

SYSTEM'S SPECIFICATIONS

A System Requirement Specification [SRS] is a collection of information that embodies the requirement of a system.

The specifications of a software should match with the SRS to run the application smoothly. For example, a computer game may require your computer to have Windows 7, 2.0 Ghz processor, 2gb RAM, 1gb graphics card and 500 mb storage space. If the system does not meet all these requirements the game will not run very well or might not run at all.

These are the necessary specifications your computer must have in order to use the software or hardware.

1. Operating system.
2. Processor speed.
3. RAM.
4. Graphics card.
5. Hard disk space.
6. I/O ports.

FACTORS THAT AFFECT COMPUTER PERFORMANCE :-

i. Processor speed and architecture :

- The **architecture** of a processor is the most important factor to determine its performance, and refers to its basic design and complexity.
- The **speed** of a computer's processor chip (technically known as its "**clock speed**") is measured in **gigahertz (GHz)**, with the fastest modern processors currently running at up to **4.7GHz**. However, for most computing tasks, including web browsing, sending e-mails,

word processing and spreadsheet work any processor running at 1GHz or more remains perfectly sufficient.

- **Cache** is a form of very fast memory integrated into the processor chip, and used to store up instructions (work for the processor) so that it has to slow down as little as possible between tasks.
- **Front Side Bus (FSB)** speed is a measure of how fast a microprocessor communicates with the computer's main circuit board (or "motherboard") into which it is physically connected.

ii. **Random Access Memory (RAM) :**

- The part of the computer in which information is stored temporarily when a program is being used.
- RAM is measured in megabytes (MB) and gigabytes (GB), as detailed on the storage page.

iii. **Graphics system :**

- Determines how well it can work with visual output. Graphics systems can either be integrated into a computer's motherboard, or plugged into the motherboard as a separate "video card".

iv. **Hard Drive Speed and Capacity :**

- A part of the computer that is used for storing computer data and that contains one or more hard disks.
- Two key factors that determine the speed of traditional, spinning hard disks :
 1. Rotational velocity of the physical disk itself.
 2. Interface used to connect it to the computer's motherboard.

Three types of interface :

- ❖ **Serial Advance Technology Attachment (SATA) :-**

The most modern and now pretty much the norm on new PCs

- ❖ **Integrated Device Electronics (IDE) (also known as UDMA):-**

A slower and older form of interface

- ❖ **Small Computer System Interface (SCSI):-**

The oldest but in its most modern variant is still the fastest disk interface standard.

SERVER

Server is the centrally located and most powerful computer system in the network whose primary functions are houses the server software, stores and manage common data and serve the data to the clients and provide shared services like access to internet, printing, faxing and so on. Server may serve data to the systems on the LAN or WAN network that depend from the where the request is come. Server is a device or computer which manage network resources. If we talk about server in software terms then it is a computer program that serve as the server component in a client-server architecture and provide some of the features like centralization, Does nothing until a request is received from client, Some of the continuous operations that are running always and ready to respond to client request, background operation that interact with the user program not to the user directly, simultaneous operation that respond to multiple user at the same time.

TYPES OF SERVERs :-

1. Proxy server :-

Proxy server is the software system running on a computer that act like and intermediate between client endpoint device and other servers from which user is requesting for his request. A proxy server can be a different server/computer or may be a same machine using firewall which forward request through firewall. Some of the advantages of using proxies servers are: this server's cache can serve all users, because most of the time user request for more than one internet sites so that should probably be handle by proxy server. This can also improve user response time when main server is already busy. Proxy server log its interactions with the user this would be helpful for troubleshooting.

2. Mail Server :-

As the name implies mail server act like a virtual post office and store all the mail that comes from local users and sends it out to the mentioned user's mail. This server is based on client-server application model and use Simple mail transfer protocol(SMTP) to send and receive mail. We can say it with the another name which is mail transfer agent.

3. Web Server :-

A server that deliver content and service over the internet that is web server. It is also known by Internet server. This server is emphasis of a physical server, Server Operating system, and software used to establish http communication. Primary function of web server is to respond HTTP request to deliver the requested content and service by the client.

4. Application Server :-

Application server is a server program in a computer which based on distributed network and providing the business logic to an application program. This server is viewed as a part of three-tier application emphasis

of GUI, application server and a database server which is also known as transaction server. Application server provide support to web services and expose business logic services. These servers are heavy in terms of resource utilization.

5. FTP Server :-

FTP server is one of the oldest internet service, By using FTP protocol it is possible to transfer file over internet securely between computers. FTP server emphasis of provide file security, organization of the files and the transfer control.

6. Telnet Server :-

This server enable the user to log on to the host server simultaneously when he is already working on remote server.

WORKING OF A SERVER :

At the most basic level, a server is a repository for web pages that respond when someone requests a certain website. This ‘**request**’ is simply the act of entering the web address into a browser and hitting return. The server monitors these requests via ports, giving their ‘**response**’ nearly instantly to deliver the site page requested. Once the server has received and verified the request at-hand, it gathers the assorted elements that make up a website and communicates this assembled information back to the user’s web browser. At its core, request-response is the key to what work a server does, day in and day out. All that remains then is for the web browser to ensure the requested site is genuine and display the page for the user. Web browsers and servers ensure the request is genuine by using TCP (Transmission Control Protocol) or IP (Internet Protocol), with HTTP

overlaid to ensure seamless communication between the server and web browser in use. At the same time, web browsers use [DNS \(Domain Name System\)](#) to make it possible for different types of web browser to connect to a diverse range of server types and configurations by changing requests for domain names (like [knownhost.com](#)) into numeric addresses, and back again – a bit like a post office uses zip codes.

It works like this:

- The web browser requests a specific web page – looking for the correct IP address associated with that domain.
- The web browser requests a full URL for the site it wants to display – sending this information over to the server.
- The web server finds and assembles all the information needed to display the site – including things like ads, dynamic elements, content and more.
- The server then sends this complete package of information back to the web browser as a response.
- The web browser receives this complete page and displays it for the user.

