Proof Of Technology

IBM Watson Internet of Things

IBM IoT Platform

Initialization for IBM Cloud free account

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Architecture de l'environnement du workshop en binômes

IBM Cloud user 1

Continuous Delivery

Git

IoT phone application

Cloudant

IoT Platform

IBM Cloud user 2

Step 2 & 3 bis

Node-RED Starter

Node-RED

Cloudant

Watson services

IBM Cloud account access

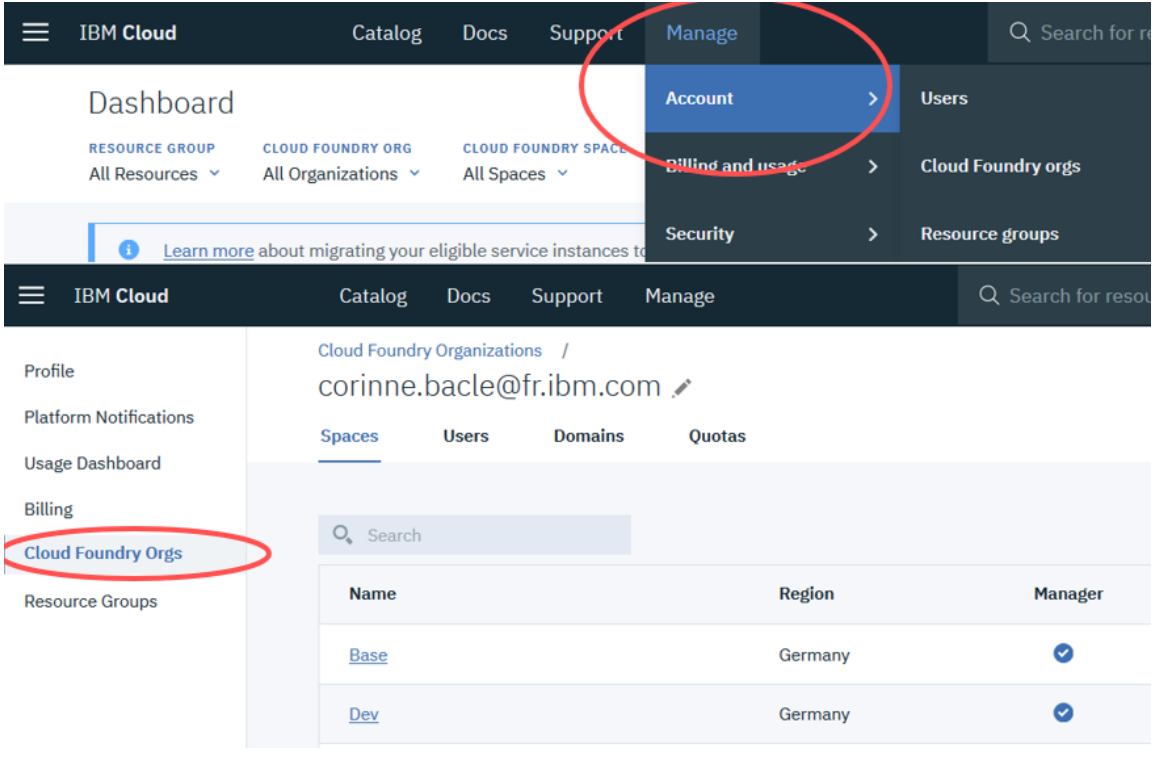
Create an IBM Cloud account: https://cloud.ibm.com/

(or use your existing one or company account)

This is free: for an unlimited period but for limited number of services

IBM Cloud account configuration

Check your account: create space and resource group if necessary



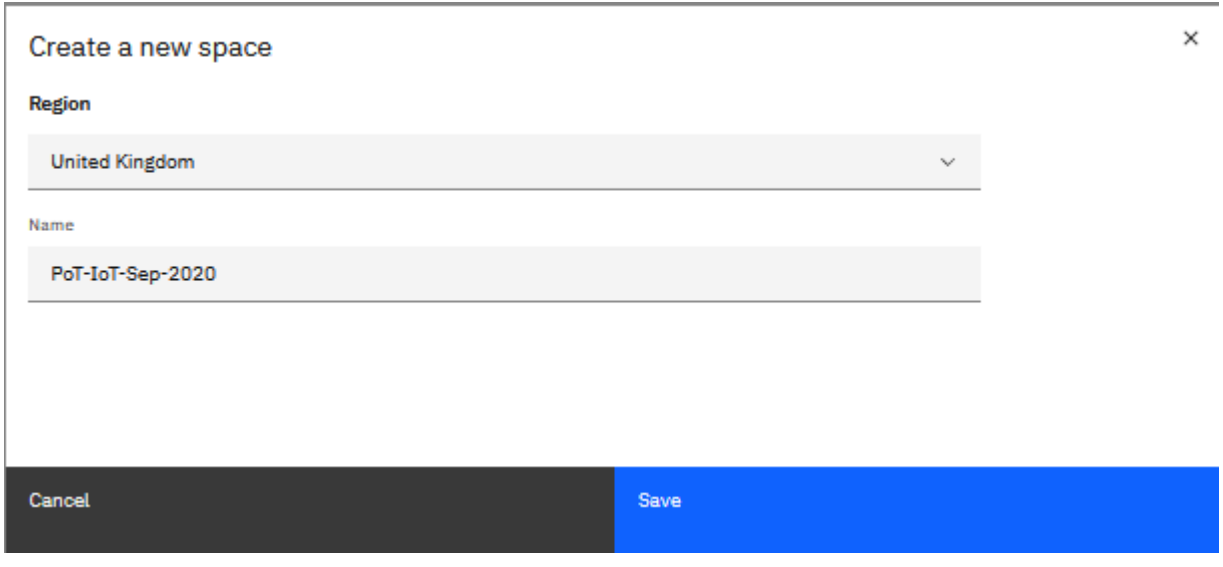
IBM Cloud account configuration

Go to Cloud Foundry Orgs

Click on your name/email

Check if you have a Space in UK/Germany

Click on « Add a Space », Select a “region” : UK/Germany, add a “Name” : PoT-IoT-Date for example, then “save”

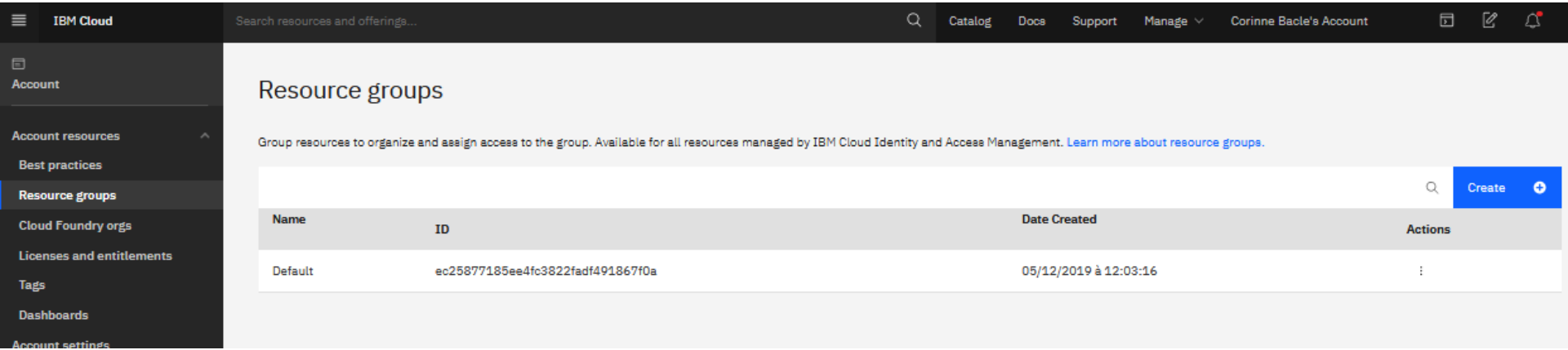


IBM Cloud account configuration

Go to Resource Groups

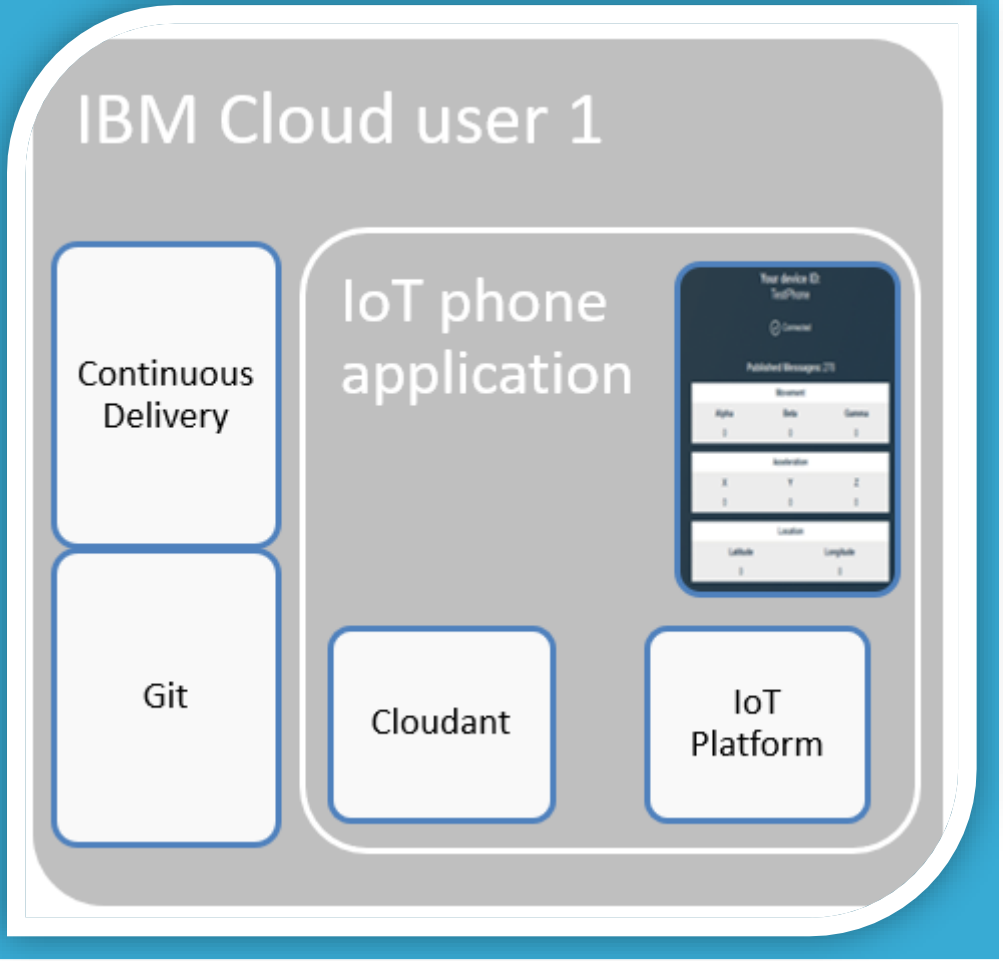
Check if you have one

If not, create one



IoTPhone Application

User 1



Go to github

https://github.com/CorinneBacle/html5-phone

Download this documentation :

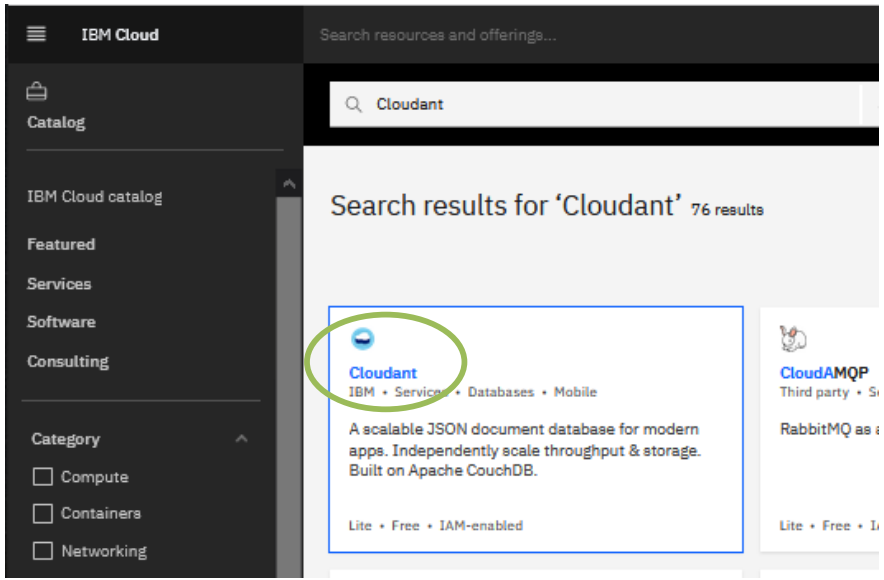
“Init binomes PoT IBM Watson IoTP CPT IBM Cloud Free 2020H2.pdf”

in directory Documentation

Cloudant service creation

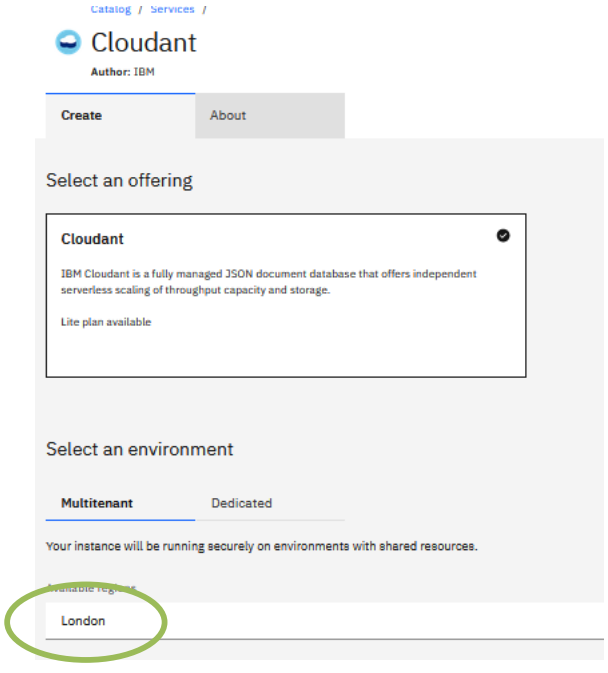
Click on IBM Cloud Catalog

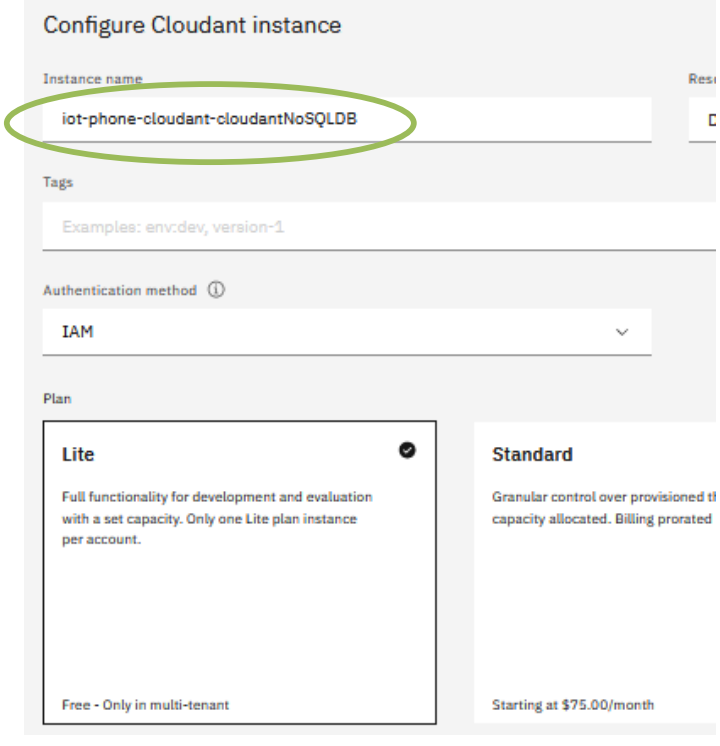
Search and select “Cloudant”



Cloudant service creation

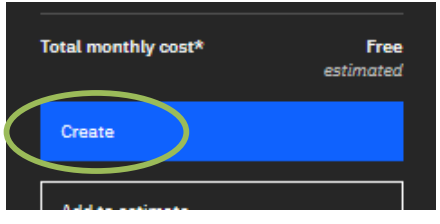
Select your region



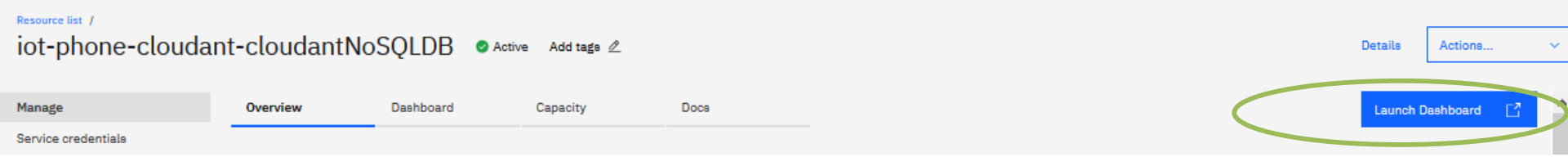


Enter the instance name :
iot-phone-cloudant-cloudantNoSQLDB

Then click “Create”



Cloudant service configuration

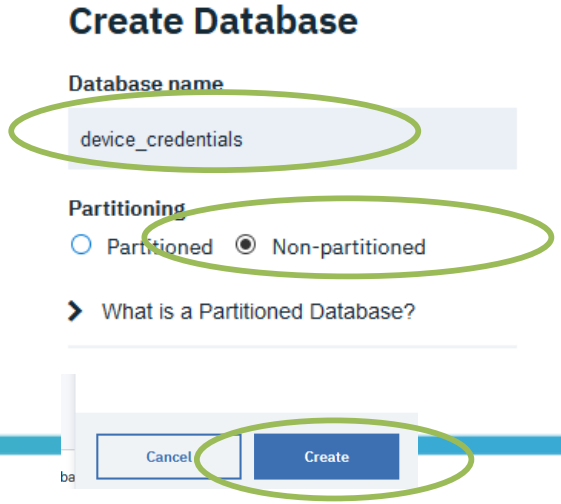


Click on the iot-phone-cloudant-cloudantNoSQLDB service then Click on Launch Dashboard

Then Create Database

Database name : device_credentials

Select: “Non-partitioned”

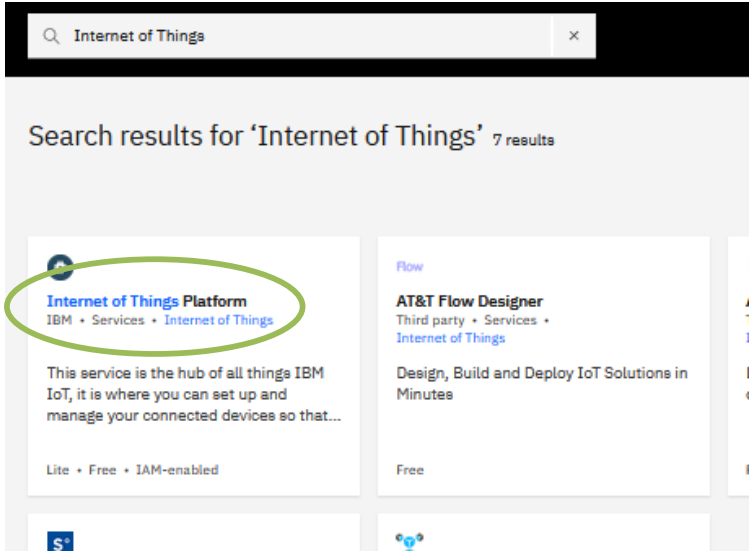


Then “Create”

IoT service creation

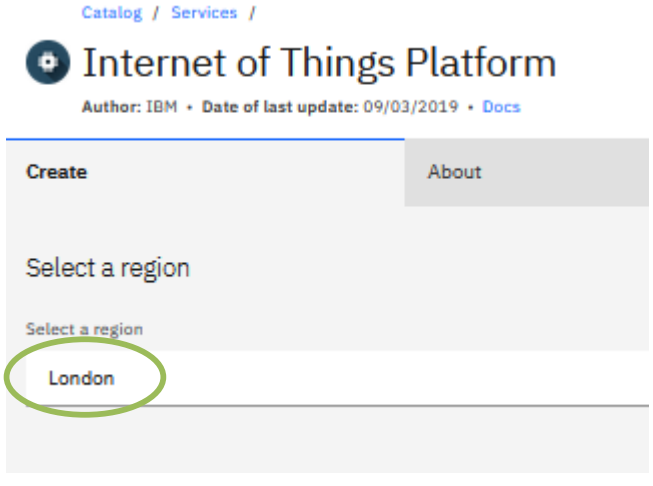
Click on IBM Cloud Catalog

Search and select “Internet of Things”



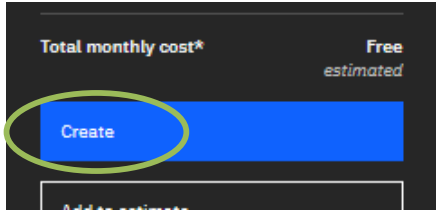
IoT service creation

Select your region



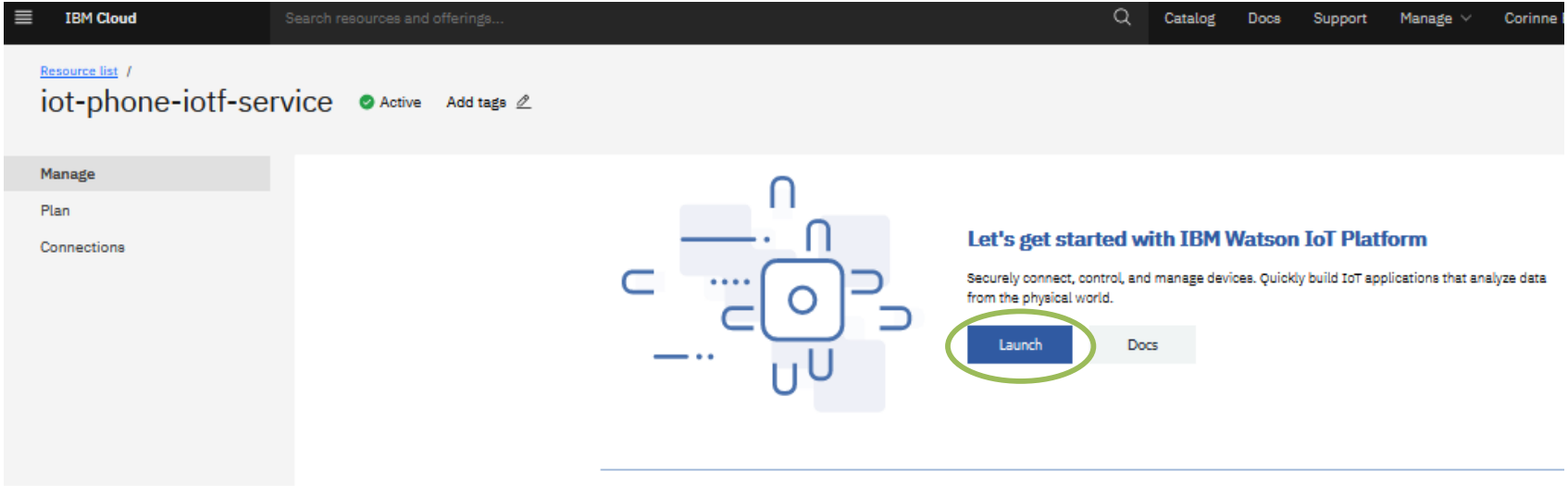
Enter the Service name :
iot-phone-iotf-service

Then click “Create”



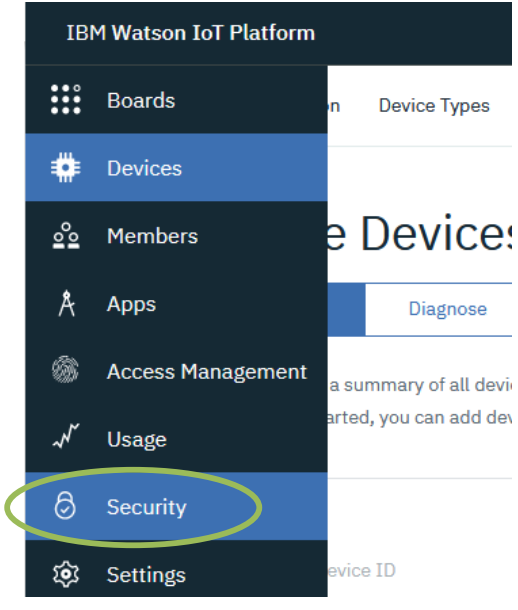
IoT service configuration

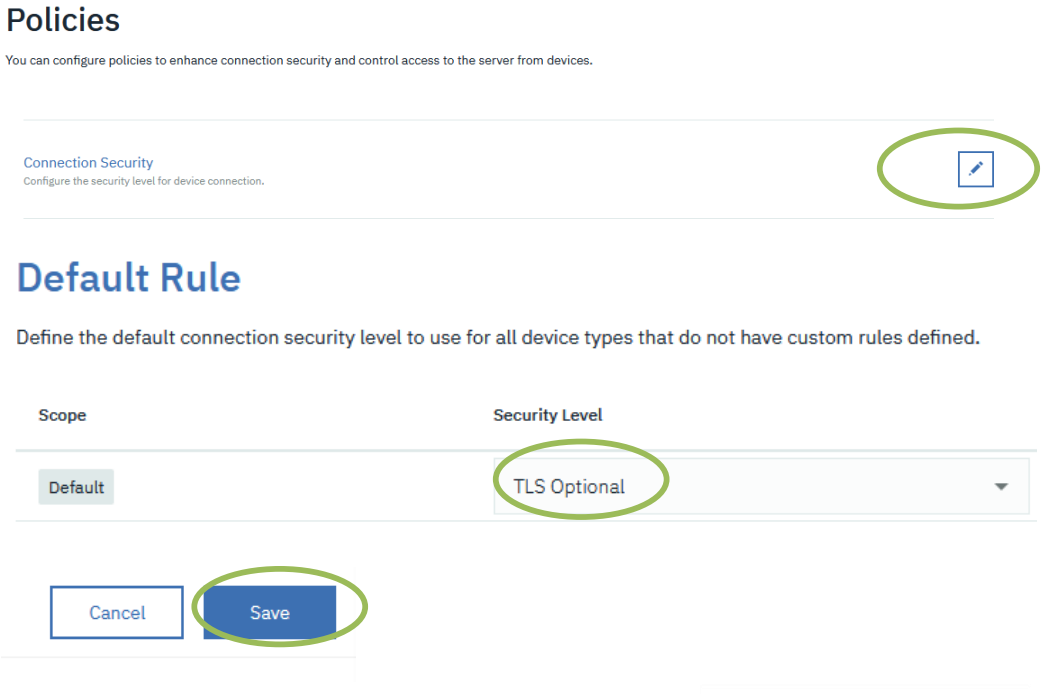
In the new window, click “Launch”



IoT service configuration

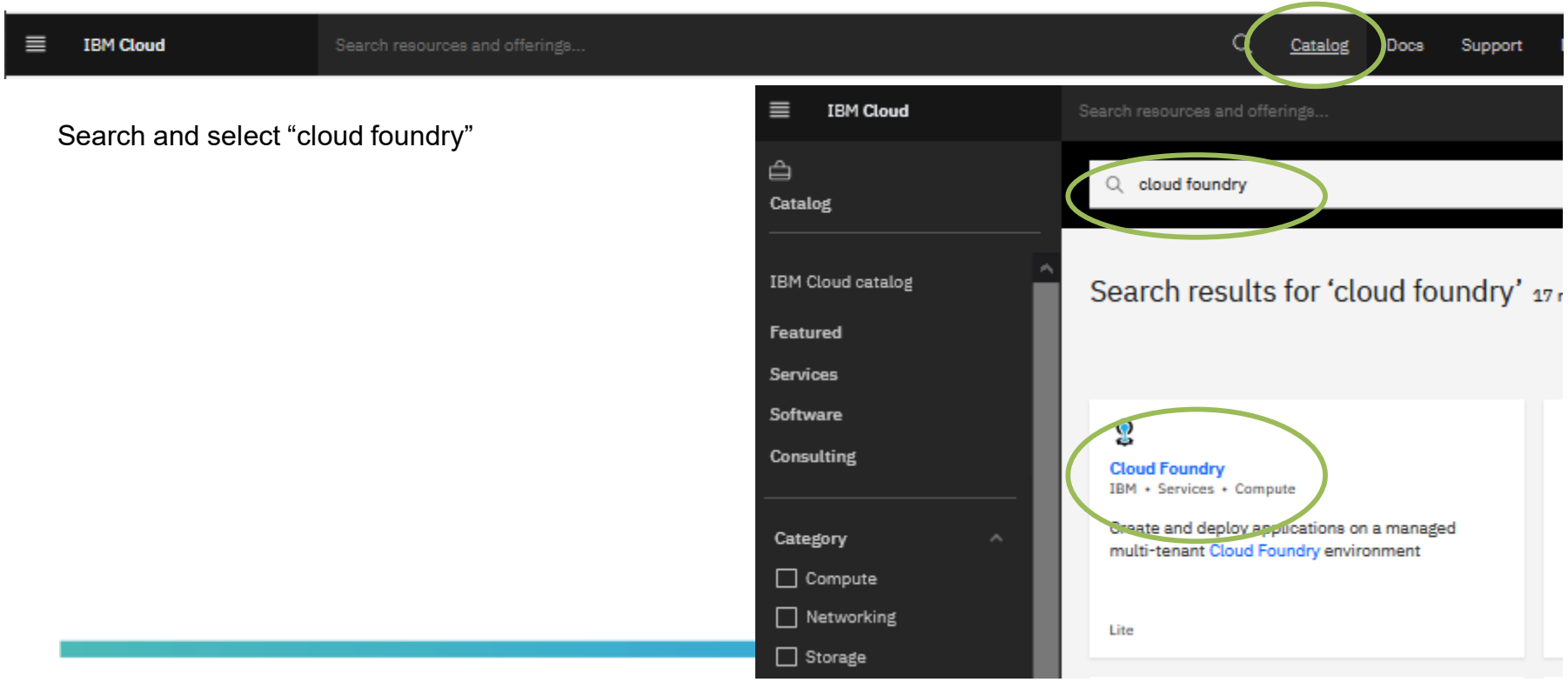
Select menu “Security” then “Connection Security” then “TLS Optional” then Save





Sample application creation

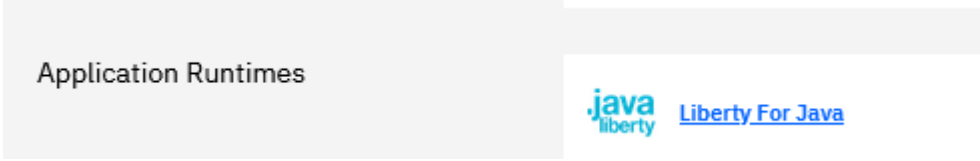
Click on IBM Cloud Catalog



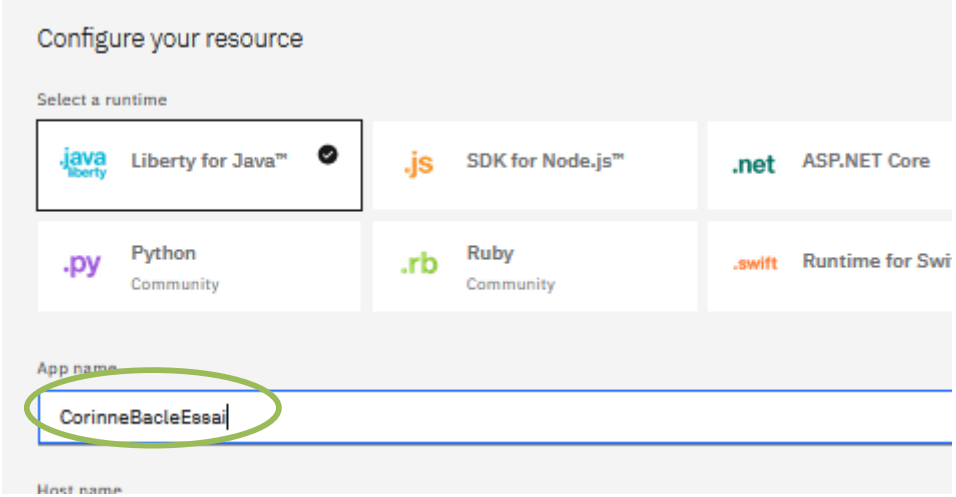
Search and select “cloud foundry”

Sample application connection creation

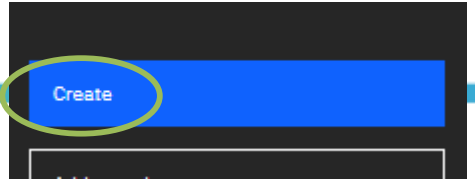
Click “Liverty For Java”



Select the region
Enter a unique name

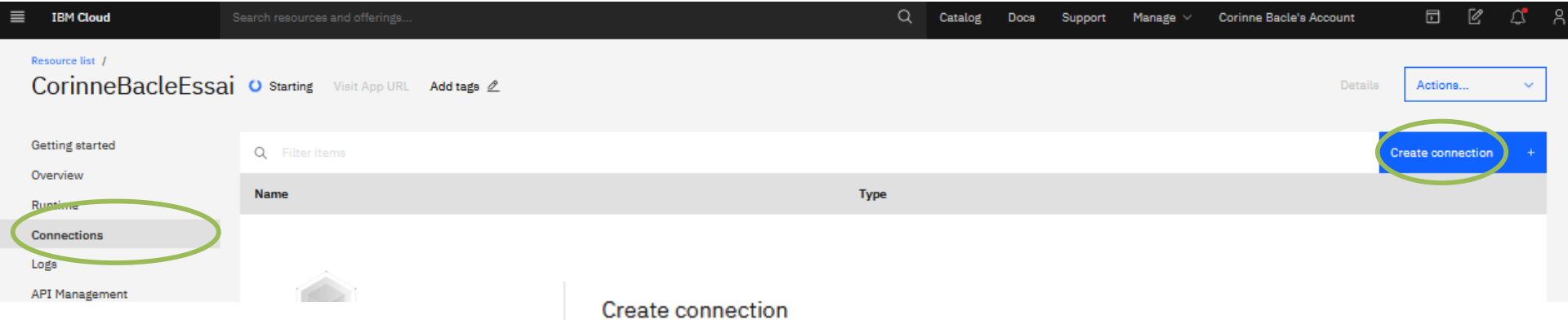


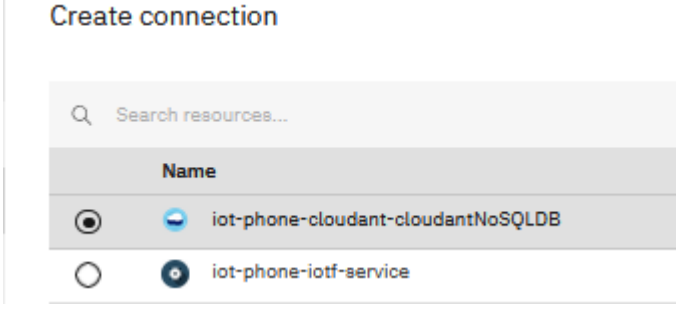
Then “Create”



Sample application connection creation

Go to “Connections”

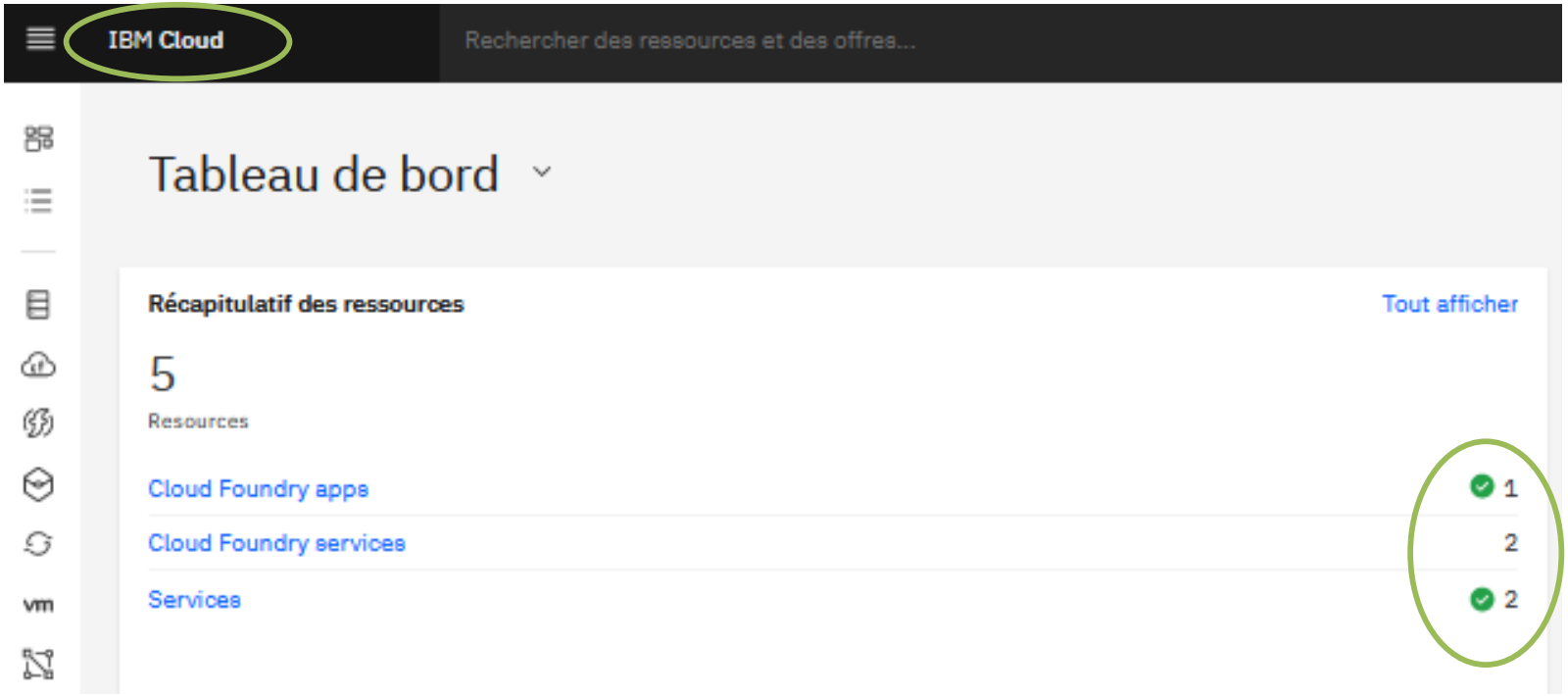




Select “Create connexion”
Select the IoT service
Select “Next”
Select “Writer” if requested
Then “Connect”
Then “Restage”

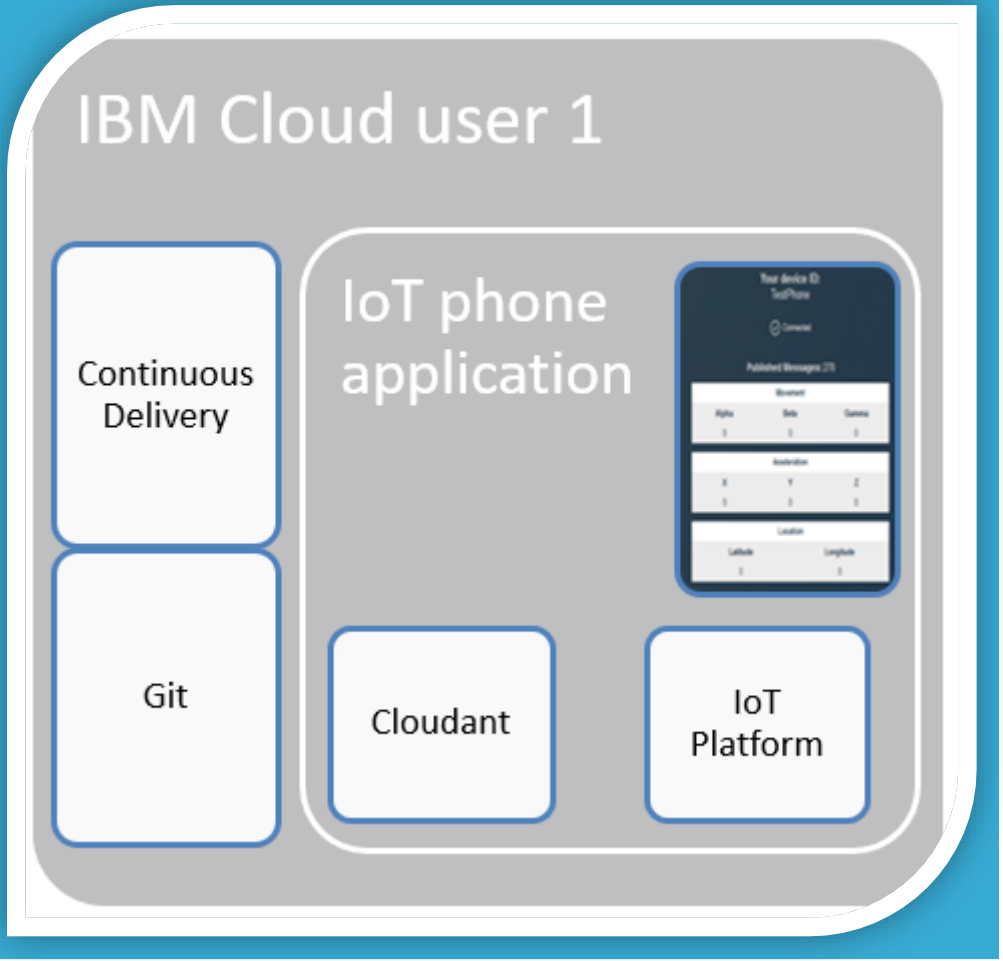
Do the same for the Cloudant service.

Result


IBM Cloud
Rechercher des ressources et des offres...
Tableau de bord
Récapitulatif des ressources
Tout afficher
5
Resources
Cloud Foundry apps
1
Cloud Foundry services
2
Services
2
vm

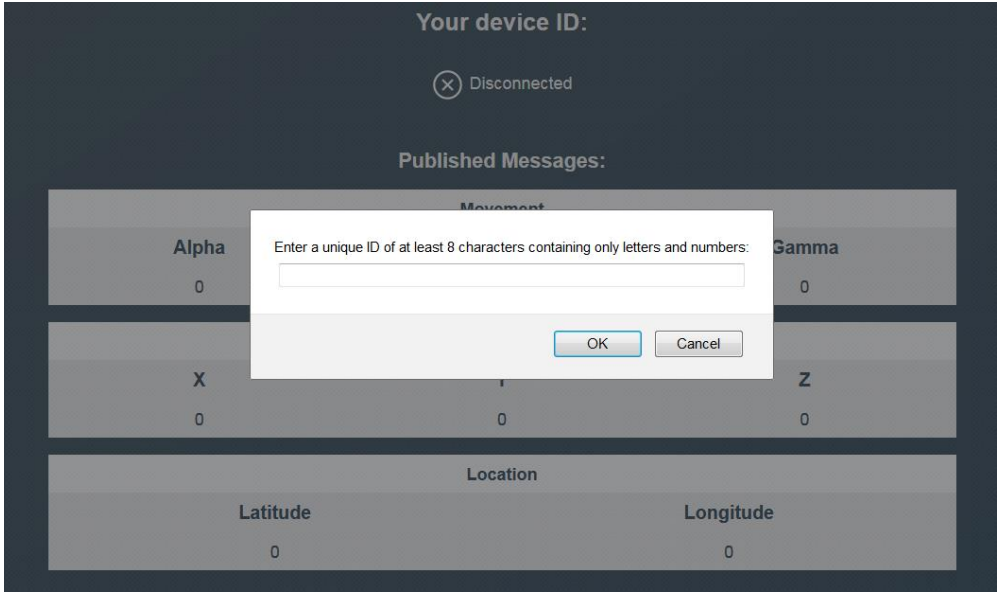
IoTPhone Application

User 1



Create your own IoT Html 5 Phone application as user 1

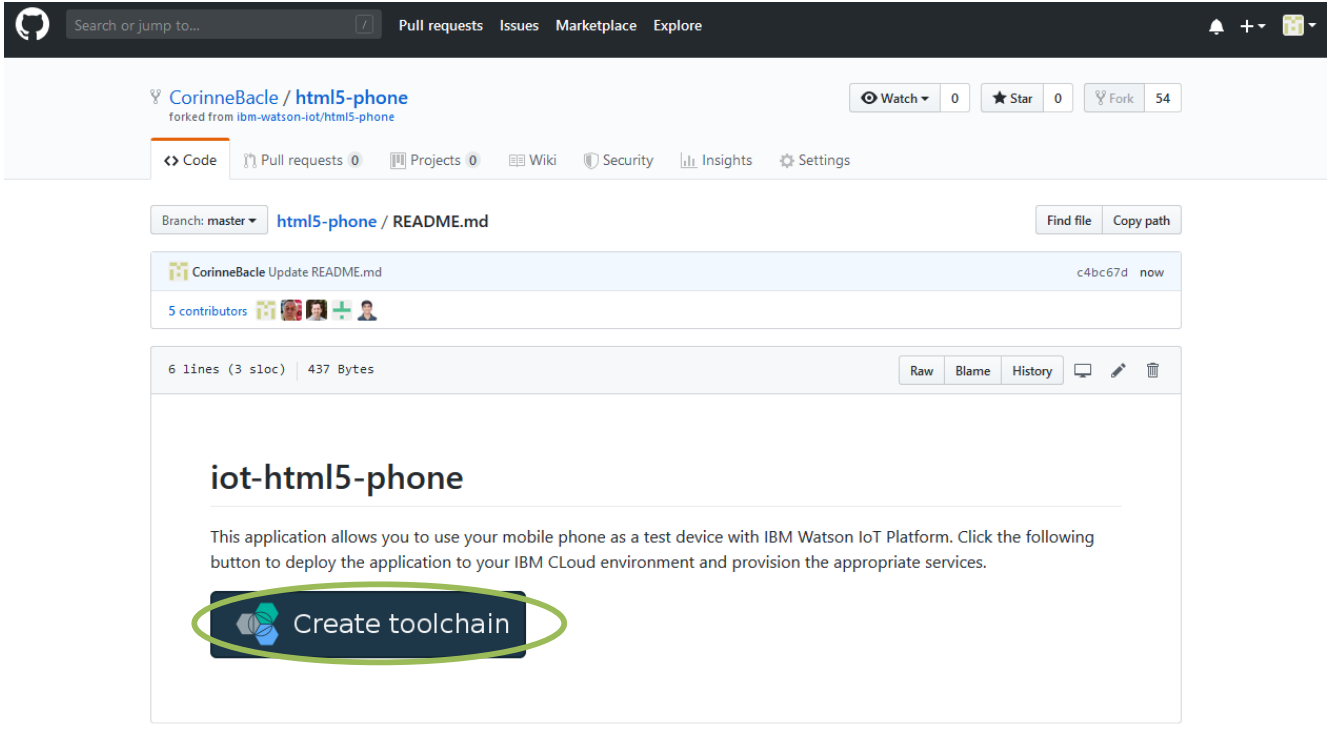
See next slides to create your own application



Log in https://cloud.ibm.com as **USER 1**

Go to github

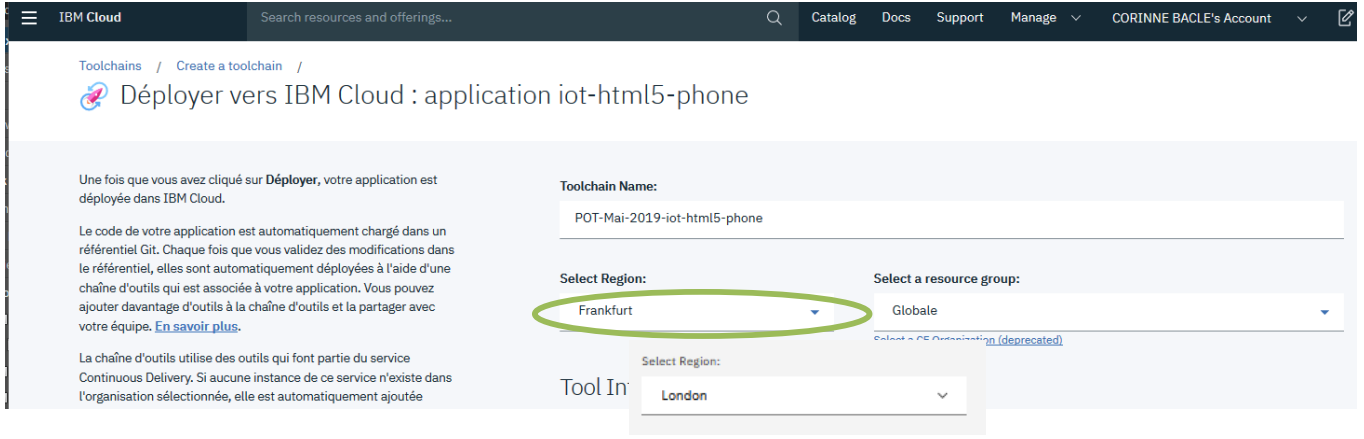
https://github.com/CorinneBacle/html5-phone

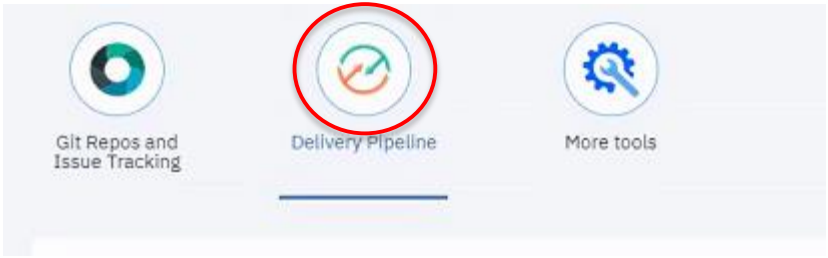


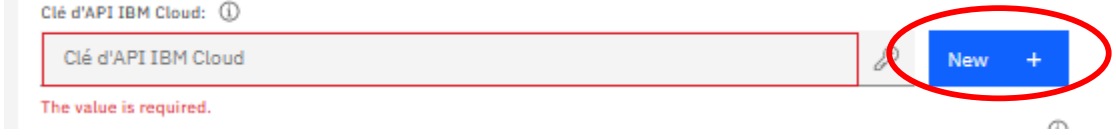
Go to the bottom and click Create toolchain

Select Region **Frankfurt** or **London** depending on where you have created your space in the previous steps

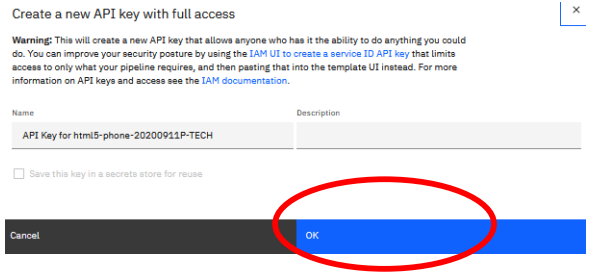
Change the application name with a shorter one



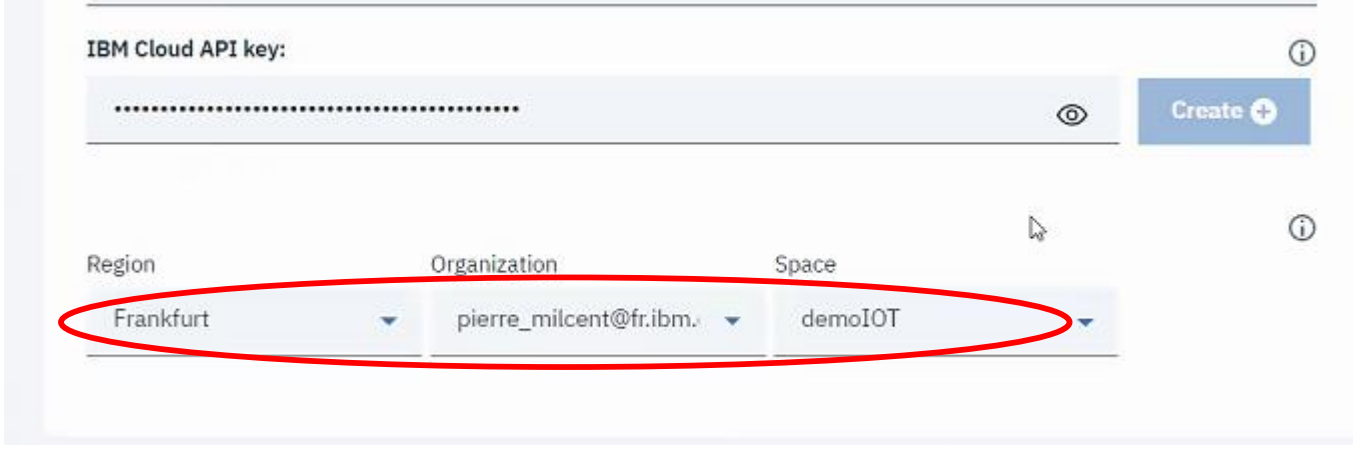


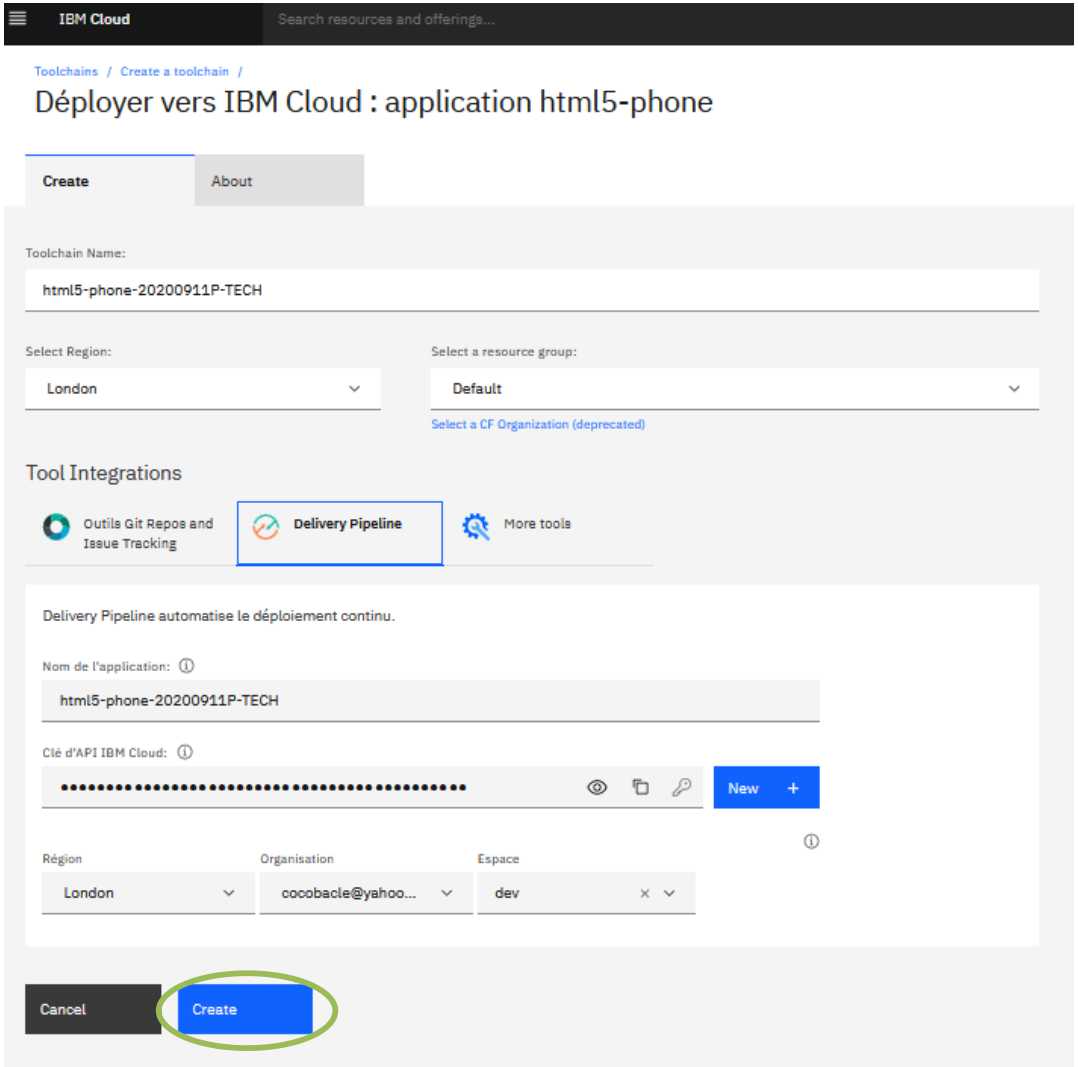


Create the API Key

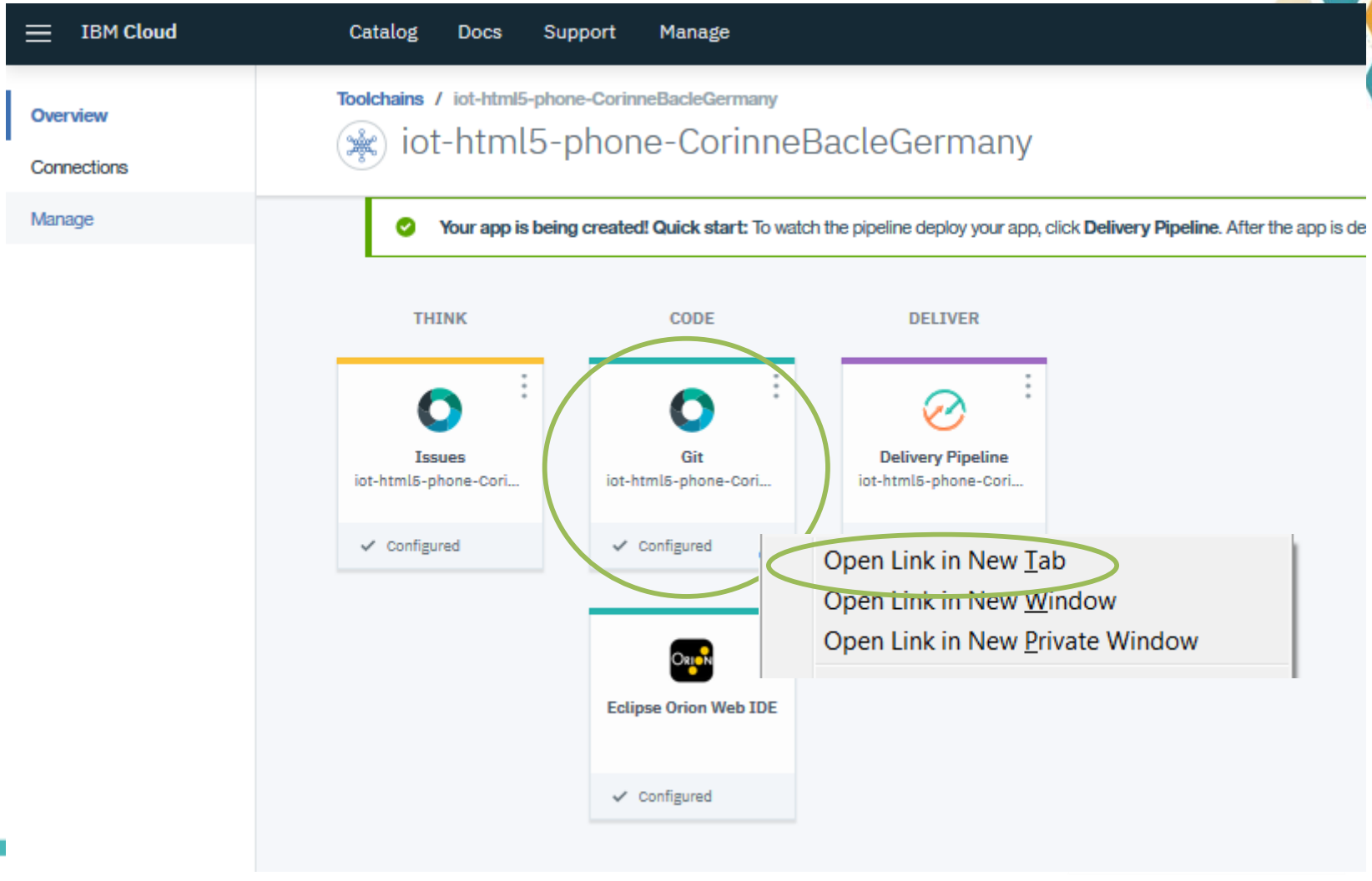


Wait a little to automatically get “Region” filled
Then Select your space
Then Deploy

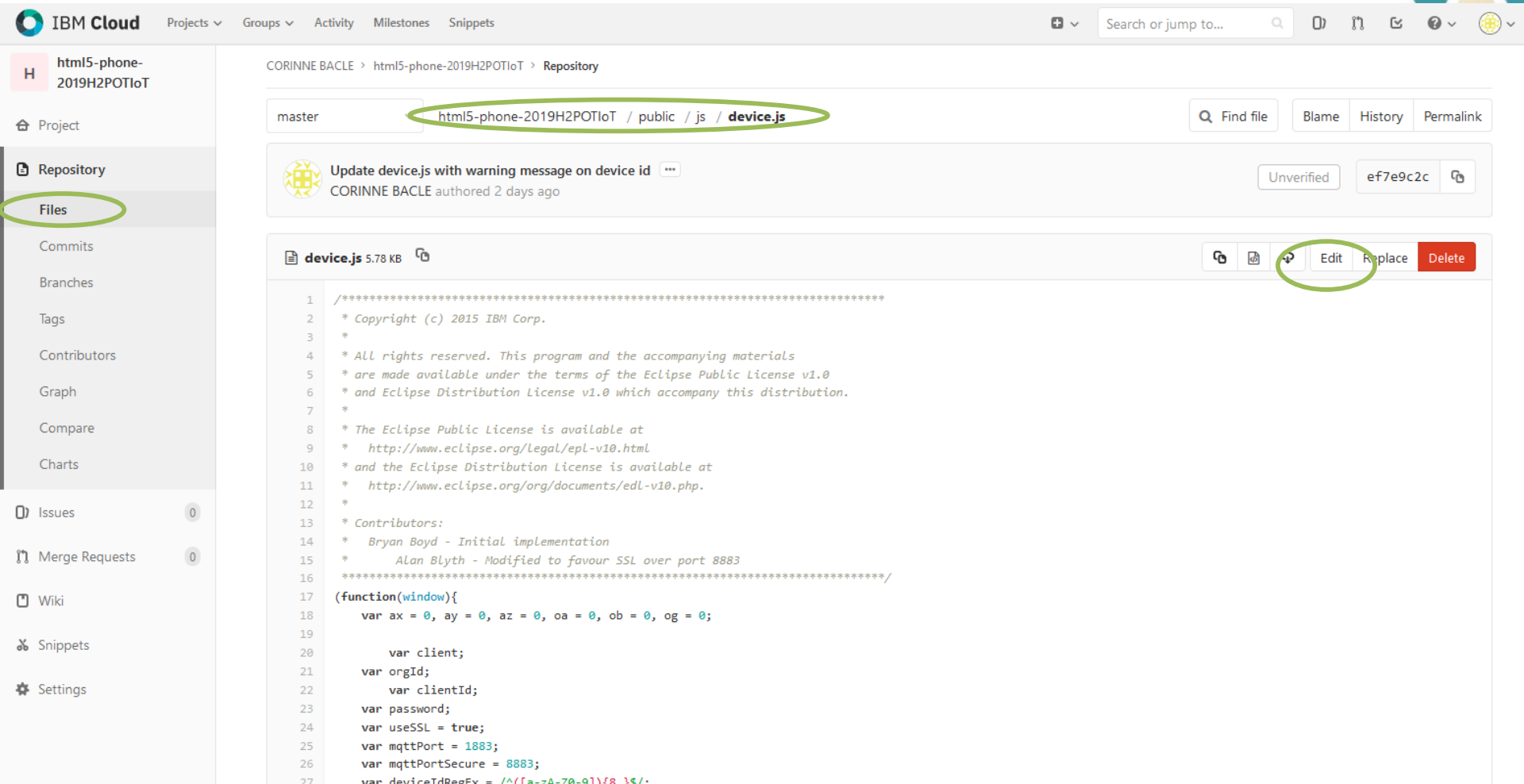




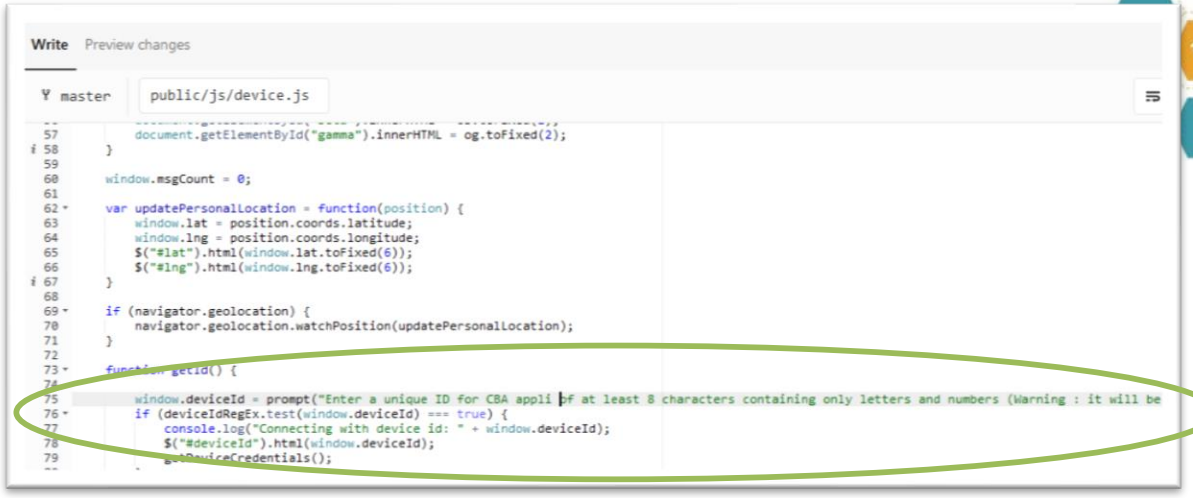
Then click “create”


IBM Cloud
Catalog
Docs
Support
Manage
Overview
Connections
Manage
Toolchains / iot-html5-phone-CorinneBacleGermany
iot-html5-phone-CorinneBacleGermany
Your app is being created! Quick start: To watch the pipeline deploy your app, click Delivery Pipeline. After the app is de
THINK
CODE
DELIVER
Issues
iot-html5-phone-Cori...
Configured
Git
iot-html5-phone-Cori...
Configured
Delivery Pipeline
iot-html5-phone-Cori...
Eclipse Orion Web IDE
Configured
Open Link in New Tab
Open Link in New Window
Open Link in New Private Window

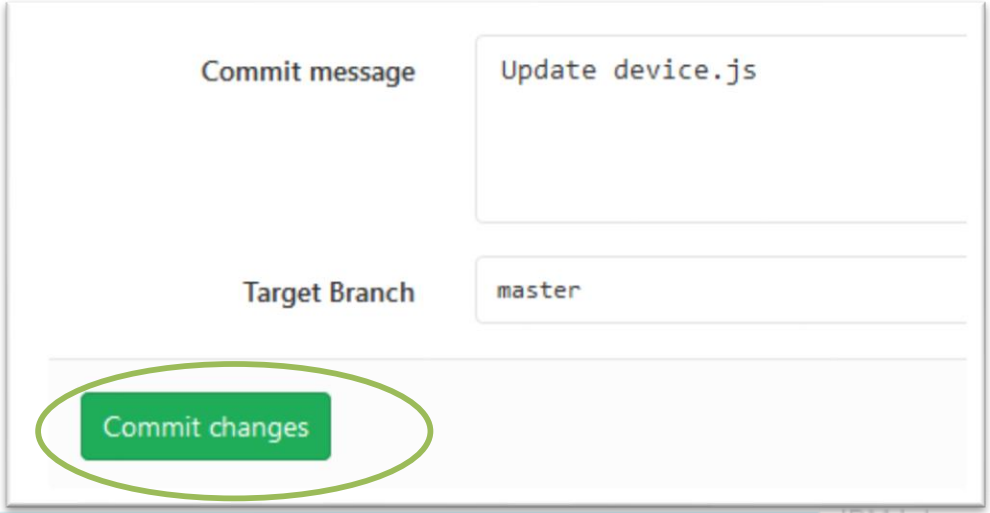
Go to Repository / Files, It's your own code, you can modify it



For example change the prompt message:



then in the bottom :



Option : changer l'image de fond

Modifier le fichier public/stylesheets/device.css partie body puis background-image

Voir une explication ici:

http://css.mammouthland.net/image-de-fond-background-css.php

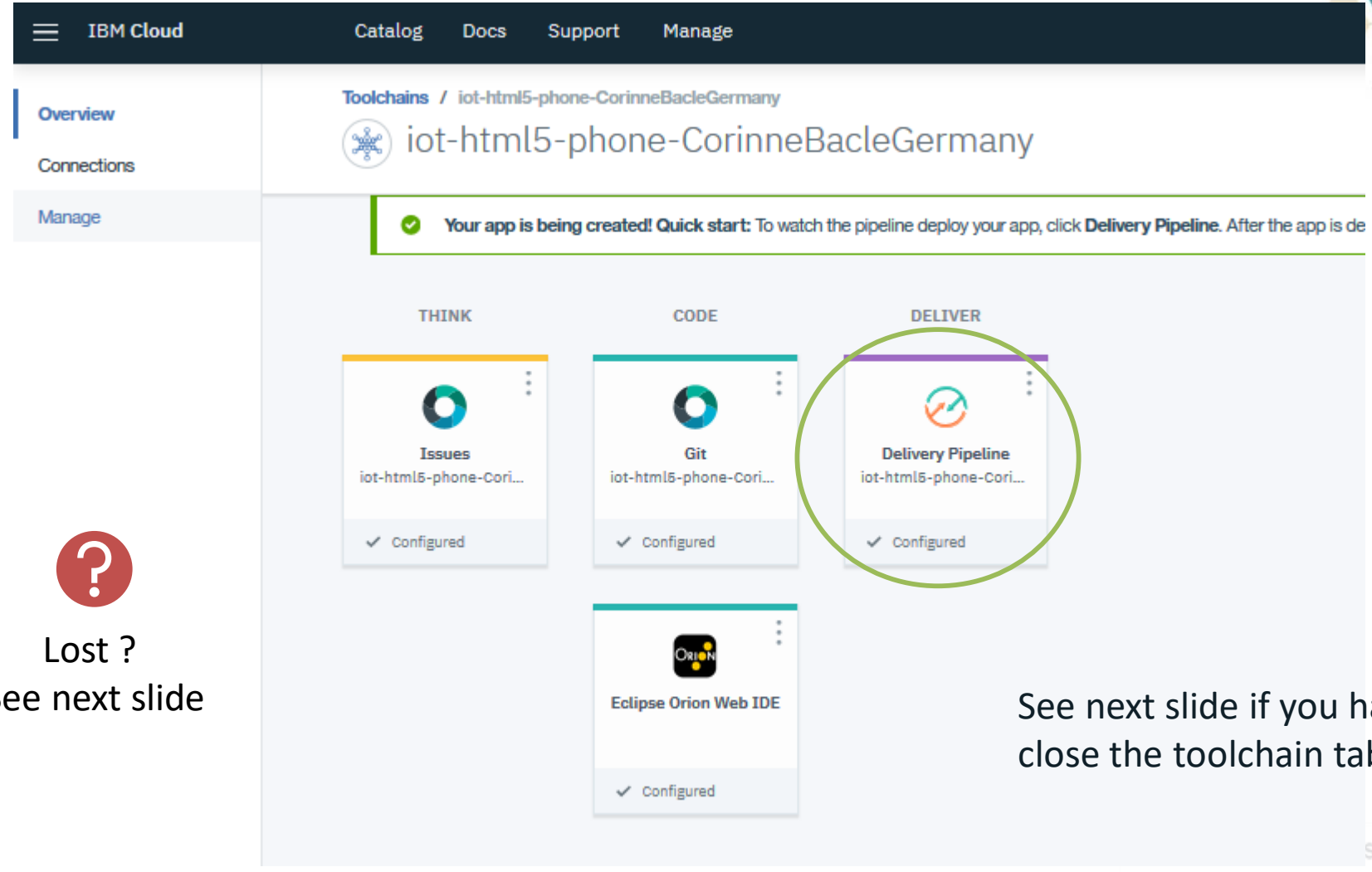
Remplacer

```
body {
background-image: linear-gradient(to bottom right, #2d3f4a, #1d3649);
margin: 0;
padding: 0;
}
```

Par

```
body {
color:black; background-color:white;
background-image:url(images/image_de_fond.png);
}
```

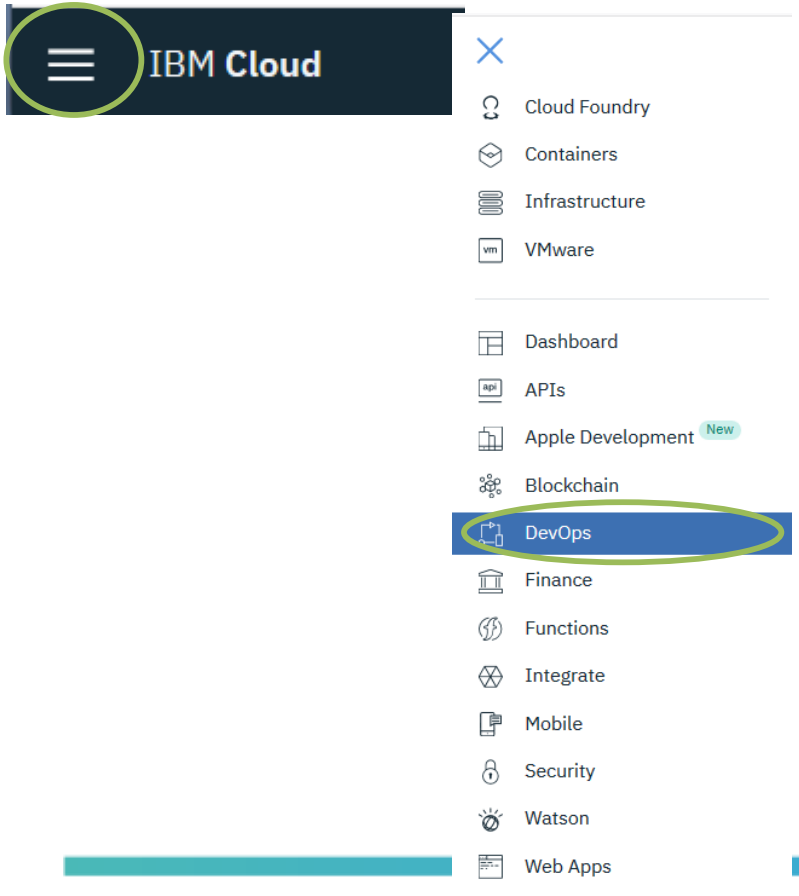
Et ajouter votre image dans un repertoire images à la racine avec le bon nom.

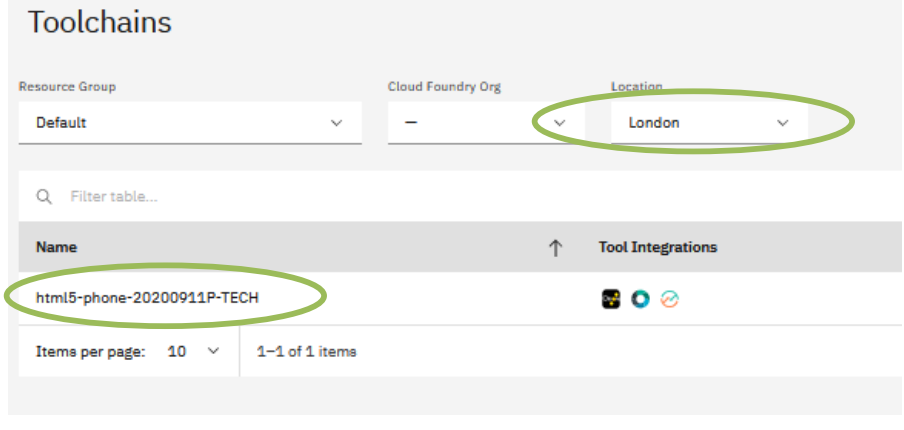


Lost ?
See next slide

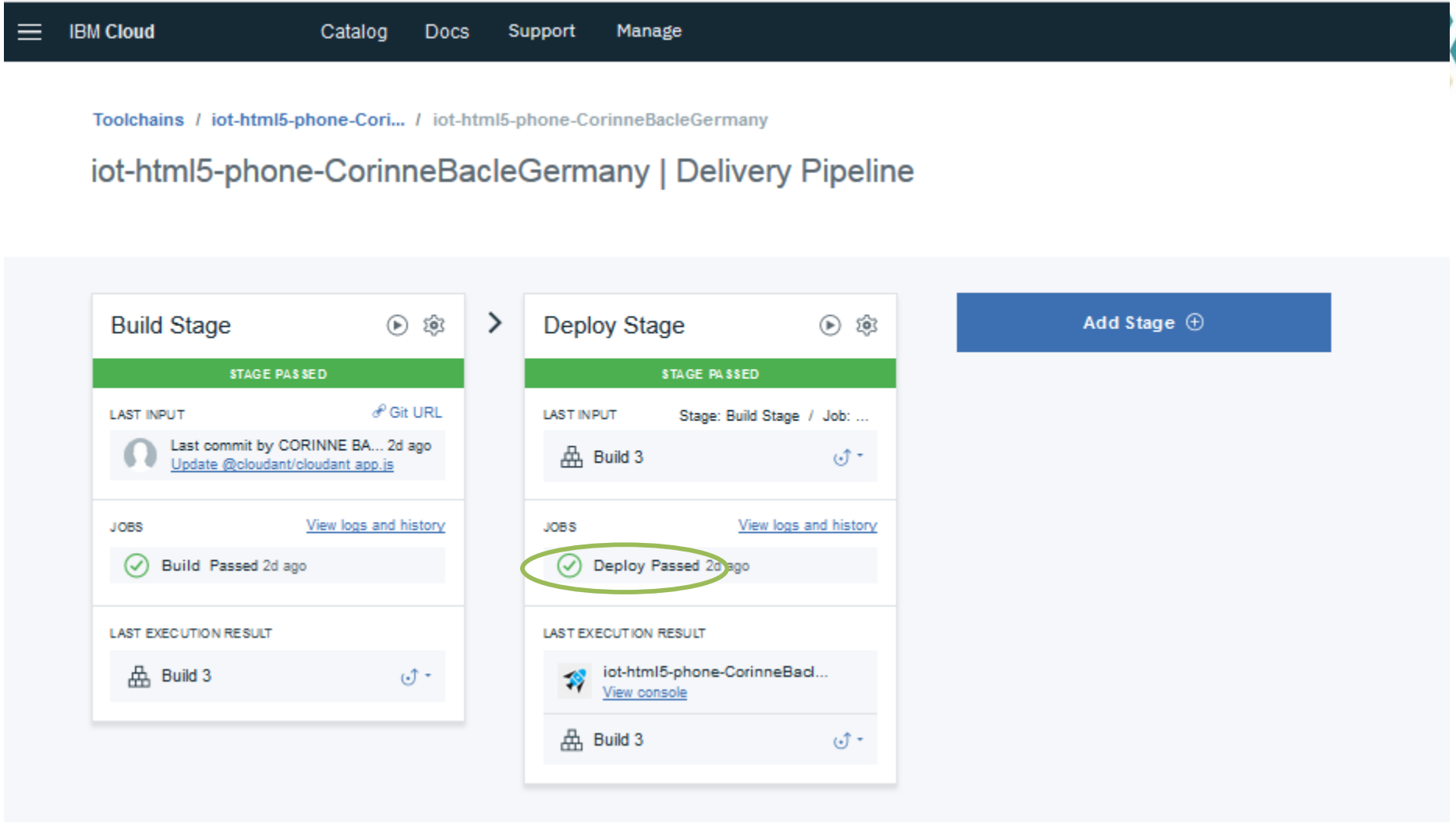
See next slide if you have close the toolchain tab

How to find the toolchain if you have closed the tab:

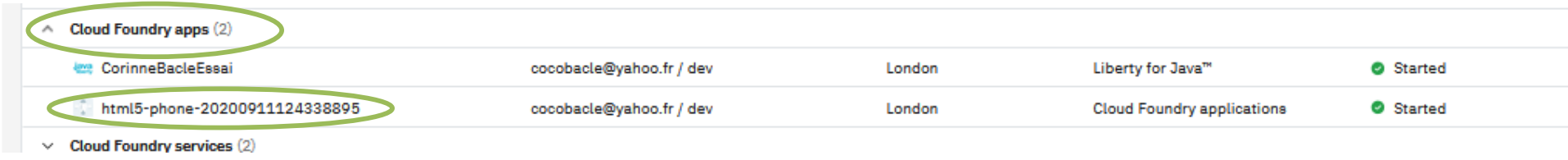




Check deployment status :



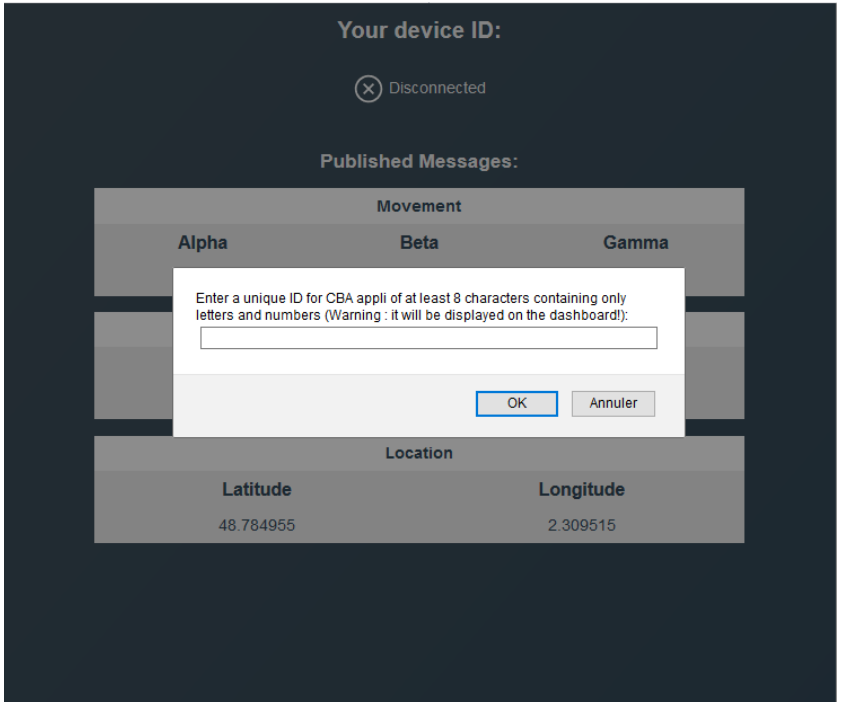
Find the application: https://cloud.ibm.com/resources



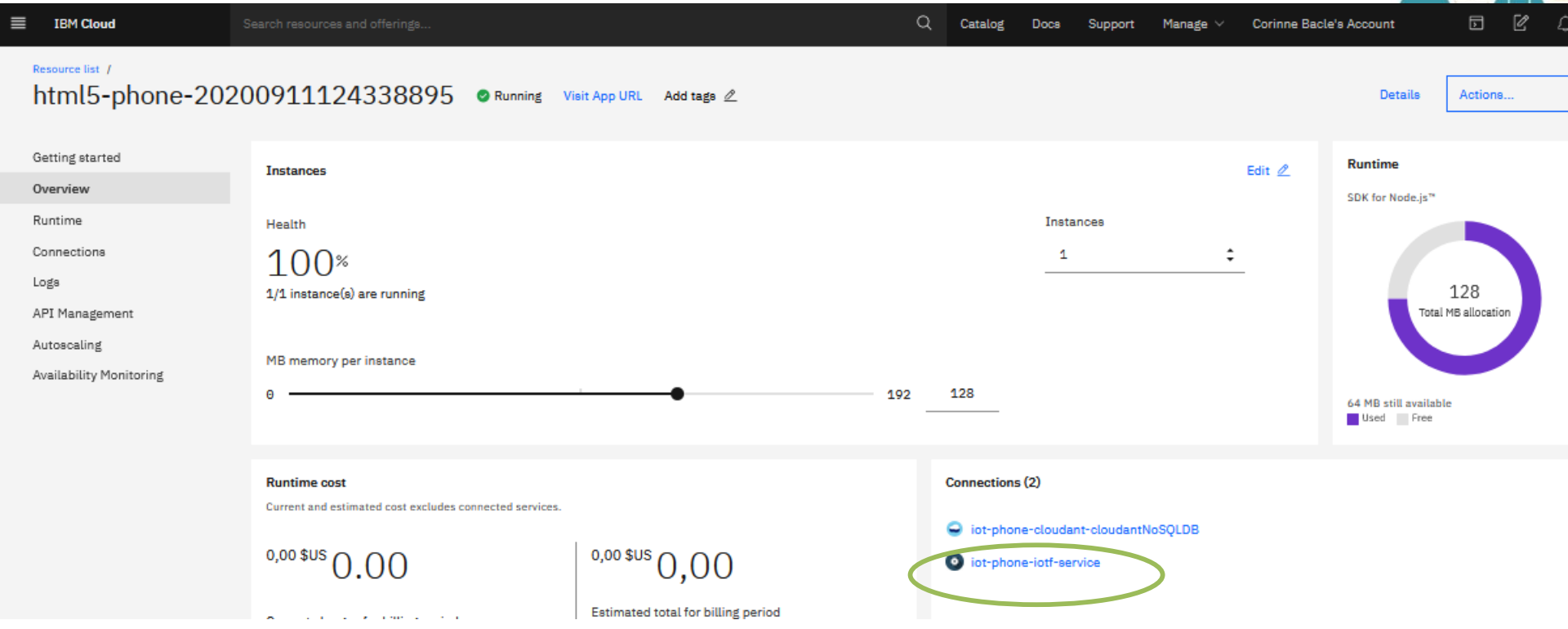
Use the link to view your app on your phone
You can create your own QR Code
If you enter a unique ID, don't let it open !!
Click Refresh to stop data transfert…

Si vous avez un IPhone : La version IOS ne permet pas d'accéder à l'accéléromètre et au gyroscope depuis Safari de façon simple.

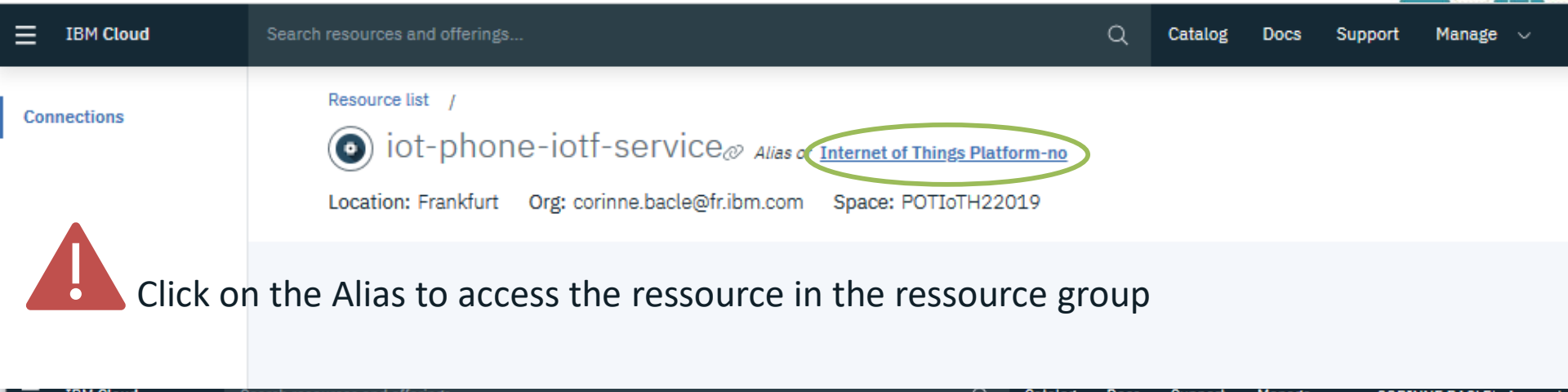
Open the appli on your phone/tablet



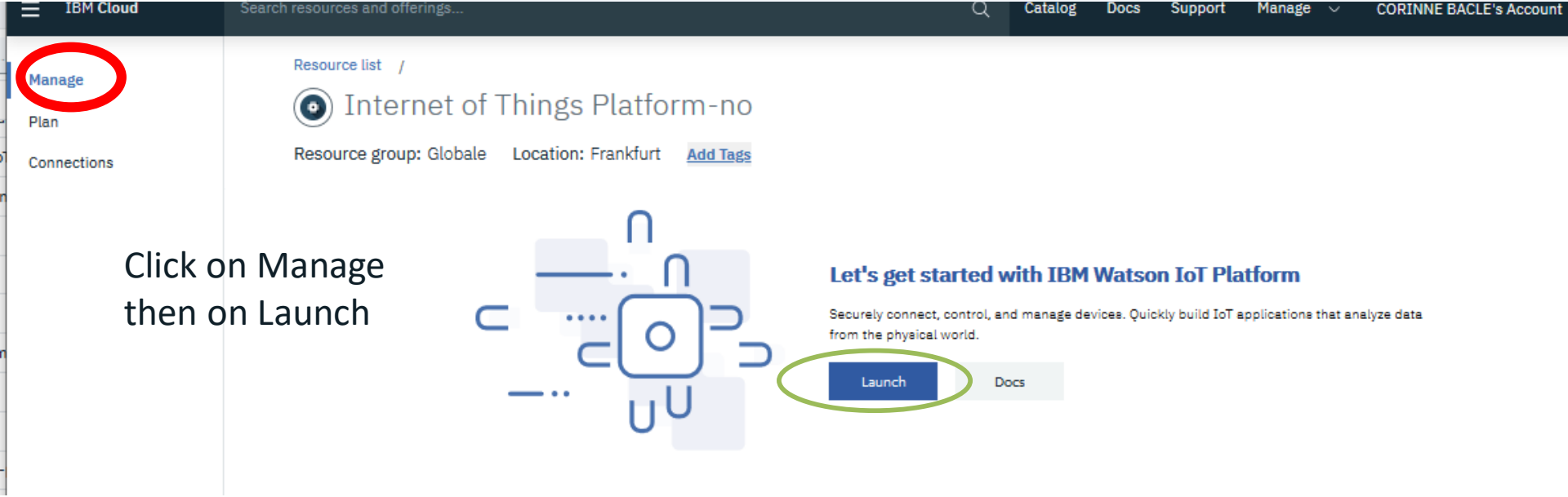
You can create your own QR Code
Using a free QR Code generator
If you enter a unique ID, don't let it open !!
Click Refresh to stop data transfert…



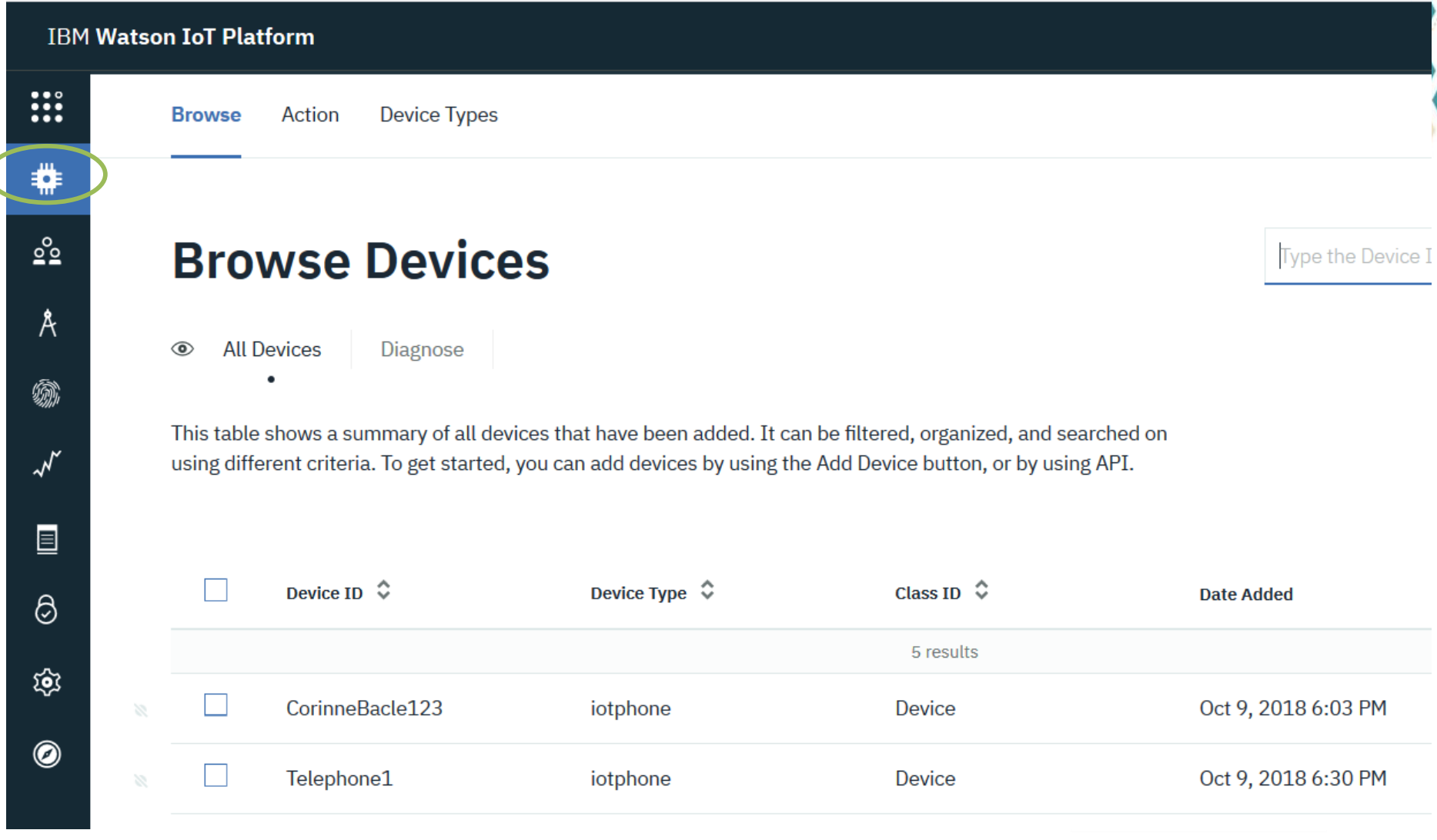
To access your IoTPlatform
Click on the connection
Then See next slide



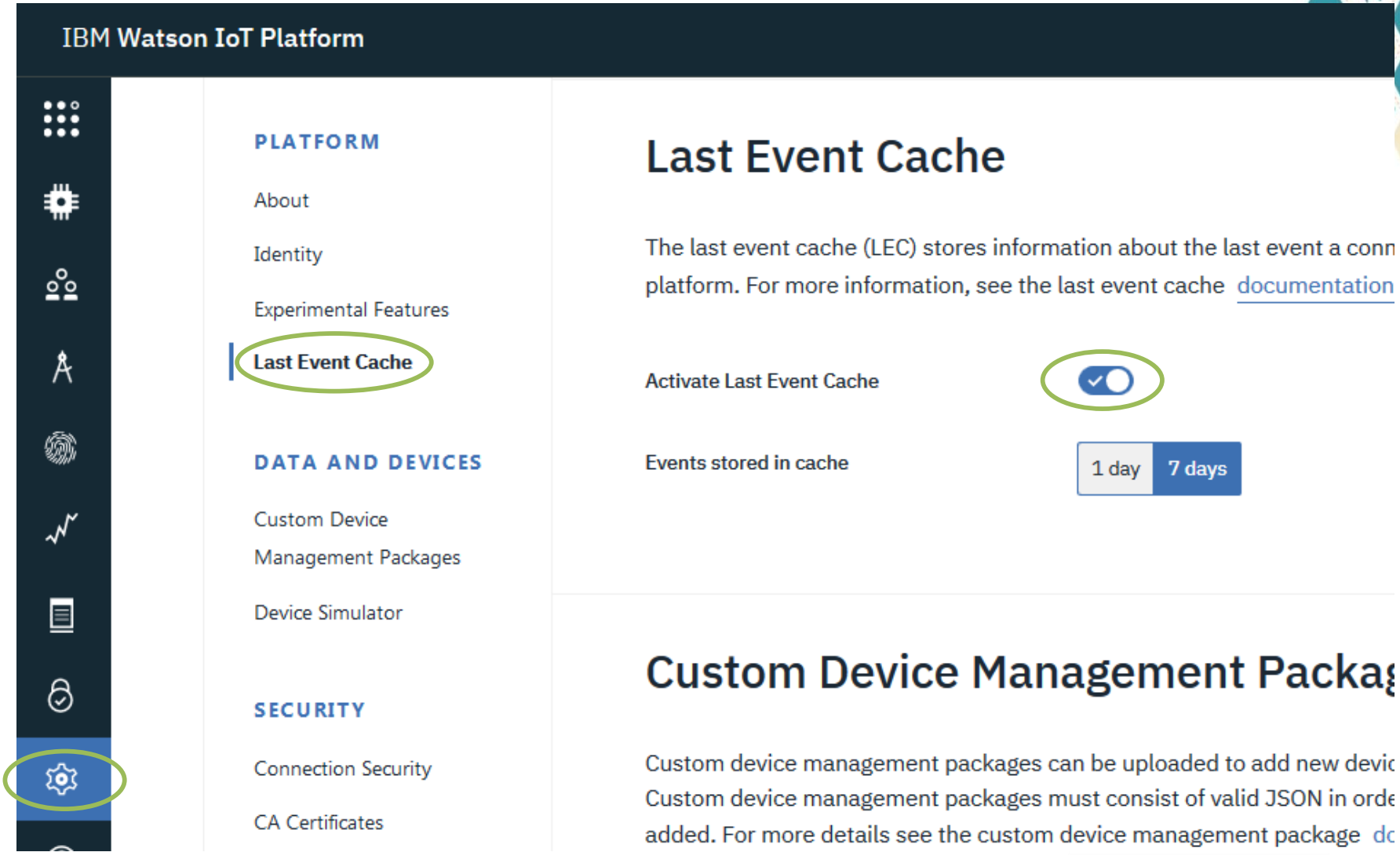
Click on the Alias to access the ressource in the ressource group



Click on Manage
then on Launch

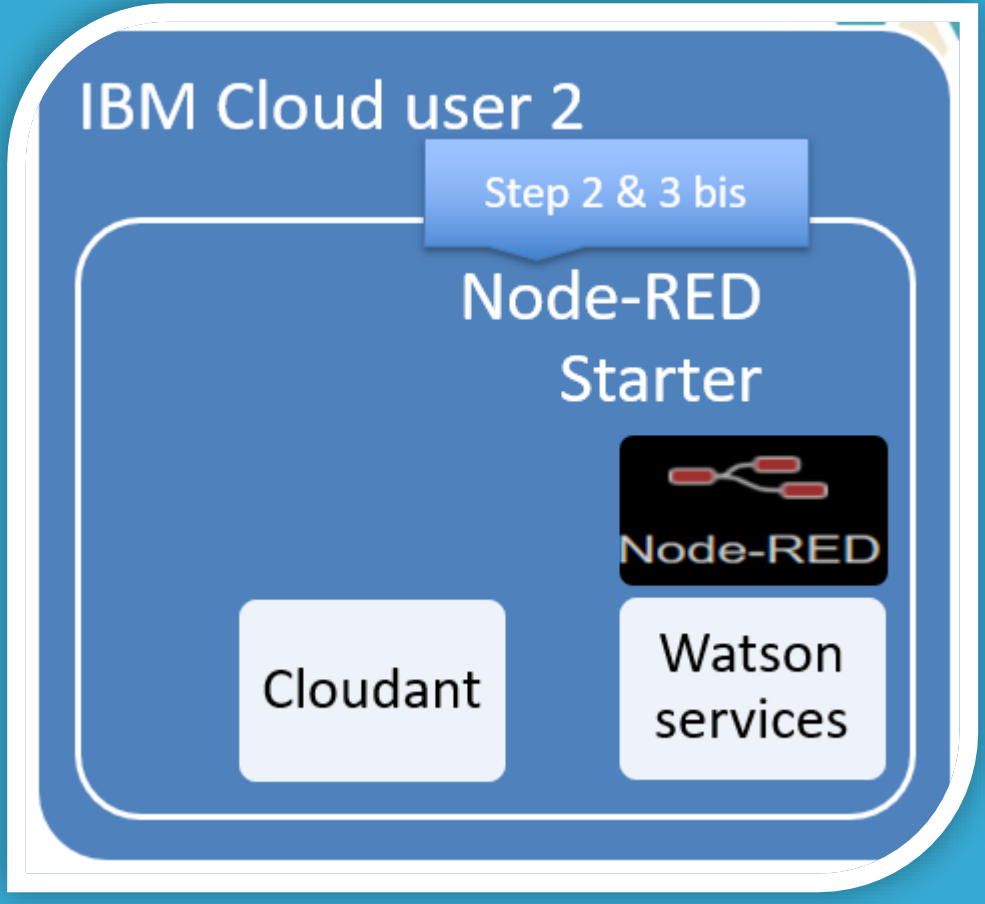

IBM Watson IoT Platform
Browse
Action
Device Types
Browse Devices
Type the Device I
All Devices
Diagnose
This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.
Device ID
Device Type
Class ID
Date Added
5 results
CorinneBacle123
iotphone
Device
Oct 9, 2018 6:03 PM
Telephone1
iotphone
Device
Oct 9, 2018 6:30 PM

Configure last event cache feature in the IoT Platform (for all)

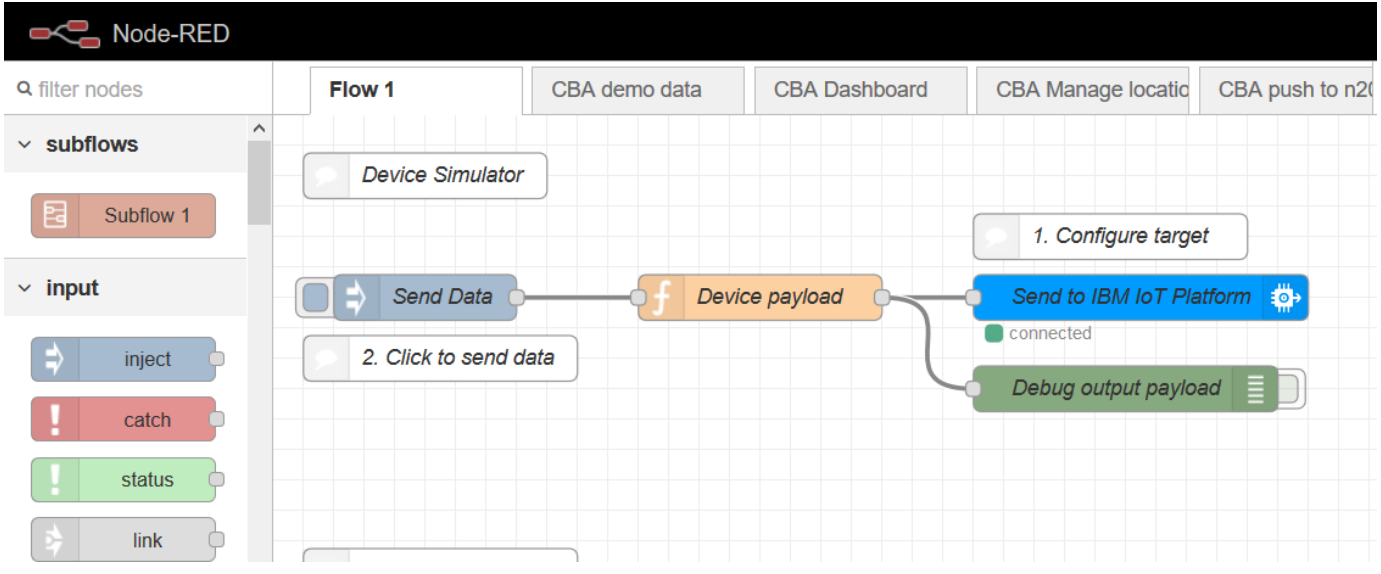

IBM Watson IoT Platform
PLATFORM
About
Identity
Experimental Features
Last Event Cache
DATA AND DEVICES
Custom Device Management Packages
Device Simulator
SECURITY
Connection Security
CA Certificates
Last Event Cache
The last event cache (LEC) stores information about the last event a conn
platform. For more information, see the last event cache documentation
Activate Last Event Cache
Events stored in cache
1 day
7 days
Custom Device Management Packag
Custom device management packages can be uploaded to add new devic
Custom device management packages must consist of valid JSON in orde
added. For more details see the custom device management package do

Node-RED

User 2

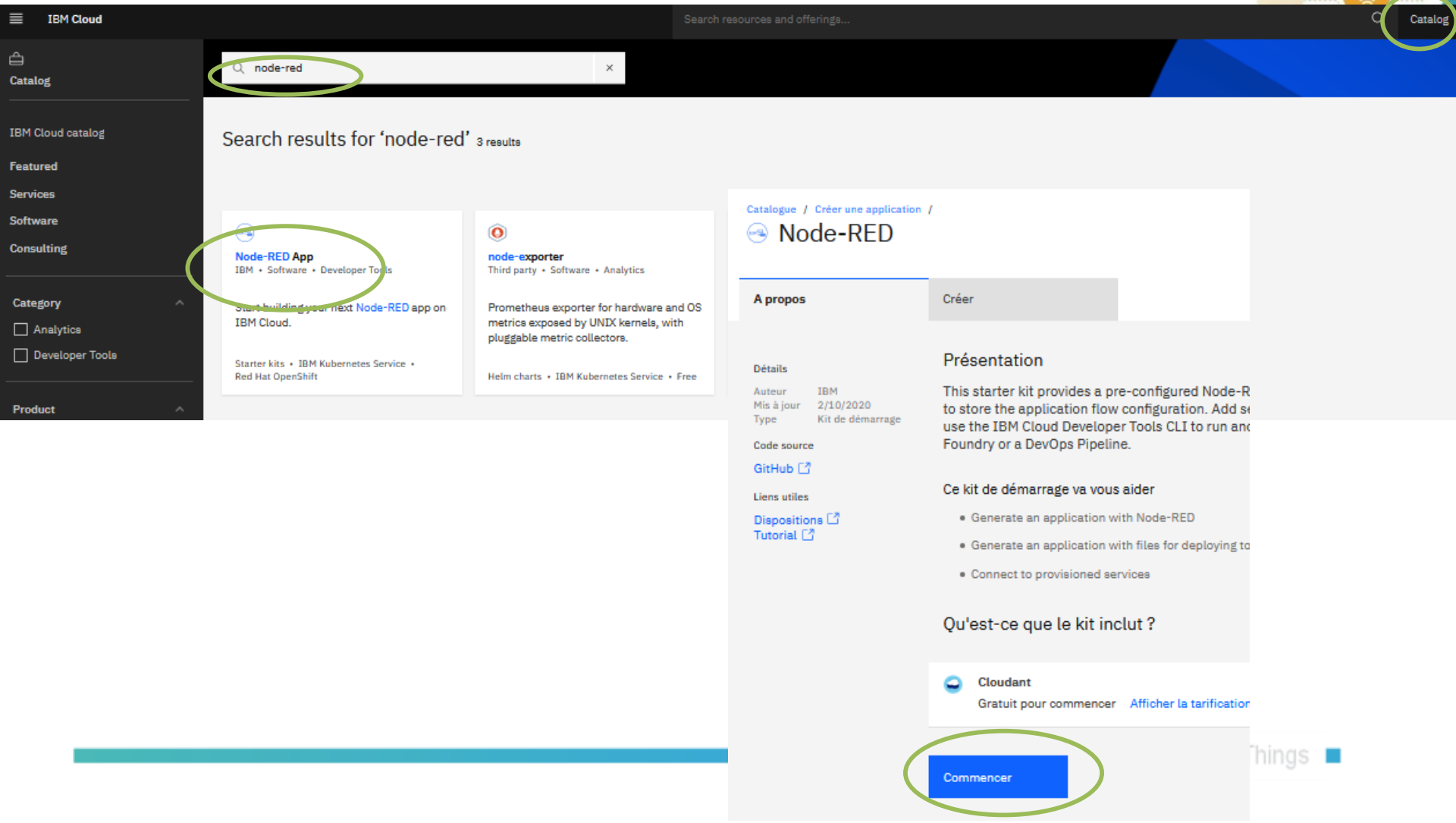


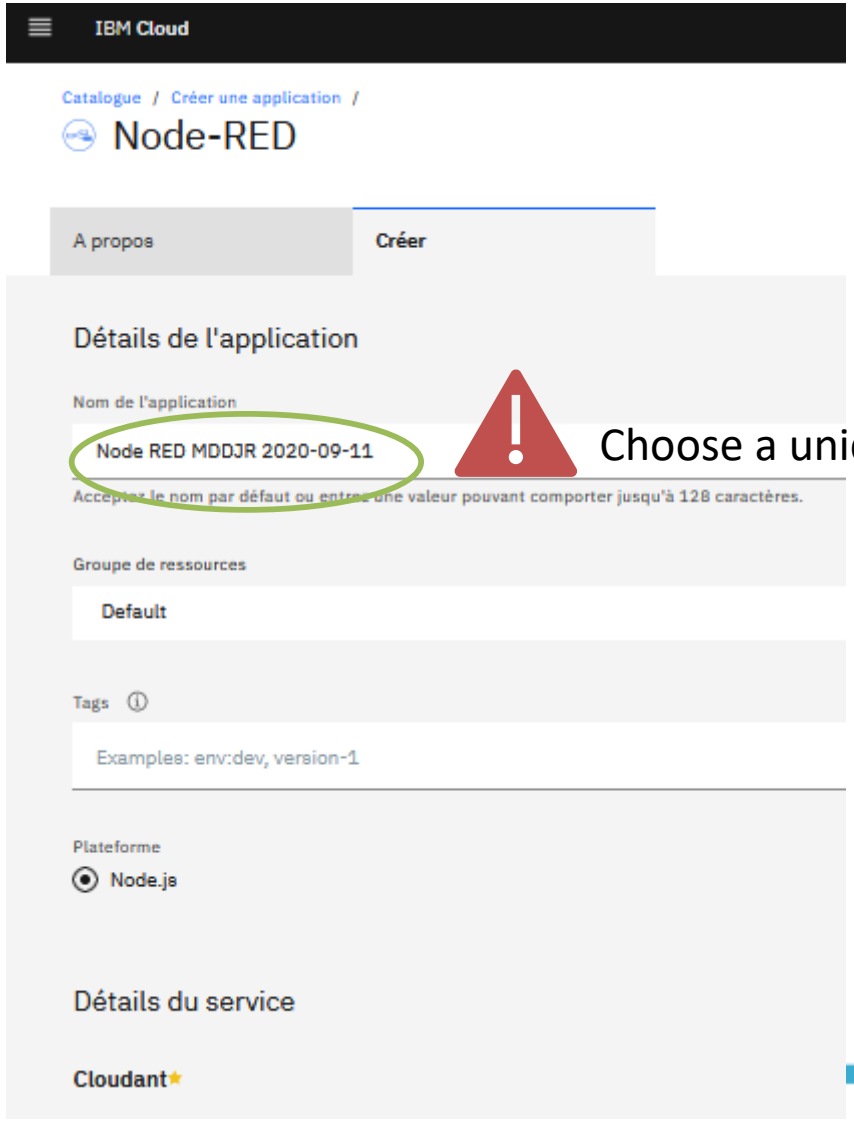
Create a NodeRed and link it to your application as user 2



Log in https://cloud.ibm.com as **USER 2**

https://cloud.ibm.com/catalog





Choose a unique name

IBM Cloud

Search resources and offerings...

Liste des ressources / Détails de l'application /

Node RED MDDJR 2020-09-11

Ajouter des balises

Détails

UTL de l'application	Vous devez d'abord déployer votre application
Source	Télécharger le code
Groupe de ressources	Default
Cible de déploiement	Vous devez d'abord déployer votre application
Créé	9/11/2020

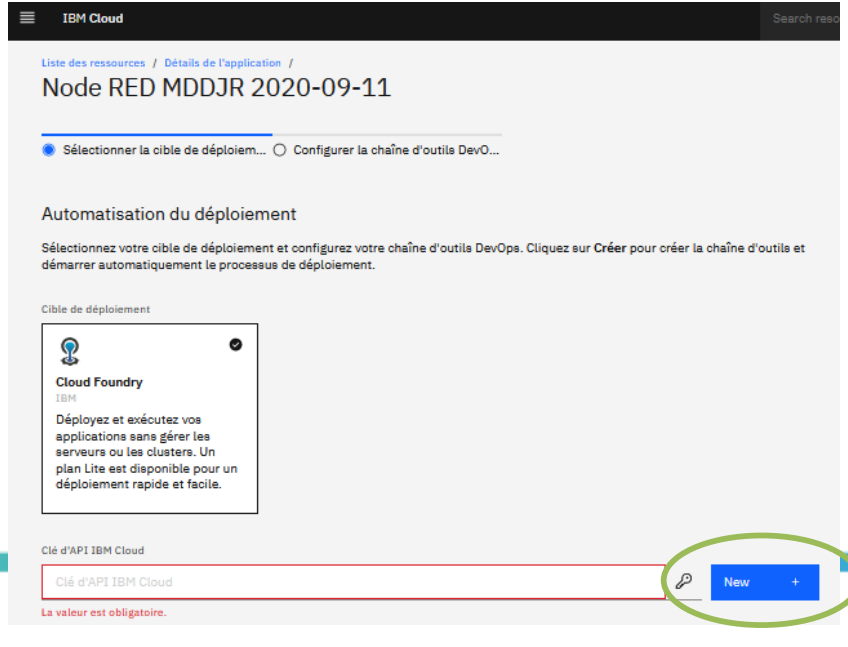
Services

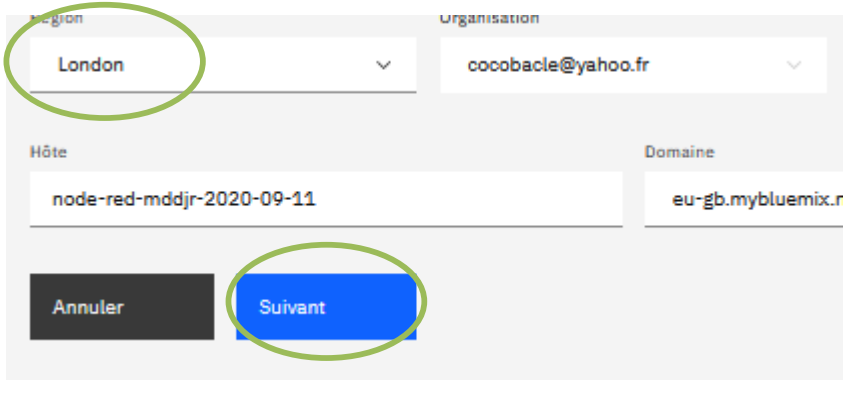
Automatisation du déploiement

Configuration de la distribution continue

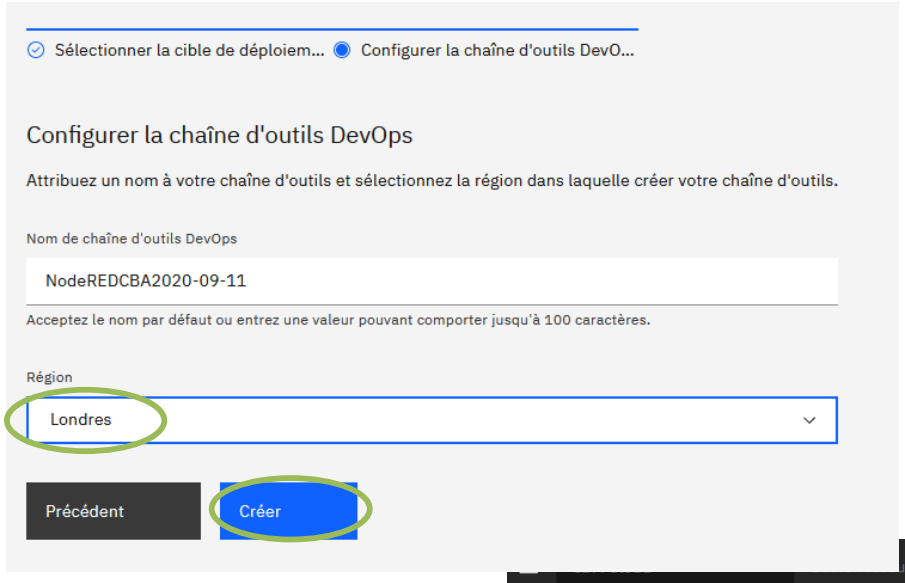
La distribution continue n'est pas activée pour cette application. Activez la distribution continue afin d'automatiser les générations, les tests et les déploiements via Delivery Pipeline, GitLab, etc.

Déploiement de votre application

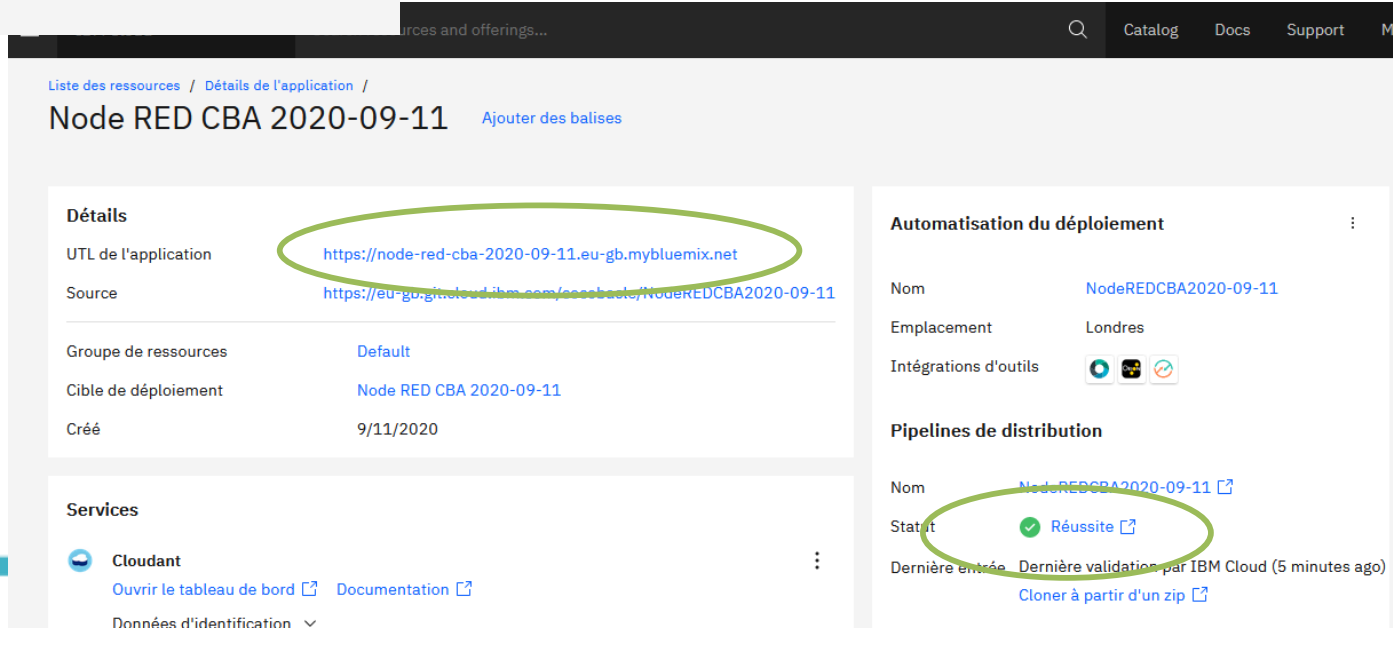




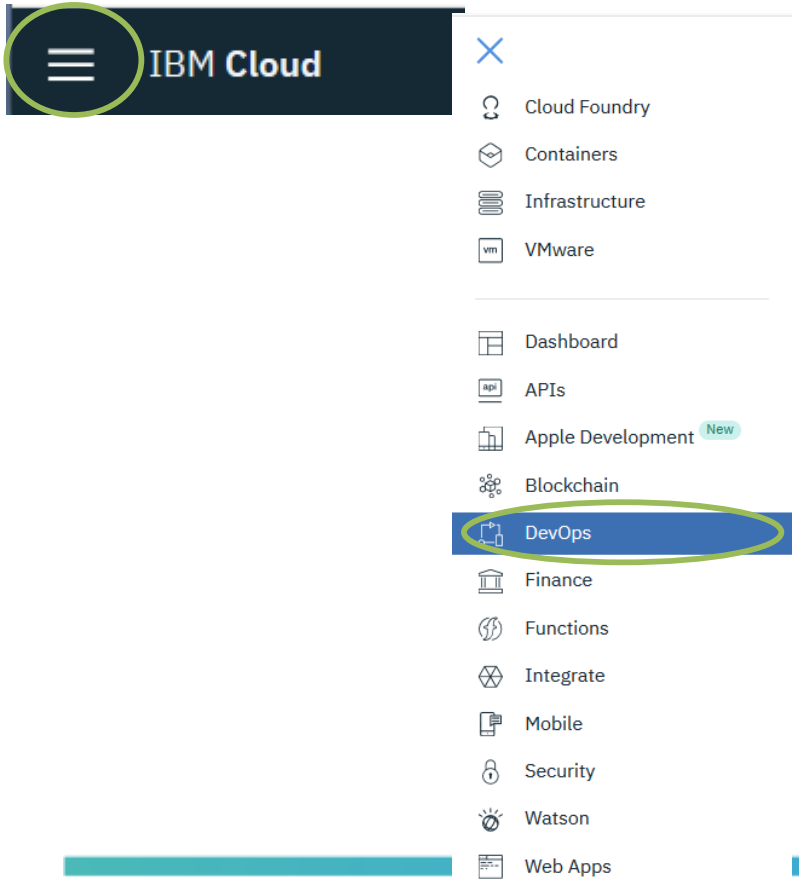
IBM Internet of Things

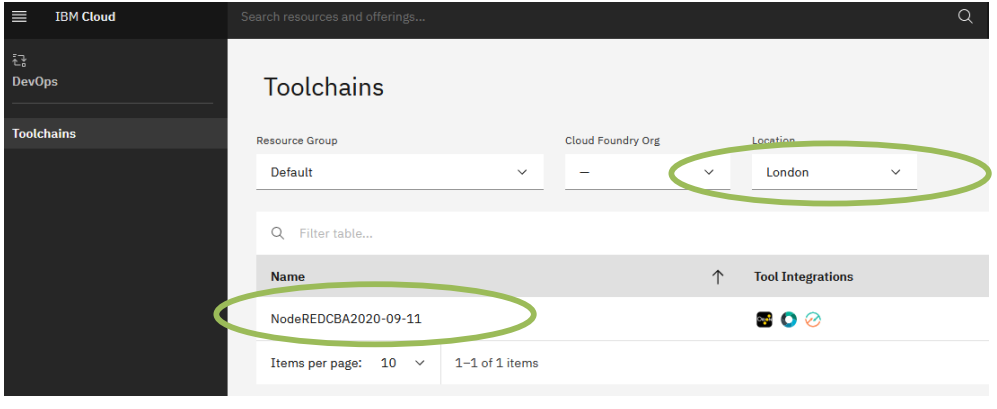


Wait a little
Refresh if necessary

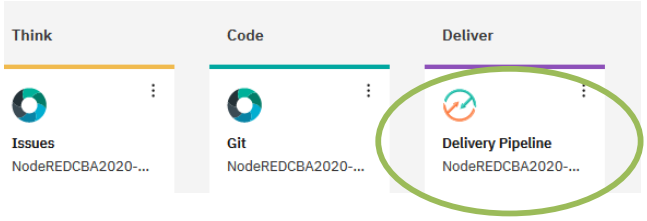


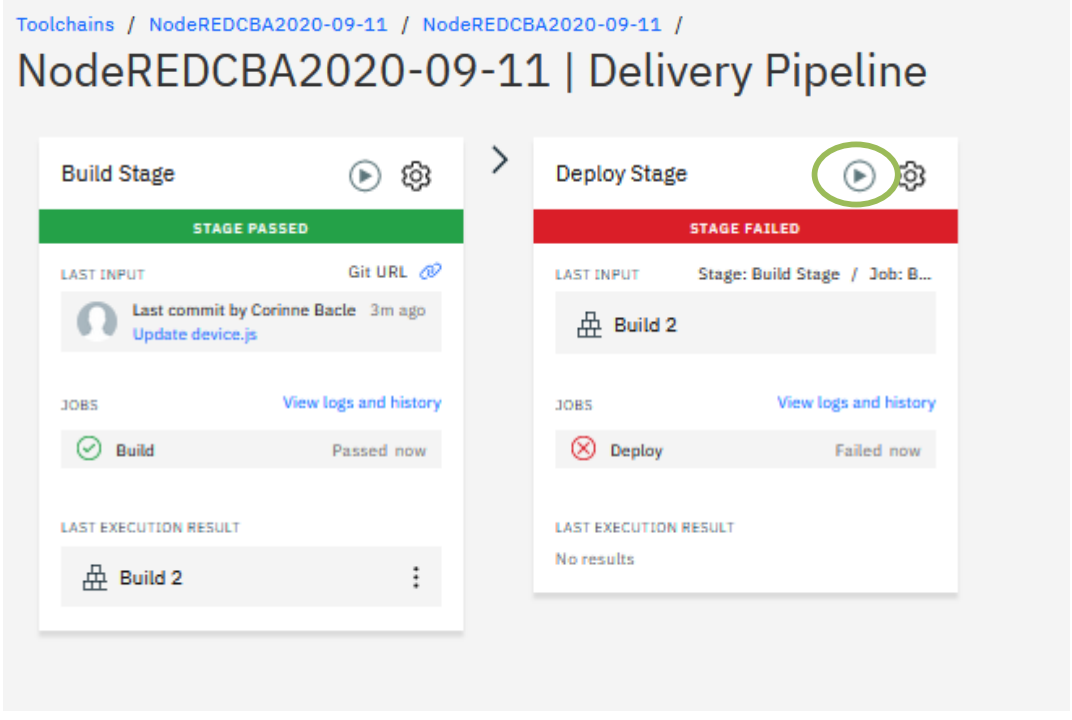
How to find the toolchain if you have closed the tab or if the status is « failed »:



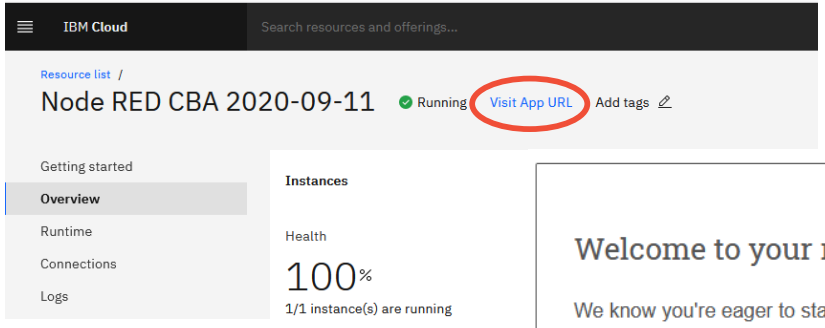


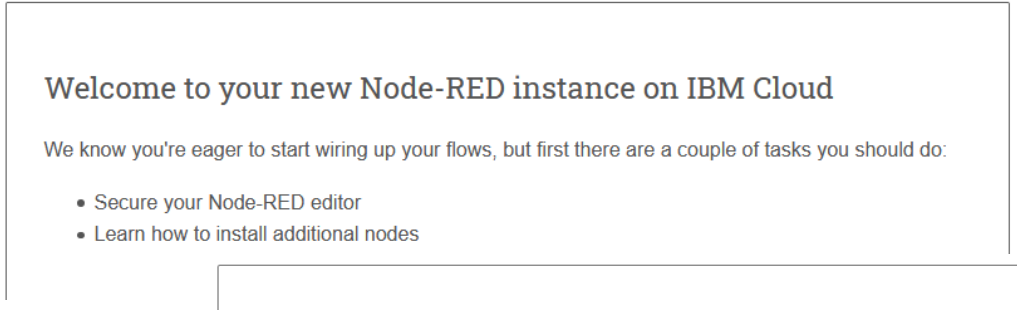
Re deploy if the status is FAILED

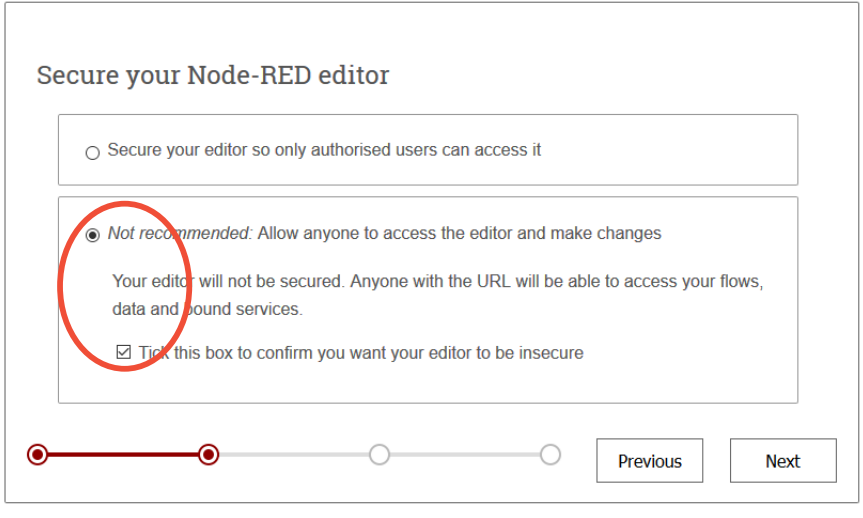




Open the Node-RED application







Node-RED on IBM Cloud

Node-RED

Flow-based programming for the Internet of Things

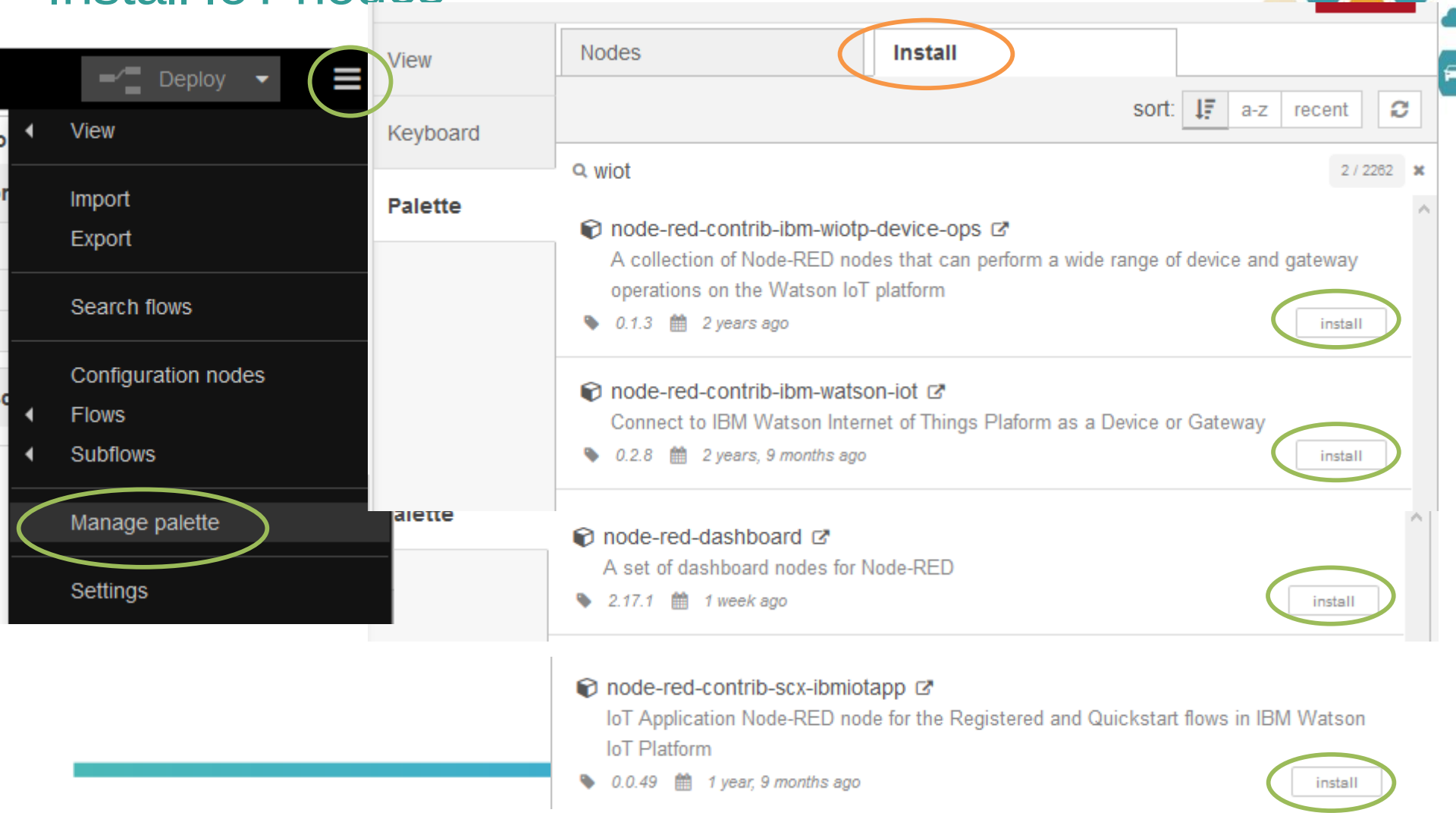
Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways.

This instance is running as an IBM Cloud application, giving it

Go to your Node-RED flow editor

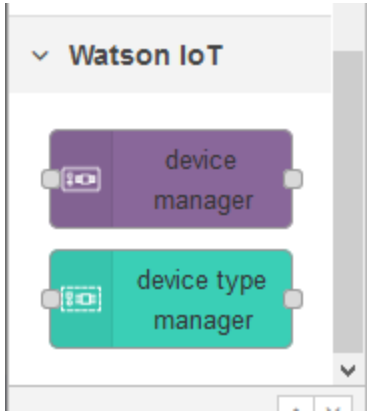
Store the link !!

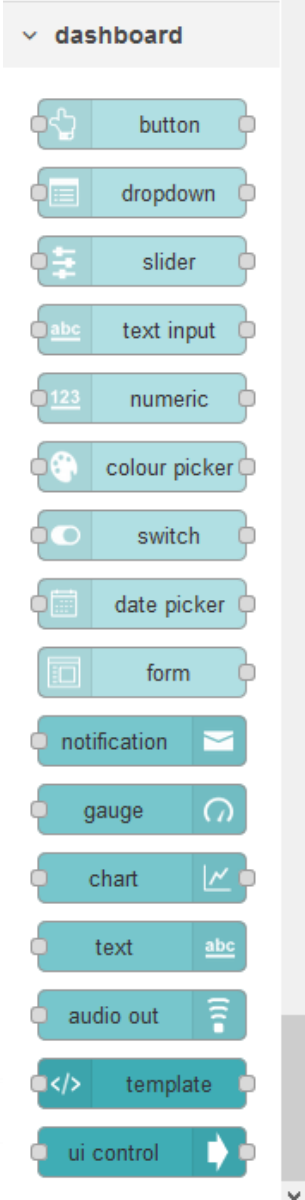
Install IoT nodes



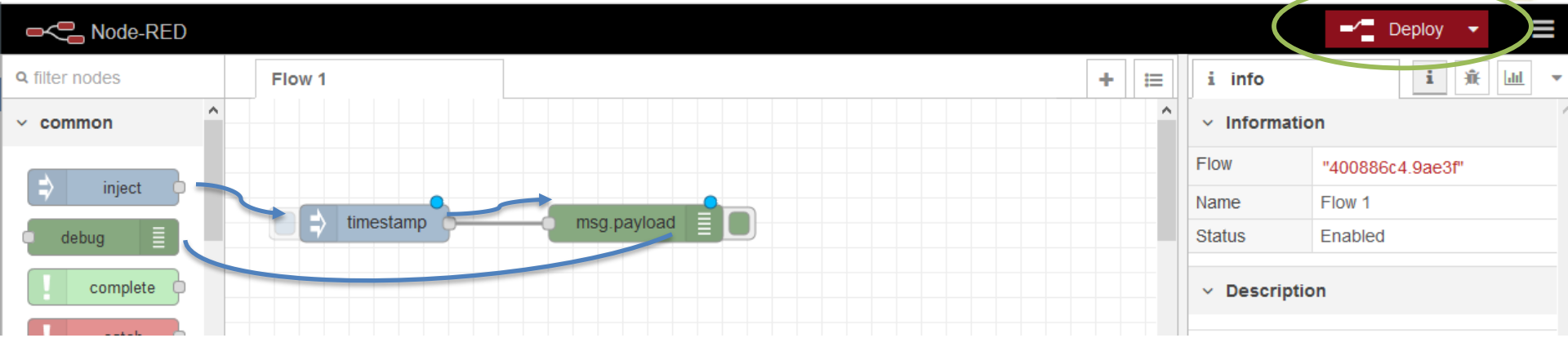
Result

input
Watson IoT
ibmiot in
output
OpenWhisk
Watson IoT
ibmiot out

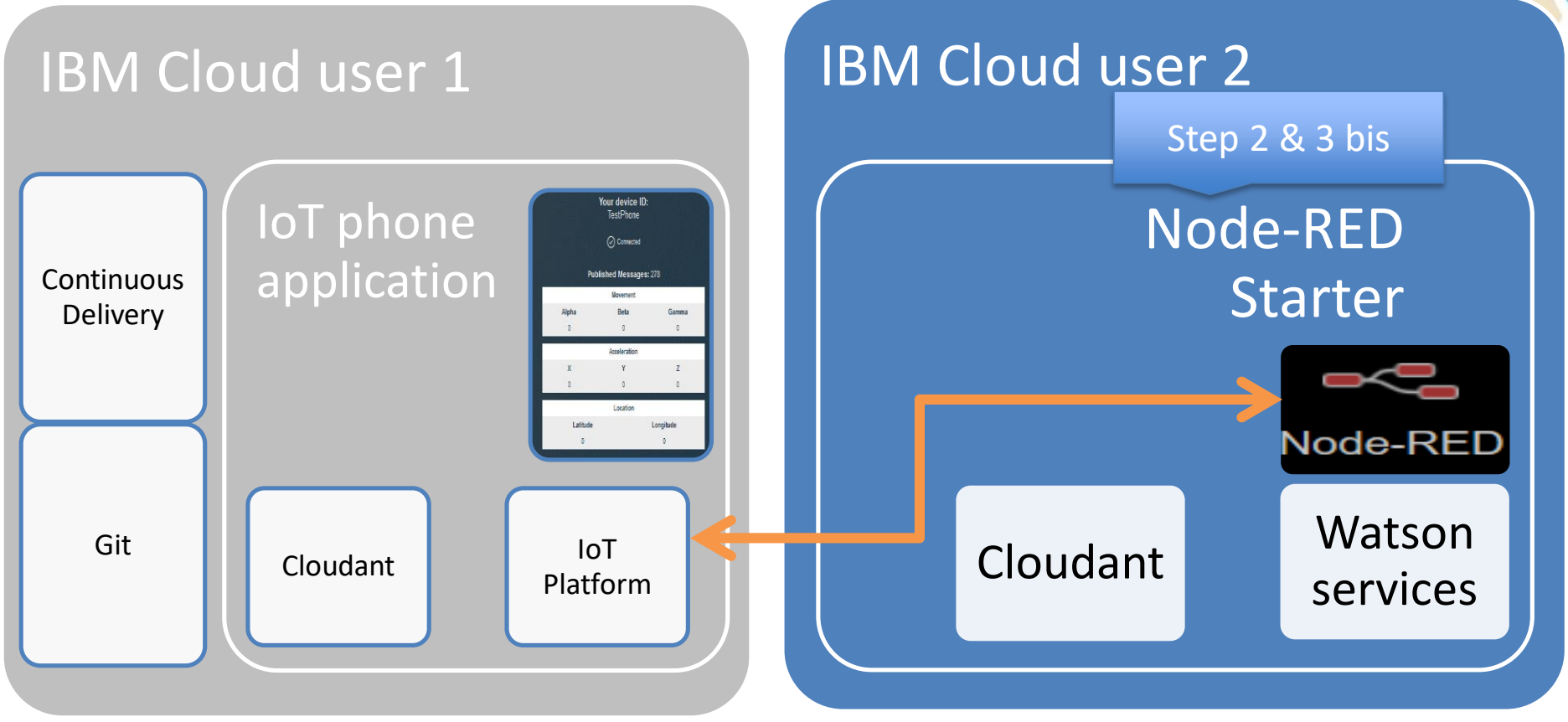

Watson IoT
device manager
device type manager


dashboard
button
dropdown
slider
text input
numeric
colour picker
switch
date picker
form
notification
gauge
chart
text
audio out
template
ui control

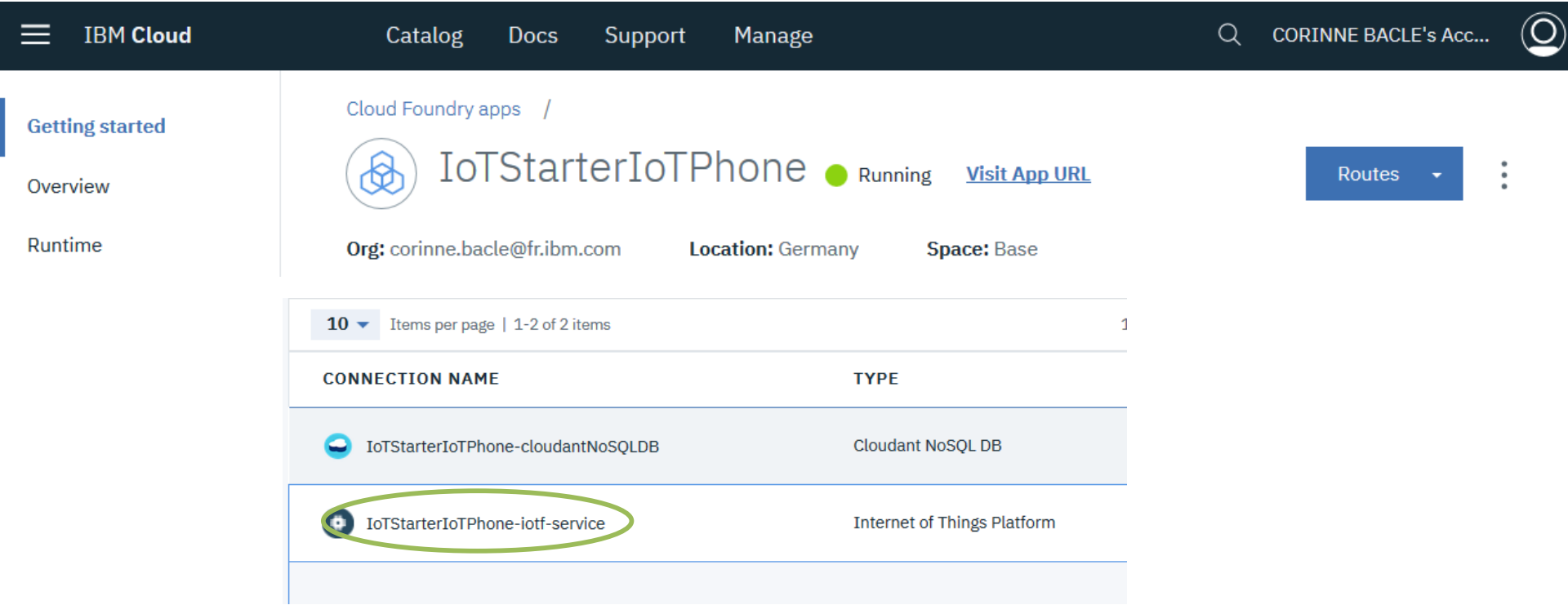
Create a first flow then deploy



Connect the Node-RED to the IoT platform service of the user 1 html 5 application

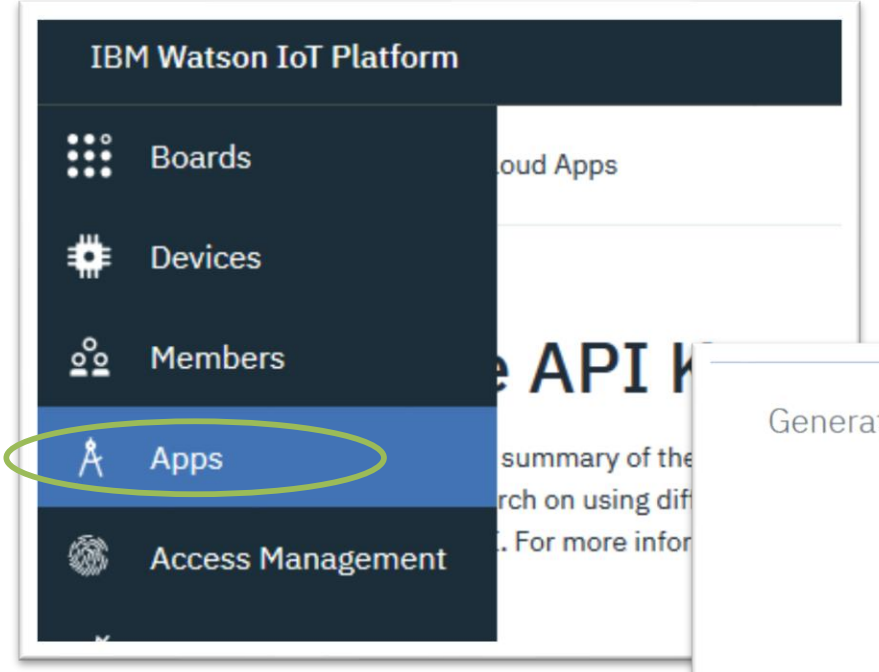


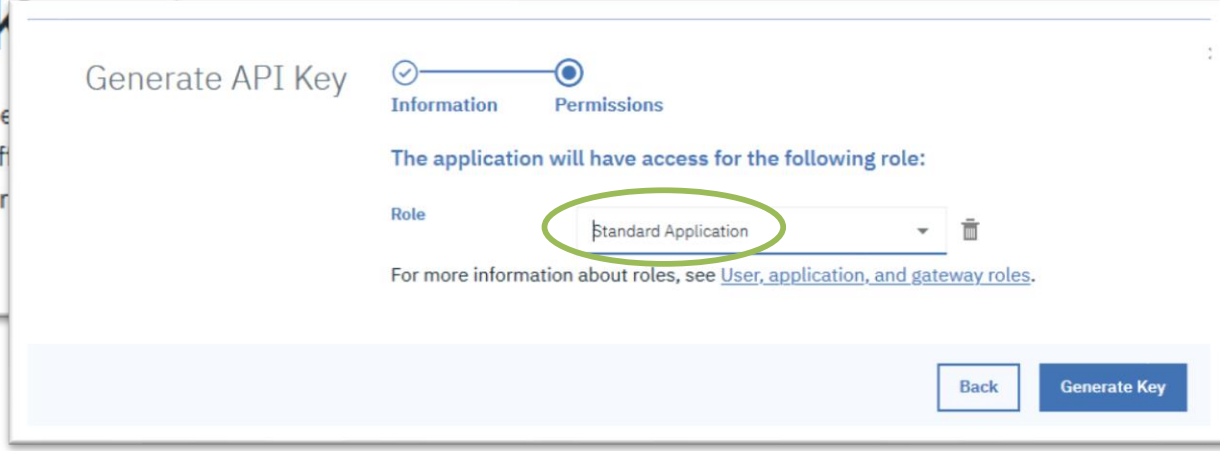
As a User 1 : create API key
Go to the IoT platform service



Go to your IoT Platform service

Create an API Key

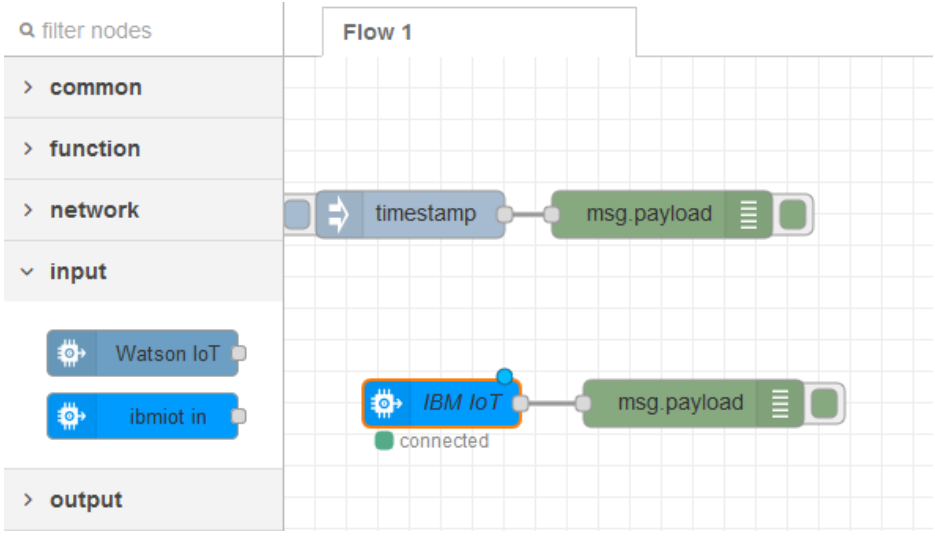




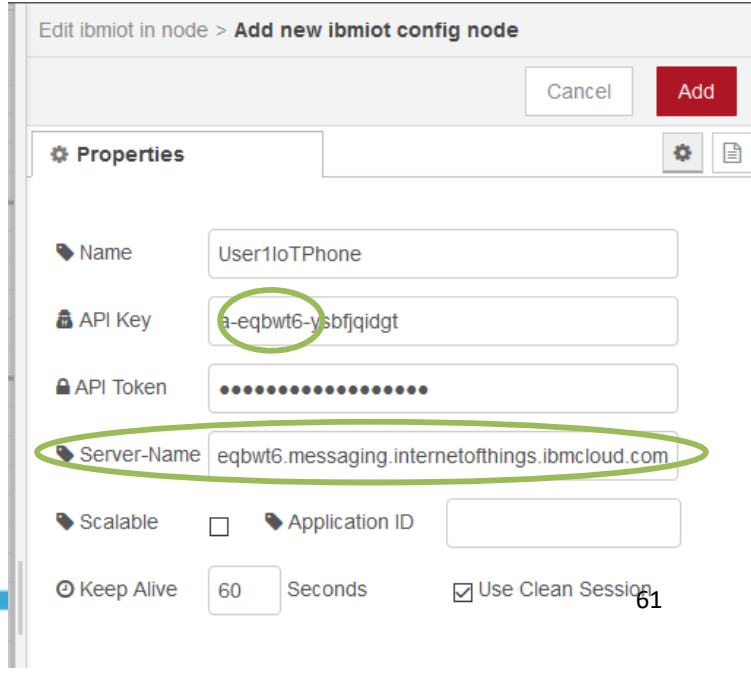
Save the API Key, Authentication Token in a file

As a User 2: connect Node-RED

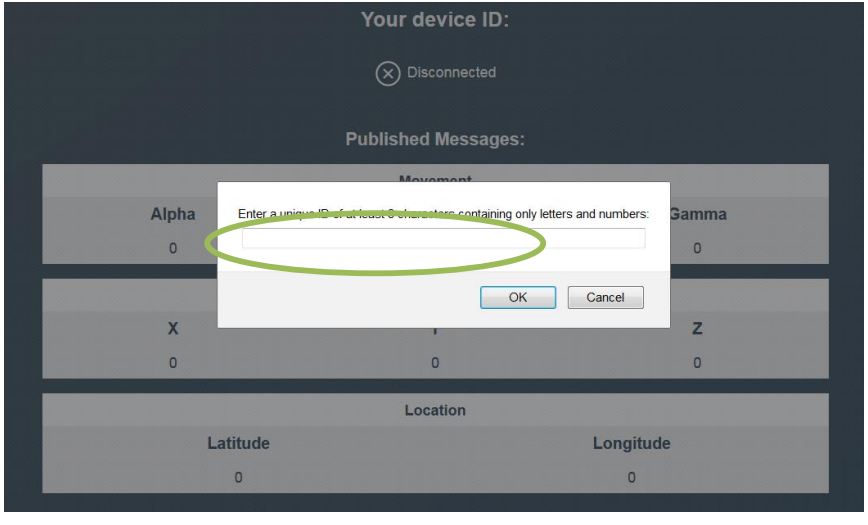
Create an IBM IoT node linked to a debug node
Open the IBM IoT node



Create the API key (pencil on the right of the API Key attribute) to define the configuration:

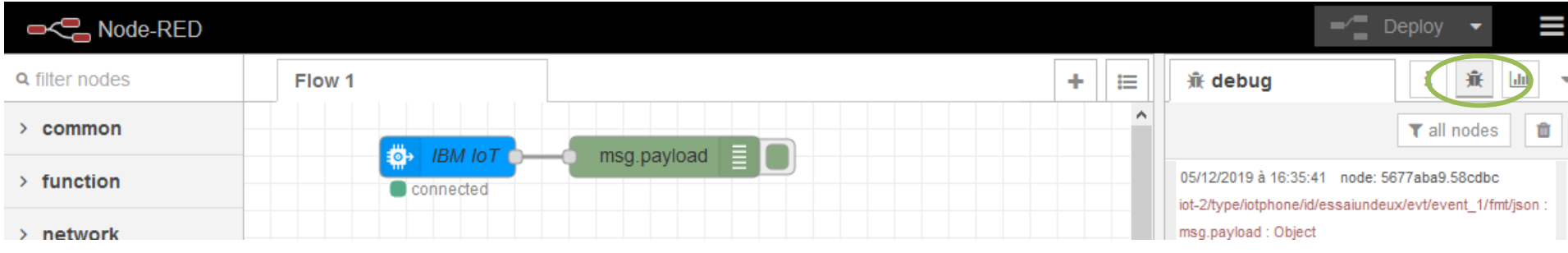


Check the configuration with the IoT Phone app:



<= Open the phone app
Enter a unique ID

Check the debug tab of the Node-RED to see messages:



POT IBM Watson IoT Platform lab

I. **Prerequisites**

II. **Explore data coming from the IoTPhone application**

III. **Use data coming from your IoT SmartPhone**

IV. **Use your NodeRed application to create and generate an alert**

V. **Create a dashboard application in Node-RED**

Ressources

Découvrez comment Watson IoT peut vous aider à exploiter le potential de vos objets connectés.

ibm.com/iot

Tester
https://ibm.biz/try_iot

DeveloperWorks
https://www.ibm.com/developerworks/learn/iot/
https://developer.ibm.com/recipes/
https://developer.ibm.com/iotfoundation/

Watson IoT Academy
https://www.iot-academy.info/