



# Install step-ca

Learn how to to install the `step-ca` binary on your local machine.

## Building from source?

Check out our guide to [getting started with development](#).

## Select your operating system or infrastructure:

- [macOS](#)
- [Windows](#)
  - [Winget Package](#)
  - [Scoop Package](#)
- [Linux Packages](#)
  - [Debian/Ubuntu](#)
  - [Arch Linux](#)
  - [RedHat](#)
  - [Alpine Linux](#)
  - [NixOS](#)
  - [FreeBSD](#)
- [Linux Binaries](#)
- [Binary Signature Verification](#)
- [Kubernetes](#)
- [Docker](#)

## MACOS

To install `step` and `step-ca` together via [Homebrew](#), run:

```
brew install step
```

## WINDOWS

### Winget package

We publish a [Winget](#) package for `Smallstep.step-ca`.

To install both `step-ca.exe` and `step.exe`, run:

```
winget install Smallstep.step-ca
```

After installing, you may need to restart your terminal for `step-ca` to appear in your path.

To uninstall, run `winget uninstall`, then remove the configuration directory `$HOME/.step`.

### Scoop package

We also publish a [Scoop](#) package:

```
scoop bucket add smallstep https://github.com/smallstep/scoop-bucket.g:  
scoop install smallstep/step  
scoop install smallstep/step-ca
```

To uninstall, run `scoop uninstall`, then remove the configuration directory `$HOME/.step`.

## LINUX PACKAGES (AMD64)

**Install both `step-ca` and the `step CLI tool`.**

The `step CLI tool` is the easiest way to initialize, configure, and control `step-ca`. While `step` is not required to run `step-ca`, we recommend installing it.

## Debian/Ubuntu

To install `step`, download and install the Debian package for your platform from our [latest release](#):

```
wget https://dl.smallstep.com/cli/docs-ca-install/latest/step-cli_amd64.deb
sudo dpkg -i step-cli_amd64.deb
```

To install `step-ca`, download and install the Debian package for your platform from our [latest release](#):

```
wget https://dl.smallstep.com/certificates/docs-ca-install/latest/step-ca_amd64.deb
sudo dpkg -i step-ca_amd64.deb
```

To configure `step-ca` as a daemon, see our [systemd configuration guide](#).

To uninstall, run `dpkg -r step-cli step-ca`, then remove the configuration directory `$HOME/.step`.

## Arch Linux

These packages are maintained by trusted Arch Linux community members.

To install with [pacman](#), run:

```
pacman -S step-cli step-ca
```

The binary tarballs can be found here:

- [step-ca](#)
- [step-cli](#)

To uninstall, run `pacman -R step-ca step-cli` , then remove the configuration directory `$HOME/.step` .

Big shout out to the maintainers of these packages! We appreciate you.

## RedHat

To install `step` , download and install the RPM package for your platform from our [latest release](#):

```
wget https://dl.smallstep.com/cli/docs-ca-install/latest/step-cli_amd64.rpm
sudo rpm -i step-cli_amd64.rpm
```

To install `step-ca` , download and install the RPM package for your platform from our [latest release](#):

```
wget https://dl.smallstep.com/certificates/docs-ca-install/latest/step-ca_amd64.rpm
sudo rpm -i step-ca_amd64.rpm
```

To configure `step-ca` as a daemon, see our [systemd configuration guide](#).

To uninstall, run `dnf remove step-cli step-ca` , then remove the configuration directory `$HOME/.step` .

## Alpine Linux

There are community-maintained Alpine Linux Packages for `step` and `step-ca` .

To install `step` with [apk](#), run:

```
apk add step-cli step-certificates
```

The binary tarballs can be found here:

- [step-cli](#)
- [step-certificates](#)

To uninstall, run `apk del step-cli step-certificates` , then remove the configuration directory `$HOME/.step` .

Big shout out to the maintainers of these packages! We appreciate you.

## NixOS

There are community-maintained packages for NixOS:

- [step-ca](#)
- [step-cli](#)

## FreeBSD

There are community-maintained packages for FreeBSD:

- [step-certificates](#)
- [step-cli](#)

To install both packages in a FreeBSD jail, follow the steps in this [installation transcript](#).

Big shout out to the maintainers of these packages! We appreciate you.

## LINUX BINARIES

We distribute pre-compiled binaries for amd64, arm64, armv6, armv7, mips, mips64, ppc64le, and 386.

For more, see our [latest release page](#).

We use [cosign](#) to sign and verify release artifacts. For more: [Binary Signatures](#).

To download and install the `step` and `step-ca` binaries on an amd64 machine:

1. Install `step` .

Download and install the Linux tarball from our [latest release](#):

```
curl -LO https://dl.smallstep.com/cli/docs-ca-install/latest/step_1
tar -xf step_linux_amd64.tar.gz
sudo cp step_linux_amd64/bin/step /usr/bin
```

2. Install `step-ca` .

Download and install the Linux tarball from our [latest release](#):

```
curl -L https://dl.smallstep.com/certificates/docs-ca-install/latest
tar -xvf step-ca_linux_amd64.tar.gz
sudo cp step-ca_linux_amd64/step-ca /usr/bin
```

To configure `step-ca` as a daemon, see our [systemd configuration guide](#).

## Binary Signature Verification

We use [cosign](#) to sign and verify release artifacts.

To verify the signature of the `step-ca` binary:

1. [Install cosign](#).
2. Download the binary signature ( `.sig` ) and certificate ( `.pem` ) files from the Assets section of our [GitHub Releases page](#).
3. Run:

```
cosign verify-blob \
  --certificate step-ca_linux_amd64.tar.gz.pem \
  --signature step-ca_linux_amd64.tar.gz.sig \
  --certificate-identity-regexp "https://github\.com/smallstep/workflows,"
  --certificate-oidc-issuer https://token.actions.githubusercontent.com `
  step-ca_linux_amd64.tar.gz
```

## KUBERNETES

We publish [Helm charts](#) for easy installation on Kubernetes:

```
helm repo add smallstep https://smallstep.github.io/helm-charts/
helm repo update
helm install step-certificates smallstep/step-certificates
```

You can see all the configuration options at <https://hub.helm.sh/charts/smallstep/step-certificates>.

 **Autocert**

If you're using Kubernetes, make sure you check out [autocert](#), a Kubernetes add-on that builds on `step-ca` to automatically inject TLS/HTTPS certificates into your containers.

## DOCKER

We publish [docker images](#) for easy container installation.

## TEST YOUR INSTALLATION

```
$ step version
Smallstep CLI/0.10.0 (darwin/amd64)
Release Date: 2019-04-30 19:01 UTC
```

```
$ step-ca version
Smallstep CA/0.10.0 (darwin/amd64)
Release Date: 2019-04-30 19:02 UTC
```

## NEXT STEPS

- Learn about the [core concepts and design principles](#) behind `step-ca`.
- Read the [Getting Started guide](#) to set up a CA and get your first certificate.

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