intermittent Error in sys.exitfunc upon ceph-deploy exit

Reported sporadically from the community, sometimes ceph-deploy exits with:

Error in sys.exitfunc:

This seems to happen most often to users when running "ceph-deploy new {hosts}", but other commands have triggered it as well.

One user noticed that exporting CEPH_DEPLOY_TEST=YES causes the error to go away, so this is a clue of where to look. This has been confirmed to happen in 1.5.19 and 1.5.21. Upon follow up, the users note that the commands seem to complete, making this error annoying but not fatal.

Reports have also come from RHEL 6 and SLES 11 distros.

History

#1 - 03/04/2015 09:24 PM - Travis Rhoden

the error from sys.exitfunc should only come from an exception raised from functions executed at interpreter shutdown. THis happens if sys.exitfunc has been set directly (a deprecated feature), or using the 'atexit' module.

The ceph-deploy codebase does not use atexit, but execnet does, which we bundle.

When we combine this info with the clue of the problem going away when CEPH_DEPLOY_TEST=YES is set, we again are pointed to execnet, actually. at the end of ceph_deploy/cli.py, in our main function, we close sys.stdout and sys.stderr if that env var is not set. the atexit function used in execnet writes to sys.stderr. So I think there is a race there.

And finally, this output from abrtd seems to confirm it:

backtrace:
:atexit.py:29:_run_exitfuncs:ValueError: I/O operation on closed file

So I think that ceph-deploy is closing sys.stderr, then exiting, at which point the atexit routines get triggered in execnet, which is trying to write to stderr. But it's not quite that clear-cut, as this is only happening sometimes (a race?).

Looking at the execnet code, the write to sys.stderr should only be happening if the env var EXECNET_DEBUG=2, which it shouldn't be. So that's where this is.
I commented this on BZ but for reference, this is mostly a problem with older Python versions, more details in this ticket I opened:

https://bitbucket.org/hpk42/execnet/issue/30/unhandled-error-in-sysexcepthook

Issue that attempted to mitigate this regardless of Python versions http://tracker.ceph.com/issues/7594