Подключение к кластеру по ssh
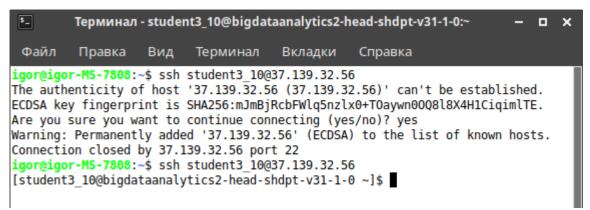ssh student3_10@37.139.32.56


```
igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
The authenticity of host '37.139.32.56 (37.139.32.56)' can't be established.
ECDSA key fingerprint is SHA256:mJmBjRcbFWlq5nzlx0+TOaywn0OQ8l8X4H1CiqimlTE.
Are you sure you want to continue connecting (yes/no)?
```



```
igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
The authenticity of host '37.139.32.56 (37.139.32.56)' can't be established.
ECDSA key fingerprint is SHA256:mJmBjRcbFWlq5nzlx0+TOaywn0OQ8l8X4H1CiqimlTE.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '37.139.32.56' (ECDSA) to the list of known hosts.
Connection closed by 37.139.32.56 port 22
igor@igor-MS-7808:~$
```



```
igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
The authenticity of host '37.139.32.56 (37.139.32.56)' can't be established.
ECDSA key fingerprint is SHA256:mJmBjRcbFWlq5nzlx0+TOaywn0OQ8l8X4H1CiqimlTE.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '37.139.32.56' (ECDSA) to the list of known hosts.
Connection closed by 37.139.32.56 port 22
igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$
```

Командой ls убеждаемся, что домашняя папка пуста


```
igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
The authenticity of host '37.139.32.56 (37.139.32.56)' can't be established.
ECDSA key fingerprint is SHA256:mJmBjRcbFWlq5nzlx0+TOaywn0OQ8l8X4H1CiqimlTE.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '37.139.32.56' (ECDSA) to the list of known hosts.
Connection closed by 37.139.32.56 port 22
igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ ls
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$
```

А также, что можно подключиться к HDFS

```
Терминал - student3_10@bigdataanalytics2-head-shdpt-v31-1-0:~

Файл    Правка    Вид    Терминал    Вкладки    Справка

igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
The authenticity of host '37.139.32.56 (37.139.32.56)' can't be established.
ECDSA key fingerprint is SHA256:mJmBjRcbFWlq5nzlx0+TOaywn00Q8l8X4H1CiqimlTE.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '37.139.32.56' (ECDSA) to the list of known hosts.
Connection closed by 37.139.32.56 port 22
igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ ls
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ hdfs dfs -ls
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ █
```

Пробуем зайти на другие сервера в подсети

```
Терминал - student3_10@bigdataanalytics2-worker-shdpt-v31-1-0:~

Файл    Правка    Вид    Терминал    Вкладки    Справка

igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
The authenticity of host '37.139.32.56 (37.139.32.56)' can't be established.
ECDSA key fingerprint is SHA256:mJmBjRcbFWlq5nzlx0+TOaywn00Q8l8X4H1CiqimlTE.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '37.139.32.56' (ECDSA) to the list of known hosts.
Connection closed by 37.139.32.56 port 22
igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ ls
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ hdfs dfs -ls
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ ssh 10.0.0.19
The authenticity of host '10.0.0.19 (10.0.0.19)' can't be established.
ECDSA key fingerprint is SHA256:tj2m7l//06hPgvYvvL8T644D62D/DVgWnv4RVany97M.
ECDSA key fingerprint is MD5:c7:15:c0:b5:93:28:2f:4e:c0:ed:28:90:00:1e:c1:75.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.0.19' (ECDSA) to the list of known hosts.
```

```
Терминал - student3_10@bigdataanalytics2-worker-shdpt-v31-1-2:~

Файл    Правка    Вид    Терминал    Вкладки    Справка

igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
The authenticity of host '37.139.32.56 (37.139.32.56)' can't be established.
ECDSA key fingerprint is SHA256:mJmBjRcbFWlq5nzlx0+TOaywn00Q8l8X4H1CiqimlTE.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '37.139.32.56' (ECDSA) to the list of known hosts.
Connection closed by 37.139.32.56 port 22
igor@igor-MS-7808:~$ ssh student3_10@37.139.32.56
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ ls
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ hdfs dfs -ls
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ ssh 10.0.0.19
The authenticity of host '10.0.0.19 (10.0.0.19)' can't be established.
ECDSA key fingerprint is SHA256:tj2m7l//06hPgvYvvL8T644D62D/DVgWnv4RVany97M.
ECDSA key fingerprint is MD5:c7:15:c0:b5:93:28:2f:4e:c0:ed:28:90:00:1e:c1:75.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.0.19' (ECDSA) to the list of known hosts.
[student3_10@bigdataanalytics2-worker-shdpt-v31-1-0 ~]$ ssh 10.0.0.26
The authenticity of host '10.0.0.26 (10.0.0.26)' can't be established.
ECDSA key fingerprint is SHA256:D2Q6uYUPrnZIQrKpUjmPKaGdDEb5EpdynamYWNuEgUE.
ECDSA key fingerprint is MD5:43:0c:cd:c6:00:db:2f:14:dd:1b:cf:17:38:10:63:4d.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.0.26' (ECDSA) to the list of known hosts.
[student3_10@bigdataanalytics2-worker-shdpt-v31-1-2 ~]$ █
```

Выход
exit


```
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ ls
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ hdfs dfs -ls
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ ssh 10.0.0.19
The authenticity of host '10.0.0.19 (10.0.0.19)' can't be established.
ECDSA key fingerprint is SHA256:tj2m7l//06hPgvYvvL8T644D62D/DVgWnv4RVany97M.
ECDSA key fingerprint is MD5:c7:15:c0:b5:93:28:2f:4e:c0:ed:28:90:00:1e:c1:75.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.0.19' (ECDSA) to the list of known hosts.
[student3_10@bigdataanalytics2-worker-shdpt-v31-1-0 ~]$ ssh 10.0.0.26
The authenticity of host '10.0.0.26 (10.0.0.26)' can't be established.
ECDSA key fingerprint is SHA256:D2Q6uYUPrnZIQrKpUjmPKaGdDEb5EpdynamYWNuEgUE.
ECDSA key fingerprint is MD5:43:0c:cd:c6:00:db:2f:14:dd:1b:cf:17:38:10:63:4d.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.0.26' (ECDSA) to the list of known hosts.
[student3_10@bigdataanalytics2-worker-shdpt-v31-1-2 ~]$ exit
logout
Connection to 10.0.0.26 closed.
[student3_10@bigdataanalytics2-worker-shdpt-v31-1-0 ~]$ exit
logout
Connection to 10.0.0.19 closed.
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ exit
logout
Connection to 37.139.32.56 closed.
igor@igor-MS-7808:~$
```

Устанавливаю туннель:
ssh -i /home/igor/Downloads/id_rsa_student3_10 student3_10@37.139.32.56 -D localhost:8080


```
logout
Connection to 10.0.0.19 closed.
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ exit
logout
Connection to 37.139.32.56 closed.
igor@igor-MS-7808:~$ ssh -i /Users/igor/Downloads/id_rsa_student3_10 student3_10
@37.139.32.56 -D localhost:8080
Warning: Identity file /Users/igor/Downloads/id_rsa_student3_10 not accessible:
No such file or directory.
Last login: Sat Apr  3 18:28:27 2021 from 109.252.26.235
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$ ssh -i /home/igor/Загрузки
//id_rsa_student3_10 student3_10@37.139.32.56 -D localhost:8080
Warning: Identity file /home/igor/Загрузки//id_rsa_student3_10 not accessible: N
o such file or directory.
The authenticity of host '37.139.32.56 (37.139.32.56)' can't be established.
ECDSA key fingerprint is SHA256:mJmBjRcbFWlq5nzlx0+TOaywn0OQ8l8X4H1CiqimlTE.
ECDSA key fingerprint is MD5:da:4e:f0:22:e2:55:18:fb:dd:dd:57:5e:00:6f:80:34.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '37.139.32.56' (ECDSA) to the list of known hosts.
bind: Address already in use
channel_setup_fwd_listener_tcpip: cannot listen to port: 8080
Could not request local forwarding.
Last login: Sat Apr  3 19:20:31 2021 from 109-252-26-235.nat.spd-mgts.ru
[student3_10@bigdataanalytics2-head-shdpt-v31-1-0 ~]$
```

Ошибок не возникает и учетная запись на кластере готова к дальнейшей работе и выполнению следующих домашних заданий.