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Contents

How to Register Gateways in IBM Watson

Platform

This recipe will help you to register your Gateways in IBM Watson Internet of Thi

Recipes@WatsonIoT

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Overview

Skill Level: Beginner

Beginner

Introduction The IBM Watson Internet of Things Platform is a fully managed, cloud-hosted servic
to derive value from Internet of Things (IoT) devices. When combined with the IBM Bluemix plat
Platform provides simple, but powerful application access to IoT devices and data. You can rapid
applications, visualization […]

Ingredients

IBM Bluemix account

Step-by-step

1   Introduction

The IBM Watson Internet of Things Platform is a fully managed, cloud-hosted service that r
value from Internet of Things (IoT) devices. When combined with the IBM Bluemix platform
provides simple, but powerful application access to IoT devices and data. You can rapidly c
applications, visualization dashboards, and mobile IoT apps. Create IoT applications that fe
backend enterprise applications.

Gateways are a specialized class of devices in Watson IoT Platform which serve as access p
Platform for other devices. Gateway devices have additional permission when compared to
perform the following functions:

- Register new devices to Watson IoT Platform

- Send and receive its own sensor data like a directly connected device,

- Send and receive data on behalf of the devices connected to it

- Run a device management agent, so that it can be managed, also manage the devices c

Refer to the documentation for more information about the Gateway support in Watson IoT

This recipe shows how one can setup an Watson IoT Platform Organization and register Ga
or more devices can be connected to IBM Watson IoT Platform via the Gateway.

2   Create Watson IoT Organization

When you create a service "**Internet of Things Platform**" in IBM Bluemix, a new Organizati
This Watson IoT organization is a space used for connecting and managing devices (and Ga
Watson IoT Platform, so that your applications can access their live and historical data.

You can create an Watson IoT Platform organization by using IBM Bluemix. Follow the belo

- Open your favorite browser and go to Bluemix. If you are an existing Bluemix user, log i
  to Bluemix you can sign up for a free 30 day trial.

- Once you signed up to Bluemix, click this link to create the Watson IoT Platform service

- Type a name for your service and click Create button as shown below,

- Observe a Welcome page, click on *Launch* button to enter into the IBM Watson IoT Plat
  The IoT organization is a space used for connecting and managing devices to the IBM W

that your applications can access their live and historical data.
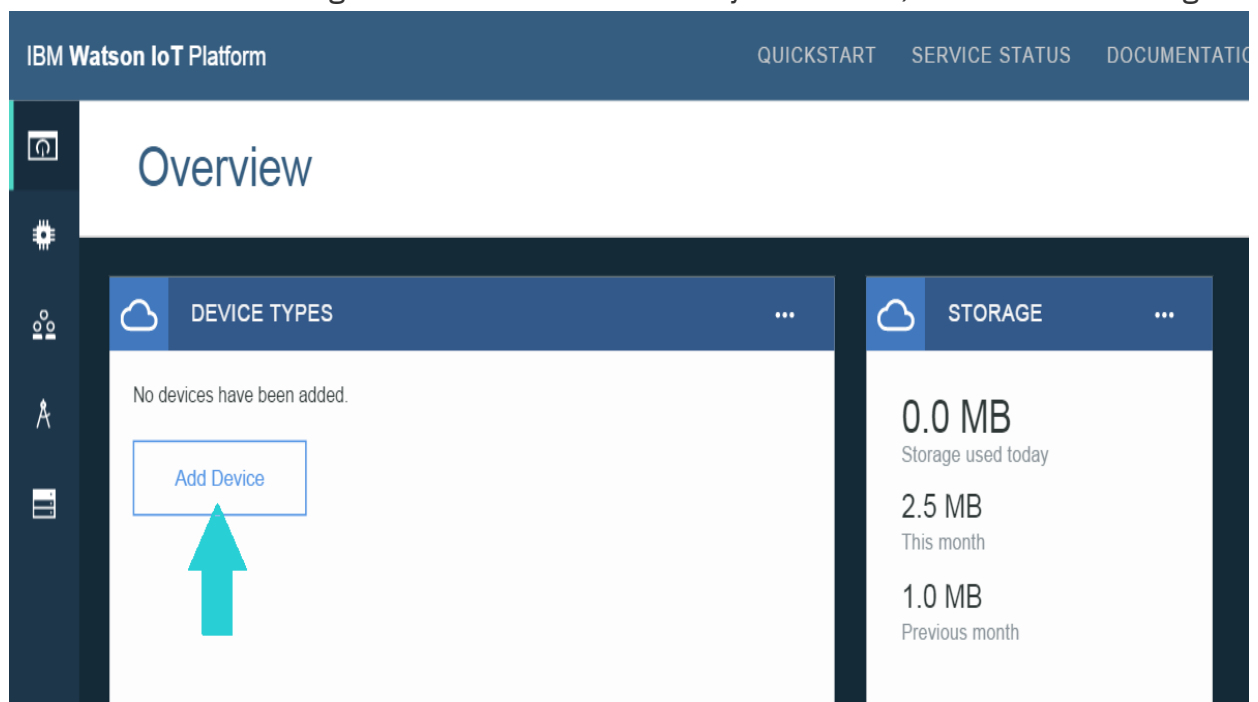

Welcome to Watson IoT Platform

Securely connect, control, and manage devices. Quickly build IoT applications that analyze data from the physical world.

Launch   Docs

- Observe that a new Organization is created where you can add, connect and manage Io

At this step, we have successfully created the Watson IoT organization.

3   # Create Gateway Device Type

Each Gateway device connected to the Watson IoT Platform is associated with a device typ
intended to be groups of devices which share common characteristics. So in order to add G
IoT Platform, one need to create a device type. Following are the instructions for creating a

- Go back to the IBM Watson IoT Platform dashboard, click Devices tab, device types tab
  Type button as shown below,
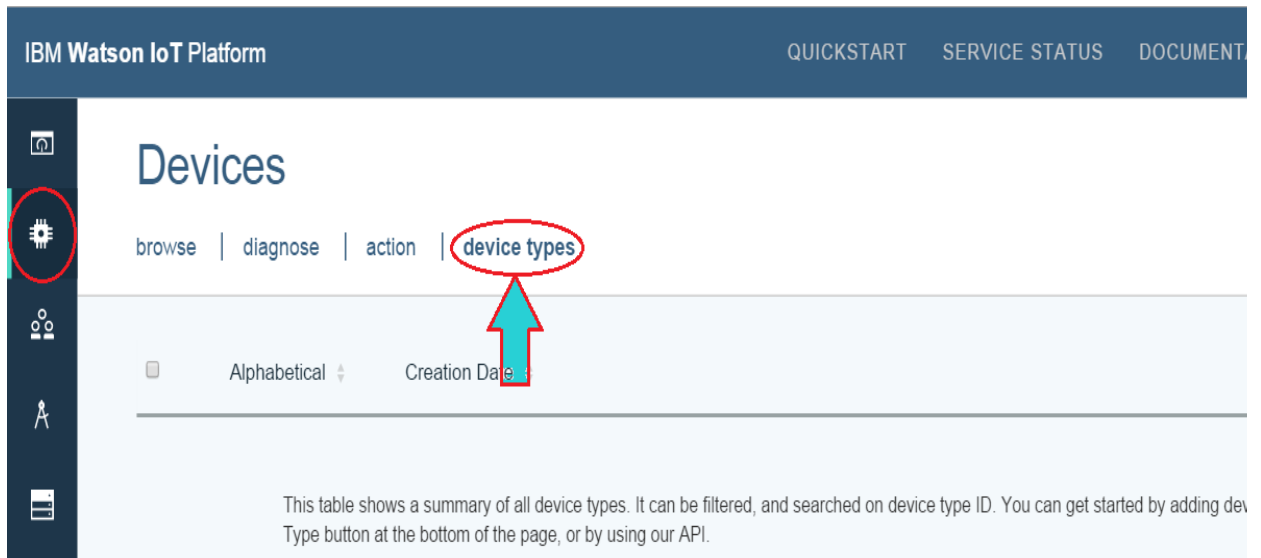
- Observe that there are 2 options provided now, namely Create device type and Create g
  recipe focuses on adding a Gateway device, click **Create gateway type** and proceed,
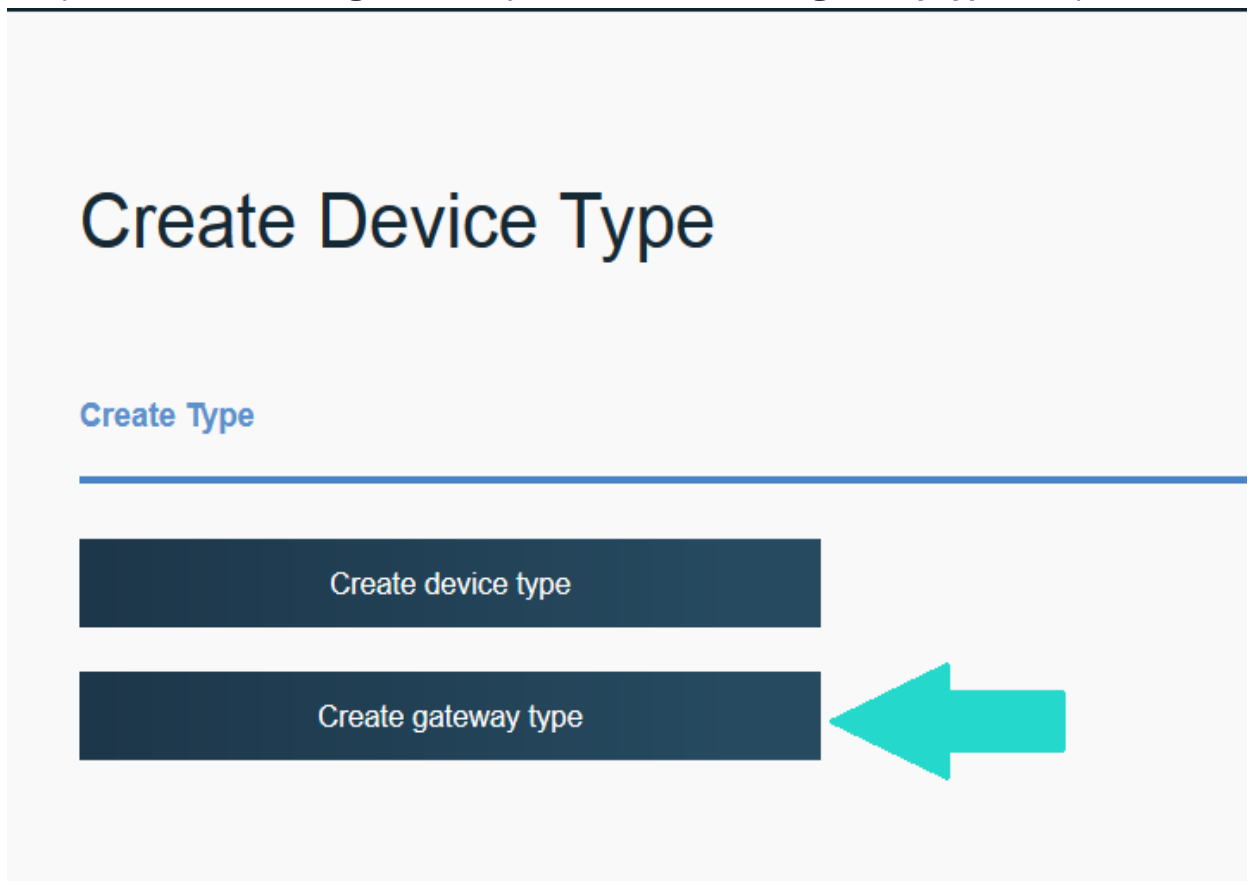
- Specify a name for the device type to be added and optionally a description as shown b

- Observe that a template page is given where you can select and define one or more att attributes are optional. They will be used as a template for new Gateway devices that a type. Attributes that you do not define may still be edited individually later when you ad

define one or more attributes by selecting them and clicking **Next** as shown below,

- Define the selected attributes Manufacturer and Model as shown below, then click **next**

- Define optional Metadata in JSON format as shown below, you can choose not to set th then click *Create*,

- Observe that a new device type is added in the Watson IoT Organization,
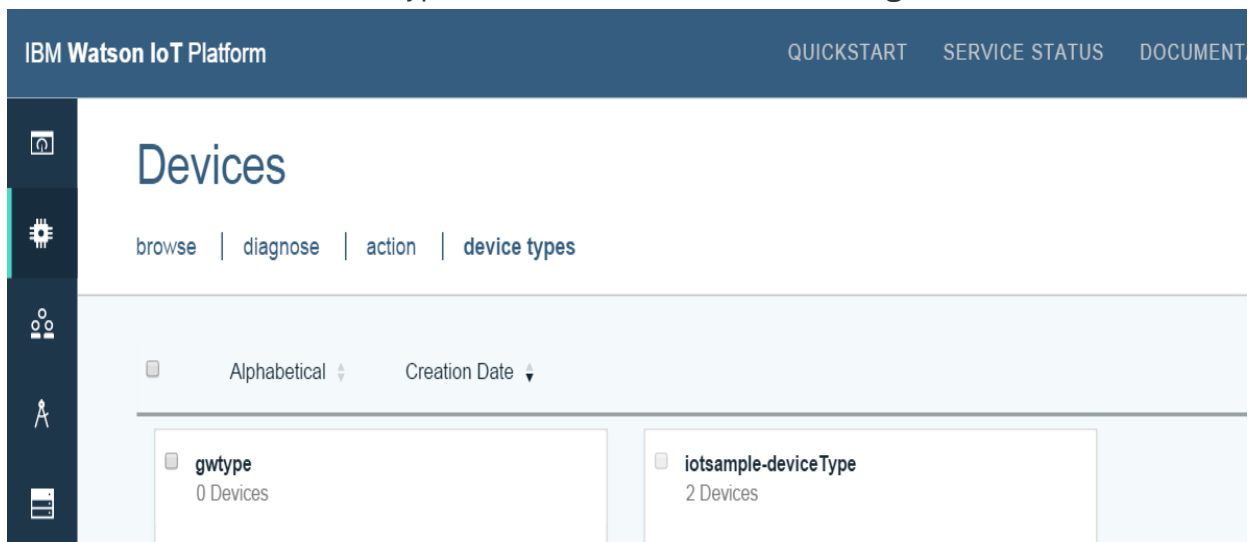
*At this step, we have successfully created a device type in Watson IoT organization.*

4   Add Gateway in Watson IoT Platform

Gateways are a specialized class of devices in the Watson IoT Platform. Gateway devices ca and can send and receive data on behalf of devices connected to them. You need to add the Organization before connecting it. Carry out the following steps to add the Gateway in IBM

- In the Watson IoT Platform dashboard, click **Browse** tab and then **Add Device** button as
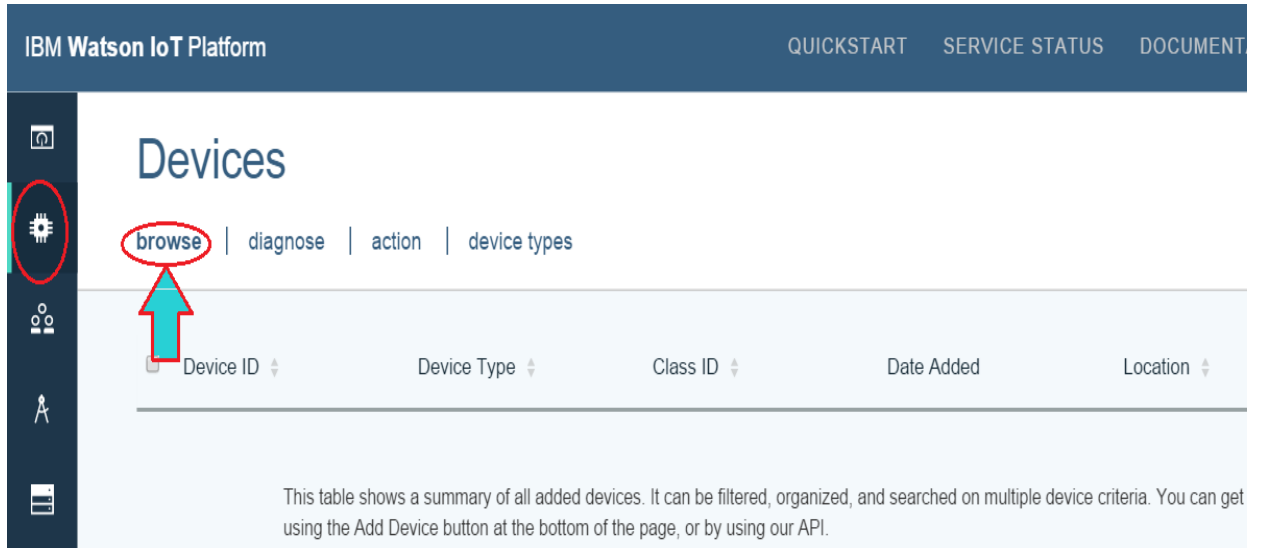
- Choose the device type "**iotsample-gwtype**" that we created in the last step, then click
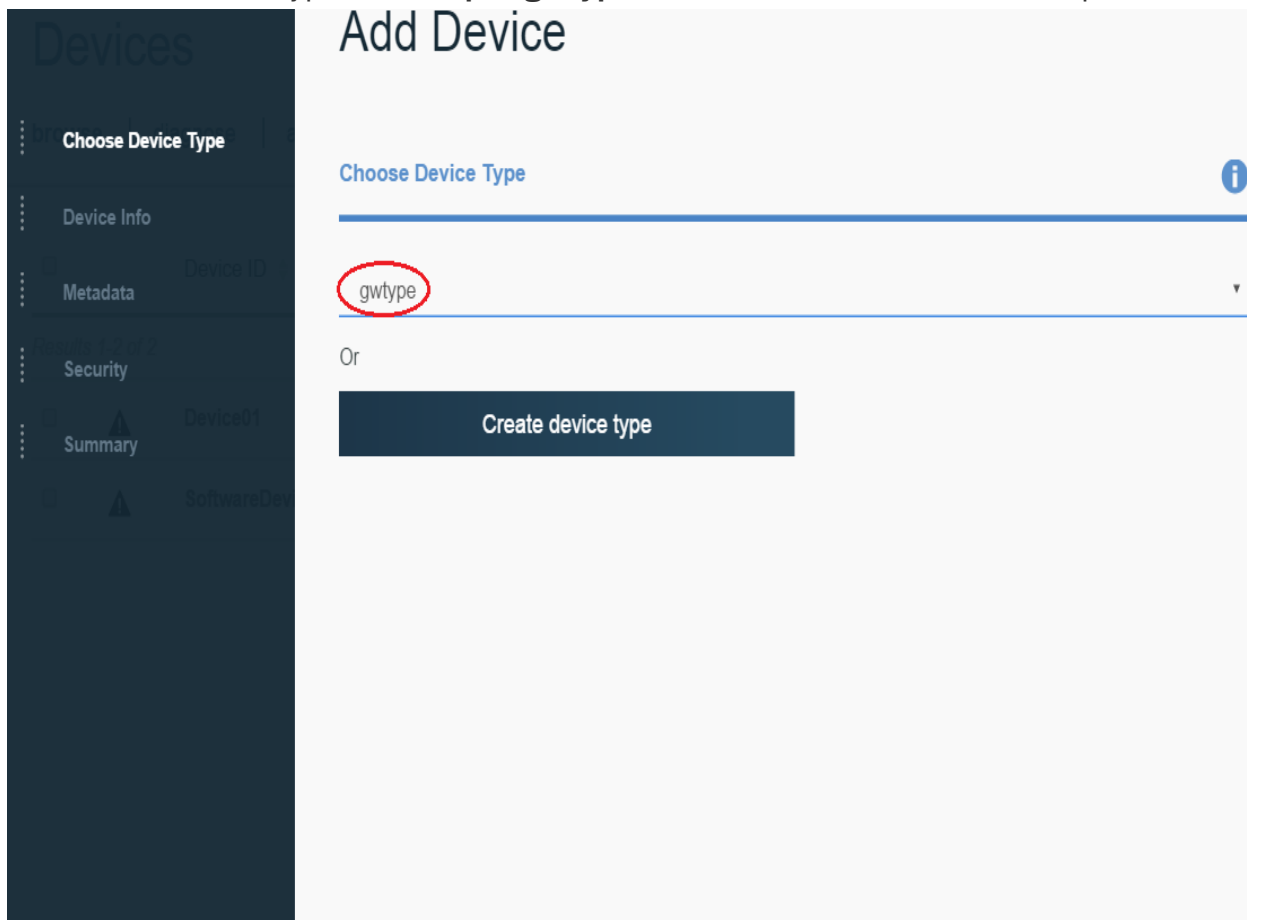
- Enter a unique device id, which will distinguish your Gateway from all other devices tha
  Watson IoT Platform(you can use 1 or something more sophisticated like your devices I
  Next as shown below. Also note that the values of "Manufacturer" and "Model" attribut
  device type "iotsample-gwtype". These values can be overridden, and attributes not se
  added as well.

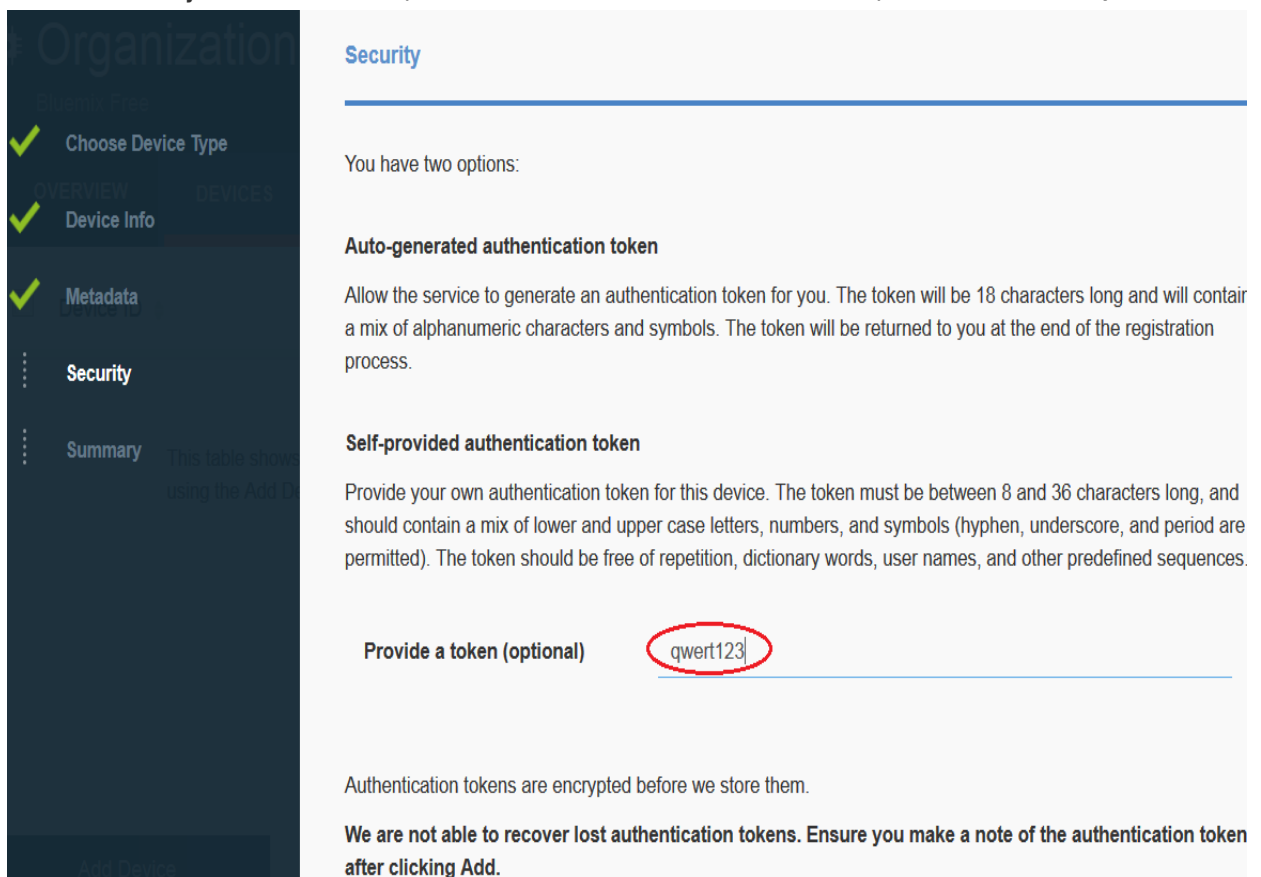- Add a Metadata and click *next*, (you can choose not to add Metadata as its optional),

Add Device

Metadata (optional)

Metadata must be added as JSON; plain text cannot be used.

```
1  {
2      "sample-key": "sample-value"
3  }
```

Sidebar navigation:
- ✓ Choose Device Type
- ✓ Device Info
- **Metadata**
- Security
- Summary

- In the next page, you can either add your own authentication token, or allow the IoT Pla for you. The IoT Platform generated token will be 18 characters long and will contain a characters and symbols. The token will be returned to you at the end of the registration want to add your own token, enter the token as shown below, then click *Next,*

Security

You have two options:

Auto-generated authentication token

Allow the service to generate an authentication token for you. The token will be 18 characters long and will contain a mix of alphanumeric characters and symbols. The token will be returned to you at the end of the registration process.

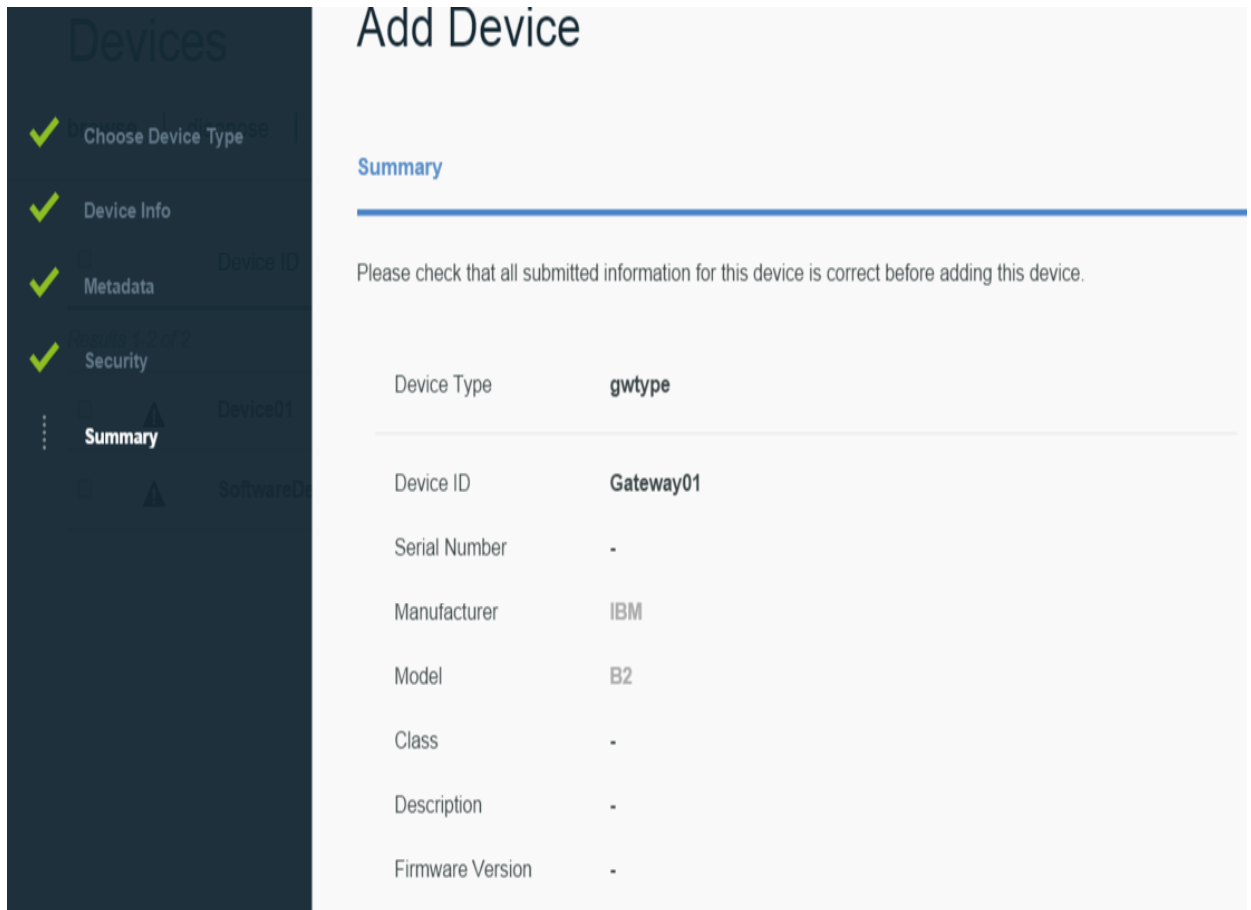**Self-provided authentication token**

Provide your own authentication token for this device. The token must be between 8 and 36 characters long, and should contain a mix of lower and upper case letters, numbers, and symbols (hyphen, underscore, and period are permitted). The token should be free of repetition, dictionary words, user names, and other predefined sequences.

Provide a token (optional)   qwert123

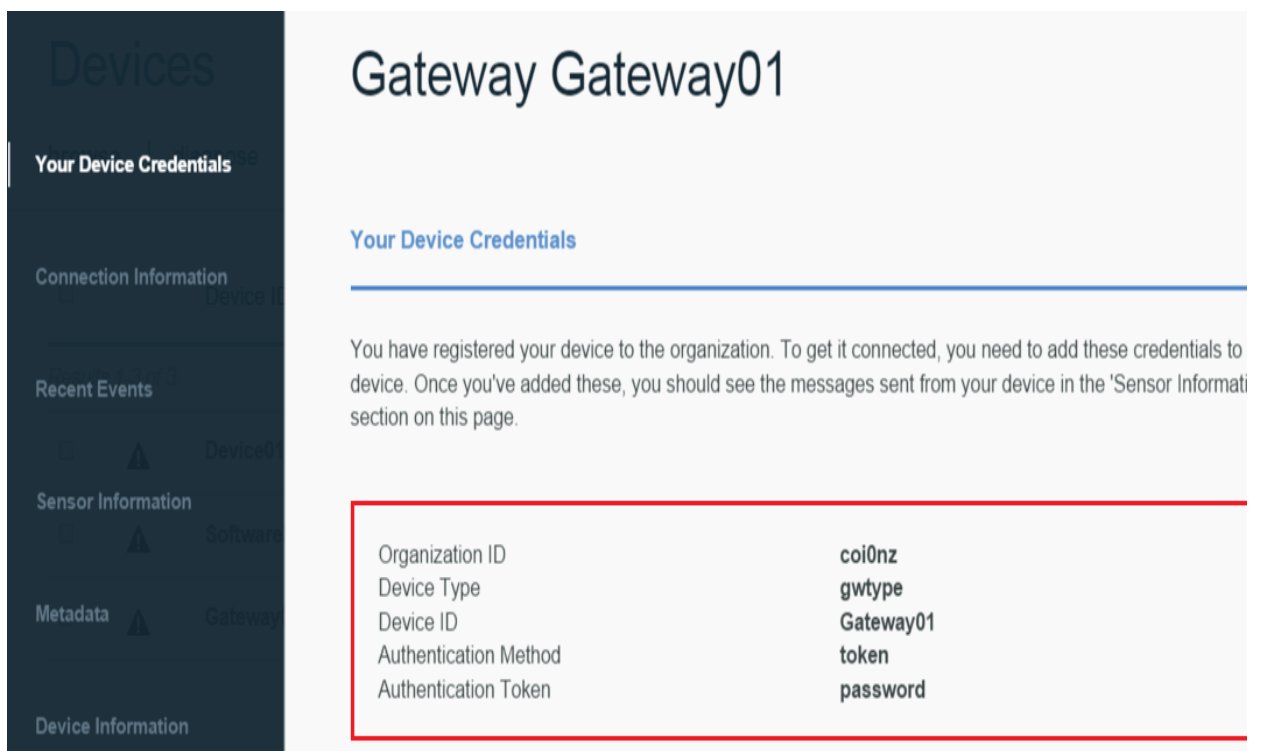Authentication tokens are encrypted before we store them.

We are not able to recover lost authentication tokens. Ensure you make a note of the authentication token after clicking Add.

Sidebar navigation:
- ✓ Choose Device Type
- ✓ Device Info
- ✓ Metadata
- **Security**
- Summary

- As shown below, you will be given a summary page to verify the details before adding t
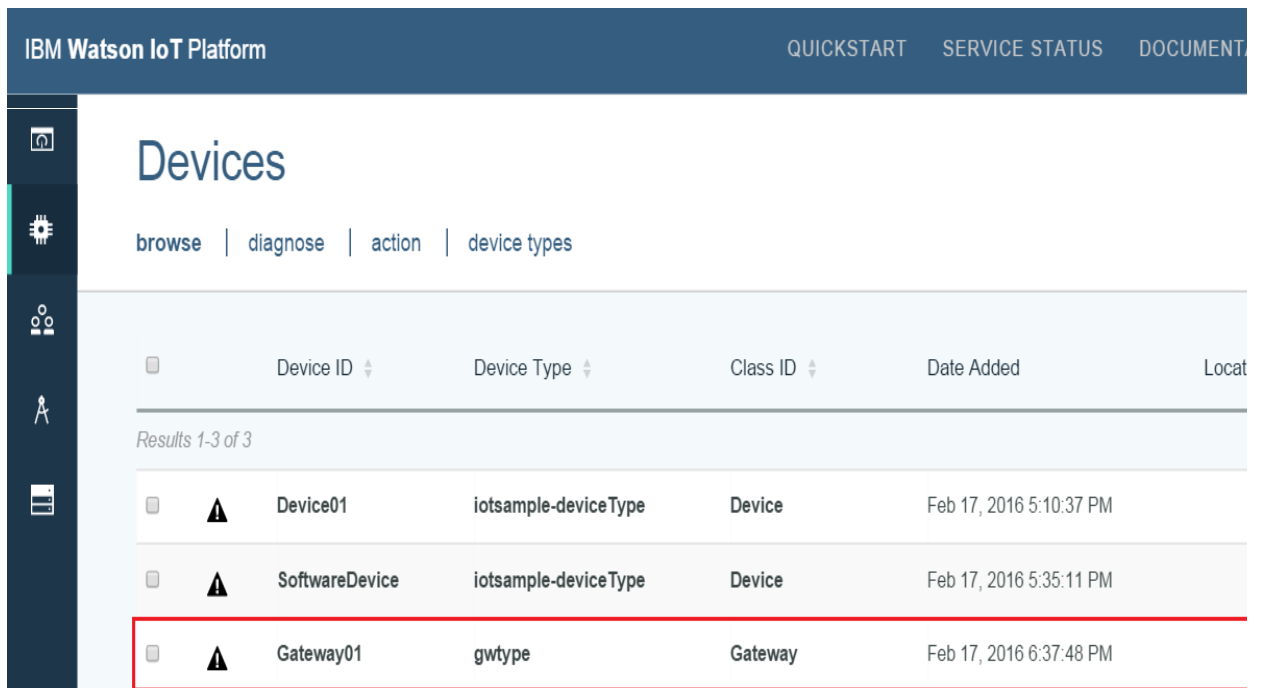 Platform. Verify and click **Add**,

- At this step, the Gateway is registered to your Organization and you will be provided wit
  as marked below. To get your Gateway connected, you need to add the credentials to y
  note of them.

- Click the cross button to get back to the main dashboard and observe that the Gateway
  Organization,

So, now we have successfully added a Gateway in the Watson IoT organization.

5   Conclusion

In this recipe we demonstrated how to setup an Watson IoT Platform Organization, create a
and register a Gateway device using the dashboard. Also, you can use the IBM Watson IoT
Client Libraries to create the Gateway Device Type and register Gateways in Watson IoT Pla

6   Where to go from here?

Go through Connect Raspberry Pi as Gateway to Watson IoT Platform recipe to develop you
connect to IBM Watson Iot Platform.

TAGS API, APPLICATION, CLOUD, DEVICE, GATEWAY, IBM, IBM IOT FOUNDATION, IBM WATSON IOT PLATFORM, IBMIOT, QUICK

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