

# **VERITAS Volume Manager 3.1 for HP-UX Release Notes**

**for HP-UX 11i Version 1.5 Only**

**June, 2001**



**Manufacturing Part Number: B7961-90016**

**E0601**

U.S.A.

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# 1 VERITAS Volume Manager 3.1 for HP-UX Release Notes

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## Announcement

VERITAS Volume Manager 3.1 for HP-UX provides state-of-the-art online disk management for HP-UX. HP-UX 11i Version 1.5 includes some basic volume manager features, including a Java-based GUI, striping (RAID-0), and path failover support (DMP for active/passive peripherals). VERITAS Volume Manager 3.1 for HP-UX (B9116AA) is an optional, advanced product that provides a full set of enhanced volume manager capabilities, including mirroring, RAID-5, load balancing (DMP for active/active peripherals), online migration, and online relayout.

The VERITAS Volume Manager 3.1 for HP-UX is an alternative to the HP Logical Volume Manager and HP MirrorDisk/UX products.

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## What's in This Version

### Benefits

The VERITAS Volume Manager 3.1 for HP-UX adds many features to those built into HP-UX 11i Version 1.5. The following table lists the VERITAS Volume Manager (VxVM) features built into HP-UX 11i Version 1.5 and those available with B9116AA.

**Table 1-1 VERITAS Volume Manager 3.1 for HP-UX Feature Availability**

<b>Feature</b>	<b>VxVM Features Included in HP-UX 11i Version 1.5</b>	<b>VERITAS Volume Manager 3.1 for HP-UX (B9116AA)</b>
Java-based admin GUI	*	*
Striping (RAID 0)	*	*
Concatenation	*	*
Path failover support (active/passive peripherals)	*	*
Online resizing of volumes	*	*
Load balancing--DMP (active/active peripherals)		*
Hot relocation/unrelocation		*
Mirroring (RAID-1)		*
Number of mirrors supported		32
Mirrored Stripes (RAID 1+0)		*
Striped Mirrors (RAID 0+1)		*
RAID-5		*
Online migration		*

**Table 1-1 VERITAS Volume Manager 3.1 for HP-UX Feature Availability**

<b>Feature</b>	<b>VxVM Features Included in HP-UX 11i Version 1.5</b>	<b>VERITAS Volume Manager 3.1 for HP-UX (B9116AA)</b>
Online relayout		*
Task monitor	*	*
Rootability Support (VxVM on root/boot disk)	*	*

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**NOTE** In an active/passive peripheral, LUNs in the peripheral can only accept I/O from one path at a single point in time. In an active/active peripheral, LUNs in the peripheral can accept I/O from either path at any time.

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## Documentation

The following documents describe the VERITAS Volume Manager for HP-UX. They are available on the Instant Information CD or on the web at <http://docs.hp.com>.

- *VERITAS Volume Manager 3.1 Administrator's Guide*
- *VERITAS Volume Manager 3.1 Reference Guide*
- *VERITAS Volume Manager 3.1 Storage Administrator Administrator's Guide*
- *VERITAS Volume Manager 3.1 Migration Guide*

Manual pages are also available on your system via the *man* (1) command.

## Known Problems and Workarounds

### VxVM Treats Alternate Paths of an Active/Active Array as Available Disks (JAGad51475)

- *Problem:* Without the full VxVM license (B9116AA) installed, DMP for active/active disk arrays is not available. VxVM commands (for example, `vxdisk (1M)` and `vmsa (1M)`) will show all the paths to the LUNs in existence. However, the commands do not show the association for the alternate paths. Therefore, it is possible to use an alternative path as a new disk, and in doing so, to corrupt the VxVM private regions, and possibly the public regions. It is therefore important to be aware of the various paths to each LUN.
- *Workaround:* Use the following command to check for alternate paths to the same disk. Disks shown with the same `diskid` are most likely to be links to the same LUN.

```
# vxdisk -s list | grep -i disk
```

A patch is being prepared to address this problem, but the patch number was not known when this version of this document was written. See “Patches and Fixes in This Version” for instructions on finding the latest patches. The online version of these *Release Notes* on <http://docs.hp.com> will be updated to include the patch number when it is known.

### Cannot Enable DMP Active/Active Subpaths Without Reboot After Installing B9116AA License (JAGad51912)

- *Problem:* VxVM does not recognize active subpaths to an active/active device after the VERITAS Volume Manager 3.1 for HP-UX (B9116AA) license is installed.
- *Workaround:* Reboot your system after installing B9116AA to enable DMP active/active functionality.



# Compatibility Information and Installation Requirements

## Software Requirements

- HP-UX 11i Version 1.5

## Hardware Requirements

The following platforms are supported for VERITAS Volume Manager 3.1 for HP-UX on HP-UX 11i Version 1.5:

- rx9610 hp server
- rx4610 hp server
- i2000 hp workstation

The following peripherals are supported for VERITAS Volume Manager 3.1 for HP-UX on servers:

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**NOTE** Not all servers support all these peripherals. The i2000 hp workstation does not support any of these peripherals. See the *HP-UX 11i Version 1.5 Release Notes* for details.

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- HP Surestore Disk System HVD10 (DMP active/active)
- HP Surestore Disk System FC10 (DMP active/active)
- HP Surestore Disk System SC10 (DMP active/active)
- HP Surestore Disk Array xp48 (DMP active/active)
- HP Surestore Disk Array xp512 (DMP active/active)
- HP Surestore Disk Array xp256 (DMP active/active)
- High Availability Storage System (HASS) A3311A/12A (no DMP support)
- HP Surestore Disk Array FC60 (DMP active/passive)

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**NOTE** Although the HP Surestore Disk Array FC60 can be used as an active/active

disk array in some configurations, with VERITAS Volume Manager for HP-UX it can only be used as an active/passive disk array.

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**NOTE** In order to configure DMP with active/active peripherals, you must have B9116AA, the VERITAS Volume Manager 3.1 for HP-UX, installed. Without B9116AA, you cannot set up DMP and can only configure a single path from the host to an active/active peripheral. Active/active peripherals cannot be configured as active/passive.

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### **DMP and HP Surestore Disk Arrays xp256, xp512, and xp48**

HP Surestore Disk Arrays xp256, xp512, and xp48 are supported with Dynamic Multipathing (DMP) in active/active mode. If VxVM encounters devices with identical VxVM Disk IDs, the VxVM software will give a preference to selecting the P-Vol as opposed to the S-Vol to resolve the conflict. This disk selection policy will work only for the following microcode revisions:

xp256	microcode revisions 5244 and above
xp512	microcode revisions 1122 and above
xp48	microcode revisions 1122 and above

### **DMP and HP FC10 Disk System Support**

Because of the way LUNs are distributed across controllers by HP-UX, the enable/disable controller feature of VxVM does not function as expected for the following configurations of FC10 disk systems:

- multiple daisy chained FC10 disk systems connected to a single host
- multiple FC10 disk systems connected to a single host through a hub

If the `vxddmpadm disable ctrlr=ctrlr_name` command is used for the above configurations to disable IOs through a particular controller, IOs can be stopped through paths that were not intended by the user.

If each FC10 disk system is individually connected to the host (using separate HBAs), the above mentioned feature functions correctly and as expected.

### **DMP and JBOD Support**

The Dynamic Multipathing feature on JBOD drives works only if the individual disks provide unique serial number information. If the individual disks do not provide unique serial

numbers, even if the disks are configured for multipathing in hardware, the VERITAS Volume Manager does not provide multipathing support.

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**NOTE** HP is continually adding support for additional hardware and software. Contact your HP Service Representative for information about additional support or refer to the latest edition of these *Release Notes* on <http://docs.hp.com>.

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## **OS Platform and Version Compatibility**

HP-UX 11i Version 1.5

## **Disk Space and Memory Required to Install**

VERITAS Volume Manager 3.1 for HP-UX uses little disk space: less than 10 Kbytes in `/var` and `/usr`.

## Patches and Fixes in This Version

There were no required or recommended patches for VERITAS Volume Manager 3.1 for HP-UX applicable to HP-UX 11i Version 1.5 at the time this document was published. For the latest information about available patches, see the IT Resource Center:

<http://ITresourcecenter.hp.com>

- If you have a support contract, select **Browse Support Info By Product**.
- If you do not have a support contract, select **Individual Patches to search the Patch Database**. Then select **HP-UX Patches**, select **11.20** as the OS version, and search for the keyword **vxvm** to get a list of VERITAS Volume Manager for HP-UX patches.

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**NOTE**      You must register with the IT Resource Center to search the patch database.

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## Installing VERITAS Volume Manager 3.1 for HP-UX on HP-UX 11i Version 1.5

To install the VERITAS Volume Manager 3.1 for HP-UX product, you must first purchase the product (B9116AA) and obtain a codeword to unlock the software from the application media.

Install B9116AA with `swinstall` as follows:

**Step 1.** Mount the HP-UX 11i Version 1.5 Application Software:

```
mount -F cdfs cdrom-device /cdrom
```

**Step 2.** Install the software with `swinstall` in either of the following ways. You will need the codeword you received when you purchased B9116AA to unlock the software.

Either run the non-interactive command:

```
swinstall -x autoreboot=true -s /cdrom B9116AA
```

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**NOTE** You must use the `-x autoreboot=true` option with the above non-interactive command. Your system, however, will not reboot.

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Or run `swinstall` interactively:

```
swinstall -s /cdrom
```

Mark the software bundle B9116AA, and install it.

Your system will not reboot.

**Step 3.** Check the log file, `/var/adm/sw/swagent.log`, for any errors reported during `swinstall`. See *Software Distributor Administration Guide for HP-UX 11i* for more information.

## Removing the VERITAS Volume Manager for HP-UX Software with swremove

To `swremove` the VERITAS Volume Manager for HP-UX software, do the following steps.

**Step 1.** Ensure that the VERITAS Volume Manager is shut down.

**Step 2.** Remove the VERITAS Volume Manager 3.1 for HP-UX (product B9116AA) with the following command:

```
# swremove -x autoreboot=true B9116AA
```

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**NOTE** You must use the `-x autoreboot=true` option, however, your system will not reboot because you are only removing a license.

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**Step 3.** Check the log file `/var/adm/sw/swagent.log` for errors or more information by selecting the `Logfile` button in the user interface.

## **Software Availability in Native Languages**

There is no information on non-English languages for VERITAS Volume Manager 3.1 for HP-UX.

