



# 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

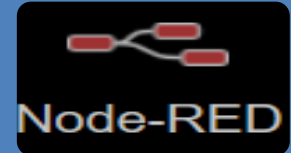
Your device ID: TestPhone		
Connected		
Published Messages: 278		
Movement		
Alpha	Beta	Gamma
0	0	0
Acceleration		
X	Y	Z
0	0	0
Location		
Latitude	Longitude	
0	0	

IoT  
Platform

## IBM Cloud user 2

Step 2 & 3 bis

Node-RED  
Starter



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

The screenshot displays the IBM Cloud dashboard. The top navigation bar includes 'IBM Cloud', 'Catalog', 'Docs', 'Support', and 'Manage'. The 'Manage' menu is open, showing options like 'Account', 'Billing and usage', and 'Security'. The 'Account' option is highlighted. Below the dashboard, the 'Cloud Foundry Organizations' page is shown for the user 'corinne.bacle@fr.ibm.com'. The 'Spaces' tab is selected, displaying a table of spaces. The 'Cloud Foundry Orgs' option in the left sidebar is also highlighted.

Dashboard

RESOURCE GROUP All Resources

CLOUD FOUNDRY ORG All Organizations

CLOUD FOUNDRY SPACE All Spaces

Learn more about migrating your eligible service instances to

Cloud Foundry Organizations / corinne.bacle@fr.ibm.com

Spaces Users Domains Quotas

Search

Name	Region	Manager
<a href="#">Base</a>	Germany	✓
<a href="#">Dev</a>	Germany	✓

Profile

Platform Notifications

Usage Dashboard

Billing

Cloud Foundry Orgs

Resource Groups



# 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”

Create a new space

Region

United Kingdom

Name

PoT-IoT-Sep-2020

Cancel

Save

# IBM Cloud account configuration

Go to Resource Groups

Check if you have one

If not, create one



IBM Cloud

Account

Account resources

Best practices

Resource groups

Cloud Foundry orgs

Licenses and entitlements

Tags

Dashboards

Account settings

Search resources and offerings...

Catalog Docs Support Manage

Corinne Baile's Account

## Resource groups

Group resources to organize and assign access to the group. Available for all resources managed by IBM Cloud Identity and Access Management. [Learn more about resource groups.](#)

Search

Create

Name	ID	Date Created	Actions
Default	ec25877185ee4fc3822fadb491867f0a	05/12/2019 à 12:03:16	:

# IoTPhone Application User 1

IBM Cloud user 1

Continuous  
Delivery

Git

IoT phone  
application

Cloudant



IoT  
Platform

# Go to github

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

Download this documentation :

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

in directory Documentation





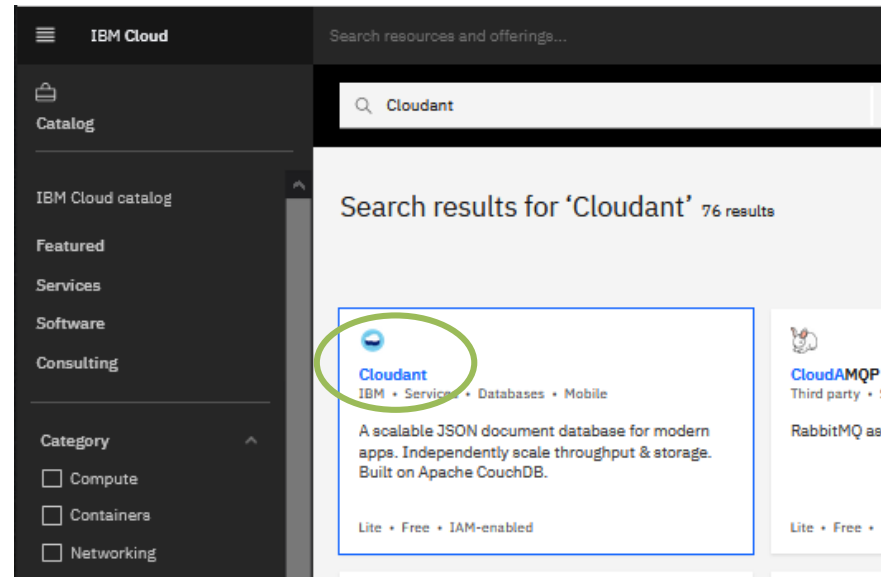
# Cloudant service creation



Click on IBM Cloud Catalog



Search and select “Cloudant”




# Cloudant service creation



Select your region

Catalog / Services /

 **Cloudant**  
Author: IBM

Create About

Select an offering

**Cloudant**

IBM Cloudant is a fully managed JSON document database that offers independent serverless scaling of throughput capacity and storage.

Lite plan available

Select an environment

Multitenant Dedicated

Your instance will be running securely on environments with shared resources.

Available regions

London

Configure Cloudant instance

Instance name

iot-phone-cloudant-cloudantNoSQLDB

Tags

Examples: env:dev, version-1

Authentication method ⓘ

IAM

Plan

**Lite**

Full functionality for development and evaluation with a set capacity. Only one Lite plan instance per account.

Free - Only in multi-tenant

**Standard**

Granular control over provisioned capacity allocated. Billing prorated

Starting at \$75.00/month

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

Then click "Create"

Total monthly cost\* Free estimated

Create

# Cloudant service configuration



Resource list /  
iot-phone-cloudant-cloudantNoSQLDB Active [Add tags](#)

Details Actions...

Manage Overview Dashboard Capacity Docs

Service credentials

Launch Dashboard

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

Then Create Database

Databases

Database name ▼ Create Database

Database name : device\_credentials

Select: "Non-partitioned"

## Create Database

Database name

device\_credentials

Partitioning

☐ Partitioned ☒ Non-partitioned

> What is a Partitioned Database?

Then "Create"

Cancel

Create

IBM Internet of Things

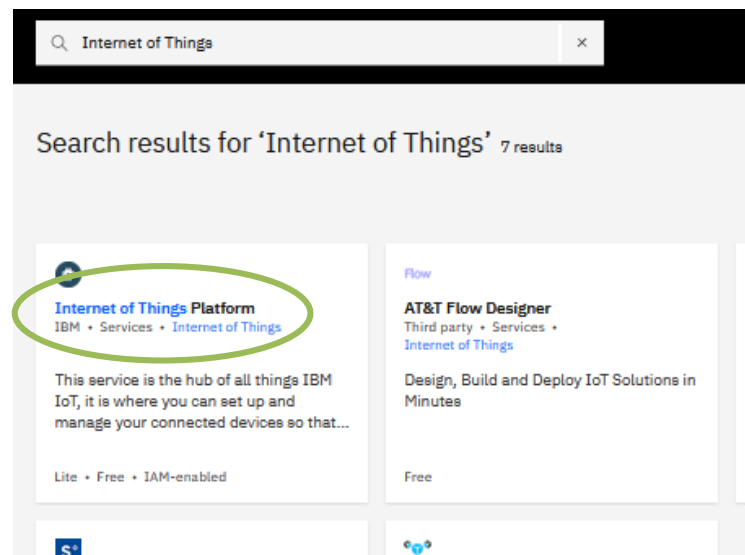
# IoT service creation



Click on IBM Cloud Catalog



Search and select "Internet of Things"



# IoT service creation



Select your region

Catalog / Services /

## Internet of Things Platform

Author: IBM • Date of last update: 09/03/2019 • Docs

Create About

Select a region

Select a region

London

Configure your resource

Service name

iot-phone-iotf-service

Tags ⓘ

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

Then click "Create"

Total monthly cost\* Free estimated

Create

Add to estimate

# IoT service configuration



In the new window, click “Launch”

A screenshot of the IBM Cloud console showing the configuration page for the 'iot-phone-iotf-service'. The page has a dark header with the IBM Cloud logo, a search bar, and navigation links for Catalog, Docs, Support, Manage, and Corinne. Below the header, the service name 'iot-phone-iotf-service' is displayed with a green 'Active' status and an 'Add tags' link. A left sidebar contains a 'Manage' section with sub-links for 'Plan' and 'Connections'. The main content area features a blue line-art icon of a central square with a circle inside, connected to various lines and shapes. To the right of the icon, the text 'Let's get started with IBM Watson IoT Platform' is followed by a description: 'Securely connect, control, and manage devices. Quickly build IoT applications that analyze data from the physical world.' Below this text are two buttons: a blue 'Launch' button, which is circled in green, and a grey 'Docs' button.

# IoT service configuration



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

The screenshot shows the IBM Watson IoT Platform interface. On the left is a dark navigation sidebar with the title "IBM Watson IoT Platform". It contains several menu items: "Boards", "Devices", "Members", "Apps", "Access Management", "Usage", "Security", and "Settings". The "Security" item is highlighted with a green oval. To the right of the sidebar, the main content area is titled "Policies" with a subtitle "You can configure policies to enhance connection security and control access to the server from devices." Below this is a "Connection Security" section with a subtitle "Configure the security level for device connection." and a green oval around an edit icon. Further down is the "Default Rule" section with a subtitle "Define the default connection security level to use for all device types that do not have custom rules defined." It features two dropdown menus: "Scope" set to "Default" and "Security Level" set to "TLS Optional", both highlighted with green ovals. At the bottom of this section are "Cancel" and "Save" buttons, with the "Save" button highlighted by a green oval.

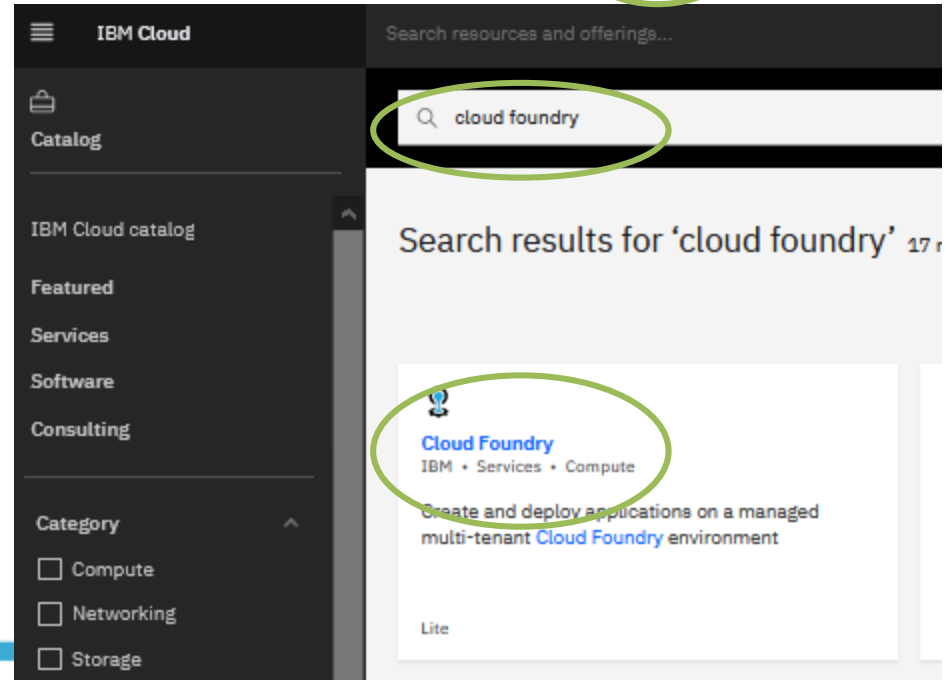
# Sample application creation



Click on IBM Cloud Catalog



Search and select “cloud foundry”

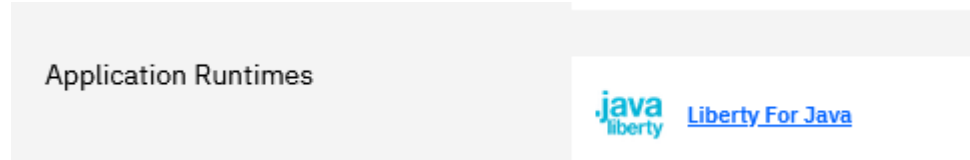




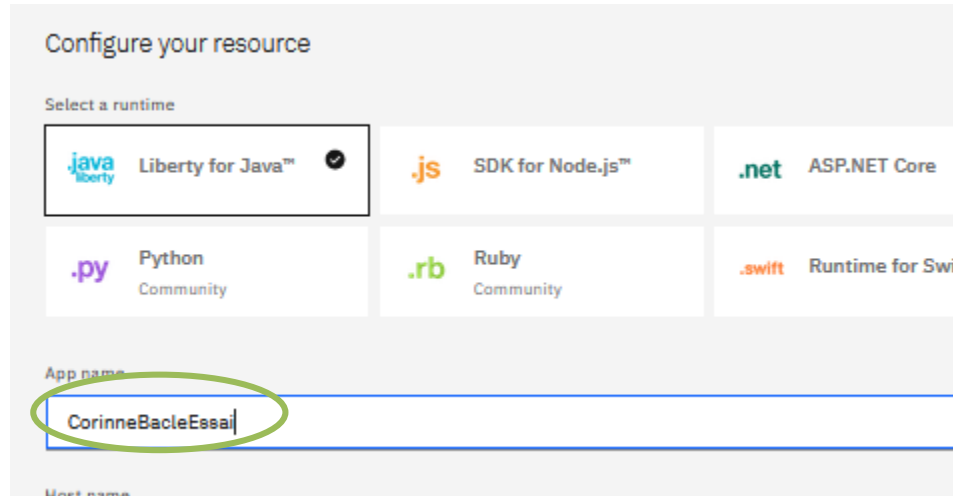
# Sample application connection creation



Click “Liberty For Java”



Select the region  
Enter a unique name



Then “Create”



# Sample application connection creation

Go to “Connections”



IBM Cloud

Search resources and offerings...

Catalog Docs Support Manage ▾ Corinne Bacle's Account

Resource list /

CorinneBacleEssai Starting Visit App URL Add tags

Getting started

Overview

Runtime

**Connections**

Logs

API Management

Filter items

Name Type

Create connection +

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

## Create connection


Search resources...

	Name
<input checked="" type="radio"/>	iot-phone-cloudant-cloudantNoSQLDB
<input type="radio"/>	iot-phone-iotf-service

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

Cloud Foundry services

Services

✓ 1

2

✓ 2

# IoTPhone Application User 1

IBM Cloud user 1

Continuous  
Delivery

Git

IoT phone  
application

Cloudant



IoT  
Platform

# Create your own IoT Html 5 Phone application as user 1



See next slides to create your own application

A screenshot of a web application interface with a dark theme. At the top, it says "Your device ID:" followed by a "Disconnected" status with a red X icon. Below this is a "Published Messages:" section. A modal dialog is open in the center, titled "Movement", with the instruction "Enter a unique ID of at least 8 characters containing only letters and numbers:". The dialog has an input field and "OK" and "Cancel" buttons. In the background, there are tables for "Movement" and "Location". The "Movement" table has columns for "Alpha", "X", "Y", and "Gamma", with values "0", "X", "0", and "Z" respectively. The "Location" table has columns for "Latitude" and "Longitude", both with values "0".

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

# Go to github

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



Search or jump to... Pull requests Issues Marketplace Explore

CorinneBacle / html5-phone  
forked from ibm-watson-iot/html5-phone

Watch 0 Star 0 Fork 54

Code Pull requests 0 Projects 0 Wiki Security Insights Settings

Branch: master html5-phone / README.md Find file Copy path

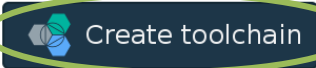
CorinneBacle Update README.md c4bc67d now

5 contributors

6 lines (3 sloc) 437 Bytes Raw Blame History

**iot-html5-phone**

This application allows you to use your mobile phone as a test device with IBM Watson IoT Platform. Click the following button to deploy the application to your IBM Cloud environment and provision the appropriate services.

 Create toolchain

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



IBM Cloud Search resources and offerings... Catalog Docs Support Manage CORINNE BACLE's Account

Toolchains / Create a toolchain /

### Déployer vers IBM Cloud : application iot-html5-phone

Une fois que vous avez cliqué sur **Déployer**, votre application est déployée dans IBM Cloud.

Le code de votre application est automatiquement chargé dans un référentiel Git. Chaque fois que vous validez des modifications dans le référentiel, elles sont automatiquement déployées à l'aide d'une chaîne d'outils qui est associée à votre application. Vous pouvez ajouter davantage d'outils à la chaîne d'outils et la partager avec votre équipe. [En savoir plus.](#)

La chaîne d'outils utilise des outils qui font partie du service Continuous Delivery. Si aucune instance de ce service n'existe dans l'organisation sélectionnée, elle est automatiquement ajoutée.

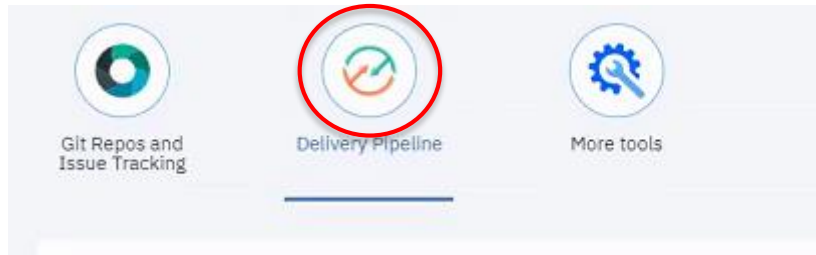
Toolchain Name:  
POT-Mai-2019-iot-html5-phone

Select Region:  
Frankfurt

Select a resource group:  
Globale

Toolchain - CE Automation (deprecated)

Select Region:  
London





Clé d'API IBM Cloud: ⓘ

Clé d'API IBM Cloud

New +

Create the API Key

The value is required.

Create a new API key with full access

**Warning:** This will create a new API key that allows anyone who has it the ability to do anything you could do. You can improve your security posture by using the [IAM UI to create a service ID API key](#) that limits access to only what your pipeline requires, and then pasting that into the template UI instead. For more information on API keys and access see the [IAM documentation](#).

Name Description  
API Key for html5-phone-20200911P-TECH

☐ Save this key in a secrets store for reuse

Cancel

OK

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

IBM Cloud API key:

.....



Create +

Region

Organization

Space

Frankfurt

pierre\_milcent@fr.ibm.

demoIOT



Toolchains / Create a toolchain /

## Déploier vers IBM Cloud : application html5-phone

Create

About

Toolchain Name:

html5-phone-20200911P-TECH

Select Region:

London

Select a resource group:

Default

[Select a CF Organization \(deprecated\)](#)

### Tool Integrations



Outils Git Repos and  
Issue Tracking



Delivery Pipeline



More tools

Delivery Pipeline automatise le déploiement continu.

Nom de l'application: ⓘ

html5-phone-20200911P-TECH

Clé d'API IBM Cloud: ⓘ

.....



New +



Région

London

Organisation

cocobacl@yahoo...

Espace

dev

Cancel

Create

Then click “create”



# 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



Issues

iot-html5-phone-Cori...

✓ Configured

## CODE



Git

iot-html5-phone-Cori...

✓ Configured

## DELIVER



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



IBM Cloud

Projects ▾ Groups ▾ Activity Milestones Snippets

+

Search or jump to...

🔍

📁

🔗

✉

🔔

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H

html5-phone-2019H2POTIoT

🏠 Project

📁 Repository

Files

Commits

Branches

Tags

Contributors

Graph

Compare

Charts

🔖 Issues 0

🔗 Merge Requests 0

📖 Wiki

🔗 Snippets

⚙ Settings

CORINNE BACLE > html5-phone-2019H2POTIoT > Repository

master

html5-phone-2019H2POTIoT / public / js / device.js

🔍 Find file

Blame

History

Permalink

🔧

Update device.js with warning message on device id

\*\*\*

Unverified

ef7e9c2c

🔗

CORINNE BACLE authored 2 days ago

📄 device.js 5.78 KB

🔗

🔗

📄

🔄

Edit

Replace

Delete

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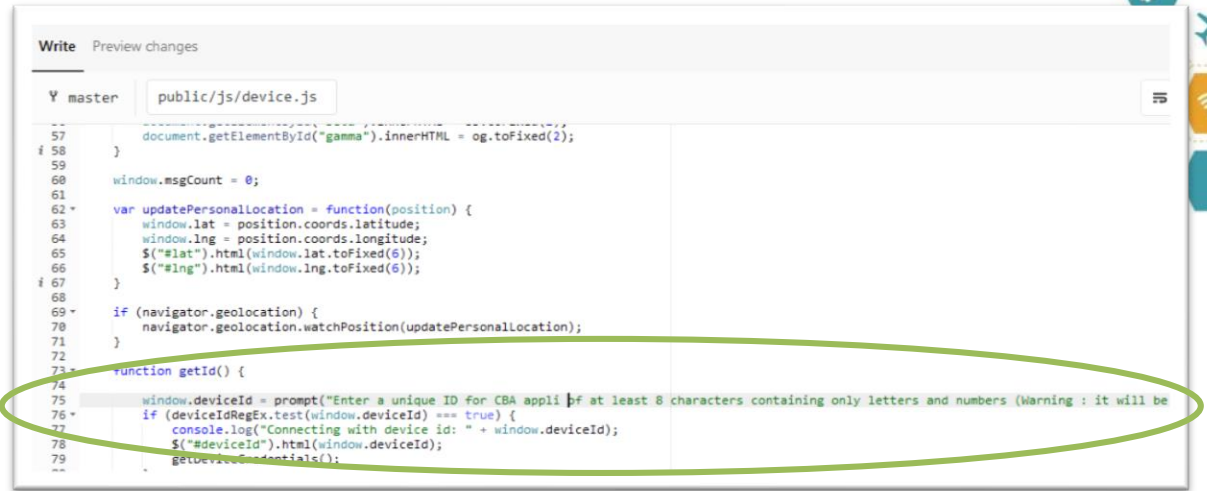
17

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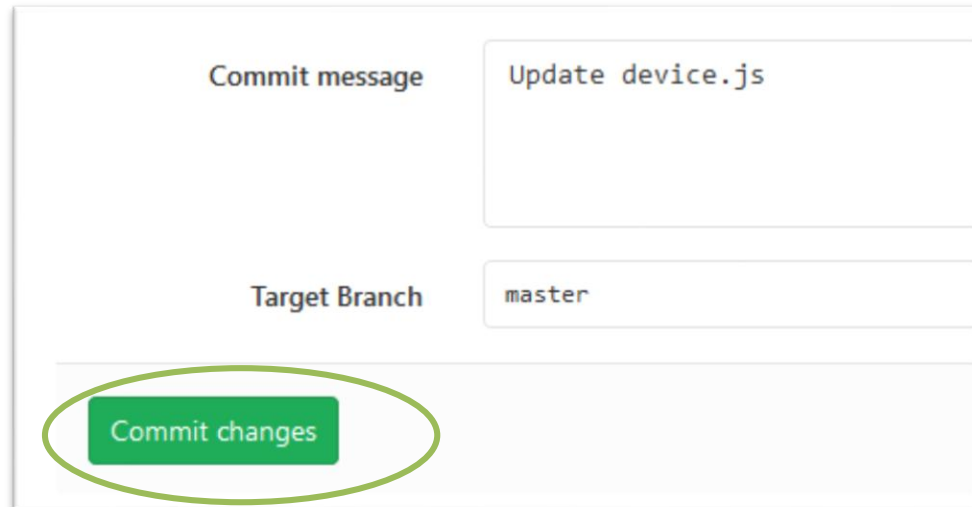
For example change the prompt message:



```
Write Preview changes
Y master public/js/device.js
57 document.getElementById("gamma").innerHTML = og.toFixed(2);
58 }
59
60 window.msgCount = 0;
61
62 var updatePersonallocation = function(position) {
63     window.lat = position.coords.latitude;
64     window.lng = position.coords.longitude;
65     $("#lat").html(window.lat.toFixed(6));
66     $("#lng").html(window.lng.toFixed(6));
67 }
68
69 if (navigator.geolocation) {
70     navigator.geolocation.watchPosition(updatePersonallocation);
71 }
72
73 function getId() {
74     window.deviceId = prompt("Enter a unique ID for CBA appli b f at least 8 characters containing only letters and numbers (Warning : it will be
75     if (deviceIdRegEx.test(window.deviceId) == true) {
76         console.log("Connecting with device id: " + window.deviceId);
77         $("#deviceId").html(window.deviceId);
78         getDeviceId();
79     }
80 }
```

Example : deviceId = prompt("Your name : Enter a unique ID of at least 8 characters containing only letters and numbers (Warning : it will be displayed on the dashboard!):");

then in the bottom :



Commit message Update device.js

Target Branch master

Commit changes

# Option : changer l'image de fond



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

Voir une explication ici:

<http://css.mammothland.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 public /images, avec le bon nom.

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



**Issues**  
iot-html5-phone-Cori...

✓ Configured


CODE



**Git**  
iot-html5-phone-Cori...


✓ Configured

DELIVER



**Delivery Pipeline**  
iot-html5-phone-Cori...

✓ Configured



**Eclipse Orion Web IDE**

✓ Configured



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:



IBM Cloud

- Cloud Foundry
- Containers
- Infrastructure
- VMware
- Dashboard
- APIs
- Apple Development New
- Blockchain
- DevOps**
- Finance
- Functions
- Integrate
- Mobile
- Security
- Watson
- Web Apps

## Toolchains

Resource Group: Default | Cloud Foundry Org: - | Location: London

Filter table...



Name	Tool Integrations
html5-phone-20200911P-TECH	

Items per page: 10 | 1-1 of 1 items

## Check deployment status :


Toolchains / [iot-html5-phone-Cori...](#) / [iot-html5-phone-CorinneBacleGermany](#)

### iot-html5-phone-CorinneBacleGermany | Delivery Pipeline


**Build Stage**  

STAGE PASSED



LAST INPUT [Git URL](#)

 Last commit by CORINNE BA... 2d ago  
[Update @cloudant/cloudant app.js](#)



JOB [View logs and history](#)

 Build Passed 2d ago

LAST EXECUTION RESULT



 Build 3 




**Deploy Stage**  

STAGE PASSED



LAST INPUT Stage: Build Stage / Job: ...



 Build 3 


JOB [View logs and history](#)

 Deploy Passed 2d ago

LAST EXECUTION RESULT

  iot-html5-phone-CorinneBacl...  
[View console](#)

 Build 3 

Add Stage 



# Find the application:

<https://cloud.ibm.com/resources>



## Dashboard

### Récapitulatif des ressources

Cloud Foundry Apps

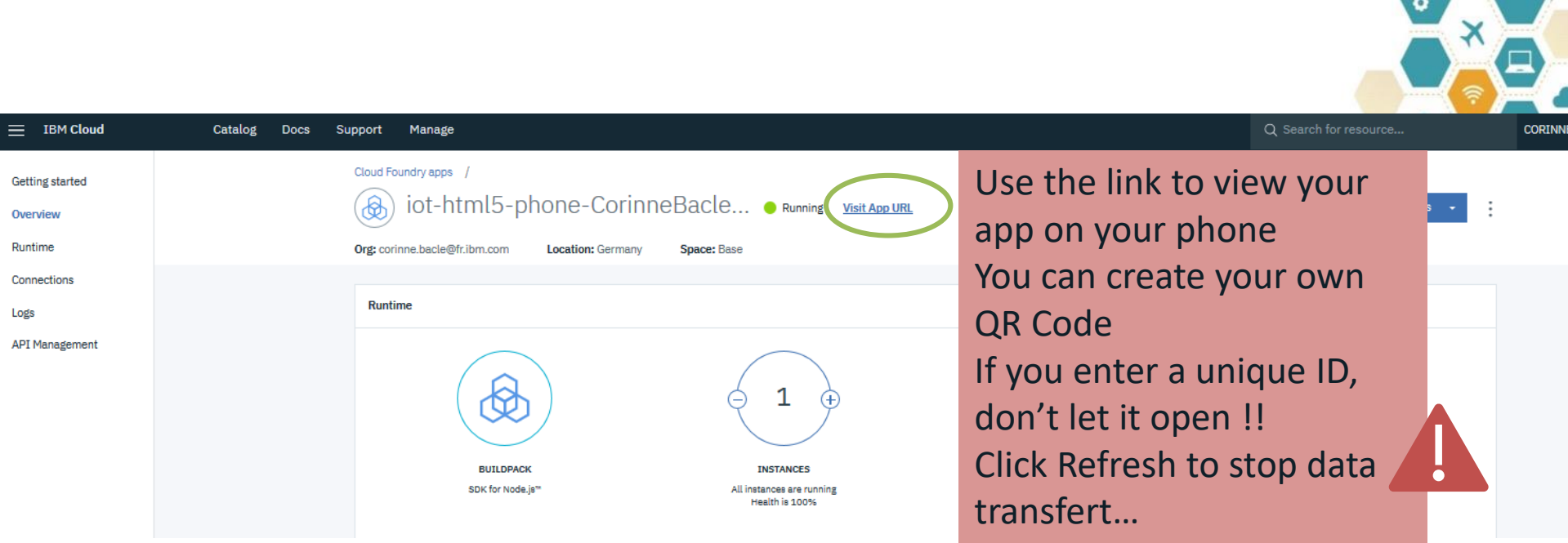
Cloud Foundry Services

Services

### Cloud Foundry apps (2)

 CorinneBacleEssai	cocobacle@yahoo.fr / dev	London	Liberty for Java™	✓ Started
 html5-phone-20200911124338895	cocobacle@yahoo.fr / dev	London	Cloud Foundry applications	✓ Started

### Cloud Foundry services (2)



The screenshot shows the IBM Cloud console interface. At the top, there's a navigation bar with 'IBM Cloud', 'Catalog', 'Docs', 'Support', and 'Manage'. A search bar is on the right. The left sidebar lists 'Getting started', 'Overview', 'Runtime', 'Connections', 'Logs', and 'API Management'. The main content area shows 'Cloud Foundry apps /' with a list of applications. One application, 'iot-html5-phone-CorinneBacle...', is highlighted with a green circle around its 'Visit App URL' link. Below this, the 'Runtime' section shows a 'BUILDPACK' (SDK for Node.js™) and 'INSTANCES' (1 instance running, Health is 100%).

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



Your device ID:

⊗ Disconnected

Published Messages:

Movement		
Alpha	Beta	Gamma
Enter a unique ID for CBA appli of at least 8 characters containing only letters and numbers (Warning : it will be displayed on the dashboard!):		
<input type="text"/>		
OK		Annuler

Location	
Latitude	Longitude
48.784955	2.309515

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...



IBM Cloud

Search resources and offerings...

Catalog Docs Support Manage ▾ Corinne Bacle's Account

Resource list /

html5-phone-20200911124338895 Running [Visit App URL](#) [Add tags](#)

Details [Actions...](#)

Getting started

Overview

Runtime

Connections

Logs

API Management

Autoscaling

Availability Monitoring

**Instances** [Edit](#)

Health

100%

1/1 instance(s) are running

MB memory per instance

0 192 128

**Runtime**

SDK for Node.js™

128  
Total MB allocation

64 MB still available

Used Free

**Runtime cost**

Current and estimated cost excludes connected services.

0,00 \$US 0.00

0,00 \$US 0,00

Estimated total for billing period

**Connections (2)**

- iot-phone-cloudant-cloudantNoSQLDB
- iot-phone-iotf-service

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

Connections

Resource list /

iot-phone-iotf-service Alias of [Internet of Things Platform-no](#)

Location: Frankfurt Org: corinne.bacle@fr.ibm.com Space: POTIoTH22019



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

Manage

Plan

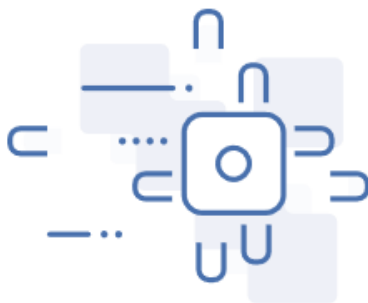
Connections

Resource list /

Internet of Things Platform-no

Resource group: Globale Location: Frankfurt [Add Tags](#)

Click on Manage  
then on Launch



Let's get started with IBM Watson IoT Platform

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

Launch

Docs



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.

<input type="checkbox"/>	Device ID ▾	Device Type ▾	Class ID ▾	Date Added
5 results				
// <input type="checkbox"/>	CorinneBacle123	iotphone	Device	Oct 9, 2018 6:03 PM
// <input type="checkbox"/>	Telephone1	iotphone	Device	Oct 9, 2018 6:30 PM



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



## 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 connection sends to the 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 Packages

Custom device management packages can be uploaded to add new device management packages. Custom device management packages must consist of valid JSON in order to be added. For more details see the custom device management package [documentation](#)



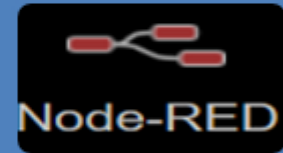
Node-RED

User 2

IBM Cloud user 2

Step 2 & 3 bis

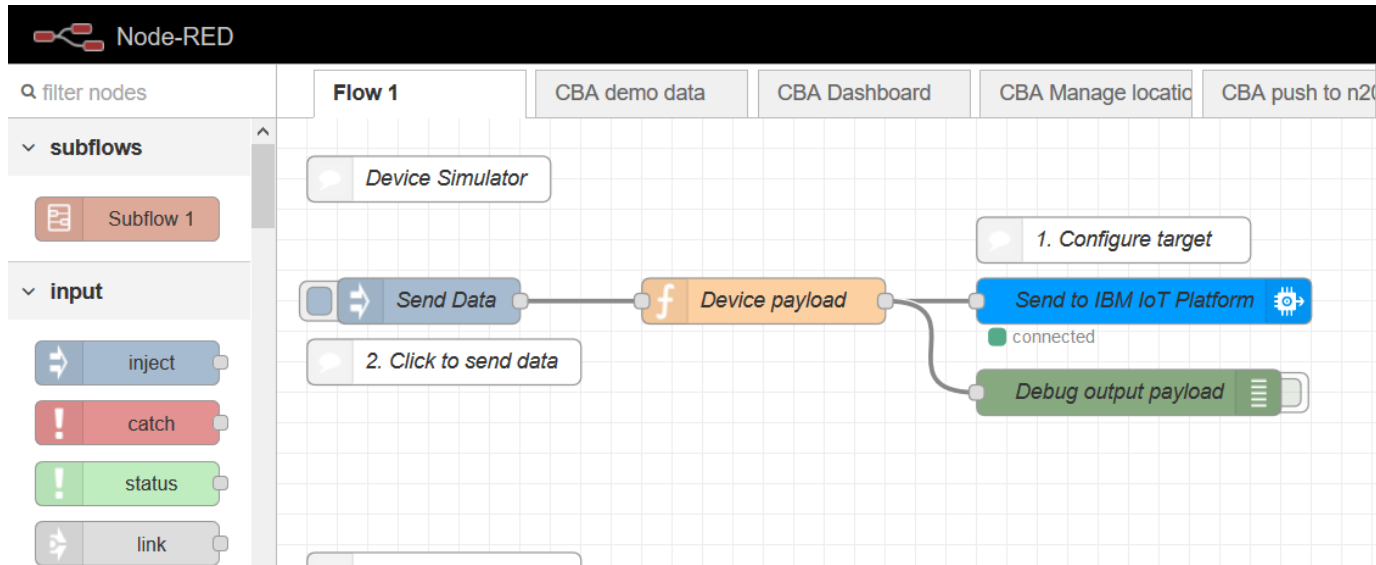
Node-RED  
Starter



Cloudfant

Watson  
services

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



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

IBM Cloud

Catalog

IBM Cloud catalog

Featured

Services

Software

Consulting

Category

Analytics

Developer Tools

Product

Search resources and offerings...

node-red

Search results for 'node-red' 3 results

Node-RED App

IBM • Software • Developer Tools

Start building your next Node-RED app on IBM Cloud.

Starter kits • IBM Kubernetes Service • Red Hat OpenShift

node-exporter

Third party • Software • Analytics

Prometheus exporter for hardware and OS metrics exposed by UNIX kernels, with pluggable metric collectors.

Helm charts • IBM Kubernetes Service • Free

Catalogue / Créer une application /

Node-RED

A propos

Créer

Détails

AuteurIBM

Mis à jour2/10/2020

TypeKit de démarrage

Code source

[GitHub](#)

Liens utiles

[Dispositions](#)

[Tutorial](#)

Présentation

This starter kit provides a pre-configured Node-RED to store the application flow configuration. Add se use the IBM Cloud Developer Tools CLI to run an Foundry or a DevOps Pipeline.

Ce kit de démarrage va vous aider

- Generate an application with Node-RED
- Generate an application with files for deploying to
- Connect to provisioned services

Qu'est-ce que le kit inclut ?

Cloudant

Gratuit pour commencer [Afficher la tarification](#)

Commencer



## Node-RED

A propos

Créer

## Détails de l'application

Nom de l'application

Node RED MDDJR 2020-09-11



Choose a unique name

Acceptez le nom par défaut ou entrez une valeur pouvant comporter jusqu'à 128 caractères.

Groupe de ressources

Default

Tags ⓘ

Exemples: env:dev, version-1

Plateforme

☒ Node.js

## Détails du service

Cloudant★



Create

Node RED MDDJR 2020-09-11 [Ajouter des balises](#)

## Détails

URL 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



## Node RED MDDJR 2020-09-11

☒ Sélectionner la cible de déploiement... ☐ Configurer la chaîne d'outils DevOps...

## Automatisation du déploiement

Sélectionnez votre cible de déploiement et configurez votre chaîne d'outils DevOps. Cliquez sur **Créer** pour créer la chaîne d'outils et démarrer automatiquement le processus de déploiement.

Cible de déploiement



Cloud Foundry

IBM

Déployez et exécutez vos applications sans gérer les serveurs ou les clusters. Un plan Lite est disponible pour un déploiement rapide et facile.

Clé d'API IBM Cloud

Clé d'API IBM Cloud

La valeur est obligatoire.



New



Région

London

Organisation

cocobacle@yahoo.fr

Hôte

node-red-mddjr-2020-09-11

Domaine

eu-gb.mybluemix.r

Annuler

Suivant

○ Sélectionner la cible de déploiement... ● Configurer la chaîne d'outils DevOps

## Configurer la chaîne d'outils DevOps

Attribuez un nom à votre chaîne d'outils et sélectionnez la région dans laquelle créer votre chaîne d'outils.

Nom de chaîne d'outils DevOps

NodeREDCBA2020-09-11

Acceptez le nom par défaut ou entrez une valeur pouvant comporter jusqu'à 100 caractères.

Région

Londres

Précédent

Créer

Wait a little  
Refresh if necessary

Liste des ressources / Détails de l'application /

## Node RED CBA 2020-09-11

Ajouter des balises

### Détails

URL de l'application

<https://node-red-cba-2020-09-11.eu-gb.mybluemix.net>

Source

<https://eu-gb.githubcloud.ibm.com/repos/ibm/node-red-cba-2020-09-11>

Groupe de ressources

Default

Cible de déploiement

Node RED CBA 2020-09-11

Créé

9/11/2020

### Services



Cloudant

[Ouvrir le tableau de bord](#)

[Documentation](#)

Données d'identification

### Automatisation du déploiement

Nom

NodeREDCBA2020-09-11

Emplacement

Londres

Intégrations d'outils



### Pipelines de distribution

Nom

NodeREDCBA2020-09-11

Statut



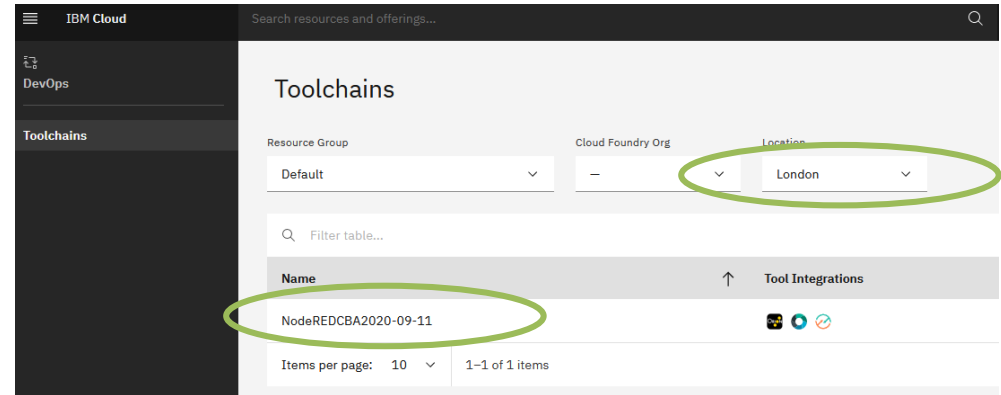
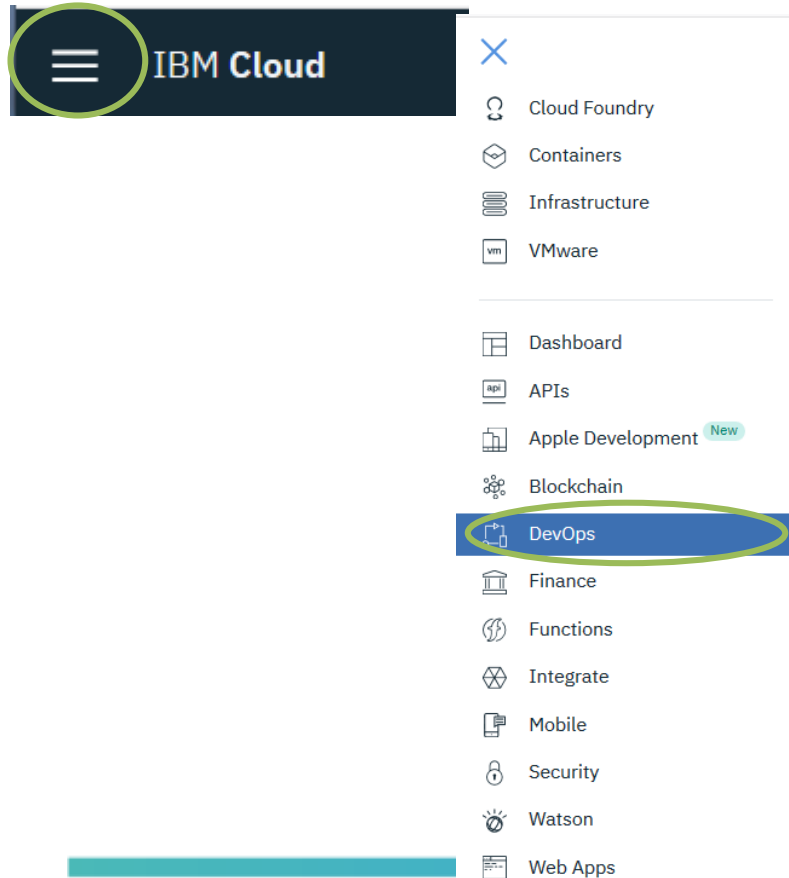
Réussite

Dernière entrée

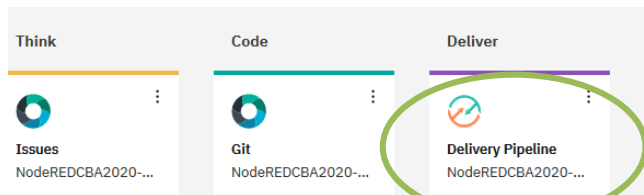
Dernière validation par IBM Cloud (5 minutes ago)

[Cloner à partir d'un zip](#)

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



## Re deploy if the status is FAILED



Think Code Deliver

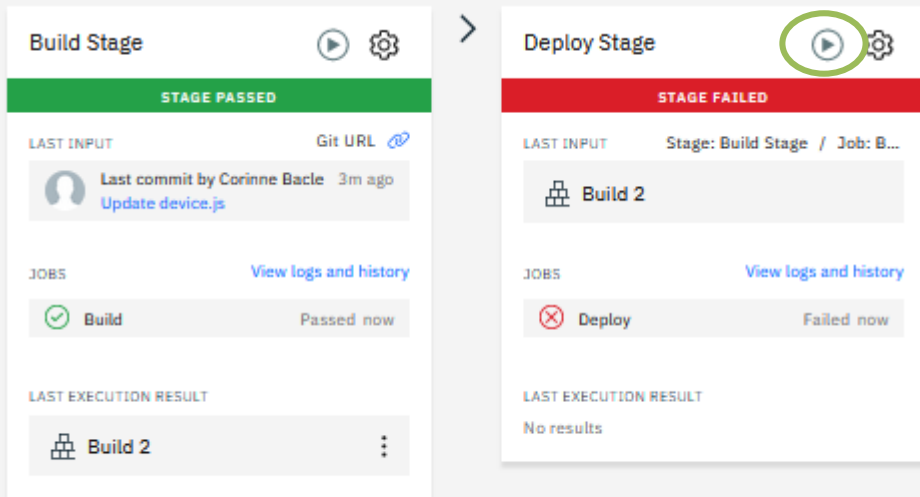
Issues  
NodeREDCBA2020-...



Git  
NodeREDCBA2020-...

**Delivery Pipeline**  
NodeREDCBA2020-...


Toolchains / NodeREDCBA2020-09-11 / NodeREDCBA2020-09-11 /


### NodeREDCBA2020-09-11 | Delivery Pipeline




**Build Stage**  

**STAGE PASSED**



LAST INPUT Git URL 



 Last commit by Corinne Bacle 3m ago  
[Update device.js](#)

**JOBS** [View logs and history](#)

 **Build** Passed now


LAST EXECUTION RESULT

 **Build 2** 


**Deploy Stage**  

**STAGE FAILED**

LAST INPUT Stage: Build Stage / Job: B...

 **Build 2**

**JOBS** [View logs and history](#)


 **Deploy** Failed now

LAST EXECUTION RESULT

No results



# Open the Node-RED application

 IBM Cloud

Search resources and offerings...

Resource list /

Node RED CBA 2020-09-11 Running [Visit App URL](#) Add tags

Getting started

Overview

Runtime

Connections

Logs

Instances

Health

100%

1/1 instance(s) are running

## Welcome to your new Node-RED instance on IBM Cloud

We know you're eager to start wiring up your flows, but first there are a couple of tasks you should do:

- Secure your Node-RED editor
- Learn how to install additional nodes

### Secure your Node-RED editor

☐ Secure your editor so only authorised users can access it

☒ *Not recommended:* Allow anyone to access the editor and make changes

Your editor will not be secured. Anyone with the URL will be able to access your flows, data and bound services.

☒ Tick this box to confirm you want your editor to be insecure



Previous

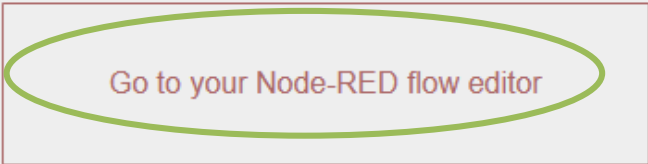
Next

# 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



Store the link !!

# Install IoT nodes

The screenshot shows the Node-RED web interface. On the left, the 'Deploy' menu is open, with 'Manage palette' highlighted. The main area shows the 'Nodes' tab, which is also highlighted. The search results for 'wiot' are displayed, showing four nodes with their descriptions and version information. The 'install' button for each node is circled in green. The 'Nodes' tab title is circled in orange.

**Deploy Menu:**

- View
- Import
- Export
- Search flows
- Configuration nodes
- Flows
- Subflows
- Manage palette**
- Settings

**Nodes Tab:**

Nodes

sort: [icon] a-z recent [icon]

Q wiot 2 / 2262

Node Name	Description	Version	Time Ago	Install Button
node-red-contrib-ibm-wiotp-device-ops	A collection of Node-RED nodes that can perform a wide range of device and gateway operations on the Watson IoT platform	0.1.3	2 years ago	install
node-red-contrib-ibm-watson-iot	Connect to IBM Watson Internet of Things Platform as a Device or Gateway	0.2.8	2 years, 9 months ago	install
node-red-dashboard	A set of dashboard nodes for Node-RED	2.17.1	1 week ago	install
node-red-contrib-scx-ibmiotapp	IoT Application Node-RED node for the Registered and Quickstart flows in IBM Watson IoT Platform	0.0.49	1 year, 9 months ago	install

# 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 

56

# Create a first flow then deploy



Node-RED

filter nodes

common

inject

debug

complete

Flow 1

timestamp

msg.payload

Deploy

info

Information

Flow	"400886c4.9ae3f"
Name	Flow 1
Status	Enabled

Description

The screenshot shows the Node-RED web interface. On the left, a palette of nodes is visible under the 'common' tab, including 'inject', 'debug', and 'complete'. The main workspace, titled 'Flow 1', contains a flow with three nodes: 'inject', 'timestamp', and 'msg.payload'. The 'inject' node is connected to the 'timestamp' node, which is then connected to the 'msg.payload' node. A blue line also connects the 'complete' node to the 'msg.payload' node. On the right, a sidebar is open with the 'info' tab selected. It displays information about the current flow, including its ID, name, and status. The 'Deploy' button in the top right corner is highlighted with a green circle.

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



## IBM Cloud user 1

Continuous  
Delivery

Git

IoT phone  
application

Cloudant

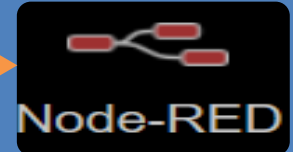
Your device ID: TestPhone		
Connected		
Published Messages: 278		
Movement		
Alpha	Beta	Gamma
0	0	0
Acceleration		
X	Y	Z
0	0	0
Location		
Latitude	Longitude	
0	0	

IoT  
Platform

## IBM Cloud user 2

Step 2 & 3 bis

Node-RED  
Starter



Cloudant

Watson  
services



# As a User 1 : create API key

## Go to the IoT platform service





IBM Cloud Catalog Docs Support Manage CORINNE BACLE's Acc...

Getting started Overview Runtime

Cloud Foundry apps / IoTStarterIoTPhone Running [Visit App URL](#) Routes

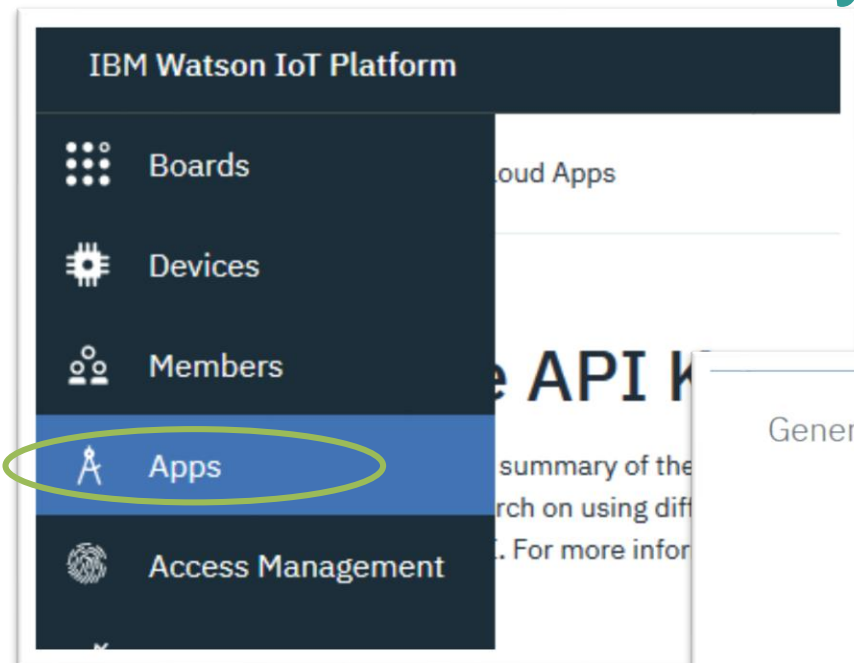
Org: corinne.bacle@fr.ibm.com Location: Germany Space: Base

10 Items per page | 1-2 of 2 items

CONNECTION NAME	TYPE
 IoTStarterIoTPhone-cloudantNoSQLDB	Cloudant NoSQL DB
 IoTStarterIoTPhone-iotf-service	Internet of Things Platform

Go to your IoT Platform service

# Create an API Key



Generate API Key

Information ☒ Permissions ☐

The application will have access for the following role:

Role

For more information about roles, see [User, application, and gateway roles](#).

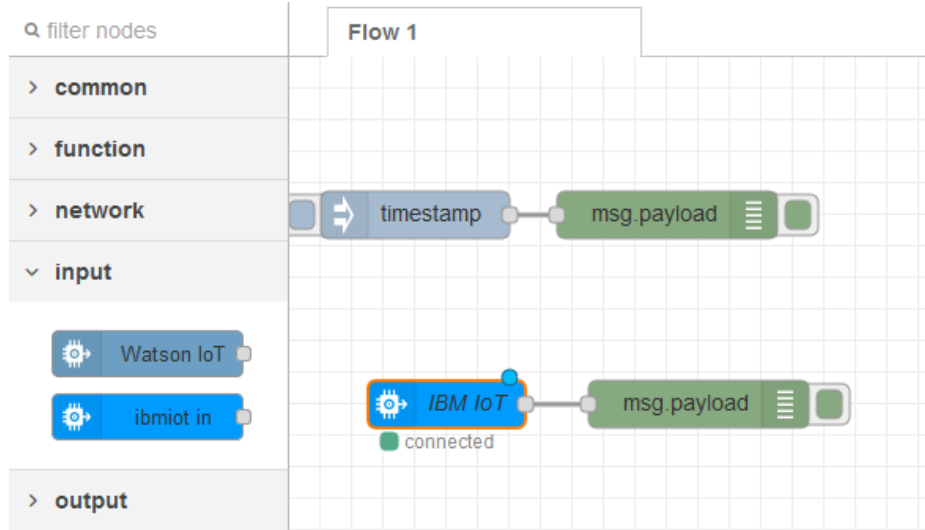
[Back](#) [Generate Key](#)



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:

Edit ibmiot in node > Add new ibmiot config node

Cancel Add

**Properties**

Name User1IoTPhone

API Key a-eqbwt6-ysbfjqidgt

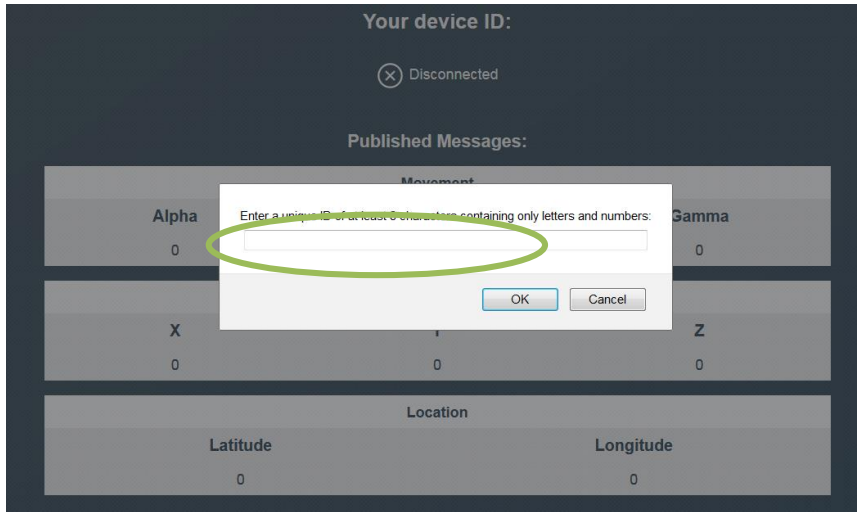
API Token .....

Server-Name eqbwt6.messaging.internetofthings.ibmcloud.com

Scalable ☐ Application ID

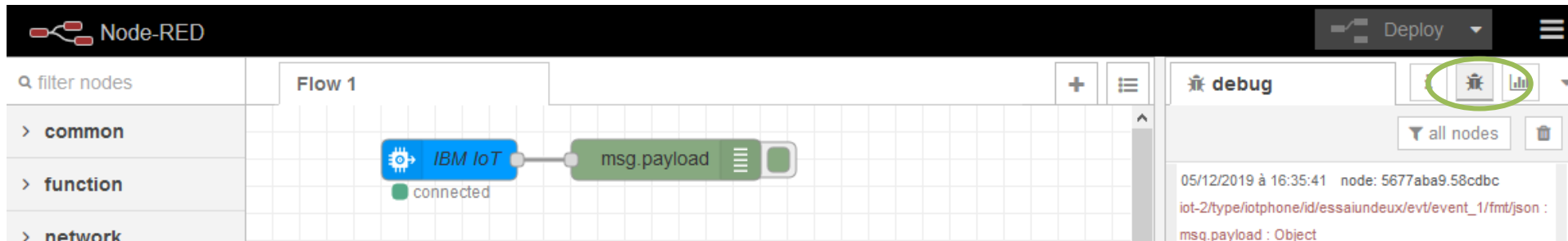
Keep Alive 60 Seconds ☒ Use Clean Session

# 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 potentiel de vos objets connectés.

[ibm.com/iot](https://ibm.com/iot)

Tester

[https://ibm.biz/try\\_iot](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/>

