

5075. Big Data aplicado - 1ª Evaluación (RA 1 – CE b)

Unidad Didáctica 1. Estrategias de ingestión y almacenamiento de datos en Big Data

Práctica 2. Preparación del entorno, instalación y configuración de Apache NiFi.

Paso 1. Instalamos la JDK.

```
hadoop@hadoop-virtualbox:~$ sudo apt install openjdk-11-jdk
Leyendo lista de paquetes... Hecho
Creando árbol de dependencias... Hecho
Leyendo la información de estado... Hecho
Se instalarán los siguientes paquetes adicionales:
  ca-certificates-java fonts-dejavu-extra java-common libatk-wrappers
  openjdk-11-jre-headless
Paquetes sugeridos:
  default-jre libice-doc libsm-doc libxt-doc openjdk-11-demo openjdk-11-jdk-headless
Se instalarán los siguientes paquetes NUEVOS:
```

```
hadoop@hadoop-virtualbox:~$ sudo update-alternatives --config java
Existe 1 opción para la alternativa java (que provee /usr/bin/java).

  Selección    Ruta
-----
* 0            /usr/lib/jvm/java-11-openjdk-amd64/bin/java  1111    modo automático
  1            /usr/lib/jvm/java-11-openjdk-amd64/bin/java  1111    modo manual

Pulse <Intro> para mantener el valor por omisión [*] o pulse un número de selección:
hadoop@hadoop-virtualbox:~$
hadoop@hadoop-virtualbox:~$ java -version
openjdk version "11.0.24" 2024-07-16
OpenJDK Runtime Environment (build 11.0.24+8-post-Ubuntu-1ubuntu324.04.1)
OpenJDK 64-Bit Server VM (build 11.0.24+8-post-Ubuntu-1ubuntu324.04.1, mixed mode, sharing)
hadoop@hadoop-virtualbox:~$
hadoop@hadoop-virtualbox:~$ javac -version
javac 11.0.24
hadoop@hadoop-virtualbox:~$
```

Paso 2. Definimos las variables de entorno para JAVA.

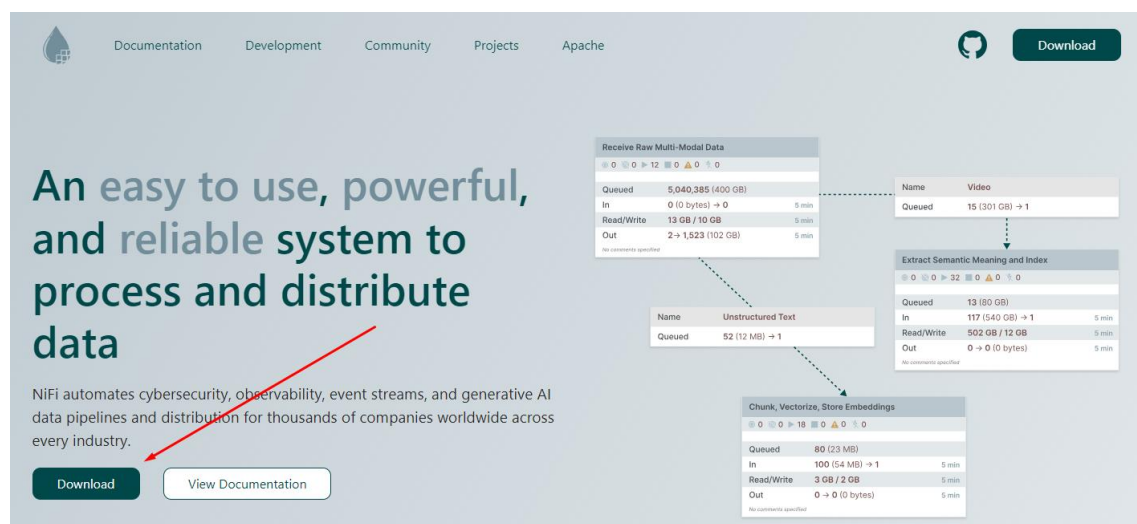
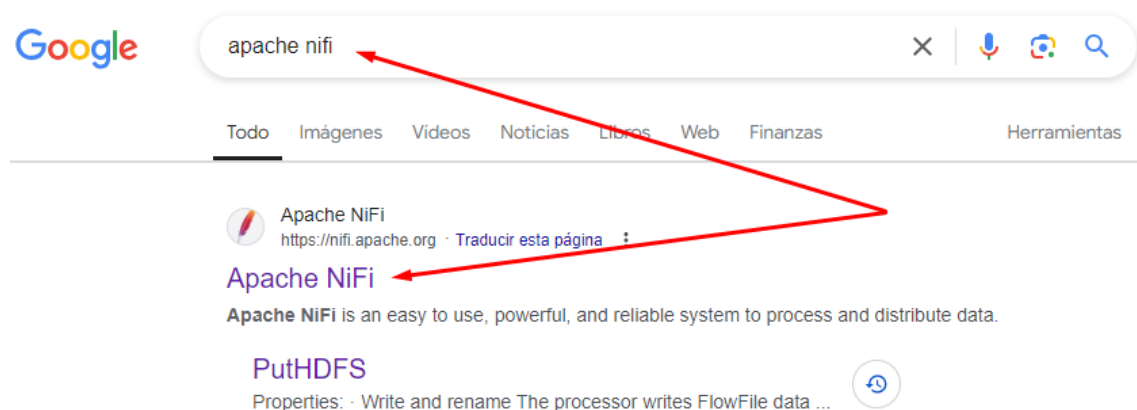
```
hadoop@hadoop-virtualbox:~$ pwd
/home/hadoop
hadoop@hadoop-virtualbox:~$
hadoop@hadoop-virtualbox:~$ nano .bashrc
hadoop@hadoop-virtualbox:~$
```

```
export JAVA_HOME=/usr/lib/jvm/java-11-openjdk-amd64
export PATH=$JAVA_HOME/bin:$PATH
```

Para guardar con el editor nano utilizaremos Ctrl + o y para salir Ctrl + x.

```
hadoop@hadoop-virtualbox:~$ source .bashrc
hadoop@hadoop-virtualbox:~$
hadoop@hadoop-virtualbox:~$ echo $PATH
/usr/lib/jvm/java-11-openjdk-amd64/bin:/usr/local/sbin:
hadoop@hadoop-virtualbox:~$
```

Paso 3. Descargamos e instalamos Apache NiFi.



NiFi 1.27.0 Release Notes

- Released: 2024-07-08
- Migration Guidance

Sources

Source 1.27.0

OpenPGP

SHA-256

SHA-512

Binaries

NiFi Standard 1.27.0

OpenPGP

SHA-256

SHA-512

NiFi Stateless 1.27.0

OpenPGP

SHA-256

SHA-512



We suggest the following location for your download:

<https://dlcdn.apache.org/nifi/1.27.0/nifi-1.27.0-bin.zip>

Alternate download locations are suggested below.

```
wget https://dlcdn.apache.org/nifi/1.27.0/nifi-1.27.0-bin.zip
```

```
hadoop@hadoop-virtualbox:~$ wget https://dlcdn.apache.org/nifi/1.27.0/nifi-1.27.0-bin.zip
--2024-08-29 01:11:08-- https://dlcdn.apache.org/nifi/1.27.0/nifi-1.27.0-bin.zip
Resolviendo dlcdn.apache.org (dlcdn.apache.org)... 151.101.2.132
Conectando con dlcdn.apache.org (dlcdn.apache.org)[151.101.2.132]:443... conectado.
Petición HTTP enviada, esperando respuesta... 200 OK
Longitud: 1243609098 (1,2G) [application/zip]
Guardando como: 'nifi-1.27.0-bin.zip'

nifi-1.27.0-bin.zip 100%[=====]
2024-08-29 01:11:55 (47,7 MB/s) - 'nifi-1.27.0-bin.zip' guardado [1243609098/1243609098]
```

```
hadoop@hadoop-virtualbox:~$ unzip nifi-1.27.0-bin.zip
Archive:  nifi-1.27.0-bin.zip
  creating: nifi-1.27.0/
  creating: nifi-1.27.0/extensions/
  creating: nifi-1.27.0/lib/
  creating: nifi-1.27.0/lib/bootstrap/
  creating: nifi-1.27.0/lib/java11/
  creating: nifi-1.27.0/lib/aspectj/
```

```
hadoop@hadoop-virtualbox:~$ sudo mv nifi-1.27.0 /opt/nifi
hadoop@hadoop-virtualbox:~$
hadoop@hadoop-virtualbox:~$ ls -lart /opt/
total 16
drwxrwxr-x  7 hadoop hadoop 4096 jul  3 09:13 nifi
drwxr-xr-x 22 root    root  4096 ago 29 00:10 ..
drwxr-xr-x  8 root    root  4096 ago 29 00:25 VBoxGuestAdditions-7.0.18
drwxr-xr-x  4 root    root  4096 ago 29 01:15 .
```

Paso 4. Definimos las variables de entorno para NiFi y lo arrancamos.

```
export NIFI_HOME=/opt/nifi
export PATH=$NIFI_HOME/bin:$PATH
```

```
hadoop@hadoop-virtualbox:~$ source .bashrc
hadoop@hadoop-virtualbox:~$
hadoop@hadoop-virtualbox:~$ nifi.sh start

Java home: /usr/lib/jvm/java-11-openjdk-amd64
NiFi home: /opt/nifi

Bootstrap Config File: /opt/nifi/conf/bootstrap.conf
```

```
hadoop@hadoop-virtualbox:~$ nifi.sh stop

Java home: /usr/lib/jvm/java-11-openjdk-amd64
NiFi home: /opt/nifi

Bootstrap Config File: /opt/nifi/conf/bootstrap.conf

2024-08-29 01:28:56,027 INFO [main] org.apache.nifi.bootstrap.Command Apache NiFi has a
2024-08-29 01:28:56,038 INFO [main] org.apache.nifi.bootstrap.Command NiFi PID [8877] s
2024-08-29 01:28:58,046 INFO [main] org.apache.nifi.bootstrap.Command NiFi PID [8877] s
2024-08-29 01:29:00,053 INFO [main] org.apache.nifi.bootstrap.Command NiFi PID [8877] s
2024-08-29 01:29:02,063 INFO [main] org.apache.nifi.bootstrap.Command NiFi PID [8877] s
2024-08-29 01:29:04,075 INFO [main] org.apache.nifi.bootstrap.Command NiFi PID [8877] s

hadoop@hadoop-virtualbox:~$
hadoop@hadoop-virtualbox:~$ nifi.sh set-single-user-credentials hadoop hadoop

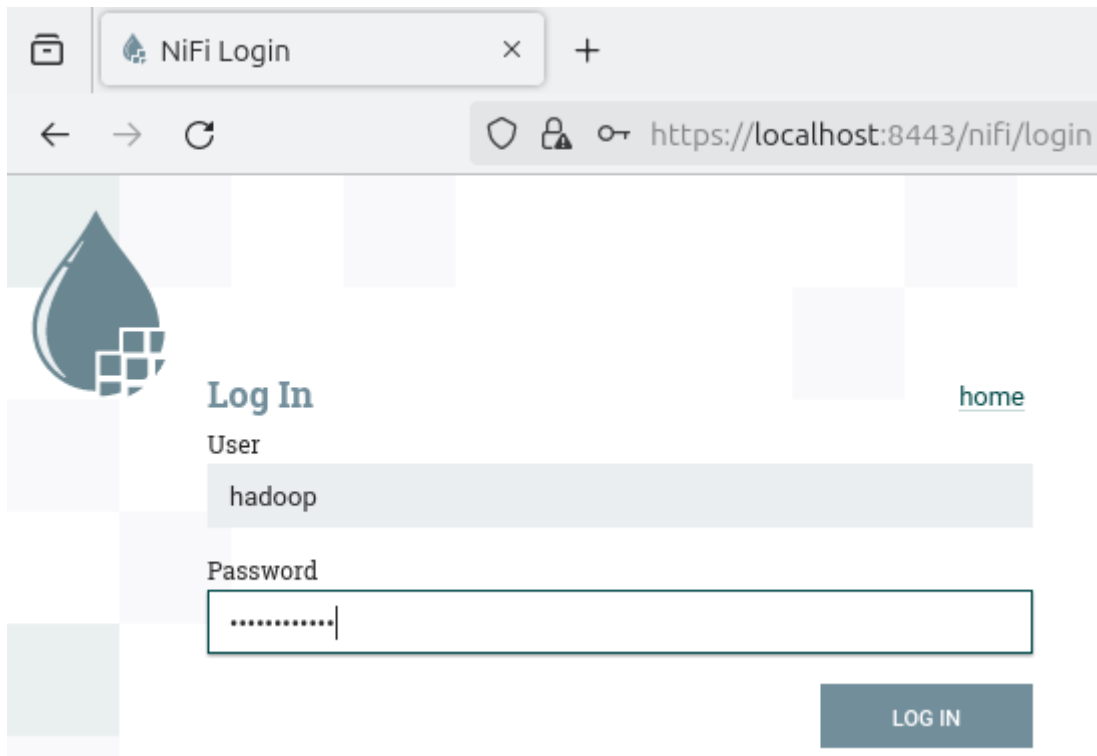
Java home: /usr/lib/jvm/java-11-openjdk-amd64
NiFi home: /opt/nifi

Bootstrap Config File: /opt/nifi/conf/bootstrap.conf

Login Identity Providers Processed [/opt/nifi/./conf/login-identity-providers.xml]
```


```
hadoop@hadoop-virtualbox:~$ nifi.sh start

Java home: /usr/lib/jvm/java-11-openjdk-amd64
NiFi home: /opt/nifi
```



NiFi Login

https://localhost:8443/nifi/login



Log In

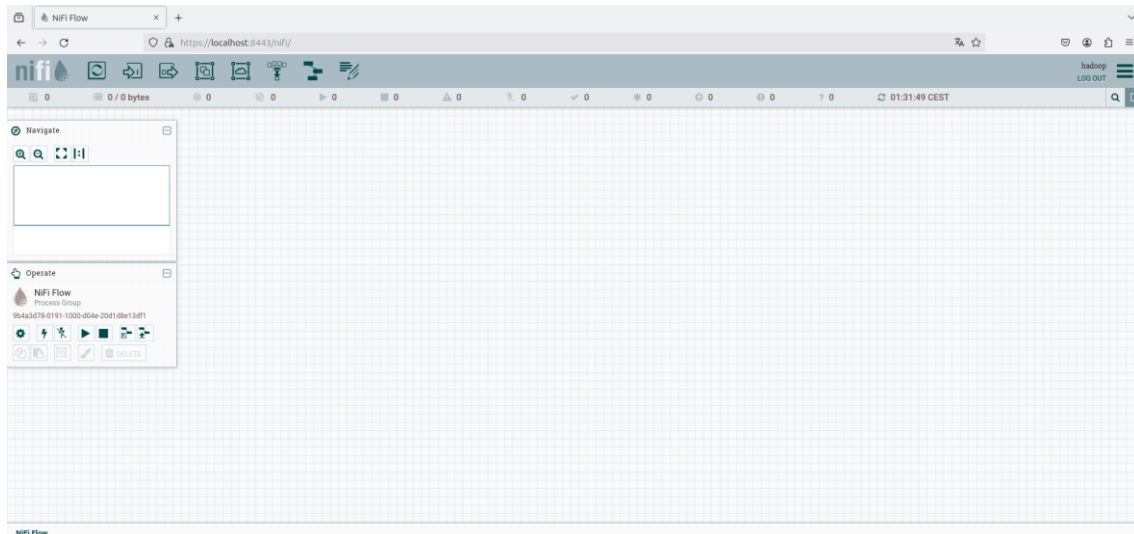
User

hadoop

Password

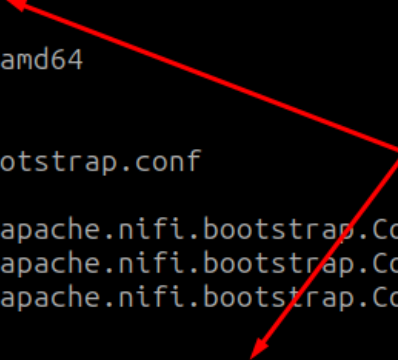
.....

LOG IN



Paso 5. Para facilitar la gestión y acceso desde la máquina host, vamos a desactivar el HTTPS y activar el HTTP.

```
hadoop@hadoop-virtualbox:~$ nifi.sh stop  
  
Java home: /usr/lib/jvm/java-11-openjdk-amd64  
NiFi home: /opt/nifi  
  
Bootstrap Config File: /opt/nifi/conf/bootstrap.conf  
  
2024-08-29 02:14:27,539 INFO [main] org.apache.nifi.bootstrap.Comma  
2024-08-29 02:14:27,550 INFO [main] org.apache.nifi.bootstrap.Comma  
2024-08-29 02:14:29,568 INFO [main] org.apache.nifi.bootstrap.Comma  
  
hadoop@hadoop-virtualbox:~$  
hadoop@hadoop-virtualbox:~$ nano /opt/nifi/conf/nifi.properties
```




```
nifi.web.http.host=0.0.0.0  
nifi.web.http.port=8081  
nifi.web.http.network.interface.default=
```

```
#nifi.web.https.host=127.0.0.1  
#nifi.web.https.port=8443  
nifi.web.https.network.interface
```

```
nifi.security.autoreload.interval=10 secs
#nifi.security.keystore=./conf/keystore.p12
#nifi.security.keystoreType=PKCS12
#nifi.security.keystorePasswd=a8f653bd1dd83073884e226cb3faae81
#nifi.security.keyPasswd=a8f653bd1dd83073884e226cb3faae81
#nifi.security.truststore=./conf/truststore.p12
#nifi.security.truststoreType=PKCS12
#nifi.security.truststorePasswd=ee9f58857d7271371a4345430163b97b
nifi.security.user.authorizer=single-user-authorizer
```

```
# Site to Site properties
nifi.remote.input.host=
nifi.remote.input.secure=false
nifi.remote.input.socket.port=
```



```
hadoop@hadoop-virtualbox:~$ nifi.sh start

Java home: /usr/lib/jvm/java-11-openjdk-amd64
NiFi home: /opt/nifi

Bootstrap Config File: /opt/nifi/conf/bootstrap.conf
```

