

# SoftNAS Cloud® Release Notes

Presented below for your convenience and information are the release notes of the latest releases.

## SoftNAS Cloud® 4.2.3 Release - March 29th, 2019

### Overview

SoftNAS Cloud® 4.2.3 is a maintenance release containing bug fixes.

### Fixed in 4.2.3

**AWS S3 bucket and IAM token issue** - During the week of March 25th, AWS made a change to the IAM token length, which impacted SoftNAS' StorageCenter's ability to authenticate to S3 via IAM roles. This issue did not impact customers currently actively running S3 buckets, but any access requiring IAM authentication from StorageCenter would fail, including creation of new S3 buckets and other actions, such as SoftNAS upgrades, S3 storage migration, and reboots of the SoftNAS instance. This issue is resolved in this 4.2.3 release, and upgrades are now available. SoftNAS recommends that all AWS customers upgrade as soon as possible. New 4.2.3 AWS Marketplace AMIs will be available within 2 weeks.

### Upgrading

SoftNAS recommends that a reboot of the instance be performed prior to performing an upgrade to ensure the upgrade process starts from a stable system. If using S3 within AWS, and updating from a version earlier than 4.2.3, your S3 bucket will not mount after the reboot. Please proceed with the upgrade process, and the S3 buckets will mount correctly following the upgrade reboot.

### Upgrading from 4.0 or later

1-click upgrades are supported from versions 4.0 and later to version 4.2.

For information on updating your instance:

#### Updating Software

**Note:** *It is important to note that for SnapReplication™, SNAP HA™, and DCHA™ environments, you must follow the upgrade process linked below and perform the suggested reboot after deactivation has been completed.*

For upgrading a SNAP HA™ pairing:

#### Upgrading a SNAP HA™ pairing

## Upgrading from versions before 4.0

For versions below 4.0, 1-click upgrades are not supported, and require a migration. Follow the instructions below to migrate, [contact SoftNAS Support](#) for assistance.

[How To Migrate SoftNAS Cloud® Instances](#)

## Upgrading from an AWS PV Instance to AWS HVM Instance

Running SoftNAS Cloud on an AWS PV (paravirtual) instance is not supported. You will need to migrate your SoftNAS instance from an AWS PV (paravirtual) instance to a supported AWS HVM (hardware virtual machine) instance. Follow the instructions below to migrate or [contact SoftNAS Support](#) to for assistance.

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**Note:** SoftNAS does not support running the ASM and OMS Azure Extensions. If SoftNAS detects these agents running during a periodic scan, the agent will be de-installed by SoftNAS, proper removal of these Azure extensions must occur through the Azure portal (more information [here](#)).

**Note:** Upon investigation of recent customer reports of poor performance, we have determined that a large percentage of these cases the customer has been impacted by rate limiting and throttling by the cloud providers. If you are experiencing performance related issues, we recommend first contacting your cloud provider and asking if you are being rate limited or throttled.

**Note:** In-place upgrades can take 45 minutes or longer to complete. Do NOT terminate the update while in progress else errors will occur. If you feel that your update is taking longer than expected, please [contact SoftNAS Support](#) for assistance and do not reboot your instance.

**Note:** SoftNAS Cloud will not prompt for a reboot post-update. Reboot will occur automatically. Schedule update to coincide with maintenance downtime.

**Note:** As of version 3.4.8 SoftNAS does not support launching SoftNAS Cloud® VMs on the Azure Classic Portal. The Azure Resource Manager (ARM) is the only supported platform on Azure.

**Note:** For version 4.2, our No Downtime Guarantee™ has the following minimum technical requirements:

- Software version must be 4.2 or above.
- Software updates must be applied within 30 days of availability.

For more details on our No Downtime Guarantee, click [here](#).

# SoftNAS Cloud® 4.2.2 Release - March 12th, 2019

## Overview

SoftNAS Cloud® 4.2.2 is a maintenance release containing security updates and bug fixes.

### New in 4.2.2

**Security Fix** - A vulnerability existed with 4.2.x releases in which systems deployed with ports exposed to the internet against SoftNAS best practices could be compromised, allowing access to the system without valid user credentials, has been addressed.

**Replication Retries added** - In order to prevent premature fail-overs, SnapHA™ will now attempt to reconnect to the HA Controller 3 times before SoftNAS deactivates HA.

**SnapReplicate™ UI Alert Message** - In order to prevent users from attempting a forced fail-over, an alert message stating "An Initial SnapRep sync is in progress. HA with full data availability will not be achieved until the initial SnapRep cycle is complete" will be visible until the initial cycle is complete.

### Fixed in 4.2.2

**Mbuffer configuration option removed from UI** - The toggle to disable the mbuffer configuration option has been removed from **Modify Replication Settings** in order to prevent users mistakenly disabling the mbuffer feature. The option to disable this feature is still available from within the CLI. Please contact support should this be needed. (15813)

**SSH compression setting removed from UI** - The option to set SSH compression has been removed from **Modify Replication Settings**, in order to prevent SSH compression and ZFS compression from being used in tandem, causing system performance degradation.

**Replication Bandwidth Throttling display issue** - An issue in which StorageCenter mistakenly showed bandwidth throttling enabled by default in **Modify Replication Settings** has been resolved.

### Errata 4.2.2

**Potential Performance Degradation when using Azure ephemeral devices as L2ARC (read cache)** - Azure ephemeral disk devices are throttled. When the performance of the ephemeral L2ARC device is slower than the storage pool that it serves, overall performance may be degraded. If considering using an Azure ephemeral disk device as L2ARC and are unsure of the potential performance impact, feel free to contact support for further guidance.

# Upgrading

SoftNAS recommends that a reboot of the instance be performed prior to performing an upgrade to ensure the upgrade process starts from a stable system.

## Upgrading from 4.0 or later

1-click upgrades are supported from versions 4.0 and later to version 4.2.

For information on updating your instance:

### Updating Software

**Note:** *It is important to note that for SnapReplication™, SNAP HA™, and DCHA™ environments, you must follow the upgrade process linked below and perform the suggested reboot after deactivation has been completed.*

For upgrading a SNAP HA™ pairing:

### Upgrading a SNAP HA™ pairing

## Upgrading from versions before 4.0

For versions below 4.0, 1-click upgrades are not supported, and require a migration. Follow the instructions below to migrate, [contact SoftNAS Support](#) for assistance.

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### How To Migrate SoftNAS Cloud® Instances

# SoftNAS Cloud® 4.2.1 Release - Feb 14th, 2019

## Overview

SoftNAS Cloud® 4.2.1 is a maintenance release containing security updates and bug fixes.

## New in 4.2.1

**Kernel update and vulnerability fixes** - SoftNAS Cloud is now updated to kernel version 4.14.87, and patched to address relevant kernel vulnerabilities, as well as Azure storage drivers. Kernel vulnerabilities have been researched, and the results posted in the following knowledgebase article to help you determine relevance:

[Responding to the results of a security scan](#)

**Recommended minimum Instance/VM requirements** - As of the SoftNAS Cloud 4.2.1 release, SoftNAS recommends that customers only deploy SoftNAS Cloud Instances/VMs with minimum system resources of 16GB or more of RAM and 4 or more vCPUs.

## Fixed in 4.2.1

**NGINX security issue fixed** - An authentication bypass vulnerability has been fixed. This issue only affects SoftNAS Cloud v 4.2, and is only externally exploitable for customers who have not followed best practices in restricting StorageCenter port access to only their private networks and/or IP-restricted client as documented in [Instance Planning: Security](#). (15764)

**EBS Backup and Restore issue fixed** - An issue in which EBS backups would not complete on certain AWS instance sizes on 4.2 has been resolved. (15586)

**EBS Backup and Restore/NVMe issue fixed** - An issue in which if NVMe EBS disks were used, EBS backup and restore would be unable to restore the data, has been resolved. (15425)

**SmartTiers Scheduling issue resolved** - Events scheduled for evening with a morning end time (for example 8pm -3am) would not process properly because the system assumed the scheduled events were the same day and therefore in conflict. This issue has been resolved.

**Azure OMS agent new service name issue** -Scripts to prevent the incompatible OMS agent from running were updated in order to reflect a new service name for the agent.

# SoftNAS Cloud® 4.2 Release - November 15th, 2018

## Overview

SoftNAS Cloud® 4.2 is a maintenance release containing security updates, performance improvements and bug fixes.

## New in 4.2

**Kernel update and vulnerability fixes** - SoftNAS Cloud is now updated to kernel version 4.14.71, and patched to address relevant kernel vulnerabilities. Kernel vulnerabilities have been researched, and the results posted in the following knowledgebase article to help you determine relevance:

### [Responding to the results of a security scan II](#)

**SKU Updates to VMware, and AWS and Azure Marketplace** - SKU sizes, Consumption and BYOL licenses have been updated for AWS and Azure Marketplace. OVAs and software update packages have been provided for VMware.

**PHP Update** - As part of the security updates, PHP has been updated to 7.2 to address several security concerns with the previous version.

**JRE Updates** - JRE updates have been put under the control of YUM updates to allow customers to more easily update the JRE version.

**Lift and Shift Updates** - Enhancements have been added to allow Lift and Shift to be used after Azure Data Box or AWS Snowball have performed the initial bulk move of data to the cloud to handle delta changes after the bulk move is complete.

**Samba Update** - Samba has been updated to version 4.8 with this release to incorporate the latest bug fixes and security updates. The Samba release notes can be found [here](#).

**Azure Improvements** - SoftNAS Cloud supports Azure Accelerated Networking, however it must be enabled manually. For information on how to enable Azure Accelerated Networking for existing SoftNAS virtual machines updated to 4.2 (from 4.0.1 and later), click [here](#).

**Root Disk Size increase** - To take advantage of increased IOPS / throughput, the default root disk size for SoftNAS Cloud instances/virtual machines has been increased from 30GB to 100GB for newly launched instances /virtual machines on AWS and Azure (Only applicable to AWS and Azure, no change made or required for VMware). The root partition and file system will remain at 30GB. Existing instances can be increased to this new size. Please contact support for instructions if needed.

## Fixed in 4.2

**SmartTiers Tiered Storage Configuration issue** - An issue in which attempts to make changes to the existing tiered storage configuration would fail due to the Tiered Storage Configuration wizard failing to load has been resolved.

**Azure SNAP HA Routing Table Conflict issue** - An issue in which an HA Pair could be influenced by a routing table from outside the resource group, but on the same subnet, has been resolved.

**Open File Capacity issue** - Increased the number of max file descriptors allowed on the instance or Virtual Machine, and ensured that this value is persistent across upgrades.

**Multiple Lift and Shift flow UI issue fixed** - On high load Lift and Shift instances with multiple flows , when stopping and starting flows, the UI would not show that individual Lift and Shift flows had restarted and were in progress. This UI issue has now been resolved.

**Lift and Shift™ Select Target Volume UI issue fixed** - A minor UI issue when selecting 'I want to use an existing SoftNAS Target Volume', in which the Target Volume Name was visible when it should not have been, has been resolved.

**Lift and Shift™ root folder display issue fixed**- If creating folders within the Lift and Shift™ flow data store, and still on the root folder, the description in the browse tab would read 'undefined', rather than showing the path to the target volume. This has now been resolved.

**Directory Lift and Shift™ source volume data calculation issue fixed** - An issue in which the original data cost value calculation would display correctly, but would not reflect changes upon subsequent addition of data has been resolved.

**'Lift and Shift "Maximum disk size" field value reset issue fixed** - After changing disk type in advanced disk configuration of the Lift and Shift wizard, the 'Maximum Disk Size' value would reset. This has now been resolved.

**Directory Lift and Shift™ button display issue fixed** - An issue where upon adding additional mappings under step 6 of the directory level flow creation ('Configure (Map) Source to Target Volumes'), the 'Update' and 'Cancel' buttons were improperly aligned, has been resolved.

**Volume Lift and Shift™ Verification issue fixed** - When creating a Volume Lift and Shift and selecting target volumes, creating target storage via the automated process, the 'Verify' option was available prior to any created mappings. The verify button is now only available after the user has a volume mapping created to verify.

**Lift and Shift™ flow removal display issue fixed**- If a flow failed, presenting an error, the user could remove the flow. However, due to background operations to pause and delete the flow, the flow would not show as deleted for up to 20 minutes. This delay has now been fixed.

**Disk Type Display Issue fixed** - A UI display issue where the disk type would remain static after making a disk type change from outside the SoftNAS UI (ie, the AWS console) has been resolved.

**Inaccurate Notification Panel message** - When creating a Lift and Shift flow on an instance using NFS, the Notification panel erroneously stated that the user had configured his flow to use CIFS/SMB. This issue has now been resolved.

## Errata 4.2

**Unnecessary Email Alert** - If deleting an S3 disk, an email alert may be generated stating that the S3 bucket does not exist, this can safely be ignored.

**NVMe and EBS Backup and Restore known issue** - Pools created with NVMe disks cannot be backed up using EBS Backup and Restore.

**Downloading File from Webmin issue** - In Webmin, under Others>Upload and Download, using the 'Download from Web' option fails with an error. This will be resolved by back-end changes in an upcoming release.

**IE11 License Agreement Display issue** - In Internet Explorer 11, SoftNAS' End User License Agreement displays upon every login/refresh.

**Recommended Action:** Agree to the terms and conditions and continue with the task at hand.

**EBS disks added to NVMe instance 'failure'** - If adding an EBS disk from the CLI (command line interface) to an NVMe instance (such as the newly available AWS m5 series instances) the command will complete successfully but not show the disk. Subsequent attempts to add the disk show a persistent error stating that "the attachment point is already in use".

**Recommended Action:** Added disks will appear after a reboot of the SoftNAS instance. Reboot your SoftNAS instance, and if the issue persists, [contact SoftNAS Support](#).

**Large Log Files on UltraFast™/Lift and Shift™ instances** - Larger than expected log files have been reported on instances running Lift and Shift with UltraFast. While SoftNAS is continuing to monitor the situation, but have observed no ill effects.

**Password Save unavailable on Chrome** - If logging into your instance on the Chrome browser, the browser will not offer to save your password.

**Azure Add Disk Limitation** - If your user name belongs to multiple subscriptions, adding disk devices will not function.

**Recommended Action:** Create a service principal under the desired subscription, and use the service principal to add disk devices.

**Password limitation** - Passwords containing the '[' special character are not supported for logging into Storage Center.

**FlexFiles on Firefox issue** - Upon first attempt to use FlexFiles and associated NiFi functionality on the Firefox browser, the user will receive a "Your connection is not secure" message.

**Recommended Action:** Under Firefox settings, open the FlexFiles Architect frame in a new tab and using Add Exception, add an exception.

## Upgrading

SoftNAS recommends that a reboot of the instance be performed prior to performing an upgrade to ensure the upgrade process starts from a stable system.

## Upgrading from 3.4.9 or later

1-click upgrades are supported from versions 3.4.9 and later to version 4.2.

For information on updating your instance:

### Updating Software

**Note:** *It is important to note that for SnapReplication™, SNAP HA™, and DCHA™ environments, you must follow the upgrade process linked below and perform the suggested reboot after deactivation has been completed.*

For upgrading a SNAP HA™ pairing:

### Upgrading a SNAP HA™ pairing

## Upgrading from versions before 3.4.9

For versions below 3.4.9, 1-click upgrades are not supported, and require a migration. Follow the instructions below to migrate, [contact SoftNAS Support](#) for assistance.

### How To Migrate SoftNAS Cloud® Instances

## Upgrading from an AWS PV Instance to AWS HVM Instance

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### How To Migrate SoftNAS Cloud® Instances

# SoftNAS Cloud® 4.1 Release - September 17th, 2018

## Overview

SoftNAS Cloud® 4.1 is a feature release containing new features, improvements and bug fixes.

## New in 4.1

- **SoftNAS® SmartTiers™**  
Introduced as Platinum Beta in 3.7, [SoftNAS Cloud® SmartTiers™](#) is now live and available for use in production environments. SmartTiers™ is a SoftNAS patent-pending automated storage tiering feature that moves aging data from more expensive, high-performance block storage to less expensive object storage according to your policies, reducing public cloud storage costs up to 67%.
- **Directory Lift and Shift™**  
Directory [Lift and Shift™](#) is an enhancement to Lift and Shift™ to allow customers to select a specific sub-directory as the starting Source point for a Lift and Shift™. Lift and Shift™ in 4.0 only allows the customer to select the root directory of an entire volume as the Source starting point.
- **Support for CIFS/SMB NTFS ACLs in Lift and Shift™**  
[Lift and Shift™](#) now maintains NTFS ACLs with CIFS for a Lift and Shift™ flow from the Source to the Target (NTFS ACLs are not supported with NFS). POSIX ACLs continue to be maintained for CIFS and NFS as in 4.0.
- **SNAP HA/SnapReplicate™ enhancement** - Should an HA Controller become unavailable for a cloud (AWS or Azure) HA deployment of SoftNAS Cloud, high availability will auto-deactivate with an error message and an email alert to ensure customer can fix the issue and re-activate HA.
- **SNAP HA/SNAPReplicate™ enhancement** - If a pair of instances are not the same version, configuring replication will fail, and will prompt the user to upgrade both instances to the same version, in order to prevent later potential replication issues.
- **SNAP HA/SnapReplicate™ enhancement** - Remote destruction of target node data is now only triggered if a manual force-sync is applied. This means that if the data on node A is destroyed after a failover has been performed, the data will remain on the second node until force sync is applied. A warning makes it clear that the force-sync operation will result in destruction of data, preventing accidental loss.
- **Azure SNAP HA in multi-subnet environment** - Users can now implement SNAP HA in a multi-subnet environment. By clicking a check box, SoftNAS updates all route tables associated to all subnets on the same VNet as the HA Pair.
- **Disk Import Wizard enhancement** - The Disk Import Wizard now supports and includes an option to select self-configured disks.
- **Cross-Region Deltasync support** - Deltasync can now be used across regions.
- **Azure and softnas-cmd enhancement** - Azure service principals can now be used in softnas-cmd to create new disks, and add SNAP HA.

## Fixed in 4.1

**Samba Upgrade** - Upgraded SAMBA to version 4.8 to resolve some known memory replication issues in previous versions of Samba.

**Java Upgrade** - Java Runtime Environment (JRE) has been updated to version 1.8, update 151.

**Apache NiFi update** - Apache NiFi source files, used for our Lift and Shift, FlexFile Architect, and Data Flow Templates, have been updated to the latest version, 1.7.1.

**SmartTiers™ RAM guidance update** - Guidance on provisioning your SoftNAS Cloud instance for a SmartTiers™ use case can be found here: [RAM Sizing Guidance for SmartTiers™](#)

**SmartTiers UI Storage Sizing Discrepancy** - An issue in the Beta version where the UI reported inconsistency in the sizes of SmartTier and underlying storage (ie two pools configured to the same size showing different totals) has been resolved.

**Add S3 Disk behind proxy issue** - An issue when attempting to add an S3 disk from behind a proxy would result in an error message has been resolved.

**S3 Self-Configured Disk Endpoint overwrite issue** - An issue where the provided http:// endpoint information in the self-configured disk wizard was being overwritten by https:// (and breaking the link) has been resolved.

**Disk encryption issue on NVME instances** - An issue when adding encryption upon creating EBS disks on NVME instances would result in an error message has been resolved.

**AD Join erroneous message issue** - An issue in which when joining AD via the UI on your SoftNAS instance would show the "Resolving domain name, please wait..." message despite AD join success has been resolved.

**Thick-provisioned Volume increase size issue** - An issue in which increasing the size of a thick-provisioned volume would result in an error has been resolved.

**Upgrade hanging issue** - An issue in which NVME instances using L2-ARC read cache would hang and display the "Please wait while server is starting" message after upgrading to previous versions has been resolved.

**CIFS/SMB Security and Access Control Unknown parameter 'user' issue** - Removed the "Possible user" and "Possible Group" from Webmin to avoid conflicts, and prevent faulty setup configurations.

**Faulty Azure HA.ini script values issue** - Resolved an issue where non-numeric values in the 'HAMONITOR\_SECS' and 'NO\_OF\_RETRY' fields were not handled, resulting in take-over failures.

**Azure SNAP HA with VNet in separate Resource Group fix** - An issue in which Azure SNApHA setup would fail if the VNet was in a different Resource Group than the SoftNAS instance has been resolved.

**Snapvol files requiring manual deletion issue** - A condition where deleted volumes in a SnapRep/HA left stale SnapReplicate™ snapshots that could result in a failed takeover has been resolved.

## Errata for 4.1

**Large Log Files on UltraFast™/Lift and Shift™ instances** - Larger than expected log files have been reported on instances running Lift and Shift with UltraFast. While SoftNAS is continuing to monitor the situation, but have observed no ill effects.

**Inaccurate Notification Panel message** - When creating a Lift and Shift flow on an instance using NFS, the Notification panel states that the user has configured his flow to use CIFS/SMB. This erroneous message does not affect creation of the flow, and will be addressed in a future release.

**Lift and Shift™ Select Target Volume UI issue** - When selecting 'I want to use an existing SoftNAS Target Volume', the expected behavior is that the **Target Volume Name** field should be hidden. This issue is visual in nature, and does not impact functionality, and will be addressed in a future release.

**Multiple Lift and Shift flow UI issue** - On high load, multiple flow Lift and Shift instances, when stopping and starting flows, the UI may not show that individual Lift and Shift flows have restarted and are in progress.

**Azure Add Disk Limitation** - If your user name belongs to multiple subscriptions, adding disk devices will not function.

**Recommended Action:** Create a service principal under the desired subscription, and use the service principal to add disk devices.

**Password Save unavailable on Chrome** - If logging into your instance on the Chrome browser, the browser will not offer to save your password.

**Directory Lift and Shift™ root folder display issue** - If creating folders within the Directory Lift and Shift™ flow data store, and you are still on the root folder, the description in the browse tab will read 'undefined', rather than showing the path to the target volume. This will be resolved in an upcoming release.

**Directory Lift and Shift™ source volume data calculation issue** - When creating a Directory Lift and Shift™ flow, and data cost is first calculated based on existing data, the values will be correct. However, if you revisit the wizard after adding more data, the data cost calculation will not reflect the changes.

**Directory Lift and Shift™ Advanced Disk Configuration UI issue** - When the user creates a new Lift and Shift™ flow, and selects EBS disk and Maximum Disk Size within Advanced Disk Configuration, the Maximum Disk Size value resets upon selecting "Type".

**Directory Lift and Shift™ button display issue** - Upon adding additional mappings under step 6 of a directory level flow creation ('Configure (Map) Source to Target Volumes'), the 'Update' and 'Cancel' buttons are improperly aligned. This will be resolved in an upcoming release.

**Volume Lift and Shift™ Verification issue** - When creating a Volume Lift and Shift and selecting target volumes, creating target storage via the automated process, the 'Verify' option is available prior to any created mappings. The expected behavior is that this button should be disabled until the user has a volume mapping created to verify. This will be resolved in an upcoming release.

**Lift and Shift™ flow removal display issue** - If a flow fails, presenting an error, the user can remove the flow. However, due to background operations to pause and delete the flow, the flow may not show as deleted for up to 20 minutes.

**FlexFiles on Firefox issue** - Upon first attempt to use FlexFiles and associated NiFi functionality on the Firefox browser, the user will receive a "Your connection is not secure" message.

**Recommended Action:** Under Firefox settings, open the FlexFiles Architect frame in a new tab and using Add Exception, add an exception.

**Unable to add second NIC without reboot** - If deploying instances without adding the second Network interface at the outset, then adding the Network interface after the fact via script/command line, the second NIC will not be active until after a reboot.

**Recommended Action:** Reboot the instance, or use the following command to activate the NIC without reboot:

```
echo 1 > /sys/bus/pci/rescan
```

## Upgrading

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### Upgrading from 3.4.9 or later

1-click upgrades are supported from versions 3.4.9 and later to version 4.1.

For information on updating your instance:

#### Updating Software

**Note:** *It is important to note that for SnapReplication™, SNAP HA™, and DCHA™ environments, you must follow the upgrade process linked below and perform the suggested reboot after deactivation has been completed.*

For upgrading a SNAP HA™ pairing:

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[How To Migrate SoftNAS Cloud® Instances](#)

## SoftNAS Cloud® 4.0.3 Release - July 18th, 2018

### Overview

SoftNAS Cloud® Enterprise 4.0.3 is a maintenance release containing bug fixes.

### Upgrading

SoftNAS recommends that a reboot of the instance be performed prior to performing an upgrade to ensure the upgrade process starts from a stable system.

***It is important to note that for SnapReplication™, SNAP HA™, and DCHA™ environments, you must follow the documented upgrade process and perform this suggested reboot after deactivation has been completed.***

### Upgrading from 3.4.9 or later

1-click upgrades are supported from versions 3.4.9 and later to version 4.0.

For information on updating your instance:

#### [Updating Software](#)

For upgrading a SNAP HA™ pairing:

#### [Upgrading a SNAP HA™ pairing](#)

### Upgrading from versions before 3.4.9

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## [How To Migrate SoftNAS Cloud® Instances](#)

### Fixed in 4.0.3

**Security Fix** - Closes a command injection vulnerability in StorageCenter. Please follow SoftNAS Security best practices and restrict your source IP as described in our documentation. See [Security](#) for more information.

**Improved NVMe Disk Support** - Improved support for instances on AWS leveraging NVMe disks, such as the i3 series, M3 series and C5 series.

**Platinum License fix** - An issue in which a platinum license could not register to an account containing a space within the account name has been resolved.

**SmartTier Beta Improvements** - A kernel issue seen during continuous heavy client load has been resolved.

### Errata 4.0.3

**NVMe and EBS Backup and Restore known issue** - Pools created with NVMe disks cannot be backed up using EBS Backup and Restore.

**RAID 5 Hot Spare Issue** - If a drive fails on a heavily loaded system with a RAID 5 configuration, the hot spare feature may fail.

**Recommended Action:** If this occurs a restart of the instance will typically resolve the issue. If not resolved, [contact SoftNAS Support](#).

## SoftNAS Cloud® 4.0.2 Release - June 15th, 2018

### Overview

SoftNAS Cloud® Enterprise 4.0.2 is a maintenance release containing bug fixes.

# Upgrading

SoftNAS recommends that a reboot of the instance be performed prior to performing an upgrade to ensure the upgrade process starts from a stable system.

*It is important to note that for SnapReplication™, SNAP HA™, and DCHA™ environments, you must follow the documented upgrade process and perform this suggested reboot after deactivation has been completed.*

## Upgrading from 3.4.9 or later

1-click upgrades are supported from versions 3.4.9 and later to version 4.0.

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### Updating Software

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### How To Migrate SoftNAS Cloud® Instances

## Fixed in 4.0.2

**Azure CLI routing table issue** - An issue in which the Azure CLI errored out unexpectedly when updating the routing table during a SNAP HA failover event has been resolved.

**Azcopy and php\_error.log file issue** - An issue in which while using Azcopy, the php\_error.log file would grow faster than the log rotation would allow has been resolved.

**Azure Resource Groups Mixed Case Names issue** - An issue in which using names consisting of mixed upper and lower case letters for Azure Resource Groups would result in a SNAP HA setup failure has been resolved.

**Unwarranted Email Alerts issue** - An issue in which monit remains active on the secondary node of a SnapReplicate™ /SNAP HA™ pair, resulting in spurious email alerts for services that have been intentionally shut down, has been resolved.

## Errata 4.0.2

**Joining AD with multiple domain controllers known issue** - When joining a SoftNAS instance to an Active Directory Domain the UI may seem to be stuck at “Resolving domain name, please wait..” for longer than 10 seconds.

**Recommended Action:** In this situation it is safe to proceed. Enter the remaining required fields and click next and complete the join operation as normal. If there is an actual issue resolving the domain name the UI will correctly error out. Joining using the CLI does not have this issue. This will be resolved in a future release.

## SoftNAS Cloud® 4.0.1 Release - June 1st, 2018

### Overview

SoftNAS Cloud® Enterprise 4.0.1 is a maintenance release containing bug fixes.

### Fixed in 4.0.1

**Legacy SKU change** - Minor change made to fix legacy marketplace SKU upgrade issues.

## SoftNAS Cloud® 4.0 Release - May 28th, 2018

### Overview

SoftNAS Cloud® 4.0 is a feature release containing new features, improvements and bug fixes.

### Upgrading

#### Upgrading from 3.4.9 or later

1-click upgrades are supported from versions 3.4.9 and later to version 4.0.

For information on updating your instance:

## Updating Software

For upgrading a SNAP HA™ pairing:

### Upgrading a SNAP HA™ pairing

## Upgrading from versions before 3.4.9

For versions below 3.4.9, 1-click upgrades are not supported, and require a migration. Follow the instructions below to migrate, [contact SoftNAS Support](#) for assistance.

### How To Migrate SoftNAS Cloud® Instances

## Upgrading from an AWS PV Instance to AWS HVM Instance

Running SoftNAS Cloud on an AWS PV (paravirtual) instance is not supported. You will need to migrate you SoftNAS instance from an AWS PV (paravirtual) instance to a supported AWS HVM (hardware virtual machine) instance. Follow the instructions below to migrate or [contact SoftNAS Support](#) to for assistance.

### How To Migrate SoftNAS Cloud® Instances

## New in 4.0

**SoftNAS Cloud® Platinum edition** - Introduced as Beta in 3.6, SoftNAS Cloud® Platinum offers the following new features and benefits to our customer's production environments:

- **SoftNAS® UltraFast™**  
UltraFast™ is the SoftNAS patent-pending technology that accelerates global bulk data movement up to 20 times faster compared to standard TCP/IP protocols. Accelerate transfers of data into, out of, and across private, public, hybrid clouds, and multi-clouds, saving on time and costs. UltraFast™ is supported for use with Snap Replication and Lift and Shift™.

- **Lift and Shift™ Live Cloud Migration (powered by Apache NiFi)**

Lift and Shift with continuous sync keeps data up-to-date and usable. Point SoftNAS Cloud® Platinum edition to existing NAS shared storage volumes, select your public cloud storage destination, and immediately begin moving your data. Use SoftNAS web management console to manage and control data storage and the Lift and Shift step by step, "fill in the blank" wizard to move applications and data fast and efficiently. Continuous sync keeps content up-to-date when aggregating data to the cloud and/or distributing it to remote locations. Lift and Shift supports live production data migrations, automatic restart, suspend/resume, bandwidth scheduling and network acceleration via UltraFast™.

- **FlexFiles™ and FlexFiles Architect (powered by Apache NiFi)**

FlexFiles and FlexFiles Architect enables you to extend the power of the Apache NiFi User Interface via FlexFiles Architect to design and monitor new custom data flow via an easy to use drag and drop interface. FlexFiles Architect also provides access to provenance data (an audit trail for

compliance), associated with each step of your custom data flows. SoftNAS FlexFiles adds custom SoftNAS processors to use in conjunction with Apache NiFi's extensive set of community-supported NiFi Processors to build powerful data flows. The type of data-flows you can create with FlexFiles Architect covers a wide spectrum through the use of SoftNAS and NiFi processors including data transformation and routing, database access, data ingestion and egress, data splitting and cloud connectors. To learn more and get started creating custom flows with FlexFiles Architect, see <https://nifi.apache.org/docs/nifi-docs/html/getting-started.html>.

- **SoftNAS DataFlow Templates (powered by Apache NiFi)**

SoftNAS Cloud® Platinum includes two solution templates for you to use as a starting point to build custom data aggregation and data publishing flows. The Many-to-One template helps you create a data aggregation flow that will aggregate data from multiple remote locations to a single location. The One-To-Many template helps you create a data publishing flow to push data created at a single location to multiple remote locations. Each of these templates can be expanded to the number of locations you need.

**Support for new instance types** - SoftNAS Cloud now supports the C5 and M5 series of instances in AWS.

**Note: For Customers using M5 and C5 Instances** - These instances are based upon the new AWS Nitro Hypervisor. There is a current limitation where EBS Disks will fail to attach via the Storage Center interface. A work-around has been tested and found to work. The work-around is to add the disks via the AWS Console or AWS CLI. Once attached they can be partitioned normally via the Disk Devices Applet, and pools can then be created with these disks.

**Snap Replication Optimization** - Added an enhancement to SNAPReplicate™ to increase the overall throughput and reduce the time needed to complete a Full Sync.

**ObjectBacker™ Performance enhancements** - Improvements made to ObjectBacker now provide up to a 200% performance increase on writes, and a 50% increase on Reads. Representative graphs have been added to illustrate the improvements.

## Platinum Beta Features

- **SoftNAS® SmartTiers™**

SmartTiers is a SoftNAS patent-pending automated storage tiering feature that moves aging data from more expensive, high-performance block storage to less expensive object storage according to your policies, reducing public cloud storage costs by up to 67%.

## Platinum Licensing

If using a **BYOL** (Bring Your Own License) SoftNAS Cloud image, both an Enterprise license and a Platinum add-on license will be required.

The Enterprise license must be installed first. For instructions on how to add your Enterprise license, see [Activating SoftNAS Cloud® License](#).

After the Enterprise License has been applied, simply click any of the Platinum Features. You will see the following prompt:

Provide the Platinum License Key received from SoftNAS Sales, as well as the name of the registered owner (or organization). Click Submit, if activating online.

If activating manually (offline), check the box, in which case a new prompt will appear, allowing you to enter the manual activation code, also obtained from SoftNAS Sales.

## Fixed in SoftNAS Cloud® 4.0

**ObjectBacker™ Improvements** - The following changes have been made to ObjectBacker in order to prevent potential data synchronization issues after a reboot:

- **Shared Throttle**- Multiple Bucket pools now have the ability to share back-end cloud platform throttle information between one another.
- **Persistent Cache**- Allows for Block Cache to be stored on Disk, rather than in Memory (RAM)

**Note:** In 4.0, SoftNAS ObjectBacker supports only Object with RAID-0, allowing for legacy configurations to run un-affected.

**UI displays all snapshots** - Due to pagination limit, snapshots listed in the UI were limited to 25. A scroll bar has been added, allowing all available snapshots to be displayed. (14490)

**Resolved whitespace issue in DeltaSync** - An issue in which whitespaces were mishandled by Deltasync resulting in SNAP HA failures has been resolved. (14599)

**Erroneous SNAP HA™/SnapReplicate "No Replication is Defined" message** - After a failover in which the primary node has become the secondary, the former primary node would display a "No Replication is Defined message" despite SNAP HA showing as activated in the logs. This issue has now been resolved. (6852)

**Java security enhancement update**- Java has been updated to version 1.8.0\_151.

**Default Settings Change** - UseDNS setting in the /etc/ssh/sshd\_config file has been set to 'No', ensuring that only addresses and not host names may be used.

**Update UI 'read latest versions' failure error** - An issue in which an error stating that "*Recent versions list read failed (error 100.4)*" when performing an update from the UI has been resolved. (14194)

**Azure separate VNET Resource Group HA Failure issue** - An issue in which SNAP HA™ pairings on Azure using a VNET in a separate resource group would not fail over has been resolved. (14591)

**Self-Configured Disk S3 bucket mount failure** - An issue in which a self-configured S3 disk could not be mounted has been resolved. (14353)

**S3 auto-trim feature enabled** - ZFS's Trim and discard feature is now enabled by default. This improves performance by enabling more efficient garbage collection.

## Errata for SoftNAS Cloud® 4.0

**Active Directory Join known issue** - If there is a user whose UPN prefix matches the samaccountname of the user who is performing the active directory join, the AD join will not succeed. If the samaccountname user is deleted, AD join using the upn account will succeed.

**Para-virtualized instances no longer supported** - PV instances are no longer supported on the EC2 platform. Updating will cause boot failure.

**Azure Active Directory Password Expiry issue** - If integrating your SoftNAS Cloud virtual machine with Azure Active Directory, default password expiry settings can break the HA configuration.

**Recommended Action:** Azure AD passwords can be set to never expire by following the instructions found in Microsoft Azure Active Directory Password Policy Help Documentation.

**UltraFast™ does not support multiple connections** - At this time, only point to point UltraFast™ connections are supported. An attempt to create a second connection will result in an error stating that the "Item already exists".

**Deleted SoftNAS SmartTiers Pools not recoverable** - After successful deletion of SmartTier pool, SmartTier Container pools may be listed as available to import, however, these pools do not contain valid data and re-importing or recreating the SmartTiers pool from them is not possible.

**VMware: Deleted VM disk still displays in SoftNAS Cloud UI** - If a virtual disk is created via the VMware console and connected within SoftNAS Cloud, then removed by deleting it from within the VMware console, the SoftNAS Cloud UI will still show the disk as present, but state that it "Needs Partition".

**Invalid NiFi Sync Settings allowed** - It is currently possible to set invalid values (such as 0 for concurrent connection count or Wait Interval), resulting in a configuration error. A validation check will be implemented preventing this in a future release.

**Lift and Shift Throughput Graph Display Issue** - When running a lift and shift flow, the curve effect of the line graph can make the throughput appear negative when in fact it is not. (5663)

**File Monitoring system additional disks** - The dashboard file monitoring system on Azure virtual machines is showing several additional disks, and those disks appear as if they are filled to capacity (as non-existent disks have no capacity).

**Recommended Action:** Disregard these additional disks (as they simply reflect past mount points), and verify disk count from Disk Devices.

**License Display Issue** - Currently, after applying a SoftNAS Cloud Essentials Edition or Platinum license to a BYOL instance, the license applet's product type field does not reflect the current license, and instead shows the former "SoftNAS Cloud Enterprise edition BYOL" product type.

**Azure storage account password containing @ symbol limitation**- A password for an azure storage account containing the @ symbol will prevent the user from successfully logging in. This is due to an Azure CLI bug. For more information, see <https://github.com/Azure/azure-cli/issues/5058>

**Ultrafast™ iPerf test and Connection issues** - iPerf tests using low bandwidth settings such as a simulated T-1 line can cause timeouts to occur, resulting in loss of the Ultrafast™ connection.

**RAID-Z space display issue** - Pools created using RAID-Z may have volumes whose used space may appear to be greater than 100%, due to parity overhead when using narrow stripe widths in ZFS. Using larger block sizes (up to 1M) or a greater number of disks in each RAIDZ vdev can reduce overhead, but will not completely eliminate it. JBOD/RAID-0 and RAID-1 pools do not exhibit this behavior.

**Inaccurate SNAPFAIL Status** - If on an active SnapReplicate pairing with active volumes, and SnapReplicate is deactivated without changes to the data/volumes, the volumes will display with a status of **SNAPFAIL** in the Replication Control Panel, rather than a more accurate "**Deactivated**" status.

**SoftNAS® SmartTiers™ ISCSI Limitation** - ISCSI LUNs are NOT supported in a SmartTiers™ configuration.

**Lift and Shift Target ACLs** - Lift and Shift in SoftNAS Cloud® 4.0 will only maintain POSIX ACLs on the files shifted to the target storage when using CIFS or NFS. If using CIFS, Lift and Shift does not maintain NTFS ACLs and you will need to manually reset any NTFS ACLs after the Lift and Shift flow completes for the 4.0 release. Maintaining NTFS ACLs with CIFS for a Lift and Shift flow is being addressed in a future release. NTFS ACLs are not supported with NFS.

**For Customers Using i3 Instances and leveraging an NVMe Disk as a Read Cache** - A tested work-around is available in order to resolve a known issue with pools not importing properly after a reboot or shutdown. If you encounter this issue your data is NOT lost or damaged. Please contact SoftNAS Support for assistance in importing your pool.

## SoftNAS Cloud® 3.7.3 Release - June 29th, 2018

### Overview

SoftNAS Cloud® Enterprise 3.7.3 is a maintenance release containing bug fixes.

### Fixed in 3.7.3

**Multiple SnapReplicate Images issue** - Resolves an issue where SnapReplicate cycles may be sending multiple SnapReplicate images instead of the latest one. This issue could result in increased replication cycle times and /or excessive CPU utilization during SnapReplicate cycles.

## SoftNAS Cloud® 3.7.2 Release - March 28th, 2018

### Overview

SoftNAS Cloud® Enterprise 3.7.2 is a maintenance release containing bug fixes.

### Upgrading

#### Upgrading from versions prior to 3.4.9

As of version 3.7.2, 1-click upgrades are not supported from versions earlier than 3.4.9. Follow instructions to migrate, or [contact SoftNAS Support](#) to schedule an upgrade assistance.

For information on updating your instance:

## Updating Software

For upgrading a SNAP HA™ pairing:

### Upgrading a SNAP HA™ pairing

To migrate SoftNAS Cloud® Instances from an earlier version to a new instance:

### How To Migrate SoftNAS Cloud® Instances

## Fixed in SoftNAS Cloud® 3.7.2

**SmartTiers with tiers > 4TB fix** - An issue was discovered in which an incorrect tier size was being reported in pools greater than 4TB. This caused a UI display issue, and in some cases, the SmartTiers pool would become unavailable after an instance reboot. This issue has now been resolved.

## SoftNAS Cloud® Platinum Beta Features:

- **SoftNAS Cloud® SmartTiers**  
With the SmartTiers™ feature of SoftNAS Cloud® Platinum Beta, you can define policies to create auto-tiered storage, automatically keeping the most recently accessed data on higher performance storage while older data can be aged and moved to less expensive, lower performance storage.
- **SoftNAS® UltraFast™**  
The SoftNAS® UltraFast™ Platinum beta feature provides high-speed data transfer, accelerating global bulk data transfers and replication up to 20x compared to TCP/IP network transmission speeds.
- **Lift and Shift™ Cloud Migration (powered by Apache NiFi)**  
The Lift and Shift™ feature of our Platinum beta provides a wizard interface to create automated data flows to migrate on-premises file servers and traditional NAS storage to the public cloud.
- **FlexFiles and Apache NiFi**  
SoftNAS Cloud® Enterprise with Platinum beta features includes FlexFiles, and allows you to use the full power of Apache NiFi to design custom data workflows, monitor data flow status, gather and obtain provenance data associated with each step of the data flow. To learn more and get started creating custom flows with Apache NiFi, see: <https://nifi.apache.org/docs/nifi-docs/html/getting-started.html>.
- **SoftNAS Many to 1 Template (powered by Apache NiFi)**  
SoftNAS Cloud® Enterprise's Platinum beta includes a FlexFiles Many-to-1 data flow template, giving you a quick start to develop your own custom replication solutions with FlexFiles. This template helps our users to aggregate data collected at remote sites back to a centralized location to help with compliance, business data analytics, and other solutions.

## SoftNAS Cloud® 3.7.1 Release - Feb 20, 2018

## Overview

SoftNAS Cloud® Enterprise 3.7.1 is a maintenance release containing bug fixes.

### Spectre and Meltdown Vulnerabilities

With the current release, we are including a kernel update for the Spectre and Meltdown vulnerabilities. As SoftNAS Cloud® is hosted on AWS, Azure, and VMware platforms, this kernel update and fixes provided by each platform will mitigate the risk. As such, no action beyond upgrading to the latest version of SoftNAS Cloud® is necessary.

## Upgrading

### Upgrading from versions prior to 3.4.9

As of version 3.7, 1-click upgrades are not supported from versions earlier than 3.4.9. Follow instructions to migrate, or [contact SoftNAS Support](#) to schedule an upgrade assistance.

For information on updating your instance:

#### Updating Software

For upgrading a SNAP HA™ pairing:

#### Upgrading a SNAP HA™ pairing

To migrate SoftNAS Cloud® Instances from an earlier version to a new instance:

#### How To Migrate SoftNAS Cloud® Instances

## Fixed in SoftNAS Cloud® 3.7.1

**S3 import fix**- Fixed an issue where if an encrypted S3 disk was created prior to version 3.5 it would not cleanly import into a version post 3.5.

**SnapReplicate fix** - Fixed an issue with SNAP replicate that was causing constant re-sync and error recovery.

## SoftNAS Cloud® 3.7 Release - JAN 22nd, 2018

## Overview

SoftNAS Cloud® Enterprise 3.7 is a feature release containing new features, beta additions, improvements and bug fixes.

## Spectre and Meltdown Vulnerabilities

With the current release, we are including a kernel update for the Spectre and Meltdown vulnerabilities. As SoftNAS Cloud® is hosted on AWS, Azure, and VMware platforms, this kernel update and fixes provided by each platform will mitigate the risk. As such, no action beyond upgrading to the latest version of SoftNAS Cloud® is necessary.

## Upgrading

### Upgrading from versions prior to 3.4.9

As of version 3.7, 1-click upgrades are not supported from versions earlier than 3.4.9. Follow instructions to migrate, or [contact SoftNAS Support](#) to schedule an upgrade assistance.

For information on updating your instance:

#### Updating Software

For upgrading a SNAP HA™ pairing:

#### Upgrading a SNAP HA™ pairing

To migrate SoftNAS Cloud® Instances from an earlier version to a new instance:

#### How To Migrate SoftNAS Cloud® Instances

## New in 3.7

### Introducing SoftNAS Cloud® SmartTiers (Beta)™

With the SmartTiers™ feature of SoftNAS Cloud® Platinum Beta, you can define policies to create auto-tiered storage, automatically keeping the most recently accessed data on higher performance storage while older data can be aged and moved to less expensive, lower performance storage.

## Fixed in SoftNAS Cloud® 3.7

**Spectre and Meltdown Vulnerabilities** - In addition to fixes made by the supported SoftNAS platforms (AWS, Azure, and VMware), SoftNAS has included a kernel update to ensure that no action is necessary to protect your instance beyond upgrading to the latest version.

**Azure Disk Device display bug fixed** - When creating more than one new Azure disk device on an Azure SoftNAS Cloud Instance, the first disk would incorrectly revert to an old designation of 'Msft Virtual Disk'.

**Active Directory Wizard Allowed Characters bug fix** - A bug in which numerical characters were disallowed on Active Directory user names has been resolved.

**Active Directory Join NETBIOS error fixed** - An issue in which domain join would fail for AD Windows Server versions that disallowed anonymous service listings (such as Windows Server 16) has now been resolved.

**Updated iSCSI LUN Creation UI** - Clarified text in iSCSI LUN Creation UI.

**Read Cache using Ephemeral disks issue resolved** - Ephemeral disk Read Cache volumes now transfer correctly upon a failover, without manual intervention.

**SMTP Settings issue** - In the Monitoring tab of Administrator settings, the SMTP settings would not recognize server addresses in the format "[smtp.domain123.com](#)". This has been resolved.

**Gov Cloud on AWS SNAP HA issue** - An issue in which creating SNAP HA pairings of two AWS Gov Cloud instances would fail with a "wrong credential" alert has been resolved.

## Errata for SoftNAS Cloud® 3.7

**Deleted SmartTiers Pools not recoverable** - After successful deletion of SmartTiers pool, SmartTiers Container pools may be listed as available to import, however, these pools do not contain valid data and reimporting or recreating the SmartTiers pool from them is currently not possible.

**Azure Active Directory Password Expiry issue** - If integrating your SoftNAS virtual machine with Azure Active Directory, default password expiry settings can break the HA configuration.

**Required Action:** Azure AD passwords can be set to never expire by following the instructions found in [Microsoft Azure Active Directory Password Policy Help Documentation](#).

**Lift and Shift Throughput Graph Display Issue** - When running a lift and shift flow, the curve effect of the line graph can make the throughput appear negative when in fact it is not.

## SoftNAS Cloud® 3.6.1 Release - Oct 26th, 2017

### Overview

SoftNAS Cloud® 3.6.1 is a maintenance release containing fixes, and improvements.

### Upgrading

#### Upgrading from versions prior to 3.4.9

As of version 3.6.1, 1-click upgrades are not supported from versions earlier than 3.4.9 Follow instructions to migrate, or [contact SoftNAS Support](#) to schedule an upgrade assistance.

For information on updating your instance:

### [Updating Software](#)

For upgrading a SNAP HA™ pairing:

### [Upgrading a SNAP HA™ pairing](#)

To migrate SoftNAS Cloud® Instances from an earlier version to a new instance:

### [How To Migrate SoftNAS Cloud® Instances](#)

## New in SoftNAS Cloud® 3.6.1

**Azure Gov Cloud Support** - SoftNAS Cloud products are now available on and can use resources from Azure's Government Cloud.

## Fixed in SoftNAS Cloud® 3.6.1

**ENONENT issue fixed** - Fixed an issue where in a rare case an ENONENT is received from back end object storage, causing Object backer to abort.

**Configure Time Zone issue fixed** - Fixed an issue where setting the time zone via webmin was not being accepted.

**Corrupted Netatalk Config file issue resolved** - An issue in which netatalk configuration files would become corrupted after restoring them via Snapclone has been resolved.

## Errata for SoftNAS Cloud® 3.6.1

If a shared storage pool is imported to a fresh SoftNAS instance, the pool in question will not be marked as shared.

**Recommended Action:** Share the pool manually by following the instructions for the share protocol (CIFS, NFS, AFP) in question. See [Sharing Volumes](#) for further details.

# SoftNAS Cloud® 3.6 Release - Sept 18th, 2017

## Overview

SoftNAS Cloud® Enterprise 3.6 is a feature release containing new features, beta additions, improvements and bug fixes.

# Upgrading

## Upgrading from versions prior to 3.4.9

As of version 3.6, 1-click upgrades are not supported from versions earlier than 3.4.9 Follow instructions to migrate, or [contact SoftNAS Support](#) to schedule an upgrade assistance.

For information on updating your instance:

### Updating Software

For upgrading a SNAP HA™ pairing:

### Upgrading a SNAP HA™ pairing

To migrate SoftNAS Cloud® Instances from an earlier version to a new instance:

### How To Migrate SoftNAS Cloud® Instances

## New in SoftNAS Cloud® 3.6

SoftNAS® has restructured its product line into multiple products with varying levels of capabilities. In this release, there are two SoftNAS Cloud® products:

1. **SoftNAS Cloud® Essentials** – entry-level Cloud NAS product supporting object-backed storage pools and reduce functionality at a lower entry-level price point;
2. **SoftNAS Cloud® Enterprise** – full-featured Cloud NAS product supporting all types of back-end storage and full NAS feature set.

## Introducing SoftNAS Cloud® Essentials

SoftNAS Cloud® Essentials is a new product that provides file services for object storage, lowering the overall storage cost of secondary data for cloud backup storage, disaster recovery and archive. SoftNAS Cloud® Essentials leverages the cost-effectiveness, scalability, and durability of object storage while presenting applications with standard NAS and SAN protocols - on-premises, public cloud, or hybrid cloud—without having to modify existing applications.

- **Low Cost**

SoftNAS Cloud® Essentials reduces storage costs, making it ideal for large scale archival, backup target and disaster recovery workloads.

- **High Performance**

With SoftNAS' patent-pending ObjFast™ technology, I/O performance to object storage backends accelerates up to 400% faster than before. For back-end object storage writes, deletes, edits and reads, SoftNAS Cloud® Essentials provides near native block storage performance levels.

- **Multi-Protocol Support**

File access to back-end object storage via NFS, CIFS/SMB with Active Directory, AFP (Apple File Protocol) and iSCSI block services.

- **Encryption**

Data is encrypted in transit and at rest, and only the customer possesses the encryption keys.

- **Access Control**

Integration with Microsoft Active Directory and LDAP, which provides secure access to customer data.

- **Storage Elasticity**

Grow and shrink your storage requirements on an as-needed basis, including thin-provisioning and storage pooling.

- **File Services for Object Storage**

SoftNAS Cloud® Essentials provides file services for object storage only.

## New in SoftNAS Cloud® Enterprise (formerly SoftNAS Cloud® NAS)

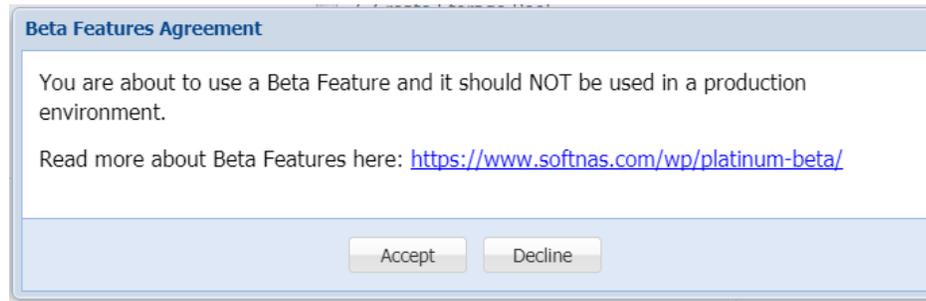
SoftNAS Cloud® NAS is changing its name to **SoftNAS Cloud® Enterprise**. SoftNAS continues to increase the value of our leading cloud enterprise NAS solution, including a new High Availability option (Dual Controller HA) and additional support for new cloud features like Azure Managed Disks.

### New NAS Features

- **Dual Controller High Availability (DCHA™)**: A high availability solution that allows a shared object storage pool to be managed by two SoftNAS Cloud VM controllers, providing resiliency against host-based failures. If the virtual machine hosting the shared storage fails, ownership is transferred to the second node, providing a seamless, behind the scenes transition. DCHA eliminates storage replication for object-backed pools. Note that DCHA applies to S3-backed and Azure blob-backed pools, and not to block storage backed pools.
- **Intercom Support Chat**: Users can now reach SoftNAS via direct chat functionality from within the SoftNAS Cloud StorageCenter™ administration UI, to ask questions, share screenshots of a potential issue, or simply to pass along kudos and comments quickly and easily.
- **Azure CLI v2 support**: Azure CLI v2 support allows SoftNAS Cloud® Enterprise to leverage and benefit from the features of Azure Managed Disks.

With this release, SoftNAS is also introducing new SoftNAS Cloud® Platinum beta features, made available as a preview prior to the launch of a new product, SoftNAS Cloud® Platinum. Cloud® Platinum beta features remain dormant by default and do not impact any other NAS functionality, and only become available when you explicitly accept a prompt in StorageCenter to enable one of the platinum features.

**Note:** Initializing the beta features may take 15 to 20 minutes to initialize after accepting the prompt to enable Cloud Platinum Beta features.



**Cloud® Platinum Beta features included in the 3.6 release should only be used in a test environment, and are not supported for production.**

## SoftNAS Cloud® Platinum Beta Features:

- **SoftNAS® UltraFast™**  
The SoftNAS® UltraFast™ Platinum beta feature provides high-speed data transfer, accelerating global bulk data transfers and replication up to 20x compared to TCP/IP network transmission speeds. Unlike WAN acceleration products, SoftNAS® UltraFast™ is a patent-pending, intelligent, self-tuning storage network acceleration technology, based on a reliable, secure UDP protocol, that is designed to address latency, congestion, poor QoS and slow data replication speeds, without redesigning or changing applications, networks or storage. Bandwidth Scheduling enables throughput and bandwidth throttling schedules to regulate network traffic and prioritize bandwidth use on a corporate WAN.
- **Lift and Shift™ Cloud Migration (powered by Apache NiFi)**  
The Lift and Shift™ feature of our Platinum beta provides a wizard interface to create automated data flows to migrate on-premises file servers and traditional NAS storage to the public cloud. Point Lift and Shift to existing NAS storage volumes, select your public cloud storage destination, and begin moving your file from anywhere globally. Lift and Shift operates in challenging network conditions with up to 800 milliseconds of latency and 10% packet loss, providing 90% or more of available network bandwidth globally. (Not integrated with SoftNAS® UltraFast™ in Beta 1).
- **FlexFiles and Apache NiFi**  
SoftNAS Cloud® Enterprise with Platinum beta features includes FlexFiles, and allows you to use the full power of Apache NiFi to design custom data workflows, monitor data flow status, gather and obtain provenance data associated with each step of the data flow. FlexFiles extends the NiFi user interface and processor set, enabling drag and drop configuration, reliable global file replication and additional templates. With the inclusion of Apache NiFi, SoftNAS provides you with an extensive set of community-supported NiFi Processors, plus SoftNAS custom processors to create automated enterprise data flows to help solve critical business problems. The NiFi user interface provides an easy to use drag and drop canvas to help you easily create custom flows. There are a wide array of data integration and transformation processors available in NiFi, including support for native cloud storage, web services, and much more. To learn more and get started creating custom flows with Apache NiFi, see: <https://nifi.apache.org/docs/nifi-docs/html/getting-started.html>.
- **SoftNAS Many to 1 Template (powered by Apache NiFi)**  
SoftNAS Cloud® Enterprise's Platinum beta includes a FlexFiles Many-to-1 data flow template, giving you a quick start to develop your own custom replication solutions with FlexFiles. This template helps our users to aggregate data collected at remote sites back to a centralized location to help with compliance, business data analytics, and other solutions. All you need to do is reconfigure the template with your environment's IP addresses and volume share points. With the Many-to-1 template, 2 remote sites (Many) can be configured to aggregate data to a centralized target location (1) by default, or by following the associated documentation, expand the flow to as many remote sites as needed.

**Note:** Support of SoftNAS' Platinum beta features is limited to the duration of the beta program, and are not supported in production environments. Support of the beta versions of each feature will expire once the Platinum version of the product is released for general availability. Refer to SoftNAS License Agreement for additional details and restrictions on use of pre-release beta features.

## Fixed in SoftNAS Cloud® 3.6

**AD join issue on Azure with Win2012 Server fixed** - An issue in which SoftNAS Cloud® instances failed to join AD on Azure Windows 2012 and higher versions has been resolved.

**UTF-8 Cyrillic values fix** - An issue in which cyrillic characters would not display correctly in the SoftNAS Cloud® UI (for example cyrillic usernames) has been resolved.

**Error Message Unit Measurement Discrepancy fixed** - If insufficient RAM is provided for SoftNAS Cloud®'s key features, the error displays consistently in a MB format, rather than one value in MB and one in GB.

**Volume Display Issue Fixed** - If thirteen or more volumes are created, a second page of volumes is generated to show the volumes beyond the twelfth. This second page would remain and be shown as blank if the volumes on the second page were deleted. This could cause confusion if the user did not realize it was not the first page of volumes. This is now resolved by returning the user to the primary page.

**iSCSI Volume Display Issue Fixed** - An issue in which newly created iSCSI volumes that were thick-provisioned would erroneously display as 50% used has now been resolved.

**Thick Volume Unit Measurement Fix** - When creating a volume from 'Create' under **Volumes and LUNs**, the unit of measurement when selecting thick volume provisioning defaulted to a blank unit of measurement, and treated this blank unit of measurement as a valid option. The unit of measurement now defaults to GB, and no blank unit of measurement is available.

## Errata for SoftNAS Cloud® 3.6

**Support Chat Feature Missing** - If logging into your SoftNAS Cloud® instance for the first time on the Microsoft Edge or Internet Explorer 11 browser, SoftNAS Cloud®'s support chat feature will not initially appear. This does not occur in other supported browsers.

**Recommended Action:** Refresh the browser, and the feature will appear.

**RAID 7 iSCSI shared pool DCHA failover issue** - RAID 7 disks created on shared iSCSI storage fails over in a degraded state.

**Recommended Action:** We recommend against using RAID 7 on iSCSI if creating a Dual Controller HA implementation. This will be addressed in a future update.

**Inaccurate Error Message Displayed** - If a user has over 1000 S3 buckets created on their AWS account, and attempts to set up HA, an "IAM permissions check error" occurs. An error providing the information about the excess of S3 buckets should be presented.

**Active Directory Join known issue** - If there is a user whose domain name and user name both are the same Active Directory join will fail from StorageCenter™.

**Recommended Action:** Join AD with a different user that does not conflict with the domain name.

**Pool Unavailable** – If using SoftNAS Cloud® in a Cloud File Gateway Configuration (on-premise to cloud), a single bucket with RAID 0 can be overrun with multiple concurrent VEEAM backup streams.

**Recommended Action:** Using a RAID-1 configuration or providing sufficient bandwidth to the cloud storage solves this issue.

**DCHA Erroneous "No Replication is Defined" message** - On a shared pool configured with dual controller HA, after a forced failover, the new target may display an erroneous "No Replication is Defined" message. DCHA does not use replication, so this message can be ignored.

## Errata for SoftNAS Cloud® Platinum Beta Features

**Missing validation for FlexFiles flow** - If the target node is shut down after a flow is started, no error message alerts the user. The flow stops, but no indication is given why. This will be resolved in post-beta release.

**Lift and Shift™ Flow Deletion Failure** - If dynamic IP addresses are used in a Lift and Shift operation, and the IP address changes on the target node, deleting the flow will produce an error.

**Recommended Action:** SoftNAS strongly recommends use of static IP addresses on both nodes for any Lift and Shift™ or FlexFiles workflow.

**Lift and Shift™ stuck in pending status** - If a Lift and Shift™ flow is set up prior to FlexFiles Settings being configured for both of the nodes involved, and FlexFiles/Nifi service unexpectedly shuts down, the Lift and Shift™ flow will be stuck in a pending status. If an attempt is made to configure FlexFiles Settings post flow creation, an error stating that "FlexFiles Settings cannot be changed when there is an active flow" occurs preventing FlexFiles Settings from being configured.

**Recommended Action:** If you are unable to delete your pending Lift and Shift™ workflow, and unable to configure FlexFiles Settings, contact support.

**Lift and Shift™ flow removal failure** - If the target instance for a Lift and Shift™ is deleted, the related flow fails as it should. However, the flow remains on the source node, and cannot be deleted. The user will see a status of 'Remove Failed.' An option to force the removal of a flow will be provided post-beta.

**Lift and Shift™ Volume Display Known Issue** - In Lift and Shift™ Data Flow, under the Transfer Statistics panel, there is currently only room to display four or five labels for the volumes in transit. This will be resolved in later releases.

**Lift and Shift™ Volume Display Known Issue** - In the Lift and Shift™ User Interface, the Target Volumes pane does not display all volume names, if a large number of volumes are being transferred. This will be resolved in later releases.

**Deleted Ultrafast™ Connection not reflected on both sides** - If an UltraFast™ connection is established between two AWS Ultrafast™ instances, then deleted on the target side, the source will not recognize that the connection is missing, and will continuously remain in a connecting/pending connection state.

**UltraFast™ Unresponsive Create Button after wrong credentials used** - If credentials are entered incorrectly or the wrong credentials used when creating a new UltraFast™ Connection, a subsequent attempt to create a flow using the 'Create' button will fail, as the button becomes unresponsive.

**Recommended Action:** Close the UltraFast™ applet (tab), and re-open. The Create button will respond again.

## SoftNAS Cloud 3.5.6 Release - July 28th , 2017

### Overview

SoftNAS Cloud® 3.5.6 is a maintenance release containing fixes, and improvements. Version 3.5.6 is compatible with all editions of SoftNAS Cloud®.

### Upgrading

#### Upgrading from versions prior to 3.4.9

As of version 3.5.6, 1-click upgrades are not supported from versions older than 3.4.9 Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

For information on updating your instance:

#### Updating Software

For upgrading a SNAP HA™ pairing:

#### Maintenance Mode

To migrate SoftNAS Instances:

#### How To Migrate SoftNAS Cloud® Instances

### Fixed in SoftNAS Cloud® 3.5.6

**NFS Server Default Thread Count Value-** Default thread count logic is improved, and is now based on the amount of available RAM, rather than a set default.

# SoftNAS Cloud 3.5.5 Release - July 17th , 2017

## Overview

SoftNAS Cloud® 3.5.5 is a maintenance release containing fixes, and improvements. Version 3.5.5 is compatible with all editions of SoftNAS Cloud®.

## Upgrading

### Upgrading from versions prior to 3.4.9

As of version 3.5.5, 1-click upgrades are not supported from versions older than 3.4.9 Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

For information on updating your instance:

### Updating Software

For upgrading a SNAP HA™ pairing:

### Maintenance Mode

To migrate SoftNAS Instances:

### How To Migrate SoftNAS Cloud® Instances

## Fixed in SoftNAS Cloud® 3.5.5

**NetApp StorageGrid Fix** - An issue preventing the addition of NetApp StorageGrid backed disks is now resolved.

**UltraFast Log Fix** - An issue in which an excessive amount of UltraFast configuration error and alerts would appear in the log even when instances were not configured for UltraFast has been resolved.

# SoftNAS Cloud 3.5.4 Release - June 28th , 2017

## Overview

SoftNAS Cloud® 3.5.4 is a maintenance release containing fixes, and improvements. Version 3.5.4 is compatible with all editions of SoftNAS Cloud®.

# Upgrading

## Upgrading from versions prior to 3.4.9

As of version 3.5.4, 1-click upgrades are not supported from versions older than 3.4.9 Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

For information on updating your instance:

### Updating Software

For upgrading a SNAP HA™ pairing:

### Maintenance Mode

To migrate SoftNAS Instances:

### How To Migrate SoftNAS Cloud® Instances

## Fixed in SoftNAS Cloud® 3.5.4

**Multiple Volume SnapReplicate™ Issue** - Fixed an issue in SnapReplicate™ where if the customer had multiple volumes the SSH connection was getting disconnected.

# SoftNAS Cloud 3.5.3 Release - June 23rd , 2017

## Overview

SoftNAS Cloud® 3.5.3 is a maintenance release containing fixes, and improvements. Version 3.5.3 is compatible with all editions of SoftNAS Cloud®.

# Upgrading

## Upgrading from versions prior to 3.4.9

As of version 3.5.3, 1-click upgrades are not supported from versions older than 3.4.9 Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

For information on updating your instance:

### Updating Software

For upgrading a SNAP HA pairing:

### [Maintenance Mode](#)

To migrate SoftNAS Instances:

### [How To Migrate SoftNAS Cloud® Instances](#)

## Fixed in SoftNAS Cloud® 3.5.3

**Licensing Fix** - Fixed an issue with license identification for new AWS and Azure Marketplace SKU's.

# SoftNAS Cloud 3.5.2 Release - June 19th , 2017

## Overview

SoftNAS Cloud® 3.5.2 is a maintenance release containing fixes, and improvements. Version 3.5.3 is compatible with all editions of SoftNAS Cloud®.

## Upgrading

### Upgrading from versions prior to 3.4.9

As of version 3.5.2, 1-click upgrades are not supported from versions older than 3.4.9 Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

For information on updating your instance:

### [Updating Software](#)

For upgrading a SNAP HA pairing:

### [Maintenance Mode](#)

To migrate SoftNAS Instances:

### [How To Migrate SoftNAS Cloud® Instances](#)

## Fixed in SoftNAS Cloud® 3.5.2

**Update Issue** - Fixed an issue where upgrades via UI were not functional on Azure instances.

# SoftNAS Cloud 3.5.1 Release - June 9th , 2017

## Overview

SoftNAS Cloud® 3.5.1 is a maintenance release containing fixes, and improvements. Version 3.5 is compatible with all editions of SoftNAS Cloud®.

## Upgrading

### Upgrading from versions prior to 3.4.9

As of version 3.5.1, 1-click upgrades are not supported from versions older than 3.4.9 Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

For information on updating your instance:

### Updating Software

For upgrading a SNAP HA pairing:

### Maintenance Mode

To migrate SoftNAS Instances:

### How To Migrate SoftNAS Cloud® Instances

## Fixed in SoftNAS Cloud® 3.5.1

**High Availability Fix** - An issue in which upgrading an existing HA pairing from versions 3.4.9.7 and prior (to 3.5) would disrupt high availability has been resolved.

## Errata for SoftNAS Cloud® 3.5.

**EPEL Repository Removed** - SoftNAS has removed the EPEL repository in the 3.5 release, however if a customer wishes to enable/install it, they can do so at their discretion.

# SoftNAS Cloud® 3.5 Release - June 1st , 2017

## Overview

SoftNAS Cloud® NAS 3.5 is a feature release containing linux and kernel updates, fixes, and improvements. Version 3.5 is compatible with all editions of SoftNAS Cloud® NAS.

## Upgrading

### Upgrading from versions prior to 3.4.9

As of version 3.5, 1-click upgrades are not supported from versions older than 3.4.9. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

For information on updating your instance:

#### Updating Software

For upgrading a SNAP HA pairing:

#### Maintenance Mode

To migrate SoftNAS Instances:

#### How To Migrate SoftNAS Cloud® Instances

## New in SoftNAS Cloud® 3.5

### New SoftNAS Cloud® NAS Editions and Capacities

- **General Purpose:** For workloads with basic networking, caching, deduplication and encryption requirements, SoftNAS Cloud® NAS General Purpose Edition balances cost vs. memory and CPU resources and is a good starting point for basic workloads.
  - AWS: M4.xlarge
  - Azure: DS12\_v2
- **High Performance:** For read-intensive workloads needing larger memory-based read cache and additional CPU cores, SoftNAS Cloud® NAS High Performance Edition improves performance for deduplication, encryption and compression compared to SoftNAS Cloud NAS General Purpose Edition.
  - AWS: M4.2xlarge
  - Azure: DS4\_v2
- **Extreme Performance:** For very demanding workloads requiring thousands of concurrent connections, SoftNAS Cloud® NAS Extreme Performance Edition utilizes maximum CPU power, IOPS, memory and very high speed networking throughput.
  - AWS: M4.10Xlarge
  - Azure: DS14\_v2
- **Marketplace options now exist for 1TB up to 1PB capacities.**

For VM (Instance) and storage sizing guidance on please see:

- [Instance Size Recommendations](#)
- [AWS Back-End Storage Guide](#)
- [Azure Back-End Storage Guide](#)

**Object Backer for Object Storage** - ObjectBacker™ Backend Storage Acceleration - Patent pending ObjFast™ technology writes data to object storage up to 400% faster than prior SoftNAS Cloud® NAS versions, enabling customers to use lower cost cloud object storage backends (e.g., AWS S3 and Azure Blob) with performance levels rivaling that of cloud block storage backends (e.g., AWS EBS and Azure Disk).

**Simplified Active Directory Wizard** - It is now simpler to join Active Directory, and status messages are improved to help troubleshoot any issues faster.

**In-Context Help** - To improve user experience, In-Context QuickHelp is now provided as in-product links that lead to helpful technical documentation, Knowledgebase articles and videos as the user is accessing the relevant feature within the UI.

**Simplified Secure Software Updates** - Based on network security best practices, Simplified Secure Software Updates requires users to open only a single firewall port for SoftNAS Cloud NAS software updates instead of multiple firewall ports for connection to different Linux software update depots.

**Update to Linux Kernel 4.4 and latest ZFS version** - Improved security and performance.

## Fixed in SoftNAS Cloud® 3.5

**Dirty Cow Security Vulnerability Fixed** - With version 3.5, the new linux kernel update to 4.4 eliminates known linux security vulnerabilities, notably the [Dirty Cow linux vulnerability](#).

**iSCSI Intermittent dropouts during write cycles fixed** - An issue in which intermittent LUN dropouts resulting in slow performance occurring in the write cycle has been resolved.

**Update Process Fix** - SoftNAS now uses SSL to [mirror.softnas.com](https://mirror.softnas.com) to provide updates.

**Improved Error Messaging regarding Multi-Factor Authentication Limitations** - SoftNAS currently cannot use accounts with Azure Multi-Factor Authentication when setting up SNAP HA. The error message provided ensures this problem is easily identified so the user can resolve the issue.

**Proxy Update Issues Resolved** - SoftNAS' simplified secure software update efforts have resulted in easier proxy setup, and has ensured that updates can get through without compromising security.

**Internationalization of Active Directory Join Feature** - Improvements added to ensure that our AD Join wizard recognizes UTF characters, and can accept domain controllers of foreign language origin.

**Memory Validation checks** - SoftNAS now ensures that a minimum RAM requirement of 3.5 GB is enforced for users of S3backer (Object Backer).

**Improved Object Storage Read Performance** - S3 pools are now set to 1 MB record size on creation, ensuring that read performance is not throttled by heavy write cycles.

**Windows 2012R2 Azure AD Join issue fixed** - A bug preventing SoftNAS instances from joining an Azure based DC has been resolved.

**Snapshot Threshold/Hourly Retention Bug Fix** - An issue in which the Hourly Snapshot Retention value was tied to the Snapshot Retention value has been resolved.

**SNAP HA Azure VNET Flexibility** - It is now possible to set two SoftNAS nodes as an HA pair using an Azure VNET created in a separate resource group.

**Scheduled Snapshots now keep accurate count** - only the number of snapshots specified are kept.

**S3 support for Canada and London Regions** - issues adding S3 devices to Canada and London region instances have now been resolved.

**SnapCloned Volumes Replication Issue fixed** - SnapClone™ created volumes now replicate successfully via SnapReplicate™.

## Errata for SoftNAS Cloud® 3.5.

**Prior to version 3.5, SoftNAS Cloud® NAS used a TDB backend, and has now switched to RID** - If planning to unjoin and rejoin Active Directory (AD) after your 3.5 upgrade, be aware that this will require AD rejoin permissions to enumerate across all files. For large scale AD configurations, this can be a significant undertaking. You will not be affected by this change if you do not plan to unjoin and rejoin your domain. If you have upgraded to 3.5 and need to rejoin your SoftNAS instance to your domain please contact SoftNAS Support for assistance.

**UTF-8 value display known issue** - UTF-8 values from files (for example cyrillic usernames added from the Active Directory Wizard) are displayed incorrectly within the UI.

**Quick Help Feature Known Issue** - Quick Help pop ups are currently resizable, and show a vertical scroll bar, whether one is required or not. These pop ups should not be resizable, and the scroll bar should only appear if the content within the Quick Help pop up warrants it.

**Kerberos Known Issue\Expected Behavior** - The Kerberos configuration will not be updated with the Domain Controller IP addresses (DCIPs) and records from the new AD wizard. Kerberos will instead use DNS to resolve all necessary records.

**Error Message Unit Measurement Discrepancy** - An error message alerting the user that he/she does not have adequate RAM for a selected feature displays the current available RAM in MB, and the amount required in GB. For example: *"Insufficient RAM for this feature: 2047MB. At least 3.5 GB of RAM is required."*

**RAID 1 S3 Degraded Disk Misrepresentation** - If a pool is created with software RAID 1 S3 object storage, and a disk is deleted, the pool does not show as degraded, despite the missing disk.

**Note:** Using software RAID other than RAID-0 on object storage is not SoftNAS recommended best practice.

**Pool Status Known Issue** - Storage Pool status (for example if a disk device is taken offline, and a pool is in a degraded or offline status) must be manually refreshed in order for the current status to be accurately displayed.

**AD Wizard Update Known Issue** - The AD wizard icon in Volumes and LUNs should have 3 status options, but currently only shows 2, reflecting only if the AD wizard is currently connected successfully or not. The third status that is not currently showing would normally display that the AD wizard has been run successfully in the past, but is no longer connected. Instead, the icon returns to status 1, in which it appears that the AD wizard has never been run.

**Failed Request error** - After software update, a failed request error may appear due to browser calling up cached content.

**Recommended Action:** Refresh the browser (Ctrl +f5) to return to login.

**AWS Manage Samba Users Unknown Group prompt** - When creating a new group from **CIFS Shares>Samba Groups> Add New Group**, a group name of "Unknown Group" is displayed by default. Using said default group name results in an error.

**Recommended Action:** Use a group name of your own choosing, rather than the prompted default.

**VMware Deleted Disk records still visible in Monitoring** - On VMware instances, deleted disks may continue to appear in the Disk Activity Monitoring dropdown.

## SoftNAS Cloud® 3.4.9.7 Release - March 27, 2017

### Overview

SoftNAS Cloud® NAS 3.4.9.7 is a maintenance release containing fixes, and improvements. Version 3.4.9.7 is compatible with all editions of SoftNAS Cloud® NAS.

### Upgrading

## Upgrading from 3.4.0 through 3.4.9.6

Reboot Required for AWS and VMware instances if updating from 3.4.9.5 or earlier. No reboot required for upgrades from 3.4.9.6

## Upgrading from 3.3.3 or 3.3.4

Reboot Required for AWS and VMware instances if updating from 3.4.9.5 or earlier. No reboot required for upgrades from 3.4.9.6.

Follow instructions to upgrade a highly available SNAP HA™ pair.

## Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## New in SoftNAS Cloud® 3.4.9.7

Instance support update - New instance sizes supported in the AWS Marketplace.

## Fixed in SoftNAS Cloud® 3.4.9.7

**Improved Disk Status Reporting for HA failover** - Failover is now triggered if an individual pool becomes unavailable, rather than only during a node failure.

**Update Warning** - Language added to beginning of update process logs reminding customers that an update can take up to two hours, and not to reboot system.

# SoftNAS Cloud 3.4.9.6 Release - March 03, 2017

## Overview

SoftNAS Cloud® NAS 3.4.9.6 is a maintenance release containing fixes, and improvements. Version 3.4.9.6 is compatible with all editions of SoftNAS Cloud® NAS.

## Upgrading

### Upgrading from 3.4.0 through 3.4.9.5

Reboot required for AWS and VMware instances.

### Upgrading from 3.3.3 or 3.3.4

Reboot Required for AWS and VMware instances.  
Follow instructions to upgrade a highly available SNAP HA™ pair.

## Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## Fixed in SoftNAS Cloud® 3.4.9.6

**High Availability IP re-assignment issue** - Fixed an issue in which the virtual IP address would not reassign itself to the primary node after a hard failover (ie, shut-down of primary node) and node recovery. This resulted in being unable to connect to CIFS and NFS shares post failover.

# SoftNAS Cloud® NAS 3.4.9.5 Release - Feb 21, 2017

## Overview

SoftNAS Cloud® NAS 3.4.9.5 is a maintenance release containing fixes, and improvements. Version 3.4.9.5 is compatible with all editions of SoftNAS Cloud® NAS.

## Upgrading

### Upgrading from 3.4.0 through 3.4.9.4

Reboot required for AWS and VMware instances.

**WARNING:** Due to the size of the 3.4.9.5 update, it can take up to 2 hours for the update to complete. Do NOT terminate the update while in progress else errors may occur. If you feel that your update is taking longer than 2 hours, please contact SoftNAS support for assistance and do not reboot your instance.

### Upgrading from 3.3.3 or 3.3.4

Reboot Required for AWS and VMware instances.  
Follow instructions to upgrade a highly available SNAP HA™ pair.

**WARNING:** Due to the size of the 3.4.9.5 update, it can take up to 2 hours for the update to complete. Do NOT terminate the update while in progress else errors may occur. If you feel that your update is taking longer than 2 hours, please contact SoftNAS support for assistance and do not reboot your instance.

## Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## New in SoftNAS Cloud® 3.4.9.5

**Improved Disk Status Reporting for HA failover** - Failover is now triggered if an individual pool becomes unavailable, rather than only during a node failure.

**Sipcalc included in installation package** - This allows SoftNAS HA to operate in isolated environments (without access to the internet) without needing to connect externally for sipcalc download.

**SnapReplicate Throttling Improvements** - Throttling now operates on all streams, rather than a per stream basis, ensuring that total outbound replication is throttled, rather than per individual volumes. Throttling levels update according to available bandwidth based on iptables. Throttling can be enabled and disabled through settings.

**Improved logging/support reports** - Additional log files added to default list of log files submitted when a support report is generated and sent to SoftNAS support, to make troubleshooting easier.

## Fixed in SoftNAS Cloud® 3.4.9.5

**NFS Bind Issue causing Client Mount hang fixed** - An issue that caused client mounts to hang, and resulted in "stale file handle" errors. This has now been resolved.

**Deletion of Disks in Active Pool Prevented** - A "loophole" in which it was possible to accidentally delete a disk in an active pool has now been prevented.

**Kerberos DNS issue fixed** - Fixed an issue hard-coding Kerberos to a single KDC/Admin Server, rather than using DNS lookup to find a KDC/Admin server. This eliminates KDC/Admin Server as a single point of failure.

**Hosts File Issue corrected** - Fixed a bug in which the etc/hosts file would not return with correct values after a reboot in some cases.

**Volume Naming Issue corrected** - Users can now create volumes of the same name on different pools.

**Snapclone Volume Mount issue fixed** - A bug in which volumes created from Snapclones within the UI (but not if mounted from command line) would appear but without data has been resolved.

**Consumption-based licensing persistent billing error message resolved** - An issue in which the "Can not connect to AWS Billing" error would persist even after connectivity issues were fixed has now been eliminated.

**Replication Hang Issue Resolved** - Fixed an issue where replication could hang for lengthy periods without an error or notification.

**Samba/NFS Failover issue** - After a failover, Delta-Sync by design temporarily shuts down Samba and NFS to prevent data loss during a transfer. The ability to restart the service immediately has been introduced.

**Premium Disk Raid 0 Pool Creation Error fixed** - An erroneous error when creating a RAID 0 pool from P20 512GB Azure disks has been resolved.

**Delta-Sync File-mapping issue fixed** - An issue in which failures could occur due to Delta-Sync failing to map files correctly to .CSV has been resolved.

**VIP mapping failure upon reboot fixed** - An issue was occurring when a reboot was performed when HA was deactivated resulting in loss of the VIP(becomes unassigned). This has now been resolved.

Ensured that a reboot prompt is provided after each update.

**Log verbiage fix** - Improved instructions matching the user interface have been introduced in log messages to resolve SnapReplicate failures.

**S3 bucket name fix** - Numerical values can now be applied to bucket names.

## Errata for SoftNAS Cloud® 3.4.9.5

If updating a SnapReplicate™ pairing to 3.4.9.5 according to the instructions found here, you may run across an error in which SoftNAS Cloud falsely reports SnapReplicate™ as still active, but with the deactivate button to continue the process grayed out.

Recommended Action: If the above occurs, switch to the SnapReplicate/Snap HA tab, and activate and deactivate replication, then return to the update process.

## SoftNAS Cloud® 3.4.9.4 Release - Dec 21, 2016

### Overview

SoftNAS Cloud® NAS 3.4.9.4 is a maintenance release containing fixes, and improvements. Version 3.4.9.4 is compatible with all editions of SoftNAS Cloud® NAS.

### Upgrading

## Upgrading from 3.4.0 through 3.4.9.2

A reboot is required for any users leveraging cloud disks.

## Upgrading from 3.3.3 or 3.3.4

A reboot is required for any users leveraging cloud disks.

Follow instructions to upgrade a highly available SNAP HA™ pair.

## Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## Fixed in SoftNAS Cloud® 3.4.9.4

**Auto Failover Issue** – Fixed an issue where in some cases auto-failover did not assign the VIP address to the proper interface.

# SoftNAS Cloud® 3.4.9.3 Release - Nov 21, 2016

## Overview

**SoftNAS Cloud® NAS 3.4.9.3** is a maintenance release containing fixes, and improvements. Version 3.4.9.3 is compatible with all editions of SoftNAS Cloud® NAS.

## Upgrading

### Upgrading from 3.4.0 through 3.4.9.2

A reboot is required for any users leveraging cloud disks.

### Upgrading from 3.3.3 or 3.3.4

A reboot is required for any users leveraging cloud disks.

Follow instructions to upgrade a highly available SNAP HA™ pair.

### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## Fixed in SoftNAS Cloud® 3.4.9.2

**License Validation bug fix** - Fixed an issue in which large storage volumes misrepresented terabytes as gigabytes, resulting in an error mistakenly stating the customer had exceeded his license limit.

## SoftNAS Cloud® 3.4.9.2 Release - Nov 15, 2016

### Overview

SoftNAS Cloud® 3.4.9.2 is a maintenance release containing fixes, and improvements. Version 3.4.9.2 is compatible with all editions of SoftNAS Cloud® NAS.

### Upgrading

#### Upgrading from 3.4.0 through 3.4.9.1

A reboot is required for any users leveraging cloud disks.

#### Upgrading from 3.3.3 or 3.3.4

A reboot is required for any users leveraging cloud disks.  
Follow instructions to upgrade a highly available SNAP HA™ pair.

#### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

### New in SoftNAS Cloud® 3.4.9.2

**Getting Started Checklist Change** - To more accurately reflect the requirement of an email address for notifications and alerts, guidance is changed to create a 'notification email', rather than 'admin email'.

### Fixed in SoftNAS Cloud® 3.4.9.2

**AWS Directory Service Integration Fix** - Fixed bug resulting in Ajax communication error as well as errors in authenticating group permissions.

### Errata for SoftNAS Cloud® 3.4.9.2

**Error Creating HA Controller** - Fixed an issue where the longer instance ID lengths were preventing creation of the HA controller.

# SoftNAS Cloud® 3.4.9.1 Release - Oct 25, 2016

## Overview

SoftNAS Cloud® 3.4.9.1 is a maintenance release containing fixes, and improvements. Version 3.4.9.1 is compatible with all editions of SoftNAS Cloud® NAS.

## Upgrading

### Upgrading from 3.4.0 through 3.4.9

A reboot is required for any users leveraging cloud disks.

### Upgrading from 3.3.3 or 3.3.4

A reboot is required for any users leveraging cloud disks.

Follow instructions to upgrade a highly available SNAP HA™ pair.

### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## New in SoftNAS Cloud® 3.4.9.1

**Ephemeral Disks as Cache for Azure** - SoftNAS Cloud® can now leverage ephemeral disks as read cache to improve performance on Azure instances.

**Case Sensitivity Option/Volume Creation** - A checkbox has been provided to allow users to determine whether to apply case sensitivity to a pool.

**Selectable Software Updates** - Software Updates now shows up to 3 of the latest release versions available for upgrade (if the user has not updated for more than 3 releases), and allows the user to select from between them, based on linked release notes.

**Self-Configured Disk Authentication Version Option** - In the Add Cloud Disk Extender wizard for Self-Configured Disks, users can now specify the authentication version (v2 or v4) used for the object storage in question.

**AWS Billing Gateway Failure to Connect Alert added** - FCP customers will now be alerted if the connection to the AWS Billing Gateway fails, and provided a timer in order to know when services will be disconnected.

**Support for AWS US East Ohio Region** - The AWS/Ohio region is now accessible from within StorageCenter's Add Devices wizard, allowing users to create S3 disks from this region.

**HA Validation Pre-Checks** - Validations have been added to ensure key HA requirements are all configured prior to SNAP HA setup. These include:

- Access to S3
- Access to a NTP server
- Two ENIs (one for replication traffic, one for heartbeat)
- Checking that each ENI is set to a different subnet
- IAM permissions
- Admin email is validated

## Fixed in SoftNAS Cloud® 3.4.9.1

**Email Notifications Fix** - SoftNAS Cloud® NAS no longer attempts to send email notifications to the default email example address of *admin@example.com*.

**Etc./Hosts File Fix** - Duplicate 127.0.0.1 entries no longer appear in the hosts file after a reboot.

**Importing S3 Disk Fix** - If importing an S3 volume and the user specified an incorrect volume size (ie; a smaller size than it was created as), StorageCenter did not alert the user of the issue. This has been corrected.

**Email Notification Fix** - An unnecessary alert email generated when checking for updates, regardless of whether updates are available, has been downgraded to info status, and will be logged rather than generating an alert email.

## Errata for SoftNAS Cloud® 3.4.9.1

On a SnapReplicate pairing of proxy SoftNAS instances, exclusions for the source and target now populate automatically. However, upon deletion of Replication, the source entry should be removed from target exclusion list. This does not occur.

**Recommended Action:** If deleting replication on a proxied SoftNAS instance, remove source entry exclusion from target manually.

Due to persistent display issues with header elements in Microsoft Edge, we no longer support the browser.

**Recommended Action:** Open the instance in a supported browser, such as Internet Explorer or Chrome.

In the Available Devices panel of Disk Devices, the Make and Model column presents SoftNAS created Azure disks as "Msft Virtual Disks" rather than "SoftNAS, Azure Virtual Disk". This will be corrected in a later release.

**Recommended Action:** None

During software update, the Progress Bar may go to 102% for a few seconds prior to completion.

**Recommended Action:** None.

# SoftNAS Cloud® 3.4.9 Release - Sept 15, 2016

## Overview

Version 3.4.9 is a maintenance release containing critical fixes and improvements. Version 3.4.9 is compatible with all editions of SoftNAS Cloud.

## Upgrading

### Upgrading from 3.4.0 through 3.4.9

No reboot is required.

### Upgrading from 3.3.3 or 3.3.4

No reboot is required.

Follow instructions to upgrade a highly available SNAP HA™ pair.

### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## Fixed in SoftNAS Cloud® 3.4.9

**Fixed NFSv4 bind issue** - NFS was not mounting correctly after HA failover events leading to stale file handle errors This issue has been fixed.

# SoftNAS Cloud® 3.4.8 Release - Sept 1, 2016

## Overview

SoftNAS Cloud® NAS 3.4.8 is a maintenance release containing feature additions, fixes, and improvements. Version 3.4.8 is compatible with all editions of SoftNAS Cloud.

## Upgrading

### Upgrading from 3.4.0 through 3.4.8

A reboot is required for any users leveraging cloud disks.

## Upgrading from 3.3.3 or 3.3.4

A reboot is required for any users leveraging cloud disks.  
Follow instructions to upgrade a highly available SNAP HA™ pair.

## Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## New in SoftNAS Cloud® 3.4.8

### Azure

**Azure Blob Object Storage Support** – SoftNAS Cloud® NAS frontends the object based scalable storage provided by Azure Blob Storage to present NFS, CIFS/SMB, iSCSI or AFP file sharing protocols for enterprise workloads. SoftNAS Cloud allows easy workload migrations to the Azure cloud without changing existing application data structures or workflows. Scale NAS deployments to Azure Blob Storage from gigabytes to petabytes.

Azure storage backends for SoftNAS Cloud:

- **Azure Premium Storage** – SSD based block storage for high-performance, I/O intensive workloads.
- **Azure General Purpose Storage** – HDD based block storage for general purpose workloads.
- **Azure Hot Blob Storage** – Object storage optimized for frequent I/O data.
- **Azure Cool Blob Storage** – Object storage optimized for low I/O and low cost (safe-keeping of less frequently accessed file data).

**SNAP HA™** – now on Azure – SoftNAS' patent-pending SNAP HA™ allows easy high-availability (HA) and cluster configuration for robust non-stop application operation with automatic failover and seamless transfer across controllers. SNAP HA, combined with Azure availability sets, makes the unique SoftNAS No Storage Downtime Guarantee available for customers using SoftNAS Cloud for Microsoft Azure.

**Role-based Access Control (RBAC)** – Ensure greater security and control for organizations with multiple users or systems on Microsoft Azure. RBAC allows management of users, roles and permissions to provide defined parameters for delegated administration.

**Support Change:** As of 3.4.8 softnas does not support launching vms on the Classic Portal. The Azure Resource Manager (ARM) is the only supported platform. Prominent SoftNAS features (notably high availability) will not function on VMs using Classic Portal.

### All Platforms

**DeltaSync™** – Reduces the Recovery Time Objective (RTO) from days to hours for cluster recovery from a high-availability (HA) failover event.

## Fixed in SoftNAS Cloud® 3.4.8

**Fixed SnapClone/HA issue** - Replicating SnapClones no longer results in an HA degraded state.

**False error message removed** - The false error message when restoring a pool with LUKS encryption enabled is eliminated.

**Fix to SNAP HA wizard on proxy instances** - EIP option no longer displays if creating a SNAP HA pairing on a proxy enabled SoftNAS instance.

**Error Message fixed** - If entering a non-existent pool name into the Create Volume wizard, an error message reading "Creating volume: No such pool: r0\_dfaf" will be generated.

**S3 Import failure display issue fixed** - A disk with 0 bytes no longer displays upon a failed S3 import.

**'Total Space Used' stat fixed** - Space calculations for block based volumes now display correctly.

**Self-Configured Disk bucket error fixed** - A bucket error occurring when rebooting a proxy instance using self-configured disks has been eliminated.

**Fixed Proxy exclusion list**- source and target exclusions for replication now auto-populate correctly before and after replication is disabled/re-enabled.

**Fixed Display Issues in Microsoft Edge** - Scroll bars within UI elements now display and function properly.

**Fixed UI Issue** - Text overlapping radial button in LDAP server settings workspace is now correctly placed.

## Errata for SoftNAS Cloud® 3.4.8

Errors may occur importing S3 disks that are members of a Storage Pool composed of multiple S3 disks.

**Recommended Action:** Contact SoftNAS Support to assist if it is necessary to import Storage Pools that span multiple S3 disks.

1 click upgrade feature for versions below 3.3.3 is not functioning in Internet Explorer.

**Recommended Action:** Perform the operation in Mozilla or Firefox.

On a SnapReplicate pairing of proxy SoftNAS instances, exclusions for the source and target now populate automatically. However, upon deletion of Replication, the source entry should be removed from target exclusion list. This does not occur.

**Recommended Action:** If deleting replication on a proxied SoftNAS instance, remove source entry exclusion from target manually.

Due to SSL certificate renewal process, after software update, a failed request error may appear due to browser calling up cached content. Alternatively, the software update complete message may appear twice, followed by a white web page.

**Recommended Action:** For either issue, refresh the browser (Ctrl +f5) to return to login.

Azure AD password expiry can cause HA and Add Disk failures.

**Recommended Action:** To disable password expiry, see Azure Documentation.

When importing a deleted pool, the import pool dialog box may not disappear, though the pool imports successfully.

**Recommended Action:** Verify pool import, and close the dialog box.

Table headers for Disk Devices, Volumes and LUNS, Storage Pool panels may shift out of position/out of sight if you navigate to another area while a task (create/delete) is in process.

**Recommended Action:** Refresh browser, or log out/log in if this occurs.

SoftNAS login screen can intermittently appear in SoftNAS UI panel rather than in browser if session expires.

**Recommended Action:** Refresh your browser, login as usual.

Deleting an Azure Blob Disk from an instance via the Azure Portal can cause your SoftNAS instance to become unstable/unresponsive.

**Recommended Action:** Delete Azure Blob disks from within the SoftNAS UI.

Currently, displayed pool or volume graphs are proportional, which can result in small pools being nearly invisible if presented along with large pools or volumes (for example a 10 GB volume next to a 100 terabyte volume).

## SoftNAS Cloud® 3.4.7.4 Release - Aug 19, 2016

### Overview

Version 3.4.7.4 is a maintenance release containing critical fixes and improvements. Version 3.4.7.4 is compatible with all editions of SoftNAS Cloud. Upgrading to this release is highly recommended for anyone leveraging Cloud Disks.

### Upgrading

#### Upgrading from 3.4.0 through 3.4.7

A reboot is required for any users leveraging cloud disks.

## Upgrading from 3.3.3 or 3.3.4

A reboot is required for any users leveraging cloud disks.  
Follow instructions to upgrade a highly available SNAP HA™ pair.

## Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## Fixed in SoftNAS Cloud® 3.4.7.4

**S3 Cloud Disk Fix** - A modification to S3 Cloud disks allows for proper response when the underlying object storage returns a 500 or 503 error.

# SoftNAS Cloud® 3.4.7.3 Release - Aug 2, 2016

## Overview

Version 3.4.7.3 is a maintenance release containing critical fixes and improvements. Version 3.4.7.3 is compatible with all editions of SoftNAS Cloud.

## Upgrading

### Upgrading from 3.4.0 through 3.4.7

No reboot is required.

### Upgrading from 3.3.3 or 3.3.4

No reboot is required.  
Follow instructions to upgrade a highly available SNAP HA™ pair.

### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## Fixed in SoftNAS Cloud® NAS 3.4.7.3

**Fix to default settings** - Disabled Linux Memory Overcommit.

# SoftNAS Cloud® 3.4.7.2 Release - June 13, 2016

## Overview

Version 3.4.7.2 is a maintenance release containing critical fixes and improvements. Version 3.4.7.2 is compatible with all editions of SoftNAS Cloud.

## Upgrading

### Upgrading from 3.4.0 through 3.4.7

No reboot is required.

### Upgrading from 3.3.3 or 3.3.4

No reboot is required.

Follow instructions to upgrade a highly available SNAP HA™ pair.

### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## Fixed in SoftNAS Cloud® NAS 3.4.7.2

**Fix to Ajax errors** - resolved an issue specific to 3.4.7 in which Ajax errors would result when rejoining a domain.

**Fix to NFS Exports Functionality** - When creating NFS exports, the option to make the export available to everyone was not functioning correctly. This has been resolved.

**Fix to NFS Exports bind entries** - An issue with NFSv4 bind entries overwriting required entries for NFSv3 compatibility has been fixed.

**Fix to AWS VIP routing table** - When failing over in an HA setting, an error would occur upon required update of the AWS VIP routing table. This has been resolved.

**Fix to SNAP HA deletion error** - An error that would occur when attempting to delete a SNAP HA pairing has been resolved.

**Fix to Century Link Regional S3 Bucket location error** - S3 Buckets placed in US East region would be misplaced to another region. This has been resolved.

# SoftNAS Cloud® 3.4.7.1 Release - May 23, 2016

## Overview

Version 3.4.7.1 is a maintenance release containing critical fixes and improvements. Version 3.4.7.1 is compatible with all editions of SoftNAS Cloud.

## Upgrading

### Upgrading from 3.4.0 through 3.4.7

No reboot is required.

### Upgrading from 3.3.3 or 3.3.4

No reboot is required.

Follow instructions to upgrade a highly available SNAP HA™ pair.

### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or Contact SoftNAS Support to schedule an upgrade session.

## Fixed in SoftNAS Cloud® 3.4.7.1

**VMware S3 Disk Device Errors** - Fixed an issue in which S3 disks introduced to VMware instances upgraded to 3.4.7 would result in errors, or would hang. Pre-existing S3 disks (from prior to upgrade) sometimes did not display in the Volumes Table. These issues have been resolved.

# SoftNAS Cloud® 3.4.7 Release - May 16, 2016

## Overview

Version 3.4.7 is a maintenance release containing critical fixes and improvements. Version 3.4.7 is compatible with all editions of SoftNAS Cloud® NAS.

## Upgrading

## Upgrading from 3.4.0 through 3.4.7

A reboot is required in order to see the benefits of the fixes added in this release. Existing functionality will not be affected pending reboot. SoftNAS recommends upgrading during a maintenance window.

## Upgrading from 3.3.3 or 3.3.4

A reboot is required in order to see the benefits of the fixes added in this release. Existing functionality will not be affected pending reboot. SoftNAS recommends upgrading during a maintenance window.

Follow instructions to upgrade a highly available SNAP HA™ pair.

## Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. Follow instructions to migrate, or [Contact SoftNAS Support](#) to schedule an upgrade session.

## HA Patch in SoftNAS Cloud® 3.4.7

### HA Hotfix Release to Prevent Spontaneous Failovers and Improve Logging

3.4.7 includes new logic and logging to address an issue seen in previous releases where brief losses of communication between AWS and SoftNAS instances have resulted in unnecessary failovers. These measures will both prevent the unnecessary failovers, and aid SoftNAS in determining root cause.

## Fixed in SoftNAS Cloud® 3.4.7

**LUN Target Deletion Issue Fixed** - Fixed an issue where a deleted target would result in the LUN detaching from other targets.

**CIFS Samba Configuration issue fixed** - Fixed an issue with user level authentication for CIFS and Active Directory integration.

**AWS key error on Proxy instances** - Fixed an issue in which EBS and S3 disks added to a SoftNAS instance that was protected by a proxy server would result in an AWS error message. Bucket errors on S3 when connected to a proxy were also resolved.

**Software Update via Proxy** - Fixed an issue where software updates could not be installed when connected via a proxy.

**License Authentication/Proxy issue** - Fixed an issue with activating licenses of SoftNAS instances that are installed behind a proxy.

**Updates Functionality in Webmin Panel** - Users can now perform OS Yum updates from within the Webmin Panel.

**Log Message Classification Change** - Fixed an HA failure message in SoftNAS logs which was misclassified as a "Warning" rather than an "Error". The message has been changed to:

**"Error ---> HA controller is not configured! Using SnapReplicate role instead of HA Controller as authoritative."**

**Fix to CLI Created Disks** - Fixed an issue where disks created in CLI would default to a setting of sync=disabled.

**NFS Server Default Thread Count Value**- Default thread count logic is improved, and is now based on the amount of available RAM, rather than a set default.

**Improved NFS Export Functionality** - Users can now add multiple hosts via our Webmin Panel with comma separated values.

**Exports and Shares Displaying after Pool Deletion** - Fixed an issue in which NFS Exports and AFP Volume Shares would continue to display after a pool was deleted.

**Importing S3 disks from Frankfurt Region Resolved** - Errata issue identified in 3.4.6 is now resolved. Users can now import S3 disks from Frankfurt without issue.

**SMTP Server Authentication** - Fixed an issue with SMTP Authentication where windows domain and username were not recognized as valid credentials (ie: domain/username).

## Errata for SoftNAS Cloud® 3.4.7

Elastic IP addresses will not work when using a proxy. This option will be removed from the HA configuration wizard in a later release, if a proxy setup is detected.

**Recommended Action:** If planning to establish high availability and use a proxy server, plan your configuration to make use of Virtual IP addresses in your configuration.

As we are doing a yum update as part of the 3.4.7 update, it could take time to complete. The time varies depending on Instance or VM resources.

**Recommended Action:** Plan the update for a maintenance window.

A misleading error message is generated if the wrong name is typed into the storage pool field when creating a volume - the error message reads 'Creating Volume: Not enough space at pool test.' It will be changed in an upcoming release to state that the pool specified does not exist.

S3 volumes created and attached as iSCSI LUNs are not displaying the disk use percentage in the Volumes table.

**Recommended action:** Monitor iSCSI Volumes in the Overview section to avoid running out of disk space.

After upgrading your instance, your instance will refresh. A prompt should appear telling you to reboot your instance. It currently does not.

**Recommended Action:** Reboot your instance after upgrade.

If running your SoftNAS instance behind a proxy, you may run into issues with running a Yum update on your SoftNAS instance. Certain mirror lists may return a 404 error (not found).

**Recommended Action:** In the command shell, run the 'yum clean all' command, and then 'yum update' in order to resolve the issue.

If running a SnapReplicate SoftNAS pairing, for replication to occur, the IPs of both paired instances must be added to the proxy's exclusion list manually.

## SoftNAS Cloud® 3.4.6.2 Release - March 30, 2016

### Overview

Version 3.4.6.2 is a maintenance release containing critical fixes and improvements. Version 3.4.6.2 is compatible with all editions of SoftNAS Cloud.

### Upgrading

#### Upgrading from 3.4.0 through 3.4.6

No reboot is required.

#### Upgrading from 3.3.3 or 3.3.4

No reboot is required.

[Follow instructions to upgrade](#) a highly available SNAP HA™ pair.

#### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. [Follow instructions to migrate](#), or [Contact SoftNAS Support](#) to schedule an upgrade session.

### Fixed in SoftNAS Cloud® 3.4.6.2

**AWS JAVA SDK update-** Added support for a new reporting API resulting in a minor change to a usage reporting structure.

**Version Numbering enhancement** - Added support for four-digit version numbers within SoftNAS.

## SoftNAS Cloud® 3.4.6.1 Release - March 21, 2016

### Overview

Version 3.4.6.1 is an optional maintenance release containing upgrades that allow use of AWS' new Flexible Consumption Pricing model. If not switching to the Flexible Consumption Pricing model, this upgrade can be skipped. Version 3.4.6.1 is compatible with all editions of SoftNAS Cloud® NAS.

### Upgrading

#### Upgrading from 3.4.0 through 3.4.6

No reboot is required.

#### Upgrading from 3.3.3 or 3.3.4

No reboot is required.

[Follow instructions to upgrade](#) a highly available SNAP HA™ pair.

#### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. [Follow instructions to migrate](#), or [Contact SoftNAS Support](#) to schedule an upgrade session.

### Fixed in SoftNAS Cloud® 3.4.6.1

**Flexible Consumption Pricing Added-** SoftNAS is one of four vendors chosen to be part of the AWS flexible consumption pricing (FCP) launch. This new pricing model, only available via the AWS Marketplace, allows you to scale your software usage up or down without modifying your SoftNAS EC2-based instance and still pay through your AWS Marketplace bill. When your usage changes, your hourly charge changes to match. This means you only pay for the amount of software you need to operate your workloads.

## SoftNAS Cloud® 3.4.6 Release - March 08, 2016

### Overview

Version 3.4.6 is a maintenance release containing critical fixes and improvements. Version 3.4.6 is compatible with all editions of SoftNAS Cloud® NAS.

## Upgrading

### Upgrading from 3.4.0 through 3.4.6

A number of S3 improvements are included as part of the upgrade. To take full advantage of the S3 improvements, a reboot is required. S3 Cloud Disks will continue to function without a reboot, but at the pre-upgrade level of functionality.

### Upgrading from 3.3.3 or 3.3.4

A number of S3 improvements are included as part of the upgrade. To take full advantage of the S3 improvements, a reboot is required. S3 Cloud Disks will continue to function without a reboot, but at the pre-upgrade level of functionality.

[Follow instructions to upgrade](#) a highly available SNAP HA™ pair.

### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. [Follow instructions to migrate](#), or [Contact SoftNAS Support](#) to schedule an upgrade session.

## Security Patch in SoftNAS Cloud® 3.4.6

### Hotfix Release to Resolve Linux Glibc Library Vulnerability

On February 16th, a serious defect was found in the getaddrinfo() library call in glibc. This issue, labelled CVE-2015-7547, allows an attacker to cause buffer overflow to occur, creating the possibility of remote code execution in some circumstances. In order to ensure that SoftNAS instances are not vulnerable to this potentially serious security issue, a hotfix has been created in order to eliminate this risk. If this hotfix has not already been applied, we recommend applying it immediately after your update to 3.4.6, as both the hotfix and update will require a reboot. Performing a single reboot for both patch and update will save significant time. See [\[SoftNAS KB\]: Installing Hotfix for CVE-2015-7547](#) for update instructions.

## Fixed in SoftNAS Cloud® 3.4.6

**Improvements to the implementation of S3 Cloud Disk Extender:** A new High-Performance S3 Block Cache has been implemented that improves performance drastically by caching changes in RAM, then synchronously flushing to S3 media in concert with ZFS filesystem to ensure data integrity. The High-Performance S3 Block Cache replaces the earlier "Block Cache File", which is deprecated and no longer used or required.

After upgrading to 3.4.6 (or later) and rebooting, it is recommended to delete any unused "s3cachepool" pools that were previously assigned for the block cache file storage, as they are no longer used. The block devices used for these pools can be reassigned as read cache, write log, or decommissioned.

Additionally, after upgrading to 3.4.6, it is necessary to reboot the instance in order for all of the improvements to be installed. S3 Cloud Disks will continue to function, but until the system is rebooted not all of the improvements will have been applied. Reboot is expected to take some time as the software updates are applied, particularly for S3 customers. The time required for the reboot to complete is dependent on the amount of data in the cache, and the speed of your network connection. See **Errata** for more details.

**Frankfurt Region HA issue:** Fixed an authentication issue preventing HA setup from functioning in the Frankfurt region.

**Erroneous Dialog Windows:** Fixed an issue in which HA installation would display several unnecessary dialog windows.

**AD Domain Field Character Limit:** Increased the previously restrictive character limit to 255 characters.

**Editing Volumes:** Fixed an issue in which if a user attempted to edit a volume, modifying the volume would not complete.

## Errata for SoftNAS Cloud® 3.4.6

As stated above, a reboot is required to obtain the improvements to S3 performance. Under certain conditions, this reboot can take a great deal of time. The reboot process performs three basic steps - applying the update, flushing the cache, then the reboot itself. If using S3 over a slow network connection, flushing the cache can take a long time. It is important NOT to interrupt this process (ie. by a hard boot) or you may lose valuable data.

**Recommended Action:** To avoid a lengthy reboot process, stop i/o, and wait for the cache to flush prior to performing your reboot. You can determine the amount of data in your cache by opening SoftNAS' dashboard, and viewing **Cache Memory** under the **Performance** tab. Alternatively, monitor the network writes traffic in the **I/O Throughput** panel. When this activity subsides, your reboot should take far less time.

When running a software update on platforms other than AWS an error may be shown in the log: "**curl: (7) couldn't connect to host**".

**Recommended Action:** It is safe to ignore this error, and the update will complete successfully.

An issue may occur when deleting SoftNAS Cloud Extender disks where the disk continues to appear in the disk devices panel and the Storage Center user interface is unable to be displayed.

**Recommended Action:** The issue will resolve itself and Storage Center will provide full functionality when the delete operation completes.

The **SoftNAS Dashboard > Performance Panel** does not include all types of filesystem activity in the throughput graph.

Errors may occur importing S3 disks that are members of a Storage Pool composed of multiple S3 disks. SoftNAS Support can assist if it is necessary to import Storage Pools that span multiple S3 disks.

If configured in a SNAP HA™/SnapReplicate configuration, volumes deleted from the primary node are not deleted from the secondary. A takeover initiated from the target node will replicate the volume again.

**Recommended Action:** If you need to remove the volume and its data permanently, delete the volume from both nodes.

iSCSI targets reconnect after a reboot, but disk devices may not show as available, due to a delay to the start of ZFS services.

**Recommended Action:** Refresh after a minute or two, and the disks will reappear.

If restoring a pool with LUKS encryption enabled, a false error message may be generated in the logs. The restoration process will successfully restore the selected pool and data.

**Recommended Action:** No action required, disregard error message.

S3 Imports to the Frankfurt AWS region fail when initiated from the UI.

**Recommended Action:** If you have the need to import an S3 Bucket in Frankfurt please contact SoftNAS Support.

## SoftNAS Cloud® 3.4.5 Release - January 13, 2016

### Overview

Version 3.4.5 is a maintenance release containing critical fixes and improvements. Version 3.4.5 is compatible with all editions of SoftNAS Cloud® NAS.

### Upgrading

#### Upgrading from 3.4.0 through 3.4.5

No reboot is required.

#### Upgrading from 3.3.3 or 3.3.4

No reboot is required.

[Follow instructions to upgrade](#) a highly available SNAP HA™ pair.

#### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. [Follow instructions to migrate](#), or [Contact SoftNAS Support](#) to schedule an upgrade session.

## Fixed in SoftNAS Cloud® 3.4.5

**Nuisance alerts and log messages fixed** - A minor issue with SNAP HA™ resulted in unnecessary log messages and nuisance email alerts from the target node has been resolved.

**NFS Bind on reboot fixed** - A critical issue with remounting NFS bind mounts on reboot has been resolved.

## Errata for SoftNAS Cloud® 3.4.5

If updating an instance that has as yet never been updated, there is a known issue where updating from 3.4.4 or earlier to 3.4.5 will hang at 82%, and will seemingly not update.

**Recommended Action:** The update completes just fine, however you will need to reboot the system, or alternatively, go to Webmin, run the command "service httpd restart", then refresh the browser to see the changes.

**Note:** Instances newer than 3.4.6 will not see this issue. This issue will also not be seen if the update process has previously been run, for example, if you previously updated from 3.4.3 to 3.4.4. The above issue has also been seen in VMware instances.

# SoftNAS Cloud® 3.4.4 Release - December 22, 2015

## Overview

Version 3.4.4 is a maintenance release containing critical fixes and improvements. Version 3.4.4 is compatible with all editions of SoftNAS® Cloud NAS.

## Upgrading

### Upgrading from 3.4.0 through 3.4.4

No reboot is required.

### Upgrading from 3.3.3 or 3.3.4

No reboot is required.

[Follow instructions to upgrade](#) a highly available SNAP HA™ pair.

### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. [Follow instructions to migrate](#), or [Contact SoftNAS Support](#) to schedule an upgrade session.

## Fixed in SoftNAS Cloud® 3.4.4

**S3 Cloud Disk data integrity fixes** - Issues addressed that may result in a degradation of data integrity for S3 Cloud Disks through reboots, upgrades, and power-loss scenarios. All customers using S3 Cloud Disks are strongly encouraged to apply the following steps. Steps 1-3 are required for data integrity. #4 is a performance improvement.

- Upgrade to 3.4.4.
- Configure all S3 Cloud Disks to utilize 1 GB block cache file. For new configuration follow directions in [Add Cloud Disk Extenders](#) in the Install Guide. For existing configurations [Contact SoftNAS Support](#).
- Install [the S3 Hotfix](#) to ensure optimal performance and data integrity.
- Follow [S3 Cloud Disk Best Practices](#) by using VPC Endpoints on AWS.

**Resync of data after a high availability failover** - A SNAP HA™ pair that had been failed, and repaired did not reliably replicate data to the new target node.

## New in SoftNAS Cloud® 3.4.4

**New** - SoftNAS Cloud AMI is now available in the Korea region, without local Korea S3 bucket support (all other regions supported). Local Korea S3 bucket support coming in a future software update.

## Errata for SoftNAS Cloud® 3.4.4

In a high availability configuration, with the Primary instance in a Degraded state, SNAP HA™ may not be able to be deleted through the Delete HA operation on first attempt.

**Recommended Action:** Log out of the StorageCenter UI. Log back in, and press Delete HA again. Successive Delete HA operations will succeed.

# SoftNAS Cloud® 3.4.3 Release - December 4, 2015

## Overview

Version 3.4.3 fixes a licensing issue in 3.4.0-3.4.2 for SoftNAS Cloud Standard on AWS Marketplace. Version 3.4.3 is compatible with all editions of SoftNAS Cloud® NAS.

## Upgrading

## Upgrading from 3.4.0 through 3.4.2

No reboot is required.

## Upgrading from 3.3.3 or 3.3.4

No reboot is required.

[Follow instructions to upgrade](#) a highly available SNAP HA™ pair.

## Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. [Follow instructions to migrate](#), or [Contact SoftNAS Support](#) to schedule an upgrade session.

# SoftNAS Cloud® 3.4.2 Release - November 21, 2015

## Overview

Version 3.4.2 provides additional security to major release version 3.4.0. Version 3.4.2 for all editions of SoftNAS Cloud® NAS is available. Upgrading to version 3.4.2 is highly recommended to address critical feature and security enhancements.

## Upgrading

### Upgrading from 3.4.0 or 3.4.1

No reboot is required.

### Upgrading from 3.3.3 or 3.3.4

No reboot is required.

[Follow instructions to upgrade](#) a highly available SNAP HA™ pair.

### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. [Follow instructions to migrate](#), or [Contact SoftNAS Support](#) to schedule an upgrade session.

## Security Update in SoftNAS Cloud® 3.4.2

## Security Update to Resolve Severe SoftNAS StorageCenter Security Vulnerability on Open Networks

This security update resolves a potentially severe security vulnerability in the SoftNAS StorageCenter Apache web server that could allow remote code execution when combined with other attacks over an unprotected network such as the Internet. An attacker who successfully exploited the vulnerability could run arbitrary commands on the storage appliance. Customers who have properly restricted Internet-based access to StorageCenter using the recommend best practices that limit StorageCenter access to a limited number of approved IP addresses or that isolate StorageCenter access to private networks, are less likely to be impacted than those who provide open Internet-based StorageCenter access (which is never recommended). This security update addresses the vulnerability by closing exploits in Apache web server.

### New in SoftNAS Cloud® 3.4.0

**360-degree Encryption™** – Data encryption all the time—at rest and in flight. Data-at-rest is encrypted through open source Linux Unified Key Setup (LUKS). LUKS is accepted as the standard for encryption of stored data. Data-in-flight is encrypted for CIFS and NFS file protocols.

**Apple File Protocol Support** – Apple File Protocol (AFP) offers file services for Mac OS X. Now Mac users can consolidate time machine backups and search for files with Spotlight when using SoftNAS with AFP for centralized storage.

**Dual Factor Authentication** – Prevent unauthorized access to SoftNAS management console with two-step authentication for SoftNAS StorageCenter™ through Google Authenticator.

**Login Protection from Bots** – Human verification through Google reCAPTCHA prevents bots from programmatically gaining access to the SoftNAS management console.

**Red Hat AMI on AWS** – SoftNAS Cloud for Red Hat Enterprise Linux (RHEL) is now available as a separate RHEL 7 AMI on AWS Marketplace.

**Hitachi Data Systems S3 Support** – Easily add Hitachi Content Platform (HCP) within StorageCenter to provide file services for Hitachi object storage.

**Active Directory Integration Improvements** – Trusted Active Directory Domains, user searches and domains with up to 1.35 million objects now supported.

### Fixed in SoftNAS Cloud® 3.4.0

**Key fixes to improve the SoftNAS experience include:**

- Alert system improved to decrease the number of generated emails
- Software upgrade fixed to work with HA
- 1-click software upgrade is restricted to version 3.3.0 and newer
- GUID Partition Tables (GPT) on S3 devices could have been corrupted when upgrading from versions older than 3.3.0.

- Adding 16TB EBS Volumes is now supported from StorageCenter
- IAM improved to be more restrictive
- Samba configuration file preserved across software updates
- Product Registration prompts 7 days after product launch

#### **NTP configurable for HA:**

- File permissions synchronize across CIFS shares and NFS exports
- StorageCenter no longer randomly logs out user sessions
- EULA "agree" button fixed to be accessible in FireFox 39.03

## **Errata for SoftNAS Cloud® 3.4.0 - 3.4.2**

Due to a number of factors, SoftNAS instances may increase resource consumption when moving from POC to Production. Planning for production instances should reflect this by planning for these higher resource requirements. Examples where higher resources are needed include: increased IO load, replacing local storage such as EBS with S3, enabling SnapReplication, scheduling backups.

**Recommended Action:** Plan scale-out to production by anticipating the need to use larger instances and more resources for the SoftNAS VM.

S3 based Storage Pools continue to grow over time, which can affect S3 bucket usage.

**Recommended Action:** Contact Support for the patch for Trim/Discard.

SnapReplicate does not replicate SnapClones. The Event Log reports not transferring SnapClones as an error.

**Recommended Action:** Be aware that SnapClone data is not protected with SnapReplication and HA.

Log files sent by Support Report can fail when too large. Failure is indicated by a pop-up status "Failure: Ajax communication failed".

**Recommended Action:** Contact Support to transfer log files through FTP.

Users are allowed through StorageCenter UI to remove disk devices from newly created storage pools, even when files are stored in a pool.

**Recommended Action:** After creating a storage pool, close and reopen the Disk Devices tab before taking any action on devices in the tab.

EBS Volumes may be incorrectly shown as Internal Devices in the Disk Devices tab if created added from the AWS console while other devices are added from StorageCenter.

**Recommended Action:** Do not add disk devices from StorageCenter and AWS console at the same time.

Errant error message is shown for loading AFP in SnapReplicate event log. The errant message can be viewed in the Events section of Replication Control Panel, "ERROR: AFP Netatalk service failed to reload in remote node...".

**Recommended Action:** The message is invalid. Ignore.

Refreshing the SnapReplicate tab when connected through RDP will cause the UI frames to scroll to right.

**Recommended Action:** The issue is cosmetic only. Avoid continual refreshes of the SnapReplicate tab when connected to the UI through RDP.

UI has compatibility issues with FireFox version 41.0.1. A specific example is that the "Next" button on SnapReplicate wizard does not get enabled.

**Recommended Action:** Use earlier version of FireFox such as 40.0.3 or another browser such as Internet Explorer, Chrome, Safari.

In General System Settings, the webmin screen lists NFS Exports twice under Networking. NFS v4 and v3 are supported, and are shown here as separate selections.

**Recommended Action:** Select each NFS Exports option to find the version interested in.

In the CIFS Shares Tab, Security and Access a user can be selected multiple times.

**Recommended Action:** Avoid selecting a user more than once.

On the Microsoft Azure platform, a disk device that has been assigned to a storage pool may be listed as Ready to Assign in Disk Devices.

**Recommended Action:** Take care with SoftNAS on Azure, to assign a disk device to a storage pool only once.

Storage Pools with a mix of encrypted and unencrypted S3 buckets are not recommended.

Issues are noted when deleting mixed encryption S3 pools.

**Recommended Action:** Do not mix Storage Pools with encrypted and unencrypted S3 buckets. If such pools are deleted, reboot to access StorageCenter UI.

The Disk Devices tab in StorageCenter does not update status for S3 devices when the S3 devices are deleted from the AWS console.

**Recommended Action:** Don't delete devices from the AWS Console that are in use. Delete S3 devices from StorageCenter Disk Devices before deleting from AWS Console.

In a storage pool with S3 devices, when a hot spare condition occurs from a spare S3 device, StorageCenter UI may be unresponsive.

**Recommended Action:** Due to the highly durable nature of object storage, using hot spares in an S3-based storage pool is not recommended. Reboot instance if the UI is found unresponsive when using S3 hot spares.

Deleting a target for an iSCSI share with multiple targets may cause all targets to become disconnected from that iSCSI share.

**Recommended Action:** Reconnect any targets from the iSCSI LUN Targets tab.

Connecting to an iSCSI LUN may cause an errant device to appear in the Disk Devices tab. Device shows up as 0 bytes and needing to be un-mounted.

**Recommended Action:** Avoid cleaning up or using 0 byte disk devices in the Disk Devices tab.

Storage Pools protected with RAID 6 report Usable Capacity incorrectly by using the raw capacity value. Licensing is impacted.

**Recommended Action:** RAID 6 usable capacity is determined by subtracting 2 disks' capacity from a Storage Pool's raw capacity. Contact Support to obtain a larger license key.

## SoftNAS Cloud® 3.4.0 Release - November 10, 2015

### Overview

SoftNAS Cloud® NAS 3.4.0 is a maintenance release containing feature additions, fixes, and improvements.

### Upgrading

#### Upgrading from 3.3.3 or 3.3.4:

No reboot is required.

#### Upgrading from versions prior to 3.3.3

1-click upgrades are not supported from versions older than 3.3.3. [Follow instructions to migrate](#).

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1-click upgrades are not supported from versions older than 3.3.3. [Follow instructions to migrate](#), or [Contact SoftNAS Support](#) to schedule an upgrade session.

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**Recommended Action:** Due to the highly durable nature of object storage, using hot spares in an S3- based storage pool is not recommended. Reboot instance if the UI is found unresponsive when using S3 hot spares.

Configuring Storage Pools with encrypted S3 devices protected with RAID 5 may require a reboot to access StorageCenter.

**Recommended Action:** Due the highly durable nature of object storage, using RAID with S3-based storage pool is not recommended. Reboot instance if the UI is found unresponsive when using encrypted S3 with RAID 5.

Deleting a target for an iSCSI share with multiple targets may cause all targets to become disconnected from that iSCSI share.

**Recommended Action:** Reconnect any targets from the iSCSI LUN Targets tab.

Connecting to an iSCSI LUN may cause an errant device to appear in the Disk Devices tab. Device shows up as 0 bytes and needing to be un-mounted.

**Recommended Action:** Avoid cleaning up or using 0 byte disk devices in the Disk Devices tab.

An iSCSI LUN exported by SoftNAS to VMware ESXi will not automatically reconnect after the SoftNAS VM is rebooted.

**Recommended Action:** In StorageCenter, navigate to the tab iSCSI LUN Targets. Select the target and click **Add a new iSCSI**.

Storage Pools protected with RAID 6 report Usable Capacity incorrectly by using the raw capacity value. Licensing is impacted.

**Recommended Action:** RAID 6 usable capacity is determined by subtracting 2 disks' capacity from a Storage Pool's raw capacity. Contact Support to obtain a larger license key.