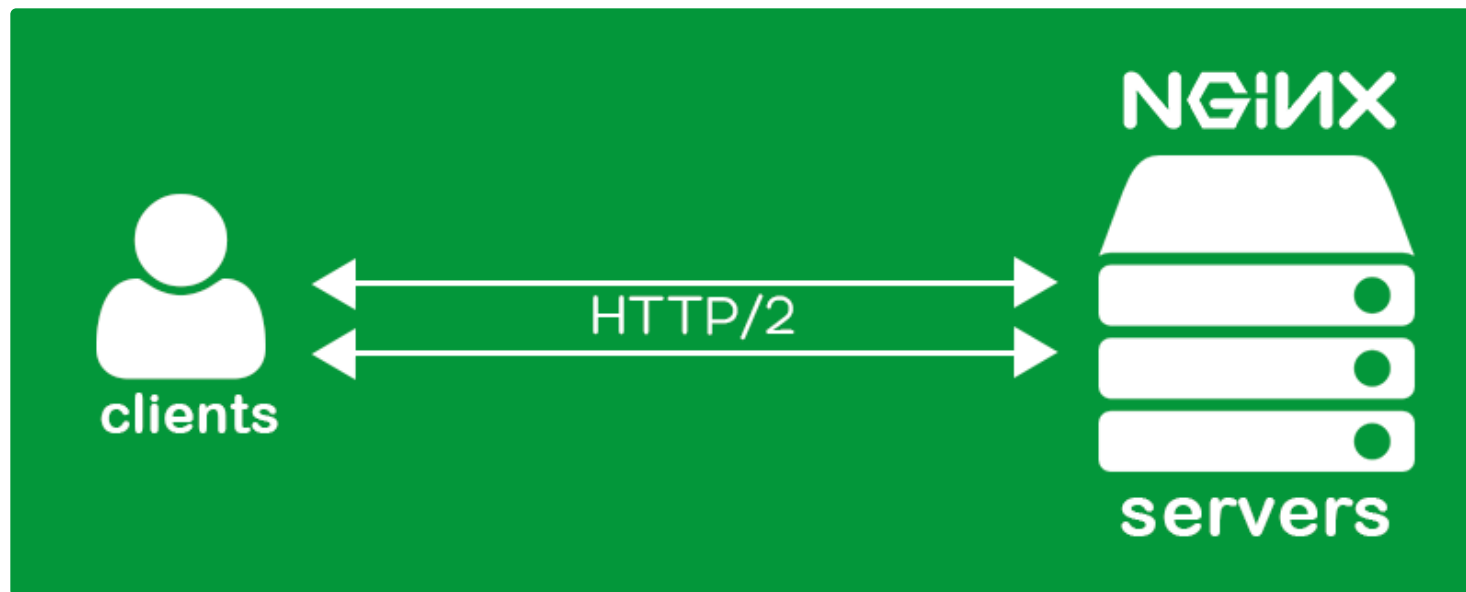


Server Setup

Nginx-extras:: Get HTTP/2 with ALPN, PageSpeed, ModSecurity and much more in one single place

by Danila Vershinin, September 9, 2018 , revisited on March 16, 2019



(<https://www.getpagespeed.com/wp-content/uploads/2018/09/nginx-extras-http2.png>)

nginx extras HTTP2

What is nginx-extras?

Nginx-extras is basically nginx stable release with lots of optional useful modules. It's no longer required to compile nginx from sources to include PageSpeed module to easily speedup websites and improve SEO (). Building nginx with latest OpenSSL is no longer important to support newest HTTP/2 protocol ALPN.

I used at first to manually compile nginx from source every time a customer wanted to switch from Apache to Nginx (LAMP to LEMP) to get decent performance for their websites. It was time-consuming to deploy and maintain so I decided to create packages (rpm) for CentOS 6 & 7. I added *extras* to their repository as it includes third party modules. With these packages, I'm able to setup a LEMP server in few minutes. I can also deploy a new module on all customer's server by simply pushing a new package update to the repository.

Nginx-extras doesn't have any dependencies on any packages not included by CentOS base and it won't break anything because it will conflict if nginx is already installed on your system. It's also fully compatible with Nginx Amplify and it's in production on many websites since 2014. Among them, some high traffic websites such as:

- <https://www.ashridgetrees.co.uk>
- <https://www.studiogears.com>
- <https://www.sayitwithagift.com>

The package changelog is available for CentOS 6 (https://extras.getpagespeed.com/redhat/6/x86_64/repoview/) and CentOS 7 (https://extras.getpagespeed.com/redhat/7/x86_64/repoview/). It's updated frequently as you can see. A new build is created when a new nginx version is released or when a CVE is discovered and needs patching.

What is the difference between nginx and nginx-extras?

Nginx team as well as EPEL provides packages for CentOS. However, it doesn't includes any extra third party modules. Here's a list of modules available with nginx-extras:

- PageSpeed
- Brotli
- ModSecurity v3
- Headers-More
- GeoIP v2
- PAM authentication
- MPEG-TS Live Module
- Fancy Index

^

- RTMP
- Cookie Flag

It doesn't end there. Nginx extras:

- Leverage dynamic modules. You can install the bare minimum nginx or any modules you wish, extending as you need. Not a bloatware nginx build!
- Is the largest collection of pre-built dynamic nginx modules on the Internet in a single repository
- Powered by CDN!

Getting started

There are currently packages available for CentOS 6 and 7. The easiest way to install is to use out CentOS yum repository (see dedicated repository page (<https://www.getpagespeed.com/redhat>)):

CentOS 6

```
yum install https://extras.getpagespeed.com/release-el6-latest.rpm
```

CentOS 7

```
yum install https://extras.getpagespeed.com/release-el7-latest.rpm
```

Once the repository is configured, you can proceed with installing nginx-extras. You can install it directly with the rpm or use GetPageSpeed repository, e.g. to install nginx with PageSpeed module, run:

```
#> yum install nginx nginx-module-nps
```

To list available modules for installation, run:

```
#> yum list available | grep nginx-module
```

To install the recommended group of modules for performance, you may want to run:

```
#> yum groupinstall "nginx extras"
```

... which installs nginx with PageSpeed and Brotli modules.

^

How to enable HTTP/2 with ALPN and confirm that it works

If you're currently using nginx < 1.10, this means you're using SPDY protocol to speedup Web traffic. Nginx switched from SPDY to HTTP/2 in version 1.10 (introduced in 1.9 mainline tree). Therefore, you will need to change all your "spdy" entries to "http2" if you upgrade to latest stable build:

```
listen 127.0.0.1:443 ssl spdy;
```

to:

```
listen 127.0.0.1:443 ssl http2;
```

There's always more

The nginx itself shipped with nginx extras repository builds on stable and time tested runtime.

If you like to live on the edge, there's a drop-in replacement for that runtime.

Read more about nginx-mod (<https://www.getpagespeed.com/server-setup/nginx-mod-a-better-faster-nginx-build>), which runs with latest OpenSSL, patched with full HTTP/2 HPACK support and dynamic TLS() records.

Package maintainer and Feedbacks

I've been the only package maintainer of nginx extras for the past 2 years. All sources are committed with GIT on a private BitBucket repository. I may push them public on GitHub in the future.

Please provide any feedbacks if you use these packages. I also accept module or feature request to add more customization or enhancements to *nginx extras*.

Related



(https://www.getpagespeed.com/server-setup/nginx/install-ngx_pagespeed-dynamic-module-centos-7)

Install NGINX with ngx_pagespeed (Google PageSpeed) dynamic module in RHEL / CentOS 7 (https://www.getpagespeed.com/server-setup/nginx/install-ngx_pagespeed-dynamic-module-centos-7)

October 3, 2016

In "Nginx"



(<https://www.getpagespeed.com/server-setup/nginx/upgrade-to-geoip2-with-nginx-on-centos-rhel-7>)

Upgrade to GeoIP2 with nginx on CentOS / RHEL 7 (<https://www.getpagespeed.com/server-setup/nginx/upgrade-to-geoip2-with-nginx-on-centos-rhel-7>)

May 15, 2019

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(<https://www.getpagespeed.com/server-setup/nginx/how-to-install-nginx-on-centos-7-properly>)

How to install nginx on RHEL 7 / CentOS 7 properly

(<https://www.getpagespeed.com/server-setup/nginx/how-to-install-nginx-on-centos-7-properly>)

April 7, 2018

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Previous (<https://www.getpagespeed.com/server-setup/the-system-has-no-more-ptys-how-to-fix-it>)

Next (<https://www.getpagespeed.com/server-setup/monitor-varnish-like-a-pro-in-centos-7>)

21 thoughts on “Nginx-extras:: Get HTTP/2 with ALPN, PageSpeed, ModSecurity and much more in one single place”

Hugh Pratt

February 12, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-431>)

Hello. I loved your Brotli tutorial. Now for my nginx I'd like to install headers_more and pagespeed, maybe mod_security for some simple WAF rules. Is there a way to install only these on CentOS 7.6 without disturbing the main nginx (which I installed via "yum install nginx" from the usual repos). Thanks!

Reply

Hugh Pratt

February 12, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-432>)

OK, I installed headers-more by doing this:

```
yum install nginx-module-headers-more.x86_64
```

Then I restarted Nginx. But when I add this to nginx.conf:

```
more_set_headers 'Server: MyServer';
```

I get the error about:

```
nginx: [emerg] unknown directive "more_set_headers" in /etc/nginx/nginx.conf
```

Reply

Hugh Pratt

February 12, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-433>)

Found it. Had to include the line at the top in nginx.conf:

```
load_module modules/ngx_http_headers_more_filter_module.so;
```

Reply

Hugh Pratt

March 10, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-440>)

Hello, how can I install ONLY geoip2? Is there a command for that?

Reply

Hugh Pratt

March 10, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-441>)

OK, I tried to do:

^

```
yum install --skip-broken nginx-module-geoip2.x86_64
```

But this shows me errors:

“Resolving Dependencies

→ Running transaction check

→ Package nginx-module-geoip2.x86_64 1:1.14.1.3.2-1.el7_4.gps will be installed

→ Processing Dependency: nginx = 1:1.14.1-1.el7_4.ngx for package: 1:nginx-module-geoip2-1.14.1.3.2-1.el7_4.gps.x86_64

→ Processing Dependency: libmaxminddb.so.0()(64bit) for package: 1:nginx-module-geoip2-1.14.1.3.2-1.el7_4.gps.x86_64

→ Running transaction check

→ Package libmaxminddb.x86_64 0:1.2.0-1.el7 will be installed

→ Package nginx-module-geoip2.x86_64 1:1.14.1.3.2-1.el7_4.gps will be installed

→ Processing Dependency: nginx = 1:1.14.1-1.el7_4.ngx for package: 1:nginx-module-geoip2-1.14.1.3.2-1.el7_4.gps.x86_64

epel/x86_64/filelists_db | 11 MB 00:00:00

getpagespeed-extras-x86_64/x86_64/filelists_db | 165 kB 00:00:00

Packages skipped because of dependency problems:

libmaxminddb-1.2.0-1.el7.x86_64 from epel

1:nginx-module-geoip2-1.14.1.3.2-1.el7_4.gps.x86_64 from getpagespeed-extras-x86_64

[root@uzi libmaxminddb-1.3.2]# yum install --skip-broken nginx-module-geoip2.x86_64

“

Any idea what I can do? I may have some other stray libmaxminddb installed from the past? Many thanks for any help!

Reply

Hugh Pratt

March 10, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-442>)

I wonder if this could be the problem:

Package: 1:nginx-module-geoip2-1.14.1.3.2-1.el7_4.gps.x86_64 (getpagespeed-extras-x86_64)

Requires: nginx = 1:1.14.1-1.el7_4.ngx

Installed: 1:nginx-1.14.2-1.el7_4.ngx.x86_64 (@nginx)

nginx = 1:1.14.2-1.el7_4.ngx

Available: 1:nginx-1.8.0-1.el7.ngx.x86_64 (nginx)....

Does the GeoIP2 require version 1.14.1 while I have a more recent 1.14.2 installed?

Reply

^

Danila Vershinin

March 10, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-443>)

Yes, this is it. That module slipped from being rebuilt for 1.14.2 – this is now fixed. Try `yum clean all && yum install nginx-module-geoip2` Thanks for the feedback

Reply

Mauricio

March 16, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-446>)

Hi, how can update OpenSSL 1.0.2k-fips 26 Jan 2017 to OpenSSL 1.1.1b 26 Feb 2019 to works with nginx-extras?

Thanks for you great support.

Reply

Danila Vershinin

March 16, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-447>)

Hi Mauricio, you may want to check nginx-mod (<https://www.getpagespeed.com/server-setup/nginx-mod-a-better-faster-nginx-build>) which is drop-in replacement with all the “edge” features like that.

Reply

Hugh Pratt

April 17, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-459>)

Hello I would like to install a few of the extras, not all. Is there a way to install only:

Brotli

ModSecurity v3

Headers-More

GeoIP v2

Cookie Flag

What would be the commands for these?

Also, please note that when I install with your repo, and do “nginx -V” the above modules are not listed. I had installed only Headers-More and GeoIP, but they are not listed. Any ideas?

^

Reply

Hugh Pratt

April 17, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-460>)

Oops, my bad. You already explain how to list the modules, and then install them selectively with the “--skip-broken” option. So I’ve installed mod_security. Any instructions on where I can find out how to *enable* the module on my websites, and where I can enable the basic OWASP rules? Many thanks!

Reply

Danila Vershinin

April 17, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-461>)

--skip-broken is never required. If you’re in position that it’s “required”, this must be a bug with packages – let me know.

Reply

Danila Vershinin

April 17, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-462>)

You can find some of module specific instructions by clicking module name here (<https://www.getpagespeed.com/redhat#nginx>), this will bring you to relevant tutorials. Either way, you get to see the required `load_module` configuration when you `yum install` (the installer shows it when a package completed installing)

Reply

Hugh Pratt

April 20, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-468>)

Thank you this is helpful. I installed naxsi, but cannot find the LoadModule directive for it.

Reply

Danila Vershinin

April 21, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-469>)

You were not paying attention then: `load_module modules/nginx_http_naxsi_module.so;`

You can also see all installed modules’ `.so` names by listing contents of `/etc/nginx/modules` directory.

^

Reply

Phoenix Kiula

May 8, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-532>)

Now you're not allowing comments? The latest nginx update of 1.16.0 (specifically `nginx.x86_64 1:1.16.0-1.el7.ngx`) is not working because your modules are older. How can I update nginx and your modules at the same time? Thanks.

Reply

Danila Vershinin

May 9, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-533>)

Please post complete output of your command.

Reply

Phoenix Kiula

May 9, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-536>)

It worked now. I think the latest nginx was not being downloaded quickly enough from your repo servers. It worked today — thanks for fixing whatever you did.

Reply

Hugh Pratt

May 9, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-534>)

How does one update these in the future to match the CentOS nginx update? I understand these modules are linked to the nginx version at the time of the install?

Reply

Danila Vershinin

May 9, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-535>)

Simply run `yum update`. This should be sufficient to update to latest nginx and its modules. Most of the modules (in fact, I don't know which doesn't), are being rebuilt whenever new nginx version is released (within 24 hrs of new stable nginx release)

^

Reply

Hugh Pratt

May 9, 2019 (<https://www.getpagespeed.com/server-setup/nginx-extras-get-http-2-with-alpn-pagespeed-modsecurity-and-much-more-in-one-single-place#comment-537>)

Thank you. That's super Danila. Love this site and thanks for all the amazing modules.

Reply

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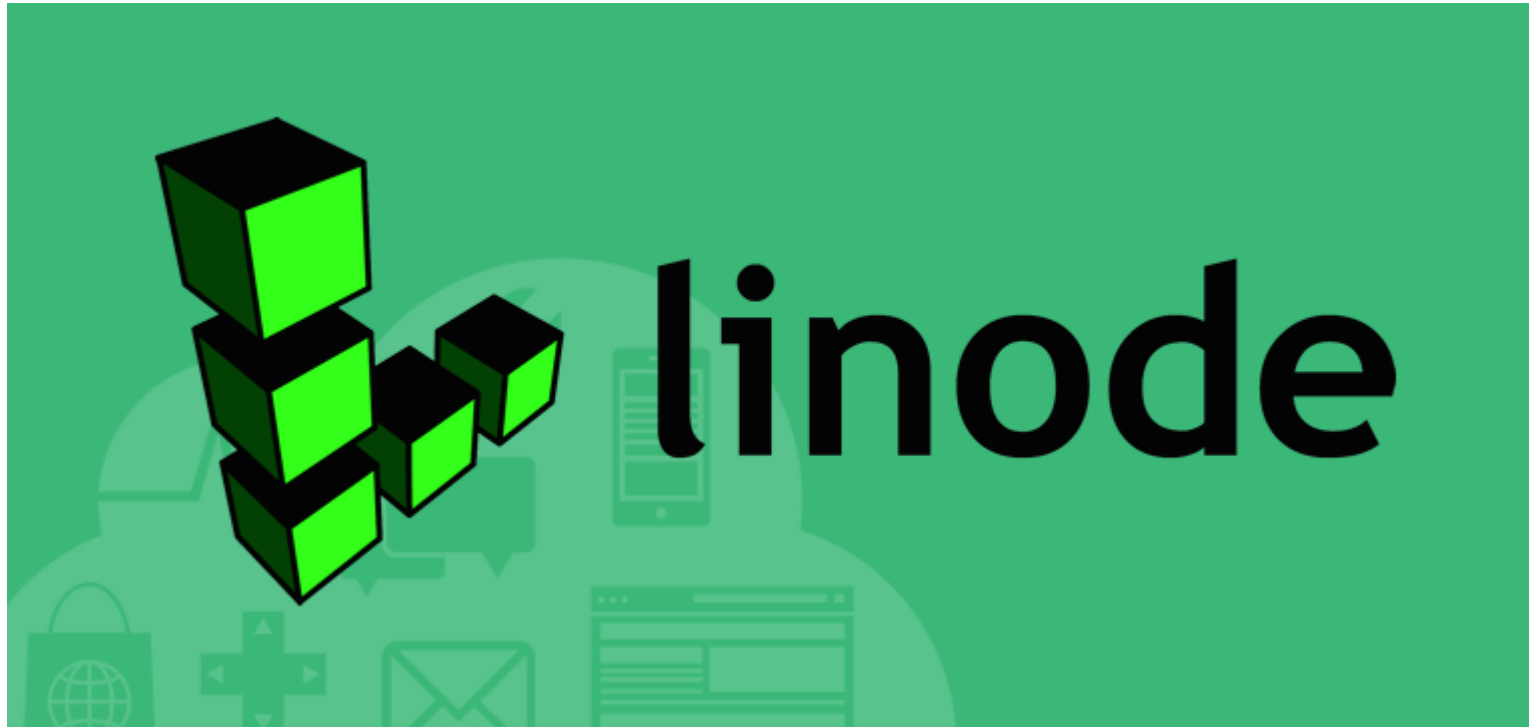
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