

# Netflow Configuring Face Detection tool

To configure the basic Face detection tool, do the following:

1. Select the **Face detection** object.

Face detection	
▼ <b>Object identification</b>	
Enable	Yes
Name	Face detection
▼ <b>Object features</b>	
1 Real-time recognition	Yes
2 Record objects tracking	Yes
3 Video stream from camera	High-quality video stream
4 Real-time recognition on external service	No

2. If you need to use this detection tool for real-time face recognition, set the corresponding parameter to **Yes**
3. If you need to record metadata, select **Yes** from the **Record objects tracking** list (2).
4. If the camera supports multi streaming, select the stream for which detection is needed (3). For the correct operation of the **Face detection**, it is recommended to use a High-quality video stream.
5. If you need to use this face detection tool in real-time set **Yes** for the **Real-time recognition on external service** parameter (4).
6. If you need to save age and gender information for each captured face in the database, select **Yes** in the corresponding field (1).

## Note

The average error in age recognition is 5 years.

Face detection		
∨	<b>Other</b>	
1	Age and gender	No
2	Camera transform	No
3	Decoder mode	CPU
4	Face detection period (msec)	250
5	Face mask detection	No
6	Filter false alarms	Yes
7	Frame size change	1920
	Maximum face height	100
8	Maximum face width	100
	Minimum face height	5
	Minimum face width	5
9	Minimum threshold of face authenticity	90
10	Mode	CPU
11	Send face images	No
12	Track loss time	500

7. If you use a bi-spherical lens, the detector will analyze two 180° spherical images by default. This may decrease recognition quality. To dewarp the image before detection, select **Yes** for the **Camera transform** parameter (2). This parameter is relevant for other types of image transformation as well.
8. Select a processing resource for decoding video streams (3). When you select a GPU, a stand-alone graphics card takes priority (when decoding with NVIDIA NVDEC chips). If there is no appropriate GPU, the decoding will use the Intel Quick Sync Video technology. Otherwise, CPU resources will be used for decoding.
9. Set the time (in milliseconds) between face search operations in a video frame in the **Face detection period (msec)** field (4). Acceptable values range is [1; 10000]. Increasing this value decreases the Server load, but can result in some faces being undetected.
10. If you plan to apply the masks detection tool, set **Yes** for the **Face mask detection** parameter
11. In some cases, the detection tool may mistake other object for a face. Select **Yes** in the **Filter false alarms** field (6) to filter out non-face objects, while calculating the vector model of a face and its recording into the metadata DB. If the filtering is on, false results will appear in the detection feed but will be ignored during searches in the archive.
12. Analyzed framed are scaled down to a specified resolution (7, 1920 pixels on the longer side). This is how it works:
  - a. If the longer side of the source image exceeds the value specified in the **Frame size change** field, it is divided by two.

- b. If the resulting resolution falls below the specified value, it is used further.
- c. If the resulting resolution still exceeds the specified limit, it is divided by two, etc.

**Note**

For example, the source image resolution is 2048\*1536, and the specified value is set to 1000.

In this case, the source resolution will be halved two times (512\*384), as after the first division, the number of pixels on the longer side exceeds the limit (1024 > 1000).

**Note**


If detection is performed on a higher resolution stream and detection errors occur, it is recommended to reduce the compression.

- 13. Specify the minimum and maximum sizes of the captured faces as a percentage of the frame size (**8**).
- 14. In the **Minimum threshold of face authenticity** field, set the minimum level of face recognition accuracy for the creation of a track (**9**). You can set any value by trial-and-error. No less than 90 is recommended. The higher the value, the fewer faces are detected, while the recognition accuracy increases.
- 15. Select the processor for the face detection – CPU or NVIDIA GPU

**Attention!**

It may take several minutes to launch the algorithm on NVIDIA GPU after you apply the settings. You should use caching to speed up future launches

- 16. N/A
- 17. Enter the time in milliseconds after which the face track is considered to be lost in the **Track loss time** field (**12**). Acceptable values range is [1; 10000]. This parameter applies when a face moves in a frame and gets hidden behind an obstacle for some time. If this time is less than the set value, the face will be recognized as the same.

18. In the preview window, set the rectangular area of the frame in which you want to perform face detection. To select the area, move the anchor points .



19. Click the **Apply** button.

The basic Face detection tool is now configured.