



VaidioSearchMgmt Installation & Manual

VAIBS
VIDEO AI ANALYTICS

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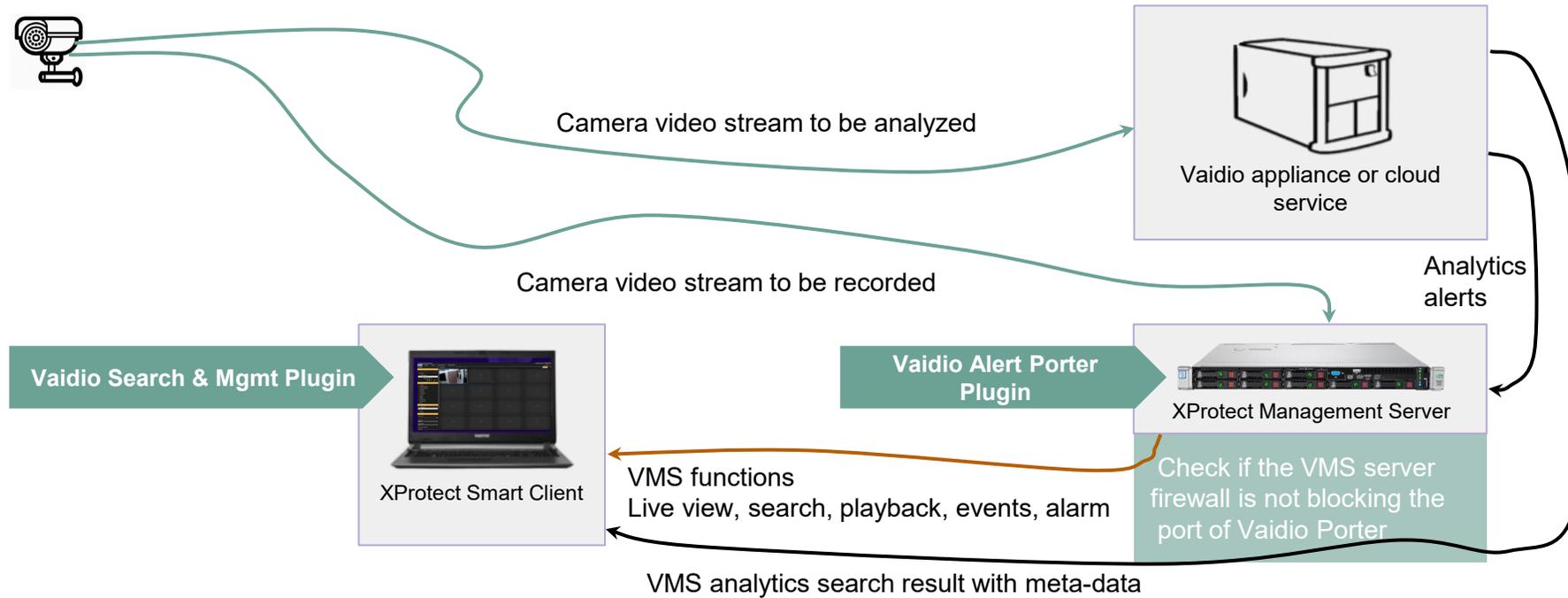
Contact: info@vaibs.com



Preparations



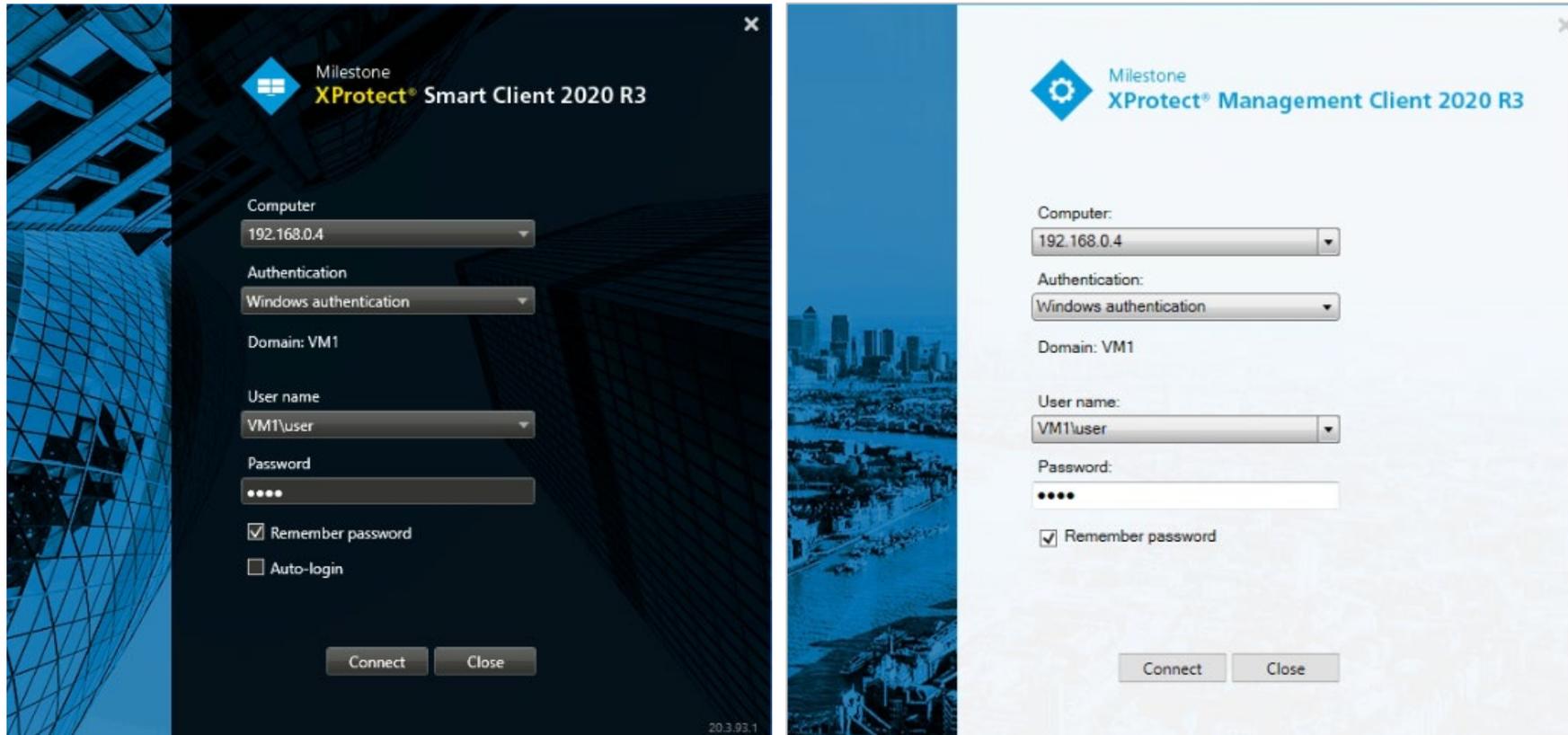
Preparation - Topology, Flow And Components



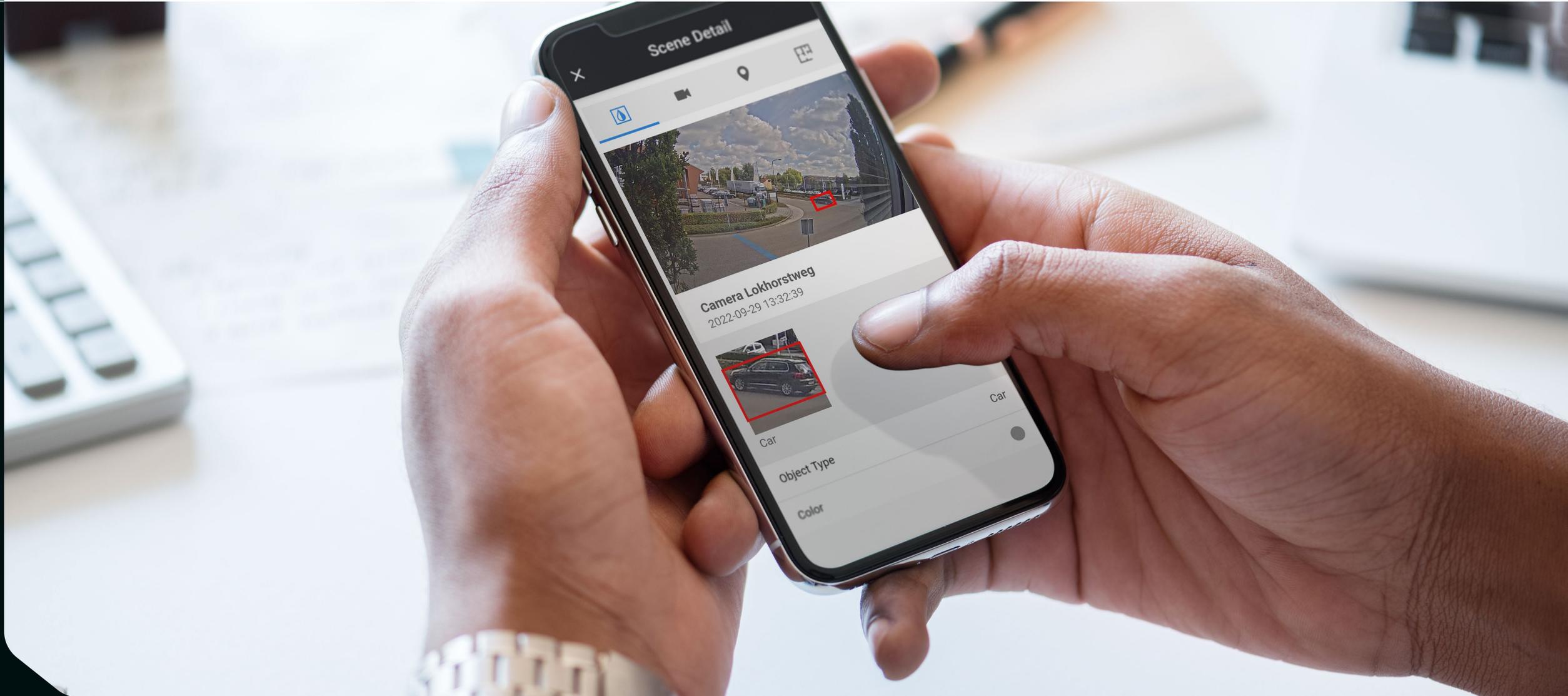
To synchronize the system it is required among camera, VMS and Vaidio service to share "a common" NTP time server

Preparation - Topology, Flow And Components

- Install Milestone XProtect Corporate or XProtect Expert in 2020R3 on x64 Windows 10 platform.
- Standalone or distributed XProtect Smart Client 2020R3 is tested with Vaidio v4.2.1 and after.
- Both Vaidio and VMS need to have access to the camera stream.

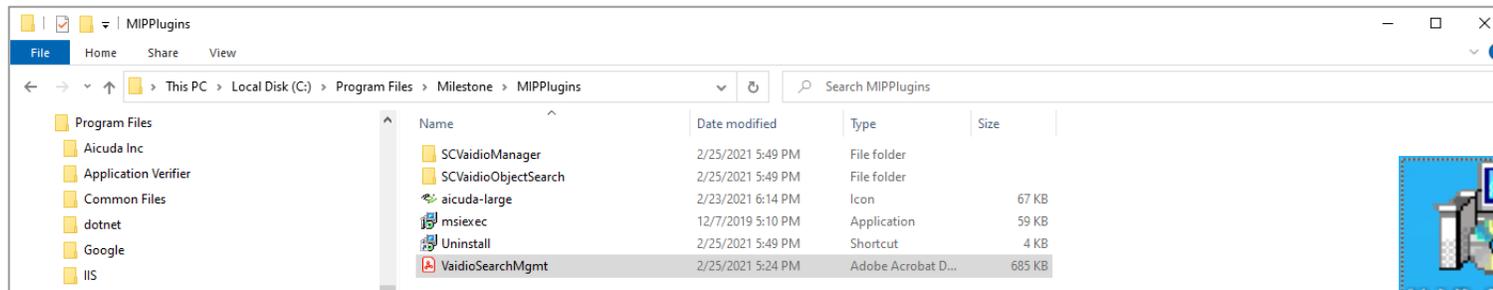


Installation Guide

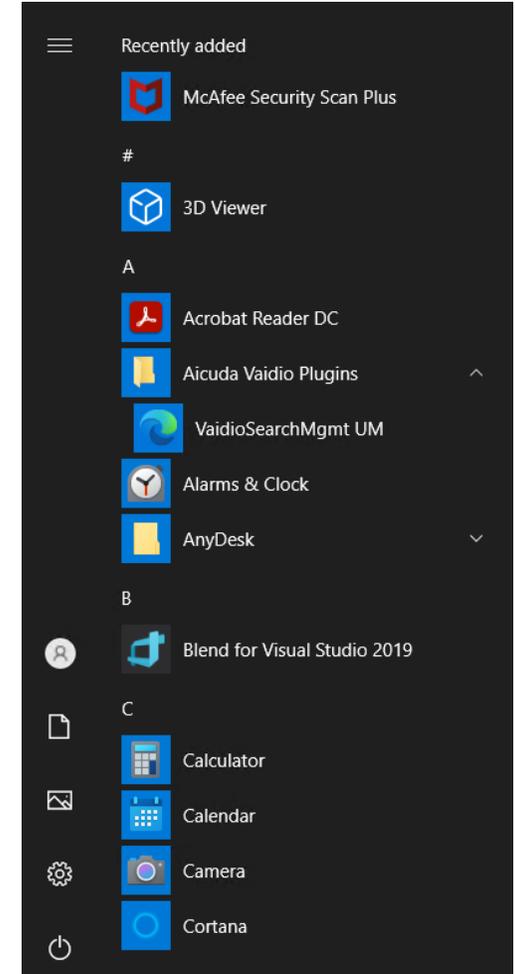


Installation & Verification

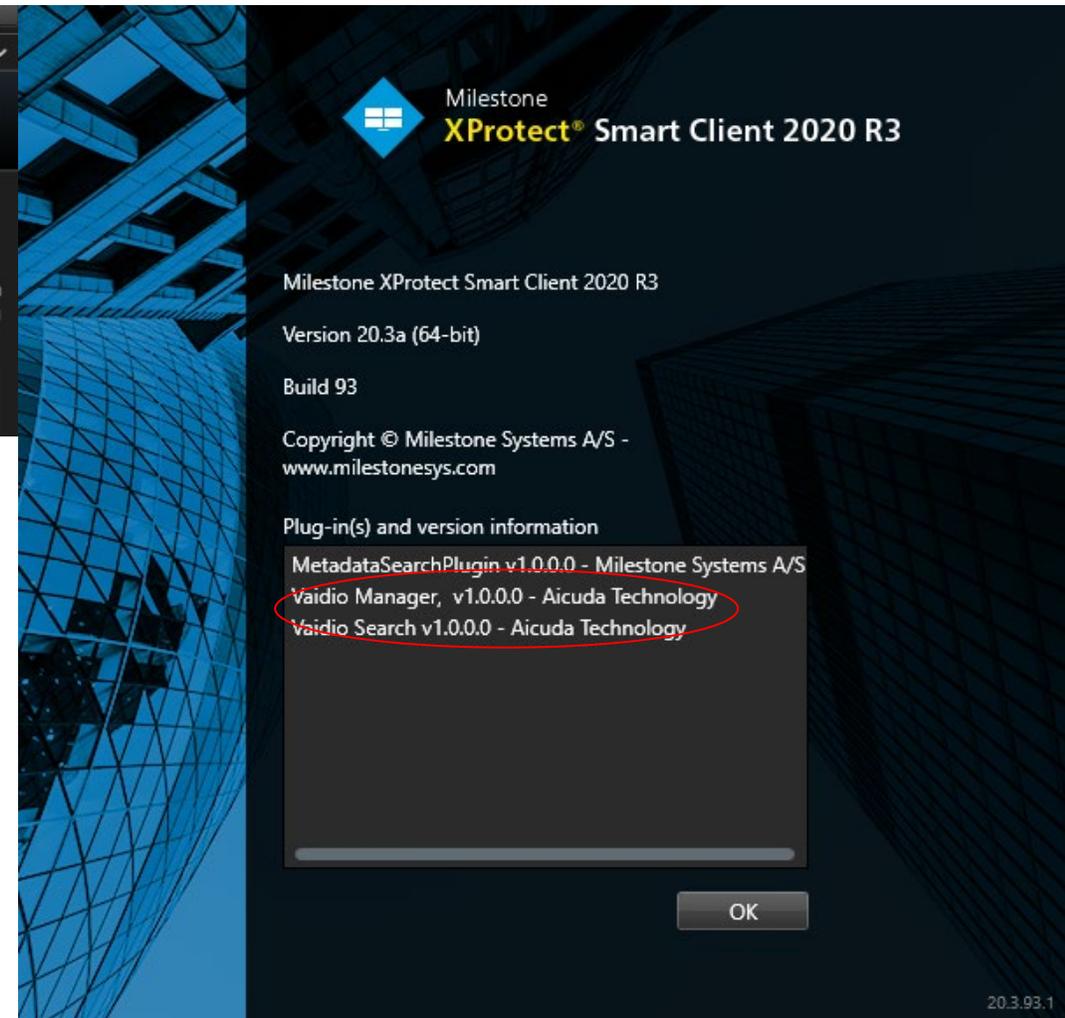
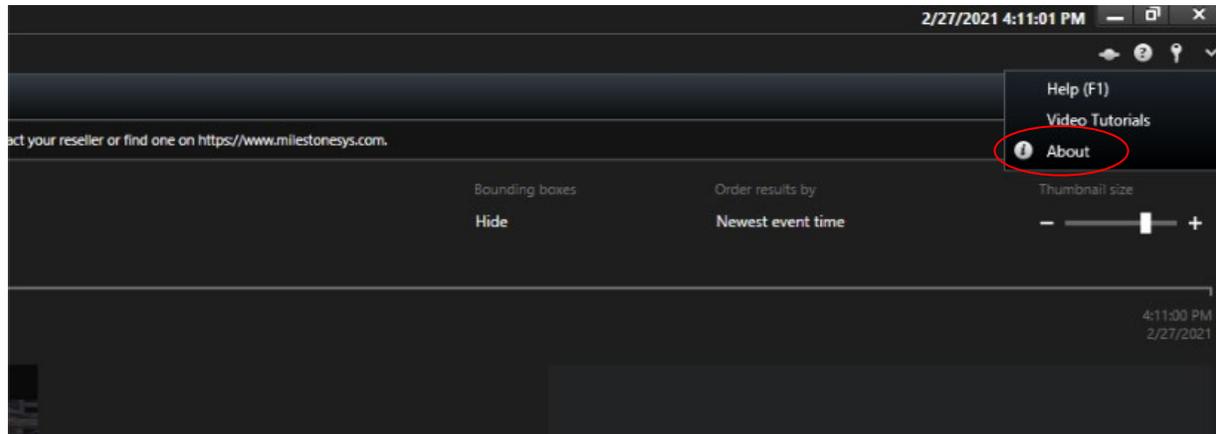
1. A base Milestone VMS installation on XProtect Corporate or XProtect Expert platform in Windows 10 w/ x64. Tested in version 2020R3 20.3a (64 bits)
2. Download the plugin from the [download link](#) and copy it in the **Xprotect Smart Client** folder on the client PC. You have the option to click “cancel” or “next” in the installation process. Installation folder and Xprotect Smart Client folders are fixed and cannot be redirected.



1. Launch the downloaded installer
“*VaidioSearchMilestonePluginInstaller -x.x.x.x.exe*”



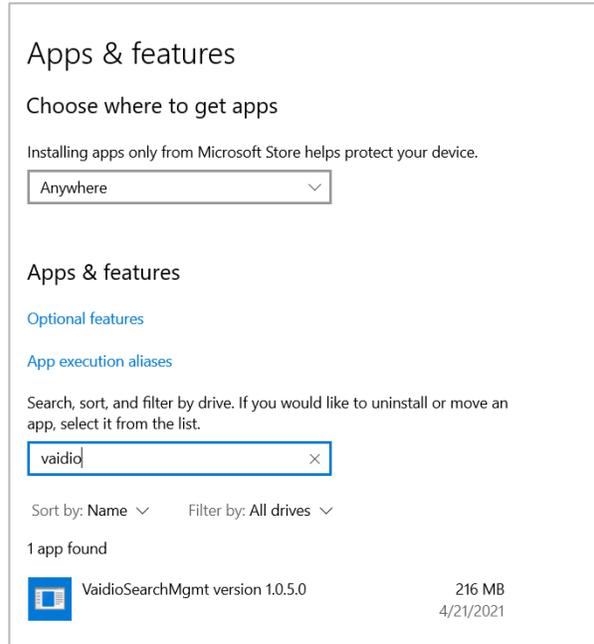
Plugin Verification



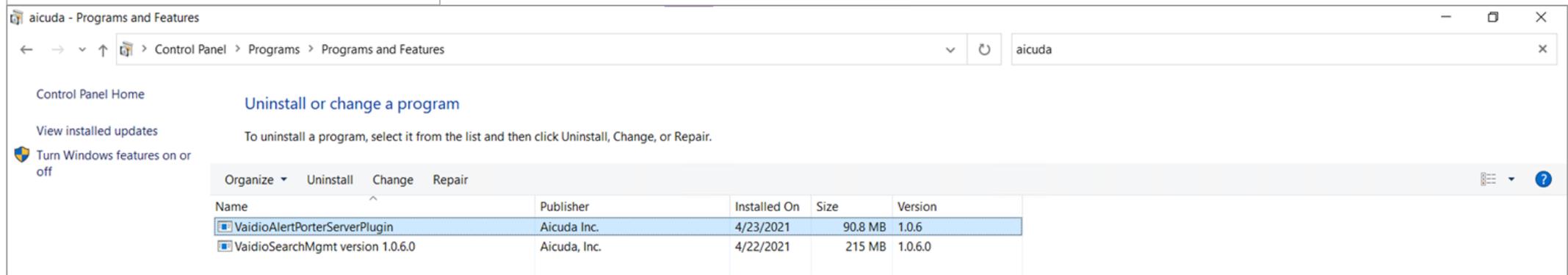
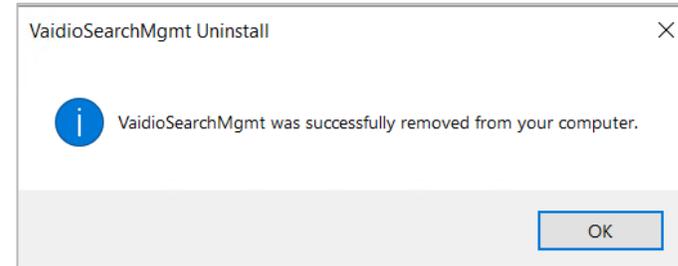
** To verify if the plugin is properly loaded in the XProtect Smart Client.

- Run Xprotect Smart Client and check “About” section.
- Check if “Vaidio Manager vx.x.x.x” is listed.
- Check if “Vaidio Search vx.x.x.x” is listed.
vx.x.x.x is a placeholder for the version number.

Plugin Removal



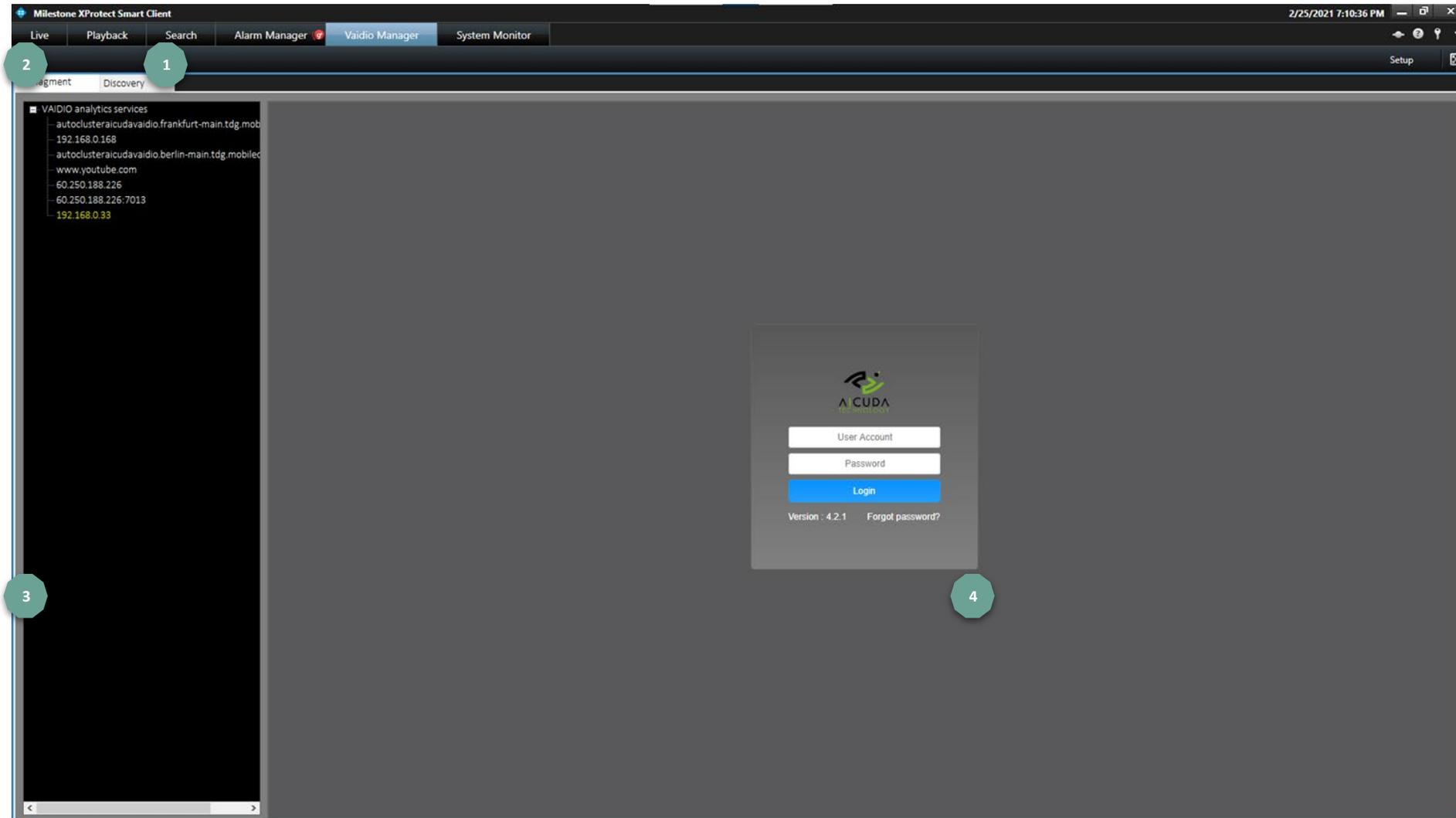
To uninstall the **VaidioSearchMgmt** plugin, open the “Programs and Features” tab in “Control Panel” to remove the plugin. There is only the option to remove the plugin directly.



Manual



Vaidio Manager - Management Page



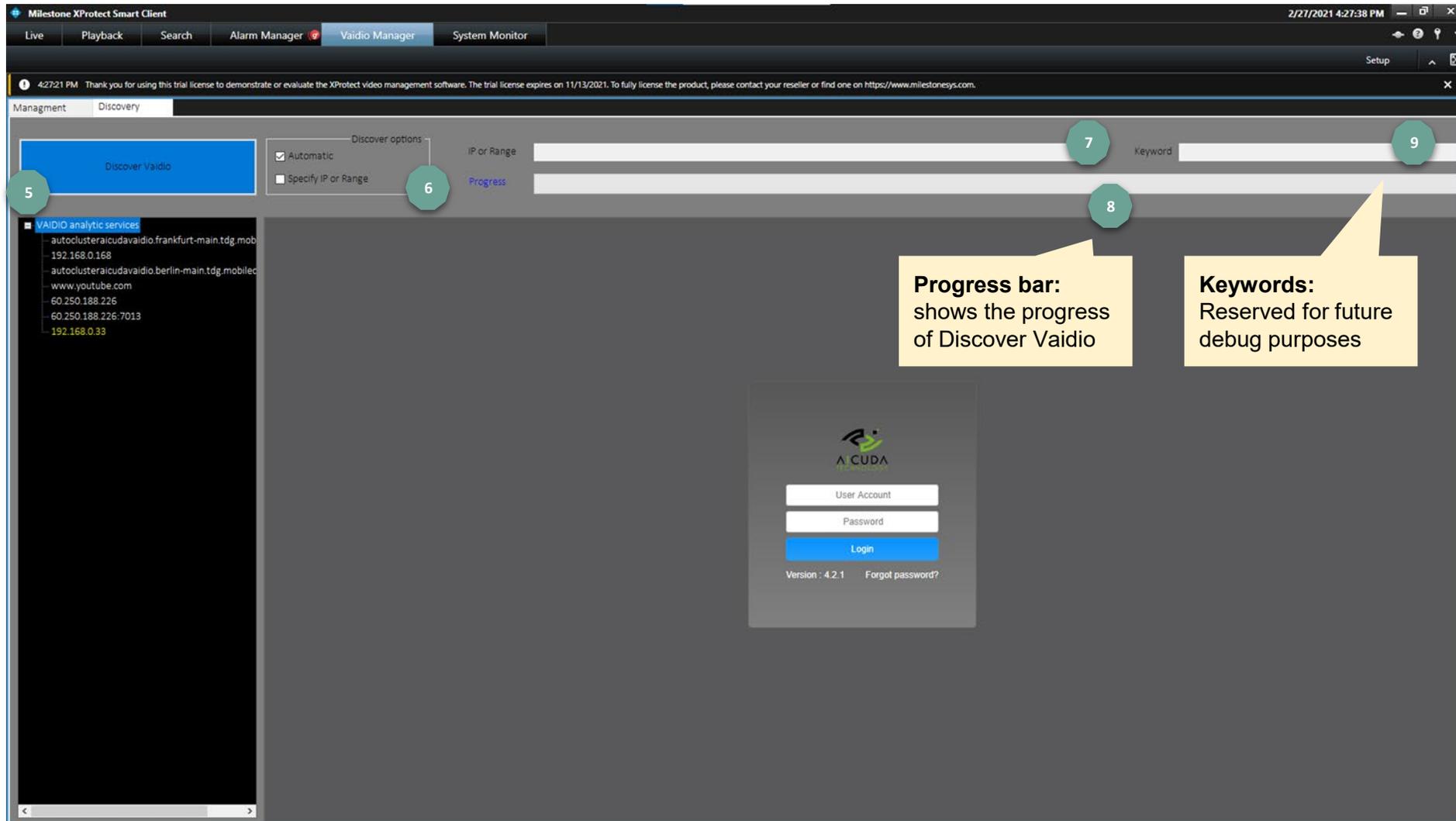
Vaidio Manager tab - For Vaidio Discovery and Management

Discovery / Management tab - Switch between Discovery and Management page.

Discovery list of Vaidio Analytics Services - Press Vaidio Analytics services and scroll down in list

GUI - Vaidio web GUI

Vaidio Manager - Management Page



Discover Button -
Press to start Discover / add Vaidio Service with options specified in (6) 5

Progress bar:
shows the progress of Discover Vaidio 8

Keywords:
Reserved for future debug purposes 9

Discover options - Automatic: option to discover Vaidio automatically in a LAN

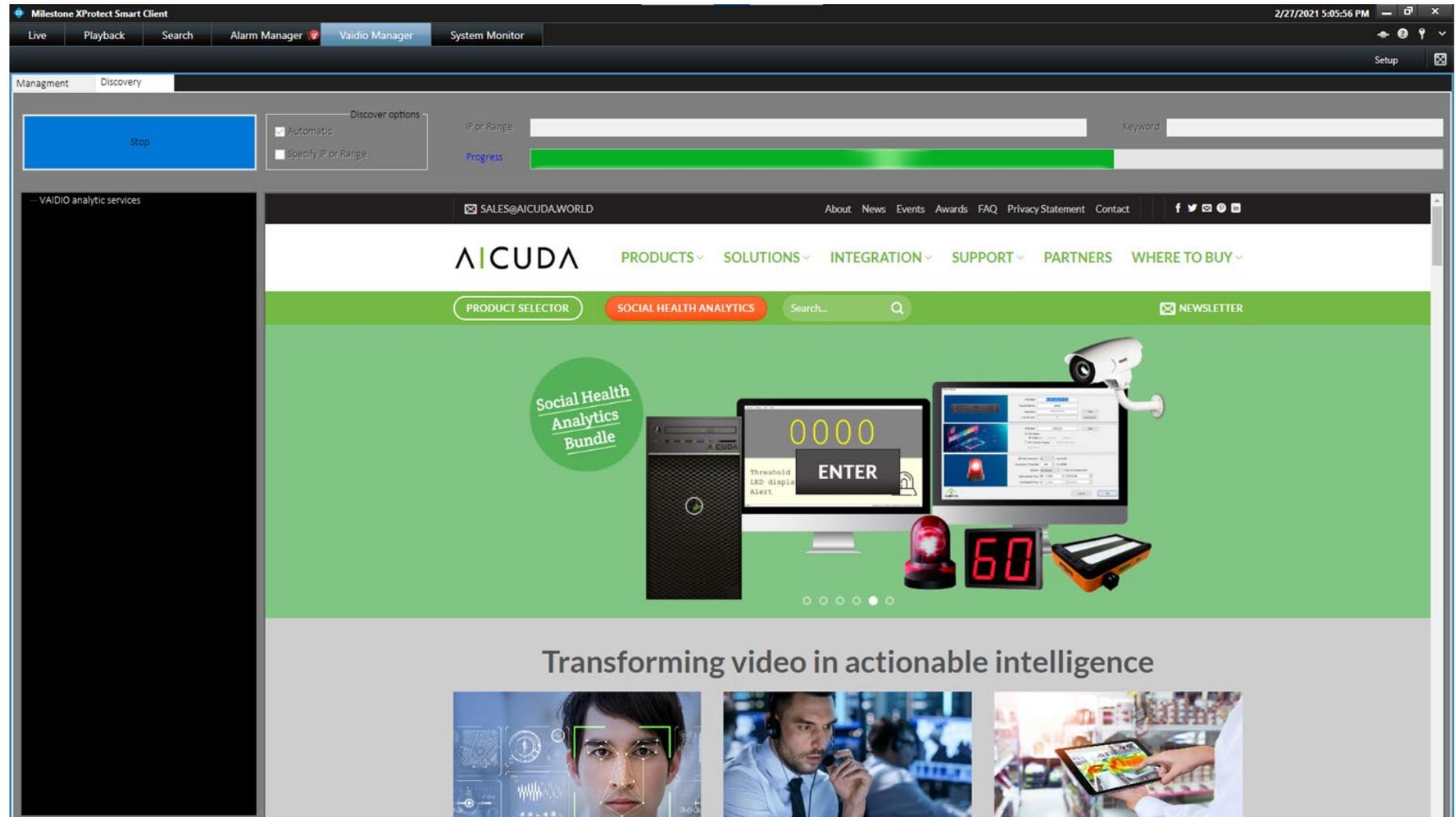
Specify IP or Range: Add a specific URL / IP to the Vaidio list or discover the specified range 6

IP or Range Field
key in the URL to "ADD" or the IP Range to Discover 7

Vaidio Manager - Discover Automatically

Press the “Discover” button to scan the Vaidio services with default “Automatic” option.

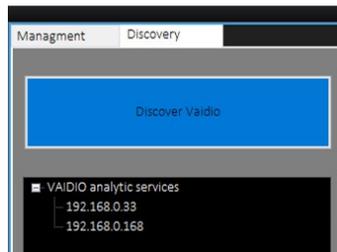
The progress bar reflects the status of the scan process. User can wait until the scan is completed or press the “Stop” button.



Vaidio Manager - Discover Automatically

Once the scan is completed a message box pops up indicating that the Discovery process is completed.

Once the user hits the OK button, the scan result of all Vaidio analytics services are listed in a tree view.



Vaidio Manager - Add URL / Host IP

Click the “Specify IP or Range” box and hit the “Discover Vaidio” button.

Add a specific URL in the “Specify IP or Range” box. The URL becomes visible in the tree view.

The URL is not able to connect if the network connection or service is not available.

The screenshot displays the Milestone XProtect Smart Client interface, specifically the Vaidio Manager tab. The interface is divided into several sections:

- Management / Discovery:** A blue "Discover Vaidio" button is visible. To its right, under "Discover options", the "Specify IP or Range" radio button is selected and circled in red. The "Automatic" option is unselected.
- IP or Range:** A text input field contains the URL: `http://autoclusteraicudavaidio.munich-main.tdg.mobiledgex.net/login`.
- Tree View:** On the left, a list of discovered Vaidio analytic services is shown, including:
 - 60.250.188.226:7013
 - 192.168.0.168
 - 192.168.0.83
 - search2.ironyun.com
 - autoclusteraicudavaidio.munich-main.tdg.mobile
- Web Page Preview:** The main area shows a preview of the AICUDA website. A small "Info" dialog box is overlaid on the page, displaying "Host Added" and an "OK" button. The website content includes the AICUDA logo, navigation menus (PRODUCTS, SOLUTIONS, INTEGRATION, SUPPORT, PARTNERS, WHERE TO BUY), and a "WELCOME TO AICUDA WORLD" message.

Vaidio Manager - Discover IP Range

Click the “Specify IP or Range” box and hit the “Discover Vaidio” button.

Key in the IP and netmask to specify the scanning range and reduce the time of discovery. In the example on the right the scanning range is determined by the netmask.

The actual scan range is

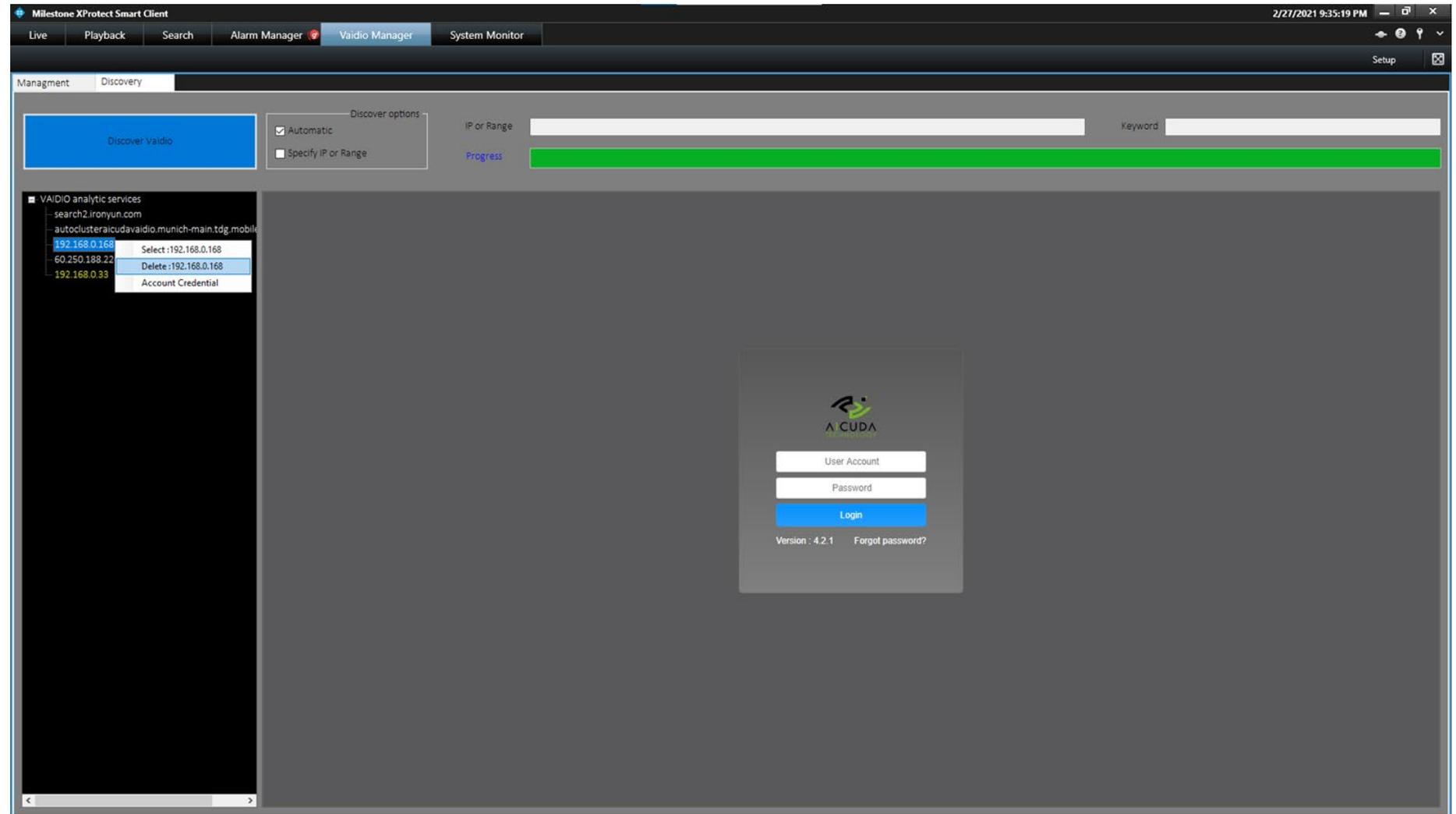
192.168.0.1 ~
192.168.0.127

The screenshot shows the Milestone XProtect Smart Client interface with the Vaidio Manager tab active. The interface includes a navigation bar with 'Live', 'Playback', 'Search', 'Alarm Manager', 'Vaidio Manager', and 'System Monitor'. Below the navigation bar, there are tabs for 'Management' and 'Discovery'. The 'Discovery' tab is selected, showing a 'Discover options' section with a 'Stop' button and checkboxes for 'Automatic' (unchecked) and 'Specify IP or Range' (checked). The 'IP or Range' field contains '192.168.0.1/255.255.255.128' and a 'Keyword' field is empty. A green progress bar is visible below the IP field. On the left side, a list of discovered Vaidio analytic services is shown, including '60.250.188.226-7013', '192.168.0.168', '192.168.0.83', 'search2.Ironyun.com', and 'autoclusteraicudavaidio.munich-main.tdg.mobile'. The main content area displays the AICUDA website, featuring a navigation menu with 'PRODUCTS', 'SOLUTIONS', 'INTEGRATION', 'SUPPORT', 'PARTNERS', and 'WHERE TO BUY'. A search bar and a 'NEWSLETTER' sign-up button are also present. The website banner includes a 'Social Health Analytics Bundle' and a 'Threshold LED Single Alert' device. The bottom of the website features the slogan 'Transforming video in actionable intelligence' and three images: a person with a face lock, a person on a phone, and a person using a tablet.

Vaidio Manager - Remove Vaidio From List

Right click on one of the scan result in the tree view. Select "Delete" to remove the Vaidio service from the analytics service list.

** IP address in the list is automatically removed if the automatic scan is not able to find it.
Exception: if the IP is a selected service or the user specifically added the IP in the "Specify IP or Range" box.

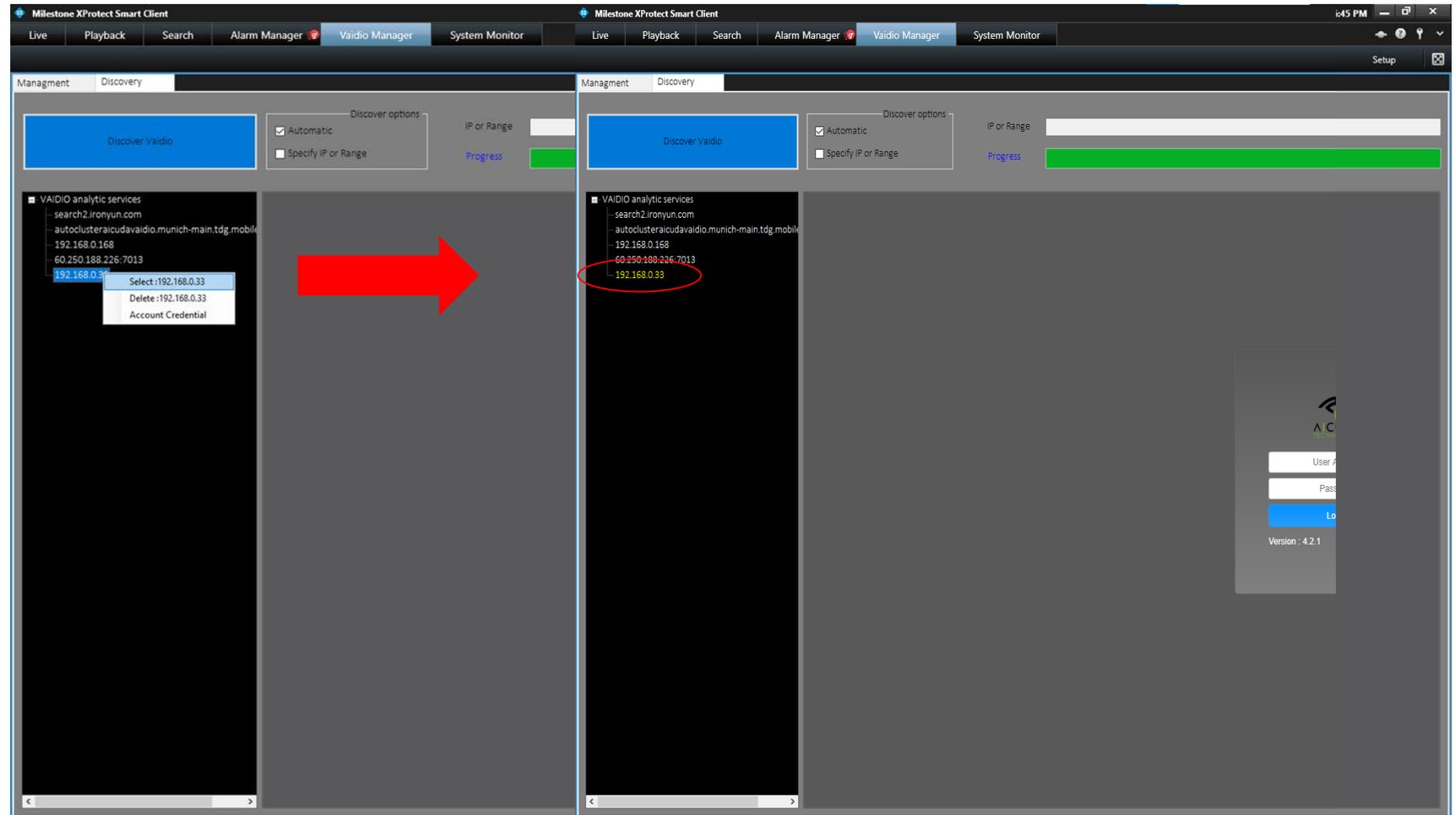


Vaidio Manager - Specify Vaidio For Search

Right click on one of the analytics services in the tree view. Choose "Select". The selected analytics service is now going to push the analytics search results to the Xprotect Smart Client search function. The user can only select one analytics service at a time.

The default credentials will be loaded. User can change credentials manually.

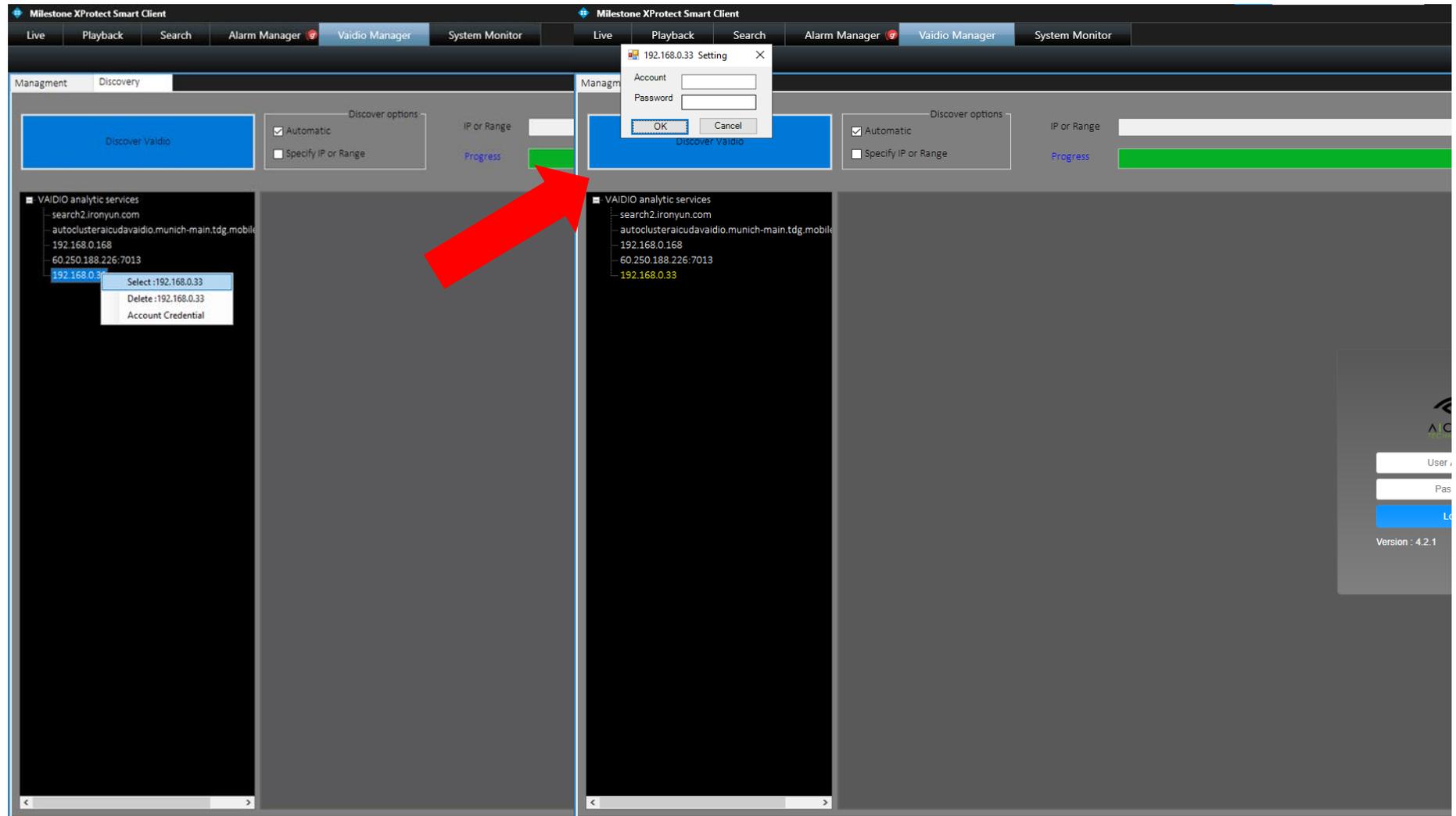
The selected Vaidio analytics service is colored in yellow.



Vaidio Manager - Credentials For Vaidio

Right click on one of the analytics services in the tree view and select "Account Credentials".

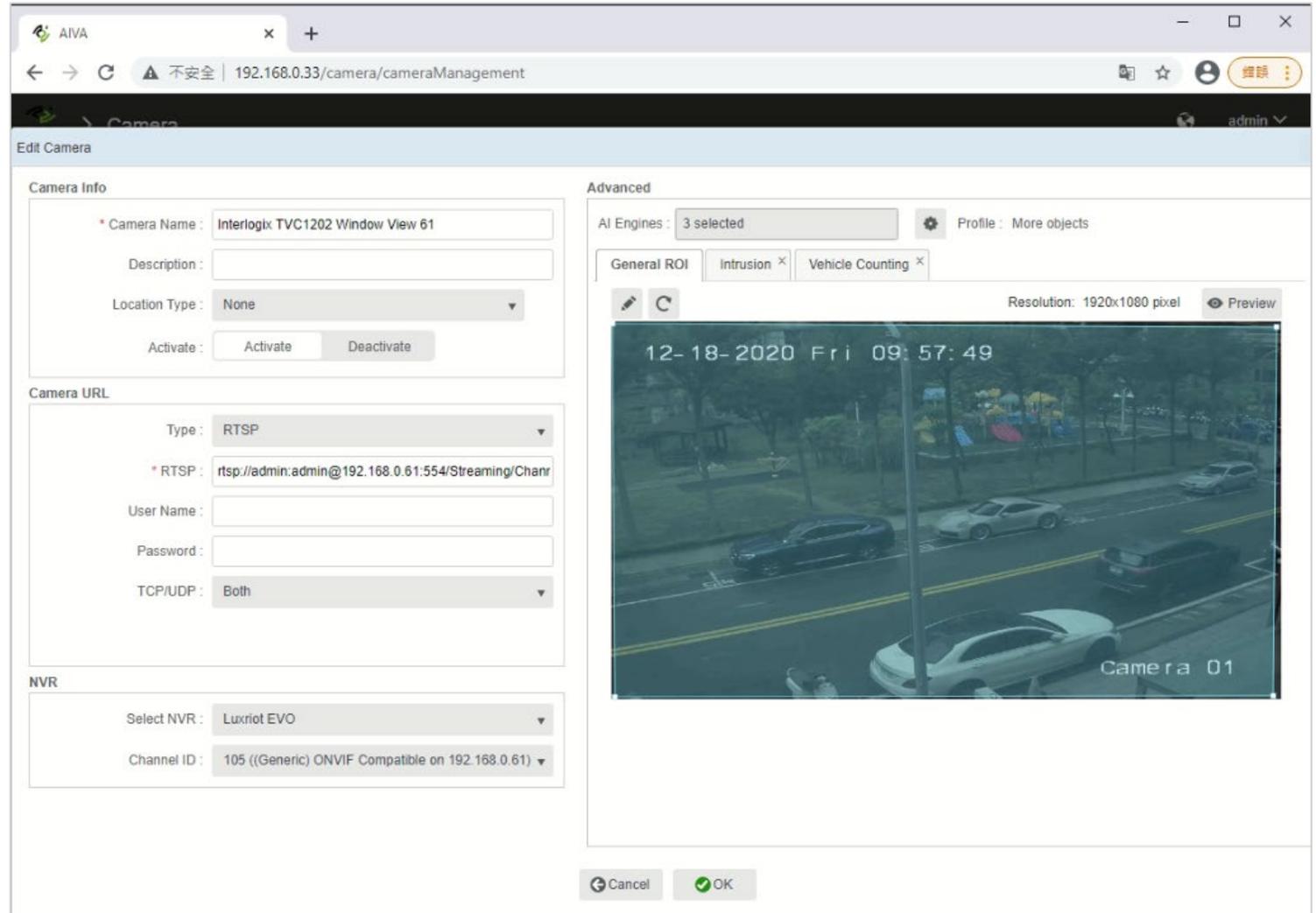
A pop up window appears and the user is able to key in the access credentials for the selected Vaidio analytics service.



Vaidio Search - Camera Match

Automatic mapping of the camera for analytics and recording. Camera needs to be visible in both Milestone XProtect and Vaidio software.

1. Add the camera in the XProtect Management Client
2. Add the camera in Vaidio.
3. Important that the camera name need to be the same in Vaidio and XProtect software.

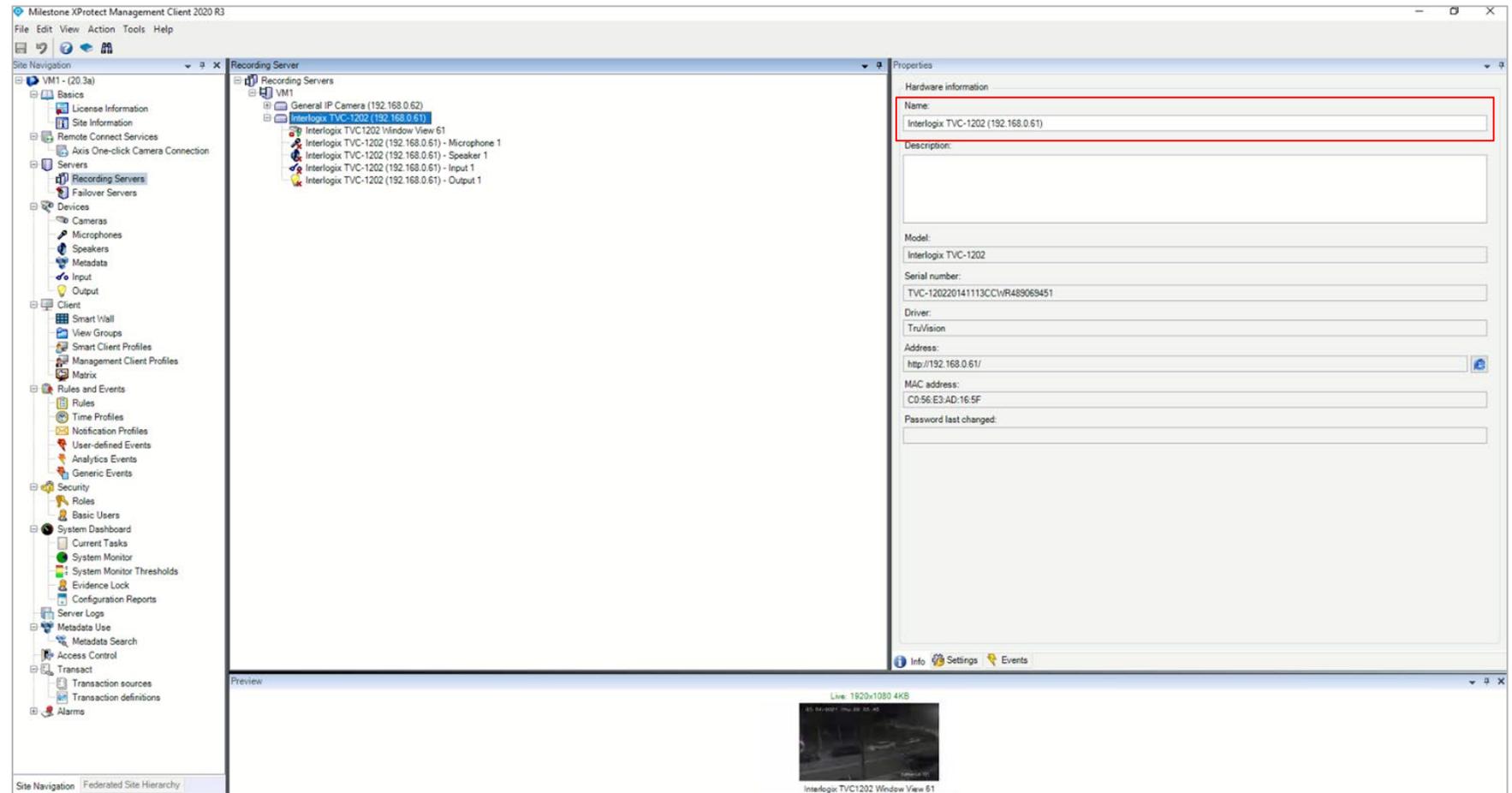


Vaidio Search - Camera Match

Mapping is based on the camera name to manage the interaction between XProtect Management Client and Vaidio.

Avoid duplication of the camera name in Vaidio and XProtect Recording Server to prevent redundant search results.

** Similar RTSP URL for a different camera name can also cause redundant search.



Vaidio Search - Operation Sequence

The screenshot shows the Milestone XProtect Smart Client interface. The top navigation bar includes 'Live', 'Playback', 'Search' (highlighted with a green circle 1), 'Alarm Manager', 'Vaidio Manager', and 'System Monitor'. A notification banner at the top reads: '5:47:32 PM Thank you for using this trial license to demonstrate or evaluate the XProtect video management software. The trial license expires on 11/13/2021. To fully license the product, please contact your reseller or find one on https://www.milestone.com.' The main search area shows 'Search filters' with a date range from 3:48 PM to 5:48 PM on 4/8/2021 (highlighted with a green circle 2). Below the filters, two cameras are selected: 'General IP Camera (192.168.0.62) - Camera 1' and 'Interlogix TVC1202 Window View 61' (highlighted with a green circle 3). Two video thumbnails are displayed with timestamps. A search filter dialog box is open in the foreground (highlighted with a green circle 4), showing categories: Alarms, Analytics Tags, Animals, Bookmarks, Events, Humans, Motion, Objects, and Vehicles. The dialog has 'Add to existing search' and 'New search' buttons.

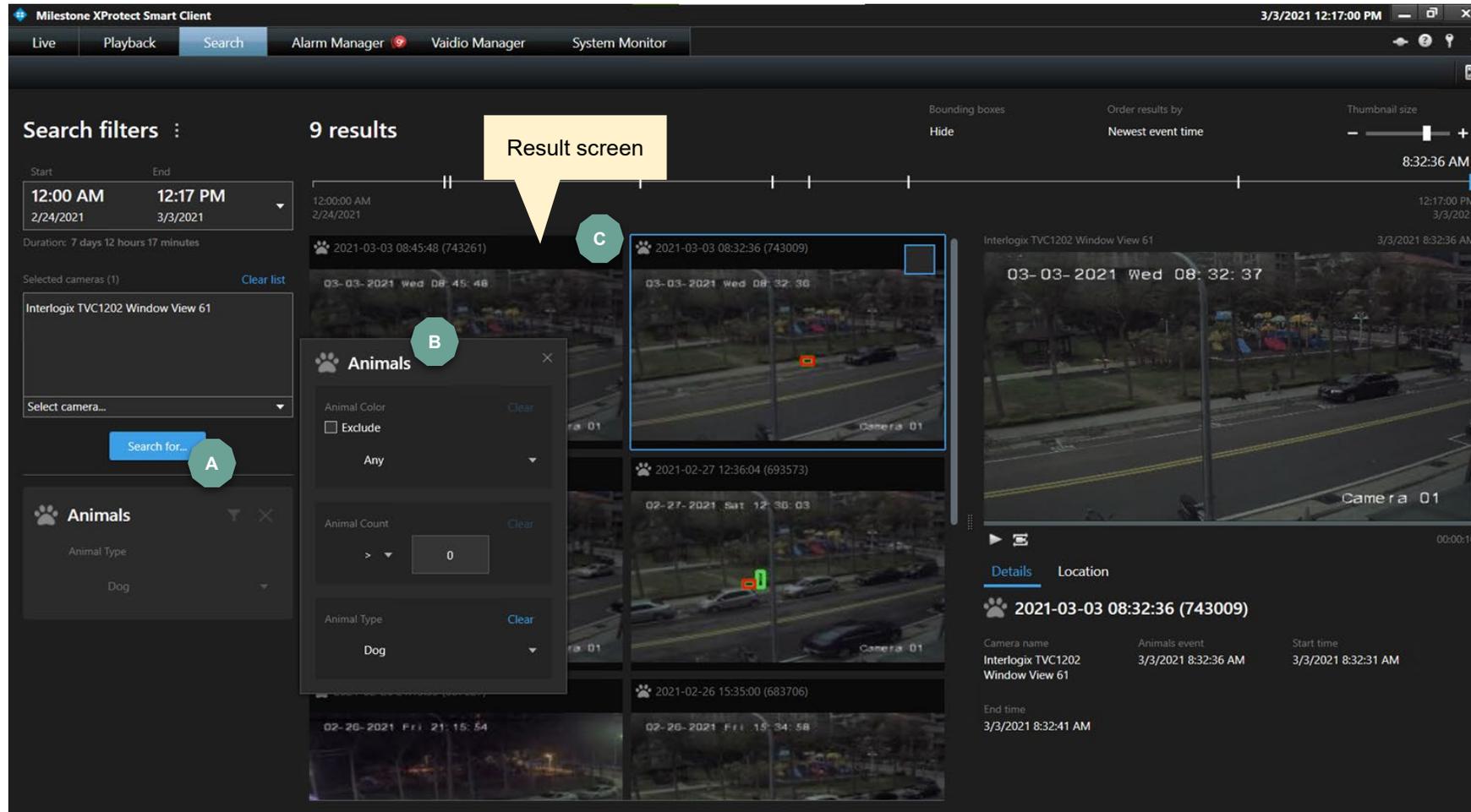
(1) Press Xprotect Smart Client Search tab.

(2) Specify the date and time range.

(3) Select the cameras for the search (** Please note that the selected camera must be added to Vaidio via Vaidio GUI. Camera mapping is based on IP or RTSP).

(4) Via the Vaidio plugin it is possible to select Humans, Vehicles, Animals, Objects and Analytics Tags.

Vaidio Search - Search Types & Options



(Continue from step 4 previous slide)

(A) Press “Search for” button to select Animals and the search option for Animals pops up.

(B) Specify the animal, the color and the quantity to search for.

(C) The XProtect Smart Client will automatically show the search results. The red bounding box highlights the target animal.

Vaidio Search - Video Details Search Results

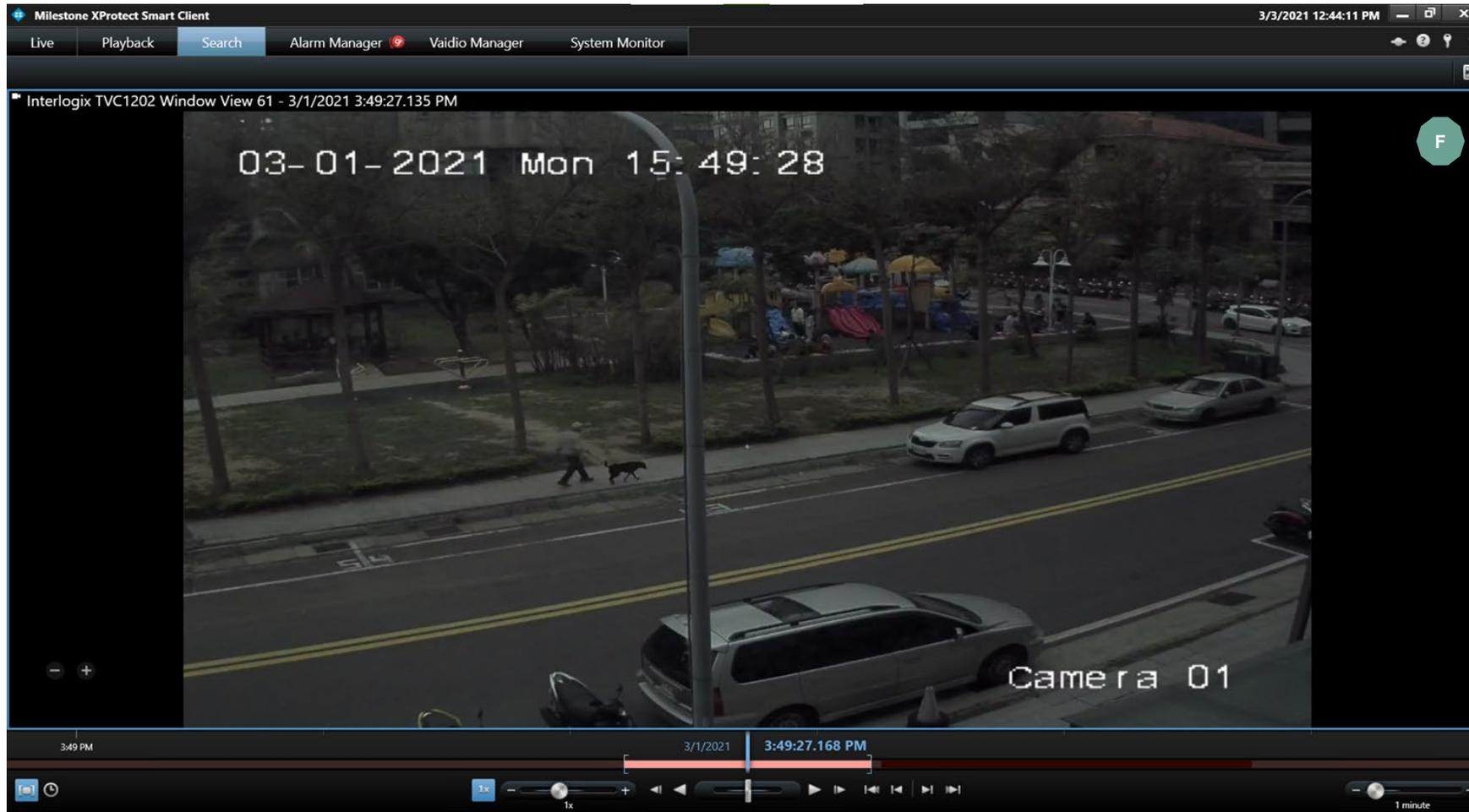
The screenshot shows the Milestone XProtect Smart Client interface. At the top, there are navigation tabs: Live, Playback, Search (selected), Alarm Manager, Vaidio Manager, and System Monitor. The search results are displayed in a grid of thumbnails. On the left, there are search filters including a date range (12:00 AM 2/24/2021 to 12:39 PM 3/3/2021), a selected camera (Interlogix TVC1202 Window View 61), and an animal filter (Animals - Dog). A timeline at the top shows the search duration and a play button. The search results are sorted by 'Newest event time'. One thumbnail is highlighted with a blue border and a green circle labeled 'D'. To the right, a larger video player shows the selected event (03-01-2021 Mon 15:49:28) with a green circle labeled 'E'. Below the video player, there are details for the event: Camera name (Interlogix TVC1202 Window View 61), Animals event (3/1/2021 3:49:27 PM), Start time (3/1/2021 3:49:22 PM), and End time (3/1/2021 3:49:32 PM).

(D) Click on one of the search results windows to enlarge the video.

(E) The corresponding video footage is now visible in the video screen.

(F) Click on the video screen to enlarge the video at the detected time event.

Vaidio Search - Enlarged Video Search



(F) To turn back to the standard view, double click the enlarged screen.

Video Search - Animals & Objects

Animals

Animal Color Clear
 Exclude
Any

Animal Count Clear
> 0

Animal Type Clear
Bear
Bear
Cat
Cow
Dog
Horse

1. **Color:** select the color of the animal or use **Exclude** option in the checkbox.
2. **Count:** select the number of animals to search for in one video frame.
3. **Type:** select the animal type to search for.

** Bear, Cat, Cow, Dog and Horse are default options. For more options please contact Aicuda / IronYun sales team.

Objects

Object Color Clear
 Exclude
Any

Object Count Clear
> 0

Object Type Clear
Airplane

1. **Color:** select the color of the animal or use **Exclude** option in the checkbox.
2. **Count:** select the number of animals to search for in one video frame.
3. **Type:** select the animal type to search for.

** Bear, Cat, Cow, Dog and Horse are default options. For more options please contact Aicuda / IronYun sales team.

Video Search - Humans & Vehicles

The screenshot shows the 'Human' search filter interface. It includes a 'Color' dropdown menu with an 'Exclude' checkbox and a 'Clear' button. Below it is a 'Count' section with a dropdown arrow and a text input field containing '0'. The 'Face' section has a 'Face' checkbox and a 'Clear' button. The 'Gender' section has a dropdown menu with 'Any' selected. The 'PPE' section has three dropdown menus, all with 'Any' selected. Each section has a 'Clear' button.

1. **Color:** select the color of the clothes to search for a specific human
2. **Count :** select the number of humans to search for in one video frame.
3. **Face:** Search for human faces. Face picture: 40px * 40px.
4. **Gender:** search for male or female.
5. **PPE:** search for humans that wear and not wear Personal Protection Equipment.

** Face recognition is not supported in the Milestone plugin so far. Please contact Aicuda / IronYun sales for support.

The screenshot shows the 'Vehicles' search filter interface. It includes a 'Vehicle Color' dropdown menu with an 'Exclude' checkbox and a 'Clear' button. Below it is a 'Vehicle Count' section with a dropdown arrow and a text input field containing '0'. The 'Vehicle LPR' section has a text input field and a dropdown menu with '--' selected. The 'Vehicle Model' section has two dropdown menus, both with 'Any' selected. The 'Vehicle Type' section has a dropdown menu with 'Any' selected. Each section has a 'Clear' button.

1. **Color:** select the color of a vehicle to search for a specific vehicle.
2. **Count :** select the number of vehicles to search for in one video frame.
3. **Vehicle LPR:** search for a specific license plate number or search from a pre-defined list. (**created via Vaidio GUI)
4. **Vehicle Model:** select the make and model of a car to search for.
5. **Vehicle type:** select the specific vehicle type to search for.

Video Search - Analytic Tag

The screenshot displays the XProtect Smart Client interface for video search. On the left, the search configuration panel includes a time range from 1:22 PM to 3:22 PM on 4/8/2021, a duration of 2 hours, and three selected cameras: IronYun - Corridor, IronYun - Front Door, and Zhudong - 1st Road. A red circle highlights the 'Analytics Tags' section where the license plate number '2998' is entered in the 'Include' field. A 'Search for...' button is located below the camera list. The main video player shows a street scene with a car in the foreground, and the license plate number '2998QW' is displayed above the video. The video player controls show a timestamp of (00:00:00) 4/8/2021 3:18:52 PM. In the bottom right corner, a 'Trigger (Optional)' configuration window is visible, showing a POST request to the URL <http://192.168.0.102:2234/v1/alerts/AicudaDetectionVehicle?cn={cameraName}&t={eventNameStamp%E MMM d HH:mm:ss z yyyy}&tag={LicensePlate}> with parameters for camera name, event time stamp, and license plate tag.

Click on “Search for” in the XProtect Smart Client and select “Analytics Tags”. Type in the text to search for. In this example the keyed in text “2998” refers to a part of a license plate number. As a result all cars with license plate number “2998” pop-up.

The keyed in number appears in the placeholder of {LicensePlate} similar to the example below.

Example of Alert delivered to Milestone Alarm:
<http://192.168.0.47:2234/v1/alerts/AicudaDetectionToyota?cn={cameraName}&t={eventNameStamp%E MMM d HH:mm:ss z yyyy}&tag={LicensePlate}>

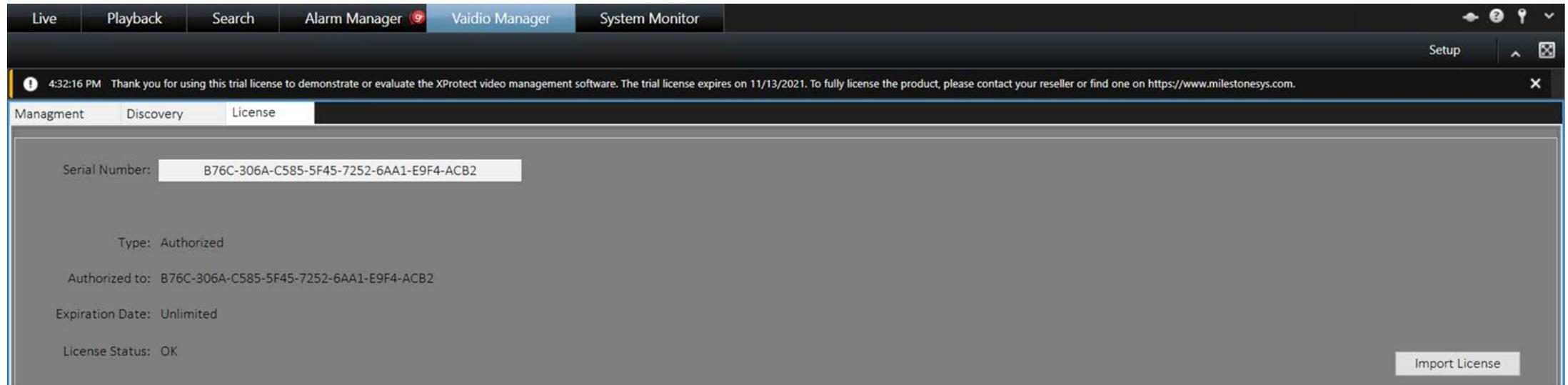
License - Search & Mgmt

3 levels of licenses

- **Free / Limited:** limited functions after installation, no expiration date. Only 5 alerts for one hour a day and limited to person search.
- **Trial:** 60 days full trial license after installation, available via info@vaibs.com or sales@ironyun.com. The trial license gives the customer the possibility to evaluate the Milestone plugin for a limited period of time with complete search plugin function..
- **Paid:** full functions for an unlimited period of time.

License Status : OK / Expired / Not Match / InValid / Not Match Product (Plugin product mismatch)

** Select "Activation" to open the license dialog from the "Import License" tab. Copy the serial number information and send it to info@vaibs.com or sales@ironyun.com to apply for the license. After receiving the license file the user can open the same dialog window to activate the license.



Note

- Please close the XProtect Smart Client before removing or upgrading a license.
- The Search plugin is installed in the Client and works with Milestone Xprotect Corporate and XProtect Corporate.
- The system time among entities (VMS Server, VMS client, Vaidio and Cameras) needs to be consistent with the same NTP source.
- If a search takes much longer as normal, please reduce the time period or reduce the number of cameras.
- The alert format of Vaidio v4.2.1 and before is different. The time format is {eventEpochTime}
<http://192.168.0.47:2234/v1/alerts/AicudaDetectionToyota?cn={cameraName}&t={cameraName}&t={eventEpochTime}&tag={LicensePlate}>



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