

Performance Tuning for `nginx`

Nginx (pronounced **engine x**) is a web server with a strong focus on high concurrency, performance and low memory usage. It can also act as a reverse proxy server for HTTP, HTTPS, SMTP, POP3, and IMAP protocols, as well as a load balancer and an HTTP cache.

Configuration Information.

worker_processes: The number of NGINX worker processes. In most cases, running one worker process per CPU core works well. This can be achieved by setting this directive to “`auto`”. There are times when you may want to increase this number, such as when the work processes have to do a lot of disk I/O. The default is 1.

Also this controls number of worker processes Nginx is running. Set `worker_processes` = number of processors in your system. To find out how many processors you have on your server, run the following command:

```
grep processor /proc/cpuinfo | wc -l
```

Current Configuration

```
worker_processes auto;
```

`worker_connections`

If you are running very high traffic sites, its better to increase value of `worker_connections`. Default is 768. Theoretically, nginx can handle max clients = `worker_processes` ** `worker_connections`

We use `worker_connections` = 10240

```
worker_connections 10240;
```

`worker_rlimit_nofile`

Increase number of files opened by `worker_process`. This directive is not present by default. You can add it in `/etc/nginx/nginx.conf` in main section (below `worker_processes`)

We use `worker_rlimit_nofile` 100000;

```
worker_rlimit_nofile 100000;
```

keepalive_requests: The number of requests a client can make over a single keepalive connection. The default is 100, but a much higher value can be especially useful for testing when the load generating tool is sending many requests from a single client.

Current we use `keepalive_requests` 20480;

```
# Use this value for testing once done comment it.
keepalive_requests 20480;
```

Setting `access_log` with buffer. Write the data to file once we have reached the buffer. I/O Operations slow down processing.

```
access_log /var/log/nginx/access.log main buffer=10m;
```

More Information Below.

<http://www.slashroot.in/nginx-web-server-performance-tuning-how-to-do-it>

<https://rtcamp.com/tutorials/nginx/optimization/>

<http://nginx.com/blog/tuning-nginx/>

<https://www.digitalocean.com/community/tutorials/how-to-optimize-nginx-configuration>