



## Installation and Basic Commands

### Installation

```

Debian/Ubuntu:

sudo apt update
sudo apt install lighttpd

CentOS/RHEL:

sudo yum install lighttpd

Verify Installation:

lighttpd -v
    
```

### Service Management

Start	<code>sudo systemctl start lighttpd</code>
Stop	<code>sudo systemctl stop lighttpd</code>
Restart	<code>sudo systemctl restart lighttpd</code>
Status	<code>sudo systemctl status lighttpd</code>
Enable (Start on boot)	<code>sudo systemctl enable lighttpd</code>
Disable (Don't start on boot)	<code>sudo systemctl disable lighttpd</code>

### Configuration File

```

Main configuration file:
/etc/lighttpd/lighttpd.conf

Modules configuration directory:
/etc/lighttpd/conf-enabled/
    
```

## Basic Configuration

### Server Configuration

```

server.modules = (
    "mod_access",
    "mod_alias",
    "mod_compress",
    "mod_redirect",
)

server.document-root = "/var/www/html"
server.upload-dirs = ( "/tmp" )
server.errorlog = "/var/log/lighttpd/error.log"
server.pid-file = "/run/lighttpd.pid"
server.username = "www-data"
server.groupname = "www-data"

index-file.names = ( "index.php", "index.html", "index.lighttpd.html" )
url.access-deny = ( ".so", ".~", ".bak", ".#", ".*", ".inc", ".config" )
static-file.exclude-extensions = ( ".php", ".pl", ".fcgi" )
    
```

### Port and Interface Configuration

Bind to a specific IP and Port	<code>server.bind = "192.168.1.100"</code> <code>server.port = 80</code>
Listen on IPv6	<code>server.use-ipv6 = "enable"</code>

### Virtual Hosts

```

Create directories for each virtual host. For example,
/var/www/example.com

Create a virtual host configuration file (e.g.,
/etc/lighttpd/conf-available/example.com.conf):

$HTTP["host"] == "example.com" {
    server.document-root = "/var/www/example.com"
    server.errorlog = "/var/log/lighttpd/example.com-error.log"
    accesslog.filename = "/var/log/lighttpd/example.com-access.log"
}

Enable the virtual host:

ln -s /etc/lighttpd/conf-available/example.com.conf /etc/lighttpd/conf-enabled/example.com.conf

Restart Lighttpd.
    
```

## Modules

### Enabling/Disabling Modules

```

Use lighty-enable-mod and lighty-disable-mod to manage modules.

Enable a module:

sudo lighty-enable-mod <module_name>

Disable a module:

sudo lighty-disable-mod <module_name>

This creates/removes symbolic links in
/etc/lighttpd/conf-enabled/.
    
```

## Common Modules

<code>mod_access</code>	Provides access control based on IP addresses.
<code>mod_alias</code>	Allows defining aliases for directories.
<code>mod_compression</code>	Enables HTTP compression (gzip/deflate).
<code>mod_rewrite</code>	Handles HTTP redirects.
<code>mod_rewrite</code>	Provides URL rewriting capabilities.
<code>mod_fastcgi</code>	For FastCGI support (e.g., PHP).

## PHP Configuration (mod\_fastcgi)

Enable `mod_fastcgi`:

```
sudo lighty-enable-mod fastcgi
```

Configure PHP in `/etc/lighttpd/conf-enabled/15-fastcgi.conf`:

```
fastcgi.server = (
    ".php" => (
        (
            "bin-path" => "/usr/bin/php-cgi",
            "socket" => "/tmp/php.socket",
            "max-procs" => 2
        )
    )
)
```

Ensure `php-cgi` is installed and the socket path is correct. You may need to install the `php-cgi` package separately (e.g., `sudo apt install php-cgi`).

## Advanced Configuration

### HTTPS Configuration (mod\_openssl)

1. Enable `mod_openssl`:

```
sudo lighty-enable-mod openssl
```

2. Configure SSL settings in `/etc/lighttpd/conf-enabled/44-ssl.conf`:

```
$SERVER["socket"] == ":443" {
    ssl.engine = "enable"
    ssl.pemfile =
"/etc/lighttpd/ssl/example.com.pem"
    ssl.ca-file =
"/etc/lighttpd/ssl/ca.pem"
    ssl.cipher-list =
"EECDH+AESGCM:EDH+AESGCM:AES256+EECDH:AES256+EDH"
    ssl.honor-cipher-order = "enable"
}
```

3. Create a self-signed certificate or obtain one from a CA:

```
sudo openssl req -x509 -nodes -days 365 -
newkey rsa:2048 -keyout
/etc/lighttpd/ssl/example.com.pem -out
/etc/lighttpd/ssl/example.com.pem
```

Adjust paths accordingly.

Restart Lighttpd.

### URL Rewriting (mod\_rewrite)

Enable `mod_rewrite`:

```
sudo lighty-enable-mod rewrite
```

Rewrite rules in `lighttpd.conf` or virtual host configuration:

```
url.rewrite-once = (
    "^/oldpage.html$" => "/newpage.html",
    "^/images/(.*)$" => "/media/images/$1"
)
```

### Access Control (mod\_access)

```
Allow only specific IPs $HTTP["remoteip"] ==
"192.168.1.100" {
    access.allow = ( "." )
}
```

Deny all other IPs by default.

```
Deny specific IPs $HTTP["remoteip"] ==
"192.168.1.101" {
    access.deny = ( "." )
}
```