Veritas Access Getting Started Guide

Linux

7.4.2

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Veritas Access Getting Started Guide

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Veritas Services and Operations Readiness Tools (SORT)

Veritas Services and Operations Readiness Tools (SORT) is a website that provides information and tools to automate and simplify certain time-consuming administrative tasks. Depending on the product, SORT helps you prepare for installations and upgrades, identify risks in your datacenters, and improve operational efficiency. To see what services and tools SORT provides for your product, see the data sheet:

https://sort.veritas.com/data/support/SORT_Data_Sheet.pdf

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Chapter 1

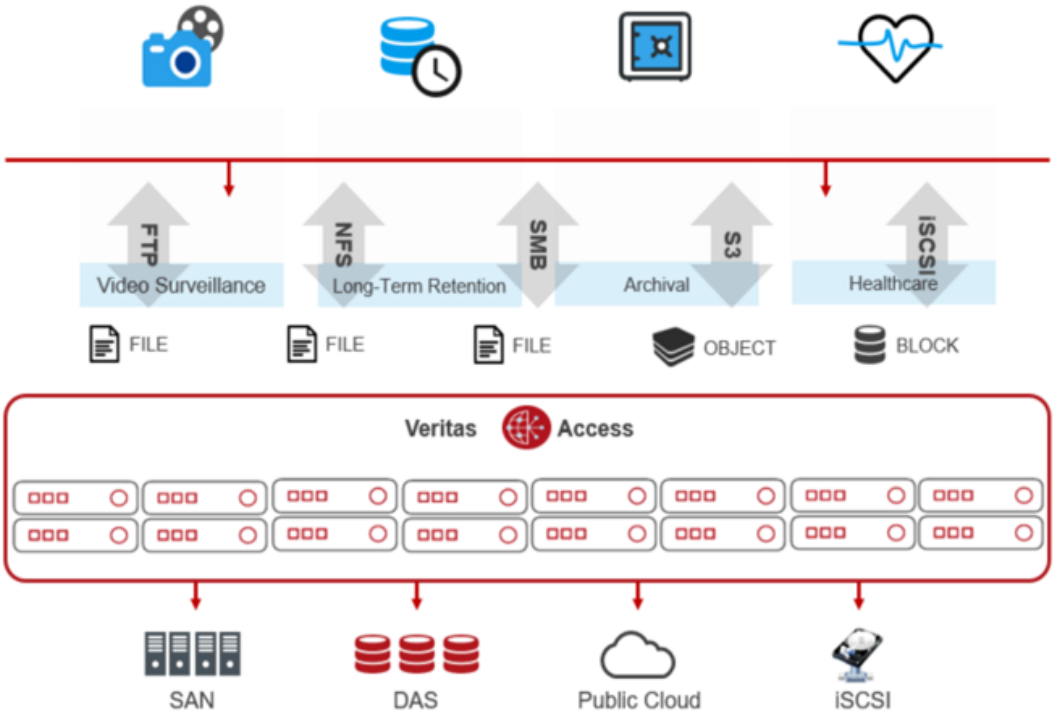
Introducing Veritas Access

This chapter includes the following topics:

About Veritas Access

Veritas Access is a software-defined scale-out network-attached storage (NAS) solution for unstructured data that works on commodity hardware. Veritas Access provides resiliency, multi-protocol access, and data movement to and from the public or private cloud based on policies.

Figure 1-1 Veritas Access architecture



You can use Veritas Access in any of the following ways.

Table 1-1 Interfaces for using Veritas Access

Interface	Description
GUI	Centralized dashboard and Quick Actions with operations for managing your storage. See the GUI and the Online Help for more information.
RESTful APIs	Enables automation using scripts, which run storage administration commands against the Veritas Access cluster. See the *Veritas Access RESTful API Guide* for more information.
Veritas Access Command-Line Interface (CLI)	Single point of administration for the entire cluster. See the manual pages for more information.

Table 1-2 describes the features of Veritas Access.

Table 1-2 Veritas Access key features

Feature	Description
Supported protocols	Veritas Access includes support for the following protocols: ■ Amazon-compatible S3 ■ CIFS ■ FTP ■ iSCSI target ■ NFS ■ Multi-protocol support for NFS with S3
WORM storage for Enterprise Vault Archiving over CIFS	Veritas Access can be configured as WORM primary storage for archival by Enterprise Vault. Veritas Access is certified as a CIFS primary WORM storage for Enterprise Vault 12.1. For more information, see the *Veritas Access Solutions Guide for Enterprise Vault*.
WORM support over NFS	Veritas Access supports WORM over NFS.
Creation of Partition Secure Notification (PSN) file for Enterprise Vault Archiving	A Partition Secure Notification (PSN) file is created at a source partition after the successful backup of the partition at the remote site. For more information, see the *Veritas Access Solutions Guide for Enterprise Vault*.
Managing application I/O workloads using maximum IOPS settings	The MAXIOPS limit determines the maximum number of I/Os processed per second collectively by the storage underlying the file system.
Flexible Storage Sharing (FSS)	Enables cluster-wide network sharing of local storage.

Table 1-2 Veritas Access key features *(continued)*

Feature	Description
Scale-out file system	The following functionality is provided for a scale-out file system: ■ Manage a single namespace spanning over both on-premises storage as well as cloud storage, which provides better fault tolerance for large data sets. ■ Highly available NFS and S3 shares. You use scale-out file systems if you want to store a large capacity of data in a single namespace (3 PB is the maximum file system size). ■ Creation of CIFS shares. ■ File sharing for a scale-out file system using FTP. ■ Read-ahead mechanism to pre-fetch the data and boost the read performance.
Cloud as a tier for a scale-out file system	Veritas Access supports adding a cloud service as a storage tier for a scale-out file system. You can move data between the tiers based on file name patterns and when the files were last accessed or modified. Use scheduled policies to move data between the tiers on a regular basis. Veritas Access moves the data from the on-premises tier to Amazon S3, Amazon Glacier, Amazon Web Services (AWS), GovCloud (US), Azure, Google cloud, Alibaba, Veritas Access S3, and IBM Cloud Object Storage based on automated policies. You can also retrieve data archived in Amazon Glacier.
SmartIO	Veritas Access supports read caching on solid state drives (SSDs) for applications running on Veritas Access file systems.
SmartTier	Veritas Access's built-in SmartTier feature can reduce the cost of storage by moving data to lower-cost storage. Veritas Access storage tiering also facilitates the moving of data between different drive architectures and on-premises.
Snapshot	Veritas Access supports snapshots for recovering from data corruption. If files, or an entire file system, are deleted or become corrupted, you can replace them from the latest uncorrupted snapshot.

Table 1-2 Veritas Access key features *(continued)*

Feature	Description
Deduplication	Veritas Access can participate in deduplicating data in several ways, depending on the storage environment: ■ Using Veritas Data Deduplication Veritas Access participates in a NetBackup Media Server Deduplication Pool-based backup policy by storing and indexing deduplicated blocks for a NetBackup server. See the *Veritas Access Solutions Guide for NetBackup* for more information. ■ Veritas Access can examine files in a local file system and deduplicate them on a scheduled basis. for more details on configuring this functionality In cases where Veritas Access is used to store deduplicated backup data from another source, there is no need to set up a separate deduplication mechanism. **Note:** It is recommended to use Veritas Deduplication for long-term data retention instead of the OpenDedup solution.
Compression	You can compress files to reduce the space used, while retaining the accessibility of the files and having the compression be transparent to applications. Compressed files look and behave almost exactly like uncompressed files: the compressed files have the same name, and can be read and written as with uncompressed files.
Erasure coding	Erasure coding is configured with the EC log option for the NFS use case.
Veritas Access as an iSCSI target for RHEL 7.x	Veritas Access as an iSCSI target can be configured to serve block storage. An iSCSI target as service is hosted in an active-active mode in the Veritas Access cluster.
Configuring Veritas Access in IPv4 and IPv6 mixed mode	Support for configuring the Veritas Access cluster in an IPv4 environment, or an IPV6 environment, or in a mixed mode environment where you have both IPv4 and IPv6 addresses.

Table 1-2 Veritas Access key features *(continued)*

Feature	Description
NetBackup integration	Built-in NetBackup client for backing up your file systems to a NetBackup master or media server. Once data is backed up, a storage administrator can delete unwanted data from Veritas Access to free up expensive primary storage for more data. See the *Veritas Access Solutions Guide for NetBackup* for more information.
OpenStack plug-in	Integration with OpenStack: ■ OpenStack Cinder integration that allows OpenStack instances to use the storage hosted by Veritas Access. ■ OpenStack Manila integration that lets you share Veritas Access file systems with virtual machines on OpenStack Manila.
Quotas	Support for setting file system quotas, user quotas, and hard quotas.
Replication	Periodic replication of data over IP networks. See the `episodic(1)` man page for more information. Synchronous replication of data over IP networks See the `continuous(1)` man page for more information.
Support for LDAP, NIS, and AD	Veritas Access uses the Lightweight Directory Access Protocol (LDAP) for user authentication.
Partition Directory	With support for partitioned directories, directory entries are redistributed into various hash directories. These hash directories are not visible in the name-space view of the user or operating system. For every new create, delete, or lookup, this feature performs a lookup for the respective hashed directory and performs the operation in that directory. This leaves the parent directory inode and its other hash directories unobstructed for access, which vastly improves file system performance. By default this feature is not enabled. See the `storage_fs`(1) manual page to enable this feature.
Isolated storage pools	Enables you to create an isolated storage pool with a self-contained configuration. An isolated storage pool protects the pool from losing the associated metadata even if all the configuration disks in the main storage pool fail.

Table 1-2 Veritas Access key features *(continued)*

Feature	Description
Performance and tuning	Workload-based tuning for the following workloads: ■ Media server - Streaming media represents a new wave of rich Internet content. Recent advancements in video creation, compression, caching, streaming, and other content delivery technology have brought audio and video together to the Internet as rich media. You can use Veritas Access to store your rich media, videos, movies, audio, music, and photos. ■ Virtual machine support ■ Other workloads

Chapter 2

Getting started with the Veritas Access GUI

This chapter includes the following topics:

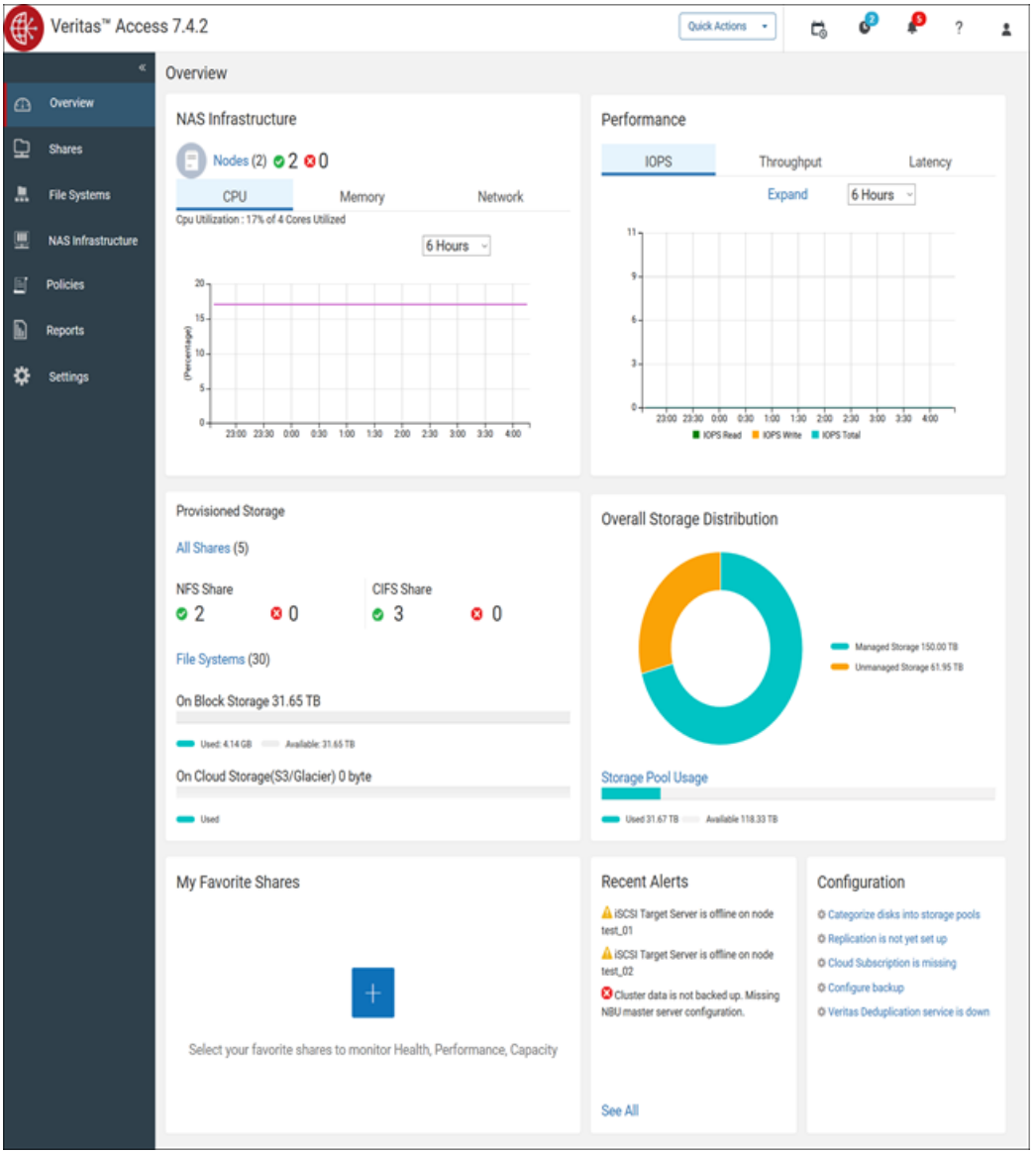
Where to find the Veritas Access GUI

The Veritas Access GUI is automatically installed with the Veritas Access installer.

After the installation, the following URL is generated: http://*consoleIP*:14161/.

The URL for accessing the GUI is displayed after logging on to the Veritas Access CLI.

Open a browser window and copy in the generated URL to access the GUI. See the online Help for information on all the GUI operations. Click ? to access the online Help.


Veritas™ Access 7.4.2
Quick Actions
Overview
Shares
File Systems
NAS Infrastructure
Policies
Reports
Settings
Overview
NAS Infrastructure
Nodes (2) 2 0
CPU
Memory
Network
Cpu Utilization : 17% of 4 Cores Utilized
6 Hours
(Percentage)
Performance
IOPS
Throughput
Latency
Expand
6 Hours
IOPS Read
IOPS Write
IOPS Total
Provisioned Storage
All Shares (5)
NFS Share
2
0
CIFS Share
3
0
File Systems (30)
On Block Storage 31.65 TB
Used: 4.14 GB
Available: 31.65 TB
On Cloud Storage(S3/Glacier) 0 byte
Used
Overall Storage Distribution
Managed Storage 150.00 TB
Unmanaged Storage 61.95 TB
Storage Pool Usage
Used 31.67 TB
Available 118.33 TB
My Favorite Shares
Select your favorite shares to monitor Health, Performance, Capacity
Recent Alerts
iSCSI Target Server is offline on node test_01
iSCSI Target Server is offline on node test_02
Cluster data is not backed up. Missing NBU master server configuration.
See All
Configuration
Categorize disks into storage pools
Replication is not yet set up
Cloud Subscription is missing
Configure backup
Veritas Deduplication service is down

Chapter 3

Getting started with the Veritas Access RESTful APIs

This chapter includes the following topics:

Using the Veritas Access RESTful APIs

You can use the Veritas Access RESTful APIs using the cURL command. You need to be authenticated first and then use the returned token in subsequent requests.

To use the Veritas Access RESTful APIs

1 Make sure that the Veritas Access GUI is running on the host.

```
When you execute the Veritas Access RESTful APIs, you have to provide
the host name and the port on which the Veritas Access GUI is running.
By default, the GUI runs on port 14161.
```

2 Authenticate the user.

```
curl --cookie-jar /tmp/cookies/cookies.txt -g -k -X
POST -d "username=username&
password=password" https://hostname:port/api/rest/authenticate

username Username of the host on which the Veritas Access GUI
is running.
password Password of the host where the Veritas Access GUI
is running.

The call returns a token.
```

3 Use the returned token and cookie.

4 Call the RESTful API.

```
curl--cookie /tmp/cookies/cookies.txt hostname:port/resturl
-g -k -header "Authorization: Bearer token"

hostname Host name on which the Veritas Access GUI is running.
port Port on which the Veritas Access GUI is running.
resturl URL for the RESTful API.
token Token that is returned in step 2.
```

Example:

```
You want to call the API to get all the disks available in the cluster.
curl --cookie /tmp/cookies/cookies.txt
https://10.182.197.183:14161/api/storage/getrecords -g -k --header "Authorization:
Bearer
eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJzdWIiOiJjYWZjNmFhZTIyNzEiLCJpYXQiOjE0NzAyNz
k3ODh9.P2CTswezKv-n6wNQTSmSsePC0YBAHRI_VPWF_69yI3o"
```

Where to find more information on using the Veritas Access RESTful APIs

You can find more information on where to access and how to use the Veritas Access RESTful APIs in the *Veritas Access RESTful API Guide*.

Chapter 4

Getting started with the Veritas Access CLI

This chapter includes the following topics:

Accessing the Veritas Access CLI

To access the Veritas Access CLI

1. After installation, connect to the management console using the console IP address you assigned during the installation.
2. Log on to the management console node using the following credentials:

   User name: `master`

   Default password: `master`

   You are prompted to change your password after the initial logon.

Navigating the Veritas Access CLI

All of the Veritas Access CLI commands are organized in different command modes depending on the operation you want to perform. You can get a list of the different command modes with descriptions of all the available modes by typing a question mark (`?`) at the CLI prompt.

If you are using the support account to log on to Veritas Access, you can use `su - master` in the terminal of the console IP to access the Veritas Access CLI.

To navigate the Veritas Access CLI

1. After logging on to the Veritas Access CLI, type a question mark (`?`) to see the available command modes.

2 Enter the `Storage>` mode by typing `storage` for example.

You can see that you are in the `Storage>` mode because the cluster name now displays with the command mode.

```
clustername.Storage

----------------------------------------------------------------------
|                     Veritas Access 7.4.2                           |
|                                                                    |
|                         Enterprise Edition                         |
|                    Warning: Authorized Access Only                 |
----------------------------------------------------------------------

Veritas Access 7.4.2 (Tue Apr 10 03:43:26 2018),
Installed on Tue Apr 10 08:24:46 EDT 2018

Welcome, master (Master). Today's date is Thu Aug 16 07:14:49 EDT 2018

URL for accessing the GUI: https://<console_ip>:14161/


smtf>

admin             -- Administrator user account
backup            -- Backup configuration
cifs              -- CIFS share commands
cluster           -- Cluster configuration commands
database          -- Database configuration
dedupe            -- Dedupe Configuration Commands
exit              -- Return to the previous menus
ftp               -- FTP configuration commands
help              -- Display an overview of the CLI syntax
history           -- Display command history
logout            -- Logout of the current CLI session
man               -- Display on-line reference manuals
network           -- Network configuration commands
nfs               -- NFS share commands
objectaccess      -- Object Access commands
opendedup         -- Opendedup Configuration Commands
openstack         -- Openstack configuration
replication       -- Replication configuration
report            -- Report utility commands
SmartIO           -- SmartIO configuration
```

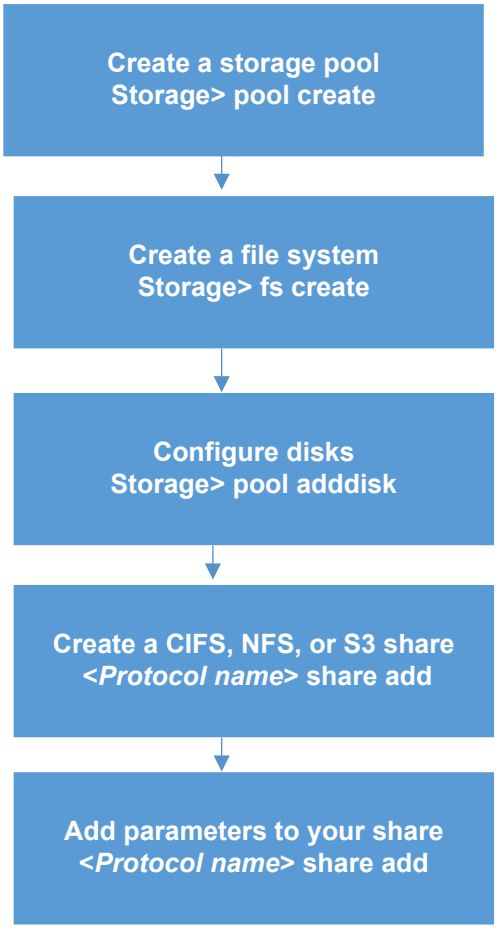
```
storage           -- Storage provisioning commands
support           -- Support utility commands
system            -- System utility commands
target            -- ISCSI Target Configuration Commands
upgrade           -- Software upgrade and version commands
```

Workflow for configuring and managing storage using the Veritas Access CLI

Figure 4-1 describes configuring and managing storage using the Veritas Access CLI.

See the Veritas Access manual pages for the detailed syntax for completing the operations.

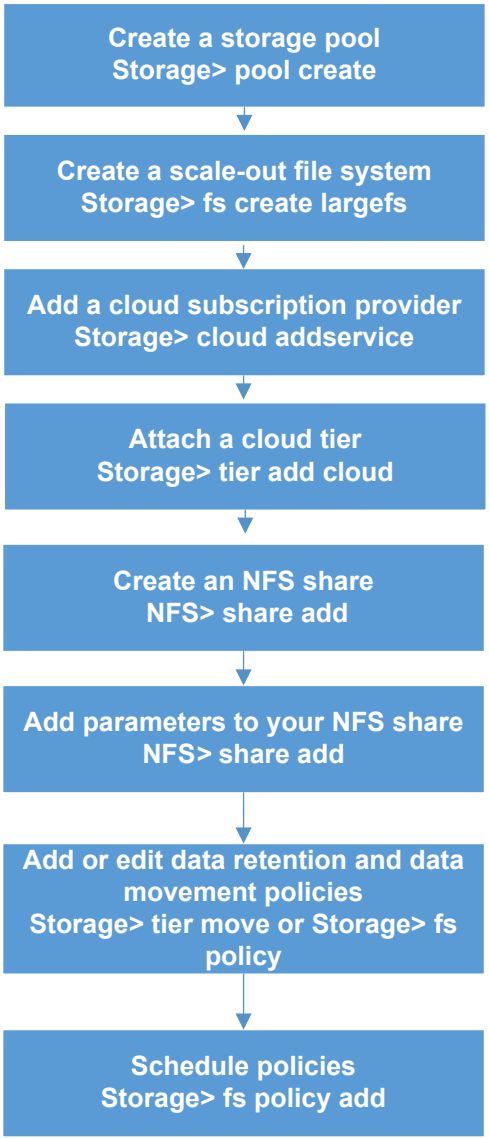
Figure 4-1 Workflow for configuring and managing Veritas Access storage using the CLI



Workflow for moving on-premises storage to cloud storage for NFS shares

Figure 4-2 describes the workflow for moving your on-premises storage to cloud storage for NFS shares for a scale-out file system.

Figure 4-2 Workflow for moving on-premises storage to cloud storage for NFS shares for a scale-out file system



Chapter 5

Where to find the documentation

This chapter includes the following topics:

Using the Veritas Access product documentation

The latest version of the Veritas Access product documentation is available on the Veritas Services and Operations Readiness Tools (SORT) website.

https://sort.veritas.com/documents

You need to specify the product and the platform and apply other filters for finding the appropriate document.

Make sure that you are using the current version of documentation. The document version appears on page 2 of each guide. The publication date appears on the title page of each document. The documents are updated periodically for errors or corrections.

The following documents are available for Veritas Access on the SORT site:

- *Veritas Access Administrator's Guide*
- *Veritas Access Cloud Storage Tiering Solutions Guide*
- *Veritas Access Command Reference Guide*
- *Veritas Access Getting Started Guide*
- *Veritas Access Installation Guide*
- *Veritas Access Quick Start Guide*
- *Veritas Access Release Notes*

- *Veritas Access RESTful API Guide*
- *Veritas Access SDS Management Platform Quick Start Guide*
- *Veritas Access Solutions Guide for Enterprise Vault*
- *Veritas Access Solutions Guide for NetBackup*
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