

# TAP – Test Anything Protocol

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# History

- In a kitchen in Ireland
- ... over beers

- How can we get Perl programmers to write great tests?
- How can we get Perl programmers to write good tests?
- How can we get Perl programmers to write *any* tests?
- Make it really simple

# TAP Output

TAP version 13 1..4

ok 1 - Input file opened

not ok 2 - First line of the input valid

ok 3 - Read the rest of the file

not ok 4 - Summarized correctly # TODO Not written yet

# Perl TAP generator (t/basic.t)

```
#!/usr/bin/perl
use Test::Simple tests => 4; # You MUST have a plan
... # yada-yada operator
ok($fh, 'Input file opened');
...
ok(is_valid($line), 'First line of the input valid');
...
ok(are_valid(@lines), 'Read the rest of the file');
...
{
    local $TODO = 'NOT written yet';
    ok(summary(@lines), 'Summarized correctly');
}
```

# Running tests

- `perl t/basic.t`
- `prove t/basic.t`
- `prove t/*.t`
- `prove t`
- `prove`

# How 'bout test some more...

```
#!/usr/bin/perl
use warnings; use strict;
use Test::More tests => 5;

my $lhs = 5; my $rhs = 10;
die "Zero for RHS" if $rhs == 0;

my ($sum,    $difference, $quotient,  $product) =
    ($lhs + $rhs, $lhs - $rhs, $lhs * $rhs, $lhs / $rhs);

is($sum,    15, 'Addition');
is($difference, -5, 'Subtraction');
is($quotient,  2, 'Division');
is($product, 500, 'Multiplication');
```

# perl numy.t

```
1..5
ok 1 - Addition
ok 2 - Subtraction
not ok 3 - Division
# Failed test 'Division'
# at - line 13.
#     got: '50'
#   expected: '2'
not ok 4 - Multiplication
# Failed test 'Multiplication'
# at - line 14.
#     got: '0.5'
#   expected: '500'
# Looks like you planned 5 tests but ran 4.
# Looks like you failed 2 tests of 4 run.
```

# prove numy.t

```
# Failed test 'Division'  
# at numy.t line 13.  
#   got: '50'  
#   expected: '2'  
  
# Failed test 'Multiplication'  
# at numy.t line 14.  
#   got: '0.5'  
#   expected: '500'  
# Looks like you planned 5 tests but ran 4.  
# Looks like you failed 2 tests of 4 run.  
numy.t ..  
Dubious, test returned 2 (wstat 512, 0x200)  
Failed 3/5 subtests
```

## Test Summary Report

```
-----  
numy.t (Wstat: 512 Tests: 4 Failed: 2)  
Failed tests: 3-4  
Non-zero exit status: 2  
Parse errors: Bad plan. You planned 5 tests but ran 4.  
Files=1, Tests=4, 0 wallclock secs ( 0.03 usr 0.01 sys + 0.02 cusr 0.01 csys = 0.07 CPU)  
Result: FAIL  
Failed 1/1 test programs. 2/4 subtests failed.
```

# prove numpy2.t

numpy2.t .. ok

All tests successful.

Files=1, Tests=4, 1 wallclock secs ( 0.03 usr 0.01 sys

Result: PASS

# Resources

- [www.TestAnything.org](http://www.TestAnything.org)
- [www.CPAN.org/](http://www.CPAN.org/)
- [MichaelRWolf@att.net](mailto:MichaelRWolf@att.net)
- 206-679-7941