


DNS Privacy Public Resolvers

The following are services that have been announced by large organisations - they support DNS Privacy on anycast networks.

- [DNS-over-TLS \(DoT\)](#)
- [DNS-over-HTTPS \(DoH\)](#)


 A list of experimental DoT test servers (including those run by the Stubby developers) is available on the [Test Servers page](#).

DNS-over-TLS (DoT)

Details are provided in the [Stubby config file](#) for users who want to enable them.

Hosted by	IP addresses	TLS Ports	Hostname for TLS authentication	Base 64 encoded form of SPKI pin(s) for TLS authentication (RFC7858)	Notes
Quad9 'secure'	9.9.9.9 2620:fe::fe	853	dns.quad9.net	Quad9 do NOT publish or recommend use of SPKI pins with their servers.	See https://quad9.net and their FAQ for details of privacy, logging and filtering policies on the main and alternative addresses ⁽¹⁾ . UDP and TCP service are also available on these addresses.
Quad9 'insecure'	9.9.9.10 2620:fe::10	853	dns.quad9.net		
Cloudflare	1.1.1.1 or 1.0.0.1 2606:4700:4700::1111 or 2606:4700:4700::1001	853	cloudflare-dns.com	Cloudflare do NOT publish or recommend use of SPKI pins with their servers.	https://blog.cloudflare.com/announcing-1111/ https://blog.cloudflare.com/dns-resolver-1-1-1-1/ PRIVACY POLICY: https://developers.cloudflare.com/1.1.1.1/commitment-to-privacy/privacy-policy/privacy-policy/ And also see https://labs.apnic.net/?p=1127 for details of the APNIC/Cloudflare agreement as mentioned on the Register . UDP and TCP service are also available on these addresses. DNS-over-HTTPS is also available! NOTE: To use this service by name only (i.e resolve the IP from the name) use 1dot1dot1dot1.cloudflare-dns.com.
Google	8.8.8.8 or 8.8.4.4 2001:4860:4860::8888 or 2001:4860:4860::8844	853	dns.google	Not published	Google DoT service Google Privacy policy
CleanBrowsing	Various, see the CleanBrowsing website	853	Various, see the CleanBrowsing website	Not published	https://cleanbrowsing.org/privacy This service provides different end points with different filters (security, family, adult) so visit the website to select the end point with the filter you prefer. NOTE: also does DoH .
Adguard	Various, see https://adguard.com/en/blog/adguard-dns-announcement/	853	Various, see https://adguard.com/en/blog/adguard-dns-announcement/	Not published	https://adguard.com/en/adguard-dns/setup.html#instruction https://adguard.com/en/privacy.html This service provides different end points with different filters (default, family) so visit the website to select the end point with the filter you prefer.
Comcast	96.113.151.145 2001:558:fe21:6b:96:113:151:145	853	dot.xfinity.com	Not published	NOTE: This is currently a Public Beta trial. https://corporate.comcast.com/privacy https://corporate.comcast.com/stories/privacy-with-comcasts-xfinity-internet-service

DNS-over-HTTPS (DoH)

 For a more up to date list of available of DoH servers you may want to look at <https://github.com/curl/curl/wiki/DNS-over-HTTPS#publicly-available-servers>

Details of a few any cast service and privacy policies:

Hosted by	URL	Notes
Cloudflare	https://cloudflare-dns.com/dns-query	https://developers.cloudflare.com/1.1.1.1/dns-over-https/ PRIVACY POLICY: https://developers.cloudflare.com/1.1.1.1/commitment-to-privacy/privacy-policy/privacy-policy/ And also see https://labs.apnic.net/?p=1127 for details of the APNIC/Cloudflare agreement as mentioned on the Register .
Cloudflare	https://mozilla.cloudflare-dns.com/dns-query	This server is announced as part of the Firefox Nightly shield study . It has a different (stronger) privacy policy than the general Cloudflare DoH server above: https://developers.cloudflare.com/1.1.1.1/commitment-to-privacy/privacy-policy/firefox/
Google	https://dns.google/dns-query	RFC8484 (GET and POST) https://developers.google.com/speed/public-dns/docs/doh/
Quad9	Various	Please see https://www.quad9.net/doh-quad9-dns-servers/ for details
CleanBrowsing	Various, see the CleanBrowsing website	This service provides different end points with different filters (security, family, adult) so visit the website to select the end point with the filter you prefer.
Adguard	Various, see https://adguard.com/en/blog/adguard-dns-announcement/	
Comcast	https://doh.xfinity.com/dns-query	NOTE: This is currently a Public Beta trial. https://corporate.comcast.com/privacy https://corporate.comcast.com/stories/privacy-with-comcasts-xfinity-internet-service



Google also run a DoH endpoint at <https://dns.google/resolve?> using a proprietary JSON API.