

# What is Web Hosting?

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## Introduction

This document is one in a series of "Technical White Papers" that attempts to interpret and explain in non-technical language the workings of computers on the Internet. The topic of this document is Web Hosting, which is one of the crucial elements in a functional website. Other documents in the series are mentioned and referenced, and further reading to support the concepts introduced here may be necessary.

For the sake of understanding what's involved in a website, please consider the parallel concept of a house, or a building, which is located on a lot or street. Please consider the following correlations:

House Address	Domain Name, such as <a href="http://freddo.com">freddo.com</a> , or <a href="http://yahoo.com">yahoo.com</a> , (see the document 'DNS Stands for Domain Name Services')
The House Itself (The Building)	The files that make up the website. By and large, a website is no more than a collection of files in a format that renders to the web.
The Lot, Property, or Real Estate where the house is located	The Web Server - the actual location where the files that make up the website are parked

## Web Server

Web servers are none other than specialized computers. Essentially, the only thing that makes them special is that they have the software installed that serves the files that comprise a website to the World Wide Web. Most often, these web servers only perform one task: web servers. Contrast this singular purpose to the computers that we all use daily, which may have several tasks - check email, prepare documents, play games, write a letter to Aunt Mary, etc. Typically, a web server is a potent rack-mounted computer tucked away in a safe & secure location, and owned by a Web Hosting Company.

This is not to say that a person couldn't deviate from the norm. If one chose to run a web server from an office or residence, using a typical tower-type

personal computer, there's nothing to stop it. The essential requirements would be the same: Software, DNS, Internet connection, etc. Risky, but it happens relatively often.

## ***Hosting Company***

The safe and prudent choice for web hosting is to hire a hosting company. With the burden of security, DNS, maintenance, upgrades, etc. put onto those who specialize in these tasks, one can then sit back and enjoy the task of building websites.

Hosting companies come in all sizes, shapes, and forms. In the latest craze, it's not uncommon to receive (spam email?) offers of hosting contracts for as low as \$5.00 per month. CAVEAT EMPTOR!!!\*

Here is a short list of the items to consider, in the form of questions to ask:

- How much down time does the server have? (Down time = time not online)
- What is access to the server like? Is it restricted? In what way?
- How much bandwidth is offered? How much traffic is permitted, and in what time frame?
- What security measures are in place?
- What software is being run? Is it the latest version, with patches, etc.?
- What scripts and/or databases are offered? Are there any other applications offered in the base plan?
- What is the server maintenance schedule? Are the log files available?
- Can one get additional software or applications as needed? What is the cost?
- Does the hosting company perform routine backups?
- Who owns the files that make up the website? Are they available if hosting needs to be moved or expanded?

These questions are the beginning of the inquiry process in finding a suitable web hosting company. Please see the additional documents in this series for further explanations of the concepts used.

A typical ploy among some 'cheap' web hosting companies is to offer an up front cheap price for a 'build-your-own' website. Lets say that one gets a price of website with hosting for \$50.00 per month. This is compared to another offer to build the website for \$1000.00. The math speaks for itself here: \$50.00 is certainly less than \$1000.00.

However, what happens after 20 months? After 20 months, one has paid in full the \$1000.00, and the \$50.00 per month continues. Who owns the files?

Can one then move them to a hosting company that offers hosting (alone) for \$10.00 per month. The previous arrangement, lower initial price, plays out in less than 2 years.

Do the math on this: Buy the website for \$1000.00, hosting for \$10.00 per month, and you own the files. This plan pays for itself in two years, and the price is now \$10.00 per month, not \$50. Plus, you own the files.

These are the questions to ask before entering into a web hosting agreement.

\*Buyer Beware!

### ***Server Maintenance***

Server Administrators (Server Admins) specialize in the type of tasks mentioned above, and more. They're usually well versed in the latest Internet and Software developments, and (hopefully) they're maintaining the Web Server accordingly. What is their maintenance schedule like? How often do they check the error logs? How often do they perform upgrades to the software and hardware? Are backups available in case of a catastrophe? Is there a Disaster Plan in writing?

### ***Log Files & Internet Traffic Reports***

Every server should be logging all the traffic that comes through. This comes in the form of log files, and should be available to the website owner. There should also be a log file that enters in all errors encountered, including hacking attempts. Typically a traffic log will enter in the time of access or page requests, as well as the number and type of returned code. The return code is: File not found, Access Denied, etc. These log files tell the whole story. Reading them gives one a bird's eye view of what's going on.

Admittedly, reading a web server log file directly isn't very thrilling. However, there are software programs available that will interpret the web server's log files in a human friendly fashion. It's possible to then import the data to a spreadsheet, like Excel, and see on a graph where most of the traffic is coming from, under what circumstances, what times the server is being accessed most, and what path a typical user is taking through the website. These reports are like gold to the person who wants to predict and increase the traffic to a website.

### ***Types of Servers***

There are several types and fashions of web servers available. There are Windows based systems, or IIS (Internet Information Services.) The Linux

Operating System powers several versions of web servers: Red Hat, Debian, etc. There is another called Sun Solaris, and many others. Arguably, to the interpretation of this writer, the Red Hat system by Linux is the most common. With a Red Hat system running Apache (the web server software,) PHP (scripting language,) MySQL (database application,) and a popular email server, one can't go wrong. It's all open source, so there are several of the world's best programmers improving it around the clock. It's abundantly available, and it's commonly supported. This is exactly the arrangement offered by [webpointmorpheus](#), and it's solid, stable, and consistent.

## ***Conclusion***

This article has covered (very briefly and non-technically) the bare essentials of web servers. A web server is only one increment of a functioning web site, but it's like the foundation under which a building or structure is built. When considering the metaphor of web servers to real estate, 'build not your house upon sand.'

## ***Additional***

The website process, way the web works, Search Engines, and other web & internet concepts are often very confusing, especially for the typical non-technical person. [webpointmorpheus](#) has assembled several documents hoping to simplify these topics. This series of documents are the result of a consistent set of questions posed by current, past, and potential webpointmorpheus clientele. The documents are listed below, and are available online at [www.webpointmorpheus.com](http://www.webpointmorpheus.com).

Documents available from [webpointmorpheus](#):

- Why Would I Want a Website?
- What's Involved Launching a Website?
- Block view of the Web Site Design Process
- Block View of Typical Web Page Request on the Web
- What is Web Hosting?
- DNS Stands for Domain Name System
- Web & Internet Security Considerations
- E-commerce 101: Is it for me?
- What are Search Engines?
- webpointmorpheus Search Engine Services
- What is PHP Server Side Scripting?
- Databases and the World Wide Web
- Viruses, Worms, & Trojan Horses