

# Nginx

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# Forward Proxy with proxy\_pass Module

## Step 1: Build Nginx with proxy\_pass module from source code

```
sudo -i
mkdir /nginx && cd /nginx
yum install -y gcc pcre-devel openssl-devel zlib-devel patch
wget https://github.com/chobits/nginx_http_proxy_connect_module/archive/refs/tags/v0.0.5.tar.gz
wget http://nginx.org/download/nginx-1.25.3.tar.gz
wget
https://raw.githubusercontent.com/chobits/nginx_http_proxy_connect_module/master/patch/proxy_connect_rewrite_102101.patch
tar -xzf v0.0.5.tar.gz
tar -xzf nginx-1.25.3.tar.gz
cd nginx-1.25.3/
patch -p1 < /nginx/proxy_connect_rewrite_102101.patch
./configure \
--user=www \
--group=www \
--prefix=/usr/local/nginx \
--with-http_ssl_module \
--with-http_stub_status_module \
--with-http_realip_module \
--with-threads \
--add-module=/tmp/nginx_http_proxy_connect_module-0.0.5 \
--with-cc-opt="-Wno-error"
make && make install
useradd www
```

## Step 2: Create a nginx service file

Copy the text below and save it as **/lib/systemd/system/nginx.service**.

[Unit]

Description=The NGINX HTTP and reverse proxy server

After=syslog.target network-online.target remote-fs.target nss-lookup.target

Wants=network-online.target

[Service]

Type=forking

PIDFile=/run/nginx.pid

ExecStartPre=/usr/local/nginx/sbin/nginx-t

ExecStart=/usr/local/nginx/sbin/nginx

ExecReload=/usr/local/nginx/sbin/nginx -s reload

ExecStop=/bin/kill -s QUIT \$MAINPID

PrivateTmp=true

[Install]

WantedBy=multi-user.target

## Step 3: Reload services systemctl daemon-reload

```
systemctl daemon-reload
```

## Step 4: Edit nginx config file

Edit the **/usr/local/nginx/conf/nginx.conf**.

```
user www;
worker_processes auto;
pid /run/nginx.pid;

error_log logs/error.log;
error_log logs/error.log notice;
error_log logs/error.log info;

events {
    worker_connections 1024;
}

http {
    include mime.types;
    default_type application/octet-stream;
```

```

sendfile on;
keepalive_timeout 65;

# Can delete this if you don't need
# For testing purposes
server {
    listen 80;
    server_name localhost;
    location / {
        root html;
        index index.html index.htm;
    }
    error_page 404 /404.html;
}

# Forwarding Configuration
server {
# Listen to what port number?
    listen 8080;

    # dns resolver used by forward proxying
    resolver 192.168.1.4;

    # forward proxy for CONNECT requests
    proxy_connect;
    proxy_connect_allow 443 563;
    proxy_connect_connect_timeout 10s;
    proxy_connect_data_timeout 10s;

    # defined by yourself for non-CONNECT requests
    # Example: reverse proxy for non-CONNECT requests
    location / {
        proxy_pass http://$host;
        proxy_set_header Host $host;
    }
}
}

```

## Step 5: Start nginx service

```
systemctl enable nginx
```

```
systemctl start nginx
```

And then manually configure proxy to clients.

# Reverse Proxy

## Basic

```
server {  
    listen 80 ssl;  
    server_name TEST.LAB.LOCAL;  
  
    location / {  
        proxy_pass http://localhost:8080/examples;  
    }  
}
```

## Set Nginx proxy header values

```
server {  
    listen 80;  
    server_name TEST.LAB.LOCAL;  
  
    location / {  
        proxy_pass http://localhost:8080/examples;  
        proxy_buffering off;  
        proxy_set_header X-Real-IP $remote_addr;  
        proxy_set_header X-Forwarded-Host $host;  
        proxy_set_header X-Forwarded-Port $server_port;  
    }  
}
```

## With SSL

```
server {  
    listen 443 ssl;  
    server_name TEST.LAB.LOCAL;
```

```
ssl_certificate /path/to/ssl_certificate.crt;
ssl_certificate_key /path/to/ssl_private_key.key;

location / {
    proxy_pass http://localhost:8080/examples;
    proxy_buffering off;
    proxy_set_header X-Real-IP $remote_addr;
    proxy_set_header X-Forwarded-Host $host;
    proxy_set_header X-Forwarded-Port $server_port;
}
}
}
```