Author Website

There are many options for creating websites, some of which are free and contain ads, others which cost $5-$20 a month. Choosing a website solution for you is going to depend on a couple of factors:

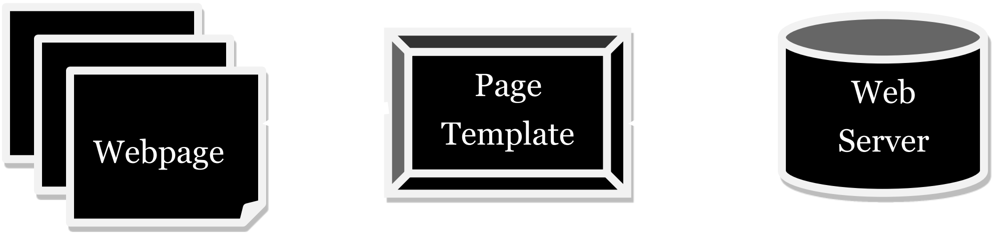
1. Professionalism
   Do you want ads? Do you want the page well-designed by a graphics artist? How much is your brand reflected on your site?
2. Cost
   Free? Low cost? Minimal cost? Cost is not a factor.
3. Ease
   A what-you-see-is-what-you-get (WYSIWYG) editor for drag-and-drop simplicity? HTML coding? A hybrid.
4. Personal Investment
   Are you willing to learn, or do you want it done for you?

This article is going to cover only one scenario: The simplistic website you wholly administer for a minimal cost ($12/month and your domain) and a hybrid of WYSIWYG vs HTML coding where there is an investment of time on your part to learn some basic HTML and take the time to setup your server.

This is not an easy tutorial and may be frustrating for those not wanting to invest a lot of themselves in their author website. For those, you'll have to consider other options, up to and including having a website company design, build, and host your website (the most expensive but hands-off option).

Website Layout

The website we will create will be designed for easy of administration, but require some setup. When we're done, our topographical map of our system will be simple and easy to administer.



Install Software

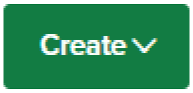
To achieve this setup, we will need a piece of software called FileZilla (https://filezilla-project.org/). Download and install that software now.

Next, install PuTTY from https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html

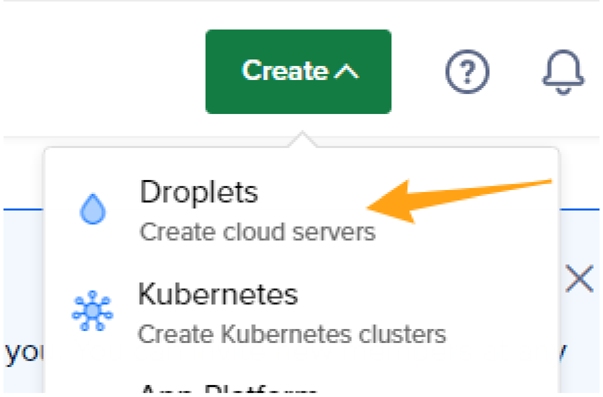
Buy a domain from a reputable site like GoDaddy. For this tutorial, we will assume you bought example.com.

Create Web Server

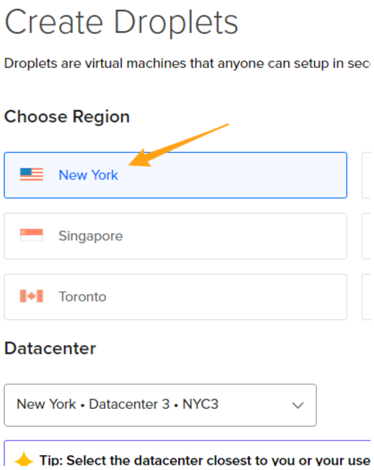
With FileZilla and PuTTY installed and your domain secured, go to DigitalOcean.com and make an account. Once logged in, click the Create button.



Click on Droplets from the menu which appears.



In the Choose Region, choose a region that's on average closest to your customers. If your customers are all over the world, do what I do and choose New York.



Create Droplets

Droplets are virtual machines that anyone can setup in sec

Choose Region

New York

Singapore

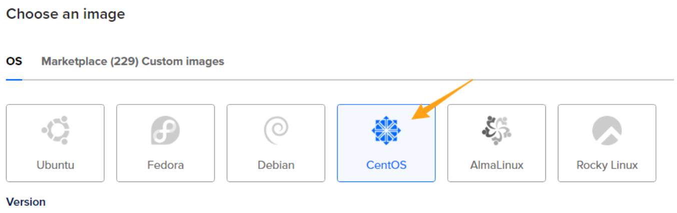
Toronto

Datacenter

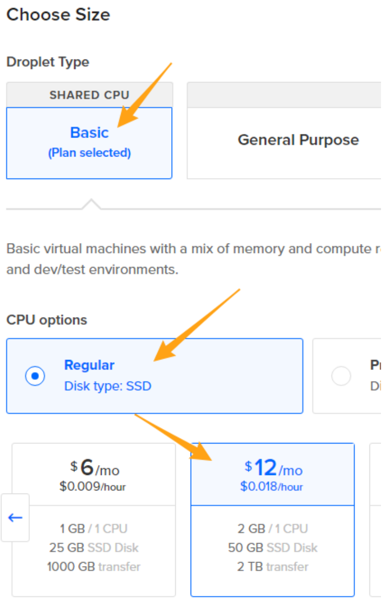
New York • Datacenter 3 • NYC3

Tip: Select the datacenter closest to you or your use

Under "Choose an image", select CentOS. NOTE: You can select anyone you want, but this tutorial may not work for you.


Choose an image

Under "Choose Size", Droplet Type: Basic, CPU Options: Regular, $12/mo


Choose Size

Droplet Type

Basic virtual machines with a mix of memory and compute r and dev/test environments.

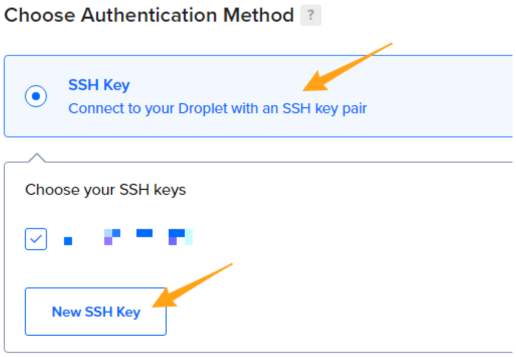
CPU options

● Regular
Disk type: SSD

$12/mo
$0.018/hour
2 GB / 1 CPU
50 GB SSD Disk
2 TB transfer

You can select more powerful computers. It will just increase your cost, but won't affect this tutorial. You can also upgrade later, if you want, though that is not covered in this tutorial.

Under "Choose Authentication Method", create a new SSH Key.


Choose Authentication Method

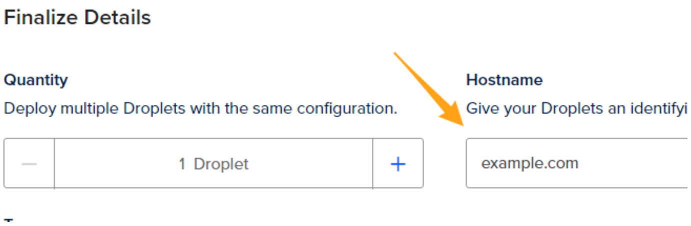
● SSH Key
Connect to your Droplet with an SSH key pair

Choose your SSH keys

Follow the instructions to create a SSH Key.

NOTE: You can choose password authentication, but it is not as secure. It may be easier since I will not cover the full key generation procedure in this tutorial. If you do choose a password, be sure to choose a strong password.

Skip all options up to Hostname. Enter your domain name in the hostname option.


Finalize Details

Quantity

Deploy multiple Droplets with the same configuration.

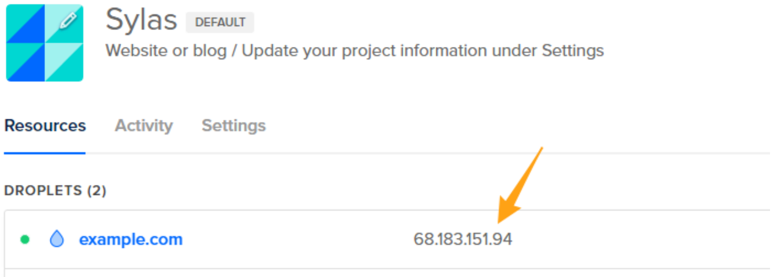
1 Droplet

Hostname

Give your Droplets an identifyi

example.com

Wait until your server shows an IP address.


Sylas DEFAULT

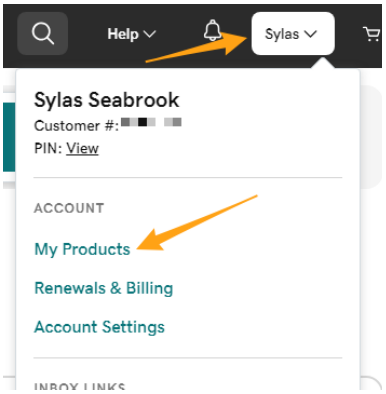
Website or blog / Update your project information under Settings

DROPLETS (2)

example.com 68.183.151.94

Change DNS

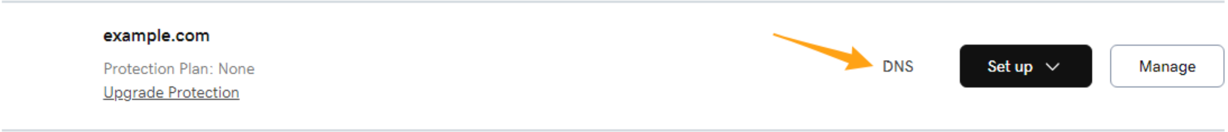
Update your DNS entry in GoDaddy by clicking on Products from the user menu.


Sylas Seabrook

Customer #: [redacted]

PIN: View

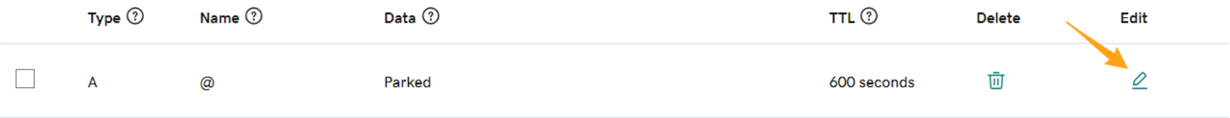
Scroll down until you see the table of results and your domain listed. Click on DNS to update the DNS settings.


example.com

Protection Plan: None

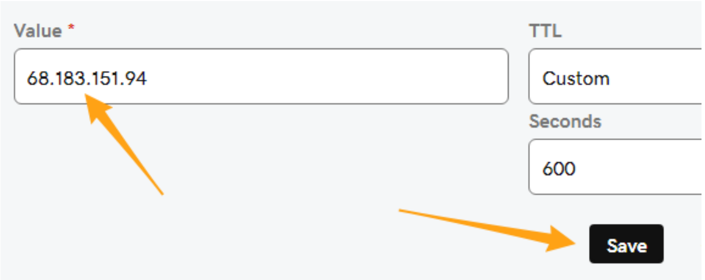
Upgrade Protection

Scroll down until you find the A record and click the edit icon.



	Type	Name	Data	TTL	Delete	Edit
□	A	@	Parked	600 seconds	🗑	✎

Set the Value field to the IP address from Digital Ocean and click Save.



Value *: 68.183.151.94

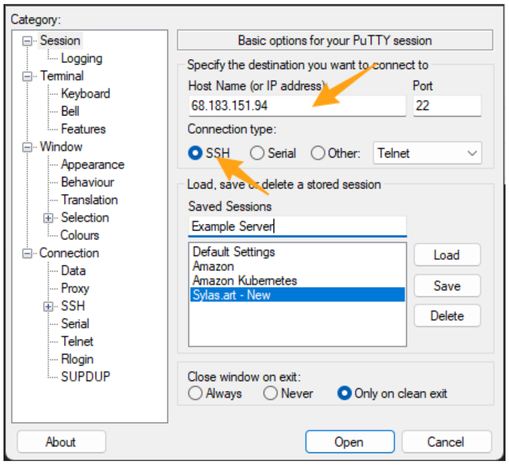
TTL: Custom

Seconds: 600

This can take anywhere from 5 minutes to a couple of days to work. You'll know it's working because the GoDaddy parked page is no longer visible in the browser when you visit.

Configure Web Server

Open PuTTY. Enter your IP address in the Host Name and choose Connection type SSH.



Specify the destination you want to connect to

Host Name (or IP address): 68.183.151.94

Port: 22

Connection type: ● SSH ○ Serial ○ Other: Telnet

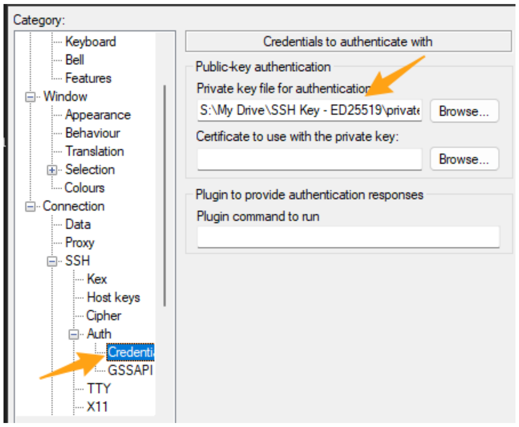
Load, save or delete a stored session

Saved Sessions: Example Server

Default Settings
Amazon
Amazon Kubernetes
Sylas.art - New

Close window on exit: ○ Always ○ Never ● Only on clean exit

If you used a SSH key, then enter the key in (otherwise, you will be prompted for a password):



Credentials to authenticate with

Public-key authentication

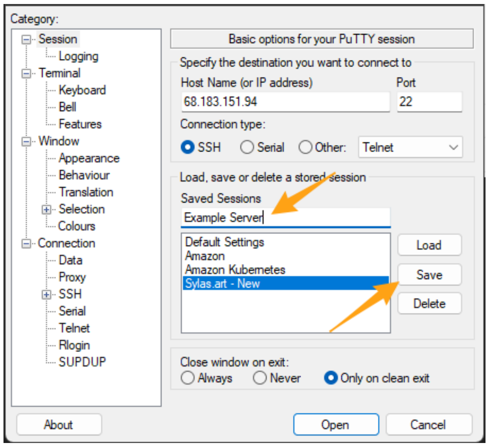
Private key file for authentication: S:\My Drive\SSH Key - ED25519\private

Certificate to use with the private key:

Plugin to provide authentication responses

Plugin command to run

Go back to the Session Category and type in a session nane and click Save. Then, click Open.



Basic options for your PuTTY session

Specify the destination you want to connect to

Host Name (or IP address): 68.183.151.94

Port: 22

Connection type: ● SSH ○ Serial ○ Other: Telnet

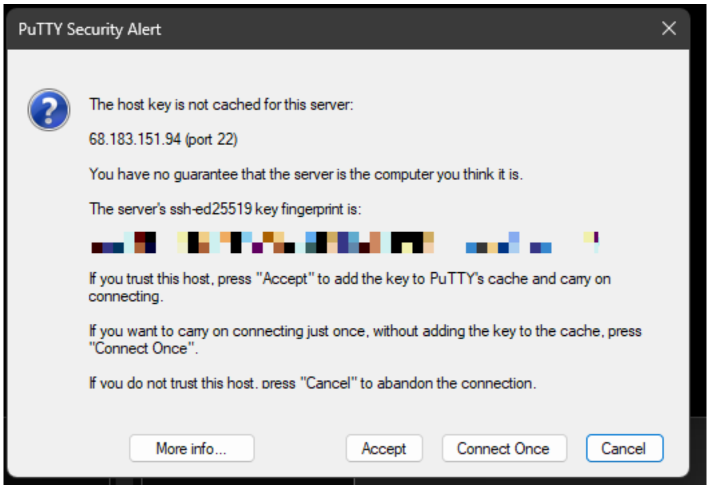
Load, save or delete a stored session

Saved Sessions: Example Server

Default Settings
Amazon
Amazon Kubernetes
Sylas.art - New

Close window on exit: ○ Always ○ Never ● Only on clean exit

Click Accept on this dialog:



PuTTY Security Alert

The host key is not cached for this server:

68.183.151.94 (port 22)

You have no guarantee that the server is the computer you think it is.

The server's ssh-ed25519 key fingerprint is:

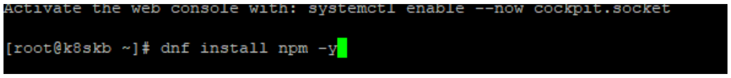
If you trust this host, press "Accept" to add the key to PuTTY's cache and carry on connecting.

If you want to carry on connecting just once, without adding the key to the cache, press "Connect Once".

If vou do not trust this host. press "Cancel" to abandon the connection.

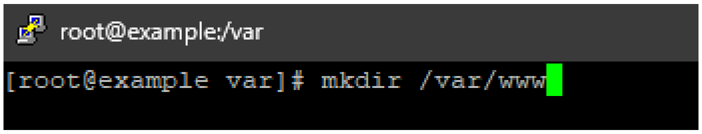
In the window which pops up, enter these commands:

```
dnf install npm -y
```



```
Activate the web console with: systemctl enable --now cockpit.socket

[root@k8skb ~]# dnf install npm -y
```

```
mkdir /var/www
```



```
[root@example var]# mkdir /var/www
```

(Now that you've gotten familiar with entering in commands, I'm not going to include screenshots of each command.)

```
cd /var/www
mkdir /var/www/html
npm init -y
npm install express
dnf upgrade -y
dnf install epel-release -y
dnf install certbot mod_ssl -y
groupadd nodecert
adduser nodeuser

usermod -a -G nodecert nodeuser
usermod -a -G nodecert root

chgrp -R nodecert /etc/letsencrypt/live
chgrp -R nodecert /etc/letsencrypt/archive

chmod -R 750 /etc/letsencrypt/live
chmod -R 750 /etc/letsencrypt/archive

setcap 'cap_net_bind_service=+ep' `which node`
```

Upload Example Files

Open FileZilla and SFTP to your server. This video demonstrates the process:

https://bookishnerds.com/FileZilla.mp4

Now drag and drop the files from the folder into the list of folders and files on the server for the /var/www/html directory.

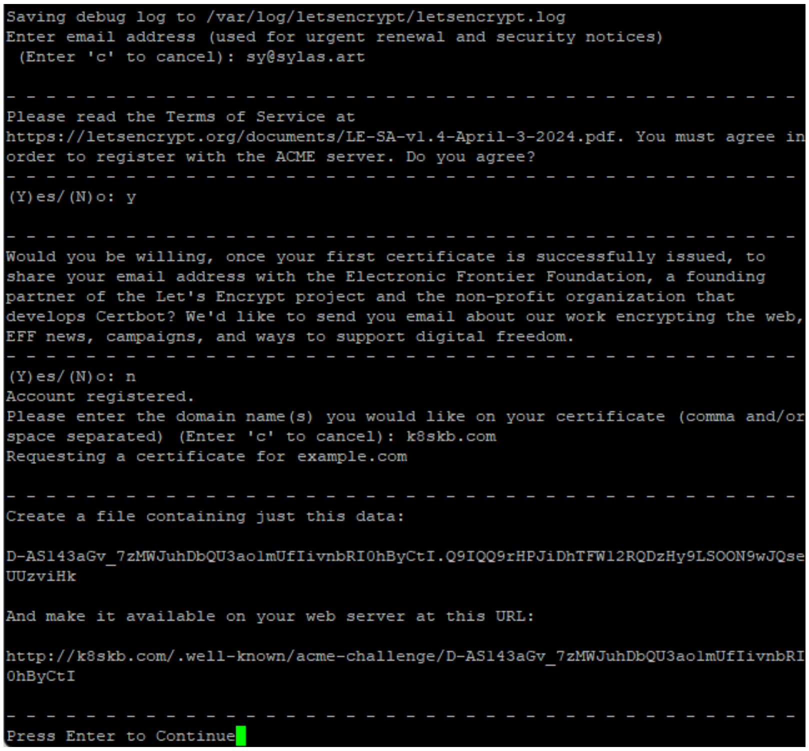
https://bookishnerds.com/webserver.zip

(Unzip before uploading)

Install Secure Certificate

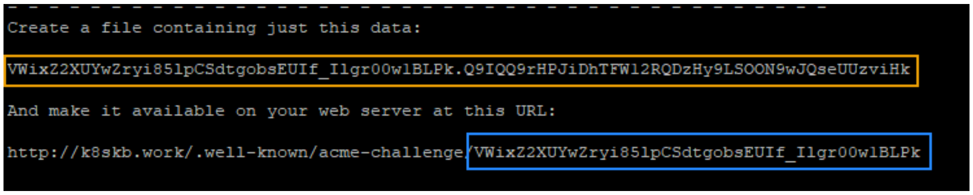
Run this command in the command window we've been using and answer according to your domain.

certbot certonly –manual



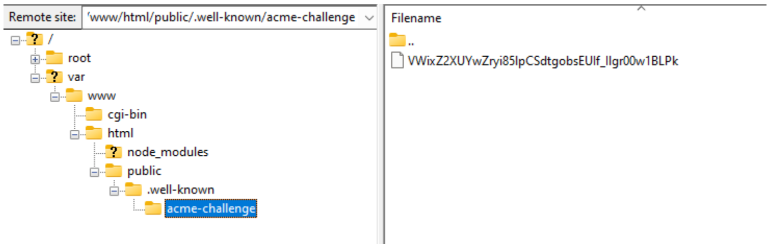
```
Saving debug log to /var/log/letsencrypt/letsencrypt.log
Enter email address (used for urgent renewal and security notices)
 (Enter 'c' to cancel): sy@sylas.art

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Please read the Terms of Service at
https://letsencrypt.org/documents/LE-SA-v1.4-April-3-2024.pdf. You must agree in
order to register with the ACME server. Do you agree?
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
(Y)es/(N)o: y

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Would you be willing, once your first certificate is successfully issued, to
share your email address with the Electronic Frontier Foundation, a founding
partner of the Let's Encrypt project and the non-profit organization that
develops Certbot? We'd like to send you email about our work encrypting the web,
EFF news, campaigns, and ways to support digital freedom.
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
(Y)es/(N)o: n
Account registered.
Please enter the domain name(s) you would like on your certificate (comma and/or
space separated) (Enter 'c' to cancel): k8skb.com
Requesting a certificate for example.com

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Create a file containing just this data:

D-AS143aGv_7zMWJuhDbQU3aolmUfIivnbRI0hByCtI.Q9IQQ9rHPJiDhTFW12RQDzHy9LSOON9wJQse
UUzviHk

And make it available on your web server at this URL:

http://k8skb.com/.well-known/acme-challenge/D-AS143aGv_7zMWJuhDbQU3aolmUfIivnbRI
0hByCtI

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Press Enter to Continue
```

At the bottom of the message is instructions to create a file. Create a file named what's highlighted in blue with the contents highlighted in orange.



```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Create a file containing just this data:

VWixZ2XUYwZryi85lpCSdtgobsEUIf_Ilgr00w1BLPk.Q9IQQ9rHPJiDhTFW12RQDzHy9LSOON9wJQseUUzviHk

And make it available on your web server at this URL:

http://k8skb.work/.well-known/acme-challenge/VWixZ2XUYwZryi85lpCSdtgobsEUIf_Ilgr00w1BLPk
```

Upload this file to /var/www/html/public/.well-known/acme-challenge



Remote site: 'www/html/public/.well-known/acme-challenge

Filename

..

VWixZ2XUYwZryi85lpCSdtgobsEUIf_Ilgr00w1BLPk

Open a new console and enter these commands:

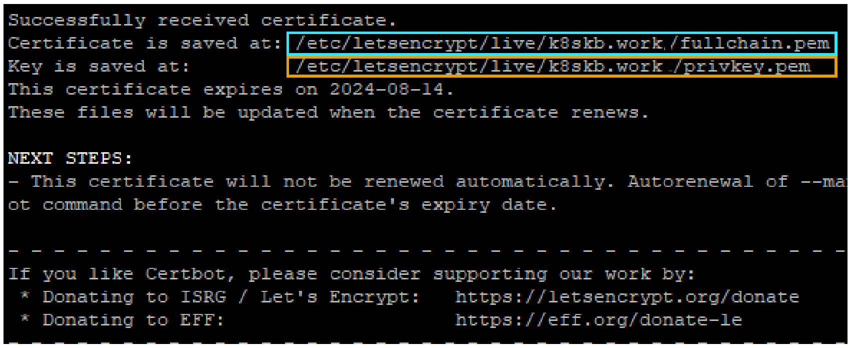
cd /var/www/html

node .

(Note: that is 6 charcter n-o-d-e-{space}-{period})

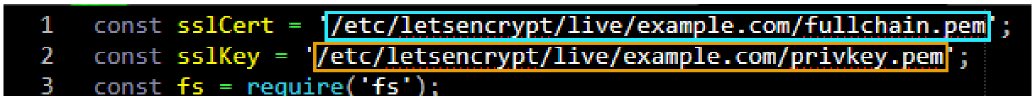
Press Enter in the certbot console.

Enter the highlighted values here



```
Successfully received certificate.
Certificate is saved at: /etc/letsencrypt/live/k8skb.work/fullchain.pem
Key is saved at:         /etc/letsencrypt/live/k8skb.work/privkey.pem
This certificate expires on 2024-08-14.
These files will be updated when the certificate renews.

NEXT STEPS:
- This certificate will not be renewed automatically. Autorenewal of --ma
ot command before the certificate's expiry date.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
If you like Certbot, please consider supporting our work by:
 * Donating to ISRG / Let's Encrypt:   https://letsencrypt.org/donate
 * Donating to EFF:                    https://eff.org/donate-le
```

into index.final.js script



```
const sslCert = '/etc/letsencrypt/live/example.com/fullchain.pem';
const sslKey = '/etc/letsencrypt/live/example.com/privkey.pem';
const fs = require('fs');
```

You ***must*** have the apostrophes at the beginning and end!

Save this over the original index.js file and upload to the server.

Close the window where you typed *node .*

Run Automatically

In the command prompt, type this:

vi /etc/systemd/system/webserver.service

Press the *i* key.

Copy this content and right-click on the command prompt to paste this content.

```
[Unit]
Description=Stryfe Bot

[Service]
ExecStart=/usr/bin/node /var/www/html/index.js
RestartSec=10
Restart=always
User=nodeuser
Group=nodecert
Environment=PATH=/usr/bin:/usr/local/bin
Environment=NODE_ENV=production
WorkingDirectory=/var/www/html/

[Install]
WantedBy=multi-user.target
```

Hit *Esc*.

Hit *:x*

systemctl start webserver

systemctl enable webserver

Conclusion

If you now visit your website in the browser (https://example.com for our example), your website appears with “Your webserver is working.”

Note that every 3 months, you’ll have to run the certbot script by logging in through PuTTY and executing this command:

```
certbot certonly –manual
```

If you don’t, your website ***will*** break.

This guide covered covered a lot, but it does not cover how to add content. For that, please see the next guide.