



## Instalación de Dspace 5.4 en Linux



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# RESUMEN

**Propósito:** Facilitar la instalación de una de las herramientas de software libre más completas y comunes para la construcción y administración de repositorios digitales para promover la difusión, intercambio y preservación de información digital.

**Diseño/metodología/enfoque:** El presente trabajo es una adaptación o analogía en Linux CentOS 7 de la metodología descrita en “Instalación de Dspace 5.5 en Windows 7” y “DSpace 5.x Documentation”.

**Hallazgos:** En este manual se muestra la metodología de instalación de DSpace 5.4 aplicada en Linux CentOS 7. Sin embargo, dicha metodología se ha probado en otras distribuciones de linux como RedHat, Fedora y Ubuntu e incluso en Solaris 10.

**Originalidad/valor:** Hay muchos manuales de instalación de DSpace en linux, sin embargo, el presente manual representa una actualización. Al momento de escribir este trabajo la versión más reciente de DSpace es la 5.5, pero la versión 5.4 es más estable. Si se desea instalar la versión 5.5 de DSpace la metodología es la misma. El proceso de instalación está en idioma español y muestra mayor claridad y detalle que la descrita en la documentación de DSpace.

**Palabras clave/temas:** Repositories, Repositorios, Sistemas de Información Digital, Digital Information Systems, Software Libre, Free Software, DSPACE, Postgresql, java.

# Introducción

Para construir, con Dspace, un repositorio digital que proporcione un servicio, a una comunidad de usuarios, recomiendo más realizar una instalación en UNIX (Linux, Solaris, MacOS) que en Windows.

El proceso de administración del Sistema Operativo en UNIX depende de la distribución e incluso de la versión. Por tal motivo intenté escribir un manual que fuera lo más genérico posible y se omiten muchos detalles en el proceso de instalación de Postgres. Para esto recomiendo seguir los pasos descritos en el portal de Postgres dependiendo de la distribución del sistema operativo que utilice.

# 1.- Prerequisitos de Software

Tal y como se indica en el manual “[Dspace 5.X Documentation](#)”

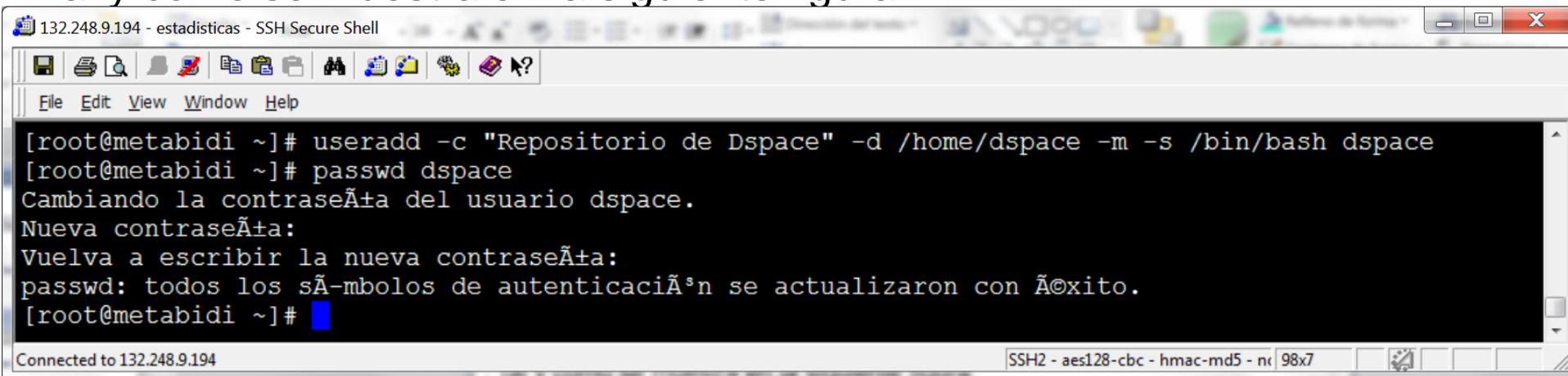
1. Oracle Java JDK 7 u OpenJDK 7
2. Apache Maven 3.0.5 o posterior
3. Apache Ant 1.8 o posterior
4. Apache Tomcat 7 o posterior
5. Base de datos relacional (PostgreSQL 9.0 o posterior, o bien, Oracle 10g o posterior)

# 1.- Prerequisitos de Software

**1.1 Crear la cuenta del usuario dspace en el sistema operativo.** Para esto se requiere la cuenta de root y se ejecuta la instrucción:

```
useradd -c "Repositorio de Dspace" -d /home/dspace -m -u -s /bin/bash dspace
```

Tal y como se muestra en la siguiente figura:



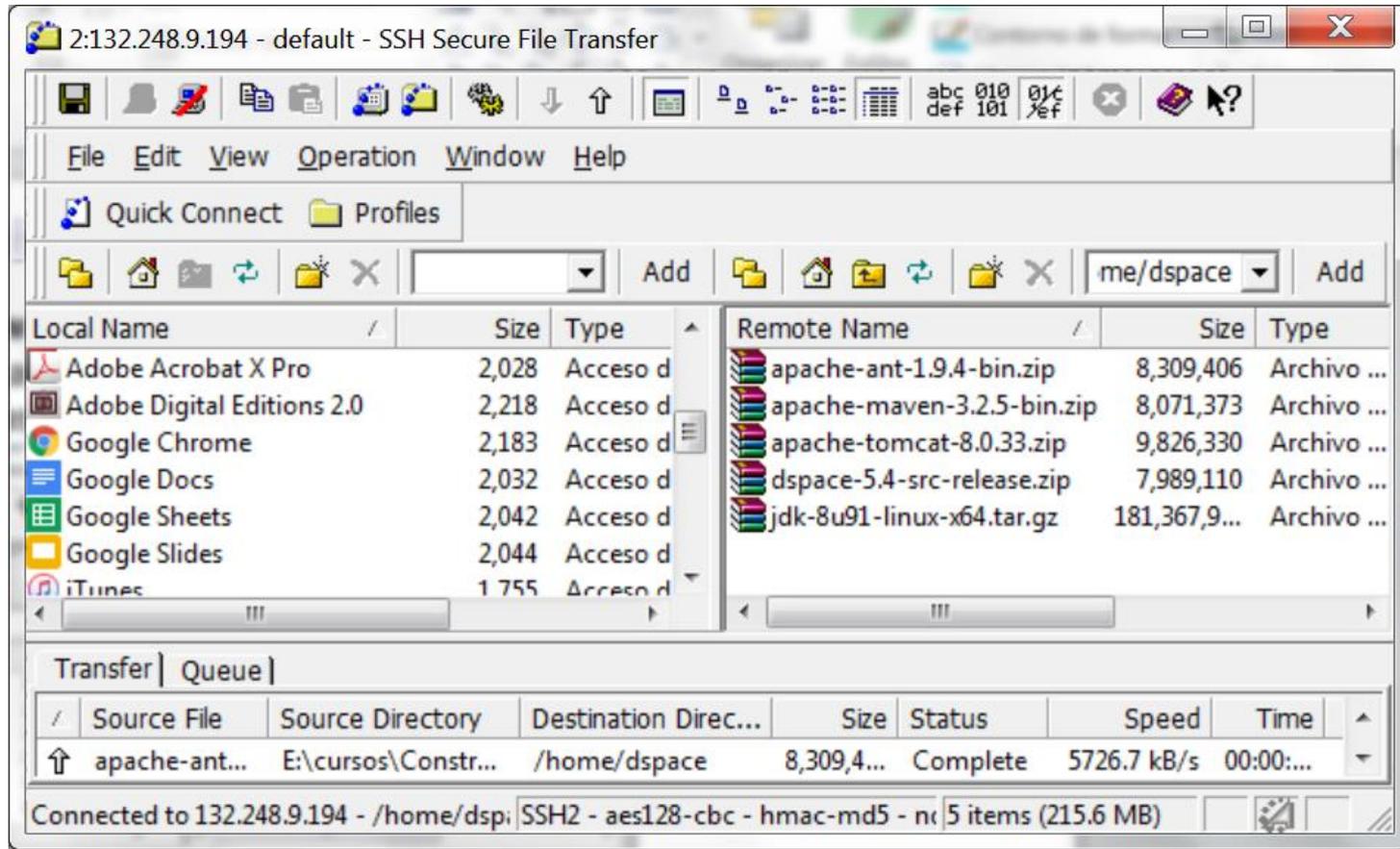
```
132.248.9.194 - estadísticas - SSH Secure Shell
File Edit View Window Help
[root@metabidi ~]# useradd -c "Repositorio de Dspace" -d /home/dspace -m -s /bin/bash dspace
[root@metabidi ~]# passwd dspace
Cambiando la contraseña del usuario dspace.
Nueva contraseña:
Vuelva a escribir la nueva contraseña:
passwd: todos los símbolos de autenticación se actualizaron con éxito.
[root@metabidi ~]#
```

Connected to 132.248.9.194 SSH2 - aes128-cbc - hmac-md5 - ni 98x7

Posteriormente se ejecuta la instrucción **passwd dspace** para crear la contraseña de la cuenta dspace.

# 1.- Prerequisitos de Software

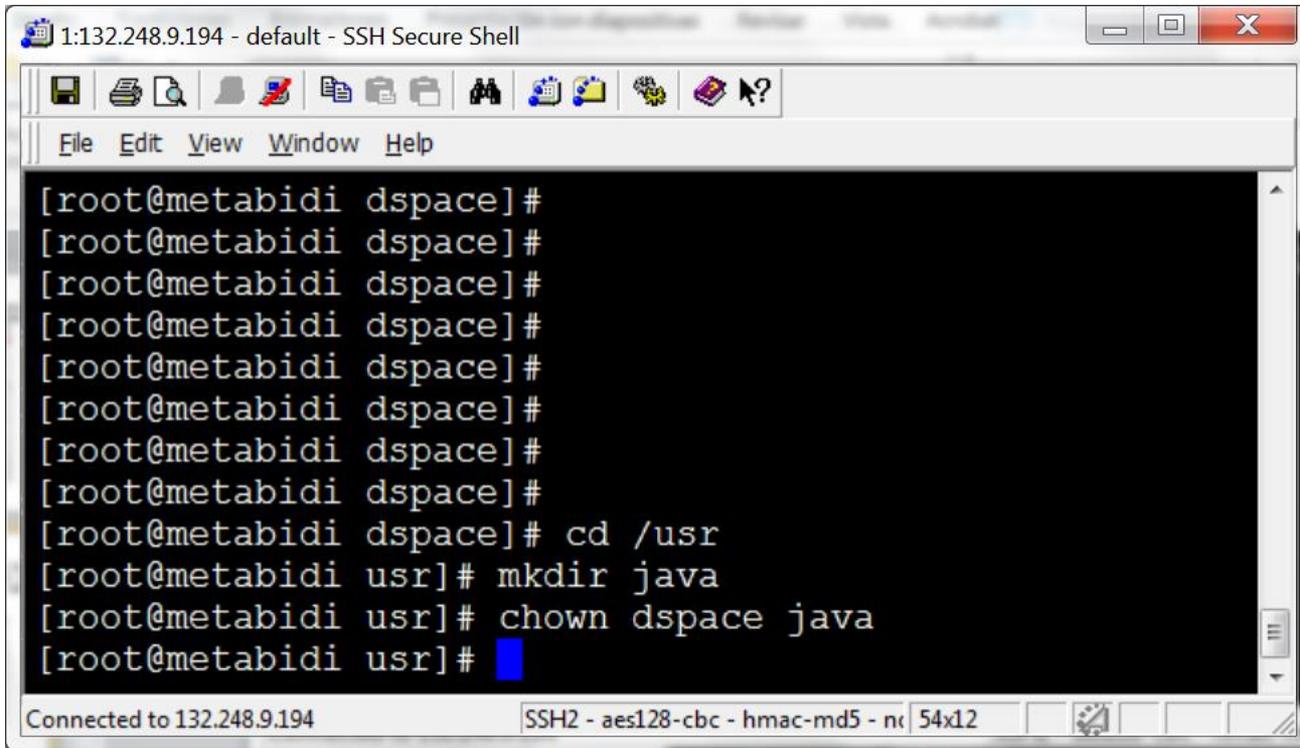
**1.2 Copiar software a la carpeta dspace.** Si utiliza una arquitectura de 64 bits, descargar o copiar el software que se muestra en la siguiente figura. En otro caso, descargue el software mostrado en el **Anexo A**.



**Nota:** el **Anexo B** muestra el procedimiento para determinar la arquitectura del equipo de cómputo.

# 1.- Prerequisitos de Software

**1.3 Crear carpeta de instalación de prerequisites de software:** Con la cuenta de **root** crear la carpeta **java** dentro del directorio **/usr**. Posteriormente definir como propietario de dicha carpeta al usuario **dspace**. Ver figura siguiente:

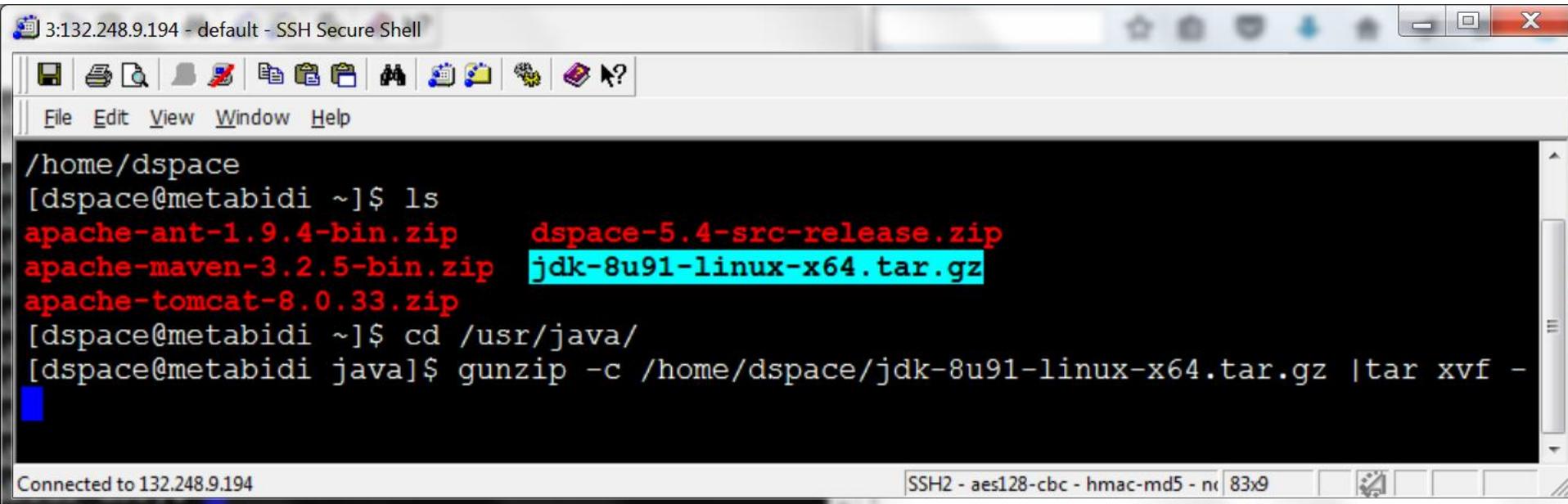


```
1:132.248.9.194 - default - SSH Secure Shell
File Edit View Window Help
[root@metabidi dspace]#
[root@metabidi dspace]# cd /usr
[root@metabidi usr]# mkdir java
[root@metabidi usr]# chown dspace java
[root@metabidi usr]#
```

Connected to 132.248.9.194 | SSH2 - aes128-cbc - hmac-md5 - nc | 54x12

# 1.- Prerequisitos de Software

**1.4 Instalación de Oracle java JDK 8.** Dentro de la carpeta /usr/java descomprimir el paquete de software jdk-8u91-linux-x64.tar.gz. Utilice la cuenta de dspace, tal y como se muestra en la siguiente figura:



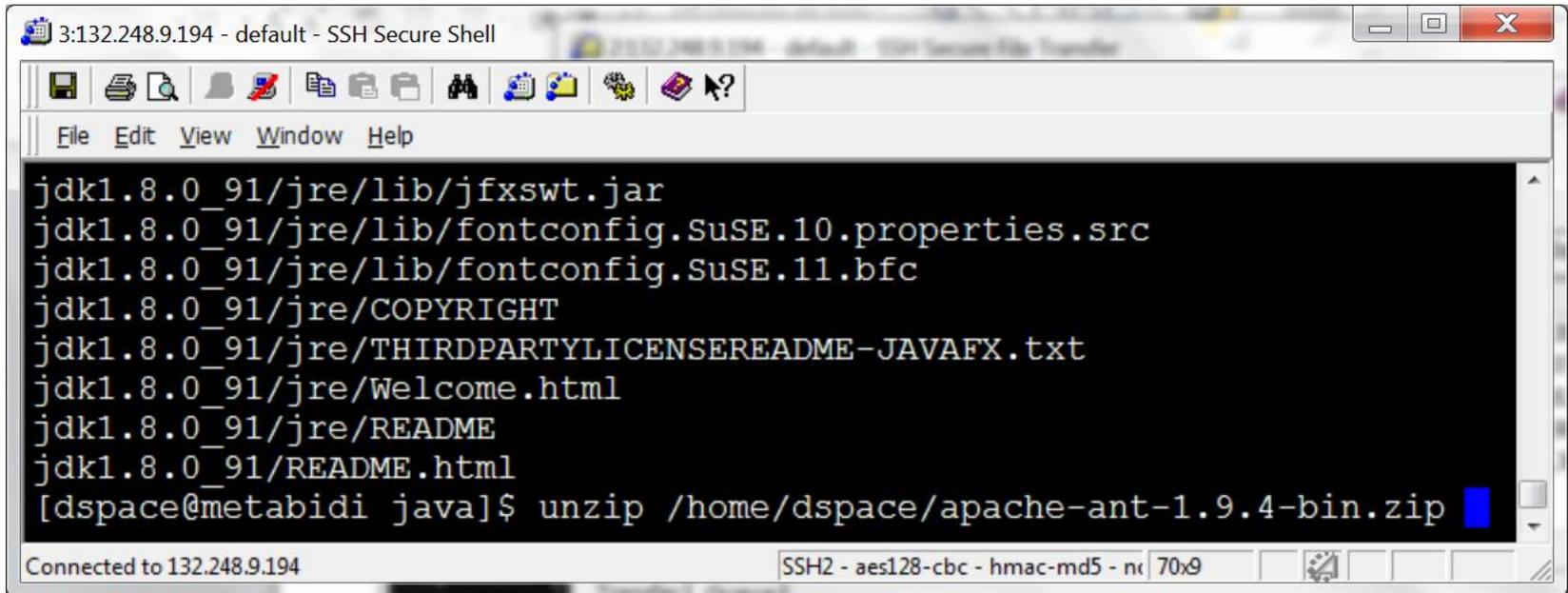
The image shows a terminal window titled "3:132.248.9.194 - default - SSH Secure Shell". The terminal output is as follows:

```
/home/dspace
[dspace@metabidi ~]$ ls
apache-ant-1.9.4-bin.zip      dspace-5.4-src-release.zip
apache-maven-3.2.5-bin.zip  jdk-8u91-linux-x64.tar.gz
apache-tomcat-8.0.33.zip
[dspace@metabidi ~]$ cd /usr/java/
[dspace@metabidi java]$ gunzip -c /home/dspace/jdk-8u91-linux-x64.tar.gz |tar xvf -
```

The terminal window also shows a menu bar with "File", "Edit", "View", "Window", and "Help". The status bar at the bottom indicates "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - n... 83x9".

# 1.- Prerequisitos de Software

**1.5 Instalación de Apache Ant 1.9.4.** Dentro de la carpeta /usr/java descomprimir el paquete de software apache-ant-1.9.4-bin.zip. Utilice la cuenta de dspace, tal y como se muestra en la siguiente figura:



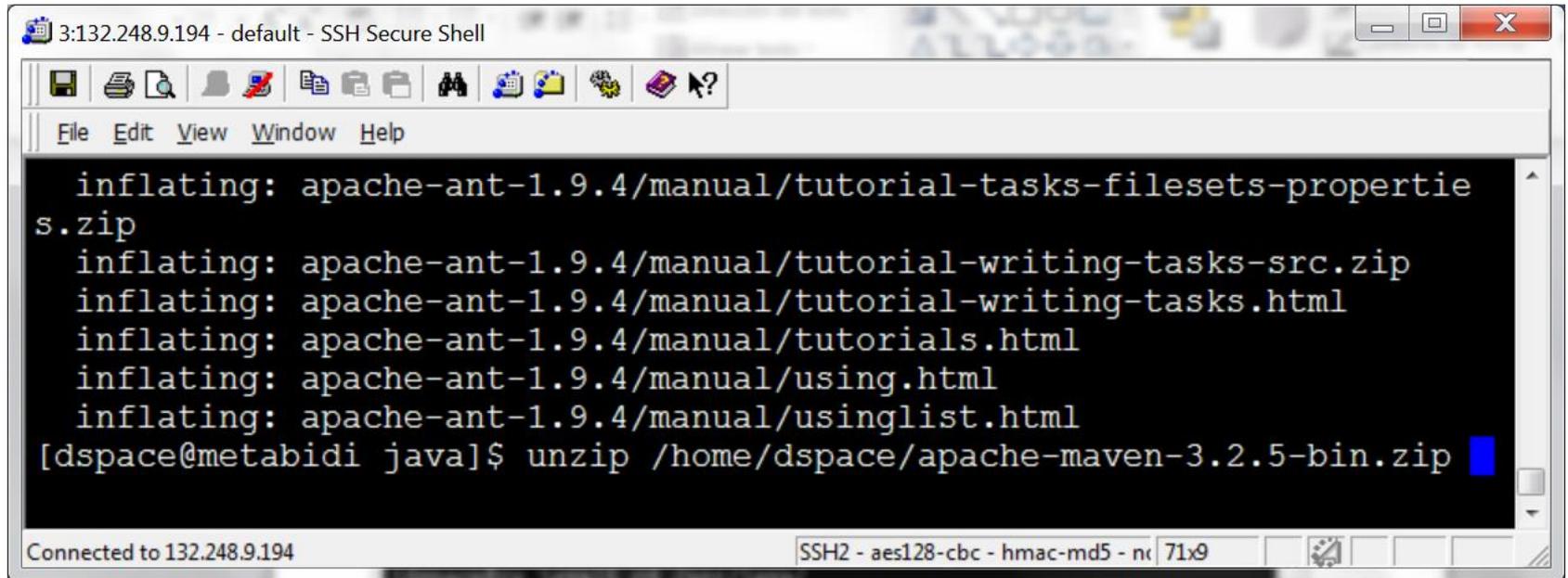
The image shows a terminal window titled "3:132.248.9.194 - default - SSH Secure Shell". The window contains a list of files from the JDK 1.8.0\_91 directory, followed by the command to unzip the Apache Ant 1.9.4 binary package. The command is: `[dspace@metabidi java]$ unzip /home/dspace/apache-ant-1.9.4-bin.zip`. The terminal output shows the following files:

```
jdk1.8.0_91/jre/lib/jfxswt.jar
jdk1.8.0_91/jre/lib/fontconfig.SuSE.10.properties.src
jdk1.8.0_91/jre/lib/fontconfig.SuSE.11.bfc
jdk1.8.0_91/jre/COPYRIGHT
jdk1.8.0_91/jre/THIRDPARTYLICENSEREADME-JAVAFX.txt
jdk1.8.0_91/jre/Welcome.html
jdk1.8.0_91/jre/README
jdk1.8.0_91/README.html
[dspace@metabidi java]$ unzip /home/dspace/apache-ant-1.9.4-bin.zip
```

The terminal window also shows the status "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - n".

# 1.- Prerequisitos de Software

**1.6 Instalación de Apache Maven 3.2.5.** Dentro de la carpeta /usr/java descomprimir el paquete de software apache-maven-3.2.5-bin.zip. Utilice la cuenta de dspace, tal y como se muestra en la siguiente figura:



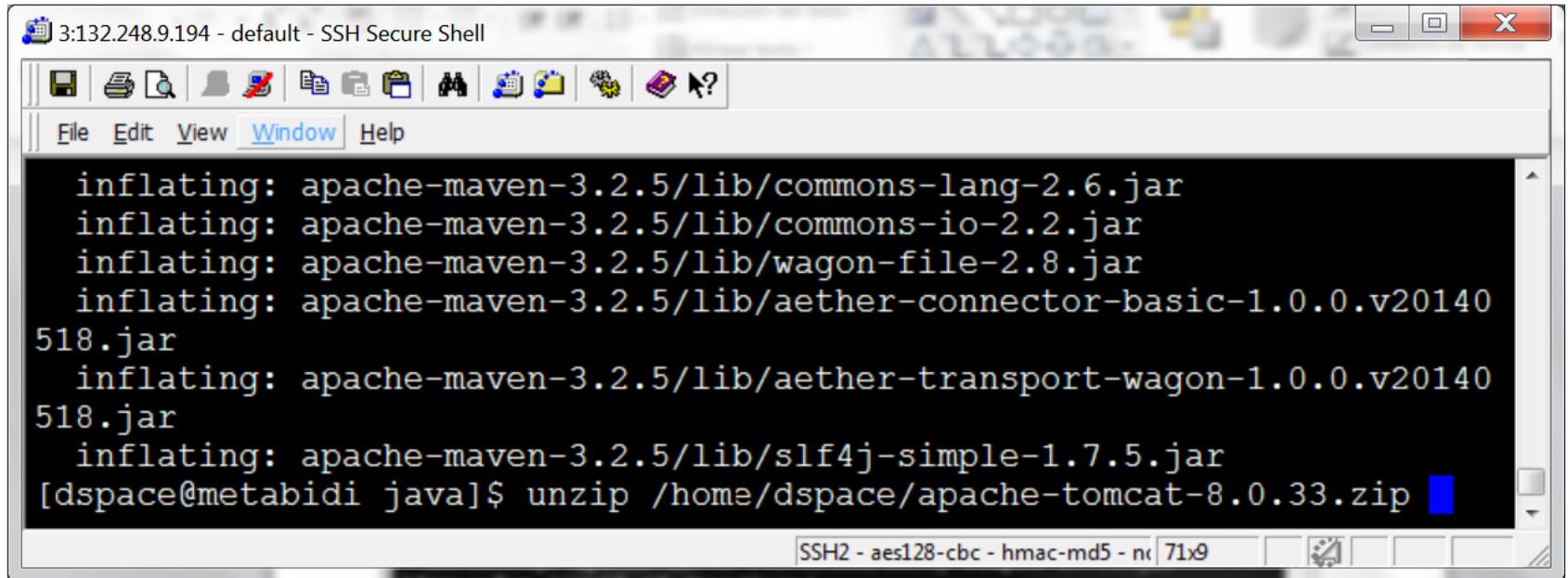
The image shows a terminal window titled "3:132.248.9.194 - default - SSH Secure Shell". The terminal output displays the process of unzipping a file, with several files being inflated. The command being executed is `unzip /home/dspace/apache-maven-3.2.5-bin.zip`. The terminal window includes a menu bar with "File", "Edit", "View", "Window", and "Help", and a status bar at the bottom indicating the connection details and window size.

```
3:132.248.9.194 - default - SSH Secure Shell
File Edit View Window Help
inflating: apache-ant-1.9.4/manual/tutorial-tasks-filesets-properties.zip
inflating: apache-ant-1.9.4/manual/tutorial-writing-tasks-src.zip
inflating: apache-ant-1.9.4/manual/tutorial-writing-tasks.html
inflating: apache-ant-1.9.4/manual/tutorials.html
inflating: apache-ant-1.9.4/manual/using.html
inflating: apache-ant-1.9.4/manual/usinglist.html
[dspace@metabidi java]$ unzip /home/dspace/apache-maven-3.2.5-bin.zip
```

Connected to 132.248.9.194 SSH2 - aes128-cbc - hmac-md5 - n 71x9

# 1.- Prerequisitos de Software

**1.7 Instalación de Apache Tomcat 8.** Dentro de la carpeta /usr/java descomprimir el paquete de software apache-tomcat-8.0.33.zip. Utilice la cuenta de dspace, tal y como se muestra en la siguiente figura:

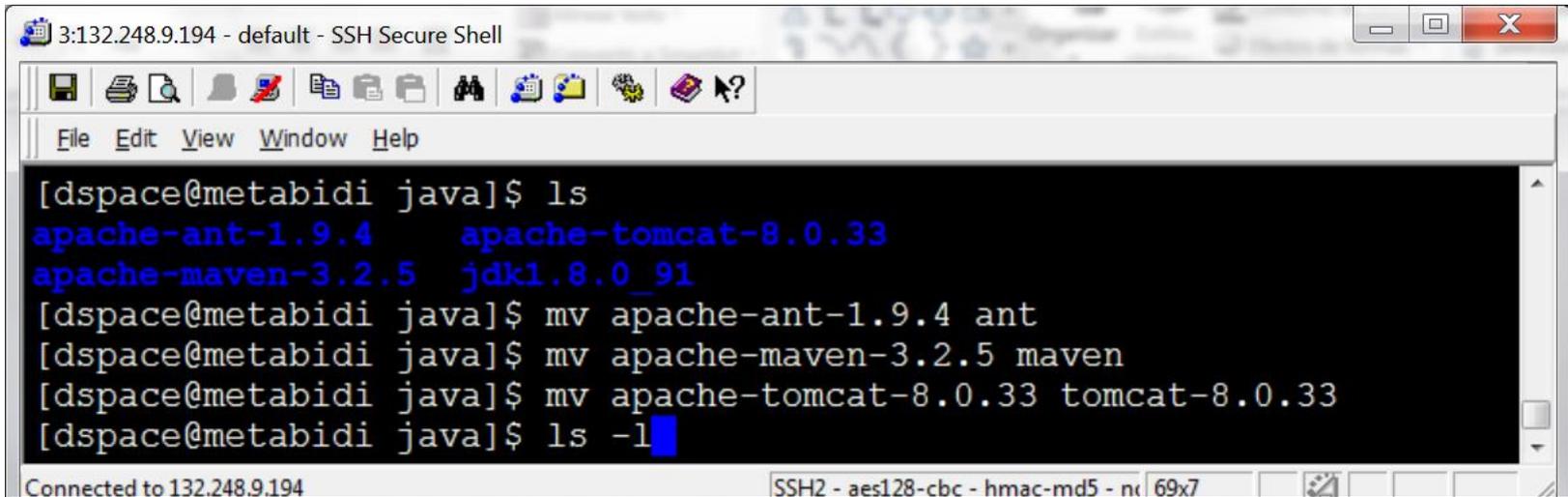


The image shows a terminal window titled "3:132.248.9.194 - default - SSH Secure Shell". The terminal displays the output of the command `unzip /home/dspace/apache-tomcat-8.0.33.zip`. The output shows several files being inflated from the archive, including `apache-maven-3.2.5/lib/commons-lang-2.6.jar`, `apache-maven-3.2.5/lib/commons-io-2.2.jar`, `apache-maven-3.2.5/lib/wagon-file-2.8.jar`, `apache-maven-3.2.5/lib/aether-connector-basic-1.0.0.v20140518.jar`, `apache-maven-3.2.5/lib/aether-transport-wagon-1.0.0.v20140518.jar`, and `apache-maven-3.2.5/lib/slf4j-simple-1.7.5.jar`. The terminal prompt is `[dspace@metabidi java]$`. The window has a menu bar with "File", "Edit", "View", "Window", and "Help". The status bar at the bottom shows "SSH2 - aes128-cbc - hmac-md5 - n..." and "71x9".

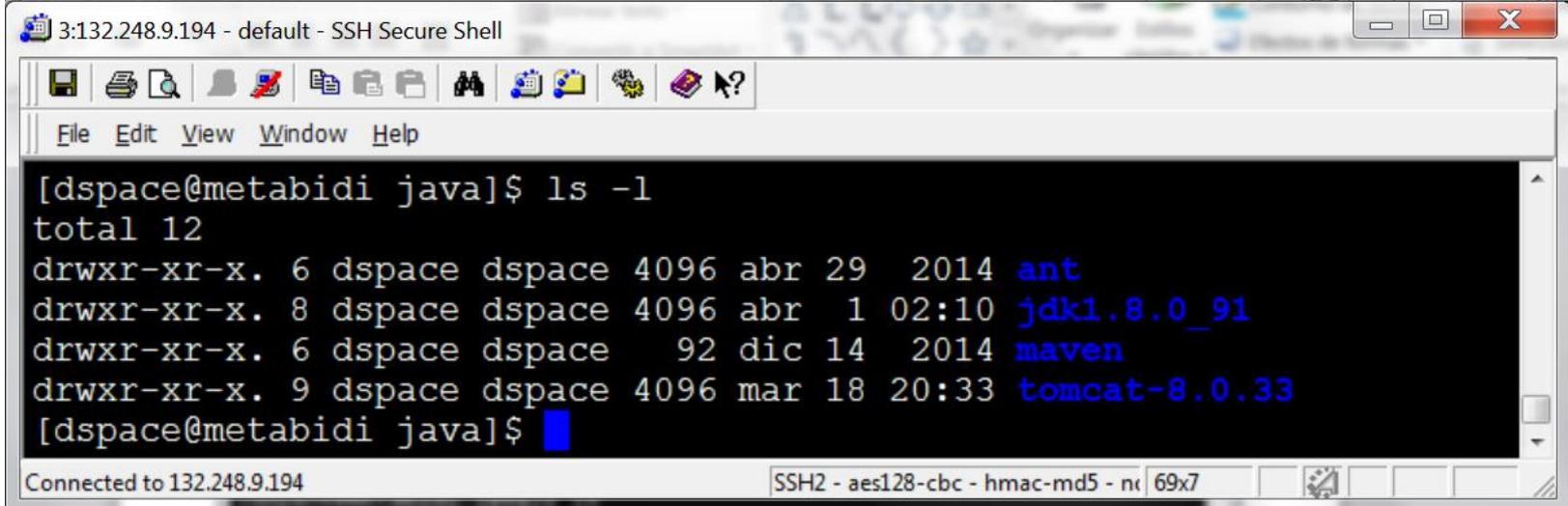
```
inflating: apache-maven-3.2.5/lib/commons-lang-2.6.jar
inflating: apache-maven-3.2.5/lib/commons-io-2.2.jar
inflating: apache-maven-3.2.5/lib/wagon-file-2.8.jar
inflating: apache-maven-3.2.5/lib/aether-connector-basic-1.0.0.v20140
518.jar
inflating: apache-maven-3.2.5/lib/aether-transport-wagon-1.0.0.v20140
518.jar
inflating: apache-maven-3.2.5/lib/slf4j-simple-1.7.5.jar
[dspace@metabidi java]$ unzip /home/dspace/apache-tomcat-8.0.33.zip
```

# 1.- Prerequisitos de Software

**1.8 Renombrar las carpetas siguientes:** apache-ant-1.9.4, apache-maven-3.2.5 y apache-tomcat-8.0.18 por ant, maven y tomcat-8.0.18 respectivamente (véase figuras siguientes).



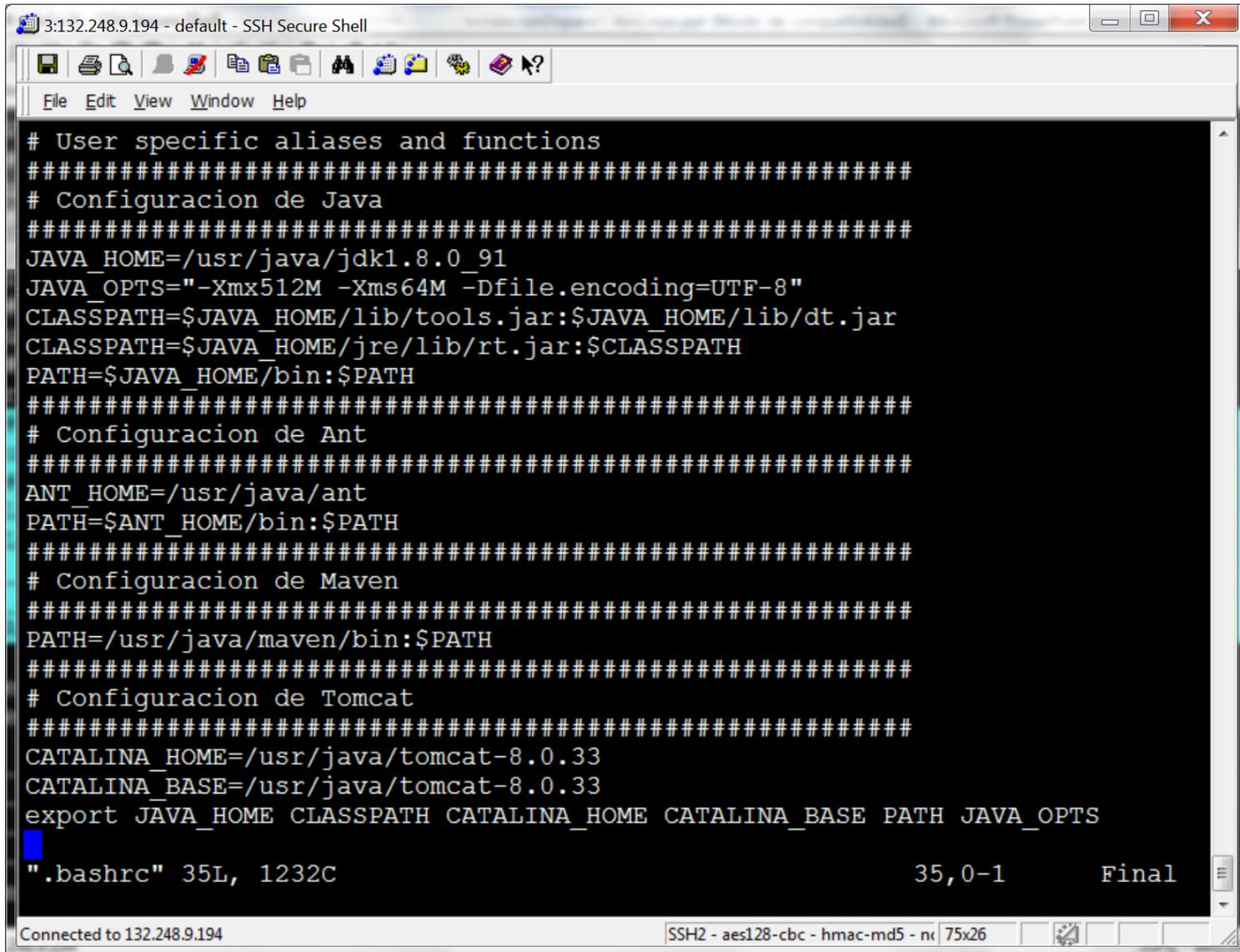
```
3:132.248.9.194 - default - SSH Secure Shell
File Edit View Window Help
[dspace@metabidi java]$ ls
apache-ant-1.9.4      apache-tomcat-8.0.33
apache-maven-3.2.5  jdk1.8.0_91
[dspace@metabidi java]$ mv apache-ant-1.9.4 ant
[dspace@metabidi java]$ mv apache-maven-3.2.5 maven
[dspace@metabidi java]$ mv apache-tomcat-8.0.33 tomcat-8.0.33
[dspace@metabidi java]$ ls -l
```



```
3:132.248.9.194 - default - SSH Secure Shell
File Edit View Window Help
[dspace@metabidi java]$ ls -l
total 12
drwxr-xr-x. 6 dspace dspace 4096 abr 29 2014 ant
drwxr-xr-x. 8 dspace dspace 4096 abr  1 02:10 jdk1.8.0_91
drwxr-xr-x. 6 dspace dspace  92 dic 14 2014 maven
drwxr-xr-x. 9 dspace dspace 4096 mar 18 20:33 tomcat-8.0.33
[dspace@metabidi java]$
```

# 1.- Prerequisitos de Software

1.9 Configuración de Java, Ant, Maven y Tomcat. Editar el archivo `.bashrc` y agregar las variables de ambiente mostradas en la figura.

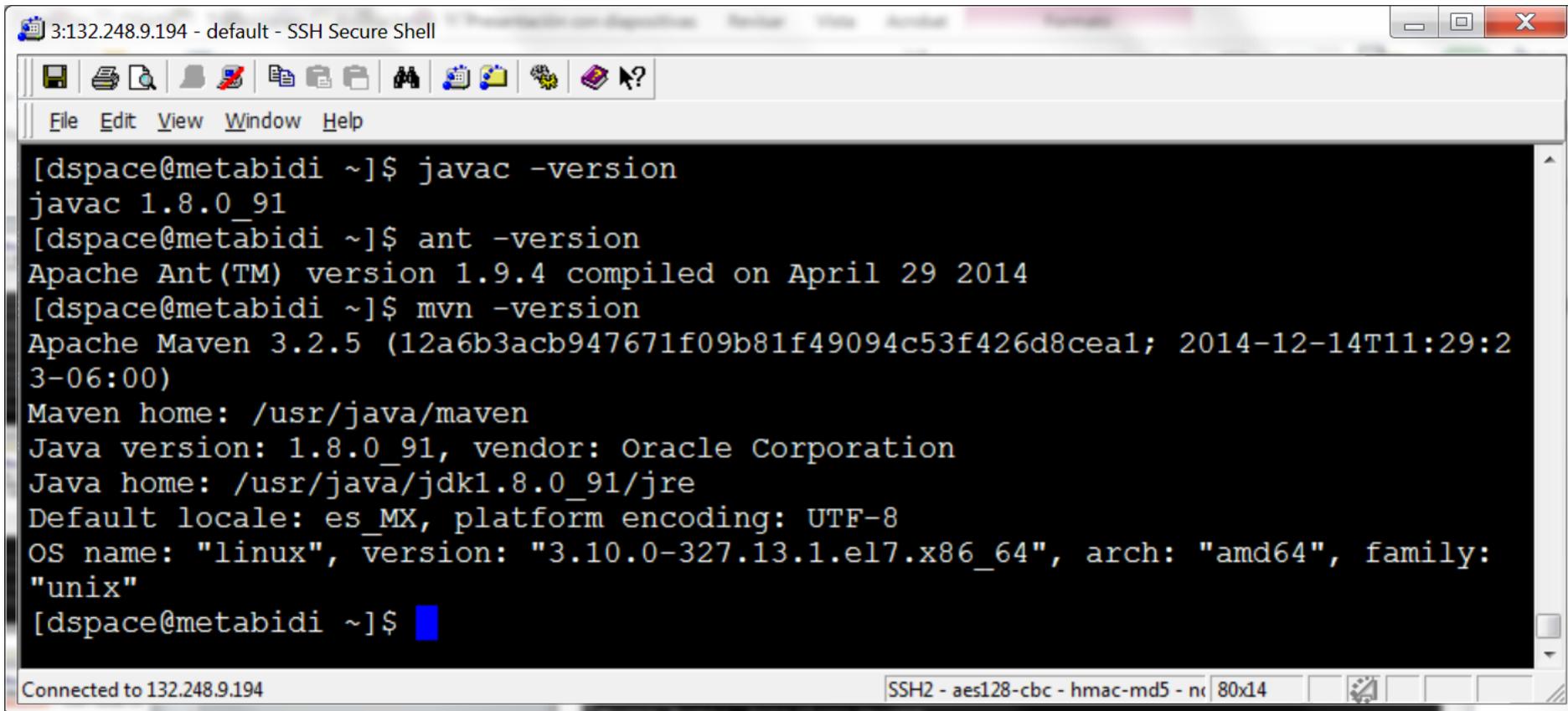


```
3:132.248.9.194 - default - SSH Secure Shell
File Edit View Window Help
# User specific aliases and functions
#####
# Configuracion de Java
#####
JAVA_HOME=/usr/java/jdk1.8.0_91
JAVA_OPTS="-Xmx512M -Xms64M -Dfile.encoding=UTF-8"
CLASSPATH=$JAVA_HOME/lib/tools.jar:$JAVA_HOME/lib/dt.jar
CLASSPATH=$JAVA_HOME/jre/lib/rt.jar:$CLASSPATH
PATH=$JAVA_HOME/bin:$PATH
#####
# Configuracion de Ant
#####
ANT_HOME=/usr/java/ant
PATH=$ANT_HOME/bin:$PATH
#####
# Configuracion de Maven
#####
PATH=/usr/java/maven/bin:$PATH
#####
# Configuracion de Tomcat
#####
CATALINA_HOME=/usr/java/tomcat-8.0.33
CATALINA_BASE=/usr/java/tomcat-8.0.33
export JAVA_HOME CLASSPATH CATALINA_HOME CATALINA_BASE PATH JAVA_OPTS
".bashrc" 35L, 1232C                               35,0-1       Final
Connected to 132.248.9.194                          SSH2 - aes128-cbc - hmac-md5 - nt 75x26
```

# 1.- Prerequisitos de Software

**1.9 Configuración de Java, Ant, Maven y Tomcat.** Para probar la configuración de Java, Ant y Maven ejecutar las sentencias siguientes:

```
javac -version, ant -version, mvn -version
```



The screenshot shows a terminal window titled "3:132.248.9.194 - default - SSH Secure Shell". The terminal output is as follows:

```
[dspace@metabidi ~]$ javac -version
javac 1.8.0_91
[dspace@metabidi ~]$ ant -version
Apache Ant(TM) version 1.9.4 compiled on April 29 2014
[dspace@metabidi ~]$ mvn -version
Apache Maven 3.2.5 (12a6b3acb947671f09b81f49094c53f426d8cea1; 2014-12-14T11:29:23-06:00)
Maven home: /usr/java/maven
Java version: 1.8.0_91, vendor: Oracle Corporation
Java home: /usr/java/jdk1.8.0_91/jre
Default locale: es_MX, platform encoding: UTF-8
OS name: "linux", version: "3.10.0-327.13.1.el7.x86_64", arch: "amd64", family: "unix"
[dspace@metabidi ~]$
```

The terminal window also shows a menu bar with "File", "Edit", "View", "Window", and "Help", and a status bar at the bottom indicating "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - nc 80x14".

# 1.- Prerequisitos de Software

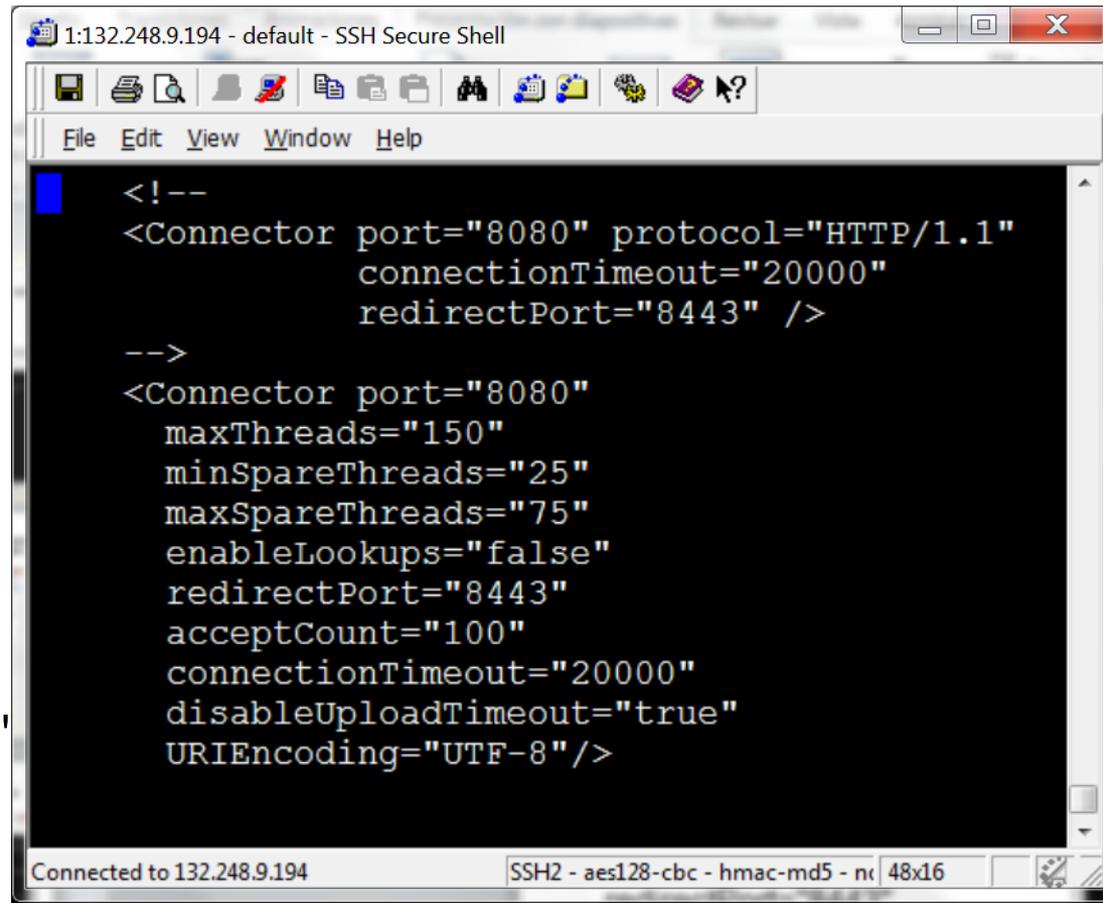
**1.9 Configuración de Java, Ant, Maven y Tomcat.** Editar el archivo `server.xml` que se encuentra en `/usr/java/tomcat-8.0.33/conf`

Deshabilitar las líneas:

```
<Connector port="8080" protocol="HTTP/1.1"  
    connectionTimeout="20000"  
    redirectPort="8443" />
```

Agregar las líneas:

```
<Connector port="8080"  
    maxThreads="150"  
    minSpareThreads="25"  
    maxSpareThreads="75"  
    enableLookups="false"  
    redirectPort="8443"  
    acceptCount="100"  
    connectionTimeout="20000"  
    disableUploadTimeout="true"  
    URIEncoding="UTF-8"/>
```



The screenshot shows a terminal window titled "1:132.248.9.194 - default - SSH Secure Shell". The terminal displays the following XML code:

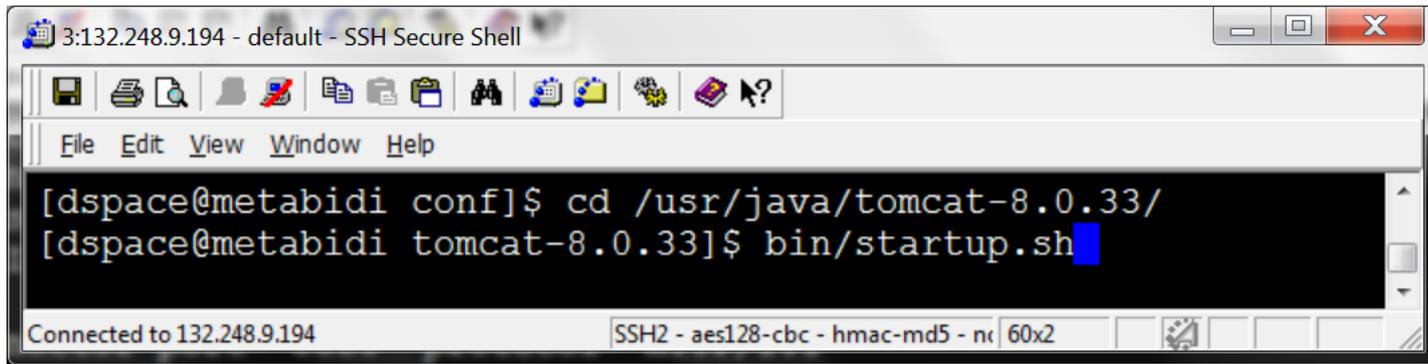
```
<!--  
<Connector port="8080" protocol="HTTP/1.1"  
    connectionTimeout="20000"  
    redirectPort="8443" />  
-->  
<Connector port="8080"  
    maxThreads="150"  
    minSpareThreads="25"  
    maxSpareThreads="75"  
    enableLookups="false"  
    redirectPort="8443"  
    acceptCount="100"  
    connectionTimeout="20000"  
    disableUploadTimeout="true"  
    URIEncoding="UTF-8" />
```

The terminal window also shows a menu bar with "File", "Edit", "View", "Window", and "Help". At the bottom, it indicates "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - nc 48x16".

# 1.- Prerequisitos de Software

1.9 Configuración de Java, Ant, Maven y Tomcat. Inicializar el servicio de tomcat ejecutando

```
cd /usr/java/tomcat-8.0.33  
bin/startup.sh
```



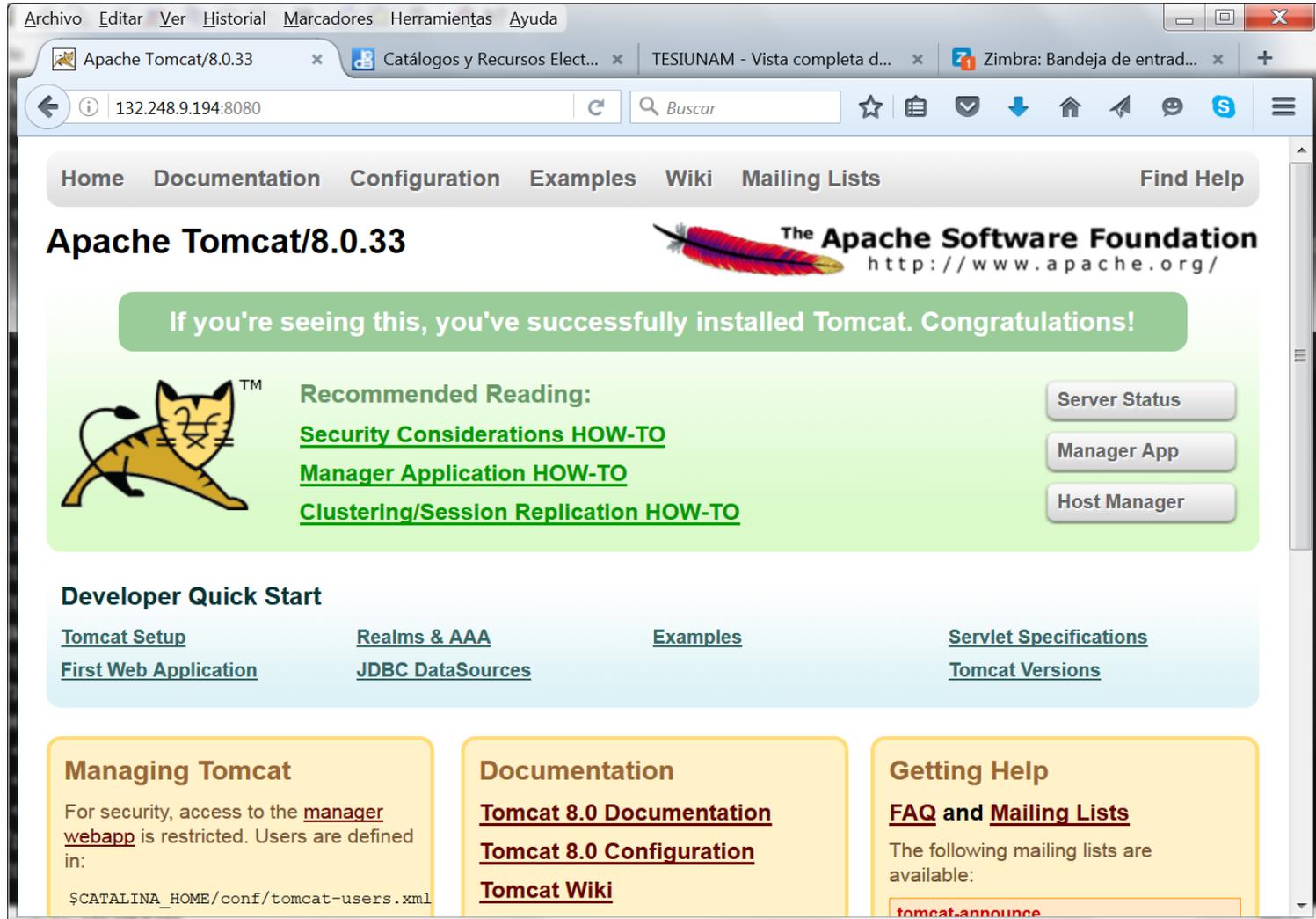
The image shows a terminal window titled "3:132.248.9.194 - default - SSH Secure Shell". The terminal displays the following commands and output:

```
[dspace@metabidi conf]$ cd /usr/java/tomcat-8.0.33/  
[dspace@metabidi tomcat-8.0.33]$ bin/startup.sh
```

The terminal window includes a menu bar with "File", "Edit", "View", "Window", and "Help". The status bar at the bottom indicates "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - nc 60x2".

# 1.- Prerequisitos de Software

1.9 Configuración de Java, Ant, Maven y Tomcat. Abrir un navegador de internet con el URL <http://IPDelServidor:8080/> y deberá mostrarse una página como la figura

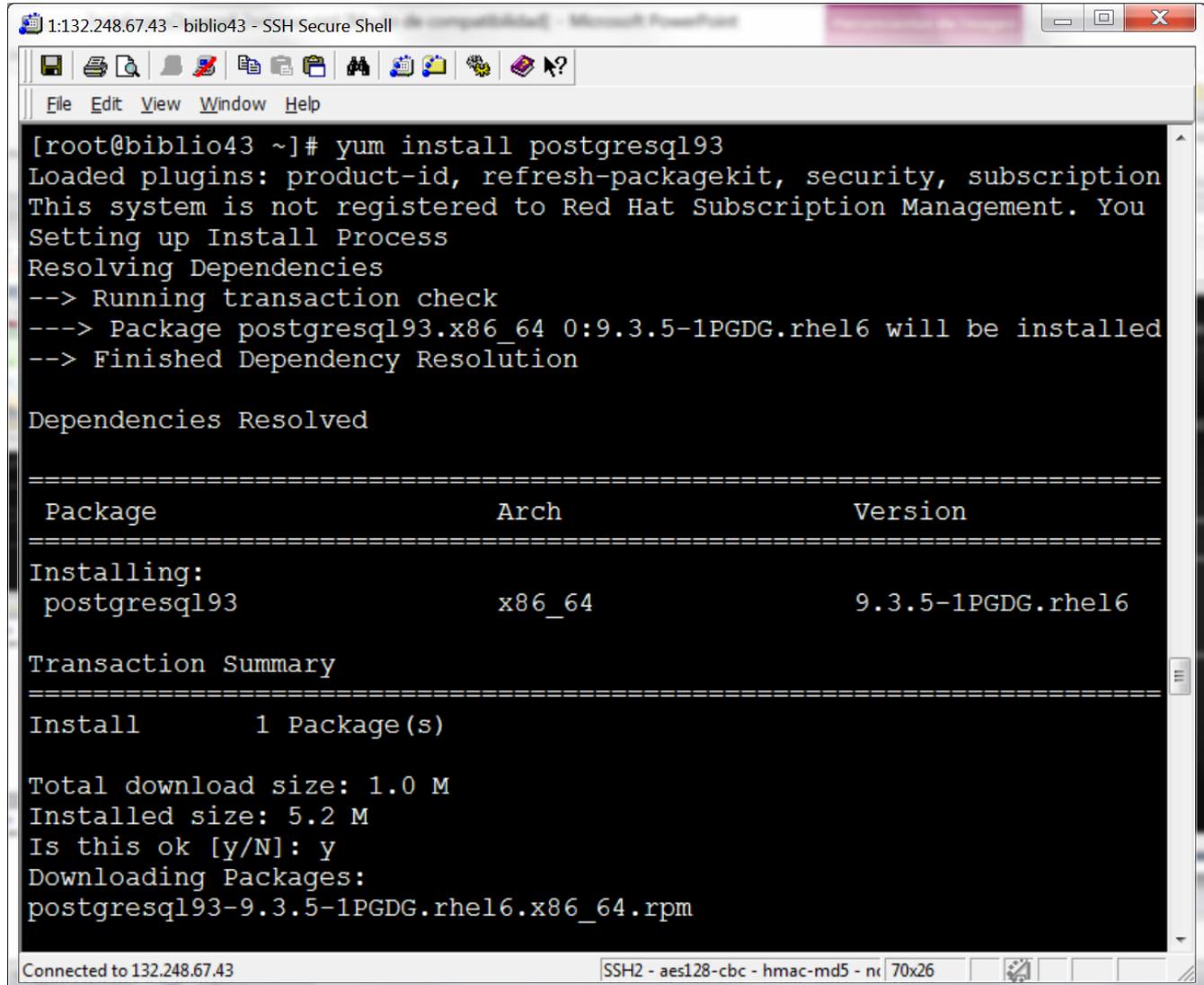


The image shows a browser window displaying the Apache Tomcat/8.0.33 homepage. The browser's address bar shows the URL `132.248.9.194:8080`. The page features a navigation menu with links for Home, Documentation, Configuration, Examples, Wiki, Mailing Lists, and Find Help. The main heading is "Apache Tomcat/8.0.33" with the Apache Software Foundation logo and URL `http://www.apache.org/`. A green banner congratulates the user for successfully installing Tomcat. Below this, there is a "Recommended Reading" section with links to "Security Considerations HOW-TO", "Manager Application HOW-TO", and "Clustering/Session Replication HOW-TO". To the right of these links are buttons for "Server Status", "Manager App", and "Host Manager". A "Developer Quick Start" section provides links to "Tomcat Setup", "Realms & AAA", "Examples", "Servlet Specifications", "First Web Application", "JDBC DataSources", and "Tomcat Versions". At the bottom, there are three yellow boxes: "Managing Tomcat" (with a note about security and a file path `$CATALINA_HOME/conf/tomcat-users.xml`), "Documentation" (with links to "Tomcat 8.0 Documentation", "Tomcat 8.0 Configuration", and "Tomcat Wiki"), and "Getting Help" (with links to "FAQ and Mailing Lists" and a list of available mailing lists including "tomcat-announce").

# 1.- Prerequisitos de Software

## 1.10 Instalación de PostgreSQL. Ejecutar yum install postgresql93.

Ver la figura siguiente:



```
[root@biblio43 ~]# yum install postgresql93
Loaded plugins: product-id, refresh-packagekit, security, subscription
This system is not registered to Red Hat Subscription Management. You
Setting up Install Process
Resolving Dependencies
--> Running transaction check
--> Package postgresql93.x86_64 0:9.3.5-1PGDG.rhel6 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                               Arch                               Version
=====
Installing:
postgresql93                          x86_64                            9.3.5-1PGDG.rhel6

Transaction Summary
=====
Install      1 Package(s)

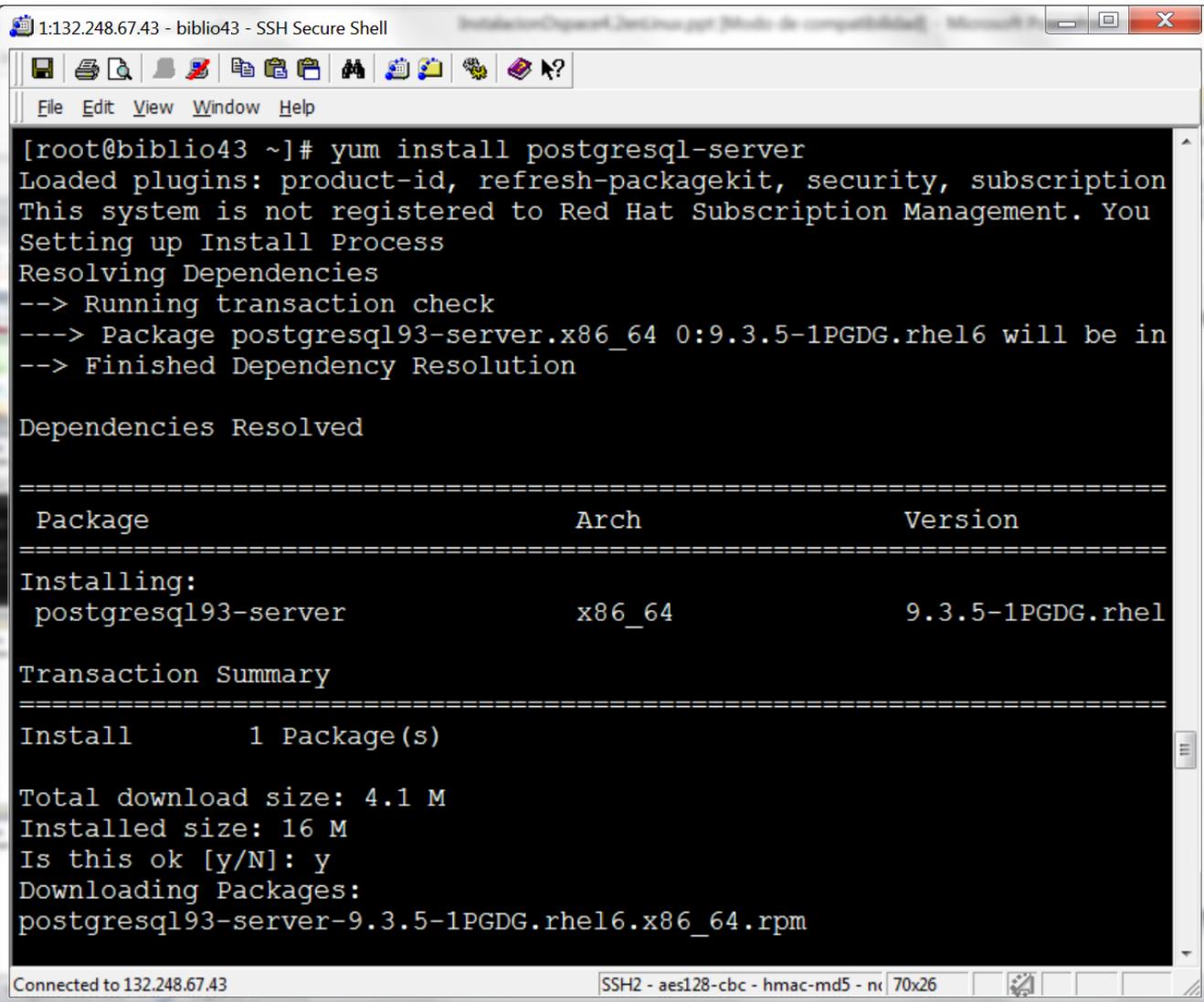
Total download size: 1.0 M
Installed size: 5.2 M
Is this ok [y/N]: y
Downloading Packages:
postgresql93-9.3.5-1PGDG.rhel6.x86_64.rpm
```

Connected to 132.248.67.43

SSH2 - aes128-cbc - hmac-md5 - nr 70x26

# 1.- Prerequisitos de Software

**1.10 Instalación de PostgreSQL.** Ejecutar yum install postgresql-server. Ver la figura siguiente:



```
1:132.248.67.43 - biblio43 - SSH Secure Shell
File Edit View Window Help

[root@biblio43 ~]# yum install postgresql-server
Loaded plugins: product-id, refresh-packagekit, security, subscription
This system is not registered to Red Hat Subscription Management. You
Setting up Install Process
Resolving Dependencies
--> Running transaction check
---> Package postgresql93-server.x86_64 0:9.3.5-1PGDG.rhel6 will be in
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                               Arch                               Version
=====
Installing:
 postgresql93-server                  x86_64                             9.3.5-1PGDG.rhel

Transaction Summary
=====
Install      1 Package(s)

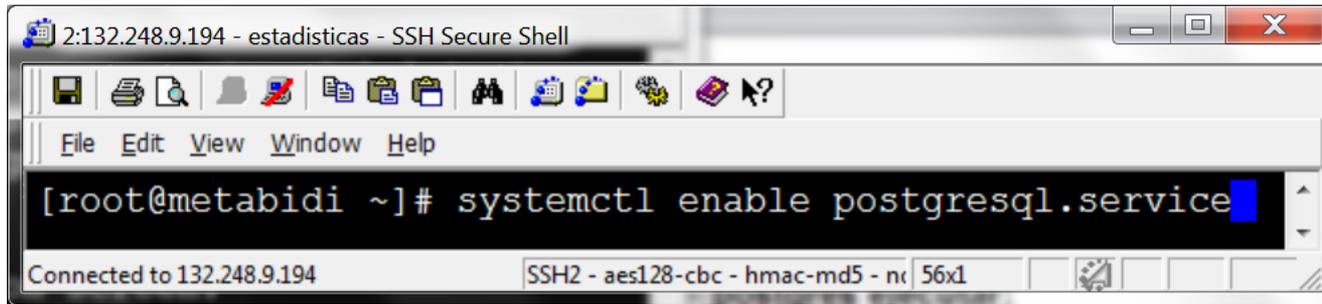
Total download size: 4.1 M
Installed size: 16 M
Is this ok [y/N]: y
Downloading Packages:
 postgresql93-server-9.3.5-1PGDG.rhel6.x86_64.rpm

Connected to 132.248.67.43
SSH2 - aes128-cbc - hmac-md5 - nt| 70x26
```

# 1.- Prerequisitos de Software

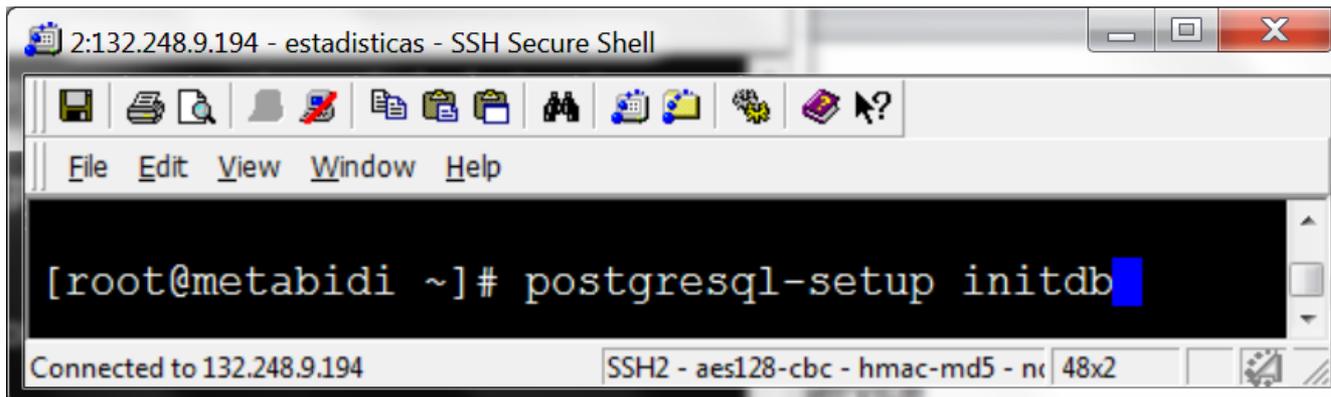
**1.10 Instalación de PostgreSQL.** Ejecutar con la cuenta de root las instrucciones siguientes:

**Para habilitar el servicio de postgresql ejecutar:**  
systemctl enable postgresql.service



A screenshot of an SSH terminal window titled "2:132.248.9.194 - estadísticas - SSH Secure Shell". The window has a standard toolbar and a menu bar with "File", "Edit", "View", "Window", and "Help". The terminal prompt is "[root@metabidi ~]#". The command "systemctl enable postgresql.service" has been entered and is highlighted with a blue cursor. The status bar at the bottom indicates "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - n... 56x1".

**Para inicializar la base de datos de postgresql ejecutar:**  
postgresql-setup initdb

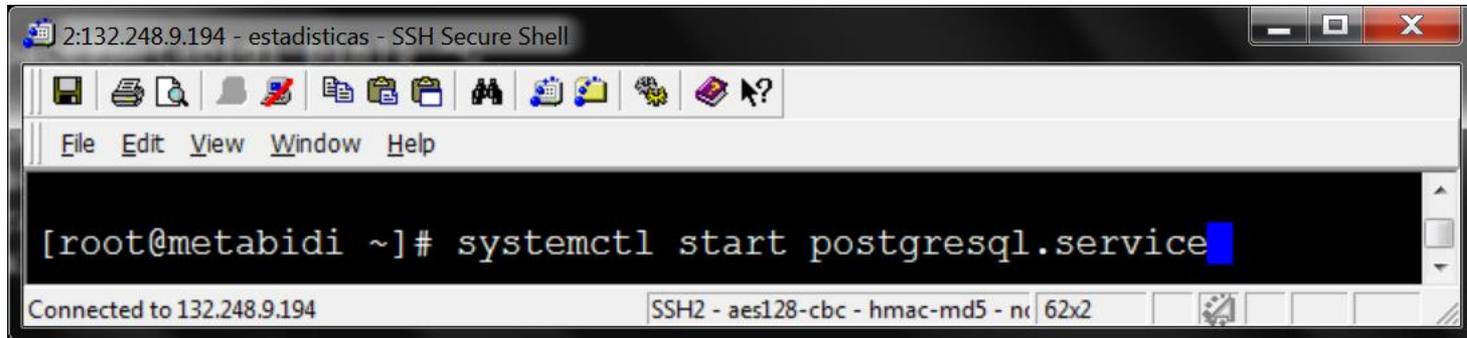


A screenshot of an SSH terminal window titled "2:132.248.9.194 - estadísticas - SSH Secure Shell". The window has a standard toolbar and a menu bar with "File", "Edit", "View", "Window", and "Help". The terminal prompt is "[root@metabidi ~]#". The command "postgresql-setup initdb" has been entered and is highlighted with a blue cursor. The status bar at the bottom indicates "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - n... 48x2".

# 1.- Prerequisitos de Software

**1.10 Instalación de PostgreSQL.** Ejecutar con la cuenta de root la instrucción siguiente para iniciar el servicio de postgresql:

```
systemctl start postgresql.service
```



The image shows a terminal window titled "2:132.248.9.194 - estadísticas - SSH Secure Shell". The window has a menu bar with "File", "Edit", "View", "Window", and "Help". Below the menu bar is a toolbar with various icons. The main area of the terminal is black with white text. The prompt is "[root@metabidi ~]#". The command "systemctl start postgresql.service" has been entered, and a blue cursor is at the end of the line. At the bottom of the window, it says "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - nc 62x2".

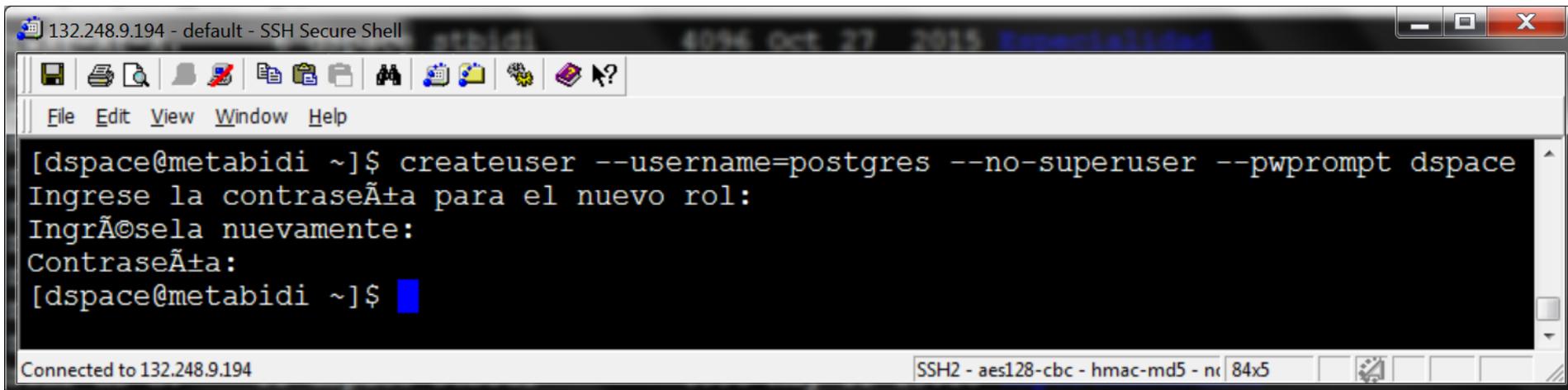
## 2.- Instalación de DSpace

**2.1 Crear el usuario y la base de datos de Dspace.** Con la cuenta de **postgres** ejecute la instrucción siguiente para crear la cuenta del usuario de **dspace**:

```
createuser --username=postgres --no-superuser --pwprompt dspace
```

Después de ejecutar la sentencia se solicita la contraseña que deseamos para el usuario **dspace** con su respectiva confirmación.

Finalmente se solicita la contraseña del usuario **postgres**.



```
132.248.9.194 - default - SSH Secure Shell
[dspace@metabidi ~]$ createuser --username=postgres --no-superuser --pwprompt dspace
Ingrese la contraseña para el nuevo rol:
IngrÃ©sela nuevamente:
ContraseÃ±a:
[dspace@metabidi ~]$
```

Connected to 132.248.9.194

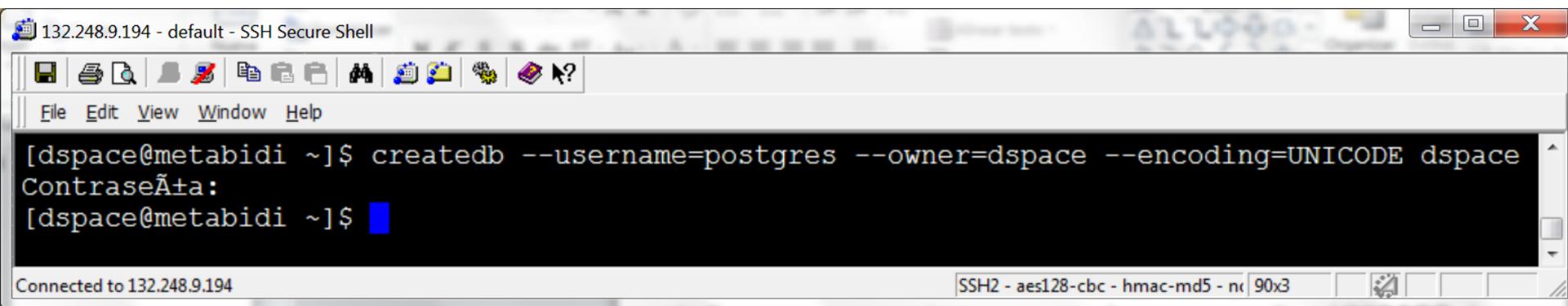
SSH2 - aes128-cbc - hmac-md5 - n... 84x5

## 2.- Instalación de DSpace

**2.1 Crear el usuario y la base de datos de Dspace.** Con la cuenta de dspace ejecute la instrucción siguiente para crear la base de datos de dspace:

```
createdb --username=postgres --owner=dspace --encoding=UNICODE dspace
```

Después de ejecutar la sentencia se solicita la contraseña del usuario **postgres**.



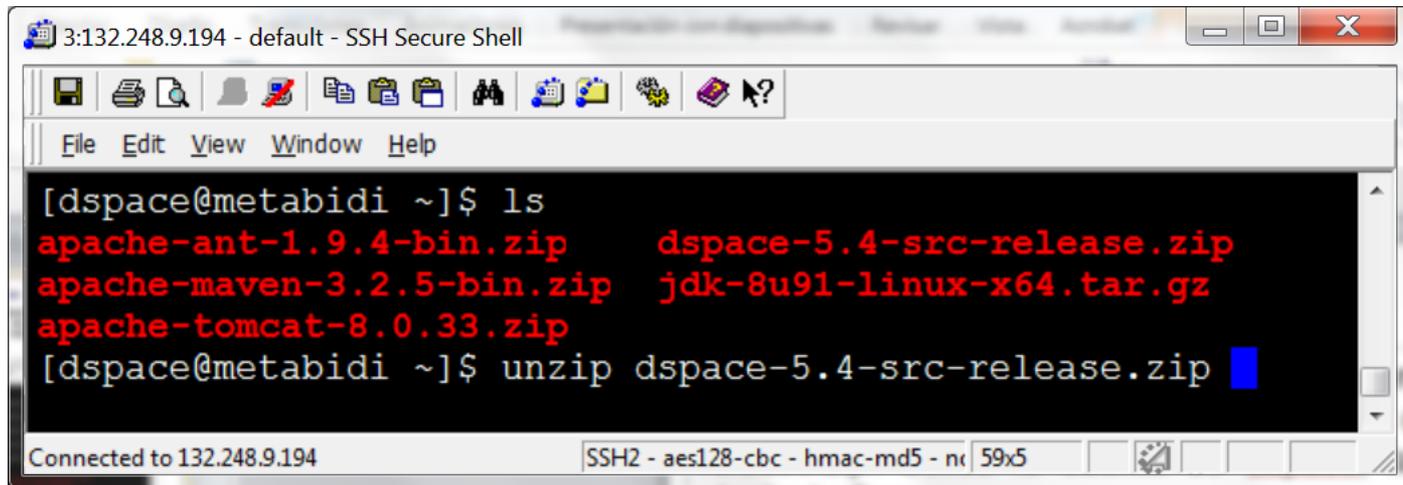
The screenshot shows a terminal window titled "132.248.9.194 - default - SSH Secure Shell". The terminal content is as follows:

```
[dspace@metabidi ~]$ createdb --username=postgres --owner=dspace --encoding=UNICODE dspace
Contraseña:
[dspace@metabidi ~]$
```

The terminal window includes a menu bar with "File", "Edit", "View", "Window", and "Help". The status bar at the bottom indicates "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - n".

## 2.- Instalación de DSpace

**2.2 Descomprimir el paquete Dspace.** Dentro de la carpeta de dspace /home/dspace descomprimir el paquete de software dspace-5.4-src-release.zip. Utilice la cuenta de dspace, tal y como se muestra en la siguiente figura:



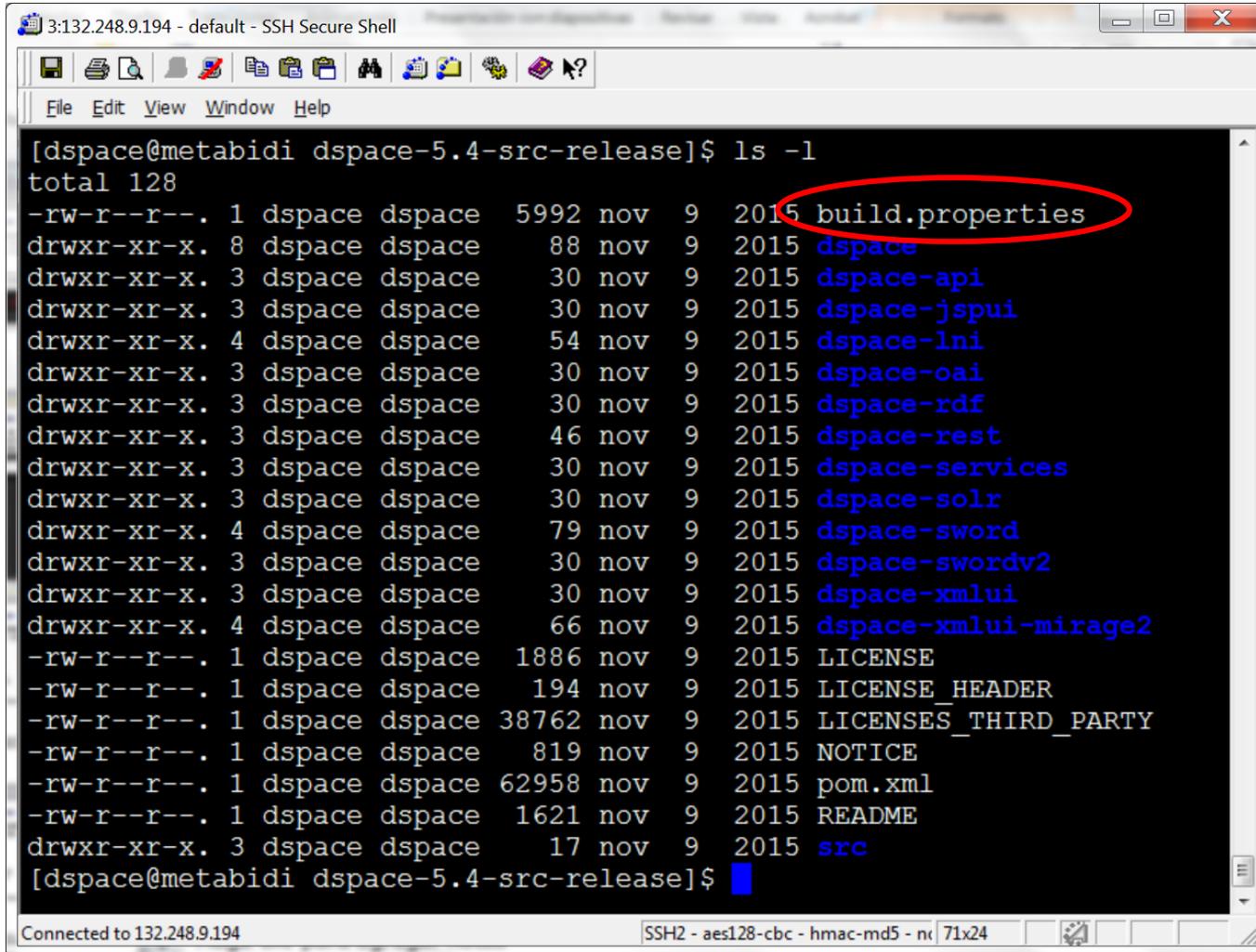
The image shows a terminal window titled "3:132.248.9.194 - default - SSH Secure Shell". The terminal output is as follows:

```
[dspace@metabidi ~]$ ls
apache-ant-1.9.4-bin.zip      dspace-5.4-src-release.zip
apache-maven-3.2.5-bin.zip  jdk-8u91-linux-x64.tar.gz
apache-tomcat-8.0.33.zip
[dspace@metabidi ~]$ unzip dspace-5.4-src-release.zip
```

The terminal window also shows a menu bar with "File", "Edit", "View", "Window", and "Help". At the bottom, it indicates "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - nc 59x5".

## 2.- Instalación de DSpace

2.3 Designar propiedades de instalación. Edite el archivo **build.properties** que se encuentra en la ruta:  
/home/dspace/dspace-5.4-src-release



```
[dspace@metabidi dspace-5.4-src-release]$ ls -l
total 128
-rw-r--r--. 1 dspace dspace 5992 nov 9 2015 build.properties
drwxr-xr-x. 8 dspace dspace 88 nov 9 2015 dspace
drwxr-xr-x. 3 dspace dspace 30 nov 9 2015 dspace-api
drwxr-xr-x. 3 dspace dspace 30 nov 9 2015 dspace-jspui
drwxr-xr-x. 4 dspace dspace 54 nov 9 2015 dspace-lni
drwxr-xr-x. 3 dspace dspace 30 nov 9 2015 dspace-oai
drwxr-xr-x. 3 dspace dspace 30 nov 9 2015 dspace-rdf
drwxr-xr-x. 3 dspace dspace 46 nov 9 2015 dspace-rest
drwxr-xr-x. 3 dspace dspace 30 nov 9 2015 dspace-services
drwxr-xr-x. 3 dspace dspace 30 nov 9 2015 dspace-solr
drwxr-xr-x. 4 dspace dspace 79 nov 9 2015 dspace-sword
drwxr-xr-x. 3 dspace dspace 30 nov 9 2015 dspace-swordv2
drwxr-xr-x. 3 dspace dspace 30 nov 9 2015 dspace-xmlui
drwxr-xr-x. 4 dspace dspace 66 nov 9 2015 dspace-xmlui-mirage2
-rw-r--r--. 1 dspace dspace 1886 nov 9 2015 LICENSE
-rw-r--r--. 1 dspace dspace 194 nov 9 2015 LICENSE_HEADER
-rw-r--r--. 1 dspace dspace 38762 nov 9 2015 LICENSES_THIRD_PARTY
-rw-r--r--. 1 dspace dspace 819 nov 9 2015 NOTICE
-rw-r--r--. 1 dspace dspace 62958 nov 9 2015 pom.xml
-rw-r--r--. 1 dspace dspace 1621 nov 9 2015 README
drwxr-xr-x. 3 dspace dspace 17 nov 9 2015 src
[dspace@metabidi dspace-5.4-src-release]$
```

Connected to 132.248.9.194

SSH2 - aes128-cbc - hmac-md5 - nr 71x24

## 2.- Instalación de DSpace

**2.3 Designar propiedades de instalación.** Modifique preferentemente las siguientes directivas del archivo **build.properties**. Ver ejemplo en la siguiente diapositiva

```
dspace.install.dir=/dspace
dspace.hostname = localhost
dspace.baseUrl = http://localhost:8080
dspace.name = DSpace at My University
db.name=postgres
db.driver=org.postgresql.Driver
db.url=jdbc:postgresql://localhost:5432/dspace
db.username=dspace
db.password=dspace
mail.server = smtp.example.com
mail.server.username=
mail.server.password=
mail.from.address = dspace-noreply@myu.edu
mail.feedback.recipient = dspace-help@myu.edu
mail.admin = dspace-help@myu.edu
mail.alert.recipient=
mail.registration.notify=
handle.prefix = 123456789
```

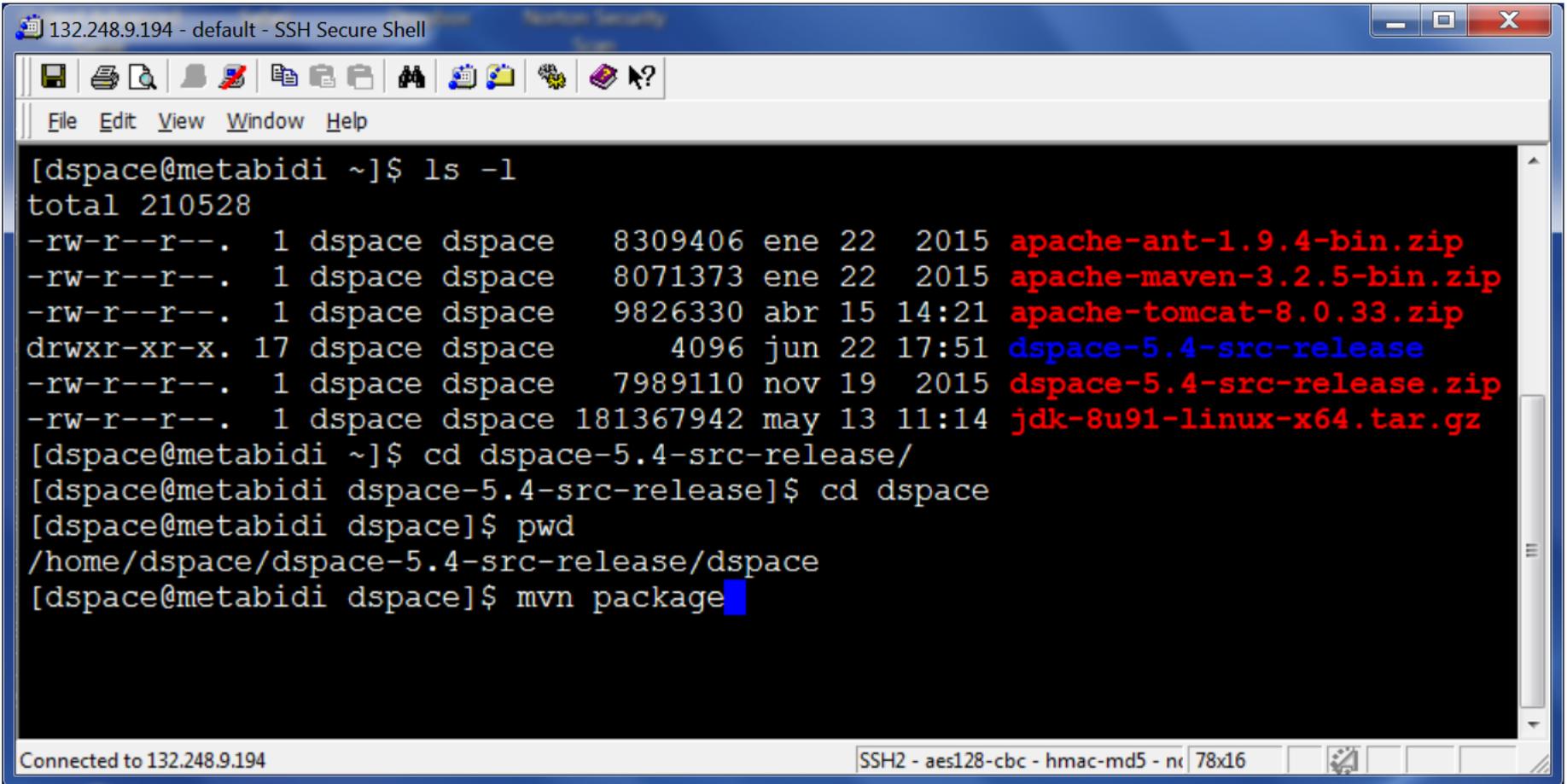
## 2.- Instalación de DSpace

2.3 Designar propiedades de instalación. Ejemplo de valores para las directivas del archivo build.properties

```
dspace.install.dir=/home/dspace  
dspace.hostname = 132.248.9.194  
dspace.baseUrl = http://132.248.9.194:8080  
dspace.name = Repositorio DGB UNAM  
db.name=postgres  
db.driver=org.postgresql.Driver  
db.url=jdbc:postgresql://localhost:5432/dspace  
db.username=dspace  
db.password=demo@#2016  
mail.server = smtp.institucion.mx  
mail.server.username=danteoa  
mail.server.password=CoA@#49  
mail.from.address = danteoa66@gmail.com  
mail.feedback.recipient = danteoa66@gmail.com  
mail.admin = danteoa66@gmail.com  
mail.alert.recipient= danteoa66@gmail.com  
mail.registration.notify= danteoa66@gmail.com  
handle.prefix = STBD_UNAM
```

## 2.- Instalación de DSpace

**2.4 Construir paquete de instalación.** Entrar al directorio `/home/dspace/dspace-5.4-src-release/dspace` y ejecutar la sentencia:  
`mvn package`



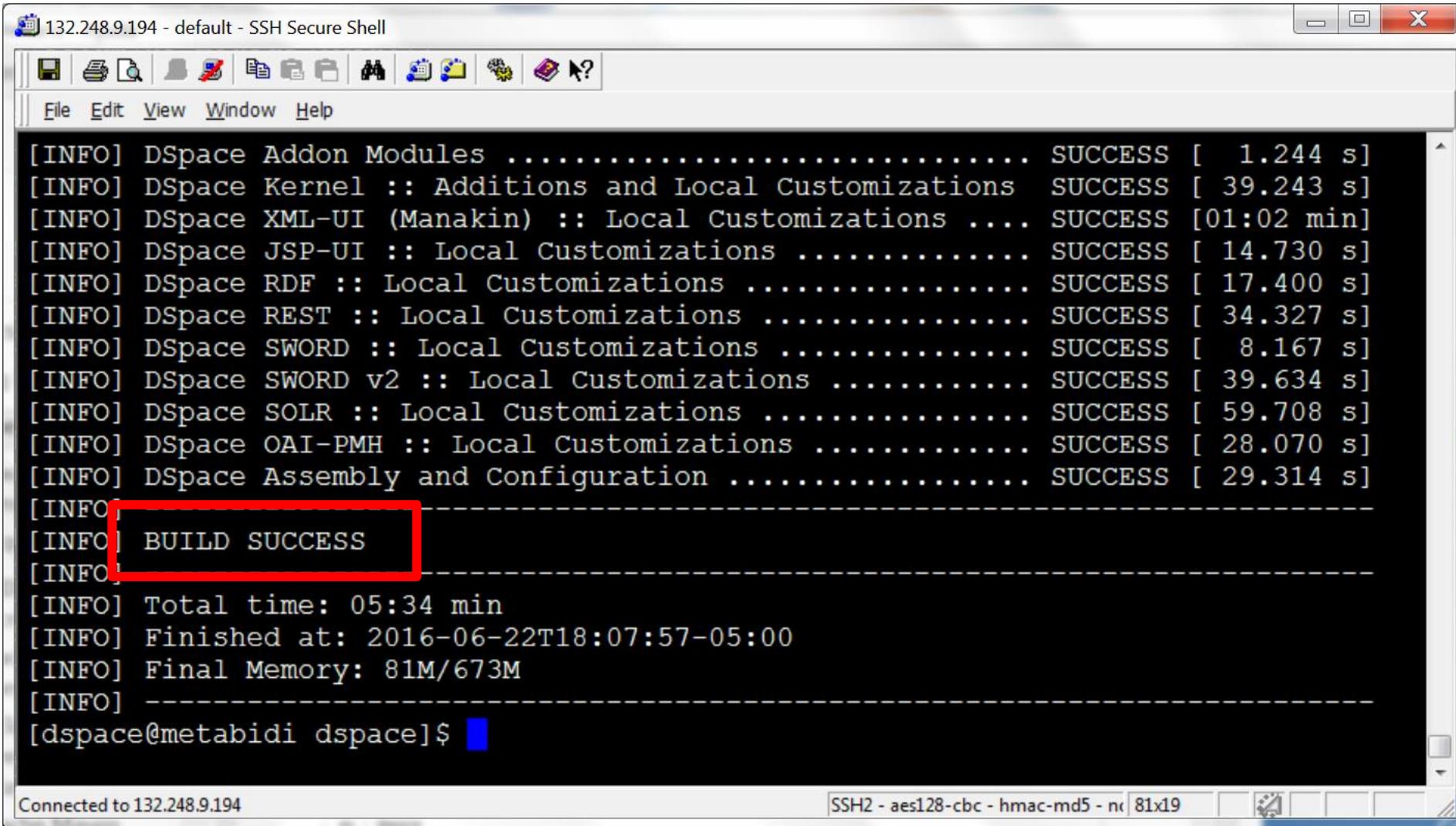
The screenshot shows an SSH terminal window titled "132.248.9.194 - default - SSH Secure Shell". The terminal displays the following commands and output:

```
[dspace@metabidi ~]$ ls -l
total 210528
-rw-r--r--. 1 dspace dspace 8309406 ene 22 2015 apache-ant-1.9.4-bin.zip
-rw-r--r--. 1 dspace dspace 8071373 ene 22 2015 apache-maven-3.2.5-bin.zip
-rw-r--r--. 1 dspace dspace 9826330 abr 15 14:21 apache-tomcat-8.0.33.zip
drwxr-xr-x. 17 dspace dspace 4096 jun 22 17:51 dspace-5.4-src-release
-rw-r--r--. 1 dspace dspace 7989110 nov 19 2015 dspace-5.4-src-release.zip
-rw-r--r--. 1 dspace dspace 181367942 may 13 11:14 jdk-8u91-linux-x64.tar.gz
[dspace@metabidi ~]$ cd dspace-5.4-src-release/
[dspace@metabidi dspace-5.4-src-release]$ cd dspace
[dspace@metabidi dspace]$ pwd
/home/dspace/dspace-5.4-src-release/dspace
[dspace@metabidi dspace]$ mvn package
```

The terminal window also shows a menu bar with "File", "Edit", "View", "Window", and "Help", and a status bar at the bottom indicating "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - nc 78x16".

## 2.- Instalación de DSpace

2.4 Construir paquete de instalación. Aparecerá el mensaje BUILD SUCCESS indicando el éxito de la construcción



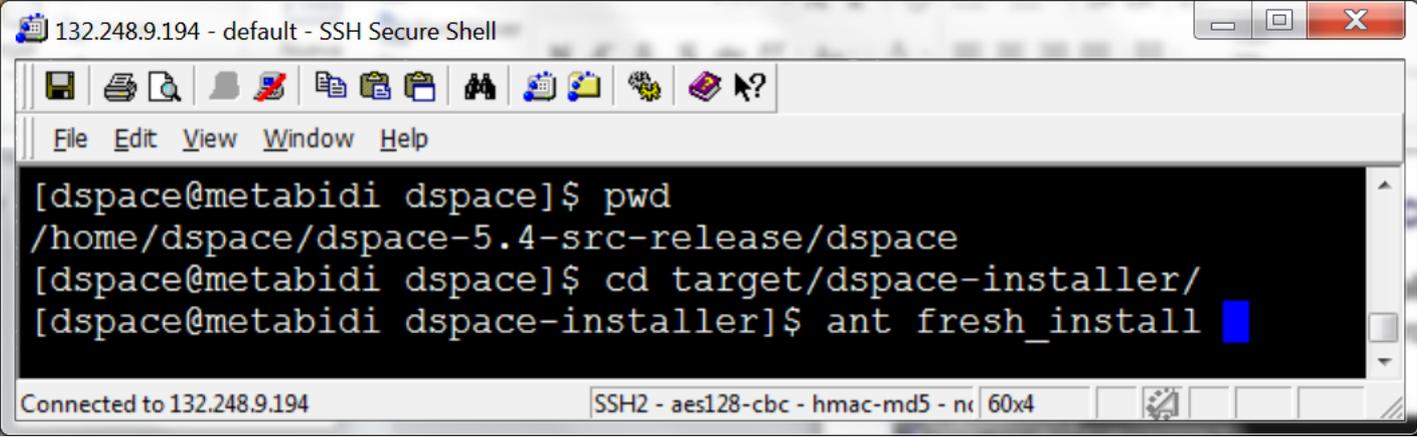
```
132.248.9.194 - default - SSH Secure Shell
File Edit View Window Help
[INFO] DSpace Addon Modules ..... SUCCESS [ 1.244 s]
[INFO] DSpace Kernel :: Additions and Local Customizations SUCCESS [ 39.243 s]
[INFO] DSpace XML-UI (Manakin) :: Local Customizations ... SUCCESS [01:02 min]
[INFO] DSpace JSP-UI :: Local Customizations ..... SUCCESS [ 14.730 s]
[INFO] DSpace RDF :: Local Customizations ..... SUCCESS [ 17.400 s]
[INFO] DSpace REST :: Local Customizations ..... SUCCESS [ 34.327 s]
[INFO] DSpace SWORD :: Local Customizations ..... SUCCESS [ 8.167 s]
[INFO] DSpace SWORD v2 :: Local Customizations ..... SUCCESS [ 39.634 s]
[INFO] DSpace SOLR :: Local Customizations ..... SUCCESS [ 59.708 s]
[INFO] DSpace OAI-PMH :: Local Customizations ..... SUCCESS [ 28.070 s]
[INFO] DSpace Assembly and Configuration ..... SUCCESS [ 29.314 s]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 05:34 min
[INFO] Finished at: 2016-06-22T18:07:57-05:00
[INFO] Final Memory: 81M/673M
[INFO] -----
[dspace@metabidi dspace]$
```

Connected to 132.248.9.194

SSH2 - aes128-cbc - hmac-md5 - nc 81x19

## 2.- Instalación de DSpace

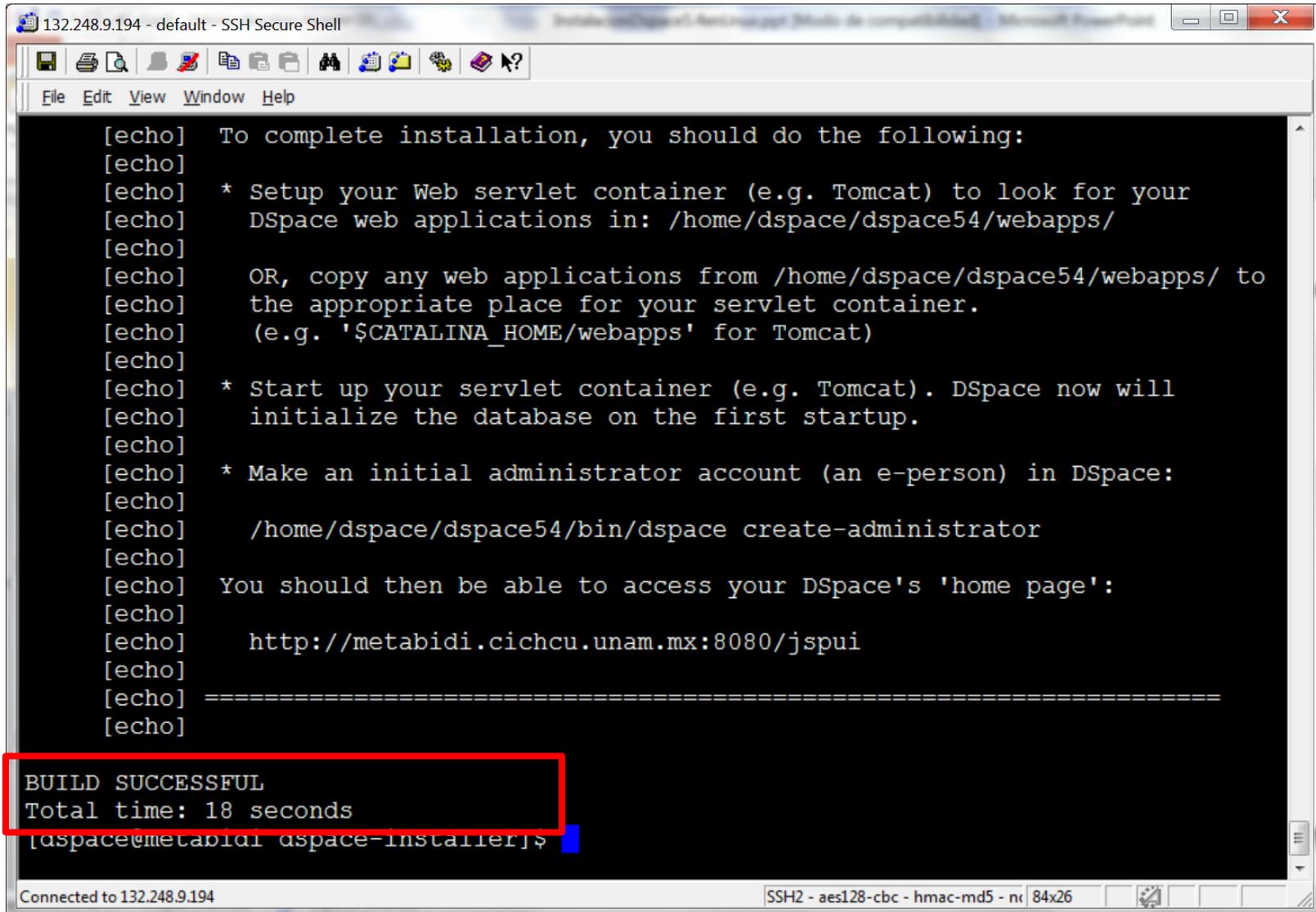
**2.4 Crear la base de datos y aplicaciones web de Dspace.** Entrar al directorio `/home/dspace/dspace-5.4-src-release/dspace/target/dspace-installer` y ejecutar **ant fresh\_install**



```
132.248.9.194 - default - SSH Secure Shell
File Edit View Window Help
[dspace@metabidi dspace]$ pwd
/home/dspace/dspace-5.4-src-release/dspace
[dspace@metabidi dspace]$ cd target/dspace-installer/
[dspace@metabidi dspace-installer]$ ant fresh_install
Connected to 132.248.9.194  SSH2 - aes128-cbc - hmac-md5 - n... 60x4
```

## 2.- Instalación de DSpace

2.4 Crear la base de datos y aplicaciones web de Dspace. Aparecerá el mensaje BUILD SUCCESSFUL indicando el éxito de la construcción



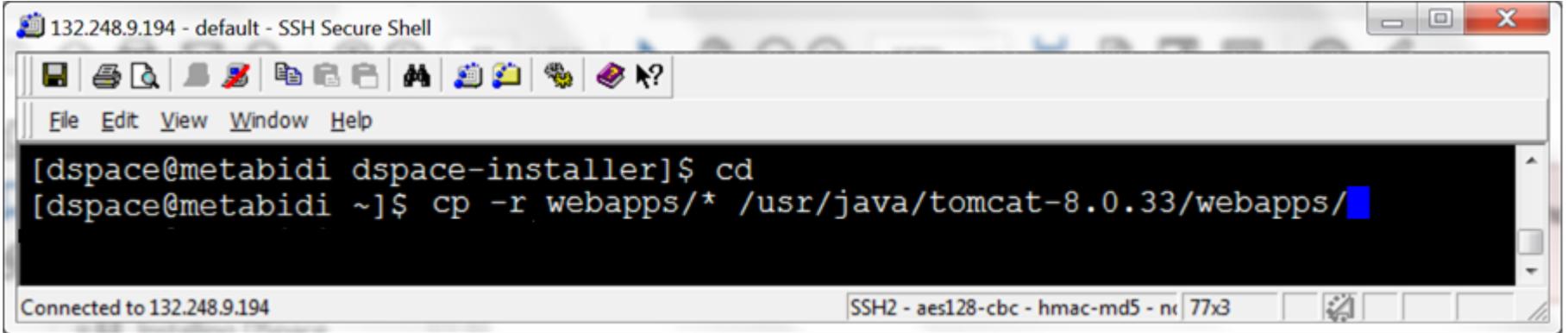
```
132.248.9.194 - default - SSH Secure Shell
File Edit View Window Help
[echo] To complete installation, you should do the following:
[echo]
[echo] * Setup your Web servlet container (e.g. Tomcat) to look for your
[echo] DSpace web applications in: /home/dspace/dspace54/webapps/
[echo]
[echo] OR, copy any web applications from /home/dspace/dspace54/webapps/ to
[echo] the appropriate place for your servlet container.
[echo] (e.g. '$CATALINA_HOME/webapps' for Tomcat)
[echo]
[echo] * Start up your servlet container (e.g. Tomcat). DSpace now will
[echo] initialize the database on the first startup.
[echo]
[echo] * Make an initial administrator account (an e-person) in DSpace:
[echo]
[echo] /home/dspace/dspace54/bin/dspace create-administrator
[echo]
[echo] You should then be able to access your DSpace's 'home page':
[echo]
[echo] http://metabidi.cichcu.unam.mx:8080/jspui
[echo]
[echo] =====
[echo]
[echo]
BUILD SUCCESSFUL
Total time: 18 seconds
[dspace@metabidi dspace-installer]$
```

Connected to 132.248.9.194

SSH2 - aes128-cbc - hmac-md5 - nr 84x26

## 2.- Instalación de DSpace

**2.5 Instalar aplicaciones web de Dspace.** Copiar el contenido de la carpeta /home/dspace hacia /usr/java/tomcat-8.0.33/webapps



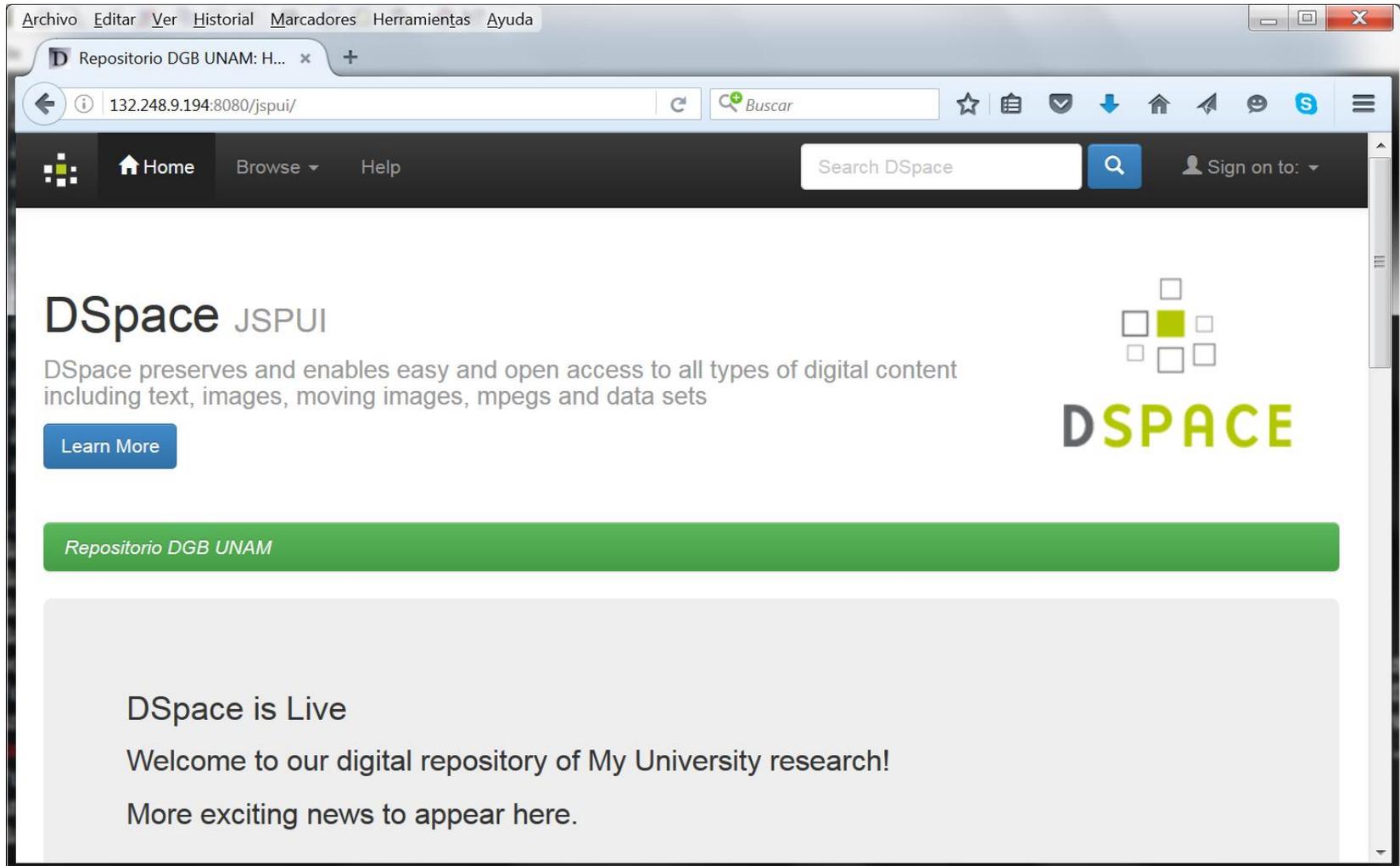
The image shows a terminal window titled "132.248.9.194 - default - SSH Secure Shell". The terminal displays the following commands and output:

```
[dspace@metabidi dspace-installer]$ cd  
[dspace@metabidi ~]$ cp -r webapps/* /usr/java/tomcat-8.0.33/webapps/
```

The terminal window includes a menu bar with "File", "Edit", "View", "Window", and "Help". The status bar at the bottom indicates "Connected to 132.248.9.194" and "SSH2 - aes128-cbc - hmac-md5 - nc 77x3".

## 2.- Instalación de DSpace

**2.5 Instalar aplicaciones web de Dspace.** Para probar la instalación Abrir un navegador de internet con el URL <http://IPDelServidor:8080/> y deberá mostrarse una página como la figura siguiente:

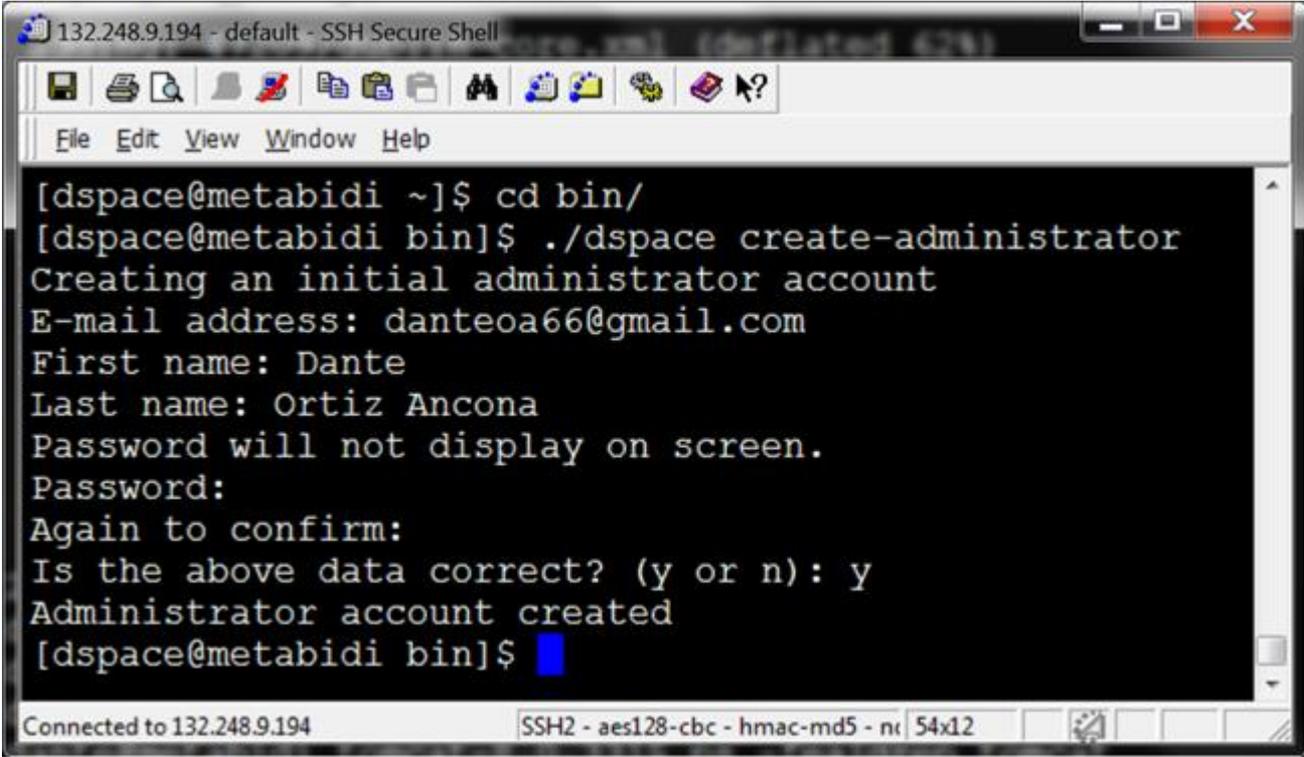


## 2.- Instalación de DSpace

**2.6 Crear la cuenta de administración del repositorio.** Entrar al directorio `/home/dspace/bin` y ejecutar la instrucción:

**`dspace create-administrator`**

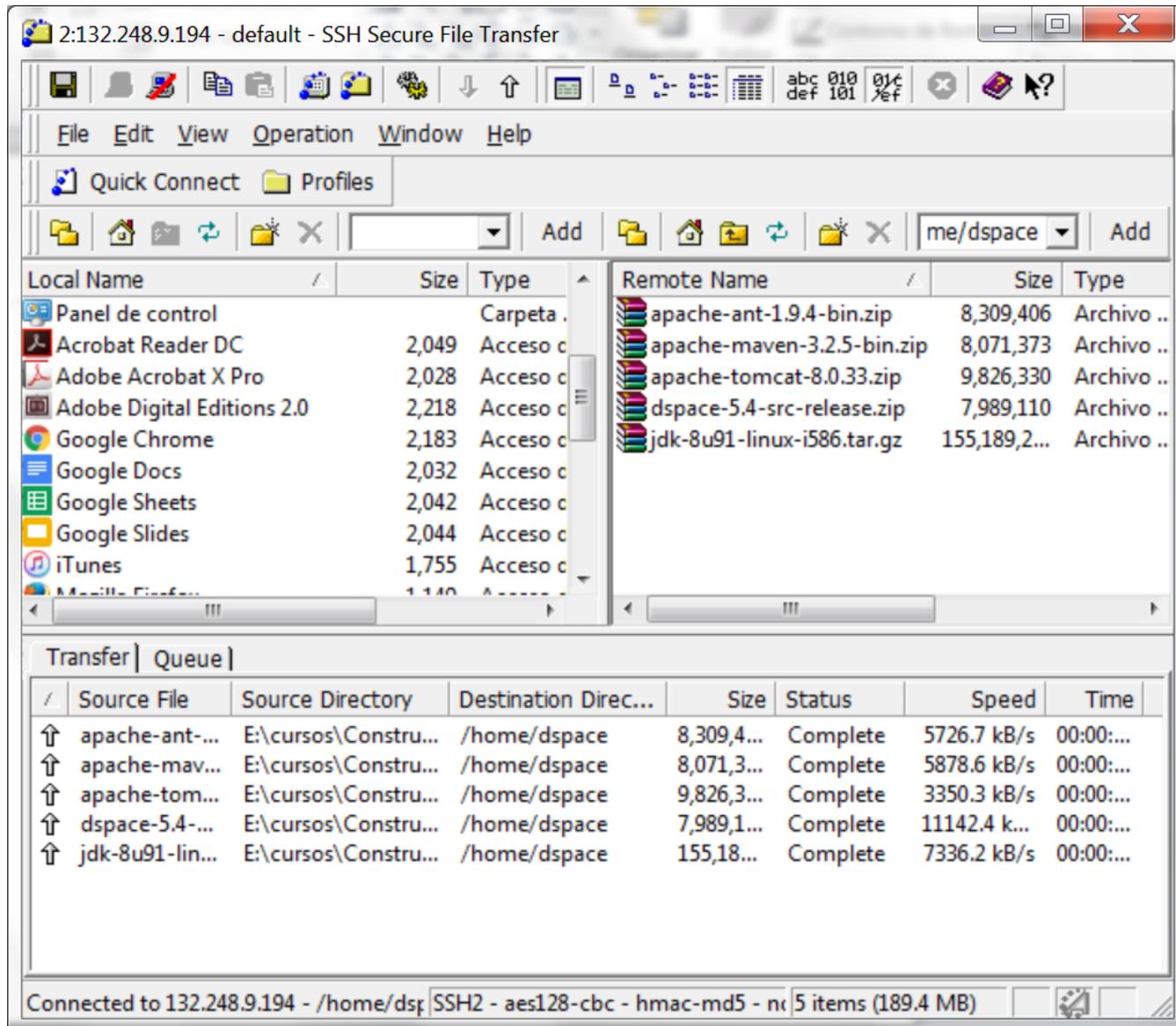
proporcione los datos que se solicitan tal y como se muestra en la siguiente figura.



```
[dspace@metabidi ~]$ cd bin/
[dspace@metabidi bin]$ ./dspace create-administrator
Creating an initial administrator account
E-mail address: danteoa66@gmail.com
First name: Dante
Last name: Ortiz Ancona
Password will not display on screen.
Password:
Again to confirm:
Is the above data correct? (y or n): y
Administrator account created
[dspace@metabidi bin]$
```

Nota: Con esto concluye la instalación de DSpace

# Anexo A Software requerido para arquitecturas de 32 bits



The screenshot shows an SSH Secure File Transfer application window. The title bar indicates the connection is to 2:132.248.9.194 - default. The interface includes a menu bar (File, Edit, View, Operation, Window, Help), a toolbar, and a main area with two panes: Local Name and Remote Name. The Local Name pane shows a list of local files and folders, including Panel de control, Acrobat Reader DC, Adobe Acrobat X Pro, Adobe Digital Editions 2.0, Google Chrome, Google Docs, Google Sheets, Google Slides, iTunes, and Mozilla Firefox. The Remote Name pane shows a list of files being transferred, including apache-ant-1.9.4-bin.zip, apache-maven-3.2.5-bin.zip, apache-tomcat-8.0.33.zip, dspace-5.4-src-release.zip, and jdk-8u91-linux-i586.tar.gz. A Transfer Queue table at the bottom shows the progress of these transfers, all of which are complete.

| Local Name                 | Size  | Type     | Remote Name                | Size         | Type       |
|----------------------------|-------|----------|----------------------------|--------------|------------|
| Panel de control           |       | Carpeta  | apache-ant-1.9.4-bin.zip   | 8,309,406    | Archivo .. |
| Acrobat Reader DC          | 2,049 | Acceso c | apache-maven-3.2.5-bin.zip | 8,071,373    | Archivo .. |
| Adobe Acrobat X Pro        | 2,028 | Acceso c | apache-tomcat-8.0.33.zip   | 9,826,330    | Archivo .. |
| Adobe Digital Editions 2.0 | 2,218 | Acceso c | dspace-5.4-src-release.zip | 7,989,110    | Archivo .. |
| Google Chrome              | 2,183 | Acceso c | jdk-8u91-linux-i586.tar.gz | 155,189,2... | Archivo .. |
| Google Docs                | 2,032 | Acceso c |                            |              |            |
| Google Sheets              | 2,042 | Acceso c |                            |              |            |
| Google Slides              | 2,044 | Acceso c |                            |              |            |
| iTunes                     | 1,755 | Acceso c |                            |              |            |
| Mozilla Firefox            | 1,140 | Acceso c |                            |              |            |

| Transfer          | Queue                |                      |            |          |              |           |
|-------------------|----------------------|----------------------|------------|----------|--------------|-----------|
| Source File       | Source Directory     | Destination Direc... | Size       | Status   | Speed        | Time      |
| ↑ apache-ant-...  | E:\cursos\Constru... | /home/dspace         | 8,309,4... | Complete | 5726.7 kB/s  | 00:00:... |
| ↑ apache-mav...   | E:\cursos\Constru... | /home/dspace         | 8,071,3... | Complete | 5878.6 kB/s  | 00:00:... |
| ↑ apache-tom...   | E:\cursos\Constru... | /home/dspace         | 9,826,3... | Complete | 3350.3 kB/s  | 00:00:... |
| ↑ dspace-5.4-...  | E:\cursos\Constru... | /home/dspace         | 7,989,1... | Complete | 11142.4 k... | 00:00:... |
| ↑ jdk-8u91-lin... | E:\cursos\Constru... | /home/dspace         | 155,18...  | Complete | 7336.2 kB/s  | 00:00:... |

Connected to 132.248.9.194 - /home/dsp SSH2 - aes128-cbc - hmac-md5 - nr 5 items (189.4 MB)



# Referencias

Ortiz Ancona, Dante (2016). Instalación de Dspace 5.5 en Windows 7. e-prints in library & information science.

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