

# Plasmon Archive Appliance

## Product Release Notes

### Release Details

Release Name:	UDO Archive Appliance
Release Note Number:	RN-7
Release Version:	4.11.39
Release Date:	23 <sup>rd</sup> July 2008
Release Type:	Full
Documentation Versions:	Installation Guide (810-103403-00 Rev A) Administrator's Guide (810-102532-03 Rev A) System Upgrade Guide (810-103029-03 Rev A)

### Support Matrix

Release 4.11.39 supports the following controller and SATA drive configurations  
(X=supported)

Controller:	Supermicro				Winboard
	2	3	4	8	2
SATA Disks					
Appliance:					
AA16					X
AA32					X
AA80	X			X	X
AA174	X			X	X
AA238	X			X	
AA438	X			X	
AA638	X			X	

Release v4.11.39 has minimum firmware requirements for the following devices:

Device	Minimum firmware
Enterprise-G	6.20
Gx – 174 slots	H06e
Gx – 80, 32, 16 slots	G05e
UDO1	U06
UDO2	W06a



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## Installation Notes

New users should refer to the "Archive Appliance Installation Guide" (810-103403-00 Rev A) 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 v4.11 from these earlier releases:

- 2.11.07 (via interim image SNAZ-OS-4.08.25-Interim.tgz)
- 4.06.19
- 4.06.19 PL1
- 4.06.19 PL2
- 4.06.19 PL3
- 4.06.19 PL4
- 4.06.19 PL5
- 4.06.19 PL6
- 4.08.21
- 4.08.21 PL1
- 4.08.25

## Product Enhancements

New Feature/Enhancement:	Description/Benefit:
UDO Guard	Media in the Archive Appliance can now be locked against unauthorized access by enabling UDO Guard. There are new GUI pages for enabling UDO Guard and setting the appropriate keys plus updates to the recovery pages to allow UDO Guard keys to be entered by the user in the case of a recovery from media. There are changes to the initialisation, migration and recall of media to lock and unlock UDO Guarded media as appropriate
Remote Access	The 4.11 release implements new functionality to allow external access to the command line and GUI plus remote monitoring of system events, upload of software logs. Of special value is the ability to upgrade Archive Appliance software from a remote location. This feature will greatly improve the convenience and flexibility of software maintenance. There are significant security features built into the remote access functionality to prevent unauthorized access.
Attached Library Modes	The 4.11 release introduced the pool per library mode for attached libraries. In this mode the media in the host library are always assigned to the primary pool and the media in the attached library are always assigned to the secondary library. The existing slot overflow mode for attached libraries has been updated to balance the media utilization between the two libraries when there are free resources in each.



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New Feature/Enhancement:	Description/Benefit:
Network Backup and Restore	Backup and restore of the system configuration and databases over the network is now available. There is the option of NFS or CIFS as the network transfer protocol. There are changes to the backup configuration and recovery GUI pages to support this feature.
Configuration Wizard	When logging into the AA GUI after a clean install the user is presented with a configuration wizard. This wizard will take the user through the configuration of the essential elements (e.g.: volumes, shares) required to make the AA operational.
Create Personality	The user now has the option to capture the system configuration by creating a System Personality File via the Diagnostics – System Information page.
Individual FSC Recovery from Media	An additional recovery mode has been introduced in the 4.11 release to allow the recovery of an individual FSC from media without requiring a full recovery from media.
16TB Volume Size Limit	In pre 4.11 releases the maximum size of a logical volume is 2TB. This limit has been removed in the 4.11 release. The theoretical maximum size is now 16TB.
RAID Improvements	In 4.11 it is possible to configure the SATA drives in a RAID-6 configuration, giving protection against a double disk failure. (RAID-5 remains the factory default configuration for appliances with 8 SATA drives.) Secondly, RAID6s now have a 16TB maximum size limit (consistent with the new maximum volume size). Finally, this release adds a background RAID verification process (known as “disk scrubbing”). The disk scrubbing process will check the integrity of RAID sectors in the background.
File Recall Improvements	<p>Prior to this release, files are recalled onto the RAID in their entirety before any part of the file is returned to the client. This can cause problems for large files since the delay between the client requesting the file and then receiving first byte of the file can be long enough to cause a network timeout.</p> <p>In the 4.11 release the recall of files has been improved to recall the file in small sections, with each section of the file being returned to the client as soon as it is available on the RAID. This ensures a consistent time to the first part of the file irrespective of the overall size of the file.</p>
Active Directory Integration Improvements	<p>The following changes enhance the Appliance’s integration with Active Directory Services:</p> <ul style="list-style-type: none"> <li>• A new diagnostic tool on the CIFS Authentication GUI page helps to identify problems with joining the domain.</li> <li>• Option to configure 1 or 2 preferred domain controllers on the CIFS Authentication GUI page.</li> <li>• The AA will now automatically sync the time with the AD domain controller when it joins the domain.</li> </ul>
User and Group Browsing Improvements for ADS and LDAP	This release introduces real-time browsing of user and group lists on AD or LDAP servers. The Web UI now supports advanced user search criteria and can retrieve up to 1,000 entries from the authentication service for a given search.



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<b>New Feature/Enhancement:</b>	<b>Description/Benefit:</b>
Added 'Insecure' Option to NFS	The 'insecure' NFS option is now available on the NFS tab of the shares page. This option allows client to connect from port numbers higher than 1024. This is required by some client applications.
Altering the Number of Copies	In release 4.08 there was no GUI option to increase the number of copies for an archive. In 4.11 the number of copies can be increased from 1 to 2 only.  If the number of copies is reduced any open media in the newly disabled pools will now be automatically closed.
Reboot on Date/Time Change	Changes to date and time can cause problems if the change is not propagated to all processes. To ensure proper time coordination amongst services, the AA now requires a reboot following any change to the date/time.
System Volume Size Increase	The system volume for new installations has been increase to 4GB.
Improvements to the Network – Configuration UI	This release reorganizes the Network - Configuration Web UI to make this aspect of configuration more efficient and intuitive. The enhanced UI also adds a 'Ports' tab to support end-user edits to HTTP and SSH ports.

## Resolved Issues

### Alerts and Notifications

<b>Area of Resolution:</b>	<b>Details:</b>
SNMP Test Alert (ID 11618)	<b>Issue:</b> The Test action for SNMP configuration always succeeds, even when the trap receiver is not accessible over the network. <b>Resolution:</b> User is now alerted to verify that SNMP service has received the test alert.
Redundant alerts during system shutdown or reboot. (ID 16707)	<b>Issue:</b> The system sends redundant alerts when shutting down or rebooting. <b>Resolution:</b> Notifications regarding RAID and Logical Volume stop failure are no longer sent.

### API

<b>Area of Resolution:</b>	<b>Details:</b>
Web API Service (ID 11508)	<b>Issue:</b> File names with chinese/hindi characters on AA shares cause the Filestatus API call to fail. <b>Resolution:</b> The issue has been fixed in this release.

### Data Migration and Recall

<b>Area of Resolution:</b>	<b>Details:</b>
Deleting a parent directory during recall causes SSM service failure (ID 11336)	<b>Issue:</b> HSM fails if a user deletes a file's parent directory after initiating a recall for that file. <b>Resolution:</b> The HSM failure no longer occurs under these conditions.



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Area of Resolution:	Details:
Buffer allocation not freed by resource manager (ID 16662)	<b>Issue:</b> The Resource Manager does not release reserved buffer space in the event of an incomplete migration or migration copy job. <b>Resolution:</b> The Resource Manager now correctly manages buffer reservations.
PM aborts when Migration Copy encounters a file with more than 255 generations. (ID 16665)	<b>Issue:</b> Even though the FSC is correct and the FSC consistency checker successfully passes, the file system event recovery cannot handle more than 255 generations of a file. <b>Resolution:</b> This limitation has now been removed. This defect is only exposed in v4.08.21.
SSM Compliant WORM archive truncates changed files. (ID 16666)	<b>Issue:</b> Attempts to change a file on a Compliant WORM archive after the 'write commit period' has expired will result in the file's truncation to 0 bytes. <b>Resolution:</b> This defect has been fixed in this release.
'No spare locations' causes migrations to fail (ID 16759)	<b>Issue:</b> Occurrence of 'no spare locations available' on UDO media can cause migrations to fail. <b>Resolution:</b> This is an extremely rare error condition on the media. SSM now handles it correctly.
Recall of 20GB files fails (ID 16768)	<b>Issue:</b> The AA does not recall files of 20GB or larger. <b>Resolution:</b> The issue has been fixed in this release.
Recalls not enabled after recovery from media (ID 16723)	<b>Issue:</b> Recalls are not immediately enabled after recovery from media. The jobs fail until new files have been written to the recovered archive. <b>Resolution:</b> The issue was introduced in 4.08.21 and has been fixed in this release.
Files with no names are migrated (ID 16764)	<b>Issue:</b> Files without a file name are migrated to UDO. <b>Resolution:</b> With release v4.08.25 and higher, this is no longer allowed. If a file name is not present the file will not be written to optical media until the file name becomes available.
Migration can write to closed media after resync (ID 16778)	<b>Issue:</b> In migrations run after disaster recovery, data can be written to 'closed' media. <b>Resolution:</b> With this release, logic has been added to ensure that no data can be written to volumes with two filemarks.

## Diagnostics

Area of Resolution:	Details:
Cannot collect UDO log bundles when one or more devices are offline. (ID 16676)	<b>Issue:</b> No UDO logs can be collected from the Web UI Diagnostics - Log bundle function if any UDO drive or library is offline. <b>Resolution:</b> With this release, the feature will collect logs from all online devices. Devices that are offline or in an error state are still not available for log collection.
Cannot collect UDO log bundles from a dual-library configuration. (ID 16677)	<b>Issue:</b> UDO log collection fails when attempted on a dual-library configuration. <b>Resolution:</b> With this release, log collection succeeds for all devices in both libraries.

## Keypad

Area of Resolution:	Details:
Keypad Daemon does not start (ID 11107)	<b>Issue:</b> The keypad daemon cannot be started at the command line if a UDO drive is in an error state. <b>Resolution:</b> The issue has been fixed in this release.



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Area of Resolution:	Details:
Time zone change not shown in keypad (ID 11201)	<b>Issue:</b> Time displayed in the Appliance keypad is not updated when the user changes the time zone for the system. <b>Resolution:</b> Because a reboot is now required when the timezone is changed, the keypad now updates the time correctly.
Keypad fails to start when library inventory takes longer than 3 minutes. (ID 16721)	<b>Issue:</b> The keypad service does not start after reboot when it takes longer than 3 minutes for SSM to start. The long start time is due to library inventory activity. <b>Resolution:</b> The service now waits for up to 15 minutes to allow the library inventory to complete and for SSM to start.
Presence of network bond prevents changes to link speed and mode. (ID 16777)	<b>Issue:</b> Changes to Link Speed/Mode performed via the keypad do not take effect when a network bond is configured. <b>Resolution:</b> The issue has been fixed in this release.
IP of network bond not shown in keypad. (ID 16774)	<b>Issue:</b> The AA keypad does not show the IP address when a network bond is configured. <b>Resolution:</b> The issue has been fixed in this release.

## Network Management

Area of Resolution:	Details:
Network - IP Configuration (ID 11944)	<b>Issue:</b> After changing an Appliance's IP address through the 'Network - Configuration' page, notifications continue to print the old address. <b>Resolution:</b> The issue has been fixed in this release.

## RAID and Volume Management

Area of Resolution:	Details:
Storage – Volume Creation (ID 11824)	<b>Issue:</b> GUI displays cryptic error when user attempts to create a storage volume with illegal characters in the name: "CORBA::INV_OBJREF#IDL:omg.org/CORBA/INV_OBJREF:1.0" <b>Resolution:</b> The Web UI now reports 'Illegal logical volume name'. <b>Note:</b> The supported character set is '0-9', 'a-z', and 'A-Z'.
Auto-repair of SSM housekeeping volumes (ID16775)	<b>Issue:</b> SSM housekeeping volumes can be corrupted during shutdowns due to power failure. <b>Resolution:</b> The system now automatically checks and attempts to repair corrupted SSM volumes.

## Share Management and Usage

Area of Resolution:	Details:
Editing NFS shares (ID 16860)	<b>Issue:</b> Saving edits to an NFS share in the Network - Shares page causes the GUI to hang when a host to which the Appliance cannot connect is listed in the 'allow hosts' field. <b>Resolution:</b> The issue has been fixed in this release; the Web UI page no longer appears to hang under these conditions.



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Area of Resolution:	Details:
Permission errors when access controls contain unknown SIDs. (ID 16679)	<p><b>Issue:</b> The AA returns permission errors to CIFS clients when Windows NT access controls on a file contain unknown SIDs in the user or group ID.</p> <p><b>Resolution:</b> CIFS server options have been changed to allow users to manage files with unknown SIDs on the share.</p>

## Software Installation and Upgrade

Area of Resolution:	Details:
Installation/Upgrade (ID 10797)	<p><b>Issue:</b> When installing or upgrading software on an Archive Appliance Express v4.06 or later, an 'rpm' process occasionally hangs. End users will see this in the GUI as a 'stalled' install where the status bar stops showing progress.</p> <p><b>Resolution:</b> An upgraded 'rpm' binary resolves the issue in this release.</p>

## SSM Resource Management

Area of Resolution:	Details:
The close-udo-1 script does not close open-offline media (ID 16779)	<p><b>Issue:</b> The close-udo-1 script does not prompt user to add open-offline media as part of its 'close UDO1 media' routine.</p> <p><b>Resolution:</b> The script has been updated to request addition of open-offline media.</p>
UDO drive set to eject-prohibit mode (ID 16734)	<p><b>Issue:</b> The SCSI subsystem sets UDO drives to 'eject prohibit' mode, causing drive eject failures and SCSI bus resets.</p> <p><b>Resolution:</b> With this release, the AA always sets UDO drives to 'eject-enable' prior to media unload operations, and the SCSI driver has been updated to repair a known trigger for setting this mode.</p>
Improved response to library hardware errors. (ID 16661)	<p><b>Issue:</b> The Archive Appliance does not disable its UDO changer(s) in response to a critical hardware failure, with the result that SSM can get stuck in an endless error recovery loop.</p> <p><b>Resolution:</b> With this release, SSM disables the UDO changer(s) and the UDO drive(s) contained therein when it receives five consecutive errors related to either</p> <ul style="list-style-type: none"> <li>a) SCSI connectivity failure</li> <li>or</li> <li>b) media load/unload failures</li> </ul>
Wrong drive data used to test for dirty drive condition. (ID 16767)	<p><b>Issue:</b> SSM uses the wrong drive statistics to test for a dirty drive condition when CWO medium is loaded.</p> <p><b>Resolution:</b> The issue has been fixed in this release.</p>



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## SSM Utilities

Area of Resolution:	Details:
After FS recovery, 'ssmcheck' does not recover file changes that were not originally detected by the HSM filter (ID 16760)	<p><b>Issue:</b> Changes to file data or access controls are not migrated to UDO media under the following sequence of events: a) a file system recovery is run; b) a file changes; and c) SSM is restarted before the file change is recorded in the HSM database. This scenario could happen, for example, if, after a file system recovery, the system undergoes a 'dirty shutdown' immediately after changing many thousands of ownership controls on archived data.</p> <p><b>Resolution:</b> The 'ssmcheck' utility now correctly recovers these events.</p> <p>Note: File changes that had not been migrated due to this defect will now be migrated on first starting SSM after upgrading to v4.11.</p>
SSM stop failure leaves migrations and recalls disabled. (ID 16733)	<p><b>Issue:</b> Requests to stop the SSM service fail when the archive is in use, and this leaves migrations and recalls in a disabled state.</p> <p><b>Resolution:</b> The logic used to stop SSM has been changed so that jobs are not disabled until it is clear that the services can be stopped successfully.</p>
Replaced media not removed from RMDB (ID 16780)	<p><b>Issue:</b> Replaced media are not removed from the RMDB even after they have been physically taken offline.</p> <p><b>Resolution:</b> The issue has been fixed in this release.</p>
False error reported during FSC consistency check (ID 16762)	<p><b>Issue:</b> The 'ssm_fsc -c' command reports a false error when it encounters an NSC entry with migID=0. This is a harmless inconsistency in Namespace Catalogue (NSC, part of the File System Catalogue), which arises when a create file is immediately deleted. Because of this error, backups do not take place.</p> <p><b>Resolution:</b> The inconsistency can only have been introduced in an AA running a v1.x release and was exposed in later improvements to the ssm_fsc utility. Releases v4.08.25 and higher will no longer report this condition, thus enabling backups to continue.</p>

## System Backup

Area of Resolution:	Details:
Backup Scheduling (ID 11603)	<p><b>Issue:</b> After a user changes the time zone or the system time, the backup jobs will continue to run at the previous time setting until the 'crond' daemon has been restarted.</p> <p><b>Resolution:</b> Changes to date, time, or time zone now require a system reboot. Backup schedules will now stay consistent with system time settings.</p>
Data Protection – Backup page (ID 11515, 11927)	<p><b>Issue:</b> The 'Data Protection - Backup' page reports failed jobs as 'Complete'. However, correct information is sent to user via the Appliance's notification services.</p> <p><b>Resolution:</b> Backup failures are now reported correctly in the status page.</p>
Backup fails with [Errno5] Input/Output error (ID 16663)	<p><b>Issue:</b> Backups fail with message '[Errno 5] Input/output error' after SSM services have been restarted on the command line (i.e. by running 'ssm restart').</p> <p><b>Resolution:</b> This vulnerability has been fixed in this release.</p>



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Area of Resolution:	Details:
Backup erases disk before determining that new backup will fit. (ID 16728)	<b>Issue:</b> A full system backup to UDO media will erase the backup disk before it has determined that there is enough space on the disk for the new backup. If the new backup will not fit on the media, then no full backup copy exists for recovery. <b>Resolution:</b> Backup media are not formatted for full backup until after the system determines that sufficient space is available.

## System and Archive Recovery

Area of Resolution:	Details:
Restore doesn't restart network and NTP services (ID 9421)	<b>Issue:</b> Following a restore the network and NTP configurations are restored, but the services are not restarted. <b>Resolution:</b> Services are now started correctly.
Recovery from Media, Full Recovery from Backup (ID 9534)	<b>Issue:</b> During the media resynchronization phase of a full recovery operation, the totals for media completed and media left to resynchronisation are incorrectly displayed in the GUI. Totals are displayed correctly once the resynchronization is complete. <b>Resolution:</b> Media counts are now dynamically updated.
Recovery from Backup (ID 11547)	<b>Issue:</b> On a multiple archive system, the GUI can offer users the option to perform a FSC recovery of a single archive when it shouldn't. This situation can occur when a full recovery from backup is interrupted and the system is rebooted before all media in all of the archives have been resynchronized. <b>Resolution:</b> Support for single FSC recovery has been added in the v4.11 release. This type of recovery is now a valid option.
Full 'ssmvar' volume during recovery from media (ID 11911, 12217)	<b>Issue:</b> During full system recovery from media, the /var/opt/ssm/ volume can become full. This causes longer recovery times and can result in UDO media being marked as 'DIRTY' or 'UNRELIABLE' <b>Resolution:</b> The 'ssmvar' volume can no longer become full during recovery from media. All media now have correct status when recovery completes.
Cannot remove dirty media during recovery from media (ID 12243)	<b>Issue:</b> The keypad does not eject UDO media for cleaning when they have failed to be resynched and have been marked as 'DIRTY' during a recovery from media operation. <b>Resolution:</b> The issue has been fixed in this release.
Replication service is not started after recovery from backup (ID 12245)	<b>Issue:</b> The Replication service is not restarted automatically after a recovery from backup operation. <b>Resolution:</b> The issue has been fixed in this release.
Enhancements to SSMLost+Found directory. (ID 16708)	<b>Issue:</b> The real file names are not preserved for files and directories that are restored to the SSMLost+Found directory after a recovery from media operation. Instead, the SSM File ID is used. (Files and directories are restored to SSMLost+Found whenever a parent directory for the objects has not been found on media. This can happen when not all media have been supplied to the appliance during recovery.) <b>Resolution:</b> With this release, the SSM File ID is used to identify only the missing parent directory. The real names of the child objects are now restored.



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Area of Resolution:	Details:
Recovering files with no name (ID 16763)	<b>Issue:</b> Files with no name appear in the File System Catalog (FSC) after recovery from media operations. This is a rare occurrence, and the result is that such files can only be recalled with the assistance of Plasmon support. <b>Resolution:</b> With this release, recovery operations will apply the file name from previous generations to the file, thus allowing the files to be recalled through normal operations.
PM failure during media resync (ID 16765)	<b>Issue:</b> The PM fails if errors occur whilst copying a UDO disk's FRI data to the FSC during the media resync phase of recovery. <b>Resolution:</b> With this release, the error handling has been improved such that the PM no longer fails under these circumstances.
Resync must be able to read data past invalid 2nd filemark (ID 16766)	<b>Issue:</b> Support recovery of data during resync if it has been written beyond the second filemark on WORM media. This fix repairs the effects of Issue 16778.
Replication schedule disabled (ID 16773)	<b>Issue:</b> Recovery from backup disables the replication schedule. <b>Resolution:</b> The issue has been fixed in this release.
Recovering duplicate file system objects (ID 16761)	This fix is a robustness enhancement: During file recovery, if the AA encounters two file system objects that have the same absolute path and/or file name, the system will recover the file with the larger fileID (i.e., the most recently migrated version of the file).

### Third-Party Authentication

Area of Resolution:	Details:
Incorrect LDAP server password causes drop in performance for network share and admin tool access. (ID 10927/15091)	<b>Issue:</b> Setting an incorrect password for the LDAP server can cause a drop in performance for share access. <b>Resolution:</b> The Appliance now checks that a valid user ID and password have been entered before the configuration is saved.
Display scalability of Network – Users page (ID 11769)	<b>Issue:</b> The 'Refresh' button in the Network - Users page does not always retrieve all users from large Active Directory or LDAP databases. This can happen on networks with high latency or if the winbind connection is not available. <b>Resolution:</b> The addition of real-time user browsing of AD and LDAP databases resolves the issue in this release.

### User and Group Management

Area of Resolution:	Details:
Authentication (ID 11539)	<b>Issue:</b> Users with 'Web Administration - Read Only' permissions cannot access some information through the GUI that should be available. These include the System - Status page, the System - Services page, the Diagnostics - Systems Job page, and the Storage - Media Requests page. <b>Resolution:</b> The issue has been fixed in this release.



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## Web UI

Area of Resolution:	Details:
Web UI – Storage Devices – UDO Changer Info Page (ID 10961)	<b>Issue:</b> The Web UI displays library SCSI addresses in 'hexadecimal format' and does not show the library firmware version in the 'Diagnostics-Storage Devices-UDO Changer Info' page. <b>Resolution:</b> The issue has been fixed in this release.
Spare media count in the System – Status page includes 'free' media. (ID 11557)	<b>Issue:</b> The System - Status page displays count of Spare media + Free media in the Spare Media field, when it should show only Spare media counts. <b>Resolution:</b> The issue has been fixed in this release.
Missing firmware version in UDO Changer Info page (ID 16792)	<b>Issue:</b> The Web UI UDO Changer Info page does not display Firmware Version or Device Type when library is in error state. <b>Resolution:</b> The issue has been fixed in this release.
GUI – Storage – Media pages (ID 11278)	<b>Issue:</b> Storage - Media pages in the GUI will not paint correctly if the user clicks on the 'refresh' button continuously without waiting for the GUI to respond. <b>Resolution:</b> The issue has been fixed in this release.
GUI: Storage -> Online Media Page (ID 11496)	<b>Issue:</b> The GUI displays an ivd-error if the Storage -> Online Media page is refreshed immediately after adding a Data Disk through the Archive Appliance's mailslot. <b>Resolution:</b> The issue has been fixed in this release.
GUI: Storage -> Offline Media Page (ID 11511)	<b>Issue:</b> Refreshing Offline Media page results in Struts exception when Storage services are not running. <b>Resolution:</b> The issue has been fixed in this release.
The Web UI is accessible on port 8080 even though the port number has been changed. (ID 10933)	<b>Issue:</b> If the port number of the GUI is updated through the personality, port 8080 is still accessible. <b>Resolution:</b> port 8080 is no longer enabled by default.
Inconsistent display of 'unmigrated data' metrics (ID 16769)	<b>Issue:</b> Web UI data for unmigrated files is inconsistent in the case of partially migrated files. The size is shown as greater than 0GB, but the file count is 0. <b>Resolution:</b> The file count has been changed to include the number of partially migrated files.
Not all user and group data shown. (ID 16709)	<b>Issue:</b> The Web UI does not display local user data with UID below 500 or local group data with GID below 100. <b>Resolution:</b> With this release, the system displays all local user and group data except for those reserved for system use.

## Known Issues and Product Notes

### Alerts and Notifications

Issue:	Details and Workaround:
Low media alert does not specify which in a dual-library setup needs new media. (ID 16799)	<b>Issue:</b> The notification sent when an Appliance runs low on spare media does not specify which library requires more media in a dual-library configuration. <b>Workaround:</b> Consult the Storage - Online media page in the Web UI to determine where to add new media.



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## API

Area of Resolution:	Details:
The API does not send info on some media states. (ID 16884)	<b>Issue:</b> The API returns status OK when media status is really Dirty, Can't Unlock, Misplaced, or Needs Resync. <b>Workaround:</b> Consult the Web UI periodically to check for media with these status values.

## Data Migration and Recall

Issue:	Details and Workaround:
File Release Latency (ID 16789)	<b>Issue:</b> Archive Appliance exhibits high file release latency during periods of high CPU usage by SSM processes. Intensive writes to the user archives during data migration could result in file release delays. Possible impact: migrations and recalls will be suspended until the files are released. <b>Workaround:</b> reduce utilization to a safe margin (under 75%) by expanding the archive or by reducing both the high and low 'watermarks' for cache utilization.
Migration can stop if ssmlog volume reaches 100%. (ID 16850)	<b>Issue:</b> If the ssmlog volume becomes full it is possible that migrations may stop. There is a background process that deletes old logs files when the volume fills up so this situation should never occur. In the development of the software this condition was observed when debug was left running. Debug logs are not deleted by the background log process. <b>Workaround:</b> Delete the file(s) causing the volume full condition and restart ssm or reboot the system. In the alternative, expand the volume if space allows. The 'ssmlog' volume can be found under the Storage – Volumes – System Volumes page.
Appliance Suspends Core Operations when 'ssmpart' volume is full. (ID 16865)	<b>Issue:</b> The Archive Appliance will suspend migrations, recalls, or backups when the /var/opt/ssm/part volume becomes 95% full. Users will receive a notification in this event. <b>Workaround:</b> On A12 systems, the user can expand the 'ssmpart' volume (the volume can be found under the Storage – Volumes – System Volumes page). On A2 systems, this is an indication that the Appliance has reached operating capacity. Contact Plasmon Technical Support should this event occur.
New media are not immediately allocated to migration jobs. (ID 16808)	<b>Issue:</b> When media must be added to an appliance in order to migrate data, the job can wait up to an hour for SSM to initialize the new media. <b>Workaround:</b> Always maintain a ready supply of spare media in the library.
Renaming a symbolic link prevents it from being migrated. (ID 16851)	<b>Issue:</b> Renaming a symbolic link before it is migrated prevents the link from ever being migrated. <b>Workaround:</b> Wait until the file's SSM status changes from 'dirty' to 'online' before renaming it.

## Diagnostics

Issue:	Details and Workaround:
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<b>Issue:</b>	<b>Details and Workaround:</b>
UDO Log Collection (ID 16852)	<b>Issue:</b> Users cannot collect UDO logs from a drive or library that is offline. However, the Web UI does allow collection of logs from devices that are in working order. <b>Workaround:</b> None.

## File System Management

<b>Issue:</b>	<b>Details and Workaround:</b>
Files can be deleted from a WORM file system (ID 16855)	<b>Issue:</b> After file system recovery, any file can be deleted from a WORM file system before the write commit period expires. <b>Workaround:</b> Wait for timeout period to expire before bringing file system online.
Archives Shared over NFS or FTP might not mount properly. (ID 16857)	<b>Issue:</b> Archives shared over NFS or FTP do not mount automatically after this sequence: 1. Create NFS or FTP SSM shares. 2. Stop NFS and FTP services. 3. Stop SSM. 4. Start NFS and FTP services. 5. Now start SSM, and you will see SSM shares will not be mounted automatically. <b>Workaround:</b> Stop NFS and FTP services, start SSM, and then start NFS and FTP services.
CIFS/SMB Scalability (ID 16859)	<b>Issue:</b> The Archive Appliance does not allow users to create or copy file names longer than 99 characters in the unicode character set on file systems shared over CIFS/SMB. <b>Workaround:</b> None.

## Keypad

<b>Issue:</b>	<b>Details and Workaround:</b>
IP Configuration via Keypad (ID 16837)	<b>Issue:</b> Active IP address cannot be set or viewed in the library keypad when the eth0 network interface is disabled and eth1 is enabled. <b>Workaround:</b> Use the Serial Console or the Web UI to manage IP addresses.

## RAID and Volume Management

<b>Issue:</b>	<b>Details and Workaround:</b>
Deleting archive volumes (ID 16866)	<b>Issue:</b> The Archive Appliance allows users to delete archives when the Storage Services are not running. Doing so will leave configuration information about the archive in the system. <b>Workaround:</b> Storage services must be running before a user deletes an archive. Note: Contact Plasmon Technical Support for recovery help should this situation arise.



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## Replication

Issue:	Details and Workaround:
Replication Logging (ID 16867)	<b>Issue:</b> The replication log /var/log/_rep_<ArchiveName> reports transfer size and rate for compressed data. The log therefore does not reflect the true size or speed of a data replication job. <b>Workaround:</b> None. This information is provided for user reference.

## Share Management and Usage

Issue:	Details and Workaround:
Adding users to CIFS access list is an expensive operation. (ID 16805)	<b>Issue:</b> Adding a user to the access list for a CIFS share results in updates to the metadata on each file in the share. The result is two-fold: All updates will be migrated to media, and the Web UI will not allow further changes to the share's access list until the updates have completed. <b>Workaround:</b> Add a group to the access list instead of multiple individual users.

## Software Installation and Upgrade

Issue:	Details and Workaround:
Firmware upgrades overwrite 'Patch' versions. (ID 16868)	<b>Issue:</b> Installing drive or library firmware via the System - Update page resets the 'Patch Version' field to 0001 in the Diagnostics - System Information page. <b>Workaround:</b> After completing the firmware upgrade, use vi to edit /boot/patch_ver file to show the correct patch level. If the patch level is unknown it can typically be found by reviewing the /var/log/upgrade.log

## SSM Resource Management

Issue:	Details and Workaround:
Device Configuration via Library Keypad (ID 16853)	<b>Issue:</b> Changing the SCSI ID of a drive or library from the Appliance's keypad (using Drive addresses option) causes SSM to put the device into an error state. <b>Workaround:</b> Reboot the Archive Appliance after performing this action.
Device Recovery Procedures (ID 16678)	<b>Issue:</b> If any of drives 1 to 4 in an Enterprise G-Series library is powered off, then drives 5 and 6 are also powered off and their scsi id is set to 0. This issue will typically occur in the course of a recovery procedure following a device error. Resolution: The data structure in the SCSI mode select command has been corrected to include all drives in these libraries.
Incorrect media allocation in dual-library setup with 'Open Volume Limit' enabled. (ID 16899)	<b>Issue:</b> Running out of media in one of the Libraries in a Dual Library, Slot Overflow setup may result in failure or partial completion of migrations. This situation will only occur when Open Volume Limit is enabled on the Archive. (Only one open volume per pool). <b>Workaround:</b> Maintain sufficient spare media in both the libraries.



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## SSM Utilities

Issue:	Details and Workaround:
Medium replacement fails for media in 'open offline' pools. (ID 16831)	<p><b>Issue:</b> Medium replacement fails when the medium both belongs to an 'open offline' pool and is offline. The system issues the error: 'source medium is offline'.</p> <p><b>Workaround:</b> Add the source medium to the Appliance before starting the replacement job.</p>
UDO1 to UDO2 Drive Upgrade (ID 16854)	<p><b>Issue:</b> The presence of media in a 'needs scanning' state could cause the 'close-udo-1' utility to fail. Failure will occur if the user accepts the 'Eject all failed media' prompt while a scan job is running on that media.</p> <p><b>Workaround:</b> After starting the 'close-udo-1' utility, monitor the system jobs list for scan jobs for about 10 minutes. If any of these jobs appear, allow them to complete before proceeding with the 'Eject all failed media' operation.</p>

## System Backup

Issue:	Details and Workaround:
Recovery from backup can be affected when changing the time or time zone moves the system time backwards (ID 16787)	<p><b>Issue:</b> If a user changes the time of the system such that the system time is moved backwards; the incremental backups done thereafter might not be valid anymore. Restore from such incremental backups may fail or may result in restore of outdated system configuration.</p> <p><b>Workaround:</b> If system time is changed such that it goes backwards; run a Full backup after the system is up with the new time. For triggering Full backup; change backup configuration such that backup runs on a different location and then change the configuration back to the original one. Running backup on the original location will now trigger a Full Backup.</p>
Backups from one appliance can overwrite those from another appliance (ID 16788)	<p><b>Issue:</b> Multiple Appliances can direct their system backups to a single network location such that the latest backup overwrites earlier backups from other systems. This is an issue only for sites that have deployed more than one Archive Appliance.</p> <p><b>Workaround:</b> If backing up to a network share, make sure that each system uses a unique path.</p>
Network backups are not listed as system jobs. (ID 16791).	<p><b>Issue:</b> Unlike backups to UDO media, backups to network locations are not shown in the Diagnostics - System Job list of the Web UI.</p> <p><b>Workaround:</b> Network backup status can be monitored in the Data Protection - Backup Status page and through the Appliance's notification features.</p>
Backup to CIFS target waits indefinitely (ID 16826)	<p><b>Issue:</b> A system backup to a CIFS share waits indefinitely when the CIFS service is stopped on the target. Users can recognize this issue as a backup whose status is 'In Progress' for a long time.</p> <p><b>Workaround:</b> Restart the CIFS service so that the backup can complete.</p>
UTF-8 character set not supported in network backup configuration (ID 16827)	<p><b>Issue:</b> Network backup configuration does not support use of the full UTF-8 character set.</p> <p><b>Workaround:</b> Use only ASCII characters when configuring the system for network backup.</p>



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Issue:	Details and Workaround:
SSM disabled if network connectivity lost during backup (ID 16829)	<b>Issue:</b> The SSM is sometimes left in a disabled state when a system backup fails due to a loss of network connectivity. <b>Workaround:</b> Stop and start SSM services in the System - Services page of the Web UI.
User name and password always required in network backup configuration. (ID 16830)	<b>Issue:</b> Users must always supply a user name and password in the AA network backup configuration, even when backing up to a CIFS network share that is configured for 'guest' (i.e., universal) access. <b>Workaround:</b> none.
Scalability limit for backup to UDO media (ID 16832)	<b>Issue:</b> Backup to UDO media will fail when any files in the FSC must be split across media volumes. <b>Workaround:</b> Direct the system backup to a network share.
Using WORM Media type for Backup (ID 16846)	<b>Issue:</b> If a user adds a Backup disk through the keypad that is not of type RW, then the Archive Appliance will not handle this event gracefully. The disk will be marked unreliable only when a backup has been attempted and failed. The root cause of the failure will be shown in the 'backup.log' file, but it will not be displayed in the GUI or via the notification system. <b>Workaround:</b> If a backup fails, eject all unreliable media through the keypad and verify that only RW media belongs to the Backup pool.

## System and Archive Recovery

Issue:	Details and Workaround:
Media count during resync does not include backup disks. (ID 16794)	<b>Issue:</b> The Web UI does not include backup disks in the count of media that will be resynced during a recovery from media operation. <b>Workaround:</b> None.
Power failure during file system rebuild (ID 16844)	<b>Issue:</b> Following a power failure during a file system recovery, the file system is not recovered but successful file system recovery is reported. <b>Workaround:</b> Restart recovery in the GUI after deleting: /var/opt/ssm/tmp/.<archivename>_ssmfs_recover
Recovery – Failure to Create Archive Volume (ID 16845)	<b>Issue:</b> Recovery can fail during volume creation phase. This is a race condition that can happen when the user navigates from the 'Recovery' page in the GUI to the Storage - RAIDs page while a recovery is in progress. <b>Workaround:</b> Do not navigate the GUI while running a recovery operation. If recovery does fail, the user must restart the operation from the beginning.



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<b>Issue:</b>	<b>Details and Workaround:</b>
Power failure during recovery operations (ID 16847)	<p><b>Issue:</b> If power fails on an Appliance during the resync stage of a recovery (either from backup or from media), then after reboot, the system will not be able to continue the recovery.</p> <p><b>Workaround:</b> Follow these steps to workaround the issue:</p> <pre> ssm stop rm -f /var/opt/ssm/lock/* rm -f /opt/jakarta-tomcat/webapps/ROOT/recoverySession /etc/init.d/tomcat stop /etc/init.d/tomcat start </pre> <p>Then repeat the recovery.</p>
Cannot remove Dirty media during recovery from media (ID 16849)	<p><b>Issue:</b> The keypad does not eject UDO media for cleaning when they have failed to be resynched and have been marked as 'DIRTY' during a recovery from media operation.</p> <p><b>Workaround:</b> Mark the UDO media as 'unreliable' at the CLI, and then use the keypad to eject the disk.</p>
Recovery fails if network connection is lost (ID 16815)	<p><b>Issue:</b> Recovery from backup fails if network connection on Archive Appliance is disrupted.</p> <p><b>Workaround:</b> restore the network connection and re-try the recovery.</p>
Appliance attempts to use failed UDO drives during the resync phase of recovery. (IDs 16783/16785/16806/16816)	<p><b>Issue:</b> The Archive Appliance attempts to use failed drives during recovery operations, causing the job to stall without notification.</p> <p><b>Workaround:</b> If a recovery operation stalls, check for a possible drive error in the Diagnostics – UDO Drives page. If one exists, then remove any media from the drive, disable it, and retry the operation.</p>
Archive settings can be altered during a recovery. (ID 16870)	<p><b>Issue:</b> During a recovery it is inadvisable to change any of the archive settings; however the Web UI will allow this.</p> <p><b>Workaround:</b> None.</p>
Resync cannot complete when unreadable barcode is in the Appliance (ID 16801)	<p><b>Issue:</b> The resync phase of recovery cannot complete when a media with an unreadable barcode exists in the system.</p> <p><b>Workaround:</b> Consult the Storage - Online Media listing to make sure that this condition does not exist before starting a full recovery from media operation.</p>
Adding a new archive can result in recovery failure. (ID 16804)	<p><b>Issue:</b> Recovery from backup fails when the last successful backup does not contain data about a recently created Archive.</p> <p><b>Workaround:</b> Run full recovery from media.</p>
Recovery from backup fails if backup is running (ID 11614)	<p><b>Issue:</b> Recover from backup fails if started when a backup is running.</p> <p><b>Workaround:</b> Check that no backups are running before attempting recovery.</p>

## User and Group Management

<b>Issue:</b>	<b>Details and Workaround:</b>
Authentication (ID 16869)	<p><b>Issue:</b> Users who are not 'admin' but who have full administrative permissions cannot login to the Web UI when the Archive Appliance is running in MAINTENANCE mode.</p> <p><b>Workaround:</b> login as the 'admin' user.</p>



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Issue:	Details and Workaround:
Promoting a user to full admin requires re-entry of user's password. (ID 16790)	<p><b>Issue:</b> The Web UI requires a correct password when assigning a user to the full admin role.</p> <p><b>Workaround:</b> None. The assignee must supply the password but then has the option to change it at a later time.</p>

## Web UI

Issue:	Details and Workaround:
GUI status page delays. (ID 16798)	<p><b>Issue:</b> The System -&gt; Status page can take a long time to display all of its information if the system is very busy. This issue will most commonly occur during intensive writes to the archive cache.</p> <p><b>Workaround:</b> None.</p>
Web UI – Storage -> Media Request page (ID 16862)	<p><b>Issue:</b> The Storage -&gt; Media Request web page will display media requests for recall jobs that have been aborted.</p> <p><b>Workaround:</b> none. This behaviour is by design so that users can see the history of unfulfilled media requests (recall jobs abort automatically if not completed within 24 hours)</p>
3 minute timeout when connecting to the Remote Management (Configuration) page (ID 16819)	<p><b>Issue:</b> Navigation to the Remote Management (Configuration) page in the Web UI takes 3 minutes when the Appliance is not connected to the Plasmon Remote Management Service.</p> <p><b>Workaround:</b> None.</p>
Storage – Browse search constraints (ID 16825)	<p><b>Issue:</b> The search function in the Web UI Storage - Browse page looks only in the current working directory for the named object.</p> <p><b>Workaround:</b> None.</p>



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