第十三週

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1. 設定 DNS server 為 8.8.8.8。

```
[s11127138@localhost ~]$ sudo vi /etc/resolv.conf
[sudo] password for s11127138:
```

```
# Generated by NetworkManager
search localdomain
#nameserver 192.168.37.2
nameserver 8.8.8.8
```

2. 使用 8.8.8.8 查詢 www.google.com 的 IP Address。

```
[s11127138@localhost ~]$ nslookup
> server 8.8.8.8
Default server: 8.8.8.8
Address: 8.8.8.8#53
> www.google.com
Server:         8.8.8.8
Address:        8.8.8.8#53

Non-authoritative answer:
Name:   www.google.com
Address: 142.250.198.68
Name:   www.google.com
Address: 2404:6800:4012:8::2004
>
```

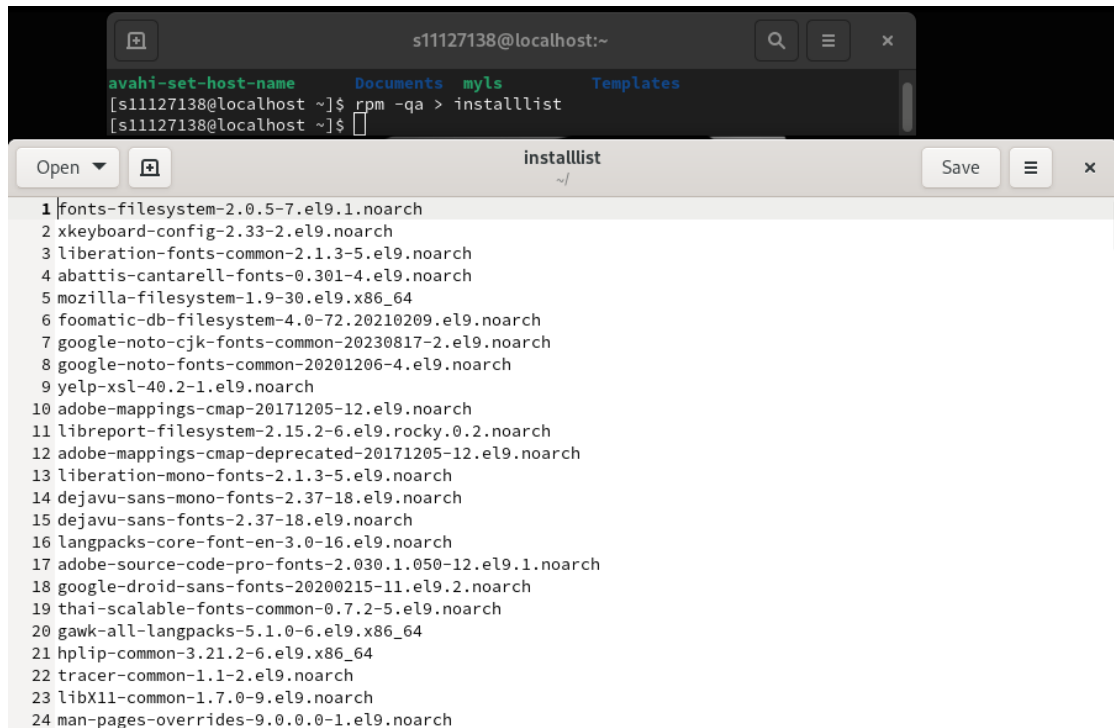3. 查詢到 www.google.com 會經過哪些網路設備。

-I 將 unix 送出的東西，轉成 windows 的格式。

```
[s11127138@localhost ~]$ traceroute -I www.google.com
traceroute to www.google.com (142.250.196.196), 30 hops max, 60 byte packets
 1  _gateway (192.168.37.2)  0.114 ms  0.101 ms  0.066 ms
 2  172.20.10.1 (172.20.10.1)  1.802 ms  4.059 ms  4.037 ms
 3  10.157.65.134 (10.157.65.134)  222.270 ms  222.273 ms  222.252 ms
 4  10.157.65.41 (10.157.65.41)  146.866 ms  146.872 ms  150.909 ms
 5  10.157.67.150 (10.157.67.150)  150.906 ms  151.614 ms  152.680 ms
 6  10.157.67.178 (10.157.67.178)  152.666 ms  135.041 ms  135.019 ms
 7  210-65-126-214.tylc-3336.hinet.net (210.65.126.214)  135.758 ms  170.656 ms  170.644 ms
 8  72.14.209.178 (72.14.209.178)  170.620 ms  170.598 ms  170.575 ms
 9  72.14.233.233 (72.14.233.233)  170.554 ms  186.500 ms  186.479 ms
10  142.251.77.85 (142.251.77.85)  186.444 ms  186.427 ms  32.533 ms
11  nctsaa-ac-in-f4.1e100.net (142.250.196.196)  32.497 ms  32.462 ms  32.443 ms
[s11127138@localhost ~]$
```

4. 查詢 www.google.com IP Address 資料 DNS TTL 還有多久?

```
[s11127138@localhost ~]$ nslookup
> set debug
> www.google.com
Server:         8.8.8.8
Address:        8.8.8.8#53

------------
    QUESTIONS:
        www.google.com, type = A, class = IN
    ANSWERS:
    ->  www.google.com
        internet address = 142.250.77.4
        ttl = 223
    AUTHORITY RECORDS:
    ADDITIONAL RECORDS:
------------
Non-authoritative answer:
Name:   www.google.com
Address: 142.250.77.4
------------
    QUESTIONS:
        www.google.com, type = AAAA, class = IN
    ANSWERS:
    ->  www.google.com
        has AAAA address 2404:6800:4012:7::2004
        ttl = 231
    AUTHORITY RECORDS:
    ADDITIONAL RECORDS:
------------
Name:   www.google.com
Address: 2404:6800:4012:7::2004
>
```
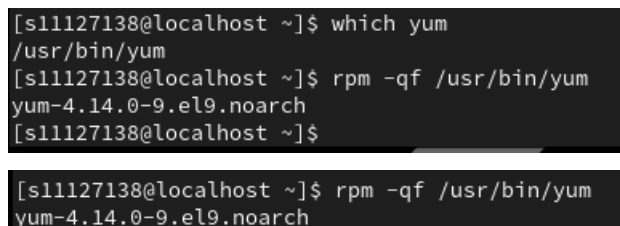
5. 列出目前已安裝套件(packages)。

```
                                    s11127138@localhost:~

avahi-set-host-name        Documents  myls        Templates
[s11127138@localhost ~]$ rpm -qa > installlist
[s11127138@localhost ~]$
```

```
Open                                installlist                          Save        ×
                                        ~/
  1 fonts-filesystem-2.0.5-7.el9.1.noarch
  2 xkeyboard-config-2.33-2.el9.noarch
  3 liberation-fonts-common-2.1.3-5.el9.noarch
  4 abattis-cantarell-fonts-0.301-4.el9.noarch
  5 mozilla-filesystem-1.9-30.el9.x86_64
  6 foomatic-db-filesystem-4.0-72.20210209.el9.noarch
  7 google-noto-cjk-fonts-common-20230817-2.el9.noarch
  8 google-noto-fonts-common-20201206-4.el9.noarch
  9 yelp-xsl-40.2-1.el9.noarch
 10 adobe-mappings-cmap-20171205-12.el9.noarch
 11 libreport-filesystem-2.15.2-6.el9.rocky.0.2.noarch
 12 adobe-mappings-cmap-deprecated-20171205-12.el9.noarch
 13 liberation-mono-fonts-2.1.3-5.el9.noarch
 14 dejavu-sans-mono-fonts-2.37-18.el9.noarch
 15 dejavu-sans-fonts-2.37-18.el9.noarch
 16 langpacks-core-font-en-3.0-16.el9.noarch
 17 adobe-source-code-pro-fonts-2.030.1.050-12.el9.1.noarch
 18 google-droid-sans-fonts-20200215-11.el9.2.noarch
 19 thai-scalable-fonts-common-0.7.2-5.el9.noarch
 20 gawk-all-langpacks-5.1.0-6.el9.x86_64
 21 hplip-common-3.21.2-6.el9.x86_64
 22 tracer-common-1.1-2.el9.noarch
 23 libX11-common-1.7.0-9.el9.noarch
 24 man-pages-overrides-9.0.0.0-1.el9.noarch
```

6. 列出 yum 執行檔是由哪一個 package 安裝進來的。

```
[s11127138@localhost ~]$ which yum
/usr/bin/yum
[s11127138@localhost ~]$ rpm -qf /usr/bin/yum
yum-4.14.0-9.el9.noarch
[s11127138@localhost ~]$
```

```
[s11127138@localhost ~]$ rpm -qf /usr/bin/yum
yum-4.14.0-9.el9.noarch
```