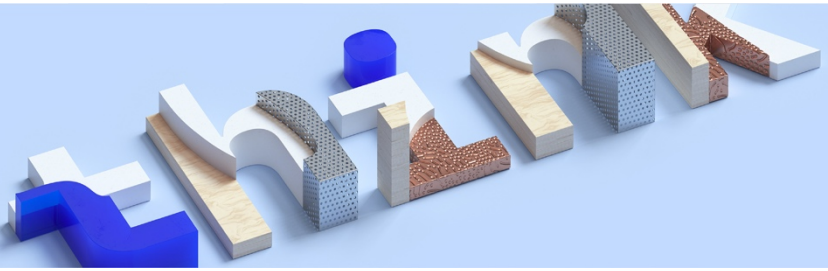


think 2018



Lab Center – Hands-on Lab

Session 4966

Getting Started with Watson IoT Edge Gateways

Running this lab post Think 2018

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1. Getting started

The instructions in this document is a complement to the Lab Handbook for Getting Started with IoT Edge Gateways.

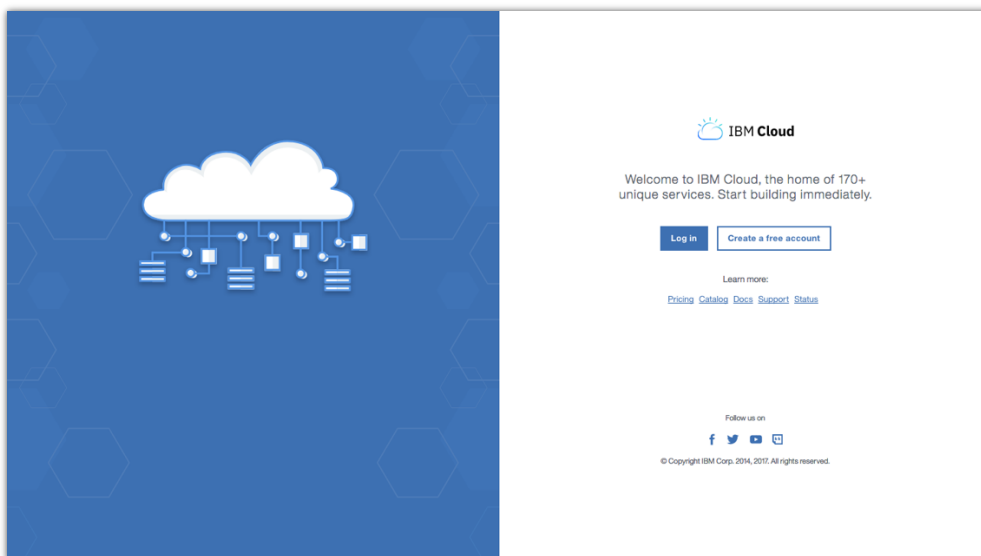
The Lab Handbook is the main source for this lab. It outlines the major sections and steps in the lab,

This Post-Think 2018 Lab Handbook outlines some differences in running the lab in your personal IoT organization and using your own Raspberry Pi with a SenseHat.

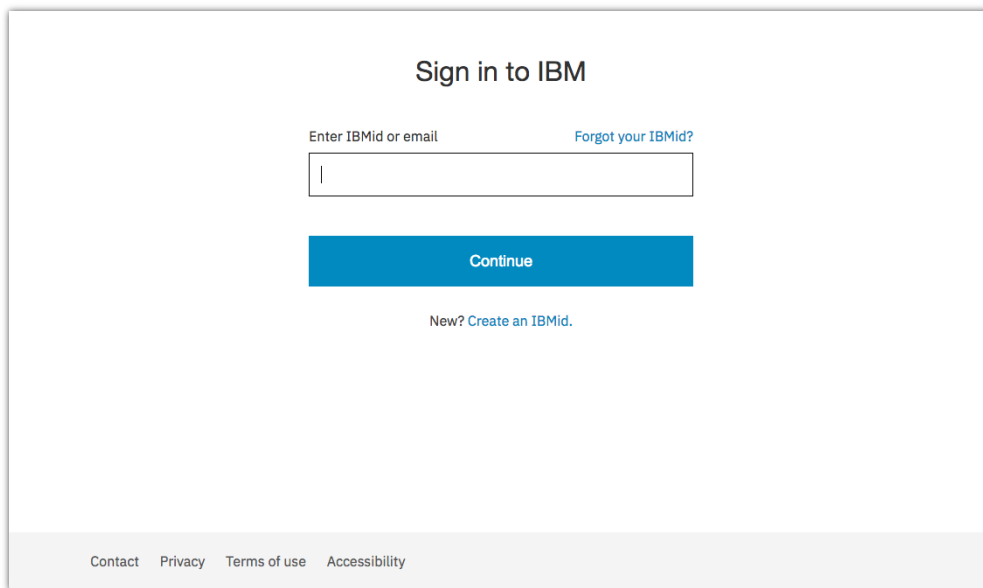
1.1 Logging into IBM Cloud and Watson IoT Platform

To run this lab you need access to IBM Cloud and a IBM ID account.

1. Open the browser on your workstation
2. Enter <https://bluemix.net>
The IBM Cloud welcome page opens



3. If you do not have an IBM ID account, click on **Create a free account** and proceed to the IBM COM account creation. After completing the registration, return to the login page.
4. Click on **Log in** and enter your IBM ID



Sign in to IBM

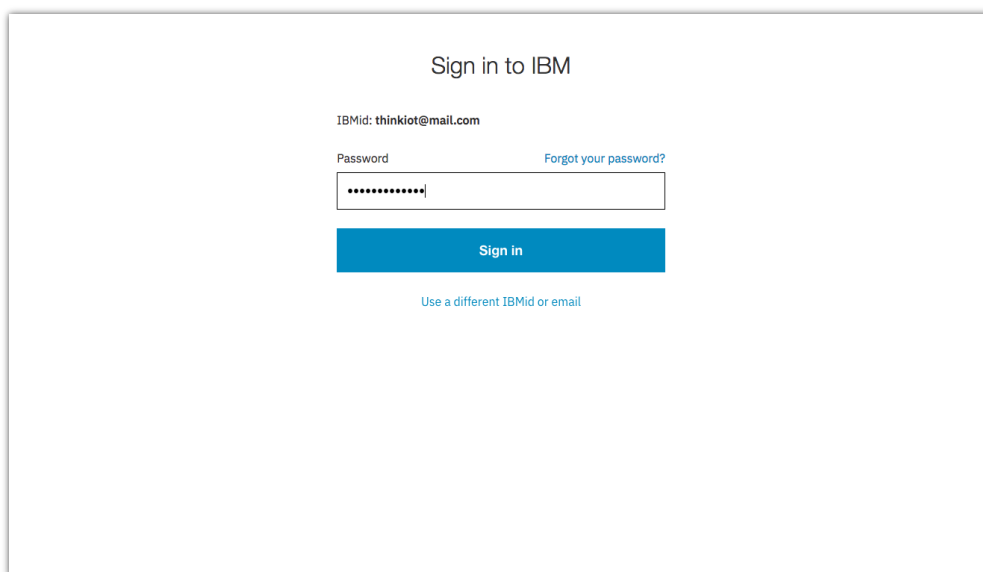
Enter IBMid or email [Forgot your IBMid?](#)

[Continue](#)

New? [Create an IBMid.](#)

[Contact](#) [Privacy](#) [Terms of use](#) [Accessibility](#)

5. Enter your password and click **Sign in**



Sign in to IBM

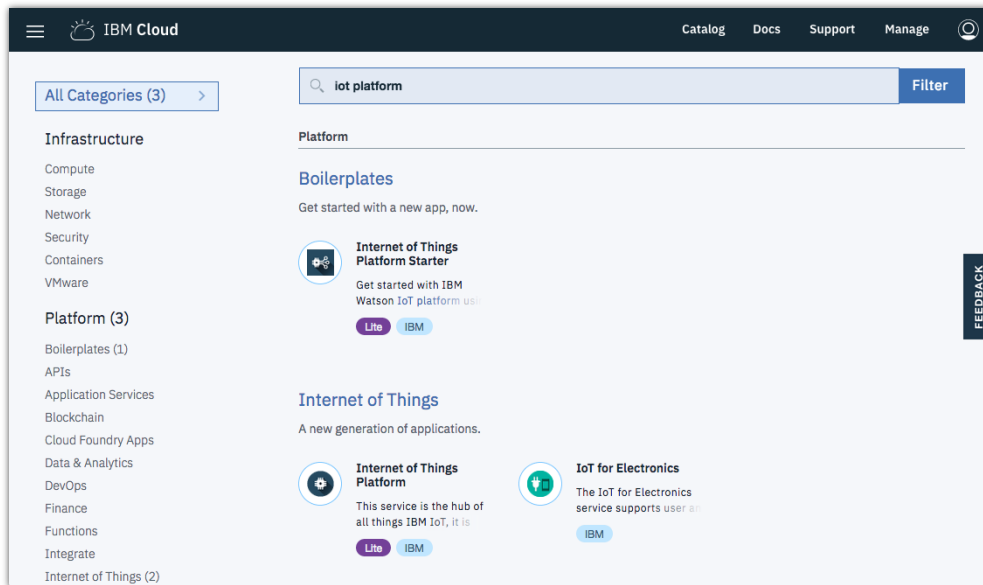
IBMId: thinkiot@mail.com

Password [Forgot your password?](#)

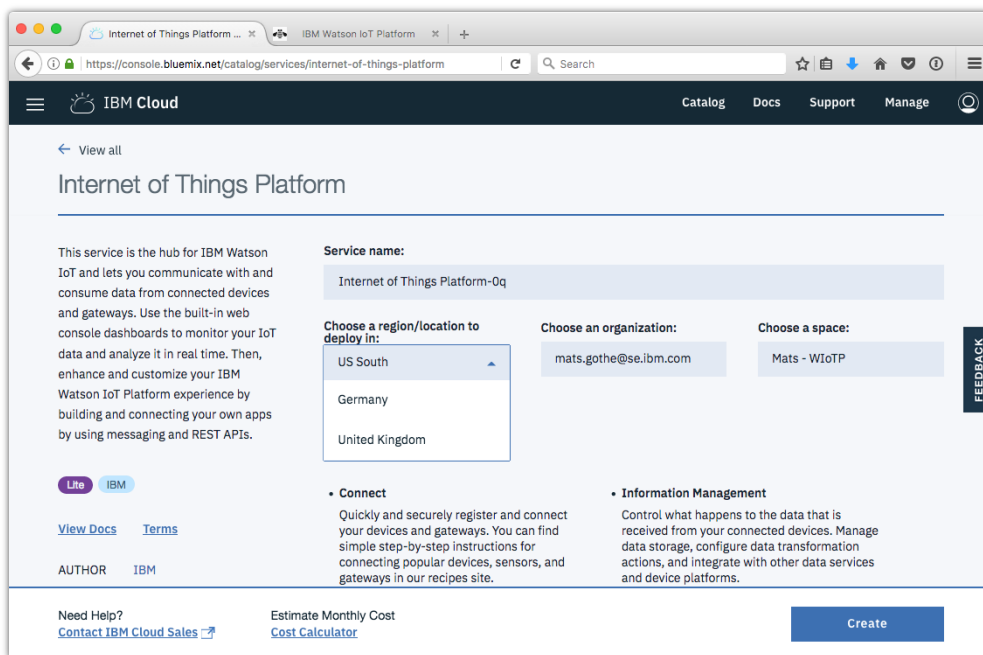
[Sign in](#)

[Use a different IBMId or email](#)

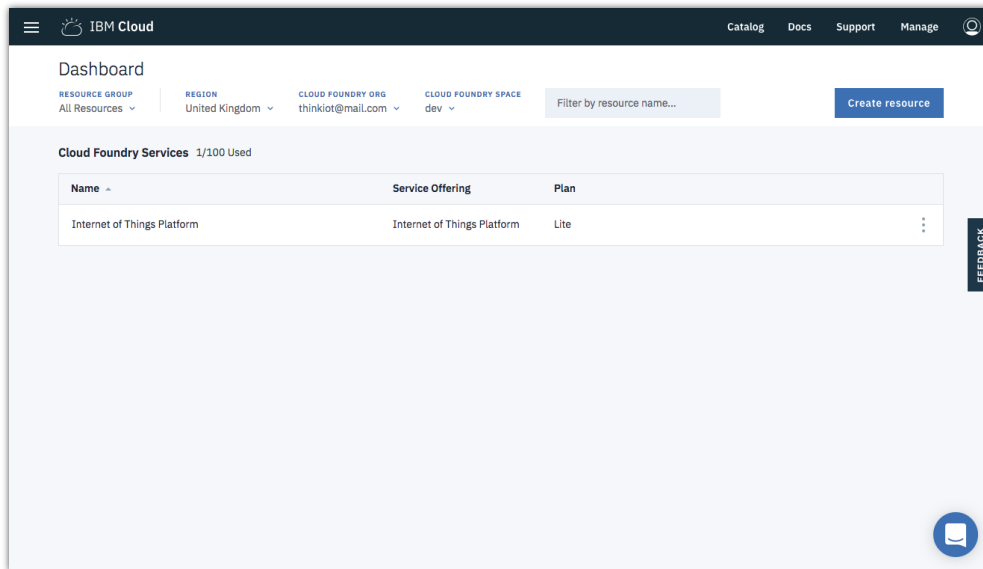
6. The IBM Cloud Dashboard is loaded.
7. If you do not have a **Watson Internet of Things Platform** service, click on **Create Resource**, search for “iot platform” and select the **Internet of Things Platform** service



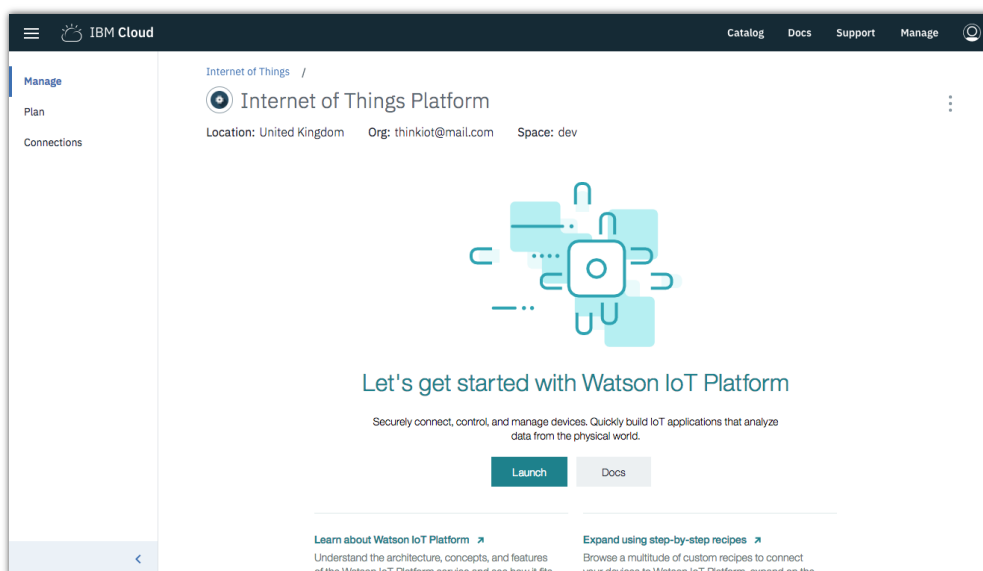
8. In the confirmation dialog, make sure you select the **US South** region.
Not that IoT Edge Preview 2 is only available to IoT organizations running in US South.



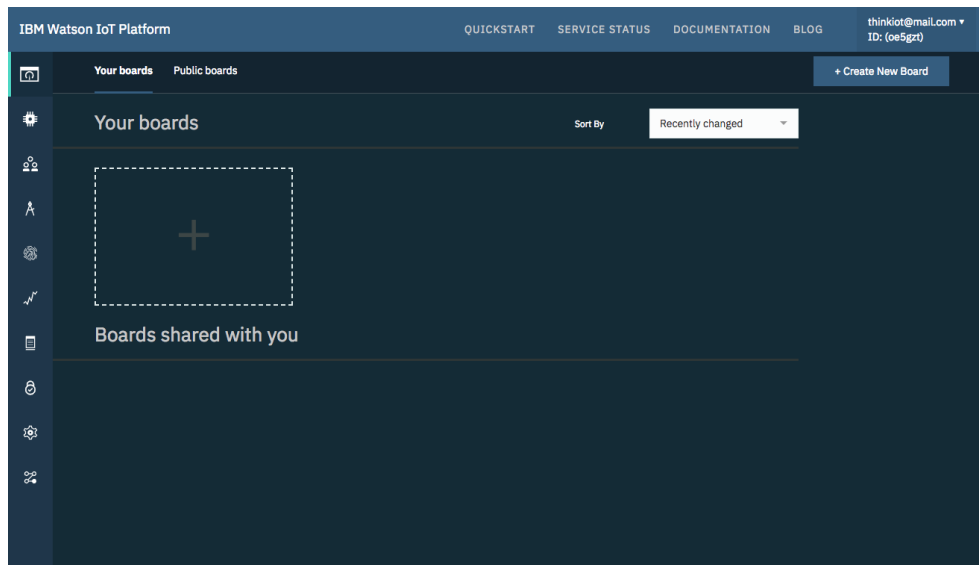
9. Click **Create**.



10. In the list of Services, click on the **Watson Internet of Things Platform** service.
The Watson Internet of Things Platform service opens.



11. Click **Launch** to open the IoT platform web interface.
The Watson IoT Platform opens and shows the platform dashboard.

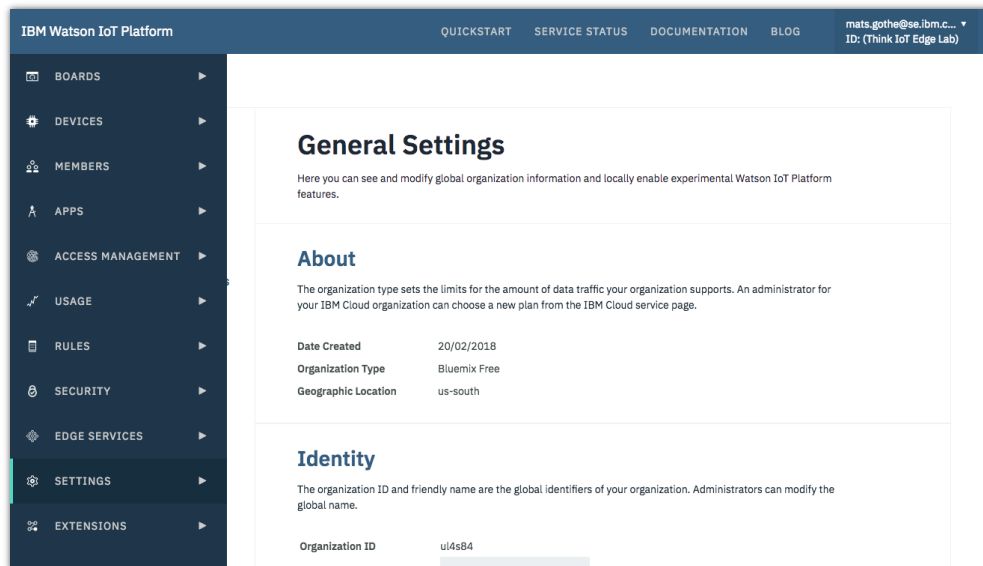


You have now successfully logged into IBM Cloud and launched the IBM Watson IoT Platform service and the IoT organization you will use in this lab.

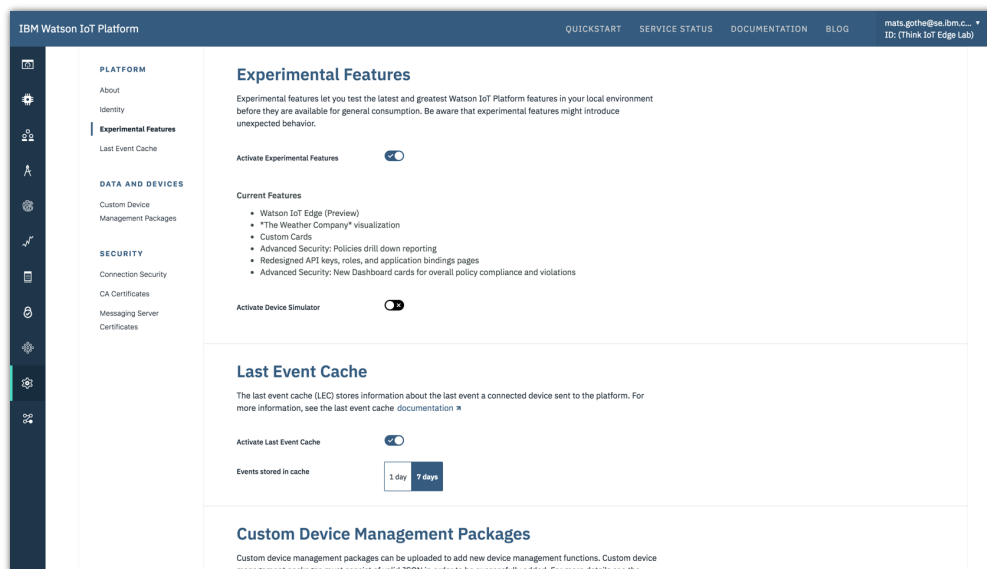
1.2 Activating IoT Edge Preview 2 Beta

In this lab we will be using the Watson IoT Platform and IoT Edge Preview 2 Beta. To activate the IoT Edge Preview 2 Beta

1. From the navigation bar, select **Settings** to open the settings page.



2. Scroll down to the Experimental Features section, or click on **Experimental Features** in the left-hand section outline



3. Experimental Features section, turn on the switch to **Activate Experimental Features**.

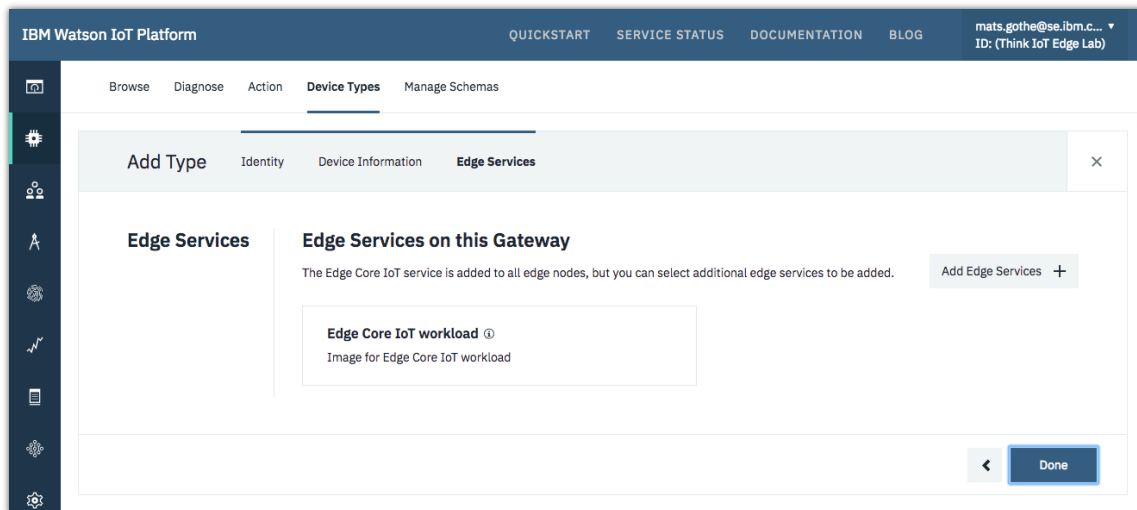
You have now activated Watson IoT Edge Preview 2 beta.

2 Configuring Watson IoT Edge

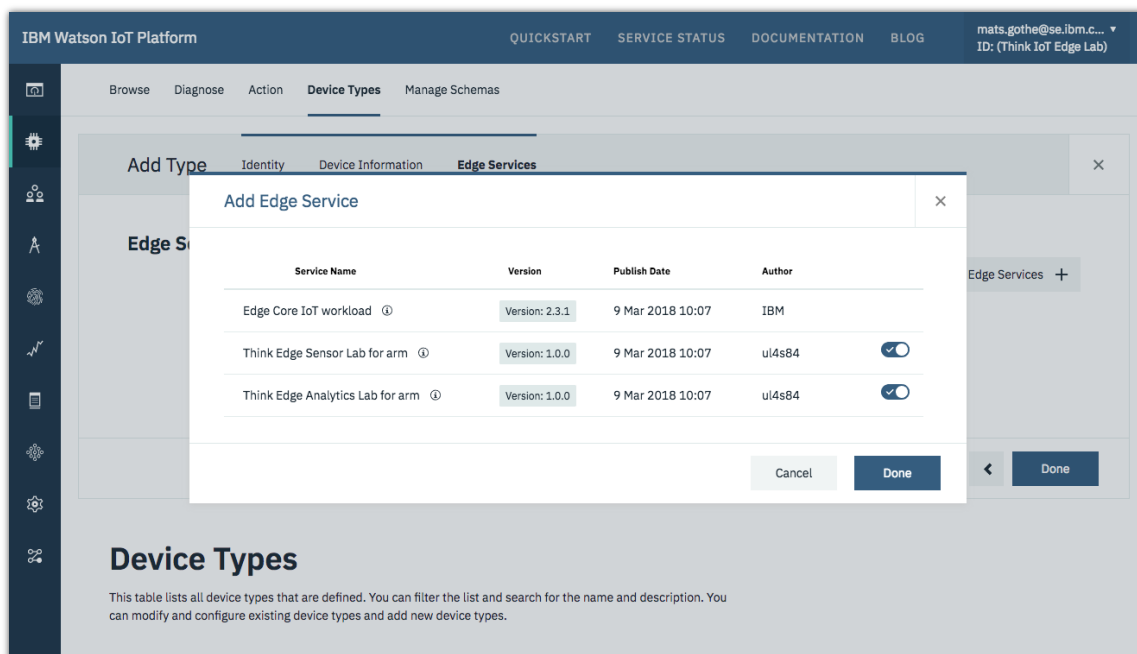
Section 4 in the IoT Edge Lab Handbook outlines the steps in the lab to create an Edge Gateway Type and an Edge Gateway instance.

Note: New IoT Organizations will not have any custom services in the IoT Edge Service Catalog.

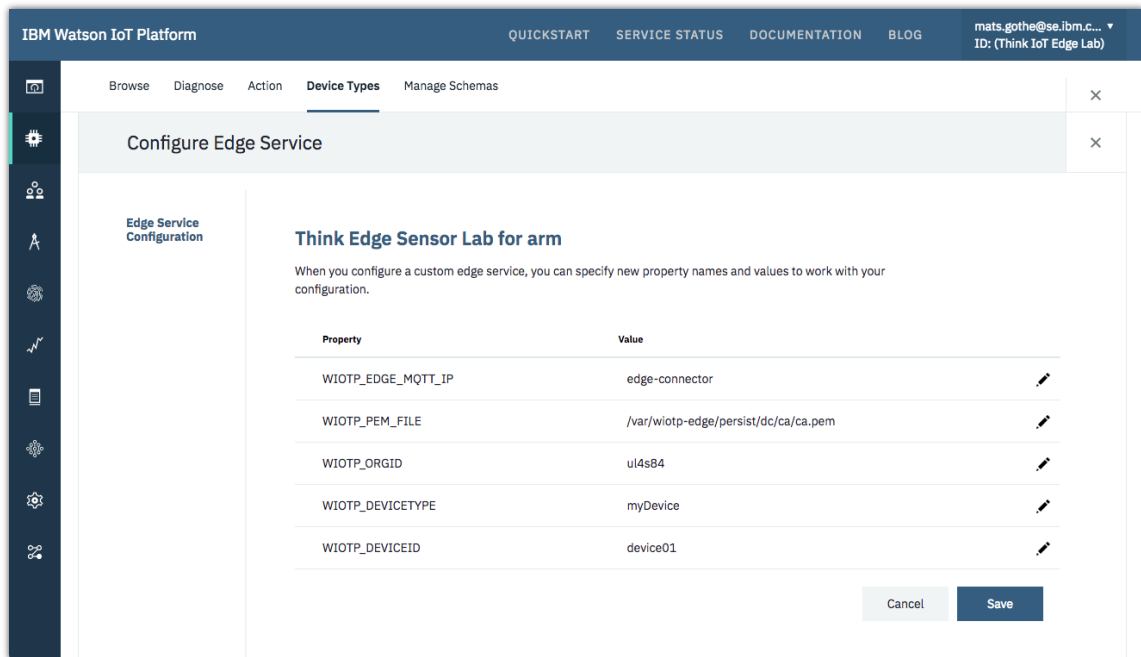
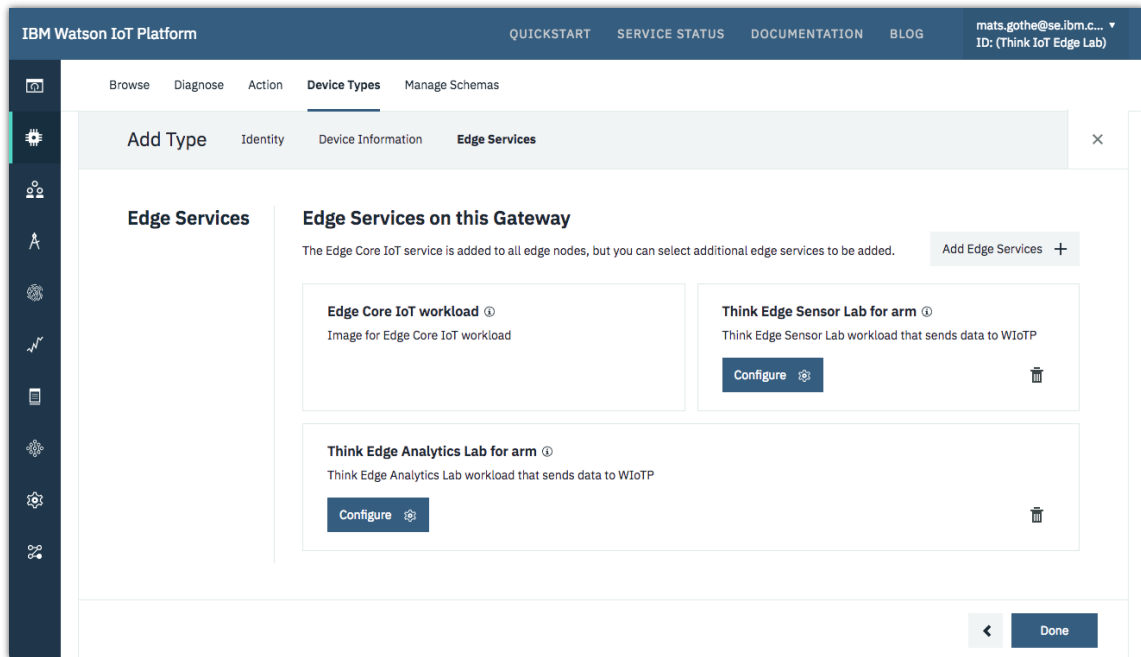
Note: The Edge Services page in the EdgeGatewayType will only show one service.



Note: Clicking on the **Add Edge Services** will NOT display the options below for selecting the **Think Edge Sensor Lab for arm** and **Think Edge Analytics Lab for arm** services



Note: In this version of the lab you will manually start the Docker images on the IoT Edge Gateway. You will not setup the properties for the Edge Services. The Docker Run command will contain the environmental parameters that you will pass to the Edge Service.



3 Configuring the Raspberry Pi / ARM gateway

To run this lab you need

- A Raspberry Pi version 3
- A SenseHat
- A SD card (8 or 16GB)

This lab uses a pre-configured SD card image for the Raspberry Pi.

- Download the latest version of the SD card image
- Flash the image to your SD card
- Boot the Raspberry Pi with the SD card
- Note down the IP display on the SenseHat display

Follow the steps in the Lab Handbook to log into the Raspberry Pi and configure the IoT Edge gateway.

- If you are using Windows, use the PuTTY SSH terminal window to run Linux commands on the Raspberry Pi
- If you are using Mac, open a Terminal Window and run the ssh command
- Open an SSH connection to the IP address you noted down when the Raspberry Pi booted

To configure the Edge Gateway

1. Run as root

```
sudo su -
```

1. Unregister

```
sudo hzn unregister
```

2. Run the command after updating the parameters to match your device type and device id and org id

```
sudo wiotp_agent_setup --org ul4s84 --deviceType EdgeGatewayType --  
deviceId EdgeGateway --deviceToken 12345678 --cloudDisableCertCheck  
true
```

3. Wait for the agreements to be settled

```
sudo hzn agreement list
```

4. Wait for the docker containers to be downloaded

```
sudo docker images
```

5. Wait for the docker containers to run

```
sudo docker ps
```

6. Run the commands to start the IoT Edge edgelab-sensor service. Update the parameters to match your device type and device id and org id.

```
sudo docker run --privileged -v /var/wiotp-  
edge/persist/dc/ca:/var/wiotp-edge/persist/dc/ca --env  
WIOTP_ORGID=ul4s84 --env WIOTP_DEVICETYPE=EdgeSensorType --env  
WIOTP_DEVICEID=EdgeSensor --network $(sudo docker network ls | grep  
"edge-core-iot" | awk '{print $2}') -it edgelab-sensor:0.0.9
```

7. Run the commands to start the IoT Edge **edgelab-sensor** and **edgelab-analytics** services