für Elektrotechnik, Informations- und Telekommunikationstechnik der Stadt Essen

Informationen Apache Konfigurationsdateien

Enthalten Informationen in Form von Direktiven

Detaillierte Informationen über die Direktiven unter: http://httpd.apache.org/docs/2.2/

Die Konfigurations-Direktiven werden generell in drei grundlegende Abschnitte unterteilt:

- 1. Richtlinien, die den grundlegenden Betrieb des Apache-Server-Prozess steuern ("Global Environment").
- 2. Richtlinien der Parameter ob der Server als 'main' oder 'default' Server arbeitet. Das sind alle Anfragen die an den Server gehen und nicht einen virtuellen Host betreffen. Diese Richtlinien bieten auch Standardwerte für die Einstellungen aller virtuellen Hosts.
- 3. Einstellungen für virtuelle Hosts, die Web-Anfragen an verschiedene IP-Adressen oder Hostnamen senden können und sie mit dem gleichen Apache-Server-Prozess behandeln. Namen von Konfiguration- und Logdateien: Wenn die Dateinamen für Server-Control-Dateien mit "/" (oder "Laufwerk:/" für Win32) beginnen, wird der Server diesen expliziten Path verwenden. Beginnen die Dateinamen nicht mit "/", wird der Wert vom Server Verzeichnis vorangestellt -- aus "foo.log" wird "/etc/apache2/foo.log".

Praktisch gibt es die Möglichkeit, mit Include externe Dateien in die Konfigurationsdatei einzubinden, sodass der Administrator die Möglichkeit hat bestimmte Direktiven in verschiedene Dateien auszulagern und somit zusammenzufassen.

Abschnitt 1: Global Environment (Beispiel: Apache2.conf)

This is the main Apache server configuration file. It contains the configuration directives that give the server its instructions. See http://httpd.apache.org/docs/2.4/ for detailed information about the directives and /usr/share/doc/apache2/README.Debian about Debian specific hints.

Summary of how the Apache 2 configuration works in Debian:
The Apache 2 web server configuration in Debian is quite different to upstream's suggested way to configure the web server. This is because Debian's default Apache2 installation attempts to make adding and removing modules, virtual hosts, and extra configuration directives as flexible as possible, in order to make automating the changes and administering the server as easy as possible.

It is split into several files forming the configuration hierarchy outlined below, all located in the /etc/apache2/ directory:

```
/etc/apache2/
#
            |-- apache2.conf
#
                         `-- ports.conf
#
            l-- mods-enabled
                      |-- *.load
`-- *.conf
#
#
            -- conf-enabled
#
#
                        `-- *.conf
             -- sites-enabled
                         `-- *.conf
```

* apache2.conf is the main configuration file (this file). It puts the pieces together by including all remaining configuration files when starting up the web server.

- * ports.conf is always included from the main configuration file. It is supposed to determine listening ports for incoming connections which can be customized anytime.
- * Configuration files in the mods-enabled/, conf-enabled/ and sites-enabled/directories contain particular configuration snippets which manage modules,

global configuration fragments, or virtual host configurations, respectively.

They are activated by symlinking available configuration files from their respective *-available/ counterparts. These should be managed by using our helpers a2enmod/a2dismod, a2ensite/a2dissite and a2enconf/a2disconf. See their respective man pages for detailed information.

* The binary is called apache2. Due to the use of environment variables, in the default configuration, apache2 needs to be started/stopped with /etc/init.d/apache2 or apache2ctl. Calling /usr/bin/apache2 directly will not work with the default configuration.

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```
Global configuration
ServerRoot: The top of the directory tree under which the server's
configuration, error, and log files are kept.
NOTE! If you intend to place this on an NFS (or otherwise network)
mounted filesystem then please read the Mutex documentation (available
at <URL:http://httpd.apache.org/docs/2.4/mod/core.html#mutex>);
you will save yourself a lot of trouble.
Do NOT add a slash at the end of the directory path.
#ServerRoot "/etc/apache2"
The accept serialization lock file MUST BE STORED ON A LOCAL DISK.
Mutex file:${APACHE_LOCK_DIR} default
PidFile: The file in which the server should record its process
identification number when it starts.
This needs to be set in /etc/apache2/envvars
PidFile ${APACHE_PID_FILE}
Timeout: The number of seconds before receives and sends time out.
Timeout 300
KeepAlive: Whether or not to allow persistent connections (more than
one request per connection). Set to "Off" to deactivate.
KeepAlive On
{\tt MaxKeepAliveRequests:} \ {\tt The} \ {\tt maximum} \ {\tt number} \ {\tt of} \ {\tt requests} \ {\tt to} \ {\tt allow}
during a persistent connection. Set to 0 to allow an unlimited amount.
We recommend you leave this number high, for maximum performance.
MaxKeepAliveRequests 100
KeepAliveTimeout: Number of seconds to wait for the next request from the
same client on the same connection.
KeepAliveTimeout 5
These need to be set in /etc/apache2/envvars
User ${APACHE RUN USER}
Group ${APACHE_RUN_GROUP}
HostnameLookups: Log the names of clients or just their IP addresses
e.g., www.apache.org (on) or 204.62.129.132 (off).
The default is off because it'd be overall better for the net if people
had to knowingly turn this feature on, since enabling it means that
each client request will result in AT LEAST one lookup request to the
nameserver.
HostnameLookups Off
ErrorLog: The location of the error log file.
If you do not specify an ErrorLog directive within a <VirtualHost>
container, error messages relating to that virtual host will be
logged here. If you *do* define an error logfile for a <VirtualHost>
container, that host's errors will be logged there and not here.
```

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```
ErrorLog ${APACHE_LOG_DIR}/error.log
LogLevel: Control the severity of messages logged to the error_log.
Available values: trace8, ..., trace1, debug, info, notice, warn,
error, crit, alert, emerg.
It is also possible to configure the log level for particular modules, e.g.
"LogLevel info ssl:warn"
LogLevel warn
Include module configuration:
IncludeOptional mods-enabled/*.load
IncludeOptional mods-enabled/*.conf
Include list of ports to listen on
Include ports.conf
Sets the default security model of the Apache2 HTTPD server. It does
not allow access to the root filesystem outside of /usr/share and /var/www.
The former is used by web applications packaged in Debian,
the latter may be used for local directories served by the web server. If
your system is serving content from a sub-directory in /srv you must allow
access here, or in any related virtual host.
<Directory />
           Options FollowSymLinks
           AllowOverride None
           Require all denied
</Directory>
<Directory /usr/share>
           AllowOverride None
           Require all granted
</Directory>
<Directory /var/www/>
           Options Indexes FollowSymLinks
           AllowOverride All
           Require all granted
</Directory>
#<Directory /srv/>
           Options Indexes FollowSymLinks
#
           AllowOverride None
           Require all granted
#</Directory>
AccessFileName: The name of the file to look for in each directory
for additional configuration directives. See also the AllowOverride
directive.
AccessFileName .htaccess
The following lines prevent .htaccess and .htpasswd files from being
viewed by Web clients.
<FilesMatch "^\.ht">
           Require all denied
</FilesMatch>
The following directives define some format nicknames for use with
a CustomLog directive.
These deviate from the Common Log Format definitions in that they use %0
(the actual bytes sent including headers) instead of %b (the size of the
requested file), because the latter makes it impossible to detect partial
```



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```
requests. #
Note that the use of %{X-Forwarded-For}i instead of %h is not recommended.
Use mod_remoteip instead.
#
LogFormat "%v:%p %h %l %u %t \"%r\" %>s %0 \"%{Referer}i\" \"%{User-Agent}i\"" vhost_combined
LogFormat "%h %l %u %t \"%r\" %>s %0 \"%{Referer}i\" \"%{User-Agent}i\"" combined
LogFormat "%h %l %u %t \"%r\" %>s %0" common
LogFormat "%{Referer}i -> %U" referer
LogFormat "%{User-agent}i" agent

Include of directories ignores editors' and dpkg's backup files,
see README.Debian for details.

Include generic snippets of statements
IncludeOptional conf-enabled/*.conf

Include the virtual host configurations:
IncludeOptional sites-enabled/*.conf

vim: syntax=apache ts=4 sw=4 sts=4 sr noet
```

Abschnitt 2: Main Server Configuration (Beispiel Ports.conf)

```
Wenn Sie nur den Port ändern oder mehrere Ports hier hinzufügen, sollten Sie auch die
VirtualHost Statements in /etc/apache2/sites-enabled/000-default ändern.
This is also true if you have upgraded from before 2.2.9-3 (i.e.
from Debian etch). See /usr/share/doc/apache2.2-
common/NEWS.Debian.gz and README.Debian.gz
#NameVirtualHost *:80
#Listen 80
Angabe des Standard-Ports
<IfModule mod_ssl.c>
If you add NameVirtualHost *:443 here, you will also have to change
the VirtualHost statement in /etc/apache2/sites-available/default-
ssl to <VirtualHost *:443>
Server Name Indication for SSL named virtual hosts is currently not
supported by MSIE on Windows XP.
Listen 443
</IfModule>
<IfModule mod_gnutls.c>
Listen 443
```

</IfModule>

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Konfiguration Apache Web Server

Zusammenfassung - Konfigurationsdateien:

/etc/apache2/httpd.conf

o Generell die Hauptkonfigurationsdatei für den Apache. Bei der Standardinstallation unter Ubuntu ist die Datei leer oder nicht vorhanden.

/etc/apache2/apache2.conf

o Hauptkonfigurationsdatei bei Ubuntu, Verweise zu weiteren Konfigurationsdateien möglich

/etc/apache2/ports.conf

o Konfiguration des Zugriffs, virtuelle Sites und verwendete Ports

/etc/apache2/envvars

o Laufzeitvariablen (z.B. Pfad zum Error Log)

/etc/apache2/conf.d/*

o Weitere Konfigurationsanweisungen (werden automatisch inkludiert)

/etc/apache2/sites-available/default.conf (default-ssl.conf)

o Konfigurations-Dateien für die virtuellen Site(s)

/etc/apache2/sites-enabled/000-default.conf (default-ssl.conf)

Symbolische Links zu den Konfigurations-Anweisungen (Dateien)