Deployment Diagrams

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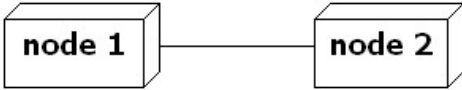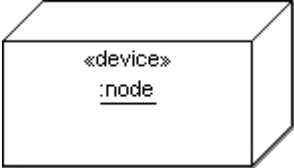
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Deployment Diagrams

- What existing systems will system need to interact or integrate with?

- How robust does system need to be (e.g., redundant hardware in case of a system failure)?

- What and who will connect to or interact with system, and how will they do it

- What middleware, including the operating system and communications approaches and protocols, will system use?

- What hardware and software will users directly interact with (PCs, network computers, browsers, etc.)?

- How will you monitor the system once deployed?

- How secure does the system need to be (needs a firewall, physically secure hardware, etc.)?

Deployment Diagrams

- show the structure of the run-time system

- capture the hardware that will be used to implement the system and the links between different items of hardware.

- Model **physical hardware elements** and the communication paths between them

- Plan the **architecture** of a system

- Document the deployment of software components or nodes

Deployment Diagrams - Notation

Node	Communication Path	Artefacts
<<device>> <<execution environment>>	**Deployment Specifications**	**Deployment of Artefacts**
	<<deployment spec>>	<<deploy>>

Communication Association

A communication associations between nodes indicates a communication path between the nodes that allows components on the nodes to communicate with one another
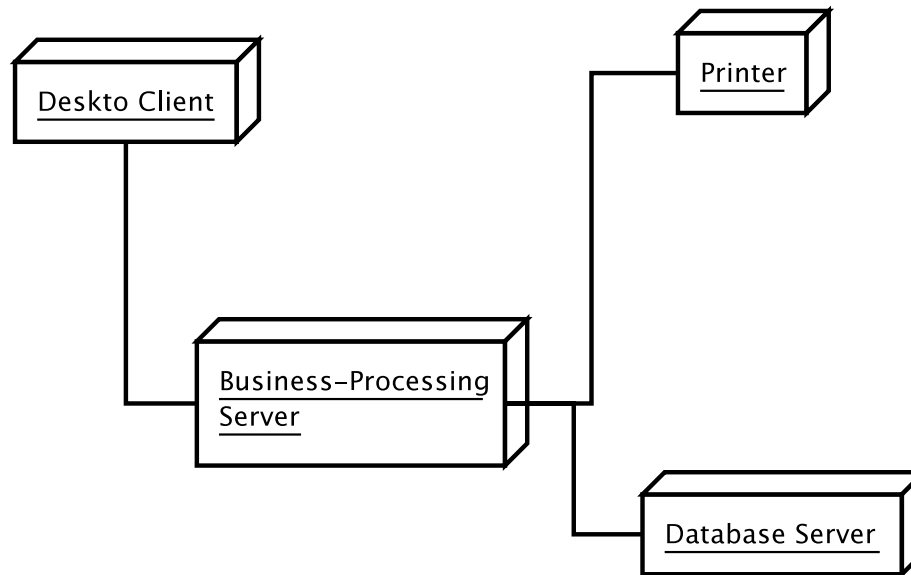
Deployment Planning

- How will your system be installed?

- If different versions of the system will be in production at the same time, how will you resolve differences?

- What physical sites do you need to deploy to and in what order?

- How will you train your users?

How to produce deployment diagrams

1. Decide on the **purpose** of the diagram

2. Add **nodes** to the diagram

3. Add **communication associations** to the diagram

4. Add other **elements** to the diagram, such as components or active objects, if required

5. Add **dependencies** between components and objects, if required

Modeling Business Process

- Business modeling using nodes and components is an effective means of capturing non-computer based processes and entities

- This can be done very early in development, to complement the use case model and other business modeling

- Components are the business procedures and documents; the nodes ("run-time structure") are the organization units and resources (human and other) of the business
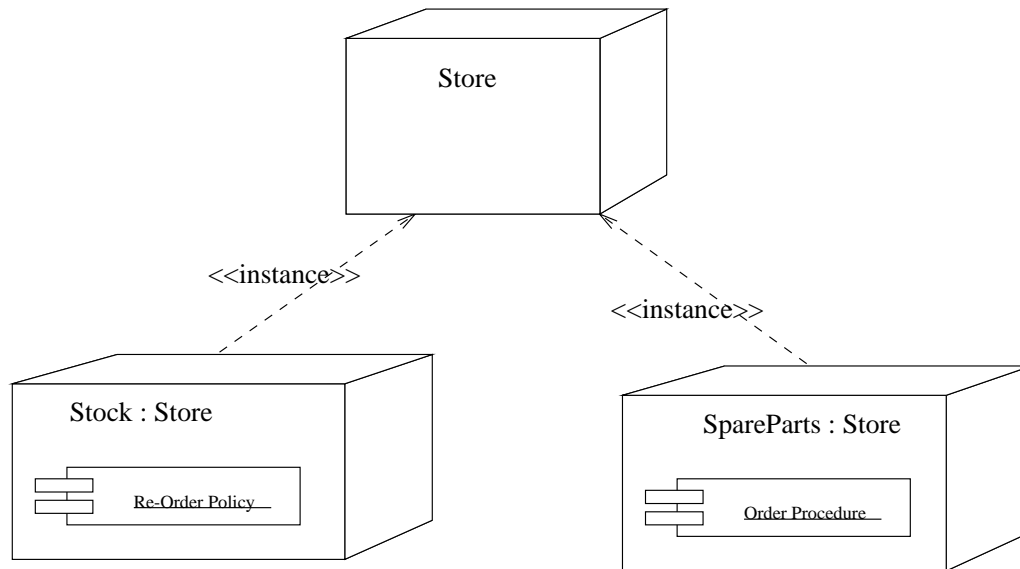
Readings

- **UML course textbook**
  - Chapter 14 on Deployment Diagrams

Summary

- Deployment Diagrams
  - Rationale
  - Notation

- How to produce Deployment Diagrams