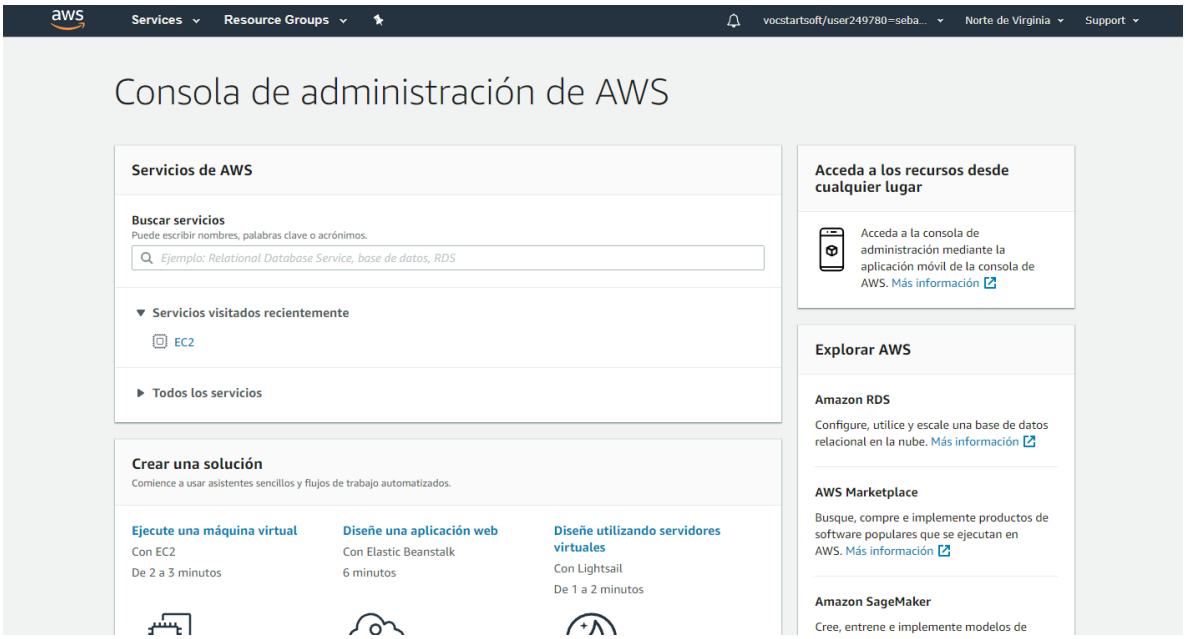
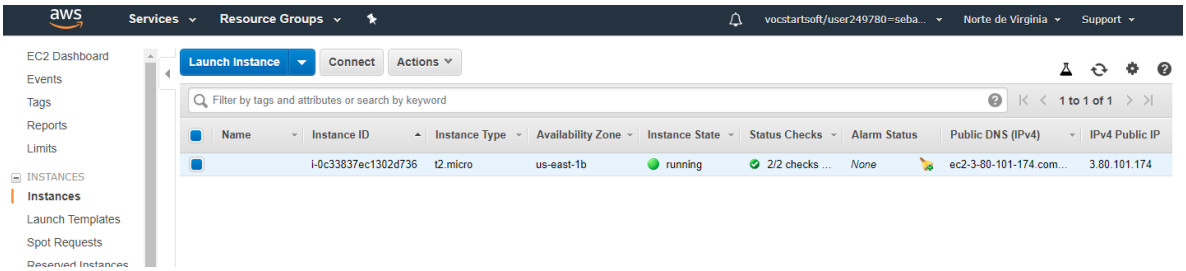
1. Acceda a la consola de administración de AWS



2. Cree una máquina virtual linux siguiendo los pasos en:https://aws.amazon.com/es/getting-started/tutorials/launch-a-virtual-machine/



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

```
$ ssh -i "Key_AREP_Taller.pem" ec2-user@3.80.101.174

       __|  __|_  )
       _|  (     /   Amazon Linux 2 AMI
      ___|\___|___|

https://aws.amazon.com/amazon-linux-2/
1 package(s) needed for security, out of 3 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-28-96 ~]$ whoami
ec2-user
[ec2-user@ip-172-31-28-96 ~]$ pwd
/home/ec2-user
[ec2-user@ip-172-31-28-96 ~]$ ls
[ec2-user@ip-172-31-28-96 ~]$ exit
logout
Connection to 3.80.101.174 closed.
```

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

```
[ec2-user@ip-172-31-24-51 ~]$ java -version
java version "1.7.0_201"
OpenJDK Runtime Environment (amzn-2.6.16.0.78.amzn1-x86_64 u201-b00)
OpenJDK 64-Bit Server VM (build 24.201-b00, mixed mode)
[ec2-user@ip-172-31-24-51 ~]$ javac
-bash: javac: command not found
[ec2-user@ip-172-31-24-51 ~]$
```

5. Salga del ssh usando "exit".

```
ECDSA key fingerprint is SHA256:OtbpJHv6T3Hoxk2GQYZDdOMQMtmdXJL8A39FrAdNjCg.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'ec2-100-26-43-0.compute-1.amazonaws.com,100.26.43.0'
 (ECDSA) to the list of known hosts.

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

https://aws.amazon.com/amazon-linux-ami/2018.03-release-notes/
10 package(s) needed for security, out of 12 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-24-51 ~]$ java- version
-bash: java-: command not found
[ec2-user@ip-172-31-24-51 ~]$ java -version
java version "1.7.0_201"
OpenJDK Runtime Environment (amzn-2.6.16.0.78.amzn1-x86_64 u201-b00)
OpenJDK 64-Bit Server VM (build 24.201-b00, mixed mode)
[ec2-user@ip-172-31-24-51 ~]$ javac
-bash: javac: command not found
[ec2-user@ip-172-31-24-51 ~]$ exit
logout
Connection to ec2-100-26-43-0.compute-1.amazonaws.com closed.
```

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.

```
package clientFromAWSToHeroku;

import java.io.*;

public class Main {

    public static void main(String[] args) throws Exception {
        URL url = new URL(args[0]);
        try (BufferedReader reader = new BufferedReader(new InputStreamReader(url.openStream()))) {
            String inputLine = null;
            while ((inputLine = reader.readLine()) != null) {
                System.out.println(inputLine);
            }
        } catch (IOException x) {
            System.err.println(x);
        }
    }
}
```

7. Pruebe su cliente en la máquina local con un comando similar al siguiente:

```
$ java -jar "ClientFromAWSToHeroku.jar" http://www.google.com
<!doctype html><html itemscope="" itemtype="http://schema.org/WebPage" lang="es-
419"><head><meta content="text/html; charset=UTF-8" http-equiv="Content-Type"><m
eta content="/images/branding/googleg/1x/googleg_standard_color_128dp.png" itemp
rop="image"><title>Google</title><script nonce="Rp3RpkDUTPaNrzkN4mIRQg==">(funct
ion(){window.google={kEI:'cONOXP7HKYLJ5gLtjY3YCg',kEXPI:'0,18167,1335580,57,1957
,1017,1406,698,527,731,325,1121,352,30,1227,805,1078,81,26,19,432,38,26,404,2334
175,303231,26305,1294,12383,4855,32691,15248,861,12169,7235,9286,369,3314,1263,4
242,2442,260,5109,573,835,284,2,579,727,2432,1361,284,4039,3390,8,960,609,774,22
52,4742,1151,2,1965,2595,1021,2580,669,1050,1808,1129,268,81,7,491,620,29,1379,1
6,978,3328,1203,2191,1209,876,412,2,554,2635,380,438,796,12,1208,38,363,259,296,
271,449,36,119,1217,956,408,484,47,1080,542,1537,657,1273,285,1245,258,2,631,218
,905,1280,159,2,4,2,670,44,934,454,799,598,1519,23,331,125,1160,332,1115,99,533,
464,950,44,306,25,330,72,692,21,39,278,255,2,414,112,783,7,1798,539,359,249,206,
617,493,494,124,295,548,51,14,33,392,29,400,49,327,2,453,58,103,350,104,2,245,58
4,312,12,800,188,58,443,33,580,204,174,20,4,18,347,41,127,276,134,120,146,498,28
3,120,203,443,5957258,12,2542,255,72,8797459,4,1572,549,333,444,1,2,80,1,900,583
,9,305,2,6,1,2,2132,1,1,1,1,1,414,1,748,141,59,726,3,7,563,1,596,141,1,288,2,45,
37,2,16',authuser:0,kscs:'c9c918f0_cONOXP7HKYLJ5gLtjY3YCg',kGL:'CO'};google.kHL=
```

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

```
$ sftp -i "KeyAREP_Taller.pem" ec2-user@ec2-100-26-43-0.compute-1.amazonaws.com
Connected to ec2-user@ec2-100-26-43-0.compute-1.amazonaws.com.
sftp> lls
ClientFromAWSToHeroku  KeyAREP_Taller.pem
sftp> lcd ClientFromAWSToHeroku
lcd ClientFromAWSToHeroku
sftp> lls
bin  ClientFromAWSToHeroku.jar  src
sftp> put ClientFromAWSToHeroku.jar
Uploading ClientFromAWSToHeroku.jar to /home/ec2-user/ClientFromAWSToHeroku.jar
ClientFromAWSToHeroku.jar                     100% 1340    15.6KB/s   00:00
sftp> ls
ClientFromAWSToHeroku.jar
sftp>
```

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-172-31-24-51 ~]$ java -jar ClientFromAWSToHeroku.jar https://desola
te-beyond-92495.herokuapp.com/index
<!DOCTYPE html><html>    <head>        <title>App</title>        <meta charset=U
TF-8>    </head>    <body>        <h2>Estadísticos</h2>        <p>La siguiente a
plicación web calcula el máximo, mínimo, sumatoria y multiplicatoria de un conju
nto de números reales.<br /> Éstos se podrán ingresar en el siguiente campo, sep
arándolos por un espacio</p>        <form action=/resp>            Conjunto de n
úmeros:<br>            <input type=text name=realNumber value= ><br><br>
    <input type=submit value=Calcular>        </form>    </body></html>
[ec2-user@ip-172-31-24-51 ~]$ java -jar ClientFromAWSToHeroku.jar https://desola
te-beyond-92495.herokuapp.com/index
<!DOCTYPE html><html>    <head>        <title>App</title>        <meta charset=U
TF-8>    </head>    <body>        <h2>Estadísticos</h2>        <p>La siguiente a
plicación web calcula el máximo, mínimo, sumatoria y multiplicatoria de un conju
nto de números reales.<br /> Éstos se podrán ingresar en el siguiente campo, sep
arándolos por un espacio</p>        <form action=/resp>            Conjunto de n
úmeros:<br>            <input type=text name=realNumber value= ><br><br>
    <input type=submit value=Calcular>        </form>    </body></html>
[ec2-user@ip-172-31-24-51 ~]$
```

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