

# Puppet Module Cheat Sheet

- Modules are directories with a predictable structure.
- Puppet can automatically load manifests, files, and code from modules in its modulepath. Use `puppet --configprint modulepath` to see where Puppet expects to find modules on your system.

## Example Module: `/etc/puppetlabs/puppet/modules/apache`

### manifests

This directory holds the module's Puppet code.

- Each `.pp` file should contain one and only one class or defined type.
- Filenames and class/defined type names are related; see the examples below.
- Within a module, the special `$module_name` variable always contains the module's name.

#### `apache/manifests/init.pp`

```
class apache {  
  ...  
}
```

Init.pp is special; it should contain a class (or define) with the same name as the module.

#### `apache/manifests/vhost.pp`

```
define apache::vhost ($port, $docroot) {  
  ...  
}
```

Other classes (and defines) should be named `modulename::filename` (without the `.pp` extension).

#### `apache/manifests/config/ssl.pp`

```
class apache::config::ssl {  
  ...  
}
```

Subdirectories add intermediate namespaces.

### lib

This directory holds Ruby plugins, which can add features to Puppet and Facter.

#### `apache/lib/puppet/type/apache_setting.rb`

A custom type.

#### `apache/lib/puppet/parser/functions/htpasswd.rb`

A custom function.

#### `apache/lib/facter/apache_confdir.rb`

A custom fact.

### files

Nodes can download any files in this directory from Puppet's built-in file server.

- Use the `source` attribute to download file contents from the server.
- Use `puppet:///` URIs to specify which file to fetch.
- Files in this directory are served at `puppet:///modules/modulename/filename`.

#### `apache/files/httpd.conf`

To fetch this file:

```
file {'/etc/apache2/httpd.conf':  
  ensure => file,  
  source => 'puppet:///modules/apache/httpd.conf',  
}
```

#### `apache/files/extra/ssl`

Puppet's file server can navigate any subdirectories:

```
file {'/etc/apache2/httpd-ssl.conf':  
  ensure => file,  
  source => 'puppet:///modules/apache/extra/ssl',  
}
```

### templates

This directory holds ERB templates.

- Use the `template` function to create a string by rendering a template.
- Use the `content` attribute to fill file contents with a string.
- Template files are referenced as `modulename/filename.erb`.

#### `apache/templates/vhost.erb`

To use this template:

```
file {'/etc/apache2/sites-enabled/wordpress.conf':  
  ensure => file,  
  content => template('apache/vhost.erb'),  
}
```