Table of Contents

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Definition of Distributed System

Examples of Distributed Systems

- 1. Intranets
- 2. Resource Sharing

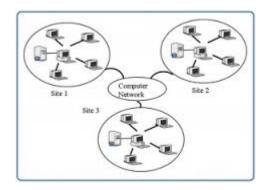
Goals Of Distributed System

- 1. Making Resources Accessible
- 2. Transparency
- 3. Concurrency
- 4. Openness
- 5. Security
- 6. Scalability
- 7. Reliability

Definition of Distributed System

A distributed system is a network that consists of autonomous computers that are connected using a distribution middleware.

They help in sharing different resources and capabilities to provide users with a single and integrated coherent network.



Block Diagram of Distributed System

Examples of Distributed Systems

1. Intranets

A single authority protected access - a firewall.

Services:

- Infrastructure services
- File service
- Name service
- Application services

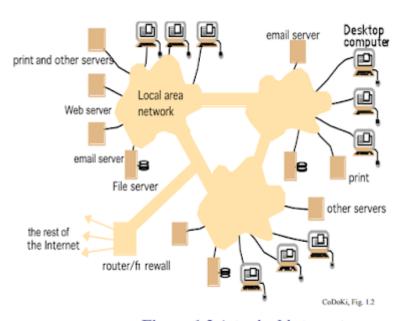


Figure 1.2 A typical intranet

2. Resource Sharing

Resource Sharing and the Web Hardware resources (reducen costs) Data resources (shared

usage of information) Service resources search engines computer-supportedncooperative working Service vs. server.

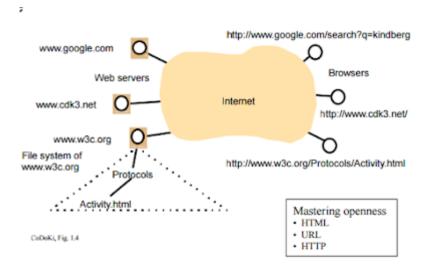


Figure 1.4 Web servers and web browsers

Goals Of Distributed System

- 1. Making resources accessible
- 2. Distribution transparency
- 3. Opennessn Scalability
- 4. Security
- 5. System design requirements

1. Making Resources Accessible

- Naming Access control
- Security
- Availability
- Performance

Mutual exclusion of users

2. Transparency

Distribution in users viewpoint: a single unified system.

3. Concurrency

- Several simultaneous users.
- Integrity of data
- Mutual exclusion
- Synchronization

4. Openness

- Making the network easier to configure and modify.
- · Openness facilitates
 - · Interoperability,
 - · Portability,
 - Extensibility,
 - Adaptivity

5. Security

Security is a big challenge in a distributed environment, especially when using public networks.

6. Scalability

Distributed systems should be scalable with respect to geography, administration or size.

7. Reliability

Compared to a single system, a distributed system should be highly capable of being secure, consistent and have a high capability of masking errors.