Day3_Network_Diagnostics_Lab

Day 3 — Network Diagnostics Lab / Лабораторка по диагностике сети

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1. Interface Info / Информация об интерфейсе

- **Name : lo;   enp0s3l;**
- **IPv4: 127.0.0.1/8;   10.0.2.15/24**
- **IPv6: ::1/128; fd17:625c:f037:2:b3c1:4719:e644:bcb0/64**
- **State / Состояние: UP,LOWER_UP**

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2. Default Gateway / Шлюз по умолчанию

- **IP: 10.0.2.2**

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3. Ping Tests / Тесты пинга

- Gateway / Шлюз (`ping -c 4 <gateway_ip>`):

```
sysadmin@Ubuntu-DevOps:~$ ping -c 4 10.0.2.2
PING 10.0.2.2 (10.0.2.2) 56(84) bytes of data.
64 bytes from 10.0.2.2: icmp_seq=1 ttl=255 time=0.455 ms
64 bytes from 10.0.2.2: icmp_seq=2 ttl=255 time=0.431 ms
64 bytes from 10.0.2.2: icmp_seq=3 ttl=255 time=0.954 ms
64 bytes from 10.0.2.2: icmp_seq=4 ttl=255 time=0.947 ms

--- 10.0.2.2 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3071ms
rtt min/avg/max/mdev = 0.431/0.696/0.954/0.253 ms
```

- 8.8.8.8 (`ping -c 4 8.8.8.8`):

```
sysadmin@Ubuntu-DevOps:~$ ping -c 4 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=255 time=18.2 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=255 time=43.8 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=255 time=18.7 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=255 time=15.8 ms

--- 8.8.8.8 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3008ms
rtt min/avg/max/mdev = 15.787/24.094/43.760/11.405 ms
```

- google.com (`ping -c 4 google.com`):

```
sysadmin@Ubuntu-DevOps:~$ ping -c 4 google.com
PING google.com (172.253.116.100) 56(84) bytes of data.
64 bytes from dj-in-f100.1e100.net (172.253.116.100): icmp_seq=1 ttl=255 time
=8.05 ms
64 bytes from dj-in-f100.1e100.net (172.253.116.100): icmp_seq=2 ttl=255 time
=8.46 ms
64 bytes from dj-in-f100.1e100.net (172.253.116.100): icmp_seq=3 ttl=255 time
=8.76 ms
64 bytes from dj-in-f100.1e100.net (172.253.116.100): icmp_seq=4 ttl=255 time
=8.42 ms

--- google.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3007ms
rtt min/avg/max/mdev = 8.050/8.421/8.755/0.250 ms
```

4. DNS Tests / Тесты DNS

- `dig google.com` :

```
sysadmin@Ubuntu-DevOps:~$ dig google.com
```

```
; <<>> DiG 9.18.30-0ubuntu0.24.04.2-Ubuntu <<>> google.com
;; global options: +cmd
;; Got answer:
;; →>HEADER<← opcode: QUERY, status: NOERROR, id: 873
;; flags: qr rd ra; QUERY: 1, ANSWER: 6, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;google.com.            IN    A

;; ANSWER SECTION:
google.com.        3564   IN    A 172.253.116.101
google.com.        3564   IN    A 172.253.116.138
google.com.        3564   IN    A 172.253.116.102
google.com.        3564   IN    A 172.253.116.139
google.com.        3564   IN    A 172.253.116.113
google.com.        3564   IN    A 172.253.116.100

;; Query time: 1 msec
;; SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
;; WHEN: Fri Aug 15 19:31:46 UTC 2025
;; MSG SIZE  rcvd: 135
```

- `nslookup google.com` :

```
sysadmin@Ubuntu-DevOps:~$ nslookup google.com
Server:        127.0.0.53
Address: 127.0.0.53#53

Non-authoritative answer:
Name: google.com
Address: 172.253.116.138
Name: google.com
Address: 172.253.116.113
```

Name: google.com
Address: 2a00:1450:400b:c02::71
Name: google.com
Address: 2a00:1450:400b:c02::66

5. HTTP Tests / HTTP-доступ

- `curl -I google.com` :

sysadmin@Ubuntu-DevOps:~$ curl -I google.com
HTTP/1.1 301 Moved Permanently
Location: http://www.google.com/
Content-Type: text/html; charset=UTF-8
Content-Security-Policy-Report-Only: object-src 'none';base-uri 'self';script-src 'nonce-bz6nx3Xrio3SlhvuTTu4hw' 'strict-dynamic' 'report-sample' 'unsafe-eval' 'unsafe-inline' https: http:;report-uri https://csp.withgoogle.com/csp/gws/other-hp
Date: Fri, 15 Aug 2025 19:33:07 GMT
Expires: Sun, 14 Sep 2025 19:33:07 GMT
Cache-Control: public, max-age=2592000
Server: gws
Content-Length: 219
X-XSS-Protection: 0
X-Frame-Options: SAMEORIGIN

- `wget --spider google.com` :

sysadmin@Ubuntu-DevOps:~$ wget --spider google.com
Spider mode enabled. Check if remote file exists.
--2025-08-15 19:36:56-- http://google.com/
Resolving google.com (google.com)... 172.253.116.139, 172.253.116.102, 172.253.116.138, ...
Connecting to google.com (google.com)|172.253.116.139|:80... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: http://www.google.com/ [following]

Spider mode enabled. Check if remote file exists.
--2025-08-15 19:36:56-- http://www.google.com/
Resolving www.google.com (www.google.com)... 209.85.203.99, 209.85.203.
105, 209.85.203.147, ...
Connecting to www.google.com (www.google.com)|209.85.203.99|:80... con
nected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [text/html]
Remote file exists and could contain further links,
but recursion is disabled -- not retrieving.

6. Summary / Итог

Сеть работает, проблем нет. / Network works, no problem.