
CONTROL4 FACE RECOGNITION

This driver provides a way to identify a face and person from any URL image. You can use this driver to check images from almost any IP camera which can be served with Control4. The driver supports Basic authentication for IP cameras and if you can get a URL for a snapshot then this driver will work!

INSTALLATION

You must install [BlackWire Driver Manager](#) for this driver to license. BDM provides auto updates and better licensing.

This driver uses Microsoft's Face API for recognition. The free tier provides you with 30,000 requests per month. Each identification request will use between 1 and 3 requests depending on whether a face is detected and whether the person is known. If you use this driver correctly with good motion sensing/line crossing detection this should be plenty for most uses. Requests are also used when creating people and adding faces to those people. You can track your usage at any time at <https://portal.azure.com>.

A video showing the full sign up process is available at <https://www.youtube.com/watch?v=PzB3bVlsEFE>. Once signed up you should enter the API Key and the Endpoint in the driver properties.

The free tier allows for up to 1,000 people, each with up to 64 faces added to them. No face images are stored by the API or the driver – only the defining features are stored.

IMPORTANT NOTE

This driver's function is to take an image and identify a person. The driver **cannot** ensure a 100% accurate response and therefore it is vital to take into consideration environmental factors concerning the camera being used. For best practices and guidelines please see <https://docs.microsoft.com/en-gb/azure/cognitive-services/face/concepts/face-detection#input-data>

TROUBLESHOOTING

1. If you run into issues with setting up this driver with BDM then please try the following:
 - Re-entering your license key
 - Rebooting your director
 - Logging out and back in on the BDM driver

If you still have issues please email shivam@shivampaw.com with details.

ADDING PEOPLE & FACES

The driver provides you with a web interface to add people and their faces. Faces can be added via an image URL. You can upload an image to <https://imgur.com> if needed. The web service URL is shown in the driver properties. When you visit the web interface (which may take a couple of seconds to fully load) you will see a list of people added and you will be able to add new people by entering their name.

When you have added the people, you will be able to add images. Use **clear** images where the face is clearly seen. It may also be worth capturing images from the camera that will be doing the detection. If you make a mistake, delete the person and re-add them. You can see how many faces have been added for each person in the web interface.

IMPORTANT

Once you have added all the people and their faces (we recommend at least 5 faces per person), you **MUST** press the blue link to train the faces. This can take a few minutes and you can check the status with the other blue link. If you do not do this then the driver **WILL NOT WORK**. You **MUST** re-train when updating people and faces.

FEATURES

The driver includes two variables: **Person Name** and **Confidence Level**. The Person Name will contain the name of the person detected. If an unknown face is detected then this will be blank. The Confidence Level will be a float number between 0 and 100 showing the confidence level of the recognition. If an unknown face is detected, this will be 0.

The driver itself has 2 programming events. One is called **Known Face Detected**. This will fire when a known face has been detected. At this point, you can use the variables to program something to happen. For example, if the Person Name is "John" then turn on their favourite music in their room and announce, "Hello John".

The other event is called **Unknown Face Detected**. This event is fired when a face is detected but does not match any of the faces you added in the web interface.

The driver contains a programming action that must be used to trigger the fetching of an image and detection of a plate. The action is called **Fetch Image And Detect Face**. You would normally trigger this action when motion is detected on a sensor.

You can also use push notification images with this driver. In **Agents → Push Notifications** you can choose an attachment and this driver has an option to send the last recorded image (which includes a face) as a push notification.

USE CASES

This driver brings Face Recognition functionality to Control4. If you have a camera that can get a good image of a face then you can program based of it in Control4.

For example, if you enter through your front door, automatically announce your presence and turn on your favourite radio station.

If an unknown face enters your front door, use our [Text to Speech](#) driver to make a scary announcement and send a push notification to devices with an image of the person.

SUPPORT

For support please contact shivam@shivampaw.com

DISCLAIMER

Note: This driver is not affiliated with Microsoft and relies on their Face API. Should the API be taken down for any reason we will do our best to find an alternative however we can make no guarantees to this extent.