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FreeBSD: Nginx Virtual Hosting Configuration

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Q. How do I configure Nginx Web server for virtual hosting (host multiple websites under same IP address - name based virtual hosting)?

NGINX [2]

A. Nginx allows you to host more than one domain name on the same computer and on the same IP address. There are two basic methods of accomplishing virtual hosting: name-based, and IP address or ip-based. This tutorial covers name-based virtual hosting i.e. you can hosts multiple websites (host names) for the same webserver IP address.

FreeBSD [3]

Nginx name-based virtual hosting configurations

You need to create directory structure as follows to host more than two websites under same IP address:

a] **/websites** : Host each domain under this directory. You need to create dirs as follows:

1. /websites/examples.com/http - Html / php / wordpress / forums files for example.com goes here.
2. /websites/examples.com/logs - Log files for example.com goes here.
3. /websites/examples.com/stats - awstats stats files for example.com goes here.

b] **/usr/local/etc/nginx/vhosts**: Host each domains configuration under this directory.

Your sample setup

1. **IP address: 202.54.1.2**
2. **HTTP Port: 80**
3. **Domain1 : theos.in hosted at /websites/theos.in/http**
4. **Domain2 : cyberciti.biz hosted at /websites/cyberciti.biz/http**

Create necessary directories

Type the following commands:

```
# D=/websites
# NROOT=/usr/local/etc/nginx
# mkdir $D
# mkdir $NROOT/vhosts
# mkdir /var/log/nginx/
# chown root:www /var/log/nginx/
```

Create / update default cache all ngnix config file

Open /usr/local/etc/nginx/nginx.conf file, enter:

```
# vi /usr/local/etc/nginx/nginx.conf
```

Update it as follows:

```
user   www www;
worker_processes  1;
```

```
# main server error log
error_log /var/log/nginx/error.log ;
pid /var/run/nginx.pid;


events {
 worker_connections  1024;
}


# main server config
http {
 include        mime.types;
 default_type  application/octet-stream;
 log_format  main  '$remote_addr - $remote_user [$time_local] $request '
                      '"$status" $body_bytes_sent "$http_referer" '
                      '"$http_user_agent" "$http_x_forwarded_for"';


 sendfile         on;
 #tcp_nopush      on;
     #keepalive_timeout  0;
 keepalive_timeout  65;
 gzip  on;


 # default server for ip 202.54.1.2
 server {
         listen            202.54.1.2:80 default;
         server_name      _;
         access_log        /var/log/nginx/access.log main;
         server_name_in_redirect  off;
         location / {
                 index index.html;
                 root  /usr/local/www/nginx;
         }
 }


    # virtual hosting
    include /usr/local/etc/nginx/vhosts/*;
}
```

Where,

- **user www www; :: Setup user and group name for Nginx server.**
- **worker_processes 1; :: nginx has the ability to use more than one worker process for large systems such as SMP system with tons of ram.**
- **error_log /var/log/nginx/error.log ; :: Default error log file.**
- **pid /var/run/nginx.pid; :: Default PID file.**
- **include mime.types; :: Set Multipurpose Internet Mail Extensions (MIME) for www communication from mime.types files.**
- **default_type application/octet-stream; :: Set default header media type of the message content**
- **log_format main '$remote_addr - $remote_user [$time_local] $request ' '"$status" $body_bytes_sent "$http_referer" ' '"$http_user_agent" "$http_x_forwarded_for"'; :: Directive log_format describes the format of a log entry.**
- **sendfile on; :: Activate the usage of sendfile().**
- **tcp_nopush on; :: This directive permits or forbids the use of the socket options TCP_NOPUSH on FreeBSD or TCP_CORK on Linux. This option is only available when using sendfile.**

- **keepalive_timeout 65; :: Set keep alive timeout.**
- **gzip on; :: Turn on gzip**
- **listen 202.54.1.2:80 default; :: Listen to given IP:port.**
- **server_name _; :: Assigns the names of virtual server.**
- **access_log /var/log/nginx/access.log main; :: Set path to access file.**
- **index index.html; :: Set default index file.**
- **root /usr/local/www/nginx; :: Set default document root.**
- **include /usr/local/etc/nginx/vhosts/*; :: Process all vhosts config files.**

Create theos.in - 1st vhost directories

Type the following commands:

```
# mkdir $D/theos.in/{http,logs,stats}
# chown -R theosftpuser:theosftpgroup $D/theos.in/
```

Replace, username:groupname and domain name as per your setup.

theos.in Nginx virtual host config file

Open /usr/local/etc/nginx/vhosts/theos.in.conf file, enter:

```
# vi $NROOT/vhosts/theos.in.conf
```

Append configuration as follows:

```
server {
 listen  80;
        server_name  theos.in www.theos.in;

        access_log  /websites/theos.in/logs/access.log  main;

        location / {
            root   /websites/theos.in/http;
            index  index.php index.html index.htm;
        }

        error_page   500 502 503 504  /50x.html;
        location = /50x.html {
            root   /usr/local/www/nginx-dist;
        }

      # pass the PHP scripts to FastCGI server listening on 127.0.0.1:9000
        location ~ \.php$ {
            fastcgi_pass   127.0.0.1:9000;
            fastcgi_index  index.php;
            fastcgi_param  SCRIPT_FILENAME  /websites/theos.in/http$fastcgi_script_name;
            include        fastcgi_params;
        }

        location ~ /\.ht {
            deny  all;
        }
 }
```

Save and close the file.

Create cyberciti.biz - 2nd vhost directories

Type the following commands:

```
# mkdir $D/cyberciti.biz/{http,logs,stats}
# chown -R user:group $D/cyberciti.biz/
```

cyberciti.biz Nginx virtual host config file

```
# vi $NROOT/vhosts/cyberciti.biz.conf
```

Append configuration as follows:

```
server {
 listen  80;
        server_name  cyberciti.biz www.cyberciti.biz;

        access_log  /websites/cyberciti.biz/logs/access.log  main;

        location / {
            root   /websites/cyberciti.biz/http;
            index  index.php index.html index.htm;
        }

        error_page   500 502 503 504  /50x.html;
        location = /50x.html {
            root   /usr/local/www/nginx-dist;
        }

       # pass the PHP scripts to FastCGI server listening on 127.0.0.1:9000
        location ~ \.php$ {
            fastcgi_pass   127.0.0.1:9000;
            fastcgi_index  index.php;
            fastcgi_param  SCRIPT_FILENAME  /websites/cyberciti.biz/http$fastcgi_script_nam
            include        fastcgi_params;
        }

        location ~ /\.ht {
            deny  all;
        }
 }
```

Save and close the file. Restart Nginx web server [4], enter:

```
# nginx -c /usr/local/etc/nginx/nginx.conf -t
# /usr/local/etc/rc.d/nginx restart
```

> **Continue reading rest of the** *Nginx Webserver Tutorial* **series (TOC):**
>
> 1. FreeBSD Install Nginx Webserver [5]
> 2. FreeBSD: Start / Stop / Restart Nginx Web Server [4]
> 3. FreeBSD: Nginx FastCGI PHP Configuration [1]
> 4. FreeBSD: Nginx Virtual Hosting Configuration

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[4] Restart Nginx web server: **http://www.cyberciti.biz/faq/freebsd-start-stop-restart-nginx-webserver/**

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