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nginx, guide, pagespeed, compile, hosting, libressl, headers

Difficulty

Hard

NGINX, PageSpeed, Brotli

This guide assumes you are switched to su - . Please note that during the ./configure steps you need to check for missing libraries, this guide assumes you are using the eSG provided installation image.

Goal

Compile nginx with most modules, including support for http2 and pagespeed.

Steps

EXPORTS used to set versions

You can change the values here to change compiled version.

```
NGINX_VERSION=1.17.4
PS_NGX_EXTRA_FLAGS="--with-ld-opt=-static-libstdc++"
HEADERS_VERSION=0.33
NPS_VERSION=latest-stable
LIBRESSL_VERSION=2.9.2
OPENSSL_VERSION=1.1.1d
```

Building Pre requisites

```
cd ~
mkdir buildnginx
cd ~/buildnginx
useradd nginx
```

Library Prerequisites

```
yum install -y epel-release
yum -y groupinstall 'Development Tools'
```

```
yum -y install gc gcc gcc-c++ pcre-devel zlib-devel make wget openssl-devel
libxml2-devel libxslt-devel gd-devel perl-ExtUtils-Embed GeoIP-devel
gperftools gperftools-devel libatomic_ops-devel perl-ExtUtils-Embed perl-
Digest-SHA1.x86_64 perl-Digest-MD5.x86_64 openssl-devel.x86_64
openssl.x86_64 openssl-libs.x86_64 libuuid-devel
```

Pagespeed Latest Beta

If you would like to build using the latest beta

```
NPS_VERSION=latest-beta
```

Fetch nginx

```
wget http://nginx.org/download/nginx-${NGINX_VERSION}.tar.gz
tar zxfv nginx-${NGINX_VERSION}.tar.gz
```

Fetch libressl

```
wget
http://ftp.openbsd.org/pub/OpenBSD/LibreSSL/libressl-${LIBRESSL_VERSION}.tar
.gz
tar zxfv libressl-${LIBRESSL_VERSION}.tar.gz
cd libressl-${LIBRESSL_VERSION}
cd ~/buildnginx
```

Fetch openssl

Optionally you can use openssl instead of libressl.

```
wget https://www.openssl.org/source/openssl-${OPENSSL_VERSION}.tar.gz
tar zxfv openssl-${OPENSSL_VERSION}.tar.gz
```

Fetch Headers_more

```
wget
https://github.com/openresty/headers-more-nginx-module/archive/v${HEADERS_VE
RSION}.tar.gz -O headers_more-${HEADERS_VERSION}.tar.gz
tar zxfv headers_more-${HEADERS_VERSION}.tar.gz
```

Fetch PageSpeed

```
wget
https://github.com/pagespeed/ngx_pagespeed/archive/${NPS_VERSION}.tar.gz -O
pagespeed-${NPS_VERSION}.tar.gz
tar zxfv pagespeed-${NPS_VERSION}.tar.gz
cd incubator-pagespeed-ngx-${NPS_VERSION}
```

Fetch PSOL

In order to get the version of PSOL build continue with the steps after this one, while configuring nginx you will get an error message providing the version required. In this example the latest-stable is 1.13.35.2.

```
wget https://dl.google.com/dl/page-speed/psol/1.13.35.2-x64.tar.gz
tar zxfv 1.13.35.2-x64.tar.gz
```

Latest Beta: 1.13.35.2-beta Check here for latest release:
https://modpagespeed.com/doc/release_notes

```
wget https://dl.google.com/dl/page-speed/psol/1.13.35.2-x64.tar.gz
tar zxfv 1.13.35.2-x64.tar.gz
```

Fetch Brotli

```
cd ~/buildnginx
git clone https://github.com/google/ngx_brotli.git
cd ngx_brotli
git submodule update --init
```

Fetch vts

```
cd ~/buildnginx
git clone https://github.com/vozlt/nginx-module-vts.git
```

Configure NGINX

```
cd ~/buildnginx
cd nginx-${NGINX_VERSION}
```

Choose between the following:

libreSSL

```
./configure --user=nginx --group=nginx --sbin-path=/usr/sbin/nginx --conf-
path=/etc/nginx/nginx.conf --error-log-path=/var/log/nginx/error.log --http-
log-path=/var/log/nginx/access.log --with-select_module --with-poll_module -
-with-threads --with-file-aio --with-http_ssl_module --with-http_v2_module -
-with-http_realip_module --with-http_addition_module --with-http_xslt_module
--with-http_xslt_module=dynamic --with-http_image_filter_module --with-
http_image_filter_module=dynamic --with-http_geoip_module --with-
http_geoip_module=dynamic --with-http_sub_module --with-http_dav_module --
with-http_flv_module --with-http_mp4_module --with-http_gunzip_module --
with-http_gzip_static_module --with-http_auth_request_module --with-
http_random_index_module --with-http_secure_link_module --with-
http_degradation_module --with-http_slice_module --with-
http_stub_status_module --with-http_perl_module --with-
http_perl_module=dynamic --with-mail --with-mail_ssl_module --with-
mail=dynamic --with-stream --with-stream=dynamic --with-stream_ssl_module --
with-stream_geoip_module --with-stream_geoip_module=dynamic --with-
google_perftools_module --with-pcre --with-libatomic --with-http_v2_module -
-add-module=../incubator-pagespeed-ngx-${NPS_VERSION} ${PS_NGX_EXTRA_FLAGS}
${PS_NGX_EXTRA_FLAGS} --with-openssl=../libressl-${LIBRESSL_VERSION}/ --add-
module=../headers-more-nginx-module-${HEADERS_VERSION}/ --add-
module=../ngx_brotli --add-module=../nginx-module-vts
```

openSSL

```
./configure --user=nginx --group=nginx --sbin-path=/usr/sbin/nginx --conf-
path=/etc/nginx/nginx.conf --error-log-path=/var/log/nginx/error.log --http-
log-path=/var/log/nginx/access.log --with-select_module --with-poll_module -
-with-threads --with-file-aio --with-http_ssl_module --with-http_v2_module -
-with-http_realip_module --with-http_addition_module --with-http_xslt_module
--with-http_xslt_module=dynamic --with-http_image_filter_module --with-
http_image_filter_module=dynamic --with-http_geoip_module --with-
http_geoip_module=dynamic --with-http_sub_module --with-http_dav_module --
with-http_flv_module --with-http_mp4_module --with-http_gunzip_module --
with-http_gzip_static_module --with-http_auth_request_module --with-
http_random_index_module --with-http_secure_link_module --with-
http_degradation_module --with-http_slice_module --with-
http_stub_status_module --with-http_perl_module --with-
http_perl_module=dynamic --with-mail --with-mail_ssl_module --with-
mail=dynamic --with-stream --with-stream=dynamic --with-stream_ssl_module --
with-stream_geoip_module --with-stream_geoip_module=dynamic --with-
google_perftools_module --with-pcre --with-libatomic --with-http_v2_module -
-add-module=../incubator-pagespeed-ngx-${NPS_VERSION} ${PS_NGX_EXTRA_FLAGS}
${PS_NGX_EXTRA_FLAGS} --with-openssl=../openssl-${OPENSSL_VERSION}/ --add-
```

```
module=../headers-more-nginx-module-${HEADERS_VERSION}/ --add-
module=../ngx_brotli
```

Build NGINX

```
make
```

Install NGINX

```
make install
```

Setup Steps

Setup the systemd service

Create the systemd service

Setup the pid directory creation

```
echo "d /var/run/nginx 755 root root" > /usr/lib/tmpfiles.d/nginx.conf
```

Edit nginx.conf

```
pid /var/run/nginx/nginx.pid;
user nginx nginx;
```

Create temp folder on boot

Used for the pid file

vim /usr/lib/tmpfiles.d/nginx.conf

```
d /var/run/nginx 755 root root
```

Setup Firewalld

Firewalld

From:
https://esgr.in/wiki/ - **eSGR Documentation**

Permanent link:
https://esgr.in/wiki/software/nginx?rev=1570301366

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