

Lambton College In Mississauga Instances | EC2 Management Con Course: 2021F-T1 BDM 1024 - D us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#Instances:

New EC2 Experience Services Search for services, features, marketplace products, and docs [Alt+S] lotus Ohio Support

EC2 Dashboard EC2 Global View Events Tags Limits Instances Instances New Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances New Dedicated Hosts Capacity Reservations

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Windows (CRLF) UTF-8 5:44 PM 9/24/2021

Instances (1/2) Info

Connect Instance state Actions Launch instances Filter instances

Name	Instance ID	Instance state	Instance type	Status
LinuxVM	i-09950f09ed7821e7a	Stopped	t2.micro	-
Ubuntu-Ha...	i-0ad0d8ba8334cc105	Running	t2.micro	Initializ

Instance: i-0ad0d8ba8334cc105

Details Security Networking Storage Status checks Monitoring Tags

Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0ad0d8ba8334cc105	18.219.192.144 open address	172.31.18.0

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File Edit Format View Help GROUP - E

1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankhar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS
Downloading:-
Ubuntu Server 18

Lambton College In Mississauga Connect to instance | EC2 Management Con Course: 2021F-T1 BDM 1024 - D us-east-2.console.aws.amazon.com/ec2/v2/home?region=us-east-2#ConnectToInstance:instanceId=i-0ad0d... lotus Ohio Support

New EC2 Experience Services Search for services, features, marketplace products, and docs [Alt+S] lotus Ohio Support

EC2 Dashboard EC2 Global View Events Tags Limits Instances Instances New Instance Types Launch Templates Spot Requests Savings Plans Reserved Instances New Dedicated Hosts Capacity Reservations

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Connect to instance Info

Connect to your instance i-0ad0d8ba8334cc105 using any of these options

ubuntu@ip-172-31-18-0: ~

```
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/advantage

System information as of Fri Sep 24 21:49:40 UTC 2021

System load: 0.0      Processes: 92
Usage of /: 3.9% of 29.02GB  Users logged in: 0
Memory usage: 20%      IP address for eth0: 172.31.18.0
Swap usage: 0%

0 packages can be updated.
0 of these updates are security updates.

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-18-0:~$
```

Note: In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.

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1)Kamaldeep Dhami
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5)Davinderjit Singh

LAB 1c
Hadoop in AWS
Connecting to putty

root@ip-172-31-18-0: /home/ubuntu

```
* Support: https://ubuntu.com/advantage

System information as of Fri Sep 24 21:49:40 UTC 2021

System load: 0.0 Processes: 92
Usage of /: 3.9% of 29.02GB Users logged in: 0
Memory usage: 20% IP address for eth0: 172.31.18.0
Swap usage: 0%

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The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-18-0:~$ clear
ubuntu@ip-172-31-18-0:~$ sudo apt-get update -y
Hit:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic InRelease
Get:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates InRelease [8.7 kB]
Get:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-backports InRelease [74.6 kB]
Get:4 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Get:5 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/universe amd64 Packages [8570 kB]
Get:6 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/universe Translation-en [4941 kB]
Get:7 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/multiverse amd64 Packages [151 kB]
Get:8 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic/multiverse Translation-en [108 kB]
Get:9 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 Packages [2225 kB]
Get:10 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main Transl...
```

*group e.txt - Notepad

GROUP - E

- 1)Kamaldeep Dhami
- 2)Kirandeep Kaur
- 3)Anirudh Siddula
- 4)Bibek Shah Shankhar
- 5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands:
sudo apt-get update -y

To Update

root@ip-172-31-18-0: /home/ubuntu

```
Get:23 http://security.ubuntu.com/ubuntu bionic-security/restricted amd64 Packages [448 kB]
Get:24 http://security.ubuntu.com/ubuntu bionic-security/restricted Translation-en [60.3 kB]
Get:25 http://security.ubuntu.com/ubuntu bionic-security/universe amd64 Packages [1138 kB]
Get:26 http://security.ubuntu.com/ubuntu bionic-security/universe Translation-en [259 kB]
Get:27 http://security.ubuntu.com/ubuntu bionic-security/multiverse amd64 Packages [20.9 kB]
Get:28 http://security.ubuntu.com/ubuntu bionic-security/multiverse Translation-en [4732 B]
Fetched 23.6 MB in 5s (4878 kB/s)
Reading package lists... Done
root@ip-172-31-18-0:~/home/ubuntu# ^C
root@ip-172-31-18-0:~/home/ubuntu# sudo apt-get install openjdk-8-jdk
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
adwaita-icon-theme-at-spi2-core ca-certificates-java fontconfig fontconfig-config fonts-dejavu-core
fonts-dejavu-extra gtk-update-icon-cache hicolor-icon-theme humanity-icon-theme java-common libasound2
libasound2-data libasynccns0 libatk-bridge2.0-0 libatk-wrapper-java-jni libatk1.0-0
libatk1.0-0-data libatspi2.0-0 libavahi-client3 libavahi-common-data libavahi-common3 libcairo2 libcroco3 libcurl2
libdatriel libdrm-amdgpu libdrm-intel libdrm-nouveau libdrm-radeon libflac8 libfontconfig1 libfontenc
libgbm-common libgail18 libgd-pixbuf2.0-0 libgd-pixbuf2.0-bin libgd-pixbuf2.0-common libgif7 libgl1
libgl1-mesa-dri libgl1-mesa-glx libglapi-mesa libglx-mesa0 libglx0 libgraphite2-2 libgtk2.0-0
libgtk2.0-bin libgtk2.0-common libharfbuzz0 libice-dev libice6 libjbig0 libjpeg-turbo8 libjpegs liblcms2-2
liblvm10 libnss4 libnss3 libpango-1.0-0 libpangocairo-1.0-0 libpangocft2-1.0-0 libpciaccess0 libpcsc-lite1
libpixman-1-0 libpthread-stubs0-dev libpulse0 librsvg2-2 librsvg2-common libssensors4 libsm-dev libsm6 libsdnfile1
libthai-data libthai0 libtiff5 libvorbis0a libvorbisenc2 libxml1-6 libxml1-dev libxml1-doc libxml1-xcb libxau-dev
libxaw7 libxcb-dri2-0 libxcb-dri3-0 libxcb-glx0 libxcb-present0 libxcb-render0 libxcb-shape0 libxcb-shm0
libxcb-sync1 libxcb1-dev libxcompositel libcursor0 libxdamage1 libxdmcp-dev libxfixed3 libxft2 libx16 libxinerama1
libxmu6 libxpm4 libxrndr2 libxshmfence1 libxt-dev libxt6 libxtst6 libxv1 libxf86dg1 libxf86vml
openjdk-8-jdk-headless openjdk-8-jre openjdk-8-jre-headless ubuntu-mono x11-common x11-utils xproto-core-dev
xproto-dev xorg-xgml-doctools xtrans-dev
Suggested packages:
default-fre libasound2-plugins alsamixer cups-common gvfs libice-doc liblcms2-utils pccsdc pulseaudio librsvg2-bin
Im-sensors libm-doc libxcb-doc libxt-doc openjdk-8-demo openjdk-8-source visualvmicedtea-8-plugin libnss-mdns
fonts-ipafont-gothic fonts-ipafont-mincho fonts-wqy-microhei fonts-wqy-zenhei fonts-indic mesa-utils
The following NEW packages will be installed:
adwaita-icon-theme-at-spi2-core ca-certificates-java fontconfig fontconfig-config fonts-dejavu-core
fonts-dejavu-extra gtk-update-icon-cache hicolor-icon-theme humanity-icon-theme java-common libasound2
libasound2-data libasynccns0 libatk-bridge2.0-0 libatk-wrapper-java-jni libatk1.0-0
```

*group e.txt - Notepad

GROUP - E

- 1)Kamaldeep Dhami
- 2)Kirandeep Kaur
- 3)Anirudh Siddula
- 4)Bibek Shah Shankhar
- 5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands:
sudo apt-get install openjdk-8-jdk

to install java8

root@ip-172-31-18-0:/home/ubuntu#

```

root@ip-172-31-18-0:/home/ubuntu# java -version
openjdk version "1.8.0_292"
OpenJDK Runtime Environment (build 1.8.0_292-8u292-b10-0ubuntu1-18.04-b10)
OpenJDK 64-Bit Server VM (build 25.292-b10, mixed mode)
root@ip-172-31-18-0:/home/ubuntu# sudo apt install openssh-client -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  openssh-server openssh-sftp-server
Suggested packages:
  keychain libpam-ssh monkeysphere ssh-askpass molly-guard rssh
The following packages will be upgraded:
  openssh-client openssh-server openssh-sftp-server
3 upgraded, 0 newly installed, 0 to remove and 76 not upgraded.
Need to get 990 kB of archives.
After this operation, 5120 B of additional disk space will be used.
Get:1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 openssh-sftp-server amd64 1:7.6pl1-4ubuntu0.5 [45.5 kB]
Get:2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 openssh-server amd64 1:7.6pl1-4ubuntu0.5 [332 kB]
Get:3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 openssh-client amd64 1:7.6pl1-4ubuntu0.5 [612 kB]
Fetched 990 kB in 0s (17.3 MB/s)
Preconfiguring packages ...
(Reading database ... 73250 files and directories currently installed.)
Preparing to unpack .../openssh-sftp-server_1%3a7.6pl1-4ubuntu0.5_amd64.deb ...
Unpacking openssh-sftp-server (1:7.6pl1-4ubuntu0.5) over (1:7.6pl1-4ubuntu0.3) ...
Preparing to unpack .../openssh-server_1%3a7.6pl1-4ubuntu0.5_amd64.deb ...
Unpacking openssh-server (1:7.6pl1-4ubuntu0.5) over (1:7.6pl1-4ubuntu0.3) ...
Preparing to unpack .../openssh-client_1%3a7.6pl1-4ubuntu0.5_amd64.deb ...
Unpacking openssh-client (1:7.6pl1-4ubuntu0.5) over (1:7.6pl1-4ubuntu0.3) ...
Setting up openssh-client (1:7.6pl1-4ubuntu0.5) ...
Setting up openssh-sftp-server (1:7.6pl1-4ubuntu0.5) ...
Setting up openssh-server (1:7.6pl1-4ubuntu0.5) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for ufw (0.36-0ubuntu0.18.04.1) ...
Processing triggers for ureadahead (0.100.0-21) ...
Processing triggers for systemd (237-3ubuntu0.46) ...
root@ip-172-31-18-0:/home/ubuntu#

```

File Edit Format View Help
GROUP - E

1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankhar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands:
sudo apt install openssh-client -y

to install openssh client

Type here to search 25°C 6:03 PM 9/24/2021

root@ip-172-31-18-0:/home/ubuntu#

```

update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jrunscript to provide /usr/bin/jrunscript (jrunscript) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/javadoc to provide /usr/bin/javadoc (javadoc) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/javap to provide /usr/bin/javap (javap) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jar to provide /usr/bin/jar (jar) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/extcheck to provide /usr/bin/extcheck (extcheck) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/schemagen to provide /usr/bin/schemagen (schemagen) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/xjc to provide /usr/bin/xjc (xjc) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jmap to provide /usr/bin/jmap (jmap) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jstathd to provide /usr/bin/jstathd (jstathd) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jhat to provide /usr/bin/jhat (jhat) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jdb to provide /usr/bin/jdb (jdb) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/serialver to provide /usr/bin/serialver (serialver) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jfr to provide /usr/bin/jfr (jfr) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/wsgen to provide /usr/bin/wsgen (wsgen) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jcmd to provide /usr/bin/jcmd (jcmd) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jarsigner to provide /usr/bin/jarsigner (jarsigner) in auto mode
Setting up openjdk-8-jre-amd64 (8u292-b10-0ubuntu1-18.04) ...
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/jre/bin/policytool to provide /usr/bin/policytool (policytool) in auto mode
Setting up openjdk-8-jdk-amd64 (8u292-b10-0ubuntu1-18.04) ...
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/appletviewer to provide /usr/bin/appletviewer (appletviewer) in auto mode
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/bin/jconsole to provide /usr/bin/jconsole (jconsole) in auto mode
Processing triggers for libgdk-pixbuf2.0-0:amd64 (2.36.11-2) ...
Processing triggers for libc-bin (2.27-3ubuntu1.4) ...
root@ip-172-31-18-0:/home/ubuntu#
root@ip-172-31-18-0:/home/ubuntu# java -version
openjdk version "1.8.0_292"
OpenJDK Runtime Environment (build 1.8.0_292-8u292-b10-0ubuntu1-18.04-b10)
OpenJDK 64-Bit Server VM (build 25.292-b10, mixed mode)
root@ip-172-31-18-0:/home/ubuntu#

```

File Edit Format View Help
GROUP - E

1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankhar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands:
java -version

to check java version

Type here to search 26°C 6:00 PM 9/24/2021

root@ip-172-31-18-0: /home/ubuntu

```
Gett1 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 openssh-sftp-server amd64 1:7.6pl-4ubuntu0.5 [45.5 kB]
Gett2 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 openssh-server amd64 1:7.6pl-4ubuntu0.5 [332 kB]
Gett3 http://us-east-2.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 openssh-client amd64 1:7.6pl-4ubuntu0.5 [612 kB]
Fetched 990 kB in 0s (17.3 MB/s)
Preconfiguring packages ...
(Reading database ... 73250 files and directories currently installed.)
Preparing to unpack .../openssh-sftp-server_1%3a7.6pl-4ubuntu0.5_amd64.deb ...
Unpacking openssh-sftp-server (1:7.6pl-4ubuntu0.5) over (1:7.6pl-4ubuntu0.3) ...
Preparing to unpack .../openssh-server_1%3a7.6pl-4ubuntu0.5_amd64.deb ...
Unpacking openssh-server (1:7.6pl-4ubuntu0.5) over (1:7.6pl-4ubuntu0.3) ...
Preparing to unpack .../openssh-client_1%3a7.6pl-4ubuntu0.5_amd64.deb ...
Unpacking openssh-client (1:7.6pl-4ubuntu0.5) over (1:7.6pl-4ubuntu0.3) ...
Setting up openssh-client (1:7.6pl-4ubuntu0.5) ...
Setting up openssh-sftp-server (1:7.6pl-4ubuntu0.5) ...
Setting up openssh-server (1:7.6pl-4ubuntu0.5) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for ufw (0.36-0ubuntu0.18.04.1) ...
Processing triggers for ureadahead (0.100.0-21) ...
Processing triggers for systemd (237-3ubuntu10.46) ...
root@ip-172-31-18-0:/home/ubuntu#
root@ip-172-31-18-0:/home/ubuntu#
root@ip-172-31-18-0:/home/ubuntu#
root@ip-172-31-18-0:/home/ubuntu# sudo adduser hdoop
Adding user 'hdoop' ...
Adding new group 'hdoop' (1001) ...
Adding new user 'hdoop' (1001) with group 'hdoop' ...
Creating home directory '/home/hdoop' ...
Copying files from '/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for hdoop
Enter the new value, or press ENTER for the default
  Full Name []: kamaldeep
  Room Number []:
  Work Phone []:
  Home Phone []:
  Other []
Is the information correct? [Y/n] y
root@ip-172-31-18-0:/home/ubuntu#
```

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GROUP - E

1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankhar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands:
sudo adduser hdoop

to add new user

Windows (CRLF) UTF-8
Ln 16, 100% 6:08 PM 9/24/2021

Type here to search

hdoop@ip-172-31-18-0: ~hadoop-2.10.1

```
hdoop@ip-172-31-18-0-:~$ wget https://mirrors.estointernet.in/apache/hadoop/common/hadoop-2.10.1/hadoop-2.10.1.tar.gz
--2021-09-24 22:58:33-- https://mirrors.estointernet.in/apache/hadoop/common/hadoop-2.10.1/hadoop-2.10.1.tar.gz
Resolving mirrors.estointernet.in (mirrors.estointernet.in)... 43.255.166.254, 2403:8940:3:1::f
Connecting to mirrors.estointernet.in (mirrors.estointernet.in)|43.255.166.254|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 408587111 (390M) [application/octet-stream]
Saving to: 'hadoop-2.10.1.tar.gz'

hadoop-2.10.1.tar.gz      100%[=====] 389.66M  4.53MB/s    in 78s

2021-09-24 22:59:52 (5.00 MB/s) - 'hadoop-2.10.1.tar.gz' saved [408587111/408587111]

hdoop@ip-172-31-18-0-:~$ tar -xzf hadoop-2.10.1.tar.gz
hdoop@ip-172-31-18-0-:~$ pwd
/home/hdoop
hdoop@ip-172-31-18-0-:~$ cd hadoop-2.10.1
hdoop@ip-172-31-18-0-:~/hadoop-2.10.1$ pwd
/home/hdoop/hadoop-2.10.1
hdoop@ip-172-31-18-0-:~/hadoop-2.10.1$
```

File Edit Format View Help
GROUP - E

1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankhar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands:
tar -xzf hadoop-2.10.1.tar.gz

to extract it

Windows (CRLF) UTF-8
Ln 15, Col 14 100% 7:03 PM 9/24/2021

Type here to search

hadoop@ip-172-31-18-0: ~

```
hadoop@ip-172-31-18-0:~$ wget https://mirrors.estointernet.in/apache/hadoop/common/hadoop-2.10.1/hadoop-2.10.1.tar.gz
--2021-09-24 22:58:33-- https://mirrors.estointernet.in/apache/hadoop/common/hadoop-2.10.1/hadoop-2.10.
1.tar.gz
Resolving mirrors.estointernet.in (mirrors.estointernet.in)... 43.255.166.254, 2403:8940:3:1::f
Connecting to mirrors.estointernet.in (mirrors.estointernet.in)|43.255.166.254|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 408587111 (390M) [application/octet-stream]
Saving to: 'hadoop-2.10.1.tar.gz'

hadoop-2.10.1.tar.gz      100%[=====] 389.66M  4.53MB/s   in 78s

2021-09-24 22:59:52 (5.00 MB/s) - 'hadoop-2.10.1.tar.gz' saved [408587111/408587111]

hadoop@ip-172-31-18-0:~$
```

hadoop@ip-172-31-18-0: ~

* * * * *

File Edit Format View Help
GROUP - E

1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankhar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands:
wget <link>

to install hadoop 2.10.1

Ln 13, Col 12 100% Windows (CRLF) UTF-8

7:00 PM 9/24/2021

Type here to search

hadoop@ip-172-31-18-0: /home/ubuntu

```
Other []:
Is the information correct? [Y/n] y
root@ip-172-31-18-0:/home/ubuntu#
root@ip-172-31-18-0:/home/ubuntu#
root@ip-172-31-18-0:/home/ubuntu# visudo
root@ip-172-31-18-0:/home/ubuntu# visudo
root@ip-172-31-18-0:/home/ubuntu# visudo
root@ip-172-31-18-0:/home/ubuntu# visudo
root@ip-172-31-18-0:/home/ubuntu# visudo
root@ip-172-31-18-0:/home/ubuntu# visudo
root@ip-172-31-18-0:/home/ubuntu# usermod -aG sudo hdoop
root@ip-172-31-18-0:/home/ubuntu# sudo su hdoop
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

hadoop@ip-172-31-18-0:/home/ubuntu$ ssh -keygen -t rsa -P '' -f ~/.ssh/id_rsa
Bad escape character 'ygen'.
hadoop@ip-172-31-18-0:/home/ubuntu$ ssh -keygen -t rsa -P '' -f ~/.ssh/id_rsa
Bad escape character 'ygen'.
hadoop@ip-172-31-18-0:/home/ubuntu$ ssh-keygen -t rsa -P '' -f ~/.ssh/id_rsa
Generating public/private rsa key pair.
Created directory '/home/hdoop/.ssh'.
Your identification has been saved in /home/hdoop/.ssh/id_rsa.
Your public key has been saved in /home/hdoop/.ssh/id_rsa.pub.
The key's fingerprint is:
SHA256:jOFalz/LvwpSw8cXzKN714oyTGe5cTot//OSXzoKNs hdoop@ip-172-31-18-0
The key's randomart image is:
+---[RSA 2048]---+
          o
          =
         . o . . o
        o o S +..
        o . = +*o.. .o
       o o=+*..oo+
       . oB+=+.+=
       .+=*==E
+---[SHA256]---+
hadoop@ip-172-31-18-0:/home/ubuntu$ cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys
hadoop@ip-172-31-18-0:/home/ubuntu$ chmod 0600 ~/.ssh/authorized_keys
chmod: cannot access '/home/hdoop/.ssh/authorized_keys': No such file or directory
hadoop@ip-172-31-18-0:/home/ubuntu$ cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys
hadoop@ip-172-31-18-0:/home/ubuntu$ chmod 0600 ~/.ssh/authorized_keys
hadoop@ip-172-31-18-0:/home/ubuntu$
```

File Edit Format View Help
GROUP - E

1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankhar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands:
cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys
chmod 0600 ~/.ssh/authorized_keys

ssh authorize key

Ln 14, Col 34 100% Windows (CRLF) UTF-8

6:40 PM 9/24/2021

Type here to search

hadoop@ip-172-31-18-0:~/home/ubuntu

```
Enter the new value, or press ENTER for the default
  Full Name []: kamaldeep
  Room Number []:
  Work Phone []:
  Home Phone []:
  Other []

Is the information correct? [Y/n] y
root@ip-172-31-18-0:~/home/ubuntu#
root@ip-172-31-18-0:~/home/ubuntu# visudo
root@ip-172-31-18-0:~/home/ubuntu# visudo
root@ip-172-31-18-0:~/home/ubuntu# visudo
root@ip-172-31-18-0:~/home/ubuntu# visudo
root@ip-172-31-18-0:~/home/ubuntu# visudo
root@ip-172-31-18-0:~/home/ubuntu# usermod -aG sudo hdoop
root@ip-172-31-18-0:~/home/ubuntu# sudo su hdoop
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

hadoop@ip-172-31-18-0:~/home/ubuntu$ ssh -keygen -t rsa -P '' -f ~/.ssh/id_rsa
Bad escape character 'yen'.
hadoop@ip-172-31-18-0:~/home/ubuntu$ ssh -keygen -t rsa -P '' -f ~/.ssh/id_rsa
Bad escape character 'yen'.
hadoop@ip-172-31-18-0:~/home/ubuntu$ ssh-keygen -t rsa -P '' -f ~/.ssh/id_rsa
Generating public/private rsa key pair.
Created directory '/home/hadoop/.ssh'.
Your identification has been saved in /home/hadoop/.ssh/id_rsa.
Your public key has been saved in /home/hadoop/.ssh/id_rsa.pub.
The key's fingerprint is:
SHA256:joFalzLvvps8cXzKN714oyTGa5ctot//OSXzoXNs hadoop@ip-172-31-18-0
The key's randomart image is:
+---[RSA 2048]---+
|          o      |
|         . =     |
|        . o . . o |
|       o o S +.. |
|      o . = +o. .o|
|     . o om+++.oo+|
|    . .OB+==,+=| |
|     ++=+=E| |
+---[SHA256]---+
hadoop@ip-172-31-18-0:~/home/ubuntu$
```

File Edit Format View Help

GROUP - E

- 1)Kamaldeep Dhami
- 2)Kirandeep Kaur
- 3)Anirudh Siddula
- 4)Bibek Shah Shankhar
- 5)Davinderjit Singh

LAB 1c

Hadoop in AWS

Commands:

```
ssh-keygen -t rsa -P '' -f ~/.ssh/id_rsa
```

to generate key

Ln 16, Col 16 100% Windows (CRLF) UTF-8 6:34 PM 9/24/2021

hadoop@ip-172-31-18-0:~/home/ubuntu

```
Preparing to unpack .../openssh-client_1%3a7.6p1-4ubuntu0.5_amd64.deb ...
Unpacking openssh-client (1:7.6p1-4ubuntu0.5) over (1:7.6p1-4ubuntu0.3) ...
Setting up openssh-client (1:7.6p1-4ubuntu0.5) ...
Setting up openssh-sftp-server (1:7.6p1-4ubuntu0.5) ...
Setting up openssh-server (1:7.6p1-4ubuntu0.5) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for ufw (0.36-0ubuntu0.18.04.1) ...
Processing triggers for ureadahead (0.100.0-21) ...
Processing triggers for systemd (237-3ubuntu10.46) ...
root@ip-172-31-18-0:~/home/ubuntu#
root@ip-172-31-18-0:~/home/ubuntu#
root@ip-172-31-18-0:~/home/ubuntu#
root@ip-172-31-18-0:~/home/ubuntu# sudo adduser hdoop
Adding user 'hdoop' ...
Adding new group 'hdoop' (1001) ...
Adding new user 'hdoop' (1001) with group 'hdoop' ...
Creating home directory '/home/hdoop' ...
Copying files from '/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for hdoop
Enter the new value, or press ENTER for the default
  Full Name []: kamaldeep
  Room Number []:
  Work Phone []:
  Home Phone []:
  Other []

Is the information correct? [Y/n] y
root@ip-172-31-18-0:~/home/ubuntu#
root@ip-172-31-18-0:~/home/ubuntu# visudo
root@ip-172-31-18-0:~/home/ubuntu# visudo
root@ip-172-31-18-0:~/home/ubuntu# visudo
root@ip-172-31-18-0:~/home/ubuntu# visudo
root@ip-172-31-18-0:~/home/ubuntu# visudo
root@ip-172-31-18-0:~/home/ubuntu# usermod -aG sudo hdoop
root@ip-172-31-18-0:~/home/ubuntu# sudo su hdoop
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

hadoop@ip-172-31-18-0:~/home/ubuntu$
```

File Edit Format View Help

GROUP - E

- 1)Kamaldeep Dhami
- 2)Kirandeep Kaur
- 3)Anirudh Siddula
- 4)Bibek Shah Shankhar
- 5)Davinderjit Singh

LAB 1c

Hadoop in AWS

Commands:

```
usermod -aG sudo hdoop
sudo su hdoop
```

logged in as hdoop

Ln 17, 100% Windows (CRLF) UTF-8 6:28 PM 9/24/2021

root@ip-172-31-18-0:/home/ubuntu# visudo
 GNU nano 2.9.3 /etc/sudoers.tmp

```

# This file MUST be edited with the 'visudo' command as root.
# Please consider adding local content in /etc/sudoers.d/ instead of
# directly modifying this file.
# See the man page for details on how to write a sudoers file.

Defaults      env_reset
Defaults      mail_badpass
Defaults      secure_path="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/snap/bin"

# Host alias specification

# User alias specification

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL
hadoop  ALL=(ALL:ALL) ALL
# Members of the admin group may gain root privileges
%admin  ALL=(ALL) ALL

# Allow members of group sudo to execute any command
%sudo   ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "#include" directives:

#include /etc/sudoers.d

```

Save modified buffer? (Answering "No" will DISCARD changes.) Y Yes

Windows Taskbar: Type here to search, File Explorer, Mail, OneDrive, Edge, Google Chrome, File Explorer, 41 notifications, 25°C, 6:22 PM, 9/24/2021

File Edit Format View Help GROUP - E

1)Kamaldeep Dhami
 2)Kirandeep Kaur
 3)Anirudh Siddula
 4)Bibek Shah Shankhar
 5)Davinderjit Singh

LAB 1c
 Hadoop in AWS

Commands:

visudo

to set user privilege

hadoop@ip-172-31-18-0:~

```

alias ll='ls -alF'
alias la='ls -A'
alias l='ls -CF'

# Add an "alert" alias for long running commands.  Use like so:
# sleep 10; alert
alias alert='notify-send --urgency=low -i "$([ $(echo $?) = 0 ] && echo terminal || echo error)" "$history|tail -n1"
sed -e 's/^s*[0-9]+s*///s/[;:]\|s*alert$//\'''

# Alias definitions.
# You may want to put all your additions into a separate file like
# ~/.bash_aliases, instead of adding them here directly.
# See /usr/share/doc/bash-doc/examples in the bash-doc package.

if [ -f ~/.bash_aliases ]; then
. ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
if ! shopt -q posix; then
  if [ -f /usr/share/bash-completion/bash_completion ]; then
    . /usr/share/bash-completion/bash_completion
  elif [ -f /etc/bash_completion ]; then
    . /etc/bash_completion
  fi
fi
export HADOOP_HOME=/home/hadoop/hadoop-2.10.1
export HADOOP_INSTALL=$HADOOP_HOME
export HADOOP_MAPRED_HOME=$HADOOP_HOME
export HADOOP_COMMON_HOME=$HADOOP_HOME
export HADOOP_HDFS_HOME=$HADOOP_HOME
export YARN_HOME=$HADOOP_HOME
export HADOOP_COMMON_LIB_NATIVE_DIR=$HADOOP_HOME/lib/native
export PATH=$PATH:$HADOOP_HOME/sbin:$HADOOP_HOME/bin
export HADOOP_OPTS="-Djava.library.path=$HADOOP_HOME/lib/native"
export JAVA_HOME="/usr/lib/jvm/java-8-openjdk-amd64"
:xx:
```

-- INSERT --

Windows Taskbar: Type here to search, File Explorer, Mail, OneDrive, Edge, Google Chrome, File Explorer, 41 notifications, 25°C, 7:46 PM, 9/24/2021

File Edit Format View Help GROUP - E

1)Kamaldeep Dhami
 2)Kirandeep Kaur
 3)Anirudh Siddula
 4)Bibek Shah Shankhar
 5)Davinderjit Singh

LAB 1c
 Hadoop in AWS

Commands:

vi .bashrc

to update bashrcX

ubuntu@ip-172-31-18-0: ~

```
<?xml version="1.0"?>
<!--
  Licensed under the Apache License, Version 2.0 (the "License");
  you may not use this file except in compliance with the License.
  You may obtain a copy of the License at

    http://www.apache.org/licenses/LICENSE-2.0

  Unless required by applicable law or agreed to in writing, software
  distributed under the License is distributed on an "AS IS" BASIS,
  WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
  See the License for the specific language governing permissions and
  limitations under the License. See accompanying LICENSE file.
-->
<configuration>

<!-- Site specific YARN configuration properties -->
<property>
  <name>yarn.nodemanager.aux-services</name>
  <value>mapreduce_shuffle</value>
</property>
<property>
  <name>yarn.nodemanager.aux-services.mapreduce_shuffle.class</name>
  <value>org.apache.hadoop.mapred.ShuffleHandler</value>
</property>
<property>
  <name>yarn.resourcemanager.hostname</name>
  <value>ec2-18-222-174-229.us-east-2.compute.amazonaws.com</value>
</property>
<property>
  <name>yarn.acl.enable</name>
  <value>0</value>
</property>
<property>
  <name>yarn.nodemanager.env-whitelist</name>
  <value>JAVA_HOME,HADOOP_COMMON_HOME,HADOOP_HDFS_HOME,HADOOP_CONF_DIR,CLASSPATH_PERPEND_DISTCACHE,HADOOP_YARN_HOME,HADOOP_MAPRED_HOME</value>
</property>
</configuration>[]

<-- INSERT -->
```

ubuntu@ip-172-31-18-0: ~

```
<configuration>
<property>
<name>mapreduce.jobtracker.address</name>
<value>ec2-18-222-174-229.us-east-2.compute.amazonaws.com</value>
</property>
<property>
<name>mapreduce.framework.name</name>
<value>yarn</value>
</property>
</configuration>
```

"/home/hadoop/hadoop-2.10.1/etc/hadoop/mapred-site.xml" 11L, 246C

"group.e.txt - Notepad" - E

```
File Edit Format View Help
GROUP - E

1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankhar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands:
sudo vi $HADOOP_HOME/etc/hadoop/yarn-site.xml
```

Ln 15, Col 100% Windows (CRLF) UTF-8

3:27 PM 9/26/2021

ubuntu@ip-172-31-18-0: ~

```
<configuration>
<property>
<name>mapreduce.jobtracker.address</name>
<value>ec2-18-222-174-229.us-east-2.compute.amazonaws.com</value>
</property>
<property>
<name>mapreduce.framework.name</name>
<value>yarn</value>
</property>
</configuration>
```

"/home/hadoop/hadoop-2.10.1/etc/hadoop/mapred-site.xml" 11L, 246C

"group.e.txt - Notepad" - E

```
File Edit Format View Help
GROUP - E

1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankhar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands:
sudo vi $HADOOP_HOME/etc/hadoop/mapred-site.xml

(copy the same configuration tag like core-site
.xml)
```

Ln 17, Col 100% Windows (CRLF) UTF-8

3:11 PM 9/26/2021


```
ubuntu@ip-172-31-18-0: ~
drwxr-xr-x 6 ubuntu ubuntu 4096 Sep 26 16:27 .
drwxr-xr-x 4 root root 4096 Sep 24 22:06 ..
-rw----- 1 ubuntu ubuntu 57 Sep 26 16:19 .bash_history
-rw-r--r-- 1 ubuntu ubuntu 220 Apr 4 2018 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Apr 4 2018 .bashrc
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 24 21:49 .cache/
drwxr-xr-x 3 ubuntu ubuntu 4096 Sep 24 21:49 .gnupg/
-rw-r--r-- 1 ubuntu ubuntu 807 Apr 4 2018 .profile
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 24 21:43 .ssh/
-rw-r--r-- 1 ubuntu ubuntu 0 Sep 24 21:51 .sudo_as_admin_successful
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 26 16:18 .vim/
-rw----- 1 ubuntu ubuntu 2254 Sep 26 16:27 .viminfo
ubuntu@ip-172-31-18-0:~$ ls -la
total 44
drwxr-xr-x 6 ubuntu ubuntu 4096 Sep 26 16:27 .
drwxr-xr-x 4 root root 4096 Sep 24 22:06 ..
-rw----- 1 ubuntu ubuntu 57 Sep 26 16:19 .bash_history
-rw-r--r-- 1 ubuntu ubuntu 220 Apr 4 2018 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Apr 4 2018 .bashrc
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 24 21:49 .cache/
drwxr-xr-x 3 ubuntu ubuntu 4096 Sep 24 21:49 .gnupg/
-rw-r--r-- 1 ubuntu ubuntu 807 Apr 4 2018 .profile
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 24 21:43 .ssh/
-rw-r--r-- 1 ubuntu ubuntu 0 Sep 24 21:51 .sudo_as_admin_successful
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 26 16:18 .vim/
-rw----- 1 ubuntu ubuntu 2254 Sep 26 16:27 .viminfo
ubuntu@ip-172-31-18-0:~$ ls
ubuntu@ip-172-31-18-0:~$ vi .bashrc
ubuntu@ip-172-31-18-0:~$ source .bashrc
ubuntu@ip-172-31-18-0:~$ ls $HADOOP_HOME
LICENSE.txt NOTICE.txt README.txt bin etc include lib libexec sbin share
ubuntu@ip-172-31-18-0:~$ sudo vi $HADOOP_HOME/etc/hadoop/core-site.xml
ubuntu@ip-172-31-18-0:~$
```

Commands:
sudo vi \$HADOOP_HOME/etc/hadoop/core-site.xml
-- copy your public ipv4 DNS of your instance in aws and paste it inside configuration

```
ubuntu@ip-172-31-18-0: ~
drwxr-xr-x 6 ubuntu ubuntu 4096 Sep 26 16:27 .
drwxr-xr-x 4 root root 4096 Sep 24 22:06 ..
-rw----- 1 ubuntu ubuntu 57 Sep 26 16:19 .bash_history
-rw-r--r-- 1 ubuntu ubuntu 220 Apr 4 2018 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Apr 4 2018 .bashrc
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 24 21:49 .cache/
drwxr-xr-x 3 ubuntu ubuntu 4096 Sep 24 21:49 .gnupg/
-rw-r--r-- 1 ubuntu ubuntu 807 Apr 4 2018 .profile
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 24 21:43 .ssh/
-rw-r--r-- 1 ubuntu ubuntu 0 Sep 24 21:51 .sudo_as_admin_successful
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 26 16:18 .vim/
-rw----- 1 ubuntu ubuntu 2254 Sep 26 16:27 .viminfo
ubuntu@ip-172-31-18-0:~$ ls -la
total 44
drwxr-xr-x 6 ubuntu ubuntu 4096 Sep 26 16:27 .
drwxr-xr-x 4 root root 4096 Sep 24 22:06 ..
-rw----- 1 ubuntu ubuntu 57 Sep 26 16:19 .bash_history
-rw-r--r-- 1 ubuntu ubuntu 220 Apr 4 2018 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Apr 4 2018 .bashrc
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 24 21:49 .cache/
drwxr-xr-x 3 ubuntu ubuntu 4096 Sep 24 21:49 .gnupg/
-rw-r--r-- 1 ubuntu ubuntu 807 Apr 4 2018 .profile
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 24 21:43 .ssh/
-rw-r--r-- 1 ubuntu ubuntu 0 Sep 24 21:51 .sudo_as_admin_successful
drwxr-xr-x 2 ubuntu ubuntu 4096 Sep 26 16:18 .vim/
-rw----- 1 ubuntu ubuntu 2254 Sep 26 16:27 .viminfo
ubuntu@ip-172-31-18-0:~$ ls -lalgrep swp
ubuntu@ip-172-31-18-0:~$ vi .bashrc
ubuntu@ip-172-31-18-0:~$ source .bashrc
source.bashrc: command not found
ubuntu@ip-172-31-18-0:~$ source.bashrc
source.bashrc: command not found
ubuntu@ip-172-31-18-0:~$ source .bashrc
ubuntu@ip-172-31-18-0:~$ vi .bashrc

Commands:  
ls $HADOOP_HOME  
should point to Hadoop directory
```

The screenshot shows a Windows desktop environment with three windows open:

- Terminal Window 1 (Top Left):** Shows the command `ls /usr/lib/jvm/java-8-openjdk-amd64` being run in a terminal window. The output includes the `ASSEMBLY_EXCEPTION THIRD PARTY README` file.
- Terminal Window 2 (Bottom Left):** Shows the command `./home/hadoop/hadoop-2.10.1/sbin$ hadoop version` being run in a terminal window. The output displays the Hadoop version information, including the Subversion URL and commit hash.
- Notepad Window (Right):** A document titled "group e.txt - Notepad" containing a list of names and a section titled "LAB 1c". The list includes:
 - 1)Kamaldeep Dhami
 - 2)Kirandeep Kaur
 - 3)Anirudh Siddula
 - 4)Bibek Shah Shankhar
 - 5)Davinderjit SinghThe "LAB 1c" section contains the text "Hadoop in AWS". Below the Notepad window, the taskbar shows the date and time as 9/26/2021 and 3:30 PM.

ubuntu@ip-172-31-18-0:~/home/hadoop/hadoop-2.10.1/sbin

```
To see these additional updates run: apt list --upgradable
New release '20.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Sun Sep 26 22:25:28 2021 from 99.235.113.132
ubuntu@ip-172-31-18-0:~$ cd $HADOOP_HOME
ubuntu@ip-172-31-18-0:~/home/hadoop/hadoop-2.10.1$ cd sbin
ubuntu@ip-172-31-18-0:~/home/hadoop/hadoop-2.10.1/sbin$ hdfs namenode -format
21/09/26 22:52:09 INFO namenode.NameNode: STARTUP_MSG:
/*****STARTUP_MSG: Starting NameNode
STARTUP_MSG: host = ip-172-31-18-0.us-east-2.compute.internal/172.31.18.0
STARTUP_MSG: args = [-format]
STARTUP_MSG: version = 2.10.1
STARTUP_MSG: classpath = /home/hadoop/hadoop-2.10.1/etc/hadoop:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/jersey-server-1.9.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/curator-recipes-2.13.0.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/protobuf-java-2.5.0.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/asm-3.2.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/commons-digests-3.2.2.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/commons-configuration-1.6.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/jackson-xc-1.9.13.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/jackson-0.1.55.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/jackson-xc-1.9.13.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/jsr305-3.0.2.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/hamcrest-core-1.3.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/httpclient-4.5.2.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/httpcore-4.4.4.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/stax2-api-3.1.4.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/guava-11.0.2.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/curator-framework-2.13.0.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/commons-logging-1.1.3.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/snappy-java-1.0.5.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/junit-4.11.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/api-util-1.0.0-M20.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/jetty-6.1.26.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/curator-client-2.13.0.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/api-asn1-api-1.0.0-M20.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/netty-3.10.6.Final.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/log4j-1.2.17.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/avro-1.7.7.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/audience-annotations-0.5.0.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/activation-1.1.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/nimbus-jose-jwt-7.9.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/apacheds-kerberos-codec-2.0.0-M15.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/slf4j-log4j12-1.7.25.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/json-smart-1.3.1.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/xlenc-0.52.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/commons-beanutils-1.9.4.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/commons-compress-1.19.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/servlet-api-2.5.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/woodstox-core-5.0.3.jar:/home/hadoop/hadoop-2.10.1/share/hadoop/common/lib/jettison-1.1.jar:/hadoop@ip-172-31-18-0:~/hadoop/hadoop-2.10.1/sbin$ ./start-dfs.sh
Starting namenodes on [ec2-3-15-154-246.us-east-2.compute.amazonaws.com]
ec2-3-15-154-246.us-east-2.compute.amazonaws.com: starting namenode, logging to /home/hadoop/hadoop-2.10.1/logs/ha
localhost: datanode running as process 4419. Stop it first.
Starting secondary namenodes [0.0.0.0]
0.0.0.0: secondarynamenode running as process 4628. Stop it first.
hadoop@ip-172-31-18-0:~/hadoop/hadoop-2.10.1/sbin$ jps
4962 NodeManager
4419 DataNode
4628 SecondaryNameNode
5846 Jps
4799 ResourceManager
hadoop@ip-172-31-18-0:~/hadoop/hadoop-2.10.1/sbin$
```

File Edit Format View Help
GROUP - E

- 1)Kamaldeep Dhami
- 2)Kirandeep Kaur
- 3)Anirudh Siddula
- 4)Bibek Shah Shankhar
- 5)Davinderjit Singh

LAB 1c
Hadoop in AWS
Commands: hdfs namenode -format

group e.txt - Notepad

File Edit Format View Help
Ln 12, Col 100% Windows (CRLF) UTF-8

Windows (CRLF) UTF-8

653 PM 9/26/2021

Windows (CRLF) UTF-8

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Windows (CRLF) UTF-8

6:39 PM 9/26/2021

Ubuntu terminal session (IP: 172.31.18.0) showing Hadoop configuration and startup:

```

hadoop@ip-172-31-18-0: ~ /hadoop-2.10.1/sbin
ubuntu@ec2-3-15-154-246.us-east-2.compute.amazonaws.com: Permission denied (publickey).
ubuntu@ip-172-31-18-0: ~ ssh -T ec2-3-15-154-246.us-east-2.compute.amazonaws.com
ubuntu@ec2-3-15-154-246.us-east-2.compute.amazonaws.com: Permission denied (publickey).
ubuntu@ip-172-31-18-0: ~ su hdoop
Password:
hadoop@ip-172-31-18-0: ~ vi .bashrc
hadoop@ip-172-31-18-0: ~ vi .bashrc
hadoop@ip-172-31-18-0: ~ cd $HADOOP_HOME
hadoop@ip-172-31-18-0: ~ ./start-dfs.sh
Starting namenodes on [ec2-3-15-154-246.us-east-2.compute.amazonaws.com]
The authenticity of host 'ec2-3-15-154-246.us-east-2.compute.amazonaws.com (172.31.18.0)' can't be established.
ECDSA key fingerprint is SHA256:IoFAt1kLhg6IItemwgl dangW7cLxLg9HvIbKmrnBFdQ.
Are you sure you want to continue connecting (yes/no)? yes
ec2-3-15-154-246.us-east-2.compute.amazonaws.com: Warning: Permanently added 'ec2-3-15-154-246.us-east-2.compute.amazonaws.com' to the list of known hosts.
ec2-3-15-154-246.us-east-2.compute.amazonaws.com: starting namenode, logging to /home/hadoop/hadoop-2.10.1/logs/ha
The authenticity of host 'localhost (127.0.0.1)' can't be established.
ECDSA key fingerprint is SHA256:IoFAt1kLhg6IItemwgl dangW7cLxLg9HvIbKmrnBFdQ.
Are you sure you want to continue connecting (yes/no)? yes
localhost: Warning: Permanently added 'localhost' (ECDSA) to the list of known hosts.
localhost: starting datanode, logging to /home/hadoop/hadoop-2.10.1/logs/hadoop-hadoop-datanode-ip-172-31-18-0.out
Starting secondary namenodes [0.0.0.0]
The authenticity of host '0.0.0.0 (0.0.0.0)' can't be established.
ECDSA key fingerprint is SHA256:IoFAt1kLhg6IItemwgl dangW7cLxLg9HvIbKmrnBFdQ.
Are you sure you want to continue connecting (yes/no)? yes
0.0.0.0: Warning: Permanently added '0.0.0.0' (ECDSA) to the list of known hosts.
0.0.0.0: starting secondarynamenode, logging to /home/hadoop/hadoop-2.10.1/logs/yarn-hadoop-secondarynamenode-ip-
hadoop@ip-172-31-18-0: ~ ./hadoop-2.10.1/sbin$ jps
4419 DataNode
4628 SecondaryNameNode
4751 Jps
hadoop@ip-172-31-18-0: ~ ./hadoop-2.10.1/sbin$ ./start-yarn.sh
starting yarn daemons
starting resourcemanager, logging to /home/hadoop/hadoop-2.10.1/logs/yarn-hadoop-resourcemanager-ip-172-31-18-0.out
localhost: starting nodemanager, logging to /home/hadoop/hadoop-2.10.1/logs/yarn-hadoop-nodemanager-ip-172-31-18-0.
hadoop@ip-172-31-18-0: ~ ./hadoop-2.10.1/sbin$ jps
4962 NodeManager
4419 DataNode
4628 SecondaryNameNode
5254 Jps
4799 ResourceManager
hadoop@ip-172-31-18-0: ~ ./hadoop-2.10.1/sbin$ clear
hadoop@ip-172-31-18-0: ~ ./hadoop-2.10.1/sbin$ ./start-dfs.sh

```

Windows Notepad window showing group e.txt - Notepad content:

```

GROUP - E
1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankhar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands: ./start-dfs.sh

```

Windows Taskbar status bar: Ln 12, Col 100% Windows (CRLF) UTF-8 638 PM 9/26/2021

Windows terminal session (IP: 172.31.18.0) showing Hadoop environment setup:

```

root@ip-172-31-18-0: ~
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limitations under the License.

# Set Hadoop-specific environment variables here.

# The only required environment variable is JAVA_HOME. All others are
# optional. When running a distributed configuration it is best to
# set JAVA_HOME in this file, so that it is correctly defined on
# remote nodes.

# The java implementation to use.
export JAVA_HOME=/usr/lib/jvm/java-8-openjdk-amd64

# The jsvc implementation to use. Jsvc is required to run secure datanodes
# that bind to privileged ports to provide authentication of data transfer
# protocol. Jsvc is not required if SASL is configured for authentication of
# data transfer protocol using non-privileged ports.
#export JSVC_HOME=$JSVC_HOME

export HADOOP_CONF_DIR=$(HADOOP_CONF_DIR:-"/etc/hadoop")

# Extra Java CLASSPATH elements. Automatically insert capacity-scheduler.
for f in $HADOOP_HOME/contrib/capacity-scheduler/*.jar; do
  if [ "$HADOOP_CLASSPATH" ]; then
    export HADOOP_CLASSPATH=$HADOOP_CLASSPATH:$f
  else
    export HADOOP_CLASSPATH=$f
  fi
done

```

Windows Notepad window showing group e.txt - Notepad content:

```

GROUP - E
1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankhar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands:vi $HADOOP_HOME/etc/hadoop/hadoop-env.sh
to provide location of java 8

```

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```

ubuntu@ip-172-31-18-0:~/home/hadoop/hadoop-2.10.1/sbin$ hadoop version
Hadoop 2.10.1
Subversion https://github.com/apache/hadoop -r 1827467c9a56f133025f28557bfc2c562d78e816
Compiled by centos on 2020-09-14T13:17Z
Compiled with proto 2.5.0
From source with checksum 3114edef868f1f3824e7d0ff68be03650
This command was run using /home/hadoop/hadoop-2.10.1/share/hadoop/common/hadoop-common-2.10.1.jar
ubuntu@ip-172-31-18-0:~/home/hadoop/hadoop-2.10.1/sbin$ dfs ls
Command 'dfs' not found, did you mean:
  command 'bfs' from deb bfs
  command 'dds' from deb dds
  command 'zfs' from deb zfsutils-linux
  command 'zfs' from deb zfs-fuse
  command 'fs' from deb openafs-client
  command 'dfc' from deb dfc
  command 'hfs' from deb hfsutils-tcltk
  command 'dcs' from deb drbl
  command 'df' from deb coreutils
Try: sudo apt install <deb name>
ubuntu@ip-172-31-18-0:~/home/hadoop/hadoop-2.10.1/sbin$ 


```

File Edit Format View Help
GROUP - E
1)Kamaldeep Dhami
2)Kirandeep Kaur
3)Anirudh Siddula
4)Bibek Shah Shankar
5)Davinderjit Singh

LAB 1c
Hadoop in AWS

Commands: dfs ls

All Applications

hadoop

- Cluster Metrics
- About Nodes Node Labels Applications

 - NEW NEW_SAVING SUBMITTED ACCEPTED RUNNING FINISHED FAILED KILLED

- Scheduler Metrics
- Capacity Scheduler
- Show 20+ entries

ID	User	Name	Application Type	Queue	Application Priority	StartTime	LaunchTime	FinishTime	State	FinalStatus	Running Containers	Allocated CPU Vcores	Allocated Memory MB	Allocated GPUs	Reserved CPU Vcores	Reserved Memory MB	Reserved GPUs	% of Queue	% of Cluster	Progress	Tracking UI
No data available in table																					

Showing 0 to 0 of 0 entries

First Previous

Group E - Notepad

```

group E

Anirudh Siddula
Bibek Shah Shankar
Kamaldeep Kaur Dhami
Kirandeep Kaur
Davinderjit Singh

```

Ln 1, Col 1 160% Windows (CRLF) UTF-8

PuTTY (inactive)

```

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<!-- Put site-specific property overrides in this file. -->

<configuration>
<property>
<name>hadoop.tmp.dir</name>
<value>/home/hadoop/tmpdata</value>
</property>
<property>
<name>fs.default.name</name>
<value>hdfs://ec2-3-1-182-160.us-east-2.compute.amazonaws.com</value>
</property>
</configuration>

hadoop@ip-172-31-18-0:~/hadoop-2.10.1/sbin$ jps
3712 NameNode
4128 SecondaryNameNode
4498 HDFSManager
4965 Jps
4330 ResourceManager
hadoop@ip-172-31-18-0:~/hadoop-2.10.1/sbin$ 

```

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