

PAC Storage PS Release Notes

Applicable Models:

PS/PSe 3000 Series:

PS 3012S3/R3
PS 3016S3/R3
PS 3024S3/R3
PS 3040ST3/3040RT3/3040ST3C/3040RT3C
PS 3060ST3/RT3/3060ST3C/3060RT3C
PS 3090ST3/3090RT3/3090ST3C/3090RT3C
PSe 30123
PSe 30163
PSe 30243
PSe 3040T3/3040T3C
PSe 3060T3/3060T3C
PSe 3090T3/3090T3C
PS 3024URT
PSe 3024UT
PS 3048URT

PS/PSe 4000 Series:

PS 4012S3/R3
PS 4016S3/R3
PS 4024S3/R3
PS 4040S3/4040R3/4040S3C/4040R3C
PS 4060S3/4060R3/4060S3C/4060R3C
PS 4090S3/4090R3/4090S3C/4090R3C
PSe 40123
PSe 40163
PSe 40243
PSe 40403/40403C
PSe 40603/40603C
PSe 40903/40903C
PSe 4024U
PS 4024UR
PS 4048UR

All Firmware Versions:

Version	Release Date	Note
1.66P01	02/06/2024	
1.66J08	01/04/2024	
1.65W18	12/08/2023	
1.65J04	09/13/2023	
1.65E19	08/22/2023	The following models are merge to this firmware version: PS 3048URT/ PS 4048UR.
1.64Y20	06/12/2023	Initial release for PS/PSe G3 90-bay
1.64N25	02/21/2023	
1.64J18	01/09/2023	Initial release for PS/PSe G3 40/60-bay C model. (For U.2 SSD cache models)

Firmware 1.66P.01 Release Note

Updated: Feb. 6th, 2024

Note: Starting from 1.49C.14 Firmware for PSe/PSa/PSc/PS Gen.1/2 was merged, therefore release notes for FW ver.1.48 and older will not be included.

Binary File Name	FA166P01_313_IFT_ESGS.BIN
MD5 Checksum	1F55E38E1C1C025D6CF75E13E3CE81B5

Compatible Software Versions

Central EonOne: 2.6.o.27

Witness: 1.0.0.8

PS CLI: 2.3.a.43

EonView for Mac: 1.0.24-1213

EonView for Windows: 1.0.24-1213

Important Note

1. When you update from an earlier version to v.1.61H14 or a later version, rolling update is NOT supported on a unit with a 128G memory or above (per controller). Please schedule a downtime, shut down the system to stop IO, and then update the firmware.
2. If you took snapshots on firmware 162G18, please delete all snapshots before upgrading.
3. This firmware version does NOT support firmware downgrade to 1.49C or older unless all Logical Drives are deleted from the system.
4. Users with block-level deduplication volumes will be blocked from downgrading to previous versions that do not support block deduplication.

New features

None

Enhancements

1. Enhancement for drive high latency disk detection mechanism.
(ID:116768/116359)

Fixed Issues

None

Known Issues

1. When setting up remote replication, remote replication pair can't be created since this firmware version is not compatible with the version earlier or after.
(ID: 2200180)

Limitation:

1. The unit need to be inserted at least 4GB DIMM to enable Jumbo Frame function when using 12 channels.
2. Volume cannot be rolled back by snapshot when using cloud-connected folder.
3. Systems with Pool larger than 1PB and firmware before v.1.52A26 can't do rolling update to this release. Please shutdown system first.

Firmware 1.66J.08 Release Note

Updated: Jan. 4th, 2024

Note: Starting from 1.49C.14 Firmware for PSe/PSa/PSc/PS Gen.1/2 was merged, therefore release notes for FW ver.1.48 and older will not be included.

Binary File Name	FA166J08_313_IFT_ESGS.BIN
MD5 Checksum	544889D9862C80B6597BF778A783856C

Compatible Software Versions

Central EonOne: 2.6.o.27

Witness: 1.0.0.8

PS CLI: 2.3.a.43

EonView for Mac: 1.0.24-1213

EonView for Windows: 1.0.24-1213

Important Note

1. When you update from an earlier version to v.1.61H14 or a later version, rolling update is NOT supported on a unit with a 128G memory or above (per controller). Please schedule a downtime, shut down the system to stop IO, and then update the firmware.
2. If you took snapshots on firmware 162G18, please delete all snapshots before upgrading.
3. This firmware version does NOT support firmware downgrade to 1.49C or older unless all Logical Drives are deleted from the system.
4. Users with block-level deduplication volumes will be blocked from downgrading to previous versions that do not support block deduplication.

New features

1. Support new 2-port and 4-port 25Gb host board
2. Support Backblaze Cloud
3. Support dmesg log displaying

Enhancements

1. Drive latency message displaying
2. XFS defragment speed
3. Enhanced EonCloud event for reporting abnormal network connection status.
(ID:105441)
4. Enhance drive I/O latency message. (ID:2300097)
5. Enhance join AD authentication mechanism. (ID: 2300145)
6. Enhanced the process of updating domain users\groups, fixing the issue of domain users\groups not being able to load due to a timeout on the AD server side. (ID: 2300232)
7. Enhanced the syncing mechanism between two controllers while processing some of the SCSI commands with Windows Offloaded Data Transfer (ODX) function enabled. (ID:113902)

Fixed Issues

1. Fixed an improper UPS error handling on the PS side, resulting in controller failure. (ID:109269)
2. Fixed the issue where permissions cannot be set due to the simultaneous calculation of file number and size. (ID:109155)
3. Modify warning that at least install more than 16G memory while enable PC files backup function. (ID:110290)
4. Improper bind service mechanism on management port lead to controller failed. (ID:110670)
5. Fixed that after restore default, user could continue using existing data.
(ID:2100305)
6. Fixed controller I/O stuck in heavy loading application. (ID:2200264)
7. Fixed an internal error which could cause a Volume expansion process to be stuck. (ID:2300042)

8. Improper iSCSI I/O timeout mechanism lead to remote replication process stuck. (ID:2300059)
9. Using the 10G iSCSI host board to create file system mounting time takes too long. (ID:2300074)
10. Improper I/O queue mechanism lead to performance slow. (ID:2300093)
11. Fixed channel type setting incorrect with inserted controller. (ID:2300100)
12. Adjusted several internal mechanisms to not cause an infinite loop and, therefore, a controller failure. (ID:2300117)
13. Improper internal resource allocating mechanism cause internal resource insufficient, and controller failed. (ID:2300119)
14. Fixed an improper time-out handler, which tried to remove a previously aborted IO request from the queue, causing controller failure. (ID:2300130)
15. Improper unmap size handling on Micron 5300 SATA SSD lead to drive can't be detected. (ID:2300166)
16. Fixed controller hang up in firmware cross load stage. (ID:2300168)
17. Improper LDAP user UID matching mechanism cause setting user quota of LDAP user failed. (ID: 2300171)
18. FW error causes WebGUI failed to access. (ID:2300184)
19. Improved the TCP connection processing between the CPU cores, which could lead to a controller failure in some niche situations. (ID:2300187)
20. Fixed an issue causing one of the controllers to fail after configuring a trunk. (ID: 2300188)
21. Controller file volume I/O speed will down to zero while deleting huge size of files on SSD pool. (ID: 2300200)
22. Improper snapshot reserve space monitoring mechanism will cause volume to expand false event. (ID: 2300203)
23. Improper drive abort command handling lead to drive error. (ID:2300226)
24. Login PS via CLI tool or Central EonOne with password over 39 characters will cause controller failed. (ID: 2300229)
25. Fixed an incorrect unmap command trigger, which could increase latency on further operations. (ID: 2300244)

26. Fixed EonOne will display “Storage expansion for the volume has continued after a power outage” when pool usage reaches full. (ID: 2300253)
27. Fixed an improper processing of a TCP connection causing a performance drop. (ID: 2300212)
28. Fixed that NAS process got problem cause UI shows abnormal. (ID:2300202)
29. While logging in the AD server, DNS entry will include PS management port and cause client cannot access to the share folder via PS hostname. (ID:2300213)
30. Fixed that SSD write cache got problem after controller failover/failback. (ID:2300094)
31. Fixed that NAS may fail if use NFS IO in Linux. (ID:2300249)
32. Fixed an improper checking mechanism of Central EonOne management software, which caused memory usage to pile up and led to controller failure.(ID: 2300301)
33. Fixed CTRL failed while LD is rebuilding. (ID: 2300278)
34. Improper cloud database restore mechanism will cause cloud connected folder disconnect after PS restart. (ID: 2300247)
35. Improved the error handling mechanism during the Pool deletion. (ID: 2300282)
36. Improper SSD cache mount mechanism after disk roaming lead to metadata corrupt. (ID: 2300240)
37. Improper cloud database restore mechanism lead to cloud service unable to use. (ID: 2300247)
38. Fixed AD join failure when the client has one or more domain controllers without the DNS Host Name attribute set; the PS couldn't receive DNS names from specific DCs in the AD server. (ID:112246)
39. Fixed MFA function can not login. (ID: 2300291)
40. Copy process hang when copy files from one share folder to another share folder on same PS unit. (ID: 2300289)

41. Fixed that nfs bug caused NAS kernel panic. (ID: 2300220)
42. Fixed an improper interaction between processing cores while using iSCSI interface, causing one of controller failed. (ID: 2300280)
43. Fixed an improper interaction between CPU cores while synchronizing an updated system configuration (NVRAM), leading to a controller failure. (ID: 2300281)
44. After changing the channel IP, the ISER session will fail to login probably. (ID: 2300233)
45. Fixed an issue where Central EonOne would not show the list of existing pools while using Russian OS, with block level deduplication enabled. (ID: 2300242)
46. Fixed a possible controller failure scenario in case of I2C device response timeout to a user or booting request (e.g. slot present, fan active, etc.) (ID: 2300295)
47. Improper SSD unmap mechanism when file deletion lead to I/O performance slow. (ID: 2300143)
48. Fixed that NAS may fail because specific NAS process uses too much memory. (ID:2300202)
49. Fixed RAID+JBOD environment, JBOD suddenly power off and cause data pool offline on startup. (ID: 2300261)
50. Fixed the controller's inability to boot up when creating more than 30 LDs. (ID: 2300299)
51. Fixed an improper IO abort handling, which could cause one of the controllers to fail. (ID:113720)
52. Fixed the resource leak which could be caused by a high IO loading on a BTRFS volume. (ID: 2300298)
53. Fixed that backup function cannot enable normally if primary controller is on slot B. (ID:113918)
54. System shut down process got problem cause the system cannot reboot. (ID:2300317)
55. Fixed rolling firmware upgrade will stuck in the middle of the process. (ID:2300302)

Known Issues

1. When setting up remote replication, remote replication pair can't be created since this firmware version is not compatible with the version earlier or after.
(ID: 2200180)

Limitation:

1. The unit need to be inserted at least 4GB DIMM to enable Jumbo Frame function when using 12 channels.
2. Volume cannot be rolled back by snapshot when using cloud-connected folder.
3. Systems with Pool larger than 1PB and firmware before v.1.52A26 can't do rolling update to this release. Please shutdown system first.

Firmware 1.65W.18 Release Note

Update date: Dec. 8th, 2023

Binary File Name	FA165W18_311_IFT_ESGS.BIN
MD5 Checksum	F65A747EC1B22577999CCC41A4255A06

Compatible Software Versions

Central EonOne: 2.6.n.1515

Witness: 1.0.0.8

PS CLI: 2.3.a.39

EonView for Mac: 1.0.23-1123

EonView for Windows: 1.0.23-1123

Important Note

1. When you update from an earlier version to v.1.61H14 or a later version, rolling update is NOT supported on a unit with a 128G memory or above (per controller). Please schedule a downtime, shut down the system to stop IO, and then update the firmware.
2. If you took snapshots on firmware 162G18, please delete all snapshots before upgrading.
3. This firmware version does NOT support firmware downgrade to 1.49C or older unless all Logical Drives are deleted from the system.
4. Users with block-level deduplication volumes will be blocked from downgrading to previous versions that do not support block deduplication.

New features

None

Enhancements

1. Enhance backup app function.

Fixed Issues

1. Fixed that NAS may fail if use NFS IO in Linux. (ID:2300249)
2. Fixed that NAS may fail because specific NAS process uses too much memory.(ID:2300202)
3. Fixed an improper checking mechanism of Central EonOne management software, which caused memory usage to pile up and led to controller failure. (ID: 2300301)
4. Fixed the improper interaction on the firmware side causing the PSe Pro system not being able to boot up with SAS host boards installed. (ID: 2300256)

Known Issues

1. When setting up remote replication, remote replication pair can't be created since this firmware version is not compatible with the version earlier or after. (ID: 2200180)

Limitation:

1. The unit need to be inserted at least 4GB DIMM to enable Jumbo Frame function when using 12 channels.
2. Volume cannot be rolled back by snapshot when using cloud-connected folder.
3. Systems with Pool larger than 1PB and firmware before v.1.52A26 can't do rolling update to this release. Please shutdown system first.

Firmware 1.65J.04 Release Note

Update date: Sep. 13th, 2023

Binary File Name	FA165J04_311_IFT_ESGS.BIN
MD5 Checksum	71A3891D8FBDA0911E09DA0C25FA6675

Compatible Software Versions

Central EonOne: 2.6.n.1001

Witness: 1.0.0.8

PS CLI: 2.3.a.39

EonView for Mac: 1.0.21-0801

EonView for Windows: 1.0.21-0801

Important Notes

1. Please be noted if you are using the following models (PS 3024URT/PSe 3024UT/PSe 4024U/PS 4024UR), you can refer to FW version 1.64K25 for previous information.
2. Users with block-level deduplication volumes will be blocked from downgrading to previous versions that do not support block deduplication.

New features

None

Enhancements

None

Fixed Issues

None

Known Issues:

None

Limitation:

None

Firmware 1.65E.19 Release Note

Update date: Aug. 22nd, 2023

Binary File Name	FA165E19_310_IPT_ESGS.BIN
MD5 Checksum	5A67DBAE77722ABE9AFB7A56ACCC2C67

Compatible Software Versions

Central EonOne: 2.6.n.214

Witness: 1.0.0.8

PS CLI: 2.3.a.37

EonView for Mac: 1.0.21-0801

EonView for Windows: 1.0.21-0801

Important Notes

1. Please be noted if you are using the following models (PS 3024URT/PSe 3024UT/PSe 4024U/PS 4024UR), you can refer to FW version 1.64K25 for previous information.

New features

None

Enhancements

None

Fixed Issues

1. Fixed that still see HA related event after system restore default.
(ID:2200181)
2. Log4j vulnerability. (ID:2200182)
3. Fixed that cannot install 3rd party app. (ID:108683)
4. Fixed EonOne will report "Folder /Teste_Backup/vai_dar_certo/_bbackup_AppData_ exists." while enabling PC backup function and network configuration can not connect to Internet.(ID:108683)
5. Fixed an issue where the network driver handled the packet missing\recovery incorrectly, causing performance issues during write operations. (ID:109822)
6. Creating file-level snapshot schedules via CLI, show No required parameter.
(ID:2300152)
7. Fixed a controller hang up causing by improper iSCSI packets handling.
(ID:2300154)
8. Fixed the handling of IO queues while working with VMWare, which could lead to some latency issues and IO aborts. (ID: 2300160)
9. Fixed routing configuration can not be set. (ID:2300173)
10. Fixed if a user adds the permission "deny all for everyone" it will result in the inability to add any other permissions on particular folder. (ID:2300175)
11. Fixed that the file with simplified Chinese character cannot backup normally for PC files backup function. (ID:2300177)
12. Fixed that backup history no show running backup schedule if enable advance acl for volume. (ID:2300179)
13. Fixed a resource leak during some scheduled events causing a controller to fail. (ID:2300186)
14. Fixed a firmware infinite loop issue and causing controller hang up.(ID:2300191)

Known Issues:

None

Limitation:

None

Firmware 1.64Y.20 Release Note

Update date: Jun. 12th, 2023

Binary File Name	FA164Y20_309_IFT_ESGS.BIN
MD5 Checksum	0379C54A65C7050060E910987726B303

Compatible Software Versions

Central EonOne_2_6_L_18

Witness_1.0.0.8

CLI ESGS 2.3.a.28

EonView for Mac: 1.0.15-0428

EonView for Windows: 1.0.15-0428

Important Notes

1. Please be noted if you are using the following models (PS 3024URT/PSe 3024UT/PSe 4024U/PS 4024UR), you can refer to FW version 1.64K25 for previous information.

New features

1. Support Traffic control(QoS)
2. Support Backup Function
3. Support Application Center
4. Support Block Volume Deduplication
5. Support 90-bay JBOD

Enhancements

1. Enhance the AD join process. (ID:101671)

Fixed Issues

1. Still show HA event after system restore default. (ID: 2200181)
2. Log4j vulnerability. (ID: 2200182)
3. Sometimes mapped snapshot might not be recognized.(ID: 2200194)
4. Resource insufficient on iSCSI channel might cause iSCSI connection abort.(ID: 2200195)
5. Improper configuration parameters fetching mechanism on NAS background when primary controller failed.(ID: 2200201)
6. Event reports high packet loss during async replication. (ID: 2200203)
7. async pair becomes invalid status in some cases. (ID: 2200204)
8. Specific SSD model show not compatible on GUI. (ID: 2200226)
9. Controller failure caused by abnormal command. (ID: 2200227)
10. Inconsistent snapshot data might cause system can't boot up.(ID:2200254)
11. After changing 'LUN per Host SCSI ID' setting, system will failed to export NVRAM to Disk. (ID:2300002)
12. Vulnerability fixed while key in management port IP in browser. (ID:2300022)
13. Can not set color tag on Mac. (ID:2300023)
14. Folders and files name with garbled will cause folders information scanning hang on PS file explorer. (ID: 2300028)
15. NAS fail causing NVRAM configuration reset to default setting. (ID: 2300012/2300035)
16. Scheduling events in WebGUI causing controller failure. (ID: 2300057)
17. Improper internal command handling cause volume mirror remote replication process stuck. (ID: 2300059)
18. Internal resource not initialized might cause system can't boot up. (ID: 2300065)
19. Volume can not expand properly in some condition. (ID: 2300070)
20. EonOne stuck at 10% when exporting log.(ID:104335)
21. A bug in process of generating command causing WWN not being able to join the initiator group.(ID:104267)

22. Configuration setting failed with read-ahead or streaming settings.(ID:104157)
23. Inability to export the diagnostic log.(ID:103491)
24. NAS temp folder not being cleared after reboot causing losing SMB connection. (ID: 2300019)
25. Unable to connect to SMTP server (ID: 2300072)
26. A bug causing improper resource allocation during the time when a lot of VAAI commands are being issued, resulting in the Controller failure. (ID:2300108/106380)
27. Controller fail when using RAID1 and change maximum drive response timeout value.(ID: 2300126)
28. If the AD server does not have the NTP service enabled and another NTP server is used, AD join will fail. (ID: 2300031)
29. Updating domain users may fail when daily update schedule is set.(ID: 2300067)
30. Volume deactivated before completely shut down that causing metadata inconsistency.(ID:106102)
31. GUI bandwidth wrong displayed.(ID:2300050)
32. Share folder mount on wrong controller and causing configuring share folder fail.(ID:2300051)
33. EonOne can not accept “-“ in FQDN and reports invalid parameter.(ID:2300053)
34. Modify folder replication task event.(ID: 2300033)
35. PSe Pro unit can not power off automatically by shutdown button.(ID: 2300148)
36. Fixed a bug, causing the system not to use the resource allocation function properly which can lead to the controller failure. (ID: 2300109)
37. Fixed a bug causing deletion process of a volume getting stuck at 100%. (ID: 2300114)

Known Issues:

None

Limitation:

None

Firmware 1.64N.25 Release Note

Update date: Feb. 21st, 2023

Binary File Name	FA164N25_305_IFT_ESGS.BIN
MD5 Checksum	74E50704F8726B10F669F93036CBDBD9

Compatible Software Versions:

Central EonOne_2_6_L_18

Witness_1.0.0.8

CLI ESGS 2.3.a.28

Important Notes:

None

New Features:

1. Support File-level HA service.
2. Support CRPS model.(Except GS4024R2B)
3. Support 64 bytes username and password on SMTP notification function.(ID:2200225)
4. Support using Google Workspace mail as a SMTP server.(ID:2200252)

Enhancements:

None

Fixed Issues:

1. Modify event while disconnect one of internal lan port. (ID: 2200223)
2. The qualified SSD show incompatible on GUI. (ID: 2200232)
3. Channel type does not restore to replacement controller, and causing LAN data port nonfunctional.(ID:2200039)
4. IP and mac address of data channel disappear after replace controller.(ID:2200039)
5. NIS users quantity show different between UI and file explorer.(ID:2200261)
6. Creating snapshot scheduler and causing GUI hangs.(ID:101854)
7. Adjust threshold of using NAS swap memory message.(ID: 2200248)
8. NAS fail causing NVRAM configuration reset to default setting. (ID: 2300012)

9. NAS temp folder not being cleared after reboot causing losing SMB connection.
(ID: 2300019)
10. One of a GUI program occupies too much memory than intended and cause
NAS fail. (ID:2300013)

Known Issues:

None

Limitation:

None

Firmware 1.64J.18 Release Note

Update date: Jan. 09th, 2023

Binary File Name	FA164J18_305_IFT_ESGS.BIN
MD5 Checksum	85AD78A96D568F700C3665FD7604C757

Compatible Software Versions:

Central EonOne_2_6_k_11

Witness_1.0.0.8

CLI ESGS 2.3.a.27

Important Notes:

None

New Features:

1. Support WORM on Btrfs volumes.
2. PS/PSe G3 40/60-bay models support 100GbE host boards.

Enhancements:

1. SSD cache flush mechanism enhancement.
2. Enhance the volume name display format on performance monitor.(ID: 2200215)

Fixed Issues:

1. Improper failover mechanism between RAID and NAS side cause XFS metadata corrupt. (ID: 2200172)
2. Sometimes mapped snapshot might not be recognized.(ID: 2200194)
3. Resource insufficient on iSCSI channel might cause iSCSI connection abort.(ID: 2200195)
4. Can not operate LCD menu content if controller password enables.(ID: 2200197)
5. Event reports high packet loss during async replication. (ID: 2200203)
6. Async pair becomes invalid status in some cases. (ID: 2200204)

7. HA check mechanism might unmount volume and shows the error message "Invalid cluster folder path".(ID: 99730)
8. Controller failure caused by abnormal command. (ID: 2200227)
9. Use thin provision volume will cause pool available size incorrect.(ID: 2200171)
10. EonOne scheduler did not run setting schedule on the specified time.(ID: 2200193)
11. Central EonOne snapshot scheduler displays password mismatch and can not run.(ID: 2200196)
12. Improper configuration parameters fetching mechanism on NAS background when primary controller failed.(ID: 2200201)
13. Enhance event after channel disconnect to let user know in detail.(ID: 2200223)
14. Use project server cause SSD cache create fail.(ID: 2200216)
15. Improper NAS handling mechanism might cause fail to create a SSD cache pool.(ID: 2200115)

Known Issues:

None

Limitation:

None