

# Perl Module Installation

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## Overview

Perl modules allow you to extend cPanel & WHM's functionality. For example, you can use Perl modules to add functions to cPanel & WHM.

### Warning:

Before you install a module, make **certain** that it will function correctly with the cPanel-provided Perl environments. For more information, read our [Guide to Perl in cPanel & WHM](#) documentation.

### Note:

In the examples throughout this document, `Module::Name` is the name of the custom Perl module that you wish to install.

## Custom modules that ship with cPanel & WHM

### Warning:

Our upgrades to Perl may break custom code and modules that you used in previous versions of cPanel & WHM.

cPanel & WHM versions 56 through 62 ship with binaries that we compile against Perl version 5.22. This change directly affects any custom Perl code that you execute from cPanel binaries. It is critical that you test your plugins and hook code against Perl 5.22 to ensure that they continue to work correctly.

## Install modules to the system Perl binary

To install a Perl module to the system's Perl environment (`/usr/bin/perl`), use one of the following methods:

Method	Description	Example command
Install from the WHM interface.	To install a module to the system Perl environment, use WHM's <i>Module Installers</i> interface ( <i>WHM &gt;&gt; Home &gt;&gt; Software &gt;&gt; Module Installers</i> ).  <div data-bbox="586 1650 1008 1770"><b>Note:</b> To use this interface, you <b>must</b> have compiler access.</div>	

<p>Install from the command line with the <code>/scripts/perlinstaller</code> script.</p>	<p>The <code>/scripts/perlinstaller</code> script requires that you include, as an argument, the name of the module that you wish to install. Make <b>certain</b> that you use the CPAN convention for the module name.</p> <div data-bbox="586 289 1008 842" style="border: 1px solid orange; padding: 5px;"> <p><b>Notes:</b> When you use this script, you can include the <code>--force</code> flag. This flag causes the system to ignore errors and warnings, and can result in the installation of broken modules.</p> <ul style="list-style-type: none"> <li>• The CPAN utility on your server is cPanel's version of the <code>App::cpanminus</code> application. For more information, read the <a href="#">cpanminus</a> documentation.</li> <li>• Run the <code>/scripts/perlinstaller</code> script without arguments to enter an interactive shell that you can use to fully manage CPAN module installations.</li> </ul> </div>	<div data-bbox="1070 138 1416 312" style="border: 1px dashed blue; padding: 5px;"> <pre>/scripts/perlinstaller Module::Name</pre> </div>
<p>Install from the command line with the <code>cpan</code> command.</p>	<p>The <code>cpan</code> command calls the CPAN utility. You <b>must</b> include, as an argument, the name of the module that you wish to install. Make <b>certain</b> that you use the CPAN convention for the module name.</p>	<div data-bbox="1070 888 1416 1026" style="border: 1px dashed blue; padding: 5px;"> <pre>cpan Module::Name</pre> </div>

## Install modules to the cPanel Perl installation

To install a Perl module to the cPanel-included Perl installation (`/usr/local/cpanel/3rdparty/bin/perl`), use the following method:

Method	Description	Example Command
<p>The <code>/usr/local/cpanel/3rdparty/perl/522/bin/cpanm</code> tool.</p>	<p>When you use this tool, you <b>must</b> include, as an argument, the name of the module that you wish to install.</p> <ul style="list-style-type: none"> <li>• Make <b>certain</b> that you use the CPAN convention for the module name.</li> <li>• Include the <code>-i</code> option to indicate that you wish to install the module.</li> </ul>	<div data-bbox="1070 1346 1416 1556" style="border: 1px dashed blue; padding: 5px;"> <pre>/usr/local/cpanel/3rdparty/perl/522/bin/cpanm -i Module::Name</pre> </div>

## Confirm that your module installed correctly

To confirm that the modules you installed to the system's Perl binary are functional, run the following command, where `Module::Name` is the name of the module:

```
/usr/bin/perl -MModule::Name -e 'print $Module::Name::VERSION . "\n"'
```

To confirm that the modules you installed to the cPanel-included Perl installation are functional, run the following command, where `Module::Name`

e is the name of the module:

```
/usr/local/cpanel/3rdparty/perl/514/bin/perl -MModule::Name -e 'print $Module::Name::VERSION . "\n"'
```

If the command responds with the version of the module that you installed, the installation was successful.

## Manage installed modules

The `/scripts/perlmods` script allows you to use the `Perl::Mod` module in order to manage the modules on your system.

Use the following flags to troubleshoot module installations:

- `-l` — Use the `Perl::Mod` module to list all of the installed modules for your system.
- `-s` — Use the `Perl::Mod` module to search for an installed module.
- `-u` — Use the `Perl::Mod` module to uninstall modules.

## Troubleshoot module problems

### Error logs

Error logs provide additional insight into problems on your server. cPanel & WHM writes `STDERR` (standard error) output to the `/usr/local/cpanel/logs/error_log` file whenever it encounters an error.

### Use strace

Some errors require that you use the `strace` (system trace) command to view additional output that does not write to the `/usr/local/cpanel/logs/error_log` file.

To view additional error information, run the following command **while** the system experiences the problem:

```
strace -s 4096 -fvt -o /root/strace.issue.at.hand -p `cat /var/run/cpsrvd.pid`
```

### @INC errors

When you encounter @INC array errors, you will see a message that resembles the following example in the `/usr/local/cpanel/logs/error_log` file:

```
Can't locate DB_File.pm in @INC (@INC contains: /usr/local/cpanel /usr/local/lib/perl5/5.8.8/x86_64-linux /usr/local/lib/perl5/5.8.8 /usr/local/lib/perl5/site_perl/5.8.8/x86_64-linux /usr/local/lib/perl5/site_perl/5.8.8 /usr/local/lib/perl5/site_perl .) at /scripts/spamassassin_dbm_cleaner line 14.
```

In this example, the system could not locate the Perl module. The error message also lists the locations in which the system searched for the module.

If you encounter this error, perform the following actions to resolve the problem:

- Place a copy of the module in one of the locations that the error message lists.
- Create a symlink from one of the listed locations to the location of the module.
- Resolve an issue in the module itself during build time.

To view the current @INC array paths, run the `perl -V` command as the `root` user. The system will return output that resembles the following example:

```
Built under linux
Compiled at Jan 28 2011 08:49:59
@INC:
 /usr/lib/perl5/site_perl/5.8.8/i386-linux-thread-multi
 /usr/lib/perl5/site_perl/5.8.8
 /usr/lib/perl5/site_perl
 /usr/lib/perl5/vendor_perl/5.8.8/i386-linux-thread-multi
 /usr/lib/perl5/vendor_perl/5.8.8
 /usr/lib/perl5/vendor_perl
 /usr/lib/perl5/5.8.8/i386-linux-thread-multi
 /usr/lib/perl5/5.8.8
```

## Additional documentation

[Suggested documentation](#) [For cPanel users](#) [For WHM users](#) [For developers](#)

- [Perl Module Installation](#)
- [Install a Perl Module](#)
- [Module Installers](#)
  
- [Perl Modules](#)
  
- [Perl Module Installation](#)
- [Install a Perl Module](#)
- [Troubleshooting Guide for Perl and CGI Scripts](#)
- [CVE-2016-1238 Perl](#)
- [Module Installers](#)
  
- [Guide to Perl in cPanel - Custom Modules](#)
- [Guide to Perl](#)
- [Guide to Standardized Hooks - Hook Action Code](#)
- [Tutorial - Create a New Paper Lantern Interface](#)
- [Guide to Perl in cPanel - Perl Environments](#)