

perl Roll: Users Guide

5.4.3 Edition

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Preface

The perl Roll installs the perl RPM, CPAN support utilities and various CPAN modules that are used for creating Rocks based RPMs from CPAN modules.

Please visit the Perl site¹ and the CPAN site² to learn more about their release and the individual software components.

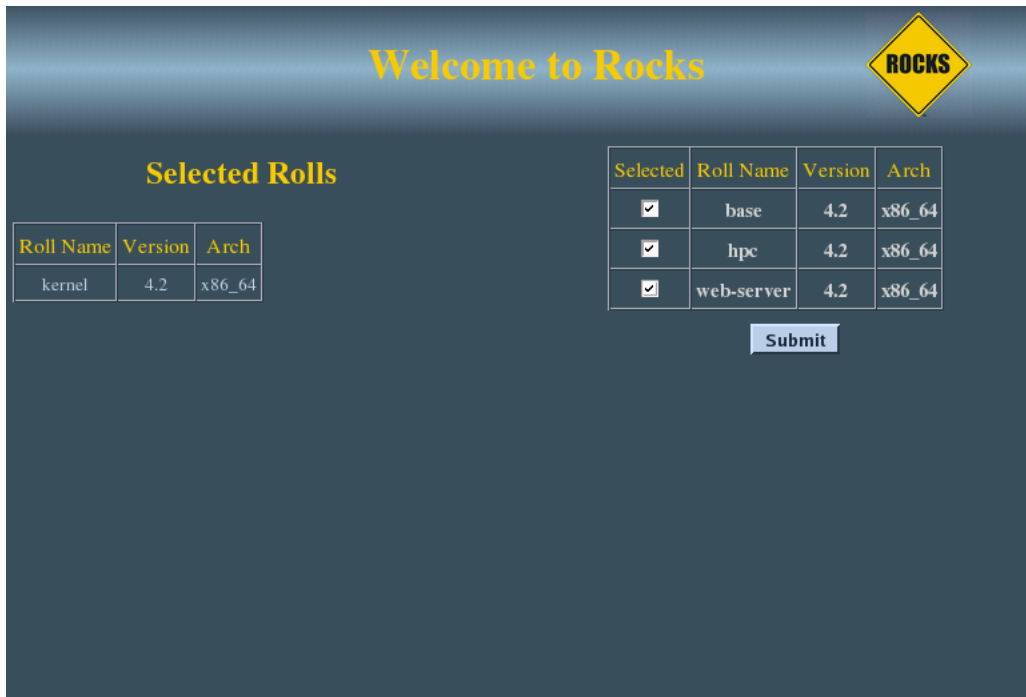
Notes

1. <http://www.perl.org>
2. <http://www.cpan.org>

Chapter 1. Installing the Perl Roll

1.1. On a New Server

The perl roll should be installed during the initial installation of your server (or cluster). This procedure is documented in section 1.2 of the Rocks® usersguide. You should select the perl roll from the list of available rolls when you see a screen that is similar to the one below.



1.2. On an Existing Server

The perl Roll may also be added onto an existing server (or frontend). For sake of discussion, assume that you have an iso image of the roll called `perl.iso`. The following procedure will install the Roll, and after the server reboots the Roll should be fully installed and configured.

```
$ su - root
# rocks add roll perl.iso
# rocks enable roll perl
# cd /export/rocks/install
# rocks create distro
# rocks run roll perl | bash
# init 6
```

Chapter 2. Using the perl Roll

2.1. Using the perl Roll

The version of perl installed with this release of the Perl Roll is Perl 5.14.1.

The various CPAN modules that are included with this roll, are compiled and installed against the aforementioned version of Perl.

Tutorials for using Perl and its components are available from the [Perl site](#)¹ and from [CPAN](#)²

2.1.1. Perl Location

The Perl roll installs Perl 5.14.1 in `/opt/perl`.

All the CPAN modules that are provided in the Perl roll are also installed in `/opt/perl`.

2.1.2. Creating RPM from CPAN modules

The Perl roll introduces an experimental feature of creating Rocks RPMS from CPAN modules. We believe this is a better method of distributing CPAN modules across a cluster than using CPAN by hand on every single node that requires it.

With the release of the Perl roll, both `Makefile.PL` and `Build.PL` methods of building and installing CPAN modules are supported.

To build an RPM from CPAN, we will use the `cpan2dist` utility that comes with the core of Perl.

To build an RPM from CPAN, we need to make sure that when running `cpan2dist`, we don't create RPMS for modules that are already installed on the system. So we create a file called `modules.ignore` that contains a list of all modules that we want to ignore during a build.

The easiest way to create `modules.ignore` is to obtain information about installed modules from the RPMS that are already present and installed on the system.

```
# for i in `rpm -qa | grep -G "^opt-perl"`; do \  
  rpm -q --provides $i | grep -E "^perl(\" | \  
  sed -r -e 's/^perl\(/^/' -e 's/\\)[ \\t]*(=[ \\t]*[.0-9]+)*$/$/'; \  
  done | sort | uniq > modules.ignore
```

Now that we have our ignore list, we can try to build an RPM from CPAN. For this example, we will use the `Params::Validate` module from CPAN.

Example 2-1. Running `cpan2dist` to create Rocks RPM

```
# /opt/perl/bin/cpan2dist --format CPANPLUS::Dist::Rocks \  
  --ignorelist modules.ignore --buildprereq --force \  
  --verbose Params::Validate
```

```
[MSG] Checking if source files are up to date
[MSG] Updating source file '01mailrc.txt.gz'
[MSG] Trying to get 'ftp://ftp.cpan.org/pub/CPAN/authors/01mailrc.txt.gz'
[MSG] Updating source file '03modlist.data.gz'
[MSG] Trying to get 'ftp://ftp.cpan.org/pub/CPAN/modules/03modlist.data.gz'
[MSG] Updating source file '02packages.details.txt.gz'
[MSG] Trying to get 'ftp://ftp.cpan.org/pub/CPAN/modules/02packages.details.txt.gz'
[MSG] No '/export/cpan/cpanplus/custom-sources' dir, skipping custom sources
[MSG] Rebuilding author tree, this might take a while
[MSG] Rebuilding module tree, this might take a while
[MSG] No '/export/cpan/cpanplus/custom-sources' dir, skipping custom sources
[MSG] No '/export/cpan/cpanplus/custom-sources' dir, skipping custom sources
[MSG] Writing compiled source information to disk. This might take a little while.
[MSG] Trying to get 'ftp://ftp.cpan.org/pub/CPAN/authors/id/D/DR/DROLSKY/Params-Validate-1.00.tar.gz'
[MSG] Trying to get 'ftp://ftp.cpan.org/pub/CPAN/authors/id/D/DR/DROLSKY/CHECKSUMS'
[MSG] Checksum matches for 'Params-Validate-1.00.tar.gz'
.....
[MSG] RPM created successfully: /state/partition1/devel/misc/cpan/Params-Validate/x86_64/opt-perl-Pa
Created 'CPANPLUS::Dist::Rocks' distribution for Params::Validate to:
  /state/partition1/devel/misc/cpan/Params-Validate/x86_64/opt-perl-Params-Validate-1.00-0.x86_64.rpm
```

When you see the last line that states that the Params::Validate RPM was created successfully, and its location, you may use the RPM to install the CPAN module across your entire cluster.

The **cpan2dist** command in the above example has an option `--buildprereq`. This option builds any prerequisites that the module has, and creates RPMS for those prerequisites as well. These RPMS are in various subdirectories in your build directory.

For more information about using the **cpan2dist** command, please run the `/opt/perl/bin/cpan2dist` command without any arguments.

Notes

1. <http://www.perl.org>
2. <http://www.cpan.org>

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