200 XP

Exercise - Install Vision Edge Shell

8 minutes

Perform the following steps in the Azure Cloud Shell environment.

Install the Vision on Edge Solution Accelerator

1. Run the following command to download installer (acs.zip) from GitHub.

```
wget -O acs.zip https://github.com/Azure-Samples/azure-intelligent-edge-patterns/raw/master/factory-ai-vision/Installer/acs.zip
```

```
mslearn@Azure:~$ wget -O acs.zip https://github.com/Azure-Samples/azure-intelligent-edge-patterns/raw/master/factory-ai-vision/Installer/acs.zip
--2021-03-16 09:56:52--  https://github.com/Azure-Samples/azure-intelligent-edge-patterns/raw/master/factory-ai-vision/Installer/acs.zip
Resolving github.com (github.com)... 140.82.121.4
Connecting to github.com (github.com)|140.82.121.4|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://raw.githubusercontent.com/Azure-Samples/azure-intelligent-edge-patterns/master/factory-ai-vision/Installer/acs.zip [following]
--2021-03-16 09:56:52--  https://raw.githubusercontent.com/Azure-Samples/azure-intelligent-edge-patterns/master/factory-ai-vision/Installer/acs.zip
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 185.199.111.133, 185.199.108.133, 185.199.109.133, ...
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|185.199.111.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 8973 (8.8K) [application/zip]
Saving to: 'acs.zip'

acs.zip                     100%[=========================================>]   8.76K  --.-KB/s    in 0s

2021-03-16 09:56:53 (48.1 MB/s) - 'acs.zip' saved [8973/8973]
```

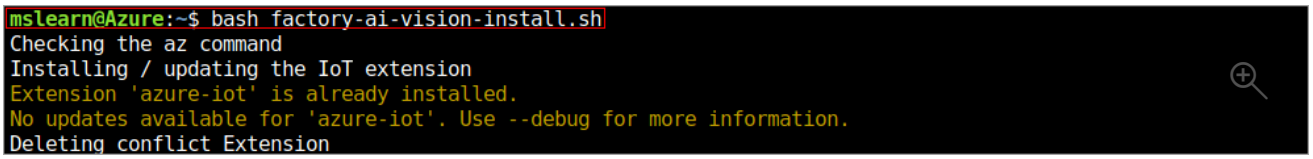
2. Unzip the installer.

```
unzip -o acs.zip
```

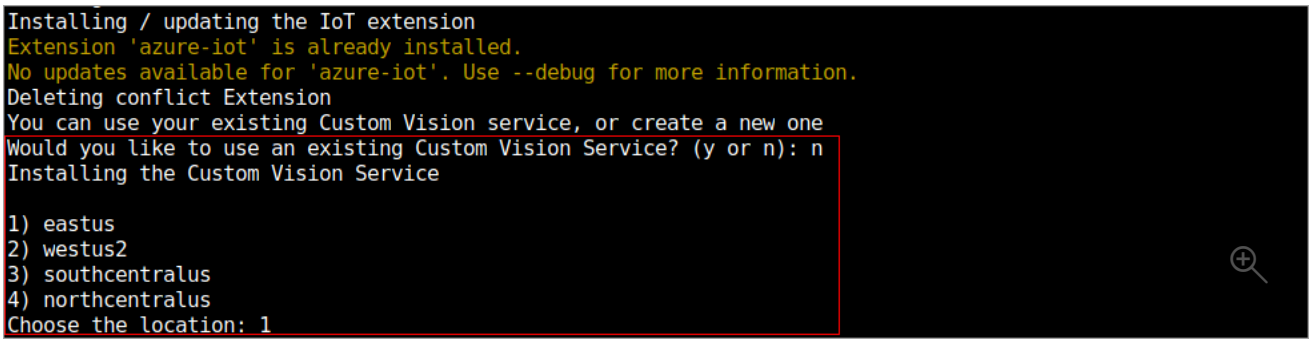
```
mslearn@Azure:~$ unzip -o acs.zip
Archive:  acs.zip
  inflating: deploy-custom-vision-arm.json
  inflating: factory-ai-vision-install.sh
  inflating: deployment.lva.json
  inflating: deployment.opencv.json
```

3. Execute the installer. It will check the az command and check if it requires any installing/updating the IoT extension.

```
bash factory-ai-vision-install.sh
```

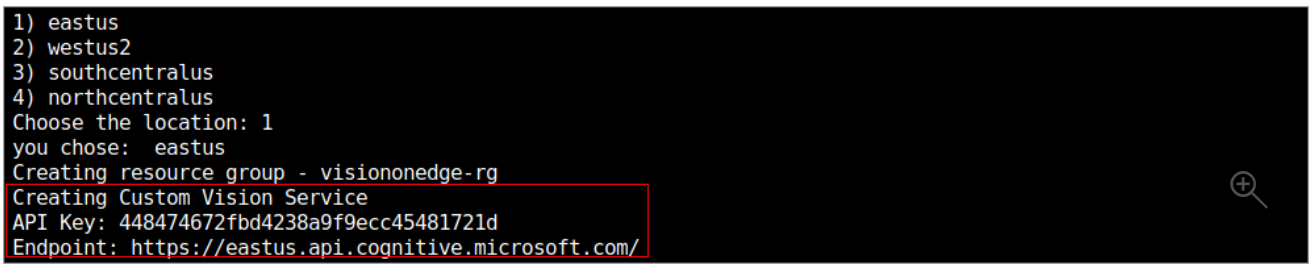


4. You would be asked if you would like to use an existing Custom Vision Service. Choose **no** and go ahead to create a new one with the instruction.



> **Note**
>
> If you choose **yes**, you need to enter your Custom Vision API key and endpoint. You can find your training key **here**.

5. Once you create custom vision service information, make a note of **API key** and **Endpoint**.



6. Next you will be asked if you want to use Azure Live Video Analytics. Choose **yes** and it will create Azure Media Service.

```
Creating Custom Vision Service
API Key: 448474672fbd4238a9f9ecc45481721d
Endpoint: https://eastus.api.cognitive.microsoft.com/
Do you want to use Azure Live Video Analytics? (y or n): y
listing Azure Media Services
factory-ai-vision-install.sh: command substitution: line 222: unexpected EOF while looking for matching `"'
factory-ai-vision-install.sh: command substitution: line 223: syntax error: unexpected end of file
There's no AMS inside the subscription ...
We'll create a Resource Group with Storage Account and AMS inside
Creating Resource Group factoryaija
```

7. Copy the "SERVICE-PRINCIPLE-SECRET" information. You will need the secret information for later use.

```
New Azure Media Service Priniple 'factoryai_2021_03_16_09_08_06' is created
************************************************************************
*** Please copy your SERVICE_PRINCIPAL_SECRET, it cannot be shown again ***
************************************************************************
============================================================
SUBSCRIPTION_ID          :
RESOURCE_GROUP           :
TENANT_ID                :
SERVICE_NAME             :
SERVICE_PRINCIPAL_NAME   :
SERVICE_PRINCIPAL_APP_ID :
SERVICE_PRINCIPAL_SECRET :
============================================================
Press any key to continue...
```

8. There will be a list of IoT hubs, choose the IoT Hub that you created in this module.

```
============================================================
Press any key to continue...
listing IoT Hubs
1) mslearn-hub
2) IoTEdgeDevOps-iothub
Choose the number corresponding to the IoTHub managing your target edge device: 1
```

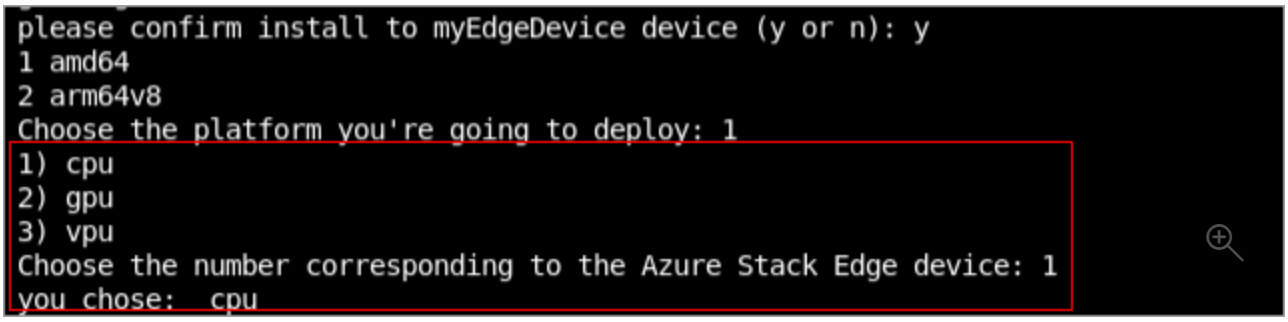
9. It will show a list of devices in your account, and choose the device to install VisionEdge.

```
Choose the number corresponding to the IoTHub managing your target edge device: 1
you chose:  mslearn-hub
Got IoTHub Connection:  HostName=mslearn-hub.azure-devices.net;SharedAccessKeyName=iothubowner;SharedAccessKey=
                                                                                                              =
getting devices
please confirm install to myEdgeDevice device (y or n): y
```

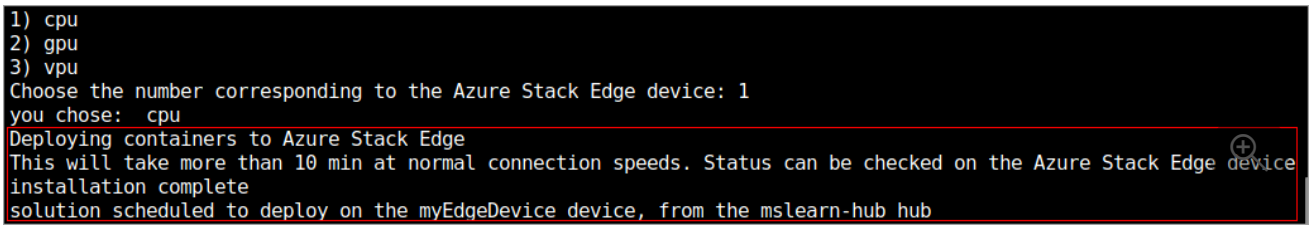
10. Choose the platform you are going to deploy.

```
getting devices
please confirm install to myEdgeDevice device (y or n): y
1 amd64
2 arm64v8
Choose the platform you're going to deploy: 1
```

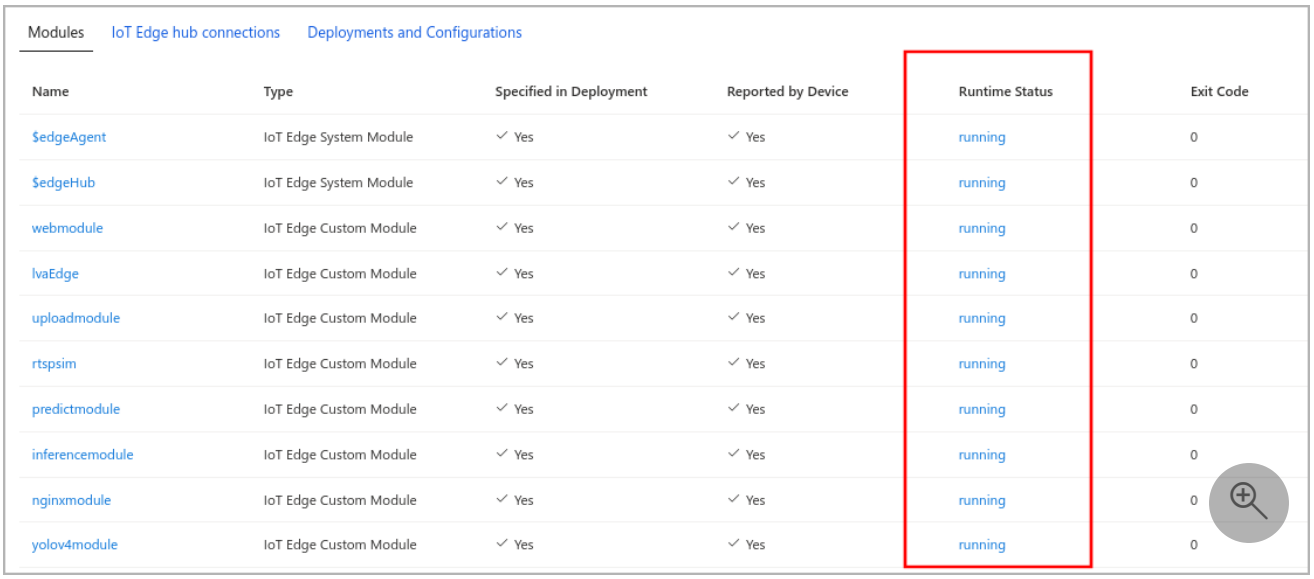
11. You will be asked if your device has a GPU or not. Choose CPU as your Edge device doesn't have it.



12. The installation will be started after. You'll wait for couple minutes to complete the installation. You can check the deployment status on the Azure portal

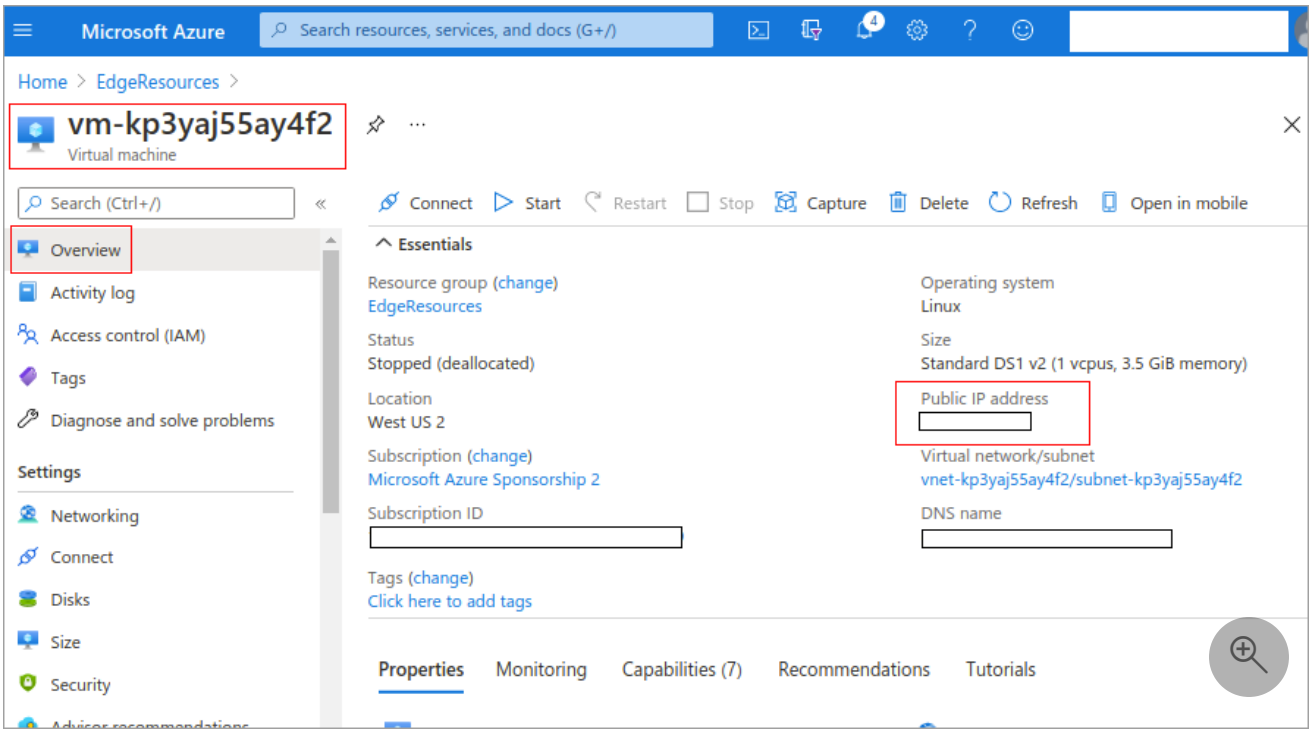


13. You can check the deployment status on the Azure portal. Go to the IoT Hub resource and navigate to IoT Edge tab. Click on the edge device you created for this module to check the status of the modules.

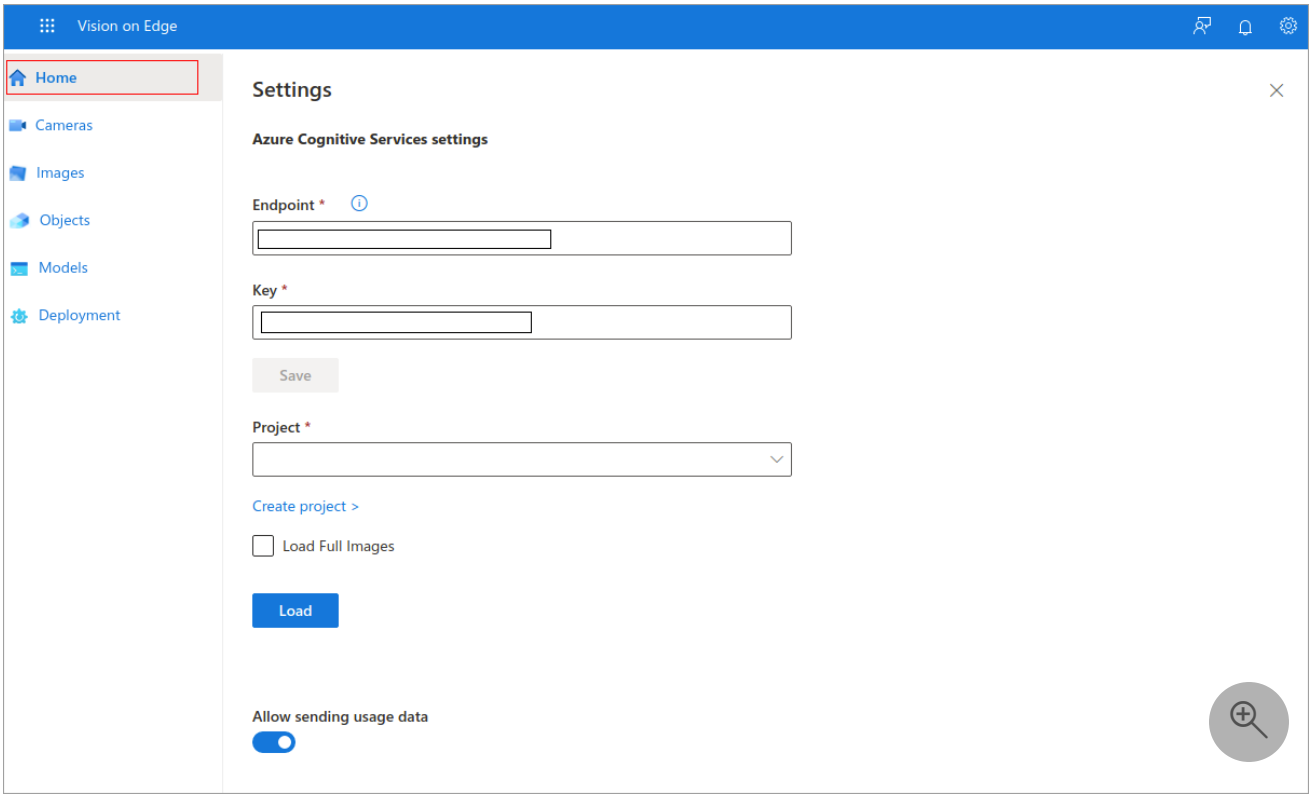


14. Open your browser, connect to **http://YOUR_IP:8181**. You'll connect to the VisiononEdge solution.

15. To find your Public IP address, go to the overview page of your virtual machine and copy it.



16. When you connect to the Vision on Edge solution, click on the Home page.



Check your knowledge

1. In the context of Vision on Edge solution architecture, you use Custom Vision API: *

- ◯ To detect objects with tags given by the API
- ◯ To train a model for your images based on the choice of your machine learning model
- ◯ To train a model of your images based on a pre-built model that Microsoft has

2. When you use a setup script to deploy the required resources in your subscription, which of the following is responsible for installing modules on edge devices? *

- ◯ Deployment manifest
- ◯ Azure Resource Manager templates
- ◯ Azure Container Registry

Check your answers