

Wisenet WAVE VMS v5 release

v5 Release

KEY NEW FEATURES

v5.0 is a full-featured release focused on cyber security, enhanced usability of existing features, and more administration capabilities including:

- Two-Factor Authentication (2FA)
- Advanced Object Search
- Metadata-Driven Archive Backups
- Web Page Proxy Via Server
- Resource Grouping
- Audio Mapping
- And more...



WISENET WAVE

SECTION 01

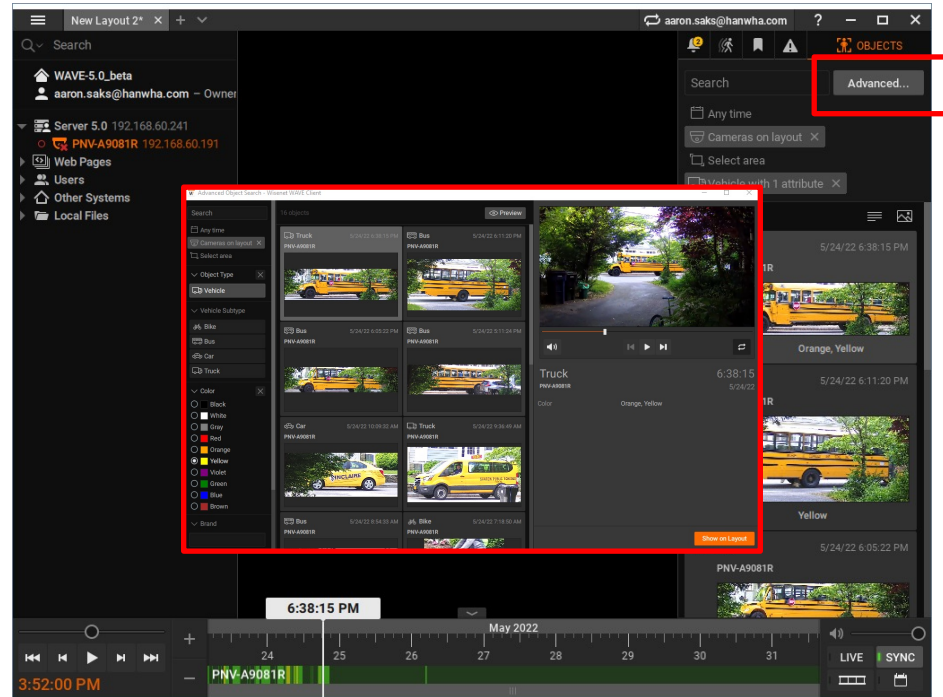
NEW USABILITY / ADMIN FEATURES

- ADVANCED OBJECT SEARCH
- METADATA DRIVEN ARCHIVE BACKUP OPTIONS
- WEB PAGE PROXY VIA SERVERS
- RESOURCE GROUPING
- AUDIO MAPPING
- DESKTOP CLIENT AUTOMATIC UPDATES
- SERVER WEB ADMIN INTERFACE DESIGN
- VIDEO PREVIEW THUMBNAILS

ADVANCED OBJECT SEARCH

Search for AI objects identified by AI cameras and stored with the video archives by attributes (e.g. object type, color, gender, age, clothing, license plate, etc) in a new pop-out window.

- Search based on object type and attribute (based on available plugins applied to camera(s)) on the Viewing Grid.



METADATA-DRIVEN RECORDING

Configure recording based on associated system metadata - including motion, bookmarks, or objects.

- Choose from the following options:
 - Continuous
 - Motion
 - Objects
 - Motion & Objects

The screenshot shows the 'Camera Settings' window for a PNV-A9081R camera. The 'Recording' tab is active, showing a recording status of 'ON' and '1/4 Time License is used'. Below this is the 'Recording Schedule' section, which is based on server time. A grid shows recording settings for each day of the week (Sun-Sat) and hour (12AM-11PM). Each cell in the grid contains '30' (FPS) and 'Hi' (Quality). Below the grid, the 'Schedule Settings' are configured with FPS set to 30 and Quality set to High. There are four recording mode options: 'Record Always' (selected, green square), 'Motion, Objects' (orange square), 'Motion, Objects + Low-Res' (orange square with pencil), and 'Do Not Record' (black square). Radio buttons are used to select the recording mode, with 'Motion & Objects' currently selected.

Camera Settings - PNV-A9081R - Wisenet WAVE Client

General **Recording** Motion Dewarping Advanced Web Page Plugins Expert

Recording **ON** 1/4 Time License is used

Recording Schedule (based on server time)

All	12AM	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM
Sun	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi
Mon	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi
Tue	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi
Wed	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi
Thu	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi
Fri	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi
Sat	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi	30 Hi

Schedule Settings

FPS 30

Quality High

More Settings

Record Always

Motion, Objects

Motion, Objects + Low-Res

Do Not Record

Motion

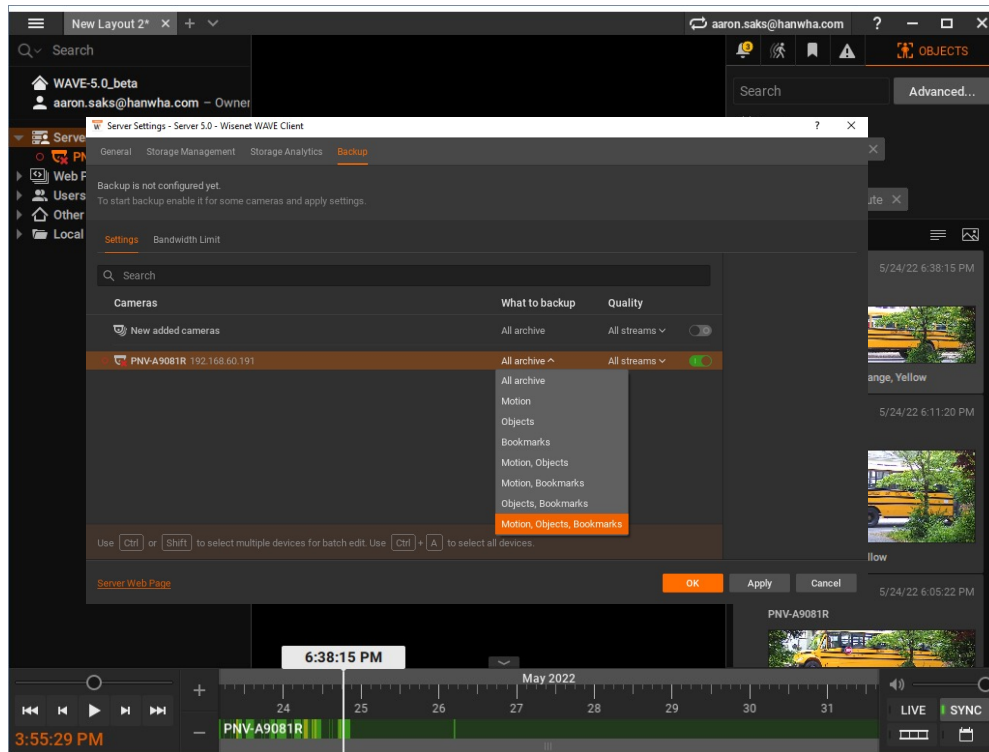
Objects

Motion & Objects

METADATA-DRIVEN ARCHIVE BACKUP

Configure archive backups to allow backup of recorded video archives based on associated system metadata - including motion, bookmarks, or objects.

- Choose from the following options:
 - All archive
 - Motion
 - Objects
 - Video
 - Bookmarks
 - Motion, Objects
 - Motion, Bookmarks
 - Objects, Bookmarks
 - Motion, Objects Bookmarks



AI OBJECT DETECTION EVENT RULE

Generate an Event Rule action when a specific AI Object is detected.

The screenshot shows the Wisenet WAVE Client interface. The main window is titled 'Event Rules - Wisenet WAVE Client'. It features a table of event rules and a configuration panel for the selected rule.

#	On	Event	Source	Action	Target	Interval of Action
	<input checked="" type="checkbox"/>	On Server Failure	<System>	Show desktop notification	All Users	Every 30 seconds
	<input checked="" type="checkbox"/>	On Server Conflict	<System>	Send email	User admin has invalid email address	Every 6 hours
	<input checked="" type="checkbox"/>	On Server Conflict	<System>	Show desktop notification	All Users	Every 30 seconds
	<input checked="" type="checkbox"/>	On Network Issue	<System>	Show desktop notification	All Users	Every 30 seconds
	<input checked="" type="checkbox"/>	On Generic Event	<System>	Show desktop notification	All Users	Instant
	<input checked="" type="checkbox"/>	On Plugin Diagnostic Event	<Any Camera>	Show desktop notification	All Users	Instant
	<input checked="" type="checkbox"/>	On Server Failure	<System>	Send email	User admin has invalid email address	Every 6 hours
	<input checked="" type="checkbox"/>	On License Issue	<System>	Show desktop notification	All Users	Every 30 seconds
*	<input checked="" type="checkbox"/>	On Analytics Object Detected	PNV-A9081R	Show desktop notification	All Administrators	Every 1 minute

The configuration panel for the 'On Analytics Object Detected' rule shows the following settings:

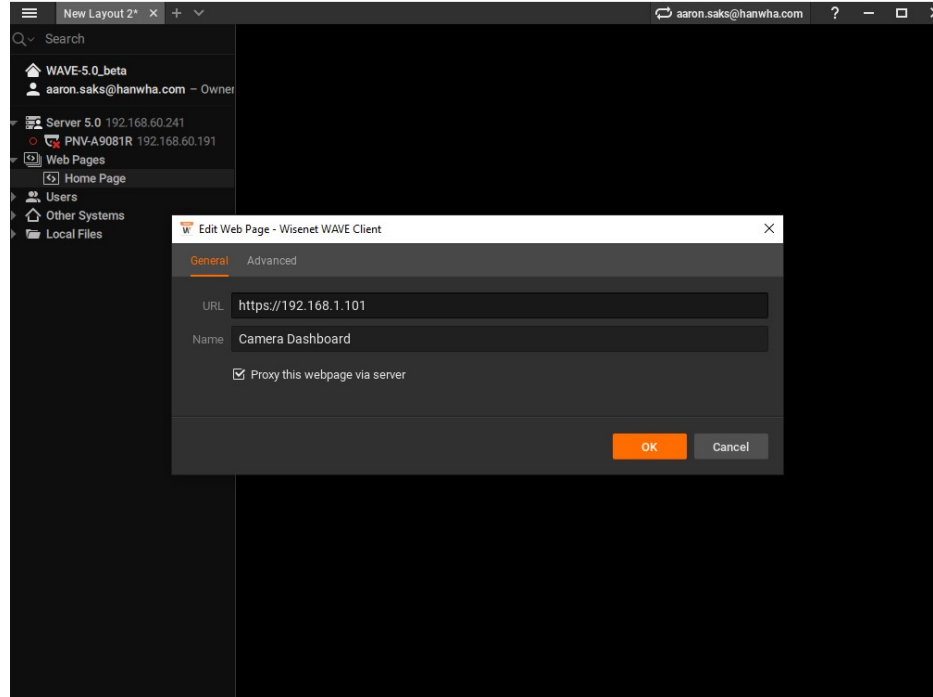
- When: Analytics Object Detected
- At: PNV-A9081R
- Object Type: Face
- Attributes: Face, License Plate
- Schedule: Person, Vehicle, Bike, Bus, Car, Truck
- Comments: (empty)
- Restore All Rules: (button)
- Action: Show desktop notification
- Interval of action: No more than once per 1 min
- to: All Administrators
- Force Acknowledgment: (checkbox, unchecked)

The interface also includes a search bar, a navigation pane on the left, and a timeline at the bottom showing the current time as 3:59:46 PM and the date as 5/24/22.

WEB PAGE PROXY VIA SERVER

Proxy local devices or on-prem application web pages via the Server application and view via a remote secured connection.

- Allows for easy, secure access to integrated security products / devices as well as management of underlying IT infrastructure and related services.
- Useful for Wisenet Road AI dashboard and other device configuration without needing to be on site.



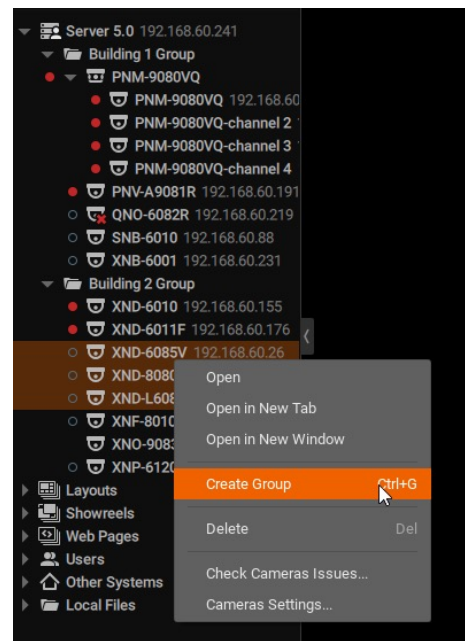
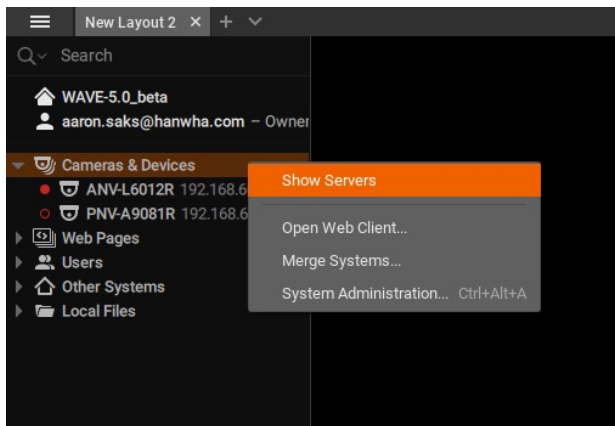
RESOURCE GROUPING

Group resources - cameras, streams, encoders, web pages - in Nx Desktop which can be used in roles and permissions for faster navigation of large systems.

Servers can be hidden for users who just need access to devices globally.

- Resource Groups can be shared via User Roles

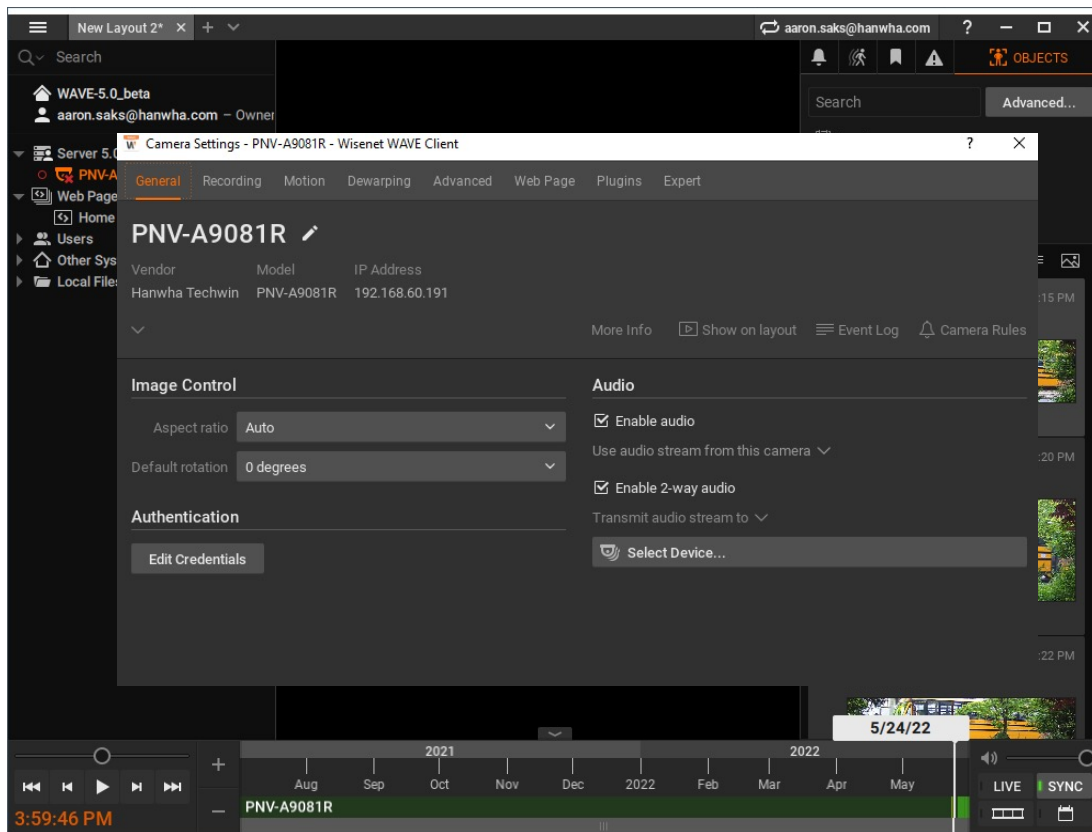
Note: Groups are limited to the Server level and will disappear if dragged.



AUDIO MAPPING

Use audio capabilities from different devices together.

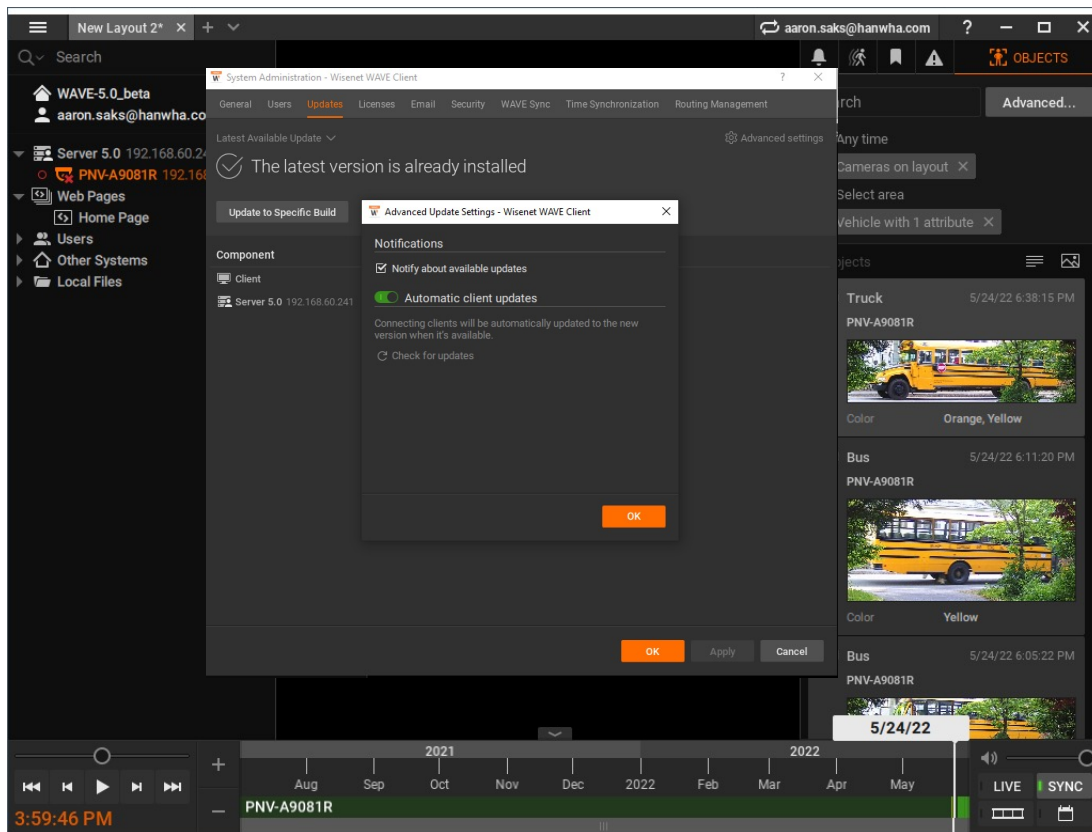
- For example:
 - An audio source from a camera or I/O module with a microphone can be used as an audio source for another camera.
 - A 2 way audio button can be placed on a camera without a microphone and used with a different camera that has a speaker attached to it.



DESKTOP CLIENT AUTOMATIC UPDATES

When enabled, the Desktop client can now download any available updates in the background and will prompt users to restart to receive the latest version.

Note: Auto-updates are optional and users can choose to disable them.



SERVER WEB ADMIN INTERFACE REDESIGN

The Server Web Admin interface has been redesigned to allow administrators to add / remove users, as well as view detailed information about Servers, Cameras, and Licenses.

The screenshot displays the WISENET WAVE web admin interface. The top navigation bar includes 'WISENET WAVE web admin', 'WAVE-5.0', and tabs for 'View', 'Settings', 'Information', and 'Monitoring'. A search bar is located in the top right. The left sidebar contains a search bar and a menu with 'System Administration', 'General', 'Licenses', 'Cameras', 'Users', and 'Servers'. The main content area is titled 'WAVE-5.0' and features a 'Merge with Another System' button. Below this is the 'WAVE Sync' section with a link to 'https://sync.wavevms.com' and a 'Disconnect from WAVE Sync' button. The 'System Settings' section includes three checkboxes: 'Enable auto discovery of cameras and servers' (unchecked), 'Send anonymous usage and crash statistics to developers' (checked), and 'Allow system to optimize camera settings' (checked). The 'Security' section includes four checkboxes: 'Enable audit trail' (checked), 'Force servers to accept only encrypted connections' (checked), 'Encrypt video traffic to desktop and mobile clients' (unchecked), and 'Limit session duration to' (checked) with a dropdown menu set to '30 days'. On the right side, there is a 'New License' section with a 'License key' input field and an 'Activate' button. Below this is a 'Licenses Summary' table and a 'ZEYE-PBF2-XYZ-FAGS' section with a table of license details.

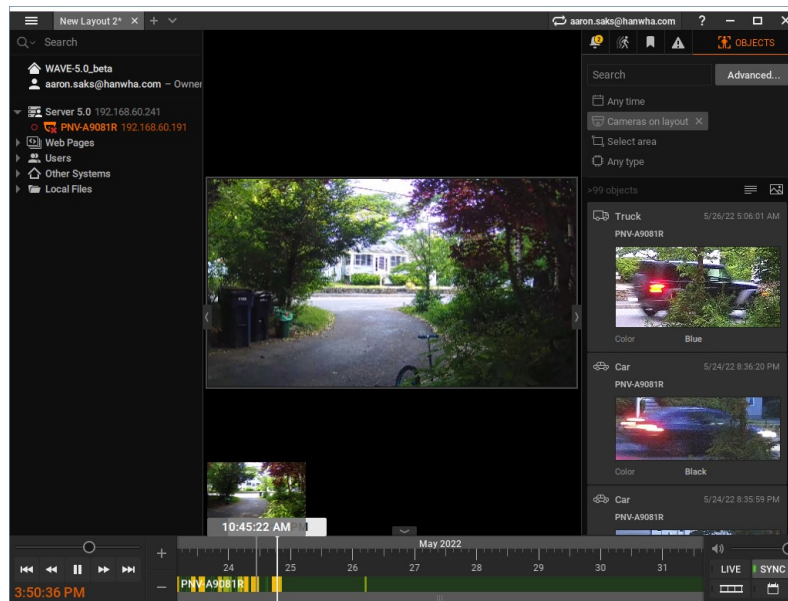
Type	Channels	Available	In use
Trial	4	4	2

Type	Time
Channels	4
Server	Server 5.0
Hardware ID	05819f5730b602074f29bbee0ed4f3ad92
Status	OK
Expires	30 Jul 2022, 03:42 PM

EASY PLAYBACK CONTROLS

Users can now hover over the timeline to preview video in thumbnail format in Windows and MacOS Desktop clients.

Instant playback – can playback from a few seconds ago.

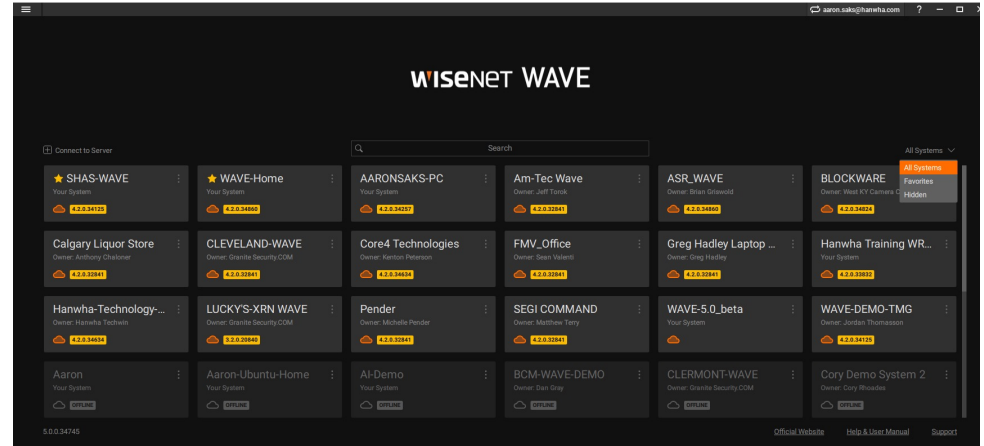


IMPROVED LOGIN PAGE

Easily sort, filter, and hide systems. The System login page now scrolls to accommodate large numbers of systems, improved sorting.

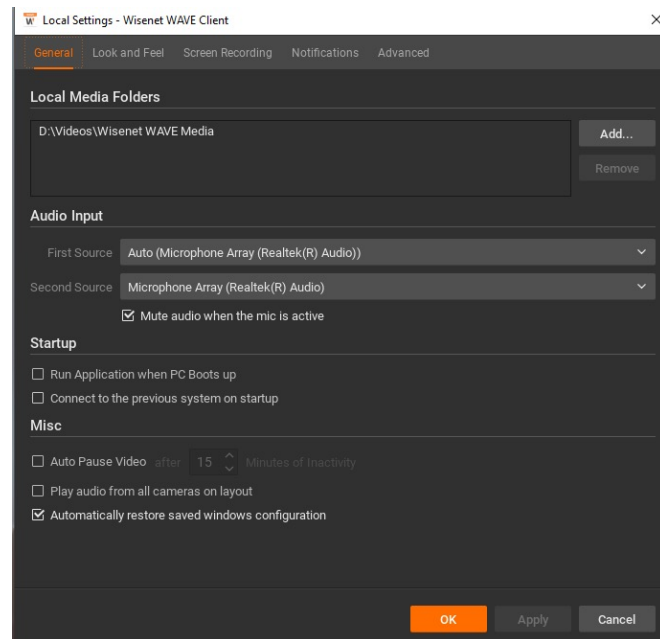
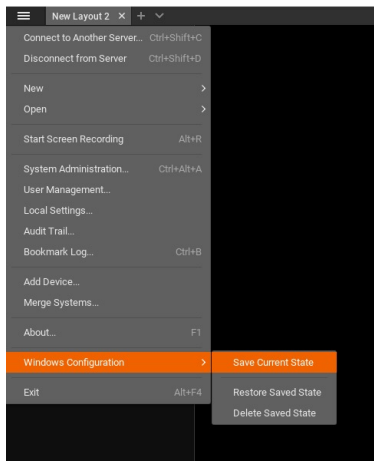
Search by:

- System Name
- Server Name
- IP address (from any of the Servers discovered by the Desktop Client)
- System owner (only for cloud systems)
- User's email (only for cloud systems)



IMPROVED CLIENT WINDOW STATE

Easily save/restore the client state manually or automatically. This is useful for video walls and unattended displays to ensure they always display correctly.



UPDATED SUPPORTED PCs.

- The Desktop Client now works on Mac computers with Apple Silicon (e.g. Apple M1 chip).
- Added support for MacOS 12 (Monterey).
- Added support for Windows 11.
- Added support for Windows Server 2022.

SECTION 02

NEW CYBER SECURITY MEASURES

- TWO-FACTOR AUTHENTICATION (2FA)
- ENCRYPTED ARCHIVES
- MORE SECURED CONNECTIONS

TWO-FACTOR AUTHENTICATION

A system wide setting that forces all users with Cloud SYNC accounts to use an authentication app (Cloud supports Google Authenticator, Microsoft Authenticator or Duo Mobile) to verify their identity before logging in to a System.

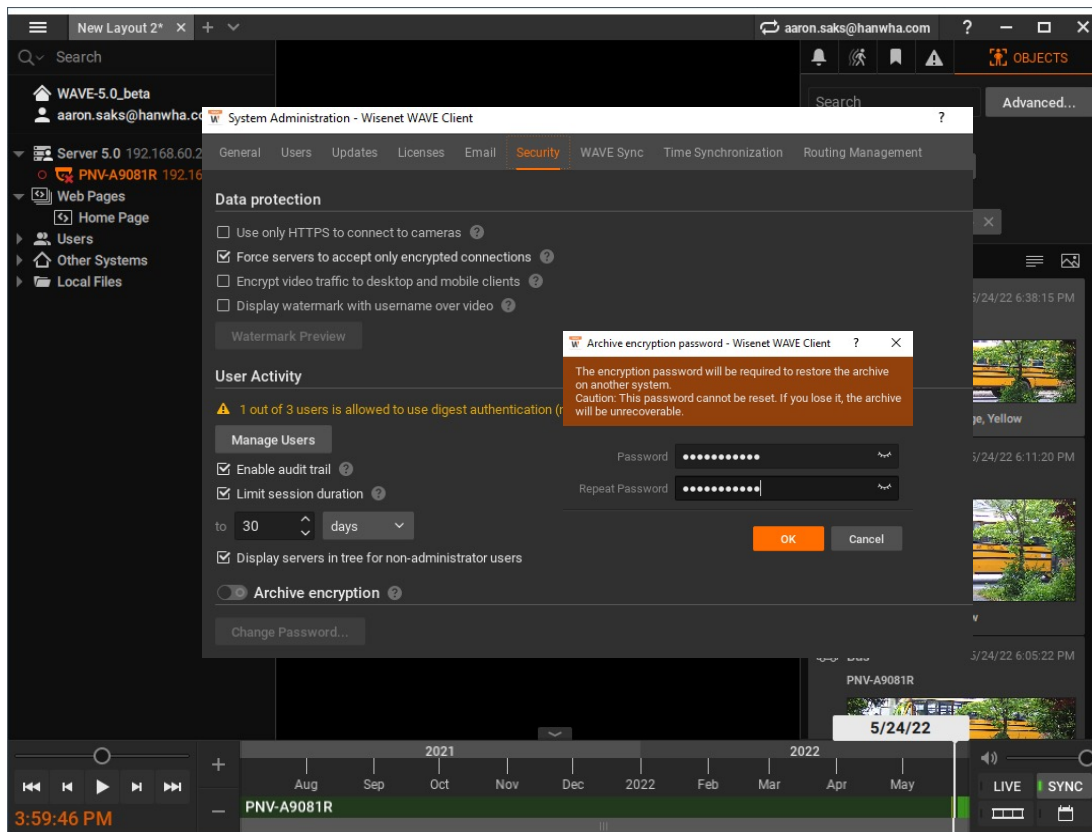
2FA must be enabled on the SYNC account, and non-2FA systems will not be accessible.

The screenshot displays the 'Settings' page for a system named 'PM Office (DG)'. The interface includes a search bar at the top left and a navigation menu with options like 'System Administration', 'General', 'Licenses', 'Cameras', 'Users', and 'Servers'. The 'General' section is active, showing 'System Settings' and 'Security' tabs. Under 'System Settings', there are three options: 'Enable auto discovery of cameras and servers' (unchecked), 'Send anonymous usage and crash statistics to developers' (unchecked), and 'Allow system to optimize camera settings' (checked). The 'Security' section contains four options: 'Enable audit trail' (checked), 'Force servers to accept only encrypted connections' (unchecked), 'Encrypt video traffic to desktop and mobile clients' (unchecked), and 'Mandatory two-factor authentication for cloud users' (checked). Below these, there is a 'Limit session duration to' section with a text input field containing '30' and a dropdown menu set to 'days'. At the bottom, there is a footer with links for 'About WAVE Sync', 'Download Wisenet WAVE', 'Support', 'Terms', 'Privacy', and 'Supported Devices', along with a copyright notice for '© Hanwha'.

ENCRYPTED ARCHIVES

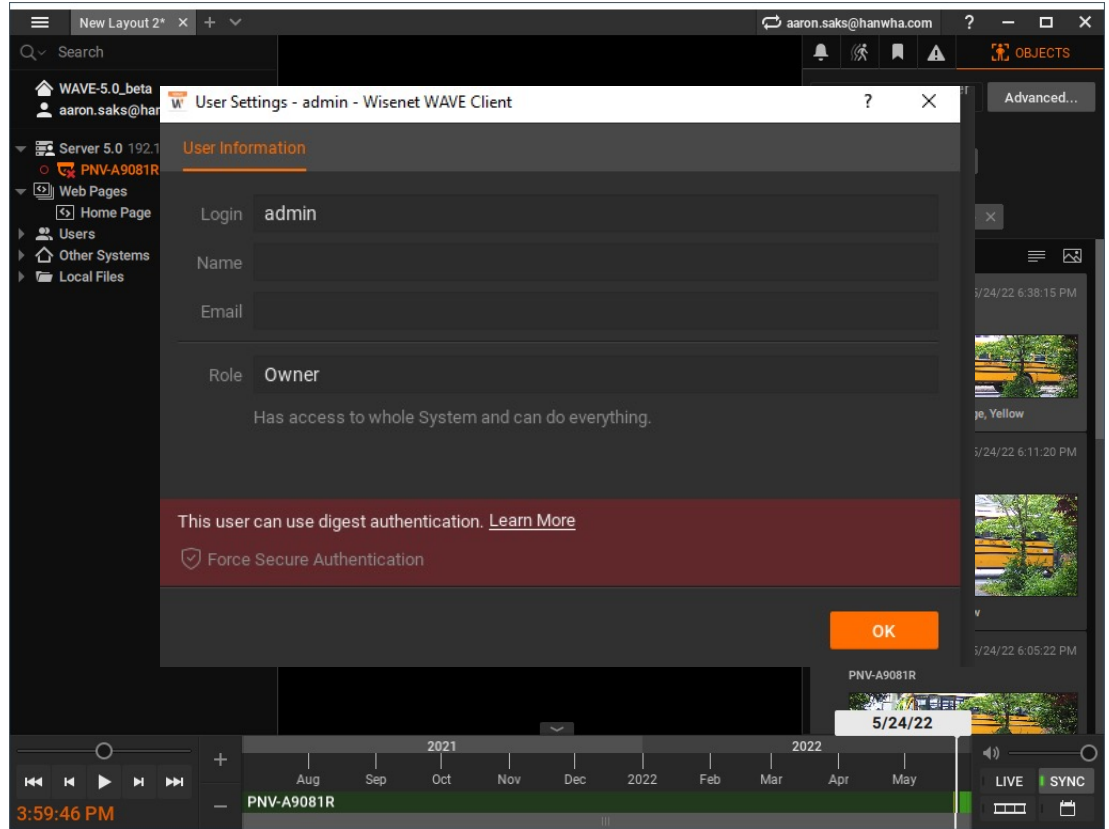
When enabled, recorded video archives will be encrypted and viewable only in the Desktop, Mobile, and Web clients. New Security tab consolidates settings.

- Works on any hard drive or storage medium.
- System owner creates the encryption key.



MORE SECURED CONNECTIONS

All VMS Server connections use SSL/TLS Certificate pinning to render man-in-the-middle attacks impossible. VMS Servers and Clients also use new session-based (bearer token) authentication by default. Digest authentication (deprecated) users can be filtered and upgraded as needed.



NEW / IMPROVED DEVICE INTEGRATION

- PTZ – Wiper, spin, heater soft triggers
- TID-600R button popup rule
- PTRZ/Varifocal lens control from Live UI
- SD card event rules
- Wisenet Road AI integration
- SPC-2000 integration
- Improved high FPS performance

