

# Institute of Engineering Jiwaji University



Distributed System

Submitted by Nayna Sharma

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# Defination

- A distributed system is defined as a group of independent computers which looks to its users as a single system which I

Distributed system are as follows:

- Making Resources Accessible
- Distribution transparency
- Openness
- Scalability
- Pitfall

# Types of distributed system

- 1. Distributed computing systems:** The distributed computing systems include the following:
  - Cluster computing systems
  - Grid computing systems
- 2. Distributed informative systems:** In the distributed systems, the following forms are concentrated:
  - Transaction processing systems
  - Enterprise application integration
- 3. Distributed pervasive systems:** Few examples of distributed pervasive systems are as below:
  - Home systems
  - Electronic health care systems
  - Sensor networks

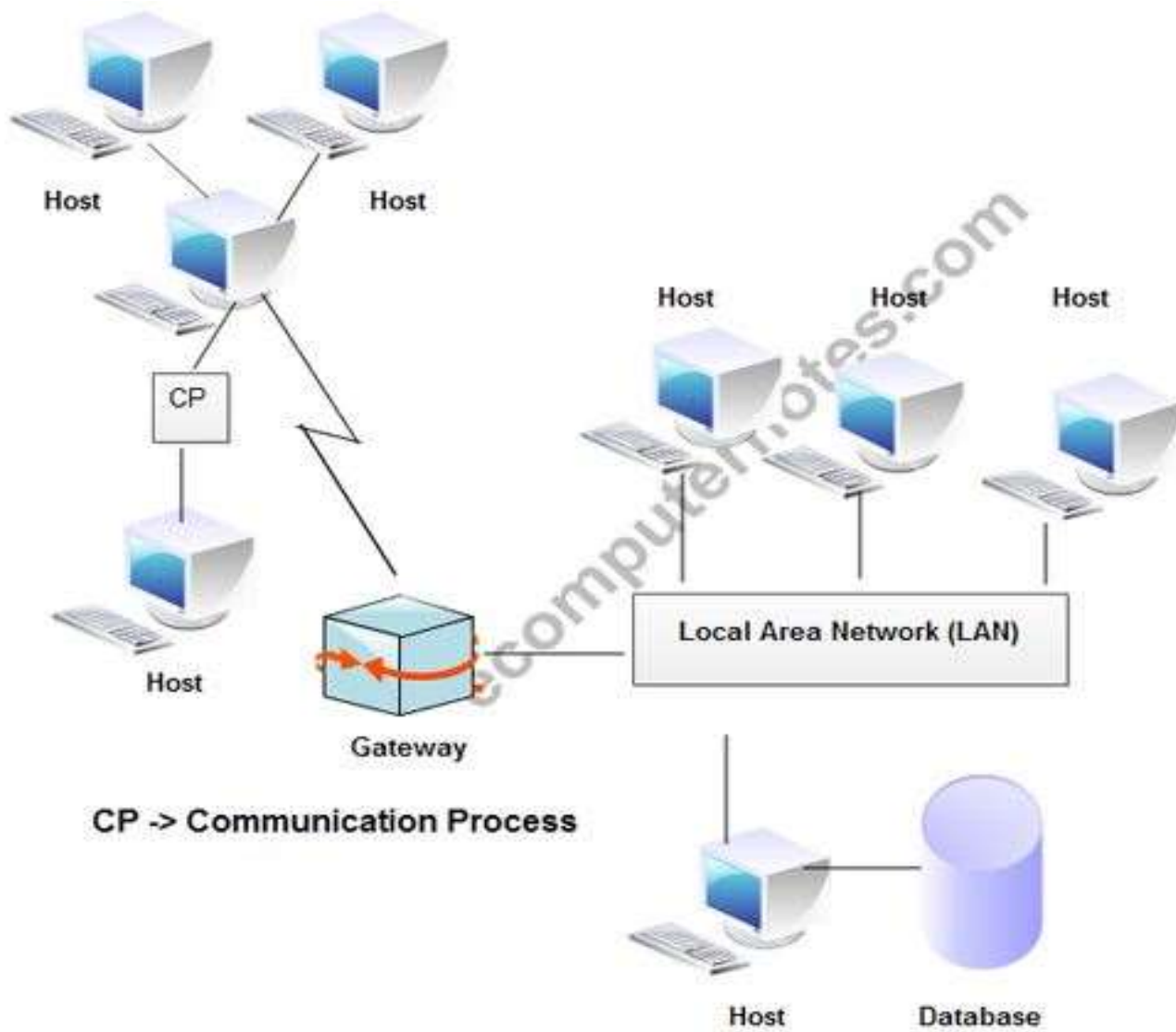
# Advantages & disadvantages

## **Advantages**

- Economics
- Speed
- Inherent distribution
- Reliability
- Incremental growth

## **Disadvantages**

- Software
- Network
- More components to fail
- Security

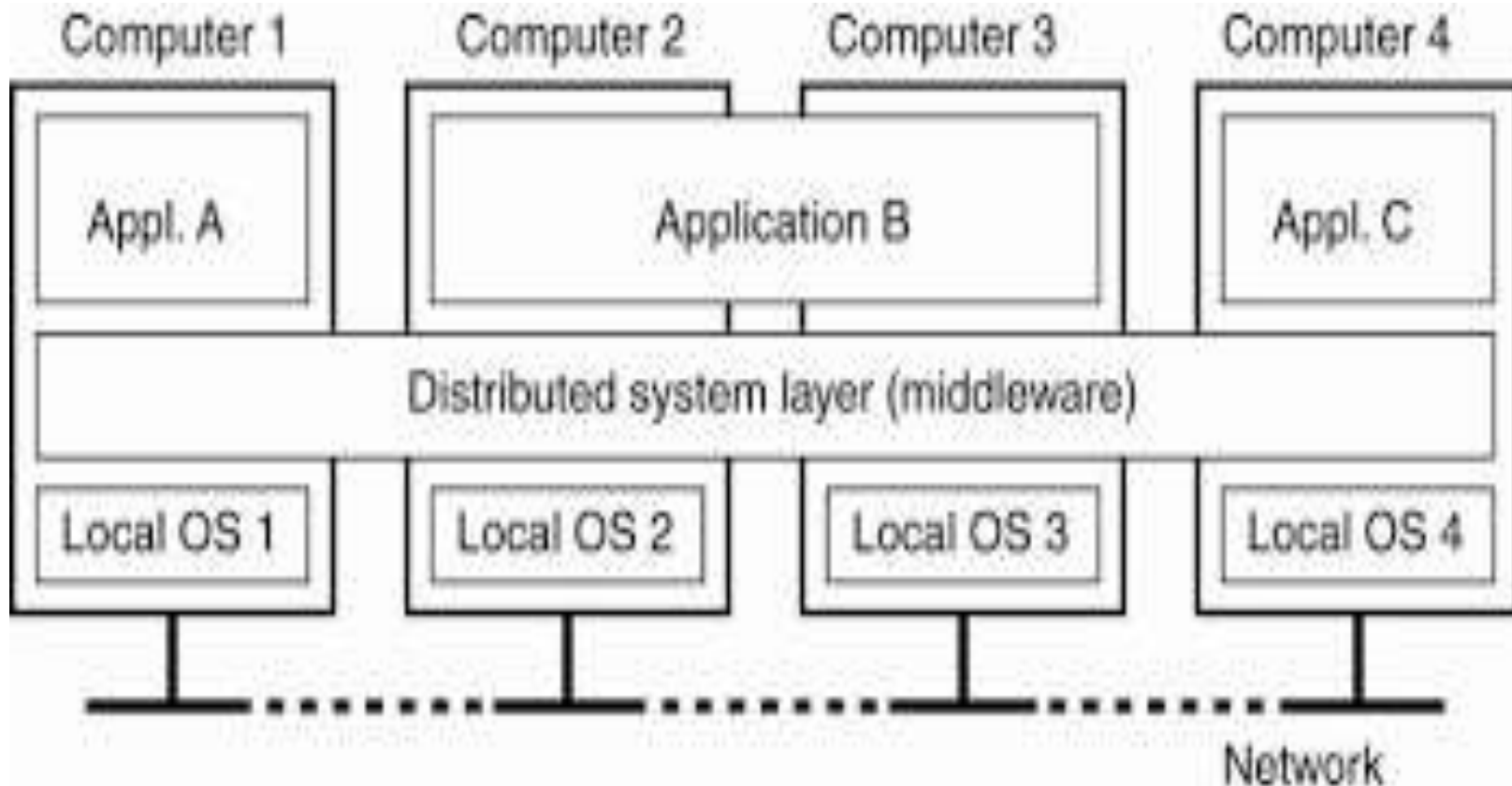


**A Typical View of Distributed System**

# Basic Design Issues

- Basic design issues of distributed systems are:-
- **Naming** :Name services includes naming context resolution, hierarchical structure, resource protection.
- **Communication** :Separated components communicate with sending processes and receiving processes for data transfer and synchronization,

# Software structure





# System architecture

- Client-server
- Peer-to-peer
- Services provided by multiple servers
- Proxy server and caches
- Mobile code and mobile agent
- Network computers
- Thin clients and mobile devices

# Conclusion

- The concept of distributed system is the most efficient way to get optimization. It is not get the efficiency of task but also reduce the total time to complete the task.