

Intel® MPSS for Linux Troubleshooting Flow Chart

Intel® MPSS 2.1.6720-13

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Did the Intel® MPSS service start correctly?
`$ sudo service mpss start`
 [fail]

Are you having problems while running a job on the coprocessor?

Update Intel® MPSS to the latest version

Are you running the latest Intel® MPSS release, with the latest flash and SMC firmware?
`$ sudo /opt/intel/mic/bin/micinfo`
 ...
 Flash Version : 2.1.02.0386
 SMC Firmware Version : 1.14.4616
 SMC Boot Loader Version : 1.8.4326
 *Note: The above output is just an example. The latest flash and SMC firmware versions can be found in the readme-linux.txt file located on the Intel® MPSS release page:
<http://software.intel.com/en-us/articles/intel-manycore-platform-software-stack-mpss>

Please contact Intel support at the forum on software.intel.com/mic-developer or premier.intel.com. Please have the output from the script at `/opt/intel/mic/bin/micdebug.sh` available.

Is the coprocessor enumerated by the host?
 *Note: It is useful to make note of the PCI bus address (in red below) of the coprocessor for further troubleshooting. This number will be different depending on the platform and PCIe slot

```
$ lspci | grep 225
83:00.0 Co-processor: Intel Corporation Device 225c (rev 10)
```

Verify that adequate power is connected to the coprocessor, try reseating the coprocessor in the PCIe slot, or try a different PCIe slot if possible.

Execute `/opt/intel/mic/bin/micsmc` while your job is running. Does the temperature exceed 104C?

Observe 'top' and /proc/meminfo on the coprocessor OS. Is there a resource contention (eg. oversub. of cores, out of memory, etc)?

Observe the host kernel log and coprocessor kernel logs for errors that occur while your application is executing. Are there any errors reported while the job is executing?
`$ dmesg`
 ..
`$ ssh mic0 -x dmesg`

Does the host kernel log show a message similar to this after the 'mic' driver was loaded?
`$ dmesg | less`
 mic 0000:83:00.0: device not available (can't reserve [mem 0x00000000-0xffffffff 64bit pref])
 pci_enable failed board #0

Enable support for mapping >4GB MMIO in the host BIOS.

Did the coprocessor reset or go offline while running the job?
`$ micctrl -s mic0: ready`
`$ dmesg|less`
 ..
 mic0: Resetting (Post Code 12)
 mic0: Transition from state resetting to ready
 mic0: Transition from state ready to booting
 MIC 0 Booting

For assistance, please contact Intel support at the forum on software.intel.com/mic-developer or premier.intel.com. If you did not develop the application, please contact the developer of the application for assistance. Please have the output from the script at `/opt/intel/mic/bin/micdebug.sh` available.

Are the values for 'Speed' and 'Width' under 'LinkSta' different than the values below when executing 'lspci -vvv' and locating the coprocessor?
 *Note: Use the PCIe bus address to locate the coprocessor in the output

```
$ lspci -vvv | less
...
83:00.0 Co-processor: Intel Corporation Device 225c (rev 10)
...
LnkSta: Speed 5GT/s, Width x16, TrErr-Train- SlotClk+ DLActive- BWMgmt- ABWMgmt-
```

There is an issue with PCIe link training.

For further assistance, please contact the manufacturer of the host platform.

Enable micras functionality (if not enabled currently), and observe the '/var/log/micras.log' file while reproducing the issue. Are there any errors reported?
`$ sudo service mpss status`
 mpss is running
`$ sudo service micras start`
`$ tail -f /var/log/micras.log`
 ..
 Tue Mar 5 16:24:29 2013 MICRAS CRITICAL : Card: 1 MCA: 5 5
 FL 00000003ffffffff f2000000001e0001 0000000000000000
 0000000000000000

Do any messages appear in the host kernel log that mention 'AER' and/or (un)correctable errors?
`$ dmesg | less`
 Apr 28 20:00:34 localhost kernel: pcieport 0000:83:00.0: AER: Multiple Uncorrected (Fatal) error received: id=8010

Have you made any modifications to the Intel® MPSS configuration files after installation?

Are there any errors in the Intel® MPSS service log at '/var/log/mpssd'?

Restore the Intel® MPSS configuration to default values and try to start Intel® MPSS again. Does it succeed?
`$ sudo service mpss unload`
`$ sudo micctrl --cleanconfig`
`$ sudo micctrl --initdefaults`
`$ sudo service mpss start`

There were problems with your Intel® MPSS configuration. Please review the Intel® MPSS documentation.