

**NETWORKING & SYSTEM ADMINISTRATION LAB****Name: Albina Chacko****Roll No: 17****Batch: A****Date: 20–3-2022****Experiment No.: 2****Aim**

Prepare a comparative study of specification of desktop and server class computers.

**Procedure**

A desktop is a computer display area that represents the kinds of objects one might find on top of a physical desk, including documents, phone books, telephones, reference sources, writing and drawing tools, and project folders.

Desktop specifications are –

Memory:	8 GB RAM
Storage:	500 GB internal storage drive
Monitor/Display:	15" LCD monitor
Other:	802.11ac 2.4/5 GHz wireless adapter

**Terms and Conditions for Desktop PC:**

1. The vendor should clearly specify name of the manufacturer of PC, the model number and provide product literature with the offer. Bill of Material with part number of Original Equipment Manufacturer (OEM) should be included in the offer. Specifications of the model with part numbers offered should be verifiable from web site of the OEM.
2. Enclose technical compliance table for each major technical specification mentioned above. Any deviation from the above mentioned specifications should be clearly brought out in the compliance table.
3. All the drivers and utility software are to be supplied on CD/ DVD/ appropriate media.
4. User manual for PC should be supplied.
5. Installation of the PC will have to be carried out in RRCAT, any additional cost for installation should be clearly mentioned.
6. The PC shall be covered under on-site comprehensive warranty of one year from the date of final acceptance.

7. All the necessary electrical and other interface cables should be provided with the PC at no extra cost. The power connectors for all the equipments should be of Indian Standard (three pin) type.

8. The offer should mention all applicable taxes separately and clearly.

### Server class computers

Designating a computer as "server-class hardware" implies that it is **specialized for running servers on it**. This often implies that it is more powerful and reliable than standard personal computers, but alternatively, large computing clusters may be composed of many relatively simple, replaceable server components.

A server is a computer program or device that provides a service to another computer program and its user, also known as the client. In a data center, the physical computer that a server program runs on is also frequently referred to as a server. That machine might be a dedicated server or it might be used for other purposes.

In the client/server programming model, a server program awaits and fulfills requests from client programs, which might be running in the same, or other computers. A given application in a computer might function as a client with requests for services from other programs and as a server of requests from other programs.

Server specifications –

- **Hardware**
  - 4 Cores, 2.8-3.0 GHz each (2.8 GHz minimum speed)
  - 4 GB RAM per core
  - Standard hard drive, 100 GB free
  - Network connectivity
- **Operating System**
  - Oracle Enterprise Linux 4 Update 7 or greater, 64-bit
  - Oracle Enterprise Linux 5 Update 3 or greater, 64-bit
  - Oracle Enterprise Linux 6 64-bit
  - Oracle Solaris 10 (x86)
  - Red Hat Enterprise Linux 4.0 Update 7 or greater, 64-bit
  - Red Hat Enterprise Linux 5.0 Update 3 or greater, 64-bit
  - Windows Server 2003 SP2 or greater, 64-bit
  - Windows Server 2008 SP1 or greater, 64-bit
- **Application Servers**
  - Apache Tomcat version 6.0.29
    - Java Development Kit (JDK) 6 Update 21 (1.6.0\_21)

- Oracle WebLogic Suite 10g Release 3 (10.3) and 11g Release 1 (10.3.1, 10.3.2, 10.3.3, or 10.3.4)

## **Desktop computers vs Server class computers**

There are both similarities and differences between desktop computers and servers. Most servers are based on X86/X64 CPUs and can run the same code as an X86/X64 desktop computer. Unlike most desktop computers, however, physical servers often include multiple CPU sockets and error correcting memory. Servers also generally support a far greater quantity of memory than most desktop computers.

Because server hardware typically runs mission-critical workloads, server hardware manufacturers design servers to support redundant components. A server might be equipped with redundant power supplies and redundant network interfaces. These redundant components allow a server to continue to function even if a key component fails.

Server hardware also differs from desktop hardware in terms of its form factor. Modern desktop computers often exist as mini towers, designed to be placed under a desk. Although there are still some vendors that offer tower servers, most servers are designed to be rack mounted. These rack mount systems are described as having a 1U, 2U or 4U form factor, depending on how much rack space they occupy -- a 2U server takes up twice as much rack space as a 1U server.