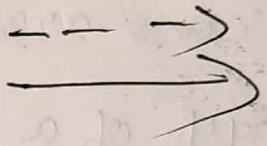
Deployment Diagram

Deployment diagrams are used to visualize the topology of the physical components of a system, where the software components are deployed.

Deployment diagrams are used to describe the static deployment view of a system.
Deployment diagrams consist of nodes and their relationships

Purpos of Deployment Diagram.



The term Deployment itself describes the Purpose of the diagrams are used for describing the hardware components where software components are deployed.

Component diagrams and deployment diagrams are closely related.

Component diagrams are used to describe the components and deployment diagrams shows how they are deployed in hardware.

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UML is mainly designed to focus on the software artefacts of a system.

- However these two diagrams are special diagrams used to focus on software and hardware components.

- Most of the UML diagrams are used to handled logic components but deployment diagrams are made to focus on the hardware topology of a system.

Deployment diagram are used by the system engineers.

- Visualize the hardware topology of a system
- Describe the hardware components used to deploy software components
- Describe the runtime processing nodes

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How to Draw a Deployment Diagram?

Deployment diagram represents the deployment view of a system. It is related to the component diagram because the components are deployed using the deployment diagrams.

A deployment diagram consists of nodes. Nodes are nothing but physical hardware used to deploy the application

Deployment diagrams are useful for system engineers. An efficient deployment diagram is very important as it controls the following parameters:-

- Performance
- Scalability
- maintainability
- Portability

Before drawing a deployment diagram, the following artifacts should be identified

- Nodes
- Relationships among nodes

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Deployment diagram shows all of the nodes of network, the connections between them the Process that will run on each one.

Processor: A Processor is any machine that has Processing Power. The servers. workstations and other machines with Processors are included in this category The scheduling field documents the type of Process scheduling used by the Processor

The options are

Preemptive:— indicates that the high Priority Processes can preempt low Priority Processes.

Non Preemptive:— Indicates that the Processes have no Priority. The current Process executes until it is finished, at which time the next Process begins

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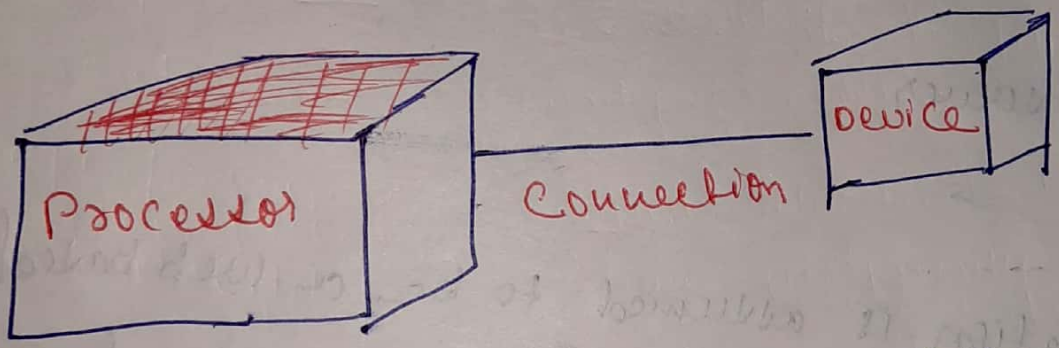
Cyclic :— Indicates that the control cycles between the processes each Processes is given set amount of time to execute, then control passes to the next process.

Executive :— indicates that there is some sort of computational algorithm that controls the scheduling.

Manual :— Indicates that the processes are scheduled by user



Device :— A device is an machine or piece of hardware without processing power Devices include item such a dumb terminals Printer or scanners.

Connection :— A connection represents some type of hardware coupling between two entities An entity is either a processor or a device. The hardware coupling can be direct, such as an RS232

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Cable, or indirect such as satellite to ground communication.

Connections are usually bi directional

Deployment Diagram case study

Following is sample deployment diagram to provide an idea of the deployment view of order management system.

Here, we have shown nodes as

- Monitor
- Modem
- Calling server
- Servers.

The application is assumed to be a web based application which is deployed in a clustered environment using server1 server2 server3.

The user connects to the application using internet

The control flows from the calling server to the clustered environment

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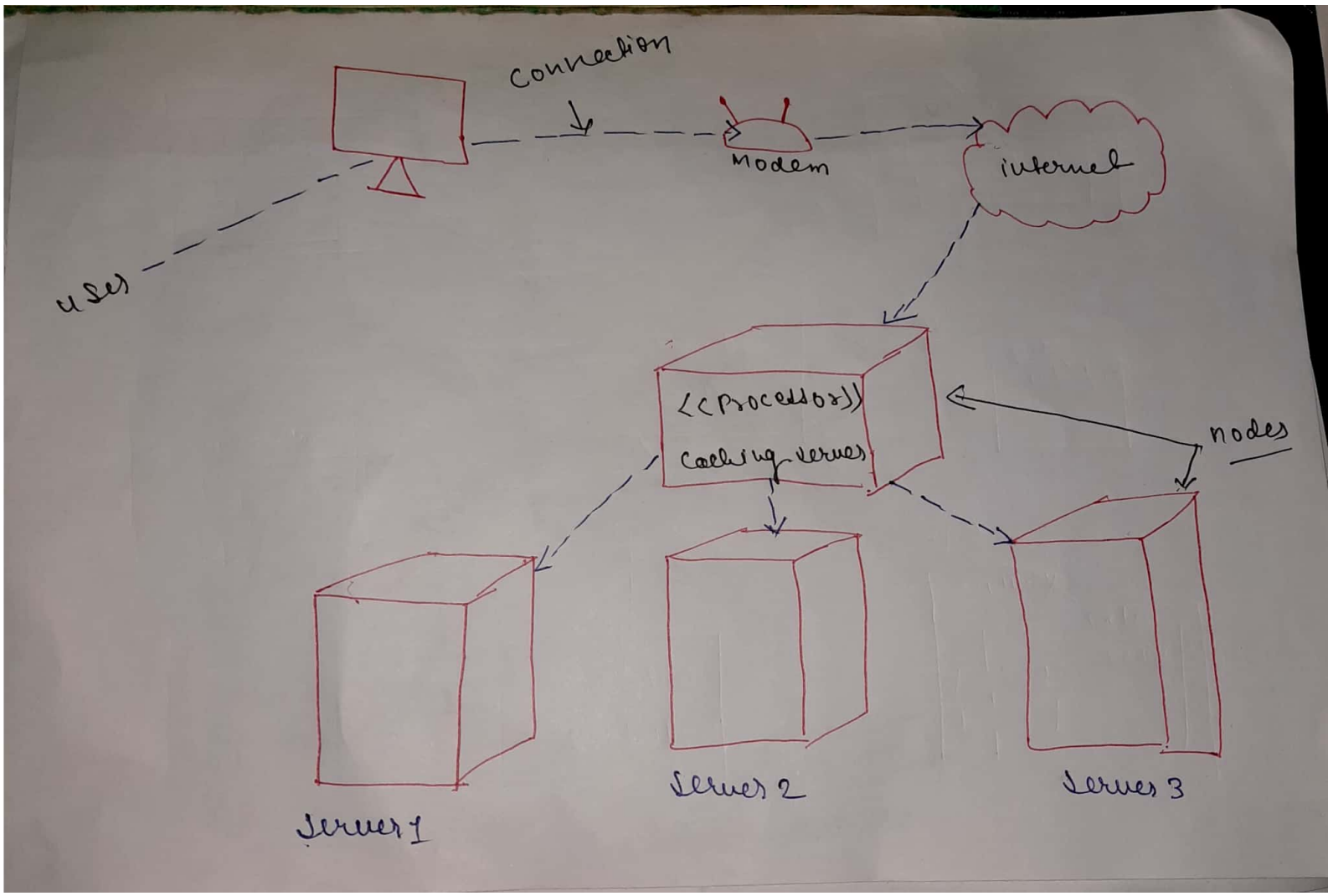

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