

# DNS Privacy Daemon - Stubby

**i** 'Stubby' is an application that acts as a local DNS Privacy stub resolver (using DNS-over-TLS). Stubby encrypts DNS queries sent from a client machine (desktop or laptop) to a DNS Privacy resolver increasing end user privacy.

**!** Stubby is developed under the [getdns](#) project, has it's own [github repo](#) and [issue tracker](#) but [dnsprivacy.org](#) currently hosts the online documentation for Stubby. For more background and [FAQ](#) see our [About Stubby](#) page.

The command line version of Stubby is suitable for technical /advanced users. Work on more a [user friendly GUI called Stubby Manager](#) is underway - see below!

## Why Use Stubby?

Read about the problem with [DNS Privacy](#) and [how Stubby helps](#)



- [Key Features](#)
- [Source Code](#)
  - [Lastest release](#)
- [Installation](#)
  - [Packages](#)
  - [Installation Guides](#)
  - [Docker Images](#)
  - [Mobile](#)
- [Configuration](#)
- [Support](#)
- [How can I contribute to the getdns/Stubby projects?](#)
- [Other options](#)



## Key Features

- Runs as a daemon listening on the loopback addresses (127.0.0.1, ::0)
- Sends all outgoing DNS queries received on those addresses out over TLS
- Uses a default configuration which provides Strict Privacy and uses a subset of the available [DNS Privacy servers](#)
- Has additional servers available for activation in the configuration file (e.g. Cloudflare, Quad9)

Stubby uses getdns, it is recommended to use at least the 1.6 release of getdns, and preferably the [latest getdns stable release](#).



A future release of Stubby is expected to support the following:

- DNS-over-HTTPS (DOH)
- Configuration of servers using authentication name only

## Source Code



As of August 2017 Stubby has moved to its own repository and getdns is a library dependency!

Source code is available on github: <https://github.com/getdnsapi/stubby>

## Lastest release

See the Stubby [github](#) repo for the latest release tarball or the [getdns releases page](#).

## Installation

### Packages

Various packages are available, see [repology for Stubby](#).

**Note1:** A [debian package](#) is also available but doesn't show up in the above because the version number is currently incorrect (it picks up the getdns version, not the stubby version). Working to fix this!

**Note2:** The chocolatey package called 'stubby' as of March 2019 is for Stubby - the name was previously used for a package named stubby4net but that has now been renamed to stubby4net.

### Installation Guides

- Linux
  - [Build from source](#)
  - [Running a service](#)
  - Great tutorial on [using stubby on Ubuntu desktop](#) - thanks linuxbabe.com!
- macOS
  - [Homebrew](#)
  - [Stubby Manager GUI \(prototype\) for macOS](#) (note, this project is no longer maintained. Support for macOS in the new [Stubby Manager GUI](#) is a work in progress).
- Windows
  - [Windows installer](#) for command line Stubby (MSI, zip file and Chocolatey package available)
  - [Windows installer for Stubby Manager GUI](#) (development release)

### Docker Images

- See [this tweet for an example](#) of using Stubby + Quad9
- [See this link](#) for an example of using BIND as a local caching forwarder and stubby for upstream TLS

### Mobile

We hope to have support on mobile platforms in the future:

- [WIP on an iPhone App](#)



Note that Android has announced that it will support a native implementation of DNS-over-TLS in an upcoming official release (it is already available in developer releases). This does not share any code with Stubby but we applaud Android for this development!

## Configuration

See our [Stubby configuration](#) guide.



Note that some users use Stubby in combination with Unbound - Unbound provides a local cache and Stubby manages the upstream TLS connections (since Unbound cannot yet re-use TCP/TLS connections). An example configuration is available [on this page](#).

## Support

Bugs or feature requests can be directed to either

- MAILING LIST: the [getdns users mailing list](#)
- BUG TRACKER: the [Stubby github issue tracker](#)

## How can I contribute to the getdns/Stubby projects?

- Run and test stubby. Give feedback and report bugs!
- Contribute code to or <https://github.com/getdnsapi/stubby> or <https://github.com/getdnsapi/getdns>
- Running a [DNS privacy resolver](#)

## Other options

See [DNS Privacy Clients](#).