

Archive Appliance

Published Product Release Notes

Release Details	
Release Name	Archive Appliance Software
Release Note Number	15
Release Version	4.20.31 (MD5: 10ade317ef5126e3759f5e04abaa940c)
Software Release Date	October 21 st , 2013
License Release Date	October 7 th , 12:00:00 UTC
Release Type	Full release
UDO Drive Firmware Version	UDO1 U06C and UDO2 W06D H07 and G07 (Midrange-Gx) G05e/H06e/6.40
Documentation Version	Administration Guide 810-102532-04 Rev C Software Upgrade Guide 810-103029-03 Rev D

Product Enhancements	
New Feature/Enhancement	Description/Benefit
Support for A12RP (S12-400R) hardware configuration	Support for A12RP server, with software RAID controller, no SSD's, and Barracuda SATA drives. This configuration will be introduced on standard Archive Appliances and utilized for field replacements of A12 SMS's.
Support for new Enclosure X8SI6-F	Support for LSI RAID controller, SAS drives, USB boot flash, multi-core CPU, and internal SSD drive for disk buffer
Support for ATTO ExpressPCI SCSI adapter	New SCSI HBA for library/UDO connectivity
Environmental Alarm confirmation through library keypad interface	User has to acknowledge alarm to silence it.
Background recall of Archive(s) and media	Recall entire archive from UDO media onto RAID cache. Also allow recall of individual media or media side.
ACL and attribute replication	Full replication of file meta data (optional)
Incremental data replication	Avoid rescan of file system by only replicating updates.
Allow passive replicate to become active	Allow passive replica to become writable with a single button click.
Support 2/3 drive configuration with E12 enclosure	Allow E12 to support a single hard drive mirror.
USB boot device support for PDSM4	Allow replacement of IDE boot device with USB flash. Note that a USB adaptor is required.

4.20.31 – Software Changes

	Change ID	Category	Descriptive Notes
1	378	Migration / Recall	In some circumstances, the Single Volume Limit was not being honoured and a file could span multiple pieces of media.
2	1185	Install / Startup	In rare cases, when a system is reset, at boot time, the incorrect device could be utilized.
3	1236	Install / Startup	At installation time, installation could be halted due to insufficient space. The calculation has been adjusted.
4	1231	Licensing	When a replacement flash is installed, the current license key information is now preserved and restored when required.
5	1230	Media Management	Improvements in handling SCSI bus timeout conditions have been implemented, where an automatic retry is attempted rather than immediately returning an error to the application
6	1243	Notification	In rare cases, failed HDD's within the RAID subsystem could occur with no accompanying SNMP alert. SNMP alerts are now issued in this case.
7	1157	RAID	To minimize system resource utilization during RAID message logging, the event capture log for this resource has been limited to the most recent 100 messages.
8	1239	Support and manufacturing features	A new flash modification now, during maintenance mode, when a flash replacement occurs, validates the current OS version of the AMS software that is installed, to prevent potential issues.
9	1168	UI Look n' Feel	Label changes on the CPU fan alerts, between varying SMS's, have been modified to ensure accuracy.

4.20.29 – Software Changes

	Change ID	Category	Descriptive Notes
1	1175	Backup/ Recovery	During the media resync stage of a recovery some files may not be recovered if during migration some specific write errors occurred (e.g. Auto reallocation error). This change will ensure that all files after the write error are recovered.
2	1174	Hardware Support	If a rare 0x0C or 0x02 auto relocation error occurs, the drive log is extracted and the offending drive is disabled.
3	1060	Install/ Startup	Allow installation to handle USB boot device (i.e. sdx) as well as IDE device (i.e. hda) on PDSM4
4	1042		During boot-up the boot device is located using a number of methods. The primary method is now the boot label, ensuring support with the PDSM4 motherboard.
5	912		4.20 Maintenance mode UI needs to be updated to allow upgrade to future software releases that may include higher level kernels, requiring support for a 2-phase install process
6	1173	Migration/ Recall	If any errors occur during the enumeration of files and media, the error is handled and the process is allowed to complete.
7	1136		Do not abort the packing of a migration job on receipt of a meta-data change. Continue to pack the migration job and migrate the meta-data change in a subsequent event
8	1070	Network	Network usage setting, when changed, are now persistent across reboots.
9	1093	Notification	Add retry logic to email notification delivery. In some cases the email connection is not terminated causing subsequent emails to fail. The email delivery will now retry until the previous SMTP connection has timed out to ensure notification delivery.
10	1165		Change RAID naming and notify when a RAID rebuild has been completed.
11	1069	RAID	All Volume Group details on the E12 enclosure, specifically the RAID details, are displayed and visible.

12	1068		Ensure that the LVM (Logical Volume Manager) does not scan Spare or non-RAID drives for volume information.
13	1059		Display USB flash as a Flash device, not a RAID drive, on the Storage Devices Page
14	940		Support 2/3 drive configuration with LSI RAID controller (E12).
15	944		After a clean slate of the drives, the hot spare drive status is now removed to facilitate reconfiguration as required.
16	949		Trace BBU status by monitoring the internal RAID log and the "Battery Replacement required" field. A battery failure will now be visible on the UI status page, email notification and keypad display
17	1072	Support and manufacturing features	Maintenance system volume diagnostics now runs without failure when "system volume not found".
18	1130		Make library and UDO visible in Maintenance mode, thereby enabling keypad display and allowing firmware upgrade. This change has no impact on other functionality
19	1163	UI Look n' Feel	Providing added information for ease of understanding
20	1164		Relocated the RAID Alarm switch in the UI, making it much more visible.
21	1071		Sort Offline Media request page in reverse order (most recent first).

4.20.23 – Software Changes

	Change ID	Category	Descriptive Notes
1	685	Backup/ Recovery	Support service operations it is useful to disable the backup and ensure that that the existing backup does not get overwritten.
2	475		Set SSM_FSCCHECK_IGNORE_DELETED environmental variable before invoking ssm_fsc
3	548		Media is rotated on each full backup.
4	350		Check that archive ID matches between backup and archive before overwriting.
5	176		Delete of share and archive volume are initiated as two separate operations.
6	816/ 817		Splits (> 4GB) are resync'ed into the FSC database.
7	689		Verify presence of all mounted volumes before running a backup..
8	195	File System Catalog	Compact attribute file utility will only be run when SSM is stopped. The old attribute file is preserved.
9	773	Hardware support	Relocate diskbuffer from RAID to SSD and back again. relocate_diskbuffer –reset to SSD relocate_diskbuffer to RAID
10	629		Add support for ATTO SCSI HBA
11	582		Display environmental alarms on library keypad and present user confirmation prompt for acknowledgement.

12	546		Accomplished SSD validation.
13	523		Set OpnExport to true on Library Special Modes Page - G-Series as this is no longer the default.
14	518/ 507		"Minimum battery time remaining before shutdown" set via UPS GUI
15	497		Adjust SMS voltage limits to recommended setting.
16	493		1.8V rail is now monitored by SMS.
17	864		Changed fan labelling for SMS.
18	476		Serial number setting functional with and without slot licensing.
19	786	Install/Startup	Ensure winbind_domain_id file is removed before AA leaves production.
20	630		Add new init script to start system volumes in SETUP mode as part of boot up into maintenance mode.
21	675		Start and stop sequence ensures that all network service are stopped before SSM.
22	421		Restore sysman.policy.
23	708		Change upload in normal mode without duplication of the ISO creating more space for uploads.

24	692		Remove unnecessary enumeration of device list in /dev.
25	661		Clean_slate command has been reviewed and simplified. We now only have a plain "clean_slate" or "clean_slate /dev/sda"
26	827		New pre-condition check to ensure that installation can only proceed if all volumes are successfully mounted.
27	640		Time zone tables have been updated.
28	838		Eliminate call of power_down from the shutdown init script.
29	837		Eliminate power down command on the Ent-G library.
30	528	Licensing	License notification updated for clarity.
31	729		Add ssmmedium option to list media keys for barcodes.
32	634		If the inventory is not successful results are ignored and current media status is retained.
33	439	Media Management	Media type must match configuration otherwise the media is ejected.
34	95		Format unit scsi command.
35	740		Optimize omm_monitor query by using a temporary table.

36	597		ssmmedium --replace removes media but not FSC on offline media.
37	624		Modified null entry for media request.
38	520		Provide method for media to exist in the RMDB which do not have any volumes.
39	793		Verification of pools appearing mixed across file copies.
40	134		Ignore case of barcode label when searching on UI.
41	66	Migration/ Recall	Disk buffer increased and tested with large files.
42	733		Prevent released files from ever being migrated.
43	599		Remove redundant extended attribute from attribute stream to reduce size of attribute file.
44	563		Verify existence of all necessary database files before starting ssm. SSM file to start if one or more files are missing.
45	547		Recall one or all Archives onto the RAID cache. Note existence of new ssm log file: background_recall_errors.log and background_recall_<arc name>.log
46	530		Allow diskbuffer to be moved between SSD and RAID buffer. If SSD fails SSM will attempt to relocate the buffer to the RAID.
47	438		Recall one or both sides onto RAID for a specific disk.

48	717		Improved handling of files with generations > 256.
49	712		Very large files may be split across more than 2 pieces of media.
50	686		Data journaling is utilized on the new enclosure while the legacy systems still use synchronous writing. New trace.cfg variable SSM_DISABLE_HSM_JOURNAL_SYNC
51	684		RM allocates spare media on attached library is the same as the host library
52	660		Significant improvements have been made to handle large record lists.
53	568		SSM timing improved when recalling a large number of files.
54	556		Implement data migration in the ssmcheck only if the attributes have changed.
55	378		SSM to recognize "in use" media as available for migration.
56	833		Reduced rebuild cache size.
57	869		Retain temporary table and run backup after omm_monitor has been stopped.
58	870		Manage truncate requests and ensure that a file is not offline.
59	797		Enable dos attributes in /etc/smb.conf - store dos attributes = yes

60	513	Network	Error condition updated.
61	620		Updated to allow removal of CIFS from IP access.
62	613		Upgrade to current version of NTP to include latest security fixes.
63	55		Update UI to reflect configuration checkbox changes.
64	569	Notification	Add notification for events generated by RAID controller board.
65	814		Separate CPU and Enclosure fan notification for PDSM4+ hardware.
66	510		Enhance error reporting and notification for replication.
67	799		Change log message from "PLASMON" to "ASTI".
68	734		Improvement of e-mails sent to all configured recipients.
69	859		Retry DC connection desensitized.
70	854		Sender and authentication e-mail notifications are now optional.
71	625		New network driver has been included into the OS to provide support for the new enclosure.

72	539	Performance	SMP support with hyperthreading. Note that the UI reports the new CPU, also the “top” command will show 4 cores.
73	538		New support for IPMI, raid controller board, new network controller, SSD, USB flash stick (boot device).
74	529		Kernel, OS and UI integration of hardware RAID controller with BBU. Predefined RAID configuration (4,8,10,12 disk) are supported as part of the installation process. <i>NOTE: status summary of RAID is included in log bundle (/tmp/lsi_raid)</i>
75	701	RAID	Ensure that uninitialized SATA drive is recognized as functional.
76	537		Add RAID support to Diagnostics page. <i>NOTE: status summary of RAID is included in log bundle (/tmp/lsi_raid)</i>
77	872		On bootup /boot/raid.cfg is created from preserving the controller configuration status.
78	714		The diskbuffer and the part volumes now use EXT as the default file system. EXT is more flexible and better suited for these volumes.
79	576	Replication	Single button to switch passive replicate to become active (i.e. writable)
80	573		Single button to start replication
81	517		Replicate Extended attributes, if required in the future
82	516		Replication owner, owner group and ACLS while maintaining the correct ID mapping.
83	504		Command script to invoke replication: start_replication .

84	503		Performance improvement of replication process by utilizing HSM journal files. This avoids having to traverse the file system for each replication attempt.
85	878		Ensure that winbind id mapping files exist on both replicas.
86	876		Upgrade to enable ACL replication create the file /etc/src_repl.conf. To turn off this feature remove this file. By default ACL/Permission replication is NOT enabled.
87	337		Replication from managed to unmanaged volume start.
88	702		Ensure that if the AA is joined to the domain, it obtains the time from its domain controller.
89	508		New samba configuration setting.
90	790	Samba	CIFS tests of DC domain to match the joining domain on lookup.
91	887		Configuration option for /etc/samba/smb.conf to ignore trusted domain.
92	784		Improved handling of local and domain users.
93	501		Blocking non-essential ports which have a listening service. Remove guest access and well-know user from CIFS.
94	498	Security	How to create a host certificate for HTTPS access.
95	499		Renew default HTTPS certificate.

96	496		Explicit blocking of ntp, firebird and java port.
97	731	Self test	Self test feature added to explicitly identify disabled UDO drives.
99	585	Support and manufacturing features	Clearly state what clean_slate is about to do. Double prompt for extra safety.
100	775		Fixed and validated, SCSI IDs remain the same when drive is turned off and on.
101	802		Firmware supporting slot licensing. If the software is told that slot licensing is not available it creates a state file <i>/tmp/no_license_support</i> .
102	772		Moved UDO log extraction code to save before power down.
103	746	UI Look n' Feel	Status page renders more quickly.
104	583		Mute button appears on the "System – Environment" page to allow muting of alarms.
105	560		Allow timeout of library related functions to indicate "System busy".
106	761	Web Services	Shutdown API inactive with Windows .NET .
107	494		Disable weak cipher on HTTPS connection.

Installation Note

New users should refer to the “Archive Appliance Installation Guide” (810-103403-00 Rev B) for setup instructions.

Users who are upgrading from an earlier release should refer to the “Archive Appliance System Upgrade Guide” (810-103029-03) for upgrade instructions.

Supported Upgrade Paths

Users can upgrade to AA 4.20 from these earlier releases:

- 2.11.07 (via interim image SNAZ-OS-4.08.25-Interim.tgz)
- 4.06.19 (All Patches)
- 4.08.21 (All Patches)
- 4.08.25 (All Patches)
- 4.11.39 (All Patches)
- 4.12.43 (All Patches)
- 4.20.23 (All Patches)
- 4.20.29 (All Patches)