Hewlett Packard
Enterprise

HPE OmniStack 4.0.1 Command Reference Guide

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Introduction to the HPE OmniStack CLI

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Overview

The HPE OmniStack CLI enables you to use a terminal to create and manage your HPE OmniStack federation from a login to the Virtual Controller.

The HPE OmniStack software runs on the Virtual Controller, a virtual machine running on each HPE OmniStack host in a federation.

You can run the CLI interactively or use it in scripts to automate frequent or recurring tasks.

> ⚠️ **Caution:**
>
> Some of the commands in this guide are not supported on all hypervisors. HPE OmniStack does not prevent you from running the unsupported commands. Do not run them on unsupported hypervisors because they may have unpredictable results.

CLI users

HPE OmniStack is tightly integrated with the Hypervisor Management System (HMS) security. It uses the roles assigned in vCenter Server or in SCVMM to determine which users can access resources and perform federation tasks.

HPE OmniStack allows CLI access to the following users:

- **HPE OmniStack CLI User**: This is the built-in CLI user. The username is `svtcli`, and the password is assigned at deployment. Do not use this user for normal CLI operations. It is intended to provide emergency access to the Virtual Controller when HMS users are not available. Do not use the `svtcli` account for other command line operations unless directed by **Customer Support (https://www.hpe.com/support/hpesc)**. Changing the configuration of the Virtual Controller could cause an HPE OmniStack host to stop functioning properly.

- **vCenter Administrator Role** (Vsphere only): Users can be directly assigned to the Administrator role or they can be assigned to a group that is assigned to the Administrator role. Nested groups are supported. You can use the vCenter **Global Permissions** list (in vSphere under **Administration-Global Permissions**) to make the assignment. Ensure that you select propagate to children or child objects when applying the permission.

- **SCVMM Administrator Role** (Hyper-V only): Users in this role can log in to the Virtual Controller and perform CLI commands to manage the federation.

Users in the Administrator role have super user privileges (like the root user) and their own `/home` directory. If you need assistance with troubleshooting an incident, you are required to provide HPE Customer Support with credentials to access the Virtual Controller.

When users log in to the Virtual Controller, their usernames are normalized according to the following rules:

- Names are lowercase. For example, `TEST1` becomes `test1`.

- Domains are truncated to include the realm only. For example:

  - `hpe.com` is truncated to `hpe`.

  - `hpe.sharepoint.com` is truncated to `hpe`.

- **On vSphere** names are formatted as `user@realm`. For example:

  - `vsphere.local\administrator` becomes `administrator@vsphere`

  - `administrator@vsphere.local` becomes `administrator@vsphere`

- **On Hyper-V** names are formatted as `user@realm`. To specify the user name and domain, use the UPN syntax. For example: `administrator@your-domain`.

HPE OmniStack CLI account credentials (`svtcli`)

As of HPE OmniStack version 3.7.4, the `svtsupport` account has been removed from the system. This means that access to the HPE OmniStack system is the sole responsibility of the customer, either through the identity source (vCenter Server or SCVMM) or through the `svtcli` account.

> ⚠️ **Caution:**
>
> If the identity source is lost and the `svtcli` password is not known, system access can be lost making recovery very difficult. In extreme cases, this can mean data loss due to an inability to access it. Hewlett Packard Enterprise has no ability to recover the `svtcli` password.

Please see this **knowledge base article** for steps on how to recreate or change your `svtcli` password if required.

Change the `svtcli` account password

Use this procedure to change the password for the `svtcli` account.

Before you begin

On vSphere: Obtain the account credentials for a vCenter Server user with permissions to access the Virtual Controller.

On Hyper-V: Obtain the account credentials for an SCVMM Administrator.

Procedure overview

Perform this procedure on every Virtual Controller whose password you want to change.

Do not run the commands in this procedure from the `/roroot` directory.

The password change persists across HPE OmniStack host reboots.

Procedure

1. SSH to the management IP address of the Virtual Controller, then log in using an account that has Administrator permissions.

   For example for vSphere: `administrator@vsphere.local`.

2. Execute the following commands to change the file system from read-only to read-write.

   ```
   sudo mount -o remount,rw /roroot
   ```

   ```
   sudo touch /roroot/disable-root-ro
   ```

3. Reboot the Virtual Controller.

   ```
   sudo reboot
   ```

4. When the Virtual Controller comes back up, log in and execute the following command to change the password:

   ```
   sudo passwd svtcli
   ```

5. Change the file system back to read-only. This step is critical to ensure that HPE OmniStack functions properly.

   ```
   sudo rm /disable-root-ro
   ```

6. Reboot the Virtual Controller.

   ```
   sudo reboot
   ```

Troubleshooting

If the file system is busy when you attempt to remount it as read-only in step **5** on page 10, make sure you are not in the `/roroot` directory when you run the command. If there is no obvious reason for `/roroot` to be busy, then run the following commands.

```
mount -o remount /
```

```
mount -o remount,ro /roroot
```

When complete, continue with step **6** on page 10 of the procedure.

Log in to the CLI on the Virtual Controller

This section describes several different ways to log in to the CLI on the Virtual Controller.

If you enter an invalid password more than ten times at the Virtual Controller log in prompt, HPE OmniStack locks the account for 30 minutes.

The formatted output from some commands does not display correctly on the console or on terminal emulator windows when the screen is set to narrow width. Make the window size or terminal width larger if you see badly formatted output.

Log in to the CLI through a terminal emulator

Before you begin

Obtain:

- The management IP address for the Virtual Controller where you want to execute CLI commands.

- The account credentials for a vCenter Server user with permission to access the Virtual Controller, or the account credentials for an SCVMM user with permission to access the Virtual Controller.

Procedure

1. Set your terminal to display color output.

   Some commands provide component status output in red, green, or yellow.

2. Open an SSH connection directly to the Virtual Controller in the federation on port 22.

3. Press **Enter** to display the Virtual Controller log in prompt, if not already displayed.

4. Enter the user name, and press **Enter**.

5. Enter the password, and press **Enter**.

6. Type `svt-` and press **Tab** twice to display a list of commands.

Log in to the CLI through the vSphere console

Before you begin

Obtain:

- The IP address for the vCenter Server that manages the federation.

- The credentials for a vCenter Server Administrator account described in the section on CLI users.

- The management IP addresses for the Virtual Controllers in the federation that you want to manage. Virtual Controllers are virtual machines whose names are in the format `OmniStack VC`.

   ◦ To display Virtual Controller IP addresses, open the vSphere Client and navigate to the vSphere inventory panel for an HPE OmniStack host in your federation. Click the Virtual Controller which has a name in the format `OmniStack VC`. Click the Summary tab in the main window and click **View All** to display the IP addresses that you can use.

Procedure

1. Launch the console for the Virtual Controller you want to access. The Virtual Controller name includes the prefix `OmniStackVC`.

2. Press **Enter** to display the Virtual Controller log in prompt, if not already displayed.

3. Enter the user name, and press **Enter**.

4. Enter the password, and press **Enter**.

5. Type `svt-` and press **Tab** twice to display a list of commands.

Log in to the CLI through the SCVMM console

Before you begin

Obtain:

- The management IP addresses for the Virtual Controllers in the federation that you want to manage.

- The credentials for an SCVMM Server Administrator account that meets the user requirements described in the section on CLI users.

Procedure

1. Log in to System Center Virtual Machine Manager (SCVMM).

2. Under VMs and Services, select **All Hosts**.

3. Right click the Virtual Controller (which has a name in the format: OmniStackVC nn.nn), select **Connect or View**, and select a connection option.

4. Press **Enter** to display the Virtual Controller log in prompt, if not already displayed.

5. Enter the user name, and press **Enter**.

6. Enter the password, and press **Enter**.

7. Type `svt-` and press **Tab** twice to display a list of commands.

Command format

CLI commands use the `svt-noun-verb [options]` format.

The *noun* variable specifies the subject of the action that you specify with the *verb* variable. In the following example, `backup` is the subject and `show` is the action: `svt-backup-show`

Options use the following format: `--option_name [parameter]`

The `--option_name` variable specifies the name of the option, and the *parameter* variable (not applicable to all options) specifies an argument to the option. For example:

`svt-datastore-create --name *ds23* --size *250GB* --policy *dailybackup*`

If an argument contains spaces or special characters, such as the dollar sign ($), wrap the argument with straight quotes. For example: `--backup '2012-Nov-12 14:00'`

Some options are common to all commands. You can use environment variables to set the values for the common options. Environment variables are useful when you are issuing many commands to the same federation.

Common command options

Use this table as a reference when providing common command options.

If you do not specify an option on the command line or set the associated environment variable, the default value is used. If you specify both an option on the command line and set the associated environment variable, the command line option has precedence.

Option	Description
`--sessionfile`	Deprecated starting in HPE OmniStack 3.6.1. File where session info is stored. **Default:** `$HOME/.svt_session` **Environment Variable:** VI_SESSIONFILE
`--server`	On vSphere, specify the IP address of the vCenter Server. On Hyper-V, do not use the `--server` option. It is ignored. **Environment Variable:** VI_SERVER

Option	Description
`--force`	Automatically supplies a `yes` response to any `Are you sure?` prompt and overrides any checks. This option is useful for scripting. **Default:** Wait for a response **Environment Variable:** SVTCLI_FORCE
`--output` *text* | *xml*	The format for the command output, either text or XML. The xml output of a command provides additional information that you can use when scripting. **Default:** text **Environment Variable:** SVTCLI_OUT
`--timeout` *seconds*	The number of seconds after which the command expires (time out) if it has not completed. The minimum timeout value is 5 seconds. When a command exceeds its timeout threshold, the following message appears: `Command still in progress, but timed out To check status, execute svt-task-show --task 4f186d32-305d-4cc0-a210-1c6f89e-b6a8` **Default:** 120 **Environment Variable:** SVTCLI_TIMEOUT
`--wait` *y* | *n*	Whether to wait for a command to complete before returning the command prompt. Each task has a unique ID string that persists for the duration of the task. When you specify the `--wait` *n* option, the following message appears: `Task started - ID is c7de83b1-3ce8-4f41-8062-8e86f041c599 The svt-task-show command may be used to monitor the progress of this task.` You can use `svt-task-show` with the task ID to monitor the progress of a task. Be careful when using the `--wait` *n* option. In many cases, you want a command to complete before a subsequent command runs. **Default:** y **Environment Variable:** SVTCLI_WAIT
`--help` | `?`	Displays built-in help. **Environment Variable:** SVTCLI_HELP

Under certain troubleshooting circumstances, you are prompted to provide an IP address for the target HPE OmniStack host using a hidden `--ip` option.

Environment variables

You can use environment variables to set the values for the common command options.

Environment variables are useful when you are issuing many commands to the same federation environment. Use the `env` command to see the environment variables that are set. See **Command operation control options** for the environment variable for the common command options. In addition, you can use VI_USERNAME and VI_PASSWORD to set the vCenter Server user name and password.

You can set an environment variable on a command line or in a file called by a script in this format:

```
export variable_name=value
```

For example, on vSphere

```
export VI_SERVER=120.45.2.10
```

The following command creates a datastore and sets a time-out limit of 20 seconds for the operation:

```
$ svt-datastore-create --name dsEnglab --size 1TB --policy daily --wait n --timeout
 20
```

The following example performs the same task, but uses environment variables:

```
$ SVTCLI_WAIT=n SVTCLI_TIMEOUT=20 svt-datastore-create --name dslab --size 1TB --
policy daily
```

Environment variables do not time out and remain valid until you log out of the shell.

Obtain help on a command

With any CLI command, you can specify the --help or --? option to display the command syntax and the command options.

On **Hyper-V**, when you obtain the command syntax or command options for any CLI command by specifying the --help or the --? option, the help output contains references to VMware-specific options. When required to specify the --datacenter option, specify a host group name instead.

Run CLI commands

You can run CLI commands interactively or use them in scripts to automate frequent or recurring tasks.

Run CLI commands interactively

After you log in to the Virtual Controller, you can run HPE OmniStack CLI commands by entering commands at the prompt.

This example creates a datastore.

```
$ svt-datastore-create --name dxlab2 --policy nightly --size 300G
      Task Complete
```

CLI sessions are cancelled after approximately 30 minutes of inactivity.

Run CLI commands in a script

You can specify command options that control how a command operates in the script. Do not use the --wait n option while scripting. In most cases, you want a command to complete before a subsequent command runs.

Access history

On successful log in, the Virtual Controller reports the history of successful and unsuccessful login attempts for the account.

It displays the timestamp and IP address of the most recent successful or unsuccessful login, and the number of unsuccessful login attempts since the last successful login.

Login banner

The Virtual Controller displays a login banner prior to authentication. The default login banner contains the text `SimpliVity OmniCube.`

Use the login banner to:

* Warn users against unauthorized entry.

* Inform users of the possibility of legal action for such unauthorized entry.

* Advise all users that using the system consitutes consent to monitoring, recording, and auditing.

* Inform users that they should have no expectation of privacy.

Failure to display a login warning banner without this type of information could adversely impact your ability to prosecute unauthorized users and users who abuse the system.

To modify the default login banner, edit the file `/mnt/etc/issue.net.` The modifications persist across reboots and upgrades.

Japanese language support (vSphere only)

You can supply HPE OmniStack object names using Japanese language UTF-8 character encoding.

For example:

```
svt-policy-create --name ポリシー
```

To use Japanese language objects names with the HPE OmniStack CLI, you must connect to the Virtual Controller by using SSH. Japanese language object names are not supported if you connect to the Virtual Controller by using vCenter Server console.

Because Japanese UTF-8 characters use three bytes and an ASCII character uses one byte, using Japanese language UTF-8 character encoding affects object naming limits.

You must use ASCII characters for file, directory, and path names.

Arbiter commands

This section contains the following topics:

- **svt-arbiter-address-set**
- **svt-arbiter-instance-set**

svt-arbiter-address-set

Use this command to point a set of HPE OmniStack hosts to an Arbiter after the Arbiter IP address has changed.

Syntax

```
svt-arbiter-address-set --address arbiter_IP_address --
datacenter datacenter_name --cluster cluster_name [common-options]
```

Option	Description
`--address`	(Required) The new IP address for the existing Arbiter instance.
`--datacenter`	The destination datacenter where the new Arbiter address is to be set. You can specify the datacenter using a name or an ID. If you do not specify a datacenter, the default is the current datacenter.
`--cluster`	The destination cluster where the new Arbiter address is to be set.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

This example shows how to set the Arbiter IP address for the data center as 10.186.20.7.

```
$ svt-arbiter-address-set --address 10.186.20.7
```

svt-arbiter-instance-set

Set the arbiter instance for a cluster.

This command allows you to set up an Arbiter on a cluster that was originally deployed without one. You can also use this command to replace an existing Arbiter instance with a completely different instance (running at a different IP address). To change the IP address, you must also use `svt-arbiter-address-set`.

Syntax

```
svt-arbiter-instance-set --address arbiter_IP_address --
datacenter datacenter_name --cluster cluster_name [common-options]
```

Option	Description
`--address`	(Required) The new IP address for the new Arbiter instance.
`--datacenter`	The destination datacenter where the new Arbiter address is to be set. You can specify the datacenter using a name or an ID. If you do not specify a datacenter, the default is the current datacenter.
`--cluster`	The destination cluster where the new Arbiter address is to be set.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

This example shows how to set the Arbiter instance for the cluster with an IP address of 52.197.21.7.

```
$ svt-arbiter-instance-set --address 52.197.21.7
```

Backup commands

This section contains the following topics:

- **svt-backup-cancel**
- **svt-backup-copy**
- **svt-backup-delete**
- **svt-backup-rename**
- **svt-backup-restore**
- **svt-backup-retention-set**
- **svt-backup-show**
- **svt-backup-size-calculate**

svt-backup-cancel

Cancels a virtual machine backup.

You can cancel a virtual machine backup when the backup status is QUEUED or SAVING. During a backup cancel operation, the following backup states might appear in the output: `Canceling`, `Canceled`.

Syntax

```
svt-backup-cancel --datastore datastore --vm vm --backup backup --
datacenter datacenter --cluster cluster [common-options]
```

Options

Option	Description
`--datastore`	(Required) The name or GUID of the datastore containing the virtual machine.
`--vm`	(Required) The name or GUID of the virtual machine that was backed up. **For Hyper-V:** Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.
`--backup`	(Required) The name or GUID of the backup.
`--datacenter`	The destination datacenter or host group containing the cluster where the backup is stored. This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.

Option	Description
`--cluster`	The destination cluster where the backup is stored.
	You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.
`--external-store`	The name of the external store containing the backup. If you specify this option, then you must either specify `--datacenter` and `--cluster` names OR the cluster GUID.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-backup-cancel --vm W28Kusr --datastore dUSR4 --backup "2012-Nov-12 14:00"
......................
Task Complete
```

svt-backup-copy

Copies virtual machine backups to remote clusters. Use this command to create a copy of a backup.

Using `svt-backup-copy` may not preserve the original backup. If you used a policy to create the original backup, that backup is subject to deletion under the backup policy retention rule. Use `svt-backup-retention-set --forever` to preserve the original backup.

Syntax

```
svt-backup-copy --datastore datastore --vm vm --backup backup --src-datacenter src-datacenter --dst-datacenter dst-datacenter --src-cluster src-cluster --dst-cluster dst-cluster --source source --destination destination [common-options]
```

Options

Option	Description
`--datastore`	(Required) The name or GUID of the datastore containing the virtual machine.
`--vm`	(Required) The name or GUID of the virtual machine that was backed up.
	For Hyper-V: Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.
`--backup`	The name or GUID of the backup. If not specified, the most recent backup is copied. If the name includes spaces, wrap all the text with quotes.

Option	Description
`--src-datacenter`	The source datacenter or host group containing the cluster where the backup is stored. If not specified, the command references all datacenters.
	This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.
`--dst-datacenter`	The destination datacenter or host group that contains the cluster where the backup is copied.
	This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.
`--src-cluster`	The source cluster where the backup is stored.
	You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.
`--dst-cluster`	The destination cluster the backup is copied to.
	If you use the default (*local*), the backups are stored in the same cluster as the virtual machine. For full protection against loss of a single site, store a backup in a remote cluster.
	You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.
`--src-external-store`	Specifes the external store containing the backup you want to copy. You cannot use this option and `--dst-external-store` in the same invocation of the command.
`--dst-external-store`	Specifies the external store you want to copy the backup to. You cannot use this option and `--src-external-store` in the same invocation of the command.
`--source`	The source datacenter or host group. If not specified, the command references all datacenters or host groups. Mutually exclusive with src-datacenter/src-cluster/src-external-store.
	NOTE:
	This option is being maintained only for the backward-compatibility of scripts.
`--destination`	The name or GUID of the destination datacenter or host group for the backup copy. Mutually exclusive with dst-datacenter/dst-cluster/dst-external-store.
	NOTE:
	This option is being maintained only for the backward-compatibility of scripts.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-backup-copy --datastore Tokyo_DS2 --vm Agaki-Win28K --source Tokyo --
destination Boston
```

svt-backup-delete

Deletes one or more backups of a virtual machine.

If a backup name contains spaces, use quotes. For example:

```
--backup "2015-Nov-12 14:00"
```

Syntax

```
 svt-backup-delete --datastore datastore --vm vm --datacenter datacenter --
cluster cluster --backup backup --backup-id backup-id --datastore-id datastore-
id --vm-id vm-id --datacenter-id datacenter-id --until until --since since --
status status --expires-before expires-before --expires-after expires-after --
external-store store-name --type source --emergency [common-options]
```

Options

Option	Description
`--datastore`	(Required) Mutually exclusive with `--datastore-id`. The datastore name. Lists all backups in the specified datastore.
	You must specify either the `--datastore` option or the `--datastore-id` option.
`--datastore-id`	(Required) Mutually exclusive with `--datastore`. The datastore ID. Lists all backups in the specified datastore.
	You must specify either the `--datastore` option or the `--datastore-id` option.
`--vm`	(Required) Mutually exclusive with `--vm-id`. The name of the source virtual machine. If not specified, this command references all accessible virtual machines.
`--vm-id`	(Required) Mutually exclusive with `--vm`. The unique ID of a virtual machine by which you can scope a query.
	For Hyper-V: Multiple virtual machines with the same name can exist in the same datastore. For best results use this option instead of the `--vm` option. If you use the `--vm` option, there is no guarantee that this command will affect the correct virtual machine.

Option	Description
--datacenter	Mutually exclusive with --datacenter-id. The destination datacenter or host group containing the cluster where the backup is stored. This parameter is only required if the specified --cluster is insufficient to identify a unique cluster.
--datacenter-id	Mutually exclusive with --datacenter. Backups belonging to the specified datacenter or host group.
--cluster	The destination cluster where the backup is stored. You are only required to specify the --datacenter option if you specify a non-unique cluster name.
--backup	Mutually exclusive with --backup-id. The backup name. If you do not specify a backup, the default setting is all backups.
--backup-id	Mutually exclusive with --backup. The unique ID for a backup.
--until	The upper limit for the date of backup creation. Backups taken before this date.
--since	The lower limit for the date of backup creation. Backups taken after this date.
--status	The current backup status. You can specify a comma-separated list consisting of any combination of new, queued, saving, failed, protected, canceling, canceled, rebuilding, degraded, and/or deleted. For more information, see **Backup status**.
--emergency	**vSphere only** Use the emergency version of the command to delete one or more backups of a virtual machine when the Hypervisor Management Service is not available.
--expires-before	Backups that expire on or before a specific date and time.
--expires-after	Backups that expire on or after a specific date and time.
--external-store	The name of the external store containing the backup.
--type	How the backup came to exist; either manual or policy.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Backup status definitions

State	Description	Allows Cancel operation
CANCELED	The backup operation was successfully canceled.	No
CANCELING	The backup operation is responding to an in-progess manual cancellation of a backup.	No
DEGRADED	The backup is on HPE OmniStack host, but it is not protected through HPE SimpliVity High Availability (HA). This situation can occur when: • An HPE OmniStack host is down in the period when a backup is created or copied and the HPE OmniStack host comes back up. • An HPE OmniStack host in the backup replica set is replaced by another HPE OmniStack host. • When a new HPE OmniStack host is added to a cluster.	No
DELETED	This state occurs if you remove an HPE OmniStack host that contains the last copy of a backup in the cluster.	No
FAILED	The backup operation was not successful. You can delete these backups and if the outcome of backup operations fails consistently, contact **Customer Support (https://www.hpe.com/support/hpesc)**.	No
NEW	The backup operation started, but the initial backup of the virtual machine and processing of the backup on the source cluster is not complete.	No
PROTECTED	The backup is successful and is protected through HPE SimpliVity High Availability (HA). There are two valid copies of the backup information in the cluster. If the backup was a remote backup, successful replication to the remote site has also completed.	No
QUEUED	The backup is waiting to be copied to a remote cluster.	Yes
REBUILDING	The backup data is being copied to a second HPE OmniStack host in the same cluster to ensure high availability of the backup data.	No
SAVING	The backup to a remote cluster is in progress.	Yes
UNKNOWN	The backup state cannot be determined.	No

Example

```
$ svt-backup-delete --vm W28Kusr --datastore dUSR4 --backup "2012-Nov-12 14:00"
.....................
Task Complete
$ svt-backup-delete --datastore ds1 --VM cw-ubuntu-20
This will delete all the backups associated with cw-ubuntu-20.
Proceed? (y/n) y
..........
Task Complete
```

svt-backup-rename

Renames an existing virtual machine backup.

Renaming a backup does not prevent it from automatic deletion under backup policy retention rules. To prevent a backup from automatic deletion, use the `svt-backup-retention-set --forever` command.

For vSphere:

It is possible to have two copies of the same backup stored in separate datacenters. If you rename the backup in one datacenter, the backup in the other datacenter is also renamed.

Syntax

```
svt-backup-rename --datastore datastore-name --vm vm-name --backup backup_name --
name new_name [common-options]
```

Options

Option	Description
--datastore	(Required) The name or GUID of the datastore containing the backed-up virtual machine.
--vm	(Required) The name or GUID of the virtual machine that was backed up.
	For Hyper-V: Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.
--backup	(Required) The original name or GUID of the backup. Use quotes if the name contains spaces.
--name	(Required) The new name for the backup. Use quotes if the name contains spaces.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-backup-rename --datastore San_Fran --vm Accounting_LX --backup "Acct_Weds
 10:30" --name Acct_Weds_Archive
```

The following command sequence shows a before-and-after example of the command:

```
$ svt-backup-show --datastore ds1 --vm cw-ubuntu-20
.-----------------------------------------------------
| Backups of VM cw-ubuntu-20
+-------------+-------+---------------+-----------
| Name        | Type  | App Consistent | Timestamp
+-------------+-------+---------------+-----------
| cw-ubu 1456 | Manual | no            | 2016-Mar-08...
'-------------+-------+---------------+-----------


$ svt-backup-rename --datastore ds1 --vm cw-ubuntu-20 --backup "cw-ubu 1456" --name
 cw-ubu-20-today
..
Task Complete

$ svt-backup-show --datastore ds1 --vm cw-ubuntu-20
.------------------------------------------------------
| Backups of VM cw-ubuntu-20
+----------------+-------+---------------+------------
| Name           | Type  | App Consistent | Timestamp
+----------------+-------+---------------+------------
| cw-ubu-20-today | Manual | no            | 2016-Mar-08...
'----------------+-------+---------------+------------
```

svt-backup-restore

Restores a virtual machine backup to a new virtual machine at any accessible datacenter or host group and datastore.

You can use this command to create a new virtual machine, preserving the original virtual machine (that is, the virtual machine that was the backup source).

By default, this command appends the string `-restore-<timestamp>` to the original virtual machine name when creating a name for the restored virtual machine.

If you perform `svt-backup-restore` multiple times, using the same backup, and you do not specify the `name` parameter of the virtual machine being created, then the first restore succeeds, and the subsequent attempts may fail with a duplicate name error. This happens because the `svt-backup-restore` command uses the same default `name` parameter for each virtual machine being created. This behavior occurs if the restore operation attempts to create a virtual machine on the same datastore or different datastores. Use the `name` parameter of the `svt-backup-restore` command to specify different virtual machine names. Alternatively, you can also use the vSphere Client, which creates a unique virtual machine name by default.

Syntax

```
svt-backup-restore --datastore datastore --vm vm --source datacenter --
destination datacenter --backup backup --src-datacenter datacenter --
```

```
dst-datacenter datacenter --src-cluster cluster --dst-cluster cluster --
home datastore --name new_name --emergency [common-options]
```

Options

Option	Description
`--datastore`	(Required) The name or GUID of the datastore containing the virtual machine.
`--vm`	(Required) The name or GUID of the virtual machine that was backed up. **For Hyper-V:** Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.
`--source`	The source datacenter. If not specified, this command references all datacenters.
`--destination`	The destination datacenter or host group for the restore operation. If not specified, this command references the original datacenter containing the backed-up virtual machine. **NOTE:** This option is being maintained only for the backward-compatibility of scripts.
`--backup`	The name or GUID of the backup to restore. If not specified, the command references the most recent backup by the timestamp for this backup. If the name includes spaces, surround all the text with quotes.
`--src-datacenter`	The source datacenter or host group containing the cluster where the backup is stored. This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.
`--src-external-store`	The external store that contains the backup.
`--dst-datacenter`	The destination datacenter or host group containing the cluster where backup is being stored. This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.
`--src-cluster`	The source cluster where the backup is stored. You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.
`--dst-cluster`	The destination cluster where the backup is copied. You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.

Option	Description
--home	The destination datastore for the new virtual machine operation. If not specified, this command references the original datastore containing the backed-up virtual machine.
--name	The name of the new virtual machine. If not specified, this command appends the string `-restore-<timestamp>` to the original virtual machine name.
--emergency	**vSphere only** Restores a virtual machine backup to a new virtual machine on any accessible datacenter and datastore when the Hypervisor Management System (HMS) is down. An HPE OmniStack CLI account (`svtcli`) password is required to run this command.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-backup-restore --datastore London_DS2 --vm Eng1-Win28K --backup
 Eng1_weekly_Fri --source London_Eng --destination Tokyo_Eng --home datastore --
name VM_Eng1_Lon [common-options]
```

The following example shows a before-and-after use of the command:

```
$ svt-backup-show --datastore ds1 --vm cw-ubuntu-20
.-------------------------------------------------------
| Backups of VM cw-ubuntu-20
+------------------+--------+---------------+--------
| Name             | Type   | App Consistent | Time
+------------------+--------+---------------+--------
| 2015-Nov-12 16:00 | Policy | no            | Mon Nov...
| cw-ubu-20-today  | Manual | no            | Mon Nov...
| cw-ubuntu-20-ba...| Manual | no            | Mon Nov...
'------------------+--------+---------------+--------


$ svt-backup-restore --datastore ds1 --vm cw-ubuntu-20
--backup "2015-Nov-12 16:00" --source Datacenter1
...........................
Task Complete


$ svt-backup-rename --datastore ds1 --vm cw-ubuntu-20 --backup "cw-ubu 1456"
--name cw-ubu-20-today
..
Task Complete


$ svt-vm-show
.----------------------------------------------------------------------------
| Virtual Machines by Datastore
+-------------+----------+-------------------------------------------------
```

```
| Datacenter  | Datastore | Virtual Machine                           | Policy
+------------+----------+-------------------------------------------+-------
| Datacenter1 | ds1      | cw-ubuntu-20                              | default
| Datacenter1 |          | cw-ubuntu-20-restore-2012-11-12-16:00:02  | default
| Datacenter1 |          | win2k8-iom-4dd-100gb-65-10                | default
| Datacenter1 |          | win2k8_template-65-10                     | default
| Datacenter1 |          | win2k8_template-65-70-restore-2016-11-...| default
'------------+----------+-------------------------------------------+-------
```

svt-backup-retention-set

Sets the retention time for existing virtual machine backups in a datastore. When the retention time expires, the backup is automatically deleted.

The retention time starts from the date and time of backup creation. The maximum retention time is 20 years. Alternately, you can set the `--forever` option if you do not want the backups to be deleted.

When you change the retention time for existing virtual machine backups, this command provides an estimate of the physical storage free space that is available based on your changes. The free space estimate is based on the unique size value of the backup. If you are not calculating the unique size of a backup, the message shows the estimated free space as `Unknown`.

Syntax

```
svt-backup-retention-set --datastore datastore-name --vm vm-name --
backup backup_name [--retention [Mins|H|D|W|MO|Y]]|--forever [common-options]
```

Options

Option	Description
`--backup`	(Optional) The name of the backup the retention time applies to. If you do not specify this option, the retention time applies to all backups in the virtual machine or in the datastore.
`--datastore`	(Required) The name or GUID of the datastore that contains the virtual machine.
`--retention`	(Optional) The retention time for backups before they are automatically deleted. The retention time for backups is a positive integer followed by the following time units: `Mins`, `H`, `D`, `W`, `MO`, or `Y`. You can combine the time units in a string surrounded by quotes, for example, `"1w 2d"`.

You must specify either the `--retention` option or the `--forever` option. Do not specify `0` for the retention time. If you want to delete backups, use `svt-backup-delete`. If you do not want backups to be deleted automatically, use the `--forever` option. |

Option	Description
`--forever`	(Optional) Sets the retention to infinite time, which means that the backups are not deleted automatically.
	You must specify `--datastore`, `--vm`, and `--backup` if you use this option.
	You must specify either the `--retention` option or the `--forever` option.
`--vm`	(Optional) The name or GUID of the virtual machine. If you do not specify this option, the retention time applies to all virtual machines in the datastore.
	For Hyper-V: Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

NOTE:

In the current release of HPE OmniStack for Hyper-V, `App Consistent` is not supported. Ignore this information when using this command.

```
$ svt-backup-retention-set --vm vm1 --datastore ds1 --retention 10mins


.-------------------------------------------------------------------.
| Backups that will have their retention time changed               |
+-----------+-----+--------------------------+--------+-------------+
| Datastore | VM  | Backup                   | Backup | Consistency |
|           |     | Name                     | Type   | Type        |
+-----------+-----+--------------------------+--------+-------------+
| ds1       | vm1 | 2017-04-12T09:20:00-04:00 | Policy | None        |
|           |     | 2017-04-12T09:10:00-04:00 | Policy | None        |
|           |     | 2017-04-12T09:30:00-04:00 | Policy | None        |
|           |     | 2017-04-12T09:00:00-04:00 | Policy | None        |
|           |     | 2017-04-12T08:50:00-04:00 | Policy | None        |
'-----------+-----+--------------------------+--------+-------------'


+-------------------+------------------+------------+----------+
| Backup            | Expiration       | Datacenter | Cluster  |
| Time              | Time             |            |          |
+-------------------+------------------+------------+----------+
| 2017-Apr-12 09:20 | 2017-Apr-12 10:20 | Datacenter1 | Cluster1 |
| 2017-Apr-12 09:10 | 2017-Apr-12 10:10 | Datacenter1 | Cluster1 |
| 2017-Apr-12 09:30 | 2017-Apr-12 10:30 | Datacenter1 | Cluster1 |
| 2017-Apr-12 09:00 | 2017-Apr-12 10:00 | Datacenter1 | Cluster1 |
```

```
| 2017-Apr-12 08:50 | 2017-Apr-12 09:50 | Datacenter1 | Cluster1 |
'------------------+------------------+------------+---------'


+-----------+--------+------+---------------+---------+
| Status    | Size   | Sent | Replication   | Family  |
|           |        | Type | End Time      |         |
+-----------+--------+------+---------------+---------+
| Protected | 4.96MB |   0B | Not Applicable | Unknown |
| Protected | 4.96MB |   0B | Not Applicable | Unknown |
| Protected | 4.96MB |   0B | Not Applicable | Unknown |
| Protected | 4.96MB |   0B | Not Applicable | Unknown |
| Protected | 4.96MB |   0B | Not Applicable | Unknown |
'-----------+--------+------+---------------+---------'
```

svt-backup-show

Displays backup information for virtual machines. This command lists backups created by a backup policy rule and backups created manually with the `svt-vm-backup` command.

Syntax

```
svt-backup-show --datastore datastore --vm vm-name --name name --vm-state state --
status status --datacenter datacenter --cluster cluster --external-store store-
name --until --since --min-size --max-size --max-sent-size --min-sent-size --min-
unique-size --max-unique-size --consistency consistency_type --type backup_type --
sort sort_on --ascending --descending --name backup-name --expires-before --
expires-after --emergency --failed-vss [common-options]
```

Options

Option	Description
--datastore	Lists all backups in the specified datastore.
--vm	The name or GUID of the source virtual machine. If not specified, this command references all accessible virtual machines.
	For Hyper-V: Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.
--name	The name of the backup. You can also specify a string pattern to match, using asterisks as the wildcard character.
	The default backup name, a user-specified name, or a timestamp if a policy creates the backup.
	In the system output, a plus symbol (+) appended to a backup indicates that one or more policy backups did not complete on schedule. This situation may be due to system unavailability, scheduling conflicts, or any other system issue that prevents the backup from occurring on schedule.

Option	Description
--backup	The backup name or a pattern using one or more asterisk characters as a wildcard to identify the backup. The backup can exist on a cluster or on an external store.
--vm-state	The current condition of the source virtual machine. You can specify a comma-separated list consisting of any combination of `active`, `deleted`, and/or `removed`.
--status	The current backup status. You can specify a comma-separated list consisting of any combination of `new`, `queued`, `saving`, `failed`, `protected`, `canceling`, `canceled`, `rebuilding`, `degraded`, and/or `deleted`. For more information, see **Backup status**.
--datacenter	The destination datacenter or host group containing the cluster where the backup is stored. This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.
--cluster	The destination cluster where the backup is stored. You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.
--until	The upper limit for the date of backup creation. (Lists backups taken before this date.)
--since	The lower limit for the date of backup creation. (Lists backups taken after this date.)
--min-size	The lower limit for the logical size of the backup.
--max-size	The upper limit for the logical size of the backup.
--min-sent-size	The lower limit for the volume of data transferred.
--max-sent-size	The upper limit for the volume of data transferred.
--min-unique-size	The lower limit for the volume of unique (non-deduplicated) data in a backup. The list of backups must contain backups for which you have performed a unique backup size calculation.
--max-unique-size	The upper limit for the volume of unique (non-deduplicated) data in a backup. The list of backups must contain backups for which you have performed a unique backup size calculation.

Option	Description
`--consistency`	Specifies if the backup is application consistent. You can specify a comma separated list of `application-consistent`, `none`, `vmw-snapshot`, `failed-vss` and/or `vss`. • `None` Crash consistent backups; backups that are not application consistent. • `VMW-Snapshot` Application Consistent backup with VMware Snapshots. • `VSS` Application aware backup with Microsoft VSS. • `Failed VSS` Backups that were scheduled as Microsoft VSS, but were taken as Crash consistent due to some guest operations failure.
`--type`	The method of backup creation. You can specify `manual` or `policy`.
`--zonestatus`	A comma separated list that shows the status of the specified zone as one of: `unknown`, `not-applicable` (the default), `compliant`, or `non-compliant`. • `unknown` At the beginning of a remote backup, the backup may appear with an unknown state. • `not-applicable` When no zones are set up. • `compliant` Zones are set up, and the replica set spans two zones. • `non-compliant` When zones are configured, and the replica set is only in one zone, the backup is non-compliant.
`--external-store`	The name of the external store containing the backup or a pattern using one or more asterisk characters as a wildcard to identify the external store.
`--expires-before`	Lists backups that expire on or before a specific date and time.
`--expires-after`	Lists backups that expire on or after a specific date and time.
`--datastore-id`	Lists only backups belonging to the specified VM. If no value is entered, all backups are displayed.
`--datacenter-id`	Lists only backups belonging to the specified datacenter or host group
`--vm-id`	The ID of the source virtual machine.
`--sort`	Sorts the command output by an attribute or value. You can specify any one of `name`, `timestamp` (the default), `consistency`, `state`, `datacenter`, `cluster`, `sent`, `datastore`, `vm`, `source`, `size`, `unique-size`, `vm-state`, `unique-size-timestamp`, `external-store` or `zonestatus`.
`--ascending`	Sorts results in ascending order.

Option	Description
--descending	Sorts results in descending order.
--offset	Specifies the number of results to 'skip over' in a sorted result set. This is used with max-results.
--emergency	**vSphere only** Displays backup information for virtual machines when the Hypervisor Management System (HMS) is down. The CLI account (svtcli) password is required to run this command.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Backup status definitions

State	Description	Allows Cancel operation
CANCELED	The backup operation was successfully canceled.	No
CANCELING	The backup operation is responding to an in-progess manual cancellation of a backup.	No
DEGRADED	The backup is on HPE OmniStack host, but it is not protected through HPE SimpliVity High Availability (HA). This situation can occur when: • An HPE OmniStack host is down in the period when a backup is created or copied and the HPE OmniStack host comes back up. • An HPE OmniStack host in the backup replica set is replaced by another HPE OmniStack host. • When a new HPE OmniStack host is added to a cluster.	No
DELETED	This state occurs if you remove an HPE OmniStack host that contains the last copy of a backup in the cluster.	No
FAILED	The backup operation was not successful. You can delete these backups and if the outcome of backup operations fails consistently, contact **Customer Support (https://www.hpe.com/support/hpesc)**.	No
NEW	The backup operation started, but the initial backup of the virtual machine and processing of the backup on the source cluster is not complete.	No

State	Description	Allows Cancel operation
PROTECTED	The backup is successful and is protected through HPE SimpliVity High Availability (HA). There are two valid copies of the backup information in the cluster. If the backup was a remote backup, successful replication to the remote site has also completed.	No
QUEUED	The backup is waiting to be copied to a remote cluster.	Yes
REBUILDING	The backup data is being copied to a second HPE OmniStack host in the same cluster to ensure high availability of the backup data.	No
SAVING	The backup to a remote cluster is in progress.	Yes
UNKNOWN	The backup state cannot be determined.	No

Command output definitions

This command displays the following information:

Field	Description
Timestamp	The date and UTC time of the backup.
Expiration Time	The date and UTC time at which the backup expires and is automatically deleted if the backup is not preserved (for example, by using `svt-backup-retention-set -- forever`).
Replication End Time	Records the time that the remote backup completed replication (state equals Degraded, Rebuilding, or Protected). If the remote backup replication ends up in the failed state, the Replication End Time will not be set.
Size	The logical size of the backup.
Sent	When the backup is sent to a remote location, the volume of data in the transfer or the volume of data transferred.

Filtering and sorting using svt-backup-show

A federation can contain a large number of manual and policy backups. The command options enable you to sort and filter the backups so that you can find specific backups easily.

Example

The following example displays information for a backup that resides in a datastore:

```
$ svt-backup-show --datastore fd
.----------------------------------------------------------------------------------------
|Backups for datastore 'fd'
+--+--------+------+-----------+------------------+------------------+----------+-------------+
|VM|Backup  |Backup|Consistency|Backup            |Expiration        |Datacenter|Cluster      |
|  |Name    |Type  |Type       |Time              |Time              |          |             |
+--+--------+------+-----------+------------------+------------------+----------+-------------+
```

```
|t1|t1-bckup|Manual|None       |2018-Dec-17 18:28:08|2018-Dec-24 18:28:08|TG2        |clust6b       |
'--+--------+------+-----------+--------------------+--------------------+----------+--------------+

   ----------------------------------------.
                                           |
   +---------+-------+----+-----------+------+
   |Status   |Size   |Sent|Replication|Family|
   |         |       |    |End Time   |      |
   +---------+-------+----+-----------+------+
   |Protected|272.00KB| 0B|N/A        |vSphere|
   +---------+-------+----+-----------+------+'
```

Example

The following example displays information for all backups that reside in clusters and in an external store:

```
# svt-backup-show
.-----------------------------------------------------------------------------------------------------------------------------.
| All backups
|
+-----------+------+-------------------------------------+--------+------------+--------------------+--------------------+
| Datastore | VM   | Backup                              | Backup | Consistency| Backup             | Expiration         |
|           |      | Name                                | Type   | Type       | Time               | Time               |
+-----------+------+-------------------------------------+--------+------------+--------------------+--------------------+
| dsLocal   | VM00 | 2019-03-26T11:18:00-04:00           | Policy | None       | 2019-Mar-26 11:18:00 | 2019-Mar-26 12:18:00 |
|           |      | 2019-03-26T11:18:00-04:00           | Policy | None       | 2019-Mar-26 11:18:00 | 2019-Mar-26 12:18:00 |
|           |      | VM00-backup-2019-03-26T11:17:03-04:00 | Manual | None       | 2019-Mar-26 11:17:03 | N/A                |
'-----------+------+-------------------------------------+--------+------------+--------------------+--------------------+

   -------------------------------------------------------------------------------------.
                                                                                        |
   +-------------+---------------+----------+--------+--------+--------------------+--------+
   | Datacenter  | Cluster Or    | Status   | Size   | Sent   | Replication        | Family |
   |             | External Store|          |        |        | End Time           |        |
   +-------------+---------------+----------+--------+--------+--------------------+--------+
   | Datacenter2 | Cluster2      | Protected| 24.00KB| 24.00KB| 2019-Mar-26 11:18:33 | vSphere|
   | Datacenter1 | Cluster1      | Protected| 24.00KB|     0B | N/A                | vSphere|
   |             | storeonce     | Protected| 24.00KB|     0B | N/A                | vSphere|
   +-------------+---------------+----------+--------+--------+--------------------+--------'
```

Example

The following example only displays information for a backup that resides in an external store:

```
# svt-backup-show --external-store storeonce
.-----------------------------------------------------------------------------------------------------------------------------.
| All backups
+-----------+------+-------------------------------------+--------+------------+--------------------+-----------+-----------+
| Datastore | VM   | Backup                              | Backup | Consistency| Backup             | Expiration| Datacenter|
|           |      | Name                                | Type   | Type       | Time               | Time      |           |
+-----------+------+-------------------------------------+--------+------------+--------------------+-----------+-----------+
| dsLocal   | VM00 | VM00-backup-2019-03-26T11:17:03-04:00 | Manual | None       | 2019-Mar-26 11:17:03 | N/A       |           |
'-----------+------+-------------------------------------+--------+------------+--------------------+-----------+-----------+

   -----------------------------------------------------------------.
                                                                    |
   +---------------+----------+---------+------+-------------+--------+
   | Cluster Or    | Status   | Size    | Sent | Replication | Family |
   | External Store|          |         |      | End Time    |        |
   +---------------+----------+---------+------+-------------+--------+
   | storeonce     | Protected| 24.00KB |  0B  | N/A         | vSphere|
   '---------------+----------+---------+------+-------------+--------'
```

Example

The following example sorts backups by external store:

```
# svt-backup-show --sort external-store
.-----------------------------------------------------------------------------------------------------------------------------.
| All backups
|
+-----------+------+-------------------------------------+--------+------------+--------------------+--------------------+
| Datastore | VM   | Backup                              | Backup | Consistency| Backup             | Expiration         |
|           |      | Name                                | Type   | Type       | Time               | Time               |
+-----------+------+-------------------------------------+--------+------------+--------------------+--------------------+
| dsLocal   | VM00 | VM00-backup-2019-03-26T11:17:03-04:00 | Manual | None       | 2019-Mar-26 11:17:03 | N/A                |
|           |      | 2019-03-26T11:20:00-04:00           | Policy | None       | 2019-Mar-26 11:20:00 | 2019-Mar-26 12:20:00 |
|           |      | 2019-03-26T11:18:00-04:00           | Policy | None       | 2019-Mar-26 11:18:00 | 2019-Mar-26 12:18:00 |
|           |      | 2019-03-26T11:19:00-04:00           | Policy | None       | 2019-Mar-26 11:19:00 | 2019-Mar-26 12:19:00 |
|           |      | 2019-03-26T11:19:00-04:00           | Policy | None       | 2019-Mar-26 11:19:00 | 2019-Mar-26 12:19:00 |
```

```
|          |      |  | 2019-03-26T11:20:00-04:00              | Policy | None       | 2019-Mar-26 11:20:00 | 2019-Mar-26 12:20:00 |
|          |      |  | 2019-03-26T11:18:00-04:00              | Policy | None       | 2019-Mar-26 11:18:00 | 2019-Mar-26 12:18:00 |
'----------+------+--------------------------------------+--------+------------+----------------------+----------------------+


   --------------------------------------------------------------------------------------------.
                                                                                               |
                                                                                               |
   +-------------+---------------+-----------+----------+---------+--------------------+--------+
   | Datacenter  | Cluster Or    | Status    | Size     | Sent    | Replication        | Family |
   |             | External Store |          |          |         | End Time           |        |
   +-------------+---------------+-----------+----------+---------+--------------------+--------+
   |             | storeonce     | Protected | 24.00KB  |      0B | N/A                | vSphere |
   | Datacenter2 | Cluster2      | Protected | 24.00KB  |      0B | 2019-Mar-26 11:20:31 | vSphere |
   | Datacenter2 | Cluster2      | Protected | 24.00KB  | 24.00KB | 2019-Mar-26 11:18:33 | vSphere |
   | Datacenter2 | Cluster2      | Protected | 24.00KB  |      0B | 2019-Mar-26 11:19:33 | vSphere |
   | Datacenter1 | Cluster1      | Protected | 24.00KB  |      0B | N/A                | vSphere |
   | Datacenter1 | Cluster1      | Protected | 24.00KB  |      0B | N/A                | vSphere |
   | Datacenter1 | Cluster1      | Protected | 24.00KB  |      0B | N/A                | vSphere |
   '-------------+---------------+-----------+----------+---------+--------------------+--------'
```

svt-backup-size-calculate

Determines the unique data in a backup that represents the amount of physical storage space consumed exclusively by this backup.

Consider a 100GB virtual machine named `CalcVM` that is the source virtual machine for your backups.

You take `CalcVMBackup1`, at 10:00 PM. You then run user applications on `CalcVM`, causing 10GB of changed data (data delta). After two hours, you take another backup named `CalcVMBackup2`.

The first backup, `CalcVMBackup1`, has a logical size of 100GB, but it shares 90GB of data in common with both `CalcVMBackup2` and `CalcVM` (the source virtual machine). Therefore, the following conditions exist:

- `CalcVMBackup1` contains 10GB of unique data, corresponding to the 10GB data delta.

- `CalvVMBackup2` has a logical size of 100GB, but contains 0 (zero) bytes of unique data. The data content of `CalvVMBackup2` is exactly the same as the source virtual machine at the point in time at which you created the backup.

In general, chronologically older virtual machine backups tend to contain larger amounts of unique data and consume more physical storage space. More recent backups tend to consume less physical storage space and more logical space.

Knowing the location of unique data in backups enables you to perform the following actions:

- Identify and compare virtual machine backups for unique data size and logical data size, as well as to consider carefully whether you need to retain the older backups in accordance with your site-specific recovery point objectives.

- Make decisions about which backups to delete so that you might recover physical storage space.

Deleting backups is only one of a number of methods to free up physical space. You can also perform the following actions:

- Delete any unwanted virtual machines that are already Removed from Inventory.

- Delete any unwanted virtual machines that are no longer registered with Hyper-V.

- Delete any existing surplus virtual machines, such as test virtual machines or clones.

- Clean up backups that show as [DELETED] when you run `svt-backup-show`. Retain the minimum number of backups required for recovery according to your recovery point objective. Be aware of the following behaviors:

  ◦ Policy backups age out (expire) according to retention rules, unless the backups are preserved using `svt-retention-set --forever`.

  ◦ Manual backups and backups that are preserved using `svt-retention-set --forever` never age out (expire), and you must delete them manually.

- Reduce backups of current virtual machines to an optimum level.
- Make sure that backup policy rules are creating an optimum number of backups.
- Move virtual machines (perhaps only temporarily while cleaning up) to locations that have more available resources.

After running `svt-backup-size-calculate`, you run `svt-backup-show` with the `-output` *XML* option, specifying the backup for which you calculated the unique data size. The XML output provides the following backup attributes:

`<uniqueSize>`	The unique data size of the backup in bytes at the point-in-time of the timestamp.
`<logicalSize>`	The logical size in bytes of the backup at the point-in-time of the timestamp.
`<lastTimeSizeCalc>`	The timestamp of the calculation. Consider recalculating the backup size if the timestamp is more than a few days old.

NOTE:

The process of calculating unique data consumes system resources and might result in a noticeable decrease in I/O performance and slower federation response times.

Syntax

```
svt-backup-size-calculate --datastore datastore --vm vm --backup backup --
datacenter datacenter --cluster cluster [common-options]
```

Options

Option	Description
`--datastore`	(Required) The name or GUID of the datastore containing the original virtual machine.
`--vm`	(Required) The name or GUID of the original virtual machine that was backed up.
	For Hyper-V: Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.
`--backup`	(Required) The name or GUID of a backup of the original virtual machine. A backup name typically contains spaces, and you must enclose the name string in single quotes.
`--datacenter`	The destination datacenter or host group containing the cluster where the backup is stored.
	This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.

Option	Description
--cluster	The destination cluster where the backup is stored.
	You are only required to specify the --datacenter option if you specify a non-unique cluster name.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-backup-size-calculate --vm Win28kFinance --datastore Acctng --backup
 1296D0E6-49C0-446B-B95D-1A4C292B46BD --datacenter moskovits
This operation might temporarily reduce IO performance during periods of heavy IO.
Proceed? (y/n): y
Once the task completes, run svt-backup-show -o XML to see results.
................
Task Complete
```

To see the results:

```
$ svt-backup-show -datastore Acctng -vm Win28kFinance -o XML
<CommandResult>
<Backup>
<source>0</source>
<datacenter>Local</datacenter>
<dsRemoved></dsRemoved>
<ruleIds ord="0">00000000-0000-0000-0000-000000000000</ruleIds>
<repTaskId>00000000-0000-0000-0000-000000000000</repTaskId>
<percentTrans>0</percentTrans>
<vmRemovedTime>0</vmRemovedTime>
<state>4</state>
<uniqueSize>0</uniqueSize>
<percentComp>0</percentComp>
<vmDeleteTime>0</vmDeleteTime>
<timestamp>1377709229</timestamp>
<datastore>default</datastore>
<id>a76a72fe-fbf6-45d7-99b7-c7223f4e760a</id>
<lastTimeSizeCalc>1377709493</lastTimeSizeCalc>
<logicalSize>258</logicalSize>
<consistent></consistent>
<hiveName>Win28kFinance</hiveName>
<hiveId>1296D0E6-49C0-446B-B95D-1A4C292B46BD</hiveId>
<name>2013-Aug-28 13:00:29</name>
<dsId>4d524882-3ba0-4ab0-aa4f-d25798253167</dsId>
<sentSize>0</sentSize>
<dcId>d2ceb7f7-c098-4f77-9d2f-bc036996eaf8</dcId>
</Backup>
</CommandResult>
```

Backup policy commands

This section contains the following topics:

- **svt-policy-show**
- **svt-policy-create**
- **svt-policy-delete**
- **svt-policy-rename**
- **svt-policy-report-show**
- **svt-policy-resume**
- **svt-policy-rule-create**
- **svt-policy-rule-delete**
- **svt-policy-rule-edit**
- **svt-policy-suspend**

svt-policy-show

Displays the backup policies in a federation and includes the backup policy rules and the number associated with each rule.

The command displays the following information:

Field	Description
Policy	The policy name.
Num	The unique number identifying the policy rule.
Dest Datacenter	The destination datacenter or host group that contains the cluster where the backups created by this policy are stored.
Dest Cluster	The destination cluster where the backups created by this policy are stored.
Frequency	The time interval at which backups are taken. The backup frequency is one day or less (less than 24 hours or 1440 minutes).
Start	The daily start time in 24-hour clock format. The policy begins creating backups after this time.
End	The daily end time in 24-hour clock format. The policy stops creating backups after this time.
Days	The days of the week or of the month when the policy is active.

Field	Description
Retention	The time for which to retain the backup policy before it is automatically deleted.
Consistency Type	Indicates the consistency type for the rule. Consistency types can be:

	None	Crash consistent backups; backups that are not application consistent.
	VMW-Snapshot	**For vSphere only:** Application Consistent backup with VMware Snapshots.
	VSS	**For vSphere only:** Application aware backup with Microsoft VSS.

Syntax

```
svt-policy-show --policy policy_name [common-options]
```

Options

Option	Description
--policy	The common name of the backup policy to display. If you do not specify a policy name, all policies are returned.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-policy-show

.------------------------------------------------------------------------
| Backup Policies
+----------------------------+-----+----------------+--------------+
| Policy                     | Num | Dest Datacenter | Dest Cluster |
+----------------------------+-----+----------------+--------------+
| DC1-to-DC2                 | 0   | Datacenter2     | ClusterA     |
+----------------------------+-----+----------------+--------------+
| DC2-to-DC1                 | 0   | Datacenter1     | ClusterB     |
+----------------------------+-----+----------------+--------------+
| Fixed Default Backup Policy |     |                 |              |
'----------------------------+-----+----------------+--------------+

  ------------------------------------------------------------------.
                                                                    |
  +------------+-------+-------+------+----------+-----------------+
  | Frequency  | Start | End   | Days | Retention | Consistency Type |
  +------------+-------+-------+------+----------+-----------------+
```

```
| 12Hrs       | 00:00 | 00:00 | All  | 1D         | Vss              |
+-------------+-------+-------+------+-----------+------------------+
| 12Hrs 9Mins | 00:00 | 00:00 | All  | 1D         | VMware snapshot  |
+-------------+-------+-------+------+-----------+------------------+
|             |       |       |      |           |                  |
+-------------+-------+-------+------+-----------+------------------'


$ svt-policy-show
.--------------------------------------------------------------------------------------------------
| Backup Policies
+----------------------------+-----+-------------------------------------------+-------------+---------------+
| Policy                     | Num | Dest Datacenter                           | Dest Cluster | External Store |
+----------------------------+-----+-------------------------------------------+-------------+---------------+
| CrossReplicate             | 0   | New_York -:- ProLiant DL380 Gen10 6.5.0   | NewOrleans  |               |
|                            | 1   | New_York1 -:- ProLiant DL380 Gen10 6.5.0  | Gulfport    |               |
|                            | 2   |                                           |             | ATF_STORE_1   |
+----------------------------+-----+-------------------------------------------+-------------+---------------+
| Fixed Default Backup Policy|     |                                           |             |               |
+----------------------------+-----+-------------------------------------------+-------------+---------------+
| ds1Policy                  |     |                                           |             |               |
+----------------------------+-----+-------------------------------------------+-------------+---------------+
| ds2Policy                  |     |                                           |             |               |
'----------------------------+-----+-------------------------------------------+-------------+---------------'


+---------------+-----------+-------+-------+------+-----------+-----------------+
| External Store | Frequency | Start | End   | Days | Retention | Consistency Type |
+---------------+-----------+-------+-------+------+-----------+-----------------+
|               | 2Mins     | 00:00 | 00:00 | All  | 10Mins    | None            |
|               | 2Mins     | 00:00 | 00:00 | All  | 10Mins    | None            |
| ATF_STORE_1   | 1Mins     | 00:00 | 00:00 | All  | 5Mins     | None            |
+---------------+-----------+-------+-------+------+-----------+-----------------+
|               |           |       |       |      |           |                 |
+---------------+-----------+-------+-------+------+-----------+-----------------+
|               |           |       |       |      |           |                 |
+---------------+-----------+-------+-------+------+-----------+-----------------+
|               |           |       |       |      |           |                 |
'---------------+-----------+-------+-------+------+-----------+-----------------'
```

svt-policy-create

Creates a backup policy.

For each datastore in a federation, you set a default backup policy that applies to new virtual machines created in the datastore. You can also set a specific backup policy for an individual federation virtual machine.

There is no limit to the number of backup policies that you can create in a federation.

After creating a backup policy, create at least one rule for the policy in order for the policy to create backups.

Syntax

```
svt-policy-create --name policy_name [common-options]
```

Options

Option	Description
--name	(Required) The name of the backup policy.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

```
$ svt-policy-create --name daily1
................
Task Complete
```

svt-policy-delete

Deletes a backup policy.

Instead of deleting a policy, you can manage rules in a backup policy.

If you delete a backup policy, all virtual machine backups created under the policy continue to exist and consume storage space. These backups are deleted automatically according to the retention rules of the deleted policy. If you want to remove these backups sooner, you must delete the backups manually at an appropriate time. If you want to keep these backups, you can also set the retention time for these backups to forever (`svt-retention-set --forever`) to prevent the automatic deletion of these backups.

You cannot delete a backup policy if it is assigned to a datastore or a VM.

Syntax

```
svt-policy-delete --name policy_name [common-options]
```

Options

Option	Description
--name	(Required) The name of the backup policy.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-policy-delete --name daily1
................
Task Complete
```

svt-policy-rename

Renames a backup policy.

Renaming a policy does not affect the policy operations. You can rename the default policy for a datastore.

Syntax

```
svt-policy-rename --policy original_policy_name --name new_policy_name [common-options]
```

Options

Option	Description
`--name`	(Required) The new name of the backup policy.
`--policy`	(Required) The original name of the backup policy.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-policy-rename --policy daily1-allvms --name dailyAM-allvms
...............
Task Complete
```

svt-policy-report-show

Displays the Policy Backups Report showing the current daily and total retained system backups as percentages of the maximum backup system limit. The percentages are based on the frequency and retention period for all backups and backup policy rules.

When the percentage is 100% or higher, the following abilities and restrictions apply:

- You can create manual backups.

- You cannot assign new virtual machines to a policy with rules in it. If the default policy for a datastore contains backup policy rules, the virtual machine is assigned to the Fixed Default Backup Policy which has no rules.

- The policies for existing virtual machines cannot be changed to a policy that would result in more retained backups or more frequent backups (depending on whether the daily rate or total retained backups reached 100%).

- You cannot create new backup policy rules for policies assigned to virtual machines.

- For policies assigned to virtual machines, you cannot modify the existing backup policy rules to have a longer retention time or more frequent backups (depending on whether the daily rate or total retained backups reached 100%).

To decrease daily and total retained system backups, perform the following actions:

- Decrease how often backups are taken. For example, change 30 minute backups to 1 hour backups.

- Decrease the retention time for backups. For example, retain backups for 90 days instead of 180 days.

Syntax

```
svt-policy-report-show [common-options]
```

Options

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-policy-report-show
```

```
.------------------------------------------.
| Policy Backups Report                    |
+-----------------+------------------------+
| Metric          | Current System Level   |
+-----------------+------------------------+
| Daily Backups   | 69.94%                 |
| Retained Backups| 80.93%                 |
'-----------------+------------------------'
```

svt-policy-resume

Resumes policy-based backups.

One of the following options is required:

- `--omnicube`
- `--datacenter` (with or without `--cluster`)
- `--cluster` (with or without `--datacenter`)
- `--all`

However, these options cannot be combined on the command line.

Syntax

```
svt-policy-resume --omnicube omnicube --datacenter datacenter --cluster cluster --
all [common-options]
```

Options

Option	Description
`--omnicube`	Resumes policy-based backups on a specific HPE OmniStack host. The value can be the IP address or GUID of a specific host in the cluster or `local` to represent the local host.
`--datacenter`	Resumes policy-based backups on the specified datacenter or host group. **For vSphere:** The value should be the name of the datacenter. **For Hyper-V:** The value can be the GUID or the name of the host group that contains the Hyper-V cluster. Obtain the host group name from the Datacenter column of the `svt-federation-show` output. This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.
`--cluster`	Resumes policy-based backups on the specified cluster. The value can be the name or the GUID of the cluster, or `local` to represent all hosts in the local cluster. You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.
`--all`	Resume the policy-based backups on all HPE OmniStack hosts in the federation.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Examples

This example shows how to resume the backup policies for the HPE OmniStack hosts in a host group by specifying the `--datacenter` option.

```
$ svt-policy-resume --datacenter 'New England'

This command resumes policy-based backups.
Proceed? (y/n): y
Task to resume backup policy with id d45234f3-1572-4228-
acf5-54976ddcddbf:d45234f3-1572-4228-
acf5-54976ddcddbf:961a4b73-7c87-44af-9442-9893085da218 has been started.
```

Validate the policy was resumed by reviewing the xml output of the `svt-federation-show` command. If the `<backupPolicyEnabled>` element has a value of 1, backup policies were resumed. For example:

```
$svt-federation-show --output xml
.
.
.
<backupPolicyEnabled>1</backupPolicyEnabled>
```

svt-policy-rule-create

Creates a backup policy rule.

This command includes the following options to create a rule for a backup policy:

When you create a rule for a backup policy, a Policy Change Impact Report shows the current system backups and the projected system backups based on your changes, as percentages of the maximum backup system limit. When the predicted system backups percentage is higher than 100%, you cannot create or edit backup policy rules.

A backup policy can have an unlimited number of rules. For a comprehensive virtual machine backup strategy, add rules to create a mix of local and remote backups. For vSphere, it is possible to create a mix of backups that are and are not application consistent. Application consistent backups and application aware backups using Microsoft VSS cannot be configured using the same rules. They are mutually exclusive in a rule, and across rules within a policy.

The policy backup name format is `<YYYY-MM-DD>T<HH:MM:SS>-` or `+<TZ>`, such as `2015-04-23T14:00:00-04:00`. To rename a backup, use `svt-backup-rename`.

Use `svt-timezone-show` to set the local time for backup creation.

For vSphere:

See the HPE SimpliVity Plug-in for vSphere Help for information about decreasing daily and total system backups.

Syntax

```
svt-policy-rule-create --policy policy --destination destination_name --
datacenter datacenter --cluster cluster --frequency [Mins|H|D] --start_time start-
time --end_time end-time --days days --retention [Mins|H|D|W|MO|Y] --
appconsistent --vss [common-options]
```

Options

Option	Default	Description
`--policy`		(Required) The name of the backup policy.
`--destination`	`local`	The datacenter or host group to store the backups in.
		If you specify the default (`local`), the backups are stored in the same datacenter or host group as the virtual machine.
		For full protection against loss of a single site, store a backup in a remote datacenter.
		NOTE:
		This option is being maintained only for the backward-compatibility of scripts.
`--vss`		**vSphere only:**
		Take an application aware backup using Microsoft VSS.
`--datacenter`		The destination datacenter or host group containing the cluster where the backup is stored.
		This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.
`--cluster`	`local`	The destination cluster where the backup is stored.
		If you use the default (*local*), the backups are stored in the same cluster as the virtual machine. For full protection against loss of a single site, store a backup in a remote cluster.
		You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.
`--frequency`		(Required) The time interval at which backups are taken. The backup frequency is one day or less (less than 24 hours or 1440 minutes). For example, if the start time is the default, and the frequency is set to 10 minutes, backups occur all day at 00:10, 00:20, and so on.
		The time units are `Mins`, `Hours`, and `Days`. You can combine the time units in a string surrounded by quotes. For example, `"1h 30m"`.
`--start_time`	00.00	The time of day (hours and minutes) at which to start creating backups, specified using a 24-hour clock. If you do not specify a start and stop time, backups occur all day at the specified frequency. If you specify a start time, the backup aligns with the start time and occurs at the specified frequency.

Option	Default	Description
`--end_time`	00.00	The time of day (hours and minutes) at which to stop creating backups, specified using a 24-hour clock. If you do not specify a start and stop time, backups occur all day at the specified frequency.
		If the end time specified is before the start time, backups begin at the start time and continue through midnight until the end time the following day, as allowed by the value of the `--days` option.
`--days`	all	The day(s) for backups, using either of the following notation schemes:
		• The day of the week (for example, `Monday` or `Mon`) or a range of days (for example, `Monday-Friday`).
		• The day of the month (`23`), a contiguous range of dates (`2-5`), the first day of the month (`first`), or the last day of the month (`last`). You can separate ranges with a comma, such as `--days first,15`.
		Do not use days 29, 30, and 31 in monthly schedules because these days are not valid for every month. To take a backup on the last day of the month, use the `last` value.
`--retention`		(Required) The retention time for backups before they are deleted automatically. You can specify a retention period in minutes, hours, days, weeks, months, and years. The time value is a positive integer, followed by `Mins`, `H`, `D`, `W`, `MO`, and/or `Y`.
		You can combine the time units in a string surrounded by quotes. For example, `"4Mo 2D 4H"`. After the retention period expires, the backup is automatically deleted. The maximum retention period is 20 years.
`--appconsistent`		**vSphere only**
		Whether the backup includes a VMware application consistent snapshot that enables you to restore the virtual machine with the corresponding applications in a consistent state. Because VMware attempts to cleanly quiesce I/O to take a snapshot, application consistent backups can take many hours to complete in virtual machines with high rates of I/O. For such virtual machines, schedule backups during intervals when the virtual machine experiences the lowest I/O rates.
`--external-store`		The external store that contains the backup. You can only use this option if `--cluster` and `--datacenter` are not set.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Examples

The following example creates a rule for backup policy `policy_2` in `cluster1`:

```
$ svt-policy-rule-create --policy policy_2 --frequency 10Mins --start_time 22:00 --
end_time 06:00 --retention 5D --cluster cluster1
.-------------------------------------------------------------------.
|Policy Change Impact Report                                        |
+---------------+------------------+--------------------------------+
|Metric         |Current System Level|Predicted System Level After Change|
+---------------+------------------+--------------------------------+
|Daily Backups  |79%               |69%                             |
|Retained Backups|128%             |112%                            |
'---------------+------------------+--------------------------------'
..
Task Complete
```

The following example creates a rule for backup policy *policy_2* in *cluster2* of *datacenter1*:

```
$ svt-policy-rule-create --policy policy_2 --frequency 10Mins --start_time 22:00 --
end_time 06:00 --retention 5D --datacenter datacenter1 --cluster cluster2
.-------------------------------------------------------------------.
|Policy Change Impact Report                                        |
+---------------+------------------+--------------------------------+
|Metric         |Current System Level|Predicted System Level After Change|
+---------------+------------------+--------------------------------+
|Daily Backups  |79%               |69%                             |
|Retained Backups|128%             |112%                            |
'---------------+------------------+--------------------------------'
..
Task Complete
```

The following example creates a backup policy for an HPE StoreOnce Catalyst appliance. The backup occurs nightly and gets stored on the external store, `Store1`, for 3 years.

```
$ svt-policy-rule-create --policy policy_2 --frequency 1D --start_time 22:00 --
retention 3Y --external-store Store1
```

svt-policy-rule-delete

Deletes a rule from a backup policy.

Use the `svt-policy-show` command to list the policy rules.

If you delete all the rules from a backup policy, the following restrictions apply:

- The policy persists but cannot create backups. Use `svt-policy-rule-create`.

- No further backups are taken for any virtual machines previously using the policy, and no warning is given. Ensure your virtual machines are backed up by another policy. Use `svt-vm-policy-set`.

- If the backup policy is the default policy for a datastore, no backups are created. Use `svt-datastore-policy-set`.

If you delete a backup policy rule, all VM backups created under the rule continue to exist and consume storage space. These backups are deleted automatically according to the retention specification of the deleted rule. If you want to remove them sooner, you must delete the backups manually at an appropriate time (using `svt-backup-`

delete). If you want to keep these backups, you can also preserve backups to prevent the automatic deletion of these backups. To preserve backups, use `svt-backup-retention-set --forever`.

Syntax

```
svt-policy-rule-delete --policy policy --rule rule_number [common-options]
```

Options

Option	Description
--policy	(Required) The name of the backup policy.
--rule	(Required) The unique identification number associated with the rule.
	Use `svt-policy-show` to display the rules in a backup policy and to identify the number for each rule. Deleting a rule permanently retires the corresponding unique identification number.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-policy-rule-delete --policy daily1 --rule 2
.....
Task Complete
```

svt-policy-rule-edit

Edits backup policy rules.

Use `svt-policy-show` to list the policy rules and identify the number associated with each rule.

When you modify a backup policy rule, a Policy Change Impact Report shows the current system backups and the projected system backups based on your changes, as percentages of the maximum backup system limit. When the predicted system backups percentage is higher than 100%, you cannot edit a backup policy rule. Use `svt-policy-report-show` for information about decreasing daily and total system backups.

Syntax

```
svt-policy-rule-edit --policy policy --rule rule_number --
destination destination_name --datacenter datacenter --cluster cluster --frequency
 [Mins|H|D] --start_time start-time --end_time end-time --days days --retention
 [Mins|H|D|W|MO|Y] --appconsistent --external-store name [common-options]
```

Options

Option	Default	Description
--policy		(Required) The name of the backup policy.

Option	Default	Description
`--rule`		(Required) The rule number within the policy, for the rule to be edited.
`--appconsistent`		**vSphere only** Whether the backup includes a VMware application consistent snapshot that enables you to restore the virtual machine with the corresponding applications in a consistent state. Because VMware attempts to cleanly quiesce I/O to take a snapshot, application consistent backups can take many hours to complete in virtual machines with high rates of I/O. For such virtual machines, schedule backups during intervals when the virtual machine experiences the lowest I/O rates.
`--external-store`		The external store where the backup is stored. You can only set this option if `--cluster` and `--datacenter` are not set.
`--vss`		**vSphere only** Take an application aware backup using Microsoft VSS.
`--destination`	`local`	The datacenter or host group in which to store the backups. If you specify the default (`local`), the backups are contained in the same datacenter or host group as the virtual machine. For full protection against loss of a single site, store a backup in a remote datacenter. **NOTE:** This option is being maintained only for the backward-compatibility of scripts.
`--datacenter`		The destination datacenter or host group containing the cluster where the backup is stored. For full protection against loss of a single site, store a backup in a remote datacenter. This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.
`--cluster`	`local`	The destination cluster where the backup is stored. If you use the default (*local*), the backups are stored in the same cluster as the virtual machine. For full protection against loss of a single site, store a backup in a remote cluster. You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.

Option	Default	Description
`--frequency`		The time interval at which backups are taken. The backup frequency is one day or less (less than 24 hours or 1440 minutes). For example, if the start time is the default, and the frequency is set to 10 minutes, backups occur all day at 00:10, 00:20, and so on.
		The time units are `Mins`, `Hours`, and `Days`. You can combine the time units in a string surrounded by quotes. For example, `"1h 30m"`.
`--start_time`	`00.00`	The time of day (hours and minutes) at which to start creating backups, specified using a 24-hour clock. If you do not specify a start and stop time, backups occur all day at the specified frequency. If you specify a start time, the backup aligns with the start time and occurs at the specified frequency.
`--end_time`	`00.00`	The time of day (hours and minutes) at which to stop creating backups, specified using a 24-hour clock. If you do not specify a start and stop time, backups occur all day at the specified frequency.
		If the end time specified is before the start time, backups begin at the start time and continue through midnight until the end time the following day, as allowed by the value of the `--days` option.
`--days`	`all`	The day(s) for backups, using either of the following notation schemes:
		• The day of the week (for example, `Monday` or `Mon`) or a range of days (for example, `Monday-Friday`).
		• The day of the month (`23`), a contiguous range of dates (`2-5`), the first day of the month (`first`), or the last day of the month (`last`). You can separate ranges with a comma, such as `--days first,15`.
		Do not use days 29, 30, and 31 in monthly schedules because these days are not valid for every month. To take a backup on the last day of the month, use the `last` value.
`--retention`		The retention time for backups before they are deleted automatically. You can specify a retention period in minutes, hours, days, weeks, months, and years. The time value is a positive integer, followed by `Mins`, `H`, `D`, `W`, `MO`, and/or `Y`.
		You can combine the time units in a string surrounded by quotes. For example, `"4Mo 2D 4H"`. After the retention period expires, the backup is automatically deleted. The maximum retention period is 20 years.

`[common options]` are options applicable to all commands. For more information, see **Common command options**

Examples

The following example edits a rule for backup policy *policy_1* in *cluster1*:

```
$ svt-policy-rule-edit --policy policy_1 --rule 0 --frequency 10Mins --cluster
 cluster1
.----------------------------------------------------------------------.
|Policy Change Impact Report                                           |
+---------------+------------------+-------------------------------+
|Metric         |Current System Level|Predicted System Level After Change|
+---------------+------------------+-------------------------------+
|Daily Backups  |79%               |69%                            |
|Retained Backups|128%             |112%                           |
'---------------+------------------+-------------------------------'
..
Task Complete
```

The following example edits a rule for backup policy *policy_1* in *cluster2* of *datacenter1*:

```
$ svt-policy-rule-edit --policy policy_1 --rule 0 --frequency 10Mins --datacenter
 datacenter1 --cluster cluster2
.----------------------------------------------------------------------.
|Policy Change Impact Report                                           |
+---------------+------------------+-------------------------------+
|Metric         |Current System Level|Predicted System Level After Change|
+---------------+------------------+-------------------------------+
|Daily Backups  |79%               |69%                            |
|Retained Backups|128%             |112%                           |
'---------------+------------------+-------------------------------'
..
Task Complete
```

svt-policy-suspend

Suspends policy-based backups. Policy-based backups that are in progress, backups being copied to remote a datacenter or host group, and backups queued for copying to a remote datacenter or host group are not impacted by this command.

One of `--omnicube`, `--datacenter`, with or without `--cluster`, or `--all` is required, but, with the exception of `--datacenter` with `--cluster`, these options cannot be combined on the command line.

Syntax

```
svt-policy-suspend --omnicube omnicube --destination datacenter_name --all [common-
options]
```

Options

Option	Description
--omnicube	Suspends policy-based backups on a specific HPE OmniStack host. The value can be: • The IP address of the HPE OmniStack host. • The fully qualified domain name of the HPE OmniStack host. Obtain the fully qualified domain name from the Host column of the `svt-federation-show` output. • The GUID of the HPE OmniStack host. • `local` to represent the local host where you are running the command.
--datacenter	Suspends policy-based backups on the specified datacenter or host group. The value can be: • **For vSphere:** The name of the datacenter. • **For Hyper-V:** The name of the host group that contains the Hyper-V cluster. Obtain the host group name from the Datacenter column of the `svt-federation-show` output. • `local` to represent the cluster that contains the host where you are running the command.
--all	Suspends policy-based backups on all HPE OmniStack hosts in the federation.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Examples

This example shows how to suspend the backup policies for the HPE OmniStack hosts in a host group by specifying the --datacenter option.

First, get the host group name to pass on the --datacenter option by running svt-federation-show:

```
# svt-federation-show
--------------------------------------------------
|Federation
+-------------+-----------+----------------------
|HMS          |Datacenter |Cluster
+-------------+-----------+----------------------
|hvscvmm-14-rc|New England|Boston.hall.HyperV.local
|             |           |
'-------------+-----------+----------------------
```

Then suspend the policy:

```
$ svt-policy-suspend --datacenter 'New England'

CONFIRMATION/WARNING:
 This command suspends policy-based backups on the OmniCube(s). Note that it can
 take an extended time for backups to reach a quiesced state.
```

```
Proceed? (y/n): y
Task to suspend backup policy with id d45234f3-1572-4228-
acf5-54976ddcddbf:d45234f3-1572-4228-
acf5-54976ddcddbf:12f8a5bc-2642-4559-8b33-4f0a475cde45 has been started.
```

Validate the policy was suspended by reviewing the xml output of the `svt-federation-show` command. If the `<backupPolicyEnabled>` element does not have a value, backup policies are not active. For example:

```
$svt-federation-show --output xml
.
.
.
<backupPolicyEnabled></backupPolicyEnabled>
```

Datastore commands

This section contains the following topics:

- **svt-datastore-show**
- **svt-datastore-create**
- **svt-datastore-delete**
- **svt-datastore-policy-set**
- **svt-datastore-resize**
- **svt-datastore-share (vSphere only)**
- **svt-datastore-unshare (vSphere only)**

svt-datastore-show

Displays information about the datastores and shares in the federation.

It displays the following information:

Datastore	The datastore name.
Datacenter	The datacenter or host group containing the cluster that contains the datastore.
Cluster	The cluster that contains the datastore.
Policy	The datastore-wide default backup policy.
Size	The physical storage space allocated for this datastore.
Created at	The date and time of datastore creation.
Shares	The name of a standard host accessing this datastore. Not implemented in this release.

Syntax

```
svt-datastore-show datastore-name [common-options]
```

Options

Option	Description
`--emergency`	**vSphere only** Displays information about the datastores and shares in the federation. The CLI account (`svtcli`) password is required to run this command.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-datastore-show
.-----------------------------------------------------------------------------.
|Datastores                                                                   |
+-----------+------------+----------+----------+------------------+--------+
|Datastore  | Datacenter | Policy   | Size     | Created At       | Shares |
+-----------+------------+----------+----------+------------------+--------+
|ds1        | All Hosts  | 1x-day   | 10.00GB  | 2016-Jun-15 17:12 |        |
+-----------+------------+----------+----------+------------------+--------+
|ds2        | All Hosts  | 1x-Month | 2.00TB   | 2016-Jun-17 13:58 |        |
'-----------+------------+----------+----------+------------------+-------'
```

This example shows that when single-replica datastores are present in a cluster, the command output contains a Single Replica column. If there are no single-replica datastores in a given cluster, the column is not displayed.

```
# svt-datastore-show
.----------------------------------------------------------------------------------------------.
| Datastores                                                                                   |
+-----------+------------+----------+----------+--------+------------------+--------+--------------+
| Datastore | Datacenter | Cluster  | Policy   | Size   | Created At       | Shares | Single Replica |
+-----------+------------+----------+----------+--------+------------------+--------+--------------+
| ds1       | DC1        | cluster1 | policy1  | 4.00TB | 2019-Feb-15 12:06 |        | Yes          |
+-----------+------------+----------+----------+--------+------------------+--------+--------------+
| ds2       | DC1        | cluster1 | policy1  | 4.00TB | 2019-Feb-15 13:16 |        | No           |
'-----------+------------+----------+----------+--------+------------------+--------+--------------'
```

svt-datastore-create

Creates a datastore in a federation and sets the backup policy for new virtual machines that you create in the datastore.

See `svt-policy-create` for information about creating a backup policy.

There is no limit to the number of backup policies you can create in a federation.

Use `svt-vm-policy-set` to set a backup policy for an individual virtual machine and override the default policy.

Syntax

```
svt-datastore-create --name datastore_name --policy policy_name --size [nGB|nTB] --
datacenter datacenter_name --cluster cluster_name --type datastore_type --single-
replica [common-options]
```

Options

Option	Description
`--datacenter`	**For vSphere:** The name or GUID of the datacenter in which to create the datastore. By default, the datastore is created in the same datacenter that contains the HPE OmniStack host on which you are running the command. To create the datastore in a different datacenter, specify this option.
	This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.
	For Hyper-V: The host group where you want to create the datastore. By default, the datastore is created in the host group that contains the HPE OmniStack host where you execute the command. Specify this option only if you want to create the datastore in a different host group.

Option	Description
--cluster	The name or GUID of the cluster that contains the HPE OmniStack host on which to create the datastore. You are only required to specify the --datacenter option if you specify a non-unique cluster name.
--name	(Required) The name of the new datastore.
--policy	(Required) The name of the backup policy. A backup policy enables you to schedule virtual machine backup operations. When you add virtual machines that do not have a policy to this datastore, this policy is automatically applied to those virtual machines.
--size	(Required) The size of the datastore. The size specifies the maximum amount of data the datastore can contain before the written data is deduplicated and compressed. You use these unit values (case-sensitive) with no space between the digit and unit: • B for bytes. • K or KB for kilobytes. • M or MB for megabytes. • G or GB for gigabytes. • T or TB for terabytes. • P or PB for petabytes.
--type	(Optional) The type of the datastore, either NFS or VVol. The default value is NFS.
--single-replica	Create a datastore for single-replica virtual machines, which do not require storage high availability. Virtual machines deployed on a single-replica datastore can experience Data Unavailability in the presence of a single failure. Do not use this option unless you specifically intend to use single-replica virtual machines

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-datastore-create --name ds2 --datacenter dc1 --cluster cluster1 --policy
 dailydr --size 4TB --type VVol
............................................
Task Complete
```

Example

```
$ svt-datastore-create --name ds1 --datacenter DC1 --cluster cluster1 --policy
 policy1 --size 4TB --single-replica

A single-replica datastore is being created. All hives created inside this
 datastore will not be HA-compliant and may be subject to DU/DL in the presence of
 node failures.
Are you sure you want to proceed?
Proceed? (y/n): y
.................................................
Task Complete
```

When creating a single-replica datastore on a stretched cluster, the warning message is slightly different:

```
A single-replica datastore is being created in a stretch cluster. All hives created
 inside this datastore will not be HA-compliant and may be subject to DU/DL in the
 presence of zone failures.
Are you sure you want to proceed? Proceed? (y/n):
```

svt-datastore-delete

Deletes a datastore from a federation.

You cannot delete a datastore if it contains active virtual machines or backups of deleted virtual machines.

Syntax

```
svt-datastore-delete --name datastore_name [common-options]
```

Options

Option	Description
--name	(Required) The name of the datastore to delete.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-datastore-delete --name datalab
This action will destroy any data remaining on the datastore.
Proceed? (y/n): y
.................................................
Task Complete
```

If virtual machines or backups exist, the command fails as follows:

```
~$ svt-datastore-delete --name MKO
This action will destroy any data remaining on the datastore.
Proceed? (y/n): y
.........................................................................
```

```
ERROR [30]: You cannot delete a datastore that is used by VMs. Migrate or remove
 VMs and try again.
```

svt-datastore-policy-set

Changes the default backup policy for a datastore. The new default policy applies only to any new virtual machines you create after the policy change. Existing virtual machines continue to use the policy in force at their time of creation or the policy subsequently assigned to that virtual machine.

See `svt-policy-create` for information about creating a backup policy. You must add one or more rules to a backup policy to create backups.

Use `svt-policy-show` to display available policies and `svt-datastore-show` to list datastores.

Use `svt-vm-policy-set` to set a backup policy for an individual virtual machine and override the default policy.

Syntax

```
svt-datastore-policy-set --datastore datastore_name --policy name [common-options]
```

Options

Option	Description
--datastore	(Required) The name of the datastore.
--policy	(Required) The name of the new backup policy.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-datastore-policy-set --datastore ds4 --policy hourly_12
.........................................
Task Complete
```

svt-datastore-resize

Increases or decreases the capacity of a datastore by specifying a new size in gigabytes (GB), terabytes (TB), or petabytes (PB).

When decreasing the size of a datastore, you cannot specify a size that is smaller than the space currently allocated to virtual machines in the datastore. The minimum size is 1GB.

You can list datastores to view the current size using `svt-datastore-show`.

The size of a datastore is defined as the maximum amount of data the datastore can contain before the written data is deduplicated and compressed.

Do not resize a datastore unless all of the HPE OmniStack hosts that use that datastore are in a healthy state. When you attempt to resize a datastore with one or more faulty HPE OmniStack hosts, the operation cannot complete.

Syntax

```
svt-datastore-resize --name datastore_name --size [nGB|nTB|nPB] [common-options]
```

Options

Option	Description
--name	(Required) The name of the HPE OmniStack datastore.
--size	(Required) The size of the datastore. The size specifies the maximum amount of data the datastore can contain before the written data is deduplicated and compressed.
	You use these unit values (case-sensitive) with no space between the digit and unit:
	• `B` for bytes.
	• `K` or `KB` for kilobytes.
	• `M` or `MB` for megabytes.
	• `G` or `GB` for gigabytes.
	• `T` or `TB` for terabytes.
	• `P` or `PB` for petabytes.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-datastore-resize --name finance-ds --size 2TB
```

svt-datastore-share (vSphere only)

Allows access to federation datastores from standard hosts. This enables you to use vMotion and Storage vMotion and to enable VMs running on an ESXi host to access a datastore in a federation with no disruption to users. The VM remains running on the original ESXi host.

Before sharing a datastore, you must configure the NFS and network settings in the standard host and configure the `/etc/hosts` file on standard hosts. See the HPE SimpliVity Plug-in for vSphere Help for information about the required settings.

See the *HPE OmniStack for vSphere Release Notes* for other constraints on datastore sharing and standard host requirements.

Use `svt-datastore-show` to list datastores and `svt-datastore-unshare` to stop sharing datastores.

You can use the `--force` common option to bypass command checking when adding multiple hosts by using a script.

Syntax

```
svt-datastore-share --host standard-ESXi-host-name|IP --datastore datastore-name
 [common-options]
```

Options

Option	Description
`--datastore`	(Required) The datastore for which access will be enabled.
`--host`	The name or IP address of a standard host that will access the datastore, as it appears in the vSphere client.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-datastore-share --host 129.23.45.67 --datastore ds9research
Before sharing a datastore, you must first configure the standard ESXi hosts as
 described in the OmniStack user documentation
Proceed? (y/n)
```

svt-datastore-unshare (vSphere only)

Stops sharing federation datastores with a standard host.

Syntax

```
svt-datastore-unshare --host standard-ESXi-host-name|IP --datastore datastore_name
 [common-options]
```

Options

Option	Description
`--datastore`	(Required) The datastore to stop sharing.
`--host`	The name or IP address of the standard host that accessed the federation datastore.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-datastore-unshare --datastore ds9research --host nfsservr.svt
```

Deployment commands

This section contains the following topics:

- **svt-host-rename (vSphere only)**

svt-host-rename (vSphere only)

Use this command to rename a host. For example, if you deploy an HPE OmniStack host and Deployment Manager could not complete the DNS lookup to convert the IP address to the host name, you can change it after deployment. The rename process does not impact I/O performance on the virtual machines that reside on the host.

After running the command, you can see the new name appear in the hypervisor. For example, if you use HPE SimpliVity Plug-in for vSphere Web Client, access the Federation host objects in the vSphere Web Client inventory panel to check the changes to the host name.

Syntax

```
svt-host-rename --from oldhostname --to newhostname [common-options]
```

Options

Option	Description
`--from`	The current name of the host. If you use this option, you must use the exact host name. You can check the name of the host by opening the hypervisor and checking the name listed for the host.
	If you do not use this option, OmniStack defaults to the local host you accessed and prompts you confirm that you want to rename the local host by entering **y** to continue or **n** to cancel. Otherwise, you do not see this prompt.
`--to`	(Required) The new name for the host. Use the naming conventions accepted by vCenter and the vCenter DNS registry. For example, DNS must be able to resolve the name as configured on vCenter.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-host-rename --from 10.00.0.0 --to Marketing-TradeShow
```

DNS commands

This section contains the following topics:

- **svt-dns-setup**

svt-dns-setup

Sets up a DNS name server for the Virtual Controller to use. Run this command before performing an `svt-kerberos-join`.

Syntax

`svt-dns-setup --ipaddress <ipaddress>[common-options]`

Options

Option	Description
`--ipaddress`	(Required) Specify the IP Address of the DNS name server

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Emergency data protection command

This section contains the following topics:

* **svt-emergency-hms-sync (vSphere only)**

svt-emergency-hms-sync (vSphere only)

Synchronizes the Hypervisor Management System (HMS) inventory with the configuration stored in the federation. The vCenter Server must be up for this command to work.

Use this command in conjunction with the `svt-backup-restore --emergency` or `svt-vm-restore --emergency` command when restoring a backup of a Hypervisor Management System virtual machine.

Syntax

```
svt-emergency-hms-sync [common-options]
```

Options

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
svt-emergency-hms-sync
```

External store commands

This section contains the following topics:

- **svt-external-store-register**
- **svt-external-store-show**
- **svt-external-store-creds-update**
- **svt-external-store-unregister**
- **svt-external-store-update**

svt-external-store-register

Registers an external store on a StoreOnce appliance with HPE OmniStack.

After running the command, run the `svt-external-store-show` command to display the external store.

Syntax

```
svt-external-store-register --name store_name --address endpoint_address --
mgmtport port_number --stgport port_number --type --cluster name --username --
password [common-options]
```

Options

Option	Description
--name	(Required) The name of the external store to register to the HPE OmniStack host.
--address	(Required) The endpoint address. It can be an IP address, Hostname, URL, etc.
--mgmtport	Specifies the management port number. The default is 9387.
--stgport	Specifies the storage port number. The default is 9388.
--type	The type of store. Default is `StoreOnceOnPrem`.
--username	(Required) The username associated with the external store.
--password	(Required) The password associated with the external store.
--datacenter	The datacenter of the associated cluster. You must either specify this option or the --cluster option.

Option	Description
--cluster	The name of the cluster that the store is associated with. You must either specify this option or the --datacenter option. This option is required if cluster names are not unique across datacenters. You cannot specify a GUID for the cluster.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-external-store-register --name mystore --address 1.2.3.4 --cluster Cluster1
 --username administrator --password pi314159
```

svt-external-store-show

Display information about the external stores registered in the federation.

Syntax

```
svt-external-store-show --external-store  name_or_guid [common-options]
```

Options

Option	Description
--external-store	The name or GUID ID of the external store.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
# svt-external-store-show --name "storeonce"
.----------------------------------------------------------------------------------.
| External Stores                                                                  |
+-----------+----------------+-----------+-----------+----------+-------------------+
| Name      | Type           | Address   | Mgmt Port | Stg Port | Associated Cluster |
+-----------+----------------+-----------+-----------+----------+-------------------+
| storeonce | StoreOnceOnPrem | 127.1.1.1 | 9387      | 9388     | Cluster1          |
'-----------+----------------+-----------+-----------+----------+-------------------'
```

svt-external-store-creds-update

Updates user credentials for an external store.

Syntax

```
svt-external-store-creds-update --name  name  --username username --
password password [common-options]
```

> ⚠️ **Caution:**
>
> This command may be removed from a future release. Use `svt-external-store-update` instead.

Options

Option	Description
`--name`	The name of the external datastore to update.
`--username`	The username associated with the external datastore.
`--password`	The password associated with the external datastore.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
svt-external-store-creds-update --name 'NolaStore' --username 'Test_Client_1' --password 'NolaPwd'
```

svt-external-store-unregister

Removes an external store registered to a cluster.

This command deletes all backups that the specified store contains from the configuration database. Existing backups remain on the external store, but you can no longer manage them by using HPE SimpliVity. HPE recommends you delete the associated backups before you unregister the external store, and that you remove or update any rules from policies that specify the external store as a backup destination

This command removes the appliance credentials from the identity store on all HPE OmniStack hosts in the cluster.

Workflow to unregister an external store

1. Delete policies from rules with HPE StoreOnce Catalyst as a destination.

2. If you want backup data removed from the external store, remove it using `svt-backup-delete` prior to unregistering the store.

3. Unregister the external store using `svt-external-store-unregister`.

Syntax

```
svt-external-store-unregister --name store_name --cluster name_or_guid --
datacenter datacenter_name [common-options]
```

Options

Option	Description
`--name`	(Required) The name of the external store to unregister from the HPE OmniStack host.

Option	Description
`--cluster`	The name or GUID of the cluster that the external store is associated with. You must provide either `--cluster` or `--datacenter`. This option is required if cluster names are not unique across datacenters.
`--datacenter`	(Required) The datacenter of the associated cluster. You must provide either `--cluster` or `--datacenter`.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-external-store-unregister --name mystore --address 1.2.3.4 --associated-
cluster Cluster1 --username administrator --password pi314159
```

svt-external-store-update

Update external store settings, including address and user credentials.

Syntax

```
svt-external-store-update --name  name  --username username --password password --
addressaddress [common-options]
```

Options

Option	Description
`--address`	The endpoint address. It can be IP address, Hostname, URL, etc. You can use this option to update the endpoint address if the external store address changes.
`--name`	(Required) The name of the external store to update.
`--username`	(Required) The username associated with the external store. You can use this option to update the username if the external store credentials change.
`--password`	The password associated with the external store. You can use this option to update the password if the external store credentials changed.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
svt-external-store-update --name 'NolaStore' --username 'Test_Client_1' --password 'NolaPwd'
```

Federation commands

This section contains the following topics:

- **svt-federation-convert (vSphere only)**
- **svt-federation-remove**
- **svt-federation-show**

svt-federation-convert (vSphere only)

Reconfigures a federation for the Management Virtual Appliance.

Syntax

```
svt-federation-convert
```

```
svt-federation-convert --json json file [reconfigure-hosts]
```

Options

Option	Default	Description
`--json file`		JSON file with Management Virtual Appliance parameters. This option is mutually exclusive with other parameters.
		Sample JSON file for a single hypervisor management system:

```
{
   "conversion_config":[
      {
         "mva_config":{
            "management_ip":"10.0.0.4",
            "management_gateway":"10.0.0.1",
            "management_mask":"255.0.0.0",
            "svtcli_user_password":"password",
            "network_name":"VM Network",
            "network_mtu":"1500"
         },

    "omnistack_cluster_id":"c31566a2-312e-47c6-814a-1e7fb5025579",
            "hypervisor_management_system":"10.0.0.2"
      }
   ]
}
```

Option	Default	Description
		Sample JSON file for a linked mode hypervisor management system:

```
{
    "conversion_config":[
        {
            "mva_config":{
                "management_ip":"10.0.0.4",
                "management_gateway":"10.0.0.1",
                "management_mask":"255.0.0.0",
                "svtcli_user_password":"password",
                "network_name":"VM Network",
                "network_mtu":"1500"
            },

    "omnistack_cluster_id":"db4904b8-22d8-44bf-90c6-352fa96343f2",
            "hypervisor_management_system":"10.0.0.2"
        },
        {
            "mva_config":{
                "management_ip":"10.0.0.5",
                "management_gateway":"10.0.0.1",
                "management_mask":"255.0.0.0",
                "svtcli_user_password":"password",
                "network_name":"VM Network",
                "network_mtu":"1500"
            },

    "omnistack_cluster_id":"c31566a2-312e-47c6-814a-1e7fb5025579",
            "hypervisor_management_system":"10.0.0.3"
        }
    ]
}
```

Option	Default	Description
`--reconfigure-hosts`	0	Flag to indicate whether federation is to be reconfigured for Management Virtual Appliance.

For detailed instructions on using this command to convert a federation, refer to the *HPE OmniStack for vSphere Administration Guide*.

svt-federation-remove

Removes individual HPE OmniStack hosts from a federation if there is at least one other healthy HPE OmniStack host in the cluster.

Note the following considerations before you use the `svt-federation-remove` command:

- If there are no healthy HPE OmniStack hosts in a cluster, you can optionally remove all unhealthy HPE OmniStack hosts from this federation in a single operation.
- An HPE OmniStack host cannot remove itself from the federation to which it belongs. You must run the command from another federation HPE OmniStack host.

- If you remove more than one HPE OmniStack host, wait for the first removal removal operation to complete before you begin removal of the second HPE OmniStack host.

- When you use this command, identify the IP address or the fully qualified domain name (FQDN) of the HPE OmniStack host that is the target for removal. Then, run `svt-federation-remove` from any other federation HPE OmniStack host, specifying `--peerip`.

- Use the output from `svt-federation-show` to determine the IP address, located under the ESXi Host column or the the FQDN, located under the Host column.

- The command does not operate on a federation where all the HPE OmniStack hosts in a cluster have a faulty status. You must correct any problems before using the command, or you can optionally remove all unhealthy HPE OmniStack hosts from a federation.

> ⚠️ **WARNING:**
>
> If you use the `--override` option to force the removal of an HPE OmniStack host, this command does not check for active virtual machines or HA compliance. Any data associated with active virtual machines is permanently deleted, although remote backups of virtual machines are still available.

- If all HPE OmniStack hosts in a cluster have a faulty status (down), use the `--cluster` option to forcibly remove all the HPE OmniStack hosts in a single operation. This option does not check for active virtual machines and datastores because it is assumed that you have decided to do a tear down of the cluster. This action permanently deletes all data associated with active virtual machines. However, remote backups of the virtual machines may be available for recovery depending on your backup strategy.

When you remove an HPE OmniStack host from a federation, you cannot join it back into the same federation unless the following conditions exist:

- The HPE OmniStack host is in a healthy state and at an appropriate compatibility level to rejoin the federation. In this case, you can delete the Virtual Controller from disk, verify the network settings are appropriate, and deploy the HPE OmniStack host.

  For more information, see the HPE SimpliVity Plug-in for vSphere Help and *HPE OmniStack for vSphere Deployment Guide*.

- You reset the boot drive on the HPE OmniStack host.

  For more information, see the HPE SimpliVity Plug-in for vSphere Help.

Syntax

```
svt-federation-remove --peerip omnicube-ip | --datacenter datacenter_name --
cluster cluster_name --override [common-options]
```

Options

Option	Description
`--peerip`	**For vSphere:** (Required if `--cluster` is not specified) The IP address, fully qualified domain name (FQDN), or GUID of the federation HPE OmniStack host you want to remove.
	This option is mutually exclusive with `--datacenter`. Use the output from `svt-federation-show` to determine the IP addresses, located under the Management IP or federation IP column.
	For Hyper-V: (Required if `--datacenter` is not specified) The fully qualified domain name (FQDN) of the HPE OmniStack host that you want to remove from the federation.
	This option is mutually exclusive with `--datacenter`. Use the output from `svt-federation-show` to determine the FQDN, located under the Host column
`--datacenter`	**For vSphere:** (Required, if `--peerip` is not specified) The name of a datacenter containing all the unhealthy HPE OmniStack hosts to remove. This operation is intended to remove all HPE OmniStack hosts when every HPE OmniStack host is non-functional. This option is mutually exclusive with `--peerip`.
	For Hyper-V: (Required, if `--peerip` is not specified) The name of a host group containing all the unhealthy HPE OmniStack hosts to remove. This operation is intended to remove all HPE OmniStack hosts when every HPE OmniStack host is non-functional. This option is mutually exclusive with `--peerip`.
	You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.
`--cluster`	(Required, if `--peerip` is not specified) The name of a cluster containing all the unhealthy HPE OmniStack hosts to remove. This operation is intended to remove all HPE OmniStack hosts when every HPE OmniStack host is non-functional. This option is mutually exclusive with `--peerip`.
`--lose-single-replica`	Allows removal of specfied HPE OmniStack host from a federation to continue even though existing single-replica virtual machines will be lost.
`--override`	Forces the removal of the HPE OmniStack host even if active virtual machines are present and if the HPE OmniStack host is not HA-compliant. This may cause data loss. This option (or environment variable) is ignored when you specify the `--datacenter` option because all HPE OmniStack hosts are removed.
	Environment variable: `SVTCLI_OVERRIDE`
`--power`	Removes the HPE OmniStack host from the federation without cleaning up. Using this option can lead to data loss for all virtual machines that have a primary replica on the host being removed and which are out of sync with the secondary replicas.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Examples

```
$ svt-federation-remove --peerip 129.128.4.55 --override
Are you sure you want to permanently remove this OmniStack host from the
Federation? You must reset the OmniStack host to factory defaults before you
can redeploy it? Yes
......................................................................
....................................................................
Task Complete


$ svt-federation-remove --cluster Cluster2
WARNING: If there are VMs present in this datacenter, this operation will
result in data loss.  You must reset all OmniStack hosts in this datacenter to
factory defaults before you can redeploy them.
Proceed? (y/n): y
......
Task Complete


$ svt-federation-remove --datacenter DMine22
WARNING: if there are VMs present in this datacenter, this operation will
result in data loss. Are you sure you want to permanently remove all OmniStack
hosts from federation DMine22? You must reset all OmniStack hosts in this
federation to factory defaults before you can redeploy them?". Yes
......................................................................
......................................................................
Task Complete
```

svt-federation-show

Displays information about all HPE OmniStack hosts in a federation.

This command provides the following data:

HMS	The name of the Hypervisor Management System.
Datacenter	**For vSphere:** The name of the VMware datacenter.
	For Hyper-V: The name of the SCVMM Host Group.
Cluster	The name of the cluster.
Zone	**vSphere only**
	Provides the zone planned and effective assignment information as follows:

Zone	Meaning
(none)	Host has no planned or effective assignments

Zone	Meaning
`<ZoneName>`	Host has an effectively-assigned zone of `<ZoneName>` and no planned-assigned zone.
`(none) => <ZoneName>`	Host has a planned-assigned zone of `<ZoneName>` and no effectively-assigned zone.
`<ZoneName1> => <ZoneName2>`	Host has an effectively-assigned zone of `<ZoneName>` and a planned-assigned zone of `<ZoneName>`.
`<ZoneName> (none)`	Host has an effectively-assigned zone of `<ZoneName>` and no planned-assigned zone.

Host

The IP address or DNS name of the HPE OmniStack host.

ESXi Host

vSphere only

The IP address or DNS name of the ESXi instance running on the HPE OmniStack host. This is the IP address that identifies the HPE OmniStack host to vCenter Server. You specify this IP address or DNS name when you add the HPE OmniStack host to vCenter Server as an ESXi host.

OVC

The name of the Virtual Controller.

State

The current HPE OmniStack state:

Alive (Green)	The HPE OmniStack host is healthy.
Faulty (Red)	The HPE OmniStack host is in a critical error state, and operations have failed over to an alternate HPE OmniStack host in the federation. It is likely that one or more error or event messages were logged.
Suspected (Yellow)	The HPE OmniStack host has one or more components that show degraded performance.
Unknown (Red)	The HPE OmniStack host status is indeterminate, perhaps because it is unable to communicate with other federation HPE OmniStack hosts. It is possible that one or more error or event messages were logged. For more information about capturing log files, see `svt-support-capture`.

Management IP (`Mgmt IP`)

The IP address of the HPE OmniStack Management network.

federation IP (`Fed IP`)

The IP address of the HPE OmniStack federation network.

Storage IP (`Stor IP`)

The HPE OmniStack Storage network IP address.

Version	The HPE OmniStack software release version number.
Family	**vSphere only**
	The hypervisor family.
Model	The model of the HPE OmniStack host.
Arbiter	The connection status of the Arbiter, Connected (green) or Disconnected (red).
Backup Policy (`Backups`)	The status of the backup policy:

Enabled (Green)

Suspended (Red)

This command also returns Arbiter status. The Arbiter status reported by CLI depends on 2 factors:

1. The release running on the node executing svt-federation-show.

2. The release running on the node in a remote cluster, whose Arbiter status is being reported.

If you run this command on a node running an HPE OmniStack release earlier than 3.7.10, then the command returns the old status values (Not Required, Connected, and Disconnected).

If you run this command on a node running HPE OmniStack 3.7.10 or later, then the command returns the new status for all nodes in clusters with HPE OmniStack 3.7.10 or later and the old status for all clusters running releases earlier than HPE OmniStack 3.7.10.

Status	What this means	What to do
Configuration required	The cluster requires Arbiter software, but it is not currently deployed.	Perform one of the following actions as soon as possible. Failure to do so results in data unavailability if a failure occurs. • Deploy Arbiter software for the cluster. • Change the cluster configuration so that Arbiter is no longer required.
Connected	The cluster requires Arbiter software. Arbiter software is deployed and it is connected.	No action required.
Disconnected	The cluster requires Arbiter software. Arbiter software is deployed, but it is currently either down or disconnected.	Perform one of the following actions as soon as possible. Failure to do so results in data unavailability if a failure occurs. • Check and repair the server where Arbiter software is running. • Check and repair network connectivity between the cluster

Status	What this means	What to do
		and the server where Arbiter software is running.
Not required	The cluster does not require Arbiter software, and it is not deployed.	No action required.
Connected (optional)	The cluster does not require Arbiter software, but Arbiter software is configured and connected.	No action required.
Disconnected (optional)	The cluster does not require Arbiter software. Arbiter software is deployed, but not connected.	Perform one of the following actions as soon as possible. Failure to do so results in data unavailability if a failure occurs. • Check and repair the server where Arbiter software is running. • Check and repair network connectivity between the cluster and the server where Arbiter software is running. • Work with **Customer Support (https://www.hpe.com/support/hpesc)** to remove Arbiter software from this configuration.
Unknown	All HPE OmniStack hosts in this cluster are in a Faulty state (either down or with impaired connectivity). The Arbiter status cannot be determined.	Perform one of the following actions as soon as possible. Failure to do so results in data unavailability if a failure occurs. • Check and repair the server where Arbiter software is running. • Check and repair network connectivity between the cluster and the server where Arbiter software is running.

Syntax

```
svt-federation-show --zone zone --emergency [common-options]
```

Options

Option	Description
`--zone`	**vSphere only**
	Only shows HPE OmniStack hosts that have the specified zone-name or zone-id.
	You can also specify `--zone` *'(none)'* to show HPE OmniStack hosts with no zone assignment (as explained) above.
	If the specified zone does not exist, an error is provided.
`--emergency`	**vSphere only**
	Displays information about all HPE OmniStack hosts in a federation. A CLI account (`svtcli`) password is required to run this command.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

In the following examples, virtual machine names are truncated, and the formatting is compressed to make the output fit the page.

```
$ svt-federation-show
.------------------------------------------------------------------------
| Federation
+--------------+------------+---------+-------+------------------------+
| HMS          | Datacenter | Cluster | Zone  | Host                   |
+--------------+------------+---------+-------+------------------------+
| hvscvmm19-tp5 | All Hosts |         | (none) | test.user1.HyperV.local |
'--------------+------------+---------+-------+------------------------+
   ----------------+-------+-------------+-------------+-------------+
    OVC            | State | Mgmt IP     | Fed IP      | Stor IP     |
   ----------------+-------+-------------+-------------+-------------+
    sva10.149.10.23 | Alive | 127.0.0.1   | 127.0.0.1   | 127.0.0.1   |
   ----------------+-------+-------------+-------------+-------------+
   ---------+---------------------+-------------+---------.
    Model   | Version             | Arbiter     | Backups |
   ---------+---------------------+-------------+---------+
    CN-5400 | Release 3.5.9001.330 | Not required | Enabled |
   ---------+---------------------+-------------+---------'
```

Intelligent Workload Optimizer commands

This section contains the following topics:

- **svt-iwo-disable (vSphere only)**

- **svt-iwo-enable vSphere only)**

- **svt-iwo-show (vSphere only)**

svt-iwo-disable (vSphere only)

Use the `svt-iwo-disable` command to disable Intelligent Workload Optimizer.

If you do not include the datacenter or host group and cluster in this command, the disable action defaults to the datacenter or host group and cluster of the local host.

For vSphere:

If you want to remove the HPE SimpliVity groups and rules from vSphere Distributed Resource Scheduler (DRS) automatically and stop creating any future HPE SimpliVity groups and rules, use the `svt-iwo-disable` command to disable Intelligent Workload Optimizer

For Hyper-V

If you disable Intelligent Workload Optimizer, leave the existing placement rule in place. Doing so prevents IWO from overwriting your settings if you enable it again.

Syntax

```
svt-iwo-disable --datacenter datacenter_name --cluster cluster_name [common-
options]
```

Option	Description
`--datacenter`	The name of the datacenter or host group where you want to disable Intelligent Workload Optimizer. This option is required if you include the `--cluster` option.
`--cluster`	The name of the cluster where you want to disable Intelligent Workload Optimizer. This option is required if you include the `--datacenter` option.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
svt-iwo-disable --datacenter Boston1 --cluster Building 4
. . . . .
Task Complete
```

svt-iwo-enable vSphere only)

Use the `svt-iwo-enable` command to enable Intelligent Workload Optimizer.

If you do not include the datacenter and cluster in the command, the enable action defaults to the datacenter and cluster of the local host.

For vSphere: .

Once Intelligent Workload Optimizer. is enabled, it works with vSphere Distributed Resource Scheduler (DRS) to create groups and rules in DRS to make load balancing of your CPU and memory resources more efficient and to lower latenc

The cluster must meet the requirements for Intelligent Workload Optimizer to start creating groups and rules. For example, three or more HPE OmniStack hosts must reside in one cluster and you must have vSphere DRS enabled.

NOTE:

Leave Power Management turned off in the cluster settings to ensure it cannot shut down the Virtual Controllers after load balancing occurs.

For Hyper-V:

Once Intelligent Workload Optimizer. is enabled, it works with Microsoft Dynamic Optimization to create a placement rule that make load balancing of your CPU and memory resources more efficient and to lower latency.

The cluster must meet the requirements for Intelligent Workload Optimizer to create the placement rule. For example, three or more HPE OmniStack hosts must reside in one cluster and the virtual machines must be highly available.

Syntax

```
svt-iwo-enable --datacenter datacenter_name --cluster cluster_name [common-options]
```

Options

Option	Description
--datacenter	The name of the datacenter or host group where you want to enable Intelligent Workload Optimizer. This option is required if you include the --cluster option.
--cluster	The name of the cluster where you want to enable Intelligent Workload Optimizer. This option is required if you include the --datacenter option.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
svt-iwo-enable --datacenter Boston1 --cluster Building 4
. . . . .
Task Complete
```

svt-iwo-show (vSphere only)

Use this command to show if a datacenter or host group has Intelligent Workload Optimizer enabled or disabled.

You can also use this command to determine whether the feature is active. For example, the cluster must meet the requirements for the feature to function. If the cluster contains fewer than three HPE OmniStack hosts, Intelligent Workload Optimizer cannot function (and appears inactive). Therefore, it cannot create any Hewlett Packard Enterprise groups and rules. For more details on cluster requirements, see the *HPE OmniStack for vSphere Administration Guide*.

Syntax

```
svt-iwo-show --datacenter datacenter_name --cluster cluster_name [common-options]
```

Option	Description
--datacenter	The name of the datacenter or host group where you want to show Intelligent Workload Optimizer information. This option is required if you include the --cluster option.
--cluster	The name of the cluster where you want to show Intelligent Workload Optimizer information. This option is required if you include the --datacenter option.

If you do not include the --datacenter (or --cluster) option, this command lists the Intelligent Workload Optimizer setting for the local datacenter or host group.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
svt-iwo-show --datacenter Boston1 --cluster Building 4


.----------------------------------------------------------------.
| Intelligent Workload Optimizer: DRS Integration Information    |
+------------+---------------+-------------------+------------+
| Datacenter | Cluster       | Setting           | Status     |
+------------+---------------+-------------------+------------+
| Boston1    | Building 4    | Enabled           | Inactive   |
'------------+---------------+-------------------+------------'
```

Kerberos commands

This section contains the following topics:

- **svt-kerberos-join**
- **svt-kerberos-leave**

svt-kerberos-join

Joins a Virtual Controller to a Windows domain.

Before running this command, use the `svt-dns-setup` command to add the Domain Name System (DNS) server for the Virtual Controller.

For vSphere:

If you are creating Application Aware backups with Microsoft VSS, VSS requires secure authentication with each virtual machine it backs up. You join the Virtual Controller with a Windows domain to enable authentication.

For Hyper-V:

HPE OmniStack hosts join a Windows domain during deployment. If you have removed the host or its Virtual Controller from the domain, to perform maintenance, for example, you can use this command to rejoin it.

The first time you run this command after using the `svt-kerberos-leave` command, it can fail with the following errors:

```
/var/tmp/build/cli/svt-do-kerberos-join.pl:617 INFO Adding Delegations ...
/var/tmp/build/cli/svt-do-kerberos-join.pl:630 FATAL FAILURE
```

If this failure occurs, try running the command again.

After running this command successfully, remote PowerShell commands can fail for up to 15 minutes with the following errors:

- 0x00050003 General failure: Failed to retrieve the key.
- 0x00050002 General failure: User, password or similar was not accepted. User might not be authorized to perform the requested operation.
- 00070016 VMM is unable to perform this operation without a connection to a Virtual Machine Manager management server.

These errors are transient. Once all kerberos tickets are repopulated on the Virtual Controller and all-in progress remote PowerShell commands initiated before you use the `svt-kerberos-join` command are completed, the errors no longer occur.

Syntax

```
svt-kerberos-join --domainname domain-name
```

Options

Option	Description
`--domainname`	(Required) Name of the Windows domain to which to join the Virtual Controller.
	For Hyper-V: Optionally, you can specify an organizational unit (OU). Use the following syntax
	`--domainname ` *`ou-name:domain-name`*
	For example: `---domainname HPE SimpliVity:mydomain`

Example

You are prompted to type the username and password for an account with permissions to add the Virtual Controller to the specified domain.

```
$ svt-kerberos-join --domainname my.windowsdomain.local
Enter username:
Enter password:
```

svt-kerberos-leave

Removes a Virtual Controller from a Windows domain.

> ⚠️ **Caution:**
>
> **For vSphere:**
>
> After removing a Virtual Controller from a Windows domain, Volume Shadow Copy Service (VSS) can no longer create application-consistent backups of virtual machines. You can use the `svt-kerberos-join` command to rejoin the Virtual Controller to the domain.
>
> **For Hyper-V:**
>
> After removing a Virtual Controller from a Windows domain you can no longer manage the HPE OmniStack host in your Hyper-V environment. You can use the `svt-kerberos-join` command to rejoin the Virtual Controller to the domain.
>
> If running this command fails with the error, `Adding Delegations Failed`, the record in Active Directory may no longer exist. This condition prevents the command from removing the Virtual Controller from the domain completely. To resolve this issue, create a new record for the Virtual Controller in Active Directory and run the `svt-kerberos-leave` command again.

Syntax

```
svt-kerberos-leave
```

Example

You are prompted to type the username and password for an account with permissions to remove the Virtual Controller from the specified domain.

```
$ svt-kerberos-leave
Enter username:
Enter password:
```

Miscellaneous commands

This section contains the following topics:

- **svt-physical-drive-locate**
- **svt-extension-refresh (vSphere only)**
- **svt-fixpack-apply (vSphere only)**
- **svt-fixpack-verify (vSphere only)**
- **svt-hardware-show**
- **svt-task-cancel**
- **svt-task-show**

svt-physical-drive-locate

Turns the blue locate LED on or off on a specified front data drive on an HPE SimpliVity 380 server.

This command is currently implemented for HPE SimpliVity 380 servers only. Running the command against any other platform results in a `command not implemented` error.

Syntax

```
svt-physical-drive-locate --slot --op [common-options]
```

Options

Option	Description
`--slot`	(Required) The number of the slot that holds the physical drive. Selecting a slot that does not contain a drive results in a `locate drive command failed` error.
`--op`	(Required) Start or stop the blue locator LED on a specified drive slot.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-physical-drive-locate --slot 1  --op start
Success
$ svt-physical-drive-locate --slot 1  --op stop
Success
```

svt-extension-refresh (vSphere only)

Refreshes the HPE SimpliVity extension by deleting and then reinstalling the extension.

After upgrading your vCenter Server, HPE OmniStack alarms, events, and tasks no longer display correctly. Running `svt-extension-refresh` unregisters and re-registers the HPE SimpliVity extension with vCenter Server and resolves the issue.

NOTE:

Running `svt-extension-refresh` clears all active HPE OmniStack tasks, events, and alarms.

Syntax

```
svt-extension-refresh [common-options]
```

Options

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-extension-refresh
This action will delete and reinstall the SimpliVity extension.
Proceed? (y/n):
```

svt-fixpack-apply (vSphere only)

Applies the specified HPE OmniStack fix pack to a system.

Syntax

```
svt-fixpack-apply --pkgpath package_path --noHA [common-options]
```

Options

Option	Description
`--pkgpath`	(Required) The full path to the fix pack. This option uses the datastore GUID, not the name of the datastore.
`--noHA`	Overrides the requirement that all virtual machines be HA compliant.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

svt-fixpack-verify (vSphere only)

Verifies the fix pack version on a system.

Syntax

```
svt-fixpack-verify [common-options]
```

Options

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-fixpack-verify
No fix pack found
```

svt-hardware-show

Displays the hardware inventory and health status for an HPE OmniStack host.

This command shows the following information:

Component	The name of the hardware component, which can be one of the following values:
	• Node—The status of an HPE OmniStack host in the federation.
	• Storage adapter.
	• Storage adapter battery backup unit (BBU).
	• Logical drive, SSD array.
	• Drive Set—A set of physical drives (SSD or HDD) included in a specific logical drive.
	• Physical drives in the SSD array.
	• Logical drive in the rotational HDD array.
	• Physical drives in the rotational HDD array.
Name/Location	The device name or slot ID number.
Parameter	• Any configurable parameters associated with the device, such as cache state.
	• An attribute of the device, such as serial or model number.
	• For SSDs, the life remaining.
Value	The health status of the device or the value of a parameter. For example, the Life Remaining parameter displays a value showing the percent of life remaining for the disk.
Status	The operational status of the device, which can be one of the following values:

Degraded (Yellow)	The component is functioning, but at reduced capability. For example, a recently replaced drive might be rebuilding.
Enabled	The component attribute status, such as enabled or disabled.

Error (Red)		The component is absent or in a critical error state. Operations might have failed over to a redundant alternate device.
FPGA Temp (Yellow/ Red)		The temperature of the Accelerator card.
Healthy (Green)		The component is present and functioning correctly.
Missing (Red)		The component is absent from the system. For example, a disk was removed.
Offline (Red)		The component is present, but unavailable for use, although not necessarily in a degraded or error state.
Rebuilding N% Completed (Yellow)		A storage component is undergoing rebuild after you replace an SSD or HDD. This information includes the progress of the rebuild.
Warning (Yellow)		The component is present, but is generating alarms or errors. Operations might have failed over to an alternate, redundant device.

Status Details	For SSDs this can be SSD Life Healthy, SSD Life Warn (when the life remaining is down to 10%), or SSD Life Critical (when the life remaining reaches 5%).

For vSphere:

If a device has a yellow or red status, you can obtain more information from alarms and error messages visible in the vSphere Triggered Alarms panel and the Alarms tab. Select **Definitions** to display the HPE OmniStack alarms and their descriptions. For example:

```
Alarm: SimpliVity Logical Drive Health State Change
```

```
Description: This object Monitors for unhealthy virtual drives for SimpliVity
 Storage.
```

Syntax

```
svt-hardware-show --details [common-options]
```

Options

Option	Description
--details	Displays additional hardware information, including the serial number, the model number, firmware revision, and life remaining (SSD only) for the HPE OmniStack hardware.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

The following example shows output for a medium size system with 8 HDDs and 2 SSDs:

```
$ svt-hardware-show
.----------------------------------------.
| Hardware Inventory for Host 169.254.0.16                                                      |
+------------------------+----------------+----------------+---------+---------+-----------------+
| Component              | Name/Location  | Parameter      | Value   | Status  | Status Details  |
+------------------------+----------------+----------------+---------+---------+-----------------+
| OmniStack              |                |                |         | Healthy |                 |
|   OmniStack Accelerator |               |                |         | Healthy |                 |
|   Storage Adapter      | PERC H730P Mini |               |         | Healthy |                 |
|     Battery Backup     |                |                |         | Healthy |                 |
|     Logical Drive      | HDD Array      |                |         | Healthy |                 |
|                        |                | Cache State    | Enabled |         |                 |
|       Drive Set        | 0              |                |         | Healthy |                 |
|         Physical Drive | 2              |                |         | Healthy |                 |
|         Physical Drive | 3              |                |         | Healthy |                 |
|         Physical Drive | 4              |                |         | Healthy |                 |
|         Physical Drive | 5              |                |         | Healthy |                 |
|         Physical Drive | 6              |                |         | Healthy |                 |
|         Physical Drive | 7              |                |         | Healthy |                 |
|         Physical Drive | 8              |                |         | Healthy |                 |
|         Physical Drive | 9              |                |         | Healthy |                 |
|     Logical Drive      | SSD Array      |                |         | Healthy |                 |
|                        |                | Cache State    | Enabled |         |                 |
|       Drive Set        | 0              |                |         | Healthy |                 |
|         Physical Drive | 0              |                |         | Healthy | SSD life Healthy |
|                        |                | Life Remaining | 100     |         |                 |
|         Physical Drive | 1              |                |         | Healthy | SSD life Healthy |
|                        |                | Life Remaining | 100     |         |                 |
'------------------------+----------------+----------------+---------+---------+-----------------'
```

The following example shows the detailed output (--detail) for a system. The output is truncated to fit this document:

```
$ svt-hardware-show --detail
.--------------------------------------.
| Hardware Inventory for Host 169.254.0.16                                                           |
+----------------------+----------------+---------------------+--------------------------------+----------+-------------------+
| Component            | Name/Location  | Parameter           | Value                          | Status   | Status Details    |
+----------------------+----------------+---------------------+--------------------------------+----------+-------------------+
| OmniStack            |                |                     |                                | Healthy  |                   |
|                      |                | Serial Number       | DY4QD42                        | Healthy  |                   |
|   OmniStack Accelerator |             |                     |                                | Healthy  |                   |
|                      |                | Serial Number       | TIA2-02151001749               |          |                   |
|                      |                | Model               | 510-000003-014                 |          |                   |
|                      |                | Vendor              | 02                             |          |                   |
|                      |                | Firmware Revision   | 3.6.2.1                        |          |                   |
|                      |                | FPGA Temp           | 61                             |          |                   |
|   Storage Adapter    | PERC H730P Mini |                    |                                | Healthy  |                   |
|                      |                | Serial Number       | 51T018E                        |          |                   |
|                      |                | Model               | N/A                            |          |                   |
|                      |                | Vendor              | N/A                            |          |                   |
|                      |                | Firmware Revision   | 4.260.00-6259                  |          |                   |
|   Battery Backup      |               |                     |                                | Healthy  |                   |
|                      |                | Serial Number       | 0                              |          |                   |
|                      |                | Model               | N/A                            |          |                   |
|                      |                | Vendor              | 0x113                          |          |                   |
|                      |                | Firmware Revision   | 0.4                            |          |                   |
|                      |                | Manufacture Date    | 00/00, 0000                    |          |                   |
|   Logical Drive      | HDD Array      |                     |                                | Healthy  |                   |
|                      |                | Cache State         | Enabled                        |          |                   |
|                      |                | Serial Number       | 644a842015e5160020327a8b09cff328 |        |                   |
|                      |                | Model               | N/A                            |          |                   |
|                      |                | Vendor              | N/A                            |          |                   |
|                      |                | Firmware Revision   | N/A                            |          |                   |
|                      |                |                     |                                |          |                   |
|     Drive Set        | 0              |                     |                                | Healthy  |                   |
|       Physical Drive | 2              |                     |                                | Healthy  |                   |
|                      |                | Serial Number       | S401AKED                       |          |                   |
|                      |                | Model               | ST1200MM0108                   |          |                   |
|                      |                | Vendor              | SEAGATE                        |          |                   |
|                      |                | Firmware Revision   | TSC5                           |          |                   |
|                      |                | Capacity            | 1.09TB                         |          |                   |
|                      |                |                     |                                |          |                   |
| Logical Drive        | SSD Array      |                     |                                | Healthy  |                   |
|                      |                | Cache State         | Enabled                        |          |                   |
|                      |                | Serial Number       | 644a842015e5160020327a8b09cd8b65 |        |                   |
|                      |                | Model               | N/A                            |          |                   |
|                      |                | Vendor              | N/A                            |          |                   |
|                      |                | Firmware Revision   | N/A                            |          |                   |
|     Drive Set        | 0              |                     |                                | Healthy  |                   |
|       Physical Drive | 0              |                     |                                | Healthy  | SSD life Healthy  |
|                      |                | Life Remaining      | 100                            |          |                   |
|                      |                | Serial Number       | 0QY4YDDA                       |          |                   |
|                      |                | Model               | HUSMM1640ASS205                |          |                   |
|                      |                | Vendor              | HGST                           |          |                   |
|                      |                | Firmware Revision   | K2CC                           |          |                   |
|                      |                | Capacity            | 372.61GB                       |          |                   |
```

svt-task-cancel

Cancels a specific federation task in progress.

To display a task, use `svt-task-show`. You cannot cancel all tasks because some tasks complete too quickly, and other tasks might have dependent tasks that prevent cancellation. You must specify the unique task identifier. To generate this identifier, either use the `--wait` *n* option on the command line or configure a value for the *SVTCLI_WAIT* environment variable. For example:

```
$ svt-datastore-create --name jnds --policy daily --wait n --timeout 100
Task started - ID is 90c6524a-c4d3-4c11-bb5d-e3781502cd60
```

If a command times out, you see a message similar to the following:

```
Command still in progress, but timed out
To check status, execute svt-task-show --task 4f186d32-305d-4cc0-a210-1c6f89efb6a8
```

In this example, the CLI timed out, but the task might still be running.

If the original task timed out and had not yet completed when you run `svt-task-show`, the command continues where the previous command had left off, printing the progress string ". . . . . ." until either the command completes or `svt-task-show` times out. If `svt-task-show` times out, run it again.

Syntax

```
svt-task-show --task n [common-options]
```

Options

Option	Description
`--task`	(Required) The identification number for a task.
	Use the `--wait` *n* option with other CLI commands to generate a task identification number. Alternatively, use the task ID returned when the original command timed out.
	For 3.x and higher versions, the task ID consists of the `OWNER_GUID:DESTINATION_ GUID:TASK_GUID`
	Where:
	• `OWNER_GUID`: Represents the task owner ID.
	• `DESTINATION_GUID`: Represents the task destination ID
	• `TASK_GUID`: Represents the origin GUID for the task.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-task-cancel --task 90c6524a-c4d3-4c11-bb5d-e3781502cd60
```

svt-task-show

Displays the status of a federation task, including the percentage complete.

To cancel a task in progress, use `svt-task-cancel`. Each task has a unique identifier. To retrieve this identifier, either use the `--wait` option on the command line or configure a value for the *SVTCLI_WAIT* environment variable. For example:

```
$ svt-datastore-create --size 3TB --name jnds --policy daily --wait n --timeout 100
Task started - ID is 90c6524a-c4d3-4c11-bb5d-e3781502cd60
```

If a command times out, you see a message similar to the following:

```
Command still in progress, but timed out
To check status, execute svt-task-show --task 4f186d32-305d-4cc0-a210-1c6f89efb6a8
```

In this example, the CLI has timed out, not the task.

If the original task timed out and had not yet completed when you run `svt-task-show`, the command continues where the previous command had left off, printing the progress string ". . . . . ." until either the command completes or `svt-task-show` times out. If `svt-task-show` times out, run it again.

Syntax

```
svt-task-show --task n [common-options]
```

Options

Option	Description
`--task`	(Required) The identification number for a task.
	Use the `--wait` option with other CLI commands to generate a task identification number. Alternatively, specify the task ID returned when the original command timed out.
	NOTE:
	For 3.x and higher versions, the task ID consists of `OWNER_GUID:DESTINATION_ GUID:TASK_GUID`, where `OWNER_GUID` represents the task owner ID, `DESTINATION_ GUID` represents the task destination ID, and `TASK_GUID` represents the origin GUID for the task.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-datastore-create --size 3TB --name jnds --policy daily --wait n --timeout 100
Task started - ID is b5e507a1-13a6-4f46-a651-9e544afd8d26

 svt-task-show --task b5e507a1-13a6-4f46-a651-9e544afd8d26
task b5e507a1-13a6-4f46-a651-9e544afd8d26 is 66 percent complete.
......................
Task Complete
```

3.x and higher versions use an expanded task ID, as shown in the following example:

```
$ svt-datastore-create --size 3TB --name jnds --policy daily --wait n --timeout 100
Task started - ID is 420a1c70-c502-ce2a-94b7-7ed69443ba3c:420a1c70-c502-
ce2a-94b7-7ed69443ba3c:3a423ddbd42a-4210-bef9-89074688bb38

$ svt-task-show --task 420a1c70-c502-ce2a-94b7-7ed69443ba3c:420a1c70-c502-
ce2a-94b7-7ed69443ba3c:3a423ddbd42a-4210-bef9-89074688bb38
task 420a1c70-c502-ce2a-94b7-7ed69443ba3c:420a1c70-c502-
ce2a-94b7-7ed69443ba3c:3a423ddb-d42a-4210-bef9-89074688bb38 is 100 percent
 complete.
```

RBAC commands

This section contains the following topics:

- **svt-rbac-group-role-show (vSphere only)**
- **svt-rbac-group-role-remove (vSphere only)**
- **svt-rbac-group-role-add (vSphere only)**

svt-rbac-group-role-show (vSphere only)

Use this command to display role-based access control group to role mappings.

Syntax

```
svt-rbac-group-role-show [common-options]
```

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
# svt-rbac-group-role-show
.-----------------------------------------------.
| Group to Role Mappings |
+----------------------------+---------------+
| Group | Roles |
+----------------------------+---------------+
| VSPHERE.LOCAL\Administrators | Administrator |
'----------------------------+---------------'
```

svt-rbac-group-role-remove (vSphere only)

Use this command to remove role-based access control group to role mappings.

Syntax

```
svt-rbac-group-role-remove  --group <group> --roles <roles>[common-options]
```

Option	Description
`--group`	Required. HMS group name
`--roles`	Required. A comma-separated list of RBAC roles to assign to group. Valid roles: • Administrator • BackupUser

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

svt-rbac-group-role-add (vSphere only)

Use this command to add role-based access control group to role mappings. |

Syntax

```
svt-rbac-group-role-add  --group <group> --roles <roles> [common-options]
```

Option	Description
`--group`	Required. HMS group name
`--roles`	Required. A comma-separated list of RBAC roles to assign to group. Valid roles: • Administrator • BackupUser

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Session commands

This section contains the following topics:

- **svt-session-diagnostics**
- **svt-session-start**
- **svt-session-stop**
- **svt-session-verify**

svt-session-diagnostics

Use this command to view user role information for the active session.

Syntax

```
svt-session-diagnostics [common-options]
```

Options

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
svt-session-diagnostics
.----------------------------------------------------------------------.
| Session Details                                                      |
+---------------------+------------------------------------------------+
| Attribute           | Value                                          |
+---------------------+------------------------------------------------+
| Ticket              | {SVT-T-TAG}9345930a-ce9b-4533-a186-5961d6903cac |
| Creation Time       | July 1, 2019 4:59:30 PM GMT                     |
| HMS Username        | VSPHERE.LOCAL\Administrator                     |
| Local Linux Username | administrator-vsphere                          |
| Logging Tag         | SLT 0821f2e6-dc04-46e7-a883-a6ac22c17617        |
| User's Roles        | administrator                                   |
| HMS IDs (IP, ID)    | 10.1.0.17, ****0def                             |
'---------------------+------------------------------------------------'
.--------------------------------.
| User Sessions Metrics          |
+------------------------+-------+
| Attribute              | Value |
+------------------------+-------+
| Active Tickets         | 21    |
| Active Sessions        | 21    |
| Maximum Active Tickets | 21    |
| Maximum Active Sessions | 21    |
| Expired Tickets        | 0     |
| Invalidated Tickets    | 0     |
'------------------------+-------'
```

svt-session-start

Starts an authorized session during an `svtcli` command line login on a Virtual Controller.

To start a session, supply the virtualization management server credentials. The session expires after thirty minutes of inactivity. To end a session, use `svt-session-stop`.

If you omit the `--password` option, you are prompted for the password. The password is not echoed to the screen in plain text.

Syntax

```
svt-session-start --username account_name --password account_password [common-
options]
```

Options

Option	Description
`--username`	The virtualization management sever account username.
`--password`	The virtualization management server account password.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

This example shows what happens when you execute a command without a valid session:

```
$ svt-backup-show
ERROR [48]: Invalid session credentials.
```

If you do not specify the `--username` and `--password` options, you are prompted for them. For example:

```
$ svt-session-start
vCenter server: 10.0.5.37
Enter username: Administrator
Enter password for Administrator:xxxxxxxxxxxx
Successful login of Administrator to 10.0.5.37
```

This example uses environment variables:

```
$ export VI_USERNAME=Administrator
$ export VI_PASSWORD=xxxxxxxxxxxx
$ svt-session-start
vCenter server: 10.0.5.37
Successful login of Administrator to 10.0.5.37
```

svt-session-stop

Stops the user session that was started with `svt-session-start`.

Sessions expire automatically after 30 minutes of inactivity.

After you stop a session, you must supply vCenter Server or Windows domain user credentials to run commands.

Syntax

```
svt-session-stop [common-options]
```

Options

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-session-stop
Successful: deleted session

$ svt-session-stop
No session exists.
```

svt-session-verify

Checks whether all sessions are valid.

To end a session, use `svt-session-stop`.

Syntax

```
svt-session-verify [common-options]
```

Options

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

The following example shows the result when a session is valid:

```
$ svt-session-verify
Verified session on 120.18.4.20
```

The following example shows the result when a session is not valid:

```
$ svt-session-verify
ERROR [47]: Missing session credentials.
```

Shutdown commands

This section contains the following topics:

- **About shutdown commands**
- **svt-shutdown-cancel**
- **svt-shutdown-force**
- **svt-shutdown-safe**
- **svt-shutdown-status**

About shutdown commands

Use the shutdown commands to shut down the Virtual Controller. The Virtual Controller should always start up before any guest virtual machines and shut down last.

Before you shut down the Virtual Controller, you should move the virtual machines hosted on the HPE OmniStack host to another HPE OmniStack host in the cluster. Alternately, shut the virtual machines down before you shut down the Virtual Controller.

If you want to move a virtual machine to a different datacenter or datastore, you can use the `svt-vm-move` command. Alternately, for vSphere, you can move the virtual machines using vSphere Client commands. For more information on VMware vSphere commands, see the vSphere Command Line documentation.

Before you move or shut down virtual machines on the HPE OmniStack host, use `svt-vm-show` to check if they are in storage HA (High Availability) compliance. The `Storage HA` column displays the HA status as `Yes`, `No`, or `Unknown`.

Storage HA compliance ensures that data remains available by making a copy of the data and storing it on another virtual machine on another HPE OmniStack host in the cluster. When you shut down a virtual machine, it may need time to ensure the last incoming data has a copy before it stops reading and writing data.

To shut down and power off the Virtual Controller, use any of the following shutdown commands:

svt-shutdown-safe	Shuts down the Virtual Controller and powers off the HPE OmniStack host. During the process, you may see any of the following messages: `None (task complete)` or `Cancel in Progress`.
svt-shutdown-cancel	Cancels the shutdown process to leave the Virtual Controller powered on. During the process, you may see any of the following messages: `None (task complete)` or `Cancel in Progress`.
svt-shutdown-force	Forces the Virtual Controller to shut down. During the process, you may see any of the following messages: `None (task complete)` or `Cancel in Progress`.
svt-shutdown-status	Shows the status of the Virtual Controller. Status can be: shutdown not started or completed, in progress, reached storage HA compliance, cancelling shutdown, or forcing shutdown.

svt-shutdown-cancel

Cancels the shutdown of the Virtual Controller.

Syntax

```
svt-shutdown-cancel --emergency [common-options]
```

Options

Option	Description
`--emergency`	**vSphere only** Allows you to run this command when the Hypervisor Management System (HMS) is unavailable.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-shutdown-cancel
Canceling the shut down process for the Virtual Controller.
```

svt-shutdown-force

Forces the shutdown of the Virtual Controller. This might result in data loss or data unavailability.

This command is useful if the virtual machines managed by the Virtual Controller take a long time to reach storage HA compliance, or if you want to force the shut down process. When prompted, enter `y` for yes to continue the shutdown. The system goes into maintenance mode automatically and forces the shutdown.

Syntax

```
svt-shutdown-force --emergency [common-options]
```

Options

Option	Description
`--emergency`	**vSphere only** Allows you to run this command when the Hypervisor Management System (HMS) is unavailable.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-shutdown-force
This action will shut down the Virtual Controller even if the virtual machines
 managed by this
Virtual Controller are not in storage HA compliance. This can make data
 unavailable.
Proceed? (y/n): y
```

```
Forcing the Virtual Controller to shut down.
admin@omnicube-ip6-105:/home/svtbuild#
Broadcast message from admin@omnicube-ip6-105
....... . (unknown) at 10:40 ...
The system is going down for maintenance now!
```

svt-shutdown-safe

Safely shuts down the Virtual Controller and powers off the HPE OmniStack host.

If the virtual machines managed by the Virtual Controller take a long time to reach storage HA compliance, or you just want to force the shut down process, you can use `svt-shutdown-force`.

NOTE:

Single-replica virtual machines are ignored by availability zone alignment and shutdown operations.

Syntax

```
svt-shutdown-safe --emergency [common-options]
```

Options

Option	Description
`--emergency`	**vSphere only** Allows you to run this command when the Hypervisor Management System (HMS) is unavailable.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-shutdown-safe
```

svt-shutdown-status

Monitors the status of the shutdown operation.

Displays any of the following results when you execute this command, depending on the shut down task running on the Virtual Controller:

- `A shutdown task is not running on the Virtual Controller.`
- `The Virtual Controller shutdown task is in progress.`
- `The virtual machines managed by the Virtual Controller reached storage HA compliance.`
- `Cancelling the shutdown process for the Virtual Controller.`
- `Forcing the Virtual Controller to shut down.`
- `Waiting for the virtual machines managed by the Virtual Controller to reach storage HA compliance.`

Syntax

```
svt-shutdown-status --emergency [common-options]
```

Options

Option	Description
`--emergency`	**vSphere only** Allows you to run this command when the Hypervisor Management System (HMS) is unavailable.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-shutdown-status
Waiting for the virtual machines managed by the Virtual Controller to reach storage
 HA compliance.
```

SMB commands

This section contains the following topics:

- **svt-smb-password-change (Hyper-V only)**

`svt-smb-password-change` (Hyper-V only)

Changes the password for the SMB file server cluster account.

During deployment, you specify a password for the SMB file server cluster account. This command enables you to change the password after the intial deployment.

All Virtual Controllers in a cluster share access to the SMB file server cluster account. To change the password, run this command on each Virtual Controller in the cluster. If you do not use this command on all the Virtual Controllers in the cluster, backups could fail.

This command obtains the keytab file with the CIFS entries, changes the password in Active Directory, and then updates the keytab file with new CIFS entries.

To find details about errors, see the following log files:

- `/var/log/samba/ip-address.log`

- `/var/svtfs/0/log/hyperproxy.log`

Error conditions

If errors occur when using this command, you are likely to see the following message:

`Internal error processing updateSmbPassword`

Depending on the situation, you might need to take one or more of the following actions:

- Start a new CLI session.

- Verify that you entered the correct user name (`--username` option) and password (`--password` option).

- Verify that you are following the Microsoft Windows password complexity requirements (`--newpassword` option).

Start a new session

If you see the errors similar to the following examples after you use this command, use the `svt-session-start` command to start a session. Then try the `svt-smb-password-change` command again.

```
root@oc-ip4-100:/var/svtfs/0/log# svt-vm-show
Credentials have expired. Please re-establish or logout.
ERROR [47]: Missing session credentials.
root@oc-ip4-100:/var/svtfs/0/log# svt-smb-password-change --newsmbpassword
 Password4 --username administrator --password svtrfs29LAB

This will change the password of the SMB cluster account. You must run this command
 on all the OVCs in the cluster
Proceed? (y/n): y
Error: Internal error processing updateSmbPassword
```

Follow Microsoft Windows password complexity requirements

When specifying a new password, ensure that you follow the Microsoft Windows password complexity requirements:

- Passwords must not contain the the user's Account Name value or the Full Name value. Checks for these requirements are not case sensitive.

- The password contains characters from three of the following categories:

  ◦ Uppercase letters of European languages (A through Z, with diacritic marks, Greek and Cyrillic characters).

  ◦ Lowercase letters of European languages (a through z, sharp-s, with diacritic marks, Greek and Cyrillic characters)

  ◦ The numbers 0 through 9

  ◦ Non-alphanumeric characters (special characters): (~!@#$%^&*_-+=`|\(){}[]:;"'<>,.?/)

  ◦ Any Unicode character that is categorized as an alphabetic character but is not uppercase or lowercase. This includes Unicode characters from Asian languages.

For additional details about password complexity, see **https://docs.microsoft.com/en-us/windows/security/ threat-protection/security-policy-settings/password-must-meet-complexity-requirements**.

Syntax

```
svt-smb-password-change --newpassword password --username username --password password
 [common-options]
```

Option	Description
`--newpassword`	(Required) The new password that you want to assign to the SMB file cluster account.
	If you enter a password that does not follow the Microsoft Windows password complexity requirements, you see the following error:
	`Error: Internal error processing updateSmbPassword`
`--username`	(Required) The user name for an account that is a member of the HPE SimpliVity SMB Full Control security group or has Domain Admins privileges.
	If you enter an incorrect user name, you see the following error:
	`Error: Internal error processing updateSmbPassword`
`--password`	(Required) The password for the user account specified with the `--username` option..
	If you enter an incorrect password, you see the following error:
	`Error: Internal error processing updateSmbPassword`

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
root@system:/home/svtcli# svt-smb-password-change --newsmbpassword mynewpassword1 --username administrator --password
 somepassword1

This will change the password of the SMB cluster account. You must run this command on all the OVCs in the cluster
Proceed? (y/n): y
/var/tmp/build/cli/SvtKerbUtil.pm:144 INFO Removing 10 entries and writing new keytab /tmp/.krb5.keytab.178560
/var/tmp/build/cli/SvtKerbUtil.pm:147 INFO Moving /tmp/.krb5.keytab.178560 to /mnt/etc/krb5.keytab
/var/tmp/build/cli/SvtKerbUtil.pm:56 INFO Merged /tmp/.samba.keytab /mnt/etc/krb5.keytab to /mnt/etc/krb5.keytab
Change SMB cluster account password succeeded
```

Software upgrade commands

This section contains the following topics:

- **svt-software-commit**
- **svt-software-rollback**
- **svt-software-status-show**
- **svt-software-upgrade**

svt-software-commit

Confirms the installation of a previously installed upgrade package and permanently replaces the current version of the HPE OmniStack software with a later version.

You run this command only once on one HPE OmniStack host in a federation to commit the upgrade on all recently upgraded HPE OmniStack hosts.

Once committed, the upgrade cannot be rolled back to the previously-installed revision.

Syntax

```
svt-software-commit [common-options]
```

Options

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-software-commit

Upgrade task with id 72c508c0-b68f-4151-b407-2e1f2ccbb2dd has been started.
.............................................
Task Complete
```

svt-software-rollback

Reverts an HPE OmniStack host to the previously installed version of the HPE OmniStack software, if an upgrade is not yet committed.

NOTE:

This command should only be used under the guidance of **Customer Support (https://www.hpe.com/support/hpesc)**.

You can install software upgrades and leave them as uncommitted, until you are ready to commit to the new version, using `svt-software-upgrade`.

This command operates only on the HPE OmniStack host hosting the current login. You must run the command on each HPE OmniStack host in the federation.

Shutdown Upgrade Manager before running this command. If you do not, Upgrade Manager will incorrectly display the upgrade status as Ready to commit. For Upgrade Manager to display the correct upgrade status, you must restart it.

Syntax

```
svt-software-rollback [common-options]
```

Options

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-software-rollback


Upgrade task with id 72c508c0-b68f-4151-b407-2e1f2ccbb2dd has been started.
..............................................
Task Complete
```

svt-software-status-show

Displays the status of the HPE OmniStack software and current upgrade tasks for each HPE OmniStack host.

This command displays the following information:

Upgrade Status	HPE OmniStack details.
Datacenter	The datacenters or host groups in the federation.
Upgrade Status	The upgrade status of the datacenter or host group:

	Ready to commit	Ready to commit (or rollback).
	Failed, contact support	The datacenter or host group is in a state that cannot be upgraded, committed, or rolled-back. This state should rarely happen, contact **Customer Support (https://www.hpe.com/support/hpesc)**.
	Committed	The datacenter or host group is committed to the current software version. Commits occur at the federation level, so all datacenters or host groups in the federation should be in this state.
	Failed, restart upgrade. Contact Support if upgrade fails again	One or more HPE OmniStack hosts in the datacenter or host group failed the upgrade. The upgrade either rolled back-automatically or failed before a rollback was required. Attempt the upgrade, and, if it fails again, contact **Customer Support (https://www.hpe.com/support/hpesc)**.
	Mixed version, upgrade needed	None of the HPE OmniStack hosts in the datacenter or host group have an upgrade in progress, but the datacenter or host group has mixed versions of software on different HPE OmniStack hosts. An

upgrade is needed to make the datacenter or host group consistent. This state can occur when an HPE OmniStack host with a different software version is added to the datacenter or host group. An upgrade is required to ensure that all HPE OmniStack hosts are running the same version.

	Unknown	Contact **Customer Support (https://www.hpe.com/support/hpesc)**.

HPE OmniStack VC Name	The Virtual Controller that was the target for the upgrade.	
Version	The current version of the HPE OmniStack software.	
Can Rollback or Commit	The upgrade is in a pre-commit state where it can be rolled back or committed.	
State	One of the following values to describe the state of the upgrade:	
	Completed	The upgrade task completed successfully.
	Failed	The upgrade task failed, and an error code and message indicate the reason for the failure.
	In progress	The upgrade task is proceeding.
	No action needed	The upgrade is incomplete. For example, an HPE OmniStack host in the datacenter or host group may have failed to upgrade successfully, and the upgrade needs to be repeated, but this HPE OmniStack host is already at the correct version and does not need to be upgraded again.
	Unknown	It is not possible to determine the status of the previous upgrade task.
Current Feature Level	The current feature level of the software on the datacenter.	
Potential Feature Level	The potential feature level (after the upgrade is committed) of the software.	

You can install software upgrades and leave them as uncommitted, until you are ready to commit to the new version, using the `svt-software-upgrade` command.

This command operates only on the HPE OmniStack host hosting the current login. You must run the command on each HPE OmniStack host in the federation.

Upgrade status: task details

Datacenter	The datacenters or host groups in the federation.
Has Upgrade Task	There is an upgrade task on the system (Yes/No). The task can be running, completed, or failed. `No` means either that it is a freshly deployed system that never ran an upgrade or that the system ran an upgrade in the past for which this is no longer a record. Completed tasks are kept in the database for a limited period of time.
Type	The type of upgrade task, which can be one of the following task types:

- HPE OmniStack task type

      ```
      com.simplivity.task.upgrade.upgrade.everywhere
      com.simplivity.task.software.upgrade
      ```

HPE OmniStack VC   The Virtual Controller where the upgrade task is/was running. The task can be in progress or done.

Start Time   The time the task started.

End Time   The time the task finished.

State   The percent complete of the upgrade task.

If there are no previous upgrade tasks, the following error message appears:

```
ERROR [133]: No previous Upgrade task found.
```

Syntax

```
svt-software-status-show [common-options]
```

Options

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

The following example is missing serveral columns so that it can display properly on the page:

```
$ svt-software-status-show

.-------------------------------------------------------------
| Upgrade Status: OmniStack host details
+---------------+--------------------+-----------------------+
| Datacenter    | Upgrade Status     | OmniStack host VC Name |
+---------------+--------------------+-----------------------+
| Boston Mass... | Failed: Fix Needed...| OmniStack host VC 1.15 |
+---------------+--------------------+-----------------------+
| Cape Cod      | Committed          | simplivity.drc...     |
+---------------+--------------------+-----------------------+
| Denver_Colo... | Failed: Fix Needed...| OmniStack host VC 0... |

.----------------------------------
| Upgrade Status: Task details
+---------------+-----------------+
| Datacenter    | Has Upgrade Task |
+---------------+-----------------+
| Boston Mass... | Yes             |
| Cape Cod      | No              |
| Denver_Colo... |                 |
'---------------+-----------------+



+------------------------------------------------+
```

```
| Type                                          |
| com.simplivity.task.upgrade.upgrade.everywhere |
|                                               |
+-----------------------------------------------+


+-------------------+------------+----------+-------+
| OmniStack VC      |Start Time  | End Time | State |
| OmniStack VC 0.115 |           |          |       |
'-------------------+------------+----------+-------+
```

svt-software-upgrade

Upgrades HPE OmniStack software to a later version. You can upgrade an individual HPE OmniStack host or all HPE OmniStack hosts in a federation (the default).

NOTE:

You cannot be logged in as root. The upgrade fails if you attempt the procedure with root access.

After an upgrade is complete, the HPE OmniStack host starts to use the upgrade software immediately. However, you can revert the upgrade or make it permanent as follows:

Roll back
You can roll back the upgrade at any time before you commit it, using `svt-software-rollback`.

Commit
You must commit the upgrade to make it permanent, using `svt-software-commit`.

You cannot downgrade to a software version that predates the current version.

You must specify the `--noHA` option when upgrading a single HPE OmniStack host.

For Hyper-V:

When upgrading from a version of the HPE OmniStack software earlier than 4.0.0 to 4.0.0 or later, run the `ConfigureSmbGroups.ps1` script before you start the upgrade. This script creates required SMB security groups in the HPE SimpliVity Organizational Unit (OU). These security groups enable you to control acces to SMB file shares. For instructions about running this script, see the *HPE OmniStack for Hyper-V Upgrade Guide*.

Syntax

```
svt-software-upgrade --pkgpath path-to-software-package --noHA --omnicube [common-
options]
```

Options

Option	Description
`--noHA`	Overrides the requirement that virtual machines are Storage High Availability (HA) compliant before the upgrade starts. This might make your data unavailable for a short time following the upgrade, while the virtual machines synchronize. You must specify the `--noHa` option when upgrading a single HPE OmniStack host.

Option	Description
`--omnicube`	Upgrades only this individual HPE OmniStack host, not the entire datacenter. You must complete the upgrade on all individual HPE OmniStack hosts and then commit the upgrade for the federation.
`--pkgpath`	The absolute path to the location where the upgrade package is located. This option uses the datastore GUID, not the name of the datastore.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

The following example is missing several columns due to the width of the actual output:

```
$ svt-software-upgrade --pkgpath


/mnt/svtfs/0/<datastore_GUID>/.svtupgrade/SimpliVity-OmniCube-Software-2.2.0.3.tar
Upgrade task with id 1a22412f-87a5-48eb-a227-0534c3d32ed8 has been started.
................
Task Complete
```

Support commands

This section contains the following topics:

- **svt-support-agent-control**
- **svt-support-agent-test**
- **svt-support-capture**
- **svt-support-heartbeat-control**
- **svt-support-proxy-set**
- **svt-support-show**
- **svt-version-show**

svt-support-agent-control

Enables or disables the support agent.

By default, HPE OmniStack Customer Support automatically receives messages about significant events and system status in the federation as part of an effort to provide enhanced support. This information is collected by a support agent running on each HPE OmniStack host and by a heartbeat message that provides a once-a-day status of the HPE OmniStack host. For more information, see `svt-support-heartbeat-control`. The messages do not contain user data from your federation.

Disabling the support agent or the heartbeat prevents critical proactive monitoring data from reaching HPE OmniStack Customer Support. For more information, contact **Customer Support (https://www.hpe.com/support/hpesc)**.

Syntax

```
svt-support-agent-control --action enable|disable [common-options]
```

Options

Option	Description
`--action`	(Required) Used with either `enable` or `disable` to enable the support agent to start automatically or to stop the agent and disable it from starting automatically.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-support-agent-control --action disable
```

svt-support-agent-test

Use this command to test the connectivity of the HPE Remote Device Access (RDA) agent. You need the connection to ensure that the agent can securely connect machines and sensors to the cloud to automatically

monitor the health of the HPE OmniStack hosts through HPE InfoSight. If the connection fails, check port 443 to ensure it can communicate with your network and hosts in the federation. If this test continues to fail, contact **Customer Support (https://www.hpe.com/support/hpesc)**.

Syntax

```
svt-support-agent-test [common-options]
```

Options

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-support-agent-test
Success - Device is able to connect to HPE RDA
```

svt-support-capture

Creates a support capture.

⚠ **WARNING:**

Run this command under the guidance of your HPE OmniStack provider.

Support captures include diagnostic data (log files, core files, and system status) from the local HPE OmniStack host. The the diagnostic data does not include user data or account information.

`svt-support-capture` retains the last four capture attempts, and it automatically deletes older support captures.

When the command completes, it displays a message that includes the URL to the support capture. For example:

```
Browse to http://128.120.2.85/capture/Capture-10.129.1.95--2013-06-03_16-26-36-MN-
VC.tgz 445196448 bytes
```

For vSphere:

Use a brower to download the resulting support capture as a compressed file that you can send to your HPE OmniStack support provider to troubleshoot issues. To locate the support capture:

1. Browse to the capture URL for the IP address, such as `http://128.120.2.85/capture`.

2. Locate the support capture file by the timestamp that forms part of the name of the capture file. For example:

   – `CaptureOutput-2012-11-23_11-03-39-MN.tgz`—Manual support capture.
   – `CaptureOutput-2012-11-23_11-03-39-AT.tgz`—Automatic (system generated) support capture.

For vSphere, you can ignore certificate mismatch warnings in the command output. For example :

```
WARNING: cannot verify <IP>'s certificate, issued by `/O=VMware Installer':
```

For Hyper-V:

To generate support captures that include information for the SCVMM and the Hyper-V host bundles, perform the following procedure:

1. Log on to the Virtual Controller.

2. Copy the PowerShell script `/var/tmp/build/support/supportcapture.ps1` from the Virtual Controller to the SCVMM host.

3. Log on to the SCVMM host as an administrator.

4. Open a PowerShell session on the SCVMM host and run `supportcapture.ps1`. Do not start PowerShell from the SCVMM Ribbon because it does not have the appropriate permissions to execute the script.

   For example:

   ```
   .\supportcapture.ps1
   ```

Syntax

```
svt-support-capture --outdir output-directory --ziptype compression-type --vc | --
hms --balancing --nohost --pushsc [common-options]
```

Options

Option	Default	Environment variable	Description
`--outdir`	`/var/capture`	`SVTCLIOUTDIR`	A link is created in the web server to the default output directory. Changing the output directory to a smaller partition is not recommended. The default output directory is accessible from the embedded Web server for the Virtual Controller, as follows: `http:/IP/capture/CaptureOutput-timestamp`
`--ziptype`	**gz**	`SVTCLIZIPTYPE`	The compression type. It can be `gz` (default) or `bz2`.
`--vc`		`SVTCL_VC`	**vSphere only** If specified, retrieves the vCenter Server support bundle, but does not include the ESXi bundle for the host. A valid vCenter Server session is required. When specified, you see the message `Generating system log bundles.`
`--hms`		`SVTCL_HMS`	If specified, retrieves the Hypervisor Management System (HMS) support bundle. It does not retrieve the HPE OmniStack host support bundle. Not implemented in this release. For more information about generating a host bundle, see **Generate SCVMM and Hyper-V host suppport captures**.

Option	Default	Environment variable	Description
--balancing		SVTCL_BALANCING	If specified, collects extra hive, policy, and backup information for manual capacity balancing considerations.
--nohost			**For vSphere:** If specified, allows the user to skip the ESXi bundle for the host being captured. A valid vCenter Server session is required to retrieve the host bundle. **For Hyper-V:** (Required) The hypervisor host bundle is not collected. For more information about generating a host bundle, see **Generate SCVMM and Hyper-V host suppport captures**.
--promdb			(Optional) Collects the Prometheus time series database using a snapshot.
--pushsc			If specified, the Virtual Controller attempts to upload the support capture to **Customer Support (https://www.hpe.com/support/hpesc)**.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Generate SCVMM and Hyper-V host suppport captures

To generate support captures that include information for the SCVMM and the Hyper-V host bundles, perform the following procedure:

1. Log on to the Virtual Controller.

2. Copy the PowerShell script /var/tmp/build/support/supportcapture.ps1 from the Virtual Controller to the SCVMM host.

3. Log on to the SCVMM host as an administrator.

4. Open a PowerShell session on the SCVMM host and run supportcapture.ps1. Do not start PowerShell from the SCVMM Ribbon because it does not have the appropriate permissions to execute the script.

   For example:

   ```
   .\supportcapture.ps1
   ```

Example

```
~$ svt-support-capture --ziptype bz2 --vc
....................
Generating vCenter support bundles - this will take a few minutes.
running...
running... running... running... running... running...
running... running... running... running... running...
```

```
running... running...
Final vCenter support bundle status: Success
Compressing capture data. This may take a few moments...
Capture file can be downloaded from Virtual Controller web server.
Browse to http://10.129.1.95/capture/Capture-10.129.1.95--2013-06-05_15-49-51-MN-
VC.tar.bz2 404369427 bytes
```

svt-support-heartbeat-control

Enables or disables the Phone Home heartbeat. The heartbeat is enabled by default to send once-a-day status messages automatically to HPE SimpliVity **Customer Support (https://www.hpe.com/support/hpesc)**.

By default, HPE SimpliVity customer support automatically receives messages about significant events and system status in your federation as part of the effort to provide you with enhanced support. This information is collected by the support agent running on each HPE OmniStack host (`svt-support-agent-control`) and by a heartbeat message that provides a once-a-day status of the HPE OmniStack host. The messages do not contain user data from your federation.

NOTE:

Disabling either the support agent or the heartbeat prevents critical proactive monitoring data from reaching customer support. For more information, contact **Customer Support (https://www.hpe.com/support/hpesc)**.

Each HPE OmniStack host selects a random time between 1 AM and 6 AM, local time, for the system summary collection.

Use `svt-support-show` to displays the current state of the heartbeat.

Syntax

```
svt-support-heartbeat-control --datacenter datacenter --cluster cluster --
action enable|disable [common-options]
```

Options

Option	Description
`--datacenter`	(Required) The datacenter for this configuration.
`--cluster`	(Required) The cluster for this configuration.
`--action`	(Required) Used with either `enable` or `disable` to enable the heartbeat to start automatically or to stop the agent and disable it from starting automatically.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-support-heartbeat-control --datacenter LondonDR --cluster London_Cluster --
action enable

$ svt-support-show
.----------------------------------------------------------------.
```

```
| PhoneHome Configuration                                         |
+--------------------+--------------------------------------------+
| Attribute          | Value                                      |
+--------------------+--------------------------------------------+
| Datacenter:        | LondonDR                                   |
| Cluster:           | London_Cluster                             |
| Enable:            | True                                       |
| Enable Time:       |                                            |
| Mail Server:       | mail01.lab.example.com                     |
| From address:      | IT-LND@example.net                         |
| Mail Username:     | jsmyth                                     |
| Mail Password:     | Is Set                                     |
| SSL/TLS:           | Enabled                                    |
| Heartbeat:         | Enabled                                    |
| Support Agent:     | Enabled                                    |
| Support Packs      | Enabled                                    |
| LastMsgSentStatus: | Success                                    |
'--------------------+--------------------------------------------'
```

svt-support-proxy-set

Use this command when you must use a proxy to connect to the HPE Midway server. A proxy change is applied to all HPE OmniStack hosts in the cluster.

For more details on using these commands, see the HPE knowledge base article **"Troubleshooting HPE InfoSight Connectivity Issues**." For more information on HPE InfoSight, contact **Customer Support (https://www.hpe.com/support/hpesc)**

For vSphere:

You set up a proxy server using the HPE SimpliVity Plug-in for vSphere Client or by using the `svt-support-proxy-set` command. To test HPE InfoSight connectivity, use the *svt-support-agent-test* command.

For Hyper-V:

You set up a proxy server using the HPE OmniStack Add-in for Hyper-V or by using the `svt-support-proxy-set` command. To test HPE InfoSight connectivity, use the *svt-support-agent-test* command. .

Syntax

```
svt-support-proxy-set --proxy "proxywebaddress"  [common-options]
```

Options

Option	Description
`--proxy`	Required. The proxy server web address (up to 50 characters). You must include quotes around the proxy server web address.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-support-proxy-set --proxy "http://web-proxy.in.hpecorp.net:8080"

Task complete.
```

svt-support-show

Displays the current Support agent configuration for the host, including the mail server name or IP address, whether a mail user name and password is set, if the heartbeat and support agent are enabled, and the Support agent type (Axeda or HPE Remote Device Access [RDA]). Axeda or HPE RDA work as an agent to securely connect machines and sensors to the cloud for managing connected products and machines and implementing applications. Either agent works with HPE InfoSight to automatically monitor the health of the HPE OmniStack hosts. For more details on HPE InfoSight, see the *HPE OmniStack Administration Guide.*

Messages include the event that resulted in a notification email message or the most recent test message. See `svt-support-test` and `svt-support-configure`.

NOTE:

If you need to change the agent that HPE InfoSight uses, contact **Customer Support (https://www.hpe.com/support/hpesc)**.

Syntax

```
svt-support-show --datacenter datacenter --cluster cluster[common-options]
```

Options

Option	Description
--datacenter	(Optional) The datacenter or host group this support configuration change applies to.
--cluster	(Optional) The cluster this support configuration change applies to.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-support-show


----------------------------------------------------------------.
| Phone Home Configuration                                       |
+----------------------+-----------------------------------------+
| Attribute            | Value                                   |
+----------------------+-----------------------------------------+
| Datacenter:          | Boston                                  |
| Cluster:             | Boston_Cluster                          |
| Enable:              | True                                    |
| Enable Time:         |                                         |
| Mail Server:         | mailserver@Lab.com                      |
| From address:        | Support@Lab.com                         |
```

```
| Mail Username:         | Support                               |
| Mail Password:         | Is Set                                |
| SSL/TLS:               | Disabled                              |
| Heartbeat:             | Enabled                               |
| Support Agent Status:  | Enabled                               |
| Support Agent Type:    | HPE RDA                               |
| Support Packs:         | Disabled                              |
| LastMsgSentStatus:     | None Sent                             |
'-----------------------+---------------------------------------'
```

svt-version-show

Displays information about the installed HPE OmniStack software version.

Syntax

```
svt-version-show [--all | --long] [common-options]
```

Options

Option	Description
--all	Includes the versions of all the software components that are currently running.
--long	Includes detailed information about all of the software components that are currently running.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-version-show

svtfs Version: origin/master 3.6.1.333 (release)

$ svt-version-show --all

svtfs Version: origin/master 3.6.1.333 (release)
eventmgr: origin/Version-Alignment-32 9.5.0
finddeployable: origin/master 8.26.2
hyperproxy: origin/Version-Alignment-32 11.18.0
jauth-test-client: origin/Version-Alignment-32 11.1.0
jauth: origin/Version-Alignment-32 11.1.0
jpal: origin/Version-Alignment-32 3.1.0
orchestrator: origin/master 8.26.2
resourcebalancer-launcher: origin/Version-Alignment-32 9.16.0
utils: origin/Version-Alignment-32 8.2.0
VasaProviderHelper: origin/master 2.5.2
api: origin/master 10.13.21
vasaService: origin/master 2.5.2
```

```
healthcheck : origin/Version-Alignment-32 9.9.0


$ svt-version-show --long


svtfs Version    : origin/master 3.6.1.333 (release)
feature.version : 902
build.timestamp : 2016-11-14T17:19:05-0500
git.branch      : origin/master
git.commit      : 034c3d041bbc78eac258c3d1cff189a2857c90fd
platform        : "Simplivity Virtual Controller 3.6.1.333"
hardware:
  Package_rev:        3.5.1.3
  FW_rev:             8.3.10
  FPGA_rev:           8.149.227
  CPLD_rev:           12

eventmgr        : origin/Version-Alignment-32 9.5.0
feature.version : N/A
build.timestamp : 2016-11-12_07:52:56
git.branch      : origin/Version-Alignment-32
git.commit      : c05b24c2c66148b4efd5e375225a7ae891415409


finddeployable  : origin/master 8.26.2
feature.version : N/A
build.timestamp : 2016-11-14_10:06:04
git.branch      : origin/master
git.commit      : 830383d427759a1ae81b972dd7c64dd87cb0b5a6


hyperproxy      : origin/Version-Alignment-32 11.18.0
feature.version : N/A
build.timestamp : 2016-11-12_07:51:50
git.branch      : origin/Version-Alignment-32
git.commit      : c823f6381589f658f221251b485fc8e53df555dl


jauth-test-client : origin/Version-Alignment-32 11.1.0
feature.version : N/A
build.timestamp : 2016-11-12_06:58:45
git.branch      : origin/Version-Alignment-32
git.commit      : ab36bff737388eb2bf9c45faaf3a294acd070f04


jauth           : origin/Version-Alignment-32 11.1.0
feature.version : N/A
build.timestamp : 2016-11-12_06:58:45
git.branch      : origin/Version-Alignment-32
git.commit      : ab36bff737388eb2bf9c45faaf3a294acd070f04


jpal            : origin/Version-Alignment-32 3.1.0
feature.version : N/A
build.timestamp : 2016-11-12_07:52:56
git.branch      : origin/Version-Alignment-32
git.commit      : 42c60a697a6bfc38c653b32a8859ac54ca6a927l


orchestrator    : origin/master 8.26.2
feature.version : N/A
build.timestamp : 2016-11-14_10:06:04
git.branch      : origin/master
```

```
git.commit          : 830383d427759a1ae81b972dd7c64dd87cb0b5a2


resourcebalancer-launcher : origin/Version-Alignment-32 9.16.0
feature.version : N/A
build.timestamp : 2016-11-12_07:52:56
git.branch          : origin/Version-Alignment-32
git.commit          : b1714839667e4ddf2bc7a9fb8e0f0f2c11f95e8t


utils               : origin/Version-Alignment-32 8.2.0
feature.version : N/A
build.timestamp : 2016-11-12_04:41:49
git.branch          : origin/Version-Alignment-32
git.commit          : cc0ece2b6c334969421a3c0cb1e506c3be32f5eb


VasaProviderHelper : origin/master 2.5.2
feature.version : N/A
build.timestamp : 2016-11-14_12:01:03
git.branch          : origin/master
git.commit          : dc5dad8349761f6fa9f76aa3df21346d1fb2d028


api                 : origin/master 10.13.21
feature.version : N/A
build.timestamp : 2016-11-14_04:51:23
git.branch          : origin/master
git.commit          : 5c03c29d57e01b127d0e097a1089b376da1be460


vasaService         : origin/master 2.5.2
feature.version : N/A
build.timestamp : 2016-11-14_12:01:03
git.branch          : origin/master
git.commit          : dc5dad8349761f6fa9f76aa3df21346d1fb2d021


healthcheck         : origin/Version-Alignment-32 9.9.0
feature.version : N/A
build.timestamp : 2016-11-12_18:59:19
git.branch          : origin/Version-Alignment-32
git.commit          : 062858444ce0c12d4ff9be28c8ca81165db8028i
```

Time zone commands

This section contains the following topics:

- **svt-timezones-list**
- **svt-timezone-show**
- **svt-timezone-set**

svt-timezones-list

Lists the time zone identifiers supported by HPE OmniStack hosts for the federation.

Use `svt-timezone-show` to display the current time zone. Use `svt-timezone-set` to change the time zone.

Syntax

```
svt-timezones-list [common-options]
```

Options

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-timezones-list | more
Africa/Abidjan
Africa/Accra
Africa/Addis_Ababa
Africa/Algiers
....
```

svt-timezone-show

Displays the time zone configured for backups taken in a federation.

Use `svt-timezone-set` to configure the time zone. Use `svt-timezones-list` to list the time zone region/locale values supported by HPE OmniStack hosts.

Syntax

```
svt-timezone-show --datacenter datacenter_name --cluster cluster [common-options]
```

Options

Option	Description
`--datacenter`	The datacenter or host group for which you require the time zone setting.
	This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.

Option	Description
--cluster	The name of the cluster. The default is *local*. You are only required to specify the --datacenter option if you specify a non-unique cluster name.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-timezone-show
 The Time Zone for datacenter <local> is "America/New_York"

$ svt-timezone-show --datacenter DNMRK22
The Time Zone for datacenter DNMRK22 is "Europe/Copenhagen"
```

svt-timezone-set

Sets the time zone used for backups for all HPE OmniStack hosts in a federation.

Use svt-timezone-show to display the current time zone for the cluster and datacenter or host group. Use svt-timezones-list to list the time zone region/locale values supported by HPE OmniStack hosts.

Syntax

```
svt-timezone-set --timezone region/locale --datacenter datacenter --cluster cluster
 [common-options]
```

Options

Option	Description
--timezone	(Required) The time zone region/locale for the federation. For example: America/New_York
--datacenter	The datacenter or host group on which to set the time zone. All HPE OmniStack hosts in the datacenter or host group use the same time zone. This parameter is only required if the specified --cluster is insufficient to identify a unique cluster.
--cluster	The cluster on which to set the time zone. All HPE OmniStack hosts in the cluster use the same time zone. You are only required to specify the --datacenter option if you specify a non-unique cluster name.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Examples

```
$ svt-timezone-set --timezone America/Pacific
ERROR [169]: The specified time zone was not defined. You can execute 'svt-
timezones-list'
for list of valid time zone names.


$ svt-timezone-set --timezone America/Phoenix
..
Task Complete
```

Virtual machine commands

This section contains the following topics:

- **svt-vm-backup**
- **svt-vm-backup-params-set (vSphere only)**
- **svt-vm-backup-params-show (vSphere only)**
- **svt-vm-clone**
- **svt-vm-move**
- **svt-vm-policy-set**
- **svt-vm-restore**
- **svt-vm-show**

svt-vm-backup

Creates a manual backup of a virtual machine at the current time. A backup saves the state of the virtual machine at the time you create the backup.

You can delete a backup of a virtual machine manually or specify a retention time when the manual backup is deleted automatically. The retention period starts from the date and time of the backup creation. The maximum retention period is 20 years.

By default, the command creates a unique name for the backup by appending a timestamp to the virtual machine name. You can override the default by specifying a unique name for the backup. You can also rename a backup at any time using `svt-backup-rename`.

You can restore the virtual machine from the backup or create a new virtual machine that has the same point-in-time data as the source virtual machine (at the time you created the backup).

To back up virtual machines using a regular schedule for disaster protection, use a backup policy.

For vSphere:

An option is available to include a VMware application consistent snapshot in the backup. This type of backup brings guest virtual machine applications to a consistent state before taking a backup. Using application consistency increases the time required to complete a backup, and you should not use it for guest virtual machines with high I/O.

You cannot use this command to manually create a local backup of a single-replica virtual machine.

Syntax

```
svt-vm-backup --datastore datastore-name --vm vm-name --name backup-
name --appconsistent --datacenter datacenter --cluster cluster --
destination datacenter_name --retention [unit] --vss [common-options]
```

Options

Option	Description
`--datastore`	(Required) The name or GUID of the datastore that contains the virtual machine.
`--vm`	**For vSphere:** (Required) The name or GUID of the virtual machine. **For Hyper-V:** Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.
`--name`	An optional name for the new backup. The default name appends a timestamp to the virtual machine name to ensure unique backup names.
`--appconsistent`	**vSphere only** Creates a VMware application consistent backup.
`--datacenter`	The destination datacenter or host group containing the cluster where the backup is stored. **For vSphere:** For full protection against loss of a single site, store a backup in a remote datacenter. This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.
`--cluster`	The destination cluster where the backup is stored. If you use the default (*local*), the backups are stored in the same cluster as the virtual machine. For full protection against loss of a single site, store a backup in a remote cluster. You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.
`--destination`	The datacenter or host group in which to store the backups. **For vSphere:** If you specify the default (`local`), the backups are contained in the same datacenter as the virtual machine. For full protection against loss of a single site, store a backup in a remote datacenter. **For Hyper-V:** If you specify the default (`local`), the backups are stored in the same host group as the virtual machine. **NOTE:** This option is being maintained only for the backward-compatibility of scripts.
`--external-store`	The name of an external store associated with the cluster where the virtual machine resides.

Option	Description
--retention	(Required) The retention time for backups before they are deleted automatically. The time is a positive integer followed by the unit (Mins, H, D, W, MO, or Y). You can combine the time units in a string surrounded by quotes, for example, "1w 2d".
--vss	**vSphere only** Take an application consistent backup that is Application Aware with Microsoft VSS. Mutually exclusive to the **--appconsistent** backup option.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-vm-backup --vm user3 --datastore ds2 --name backup3-12 --retention 2d


......................................................................
......................................................................
...............................................
Task Complete
```

svt-vm-backup-params-set (vSphere only)

Sets the backup parameters on a Windows virtual machine to either enable or disable Volume Shadow Copy Service (VSS)-based backups.

Syntax

```
svt-vm-backup-params-set --datastore  datastore_name  --vm  vm_name    --
guestusername guest_username --guestpassword guest_password --overide [common-
options]
```

Options

Option	Description
--datastore	(Required) The name or GUID of the datastore that contains the virtual machine.
--vm	(Required) The name or GUID of the virtual machine.
--guestusername	(Required when enabling VSS) The username to authenticate with the guest virtual machine. The user must have administrator-level privileges.
--guestpassword	(Required when enabling VSS) The password to authenticate with the guest virtual machine.

Option	Description
`--override`	Override guest validation in situations where you want to enable VSS backups and set guest credentials, but the virtual machine is powered off. The credentials will not be authenticated until the virtual machine is powered on and an application consistent backup is attempted.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-vm-backup-param-set --datastore ds2 --vm abr2012r2dev --enable-vss --
guestusername JSmyth --guestpassword Welcome!23


.................................................................................
.................................................................................
...............................................
Task Complete
```

svt-vm-backup-params-show (vSphere only)

Shows if Volume Shadow Copy Service (VSS)-based backups are enabled or disabled on a virtual machine.

This command shows the following information:

Application Aware Status	Indicates if the virtual machine is ready to take an Application Aware backup with Microsoft VSS.
	• **Unknown** — The state of the virtual machine with respect to readiness for an application aware snapshot is not known.
	• **Capable** — The virtual machine is ready and can take application aware snapshots.
	• **Invalid Credentials** — A valid set of credentials for the virtual machine is not available, which prevents application aware snapshots of this virtual machine.
	• **General Fault** — The last Application Aware backup with Microsoft VSS backup failed.
	• **VMware Tools Unavailable** — VMWare Tools are not installed, not running, or are out of date. This prevents you from obtaining Application-Aware backups using Microsoft VSS.
	• **Invalid OS** — The operating system on the guest virtual machine is not a Windows operating system. This prevents you from obtaining Application-Aware backups using Microsoft VSS.
	• **Valid Credentials** — The most recent operation to set the guest virtual machine credentials was successful.

Syntax

```
svt-vm-backup-params-show --datastore datastore_name --vm vm_name [common-options]
```

Options

Option	Description
`--datastore`	(Required) The name or GUID of the datastore that contains the virtual machine.
`--vm`	(Required) The name or GUID of the virtual machine.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-vm-backup-params-show --datastore ds2 --vm nkeDev


.--------------------------------------------------------------.
| Parameters for Virtual Machine                               |
+-----------+--------------------------+-------------------------+
| Datastore | VM                       | Application Aware Status |
+-----------+--------------------------+-------------------------+
| ds1       | Win2012R2_Sql2014R2_hmdb | Capable                 |
'-----------+--------------------------+-------------------------'
```

svt-vm-clone

Creates a new virtual machine that contains the same contents as an existing virtual machine.

The new virtual machine has a different name, but resides in the same datastore as the original virtual machine. Characteristics of the cloned virtual machine are as follows:

Clone name	By default, this command appends the string `-clone-<timestamp>` to the original virtual machine name. You can override this default by specifying the `--name` option.
Power status	The clone is powered off. Make sure that you have sufficient CPU and memory resources before powering on the virtual machine.
Backup	You can back up a cloned virtual machine using a policy (`svt-policy-create`) or a manual backup (`svt-vm-backup`).

NOTE:

Serial clone and backup operations can cause long object names. Use the appropriate renaming option to shorten the name.

Syntax

```
svt-vm-clone --appconsistent --datastore datastore_name --name new_name --
vm vm_name --vss [common-options]
```

Options

Option	Description
`--appconsistent`	**vSphere only** (Optional) The resulting clone is created from an application consistent snapshot of the source virtual machine and is application consistent when powered on.
`--datastore`	(Required) The name or GUID of the datastore containing the virtual machine that you want to clone.
`--name`	The name of the cloned (new) virtual machine. If not specified, a name is assigned to the clone in the format `<vm-name>-clone-<date>-<time>`.
`--vm`	The name or GUID of the virtual machine to clone. **For Hyper-V:** Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.
`--vss`	Take an application consistent backup that is Application Aware with Microsoft VSS.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-vm-clone --vm lab29 --datastore ds4
...............
Task Complete
```

svt-vm-move

Relocates a virtual machine to a different federation datastore.

For vSphere, the datastore can be in the same datacenter or a different datacenter. For Hyper-V, the datastore must be in the same host group.

Considerations when moving virtual machines:

- You must shut down the guest operating system and power off the virtual machine before you move it. Otherwise, the operation fails.

- After moving a virtual machine, set the boot sequence for the virtual machine so that it powers on after the Virtual Controller during startup and shuts down before the Virtual Controller during shutdown.

- Any pre-move backups are associated with the virtual machine after the move to a different datacenter, cluster or datastore. You can recover the virtual machine from these backups using `svt-backup-restore`.

- By default, the command uses the original virtual machine name as the name for the moved virtual machine. You can override the default by specifying a unique name for the moved virtual machine.

- HPE OmniStack does not support running multiple concurrent Move VM commands against the same virtual machine. You must wait for one virtual machine move operation to complete before initiating another one.

For vSphere:

NOTE:

You cannot move virtual machines between datacenters or datastores contained by HPE OmniStack hosts in a different vCenter Server (even if you use Linked Mode and the vCenter Servers are in the same federation). If you need to do this, use the - **Move Virtual Machine** option in vSphere Web Client. Do not use `svt-vm-move`.

You can move a virtual machine to and from a remote datacenter/cluster.

You can use this command to move a virtual machine from a single-replica datastore to a dual-replica datastore. When this is done, a single-replica virtual machine becomes a dual-replica virtual machine, and its high availability (HA) status changes from `N/A` to `Yes` once the secondary replica is in sync. You cannot move a virtual machine from a dual-replica datastore to a single-replica datastore.

Syntax

```
svt-vm-move --source datastore --vm vm --datacenter datacenter_name --
cluster cluster --destination datastore --name vm-name [common-options]
```

Options

Option	Description
--source	(Required) The name of the datastore containing the original virtual machine (the source of the move operation).
--vm	(Required) The name or GUID of the original virtual machine that you want to move. **For Hyper-V:** Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.
--datacenter	The name of the datacenter or host group containing the destination datastore. The default is the datacenter or host group containing the virtual machine.
--cluster	The name of the cluster that contains the destination datastore.
--destination	(Required) The name of a destination datastore that will contain the relocated virtual machine.
--name	The name for the relocated virtual machine. The default is the original virtual machine name.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Examples

```
# svt-vm-move --source ds1 --vm tinyvm32_1 --cluster cluster2 --destination ds3
Upon completion, the VM will remain powered off in the new location.
Proceed? (y/n): y
..ERROR [130]: The VM power state is not acceptable.

# svt-vm-move --source ds1 --vm tinyvm32_1 --cluster cluster2 --destination ds3
Upon completion, the VM will remain powered off in the new location.
Proceed? (y/n): y
.............................................................................
Task Complete

# svt-vm-move --source ds3 --vm tinyvm32_1 --cluster cluster0 --destination ds1
Upon completion, the VM will remain powered off in the new location.
Proceed? (y/n): y
.............................................................................
Task Complete
```

Examples

This example shows how to move a single-replica virtual machine from a single-replica datastore to a dual-replica datastore:

```
# svt-vm-move --source single_replica_ds --vm VM0 --cluster cluster1 --destination
 dual_replica_ds --name protectedVM

Upon completion, the virtual machine will remain powered off in the new location.
Proceed? (y/n): y
..................
Task Complete
```

You cannot move a virtual machine from a dual-replica datastore to a single-replica datastore.

svt-vm-policy-set

Sets the backup policy for a virtual machine.

A backup policy enables you to schedule virtual machine backup operations and control the frequency and number of backups retained. You can also create a manual backup at any time, using `svt-vm-backup`. By default, each virtual machine inherits the backup policy assigned to the datastore in which the virtual machine resides. If you change the backup policy for a virtual machine to a different policy from the datastore default, any changes to the datastore default policy are ignored by the virtual machine. Use `svt-vm-policy-set` to change the backup policy for a virtual machine. To create a backup policy, use `svt-policy-create`. To create virtual machine backups, add one or more rules to a backup policy, using `svt-policy-rule-create`.

You can assign only one backup policy to a virtual machine. However, a backup policy can contain an unlimited number of rules.

If you modify backup policy rules, all virtual machine backups created under the previous policy rule continue to exist and consume storage space. These backups are deleted automatically according to the retention rules of the previous policy. To remove them sooner, you must delete the backups manually at an appropriate time.

To delete many backups, use `svt-backup-delete`. To retain the backups, use `svt-backup-retention-set --forever`.

Syntax

```
svt-vm-policy-set --datastore datastore_name --vm vm_name --policy policy_name
 [common-options]
```

Options

Option	Description
--datastore	(Required) The name of the datastore that contains the virtual machine.
--policy	(Required) The name of the backup policy.
--vm	(Required) The name or GUID of the virtual machine. **For Hyper-V:** Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-vm-policy-set --vm user23 --datastore ds4 --policy daily
................
Task Complete
```

svt-vm-restore

Restores a virtual machine from a backup. The backup still exists after the restore operation.

`svt-vm-restore` replaces the contents of the virtual machine with the contents that existed at the time at which the backup was created. If the restored virtual machine was powered on at the time of the restore operation, it is powered off during the operation and remains powered off when the operation is complete.

If you rename a virtual machine, and attempt to restore it using a backup that was created with the old virtual machine name, then the newly restored virtual machine has the old name.

NOTE:

Restoring a virtual machine deletes any data changes that have occurred since you created the backup. Use `svt-backup-restore` to restore a virtual machine without deleting the original virtual machine.

Syntax

```
svt-vm-restore --vm vm-name --datastore datastore-name --backup backup-name --
emergency [common-options]
```

Options

Option	Description
`--backup`	(Required) The name of the backup. If the name includes spaces, surround all the text with quotes.
`--datastore`	(Required) The name of the datastore that contains the virtual machine.
`--vm`	(Required) The name or GUID of the virtual machine. **For Hyper-V:** Multiple virtual machines with the same name can exist in the same datastore. For best results, use the GUID as the value for this option, not the name. If you use the name, there is no guarantee that this command will affect the correct virtual machine.
`--emergency`	**vSphere only** Restores a virtual machine from a backup when the Hypervisor Management System (HMS) is down. A CLI account (`svtcli`) password is required to run this command.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

```
$ svt-vm-restore --vm TiCore4.5.4 --datastore LTN-1 --backup '2013-Nov-11 19:59:00
 EST'
This action will replace the data on your VM.
If the VM is currently powered on, it will be powered off.
Proceed? (y/n): y
...................
Task Complete
```

svt-vm-show

Displays information about virtual machines in a federation datastore. You can also display deleted and removed virtual machines for which there are existing backups.

Syntax

```
svt-vm-show --datacenter datacenter_name --cluster cluster --datastore datastore-
name --all --deleted --ignoredbybalancer --removed --single-replica --violations --
zone zone --emergency [common-options]
```

Options

Option	Description
`--datacenter`	The name of the datacenter or host group for which virtual machines are displayed. If not specified, this command lists all virtual machines in all datacenters or host groups.

Option	Description
`--cluster`	The name of the cluster for which virtual machines are displayed. If not specified, this command lists all virtual machines in all clusters.
`--datastore`	The name of the datastore for which virtual machines are displayed. If not specified, this command lists all virtual machines in all datastores.
`--all`	Shows active, deleted, and removed virtual machines.
`--deleted`	**For vSphere:** Shows only virtual machines that you deleted with the VMware Delete from Disk option. (You deleted the virtual machine from disk, but at least one HPE OmniStack virtual machine backup persists.) You can restore the deleted virtual machine from any persisting backup. **For Hyper-V:** Shows only virtual machines that you deleted with the SCVMM Delete option. (You deleted the virtual machine from disk, but at least one HPE OmniStack virtual machine backup persists.) You can restore the deleted virtual machine from any persisting HPE OmniStack backup.
`--ignoredbybalancer`	**vSphere only** Shows all virtual machines with the `ignoredbybalancer` field set. These virtual machines are not available for automatic resource balancing applications
`--removed`	**For vSphere:** Shows only virtual machines that you removed from the vSphere inventory with the VMware Remove from Inventory option. You can browse to the datastore, right click on the `.vmx` file, and then use the VMware Add to Inventory option to restore the virtual machine. You can also restore the removed virtual machine from a HPE OmniStack backup if you retained at least one HPE OmniStack virtual machine backup. **For Hyper-V:** Shows virtual machines or files that are not registered with Hyper-V. The expected result of using this option is to receive no results. If the option returns results, use the `SCVMM Refresh` option to resynchronize the data. If refreshing the data does not resolve this issue, restore virtual machines from any persisting HPE OmniStack backup.
`--single-replica`	Shows only the single-replica virtual machines, stored in single-replica datastores, if any.
`--violations`	Shows only virtual machines with policy violations (Storage HA, Zoning Compliance, and Witness Compliance violations). If there are no policy violations, there is no reponse.
`--zone`	Shows only virtual machines in the specified zone. If the specified zone is invalid or unknown, or if the HPE OmniStack host is a non-leader HPE OmniStack host, an error message is provided.

Option	Description
`--emergency`	**vSphere only** Displays information about virtual machines in a federation datastore when the Hypervisor Management System (HMS) is down. You can also display deleted and removed virtual machines for which there are existing backups. A CLI account (`svtcli`) password is required to run this command.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

This command shows the following information:

Zoning	Indicates whether the virtual machine is zone compliant. This applies only to HPE OmniStack hosts in an Availability Zone configuration.

- **Compliant** — This virtual machine is compliant with the current availability zone policy. (That is, this virtual machine can survive an availability zone failure, provided it is highly available.)

- **Non-Compliant** — This virtual machine is not compliant with the current availability zone policy. (That is, this virtual machine cannot survive an availability zone failure.)

- **Non-Compliant Witness** — This virtual machine is not compliant with the current availability zone policy. (That is, this virtual machine cannot survive an availability zone failure.) This should only be a temporary state. If it continues, then you should contact Support.

- **Not Applicable** — This virtual machine is not deployed in a stretched cluster.

- **Healing** — This virtual machine is currently out of zone compliance. However, there is a replica migration in progress to make this virtual machine zone compliant.

Examples

In the following examples, virtual machine names are truncated:

```
# svt-vm-show
.------------------------------------------------------------------
| Virtual Machines
+--------------+----------+----------+----------------+---------+
| Datacenter   | Cluster  | Datastore | Virtual Machine | Policy  |
+--------------+----------+----------+----------------+---------+
| NY_OC_CN2000 | cluster0 | ds1      | tinyvm32_0      | Policy0 |
|              |          |          | tinyvm32_1      | Policy0 |
|              |          |          | tinyvm32_4      | Policy0 |
+--------------+----------+----------+----------------+---------+
| NY_OC_CN2000 | cluster1 | ds2      | tinyvm32_2      | Policy1 |
+--------------+----------+----------+----------------+---------+
| NY_OC_CN2000 | cluster2 | ds3      | tinyvm32_3      | Policy2 |
'--------------+----------+----------+----------------+---------+
```

```
              ------------------------------.
                                            |
              -----------+------------------+
               Storage HA | Created At       |
              -----------+------------------+
                Yes        | 2017-Jan-23 16:38 |
                Yes        | 2017-Jan-27 20:20 |
                Yes        | 2017-Jan-27 18:25 |
              -----------+------------------+
                No         | 2017-Jan-23 16:38 |
              -----------+------------------+
                No         | 2017-Jan-23 16:38 |
              -----------+------------------'
```

```
# svt-vm-show --cluster cluster0
.-------------------------------------------------------------------
| Virtual Machines
+-------------+---------+----------+----------------+---------+
| Datacenter  | Cluster | Datastore | Virtual Machine | Policy  |
+-------------+---------+----------+----------------+---------+
| NY_OC_CN2000 | cluster0 | ds1       | tinyvm32_0      | Policy0 |
|             |         |           | tinyvm32_1      | Policy0 |
|             |         |           | tinyvm32_4      | Policy0 |
'-------------+---------+----------+----------------+---------+
```

```
              ------------------------------.
                                            |
              -----------+------------------+
               Storage HA | Created At       |
              -----------+------------------+
                Yes        | 2017-Jan-23 16:38 |
                Yes        | 2017-Jan-27 20:20 |
                Yes        | 2017-Jan-27 18:25 |
              -----------+------------------'
```

In the following example, the Zoning status for virtual machine `vm0` illustrates that the two witness nodes are both located in the same zone, and, therefore, are not compliant.

```
# svt-vm-show
.---------------------------------------------------------------------------
| Virtual Machines
+------------+---------+----------+----------------+--------+-----------+
| Datacenter | Cluster | Datastore | Virtual Machine | Policy | Storage HA |
+------------+---------+----------+----------------+--------+-----------+
| Datacenter1 | Cluster1 | ds1       | vm0             | none   | Yes        |
'------------+---------+----------+----------------+--------+-----------+
   +----------------------+------------------+
   | Zoning               | Created At        |
   +----------------------+------------------+
   | Non-Compliant Witness | 2019-Jun-12 11:30 |
   ----------------------+------------------'
```

Examples

This example displays `N/A` for `Storage HA` for single-replica virtual machines.

```
# svt-vm-show
```

```
.-------------------------------------------------------------------------------
+----------------+----------------+------------------+------------------+
| Datacenter     | Cluster        | Datastore        | Virtual Machine  |
+----------------+----------------+------------------+------------------+
| DC1            | cluster1       | ds1              | VM1              |
'----------------+----------------+------------------+------------------+
   +----------+-----------+--------------+------------------+
   | Policy   | Storage HA | Zoning      | Created At       |
   +----------+-----------+--------------+------------------+
   | policy1  | N/A       | Non-Compliant | 2019-Feb-07 09:21 |
   -----------+-----------+--------------+------------------'
```

You can use the `--zone` and `--single-replica` arguments for `svt-vm-show` to show only the single-replica virtual machines that reside in the specified zone.

Examples

This example displays `N/A` for `Storage HA` for single-replica virtual machines. This example shows what the command returns after a failure of the node storing the primary replica of a single-replica virtual machine. The unknown state indicates that the virtual machine no longer has access to data.

```
# svt-vm-show
.-------------------------------------------------------------------------------
| Virtual Machines
+----------------+----------------+------------------+-------------------+
| Datacenter     | Cluster        | Datastore        | Virtual Machine   |
+----------------+----------------+------------------+-------------------+
| DC1            | cluster1       | ds1              | VM1               |
+----------------+----------------+------------------+-------------------+
| DC1            | cluster1       | ds2              | VM2               |
'----------------+----------------+------------------+-------------------+
   +----------+-----------+------------------+
   | Policy   | Storage HA | Created At      |
   +----------+-----------+------------------+
   | policy1  | Unknown   | 2019-Feb-07 09:21 |
   +----------+-----------+------------------+
   | policy1  | No        | 2019-Feb-07 09:22 |
   +----------+-----------+------------------'
```

When you remove an HPE OmniStack host from a federation, any single-replica virtual machines on that host will be lost, and data loss will ensue. If you require the virtual machine to remain operational after host removal, ensure that the virtual machine replica is safely moved to a different HPE OmniStack host. Please, contact **Customer Support (https://www.hpe.com/support/hpesc)** to ensure that this is done prior to host removal.

Zone commands

This section contains the following topics:

- **svt-zone-create (vSphere only)**
- **svt-zone-assign (vSphere only)**
- **svt-zone-unassign (vSphere only)**
- **svt-zone-realize (vSphere only)**
- **svt-zone-delete (vSphere only)**
- **svt-zone-rename (vSphere only)**
- **svt-zone-show (vSphere only)**

svt-zone-create (vSphere only)

Creates an availability zone to be used for stretched cluster configuration.

A zone is created with a name and an optional description. Zone names must be unique across the federation. An error is returned if a zone by that name already exists.

Syntax

```
svt-zone-create --name name --description description [common-options]
```

Options

Option	Description
--name	Required. This defines the *name* of the zone.
--description	Optional. Provides an optional *description* of the zone.

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

The following example shows the command to create a zone with a description. No response is provided if the command completes successfully. Use the svt-zone-show command to see the results of this command.

```
# svt-zone-create --name BuildingA --description "Rack 1 in Room D"
```

The following example shows the result if the zone name already exists.

```
# svt-zone-create --name BuildingA
ERROR [13]: Duplicate name exists.
```

svt-zone-assign (vSphere only)

Assigns a host to an availability zone.

When this command completes, the host becomes part of the planned configuration. You must use the `svt-zone-realize` command to make the change effective. Use the `svt-zone-unassign` command to unassign a host from the zone.

NOTE:

If any `option` or *argument* is not included, an error message is provided.

Syntax

```
svt-zone-assign --host host --zone zone [common-options]
```

Options

Option	Description
--host	Required. This is the name or ID of the host to be assigned to the specified zone.
--zone	Required. This is the name or ID of the zone to which the host will be assigned.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

The following example shows the command to assign an HPE OmniStack host to a zone.

```
# svt-zone-assign --host Host1 --zone BuildingA
..
Task Complete
```

The following example shows the command to assign the same HPE OmniStack host to a different zone.

```
# svt-zone-assign --host Host1 --zone BuildingB
..
Task Complete
```

svt-zone-unassign (vSphere only)

Unassigns a host from an availability zone.

When this command completes, the HPE OmniStack host is removed from the planned configuration of the availability zone. You must use the `svt-zone-realize` command to make the change effective.

NOTE:

If no *host* or an invalid *host* is included, an error message is provided.

Syntax

```
svt-zone-unassign --host host [common-options]
```

Options

Option	Description
`--host`	Required. This is name or ID of the host to be unassigned from a zone.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

The following example shows the command to unassign an HPE OmniStack host from a zone.

```
# svt-zone-unassign --host Host1
..
Task Complete
```

svt-zone-realize (vSphere only)

Finalizes the planned zone configuration changes and makes them effective.

Making changes effective may cause data migration to occur. While it is safe to perform this operation, you may notice a performance degradation while the data migrates to honor the new zoning policy. Unless otherwise specified, the command performs an impact assessment of the zone realize operation when one or more virtual machines will be rendered zone non-compliant after the operation and will require data migration to become compliant.

This command checks if a stretched cluster has an Arbiter connected, meaning that Arbiter is both configured and connected. If Arbiter is not configured and connected, then the command returns an error message.

- If Arbiter is not present, then the message instructs you to deploy one.
- If Arbiter is present, then the error message instructs you to ensure it is connected.

Similarly, if you have no Arbiter installed because you are not running in stretched cluster configuration, and you attempt to convert to stretched cluster configuration, then the command fails and instructs you to deploy Arbiter.

> ⚠️ **Caution:**
>
> Customers on scaled setups with a large number of virtual machines and backups may experience prolonged migration intervals. To avoid this situation, contact **Customer Support (https://www.hpe.com/support/hpesc)** to have them perform the required virtual machine and backup migrations **prior to** zone realization.

NOTE:

You must have a valid cluster configured to run this command.

Error messages are provided for any of the following situations:

- No cluster or an invalid cluster is included.
- Some hosts in a cluster have a zone assignment and others do not.
- All the hosts in a cluster are assigned to the same zone.
- Different hosts in a cluster are assigned to more than two zones.
- There are not an equal number of hosts in each zone in a cluster.

- The zone configuration being realized has one or more zones that are already effective in another storage cluster.

- Several clusters in different datacenters have the same name.

- Unable to realize this zone configuration because there is no Arbiter connected. An Arbiter is required in a stretch cluster. Please deploy an Arbiter before attempting to perform this command.

NOTE:

Single-replica virtual machines are ignored by availability zone alignment and shutdown operations.

Syntax

```
svt-zone-realize --datacenter datacenter --cluster cluster --no-impact-assessment
  [common-options]
```

Options

Option	Description
`--datacenter`	The name or GUID of the datacenter in which to realize the changes.
	This parameter is only required if the specified `--cluster` is insufficient to identify a unique cluster.
`--cluster`	Required. The cluster in which to realize the changes. The value can be the name or GUID of the cluster, or *local* to represent all hosts in the local cluster.
	You are only required to specify the `--datacenter` option if you specify a non-unique cluster name.
`--no-impact-assessment`	This option specifies that the command will be run without doing any impact assessment before realizing zone changes.
	⚠️ **Caution:**
	Running this command with `--no-impact-assessment` will not warn you about data migration jobs, which may potentially be large. It is a best practice not to use this `--no-impact-assessment` option.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

The following shows an example of this command.

```
# svt-zone-assign --host Host1 --zone zoneA
..
Task Complete

# svt-zone-assign --host Host2 --zone zoneA
..
Task Complete
```

```
# svt-zone-assign --host Host3 --zone zoneB
..
Task Complete

# svt-zone-assign --host Host4 --zone zoneB
..
Task Complete

# svt-zone-realize --cluster Cluster1 --datacenter Datacenter1
....
Task Complete
```

The following example shows the result when the command is run with no zones, or when there are no hosts added to zones in the system.

```
# svt-zone-realize --datacenter Datacenter1
ERROR [233]: There are no outstanding changes to zones in the
specified datacenter that need to be realized.
```

The following example shows the result when the zone configuration being realized has one or more zones that are already effective in another storage cluster.

```
# svt-zone-realize --datacenter Datacenter1
ERROR [240]: One or more zones in the specified operation are already
effective in another storage cluster.
```

The following example shows the command run with an impact assessment.

```
# svt-zone-realize --datacenter Datacenter1
2 virtual machine(s) will require some amount of data migration to become
zone policy compliant. This will occur automatically in the background,
and may cause a slight impact to I/O performance. All virtual machines
will remain operational through this transition. Each virtual machine
affected will receive a yellow alarm indicating a zone compliance policy
violation which will self-clear when the system remediates the issue.
Proceed? (y/n):
```

The following example shows the command run with the --no-impact-assessment option when it completes successfully.

```
# svt-zone-realize --datacenter Datacenter1 --no-impact-assessment
..
Task Complete
```

The following example shows the result if the datacenter cannot be identified or found.

```
# svt-zone-realize --cluster Cluster1
ERROR [41]: Unable to locate datacenter.
```

Backup replica zone-compliance warning

In certain circumstances, when you remove HPE OmniStack hosts from a stretched cluster or you reassign HPE OmniStack hosts to zones in an existing stretched cluster, your backup replicas may become non-zone-compliant. This means that these non-zone-compliant backups may not survive a zone failover (while migrations

are underway to re-establish zone compliance). In such a situation, an alarm will be raised on every HPE OmniStack host with these non-zone-compliant backups.

svt-zone-delete (vSphere only)

Deletes an availability zone from a stretched cluster configuration.

Syntax

```
svt-zone-delete --zone zone [common-options]
```

NOTE:

An error message is provided for any of the following situations:

*   If no *zone* or an invalid *zone* is included

*   If the *zone* has one or more hosts assigned to it (whether in a planned or effective configuration)

Options

Option	Description
--zone	Required. This is the name or ID of the zone that will be deleted.

`[common options]` are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

The following example shows the command to delete a zone. No response is provided if the command completes successfully.

```
# svt-zone-delete --zone zoneA
```

svt-zone-rename (vSphere only)

Renames an availability zone, and can be used to add or change the zone description.

Zone names must be unique across the federation. If a zone already exists with the new name, an error message is provided. To see the results of this command, you must use the `svt-zone-show` command.

Syntax

```
svt-zone-rename --zone zone --name name --description description [common-options]
```

NOTE:

Either the `--name` or `--description` option is required.

Options

Option	Description
--zone	This is current name or the ID of the zone to be renamed.
--name	This is the new name of the zone.
--description	Provides an optional description of the zone. • If you do not provide a description, the current description used. • If you provide a description, the current description is replaced. • To remove the current description, provide an empty string (using a set of either single or double quotes with nothing between them).

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

The following example shows the command to rename a zone without changing the description.

```
# svt-zone-rename --zone BuildingA --name BuildingB
..
Task Complete
```

The following example shows the command to rename a zone and change the description.

```
# svt-zone-rename --zone BuildingB --name BuildingC --description "Rack 1 in Room
 D"
..
Task Complete
```

The following example shows the command to rename a zone and remove the description.

```
# svt-zone-rename --zone BuildingC --name BuildingA --description ""
..
Task Complete
```

The following example shows the command to change the description of a zone without renaming it.

```
# svt-zone-rename --zone BuildingC --description "Rack 2 in Room D"
..
Task Complete
```

svt-zone-show (vSphere only)

Displays information about the Availability Zones configured in a stretched cluster configuration.

Syntax

```
svt-zone-show [common-options]
```

Options

[common options] are options applicable to all commands. For more information, see **Common command options** on page 12.

Example

The following example shows the results of the command when there are no zones configured in the system.

```
# svt-zone-show
No zones.
```

The following example shows the results of the command when there are two zones configured in the system.

```
# svt-zone-show
.----------------------------.
| Zones                      |
+-----------+----------------+
| Name      | Description    |
+-----------+----------------+
| BuildingA | Rack 1 in Room D |
| BuildingB | Rack 1 in Room H |
'-----------+----------------'
```

Appendix A: Support and other resources

This section contains the following topics:

- **Support and other resources**
- **Documentation feedback**

Support and other resources

Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:

    https://www.hpe.com/info/assistance

- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:

    https://www.hpe.com/support/hpesc

Information to collect

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages
- Product-specific reports and logs
- Add-on products or components
- Third-party products or components

Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.
- To download product updates:
    - Hewlett Packard Enterprise Support Center

        https://www.hpe.com/support/hpesc

    - My HPE Software Center: Software downloads

        http://www.hpe.com/software/hpesoftwarecenter

    - Software Depot

        https://www.hpe.com/support/softwaredepot

- To subscribe to eNewsletters and alerts:

    https://www.hpe.com/support/e-updates

*   To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to Support Materials** page:

    https://www.hpe.com/support/AccessToSupportMaterials

    IMPORTANT: Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HPE Passport set up with relevant entitlements.

Remote support

Remote support is available with supported devices as part of your warranty or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

If your product includes additional remote support details, use search to locate that information.

Remote support and Proactive Care information

HPE Get Connected	**https://www.hpe.com/services/getconnected**
HPE Proactive Care services	**https://www.hpe.com/services/proactivecare**
HPE Datacenter Care services	**https://www.hpe.com/services/datacentercare**
HPE Proactive Care service: Supported products list	**https://www.hpe.com/services/proactivecaresupportedproducts**
HPE Proactive Care advanced service: Supported products list	**https://www.hpe.com/services/ proactivecareadvancedsupportedproducts**

Proactive Care customer information

Proactive Care central	**https://www.hpe.com/services/proactivecarecentral**
Proactive Care service activation	**https://www.hpe.com/services/proactivecarecentralgetstarted**

Warranty information

To view the warranty information for your product, see the links below:

HPE ProLiant and IA-32 Servers and Options	**https://www.hpe.com/support/ProLiantServers-Warranties**
HPE Enterprise and Cloudline Servers	**https://www.hpe.com/support/EnterpriseServers-Warranties**
HPE Storage Products	**https://www.hpe.com/support/Storage-Warranties**
HPE Networking Products	**https://www.hpe.com/support/Networking-Warranties**

Regulatory information

To view the regulatory information for your product, view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at the Hewlett Packard Enterprise Support Center:

https://www.hpe.com/support/Safety-Compliance-EnterpriseProducts

Additional regulatory information

Hewlett Packard Enterprise is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at:

https://www.hpe.com/info/reach

For Hewlett Packard Enterprise product environmental and safety information and compliance data, including RoHS and REACH, see:

https://www.hpe.com/info/ecodata

For Hewlett Packard Enterprise environmental information, including company programs, product recycling, and energy efficiency, see:

https://www.hpe.com/info/environment

Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (**mailto:docsfeedback@hpe.com**). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.