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Государственное автономное образовательное учреждение
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Институт цифрового образования
Департамент информатики, управления и технологий

ДИСЦИПЛИНА:
«Распределенные системы»
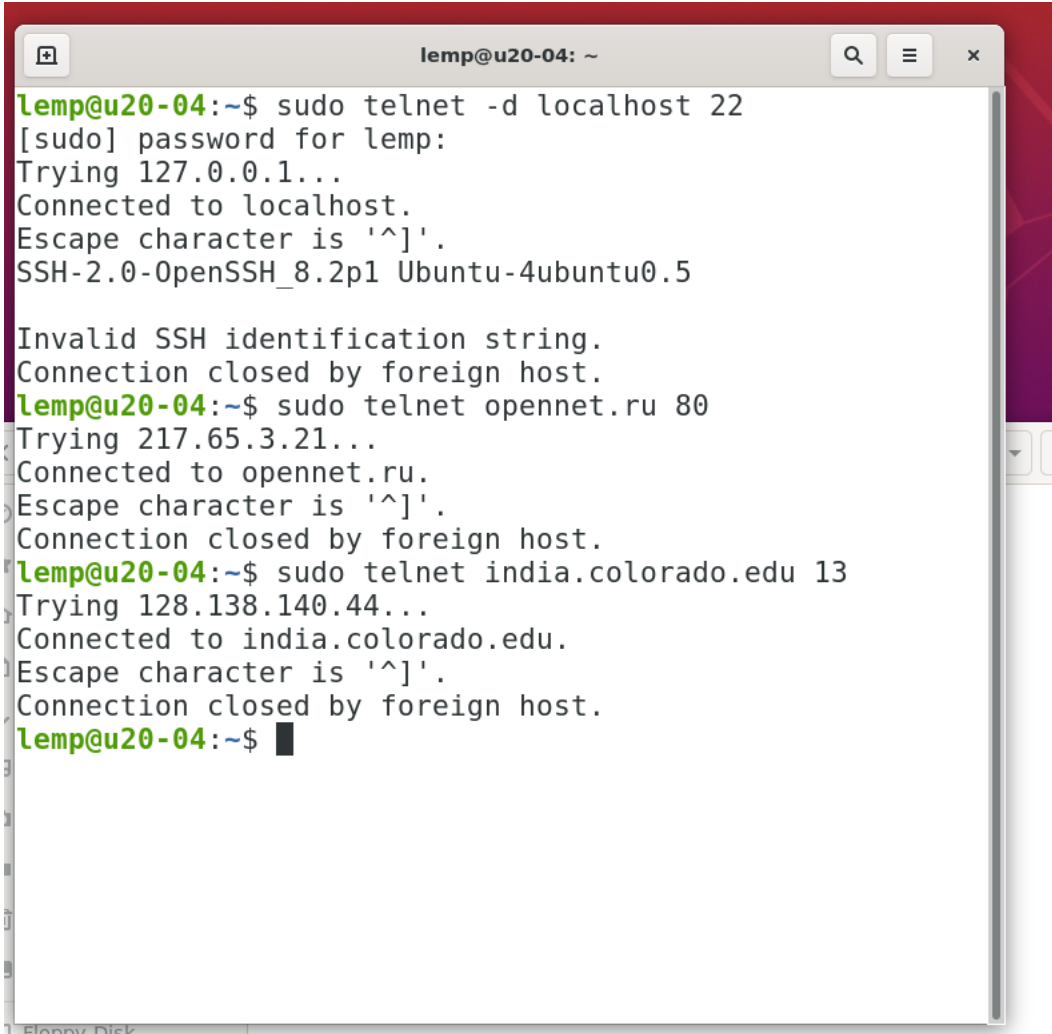
Отчет по практической работе №1

Тема:

«Семинар 1. HTTP»

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Проверил: Босенко Т.М.

Москва
2022

Режим тестирование:


```
lemp@u20-04:~$ sudo telnet -d localhost 22
[sudo] password for lemp:
Trying 127.0.0.1...
Connected to localhost.
Escape character is '^]'.
SSH-2.0-OpenSSH_8.2p1 Ubuntu-4ubuntu0.5

Invalid SSH identification string.
Connection closed by foreign host.
lemp@u20-04:~$ sudo telnet opennet.ru 80
Trying 217.65.3.21...
Connected to opennet.ru.
Escape character is '^]'.
Connection closed by foreign host.
lemp@u20-04:~$ sudo telnet india.colorado.edu 13
Trying 128.138.140.44...
Connected to india.colorado.edu.
Escape character is '^]'.
Connection closed by foreign host.
lemp@u20-04:~$
```
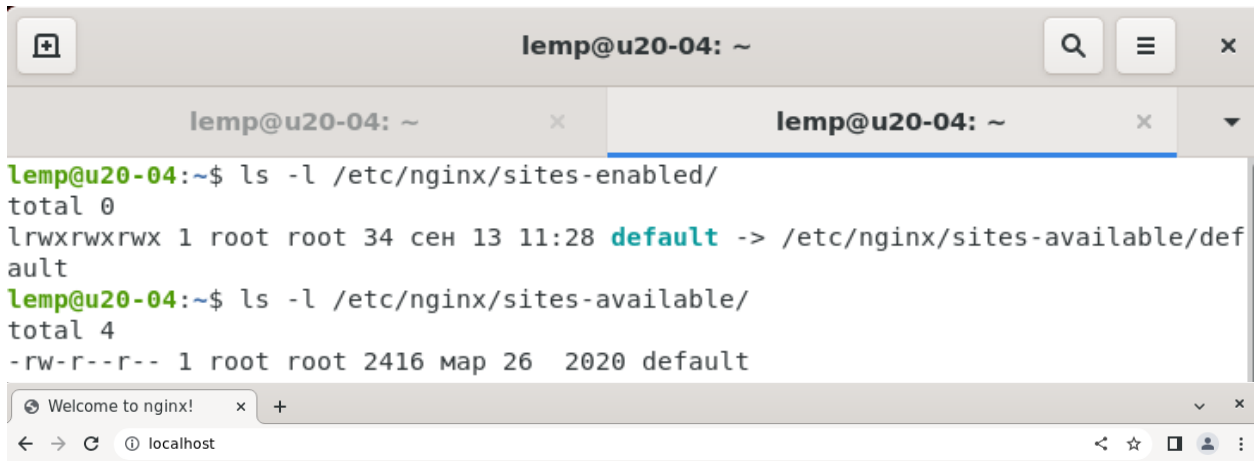
```
lemp@u20-04:~$ sudo curl -v http://mgpu.ru
[sudo] password for lemp:
*   Trying 37.230.157.233:80...
* TCP_NODELAY set
* Connected to mgpu.ru (37.230.157.233) port 80 (#0)
> GET / HTTP/1.1
> Host: mgpu.ru
> User-Agent: curl/7.68.0
> Accept: */*
>
* Mark bundle as not supporting multiuse
< HTTP/1.1 301 Moved Permanently
< Content-length: 0
< Location: https://mgpu.ru/
<
* Connection #0 to host mgpu.ru left intact
lemp@u20-04:~$ sudo curl -v https://mgpu.ru
*   Trying 37.230.157.233:443...
* TCP_NODELAY set
* Connected to mgpu.ru (37.230.157.233) port 443 (#0)
* ALPN, offering h2
* ALPN, offering http/1.1
* successfully set certificate verify locations:
*   CAfile: /etc/ssl/certs/ca-certificates.crt
  CApath: /etc/ssl/certs
* TLSv1.3 (OUT), TLS handshake, Client hello (1):
* TLSv1.3 (IN), TLS handshake, Server hello (2):
* TLSv1.3 (IN), TLS handshake, Encrypted Extensions (8):
* TLSv1.3 (IN), TLS handshake, Certificate (11):
* TLSv1.3 (IN), TLS handshake, CERT verify (15):
* TLSv1.3 (IN), TLS handshake, Finished (20):
* TLSv1.3 (OUT), TLS change cipher, Change cipher spec (1):
* TLSv1.3 (OUT), TLS handshake, Finished (20):
* SSL connection using TLSv1.3 / TLS_AES_256_GCM_SHA384
* ALPN, server did not agree to a protocol
* Server certificate:
*  subject: CN=*.mgpu.ru
*  start date: Mar 29 11:44:41 2022 GMT
*  expire date: Apr 30 11:44:40 2023 GMT
*  subjectAltName: host "mgpu.ru" matched cert's "mgpu.ru"
*  issuer: C=BE; O=GlobalSign nv-sa; CN=AlphaSSL CA - SHA256 - G2
*  SSL certificate verify ok.
> GET / HTTP/1.1
> Host: mgpu.ru
> User-Agent: curl/7.68.0
> Accept: */*
>
* TLSv1.3 (IN), TLS handshake, Newsession Ticket (4):
* TLSv1.3 (IN), TLS handshake, Newsession Ticket (4):
* old SSL session ID is stale, removing
* Mark bundle as not supporting multiuse
< HTTP/1.1 301 Moved Permanently
< Content-length: 0
< Location: https://www.mgpu.ru/
<
* Connection #0 to host mgpu.ru left intact
lemp@u20-04:~$
```

```
lemp@u20-04:~$ sudo curl -v https://www.hse.ru
[sudo] password for lemp:
*    Trying 178.248.234.104:443...
* TCP_NODELAY set
* Connected to www.hse.ru (178.248.234.104) port 443 (#0)
* ALPN, offering h2
* ALPN, offering http/1.1
* successfully set certificate verify locations:
*    CAfile: /etc/ssl/certs/ca-certificates.crt
  CApath: /etc/ssl/certs
* TLSv1.3 (OUT), TLS handshake, Client hello (1):
* TLSv1.3 (IN), TLS handshake, Server hello (2):
* TLSv1.3 (IN), TLS handshake, Encrypted Extensions (8):
* TLSv1.3 (IN), TLS handshake, Certificate (11):
* TLSv1.3 (IN), TLS handshake, CERT verify (15):
* TLSv1.3 (IN), TLS handshake, Finished (20):
* TLSv1.3 (OUT), TLS change cipher, Change cipher spec (1):
* TLSv1.3 (OUT), TLS handshake, Finished (20):
* SSL connection using TLSv1.3 / TLS_AES_128_GCM_SHA256
* ALPN, server accepted to use h2
* Server certificate:
*   subject: CN=*.hse.ru
*   start date: Jan 21 00:00:00 2022 GMT
*   expire date: Feb 21 23:59:59 2023 GMT
*   subjectAltName: host "www.hse.ru" matched cert's "*.hse.ru"
*   issuer: C=GB; ST=Greater Manchester; L=Salford; O=Sectigo Limited; CN=Sectigo RSA Domain Vali
dation Secure Server CA
*   SSL certificate verify ok.
* Using HTTP2, server supports multi-use
```

```
* TLSv1.3 (IN), TLS handshake, Newsession Ticket (4):
* TLSv1.3 (IN), TLS handshake, Newsession Ticket (4):
* old SSL session ID is stale, removing
* Mark bundle as not supporting multiuse
< HTTP/1.1 200 OK
< Server: nginx/1.18.0 (Ubuntu)
< Date: Tue, 13 Sep 2022 08:09:21 GMT
< Content-Type: text/html; charset=UTF-8
< Transfer-Encoding: chunked
< Vary: Accept-Encoding
< Last-Modified: Tue, 13 Sep 2022 08:08:55 GMT
< Cache-Control: max-age=574, must-revalidate
< Vary: Cookie
< Link: <https://www.mgpu.ru/wp-json/>; rel="https://api.w.org/"
< Link: <https://www.mgpu.ru/wp-json/wp/v2/pages/2>; rel="alternate"; type="application/json"
< Link: <https://www.mgpu.ru/>; rel=shortlink
```

```
>
* TLSv1.3 (IN), TLS handshake, Newsession Ticket (4):
* TLSv1.3 (IN), TLS handshake, Newsession Ticket (4):
* old SSL session ID is stale, removing
* Connection state changed (MAX_CONCURRENT_STREAMS == 16)!
< HTTP/2 302
< server: QRATOR
< date: Tue, 13 Sep 2022 08:15:44 GMT
< content-type: text/html
< content-length: 138
< location: https://www.hse.ru/en/
< expires: Tue, 13 Sep 2022 08:15:44 GMT
< cache-control: max-age=0
< strict-transport-security: max-age=15552000
< x-xss-protection: 1; mode=block; report=https://www.hse.ru/n/api/xss/report
< set-cookie: tracking=ZEsUBGMgPDBL38EyCWAPAg==; expires=Thu, 31-Dec-37 23:55:55 GMT; domain=.hs
e.ru; path=/
<
<html>
<head><title>302 Found</title></head>
<body>
<center><h1>302 Found</h1></center>
<hr><center>nginx</center>
</body>
</html>
* Connection #0 to host www.hse.ru left intact
lemp@u20-04:~$ 
```

lemp@u20-04: ~

lemp@u20-04: ~   lemp@u20-04: ~

```
lemp@u20-04:~$ ls -l /etc/nginx/sites-enabled/
total 0
lrwxrwxrwx 1 root root 34 сен 13 11:28 default -> /etc/nginx/sites-available/def
ault
lemp@u20-04:~$ ls -l /etc/nginx/sites-available/
total 4
-rw-r--r-- 1 root root 2416 мар 26  2020 default
```
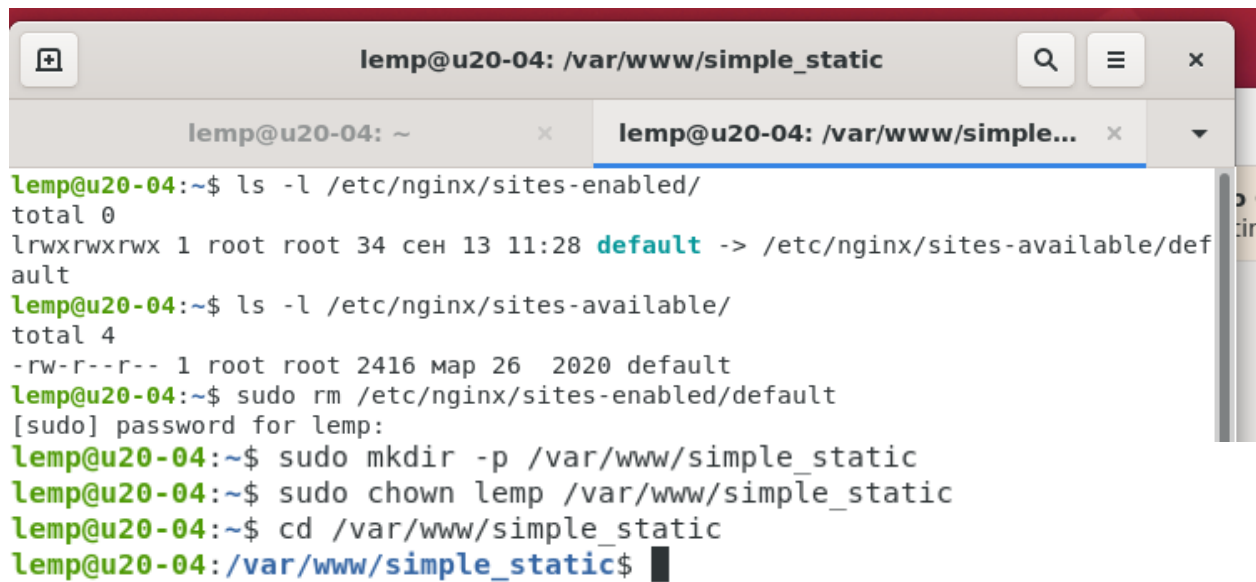
Welcome to nginx!   +

← → C ⓘ localhost

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.
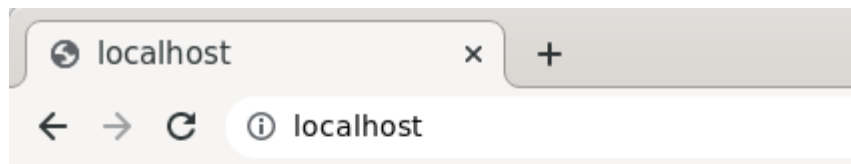
Thank you for using nginx.

```
lemp@u20-04:~$ ls -l /etc/nginx/sites-enabled/
total 0
lrwxrwxrwx 1 root root 34 сен 13 11:28 default -> /etc/nginx/sites-available/def
ault
lemp@u20-04:~$ ls -l /etc/nginx/sites-available/
total 4
-rw-r--r-- 1 root root 2416 мар 26  2020 default
lemp@u20-04:~$ sudo rm /etc/nginx/sites-enabled/default
[sudo] password for lemp:
lemp@u20-04:~$ sudo mkdir -p /var/www/simple_static
lemp@u20-04:~$ sudo chown lemp /var/www/simple_static
lemp@u20-04:~$ cd /var/www/simple_static
lemp@u20-04:/var/www/simple_static$ 
```

This is our first html file

```
lemp@u20-04:/etc/nginx$ cd
lemp@u20-04:~$ sudo nano /etc/nginx/sites-available/simple_static.conf
lemp@u20-04:~$ cd /etc/nginx/
lemp@u20-04:/etc/nginx$ sudo nginx -t
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful
lemp@u20-04:/etc/nginx$ sudo service nginx start
lemp@u20-04:/etc/nginx$ curl -v http://localhost:80/
*   Trying 127.0.0.1:80...
* TCP_NODELAY set
* Connected to localhost (127.0.0.1) port 80 (#0)
> GET / HTTP/1.1
> Host: localhost
> User-Agent: curl/7.68.0
> Accept: */*
>
* Mark bundle as not supporting multiuse
< HTTP/1.1 200 OK
< Server: nginx/1.18.0 (Ubuntu)
< Date: Tue, 13 Sep 2022 10:15:58 GMT
< Content-Type: text/html
< Content-Length: 41
< Last-Modified: Tue, 13 Sep 2022 08:51:23 GMT
< Connection: keep-alive
< ETag: "6320448b-29"
< Accept-Ranges: bytes
<
<body>This is our first html file</body>
* Connection #0 to host localhost left intact
```