2.	
	Restrict VPN connections u			
	Restrict Wi-Fi usage to the	and the second sec		
	SSID			Add
				Remove
	up I/O control	Wednestern och		
۲	Throttle agent activity on:	Workstations only		~
) ()	Throttle agent activity on: Do not throttle agent	Workstations only		~
Secur	Throttle agent activity on: Do not throttle agent ity			*
Secur	Throttle agent activity on: Do not throttle agent		ccount	~
Secur	Throttle agent activity on: Do not throttle agent ity		ccount	~
Secur	Throttle agent activity on: Do not throttle agent ity		ccount	~
● ○ Secur	Throttle agent activity on: Do not throttle agent ity Allow file level recovery wi			~
● ○ Secur	Throttle agent activity on: Do not throttle agent ity		ccount	

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.

23. On the Advanced page, select Notifications.

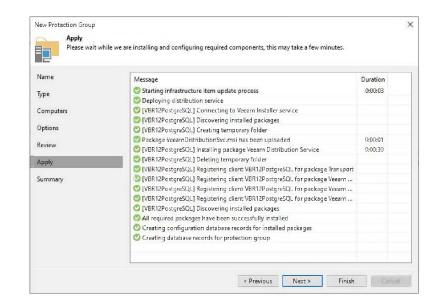
Agent for Windows Notifications	
Send daily agent status report e-mail to the follow	wing recipients:
Type in one or more e-mail addresses separated	by semicolon
Send daily summary at: 10:00 PM	
Use global notification settings	
O Use custom notification settings specified be	low:
Subject:	
[%JobResult%] %PGName%: (%FoundCount	t% 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.

Agen	nt for Windows Notifications	
\square	Send daily agent status report e-mail to the following recipients:	
	csun@gooddealmart.com	
	Send daily summary at: 10:00 PM	
1	Use global notification settings	
9	O Use custom notification settings specified below:	
	Subject: [%JobResult%] %PGName%: (%FoundCount% new hosts found (%To	1.10
		648/885
	 Notify on success Notify on warning 	
	Notify on error	
	in the second second	

Next.	Specify host d	liscovery schedule and automatic backup agent deployment op	ions.
	Name	Discovery	
		Rescan protection group every:	
	Туре	Daily at this time: 9:00 PM Everyday	v Days
	Computers	O Periodically every:	v Schedule
	Options	Deployment	
	Review	Distribution server:	
	IVE VIEW	VBR11.gooddealmart.ca (Backup server)	
	Apply	Protected computers will download backup agent re	distributable from this server.
	Summary	Install backup agent automatically (recommend	
		Auto-update backup agent	
		Install changed block tracking driver on Wind	aur Saarr Of
			ows server 0.5
		Perform reboot automatically if required	
		Customize advanced protection group settings such	s e-mail notifications.
		customize advanced protection group settings soci-	
On the Review page, click	New Protection Group	Customize sofances protection group settings soft < Previous	Net > Finish Cancel
On the Review page, click Apply.	Review		Net > Finish Cancel
	Review	< Previous	
	Review Review the set	< Previous ttings, and click Apply to continue.	
	Review the set	< Previous ttings, and click Apply to continue. The following components will be processed on VBR	2PostgreSQL.gooddealmart.ce:
	Review Review the set	< Previous ttings, and click Apply to continue. The following components will be processed on VBR Component name Transport Veeam Distribution Service	2PostgreSOL.gooddealmart.ce: Status already exists will be installed
	Review the set Name Type Computers	< Previous ttings, and click Apply to continue. The following components will be processed on VBR Component name Transport Veeam Distribution Service Veeam Agent for Microsoft Windows Redistributabl	2PostgreSQL.gooddealmart.ce: Status already exists will be installed already exists
	Review Review the set Name Type	< Previous ttings, and click Apply to continue. The following components will be processed on VBR Component name Transport Veeam Distribution Service	2PostgreSOL.gooddealmart.ce: Status already exists will be installed
	Review the set Name Type Computers	< Previous ttings, and click Apply to continue. The following components will be processed on VBR Component name Transport Veeam Distribution Service Veeam Agent for Microsoft Windows Redistributabl	2PostgreSQL.gooddealmart.ce: Status already exists will be installed already exists
	Review Review the set Name Type Computers Options Review	< Previous ttings, and click Apply to continue. The following components will be processed on VBR Component name Transport Veeam Distribution Service Veeam Agent for Microsoft Windows Redistributabl	2PostgreSQL.gooddealmart.ce: Status already exists will be installed already exists
	Review the set Name Type Computers Options	< Previous ttings, and click Apply to continue. The following components will be processed on VBR Component name Transport Veeam Distribution Service Veeam Agent for Microsoft Windows Redistributabl	2PostgreSQL.gooddealmart.ce: Status already exists will be installed already exists

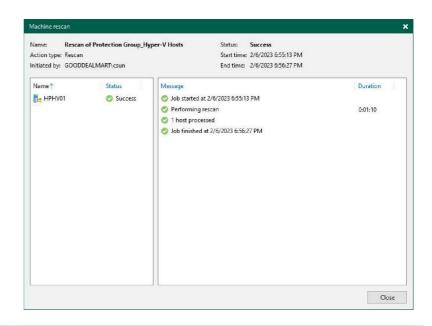
29. Click Next on the Apply page.



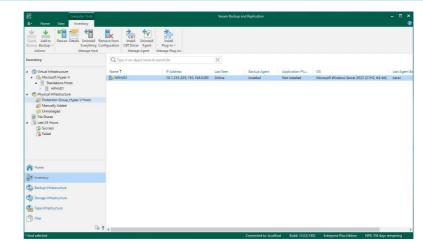
30. On the Summary page, select Run discovery when I click the Finish checkbox and click Finish.

Protection g	roup settings have been saved successfully. Click Finish to exit the wizard.
Name	Summary:
Type Computers Options Review Apply	Protection Group_Hyper-V Hosts was successfully saved.
Summary	
	Run discovery when I click Finish

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



32. Verify that the protection group has been added.



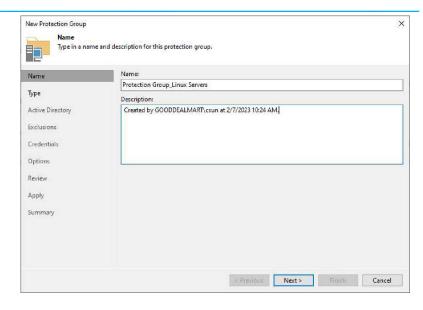
Add Veeam Agent to On-Premises Linux Physical machines

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)
 Log in to the Veeam Backup and replication manager server. 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 Close
 Select Inventory on the Home page. On the Inventory page, select Physical Infrastructure and click Create Protection Group. 	<complex-block> The state of the state of the</complex-block>

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



EC2 instances or Microsoft Azure virtual machines.

	Click Add on the Computers page.		roup uters 'y computers to include in this protection group.		×
		Name	Computers:		
		Туре	Computer	Account	Add
		Computers			Set User
		Options			Remove
		Review			
		Apply			
		Summary			
		Summary			
			Click Test Now to validate the sp	pecified credentials.	Test Now
	address on the Add		euters in computers to include in this protection group.		
	Computer page.	Speci	y computers to include in this protection group.		
10.	Computer page. From the Credentials list,	Name Specif		Account	Add
10.	Computer page. From the Credentials list, select a user account with	Speci Name Type	y computers to include in this protection group.	Account	Add
10.	Computer page. From the Credentials list,	Name Type Computers	y computers to include in this protection group. Computers Computer Add Computer Host name or IP address:		Add Set Morue Remove
10.	Computer page. From the Credentials list, select a user account with	Name Type Computers Options	y computers to include in this protection group. Computers Computers Add Computer		Set Olzer
10.	Computer page. From the Credentials list, select a user account with administrative	Specification Sp	y computers to include in this protection group. Computers Computers Add Computer Host name or IP address: [ubuntu20045 Credentials:	×	Set Olzer
	Computer page. From the Credentials list, select a user account with administrative permissions on the computer and click OK.	Name Type Computers Options	Computers to include in this protection group. Computers: Computer Add Computer Host name or IP address: ubuntu20045	×	Set Olymuu Remove
	Computer page. From the Credentials list, select a user account with administrative permissions on the computer and click OK.	Specification Sp	y computers to include in this protection group. Computers: Computer Add Computer Host name or IP address: Unburitu20045 Credentials: Select existing or add new credentials	→ Add Stored → Standard i Single-use → Linux acci	Set Name Remove
	Computer page. From the Credentials list, select a user account with administrative permissions on the computer and click OK. If you need to set up credentials beforehand,	Name Type Computers Options Review Apply	y computers to include in this protection group. Computers: Computer Add Computer Host name or IP address: Unburitu20045 Credentials: Select existing or add new credentials	Add Add Single-use Linux accu	Set Name Remove
	Computer page. From the Credentials list, select a user account with administrative permissions on the computer and click OK. If you need to set up credentials beforehand, click the Manage accounts	Name Type Computers Options Review Apply	y computers to include in this protection group. Computers Computers Add Computer Add Computer Host name or IP address: [ubuntu20045 Credentials: Select existing or add new credentials: Manage acc	Add Add Single-use Linux accu	Set filme Remove
11.	Computer page. From the Credentials list, select a user account with administrative permissions on the computer and click OK. If you need to set up credentials beforehand, click the Manage accounts link or Add on the right.	Name Type Computers Options Review Apply	y computers to include in this protection group. Computers Computers Add Computer Add Computer Host name or IP address: [ubuntu20045 Credentials: Select existing or add new credentials: Manage acc	Add Add Single-use Linux accu	Set filme Remove
11.	Computer page. From the Credentials list, select a user account with administrative permissions on the computer and click OK. If you need to set up credentials beforehand, click the Manage accounts link or Add on the right. Click Add in the	Name Type Computers Options Review Apply	y computers to include in this protection group. Computers Add Computer Host name or IP address: ubuntu20045 Credentials: Select existing or add new credentials Manage acc OK	→ Add Stored → Standard I Single-use → Linux acc Cancel	Set Virou. Remove
11.	Computer page. From the Credentials list, select a user account with administrative permissions on the computer and click OK. If you need to set up credentials beforehand, click the Manage accounts link or Add on the right. Click Add in the Credentials field, select	Name Type Computers Options Review Apply	y computers to include in this protection group. Computers Computers Add Computer Add Computer Host name or IP address: [ubuntu20045 Credentials: Select existing or add new credentials: Manage acc	→ Add Stored → Standard I Single-use → Linux acc Cancel	Set films. Remove
11.	Computer page. From the Credentials list, select a user account with administrative permissions on the computer and click OK. If you need to set up credentials beforehand, click the Manage accounts link or Add on the right. Click Add in the	Name Type Computers Options Review Apply	y computers to include in this protection group. Computers Add Computer Host name or IP address: ubuntu20045 Credentials: Select existing or add new credentials Manage acc OK	→ Add Stored → Standard I Single-use → Linux acc Cancel	Set Virou. Remove

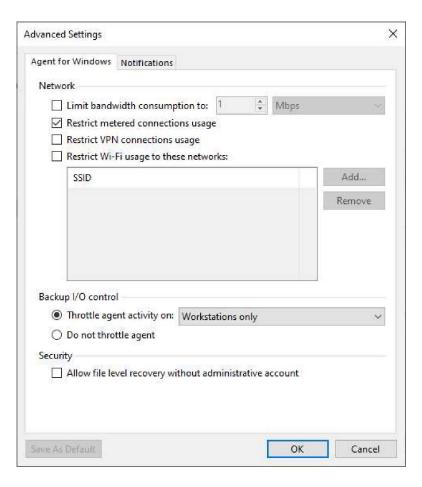
 On the Credentials page, Enter a user name in the Username field. Enter a password in the Password field. Enter 22 in the SSH port field. Select the Elvate account privileges automatically checkbox for a non-root user with root account privileges. Select Add account to the sudoers file checkbox. Enter the password in the Root password field. Give a brief description in the Description field for future reference and click OK. 	Credentials × Username: cary Password: •••••• SSH port: 22 Non-root account Celevate account privileges automatically Add account to the sudoers file Use "su" if "sudo" fails Root password: •••••• Description: Cary OK Cancel
20. Click OK on the add Computer page.	Add Computer × Host name or IP address: ubuntu20045 Credentials: Credentials: Cary (cary, last edited: less than a day ago) × Add Manage accounts OK Cancel

	Specify c	Cor	nputers:				
	Name		omputer	Accou	nt	1	Add
	Туре		ubuntu20045	cary			Set User
	Computers						Remove
	Options						Kemove
	Review						
	Apply						
	Summary						
		Clic	k Test Now to validate the specified	l credentials.			Test Nov
2. On the Guest Credentials	Guest Credentials Tes		k Test Now to validate the specified	d credentials.	Next >	Tinish:	Test Nov Cancel
2. On the Guest Credentials Test page and click Close.	Guest Credentials Tes Name Dubuntu20045		Action Starting credentials test Uniding hosts list Credentials test has been cc	< Previous	Next >	Tinish	Test Now
	Name	it Status	Action Starting credentials test Building hosts list	< Previous	Next >		
	Name	it Status	Action Starting credentials test Uniding hosts list Credentials test has been cc	< Previous	Next >		
	Name	it Status	Action Starting credentials test Uniding hosts list Credentials test has been cc	< Previous	Next >		
	Name	it Status	Action Starting credentials test Uniding hosts list Credentials test has been cc	< Previous	Next >		
	Name	it Status	Action Starting credentials test Uniding hosts list Credentials test has been cc	< Previous	Next >		
	Name	it Status	Action Starting credentials test Uniding hosts list Credentials test has been cc	< Previous	Next >		
	Name	it Status	Action Starting credentials test Uniding hosts list Credentials test has been cc	< Previous	Next >		
	Name	it Status	Action Starting credentials test Uniding hosts list Credentials test has been cc	< Previous	Next >		

protection group settings.

3. Click Next on the Computers page.	New Protection Group Computers Specify computers to	include in this protection gr	oup.			
	Name	Computers:				
		Computer		Account		Add
	Туре	buntu20045		cary		Set User
	Computers					Remove
	Options					
	Review					
	Apply				_	
	Summary					
					-	
		Click Test Manufer unlideter	the survey official second			Test Now
		Click Test Now to validate:	trie specified credi	enuars.		IEST 140%
			<	Previous Next >	Finish	Cancel
4. On the Options page, in	New Protection Group					
the Discovery section, define the schedule for	Options Specify a machine di	scovery schedule and agent o	eployment option	15.		
the Discovery section, define the schedule for automatic computer	Options Specify a machine di Name	Discovery Rescan protection grou	ip every:	1		
the Discovery section, define the schedule for	Options Specify a machine di Name Type	Discovery Rescan protection grou		Everyday	v	Days
the Discovery section, define the schedule for automatic computer	Options Specify a machine di Name	Discovery Rescan protection grou	ip every:	1	* ~	Days Schiedule.
the Discovery section, define the schedule for automatic computer discovery within the scope of the protection	Options Specify a machine di Name Type	Discovery Rescan protection grou	ip every:	Everyday	×	-
the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group.	Options Specify a machine di Name Type Computers	Discovery Rescan protection grou	ip every: 9:00 PM 🔹 1 🗸	Everyday	* ~ ~	-
the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group. 5. In the Deployment	Options Specify a machine di Name Type Computers Options	Discovery Rescan protection grou	IP every: 9:00 PM 1 viddealmart.ca II download backu	Everyday	~	Schedule.
 the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group. In the Deployment section, select a Microsoft 	Options Specify a machine di Name Type Computers Options Review	Discovery Rescan protection grou	ip every: 9:00 PM 😨 1	Everyday Hours up agents from this server.	~	Schedule.
the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group. 5. In the Deployment	Options Specify a machine di Name Type Computers Options Review Apply	Discovery Rescan protection grou Daily at this time Periodically every: Deployment Distribution server: VBR12PostgreSQL.goc Protected machines wi Install backup agen Install changed	ip every: 9:00 PM ♀ 1 ♀ iddealmart.ca II download backu t block tracking driv	Everyday Hours up agents from this server. ver (for Windows machines	~ only)	Schedule
 the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group. In the Deployment section, select a Microsoft 	Options Specify a machine di Name Type Computers Options Review Apply	Discovery Rescan protection grou Daily at this time: Periodically every: Deployment Distribution server: VBR12PostgreSQL-goc Protected machines wi Install backup agen Install changed Install application p	up every: 9:00 PM 1 0 0 0 0 0 0 0 0 0 0 0 0 0	Everyday Hours up agents from this server. ver (for Windows machines e plug-ins to be installed C	~ only)	Schedule.
 the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group. 10. In the Deployment section, select a Microsoft Windows server from the Distribution server list to 	Options Specify a machine di Name Type Computers Options Review Apply	Discovery Rescan protection grou Daily at this time Periodically every: Deployment Distribution server: VBR12PostgreSQL.goc Protected machines wi Install backup agen Install changed	IP every: 9:00 PM 1 	Everyday Hours up agents from this server. ver (for Windows machines a plug-ins to be installed Co g-ins	~ only)	Schedule.
 the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group. 5. In the Deployment section, select a Microsoft Windows server from the Distribution server list to serve as a distribution 	Options Specify a machine di Name Type Computers Options Review Apply	Discovery Rescan protection grou	IP every: 9:00 PM 1 	Everyday Hours up agents from this server. ver (for Windows machines a plug-ins to be installed Co g-ins	~ only)	Schedule.
 the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group. In the Deployment section, select a Microsoft Windows server from the Distribution server list to serve as a distribution server. 	Options Specify a machine di Name Type Computers Options Review Apply	Discovery Rescan protection grou	IP every: 9:00 PM 1 I devaluant.ca II download backut t block tracking driv hug-ins: configure up agents and plug omatically if requi	Everyday Hours up agents from this server. ver (for Windows machines e plug-ins to be installed C g-ins irred	only)	Add
 the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group. 5. In the Deployment section, select a Microsoft Windows server from the Distribution server list to serve as a distribution server. 6. Select the Install Backup 	Options Specify a machine di Name Type Computers Options Review Apply	Discovery Rescan protection grou	IP every: 9:00 PM 1 I devaluant.ca II download backut t block tracking driv hug-ins: configure up agents and plug omatically if requi	Everyday Hours up agents from this server. ver (for Windows machines a plug-ins to be installed Co g-ins	only)	Schedule.
 the Discovery section, define the schedule for automatic computer discovery within the scope of the protection group. 5. In the Deployment section, select a Microsoft Windows server from the Distribution server list to serve as a distribution 	Options Specify a machine di Name Type Computers Options Review Apply	Discovery Rescan protection grou	IP every: 9:00 PM	Everyday Hours up agents from this server. ver (for Windows machines e plug-ins to be installed C g-ins irred	only)	Schedule.

- 28. On the Advanced Settings page, specify the below settings that will be deployed on computers included in the protection group and click OK.
 - Limiting bandwidth consumption: specify the maximum speed for transferring backed-up data from the Veeam Agent computer to the target location.
 - Restrict metered connections usage: Veeam Agent automatically detects metered connections and does not perform backup when your computer is on such connection.
 - Restrict VPN connection usage: Veeam Agent for Microsoft Windows will



automatically detect a VPN connection and 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.

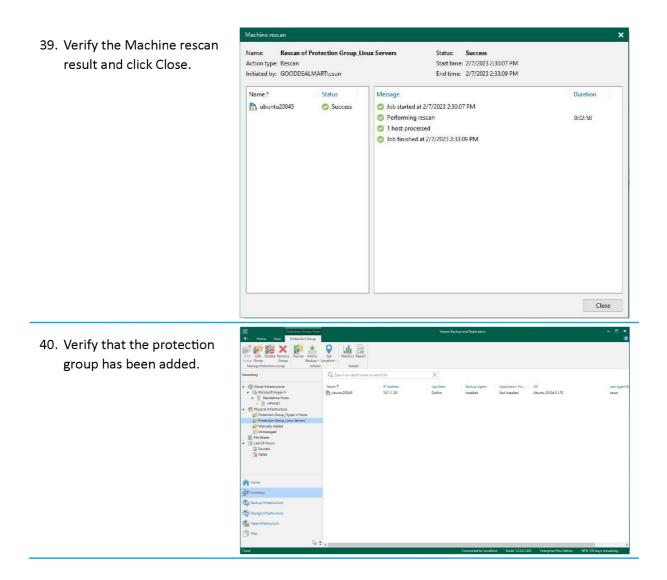
age,	Advanced Settings X
	Agent for Windows Notifications
	Send daily agent status report e-mail to the following recipients:
	Type in one or more e-mail addresses separated by semicolon
	Send daily summary at: 10:00 PM Use global notification settings Use custom notification settings specified below: Subject:
	[%JobResult%] %PGName%: (%FoundCount% new hosts found (%TotalCou
	 Notify on success Notify on warning Notify on error
	Save As Default OK Cancel

- 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.

Agent for Window	s Notifications	
🗹 Send daily ag	ent status report e-mail to the followir	ig recipients:
csun@goodd	lealmart.ca	
Send daily su	mmary at: 10:00 PM 🚔	
Use globa	Inotification settings	
	m notification settings specified below	v:
Subject: [%JobRes	ult%] %PGName%: (%FoundCount%	new hosts found (%TotalC
🗹 Notify	on success on warning on error	

	Туре	Discovery		
		Rescan protection group every: Daily at this time: 9:00 PM + Eveny	rdav 🗸	
		O Periodically every: 1 Hoursel		
	Computers		3	
	Options	Deployment Distribution server:		
	Review	VBR12PostgreSQL.gooddealmart.ca	~	Add
	Apply	Protected machines will download backup ager	ts from this server.	
	Арру	Install backup agent		
	Summary	Install changed block tracking driver (for	Windows machines only)	
		Install application plug-ins: configure plug-i	ns to be installed Configure	
		Auto-update backup agents and plug-ins		
		Perform reboot automatically if required		
		Customize advanced protection group settings suc	h as e-mail notifications.	Advanced
		< Previou	s Next > Finish	Cancel
36. Click Apply on the Revie	the second se			
36. Click Apply on the Revie page.	W Review	settings, and click Apply to continue.		
	W Review	settings, and click Apply to continue. The following components will be processed on VE	R12PostgreSQL.gooddealmart.ca:	
	Review the	The following components will be processed on VE Component name	Status	
	Name Type	The following components will be processed on VE Component name Transport	Status already exists	
	Name Review the	The following components will be processed on VE Component name	Status	
	Name Type	The following components will be processed on VE Component name Transport Vecam Distribution Service	Status already exists already exists	
	Name Type Computers Options	The following components will be processed on VE Component name Transport Vecerm Distribution Service Vecerm Agent for Linux Redistributable	Status already exists already exists already exists already exists	
	W Review the Review the Review the Computers Options Review	The following components will be processed on VE Component name Transport Vecerm Distribution Service Vecerm Agent for Linux Redistributable	Status already exists already exists already exists already exists	
36. Click Apply on the Revie page.	Name Type Computers Options	The following components will be processed on VE Component name Transport Vecerm Distribution Service Vecerm Agent for Linux Redistributable	Status already exists already exists already exists already exists	
	W Review the Review the Review the Computers Options Review	The following components will be processed on VE Component name Transport Vecerm Distribution Service Vecerm Agent for Linux Redistributable	Status already exists already exists already exists already exists	
	Review the Computers Options Review Apply	The following components will be processed on VE Component name Transport Vecerm Distribution Service Vecerm Agent for Linux Redistributable	Status already exists already exists already exists already exists	
	Review the Computers Options Review Apply	The following components will be processed on VE Component name Transport Vecerm Distribution Service Vecerm Agent for Linux Redistributable	Status already exists already exists already exists already exists	
	Review the Computers Options Review Apply	The following components will be processed on VE Component name Transport Vecerm Distribution Service Vecerm Agent for Linux Redistributable	Status already exists already exists already exists already exists	
	Review the Computers Options Review Apply	The following components will be processed on VE Component name Transport Vecerm Distribution Service Vecerm Agent for Linux Redistributable	Status already exists already exists already exists already exists	

37. Click Next on the Apply page.	New Protection Group Apply Please wait while	e we are installing and configuring required components, this may take a few minutes.	X
	Name Type Computers Options Review Apply Summary	Message Starting infrastructure item update process Deploying distribution service (VBR12PostgreSQL) Connecting to Veeam Installer service VBR12PostgreSQL) Registering client VBR12PostgreSQL for package Transport (VBR12PostgreSQL) Registering client VBR12PostgreSQL for package Transport (VBR12PostgreSQL) Registering client VBR12PostgreSQL for package Veeam (VBR12PostgreSQL) Discovering installed packages (VBR12PostgreSQL) Discovering installed packages (VBR12PostgreSQL) Discovering installed packages (Catenting configuration database records for installed packages (Catenting database records for protection group)	Duration 0:00:03
38. On the Summary page, select the Run discovery when I click the Finish checkbox and click Finish.	New Protection Group Summary Protection group Name Type Computers Options Review Apply Summary	P settings have been saved successfully. Click Finish to exit the wizard. Summary: Protection Group_Linux Servers was successfully saved. A un discovery when I click Finish	X
		< Previous Next> Finish	Cancel



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.

Instructions

- 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.

1.	Log in to the Veeam Backup and replication		×
2.	manager server. 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 numb and user credentials to connect with.	er,
		localhost \checkmark 9392	
		GOODDEALMART\csun	
		Password	
		✓ Use Windows session authentication	
		Save shortcut Close	

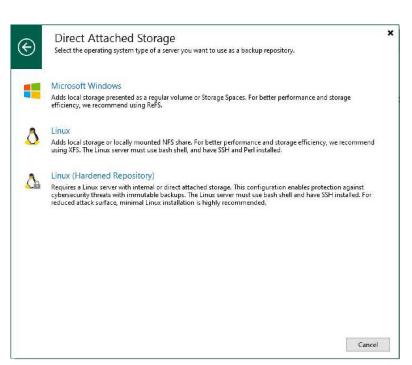
Screenshot (if applicable)

- Select Backup Infrastructure on the Home page.
- Select Backup Repositories on the Backup Infrastructure page.
- Right-click Backup Repositories and select Add backup repository.
- Select Direct attached storage on the Add Backup Repository page.

Repository Tools Home Backup Repositor									- 0 ×
Add Edit Repository Repository Manage Repository Tools									
Backup Infrastructure	Q, Type	in an object nome to search fo		\times					
Backup Proxies	Name 1		Type		Host	Path	Capacity	Free Used Spac	e Description
Backup Repositories	Add backup repository Rescan	bup Repository	Windows		VBR12PostgreS	C:\Backups	126.4 G	98.4 GB	0 B Created by GOODDEALM
VAM Accelerators Savie Provides. Savie Provides. SureSarkup SureSarkup SureSarkup SureSarkup SureSarkup Sandalone Hoss SureSarkup Sandalone Hoss Sandalone Hoss									
A Home									
Gil Backup Infrastructure									
Ta Storage Infrastructure									
Tape Infrastructure									
Files									
	De t e								_
1 repository					Connected to: lo	calhost Buil	di 12.0.0.1402	Enterprise Plus Edition	NFR: 358 days remaining

	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
Ň	Dell Data Domain, ExaGrid, Fujitsu ETERNUS CS800, HPE StoreOnce, Infinidat InfiniGuard or Quantum DXi. If y are unable to meet the requirements of advanced integration via native appliance API, use the network attach storage option instead.
	Object storage
	On-prem object storage system or a cloud object storage provider.

 Select Microsoft Windows on the Direct Attached Storage page.

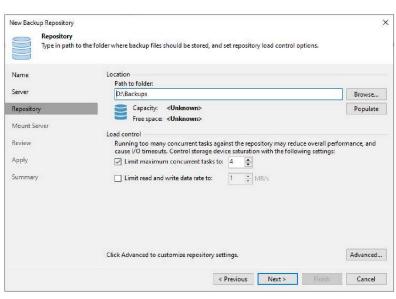


- 8. On the Name page, specify a Backup Repository name.
- Give a brief description in the Description field for future reference and click Next.

Name	Name:
Server	Backup Repository-Storage-Win Description:
Repository Mount Server Review Apply Summary	Created by GOODDEALMART\csun at 2/7/2023 12:26 PM.

server from the	Name	Repository server:				
Repository server drop-	Server	STORAGE-WIN (Created	by GOODDEALMART\csun at 2	/3/2023 1:12 PM.	· ~	Add New.
down list and click Populate.	Repository Mount Server Review Apply Summary	Path		Capacity	Free	
		L	< Previous	Next >	Finish	Cancel
 Select the disk and click Next. 	8		rom the list of managed servers	added to the co	nsole.	
1. Select the disk and click Next.	Server	Repository server:	rom the list of managed servers by GOODDEALMART\csun at 2			Add New.

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



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

Repository Type in pat	y r h to the folder where backup files should be stored, and set repository load control options.
Name	Location
Server	Path to folder:
Jerver	D:\Backups Bro
Repository Mount Server	Capacity: 126.9 GB Pop Free space: 125.6 GB Load control
Review	Running too many concurrent tasks against the repository may reduce overall performance, cause I/O timeouts. Control storage device saturation with the following settings:
Apply	Limit maximum concurrent tasks to:
Summary	Limit read and write data rate to:
,	

- 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.

17. Click Next on the Repository page.

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)

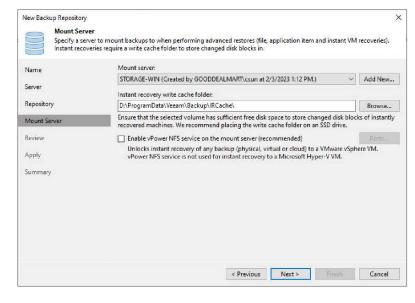
Improves backup performance for storage devices benefiting from multiple I/O streams, such as enterprise grade block storage and deduplicating storage appliances. Enables additional backup management functionality.



Х

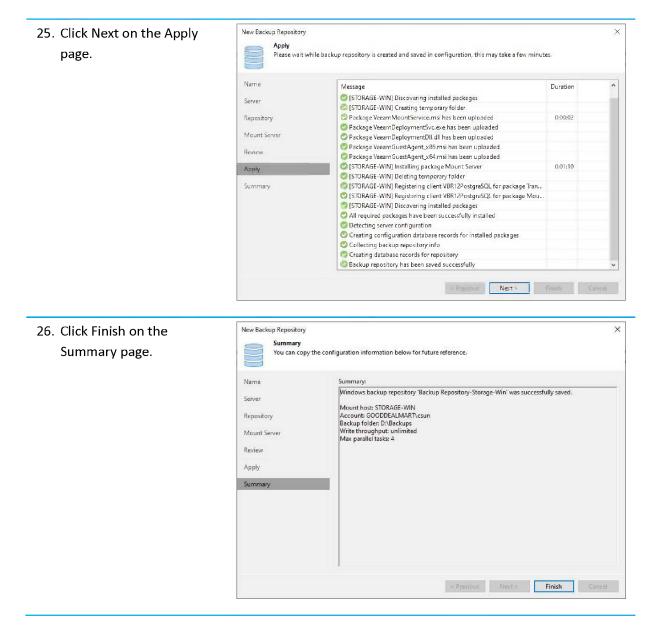
Name	Location Path to folder:
Server	D:\Backups Brow
Repository	Capacity: 126.9 GB Popu
Mount Server	Free space: 125.6 GB
Mount Server	Load control
	Load control
Review	Running too many concurrent tasks against the repository may reduce overall performance, a
Review	Running too many concurrent tasks against the repository may reduce overall performance, a cause I/O timeouts. Control storage device saturation with the following settings:
Apply	Running too many concurrent tasks against the repository may reduce overall performance, a cause I/O timeouts. Control storage device saturation with the following settings:
	Running too many concurrent tasks against the repository may reduce overall performance, a cause I/O timeouts. Control storage device saturation with the following settings:
Apply	Running too many concurrent tasks against the repository may reduce overall performance, a cause I/O timeouts. Control storage device saturation with the following settings:
Apply	Running too many concurrent tasks against the repository may reduce overall performance, a cause I/O timeouts. Control storage device saturation with the following settings:
Apply	Running too many concurrent tasks against the repository may reduce overall performance, a cause I/O timeouts. Control storage device saturation with the following settings:
Apply	Running too many concurrent tasks against the repository may reduce overall performance, a cause I/O timeouts. Control storage device saturation with the following settings:

- 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.
- 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



Please review	v the settings, and click Apply to continue.	
Name	The following components will be processed or	n server STORAGE-WIN:
Server Repository	Component name Transport Mount Server	Status already exists will be installed
Mount Server Review	-	
Apply		
Apply Summary		
	Search the repository for existing backups a Import guest file system index data to th	

index files previously created by Veeam Backup & Replication.



27. Verify that the new Backup Repository has been added.

문 Home Beckup Repository			am Backup and Replication					
Add Edit Repository Repository Repository	t Access Set missions soge Settings Tools							
Backup Infrastructure	Q. Type in an object name to search for	×						
Backup Proxies	Name 1	Туре	Host	Path	Capacity	Free	Used Space	Description
Backup Repositories	Backup Repository-Storage-Win	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	0.8	Created by GOODDEA
Enternal Repotations State-out Repotations State-out Repotations State-out Repotations Service Provides Servic	😭 Default Backup Repository	Windows	VBR12PostgreS	C//Backups	126-4 GB	96.4 G8	0.8	Created by GOODDE
Home								
Backup Infrastructure								
Can Storage Infrastructure								
Tape Infrastructure								
D Files								
q	et c							
1 repository selected			Connected to:		d: 12.0.0.1402	Enterprise PI		FR: 358 days remaining

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.

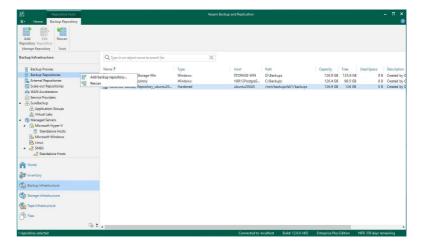
Instructions

Screenshot (if applicable)

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

Veeam Backup & Re	eplication 1	2
Type in a backup server name or IP and user credentials to connect wit localhost		ice port number, 9392
GOODDEALMART\csun		
Password		
✔ Use Windows session authentic	ation	
Save shortcut	Connect	Close

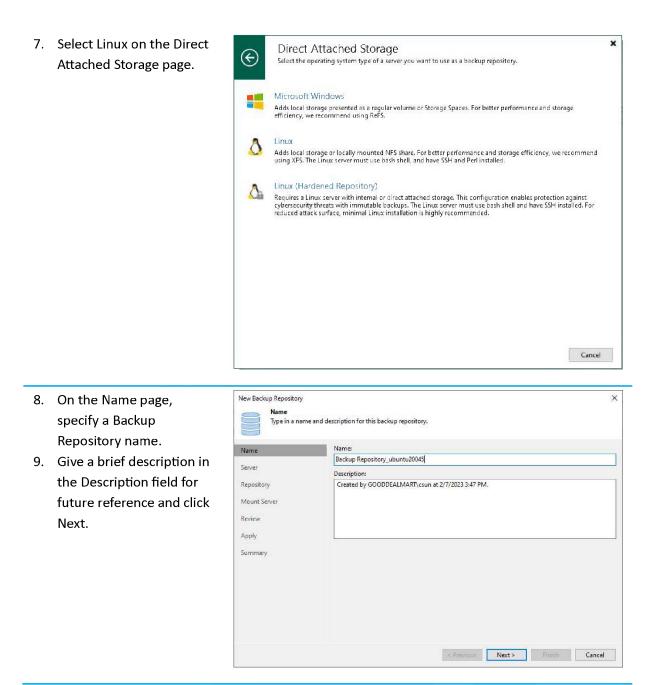
- 3. On the Home page, select Backup Infrastructure.
- 4. On the Backup Infrastructure page, select Backup Repositories.
- 5. Right-click Backup Repositories and select Add backup repository.



×

6. Select Direct attached storage on the Add Backup Repository page.

	Backup Repository ne 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
Ň	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.
Sb	Object storage
	On-prem object storage system or a cloud object storage provider.
	Cancel



10. On the Server page, select the Linux server from the Repository server dropdown list and click Populate.

Name	Repository serve	r:			
Server	ubunta20045 (C	reated by GOODDEALMART\	sun at 2/7/2023 2:42 PM.)	~	Add New
Repository Mount Server Review Apply Summary	Path		Capacity	Free	Populate
			evious Next>	Finith	Cancel

11. Select the disk and click Next.

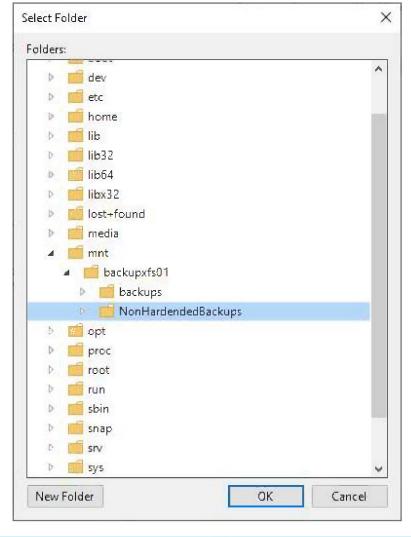
			onsole.		
Name	Repository server:				
	ubuntu20045 (Created by GOODDEALMART\csun at	2/7/2023 2:42 PM.)	~	Add Ne	
Server	Path	Capacity	Free	Popula	
Repository	(/dev/mapper/ubuntuvq-ubuntulv)	9.7 GB	3.7 GB		
	 / uter/mapper/dub/td=-vg-dub/td=-vg /boot (/dev/sda2) 	1.7 GB	1.4 GB		
Mount Server	 /boot/efi (/dev/sda1) 	951.1 MB	945.9 MB		
Review	/dev (udev)	915.1 MB	915.1 MB		
incircu.	/dev/shm (tmpfs)	959.2 MB	959.2 MB		
Apply	/mnt/backupxfs01 (/dev/sdb)	126.9 GB	126 GB		
	👄 /run (trnpfs)	191.8 MB	190.9 MB		
Summary	/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/ixd/24061 (/dev/loop5)	91.9 MB	0 B		
	/snap/snapd/17883 (/dev/loop2)	49.6 MB	θB		
	/snap/snapd/17950 (/dev/loop4)	49.9 MB	0 B		
	/sys/fs/cgroup (trnpfs)	959.2 MB	959.2 MB		
	∞/sys/fs/cgroup (trnpfs)	959.2 MB	959.2 MB		

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

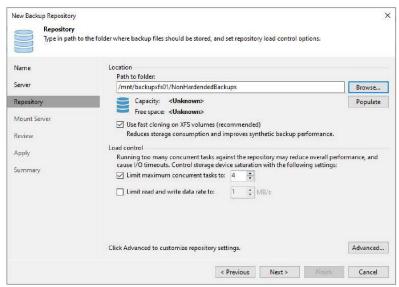
Type in pati	h to the folder where backup files should be stored, and set repository load control options.	
Name	Location	
-	Path to folder:	
Server		Browse
Repository	Capacity: <unknown></unknown>	Popula
	Free space: <unknown></unknown>	
Mount Server	Use fast cloning on XFS volumes (recommended)	
Review	Reduces storage consumption and improves synthetic backup performance.	
	Make recent backups immutable for: 7 🗇 days	
Apply	Protects backups from modification or deletion by ransomware or hackers. GFS f	ull backup
Summary	made immutable for the entire duration of their retention policy.	-
Summing	Load control	
	Running too many concurrent tasks against the repository may reduce overall perfor cause I/O timeouts. Control storage device saturation with the following settings:	rmance, an
	🗹 Limit maximum concurrent tasks to: 🛛 4	
	Limit read and write data rate to:	
	Click Advanced to customize repository settings.	🔅 Advar

- 13. On the Select Folder page, expand the server.
- 14. Select the

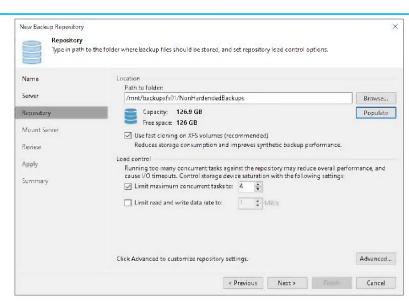
NonHardenedBackups folder and click OK.



15. On the Repository page, click Populate.



- 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.



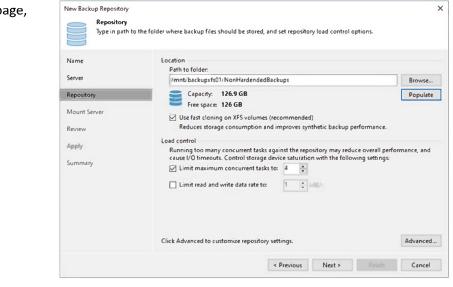
- 19. On the Storage Compatibility Settings, select Align backup file data blocks (recommended) checkbox
- 20. Select Use per-machine backup files and click OK.

Note:

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

21. On the Repository page, click Next.

Storage Compatibility Settings	×
Align backup file data blocks (recommended)	
Significantly improves backup and restore performance while CPU usage by avoiding unaligned I/O. Increases backup size	
Decompress backup file data blocks before storing	
Source data mover compresses data according to the backup settings to minimize LAN traffic. Uncompressing the data be for better deduplication ratio on most deduplicating storage	fore storing allows
This repository is backed by rotated drives	
Backup jobs pointing to this repository will tolerate the disap previous backups by creating a new full, and track the reposit 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 streams, such as enterprise grade block storage and deduplic	
appliances. Enables additional backup management function	
OK	Cancel



- 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.
- 25. Review the ports settings on the vPower NFS Port Settings and click OK.

	ver to mount backups to when performing advanced restores (file, application item veries require a write cache folder to store changed disk blocks in.	and instant VM recoveries).
Name	Mount server:	
	VBR12PostgreSQL.gooddealmart.ca (Backup server)	 Add New
Server	Instant recovery write cache folder:	
Repository	C:\ProgramData\Veeam\Backup\IRCache\	Browse
Mount Server	Ensure that the selected volume has sufficient free disk space to store cha recovered machines. We recommend placing the write cache folder on a	
Review	Enable vPower NFS service on the mount server (recommended)	Ports
Summary	vPower NFS service is not used for instant recovery to a Microsoft Hy	
	< Previous Next >	

Mount port:	1063			
Mount acceptor	port of v	Power N	FS service.	
vPower NFS por	t: 2049	-		
NFS acceptor po	ort of vPo	wer NFS	service.	
			ОК	Cancel

26. Click Next on the Mount Server page.	New Backup Repository X 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 Mount server: VBR12PostgreSQL.gooddealmart.ca (Backup server) Add New Instant recovery write cache folder: Browse Repository Cn.Program Data\Weam\Backup\IRCache\ Browse Mount Server 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. Browse Review Enable vPower NFS service on the mount server (recommended) Ports Unlocks instant recovery of any backup (physical, virtual or cloud) to a VM-ware vSphere VM. vPower NFS service is not used for instant recovery to a Microsoft Hyper-V VM. Summary Summary Summary Summary
 27. Click Apply on the Review page. 28. Select the Search the repository for existing backups and import them automatically checkbox if 	New Backup Repository X Review Please review the settings, and click Apply to continue. Name The following components will be processed on server VBR12PostgreSQL.gooddealmart.ca: Server Component name Server already exists Repository Wowr NFS Mount Server already exists Mount Server already exists
 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. 	Review Apply Summary Summary Search the repository for existing backups and import them automatically Import guest file system index data to the catalog < Previous

page.	Apply Please wait while ba	sckup repository is created and saved in configuration, this may take a few minut	es.
	Name	Message	Duration
	14 11 CH	Starting infrastructure item update process	0:00:03
	Server	© [VBR12PostgreSQL] Discovering installed packages	0:00:05
	Repository	[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Tr	
		Second States (VBR12PostgreSQL) Registering client VBR12PostgreSQL for package v	
	Mount Server	🕐 [VBR12PostgreSQL] Registering client VBR12PostgreSQL for package	
	Review	[VBR12PostgreSQL] Discovering installed packages	
		All required packages have been successfully installed	
	Apply	Detecting server configuration Reconfiguring vPower NFS service	
	Summary	C 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	
	New Backup Repository		
1. Click Finish on the Summary page.	<u>Summary</u>	onfiguration information below for future reference.	
1. Click Finish on the Summary page.	<u>Summary</u>	Summary:	
	Summary You can copy the co Name Server Repository Mount Server	-	saved.
	Summary You can copy the co Name Server Repository Mount Server Review	Summary: Linux: backup repository 'Backup Repository_ubuntu20045' was successfully Mount host: VBR12PostgreSQLgooddealmart.ca Backup folder: /mnt/backupx501/NonHardendedBackups Write throughput: unlimited Max parallel tasks: 4	saved.
	Summary You can copy the co Name Server Repository Mount Server Review Apply	Summary: Linux: backup repository 'Backup Repository_ubuntu20045' was successfully Mount host: VBR12PostgreSQLgooddealmart.ca Backup folder: /mnt/backupx501/NonHardendedBackups Write throughput: unlimited Max parallel tasks: 4	saved.
	Summary You can copy the co Name Server Repository Mount Server Review	Summary: Linux: backup repository 'Backup Repository_ubuntu20045' was successfully Mount host: VBR12PostgreSQLgooddealmart.ca Backup folder: /mnt/backupx501/NonHardendedBackups Write throughput: unlimited Max parallel tasks: 4	saved.

32. Verify that the Linux Backup Repository has been added.

문 Home Beckup Repository			n Backup and Replication					- • ×
Add Edit Remove Repository Repository Autority Manage	cess Set Rescan							
Backup Infrastructure	Q. Type in an object name to search for	×						
Backup Proxies Backup Repositories	Name 1 Backup Repository-Storage-Win	Type Windows	Host STORAGE-WIN	Path D\\Backups	Capacity 126.9 GB			Descriptio Created b
Constant Repeatories Constant Repeato	Decking Registery July Microsofts Except Section 2015 Handmark Backup Reportery John 202	Linux Windows Hardened	ubuntu20045 V9812PotgreS. ubuntu20045	/mmt/backups/60/NewHarden C/Backups /mmt/backups/f01/backups	126.9 GB 126.4 GB 126.9 GB	126 G8 98.5 G8 126 G8	0 B	Created b Created b Created b
Sectory								
Storage Infrastructure								
D. 1	¢							

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)

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

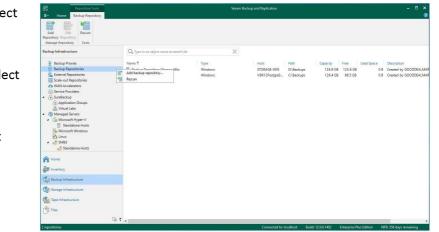
Veeam Backup & Replication 12

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 authentic	ation	

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



6. Select Direct attached × Add Backup Repository Select the type of backup repository you want to add. storage on the Add Backup Repository page. 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 1 On-prem object storage system or a cloud object storage provider. Cancel 7. Select Linux (Hardened × **Direct Attached Storage** Select the operating system type of a server you want to use as a backup repository. Repository) on the Direct Attached Storage page. Microsoft Windows Adds local storage presented as a regular volume or Storage Spaces. For better performance and storage efficiency, we recommend using ReFS. Linux 0 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) (Ca 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. Cancel

- On the Name page, specify a Backup Repository name.
- 9. Give a brief description in the Description field for future reference and click Next.

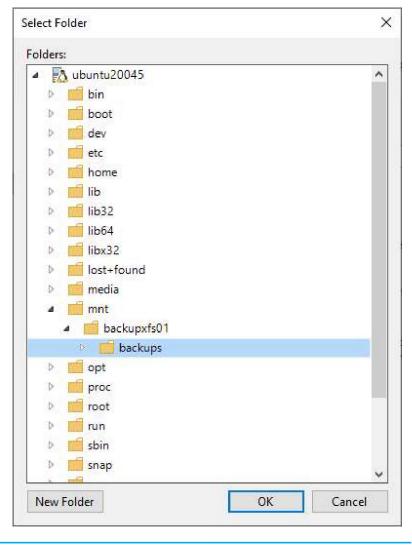
New Backup Repository Name Type in a na	me and description for this backup repository.
Name	Name:
Server	Hardened Backup Repository_ubuntu20045
sure	Description: Created by GOODDEALMART\csun at 2/7/2023 2:57 PM
Mount Server Review Apply Summary	
	< Previous Next > Finish Cancel

10. On the Server page, select the Linux server from the Repository server dropdown list and click Populate.

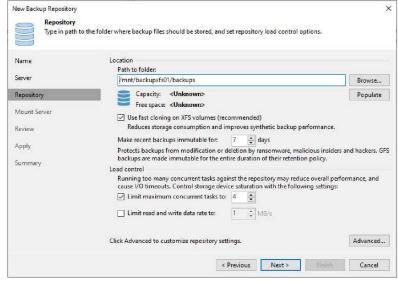
LMART\csun at 2/7/2023 2:42 PM.) V Add Ne Capacity Free Popula
Capacity Free Popula

New Backup Repository × 11. Select the disk and click Server Next. Choose repository server. You can select server from the list of managed servers added to the console. Repository server: Name ubuntu20045 (Created by GOODDEALMART\csun at 2/7/2023 2:42 PM.) Add New... Server Populate Path Capacity Free Repository / (/dev/mapper/ubuntu--vg-ubuntu--lv) 9.7 GB 3.7 GB /boot (/dev/sda2) 1.7 GB 1.4 GB Mount Server /boot/efi (/dev/sda1) 951.1 MB 945.9 MB /dev (udev) 915.1 MB 915.1 MB Review /dev/shm (tmpfs) 959.2 MB 959.2 MB Apply @/mnt/backupxfs01 (/dev/sdb) 126.9 GB 126 GB 👄/run (tmpfs) 191.8 MB 190.9 MB Summary /run/lock (tmpfs) 5 MB 5 MB /snap/core20/1611 (/dev/loop0) 62 MB $0 \, \text{B}$ /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) /snap/snapd/17883 (/dev/loop2) 91.9 MB 0 B 49.6 MB θB /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, New Backup Repository X Repository click Browser for Path to Type in path to the folder where backup files should be stored, and set repository load control options. folder. Name Location Path to folder: Server Browse Capacity: <Unknown> Free space: <Unknown> Repository Populate Mount Server Use fast cloning on XFS volumes (recommended) Reduces storage consumption and improves synthetic backup performance. Review Make recent backups immutable for: 7 🗦 days Apply Protects backups immutatie (or. Protects backups from modification or deletion by ransomware or hackers. GFS full backups are made immutable for the entire duration of their retention policy. Summary 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.



15. On the Repository page, click Populate.



- 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.
- 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 Repository Type in path	
Name	Location
	Path to folder:
Server	/mnt/backupxfs01/backups Browse
Repository	Capacity: 126.9 GB Populate
Review Apply Summary	Reduces storage consumption and improves synthetic backup performance. Make recent backups immutable for: Protects backups from modification or deletion by ransomware, malicious insiders and hackers. Gl 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: $1 + \frac{1}{2} MB/s$
	Click Advanced to customize repository settings. Advanced.

- 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.

22. On the Repository page, click Next.

	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)
$\overline{\mathbf{A}}$	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.
	OK Cancel

Storage Compatibility Settings

Х

Name	Location Path to folder:
Server	/mnt/backupxfs01/backups Browse
Repository	Capacity: 126.9 GB Populate Free space: 126 GB
Mount Server Review Apply Summary	✓ Use fast cloning on XFS volumes (recommended) Reduces storage consumption and improves synthetic backup performance. Make recent backups immutable for: 7
	Click Advanced to customize repository settings.

- 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.
- 26. Review the ports settings on the vPower NFS Port Settings page and click OK.

	veries require a write cache folder to store changed disk blocks in.	
Name	Mount server:	
Server	VBR12PostgreSQL.gooddealmart.ca (Backup server) VBR12PostgreSQL.gooddealmart.ca (Backup server)	Add New
	Instant recovery write cache folder:	
Repository	C:\ProgramData\Veeam\Backup\IRCache\	Browse
Mount Server	Ensure that the selected volume has sufficient free disk space to store changed disk block recovered machines. We recommend placing the write cache folder on an SSD drive.	s of instantly
Review	Enable vPower NFS service on the mount server (recommended)	Ports
Summary		
	< Previous Next > Finish	Cancel

ick	Mount port: 1063
	Mount acceptor port of vPower NFS service.
	vPower NFS port: 2049
	NFS acceptor port of vPower NFS service.
	OK Cancel

27. Click Next on the Mount Server page.		to mount backups to when performing advanced restores (file, ap es 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\RCache\ Ensure that the selected volume has sufficient free disk spa recovered machines. We recommend placing the write cac Mable vPower NFS service on the mount server (recon Unlocks instant recovery of any backup (physical, virtu vPower NFS service is not used for instant recovery to a	Add New Browse ace to store changed disk blocks of instantly che folder on an SSD drive. nmended) Ports al or cloud) to a VMware vSphere 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 	Name Server Repository Mount Server Review	< Previous e settings, and click Apply to continue. The following components will be processed on server VBB Component name Transport vPower NFS Mount Server	Next > Finish Cancel
 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. 	Apply Summary	Search the repository for existing backups and import Import guest file system index data to the catalog Previous	them automatically Apply Finish Cancel

31. Click Next on the Apply page.	New Backup Repository Apply Please wait while bac	kup repository is created and saved in configuration, this may take a few minute	5.
	Name	Message	Duration
	Server	Starting infrastructure item update process	0:00:03
		VBR12PostgreSQL] Discovering installed packages	
	Repasitory	[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Tr	
	Mount Server	[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package v [VBR12PostgreSQL] Registering client VBR12PostgreSQL for package	
		[VBR12PostgreSQL] Discovering installed packages	
	Review	All required packages have been successfully installed	
	Apply	🖸 Detecting server configuration	
		Reconfiguring vPower NFS service	
	Summary	Creating configuration database records for installed packages	0.00.07
		Collecting backup repository info Checking write permissions for the repository folder	0:00:03
		Checking write permissions for the repository forder	
		Creating database records for repository	0:00:05
		Backup repository has been saved successfully	
2. Click Finish on the Summary page.	New Backup Repository	infiguration information below for future reference.	Finish: Cancel
Summary page.	Name	Summary:	
		Hardened backup repository 'Hardened Backup Repository_ubuntu20045' wa	as successfully saved.
	Server Repasitory Mount Server Review	Mount host: VER12PostgreSQL:gooddealmart.ca Backup folder./mt/backupafs01/backups Write throughput: unlimited Max paralle tasks: 4 Fast: cloning on XFS volumes: enabled Days of immotability: enabled for 7 days	
	Apply Summary		

33. Verify that the Hardened Backup Repository has been added.

Backup Infrastructure	Q Type in an object name to search for	×						
Backup Prosies	Name 1	Type Windows	Host STORAGE-WIN	Path D:\Backups	Capacity 126.9 G8	Free 125.6 GB	Used Space	Description Created by GOODDEALN
External Repositories	Backup Kepository-Storage-Win	Windows	V8R12PostgreS	C\Backups C\Backups	126.9 G8 126.4 G8	125.6 G8 98.5 G8	08	
Scale-out Repositories	Hardened Backup Repository_ubuntu20		ubuntu20045	/mnt/backupxfs		126 GB		Created by GOODDEALM
Of Managed Servers Of Managed Servers Of Managed Servers Of Managed Servers Sundatione Hosts Standatione Hosts Sandatione Hosts Sandatione Hosts Mone Inventory								
Backup Infrastructure								
Storage Infrastructure								
Tape Infrastructure								
files								

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)

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

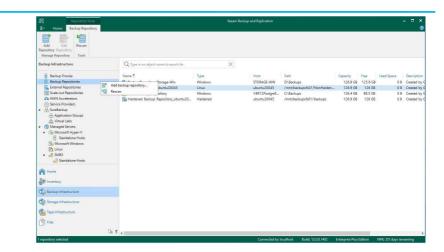
Veeam Backup & Replication 12

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

×

localhost	~	9392
GOODDEALMART\csun		
Password		
\checkmark Use Windows session authentication	1	
Save shortcut	Connect	Close

- Select Backup Infrastructure on the Home page.
- Select Backup Repositories on the Backup Infrastructure page.
- Right-click Backup Repositories and select Add backup repository.



6. On the Add Backup × Add Backup Repository Select the type of backup repository you want to add. Repository page, select Network attached OBDI Direct attached storage 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 8 On-prem object storage system or a cloud object storage provider. Cancel 7. Select SMB share on the × Network Attached Storage Select the type of a shared folder you want to use as a backup repository. **Network Attached** Storage. NFS share Adds an NFS share. This is the recommended configuration for leveraging storage capacity provided by NAS devices. SMB share D Adds an SMB (CIFS) share. For reliability reasons, this configuration is recommended for continuously available (CA) network shares only. Cancel

- 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 nam	rme and description for this backup repository.	×
Name	Name:	
-	Backup Repository_Storage-Win_VBRBackup	
Share	Description:	
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 dropdown list.
- 12. Select Automatic selection or click Choose to select the Gateway server.
- 13. Click Next.

RP\csur, last edited: 23 days ago) 💌 Add Manage accounts	
	ihare
	Repository
Manage accounts	Mount Server
	Review
Choose	Apply
	Summany
	, and a second se
	Summary

- Use the Load control settings to manage the load on the backup repository and avoid storage I/O timeouts.
- 15. Click Advanced.

New Backup Repository		×
Repository Type in path to th	e folder where backup files should be stored, and set repository load control options.	
Name	Location Path to folder:	-
Share	NSTORAGE-WIN\VBRBackup	
Repository	Capacity: 126.9 GB	Populate
Mount Server	Free space: 125.6 GB	
Review	Running too many concurrent tasks against the repository may reduce overall pe cause I/O timeouts. Control storage device saturation with the following settings	
Apply	🗹 Limit maximum concurrent tasks to: 4 🚊	
Summary	Limit read and write data rate to:	
	Click Advanced to customize repository settings.	Advanced
	circk Advanced to customize repository settings.	Huvdite0
	< Previous Next > Finish	Cancel

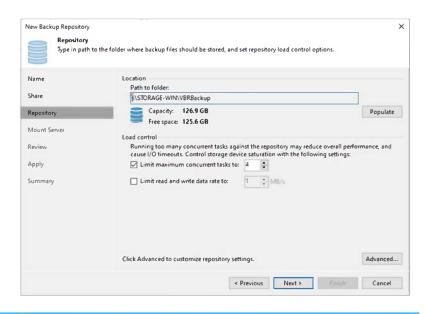
- On the Storage Compatibility Settings, select Align backup file data blocks (recommended) checkbox
- 17. Select Use per-machine backup files and click OK.

Note:

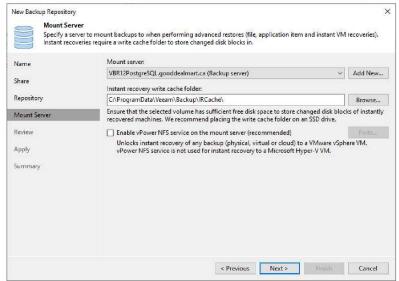
Select Decompress backup file data blocks before storing if you use a deduplicating storage feature or appliance.

Storage Compatibility Settings	×
Align backup file data blocks (recommended)	
Significantly improves backup and restore performance wh CPU usage by avoiding unaligned I/O. Increases backup siz	
Decompress backup file data blocks before storing	
Source data mover compresses data according to the back settings to minimize LAN traffic. Uncompressing the data b for better deduplication ratio on most deduplicating storag	before storing allows
This repository is backed by rotated drives	
Backup jobs pointing to this repository will tolerate the disa previous backups by creating a new full, and track the repo 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 benefiti streams, such as enterprise grade block storage and dedup appliances. Enables additional backup management functi	licating storage
OK	Cancel

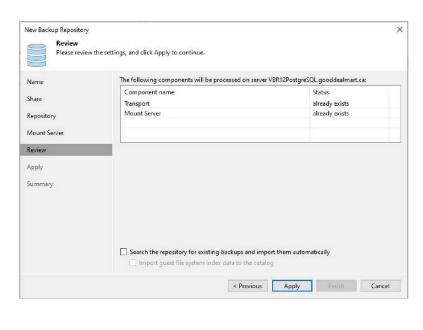
18. Click Next on the Repository page.



- 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.



- 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.
- 26. Click Next on the Apply page.



Name	Message	Duration
	Starting infrastructure item update process	0:00:03
Share	VIEW VIEW VIEW VIEW VIEW VIEW VIEW VIEW	0:00:05
Repository	[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package Tr	
nepository	[VBR12PostgreSQL] Registering client VBR12PostgreSQL for package	
Mount Server	[VBR12PostgreSQL] Discovering installed packages	
	All required packages have been successfully installed	
Review	© Detecting server configuration	
A	Creating configuration database records for installed packages	
Apply	Collecting backup repository info	
Summary	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 Summary: Share BMB backup repository 'Backup Repository_Storage-Win_VBRBackup' was successfully saved. Repository Account: GOODEALMARN.csun Backup folder: \\STORAGE-WIN\VBRBackup Wount Server Mount Server Wite throughput unlimited Apply Summary:
28. Verify that the Backup Repository has been added.	Previous Next Previous Next Finish Cancel Next Next Next Finish Cancel Next Next Next Next Next Sincle Sincle Next Next Next Next Next <

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)

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

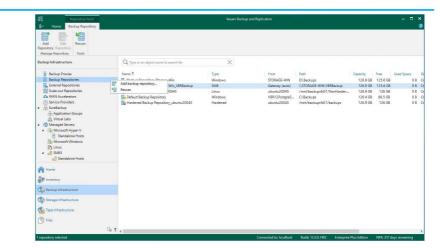
Veeam Backup & Replication 12

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 authention	cation	

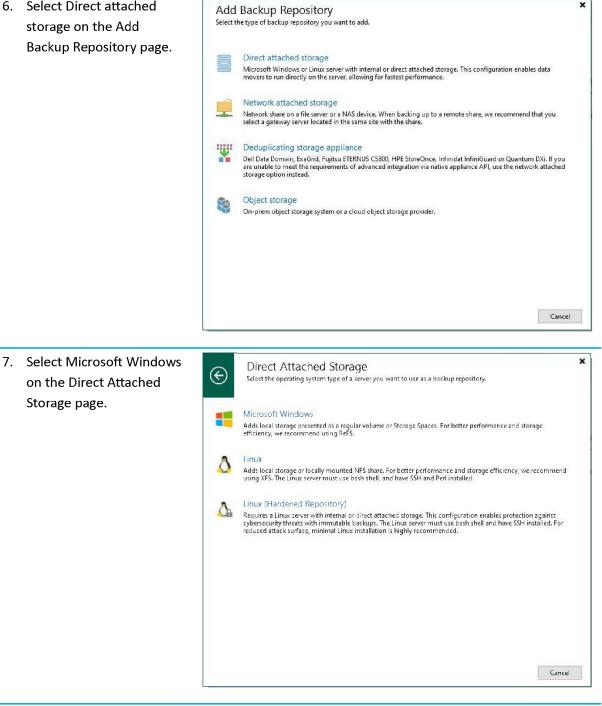
- Select Backup Infrastructure on the Home page.
- Select Backup Repositories on the Backup Infrastructure page.
- Right-click Backup Repositories and select Add backup repository.



6. Select Direct attached storage on the Add Backup Repository page.

on the Direct Attached

Storage page.



- 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 nar	ne and description for this backup repository.
Name	Name
Server	Backup Repository_HPHV01-USB
Repository	Description: Created by GOODDEALMART\csun at 2/7/2023 5:05 PM.
Mount Server Review Apply Summary	
	« Previous Next > Finish Cancel

 On the Server page, select the Microsoft Windows server from the Repository server dropdown list and click Populate.

Name	Repository serve	er:			
Server	HPHV01 (Creat	ed by GOODDEALMART\csun a	at 2/3/2023 5:23 PM.)	~	Add New
Repository Mount Server Review Apply Summary	Path	×	Capacity	Free	Populati
			evious Next>	Finish	Cancel

	Name	Repository server:			
		HPHV01 (Created by GOODDEALMART\csu	in at 2/3/2023 5:23 PM.)	~	Add New
	Server Repository Mount Server Review Apply Summary	Path CA EA FA	Сарасіty 4763.68 1.8 ТВ 931.5 68	Free 457.5 GB 1.3 TB 925.8 GB	Populate
			Previous Next >	Finish	Cancel
the Repository page, k Populate to review	New Backup Repository Repository Type in path to	b the folder where backup files should be stored, and	set repository load control c	ptions.	
	Repository	Location	set repository load control c	ptions.	
opulate to review	Repository Type in path to	Location Path to folder:	set repository load control c	ptions.	Browse.
ate to review	Repository Type in path to Name	Location	sinst the repository may redu	ce overall perfor	Browse Populate mance, and

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

New Backup Repository		×
Repository Type in path t	o the folder where backup files should be stored, and set repository load control options.	
Name	Location	
	Path to folder.	
Server	F:\Backups	Browse
Repository	Capacity: 931.5 GB	Populate
Mount Server	Free space: 925.8 GB	
	Load control	
Review	Running too many concurrent tasks against the repository may reduce overall perfo cause I/O timeouts. Control storage device saturation with the following settings:	rmance, and
Apply	Limit maximum concurrent tasks to:	
Summary	Limit read and write data rate to:	
	Click Advanced to customize repository settings.	Advanced
	< Previous Next > Finish	Cancel

- 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:

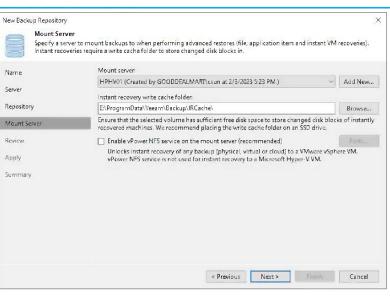
Select Decompress backup file data blocks before storing if

Storage Compatibility Settings	×
Align backup file data blocks (recommended) Significantly improves backup and restore performance will CPU usage by avoiding unaligned I/O. Increases backup size	
Decompress backup file data blocks before storing Source data mover compresses data according to the back settings to minimize LAN traffic. Uncompressing the data for better deduplication ratio on most deduplicating storage	before storing allows
This repository is backed by rotated drives Backup jobs pointing to this repository will tolerate the dis previous backups by creating a new full, and track the repo 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 benefiti streams, such as enterprise grade block storage and dedup appliances. Enables additional backup management functi	licating storage

you use a deduplicating storage feature or appliance.

18. Click Next on the Repository page.	New Backup Repository Type in path	to the folder where backup files should be stored, and set repository load control options.	×
	Name Server Repository	Location Path to folder: F\Backups Capacity: 931.5 GB	Browse Populate
	Mount Server Review Apply Summary	Free space: 925.8 GB Load control Running too many concurrent tasks against the repository may reduce overall performs cause I/O timeouts. Control storage device saturation with the following settings: Limit naximum concurrent tasks to: Limit read and write data rate to: Too MB/5 Click Advanced to customize repository settings.	ance, and
		< Previous Next > Finish	Cancel
19. Select a mount server from the Mount server			×
drop-down list on the Mount Server page. The	Name Server		Add New
mount server is required	Repository	Instant recovery write cache folder: E\\ProgramData\\Veeam\Backup\IRCache\	Browse

- 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



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.

erver Component name Status already exists epository Mount Server will be installed exists exists and exists will be installed exists will be installed exists exists and the server	Review Please review	v the settings, and click Apply to continue.	
erver already exists lepository Mount Server /ount Server will be installed ummary	lame	The following components will be processed on	server STORAGE-WIN:
Acount Server will be installed Acount Server Acount Server Acount Server Cericov Cericov Cericov		Component name	Status
Acunt Server	erver	Transport	already exists
Aount Server	lepository	Mount Server	will be installed
kevicw Apply ummary Search the repository for existing backups and import them automatically			
pply ummary	1ount Server		
	leview Apply Jummary	Search the repository for existing backups an	

page.	Apply Please wait w	while backup repository is created and saved in configuration, this may take a few minut	tes.	
	Name			
	1 States	Message	Duration	
	Server	[HPHV01] Discovering installed packages		
		[HPHV01] Creating temporary folder		
	Repository	Package VeeamMountService.msi has been uploaded	0:00:03	
	Mount Server	Package VeeamDeploymentSvc.exe has been uploaded		
	NO UNE SELVER	Package VeeamDeploymentDII.dll has been uploaded		
	Review	Package VeeamGuestAgent_x86.msi has been uploaded		
		Package VeeamGuestAgent_x64.msi has been uploaded		
	Apply	[HPHV01] Installing package Mount Server	0:01:04	
		(HPHV01) Deleting temporary folder		
	Summary	[HPHV01] Registering client VBR12PostgreSQL for package Transport		
		[HPHV01] Registering client VBR12PostgreSQL for package Mount Ser		
		[HPHV01] Discovering installed packages		
		O 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 		
		· · · · · · · · · · · · · · · · · · ·		
7 Click Finish on the	New Backup Repository			
7. Click Finish on the	New Backup Repository			
7. Click Finish on the Summary page.	Summary	y the configuration information below for future reference.		
	Summary	Summarys		
	You can copy Name		fully saved.	
	Suramary You can copy	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success	fully saved.	
	You can copy Name	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount host: HPHV01 Accessed: HPHV01	fully saved.	
	Name Server Repository	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount host: HPHV01 Account: HPHV01\Administrator Backup foider: F\Backups	fully saved.	
	Name Server	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount host: HPHV01 Account: HPHV01\Administrator Backup foider: F\Backups	fully saved.	
	Name Server Repository	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server Review	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server Review Apply	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server Review	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server Review Apply	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server Review Apply	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server Review Apply	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server Review Apply	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server Review Apply	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server Review Apply	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server Review Apply	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	
	Name Server Repository Mount Server Review Apply	Summary: Windows backup repository 'Backup Repository_HPHV01-USB' was success Mount hos: HPHV01 Account: HPHV01\Administrator Backup folder: Fi\Backups Write throughput: unlimited	fully saved.	

28. Verify that the Rotated Drives Backup Repository has been added.

Repository Tools Home Backup Repository		Veeam Backup a	nd Replication				
Repository Repository Repository Affinity Per	t Access Set missions Location * nage Settings						
Backup Infrastructure	Q. Type in an object name to search for	×					
Backup Proxies	Name 1	Type	Host	Path	Capacity	Free	Used Space
Backup Repositories	Backup Repository-Storage-Win	Windows	STORAGE-WIN	D:\Backups	126.9 GB	125.6 GB	(
External Repositories	Backup Repository_HPHV01-US8	Windows	HPHV01	F:\Backups	931.5 GB	925.8 GB	0
Scale-out Repositories	Sackup Repository_Storage-Win_YBRBackup	SM8	Gateway (auto)	\\STORAGE-WIN\V8R8ackup	126.9 GB		
WAN Accelerators	Backup Repository_ubuntu20045	Linux	ubuntu20045	/mnt/backupids01/NonHarden	126.9 GB	126 G8	
Service Providers	Et Default Backup Repository	Windows	VBR12PostgreS	C/\Backups	126.4 GB		1
Proveskup Application Groups Application Groups Application Strenge Managed Strenge Managed Strenge Managed Watching Hosts Managed Strenge Managed Watching Managed Strenge Managed S	Hardened Backup Repository_uburu20045	Hardened	ubuntu20045	/mnt/backupxfs01/backups	126.9 GB	126 G8	
Home							
Ci Backup Infrastructure							
Storage Infrastructure							
Tape Infrastructure							
P Files							
9	\$ * <						
	And a second			Build: 12.0.0.1402 Enterprise			

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.

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.

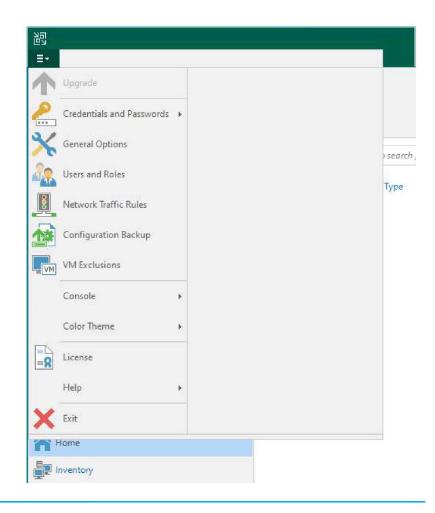
Instructions

Screenshot (if applicable)

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

	×
Veeam Backup & Re	eplication 12
and user credentials to connect with	
localhost	· 9392
GOODDEALMART\csun	
Password	
✓ Use Windows session authentic	ation
Save shortcut	Connect

3. Select Users and Roles from the main menu.



4. Click Add on the Security page.

User or group	Role	Add
🔏 Administrators	Veeam Backup Administrator	Edit
		Remov
		Reset Mi
☐ Require two-factor authe ☐ Enable auto logoff after	ntication for interactive logon	

5. On the Add user page, click Browse in the User or group field.

User or group:		Browse
Role:	Veeam Restore Operator	~
This is a se	rvice account (disables multi-facto	r authentication)

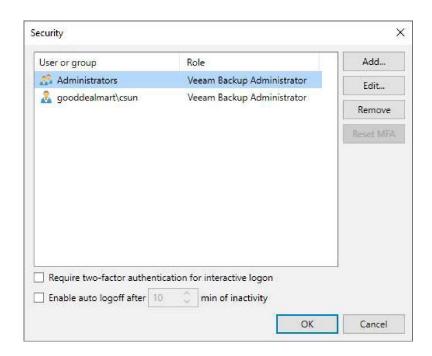
 Enter a user name on the Select User, Computer, or Group page and click Check Names.

Select User, Computer, or Group		×
Select this object type:		
User, Computer, Group, or Built-in security principal		Object Types
From this location:		
gooddealmart.ca		Locations
Enter the object name to select (<u>examples</u>):		
csun		Check Names
	-	
Advanced	ОК	Cancel

7.	7. Click OK on the Select	Select User, Computer, or Group	×
	User, Computer, or Group	Select this object type:	
page.	User, Computer, Group, or Built-in security principal	Object Types	
		From this location:	
		gooddealmart.ca	Locations
		Enter the object name to select (<u>examples</u>):	
		cary sun (csun@gooddealmart.ca)	Check Names
			-
		Advanced	OK Cancel

8.	8. Select a role from the Role drop-down list on	Add user ×		
the Add user page and		User or group:	gooddealmart\csun	Browse
	click OK.	Role:	Veeam Backup Administrator 🔹 🗸	
		This is a se	rvice account (disables multi-factor authen	tication)
			ОК	Cancel

9. On the Security page, select the Administrators group and click Remove.



- 10. Select the new user.
- Select the Require twofactor authentication for interactive Log in checkbox.
- Select Enable auto logoff after a period min of inactivity.
- 13. Click OK.

User or group	Role	Add
🤱 gooddealmart\csun	Veeam Backup Administrator	Edit
		Remove
		Reset MFA

 Please remove all unsupported security groups from the list if the error message pops up.

Veeam E	Backup & Replication	×
\bigotimes	Security groups cannot be used with multi-factor a Please remove all groups from the list and add indi	
Name		
💦 Adm	inistrators	

- 15. Close Veeam Backup and Replication console and reopen it.
- Enter the user name and password on the Veeam Backup & Replication 12 page.

nlication 1	2
plication	٤
	ce port number,
~	9392
	6
tion	(•
	plication 1 Inddress, backup servi

 Open an Authentication
 APP from your device and select Add (+).

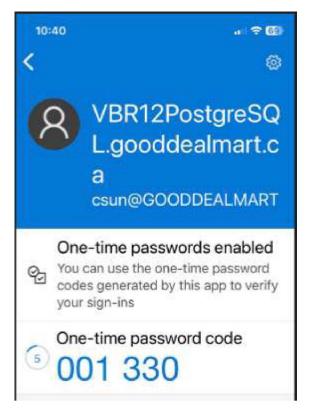
Note:

I have tried Microsoft and google authentication apps.

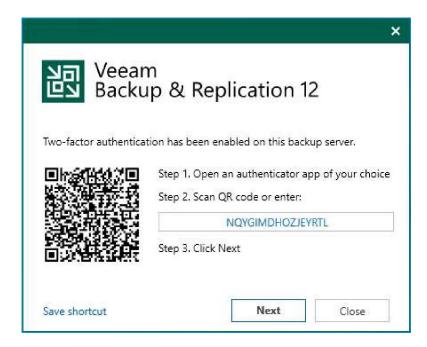
18. Scan the QR code or enter the code.

	×
Veear Backu	n Ip & Replication 12
Two-factor authentica	tion 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.



20. Click Next on the Twofactor authentication enabled on this backup server page.



21. Enter the one-time password code in the Confirmation code field and click Confirm.

Veeam	D	
Veeam 변화 Backup &	Replication 12	
Enter the code from your auth		
Confirmation code:		
630112		

22. Ensure that the open Veeam Backup and Replication console is successful.

Image: Second of the	
Jobs Name Type Objects Status Last Run Lot Result Next Run List 24 Hours	
Statt 24 Hours	
ुर्ह Succes ुर्हे Følet	Tropet De
n Home	
是更 Inventory	
🖓 Backup Infrastructure	
Storage infrastructure	
🚰 Tape infrastructure	
Type Infrastructure	

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.



- 1. Log in to the domain controller server.
- Open Windows
 PowerShell and run as administrator.
- Run the cmdlet below to generate a root key.
 Add-KdsRootKey –
 EffectiveTime ((getdate).addhours(-10))
- Run the cmdlet below to ensure the KDS root key has been created successfully.

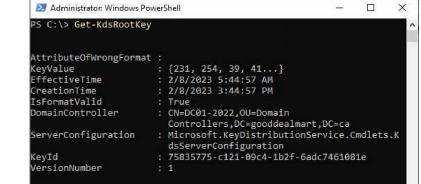
Get-KdsRootKey

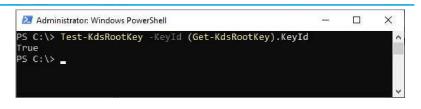
5. Run the cmdlet below to check the KDS key.

Test-KdsRootKey -Keyld (Get-KdsRootKey).Keyld

 Run the below cmdlet to enable gMSA.
 Add-WindowsFeature NET-Framework, RSAT-ADDS 2>&1 | Out-Null; Import-Module ServerManager;







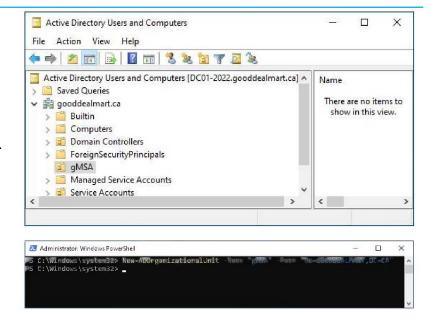


Install-WindowsFeature -IncludeAllSubFeature RSAT | Out-Null; Import-Module ActiveDirectory;

- 7. Restart the domain controller server.
- 8. Log in to the domain controller server.
- 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."



11. Create a new security	New Object - Group	×	
group for gMSA computers. Note:	🥵 Create in: goo	ddealmart.ca/gMSA	
New-ADGroup -Name gMSAComputers - GroupCategory Security -	Group name: gMSAComputers Group name (pre-Windows 2	2000)+	
GroupScope Global -Path "OU=gMSA,	gMSAComputers		
DC=GOODDEALMART, DC=CA."	Group scope Domain local Global Universal	Group type Security Distribution	
		OK Cancel	
	2 Administrator: Windows PowerShell	X	
	PS C:\Windows\system32> New-AC -GroupScope Global -Path "OU=g 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\$','S TORAGE-WIN\$','VBR12POSTGRESQL\$')

Add-AdGroupMember -Identity gMSAComputers -Members \$gMSAComputers

General Members	Member Of Managed By		
Members:			
Name	Active Directory Domain Servic	ces Folder	
PC01-2022	gooddealmart.ca/Domain Con	trollers	
MGMT01	gooddealmart.ca/Computers		
SMB3	gooddealmart.ca/Computers		
STORAGE-V			
VBR12POST	T gooddealmart.ca/Computers		
Add	Remove		
Add	Remove		
Add	Remove		
Add			
Add		ncel	-pply
Add		ncel	pply
, 	ОК Саг		
())	ОК Саг		-pply
• Administrator: Windo C: \Windows\syst	OK Car ows PowerShell tem32> \$gMSAComputers = @('DC	<u></u> []
• Administrator: Windo C:\Windows\syst SMB3\$', 'STORAGE-	OK Car	 01-2022\$','M	J GMT01

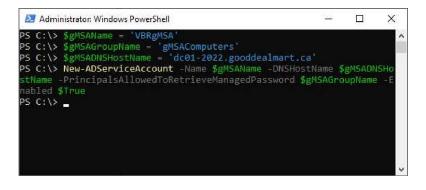
- 13. Open Windows PowerShell and run as administrator.
- 14. Run the below cmdlet to create a gMSA account.
 \$gMSAName = 'VBRgMSA'
 \$gMSAGroupName = 'gMSAComputers'
 \$gMSADNSHostName = 'dc01-

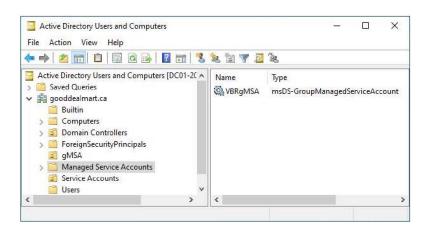
2022.gooddealmart.ca'

New-ADServiceAccount -Name \$gMSAName -DNSHostName \$gMSADNSHostName -PrincipalsAllowedToRetrie veManagedPassword \$gMSAGroupName -Enabled \$True

- 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





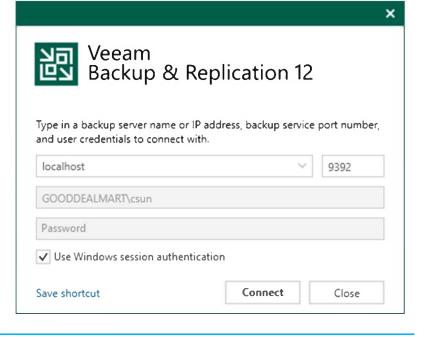
backup infrastructure components to provide a more secure environment.	
17. Run the below cmdlet to install gMSA on the domain controller as the target machine.	Administrator Windows PowerShell Administrator Windows PowerShell Copyright (C) Microsoft Corporation. All rights reserved. Install the latest PowerShell for new features and improvements! https://aka.ms/PSWdindows PS C:\Windows\system32> Install-ADServiceAccount VBRgMSA PS C:\Windows\system32> _ V
Install-ADServiceAccount VBRgMSA	
18. Run the below cmdlet to ensure that the gMSA was successfully installed.	Administrator: Windows PowerShell - C X PS C:\Windows\system32> Test-ADServiceAccount VBRgMSA True PS C:\Windows\system32> _
Test-ADServiceAccount VBRgMSA	·
19. Run the below cmdlet to Add the VBRgMSA service account to the domain Admins group.	Administrator: Windows PowerShell - PS C:\> Add-ADGroupMember -Identity Administrators -Members VBRgMSA\$ PS C:\> _
Add-ADGroupMember - Identity Administrators - Members VBRgMSA\$	
20. Run the below cmdlet to Add the VBRgMSA service account to the Local Administrators group.	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:\> _
\$gMSAComputers = @('MGMT01','SMB3','STO	

282

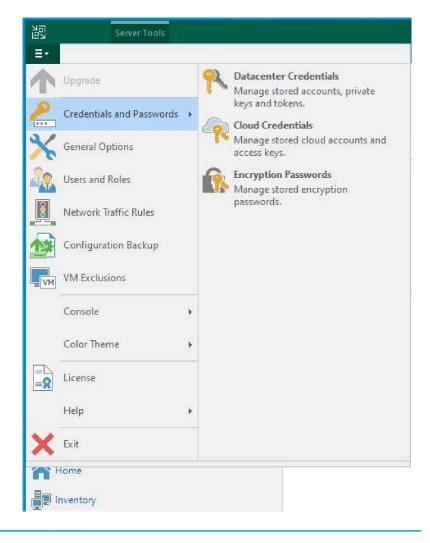
RAGE-WIN','VBR12POSTGRESQL')

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.



- 23. Select Credentials and Passwords from the main menu.
- 24. Select Datacenter Credentials.



25. Click Add on the Manage Credentials page and select Managed service account.

Account	Туре	Description	Last Edited	Add	
🔧 apikey	Standard	apikey	31 days ago	Standard	account
CARYPC\Admini	Standard	CARYPC\Administrator	33 days ago	Managed	service account
🔧 gooddealmart\a	Standard	gooddealmark.ca\ad	28 days ago	Linux acco	ount
🕅 GOODDEALMAR	Standard	GOODDEALMART\csun	34 days ago	Linux priv	ate key
🔧 HPHV01\Admini	Standard	HPHV01\Administrator	34 days ago	K10 authe	entication token
N 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		

- 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.

Account	Type	Description	Last Edited		Add
💦 apikey Cre	dentials			×	Edit
CARYP	Username:	gooddealmart\VBRgMSA			Remove
🔥 goodd 📘	2				Utilityte
GOOD	Description:				
		ount uses to run guest proces	sing tasks		
N HPHVC	gines acco	and uses to run guest proces	ang taska		
👌 root					
🔧 root					
🔧 root	-				
🔥 root			ОК	Cancel	
VEEAN				1	

28. Ensure the gMSA account is added to the Manage Credentials page and click OK.

Use this dialog to cen	trally manage all user	r accounts and their passv	vords.	
ccount	Туре	Description	Last Edited	Add
🔧 apikey	Standard	apikey	31 days ago	Edit
CARYPC\Administrator	Standard	CARYPC\Administrator	33 days ago	Ettes
🔧 gooddealmart\administr	Standard	gooddealmart.ca\ad	28 days ago	Remove
GOODDEALMART\csun	Standard	GOODDEALMART\csun	34 days ago	
N HPHV01\Administrator	Standard	HPHV01\Administrator	34 days ago	
N HPHV02\Administrator	Standard	HPHV02\Administrator	29 days ago	
0 root	Linux	Helper appliance cre	250 days ago	
N root	Standard	Provider-side networ	250 days ago	
R root	Standard	Tenant-side network	250 days ago	
N root	Standard	Azure helper applianc	32 days ago	
🔧 VEEAM@carysun.com	Standard	VEEAM@carysun.com	31 days ago	
N VEEAMMFA@carysun.com	Standard	VEEAMMFA@carysun	31 days ago	
gooddealmart\VBRgMSA	Managed service	gMSA account uses t	less than a day	

Configure Notification with Free SendGrid Account of Azure

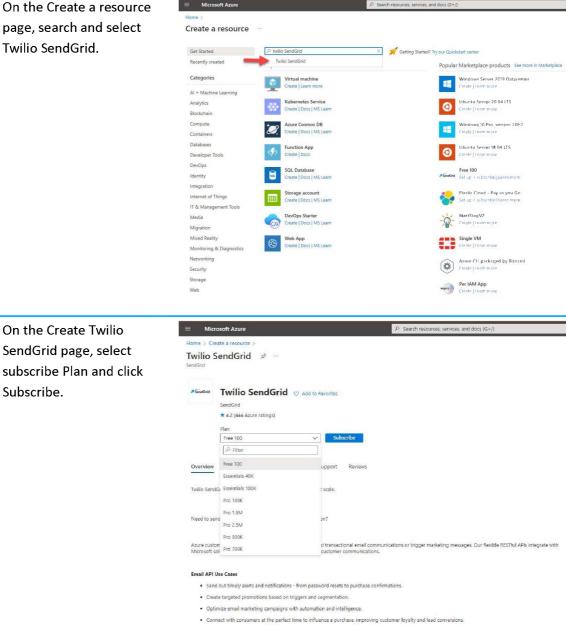
You can configure the SendGrid account as an SMTP relay for notification settings if you want Veeam Backup & Replication to send email notifications about backup job results.

Instructions	Screenshot (if applicable)		
1. Sign in Azure portal with a 👘 🐇	ORSHIP		
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global admin account.	Microsoft Azure portal		
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https://portal.azure.com			
	Supplet When the Annual Flour Four 2		
	Check out the how to video solice for tips on deploying your cloud workloads from the Azure portal.		
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2. On the Azure services 👘	Moosefulture Distantinequestion in addes 5/0 R H S 0 0 A		
page, select +Create			
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resource.	Recent resources		

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

4. On the Create Twilio

Subscribe.



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.

Subscribe To Twilio	SendGrid
Subscribe to plan	
Basics Tags Review + subso	nbe
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 d	eployed resources and costs. Use resource groups like folders to organize and manage all
your resources.	
Subscription * 💿	Microsoft Azure Sponsorship 🔗
Resource group * 💿	SendGrid
Kesburde group * 🕤	Create new
SaaS details	
Name * 🕤	TwilioSendGridFree100
Plan	Free 100 - 1-month
	Try it out! Integrale fast and explore features with 100 emails/day forever.
	Change plan
Billing term	1-month
Price + payment options	CA\$D/one-time payment
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6. On the Tags page, click Next: Review + subscribe.

Microsoft Azure		${\cal P}$ Search resources, service
Home > Create a resource > Twilio SendGrid >		
Subscribe To Twilio SendGrid	хэн	
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view + subscribe

Previous: Basics Next: Review + subscribe >

 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

Product + plan details		
Twilio SendGrid - Free 100		
by SendGrid		
Terms of use privacy policy		
Terms of use		
statement(s) associated with each payment method for the fees asso frequency as my Azure subscripti contact information and transacti	leting the purchase with the provider, I (a) agree to the legal terms and prive Marketplace offering above. (b) authorize Microsoft to charge or bill my cu octated with my use of the offering(s), including applicable taxes, with the se on until I discontinue use of the offering(s), and (c) agree that Microsoft may on details (including) scane solume, according with the differing), with the set o use and share my contact information so that Microsoft or the Provider ca	rrent ame billing y share my ller(s) of the
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 On the Configure SaaS account page, click Configure account now.

Microsoft Azure		P Search resources, service
ome > Create a resourc	e > Twilio SendGrid > Subscribe To Twilio SendGrid	>
Subscription p	rogress	
Thank you for	your order. Configure the SaaS servi	ice 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		
	chase, configure your SaaS account on the publisher's website. nail confirmation with instructions on configuring this SaaS acc	ount.
Configure account no	w	
mportant to know		
Billing will start after your	account is configured on the publisher's website.	
If no action is taken within	n 30 days, this SaaS subscription will be automatically delet	ted.
	II 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.	

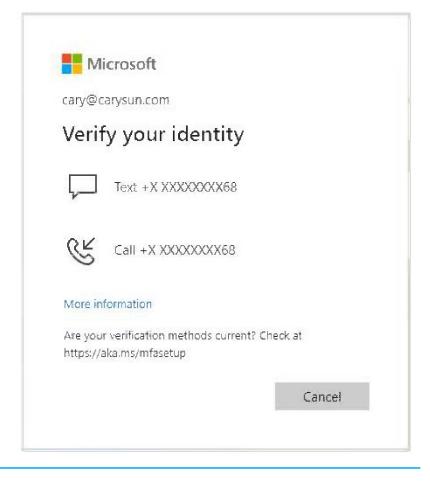
9. On the Microsoft Sign-in page, enter your account name and click Next.

Sign in		
cary@carysun.c	om	
No account? Creat	te one!	
Can't access your	account?	
	Back	Next

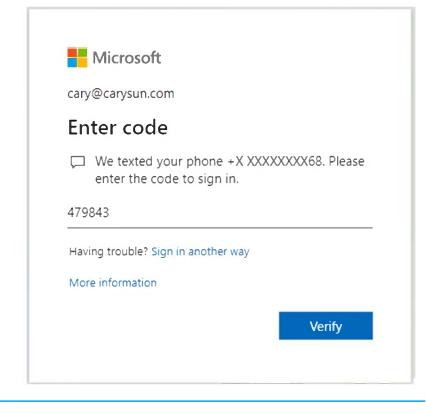
10. Enter a password, and click Sign in.

← cary@carysun.com	
Enter password	
Forgot my password	
	Sign in

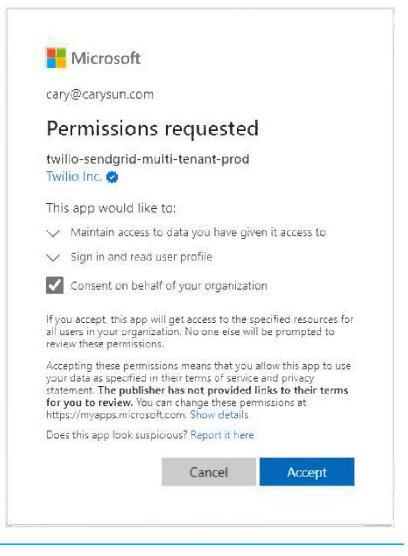
11. On the Verify your identity page, select the identity method.



12. Enter the code, and click Verify.



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



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



Tell Us About Yourself

This information will help us serve you better.

Cary	Sun		
Company Name •	Company Website •		
Carysun	carysun.com		
Contact Email			
cary@carysun.com			
Country Code			
USA (+1) ~	Phane Number		
What is your role? •			
O Developer	O CEO		
O Marketer	Other		
How many emails do you send	i per month? •		
• 0 to 100,000	0 100,000 to 700,000		
0 700,000 to 1,500,000	0 1,500,000 to 10,000,000		
0 10,000,000 to 50,000,000	50,000,000 to 100,000,000		
	0 100,000,000+		
How many employees work at	your company? •		
● F- 500	0 1,001 - 5,000		
0 501 - 1,000	5,001+		
Get	Started		

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



- 16. On the Authenticate Your Domain page, select your DNS host, select Yes to rewrite all tracking links to use your chosen domain – not sendgrid.net, and click Next.
- Image: Image:
- 17. Enter your domain name on the Domain You Send From a page, and click

P 1414	Authenticate Your Domain	Constant and the distance and the standard program from the standard program of the standard distance for the program of the program of the standard distance for the program of the standard distance for the program of the program
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 On the Install DNS Records page, copy and add all these records to your External DNS records.

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nutrars	Instructions						
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NIP LINE					_ fue added these records.		

19. In my case, add them to GoDaddy.

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CNAME	em1605	u26344722.wi223.sendgnd.net.	1 Hour	Delete	Edit
CNAME	26344722	sendgrid.net.	1 Hour	Delete	Edit
CNAME	stdomainkey	s1 domainkey u26344722 w/223.sendgrid.net.	1 Hour	Delete	Edit
CNAME	s2domainkey	s2.stomeinkey.u26344722.wI223.sendgrid.rel.	1 Hour	Delete	Edit
CNAME	ur:507	sendgrid.net	1 Hour	Delete	Edit

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

a tayin -	Install DM	NS Records			
Carllinia	You will reed too	nstall the following records to comprete the process.			
- man	Manual Boolo	Bens To A Commun			
Examinant S	Instructions				
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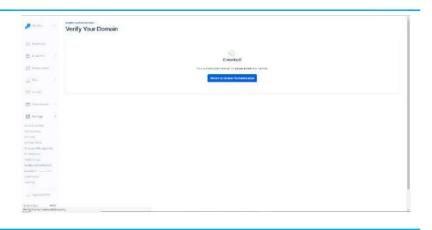
21. Type your coworker's email address, and click Send. Then, ask your coworker to add these DNS records.

📕 danka 🔹 🔹	Install DNS Records
Contrast	You with each owned to install the following records to complete the process:
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teo grubary	Every consider's analyzed well pend have available to your and to install have records.
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22. On the Install DNS Records page, select I've added these records, click Verify.

	Sambar Ruthandination		
	Install DNS Records		
	Yes will need to impair the following records to complete the process.		
	Manual Serap: Sond Talk Coupling		
	Instructions		
	1. And all of these recents to Occusity's DNR section.		
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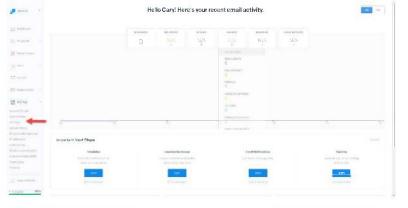
23. On the Verify Your Domain page, make sure your authenticated domain for the domain name was verified without issues and click Return to Sender Authentication.



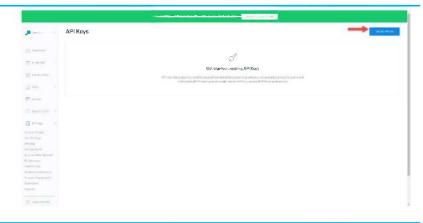
24. On the Sender Authentication page, ensure Domain Authentication and link Branding status is Verified.

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25. Under the Settings page, select API Keys.

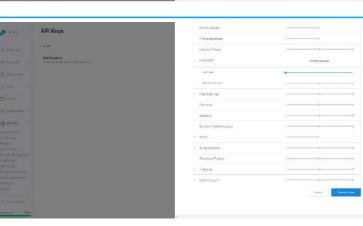


26. On the API Keys page, select Create API Key.



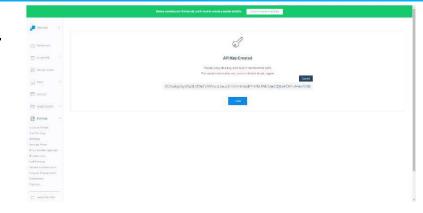
- 27. On the Create API Key page, type the API Key Name and select Restricted Access as API Key Permissions.
- Image: Image:
- An index of the second second

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



Create API Key

29. Copy the key on the API Key Created page, save it, and click Done.



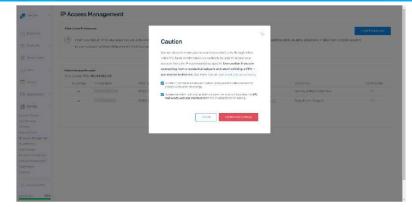
 30. Under settings, select IP Access Management.
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> St territo Si territo El secono El secono

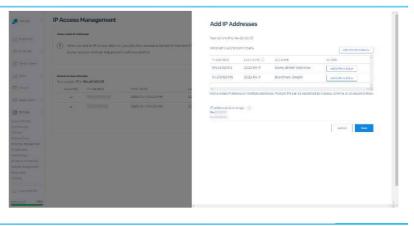
32. On the Caution page, select I confirm that the IP addresses I'm allow listing are dedicated and will not change without my knowledge.

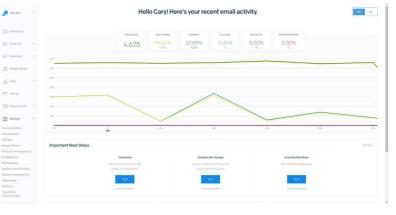
+Add UP Address.

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,



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





37. On the Sender Authentication page, click	Cary Sun 🔍	Sender Authentication	
Authenticate Your	🔼 Deshboard	Sender Identity	
Domain.	Email API	The type of Sender Identity you use to send email can impact your deliverability Learn more about the differences between Domain Authentication and Single S	
	(1) Marketing ····	Domain Authentication [RECOMMENDED]	STATUS
	28 Design Library	Improve deliverability by proving to inbox providers that you own the domain you're sending from, Learn more	STATUS
	Stats -	Authenticate Your Domain	Verified
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	Inbound Parse	Single Sender Verification Verify ownership of a single email address to use as a sender. Learn more	STATUS
	IP Access Management IP Addresses	Verify a Single Sender	Ø Verified
	Mail Settings Sender Authentication	verny a single sencer	VOING
 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. 	Clashbeard To make this est Creat APT - 1 Street APT - 1 St	icate Your Domain see, person the folling of generalse. see the second	FO
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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		Sender Authentication	S Records			
Deshboard		You will need to in	stall the following records to complete the process.			
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43. On the Verify Your Domain page, ensure verification is successful and click Return to Send Authentication.

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🙆 Destboard		
🛅 Email API 🔷 👻	O It worked!	
(d) Hadeting *	Your authenticated domain for gooddealmart.ea was verified.	
28 Design Library	Return to Sender Authentication	
Si Sun		

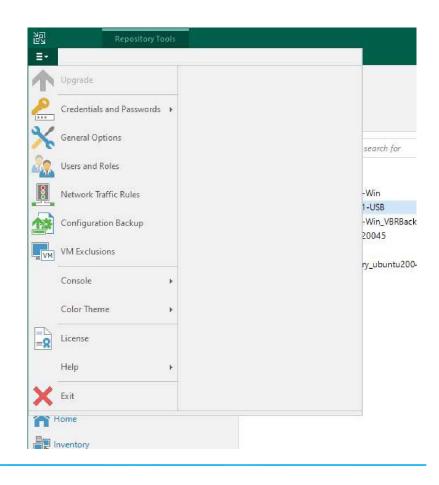
44.	Sign	Out of	Account.	
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- 45. Log in to the Veeam Backup and replication manager server.
- 46. Open the Veeam Backup& Replication Console and click Connect.

	<u> </u>
Veeam Backup & Rep	olication 12
Type in a backup server name or IP add	dress, backup service port number,
and user credentials to connect with.	
localhost	~ 9392
GOODDEALMART\csun	
Password	
✓ Use Windows session authenticatio	on
Save shortcut	Connect Close

47. Select General Options from the main menu.



48. On the Options page, select Email Settings.

/O Control	Security	E-mail Settings	SNMP Settings	Notifications	History
Define	desired pri	tency control imary storage late vailability to produ			s do not
Stop as	signing na	w tasks to datasto	ire at:	20	0 ms
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Set cus	tom thresh	iolds on individua	l datastores	G	onfigure

- 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.

O Control	Security	E-mail Settings	SNMP Settings	Notifications	History
Enable SMTP		tifications (reco	mmended)		
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Notify Sua Wa Va Fai	on: ccess irning lure			Cancel	I Apply

- 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.

smtp	.sendgrid.i	net			Advanced	I
From:						21
Adv	anced SM	TP options			×	\vdash
	Connect u	^o server requires	authentication	~ ОК	Add Cancel	ge
🗹 Su	ppress no	tifications until th	ne last job retry			

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

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SITI	p.sendgrid.ne	t		Advanced
Credentia	ls)
		r		T I
	Username:	apikey		Browse
EX	Password:		 *****	
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	Description:			
	apikey			
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59. On the Advanced SMTP options page, click OK.

Enable e-mail no SMTP server:	uncations (recor	nmended			
smtp.sendgrid.r	iet			Advance	ed
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			ок	Cancel	
Suppress not	ifications until tl	ne 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.

smtp.	sendgrid.net				Advanced
From:					-
	gooddealmart.ca				
To:					
csun	triconelite.com				
Subjec	E				
[%Jok	Result%] %JobNam	e% (%Obje	ctCount% c	bjects) %lssue	es%
					Test Message
Notify Su Wi Fa	ccess ming		👌 🐧		

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

/O Control	Security	E-mail Settings	SNMP Settings	Notifications	History
Concerning and the second second		tifications (recor	mmended)		
	server:				
smtp	sendgrid.r	net			Advanced
From:	1				
VBR@	gooddeal	ma <mark>rt.c</mark> a			
To:					
csun(Dtriconelit	e.com			
Subjec	:t:				
[‰Jo Send	Veeam Ba	ickup and Replic Test message ha	ation is been sent to "c:	sun@triconelite	× age
Send Notif	Veeam Ba				age .com
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Send Notif S W W Fa	llure	Test message ha	is been sent to "c		age .com
Send Notif S W W Fa	llure		is been sent to "c		age .com

64. On the Options page, click OK.

	E-mail Settings	SNMP Settings	Notifications	History
🗹 Enable e-mail n	otifications (reco	mmended)		
SMTP server:				
smtp.sendgrid	net			Advanced
From:				
VBR@gooddea	ilmart.ca			
To:				
csun@triconel	ite.com			
Subject:				
[%JobResult%]	%JobName% (%	ObjectCount% o	bjects) %lssues	:%
				Test Message
Sond daily suga	mary at: 10:00 P	м 🛊 🔒		
	mary at: 10.00 P			
Notify on:				
Success				
Warning				
Failure	100 10 1011			
Suppress no	otifications until t	he last job retry		

Configure Notification with Microsoft Office 365 NON-MFA Account

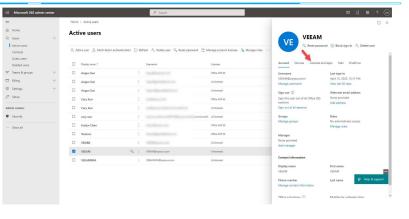
You can configure Microsoft Office 365 non-MFA account for notification settings if you want Veeam Backup & Replication to send email notifications about backup job results.

Ins	tructions		Screens	hot (if applicable)	
1.	Sign in Office 365 portal with a Global Admin account and select Admin.	C C A A through we have El Other of the control C Duration C D Atom Atom	and Street Officeren +	• Å •	ा की 26 की 26 00
2.	On the Microsoft 365 admin center, expand Users and select Active users.	Mitcoull 388 adveb cever	 Provide the set of the		Contractions of the operation of the ope

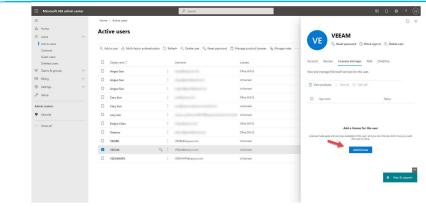
 On the Active users' page, click Veeam service account (in my case, VEEAM).

-		Home > Active users					Dark mode
A Home		Active users					
R. Users	~	Active users					
Active users Contacts Guest users		🔍 Add a user 🛛 Multi-factor au	hentication 🕐 Re	fresh 🔍 Delete user 🔍 Reset passwo	rd 📋 Manage product licenses 🤌 Monage r	oles … 1 selected × ∇ Filter $\int \mathcal{O}$ Search active users fait	=
Deleted users		Display name 1		Uservanie	Licenses	100 Choose columns	
e Teams & groups	~	Angus Sun		***	Office 365 13		
I Billing	~	Angus Sun			Unicersed		
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P Setup		Cary Sun		and second second	Office 345 E3		
Admin centers		Cary Sun			Unicensed		
Security		cary sun			icrosoft. Unlicensed		
·· Show all		Evelyn Chen			Office 365 E3		
		Terence		the second spectra second	Office 265 83		
		C VECEX			Unicensed		
		VEEAM	۹ :	VEEXM@caryoun.com	Unicersed		
		VERAMMARA		VEEAVMPA@carysun.com	Unicensed		

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



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



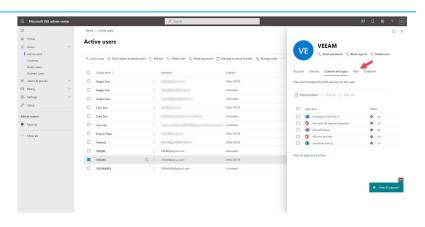
 On the Office 365 license page, enable Assign license to the account and click Save changes.

Microsoft 365 admin c	enter				₽ Search			8	0 0 ?
		Home > Act	ive users				÷		
Home		Active	users				Off	ice 365 E3	
Users		/icure	aberb				1 licers	e available	
Active users					ish R. Delete user 🔍 Reset password 🕅 M			Assign license to VEEAM	
Contacts		M. ADS & USE	 Main-factor autoer 	ocation U Herre	ista 🗚 Develse user 👒 weset bassword 🔲 w	anage product icenses in Minage roles in	_		
Guest users					Uservane	Licenses	~ 76	mon 🚫 Tumoff	
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how all		tvoly	n Chen			Office 365 E3	-	Power Apps for Office 385 Acure Rights Management	0 0n
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		vsce	ĸ		V908K@censun.com	Unicensed		Common Data Service for Teams	0 01
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							Save	changes	

7. Click Back <--.

III Microsoft 365 admin	center			₽ Search			9	5 0 0 1
=		Home > Active users				÷		×
		Active users				Off	ice 365 E3	
R. Users		Active users					ses available	
Active users						0.	Dranges saved	
Contacts		H, Add a user H Multi-factor authentication	O Refn	esh 🔍 Dekete user 🔍 Reset password 📋 M	anage product licenses 3% Monage roles 300			
Guest users Deleted users		Dopley name 1		Utevane	Lienss		Assign license to VEEAM	
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Settings		Angus Sun			Unicensed		App name	Satur
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							Microsoft 385 Apps for Enterprise	O 01
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··· Show all		Evelyn Oten			Office 345 E3	0	 SharePoint (Pan 2) Microsoft Stream for Office 305 E3 	0 0s
3100 88		Terence		terence@ccccddealmart.com	Office 345 E3		 Prover Ages for Office 365 	• 01
							Acure Rights Management	0 01
				V908K@carysun.com	Unlicensed		HP Common Data Service	9 Q1
		VERAM C		VttAM@carysun.com	Office 345 E3	0	R Common Data Service for Teams	• 01
		VEEAMMEA		VEEAMMEA@carysum.com	Unlicensed		Information Protection and Governance Analytic	-Star O Os
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							Insights by MyAnalytics	
							Hickard Rookings	Q Help & support
							H Microsoft Forms (Flan E3)	• 0n
						Ser	re changes	

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



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

interoport pro durine	center			P Search			
		Home > Active users					0 >
Home		Active users					
Users	~	Active users				VEEAM	
Active users						VE Reset passwor	1 🚫 Block sign-in 🤱 Delete user
Contacts		🔍 Add a user 🛛 👌 Multi-factor authenti	cation 🔘 Ref	resh 🧸 Delete user 🔍 Reset password	C Manage product licenses R Manage roles	Change photo	
Guest users							
Deleted users		Display name 1		Uservarve	Lienes	Account Devices Licenses and	apps Mail OneDrive
Teams & groups	~	Angus Sun		and the second	Office 365 03	Malbox permissions	Email apps
Ming	~	Angus Sun		Page May Control of Co	Unicersed	Read and manage permissions (2)	All apps allowed
Settings	~	Angus Sun			Unicensed	Send as permissions (0)	Manage email apps
Setup		Cary Sun			05+351	Send on behalf of permissions (0)	
						Show in global address list	Email forwarding None
nin centers		Cary Sun			Unicensed	Manage global address list visibility	Manage email forwarding
Security		cary sun		service of the servic	Unicersed	Automatic replies	More actions
Show all		Evelyn Chen		president and the second	Office 365 83	Off	Convert to shared mailbox
		Terence			Office 345 E3	Manage automatic replies	Edit Exchange properties Manage Itigation hold
		П увовк		V508K@carysun.com	Unicensed		manage ingeneration
		UEEAM	۹ :	VEEAM@carysun.com	Office 245 E3		
		U VERAMMIA		VEEAWMPA@carysun.com	Unicensed		
							_
							P Help & support

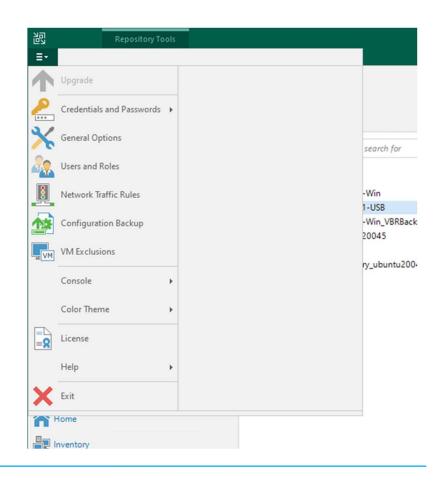
 On the Manage email apps, select Authenticated SMTP and click Save changes.

Active users	or authentication 🔿 Ref			Manage email apps
	or authentication 🕐 Refi			
	or authentication 🜔 Refi			Choose the apps where VZDAM can access Microsoft 355 email.
		esh R _x Delete user Q _k Reset password D	Manage product licenses 🦓 Monage roles \cdots	Cuttook on the web
				Cuttook desktop (MAPI)
		Usevane	Leeves	Exchange web services
🗌 Angus San			Office 385 63	Molsile (Exchange ActiveSync)
C Angus stin			Unicessed	₩AP
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- 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		
\checkmark Use Windows session authentication		
Save shortcut	Connect Close	

13. Select General Options from the main menu.



14. On the Options page, select Email Settings.

/O Control	Security	E-mail Settings	SNMP Settings	Notifications	History
Define	desired p		tency limits to en duction workloa		jobs do not
Stop a	ssigning n	ew tasks to data	store at:		20 🌲 ms
Thrott	le I/O of e	xisting tasks at:			30 🌲 ms
Set cu	stom thres	holds on individ	lual datastores		Configure.

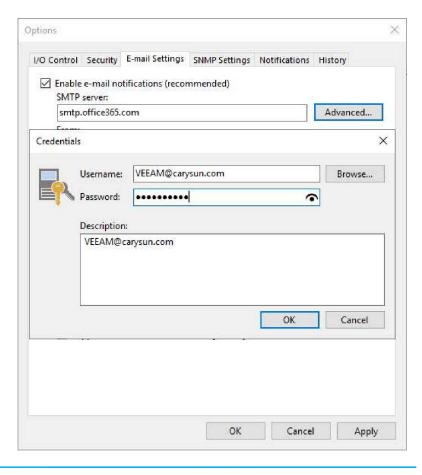
- Select Enable e-mail notification (recommend) on the Email Settings page.
- In the SMTP server field, enter smtp.sendgrid.net, and click Advanced.

SMTP s		incations (reci	ommend <mark>e</mark> d)			
smtp.o	office365.c	om				Advanced
From:						
To:						
Subject						
[%]0p	Result%] 7	(<mark>JobNam</mark> e% (%ObjectCoun	t% objects) %lssues	%
Notify		ary at: 10:00	PM 🚔	0		
Suc						
☑ Wa ☑ Fail	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
		fications until	the last job re	try		

- 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.

s	ATP server: mtp.office36	5.com			Advanced
Fr	om:				
	Advanced Si	MTP options			×
	Timeout:	t using SSL		ок	Add Cancel
] Suppress r	notifications until th	ne 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.



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

SMTP server: smtp.office365.	om			Advanced
From:			-	
Advanced SM	[P options			×
Log on as	ising SSL 9 server requires	authentication (VEEAM@carysu		ge Add
		8	ОК	Cancel
	ifications until th	ne 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.

SMTP server:	tifications (recommended)							
smtp.office365	com Advanced							
From:								
VEEAM@carysu	in.com							
To:								
csun@triconeli	te.com							
Subject								
[%JobResult%]	[%JobResult%] %JobName% (%ObjectCount% objects) %Issues%							
Send daily summer Notify on:	nary at: 10:00 PM 🛃 🕦							
 ✓ Success ✓ Warning ✓ Failure 								

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

SMTP smtp	office365.com				Ad	vanced	
From:							
VEEA	VEEAM@carysun.com						
To:							
csun(csun@triconelite.com						
Subjec	t:						
Send Notif So	Test	message ha	s been sent to	`csun@tric	onelite.com [*]		
- 1	lure				-		
10		tions until tl	ne last job retry				

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.

 Enable e-mail notifications (recommended) SMTP server: smtp.office365.com Advanced From: VEEAM@carysun.com To:	O Control Security	E-mail Settings	SNMP Settings	Notifications	History				
From: VEEAM@carysun.com To: csun@triconelite.com Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues% Test Message Send daily summary at: 10:00 PM 🔅 1 Notify on: Success Warning Failure		tifications (recor	mmended)						
VEEAM@carysun.com To: csun@triconelite.com Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues% Test Message Send daily summary at: 10:00 PM Image: Send daily summary at: Success Image: Send daily summary at: Image: Success Image: Success Image: Success Image: Send daily summary at: Image: Success Image: Success Image: Send daily summary at: Image: Success Image: Send daily sum summary at: Image: Send daily	smtp.office365.	com			Advanced				
To: csun@triconelite.com Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues% Test Message Send daily summary at: 10:00 PM 🗘 1 Notify on: Success Warning Failure	From:								
csun@triconelite.com Subject: [%JobResult%] %JobName% (%ObjectCount% objects) %Issues% Test Message Send daily summary at: 10:00 PM 🔹 (1) Notify on: Success Varning Failure	VEEAM@carysu	n.com							
Subject [%JobResult%] %JobName% (%ObjectCount% objects) %Issues% Test Message Send daily summary at: 10:00 PM 🔹 (i) Notify on: Success Warning Failure									
[%JobResult%] %JobName% (%ObjectCount% objects) %Issues% Test Message Send daily summary at: 10:00 PM 🔅 1 Notify on: Success Warning Failure	csun@triconelit	e.com							
Test Message Send daily summary at: 10:00 PM 🔹 👔 Notify on: 🗹 Success 🖉 Warning 🖉 Failure									
Send daily summary at: 10:00 PM 🔹 👔 Notify on: 🗹 Success 🖉 Warning 🖉 Failure	[%JobResult%]	[%JobResult%] %JobName% (%ObjectCount% objects) %Issues%							
 ✓ Success ✓ Warning ✓ Failure 	Send daily summ	nary at: 10:00 PM	M 🛟 🚺		rest wiessage				
└── Warning └── Failure									
☑ Failure									
	🗹 Warning								
Suppress notifications until the last job retry									
		ifications until tr	ne last job retry						
		ifications until tr	ne last job retry						
		ifications until tr	ne last job retry						
		ifications until tr	ne last job retry						
		ifications until tr	ne last job retry						

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.

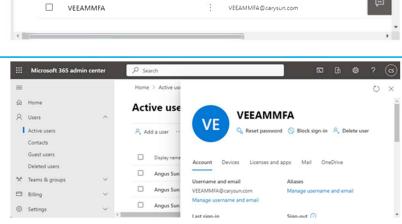
Instructions	Screenshot (if applicable)
 Sign in Office 365 portal with a Global Admin account, and select Admin. 	 Home Microsoft 365 x + Microsoft 365 P Search Search Sea
2. On the Microsoft 365 admin center, expand Users and select Active users.	Image: Search Image: Search<

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

🗌 УВОВК

VEEAM

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



VBOBK@carysun.com

VEEAM@carysun.com

Q

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

Billing Settings	× .	Angus Sun	Manage username and email	Sign-out ①		
Account	Devices	Licenses and	apps Mail On	eDrive		
View and n	nanage Micro	soft services fo	or this user.			
🛱 View products 🗸 Turn on 🚫 Turn off						
ء 🗆	op name			Status		
	ipp name			Status		
		Add a lice	nse for this user			
Licenses mal	ke apps and ser	vices available to		oose which ones you want		

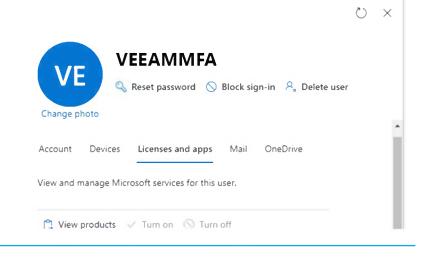
On the Office 365 license page, enable Assign license to the account, and click Save changes.

	Assign	license to VEEAMMFA			
V Tu	rn on	S Turn off			
	App r	name	Statu	٤L	
	•	Exchange Online (Plan 2)	٥	On	
	0	Microsoft 365 Apps for Enterprise	٥	On	
	nii i	Microsoft Teams	0	On	
	0	Office for the Web	٥	On	
	-	Office for the Web SharePoint (Plan 2)	0	On On	
_	-		-		
	5 >	SharePoint (Plan 2)	0	On	
	5 >	SharePoint (Plan 2) Microsoft Stream for Office 365 E3	0	On On	
	\$ * * *	SharePoint (Plan 2) Microsoft Stream for Office 365 E3 Power Apps for Office 365	0	On On On	

7. Click Back <--.

~	Offi 0 license	es avai Assigr	365 E3 Ilable In license to VEEAMMFA		×
		App	name	Status	
		ē.	Exchange Online (Plan 2)	 On 	
		0	Microsoft 365 Apps for Enterprise	On On	
		H ji	Microsoft Teams	On On	
		0	Office for the Web	On On	
		5	SharePoint (Plan 2)	On On	
		٠	Microsoft Stream for Office 365 E3	On	
		٠	Power Apps for Office 365	On On	
		B	Azure Rights Management	On	
		B	Common Data Service	On On	
		B	Common Data Service for Teams	On On	-

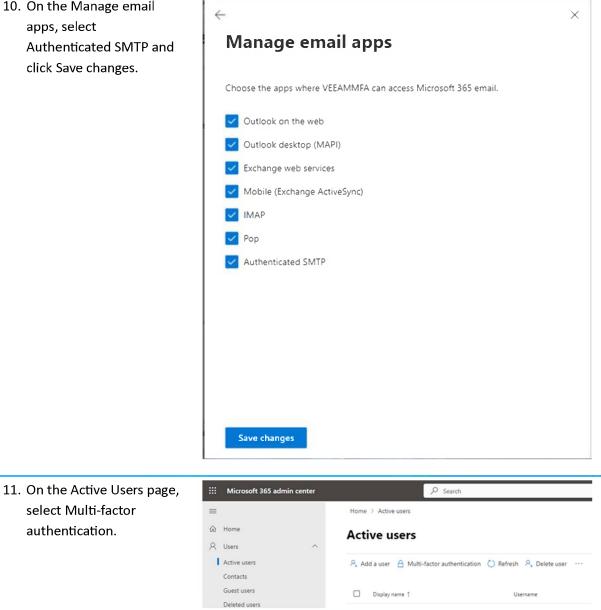
 On the account page, select Mail. It would be preferable to wait a few minutes before preparing a mailbox for the user.



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

Change photo	A S Block sign-in 🦂 Delete user
Account Devices Licenses and app	s Mail OneDrive
Mailbox storage	0.01% (8.604MB/100GB)
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.



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

14. On the service settings

3

admin account.		
On the multi-factor	multi-factor authentication users service settings	
authentication page, select service settings.	Note: only users licensed to use Microsoft Online Services are eligible for Multi-Factor Authenticatio Before you begin, take a look at the multi-factor auth deployment guide.	on. Learn more about how t
	bulk update	
	View: Sign-in allowed users V Multi-Factor Auth status: Any V	
	DISPLAY NAME USER NAME	MULTI-FACTOR AUTH STATUS
On the service settings	#	⊚ ?
page, select Allow users	multi-factor authentication	
to create an app password	users service settings	
to sign in to non-browser	app passwords	
apps, click save and then	 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 	
sign out from the office	verification options	
365 portal.	Methods available to users: Call to phone Text message to phone Notification through mobile app Verification code from mobile app or hardware token	

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 expensive, 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 c
 more days.

remember multi-factor authentication on trusted device

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

Image: a constraint of the constraint o

- 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 learned to use Microardh Orling Services are eligible for Multi-Factor Fauthentication. Learn more about how to license other users. Before you being, in use a look at the multi-factor and registryment guide. bulk update View: Sign-in allowed users 🗸 🖉 Multi-Factor Auth status: Any 🗸 MULTI-FACTOR AUTH DISPLAY NAME . USER NAME Angus Sun Enforced Select a user Angus Sun Disabled Angus Sun Disabled Cary Sun Enforced Cary Sun Disabled Cary sun Disabled Evelyn Chen Disabled Terence Disabled VBOBK VBOBK@carysun.com Enforced VEEAM VEEAM@carysun.com Disabled VEEAMMFA@carysun.com Disabled

18. On the quick steps page. sel

18. On the quick steps page,				
select Enable.	multi-factor au users service setti			
	Note: only users licensed to use	- ned registration experiences for MFA and SSPR will b Microsoft Online Services are eligible for Multi-Facto the multi-factor auth deployment guide.	e enabled for all tenants. Enable it now. or Authentication. Learn more about how to	license other users.
	bulk update			
	View: Sign-in allowed users	- P Multi-Factor Auth status: Any	~	
	DISPLAY NAME +	USER NAME	MULTI-FACTOR AUTH	
	Angus Sun		Enforced	VEEAMMFA
	Angus Sun		Disabled	VEEAMMFA@carysun.com
	Angus Sun		Disabled	quick steps
	Cary Sun		Enforced	Enable
	cary sun		Disabled	Manage user settings
	Evelyn Chen		Disabled	
	Terence		Disabled	
	О ИВОВК	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.	Please read the de If your users do no auth: https://aka.m	ing multi-factor auth ployment guide if you haven't already. at regularly sign in through the browser ts/MFASetup		c to register for multi-factor
20. On the Updates, successful page, click Close.	Updates succ Multi-factor auth i	Eessful	ts.	close

(i) Learn ho 21. Sign in Office 365 portal About our ads at - Sign in 🔍 Microsoft | Office Buy now with a Veeam service account Welcome to Office Sign in to use your favorite productivity apps from any device N x đji w 22. On the Sign in page, enter the Veeam services Microsoft account email address. Sign in VEEAMMFA@carysun.com No account? Create one! Can't access your account? Back Next \mathbb{Q} Sign-in options

23. Enter the password.	
	Microsoft
	← veeammfa@carysun.com
	Enter password
	Forgot my password
	Sign in
L	
24. On the More information	
required page, click Next.	Microsoft
	veeammfa@carysun.com
	More information required
	Your organization needs more information to keep your account secure
	Use a different account
	Learn more
	Next

25. Select Fill in th info ра

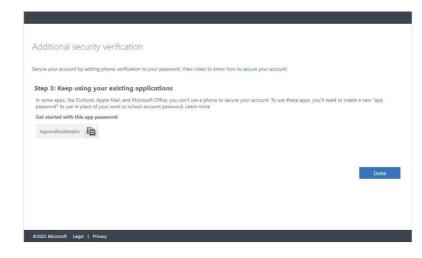
25. Select Fill in the information on the Step 1 page and click Next.	Additional security verification Secure your account by adding phone verification to your password. View video to know how to secure your account Step 1: How should we contact you? Authentication phone Canada (+1) Method Send me a code by text message Call me Vour phone numbers will only be used for account security. Standard telephone and SMS charges will apply.
26. On the Step 2 page, enter	Additional security verification
the verification code and	Secure your account by adding phone verification to your password. View video to know how to secure your account
click Verify.	Step 2: We've sent a text message to your phone at +1 604

Cancel Verify

When you receive the verification code, enter it here
766326

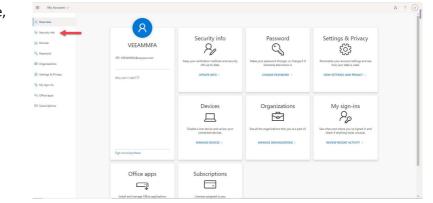
©2022 Microsoft Legal | Privacy

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



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





31. On the Security info page, select the +Add method.	Ne Sporter Constant Sporter Sp
32. On the Add Method, select App password and click Add.	Add a method Which method would you like to add? App password Cancel Add
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 VBO365APP Cancel Next

- 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: hcsrjjplp f

Note: Keep this password in a safe place. It will not be shown again.

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

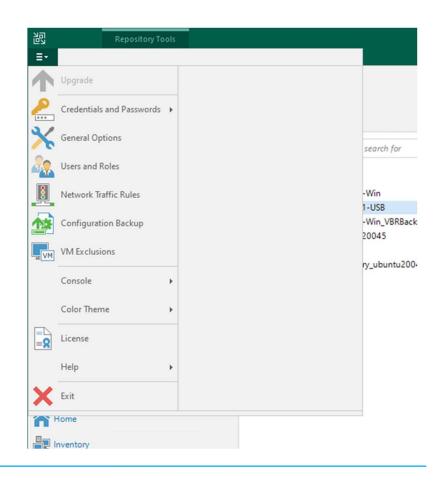
	×
Veeam Backup & Re	plication 12
Type in a backup server name or IP a and user credentials to connect with localhost	ddress, backup service port number,
GOODDEALMART\csun	
Password	
✔ Use Windows session authentica	ion
Save shortcut	Connect Close

×

Done

Back

38. Select General Options from the main menu.



39. On the Options page, select Email Settings.

Enable storage latency control Define desired primary storage latency limits to ensure running jobs impact storage availability to production workloads.	
Define desired primary storage latency limits to ensure running jobs	
	s do not
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

- 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.

	mail Settings	SNMP Settings	Notifications	History
Enable e-mail notifi SMTP server:	cations (recor	nmended)		
smtp.office365.co	n			Advanced
From:	- 199 			h
To:				
Cubicut				
Subject: [%JobResult%] %J	hName% (%)	ObjectCount% o	hierts) %lssues	%
				*
				Test Message
Send daily summar	y at: 10:00 PM	м ≑ 🕦		
Notify on:				
Success				
🗹 Warning				
🗹 Failure				
Suppress notified	ations until th	ne last job retry		

- 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.

	office365.	com			Advanced
From:					
Adv	anced SM	TP options			×
	neout: 10 Connect o This SMT Log on as	using SSL P server requires		OK	ge Add Cancel
Su Su	ppress no	tifications until th	ne last job retry		

47. The SMTP server requires

authentication. Type the
office 365 service account
(VEEAMMFA@carysun.co
m in my case) as
Username, enter the App
password as the
password, and click OK.

	le e-mail noti P server:	ifications (recor	nmend <mark>e</mark> d)		
smt	p.office365.co	om			Advanced
Credentia	ls				>
	Username:	VEEAMMFA@	carysun.com		Browse
ER	Password:		*****	•]
	Description:	-			*
	VEEAMME	A@carysun.con	n		
				-	
				ОК	Cancel

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

SMTP	office365.				Advance	4
From:	oncesosa	com		3	Advance	.u
						-1
Adv	anced SM	[P options			×	
	Log on as:	sing SSL server requires	authentication .com (VEEAMMF	A@c; ~	Add	ge
			1.1	ок	Cancel	
ļ						

- 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.

5 control	Security	E-mail Settings	SNMP Settings	Notifications	History
	e-mail no server:	tifications (recor	nmend <mark>e</mark> d)		
smtp	office365.	com			Advanced
From:					
VEEA	MMFA@ca	arysun.com			
To:					
csuni	@triconelit	e.com			
Subje	t:				
[%Jol	Result%]	%JobName% (%	ObjectCount% o	bjects) %lssues	:%
					Test Message
					Test Message
Notify Su W Fa	r on: ccess arning ilure	nary at: 10:00 PI			LEPT MESZAGE

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

SMTP smtp.	office365.	com			Advance	ed
From:	i el				-	
VEEA	MMFA@ca	rysun.com				
To:						
csun@	Dtriconelit	e.com				
Subjec	t:					
Send		ckup and Replic Test message ha	s been sent to "c	sun@ <mark>tr</mark> iconelite	× e.com*	agi
10000						
Notif						
🗹 Si					ок	
	lure				ОК	

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.

Control Security	E-mail Settings	Child D Coldina and	Notifications	Mishami
Control Security	c-man settings	SNMP Settings	Notifications	History
Enable e-mail no SMTP server:	tifications (recor	nmended)		
smtp.office365.	com			Advanced
From:				
VEEAMMFA@ca	arysun.com			
To:				
csun@triconelit	te.com			
Subject:				
[%JobResult%]	%JobName% (%	ObjectCount% o	bjects) %lssues	%
				Test Message
Send daily summ Notify on: Success Warning Failure Suppress not	nary at: 10:00 PI			
		ОК	Cancel	Apply

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)

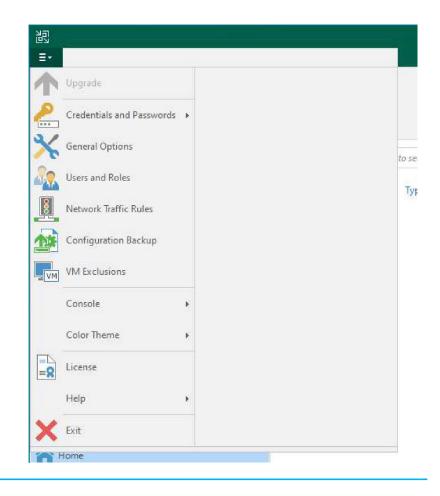
- Log in to the Veeam Backup and replication manager server.
- Open the Veeam Backup & Replication Console and click Connect.

		×
Veeam Backup & Rep		port number,
and user credentials to connect with.	~	9392
GOODDEALMART\csun		
Password		
✔ Use Windows session authentication	on	
Save shortcut	Connect	Close

3. Enter the MFA Confirmation code and click Confirm.

Veeam Backup & R	eplication 12	2
Enter the code from your authenti		
Confirmation code:		

4. Select Configuration Backup from the Man menu.



- Select Enable configuration backup to the following repository checkbox on the Configuration Backup Settings page.
- Select the backup repository from the dropdown list.
- Enter the restore points number in the Restore points to keep field.
- 8. Click Notifications.

Enable configuration backup to the following reposite	24
Backup Repository_HPHV02 (Created by GOODDEALI	MART\csun at 1/10/2023 🗸
🧧 688 GB free of 931 GB	
Restore points to keep: 10 🚖	Notifications
Perform backup on: Daily at 10:00 AM	Schedule
Last successful backup: 1/7/2023 10:00 AM	Backup now
	- Add
Manage	passwords
Saved credentials, backup server certificate and cluappliance data will not be included in the configuencryption is enabled	
appliance data will not be included in the configu	
appliance data will not be included in the configu encryption is enabled	Restore

- 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.
- 13. Click Schedule on the Configuration Backup Settings page.
- 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 dropdown list.

Config	guration Backup Notifications	×
	end SNMP notifications for this job end e-mail notifications to the following recipients:	
c	sun@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 OK Cancel 	

] Run the job automatically						
Daily at this time:	10:00 AM	\$	Everyday		~	
O Monthly at this time:	10:00 PM	*	Fourth ~	Saturday	~	Months
				0	к	Cancel

16. Click OK.

17. On the Configuration Backup Settings page, click Backup now if you want to back up manually.

Backu			
	Enable configuration backup to the following repo	sitory:	
	Backup Repository_HPHV02 (Created by GOODDE	ALMART\csun	at 1/10/2023 ~
	🧧 688 GB free of 931 GB		
	Restore points to keep: 10		Notifications
	Perform backup on: Daily at 10:00 AM		Schedule
	Last successful backup: <u>1/7/2023 10:00 AM</u>		Backup now
	Enable backup file encryption Password:		
		~	
	Mana	ge passwords	
Restor	Saved credentials, backup server certificate and appliance data will not be included in the confi encryption is enabled re		
Re	store the configuration backup to this server:		Restore
		Cancel	

- 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.

ckup C Enable configuration backup to the following repository:	
Backup Repository_HPHV02 (Created by GOODDEALMART\csu	n at 1/10/2023 🚿
🧧 688 GB free of 931 GB	
Restore points to keep: 10 🚊	Notifications
Perform backup on: Daily at 10:00 AM	Schedule
Last successful backup: 1/7/2023 10:00 AM	Backup now
Enable backup file encryption Password:	
Created by GOODDEALMART\csun at 1/7/2023 8:13 PM. (L $ \sim$	Add
Loss protection disabled <u>Manage passwords</u>	
store	Restore
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.

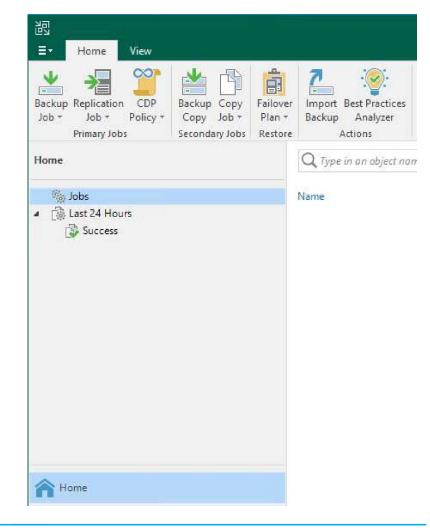
The tool Best Practices Analyzer examines the following configuration parameters.

×
nber,
2

 Enter the MFA Confirmation code and click Confirm.

Veeam Backup &	Replication 12	2
Enter the code from your auth		
Confirmation code:		
		Close

4. Select the Best Practices Analyzer on the Home page.



On the Best Practices
 Analyzer page, click
 Analyze after setting up
 the parameters as
 recommended and ensure
 that the status is changed
 to Passed.

nnecessary security risks, reduced chances of successful recovery follo	owing a cyber attack, affects backup infrastructure	e reliability etc.
Best Practice	Status	Analyze
Backup infrastructure security		Suppress
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	O 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	1 Unable to detect	
		Reset Al
opy to Clipboard		Close

 Select the parameter and click Suppress to skip the security check.

Best Practice	Status	Analyze
Backup infrastructure security		Suppres
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	1. Unable to detect	
		Reset A

 Comment briefly on the Note field on the Edit Note page for future reference, and click OK.

Note:	Suppressed by GOODDEALMART\c	sun on 2/10)/2023
			Cancel

8. Click Close on the Best Practices Analyzer page.

lest Practice	Status	Analyze
Backup infrastructure security		Reset
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	Reset All

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.

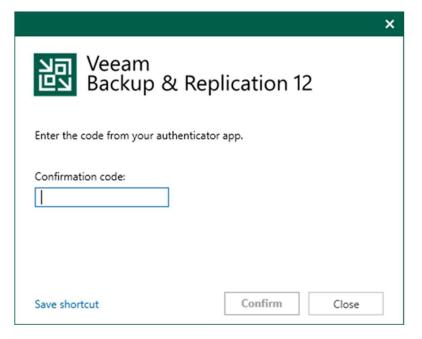
Create a Backup job to backup the specified VMs

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.

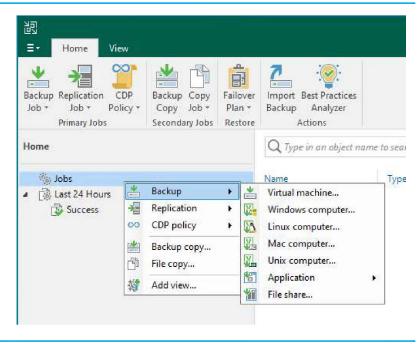
This procedure creates a backup job to back up the production VMs specified.

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

3. Enter the MFA Confirmation code and click Confirm.



- 4. Select Jobs on the Home page and right-click Jobs.
- 5. Select Backup and click Virtual machine.

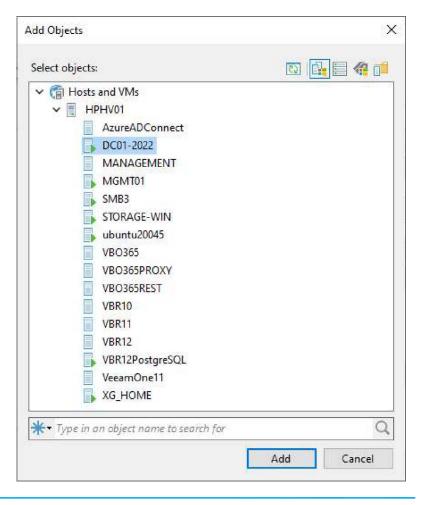


- 6. On the Name page, enter a name for the backup job in the Name field.
- Give a brief description in the Description field for the future.
- Select the High priority checkbox if you want this job to allocate resources in the first place.
- 9. Click Next.
- 10. Click Add on the Virtual Machines page.

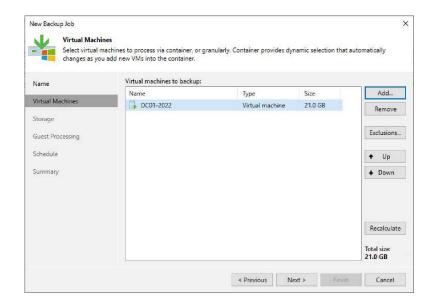
	e and description for this backup job.	
	Name	
Name	DC01-2022 Backup	
Virtual Machines	L Description:	
Storage	Created by GOODDEALMART\csun at 2/10/2023 9:10 PM.	
Guest Processing		
Schedule		
Schedule		
Summary		
	High priority Backup infrastructure resources are offered to high priority jobs first. Use this option for job	

New Backup Job Virtual Machi Select virtual	ines machines to process via container,	or granularly. Container provid	les dynamic selection th	at automatically cha
as you add ne	W VM into container.		ies ajname selection a	at acompleting che
Virtual Machines	Name	Туре	Size	Add
Storage				Eleren ano i
Guest Processing				Exclusion
				EAconstend
Schedule				+ Up.
Summary				+ Down
				Receicura
				Total size: 0 B

- 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.



13. Click Next on the Virtual Machines page.



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 proces	sing proxy server to be used for source data retrieval, backup repository to store the backup files	produced by t
job and custor	nize advanced job settings if required. Backup proxy:	
	Off-host backup (automatic proxy selection)	Choose
Virtual Machines	Backup repository:	
Storage	Default Backup Repository (Created by Veeam Backup)	
Guest Processing Schedule Summary	 93.6 GB free of 126 GB Map backup Retention policy: 7 days Keep certain full backups longer for archival purposes GFS retention policy is not configured Configure secondary destinations for this job 	Configure
	Copy backups produced by this job to another backup repository, or tape. We recon at least one copy of your backups to a different storage device that is located off-sit Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings.	
	< Previous Next > Finish	Cancel

- 15. On the Backup Proxy page, if you select Onhost 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.
- 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	Select al
HPHV01	Clear all
HPHV02	

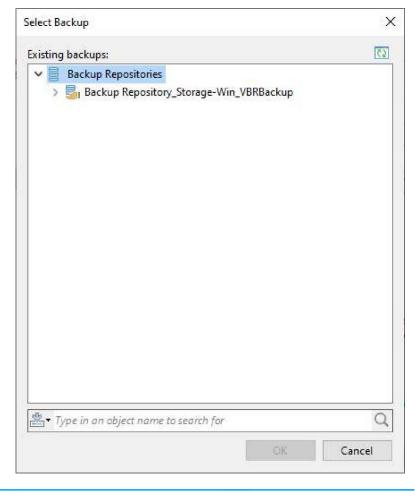
X

proxies are available in the checkbox. Still, the job will fail to start if off-host backup proxies are unavailable or configured properly.

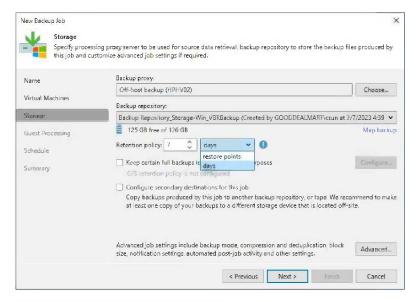
- 19. Click OK.
- 20. Select the backup repository from the Backup repository dropdown list where the created backup files must be saved.

this job and c	ustomize advanced job settings if required.	
Name	Backup proxy:	
	Off-host backup (HPHV02)	Choose
Virtual Machines	Backup repository:	
Storage	Backup Repository_Storage-Win_VBRBackup (Created by GOODDEALMART\csur	n at 2/7/2023 4:39
Guest Processing Schedule Summary	 125 GB free of 126 GB Retention policy: 7	
	Advanced job settings include backup mode, compression and deduplication, blo size, notification settings, automated post-job activity and other settings.	Advanced.

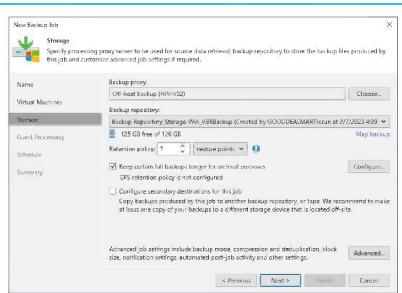
21. Click Map backup is helpful if you have relocated backup files to a new backup repository and want to point the job to existing backups in this new backup repository. Backup job mapping can also be used if the configuration database becomes corrupt and you need to reconfigure backup jobs.



- 22. Set the retention policy settings for restore points in the Retention Policy field.
- 23. Select days or restore points from the dropdown list.



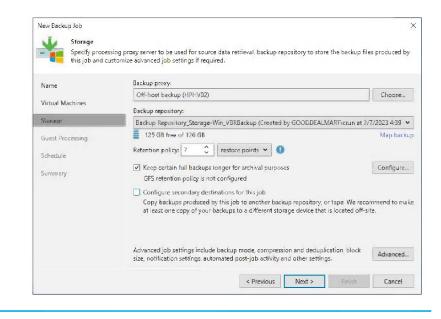
- 24. You can configure GFS retention policy settings for the backup job to ignore the short-term retention policy for some full backups and store them for long-term archiving.
- 25. Select the Keep certain full backups for longer for archival purposes. Then, if you need it, click Configure.



- 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.

onfigure GFS		×
Keep weekly full backups for: 1 🔘 weeks		
If multiple full backups exist, use the one from:	Sunday	v
Keep monthly full backups for: 1 🔅 months		
Use weekly full backup from the following week of a month	i : First	~
Keep yearly full backups for: 1 🗘 years		
Use monthly full backup from the following month:	January	~

30. On the Storage page, click Advanced.



- 31. On the Backup page, select Incremental (recommended).
- 32. Select create synthetic full backups periodically or active full backups periodically checkbox.
- Click Configure to schedule full backups periodically and click OK.

lackup	Maintenan	ce Storage Notifications	Hyper-V	Scripts
Backup	mode			
0	Increments	remental (slower) are injected into the full back a full backup of the most re		
۲	Increments chain. Best f Create s	I (recommended) are saved into new files depe or backup targets with poor withetic full backups periodic Configure	random I/	
Active	full backup	-		
	Saturday Co	e full backups periodically on ofigure		
Sche	dule Setting:			×
				×
Sch	dule Setting: edule: Monthly on:		/ ~	X Months
Schi O	edule:		/ ~	
Schr	edule: Monthly on:	First 👻 Monday		Months
Schr	edule: Monthly on: Weekly:	First V Monday On these days		Months
Schr	edule: Monthly on: Weekly:	First V Monday On these days	*	Months Days
Schr	edule: Monthly on: Weekly:	First V Monday On these days	*	Months Days

34. Select Incremental and disable synthetic full or active full backups to create a forever forward incremental backup chain if needed.

Backup.	Maintenance	Storage	Notifications	Hyper-V	Scripts	
D (
Backup	Reverse increr	nontal (cl	ounar)			
\cup	Increments are			kup file, so	that the lat	est backup
	file is always a			ecent VM s	state.	
۲	Incremental (r Increments are chain. Best for Create synt Saturday C	saved inte backup ta hetic full t	o new files dep rgets with pool packups period	random l/		
Active	full backup	-				

35. On the Advanced Settings, select Maintenance.	Advanced Settings
select Maintenance.	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 0 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.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Storage	-level corrupti	on guard				
		And the second second	lth check (d <mark>et</mark> e f every month			ruption) on:
Full bac	kup file mainte	enance				
	Remove delete	12/12/22/22/22			1	4 🗘 day
	-		t full backup fil onth Configure		1	
	Lase saturnay	or every m	unan contiguit			
Schedule S	Settings					
Schedule		201	5	24.5		
Montl	hly on: 10:00	PM 🗘	Last	- Friday	~	Months.
🔿 Weeki	ly: 10:00	PM C	On these days			Days
Friday						3 10
					OK	Cancel
11				-		

- 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.

Storage-level corruption guard ✓ Perform backup files health check (detects and auto-heals corrupt At 22:00 on Last Friday of every month Configure Full backup file maintenance ✓ Remove deleted items data after	tion) on:
At 22:00 on Last Friday of every month Configure Full backup file maintenance	tion) on:
✓ Remove deleted items data after 14	
· · · · · · · · · · · · · · · · · · ·	🗘 day
Schedule Settings	×
Schedule Settings	×
Schedule:	
Monthly on: Last	-
O Weekly: On these days V Days	
Saturday	
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.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Data re	duction					
\checkmark	Enable inline d	ata dedup	lication (recom	mended)		
12111	Exclude swap fi		and the second	500 - State -		
1.00	Exclude deleted		ts (recommend	ed)		
1	mpression level					
Op	otimal (recomm	ended)				~
12.65	one					
and the second	edupe-friendly otimal (recomm	ended)				
	gh	criticity				
	treme					
Del	ivers the optim				anular resto	bre
Del per	ivers the optim formance and r				anular resto	pre
Del per	ivers the optim formance and r tion	epository	space consump		anular resto	pre
Del per	ivers the optim formance and r	epository	space consump		anular resto	pre
Del per	ivers the optim formance and r tion Enable backup	epository	space consump		anular resto	Add
Del per	ivers the optim formance and r tion Enable backup	epository	space consump	otion.	~	
Del per	ivers the optim formance and r tion Enable backup	epository	space consump		~	
Del	ivers the optim formance and r tion Enable backup	epository	space consump	otion.	~	
Del per	ivers the optim formance and r tion Enable backup	epository	space consump	otion.	~	
Del per	ivers the optim formance and r tion Enable backup	epository	space consump	otion.	~	
Del per	ivers the optim formance and r tion Enable backup	epository	space consump	otion.	~	

46. Select the Storage optimization for the backup from the dropdown list.

lackup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Data r	reduction					
V] Enable inline d	ata dedupl	ication (recom	mended)		
~	Exclude swap fi	ile blocks (i	recommended)		
~	Exclude deleted	d file block	s (recommend	ed)		
Co	ompression level					
C	Optimal (recomm	ended)				~
	IMB	- B-				
55	orage optimizati IMB (recommenc					~
1						
-	IMB (recommend	ied)				
Enci 5	IMB (recommend 12KB 256KB	led)				
Enci 5	512KB 56KB		וזאטי			
Enci 5	12KB 256KB		ero'n		~	र्वतं -
Enci 5	512KB 56KB				~	Àdd
Enci 5	512KB 56KB			Manage pa	∼ asswords	Add
Enci 5	512KB 56KB			Manage pa	~ asswords	Add
Enci 5	512KB 56KB			Manage pa	25swords	Add
Enci 5	512KB 56KB			Manage pa	~ asswords	Add
Enci 5	512KB 56KB			Manage pa	~ asswords	Add
Enci 5	512KB 56KB			Manage pa	asswords	Add

- 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.

Backup	Maintenance	Storage	Notificatio	ns Hyper-	/ Scripts	
Data re	duction					
	Enable inline da Exclude swap fi Exclude deleted	ile blocks ((recommen	ded)		
	mpression level:					
Op	stimal (recomm	ended)				v
1 (1)		ed)				~
Del	/B (recommend livers the optimi formance and r	al combina			panular resto	21
Del per Encrypt	livers the optim formance and r tion Enable backup	al combina epository	space cons		pranular resto	21
Del per Encrypt	livers the optima formance and r tion Enable backup Password:	al combina epository file encryp	space cons	amption.		pre
Del per Encrypt	livers the optim formance and r tion Enable backup	al combina epository file encryp	space cons stion MART\csun	at 1/7/2023		21

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

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
	ad SNMP notific					
1	id e-mail notific pe in one or mi				emicolon	
	Use global not Use custom no Subject:			ed below;	es ne da com	
] %JobNa	me% (%Object	Count% ob	jects) %lssu	es%
	Notify on w Notify on e Suppress n	rror	s until the last	retry		

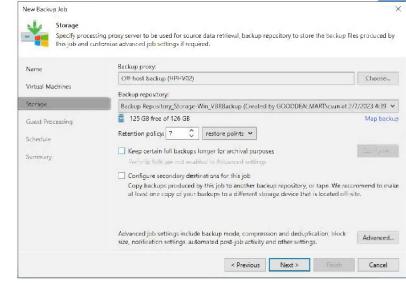
- 51. On the Advanced Settings, select Hyper-V.
- 52. Keep the default settings.

Backup	Maintenance Storage Notifications Hyper-V Scripts
Guest o	quiescence
	Enable Hyper-V guest quiescence
	Native quiescence will only be used for virtual machines with application- aware image processing disabled.
	Take crimin 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.
Change	ed block tracking
~	Use changed block tracking data (recommended)
Volume	replication of protected VMs. CBT is performed by Veeam's Hyper-V integration component that is auto-deployed on each host. e 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.

- 53. On the Advanced Settings page, click Scripts and keep the default settings.
- 54. Click OK.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Job scr	ipts					
	Run the followi	ng script l	before the job:			
						Browse
	Run the followi	ng script a	after the job:			
						Browse
0	Run scripts eve	ry t C	backup sess	ion		
0	Run scripts on t					Days
	Saturday					
	and and and a					
	and the start of the					

55. On the Storage page, click Next.



- 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.

lew Backup Job		>
Guest Proce	ssing t OS processing options available for running VMs.	
Name Virtual Machines	Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs configures the OS to perform required application restore steps upon first boot.	processing, and
virtual machines	Customize application handling options for individual machines and applications	Applications
Storage	Enable quest file system indexing	
Guest Processing	Creates catalog of guest files to enable browsing, searching and 1-click restores of i Indexing is optional, and is not required to perform instant file level recoveries.	ndividual files.
Schedule	Customize advanced guest file system indexing options for individual machines Guest interaction proxy:	Indexing
Summary	Automatic selection	Choose
	Guest OS credentials:	
	Select existing credentials or add new	Add
	Manage accounts	
	Customize guest OS credentials for individual machines and operating systems	Credentials
	customize guest of creaenants for manifold machines and operating systems	
	Verify network connectivity and credentials for each machine included in the job	Test Now
		Test Now

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

Object	Vss	Transaction Logs	Exclusions	Scripts	Add
🕞 DC01-20	Require success	SQL: Truncate, Exchange: Tru	Disabled	No	Edit
					Remov

- 59. On the Processing Settings, click General.
- 60. Keep the default settings.

General	SQL	Oracle	PostgreSQL	Exclusions	Scripts		
Applica	tions						
bac req ()	kup us uired a Requir Try <mark>a</mark> pp	ing appli pplicatio e success plication	processing de cation-specific n restore step ful processing processing, bu tion processin	c methods, a s upon first t g (recommen ut ignore f <mark>a</mark> il	nd config boot. ided)		
VSS Set				2			
bac Ser	kup. Lo ver, and Proces	ogs pruni d other a s transac	is job should j ng is supporte pplications the tion logs with nly (lets anoth	ed for Micros at support M this job (rec	oft Exchai licrosoft V ommende	nge, Micro SS. ed)	
Persiste	nt gue	st agent					
per	sistent t requi	runtime re <mark>m</mark> ents	ion-aware pro process. Depk of the runtime guest agent	oying a persi	stent ager		
							u <u>1</u>

- 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.

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 Choose.		SQL Oracle	PostgreSQ	L Exclusions Scripts	
 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: 	Choose	how this job	should proce	ss <mark>Microsoft SQL Server trans</mark>	action logs:
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:			and the second		
Backup logs every: 15 minutes Retain log backups:			State Street of the		
Retain log backups: Until the corresponding image-level backup is deleted Keep only last 15 0 days of log backups Log shipping servers:					
 Until the corresponding image-level backup is deleted Keep only last 15 C days of log backups Log shipping servers: 	Back	cup logs every	15 0	minutes	
C Keep only last 15 C days of log backups					
Log shipping servers:				1	
				days of log backups	
Automatic selection Choose	1				1 Martine
	Âu	tomatic select	tion		Choose

- 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.

General	SQL	Oracle	Exclusion	s Scripts		
Specify	Oracle ad	count wi	th SYSDB/	privileges:	0	
💦 Use	guest O	S credenti	als		~	Add
Archived				Mana	ge accounts	
	ALC: NOT		1.12			
() Don	ot delete	e archived	l logs			
O Dele	te <mark>log</mark> s o	lder than:	24 🤹	hours		
O Dele	te logs o	ver	10 🌲	GB		
🗌 Back	up logs	every:	15 🌲	minutes.		
12 File	in log ba					
			nding ima	ge-level bac	kup is delete	d
O K	leep only	/ last 15	📫 day	s of log bac	kups	
Log	shipping	servers:				
Aut	omatic s	election				Choose

- 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.

Seneral SQL Oracle	PostgreSQL	Exclusions	Scripts		
Specify PostgreSQL ac	count with su	uperuser privile	eges:		
👫 Use guest crede	ntials			✓ Add.	
The specified user is: O Database user with	password		vlanage accor	unts	
O Database user with					
O System user without		(peer)			
Backup logs every:	15 C	minutes			
Retain log backups	1				
Outil the corres	sponding ima	nge-level back	ip is deleted		
Ø Keep only last	15 🗘	days of log b	ackups		
Staging location fo	or archive log	st 🚯			
Log shipping serve	rs				
Automatic selecti	on			Choos	e
1					
					_

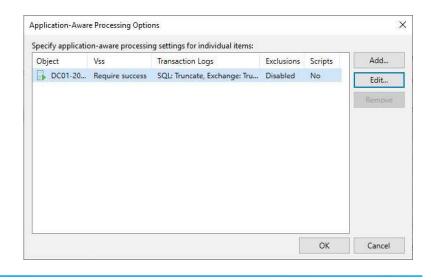
69. On the Processing Settings page, click Exclusions and keep the default settings.

General	SQL	Oracle	PostgreSQL	Exclusions	Scripts	
-	able fil	e level ex	clusions ng files and fo	olders:		
Fo	older					Add Remove
	ude or older	ly the fo	llowing files a	nd folders:		Add
						Remove
exc use	luded <mark>1</mark> d for e	files, and xcluding	<mark>st</mark> ores extra p	er-file metad nd keeping t	e proportional to lata in backup. Tl ne total number o	nus, it is best

- 70. On the Processing Settings page, click Scripts and keep the default settings.
- 71. Click OK.

General	SQL	Oracle	PostgreSQL	Exclusions	Scripts
00	Requir Ignore	s <mark>cri</mark> pt ex	ful script exec ecution failure xecution		
Window	vs scrip	ots			
Pre-	freeze	script:			
					Browse
Pos	t-thaw	script:			
					Browse
Linux so	rinte				
	1000000	script:			
					Brawse
Pos	t-thaw	script:			18
					Browse

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



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

Guest Proces Choose guest	os OS processing options available for running VMs.	
Name Virtual Machines	Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs configures the OS to perform required application restore steps upon first boot.	s processing, a
virtual machines	Customize application handling options for individual machines and applications	Applications
Storage	Enable quest file system indexing	No. 1 and 1
- /- ·	Creates catalog of guest files to enable browsing, searching and 1-click restores of	individual files
Guest Processing	Indexing is optional, and is not required to perform instant file level recoveries.	1
Schedule	Customize advanced guest file system indexing options for individual machines	Indexing
	Guest interaction proxy:	
Summary	Automatic selection	Choose
	Guest OS credentials:	
	Select existing credentials or add new	Add
	Manage account	s
	Customize guest OS credentials for individual machines and operating systems	Credentials.
	Verify network connectivity and credentials for each machine included in the job	Test Now
	very network connectivity and createrials for each machine included in the job	lest Now

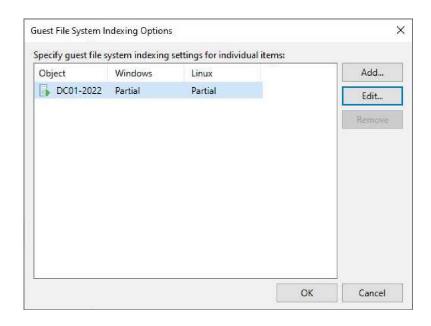
74. On the Guest File System Indexing Options page, select the VM, click Edit and select Windows indexing.

Object	Windows	Linux	Add	
DC01-2022	Partial	Partial	Edīt	
			Windows indexi Linux indexing	-

- 75. On the Guest file system indexing mode page, keep the default settings.
- 76. Click OK.

uest file system indexing mod- Disable indexing	e:	
) Index everything		
Index everything except:		
Folder	A	.dd
%windir%	A Re	move
%ProgramFiles%		
%ProgramFiles(x86)%		efault
Index only following folders:		
Folder	Ă	dd
	Re	move
i k	OK	ancel

77. Click OK on the Guest file system indexing mode page.



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

Choose guest	OS processing options available for running VMs.	
Name Virtual Machines	Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs configures the OS to perform required application restore steps upon first boot.	processing, ar
Storage	Customize application handling options for individual machines and applications	Applications.
	Enable guest file system indexing	
Guest Processing	Creates catalog of guest files to enable browsing, searching and 1-click restores of i Indexing is optional, and is not required to perform instant file level recoveries.	individual files.
Schedule	Customize advanced guest file system indexing options for individual machines	Indexing
Summary	Guest interaction proxy:	masanga
	Automatic selection	Choose
	Guest OS credentials:	
	Ý	Add
	Manage accounts	Credentials
	Manage accounts Customize guest OS credentials for individual machines and operating systems	creaendais.
		Test Now

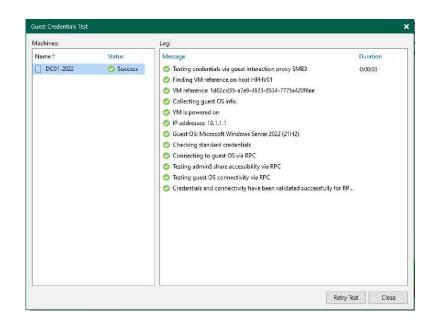
- 79. On the Guest Interaction Proxy page, select the domain member servers as the Guest Interaction proxy when you use gMSA as the guest OS credential.
- 80. Click OK.

× **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. O 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 Select all HPHV01 Clear all HPHV01 HPHV02 HPHV02 SMB3 STORAGE-WIN VBR12PostgreSQL.gooddealmart.ca OK Cancel

- 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 B		
Guest Processin Choose guest OS	ig 5 processing options available for running VMs.	
Name Virtual Machines	Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs configures the OS to perform required application restore steps upon first boot.	processing, an
Yoruan maccolles	Customize application handling options for individual machines and applications	Applications.
Storage	✓ Enable quest file system indexing	
Guest Processing	Creates catalog of guest files to enable browsing, searching and 1-dick restores of Indexing is optional, and is not required to perform instant file level recoveries.	individual files.
Schedule	Customize advanced guest file system indexing options for individual machines Guest interaction proxy:	Indexing
Summary	SMB3; STORAGE-WIN; VBR12PostgreSQLgooddealmart.ca	Choose
	Guest OS credentials:	
	👃 gooddealmart\VERgMSA (gMSA account uses to run guest processing ta 👻	Add
	sound the second second second test and the second	
	Manage accounts	

- 84. On the Guest Credentials Test page, ensure verification success for each machine.
- 85. Click Close.



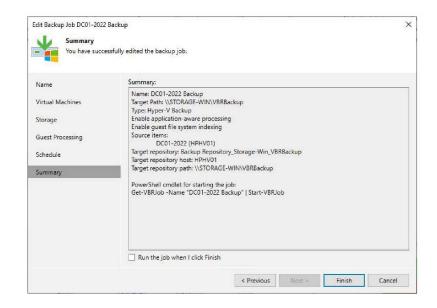
86. Click Next on the Guest Processing page.

Guest Process Choose guest	ing OS processing options available for running VMs.	
Name Virtual Machines	Enable application aware processing Detects and prepares applications for consistent backup, performs transaction logs pr configures the OS to perform required application restore steps upon first boot.	rocessing, ar
	Customize application handling options for individual machines and applications	Applications
Storage	✓ Enable guest file system indexing	
Guest Processing	Creates catalog of guest files to enable browsing, searching and 1-click restores of inc Indexing is optional, and is not required to perform instant file level recoveries.	Iwidual files
Schedule	Customize advanced guest file system indexing options for individual machines	Indexing
	Guest interaction proxy:	
Summary	SME3; STORAGE-WIN; VBR12PostgreSQLgooddealmart.ca	Choose
	Guest OS credentials:	
	🎄 gooddealmart\\/BRgMSA (gMSA account uses to run guest processing ta 👻	Add
	Manage accounts	Greden Kals.
	Customize guest OS credentials for individual machines and operating systems	credentials.
	Verify network connectivity and credentials for each machine included in the job	Test Now

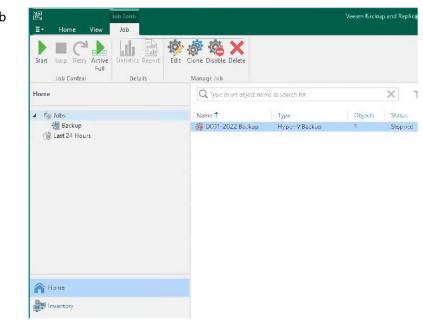
- 87. Select Run the job automatically checkbox on the Schedule page and select your specified schedule.
- 88. Define whether VeeamBackup & Replicationshould retry the backupjob if it fails in theAutomatic retry section.
- 89. Define the time interval the backup job must complete in the Backup window 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.

lame	🗹 Run the job automatically	1				
/irtual Machines	Daily at this time:	10:00 PM 🗘	Everyday		~	Days
	O Monthly at this time:	10:00 PM 🔅	Fourth 🛩	Saturday	~	Months_
itorage	O Periodically every:	1 4	Hours		~	Schedule.
Guest Processing	O After this job:					
chedule	Automatic retry					
	Retry failed items pro	cessing:	🗘 times			
ummary	Wait before each retry attempt for: 10 🗘 minutes					
	Backup window					
	✓ Terminate the job out	tside of the allov	ed backup wind	ow		Window
	Long running or accid		a second second second second		impact	

91. Click Finish on the Summary page.



92. Verify that the backup job has been added.



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.

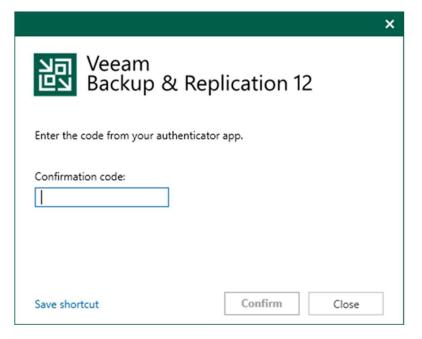
Instructions

Screenshot (if applicable)

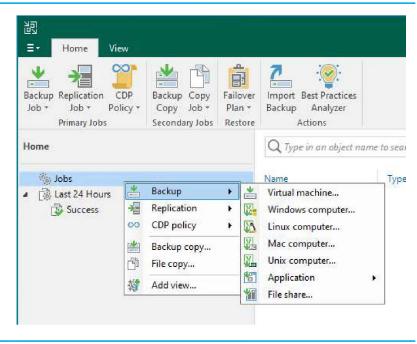
- Log in to the Veeam Backup and replication manager server.
- Open the Veeam Backup & Replication Console and click Connect.

Veeam Backup 8	& Replication 12
Type in a backup server nam and user credentials to conn localhost	e or IP address, backup service port number, ect with.
GOODDEALMART\csun	
GOODDEALMART\csun	
	hentication

3. Enter the MFA Confirmation code and click Confirm.



- 4. Select Jobs on the Home page and right-click Jobs.
- 5. Select Backup and click Virtual machine.



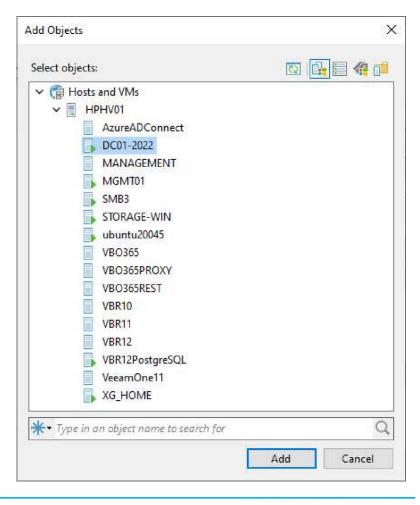
- 6. On the Name page, enter a name for the backup job in the Name field.
- Give a brief description in the Description field for the future.
- 8. Click Next.

New Backup Job	×
Name Type in a name	and description for this backup job.
Name	Name:
	DC01-2022_ubuntu20045 Immutable Backup
Virtual Machines	Description:
Storage	Created by GOODDEALMART\csun at 2/21/2023 2:41 PM.
Guest Processing	
Schedule	
Summary	
	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 > Feilon Cancel

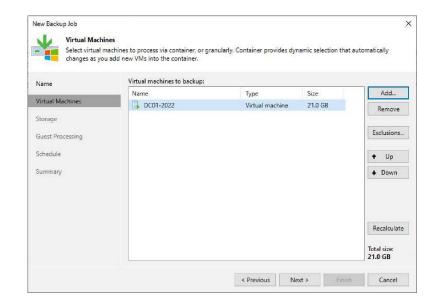
9. Click Add on the Virtual Machines page.

lew Backup Job	es			
Select virtual m as you add nev	nachines to process via container, v VM into container.	or granularly. Container provid	les dynamic selection t	hat automatically chang
Name	Virtual machines to back	ib:		
Virtual Machines	Name	Туре	Size	Add
Storage				Remove
Guest Processing				Exclusions
Schedule				+ Up
Summary				+ Down
				Recalculate
				Total size: 0 B
		< Previous	Next > 6	nish Cancel

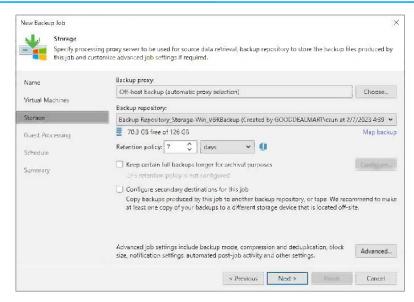
- Select the VM from the Select objects list on the Add Objects page and click Add.
- 11. If you have multiple VMS that needs to back up in the same backup job, you can repeat the step to add them.



12. Click Next on the Virtual Machines page.



 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.



- 14. On the Backup Proxy page, if you select Onhost 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

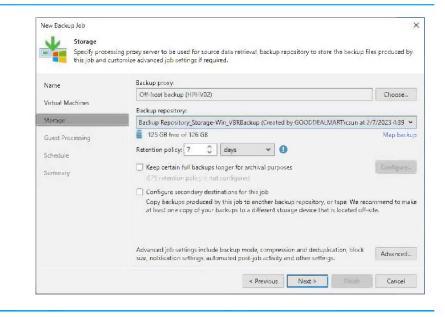
Use the following backup proxy servers only:

Name		Select al
HPHV01		Clear all
HPHV02		
-	ОК	Cancel

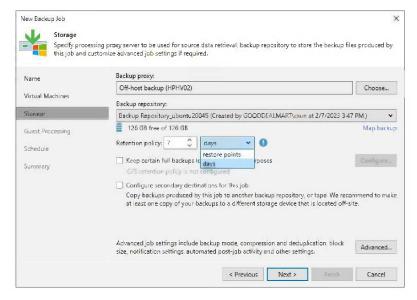
X

proxies are available in the checkbox. Still, the job will fail to start if off-host backup proxies are unavailable or configured properly.

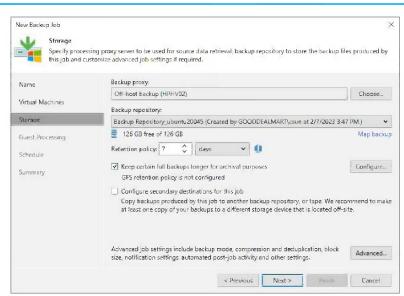
- 18. Click OK.
- Select the Hardened backup repository from the Backup repository drop-down list.



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



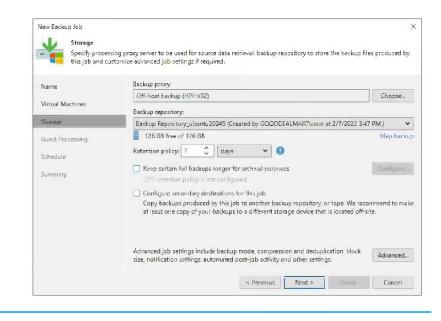
- 22. You can configure GFS retention policy settings for the backup job to ignore the short-term retention policy for some full backups and store them for long-term archiving.
- 23. Select the Keep certain full backups for longer for archival purposes checkbox and click Configure.



- 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 0 months	
Use weekly full backup from the following week of a month:	First v
Keep yearly full backups for: 1 🗘 years	
Use monthly full backup from the following month:	January 🗸
Save as default	Cancel

28. On the Storage page, click Advanced.



- 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.

Backup	Maintenan	ce Storage	Notifications	-lyper-V	Scripts	
Backup	mode					
0		are injected	slower) Linto the full backuup of the most rec			ackup
۲	chain. Best f ☑ Create s	are saved in or backup t	ito new files deper argets wit <mark>h p</mark> oor n backups periodica	andom I/s		he
Active	full backup					
	Create activi Saturday Co		ps periodically on:			
		2				
Sche	dule Setting:				×]
	edule Setting: edule:				×]
Sch	-	5	→ Monday	×	× Months	
Schi O	edule:	5		~ ~		
Sche O	edule: Monthly on:	First			Months	
Sche O	edule: Monthly on: Weekly:	First	lays		Months	
Sche O	edule: Monthly on: Weekly:	First	lays	~	Months Days	
Sche O	edule: Monthly on: Weekly:	First	lays	~	Months Days	

32. Select Incremental and disable synthetic full or active full backups to create a forever forward incremental backup chain if needed.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Backup	mode					
0	Reverse increr Increments are file is aiways a	injected i	nto the full bac			st backup
۲		saved int backup ta hetic full t	o new files dep rgets with pool backups period	random I/		
Active	full backup					
	Saturday Confi	3				

33. On the Advanced Settings,	Advanced Settings
select Maintenance.	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
	Defragment and compact full backup file on: Last Saturday of every month Configure
	Save As Default OK Cancel

- 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.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Storage	-level corruption	on guard				
			Ith check (dete f every month			rruption) on:
Full bac	kup file mainte	enance		and the second		
	Remove delete	ed items di	ata after		17	14 🗘 day
			t full backup fil		1	
	Last Saturday (of every m	onth Configure	2mi		
Schedule S	Settings					
Schedule:						
Montl	hly on: 10:00	PM 🗘	Last	- Friday	· ·	Months.
🔿 Weeki	iy: 10:00	PM 🔘	On these days	SUPERIO	4	Days
Friday						
					OK	Cancel
				1.		
-						

- 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.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts		
Storage	-level corrupti	on guard -					
	Perform <mark>ba</mark> cku At 22:00 on La					corruption	n) on:
Full bac	ku <mark>p file mainte</mark>	nance					
~	Remove delete	d items da	ata after			14 🗘	day
Sch	nedule Settings					×	
Sc	hedule:						
۲	Monthly on:	Last	✓ Satu	urday 🗸	M	onths	
С	Weekly:	On these	days	~	Ē	ays	
	Saturday						
				OK	с	ancel	
1							~

- 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.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Data re	duction					
\checkmark	Enable inline da	ata dedup	lication (recom	mended)		
~	Exclude swap fi	ile blocks ((recommended)		
-	Exclude deleted	file block	ks (recommend	ed)		
Co	mpression level	i				
O	otimal (recomm	ended)				~
	one					
1000	edupe-friendly					
	ptimal (recomm	ended)				
	gh treme					
Ex	treme livers the optimi				anular reste	ore
Ex	treme				anular resto	ore
Ex	treme livers the optima formance and r tion	epository	space consump		anular resto	ore:
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump		anular resto	ore
Ex Del per	treme livers the optima formance and r tion	epository	space consump		anular resto	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump		anular resto	ore Add
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump		~	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump	otion.	~	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump	otion.	~	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump	otion.	~	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump	otion.	~	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump	otion.	~	

44. Select the Storage optimization for the backup from the dropdown list.

lackup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Data r	reduction					
V] Enable inline d	ata dedupl	ication (recom	mended)		
~	Exclude swap fi	ile blocks (i	recommended)		
~	Exclude deleted	d file block	s (recommend	ed)		
Co	ompression level					
C	Optimal (recomm	ended)				~
	IMB	- B-				
55	orage optimizati IMB (recommenc					~
1						
-	IMB (recommend	ied)				
Enci 5	IMB (recommend 12KB 256KB	led)				
Enci 5	512KB 56KB		וזאטי			
Enci 5	12KB 256KB		ero'n		~	र्वतं -
Enci 5	512KB 56KB				~	Àdd
Enci 5	512KB 56KB			Manage pa	∼ asswords	Add
Enci 5	512KB 56KB			Manage pa	~ asswords	Add
Enci 5	512KB 56KB			Manage pa	25swords	Add
Enci 5	512KB 56KB			Manage pa	~ asswords	Add
Enci 5	512KB 56KB			Manage pa	~ asswords	Add
Enci 5	512KB 56KB			Manage pa	asswords	Add

- 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.

Backup	Maintenance	Storage	Notificatio	ns Hyper-V	Scripts	
Data re	duction					
	Enable inline d. Exclude swap fi Exclude deleted	ile blocks (recommen	ied)		
16	mpression level					
O	ptimal (recomm	ended)				~
	rage optimizati	211				
1						
	//B (recommend					~
Del	//B (recommend livers the optim formance and r	al combina			ranular resto	27
Del	livers the optim formance and r	al combina			ranular resto	27
Del per Encrypt	livers the optim formance and r	al combina epository	space consi		ranular resto	27
Del per Encrypt	livers the optim formance and r tion Enable backup	al combina epository file encryp	space consi stion	amption.		27
Del per Encrypt	livers the optim formance and r tion Enable backup Password:	al combina epository file encryp	space consi ntion MART\csun	amption. at 1/7/2023 8		pre
Del per Encrypt	ivers the optim. formance and r tion Enable backup Password: Created by GC	al combina epository file encryp	space consi ntion MART\csun	amption. at 1/7/2023 8	:13 P 👻	pre

- 47. Select Notifications on the Advanced Settings.
- 48. Keep the default settings.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
	nd SNMP notific ad e-mail notific		this job the following re	ecipients:		
Ту	pe in one or m	ore e-mail	addresses sepa	arated by s	emicolon	
	Use global not Use custom no Subject:		ettings settings specifi	ed below:		
	[%JobResult%	6] %JobNa	me% (%Object	Count% ob	jects) %lssu	es%
	 ✓ Notify on s ✓ Notify on v ✓ Notify on e ✓ Notify on e ✓ Suppress n 	varning mor	is until the last i	retry		
Save As [

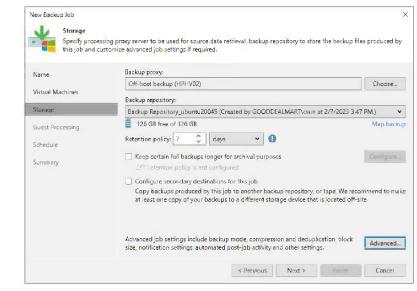
- 49. Select Hyper-V on the Advanced Settings.
- 50. Keep the default settings.

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 crisis consistent backup instead of suspending WM
	As a part of snapshot process, Hyper-V suspends guests not supporting Microsoft VSS. Use this option to keep them running.
Change	ed block tracking
~	Use changed block tracking data (recommended)
Volume	integration component that is auto-deployed on each host. e snapshots
V	Allow processing of multiple VMs with a single volume snapshot Includes other VMs from the job into the snapshot, as opposed to creatin a separate snapshot for each processed VM.

- 51. On the Advanced Settings page, select Scripts and keep the default settings.
- 52. Click OK.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Job scr	ipts					
	Run the followi	ng script b	before the job:			
						Browse
12	Run the followi	ng script a	after the job:			
						Browse
۲	Run scripts eve	ry t 🗘	backup sessi	on		
0	Run scripts on	the selecte	ed days only			Days
	Saturday					

53. Click Next on the Storage page.



- 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		
Guest Process Choose guest	sing OS processing options available for running VMs.	
Name Virtual Machines	Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs configures the OS to perform required application restore steps upon first boot.	processing, and
virtual machines	Customize application handling options for individual machines and applications	Applications
Storage	Enable quest file system indexing	
Guest Processing	Creates catalog of guest files to enable browsing, searching and 1-click restores of i Indexing is optional, and is not required to perform instant file level recoveries.	ndividual files.
Schedule	Customize advanced guest file system indexing options for individual machines	Indexing
Summary	Guest interaction proxy:	1
	Automatic selection	Choose
	Guest OS credentials:	
	Guest US credentials: Select existing credentials or add new	Add
	Select existing credentials or add new 🗸 Manage accounts	

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

Object	Vss	Transaction Logs	Exclusions	Scripts	Add
🔓 DC01-20	Require success	SQL: Truncate, Exchange: Tru	Disabled	No	Edit
					Remov

- 57. On the Processing Settings, click General.
- 58. Keep the default settings.

General	SQL	Oracle	PostgreSQL	Exclusions	Scripts		
Applica	tions						
bac req ()	kup us uired a Require	ng appli pplicatio e succese	cation-specif n restore step ful processin	etects and pr ic methods, a ps upon first g (recommer out ignore fail	nd confi boot. nded)		
	1.5.5		tion processi	-			
VSS Set	tings						
bac Ser	kup. Lo ver, and Proces	gs pruni I other a s transac	ng is support pplications th tion logs with	process tran ted for Micro nat support N n this job (rec her applicatio	soft Exch licrosoft commenc	ange, Micro VSS. led)	
Persiste	nt gue	st agent					
per por	sistent t requi	runtime re <mark>m</mark> ents	process. Dep	ocessing on l loying a pers e process inj	istent ag		

- 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.

General	SQL	Oracle	PostgreSQL	Exclusions	Scripts	
Choose	how t	his job sł	hould process	Microsoft SC	QL Server trans	action logs:
Tru	ncate lo	ogs (prev	ents logs fror	n <mark>g</mark> rowing fo	rever)	
			gs (requires si		Conserved Serverse	
() Bac	kup log	gs period	lically (backed	d up logs will	be truncated)	
Bac	kup lo	gs every:	15 🗘	minutes		
		backups				
۲	Until t	he corres	ponding ima	ge-level back	up is deleted	
	- M			days of log b	ackups	
Log	shippi	ng serve	rs:			1
Â	itomat	ic selecti	on			Choose

- 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.

ieneral	SQL	Oracle	Exclusio	ons Script	s		
Specify	Oracle	account w	ith SYSD	BA privileg	es: 🕦		
💦 Us	e gues <mark>t (</mark>	DS creden	tials			\sim	Add
Archive	ad loan			Ma	inage acc	ounts	
Do	not dele	te archive		201			
🔿 Del	ete <mark>log</mark> s	older thar	n: 24	hours			
O Del	ete logs	over:	10	Ç GB			
🗌 Bac	kup log	s every:	15	minute	S-		
Ret	ain log t	ackups:					
۲	Until th	e correspo	inding im	iage-level l	ackup is	deleted	
0.	Keep or	ily last 1	5 🌲 d	ays of log l	backups		
Log	shippir	ig servers:					
Au	tomatīc	selection					Choose
					-		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.

General SQL Oracle	PostgreSQL	Exclusions	Scripts	
Specify PostgreSQL ac	count with su	peruser privile	ges:	
🙉 Use guest creder	ntials		Ŷ	Add
The specified user is: The specified user is: The specified user with The specified user with The specified user without System user without	password file	e (.pgpass)	l <mark>anage accoun</mark>	ts
Backup logs every:	- A 1	minutes		
Retain log backups (a) Until the corres (b) Keep only last Staging location fo	ponding imag 15 0	days of log ba		
Log shipping serve				1.0
Automatic selecti	20			Choose
			OK	Cance

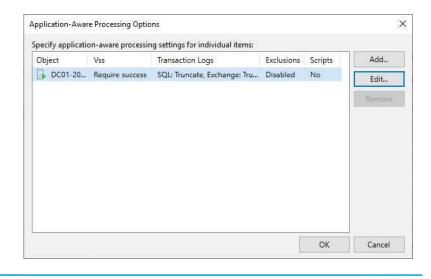
67. On the Processing Settings page, click Exclusions and keep the default settings.

	SQL	Oracle	PostgreSQL	Exclusions	Scripts	
	able file	e level ex	clusions	olders:		
Fo	lder					Add Remove
	ude on	ly the fo	lowing files a	and folders:		Add Remove
exc	luded f	iles, and	stores extra p	per-file metad	e proportional t data in backup. he total number	Thus, it is

- 68. On the Processing Settings page, click Scripts and keep the default settings.
- 69. Click OK.

General	SQL	Oracle	PostgreSQL	Exclusions	Scripts	
00	Requir Ignore	script ex	ful script exec ecution failure xecution			
Window		0				
Pre-	freeze	script:				
						Browse
Pos	t-thaw	script:				
						Browse
Linux sc	rinte					
		script:				
						Braikse
Pos	t-thaw	script:				
						Browse

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



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

Guest Process Choose guest	sing OS processing options available for running VMs.	
Name Virtual Machines	Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs configures the OS to perform required application restore steps upon first boct.	processing, an
Virtual Machines	Customize application handling options for individual machines and applications	Applications
Storage	Enable guest file system indexing	
Guest Processing	Creates catalog of guest files to enable browsing, searching and 1-click restores of Indexing is optional, and is not required to perform instant file level recoveries.	individual files
10.00	Customize advanced guest file system indexing options for individual machines	Indexina
Schedule	Guest interaction proxy:	
Summary	Automatic selection	Choose
	Guest OS credentials:	1
	Select existing credentials or add new	Add
	Manage accounts	
	Customize guest OS credentials for individual machines and operating systems	Credentials.
	Verify network connectivity and credentials for each machine included in the job	Test Now
	< Previous Next > Finish	Cancel

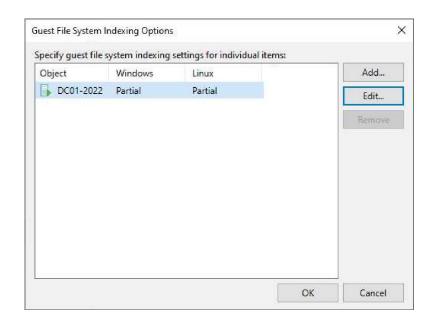
72. On the Guest File System Indexing Options page, select the VM, click Edit and select Windows indexing.

secify guest file s	ystem indexing	settings for individual	items:		
Object	Windows	Linux		Add	
DC01-2022	Partial	Partial		Edit	
				Windows index Linux indexing.	-

- 73. On the Guest file system indexing mode page, keep the default settings.
- 74. Click OK.

Guest file system indexing mode:		
Disable indexing		
Index everything		
Index everything except:		
Folder	Add.	•
%windir%	Remo	/E
%ProgramFiles%		te c
%ProgramFiles(x86)%	Defau	it
Index only following folders:		
Folder	Add.	
	Remo	/e
<u>11</u>		
0	Canc	el

75. Click OK on the Guest file system indexing mode page.



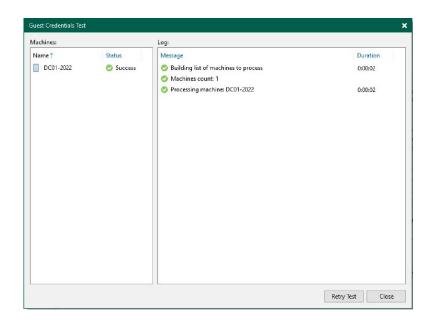
76. Keep the default Automatic selection setting in the Guest interaction proxy field.

Guest Process Choose guest	ing OS processing options available for running VMs.	
Name	Enable application-aware processing	
/irtual Machines	Detects and prepares applications for consistent backup, performs transaction logs configures the OS to perform required application restore steps upon first boot.	processing, an
	Customize application handling options for individual machines and applications	Applications.
Storage	Enable quest file system indexing	
Suest Processing	Creates catalog of guest files to enable browsing, searching and 1-click restores of i	individual files.
Schedule	Indexing is optional, and is not required to perform instant file level recoveries.	
Jenedule	Customize advanced guest file system indexing options for individual machines	Indexing
Summary	Guest interaction proxy:	
	Automatic selection	Choose
	Guest OS credentials:	
	×	Add
	Manage accounts	
	Customize guest OS credentials for individual machines and operating systems	Credentials
	Verify network connectivity and credentials for each machine included in the job	Test Now

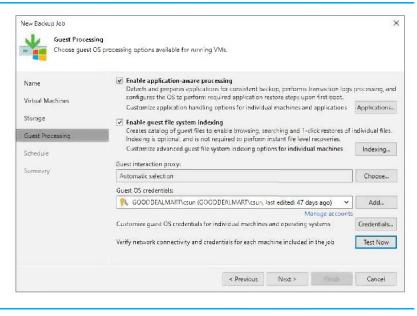
- 77. Choose a user account on the Guest Processing page with sufficient permissions from the Guest OS credentials drop-down list.
- 78. If you have multiple VMs at the same job, click Credentials to Customize guest OS credentials for individual machines and operating systems.
- 79. On the Guest Processing 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	g processing options available for running VMs.	
Name Virtual Machines	Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs configures the OS to perform required application restore steps upon first boot.	processing, and
virtual Machines	Customize application handling options for individual machines and applications	Applications
Storage Guest Processing	Enable guest file system indexing Creates catalog of guest files to enable browsing, searching and 1-click restores of i Indexing is optional, and is not required to perform instant file level recoveries.	individual files.
Schedule	Customize advanced guest file system indexing options for individual machines Guest interaction proxy:	Indexing
Summary	Automatic selection	Choose
	Guest OS credentials:	
	🙌 GOODDEALMART\csun (GOODDEALMART\csun, last edited: 47 days ago) 🗸	Add
	Manage accounts	
	Customize guest OS credentials for individual machines and operating systems	Credentials
	Verify network connectivity and credentials for each machine included in the job	Test Now

- 80. On the Guest Credentials Test page, ensure verification success for each machine.
- 81. Click Close.



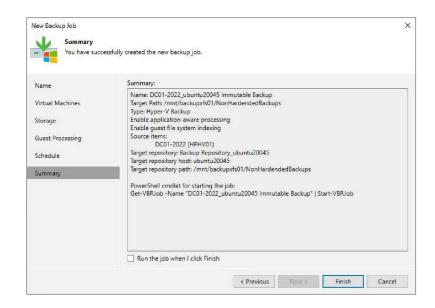
82. Click Next on the Guest Processing page.



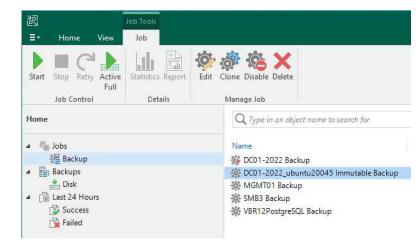
- 83. Select Run the job automatically checkbox on the Schedule page and select your specified schedule.
- 84. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
- 85. Define the time interval the backup job must complete in the Backup window 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.

lame	🗹 Run the job automatically	1				
/irtual Machines	Daily at this time:	10:00 PM 🗘	Everyday		~	Days
	O Monthly at this time:	10:00 PM 🔅	Fourth 🛩	Saturday	~	Months_
itorage	O Periodically every:	1 4	Hours		~	Schedule.
Guest Processing	O After this job:					
chedule	Automatic retry					
	Retry failed items pro	cessing:	🗘 times			
ummary	Wait before each retry	attempt for:	0 🗘 minute	25		
	Backup window					
	✓ Terminate the job out	tside of the allov	ed backup wind	ow		Window
	Long running or accid		a second s		impact	

87. Click Finish on the Summary page.



88. Verify that the backup job has been added.

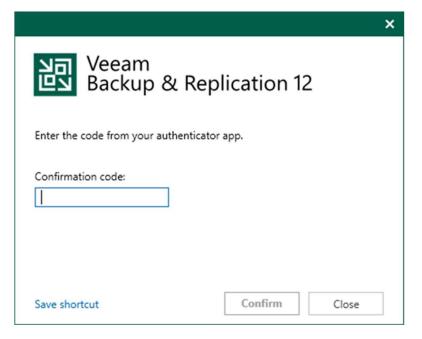


Create a Backup job to backup the specified Physical Machines (Managed by Backup Server Mode)

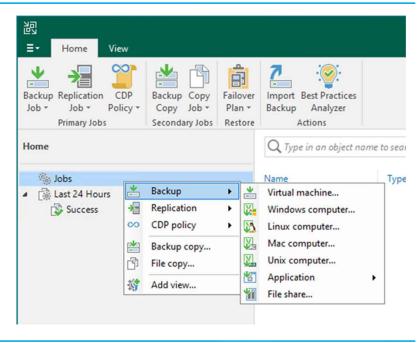
This procedure uses the managed backup server mode to create a backup job to back up the specific physical production machines.

Instructions	Screenshot (if applicable)	
 Log in to the Veeam Backup and replication manager server. Open the Veeam Backup & Replication Console and click Connect. 	Screenshot (if applicable) Veeam Veeam Backup & Replication 1 Type in a backup server name or IP address, backup servand user credentials to connect with. localhost	
	GOODDEALMART\csun Password Image: Connect state Save shortcut	Close

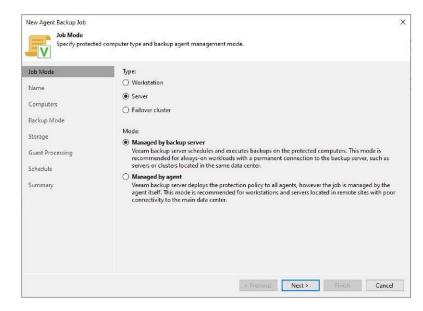
3. Enter the MFA Confirmation code and click Confirm.



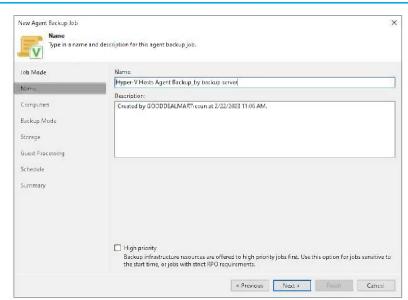
- 4. Select Jobs on the Home page and right-click Jobs.
- 5. Select Backup and click Windows computer.



 Select Managed by backup server mode on the Job Mode page and click Next.



- 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.



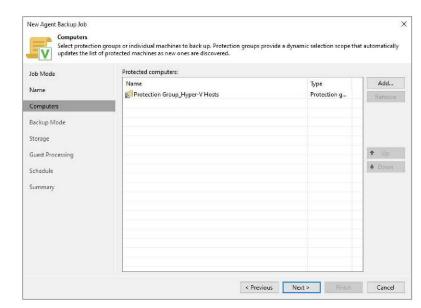
10. On the Computers page, click Add and select Protection group.

Job Mode	Protected computers:	. There is a second sec	
Name	Name	Туре	Add Protection group
Computers			Individual comput
Storage Guest Processing Schedule Sammery			€ Up ♦ Court

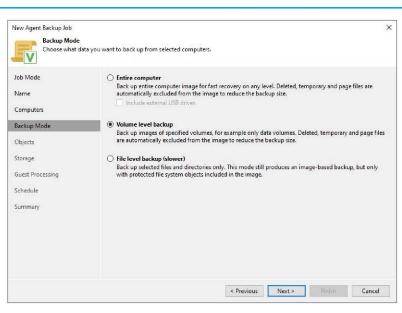
- 11. Select the protection group on the Select Objects page and click OK.
- 12. You can select multiple protection groups for the same backup job and repeat the step to add them.

ects:	25
rotected computers	
Protection Group_Hyper-V Hosts	
HPHV01	
e in an object name to search for	0
	Protection Group_Hyper-V Hosts

13. Click Next on the Computers page.



14. Select Volume level backup mode on the Backup Mode page to back up the specified computer volumes and click Next.



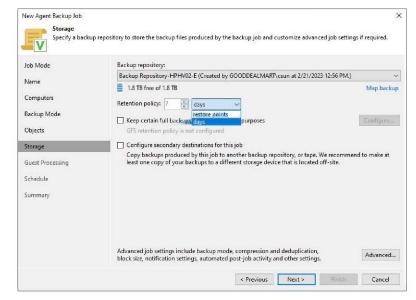
- 15. On the Objects page, select Backup the following volumes only.
- 16. Click Add and select OS volume.
- 17. Click Next

lob Mode	Backup the following volumes only:	
Name Computers Backup Mode	Object	Add OS volume Volume name
Objects		
Storage		
Guest Processing	O Backup all volumes except the following:	
chedule	Object	Addu
ummary		Edit
		Remove

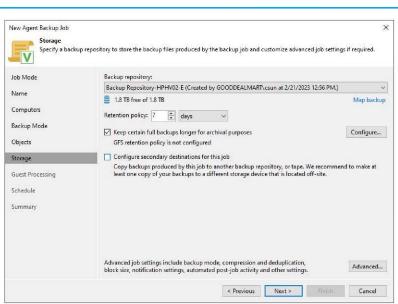
 Select the backup repository from the Backup repository dropdown list on the Storage page.

Storage Specify a back	up repository to store the backup files produced by the backup job and customize advanced job setting	s if required.
Job Mode	Backup repository:	
Name	Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)	
Computers	1.8 TB free of 1.8 TB	Map back
	Retention policy: 7 🔹 days 🗸	
Backup Mode	Keep certain full backups longer for archival purposes	Configure.
Objects	GFS retention policy is not configured	
Storage	Configure secondary destinations for this job	
Guest Processing	Copy backups produced by this job to another backup repository, or tape. We recommen least one copy of your backups to a different storage device that is located off-site.	id to make at
Schedule		
Schedule		
Schedule		
Schedule		
Schedule	Advanced in activity include backup mode compression and det with the	
Schedule	Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings.	Advanced

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



- 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.



- 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 0 months		
Use weekly full backup from the following week of a month:	First	~
Keep yearly full backups for: 1 0 years		
Use monthly full backup from the following month:	January	v
Save as default	Canc	el

27. On the Storage page, click Advanced.

Job Mode	Backup repository:	
Name	Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)	h
	1.8 TB free of 1.8 TB	Map ba
Computers	Retention policy: 7 😴 days 🗸	
Backup Mode		
	Keep certain full backups longer for archival purposes	Configu
Objects		
Objects	GFS retention policy is not configured	
Objects Storage	Configure secondary destinations for this job	
and a second		end to make
Storage	Configure secondary destinations for this job Copy backups produced by this job to another backup repository, or tape. We recomme	end to make
Storage Guest Processing Schedule	Configure secondary destinations for this job Copy backups produced by this job to another backup repository, or tape. We recomme	end to make a
Storage Guest Processing	Configure secondary destinations for this job Copy backups produced by this job to another backup repository, or tape. We recomme	end to make i
Storage Guest Processing Schedule	Configure secondary destinations for this job Copy backups produced by this job to another backup repository, or tape. We recomme	end to make
Storage Guest Processing Schedule	Configure secondary destinations for this job Copy backups produced by this job to another backup repository, or tape. We recomme	end to make .
Storage Guest Processing Schedule	Configure secondary destinations for this job Copy backups produced by this job to another backup repository, or tape. We recomme	end to make
Storage Guest Processing Schedule	Configure secondary destinations for this job Copy backups produced by this job to another backup repository, or tape. We recomme	end to make

- 28. Select Create synthetic full backups or Active full backups periodically checkbox.
- 29. Schedule full backups periodically and click OK.

avance	d Settings					
Backup	Maintenance	Storage	Notifications	Integration	Scripts	
Synth	etic full backup					
ЫC	reate synthetic	full backu	ps periodically			Days
C	Create on: Satur	rday				
Active	e f <mark>ull</mark> backup —					
	Create active ful Saturday Conf		perio <mark>d</mark> ically			

- 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.

Backup	Maintenance	Storage	Notifications	Integration	Scripts	
Storage	e-level corrupt	ion guard	l			
✓ P	erform backu	<mark>p file</mark> s hea	alth check (dete	ects and auto	-heals cor	ruption)
Д	at 22:00 on Las	t Friday o	f every month	Configure		
Full bac	ckup file main	tenance				
R	emove delete	d items d	ata after			30 🤤 days
	efragment an	d compa	ct fu <mark>ll backup f</mark> i	le		in the second se
			onth Configu			
100				10000		
chedule S	Settings					
chedule						
		PM ^	Last	← Friday	~	Months
Month	nly on: 10:00	~	Last			
Schedule: Month Weekl	nly on: 10:00	~	Last On these day		•	Months Days
Month	nly on 10:00	~	Personal Contraction			
 Month Weekl 	nly on 10:00	~	Personal Contraction			
 Month Weekl 	nly on 10:00	~	Personal Contraction		v	Days
 Month Weekl 	nly on 10:00	~	Personal Contraction		v	Days
 Month Weekl 	nly on 10:00	~	Personal Contraction		v	Days
 Month Weekl 	nly on 10:00	~	Personal Contraction		v	Days

- 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.

Backup	Maintenance	Storage	Notificati	ons Integ	ration	Scripts	
Storag	ge-level corrupt	ion guard					
	Perform backu	p files hea	lth check i	detects and	l auto-l	neals cor	ruption)
	At 22:00 on Las	t Friday of	every mo	nth Config	gure		
Full b	ackup file main	tenance					
\checkmark	Remove delete	d items da	ita after				30 🖨 days
	Defragment an	d compac	t fu <mark>ll bac</mark> k	up file			teatment
	Last Saturday o						
							27
Se	hedule Setting:						×
s	chedule:						
0	Monthly on:	Last	~	Saturday	~	Mon	ths
C) Weekly:	On these	days		Ψ.	Day	Cini .
	Saturday						
				-		-	20
				Oł		Can	cel

- 36. On Advanced Settings, select Storage.
- 37. Select the Compression level from the drop-down list.

Backup	Maintenance	Storage	Notifications	Integration	Scripts	
Data r	eduction					
Co	mpression leve	ŀ:				
0	ptimal (recomn	nended)				Ý
	one					6
De	edupe-friendly	k b				
	ptimal (recomn igh	rended)				
	treme					
	ation					
Encry	ption Enable backup Password:	file encry	ption			
Encry		file encry	rption		~	Add
Encry	Enable backup	i file encry		/Janage passw	vords	Add
	Enable backup) file encry		Лападе разsм	ords	Add

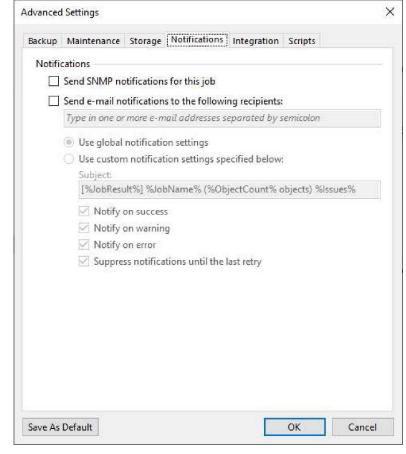
 Select Storage optimization from the drop-down list.

Backup	Maintenance	Storage	Notifications	Integration	Scripts	
Data r	eduction					
Co	mpression level	ŀ:				
0	ptimal (recomn	nended)				~
CP	ovides for the be U usage and fas prage optimizati	stest resto		rmance ratio,	lowest ba	ckup proxy
-	MB (recommen	alari ya				~
0.000	ИВ					
51	AB (recommend 2KB	ded)				
Enc 25	6KB					
Enc 25	6KB Enable backup Password:	file encry	ption			
End 25	Enable backup	file encry	ption		~	Add
Enc <mark>25</mark>	Enable backup	file encry		Manage passw	vords	Add
	Enable backup	file encry		Лападе passw	vords.	Add

- 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.

Backup	Maintenance	Storage	Notifications	Integration	Scripts	
Data r	eduction					
Co	mpression leve	l:				10
O	ptimal (recomn	nended)				~
CP	ovides for the b U usage and fa prage optimizat	stest restore		rmance ratio,	lowest ba	ockup proxy
11	MB (recommen	ded)				~
	Enable backur	file encryp	tion			
	Enable backup Password:					
	Password: Created by G		1ART∖csun at	1/7/2023 8:13 Manage passw		Add

- 41. On the Advanced Settings, select Notifications.
- 42. Keep the default settings.

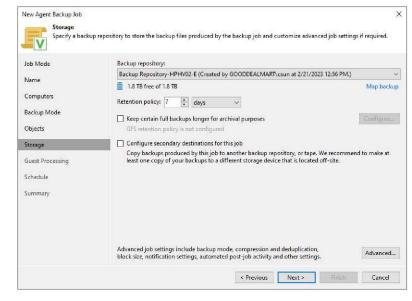


43. On the Advanced Settings, select Integration.	Advanced Settings	×
select integration.	Backup Maintenance Storage Notifications Integration Scripts	
44. Keep the default settings.	Enable backup from storage snapshots Use storage snapshots as the data source for this job. Processing of volu stored on supported primary storage arrays will be performed by your b proxy servers, removing the load from the protected servers. Off-host backup proxy:	
	Automatic selection Chr	oose
	Save As Default OK	Cancel

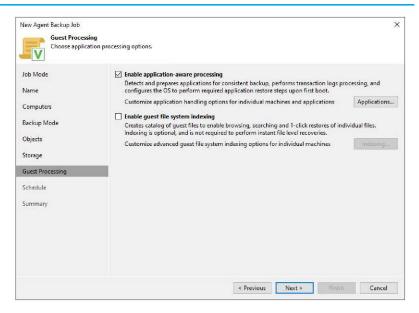
- 45. On the Advanced Settings page, select Scripts.
- 46. Keep the default settings and click OK.

Backup	Maintenance	Storage	Notifications	Integratio	n Scripts]
Job so	ripts					
	Before the job:					
						Browse
	After the job:					
						Browse
(0)	Run scripts eve	erv 1	backup se	scion		
0	Run scripts on	- 14 <u>- 1</u>				Days
	Saturday					Contract of the Contract of the
	2					
	4					
	4					
	4					
	~					

47. On the Storage page, click Next.



- 48. When you add Physical machines running VSSaware 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



page, and click Applications.

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

Object	VSS	Transaction Logs	Scripts	Add
Protection	Require success	SQL: Truncate, Exchange: Tr	No	Edit
				Remove

- 51. On the Processing Settings page, select General.
- 52. Select Enable applicationaware processing checkbox.
- 53. Select Process transaction logs with this job (recommended).

rocessing	Settings						>
General	SQL	Oracle	SharePoint -	Scripts			
Applic	ations —						
con	sistent ba	ackup usii	ng applicatio	n-specif	prepares applic ic methods, an core steps upon	d configures	
\checkmark	Enable ap	plication	-aware proce	essing			
Cho suce	cessful ba	ther this ju ackup. Lo	gs pruning is	support	insaction logs u ed for Microso 15 that rely on V	ft Exchange,	
					ecommended)		
0	Perform	copy only	(lets anothe	r applica	ition us <mark>e l</mark> ogs)		
					ОК	Cancel	

- 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).

General SQL	Oracle SharePoint Sc	ripts	
Specify Wind	ows account with sysadmin	rale on SQL Server:	
-	t credentials	~	Add
Truncate	this job should process Micr logs (prevents logs from gro	wing forever)	saction logs
	uncate logs (requires simple		
O Backup l	ogs periodically (backed up lo	gs will be truncated)
Backup lo	gs every: 15 💲 minutes		
Retain lo	g backups:		
Until •	he corresponding image-lev	el backup is deleted	
() Кеер	only last 15 🌲 days of lo	∘g hackups	
		ОК	Cancel

- 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.

	SharePoint		
Specify Oracle account with	101.040.000 A.C.200	privileges: 🕦	
💦 Use guest OS credentia	ils	~	Add
Archived logs:		Manage accounts	
Do not delete archived	logs		
	<u> </u>		
O Delete logs older than:	24 🤹	hours	
O Delete logs over:	10 🌻	GB	
Backup logs every:	15 🌲	minutes.	
Retain log backups:	-		
Until the correspond			ł
Keep only last 15	🔹 days	of log backups	

- 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.

General S	QL Oracle	SharePoint	Scripts		
Specify Sh	narePoint adm	in account:			
Provide the second seco	ues <mark>t cred</mark> entia	and the second		~	Add
		Manage a	iccounts		

- 62. On the Processing Settings page, select Scripts.
- 63. Keep the default settings and click OK.

General	SQL	Oracle	SharePoint 8 1	Scripts		
Specify	admin	account fo	or script execu	ition:		
💦 Us	e gues <mark>t</mark>	credentials	ii.		~	Add
				Manage a	accounts	
Script p	orocessi	ng mode				
0	Require	successfu	l script execu	tion		
0	Ignore s	script exec	ution failures			
۲	Disable	script exec	ution			
Snapsh	ot scrip	ts —				
Pre	-freeze s	script:				
						Browse
Pos	t-thaw	script:				
						Browse
				-		-
					OK	Cance

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

Object	VSS	Transaction Logs	Scripts	Add
Protection	Require success	SQL: Truncate, Exchange: Tr	No	Edit
				Remove

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

Job Mode Name	Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs processing, and configures the C5 to perform required application restore steps upon first boot.
Computers Backup Mode Objects Storage	Configures the US to perform required application feature steps upon first boot. Customize application handling options for individual machines and applications Tealse 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 Indexi
Guest Processing Schedule Summary	-

66. On the Guest File System Indexing Options page, select the Object, click Edit and.

Object	Indexing	Add
Protection Group_Hy	Partial	Edit
		Remove

- 67. On the Guest file system indexing mode page, keep the default settings.
- 68. Click OK.

uest file system indexing mode:		
) Disable indexing		
) Index everything		
Index everything except:		
Folder	^	Add
%windir%		Remove
%ProgramFiles%		
%ProgramFiles(x86)%		Default
) Index only following folders:		
Folder		Add
		Remove
	ОК	Cancel

69. On the Guest File System Indexing Options page, click OK.

Dbject	Indexing	Add
Protection Group_Hy	Partial	Edit
		Remove

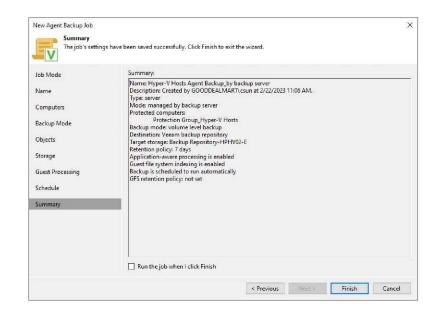
70. On the Guest Processing page, click Next.

New Agent Backup Job	
Guest Proces	
Choose applic	ation processing options.
Job Mode Name Computers Backup Mode	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 Finable guest file system indexing Creates catalog of quest file to enable browsing, searching and 1-click restores of individual files.
	Creates catalog of guest files to enable browsing, searching and i-click restores of individual files. Indexing is optional, and is not required to perform instant file level recoveries.
Objects	Customize advanced guest file system indexing options for individual machines
Storage	
Guest Processing	
Schedule	
Summary	
Summary	

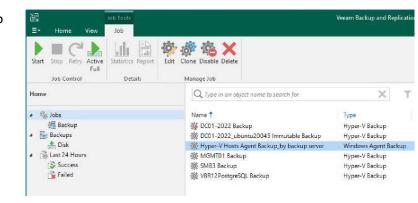
- 71. Select Run the job automatically checkbox on the Schedule page and select your specified schedule.
- 72. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
- 73. Define the time interval the backup job must complete in the Backup window 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.

Job Mode	🗹 Run the job automatically	(
Name	Daily at this time:	10:00 PM	Everyday	~	Days
	 Monthly at this time: 	10:00 PM	Fourth v	Saturday 😪	Months
Computers	O Periodically every:	1	Hours	~	Schedule.
Backup Mode	O After this job:	DC01-2022 Back	up (Created by GOOI	DEALMART\csun at 2/21	/2023 10:24 /
Objects	Automatic retry				
Storage Guest Processing	Retry failed items proc Wait before each retry Backup window		 times minutes 		
Schedule	Terminate job outside	of the backup wir	ndow		Window
Summary	Prevent long-running infrastructure during t		arted job from impact	ing your production	

75. On the Summary page, click Finish.



76. Verify that the backup job has been added

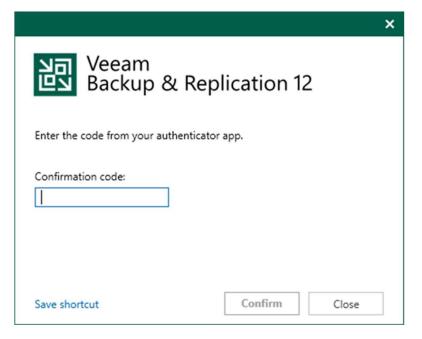


Create a Backup job to backup the specified Physical Machines (Managed by Agent Mode)

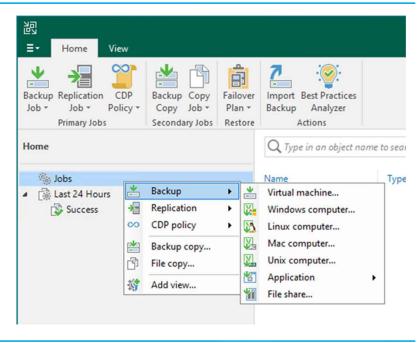
This procedure uses the managed backup server mode to create a backup job to back up the specific physical production machines.

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

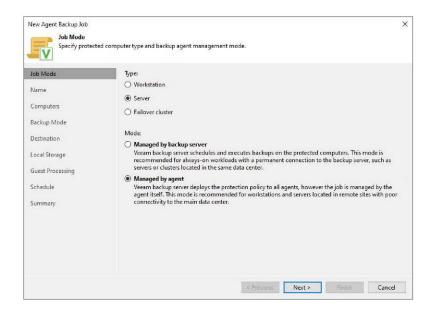
3. Enter the MFA Confirmation code and click Confirm.



- 4. Select Jobs on the Home page and right-click Jobs.
- 5. Select Backup and click Windows computer.



6. On the Job Mode page, select Managed by agent mode and click Next.



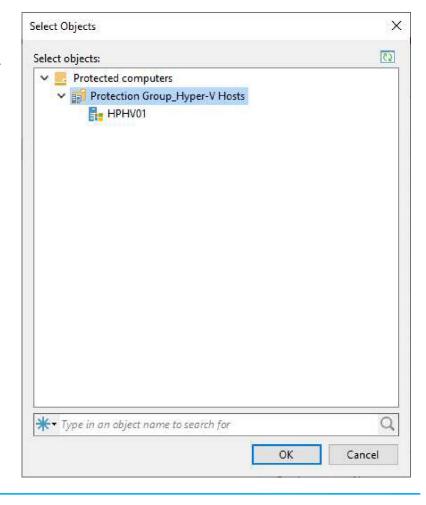
- 7. On the Name page, enter a name for the backup job in the Name field.
- Give a brief description in the Description field for the future.
- 9. Click Next.

n_by agent RTvesun at 2/22/2023 11:12 AM.
RTvesun at 2/22/2023 11:12 AM
RTLcsun at 2/22/2023 11:12 AM

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

Job Mode	Protected computers:		
Name	Name	Туре	Add
Computers			Protection group Individual compute
Backup Mode			
Objects			
Destination			+ Up
Local Storage			+ Down
Guest Processing			
Schedule			
Summary			

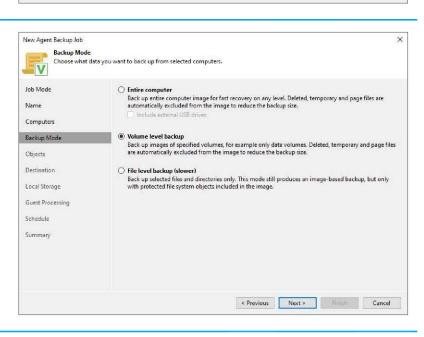
- Select the protection group on the Select Objects page and click OK.
- 12. You can select multiple protection groups for the same backup job and repeat the step to add them.



13. Click Next on the Computers page.

lob Mode	Protected computers:						
Name	Name	Type Protection g	Add				
Computers			_				
Backup Mode							
Objects							
Destination			+ Up				
Local Storage			+ Down				
Guest Processing							
Schedule							
Summary			_				

14. Select Volume level backup mode on the Backup Mode page to back up the specified computer volumes and click Next.



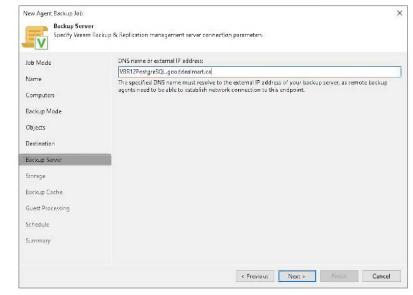
- 15. On the Objects page, select Backup the following volumes only.
- 16. Click Add and select OS volume.
- 17. Click Next

Objects Specify objects	to include in the backup.	
lob Mode	Backup the following volumes only:	
Name Computers Backup Mode	Object	Add OS volume Volume name
Objects		
Destination		
.ocal Storage	O Backup all volumes except the following:	
Suest Processing	Object	Add.,
Schedule		Edit
Summary		Remove

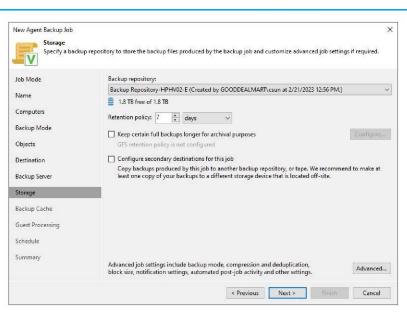
18. Select the Veeam backup repository and click Next.

Choose where	ou want to backup data to.
Job Mode Name Computers Backup Mode Objects	 Local storage Choose this option to back up to a locally attached storage device such as USB, Firewire or eSATA extern 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 a regular file server. Vecam backup repository Choose this option to back up to a backup repository managed by Vecam Backup & Replication 10 or
Destination	later server.
Backup Server Storage Backup Cache Guest Processing Schedule Summary	O Veeam Cloud Connect repository Choose this option to back up to a cloud repository managed by Veeam Cloud Connect service provide

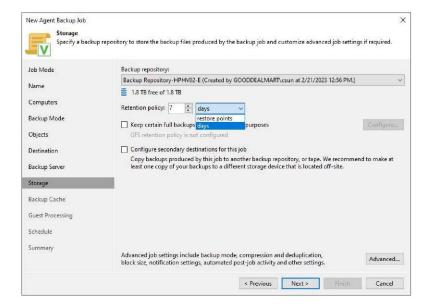
19. Enter the Veeam Backup and Replication manager server name or IP address in the DNS name or external IP address field on the Backup Server page.



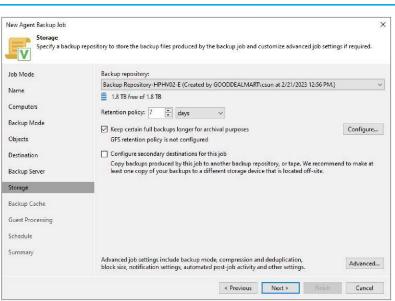
20. Select the backup repository from the Backup repository dropdown list on the Storage page.



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



- 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.



- 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 0	weeks		
If multiple full backups exist, use	e the one fr	om:	Sunday	v.
Keep monthly full backups for:	1 0	months		
Use weekly full backup from the	following	week of a month:	First	×.
Keep yearly full backups for:	1 0	years		
Use monthly full backup from th	ne followin	g month:	January	~

29. On the Storage page, click Advanced.

Job Mode	Backup repository:	
Name	Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)	
	1.8 TB free of 1.8 TB	Map I
Computers	Retention policy: 7 🔹 days 🗸	
Backup Mode	Received In Concerning In Conc	e
	Keep certain full backups longer for archival purposes	Config
Objects	GES retention policy is not configured	
Objects Storage	GFS retention policy is not configured Configure secondary destinations for this job	
		ıd to makı

- 30. Select Create synthetic full backups or Active full backups periodically checkbox.
- 31. Schedule full backups periodically and click OK.

dvanced	d Settings			
Backup	Maintenance	Storage Notifications	s	
Synth	etic full backup			
	reate synthetic Create on: Satu	full backups periodically rday	y	Days
Active	e f <mark>ull</mark> backup			
	Create active ful Saturday Conf	l backups periodically igure		

- 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.

torage-level corruption guard Perform backup files health check (detects and auto-heals corruption) Last Friday of every month Configure ull backup file maintenance Remove deleted items data after Defragment and compact full backup file Last Saturday of every month Configure Schedule Settings Schedule: Monthly on: Last Friday Months Weekly: On these days Payson Friday OK Cancel	Backup	Maintenanc	e Storage	Notific	ations			
Last Friday of every month Configure ull backup file maintenance Remove deleted items data after Defragment and compact full backup file Last Saturday of every month Configure Schedule Settings Schedule: Monthly on: Last Friday Months Weekly: On these days Payson Friday	Storag	ge-level corru	ption guard					
ull backup file maintenance Remove deleted items data after Defragment and compact full backup file Last Saturday of every month Configure Chedule Settings Chedule: Monthly on: Last Friday Months Days Friday	\square	Perform back	cup files healt	t <mark>h</mark> chec	k (detects a	and auto	o- <mark>h</mark> eals corr	uption)
 Remove deleted items data after Defragment and compact full backup file Last Saturday of every month Configure Schedule Settings Schedule: Monthly on: Last Friday Months Weekly: On these days Days Friday 		Last Friday of	f every month	h Coni	ïgure			
C Defragment and compact full backup file Last Saturday of every month Configure Schedule Settings Schedule: Monthly on: Last Friday Months Weekly: On these days Friday	Full bi	ackup file ma	intenance					
Last Saturday of every month Configure Schedule Settings X Schedule: Monthly on: Last V Friday Months Weekly: On these days V Days Friday		Remove dele	ted items dat	ta after				30 🔅 days
Schedule Settings × Schedule: Monthly on: Last Friday Months Weekly: On these days Days Friday		Defragment a	and compact	fu <mark>ll b</mark> a	ckup file			
Schedule Settings × Schedule: Monthly on: Last Friday Months Weekly: On these days Days Friday		Last Saturday	of every mo	nth C	onfigure			
Schedule: Monthly on: Last Friday Months Weekly: On these days Friday								
Schedule: Monthly on: Last Friday Months Weekly: On these days Friday								
Monthly on: Last Friday Months Weekly: On these days Days Friday								3256
O Weekly: On these days V Days	Sche	dule Settings						×
Friday		5						×
	Sche	edule:	Last	~	Friday	*	Months.	
OK Cancel	Sche	edule: Vonthly on:			Friday	>		
Cancer	Sche	edule: Monthly on: [Neekly:			Friday	>		
	Sche	edule: Monthly on: [Neekly:				~	Days	
	Sche	edule: Monthly on: [Neekly:				~	Days	
	Sche	edule: Monthly on: [Neekly:				~	Days	
	Sche	edule: Monthly on: [Neekly:				~	Days	
e As Default OK Can	Sche	edule: Monthly on: [Neekly:				~	Days	_

- 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.
- 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.

Backup	Maintenance	Storage Notificat	ions		
Stora	ge-level corruptio	n guard			
\checkmark	Perform backup	files health check	(detects and auto	-heals co	orruption)
	Last Friday of eve	ery month Config	jure		
Full b	ackup file mainte	nance			
	Remove deleted				30 🜻 da
	Defragment and	compact full back	un file		
	Last Saturday OF	every month Cor	ingule		
	Schedule Setting	s			×
	Schedule Setting	5			×
	-		Saturday	✓ N	X Nonths
	Schedule:		Saturday		1.4
	Schedule: Monthly on: Weekly:	Last 🗸	Saturday		fonths
	Schedule: Monthly on:	Last 🗸		~	Aonths Days
	Schedule: Monthly on: Weekly:	Last 🗸	Saturday	~	fonths
	Schedule: Monthly on: Weekly:	Last 🗸		~	Aonths Days
	Schedule: Monthly on: Weekly:	Last 🗸		~	Aonths Days

- 38. On Advanced Settings, select Storage.
- 39. Select the Compression level from the drop-down list.

Backup	Maintenance	Storage	Notifications			
Data r	eduction					
Co	mpression level	ŀ:				22
0	ptimal (recomn	nended)				×
	one					
De	edupe-friendly ptimal (recomm	nended)				
	gh	nemerce)				1
Ex	treme					
Encry	ption Enable backup	file encry	/ space consur /ption			
Encry		file encry				
Encryj	Enable backup	file encry	/ption	Manage pas	swords	Add
Encry	Enable backup	file encry	/ption		swords	Add
Encry	Enable backup	file encry	/ption		swords	Add

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

		C 1			
Backup	Maintenance	Storage	Notifications		
Data r	eduction				
Co	mpression leve	Ŀ			
0	ptimal (recomn	nended)			~
CP	ovides for the b U usage and fa prage optimizati	stest resto	ession to performance rat re.	tio, lowest	backup proxy
11	MB (recommen	ded)			~
1000	ИВ				
	MB (recomment	ded)			1
51 Eng 25	2KB				
		Service States	7872012-1		
	Enable backup	file encry	ption		
	Password:	file encry	ption	¥	Add
		file encry	ption Manage pa	sswords	Add
		tile encry		sswords	Add
		tile encry		sswords	Add
		tile encry		sswords	Add
		tile encry		sswords	Add
		tile encry		sswords	Add
		file encry		sswords	Add
		tile encry		sswords	Add
		tile encry		sswords	Add

- 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.

Backup	Maintenance	storage Notifica	tions	
Data r	eduction			
Co	mpression level:			
0	ptimal (recomme	nded)		~
CPI	ovides for the bes U usage and faste rage optimization	est restore.	performance ratio, lowest t	backup proxy
1	AB (recommende			~
\leq	Enable backup f	ile encryption		
	Password: Created by GO	ODDEALMART\cs	sun at 1/7/2023 8:13 🗸	Add
	Created by GO	ODDEALMART\cs	un at 1/7/2023 8:13 \vee 🗌	Add

43. On the Advanced Settings, select Notifications.

E

44. Keep the default settings and click OK.

Backup	Maintenance	Storage	Notifications		
Notifi	cations				
	Send daily e-m	ail report	to the <mark>following</mark> re	ecipients:	
	Type in one or	more e-m	ail addresses sepa	rated by semicolon	
	Send daily sun	nmary at:	10:00 PM 📫		
	Use global	notificatio	on settings		
			ion settings specif	ied below:	
	Subject:				
	[%JobRest	ilt%] %Job	Name% (%Object	tCount% objects) %lssue	es%
	V Notify	on success	5		
	🗵 Notify	on warnin	9		
	🗹 Notify	on error			
Backu	p monitoring				
\checkmark	Warn me if no	backups v	were created in the	e last 🕴 🖨 days	
			ion if an agent do ified time period.	es not report any succes	sful
Save As	Default			ОК	Cancel

5. 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.
	Job Mode	Backup repository:
		Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:56 PM.)
	Name	🛢 1.8 TB free of 1.8 TB
	Computers	Retention policy: 7 😴 days 🗸
	Backup Mode	
	Objects	GFS retention policy is not configured
	Destination	Configure secondary destinations for this job
		Copy backups produced by this job to another backup repository, or tape. We recommend to make at
	Backup Server	least one copy of your backups to a different storage device that is located off-site.
	Storage	
	Backup Cache	
	Guest Processing	
	Schedule	
	Summary	
		Advanced job settings include backup mode, compression and deduplication, block size, notification settings, automated post-job activity and other settings.
		< Previous Next > Finish Cancel
. On the Backup Cache page, keep the default settings and click Next.	Job Mode Name Computers Backup Mode Objects Destination Backup Server	che allows backups to continue on schedule even if remote backup target is temporarily unavailable.
page, keep the default	Backup Cache Local backup ca Job Mode Name Computers Backup Mode Objects Destination	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 To cation: O Automatic selection (recommended) We will pick a suitable volume with most free disk space available on every protected machine. O Manual selection (psecified volume must exist on every machine)
page, keep the default	Backup Cache Local backup cac Local backup cac Job Mode Name Computers Backup Mode Objects Destination Backup Server Storage Backup Cache Guest Processing	che allows backups to continue on schedule even if remote backup target is temporarily unavailable. Enable backup cache Wherever 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 Decision Galance Galance Location: Automatic selection (precommended) We will pick a suitable volume with most free disk space available on every protected machine. Manual selection (precified volume must exist on every machine)

- 47. When you add Physical machines running VSSaware 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.
- 49. On the Application-Aware Processing Options page, select the Object and click Edit.

Job Mode Name	Inable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs proc configures the OS to perform required application restore steps upon first boot.	cessing, and
Computers Backup Mode Objects Destination Backup Server Storage	Customize application handling options for individual machines and applications Inable guest file system indexing Creates catalog of guest files to enable browsing, searching and 1-click restores of individual reacting is optional, and is not required to perform instant file level recoveries. Customize advanced guest file system indexing options for individual machines	Application
Backup Cache Guest Processing Schedule	-	
Summary	< Previous Next > Finish	Cance

Object	VSS	Transaction Logs	Scripts	Add
Protection	Require success	SQL: Truncate, Exchange: Tr	No	Edit
				Remove

- 50. On the Processing Settings page, select General.
- 51. Select Enable applicationaware processing checkbox.
- 52. Select Process transaction logs with this job (recommended).

rocessing	Settings)
General	SQL	Oracle	SharePoint	Scripts	5		
Applica	tions —						
con	sistent ba	ackup usi	ng applicatio	n-specif	prepares applica fic methods, and tore steps upon f	configures	
	Enable ap	plication	-aware proce	essing			
Micros	oft VSS s	ettings —					
succ	essful ba	ackup. Lo	gs pruning is	suppor	ansaction logs up ted for Microsoft ns that rely on VS	Exchange,	
()	Process t	ransaction	n logs with th	nis job (r	ecommended)		
0	Perform	copy only	(lets anothe	r applica	ation use logs)		
					ОК	Cancel	

- 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).

General SQL	Oracle SharePoint	Scripts	
	vs account with sysadmin	n role on SQL Server:	2.00
💦 Use guest c	redentials	<u> </u>	Add
Choose how thi	is job should process Mid	Manage accounts	nsaction loos
	is (prevents logs from gr		insteriori rogsi
These products the constraints of	cate logs (requires simple	Second - California Andread	
	periodically (backed up		0
Backup logs		_	.,
	and the second se	64	
Retain log b			
	corresponding image-le	and a second stand street.	
🔘 Keep on	ly last 15 🛟 days of	log backups	
		ОК	Cancel

- 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.

Seneral SQL Oracle	SharePoir	nt Scripts	
Specify Oracle account with	h SYSDB/	A privileges: 🕦	
👭 Use guest OS credentia	ls	~	Add
Archived logs:		Manage accounts	
 Do not delete archived 	logs		
	28	Γ.	
O Delete logs older than:	24 🤹	hours	
O Delete logs over:	10 🤤	GB	
Backup logs every:	15 🌲	minutes	
Retain log backups:	h	1	
Until the correspond	ding ima	ge-level backup is deleted	
Keep only last 15	📫 day	s of log backups	

- 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.

General	SQL	Oracle	SharePoint	Scripts		
Specify	/ ShareP	oint admir	n account:			
💦 Us	e guest (credentials	i i		~	Add
				Manage	e accounts	

- 61. On the Processing Settings page, select Scripts.
- 62. Keep the default settings and click OK.

General SQL Oracle SharePoint Scripts	
Specify admin account for script execution:	
👭 Use guest credentials	~ Add
Manage acco	unts
Script processing mode	
Require successful script execution	
Ignore script execution failures	
Disable script execution	
Snapshot scripts	
Pre-freeze script:	
	Browse
Post-thaw script:	
	Browse
	19 - L

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

Object	VSS	Transaction Logs	Scripts	Add
Protection	Require success	SQL: Truncate, Exchange: Tr	No	Edit
				Remove

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

Guest Processi	ing tion processing options.	
V Choose applica	tion processing options.	
Job Mode Name Computers Backup Mode Objects Destination Backup Server Storage Backup Cache	Inable guest file system indexing Creates catalog of guest files to enable browsing, searching and 1-click restores of individual fil Indexing is optional, and is not required to perform instant file level recoveries.	ications
Guest Processing		
Schedule		
Summary		

65. On the Guest File System Indexing Options page, select the Object, click Edit and.

Object	Indexing	Add
Protection Group_Hy	Partial	Edit
		Remove

- 66. On the Guest file system indexing mode page, keep the default settings.
- 67. Click OK.

iuest file system indexing mode	2:	
Disable indexing		
 Index everything Index everything except: 		
Folder	^	Add
%windir%		Remove
%ProgramFiles% %ProgramFiles(x86)%		Default
Index only following folders:		
Folder		Add
		Remove

68. On the Guest File System Indexing Options page, click OK.

Object	Indexing	Add
Protection Group_Hy	Partial	Edit
		Remove

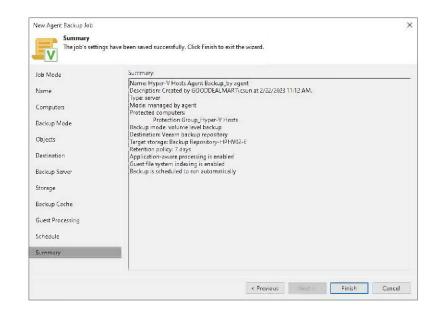
69. On the Guest Processing page, click Next.

Guest Processi Choose applica	ing tion processing options.	
Job Mode Name Computers Backup Mode Objects Destination Backup Server Storage Backup Cache	 Inable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs processi configures the OS to perform required application restore steps upon first boot. Customize application handling options for individual machines and applications Inable guest file system indexing Creates catalog of guest files to enable browsing, searching and 1-click restores of individual Indexing is optional, and is not required to perform instant file level recoveries. Customize advanced guest file system indexing options for individual machines 	application
Guest Processing		
Schedule		
Summary		
	< Previous Next > Finish	Cancel

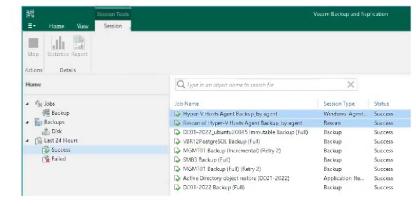
- 70. Select Run the job automatically checkbox on the Schedule page and select your specified schedule.
- 71. Define whether Veeam Backup & Replication should retry the backup job if it fails in the Automatic retry section.
- 72. Define the time interval the backup job must complete in the Backup window 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 sch	eduling options. If you do not set the se	chedule, the j	b will	need to be contr	rolled manually.		
Job Mode Name	 Run the job automatically Daily at this time: 	10:00 PM		Everyday		~	Days
Computers	O Monthly at this time:	10:00 PM	4.5	Fourth	Saturday	4	Months
Computers	O Periodically every:	1		Hours			Schedule
Backup Mode	Automatic retry						
Objects	Retry failed items processing items processing items	essing:	3	🛊 times			
Destination	Wait before each retry Backup window	attempt for:	10	+ minutes			
Backup Server	Terminate job outside	of the backu	wind	low			Window
Storage	Prevent long-running infrastructure during t			ted job from imp	acting your produ	tion	
Backup Cache							
Guest Processing							
Schedule							
Summary							

74. On the Summary page, click Finish.



75. Verify that the Machine rescan and Job configured are completed without issues.



76. Verify that the backup job has been added

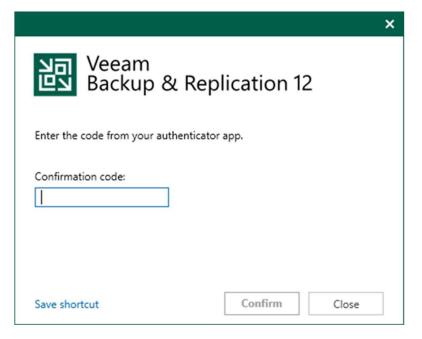
团 Job Tool: ≣- Home View Job			Veeam Backup and Repli	cation	
Apply Start Stop Active Job Configuration	Statistics Report Details	Clone Disable Delete Manage Job			
lome	Q	Type in an object name to search for	\times		
Jobs	Nam	ie .	Туре 🕇	Objects	Status
📲 Backup	游 (C01-2022 Backup	Hyper-V Backup	1	Stopped
Backups	徽日	001-2022_ubuntu20045 Immutable Backup	Hyper-V Backup	1	Stopped
📥 Disk	鐏 M	AGMT01 Backup	Hyper-V Backup	1	Stopped
Last 24 Hours	逾 S	MB3 Backup	Hyper-V Backup	1	Stopped
🕲 Success	逾 v	/BR12PostgreSQL Backup	Hyper-V Backup	1	Stopped
🕞 Failed	徽日	lyper-V Hosts Agent Backup_by backup ser	Windows Agent Backup	1	Stopped
		lyper-V Hosts Agent Backup_by agent	Windows Agent Policy	1	Enabled

Create a Backup job to backup all VMS of the Hyper-V Host

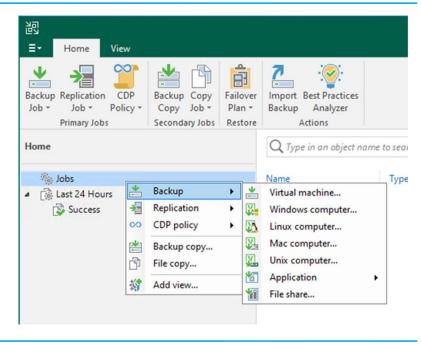
This procedure creates a backup job to back up all VMS of the production Hyper-V host. The new VMS will be backed up automatically after the backup job is created. You don't need to modify the backup job settings.

Inst	tructions	Screenshot (if applicable)	
1.	Log in to the Veeam Backup and replication manager server. Open the Veeam Backup & Replication Console and click Connect.	Veeam Backup & Replication 12	×
		Type in a backup server name or IP address, backup service po and user credentials to connect with. Iocalhost Iocalhost	rt number, 9392

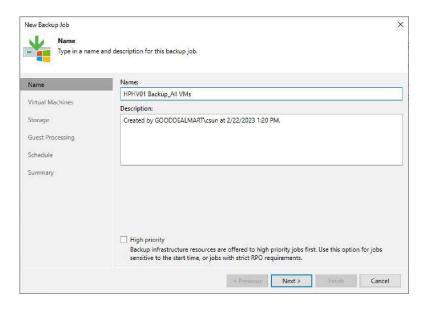
3. Enter the MFA Confirmation code and click Confirm.



- 4. Select Jobs on the Home page and right-click Jobs.
- 5. Select Backup and click Virtual machine.

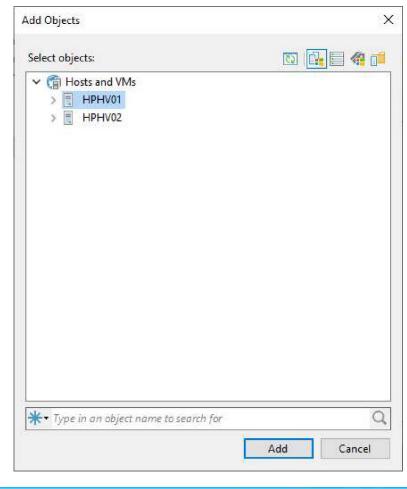


- 6. On the Name page, enter a name for the backup job in the Name field.
- Give a brief description in the Description field for the future.
- Select the High priority checkbox if you want this job to allocate resources in the first place.
- 9. Click Next.
- 10. Click Add on the Virtual Machines page.

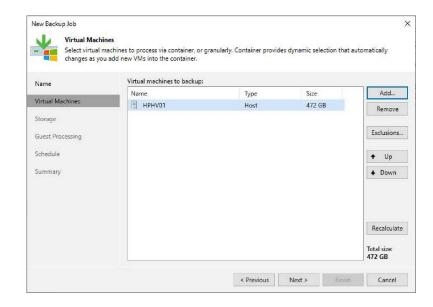


	machines to process via container,		les dynamic selection th	at automatically
Changes as y	ou add new VMs into the container Virtual machines to back			
Virtual Machines	Name	Туре	Size	Add
				Remo
Storage Guest Processing				Exclusio
Schedule				+ Up
Summary				+ Dow
				Recalco
				Total size 0 B

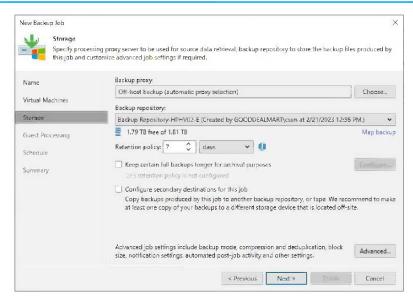
- Select the Host from the Select objects list on the Add Objects page and click Add.
- 12. If you have multiple Hosts that need to back up in the same backup job, you can repeat the step to add them.



13. Click Next on the Virtual Machines page.



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.



- 15. On the Backup Proxy page, if you select Onhost 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.
- 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	Select al
HPHV01	 Clear all
HPHV02	

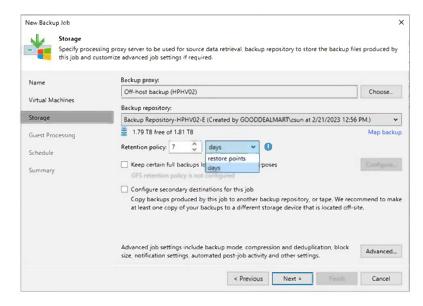
X

proxies are available in the checkbox. Still, the job will fail to start if off-host backup proxies are unavailable or configured properly.

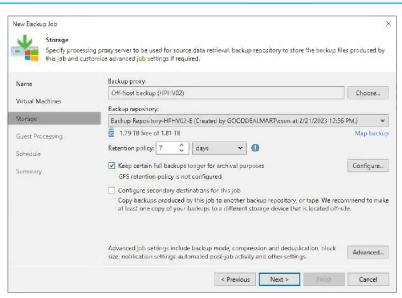
- 19. Click OK.
- 20. Select the backup repository from the Backup repository dropdown list where the created backup files must be saved.

this job and c	ustomize advanced job settings if required.	
Name	Backup proxy:	
	Off-host backup (HPHV02)	Choose.
Virtual Machines	Backup repository:	
Storage	Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023	12:56 PM.)
Guest Processing Schedule Summary	 I.79 TB free of 1.81 TB Retention policy: 7	
	Advanced job settings include backup mode, compression and deduplication, bl size, notification settings, automated post-job activity and other settings.	ock Advanced

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



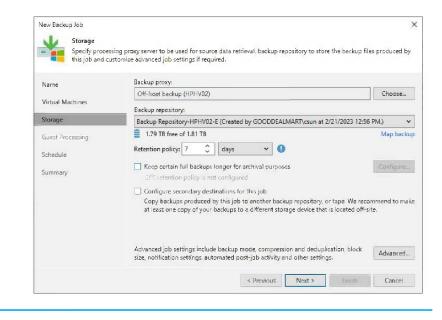
- 23. You can configure the backup job's GFS retention policy settings to ignore the short-term retention policy for some full backups and store them for long-term archiving.
- 24. Select Keep certain full backups for longer for archival purposes and click Configure.



- 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 0 months	
Use weekly full backup from the following week of a month:	First v
Keep yearly full backups for: 1 🗘 years	
Use monthly full backup from the following month:	January 🗸
Save as default	Cancel

29. On the Storage page, click Advanced.



- 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.

lackup	Maintena	nce Storag	ge Notif	ications Hy	per-V	Scripts	
Backup	mode						
0		are injecte	d into the	e full backup e most recer			st backup
۲	chain. Best	are saved for backup	into new targets v III backup	files depend vit <mark>h p</mark> oor ran s periodicall	dom I/(
Active	full backup						
	Create activ Saturday C dule Setting	onfigure	ups perio	dically on:			×
	dule:						
Sche	CLOCK .				~	Months	
	Monthly on	First	1. N.	Monday			
DI		First On these		Monday	~	Days	
<u>○</u> №	Nonthly on	1		Monday	~	Days	
<u>)</u>	Monthly on	1		Monday		Days Cancel	
<u>○</u> №	Monthly on	1					
<u>○</u> №	Monthly on	1					

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

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Backup	mode					
0	Reverse increm Increments are file is always a	injected i	nto the full bac			st backup
۲	Incremental (r Increments are chain. Best for Create synt Saturday C	saved inte backup ta hetic full b	o new files dep rgets with poor packups periodi	random I/		
Active	full backup					
	Saturday-Confi	gure				
ave As l	Default				OK	Capcel

- 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.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Storage	-level corruptio	on guard				
	At 22:00 on La	st Friday o	alth check (dete of every month			uption) on:
	kup file mainte Remove delete Defragment ar	d items d	ata after ct full backup fil	e on:	14) day:
	-		onth Configure			
Schedule S	ettings					
Schedule:						
Month	-	PM 🗘	Last	✓ Friday	i •	Months.
() Weekl	y: 10:00	PM C	On these days		~	Days_
Friday	1				1	
					OK	Cancel
191						

- 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.
- 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.

Backup	Maintenance	Storage	Notificati	ons	Hyper-V	Scrip	ts	
Storage	-level comuptio	on guard						
- Annothing of the second	Perform backu At 22:00 on Las		The second se				s corru	ption) on:
Full bac	kup file mainte	nance						
	Remove delete	d items da	ta after				14	C days
_	Last Saturday o	of every mo	onth Confi	igure.	ia -			
Sc	hedule Settings	6						×
S	chedule:							
	Monthly on:	Last	~	Satur	day 🕚	e	Month	s
C) Weekly:	On these	days			2	Days	44 (S
	Saturday					_		
					OK		Cance	ł

- 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.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Data re	duction					
-	Enable inline da	ata dedup	lication (recom	mended)		
	Exclude swap fi	le blocks ((recommended)		
\checkmark	Exclude deleted	file block	ts (recommend	ed)		
Co	mpression level					
O	otimal (recomm	ended)				~
N	one					
De	edupe-friendly					
	ptimal (recomm	ended)				
111	(A CONTRACT OF					
	gh					
Ex	treme	al combini	ation of backur	speed ar	anular resto	ire
Ex	7				anular resto	pre
Ex Del per	treme livers the optimi formance and r				anular resto	ore
Ex	treme livers the optimi formance and r tion	epository	space consump		anular resto	pre
Ex Del per	treme livers the optimi formance and r	epository	space consump		anular resto	pre
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump		anular resto	Add
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump	otion.	~	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump		~	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump	otion.	~	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump	otion.	~	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump	otion.	~	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump	otion.	~	
Ex Del per	treme livers the optima formance and r tion Enable backup	epository	space consump	otion.	~	

45. Select the Storage optimization for the backup from the dropdown list.

ackup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Data re	eduction					
V	Enable inline da	ata dedupi	ication (recom	mended)		
~	Exclude swap fi	ile blocks (i	recommended)		
~	Exclude deleted	d file block	s (recommend	ed)		
Co	ompression level					
0	ptimal (recomm	ended)				~
41	MB					
1	orage optimization MB (recommend					v
41	MB					
1000	MB (recommend	led)				
nci –	12KB 56KB					
	DOKB	те спетур	uon			
2						2000
2:	Password:				2 V .	Add
2						
2				Manage pa	asswords	
2				Manage pa	asswords	
2!				Manage pa	asswords	
2:				Manage pa	asswords	
2:				Manage pa	asswords	

- 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.

Backup	Maintenance	Storage	Notificatio	ns Hyper-V	Scripts	
Data re	duction					
~	Enable inline da	ata dedup	lication (reco	ommended)		
\checkmark	Exclude swap fi	ile blocks i	(recommenc	led)		
4	Exclude deleted	i file block	s (recomme	nded)		
Co	mpression levels					
O	ptimal (recomm	ended)				~
Sto	rage optimizatio					
	/IB (recommend	leđ)	ation of bac	kun speed ar	anular restr	v Ite
Del per Encrypt	AB (recommend livers the optima formance and r	led) al combina epository	space consu		anular resto	
Del per Encrypt	AB (recommend livers the optimi formance and r tion Enable backup	led) al combina epository file encryp	space consu stion	amption.		
Del per Encrypt	AB (recommend livers the optim: formance and r tion Enable backup Password:	led) al combin: epository file encryp OODDEAL1	space consu stion MART\csun a	amption.	13 P ¥	pre

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

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
	ad SNMP notific					
1	id e-mail notific pe in one or mi				emicolon	
	Use global not Use custom no Subject:			ed below;	es ne da com	
] %JobNa	me% (%Object	Count% ob	jects) %lssu	es%
	Notify on w Notify on e Suppress n	rror	s until the last	retry		

- 50. On the Advanced Settings, select Hyper-V.
- 51. Keep the default settings.

Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Guest	quiescence					
	Enable Hyper-V	/ guest qu	uiescence			
	Native quiescer aware image p			virtual mac	hines with a	application-
	Take crash	onsisten	t backup instea	d af susper	nding VM	
			t process, Hypi t VSS, Use this			
Change	ed block trackin	9				
~	Use changed b	lock track	ing data (recor	nmended)		
Volume	replication of p integration cor snapshots			-	-	.p.1.v
~	Allow processin	ng of mult	tiple VMs with a	a single vol	ume snapsh	not
	Includes other a separate snap				, as oppose	d to creating

- 52. On the Advanced Settings page, click Scripts and keep the default settings.
- 53. Click OK.

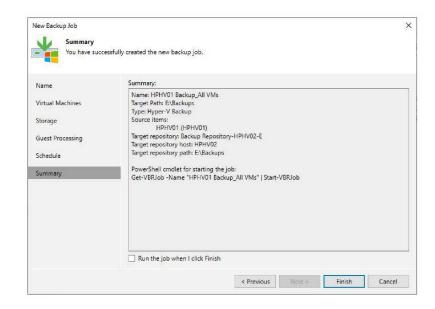
Backup	Maintenance	Storage	Notifications	Hyper-V	Scripts	
Job scr	ipts					
	Run the followi	ng script l	before the job:			
						Browse
	Run the followi	ng script a	after the job:			
						Browse
۲	Run scripts eve	ry t O	backup sessi	on		
O	Run scripts on t	the selecte	ed days only			Days
	Saturday					

		ustomize advanced job settings if required.	
	Name	Backup proxy:	
	Virtual Machines	Off-host backup (HPHV02)	Choose
	Storage	Backup repository:	
		Backup Repository-HPHV02-E (Created by GOODDEALMART\csun at 2/21/2023 12:55 Pt 1.79 TB free of 1.81 TB	M.) Map back
	Guest Processing		мар расю
	Schedule	Retention policy: 7 🗘 days 🗸	
	Summary	Keep certain full backups longer for archival purposes Periodic fulls are not enabled in Advanced settings	Configure.
		Configure secondary destinations for this job Copy backups produced by this job to another backup repository, or tape. We recommended and the second seco	mend to ma
		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.	Advanced.
k Next on the Guess	New Backup Job	< Previous Next > Period	Cancel
< Next on the Guess cessing page.	Guest Proces		Cancel
	Guest Proces	sing OS processing options available for running VMs. Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs p configures the OS to perform required application restore steps upon first boot.	rocessing, ar
	Guest Proces Choose guest Name Virtual Machines	sing OS processing options available for running VMs. Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs p configures the OS to perform required application restore steps upon first boot. Customize application handling options for individual machines and applications	rocessing, a
	Guest Proces Choose guest Name Virtual Machines Storage	sing OS processing options available for running VMs. Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs p 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	rocessing, a
	Guest Proces Choose guest Name Virtual Machines	sing OS processing options available for running VMs. Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs p 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 im Indexing is optional, and is not required to perform instant file level recoveries.	rocessing, a Application dividual file
	Guest Proces Choose guest Name Virtual Machines Storage	sing OS processing options available for running VMs. Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs p 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 im Indexing is optional, and is not required to perform instant file level recoveries. Customize advanced guest file system indexing options for individual machines	rocessing, a
	Guest Process Choose guest Name Virtual Machines Storage Guest Processing	sing OS processing options available for running VMs. Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs p 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 or enable browsing, searching and 1-click restores of im 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 proxys	rocessing, a Application dividual file indexing.
	Guest Process Choose guest Name Virtual Machines Storage Guest Processing Schedule	sing OS processing options available for running VMs. Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs p 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 im 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 proxys Automatic selection	rocessing, a Applications idividual files
	Guest Process Choose guest Name Virtual Machines Storage Guest Processing Schedule	sing OS processing options available for running VMs. Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs p 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 im Indexing is applicanal, and is not required to perform instant file level recoveries. Customize advanced guest file system indexing options for individual machines Guest interaction proxyn Automatic selection Guest OS credentials:	nocessing, an Applications dividual files Indexing Choose
	Guest Process Choose guest Name Virtual Machines Storage Guest Processing Schedule	sing OS processing options available for running VMs. Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs p 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 im 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	rocessing, ar Applications dividual files Indexing
	Guest Process Choose guest Name Virtual Machines Storage Guest Processing Schedule	sing OS processing options available for running VMs. Enable application-aware processing Detects and prepares applications for consistent backup, performs transaction logs p 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 im Indexing is applicanal, and is not required to perform instant file level recoveries. Customize advanced guest file system indexing options for individual machines Guest interaction proxyn Automatic selection Guest OS credentials:	rocessing, an Applications. dividual files. Indexing Choose

- 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.

Name	✓ Run the job automatically	1				
/irtual Machines	Daily at this time:	10:00 PM 🗘	Everyday		~	Days
virtual Machines	O Monthly at this time:	10:00 PM 🔅	Fourth 🗸	Saturday	~	Months_
Storage	O Periodically every:	1 ~	Hours		~	Schedule.
Suest Processing	O After this job:	DC01-2022 Ba	ckup (Greated by	GOODDEALMAR	T\csun at	2/21/2023
Schedule	Automatic retry					
	Retry failed items pro	cessing:	🗘 times			
Summary	Wait before each retry	attempt for:	0 🗘 minute	s		
	Backup window					
	 ✓ Terminate the job out 	side of the allov	ved backup windo	w		Window.
	Long running or accid	والمعلمين والمعلمين	abr will be tarmin	and the manual t	2	

60. Click Finish on the Summary page.



61. Verify that the backup job has been added.

