

A decorative graphic in the top-left corner consisting of a cluster of dots in various colors: green, teal, blue, dark blue, and magenta. The dots are arranged in a roughly circular pattern, with some larger and some smaller.

ENODEB BASIC COMMANDS

S1-UP, S1-CP, S1, X2 LINKS
AND HANDOVER

HOW TO VERIFY CONNECTION BETWEEN ENODEB AN MME (S1-CONTROL PLANE) AFTER ENB OR MME RESTART >ST MME OR ST TERMPPOINTTOMME

DFWe0600037> st mme

100727-13:22:42 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

=====

Proxy	Adm State	Op. State	MO
-------	-----------	-----------	----

=====

886	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,TermPointToMme=MME010012008226
-----	--------------	-------------	---

=====

Total: 1 MOs

DFWe0600037> st termpointtomme

100727-13:23:01 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

=====

Proxy	Adm State	Op. State	MO
-------	-----------	-----------	----

=====

886	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,TermPointToMme=MME010012008226
-----	--------------	-------------	---

=====

Total: 1 MOs

To find out IP address for MME

>get <proxy#>

>>> 1.mcc = 0

>>> 2.mnc = 0

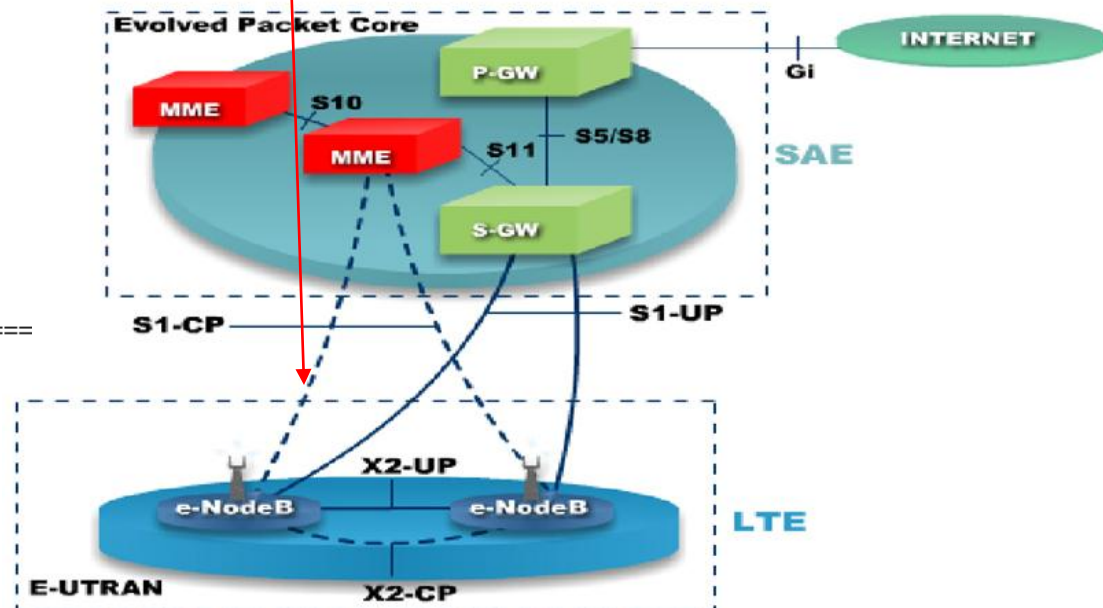
>>> 3.mncLength = 0

usedIpAddress

10.12.8.226

=====

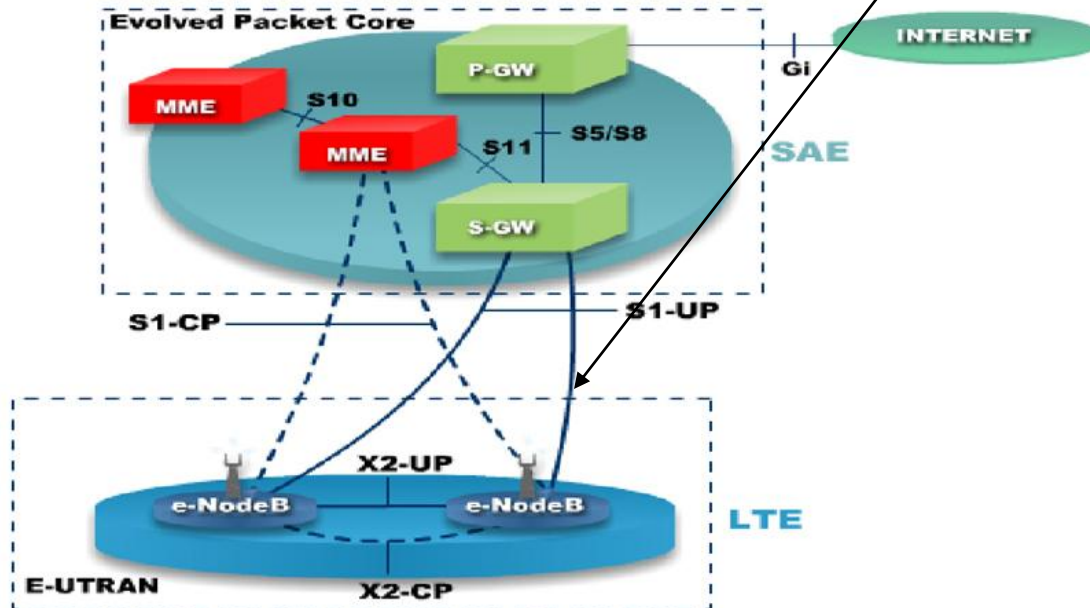
Total: 1 MOs



HOW TO VERIFY CONNECTION BETWEEN ENODEB TO SGW S1-UP (S1 – USER PLANE) AFTER ENB OR SGW RESTART

To verify S1-UP (link from eNodeB to S-GW), you have to run ping command from UE to application server.

Ping <IP address> -t



HOW TO VERIFY CONNECTION X2 LINK (LINKS BETWEEN ENB)

```
DFWe0600037> st termpointtoenb
```

```
100727-14:28:05 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
```

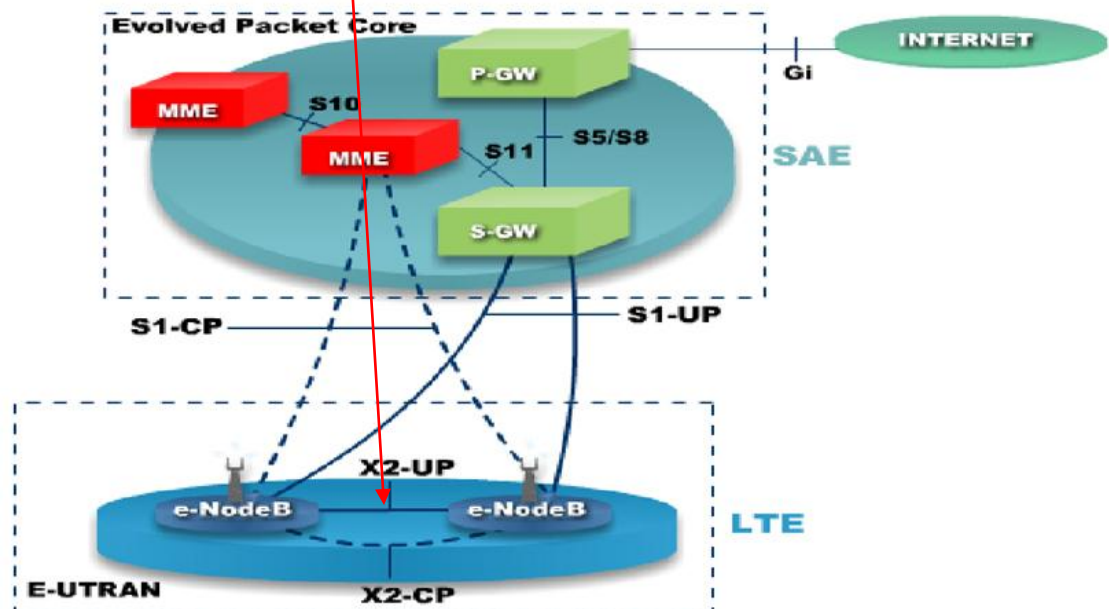
```
=====
```

Proxy	Adm State	Op. State	MO
-------	-----------	-----------	----

```
=====
```

684	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,EUtraNetwork=1,ExternalENodeBFunction=DFWe0600671,TermPointToENB=DFWe0600671
692	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,EUtraNetwork=1,ExternalENodeBFunction=DFWe0600008,TermPointToENB=DFWe0600008
694	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,EUtraNetwork=1,ExternalENodeBFunction=DFWe0600029,TermPointToENB=DFWe0600029
703	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,EUtraNetwork=1,ExternalENodeBFunction=DFWe0600607,TermPointToENB=DFWe0600607
708	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,EUtraNetwork=1,ExternalENodeBFunction=DFWe0600049,TermPointToENB=DFWe0600049
712	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,EUtraNetwork=1,ExternalENodeBFunction=DFWe0600674,TermPointToENB=DFWe0600674
718	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,EUtraNetwork=1,ExternalENodeBFunction=DFWe0600055,TermPointToENB=DFWe0600055
722	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,EUtraNetwork=1,ExternalENodeBFunction=DFWe0600007,TermPointToENB=DFWe0600007
725	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,EUtraNetwork=1,ExternalENodeBFunction=DFWe0600036,TermPointToENB=DFWe0600036
730	1 (UNLOCKED)	1 (ENABLED)	ENodeBFunction=1,EUtraNetwork=1,ExternalENodeBFunction=DFWe0600044,TermPointToENB=DFWe0600044

This command will verify X2 links. A maximum of 64 host MOs (IpAccessHostGpb, IpAccessHostSpb and IpAccessHostEt) can be configured in a node. A maximum of 64 host MOs (IpAccessHostGpb, IpAccessHostSpb and IpAccessHostEt) can be connected to IpInterface MOs on one board.



HOW TO LIST RELATION

DfWe0600037> pr relat

100727-14:44:06 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

Proxy MO

```
=====
633 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1
634 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000021
635 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06004332
636 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000061
637 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000443
638 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000482
639 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06004592
640 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000351
641 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000471
642 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000373
643 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000291
644 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06056744
645 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000072
646 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000492
647 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000062
648 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06050506
649 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000551
650 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06000363
651 ENodeBFunction=1,EUtranCellFDD=DfWe06000372,EUtranFreqRelation=1,EUtranCellRelation=DfWe06006742
```

HOW TO CHECK HO FEATURE IS ACTIVATED. IF THE FEATURE DOESN'T ACTIVATE, ENB WILL NOT ABLE TO DO HO

DFWe0600037> get intralte

100727-14:41:30 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

=====

21 SystemFunctions=1,Licensing=1,OptionalFeatures=1,IntraLTEHandover=1

=====

IntraLTEHandoverId 1
featureStateIntraLTEHandover 1 (ACTIVATED)
keyIdIntraLTEHandover CXC4010612
licenseStateIntraLTEHandover 0 (DISABLED)
serviceStateIntraLTEHandover 1 (OPERABLE)

=====

30 SystemFunctions=1,Licensing=1,OptionalFeatures=1,IntraLTEHODataFwd=1

=====

IntraLTEHODataFwdId 1
featureStateIntraLTEHODataFwd 0 (DEACTIVATED)
keyIdIntraLTEHODataFwd CXC4010613
licenseStateIntraLTEHODataFwd 0 (DISABLED)
serviceStateIntraLTEHODataFwd 0 (INOPERABLE)

=====

Total: 2 MOS

HOW TO VERIFY IPACCESSHOST FOR SOURCE ENB. IPACCESSHOST IS IP (GET IPACCESSHOSTET)

DFWe0600037> get ipaccesshostet

100727-14:11:52 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

620 IpSystem=1,IpAccessHostEt=1

IpAccessHostEtId 1
administrativeState 1 (UNLOCKED)
availabilityStatus 0 (NO_STATUS)
ipAddress 10.26.4.170
ipDefaultTtl 64
ipInterfaceMoRef
Subrack=1,Slot=1,PlugInUnit=1,ExchangeTerminalIp=1,GigaBitEthernet=1,IpInterface=2
ntpDscp 54
ntpServerMode 0 (DISABLED)
operationalState 1 (ENABLED)
reservedBy [1] =
>>> reservedBy = IpSystem=1,IpAccessSctp=1
userLabel

Total: 1 MOs

- 835 1 (UNLOCKED) ENodeBFunction=1,EutraNetwork=1,ExternalENodeBFunction=DFWe0600002,TermPointToENB=DFWe0600002
- =====
- Total: 31 MOs

- DFWe0600037> get 835
- 100727-14:37:16 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
- =====
- 835
- ENodeBFunction=1,EutraNetwork=1,ExternalENodeBFunction=DFWe0600002,TermPointToENB=DFWe0600002
- =====
- TermPointToENBId DFWe0600002
- administrativeState 1 (UNLOCKED)
- anrCreated false
- availabilityStatus 1 (IN_TEST)
- ctrlMode 0 (MANUAL)
- domainName
- ipAddress 10.26.0.74
- operationalState 1 (ENABLED)
- timeOfAnrCreation
- timeOfAnrModification
- =====
- Total: 1 MOs

To get ipaccesshost
For target eNB, from
X2 link. Select eNB
You want to get
Ipaccesshost and
type
>get <proxy>

ENB AT SITE LEVEL AND
AND CELL LEVEL

HOW TO CHECK STATUS OF CELL AND SECTOR, LOCK/UNLOCK CELL

```
DFWe0600037> st fdd

100727-14:46:20 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
=====
Proxy  Adm State  Op. State  MO
=====
628 1 (UNLOCKED) 1 (ENABLED) ENodeBFunction=1,EUtranCellFDD=DFWe06000372
842 1 (UNLOCKED) 1 (ENABLED) ENodeBFunction=1,EUtranCellFDD=DFWe06000373
889 1 (UNLOCKED) 1 (ENABLED) ENodeBFunction=1,EUtranCellFDD=DFWe06000371
=====
Total: 3 MOs

DFWe0600037> st sec
```

```
100727-14:46:26 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
=====
Proxy  Adm State  Op. State  MO
=====
938 1 (UNLOCKED) 1 (ENABLED) SectorEquipmentFunction=S1
939 1 (UNLOCKED) 1 (ENABLED) SectorEquipmentFunction=S2
944 1 (UNLOCKED) 1 (ENABLED) SectorEquipmentFunction=S3
=====
Total: 3 MOs
```

```
DFWe0600531> bl cellfdd

100809-16:20:22 10.26.66.110 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/28360
Block following MOs ?
=====
629 ENodeBFunction=1,EUtranCellFDD=DFWe06005311
903 ENodeBFunction=1,EUtranCellFDD=DFWe06005312
957 ENodeBFunction=1,EUtranCellFDD=DFWe06005313
=====
Are you Sure [y/n] ?
Yes for lock cell and No for unlock cell
```

```
DFWe0600531> deb cellfdd

100809-16:27:04 10.26.66.110 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/28360
Deblock following MOs ?
=====
629 ENodeBFunction=1,EUtranCellFDD=DFWe06005311
903 ENodeBFunction=1,EUtranCellFDD=DFWe06005312
957 ENodeBFunction=1,EUtranCellFDD=DFWe06005313
=====
Are you Sure [y/n] ?
Yes for I unlock cell and No for lock cell
```

HOW TO VERIFY ENODEB HEALTH CHECK

DFWe0600037> acc 0 starthealthcheck

100727-15:06:22 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
Call Action starthealthcheck on following MOs ?

=====

0 ManagedElement=1

=====

Are you Sure [y/n] ? y

=====

Proxy	MO	Action	Nr of Params
0	ManagedElement=1	startHealthCheck	0

>>> Return value = 0 (STARTED)

=====

Total: 1 MOs attempted, 1 MOs actioned

HOW TO RESTART ENB

DFWe0600531> acc 0 manualrestart

100809-17:23:20 10.26.66.110 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/28638
Call Action manualrestart on following MOs ?

=====

0 ManagedElement=1

INFO: The RBS node DFWE0600531 will be restarted on CV: EnclosureProductDataMismatch_Fix

=====

Are you Sure [y/n] ?

HOW TO SHOW LOG STATUS OF CELL

DFWe0600037> llog

100727-15:07:20 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
\$ llog

-
1. [00-00-00 00:00:00] 0x00000003 (2) Error log was cleared at last restart..
 2. [70-01-01 00:00:12] 0xB0AD0001 (2) Board manager restart.. Reset aft
 3. [10-07-04 00:23:52] 0xF0F0F0F2 (2) Recovery action, faultId: 0x203, (SwDow
 4. [10-07-04 00:23:52] 0xB0AD0005 (2) Board manager restart escalate..
 5. [10-07-10 14:42:49] 0xB0AD0002 (2) Board manager restart.. .
- \$

HOW TO CHECK THE SOFTWARE PACKAGE OF ENODEB

DFWe0600037> pr upgrade

100727-14:49:14 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

=====

Proxy MO

=====

205 SwManagement=1,UpgradeTrace=1
207 SwManagement=1,UpgradePackage=R20BT
233 SwManagement=1,UpgradePackage=CXP102051/1_R20DN
278 SwManagement=1,Repertoire=CPP_Control_Upgrade_2
436 SwManagement=1,UpgradePackage=CXP102051/1_R20GY
442 SwManagement=1,Repertoire=CPP_IP_Tran_Upgrade_2
490 SwManagement=1,UpgradePackage=InitialUP
597 SwManagement=1,UpgradePackage=CXP102051/1_R20EM

=====

Total: 8 MOs

CURRENT CV

HOW TO CHECK CV

```
• DFWe0600037> cvcu
• 100727-14:50:13 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
• =====
• =====
• 100727-14:50      CV Name      Upgrade Package      Release
• =====
• Startable:      Pre_Launch_Samsung_settings      CXP102051/1_R20GY      L10 (EP19-CPP_7.0.3.10.1)
• Loaded:         Pre_Launch_Samsung_settings      CXP102051/1_R20GY      L10 (EP19-CPP_7.0.3.10.1)
• Executing:      Pre_Launch_Samsung_settings      CXP102051/1_R20GY      L10 (EP19-CPP_7.0.3.10.1)
• Last created:    Pre_Launch_Samsung_settings      CXP102051/1_R20GY      L10 (EP19-CPP_7.0.3.10.1)
• -----
• Current UpgradePkg: UpgradePackage=CXP102051/1_R20GY      CXP102051/1_R20GY      L10 (EP19-CPP_7.0.3.10.1)
• AutoCreatedCV:   Disabled
• Ongoing CV activity: 0 (IDLE)
• Rollback status: Rollback is on
• Rollback init timer: 30
• Rollback init counter: 2
• Rollback counter: 2
• Rollback list:    s[2] = Internal_Relation_add_0607 Fi_CXP102051%1_R20DN_100428_0106
• =====
• =====
```

To delete old cv :

>cvrn <cv name>

To set new cv from the list:

>cvset <cv name>

To create cv after any change make:

>cvms <cv name> (Have to be a new name, can't overwrite the old name).

ENB RELATED HARDWARE

TO LIST OF RF PORTS, RI PORTS

DFWe0600037> lpr rfport

100727-17:24:57 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

Proxy MO

```
=====
158 Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RU-1-5,DeviceGroup=ru,RfPort=B
159 Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RU-1-5,DeviceGroup=ru,RfPort=A
163 Equipment=1,RbsSubrack=1,RbsSlot=1,AuxPlugInUnit=RU-1-1,DeviceGroup=ru,RfPort=A
166 Equipment=1,RbsSubrack=1,RbsSlot=1,AuxPlugInUnit=RU-1-1,DeviceGroup=ru,RfPort=B
177 Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RU-1-3,DeviceGroup=ru,RfPort=B
178 Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RU-1-3,DeviceGroup=ru,RfPort=A
=====
```

Total: 6 MOs

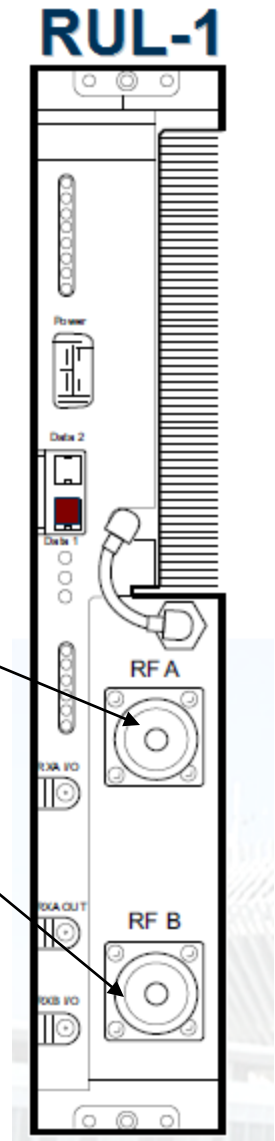
DFWe0600037> lpr riport

100727-17:26:57 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

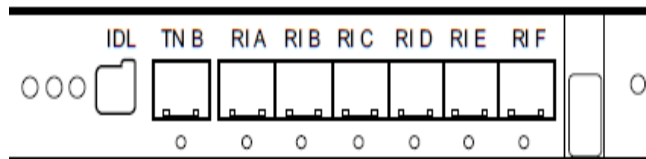
Proxy MO

```
=====
76 Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,RiPort=B
77 Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,RiPort=C
84 Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,RiPort=E
86 Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,RiPort=A
88 Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,RiPort=D
103 Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,RiPort=F
153 Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RU-1-5,RiPort=DATA_1
154 Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RU-1-5,RiPort=DATA_2
167 Equipment=1,RbsSubrack=1,RbsSlot=1,AuxPlugInUnit=RU-1-1,RiPort=DATA_1
168 Equipment=1,RbsSubrack=1,RbsSlot=1,AuxPlugInUnit=RU-1-1,RiPort=DATA_2
173 Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RU-1-3,RiPort=DATA_1
174 Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RU-1-3,RiPort=DATA_2
=====
```

Total: 12 MOs



DUL

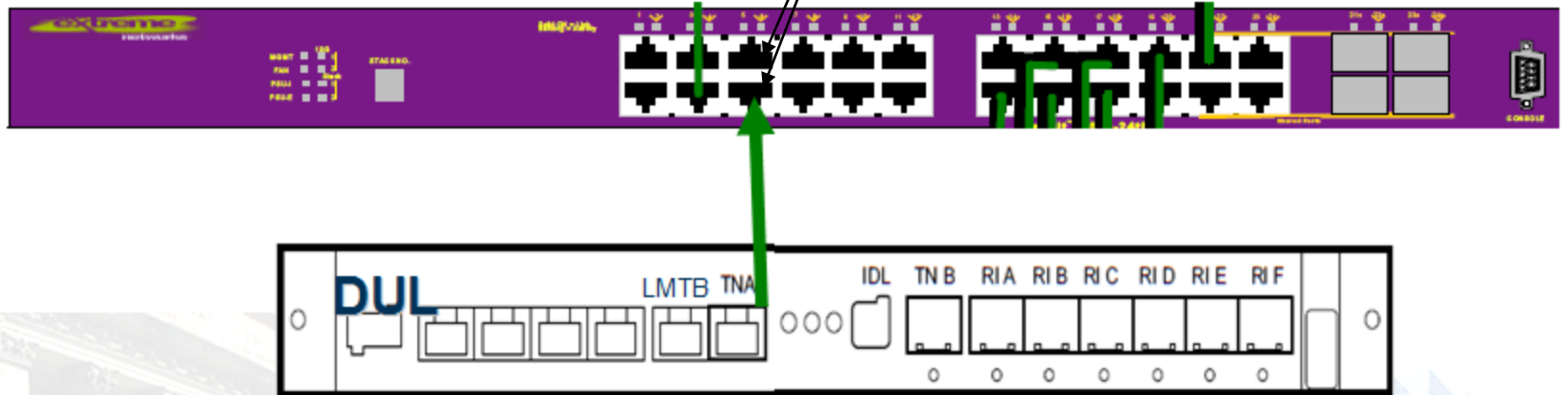


HOW TO VERIFY IPINTERDACE (IP FOR GIGB PORT)

DFWe0600037> get interface addressactive

100727-15:02:46 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

```
=====
MO                Attribute      Value
=====
Subrack=1,Slot=1,PlugInUnit=1,ExchangeTerminalIp=1,GigaBitEthernet=1,IpInterface=1
ownIpAddressActive xx.xx.xx.xx
Subrack=1,Slot=1,PlugInUnit=1,ExchangeTerminalIp=1,GigaBitEthernet=1,IpInterface=2
ownIpAddressActive xx.xx.xx.xx
=====
Total: 2 MOs
```



HOW TO LIST RADIO BOARD UNIT

DFWe0600037> lst ru

100727-15:28:17 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

=====				
Proxy	Adm State	Op. State	MO	
=====				
52		1 (ENABLED)	Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,GeneralProcessorUnit=1	
53		1 (ENABLED)	Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,GeneralProcessorUnit=1,MediumAccessUnit=1	
152	1 (UNLOCKED)	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RU-1-5	
153		1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RU-1-5,RiPort=DATA_1	
154		0 (DISABLED)	Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RU-1-5,RiPort=DATA_2	
155		1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RU-1-5,DeviceGroup=ru	
158	1 (UNLOCKED)	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RU-1-5,DeviceGroup=ru,RfPort=B	
159	1 (UNLOCKED)	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RU-1-5,DeviceGroup=ru,RfPort=A	
161	1 (UNLOCKED)	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=1,AuxPlugInUnit=RU-1-1	
162		1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=1,AuxPlugInUnit=RU-1-1,DeviceGroup=ru	
163	1 (UNLOCKED)	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=1,AuxPlugInUnit=RU-1-1,DeviceGroup=ru,RfPort=A	
166	1 (UNLOCKED)	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=1,AuxPlugInUnit=RU-1-1,DeviceGroup=ru,RfPort=B	
167		1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=1,AuxPlugInUnit=RU-1-1,RiPort=DATA_1	
168		0 (DISABLED)	Equipment=1,RbsSubrack=1,RbsSlot=1,AuxPlugInUnit=RU-1-1,RiPort=DATA_2	
172	1 (UNLOCKED)	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RU-1-3	
173		1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RU-1-3,RiPort=DATA_1	
174		0 (DISABLED)	Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RU-1-3,RiPort=DATA_2	
175		1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RU-1-3,DeviceGroup=ru	
177	1 (UNLOCKED)	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RU-1-3,DeviceGroup=ru,RfPort=B	
178	1 (UNLOCKED)	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RU-1-3,DeviceGroup=ru,RfPort=A	
=====				
Total: 20 MOs				

DFWe0600037> st device

100727-15:04:15 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

=====			
Proxy	Adm State	Op. State	MO
=====			
71	1 (ENABLED)	Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,DeviceGroup=dul	
155	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=5,AuxPlugInUnit=RU-1-5,DeviceGroup=ru	
162	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=1,AuxPlugInUnit=RU-1-1,DeviceGroup=ru	
175	1 (ENABLED)	Equipment=1,RbsSubrack=1,RbsSlot=3,AuxPlugInUnit=RU-1-3,DeviceGroup=ru	
=====			
Total: 4 MOs			

SHOWS ALL RUS BOARDS INSTALLED IN THE ENODEB

DfWe0600531> cabx

100804-11:26:30 10.26.66.110 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/11419

.

SMN	APN	BOARD	GREEN	YELLOW	RED	PRODUCT NR	REV	DATE	SERIAL NR	TEMP	COREMGR
0	1	DUL 20 01	ON	OFF	OFF	KDU 137 533/3	R2C	20100406	C823455278		

SMN	ProductNr	Rev	Name	Date	SerialNr
0	ROJ 999 999	*	BACKPLANE		

SMN	APN	PORT	BOARD	GREEN	YELLOW	RED	PRODUCT NR	REV	DATE	SERIAL NR
0	1	BXP_0_1	RUS	steady 16	off	KRC 118 59/1	R2B	20100329	CC40857143	
0	1	BXP_1_1	RUS	steady 16	off	KRC 118 59/1	R2B	20100331	CC40865276	
0	1	BXP_2_1	RUS	steady 16	off	KRC 118 59/1	R2B	20100329	CC40857167	

SYNCHRONIZATION

HOW TO VERIFY THE SYNC

>GET SYNC

DFWe0600037> get sync

100727-15:09:42 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

=====

39 TransportNetwork=1,Synchronization=1

=====

SynchronizationId 1
degradationIsFault 0 (DEGR_NOT_FAULT)
nodeSystemClock 2 (LOCKED_MODE)
syncRefActivity i[8] = 2 1 1 1 1 1 1 1
syncRefPriority i[8] = 1 0 0 0 0 0 0 0
syncRefStatus i[8] = 3 0 0 0 0 0 0 0
syncReference [8] =
>>> syncReference = Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,TimingUnit=1,TuSyncRef=1
>>> syncReference =
>>> syncReference =
>>> syncReference =
>>> syncReference =
>>> syncReference =
>>> syncReference =
>>> syncReference =
userLabel

=====

95 Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,TimingUnit=1,TuSyncRef=1

=====

TuSyncRefId 1
administrativeState 1 (UNLOCKED)
availabilityStatus 0 (NO_STATUS)
operationalState 1 (ENABLED)
reservedBy [1] =
>>> reservedBy = TransportNetwork=1,Synchronization=1
userLabel

=====

Total: 2 MOs

TO VERIFY STATUS OF SYNC DEVICE

```
DFWe0600037> st sync

100727-15:10:29 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
=====
Proxy  Adm State   Op. State   MO
=====
95 1 (UNLOCKED) 1 (ENABLED)
Equipment=1,Subrack=1,Slot=1,PlugInUnit=1,TimingUnit=1,TuSyncRef=1
=====
Total: 1 MOs
```

TO VERIFY HANDLING OF SYNC

```
DFWe0600531> get . clock

100804-09:44:51 10.26.66.110 8.0d ERBS_NODE_MODEL_A_9_2
stopfile=/tmp/11419
=====
MO                               Attribute  Value
=====
Synchronization=1               nodeSystemClock 2 (LOCKED_MODE)
Subrack=1,Slot=1,PlugInUnit=1,TimingUnit=1    tuSystemClock 2 (LOCKED_MODE)
=====
```

- 0

UNKNOWN_MODE
- 1

STARTUP_MODE
The system clock is starting up.
- 2

LOCKED_MODE
The system clock signal on the Timing Unit is locked: a synchronization reference is used to generate the system clock, the clock accuracy is 50 ppb or better.
- 3

HOLD_OVER_MODE
The system clock signal on the Timing Unit has holdover quality: no synchronization reference is used to generate the system clock, the clock accuracy is 50 ppb or better.
- 4

FREE_RUNNING_MODE
The system clock signal on the Timing Unit is free-running: no synchronization reference is used to generate the system clock, the clock accuracy is 4.6 ppm or better.
- 5

FAILED_MODE
The system clock signal on the Timing Unit is failed: there is fault in generating the system clock, no guarantee of clock accuracy level.
- 6

LOSS_OF_TRACKING_MODE
The frequency of the system clock is at its upper or lower limit.
- 7

NOT_APPLICABLE
The system clock signal on Timing Unit is not applicable: the TUB or the CBU is not present.

ALARM

HOW TO CHECK CELL ALARM

DFWe0600037> alt

```
100727-15:13:11 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
Connecting to 10.26.4.174:56834 (CorbaSecurity=OFF, corba_class=2, java=1.6.0_13, jacoms=R71CD02, jacorb=R71AN04)
Trying file=/var/opt/ericsson/amos/moshell_logfiles/edonngu/logs_moshell/tempfiles/20100727-131859_18123/ior18123
Resolving the alarm service in OMS...
Simple Alarm Client initialized...
Starting to retrieve active alarms
Nr of active alarms are: 4
```

```
=====
Date & Time (Local) S Specific Problem          Cause          Mo-Reference
=====
2010-07-10 09:43:51 M TemperatureSensorFailure equipment_malfunction BatteryBackup=1
2010-07-10 09:43:51 M BatteryMissing            configuration_or_customizing_error BatteryBackup=1
2010-07-10 09:44:41 C License Key File Fault    configuration_or_customizing_error Licensing=1
2010-07-27 15:06:55 M Upgrade Package Corrupt  file_error      UpgradePackage=R20BT
>>> Total: 4 Alarms (1 Critical, 3 Major)
```

HOW TO CHECK MORE DETAIL ON EACH ALARM

DFWe0600037> ala

```
100727-16:30:22 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
Connecting to 10.26.4.174:56834 (CorbaSecurity=OFF, corba_class=2, java=1.6.0_13, jacoms=R71CD02, jacorb=R71AN04)
Trying file=/var/opt/ericsson/amos/moshell_logfiles/edonngu/logs_moshell/tempfiles/20100727-131859_18123/ior18123
Resolving the alarm service in OMS...
Simple Alarm Client initialized...
Starting to retrieve active alarms
Nr of active alarms are: 4
```

```
=====
Sever Specific Problem          Cause          Mo-Reference
=====
Crit License Key File Fault    configuration_or_customizing_error Licensing=1
Maj  BatteryMissing            configuration_or_customizing_error BatteryBackup=1
Maj  TemperatureSensorFailure  equipment_malfunction BatteryBackup=1
Maj  Upgrade Package Corrupt  file_error      UpgradePackage=R20BT
```

```
Alarm Id : SubNetwork=ONRM_ROOT_MO_R,SubNetwork=DFW-ENB,MeContext=DFWe0600037_5
Event Time : Jul 10, 2010 9:44:41 AM
Perceived Severity : Critical
Managed Object Class : Licensing
Managed Object Instance : SubNetwork=ONRM_ROOT_MO_R,SubNetwork=DFW-ENB,MeContext=DFWe0600037,ManagedElement=1,SystemFunctions=1,Licensing=1
Specific Problem : License Key File Fault
Probable Cause : configuration_or_customizing_error
Additional Text : No license key file installed
Acknowledged by :
Acknowledgement Time : 0
Acknowledgement State: 2
System DN : SubNetwork=ONRM_ROOT_MO_R,SubNetwork=DFW-ENB,MeContext=DFWe0600037
Notification Id : 7
Additional Info :
```

HOW TO CHECK CELL ALARM LOG >LGA OR LGA -XXD (NUMBER OF DAYS)

DFWe0600531> lga -2d

100804-09:59:24 10.26.66.110 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/11419

Trying password from ipdatabase file: /opt/ericsson/amos/moshell/sitefiles/ipdatabase...

Startdate=19661031.081320, Enddate=20100805.145924

.....Get /c/logfiles/alarm_event/ALARM_LOG.xml /var/opt/ericsson/amos/moshell_logfiles/edonngu/logs_moshell/tempfiles/20100803-162851_11377/alarmLog11419.xml ... OK

Timestamp (UTC)	S	Problem	Cause	MO-reference
2010-03-28 21:49:57	AL	m Password File Fault	configuration_or_customizing_error	Security=1
2010-03-28 21:50:00	AL	C License Key File Fault	configuration_or_customizing_error	Licensing=1
2010-04-29 14:49:00	AL	* License Key File Fault	configuration_or_customizing_error	Licensing=1
2010-04-29 14:49:36	AL	m Password File Fault	configuration_or_customizing_error	Security=1
2010-04-29 14:49:40	AL	C License Key File Fault	configuration_or_customizing_error	Licensing=1
2010-04-29 14:52:46	AL	M Invalid Ethernet Optical Module	replaceable_unit_type_mismatch	Subrack=1,Slot=1,PlugInUnit=1,ExchangeTerminalp=1,GigaBitEthernet=1
2010-04-29 14:52:52	AL	* Invalid Ethernet Optical Module	replaceable_unit_type_mismatch	Subrack=1,Slot=1,PlugInUnit=1,ExchangeTerminalp=1,GigaBitEthernet=1
2010-04-29 14:52:52	AL	M Gigabit Ethernet Link Fault	loss_of_signal	Subrack=1,Slot=1,PlugInUnit=1,ExchangeTerminalp=1,GigaBitEthernet=1
2010-04-29 14:52:54	AL	* Gigabit Ethernet Link Fault	loss_of_signal	Subrack=1,Slot=1,PlugInUnit=1,ExchangeTerminalp=1,GigaBitEthernet=1
2010-04-29 14:53:16	AL	m Password File Fault	configuration_or_customizing_error	Security=1
2010-04-29 14:53:16	AL	C License Key File Fault	configuration_or_customizing_error	Licensing=1
2010-04-29 19:54:32	AL	M EnclosureProductDataMismatch	configuration_or_customizing_error	Cabinet=1
2010-04-29 19:54:53	AL	* License Key File Fault	configuration_or_customizing_error	Licensing=1
2010-04-29 19:54:57	AL	M LossOfMains	commerical_power_failure	HwUnit=PSU-1
2010-04-29 19:55:02	AL	M TemperatureSensorFailure	equipment_malfunction	BatteryBackup=1
2010-04-29 19:55:02	AL	M CircuitBreakerTripped	fuse_failure	HwUnit=BFU-1
2010-04-29 19:55:03	AL	* CircuitBreakerTripped	fuse_failure	HwUnit=BFU-1
2010-04-29 19:55:03	AL	M BatteryMissing	configuration_or_customizing_error	BatteryBackup=1
2010-04-29 19:55:05	AL	M Disconnected	equipment_malfunction	HwUnit=PSU-3
2010-04-29 19:55:06	AL	M Disconnected	equipment_malfunction	HwUnit=PDU-2
2010-04-29 19:55:06	AL	M Disconnected	equipment_malfunction	HwUnit=SAU
2010-04-29 19:57:45	AL	M LinkFailure	link_failure	Subrack=1,Slot=1,PlugInUnit=1,RiPort=A

HOW TO CHECK CELL ALARM LOG

>LGAE OR LGAE -XXD (NUMBER OF DAYS)

RNING - During reconfiguration of programs, no SwAllocation found for PlugInUnit: SubNetwork=ONRM_ROOT_MO_R,SubNetwork=DFW-ENB,MeContext=DFWe0600037,ManagedElement=1,Equipment=1,HwUnit=PSU-1. =. =

2010-06-09 19:04:28 EV UpgradePackage=CXP102051/1_R20GY UpgradePackage Warning: Unexpected condition detected.
currentStepLabel=HardINITIATE. TimeStamp=Date: 2010-06-09, Time: 19:04:28.580. Version=SU_SW: DeltaUPS - R71CD04. Slogan=WARNING - During reconfiguration of programs, no SwAllocation found for PlugInUnit: SubNetwork=ONRM_ROOT_MO_R,SubNetwork=DFW-ENB,MeContext=DFWe0600037,ManagedElement=1,Equipment=1,HwUnit=PSU-2. =. =

2010-06-09 19:04:30 EV UpgradePackage=CXP102051/1_R20GY UpgradePackage Warning: Unexpected condition detected.
currentStepLabel=HardINITIATE. TimeStamp=Date: 2010-06-09, Time: 19:04:30.707. Version=SU_SW: DeltaUPS - R71CD04. Slogan=WARNING - During reconfiguration of programs, no SwAllocation found for PlugInUnit: SubNetwork=ONRM_ROOT_MO_R,SubNetwork=DFW-ENB,MeContext=DFWe0600037,ManagedElement=1,Equipment=1,HwUnit=PDU-1. =. =

2010-06-09 19:04:32 EV UpgradePackage=CXP102051/1_R20GY UpgradePackage Warning: Unexpected condition detected.
currentStepLabel=HardINITIATE. TimeStamp=Date: 2010-06-09, Time: 19:04:32.915. Version=SU_SW: DeltaUPS - R71CD04. Slogan=WARNING - During reconfiguration of programs, no SwAllocation found for PlugInUnit: SubNetwork=ONRM_ROOT_MO_R,SubNetwork=DFW-ENB,MeContext=DFWe0600037,ManagedElement=1,Equipment=1,HwUnit=BFU-1. =. =

2010-06-09 19:04:34 EV UpgradePackage=CXP102051/1_R20GY UpgradePackage Warning: Unexpected condition detected.
currentStepLabel=HardINITIATE. TimeStamp=Date: 2010-06-09, Time: 19:04:34.779. Version=SU_SW: DeltaUPS - R71CD04. Slogan=WARNING - During reconfiguration of programs, no SwAllocation found for PlugInUnit: SubNetwork=ONRM_ROOT_MO_R,SubNetwork=DFW-ENB,MeContext=DFWe0600037,ManagedElement=1,Equipment=1,HwUnit=SCU. =. =

2010-06-24 18:19:28 EV	Synchronization=1	NssSynchronization_SystemClockStatusChanged
2010-06-24 18:19:41 EV	Synchronization=1	NssSynchronization_SynchRefChanged
2010-06-24 18:19:41 EV	Synchronization=1	NssSynchronization_SystemClockStatusChanged
2010-07-19 22:56:11 EV	Synchronization=1	NssSynchronization_SystemClockStatusChanged
2010-07-19 22:56:22 EV	Synchronization=1	NssSynchronization_SynchRefChanged
2010-07-19 22:56:22 EV	Synchronization=1	NssSynchronization_SystemClockStatusChanged
2010-07-20 19:31:35 EV	Synchronization=1	NssSynchronization_SystemClockStatusChanged
2010-07-20 19:31:46 EV	Synchronization=1	NssSynchronization_SynchRefChanged
2010-07-20 19:31:46 EV	Synchronization=1	NssSynchronization_SystemClockStatusChanged
2010-07-22 23:46:42 EV	Synchronization=1	NssSynchronization_SystemClockStatusChanged
2010-07-22 23:46:53 EV	Synchronization=1	NssSynchronization_SynchRefChanged
2010-07-22 23:46:53 EV	Synchronization=1	NssSynchronization_SystemClockStatusChanged

ENB POWER SETTING, PCI, AND MISCELLANEOUS

HOW TO CHECK ENB POWER SETING

```
DFWe0600037> get . power
```

```
100727-15:29:48 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
```

```
=====
MO                Attribute      Value
=====
Licensing=1,CapacityLicenses=1,CapacityOutputPower=60Watt CapacityOutputPowerId 60Watt
Licensing=1,CapacityLicenses=1,CapacityOutputPower=60Watt capacityUnitOutputPower Number of 60 Watt Licenses
Licensing=1,CapacityLicenses=1,CapacityOutputPower=60Watt keyIdOutputPower CXC4010626
Licensing=1,CapacityLicenses=1,CapacityOutputPower=60Watt licenseCapacityOutputPower 0
Licensing=1,CapacityLicenses=1,CapacityOutputPower=60Watt licenseStateOutputPower 0 (DISABLED)
Licensing=1,CapacityLicenses=1,CapacityOutputPower=40Watt CapacityOutputPowerId 40Watt
Licensing=1,CapacityLicenses=1,CapacityOutputPower=40Watt capacityUnitOutputPower Number of 40 Watt Licenses
Licensing=1,CapacityLicenses=1,CapacityOutputPower=40Watt keyIdOutputPower CXC4010625
Licensing=1,CapacityLicenses=1,CapacityOutputPower=40Watt licenseCapacityOutputPower 0
Licensing=1,CapacityLicenses=1,CapacityOutputPower=40Watt licenseStateOutputPower 0 (DISABLED)
SubrackProdType=ROJ999999_*          maxPowerDissipation 2000
EUTranCellFDD=DFWe06000372          maximumTransmissionPower 406
EUTranCellFDD=DFWe06000372          partOfRadioPower 100
EUTranCellFDD=DFWe06000373          maximumTransmissionPower 406
EUTranCellFDD=DFWe06000373          partOfRadioPower 100
EUTranCellFDD=DFWe06000371          maximumTransmissionPower 406
EUTranCellFDD=DFWe06000371          partOfRadioPower 100
SectorEquipmentFunction=S1           confOutputPower 20
SectorEquipmentFunction=S2           confOutputPower 20
PowerSupply=1                        PowerSupplyId 1
PowerDistribution=1                   PowerDistributionId 1
SectorEquipmentFunction=S3           confOutputPower 20
=====
```

```
Total: 11 MOs
```

These are 3 key eNB power parameters

- partOfRadioPower
- confOutputPower
- maximumTransmissionPower

DETAIL ON ENB POWER SETING

Power per Radio Unit [W]:

$$P_{RU,Cell} = \min [(H/W \text{ Capability} \times \text{partOfRadioPower}/100) , \text{License Power Available} , \text{confOutputPower} / \#RU]$$

H/W Capability

- Power capability limited by the RU hardware.

License Power Available

- Power capability as limited by power license management.

partOfRadioPower= 100 {0..100}

- Specifies fraction of power for LTE in case of shared RU.

confOutputPower= 20 {20, 40, 60, 80, 120} [W]

- Used to restrict power in the sector

HOW TO CHANGE POWER SETTING

EXAMPLE: CHANGE POWER ON CONFOUTPUTPOWER

DFWe0600037> set SectorEquipmentFunction=S1 confoutputpower 40

100727-15:32:56 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2
stopfile=/tmp/18164

Set confoutputpower on following MOs ?

=====

938 SectorEquipmentFunction=S1

=====

Are you Sure [y/n] ?

y

HOW TO LOCK AND UN-LOCK CELL

DFWe0600037> bl cellfdd

100727-16:43:42 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

Block following MOs ?

```
=====
628 ENodeBFunction=1,EUtranCellFDD=DFWe06000372
842 ENodeBFunction=1,EUtranCellFDD=DFWe06000373
889 ENodeBFunction=1,EUtranCellFDD=DFWe06000371
=====
```

Are you Sure [y/n] ? Y

DFWe0600037> deb cellfdd

100727-16:45:02 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

Deblock following MOs ?

```
=====
628 ENodeBFunction=1,EUtranCellFDD=DFWe06000372
842 ENodeBFunction=1,EUtranCellFDD=DFWe06000373
889 ENodeBFunction=1,EUtranCellFDD=DFWe06000371
=====
```

Are you Sure [y/n] ?

HOW TO CHECK PHYSICAL-LAYER CELL IDENTITY (PCI)

DFWe0600037> get utrancellfdd=dfwe0600037 cellid

100727-16:52:40 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

MO	Attribute	Value
EUtranCellFDD=DFWe06000372	cellId	2
EUtranCellFDD=DFWe06000372	physicalLayerCellIdGroup	145
EUtranCellFDD=DFWe06000372	physicalLayerSubCellId	2
EUtranCellFDD=DFWe06000373	cellId	3
EUtranCellFDD=DFWe06000373	physicalLayerCellIdGroup	148
EUtranCellFDD=DFWe06000373	physicalLayerSubCellId	1
EUtranCellFDD=DFWe06000371	cellId	1
EUtranCellFDD=DFWe06000371	physicalLayerCellIdGroup	143
EUtranCellFDD=DFWe06000371	physicalLayerSubCellId	0
Total: 3 MOs		

PCI sector 2 = 145*3 + 2 = 437. This is PCI UE detect and collection tool reports

PHYSICAL-LAYER CELL IDENTITY (PCI)



- PSS signal: 3 different sequences called Physical-Layer Identities (0-2)
- SSS signal: 168 different sequences called Physical-Layer Cell-Identity groups (0-167)
- Because of 168 Physical-Layer Cell-Identity groups with 3 Physical-Layer, we will have 504 PCIs
 $168 \times 3 = 504$ Physical-Layer Cell Identities
- For each cell, $PCI_i = 3S_j + P_k$
(Where $i = 0 \dots 503$; Group $j = 0 \dots 167$; ID $k = 0 \dots 2$)

HOW TO CHECK ENB PARAMETERS

You need to dump the kget file from eNB

1. > !+ filename
2. > kget all
3. > !-

Kget file will be stored in the location of current directory.

Compare two eNB parameters

1. Take kget dump from eNB1, call it "kget_eNB1.log"
2. Moshell into eNB2
3. Do: diff . Kget_eNB1.log

HOW TO VERIFY TIMER FROM ACTIVE TO IDLE

DFWe0600037> get . tinactivity

100727-15:22:46 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

=====

MO	Attribute	Value
----	-----------	-------

=====

Rcs=1	tinactivityTimer	10
-------	------------------	----

=====

Total: 1 MOs

DFWe0600037> set rcs=1 tinactivitytimer 60

100727-15:34:28 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164

Set tinactivitytimer on following MOs ?

=====

935 ENodeBFunction=1,Rcs=1

=====

Are you Sure [y/n] ?

y

HOW TO CHECK NUMBERS OF ACTIVE UE (NOT IMSI) ONLY MME CAN LOOK UP IMSI

```
DfWe0600037> ue print -ue -allcell
```

```
100727-15:17:22 10.26.4.174 8.0d ERBS_NODE_MODEL_A_9_2 stopfile=/tmp/18164
```

```
$ ue print -ue -allcell
```

```
CellId RacUeRef BbUeRef {traceRef,interfaces,traceDepth,ipAddress}
```

```
TypeOfActiveTrace SetByColi
```

```
$
```



ERICSSON