Release Notes

Product	AMASS® for UNIX Version 5.6
Operating Systems	IBM® AIX 5.2 and 5.3 (32-bit and 64-bit) HP Tru64™ UNIX 5.1A and 5.1B HP-UX® 11.00 (32-bit and 64-bit) HP-UX® 11i (11.11) (32-bit and 64-bit) (PA-RISC only) SGI IRIX® 6.5.27–6.5.30 Sun Solaris™ 8 and 9 (32-bit and 64-bit) (SPARC™ only) Sun Solaris™ 10 (64-bit) (SPARC™ only)
Date	February 2007

Contents

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Purpose of This Release

AMASS for UNIX Version 5.6 includes several new features and enhancements that extend its capabilities. These release notes describe changes to supported software and hardware, and information about upgrading. These release notes also describe currently known issues as well as issues that were resolved for this release. Visit www.quantum.com for additional information about AMASS for UNIX Version 5.6 (or previous releases).

For more information about new features and enhancements, as well as for information about changes to previously documented features, see the *AMASS for UNIX 5.6 Addendum*. An electronic version of the addendum is located on the AMASS 5.6 product CD, or visit www.quantum.com to download a copy.

Changes to Supported Software and Hardware

These corrections update information from previous versions of AMASS for UNIX.

Additional Support

Additional operating system support includes:

- SGI IRIX 6.5.27
- SGI IRIX 6.5.28
- SGI IRIX 6.5.29
- SGI IRIX 6.5.30
- Sun Solaris™ 10 (64-bit) (SPARC™ only)

Additional drive support includes:

- HP LTO-3 Gen

Additional library support includes:

- Quantum Scalar i500
- STK SL8500
- Plasmon GX Series: Gx24, Gx32, Gx72, Gx80, Gx134, Gx166, and Gx174
- HP AA968A: Certified for use with mixed optical media (MO and UDO)

Additional firmware support includes:

- Scalar i2000 library i3 firmware
- Scalar DLC 2.5 Service Pack 2

Discontinued Support

Support for the following operating systems has been discontinued with AMASS release 5.6.

- None

Support for the following operating systems was discontinued with AMASS release 5.5:

- AIX 5.1

Support for the following operating systems was discontinued with AMASS release 5.4.

- AIX 4.3
- SGI IRIX 6.2

Support for the following libraries was discontinued with AMASS release 5.6.

- IBM 3494

Software Installation

Use the information provided in this section to upgrade AMASS for UNIX to Version 5.6.

System Requirements

The requirements identified in Table 1 are necessary to support the installation of AMASS for UNIX Version 5.6.

Table 1 AMASS for UNIX 5.6 System Requirements

System/Component	Requirement
Operating System	• The operating system must always be run in US English. • Your native operating system, and not AMASS, limits the maximum size of your files. • AMASS supports only the maintenance (m) and not the feature (f) stream of IRIX 6.5.x. • For operating systems in which both 32-bit and 64-bit versions of AMASS exist, the bit version of the AMASS API must match the bit version of the AMASS applications.
Server Platform	To obtain details on supported application server platforms, contact your AMASS sales representative.

Required Operating System Patch Levels

Quantum requires operating system patches to successfully operate AMASS. Obtain these patches from the appropriate vendor. To view a list of patches that are already installed on your machine, go to View Patches.

> **Note:** Quantum assumes that you have installed all of the patches that your vendor recommended for your kernel, operating system, network, hardware, and storage devices.

Patch Issues (HP-UX)

In HP-UX 11.11, there was a problem with certain patches installed on hardware platforms s700 and s800. These patches contained an error that can lead to false data being read from memory mapped files.

When the AMASS File System database check utility sysdbchk is run on a platform which has these patches loaded, even though the AMASS database is not corrupt, output with lines similar to below are sporadically seen (sometimes listing thousands of files):

```
SHARED_NAME_RECORD: 50 - several files share the same name record
SHARED_NAME_RECORD: 58 - several files share the same name record
SHARED_NAME_RECORD: 64 - several files share the same name record
```

A software fix introduced in AMASS 5.5 (CR 44991) alleviated this problem. (This software fix is also present in AMASS 5.6.)

Patch Issues (IBM AIX)

In some installations of IBM AIX 5.3 ML 2, the IBM-provided **/etc/protocols** file is corrupted. If this file is corrupted, AMASS cannot start. Quantum recommends upgrading IBM AIX 5.3 to ML 3 or higher.

View Patches

To view a list of the patches that are currently installed on your machine, enter the appropriate command listed in Table 2.

Table 2 Commands for Viewing Installed Patches

Operating System	Command or Path
AIX	lslpp -h
HP Tru64 UNIX	setld -i
HP-UX	/usr/sbin/swlist -1 product PH*
IRIX	versions | grep patch
Solaris	showrev -p

Space Requirements

Table 3 shows the amount of hard disk space required by this release of AMASS.

Table 3 AMASS for UNIX 5.6 Space Requirements

Operating System	AMASS Program Files[1]	AMASS Journal and Database[2]	Raw Cache[3]
AIX 5.2 (32-bit / 64-bit)	130 MB / 200 MB	2 MB (minimum)	80 MB – 64 PB
AIX 5.3 (32-bit / 64-bit)	130 MB / 200 MB		
HP Tru64 UNIX 5.1A, 5.1B	100 MB		
HP-UX 11.0 (32-bit / 64-bit)	160 MB / 175 MB		
HP-UX 11i 11.11 (32-bit / 64-bit)	175 MB / 190 MB		
IRIX 6.5.x	340 MB		
Solaris 8 (32-bit / 64-bit)	175 MB / 380 MB		
Solaris 9 (32-bit / 64-bit)	200 MB / 400 MB		
Solaris 10 (64-bit)	425 MB		

1 The **/usr/amass/logs/tac** directory contains log files, so the initial size will grow.
2 AMASS will not load unless there is a minimum of 2 MB.
3 Used exclusively by AMASS. The maximum size is dependent on sector size and kernel architectural limits.

Compatibility Matrix

For AMASS and DataMgr compatibility, refer to the DataMgr Release Notes.

Refer to Table 4 for information on firmware compatibility with AMASS for UNIX Version 5.6.

Table 4 AMASS Library Compatibility

	Description	Firmware Level
Library		
Quantum	Scalar 24	306A.GZ.001
	Scalar 100	3.32.0002
	Scalar 1000	640P.00001
	Scalar i500	320G.GS00400
	Scalar i2000	300A-GS02401
	Scalar 10K AMASS supports the Scalar 10K in a Dual Aisle configuration as a large 10K library. The current version of AMASS does not support the high availability and failover feature sets of the Scalar 10K in a Dual Aisle configuration.	300A.00007
Ampex	DST 812	R 003.02.p
DISC	245 525	3.16
HP	Model 4/48	1.02
	Model 600 FX	0.48
Phillips	LMS LF-6600	C05B
Plasmon	D-Series 875	3.01a
Plasmon	G-Series G104 - G638 Gx-24 - Gx174	G02
StorageTek	97xx Series	1.00.03
	SL8500	1.61
	L-180 Series	3.09.00
	L-700 Series	3.09.00

	Description	Firmware Level
Library Interface		
	ACSLS for StorageTek	7.1
	DAS for ADIC AML Series	3.12
	Scalar DLC for ADIC Scalar 10K firmware 300 and above requires 2.5 SP2 Hotfix 38	2.5 SP2
Drive		
Ampex	DST 312	S 2.12bd
	DST 314	1535
HP	HP UDO	3.00
	LTO-3 Gen	92LS
IBM	LTO-1	4561
	LTO-2	4AP0
	LTO-3	5481
	3590B1A Fibre	A_4EF
	3590B1A SCSI NOTE: An installed IBM 3590B1A tape drive in a StorageTek Silo ACS 4400 is seen by the ACSLS as a 9490 Timberline.	A_558
	3590E1A Fibre	D01F_2B9
	3590E1A SCSI	D01F_2B9
	3590H1A Fibre	F26E
	3592	0529
Panasonic	SW-9571 Multi-Drive	A111
Plasmon	Plasmon UDO	U03
Quantum	DLT 4000	150
	DLT 7000	276A
	DLT 8000	0250
	SDLT 220	4646
	SDLT 320	4646
	SDLT 600	2222

	Description	Firmware Level
Sony	SDX-300C (AIT-1)	04E5
	SDX-500 (AIT-2) (with or without WORM support)	0203
	SDX-700 (AIT-3) (with or without WORM support)	0207
	GY-2120 (DFT-1)	1.10
	GY-8240 (DTF-2)	1.45
	SMO F561 Optical Drive	1.08
StorageTek	9840A	R1.33.109E
	9840B	R1.35.305
	9840C	R1.35.505
	9940A	R1.35.205
	9940B	R1.35.405
	Redwood SD-3 Tape media written by Redwood SD-3 drives with a firmware level earlier than 2.2.3 may have missing or damaged LTC (Linear Time Code) tracks (Product Alert #AU33)	2.2.3

Tape Features

In this release, Table 5 describes the features that are available with the listed tape drives.

Table 5 AMASS Tape Feature

Tape Drives	Configure Block Size (volformat command)[1]	Compression (volformat command)[1]	Tape Streaming (config_ prod -o)[2]	Automatic Drive Cleaning[1]	Optional InfiniteFile Life[3]
Ampex DST 312	X	-	-	-	-
Ampex DST 314	X	-	-	-	-
HP LTO-3 Gen	X	X	X	X	-
IBM 3570	X	X	X	X	-
IBM 3580 Ultrium (LTO-1)	X	X	X	X	X

Tape Drives	Configure Block Size (volformat command)[1]	Compression (volformat command)[1]	Tape Streaming (config_ prod -o)[2]	Automatic Drive Cleaning[1]	Optional InfiniteFile Life[3]
IBM 3580 Ultrium (LTO-2)	X	X	X	X	X
IBM 3580 Ultrium (LTO-3)	X	X	X	X	X
IBM 3590 B1A	X	X	X	X	-
IBM 3590B1A-ultra	X	X	X	X	-
IBM 3590E1A	X	X	X	X	-
IBM 3590 H1A	X	X	X	X	-
IBM 3592	X	X	X	X	-
Quantum DLT 7000*	X	X	X	X	-
Quantum DLT 8000*	X	X	X	X	-
Quantum SDLT 220*	X	X	X	X	-
Quantum SDLT 320*	X	X	X	X	-
Quantum SDLT 600	X	X	X	X	-
Sony SDX-300C (AIT-1)	X	X	-	X	Requires minimum FW level 0400 (CR8663)
Sony SDX-500C (AIT-2)	X	X	Requires minimum FW level 0107	X	Requires minimum FW level 0107
Sony SDX-700C (AIT-3)	X	X	X	X	Requires minimum FW level 0102
Sony GY-2120 (DTF-1)	X	X	Requires minimum FW level 1.10	X	Requires minimum FW level 1.10
Sony G4-8240 (DTF-2)	X	X	X	X	-

Tape Drives	Configure Block Size (volformat command)[1]	Compression (volformat command)[1]	Tape Streaming (config_ prod -o)[2]	Automatic Drive Cleaning[1]	Optional InfiniteFile Life[3]
StorageTek Timberline 9490-E	X	X	-	-	-
StorageTek Redwood SD-3	X	X	X	-	-
StorageTek 9840 A, B, and C	X	X	X	-	-
StorageTek 9940 A and B	X	X	X	-	-

1 For more information about the AMASS volformat and driveclean commands, refer to the *Command Reference* chapter in *Managing the AMASS File System*. Drive Cleaning exceptions are noted under the specific libraries in *Accessing Storage Devices*.

2 For more information about the AMASS **config_prod -o** script, refer to the *Optional Parameters* appendix in *Installing AMASS*.

3 For more information about IFL, refer to the *Infinite File Life* manual.

* DLT customers: Quantum recommends that you enable the Tape Streaming feature. Using tape streaming I/O eliminates start/stop cycles on these drives, which leads to better tape handling. For instructions on configuring AMASS for tape streaming, refer to the *Optional Parameters* appendix in *Installing AMASS*.

Upgrade Guidelines

When upgrading to AMASS 5.6, please note the upgrade guidelines in Table 6.

Table 6 AMASS Upgrade Guidelines

Operating System	Upgrade Guideline
All	With AMASS 5.6, users are prompted during the install on the configurable options of CFG_OPT_AIO, CFG_OPT_SIO and CFG_OPT_INTERLEAVE These were previously only configurable with the executable: /usr/amass/sys/config_prod -o **Note:** CFG_OPT_AIO and CFG_OPT_INTERLEAVE are not supported on AIX and therefore are not prompted in an AIX install. For more details, refer to the *Optional Parameters* section of the *Installing AMASS* manual. When AMASS is upgraded, the AMASS cron table is removed and added back to the system. If you have made any changes, save your customized AMASS cron table and edit the AMASS cron table after the upgrade to put back your changes.
HP Tru64 UNIX	To successfully install AMASS while using only part of a disk as the AMASS cache, you must first verify that the **c** partition of the disk has a file system type（fstype) of unused. Second, you must verify that the user amass has read/write permission to the raw **c** partition (for example, **/dev/rdisk/dsk2c**). You can get this permission by owning the file, belonging to a group that owns the file, or allowing access to all users of the file. **Note:** If you do not perform these two verifications when attempting to start AMASS, you may get a message in the tac log that says the cache is invalid.
HP-UX	If you encounter problems installing AMASS, use the pfs_mount utility provided by HP to mount the CD-ROM drive. The steps are as follows: **1** pfs_mountd & **2** pfsd & **3** pfs_mount <*dev*> <*mount_point*> **4** loadamass CDROM <*mount_point*>/AMASS **5** pfs_umount <*mount_point*>

Upgrade Instructions

Follow these instructions to upgrade to AMASS for UNIX 5.6.

> **Note:** Before upgrading your software and/or firmware, Quantum recommends that the AMASS database be backed up prior to performing the upgrade.

> **Note:** The following tasks are presented as guidelines only because the actual steps are site-specific.

1. For pre-installation instructions for a specific storage device, refer to the *Accessing Storage Devices* book.
2. Make sure the UNIX server has the required operating system patch levels.

   Read the hard disk partitioning, space requirements, and guidelines on partitioning the cache in the "Getting Started" chapter in *Installing AMASS*.
3. Make sure the cache is empty by running the sysperf command and verifying that there are no dirty cache blocks.

   Use killdaemons to inactivate AMASS, unmount the file system, and kill the AMASS daemons.

   > **Caution:** Run the sysdbchk utility to make sure there has been no database corruption.

   > **Note:** Make a full backup of the AMASS File System Database and Journal by running the amassbackup -fv command.
4. Upgrade the UNIX operating system, if required.
5. Shut down and power off the UNIX server where AMASS will be installed.
6. **Fibre-Attached Devices:** Connect the storage devices to the Fibre-Channel bus on the server. The Fibre-Channel driver must be one that maps World-Wide-Names to SCSI device names.

   Network-Attached Devices: Connect the storage devices to the network.

   The AMASS installation script retrieves and displays device addresses to aid you in the AMASS configuration process.

   SCSI-Attached Devices: Connect the storage devices to the SCSI bus on the server. Make sure the SCSI bus is properly terminated. Refer to your library's user manual for instructions on setting the SCSI addresses.

   The AMASS installation script retrieves and displays device addresses to aid you in the AMASS configuration process.
7. Apply power to the storage devices and boot the UNIX server.
8. To assist you in answering the AMASS script questions, refer to the "Worksheet" chapter in the *Installing AMASS* book.
9. Install AMASS. For installation information, refer to the *Installing AMASS* book. For any last minute instructions, refer to the Release Notes.
10. After AMASS is installed, reboot the UNIX server if necessary.

11 Verify the configuration by running the **install_tests** script. For complete information on this script, refer to the "Installation Procedure" chapter in the *Installing AMASS* book.

12 Make a full backup of the AMASS File System Database and Journal by running the amassbackup -fv command with a **new** Backup Volume.

13 Decide how you want to organize the AMASS file system. For example, what directories should be under the AMASS mount point? Set permissions for these directories to allow clients to access the file system. AMASS supports read and write permissions only; Access Control Lists (ACLs) are not supported.

14 Load media and create entries in the AMASS database for all your media. For detailed steps, refer to the "Initial Setup Tasks" chapter in the *Managing the AMASS File System* book.

15 Decide if you want to apportion media into volume groups to keep project data or department data together on a specified number of volumes. Also, do you want to have a volume group for cleaning cartridges? For a description of volume groups, refer to either the *AMASS Overview* book or the *Managing the AMASS File System* book.

Authorization String

During an AMASS installation, you are prompted to enter an authorization string. Contact the Quantum Technical Assistance Center at www.quantum.com/support to obtain the authorization string.

> **Note:** For an upgrade, your existing authorization string will remain valid; it is not necessary to request a new one if your system ID remains the same.

Prior to obtaining an authorization string, you can use a 30-day temporary product key. To determine the temporary product key for your specific library, go to the Quantum web site at: www.quantum.com

A week before the 30-day time limit, AMASS displays a message on the system console indicating that the temporary product key will expire. When this happens, contact the Quantum Technical Assistance Center and request a permanent authorization string. If a valid authorization string is not entered by the end of the expiration period, AMASS converts to read-only mode; no data is lost.

> **Note:** The temporary product keys do not enable optional software features.

Fibre Channel Guidelines

The following guidelines exist for AMASS running with fibre channel.

HP-UX Fibre

For AMASS users in a HP-UX fibre environment connected to a PathLight 5000 SNC, the environment variable AMASS_PLSNK should be used.

A known error condition exists where the first SCSI test-unit-ready sent to the device is never received but rather absorbed by the PathLight and a SCSI bus

reset status returned. The detected presence of this environmental variable in the UNIX shell will cause AMASS to respond correctly to this condition. This environmental variable can be set in the shell in which AMASS is started or put directly in the **amass_start** script.

> **Note:** Make sure that if this environment variable is being used to set it in the shell before amassbackup and amassrestore are executed.

Solaris Fibre

AMASS supports fibre on the Sun Solaris platform. When installing AMASS, the AMASS juke driver may be unable to attach to fibre attached drives and libraries. If you have this problem, please contact the Quantum Technical Assistance Center at www.quantum.com/support for assistance. AMASS 5.6 also now supports the Solaris sgen driver.

SGI IRIX 6.5 Fibre

AMASS uses symbolic links (/dev/rjuke1, /dev/rj1d17) that are mapped to system device files.

For example: /dev/rjuke1 ->/hw/scsi/sc7d510

However, the AMASS install process may have trouble creating symbolic links for fibre devices attached to a fabric under IRIX 6.5.14 and later. For instance, after entering the desired controller, target, and Logical Unit Number (LUN), you might receive the following error message.

```
Failed to build a path to the device for you.

Please enter the explicit device path:
```

To find the explicit device path, use the following steps. You can also use the same steps to determine the explicit device path for other fibre devices. This example tries to determine the device path for the first device listed in Step 1.

```
Fabric Tape: node 1000006045170ad2 port 2001006045170ad2, lun 2 on SCSI
controller 8: unknown
```

1. Perform an hinv system call.

```
# hinv | grep -i tape

Fabric Tape: node 1000006045170ad2 port 2001006045170ad2, lun 2 on SCSI
controller 8: unknown

Fabric Tape: node 1000006045170ad2 port 2001006045170ad2, lun 4 on SCSI
controller 8: unknown

Fabric Tape: node 1000006045170ad2 port 2001006045170ad2, lun 6 on SCSI
controller 8: unknown

Fabric Tape: node 1000006045170ad2 port 2001006045170ad2, lun 8 on SCSI
controller 8: unknown
```

2. Look at the contents of the **/dev/scsi** or **/hw/scsi** directories and match the output from the hinv system call for the desired device.

```
# ls -l /hw/scsi

total 0

drwxr-xr-x 2 root sys 0 Apr 24 12:38 1000006045170ad2

drwxr-xr-x 2 root sys 0 Apr 24 12:38 2000000087000b63
```

```
drwxr-xr-x 2 root sys 0 Apr 24 12:38 2000000087002b04
drwxr-xr-x 2 root sys 0 Apr 24 12:38 2000000087003124
```

3. Look at the contents of the node directory for that device.

```
# ls -l /hw/scsi/1000006045170ad2
total 0
drwxr-xr-x 2 root sys 0 Apr 24 12:42 lun0
drwxr-xr-x 2 root sys 0 Apr 24 12:42 lun2
drwxr-xr-x 2 root sys 0 Apr 24 12:42 lun4
drwxr-xr-x 2 root sys 0 Apr 24 12:42 lun6
drwxr-xr-x 2 root sys 0 Apr 24 12:42 lun8
```

4. Look at the contents of the LUN directory for that device.

```
# ls -l /hw/scsi/1000006045170ad2/lun2
total 0
crw------- 1 amass sys 0,282 Apr 24 12:43 c8p2001006045170ad2
```

Therefore, the explicit device path for the prompt shown on the previous page would be as follows:

```
Failed to build a path to the device for you.
Please enter the explicit device path:
/hw/scsi/1000006045170ad2/lun2/c8p2001006045170ad2
```

Mappings

Storage Network Controllers (SNCs) can usually be configured for multiple mapping schemes of the SCSI bus: target: LUN address to the FC LUN addresses. The HBA can then have its own mapping of FC LUNS to target: LUN combinations. Some routers and Fibre Channel HBAs also support non-permanent mappings that can dynamically change as devices are added or removed from the buses.

> **Note:** To avoid the problems of a dynamically changing bus address, configure the Quantum FC router to use indexed addressing, which permanently maps the bus: target: LUN to the FC:LUN

Operating Guidelines

When operating AMASS 5.6, please make note of the following operating guidelines.

All: Scalar DLC

AMASS may experience a problem with loading media into the S10K (with Scalar DLC). The drive types are AIT, but Scalar DLC looks for 8mm for the mount rather than AIT due to a mismatch in parameters. The XDI utility sends the drive type AIT rather than 8mm on the mount.

> **Note:** This procedure is for Scalar DLC 2.x only.

Workaround:

1. On the Scalar DLC box, select **Configuration > Clients**.
2. Select the **AMASS DAS** client entry.
3. Select the **aliasing tab**.
4. Change the media type to sony_ait on the media type alias entry.
5. Restart Scalar DLC.
6. Follow the mount procedure as usual.

IRIX: Tape Support (TS) system

The tape support (TS) system consists of a tape support driver, personality daemons, and a daemon to manage the personality daemons. The TS system is provided by SGI to manage tape devices. AMASS does not require the TS system to run and it has trouble if the TS system is controlling the AMASS drives. The mediad daemon initiates the ts daemon on the AMASS drives. To disable the ts daemon, change the mediad configuration, **/etc/config/mediad.config**, so that the mediad daemon ignores the AMASS drives.

Solaris: Shared Memory

AMASS may require more shared memory than the default size allocated on your operating system. If this happens, the following message appears.

```
AMASS shared memory size of 1692944 bytes exceeds current system limit.

Error getting shared memory via shmget, errno 22 - Invalid argument.
```

Workaround:

1. Refer to the man page for system (4) on Solaris.
2. Set the value for shmsys:shminfo_shmmax in the **/etc/system** file to a number that is large enough to accommodate AMASS and other processes on your system.
3. Reboot the Solaris machine.

Solaris: FTP Performance

Customers may experience poor performance in writing/reading from AMASS via ftp. The problem is the size of the I/O request issued and the amount of I/O buffering at the OS level between the application and AMASS kernel. This could exist for applications other than FTP as well.

To get better performance use an alternative FTP daemon which can be configured to write/read from AMASS with larger block sizes. WU FTPD is one option. A customer may also experience poor performance with a FTP client. Please contact the Quantum Technical Assistance Center for details.

Solaris 10: FTP Failures

FTP requests sent to an AMASS remote host running Solaris 10 may fail. This is due to a problem with sendfile functionality in Solaris 10. When a FTP read failure occurs, this causes an I/O error, resulting in a zero length file or a file containing garbage data.

To correct this problem, do the following steps:

1. Use a text editor to create the file **/etc/rc3.d/S98sendfile** and edit it to contain the following line (note that the 0 is a zero, not a capital letter O):

   ```
   echo "sendfile_max_size/Z 0" | mdb -kw
   ```

2. Set the permissions for **S98sendfile** to 744:

   ```
   unix# chmod 744 S98sendfile
   ```

3. Set the owner for **S98sendfile** to root and the group to sys:

   ```
   unix# chown root S98sendfile
   unix# chgrp sys S98sendfile
   ```

4. To implement the change, run **S98sendfile** or reboot the system.

Environmental Variables

This section lists the environmental variables available in AMASS. Contact software support for more details.

New Variables in AMASS 5.6

AMASS_CLN_INTERVAL — Clean a drive every AMASS_CLN_INTERVAL number of mounts.

AMASS_IOMULTIPLIER — Increase the I/O system buffer for LTO-3 drives by a factor of the value set with this variable. Valid values are 1–14.

Existing Variables

AMASS_BYPASS_POSTLOAD—Enables or disables pre-spinup load processing. For best performance, Quantum recommends setting this variable to 0 or removing it from the **amass_start** script.

AMASS_DEV_LOADTIME—Sets the device load time to the specified value. For best performance, Quantum recommends setting this variable to 0 or removing it from the **amass_start** script.

AMASS_DISABLE_CHKDRV—Disables the default action of library drive status checking.

AMASS_DISABLE_DRVBLKSIZE_TEST—Disable logic which verifies tape blocks sizes after writes.

AMASS_DISABLE_LIBTIMEOUT—Should the library timeout feature cause undesired effects, this environment variable will disable the feature.

AMASS_DISABLE_SCSI_ALARM—Disables SGI libio SCSI alarm timeout functionality.

AMASS_DISABLE_TEST_DRIVE—Should the reduction in queries to the drive cause undesired effects, this environmental variable will return AMASS to pre-fix default state that continually pings the library interface.

AMASS_DISABLE_VOLQCHK—Disables the default action of testing for duplicate volume queue entries.

AMASS_DRIVESTAT_TIMEOUT—Changes query drive time out from the default of 10 seconds to the value specified here.

AMASS_EJECT_OVERRIDE—This variable will force a libsched to eject volumes from drives regardless of whether or not libio will. This is used to override the default for a given library.

AMASS_HPFRET—Disables the default action of retrying HPUX SCTL Incomplete errors.

AMASS_MODESEL_CLASSIC—Revert to executing the 'mode select' SCSI command before the drive is spun-up.

AMASS_MODESEL_TIMEOUT—Replace the default 'mode select' SCSI timeout of 60 seconds with the value set by this variable.

AMASS_PLSNK—Issue extra 'test unit ready' SCSI commands to a device before use. (HPUX fibre).

AMASS_RDPOS_CLASSIC—Revert to attempting a recovery from a read position error and potentially corrupting data.

AMASS_RELOAD_DELAY—Replace the default volume load/retry timeout value of 50 seconds with the value set with this variable. (Not applicable for all library types.)

AMASS_RELOAD_RETRIES—Replace the default volume load/retry attempts of 3 with the value set with this variable. (Not applicable for all library types).

AMASS_SPINUP_DELAY—Replace the drive type specific spinup threshold timeout with the value set with this variable.

AMASS_STORE_TIMEOUT—Changes the library mount/dismount timeout from a default 360 seconds to the value specified here.

DO_ASYNC_STK_MOUNT—Enables asynchronous mounts for StorageTek (STK) libraries connected to AMASS.

DRV_CLEAN_COUNT—Drive cleaning interval (applicable to AIT and DTF drive types only).

DRV_CLEAN_OFF—Disables drive cleaning (applicable to AIT and DTF drive types only).

Resolved Issues

Problems that have been resolved in AMASS for UNIX 5.6 are shown in Table 7.

Table 7 AMASS 5.6 Resolved Issues

Operating System	Change Request	Description
All	15908	Volumes from storage pool cannot be moved to or used in other groups if flags are different.
	24214	Cleaning requests get rejected while there is already an Admin request out.
	31270	AMASS only uses CAP from first LSM.
	35398	READAHEAD does not function as expected.
	34938	Cannot delete a file or the volume on which the file resides.
	44587	Problems with DTF2 automatic drive cleaning.
	49466	Upgrade the XDI ssi daemon.
	59371	AMASS IFL logsense utility can generate segmentation fault.
HP-UX	24752	Table 0 entries created with rid and file name, but no other information.
IRIX	6100	AIO fails on IRIX 6.5.

Known Issues

Known issues in AMASS for UNIX 5.6 and associated workarounds are shown in Table 8.

Note: In addition to the following known issues, be aware of the setup and operational guidelines. For more information, refer to Upgrade Guidelines on page 11, Fibre Channel Guidelines on page 13, and Operating Guidelines on page 15 in this document.

Table 8 AMASS 5.6 Known Issues

Operating System	Change Request	Description	Workaround
All	4682	After reboot, AMASS database check fails with "missing volume group key" errors.	This problem only occurs rarely. Run sysdbchk -y to correct the problem.
	5729	The libsched core on invalid volume ID.	This problem only occurs rarely. Stop and restart AMASS.
	8864 5898	UNIX command, ls, does not report all files in all sub-directories.	Run dirfilelist to resolve the problem.
	17340	Scattered write algorithm causes AMASS to thrash.	Disable scattered writes.
	17952	SAMBA files stop copying with "ret blk not lst on dirty lst."	Use an alternative method to copy files to AMASS.
	22288	IFL inconsistencies occur in AMASS 5.3.	Use the volstat command instead of the volmedia command to resolve the problem.
	24790	No explicit AMASS error message when jukebox fails on second try.	Use other messages in the log indicating drive failure to resolve the problem.
	30640	The volgroup command generates bad values message.	Messages are only warnings.
	34562	The vgimport command fails on duplicate entries.	Edit the metadata file.
	45900	Amass cache - Doesn't write all contents out to tape.	Stop and restart AMASS.
	61524	IFL: mqverify for generic drive does not set proper state on volume.	No workaround.
	61532	IFL: read/write error processing - generic - does not process tape alerts.	No workaround.
	65510	healthcheck behavior inadvertently changed in AMASS 5.6.	If a healthcheck failure occurs, run each healthcheck command on a separate line (press **<Enter>** after each command). Do not run multiple healthcheck commands on a single line separated by a semicolon.
	66701	Scattered Writes can write to a volume outside of the volume group.	This condition can occur (but does not always occur) when scattered writes is enabled. To avoid the problem, disable scattered writes.

Operating System	Change Request	Description	Workaround
HP-UX	6039	AMASS upgrade from 4.13 to 5.3 on HP-UX results in system panic and unbootable kernel.	**1** Remove the AMASS kernel components. **2** Rebuild the kernel. **3** Reboot. **4** Install AMASS.
Solaris 10	66648	AMASS on Solaris 10 does not work with NFS Version 4.	Use NFS Version 3 on Solaris 10.

Documentation

The documents currently available for AMASS are shown in Table 9.

Table 9 AMASS Documentation

Document Number	Document Title
6-00323-01	*Infinite File Life* **Note:** This book is not included in the product packaging and is not available in print. However, it is included as a PDF file on the CD-ROM and can be printed from Acrobat Reader or it can be ordered from Quantum. IFL is optional.
6-00024-01	*Quick Reference Guide*
6-00025-01	*Accessing Storage Devices*
6-00026-01	*AMASS Overview*
6-00027-01	*Installing AMASS*
6-00028-01	*Managing the AMASS File System*
6-00029-01	*Errors and Corrective Action* **Note:** This book is not included in the product packaging. However, it is included as a PDF file on the CD-ROM and can be printed from Acrobat Reader or it can be ordered from Quantum.
6-00030-01	*Application Program Interface (API) Guide* **Note:** The API Guide is sold separately.

Document Number	Document Title
6-01238-02	*AMASS for UNIX Version 5.6 Addendum* **Note:** This document is available as a PDF file on the product CD, or it can be downloaded from the Quantum web site at: www.quantum.com
6-00032-02	CD Booklet

Contacting Quantum

More information about this product is available on the Customer Service Center website at www.quantum.com/csc. The Customer Service Center contains a collection of information, including answers to frequently asked questions (FAQs). You can also access software, firmware, and drivers through this site.

For further assistance, or if training is desired, contact the Quantum Technical Assistance Center:

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