

Cheatsheet: Apache Server (httpd) Monitoring



- Note:**
- Direct the curl commands to your server's IP address, e.g. curl localhost/server-status?auto
 - Windows users should download cURL to use the commands below
 - To query these metrics, mod_status and ExtendedStatus must be enabled ([more info here](#))
 - For more info on Apache monitoring, visit [dtdg.co/monitor-apache](#)

Throughput and latency metrics—more info

METRIC DESCRIPTION	COMMAND
Total requests*	curl -s localhost/server-status?auto grep 'Total Accesses'
Total kilobytes served*	curl -s localhost/server-status?auto grep 'Total kBytes'
Total requests served/sec*	curl -s localhost/server-status?auto grep 'ReqPerSec'
Total bytes served/sec*	curl -s localhost/server-status?auto grep 'BytesPerSec'

*Calculated over the server's entire lifetime

Resource utilization and activity metrics—more info

METRIC DESCRIPTION	COMMAND
CPU utilization (over the server's lifetime)	curl -s localhost/server-status?auto grep 'CPUload'
Busy workers	curl -s localhost/server-status?auto grep 'BusyWorkers'
Idle workers	curl -s localhost/server-status?auto grep 'IdleWorkers'
Asynchronous connections: writing*	curl -s localhost/server-status?auto grep 'ConnsAsyncWriting'
Asynchronous connections: keep-alive*	curl -s localhost/server-status?auto grep 'ConnsAsyncKeepAlive'
Asynchronous connections: closing*	curl -s localhost/server-status?auto grep 'ConnsAsyncClosing'

*Only available for [event MPM](#) users

Default directories and config locations (Linux)

INFORMATION	DEBIAN/UBUNTU	RHEL/CENTOS
Main configuration file	/etc/apache2/apache2.conf	/etc/httpd/conf/httpd.conf
Error and access logs	/var/log/apache2	/var/log/httpd
MPM configuration file	/etc/apache2/mods-enabled/<MPM_NAME>.conf	Add/edit the <IfModule MPM_NAME> directive in main config file (location above)
mod_status permissions	/etc/apache2/mods-enabled/status.conf	Edit the <Location /server-status> directive in main config file (location above)

Useful commands (Linux)

ACTION	DEBIAN/UBUNTU	RHEL/CENTOS
Check version of Apache	apachectl -v	httpd -v
Check which modules are loaded	apachectl -M	httpd -t -D DUMP_MODULES
Enable a module*	sudo a2enmod <MODULE_NAME>	Uncomment or add the module to the config file (/etc/httpd/conf.modules.d/00-base.conf)
Disable a module*	sudo a2dismod <MODULE_NAME>	Comment out or remove the module from the config file (/etc/httpd/conf.modules.d/00-base.conf)
Update the MPM* (mpm_worker, mpm_prefork, or mpm_event)	Disable the current MPM module: sudo a2dismod <MPM_NAME> and then enable the desired MPM module: sudo a2enmod <MPM_NAME>	Comment out LoadModule for current MPM module & uncomment desired module in /etc/httpd/conf.modules.d/00-mpm.conf
Check config file syntax	apachectl -t	httpd -t
Restart Apache	sudo apachectl restart	sudo service httpd restart
Gracefully restart Apache	sudo apachectl graceful	sudo service httpd graceful

*Requires a restart to take effect

Access log variables—more info

- To update your log config:
- RHEL/CentOS: Update <IfModule log_config_module> within your main config file (/etc/httpd/conf/httpd.conf)
 - Debian/Ubuntu: Update CustomLog line within Virtual Host file (within /etc/apache2/sites-enabled directory)

Combined LogFormat: "%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-agent}i\""

Common LogFormat: "%h %l %u %t \"%r\" %>s %b"

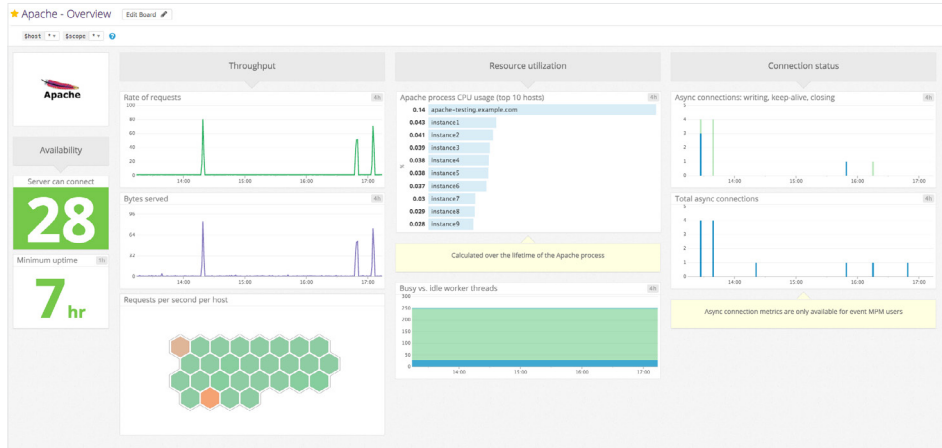
VARIABLE	DEFINITION
%h	Remote hostname
%l	Remote logname
%u	Remote user
%t	Time Apache received the request, formatted as [16/Jun/2017:15:59:09 -0400] with last number as time zone offset from GMT
\"%r\"	First line of the request in quotes (e.g. "GET /server-status?auto HTTP/1.1")
%>s	Final HTTP status of request
%b	Size of response (bytes)
\"%{Referer}i\"	Referer: address of the referring web page
\"%{User-agent}i\"	User-Agent: web browser or agent issuing the client request

Cheatsheet: Apache Server (httpd) Monitoring with Datadog



Note:

- To collect these metrics, your servers must have `mod_status` and `ExtendedStatus` enabled ([more info here](#))
- For metric descriptions and more info: [dtdg.co/monitor-apache](#)



Datadog's [out-of-the-box screenboard](#) for monitoring Apache.

Throughput metrics—more info

METRIC DESCRIPTION	DATADOG METRIC NAME
Total requests over the server's lifetime	<code>apache.net.hits</code>
Total bytes served over the server's lifetime	<code>apache.net.bytes</code>
Requests served/sec*	<code>apache.net.request_per_s</code>
Bytes served/sec*	<code>apache.net.bytes_per_s</code>

*Calculated for each collection period (15–20 seconds)

Resource utilization and activity metrics—more info

METRIC DESCRIPTION	DATADOG METRIC NAME
CPU utilization (%)	<code>system.cpu.system</code>
Busy workers	<code>apache.performance.busy_workers</code>
Idle workers	<code>apache.performance.idle_workers</code>
Asynchronous connections: writing*	<code>apache.conns_async_writing</code>
Asynchronous connections: keep-alive*	<code>apache.conns_async_keep_alive</code>
Asynchronous connections: closing*	<code>apache.conns_async_closing</code>

*Only available for [event MPM](#) users

Default directories and config locations (Linux)

INFORMATION	DEBIAN/UBUNTU	RHEL/CENTOS
Main configuration file	<code>/etc/apache2/apache2.conf</code>	<code>/etc/httpd/conf/httpd.conf</code>
Error and access logs	<code>/var/log/apache2</code>	<code>/var/log/httpd</code>
MPM configuration file	<code>/etc/apache2/mods-enabled/<MPM_NAME>.conf</code>	Add/edit the <code><IfModule MPM_NAME></code> directive in main config file (location above)
<code>mod_status</code> permissions	<code>/etc/apache2/mods-enabled/status.conf</code>	Edit the <code><Location /server-status></code> directive in main config file (location above)

Useful commands (Linux)

ACTION	DEBIAN/UBUNTU	RHEL/CENTOS
Check version of Apache	<code>apachectl -v</code>	<code>httpd -v</code>
Check which modules are loaded	<code>apachectl -M</code>	<code>httpd -t -D DUMP_MODULES</code>
Enable a module*	<code>sudo a2enmod <MODULE_NAME></code>	Uncomment or add the module to the config file (<code>/etc/httpd/conf.modules.d/00-base.conf</code>)
Disable a module*	<code>sudo a2dismod <MODULE_NAME></code>	Comment out or remove the module from the config file (<code>/etc/httpd/conf.modules.d/00-base.conf</code>)
Update the MPM* (<code>mpm_worker</code> , <code>mpm_prefork</code> , or <code>mpm_event</code>)	Disable the current MPM module: <code>sudo a2dismod <MPM_NAME></code> and then enable the desired MPM module: <code>sudo a2enmod <MPM_NAME></code>	Comment out <code>LoadModule</code> for current MPM module & uncomment desired module in <code>/etc/httpd/conf.modules.d/00-mpm.conf</code>
Check config file syntax	<code>apachectl -t</code>	<code>httpd -t</code>
Restart Apache	<code>sudo apachectl restart</code>	<code>sudo service httpd restart</code>
Gracefully restart Apache	<code>sudo apachectl graceful</code>	<code>sudo service httpd graceful</code>

*Requires a restart to take effect

Access log variables—more info

To update your log config:

- RHEL/CentOS: Update `<IfModule log_config_module>` within your main config file (`/etc/httpd/conf/httpd.conf`)
- Debian/Ubuntu: Update `CustomLog` line within Virtual Host file (within `/etc/apache2/sites-enabled` directory)

Combined LogFormat: `"%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-agent}i\""`

Common LogFormat: `"%h %l %u %t \"%r\" %>s %b"`

VARIABLE	DEFINITION
<code>%h</code>	Remote hostname
<code>%l</code>	Remote logname
<code>%u</code>	Remote user
<code>%t</code>	Time Apache received the request, formatted as <code>[16/Jun/2017:15:59:09 -0400]</code> with last number as time zone offset from GMT
<code>\"%r\"</code>	First line of the request in quotes (e.g. <code>"GET /server-status?auto HTTP/1.1"</code>)
<code>%>s</code>	Final HTTP status of request
<code>%b</code>	Size of response (bytes)
<code>\"%{Referer}i\"</code>	<code>Referer</code> : address of the referring web page
<code>\"%{User-agent}i\"</code>	<code>User-Agent</code> : web browser or agent issuing the client request