

Moab

How can I get debug information without a core file?

Issue:

Not all sites generate core files, yet source code information is needed by developers.

Solution:

Adaptive Computing has a script that will get the relevant binary offsets from the backtrace information in the Moab log files, and look up the source information by reading the Moab executable.

Prerequisites:

The script depends on having the opensource program `addr2line` installed. This can be obtained separately, or it's installed as part of the `binutils` package.

The Perl script will also need to be downloaded. It's attached to this ticket, and can also be downloaded from http://files.adaptivecomputing.com/support/moab_addr2line.pl.gz.

Decompress the script and make it executable. You can either place it somewhere in the path, or run it specifying its path.

Using the Script:

You will need to run the script as root (either logged in as root, via `sudo`). The first step is to identify which log file(s) have the backtrace information. If your logs rotate frequently, you may want to make a copy of the log file(s). A good way to find backtraces is by using `grep`, as will be shown below.

Here is an example of what a typical run might look like:

```
root@root $ grep -l "Begin Moab Backtrace" /opt/moab/log/*
moab.log
moab.log.4
```

```
root@root $ cp /opt/moab/log /tmp/root@root $ ./moab_addr2line.pl /tmp/moab.log
```

```
-----Begin Moab Backtrace-----
Version: moab server 9.1.1 (revision 2017040313, changeset
cde619758eb7890901ade22e3fdd168f36c024d2)
Backtrace timestamp: 2017-09-28T17:03:25.809-0600
Caught Signal 11 (SIGSEGV) Invalid memory reference
kill(2) or raise(3). Sent by pid:28095 uid:0
MSysBacktraceHandler(int, siginfo_t const*, void*) |
/opt/src/build/moab/9.1.1/src/moab/MSysSignalHandling.c:330
```

```
?? | ??:0
```

```
?? | ??:0
```

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```
MUSleep(long, unsigned char) | /opt/src/build/moab/9.1.1/src/moab/MTime.c:2103  
MUIAcceptRequests(msocket_t const*, long) |  
/opt/src/build/moab/9.1.1/src/moab/MUIAcceptRequest.c:506root@root $
```

Note that the logs can be copied to a different computer to analyze, but the Moab executable will also need to be copied, and will need to be in the location it was on the Moab server.

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