

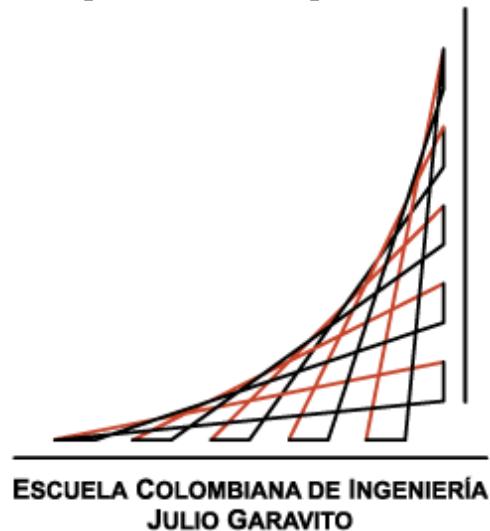
Taller AWS

Taller de introducción a AWS y modularización por virtualización

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Luis Daniel Benavides Navarro

Arquitectura Empresarial



1. Acceda a la consola de administración de AWS

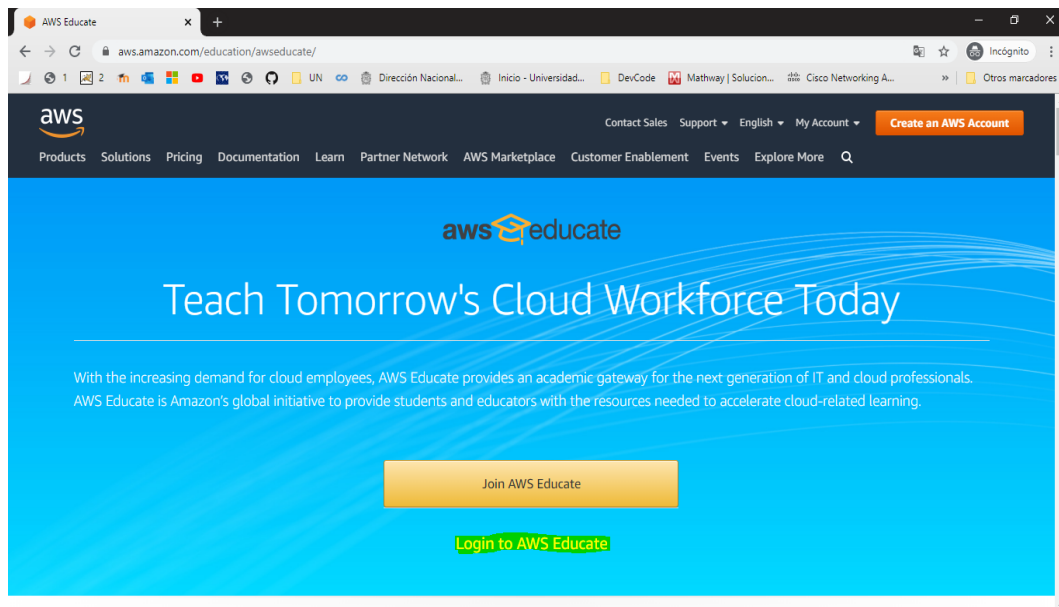


Figura 1: Ingresamos a la página principal de AWSEducate.

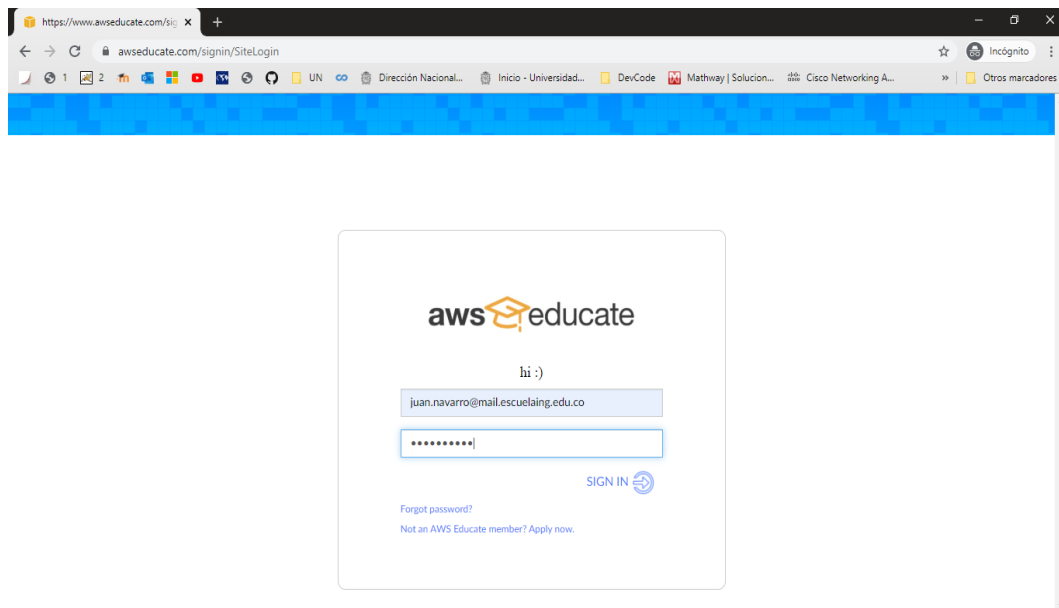


Figura 2: Iniciamos sesión con nuestro correo y clave.

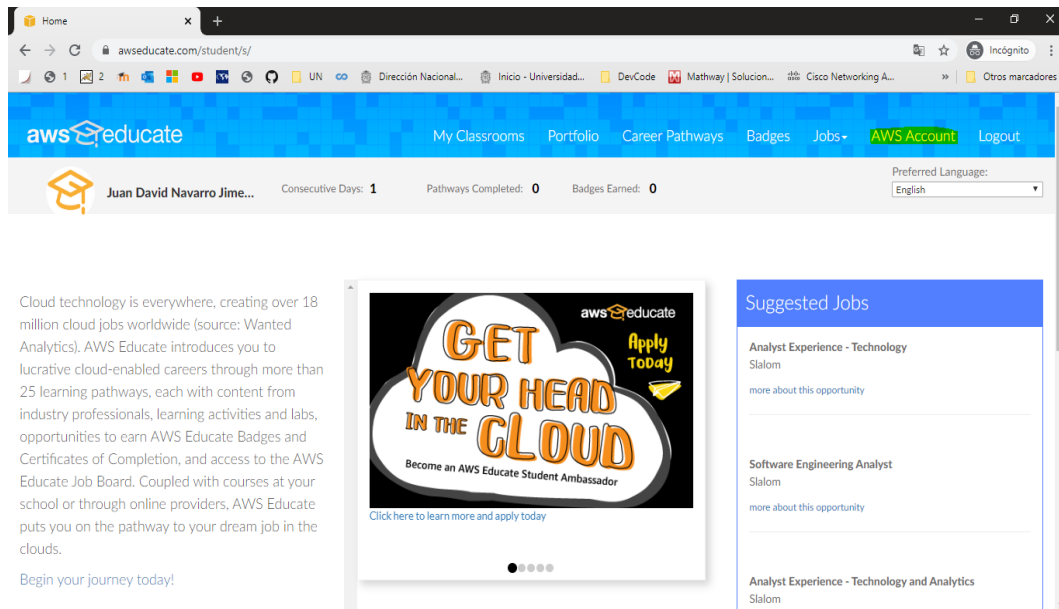


Figura 3: Seleccionamos la pestaña AWS Account.

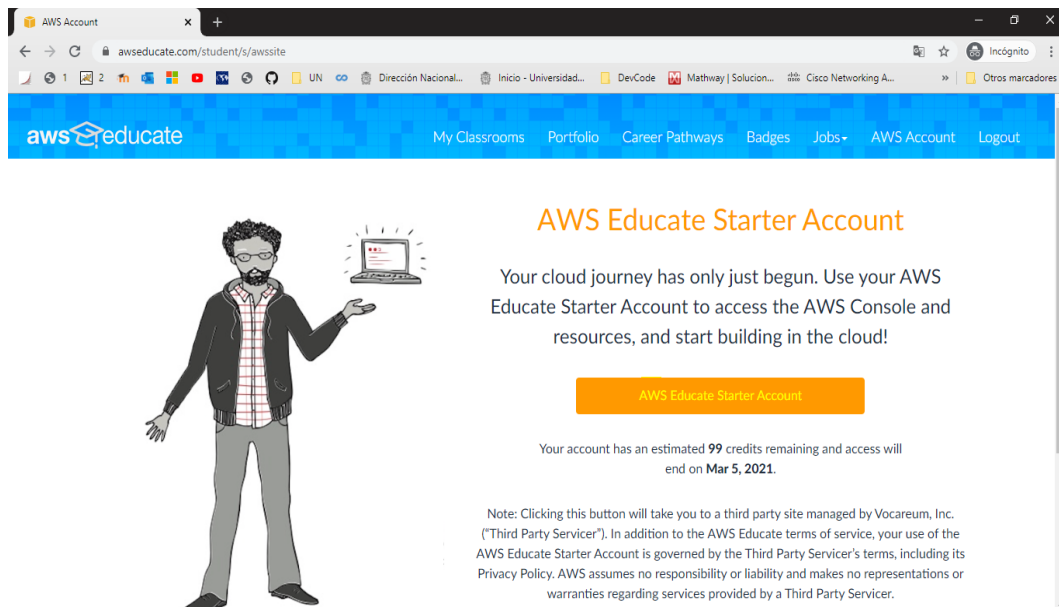


Figura 4: Seleccionamos el botón AWS Educate Starter Account.

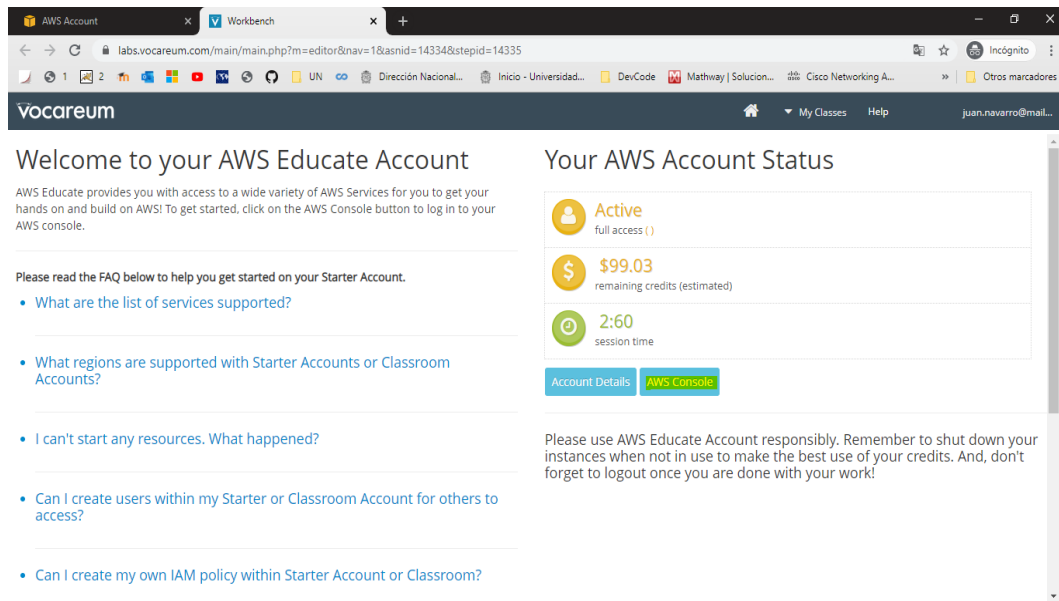


Figura 5: Luego damos click en el botón AWS Console.

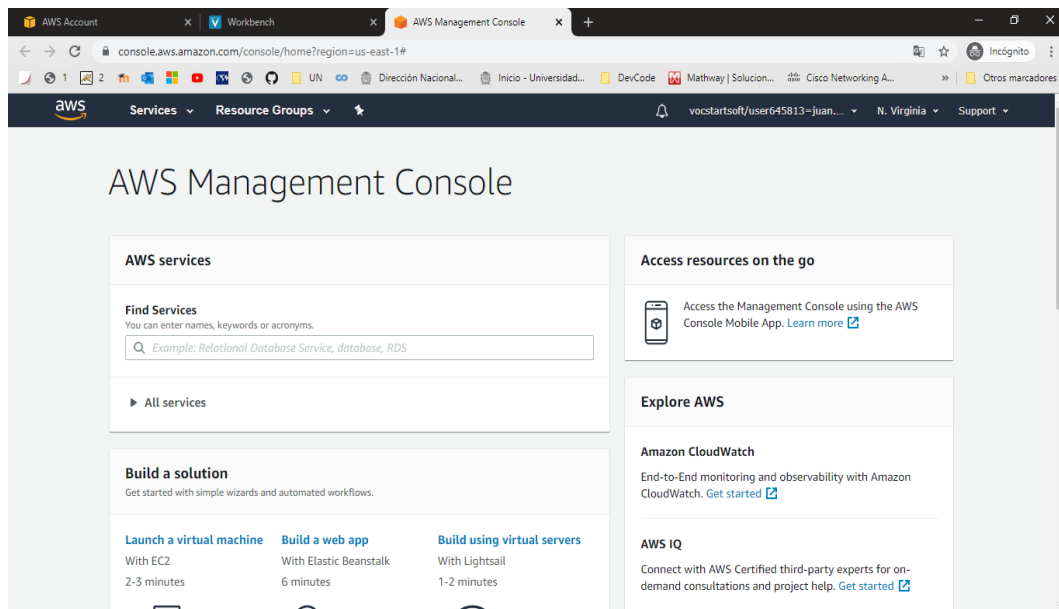


Figura 6: Y así finalmente estaremos en AWS Management Console.

2. Cree una máquina virtual linux siguiendo los pasos:

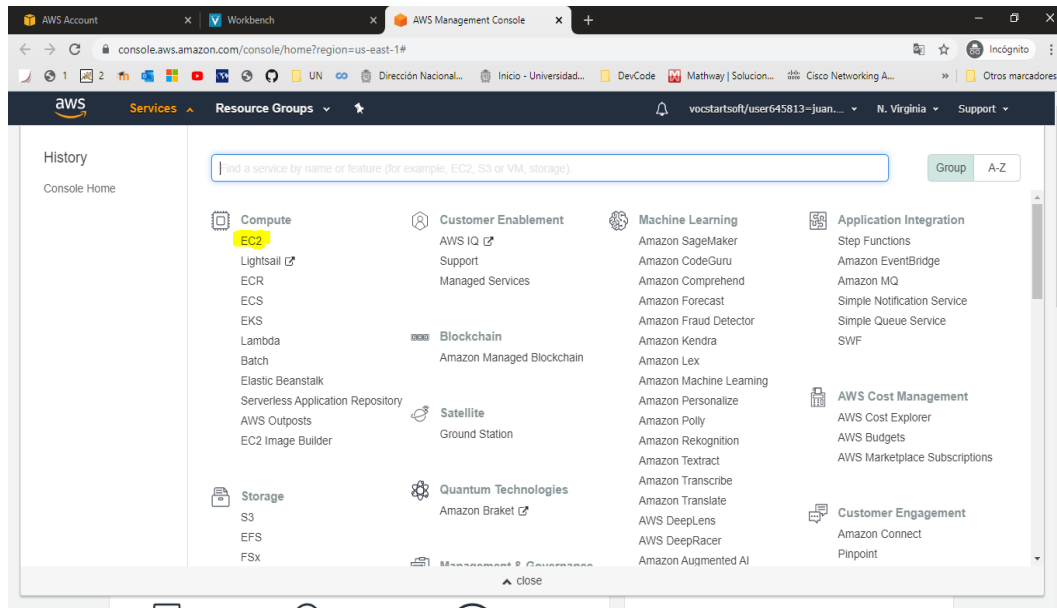


Figura 7: Seleccionamos la pestaña de servicios y elegimos la opción EC2.

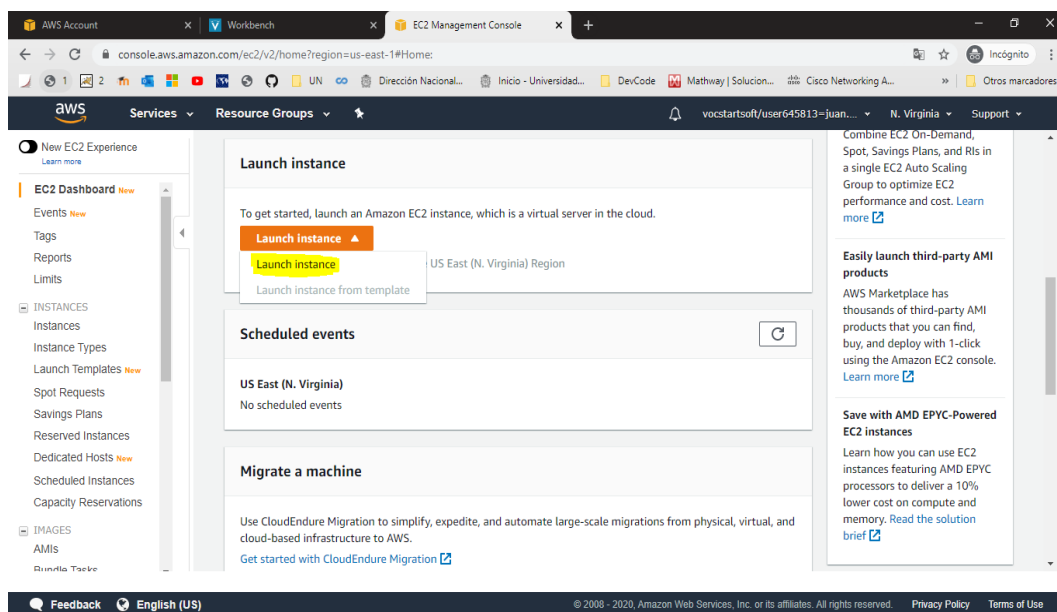


Figura 8: Lanzamos una nueva instancia.

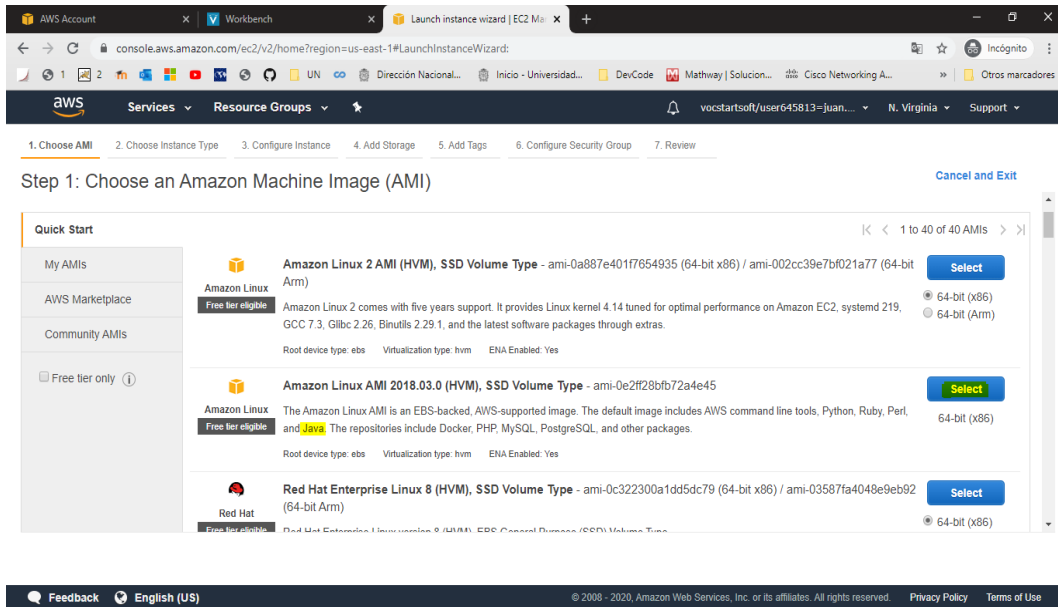


Figura 9: Elegimos la imagen de la maquina la cual queremos utilizar en nuestro caso necesitamos una máquina que tenga Java.

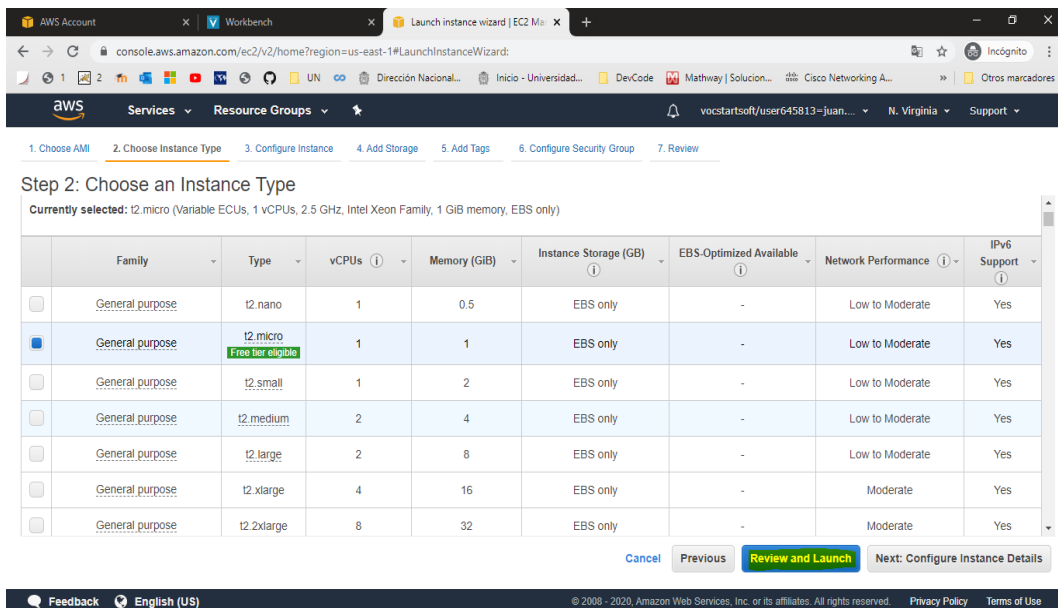


Figura 10: Damos en Review and Launch para ver la configuración de la maquina y lanzar una instancia de ella.

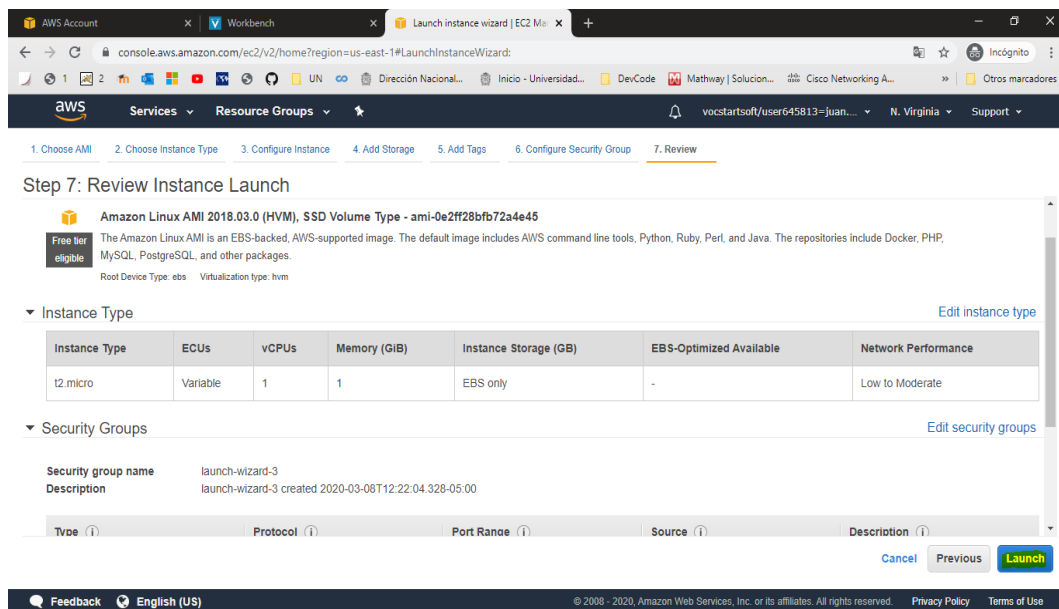


Figura 11: En esta pestaña vemos la información de la maquina y luego damos en Launch.

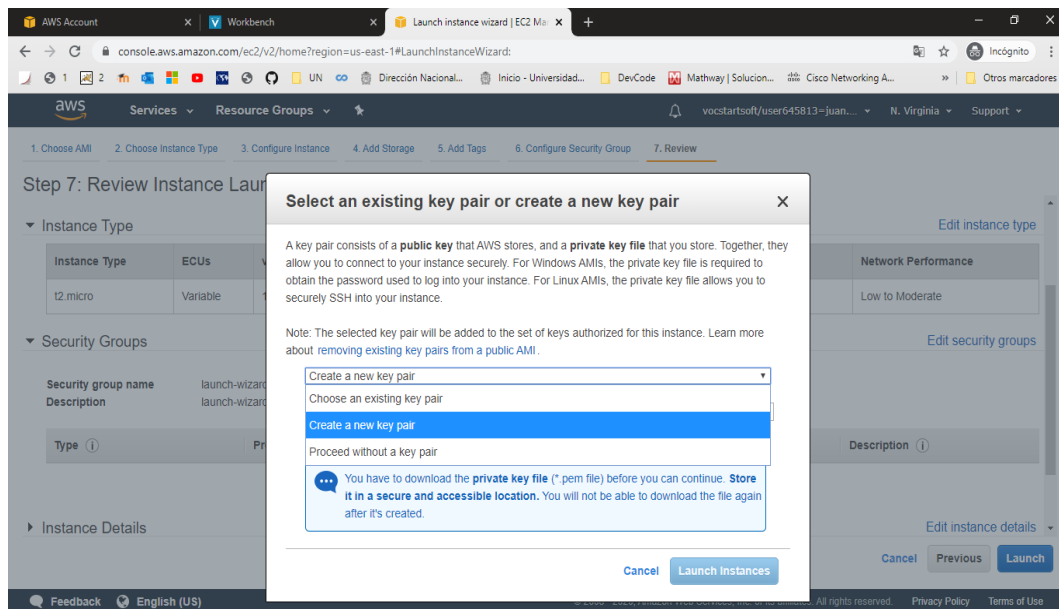


Figura 12: Si no tenemos una llave debemos crear un nuevo par de llaves.

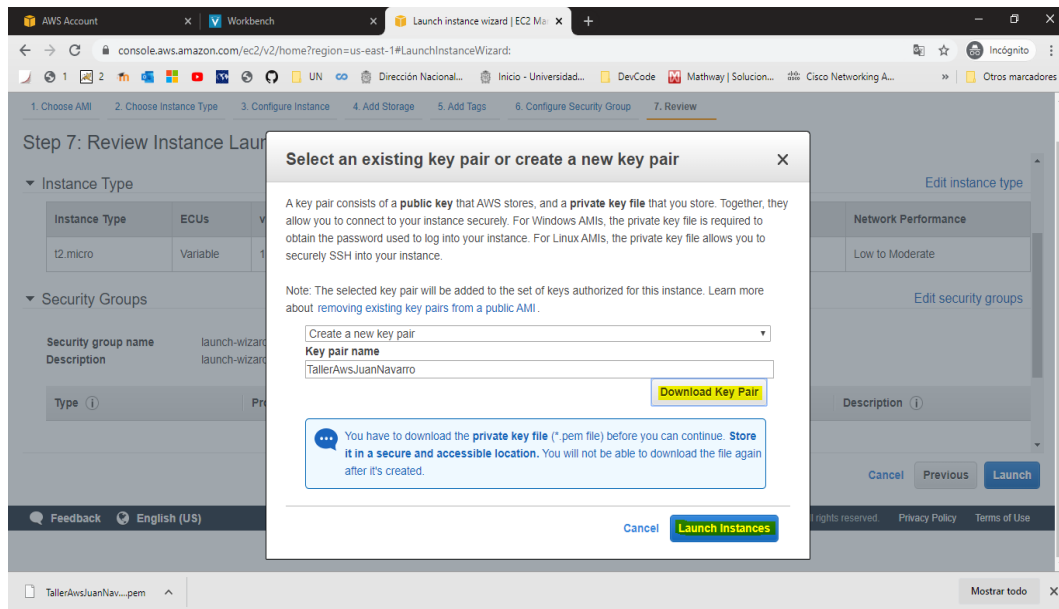


Figura 13: Seleccionamos la llave, descargamos y luego lanzamos la instancia.

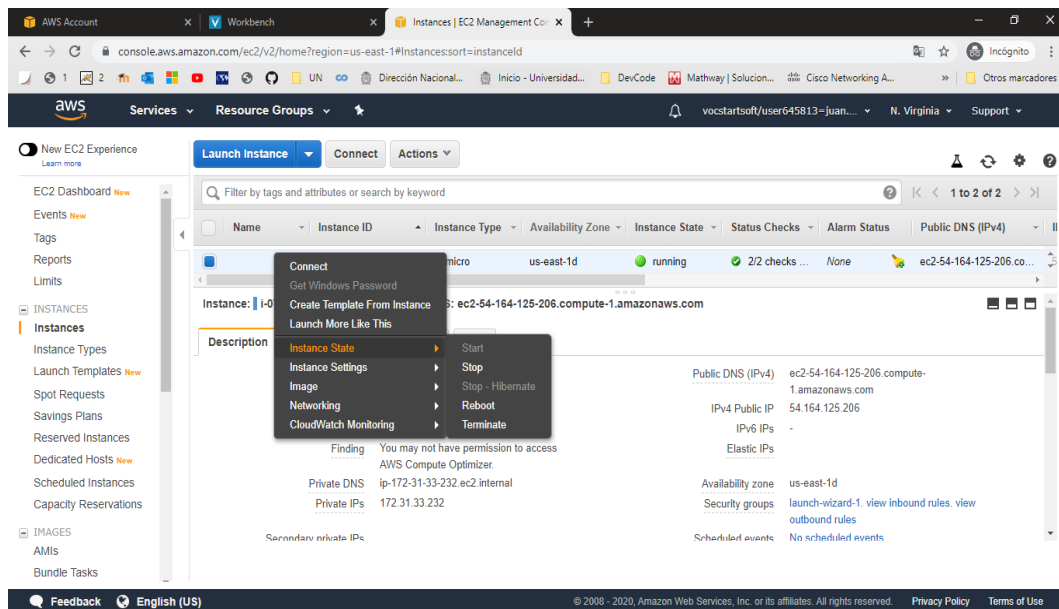
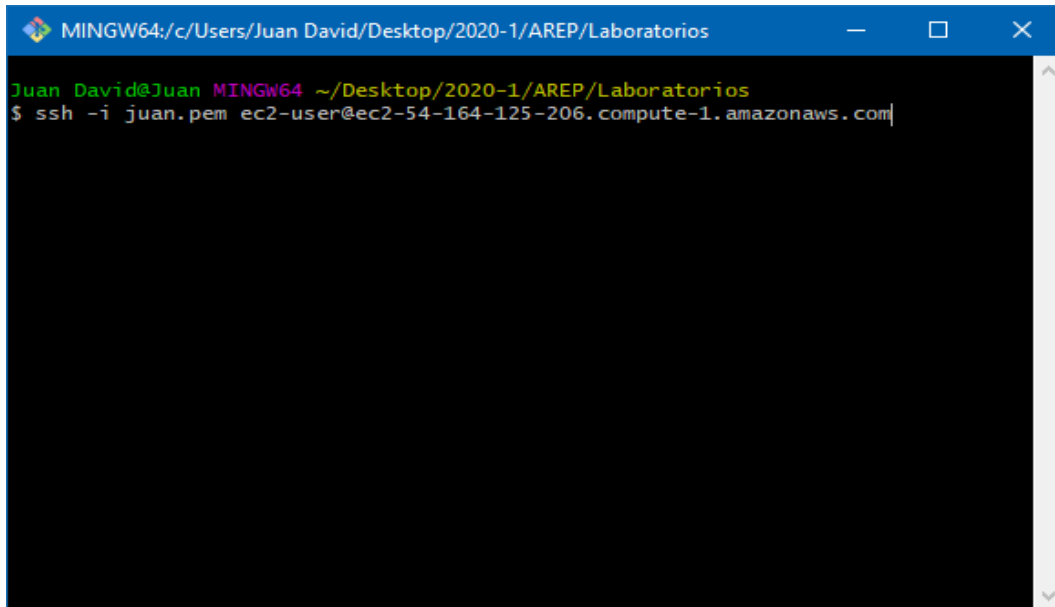


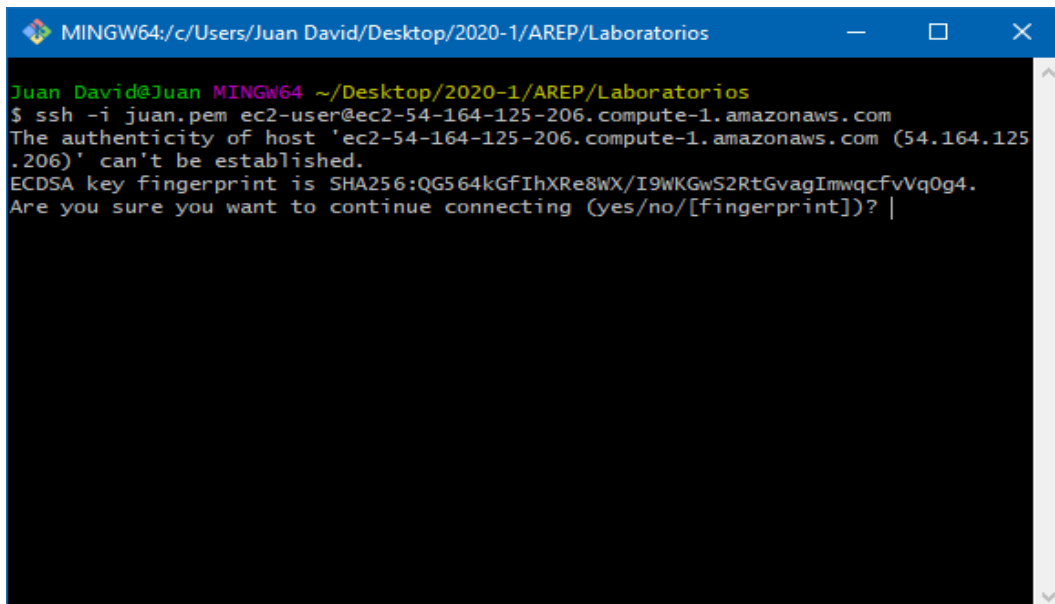
Figura 14: Una vez creada la instancia la ponemos a correr.

3. Conéctese a la máquina virtual usando ssh. Verifique que está en la máquina virtual introduciendo comandos simples como: whoami, ls, pwd.



```
MINGW64:/c/Users/Juan David/Desktop/2020-1/AREP/Laboratorios
Juan David@Juan MINGW64 ~/Desktop/2020-1/AREP/Laboratorios
$ ssh -i juan.pem ec2-user@ec2-54-164-125-206.compute-1.amazonaws.com
```

Figura 15: Realizamos la conexión por medio de SSH utilizando gitBash ya que me encuentro en un equipo Windows, si usted esta en un equipo Linux realice los mismos comandos en la terminal.



```
MINGW64:/c/Users/Juan David/Desktop/2020-1/AREP/Laboratorios
Juan David@Juan MINGW64 ~/Desktop/2020-1/AREP/Laboratorios
$ ssh -i juan.pem ec2-user@ec2-54-164-125-206.compute-1.amazonaws.com
The authenticity of host 'ec2-54-164-125-206.compute-1.amazonaws.com (54.164.125.206)' can't be established.
ECDSA key fingerprint is SHA256:QG564kGfIhXRe8wX/I9wKGwS2RtGvagImwqcfvVq0g4.
Are you sure you want to continue connecting (yes/no/[fingerprint])?
```

Figura 16: Escribimos yes y damos enter.

```
ec2-user@ip-172-31-38-255:~$
Juan David@Juan MINGW64 ~/Desktop/2020-1/AREP/Laboratorios
$ ssh -i juan.pem ec2-user@ec2-54-164-125-206.compute-1.amazonaws.com
ec2-user@ec2-54-164-125-206.compute-1.amazonaws.com: Permission denied (publickey).

Juan David@Juan MINGW64 ~/Desktop/2020-1/AREP/Laboratorios
$ ^C

Juan David@Juan MINGW64 ~/Desktop/2020-1/AREP/Laboratorios
$ ssh -i JuanD.pem ec2-user@ec2-54-224-134-27.compute-1.amazonaws.com
The authenticity of host 'ec2-54-224-134-27.compute-1.amazonaws.com (54.224.134.27)' can't be established.
ECDSA key fingerprint is SHA256:7U351sGftmeQLcmlytxJ/Ius0RGNRCpur9i143pFwJg.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-54-224-134-27.compute-1.amazonaws.com,54.224.134.27' (ECDSA) to the list of known hosts.

  _ | _ | _ )
  _ | (   /   Amazon Linux AMI
 _ | \___|___|

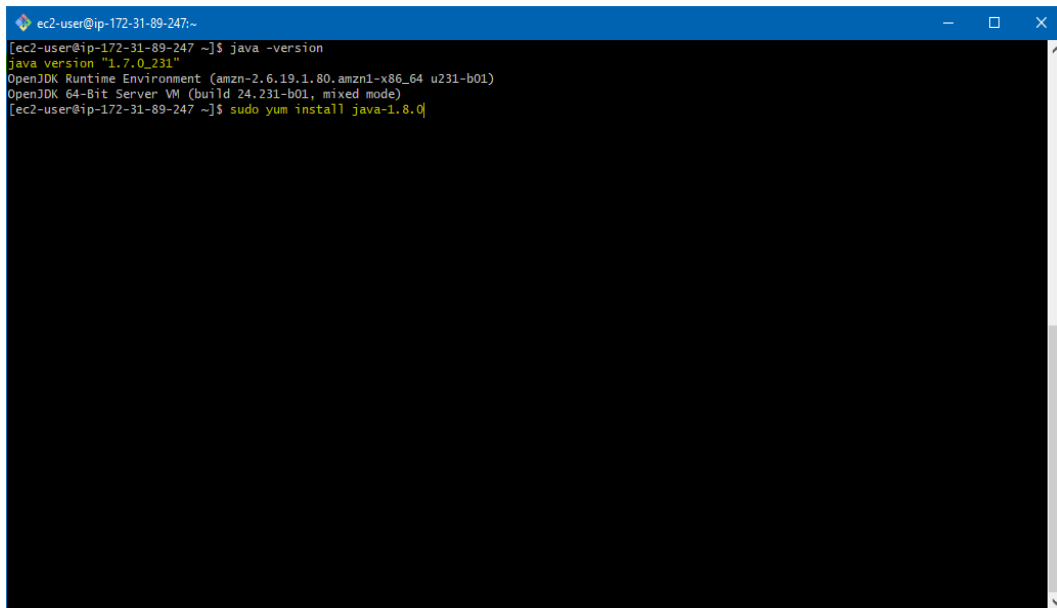
https://aws.amazon.com/amazon-linux-ami/2018.03-release-notes/
4 package(s) needed for security, out of 10 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-38-255 ~]$
```

Figura 17: Ingresamos a la máquina.

A screenshot of a terminal window titled "ec2-user@ip-172-31-89-247:~". The terminal has a black background with white text. It shows four lines of input and output:
[ec2-user@ip-172-31-89-247 ~]\$ whoami
ec2-user
[ec2-user@ip-172-31-89-247 ~]\$ pwd
/home/ec2-user
[ec2-user@ip-172-31-89-247 ~]\$ ls
[ec2-user@ip-172-31-89-247 ~]\$ |
The cursor is at the end of the last line. The window includes standard Linux terminal window controls (minimize, maximize, close) in the top right corner.

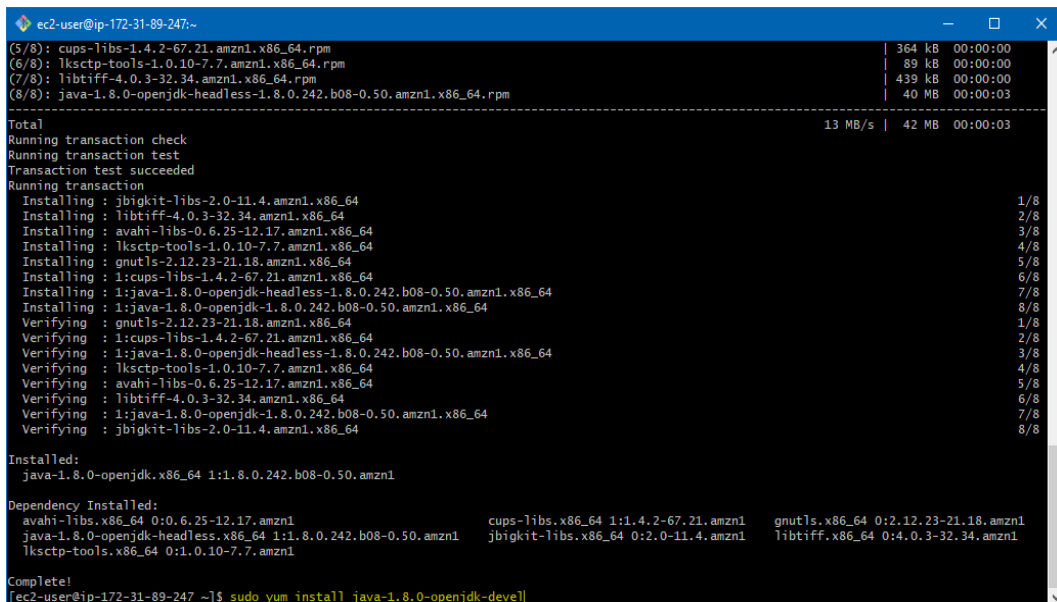
Figura 18: Verificamos los comandos Whoami, pwd y ls.

4. Verifique que java está instalado. Note que el compilador de java (javac) no está instalado en la máquina virtual.



```
ec2-user@ip-172-31-89-247:~$ java -version
java version "1.7.0_231"
OpenJDK Runtime Environment (amzn-2.6.19.1.80.amzn1-x86_64 u231-b01)
OpenJDK 64-Bit Server VM (build 24.231-b01, mixed mode)
[ec2-user@ip-172-31-89-247 ~]$ sudo yum install java-1.8.0
```

Figura 19: Observamos que la versión de java no está actualizada entonces instalaremos java 8.



```
ec2-user@ip-172-31-89-247:~$ sudo yum install java-1.8.0-openjdk-devel
(5/8): cups-libs-1.4.2-67.21.amzn1.x86_64.rpm | 364 kB 00:00:00
(6/8): lksctp-tools-1.0.10-7.7.amzn1.x86_64.rpm | 89 kB 00:00:00
(7/8): libtiff-4.0.3-32.34.amzn1.x86_64.rpm | 439 kB 00:00:00
(8/8): java-1.8.0-openjdk-headless-1.8.0.242.b08-0.50.amzn1.x86_64.rpm | 40 MB 00:00:03
-----
Total | 13 MB/s | 42 MB 00:00:03
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : jbigkit-libs-2.0-11.4.amzn1.x86_64 1/8
Installing : libtiff-4.0.3-32.34.amzn1.x86_64 2/8
Installing : avahi-libs-0.6.25-12.17.amzn1.x86_64 3/8
Installing : lksctp-tools-1.0.10-7.7.amzn1.x86_64 4/8
Installing : gnutls-2.12.23-21.18.amzn1.x86_64 5/8
Installing : 1:cups-libs-1.4.2-67.21.amzn1.x86_64 6/8
Installing : 1:java-1.8.0-openjdk-headless-1.8.0.242.b08-0.50.amzn1.x86_64 7/8
Installing : 1:java-1.8.0-openjdk-1.8.0.242.b08-0.50.amzn1.x86_64 8/8
Verifying : gnutls-2.12.23-21.18.amzn1.x86_64 1/8
Verifying : 1:cups-libs-1.4.2-67.21.amzn1.x86_64 2/8
Verifying : 1:java-1.8.0-openjdk-headless-1.8.0.242.b08-0.50.amzn1.x86_64 3/8
Verifying : lksctp-tools-1.0.10-7.7.amzn1.x86_64 4/8
Verifying : avahi-libs-0.6.25-12.17.amzn1.x86_64 5/8
Verifying : libtiff-4.0.3-32.34.amzn1.x86_64 6/8
Verifying : 1:java-1.8.0-openjdk-1.8.0.242.b08-0.50.amzn1.x86_64 7/8
Verifying : jbigkit-libs-2.0-11.4.amzn1.x86_64 8/8

Installed:
  java-1.8.0-openjdk.x86_64 1:1.8.0.242.b08-0.50.amzn1

Dependency Installed:
  avahi-libs.x86_64 0:0.6.25-12.17.amzn1 cups-libs.x86_64 1:1.4.2-67.21.amzn1 gnutls.x86_64 0:2.12.23-21.18.amzn1
  java-1.8.0-openjdk-headless.x86_64 1:1.8.0.242.b08-0.50.amzn1 jbigkit-libs.x86_64 0:2.0-11.4.amzn1 libtiff.x86_64 0:4.0.3-32.34.amzn1
  lksctp-tools.x86_64 0:1.0.10-7.7.amzn1

Complete!
[ec2-user@ip-172-31-89-247 ~]$ sudo yum install java-1.8.0-openjdk-devel
```

Figura 20: Instalamos el jdk para java 8.

```
ec2-user@ip-172-31-89-247:~  
Complete!  
[ec2-user@ip-172-31-89-247 ~]$ sudo yum install java-1.8.0-openjdk-devel  
Loaded plugins: priorities, update-motd, upgrade-helper  
Resolving Dependencies  
--> Running transaction check  
--> Package java-1.8.0-openjdk-devel.x86_64 1:1.8.0.242.b08-0.50.amzn1 will be installed  
--> Finished Dependency Resolution  
  
Dependencies Resolved  
  
=====
```

Package	Arch	Version	Repository	Size
Installing: java-1.8.0-openjdk-devel	x86_64	1:1.8.0.242.b08-0.50.amzn1	amzn-updates	12 M

```
=====
```

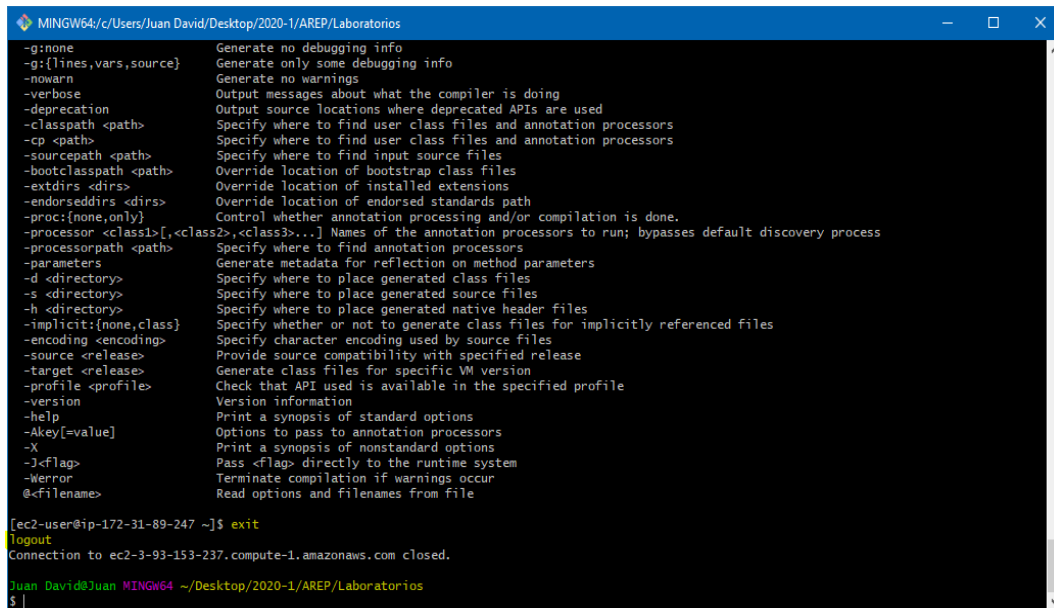
Transaction Summary
Install 1 Package
Total download size: 12 M
Installed size: 40 M
Is this ok [y/d/N]: y
Downloading packages:
java-1.8.0-openjdk-devel-1.8.0.242.b08-0.50.amzn1.x86_64.rpm | 12 MB 00:00:01
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
Installing : 1:java-1.8.0-openjdk-devel-1.8.0.242.b08-0.50.amzn1.x86_64 1/1
Verifying : 1:java-1.8.0-openjdk-devel-1.8.0.242.b08-0.50.amzn1.x86_64 1/1
Installed:
java-1.8.0-openjdk-devel.x86_64 1:1.8.0.242.b08-0.50.amzn1
Complete!
[ec2-user@ip-172-31-89-247 ~]\$ sudo yum remove java-1.7.0-openjdk

Figura 21: Removemos el jdk de java 7.

```
ec2-user@ip-172-31-89-247:~  
[ec2-user@ip-172-31-89-247 ~]$ java -version  
openjdk version "1.8.0_242"  
OpenJDK Runtime Environment (build 1.8.0_242-b08)  
OpenJDK 64-Bit Server VM (build 25.242-b08, mixed mode)  
[ec2-user@ip-172-31-89-247 ~]$ javac  
Usage: javac <options> <source files>  
where possible options include:  
-g Generate all debugging info  
-g:none Generate no debugging info  
-g:{lines,vars,source} Generate only some debugging info  
-nowarn Generate no warnings  
-verbose Output messages about what the compiler is doing  
-deprecation Output source locations where deprecated APIs are used  
-classpath <path> Specify where to find user class files and annotation processors  
-cp <path> Specify where to find user class files and annotation processors  
-sourcepath <path> Specify where to find input source files  
-bootclasspath <path> Override location of bootstrap class files  
-extdirs <dirs> Override location of installed extensions  
-endorseddirs <dirs> Override location of endorsed standards path  
-proc:{none,only} Control whether annotation processing and/or compilation is done.  
-processor <class1>[,<class2>,<class3>...] Names of the annotation processors to run; bypasses default discovery process  
-processorpath <path> Specify where to find annotation processors  
-parameters Generate metadata for reflection on method parameters  
-d <directory> Specify where to place generated class files  
-s <directory> Specify where to place generated source files  
-h <directory> Specify where to place generated native header files  
-implicit:{none,class} Specify whether or not to generate class files for implicitly referenced files  
-encoding <encoding> Specify character encoding used by source files  
-source <release> Provide source compatibility with specified release  
-target <release> Generate class files for specific VM version  
-profile <profile> Check that API used is available in the specified profile  
-version Version information  
-help Print a synopsis of standard options  
-Akey[=value] Options to pass to annotation processors  
-X Print a synopsis of nonstandard options  
-J<flag> Pass <flag> directly to the runtime system  
-Werror Terminate compilation if warnings occur
```

Figura 22: Revisamos que la instalación se haya echo correctamente para esto ejecutamos el comando java -version y javac.

5. Salga del ssh usando exit.

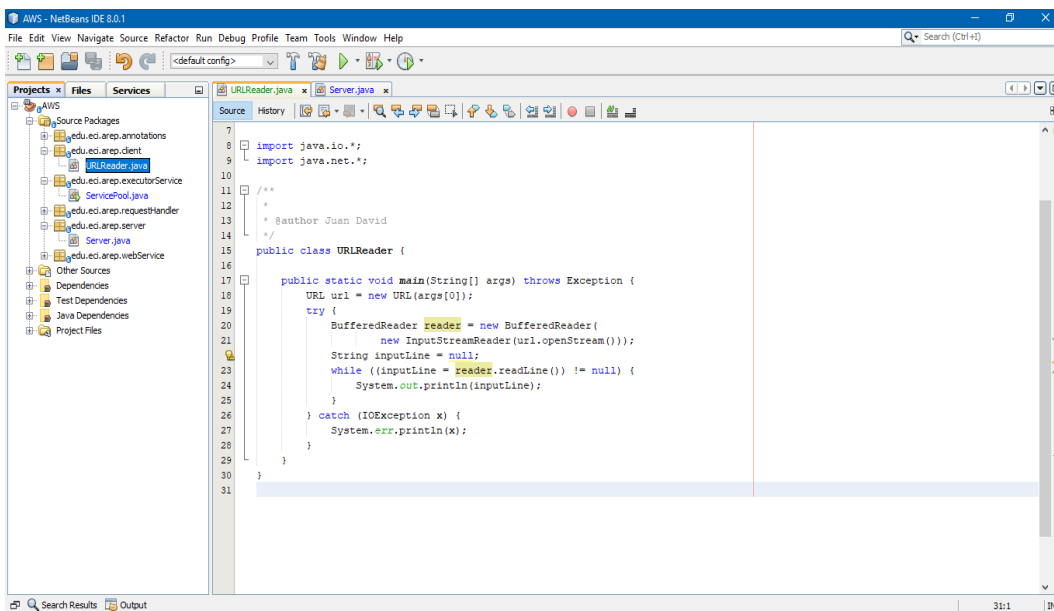


```
MINGW64/c/Users/Juan David/Desktop/2020-1/AREP/Laboratorios
-g:none Generate no debugging info
-g:{lines,vars,source} Generate only some debugging info
-nowarn Generate no warnings
-verbose Output messages about what the compiler is doing
-deprecation Output source locations where deprecated APIs are used
-classpath <path> Specify where to find user class files and annotation processors
-cp <path> Specify where to find user class files and annotation processors
-sourcepath <path> Specify where to find input source files
-bootclasspath <path> Override location of bootstrap class files
-extdirs <dirs> Override location of installed extensions
-endorseddirs <dirs> Override location of endorsed standards path
-processor <class>[,<class>,...] Names of the annotation processors to run; bypasses default discovery process
-processorpath <path> Specify where to find annotation processors
-parameters Generate metadata for reflection on method parameters
-d <directory> Specify where to place generated class files
-s <directory> Specify where to place generated source files
-h <directory> Specify where to place generated native header files
-implicit:[none,class] Specify whether or not to generate class files for implicitly referenced files
-encoding <encoding> Specify character encoding used by source files
-source <release> Provide source compatibility with specified release
-target <release> Generate class files for specific VM version
-profile <profile> Check that API used is available in the specified profile
-version Version information
-help Print a synopsis of standard options
-Akey[=value] Options to pass to annotation processors
-X Print a synopsis of nonstandard options
-J<flag> Pass <flag> directly to the runtime system
-Werror Terminate compilation if warnings occur
@<filename> Read options and filenames from file

[ec2-user@ip-172-31-89-247 ~]$ exit
logout
Connection to ec2-3-93-153-237.compute-1.amazonaws.com closed.
Juan David@Juan MINGW64 ~/Desktop/2020-1/AREP/Laboratorios
$
```

Figura 23: Ejecutamos el comando exit para salir de la consola de la máquina.

6. En su máquina local, usando netbeans cree un cliente que se pueda conectar a una url e imprimir la respuesta de esa url en pantalla. Observe que el código de ejemplo recibe la url como el primer argumento en la línea de comandos.



```
AWS - NetBeans IDE 8.0.1
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
<default config>
Search (Ctrl+F)

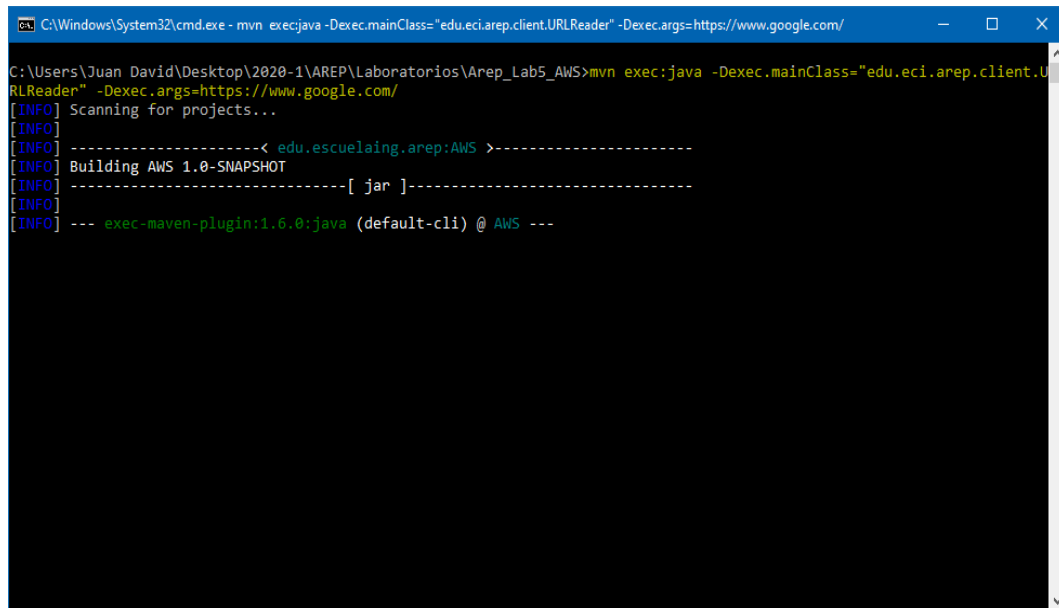
Projects Files Services
AWS
  Source Packages
    edu.edi.arep.annotations
    edu.edi.arep.client
    URLReader.java
    edu.edi.arep.executorService
    ServicePool.java
    edu.edi.arep.requestHandler
    edu.edi.arep.server
    Server.java
    edu.edi.arep.webService
  Other Sources
  Dependencies
  Test Dependencies
  Java Dependencies
  Project Files

Source
History
URLReader.java
Server.java

7
8 import java.io.*;
9 import java.net.*;
10
11 /**
12  *
13  * @author Juan David
14  */
15 public class URLReader {
16
17     public static void main(String[] args) throws Exception {
18         URL url = new URL(args[0]);
19         try {
20             BufferedReader reader = new BufferedReader(
21                 new InputStreamReader(url.openStream()));
22             String inputLine = null;
23             while ((inputLine = reader.readLine()) != null) {
24                 System.out.println(inputLine);
25             }
26         } catch (IOException x) {
27             System.err.println(x);
28         }
29     }
30 }
31
```

Figura 24: Copiamos el cliente dado en Moodle para consultar sitios web.

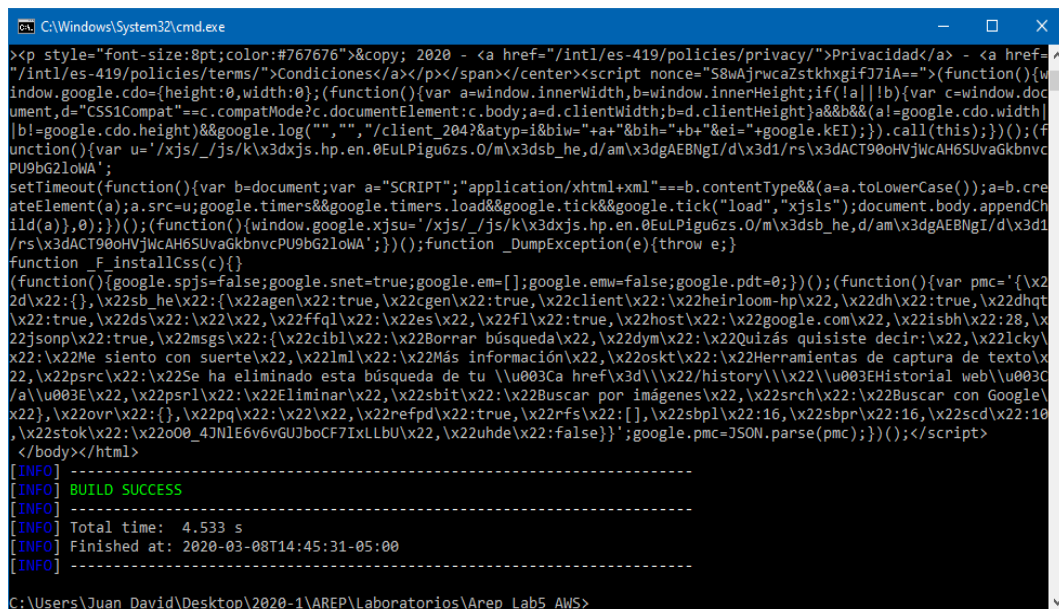
7. Pruebe su cliente en la máquina local



```
C:\Windows\System32\cmd.exe - mvn exec:java -Dexec.mainClass="edu.eci.arep.client.URLReader" -Dexec.args=https://www.google.com/

C:\Users\Juan David\Desktop\2020-1\AREP\Laboratorios\Arep_Lab5_AWS>mvn exec:java -Dexec.mainClass="edu.eci.arep.client.URLReader" -Dexec.args=https://www.google.com/
[INFO] Scanning for projects...
[INFO] -----< edu.escuelaing.arep:AWS >-----
[INFO] Building AWS 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
[INFO] --- exec-maven-plugin:1.6.0:java (default-cli) @ AWS ---
```

Figura 25: Utilizamos el comando `mvn exec:java` ya que estamos utilizando Maven en el proyecto, la opción `Dexec.mainClass` va a correr una clase main y la opción `Dexec.args` es donde pasamos los argumentos del main.



```
><p style="font-size:8pt;color:#767676">&copy; 2020 - <a href="/intl/es-419/policies/privacy/">Privacidad</a> - <a href="/intl/es-419/policies/terms/">Condiciones</a></p></span></center><script nonce="S8wAjrwcaZstkxgjf7iA==">(function(){window.google.cdo={height:0,width:0};(function(){var a=window.innerWidth,b=window.innerHeight;if(!a||!b){var c=window.document,d="CSS1Compat"==c.compatMode?c.documentElement:c.body;a=d.clientWidth;b=d.clientHeight;a&&b&&(a=google.cdo.width|b|=google.cdo.height)&&google.log("","/client_204?&atyp=i&biw="+a+"&bih="+b+"&ei="+google.kEI);}).call(this);})();(function(){var u="/xjs/_/js/k/x3dxjs.hp.en.0EuLPigu6zs.0/m/x3dsb_he,d/am/x3dgAEBNgI/d/x3d1/rs/x3dACT90oHVjWcAH6SUVaGkbnvcPU9bG2loWA";setTimeout(function(){var b=document;var a="SCRIPT";"application/xhtml+xml"===b.contentType&&(a=a.toLowerCase());a=b.createElement(a);a.src=u;google.timers&&google.timers.load&&google.tick&&google.tick("load","xjsls");document.body.appendChild(a);})();(function(){window.google.xjsu="/xjs/_/js/k/x3dxjs.hp.en.0EuLPigu6zs.0/m/x3dsb_he,d/am/x3dgAEBNgI/d/x3d1/rs/x3dACT90oHVjWcAH6SUVaGkbnvcPU9bG2loWA";})();function _DumpException(e){throw e;}}function _F_installCss(c){(function(){google.spjs=false;google.snet=true;google.emw=false;google.pdt=0;})();(function(){var pmc='{x22d\x22:{},x22sb_he\x22:{x22agen\x22:true,x22cgen\x22:true,x22client\x22:x22heirloom-hp\x22,x22dh\x22:true,x22dht\x22:true,x22ds\x22:x22,x22ffq1\x22:x22es\x22,x22fl\x22:true,x22host\x22:x22google.com\x22,x22isbh\x22:28,x22jsomp\x22:true,x22msgs\x22:{x22cibl\x22:x22Borrar búsqueda\x22,x22dym\x22:x22Quizás quisiste decir:x22,x22lcky\x22:x22Me siento con suerte\x22,x22lml\x22:x22Más información\x22,x22oskt\x22:x22Herramientas de captura de texto\x22,x22psrc\x22:x22Se ha eliminado esta búsqueda de tu \u003Ca href=x3d\\x22/history\\x22\\u003EHistorial web\\u003C/a\\u003E\x22,x22psrl\x22:x22Eliminar\x22,x22sbit\x22:x22Buscar por imágenes\x22,x22srch\x22:x22Buscar con Google\x22,x22ovr\x22:{},x22pq\x22:x22,x22refpd\x22:true,x22rfs\x22:[],x22sbpl\x22:16,x22sbpr\x22:16,x22scd\x22:16,x22stok\x22:x22o00_4JNlE6v6vGUjboCF7IxLLbU\x22,x22uhde\x22:false}}';google.pmc=JSON.parse(pmc);})();</script></body></html>
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 4.533 s
[INFO] Finished at: 2020-03-08T14:45:31-05:00
[INFO] -----
C:\Users\Juan David\Desktop\2020-1\AREP\Laboratorios\Arep_Lab5_AWS>
```

Figura 26: Vemos como resultado la búsqueda en la página `www.google.com`

8. Suba el proyecto compilado a su máquina virtual usando sftp.

```
MINGW64: c:/Users/Juan David/Desktop/2020-1/AREP/Laboratorios
Juan David@Juan MINGW64 ~/Desktop/2020-1/AREP/Laboratorios
$ sftp -i JuanAWS.pem ec2-user@ec2-3-93-153-237.compute-1.amazonaws.com
Connected to ec2-user@ec2-3-93-153-237.compute-1.amazonaws.com.
s
```

Figura 27: Nos conectamos por medio de SFTP.

```

MINGW64; c:/Users/Juan David/Desktop/2020-1/AREP/Laboratorios
Juan David@Juan MINGW64 ~/Desktop/2020-1/AREP/Laboratorios
$ sftp -i JuanAWS.pem ec2-user@ec2-3-93-153-237.compute-1.amazonaws.com
Connected to ec2-user@ec2-3-93-153-237.compute-1.amazonaws.com.
s 11s
'~/TallerAWS.docx'      Arep_Lab2_SparkWebApp  Arep_Lab4_ServerWeb  Img      Lab#4JuanNavarro      TallerAWS.docx
Arep_Lab1_TallerMvnGit  Arep_Lab3_Networking  Arep_Lab5_AWS        JuanAWS.pem  Lab#4JuanNavarro.zip
s 1s
s 1pwd
Local working directory: /c:/Users/Juan David/Desktop/2020-1/AREP/Laboratorios
s pwd
Remote working directory: /home/ec2-user
s |

```

Figura 28: Verificamos que podamos ver tanto los archivos en la maquina virtual como en la local.

```
MINGW64/c/Users/Juan David/Desktop/2020-1/AREP/Laboratorios
Juan David@Juan MINGW64 ~/Desktop/2020-1/AREP/Laboratorios
$ sftp -i JuanAWS.pem ec2-user@ec2-3-93-153-237.compute-1.amazonaws.com
Connected to ec2-user@ec2-3-93-153-237.compute-1.amazonaws.com.
s > ls
'-$!lerAWS.docx'      Arep_Lab2_SparkWebApp  Arep_Lab4_ServerWeb  Ing      Lab#4JuanNavarro      TallerAWS.docx
Arep_Lab1_TallerMvnGit Arep_Lab3_Networking  Arep_Lab5_AWS        JuanAWS.pem Lab#4JuanNavarro.zip
s > ls
s > pwd
Local working directory: /c/Users/Juan David/Desktop/2020-1/AREP/Laboratorios
s > pwd
Remote working directory: /home/ec2-user
s > lcd Arep_Lab5_AWS
s > ls
circle.yml LICENSE.txt pom.xml Procfile README.md src system.properties target
s > lcd target
s > ls
Couldn't change local directory to "target": No such file or directory
s > lcd target
s > ls
AWS-1.0-SNAPSHOT.jar classes generated-sources maven-archiver maven-status test-classes
s > put AWS-1.0-SNAPSHOT.jar
Uploading AWS-1.0-SNAPSHOT.jar to /home/ec2-user/AWS-1.0-SNAPSHOT.jar
AWS-1.0-SNAPSHOT.jar 100% 1893KB 223.0KB/s 00:08
s > ls
AWS-1.0-SNAPSHOT.jar
s > |
```

Figura 29: Utilizamos el comando PUT para subir el JAR del proyecto.

```
ec2-user@ip-172-31-89-247:~
s > pwd
Local working directory: /c/Users/Juan David/Desktop/2020-1/AREP/Laboratorios
s > pwd
Remote working directory: /home/ec2-user
s > lcd Arep_Lab5_AWS
s > ls
circle.yml LICENSE.txt pom.xml Procfile README.md src system.properties target
s > lcd target
s > ls
Couldn't change local directory to "target": No such file or directory
s > lcd target
s > ls
AWS-1.0-SNAPSHOT.jar classes generated-sources maven-archiver maven-status test-classes
s > put AWS-1.0-SNAPSHOT.jar
Uploading AWS-1.0-SNAPSHOT.jar to /home/ec2-user/AWS-1.0-SNAPSHOT.jar
AWS-1.0-SNAPSHOT.jar 100% 1893KB 223.0KB/s 00:08
s > ls
AWS-1.0-SNAPSHOT.jar
s > exit
client_loop: send disconnect: Connection reset by peer

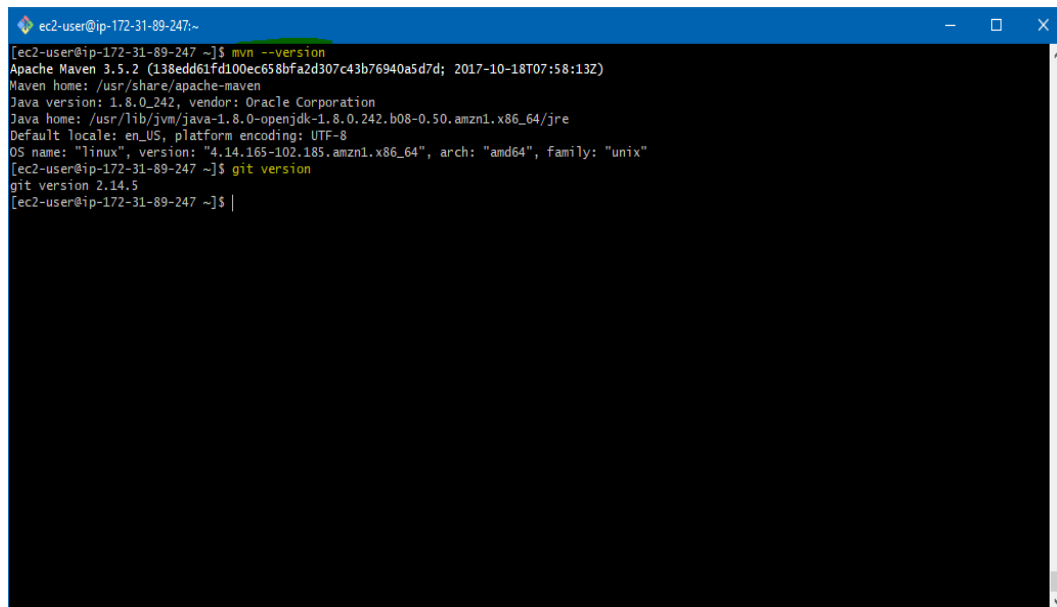
Juan David@Juan MINGW64 ~/Desktop/2020-1/AREP/Laboratorios
$ ssh -i JuanAWS.pem ec2-user@ec2-3-93-153-237.compute-1.amazonaws.com
Last login: Sun Mar 8 19:56:00 2020 from 186.144.59.108

  _| _|_ )
  _| ( _/  Amazon Linux AMI
  _|\_|_||

https://aws.amazon.com/amazon-linux-ami/2018.03-release-notes/
4 package(s) needed for security, out of 10 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-89-247 ~]$ ls
AWS-1.0-SNAPSHOT.jar
[ec2-user@ip-172-31-89-247 ~]$
```

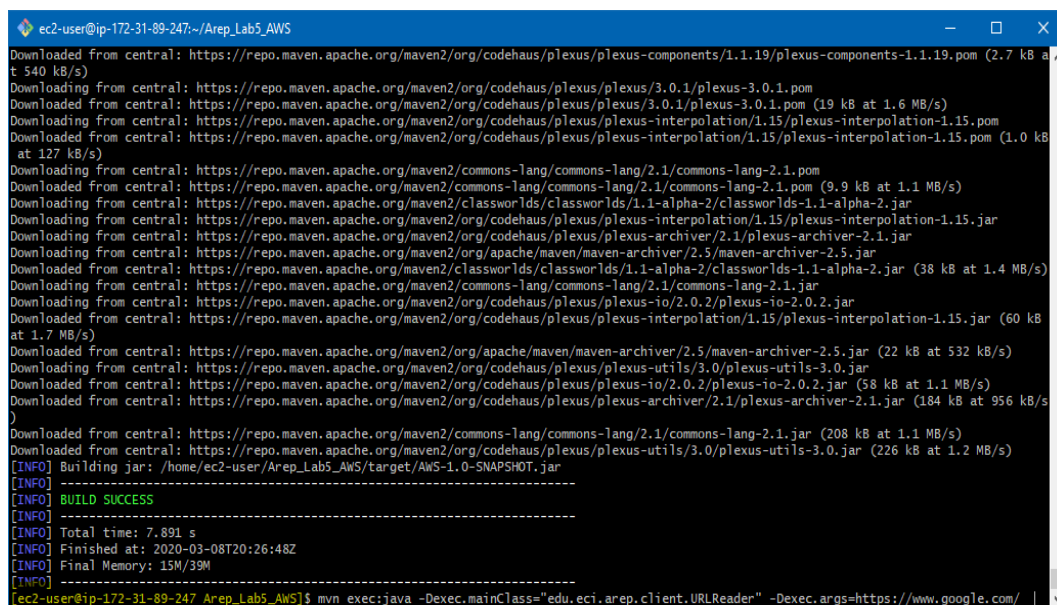
Figura 30: Ahora nos volvemos a conectar con SSH para verificar que el JAR se haya subido.

9. Ejecute el cliente que instaló en su máquina virtual de AWS para conectarse a la aplicación que instaló en Heroku durante el parcial o el taller.



```
ec2-user@ip-172-31-89-247:~  
[ec2-user@ip-172-31-89-247 ~]$ mvn --version  
Apache Maven 3.5.2 (138ed61fd100ec658bfa2d307c43b76940a5d7d; 2017-10-18T07:58:13Z)  
Maven home: /usr/share/apache-maven  
Java version: 1.8.0_242, vendor: Oracle Corporation  
Java home: /usr/lib/jvm/java-1.8.0-openjdk-1.8.0.242.b08-0.50.amzn1.x86_64/jre  
Default locale: en_US, platform encoding: UTF-8  
OS name: "linux", version: "4.14.163-102.185.amzn1.x86_64", arch: "amd64", family: "unix"  
[ec2-user@ip-172-31-89-247 ~]$ git version  
git version 2.14.5  
[ec2-user@ip-172-31-89-247 ~]$
```

Figura 31: Primero instalamos Maven y git para ver otra forma de poder transferir archivos a la máquina virtual.



```
ec2-user@ip-172-31-89-247:~/Arep_Lab5_AWS  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-components/1.1.19/plexus-components-1.1.19.pom (2.7 kB at 540 kB/s)  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus/3.0.1/plexus-3.0.1.pom  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus/3.0.1/plexus-3.0.1.pom (19 kB at 1.6 MB/s)  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-interpolation/1.15/plexus-interpolation-1.15.pom  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-interpolation/1.15/plexus-interpolation-1.15.pom (1.0 kB at 127 kB/s)  
Downloaded from central: https://repo.maven.apache.org/maven2/commons-lang/commons-lang/2.1/commons-lang-2.1.pom  
Downloaded from central: https://repo.maven.apache.org/maven2/commons-lang/commons-lang/2.1/commons-lang-2.1.pom (9.9 kB at 1.1 MB/s)  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-interpolation/1.15/plexus-interpolation-1.15.jar  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-archiver/2.1/plexus-archiver-2.1.jar  
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-archiver/2.5/maven-archiver-2.5.jar  
Downloaded from central: https://repo.maven.apache.org/maven2/commons-lang/commons-lang/2.1/commons-lang-2.1.jar (38 kB at 1.4 MB/s)  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-io/2.0.2/plexus-io-2.0.2.jar  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-interpolation/1.15/plexus-interpolation-1.15.jar (60 kB at 1.7 MB/s)  
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-archiver/2.5/maven-archiver-2.5.jar (22 kB at 532 kB/s)  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0/plexus-utils-3.0.jar  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-io/2.0.2/plexus-io-2.0.2.jar (58 kB at 1.1 MB/s)  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-archiver/2.1/plexus-archiver-2.1.jar (184 kB at 956 kB/s)  
Downloaded from central: https://repo.maven.apache.org/maven2/commons-lang/commons-lang/2.1/commons-lang-2.1.jar (208 kB at 1.1 MB/s)  
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0/plexus-utils-3.0.jar (226 kB at 1.2 MB/s)  
[INFO] Building jar: /home/ec2-user/Arep_Lab5_AWS/target/AWS-1.0-SNAPSHOT.jar  
[INFO] BUILD SUCCESS  
[INFO] Total time: 7.891 s  
[INFO] Finished at: 2020-03-08T20:26:48Z  
[INFO] Final Memory: 15M/39M  
[INFO]  
[ec2-user@ip-172-31-89-247 Arep_Lab5_AWS]$ mvn exec:java -Dexec.mainClass="edu.eci.arep.client.URLReader" -Dexec.args=https://www.google.com/
```

Figura 32: Utilizamos Mvn package para compilar el proyecto en la máquina virtual y ejecutamos el comando mvn exec:java con el parámetro `https://www.google.com`.


```

ec2-user@ip-172-31-89-247:~/Arep_Lab5_AWS
te>Primer Elemento </blockquote> <blockquote>Segundo Elemento </blockquote> <
blockquote>Tercer Elemento </blockquote> </aside> <section>
<header> <hgroup> <h2><cite>Porsche 911</cite> modificados</h2> <h3>SubTitulo de la not
ia 1</h3> </hgroup> <time datetime="2018/10/16 pubdate">Noticia publicada el dia 16/10/2018 </time> </header>
<figure>  </figure>
<figcaption><mark><em>Porsche 911</em></mark></figcaption> </figure>
<p><strong>Noticia 1</strong></p> <p>Seguimos hablando de <em>noticia 1</em></p>
<p>Terminamos de hablar de la noticia 1</p> <footer>
<p>Comentarios de usuarios</p> </footer> </article>
</article> <header> <h2>Titulo de la noticia 2</h2>
<p>Noticia 2</p> <p>Seguimos hablando de noticia 2
<p>Terminamos de hablar de la noticia 2</p> <footer>
<p>Comentarios de usuarios</p> </footer> </article>
</article> <header> <h2>Titulo de la noticia 3</h2>
<h3>SubTitulo de la noticia 3</h3>
<p>Noticia 3</p>
<p>Seguimos hablando de noticia 3</p> <p>Terminamos de hablar de la noticia 3</p>
<footer> <p>Comentarios de usuarios</p> </footer>
</article> </section> <small>Derechos r
eservados</small> <address> Tel: 8888888 </address> <address> juan_4661@hotmail.com </address>
</body>
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 2.141 s
[INFO] Finished at: 2020-03-08T21:25:20Z
[INFO] Final Memory: 11M/27M
[INFO] -----
[ec2-user@ip-172-31-89-247 Arep_Lab5_AWS]$ |

```

Figura 35: Vemos los resultados de la ejecución.

10. Borre las instancias y unidades de almacenamiento en su cuenta AWS para no generar costos.

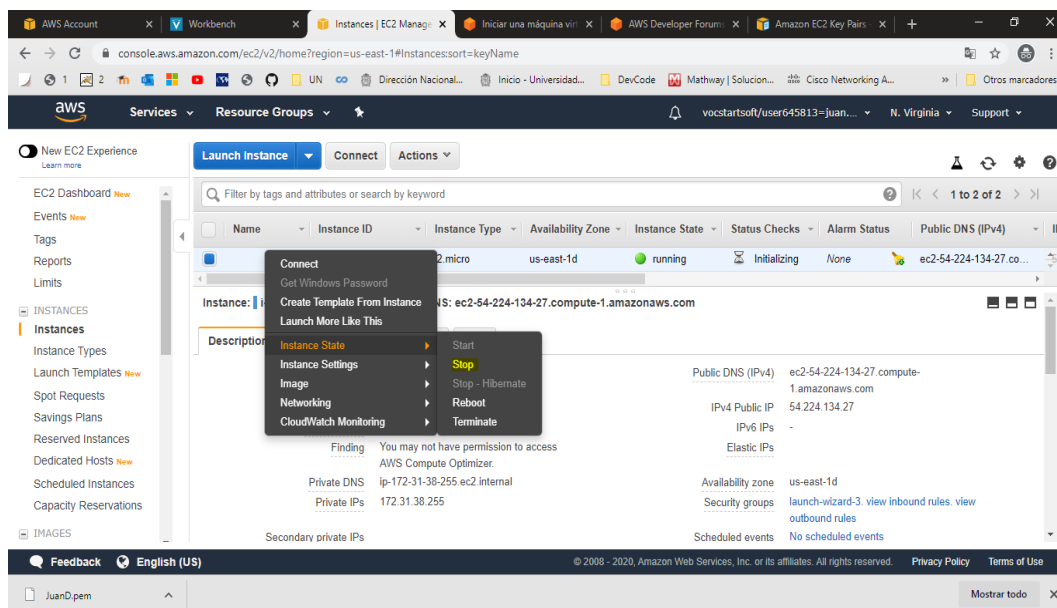


Figura 36: Podemos para la ejecución de una instancia.

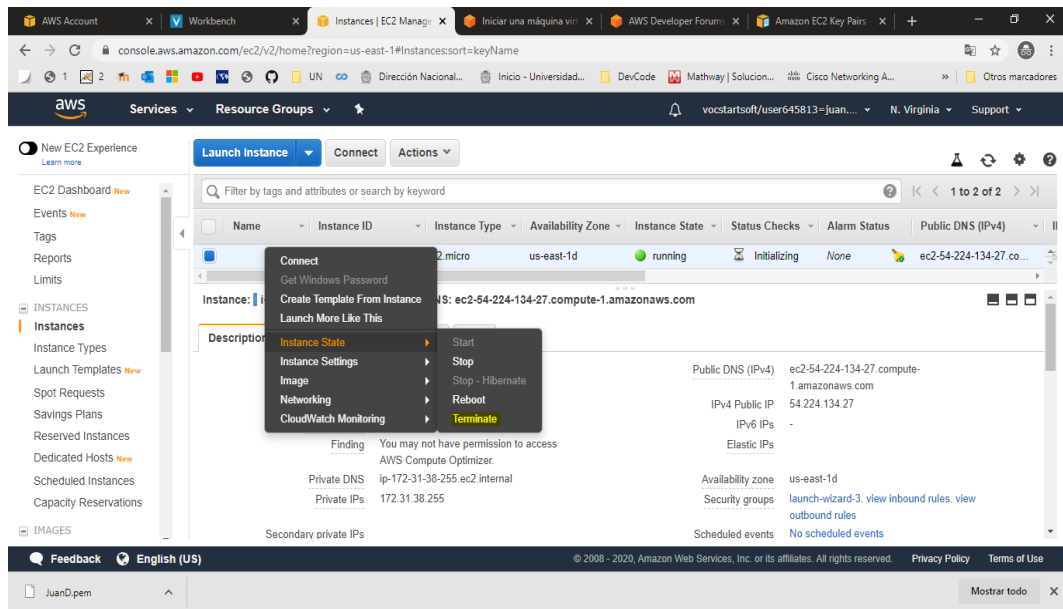


Figura 37: También podemos borrar una instancia para no generar costos.