



IMAGUS MILESTONE INTEGRATION MANUAL

Released on 16 March 2023

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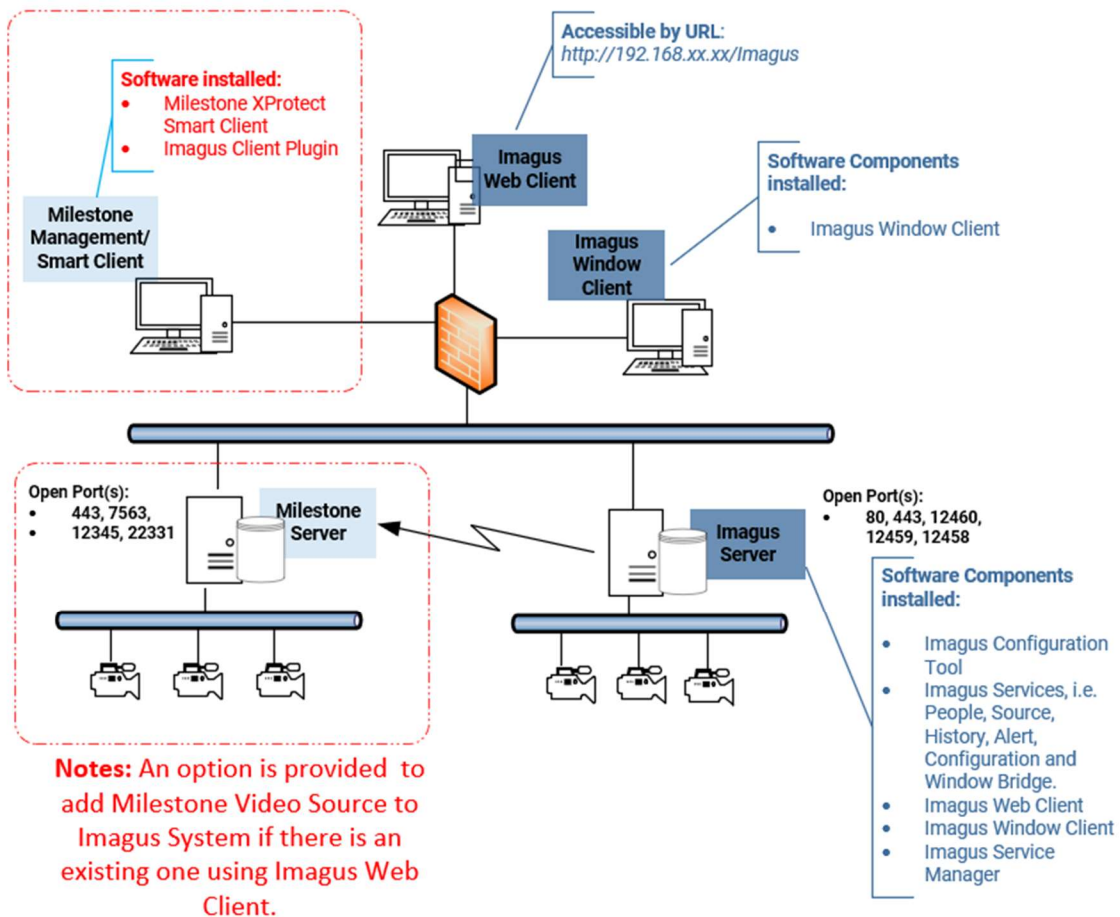
2 INTRODUCTION

Vix Vizion (formerly Imagus Technology) has seamlessly integrated its Facial Recognition Engine with Milestone XProtect video management software. This integration enables surveillance staff to use access face recognition databases and alarms directly within the XProtect Smart Client, and for system maintainers to configure Face Recognition through XProtect Management client without having to leave the Milestone ecosystem.

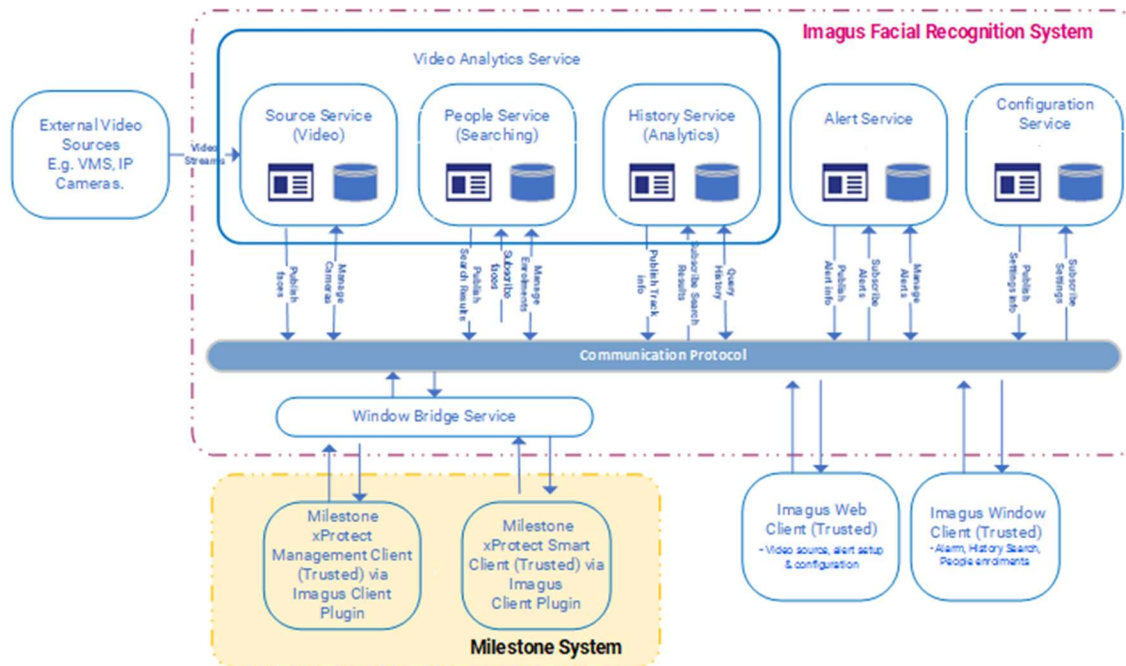
2.1 PRODUCT SUPPORT MATRIX FOR IMAGUS PLUGINS INTO MILESTONE XPROTECT

Milestone VMS Products	Essential +	Express s	Express +	Professional al	Professional +	Expert t	Corporate e
2019 R2	✓		✓		✓	✓	✓
2019 R3	✓		✓		✓	✓	✓
2020 R1	✓		✓		✓	✓	✓
2020 R2	✓		✓		✓	✓	✓
2020 R3	✓		✓		✓	✓	✓
2021 R1	✓		✓		✓	✓	✓
2021 R2	✓		✓		✓	✓	✓
2021 R3	✓		✓		✓	✓	✓
2022 R1	✓		✓		✓	✓	✓
2022 R2	✓		✓		✓	✓	✓
2022 R3	✓		✓		✓	✓	✓

2.2 SYSTEM SET UP OVERVIEW



2.3 SYSTEM ARCHITECTURE DIAGRAM



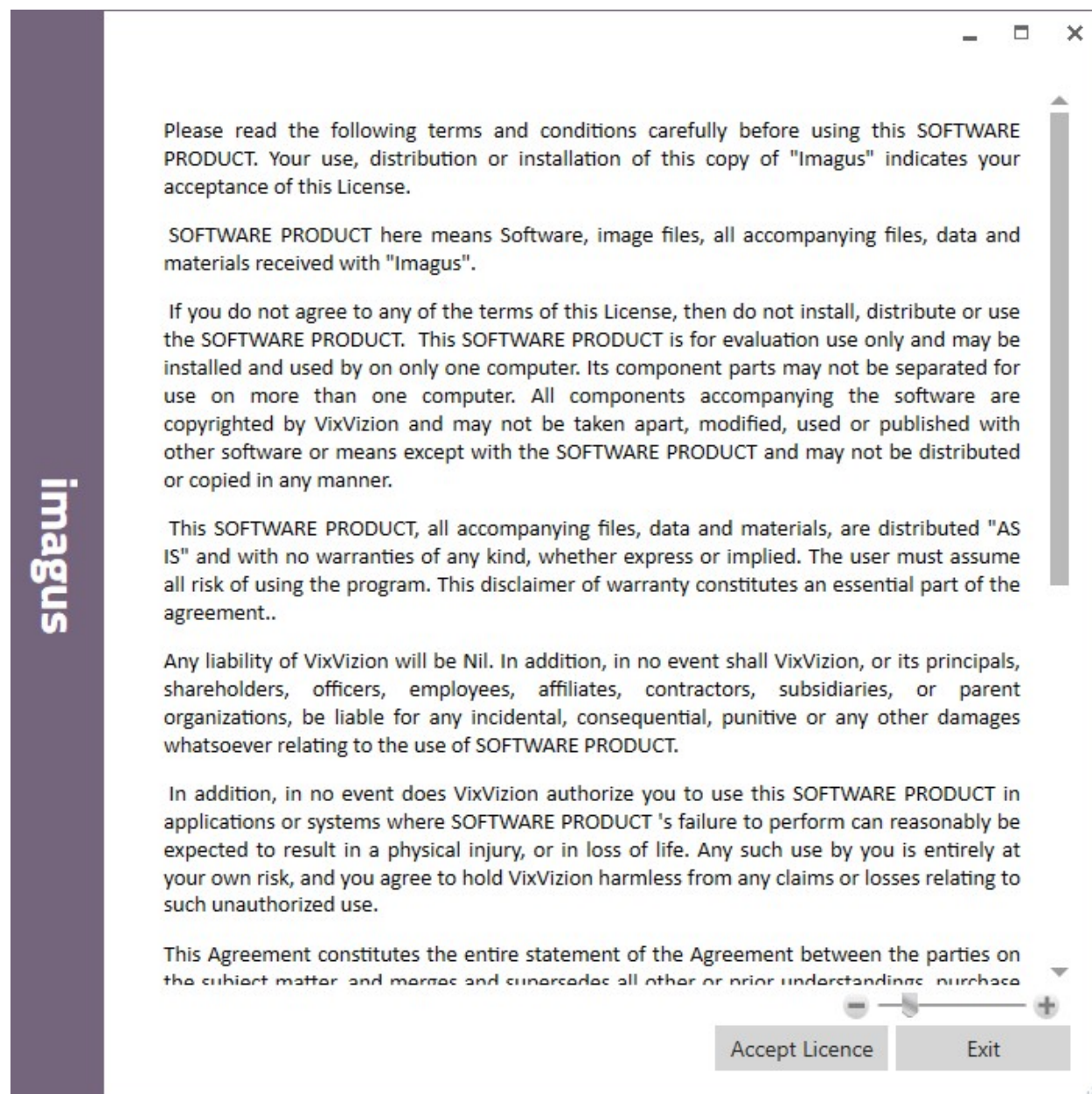
3 PURPOSE

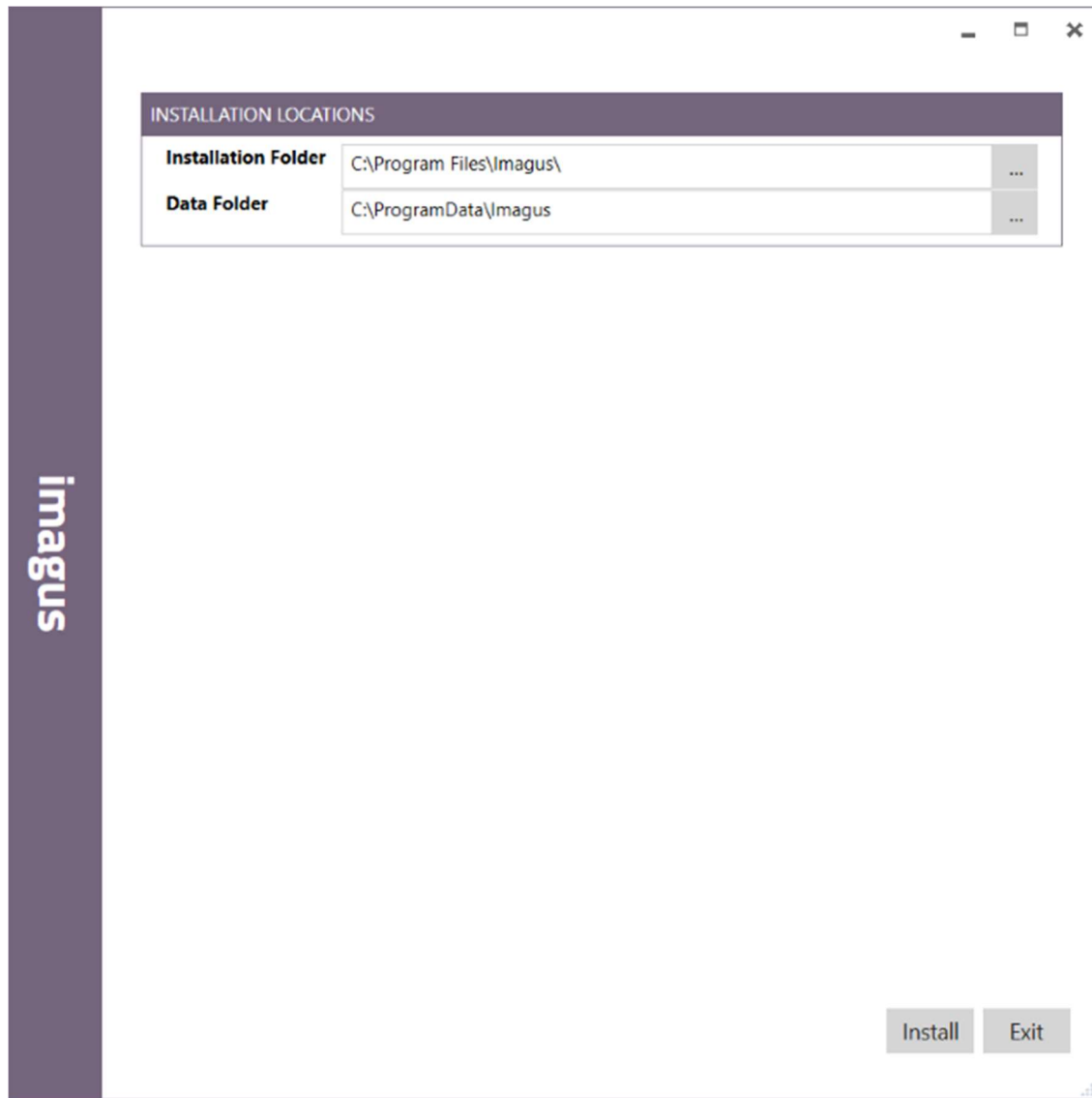
This document provides a guide on integrating the Imagus Face Recognition System with the Milestone Video Management System. This document will not address advanced features of installation, such as clustering if these are needed, please contact your Imagus distributor.


4 INSTALLING IMAGUS FACIAL RECOGNITION SOFTWARE

Pre-requisite: Please ensure that the IIS is turn on before installation.

1. Run the supplied Installation File, and the screen below will be displayed.
2. The data folder needs to be on a drive with a large amount of free space, currently approx. 1GB per camera per day stored. It all depends on the number of faces seen per day; please contact your Imagus Software distributor for assistance in calculating. An SSD drive is required for the Imagus Software installation.
3. Click on the 'Install' button to start the installation process.







Process Complete

Exit

COMPONENT	INITIAL INSTALL STATE	REQUESTED INSTALL STATE	UPGRADE?	STATE	PROGRESS
Installing IIS: II!	Absent	Present	None		<div></div>
Microsoft .NET	Present	Present	None		<div></div>
Microsoft .NET	Absent	Present	None		<div></div>
Microsoft Winc	Absent	Present	None		<div></div>
Imagus Installe	Absent	Present	MajorUpgra		<div></div>
PostgreSQL	Present	Present	None		<div></div>
Imagus.Stats.Di	Absent	Present	MajorUpgra		<div></div>
ImagusFaceRec	Absent	Present	MajorUpgra		<div></div>
ImagusFaceRec	Absent	Present	MajorUpgra		<div></div>
Cuda	Absent	Present	MajorUpgra		<div></div>
Inference	Absent	Present	MajorUpgra		<div></div>
FFmpeg	Absent	Present	None		<div></div>
Models	Absent	Present	MajorUpgra		<div></div>
Imagus.Configi	Absent	Present	MajorUpgra		<div></div>
Imagus.Window	Absent	Present	None		<div></div>
Imagus.Config.	Absent	Present	MajorUpgra		<div></div>
Imagus.People.	Absent	Present	MajorUpgra		<div></div>
Imagus.Alert.Se	Absent	Present	MajorUpgra		<div></div>
Imagus Tray Ap	Absent	Present	MajorUpgra		<div></div>
Imagus	Absent	Present	MajorUpgra		<div></div>
Imagus Post In	Absent	Present	MajorUpgra		<div></div>

- Click on the 'Exit' button when the installation is complete.

5 INSTALLING MILESTONE CLIENT PLUGIN

The Milestone plugin needs to be installed on all computers running the XProtect Smart Client, and also all machines where the XProtect Management Client is used.

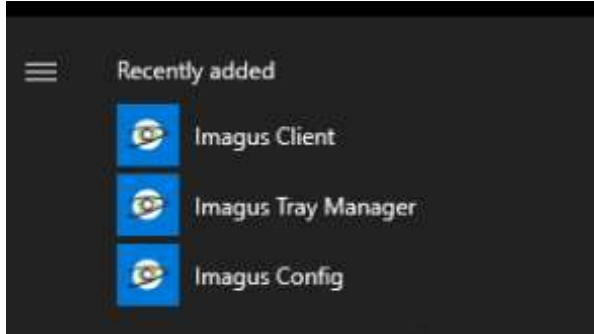
Run the Milestone Plugin Installer, and the files will be installed to the following location: *C:\ProgramFiles\Milestone\MIPPlugins\Imagus*.

Please ensure the XProtect Smart Client version installed on your machine is either version 2019 R2 and above.



6 IMAGUS SOFTWARE CONFIGURATION

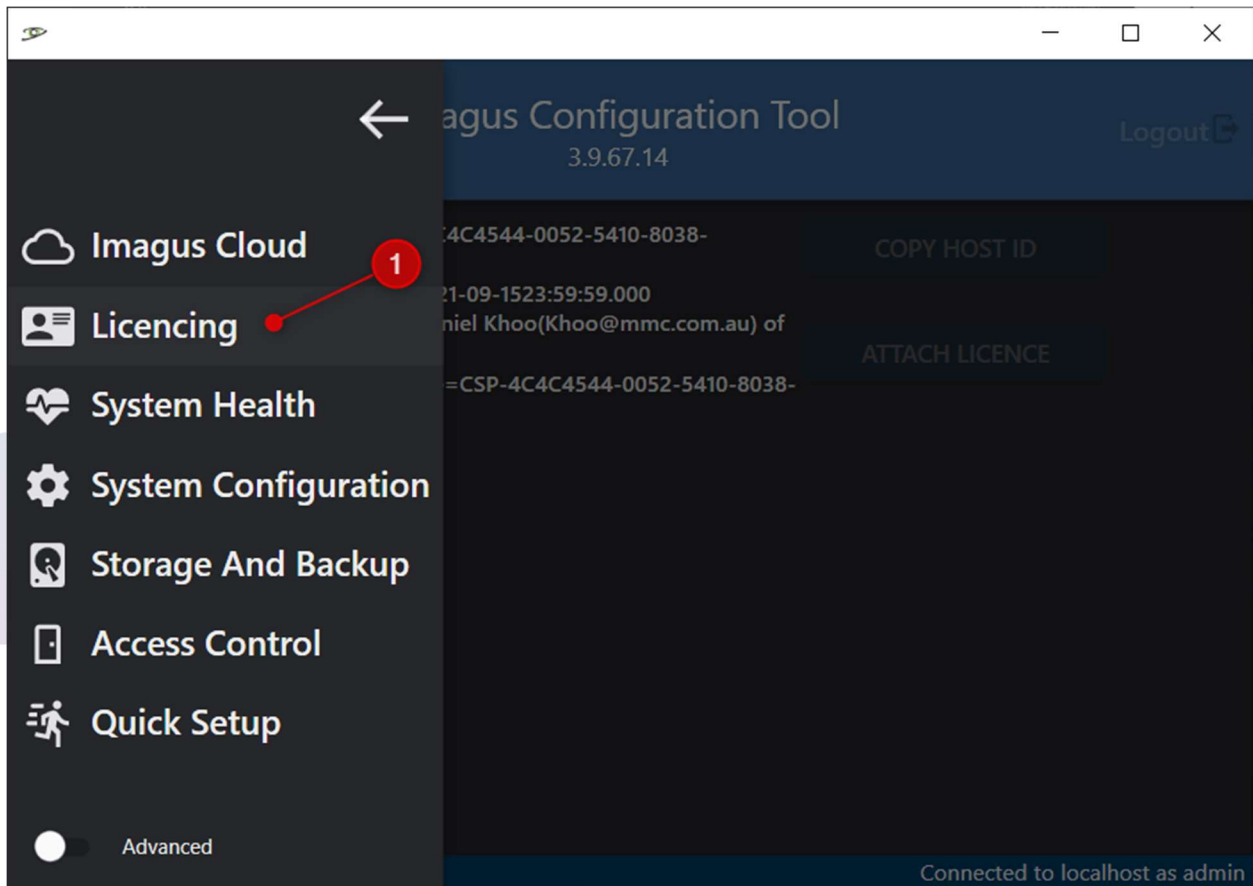
- Launch the 'Imagus Config' application.



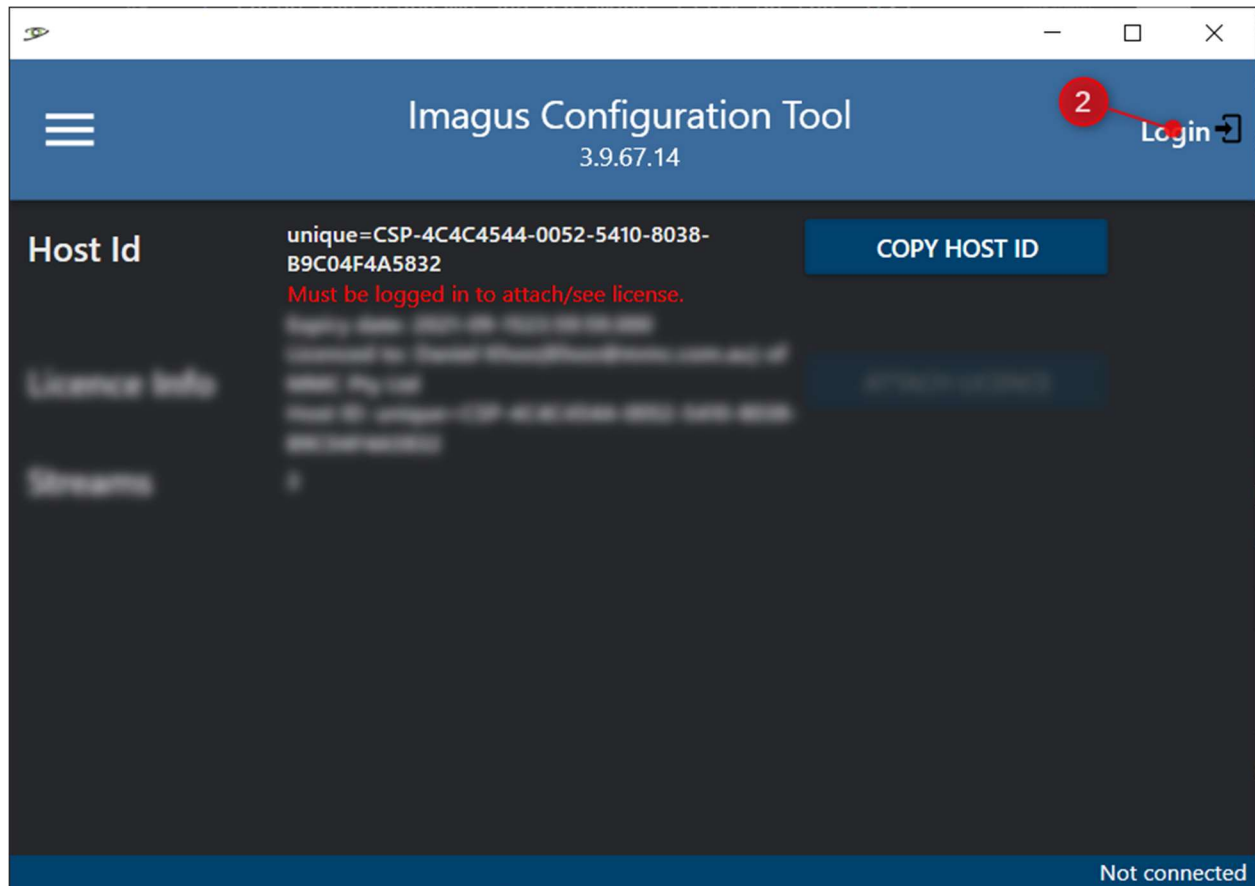
6.1 LICENSING

Please contact your Imagus Software distributor to licence the product and supply them with the host ID displayed on the licensing page. They will provide you with an appropriate licence.

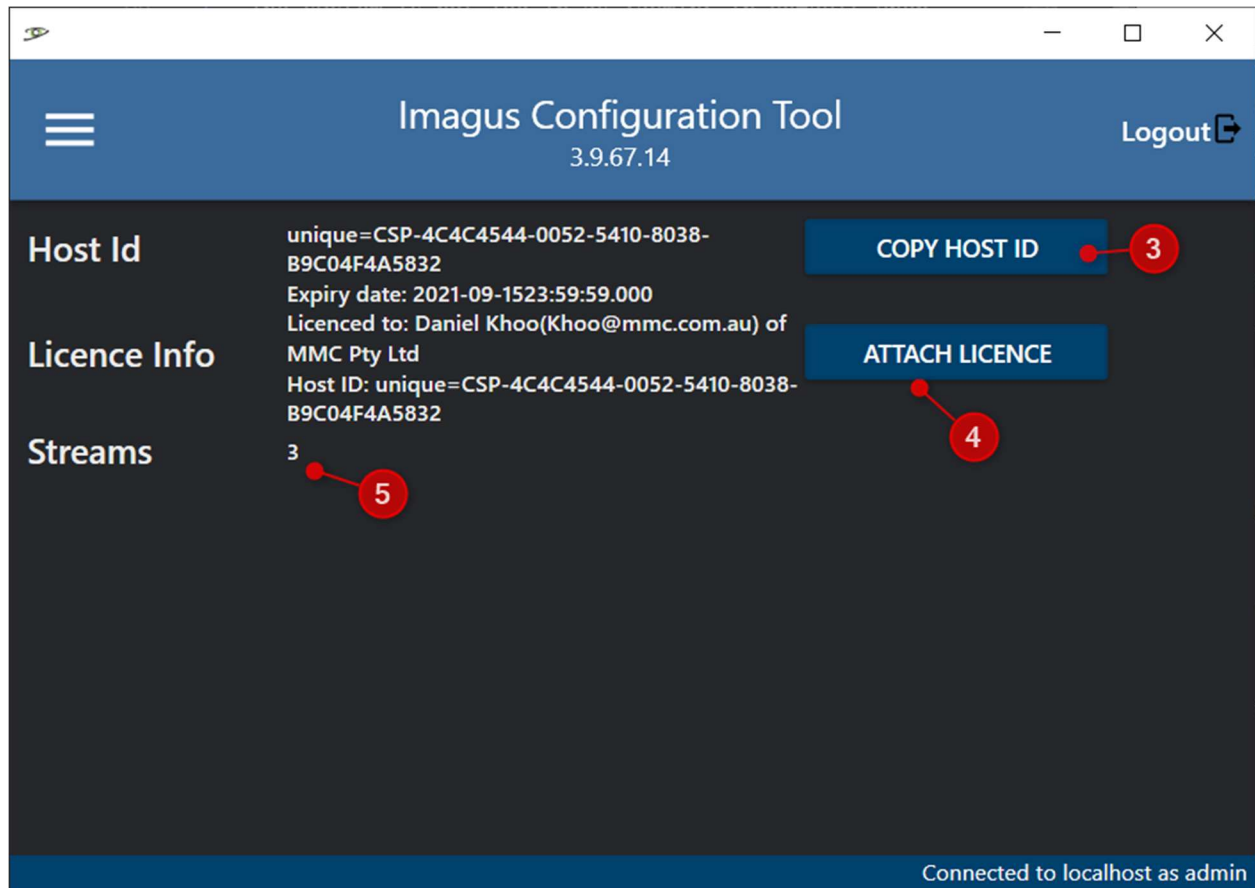
1. Select the 'Licencing' option.



2. The system is not logged in as 'admin' in default upon installation. Click on the 'Login' button to login as 'Administrator' to attach/see the licence information, monitor 'System Health', and 'System Configuration'.

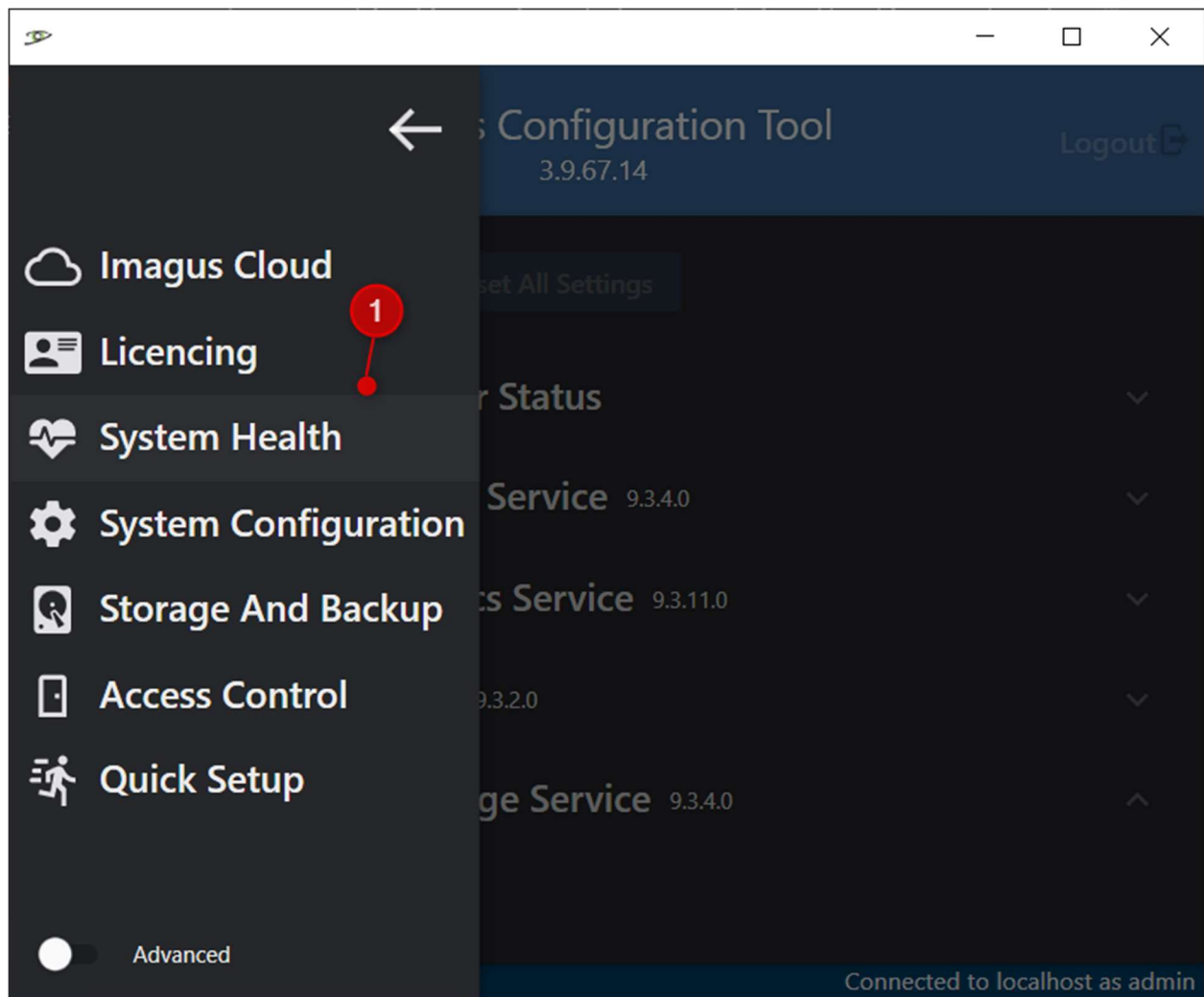


3. Click on the 'COPY HOSTID' button and forward this information to Vix Vizion to generate the licence key file.
4. Click on the 'ATTACH LICENCE' button to attach the licence key file received from Vix Vizion.
5. The system displays the licence number of camera streams. This figure is 0 before the application of the licence key to the system.

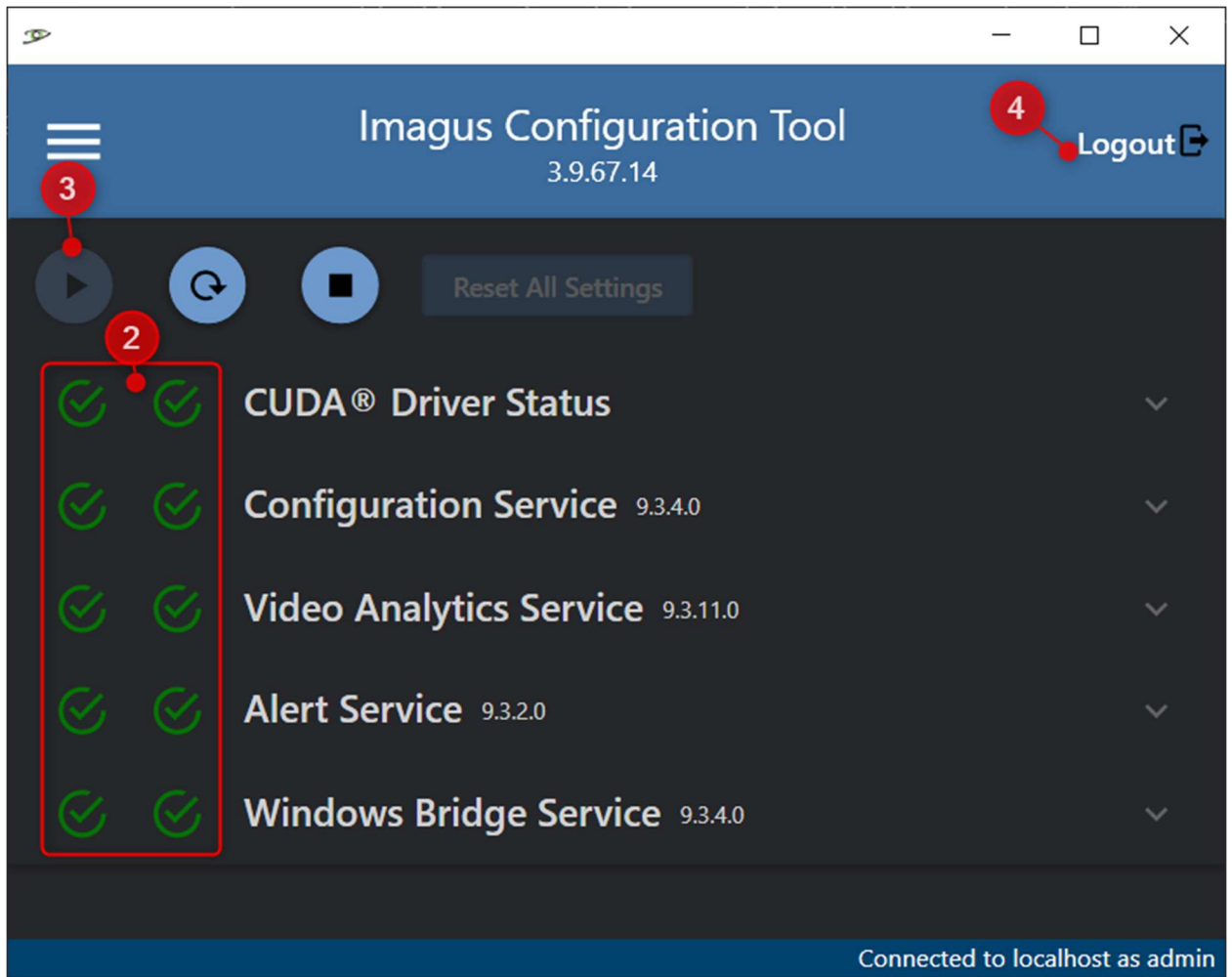


6.2 SYSTEM HEALTH

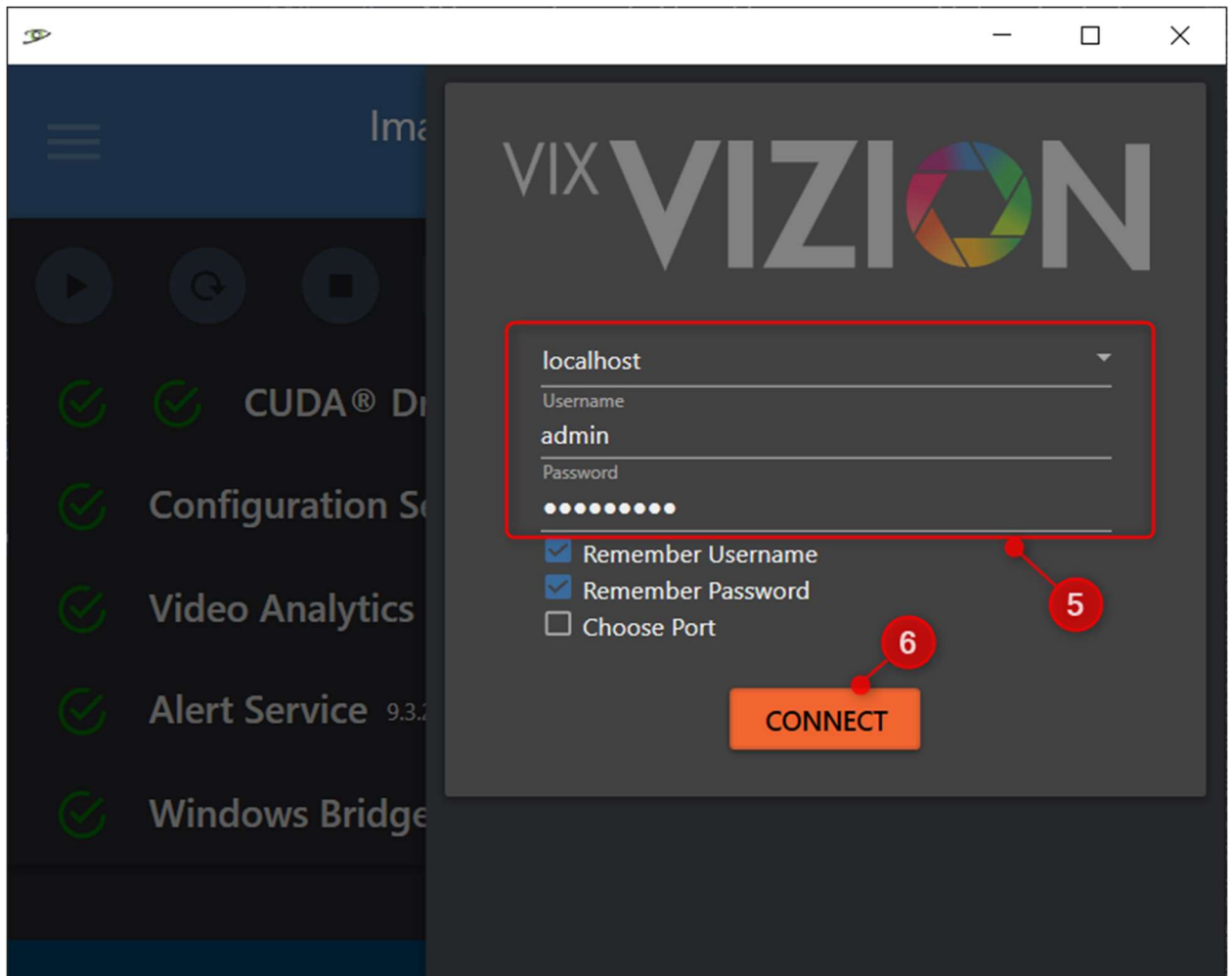
1. Select the 'System Health' option to check and ensure all Imagus Software Services are running.



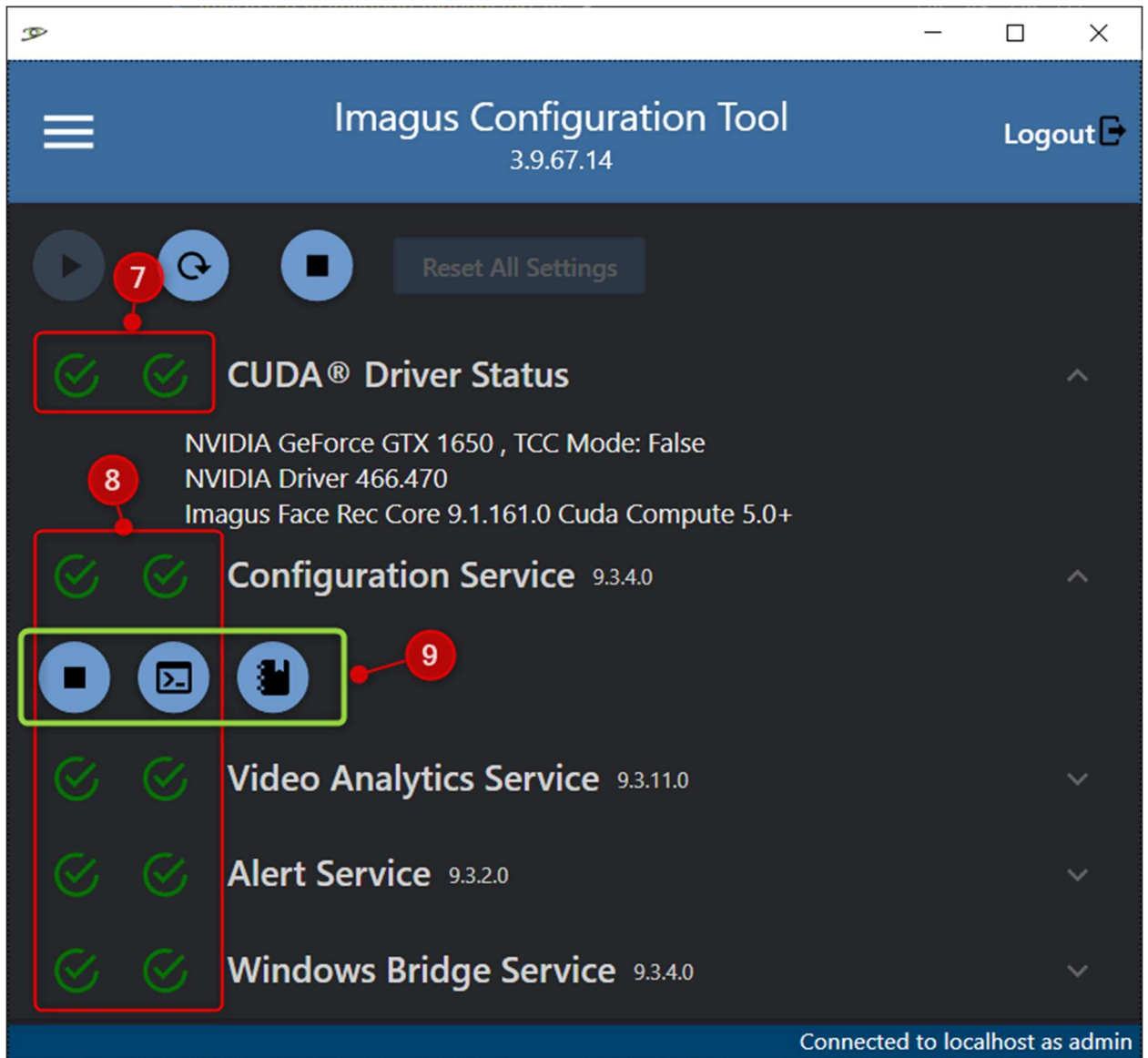
2. After each install, all services will start automatically.
3. If the services are not started, press the play button to start them.



4. Click on the 'Login' button to login as 'Administrator' to save the settings configured under 'System Configuration' and 'Storage And Backup'.
5. Enter the default admin password provided.
6. Click on the 'CONNECT' button.



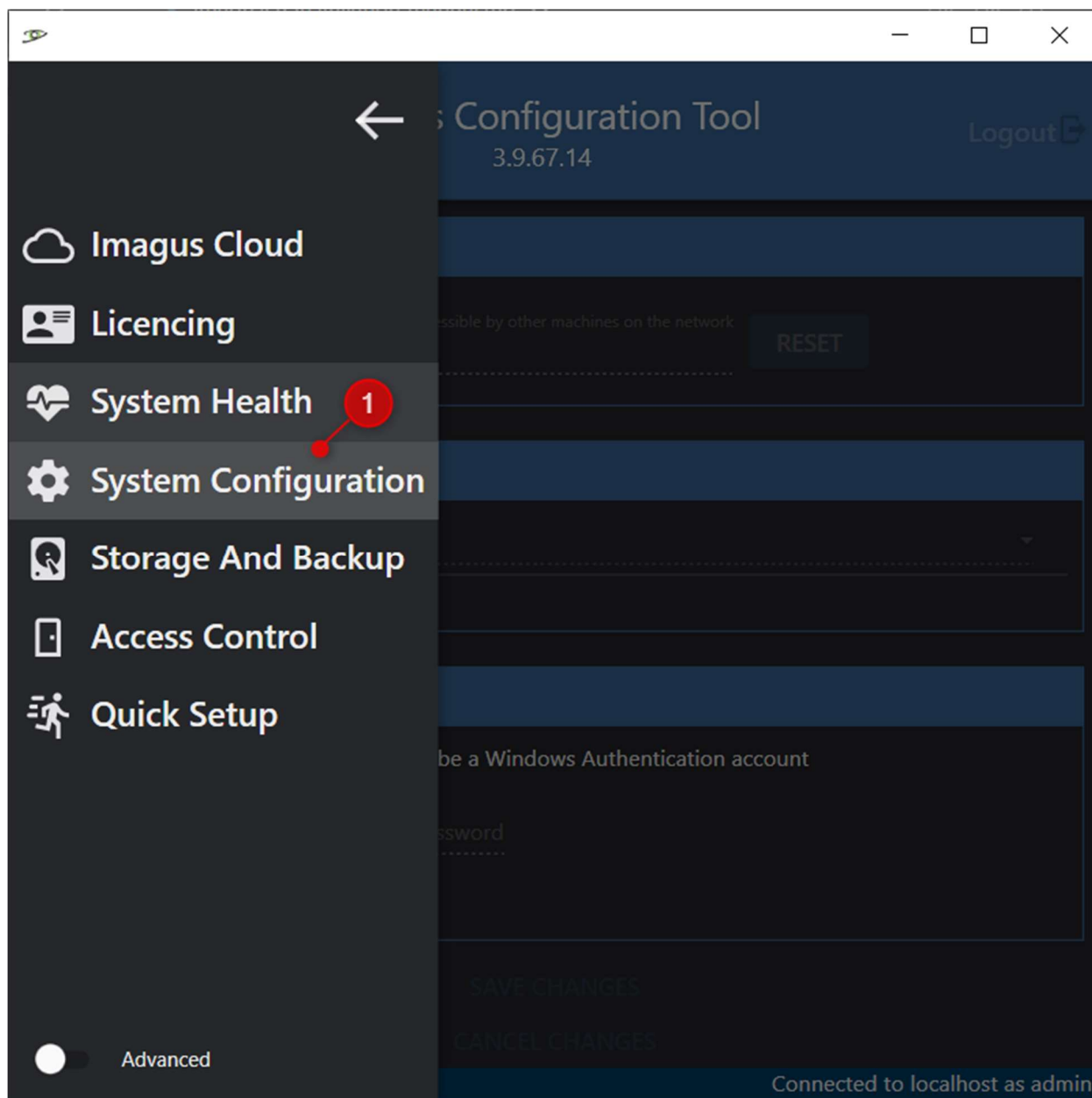
7. There are 2 checks next to each item, for the CUDA status, the first checkmark indicates the correct Nvidia driver is installed, the second check indicates the Imagus Facerec Engine is correctly using the driver.
8. For all other items, the first check shows the service is running, and the second check shows that it is communicating.



All services are running with NVidia Card.

6.3 SYSTEM CONFIGURATION

1. Select the 'System Configuration' option.



By default, the system will be configured for a single server installation. If you are planning to have more than a single Imagus Software server, please contact your Imagus Software distributor for advanced support.

2. Face Algorithm: The possible options are as follows:

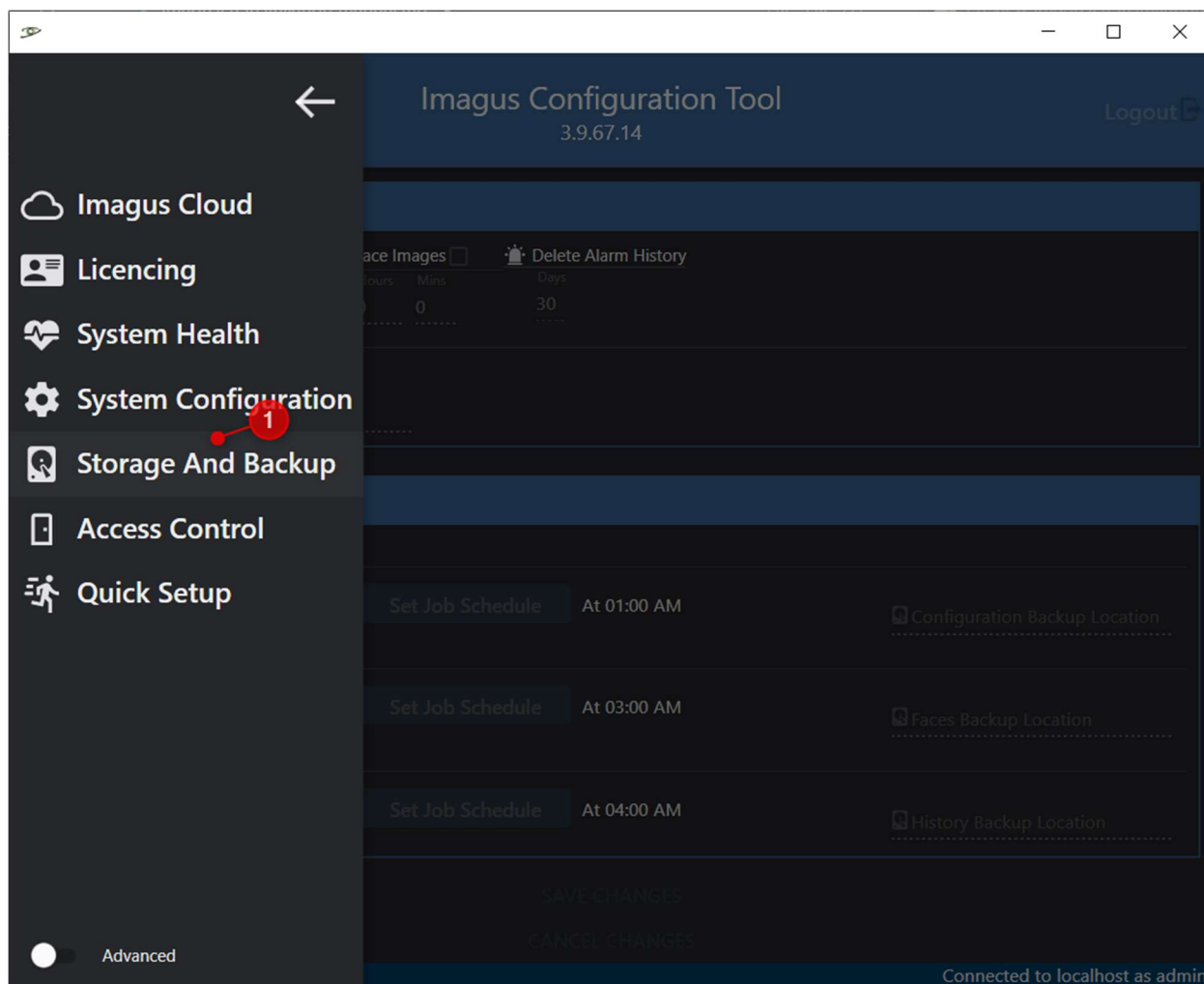
- Fast (V6) - Face recognition based on the V6 model with the option to enable/disable automatic mask recognition;
- Mask (V8 Mask) - All faces will be recognised using Face-Mask optimised model. The accuracies for people not wearing a mask will not be as good as a non-mask model;

- Accurate(V8) - Face recognition based on V8 model with the option to enable/disable the automatic mask recognition;
3. Milestone connections: This is the connection details for the Milestone management server. It must be a Windows account; please make sure the test is valid before saving. Once saved, the Imagus Software server details are entered into the Milestone configuration, and all future setup is completed in the Management Client.

The screenshot shows the 'Imagus Configuration Tool' window with version 3.9.67.14. The interface has a dark blue header with a menu icon, the title 'Imagus Configuration Tool', and a 'Logout' button. The main content area is divided into three sections: 'Local Machine Address', 'Face Algorithm', and 'Milestone'. In the 'Local Machine Address' section, the address 'DESKTOP-HGSLRMN' is entered, and a red circle with the number '2' points to it. A 'RESET' button is also present. The 'Face Algorithm' section shows 'Accurate (V8)' selected in a dropdown menu, with a red circle and the number '3' pointing to it. Below this, the 'Enable Automatic Mask Recognition' checkbox is checked. The 'Milestone' section contains a note about using a Windows Authentication account, a 'Milestone Server' section with 'localhost' in the 'Username' field, and a 'TEST CONNECTION' button with a red circle and the number '4' pointing to it. At the bottom, there are 'SAVE CHANGES' and 'CANCEL CHANGES' buttons, and a status bar indicating 'Connected to localhost as admin'.

6.4 STORAGE AND BACKUP

1. Select the 'Storage And Backup' option.



2. Storage:

- i. Delete Metadata History: The number of days to keep history metadata online before system housekeep it. The default is 30 days.
 - ii. Delete Face Images: The number of days to keep face images data online before system housekeep it. The default is 20 days.
 - iii. Delete Alarm History: The number of days to keep alarm data online before system housekeep it. The default is 30 days.
 - iv. Video Recording - Enable Recording: To enable video recording and indicate the number of days to keep video recording to a specified location.
3. Backup – Configuration: The number of backup copies to keep to a specified location. The default time for the job to run is set at 03:00 AM.
 4. Backup – Face Database: The number of backup copies to keep to a specified location. The default time for the job to run is set at 03:00 AM.

5. Backup – History Database: The number of days to keep history data online before system housekeep it to a specified location. The default time for the job to run is set at 04:00 AM.

The screenshot displays the 'Imagus Configuration Tool' interface, version 3.9.67.14. The top navigation bar includes a menu icon, the title 'Imagus Configuration Tool', and a 'Logout' button. The main content area is divided into two sections: 'Storage' and 'Backup'.

Storage Section (Callout 2):

- Delete Metadata History:** A slider set to 30 days.
- Delete Face Images:** A checkbox that is currently unchecked, with a sub-section for Days (30), Hours (0), and Mins (0).
- Delete Alarm History:** A slider set to 30 days.
- Video Recording:** A checkbox labeled 'Enable Recording' is checked. Below it, a slider for 'Days' is set to 30, and a text field for 'Recording Location' contains 'c:\videos'.

Backup Section (Callout 3):

Configuration:

- Number of rolling copies:** A slider set to 10. A 'Set Job Schedule' button is next to it, showing 'At 01:00 AM'. To the right is a text field for 'Configuration Backup Location'.

Face Database (Callout 4):

- Number of rolling copies:** A slider set to 10. A 'Set Job Schedule' button is next to it, showing 'At 03:00 AM'. To the right is a text field for 'Faces Backup Location'.

History Database (Callout 5):

- Days Of History Backup to Keep:** A slider set to 60. A 'Set Job Schedule' button is next to it, showing 'At 04:00 AM'. To the right is a text field for 'History Backup Location'.

At the bottom of the interface, there are two buttons: 'SAVE CHANGES' and 'CANCEL CHANGES'. The status bar at the very bottom indicates 'Connected to localhost as admin'.

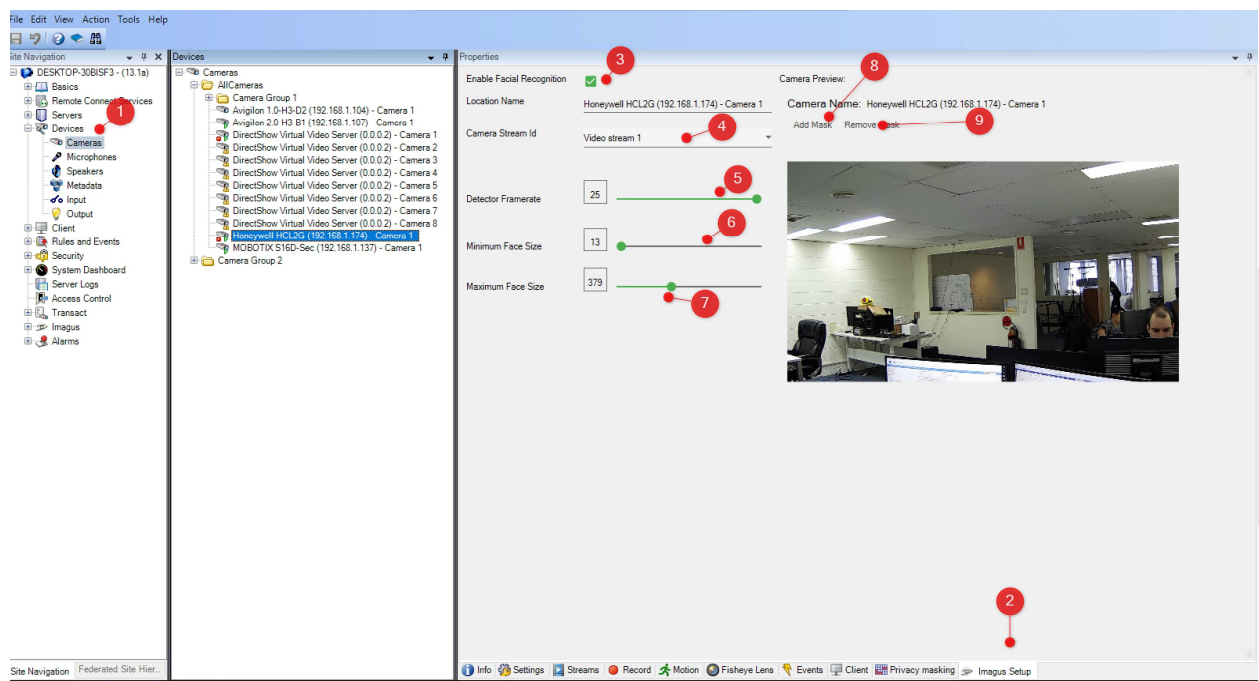
7 MILESTONE MANAGEMENT CLIENT SOFTWARE CONFIGURATION

Launch Milestone Management Client Application.

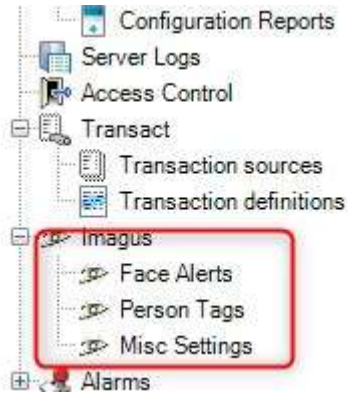
Please ensure the XProtect Management Client version installed on your machine is either version 2019 R1 and above.

7.1 SETTING UP VIDEO SOURCE

1. Go to Devices → Camera to enable the Facial Recognition for a selected camera in the Milestone System. →
2. Click on the 'Imagus Setup' tab.
3. Check on the 'Enable Facial Recognition' checkbox to enable facial recognition for the selected camera.
4. Select the camera stream to perform facial recognition.
5. Select the detector frame rate at which the detector will base on.
6. Change the minimum and maximum face size in pixels here to change the size of the face detected in the frame.
7. Click on the 'Add Mask' button to mark the region from facial recognition.
8. Click on the 'Remove Mask' button to remove mark region from facial recognition.



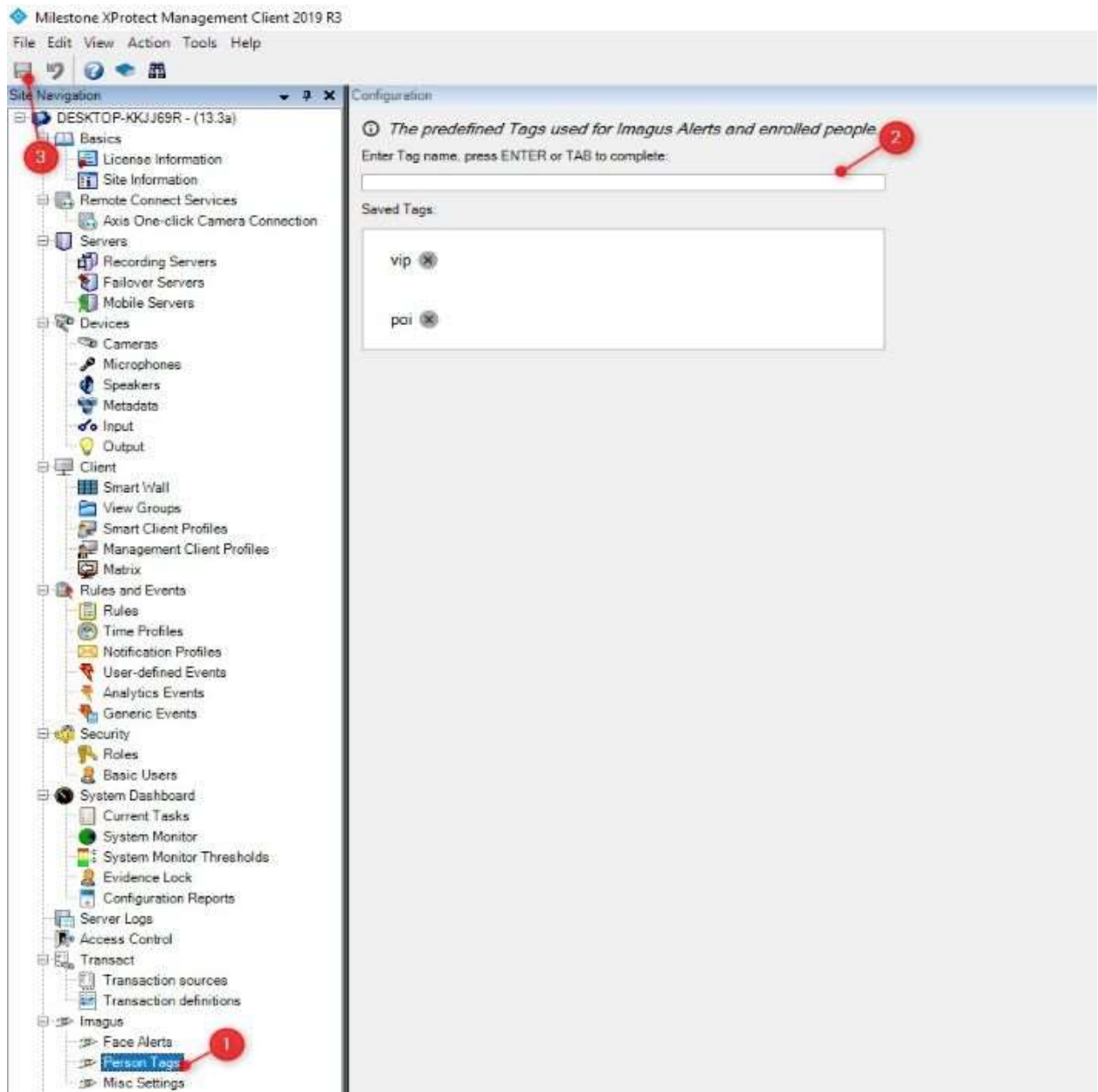
7.2 ALERT CONFIGURATION



- Every person in the face database can be annotated with user-defined tags. These are simple text strings. All alerts in the Imagus system are configured using these tags. A Smart client will be presented with a predefined list of tags from which they can pick.
- An alert is generated when a person is recognised above a certain threshold, and they have tags that match those set up in the alert.

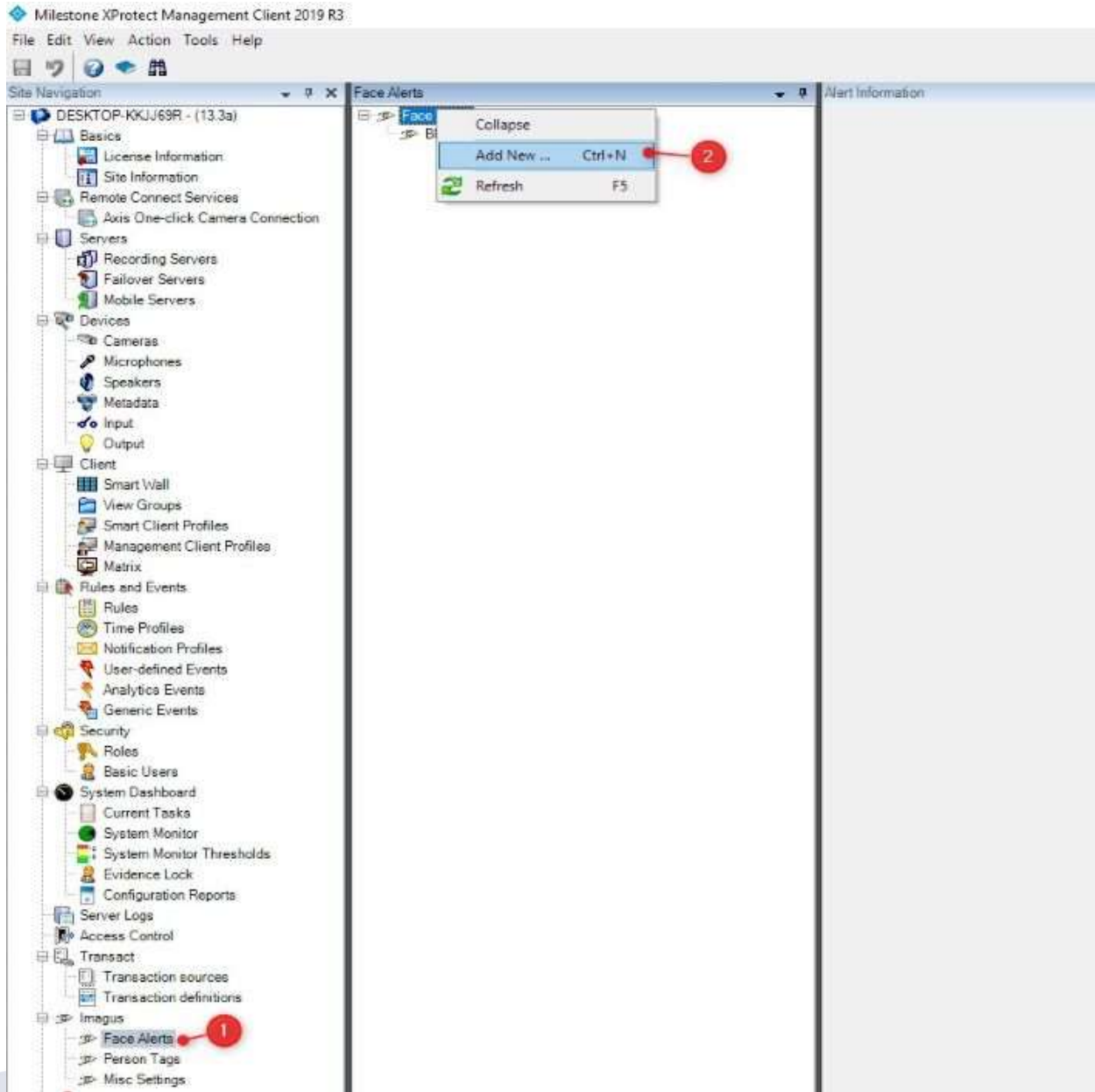
7.3 SETTING UP TAGS

1. Go to Milestone Management Client → Imagus → Person Tags to set up tags for the alert in the Milestone System.
2. Enter the tags that you predefined in the Milestone Smart Client. If you entered a tag that already exists in the system. The system will prompt you to an error.
3. Click on the 'Save' icon to save the settings.

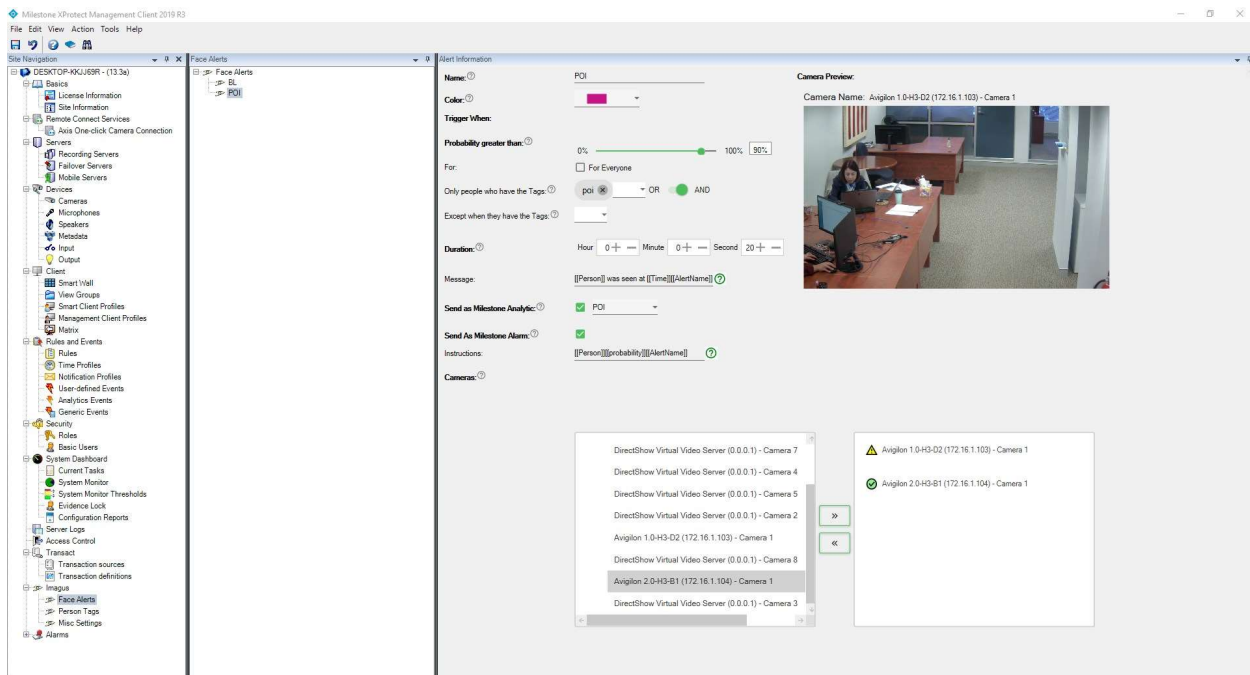
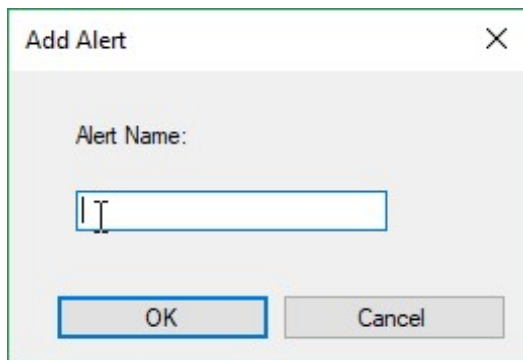


7.4 SETTING UP ALERTS

1. Go to Imagus → Face Alerts to set up alerts in the Milestone System.
2. Right-click on the 'Face Alerts' and choose the option 'Add New' to add a new alert.



3. You will be prompted with the pop-up message box. Enter the name of the new Alert, e.g., 'POI', and click on the 'OK' button to proceed to the next step. Otherwise, click on the 'Cancel' button to close the message box.



4. Enter the information below for the new alert:

- Name – The alert name specified, e.g. 'POI';
- Colour – The colour of the alarm border to be displayed.
- Trigger when:
 - **Probability greater than** - Default is 90%. The % of how similar/close the face is to the face that you want to match with;
 - **For** - If 'For Everyone' option is checked then alert will be triggered for everyone who is seen by the camera;
 - **Only people who have tags** – Specify the tags to be alerted. This option is enabled when the 'For Everyone' option is not checked;
 - **Except when they have the tags** – Specify the tags to be excluded.
 - **Duration** – The time-lapse between alerts reoccurring;

- **Send an analytic** – This option allows you to create a Milestone Analytics Event. However, you are required to specify the rules for the event in the Milestone System. Below are the available options:

The screenshot shows a configuration interface with a dropdown menu open for the 'Send as Analytic' option. The dropdown lists three choices: 'Analytic Name same as Alert' (which is selected and marked with a green checkmark), 'Custom Analytic Name', and 'Send Analytic to person Tags one of each'. Below the dropdown, the 'Send As Alarm' checkbox is visible and unchecked, and the 'Message' field is partially visible.

- **Analytic Name same as Alert** – The analytic will have the same name as the Alert, i.e. POI;
- **Custom Analytic Name** – You can specify a custom name such as 'Violent', 'Theft' etc. It cannot be left blank. Otherwise, it will be default with the Alert Name.

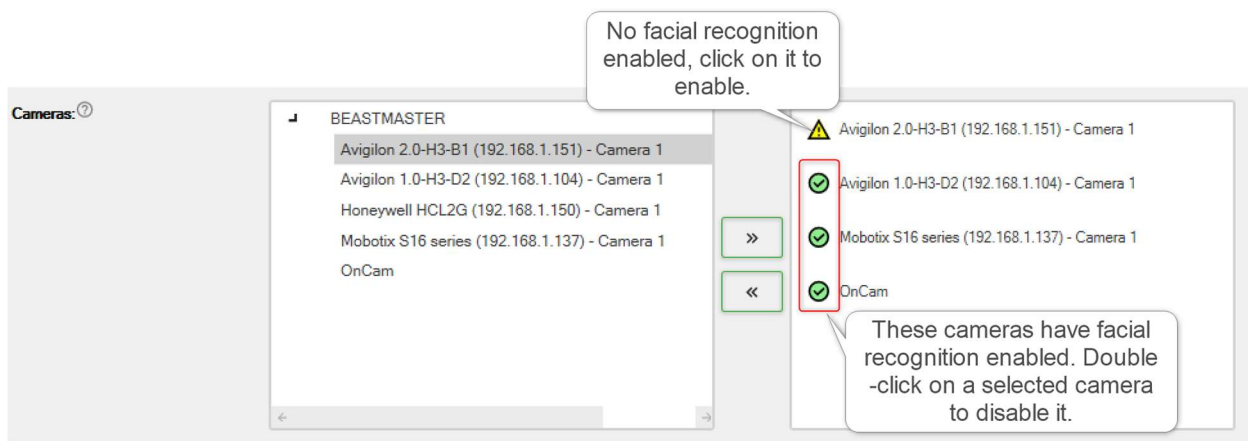
This screenshot shows the 'Send as Analytic' configuration with 'Custom Analytic Name' selected in the dropdown. The 'Analytic Name' input field is empty, and a red error message states: 'Custom Analytic Name cannot be empty. otherwise Alert Name is used'. The 'Send As Alarm' checkbox is checked, and the 'Message' field shows 'POI'.

- **Send Analytic to person Tags one of each** – If this option is selected and there is a face match, the system will send the corresponding analytic events based on the number of tags that a person has. For example, if this person has three tags, namely 'Theft', 'Violent', 'Blacklist', then the system will trigger three analytic events with the name as such.
- **Send an alarm** – Check this box if you want to trigger this alarm as a Milestone Alarm. Enter the below information with the system provided parameters:

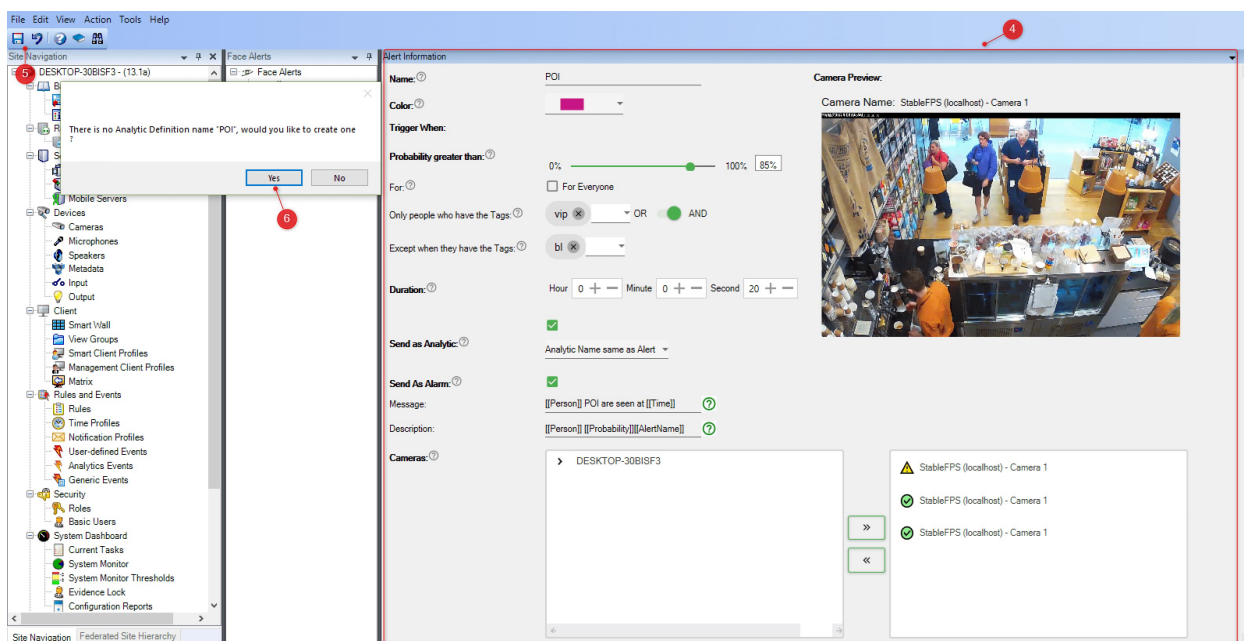
The screenshot shows the 'Send As Alarm' configuration. The 'Send As Alarm' checkbox is checked. The 'Message' field contains the template '[[Person]] POI was seen at [[Time]]'. The 'Description' field contains the template '[[Person]][[Probability]][[AlertName]]'. Both fields have a question mark icon to the right.

- **Message** – A message that you can configure with the below system parameters that will be displayed in the Alarm Manager Tab under the Alarm List's field 'message'.
 - [[Person]] – Person identified that raised the alert;
 - [[Time]] – Timestamp of when the alert is raised;
 - [[AlertName]] – Alert Name;
 - [[Probability]] – Probability of match in %;
- **Description** – You can compose an instruction using the above-provided system parameters. This instruction will be displayed under the Alarm Manager Tab by double-clicking on the Alarm list.

- For more details, please refer to Section 16.
- **Camera** – Select a list of cameras from an available list for facial recognition;

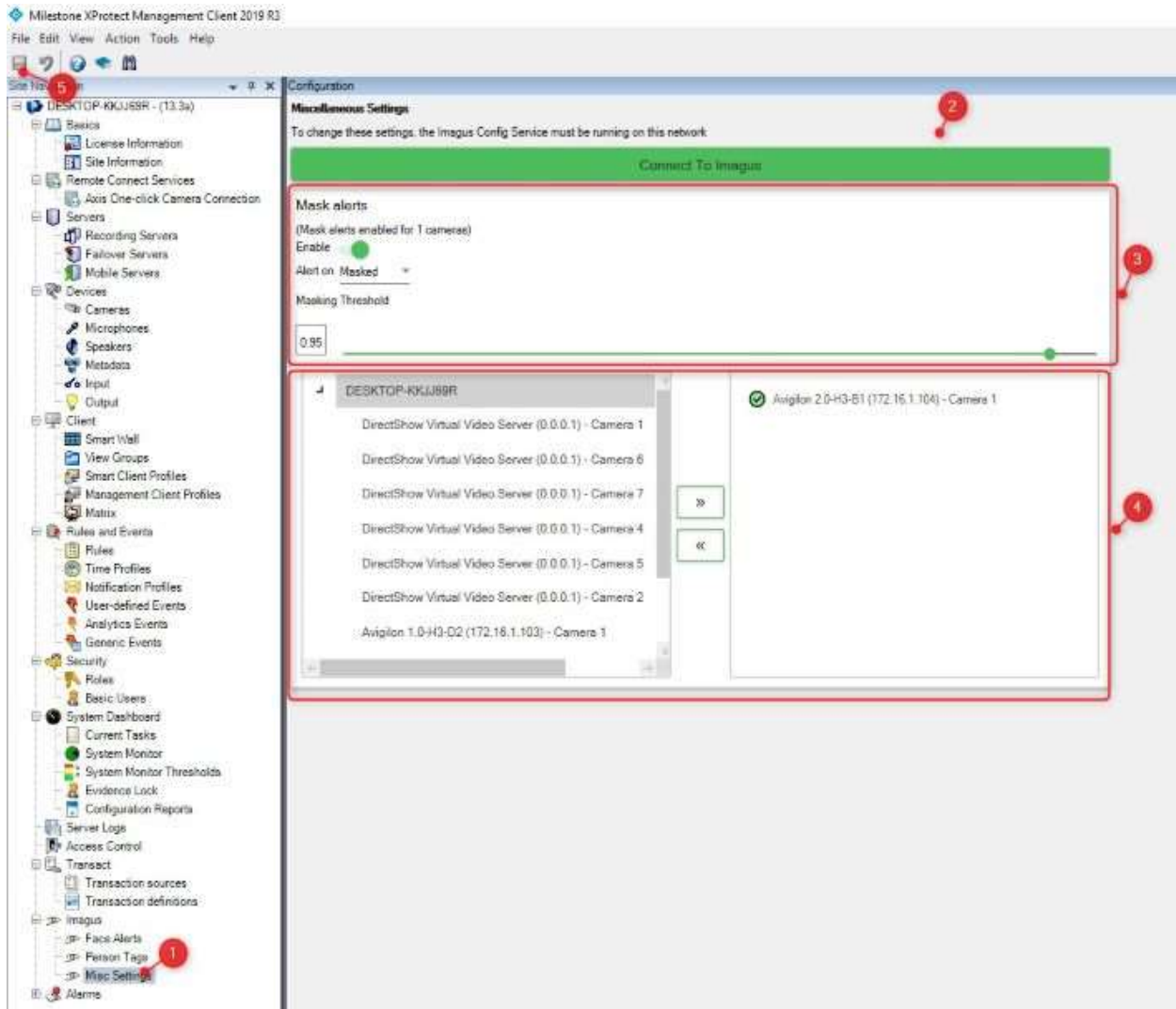


5. Click on the 'Save' icon to save the settings.
6. The system will prompt you a message and click on the 'Yes' button to create the alert.



7.5 SETTING UP MASK DETECTION AND ALERTS

1. Go to Imagus → Misc Settings to set up the mask alerts.



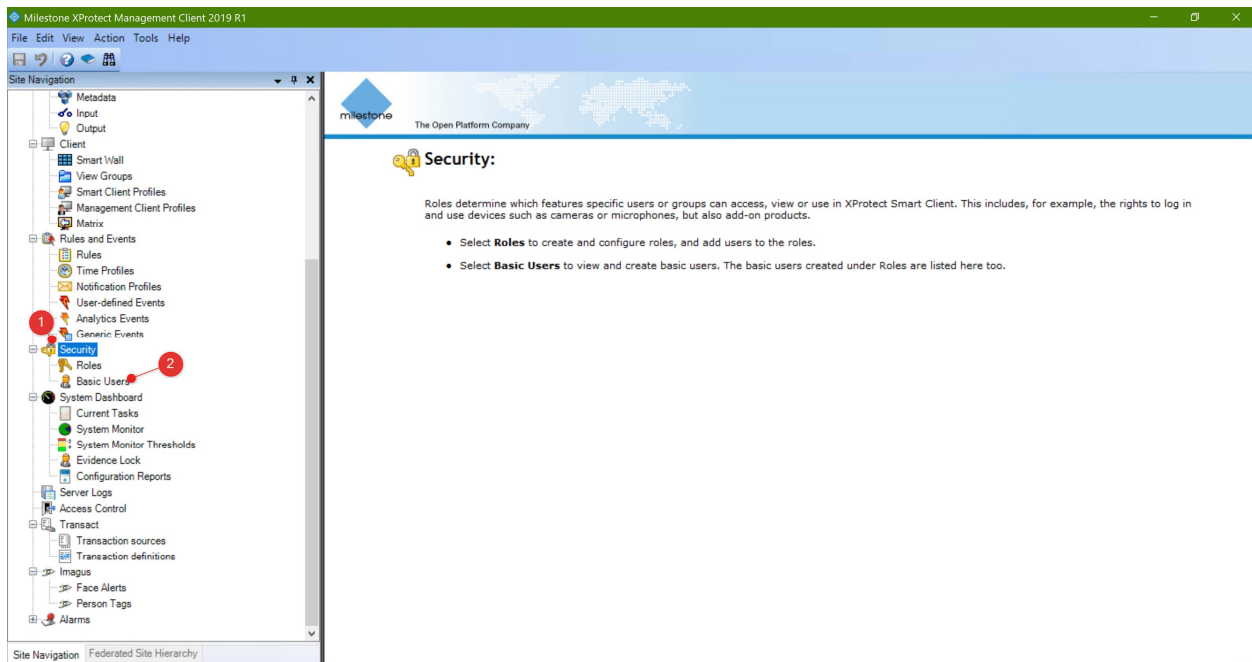
2. Click on the 'Connect to Imagus' to establish the connection to Imagus Configuration Service.
3. Enter the below information for Mask Alerts:
 - Enable - A slider option to enable/disable Mask Alerts;
 - Alert on - The possible values are Masked and Unmasked
 - Masking Threshold - Default value is 0.8. For best settings, set it to 0.95.
4. Cameras - Select list of cameras for mask detections and alerts.
5. Click on the 'Save' icon to save the settings.

7.6 USER ACCESS CONTROL

System Administrators have an option to restrict Imagus facial recognition functionality access rights to specified users.

7.6.1 Create a basic user account

1. Go to Security → Basic User → Create Basic User option to create a basic user account with specified Imagus facial recognition functionality access rights.



2. The below screen will be displayed. Enter the below information and click the 'OK' button to save the details or 'Cancel' button to exit.
- User name – Basic user account name;
 - Description – Description of the user account to be created;
 - Password – Set a password to access the Milestone System;
 - Repeat password – Repeated password for verification;

New: Basic User

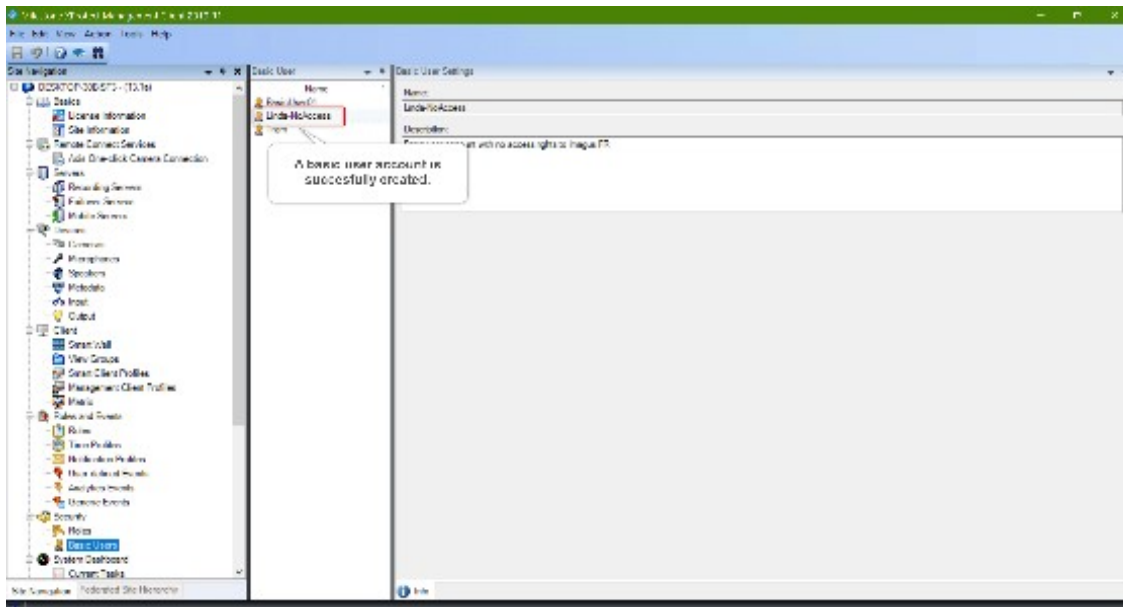
User name:
Linda-NoAccess

Description:
Basic user account with no access rights to Imagus FR

Password:

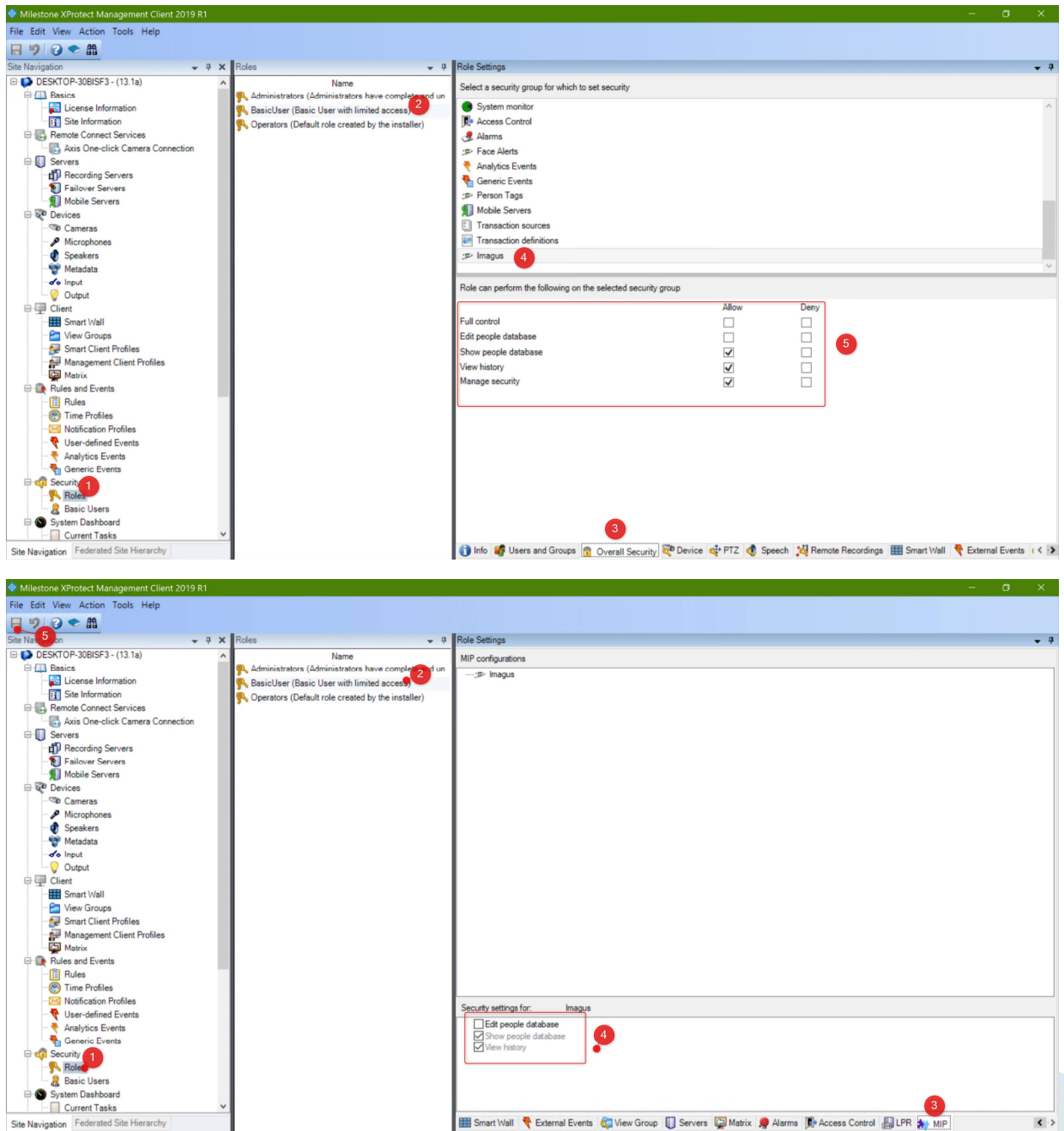
Repeat password:

1 OK 2 Cancel



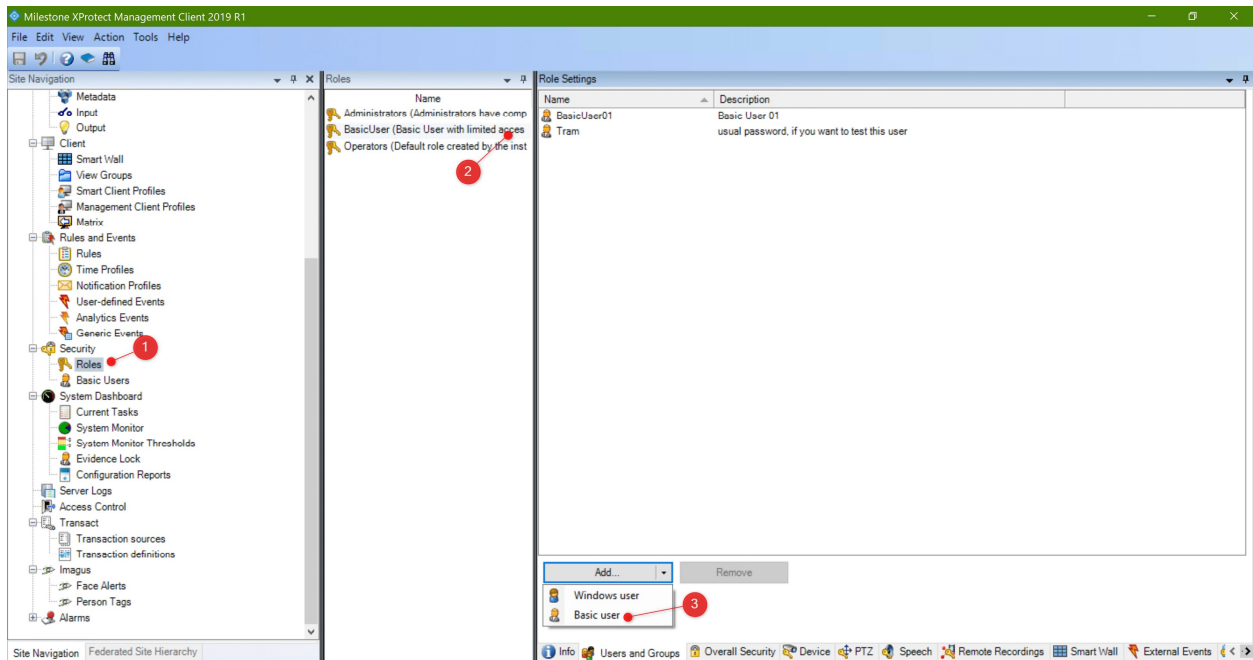
7.6.2 Set security/access rights to a role

1. Go to Security → Roles and select a role, e.g., BasicUser (Basic User with limited access)
2. Click on the 'Overall Security' or 'MIP' Tab, navigate to select 'Imagus' security group option under Role Settings.
3. Below security options will be displayed for access right settings:
 - Full Control - Ability to edit, view people database, view history as well as managing security;
 - Edit people database – Ability to make changes to people enrolment records in people database;
 - Show people database - Ability to view people enrolment records in people database;
 - View History - Ability to view and search historical data;
 - Manage Security - Ability to manage security;
4. Select/Check on the security options that this role group can perform and click on the 'Save' option to save the settings.

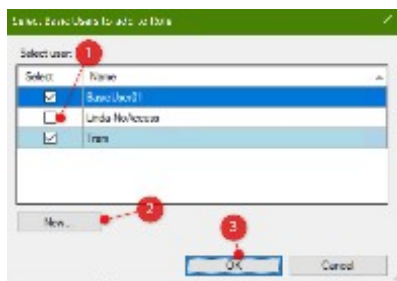


7.6.3 Add a user to a role

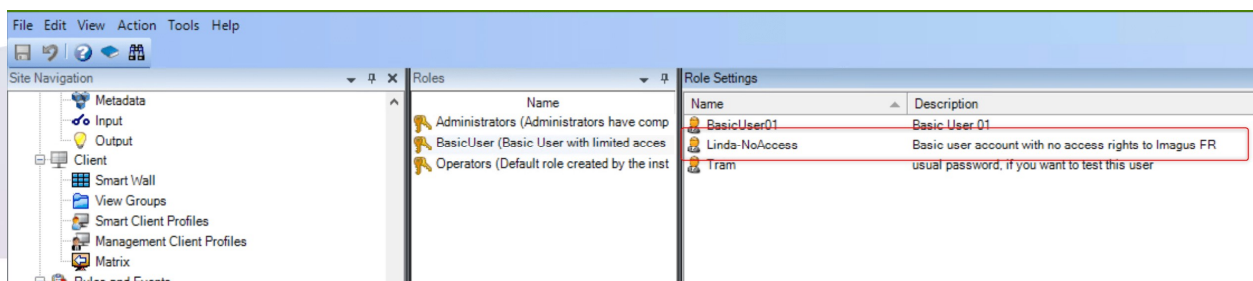
1. Go to Security → Roles and select a role, e.g., BasicUser (Basic User with limited access)
2. Click on the 'Users and Groups' Tab and click on the 'Add' button and select the 'Basic user' option.



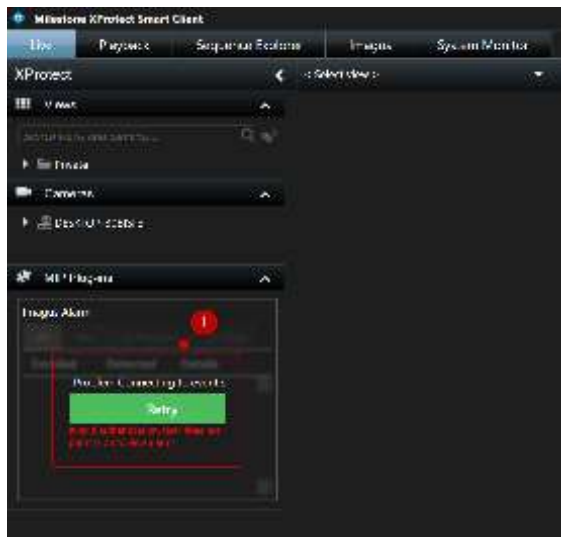
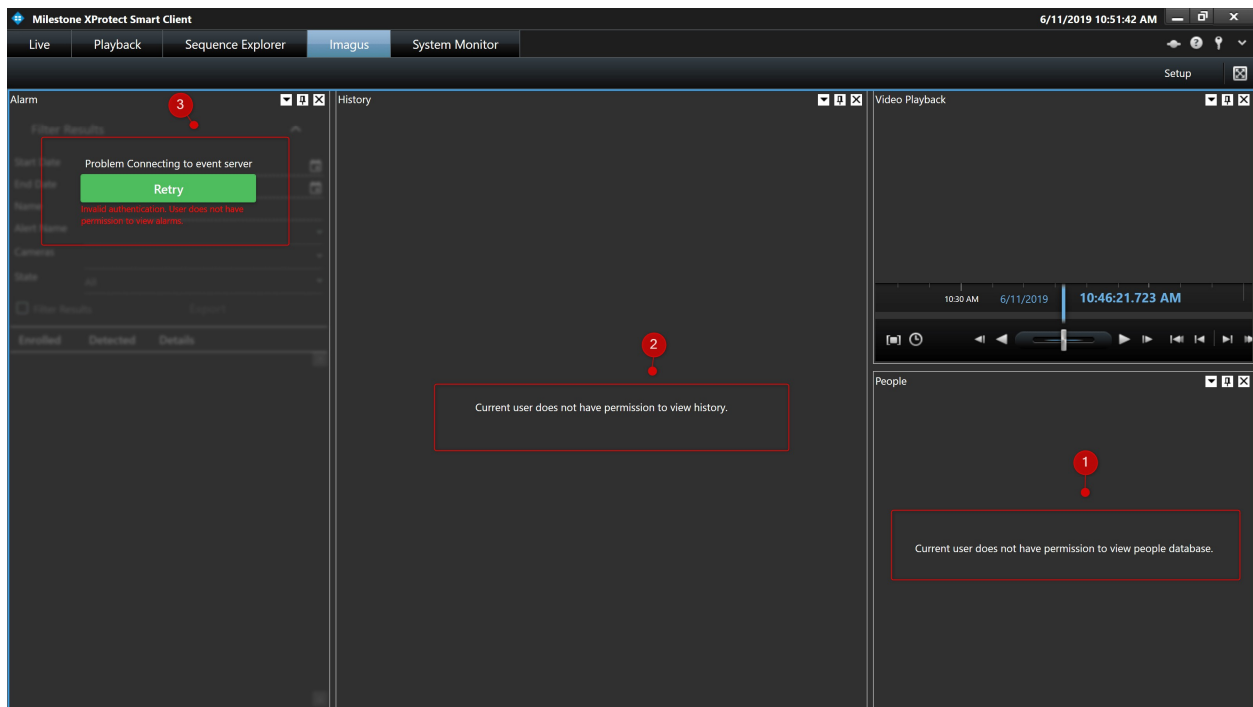
3. The below pop-up screen will be displayed and check/select the new basic user account that is created in Section 6.3.1.

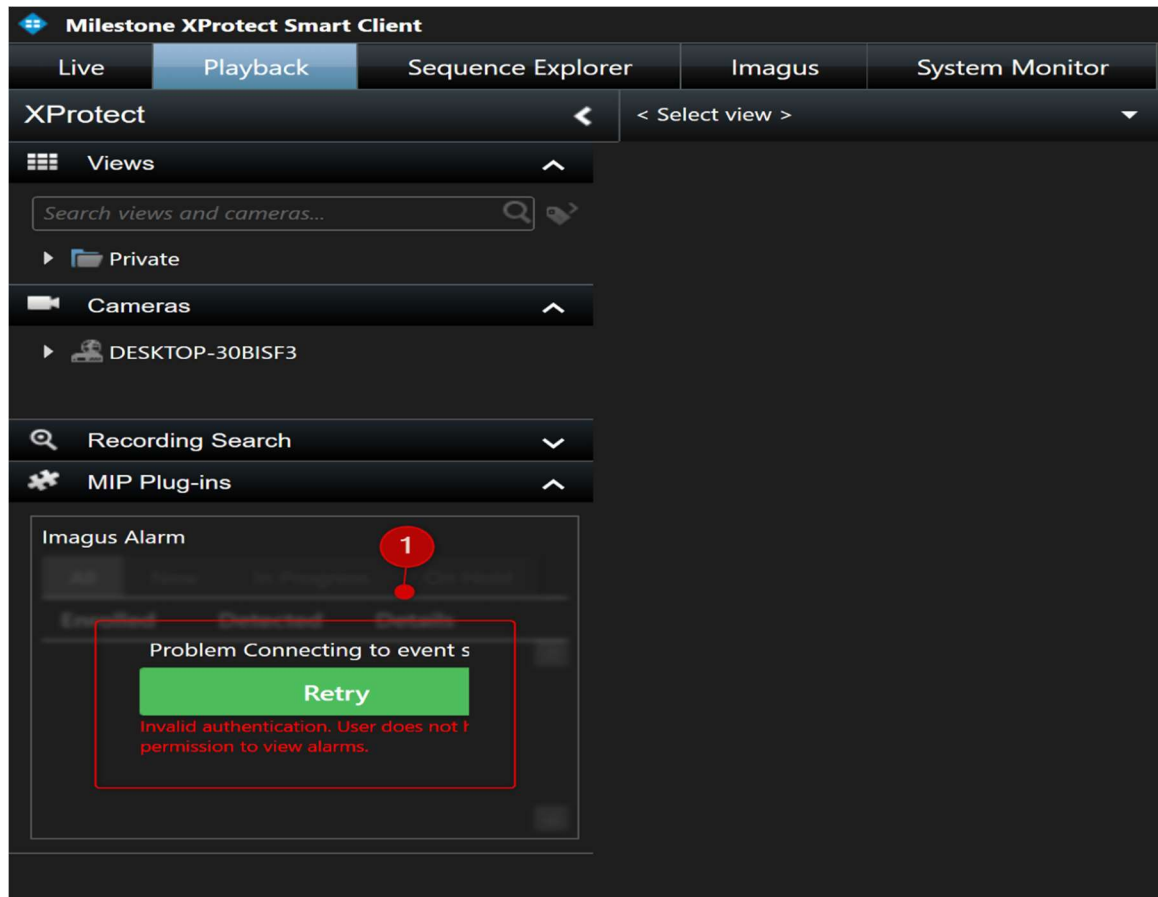


4. The below pop-up screen will be displayed and check/select the new basic user account that is created in Section 6.3.1.



For example: The below shown a basic user with a role with no access to Imagus Tab's functionalities. The user will be prompted with an appropriate message on the access level.

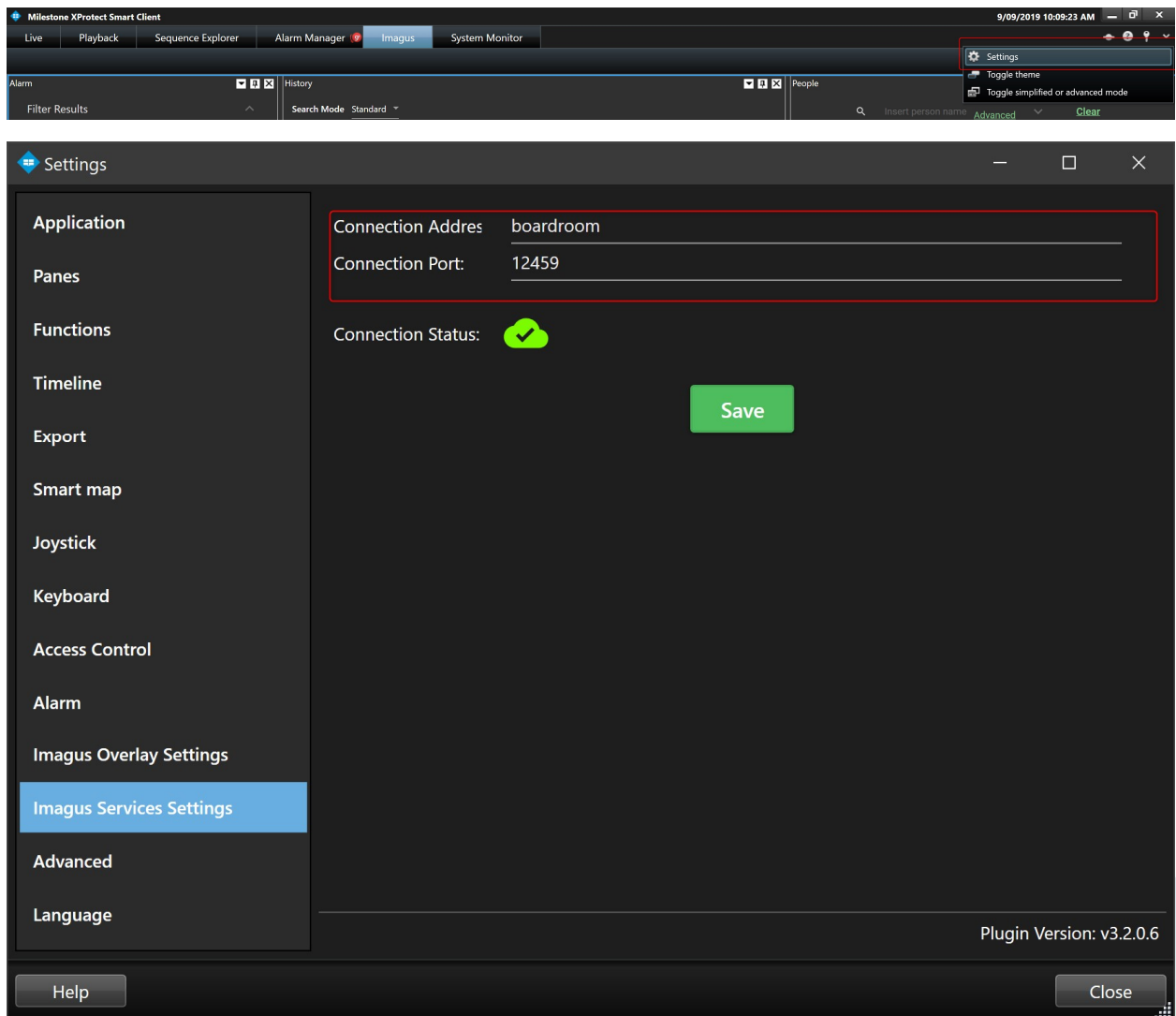




8 MILESTONE SMART CLIENT SOFTWARE CONFIGURATION

The milestone client settings are set up by the Software Config tool above, only change these settings if the connection status cloud is not green.

1. Run Milestone Smart Client.
2. Click on 'Settings' button and the pop-up screen below will be displayed.

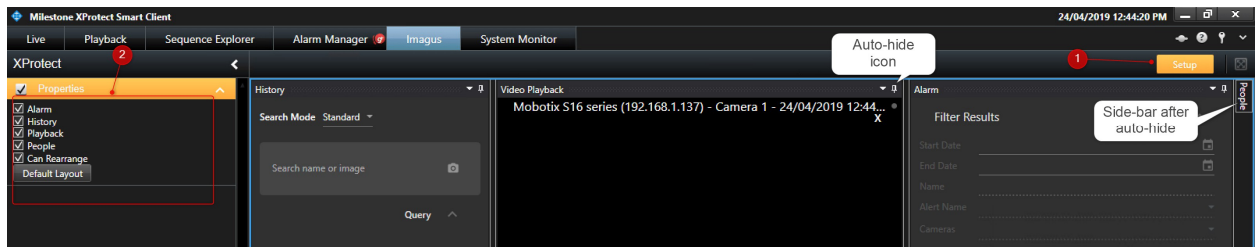


3. Select the "Imagus Services Settings" option.
4. The Connection Address and Port are set during the installation.
5. The Connection details point to the Imagus Server; it will be either IP address or hostname and come in the form "192.168.1.1" or "boardroom".
6. Click on the 'Save' button to save the information.

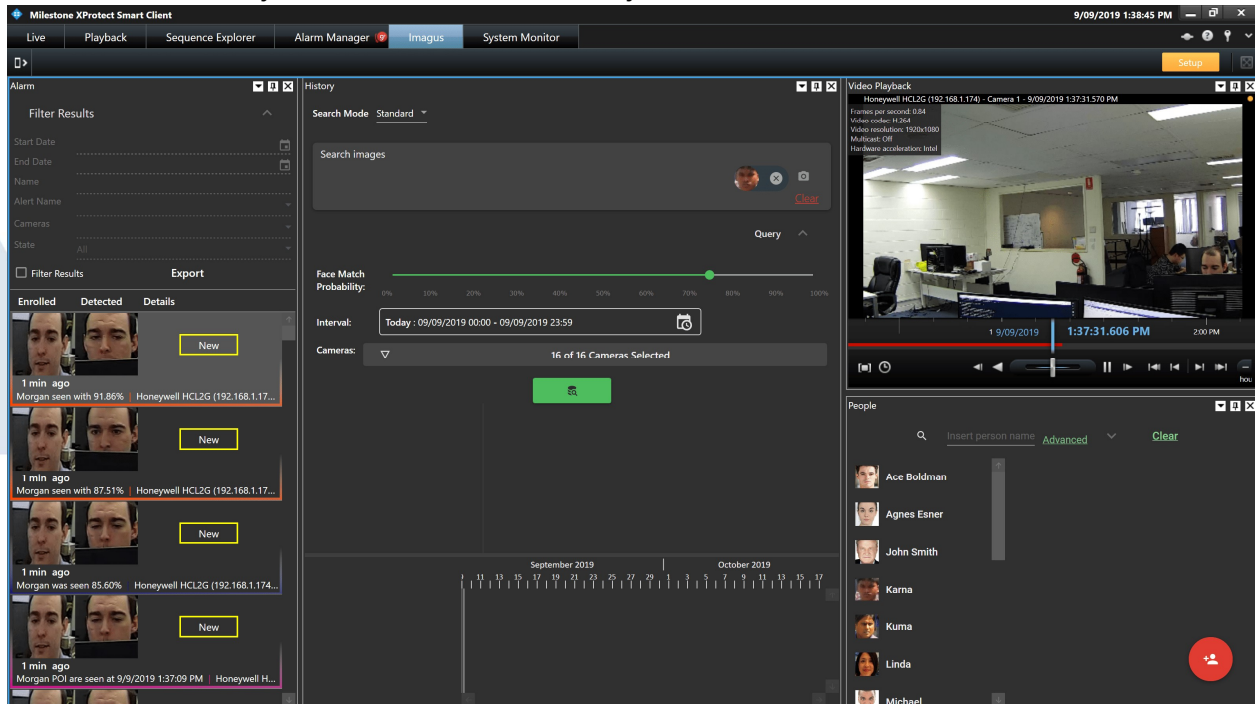
8.1 IMAGUS TAB SCREEN LAYOUT CONFIGURATION AND CONTROL

One size does not fit all. As every business is different, we've made it very easy for the user to modify the layout of the screens within the Milestone Smart Client accordingly to your preference.

1. Click on the 'Setup' button to configure the Imagus Tab layout according to your preference.
2. Check on one or more of the below to enable screen layout auto-hide and reposition feature.
 - Alarm
 - History
 - Playback
 - People
 - Can Rearrange

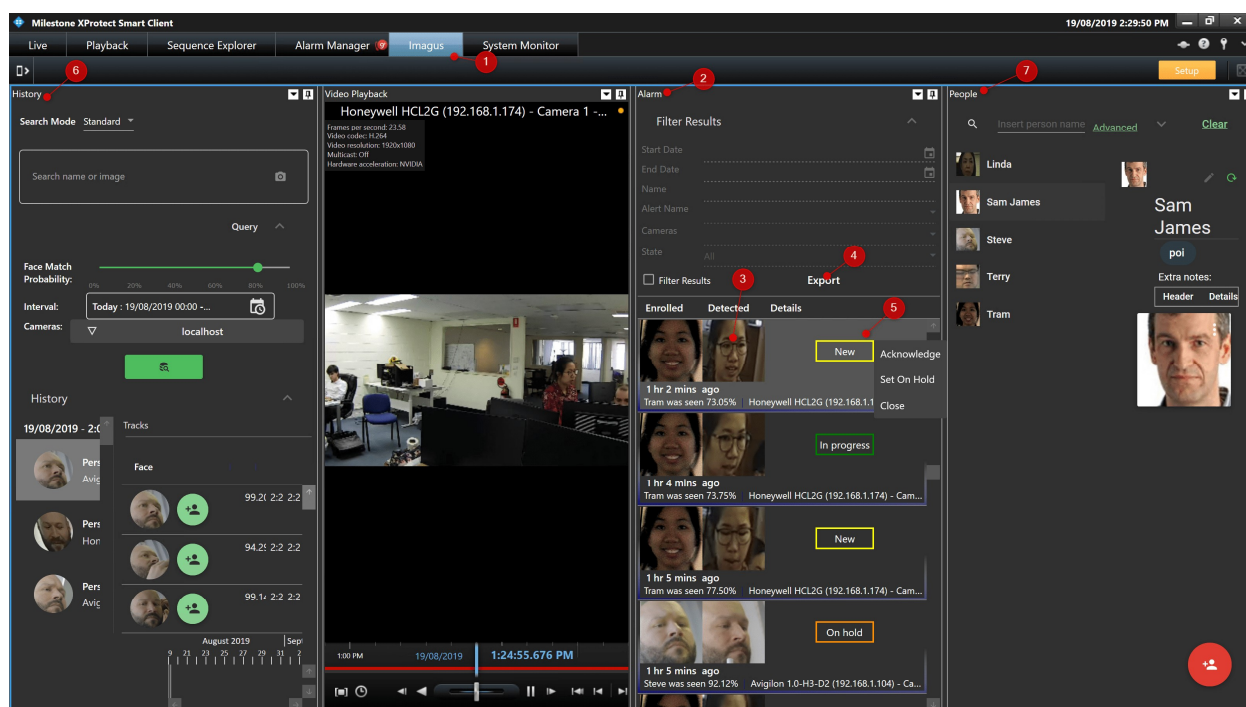


3. You can auto-resize or drag the individual sub-tab within the Imagus Tab.
4. To have a default layout, click on the 'Default Layout' button.



9 VIEW ALARMS, FACES AND PEOPLE IN MILESTONE SMART CLIENT USING IMAGUS PLUGIN

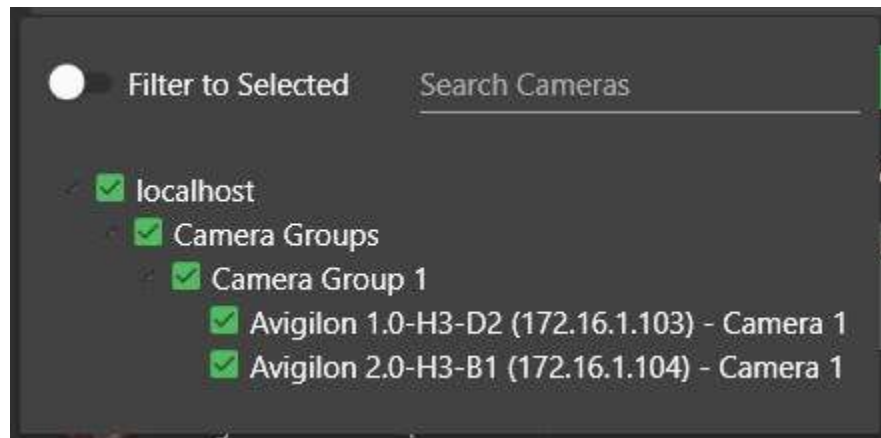
1. Run Milestone Smart Client and go to the Imagus tab.
2. To view alerts, go to the Alarms Tab, enrolled image and first detected image shown.
3. To replay the video from 5 seconds before the detection, click on the 'Face'.
4. To export the alarms, click on 'Export' button.
5. To update the alarm 'State' status, right-click on the 'New' button to select the option.
6. To view all detections, click on the History tab.
7. To view a list of people in the connected database, click on the People Tab in Milestone.



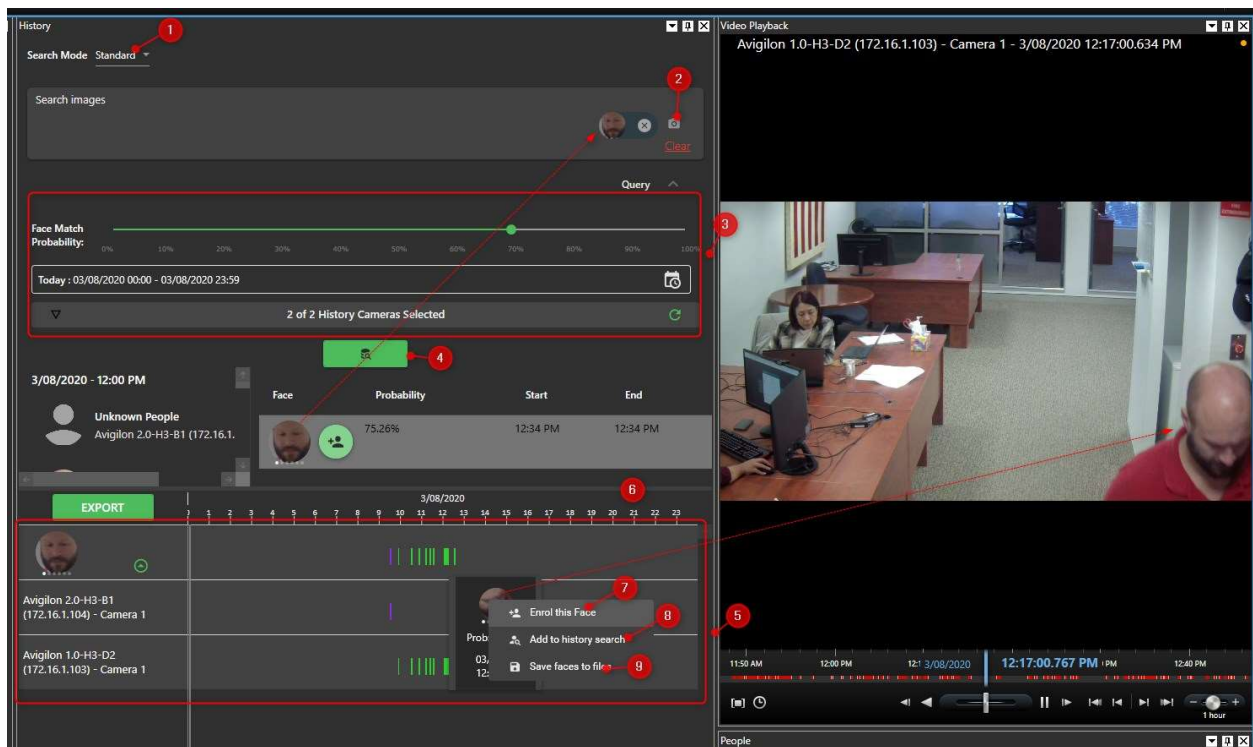
10 PERFORM STANDARD HISTORICAL SEARCH USING IMAGES WITHIN THE MILESTONE SYSTEM

In a scenario where you need to perform a historical search for anyone that has passed a facial recognition camera, you can follow the below steps:




1. Specify the Search mode as 'Standard', drag any images from History or People Tab and enter the filter criteria.
2. Click on the 'Camera' icon to select a stored image from outside of the Milestone System.
3. Specify the below search criteria:
 - Face Match Probability (0% - 100%) – The % of how similar/close the face is to the face that you search on;
 - Interval (Start and End Date) – A picklist of a date and time interval that the person is detected;
 - Camera – The camera that you're interested in.



4. Click on the 'Search' button to perform the Standard Historical Search.
5. The system will display the results as well as the timeline.
6. Click on the 'Face' to replay the video from 5 seconds before the detection.
7. Click on the 'Enrol this Face' button to enrol the face into the People database. Refer to section 11 for more details.
8. Click on the 'Add to history Search' button to add this image to search criteria.
9. Click on the 'Save faces to file' button to save faces to a file.



10. Click on the EXPORT button to export the historical data to an excel file.

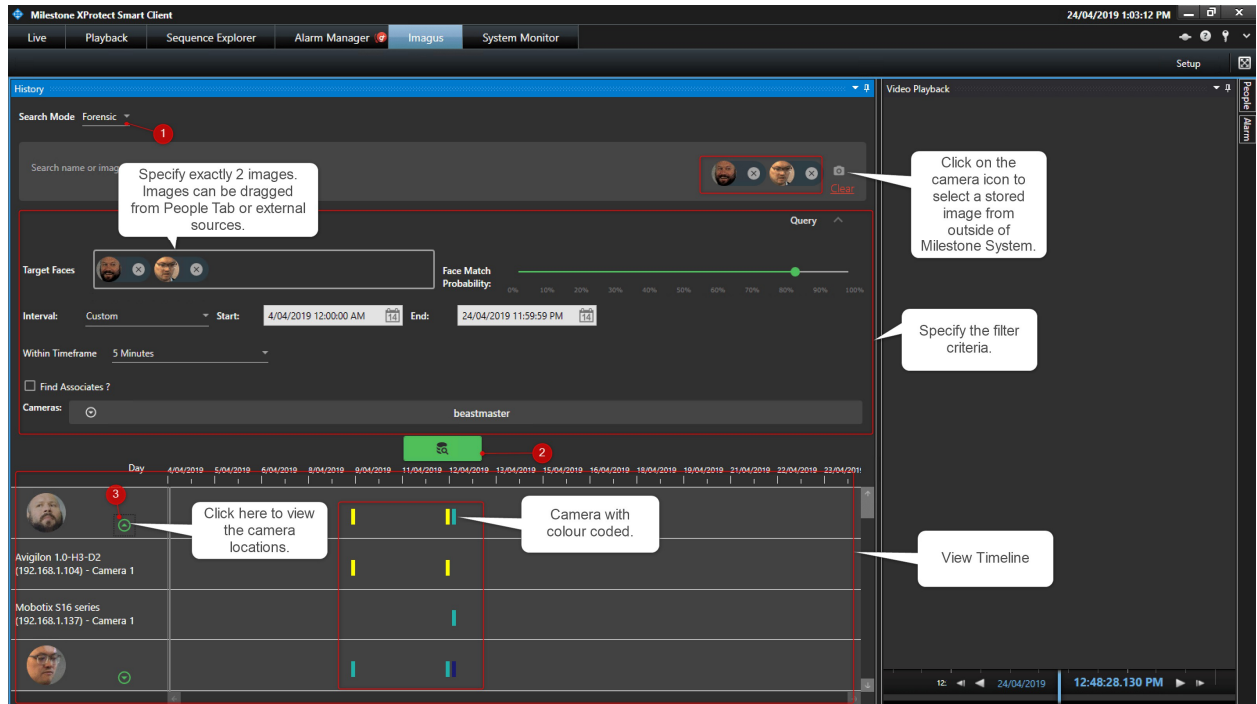
Start	End	Probability	Face	
20/10/2020 15:01	22/10/2020 8:37	99.44		
22/10/2020 8:38	22/10/2020 8:42	99.1		
22/10/2020 8:42	22/10/2020 8:43	99.51		
				

11 PERFORM FORENSIC HISTORICAL SEARCH USING IMAGES WITHIN THE MILESTONE SYSTEM

11.1 SEARCH FOR A RELATIONSHIP BETWEEN TWO SPECIFIED PERSONS

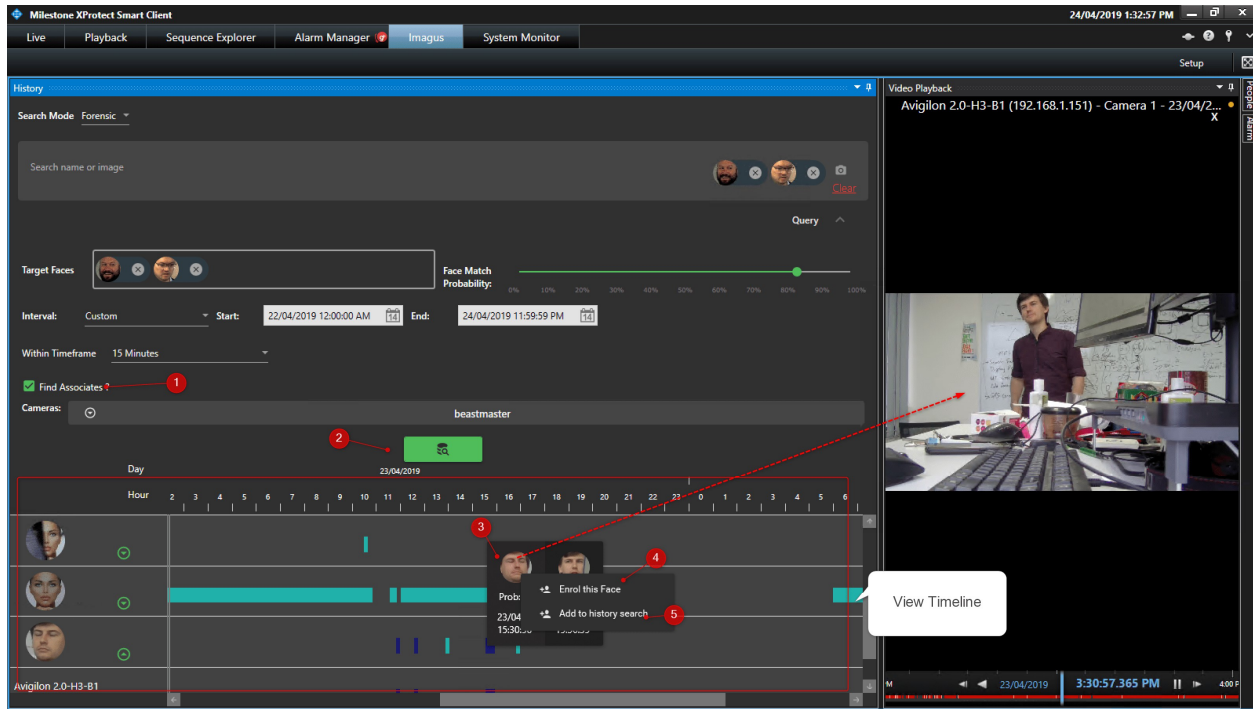
- This function allows forensic historical searching for multiple people who may be seen in the same vicinity within a set period.
- It can also show “unknown” people that may be associated with these people and create a timeline of people who may be connected.
- Below are the steps:
 1. Specify the Search mode as ‘Forensic’ and select at most two images which can be dragged from People Tab or externally stored images.
 2. Specify the search criteria below. Click on the ‘Search’ button to find all those associated with the two within the specified timeframe.
 1. Target Faces – Specify precisely two images. Images can be dragged from People Tab or external sources outside from Milestone System;
 2. Face Match Probability – The % of how similar/close the face is to the face that you search on;
 3. Interval (i.e. Date Range) – A picklist of a time interval that the person is detected;
 4. Within timeframe – The time interval that the persons are identified;
 5. Camera - The camera you’re interested in.

- Click on the green arrow icon to view the camera locations. The cameras are differentiated with a different colour.



11.2 SEARCH FOR ASSOCIATES FOR ONE OR BETWEEN TWO SPECIFIED PERSONS

- Check on the option 'Find Associates' to find the associates that you are looking for.
- Click on the 'Search' button and the system will display the results in the timeline.
- Click on the 'Face' to replay the video from 5 seconds before the detection.
- Click on the 'Enrol this Face' button to enrol the face into the People database. Refer to section 11 for more details.
- Click on the 'Add to history Search' button to add this image to search criteria.

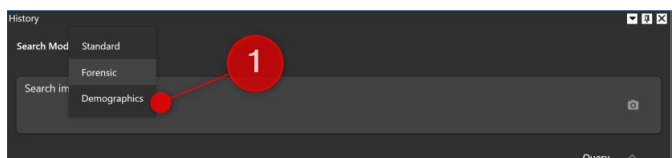


12PERFORM SEARCH BASED ON DEMOGRAPHIC INFORMATION WITHIN THE MILESTONE SYSTEM (ONLY AVAILABLE IN THE MARKETING MODULE)

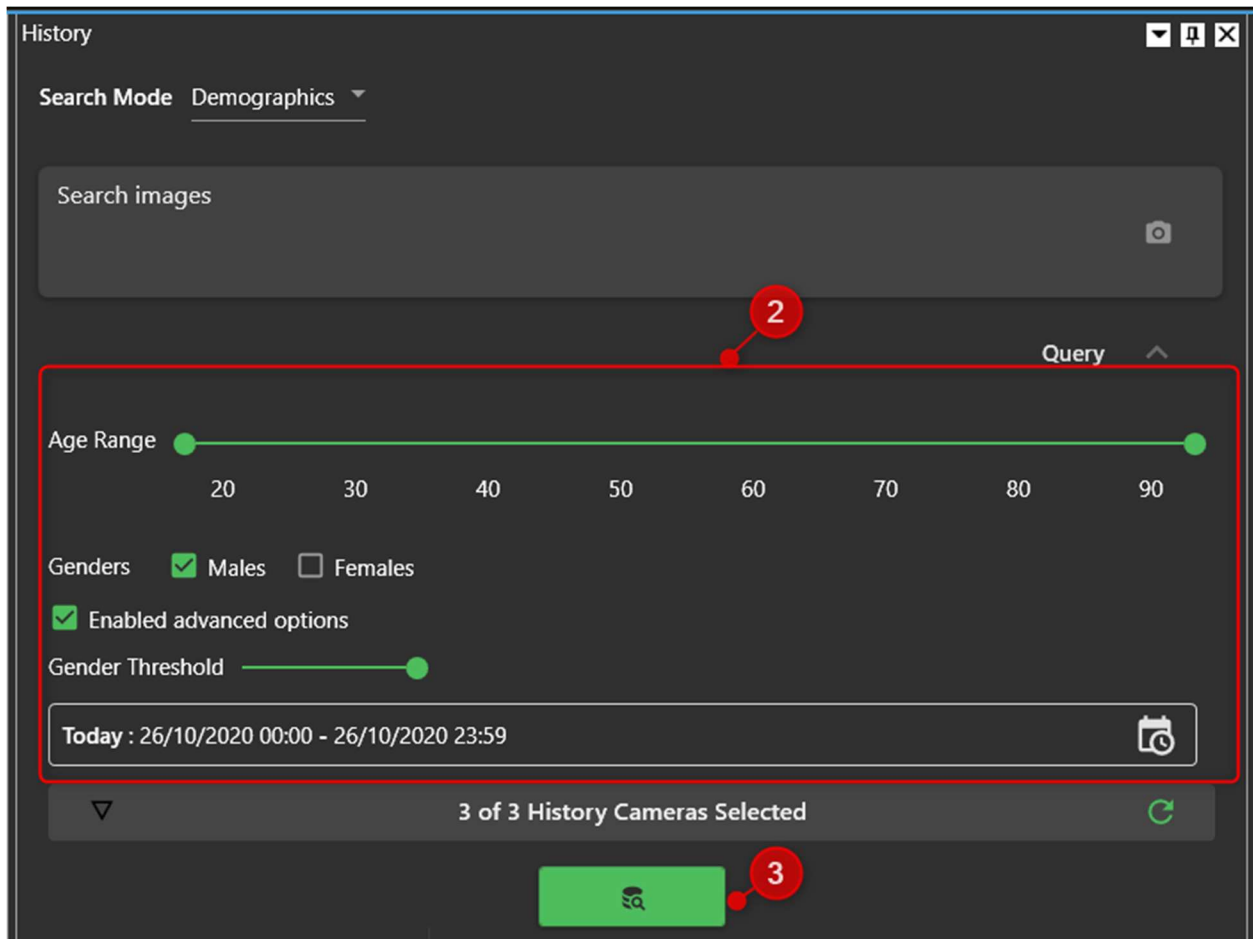
This function allows the end-users to perform a search on historical information filter on age band and gender selections.

Below are the steps:

1. Specify the Search mode as 'Demographics' under Imagus -> History Tab.



2. Specify the below search criteria:
 - Age Range – from 0 -100 years old;
 - Genders – Male or Female. If you selected both, the search results would include the Unknown as well;
 - Enabled advanced options - A checkbox to enable the option for Gender threshold level adjustment.
 - Gender Threshold - A slider option from 0.0 to 1.0. The default value is 0.2.
 - Interval (i.e. Date Range) – A picklist of a time interval that the person is detected;
 - Camera - The camera you're interested in.



3. Click on the Search button, and the system will display the results based on the search parameters specified in s/n 2.

Age Range

20

30

40

50

60

70

80

90

Genders

☒ Males
 ☒ Females

☒ Enabled advanced options

Gender Threshold

Custom : 01/10/2020 00:00 - 26/10/2020 23:59

3 of 3 History Cameras Selected

Results

1/10/2020 - 1:00 PM







Unknown People

DirectShow Virtual Video Serve

Unknown People

Avigilon 1.0-H3-D2 (172.16.1.10)

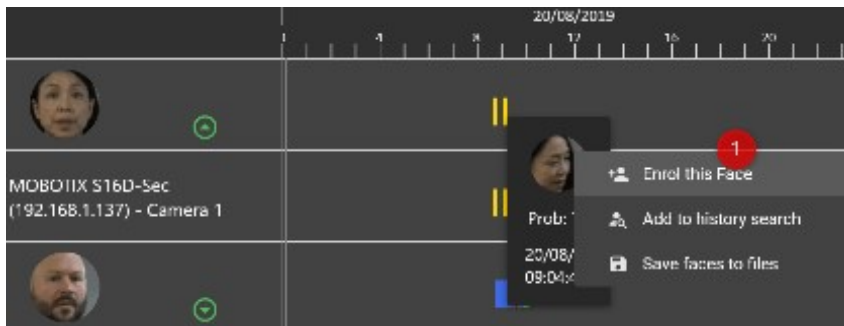
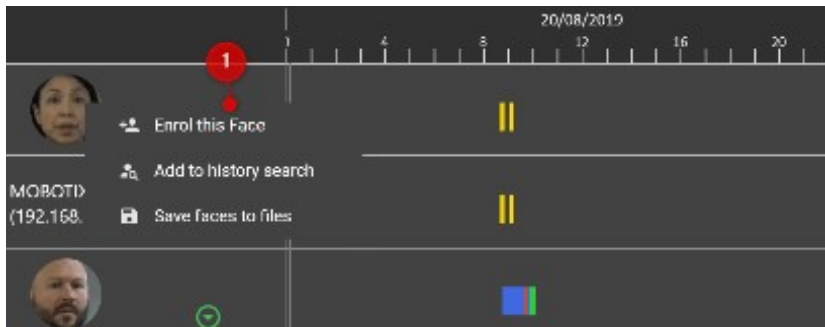
1/10/2020 - 12:00 PM

Face	Probability	Start	End
 	0.00%	1:06 PM	1:06 PM
 	0.00%	1:06 PM	1:06 PM
 	0.00%	1:06 PM	1:06 PM

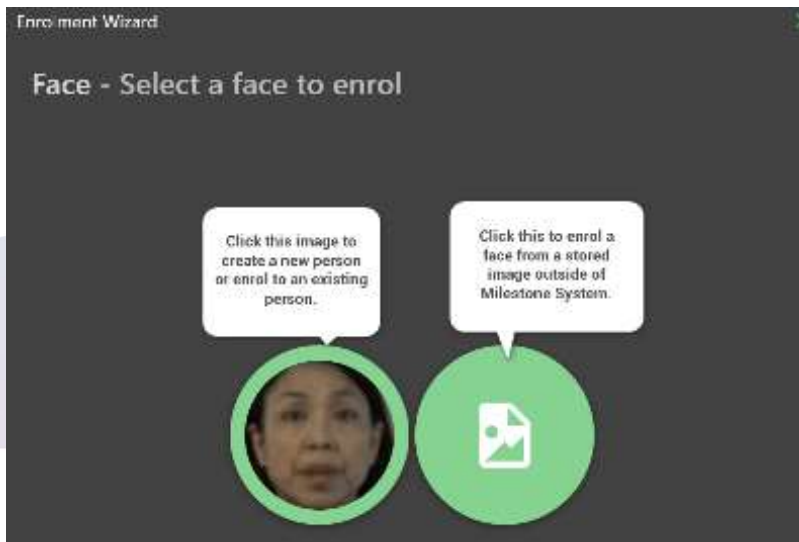
Timelines unavailable for demographics search

13 ENROL FACES FROM HISTORY TAB UNDER TIMELINE

1. Faces in the 'History' tab can be enrolled by clicking on 'Enrol This Face' button under Timeline.

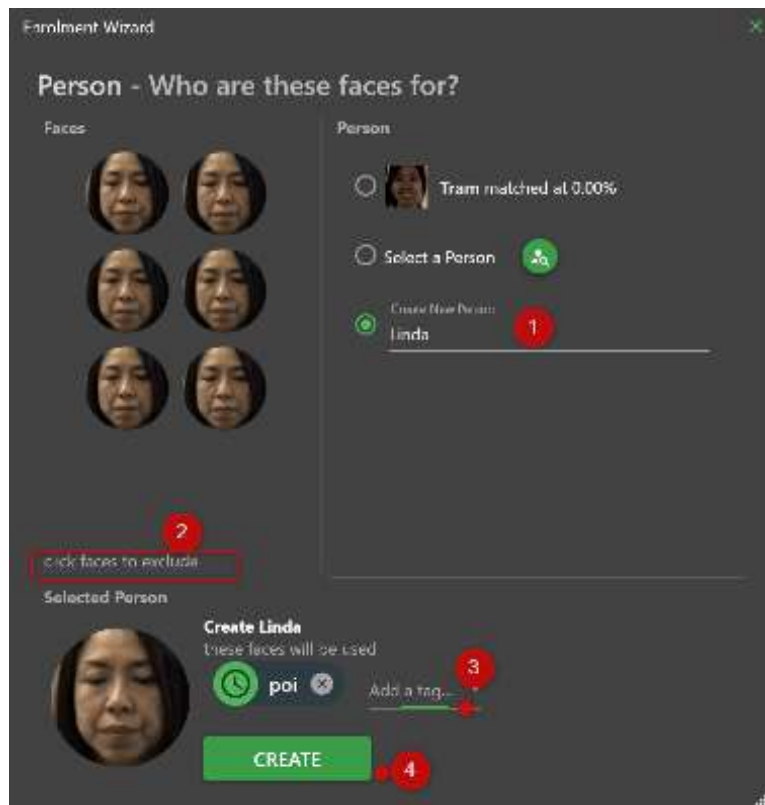


2. An Enrolment Wizard pops up which provides options to create a new enrolment or to add faces to an existing person or enrol faces from a stored image from outside of the Milestone System.

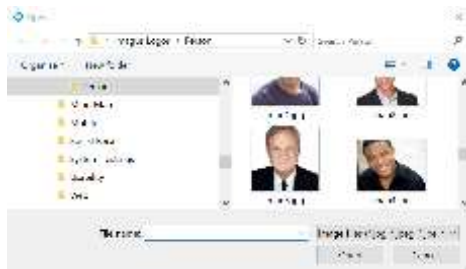


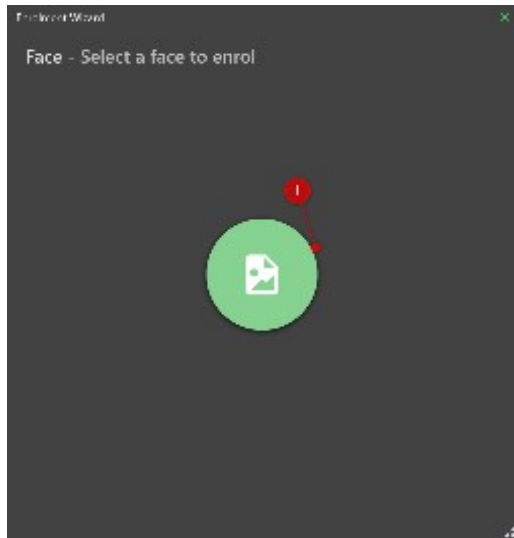
3. Enter a New Person Name.
4. To exclude faces from the enrolment, click this slide bar.
5. Add in a tag for the person.

6. Click on the 'CREATE' button to create an enrolment.



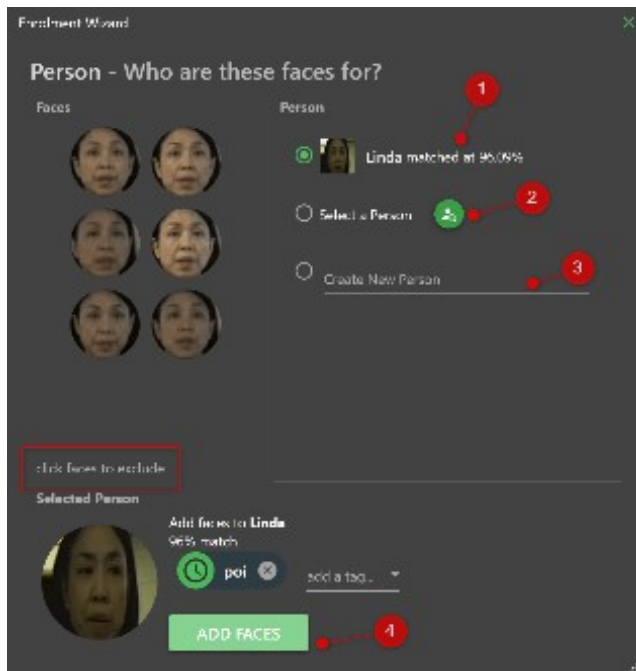
7. Click this to enrol faces from a stored image.





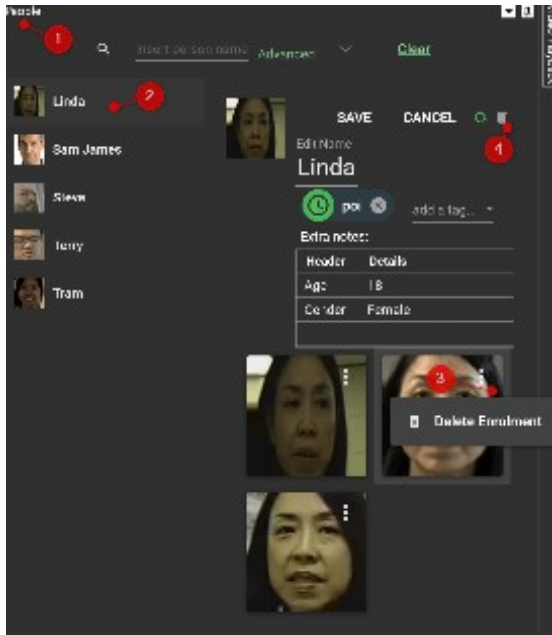
14 ADDING IMAGES TO AN EXISTING PERSON

1. Select the closest person to add an image.
2. Alternatively, select a person from a dropdown list to add an image or create a new person.
3. To exclude faces from the enrolment, click this slide bar.
4. Click 'ADD FACES' to add faces to the selected person.



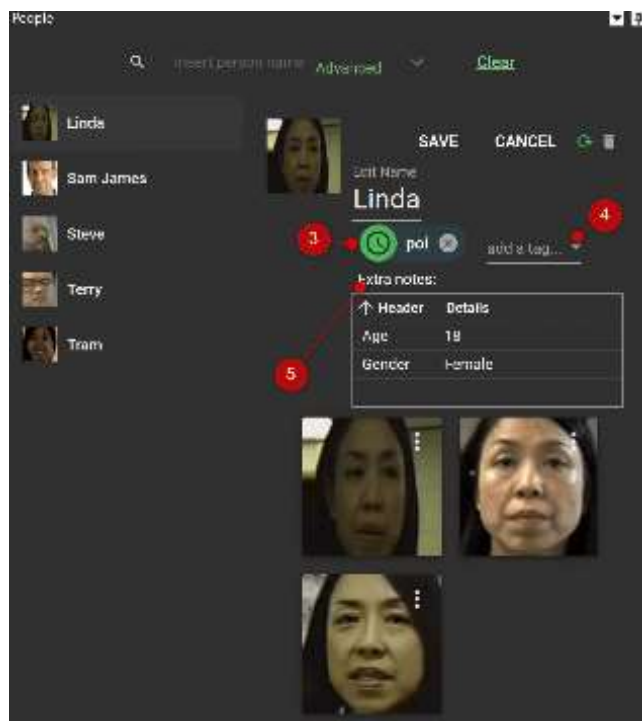
15 DELETE AN ENROLMENT FROM A PERSON UNDER PEOPLE TAB

1. Run the Milestone Smart Client and go to People Tab.
2. Select the person from the people list that you want to delete.
3. Click on the delete icon to delete the selected image to be deleted from the person.
4. Click this trash bin icon to delete the person record.



16 ADD EXTRA INFORMATION FOR A PERSON UNDER PEOPLE TAB

1. Run the Milestone Smart Client and go to People Tab.
2. Select the person from the people list and click on the edit icon.
3. Click on the clock icon to set the expiry of the selected tag.
4. Select additional new tags from the pre-defined list set up at xProtect Management Client.
5. Click on the 'Extra notes' section to add any extra information such as age, gender, remark etc.



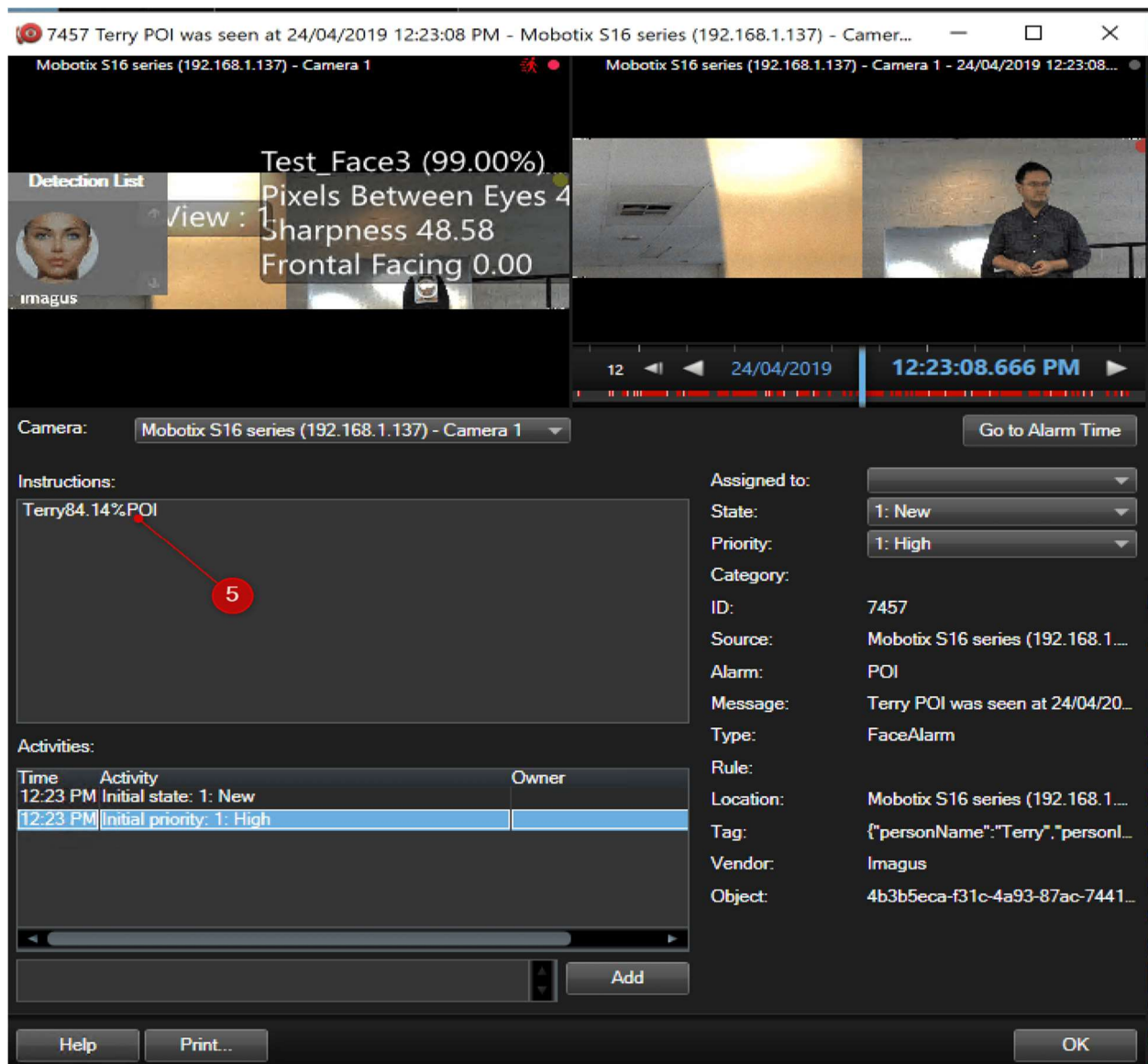
17 VIEW ALARMS AND FACES IN MILESTONE SMART CLIENT USING ALARM MANAGER

1. Run Milestone Smart Client and go to the Alarm Manager Tab.
2. Click on Alarm from the list to view the Faces and Video.
3. Under the 'Message' column, the message is displayed as "Terry POI was seen at 24/04/2019 12:23:08 PM". The format of the message is configured at Milestone Management Client having the format of **[[Person]]** POI was seen at **[[Time]]**.

The screenshot displays the Milestone XProtect Smart Client interface. The top pane shows a video preview of the selected alarm, with a red circle 1 pointing to the 'Alarm Manager' tab. The bottom pane shows a list of alarms with columns: Time, Priority Level, State Level, State Name, Message, Source, Owner, and ID. A red circle 2 points to the selected alarm row, and a red circle 3 points to the 'Message' column. The message for the selected alarm is 'Terry POI was seen at 24/04/2019 12:23:08 PM'.

Time	Priority Level	State Level	State Name	Message	Source	Owner	ID
12:24:35 PM 24/04/2019	1	1	New	POI was seen at 24/04/2019 12:24:35 PM	Mobotix S16 series (192.16		7465
12:24:35 PM 24/04/2019	1	1	New	Test_Face3 with Warning	Mobotix S16 series (192.16		7464
12:24:27 PM 24/04/2019	1	1	New	Test_Face3	Mobotix S16 series (192.16		7461
12:24:27 PM 24/04/2019	1	1	New	Test_Face3 POI was seen at 24/04/2019 12:24:27 PM	Mobotix S16 series (192.16		7463
12:24:47 PM 24/04/2019	1	1	New	Terry	Mobotix S16 series (192.16		7460
12:23:40 PM 24/04/2019	1	1	New	Yao, Ming POI was seen at 24/04/2019 12:23:40 PM	Mobotix S16 series (192.16		7459
12:23:36 PM 24/04/2019	1	1	New	Terry POI was seen at 24/04/2019 12:23:36 PM	Mobotix S16 series (192.16		7458
12:23:08 PM 24/04/2019	1	1	New	Terry POI was seen at 24/04/2019 12:23:08 PM	Mobotix S16 series (192.16		7457
11:41:54 AM 24/04/2019	1	1	New	dbaca with Warning	Avigilon 1.0-H3-D2 (192.16		7454
11:41:54 AM 24/04/2019	1	1	New	dbaca	Avigilon 1.0-H3-D2 (192.16		7455
11:35:11 AM 24/04/2019	1	1	New	flye	Avigilon 1.0-H3-D2 (192.16		7453
11:27:01 AM 24/04/2019	1	1	New	Steve	Avigilon 1.0-H3-D2 (192.16		7452
11:27:01 AM 24/04/2019	1	1	New	Steve	Avigilon 1.0-H3-D2 (192.16		7451
11:25:16 AM 24/04/2019	1	1	New	Steve	Avigilon 1.0-H3-D2 (192.16		7450
11:25:57 AM 24/04/2019	1	1	New	dbaca with Warning	Avigilon 1.0-H3-D2 (192.16		7448

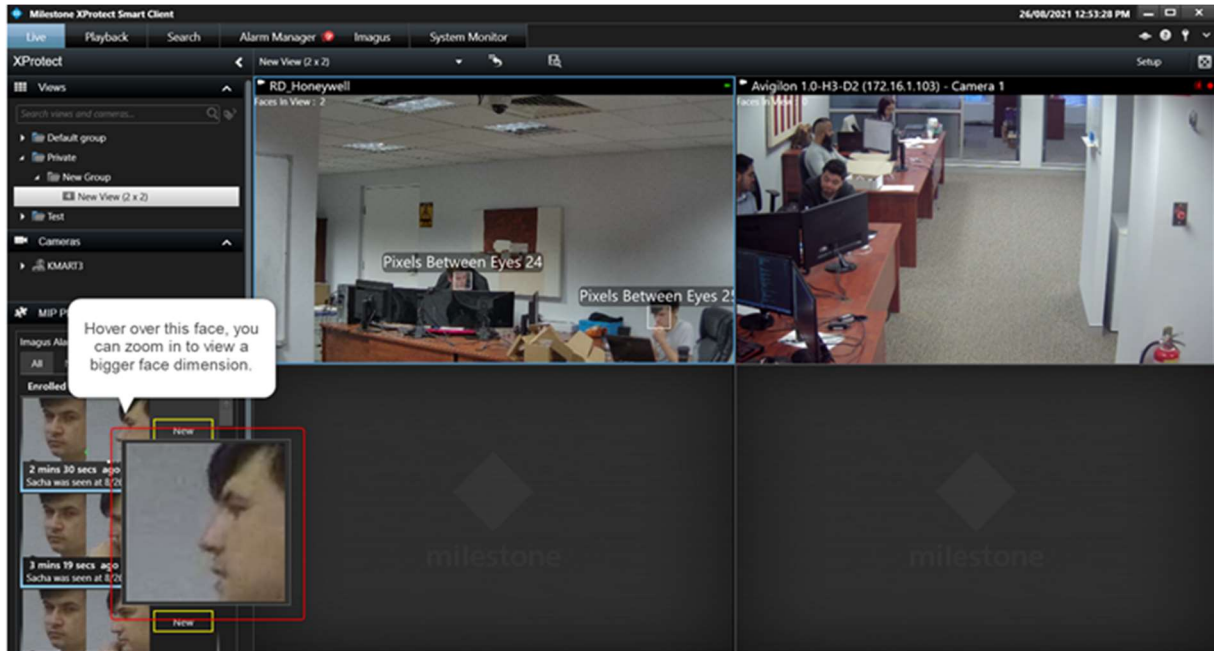
4. Double-clicked an alarm from the alarm list, the system will display the below pop-up message box.



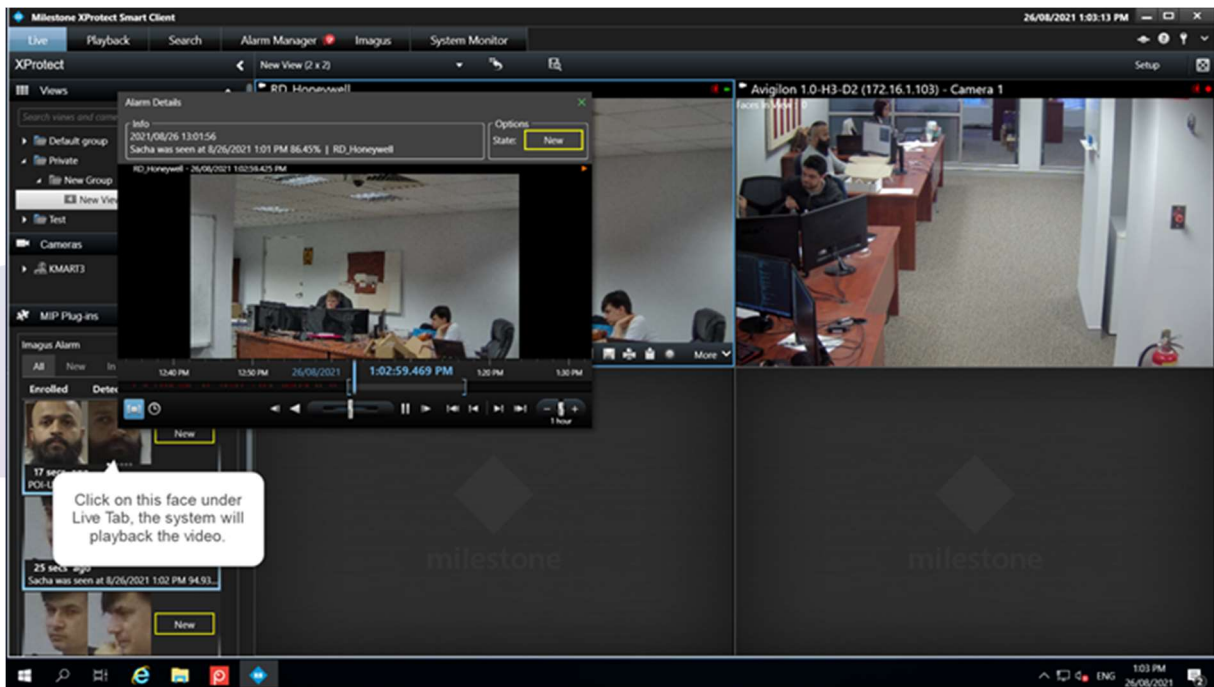
- The message displayed in the instruction box is configured at Milestone Management Client having the format of **[[Person]][[Probability]][[AlertName]]** which has the value of 'Terry84.14%POI'.

18ZOOM FEATURE WHEN YOU HOVER OVER THE FACE (NEW)

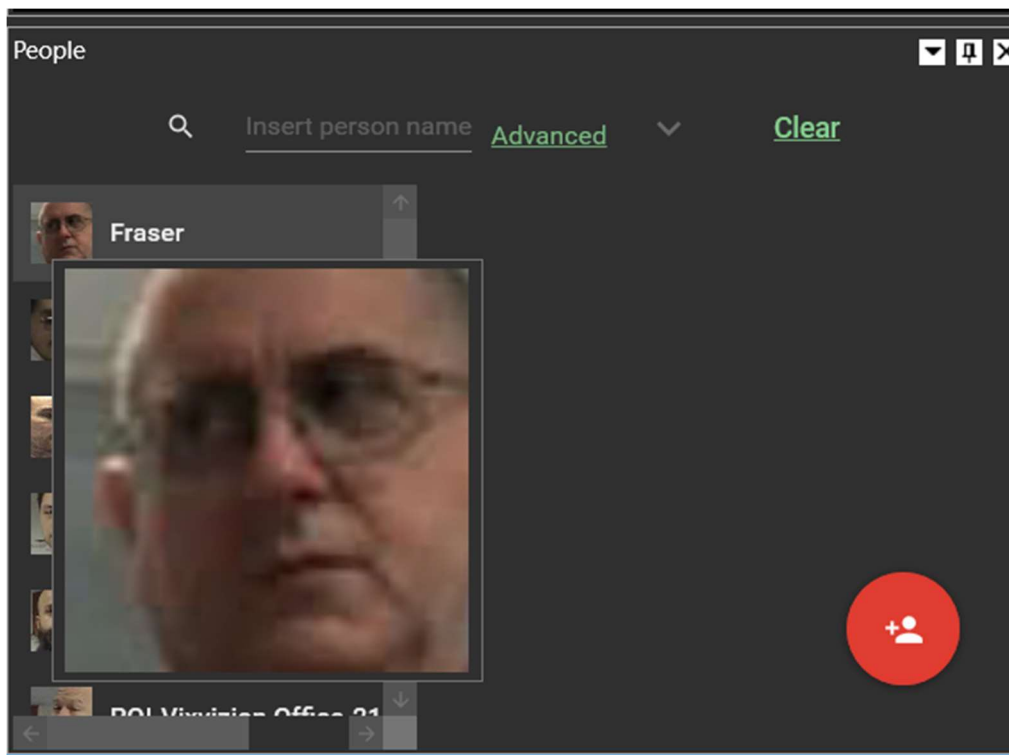
When hovering the face in the Imagus, Live and Playback tabs, the user can zoom in to view the face in a bigger dimension as shown in the below diagrams.



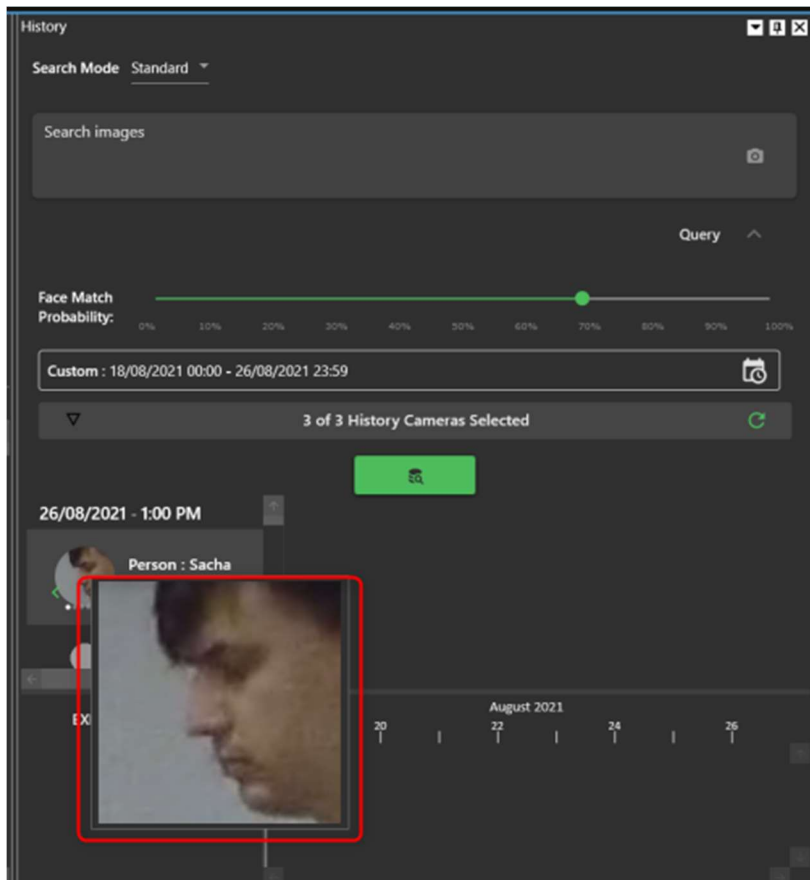
Live Tab: Hover over the face at the right-hand side to Zoom in to view the face in a bigger dimension.



Playback Tab: Click on the face under Live Tab Alarm list to playback video.



Imagus Tab: Zoom in to view face in People list

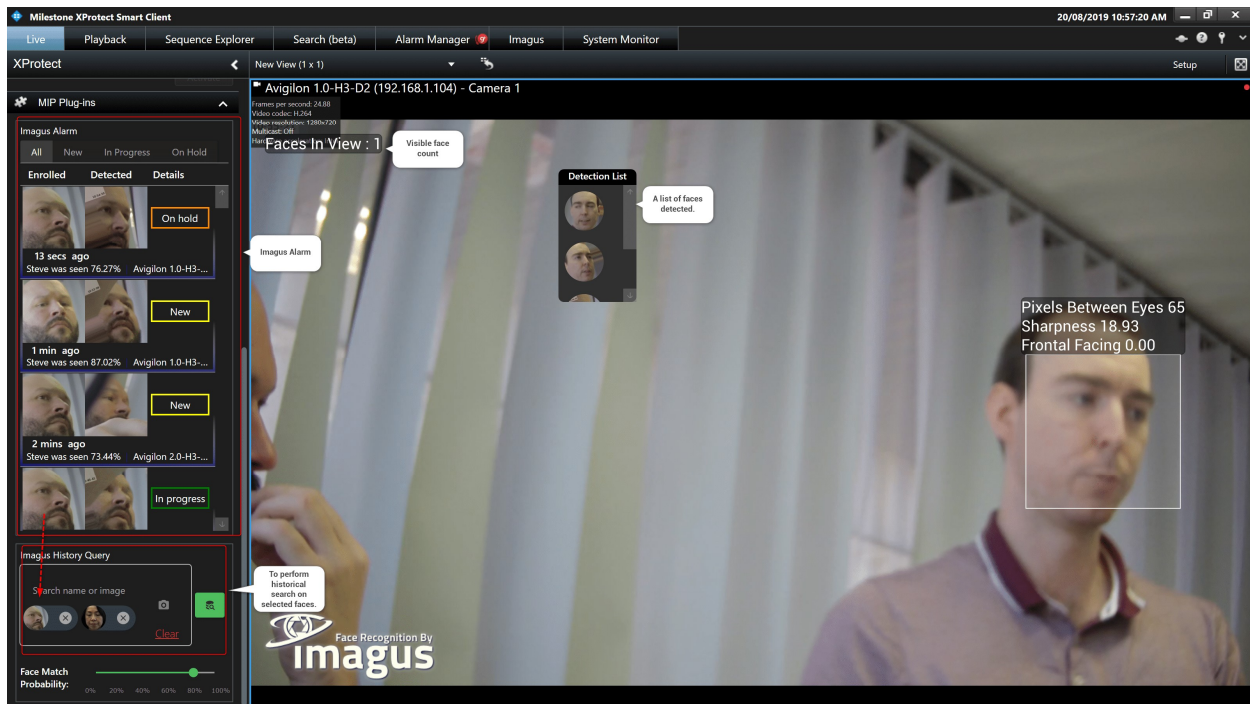


Imagus Tab: Zoom in to view face in History list

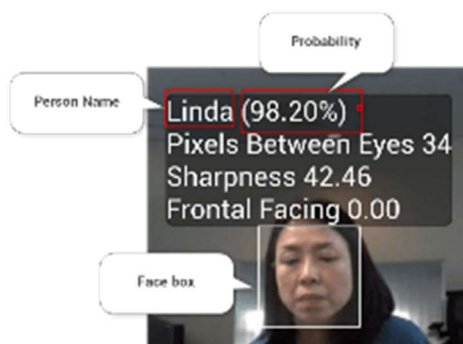
19 DISPLAY LIVE FACES IN MILESTONE USING IMAGUS

19.1 VIEWING FACES IN 'LIVE TAB' AND REPLAY VIDEO CLIPS IN 'PLAYBACK' TAB

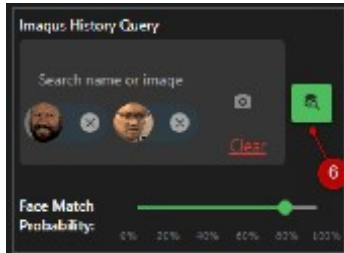
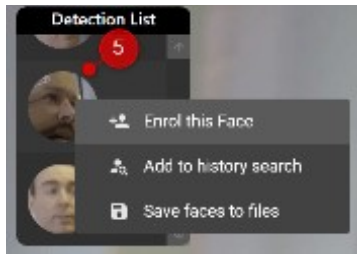
1. Run Milestone Smart Client.
2. Navigate to the 'Live' tab.
3. Drag in a Camera (which has been added to perform face recognition).



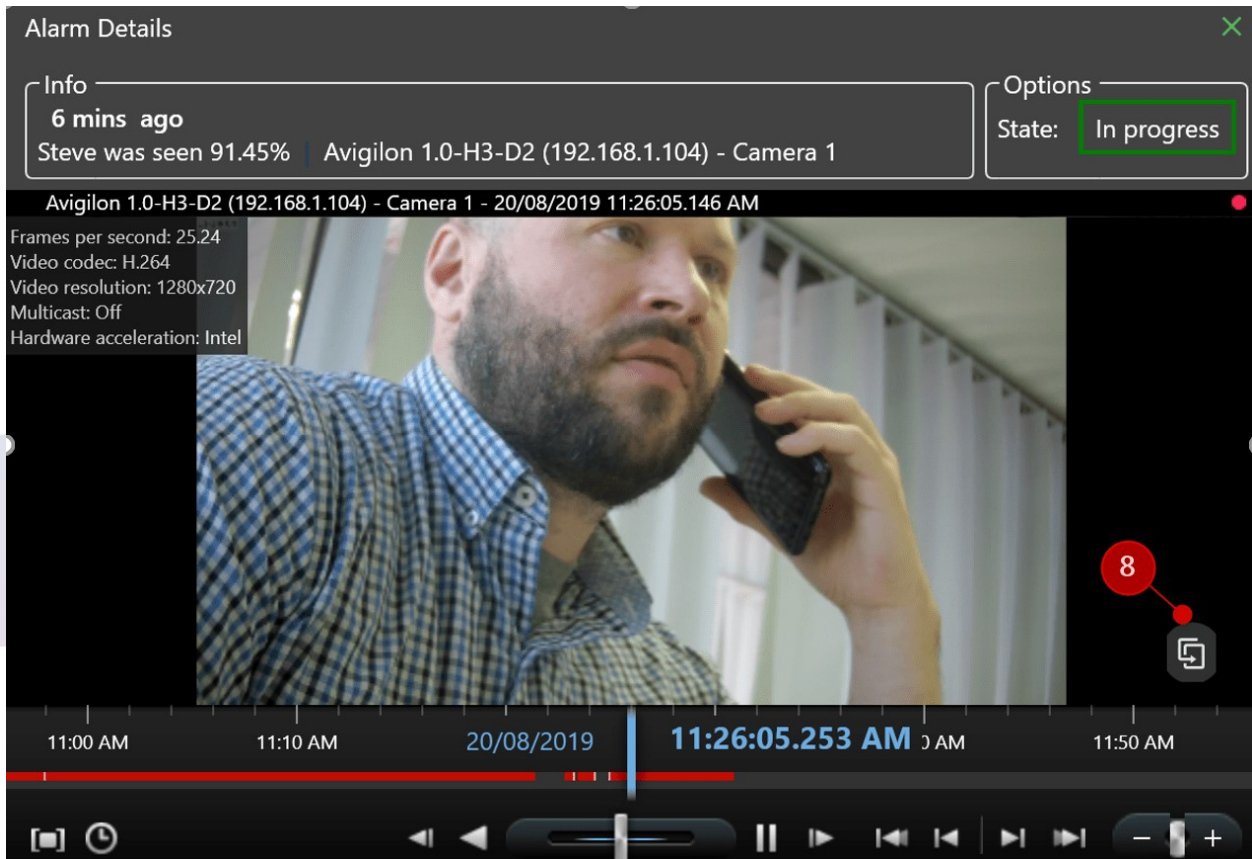
4. You can Observe boxes on faces, as shown above. Please note that if the person as above does not have a close match in the face database, the system will not display the person name and probability %. Below is a person with a close match to a person, Linda, with a probability of 98.20%.



5. Right-clicked on any face in the detection list, you will have the options to either enrol the face, add this face to the search history query or save faces to file.



6. Click on the 'Search button' under 'Imagus History Query' to perform the historical search on the faces selected. The system navigates to the 'Playback' tab to replay the video from 5 seconds before the detection.
7. Right-click on the detected faces in the 'Imagus Alarm' section to view alarm and playback video at Live Tab.

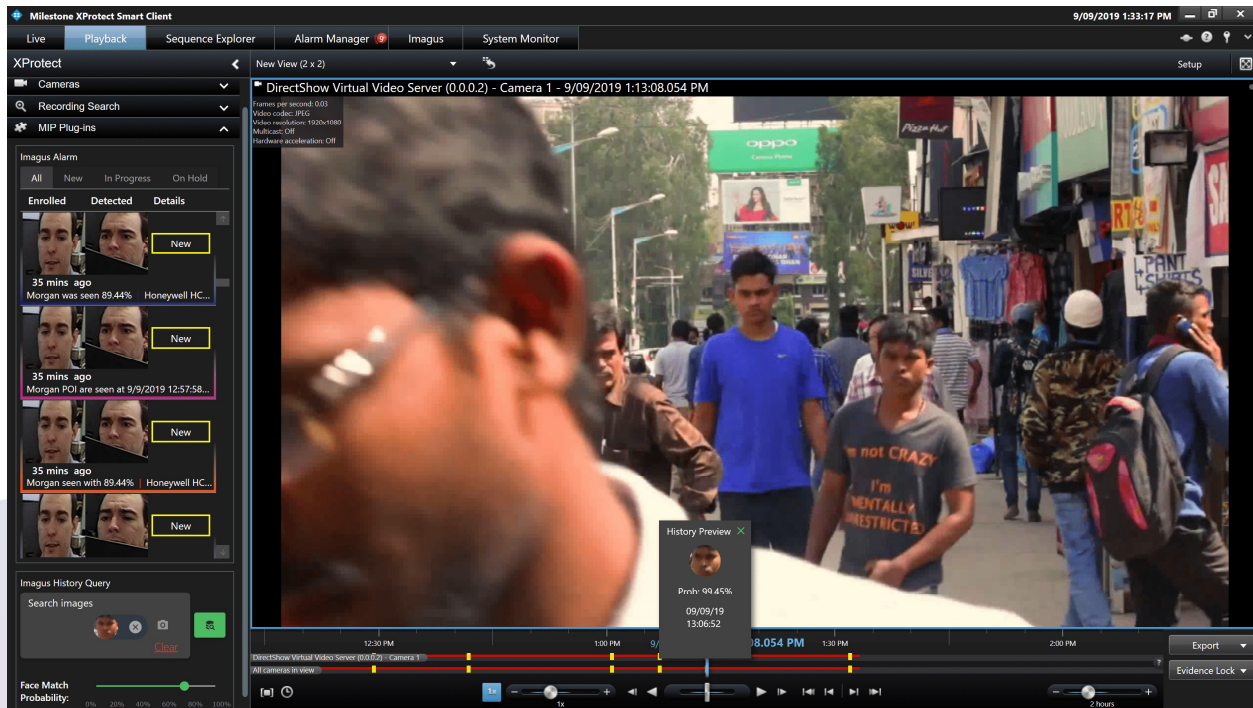
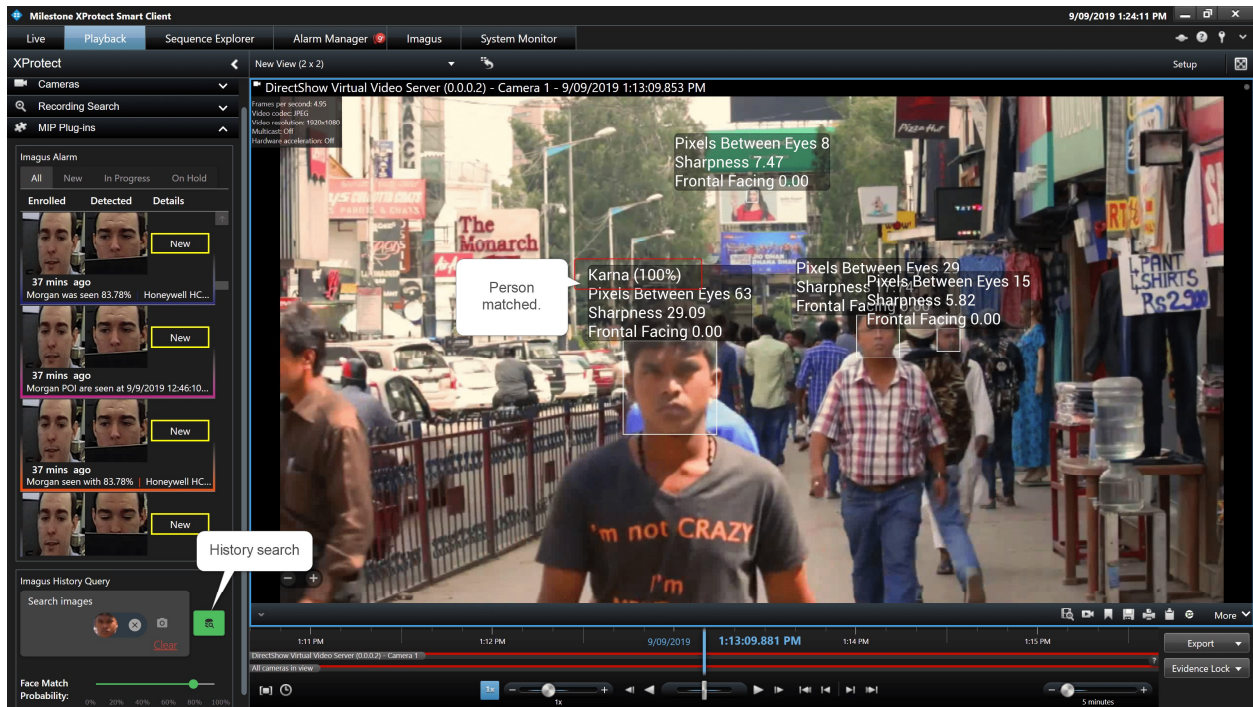


- To export the video clips, click on this Open button to access the playback in a new Live and Playback window.

19.2 DETECT FACES AND SEARCH FOR THEM IN THE 'PLAYBACK' TAB

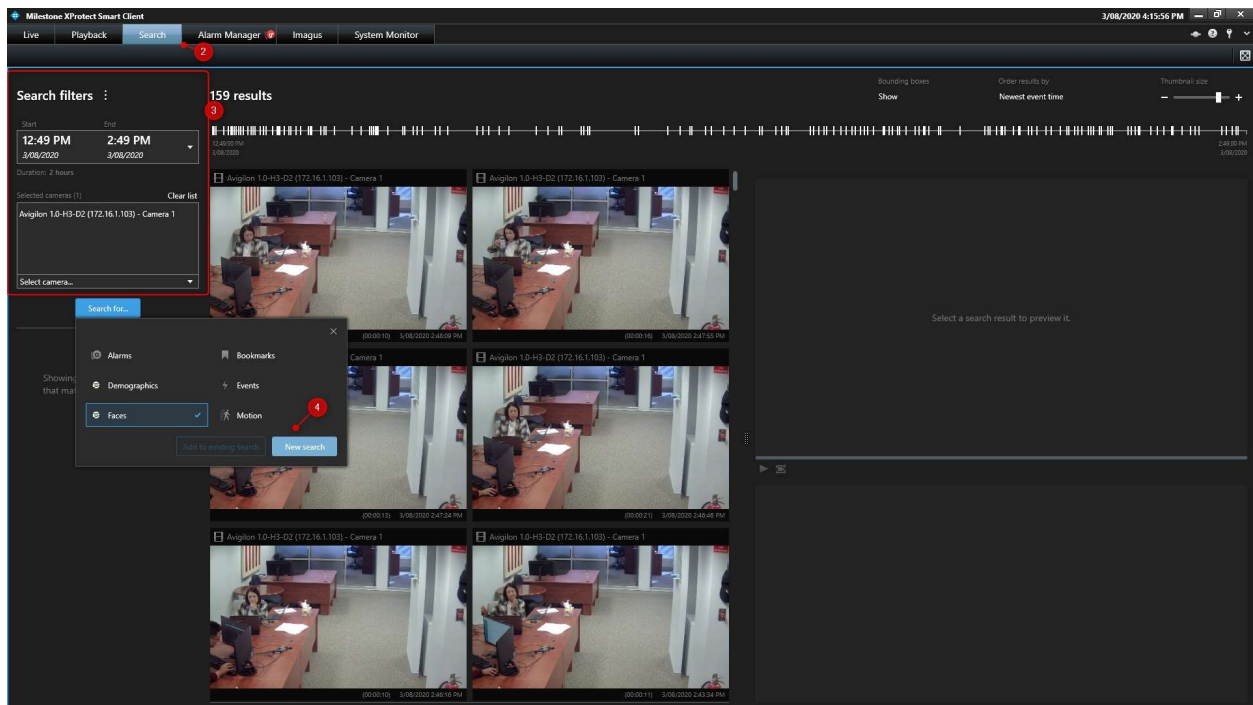
- Run Milestone Smart Client.
- Navigate to the 'Playback' tab.
- Drag in a Camera (which has been added to perform face recognition).
- Click on the 'eye' icon to detect faces from the selected playback video.
- Right-click on the detected faces to enrol, search it in history or save the faces to a file.



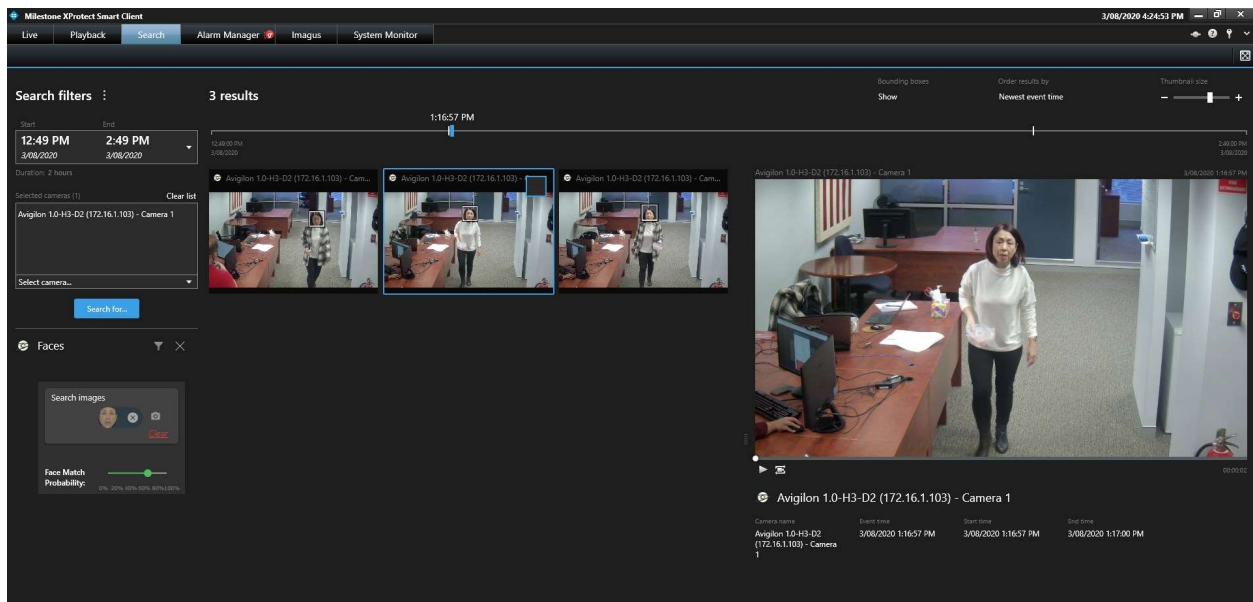


19.3 DETECT FACES AND SEARCH FOR THEM IN THE 'SEARCH' TAB

1. Run Milestone Smart Client.

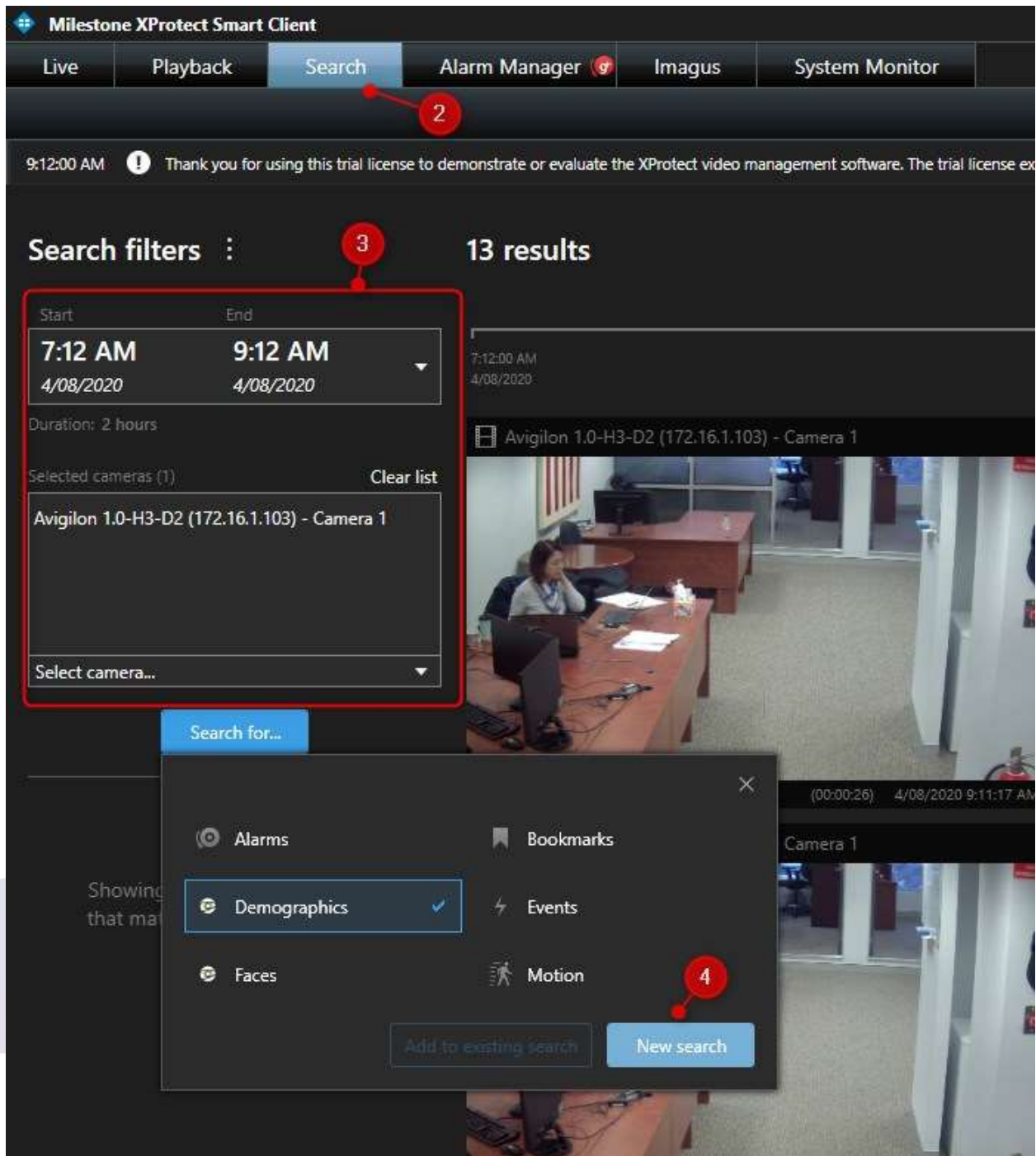


2. Navigate to the 'Search' tab.
3. Enter the below Search filters and click on the 'Search for..' button.
 - Start and End Date/time
 - Select Cameras - Select a list of cameras set up for facial recognition
4. Select the 'Faces' option, and click on the 'New Search' button. Below show the search results.



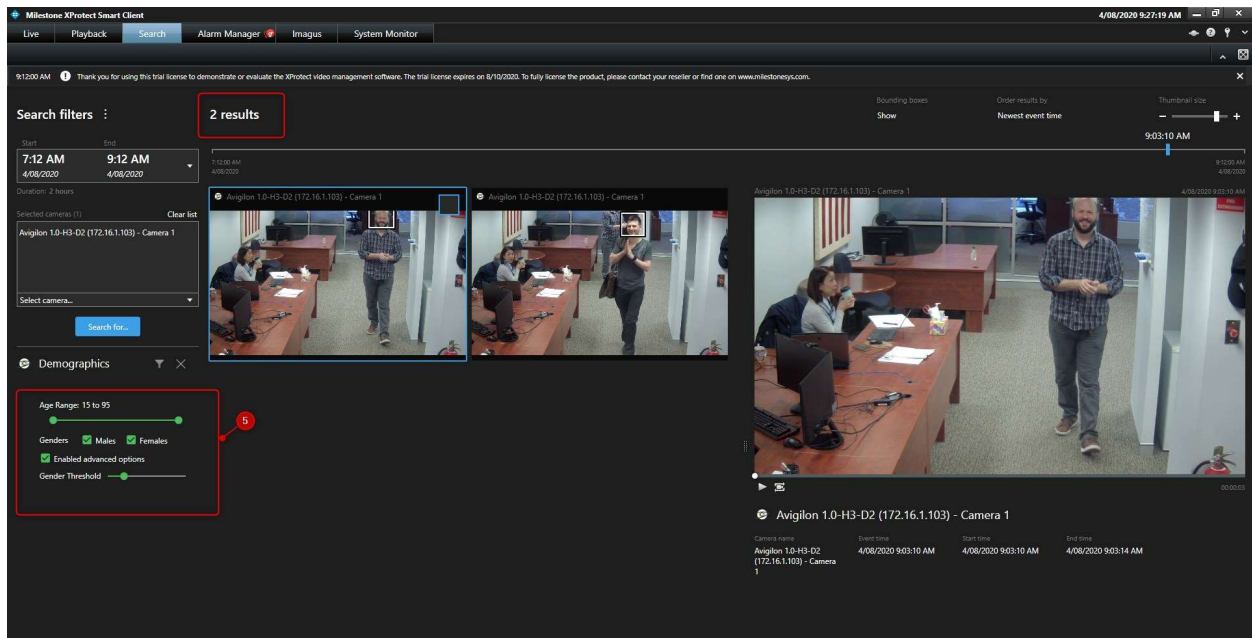
19.4 DETECT FACES AND SEARCH FOR THEM IN THE 'SEARCH' TAB USING DEMOGRAPHIC INFORMATION (ONLY AVAILABLE IN THE MARKETING MODULE)

1. Run Milestone Smart Client.



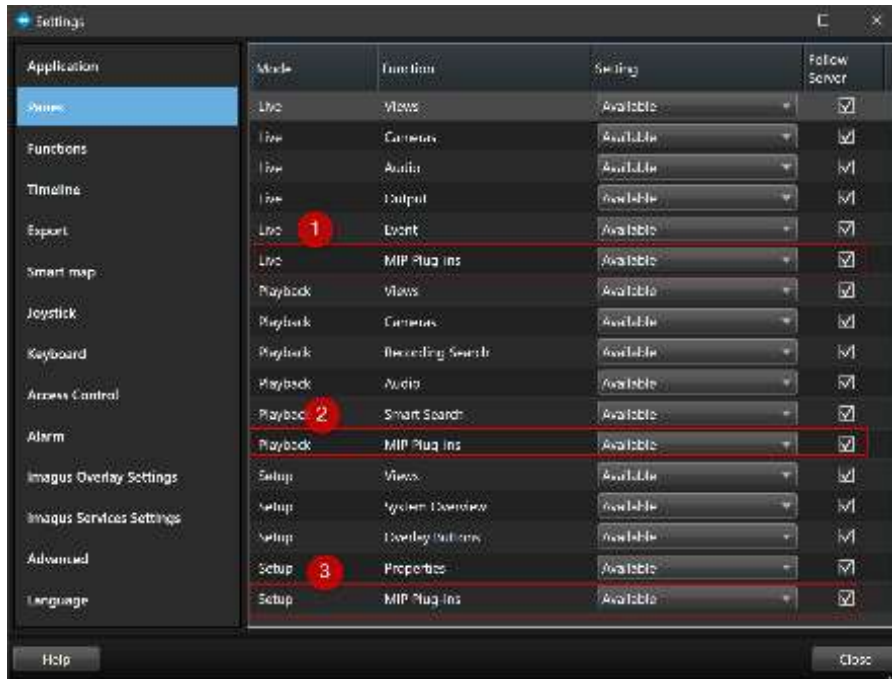
2. Navigate to the 'Search' tab.
3. Enter the below Search filters and click on the 'Search for..' button.

- Start and End Date/time
 - Select Cameras - Select a list of cameras set up for facial recognition
4. Select the 'Demographic' option and click on the 'New Search' button.
 5. Specify the below filter criteria, and the results will be displayed as below:
 - Age Range 15 to 95
 - Genders i.e. Males or/and Females
 - Enabled Advance options - Checked to allow adjustment of gender threshold
 - Gender Threadhold (0-1.00)



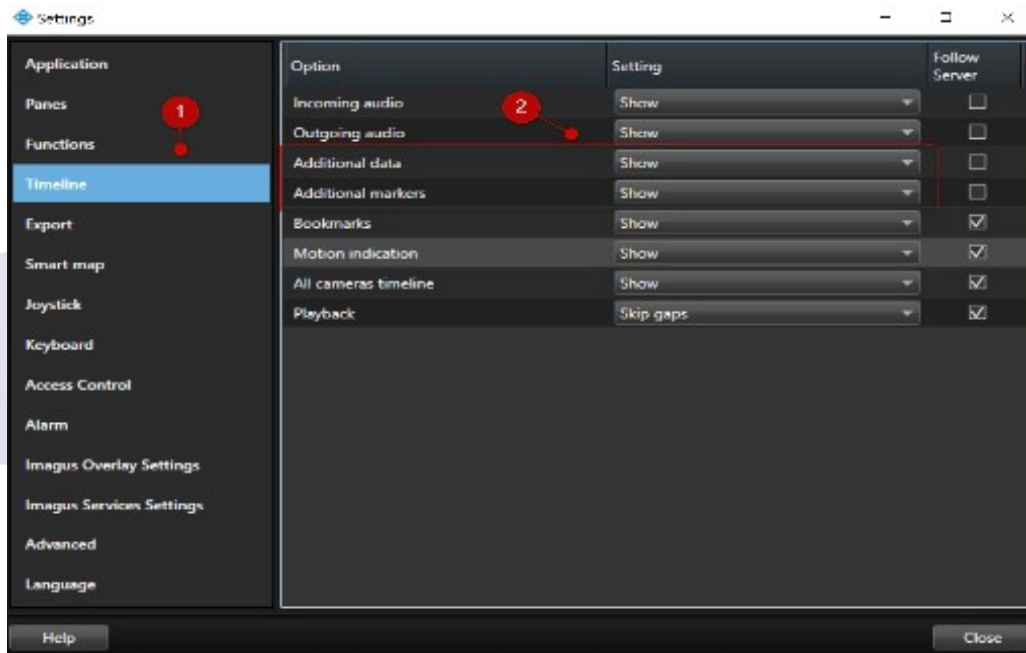
19.5 DISPLAYING OF MIP PLUGIN IN THE SETUP BUTTON, 'LIVE' AND PLAYBACK TAB

1. Run Milestone Smart Client and navigate to the 'Settings' Tab and click on Panes.
2. Enter the below information:
 - Live -> MIP Plugin - Available/Unavailable
 - Playback -> MIP Plugin - Available/Unavailable
 - Setup -> MIP Plugin - Available/Unavailable

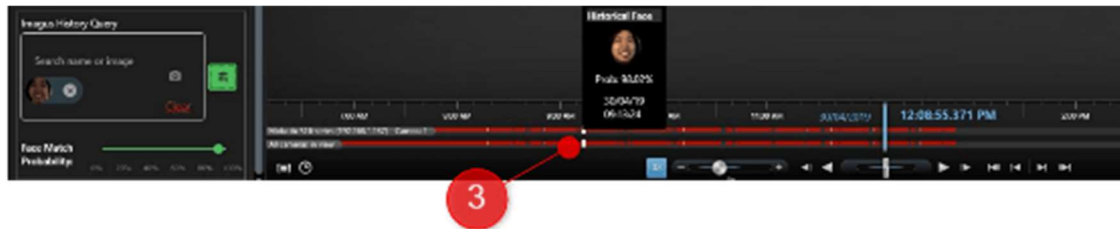


19.6 HISTORICAL TIMELINE DISPLAY IN 'PLAYBACK' TAB

1. Run Milestone Smart Client and navigate to the 'Settings' Tab and click on Timeline.
2. Enter the below information:
 - Additional data - Show/Hide
 - Additional markers - Show/Hide



3. If the above two fields are set to 'Show', you will be able to click on the timeline to playback the video.



19.7 LABEL DEFINITIONS

Visible Face Count

- The number of faces in view.

Pixels Between Eyes

- The distance between the eyes on a face measured in a number of pixels on the camera.

Probability (%)

- A measure in the percentage of how likely a face belongs to a person. The default value is set at 80%

Faces

- The face boxes with eye locations.

Branding

- Display of Imagus Face Recognition Logo.

19.8 LABEL CONFIGURATION

- All information displayed over faces inside the Smart Client is configurable.
- To change settings:
 1. Click Settings under the Overflow Menu in the top right corner of Smart Client
 2. In the Settings Dialog, select "Imagus Overlay Settings" from the left-hand tabs
 3. Toggle the checkbox to enable or disable the User Interface (UI) Element.

