Testing for Ports

Let's verify that things work properly!

Why do testing?

- Do I have to say this? :)

- And yet, many don't do it.

- Fewer bug reports!

- Failures cascade

Value of Testing

- Example: Testing perl modules helped me find that we needed to build perl with -pthread

- Discovered many missing dependencies in Perl modules

- Helped discover categories of failure (ex: some tests need the network) which led to revisions in test framework

What's been done

- Testing (lots!) of Perl modules

- Adding lots of TEST_DEPENDS

- See http://wiki.freebsd.org/Perl#Test_Dependencies

- Test Framework created

Testing Perl Modules

- Call standard "make test" on all p5-* ports

- Check result

Example

```
    ===>  Testing for p5-Pod-Coverage-0.22
PERL_DL_NONLAZY=1 /usr/local/bin/perl5.12.4 "-MExtUtils::Command::MM" "-e"
"test_harness(0, 'blib/lib', 'blib/arch')" t/*.t
t/01compile.t ..... ok
t/04cvgv.t ........ ok
t/06trustme.t ..... ok
t/05parentage.t ... ok
t/03import.t ...... ok
t/02simple.t ...... ok
t/07pod.t ......... ok
t/08tie.t ......... ok
t/09whitespace.t .. ok
All tests successful.
Files=9, Tests=71,  0 wallclock secs ( 0.06 usr  0.00 sys +  0.66 cusr
0.13 csys =  0.85 CPU)
Result: PASS
===>  Testing completed for p5-Pod-Coverage-0.22
```

Test Framework

- A framework for calling tests that ship with software

- Could be anything

- Simple call, check return status

- Started with Perl, want to extend this to everything

Test Framework

- Enables users to opt into testing

- Users can also ignore failure

- Can opt into testing only for certain ports

- See PR ports/164896

How to use Test Framework

- Enable testing of your port: in port Makefile, set USE_TESTS, create "test" make target

- Enable testing on all ports on your system: USE_TESTS in /etc/make.conf

- Enable testing of all p5- ports: WITH_PERL_TESTS in /etc/make.conf

Whats Next?

- Refine framework to the point that it's acceptable for the ports tree and get it committed

- Add more hooks for existing test frameworks

- Add tests to all the ports

Obligatory Meme