

# Gravitee API Gateway Installation Guide

## Environment

CentOS 7  
4 CPU  
8G Memory  
172.22.147.111  
Hostname : [gravitee.io](https://gravitee.io).local

Package resource : [https://drive.google.com/drive/folders/1DVlwYm-14C0DP\\_YJBR7tOMRRhgwcDOOe?usp=sharing](https://drive.google.com/drive/folders/1DVlwYm-14C0DP_YJBR7tOMRRhgwcDOOe?usp=sharing)

## 0. Preparation

Download JDK1.8, jdk-8u221-linux-x64.tar.gz from <https://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>, then:

```
mkdir /usr/local/java/  
tar -zxvf jdk-8u221-linux-x64.tar.gz -C /usr/local/java/
```

Environment variable settings :

```
vi /etc/profile  
  
export JAVA_HOME=/usr/local/java/jdk1.8.0_221  
export JRE_HOME=${JAVA_HOME}/jre  
export CLASSPATH=.:${JAVA_HOME}/lib:${JRE_HOME}/lib  
export PATH=${JAVA_HOME}/bin:$PATH  
  
source /etc/profile  
ln -s /usr/local/java/jdk1.8.0_221/bin/java /usr/bin/java
```

check if JDK have already installed successful:

```
java -version  
java version "1.8.0_221"  
Java(TM) SE Runtime Environment (build 1.8.0_221-b11)  
Java HotSpot(TM) 64-Bit Server VM (build 25.221-b11, mixed mode)
```

If yes, modify : /etc/security/limits.conf

```
vi /etc/security/limits.conf  
  
* soft nfile 65536  
* hard nfile 65536
```

Modify port from 4096 to 32768 in /etc/security/limits.d/20-nproc.conf

```
# Default limit for number of user's processes to prevent  
  
# accidental fork bombs.  
  
# See rhbz #432903 for reasoning.  
  
*          soft    nproc    32768  
root      soft    nproc    unlimited
```

disable warning message from MongoDB :

```
echo never > /sys/kernel/mm/transparent_hugepage/enabled
echo never > /sys/kernel/mm/transparent_hugepage/defrag
```

Then, we can start to install RepositoryGatewayManagement APIWeb UI

## 1. Elasticsearch

In order to install Repository, we need to install Elasticsearch and MongoDB.

Add yum resource:

```
vi /etc/yum.repos.d /elasticsearch.repo

[elasticsearch-5.x]
name=Elasticsearch repository for 5.x packages
baseurl=https://artifacts.elastic.co/packages/5.x/yum
gpgcheck=1
gpgkey=https://artifacts.elastic.co/GPG-KEY-elasticsearch
enabled=1
autorefresh=1
type=rpm-md
```

Elasticsearch installation:

```
yum install -y elasticsearch

bootstrap.memory_lock: false
bootstrap.system_call_filter: false
network.bind_host: 0.0.0.0
network.publish_host: 172.22.147.111 #The IP of your deployment server
http.port: 9200
```

Start Elasticsearch

```
service elasticsearch start
```

Check the elasticsearch to make sure if there is no error message.

```
tail -f /var/log/elasticsearch/elasticsearch.log
```

## 2. MongoDB

Add yum resource:

```
vi /etc/yum.repos.d/mongodb-org-3.4.repo

[mongodb-org-3.4]
name=MongoDB 3.4 Repository
baseurl=https://repo.mongodb.org/yum/redhat/$releasever/mongodb-org/3.4/x86_64/
gpgcheck=0
enabled=1
```

MongoDB installation:

```
yum install -y mongodb-org
```

Run MongoDB

```
service mongod start
```

Check MongoDB to make sure if there is no error message

```
mongo

MongoDB shell version v3.4.22
connecting to: mongodb://127.0.0.1:27017
MongoDB server version: 3.4.22

Server has startup warnings:
2019-08-08T16:54:00.591+0800 I CONTROL [initandlisten]
2019-08-08T16:54:00.591+0800 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for the
database.
2019-08-08T16:54:00.591+0800 I CONTROL [initandlisten] **           Read and write access to data and
configuration is unrestricted.
2019-08-08T16:54:00.591+0800 I CONTROL [initandlisten]
```

### 3. Gateway

Download gravitee.tar from <https://gravitee.io/downloads/apim/index.html>

[gravitee.tar](#) have already setup all the Config file `graviteeio-full-1.28.0.zip` (<https://gravitee.io/downloads/apim/index.html>) is the original file, the configuration can follow these reference : `-PI Gateway` ([https://docs.gravitee.io/apim\\_installguide\\_gateway.html](https://docs.gravitee.io/apim_installguide_gateway.html)) and `Management API` ([https://docs.gravitee.io/apim\\_installguide\\_management\\_api\\_configuration.html](https://docs.gravitee.io/apim_installguide_management_api_configuration.html)), then setup as follows:

```
mv gravitee.tar /usr/local
cd /usr/local
tar xvf gravitee.tar
cd gravitee/graviteeio-gateway-1.28.0/
bin/gravitee > run.log &
```

Check log to make sure if there is no error message

```
tail -f run.log
```

Use curl to check if gateway is working.(localhost is your IP Address)

```
curl -X GET http://localhost:8082/
No context-path matches the request URI.
```

### 4. Management API

Run Management API

```
cd ../graviteeio-management-api-1.28.0/  
bin/gravitee > run.log &
```

Check log to make sure if there is no error message

```
tail -f run.log
```

Use curl to check if API is working

```
curl -X GET http://localhost:8083/management/apis/  
[ ]
```

## 5. UI

Install epel-release-latest-7

```
yum install https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
```

Install Nginx

```
yum install nginx
```

Modify nginx.conf:

Update server\_name to your hostname and make sure the location/ root path is the same to the gravitee UI

```
server {  
  
    listen      80 default_server;  
    listen     [::]:80 default_server;  
    server_name gravitee.io.local;  
    #root       /usr/share/nginx/html;  
  
    # Load configuration files for the default server block.  
    #include /etc/nginx/default.d/*.conf;  
  
    location / {  
  
        root /usr/local/gravitee/graviteeio-management-ui-1.28.0;  
  
        index index.html;  
  
    }  
  
    #error_page 404 /404.html;  
    #    location = /40x.html {  
    #}  
  
    error_page 500 502 503 504 /50x.html;  
  
        location = /50x.html {  
  
            root /usr/share/nginx/html;  
  
        }  
    }  
}
```

Replace /etc/nginx/nginx.conf

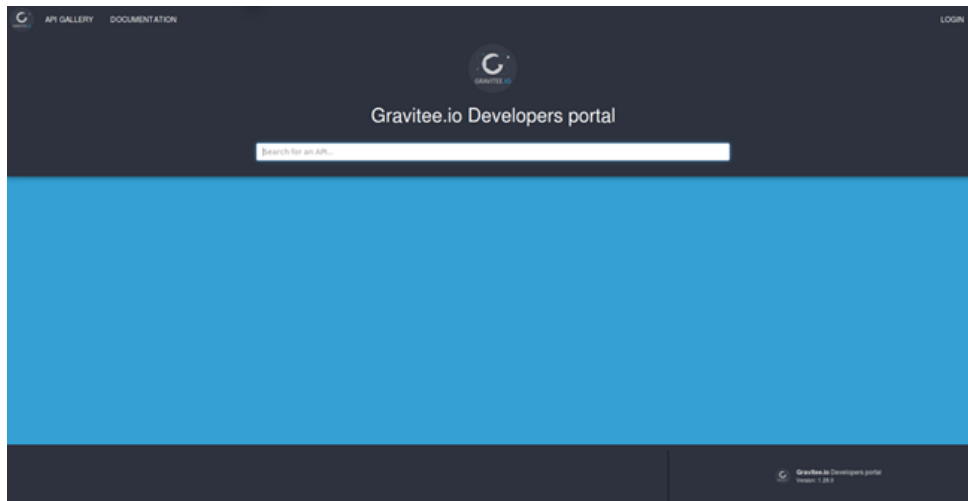
```
cp nginx.conf /etc/nginx
```

Run Nginx

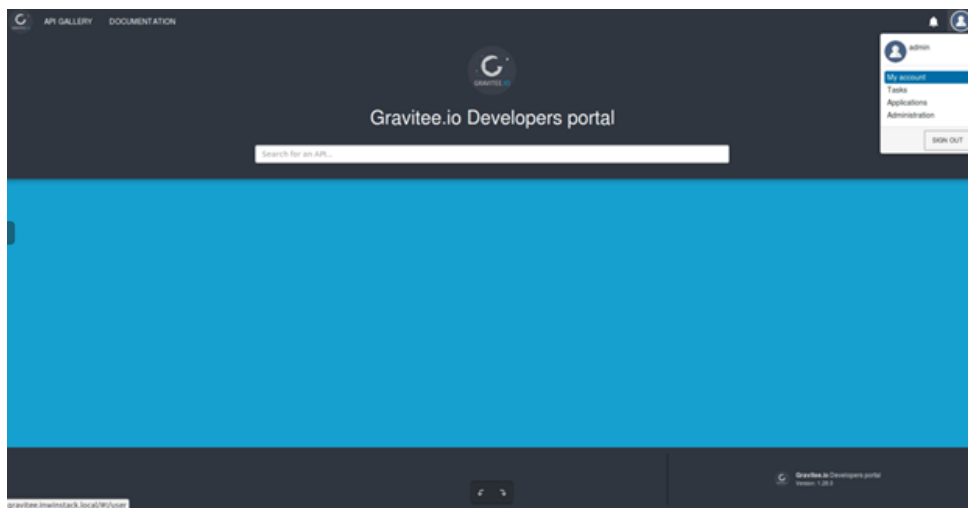
```
service nginx start
```

## 6. Verification

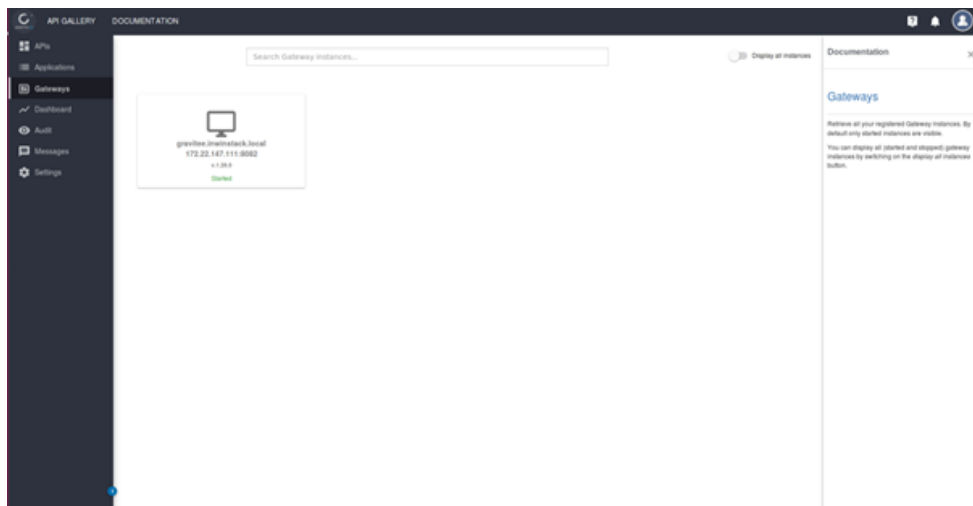
IF you don't have DNS, you need to modify the /etc/hosts on the Gravitee server  
Open browser to <http://gravitee.io.local> and you will get this:



Click Log In and the default user name/ password is admin/admin. Then, click "My Account"



Click Gateway to make sure the status is Started.



Then the management API link will be: <http://gravitee.io.local/PATH>