

Deployment Diagrams, Course Wrap-up

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Plan for Today

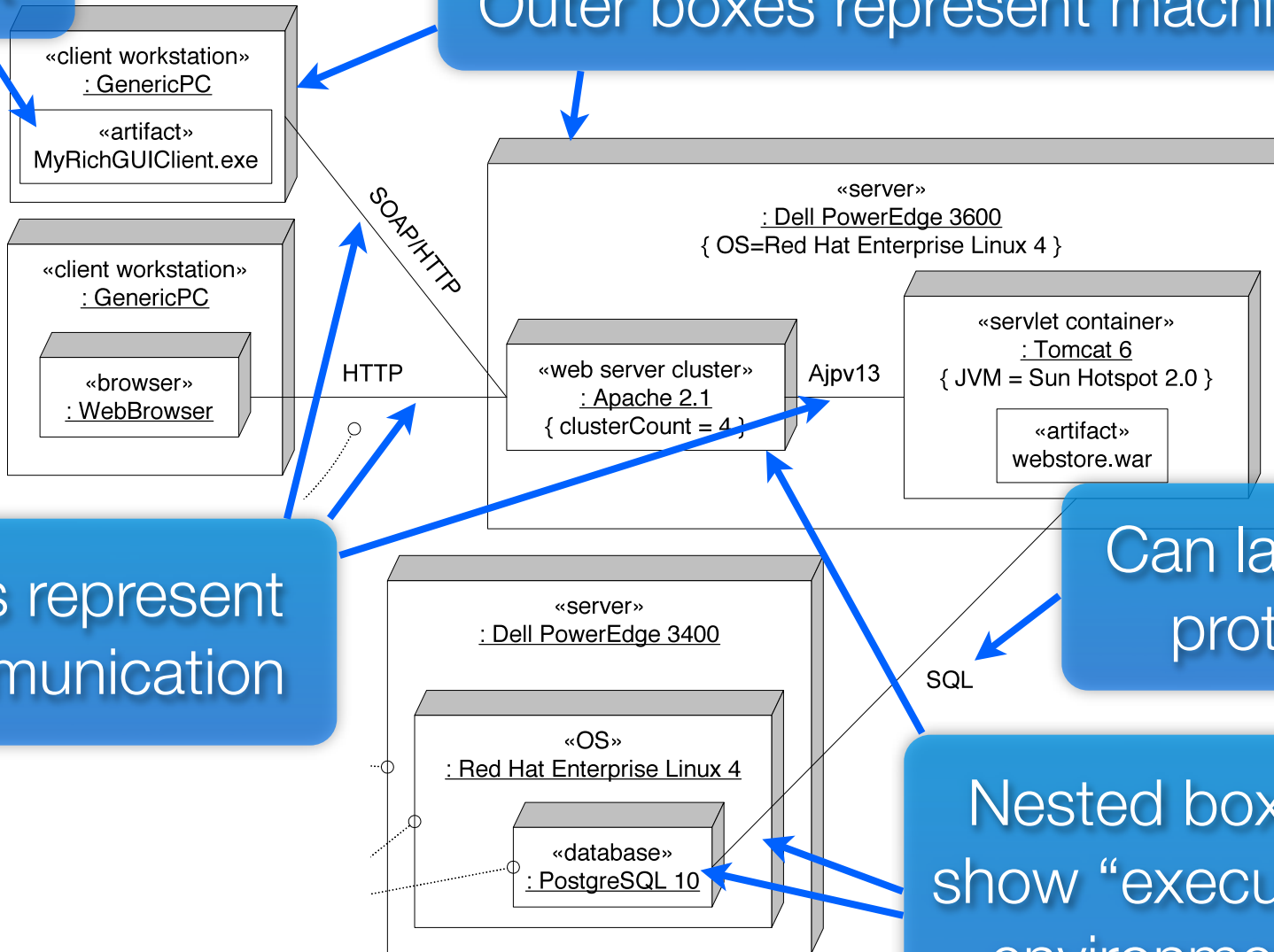
- ✦ Deployment diagrams
- ✦ Course recap
- ✦ Course evaluations
- ✦ Design Studio: Team Albatross
- ✦ Last chance to sign up for final exam

Thursday: In-class
project work day

Deployment Diagrams

Software artifact

Outer boxes represent machines



Lines represent communication

Can label with protocols

Nested boxes show “execution environment nodes”

Uses for Deployment Diagrams

- Describe physical deployment of software artifacts to hardware devices
- Summarize configuration of hardware and software devices

Course Recap

Course Themes

- Object-oriented design as **assignment of responsibilities**
- Using design principles and patterns to **think about object-oriented designs**
- Using design principles, patterns, and notations to **communicate design ideas**
- Begin **practicing the art and science** of object-oriented design

Notations Used

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Analysis

Logical Design

- Domain models
- System sequence diagrams

- Logical architecture diagrams

- Activity diagrams

Business Process Modeling

Architecture

- Design class diagrams
- Interaction diagrams
 - Communication diagrams
 - Sequence diagrams

- Deployment diagrams

Physical Design

GRASP Principles

General,
Responsibility
Assignment,
Software **P**atterns

GRASP Principles

- ✦ Low Coupling
- ✦ High Cohesion
- ✦ Information Expert
- ✦ Creator
- ✦ Controller
- ✦ Polymorphism
- ✦ Pure Fabrication
- ✦ Indirection
- ✦ Protected Variations

Gang of Four Design Patterns

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▪ Behavioral

- Strategy
- Observer
- Template Method
- State
- Command

▪ Creational

- Factory Method
- Abstract Factory
- Singleton

▪ Structural

- Adapter
- Composite
- Façade
- Proxy
- Decorator

Others: Interpreter, Chain of Responsibility, Iterator, Mediator, Memento, Visitor, Builder, Prototype, Bridge, Flyweight



You've come a long way

You're beginning to talk (and think) like designers!

Course Evaluations

Design Studio: Self Service Management

Team describes problem and perhaps current solution (if any)

~5 min.

Class thinks about questions, alternative approaches. **Q5**

~3 min.

On-board design

~12 min.