Gatsby provides a way to use a local HTTPS server during development, thanks to devcert. When you enable the `https` option, a private key and certificate file will be created for your project and used by the development server.

Usage (automatic HTTPS)

Start the development server using `npm run develop` as usual, and add either the `-S` or `--https` flag.

```
npm run develop -- --https
```

Setup

When setting up a development SSL certificate for the first time, you may be asked to type in your password after starting the development environment:

```
info setting up SSL certificate (may require elevated permissions/sudo)

Password:
```

On Windows, the prompt will differ:

```
A password is required to access the secure certificate authority key
used for signing certificates.

If this is the first time this has run, then this is to set the password
for future use.  If any new certificates are signed later, you will need
to use this same password.

Please enter the CA password:
```

The password is *only* required the first time you are using Gatsby's HTTPS feature on your machine, or when you are creating a brand-new certificate.

Using `Certutil`

After typing in your password, `devcert` will install the CA certificate in your operating system trusted certs store. A utility called `certutil` will be needed to update the trust store for various browsers; specifically: Firefox, and Chrome (when it's running on Linux).

`devcert` is configured to install `certutil` automatically, unless you're running Windows. If an automatic install is not successful, you may need to install it manually.

Manual installation of `Certutil`

To install `certutil`, you need to install the `nss tools` package(s). The exact procedure will differ depending on your operating system.

Linux

On a Linux OS, you should be able to run one of the following, depending on your Linux distro:

```
# Debian based (Ubuntu)
sudo apt install libnss3-tools

# RHEL based (Fedora)
sudo yum install nss-tools

# OpenSuse
sudo zypper install mozilla-nss-tools
```

macOS

Run the following command:

```
brew install nss
```

Windows

Pre-compiled libraries are rare, so you may need to compile it yourself. Because of how difficult Windows makes it, `devcert` will not attempt to update the Firefox trust store automatically; instead, it will fall back to using the "Firefox wizard", detailed below.

Debugging installation

If you choose not to install `certutil`, or the automatic install is not successful, you may get the following errors/prompts:

Chrome on Linux

```
WARNING: It looks like you have Chrome installed, but you specified
'skipCertutilInstall: true'. Unfortunately, without installing
certutil, it's impossible get Chrome to trust devcert's certificates
The certificates will work, but Chrome will continue to warn you that
they are untrusted.
```

Firefox

If you have Firefox installed, `devcert` will try to utilize Firefox itself to trust the certificate

```
devcert was unable to automatically configure Firefox. You'll need to
complete this process manually. Don't worry though - Firefox will walk
you through it.

When you're ready, hit any key to continue. Firefox will launch and
display a wizard to walk you through how to trust the devcert
certificate. When you are finished, come back here and we'll finish up.
(If Firefox doesn't start, go ahead and start it and navigate to
http://localhost:52175 in a new tab.)

If you are curious about why all this is necessary, check out
```

```
https://github.com/davewasmer/devcert#how-it-works
<Press any key to launch Firefox wizard>
```

Your options are as follows:

- Press enter and it will launch Firefox for you.
- If you wish to have trust support on Firefox, tell the point-and-click wizard `this certificate can identify websites`, and click OK. Otherwise, you may hit cancel and close the browser, then key return to finish building. **Reminder: you'll only need to do this once per machine.**

After `devcert` setup process

You can open the development server at `https://localhost:8000` and enjoy the HTTPS goodness ✨. You may change the port according to your setup.

Find out more about how devcert works.

Management of certificates generated by `devcert`

If you want to do some maintenance/cleanup of the certificates generated by `devcert`, please refer to the devcert-cli

Custom key and certificate files

You may find that you need a custom key and certificate file for HTTPS if you use multiple machines for development (or if your dev environment is containerized in Docker).

If you need to use a custom HTTPS setup, you can pass the `--https`, `--key-file`, `--cert-file`, and `--ca-file` flags to `npm run develop`.

- `--cert-file` [relative/absolute path to SSL certificate file]
- `--key-file` [relative/absolute path to SSL key file]
- `--ca-file` [relative/absolute path to SSL certificate authority file]

Using `npm run develop`

```
npm run develop -- --https --key-file ../relative/path/to/key.key --cert-file
../relative/path/to/cert.crt --ca-file ../relative/path/to/ca.crt
```

> *Note: You can use relative or absolute paths with this command*

Using the Gatsby CLI

```
gatsby develop --https --key-file ../relative/path/to/key.key --cert-file
../relative/path/to/cert.crt --ca-file ../relative/path/to/ca.crt
```

> *Note: You can use relative or absolute paths with this command*

Flag usage

Usage of the `--ca-file` flag is only required if your certificate is signed by a certificate authority.

If your certificate is self-signed, then do not include the `--ca-file` flag. Also, if you want your browser to trust a self-signed certificate, you will need to add it to your operating system (or browser's, in Firefox's case) root certificate store for your browser to trust it.

In most cases, the `--https` passed by itself is easier and more convenient to get local HTTPS.

Automatic certificates issued with the `--https` flag are issued to `localhost` by default, unless you have used the `--host` flag. If you have, a record in your hosts file will automatically be configured to point the defined host to `127.0.0.1`. At this time, ip addresses defined by `--host` are not supported.