IBM Cloud Object Storage System

Veritas Storage Streamer Installation and Configuration Guide Bulletin ID: IBM_COS_VERITAS_STREAMER_2016-01



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Support information

For more information on the product or help with troubleshooting, contact IBM Support at IBMCloudStorageSupport@us.ibm.com or visit the Directory of worldwide contacts.

Revision History

	lle	Description
2.0 12	December	Addition of EV12 to IBM Cloud Object Storage and
20 ²	16	Microsoft Windows+SQL 2012 versions.

Introduction

The IBM Cloud Object Storage Veritas Storage Streamer is installed on an Enterprise Vault server and serves as a remote interface between Enterprise Vault and a IBM Cloud Object Storage, formerly known as the 'Cleversafe dsNet', as primary storage.

Configuration Diagram



Figure 1. Configuration Diagram

Mapping Enterprise Vault to IBM Cloud Object Storage Concepts

Enterprise Vault archives data in containers called Vault Stores which are logically grouped within Vault Store Groups. Each Vault Store is partitioned into Open, Ready and Closed Partitions. At any point in time there is only one Open Partition within a Vault Store.

Vault Stores and Vault Store Groups are configured in Enterprise Vault using the Vault Admin Console (VAC). When configuring a New Vault Store, 'Cleversafe dsNet' can be selected as the Storage Type. Each New Vault Store must be configured with an initial Partition. When configuring this partition, details of an existing IBM Cloud Object Storage vault must be provided including the IP Address of the Accesser, Port, Protocol, Authentication and the name of the IBM Cloud Object Storage Vault. The details of an existing IBM Cloud Object Storage vault must be provided for every New partition configured using the VAC. The IBM Cloud Object Storage vault configuration must have Index-enabled and Versioning-disabled. The cardinality possible between a Vault Store Partition and a IBM Cloud Object Storage vault is N:1.



Figure 2. Cardinality Diagram

Each Vault Store can only have one Active IBM Cloud Object Storage vault (associated through the Open partition). A Vault Store can have multiple Closed and Ready partitions, and one Open Partition, all pointing to different IBM Cloud Object Storage vaults. Vault store partitions in a vault store can be of different storage types. The Open partition will be used and when it has closed, EV will use the next available (Ready) partition, if any exist.

As a normal practice a partition is typically configured to a different storage type/location. Even though partitions on different Vault Stores can be pointed to the same IBM Cloud Object Storage Vault, this is not recommended by IBM.

The table below summarizes the key Enterprise Vault concepts and how they relate to IBM Cloud Object Storage concepts.

Enterprise Vault Concept	Description	Related IBM Cloud Object Storage Concept
Vault Store	Enterprise Vault stores archives in Vault Stores. Vault Stores contain one or more Enterprise Vault partitions that can reside on any of the supported storage media, including the 'IBM Cloud Object Storage' storage type.	A Vault Store is a logical container in Enterprise Vault, and maps to IBM Cloud Object Storage through the partitions it contains
Vault Store Group (VSG)	A VSG is a logical collection of Vault Stores	Vault Store Groups are logical concepts in Enterprise Vault, and have no direct mapping in IBM Cloud Object Storage.
Vault Store Partitions	Vault Stores are subdivided into partitions. Only one partition can be open in each Vault Store. This is the active partition in which Enterprise Vault archives data.	Vault Store Partitions map directly to IBM Cloud Object Storage Vaults
Open Partition	An Open Partition is the current active Partition in which Enterprise Vault data is being written	The open partition is the current active partition mapped to a IBM Cloud Object Storage Vault
Ready Partition	Each Vault Store can have a number of Ready Partitions. A Ready Partition is the next available partition to be used.	Each ready partition maps to a IBM Cloud Object Storage Vault
Closed Partition	Each Vault Store can have any number of Closed Vault Store Partitions. Enterprise Vault does not archive content into partitions that are closed.	Each closed partition maps to a IBM Cloud Object Storage Vault

Table 1. Enterprise	e Vault -	IBM	Cloud	Object	Storage	concepts
---------------------	-----------	-----	-------	--------	---------	----------

Prerequisites and Dependencies

Minimum Software Versions

The functionality described in this document was tested with Veritas Enterprise Vault software version 11.0.1 and 12.1.0, IBM Cloud Object Storage release 3.6.x and 3.8.x, and Windows Server versions. The following table contains all required dependency information.

Table 2. Dependency Information

Software	Version
Windows Server	2008 R2 (WOW 64) and 2012 R2 (WOW 64)
Windows SQL Server	2008 R2 and 2012

IBM Cloud Object Storage Veritas Storage Streamer Installer

Obtain the CleversafeDSNetPluginSetup.exe plugin from IBM Cloud Object Storage support team.

IBM Cloud Object Storage Vault Configuration

The IBM Cloud Object Storage vault used to host EV partitions must have index enabled and versioning disabled.

Limitations and Constraints

There are a few constraints that must first be considered when planning for the use of Veritas NetBackup software. These considerations are described in further detail in the next section.

Enterprise Vault Features not supported

- WORM
- Device level sharing
- SIS capabilities / de-duplication

Supported Authentication

Only Manager based and AD based authentication is supported.

Installation and Configuration Instructions

The instructions below detail the steps necessary to install and configure IBM's Cloud Object Storage Veritas Storage Streamer with Veritas Enterprise Vault software. These instructions assume the following:

- IBM Cloud Object Storage system is installed and configured.
- IBM Cloud Object Storage vault has been deployed to an Accesser appliance.
- You know the IP address or hostname of the Accesser appliance.
- You know the name of the IBM Cloud Object Storage vault and the username and password required to access the vault.
- The Host system for Veritas Enterprise Vault server software is installed and configured.
- You have Administrator privilege on the Veritas Enterprise Vault server where IBM Cloud Object Storage Streamer will be installed.

Install IBM Cloud Object Storage Veritas Storage Streamer on Enterprise Vault Server

Obtain IBM Cloud Object Storage Veritas Storage Streamer Installation Package

Log in to the Veritas Enterprise Vault server as an Enterprise Vault account user, then download CleversafeDSNetPluginSetup.exe to the desired install directory. The Enterprise Vault account user should have admin privileges on the Windows Server to install the IBM Cloud Object Storage Veritas Storage Streamer plugin.

Installing IBM Cloud Object Storage Veritas Storage Streamer Plugin

The IBM Cloud Object Storage Veritas Storage Streamer plugin (CleversafeDSNetPluginSetup.exe) should be installed on each Enterprise Vault Server in your network. Double click on the installation file CleversafeDSNetPluginSetup.exe. This will automate the install and registration of the storage streamer dsnetStreamer.dll.



Figure 3. Installer Wizard Setup



Figure 4. Select Destination Folder

Setup - Cleversafe DSNet Plugin	
Ready to Install Setup is now ready to begin installing	g Cleversafe DSNet Plugin on your computer.
Click Install to continue with the insta change any settings.	allation, or click Back if you want to review or
Destination location: C: \Cleversafe DSNet Plugin	*
	¥.
x	<u>الا</u>
	< Back Install Cancel

Figure 5. Install Storage Streamer

Setup - Cleversafe DSNet Plugin	
Installing Please wait while Setup installs Cleversafe DSNet Plugin on your computer.	
Extracting files C:VGeversafe DSNet Plugin 2VdsNetStreamer.dll	
<u></u>	
	Cancel

Figure 6. Extracting dsNetStreamer.dll



Figure 7. Finish Plugin Setup Wizard

Create Vault Store Group and Vault Store

The Vault Stores created in this section will be used to access the IBM Cloud Object Storage medium.

Create New Vault Store Group

1. Right-click on Vault Store Group in the VAC. Select New, Vault Store Group.

Interprise Vault					- 🗆 X
6 File Action View F	avorites Tools Wind	dow Help			- & ×
(* *) 🖄 📅 📋 🛅	0 🔒 🛛 🖬 🖉	1 🖧 👫 🖭	9- 11: (11) 🕐		
Console Root Console Root Co	host al) ess Vault Servers	lame ₴ VaultStore1	Description		
Vau	Reporting				
10	New	>	Vault Store Group		
> 🔤 Indexin > 🚉 Persona > 🐝 Extensions	View New Window from H	> Here			
Enterprise Vaul	New Taskpad View				
C	Refresh Export List	_			
creates a new item in this	Heln			1	

Figure 8. Create New Vault Store Group

2. The New Vault Store Group wizard displays. Select Next.



Figure 9. Create New Vault Store Group Wizard

3. Enter Name and Description for new Vault Store Group, and select Next.

	Enter a name for the new Vault Store Group. FSAVSG1
VERITAS	Enter a description for the new Vault Store Group. Self Cert Vault Store Group
~	

Figure 10. Name and Description

4. Enter the name of the SQL server to be used for the Vault Store Group Fingerprint Database, and select **Next**.

	New Vault Store Group			
	You must create a fingerprint database for the Vault Store Group. Select or browse for the SQL server or listener that you want to use for the Vault Store Group fingerprint database. SQL Server:			
	EVSCSQL.REDENSC.COM	♥ Browse		
VERITAS				
	< Back Next >	Cancel Help		

Figure 11. SQL server to be used

5. Enter the SQL **Primary filegroup** and **Transaction log** locations. Make sure the field Configure additional locations for the non-primary file groups is **unchecked**, and select **Next**.



Figure 12. SQL Primary file group and transaction log

6. Confirm the Vault Store Group Information you have entered, and select Next

	You have now entered all the Vault Store Group:	information required to create the n
	Vault Store Group Name: Description: Computer: You have chosen: Create fingerprint database – Primary filegroup location:	FSAVSG1 Self Cert Vault Store Group EVSCEV01 on SQL Server: EVSCSQL,REDENSC C:IProgram Piles/Microsoft
VERITAE	< III	> cityrogrammestradosur.
	Click Next to create the new V database.	ault Store Group and fingerprint

Figure 13. Confirm Vault Store Group

7. Select **Next** to create the new Vault Store Group and fingerprint database.



Figure 14. Creating New Vault Store Group and fingerprint database @ Copyright IBM Corp. Copyright 2017

8. Observe that the Vault Store Group and fingerprint database have been successfully created. Select **Next** to create a new Vault Store.

New Vault Store Group		x
VERITAS	The new Vault Store Group and the fingerprint database have been successfully created and are ready for use. You must add a Vault Store to this Vault Store Group before you can use it for archiving. Click Next to create a Vault Store.	
	< Back Next > Cancel Help	

Figure 15. Create new Vault Store

Create New Vault Store

1. Select Next to create a new Vault Store



Figure 16. Create New Vault Store

2. Select **server** to specify the computer with the Storage Service to be used, and select **Next**.

	New Vault Store
	On which computer is the Storage Service that you want the new Vault Store to use? Computers with Storage Services:
	SCEVSite SCEVServer.REdenSC.Com (EVSCEV01) SCEVServer2.REdenSC.Com (EVSCEV02)
VEDITAE	
VERIIAS	
	< Back Next > Cancel Help

Figure 17. Select server

3. Enter the Name and Description for the new Vault Store, and select Next.

New Vault Store	2
	Enter a name for the new Vault Store. FSAVS1 Enter a description for the new Vault Store
	Vault Store Self Cert
VERITAS	
	< Back Next > Cancel Help

Figure 18. Name and Description

4. Enter **SQL Server name** to be used for the Vault Store Database, and select **Next**.

	Select or browse for the SQL server for the Vault Store database:	or listener that you want to
	SQL Server:	
	EVSCSQL.REDENSC.COM	Browse
VERITAS		

Figure 19. SQL Server

5. Enter the locations of the Vault Store Database and Transaction log, and select Next.

	New Vault Store	
	Where would you like the new Vault Store data its transaction log to be created?	base and
	Vault Store Database location on EVSCSQL.REE	ENSC.COM:
	1 Files Microsoft SQL Server MSSQL11.MSSQL	SERVER (MSSQL \DATA
	Initial free space required: 100 MB	Browse
	Transaction log location on EVSCSQL.REDENSC	.COM: SERVER\MSSQL\DATA
VERITAS	Initial free space required: 80.0 MB	Browse

Figure 20. Vault store database and transaction log

6. Ensure that *Remove original items* is selected. For **Default behavior** select Yes, *in the storage queue*, and select **Next**.

	When an item is archived, a safety copy is retained when to delete this safety copy. Click Help for more Remove original items Do you want to retain safety copies until the Vau partition has been backed up or replicated? Default behavior:	l. You must specif e information. It Store
	Yes, in the storage queue	¥
	For journal archives:	
VERITAS	Yes, in the storage queue	Ŷ

Figure 21. Behavior of storage queue

7. Confirm the Vault Store Information you have entered, and select **Next**. The new Vault Store is created.

	Vault Store	8			
	Vault Stor	e			2
	Name: Descriptio Computer You have – to creat	FSAVS1 FSAVS1 Self Cer EVSCEV chosen: te the Vault Store of	t Vault Store 01 database on SQL S	erver	
	EVSCSQ	L.REDENSC.COM.			
VEDITAE	<	Ш		>	f
	Click Next	to create the new	Vault Store and da	tabase.	

Figure 22. Vault store information

8. Wait while the new Vault Store is created.



Figure 23. Wait while new vault store is ready

9. Confirm Vault Store Creation. Select Next.



Figure 24. Confirm vault

Create a New Partition

1. New Vault Store Creation will automatically proceed to create a New Partition. Select Next.



Figure 25. New Vault Partition

2. Enter the **Name** and **Description** of the partition. Check that *Open* is selected from the **Create this new partition** drop-down list, and select **Next**.

New Partition	x
VERITAS	Enter a name and a description for the new Vault Store Partition. Name: VaultStore Ptn1 Description: Partition of Vault Store VaultStore A Vault Store can have only one partition open for archiving. If you open this new partition, any existing open partition will be dosed.
	Create this new partition: Open

Figure 26. New Vault Partition Name/Description

3. Select the storage system '*Cleversafe dsNet*' from the **Storage Type** drop-down list, and select Next.

	New Partition	x
	Enterprise Vault can create a Vault Store Partition on various typ storage. Click Help for more information.	bes of
	Storage type:	
	NTFS Volume	~
	NTFS Volume Plasmon UDO Archive Appliance	^
	HYDRAstor Data Domain FUJITSU ETERNUS Disk Storage Systems Oracle ZFS Storage Appliance EMC Isilon OneFS Scale Out Storage IBM Storwize V/2000 Unified	
VERITAS	IBM Scale Out Network Attached Storage (SONAS) Symantec Cluster File System Pillar Axiom	
	EMC Celerra Unified Storage Platforms	
	EMC Centera EMC Atmos	
	EMC Elastic Cloud Storage (ECS)	
	Hitachi Content Platform (HCP)	
	NetApp Device	
	NetApp StorageGRID (HTTP)	
	Caringo Swarm	
	Cleversafe dsNet	
	Figure 27. Select storage type	

4. Configurable Parameters for connection settings.

The following parameters must be configured for the IBM Cloud Object Storage Streamer in the Vault Admin Console (VAC) when creating a new vault store partition, as described in Create Vault Store Group and Vault Store.

Name	Default Value	Description	Required
Accesser IP	N/A	IP address or hostname of the Accesser Appliance	Yes
Protocol	http	http or https	Yes
Port	80 (443 for https)	Port	Yes
Vault Name	N/A	Vault name configured on IBM Cloud Object Storage system (Index enabled & Versioning disabled)	Yes
Disable Peer Certificate Verification	False	False: For https only, do not verify authenticity of peer's certificate. True: This setting means that the client will not attempt to verify the certificate of the Accesser or load balancer when using https. The devices ship with self-signed certificates by default. If you want to use https and do not want to disable this option, you must configure your clients to trust certificates issued by the IBM Cloud Object Storage Manager	Yes
Server Authentication	N/A	Username and Password to access Vault	Yes

Table 3. Configuration Parameters

5. Run the **Connectivity Test** to determine the performance of the partition in single instance storage, and select **Next**. You will see a confirmation dialog when the IBM Cloud Object Storage connection test succeeds.

	New Partition	×
	Cleversafe dsNet connection settings	
	Setting	Value
	Accesser IP	172.20.12.21
	🛆 Protocol	HTTPS
	🛆 Port	443
	🛆 Vault Name	evtest
	🛆 Disable Peer Certificate Verifica	True
	Server Authentication	evtest:p@ssw0rd
	Reset All Test	Modify
	Description	
VERITAS	The username:password required to ac	cess the dsNet server.
	< Back Next >	Cancel Help

Figure 28. Connection settings test

6. If **Test** connectivity fails, it should not be possible to proceed through the wizard. Select **Next.**

			_
list settings.	trom: Cleversate dsNe	et	_
Setting		Value	
Acces	ser IP	3Accessers.ait.cleve	
	Enterprise V	/ault	:
A	Cleversafe dsNet connec	tion test succeeded.	
	Streamer Version:	1.0.0.1	
	Storage System Version:	0.9.9.0	
		011	
		OK	1
IP addres	s or nosmame of the Accesser	appliance.	

Figure 29. Connection settings test

7. In the Partition Rollover drop-down list, Leave the value as Not Enabled. Select Next.

	Volume		
	When volume	reaches 5 🔷 % free	
	○ When volume	reaches 1 GB V	ree
	Time		
	After 3	🔆 Months 🗸	
VERITAS	O On		
	-	<u></u>	

Figure 30. Partition Rollover

8. For the partition scan interval, **Uncheck** the Scan partition every.

Additionally you can set a parti replication, if required.	tion scan interval to check for
Scan partition every	60 📻 minutes

Figure 31. Partition scan interval

9. Select **Finish** on the Partition Summary.

New Partition				
	You have now entered all the information required to create the new Vault Store Partition:	,		
	Vault Store Partition A ====================================			
VERITAS	Click Finish to create the new Partition.	_		
	< Back Finish Cancel Help			

Figure 32. Partition summary

10. Select **Finish** on Partition Completion.

New Partition		x
	The new Vault Store Partition has been successfully created and is ready for use.	
VERITAS		
	< Back Finish Cancel	_

Figure 33. Partition completion

- Check that the Vault Store Group, Vault Store, and Partition have been created without any errors.
- Check the Veritas Enterprise Vault event log for any errors.

Logging Configuration

Enterprise Vault logging is managed by Windows Event Viewer and can be accessed as illustrated below in the Event Viewer Window.

Event Viewer						- 0
File Action View Help						
Event Viewer (Local) Custom Views Windows Logs	Symantec Enterpris	e Vault Number of events ste and Time	: 9,368 Source	Event ID Task	Actions Symantec Enterprise Vault	
Applications and Services Logs Active Directory Web Services DFS Replication DFS Replication DFSN-Rev DFSN-Rev DFSN-Service Drentory Service Drentory Service Hardware Events Internet Explorer Key Management Service Microsoft Microsoft Microsoft Microsoft Symarkee Enterprise Vauk Symarkee Enterprise Vauk Converters Symarkee Enterprise Vauk Converters Symarkee Enterprise Vauk Converters Symarkee Enterprise Vauk Converters Subscriptions	Jartomation 9 Jartoma	(14)(2015 4)(25:40 PM (16)(2015 4)(25:40 PM (16)(2015 4)(25:40 PM (16)(2015 4)(26:40 PM (16)(2015 3)(4)(26:40 PM (16)(2015 3)(4)(26:40 PM (16)(2015 3)(29:00 PM	Enterprise Vault Enterprise Vault Enterprise Vault Enterprise Vault Enterprise Vault Enterprise Vault Enterprise Vault	6222 Store 6659 Store 28944 Store 28944 Store 28944 Store 6667 Store 28944 Store 4184 Admin	Cipen Saved Log Create Custom View Import Custom View Clear Log Fiber Current Log Properties DB Frod	
	Event 6222, Enterprise Vault X General [Details]				Attach a Task To this Log	
	Storage Service stopped For more information, see Help and Support Center at <u>http://entced.symantec.co</u>				View Refresh	59
	productievouer	gungenengishoversione.	1.4.1.4cccbuild = 11.	E.L.14/ 4cterroray	Event 6222, Entreprise Vault	
	Log Name: Source: Event ID:	ult Logged: Task Catego	Logged: 9/16/2015 4:25 Task Category: Storage Server	S Refresh		
	Level: User: OpCode: More Information	Information N/A • <u>Event Log Online Help</u>	Keywords: Computer:	Classic pentos.syma	r Help	

Figure 34. Windows Event Viewer

Reference

Required section. Bulleted list. Only reference documents that are customer visible here. Keep the section and put "Not Applicable." if there are no references applicable.

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