MDLog:/sysadmin

The Journal Of A Linux Sysadmin

Managing Apache2 Modules the Debian Way

May 30th, 2006 | Comments

The **Apache2 HTTP Server** is a modular program, where we can choose its functionality by including in the server a set of modules. The modules can be *statically* compiled into the httpd binary when the server is built. Alternatively, modules can be compiled as *Dynamic Shared Objects (DSOs)* that exist separately from the main httpd binary file.

Normally enabling one particular apache DSO module will involve editing the main apache configuration file and adding a **LoadModule** line to enable the loading of the particular module. Depending from the module itself, we might need to add also some configuration directives. This will work fine on Debian also, but I am going to show you the Debian particular method of managing apache2 modules.

Regardless of the apache **MPM** (Multi-Processing Modules) you are using: *apache2-mpm-prefork*, *apache2-mpm-worker or apache2-mpm-perchild* after the installation you will end up with some default modules: some already enabled and some ready to be used. Opposed to a RedHat based system for example (where they will try to enable all the possible modules) the *Debian package* will enable by default only a very small amount of modules. Here are the modules enabled by default:

Compiled statically inside the apache2 binary: *core*, *http_core*, *prefork/worker/perchild*, *mod_access*, *mod_auth*, *mod_log_config*, *mod_logio*, *mod_env*, *mod_setenvif*, *mod_mime*, *mod_status*, *mod_autoindex*, *mod_negotiation*, *mod_dir*, *mod_alias*, *mod_so*.

- You can get the list of compiled in modules from the command line with, **apache2 -l**
- These modules can't be disabled without recompiling the apache package
- For more details on the build-in modules you can check Appendix 1.

Standard apache2 modules installed and ready to be enabled: *actions*, *asis*, *auth_anon*, *auth_dbm*, *auth_digest*, *auth_ldap*, *cache*, *cern_meta*, *cgi*, *cgid*, *dav*, *dav_fs*, *deflate*, *disk_cache*, *expires*, *ext_filter*, *file_cache*, *headers*, *imap*, *include*, *info*, *ldap*, *mem_cache*, *mime_magic*, *proxy*, *proxy_connect*, *proxy_ftp*, *proxy_http*, *rewrite*, *speling*, *ssl*, *suexec*, *unique_id*, *userdir*, *usertrack*, *vhost_alias*.

- only one module is enabled by default: mod_userdir
- You can enable any of these modules at any time with as shown bellow.
- For more details on the standard modules installed you can check Appendix 2.

Other apache2 modules available: you can install additional apache2 modules that are not standard if needed. Probably you will like to have php installed that way, but maybe some others based on the particular need. The installation uses the regular apt commands, for example:

```
aptitude install libapache2-mod-php4
```

The list of additional modules that can be installed includes: *mod-geoip*, *mod-jk*, *mod-mono*, *mod-perl2*,*mod-php4*, *mod-php5*, *mod-python*, *mod-rpaf*, *mod-ruby*, *mod-suphp*.

- For the full list of extra modules available you can check Appendix 3.
- Normally when you install one of the extra modules the debian package will automatically enable it. If needed, you can disable it as shown bellow (if you don't want to completely remove it).

Managing apache2 modules in Debian:

The Debian apache2 package provides a unique mode of managing modules. All the loading and configuration related entries are found in individual files inside folder **/etc/apache2/mods-available/**. Here we will find files like module_name.load (and if needed module_name.conf). Also all additional installed modules will place their configuration files in the same place.

Inside the folder **/etc/apache2/mods-enabled/** we will find all the enabled modules. Here we will find symlinks to the files from *mods_available* for all the enabled modules. _Only the modules found in this folder will be enabled at run time. _

For example the configuration file for mod_rewrite includes only one line to load the module:

```
1 cat /etc/apache2/mods-enabled/rewrite.load
2 LoadModule rewrite_module /usr/lib/apache2/modules/mod_rewrite.so
```

So in order to enable one additional module we will only have to create the proper symlinks from the mods-available to the mod-enabled files… But why not use the little tools Debian provides us for this:

- **a2enmod**: enables an apache2 module (this does nothing else but creates the proper links to the module .load and .conf files). For example to enable the rewrite module:

```
1 a2enmod rewrite
```

- **a2dismod**: disables an apache2 module (removes the links from mod-enabled for the module). For example to disable the rewrite module:

```
1 a2dismod rewrite
```

Running **a2enmod** without any parameter will show the possible choices:

```
1 a2enmod
2 Which module would you like to enable?
3 Your choices are: actions asis auth_anon auth_dbm auth_digest auth_ldap cache cern_meta cgi cgid dav dav_fs deflate disk_cache expi
4 Module name?
```

Running **a2dismod** without any parameter again will show us the list of enabled modules and allow to choose one:

```
1 a2dismod
2 Which module would you like to disable?
3 Your choices are: actions cgi deflate geoip headers info php4 rewrite rpaf ruby
4 Module name?
```

Donâ€™t forget to *reload* the apache daemon, after making any changes to the list of enabled modules:

```
/etc/init.d/apache2 reload
```

Posted by Marius Ducea May 30th, 2006 posted in: debian

« Debian Apache2 modules: Appendix 3 - Extra modules available Disable IPV6 module on default kernels »

Comments

heradas jura • 7 years ago
wow this really worked i was going to mess up the whole system
1 • Reply • Share ›

bibe • 10 years ago
I manage more than 10 Apache servers for one of my customers, and each server needs different modules. I personally feel that Debian's way of enabling/disabling Apache modules is by far the smartest in the mainline distributions.

Also, Debian uses the very same concept when enabling/disabling virtualhosts, using a2ensite and a2dissite scripts.
1 • Reply • Share ›

мір бел свет • 3 months ago
+ off -On
a2dismod status; service apache2 restart +
a2dismod cgi; service apache2 restart +
a2dismod -f autoindex; service apache2 restart +

a2dismod access_compat -f; service apache2 restart -
a2dismod actions -f; service apache2 restart +
a2dismod alias -f; service apache2 restart -
a2dismod auth_basic -f; service apache2 restart
a2dismod authn_core -f; service apache2 restart
a2dismod authn_file -f; service apache2 restart
a2dismod authz_core -f; service apache2 restart
a2dismod authz_host -f; service apache2 restart
a2dismod authz_user -f; service apache2 restart
a2dismod dir -f; service apache2 restart +
a2dismod env -f; service apache2 restart +
a2dismod fcgid -f; service apache2 restart +
a2dismod mime -f; service apache2 restart +

see more

• Reply • Share ›

Garu • 4 months ago
yep, that called a simple explanation, thanks!
• Reply • Share ›

Brian Chandler • 2 years ago
saved my day, if you ever write a book explaining apache2 let me know, i will purchase a copy.
• Reply • Share ›

Andrew Swan • 3 years ago
Very helpful, thanks!
• Reply • Share ›

Juho • 4 years ago
epic
• Reply • Share ›

Dave • 7 years ago
Thanks for explaining this!
• Reply • Share ›

jon • 7 years ago
I've been looking for just such a break down of modules enable/disabling for apache! thanks so much!
• Reply • Share ›

- Marius - Mod • 10 years ago
paradox,

You can install one of them as CGI and the other one as regular apache module and have special rules (like *.php5 or per vhost) to use both of them simultaneously. I have a post about this in my drafts and as soon as I'll have some time I'll finish it and post it to the site.

hth,
- Marius -
• Reply • Share ›

paradox • 10 years ago

hi,
great post,

I have a little question, why cant we install php4 and php5 module in the same time?

can't we hack this by making a script that switching between this 2 versions ?

thanks

Reply • Share ›

Ian • 10 years ago

This is a cracking/fantastic approach. The easiest and most sultry I've come across.

Keep up the good work

Ian

Reply • Share ›

splif • 10 years ago

one little change to this would be to reload the web server using: apache2ctl graceful

Reply • Share ›

About Me

My name is **Marius Ducea**. I am an experienced Infrastructure Developer based in the SF Bay Area. You can find out more about me here. I blog here mostly about things I don't want to forget ;)

Do you have an interesting project idea? Or you just want to chat? Get in touch!

Connect

- @mariusducea (Twitter)
- mariusducea (LinkedIn)
- mariusducea (Facebook)
- mariusducea (Google+)
- mdxp (GitHub)

Recent Posts

- Speedup MySQL InnoDB shutdown
- HowTo Migrate to Chef 11
- knife-backup
- knife-cleanup
- Bay Area Chef User Group Update - After One Year

GitHub Repos

- knife-backup

  knife plugin to help backup and restore a chef server.

- aws-env

  Making it easier to work with multiple AWS cli profile keys and configs

- knife-cleanup

  knife plugin to help cleanup unused cookbook versions from a chef server.

- chef-jenkins

  Chef/Jenkins workflow integration

- nodejs-cookbook

- dockerfiles

  Docker playground

- bind9

  Bind9 Cookbook

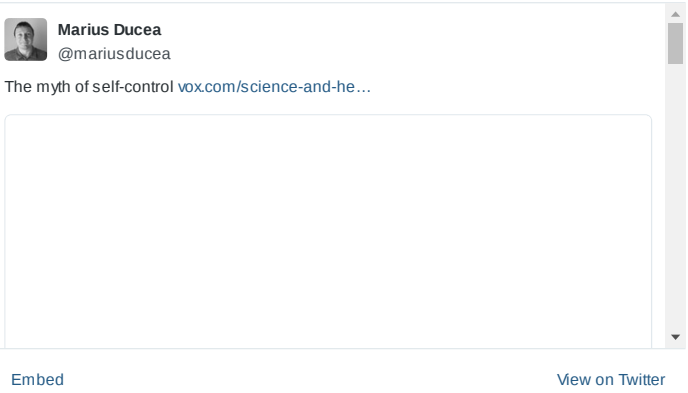
- icinga-cookbook
- opscale-exercise

  A simple 'coding style' exercise

@mdxp on GitHub

Latest Tweets

Tweets by @mariusducea



Categories

- centos
- certifications
- chef
- cloud computing
- conferences
- configuration management
- contribute
- cpanel
- debian
- fedora
- freelancer
- general
- hardware
- linux
- macosx
- meetups
- monitoring
- news from outside
- rhel
- scaling
- security
- tips & tricks
- tools
- ubuntu
- virtualization
- wordpress

Tags

CPanel Centos Cloud Computing Conferences Debian fedora freelancer LISA Linux RHEL Security Tips & Tricks Tools WordPress amazon ami apache apache-tips-and-tricks apache2 apt aws awstats backup bash bcfg2 bnx2 chef datacenter deb debian-etch debian-lenny debian_packages debian_tools dell devops distributions eaccelerator ec2 glance etch github google howto initramfs initrd innodb install interviews kernel knife ldirectord lenny lighttpd load_balancing log_rotation logrotate lvs meetups memcached mysql mysql-5.1 mysqldump nagios news opschef outside php5 polls redhat releases reviews site squeeze ssh stats sudo sysadmin syslog tips trac up2date velocityconf whm xen yum