

# Glossary of Technical Terms Related to IPv6

## **AAAA Record**

An AAAA record stores a 128-bit Internet Protocol version 6 (IPv6) address, which does not fit the standard A record format. For example, 2007:0db6:85a3:0000:0000:6a2e:0371:7234 is a valid 128-bit IPv6 address. It maps the host name to an address associated with a domain name and specifies that AAAA records must be processed.

## **Aliased Nameserver**

An aliased nameserver is owned by a hosting provider but is aliased (or masked) to a name that you specify.

## **Apache**

The Apache program is a popular open-source Web server. It supports Perl and PHP scripts.

## **A Record**

An A record is the part of the zone file that directs the domain name to a specific IP address. A records are modified routinely when users want to point their domain name to the IP assigned to their hosting account.

## **Bandwidth**

Bandwidth is a site or connection's capacity to carry information. It plays an important role in how many visitors can efficiently download a site at one time.

## **Browser**

A browser is an application used to view and work on the Internet. Popular browsers include Internet Explorer®, Mozilla®, Firefox®, and Safari™.

## **CNAME Record**

A CNAME record contains the name of the client's principal identifier.

## **Custom MX Record**

A custom MX record is created when a user has hosting through one provider and email service through another.

## **Dedicated IP**

A dedicated IP is a host interface identification used for location addressing. It is commonly used to access a website or location directly without benefit of a domain name.

## **DIG**

DIG (domain information groper) is a flexible tool for interrogating DNS name servers. It performs DNS lookups and displays the answers that are returned from the name server(s) that were queried. It is not native in Windows but can be added.

```
dig -6 ipv6.google.com AAAA OR dig 2001:05c0:1113:1c00::1 AAAA
```

## **DNS**

The DNS, or Domain Name System, stores information regarding domain and host names.

## **Domain Name**

A domain name is the portion of a URL that locates a group or entity on the Internet.

## **Domain Name Locking**

Registrars offer domain name locking as a free security feature to prevent the unauthorized transfer of a domain name to another registrar or host.

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## **Domain Name Monitoring**

Domain name monitoring tracks domain names of interest and alerts users to domain name changes.

## **Domain Name Privacy**

Domain name privacy keeps the domain name registrant's contact information confidential. Instead of publishing the registrant's contact information in the Whois database, the Whois database contains the contact information of the privacy provider.

## **Domain Name Transfer**

A domain name transfer moves a domain name from one registrar to another. Customers must wait 60 days to transfer domain names after a purchase, a prior transfer, or certain changes to domain name registrant information.

## **Email Forwarding**

Email forwarding redirects email from one email address to another. This service accommodates customers who want to continue using their personal email but would like a more business-identified address for their clients to reference.

## **Firewall**

A firewall secures a network and protects it from access by unauthorized viewers.

## **Forwarding**

Forwarding directs a domain name to another Web address or URL.

## **gTLD**

A gTLD is a generic top-level domain name. gTLDs are usually three letters long and describe organizations and political structures.

## **Hosting**

Hosting is the storage space or capacity for a website on the Internet.

## **Host Name**

The host name, located just to the left of the dot in a URL, identifies the machine name as part of the Internet address.

## **IANA**

The IANA, or Internet Assigned Numbers Authority, oversees registration for different IP parameters, including port numbers, protocol and enterprise numbers, options, codes, and types.

## **ICANN**

ICANN, the Internet Corporation for Assigned Names and Numbers, is a non-profit corporation given responsibility from the US government to manage the Internet domain name system.

## **IIS**

IIS, or Internet Information Services, is an informational Web server used for Windows operating systems. Some site-building programs are only compatible with specific IIS versions.

## **IMAP**

IMAP, or Internet Message Access Protocol, retrieves email and views or manipulates it on the server.

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## IP Address

An IP address, or Internet Protocol address, is a set of numbers divided by periods that specifies a location for the TCP/IP Protocol.

## IPv4

IPv4 is the most widely used version of the Internet Protocol. It defines IP addresses in a 32-bit format, which looks like 123.123.123.123. Each three-digit section can include a number from 0 to 255. IPv4 allows 4,294,967,296 addresses to be used ( $2^{32}$ ).

## IPv6

IPv6, also called IPng (or IP Next Generation), is the next planned version of the IP address system. IPv6 uses 128-bit addresses, which increases the number of possible addresses by an exponential amount. For example, IPv6 allows for over 340,000,000,000,000,000,000,000,000,000,000 IP addresses ( $2^{128}$ ).

## ISP

The ISP, or Internet Service Provider, provides users with Internet services.

## James

James is an open source SMTP, IMAP and POP3 mail transfer agent written entirely in Java. James is maintained by contributors to the Apache Software Foundation

## Mirror Site

A mirror site is an exact copy of another site that balances and spreads traffic load on busy websites.

## Multihoming

Multihoming is having multiple network addresses in one computer.

## MX Record

An MX record is part of a domain name's DNS. They include information on the domain name's email servers (mail servers).

## Nameserver

A nameserver is a host or computer server containing software and data (zone files) to resolve domain names to IP numbers. Domain names require a minimum of two nameservers hosted on separate networks.

## Non-Primary Hosted Domain Name

A non-primary hosted domain name is any hosted domain name other than the primary. It can point to either the hosting root directory or a sub directory.

## Off-Site DNS Server

An off-site DNS server contains backup data that is used if the first server goes down.

## Parking

Parking inactivates a domain name. Parked domain names display a temporary Web page.

## Ping

A ping, or Packet Internet Groper, determines if another computer is currently connected to the Internet. When you identify the target host by name rather than IPv6 address, it is necessary to include the -6 parameter.

```
ping -6 ipv6.google.com OR ping 2001:05c0:1113:1c00::1
```

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## **POP3 Server**

A POP3 server connects email clients like Outlook and Apple Mail with mail servers.

## **Primary Hosted Domain Name**

A primary hosted domain name is the main domain name on a hosting plan. It points to the hosting content root by default.

## **Primary Server**

The primary server, or primary nameserver, of a domain name contains authoritative information regarding the domain name and its corresponding IP.

## **Protected Registration**

Protected registration prevents most domain name transfers and domain name expiration.

## **PTR**

PTR (Pointer) record resolves the IP address to a domain/hostname. PTR records are used for the reverse DNS lookup.

```
dig -x 2001:05c0:1113:1c00::1
```

## **Registrant**

The registrant is the individual or organization that registers a domain name and holds the right to use it. The registrant is the legal owner of a domain name.

## **Registrar**

A registrar provides domain name registration services to individuals and companies.

## **Registry**

A registry is a database associating DNS information with an individual, a legal entity, or operational entity for a specific domain name extension.

## **Reverse DNS**

Reverse DNS (rDNS) is name resolution that looks up an IP addresses to obtain a domain name, performing the opposite function of the DNS server, which turns domain names into IP addresses.

## **Root**

The root is the top of the DNS hierarchy. It is commonly known as the “dot”.

## **Root Server**

The root server is the portion of the hosting account or server that has access privileges for all locations and documents on that computer.

## **rTLD**

An rTLD, or restricted top-level domain name, is a domain name extension, such as .edu, .name, and .gov, that limits registration to persons or organizations meeting specific criteria.

## **Second-Level Domain Name**

A second-level domain name is the portion of a domain name that falls immediately to the left of the "dot", or root. In coolexample.com, the second-level domain name is coolexample.

## **Secondary Server**

The secondary server assumes control if the primary server fails.

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## Shared Hosting

Shared hosting provides self-contained hosting services to multiple users on one server.

## SMTP

SMTP, or Simple Mail Transport Protocol, is a TCP/IP protocol. It governs electronic mail transmission and reception.

## SMTP Server

An SMTP server is a computer that forwards email messages using SMTP protocol.

## SPF Record

An SPF record, or Sender Policy Framework record, is an information record that validates legitimate email sources for a domain name.

## SSH

SSH, or Secure Shell, is a utility to securely access a remote computer.

## SSL

An SSL, or Secure Sockets Layer, is a security management protocol used for message transmission on the Internet.

## Static IP

A static IP is a fixed IP address, meaning that the IP remains unchanged with each user login.

## SRV Record

An SRV record, or a service record, provides information on available services.

## TCP/IP

TCP/IP, or Transmission Control Protocol, works with the IP address to ensure successful packet delivery to the intended destination.

## Third-Level Domain Name

A third-level domain name is the next highest level of the hierarchy below second-level domain names. A third-level domain name, if present, falls to the left of the "dot" and to the right of the second-level domain name. In `coolexample.co.uk`, the third-level domain name is `.co`.

## Traceroute

A traceroute command or `tracert` in Windows produces a log of the precise locations of servers used to access a location on the Internet.

```
tracert -6 ipv6.google.com
```

## TTL

TTL, or Time To Live, controls how often DNS changes will be submitted for propagation.

## Unique IP Address

A unique IP address is also known as a dedicated IP address.

## URL

A URL, or Uniform Resource Locator, is the address defining the route to an Internet file or facility.

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## **Virtualization**

Virtualization is a process or software to reduce server management cost through automation and provide more control over service levels.

## **Virtual Server**

A virtual server is a Web server that shares its facilities with multiple users or sites.

## **VPS**

A VPS, or Virtual Private Server, allows a hosting service provider to multiplex a single dedicated server into multiple, virtual-server machines. It provides private and protected Web services operating as an independent server.

## **Whois**

Whois is a central database that tracks domain names and IP registrations. It lists the owner and other contacts along with their email addresses, phone numbers, and addresses.