App::MechaCPAN

Easy, opinionated perl deployments

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SafeSchools: Online Safety Compliance for Schools

Catalyst, DBIx::Class, Template Toolkit, etc

How do we did deployments, circa 2010

```
foreach $machine (@allmachines) {
    foreach my $pkg (@allpackages) {
        cpan $pkg
    }
}
```

Problems

Unrepeatable

One machine had a different version of a module that caused a sometimes bug when installed days apart

Unreliable

Very dependant on the installed version of perl

Scales Poorly

Had to clone a machine or otherwise hack the machine to get a new machine for the server pool

Lessons Learned

Don't use the system perl

While convenient, it's often behind and has module versions you shouldn't upgrade, even if you need to

Don't install global modules

This allows for reinstalling modules without reinstalling perl

Don't install latest version

Installing exact version of all dependencies means deployments can be reproduced

Solutions Discovered

perlbrew or plenv

For installing and managing multiple versions of perl
I prefer plenv because I don't like the symlink

cpanm

The `-L` option installs into a directory usable by local::lib

local::lib

Allows the easy use of a local/ directory for all CPAN dependencies

Carton

This allows us to use identical module versions in development and production

How we do deployments today

```
git clone git://github.com/tokuhirom/plenv.git ~/.plenv
git clone git://github.com/tokuhirom/Perl-Build.git ...
plenv install-cpanm
cpanm Carton
carton install --deployment
cpanm -L local https://github.com/$DAYJOB/$PRIVATE_REPO.git
```

Better, but...

A single tool would be nice

App::MechaCPAN

MechaCPAN was created to mechanize CPAN things

Mechanize, as in do automatically

MechaCPAN tries to be easy to use

MechaCPAN can install any version of perl after 5.14

MechaCPAN can install modules from CPAN

MechaCPAN can install perl and modules at once

MechaCPAN can install perl and modules at once

.perl-version
cpanfile
cpanfile.snapshot

MechaCPAN has no other dependency but perl

DarkPan Friendly

Install non-CPAN modules at the same time as CPAN modules (work in progress)

Easy to get

https://get.mechacpan.us

MechaCPAN is opinionated

MechaCPAN creates self-contained deployments

Everything need to run is in a single directory

MechaCPAN only writes to the local/ directory

Everything: perl, modules, logs

MechaCPAN installs in local/perl/

My user can install perl and the web user can run it, which is harder to do with home directories

lib/ and local/ are in @INC by default

Tests are skipped if it seems unlikely to fail

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cpanfile.snapshot means someone has tested before

In conclusion

How I hope to do deployments in the future

```
mechacpan deploy
```

```
{atrodo@lightning-talk-tpcislc}> curl https://get.mechacpan.us | perl - deploy
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 47496  100 47496    0     0   1576k      0 --:--:-- --:--:-- --:--:-- 1599k

Installing perl 5.26.2
Installed perl 5.26.2
Installed perl 5.26.2
Installed      DBD::SQLite
Installed      DBI
Installed      JSON::MaybeXS
Installed      Cpanel::JSON::XS
Up to date     JSON::PP
Prerequisites  Plack
Installed      File::ShareDir::Install
Installed      Apache::LogFormat::Compiler
Installed      Module::Build::Tiny
Installed      ExtUtils::Config
Installed      ExtUtils::Helpers
Installed      ExtUtils::InstallPaths
Installed      Test::Harness
Installed      POSIX::strftime::Compiler
Installed      Cookie::Baker
Installed      URI
Installed      Devel::StackTrace
Installed      Devel::StackTrace::AsHTML
Installed      File::ShareDir
Installed      Class::Inspector
Installed      Filesys::Notify::Simple
Prerequisites  HTTP::Entity::Parser
Prerequisites  HTTP::MultiPartParser
Building       Test::Deep
```

If you want to deploy self-contained applications

D.D.M.T.

If you want to deploy self-contained applications

Don't Delay, MechaCPAN today

Thank You

https://metacpan.org/pod/App::MechaCPAN
https://get.mechacpan.us