Mark6 troubleshooting

General

In case you run into trouble with the Mark6 recorders first try to restart the cplane and dplane services.

You can download a service script (to /home/oper/bin) that reliably shuts down and restarts the services in the proper order. The script also displays the relevant logs files (named dplane-daemon.log, cplane-daemon.log) which can help you in debugging the issue.

as user oper:

```
m6service_restart
```

If the issue cannot be resolved by restarting the services try rebooting the mark6 machine.

Procedure for replacing a broken module when running the schedule

1. Stop the schedule (end M6_CC)
2. log-into the recorder and start `da-client`
    1. record=off
    2. group=close:1234
    3. group=unmount:1234
3. remove the broken module
4. insert the new module
5. reboot the mark6 machine (this step is neccessary at the moment due to problems in Mark6 software 1.3c)
6. in da-client **(VERY IMPORTANT: Don't use the "new" option in the following mod_init commands)**
    1. mod_init:1:8:{VSN1}:sg
    2. mod_init:2:8:{VSN2}:sg
    3. mod_init:3:8:{VSN3}:sg
    4. mod_init:4:8:{VSN4}:sg
    5. group=new:1234
    6. redefine/commit your input_streams
    7. group=open:1234
7. restart the schedule

    This procedure has been verified to work at PV30M. The previously recorded

scans were readable. Recording on the new group of modules has worked. Note that even though `list?` will not show the previously recorded scans anymore they are still physically on the module disks.

Host name

The hostname as reported by the hostname command should not be fully qualified, e.g.

```
> hostname
recorder1                OK
recorder1.iram.es        Not OK
```

fully qualified hostnames prevent communication between cplane and dplane which for example would cause the recording state to always remain in the "pending" state even if data is being recorded.

Timezone

The configured timezone of the mark6 machine must be UTC otherwise starting of the scheduled recording will not work!

Check the timezone of the mark6 machine e.g. run:

```
date
> Tue Mar 17 08:12:54 UTC 2015
```

make sure that the timezone is UTC. If it is not run

```
dpkg-reconfigure tzdata
> Etc > UTC
```

Input_stream error

Before entering input streams, groups of diskmodules have to be in a closed state. When group is open you may see this problem when you commit the input_stream.

```
<<  !mstat?0:0:1234:1:BHC%0029/48008/4/8:8:8:47991:48008:open:ready:sg:12
>> input_stream=add:FILA10G-L:vdif:8224:50:42:eth3:172.16.3.1:0:12
<<  !input_stream=0:0;
>> input_stream=add:FILA10G-H:vdif:8224:50:42:eth5:172.16.5.1:0:34
<<  !input_stream=0:0;
>> input_stream=commit
```

```
<<  'BHC%0031/48008/4/8'
>>
```

After committing the input_stream, the command returns a disk module status.

**If you issue a input_stream? it may look like the input_streams are committed after this bug **

You should restart cplane and to be sure the disks are in a closed state. The expected input_stream=commit response should be:

```
>> input_stream=add:FILA10G-L:vdif:8224:50:42:eth3:172.16.3.1:0:12
<<  !input_stream=0:0;
>> input_stream=add:FILA10G-H:vdif:8224:50:42:eth5:172.16.5.1:0:34
<<  !input_stream=0:0;
>> input_stream=commit
<<  !input_stream=0:0;
>>
```

cplane missing disk/diskmodule after diskmodule swap

Occasionally we've seen a disk or diskmodule not seen after swapping in new modules.

If the Mark6 OS doesn't see a disk it may be due to a kernel bug when swapping disks in and out.

```
#log in as root
su -l
# use fdisk -l command to see disks recognized by the Mark6 OS
fdisk -l
.
.
.
# There should be 33 disks seen (1 being the OS disk)
# /dev/sdag1  # number of disks seen /dev/sdag = 33 disks...
```

You may have to restart the Mark6 unit to clear the kernel bug if there isn't 33 disks seen

If all disks are seen by the Mark6 OS But not cplane, this would require a restart of the dplane/cplane services

```
#log in as root
su -l
# restart dplane and cplane services
/etc/init.d/dplane restart
/etc/init.d/cplane restart
```