

29/09/2023, 05:38

Lite-ON install OAI gNB LOG - HackMD

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```
[HW] # /dev/cpu_dma_latency set to 2 us
[0m[ENB_APP] nfapi running mode: MONOLITHIC
[0m[GNB_APP] Getting GNBSParams
[0m[ITTI] Starting itti queue: TASK_UNKNOWN as task 0
[0m[ITTI] Starting itti queue: TASK_TIMER as task 1
[0m[ITTI] Starting itti queue: TASK_L2L1 as task 2
[0m[ITTI] Starting itti queue: TASK_BM as task 3
[0m[ITTI] Starting itti queue: TASK_PHY_ENB as task 4
[0m[ITTI] Starting itti queue: TASK_MAC_GNB as task 5
[0m[ITTI] Starting itti queue: TASK_RLC_ENB as task 6
[0m[ITTI] Starting itti queue: TASK_RRC_ENB_NB_IoT as task 7
[0m[ITTI] Starting itti queue: TASK_PDCP_ENB as task 8
[0m[ITTI] Starting itti queue: TASK_PDCP_GNB as task 9
[0m[ITTI] Starting itti queue: TASK_DATA_FORWARDING as task 10
[0m[ITTI] Starting itti queue: TASK_END_MARKER as task 11
[0m[ITTI] Starting itti queue: TASK_RRC_ENB as task 12
[0m[ITTI] Starting itti queue: TASK_RRC_GNB as task 13
[0m[ITTI] Starting itti queue: TASK_RAL_ENB as task 14
[0m[ITTI] Starting itti queue: TASK_S1AP as task 15
[0m[ITTI] Starting itti queue: TASK_NGAP as task 16
[0m[ITTI] Starting itti queue: TASK_X2AP as task 17
[0m[ITTI] Starting itti queue: TASK_M2AP_ENB as task 18
[0m[ITTI] Starting itti queue: TASK_M2AP_MCE as task 19
[0m[ITTI] Starting itti queue: TASK_M3AP as task 20
[0m[ITTI] Starting itti queue: TASK_M3AP_MME as task 21
[0m[ITTI] Starting itti queue: TASK_M3AP_MCE as task 22
[0m[ITTI] Starting itti queue: TASK_SCTP as task 23
[0m[ITTI] Starting itti queue: TASK_ENB_APP as task 24
[0m[ITTI] Starting itti queue: TASK_GNB_APP as task 25
[0m[ITTI] Starting itti queue: TASK_MCE_APP as task 26
[0m[ITTI] Starting itti queue: TASK_MME_APP as task 27
[0m[ITTI] Starting itti queue: TASK_PHY_UE as task 28
[0m[ITTI] Starting itti queue: TASK_MAC_UE as task 29
[0m[ITTI] Starting itti queue: TASK_RLC_UE as task 30
[0m[ITTI] Starting itti queue: TASK_PDCP_UE as task 31
[0m[ITTI] Starting itti queue: TASK_RRC_UE as task 32
[0m[ITTI] Starting itti queue: TASK_RRC_NRUE as task 33
[0m[ITTI] Starting itti queue: TASK_NAS_UE as task 34
[0m[ITTI] Starting itti queue: TASK_RAL_UE as task 35
[0m[ITTI] Starting itti queue: TASK_GTPV1_U as task 36
[0m[ITTI] Starting itti queue: TASK_CU_F1 as task 37
[0m[ITTI] Starting itti queue: TASK_DU_F1 as task 38
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[0m[ITTI] Starting itti queue: TASK_CUCP_E1 as task 39
[0m[ITTI] Starting itti queue: TASK_CUUP_E1 as task 40
[0m[ITTI] Starting itti queue: TASK_RRC_UE_SIM as task 41
[0m[ITTI] Starting itti queue: TASK_RRC_GNB_SIM as task 42
[0m[ITTI] Starting itti queue: TASK_RRC_NSA_UE as task 43
[0m[ITTI] Starting itti queue: TASK_RRC_NSA_NRUE as task 44
[0m[ITTI] Starting itti queue: TASK_NAS_NRUE as task 45
[0m[OPT] OPT disabled
[0m[HW] Version: Branch: use_msgq Abrev. Hash: ffee14b30c Date: Tue Mar 21 10:50:4
[0m[NR_PHY] RC.gNB = 0x34942a0
[0m[NR_PHY] PRB blacklist
[0m[NR_PHY] Copying 0 blacklisted PRB to L1 context
[0m[PHY] TX_AMP = 3276 (-20 dBFS)
[0m[PHY] L1_RX_THREAD_CORE -1 (17)
[0m[PHY] l1_north_init_gNB() RC.nb_nr_L1_inst:1
[0m[PHY] Installing callbacks for IF_Module - UL_indication
[0m[MAC] Allocating shared L1/L2 interface structure for instance 0 @ 0x3498f20
[0m[PHY] l1_north_init_gNB() RC.gNB[0] installing callbacks
[0m[PHY] create_gNB_tasks() Task ready initialize structures
[0m[NR_PHY] PRB blacklist
[0m[NR_PHY] Copying 0 blacklisted PRB to L1 context
[0m[PHY] TX_AMP = 3276 (-20 dBFS)
[0m[PHY] L1_RX_THREAD_CORE -1 (17)
[0m[PHY] l1_north_init_gNB() RC.nb_nr_L1_inst:1
[0m[PHY] Installing callbacks for IF_Module - UL_indication
[0m[PHY] l1_north_init_gNB() RC.gNB[0] installing callbacks
[0m[1;31m[PHY] No prs_config configuration found...!
[0m[MAC] [MAIN] Init function start:nb_nr_macrlc_inst=1
[0m[UTIL] threadCreate for MAC_STATS, affinity ffffffff, priority 2
[0m[UTIL] threadCreate for rlc_data_req_thread, affinity ffffffff, priority 97
[0m[PHY] Installing callbacks for IF_Module - UL_indication
[0m[NR_MAC] PUSCH Target 300, PUCCH Target 200, PUCCH Failure 10, PUSCH Failure 10
[0m[PHY] create_gNB_tasks() RC.nb_nr_L1_inst:1
[0m[PHY] l1_north_init_gNB() RC.nb_nr_L1_inst:1
[0m[PHY] Installing callbacks for IF_Module - UL_indication
[0m[PHY] l1_north_init_gNB() RC.gNB[0] installing callbacks
[0m[GNB_APP] Allocating gNB_RRC_INST for 1 instances
[0m[PHY] create_gNB_tasks() RC.nb_nr_inst:1 RC.nrrrc:0x34aa480
[0m[PHY] create_gNB_tasks() Creating RRC instance RC.nrrrc[0]:0x34ad9a0 (1 of 1)
[0m[RRC] Read in ServingCellConfigCommon (PhysCellId 0, ABSFREQSSB 643392, DLBand
[0m[NR_MAC] NR band duplex spacing is 0 KHz (nr_bandtable[37].band = 78)
[0m[NR_MAC] NR band 78, duplex mode TDD, duplex spacing = 0 KHz
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```
[0mCMDLINE: "./nr-softmodem" "-O" "../.../targets/PROJECTS/GENERIC-NR-5GC/CONF/ora
[CONFIG] get parameters from libconfig ../.../targets/PROJECTS/GENERIC-NR-5GC/CONF
[CONFIG] function config_libconfig_init returned 0
[CONFIG] config module libconfig loaded
[LIBCONFIG] config: 2/2 parameters successfully set, (2 to default value)
[CONFIG] debug flags: 0x00000000
[LIBCONFIG] log_config: 3/3 parameters successfully set, (1 to default value)
[LIBCONFIG] log_config: 54/54 parameters successfully set, (46 to default value)
[LIBCONFIG] log_config: 54/54 parameters successfully set, (54 to default value)
[LIBCONFIG] log_config: 16/16 parameters successfully set, (16 to default value)
[LIBCONFIG] log_config: 16/16 parameters successfully set, (16 to default value)
log init done
Reading in command-line options
[LIBCONFIG] (root): 37/37 parameters successfully set, (33 to default value)
[LIBCONFIG] (root): 6/6 parameters successfully set, (5 to default value)
[LIBCONFIG] (root): 2/2 parameters successfully set, (0 to default value)
[LIBCONFIG] THREAD_STRUCT.[0]: 2/2 parameters successfully set, (0 to default value)
[LIBCONFIG] THREAD_STRUCT.[0]: 2/2 parameters successfully set, (0 to default value)
[CONFIG] parallel_conf is set to 0
[CONFIG] worker_conf is set to 1
Configuration: nb_rrc_inst 1, nb_nr_L1_inst 1, nb_ru 1
[LIBCONFIG] TTracer: 3/3 parameters successfully set, (3 to default value)
configuring for RAU/RRU
CPU Freq is 2.496120
[LIBCONFIG] opt: 3/3 parameters successfully set, (3 to default value)
[LIBCONFIG] (root): 2/2 parameters successfully set, (0 to default value)
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] L1s.[0]: 19/19 parameters successfully set, (12 to default value)
Initializing northbound interface for L1
[LIBCONFIG] (root): 2/2 parameters successfully set, (0 to default value)
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] L1s.[0]: 19/19 parameters successfully set, (12 to default value)
Initializing northbound interface for L1
[LIBCONFIG] list prs_config not found in config file ../.../targets/PROJECTS/GENER
[LIBCONFIG] (root): 2/2 parameters successfully set, (0 to default value)
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] MACRLCs.[0]: 33/33 parameters successfully set, (26 to default value)
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] MACRLCs.[0]: 33/33 parameters successfully set, (26 to default value)
[LIBCONFIG] list gNBs.[0].E1_INTERFACE not found in config file ../.../targets/PRO
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] MACRLCs.[0]: 33/33 parameters successfully set, (26 to default value)
```

```
[LIBCONFIG] list gNBs.[0].E1_INTERFACE not found in config file ../../../../targets/PRO
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] MACRLCs.[0]: 33/33 parameters successfully set, (26 to default value)
[LIBCONFIG] list gNBs.[0].E1_INTERFACE not found in config file ../../../../targets/PRO
[LIBCONFIG] (root): 2/2 parameters successfully set, (0 to default value)
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] gNBs.[0].servingCellConfigCommon.[0]: 60/60 parameters successfully set,
[LIBCONFIG] list gNBs.[0].servingCellConfigDedicated not found in config file ../../
NR_RRC 0: Southbound Transport local_mac
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] MACRLCs.[0]: 33/33 pa[GNB_APP] pdsch_AntennaPorts N1 1
[0m[GNB_APP] pdsch_AntennaPorts N2 1
[0m[GNB_APP] pdsch_AntennaPorts XP 2
[0m[GNB_APP] pusch_AntennaPorts 2
[0m[GNB_APP] minTXRXTIME 4
[0m[GNB_APP] SIB1 TDA 15
[0m[GNB_APP] Do CSI-RS 1
[0m[GNB_APP] Do SRS 0
[0m[GNB_APP] 256 QAM: may be on
[0m[GNB_APP] SDAP layer is disabled
[0m[GNB_APP] Data Radio Bearer count 1
[0m[GNB_APP] RRC starting with node type 2
[0m[GNB_APP] Sending configuration message to NR_RRC task
[0m[PDCCP] pdcp init,usegtp
[0m[GNB_APP] default drx 0
[0m[GNB_APP] [gNB 0] gNB_app_register for instance 0
[0m[UTIL] threadCreate for TASK_SCTP, affinity ffffffff, priority 50
[0m[ITTI] Created Posix thread TASK_SCTP
[0m[X2AP] X2AP is disabled.
[0m[UTIL] threadCreate for TASK_NGAP, affinity ffffffff, priority 50
[0m[NGAP] Starting NGAP layer
[0m[NGAP] Registered new gNB[0] and macro gNB id 3584
[0m[NGAP] [gNB 0] check the amf registration state
[0m[ITTI] Created Posix thread TASK_NGAP
[0m[NGAP] 3584 -> 0000e000
[0m[NGAP] servedGUAMIs.list.count 1
[0m[NGAP] PLMNSupportList.list.count 1
[0m[NGAP] PLMNSupportList.list.count 1
[0m[UTIL] threadCreate for TASK_GNB_APP, affinity ffffffff, priority 50
[0m[GNB_APP] [gNB 0] Received NGAP_REGISTER_GNB_CNF: associated AMF 1
[0m[ITTI] Created Posix thread TASK_GNB_APP
[0m[NR_RRC] Creating NR RRC gNB Task, that will also create TASKS
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[0m[UTIL]   threadCreate for TASK_RRC_GNB, affinity ffffffff, priority 50
[0m[NR_RRC]   Entering main loop of NR_RRC message task
[0m[NR_RRC]   [gNB 0] Received NRRRC_CONFIGURATION_REQ : 0x34ae8d0
[0m[NR_RRC]   [FRAME 00000][gNB][MOD 00][RNTI 0] Init...
[0m[NR_MAC]   NR band duplex spacing is 0 KHz (nr_bandtable[37].band = 78)
[0m[NR_MAC]   NR band 78, duplex mode TDD, duplex spacing = 0 KHz
[0m[NR_RRC]   [FRAME 00000][gNB][MOD 00][RNTI 0] Checking release
[0m[NR_RRC]   SIB1 freq: absoluteFrequencySSB 643392, absoluteFrequencyPointA 642816
[0m[NR_RRC]   SIB1 freq: absolute_diff 576, 2*(absolute_diff/(12*2) - 10) 28
[0mrameters successfully set, (26 to default value)
[LIBCONFIG] list gNBs.[0].E1_INTERFACE not found in config file ../../../../targets/PRO
[LIBCONFIG] gNBs.[0].plmn_list.[0]: 3/3 parameters successfully set, (0 to default v
[LIBCONFIG] security: 4/4 parameters successfully set, (0 to default value)
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] MACRLCs.[0]: 33/33 parameters successfully set, (26 to default value)
[LIBCONFIG] list gNBs.[0].E1_INTERFACE not found in config file ../../../../targets/PRO
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] MACRLCs.[0]: 33/33 parameters successfully set, (26 to default value)
[LIBCONFIG] list gNBs.[0].E1_INTERFACE not found in config file ../../../../targets/PRO
[LIBCONFIG] eNBs.[0]: 1/1 parameters successfully set, (1 to default value)
[LIBCONFIG] gNBs.[0]: 1/1 parameters successfully set, (1 to default value)
[LIBCONFIG] (root): 2/2 parameters successfully set, (0 to default value)
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] gNBs.[0].plmn_list.[0]: 3/3 parameters successfully set, (0 to default v
[LIBCONFIG] gNBs.[0].plmn_list.[0].snssaiList.[0]: 2/2 parameters successfully set,
[LIBCONFIG] gNBs.[0].amf_ip_address.[0]: 4/4 parameters successfully set, (0 to defa
[LIBCONFIG] gNBs.[0].SCTP: 2/2 parameters successfully set, (0 to default value)
[LIBCONFIG] gNBs.[0].NETWORK_INTERFACES: 10/10 parameters successfully set, (3 to de
[LIBCONFIG] gNBs.[0].NETWORK_INTERFACES: 10/10 parameters successfully set, (3 to de
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] MACRLCs.[0]: 33/33 parameters successfully set, (26 to default value)
[LIBCONFIG] list gNBs.[0].E1_INTERFACE not found in config file ../../../../targets/PRO
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    <q-RxLevMin>-65</q-RxLevMin>
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```

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```

```

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    <timeAlignmentTimerCommon><infinity/></timeAlignmentTimerCommon>
</uplinkConfigCommon>
<n-TimingAdvanceOffset><n25600/></n-TimingAdvanceOffset>
<ssb-PositionsInBurst>
    <inOneGroup>
        10000000
    </inOneGroup>
</ssb-PositionsInBurst>
<ssb-PeriodicityServingCell><ms20/></ssb-PeriodicityServingCell>
<tdd-UL-DL-ConfigurationCommon>
    <referenceSubcarrierSpacing><kHz30/></referenceSubcarrierSpacing>
    <pattern1>
        <dl-UL-TransmissionPeriodicity><ms2p5/></dl-UL-TransmissionPeriodici
        <nrofDownlinkSlots>3</nrofDownlinkSlots>
        <nrofDownlinkSymbols>6</nrofDownlinkSymbols>
        <nrofUplinkSlots>1</nrofUplinkSlots>
        <nrofUplinkSymbols>4</nrofUplinkSymbols>
    </pattern1>
</tdd-UL-DL-ConfigurationCommon>

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        </pattern1>
    </tdd-UL-DL-ConfigurationCommon>
    <ss-PBCH-BlockPower>-25</ss-PBCH-BlockPower>
</servingCellConfigCommon>
<ue-TimersAndConstants>
    <t300><ms400/></t300>
    <t301><ms400/></t301>
    <t310><ms2000/></t310>
    <n310><n10/></n310>
    <t311><ms3000/></t311>
    <n311><n1/></n311>
    <t319><ms400/></t319>
</ue-TimersAndConstants>
</SIB1>
[NR_RRC]   do_SIB23_NR, size 9
[0m[NR_RRC]   Done init_NR_SI
[0m[NR_MAC]   Configuring common parameters from NR ServingCellConfig
[0m[NR_MAC]   config_common() dl_BandwidthP:100
[0m[NR_MAC]   NR band duplex spacing is 0 KHz (nr_bandtable[37].band = 78)
[0m[NR_MAC]   Computing frequency (pointA 642816 => 3642240 KHz (freq_min 3300000 KH
[0m[NR_MAC]   config_common() dl_BandwidthP:100
[0m[NR_MAC]   NR band duplex spacing is 0 KHz (nr_bandtable[37].band = 78)
[0m[NR_MAC]   Computing frequency (pointA 642816 => 3642240 KHz (freq_min 3300000 KH
[0m[NR_MAC]   NR band duplex spacing is 0 KHz (nr_bandtable[37].band = 78)
[0m[NR_MAC]   NR band 78, duplex mode TDD, duplex spacing = 0 KHz
[0m[NR_MAC]   Set RX antenna number to 2, Set TX antenna number to 2 (num ssb 1: 800
[0m[NR_MAC]   Setting TDD configuration period to 5
[0m[NR_MAC]   TDD has been properly configured
[0m[PHY]   DL frequency 3691380000 Hz, UL frequency 3691380000 Hz: band 77, uldl off
[0m[32m[PHY]   Configuring MIB for instance 0, : (Nid_cell 0,DL freq 3691380000, UL
[0m[PHY]   Initializing frame parms for mu 1, N_RB 273, Ncp 0
[0m[93m[PHY]   Init: N_RB_DL 273, first_carrier_offset 2458, nb_prefix_samples 288,n
[0m[PHY]   Doing symbol rotation calculation for gNB TX/RX, f0 3691380000.000000 Hz,
[0m[PHY]   Symbol rotation 0/28 => tl 0.000000 (-3212,-32610) (0.265625)
[0m[PHY]   Symbol rotation 1/28 => tl 0.000036 (30272,12539) (0.937500)
[0m[PHY]   Symbol rotation 2/28 => tl 0.000072 (-25330,20787) (0.609375)
[0m[PHY]   Symbol rotation 3/28 => tl 0.000108 (-6393,-32138) (0.281250)
[0m[PHY]   Symbol rotation 4/28 => tl 0.000143 (31356,9511) (0.953125)
[0m[PHY]   Symbol rotation 5/28 => tl 0.000179 (-23170,23169) (0.625000)
[0m[PHY]   Symbol rotation 6/28 => tl 0.000215 (-9512,-31357) (0.296875)
[0m[PHY]   Symbol rotation 7/28 => tl 0.000250 (32137,6392) (0.968750)
[0m[PHY]   Symbol rotation 8/28 => tl 0.000286 (-20788,25329) (0.640625)

```

```
[0m[PHY] Symbol rotation 9/28 => tl 0.000322 (-12540,-30273) (0.312500)
[0m[PHY] Symbol rotation 10/28 => tl 0.000357 (32609,3211) (0.984375)
[0m[PHY] Symbol rotation 11/28 => tl 0.000393 (-18205,27244) (0.656250)
[0m[PHY] Symbol rotation 12/28 => tl 0.000429 (-15447,-28898) (0.328125)
[0m[PHY] Symbol rotation 13/28 => tl 0.000464 (32767,-1) (0.000000)
[0m[PHY] Symbol rotation 14/28 => tl 0.000500 (-3212,-32610) (0.265625)
[0m[PHY] Symbol rotation 15/28 => tl 0.000536 (30272,12539) (0.937500)
[0m[PHY] Symbol rotation 16/28 => tl 0.000572 (-25330,20787) (0.609375)
[0m[PHY] Symbol rotation 17/28 => tl 0.000608 (-6393,-32138) (0.281250)
[0m[PHY] Symbol rotation 18/28 => tl 0.000643 (31356,9511) (0.953125)
[0m[PHY] Symbol rotation 19/28 => tl 0.000679 (-23170,23169) (0.625000)
[0m[PHY] Symbol rotation 20/28 => tl 0.000715 (-9512,-31357) (0.296875)
[0m[PHY] Symbol rotation 21/28 => tl 0.000750 (32137,6392) (0.968750)
[0m[PHY] Symbol rotation 22/28 => tl 0.000786 (-20788,25329) (0.640625)
[0m[PHY] Symbol rotation 23/28 => tl 0.000822 (-12540,-30273) (0.312500)
[0m[PHY] Symbol rotation 24/28 => tl 0.000857 (32609,3211) (0.984375)
[0m[PHY] Symbol rotation 25/28 => tl 0.000893 (-18205,27244) (0.656250)
[0m[PHY] Symbol rotation 26/28 => tl 0.000929 (-15447,-28898) (0.328125)
[0m[PHY] Symbol rotation 27/28 => tl 0.000964 (32767,0) (1.000000)
[0m[PHY] Doing symbol rotation calculation for gNB TX/RX, f0 3691380000.000000 Hz,
[0m[PHY] Symbol rotation 0/28 => tl 0.000000 (-3212,-32610) (0.265625)
[0m[PHY] Symbol rotation 1/28 => tl 0.000036 (30272,12539) (0.937500)
[0m[PHY] Symbol rotation 2/28 => tl 0.000072 (-25330,20787) (0.609375)
[0m[PHY] Symbol rotation 3/28 => tl 0.000108 (-6393,-32138) (0.281250)
[0m[PHY] Symbol rotation 4/28 => tl 0.000143 (31356,9511) (0.953125)
[0m[PHY] Symbol rotation 5/28 => tl 0.000179 (-23170,23169) (0.625000)
[0m[PHY] Symbol rotation 6/28 => tl 0.000215 (-9512,-31357) (0.296875)
[0m[PHY] Symbol rotation 7/28 => tl 0.000250 (32137,6392) (0.968750)
[0m[PHY] Symbol rotation 8/28 => tl 0.000286 (-20788,25329) (0.640625)
[0m[PHY] Symbol rotation 9/28 => tl 0.000322 (-12540,-30273) (0.312500)
[0m[PHY] Symbol rotation 10/28 => tl 0.000357 (32609,3211) (0.984375)
[0m[PHY] Symbol rotation 11/28 => tl 0.000393 (-18205,27244) (0.656250)
[0m[PHY] Symbol rotation 12/28 => tl 0.000429 (-15447,-28898) (0.328125)
[0m[PHY] Symbol rotation 13/28 => tl 0.000464 (32767,-1) (0.000000)
[0m[PHY] Symbol rotation 14/28 => tl 0.000500 (-3212,-32610) (0.265625)
[0m[PHY] Symbol rotation 15/28 => tl 0.000536 (30272,12539) (0.937500)
[0m[PHY] Symbol rotation 16/28 => tl 0.000572 (-25330,20787) (0.609375)
[0m[PHY] Symbol rotation 17/28 => tl 0.000608 (-6393,-32138) (0.281250)
[0m[PHY] Symbol rotation 18/28 => tl 0.000643 (31356,9511) (0.953125)
[0m[PHY] Symbol rotation 19/28 => tl 0.000679 (-23170,23169) (0.625000)
[0m[PHY] Symbol rotation 20/28 => tl 0.000715 (-9512,-31357) (0.296875)
[0m[PHY] Symbol rotation 21/28 => tl 0.000750 (32137,6392) (0.968750)
```

```
[0m[PHY] Symbol rotation 22/28 => tl 0.000786 (-20788,25329) (0.640625)
[0m[PHY] Symbol rotation 23/28 => tl 0.000822 (-12540,-30273) (0.312500)
[0m[PHY] Symbol rotation 24/28 => tl 0.000857 (32609,3211) (0.984375)
[0m[PHY] Symbol rotation 25/28 => tl 0.000893 (-18205,27244) (0.656250)
[0m[PHY] Symbol rotation 26/28 => tl 0.000929 (-15447,-28898) (0.328125)
[0m[PHY] Symbol rotation 27/28 => tl 0.000964 (32767,0) (1.000000)
[0m[PHY] Timeshift symbol rotation 0 => (32767,0) 0.000000
[0m[PHY] Timeshift symbol rotation 1 => (32717,1809) -0.055223
[0m[PHY] Timeshift symbol rotation 2 => (32567,3612) -0.110447
[0m[PHY] Timeshift symbol rotation 3 => (32318,5404) -0.165670
[0m[PHY] Timeshift symbol rotation 4 => (31971,7179) -0.220893
[0m[PHY] Timeshift symbol rotation 5 => (31526,8933) -0.276117
[0m[PHY] Timeshift symbol rotation 6 => (30985,10659) -0.331340
[0m[PHY] Timeshift symbol rotation 7 => (30349,12353) -0.386563
[0m[PHY] Timeshift symbol rotation 8 => (29621,14010) -0.441786
[0m[PHY] Timeshift symbol rotation 9 => (28803,15623) -0.497010
[0m[PHY] gNB 0 configured
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 0 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 1 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 2 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 3 DL 1 UL 1
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 4 DL 0 UL 1
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 5 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 6 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 7 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 8 DL 1 UL 1
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 9 DL 0 UL 1
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 10 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 11 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 12 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 13 DL 1 UL 1
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 14 DL 0 UL 1
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 15 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 16 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 17 DL 1 UL 0
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 18 DL 1 UL 1
[0m[NR_MAC] In rrc_mac_config_req_gNB: slot 19 DL 0 UL 1
[0m[ITTI] Created Posix thread TASK_RRC_GNB
[0m[GTPU] Configuring GTPu
[0m[GTPU] SA mode
[0m[GTPU] Configuring GTPu address : 192.168.120.68, port : 2152
[0m[GTPU] Initializing UDP for local address 192.168.120.68 with port 2152
```



```
[0m[GTPU]    Created gtpu instance id: 100
[0m[UTIL]    threadCreate for TASK_GTPV1_U, affinity ffffffff, priority 50
[0m[ITTI]    Created Posix thread TASK_GTPV1_U
[0m[PHY]     Initializing gNB 0 single_thread_flag:1
[0m[PHY]     Initializing gNB 0
[0m[PHY]     Registering with MAC interface module (before 0x3498f20)
[0m[PHY]     Installing callbacks for IF_Module - UL_indication
[0m[PHY]     Registering with MAC interface module (after 0x3498f20)
[0m[PHY]     Setting indication lists
[0m[PHY]     [nr-gnb.c] gNB structure allocated
[0m[PHY]     Setting clock source to internal
[0m[PHY]     Setting time source to internal
[0m[PHY]     number of L1 instances 1, number of RU 1, number of CPU cores 16
[0m[1;31m[PHY]   DJP - delete code above this ../../../../executables/nr-ru.c:1763
[0m[PHY]     Copying frame parms from gNB in RC to gNB 0 in ru 0 and frame_parms in ru
[0mDL frequency 3691380000: band 77, UL frequency 3691380000
[LIBCONFIG] (root): 2/2 parameters successfully set, (0 to default value)
[LIBCONFIG] gNBs.[0]: 28/28 parameters successfully set, (17 to default value)
[LIBCONFIG] gNBs.[0].plmn_list.[0]: 3/3 parameters successfully set, (0 to default v
[LIBCONFIG] (root): 2/2 parameters successfully set, (0 to default value)
[LIBCONFIG] gNBs.[0].NETWORK_INTERFACES: 10/10 parameters successfully set, (3 to de
START MAIN THREADS
RC.nb_nr_L1_inst:1
Initializing gNB threads single_thread_flag:1 wait_for_sync:0
wait_gNBs()
Waiting for gNB L1 instances to all get configured ... sleeping 50ms (nb_nr_sL1_inst
gNB L1 are configured
About to Init RU threads RC.nb_RU:1
Initializing RU threads
configuring RU from file
[LIBCONFIG] RUs.[0]: 42/42 parameters successfully set, (27 to default value)
Set RU mask to 1
Creating RC.ru[0]:0x34dcfe0
RU 0: Transport raw_if4p5
[RU 0] Setting nr_flag 0, nr_band 78, nr_scs_for_raster 1
[RU 0] Setting half-slot parallelization to 1
[LIBCONFIG] device.recplay: 8/8 parameters successfully set, (8 to default value)
[LIBCONFIG] device: 1/1 parameters successfully set, (1 to default value)
[LIBCONFIG] loader: 2/2 parameters successfully set, (2 to default value)
[LIBCONFIG] loader.oai_transpro: 2/2 parameters successfully set, (1 to default valu
shlib_path liboai_transpro.so
[LOADER] library liboai_transpro.so successfully loaded
```

```
UP_VF [0000:04:02.0], CP_VF [0000:04:02.1]
wrapper.hpp: m_xranInit.io_cfg.dpd_dev[0] =0000:04:02.0, m_xranInit.io_cfg.dpd_dev
*** Numerology []
*** Number of Slot [20]
*** IQ Width []
*** Compression Method [ ]
ORAN: transport_init
Machine is not synchronized using PTP (1)!
O-DU MAC address: 00:11:22:33:44:66
O-RU MAC address: 00:FFFFFFAA:FFFFFFF:FFFFFFBB:FFFFFFF:FFFFFFCC
eAxCID - 12:8:4:0 (f000, 0f00, 00f0, 000f)
Total BF Weights : 32
  xran_init: MTU 1500
total cores 16 c_mask 0x7 core 1 [id] system_core 0 [id] pkt_proc_core 0x4 [mask] pk
xran_ethdi_init_dpd_dev: Calling rte_eal_init:wls -c 0x7 -n2 --iova-mode=pa --socket
EAL: Probing VFIO support...
EAL: VFIO support initialized
EAL: No legacy callbacks, legacy socket not created
EAL:   Invalid NUMA socket, default to 0
EAL:   using IOMMU type 1 (Type 1)
EAL: Probe PCI driver: net_i40e_vf (8086:154c) device: 0000:04:02.0 (socket 0)
initializing port 0 for TX, drv=net_i40e_vf
Port 0 MAC: 00 11 22 33 44 66
Port 0: nb_rxd 4096 nb_txd 4096

Checking link status portid [0]   ... done
Port 0 Link Up - speed 10000 Mbps - full-duplex
EAL:   Invalid NUMA socket, default to 0
EAL: Probe PCI driver: net_i40e_vf (8086:154c) device: 0000:04:02.1 (socket 0)
initializing port 1 for TX, drv=net_i40e_vf
Port 1 MAC: 00 11 22 33 44 66
Port 1: nb_rxd 4096 nb_txd 4096

Checking link status portid [1]   ... done
Port 1 Link Up - speed 10000 Mbps - full-duplex
vf 0 local  SRC MAC: 00 11 22 33 44 66
vf 0 remote DST MAC: 00 aa ff bb ff cc
vf 1 local  SRC MAC: 00 11 22 33 44 66
vf 1 remote DST MAC: 00 aa ff bb ff cc
wrapper.hpp: nFpgaToSW_FTH_RxBufferLen=13168 , nSW_ToFpga_FTH_TxBufferLen=15696
XRAN front haul xran_mm_init
xran_sector_get_instances [0]: CC 0 handle 0x358b440
```

```
Handle: 0x7f234317cc70 Instance: 0x358b440
init_memory [0]: CC 0 handle 0x358b440
Sucess xran_mm_init
wrapper.hpp: Init memory *** XRANFTHTX_OUT ***
Call xran_bm_init 0
ru_0_cc_0_idx_0: [ handle 0x358b440 0 0 ] [nPoolIndex 0] nNumberOfBuffers 1120 nBuff
CC:[ handle 0x358b440 ru 0 cc_idx 0 ] [nPoolIndex 0] mb pool 0x2ea2f6700
wrapper.hpp: Init memory *** XRANFTHTX_SEC_DESC_OUT ***
ru_0_cc_0_idx_1: [ handle 0x358b440 0 0 ] [nPoolIndex 1] nNumberOfBuffers 17920 nBuf
CC:[ handle 0x358b440 ru 0 cc_idx 0 ] [nPoolIndex 1] mb pool 0x2e9020bc0
wrapper.hpp: Init memory *** XRANFTHTX_PRB_MAP_OUT ***
ru_0_cc_0_idx_2: [ handle 0x358b440 0 0 ] [nPoolIndex 2] nNumberOfBuffers 1120 nBuff
CC:[ handle 0x358b440 ru 0 cc_idx 0 ] [nPoolIndex 2] mb pool 0x2e8486580
wrapper.hpp: Init memory *** XRANFTHRX_IN ***
ru_0_cc_0_idx_3: [ handle 0x358b440 0 0 ] [nPoolIndex 3] nNumberOfBuffers 1120 nBuff
CC:[ handle 0x358b440 ru 0 cc_idx 0 ] [nPoolIndex 3] mb pool 0x2e4ea8a40
wrapper.hpp: Init memory *** XRANFTHTX_SEC_DESC_IN ***
ru_0_cc_0_idx_4: [ handle 0x358b440 0 0 ] [nPoolIndex 4] nNumberOfBuffers 17920 nBuf
CC:[ handle 0x358b440 ru 0 cc_idx 0 ] [nPoolIndex 4] mb pool 0x2e3bd2f00
wrapper.hpp: Init memory *** XRANFTHRX_PRB_MAP_IN ***
ru_0_cc_0_idx_5: [ handle 0x358b440 0 0 ] [nPoolIndex 5] nNumberOfBuffers 1120 nBuff
CC:[ handle 0x358b440 ru 0 cc_idx 0 ] [nPoolIndex 5] mb pool 0x2e30388c0
wrapper.hpp: Init memory *** XRANFTHRACH_IN ***
ru_0_cc_0_idx_6: [ handle 0x358b440 0 0 ] [nPoolIndex 6] nNumberOfBuffers 1120 nBuff
CC:[ handle 0x358b440 ru 0 cc_idx 0 ] [nPoolIndex 6] mb pool 0x2dfa5ad80
wrapper.hpp: Init memory *** XRANSRS_IN ***
ru_0_cc_0_idx_7: [ handle 0x358b440 0 0 ] [nPoolIndex 7] nNumberOfBuffers 1120 nBuff
CC:[ handle 0x358b440 ru 0 cc_idx 0 ] [nPoolIndex 7] mb pool 0x2def74f40
INIT DONE
[HW] [RAU] has loaded ETHERNET trasport protocol.
[0m[PHY] Starting ru_thread 0
[0m[PHY] Initializing RU proc 0 (NGFI_RAU_IF4p5,synch_to_ext_device),
[0m[UTIL] threadCreate for ru_thread, affinity 8, priority 97
[0m[PHY] Starting RU 0 (NGFI_RAU_IF4p5,synch_to_ext_device) on cpu 0
[0m[PHY] Initializing frame parms for mu 1, N_RB 273, Ncp 0
[0m[93m[PHY] Init: N_RB_DL 273, first_carrier_offset 2458, nb_prefix_samples 288,n
[0m[PHY] fp->scs=30000
[0m[PHY] fp->ofdm_symbol_size=4096
[0m[PHY] fp->nb_prefix_samples0=352
[0m[PHY] fp->nb_prefix_samples=288
[0m[PHY] fp->slots_per_subframe=2
[0m[PHY] fp->samples_per_subframe_wCP=114688
```

```
[0m[PHY] fp->samples_per_frame_wCP=1146880
[0m[PHY] fp->samples_per_subframe=122880
[0m[PHY] fp->samples_per_frame=1228800
[0m[PHY] fp->dl_CarrierFreq=3691380000
[0m[PHY] fp->ul_CarrierFreq=3691380000
[0m[PHY] Setting RF config for N_RB 273, NB_RX 2, NB_TX 2
[0m[PHY] Channel 0: setting tx_gain offset 0, rx_gain offset 0, tx_freq 3691380000
[0m[PHY] Channel 1: setting tx_gain offset 0, rx_gain offset 0, tx_freq 3691380000
[0m[PHY] Initializing RU signal buffers (if_south IF4p5 RRU) nb_tx 2, nb_rx 2
[0m[PHY] nb_tx 2
[0m[PHY] rxdata_7_5kHz[0] 0x7f232361e040 for RU 0
[0m[PHY] rxdata_7_5kHz[1] 0x7f232343d040 for RU 0
[0m[PHY] [INIT] common.txdata_BF= 0x7f23180009a0 (16 bytes)
[0m[PHY] txdataF_BF[0] 0x7f23180009e0 for RU 0
[0m[PHY] txdataF_BF[1] 0x7f2318070a40 for RU 0
[0m[PHY] rxdataF[0] 0x7f23180e0b20 for RU 0
[0m[PHY] rxdataF[1] 0x7f23181c0b80 for RU 0
[0m[PHY] [INIT] nr_phy_init_RU() ru->num_gNB:1
[0m[PHY] Starting IF interface for RU 0, nb_rx 2
[0m[PHY] RU 0 Setting N_TA_offset to 1600 samples (factor 4.000000, UL Freq 364224
[0m[PHY] Signaling main thread that RU 0 is ready, sl_ahead 5
[0m[PHY] Waiting for RUs to be configured ... RC.ru_mask:00
[0m[PHY] RUs configured
[0m[PHY] init_eNB_afterRU() RC.nb_nr_inst:1
[0m[PHY] RC.nb_nr_CC[inst:0]:0x7f23bda88010
[0m[PHY] [gNB 0] phy_init_nr_gNB() About to wait for gNB to be configured
[0m[PHY] Initialise nr transport
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 0/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 1/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 2/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 3/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 4/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 5/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 6/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 7/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 8/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 9/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 10/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 11/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 12/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 13/32
[0m[PHY] Allocating Transport Channel Buffers for PUCCH 14/32
```

```
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 15/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 16/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 17/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 18/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 19/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 20/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 21/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 22/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 23/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 24/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 25/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 26/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 27/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 28/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 29/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 30/32
[0m[PHY]   Allocating Transport Channel Buffers for PUCCH 31/32
[0m[PHY]   Allocating Transport Channel Buffers for SRS 0/4
[0m[PHY]   Allocating Transport Channel Buffers for SRS 1/4
[0m[PHY]   Allocating Transport Channel Buffers for SRS 2/4
[0m[PHY]   Allocating Transport Channel Buffers for SRS 3/4
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 0/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 1/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 2/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 3/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 4/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 5/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 6/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 7/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 8/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 9/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 10/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 11/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 12/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 13/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 14/16
[0m[PHY]   Allocating Transport Channel Buffers for ULSCH 15/16
[0m[PHY]   Mapping RX ports from 1 RUS to gNB 0
[0m[PHY]   gNB->num_RU:1
[0m[PHY]   Attaching RU 0 antenna 0 to gNB antenna 0
[0m[PHY]   Attaching RU 0 antenna 1 to gNB antenna 1
[0m[UTIL]   threadCreate for Tpool0_-1, affinity ffffffff, priority 97
```

```
[0m[UTIL]   threadCreate for Tpool1_-1, affinity ffffffff, priority 97
[0m[UTIL]   threadCreate for Tpool2_-1, affinity ffffffff, priority 97
[0m[UTIL]   threadCreate for Tpool3_-1, affinity ffffffff, priority 97
[0m[UTIL]   threadCreate for Tpool4_-1, affinity ffffffff, priority 97
[0m[UTIL]   threadCreate for Tpool5_-1, affinity ffffffff, priority 97
[0m[UTIL]   threadCreate for Tpool6_-1, affinity ffffffff, priority 97
[0m[UTIL]   threadCreate for Tpool7_-1, affinity ffffffff, priority 97
[0m[UTIL]   threadCreate for L1_rx_thread, affinity ffffffff, priority 97
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 0/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 1/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 2/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 3/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 4/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 5/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 6/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 7/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 8/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 9/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 10/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 11/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 12/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 13/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 14/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[PHY]   Allocating Transport Channel Buffers for DLSCH 15/16
[0m[PHY]   Allocating 72 segments (MAX 36, N_PRB 273)
[0m[UTIL]   threadCreate for L1_stats, affinity ffffffff, priority 1
[0mSetUp ORAN. Done
```

```
*****
```

ORAN Configuration

```
* Numerology      = 1
* Duplex Type     = 1
* Number CC       = 1
* Number eAxc     = 2
* Number eAxc UL  = 0
* Number RBs DL   = 273
* Number RBs UL   = 273
```

```
*****
```

```
physide_dl_tti_call_backRegister physide callbacks. Done
```

```
Open Oran callbacks. Done
```

```
Init Oran. Done
```

```
xran_open: 5G NR Category A
```

```
xRAN open PRACH config: Numerology 1 ConfIdx 159, preambleFmrt 10 startsyb 0, numSy
```

```
PRACH: x 1 y[0] 0, y[1] 0 prach slot: 9 ..
```

```
PRACH start symbol 0 lastsymbol 11
```

```
xran_open: interval_us=500
```

```
XRAN_UP_VF: 0x0000
```

```
XRAN_CP_VF: 0x0001
```

```
xran_timing_source_thread [CPU 1] [PID: 4424]
```

```
ring_processing_thread [CPU 2] [PID: 4424]
```

```
xran_open. Done
```

```
openair0_transport_init returns 0 for ru_id 0
```

```
ORAN: get_internal_parameter
```

```
ORAN: get_internal_parameter
```

```
ORAN: trx_oran_start
```

```
Start ORAN. Done
```

```
setup_RU_buffers: frame_parms = 0x34e2a90
```

```
waiting for sync (ru_thread, -1/0x12a8a14, 0x20319e0, 0x1f26f00)
```

```
wait RUs
```

```
ALL RUs READY!
```

```
RC.nb_RU:1
```

```
ALL RUs ready - init gNBs
```

```
Not NFAPI mode - call init_eNB_afterRU()
```

```
[LIBCONFIG] loader.dfts: 2/2 parameters successfully set, (1 to default value)
```

```
shlib_path libdfts.so
```

```
[LOADER] library libdfts.so successfully loaded
```

```
[LIBCONFIG] loader.ldpc: 2/2 parameters successfully set, (1 to default value)
```

```
shlib_path libldpc.so
[LOADER] library libldpc.so successfully loaded
0-DU: thread_run start time: 07/06/23 09:50:36.000000004 UTC [500]
Start C-plane DL -5 us after TTI [trigger on sym 120260]
Start C-plane UL -5 us after TTI [trigger on sym 120260]
Start U-plane DL 505 us before OTA [offset in sym -14]
Start U-plane UL 180 us OTA [offset in sym 6]
C-plane to U-plane delay 510 us after TTI
Start Sym timer 71428 ns
interval_us 500
create a thread for core -1
create a thread for core -1
create a thread for core -1
create a thread for core -1
create a thread for core -1
create a thread for core -1
create a thread for core -1
create a thread for core -1
waiting for sync (L1_stats_thread, -1/0x12a8a14, 0x20319e0, 0x1f26f00)
ALL RUs ready - ALL gNBs ready
Sending sync to all threads
Entering ITTI signals handler
TYPE <CTRL-C> TO TERMINATE
got sync (ru_thread)
got sync (L1_stats_thread)
[PHY] RU 0 no rf device
[0m[PHY] RU 0 RF started opp_enabled 0
[0m[PHY] before adjusting, OAI: frame=0 slot=0, XTRAN: frame=0 slot=1
[0m[PHY] After adjusting, OAI: frame=0 slot=1, XTRAN: frame=0 slot=1
[0m[NR_MAC] Frame.Slot 128.0

[0m[NR_MAC] Frame.Slot 256.0

[0m[NR_MAC] Frame.Slot 384.0

[0m[NR_MAC] Frame.Slot 512.0

[0m[NR_MAC] Frame.Slot 640.0

[0m[NR_MAC] Frame.Slot 768.0

[0m[NR_MAC] Frame.Slot 896.0
```



```
[0m[NR_MAC]    Frame.Slot 0.0

[0m[PHY]    prach_I0 = 0.0 dB
[0m[NR_MAC]    Frame.Slot 128.0

[0m[NR_MAC]    Frame.Slot 256.0

[0m[NR_MAC]    Frame.Slot 384.0

[0m[NR_MAC]    Frame.Slot 512.0

[0m[NR_MAC]    Frame.Slot 640.0

[0m[NR_MAC]    Frame.Slot 768.0

[0m[NR_MAC]    Frame.Slot 896.0

[0m[NR_MAC]    Frame.Slot 0.0

[0m[PHY]    prach_I0 = 0.0 dB
[0m[NR_MAC]    Frame.Slot 128.0

[0m[NR_MAC]    Frame.Slot 256.0

[0m[NR_MAC]    Frame.Slot 384.0

[0m[NR_MAC]    Frame.Slot 512.0

[0m[NR_MAC]    Frame.Slot 640.0

[0m[NR_MAC]    Frame.Slot 768.0

[0m[NR_MAC]    Frame.Slot 896.0

[0m[NR_MAC]    Frame.Slot 0.0

[0m[PHY]    prach_I0 = 0.0 dB
[0m[NR_MAC]    Frame.Slot 128.0

[0m[NR_MAC]    Frame.Slot 256.0
```

[0m[NR_MAC] Frame.Slot 384.0

[0m[NR_MAC] Frame.Slot 512.0

[0m[NR_MAC] Frame.Slot 640.0

[0m[NR_MAC] Frame.Slot 768.0

[0m[NR_MAC] Frame.Slot 896.0

[0m[NR_MAC] Frame.Slot 0.0

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[0m[NR_MAC] Frame.Slot 256.0

[0m[NR_MAC] Frame.Slot 384.0

[0m[NR_MAC] Frame.Slot 512.0

[0m[NR_MAC] Frame.Slot 640.0

[0m[NR_MAC] Frame.Slot 768.0

[0m[NR_MAC] Frame.Slot 896.0

[0m[NR_MAC] Frame.Slot 0.0

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[0m[NR_MAC] Frame.Slot 512.0

[0m[NR_MAC] Frame.Slot 640.0

[0m[NR_MAC] Frame.Slot 768.0

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```
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[0m[NR_MAC]    Frame.Slot 512.0

[0m[NR_MAC]    Frame.Slot 640.0

[0m[NR_MAC]    Frame.Slot 768.0

[0m[NR_MAC]    Frame.Slot 896.0

[0m[NR_MAC]    Frame.Slot 0.0

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[0m[NR_MAC]    Frame.Slot 384.0

[0m[NR_MAC]    Frame.Slot 512.0

[0m[NR_MAC]    Frame.Slot 640.0

[0m[NR_MAC]    Frame.Slot 768.0

[0m[NR_MAC]    Frame.Slot 896.0

[0m[NR_MAC]    Frame.Slot 0.0

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[0m[NR_MAC]    Frame.Slot 256.0

[0m[NR_MAC]    Frame.Slot 384.0

[0m[NR_MAC]    Frame.Slot 512.0

[0m[NR_MAC]    Frame.Slot 640.0

[0m[NR_MAC]    Frame.Slot 768.0
```

[0m[NR_MAC] Frame.Slot 896.0

[0m[NR_MAC] Frame.Slot 0.0

[0m[PHY] prach_I0 = 0.0 dB

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[0m[NR_MAC] Frame.Slot 384.0

[0m[NR_MAC] Frame.Slot 512.0

[0m[NR_MAC] Frame.Slot 640.0

[0m[NR_MAC] Frame.Slot 768.0

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[0m[NR_MAC] Frame.Slot 0.0

[0m[PHY] prach_I0 = 0.0 dB

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[0m[NR_MAC] Frame.Slot 512.0

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[0m[NR_MAC] Frame.Slot 384.0

[0m[NR_MAC] Frame.Slot 512.0

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[0m[NR_MAC] Frame.Slot 896.0

[0m[NR_MAC] Frame.Slot 0.0

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[0m[NR_MAC] Frame.Slot 256.0

[0m[NR_MAC] Frame.Slot 384.0

[0m[NR_MAC] Frame.Slot 512.0

[0m[NR_MAC] Frame.Slot 640.0

[0m[NR_MAC] Frame.Slot 768.0

[0m[NR_MAC] Frame.Slot 896.0

[0m[NR_MAC] Frame.Slot 0.0

[0m[PHY] prach_I0 = 0.0 dB

[0m[NR_MAC] Frame.Slot 128.0

```
[0m[NR_MAC]    Frame.Slot 256.0

[0m[NR_MAC]    Frame.Slot 384.0

[0m[NR_MAC]    Frame.Slot 512.0

[0m[NR_MAC]    Frame.Slot 640.0

[0m[NR_MAC]    Frame.Slot 768.0

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[0m[NR_MAC]    Frame.Slot 0.0

[0m[PHY]    prach_I0 = 0.0 dB
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[0m[NR_MAC]    Frame.Slot 256.0

[0m[NR_MAC]    Frame.Slot 384.0

[0m[NR_MAC]    Frame.Slot 512.0

[0m[NR_MAC]    Frame.Slot 640.0

[0m[NR_MAC]    Frame.Slot 768.0

[0m[NR_MAC]    Frame.Slot 896.0

[0m[NR_MAC]    Frame.Slot 0.0

[0m[PHY]    prach_I0 = 0.0 dB
[0m[NR_MAC]    Frame.Slot 128.0

[0m[NR_MAC]    Frame.Slot 256.0

[0m[NR_MAC]    Frame.Slot 384.0

[0m[NR_MAC]    Frame.Slot 512.0

[0m[NR_MAC]    Frame.Slot 640.0
```


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[0m[NR_MAC] Frame.Slot 768.0

[0m