

Veritas System Recovery 16 Linux Edition README

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Veritas(TM) System Recovery 16 Linux Edition is available in English only.

This README file includes information about using Veritas System Recovery 16 Linux Edition.

License expiration in Veritas System Recovery 16 Linux Edition

If you choose to delay installation of the license key, all features in Veritas System Recovery 16 Linux Edition remain enabled during a 60-day trial period.

The Back Up feature in Veritas Recovery Disk is not available during the trial period. To use the Back Up feature in Veritas Recovery Disk, you need a valid license key. The trial period starts on your first use of the product.

After the trial period ends, the backup functionality stops working. All other features remain enabled.

About Veritas System Recovery 16 Linux Edition

Veritas System Recovery 16 Linux Edition lets you recover from system loss or disasters in minutes, not hours or days. It provides fast, easy-to-use system restoration to help you meet your recovery time objectives. Veritas System Recovery 16 Linux Edition lets you capture recovery points of all the partitions and volumes on a live Linux system.

The recovery points can include partitions and volumes that contain the operating system, applications, system settings, configurations, files, and data.

When you experience a problem with your computer, you can restore a file system partition or an entire drive. This recovery process returns your computer to a previous, functional state with the operating system, applications, and data files intact.

Using Veritas System Recovery 16 Linux Edition, you can do the following:

- Perform backups (create recovery points) of partitions and volumes on your Linux system.
- Schedule backups to create independent recovery points and recovery point sets.

- Restore volumes and partitions using the recovery points that you have created.
- Create a Veritas Recovery Disk that you can use to recover your computer if it does not boot.
- Mount recovery points using Granular File Recovery utility so you can restore individual files and folders.

What's new in Veritas System Recovery 16 Linux Edition

- Improved platform support

Veritas System Recovery 16 Linux Edition now includes support for the following platforms:

- Red Hat Enterprise Linux 6.6 (x86) 32-bit
 - Red Hat Enterprise Linux 6.6 (x86_64 not ia64) 64-bit
 - Red Hat Enterprise Linux 6.7 (x86) 32-bit
 - Red Hat Enterprise Linux 6.7 (x86_64 not ia64) 64-bit
 - Red Hat Enterprise Linux 6.8 (x86) 32-bit
 - Red Hat Enterprise Linux 6.8 (x86_64 not ia64) 64-bit
 - Red Hat Enterprise Linux 7.0 (x86_64 not ia64) 64-bit
 - Red Hat Enterprise Linux 7.1 (x86_64 not ia64) 64-bit
 - Red Hat Enterprise Linux 7.2 (x86_64 not ia64) 64-bit
 - Red Hat Enterprise Linux 7.3 (x86_64 not ia64) 64-bit
 - CentOS 6.6 (x86) 32-bit
 - CentOS 6.6 (x86_64 not ia64) 64-bit
 - CentOS 6.7 (x86) 32-bit
 - CentOS 6.7 (x86_64 not ia64) 64-bit
 - CentOS 6.8 (x86) 32-bit
 - CentOS 6.8 (x86_64 not ia64) 64-bit
 - CentOS 7.0 (x86_64 not ia64) 64-bit
 - CentOS 7.1 (x86_64 not ia64) 64-bit
 - CentOS 7.2 (x86_64 not ia64) 64-bit
 - CentOS 7.3 (x86_64 not ia64) 64-bit
 - SUSE Linux Enterprise Server 11 SP4 (x86) 32-bit
 - SUSE Linux Enterprise Server 11 SP4 (x86_64 not ia64) 64-bit
 - SUSE Linux Enterprise Server 12 (x86_64 not ia64) 64-bit
 - SUSE Linux Enterprise Server 12 SP1 (x86_64 not ia64) 64-bit
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- SUSE Linux Enterprise Server 12 SP2 (x86_64 not ia64) 64-bit

Note: Veritas System Recovery 16 Linux Edition does not support the Btrfs, JFS, NSS, and Reiser4 file systems.

System Requirements

- 1 GB RAM
- 30 MB free disk space
- Libfuse for recovery point mount capability
- Squashfs-tool on Red Hat to create the Veritas Recovery Disk
- Genisoimage on RHEL 6.0 to create the Veritas Recovery Disk

Supported Platforms:

You can find a list of compatible operating systems, platforms, and applications at the following URL:

https://www.veritas.com/support/en_US/search-results.html?keyword=V-306-17*

Installing Veritas System Recovery 16 Linux Edition

Root privileges are required to install the Veritas_System_Recovery.bin.

1. Log on to your computer as the root user.
2. Copy the Veritas_System_Recovery.bin file from the download or the product DVD to a directory on your Linux computer.
3. Make the Veritas_System_Recovery.bin file an executable by changing to the directory where you copied it and entering the following command at the Linux console:

```
# chmod +x Veritas_System_Recovery.bin
```

4. Start the installation process by entering the following command at the Linux terminal:

```
# ./Veritas_System_Recovery.bin
```

The command that you specified assumes that you are currently in the same directory where the `Veritas_System_Recovery.bin` file is located. If that is not the case, you must either change to that directory or specify the proper path to it.

5. Page through the license agreement and accept it by typing `y` or `yes` at the prompt.

6. To install the utility for creating a Veritas Recovery Disk, type `y` or `yes` at the install SRD creation utility prompt.

`createSRD` is a command line utility that lets you create the Veritas Recovery Disk.

7. To install the utility for restoring individual files and folders, type `y` or `yes` at the install Granular File Recovery utility prompt.

The Granular File Recovery utility lets you mount or unmount a recovery point so you can restore individual files and folders.

If you choose not to install the utilities, you can run the installation process later. The installation program automatically detects that Veritas System Recovery 16 Linux Edition is installed and prompts you to install the utilities that are not already installed.

Creating recovery points

1. To create a recovery point of the system volume (The Root Volume or `/`) on to the `/mnt/backup` folder, use `symsr` command line.

```
# symsr -b / -d /mnt/backup/sysvol.v2i
```

2. To schedule a backup job for one or more devices, use `symsr` command line.

```
# symsr -createjob
```

You will be prompted to provide inputs, such as, source, destination, backup type, and compression level and encryption type for the recovery points, and a schedule to run the backup.

3. To view the details of existing backup jobs, use `symsr` command line.

```
# symsr -info job
```

4. To run an existing backup job immediately, irrespective of the backup schedule, use `symsr` command line.

```
# symsr -runjob <job id>
```

5. To remove an existing backup job from the info job list, use symsr command line.

```
# symsr -rmjob <job id>
```

6. To view the partitions and file system types that are available on the disk, use symsr command line.

```
# symsr -info disk
```

7. The various options and features are available as man pages. Use man command to see the information. Use q to quit the man pages.

```
# man symsr
```

Creating a Veritas Recovery Disk

1. Get the RHEL/SLES install CD/DVD.

2. Use the createSRD command to create the Veritas Recovery Disk.

This will customize and create the Veritas Recovery Disk using the operating system install CD/DVD.

3. If the Veritas Recovery Disk was created from the install CD, use CD-1 from the install CD set.

Note: For RHEL 6.2, the Boot CD can also be used to create the Veritas Recovery Disk.

4. Example of creating Veritas Recovery Disk iso on Red Hat:

```
# createSRD --iso=/mnt/user/RHEL6.2/rhel-server-6.2-i386-dvd.iso -d  
/mnt/backup/customSRD.iso
```

5. Burn custom SRD.iso using any CD burning tool and use it to recover the volumes that cannot be unmounted while booted (Example root volume).

More options and features of createSRD are available on viewing the man pages.

Restoring System Volume (Root Volume) using Veritas Recovery Disk

1. Set the computer to boot from a CD.

2. Use the Veritas Recovery Disk to boot the system.

3. Choose Rescue System when prompted to go into rescue environment

On Red Hat

- a. Select the Language and Keyboard type. If the recovery point is on a network share, select Yes to start networking, and then set the network.
- b. Skip the dialog box that searches for Linux installations on the system. This will drop to a shell.

On SuSE Linux Enterprise Server

- a. At the log on prompt, log on as root without any password.
- b. If the recovery point is located on a network share, set the network as DHCP using the `ifup-dhcp` command as in the following:

```
# ifup-dhcp eth0
```

4. If the recovery point is located on a network share (Windows Share or NFS), mount the share to a temporary folder as shown in the following example.

```
# mkdir /tmp/backup
```

To mount a Windows share from windows-mc

```
# mount -t cifs //Windows-mc/Share -o user=domain\username,pass=password /tmp/backup
```

Note: To mount a Windows share in Veritas Recovery Disk mode, you must provide the password in the command itself as shown in the above example.

To mount an NFS share "/backup-store" from machine linux-nfs

```
# mount -t nfs linux-nfs:/backup-store/backup /tmp/backup
```

Note: To mount a NFS share in Veritas Recovery Disk mode, for some operating systems, such as RHEL 5.7, you must provide "-o nolock" in the command.

5. If the recovery point is located on the computer in a different partition (for example, `/dev/sda3`), mount that partition.

```
# mount /dev/sda3 /tmp/backup
```

6. Veritas System Recovery is included with Veritas Recovery Disk. Use the Veritas System Recovery utility to restore the system volume using the independent or base recovery points (`v2i`), or incremental recovery points (`iv2i`).

To recover the system volume using an independent or base recovery point:

```
# symshr -r /tmp/backup/<imagename>.v2i -d /dev/sda1
```

To recover the system volume using an incremental recovery point:

```
# symsr -r /tmp/backup/<imagename>.iv2i -d /dev/sda1
```

Replace <imagename> with the name of the recovery point that you want to restore from.

7. After recovery, reboot the system by typing reboot in the shell.

Restoring a data volume that can be unmounted while the system is booted

1. Unmount the Volume that needs to be recovered.

For example, /dev/sda3

2. Use Veritas System Recovery to restore the recovery point that was taken previously and kept on /mnt/backup as shown in the following:

```
# symsr -r /mnt/backup/sda3_backup.v2i -d /dev/sda3
```

Mounting a recovery point for granular restore

1. Load the Fuse driver using the following command:

```
# modprobe fuse
```

2. Create a temporary folder (for example, /mnt/recoverypoint)

```
# mkdir /mnt/recoverypoint
```

3. To mount the recovery point (for example, sysvol.v2i that was created above) use the following mount command:

```
# mount -t v2i /mnt/backup/sysvol.v2i /mnt/recoverypoint
```

4. Copy the file and folder from the mount point folder (/mnt/recoverypoint) using regular cp command to do granular restore.

5. Unmount by using one of the following commands:

```
# umount /mnt/backup/sysvol.v2i
```

or

umount /mnt/recoverypoint

Known Issues and Limitations

- On server reboot, a new recovery point set will be initiated automatically for the existing scheduled jobs.
- The minimum time interval between two successive scheduled backups for recovery points is one hour.
- The maximum latency period between the time when a backup job triggers and the time when the backup is scheduled to run is 14 minutes.

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