

# Web Hosting – Shared

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A **shared web hosting service** or **virtual hosting service** or **derive host** refers to a web hosting service where many websites reside on one web server connected to the Internet. Each site "sits" on its own partition, or section/place on the server, to keep it separate from other sites. This is generally the most economical option for hosting, as many people share the overall cost of server maintenance.

## Description

The hosting service must include system administration since it is shared by many users; this is a benefit for users who do not want to deal with it, but a hindrance to power users who want more control. In general shared hosting will be inappropriate for users who require extensive software development outside what the hosting provider supports. Almost all applications intended to be on a standard web server work fine with a shared web hosting service. But on the other hand, shared hosting is cheaper than other types of hosting such as dedicated server hosting. Shared hosting usually has usage limits and hosting providers should have extensive reliability features in place.[1] Shared hosting typically uses a web-based control panel system, such as cPanel, DirectAdmin, Plesk, InterWorx, H-Sphere or one of many other control panel products. Most of the large hosting companies use their own custom developed control panel. Control panels and web interfaces can cause controversy however, since web hosting companies sometimes sell the right to use their control panel system to others. Attempting to recreate the functionality of a specific control panel is common, which leads to many lawsuits over patent infringement.[2]

In shared hosting, the provider is generally responsible for managing servers, installing server software, security updates, technical support, and other aspects of the service. Most servers are based on the Linux operating system and LAMP (software bundle), which is driven by the reliability and security of open source software such as Linux and Apache (the 'L' and 'A' of LAMP). Some providers offer Microsoft Windows-based or FreeBSD-based solutions. For example, the Plesk control panel is available for two operating systems, Linux and Windows. Server-side facilities for either OS have similar functionality (for example: MySQL (database) and many server-side programming languages (such as the widely used PHP web programming language) under Linux, or the proprietary SQL Server (database) and ASP.NET programming language under Windows).

There are thousands of shared hosting providers in the United States alone. They range from mom-and-pop shops and small design firms to multi-million-dollar providers with hundreds of thousands of customers. A large portion of the shared web hosting market is driven through pay per click (PPC) advertising or Affiliate programs while some are purely non-profit.

Shared web hosting can also be done privately by sharing the cost of running a server in a colocation centre; this is called **cooperative hosting**.

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## Implementation

Shared web hosting can be accomplished in two ways: **name-based** and **IP-based**, although some control panels allow a mix of name-based and IP-based on the one server.

### IP-based

In **IP-based virtual hosting**, also called **dedicated IP hosting**, each virtual host has a different IP address. The web server is configured with multiple physical network interfaces, or virtual network interfaces on the same physical interface. The web server software uses the IP address the client connects to in order to determine which web site to show the user. The issue of IPv4 address exhaustion means that IP addresses are an increasingly scarce resource, so the primary justification for a site to use a dedicated IP is to be able to use its own SSL certificate rather than a shared certificate.

### Name-based

In **name-based virtual hosting**, also called **shared IP hosting**, the virtual hosts serve multiple hostnames on a single machine with a single IP address. This is possible because when a web browser requests a resource from a web server using HTTP/1.1 it includes the requested hostname as part of the request. The server uses this information to determine which web site to show the user. When you register/purchase your domain name on a particular "registrars name server", your DNS settings are kept on their server, and in most cases point your domain to the Name Server of your hosting provider. This Name Server is where the IP number (currently associated with your domain name) resides.

## Understanding DNS and Name Servers

DNS stands for "Domain Name System." The domain name system acts like a large telephone directory and in that it's the master database, which associates a domain name such as (<http://www.wikipedia.org>) with the appropriate IP number. Consider the IP number something similar to a phone number: When someone calls <http://www.wikipedia.org>, your ISP looks at the DNS server, and asks "how do I contact <http://www.wikipedia.org>'?" The DNS server responds, for example, it can be found at: 216.198.221.66. As the Internet understands it, this can be considered the phone number for the server, which houses the web site. When you register/purchase your domain name on a particular "registrars name server", your DNS settings are kept on their server, and in most cases point your domain to the Name Server of your hosting provider. This Name Server is where the IP number (currently associated with your domain name) resides.

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## Drawbacks

Name-based virtual hosts have some disadvantages:

- They will not work with very old HTTP/1.0 browsers that do not send the hostname as part of requests. Since the "Host" header is mandatory in HTTP/1.1, which was issued in 1999 as RFC 2616, this is not a common issue.
- By default, they do not properly support secure websites using HTTPS. All name-based virtual hosts using the same IP address must share the same digital certificate because the SSL/TLS handshake takes place before the hostname is sent to the server. While there are solutions to this such as Server Name Indication, it is not yet widely implemented.
- If the Domain Name System is malfunctioning, or DNS changes haven't propagated to all ISPs' resolvers, it is not possible to fall back to using the IP address to contact the system. Some web hosting companies may offer alternative URLs to provide access in such cases.
- If file permissions have been improperly configured, then shared file systems might give other (compromised) users or processes system-wide access to these files.

## References

1. Jensen, Joe (September 30,). "What Type of Web Hosting Is Best For You?". Retrieved 16 February 2014.
2. Berr, Jonathan (June 6). "Go Daddy Gets Sued". THE STREET. Retrieved 16 February 2014.

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