

Configuration and Deployment

Dell EMC ECS with Veeam Backup & Replication

Abstract

This document describes how to configure Veeam® Backup & Replication™ with Dell EMC™ ECS.

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Revisions

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Executive summary

This document focuses on the integration between the Dell EMC[™] ECS system and Veeam[®] Backup & Replication[™] software. It describes the steps required to install and configure the integration.

Objectives

The main objective of this guide is to show how to configure an ECS system as a backup-archive target with Veeam Backup & Replication.

Audience

This document is intended for administrators who will deploy and configure an ECS system with Veeam Backup & Replication software. This paper assumes a high level of technical knowledge for the devices and technologies described.

1 Solution overview

This section provides an overview of the integration of ECS with Veeam Backup & Replication and the key technologies used.

1.1 Solution architecture



Unstructured Data Storage Solution Architect Lab

Figure 1 Veeam Backup & Replication and Dell EMC ECS architecture diagram

1.2 Key components

Table 1 Dell EMC ECS

Component	Description
Dell EMC ECS	EX300 appliance 5 nodes 12 x 1 TB disks / node
ECS version	3.3

Component	Description
Veeam version	9.5U4
Operating system	Microsoft [®] Windows Server [®] 2012
CPU	16 vCPU
RAM	128 GB
Operating system disk	12 GB SSD
Veeam application disk	200 GB SSD
Veeam backup repository	4 TB
Network NIC	10 GbE

 Table 2
 Veeam Backup & Replication

2 Solution implementation

This section describes the high-level steps required to deploy Veeam Backup & Replication with ECS.

2.1 Implementation workflow

The following steps describe how to configure the solution.

1. Install ECS.

Customers should engage, through their sales team, with Dell EMC Customer Services and Professional Services to perform the following:

- Visit the site
- Scope the installation requirements
- Arrange installation and configuration of ECS
- 2. Create an ECS namespace for Veeam backups.
- 3. Create an Veeam ECS access key and secret key.
- 4. Create an ECS bucket for Veeam to use.
- 5. Install Veeam Backup & Replication software.
- 6. Configure Veeam to use ECS as an object store for archiving backups.

2.2 Installation and configuration steps

2.2.1 Install Veeam Backup & Replication

To install Veeam Backup & Replication, mount the installation ISO and perform the following:

1. Click Install.



2. Enter the license file details.



3. Click Next and click Next again.

Provide License Provide license file for Veeam Backup & Replication.		闿
License file for Veeam Backup & Replication:	Province	
A valid license is already installed on this machine.	browse	
	< Back Next > Ca	ancel

4. The install process will assess the Windows Server installation to see if further Windows software is required to be installed.

邬	Veeam Backup & Replication Setup –	-	×
S P	System Configuration Check lease wait while setup is checking your system for potential installation problems.		גנ
	Requirement	Status]
	Microsoft System CLR Types for SQL Server 2014	😣 Failed	
	Microsoft SQL Server 2014 Management Objects	😣 Failed	
	Microsoft Report Viewer Redistributable 2015	😣 Failed	
	Microsoft PowerShell v2.0	Passed	
	Microsoft Universal C Runtime	Passed	
	Your computer does not meet minimum requirements. Click the "Install" button to deploy missing features.	Rerun]
	< Back Next >	Cancel]

5. If any of the required features are not present (as in this example) click **Install** to install them.

😰 Veeam Backup & Replication Setup	– 🗆 X
System Configuration Check Please wait while setup is checking your system for potential installation problems.	
Requirement	Status
Microsoft System CLR Types for SQL Server 2014	Passed
Microsoft SQL Server 2014 Management Objects	Passed
Microsoft Report Viewer Redistributable 2015	Passed
Microsoft PowerShell v2.0	Passed
Microsoft Universal C Runtime	Passed
	Re-run
< Back N	lext > Cancel

6. Click Next to proceed.

الا الا	🛛 Veeam Backup & Rep	lication Setup	-		×
l C t	Default Configura Click Install to deploy Veear he check box below to cus	t ion n Backup & Replication with the default configuration settir tomize them on the following wizard steps.	ngs, or sele	ct	闿
	Configuration settings:				
	Installation folder:	C:\Program Files\Veeam\Backup and Replication\			^
	vPower cache folder:	C:\ProgramData\Veeam\Backup\NfsDatastore\			
	Guest catalog folder:	E:\VBRCatalog			
	Catalog service port:	9393			
	Service account:	LOCAL SYSTEM			
	Service port:	9392			
	Secure connections port:	9401			
	SQL Server:	VEEAM-WIN01\VEEAMSQL2016			~
	Let me specify differen	settings			
		< Back Ins	tall	Cano	el

- 7. Review the installation details provided. The Guest catalog folder will be placed on the windows disk that has the most space available, you may wish to override that. Click **Install** to proceed.
- 8. The installation process will install MS SQL Server Express on the Windows Server and then Veeam Backup and replication.



This completes the installation of Veeam Backup & replication.

Note: If you reinstall, it is not sufficient to uninstall both Microsoft[®] SQL Server and Veeam. You will need to delete the SQL database created for the previous Veeam installation.

2.2.2 Configure Veeam to use ECS as an object storage repository

1. Within the Veeam management GUI under **Backup Infrastructure** in the navigation pane, right-click **Backup Repository** and choose **Add Backup repository**.

記 REPOSITORY TOOLS			VEEA
ET HOME BACKUP REPOSITORY			
Add Edit Repository Repository Manage Repository Tools			
BACKUP INFRASTRUCTURE	Q Type in an object nam	ne to search for	\times
 Backup Reposito External Reposito Rescan WAN Accelerators Service Providers SureBackup Application Groups Virtual Labs Managed Servers Microsoft Windows 	sitory tepository 1 Jackup Rep	TYPE HC Windows ver Windows ver	OST eam-win01 eam-win01
STORAGE INFRASTRUCTURE			
TAPE INFRASTRUCTURE			
[_@	<		
1 DED/OCIT/ODV			

2. Select Object storage.



3. Select S3 Compatible.



4. Give the repository an appropriate name and click Next.

	New Object Storage Repository		×	
ζ Τ.	Name Type in a name and d	lescription for this object storage repository.		
ME	Name	Name:	_	USED S
Bac Defi	Account	Description:		
	Bucket	Created by VEEAM-WIN01\Administrator at 1/3/2019 9:36 AM.		
	Summary			

 Since ECS is a cluster of nodes with their own IP address, you will need to front it an IP load balancer (DNS round robin is not recommended), and supply the IP address or FQDN name of the load balancer as the service point.

New Object Storage Repo	nt to use for connecting to \$3 compatible storage system.	<
Name	Service point:	US
Account	hop-paul-lb.solarch.lab.emc.com	
Bucket	us-east-1	1
Summary	Credentials:	I
	Credentials ×	
	Description:	
	vay server is ess to the storage	

6. Click Add to supply an ECS access key and secret key as shown. Click OK and click Next

Note: Veeam will connect only on port 443.

7. You will also need to ensure that you have a signed certificate set up for the load balancer. If you are using a self-signed certificate (as tested for this document) you will be prompted to confirm its use.

Site certificate cann	not be verified. Continue anyw	ay?	
Remote certificate chain en	rrors: te chain processed, but termin	ated in a root	e clou
certificate which is not true NotTimeValid (A required	sted by the trust provider.)	lity period	
when verifying against the the signed file.)	current system clock or the ti	mestamp in	
10	Continue	Cancel	

8. At the next screen you can select **Browse** to select the pre-created bucket on the ECS and create a folder within it for Veeam to use.

10				
	New Object Storage Repository	Select File	×	×
ļ	Bucket Specify object storage	Folders:		
7		✓		
1		VFolder1		
	Name			
c fi	Account			· · · · ·
1	Bucket			Browse
	Summary			
				cified limit is exceeded, the
				new tasks will start.
1		New Folder OK Cancel		Colda Court
l		OR		Cancel

9. Click **Next** for the new object repository to be created.

New Object Storage Repository		×
[TBD]Archive Reposit	ory Summary description	
Name	Summary:	
	Object storage repository was successfully created.	
Account	Description: Created by VEEAM-WIN01\Administrator at 1/3/2019 9:36 AM.	
Bucket	Type: S3-compatible Gateway server: not selected	
Summary	Service point: https://hop-paul-lb.solarch.lab.emc.com	
	Bucket: veeambckt1	
	Storage consumption limit: unlimited	

10. Click Finish and notice the new object storage repository has been created.

避 REPOSITORY TOOLS E+ HOME BACKUP REPOSITORY		VEEAM BAC	KUP AND REPLICATION			- 🗆 ×
Add Edit Repository Repository Manage Repository Tools	_					
BACKUP INFRASTRUCTURE	Q. Type in an object name to search for	×				
Backup Repositories	NAME T TYPE	HOST	PATH CAPACITY	FREE	USED SPACE	DESCRIPTION
Leternal Repositories Scale-out Repositories WAN Accelerators Service Providers Service Providers Application Groups Virtual Labs	Backup Repository 1 Windows Pefault Backup Rep. Windows ECS Repo S3-compatible	veeam-win01.s veeam-win01.s	G\Backups 1024 E\Backup 1024 amazonS3://ho	.0 GB 1021.8 GB .0 GB 1021.9 GB N/A N/A	0.0 B 0.0 B 0.0 B	Created by VEEAM-WIN01\Administ Created by Veeam Backup Created by VEEAM-WIN01\Administ

Veeam has now been configured with an ECS object storage repository.

11. At this point, it is typical to create a scale out repository that can use the ECS object storage repository. In the Veeam admin GUI, click **Backup Infrastructure > Scale-out Repositories** and click **Add Scale-out repository.**



- 12. Give the repository an appropriate name and click Next.
- 13. On the **Performance Tier**, click **Add** and select the object repository to create this scale out repository in.



14. At the **Capacity Tier** screen, click the **Move older backup files...** radio button and select the ECS Object Store. Set the **Move backup file older** field to the time after which backups will be moved from this scale out repository to the ECS object store.

1 25	New Scale-out Backup Repositor	у	×
יי tt	Capacity Tier Specify object storag long-term retention	e to move your backup files to as they age out of your operational restores window. This reduces you costs without sacrificing the ability to perform restore from offloaded backup files.	ır
	Name	Vove order backup files to object storage (reduces long-term retention costs)	
"]	Defense Tim	Object storage:	
	Performance Her	ECS Repo 🗸 Add.	
	Placement Policy	Move backup files older that 0 🚽 lays (your operational restores window) Overric	le
	Capacity Tier		
	Summary	Define time windows when offloading to object storage is allowed to take place Windo	w
		Encrypt data offloaded to object storage	
		Password:	
		Add.	
		Manage passwords	
		< Previous Apply Finish Canc	el
ŀ			

15. Click Apply and click Finish.

The ECS object store is in use and can be used to archive backups to.

3 Configuration and tuning

The following configuration and tuning changes are recommended.

Table 3	Configuration	and tuning	recommendations

Description	Detail
IP load balancer	An IP load balancer should be used so that Veeam Backup & Replication can use all nodes in the ECS system.
Port	By default, Veeam Backup & Replication will use port 443 when communicating with the ECS (IP load balancer).
SSL certificate	By default, Veeam Backup & Replication will expect a signed SSL certificate to be installed on the ECS or IP load balancer.

A Technical support and resources

Dell.com/support is focused on meeting customer needs with proven services and support.

<u>Storage technical documents and videos</u> provide expertise that helps to ensure customer success on Dell EMC storage platforms.

See <u>Dell EMC ECS documentation</u> to access the Administration Guide, Data API, and Monitoring Guide.