Nexsan Assureon 8.3

Product Release Notes for Nexsan Assureon

Release Date: January 2020

Note: Certain changes of a proprietary or cosmetic nature are not necessarily listed.

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System requirements and usage notes

This section lists system requirements and prerequisites, as well as usage information for Assureon components.

System requirements and prerequisites

The following is a list of the necessary system components for optimal performance of Assureon 8.0 or higher.

Component	Description
.net framework support	The Assureon client requires version 4.6.2 of the .net framework.
Browser support	The following web browsers are recommended to run the Assureon System Administration user interface: • Internet Explorer 10 (11 or higher recommended) with *compatibility view* turned off. • Google Chrome

Usage notes

The following provides usage information and notes for Assureon system components.

Component	Notes	Procedural steps
Archive Folders	By default, files that have no content (empty files) are NOT archived into Assureon. (Empty files are defined as files where every byte in the file is the NULL ('\0') character.)	To enable archiving of empty files, set the `skipBlankFile` configuration entry in the `AssureonFSW.exe.config` file to `false`.

New features, enhancements and fixes in version 8.3

This section describes new features, enhancements and fixes in Assureon version 8.3.

Version 8.3.0 (January 2020)

Feature/Component	Description
High-speed Assureon with RoCE (RDMA over Converged Ethernet) for Virtual Shortcut capability	Assureon now offers an optional high-speed, end-to-end RoCE implementation that delivers blazing-fast 40GbE read functionality for virtual shortcuts. Using high-speed Assureon with RoCE, you can now configure an Assureon Edge/client to replace files archived to Assureon with virtual shortcuts—instead of physical shortcuts or stubs. Virtual shortcuts over RoCE consume no disk space on the Assureon Edge server and reside purely in memory as reference points to the files in Assureon. When a user or application reads a virtual shortcut on the Assureon Edge/client, the corresponding file is instantaneously retrieved from the Assureon archive and presented to the user or application as if it was the actual file. This retrieval is achieved using RDMA (Remote Directory Memory Access) over a 40Gb/s Converged Ethernet (RoCE) connection between the Assureon server and Assureon Edge/client. When you purchase high-speed Assureon with RoCE, you get a complete end-to-end solution for your data protection and archival needs, including RDMA-enabled Network Interface Cards (NICs) on the Assureon server and all Edge/client servers, as well as an optionally available 100Gb/s Ethernet Switch System for larger deployments. For more information about High-speed Assureon with RoCE, please contact your Nexsan Account Representative.
Assureon server enhancements and fixes	• Includes improvements to the Assureon Server hardware monitoring mechanism, whereby monitored components no longer report false anomalies • Includes a fix that prevents duplicate entries from being created in the Transaction Log under certain conditions • Includes minor UI fixes and enhancements • Previously, the “Monthly growth rate calculated by the system" field on the Reports tab was not showing any data; this has now been resolved. • Previously, the file system Rollover mechanism can fail under certain conditions; this has now been resolved. • Previously, creating and setting up a Trust relationship in the Configuration Wizard was not working as expected; this has now been resolved.

Feature/Component	Description
Assureon Edge/client enhancements and fixes	• Includes support for reading sparse files created in older versions of Assureon, where sparse files did not contain UFIDs • Includes support for the Change Journal sync to pick up events for a watch that references the root of a volume • Includes a fix for a potential performance issue when reading files over UNC • Includes a fix that prevents duplicate entries from being added to the FSW's (File System Watcher) Change Journal database • Previously, the Change Journal mechanism queried its database from beginning to end on a continuously rotating basis, which caused the File System Watcher (FSW) database to fill up. This has now been resolved. • Previously, the Delete Disposed Shortcuts sync was not taking in consideration read-only file systems; this has now been resolved.

New Features in version 8.2

This section describes new features and enhancements to the Assureon client and server components in Assureon version 8.2.

Version 8.2.0 (July 2017)

Feature	Description
Compatibility with Windows Server 2016	The Assureon server can now be run on systems using Windows Server 2016.
Compatibility with SQL Server 2016	The Assureon server can now be run on systems using SQL Server 2016.
Archiving compatibility	Assureon can now archive files stored on: • Nexsan Unity Active Archive file systems • Windows Server 2016, 2012, and 2008 R2 file systems
Configuration wizards for site deployments	Assureon now provides a Windows application that greatly eases the initial setup and configuration Assureon systems. The following new wizards are available: • **Initial Setup wizard**: Allows you to quickly configure Date and Time settings, Network Settings, and DNS Forwarders. • **File System Creation wizard**: Allows you to quickly create new file systems, using either existing organizations, or by creating a new organization for the file system to reside in. • **Authentication Setup wizard**: Allows you to specify the authentication method to be used between your system, and the Corporate domain. You can use either an Active Directory Trust Relationship, or issue certificates for each of your file servers. • **Watch Creation wizard**: Allows you to quickly create new watches, specifying the folders to use, the classifications, and the retention rules, for the watch.

Feature	Description
Enhanced reporting	Assureon now provides reporting information about the following: • Site space consumption • Node space consumption • Archiving stats by client and in total • Disposition information • A predictive analysis to determine when a system is expected to be full
Edge enhancements	The following enhancements to the Edge server have been made: • Added support for Windows 10 and Windows 2016 • Added support for ReFS (Resilient File System) • Upgraded .NET Framework • Added support to monitor disk space and trigger alerts • Added support to open a virtual file using 8.3 format (i.e.: c:\test\file~.1) • Added support to download the whole content of a sparse file when an application is trying to write a block

Known Issues v8.2

Component	Issue Description
Shortcuts of PDF documents	Some of the latest Adobe Reader versions do not allow shortcut sparse files to be read. As a result, shortcutting PDF files is turned off by default. If you try to access PDF files using Adobe Security Enhancement, the shortcut of PDF files will not load on a mapped drive with Adobe Security Enhancement enabled. As possible solutions, perform one of the following actions: • Disable Adobe Security Enhancement • Access the files locally or over UNC • Use virtual files
Shortcuts of Microsoft OneNote files	Microsoft OneNote files should NOT be shortcutted. While Microsoft OneNote can open a shortcutted file, OneNote loses the association with the file's table of contents.

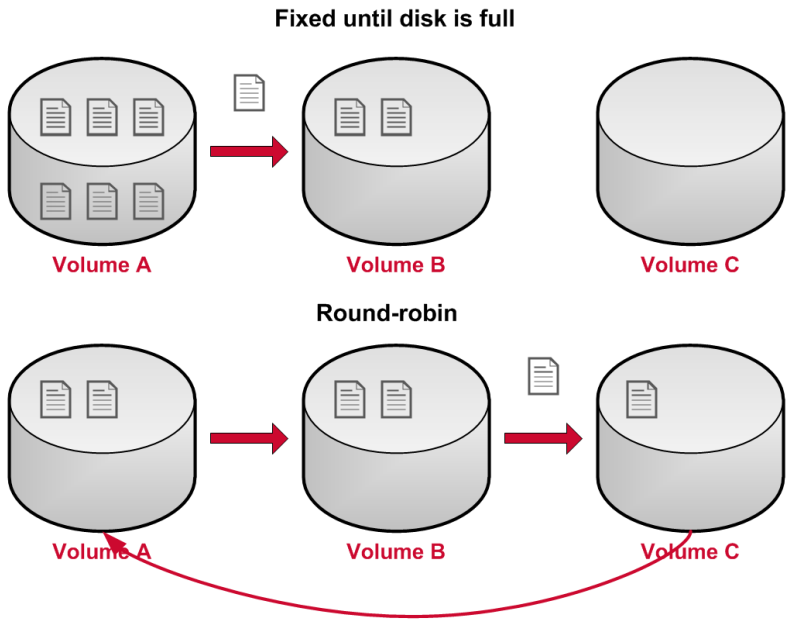
Component	Issue Description
Microsoft's Data Deduplication on Windows Server 2012 and 2016	On Microsoft Windows Server 2012 and 2016, data deduplication will not consider Assureon sparse file shortcuts.
Virtual Shortcuts	• Opening image files over UNC using Windows PhotoViewer does not work. • Virtual files cannot be opened through UNC if the watch points to a mounted volume. • Virtual zip files that cannot be opened local or over UNC on Windows Server 2008 R2 using WinZip. • TCP virtual shortcuts: In a clustered NAS or replicated Edge environment, file modifications are not transferred to the other node and so may not be immediately available.
Sparse files	You may not be able to access sparse file shortcuts if you have an anti-virus software running. This is because the filter driver service cannot access the cache files while the anti-virus is scanning files. You need to exclude the cache folder from your anti-virus configuration.

New features in version 8.1

This section describes new features and enhancements to the Assureon client and server components in Assureon version 8.1.

Version 8.1.0 (November 2015)

Feature	Description
Improvements to the CallHome feature	This feature sends system logs when major issues are detected, based on events and diagnostics, including: • The maximum object count is reached for the file system (in which case ingestion stops) • Any hardware-related error (processor, fan, disk, power supply unit, or memory) • The disk is full and ingestion gets turned off • There are no more active storage pools and rollover failed • The key server security check fails when trying to dispose files • The Events Manager starts to discard events because it is receiving hundreds of errors per second • The Root key is expired or is going to expire
Assureon Server Hardening	This fixes security issues and make the Assureon server less vulnerable to security breaches. We fixed these vulnerability issues in this release: • 7 category I issues • 248 category II issues • 47 category III issues The procedure to apply server hardening settings is described in a Technical Information Bulletin and must be performed by Nexsan Technical Support.

Feature	Description
Empty file notifications	The Assureon server no longer automatically archives blank files, that is, files with blank content and having a size higher than 0 KB. Instead, Assureon sends an email notification to inform you that a third-party application (such as an anti-virus application) may be intercepting files during a read/write operation and causing the files to become blank. Empty files—files that have a size of 0 KB—are automatically archived. You can configure the Assureon FSW configuration file (`fswconfig.xml`) to modify these settings: • `skipZeroKFile`: This value archives 0 KB files when set to `false`. The default value is `false`. • `skipBlankFile`: This value archives files that are blank (not 0 KB) when set to `false`. The default value is `true`.
Enhancements to storage pools	Assureon now uses a round-robin method for archiving data in implementations with multiple data stores. This allows for load balancing and more efficient use of storage. So, instead of filling up one storage pool before using the next pool, the Assureon server will write data to all available pools in a round-robin fashion. 

Feature	Description
Enhancements to virtual shortcuts	The following enhancements have been made to the virtual shortcuts mechanism: • Support for mount points – virtual shortcuts can now reference files that are part of a mounted file system. • Files can now be downloaded to replace virtual shortcuts – you can now configure Assureon to download the file reference by a shortcut, in order to replace the shortcut with the physical file. • A file can be read entirely on the first read operation – you can now configure Assureon to download a file in its entirety when it is first accessed using the corresponding shortcut. This can improve performance with read operations. By default, the Assureon server downloads files in 64 KB increments.
Database monitoring	Assureon runs SQL Jobs on all Assureon's databases to monitor their status and maintain database integrity. You can view the status of SQL Jobs on the System State page.
Secure Data Discovery	The Nexsan Secure Data Discover tool analyzes the current and future state of your data storage environment. Once downloaded from the Nexsan website, the tool completes a scan of one or several directories of your choice and then creates a report. The report provides a thorough summary and analysis of your storage and files.

Known issues in version 8.1

Component	Issue Description
Shortcuts of PDF documents	Some of the latest Adobe Reader versions do not allow shortcut sparse files to be read. As a result, shortcutting PDF files is turned off by default. If you try to access PDF files using Adobe Security Enhancement, the shortcut of PDF files will not load on a mapped drive with Adobe Security Enhancement enabled. As possible solutions, perform one of the following actions: • Disable Adobe Security Enhancement • Access the files locally or over UNC • Use virtual files
Shortcuts of Microsoft OneNote files	Microsoft OneNote files should NOT be shortcutted. While Microsoft OneNote can open a shortcutted file, OneNote loses the association with the file's table of contents.

Component	Issue Description
Microsoft's Data Deduplication on Windows Server 2012	On Microsoft Windows Server 2012, data deduplication will not consider Assureon sparse file shortcuts.
Virtual Shortcuts	• Opening image files over UNC using Windows PhotoViewer does not work. • Virtual files cannot be opened through UNC if the watch points to a mounted volume. • Virtual zip files that cannot be opened local or over UNC on Windows Server 2008 R2 using WinZip. • TCP virtual shortcuts: In a clustered NAS or replicated Edge environment, file modifications are not transferred to the other node and so may not be immediately available.
Sparse files	You may not be able to access sparse file shortcuts if you have an anti-virus software running. This is because the filter driver service cannot access the cache files while the anti-virus is scanning files. You need to exclude the cache folder from your anti-virus configuration.

New features in version 8.0.1

This section describes new features and enhancements to the Assureon client and server components in version 8.0.1.

Version 8.0.1.33 (December 2014)

Feature	Description
Support for Microsoft Volume Shadow Copy Service (VSS)	Assureon now enables you to view and restore *Previous Versions* of shortcutted files using Microsoft VSS.
Assureon Explorer enhancements and fixes	This version provides several enhancements and fixes to the Assureon Explorer component: • In the previous release, when restoring batches of files, the Assureon Explorer may fail the batch currently in progress if an error is encountered, and move on to the next batch. This is resolved; the Assureon Explorer will now attempt to restore all files in the batch, regardless of any error condition. • In the previous release, while restoring files under some specific error cases, the Assureon Explorer may remove a file's *reparse* point without restoring the contents of the file—leaving an empty sparse file. This is resolved. • Restored files no longer have the "A" attribute set • Long file names are now restored correctly
System State *Daily Summary* email	In the previous release, the subject line on the System State *Daily Summary* email provides no indication of hard disk failures; instead, the subject line indicates, *No issues found*. This is resolved.

Known issues in version 8.0.1

Component	Issue Description
Shortcuts of PDF documents	Some versions of Adobe Reader do not allow shortcut files to be read. As a result, shortcutting PDF files is no longer available.
Shortcuts of Microsoft OneNote files	Microsoft OneNote files should NOT be shortcutted. While Microsoft OneNote can open a shortcutted file, OneNote loses the association with the file's table of contents.
Deduplication on Microsoft Windows Server 2012	On Microsoft Windows Server 2012, deduplication is NOT supported on volumes containing Assureon sparse file shortcuts.

New features in version 8.0

This section describes new features and enhancements to the Assureon client and server components in Assureon version 8.0.

Version 8.0.0.163 (October 2014)

Feature	Description
New Assureon Call-Home and Automated Transfer Features	Assureon now enables you to enable remote access to the Assureon system without having to open up a web support session or VPN connection. This permits Assureon Technical Support to securely connect to the Assureon system and troubleshoot issues remotely. A new page in the System Administration user interface enables you to open up this connection with the push of a button. In addition, you can now configure the Assureon system to automatically send system logs to the Assureon Technical Support team as a means of detecting potential problems before they have an impact on system health. With this feature enabled, the Assureon system automatically collects and securely transfers system logs to the Assureon Technical Support team on a pre-defined schedule. Similar to the Assureon call-home feature, a new page is available in the System Administration User Interface for configuring logs. **Note** In order to use these features, the system must be able to connect to `asu.callhome.nexsan.ca` (`208.92.134.75`) on port 22. While port 22 is recommended, ports 443 or 80 may also be used.
Concurrent Synchronizations	Multiple synchronizations can now be executed at the same time, providing better archiving strategies to ensure data is being protected in a timely manner.
Virtual Shortcuts over TCP and Virtual Shortcut Read Failover	Virtual shortcuts are now supported over TCP. This allows a system using Infiniband on the primary site to failover to the second site during an outage. Virtual shortcuts over TCP can replace the existing Assureon Explorer shortcut replication strategy.
Filtering Files to Restore from Assureon Explorer	Users can now filter which files are restored based on filenames from the Assureon Explorer.

Feature	Description
Redesign of System Administration User Interface	The Assureon System Administration User Interface has been redesigned to be more modern and user-friendly. The redesigned interface also includes several new pages containing new functionality: • Tasks – This page enables you to monitor background tasks currently in progress, or that have completed recently. A task is defined as a long-running process or job that was started in the System Administration User Interface, such as a Disposition or Retention job. • System State Thresholds – This page enables you to configure threshold for various counters on the system and change other settings used by the System State page. • Remote Desktop – This page enables you to enable remote access for Assureon Technical Support. • Logs – This page enables you to configure the Assureon system to automatically send system logs to the Assureon Technical Support team, in order to detect potential problems before they have an impact on system health. • Upgrades – This page enables automatic system upgrades for configurations with a single node per site. • Contact Us – This page contains information about how to open a ticket with Assureon Technical Support.

	All pages have been updated to conform to the user interface redesign, but the following pages have undergone significant changes to enhance usability:
	• Search pages – All search pages now include more advanced search criteria, allowing you to retrieve files using more Meta data than was previously available.
	• The Clients page has been redesigned, allowing you to:
	  • Start and stop synchronizations,
	  • View Statistics on current synchronizations,
	  • View reports on how much data was ingested over a certain period of time.

Feature	Description
	The Archive Folders functionality has been enhanced, allowing you to: • Schedule synchronizations. Previously, this was done using the Windows Scheduled Tasks. Windows Scheduled Tasks can still be used but it is recommended to use the integrated Assureon rules. • Include exclude shortcuts in the rule level based on filename and file size. • Enable client triggered expiration by users and process names. Note that this feature is not visible by default. • Copy an archive configuration from one computer to another.
	• New Reports interface – The reports interface has been completely redesigned to allow for faster access, better filtering, and creation of reports based on specific dates. • New Reports interface – The reports interface has been completely redesigned to allow for faster access, better filtering, and creation of reports based on specific dates. • New Reports interface – The reports interface has been completely redesigned to allow for faster access, better filtering, and creation of reports based on specific dates.
Redesign of the File Synchronization Utility	The File Synchronization UI has been updated and redesigned to allow you to: • Start and stop synchronizations, • Manage multiple synchronizations at once, • View statistics on current file and real-time synchronizations, • View reports on how much data was ingested over a certain period of time, • View past synchronizations.

Known issues in version 8.0

The following is a list of known issues in version 8.0.

Component	Issue Description
TCP Virtual Shortcuts	In a clustered NAS or replicated Edge environment, file modifications are not "pushed" to the other node and so may not be immediately available.

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