

Nginx

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Overview

This document explains how to install [Nginx](#) on a server that runs cPanel & WHM and EasyApache 4. Nginx is an open source web server that also provides a reverse proxy, load balancing, and caching. It functions very differently from Apache. Nginx does **not** serve dynamic content unless you pass it through a proxy.



Warning:

Nginx is **experimental**. You **must** install the [Experimental Repository](#) to use it.

Requirements

To install Nginx on your server, you must meet the following requirements:

- Run EasyApache 4.
- Install the [Experimental Repository](#). Use the following command to install this repository:

```
yum install ea4-experimental
```

- Possess `root` user access to the server.
- Use [PHP-FPM](#) as the server's PHP handler.

Compatibility

Nginx takes the place of Apache as the primary web server. The installation will move Apache away from its default ports in favor of Nginx.

For more information, read the [Nginx configuration changes](#) section below.



Note:

You can still use Apache to serve dynamic content, but must proxy your requests to the server.

Install or uninstall Nginx

Install



If the [Experimental Repository](#) does not already exist on your server, install it with the following command:

```
yum install ea4-experimental
```

To install Nginx, run the following command on the command line:

```
yum install ea-nginx
```

Uninstall

To uninstall Nginx, run the following command on the command line:

```
yum erase ea-nginx
```

The Nginx installation

When you install cPanel & WHM's version of Nginx, the install process will move your server's Apache installation to different ports.



Note:

The process will only change your Apache ports if your Apache configuration uses the default ports of 80 and 443.

The following features will work with Nginx without any further action by the user:

- Static content.



Note:

You must proxy any dynamic content to Apache.

- The MultiPHP system.
- Wordpress
- Mailman
- AutoSSL
- Proxy subdomains and redirects.



Important:

The MultiPHP system and Wordpress will **only** work if you use [PHP-FPM](#).

Nginx configuration changes

When you install Nginx on your server, the install process makes several changes to your system.

Most notably, the installation will move Apache to no longer act as the primary web server. Because of this, the Nginx installation will create proxies for MailMan and AutoSSL.

Configuration files

The system creates the `/etc/nginx/conf.d/ea-nginx.conf` configuration file.

Custom configurations

**Warning:**

- Don't edit any of the files that Nginx owns. Changing these files may result in unexpected behavior.
- If you create custom configuration files, you may change Nginx behavior in undesired ways. For example, if your custom block matches the PHP block, the server may serve the source code instead of PHP.

If you want to customize the server blocks for Nginx, create an include file that ends in `.conf` in the appropriate location. A server block is the same thing as a virtual host in Apache.

For more information about server blocks, including examples, read Nginx's [Server Block Examples](#) documentation.

**Note:**

Don't use `cpanel-` as the prefix for any custom files you create.

Global configuration

Place any global `.conf` files that you create in the following directory:

```
/etc/nginx/conf.d/
```

If you want to adjust every server block on your server, create your `.conf` file in the following directory:

```
/etc/nginx/conf.d/server-includes/
```

User configuration

**Note:**

In the following examples, `username` represents the username, and `fqdn` represents the fully qualified domain name.

This fully qualified domain name must be one of the following:

- The server block's main domain.
- The server block's subdomain for addon domains and their subdomains.
- The server block's subdomain for subdomains that are not addon domains.

If you want to customize every server block that a user owns, create your `.conf` file in the following directory:

```
/etc/nginx/conf.d/users/username/
```

To customize a specific server block for a specific domain, create your `.conf` file in the following directory:

```
/etc/nginx/conf.d/users/username/fqdn/
```

If you want use the same `.conf` file in multiple locations, place your file in the following directory. Make sure that you also reference the file with an `include` directive in the file that you want to use it in.

```
/etc/nginx/conf.d/server-includes-optional/
```

Apache configuration

The Nginx installation makes the following changes to your Apache configuration:

- Moves the Apache port to the first available port under 1024. This will usually be port 81. You must proxy any applications that are not static to Apache.
- Moves the Apache SSL port to the first available port under 1024. This will usually be port 444.

**Note:**

Your Apache ports will **only** change if your configuration uses the default ports 80 and 443. The installation ignores custom port numbers.

- Adds the following to the `/etc/nginx/conf.d/ea-nginx.conf` file:

```
map $host $CPANEL_APACHE_PROXY_IP {
    default 127.0.0.1;
}
map $host $CPANEL_APACHE_PROXY_PORT {
    default 81;
}
```

Run Nginx

To stop or restart Nginx, use the `/usr/local/cpanel/scripts/restartsrv_nginx` script.

We **strongly** recommend that you **only** use the cPanel script or WHM's [Service Manager](#) interface (*WHM >> Home >> Service Configuration >> Service Manager*) to restart Nginx.

To use the CentOS6 or CentOS 7 `restart` commands to restart Nginx, you **must** use the `reload` option to ensure a graceful restart. Use one of the following commands:

- CentOS 6 — `/etc/init.d/nginx reload`
- CentOS 7 — `systemctl reload nginx.service`

For more information, read our [How to Restart Services](#) documentation.

Configure a user

To configure a user in Nginx, run the `/usr/local/cpanel/scripts/ea-nginx` script. This script generates the user configuration file for each user.

To set up a user, run the following command, where `username` represents the username:

```
/usr/local/cpanel/scripts/ea-nginx config username
```

The script creates the `.conf` file in the following location, where `username` represents the username:

```
/etc/nginx/conf.d/users/username.conf
```

**Important:**

You **must** run the `/usr/local/cpanel/scripts/ea-nginx` script whenever you create or change a user to update the user configuration. This includes any changes to subdomains or addon domains or changes to the PHP version.

Limitations

If one of your domains matches a proxy domain, the system will warn you that it will ignore conflicting duplicate entries. This conflict may result in unexpected behavior.

Security concerns

When you use Nginx, your ModSecurity™ rules will **not** apply.

Any restrictions set in an `.htaccess` file will **not** apply. For example, if you password-protected a directory, the protection will not work.

If you create an alias, make **certain** that your path's location ends with a trailing slash (`/`). If your path does **not** end with a `/`, then your path is vulnerable to a [path traversal exploit](#).

For more information, read the [Nginx Security Advisories](#) documentation.

Troubleshooting

Could not build the `server_names_hash`

You may receive an error that resembles the following message:

```
could not build the server_names_hash,  
you should increase either server_names_hash_max_size: 512  
or server_names_hash_bucket_size: 32
```

If you receive this error message, increase the value of the following directives in the `/etc/nginx/conf.d/ea-nginx.conf` and the `/etc/nginx/conf.d/settings.json` files:

- `server_names_hash_max_size`
- `server_names_hash_bucket_size`

For more information, read the Nginx [Server Names](#) documentation.

Nginx will not restart

If you used the `nginx` command to start Nginx, then the `/usr/local/cpanel/scripts/restartsrv_nginx` and `systemctl restart nginx` service commands will not work. To correct this, perform the following steps:

1. Stop the service with the `/usr/sbin/nginx -s stop` command.
2. Restart Nginx with one of the following commands:
 - `/usr/local/cpanel/scripts/restartsrv_nginx start`
 - `systemctl start nginx.service`
 - `/etc/init.d/nginx start`

Additional documentation

- [The ea-nginx script](#)
- [Nginx](#)
- [How to Install a Python WSGI Application](#)
- [How to Create Ruby Web Applications](#)
- [How to Limit a User's Available PHP Versions in the MultiPHP Manager](#)