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FACULTY OF ENGINEERING & TECHNOLOGY

DCS-503 Computer Networks

Lecture-32

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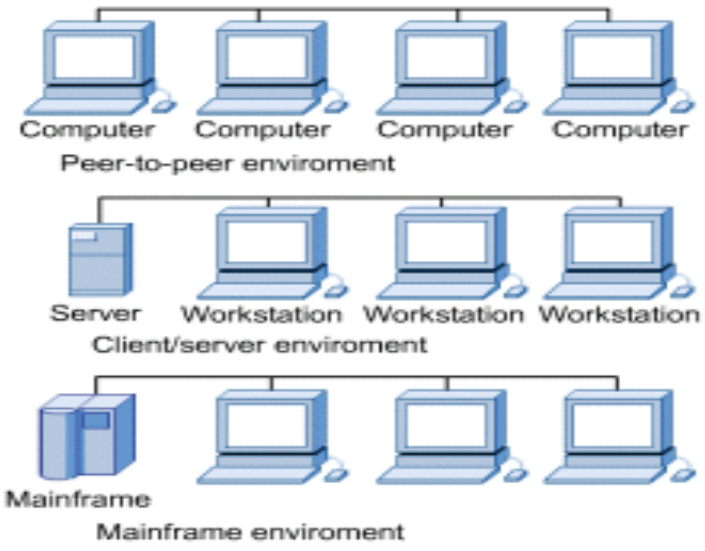
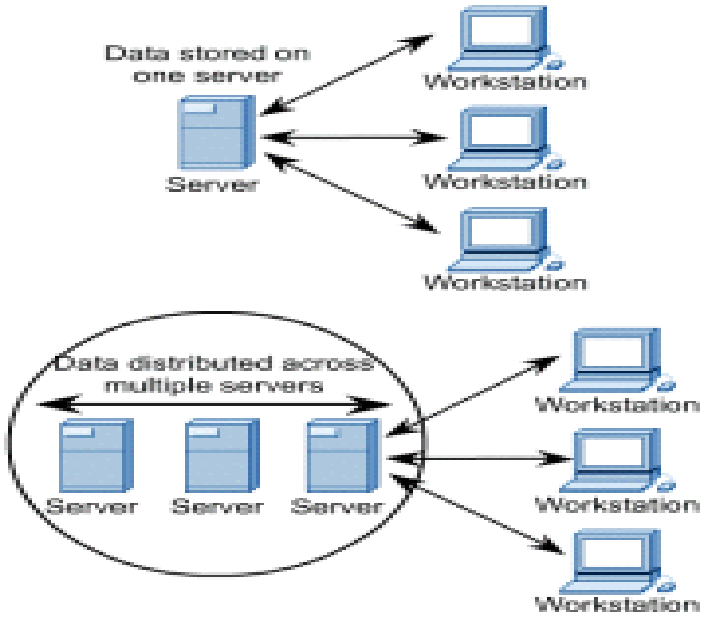
OUTLINE

- OVERVIEW OF NOS CHARACTERISTICS
- DIFFERENCES BETWEEN PC AND A NOS
- MULTIUSER, MULTITASKING, AND MULTIPROCESSOR SYSTEMS
- CHOOSING A NOS
- TYPES OF NOS

OVERVIEW OF NOS CHARACTERISTICS

- Network operating systems (NOSs) distribute their functions over a number of networked computers.
- It then adds functions that allow access to shared resources by a number of users concurrently.
- NOS computers take on specialized roles to accomplish concurrent access to shared resources.
- Client systems contain specialized software that allows them to request shared resources that are controlled by server systems responding to a client request



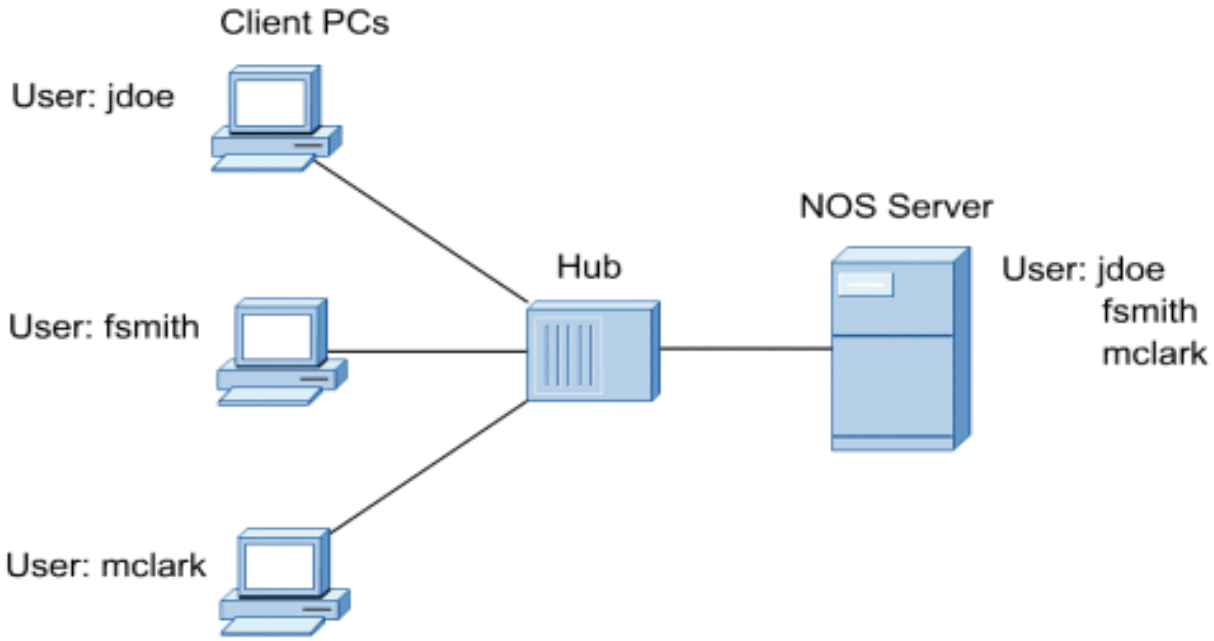


DIFFERENCES BETWEEN PC AND A NOS

▪The NOS enhances the reach of the client PC by making remote services available as extensions of the local native operating system.

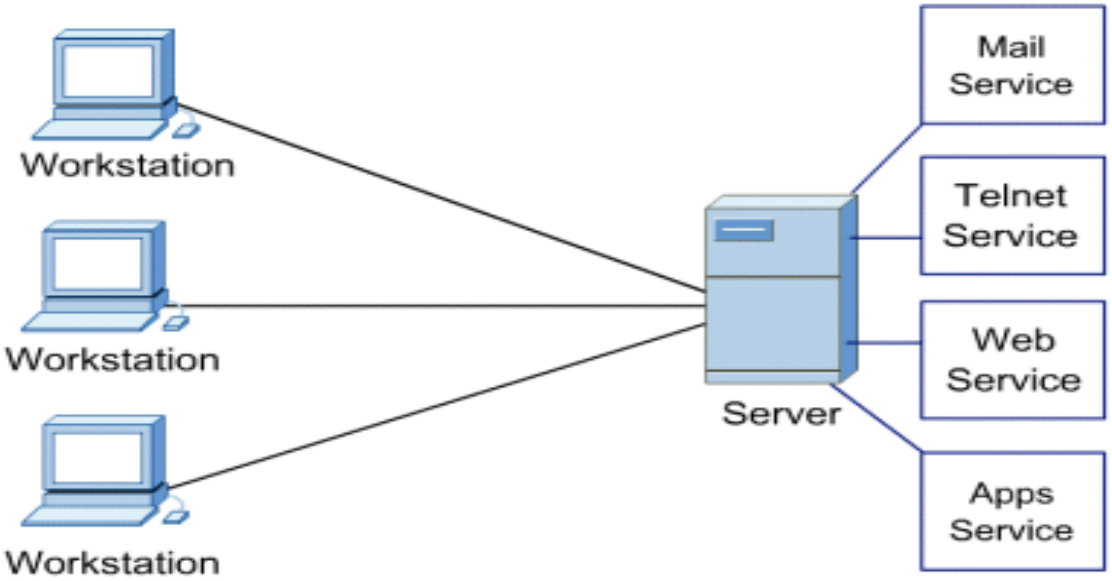
▪Although a number of users may have accounts on a PC, only a single account is active on the system at any given time.

▪NOS supports multiple user accounts at the same time and enables concurrent access to shared resources by multiple clients (multitasking and multiuser environment).



MULTIUSER, MULTITASKING, AND MULTIPROCESSOR SYSTEMS

- A NOS server is a multitasking system. Internally, the OS must be capable of executing multiple tasks or processes at the same time.
- Some systems are equipped with more than one processor, called multiprocessing systems.
- They are capable of executing multiple tasks in parallel by assigning each task to a different processor.
- The aggregate amount of work that the server can perform in a given time is greatly enhanced in multiprocessor systems



CHOOSING A NOS

The main features to consider when selecting a NOS include:

- Performance
- Management and monitoring tools
- Security
- Scalability
- Robustness/fault tolerance

Security	
Robustness	
Performance	
Scalability	
Management	

consistency under strain

user authentication

balanced workloads

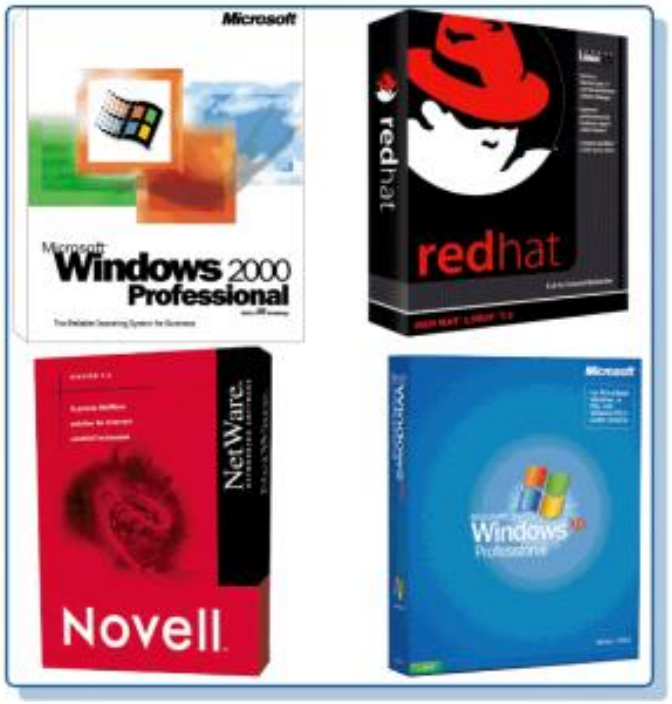
ready for growth

redundancy

system administration

encryption

TYPES OF NOS



- It is important to know the basics about popular NOS families.
- Many networks now include more than one server type, and knowing how to get these diverse systems to interoperate is an important skill for a network administrator.
- Operating systems on the network have their own language.
- Different NOS vendors use the same terms in different ways.

Multiple Choice Question

MUTIPLE CHOICE QUESTIONS:

Sr no	Question	Option A	Option B	OptionC	OptionD
1	Host-specific routing is used for purposes such as checking route or providing _____	Network Measures	Security Measures	Delivery Measures	Routing Measures
2	In Unicast routing, if instability is between three nodes, stability cannot be _____	Stable	Reversed	Guaranteed	Forward
3	In Unicast Routing, Dijkstra algorithm creates a shortest path tree from a _____	Graph	Tree	Network	Link
4	n Multicast Routing Protocol, flooding is used to broadcast packets but it creates _____	Gaps	Loops	Holes	Links
5	RPF stands for _____	Reverse Path Forwarding	Reverse Path Failure	Reverse Packet Forwarding	Reverse Protocol Failure

REFERENCES

- http://www.engppt.com/2009/12/networking-fourozan-ppt-slides.html