* 1. Compare an internet server(s) for a large company like Ebay to the internet server(s) for a small company.

- Big companies have large rooms fully dedicated to hold server computers, whereas smaller services can just use a single desktop computer to host a service.

2. Internet Server Software

* 1. What are the main software features of an internet server?

The operating system of an internet server is not easy to pick. There are specific operating systems for what the server would be mainly used for. Server software is primarily built to interact with a server’s hardware infrastructure that includes the processor, memory, storage, input, output and other communication ports.

* 1. How is internet server software similar to and different from a desktop PC software?

- Internet server software are similar to desktop PC software because they both allow for ease of access to services to users, but desktop PC software allow the user to use many different softwares (OS), and server software allow many users to access one service/software.

* 1. Compare an internet server(s) for a large company like Ebay to the internet server(s) for a small company.

In a small company the server would be a low end server that is affordable and manageable in a small business. Small business servers are for about a dozen employees and a small business server is often used to manage multiple network services which are email, threat management, file sharing, and data backups.

In a large company they would have many servers to do only one task. These separate servers can be print servers, and data servers which would only do the task that they were assigned.

3. HTTP versus HTTPS

* 1. What does HTTP stand for? Why is it used in front of web addresses (e.g. [http://www.google.com](http://www.google.com/))

- (Hypertext Transfer Protocol) Is a application layer protocol which is basically it is the protocol followed for information sent from a user’s web browser to the website they are visiting, this allows the information to be sent in plain text which means that if it were intercepted, it could easily be taken and understood.

* 1. What does HTTPS stand for? How is it different from HTTP?

- (Hypertext Transfer Protocol Secure) Is similar to HTTP except this encrypts information before sending it to the website, making it difficult for interceptors to take the information as it could require complex decrypting.

* 1. Discuss some other services such as: FTP, SMTP, etc.

- FTP - File Transfer Protocol, is a language allowing software to communicate across ends of a connection, not as secure as Https but is more often used for business reasons with colleagues, clients, and other companies.

- SMTP - Simple Mail Transfer Protocol, used when email is delivered from email software client to email server or from one email server to another email server.

4. Web Server

* 1. What functions does a “Web Server” provide?

- 1.Client’s browser divides URL to different parts such as, address, path name, and protocol.

- 2.DNS translates the domain name into the corresponding IP address

- 3.The browser decided which protocol should be used for the situation (Client).

- 4.The application client/browser sends GET request to web server to retrieve address it has been given, verifies the address, finds the necessary files, runs the appropriate scripts, exchanges cookies if necessary and returns the information back to the browser.

- 5.Browser converts the data to HTML and displays the results to the user, if it is not found, an error message is sent to the client and the browser.

* 1. What special hardware and software is required by a “Web Server”?

- The web server would need two 1.6 Ghz CPU, 3.5 GB ram and a hard disk drive of at least 40 GB. The software needed is internet information services (IIS) 6,7, 7.5, and 8. I would also need windows PowerShell 2, 3, and 4. The operating system would depend on the Internet Information Service that is being used.

* 1. What different types of web servers are used by companies on the internet?

- Internet Information Services (IIS) - Microsoft

- Sun Java System Web Server - Sun Microsystems

5. Database Server

* 1. What functions does a “Database Server” provide?

- Operate large quantities of data by inputting, storing, retrieving, and managing that data.

- Provide one set of software programs to all users with access to all the data.

* 1. What special hardware and software is required by a “Database Server”?

- The Following should be taken into account when looking for suitable hardware and while creating or buying software:

- High-traffic or low-traffic webshop

- Number of visitors per day/month

- Maximum number of simultaneous visitors

- Maximum number of order lines in the shopping basket

- Number of simultaneous orders

- Size and complexity of the products catalog (number of products, product categories, attributes)

- Number of articles in the webshop

- Number of search queries

- Size of the database

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- The hardware needed for many low end Database Servers is four 1.6 GHz CPUs, 7 GB of RAM, and at least 40 Gb of free space in a hard disk drive. The software needed is:

|  |  |
| --- | --- |
| **Component** | **Notes** |
| Microsoft SQL Server 2012 Service Pack 1  -or-  Microsoft SQL Server 2012 | ● Enterprise, Business Intelligence, Standard, Web, Express |
| Microsoft SQL Management Studio 2012 | ● Enterprise, Business Intelligence, Standard, Web, Express |
| Microsoft SQL Server 2008 R2  -or-  Microsoft SQL Server 2008 with Service Pack 1 or later  -or-  Microsoft SQL Server 2005 with Service Pack 2 or later | ● Express, Workgroup, Web, Standard, Enterprise and Datacenter editions are supported  ● Web edition is recommended  ● Express edition can only be used if the database size is under 4GB |
| Microsoft SQL Management Studio 2008 R2  -or-  Microsoft SQL Management Studio 2008  -or-  Microsoft SQL Management Studio 2005 | ● Express, Workgroup, Web, Standard, Enterprise and Datacenter editions are supported |

* 1. What different types of web servers are used by companies on the internet?