

NAME

Test2 - Framework for writing test tools that all work together.

DESCRIPTION

Test2 is a new testing framework produced by forking Test::Builder, completely refactoring it, adding many new features and capabilities.

WHAT IS NEW?

Easier to test new testing tools.

From the beginning Test2 was built with introspection capabilities. With Test::Builder it was difficult at best to capture test tool output for verification. Test2 Makes it easy with "Test2::API::intercept()".

Better diagnostics capabilities.

Test2 uses an Test2::API::Context object to track filename, line number, and tool details. This object greatly simplifies tracking for where errors should be reported.

Event driven.

Test2 based tools produce events which get passed through a processing system before being output by a formatter. This event system allows for rich plugin and extension support.

More complete API.

Test::Builder only provided a handful of methods for generating lines of TAP. Test2 took inventory of everything people were doing with Test::Builder that required hacking it up. Test2 made public API functions for nearly all the desired functionality people didn't previously have.

Support for output other than TAP.

Test::Builder assumed everything would end up as TAP. Test2 makes no such assumption. Test2 provides ways for you to specify alternative and custom formatters.

Subtest implementation is more sane.

The Test::Builder implementation of subtests was certifiably insane. Test2 uses a stacked event hub system that greatly improves how subtests are implemented.

Support for threading/forking.

Test2 support for forking and threading can be turned on using Test2::IPC. Once turned on threading and forking operate sanely and work as one would expect.

GETTING STARTED

If you are interested in writing tests using new tools then you should look at Test2::Suite. Test2::Suite

is a separate cpan distribution that contains many tools implemented on Test2.

If you are interested in writing new tools you should take a look at Test2::API first.

NAMESPACE LAYOUT

This describes the namespace layout for the Test2 ecosystem. Not all the namespaces listed here are part of the Test2 distribution, some are implemented in Test2::Suite.

Test2::Tools::

This namespace is for sets of tools. Modules in this namespace should export tools like "ok()" and "is()". Most things written for Test2 should go here. Modules in this namespace **MUST NOT** export subs from other tools. See the "Test2::Bundle::" namespace if you want to do that.

Test2::Plugin::

This namespace is for plugins. Plugins are modules that change or enhance the behavior of Test2. An example of a plugin is a module that sets the encoding to utf8 globally. Another example is a module that causes a bail-out event after the first test failure.

Test2::Bundle::

This namespace is for bundles of tools and plugins. Loading one of these may load multiple tools and plugins. Modules in this namespace should not implement tools directly. In general modules in this namespace should load tools and plugins, then re-export things into the consumers namespace.

Test2::Require::

This namespace is for modules that cause a test to be skipped when conditions do not allow it to run. Examples would be modules that skip the test on older perls, or when non-essential modules have not been installed.

Test2::Formatter::

Formatters live under this namespace. Test2::Formatter::TAP is the only formatter currently. It is acceptable for third party distributions to create new formatters under this namespace.

Test2::Event::

Events live under this namespace. It is considered acceptable for third party distributions to add new event types in this namespace.

Test2::Hub::

Hub subclasses (and some hub utility objects) live under this namespace. It is perfectly reasonable for third party distributions to add new hub subclasses in this namespace.

Test2::IPC::

The IPC subsystem lives in this namespace. There are not many good reasons to add anything to this namespace, with exception of IPC drivers.

Test2::IPC::Driver::

IPC drivers live in this namespace. It is fine to create new IPC drivers and to put them in this namespace.

Test2::Util::

This namespace is for general utilities used by testing tools. Please be considerate when adding new modules to this namespace.

Test2::API::

This is for Test2 API and related packages.

Test2::

The Test2:: namespace is intended for extensions and frameworks. Tools, Plugins, etc should not go directly into this namespace. However extensions that are used to build tools and plugins may go here.

In short: If the module exports anything that should be run directly by a test script it should probably NOT go directly into "Test2::XXX".

SEE ALSO

Test2::API - Primary API functions.

Test2::API::Context - Detailed documentation of the context object.

Test2::IPC - The IPC system used for threading/fork support.

Test2::Formatter - Formatters such as TAP live here.

Test2::Event - Events live in this namespace.

Test2::Hub - All events eventually funnel through a hub. Custom hubs are how "intercept()" and "run_subtest()" are implemented.

CONTACTING US

Many Test2 developers and users lurk on <irc://irc.perl.org/#perl-qa> and <irc://irc.perl.org/#toolchain>. We also have a slack team that can be joined by anyone with an

"@cpan.org" email address <<https://perl-test2.slack.com/>> If you do not have an "@cpan.org" email you can ask for a slack invite by emailing Chad Granum <exodist@cpan.org>.

SOURCE

The source code repository for Test2 can be found at <http://github.com/Test-More/test-more/>.

MAINTAINERS

Chad Granum <exodist@cpan.org>

AUTHORS

Chad Granum <exodist@cpan.org>

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