



VAST Security Station

VAST Security Station Release Notes

Revision Number: 1.4 Software Version: 1.4

VIVOTEK
A Delta Group Company

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Upgrade Consideration for VAST 2 Users

- The license mechanism has changed from VAST 2. The previous VAST 2 license will be invalid after upgrading to VSS. A corresponding new VSS license is required for each VSS edition. Contact your distributor or VIVOTEK sales representative for new licenses before you upgrade to VSS.
- 32-bit systems are no longer supported in VSS. The installer will only run on 64-bit operating systems.
- Please refer to the How to Migrate to VSS Instruction Manual before upgrading from VAST 2 to VSS - Available at https://www.vivotek.com/products/software/vast_security_station.

Documents

The user manual and datasheet are available at
https://www.vivotek.com/products/software/vast_security_station.

System Specifications and Requirements

System specifications and requirements are available at
<https://www.vivotek.com/resource/learning/blog>.

VSS 1.4.0.2300 – July 18, 2025

Release Summary

VSS 1.4.0.2300 is a maintenance release that enhances overall system stability and reliability for ongoing deployments.

This update includes key fixes to improve:

- CMS and Substation system performance
- Camera connectivity and memory leak in certain camera statuses
- User role and license table performance

These improvements are based on feedback from recent field cases and are designed to reduce operational friction and support efforts.

We strongly recommend all VSS 1.4 users upgrade to this version to ensure smoother daily operation and fewer support incidents.

New Features

No new features were introduced in this version.

Changed Features

No changes to existing features in this version.

Improvements

- **Alarm**
 - Updated the display logic of the event "SD card life expectancy detection" in Event Search and Timeline views. This event will now only appear when the Status = Trigger (indicating an SD Card problem), rather than showing both Normal and Trigger statuses. This change reduces clutter and makes actual issues easier to detect and respond to.

Bug Fixed

- **System**
 - Stopped writing certain unnecessary debug logs that were previously not recycled, preventing excessive disk space usage in the installation directory.
 - Fixed a memory leak that could occur when cameras become disconnected.
 - Fixed a memory leak that could occur when a user attempts to play a camera stream without the required permissions.
- **Client**
 - Fixed an issue where the VSS Client could unexpectedly crash and close under specific conditions under a CMS/Substations structure.
- **Camera**
 - Resolved a disconnection issue where behavior from the VSS system was flagged

as a network attack by updated rules in the Trend Micro IoT Security program running on certain cameras.

- **Substation**

- Fixed an issue introduced in v1.3.0.5100 and later, where unstable network conditions increased the likelihood of Substation disconnections from CMS, affecting Dashboard availability.

- **Playback**

- Fixed an issue where adding a new camera to a view cell during Synchronized Playback would incorrectly display “Disconnected” on the view cell.

- **License**

- Resolved a problem where the License settings page became unresponsive or failed to display correctly when handling a significant number of Substations.

- **User Permission**

- Fixed a bug where the Camera filter did not work properly when assigning camera permissions to a user in versions after v1.3.0.5100.
- Fixed a timeout issue when updating user roles with a significant number of selected devices.
- Resolved a UI freeze that could occur when selecting a significant number of devices in the User Role interface.
- Fixed occasional UI lag when clicking the Update Role button after making permission changes.

- **ONVIF Support**

- Fixed an issue with multi-channel ONVIF cameras or encoders, where streams beyond the first channel would display incorrect camera information, such as resolution.

- **Alarm**

- Fixed an issue where configuring the alarm action "Set DO Status" for multiple Digital Outputs could result in one DO's value being incorrectly overwritten by another's.

- **E-Map**

- Fixed an issue where Substation E-Maps might not appear in the E-Map Tree view.

Known Issue

- On firmware version 4.8.0.2 of ND-Series NVRs, Scene Search – Line Crossing Detection may show inconsistent search results compared to VSS 1.4.

Important Notice

- **Remote Access Component in Health Monitoring Updated for Improved Compatibility**

The Remote Access option of the VIVOTEK Service Management feature in the Health Monitoring function has been modified to reduce potential antivirus conflicts. The required

component is no longer bundled in the installation package and will now be downloaded automatically only when the Remote Access option is enabled.

For systems upgrading from version 1.4.0.1100, the old component will be removed and reinstalled as the Remote Access option is enabled.



VSS 1.4.0.2000 – May 13, 2025

Release Summary

VSS 1.4.0.2000 delivers key bug fixes to improve playback reliability, device connectivity, and system stability. It also updates the Remote Access feature in Health Monitoring to improve compatibility by changing how its component is installed.

New Features

No new features were introduced in this version.

Changed Features

No changes to existing features in this version.

Improvements

- Updated Remote Access in Health Monitoring for better antivirus compatibility. The required component is now downloaded on demand when the feature is enabled.

Bug Fixed

- Fixed disconnection issues between ND-Series NVRs and VSS under high event load.
- Resolved “No permission” errors during synchronized playback on cameras under ND-Series NVRs.
- Resolved incorrect playback start time when using camera time in synchronized playback.
- Fixed recording interruptions caused by the stitch function on counting cameras (e.g., SC9133 series).
- Resolved early disconnection issue for SC9133 after initial connection.
- Corrected scheduled audio playback timing during Daylight Saving Time transitions.
- Fixed potential service startup failure after upgrading to v1.3.0.5150.
- Addressed occasional failures in updating user roles.
- Resolved Plugin Server crash during login if alarms are triggered at the same time.
- Fixed E-Map sync failure between CMS and Substation after a disconnection.

Known Issue

- On firmware version 4.8.0.2 of ND-Series NVRs, Scene Search – Line Crossing Detection may show inconsistent search results compared to VSS 1.4.

Important Notice

- **Remote Access Feature in Health Monitoring Updated for Improved Compatibility**
The Remote Access feature has been modified to reduce potential antivirus conflicts. The required component is no longer bundled in the installation package and will now be

downloaded automatically only when the feature is enabled.

For systems upgrading from version 1.4.0.1100, the old component will be removed and reinstalled as needed.

Please ensure antivirus software allows the download and execution of this component.

Further enhancements are planned in future versions.



VSS 1.4.0.1100 – Apr 01, 2025

Release Summary

This is the first release of VSS version 1.4, introducing powerful new features and upgrades focused on investigation efficiency, system stability, and expanded compatibility.

Key highlights include:

- License Plate Search integrated with Deep Search and supported AI cameras.
- Case Vault 2.0 for centralized case management and professional report generation
- Client Manual Recording from Live View with local clip storage.
- Health Monitoring enhancements with new alert types and remote access via the Partner Portal.
- ONVIF Profile T support for improved ONVIF camera integration and settings control.
- List Management enhancements with batch operations and CSV import guidance.

This release strengthens investigative tools, boosts operational efficiency, and delivers greater reliability for enterprise deployments.

New Features

- **Case Vault 2.0 (Pro Edition Exclusive)**

Case Vault is now a standalone module, elevated from a sub-feature within Deep Search. Users can organize evidence by case, manage multiple cases, and generate polished incident reports in one unified interface.

The original Case Vault under Deep Search now functions as a playlist-style tool to collect and sort footage during investigations.

- **Key Features**

- ◆ Add footage from both Deep Search results and Bookmarks into designated Cases.
- ◆ Cases are stored on the server centrally and can be accessed from multiple clients.
- ◆ Auto-generated reports with editable fields and thumbnails for visual reference.
- ◆ Export Case reports as PDFs or video packages.

- **Compatibility & System Requirements**

- ◆ Requires Administrator privileges.
- ◆ CMS and all substations must run the same VSS version.
- ◆ Case metadata (best shots, screenshots, descriptions, etc.) is stored in the server's database folder for persistent access.
- ◆ Footage added to Case Vault is protected from recycling but will be lost if the recording directory is manually deleted.



- ◆ For cameras managed by ND/NV-series NVRs, footage may be deleted based on local storage rules.

- **Deep Search – License Plate Search (Beta)**

This feature enhances Deep Search – Vehicle Search by incorporating the new Vision Object Analytics (VOA) attribute—license plate—on select VIVOTEK AI cameras with Deep Learning VCA package v7.14 or later for license plate capture. Compatibility details will be available on the product page at launch.

- **Key Features**

- ◆ Supports complete or partial license plate number searches and a fuzzy search feature to find similar vehicle results.
 - ◆ Allows users to Re-Search for identical license plates (Pro Edition Exclusive) to quickly locate identical vehicle results by clicking on a vehicle's full-view image displaying the plate number.
 - ◆ Supports Add to Case Vault for generating incident reports.

- **Important Notices**

- ◆ This new AI camera capability for license plate capture is currently in Preview and Beta release for testing and refinement. VIVOTEK has deployed a general license plate detection and alphanumeric Optical Character Recognition (OCR) technology for beta testing in countries that use alphanumeric license plates. Capture rate and accuracy refinements are necessary for each region before the official launch. The beta-release package, including detailed information and a test guide, will be available on the "VIVOTEK website – AI Lab Program" in May 2025. For an early preview now, please contact VCA.support@vivotek.com.
 - ◆ For optimal results, testing should be conducted in drive lanes and vehicle entrance areas with ambient lighting and low vehicle speed. Factors such as motion blur, low resolution, glare, or obstructed plates may result in misread characters or incorrect identifications. Users should refer to the test guide for best practices.
 - ◆ VIVOTEK AI camera models available for beta testing and feature preview include the VIVOTEK C Series – 83 Series and the VIVOTEK V Series – 87-V3, 91-V2, FE-V2, and CC Series.
 - ◆ The feature supports searching across supported VIVOTEK AI cameras under [supported VIVOTEK ND series NVRs](#) with firmware 4.8 or later.

- **Client Manual Recording**

- Start and stop manual recording from the VSS Client during Live View.
 - Recorded clips are saved locally and viewable immediately.

- **Health Monitoring Enhancement**

- Add two alarm types to the notification setting: Login Failure Alert and Recording Error Alert.
 - New dashboard sections: PoE status and Notification event (initially supporting VSS login and recording failure only)

- Support remote access and monitoring via the [VIVOTEK Premium Partner](#) Portal. Please refer to the [introduction page](#) for further details about this feature.
- Health Monitoring Service Version: 1.1.0.324
- **Support ONVIF Profile T for ONVIF camera**

By integrating the ONVIF Profile T, VSS now supports more configuration options for ONVIF Profile T-supported cameras, providing users greater flexibility in device management and project deployment.

 - Support image setting for ONVIF camera.
 - Support network setting for ONVIF camera.

Changed Features

- **Deep Search**
 - The installer process now includes the option to enable or disable the use and storage of license plate captures. This option will only appear during a fresh VSS installation and not during upgrades.
 - The Deep Search settings now include a new switch for using and storing license plate captures. When upgrading from a prior VSS version, the default setting will be enabled, while for a fresh installation, it will follow the configuration set during the installer process.
 - 'Scene Search - Line Crossing Detection' supports 'All,' 'Outside-to-Inside,' and 'Inside-to-Outside' directional filtering for more precise event searches.
- **VCA Metadata Display Information on Live View and Playback**
 - Adds new Face Box and Object Type Icon display options, allowing users to toggle the visibility of face and object type detection.
 - Aligns with the VCA web interface to use consistent display item terminology, ensuring clear and accurate information presentation across both products.
- **Alarm Management**
 - Added more tags to Alarm Action “Send HTTP requests,” such as Camera ID and Station ID of triggering event.

Improvements

- List management Usability
 - Batch delete enrollment cameras and members.
 - CSV import includes tooltips for better guidance.
- Deep Search Efficiency
 - Adds face filter in Deep Search – People Search, allowing users to quickly identify and refine face-related search results, improving investigation efficiency.
 - Optimizes Re-Search performance for faster results, making it up to 8x faster when analyzing the same amount of data over an 8-hour search range.
- Improved usability for submitting feedback and bugs.



- Block installation on unsupported Windows versions.
- All VSS x86 Servers will be upgraded to x64 architecture in this version.
- Web Client will now use the same port as the user's VSS Client instead of defaulting to 3443.
- Added Log Viewer tool LogViewer.exe under: \Program Files (x86)\VIVOTEK Inc\AST\Client\VSS folder.

Relevant module and package information

- Device Pack Version: 5.9.502
- Health Monitoring Service Version: 1.1.0.324

Bug Fixed

- **Camera**
 - Fixed an issue where connecting certain types of cameras could cause the Configuration Server to crash and restart, resulting in temporary recording interruptions.
 - Fixed an issue where the "Update Device" function did not affect ONVIF cameras.
 - Fixed an issue where zooming in or out on a fisheye camera view cell would cause Fisheye Dewarp coordinates to shift, resulting in display errors in Live View.
- **Installation**
 - Prevented users from installing VSS in the root directory of a disk, as doing so would cause the application to fail to start.
 - Blocked upgrades of NR Series NVRs that have not been configured with a database path to prevent system errors.
- **IO & Alarm**
 - Fixed an issue where DI/DO status might become incorrect after an IO Box reconnects following a disconnection.
 - Fixed an issue where the "Send HTTP requests" Alarm Action would fail if the content included the '&' character.
- **NAS**
 - Fixed an issue where the VSS Server could fail to record to a NAS if the connection was restored slowly after a hardware reboot.
- **Multicast**
 - Fixed an issue where incorrect IP address settings in Multicast could cause the Streaming Server to crash.
- **Data Magnet**
 - Fixed an issue where using the Data Magnet search function to query a large volume of data under low memory conditions could cause the Plugin Server to crash.
- **Counting Report**
 - Fixed an issue where using certain characters in the Counting Report function's area names would prevent JPG attachments from being included in the sent email.

Known Issue

- On firmware version 4.8.0.2 of ND-Series NVRs, Scene Search – Line Crossing Detection may show inconsistent search results compared to VSS 1.4.

Limitation

- N/A

Important Notice

- For ND-Series NVR users:
If your NVR is added to VSS as a substation via VIVOCloud, do not upgrade to firmware v4.8, as it removes VIVOCloud support.
To continue using this feature, remain on firmware v4.7 or earlier.
- Microsoft Windows Server 2012 is no longer supported.



VSS 1.3.0.5150 – Feb 13, 2025

Release Summary

This update is a bug-fix release for VSS v1.3.0.5100. It resolves two critical issues that may disrupt normal operations. We recommend that users who have encountered these issues and those who originally planned to upgrade to v1.3.0.5100 install this update, since it includes all the enhancements from the previous version.

Bug Fixed

- Fixed an issue where the playback functionality became unavailable after upgrading from the VAST/VAST2 X86 Server to VSS v1.3.0.5100.
- Fixed a memory leak issue when a camera connecting to VSS via the HTTPS protocol could not establish a WebSocket connection due to camera-side issues (e.g., an expired HTTPS certificate or disabled VCA package).

Known Issue

- The screenshot function used in alarm actions, such as sending emails, may fail, resulting in screenshots with no image displayed. This issue will be fixed in version 1.4.

VSS 1.3.0.5100 – Dec 27, 2024

Release Summary

This maintenance release of VSS 1.3 delivers essential bug fixes and introduces support for VIVOTEK's new Thermal and MA series cameras. Users experiencing previously identified issues or integrating these cameras are encouraged to upgrade to enhance system stability and functionality.

New Features

- **New Thermal Camera Event Support**
 - Added support for thermal camera events, including:
 - ◆ Event Search
 - ◆ Event-only recording
 - ◆ Alarm triggering based on thermal camera events
 - Supported VIVOTEK camera models:
 - ◆ **TB9332-E series:** Firmware version 3.6.1503.1006.381.0.6.12.12 or later
 - ◆ **TB9333-E series:** Firmware version 3.6.1305.1006.381.0.8.12.12 or later
 - ◆ **TT9333-E series:** Firmware version 3.6.1305.1006.381.0.8.12.12 or later
- **VCA Event and Object Metadata Support for New MA Cameras**
 - Added support for:
 - ◆ Event Search
 - ◆ Event-only recording
 - ◆ Alarm triggering based on VCA events
 - ◆ Deep search functionality
 - Supported VIVOTEK camera model:
 - ◆ **MA9311-EHTV:** Firmware version MA9311-VVTK-1.2403.61.01a or later

Changed Features

- **Discontinued Support:** Microsoft Windows Server 2012 is no longer supported.
- **Enhanced Playback Timeline:** The playback timeline now supports displaying camera footage from different recording groups on the same timeline. This enhancement is available only in the playback timeline under the "Live" tab. Support for event indicators, bookmarks, and synchronized playback is limited to the timeframe of the current recording group.
- **Event Recording Mechanism Update:** Adjusted the stop time mechanism for the VCA event "Restricted Zone" to ensure accuracy.

Relevant module and package information

- Device Pack Version: 5.9.494



- Health Monitoring Service Version: 1.0.1.830

Bug Fixed

- **General System**
 - Removed the unused driver program instdrv.exe from the installation path.
 - Fixed a timeout issue that caused failures when exporting logs from Analytics Report.
 - Fixed UI issues when operating some functions on a secondary screen in Windows.
- **Live View / Playback**
 - Fixed an issue where digital zoom and fisheye dewarp caused jagged edges in live view.
 - Fixed a memory leak that occurred during reverse playback of footage.
- **User Management**
 - Fixed an issue where camera permissions for disconnected substations were not applied correctly during user role updates ◦
- **License**
 - Improved the operational speed of the license table in environments with numerous substations.
 - Fixed performance degradation in the License Tab when both the Dashboard and License Tabs were open simultaneously.
- **Substation**
 - Fixed an issue where some cameras in the substations did not appear in the CMS device tree.
 - Fixed a crash in the plugin server during CMS updates of the substation's information in specific scenarios.
 - Corrected an issue where ND substation cameras were incorrectly displayed as offline in the CMS device tree.
- **Alarm**
 - Fixed a display issue with the "people running detection" alarm trigger in the alarm editing interface.
- **Counting Report**
 - Corrected an issue where changes in VCA rule name casing prevented data from appearing in the Counting Report.
- **Data Magnet**
 - Fixed a memory increase issue when continuously storing data that matched Data Magnet rules.
 - Corrected a cross-date data storage failure for LPR cameras in specific scenarios.
- **Integration**
 - Fixed a memory leak caused by repetitive use of the VSS API to retrieve the VSS device tree status by third-party systems.
 - Corrected misidentification of certain PoE types.



Known Issue

- N/A

Limitation

- N/A

Important Notice

- Microsoft Windows Server 2012 is no longer supported.



VSS 1.3.0.1100 – Sep 30, 2024

Release Summary

This is the first release of VSS version 1.3, which introduces significant enhancements and new features. Key highlights include:

- CMS-Driven Remote Software Upgrade for VSS Substations (Pro Edition).
- List Management for VVTK FR/LPR cameras (Beta, Pro Edition).
- Web Client with camera live view and control.
- Health Monitoring with new device locating features (Beta, Pro Edition).
- Upgraded software interface framework to Qt 6 for better interface compatibility.
- Enhanced security with OpenSSL 3.0 and OpenVPN 2.6.10 upgrades.

This release aims to improve system management efficiency, expand functionality, and enhance overall performance and security.

New Features

- **CMS-Driven Remote Software Upgrade for VSS Substations (Pro Edition Exclusive)**
Enables seamless remote software upgrades for VSS substations (including VIVOTEK NR-series NVRs, CMS Failover Servers, and Substation Failover Servers) from CMS station in VSS Pro edition, improving efficiency and reducing manual effort.
 - Notice:
 - This feature is handy for systems managed by a CMS station, ensuring that all substations match the version of the CMS station after it is upgraded. If the substation has a client installed, it will also be upgraded to match the CMS station version.
 - To maintain system-wide version consistency, when a client logs into a server with a newer version, you can download the installer from the server and manually run the upgrade.
 - The CMS station can only upgrade the substations directly beneath it. To upgrade third-layer substations, you must log in to the second layer and upgrade them from there.
 - This feature is supported from version 1.3 onwards. You must manually upgrade your entire system (both CMS station and VSS substations) to version 1.3. After this, you can use the remote upgrade feature for version 1.3.X or later.
- **List Management (Beta; Pro Edition Exclusive)**
Provides centralized list management for VVTK FR/LPR cameras, allowing users to enroll the list with multiple cameras and set the list as an alarm trigger in the VSS Pro edition.
 - Notice:
 - Users must first add VIVOTEK's FR or LPR cameras to VSS and configure the

data source in Data Magnet.

- Users must also configure the VADP Package specific to FR and LPR cameras to ensure data is correctly sent back to the VSS Server.
 - When configuring the VADP settings for FR cameras, users must enter "VSS_List" in the VSS event push settings category field.
- Support VVTK Camera models:
 - FD9387-FR-v2: FW version: 1.2101.37.01m or later; VADP Package version: 1.00.82 or later.
 - FD9387-FR-v3: FW version: 1.2302.37.10c or later; VADP Package version: 1.00.82 or later.
 - IB9387-LPR-v2 (N)/IB9387-LPR-W-v2(N): FW version: 1.2101.37.01m or later; VADP Package: 4.8.1.39 or later.
 - IB9387-LPR-v2 (V)/IB9387-LPR-W-v2(V): FW version: 1.2101.37.01m or later; VADP Package: 1.1.15 or later.
 - IB9387-LPR-V3 (N) series: FW version: 1.2302.37.02d or above; VADP Package: 4.8.1.39 or above.
 - IB9387-LPR-V3 (V) series: FW version: 1.2302.37.02d or above; VADP Package: 1.1.15 or above.

● **Web Client**

Provide a web-based client with the group view and saved view from the VSS client, allowing the user to control the camera in live view.

- Notice:
 - Users must first create a user account in the VSS client.
 - Support Chrome/Edge only.
 - Chrome browser version 128.0.6613.114 or later
 - Edge browser version 128.0.2739.54 or later

● **Health Monitoring (Beta; Pro Edition Exclusive)**

Introduces a Health Monitoring service version v1.0.1.830 that includes features for easier device identification and system monitoring:

- Adds a feature that makes the NVR emit beeping sounds to help locate the device.
- Adds a feature that makes the LED lights on the PoE switch blink for easier identification.
- Add a report feature allowing users to search and export a one-month device status history.
- Notice:
 - Health Monitor service uses port 5056. Ensure this port is open for remote access in the firewall.
 - The user interface is available in English only.
- Compatibility:
 - Supported VSS/NR substations version: VSS v1.2.0.3300 or later.
 - Supported ND series NVR substations version: ND v4.6.0.4 or later.

- Supported PoE models: VIVOCAM L2 Managed PoE Switches (e.g., AW-GEV-108A-130, AW-GEV-288A-370).

Changed Features

- The Playback interface allows users to switch between recordings from different recording groups.
- The display name of NR-series NVR models has been updated to the format “VSS Pro (NRXXXX-XX)” for consistency with other VIVOTEK applications.

Improvements

- **Qt 5 to Qt 6 Framework Upgrade:**
Upgraded software interface framework from Qt 5 to Qt 6 for better interface compatibility, including:
 - Support for high-DPI displays, delivering smoother text and icons and enhanced camera view cell quality on 4K+ resolution displays.
 - Removed the "DirectX (ANGLE)" display compatibility option in the Display Setup tool, as it is not supported in Qt 6.
 - Fixed a black screen issue in VSS live view when “No resampling” was set in the image sampling method on some VM platforms.
- **Security Upgrades:**
 - OpenSSL: Upgraded from version 1.1 to 3.0 for enhanced system security.
 - OpenVPN Update: Upgraded from version 2.4.8 to 2.6.10, providing enhanced reliability and security. This optional update may disconnect some OpenVPN connections between ND series NVR and VSS CMS station. After updating, check the connection status in the VSS device tree and re-enable the connection from “VMS remote connection” settings on each NVR device if needed.
- **Open Source Software Notice:**
Updated the “Open Source Software Notice” and added it to the “About” page.
- **User Management**
 - Improved the device multi-selection behavior in the Users and Roles feature to prevent users from accidentally deselecting previously selected devices during the operation.
- **View Cell Display Enhanced Mode**
 - Enjoy improved visual clarity with the enhanced view cell display mode. This feature enhances contrast for a better viewing experience but may cause overexposure in certain scenes.

Bug Fixed

- **Health Monitoring**
 - Fixed an issue where certain operations may cause the health monitoring page to reload.

- Fixed an issue where the redundant server information shown on health monitoring was incorrect.
- Fixed an issue where the camera's recording mode from substations was not displayed correctly.
- **Counting Report**
 - Fixed an issue where multiple duplicate emails were sent for the weekly report in certain situations.
 - Fixed a problem where camera previews from substations were not visible in the Counting Report.
 - Fixed an issue where scheduled VCA reports sent via email had no data in certain situations.
- **License**
 - Fixed an issue in version 1.2.0.3300 where VAST2 licenses could not be converted to VSS licenses while migrating VAST2-embedded NR/NS devices.
 - Fixed an issue where adding cameras without a MAC address caused license calculation errors.
 - Fixed an issue where license data could become corrupted during installation repair or upgrade after hardware changes.
 - Improved performance of the License table when the Dashboard and License Tab were used simultaneously.
- **VCA**
 - Fixed an issue where Deep Search could crash under certain conditions.
 - Fixed a crash issue in specific computer environments due to unsupported instruction sets used by Smart Search I.
- **Data Magnet**
 - Fixed an issue where search results in Data Magnet were not fully sorted when sorting the results.
- **Failover**
 - Fixed an issue where CMS could not display the recordings of some cameras under substations after failover was activated °.
- **Dashboard**
 - Fixed an issue where the total camera count on the CMS Dashboard was incorrectly calculated under specific CMS/Substations structures.
 - Fixed an issue where devices were shown as disconnected on the Dashboard when they were connected.
 - Fixed an issue where the snooze function did not apply to cameras in certain scenarios.
- **VSS Client**
 - Fixed an issue where multiple VSS clients logging into the server simultaneously could cause inaccurate camera connection/disconnection status updates.
 - Fixed an issue where the auto-login setting in VSS Client was turned off after a failed

login.

- **Live View/Recording/Playback**

- Fixed an issue where recordings added to Recording Group Storage using "Restore recordings from this path" could not be played back in certain conditions.
- Fixed an issue where taking screenshots in 1R view of a Fisheye camera could sometimes produce screenshots in 1O view instead.
- Fixed an issue where the "Export Clips" feature could not be used when the Live Tab was displayed on another monitor using the "Send to Screen" function.

- **Device**

- Fixed an issue where configuring cameras under VSS sometimes resulted in "Failed to apply" or "VSS.exe is not responding" errors.
- Fixed an issue where adding cameras under specific DVR models could cause inaccurate camera connection status.

- **Log**

- Fixed an issue where duplicate VCA events appeared in logs under certain conditions.
- Improved log search performance when dealing with large quantities of logs.

- **Email**

- Fixed an issue where email notifications failed to send due to an SMTP server crash in certain situations.



VSS 1.2.0.3300 – July 24, 2024

Release Summary

This release introduces a new health monitoring feature and enhanced view cell display mode, delivering a range of improvements and bug fixes to optimize system performance and user experience.

New Features

- Health Monitoring (Beta; Pro Edition Exclusive)
 - Gain valuable insights into the health of your system with a new bundled background service that collects data from cameras, VSS stations, substations, and managed PoE switches.
 - A web-based interface provides a clear view of this critical information, allowing you to proactively identify and address potential issues.
 - Accessing and enabling the Health Monitoring service requires Administrator permissions.
 - Health Monitor service uses port 5056. For remote access, ensure this port is open in the firewall.
 - Health Monitoring Service version: v1.0.0.705
 - The user interface is currently only available in English.
 - Compatibility:
 - ◆ Supported VSS/NR substations version: VSS v1.2.0.3300 or above.
 - ◆ Supported ND series NVR substations version: ND v4.6.0.0 or above.
 - ◆ Supported PoE models: VIVOCAM L2 Managed PoE Switches, such as AW-GEV-108A-130 and AW-GEV-288A-370.
 - More information and documentation available at: <https://www.vivotek.com/vast-security-station#support>
- View Cell Display Enhanced Mode
 - Enjoy improved visual clarity with the enhanced view cell display mode. This feature enhances contrast for a better viewing experience but may cause overexposure in certain scenes.

Changed Features

- Mobile NVR Wi-Fi Backup (Beta; Pro Edition Exclusive)
 - Improved backup efficiency: The updated mechanism ensures that only one backup occurs for alarms with the same trigger source, even if multiple alarms are activated simultaneously.
- License Invalid Process
 - Streamlined license management. If a license becomes invalid due to hardware changes, VSS will allow you to log in to a page where you can export a license request (REQ) file containing the latest hardware fingerprint. This file can then be

submitted to the support team for evaluation.

Improvements

- Improved error messages for failed Substation additions, making it more explicit for users to understand the reasons for failure.
- Adjusted the expiration time of SSL certificates to enhance security.

Bug Fixed

- Resolved an issue that prevented the CMS failover server from returning to Standby status after failover, potentially causing Substation and CMS server disconnection.
- Fixed an ND-series NVR issue that caused the system to misidentify substation versions and display warning messages upon login.
- Fixed an issue where, in live view, switching from one camera to another before the first camera's feed loads might result in a perpetual loading screen.
- Fixed an issue where Shepherd could not find the installed VSS version NR-series NVR.
- Fixed an issue where, if multiple clients logged into the same server simultaneously, only one client might receive camera status change notifications (e.g., disconnection, connection, recording start).
- Fixed an issue where multiple clients operating the same IP Speaker might experience connectivity issues.
- Resolved the APP "iViewer" hanging issue that might have happened during the VSS server login.
- Fixed an issue where the Client would display a successful setup message when NAS is used as Storage in the backup function, but NAS permissions were not successfully obtained, resulting in an actual failure.
- Fixed an issue where images in the exported Counting Report might be cropped in certain situations.
- Fixed an issue where removing a camera from one of two recording groups it was added to might result in missing playback.
- Optimized Dashboard layout to prevent camera count information from obscuring when managing many stations.
- Fixed an issue where the warning message filter on the Dashboard might be unusable when the number of Stations is high.
- Fixed an issue where the Dashboard would not display camera disconnection messages under certain conditions.
- Fixed an issue where the version of the redundant server would incorrectly display as VSS Lite instead of VSS Pro when the redundant server takes over a failed Substation.

Known Issues

- For VAST2-embedded NR/NS devices: This version cannot convert VAST2 licenses to VSS licenses. To upgrade to VSS, please first use VSS

v1.1.0.2000 or v1.2.0.2000 and then update to this version.

- Certain operations may cause the health monitoring page to reload.
- Information of the redundant server shown on health monitoring is incorrect.



VSS 1.2.0.2000 – Apr 01, 2024

Release Summary

This is the first release of VSS 1.2, a milestone update featuring the innovative Case Vault for Deep Search, enhanced PoE Switch integration, and PTZ functionality enhancements, alongside significant system improvements, spec changes, and bug fixes. This update is essential for all users seeking to elevate their VSS experience with cutting-edge capabilities.

New Features

- Case Vault for Deep Search (Pro Edition Exclusive)
 - A new functionality within Deep Search allows users to organize and analyze desired footage by adding it to Case Vault.
 - Videos in Case Vault are arranged chronologically, with their locations displayed on the E-Map during sequential playback for review.
 - This feature also supports automatic PDF report generation and bulk video export based on the Case Vault list.
- PoE Switch Integration
 - Offers support for embedded PoE Web, including PoE on/off, Topology view, and traffic monitoring.
- PTZ Enhancements for VIVOTEK PTZ camera
 - Support the Area zoom within view cell.
 - Support the selection of different preset points for advanced smart tracking within view cell.
- Dashboard Enhancements
 - The storage usage panel now shows estimated remaining recording days and total recorded days for each recording group.
 - A warning message appears on the dashboard when the sum of remaining and total recorded days falls below the set retention period in recycle options.
 - Support for snooze and refresh options in warning messages related to disconnections.
- E-Map Enhancements
 - It supports importing E-Maps created at substations from CMS.
 - E-Maps imported from Substations are usable in live view, alarm, and E-Map features within CMS but cannot be edited within CMS.
- Mobile NVR Wi-Fi Backup (Beta; Pro Edition Exclusive)
 - Enables Mobile NVRs to back up specific Alarm recordings near a Wi-Fi Access Point connected to the same domain as the VSS CMS server. Currently, only System DI-triggered alarms are supported.

Changed Features



- VSS Std Edition SPEC Change
 - Support adding ND series NVRs as substations via VIVOCLOUD.
 - The limitation of the total connected camera adjusts from 128 channels to 256 channels.
 - The free license of cameras connected under ND series NVRs increases from 128 to 192 channels.
 - Support VSS Embedded NVR Camera License for cameras connected under ND series NVRs.
- Deep Search Enhancements
 - For a better user experience, VSS introduces a new capability for the Deep Search function to prevent functionality irregularities among different software/firmware version combinations of clients, servers, and substations. This change will result in no search results for the Deep Search function if:
 - ◆ VSS clients, servers, and substations are not on the software version 1.2 or later.
 - ◆ ND series NVRs are not on the firmware version 4.4.0.4 or later.
 - The Re-Search function supports searching across cameras under [supported VIVOTEK ND series NVRs](#) with firmware 4.5 or a later version.
 - ◆ It is suggested not to Re-Search for more than ten cameras per ND series NVR.
- License Calculation Method Update
 - The method for calculating licenses for VIVOTEK MA series cameras connected to ND and NR series NVRs has been updated. Each MA camera device now counts as a 1ch camera license, aligning with those directly connected to the VSS Station.

Improvements

- Added shortcuts for "Analytic Report" and "Standalone Player" applications to the Windows Start menu program.
- Introduced an API to close alarm notifications, E-Map tab, and Alarm tab.
- Seamless Recording now supports Deep Search metadata.
- The live view displays related to the Camera VCA package rule, and FOV updates are now automatically updated rather than manually.
- Optimized CGI performance for fetching Snapshots via API.
- Enhance the method for retrieving deep search screenshots from ND by switching from mainstream screenshots to sub-stream and reducing screenshot capture frequency.

Bug Fixed

- Fixed an issue where only stream one was available for ONVIF cameras added using the "Add as offline camera" method.
- Corrected the timing of bookmarks generated by the "Unattended object detection" alarm trigger, which was previously incorrect.
- Resolved a problem where exporting video would fail when the server uses port

forwarding.

- Fixed a bug where the backup function would fail if the storage path contained non-English characters.
- Addressed issues with exporting camera recordings from ND NVR being more prone to failure under limited bandwidth conditions.
- Fixed a display issue where VCA counting data would not appear on the FD8166A-S live view.
- Resolved a problem where the tracking block would not display in SC8131's live view and playback.
- Corrected an issue where cameras supporting deep search would sometimes be incorrectly shown as not supporting deep search after a camera reboot.
- Fixed a login timeout issue that could occur when the client attempted to log into the server during times of high system activity.
- Resolved a problem where some cameras could not be configured after migrating from VAST2.

Known Issues

- VSS does not support use on Windows with the time zone set to UT+13:00 to +14:00.



VSS 1.1.0.2000 – Jan 17, 2024

Release Summary

This maintenance release of VSS 1.1 focuses on bug fixes and introduces face snapshot controls for the Deep Search function. Users encountering these issues or with privacy concerns related to Deep Search are recommended to upgrade for improved stability and functionality.

Changed Features

- The installer process now includes the option to Enable/Disable the Deep Search function and the switch for using and storing face snapshots. This switch will only appear during a fresh VSS installation and not during upgrades.
- The Deep Search settings have a new switch for using and storing face snapshots. When upgrading from a prior VSS version, the default setting will be enabled, while for a fresh installation, it will follow the configuration set during the installer process.

Bug Fixed

- Fixed the issue where logging into the server using the client would sometimes display "server not responding" due to an excessive number of connected substations.
- Fixed the problem with specific models of AXIS cameras, where changes in the parameters of the latest AXIS firmware caused live view and recording issues on VSS.
- Adjusted the timestamp of the bookmark triggered by the VCA event "Unattended Object Detection" to the time the event was just triggered.
- Fixed the issue where the bounding box of the triggered object in the VCA event "Unattended Object Detection" was not displayed in the view cell.
- Fixed the occasional system crash problem when using the "Send HTTP" alarm action.



VSS 1.1.0.1000 – Oct 12, 2023

Release Summary

This is the first release of VSS 1.1. This update brings several new features and improvements over VSS 1.0, making it a highly recommended upgrade for all existing users.

New Features

- Sends Mobile Notification
 - Support “Send mobile notification” in alarm action.
 - Manage iViewer users in the mobile device list.
 - Available in both VSS Std and Pro editions.
 - Requires iViewer version 3.15 or later.
- Privacy Mask on Exported Video
 - Exclusive to VSS Pro edition.
 - Applies mosaic or solid black masks to exported video clips for enhanced data protection.
 - Exported videos are compatible with most standard media players.
 - This feature will disable the ability to simultaneously use VCA metadata display, video encryption, and digital and display watermark functions.
- Re-Search for Similar Faces
 - Exclusive to VSS Pro edition.
 - Requires an update for Deep Learning VCA package to v7.7.4.4 or later on [supported VIVOTEK cameras](#) for face detection
 - Allows users to search for similar faces by clicking on the face best shot of an object.
- Support for Virtual Machine (VM)
 - Exclusive to VSS Pro edition.
 - Support is exclusively available for VMware and Microsoft Hyper-V platforms.
- Integration with ND Series NVRs
 - Configures camera settings when using ND 9000 series NVRs with firmware version 4.3 or later.
- Support NS9521 Series Model
 - Enables upgrading from VAST2 v2.13 to VSS Pro edition. The original number of licenses will be retained after the upgrade.

Changed Features

- Deep Search
 - Introduces an ON/OFF toggle for the Deep Search function. For fresh installations, the feature is set to OFF by default.
 - Modifies multiple color selection search logic from "AND" to "OR" for more intuitive search results. Selecting multiple colors will list all objects that contain any of the

selected colors.

- Sets the default search time to the last hour for quicker access to recent data.
- Data Magnet
 - Adds a new type of rule trigger that supports using a mismatch watchlist.
- Recording
 - Event recording supports seamless recording.
- Counting Report
 - Changes the feature "VCA Report" name to Counting Report

Improvements

- Security
 - Upgrades TLS to version 1.2 for enhanced security.
- IO Box
 - Adds online/offline status display for better monitoring.
- Dashboard
 - Network usage panel now displays the maximum network throughput of your system.
- API Enhancements
 - Provides API support to turn off alarm pop-up windows, E-Map, and alarm tabs triggered by an alarm.
- Installation
 - When upgrading VSS, the installer automatically backs up configuration files to the path "C:\ProgramData\VIVOTEK Inc\Backup\VAST\Server\VSS".
- License Activation
 - Adds a confirmation pop-up window when activating editions that do not require a license key.

Bug Fixed

- Fixed an issue where using the symbols ' or " in user account names prevented the account from being deleted. A mechanism has been added to avoid using these characters.
- Removed "remaining people data" from exported weekly and monthly Counting reports.
- Fixed an issue where live view and playback were unavailable when adding cameras using UDP.
- Fixed an issue with camera recording icons incorrectly displaying when frequently toggling between continuous and event recording.
- Fixed a crash in the streaming server due to insufficient memory in CMS, leading to the loss of camera feeds from substations.
- Fixed an issue where alarms and other settings became unchangeable after importing a .bin file without logging into the server following an NR-v2 reset to default.
- Removed an unused file, "smartctl.exe," identified as a virus by some antivirus software.
- Fixed a licensing issue when upgrading from NR-v2 to VSS after using the Restore to

Default function.

- Fixed an issue where long-duration video exports from cameras under ND in CMS would fail.
- Corrected a display issue for 10G network cards on the dashboard.
- Resolved an issue where frequent joystick commands were interpreted as an attack by the Trend Micro package on cameras, leading to disconnection.
- Fixed an issue where the Import/Export Utility would still export a .bin file even if the database were corrupted.
- Closed Port 5544 to external connections to enhance security.
- Fixed an issue where the camera's ROI would offset when zooming in beyond 175% and reloading a saved view.
- Resolved an issue where alarms would not be triggered if the Data Magnet category character count was less than 2.
- Fixed a memory leak in the plug-in server when the camera's motion event frequency was too high.
- Improved the reliability of exporting camera recordings from substations in CMS during periods of high network traffic.

Known Issues

- Changing the case of the Camera VCA rule name used in Counting Reports will cause the report to fail to display data. If you encounter this issue, reverting the name back to its original case will restore normal data display.

Known Limitations

- The Privacy Mask feature is limited to recordings with a maximum size of 9.4 million pixels. For higher-resolution cameras, such as the MS9321 model, exported recordings will be automatically resized to fall below this limit.
- Only 10 mode supports privacy masks for Fisheye and SC9133 series cameras. To view the exported video in a dewarping mode, please use the VSS Standalone player and activate the ONVIF fisheye lens dewarping option.
- The default image resampling method for the VSS Client's live view is set to "No Resampling." Some Virtual Machines may not support this, resulting in an inability to view the live feed. If you encounter this issue, navigate to Settings -> Preferences -> Client and change the Image Resampling Method to "Nearest Neighbor."



VSS 1.0.0.3000 – Aug 03, 2023

Release Summary

This maintenance release of VSS 1.0 contains bug fixes and performance enhancements. This release is recommended for all VSS 1.0 users.

Bug Fixed

- Fixed an issue where, during software uninstallation, the "remove the recorded data folder" option did not delete the recorded data folder.
- Fixed an issue with cameras under ND machines, where the snapshot function failed when the camera's name contained a "/" character.
- Fixed a VAST2 to VSS upgrade issue. This problem arose when a VAST2 system with a redundant station was upgraded to VSS, causing issues with activating the CMS station's license.
- Fixed a camera live view issue under a CMS/Substation structure where a "no permission" message could appear on the substation's camera live view upon CMS reboot if the auto-start live view page feature was used.
- Removing the 'remaining people' information from the weekly and monthly reports exported from the VCA Report.
- Fixed a memory leak problem that occurred when using the deep search feature.

Known Issues

- On the MAC client, there is a possibility of crashing when switching between live view and playback modes on a camera stream with audio in macOS 13 Ventura.

Known Limitations

- This release does not support running a VSS Server on a virtual machine. The next VSS release, v1.1, will support it.



VSS 1.0.0.2900 – Jun 07, 2023

Release Summary

This maintenance release of VSS 1.0 contains bug fixes and performance enhancements. This release is recommended for all customers.

Changed Features

- Modifies the database mechanism of deep search metadata to improve search performance. The database storage mechanism changed from one database file per recording group to one database file per camera.
- Modifies license backup mechanism for NR models with VSS Pro edition. When the VSS license is updated, the original embedded NR VSS license will be replaced by the new updated VSS license.
- Adds a mismatch rule for Data Magnet. Users set up a mismatch rule to trigger an alarm or action when the data does not match watchlist keywords.
- Improves Send feedback and bugs user interface for better usability.

Bug Fixed

- Fixed a motion event recording issue with the AXIS P3715-PLVE camera model.
- Fixed a VCA report issue: the counting data will not show if the VCA rule name contains a space character.
- Fixed a log-in problem: When upgrading from VAST2 to VSS, there is a possibility that the VSS client cannot log in to the server if too many logs exist.
- Fixed a license import issue: When the user uninstalls a VAST2 server that had activated licenses and then installs a new VSS server, the VSS license key may fail to be activated.
- Fixed a camera sync playback issue on the E-map function.
- Fixed a deep search issue that the object path does not show on the preview and playback video of the search results.
- Fixed a migration license fail-to-import issue: if any VAST2 server hardware fingerprints change after upgrading to VSS, the migration VSS license will not be able to import to the VSS server.

Known Issues:

- On the MAC client, there is a possibility of crashing when switching between live view and playback modes on a camera stream that has audio.

Known Limitations

- This release does not support running a VSS Server on a virtual machine. The next VSS release, v1.1, will support it.

VSS 1.0.0.1000 – Feb 27, 2023

Release Summary

This initial release of VIVOTEK's VAST Security Station (VSS) is an easy-to-use, all-around, AI-powered IP video surveillance software designed to help you manage tens of thousands of cameras with ease and focus on only what matters to you through VIVOTEK AI solutions. With three variants, VSS Lite, VSS Standard, and VSS Professional, you can choose what's best for your organization and scale up the whole system anytime.

Major Features

- **Three VSS editions: VSS Lite, VSS Standard, and VSS Professional**
- **Deep Search**
 - The Deep Search function is an AI-driven post-search empowered by VIVOTEK AI cameras. The Deep Search enhances post-search capability with different types of object metadata, helping users search the target more precisely and faster using attributes and behaviors.
- **Recording Encryption**
 - Allows users to encrypt the recording videos with password protection.
 - The recording videos will be viewable only in the VSS Client and VSS Standalone player.
- **User-Defined Role**
 - A user-defined role allows you to define a common set of permissions for a group of users, reducing the setup time for different groups of users.
- 64-bit VSS server to support up to 16G memory.

Known Limitations

- This release does not support running a VSS Server on a virtual machine. The next VSS release, v1.1, will support it.
- MAC client does not support fisheye dewarping.

