

## Second Instruction

### Automated Installation of Big Data Utilities (Hadoop, Sqoop, Pig, and Python) via Shell Script File

#### Step 1/6:

Open the terminal, type **sudo su -** and press the **Enter** key to switch to the root user.

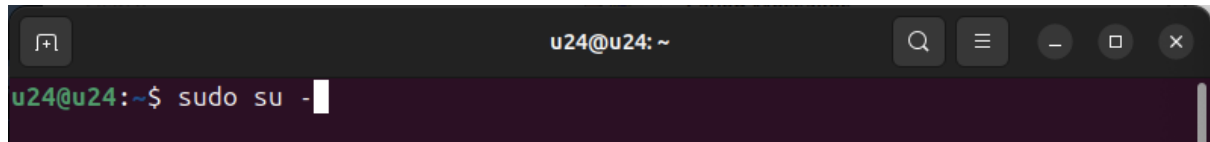
A terminal window with a dark background. The title bar shows 'u24@u24: ~'. The prompt is 'u24@u24:~\$' and the command 'sudo su -' is being entered, with a cursor at the end of the line.

Figure 1. Switching to the root user.

#### Step 2/6:

Enter the password for the current user and press the **Enter** key.

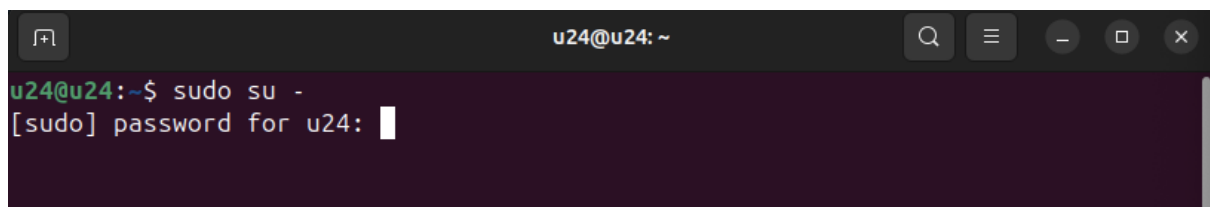
A terminal window with a dark background. The title bar shows 'u24@u24: ~'. The prompt is 'u24@u24:~\$' and the command 'sudo su -' has been entered. The next line shows '[sudo] password for u24:' with a cursor at the end of the line.

Figure 2. Filling the password for the current user.

#### Step 3/6:

Type **wget https://raw.githubusercontent.com/homony/big\_data/refs/heads/main/install\_big\_data\_utilities.sh** and press **Enter** key to download a script file named **install\_big\_data\_utilities.sh** to store in **/root/** directory.

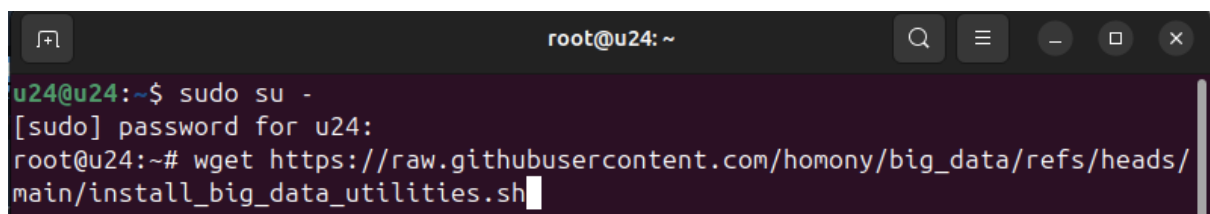
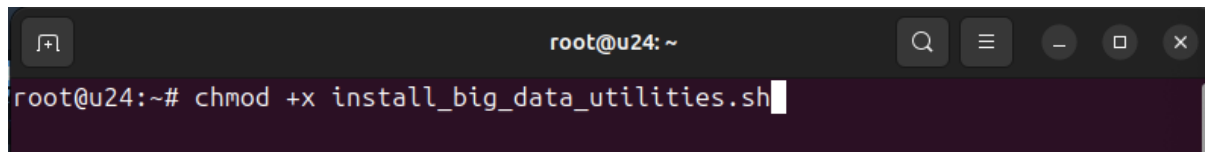
A terminal window with a dark background. The title bar shows 'root@u24: ~'. The prompt is 'root@u24:~#'. The command 'wget https://raw.githubusercontent.com/homony/big\_data/refs/heads/main/install\_big\_data\_utilities.sh' is being entered, with a cursor at the end of the line.

Figure 3. Downloading script file from GitHub.

#### Step 4/6:

Type **chmod +x install\_big\_data\_utilities.sh** and press **Enter** key to grant execute permission to the script file.

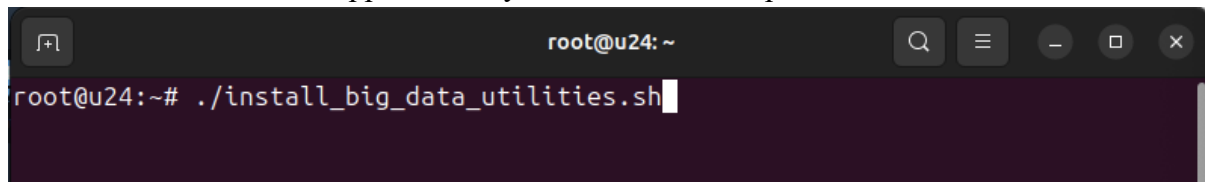
A terminal window with a dark background. The title bar shows 'root@u24: ~'. The command prompt is 'root@u24:~#'. The command entered is 'chmod +x install\_big\_data\_utilities.sh'.

```
root@u24:~# chmod +x install_big_data_utilities.sh
```

Figure 4. Granting execute permission to the script file.

#### Step 5/6:

Type **`./install_big_data_utilities.sh`** and press **Enter** key to execute the script file and install Big Data utilities such as java, SSH, Hadoop, Sqoop, Pig, and Python. The installation will take approximately 10 minutes to complete.

A terminal window with a dark background. The title bar shows 'root@u24: ~'. The command prompt is 'root@u24:~#'. The command entered is './install\_big\_data\_utilities.sh'.

```
root@u24:~# ./install_big_data_utilities.sh
```

Figure 5. Executing the script file and install big data utilities.

#### Step 6/6:

After the installation is complete, search the terminal output to verify that all utilities as the following have been installed successfully.

**openjdk version "11.0.26" 2025-01-21**

**Hadoop 2.10.2**

**Apache Pig version 0.15.0**

**Sqoop 1.4.7**

**Python 3.12.3**

**pip 24.0**

```
root@u24: ~  
Processing triggers for desktop-file-utils (0.27-2build1) ...  
  
openjdk version "11.0.26" 2025-01-21  
OpenJDK Runtime Environment (build 11.0.26+4-post-Ubuntu-1ubuntu124.04)  
OpenJDK 64-Bit Server VM (build 11.0.26+4-post-Ubuntu-1ubuntu124.04, mixed mode,  
  sharing)  
Hadoop 2.10.2  
Subversion Unknown -r 965fd380006fa78b2315668fbc7eb432e1d8200f  
Compiled by ubuntu on 2022-05-24T22:35Z  
Compiled with protoc 2.5.0  
From source with checksum d3ab737f7788f05d467784f0a86573fe  
This command was run using /usr/local/hadoop/share/hadoop/common/hadoop-common-2  
.10.2.jar  
4912 NameNode  
7026 Jps  
5170 DataNode  
5570 ResourceManager  
5350 SecondaryNameNode  
5687 NodeManager  
Apache Pig version 0.15.0 (r1682971)  
compiled Jun 01 2015, 11:44:35  
Warning: /usr/local/sqoop/./hbase does not exist! HBase imports will fail.  
Please set $HBASE_HOME to the root of your HBase installation.  
Warning: /usr/local/sqoop/./hcatalog does not exist! HCatalog jobs will fail.  
Sqoop 1.4.7  
git commit id 2328971411f57f0cb683dfb79d19d4d19d185dd8  
Compiled by maugli on Thu Dec 21 15:59:58 STD 2017  
Python 3.12.3  
pip 24.0 from /usr/lib/python3/dist-packages/pip (python 3.12)  
  
root@u24:~#
```

Figure 6. Installation is complete and display in terminal