

# Day3\_Network\_Diagnostics\_Lab\_EN

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## 1. Interface Info

- Name: wlo1;
  - IPv4: 192.168.1.10;
  - IPv6: 2001:bd6:a3c:7000:8fab:bav2:7f80:6a6d/64 scope global temporary dynamic
  - State: UP,LOWER\_UP
- 

## 2. Default Gateway

- IP: 192.168.1.251
- 

## 3. Ping Tests

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

```
leprecha@Ubuntu-DevOps:~$ ping -c 4 192.168.1.251
PING 192.168.1.251 (192.168.1.251) 56(84) bytes of data.
64 bytes from 192.168.1.251: icmp_seq=1 ttl=64 time=3.94 ms
64 bytes from 192.168.1.251: icmp_seq=2 ttl=64 time=4.60 ms
64 bytes from 192.168.1.251: icmp_seq=3 ttl=64 time=4.26 ms
64 bytes from 192.168.1.251: icmp_seq=4 ttl=64 time=3.58 ms

--- 192.168.1.251 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3004ms
rtt min/avg/max/mdev = 3.575/4.093/4.599/0.380 ms
```

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

```
leprecha@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=116 time=12.5 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=116 time=11.9 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=116 time=12.8 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=116 time=11.1 ms
```

--- 8.8.8.8 ping statistics ---

4 packets transmitted, 4 received, 0% packet loss, time 3004ms

rtt min/avg/max/mdev = 11.119/12.107/12.819/0.652 ms

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

```
leprecha@Ubuntu-DevOps:~$ ping -c 4 google.com
```

```
PING google.com (2a00:1450:400b:c02::8a) 56 data bytes
```

```
64 bytes from dj-in-f138.1e100.net (2a00:1450:400b:c02::8a): icmp_seq=1 ttl=109 time=6.29 ms
```

```
64 bytes from dj-in-f138.1e100.net (2a00:1450:400b:c02::8a): icmp_seq=2 ttl=109 time=10.7 ms
```

```
64 bytes from dj-in-f138.1e100.net (2a00:1450:400b:c02::8a): icmp_seq=3 ttl=109 time=9.55 ms
```

```
64 bytes from dj-in-f138.1e100.net (2a00:1450:400b:c02::8a): icmp_seq=4 ttl=109 time=9.32 ms
```

--- google.com ping statistics ---

4 packets transmitted, 4 received, 0% packet loss, time 3005ms

rtt min/avg/max/mdev = 6.287/8.966/10.714/1.634 ms

## 4. DNS Tests

- `dig google.com` :

```
leprecha@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: 32812
```

```
;; 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.      1496 IN  A 172.253.116.101  
google.com.      1496 IN  A 172.253.116.102  
google.com.      1496 IN  A 172.253.116.138  
google.com.      1496 IN  A 172.253.116.100  
google.com.      1496 IN  A 172.253.116.113  
google.com.      1496 IN  A 172.253.116.139
```

```
:: Query time: 0 msec
```

```
:: SERVER: 127.0.0.53#53(127.0.0.53) (UDP)
```

```
:: WHEN: Thu Aug 21 22:15:43 IST 2025
```

```
:: MSG SIZE rcvd: 135
```

- `nslookup google.com` :

```
leprecha@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::8b
```

```
Name: google.com
```

```
Address: 2a00:1450:400b:c02::66
```

## 5. HTTP Tests

- `curl -I google.com` :

```
leprecha@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
-NkbORnGq1XJsKxxo202mRQ' 'strict-dynamic' 'report-sample' 'unsafe-eval' 'unsafe-i
nline' https: http;;report-uri https://csp.withgoogle.com/csp/gws/other-hp
Date: Thu, 21 Aug 2025 21:16:59 GMT
Expires: Sat, 20 Sep 2025 21:16:59 GMT
Cache-Control: public, max-age=2592000
Server: gws
Content-Length: 219
X-XSS-Protection: 0
X-Frame-Options: SAMEORIGIN
```

- `wget --spider google.com` :

```
leprecha@Ubuntu-DevOps:~$ wget --spider google.com
Spider mode enabled. Check if remote file exists.
--2025-08-21 22:17:39-- http://google.com/
Resolving google.com (google.com)... 2a00:1450:400b:c02::8b, 2a00:1450:400b:c02::
8a, 2a00:1450:400b:c02::71, ...
Connecting to google.com (google.com)|2a00:1450:400b:c02::8b|:80... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: http://www.google.com/ [following]
Spider mode enabled. Check if remote file exists.
--2025-08-21 22:17:39-- http://www.google.com/
Resolving www.google.com (www.google.com)... 2a00:1450:400b:c03::69, 2a00:1450:
400b:c03::63, 2a00:1450:400b:c03::6a, ...
Connecting to www.google.com (www.google.com)|2a00:1450:400b:c03::69|: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

Network works, no problem.