Public recursive name server

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[Jump to navigation](https://en.wikipedia.org/wiki/Public_recursive_name_server#mw-head)[Jump to search](https://en.wikipedia.org/wiki/Public_recursive_name_server#searchInput)

A **public recursive name server** (also called **public DNS resolver**) is a [name server](https://en.wikipedia.org/wiki/Name_server) service that networked computers may use for query to the [Domain Name System (DNS)](https://en.wikipedia.org/wiki/DNS), the decentralized Internet naming system, in place of or in addition to name servers operated by the local [Internet service provider (ISP)](https://en.wikipedia.org/wiki/Internet_service_provider) to which the devices are connected. Reasons for using these services include:

* speed, compared to using ISP DNS services[[1]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-1)
* filtering (security, ad-blocking, porn-blocking, etc.)[[2]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-2)
* reporting[[3]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-3)
* avoiding censorship[[4]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-4)
* redundancy (smart caching)[[5]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-5)
* access to unofficial [alternative top level domains](https://en.wikipedia.org/wiki/Alternative_top_level_domain) not found in the official [DNS root zone](https://en.wikipedia.org/wiki/DNS_root_zone)
* temporary unavailability of the ISP's name server

Public DNS resolver operators often cite increased privacy as an advantage of their services; critics of public DNS services have cited the possibility of mass data collection targeted at the public resolvers as a potential risk of using these services. Several services now support secure DNS lookup transport services such as [DNS over HTTPS (DoH)](https://en.wikipedia.org/wiki/DNS_over_HTTPS) and [DNS over TLS (DoT)](https://en.wikipedia.org/wiki/DNS_over_TLS).

Public DNS resolvers are operated either by commercial companies, offering their service for free use to the public, or by private enthusiasts to help spread new technologies and support non-profit communities.

List of public DNS service operators[[edit](https://en.wikipedia.org/w/index.php?title=Public_recursive_name_server&action=edit&section=1)]

| **Provider** | **Nodes** | **Privacy policy** | **DNS over UDP** | **DNSSEC** | **DNS over TLS** | **DNS over HTTPS** | **DNSCrypt** | **Hostnames** | **IPv4 addresses** | **IPv6 addresses** | **Filters** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**AdGuard**](https://en.wikipedia.org/wiki/AdGuard#Products) | 12[[6]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-6) | Yes[[7]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-7) | Yes | Yes[[8]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-8) | Yes | Yes[[9]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-:10-9) | Yes[[10]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-10) | dns.adguard.com | *176.103.130.130* *176.103.130.131* | *2a00:5a60::ad1:0ff* *2a00:5a60::ad2:0ff* | Default[[11]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-:11-11) | A free, privacy-oriented DNS resolution system that blocks tracking, ads and phishing.[[12]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-12) |
| dns-family.adguard.com | *176.103.130.132*  *176.103.130.134* | *2a00:5a60::bad1:0ff*  *2a00:5a60::bad2:0ff* | Family[[11]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-:11-11) |
| dns-unfiltered.adguard.com | *176.103.130.136*  *176.103.130.137* | *2a00:5a60::01:ff*  *2a00:5a60::02:ff* | None[[11]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-:11-11) |
| [**CleanBrowsing**](https://en.wikipedia.org/wiki/CleanBrowsing) | 20 | Yes[[13]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-cbpp-13) | Yes | Yes | Yes[[14]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-cbdot-14) | Yes[[15]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-cbdoh-15) | Yes[[16]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-cbdcr-16) | family-filter-dns.cleanbrowsing.org | *185.228.168.168* *185.228.169.168* | *2a0d:2a00:1::* *2a0d:2a00:2::* | Family | Designed to be used on devices of kids under 13. |
| adult-filter-dns.cleanbrowsing.org | *185.228.168.10* *185.228.169.11* | *2a0d:2a00:1::1* *2a0d:2a00:2::1* | Adult |
| security-filter-dns.cleanbrowsing.org | *185.228.168.9* *185.228.169.9* | *2a0d:2a00:1::2* *2a0d:2a00:2::2* | Security |
| [**Cloudflare**](https://en.wikipedia.org/wiki/1.1.1.1) | 200[[17]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-cfnet-17) | Yes[[18]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-18) | Yes | Yes[[19]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-19) | Yes[[20]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-20) | Yes[[21]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-21) | No | one.one.one.one[[22]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-22) 1dot1dot1dot1.cloudflare-dns.com | *1.1.1.1* *1.0.0.1* | *2606:4700:4700::1111* *2606:4700:4700::1001* | None |  |
| dns64.cloudflare-dns.com | — | *2606:4700:4700::64* *2606:4700:4700::6400* | None | Intended to be used with IPv6-only network.[[23]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-23) See [NAT64](https://en.wikipedia.org/wiki/NAT64) and [DNS64](https://en.wikipedia.org/wiki/DNS64). |
| No | security.cloudflare-dns.com | *1.1.1.2* *1.0.0.2* | *2606:4700:4700::1112* *2606:4700:4700::1002* | Malware, Phishing |  |
| family.cloudflare-dns.com | *1.1.1.3* *1.0.0.3* | *2606:4700:4700::1113* *2606:4700:4700::1003* | Malware, Phishing, Adult content |  |
| [**Comodo**](https://en.wikipedia.org/wiki/Comodo_Group) |  | No | Yes | Yes | No | No | Yes | ns1.recursive.dnsbycomodo.com ns2.recursive.dnsbycomodo.com | *8.26.56.26* *8.20.247.20* | — |  |  |
| [**Dyn**](https://en.wikipedia.org/wiki/Dyn_(company)) |  | Yes[[24]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-24) | Yes | Yes | No | No | No | resolver1.dyndnsinternetguide.com resolver2.dyndnsinternetguide.com | *216.146.35.35* *216.146.36.36* | — |  | Shut down on May 31, 2022 |
| [**Google**](https://en.wikipedia.org/wiki/Google_Public_DNS) | 23[[25]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-googlelocations-25) | Yes[[26]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-googleprivacy-26) | Yes | Yes | Yes | Yes[[27]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-27) | No | dns.google[[28]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-28) google-public-dns-a.google.com google-public-dns-b.google.com | *8.8.8.8* *8.8.4.4* | *2001:4860:4860::8888* *2001:4860:4860::8844* | None |  |
| dns64.dns.google | — | *2001:4860:4860::6464* *2001:4860:4860::64* | None | Intended to be used on networks with NAT64 gateway.[[29]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-29) |
| [**Neustar**](https://en.wikipedia.org/wiki/Neustar#DNS_Advantage) |  | Yes[[30]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-Neustar_PP-30) | Yes | Yes | No | No | No |  | *156.154.70.1* *156.154.71.1* | *2610:a1:1018::1* *2610:a1:1019::1* | None |  |
| *156.154.70.2* *156.154.71.2* | *2610:a1:1018::2* *2610:a1:1019::2* | Malware, ransomware, spyware, phishing |
| *156.154.70.3* *156.154.71.3* | *2610:a1:1018::3* *2610:a1:1019::3* | Low security + gambling, pornography, violence, hate |
| *156.154.70.4* *156.154.71.4* | *2610:a1:1018::4* *2610:a1:1019::4* | Medium security + gaming, adult, drugs, alcohol, anonymous proxies |
| *156.154.70.5* *156.154.71.5* | *2610:a1:1018::5* *2610:a1:1019::5* | None | Will not redirect non-existent domains to a landing page |
| [**OpenDNS**](https://en.wikipedia.org/wiki/OpenDNS) | 31[[31]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-opendnsnet-31) | Yes[[32]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-opendnsprivacy-32) | Yes | Yes[[33]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-33) | No | Yes[[34]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-opendnsdoh-34) | Yes[[35]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-opendnscrypt-35) | dns.opendns.com | *208.67.222.222* *208.67.220.220* | *2620:119:35::35* *2620:119:53::53* | Basic Security filtering + user defined policies |  |
| familyshield.opendns.com | *208.67.222.123* *208.67.220.123* | *2620:119:35::123* *2620:119:53::123* | "FamilyShield": adult content |  |
| sandbox.opendns.com | *208.67.222.2* *208.67.220.2* | *2620:0:ccc::2* *2620:0:ccd::2* | None | Sandbox addresses which provide no filtering |
| [**OpenNIC**](https://en.wikipedia.org/wiki/OpenNIC) |  | Yes[[36]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-36) | Yes | Yes | No | No | Partial[[37]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-37) | Several [[38]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-38) | *185.121.177.177* *169.239.202.202* | *2a05:dfc7:5::53* *2a05:dfc7:5::5353* |  | List of all [OpenNIC Tier 2 DNS Resolvers](https://servers.opennic.org/) |
| [**Quad9**](https://en.wikipedia.org/wiki/Quad9) | 137[[39]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-39) | Yes[[40]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-quad9privacy-40) | Yes | Yes[[41]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-41) | Yes[[42]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-quad9tls-42) | Yes[[43]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-quad9https-43) | Yes[[44]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-quad9dnscrypt-44) | dns.quad9.net rpz-public-resolver1.rrdns.pch.net | *9.9.9.9* *149.112.112.112* | *2620:fe::fe* *2620:fe::9* | Malicious domains (phishing, malware, exploit kit domains) |  |
| No[[45]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-45) | dns-nosec.quad9.net | *9.9.9.10* *149.112.112.10* | *2620:fe::10* *2620:fe::fe:10* | None |  |
| [**VeriSign**](https://en.wikipedia.org/wiki/VeriSign) |  | Yes[[46]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-46) | Yes | Yes[[47]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-47) | No | No | No | recpubns1.nstld.net recpubns2.nstld.net | *64.6.64.6* *64.6.65.6* | *2620:74:1b::1:1* *2620:74:1c::2:2* | None |  |
| [**Yandex**](https://en.wikipedia.org/wiki/Yandex) |  | Yes[[48]](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_note-yandextou-48) | Yes | No | No | No | Yes | dns.yandex.ru secondary.dns.yandex.ru | *77.88.8.1* *77.88.8.8* | *2a02:6b8::feed:0ff* *2a02:6b8:0:1::feed:0ff* | None |  |
| safe.dns.yandex.ru secondary.safe.dns.yandex.ru | *77.88.8.2* *77.88.8.88* | *2a02:6b8::feed:bad* *2a02:6b8:0:1::feed:bad* | "Safe": fraudulent / infected / bot sites |  |
| family.dns.yandex.ru secondary.family.dns.yandex.ru | *77.88.8.3* *77.88.8.7* | *2a02:6b8::feed:a11* *2a02:6b8:0:1::feed:a11* | "Family": fraudulent / infected / bot / adult sites |  |

References[[edit](https://en.wikipedia.org/w/index.php?title=Public_recursive_name_server&action=edit&section=2)]

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  2. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-2) [*"A simple way to get around Rogers' DNS re-directing"*](http://www.itbusiness.ca/news/a-simple-way-to-get-around-rogers-dns-re-directing/12025)*. IT Business. Retrieved 2016-10-22.*
  3. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-3) [*"OpenDNS Adds Centralized Reporting, IP-Layer Enforcement to Umbrella"*](https://web.archive.org/web/20161022224758/http:/mspmentor.net/managed-services/110415/opendns-adds-centralized-reporting-ip-layer-enforcement-umbrella)*. mspmentor.net. Archived from*[*the original*](http://mspmentor.net/managed-services/110415/opendns-adds-centralized-reporting-ip-layer-enforcement-umbrella)*on 2016-10-22. Retrieved 2016-10-22.*
  4. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-4) [*"Austrian Pirate Bay Blockade Censors Slovak Internet - TorrentFreak"*](https://torrentfreak.com/austrian-pirate-bay-blockade-censors-slovak-internet-accidentally-151203/)*. TorrentFreak. 2015-12-03. Retrieved 2016-10-22.*
  5. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-5) *Security; Iana.*[*"DNS devastation: Top websites whacked offline as Dyn dies again"*](https://www.theregister.co.uk/2016/10/21/dns_devastation_as_dyn_dies_under_denialofservice_attack/)*. The Register. Retrieved 2016-10-22.*
  6. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-6) [AdGuard DNS servers map](https://adguard.com/en/adguard-dns/overview.html)
  7. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-7) [AdGuard DNS Privacy Notice](https://adguard.com/en/privacy/dns.html)
  8. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-8) [AdGuard DNS FAQ: What is DNSSEC?](https://adguard.com/en/adguard-dns/overview.html)
  9. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-:10_9-0) [The official release of AdGuard DNS — a new unique approach to privacy-oriented DNS](https://adguard.com/en/blog/adguard-dns-announcement.html)
  10. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-10) [Adguard DNS now supports DNSCrypt](https://adguard.com/en/blog/adguard-dns-now-supports-dnscrypt.html)
  11. ^ [Jump up to:***a***](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-:11_11-0) [***b***](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-:11_11-1) [***c***](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-:11_11-2) [AdGuard DNS Setup guide](https://adguard.com/en/adguard-dns/overview.html)
  12. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-12) [*"AdGuard DNS FAQ: What is AdGuard DNS?"*](https://adguard.com/en/adguard-dns/overview.html)*. adguard.com. Retrieved 2019-08-12.*
  13. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-cbpp_13-0) *NOC.org / dcid.*[*"CleanBrowsing Privacy and Terms of Service"*](https://cleanbrowsing.org/privacy)*. Cleanbrowsing.org. Retrieved 2019-01-04.*
  14. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-cbdot_14-0) [*"Parental Control with DNS over TLS Support"*](https://cleanbrowsing.org/dnsovertls)*.*
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  17. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-cfnet_17-0) [Cloudflare: Our Anycast Network Map](https://www.cloudflare.com/network/)
  18. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-18) [*"Privacy Policy"*](https://www.cloudflare.com/privacypolicy/)*. Cloudflare. Retrieved 2019-01-04.*
  19. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-19) [*"The Nitty Gritty - Cloudflare Resolver"*](https://developers.cloudflare.com/1.1.1.1/nitty-gritty-details/#dnssec)*.*
  20. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-20) *Cloudflare Inc (2018-03-31).*[*"DNS over TLS - Cloudflare Resolver"*](https://developers.cloudflare.com/1.1.1.1/dns-over-tls/)*. Developers.cloudflare.com. Retrieved 2019-01-04.*
  21. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-21) *Cloudflare Inc.*[*"DNS over HTTPS - Cloudflare Resolver"*](https://developers.cloudflare.com/1.1.1.1/dns-over-https/)*. Developers.cloudflare.com. Retrieved 2019-01-04.*
  22. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-22) [*"Test DNS owner one.one.one.one"*](https://community.cloudflare.com/t/test-dns-owner-one-one-one-one/29970/4)*. 2018-08-21.*
  23. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-23) [Supporting IPv6-only Networks](https://developers.cloudflare.com/1.1.1.1/support-nat64/)
  24. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-24) [*"Oracle's Privacy Policy"*](https://dyn.com/legal/dyn-privacy-policy/)*. dyn.com. Retrieved 2018-12-31.*
  25. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-googlelocations_25-0) [Google Public DNS: Where are your servers currently located?](https://developers.google.com/speed/public-dns/faq#locations)
  26. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-googleprivacy_26-0) [Google Public DNS: Your Privacy](https://developers.google.com/speed/public-dns/privacy)
  27. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-27) [Google Public DNS: DNS-over-HTTPS](https://developers.google.com/speed/public-dns/docs/dns-over-https)
  28. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-28) [*"Get Started | Public DNS"*](https://developers.google.com/speed/public-dns/docs/using)*.*
  29. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-29) [Google Public DNS64](https://developers.google.com/speed/public-dns/docs/dns64)
  30. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-Neustar_PP_30-0) [*"Privacy Policy | Neustar"*](https://www.home.neustar/privacy/privacy-policy#data_in_products_services)*. home.neustar.*
  31. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-opendnsnet_31-0) [OpenDNS: Data Center Locations](https://www.opendns.com/data-center-locations/)
  32. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-opendnsprivacy_32-0) [Cisco Online Privacy Statement](https://www.cisco.com/c/en/us/about/legal/privacy-full.html)
  33. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-33) [DNSSEC General Availability - OpenDNS](https://support.opendns.com/hc/en-us/articles/360039659971)
  34. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-opendnsdoh_34-0) [[1]](https://doh.opendns.com/dns-query)
  35. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-opendnscrypt_35-0) [OpenDNS and DNSCrypt](https://support.opendns.com/hc/en-us/articles/227989147-OpenDNS-and-DNSCrypt)
  36. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-36) [OpenNIC: Privacy Policy](https://www.opennic.org/privacy)
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  41. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-41) [Quad9 FAQ: Does Quad9 implement DNSSEC?](https://www.quad9.net/faq/#Does_Quad9_implement_DNSSEC)
  42. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-quad9tls_42-0) [Quad9 Frequently Asked Questions](https://www.quad9.net/faq/#Does_Quad9_support_DNS_over_TLS)
  43. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-quad9https_43-0) [DoH with Quad9 DNS Servers](https://www.quad9.net/doh-quad9-dns-servers/)
  44. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-quad9dnscrypt_44-0) [Quad9 DNSCrypt Now In Testing](https://www.quad9.net/privacy-dnscrypt-testing/)
  45. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-45) [Quad9 FAQ: Is there a service that Quad9 offers that does not have the blocklist or other security?](https://www.quad9.net/faq/#Is_there_a_service_that_Quad9_offers_that_does_not_have_the_blocklist_or_other_security)
  46. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-46) [Verisign Public DNS Terms of Service](https://www.verisign.com/en_US/security-services/public-dns/terms-of-service/index.xhtml?loc=en_US)
  47. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-47) [Verisign Public DNS Forum: employee post](https://publicdnsforum.verisign.com/discussion/comment/56#Comment_56)
  48. [**^**](https://en.wikipedia.org/wiki/Public_recursive_name_server#cite_ref-yandextou_48-0) [Terms of use of the Yandex.DNS service](https://yandex.com/legal/dns_termsofuse/)

External links[[edit](https://en.wikipedia.org/w/index.php?title=Public_recursive_name_server&action=edit&section=3)]

* [Home page of the DNSCrypt project: Public DNS servers](https://dnscrypt.info/public-servers/)