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Hands-on Lab Session 4966

Getting started with Watson IoT Edge Gateways

think 2018

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Mats Gothe / Leonardo Tekatscz / Jeffrey Achtermann
Watson Content & IoT Platform



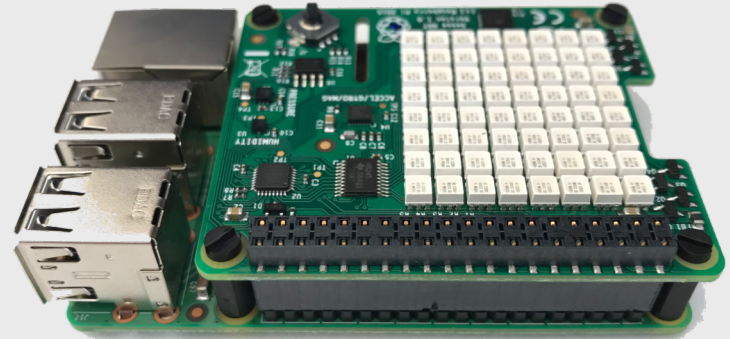
Welcome to this lab

Getting started with Watson IoT Edge Gateways

In the IoT Edge hands-on lab you will learn about the steps to configure and connect a Raspberry Pi device to run as a IoT Edge Gateway connected to the Watson IoT Platform

You will also learn about the distribution of Data Management and custom Edge Service workloads to the IoT Edge Gateway. These workloads will perform filtering, transformation and analytics on edge sensor data events.

As a lab attendee, you will explore the user experience in working with IoT Edge Gateways and provide your feedback on the design of this preview 2 beta capability.

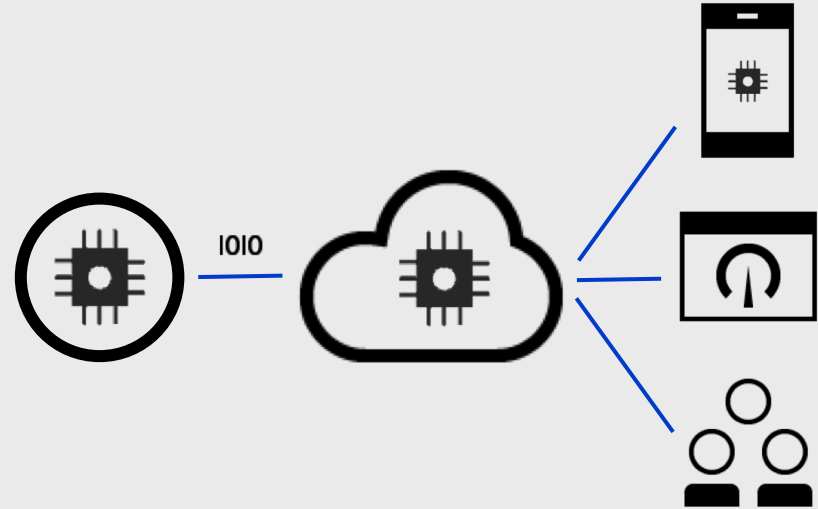


What is the Watson IoT Platform?

The IBM Watson Internet of Things Platform is a fully managed, cloud-hosted service available in IBM Cloud

Devices get connected and start sending data securely to the IBM Watson IoT Platform service using the MQTT messaging protocol

From there, devices are managed using an online dashboard or secure APIs, so that cloud applications can access real-time and cached device data

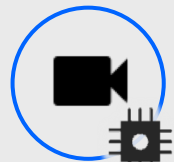
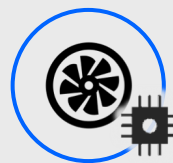
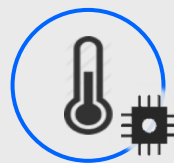
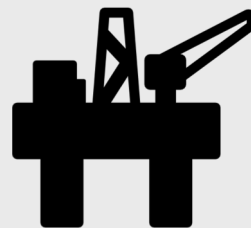


What is Edge?

Edge devices generally live on the edge of the network at a physical location

They are specific hardware sensors, industrial controllers, or other industrial devices

The edge is creating challenges for cloud based applications which rely on receiving data from devices at the edge to drive the business process, and accomplish the business goal



Why Edge?

Laws of Edge

- Device data volumes are growing and transmitting to the cloud is unworkable in many cases
- Systems require rapid reaction times and cloud round trip introduce unacceptable latency
- Data privacy and regulations require data to remain at the edge

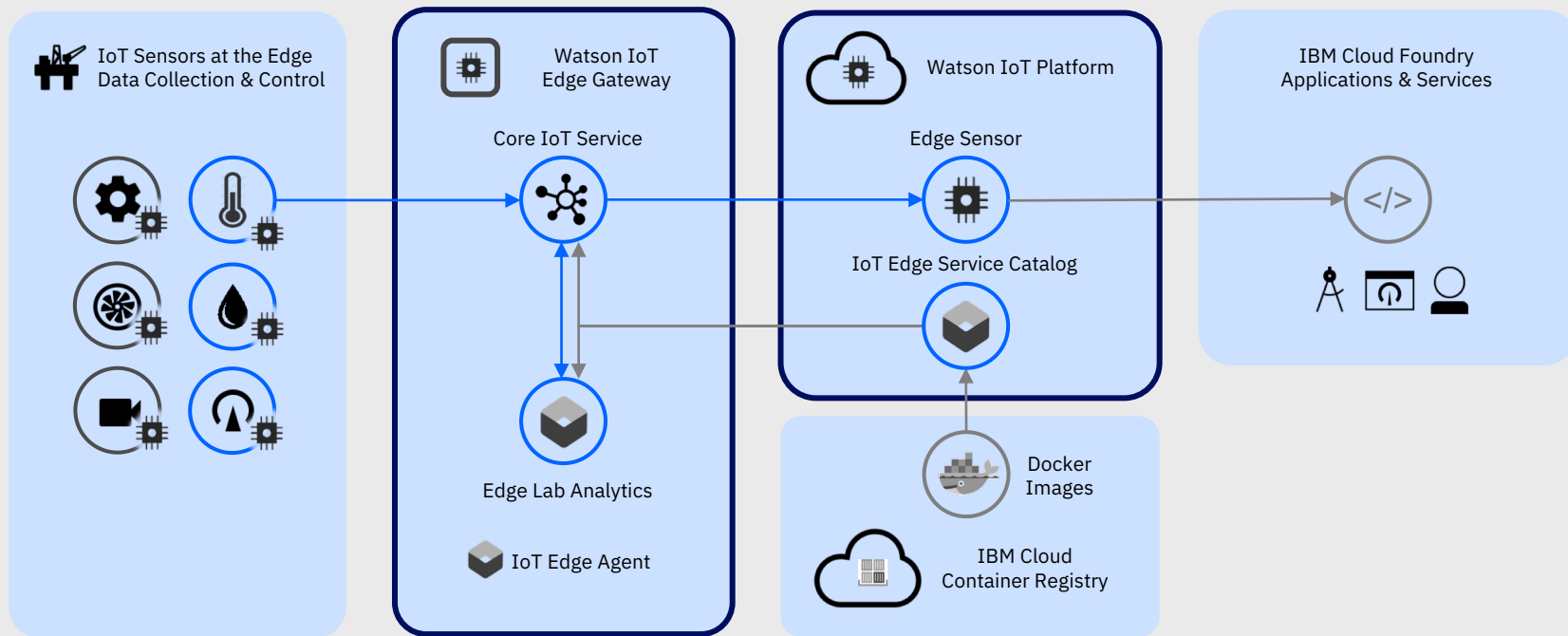
Edge devices are becoming more powerful

- Many Edge nodes are capable of significant processing
- Data gravity is driving computation and analytics closer to the data

Edge use-cases across all industries

- The edge is driving use-cases across Manufacturing, Electronics, Automotive, Natural resources, Healthcare.

What is the IoT Edge topology?



4 sections

1

Configure an
Edge Gateway

Watson
IoT Platform



Gateway Type
Gateway
Edge Sensor Type
Edge Sensor



2

Configure the
Raspberry Pi

Raspberry Pi
Gateway



IoT Edge Agent



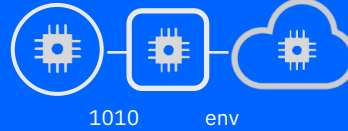
Edge Services



3

Explore IoT Edge
Workloads

Data Management
Edge Services



1010

env

4

Explore the
Safety application



Getting started

The Lab handbook guides you on the steps you will perform to complete the sections in this lab

- Introduction and Getting started
- Overview of IoT Platform and Edge
- Configuring the IoT Platform
- Configuring the Raspberry Pi
- Working with IoT Edge Data Management workloads
- Working with IoT Edge Service workloads
- Exploring the Safety Application
- Further Reading
- Troubleshooting



Lab Center – Hands-on Lab

Session 4966

Getting Started with Watson IoT Edge Gateways

Mats Gothe
Senior Design Lead
Watson Content & IoT Platform
mats.gothe@se.ibm.com

Getting started

The Lab handbook guides you on the steps you will perform to complete this lab

You will use the web browser running on your local workstation

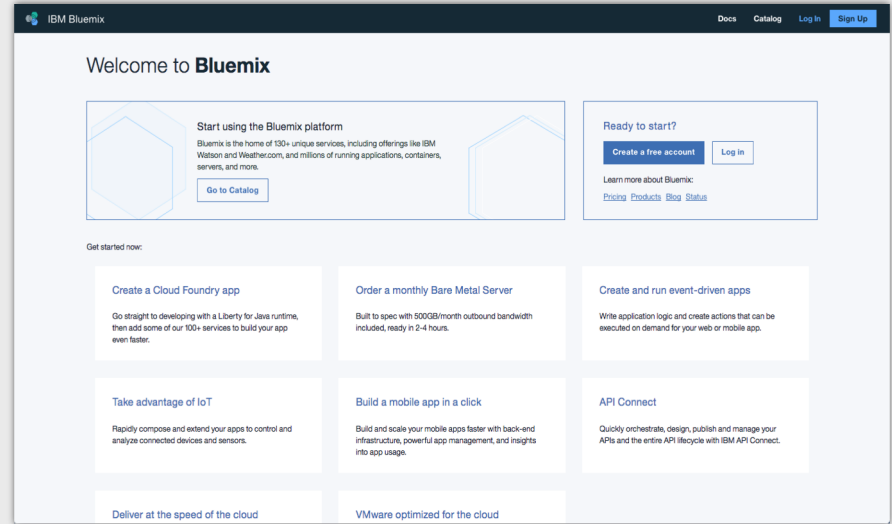


Getting started

The Lab handbook guides you on the steps you will perform to complete this lab.

You will use a web browser running on your local workstation.

You will be logging into the IBM Cloud platform and the Watson IoT Platform service



<https://bluemix.net>

Username: -

Password: -

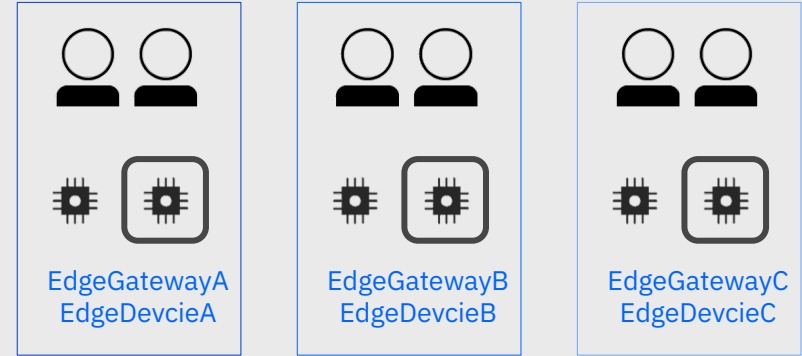
Getting started

The Lab handbook guides you on the steps you will perform to complete this lab.

You will use a web browser running on your local workstation.

You will be logging into the IBM Cloud cloud platform and the Watson IoT Platform service

**You will work in pair of two,
in a shared IoT organization,
and connect the Raspberry Pi
given to your lab station,
using unique names on devices and types**



<http://ul4s84.internetofthings.ibmcloud.com/>

Getting started

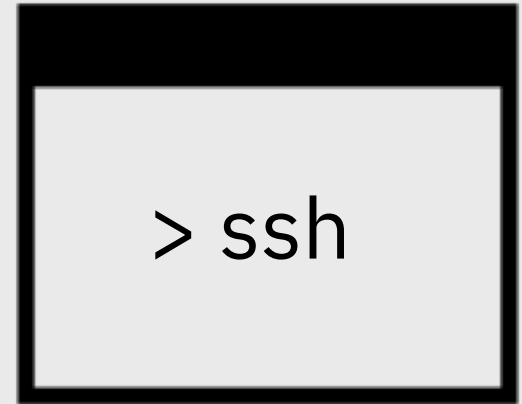
The Lab handbook guides you on the steps you will perform to complete this lab.

You will use a web browser running on your local workstation.

You will be logging into the IBM Bluemix cloud platform and the Watson IoT Platform service.

You will work in pair of two, in a shared IoT organization, and connect the Raspberry Pi given to your lab station

You will connect directly to the Raspberry Pi using a PuTTY terminal window on your workstation



Troubleshooting

Critical steps for success

- **Use your unique names**
- **Getting the wiotp-agent-setup command correct**
- **Setting the properties on the edgelab services**

Ask your lab facilitators for help

Follow steps in the Troubleshooting section
in the Lab Handbook when advised



Provide your feedback

Watson IoT Platform Team welcomes your feedback on the usability of Watson IoT Edge solution

Help us by providing your feedback, advises and priorities on the lab survey



After this lab

There are much more to explore on the Watson IoT Platform after this lab!

Create your free IBM Cloud account and try IoT Platform and other cloud services.

Go to [Bluemix.net](https://bluemix.net) to create your account



Learn more about Watson IoT Platform

Learn more about IBM's point of view on the
Internet of Things

- ibm.com/IoT

Try out our Internet of Things platform

- ibm.biz/try_iot
- [Bluemix.net](https://bluemix.net)

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Thank you

Mats Gothe
Watson Content & IoT Platform
—
mats.gothe@se.ibm.com

