

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

Version	Date	Description
2.0	12 December 2016	Addition of EV12 to IBM Cloud Object Storage and 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

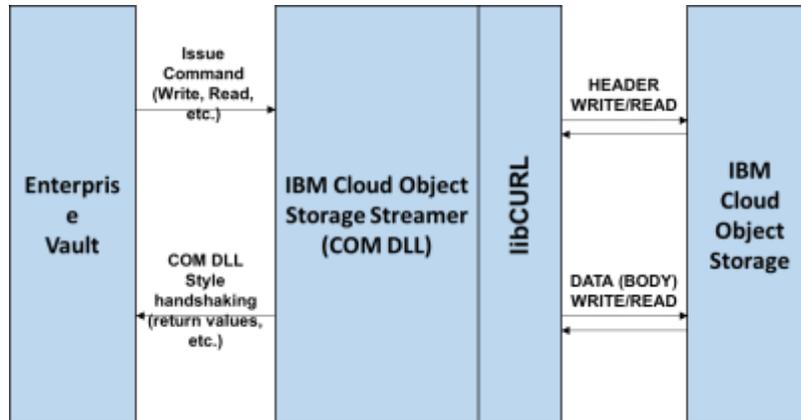


Figure 1. Configuration Diagram

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.

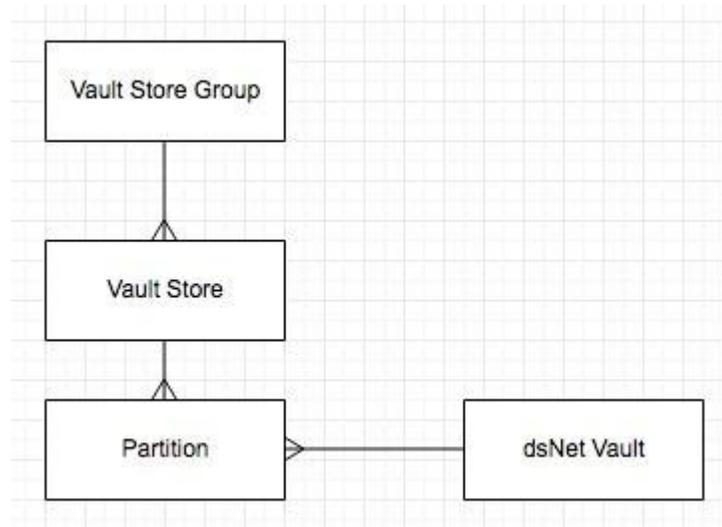


Figure 2. Cardinality Diagram

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.

Table 1. Enterprise Vault - 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

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

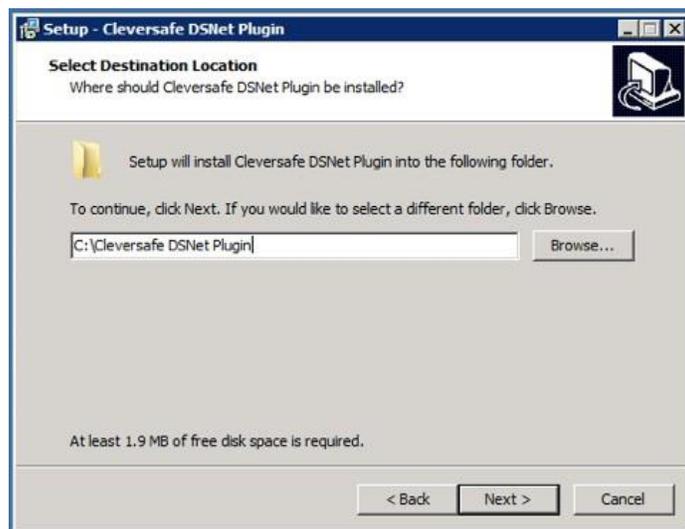


Figure 4. Select Destination Folder

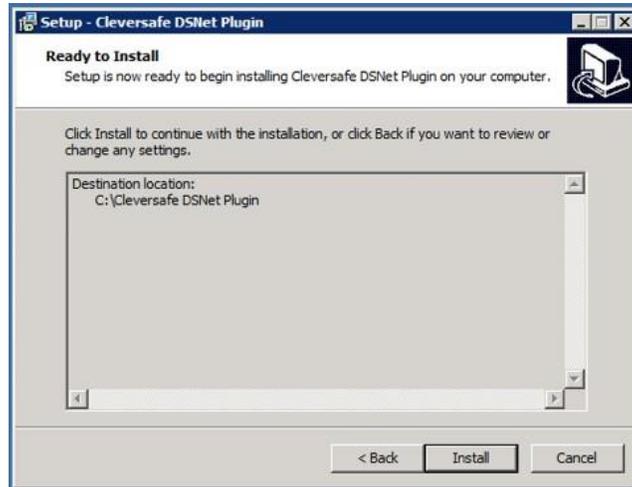


Figure 5. Install Storage Streamer

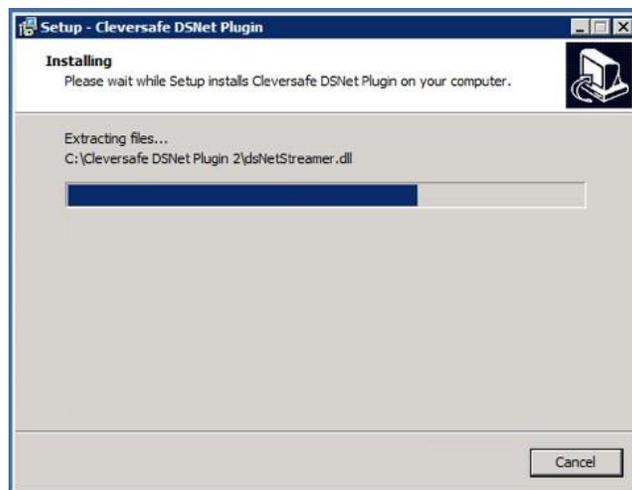


Figure 6. Extracting dsNetStreamer.dll



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.

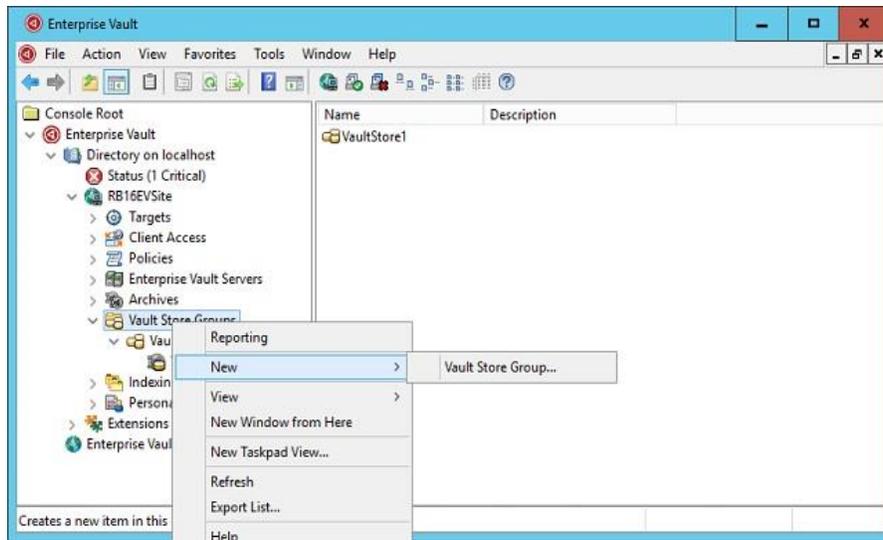


Figure 8. Create New Vault Store Group

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

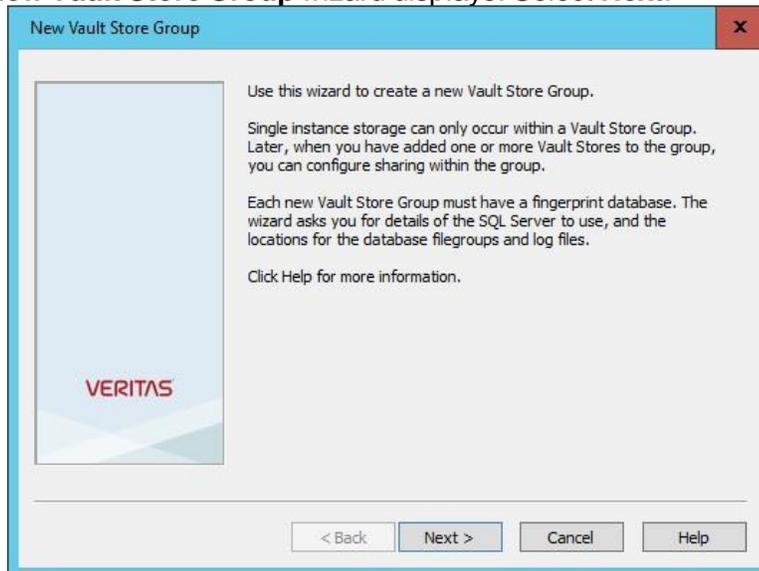


Figure 9. Create New Vault Store Group Wizard

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

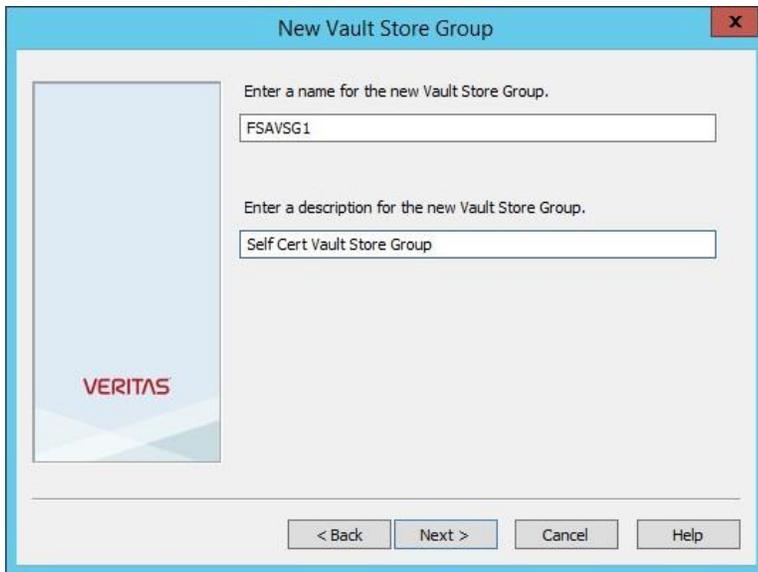


Figure 10. Name and Description

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

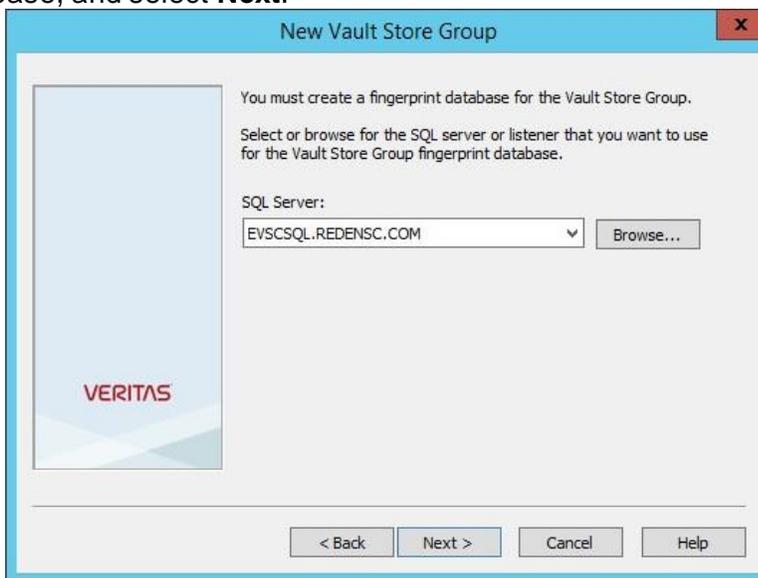


Figure 11. SQL server to be used

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**.

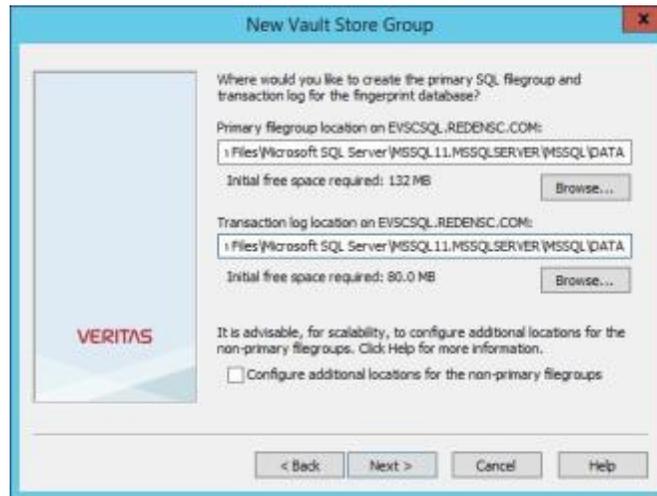


Figure 12. SQL Primary file group and transaction log

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

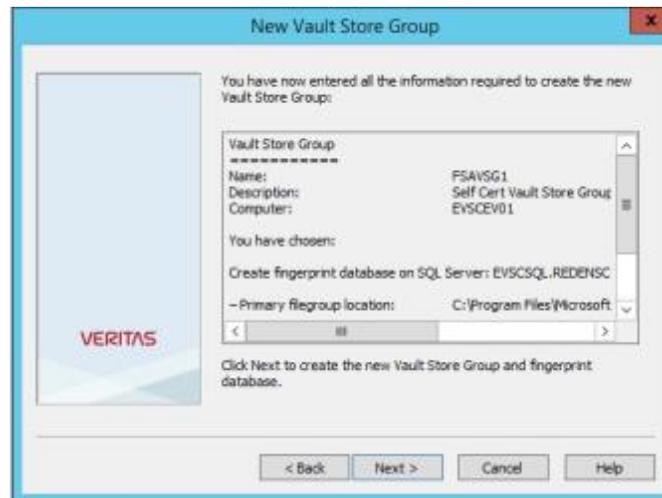


Figure 13. Confirm Vault Store Group

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

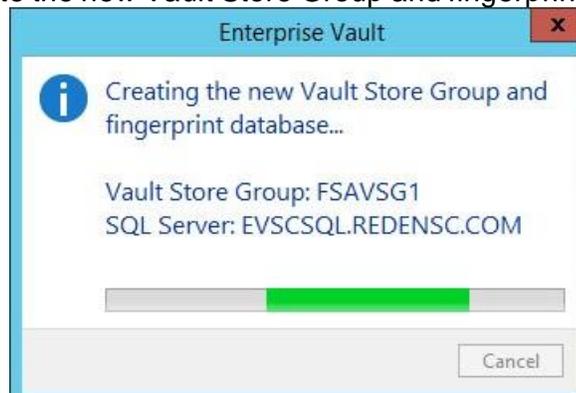


Figure 14. Creating New Vault Store Group and fingerprint database

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

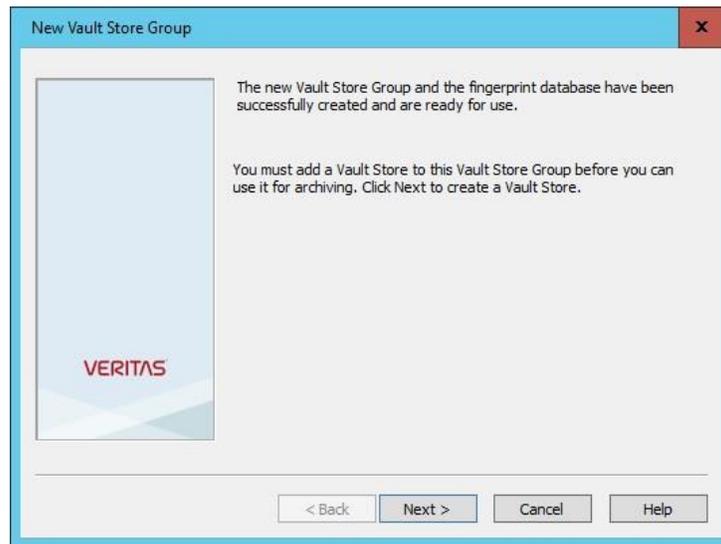


Figure 15. Create new Vault Store

Create New Vault Store

1. Select **Next** to create a new Vault Store

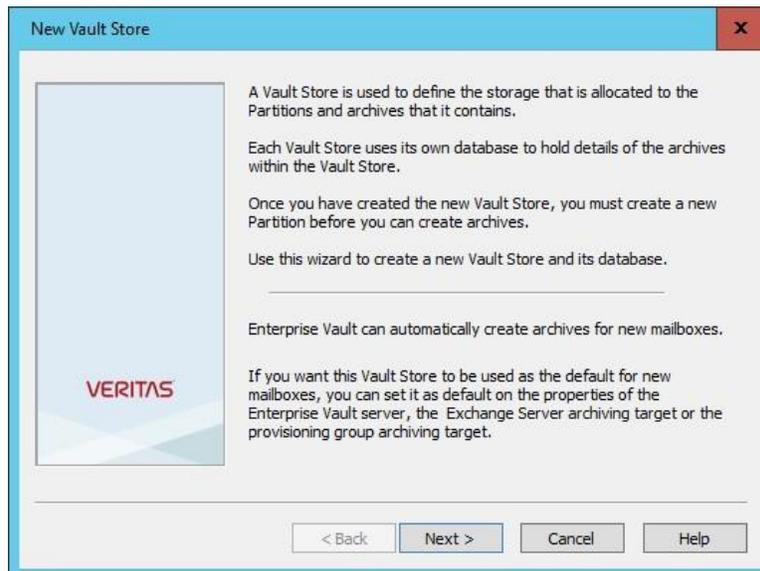


Figure 16. Create New Vault Store

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

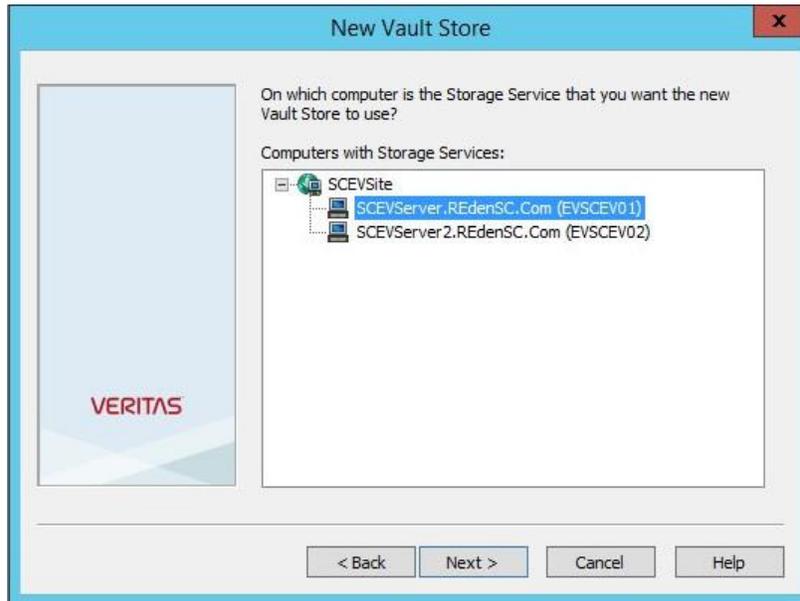


Figure 17. Select server

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

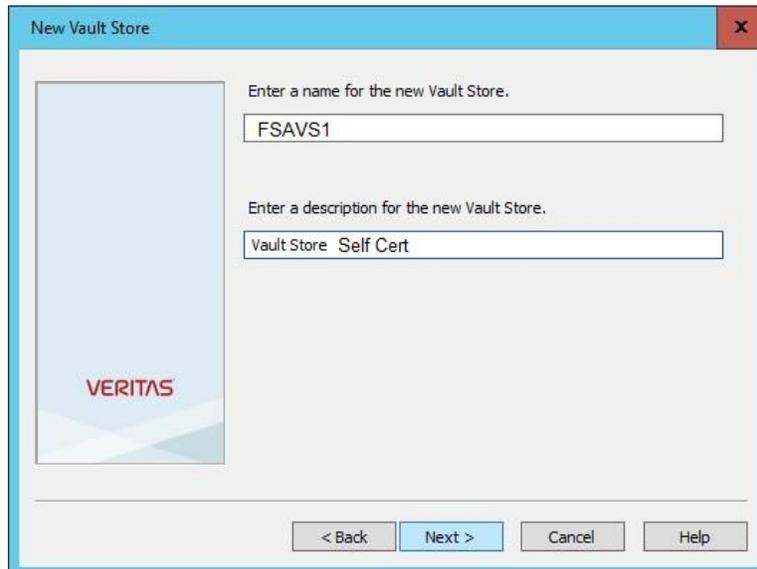


Figure 18. Name and Description

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

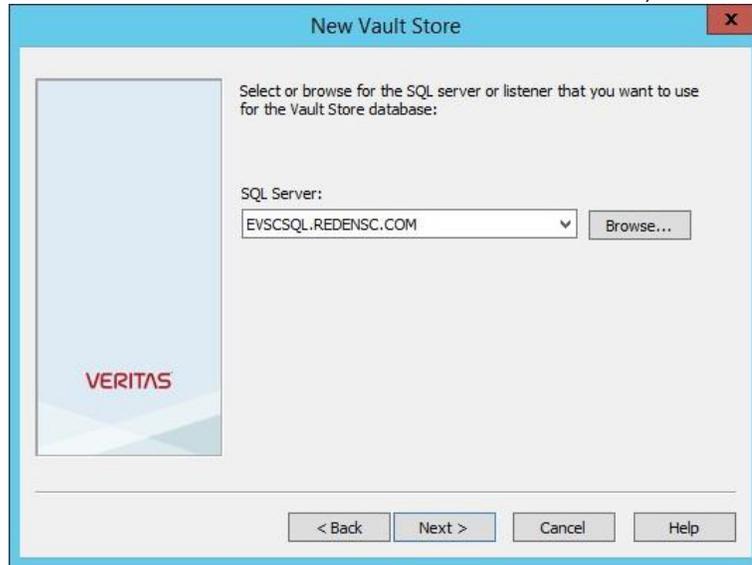


Figure 19. SQL Server

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

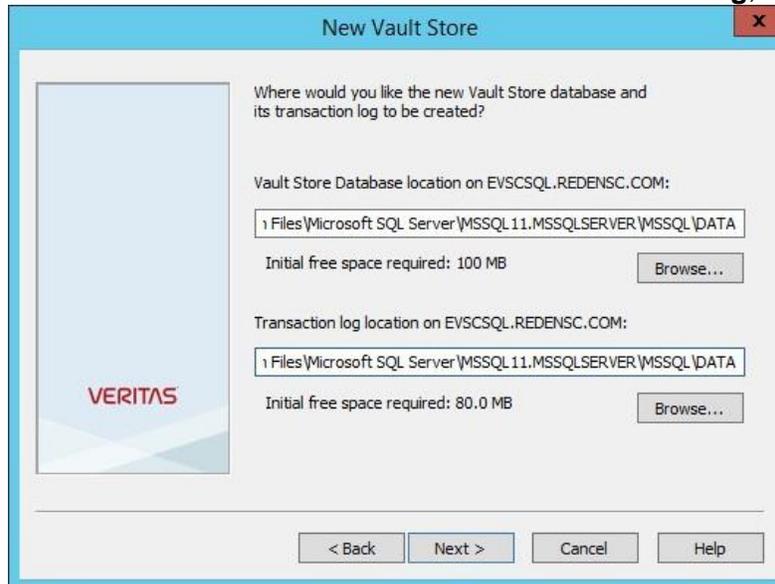


Figure 20. Vault store database and transaction log

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

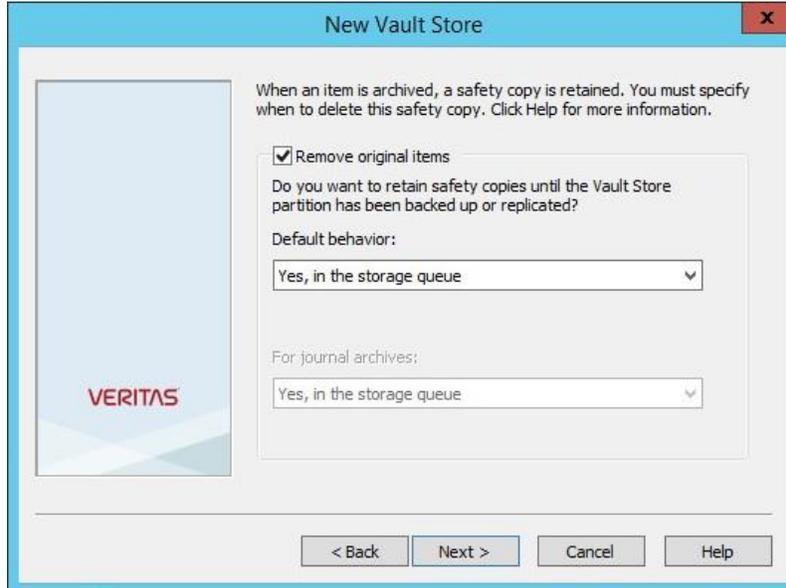


Figure 21. Behavior of storage queue

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

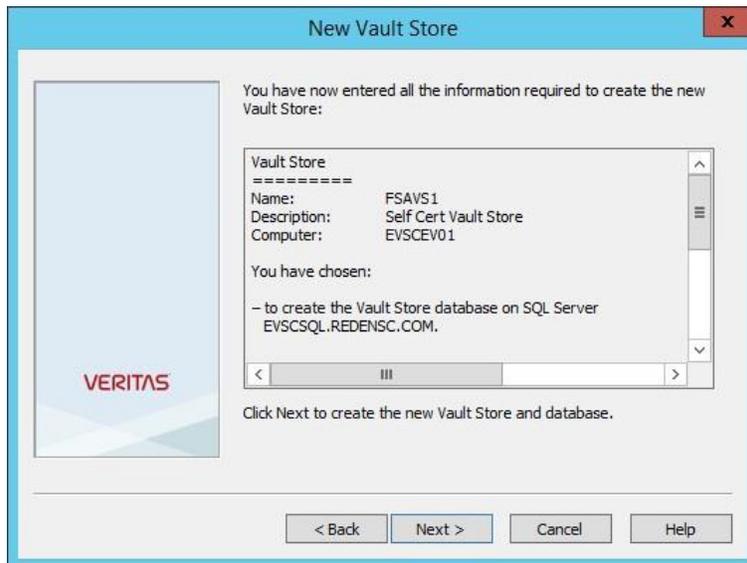


Figure 22. Vault store information

8. Wait while the new Vault Store is created.

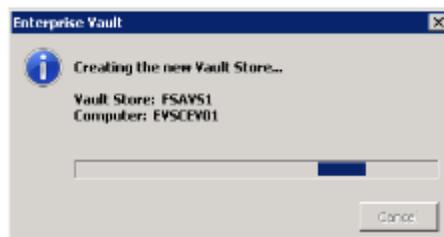


Figure 23. Wait while new vault store is ready

9. Confirm Vault Store Creation. Select **Next**.

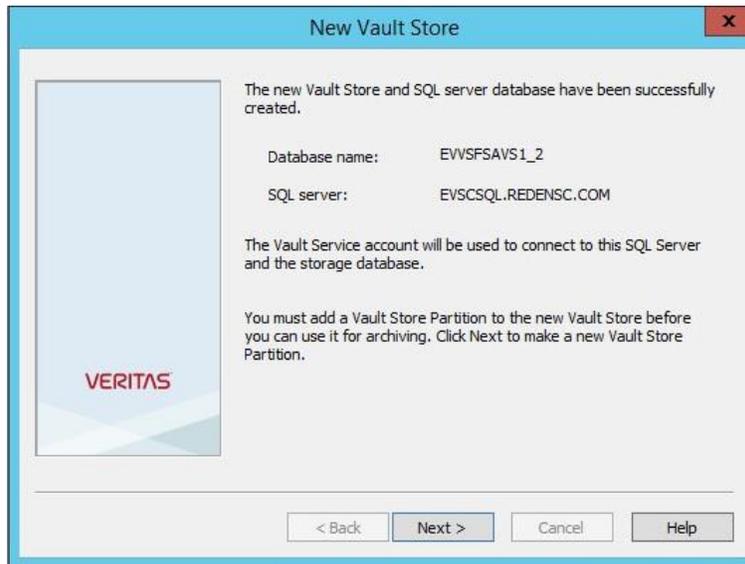


Figure 24. Confirm vault

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**.

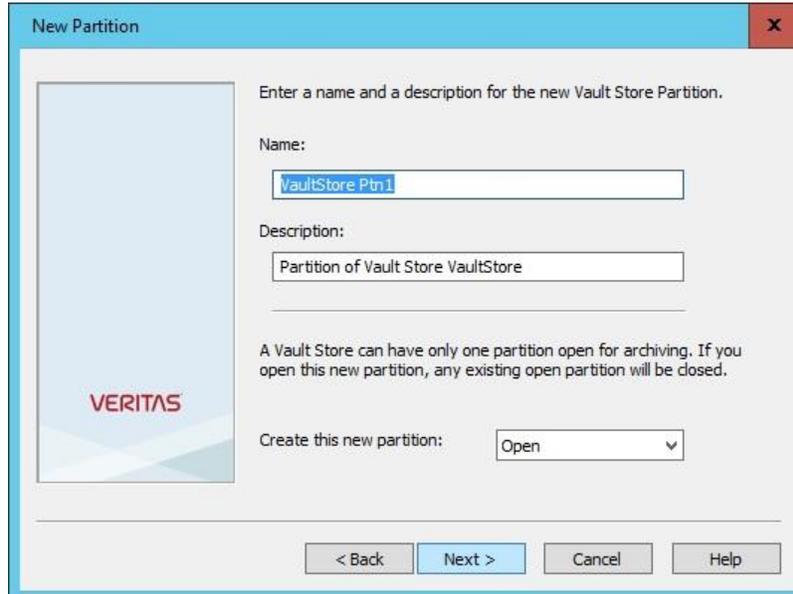


Figure 26. New Vault Partition Name/Description

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

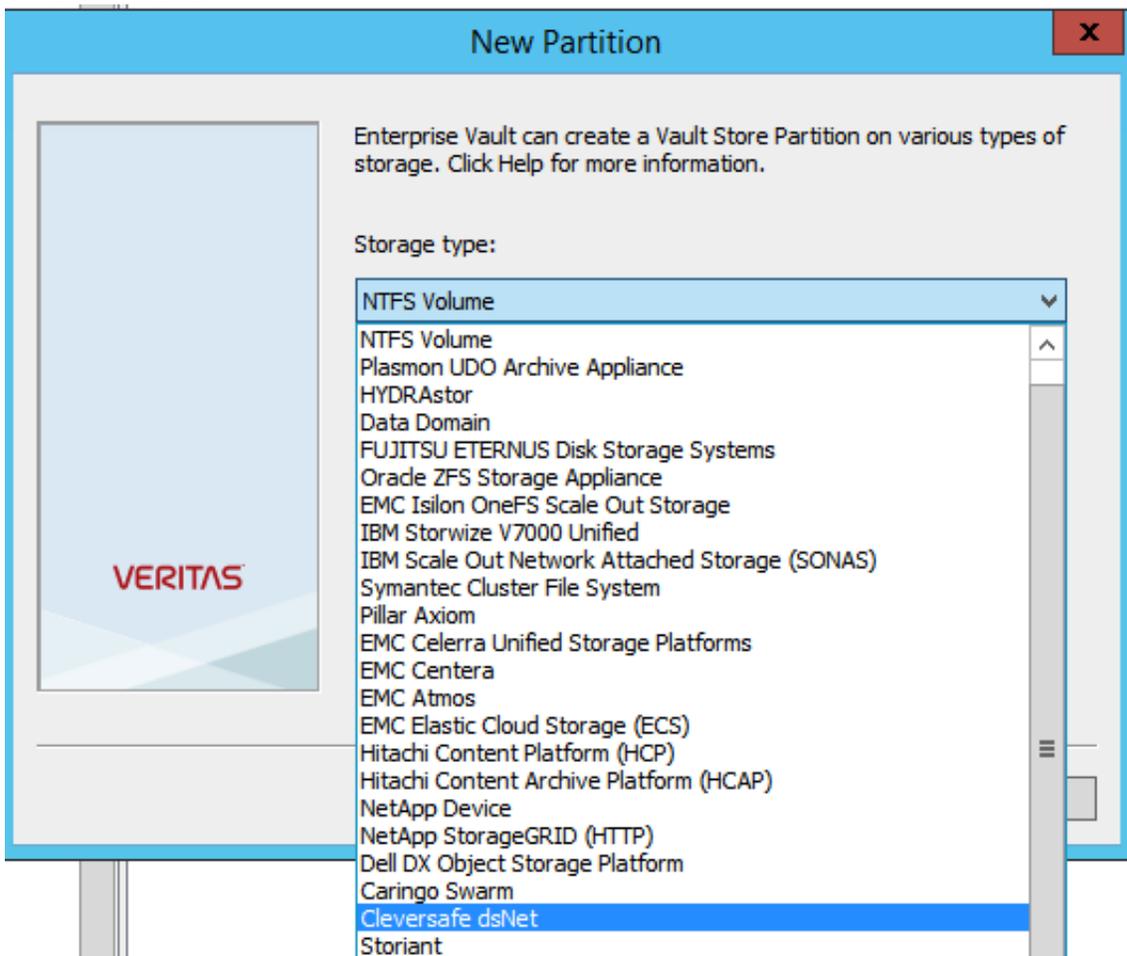


Figure 27. Select storage type

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.

Table 3. Configuration Parameters

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

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.

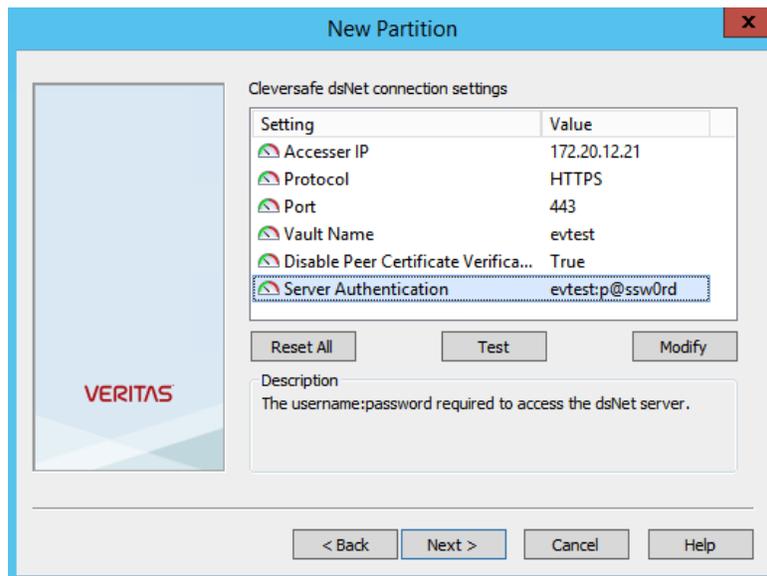


Figure 28. Connection settings test

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

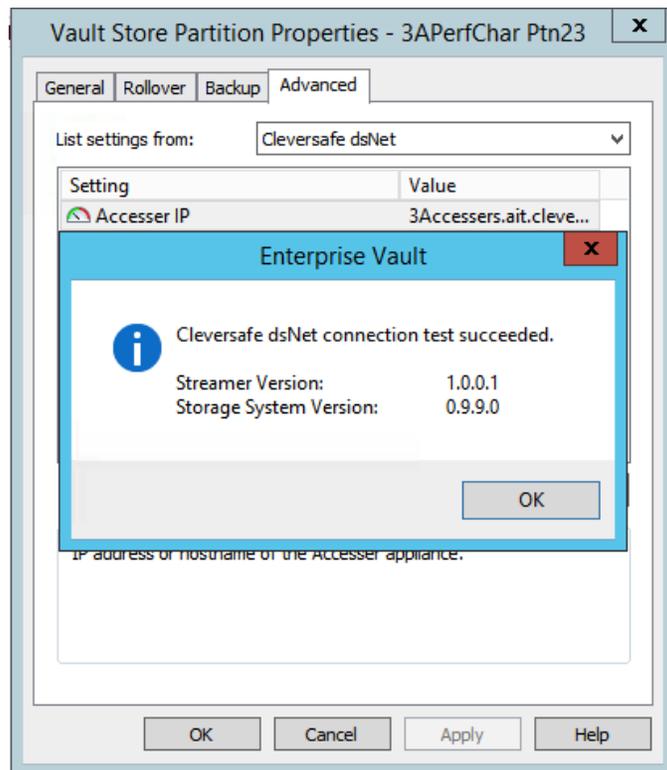


Figure 29. Connection settings test

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

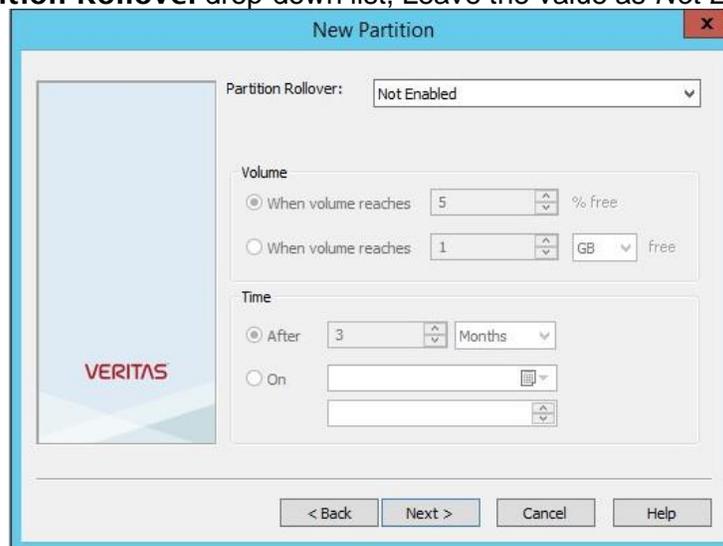


Figure 30. Partition Rollover

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



Figure 31. Partition scan interval

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

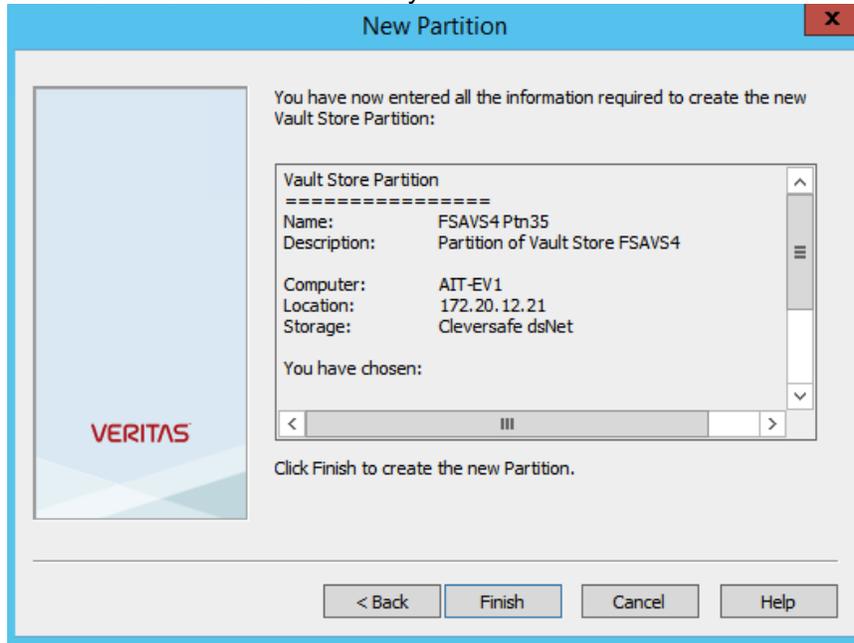


Figure 32. Partition summary

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

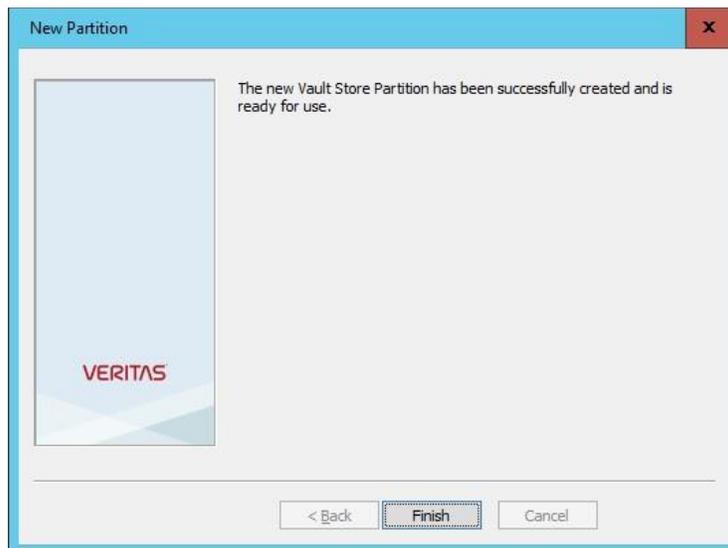


Figure 33. Partition completion

- 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.

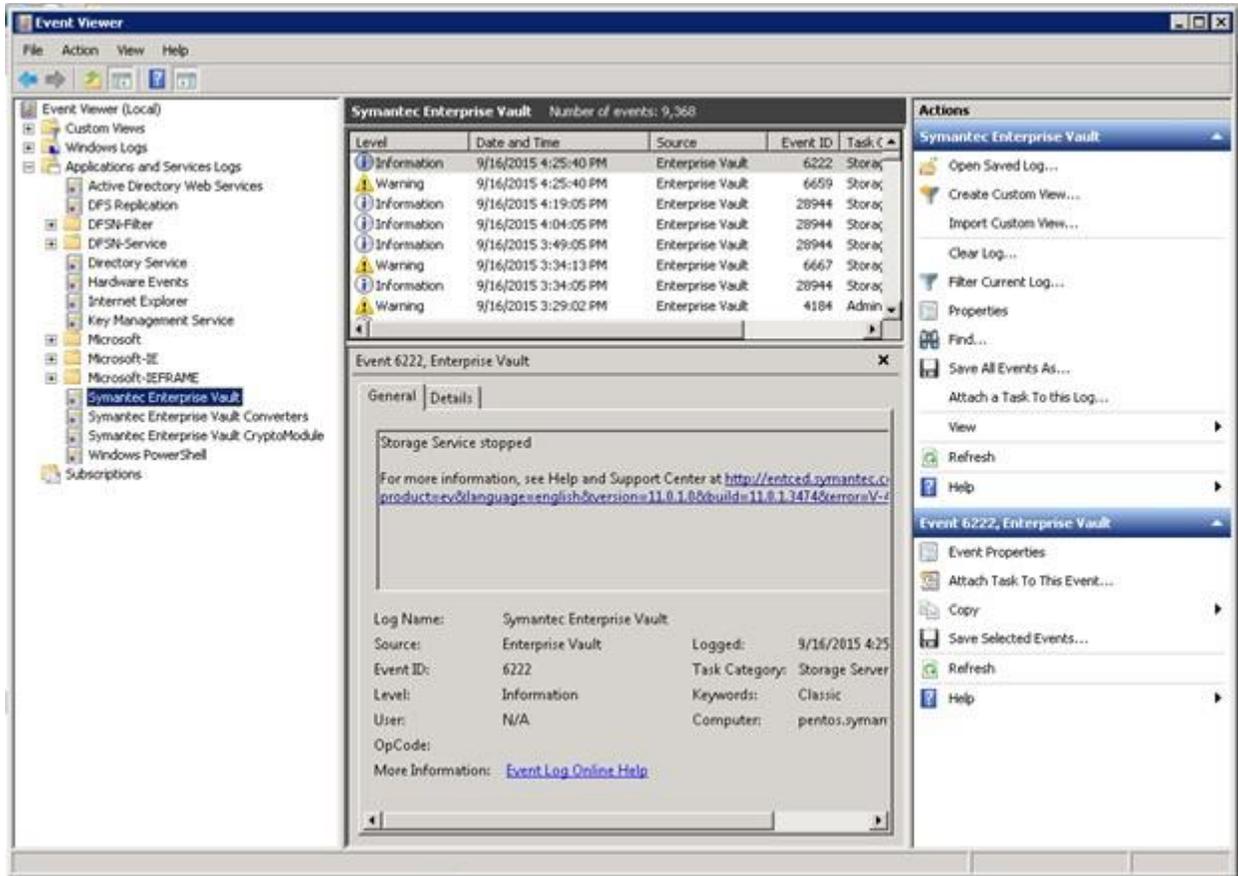


Figure 34. Windows Event Viewer

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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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