Circumventing Internet censorship with Tor

Philipp Winter
The Tor Project
What Tor Browser does

Alice

Anonymity Network

Bob
Obscures your Real IP Address
Prevents Network Observation
Prevents Location Determination
Blocks Fingerprinting

Prevents Cross-Site Correlation
Isolates Cookies & Scripts
Writes Nothing to Disk
No Browser History
“Standard” Tor is easy to block
GetTor helps you get Tor Browser
GetTor helps you get Tor Browser

gettor@torproject.org

This is an automated email response from GetTor.

You requested Tor Browser for windows.

Step 1: Download Tor Browser

First, try downloading Tor Browser from either GitLab or GitHub:

GitLab: https://gitlab.com/torproject/torbrowser-9.5-windows/raw/master/torbrowser-install-9.5_id.exe
Signature file: https://gitlab.com/torproject/torbrowser-9.5-windows/raw/master/torbrowser-install-9.5_id.exe.asc


If you cannot download Tor Browser from GitLab or GitHub, try downloading the file torbrowser-install-9.5_id.exe from the following archives:

Internet Archive: https://archive.org/details/@gettor

Google Drive folder: https://drive.google.com/open?id=13CADQ7jCwrGslID9YQ6bNz2DJPMU0vUu
Tor Browser ships with “default bridges”

- Bridges are effectively public but work for many people
  - Fifteen obfs4 bridges
  - One meek bridge
  - One Snowflake bridge
BridgeDB helps you get bridges

Step 1  Download Tor Browser

Step 2  Get bridges

Step 3  Now add the bridges to Tor Browser

What are bridges?
Bridges are Tor relays that help you circumvent censorship.

I need an alternative way of getting bridges!
Another way to get bridges is to send an email to bridges@torproject.org. Please note that you must send the email using an address from one of the following email providers: Riseup or Gmail.
BridgeDB helps you get bridges

What are bridges?

Bridges are Tor relays that help you circumvent censorship.

I need an alternative way of getting bridges!

Another way to get bridges is to send an email to bridges@torproject.org. Leave the email subject empty and write “get transport obfs4” in the email’s message body. Please note that you must send the email using an address from one of the following email providers: Riseup or Gmail.
BridgeDB helps you get bridges

Here are your bridge lines:

Select All  Show QRCODE
BridgeDB helps you get bridges
Different types of “bridges”

- obfs4
  - The protocol itself should work everywhere
  - Private obfs4 bridges work in China!

- meek
  - Works everywhere but is slow :-(

- Snowflake
  - Currently only in Tor Browser alpha
What’s new in anti-censorship?
Anti-censorship team

- We move forward all things anti-censorship
  - Improve *circumvention systems* and document *censorship systems*
  - Coordinate with other projects, our community, and academia

- Come join our *weekly meetings*!
  - More info: [https://pad.riseup.net/p/tor-anti-censorship-keep](https://pad.riseup.net/p/tor-anti-censorship-keep)
Snowflake

- Incorporated TurboTunnel
- Added Snowflake to Tor Browser alpha
- Numerous reliability and usability fixes
- We now have thousands of volunteer proxies
- We’re working on an Android proxy app for volunteers to run on their phones
BridgeDB

- Fixed many *usability* issues
  - Better email autoresponder
  - Relay Search shows distribution mechanism
  - Better CAPTCHAs
- Added *usage metrics*
- Many changes *under the hood*
Bridges

- Wrote bridge setup guides for eleven operating systems
  - https://community.torproject.org/relay/setup/bridge/
- Obfs4 bridge docker image
  - https://hub.docker.com/u/thetorproject/
- Test your bridge’s pluggable transport port
  - https://bridges.torproject.org/scan/
Scaling & monitoring infrastructure

- Outage monitoring
- Default bridge maintenance
- Increased number of bridges
What’s next?
What’s next

Make Snowflake stable
What’s next

- Implement *Salmon* bridge distributor
- Build *feedback loop* between BridgeDB and OONI
- Test bridges before handing them out
What’s next

Make Tor Browser smarter
We need your help!

- Help us set up relays, bridges, and snowflakes
- Help us write code
  - Most of our code is in Golang and Python
- Help us document and analyse censorship
- Best way to get started: our weekly IRC meetings!
Questions?

Philipp Winter

Email: phw@torproject.org
Twitter: @_phw