IVSEC

INTELLIGENT VIDEO SECURITY

https://ivsecurity.com.au/support/analytics-ai-ivs/

FACIAL RECOGNITION FEATURE

ABOUT THIS DOCUMENT

Some of the iVSEC camera range have the Facial Recognition feature using AI and can log detection on the recorded timeline, send push notifications to a user, or email the results if required. The AI can also trigger a relay on cameras or NVRs that include alarm relay outputs if the device that have these included and are setup to trigger when a face is detected.
All instruction contained within this document are using the Web Interface, though similar steps are performed using the NVR Interface.

GETTING STARTED

To adjust these settings, you will have the following:
- LCD monitor and USB mouse connected to iVSEC recorder.
- Laptop (if you are logging into recorder using a web browser).
- iVSEC X mobile app installed and your iVSEC recorder added to the app.
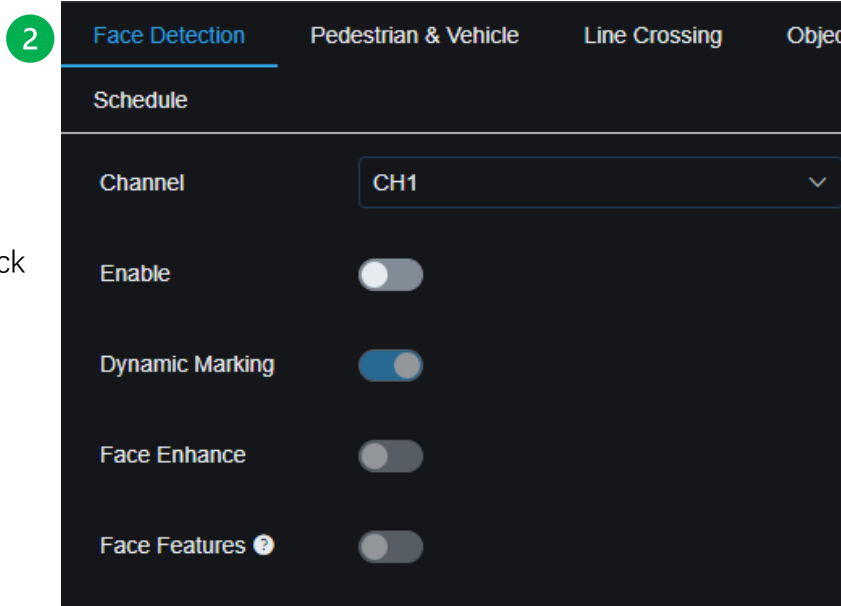
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FACE DETECTION – SETUP

1 Open the **Remote Settings** of the Camera and navigate to the **AI** section.
Select the **Setup** option.

AI

Setup | Recognition |
Alarm | Statistics
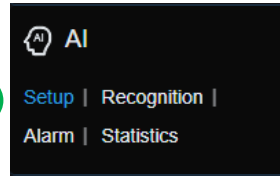
**2** Select the **Face Detection** tab and toggle the **Enable** feature to on.

Scroll down to the bottom and click the **Save** option.

If this does not work, you will need to check that another **AI** feature is not already enabled, as some cameras only support one **AI** feature at a time.

| Face Detection | Pedestrian & Vehicle | Line Crossing | Object |

Schedule

Channel	CH1
Enable	
Dynamic Marking	
Face Enhance	
Face Features ❓	

There are extra features that can be adjusted, such as **Face Features** (for mask/glasses detection), **Min/Max Pixel** (so that people in the far distance don't register), and **Detection Area** (so that the whole screen or a specific region can be defined).
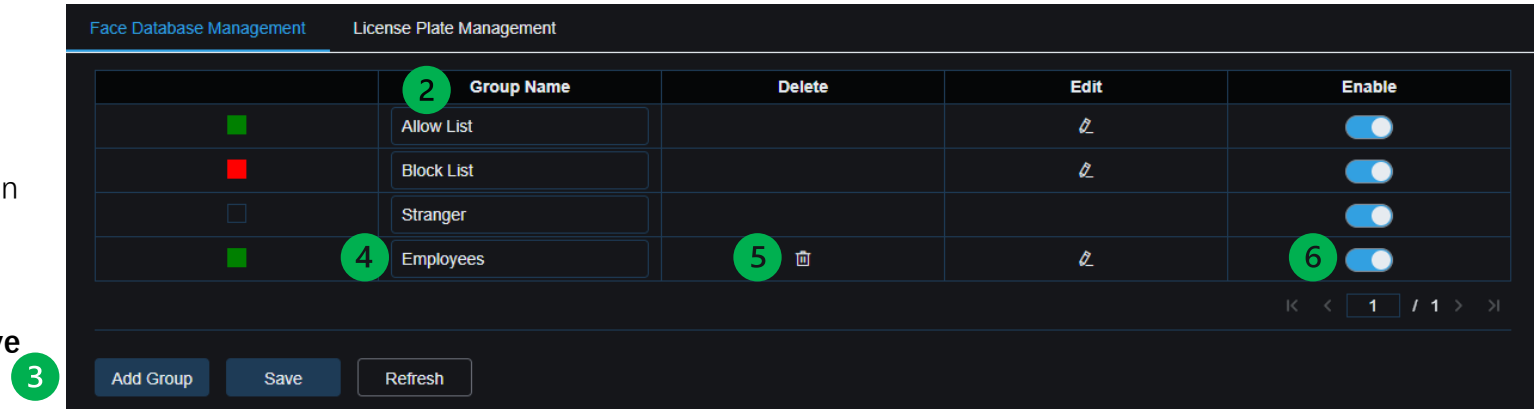
FACE DETECTION – RECOGNITION – GROUP MANAGEMENT

1 Navigate to the **AI** section.
Select the **Recognition** option.
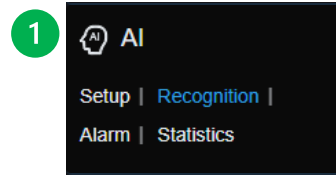
2 Here you have three predefined **Groups :**
Allow List, **Block List**, and **Stranger**.
These can not be deleted, only disabled.

3 If you require extra **Groups**, simply click on
the **Add Group** button.

4 You can change the **Group Name** by
entering a new name and clicking the **Save**
button.

5 To delete a **Group** and all the data along
with it, click the **Trash Bin** icon and select
the **OK** option when presented.

6 You will need to ensure a **Group** is **Enabled**
otherwise you will receive no notifications
from this group.

1 AI

Setup | Recognition |
Alarm | Statistics

Face Database Management   License Plate Management

	Group Name	Delete	Edit	Enable
■	Allow List		✎	🔵
■	Block List		✎	🔵
☐	Stranger			🔵
■	Employees	🗑	✎	🔵

|◁ ◁ 1 / 1 ▷ ▷|

Add Group   Save   Refresh

FACE DETECTION – RECOGNITION – ENROLMENT

1 Select the **Edit** pencil icon to enroll a person into the Facial Detection **Group**.

2 Here you can either add a new face by using the **Import** feature or delete an existing face by using the **Delete** feature.

FACE DETECTION – RECOGNITION – ENROLMENT – FROM EXISTING FOOTAGE

1 Selecting the **Import** option will result in a popup appearing with three options : **Capture Image** (from existing footage), **Local Image** (uploaded from your local computer), **Cancel** (to go back to the previous screen).
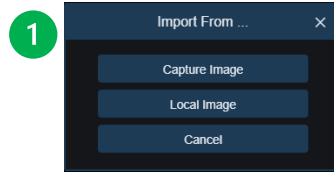
We will be uploading from the **Capture Image** option.

2 Enter in the **Start Time** and **End Time** that you know the person you are wanting to enroll has passed by the camera.

Click **Search** and all faces that were detected during this period will turn up.

Click on all the faces you wish to enroll; it is recommended that at least two different angles are uploaded for the best results.

3 Click **OK** when you have selected all the faces you wish to use.
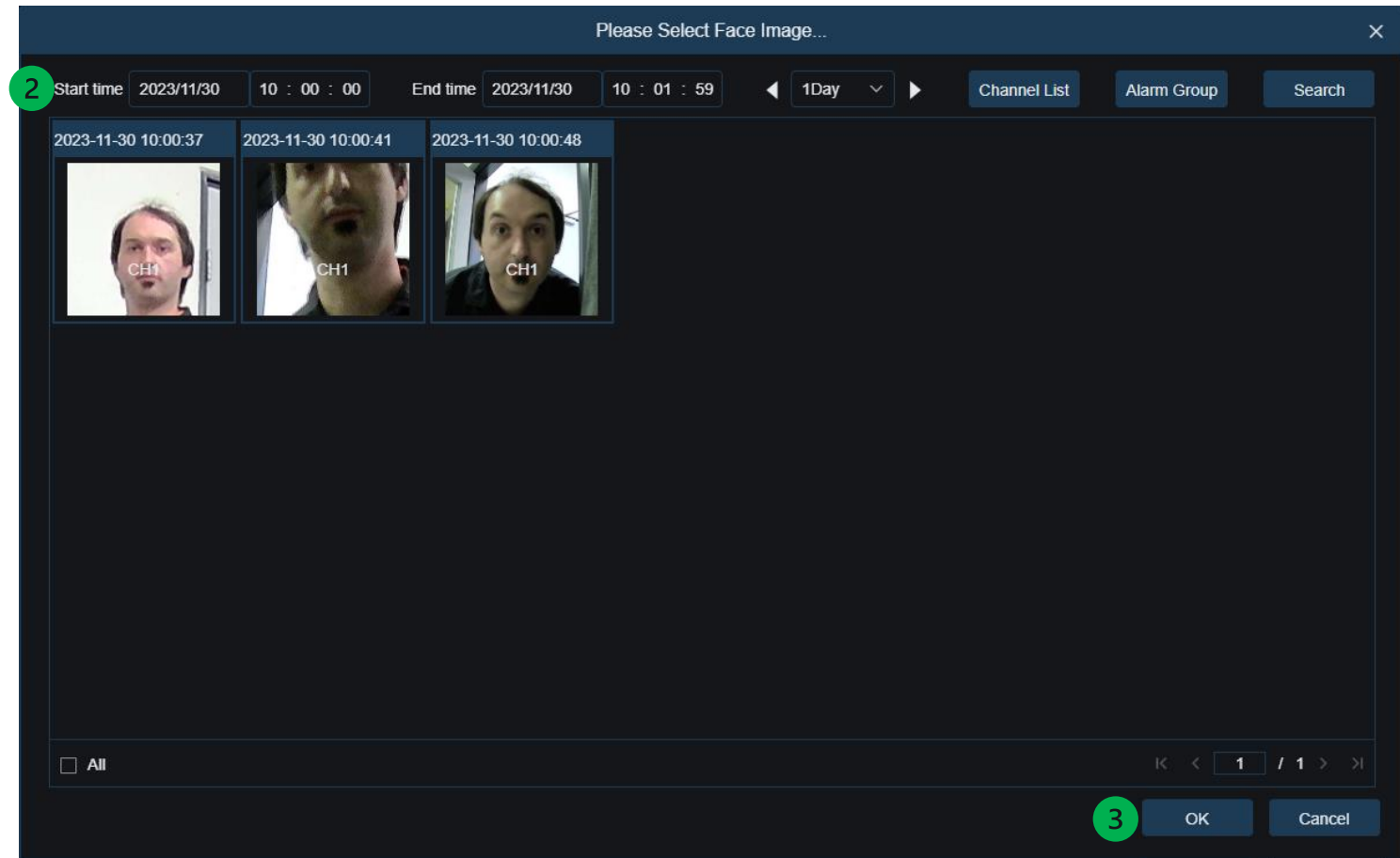
FACE DETECTION – RECOGNITION – ENROLMENT – FROM EXISTING FOOTAGE

3 A new popup window will appear where you can enter in all the information about the person.

The only two fields that are mandatory are **Name** and **Sex** (of which Male or Female are the only options)

You must do this for each of the faces; they can have the same name (e.g **Bob Smith**).

When you are finished entering in all the data, simply click Upload.

4 If everything works, then you will see a popup that reads **Import Success!** and the images you had selected will get little green ticks in the top right-hand corner.

5

6 Once done, you can click the **X** in the top right-hand corner of the popup window.

| Name | Bob Smith | Sex | Male | Age | 0 |

Country Australia Nation Phone

Native Postion Email

Id Code Occupation

Residence

Remark

☑ All   succ: 0   fail: 0   total: 2

Add   Cancel   Upload
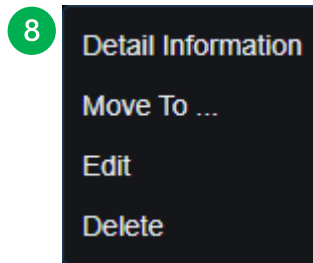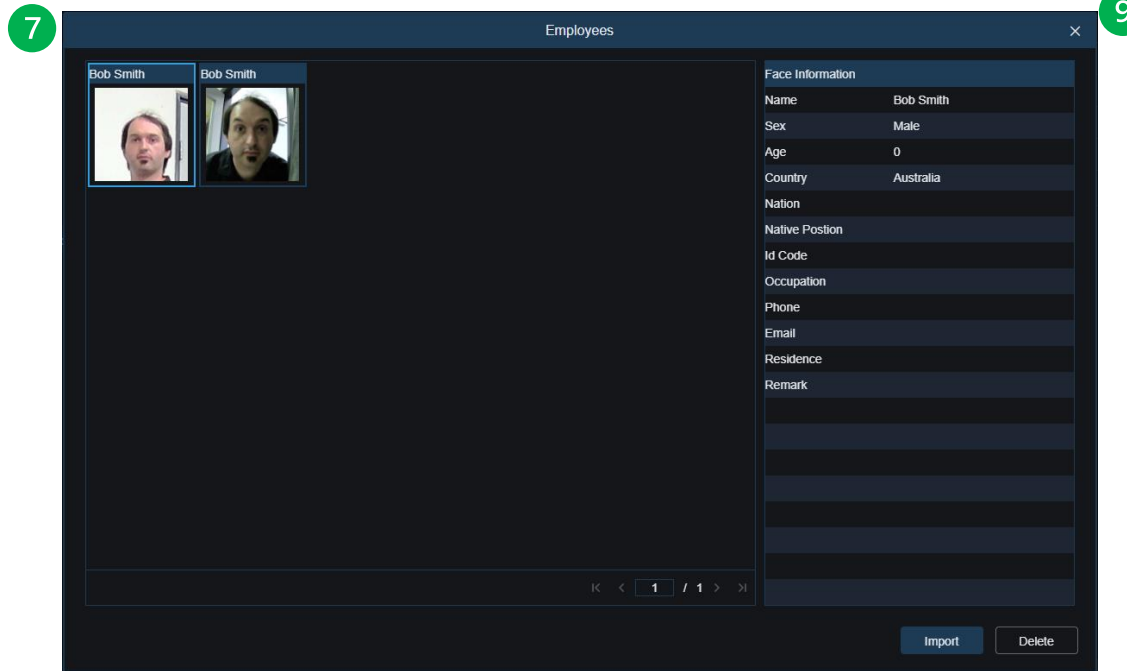
Information
Import Success!
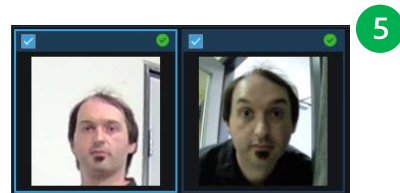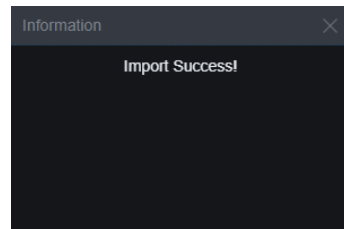
FACE DETECTION – RECOGNITION – ENROLMENT – FROM EXISTING FOOTAGE

7 The Group popup will now be visible, and as you click on each of the different faces that have been enrolled you will see the data that had been entered on the right-hand side under the **Face Information** section.

8 If you right click on any of the enrolled face, you will be presented with the option to see the faces' **Detail Information** (same as what is displayed on the right-hand side of the popup), **Move To...** (allows you can move the person do a different **Group**), **Edit** (enables you to change the details of the face), and **Delete** (removes the face and information permanently from the database).

9 If you have completed all the functions you wanted to do, click the X in the top right-hand corner of the popup.

FACE DETECTION – RECOGNITION – ENROLMENT – FROM LOCAL IMAGE

1 Selecting the **Import** option will result in a popup appearing with three options : **Capture Image** (from existing footage), **Local Image** (uploaded from your local computer), **Cancel** (to go back to the previous screen).
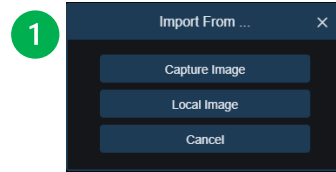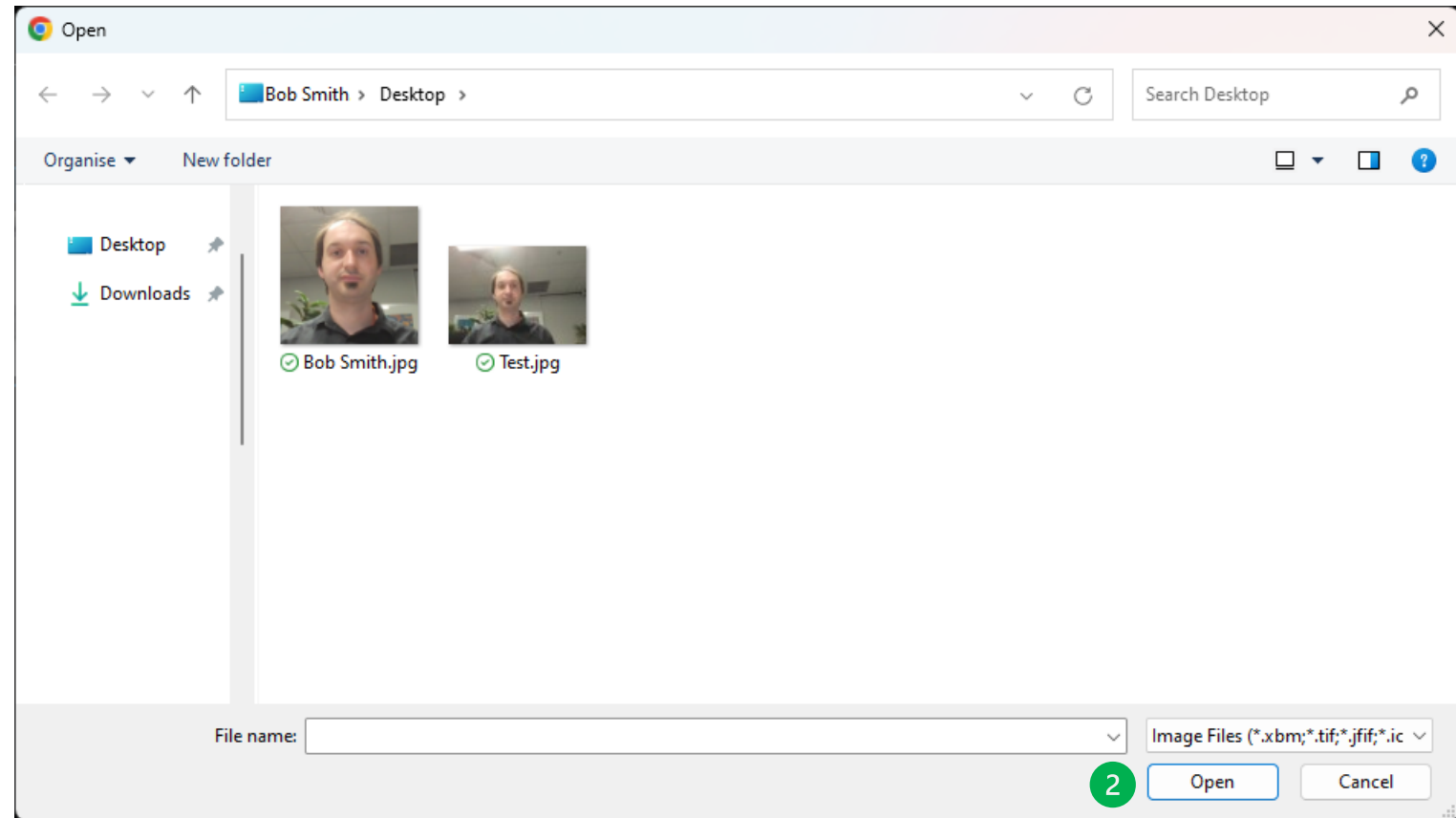
We will be uploading from the **Local Image** option.

2 Navigate to the image of the face you wish to upload, and select **Open**.

The restrictions are that the image must be:
- Less than or equal to 1024 x 1024 pixels in size (e.g 1024x 720, 640 x 480, 240 x 320, etc).
- Have the file extension of .jpg/.jpeg (others can be used but can cause issues).
- Have a file size of less than 1Mb

1

Import From ...	✕
Capture Image	
Local Image	
Cancel	

Open

← → ⌄ ↑ 　Bob Smith › Desktop ›　⌄　C　Search Desktop

Organise ▾　New folder

Desktop 📌
Downloads 📌

✓ Bob Smith.jpg　✓ Test.jpg

File name: 　　　　　　　　　　Image Files (*.xbm;*.tif;*.jfif;*.ic ⌄

2 Open　Cancel

FACE DETECTION – RECOGNITION – ENROLMENT – FROM LOCAL IMAGE

3 A new popup window will appear where you can enter in all the information about the person.

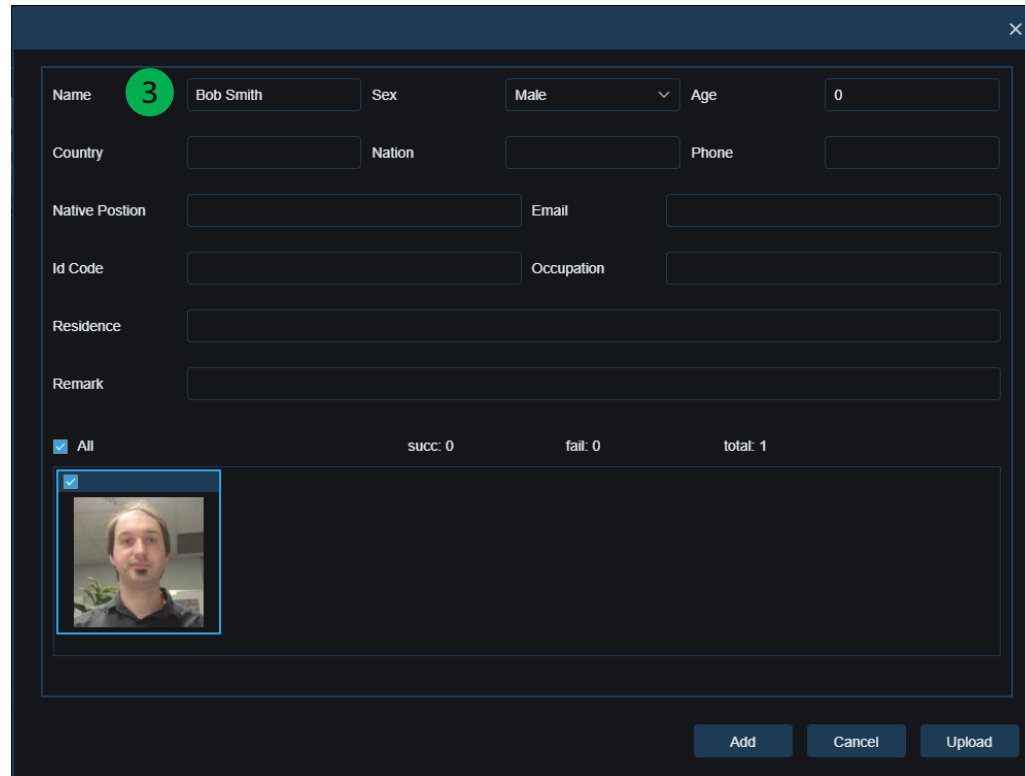The only two fields that are mandatory are **Name** and **Sex** (of which Male or Female are the only options)

You must do this for each of the faces; they can have the same name (e.g **Bob Smith**).

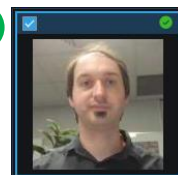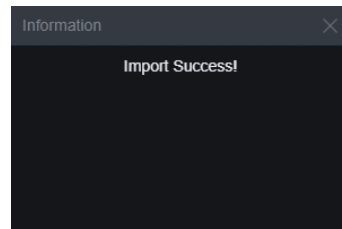When you are finished entering in all the data, simply click Upload.

4 If everything works, then you will see a pop that reads **Import Success!** and the images you had selected will get little

5 green ticks in the top right-hand corner.

6 Once done, you can click the **X** in the top right-hand corer of the popup window.
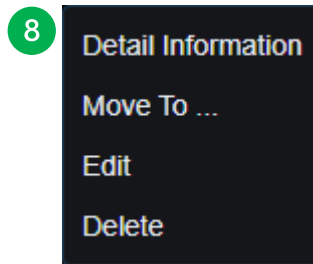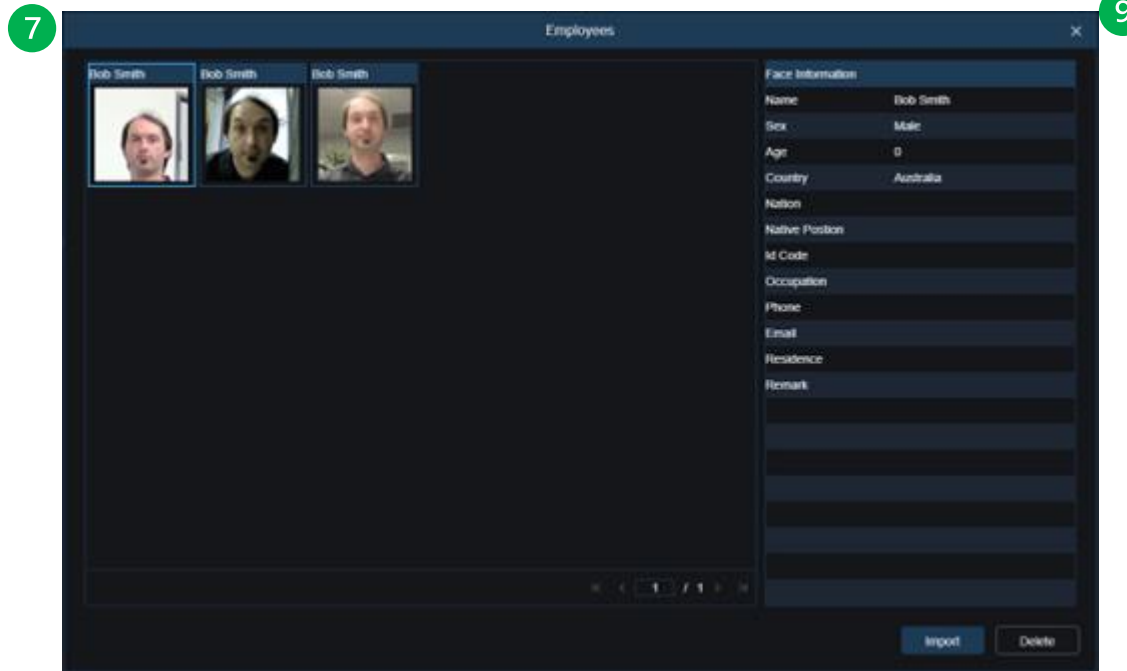
FACE DETECTION – RECOGNITION – ENROLMENT – FROM LOCAL IMAGE

7 The Group popup will now be visible, and as you click on each of the different faces that have been enrolled you will see the data that had been entered on the right-hand side under the **Face Information** section.

8 If you right click on any of the enrolled face, you will be presented with the option to see the faces' **Detail Information** (same as what is displayed on the right-hand side of the popup), **Move To…** (allows you can move the person do a different **Group**), **Edit** (enables you to change the details of the face), and **Delete** (removes the face and information permanently from the database).

9 If you have completed all the functions you wanted to do, click the X in the top right-hand corner of the popup.

FACE DETECTION – ALARM – SETUP - GENERAL

1 Navigate to the **AI** section.
Select the **Alarm** option.
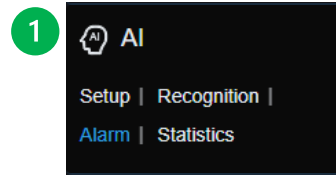
2 Select the **Face Recognition** tab and toggle the **Enable** feature to on for each of the groups you wish to activate alarms for.
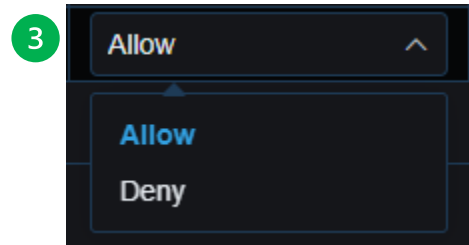
3 For any of the custom **Groups** that you have created you can choose either to add these to an **Allow** or **Deny** list.

4 You will also be able to change the **Similarity** parameter here, which determines how similar the face detected by the camera is the same as the one you have enrolled.
The higher the number, the better quality **and** clarity the image from the camera needs to be.
The typical value is between 70%-85%.

FACE DETECTION – ALARM – SETUP – GROUP ALARMS

1 Under the **Alarm** section is a **Gear** icon. Clicking this will show you the settings for the different actions that can be taken when some one on the associated list is detected.

2 The **Latch Time** relates to how long the alarm output for that camera will be latched. This can be used to trigger an audible security alarm, a visual alarm indicator, or trigger the release of a doors lock/unlock feature.

3 The **Face Capture** is to choose whether to record the face as saved image on the storage.

4 The **Send Email** option is so an email can be sent to a nominated email account. This is set up under **Network** >> **Email**.

5 The **FTP Picture Upload** option is similar to the email one above, but is configured under **Network** >> **FPT**.

6 The **Cloud Picture** option is to allow the face that is captured to be uploaded to the cloud.
This is configured under **Device** >> **Cloud**.
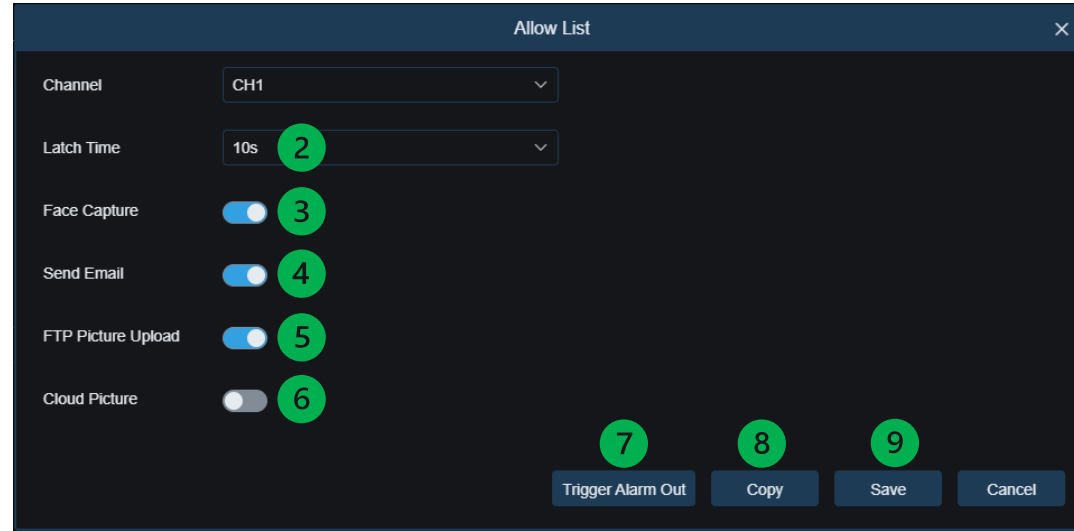
7 The **Trigger Alarm Out** button opens the menu to select which physical outputs will be triggered when a face is detected.

8 The Copy button allows you to copy the settings you have to other channels (if the device has more than one channel).
NOTE: You must have saved the changes before copying to other channel or it will not work.

9 Finally, there is the **Save** or **Cancel** options, which do exactly what they say.
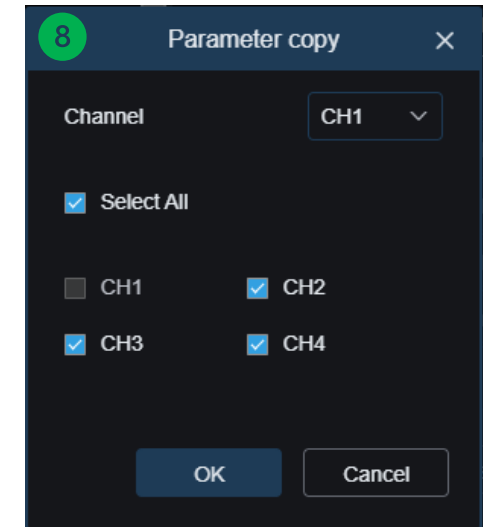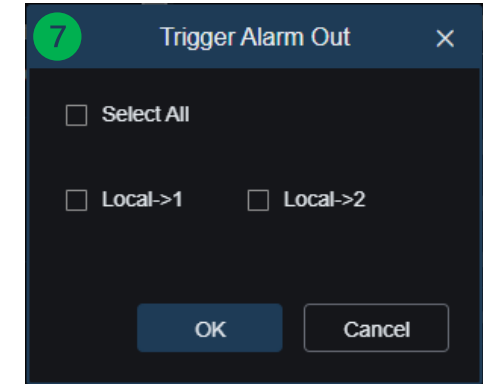
FACE DETECTION – ALARM – SETUP – SCHEDULE

1 Under the **Alarm Schedule** section is a **Gear** icon.
Clicking this will show you the alarm schedule for the different methods of **Group Alarms**.

2 If a square is coloured in orange then it means that that at that time of day a face that matches one in the database will cause that **Group Alarm** to trigger.

3 If a square is coloured in black then it means that that at that time of day nothing will cause that **Group Alarm** to trigger.

In the example an alarm will not trigger between 02:00-04:00 or 14:00-16:00, even if a face in the database matches.

4 These times are individual for each **Group Alarm** and for each **Channel** (if available).

5 The **OK** button will confirm the schedule that you have created.

**6** The **Cancel** will not apply any changes
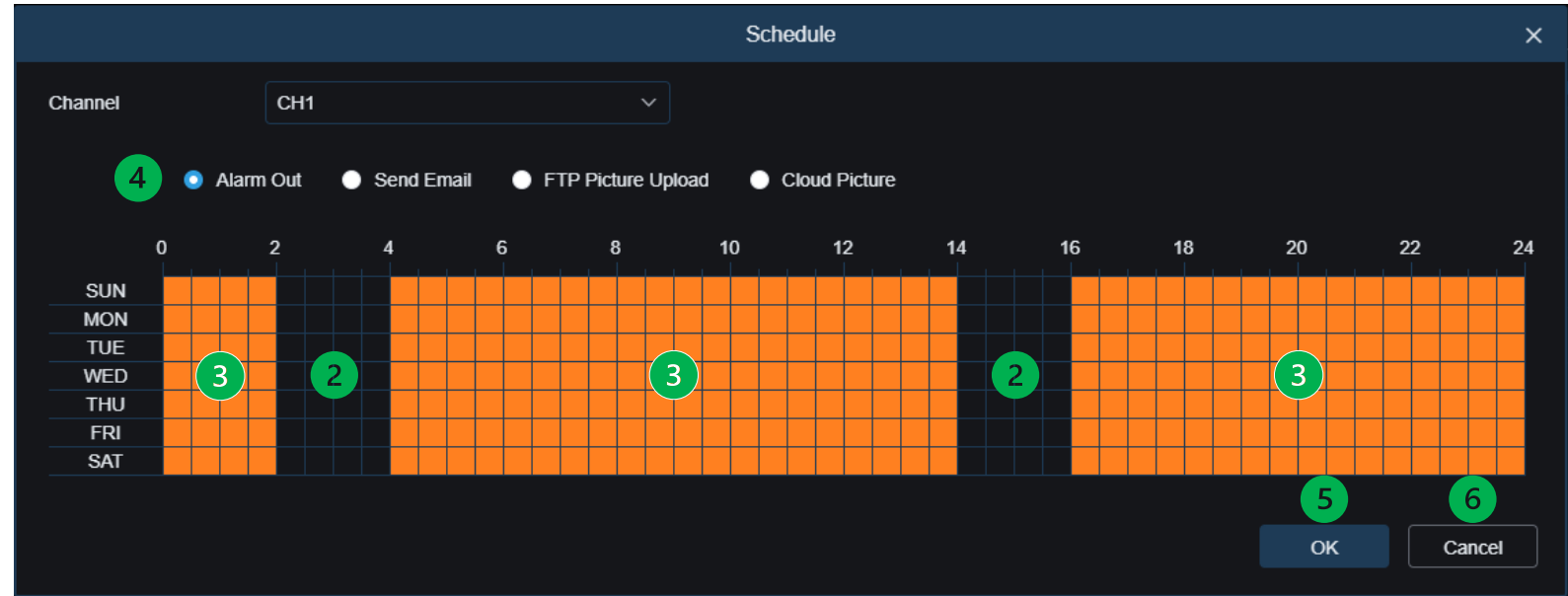
FACE DETECTION – ALARM – SETUP – ALARM CHANNEL

1 Under the **Alarm Channel** section is a **Gear** icon.
Clicking this will show you each of the different channels that can be triggered by **Group Alarms**.

2 If a channel is ticked it means that the **Group Alarms** that have been set will apply.

3 If a channel is not ticket it means that the **Group Alarms** that have been set will not be applied.

4 The **OK** button will confirm the schedule that you have created.

5 The **Cancel** will not apply any changes

Allow List	✕

☐ Select All

☐ CH1   ☑ CH2   ☐ CH3   ☑ CH4

OK   Cancel
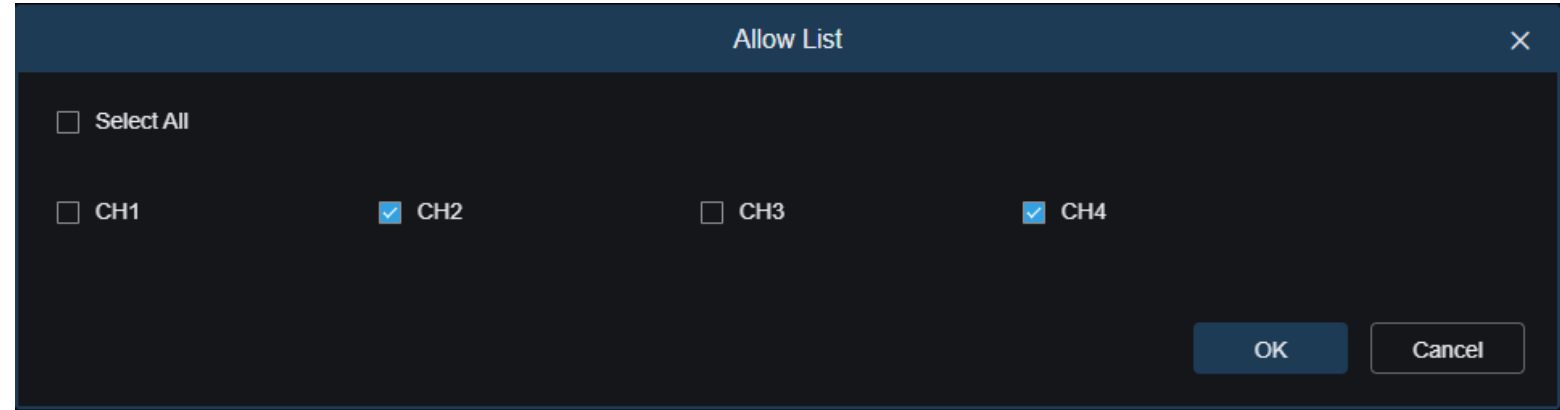
FACE DETECTION – PLAYBACK

1 Click on the **Playback** tab.

2 Select the **Date** that you wish to review footage for

3 Unselect all **Search Types** except for **Face Detect**. This will then only show when a face has been detected.

4 Click the **Search** button

5 This will show only the times that the cameras that were set to detect for faces will show content.

6 When watching the playback, you will see a green rectangle drawn around the face of the person detected.
This can help you see who was being identified if there is more than one person in the frame.
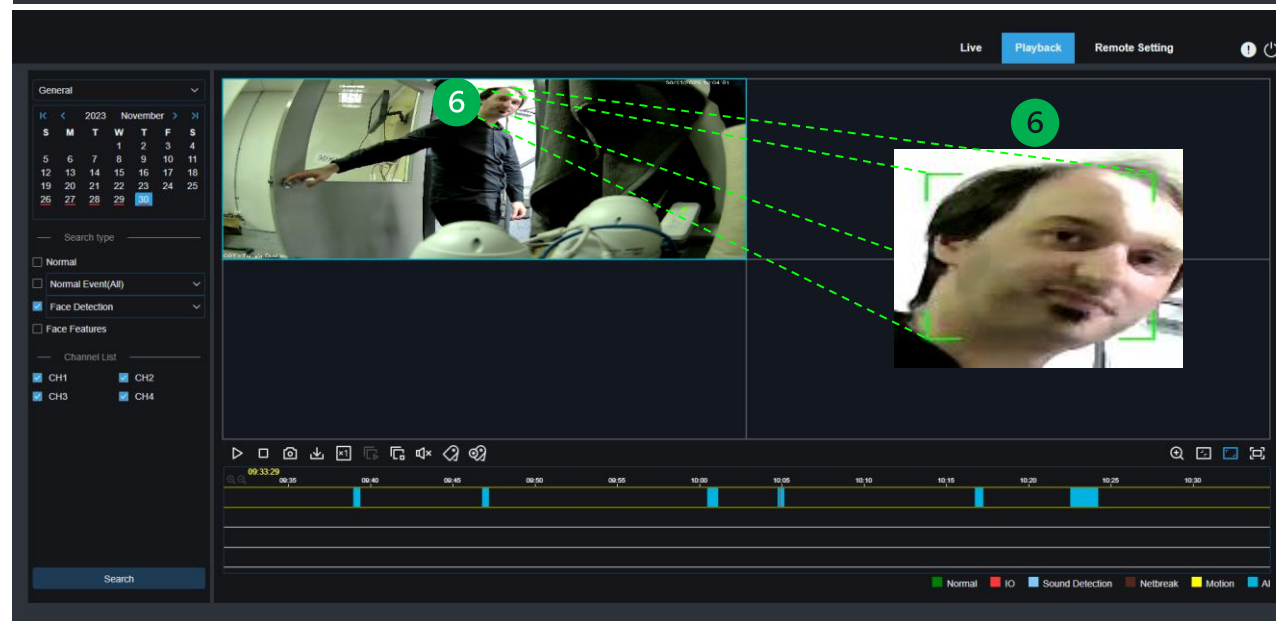
FACE DETECTION – STATISTICS

1 Open the **Remote Settings** of the Camera and navigate to the **AI** section.
Select the **Statistics** option.

2 Select the **Face Detection** tab.

3 Visible straight away is a timeline of the number of faces that have been detected in a 24-hour period.

4 You can change this to display information by changing the **Date** selector.

5 Alternatively, you can show the data for different periods of time by selecting from the dropdown menu.
These include : **Day**, **Week**, **Month**, **Quarter**, or **Year**.

6 The Chanel button allows you to select which channels you would like to include or exclude in the count.

7 The Group button allows you to select which groups you would like to include or exclude in the count.

8 The Search button will run the search based on the specified parameters.

9 The Export button will export a .CSV file that shows the numeric values based on the specified parameters
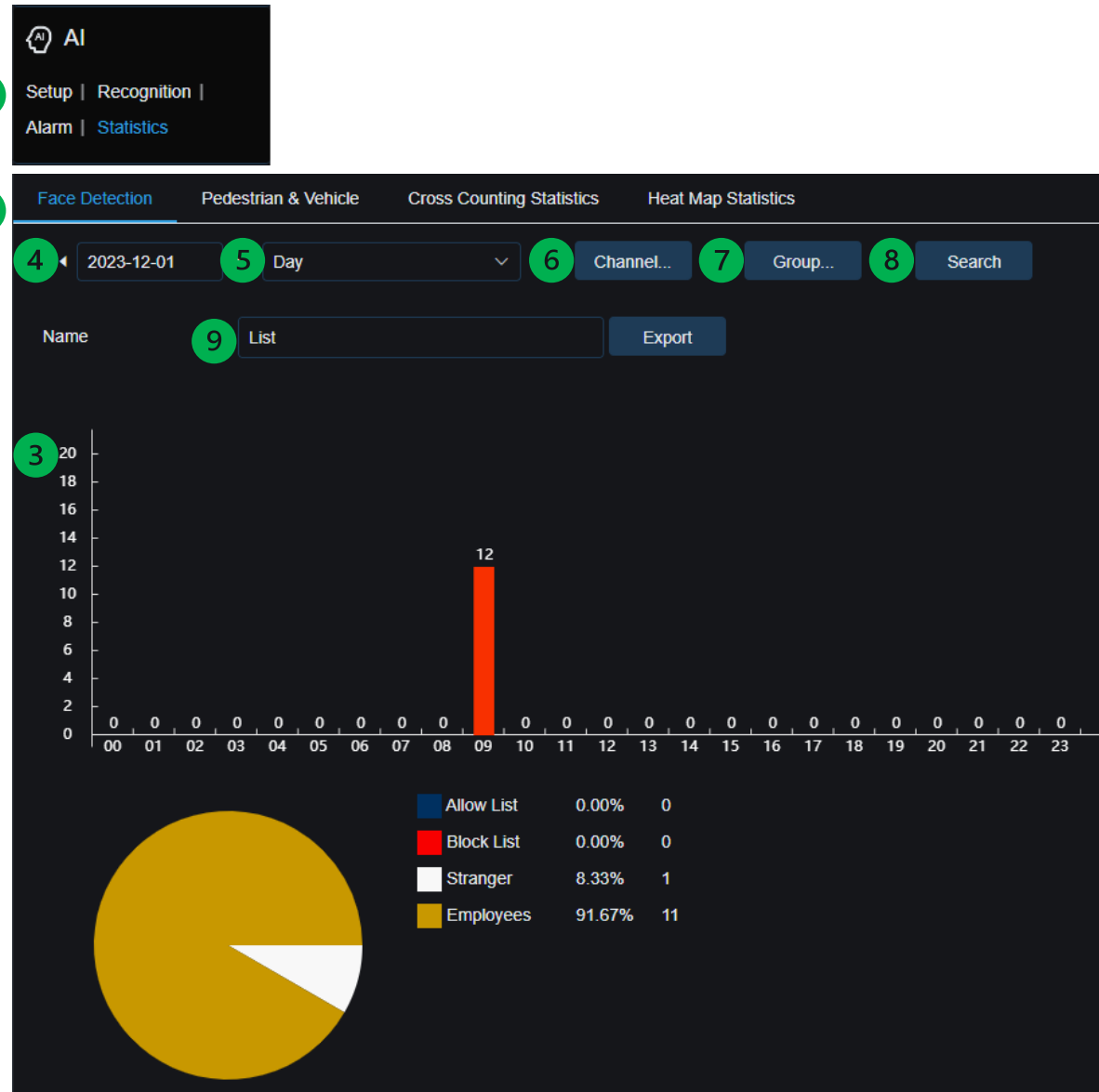
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