NETWORKING & SYSTEM ADMINISTRATION LAB

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Aim

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

Procedure

A desktop computer system typically runs a user-friendly operating system and desktop applications to facilitate desktop-oriented tasks. In contrast, a server manages all network resources. Servers are often dedicated

Desktop specifications are –

Processor (CPU):	Intel Core i5 (sixth generation or newer) or equivalent
Operating System:	Microsoft Windows 10 Professional x64
Memory:	16 GB RAM
Storage:	500 GB internal storage drive

Server class computers

When multithreaded operating system processes are not available, a good alternative is to use a set of processes to emulate a pool of threads. That is, instead of having one multithreaded process, the system uses a set of single-threaded processes, all of which are running the same program (see Figure 2.8). This often is called a **server class**. In this case, for each server program, there is a set of server processes that runs it.

Server classes have a number of nice features. Most of them stem from the fact that each process in the server class is an ordinary single-threaded process and therefore avoids the disadvantages of multithreading.

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)
- **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)

MAIN DIFFERENCES BETWEEN A DESKTOP AND SERVER

Many people mistakenly believe that a server is no different from a typical desktop computer. This couldn't be further from the truth. While almost any computer that meets the minimum hardware requirements can run a server operating system that alone does not make a desktop computer a true server. Even if the desktop computer had similar processor speeds, memory and storage capacity compared to a server, it still isn't a replacement for a real server. The technologies behind them are engineered for different purposes.

A desktop computer system typically runs a user-friendly operating system and desktop applications to facilitate desktop-oriented tasks. In contrast, a server manages all network resources. Servers are often dedicated (meaning it performs no other task besides server tasks). Because a server is engineered to manage, store, send and process data 24-hours a day it has to be more reliable than a desktop computer and offers a variety of features and hardware not typically used in the average desktop computer.