

Chapter 7

Web Hosting



Web hosting is the service of providing storage space in a web server for the files of a website. The companies that provide web hosting services are called web hosts. These web servers offer uninterrupted Internet connectivity, software packages for offering additional services such as databases and support for programming languages such as PHP, Java, ASP.NET, etc.

Stages of web hosting

- Selection of hosting type.
- Purchase of hosting space.
- Registration of domain name.
- Transfer of files to the server using FTP.

Types of web hosting

The selection of web hosting type depends on (i) amount of storage space (ii) number of expected visitors (iii) data base requirement and (iv) support of programming languages.

There are three types of web hosting – shared hosting, virtual hosting and dedicated hosting.

- (i) Shared hosting:** Many different websites are stored on one single web server and they share resources like RAM and CPU. Most suitable for small websites that have less traffic. Shared servers are cheaper and easy to use. The updates and the security issues are taken care of by the hosting company. A drawback is that the bandwidth is shared by several websites and hence their services will be slow.
- (ii) Dedicated hosting:** The client leases the entire web server and all its resources. It is not shared. Websites of large organisations, government departments, etc. where there are large numbers of visitors, opt for dedicated web hosting. Dedicated servers provide guaranteed performance, round-the-clock power supply, and fast access. But they are very expensive.
- (iii) Virtual Private Server (VPS):** VPS is a physical server that is virtually partitioned into several servers using the virtualization technology. Each VPS works similar to a dedicated server and has its own separate server operating system, web server software and packages like e-mail, databases, etc. installed in it. It provides dedicated amount of RAM for each virtual web server. VPS hosting provides dedicated bandwidth to each website on the server. This type of hosting is suitable for websites that require more features than that provided by shared hosting, but does not require all the features of dedicated hosting. VPS provides almost the same services at a lesser cost than that of dedicated hosting. Some popular server virtualization softwares are VMware, FreeVPS, etc.

Purchase of hosting space

Factors have to be considered:

- Amount of space required for storing the files of our website.
- Involvement of programming content.
- Requirement of Windows hosting or Linux hosting.
- Database support, e-mail facility, etc.



Domain name registration

The details of domain names are available in WHOIS data base. This database is owned and managed by ICANN (Internet Corporation for Assigned Names and Numbers). The details of domain name (URL) include the name, address, telephone number and e-mail address of the registrant. The domain name is connected to the IP address of the server through 'A record'.

FTP client software

FTP is used to transfer files from one computer to another on the Internet. FTP client software establishes a connection with a remote server and is used to transfer files from our computer to the server computer. FTP sends username and password to the server as plain text which is insecure. Therefore nowadays, SSH FTP (SFTP) protocol which encrypts and sends usernames, passwords and data to the web server is used in the FTP software. SFTP uses Secure Shell (SSH) protocol which provides facilities for secure file transfer. The popular FTP client software are FileZilla, CuteFTP, SmartFTP, etc.

Free Hosting

Free hosting provides web hosting services free of charge. Such free web hosting sites may place certain restrictions on the files. The size of the files that can be uploaded may be limited, audio/video files (mp3, mp4, etc.) may not be permitted and so on. Free web hosting is useful for sharing content on the web, among groups having similar interests like family unions, non-profit organisations, etc. Sites.google.com, yola.com, etc. are free web hosting services.

Content Management System

Content Management System (CMS) refers to a web based software system which is capable of creating, administering and publishing websites. CMS provides an easy way to design and manage attractive websites. Templates are available for download. The users need to choose a template from the given list, and add titles, images and other descriptions associated with required website.

Advantages:

- CMS provides standard security features in its design.
- Help people with less technical knowledge to design and develop secure websites.
- The templates reduce the need for repetitive coding and design for headings and menus that appear in all pages in a website
- CMS is economical

Some of the popular CMS software are WordPress, Drupal and Joomla!

Responsive web design

Responsive web design is the custom of building a website suitable to work on every device and every screen size, no matter how large or small, mobile phone or desktop or television. Responsive web design can be implemented using flexible grid layout, flexible images and media queries. Flexible grid layouts set the size of the entire web page to fit the display size of the device. Flexible images and videos set the image/video dimensions to the percentage of display size of the device. Media queries provide the ability to specify different styles for individual devices.

Questions from Previous Years' Question Papers (Computer Science)

1. Name a protocol that provides secure file transfer. (1) (March 2016)
2. What type hosting will you use to support a government website? Give its advantages. (2) (March 2016)
3. (a) List the factors to be taken into consideration while buying hosting space on a web server. (2) (SAY 2016)
(b) What type of web page designing is called responsive web design? (1) (SAY 2016)
4. An example of virtualization software is _____. (1) (March 2017)
5. Discuss stages involved in registering the domain name of your school website. (2) (March 2017)
6. What is the advantage of using SFTP protocol in FTP software? (3) (SAY 2017)

Questions from Previous Years' Question Papers (Computer Applications)

1. Identify the odd out:
(a) WordPress (b) FileZilla (c) Joomla (d) Drupal (1) (March 2016)
2. What type of hosting package is suitable for a multinational online shopping site? Mention any two advantages of the package? (2) (March 2016)
3. What is the need of registering domain name for a website? Explain the procedure for domain name registration. (3) (March 2016)
4. Compare shared hosting and VPS. (3) (SAY 2016)
5. _____ provide an easy way to design and manage attractive websites.
(a) free hosting (b) CMS (c) WHIOS (d) FTP (1) (SAY 2016)
6. What is SFTP? (2) (SAY 2016)
7. A designed website has to be uploaded into a _____ to make it available to the Internet users all over the world. (1) (March 2017)
8. Anita wanted to get the name "www.smartproducts.com" for her newly designed website. How it is possible? (3) (March 2017)
9. Ajith created a website using the software Joomla. What is the peculiarity of this software and write any four advantages of using this software? (3) (March 2017)
10. DNS stands for _____. (1) (SAY 2017)
11. Differentiate shared and dedicated web hosting. (2) (SAY 2017)
12. Explain responsive web design. (3) (SAY 2017)