



SAFR Digifort Integration Guide

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Note: Documentation pertaining to the macOS platform is no longer being actively maintained.

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1 SAFR Digifort Integration Guide

Integrated SAFR Digifort is only available on Windows.

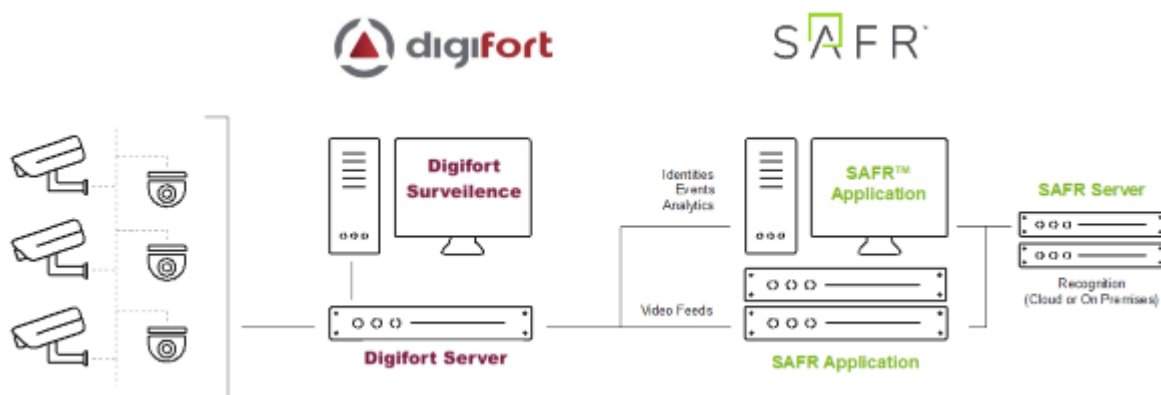
Integrating SAFR's facial recognition and analysis capabilities into Digifort enables you to use SAFR's video feed information overlays within Digifort camera video feeds, thus making it much easier to quickly and accurately separate unknown people from authorized people from known threats. You'll also have immediate access to additional information such as age, gender, sentiment, name, company, known associates, or any other configurable information you want to create.

Integrating the two systems also allows SAFR's information about individuals to trigger Digifort alerts and other actions within the Digifort system. Digifort's metadata within bookmarks are enriched with SAFR's additional information, allowing you to more easily find relevant bookmarks.

1.1 Integration Overview and Requirements

A typical deployment requires the following:

- A machine running Digifort Server and Digifort Administration Client.
- A machine running the Digifort Surveillance Client at monitoring locations.
- One or more machines running the SAFR Desktop Client to process videos.
- If you're doing a SAFR local deployment, you'll also need a machine running SAFR Server. SAFR Server can run on the same machine as one of the Desktop Clients, provided the host machine meets the system requirements.



Cameras are connected to Digifort. The SAFR Desktop Client can connect to Digifort to perform analysis of the video. Depending on the number of cameras you need, one or more machines can run SAFR Desktop, each processing multiple video feeds. The Desktop Client processes the video and returns information to Digifort to generate events. The Desktop Client is also used to perform various management activities. This could be run on the same system as Digifort Server.

1.1.1 System Requirements

Digifort has the following requirements:

- Each machine running Digifort must meet the following requirements:
 - The Digifort version must be 7.2.1 or later.
 - The machine must be running Windows 10 or later.
 - .Net Framework 4.6.2 or later must be installed.
- Each camera connected to Digifort requires a Digifort license.

Note: Digifort licenses must be acquired before attempting to discover and add cameras.

SAFR has the following requirements:

- Each camera running SAFR must have a SAFR license.
- Each machine running the SAFR Desktop Client must meet the following requirements:
 - The Desktop Client must be version 1.4.162 or later.
 - The system requirements described here.
- Local SAFR deployments require at least one machine running SAFR Platform 1.4.157 or later.
- Each machine running SAFR Platform must meet the system requirements described here.

1.2 Install and Configure Digifort

Download and install Digifort by doing the following:

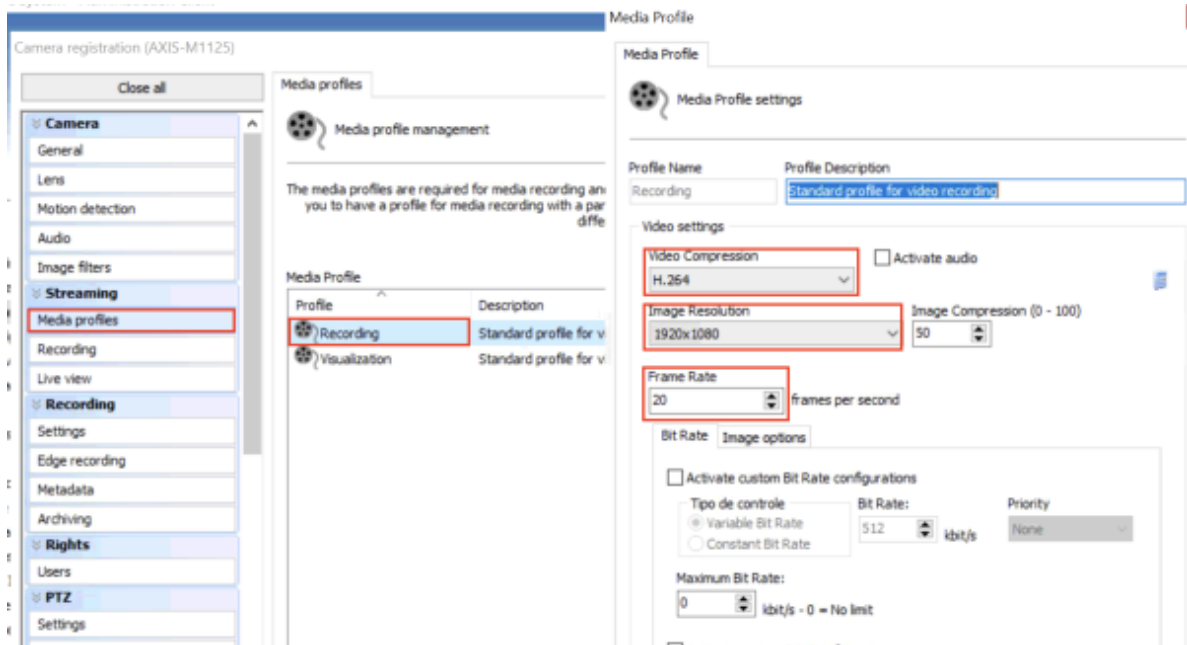
1. Turn off Windows Defender and Firewalls. (Digifort requires that both these features be disabled.)
2. Download the latest Digifort installer package from Digifort and install the full package.
3. Open the *Digifort Administration Client* and add a new server. Log in with the default username **admin** and set a password in the **Users** tab. As an administrator, you can create additional user accounts if needed.
4. To connect cameras to Digifort, do the following:
 1. Go to Recording Servers in the Digifort Administration Client.
 2. Click **Camera** from the Add Button.
 3. Complete the dialog shown in the following graphic to add Camera manufacturer, model, IP Address, and other information as needed.

The screenshot shows the 'Camera registration (AXIS-M1125)' dialog box in the Digifort Administration Client. The 'General' tab is active. The left sidebar shows a tree view with 'Digifort Servers' expanded, and 'Add Camera' highlighted. The main area contains the following fields and settings:

- Camera name:** AXIS-M1125
- Camera description:** AXIS-M1125
- Manufacturer:** Axis (selected from a dropdown)
- Camera model:** M1125
- Firmware:** 5.09 or greater
- Camera address:** 192.168.123.101
- Port (80):** 80
- User:** safr
- Password:** ****
- Preferred transport:** Auto
- Secure connection via SSL/TLS:** (unchecked)
- Camera shortcut:** (empty)
- Latitude:** 0.000000
- Longitude:** 0.000000
- Recording directory:** C:\Recording\AXIS-M1125
- Connection timeout (ms):** 30000
- Activate camera:** (checked)

Note: Digifort allows you to add mobile cameras as well as using the Digifort Mobile Camera Pro App. In the Add Camera dialog, select **Digifort** as the manufacturer and **Mobile Camera Pro** as the make.

5. You may need to update the *Video Compression*, *Image Resolution*, *Frame Rate*, or *Image Rotation*, as shown below:



6. You may need to update the *Image Rotation* or *Profile Description* on the Media Profile settings page, as shown below:

Media Profile

Media Profile

Media Profile settings

Profile Name

Recording

Profile Description

Standard profile for video recording

Video settings

Video Compression

H.264

☐ Activate audio

Image Resolution

1920x1080

Image Compression (0 - 100)

50

Frame Rate

20

frames per second

Bit Rate

Image options

☐ Show Date

☐ Show Time

☐ Show Text

☐ Saturation *

60

☐ Square Pixel Correction **

Image Rotation *

180

Text *

Text Color *

White

Text Background *

Black

Text Position *

Top

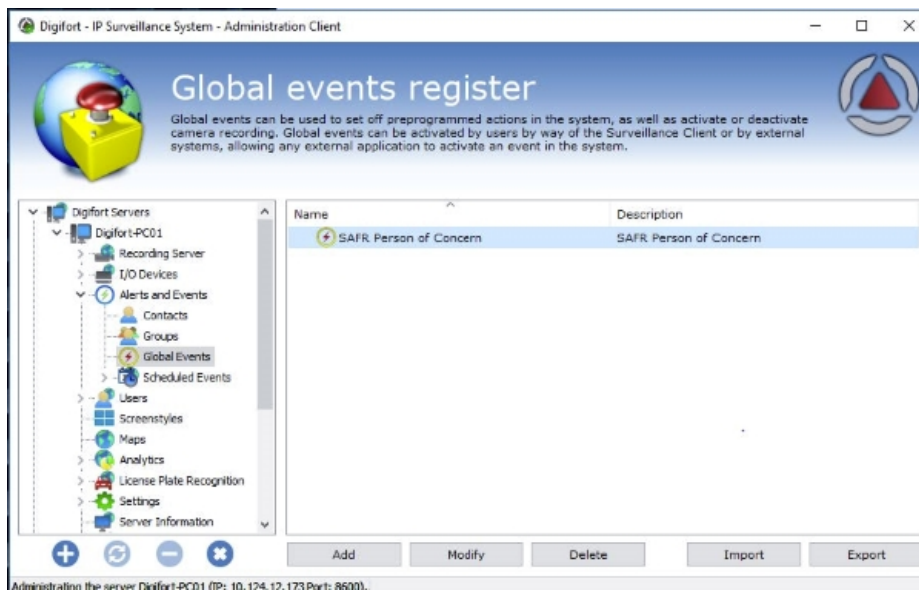
☐ Show overlay image *

Overlay Position:

X: 8

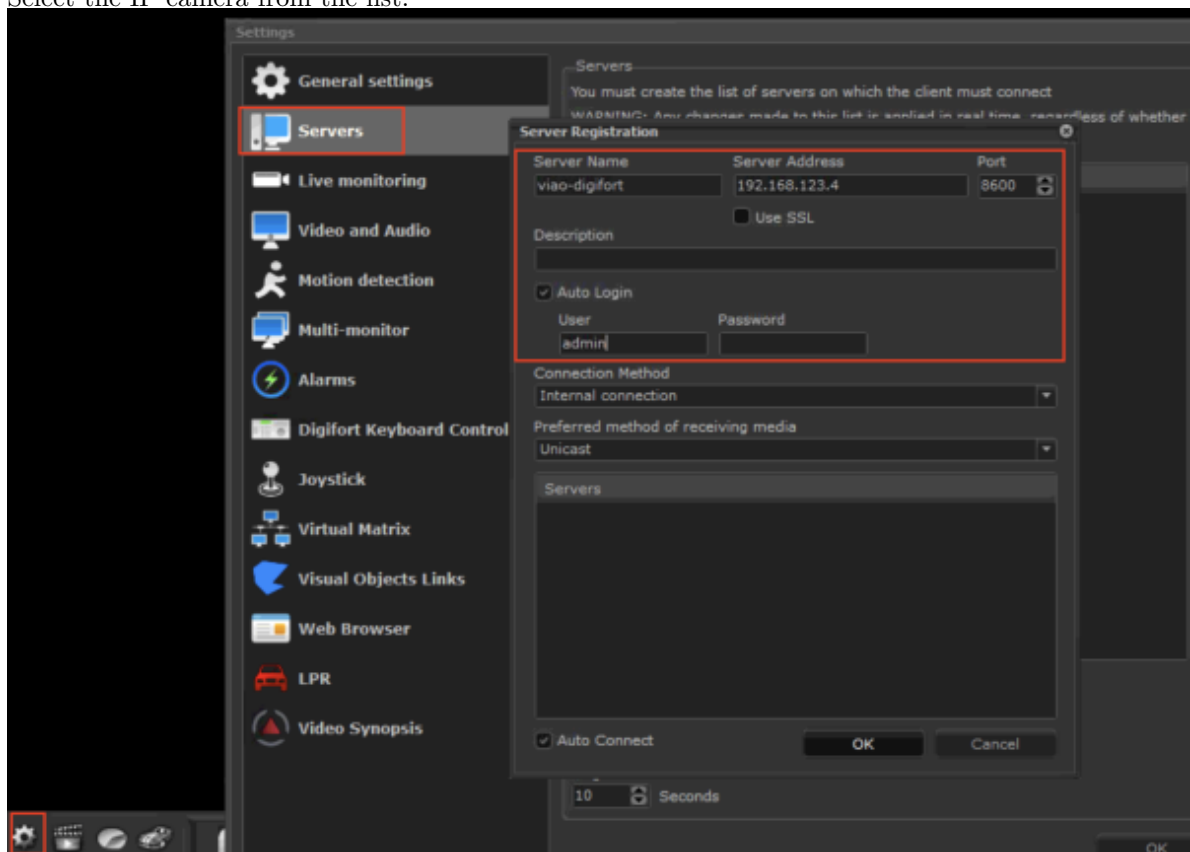
Y: 8

7. Navigate to **Alerts and Events > Global Events** to add events as needed. You can configure the event actions there too, when needed.



Configure the Digifort Surveillance Client by doing the following:

1. Start Digifort Serveillance Client.
2. Go to Setting > Servers > Add.
3. Restart Digifort Serveillance Client.
4. Select the IP camera from the list.



1.2.1 Connect an IP Camera

Important: Digifort licenses must be acquired prior to attempting to discover and add cameras.

1. Start the Digifort Serveillance Client.
2. Select the IP camera from the Cameras list.



1.3 Install and Configure SAFR

1. From the SAFR Download Portal, download and install either SAFR Platform or SAFR Desktop, depending on your deployment type. Make sure to select the Digifort VMS extension install option.
2. After installing SAFR, you'll be prompted for the Digifort Credentials as shown in the following dialog:

The image shows a dialog box titled 'Provide Digifort Credentials'. It contains a message: 'Failed to connect to Digifort's Service. Please check your network connection and the server address.' Below the message are four input fields: 'Username:' with the value 'admin', 'Password:' with a masked password (represented by dots), 'Server:' with the value '10.124.12.173', and 'Media Gateway Port:' with the value '554'. At the bottom right of the dialog are two buttons: 'Cancel' and 'Authenticate'.

3. Enter the information for the Digifort user created previously to connect to Digifort server, and click OK.

Note: During the Digifort login and authentication process, you may be prompted to enter your SAFR account credentials as well as to log into any automatically detected cameras.

4. After SAFR finishes installing, open the SAFR Desktop Client.
5. From the **Tools** menu, select **Preferences**, and click the Digifort tab.

The screenshot shows the 'Preferences' dialog box with the 'Digifort' tab selected. The dialog has a title bar with a close button. Below the title bar is a row of icons for different settings: Account, Digifort (selected), Camera, Detection, Tracking, Recognition, Events, and User Interface. The main area contains the following fields and options:

- Digifort User Id:
- Digifort User Password:
- Digifort Server Address:
- Media Gateway Port:
- ☒ Report Events
- ☒ Insert Bookmarks
 - ☐ Include Unrecognizable Faces
 - ☒ Include Strangers
 - ☒ Include Enrolled
 - ☒ Include Concerns and Threats
 - ☒ Include Smile Activation
-

At the bottom right are 'OK' and 'Cancel' buttons.

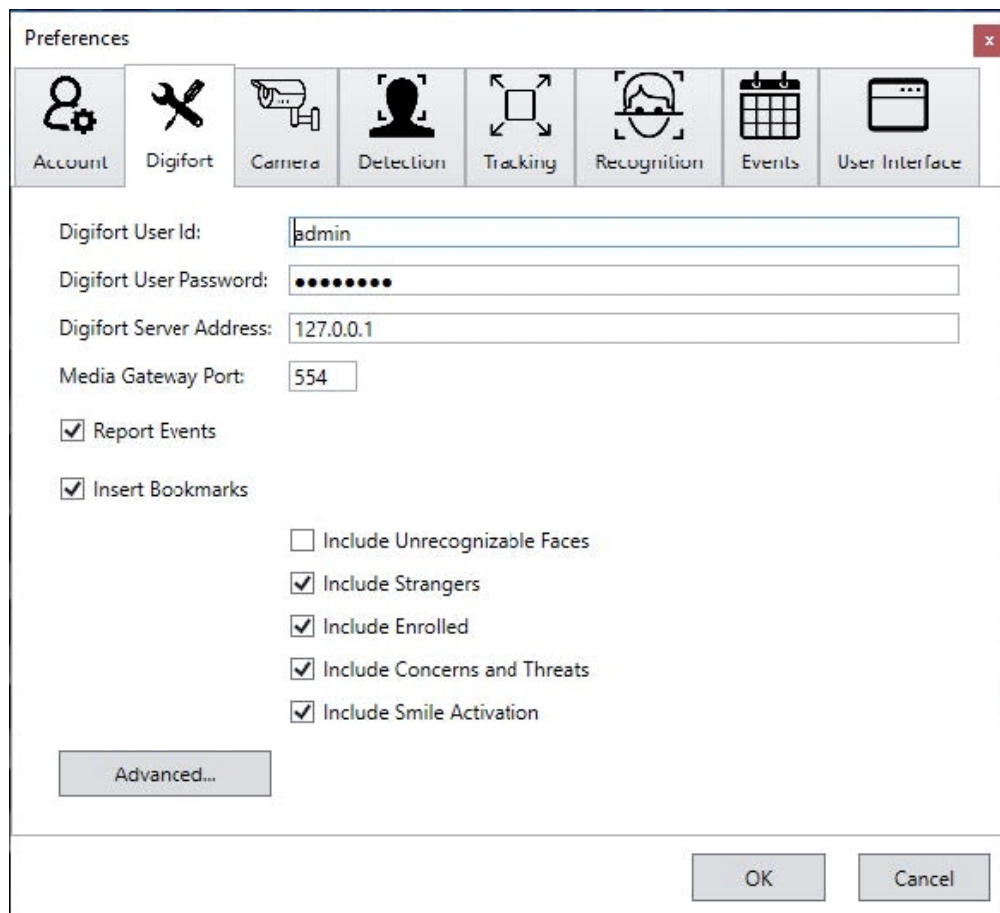
6. Enter the following information.
 - **Digifort User Id:** User created previously in Configure Digifort.
 - **Digifort User Password:** Password created for the SAFR user.
 - **Digifort Server Address:** IP address of server running Digifort.
 - **Media Gateway Port:** Set to 554 unless configured otherwise in Digifort.
7. Click **OK**.

1.4 Verify your Connection

To verify successful connection to the Digifort system, open the **Preferences > Camera** tab. Cameras connected to the Digifort system should be visible. All cameras connected to the Digifort system have a Digifort prefix in their names.

2 SAFR Digifort Operation Guide

2.1 SAFR Digifort Preferences



The image shows a 'Preferences' window for SAFR Digifort. It has a title bar with a close button. Below the title bar is a row of eight icons representing different settings: Account, Digifort, Camera, Detection, Tracking, Recognition, Events, and User Interface. The 'Digifort' icon is selected. The main area contains the following fields and options:

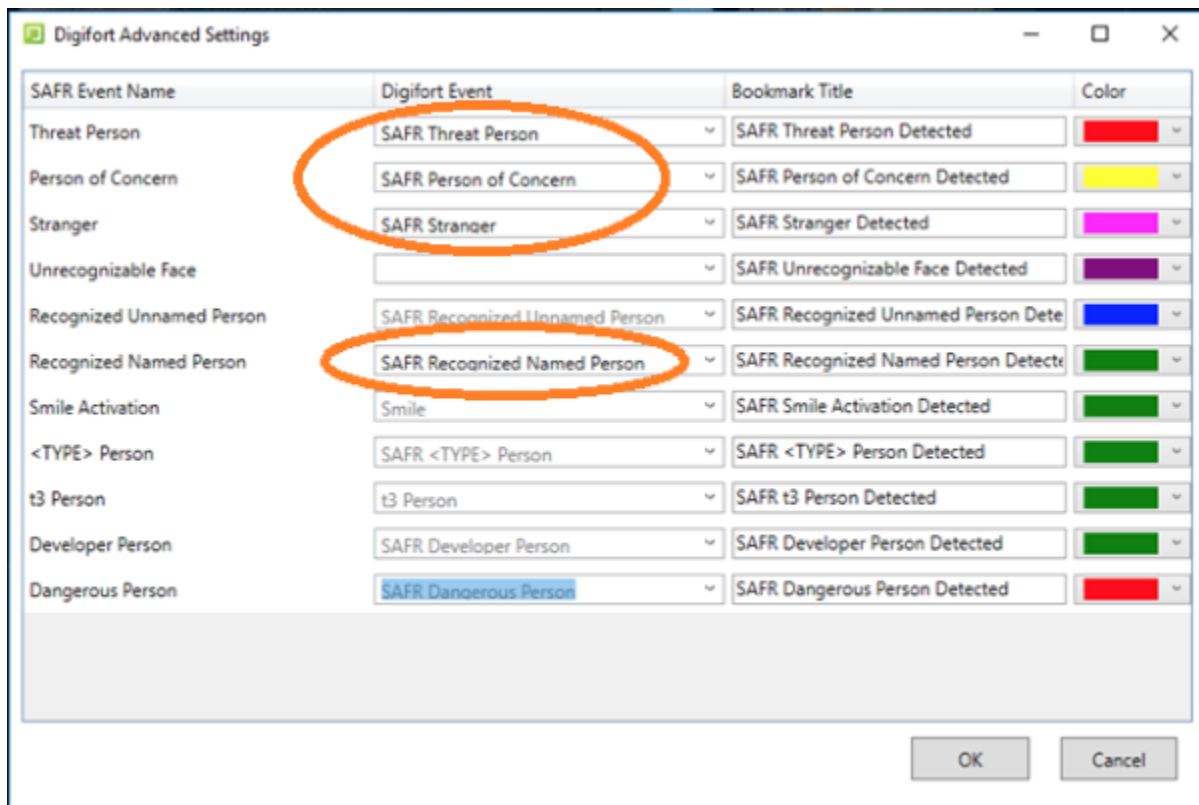
- Digifort User Id:
- Digifort User Password:
- Digifort Server Address:
- Media Gateway Port:
- ☒ Report Events
- ☒ Insert Bookmarks
 - ☐ Include Unrecognizable Faces
 - ☒ Include Strangers
 - ☒ Include Enrolled
 - ☒ Include Concerns and Threats
 - ☒ Include Smile Activation
-

At the bottom right are 'OK' and 'Cancel' buttons.

- **Digifort User Id:** User created previously in Configure Digifort
- **Digifort User Password:** Password created for the SAFR user
- **Digifort Server Address:** IP address of server running Digifort
- **Media Gateway Port:** Set to 554 unless configured otherwise in Digifort
- **Report Events:** Controls if events are sent to Digifort. Events are used to trigger alarms in Digifort.
- **Insert Bookmarks:** Adds bookmarks to the video stream related to events. Allows operators to search video for events or recognized person names. **Note:** Use caution when deciding what to include since many faces can cause many bookmarks to be created.
 - **Include Unrecognizable Faces:** Adds bookmarks when a face detected by SAFR does not have enough information to determine if it is a stranger or known person. This can become visually noisy and is disabled by default. Generally useful for areas where nobody should enter.
 - **Include Strangers:** Adds bookmarks when a face is determined to be a stranger. Generally useful for secured areas where only known people should be.
 - **Include Enrolled:** Adds bookmarks when a face is determined to be a known person.
 - **Include Concerns and Threats:** Adds bookmarks when a face is determined to be a known concern or threat.
 - **Include Smile Activation:** Requires smile activation to trigger recognition.
- **Advanced:** Clicking on the **Advanced** button opens the following window:

SAFR Event Name	Digifort Event	Bookmark Title	Color
Threat Person	SAFR Threat Person	SAFR Threat Person Detected	Red
Person of Concern	SAFR Person of Concern	SAFR Person of Concern Detected	Yellow
Stranger	SAFR Stranger	SAFR Stranger Detected	Magenta
Unrecognizable Face	SAFR Unrecognizable Face	SAFR Unrecognizable Face Detected	Purple
Recognized Unnamed Person	SAFR Recognized Unnamed Person	SAFR Recognized Unnamed Person Detected	Blue
Recognized Named Person	SAFR Recognized Named Person	SAFR Recognized Named Person Detected	Green
Smile Activation	SAFR Smile Activation	SAFR Smile Activation Detected	Green
<TYPE> Person	SAFR <TYPE> Person	SAFR <TYPE> Person Detected	Green

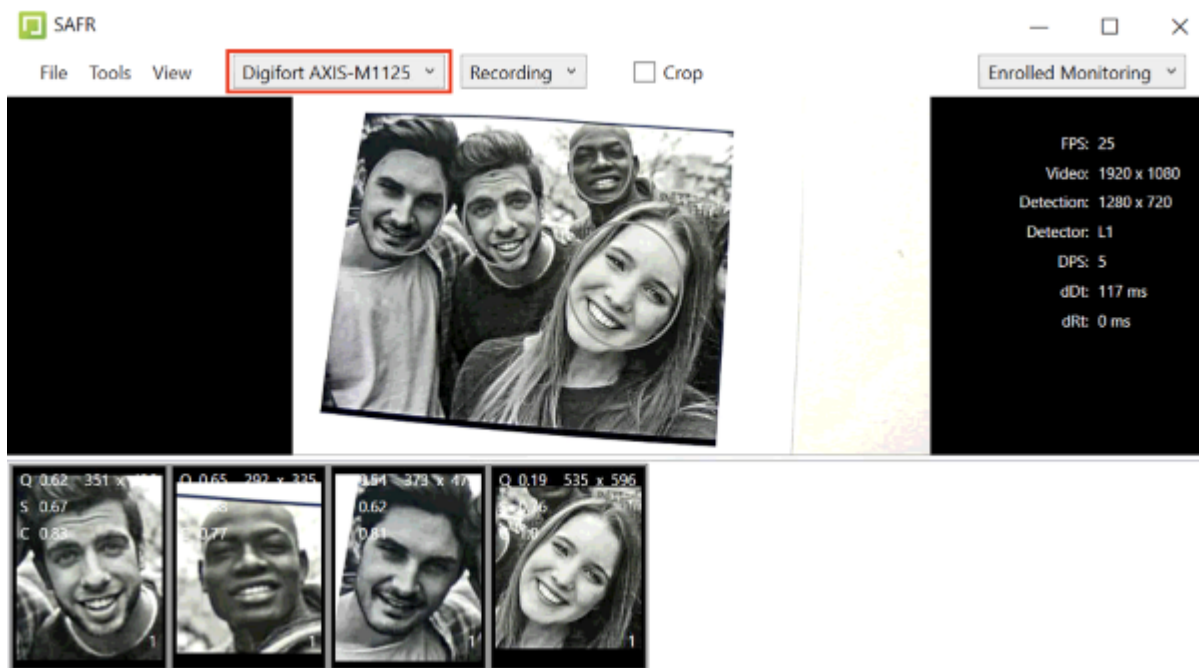
If the Digifort events are disabled (gray; no matching Digifort event), refer to Digifort documentation to create Digifort events. Once the events are created, open the Digifort Advanced Settings dialog and, from the menu for the associated SAFR event, select the Digifort event. Once the Digifort events are created and matched, the events are enabled (black). For information on creating events, refer to Digifort documentation.



This affects the titles given to bookmarks created from the respective events.

Note: Each event type is only created if enabled in the SAFR Digifort Preferences tab.

2.2 Connect and Use Cameras and Video Feeds



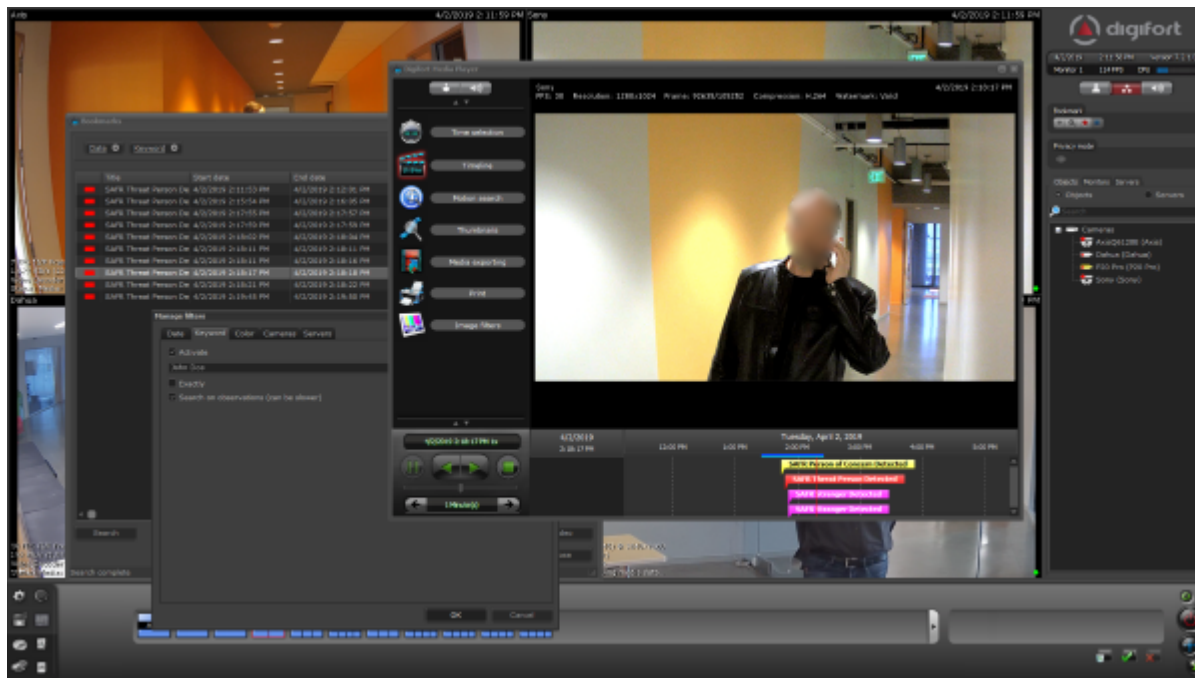
In the SAFR Desktop Client, view the video feed for the camera selected from the camera selection menu.

The menu shows the cameras available from the Digifort servers. To enable the row at the bottom of the screen that isolates individual faces, click **View > Detection List**.

2.3 Digifort Bookmarks

Digifort creates bookmarks to help locate important events. Bookmarks are populated with *Person Type*, *ID Class*, and *Name*. They can also provide more detailed information with even more search attributes, such as *Age* and *Gender*.

The following illustration shows how bookmarks can be used to review important events, such as the detection of a stranger tailgating behind a registered user.



To view Digifort Bookmarks, do the following:

- Click the **Bookmark** icon on right side panel.
- Set a date range or other criteria, and click **Search**.
- Click a bookmark of interest.
- To play the video, click **Video**.

2.4 SAFR Identities

To add people through the SAFR Desktop Client from an image or video file, do the following:

1. Open the Desktop Client.
2. Click **File > Import Faces**.
3. Select the image.
 - For an image, each recognized face is enclosed by a box, and you have the option to type a name.
 - For a video, each recognized person is learned automatically as long as the faces meet the minimum criteria for recognition.
4. If faces are not learned, check the settings in the Detection and Recognition tabs under Preferences to ensure faces meet minimum criteria.
 - Detection > Minimum searched face size
 - Recognition > To allow identification

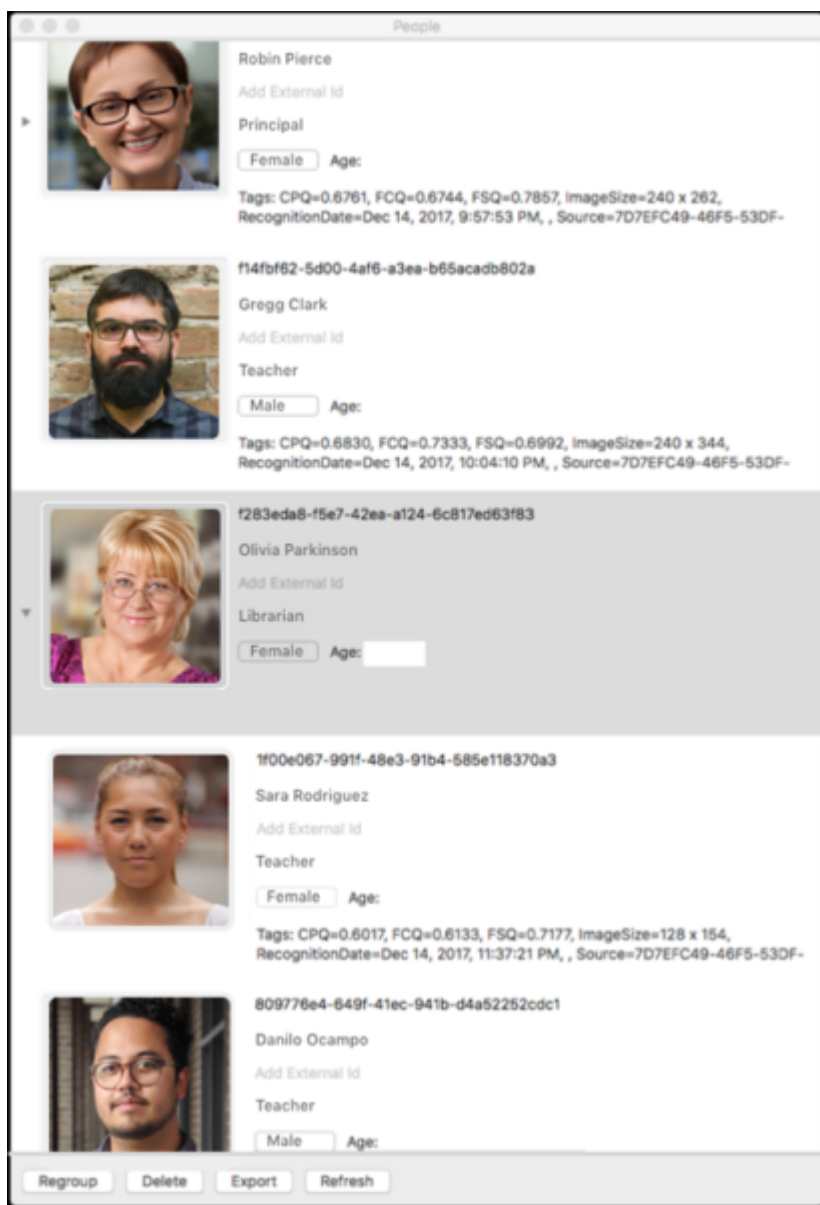
Warning: Reducing detection and recognition settings lowers the quality of the reference face and negatively impacts recognition. It is preferable to increase the quality of your sources than to lower the criteria for learning.

Warning: Users added to SAFR are not synchronized with Digifort; these users exist only in SAFR.

It may be desirable to edit people properties to control which events get triggered when that person is recognized. For example, setting a person's *ID Class* to *Concern* or *Threat* triggers the respective alarms. The most important people attributes are *Name*, *Image*, *Person Type*, and *ID Class*.

Name, *Image*, and *Person Type* should be edited through SAFR. *Person Type* defines a person's role (e.g. staff or visitor), while the *ID Class* defines the risk level (No-Concern, Concern, or Threat). *Person Type* and *Image* can be edited in the Desktop Client by changing the *Person Type* on the People screen.

ID Class and all other attributes of a person are also edited within SAFR People dialog, accessed through the SAFR Desktop Client **Tools** menu. All identities are created by default with an *ID Class* of *No Concern*. To edit a person's *ID Class*, open the People window from the SAFR Desktop Client **Tools** menu as follows:



The *Person Type* and *Name* can be edited by clicking the respective fields on the People screen. To edit *ID Class*, double-click the person, and choose the desired value from the ID Class menu in the People Edit dialog as shown in the following graphic:

The screenshot shows a 'People Edit' dialog box. On the left is a blurred photo of a man with the name 'Yulong Yuan' below it. To the right of the photo are several labeled fields: 'Identifier' with the value 'aff7c218-cc6a-4fd0-9550-e0c865f9d8', 'Enrolled Since' with '11/26/2018 8:28:03 PM', 'Company' with an empty text box, 'Moniker' with an empty text box, 'Validation Phone' with an empty text box, 'Validation Email' with an empty text box, 'Id Class' with a dropdown menu showing 'No-Concern', and 'Enrollment Expiration' with a dropdown menu showing 'Never'. At the bottom right are two buttons: 'Cancel' and 'Update'.

2.5 SAFR Events

You can use SAFR to generate events. When enabled on the Events Preferences page, events occur when a person appears in the view of a connected camera. When a person appears in the camera's view, they're immediately assigned an **ID Class** attribute, although that **ID Class** may change if the system successfully recognizes them and assigns them a more appropriate **ID Class**. The types of **ID Classes** are listed below.

- **Unrecognizable:** A face was detected but it wasn't of sufficient quality to attempt recognition.
- **Stranger:** The person's face is of sufficient quality to recognize them, but they're not registered in SAFR's Identity Database.
- **No-Concern:** Registered person.
- **Concern:** Registered person who has been marked as a person of concern.
- **Threat:** Registered person who has been marked as a known threat.

The following table lists the available events that SAFR makes available to Digifort.

Event Message	Id Class	Named	Person Type	Condition	People Attributes
Unrecognizable face detected	N/A	N/A	N/A	Face detected but insufficient information for recognition	idClass="unidentified"
Stranger detected	Stranger	N/A	N/A	Face detected but not found in registered people	idClass="stranger"

Event Message	Id Class	Named	Person Type	Condition	People Attributes
Registered person detected without name	Normal	No	None	Registered person without name or person type assigned	idClass="noconcern" && person-Type="" && name=""
Registered person detected with name <name>	Normal	Yes	None	Registered person with name but no person type	idClass="noconcern" && person-Type="" && name=<name>
Registered person detected of type <personType>	Normal	No	Defined	Registered person with person type but no name	idClass="noconcern" && person-Type=<personType> && name=""
Registered person detected of type <person-Type> with name <name>	Normal	Yes	Defined	Registered person with person type and name	idClass="noconcern" && person-Type=<personType> && name=<name>
Concern person detected without a name	Concern	No	None	Same as above for Concern	idClass="concern" && person-Type="" && name=""
Concern person detected with name <name>	Concern	Yes	None	Same as above for Concern	idClass="concern" && person-Type="" && name=<name>
Concern person detected of type <personType>	Concern	No	Defined	Same as above for Concern	idClass="concern" && person-Type=<personType> && name=""
Concern person detected of type <person-Type> with name <name>	Concern	Yes	Defined	Same as above for Concern	idClass="concern" && person-Type=<personType> && name=<name>
Threat person detected without a name	Threat	No	None	Same as above for Threat	idClass="threat" && person-Type="" && name=""
Threat person detected with name <name>	Threat	Yes	None	Same as above for Threat	idClass="threat" && person-Type="" && name=<name>

Event Message	Id Class	Named	Person Type	Condition	People Attributes
Threat person detected of type <personType>	Threat	No	Defined	Same as above for Threat	idClass="threat" && person-Type=<personType> && name=""
Threat person detected of type <person-Type> with name <name>	Threat	Yes	Defined	Same as above for Threat	idClass="threat" && person-Type=<personType> && name=<name>

2.5.1 SAFR Operator Modes

SAFR has different operator modes that control what events are generated. Below is a short summary of the modes most relevant to Digifort integration. For a complete description, see the Operator Modes documentation.

- **Secure Access:** Only triggers events when cardholders and people registered in SAFR's Person Directory are identified with a high degree of certainty. This mode is useful when the system is being used to manage physical access. (i.e. When the system is responsible for unlocking doors for authenticated people.)
- **Secure Access with Smile:** Similar to *Secure Access* mode, except that registered people must smile in order to cause the system to grant them access.
- **Enrolled Monitoring:** Similar to *Secure Access* mode, but events are triggered at a lower recognition confidence level.
- **Enrolled and Stranger Monitoring:** Similar to *Enrolled Monitoring* mode, but events are also triggered for strangers.

2.5.2 Alarms and Notifications

You can also use SAFR to view recognition events. Recognition events occur when a known, unknown, or unrecognized person appears in the view of a camera. The types of recognized persons are:

- **Unrecognizable:** A face was detected but it wasn't of sufficient quality to attempt recognition.
- **Stranger:** The person's face is of sufficient quality to recognize them, but they're not registered in SAFR's Identity Database.
- **No-Concern:** Registered person without a name.
- **No-Concern:** Registered person with a name.
- **Concern:** Registered person who has been marked as a person of concern.
- **Threat:** Registered person who has been marked as a known threat.

There are several different combinations of these conditions that are triggered. The following graphic shows multiple events populated in the Digifort alerts panel:



2.6 Troubleshooting Tips

Note: When closing SAFR, use the **Quit SAFR** option on the **File** menu. Closing SAFR using the Window Close button will cause you to lose the SAFR state settings and connected cameras for that window.

- If detection or recognition results in few faces found or recognized, check that the Digifort video feeds are of a sufficiently large frame size.
- If Digifort cameras do not appear in the SAFR Desktop Client, make sure you have added cameras to Digifort as described in Connect Your Cameras to Digifort.
- If events are not being triggered, ensure the correct SAFR video processing mode is selected.