**RADIO CLI README**

This is a list of all the radio sim cli commands. parameters with a short description and the command directory hierarchy.

Starting from the root:

Radio\_RT-1 >ld

[show], [debug], [test]

[fuzz], start, stop

(Note: “~” is used to come back to main menu/root.)

Radio\_RT-1 > start ?

start - starts the discovery process when MANUAL is defined in the config file.

(Note: This is used for early versions of DLEP. In Latest Discovery Mode is enabled)

Radio\_RT-1 > stop ?

stop - immediately exits the simulation without sending any terminates.

**SHOW COMMANDS:**

Radio\_RT-1 >ld

[show], [debug], [test]

[fuzz], start, stop

Radio\_RT-1 >show

Radio\_RT-1 >ld

[system], [peer], [neighbor]

Radio\_RT-1 >system

Radio\_RT-1 >ld

system\_show\_timer

Radio\_RT-1 >system\_show\_timer ?

system\_show\_timer - lists timer stats

Radio\_RT-1 > ~

Radio\_RT-1 >show

Radio\_RT-1 >peer

Radio\_RT-1 >ld

peer\_show\_all, peer\_show\_fsm\_history, peer\_show\_fsm\_table

Radio\_RT-1 >peer\_show\_all ?

peer\_show\_all - lists all peers

Radio\_RT-1 >peer\_show\_fsm\_history ?

peer\_show\_fsm\_history - display peer state history

Radio\_RT-1 >peer\_show\_fsm\_table ?

peer\_show\_fsm\_table - displays peer state machine

Radio\_RT-1 > ~

Radio\_RT-1 >show

Radio\_RT-1 >neighbor

Radio\_RT-1 >ld

neighbor\_show\_mac, neighbor\_show\_all, neighbor\_show\_fsm\_history

neighbor\_show\_fsm\_table

Radio\_RT-1 >neighbor\_show\_mac ?

neighbor\_show\_mac <mac\_address> - display neighbor info for MAC address

where

<mac\_address> - 11:22:33:44:55:66

Radio\_RT-1 >neighbor\_show\_all ?

neighbor\_show\_all - lists all client neighbors

Radio\_RT-1 >neighbor\_show\_fsm\_history ?

neighbor\_show\_fsm\_history <mac\_address> - displays neighbor state history

where

<mac\_address> - 11:22:33:44:55:66

Radio\_RT-1 >neighbor\_show\_fsm\_table ?

neighbor\_show\_fsm\_table <mac\_address> - displays neighbor state machine

where

<mac\_address> - 11:22:33:44:55:66

Radio\_RT-1 > ~

**DEBUG COMMANDS:**

Radio\_RT-1 >ld

[show], [debug], [test]

[fuzz], start, stop

Radio\_RT-1 >debug

Radio\_RT-1 >ld

debug\_show, debug\_set, debug\_clear

debug\_enable, debug\_disable

Radio\_RT-1 >debug\_show ?

peer\_debug\_show - displays enabled debugging levels

Radio\_RT-1 >debug\_set ?

debug\_set [error|udp|incoming|outgoing|packet|peer|neighbor|metrics|scratch|decoder]

where

error - enables the error debug trace

udp - enables debug trace of the udp send-receive

incoming - enables debug trace of incoming packets

outgoing - enables debug trace of outgoing packets

packet - enables both incoming and outgoing packet trace

peer - enables peer specific debug trace

neighbor - enables neighbor specific debug trace

metrics - enables neighbor metrics trace

scratch - enables scratch pad trace

decoder - enables debug trace of TLV validation

Radio\_RT-1 >debug\_clear ?

debug\_clear [error|udp|incoming|outgoing|packet|peer|neighbor|metrics|scratch|decoder]

where

error - disables the error debug trace

udp - disables debug trace for udp operations

incoming - disables debug trace of incoming packets

outgoing - disables debug trace of outgoing packets

packet - enables both incoming and outgoing packet trace

peer - disables peer specific debug trace

neighbor - disables neighbor specific debug trace

metrics - disables neighbor metrics trace

scratch - disables scratch pad trace

decoder - disables debug trace of TLV validation

Radio\_RT-1 >debug\_enable ?

debug\_enable - enables all debugs

Radio\_RT-1 >debug\_disable ?

debug\_disable - disables all debugs

Radio\_RT-1 > ~

**TEST COMMANDS:**

Radio\_RT-1 >test

Radio\_RT-1 >ld

[peer], [neighbor]

Radio\_RT-1 >peer

Radio\_RT-1 >ld

test\_session\_init, peer\_test\_terminate, peer\_test\_update

peer\_test\_offer, peer\_test\_init\_ack, peer\_test\_update\_res

peer\_test\_term\_res, peer\_test\_heartbeat

Radio\_RT-1 >test\_session\_init ?

session init enter 0 or 1

Radio\_RT-1 >peer\_test\_terminate ?

peer\_test\_terminate - sends a peer terminate

Radio\_RT-1 >peer\_test\_update ?

peer\_test\_update - sends a peer update

Radio\_RT-1 >peer\_test\_offer ?

dlep\_client\_fsm\_engine-436 normalized\_event=2 p2peer=0x8d26468 peer\_id=1 p2neighbor=(nil)

OUTGOING- 0x44 0x4c 0x45 0x50 0x00 0x02 0x00 0x1e

OUTGOING- 0x00 0x04 0x00 0x0f 0x00 0x44 0x4c 0x45

OUTGOING- 0x50 0x5f 0x52 0x61 0x64 0x69 0x6f 0x5f

OUTGOING- 0x52 0x54 0x32 0x00 0x02 0x00 0x07 0x00

OUTGOING- 0x20 0x00 0x00 0x16 0x05 0xa7

Sending peer offer :

signal code=2 RFC5444\_SIG\_PEER\_OFFER

sendto: udp failed : Invalid argument

dlep\_send-806 Error: peer\_id=1 send to 32.0.0.17 at port 1233 bytes=-1

Radio\_RT-1 >peer\_test\_init\_ack ?

reaching here

OUTGOING- 0x00 0x02 0x00 0x84 0x00 0x01 0x00 0x01

OUTGOING- 0x00 0x00 0x04 0x00 0x0f 0x00 0x44 0x4c

OUTGOING- 0x45 0x50 0x5f 0x52 0x61 0x64 0x69 0x6f

OUTGOING- 0x5f 0x52 0x54 0x32 0x00 0x05 0x00 0x04

OUTGOING- 0x00 0x00 0x13 0x88 0x00 0x0c 0x00 0x08

OUTGOING- 0x00 0x00 0x00 0x00 0x05 0xf5 0xe1 0x00

OUTGOING- 0x00 0x0d 0x00 0x08 0x00 0x00 0x00 0x00

OUTGOING- 0x05 0xf5 0xe1 0x00 0x00 0x0e 0x00 0x08

OUTGOING- 0x00 0x00 0x00 0x00 0x05 0xf5 0xe1 0x00

OUTGOING- 0x00 0x0f 0x00 0x08 0x00 0x00 0x00 0x00

OUTGOING- 0x05 0xf5 0xe1 0x00 0x00 0x10 0x00 0x08

OUTGOING- 0x00 0x00 0x00 0x00 0x00 0x00 0x00 0xfa

OUTGOING- 0x00 0x12 0x00 0x01 0x64 0x00 0x13 0x00

OUTGOING- 0x01 0x64 0x00 0x11 0x00 0x01 0x64 0x00

OUTGOING- 0x14 0x00 0x02 0x00 0x64 0x00 0x08 0x00

OUTGOING- 0x05 0x01 0x20 0x00 0x00 0x16 0x00 0x0a

OUTGOING- 0x00 0x06 0x01 0xff 0xff 0xff 0x00 0x18

Sending Session initialization response :

Message code=2 RFC5444\_MSG\_PEER\_INIT\_RES

sendto: tcp failed : Socket operation on non-socket

dlep\_tcp\_send-882 Error: peer\_id=1 send to 32.0.0.17 at port 3333 bytes=-1

Radio\_RT-1 >peer\_test\_update\_res ?

OUTGOING- 0x00 0x04 0x00 0x05 0x00 0x01 0x00 0x01

OUTGOING- 0x00

Sending session update response :

Message code=4 RFC5444\_MSG\_PEER\_UPDATE\_RES

sendto: tcp failed : Socket operation on non-socket

dlep\_tcp\_send-882 Error: peer\_id=1 send to 32.0.0.17 at port 3333 bytes=-1

Radio\_RT-1 >peer\_test\_term\_res ?

OUTGOING- 0x00 0x06 0x00 0x00

Sending session termination message :

Message code=5 RFC5444\_MSG\_PEER\_TERM\_RES

sendto: tcp failed : Socket operation on non-socket

dlep\_tcp\_send-882 Error: peer\_id=1 send to 32.0.0.17 at port 3333 bytes=-1

Radio\_RT-1 >peer\_test\_heartbeat ?

OUTGOING- 0x00 0x10 0x00 0x00

Sending heartbeat message :

Message code=16 RFC5444\_MSG\_PEER\_HEARTBEAT

sendto: tcp failed : Socket operation on non-socket

dlep\_tcp\_send-882 Error: peer\_id=1 send to 32.0.0.17 at port 3333 bytes=-1

Radio\_RT-1 >

Radio\_RT-1 >~

Radio\_RT-1 >test

Radio\_RT-1 >ld

[peer], [neighbor]

Radio\_RT-1 >neighbor

Radio\_RT-1 >ld

neighbor\_test\_up, neighbor\_test\_credit\_up, neighbor\_test\_metric\_up

neighbor\_test\_ipv4, neighbor\_test\_ipv6, neighbor\_test\_down

neighbor\_test\_metrics, neighbor\_test\_rlq, neighbor\_test\_resources

neighbor\_test\_latency, neighbor\_test\_cdr, neighbor\_test\_mdr

neighbor\_test\_mtu, neighbor\_test\_update\_msg

Radio\_RT-1 >neighbor\_test\_up ?

neighbor\_test\_up <mac\_address> <ipv4\_address> - generate a neighbor up with Layer 3 addresse

where

<mac\_address> - 11:22:33:44:55:66

<ipv4\_address> - 210.123.234.102

Radio\_RT-1 >neighbor\_test\_credit\_up ?

neighbor\_test\_up <mac\_address> - generate a neighbor up

where

<mac\_address> - 11:22:33:44:55:66

Radio\_RT-1 >neighbor\_test\_metric\_up ?

neighbor\_test\_metric\_up <mac\_address> <ipv4-address> <rlq> <resources> <latency> <cdr> <mdr> <mtu>- generate a neighbor up w/ metrics

where

<mac\_address> - 11:22:33:44:55:66

ipv4 addrss

<rlq> - 0 - 100

<resources> - 0 - 100

<latency> - 64-bit millisecond value

<cdr> - 64-bit bps value

<mdr> - 64-bit bps value

<mtu> - 16-bit

Radio\_RT-1 >neighbor\_test\_ipv4 ?

neighbor\_test\_ipv4 <mac\_address> <operation> <ipv4\_address> - generate a neighbor address IPv4 update

where

<mac\_address> - 11:22:33:44:55:66

<operation> - add | drop

<ipv4\_address> - 210.123.234.102

Radio\_RT-1 >neighbor\_test\_ipv6 ?

neighbor\_test\_ipv6 <mac\_address> <operation> <ipv6\_address><ipv6\_subnet\_address><subnet\_prefix> - generate a neighbor address IPv6 update

where

<mac\_address> - 11:22:33:44:55:66

<operation> - add | drop

<ipv6\_address> - 11223344:22334455:33445566:44556677

Radio\_RT-1 >neighbor\_test\_down ?

neighbor\_test\_down <mac\_addressd> - generate a neighbor down

where

<mac\_address> - 11:22:33:44:55:66

Radio\_RT-1 >neighbor\_test\_metrics ?

neighbor\_test\_metrics <mac\_address> <rlq\_tx> <rlq\_rx> <resources\_tx> <resources\_rx> <latency><cdr\_tx> <cdr\_rx> <mdr\_tx> <mdr\_rx> - generate a neighbor metrics update

where

<mac\_address> - 11:22:33:44:55:66

<rlq\_tx> - 0 - 100

<rlq\_rx> - 0 - 100

<resources> - 0 - 100

<latency> - 16-bit millisecond value

<cdr\_tx> - 64-bit bps value

<cdr\_rx> - 64-bit bps value

<mdr\_tx> - 64-bit bps value

<mdr\_rx> - 64-bit bps value

<mtu> - 16-bit

Radio\_RT-1 >neighbor\_test\_rlq ?

neighbor\_test\_rlq <mac\_address> <rlq\_tx> <rlq\_rx> - generate a neighbor metrics update with a new RLQ

where

<mac\_address> - 11:22:33:44:55:66

<rlq\_tx> - 0 - 100

<rlq\_rx> - 0 - 100

Radio\_RT-1 >neighbor\_test\_resources ?

neighbor\_test\_resources <mac\_address> <resources\_tx> - <resources\_rx>generate a neighbor metrics update with a new resource

where

<mac\_address> - 11:22:33:44:55:66

<resources\_tx> - 0 - 100

<resources\_rx> - 0 - 100

Radio\_RT-1 >neighbor\_test\_latency ?

neighbor\_test\_latency <mac\_address> <latency> -generate a neighbor metrics update with a new latency

where

<mac\_address> - 11:22:33:44:55:66

<latency> 64-bit millisecond value

Radio\_RT-1 >neighbor\_test\_cdr ?

neighbor\_test\_cdr <mac\_address> <cdr\_tx> <cdr\_rx>- generate a neighbor metrics update with a new CDR

where

<mac\_address> - 11:22:33:44:55:66

<cdr\_tx> 64-bit bps value

<cdr\_tx> 64-bit bps value

Radio\_RT-1 >neighbor\_test\_mdr ?

neighbor\_test\_mdr <mac\_address> <mdr\_tx> <mdr\_rx> - generate a neighbor metrics update with a new MDR

where

<mac\_address> - 11:22:33:44:55:66

<mdr\_tx> 64-bit bps value

<mdr\_rx> 64-bit bps value

Radio\_RT-1 >neighbor\_test\_mtu ?

neighbor\_test\_mdr <mac\_address> <mdr\_tx> <mdr\_rx> - generate a neighbor metrics update with a new MDR

where

<mac\_address> - 11:22:33:44:55:66

<mdr\_tx> 64-bit bps value

<mdr\_rx> 64-bit bps value

Radio\_RT-1 >neighbor\_test\_update\_msg

neighbor\_test\_update\_msg <mac\_address> - generate a neighbor up

where

<mac\_address> - 11:22:33:44:55:66

Radio\_RT-1 > ~

**FUZZ COMMANDS:**

Radio\_RT-1 >fuzz

Radio\_RT-1 >ld

[peer], [neighbor]

Radio\_RT-1 >peer

Radio\_RT-1 >ld

peer\_fuzz\_terminate, peer\_fuzz\_heartbeat

Radio\_RT-1 >peer\_fuzz\_terminate ?

peer\_fuzz\_terminate - sends a peer terminate

Radio\_RT-1 >peer\_fuzz\_heartbeat ?

peer\_fuzz\_heartbeat - sends a peer heartbeat

Radio\_RT-1 >~

Radio\_RT-1 >fuzz

Radio\_RT-1 >ld

[peer], [neighbor]

Radio\_RT-1 >neighbor

Radio\_RT-1 >ld

neighbor\_fuzz\_up, neighbor\_fuzz\_term, neighbor\_fuzz\_metrics

Radio\_RT-1 >neighbor\_fuzz\_up ?

neighbor\_fuzz\_up <mac\_address> - generate a neighbor up

where

<mac\_address> - 11:22:33:44:55:66

Radio\_RT-1 >neighbor\_fuzz\_term ?

neighbor\_fuzz\_term <mac\_addressd> - generate a neighbor terminate

where

<mac\_address> - 11:22:33:44:55:66

Radio\_RT-1 >neighbor\_fuzz\_metrics ?

neighbor\_fuzz\_metrics <mac\_address> <rlq> <resources> <latency> <cdr> <mdr>

where

<mac\_address> - 11:22:33:44:55:66

<rlq> - 0 - 100

<resources> - 0 - 100

<latency> - 16-bit millisecond value

<cdr> - 64-bit bps value

<mdr> - 64-bit bps value

Radio\_RT-1 >~