Проверка работы сервисов

```
hadoop@u20-05:~$ jps
881629 NodeManager
687722 DataNode
687538 NameNode
881476 ResourceManager
882514 Jps
687925 SecondaryNameNode
hadoop@u20-05:~$
```

2. Вывести с помощью команды help описание основных команды shell-клиента

```
hadoop@u20-05:~$ hdfs dfs -help
2022-11-01 09:19:18,534 WARN util.NativeCodeLoader: Unable to load native-hadoop
 library for your platform... using builtin-java classes where applicable
Usage: hadoop fs [generic options]
        [-appendToFile <localsrc> ... <dst>]
        [-cat [-ignoreCrc] <src> ...]
        [-checksum <src> ...]
        [-chgrp [-R] GROUP PATH...]
        [-chmod [-R] <MODE[,MODE]... | OCTALMODE> PATH...]
        [-chown [-R] [OWNER][:[GROUP]] PATH...]
        [-copyFromLocal [-f] [-p] [-l] [-d] [-t <thread count>] <localsrc> ... <
dst>]
        [-copyToLocal [-f] [-p] [-ignoreCrc] [-crc] <src> ... <localdst>]
```

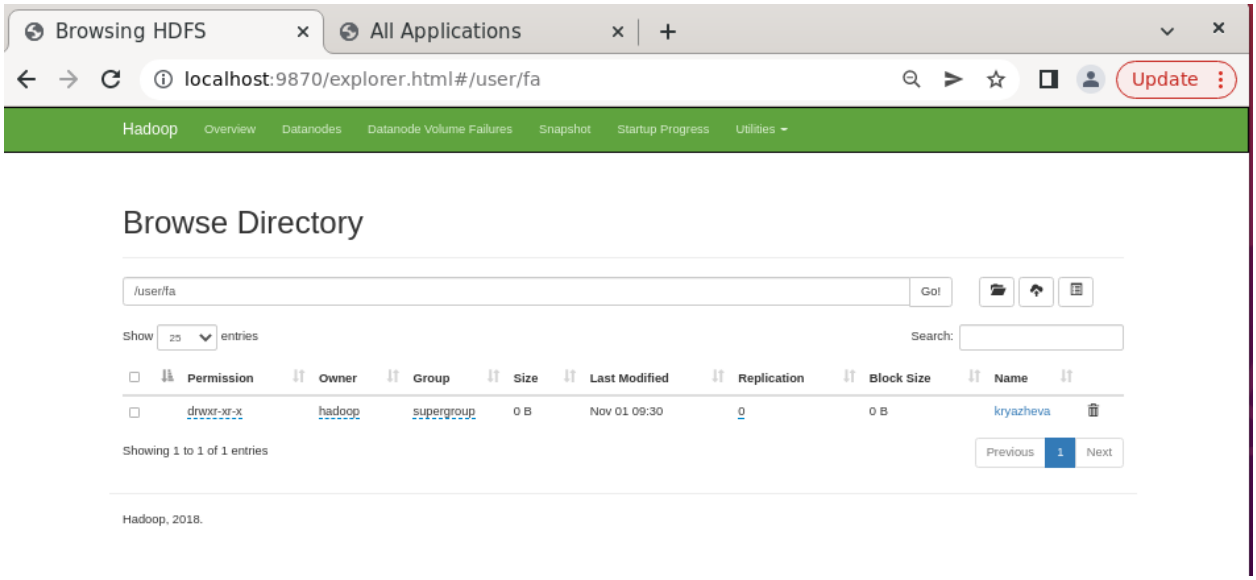
3. Просмотреть корневую директорию HDFS

```
hadoop@u20-05:~$ hdfs dfs -ls / hdfs://localhost:9000/user
2022-11-01 09:26:11,863 WARN util.NativeCodeLoader: Unable to load native-hadoop
 library for your platform... using builtin-java classes where applicable
Found 3 items
drwxr-xr-x   - hadoop supergroup          0 2022-10-31 18:52 /hadoop
drwx------   - hadoop supergroup          0 2022-10-25 11:18 /tmp
drwxr-xr-x   - hadoop supergroup          0 2022-10-25 11:13 /user
Found 1 items
drwxr-xr-x   - hadoop supergroup          0 2022-10-31 18:52 hdfs://localhost:90
00/user/hadoop
hadoop@u20-05:~$
```

4. Создать в HDFS в директории /user/mgpu поддиректорию ваше_фио

```
hadoop@u20-05:~$ hadoop fs -mkdir /user
2022-11-01 09:28:58,719 WARN util.NativeCodeLoader: Unable to load native-hadoop
 library for your platform... using builtin-java classes where applicable
mkdir: `/user': File exists
hadoop@u20-05:~$ hadoop fs -mkdir /user/fa
2022-11-01 09:29:31,154 WARN util.NativeCodeLoader: Unable to load native-hadoop
 library for your platform... using builtin-java classes where applicable
hadoop@u20-05:~$ hadoop fs -mkdir /user/fa/kryazheva
2022-11-01 09:30:27,613 WARN util.NativeCodeLoader: Unable to load native-hadoop
 library for your platform... using builtin-java classes where applicable
hadoop@u20-05:~$
```

В браузере



5. Создать в локальной файловой системе случайный текстовый файл размером 10 Mb с именем, образованным вашими инициалами

```
hadoop@u20-05:~$ hadoop fs -mkdir /user/fa/kryazheva
2022-11-01 09:30:27,613 WARN util.NativeCodeLoader: Unable to load native-hadoop
 library for your platform... using builtin-java classes where applicable
hadoop@u20-05:~$ base64 /dev/urandom | head -c 10000000 > KS.txt
```

6. Заархивировать созданный текстовый файл

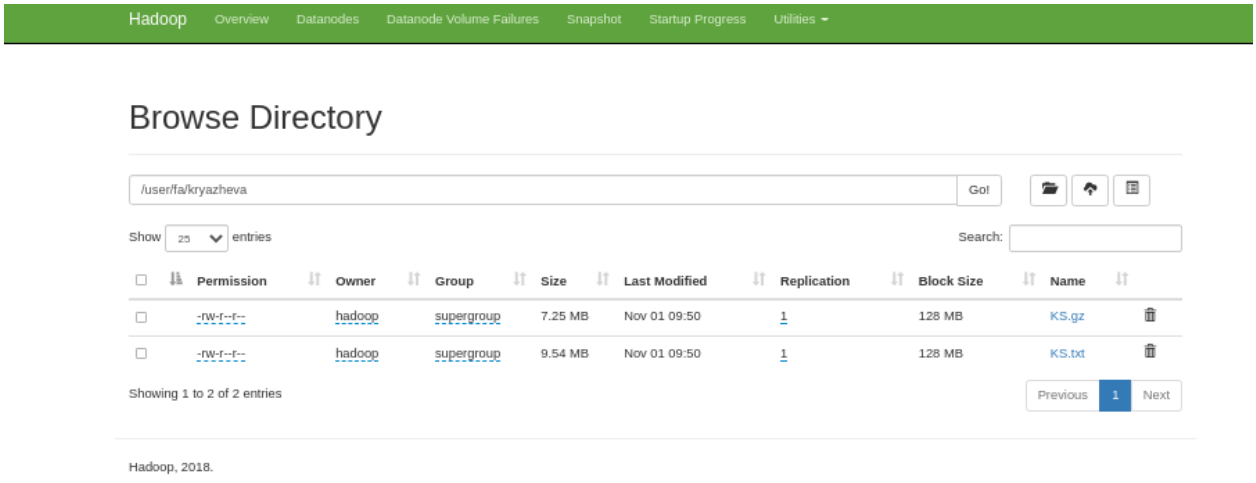
```
hadoop@u20-05:~$ gzip -c KS.txt > KS.gz
```

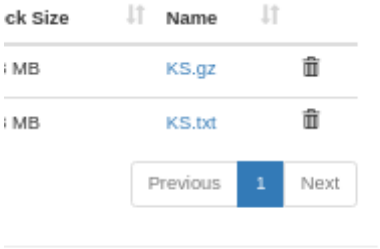
7. Скопировать текстовый файл и архив в директорию /user/mgpu/fio HDFS виртуальной машины

```
hadoop@u20-05:~$ ls
cat                 Downloads           Faust_1_Output.csv   KS.txt      Videos
Co_d_Output.csv     ds_practice         hadoop               Music
Desktop             Dst_1_C_Output.csv  hadoop-3.1.2.tar.gz  Pictures
Documents           Dst_1_Output.csv    hadoopdata           Public
d_Output.csv        Faust_1_C_Output.csv KS.gz               Templates
```

```
hadoop@u20-05:~$ hadoop fs -copyFromLocal KS.txt /user/fa/kryazheva
2022-11-01 09:50:30,266 WARN util.NativeCodeLoader: Unable to load native-hadoop
 library for your platform... using builtin-java classes where applicable
hadoop@u20-05:~$ hadoop fs -copyFromLocal KS.gz /user/fa/kryazheva
2022-11-01 09:50:51,793 WARN util.NativeCodeLoader: Unable to load native-hadoop
 library for your platform... using builtin-java classes where applicable
hadoop@u20-05:~$
```

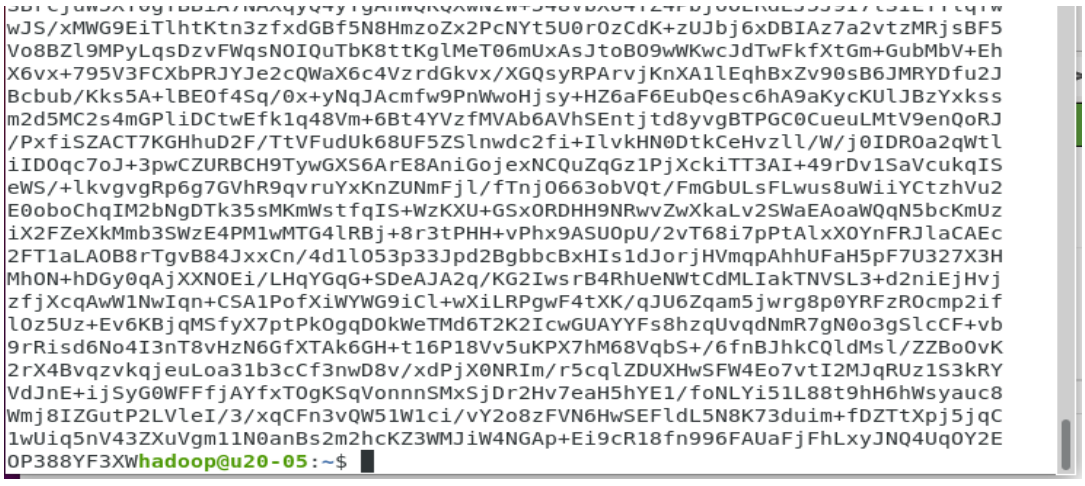
В браузере:



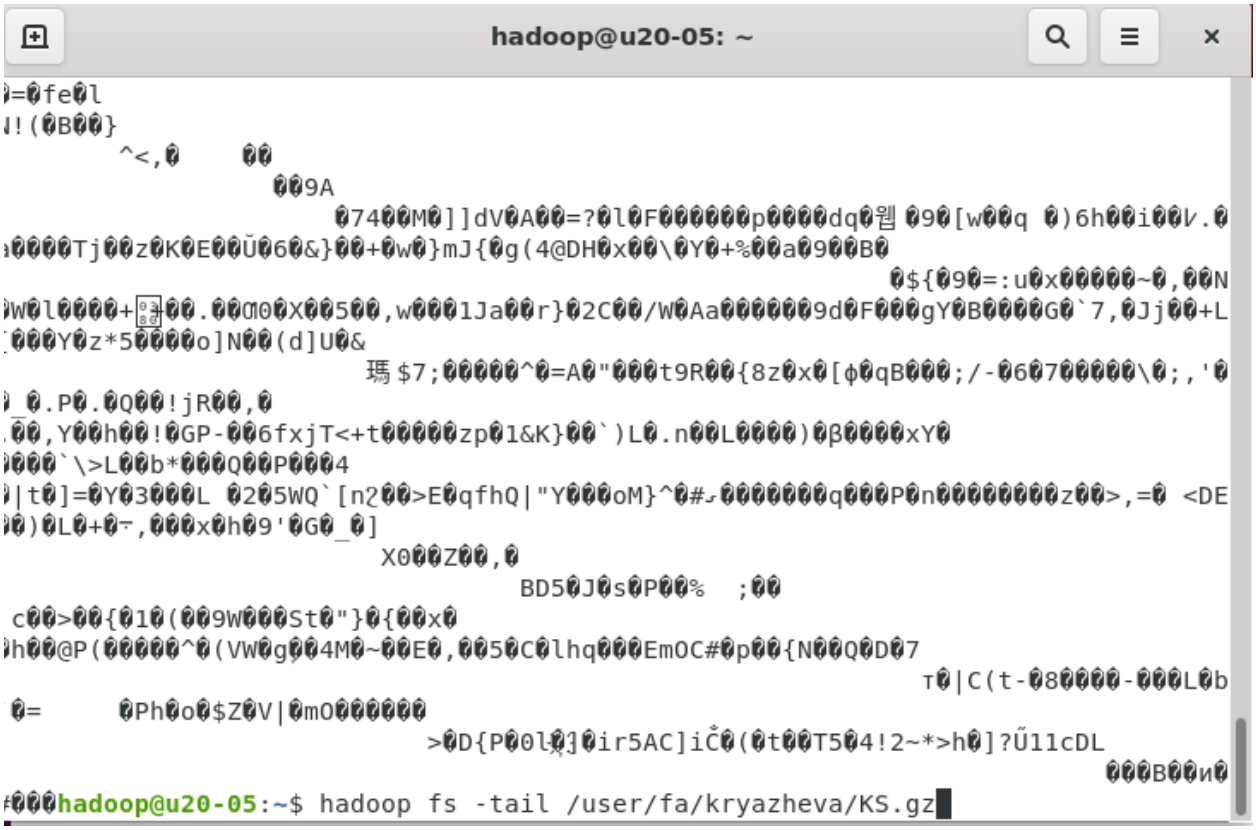


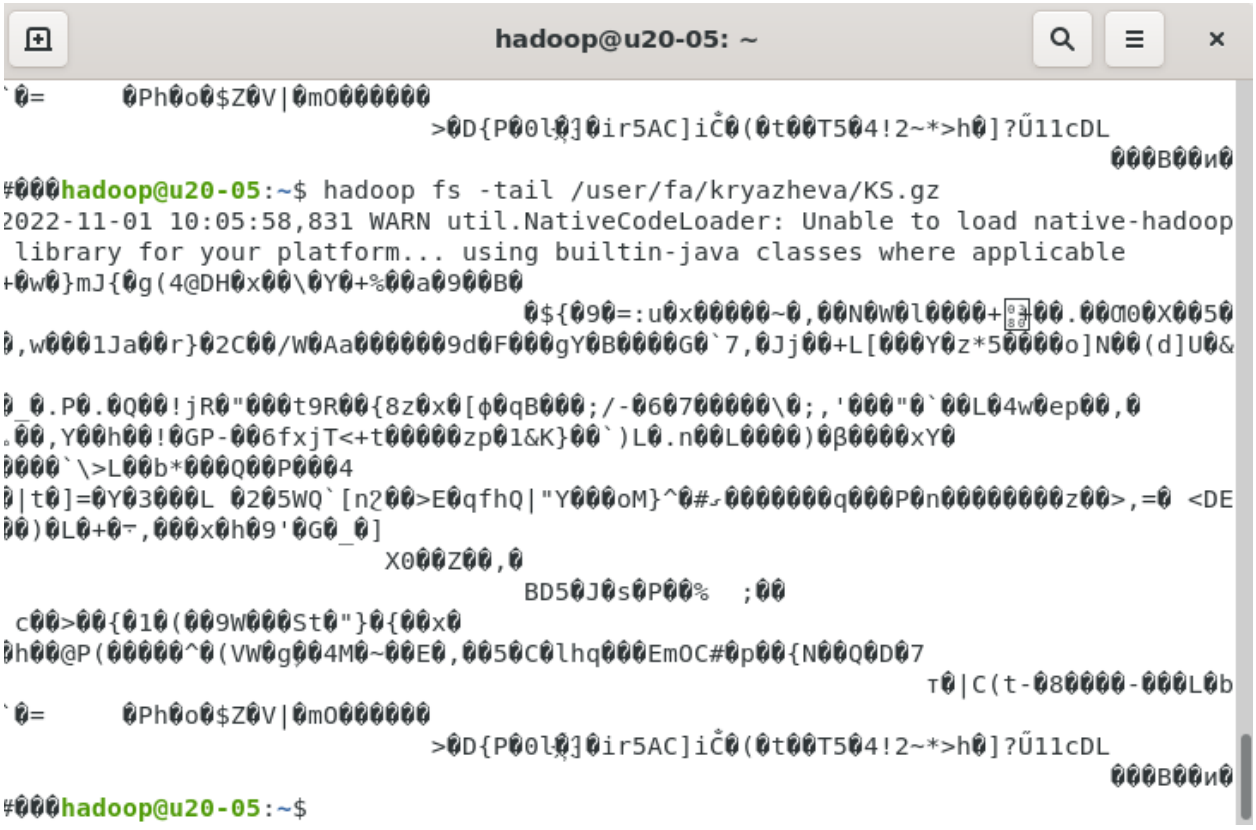
8. Просмотреть файл и архив с помощью утилит cat, text в комбинации с каналами и утилитами head, tail -- привести не менее 3 вариантов команд и просмотра файла.

hadoop fs –cat /user/fa/kryazheva/KS.txt



hadoop fs –cat /user/fa/kryazheva/KS.gz





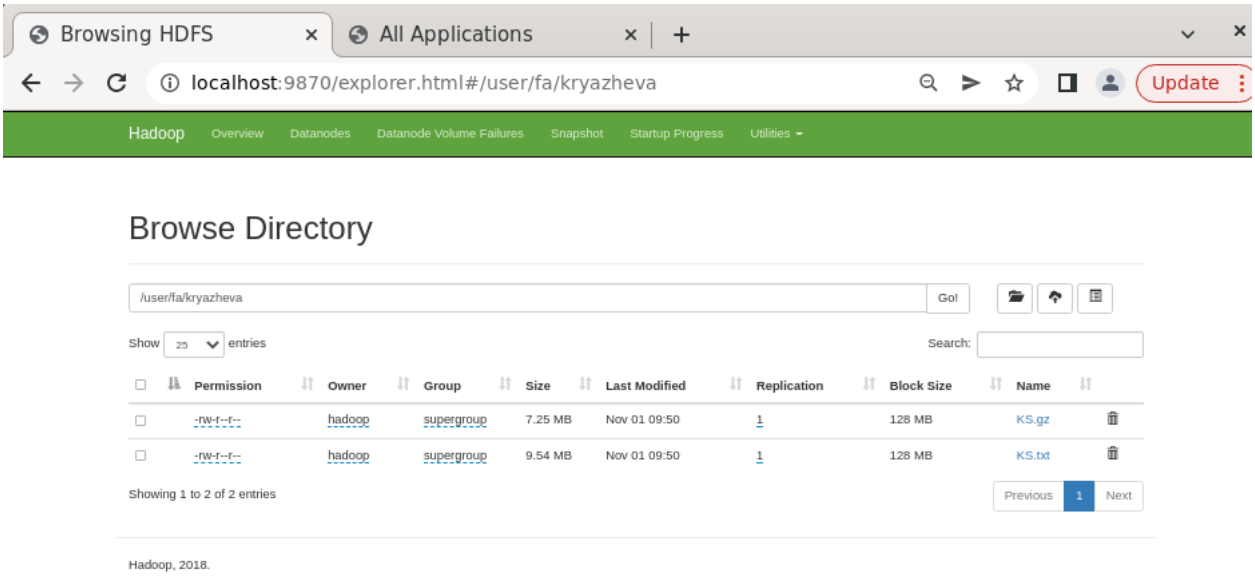
9. Создать копию файла file.txt вида date_file.txt, где в начале имени файла-копии указана текущая дата. Вывести листинг

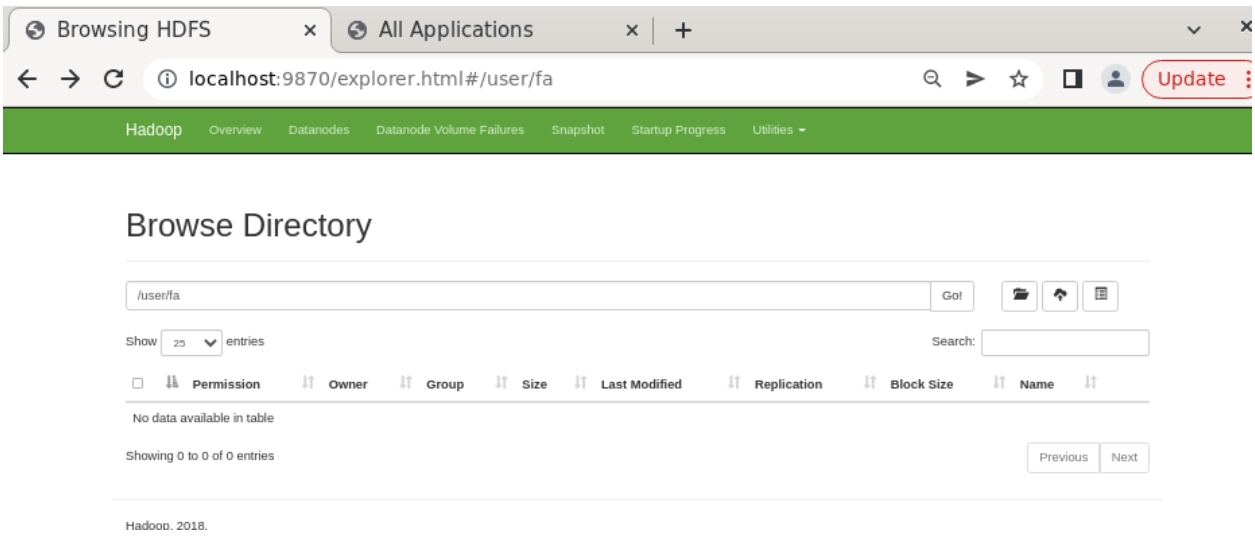
```
hadoop@u20-05:~$ cp KS.txt `date +%d%m%Y`_KS.txt
hadoop@u20-05:~$ ls
 01112022_KS.txt        Documents            Faust_1_C_Output.csv   KS.txt
 cat                    d_Output.csv         Faust_1_Output.csv     Music
 Co_d_Output.csv        Downloads            hadoop                 Pictures
```

```
hadoop@u20-05:~$ ls
 01112022_KS.txt        Documents              Faust_1_C_Output.csv   KS.txt
 cat                    d_Output.csv           Faust_1_Output.csv     Music
 Co_d_Output.csv        Downloads              hadoop                 Pictures
```

10. Вывести статистику по директории /user/mgpu/fio виртуальной машины

```
hadoop@u20-05:~$ hdfs dfs -du -h /user/fa/kryazheva
2022-11-01 10:17:58,520 WARN util.NativeCodeLoader: Unable to load native-hadoop
 library for your platform... using builtin-java classes where applicable
7.2 M  7.2 M  /user/fa/kryazheva/KS.gz
9.5 M  9.5 M  /user/fa/kryazheva/KS.txt
```



11. Удалить поддиректорию /fio со всем содержимым

```
hadoop@u20-05:~$ hdfs dfs -rm -r /user/fa/kryazheva
2022-11-01 10:39:58,602 WARN util.NativeCodeLoader: Unable to load native-hadoop
 library for your platform... using builtin-java classes where applicable
Deleted /user/fa/kryazheva
```