

Speed ??up Internet connection by changing DNS server

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Network administration - Many factors play a role in determining the performance of a connection, such as server speed, network connection (wireless or wired), router and network bandwidth, as well as delay, .
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The majority of users often assume that their Internet connection bandwidth determines the overall performance of the connection. However, this is not entirely true. There are many factors that play a role in determining this overall performance, such as the server speed the user wants to connect, the type of network connection (wireless or wired), router and network bandwidth as well as latency. And one of the least interesting factors is the user's DNS (Domain Name System) server.

When typing into a web address, your system will send a lookup request to the DNS server to find the IP address of the server hosting the website with that domain name. The same thing happens when you use Internet applications, email clients or other programs to access Internet resources. Basically, the Domain Name System is a naming system for Internet-connected devices that translates easy-to-remember domain names into pure-digit IP addresses.

For example, when you enter **www.pcworld.com** (or just **pcworld.com**) into your browser, your system will respond by looking up its DNS resolution; If the required IP address is not already stored in the cache, your system will send a request to another DNS server, which is done until a server responds with a preferred address. case - in this case, 70.42.185.10. In the meantime, you have to wait until the request and the search is complete - and if the request fails at a certain server, your system must switch to another DNS server request.

DNS servers basically act as intermediaries to link your system to all resources somewhere on the Internet. Typically, your ISP will provide DNS servers and assign them via DHCP (Dynamic Host Configuration Protocol). When they do this well, you won't see a slowdown in browsing or using online resources. It is for this reason that finding fast-processing DNS servers is a very important issue.

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The role of changing DNS settings

Solve geographic questions

Internet support infrastructure is a series of copper or fiber cables, connecting servers worldwide. Data is transmitted through these cables in the form of electromagnetic waves, at a fast rate equal to the speed of light. Although we cannot do anything to increase that speed, we can reduce the distance that these waves have to move. If the DNS server is located away from you, your browsing speed will be affected.



However, in fact, Internet speed is much more complicated than calculating the simple distance you often imagine. Google Public DNS is one of the most popular DNS server alternatives and uses two IP addresses (8.8.8.8 and 8.8.4.4). They are called anycast addresses, with many servers around the world to meet requests from these addresses. Servers that meet the changing requirements of the day depend on network conditions and traffic. Although it must respond to queries from many servers around the world, Google Public DNS is always ranked as one of the fastest DNS servers.

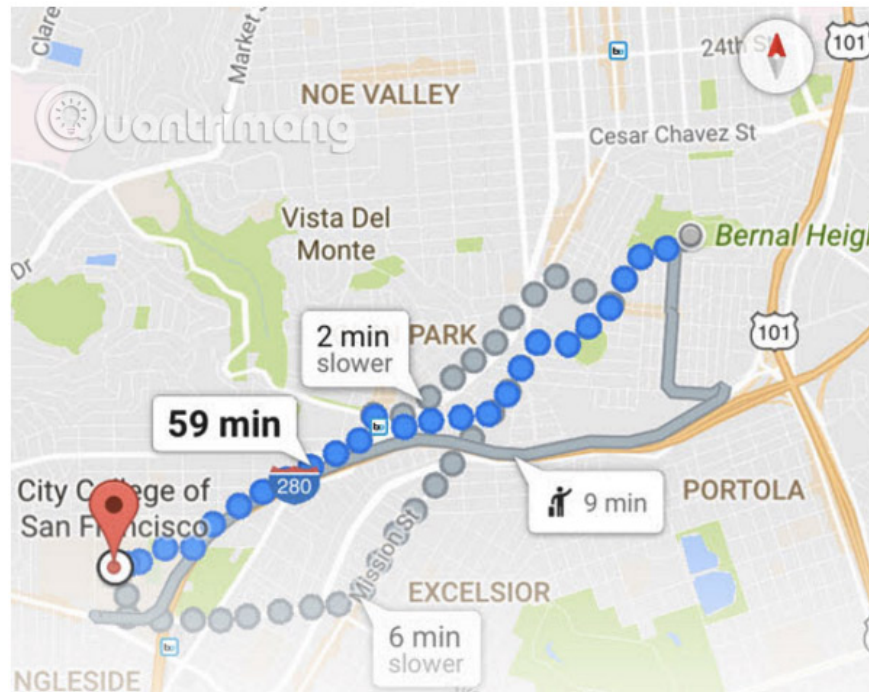


Google Public DNS has achieved this by working with Content Delivery Networks (CDN) - Content Delivery Network, to attach location data to DNS requests. In most cases, if you use Canada's DNS server, CDN will assume you are in Canada. This has an impact on the load speed and the content you see will be optimized for

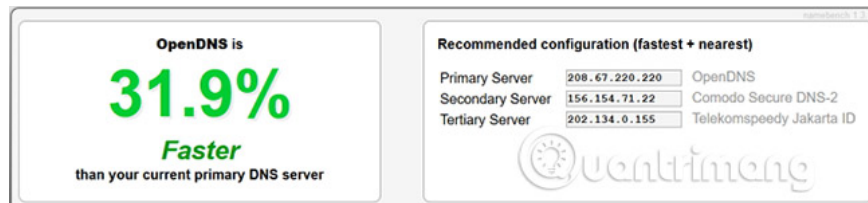
users in Canada. Currently, Google, along with OpenDNS, will attach your IP address to DNS requests. This means that the data is loaded from the local server for you, helping to improve your overall Internet speed.

Optimize DNS connection

When planning a move with Google Maps, you will see a number of different options. Some routes will take less time, even if they are larger distances. This may be due to a number of factors such as traffic, vehicles and average speed. When choosing DNS server to increase your Internet speed, you will face a series of similar factors. Selecting the most favorable path is called optimizing the link.



Some DNS servers, like servers provided by ISPs, will have large traffic, especially during peak periods. Some servers may be outdated or no longer effective in routing your data. The connection between the DNS server and your computer is only part of the solution to this problem because the site you want to access may require data from other websites such as ads or videos.



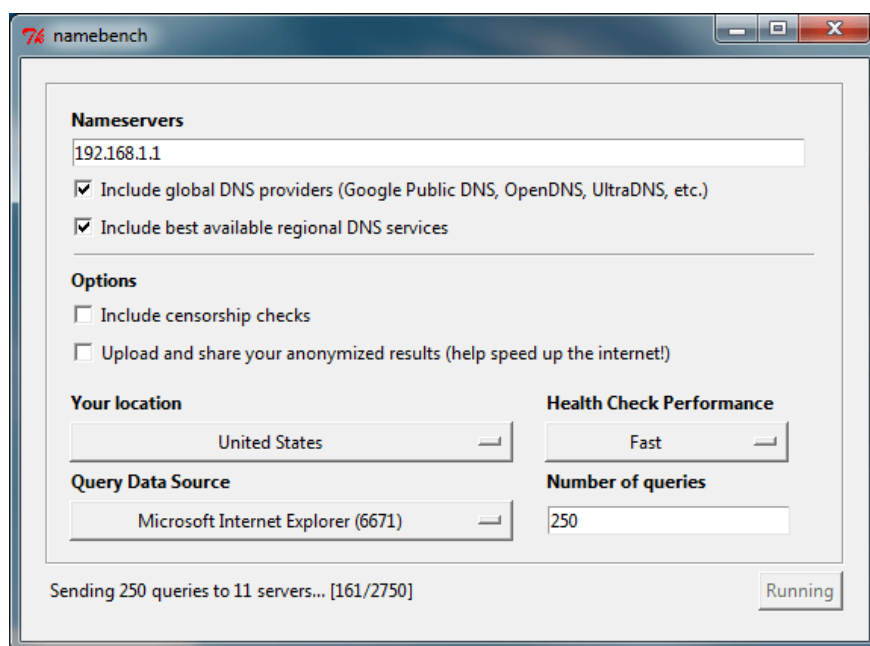
The complex interactions between servers and connections that help streamline optimization are indispensable measures for improving Internet speed. ISP DNS servers can be placed very close to you. However, that doesn't mean giving you the best performance. This is where a tool like Google's **Namebench** works. Namebench analyzes your connection and recommends the best DNS servers designed specifically for you.

Demand for DNS speed

Under the management of Dave Brailsford, the British Olympic cycling team has become one of the most successful riders of all time. They eventually won seven of the ten gold medals at the 2008 and 2012 Olympics. Their key to success was Brailsford's commitment to in principle profit margins. This is the principle that many small improvements bring about a significant improvement in overall.

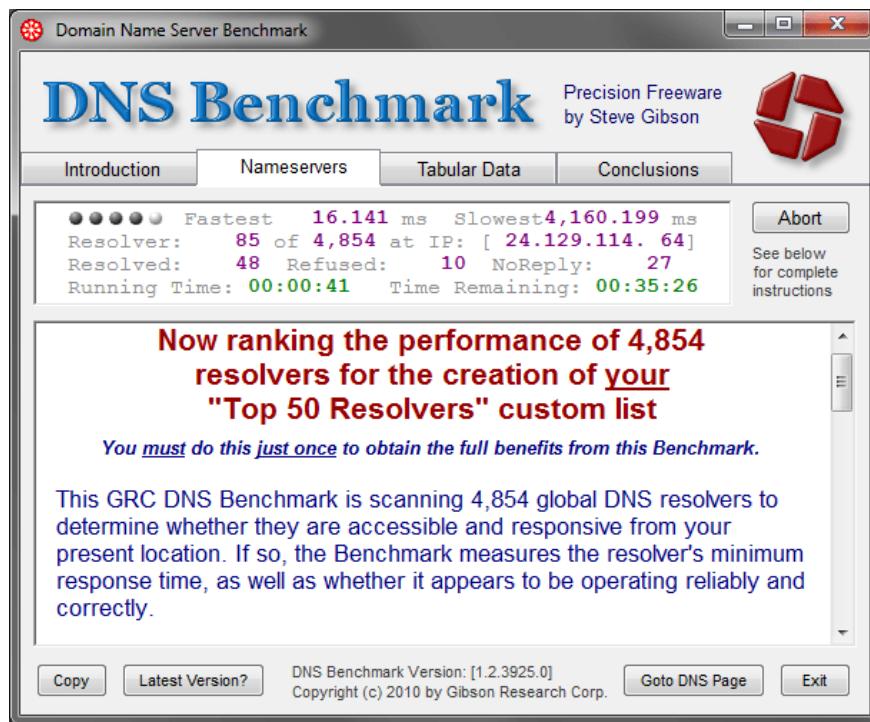
Although there is no way to increase the Internet speed, we can make many small modifications and improvements. These improvements work together to increase the overall Internet speed and DNS servers play an important role in this process. Changing your DNS server is not the only purpose. Alternative DNS servers can even provide greater security and privacy than your default options.

Find the fastest DNS server



The DNS benchmark open source utility is used for Mac OS X, Windows and UNIX computers. For Windows systems, GRC's DNS Benchmark tool provides more detailed and comprehensive results.

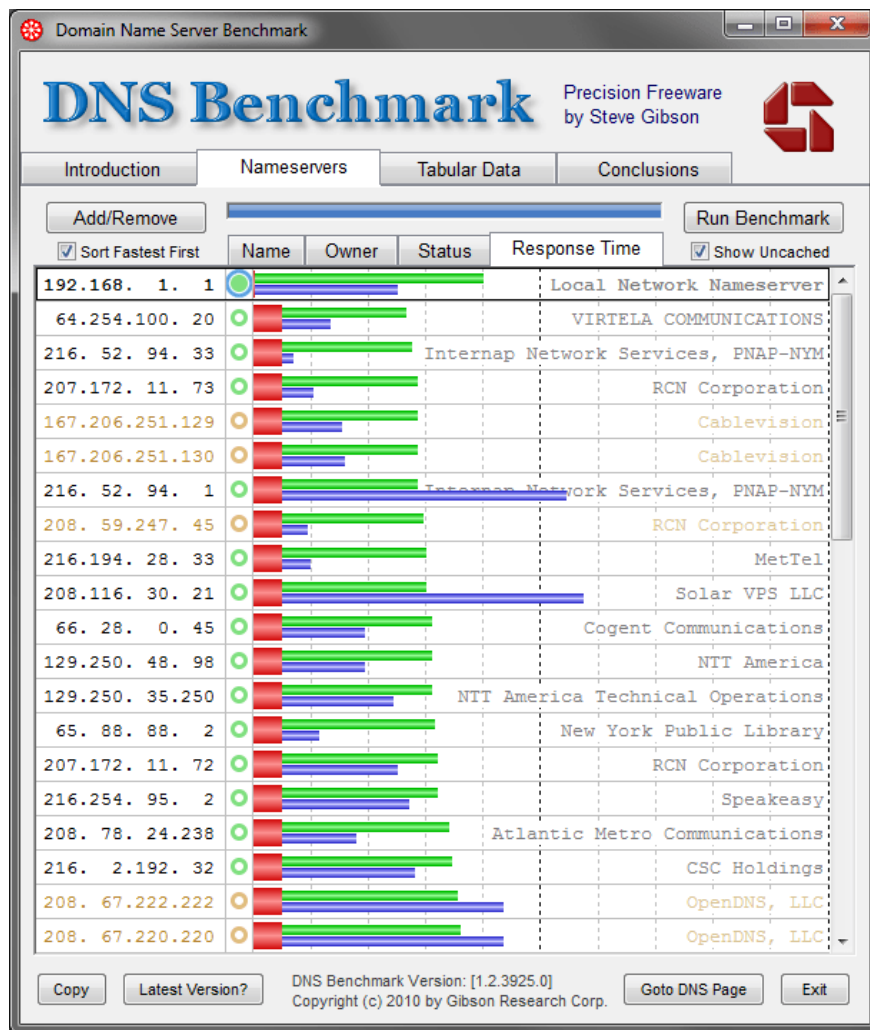
The DNS servers provided by many ISPs by default do not always have the best or most reliable performance, while many other public DNS options meet this requirement. Finding the fastest DNS server for a connection is difficult for most users, so we'll show you how to find the fastest DNS server in the region and how to configure it. System to use them.



GRC's DNS Benchmark evaluates the performance and stability of thousands of DNS servers.

Start by downloading two utilities to identify the fastest DNS server in your area: GRC's Namebench and DNS Benchmark DNS benchmark utility. Both have the same functions and it is best to run both to see if the results are consistent or not; However, DNS Benchmark is a utility with a more comprehensive option.

To run Namebench, simply download it and double-click the executable file. When the Namebench interface appears, check the *Include global DNS providers* and *Include best available regional options DNS services*, confirm that your location is set correctly in the corresponding drop-down menu, click the *Start Benchmark* button. Namebench will run several tests, then let you switch to the results page that lists the fastest DNS servers your system can access.

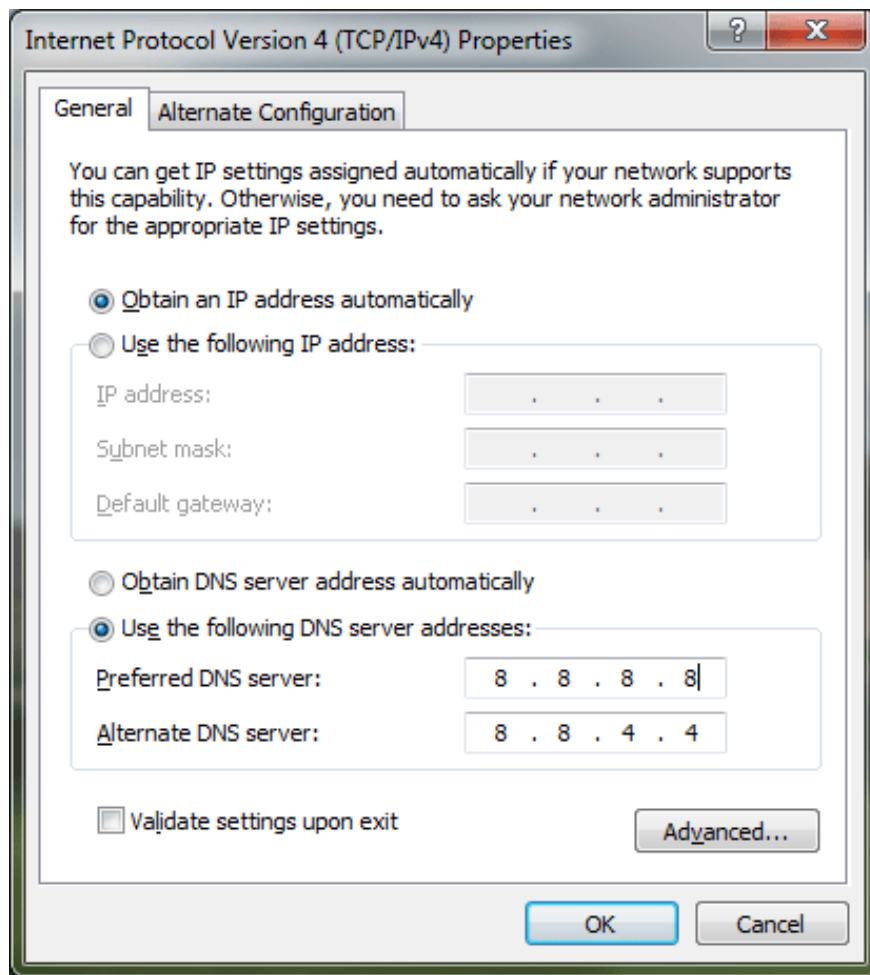


The DNS benchmark results page will display the list of DNS servers with the fastest response times.

The DNS Benchmark of GRC is similar. Download and double-click the executable file to run the utility. When the DNS Benchmark interface appears, click the *Nameservers* tab, then the *Add / Remove* button. The Edit DNS Server IPs window will open. Under this window, click the *Build Nameserver Custom List option*. In the results box that appears, click on the list, GRC DNS Benchmark can scan 4854 global DNS resolvers to answer questions whether they are accessible from your location or not. When the list is complete, click the *Run Benchmark* button on the Nameservers tab. When the benchmark finishes its work, the program will display the results automatically, sorting by response time.

In both benchmarks, the DNS server with the fastest response time will provide the best performance. Record the top IP addresses so you can use them later in the system configuration.

Configuring computers and routers



Configuring your preferred DSN server within Windows involves changing the IP addresses needed in the appropriate fields of the TCP / IPv4 Properties window.

You can set up Windows 7 to use your preferred DNS servers by changing the appropriate settings in the Network Connections control panel. Click the *Start* button; in the Search box, type **Network Connections** and press **Enter** . You should now see a list of network adapters installed on the system. DNS settings must be configured on all active network connections. On a desktop, configuration only needs to be done on one adapter, but on the notebook we need to configure both wired and wireless adapters if both are used.

The active network adapter will have the network name listed right below its name and no red X in the icon. Right-click on the active adapter, select *Properties* and click the *Networking* tab. On the Networking tab, you will see a list of items used by the network connection. In this list, highlight *Internet Connection Protocol Version 4 (TCP / IPv4)* and click the *Properties* button . In the window that appears, click the *General* tab if it is not already selected, and the radio button is labeled *Use the following DNS server addresses* . Two fields will become available - one is Preferred DNS server and another is Alternate DNS server. In the Preferred DNS server field, enter the fastest DNS server (according to the benchmark); In the Alternate DNS server field, enter the second DNS server. Click *OK* in that window and click *OK* again in the network properties window. Then close the network connection list and restart the system. You have now configured Windows to use the fastest DNS server in your area.

Network Address Server Settings (DHCP)

DHCP Type: DHCP Server

DHCP Server: Enable Disable

Start IP Address: 192.168.1.100

Maximum DHCP Users: 50

Client Lease Time: 1440 minutes

Static DNS 1: 4.2.2.4

Static DNS 2: 4.2.2.2

Static DNS 3: 8.8.8.8

WINS: 0.0.0.0

Use DNSMasq for DHCP:

Use DNSMasq for DNS:

DHCP-Authoritative:

In order for all systems to connect to the Internet via a broadband router using the same DNS server, enter their IP address in the router's network address server settings.

Configuring Windows is a way to ensure that certain systems are using the fastest DNS servers available. To arrange for all systems to be configured via a broadband connection - regardless of their operating system - using the same DNS servers, you need to change the settings in your router.

The setup steps for routers to use preferred DNS servers are quite different for different routers, but the basic process is relatively similar. The best way is to see the router's user guide, below we have provided a few basic reference steps.

Most routers allow you to set up their system via the web interface. Open the browser and enter **192.168.0.1** or **192.168.1.1** in the address bar. There are many IP addresses that most broadband routers today use. If both addresses do not get you into the router's configuration interface, you can find the router's IP address in its user guide. Select *Control Panel*, *Network and Sharing Center*, *Change adapter settings* ; double-click the active network connection; click *Details* ; and find the IP address listed below 'IPv4 Default Gateway'. Get that IP address and add **http://** to the front of it, then paste it into the address bar of your web browser.

After entering the correct IP address, log in to the router with the appropriate credentials. If you don't know them, you can refer to the router's user manual. Once logged in, click *Basic Setup* or *Network Setup*, and you should see the section called 'Network Address Server Settings (DHCP)'. This section usually has two or three fields, this is where you can enter static DNS information. Enter the IP address for the fastest DNS servers in the region, save your changes and reboot the system.

See more:

1. How to change DNS to surf faster, speed up Internet
2. 3 "legitimate" reasons to change DNS Server
3. How to change DNS to see if Cloudflare really speeds up the network

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