AAL2 Path ETE Loop Back
AAL5 Path ETE Loop Back
Alarm and event logs
Analyse logs in offline mode
AtmCrossConnections Status
Atmport Bandwidth usage
Cab print
Call Path Trace - Full
Change a restricted attribute
Change pdiff timer
Check AAL2 Paths
Check counters over time
Check device rejects on all MeSCs
Check E1 physical
Check ET-C41 board overload
Check every reject-fail-unsucc etc
Check IPB rejects - local or remote
Check ipinterfaces
Check MOShell version
Check MSPG config
Check SCB or SXB issues
Check Sctp-Mtp3b on a VMGw
Check SP and EP processor ID
Check TsTone segmentinfo1<>255
Check User Variables in MOSHELL
Collect logs for CSR
Create EMAS scripts from node
Decoding a PMD
Define scanners w nonpm counters

Action name

MOSHELL Commands:

```
mr loop_aal2
mr loop_aal2vcl
lma loop_aal2 aal2ap=... tplist
lma loop_aal2vcl loop_aal2 vcltp
lacc loop_aal2vcl eteloopback
```

Software Level: All

Description:

These commands will allow you to perform a VCI loopback test for all the AAL2 Paths

NOTE: if you want to do a loopback test for all AAL2 Paths then simply exchange the
lma loop_aal2 aal2ap=... tplist
with:
lma loop_aal2 aal2pathvcctp
and perform all the other commands as specified.

MOSHELL Commands:

```
mr loop_sl
mr loop_nni
mr loop_aal5
mr loop_vcltp
lma loop_sl mtp3bsls=... tpid nnisaaltp
lma loop_nni loop_sl tpid
lma loop_aal5 loop_nni aal5tp
lma loop_vcltp loop_aal5 vcltp
lacc loop_vcltp eteloopback
```

Software Level: All

Description:

These commands will allow you to perform a VCI loopback test for all the Signalling

NOTE: if you want to do a loopback test for all signalling links then simply exchang
lma loop_sl mtp3bsls=... tpid nnisaaltp
with:
lma loop_sl mtp3bslitu
and perform all the other commands as specified.

MOSHELL Commands:

```
lgaevsmircdyuolh
```

Software Level: ALL

Description:

Alarm and event logs

lgaevsmircdyuolh

a- alarm log, **e**- event log, **v**- availability, **s**- system, **u**- upgrade log, **o**- command l
based in chronological order,i- inverse chronological order, r- refetch (like refresh will get the files anew from the n

MOSHELL Commands:

```
lgf /home/userid

(In offline mode)
lg -l <filename>
```

Software Level:

Description:

lgf downloads all log files (in /c/logfiles directory) into the directory you specif

In offline mode, you can use the command "lg -l" to print the logfile to screen.

grep can also be used to pipe specific phrases.

MOSHELL Commands:

```
stc
```

Software Level: All

Description:

Display state and configuration of AtmCrossConnections

MOSHELL Commands:

stvb

Software Level:

Description:

Prints the defined bandwidth (traffic descriptor)the bandwidth usage, VPI/VCI, VclTp

MOSHELL Commands:

cabslxrdgme

Software Level: ALL

Description:

cabslxrdgme

x=H/W, **s**=S/W, **r**=board restarts, **l**=CPU Load, **g**=errors, **d**=disk usage, **m**=total usage (s

***e** is only available with MOSHELL Ver 7.0z

MOSHELL Commands:

facc Vmgw=... callpathtrace
facc Vmgw=... gettraceresult

Software Level: All

Description:

The EMAS and Telnet call path traces are extremely limited and show very little inf
however if you want to see everything including, IP Userplane addresses, Port Numbers, AAL2 Path ID's, CEP ID
See comments in example for more information

NOTE: This should also be possible via NCLI, however I have not tried this.

MOSHELL Commands:

rset mo_name|proxy(s) restricted_attribute [new_value]
eg
rset

Software Level: All

Description:

A restricted attribute can only be set when its MO is created. The 'rset' command s
by automatically deleting the MO and all other MOs that reserve it, and re-creating all deleted MOs with the new va

MOSHELL Commands:

uv pm_wait
uv pm_wait=30
uv pm_wait=360

Software Level: ALL

Description:

When doing the command pdiff to check the difference in a certain counter over a pe
Generally the timer is set to 25 seconds
It is not currently known what the maximum value for pm_wait is, 360 seconds (6 min

Time indicated is in seconds.

MOSHELL Commands:

hget aal2path state|owner|pathid|reserved

Software Level: All

Description:
Prints the state of the aal2 paths, including the remote blocking state, the path o

This print is ideal for identifying when the aal2PathOwner is incorrectly set or id
which may be due to an incorrect aal2PathId setting

MOSHELL Commands:
pmx[hfdn] [<mofilter>|<mogroup>] [<counter-filter>] [-l <PMfiles-directory>] [-m <m
[-e <enddate>[.<endtime>]]
eg. pmx TdmTermGrp=PcmNr424351_MOD3-24-3-51 rej -m 24

Software Level:

Description:
Prints the counter at 15 minute intervals over the period of time you specify.

This is useful if you want to check if there were any changes in counters over a pe
if the TDM Termination group has had any rejections over the last 24 hours and you can see the counter values at
You can see that the last time there was an increase in rejections was between 15:00 and 15:15 (from 31887 to 31

Type "h pmx" for more information.

MOSHELL Commands:
lh mesc mesc_counters_device 2 |grep Reject

Software Level: ALL

Description:
Prints all device REJECT counters on all mescs

MOSHELL Commands:
pmomc exchangeterm

Software Level: ALL

Description:
This command checks the number of Errored Seconds (pmEs), Severely Errored Seconds (
Transmission Background Block Errors (Bbe), good for checking the quality of the physical layer.

MOSHELL Commands:

```
lh mesc mesc_command_aal1Delay -etBoard
```

Software Level: MGW R4.2.3 above

Description:

This command is only for ET-C41 board, when the board is facing overload situation, All the MESC board showed same prinout, this command has not been verified in the real overload situation

MOSHELL Commands:

```
lh mesc mesc_command_aal1Delay -etBoard
```

Software Level: MGW R4.2.3 above

Description:

This command is only for ET-C41 board, when the board is facing overload situation, All the MESC board showed same prinout, this command has not been verified in the real overload situation.

MOSHELL Commands:

```
pdiff all forced|fail|unsucc|rej|rele|err|overflow|down|unavail|lost|missing|conges
```

Software Level: ALL

Description:

This command will print out every reject, failure, release, error, overflow, state d congestion or force rel on the node in a ~20 sec period. Any counter that is not 0 or -1, is good to capture current s Is from the health check document, however they say to check manually by doing pget

MOSHELL Commands:

```
lh mesc mesc_counters_device all |grep -i "IPB                    Reject"
lh mesc mesc_counters_ip |grep "nrRej"
```

Software Level: ALL

Description:

These commands will print only the IPB device reject numbers and also the reject typ

MOSHELL Commands:

```
hget ipinterface ownipaddressactive|defaultrouter0|rps|vid|operationalState
```

Software Level: ALL

Description:

This command gives a good summary very quickly of the status and important informati

Note that the example has been truncated to make ease of viewing in this tool.

MOSHELL Commands:

pv

Software Level:

Description:

Use this command to find out the MOShell version if you are not using your local MOS

MOSHELL Commands:

get os155 reservedby$

Software Level: all

Description:

There can be issues if the MSPG is not defined on all ports on the card.

This command is a very quick way to check the config

MOSHELL Commands:

all spaspccinfo|grep Total
lh scx spashwinfo all |grep ": Error"
lh scx spastopologyinfo
lh scx spasislledinfo

Software Level: ALL

Description:

These commands will print out the total ordered plane changes executed, and which pc

spastopologyinfo prints out the ISL mapping, so you can see which board/slot/port or
to the corresponding slot/port on the MAIN ubrack.
spasislledinfo prints the LED status of each ISL port. Flickering indicates the link

MOSHELL Commands:

Execute the command on the board containing upcf_stc:
stc_info

Software Level: All

Description:
The command "stc_info " is executed on the board containing upcf_stc.
If the given vmgw is used for Sigtran, Sctp state & its related info will be printed
PS.
For GMP V3.0, upcf_stc is on the board 12 (active) and 9 (passive) in subrack 1.
For GMP V2.1, upcf_stc is on the board 25 (active) and 27 (passive) in subrack 1.
It should always be checked to find out which board is active at the time.

MOSHELL Commands:

```
get sctp= reservedby|rpuid
hget Mtp3bSpItu= rpuid
```

Software Level: ALL

Description:
In a dual stack scenario it is possible that 1 or more Mtp3bSpItu is running on a di
M3UA associations associated with that Mtp3bSpItu.

MOSHELL Commands:

```
hget TsTone segmentInfo1|toneName
```

Software Level: ALL

Description:
It is incorrect configuration to have a silent tone define in the MGw with segment 1

This is an easy command to check this.

MOSHELL Commands:

```
uv
```

Software Level: ALL

Description:
This command will print out the user variable values for the settings for MOSHELL.

MOSHELL Commands:

```
dcg
```

Software Level: All

Description:

To collect log for CSR input.

Options:
- m: mandatory data
- e: subset of the mandatory data which can be taken in case of emergency, before d
- s: data for SS7 issues
- i: data for Iu/Iur issues in RNC

e.g. dcgmes

This will take a long time

MOSHELL Commands:

u+s
del/rdel/set
u-
u!

Software Level: ALL

Description:
When using undo command **u+** an undo file is automatically generated as the MOs are d

Simulated mode **u+s** is where the undo file is still generated but the MOs are not act

Using the simulated mode **u+s**, in conjunction with the EMAS conversion command **u!** , i
EMAS style scripts from the node directly without altering the state of the node's configuration.

MOSHELL Commands:

dump -i /c/pmd/XX/XXXXXX/0x000000xx.pmd

Software Level: All

Description:
This command prints the decoded post mortem dump

MOSHELL Commands:

uv include_nonpm=1
pcr vpltp vpltp

Software Level: All

Description:
This is used to include non PM counters in scanners that has pm and non pm counters, nonpm counters scanners like MSdevicepool using PCR moshell command.

MOSHELL Commands:

```
u+ /home/epamull/EHK/MGw6_SP-EPalign.mos
lma sr_m3ua mtp3bsr= linkset .*m3ua
del sr_m3ua
del m3ua
del sctp=
bl IpAccessHostGpb=
del IpAccessHostGpb=
u-
```

Software Level: All

Description:
Sometimes it is necessary to change the configuration at certain MO levels but it is

MOSHELL Commands:

```
std
```

Software Level: All

Description:
Prints the status of all devices in the M-MGw

MOSHELL Commands:

```
eg. lhsh 000200 te log read ; llog -l ; vii ;
```

Software Level:

Description:
By using a semicolon in between commands, you can execute multiple commands on the s

MOSHELL Commands:

```
facc reliableprogramuniter=xxx switch
```

Software Level: ALL

Description:
This command will switch the RPU from the currently active board to the standby boar

To determine what board is currently active, either telent to the board and perform
or print out the ReliableProgramUniter MO and if the operationalMode is set to AS_O
otherwise if it is SWITCHED_OVER then it means the PassiveSlot is currently active.

MOSHELL Commands:
h 5

Software Level: All

Description:
To display some frequently uesed command sequences.
eg: Software upgrade, health check

MOSHELL Commands:
lhsh 000300 license server
lhsh 000300 fro_lici_data_list

Software Level: all

Description:
This is used to check the license feature installed after the license key loading &
date last license key was installed; whether emergency capacity is used or not.

MOSHELL Commands:
find / -name moshell -print

Software Level:

Description:
This is a unix command, not an MOShell command - use this on the server that MOShell
to a MGw via a server and you aren't given the directory where MOShell is installed, use this command to find the
The output may take a long time to print as it searches through every directory.

When you find a directory that you can access, trying running MOShell from this dire

MOSHELL Commands:

acc MsDevicePool getPoolDetails
acc MsDeviceGroup getBoardDetails

Software Level: All

Description:
When printing out the status of the devices with the **std** command it can sometimes be
Using the above MOShell commands you can identify what pools have what percentage of failed and locked devic

MOSHELL Commands:
set MO struct attribute=value,attribute=value

i.e. **set mtp3bspttc=0-42620 spTimerM3ua timerM3uaTack=20,timerM3uaTassocack=65**

Software Level: All

Description:
When needing to modify a datatype of struct, like a lot of the mtp3bsp attributes, y

MOSHELL Commands:
hget mtp2tp plugin|reserve

Software Level: All

Description:
To print a list of all the MTP2 links, the pluginunit they are being terminated on a
This is ideal for determining if proper processor redundancy has been configured on

MOSHELL Commands:
commands sequence
---
prox;
get ManagedElementData ntp;
acl 1;
acc 1 createNtpPrimary; <NTP server Ip>; 64; 1024; false; true;
set ManagedElementData nodeLocalTimeZone <LocalTimeZone>;
set ManagedElementData daylightSavingTime true;
ntpconfig info;
cvms <CV Name> <Operator> <Comment>

Software Level: All

Description:
This commands sequence can be used to define the NTP in the CPP nodes.
If you need mobatch to use several nodes NTP Configuration at once, below method ca
P/S: Before define the NTP, set the clock, if node having default Date and Time

```
mtn@oss3g> pwd
/home/eric1/moshell
mtn@oss3g> ./mobatch <Ip Address List File> 'lt all; readclock; rbs; setclock yyyy-
```

After NTP synchronization complete, following output is displayed

```
UCM078_Nugegoda_West> ntpconfig info

081208-15:05:29 172.27.101.201 7.1 RBS_NODE_MODEL_J_5_17 stopfile=/tmp/2695
$ ntpconfig info
Server 0: 192.168.4.9
Result = 3: No secondary server found
Result = 3: No tertiary server found

NTP synchronized          2008-12-08 09:18:28
NTP changed server        2008-12-08 09:00:16   192.168.4.9
NTP clock stepped         2008-12-08 08:55:59   2008-12-08 08:55:59.582->2008-12-08
$
```

P/S: You may can defined one or two other NTP configuration also.

MOSHELL Commands:
`fget xxxxxx resourceid`

Software Level: All

Description:
Using the fro command to get the resource id of an MO will load the SQL LM and this
The better option is to use a forced get as this information is actually store in the MO.

MOSHELL Commands:
`hget mtp3bsp network|PointCode|rpuId`

Software Level: all

Description:
This command will print out the relation as to which OPC is running on which RPU for

MOSHELL Commands:
pgetsn

Software Level: ALL

Description:
This command will print the scanner name, the counters defined in that scanner, the the state of the scanner, and also the total number of scanners defined.

MOSHELL Commands:
hget exchan desc@type

Software Level: ALL

Description:
This command will print the location and type of exchange terminals in the node.

MOSHELL Commands:
facc gcp getattributes

Software Level: ALL

Description:
When printing out the GCP MO, no attributes can be seen. This is due to the attribut however the hidden action (an action that isn't listed in the MOM document) getattributes will print the all the attribu

MOSHELL Commands:
mom vmgw profile

Software Level:

Description:
Getting confused by that very strange product number for what EP you are using ? lik

If you are onsite and are already connected to the MGw just do the following print c

Note the following print is take on R5.1 MGw so the default is set to EP6.

MOSHELL Commands:

```
lh gra gradsl
where device type can be mfd, inm(ar), up, gsm, fax, dig, mod, mpc, ipet, cdm(a)
```

Software Level:

Description:

Prints out the Device Set List that is owned by each GRA. Useful for checking which gives you the DSP ID for that device, the number of available and idle resourses and the status of the device set.

MOSHELL Commands:

```
hget @

eg. hget upg data@info
eg. hget mtp3bsp spTimer@timerM3uaTack
```

Software Level:

Description:

If you only want to print out a particular datatype from a Struct attribute, you car

eg. If you want to see what software levels are loaded on the MGw,

```
hget upg data@info
```

Or if you want to check a timer in the mtp3bsp MO,

```
hget mtp3bsp spTimer@timerM3uaTack
```

MOSHELL Commands:

```
lh mesc mesc_counters_gcp 0 |grep with
```

Software Level: ALL

Description:

This will only print out the GCP errors that have occurred on every board.

MOSHELL Commands:

stt

Software Level: ALL

Description:

Display state and user of Physical Ports and Ds0Bundles, including KLM numbers.

Printout format:
- PUI: the first digit represents the state of the PhysicalPort/Ds0Bundle. The secor
- CG/K.L.M: circuit group and K.L.M (for channelised STM-1)

Options:
- r: to refresh the data (ie. re-read from node).

Arguments:
- the first argument matches on the whole line
- the second argument matches only the state field ("VU")

MOSHELL Commands:

R4: hpget TdmTermGrp all . !^0
R5: hpget TdmTermGrp all . . !^0

Software Level: All

Description:

These commands will print out the busy, requested and rejected TDM statistics for ar
This is especially good after node restarts as any rejection initially may indicate a more serious issue.

MOSHELL Commands:

hget aal2path state

or only on certain ports

hget Aal2PathVccTp=ATM-(5|6|7)-2 state

Software Level: all

Description:

With this command it is very quick to get all the states of the aal2paths on the nod

MOSHELL Commands:

hget aal2r number|user

Software Level:

Description:

A quick way to get the userlabel and number direction for the AAL2 routing.

MOSHELL Commands:

pmx atmport=(ATM-9-2|ATM-8-1)$ AtmCells -m 0.5

Software Level: all

Description:

This command will print the AtmCells transmitted and recieved over 2 reporting peric

MOSHELL Commands:

st tdmtermgrp=525(31106|31107|31108)
pget tdmtermgrp=525(31106|31107|31108)
pr =MOD1-.[^7]
pr SA.*[12]$
get tdmterm userlabel .*TNUK

Software Level: ALL

Description:

When there are enormous amounts of MOs and you only want to print a certain number c
the MO states etc it is useful to print only the MOs you are interested in.

st tdmtermgrp=525(31106|31107|31108) (prints the state of only 52531106,52531107,525
pget tdmtermgrp=525(31106|31107|31108) (as above but gets the counters for only thos
pr =MOD1-.[^7] (prints all MOD1 UDPs but leaves out board 17)
pr SA.*[12]$ (prints any string starting with SA, ending with _1 or _2)
get tdmterm userlabel .*TNUK (prints all TDM's that contain the letters TNUK in th

MOSHELL Commands:

inv

inv

inv

Software Level: ALL

Description:
This command is very useful, and will show what loadmodules are running on what boar

Also, if you only want to print the details of a particular load module or board ty

eg. inv CXC1327798
eg. inv msb3

MOSHELL Commands:
mgw9> cabd

Software Level: All

Description:
This command prints the disk usage. Disks that are getting over a certain limit wil

MOSHELL Commands:
lmid

Software Level: All

Description:
To translate load module name to cxc number and via versa.

MOSHELL Commands:
acc licensing updatelicensekeyfile

Software Level: ALL

Description:
This command will allow the user to update the License on the node by MOSHELL.

MOSHELL Commands:
cr swmanagement=1,upgradepackage=....
ftp IP:
ucf location:

user:
pass:

acc UpgradePackage=... nonBlockingInstall - Soft Install
acc UpgradePackage=... nonBlockingForcedInstall - Hard Install

acc UpgradePackage=... upgrade - Soft Upgrade
acc UpgradePackage=... rebootNodeUpgrade - Hard Upgrade

acc UpgradePackage=... confirmUpgrade - Confirm Upgrade

To check the status of the upgrade use the command:
hget UpgradePackage=... prog|stat

Software Level: All

Description:
To perform a M-MGw upgrade via MOShell, use the above commands.
Note: Ensure the correct upgrade type is used according to the upgrade guide, i.e. s

Also replace the ... with the MO Name.

After the upgrade you will also need to change the userlabel of the upgrade to show

set UpgradePackage=... userlabel ...

MOSHELL Commands:
uv pm_wait
uv pm_wait=30
uv pm_wait=360

Software Level: all

Description:
In MOSHELL it is possible to change certain settings with the user variables.

We can print out all the user variables with command uv.

However in this example we can change only the timer for the pm counters for pdiff c

When doing the command pdiff to check the difference in a certain counter over a per

It is not currently known what the maximum value for pm_wait is, 360 seconds (6 minu

Time indicated is in seconds.

for a specific AAL2 AP.

line:

Links in a specific Signalling Link Set.

e the line:

·og, **y**- security event, **l**- coli log, **h**- Hw log, **m**- merge logs together,
)de), c- output to file (.csv), d- downtime, can only be used with r eg lgd or lgdr

:y in the command.

' and the user.

'pace), **e**=traces*

rmation, often it is enough,
, etc. You can use some hidden actions in the MGw to perform this.

ts the new value for the restricted attribute .
lue set for the restricted attribute

iod of time, it is possible to change the timer with this command. .

ıtes) has been tried successfully.

ner, path id and the Aal2Ap using this path.

ntifying when paths are remotely blocked,

nushours>] [-p <plushours>] [-s <startdate>[.<starttime>]]

iod of time. In the example below you can check
15 minute time intervals. .
950)

pmSes), Unavailable seconds (Uas),

the rejCounter will start to increase. .

the rejCounter will start to increase.

!^0|-1

own, unavailable, lost, missing,
ignalling faults on the node etc.
twice, which would take forever.

es showing whether they are local or remote rejects.

on of the Ip interface MO.

hell.

rts on which SCB/SXB boards have errors.

each subrack is connected

is active, slow indicates the link is standby.

; if it is used for MTP3b, MTP3b state & info will be printed.

fferent board to the SCTP processor for the

set to don't play. This will cause GCP 452 in MFD at location 5.

'ing board/node restart.

'l/rdel/set/bl/deb.

:ually del/rdel/set/bl/deb.

.t is possible to generate

and to be able to define only

difficult to remember what MOs to remove above

ame line. This only works for telnet commands.

'd.

the command: **lhsh sma -all**
)NFIGURED then it means the ActiveSlot is currently active,

also you can check on what

. is installed. When you are trying to connect
irectory where the moshell executable file is.

'ctory.

hard to identify what board has the faulty devices.
s and also what MSB has faulty devices

ou can use MOShell with the format listed.

nd the signalling links using them.
the MTP2 links

ı be used.

ım-dd hh:mm:ss; prox; get ManagedElementData ntp; acl 1; acc 1 createNtpPrima

08:55:59.601

is not recommended. In fact the RNC group do not use it at all.

the mtp3bsp.

number of counters in each scanner,

es being removed from the MOM doocument,
tes.

e what is the profile for Ericsson_FAY112163_1/1 ?

n the node to confirm.

board is used for the particular device,

ı use hget and the "2" symbol.

d digit (if present) represents the state of the User. The third digit (if

y TDM that has had at least 1 rejection.

e.

'ds (1/2 an hour).

'f them, either because you are monitoring

31108)
'e TDMs)

'e userlabel

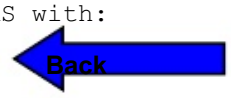
'ds, what features are enabled and licensed on the node, the capacity of rele

'e you can include this after the inv command as a filter.

· appear in color. The limit can be defined in cabview file.

oft or hard install and soft or hard upgrade.

up in EMAS with:



ommand.

iod of time, it is possible to change the timer with this command. Generall

tes) has been tried successfully.


Back

ıry; <NTP server Ip>; 64; 1024; false; true; set ManagedElementData nodeLoc

›resent) represents the state of the ImaGroup. L=locked, 1=enabled, 0=disabl‹

evant features, active and passive boards for the loadmodule ids and under w

-y the timer is set to 25 seconds.

alTimeZone IST; set ManagedElementData daylightSavingTime true; ntpconfig in

ed.

hat conditions the switch will be done to the passive board, the name of the

```
fo; cvms <CV Name> <Operator> <Comment>
```

loadmodule, the RPU MOid, and a lot of other useful information.