

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>]

```

	RUNNING	Scheduler type	Scheduling resource type	Minimum Allocation

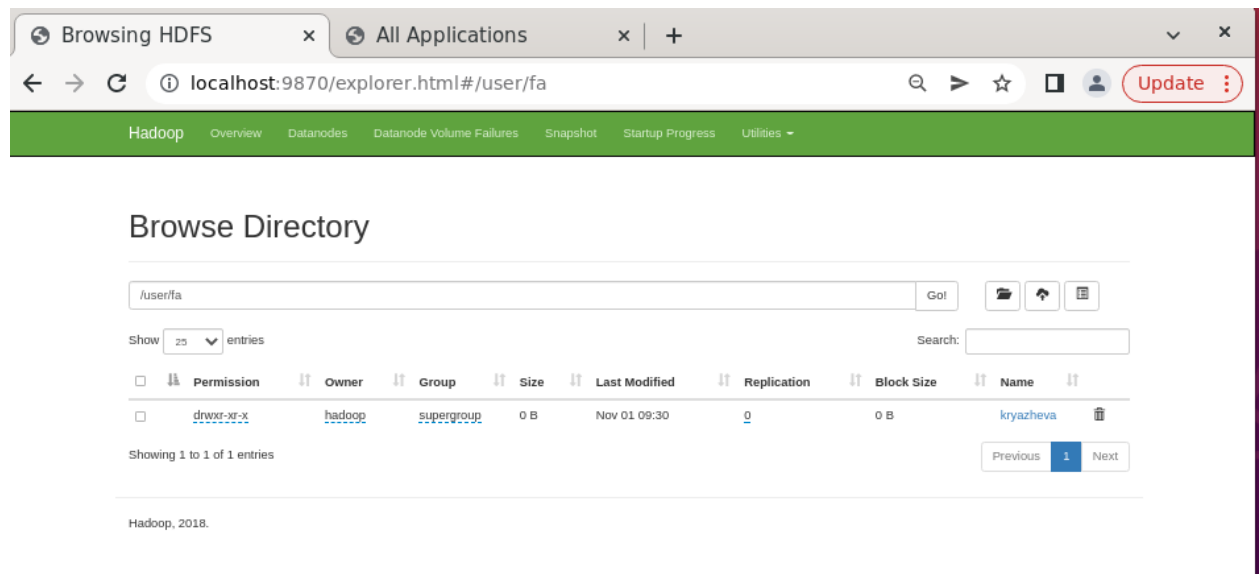
3. Просмотреть корневую директорию HDFS

```
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:9000/user/hadoop
hadoop@u20-05:~$
```

4. Создать в HDFS в директории /user/mgpi поддиректорию ваше\_фio

```
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/mgpru/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:

Hadoop
Overview
Datanodes
Datanode Volume Failures
Snapshot
Startup Progress
Utilities

## Browse Directory

Show  entries
Search:

<input type="checkbox"/>	Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name	
<input type="checkbox"/>	-rw-r--r--	<a href="#">hadoop</a>	<a href="#">supergroup</a>	7.25 MB	Nov 01 09:50	<a href="#">1</a>	128 MB	<a href="#">KS.gz</a>	<input type="button" value="🗑"/>
<input type="checkbox"/>	-rw-r--r--	<a href="#">hadoop</a>	<a href="#">supergroup</a>	9.54 MB	Nov 01 09:50	<a href="#">1</a>	128 MB	<a href="#">KS.txt</a>	<input type="button" value="🗑"/>

Showing 1 to 2 of 2 entries

Hadoop, 2018.

ck Size
Name

128 MB
KS.gz

128 MB
KS.txt

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`

```

JBT CjwXtRgTBB1R/NAKqyQTyTgAmQKqXWnZWT346VbX0T1247Bj00LNDL3331/CSLE1TtCqW
wJS/xMWG9EiTLhtKtn3zfxdGBf5N8HmzoZx2PcNYt5U0rOzCdK+zUJbj6xDBIAz7a2vtzMRjsBF5
Vo8BZl9MPyLqsDzvFWqNsNOIQuTbK8ttKgLMet06mUxAsJtoB09wWKwcJdTWFkfXtGm+GubMbV+Eh
X6vx+795V3FCxbPRJYJe2cQWax6c4VzrdGkvx/XGQsyRPArvjKnXA1lEqhBxZv90sB6JMRyDfu2J
Bcbub/Kks5A+lBE0f4Sg/0x+yNqJAcmfw9PnWwoHj sy+HZ6aF6EubQesc6hA9aKycKULJBzYxkss
m2d5MC2s4mGPLiDctWefklq48Vm+6Bt4YVzfMVA6bAVhSEntjtd8yvvgBTPGC0CueuLMTV9enQoRJ
/PxfiSZACT7KGHhuD2F/TtVFudUk68UF5ZSlnwdc2fi+IlvkHN0DtkCeHvzll/W/j0IDR0a2qWtl
iID0qc7oJ+3pWCZURBCH9TywGXS6ArE8AniGojexNCQuZqGz1PjXckiTT3AI+49rDv1SaVcukqIS
eWS/+lkvgvgRp6g7GVhR9qvrYxKnZUNmFjl/fTnj0663obVQt/FmGbULsFLwus8uWiiYctzhVu2
E0oboChqIM2bNgDTK35sMKmWstfQIS+WzKXU+GSxORDHH9NRwvZwXkaLv2SWaEaowQqN5bcKmUz
ix2FZeXkMmb3SWze4PM1wMTG4lRBj+8r3tPHH+vPhx9ASUOpU/2vT68i7pPtAlxX0YnFRJlaCAEC
2FT1aLa0B8rTgvB84JxxCn/4d1l053p33Jpd2BgbbcBxHIs1dJorjHvmqpAhhuFah5pF7U327X3H
Mh0N+hDgy0qAjXXNOEi/LHqYgqG+SDeAJA2q/KG2IwsrB4RhUeNwtCdMLIakTNVSL3+d2niEjHvj
zfjXcqAwW1NwIqn+CSA1PoFxiWYWG9iCl+wXiLRPgWf4tXK/qJU6Zqam5jwrg8p0YRFzR0cmp2if
l0z5Uz+Ev6KBjQMSfyX7ptPkOggD0KweTMD6T2K2IcwGUAYYFs8hzqUvqdNmR7gN0o3gSlcCF+vb
9rRisdd6No4I3nT8vHzN6GfXTAk6GH+t16P18Vv5uKPx7hM68VqbS+/6fnBJhkCQldMsL/ZZBo0vK
2rX4BvqvzkqjeuLoa31b3cCf3nwD8v/xdPjX0NRIm/r5cqLZDUXHwSFW4Eo7vtI2MJqRUZ1S3kRY
VdJnE+iJsyG0WFFfjAYfxT0gKSqVonn5SMxSjDr2Hv7eaH5hYE1/foNLYi51L88t9hH6hWsyauc8
Wmj8IZGutP2LVleI/3/xqCFn3vQW51W1ci/vY2o8zFVN6HwSEFLdL5N8K73duim+fDZTtXpj5jqC
lwUiq5nV43ZxUvgm1lN0anBs2m2hcKZ3WMJiW4NGAp+EI9cR18fn996FAUaFjFhLxyJNQ4Uq0Y2E
OP388YF3XWhadoop@u20-05:~$
```

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

```
0=0fe0l
N! (0B00}
^<,0 00
009A
07400M0]]dV0A00=?0l0F000000p0000dq0웁 090[w00q 0)6h00i00V.0
a0000Tj00z0K0E00Ŭ060&}00+0w0}mJ{0g(4@DH0x00\0Y0+%00a0900B0
0${090=:u0x00000~0,00N
0W0l0000+0000.00000X00500,w0001Ja00r}02C00/W0Aa0000009d0F000gY0B0000G0`7,0Jj00+L
[000Y0z*50000o]N00(d)U0&
瑪 $7;00000^0=A0"000t9R00{8z0x0[00qB000;/-060700000\0;;'0
0 0.P0.0Q00!jR00,0
.00,Y00h00!0GP-006fxjT<+t00000zp01&K}00`)L0.n00L0000)0β0000xY0
0000`\>L00b*000Q00P0004
0|t0]=0Y03000L 0205WQ`[n200>E0qfhQ|"Y000oM}^0#-0000000q000P0n00000000z00>,<DE
00)0L0+0-,000x0h09'0G0_0]
X000Z00,0
BD50J0s0P00% ;00
c00>00{010(009W000St0"}0{00x0
0h00@P(00000^0(VW0g004M0~00E0,0050C0lhq000EmOC#0p00{N00Q0D07
τ0|C(t-080000-000L0b
`0= 0Ph0o0$Z0V|0m0000000
>0D{P00l0j0ir5AC}iĈ0(0t00T504!2~*>h0]?Ŭ11cDL
000B00и0
#000hadoop@u20-05:~$ 65;1;9c
```

hadoop@u20-05:~\$ hadoop fs -cat /user/fa/kryazheva/KS.gz | tail

```
hadoop@u20-05: ~
0=0fe0l
N! (0B00}
^<,0 00
009A
07400M0]]dV0A00=?0l0F000000p0000dq0웁 090[w00q 0)6h00i00V.0
a0000Tj00z0K0E00Ŭ060&}00+0w0}mJ{0g(4@DH0x00\0Y0+%00a0900B0
0${090=:u0x00000~0,00N
0W0l0000+0000.00000X00500,w0001Ja00r}02C00/W0Aa0000009d0F000gY0B0000G0`7,0Jj00+L
[000Y0z*50000o]N00(d)U0&
瑪 $7;00000^0=A0"000t9R00{8z0x0[00qB000;/-060700000\0;;'0
0 0.P0.0Q00!jR00,0
.00,Y00h00!0GP-006fxjT<+t00000zp01&K}00`)L0.n00L0000)0β0000xY0
0000`\>L00b*000Q00P0004
0|t0]=0Y03000L 0205WQ`[n200>E0qfhQ|"Y000oM}^0#-0000000q000P0n00000000z00>,<DE
00)0L0+0-,000x0h09'0G0_0]
X000Z00,0
BD50J0s0P00% ;00
c00>00{010(009W000St0"}0{00x0
0h00@P(00000^0(VW0g004M0~00E0,0050C0lhq000EmOC#0p00{N00Q0D07
τ0|C(t-080000-000L0b
`0= 0Ph0o0$Z0V|0m0000000
>0D{P00l0j0ir5AC}iĈ0(0t00T504!2~*>h0]?Ŭ11cDL
000B00и0
#000hadoop@u20-05:~$
```

```
hadoop@u20-05: ~
)=0fe0l
!!(0B00}
^<,0 00
009A
07400M0]]dV0A00=?0l0F000000p0000dq0웁 090[w00q 0)6h00i00v.0
:0000Tj00z0K0E000060&}00+0w0}mJ{0g(4@DH0x00\0Y0+%00a0900B0
0${090=:u0x00000~0,00N
)W0l0000+00.00000X00500,w0001Ja00r}02C00/W0Aa0000009d0F000gY0B0000G0`7,0Jj00+L
:000Y0z*50000o]N00(d)U0&
瑪 $7;00000^0=A0"000t9R00{8z0x0[00qB000;/-060700000\0;,'0
)0.P0.0Q00!jR00,0
.00,Y00h00!0GP-006fxjT<+t00000zp01&K}00`)L0.n00L0000)0β0000xY0
)000`\>L00b*000Q00P0004
)|t0]=0Y03000L 0205WQ`[n200>E0qfhQ|"Y000oM}^0#-0000000q000P0n00000000z00>=0 <DE
00)0L0+0-,000x0h09'0G0_0]
X000Z00,0
BD50J0s0P00% ;00
c00>00{010(009w000St0"}0{00x0
)h00@P(00000^0(VW0g004M0~00E0,0050C0lhq000Em0C#0p00{N00Q0D07
τ0|C(t-080000-000L0b
0= 0Ph0o0$Z0V|0m0000000
>0D{P00l0j0ir5AC]iĈ0(0t00T504!2~*>h0]?Ũ11cDL
000B00и0
#000hadoop@u20-05:~$ hadoop fs -tail /user/fa/kryazheva/KS.gz
```

```
hadoop@u20-05: ~
0= 0Ph0o0$Z0V|0m0000000
>0D{P00l0j0ir5AC]iĈ0(0t00T504!2~*>h0]?Ũ11cDL
000B00и0
#000hadoop@u20-05:~$ hadoop fs -tail /user/fa/kryazheva/KS.gz
2022-11-01 10:05:58,831 WARN util.NativeCodeLoader: Unable to load native-hadoop
library for your platform... using builtin-java classes where applicable
+0w0}mJ{0g(4@DH0x00\0Y0+%00a0900B0
0${090=:u0x00000~0,00N0w0l0000+00.00000X0050
0,w0001Ja00r}02C00/W0Aa0000009d0F000gY0B0000G0`7,0Jj00+L[000Y0z*50000o]N00(d)U0&
00.P0.0Q00!jR0"000t9R00{8z0x0[00qB000;/-060700000\0;,'000"0`00L04w0ep00,0
.00,Y00h00!0GP-006fxjT<+t00000zp01&K}00`)L0.n00L0000)0β0000xY0
)000`\>L00b*000Q00P0004
)|t0]=0Y03000L 0205WQ`[n200>E0qfhQ|"Y000oM}^0#-0000000q000P0n00000000z00>=0 <DE
00)0L0+0-,000x0h09'0G0_0]
X000Z00,0
BD50J0s0P00% ;00
c00>00{010(009w000St0"}0{00x0
)h00@P(00000^0(VW0g004M0~00E0,0050C0lhq000Em0C#0p00{N00Q0D07
τ0|C(t-080000-000L0b
0= 0Ph0o0$Z0V|0m0000000
>0D{P00l0j0ir5AC]iĈ0(0t00T504!2~*>h0]?Ũ11cDL
000B00и0
#000hadoop@u20-05:~$
```

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
cat
Co_d_Output.csv
```

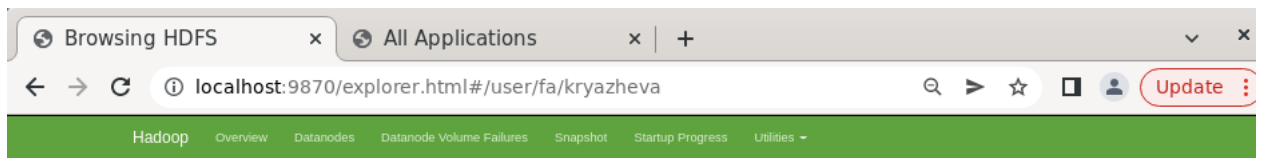
Documents  
d\_Output.csv  
Downloads

Faust\_1\_C\_Output.csv  
Faust\_1\_Output.csv  
hadoop

KS.txt  
Music  
Pictures

10. Вывести статистику по директории /user/mgpr/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
```

