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Москвы «Московский городской педагогический университет» Институт
цифрового образования Департамент информатики, управления и технологий

ДИСЦИПЛИНА:

Инструменты для хранения и обработки больших данных

Практическая работа №5.2

Тема:

Работа с командами Hadoop

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Москва

2022

```
hadoop@ubuntu:~$ help
GNU bash, version 5.1.16(1)-release (x86_64-pc-linux-gnu)
These shell commands are defined internally. Type 'help' to see this list.
Type 'help name' to find out more about the function 'name'.
Use 'info bash' to find out more about the shell in general.
Use 'man -k' or 'info' to find out more about commands not in this list.

A star (*) next to a name means that the command is disabled.

job_spec [&]
(( expression ))
. filename [arguments]
:
[ arg... ]
[[ expression ]]
alias [-p] [name=value] ... ]
bg [job_spec ...]
bind [-lpsvPSVX] [-m keymap] [-f filename] [-q name]>
break [n]
builtin [shell-builtin [arg ...]]
caller [expr]
case WORD in [PATTERN [| PATTERN]...) COMMANDS ;;]...>
cd [-L|[-P [-e]] [-@]] [dir]
command [-pVv] command [arg ...]
compgen [-abcdefgjkuv] [-o option] [-A action] [-G >
complete [-abcdefgjkuv] [-pr] [-DEI] [-o option] [->
history [-c] [-d offset] [n] or history -anrw [file>
if COMMANDS; then COMMANDS; [ elif COMMANDS; then C>
jobs [-lnprs] [jobspec ...] or jobs -x command [arg>
kill [-s sigspec | -n signum | -sigspec] pid | jobs>
let arg [arg ...]
local [option] name[=value] ...
logout [n]
mapfile [-d delim] [-n count] [-O origin] [-s count>
popd [-n] [+N | -N]
printf [-v var] format [arguments]
pushd [-n] [+N | -N | dir]
pwd [-LP]
read [-ers] [-a array] [-d delim] [-i text] [-n nch>
readarray [-d delim] [-n count] [-O origin] [-s cou>
readonly [-aAf] [name[=value] ...] or readonly -p
return [n]
select NAME [in WORDS ... ;] do COMMANDS; done
```

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -ls
2023-04-30 02:35:14,201 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
Found 5 items
-rw-r--r-- 1 hadoop supergroup 187937 2023-04-30 01:51 Faust_1.txt
drwxr-xr-x - hadoop supergroup 0 2023-04-30 02:01 Faust_1_Count_Output
drwxr-xr-x - hadoop supergroup 0 2023-04-30 01:56 Faust_1_Output
-rw-r--r-- 1 hadoop supergroup 1184337 2023-04-30 01:37 dpkg.log
drwxr-xr-x - hadoop supergroup 0 2023-04-30 01:38 test output
```

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -ls /user/
2023-04-30 02:36:01,712 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
Found 2 items
drwxr-xr-x - hadoop supergroup 0 2023-04-30 02:01 /user/hadoop
drwxr-xr-x - hadoop supergroup 0 2023-04-30 01:53 /user/hduser
```

```
hadoop@ubuntu:~/hadoop$ ls
bin etc include lib libexec LICENSE.txt logs NOTICE.txt README.txt sbin share
hadoop@ubuntu:~/hadoop$ cd bin
hadoop@ubuntu:~/hadoop/bin$ ls
container-executor hadoop.cmd hdfs.cmd mapred.cmd yarn
hadoop hdfs mapred test-container-executor yarn.cmd
hadoop@ubuntu:~/hadoop/bin$
```

```
hadoop@ubuntu:/bin$ ls
['
7z jfr py3clean
7za jhat py3compile
7zr jinfo py3versions
aa-enabled jjs pydoc3
aa-exec jmap pydoc3.10
aa-features-abi join pygettext3
aconnect journalctl pygettext3.10
acpi_listen jpgicc python3
add-apt-repository jps python3.10
addpart jrunscript pzstd
addr2line jsadebugd qapt-batch
airscan-discover json_pp qapt-deb-installer
istack qaptworker3
```

```
hadoop@ubuntu:/bin$ $HADOOP_HOME/bin/hadoop fs -mkdir -p /user/mgpu_adey/ShepelevaEV
2023-04-30 02:40:28,439 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
```

```
hadoop@ubuntu:~$ base64 /dev/urandom | head -c 10000000 > sev.txt
hadoop@ubuntu:~$ gzip -c sev.txt > sev.gz
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -copyFromLocal sev.txt /user/mgpu_adey/ShepelevaEV
2023-04-30 02:43:16,079 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -copyFromLocal sev.gz /user/mgpu_adey/ShepelevaEV
2023-04-30 02:43:36,920 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
```



```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -cat /user/mgpu_adey/ShepelevaEV/sev.txt | head
2023-04-30 02:45:34,312 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
A+/ICFI0GWZsLXH4ArQaP6rMFMpHWTjTmGyUfAshzjJ6WznpWLZZNbgh2xndw9ntZrnYTBI4HBjK
ud8zmnF5sw4NyGrLDZS66YX9y59yURR3G8Woj+SqXa0BCGnPjnEs0EafUqNBt5nukzo+doUmydLf
6aGf/QV8w6/DKc9Qeq5P26luVriqDfK0GewPdQU+o2JfSYxpK39b8YLcvGkP+KmqbLgF5gjdGRxh
JYxcEE80pmnttlmtzLeWuN1Vr2x1rRENlFZb6F2J+ex3AGQz+3MGB0sGvrBttK80PbQJKDhg4jE
rkRy2W5IM0AeN0ZW0lb6hpDhQBTnlgtDr00AuNittWTawYPjwY8S+/YKP1y3lMMQicDWGCg3r03B
wMLBDcm99rarMi6D2L0wgq5CzSap20ewMlz5WeNu9zyZ/9BPG8BrgmLLY0mi2H5AocPSDzGy8uC+
Br5tjmr7o0ryKF4JHNhW4bWery+6KwInugDV1QmKhL8TTyqF9Vm4h3ThecopjzZQS0QPXwi3wxoP
J9j0u6WGFgG8BzFayGYsywrSbgciY+oHsbUTZL3iX0fE1s7+zS1fIu4xrc1abKYNSBY9IASTEdL
JaXxcmivX3m6PIUtaf9jfr+THY1bGYPMa0LEZjvXKg4/7ZgnAakoyCAPN/yPCz+bLnLFRkSYPAeC
mkV3q+E1c6NuRLRLzGmWDrOUvWzU7TRukkebWvW5JGxNC9FXRbTPkgjUfMAXj/3wugB/KhG5V2
```

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -cat /user/mgpu_adey/ShepelevaEV/sev.txt |tail
2023-04-30 02:46:15,104 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
Q0CPULdzGgQmP8ZhenGyJQnMtzXwP4jnXmR64V/gYVkuPZW9UJ3kFn8PA1RsZSGCUalYrYog0E+C
aWcyV/ChjeMeDbcoHo2390G8NMvVv4Pue+ogKNrDjhazRoYU115RsDLHh137qZ0uocx4T3BfHzXp
ZLeURA613nrk63FSyFZjqnfTx2vn1dF/Fhy0F/MSeCiyjsXdgGp90M1r9vQTyTqoZF7ugJBgiQB
tFrRwnl3t7zX0EALPlEocd1SoURIdip5u6391PGiISDueu9s7tgvZiHw3wtpPtFFrgxY4wAd973w
vTMsboVY2f2goGjdisjMfGncPsnIAW7NwmGBoFXjVvdqybc1USRmbI8pWL8DxR8f1NVGGRHYCcI9
3EU1gdJpTIAgGklF3ecLUjpr1YlFvqu8dtCY4hrXwlrjj4GPmioZmWwP8Ltk4MF5PG6nPX7ZLDqs
XMqJ2FcGKoY7on2B/n3fjXH1h5KIHCs2zLL0uU7180lPeggyGdjUIitAVbmbE8GrndjG5aDdcAP
EP5MGI6j6NC9N+F4WZCWeB1aains3QAuXmbTUZjmC4NqVABn0VDY4mWwurHAtGh0iFVytfhQIR1z
1yAjLDrRhsbIZSfA8eEozKZ0eW2Wcecv47x11ist00A+YeN1LWonuN1Dkuns9j7YEM65u0MT6YRT
```

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -text /user/mgpu_adey/ShepelevaEV/sev.txt | tail
2023-04-30 02:47:02,907 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
Q0CPULdzGgQmP8ZhenGyJQnMtzXwP4jnXmR64V/gYVkuPZW9UJ3kFn8PA1RsZSGCUalYrYog0E+C
aWcyV/ChjeMeDbcoHo2390G8NMvVv4Pue+ogKNrDjhazRoYU115RsDLHh137qZ0uocx4T3BfHzXp
ZLeURA613nrk63FSyFZjqnfTx2vn1dF/Fhy0F/MSeCiyjsXdgGp90M1r9vQTyTqoZF7ugJBgiQB
tFrRwnl3t7zX0EALPlEocd1SoURIdip5u6391PGiISDueu9s7tgvZiHw3wtpPtFFrgxY4wAd973w
vTMsboVY2f2goGjdisjMfGncPsnIAW7NwmGBoFXjVvdqybc1USRmbI8pWL8DxR8f1NVGGRHYCcI9
3EU1gdJpTIAgGklF3ecLUjpr1YlFvqu8dtCY4hrXwlrjj4GPmioZmWwP8Ltk4MF5PG6nPX7ZLDqs
XMqJ2FcGKoY7on2B/n3fjXH1h5KIHCs2zLL0uU7180lPeggyGdjUIitAVbmbE8GrndjG5aDdcAP
EP5MGI6j6NC9N+F4WZCWeB1aains3QAuXmbTUZjmC4NqVABn0VDY4mWwurHAtGh0iFVytfhQIR1z
1yAjLDrRhsbIZSfA8eEozKZ0eW2Wcecv47x11ist00A+YeN1LWonuN1Dkuns9j7YEM65u0MT6YRT
```

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -copyToLocal /user/mgpu_adey/ShepelevaEV/sev.txt /home/hadoop/30-0
4-2023-sev.txt
2023-04-30 02:54:52,103 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
```

```
hadoop@ubuntu:~$ ls
30-04-2023-sev.txt          Faust_1_Count_Output.csv  hadoop          hadoopdata  sev.txt
Big-Data-Storage-and-Processing-Tools  Faust_1_Output.csv      hadoop-3.1.2.tar.gz  sev.gz
```

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -du -s /user/mgpu_adey/ShepelevaEV
2023-04-30 02:56:48,101 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
17599505  17599505  /user/mgpu_adey/ShepelevaEV
```

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -du /user/mgpu_adey/ShepelevaEV
2023-04-30 02:57:23,037 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
7599505  7599505  /user/mgpu_adey/ShepelevaEV/sev.gz
10000000 10000000 /user/mgpu_adey/ShepelevaEV/sev.txt
```

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop dfs -rm -r /user/mgpu_adey/ShepelevaEV
WARNING: Use of this script to execute dfs is deprecated.
WARNING: Attempting to execute replacement "hdfs dfs" instead.

2023-04-30 02:58:44,195 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
Deleted /user/mgpu_adey/ShepelevaEV
```


Browse Directory

Show 25 entries

Search:

<input type="checkbox"/>	Permission	Owner	Group	Size	Last Modified	Replication	Block Size	Name
No data available in table								

Showing 0 to 0 of 0 entries

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Hadoop, 2018.

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -mkdir -p /user/ShepelevaEV
2023-04-30 03:06:22,225 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
```

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -copyFromLocal /home/hadoop/rus.txt /user/ShepelevaEV
2023-04-30 03:07:35,900 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -cat /user/ShepelevaEV/rus.txt
2023-04-30 03:07:57,136 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
Жили-были на свете три поросенка. Три брата. Все одинакового роста, кругленькие, розовые, с одинаковыми веселы
ми хвостиками. Даже имена у них были похожи. Звали поросят: Ниф-Ниф, Нуф-Нуф и Наф-Наф.

Все лето поросята кувыркались в зеленой траве, грелись на солнышке, нежились в лужах. Но вот наступила осень.

- Пора нам подумать о зиме, - сказал как-то Наф-Наф своим братьям, проснувшись рано утром. - Я весь дрожу от хо
лода. Давайте построим дом и будем зимовать вместе под одной теплой крышей.

Но его братья не хотели браться за работу.

- Успеется! До зимы еще далеко. Мы еще погуляем, - сказал Ниф-Ниф и перекувырнулся через голову.
```

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -text /user/ShepelevaEV/rus.txt
2023-04-30 03:08:53,855 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
Жили-были на свете три поросенка. Три брата. Все одинакового роста, кругленькие, розовые, с одинаковыми веселы
ми хвостиками. Даже имена у них были похожи. Звали поросят: Ниф-Ниф, Нуф-Нуф и Наф-Наф.

Все лето поросята кувыркались в зеленой траве, грелись на солнышке, нежились в лужах. Но вот наступила осень.
```

```
hadoop@ubuntu:~$ ls
30-04-2023-sev.txt          Faust_1_Count_Output.csv  hadoop          hadoopdata  sev.gz
Big-Data-Storage-and-Processing-Tools Faust_1_Output.csv       hadoop-3.1.2.tar.gz rus.txt      sev.txt
hadoop@ubuntu:~$ gzip -c rus.txt > rus.gz
hadoop@ubuntu:~$ ls
30-04-2023-sev.txt          Faust_1_Output.csv       hadoopdata      sev.gz
Big-Data-Storage-and-Processing-Tools hadoop                  rus.gz          sev.txt
Faust_1_Count_Output.csv    hadoop-3.1.2.tar.gz     rus.txt
hadoop@ubuntu:~$
```

```
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -copyFromLocal /home/hadoop/rus.gz /user/ShepelevaEV
2023-04-30 03:12:24,464 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
hadoop@ubuntu:~$ $HADOOP_HOME/bin/hadoop fs -cat /user/ShepelevaEV/rus.gz | head
2023-04-30 03:12:49,443 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform...
using builtin-java classes where applicable
Mdrus.txt]r#0~54
HfLz(YZNCn!Dn\q=V~fVVw3D**+/gW
-~yUW2,$7T}控89H21
[y(MH>YFK_2EA/oMxA#3iJNZt
ie:W>3 n0^LB.cZ^PS>i^;k]PrWyy4+kWA
```

