**Procedure to Enable Dual-Networking Interface**

By

Regards

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root@android:/ # pkill dhcpcd

root@android:/ # busybox netstat -r

Kernel IP routing table

Destination Gateway Genmask Flags MSS Window irtt Iface

default 172.24.16.1 0.0.0.0 UG 0 0 0 wlan0

172.24.16.0 \* 255.255.240.0 U 0 0 0 wlan0

172.24.16.1 \* 255.255.255.255 UH 0 0 0 wlan0

root@android:/ # busybox ifconfig

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:16436 Metric:1

RX packets:0 errors:0 dropped:0 overruns:0 frame:0

TX packets:0 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:0

RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

p2p0 Link encap:Ethernet HWaddr 42:B0:FA:C1:95:36

UP BROADCAST MULTICAST MTU:1500 Metric:1

RX packets:0 errors:0 dropped:0 overruns:0 frame:0

TX packets:0 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:100

RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

wlan0 Link encap:Ethernet HWaddr 40:B0:FA:C1:95:36

inet addr:172.24.24.182 Bcast:172.24.31.255 Mask:255.255.240.0

inet6 addr: fe80::42b0:faff:fec1:9536/64 Scope:Link

UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1

RX packets:268914 errors:0 dropped:1 overruns:0 frame:0

TX packets:141875 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:100

RX bytes:372125770 (354.8 MiB) TX bytes:10436703 (9.9 MiB)

root@android:/ # svc wifi disable

root@android:/ # svc data enable

root@android:/ # busybox ifconfig

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:16436 Metric:1

RX packets:0 errors:0 dropped:0 overruns:0 frame:0

TX packets:0 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:0

RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

p2p0 Link encap:Ethernet HWaddr 42:B0:FA:C1:95:36

UP BROADCAST MULTICAST MTU:1500 Metric:1

RX packets:0 errors:0 dropped:0 overruns:0 frame:0

TX packets:0 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:100

RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

rmnet\_usb0 Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00

inet addr:10.116.50.149 Mask:255.255.255.252

inet6 addr: fe80::e64d:fbe2:efd1:f243/64 Scope:Link

UP RUNNING MTU:1500 Metric:1

RX packets:391 errors:0 dropped:0 overruns:0 frame:0

TX packets:403 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:1000

RX bytes:385653 (376.6 KiB) TX bytes:48286 (47.1 KiB)

130|root@android:/ # busybox netstat -r

Destination Gateway Genmask Flags MSS Window irtt Iface

default 10.116.50.150 0.0.0.0 UG 0 0 0 rmnet\_usb0

10.116.50.148 \* 255.255.255.252 U 0 0 0 rmnet\_usb0

10.116.50.150 \* 255.255.255.255 UH 0 0 0 rmnet\_usb0

root@android:/ # netcfg

wlan0 DOWN 0.0.0.0/0 0x00001002 40:b0:fa:c1:95:36

rmnet\_usb3 DOWN 0.0.0.0/0 0x00000000 00:00:00:00:00:00

rmnet\_usb1 DOWN 0.0.0.0/0 0x00000000 00:00:00:00:00:00

rmnet\_usb2 DOWN 0.0.0.0/0 0x00000000 00:00:00:00:00:00

rmnet\_usb0 UP 10.116.50.149/30 0x00000041 00:00:00:00:00:00

sit0 DOWN 0.0.0.0/0 0x00000080 00:00:00:00:00:00

p2p0 UP 0.0.0.0/0 0x00001003 42:b0:fa:c1:95:36

lo UP 127.0.0.1/8 0x00000049 00:00:00:00:00:00

dummy0 DOWN 0.0.0.0/0 0x00000082 aa:59:cf:45:4b:7e

rmnet7 DOWN 0.0.0.0/0 0x00001002 52:2c:08:34:ae:c3

rmnet5 DOWN 0.0.0.0/0 0x00001002 e6:bb:f8:3b:53:dd

rmnet6 DOWN 0.0.0.0/0 0x00001002 ee:b6:d4:62:2f:af

rmnet4 DOWN 0.0.0.0/0 0x00001002 ee:a6:ea:46:57:97

rmnet2 DOWN 0.0.0.0/0 0x00001002 f2:20:2c:a0:58:a3

rmnet3 DOWN 0.0.0.0/0 0x00001002 ea:19:64:84:9f:8f

rmnet1 DOWN 0.0.0.0/0 0x00001002 2e:7d:62:9c:1c:93

rmnet0 DOWN 0.0.0.0/0 0x00001002 62:67:02:b5:17:ad

rmnet\_smux0 DOWN 0.0.0.0/0 0x00001002 82:e2:dc:78:08:7c

root@android:/ # netcfg wlan0 up

root@android:/ # netcfg

wlan0 UP 0.0.0.0/0 0x00001003 40:b0:fa:c1:95:36

rmnet\_usb3 DOWN 0.0.0.0/0 0x00000000 00:00:00:00:00:00

rmnet\_usb1 DOWN 0.0.0.0/0 0x00000000 00:00:00:00:00:00

rmnet\_usb2 DOWN 0.0.0.0/0 0x00000000 00:00:00:00:00:00

rmnet\_usb0 UP 10.116.50.149/30 0x00000041 00:00:00:00:00:00

sit0 DOWN 0.0.0.0/0 0x00000080 00:00:00:00:00:00

p2p0 UP 0.0.0.0/0 0x00001003 42:b0:fa:c1:95:36

lo UP 127.0.0.1/8 0x00000049 00:00:00:00:00:00

dummy0 DOWN 0.0.0.0/0 0x00000082 aa:59:cf:45:4b:7e

rmnet7 DOWN 0.0.0.0/0 0x00001002 52:2c:08:34:ae:c3

rmnet5 DOWN 0.0.0.0/0 0x00001002 e6:bb:f8:3b:53:dd

rmnet6 DOWN 0.0.0.0/0 0x00001002 ee:b6:d4:62:2f:af

rmnet4 DOWN 0.0.0.0/0 0x00001002 ee:a6:ea:46:57:97

rmnet2 DOWN 0.0.0.0/0 0x00001002 f2:20:2c:a0:58:a3

rmnet3 DOWN 0.0.0.0/0 0x00001002 ea:19:64:84:9f:8f

rmnet1 DOWN 0.0.0.0/0 0x00001002 2e:7d:62:9c:1c:93

rmnet0 DOWN 0.0.0.0/0 0x00001002 62:67:02:b5:17:ad

rmnet\_smux0 DOWN 0.0.0.0/0 0x00001002 82:e2:dc:78:08:7c

130|root@android:/ # busybox netstat -r

Kernel IP routing table

Destination Gateway Genmask Flags MSS Window irtt Iface

default 10.116.50.150 0.0.0.0 UG 0 0 0 rmnet\_usb0

10.116.50.148 \* 255.255.255.252 U 0 0 0 rmnet\_usb0

10.116.50.150 \* 255.255.255.255 UH 0 0 0 rmnet\_usb0

root@android:/ # busybox ifconfig

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:16436 Metric:1

RX packets:0 errors:0 dropped:0 overruns:0 frame:0

TX packets:0 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:0

RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

p2p0 Link encap:Ethernet HWaddr 42:B0:FA:C1:95:36

UP BROADCAST MULTICAST MTU:1500 Metric:1

RX packets:0 errors:0 dropped:0 overruns:0 frame:0

TX packets:0 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:100

RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

rmnet\_usb0 Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00

inet addr:10.116.50.149 Mask:255.255.255.252

inet6 addr: fe80::e64d:fbe2:efd1:f243/64 Scope:Link

UP RUNNING MTU:1500 Metric:1

RX packets:1599 errors:0 dropped:0 overruns:0 frame:0

TX packets:1348 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:1000

RX bytes:1734620 (1.6 MiB) TX bytes:143495 (140.1 KiB)

wlan0 Link encap:Ethernet HWaddr 40:B0:FA:C1:95:36

UP BROADCAST MULTICAST MTU:1500 Metric:1

RX packets:410154 errors:0 dropped:1 overruns:0 frame:0

TX packets:199876 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:100

RX bytes:562376128 (536.3 MiB) TX bytes:15590093 (14.8 MiB)

root@android:/ # cd /data/misc/wifi/.

root@android:/data/misc/wifi # cat wpa\_supplicant.conf

ctrl\_interface=wlan0

driver\_param=use\_p2p\_group\_interface=1

update\_config=1

device\_name=occam

manufacturer=LGE

model\_name=Nexus 4

model\_number=Nexus 4

serial\_number=01c4e7dade4be8e5

device\_type=10-0050F204-5

config\_methods=physical\_display virtual\_push\_button keypad

network={

ssid="WolfieNet-Open"

key\_mgmt=NONE

priority=1

}

Now start wpa\_supplicant to connect to the first available wireless network.

The wpa\_supplicant.conf file I list below is the one maintained automatically by the phone as you join new networks.

root@android:/ # wpa\_supplicant -B -Dnl80211 -iwlan0 -c/data/misc/wifi/wpa\_supplicant.conf

root@android:/ # dhcpcd wlan0

root@android:/data/misc/wifi # dhcpcd wlan0

dhcpcd[4848]: version 5.5.6 starting

dhcpcd[4848]: wlan0: sending IPv6 Router Solicitation

dhcpcd[4848]: wlan0: sendmsg: Network is unreachable

dhcpcd[4848]: wlan0: broadcasting for a lease

dhcpcd[4848]: wlan0: offered 172.24.24.182 from 130.245.255.4

dhcpcd[4848]: wlan0: acknowledged 172.24.24.182 from 130.245.255.4

dhcpcd[4848]: wlan0: checking for 172.24.24.182

dhcpcd[4848]: wlan0: sending IPv6 Router Solicitation

dhcpcd[4848]: wlan0: sendmsg: Network is unreachable

dhcpcd[4848]: wlan0: leased 172.24.24.182 for 1800 seconds

dhcpcd[4848]: forked to background, child pid 4879

root@android:/data/misc/wifi # busybox ifconfig

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:16436 Metric:1

RX packets:0 errors:0 dropped:0 overruns:0 frame:0

TX packets:0 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:0

RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

p2p0 Link encap:Ethernet HWaddr 42:B0:FA:C1:95:36

UP BROADCAST MULTICAST MTU:1500 Metric:1

RX packets:0 errors:0 dropped:0 overruns:0 frame:0

TX packets:0 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:100

RX bytes:0 (0.0 B) TX bytes:0 (0.0 B)

rmnet\_usb0 Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00

inet addr:10.116.43.190 Mask:255.255.255.252

inet6 addr: fe80::7b94:7a1b:1b05:db0e/64 Scope:Link

UP RUNNING MTU:1500 Metric:1

RX packets:3738 errors:0 dropped:0 overruns:0 frame:0

TX packets:3309 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:1000

RX bytes:4165992 (3.9 MiB) TX bytes:356343 (347.9 KiB)

wlan0 Link encap:Ethernet HWaddr 40:B0:FA:C1:95:36

inet addr:172.24.24.182 Bcast:172.24.31.255 Mask:255.255.240.0

UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1

RX packets:410179 errors:0 dropped:2 overruns:0 frame:0

TX packets:199883 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:100

RX bytes:562377724 (536.3 MiB) TX bytes:15590987 (14.8 MiB)

root@android:/data/misc/wifi # busybox netstat -r

Kernel IP routing table

Destination Gateway Genmask Flags MSS Window irtt Iface

default 10.116.43.189 0.0.0.0 UG 0 0 0 rmnet\_usb0

default 172.24.16.1 0.0.0.0 UG 0 0 0 wlan0

10.116.43.188 \* 255.255.255.252 U 0 0 0 rmnet\_usb0

10.116.43.189 \* 255.255.255.255 UH 0 0 0 rmnet\_usb0

172.24.16.0 \* 255.255.240.0 U 0 0 0 wlan0

root@mako:/sdcard #busybox route del default gw 10.116.30.202 rmnet\_usb0

root@mako:/sdcard #ip route add 74.125.228.8 via 172.24.16.1

root@mako:/sdcard #ip route add 74.125.0.0/16 via 172.24.16.1

root@mako:/sdcard #ip route add 173.252.0.0/16 via 172.24.16.1

root@android:/data/misc/wifi # busybox netstat -r

Kernel IP routing table

Destination Gateway Genmask Flags MSS Window irtt Iface

default 10.116.24.77 0.0.0.0 UG 0 0 0 rmnet\_usb0

default 172.24.16.1 0.0.0.0 UG 0 0 0 wlan0

10.116.24.76 \* 255.255.255.252 U 0 0 0 rmnet\_usb0

10.116.24.77 \* 255.255.255.255 UH 0 0 0 rmnet\_usb0

74.125.0.0 172.24.16.1 255.255.0.0 UG 0 0 0 wlan0

74.125.228.8 172.24.16.1 255.255.255.255 UGH 0 0 0 wlan0

172.24.16.0 \* 255.255.240.0 U 0 0 0 wlan0

173.252.0.0 172.24.16.1 255.255.0.0 UG 0 0 0 wl

root@mako:/sdcard #ip route del 74.125.228.8 via 172.24.16.1

root@mako:/sdcard #ip route del 74.125.0.0/16 via 172.24.16.1

root@mako:/sdcard #ip route del 173.252.0.0/16 via 172.24.16.1

root@mako:/sdcard #ip route del 74.125.68.138 via 10.116.57.126

root@android:/data/misc/wifi # busybox netstat -r

Kernel IP routing table

Destination Gateway Genmask Flags MSS Window irtt Iface

default 10.116.43.189 0.0.0.0 UG 0 0 0 rmnet\_usb0

default 172.24.16.1 0.0.0.0 UG 0 0 0 wlan0

10.116.43.188 \* 255.255.255.252 U 0 0 0 rmnet\_usb0

10.116.43.189 \* 255.255.255.255 UH 0 0 0 rmnet\_usb0

172.24.16.0 \* 255.255.240.0 U 0 0 0 wlan0

**Important Commands**

rmnet\_usb0 Link encap:UNSPEC HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00

inet addr:10.116.14.229 Mask:255.255.255.252

inet6 addr: fe80::cad1:d8a1:b492:9ca3/64 Scope:Link

UP RUNNING MTU:1500 Metric:1

RX packets:32927 errors:0 dropped:0 overruns:0 frame:0

TX packets:16553 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:1000

RX bytes:42241107 (40.2 MiB) TX bytes:1435850 (1.3 MiB)

wlan0 Link encap:Ethernet HWaddr 40:B0:FA:C1:95:36

inet addr:172.24.24.182 Bcast:172.24.31.255 Mask:255.255.240.0

UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1

RX packets:1959 errors:0 dropped:0 overruns:0 frame:0

TX packets:564 errors:0 dropped:0 overruns:0 carrier:0

collisions:0 txqueuelen:100

RX bytes:163248 (159.4 KiB) TX bytes:487088 (475.6 KiB)

root@mako:/data/misc/wifi # ping google.com

PING google.com (74.125.68.101) 56(84) bytes of data.

64 bytes from 74.125.68.101: icmp\_seq=1 ttl=41 time=717 ms

64 bytes from 74.125.68.101: icmp\_seq=2 ttl=41 time=726 ms

130|root@mako:/ # ping facebook.com

PING facebook.com (173.252.120.6) 56(84) bytes of data.

64 bytes from edge-star-shv-12-frc3.facebook.com (173.252.120.6): icmp\_seq=1 ttl=82 time=498 ms

64 bytes from edge-star-shv-12-frc3.facebook.com (173.252.120.6): icmp\_seq=2 ttl=82 time=478 ms

root@mako:/sdcard # ip route add 74.125.0.0/16 via 172.24.16.1

root@mako:/sdcard # ip route add 192.0.78.0/24 via 172.24.16.1

130|root@mako:/sdcard # busybox netstat -r

Kernel IP routing table

Destination Gateway Genmask Flags MSS Window irtt Iface

default 10.116.39.89 0.0.0.0 UG 0 0 0 rmnet\_usb0

default 172.24.16.1 0.0.0.0 UG 0 0 0 wlan0

10.116.39.88 \* 255.255.255.252 U 0 0 0 rmnet\_usb0

10.116.39.89 \* 255.255.255.255 UH 0 0 0 rmnet\_usb0

74.125.0.0 172.24.16.1 255.255.0.0 UG 0 0 0 wlan0

74.125.228.201 10.116.39.89 255.255.255.255 UGH 0 0 0 rmnet\_usb0

172.24.16.0 \* 255.255.240.0 U 0 0 0 wlan0

192.0.78.0 172.24.16.1 255.255.255.0 UG 0 0 0 wlan0

root@mako:/sdcard # adb shell "/data/local/tcpdump -i any -p -s 0 -v -w /sdcard/capture1.pcap"

root@mako:/sdcard # adb shell "/data/local/tcpdump -i any -p -s 0 -v -w /sdcard/capture2.pcap"

root@mako:/ # /data/local/tcpdump -i any -p -s 0 -v -w /sdcard/capture1.pcap

tcpdump: listening on any, link-type LINUX\_SLL (Linux cooked), capture size 65535 bytes

^C527 packets captured

527 packets received by filter

0 packets dropped by kernel

root@mako:/ # /data/local/tcpdump -i any -p -s 0 -v -w /sdcard/capture2.pcap

tcpdump: listening on any, link-type LINUX\_SLL (Linux cooked), capture size 65535 bytes

^C536 packets captured

536 packets received by filter

0 packets dropped by kernel

root@mako:/sdcard # nc google.com 80 < UPDATE-SuperSU-v2.00.zip

root@mako:/sdcard # nc facebook.com 80 < UPDATE-SuperSU-v2.00.zip

root@mako:/sdcard #

adb shell tcpdump -n -s 0

adb shell tcpdump -X -n -s 0 port 80

# In one shell, start tcpdump.

adb shell "/data/local/tcpdump -n -s 0 -w - | nc -l -p 11233"

root@mako:/ # /data/local/tcpdump -i any -p -s 0 -w - | nc -l -p 11233

# In a separate shell, forward data and run ethereal.

adb forward tcp:11233 tcp:54321 && nc 127.0.0.1 54321 | wireshark -k -S -i -

adb forward tcp:11233 tcp:54321

/data/local/bin/curl -L -k www.ashishtanwer.wordpress.com

**Procedure to Disable Dual-Networking Interface**

ip route del x.x.x.x/x via x.x.x.y

pkill dhcpcd

pkill wpa\_supplicant

rm -rf /data/misc/wifi/wlan0

netcfg wlan0 down

svc wifi disable

svc data disable