



@ 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

eth0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
ether 64:9d:99:ff:f5:12 txqueuelen 1000 (Ethernet)
RX packets 21 bytes 3427 (3.4 KB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 49 bytes 6102 (6.1 KB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eth1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet 192.168.4.15 netmask 255.255.255.0 broadcast 192.168.4.255
inet6 fe80::af68:bb13:894f:e285 prefixlen 64 scopeid 0x20<link>
ether 64:9d:99:ff:f5:13 txqueuelen 1000 (Ethernet)
RX packets 59123 bytes 24619222 (24.6 MB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 45653 bytes 3623706 (3.6 MB)
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 808542 bytes 118492604 (118.4 MB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 1290175 bytes 1499841997 (1.4 GB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
device interrupt 16 memory 0xb1400000-b1420000

eth1.36: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet 192.168.3.15 netmask 255.255.255.0 broadcast 192.168.3.255
inet6 fe80::669d:99ff:feff:f513 prefixlen 64 scopeid 0x20<link>
ether 64:9d:99:ff:f5:13 txqueuelen 1000 (Ethernet)
RX packets 26533 bytes 17471533 (17.4 MB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 18877 bytes 1792552 (1.7 MB)
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
inet6 ::1 prefixlen 128 scopeid 0x10<host>
loop txqueuelen 1000 (Local Loopback)
RX packets 377038 bytes 8279024268 (8.2 GB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 377038 bytes 8279024268 (8.2 GB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

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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 Tue 2023-01-24 10:48:33 IST; 6h ago

Docs: man:dhcpd(8)

Main PID: 10024 (dhcpd)

Tasks: 1 (limit: 4915)

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

cpd -user dhcpd -group dhcpd -f -4 -pf /run/dhcp-server/dhcpd.pid -cf /etc/dhcp/dhcpd.conf eth1.36

Jan 24 14:56:46 vvdn dhcpd[10024]: DHCPACK on 192.168.3.38 to 98:ae:71:00:8a:c2 (mcb1) via eth1.36

Jan 24 15:06:25 vvdn dhcpd[10024]: reuse_lease: lease age 1111 (secs) under 25% threshold, reply with unaltered, existing lease for 192.168.3.38

Jan 24 15:06:25 vvdn dhcpd[10024]: DHCPREQUEST for 192.168.3.38 from 98:ae:71:00:8a:c2 (mcb1) via eth1.36

Jan 24 15:06:25 vvdn dhcpd[10024]: DHCPACK on 192.168.3.38 to 98:ae:71:00:8a:c2 (mcb1) via eth1.36

Jan 24 15:48:25 vvdn dhcpd[10024]: Wrote 0 class decls to leases file.

Jan 24 15:48:25 vvdn dhcpd[10024]: Wrote 39 leases to leases file.

Jan 24 15:48:25 vvdn dhcpd[10024]: DHCPREQUEST for 192.168.3.38 from 98:ae:71:00:8a:c2 (mcb1) via eth1.36

Jan 24 15:48:25 vvdn dhcpd[10024]: DHCPACK on 192.168.3.38 to 98:ae:71:00:8a:c2 (mcb1) via eth1.36

Jan 24 16:41:36 vvdn dhcpd[10024]: DHCPREQUEST for 192.168.3.38 from 98:ae:71:00:8a:c2 (mcb1) via eth1.36

Jan 24 16:41:36 vvdn dhcpd[10024]: DHCPACK on 192.168.3.38 to 98:ae:71:00:8a:c2 (mcb1) via eth1.36

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Pinging

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PING 192.168.3.38 (192.168.3.38) 56(84) bytes of data.

64 bytes from 192.168.3.38: icmp_seq=1 ttl=64 time=0.168 ms

64 bytes from 192.168.3.38: icmp_seq=2 ttl=64 time=0.217 ms

64 bytes from 192.168.3.38: icmp_seq=3 ttl=64 time=0.212 ms

64 bytes from 192.168.3.38: icmp_seq=4 ttl=64 time=0.172 ms

64 bytes from 192.168.3.38: icmp_seq=5 ttl=64 time=0.202 ms

--- 192.168.3.38 ping statistics ---

5 packets transmitted, 5 received, 0% packet loss, time 4101ms

rtt min/avg/max/mdev = 0.168/0.194/0.217/0.022 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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'str' object has no attribute 'close_session'

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Error occured in line number 202

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SYSTEM LOGS

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Nov 4 02:14:11 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:11 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:12 mcb1 user.warn pm_manager[1372]: Failed to open /media/sd-mmcb1k0p4/O-RAN/log/timezone. Using default value...

Nov 4 02:14:12 mcb1 user.warn pm_manager[1372]: Failed to open /media/sd-mmcb1k0p4/O-RAN/log/timezone. Using default value...

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Nov 4 02:14:12 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:12 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/fw_manager

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/nw_manager

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/operations_manager

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/pm_manager

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/um_manager

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/sys_monitor

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/fault_manager

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/file_manager

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/supervision

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/sync_manager

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/ald_controller

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/log_manager

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/radio_manager

Nov 4 02:14:13 mcb1 user.notice wd_manager[1441]: Value is 1 for Xpath /vvdn_mcel-wdm:system-apps/cli_manager

Nov 4 02:14:13 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:13 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:14 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:14 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:15 mcb1 user.notice SYNCMNGR[1305]: Received message from S-Plane

Nov 4 02:14:15 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:15 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:16 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:16 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:17 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:17 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:18 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:18 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:19 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:19 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:20 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:20 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:21 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:21 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:22 mcb1 user.warn pm_manager[1372]: Failed to open /media/sd-mmcbk0p4/O-RAN/log/timezone. Using default value...

Nov 4 02:14:22 mcb1 user.warn pm_manager[1372]: Failed to open /media/sd-mmcbk0p4/O-RAN/log/timezone. Using default value...

Nov 4 02:14:22 mcb1 user.warn pm_manager[1372]: Failed to open /media/sd-mmcbk0p4/O-RAN/log/timezone. Using default value...

Nov 4 02:14:22 mcb1 user.warn pm_manager[1372]: Failed to open /media/sd-mmcbk0p4/O-RAN/log/timezone. Using default value...

Nov 4 02:14:22 mcb1 user.warn pm_manager[1372]: Failed to open /media/sd-mmcbk0p4/O-RAN/log/timezone. Using default value...

Nov 4 02:14:22 mcb1 user.warn pm_manager[1372]: Failed to open /media/sd-mmcbk0p4/O-RAN/log/timezone. Using default value...

Nov 4 02:14:22 mcb1 user.warn pm_manager[1372]: Failed to open /media/sd-mmcbk0p4/O-RAN/log/timezone. Using default value...

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Nov 4 02:14:22 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:22 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:23 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:23 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:24 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:24 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:25 mcb1 user.notice SYNCMNGR[1305]: Received message from S-Plane

Nov 4 02:14:25 mcb1 daemon.info netopeer2-server[984]: Trying to connect via IPv4 to 192.168.4.15:4336.

Nov 4 02:14:25 mcb1 daemon.err netopeer2-server[984]: connect() failed (Network is unreachable).

Nov 4 02:14:26 mcb1 authpriv.debug sshd[3403]: pam_unix(sshd:account): account operator has password changed in future

Nov 4 02:14:26 mcb1 auth.info sshd[3403]: Accepted password for operator from 192.168.3.15 port 42762 ssh2

Nov 4 02:14:26 mcb1 authpriv.info sshd[3403]: pam_unix(sshd:session): session opened for user operator by (uid=0)

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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***** FAIL_REASON *****

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'str' object has no attribute 'close_session'

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

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