Департамент образования и науки города Москвы Государственное автономное образовательное учреждениевысшего образования города Москвы «Московский городской педагогический университет»Институт цифрового образования Департамент информатики, управления и технологий

Отчет по практической работе Hadoop-Установка

Выполнил: Кряжева К.С

группа: ТП-191

```
Q | ≡
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                                   lemp@u20-05: ~
Processing triggers for libc-bin (2.31-0ubuntu9.9) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for ca-certificates (20211016~20.04.1) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...
done.
done.
Processing triggers for sgml-base (1.29.1) ...
Setting up x11proto-dev (2019.2-lubuntu1) ...
Setting up libxau-dev:amd64 (1:1.0.9-0ubuntu1)
Setting up libice-dev:amd64 (2:1.0.10-0ubuntul) ...
Setting up libsm-dev:amd64 (2:1.2.3-1) ...
Setting up libxdmcp-dev:amd64 (1:1.1.3-0ubuntul) ...
Setting up x11proto-core-dev (2019.2-1ubuntu1) ...
Setting up libxcb1-dev:amd64 (1.14-2) ...
Setting up libx11-dev:amd64 (2:1.6.9-2ubuntu1.2) ...
Setting up libxt-dev:amd64 (1:1.1.5-1) ...
lemp@u20-05:~$ java -version
openjdk version "1.8.0 342"
OpenJDK Runtime Environment (build 1.8.0 342-8u342-b07-0ubuntu1~20.04-b07)
OpenJDK 64-Bit Server VM (build 25.342-b07, mixed mode)
lemp@u20-05:~$
 ⊞
                             hadoop@u20-05: /home/lemp
                                                                         Q
                                                                              lemp@u20-05:~$ java -version
openidk version "1.8.0 342"
OpenJDK Runtime Environment (build 1.8.0 342-8u342-b07-0ubuntu1~20.04-b07)
OpenJDK 64-Bit Server VM (build 25.342-b07, mixed mode)
lemp@u20-05:~$ sudo nano /etc/environment
lemp@u20-05:~$ sudo adduser hadoop
Adding user `hadoop' ...
Adding new group `hadoop' (1001) ...
Adding new user `hadoop' (1001) with group `hadoop' ...
Creating home directory `/home/hadoop' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for hadoop
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n] y
lemp@u20-05:~$ sudo su hadoop
hadoop@u20-05:/home/lemp$
```

```
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                                hadoop@u20-05: ~
                                                                     Q
Processing triggers for libc-bin (2.31-Oubuntu9.9) ...
Processing triggers for ufw (0.36-6ubuntul) ...
Lemp@u20-05:~$ sudo su hadoop
hadoop@u20-05:/home/lemp$ cd
hadoop@u20-05:~$ ssh-keygen -t rsa -N "" -f /home/hadoop/.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 fingerprint is:
5HA256:F/skIPLWVgctTneCVaeXSnYz08vtuBPSHhSJBg50gW4 hadoop@u20-05
The key's randomart image is:
+---[RSA 3072]----+
       .+.0=.0...
      .0 0+.* +00
     ... oo++.=.Bo|
     oEo \ o.+o =.*|
     .o S + .+ o.|
      . . . +. +0
             .o.o.l
               0.
+----[SHA256]----+
hadoop@u20-05:~$ >
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                                hadoop@u20-05: ~
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```
d keys
ash: /home/hadoop/.ssh/id rsa.pub: Permission denied
adoop@u20-05:~$ cat /home/hadoop/.ssh/id rsa.pub >> /home/hadoop/.ssh/authorize
adoop@u20-05:~$ chmod 0600 /home/hadoop/.ssh/authorized keys
adoop@u20-05:~$ ssh localhost
he authenticity of host 'localhost (127.0.0.1)' can't be established.
CDSA key fingerprint is SHA256:K2D8LNfHf4GpPa+LqqR0Jj8NWUCYe8SAI2ETi00ZwLU.
re you sure you want to continue connecting (yes/no/[fingerprint])? yes
arning: Permanently added 'localhost' (ECDSA) to the list of known hosts.
elcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.15.0-46-generic x86 64)
* Documentation: https://help.ubuntu.com
* Management:
                 https://landscape.canonical.com
* Support:
                 https://ubuntu.com/advantage
8 updates can be applied immediately.
o see these additional updates run: apt list --upgradable
our Hardware Enablement Stack (HWE) is supported until April 2025.
** System restart required ***
he programs included with the Ubuntu system are free software;
he exact distribution terms for each program are described in the
```

```
hadoop@u20-05: ~
Q ≡ x
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
```

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

```
hadoop@u20-05:~$ exit
logout
Connection to localhost closed.
hadoop@u20-05:~$ wget https://archive.apache.org/dist/hadoop/common/hadoop-3.1.2
/hadoop-3.1.2.tar.gz
--2022-10-25 10:41:00-- https://archive.apache.org/dist/hadoop/common/hadoop-3.
1.2/hadoop-3.1.2.tar.gz
Resolving archive.apache.org (archive.apache.org)... 138.201.131.134, 2a01:4f8:1
72:2ec5::2
Connecting to archive.apache.org (archive.apache.org)|138.201.131.134|:443... co
nnected.
HTTP request sent, awaiting response... 200 OK
Length: 332433589 (317M) [application/x-gzip]
Saving to: 'hadoop-3.1.2.tar.gz'
hadoop-3.1.2.tar.gz 100%[===========] 317,03M
                                                         708KB/s
                                                                    in 8m 14s
2022-10-25 10:49:14 (658 KB/s) - 'hadoop-3.1.2.tar.gz' saved [332433589/33243358
```

⊞ hadoop@u20-05: ~ hadoop-3.1.2/share/doc/hadoop/images/icon warning s hadoop-3.1.2/share/doc/hadoop/images/newwindow.png hadoop-3.1.2/share/doc/hadoop/images/maven-logo-2.c hadoop-3.1.2/share/doc/hadoop/images/banner.jpg hadoop-3.1.2/share/doc/hadoop/images/logo maven.jpc hadoop-3.1.2/share/doc/hadoop/images/collapsed.gif hadoop-3.1.2/share/doc/hadoop/images/external.png hadoop-3.1.2/share/doc/hadoop/images/h5.jpg hadoop-3.1.2/share/doc/hadoop/images/logos/ hadoop-3.1.2/share/doc/hadoop/images/logos/build-by hadoop-3.1.2/share/doc/hadoop/images/logos/build-by hadoop-3.1.2/share/doc/hadoop/images/logos/maven-fe hadoop-3.1.2/share/doc/hadoop/index.html hadoop-3.1.2/share/doc/hadoop/project-reports.html hadoop-3.1.2/include/ hadoop-3.1.2/include/hdfs.h hadoop-3.1.2/include/Pipes.hh hadoop-3.1.2/include/SerialUtils.hh hadoop-3.1.2/include/StringUtils.hh hadoop-3.1.2/include/TemplateFactory.hh hadoop@u20-05:~\$ mv hadoop-3.1.2 hadoop hadoop@u20-05:~\$ nano .bashrc hadoop@u20-05:~\$ source .bashrc hadoop@u20-05:~\$

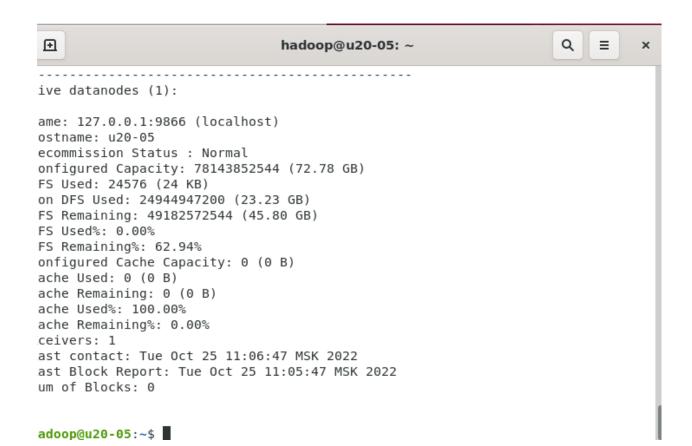
hadoop@u20-05:~\$

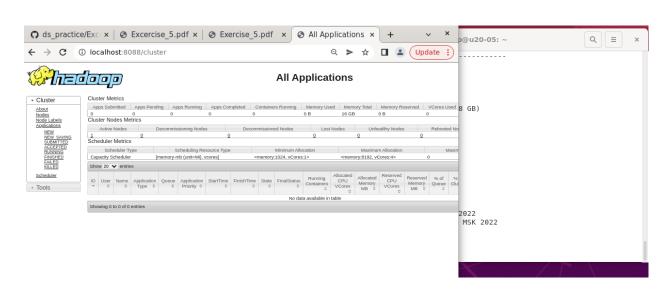
```
hadoop-3.1.2/share/doc/hadoop/images/h5.jpg
hadoop-3.1.2/share/doc/hadoop/images/logos/
 hadoop-3.1.2/share/doc/hadoop/images/logos/build-by-maven-white.png
hadoop-3.1.2/share/doc/hadoop/images/logos/build-by-maven-black.png
hadoop-3.1.2/share/doc/hadoop/images/logos/maven-feather.png
hadoop-3.1.2/share/doc/hadoop/index.html
hadoop-3.1.2/share/doc/hadoop/project-reports.html
hadoop-3.1.2/include/
hadoop-3.1.2/include/hdfs.h
hadoop-3.1.2/include/Pipes.hh
hadoop-3.1.2/include/SerialUtils.hh
hadoop-3.1.2/include/StringUtils.hh
hadoop-3.1.2/include/TemplateFactory.hh
hadoop@u20-05:~$ mv hadoop-3.1.2 hadoop
hadoop@u20-05:~$ nano
                       .bashrc
hadoop@u20-05:~$ source .bashrc
hadoop@u20-05:~$ nano /home/hadoop/hadoop/etc/hadoop/hadoop-env.sh
hadoop@u20-05:~$ nano /home/hadoop/hadoop/etc/hadoop/core-site.xml
hadoop@u20-05:~$ nano /home/hadoop/hadoop/etc/hadoop/hdfs-site.xml
hadoop@u20-05:~$ nano /home/hadoop/hadoop/etc/hadoop/mapred-site.xml
 hadoop@u20-05:~$ nano ^C
hadoop@u20-05:~$ nano /home/hadoop/hadoop/etc/hadoop/hdfs-site.xml
hadoop@u20-05:~$ nano /home/hadoop/hadoop/etc/hadoop/yarn-site.xml
hadoop@u20-05:~$
⊞
                              hadoop@u20-05: ~
                                                                Q
total heap and retry cache entry expiry time is 600000 millis
022-10-25 11:04:28,211 INFO util.GSet: Computing capacity for map NameNodeRetr
ache
:022-10-25 11:04:28,211 INFO util.GSet: VM type
                                                  = 64-bit
:022-10-25 11:04:28,211 INFO util.GSet: 0.02999999329447746% max memory 1.7 GB
: 532.1 KB
022-10-25 11:04:28,213 INFO util.GSet: capacity
                                                 = 2^16 = 65536 entries
022-10-25 11:04:28,270 INFO namenode.FSImage: Allocated new BlockPoolId: BP-12
638476-172.26.35.25-1666685068258
022-10-25 11:04:28,294 INFO common.Storage: Storage directory /home/hadoop/had
pdata/hdfs/namenode has been successfully formatted.
022-10-25 11:04:28,311 INFO namenode.FSImageFormatProtobuf: Saving image file
ome/hadoop/hadoopdata/hdfs/namenode/current/fsimage.ckpt_0000000000000000000 u
ng no compression
022-10-25 11:04:28,406 INFO namenode.FSImageFormatProtobuf: Image file /home/h
loop/hadoopdata/hdfs/namenode/current/fsimage.ckpt 000000000000000000 of size
3 bytes saved in 0 seconds .
:022-10-25 11:04:28,427 INFO namenode.NNStorageRetentionManager: Going to retai
1 images with txid >= 0
:022-10-25 11:04:28,431 INFO namenode.NameNode: SHUTDOWN MSG:
*********************
HUTDOWN MSG: Shutting down NameNode at u20-05/172.26.35.25
*************************
```

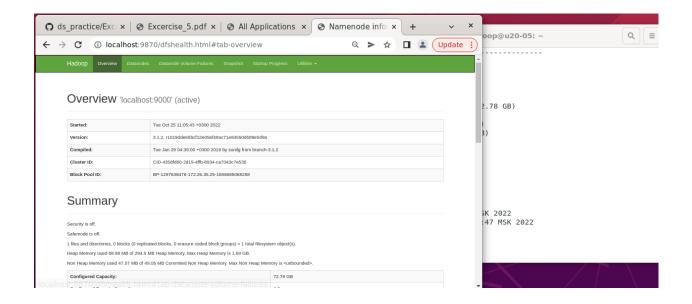
hadoop@u20-05: ~

⊞

adoop@u20-05:~\$







⊕ hadoop@u20-05: ~

DFS Remaining%: 62.94%

Configured Cache Capacity: 0 (0 B)

Cache Used: 0 (0 B)
Cache Remaining: 0 (0 B)
Cache Used%: 100.00%
Cache Remaining%: 0.00%

Xceivers: 1

Last contact: Tue Oct 25 11:06:47 MSK 2022 Last Block Report: Tue Oct 25 11:05:47 MSK 2022

Num of Blocks: 0

hadoop@u20-05:~\$ hadoop fs -mkdir /user

2022-10-25 11:13:44,683 WARN util.NativeCodeLoader: Unable to load native-hadlibrary for your platform... using builtin-java classes where applicable

hadoop@u20-05:~\$ hadoop fs -mkdir /user/hadoop

2022-10-25 11:13:59,180 WARN util.NativeCodeLoader: Unable to load native-hadlibrary for your platform... using builtin-java classes where applicable

hadoop@u20-05:~\$ hadoop fs -ls /

2022-10-25 11:14:16,137 WARN util.NativeCodeLoader: Unable to load native-hadlibrary for your platform... using builtin-java classes where applicable Found 1 items

drwxr-xr-x - ha<u>d</u>oop supergroup

0 2022-10-25 11:13 /user

hadoop@u20-05:~\$

