# Troubleshooting

- Avaya CM Error Log
- Avaya CM MST
- Avaya CM - History file
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- Avaya CM - Logs
- MST SIP
- Avaya CM - Reset System
- Avaya CM - tethereal
- Avaya CM - One X TTS

# Avaya CM Error Log

15.2.  Examine the logs
Change directories to /var/log/ecs.  Run the ls –ltr command from the Linux shell or the CLI to see a list of all the log files in that directory. The files are named with the time stamp of when the logs began.  Use this information to determine which log contains information on the reset

# from logfiles get EIP address
[root@s8700 ecs]# cd /var/log/ecs
[root@s8700 ecs]# grep EIP 2006-07* to search by date

***FIND Log with word interchange***
grep "Interchange" 2011-08* | less

grep -i "FILESYNC" 2011-1114*.log|more

more  2019-0107-081018.log | grep interchange -B20

LOGC Logs to show lines before and after grep

logc -r | grep 20191231 | grep interchange -B 30 -A 30

dhelp logc to display logc help

LOGC to view IP events

> logc -r --view ipevt -t 20191231:2000-20191231:2030
logc --view ipevt -t 20170501:0830-20170505:1000

restartcauses <-- to view restart causes on linux CM.

logc -r --view ipevt | grep 4104176

grep -i "Interchange" 2020-1230-21*.log|more
2020-1230-215601.log:20201230:215638241:-1395161647:Arbiter(2677):MED:[HANDOFF->STANDBY:inter
change to healthier side]

more  2020-1230-215601.log | grep interchange -B30 -A30

========== messages log ==========

/var/log/

grep  1228078 messages

grep -wc IPT_UNREG messages
2542

tac messages | IPEVT (to display message log in reverse order

/var/log
grep 1228078 *

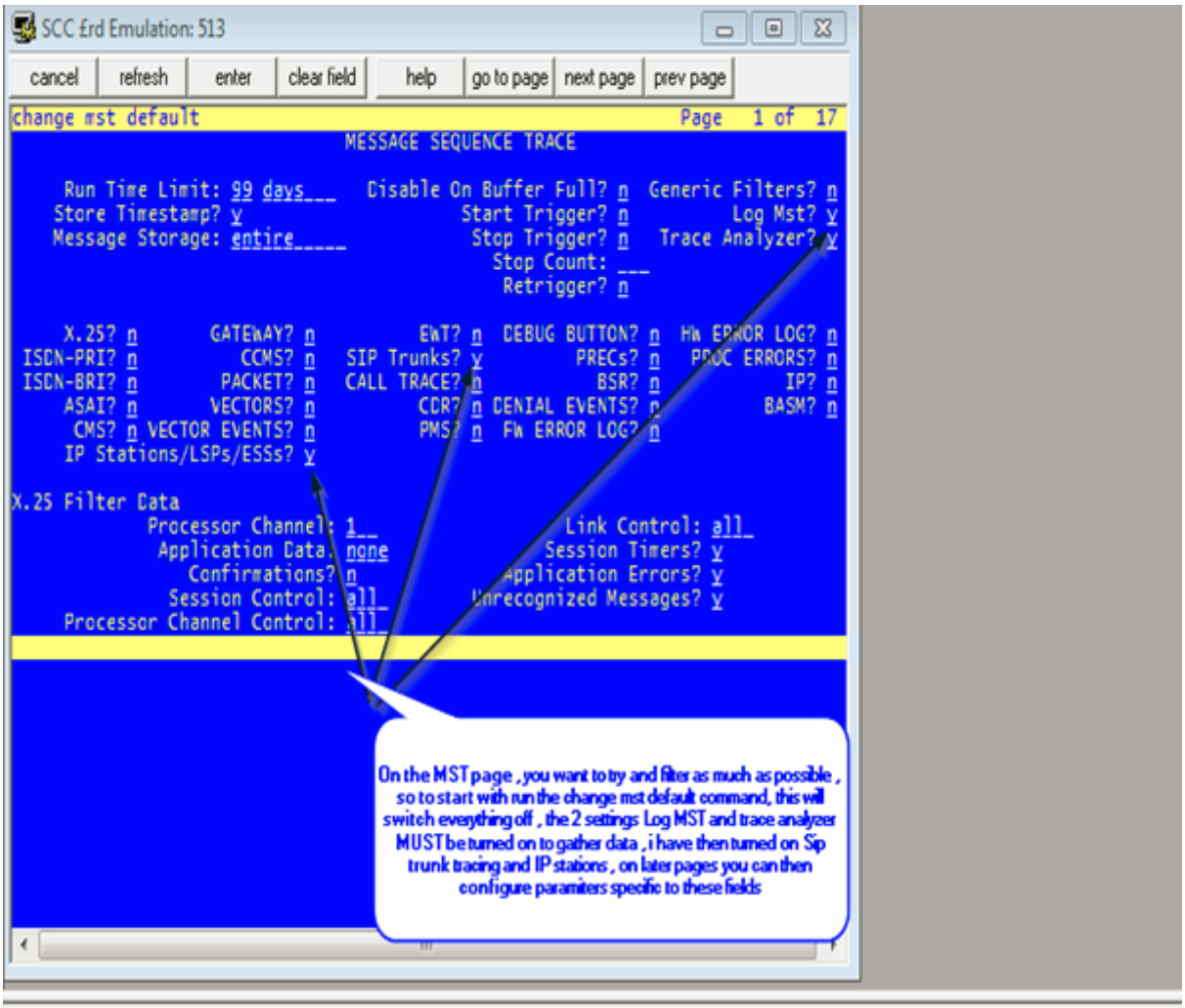
# Avaya CM MST

**Avaya MST-MDA extract & download log files  & Sip trunk example tracing.**

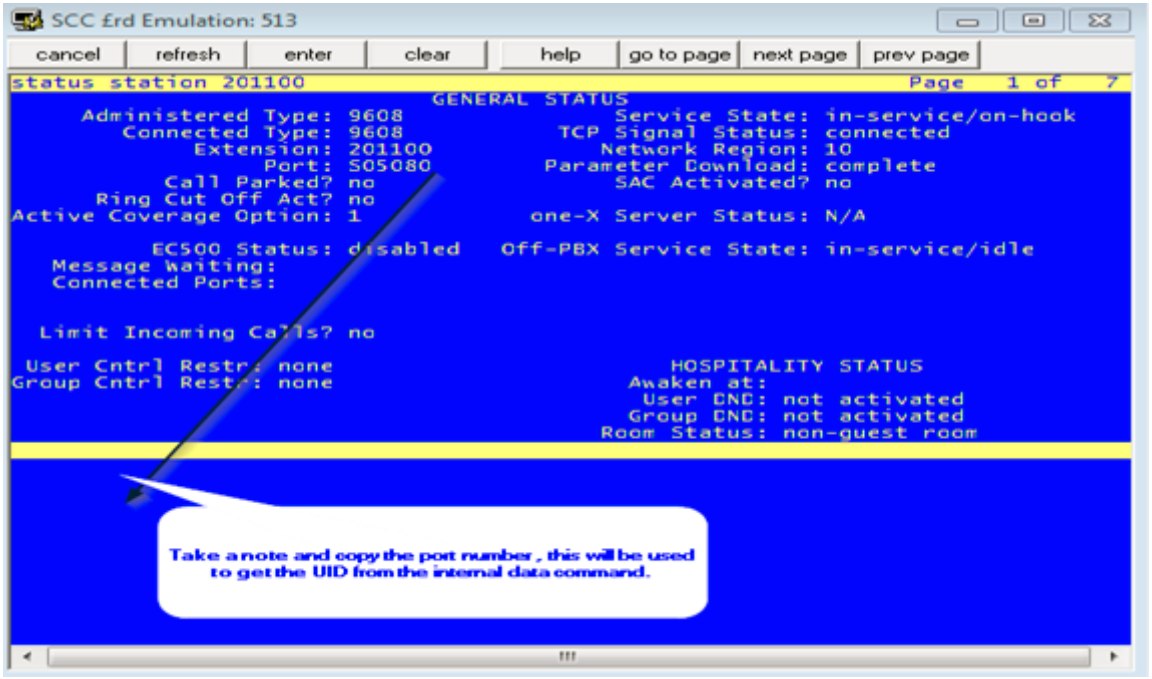
The reason for this document is to show you how to extract MST traces from the shell of CM as a dadmin or admin (Prof18) user , what happens if you try and extract the MST trace from the CM SMI web interface is that it will fail and tell you your file is to large  , this is actually false your file may only be a couple of KB , but because CM has to try and create temporary files of your MST , it will fail because of the rest of the logs in the location it tries to copy your MST to.

So the following first shows you how to filter and turn on MST , then extract your MST from CM shell with win SCP.

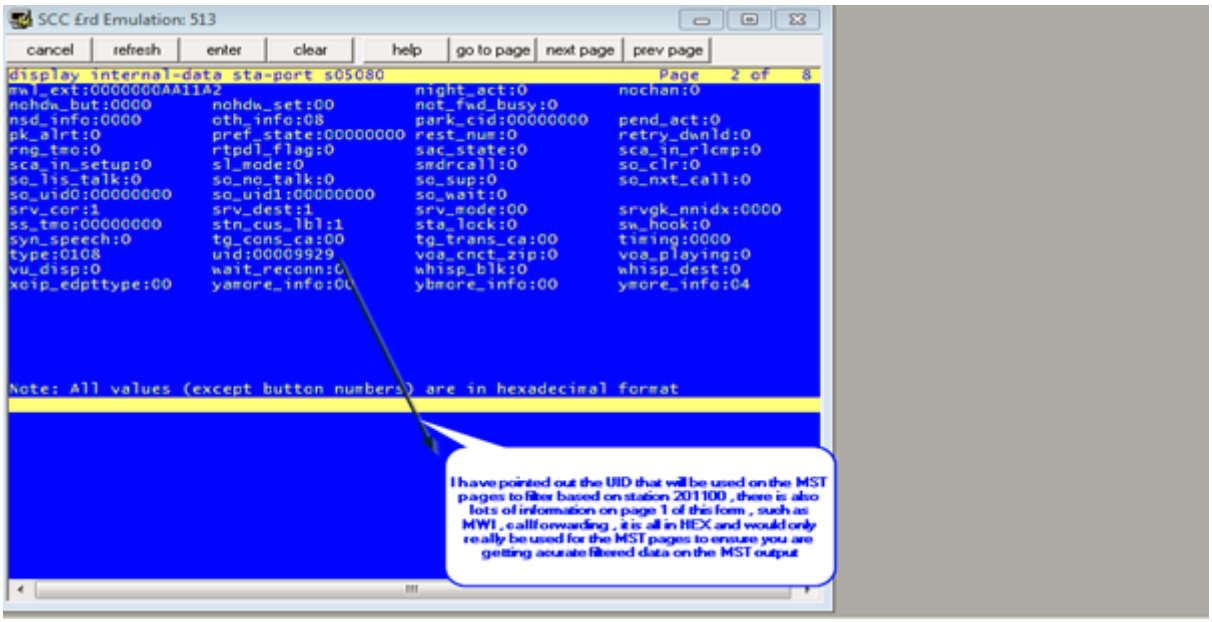
**Step 1** , is to issue the command “clear mst” then “change mst default” this will reset all filter options, as in the screen shot from below, the log and trace options need to be selected for this to work.




As I wanted to trace on both sip trunks and a specific sta I needed the port number for the station as below my port was S05080.




I then ran the command “disp internal data sta port s05080” , this was to obtain the UID of the station, take note of the below speech box , as it gives more information on this command and other useful data on that form.




From there I returned back to the mst pages by issuing  the “change mst” command rather than the “change mst default” just to ensure the log and analyser settings do not get switched off. And as below inputted the UID of my station obtained previously to ensure I was filtering as much as possible , as the below two screen shots show.

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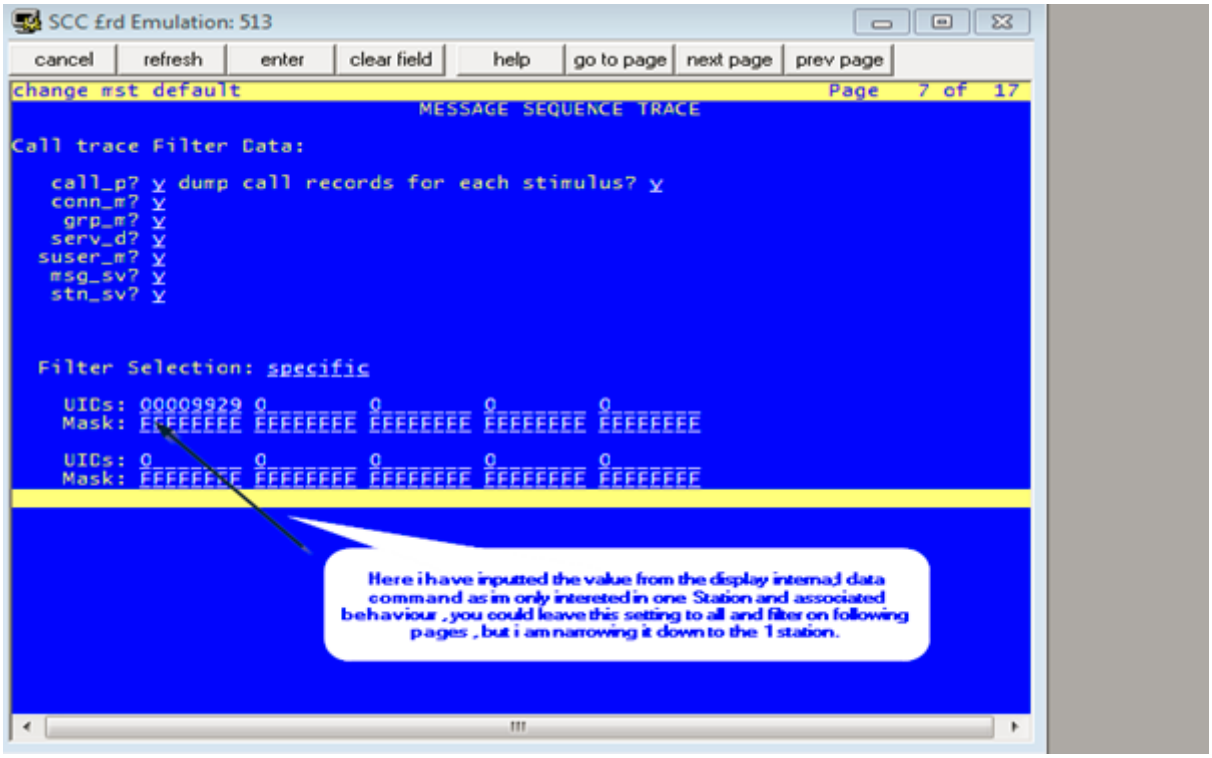
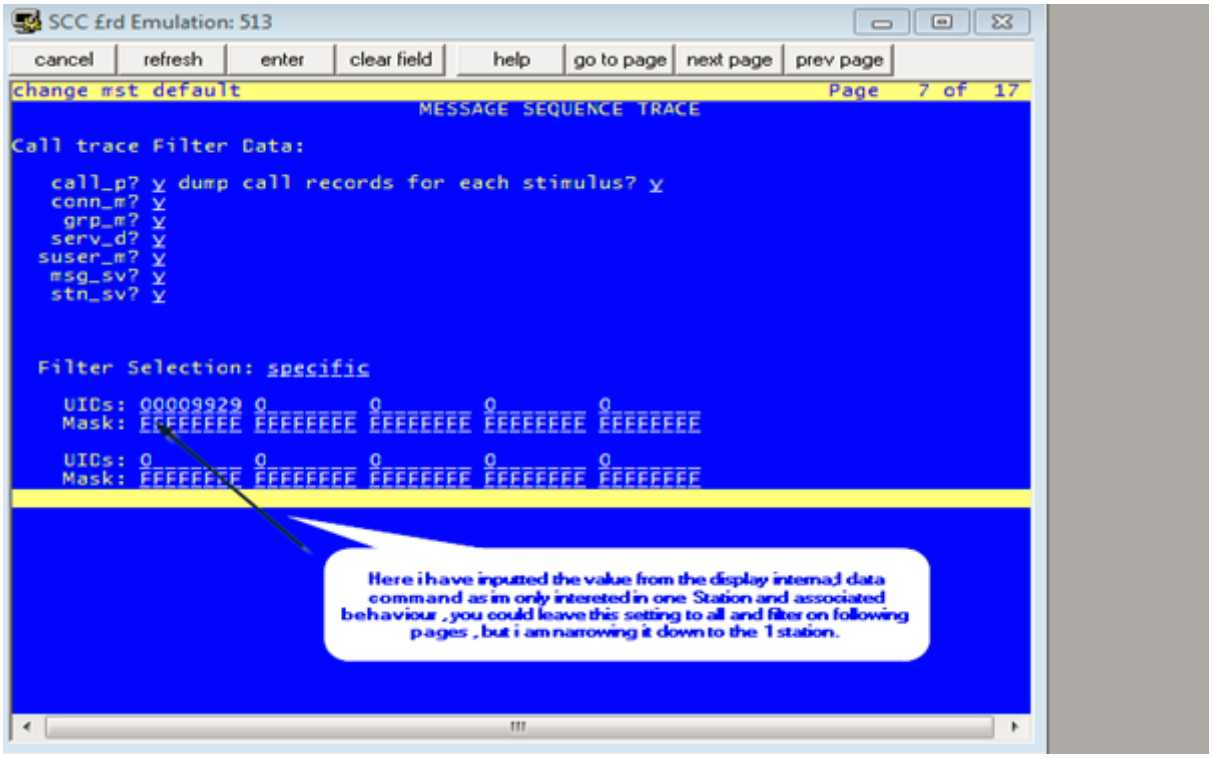
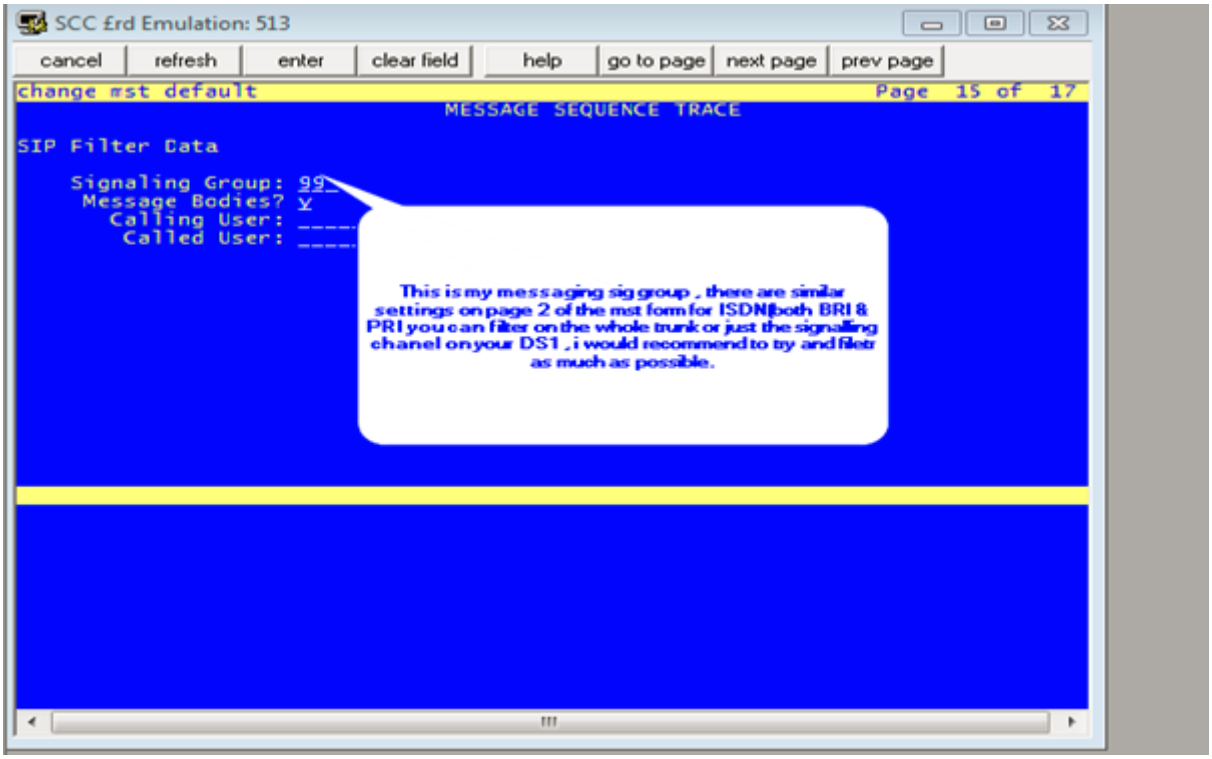



I then continued to filter based on my signalling group associated with the messaging trunk group that I am having issues with.




At this stage I was set, I saved the mst settings I had altered, and at that point enabled MST with the “enable MST” command ,a quick check with the “status mst” command will ensure it is enabled , at this point make your test calls and as soon as you have finished issue “disable mst” to allow collection of the trace.

The below instructions  contains the details of how to collect the new MST logs , you need to putty(or similar) into CM to run the  commands , you can then use WIN SCP to extract the trace files , in my case it was copied to the /tmp folder on CM

**This command can be ran by `dadmin` user or prof18 superusers when accessing the MTA data by SSH into shell. The below string can be copy and pasted , you will just need to alter the time and date in the CLI string to match your MST trace time.**

**dadmin@labpbx> /usr/bin/sudo /opt/ecs/bin/logc  -c  'view%mta' -t 0127:1300-0127:1400 > /tmp/mstdecoded.m**

**Where after the `t =  time` switch user can define the start / end date of the interval for which they want to decode the MST data from ecs log files.**
**In the above example an hour interval is selected on the day 27th January between 1PM and 2PM and decoded data will be written into file /tmp/mstdecoded.m**

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# Avaya CM - History file

cd /var/log/ecs
ls
cat commandhistory

## History file to FTP

you could write a script to copy or tar and zip and copy to another server on an as needed basis.

script could be as simple as follows which will create a tar.gz file with the server_name and date in the file name. Then use scp or ftp to copy the archive file off of the server to another server.

```
tar cvf /var/home/ftp/pub/`uname -n`_`date +%m%d%y`_hist_logs.tar /var/log/mess*
tar rvf /var/home/ftp/pub/`uname -n`_`date +%m%d%y`_hist_logs.tar /var/log/ecs/commandhist*
gzip /var/home/ftp/pub/`uname -n`_`date +%m%d%y`_hist_logs.tar
```

# Avaya CM - Reason codes for IP Events

Reason codes for IP Events

Enable IP Events you need to enable IP logging levels

To record events to log files:
In CM you must set LOG IP Registrations and events: y

change logging-levels Page 2 of 2

LOGGING LEVELS

Log All Submission Failures: y
Log PMS/AD Transactions: y
Log IP Registrations and events: n
Log CTA/PSA/TTI Transactions: y

Below is an example (we need to use sudo to access ipevt)

```
cgzz@labacm> sudo logc -r --view ipevt | more
20230404:162659000:295944:lxsys:MED:labacm logmanager: IPEVT IPT_TCP_UP board=PROCR
ip=10.123.123.10 net_reg= 1 ext= 1336035 the 1st ip=10.10.169.180;13926 the 2nd ip=0.0.0.0; 0 net_reg= 1
reason=switch_request
20230404:162658000:295943:lxsys:MED:labacm logmanager: IPEVT IPT_TCP_DOWN board=PROCR
ip=10.123.123.10 net_reg= 1 ext= 1336035 the 1st ip=10.10.169.180;13926 the 2nd ip=0.0.0.0; 0 net_reg= 1
reason=00000
20230404:162658000:295942:lxsys:MED:labacm logmanager: IPEVT IPT_TCP_UP board=PROCR
ip=10.123.123.10 net_reg= 1 ext= 1339100 the 1st ip=10.10.175.169;13926 the 2nd ip=0.0.0.0; 0 net_reg= 1
reason=switch_request
20230404:162657000:295941:lxsys:MED:labacm logmanager: IPEVT IPT_REG board=PROCR ip=10.123.123.10
net_reg= 1 ext= 1339100 ip= 10.10.175.169; 1024 net_reg= 1 reason=normal
20230404:162645000:295940:lxsys:MED:labacm logmanager: IPEVT IPT_UNREG board=PROCR
```

ip=10.123.123.10 net_reg= 1 ext= 4095312 ip= 10.10.175.92; 1024 net_reg= 1 reason=2012
20230404:162643000:295938:lxsys:MED:labacm logmanager: IPEVT IPT_TCP_UP board=PROCR ip=10.123.123.10 net_reg= 1 ext= 1336021 the 1st ip=10.10.170.14;13926 the 2nd ip=0.0.0.0; 0 net_reg= 1 reason=switch_request
20230404:162642000:295937:lxsys:MED:labacm logmanager: IPEVT IPT_REG board=PROCR ip=10.123.123.10 net_reg= 1 ext= 1336021 ip= 10.10.170.14; 1024 net_reg= 1 reason=normal
20230404:162635000:295935:lxsys:MED:labacm logmanager: IPEVT IPT_TCP_UP board=PROCR ip=10.123.123.10 net_reg= 1 ext= 1338647 the 1st ip=10.10.169.137;13926 the 2nd ip=0.0.0.0; 0 net_reg= 1 reason=switch_request
20230404:162635000:295933:lxsys:MED:labacm logmanager: IPEVT IPT_REG board=PROCR ip=10.123.123.10 net_reg= 1 ext= 1338647 ip= 10.10.169.137; 1024 net_reg= 1 reason=move-user
20230404:162635000:295932:lxsys:MED:labacm logmanager: IPEVT IPT_UNREG board=PROCR ip=10.123.123.10 net_reg= 1 ext= 1338647 ip= 10.10.171.41; 1024 net_reg= 1 reason=2009

In the previous example we can find an IP_UNREG event 2009, code 2009 =

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| 2089 | |
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| 2092 | |
| 2093 | |
| 2094 | |

# Avaya CM - Logs

Examine the logs
Change directories to /var/log/ecs.  Run the ls –ltr command from the Linux shell or the CLI to see a list of all the log files in that directory. The files are named with the time stamp of when the logs began.  Use this information to determine which log contains information on the reset

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***FIND Log with word interchange***
grep "Interchange" 2022-08* | less

grep -i "FILESYNC" 2011-1114*.log|more

more  2021-0107-081018.log | grep interchange -B20

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dhelp logc to display logc help

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LOGC to view IP events

> logc -r --view ipevt -t 20191231:2000-20191231:2030
logc --view ipevt -t 20170501:0830-20170505:1000

restartcause <-- to view restart causes on linux CM.

grep -i "Interchange" 2020-1230-21*.log|more
2020-1230-215601.log:20201230:215638241:-1395161647:Arbiter(2677):MED:[HANDOFF-

>STANDBY:inter
change to healthier side]

more  2020-1230-215601.log | grep interchange -B30 -A30

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Messages Log

/var/log/

grep  1228078 messages

grep -wc IPT_UNREG messages
2542

tac messages | IPEVT (to display message log in reverse order

/var/log
grep 1228078 *

# MST SIP

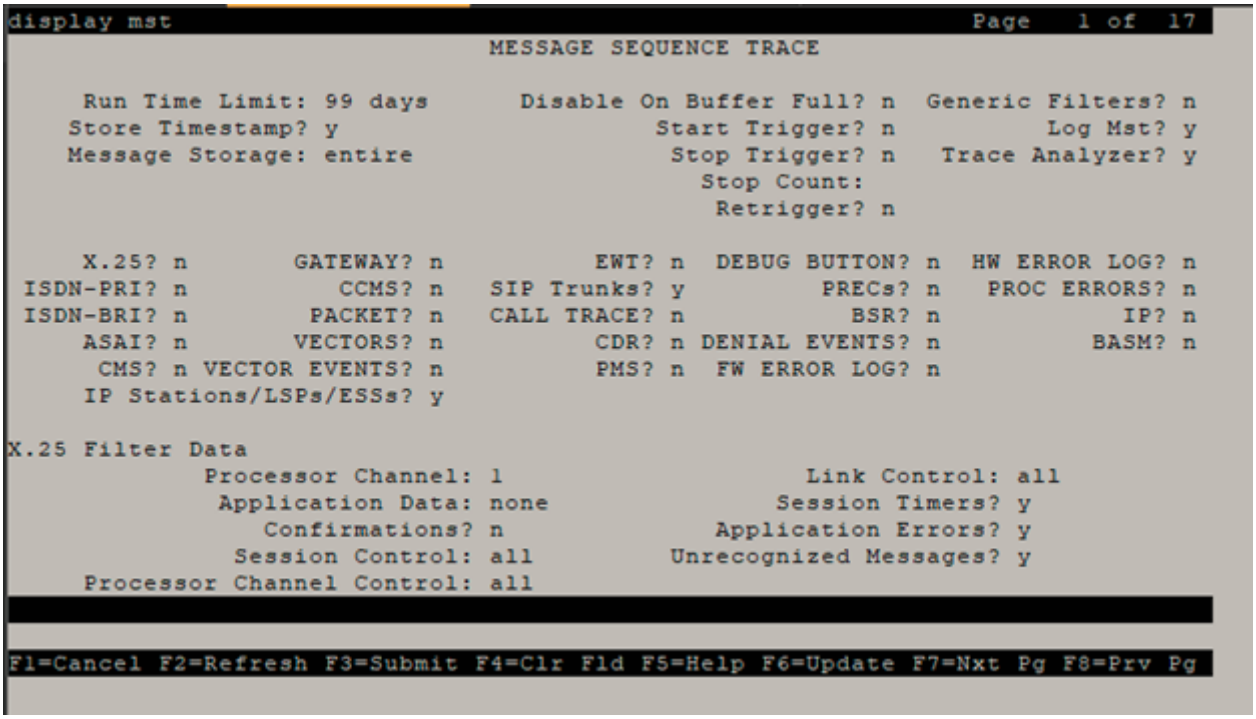
Change mst default

Log mst: y (to send mst date to var/log/ecs*.log files

Trace analyzer? Y

SIP trunks? Y

IP stations/LSP/Ess Y




**To display all mta messages**

sudo logc --view mta  | more

**To display mta message on specific time period and write output log**

sudo logc -t 20210915:0835-20210915:0850 --view mta > /tmp

sudo logc -t 20220429:2140-20220429:2320 --view mta > /tmp/test3.m

sudo logc -t 20220429:2140-20220429:2320 | logmst –c | mta > /tmp/test2.m

sudo logc -t 20220411:1641-20220411:1645 --view mta > /tmp/loumst2.m

```
admin@[redacted]> sudo logc --view mta | more
_____________________________________________________________________________
|                                                                           |
|                    M E S S A G E     T R A C E R     6.5.2.1              |
|                                                                           |
|___________________________________________________________________________|

.............................................................................
:                                                                           :
:      Switch:                                  aka                         :
:      Release:     R018x.01.0.890.0            Host:  [redacted]vm-labcm2  :
:      Patch:       01.0.890.0-26905                                        :
:                   KERNEL-3.10.0-1127.19.1.el7                             :
:                   PLAT-rhel7.6-0050                                       :
:      Full Release String:      8.1.3.0.0.890.26905                       :
:      Serial:                                  User:  admin                :
:                                                                           :
:      Request:     MST_ALL                                                 :
:      Issued:      03/29/22 23:06:07   (switch time)                       :
:                   03/29/22 23:06:07   (host time)                         :
:...........................................................................:

    1  22:53:33.249  8B          <-- SIP Out

      From IPAddr:    [redacted].220.110   From Port:     0   Transport: TLS
      To IPAddr:      [redacted].220.121   To Port:    5061

INFO sip:379bf905-da2f-11e0-882c-e36c7400a53b@[redacted].220.121:5061;transport=tls;
nt_service=379bf905-da2f-11e0-882c-e36c7400a53b SIP/2.0
From: <sip:ACM@[redacted].220.110>;tag=b5a6cf4eafe241ec9e7c05056abf91d
To: <sip:379bf905-da2f-11e0-882c-e36c7400a53b@[redacted].220.121:5061;transport=tls;
hanotify=true;plock=allow>;tag=26e21856-0f46-350c-90fb-c049879e9218
Call-ID: b5a6cf76afe241ec9e7d05056abf91d
CSeq: 125 INFO
Max-Forwards: 70
Via: SIP/2.0/TLS [redacted].220.110:9061;branch=z9hG4bK59e984f0afe541eca25205056abf9
1d
Supported: 100rel,histinfo,join,replaces,sdp-anat,timer
User-Agent: Avaya CM/R018x.01.0.890.0
Content-Length:     0



    2  22:53:33.250  8A          ==> SIP In

      From IPAddr:    [redacted].220.121   From Port:  5061   Transport: TLS
      To IPAddr:      [redacted].220.110   To Port:       0
```

# Avaya CM - Reset System

Reset 1 Effects:
- Stable calls are preserved
- System links and stable feature and service state data are preserved.
- Error and alarm logs are preserved. And almost all alarms are resolved.
- Transient calls are dropped.
- Remote access and system port logins are dropped.
- Apllications links (CDR, AUDIX etc.) are dropped and reestablished.
- MSS activity is aborted.

Reset 2 Effects:
- All system and application links are dropped.
- All calls are dropped.
- Non-translation feature data is lost.
- All hardware components except PNC components are resetted.
- All busied out maintenance objects are released.
- Circuit packs are reinitialized.

Reset 3 effects:
- Same effects as reset 2 plus;
- Emergency transfer is invoked.
- Translations are reloaded from disk or tape.

Reset 4 effects:
- System software is reloaded. (default medium = disk).
- Before the reboot alarm & error logs are saved to disk.
- After reboot alarm & errors logs are reloaded from disk. (Some error information might be incorrect at this moment).
 If this reboot fails your SPE will go down.

Reset 5 Effects:
- More extensive diagnositcs are performed compared to all previous resets.

# Avaya CM - tethereal

```
[root@Acsito8800a ~]# tethereal -i eth0:0 -w /tmp/snifferCM.pcap
Running as user "root" and group "root". This could be dangerous.
Capturing on eth0:0
37212
[root@Acsito8800a ~]# ll /tmp
lrwxrwxrwx 1 root root 8 Mar 19  2013 /tmp -> /var/tmp
[root@Acsito8800a ~]# ll /var/tmp
```

# Avaya CM - One X TTS

One-X Agent uses (TTS) which is enabled by default, IP Agent does not use such protocol.

Time-to-Service (TTS)

The IP Endpoint Time-to-Service (TTS) feature was introduced in Software Release 1.2, along with Avaya Communication Manager (CM) Release 4.0. TTS changes the way IP endpoints register with their gatekeeper, reducing the time to come into service. Currently, IP endpoints are brought into service in two steps, which are coupled (1) H.323 registration and (2) TCP socket establishment for call signaling. The TTS feature de-couples these steps. In CM 4.0, IP endpoints can be enabled for service with just the registration step. TCP sockets are established later, as needed.

The TTS feature also changes the direction of socket establishment. With TTS, Communication Manager, rather than the endpoint, initiates socket establishment, which further improves performance. In CM 4.0, TTS is enabled by default, but can be disabled for all IP endpoints in a given IP network region by changing the IP Network form. TTS applies only to IP endpoints whose firmware has been updated to support this feature. It does not apply to the following endpoints: third party H.323, DCP, BRI, and analog. For more information, see the Administrator Guide for Avaya Communications Manager (Document Number 03-300509).