
PTools

Perl Tools and Applications

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1 PTools

PTools is a collection of related library modules and applications written in Perl. It includes:

- A framework for writing (mostly) command-line applications, with support for command-line arguments, logging, configuration files, and testing.
- The PFC parser tools: a library of functional combinators, a parser generator and a graphical grammar “explorer”.
- The CF2 configuration language and compiler.
- A collection of miscellaneous library modules.

PFC and CF2 are documented separately. This document is a work-in-progress which is intended to cover the remaining elements.

1.1 Installation

Unpacking the distributed tar file creates a directory `ptools-version`. This documentation uses the name *topdir* to refer to the full pathname of this directory.

All of the tools are accessed via the single `ptools` command. This can be executed by using the full pathname:

```
→ topdir/Perl/ptools
```

or by including `topdir/Perl` in the path:

```
→ PATH=$PATH:topdir/Perl  
→ ptools
```

or by symlinking the `ptools` command to a directory in the path:

```
→ ln -s topdir/Perl/ptools ~/bin  
→ ptools (assuming ~/bin is in your $PATH)
```

Do not copy the `ptools` file itself - it uses its own location to locate the rest of the package.

The installation can be checked by running the basic unit tests:

```
→ ptools test
```

This should report “all tests OK”.

For a full list of commands:

```
→ ptools help
```

For a full list of options to a command:

```
→ ptools cf2 help -v  
→ ptools test help -v  
...
```



The following sections are still to be done:

2 The PTools Framework

2.1 Creating a New Project

2.2 Command-Line Options

2.3 Logging

2.4 Configuration

2.5 Testing

2.6 Documentation

2.7 Publishing

3 Other Modules

3.1 Reading & Writing Files

3.2 Shell Command Execution

3.3 Transforming File Hierarchies

3.4 ANSI Control Sequences

3.5 Converting Mac documents to PDF

3.6 Remote File Sync

3.7 Time/Date Formatting & Parsing

3.8 Mac Keychain Utilities

3.9 HTML Element Creation

3.10 PGP Wrappers

Appendix A Change Log

v2.6 2/11/23:

- cf2: add support for “strings”s (with interpolation) as well as 'literal's
- cf2: add support for regexs with =~ and !~ and match() function
- cf2: comparing different scalar types is now an error (e.g. 3=='3' is an error)
- cf2: function names are now case-insensitive
- cf2: ipaddr(), iphost() & read() functions
- cf2: add support for multiple renderers - json & perl exemplars
- cf2: fix bug in inline conditionals containing refs/selectors
- pfc: report separator as expected token when using sepby
- cf2: aggregate expected operators when reporting parse errors

v2.5 18/10/23:

- ptools: publish tool for public release
- ptools: fix unicode bug when writing to stdout
- cf2: major documentation update
- cf2: support duplicate assignments with the same value
- cf2: remove list merge to support commutative block merge
- cf2: support for conditionals
- cf2: support for external functions: defined, downcase, fail, join, max, topdir, typeof, upcase, warn
- cf2: support for macros
- cf2: syntax change: +> to ~>
- cf2: change include to import
- cf2: support for external mutations: ~ (f) >
- cf2: various bug fixes
- cf2: evaluation debugger (-Deval)

v2.4 13/9/23:

- cf2: added support for private resources
- cf2: added expressions
- cf2: always display => instead of +> in compiled output
- cf2: distinct number/string/bool types
- cf2: -o options supports multiple output files & resource paths
- cf2: reads pgp-signed sources
- cf2: fixed various taint issues

v2.3 7/9/23:

- cf2: replaced parse-time import with eval-time include
- cf2: added support for pgp-signed include files
- cf2: small bug/warning fixes

v2.2 28/8/23:

- cf2: added keepass support
- ptools: added pgp module
- ptools: added keepass module
- ptools: rewritten keychain module