



@ FILE NAME: M_CTC_ID_002.txt

@ TEST SCOPE: M PLANE O-RAN CONFORMANCE

@ Software Release for MCB1: v1.0.7

This scenario validates that the O-RU properly executes the session establishment procedure with VLANs and a DHCPv4 server. This test is applicable to IPv4 environments. Two negative flows are included in this test:

The TER NETCONF Client does not trigger a SSH session establishment in reaction to Call Home initiated by THE O-RU NETCONF Server.

Interfaces Present in DU Side

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eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.4.15 netmask 255.255.255.0 broadcast 192.168.4.255
    ether 64:9d:99:ff:f5:12 txqueuelen 1000 (Ethernet)
    RX packets 93064 bytes 44610078 (44.6 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 105420 bytes 79036875 (79.0 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eth1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    ether 64:9d:99:ff:f5:13 txqueuelen 1000 (Ethernet)
    RX packets 12 bytes 2876 (2.8 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 66 bytes 8226 (8.2 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eth2: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.25.96.163 netmask 255.255.254.0 broadcast 172.25.97.255
    inet6 fe80::a7de:bea9:9091:a5f0 prefixlen 64 scopeid 0x20<link>
    ether b4:2e:99:60:73:8c txqueuelen 1000 (Ethernet)
    RX packets 3534222 bytes 395491758 (395.4 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 21151417 bytes 29719124178 (29.7 GB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
    device interrupt 16 memory 0xb1400000-b1420000

eth0.16: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.226.149 netmask 255.255.255.0 broadcast 192.168.226.255
    inet6 fe80::669d:99ff:feff:f512 prefixlen 64 scopeid 0x20<link>
    ether 64:9d:99:ff:f5:12 txqueuelen 1000 (Ethernet)
    RX packets 388 bytes 36028 (36.0 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 645 bytes 42369 (42.3 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eth0.21: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.244.35 netmask 255.255.255.0 broadcast 192.168.244.255
    inet6 fe80::669d:99ff:feff:f512 prefixlen 64 scopeid 0x20<link>
    ether 64:9d:99:ff:f5:12 txqueuelen 1000 (Ethernet)
    RX packets 2583 bytes 2163684 (2.1 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 2307 bytes 208347 (208.3 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
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```
inet6 ::1 prefixlen 128 scopeid 0x10<host>  
loop txqueuelen 1000 (Local Loopback)  
RX packets 1873612 bytes 46953776068 (46.9 GB)  
RX errors 0 dropped 0 overruns 0 frame 0  
TX packets 1873612 bytes 46953776068 (46.9 GB)  
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
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DHCP Status

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DHCP Status

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isc-dhcp-server.service - ISC DHCP IPv4 server

Loaded: loaded (/lib/systemd/system/isc-dhcp-server.service; enabled; vendor preset: enabled)

Active: active (running) since Wed 2023-01-04 16:20:53 IST; 24min ago

Docs: man:dhcpcd(8)

Main PID: 24085 (dhcpcd)

Tasks: 1 (limit: 4915)

CGroup: /system.slice/isc-dhcp-server.service

dhcpcd -user dhcpcd -group dhcpcd -f -4 -pf /run/dhcp-server/dhcpcd.pid -cf /etc/dhcp/dhcpcd.conf eth0.21

Jan 04 16:21:24 vvdn dhcpcd[24085]: DHCPDISCOVER from 98:ae:71:00:8a:c2 via eth0.21

Jan 04 16:21:25 vvdn dhcpcd[24085]: DHCPOFFER on 192.168.244.37 to 98:ae:71:00:8a:c2 (mcb1) via eth0.21

Jan 04 16:21:25 vvdn dhcpcd[24085]: DHCPREQUEST for 192.168.244.37 (192.168.244.35) from 98:ae:71:00:8a:c2 (mcb1) via eth0.21

Jan 04 16:21:25 vvdn dhcpcd[24085]: DHCPACK on 192.168.244.37 to 98:ae:71:00:8a:c2 (mcb1) via eth0.21

Jan 04 16:30:37 vvdn dhcpcd[24085]: reuse_lease: lease age 552 (secs) under 25% threshold, reply with unaltered, existing lease for 192.168.244.37

Jan 04 16:30:37 vvdn dhcpcd[24085]: DHCPREQUEST for 192.168.244.37 from 98:ae:71:00:8a:c2 (mcb1) via eth0.21

Jan 04 16:30:37 vvdn dhcpcd[24085]: DHCPACK on 192.168.244.37 to 98:ae:71:00:8a:c2 (mcb1) via eth0.21

Jan 04 16:35:44 vvdn dhcpcd[24085]: reuse_lease: lease age 859 (secs) under 25% threshold, reply with unaltered, existing lease for 192.168.244.37

Jan 04 16:35:44 vvdn dhcpcd[24085]: DHCPREQUEST for 192.168.244.37 from 98:ae:71:00:8a:c2 (mcb1) via eth0.21

Jan 04 16:35:44 vvdn dhcpcd[24085]: DHCPACK on 192.168.244.37 to 98:ae:71:00:8a:c2 (mcb1) via eth0.21

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Pinging

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PING 192.168.244.37 (192.168.244.37) 56(84) bytes of data.

64 bytes from 192.168.244.37: icmp_seq=1 ttl=64 time=0.218 ms

64 bytes from 192.168.244.37: icmp_seq=2 ttl=64 time=0.190 ms

64 bytes from 192.168.244.37: icmp_seq=3 ttl=64 time=0.224 ms

64 bytes from 192.168.244.37: icmp_seq=4 ttl=64 time=0.193 ms

64 bytes from 192.168.244.37: icmp_seq=5 ttl=64 time=0.207 ms

--- 192.168.244.37 ping statistics ---

5 packets transmitted, 5 received, 0% packet loss, time 4083ms

rtt min/avg/max/mdev = 0.190/0.206/0.224/0.018 ms

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The O-RU NETCONF Serve establishes TCP connection and performs a Call Home procedure towards the NETCONF Client and not establishes a SSH.

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> listen --ssh --login operator

Waiting 60s for an SSH Call Home connection on port 4334...The authenticity of the host '::ffff:192.168.244.37' cannot be established.

ssh-rsa key fingerprint is c0:7c:63:5d:4b:85:e7:27:e0:7e:f0:44:38:4e:ab:83.

Are you sure you want to continue connecting (yes/no)? no

nc ERROR: Checking the host key failed.

cmd_listen: Receiving SSH Call Home on port 4334 as user "observer" failed.

> listen --ssh --login operator

Waiting 60s for an SSH Call Home connection on port 4334...The authenticity of the host '::ffff:192.168.244.37' cannot be established.

ssh-rsa key fingerprint is c0:7c:63:5d:4b:85:e7:27:e0:7e:f0:44:38:4e:ab:83.

Are you sure you want to continue connecting (yes/no)? no

nc ERROR: Checking the host key failed.

cmd_listen: Receiving SSH Call Home on port 4334 as user "operator" failed.

> listen --ssh --login operator

Waiting 60s for an SSH Call Home connection on port 4334...The authenticity of the host '::ffff:192.168.244.37' cannot be established.

ssh-rsa key fingerprint is c0:7c:63:5d:4b:85:e7:27:e0:7e:f0:44:38:4e:ab:83.

Are you sure you want to continue connecting (yes/no)? no

nc ERROR: Checking the host key failed.

cmd_listen: Receiving SSH Call Home on port 4334 as user "installer" failed.

> listen --ssh --login operator

Waiting 60s for an SSH Call Home connection on port 4334...The authenticity of the host '::ffff:192.168.244.37' cannot be established.

ssh-rsa key fingerprint is c0:7c:63:5d:4b:85:e7:27:e0:7e:f0:44:38:4e:ab:83.

Are you sure you want to continue connecting (yes/no)? no

nc ERROR: Checking the host key failed.

cmd_listen: Receiving SSH Call Home on port 4334 as user "installer" failed.

> listen --ssh --login operator

Waiting 60s for an SSH Call Home connection on port 4334...The authenticity of the host '::ffff:192.168.244.37' cannot be established.

ssh-rsa key fingerprint is c0:7c:63:5d:4b:85:e7:27:e0:7e:f0:44:38:4e:ab:83.

Are you sure you want to continue connecting (yes/no)? no

nc ERROR: Checking the host key failed.

cmd_listen: Receiving SSH Call Home on port 4334 as user "operator" failed.

Expected Result : The TER NETCONF Client and O-RU NETCONF Server exchange capabilities through NETCONF <hello> messages.

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***** Actual Result *****

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Transport and Handshake in IPv4 Environment (negative case: refuse SSH Connection) =

SUCCESS

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