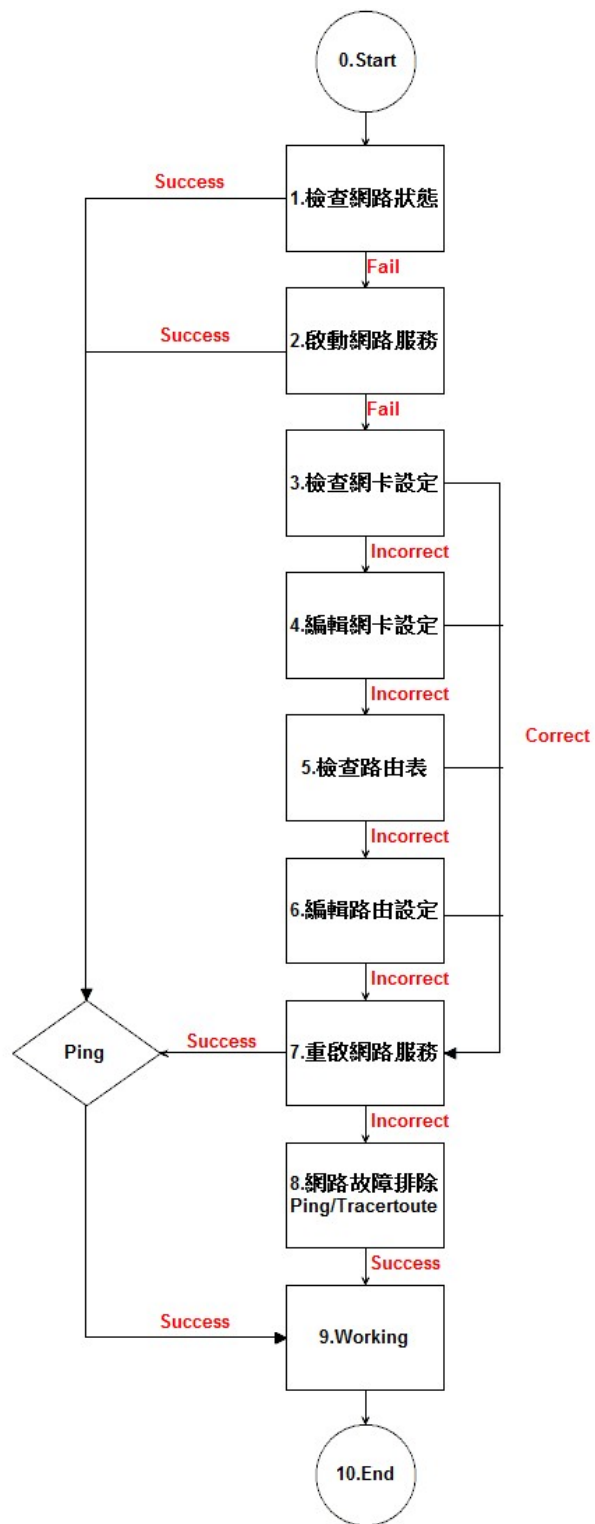


此篇主要根據 3/10 至香港更換設備時所做的總結，及於事前所需做的設備檢查及突發事故時可做的故障排除之 SOP。

注意事項及步驟：

- 可先將網路 IP 設定為與欲更換設備之臨近 IP，然後再重啟網路是否可正常運作
- 重啟設備，再觀察其網路連線狀況
- 切換至欲更換設備之 IP，再重啟網路一次看連線狀況
- 再重啟設備一次，最後確認網路連線狀況
- 檢查與公司 FTP 之連線狀況



1. 檢查網路狀態

透過 `/etc/init.d/network status` 或 `service network status` 檢查當前網路狀況

```
CentOS release 6.7 (Final)
Kernel 2.6.32-573.el6.x86_64 on an x86_64

localhost login: root
Password:
[root@localhost ~]# /etc/init.d/network status
Configured devices:
lo eth0
Currently active devices:
lo eth0
[root@localhost ~]# _
```

2. 啟動網路服務

透過 `/etc/init.d/network start` 或 `service network start` 來啟動網路服務

```
[root@localhost ~]# /etc/init.d/network start
Bringing up loopback interface: [ OK ]
Bringing up interface eth0: Active connection state: activating
Active connection path: /org/freedesktop/NetworkManager/ActiveConnection/1
state: activated
Connection activated [ OK ]
```

3. 檢查網卡資訊

透過 `ifconfig` 檢查網卡設定是否正確

```
[root@localhost ~]# ifconfig
eth0      Link encap:Ethernet  HWaddr 52:54:00:22:D1:5F
          inet addr:192.168.10.247  Bcast:192.168.10.255  Mask:255.255.255.0
          inet6 addr: fe80::5054:ff:fe22:d15f/64  Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:1035 errors:0 dropped:0 overruns:0 frame:0
          TX packets:23 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:237297 (231.7 KiB)  TX bytes:1548 (1.5 KiB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128  Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:4 errors:0 dropped:0 overruns:0 frame:0
          TX packets:4 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:240 (240.0 b)  TX bytes:240 (240.0 b)
```

4. 編輯網卡設定

進入網卡目錄 `cd /etc/sysconfig/network-scripts`

```
[root@localhost ~]# cd /etc/sysconfig/network-scripts/
[root@localhost network-scripts]# ls
ifcfg-eth0      ifdown-ipv6      ifup              ifup-isdn        ifup-tunnel
ifcfg-lo        ifdown-isdn      ifup-aliases     ifup-plip        ifup-wireless
ifdown          ifdown-post      ifup-bnep        ifup-plusb       init.ipv6-global
ifdown-bnep     ifdown-ppp       ifup-eth         ifup-post        net.hotplug
ifdown-eth      ifdown-routes    ifup-ib          ifup-ppp         network-functions
ifdown-ib       ifdown-sit       ifup-ippv        ifup-routes      network-functions-ipv6
ifdown-ippv     ifdown-tunnel    ifup-ipv6        ifup-sit
```

編輯對外網卡 vi ifcfg-eth0

```
[root@localhost network-scripts]# vim ifcfg-eth0_
```

輸入網卡資訊 (IP、Netmask、Gateway 及 DNS)後，儲存離開

```
DEVICE="eth0"
BOOTPROTO="static"
BROADCAST="192.168.10.255"
DNS1="168.95.1.1"
GATEWAY="192.168.10.254"
HWADDR="52:54:00:22:D1:5F"
IPADDR="192.168.10.247"
IPV6INIT="yes"
IPV6_AUTOCONF="yes"
NETMASK="255.255.255.0"
NM_CONTROLLED="yes"
ONBOOT="yes"
TYPE="Ethernet"
UUID="413636b6-8194-4ac4-8759-199a53313bc1"

IPADDR=192.168.10.247
NETMASK=255.255.255.0
GATEWAY=192.168.10.254
DNS=8.8.8.8

~
~
:wq_
```

5. 檢查路由表

透過 route -n 檢查路由設定

```
[root@localhost ~]# route -n
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
192.168.10.0 0.0.0.0 255.255.255.0 U 1 0 0 eth0
0.0.0.0 192.168.10.254 0.0.0.0 UG 0 0 0 eth0
[root@localhost ~]#
```

6. 編輯路由設定

建立對外的路由 `route add default gw 192.168.10.254`

```
[root@localhost ~]# route add default gw 192.168.10.254
```

7. 重啟網路服務

透過 `/etc/init.d/network restart` 或 `service network restart` 來重啟網路服務

```
/etc/init.d/networking restart
```

8. 網路故障排除

透過 `ping 8.8.8.8` 來判定網路是否連線成功，如果出現以下狀況，則試著進行下個測試 – `traceroute`

```
[root@localhost ~]# ping 8.8.8.8  
connect: Network is unreachable
```

透過 `traceroute 8.8.8.8` 看路由之路徑到哪裡就停了來判定內部網路連線是否正常

```
[root@localhost network-scripts]# traceroute 8.8.8.8  
traceroute to 8.8.8.8 (8.8.8.8), 30 hops max, 60 byte packets  
 1 192.168.10.254 (192.168.10.254) 0.411 ms 0.615 ms 0.602 ms  
 2 61-220-128-254.HINET-IP.hinet.net (61.220.128.254) 5.638 ms 6.104 ms 6.08  
 9 ms  
 3 tpd-3308.hinet.net (168.95.229.46) 6.320 ms 6.313 ms 6.284 ms  
 4 220-128-2-18.HINET-IP.hinet.net (220.128.2.18) 15.258 ms TPD-3012.hinet.ne  
 t (220.128.2.70) 18.955 ms TPD-3011.hinet.net (220.128.3.106) 13.199 ms  
 5 r4041-f0.ty.hinet.net (220.128.9.237) 12.680 ms 12.672 ms 12.616 ms  
 6 220-128-9-173.HINET-IP.hinet.net (220.128.9.173) 8.054 ms 7.537 ms 220-128  
 -8-173.HINET-IP.hinet.net (220.128.8.173) 6.506 ms  
 7 72.14.205.102 (72.14.205.102) 8.557 ms 74.125.49.158 (74.125.49.158) 11.96  
 7 ms 72.14.196.3 (72.14.196.3) 7.960 ms  
 8 72.14.236.19 (72.14.236.19) 13.946 ms 216.239.62.178 (216.239.62.178) 10.6  
 68 ms 15.821 ms  
 9 209.85.252.213 (209.85.252.213) 11.492 ms 209.85.250.229 (209.85.250.229)  
 17.885 ms 216.239.46.223 (216.239.46.223) 36.948 ms  
 10 209.85.243.23 (209.85.243.23) 21.750 ms 209.85.243.21 (209.85.243.21) 15.7  
 32 ms 72.14.237.171 (72.14.237.171) 18.455 ms  
 11 * * *  
 12 google-public-dns-a.google.com (8.8.8.8) 15.345 ms 14.393 ms 15.199 ms  
[root@localhost network-scripts]# _
```

9. Working

如果可以 `ping` 得出去，表示網路連線都正常且可成功地運作了。

```
[root@localhost ~]# ping 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=48 time=20.5 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=48 time=20.5 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=48 time=20.4 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=48 time=20.8 ms
64 bytes from 8.8.8.8: icmp_seq=5 ttl=48 time=20.3 ms
64 bytes from 8.8.8.8: icmp_seq=6 ttl=48 time=20.7 ms
^C
--- 8.8.8.8 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5497ms
rtt min/avg/max/mdev = 20.334/20.578/20.811/0.172 ms
```