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## 108-WL. Overview of Java EE with WebLogic

### Version 10.3.0

This course provides a coherent, high-level explanation of the Java Platform, Enterprise Edition (Java EE), and how it relates to the Oracle® WebLogic server and enterprise platform: what sorts of software are created with Java EE; how software is developed; how it is deployed and put into production; how it can be administered. The course is designed specifically for non-programmers -- analysts, managers, technical writers, and anyone who desires a good conceptual understanding of Java EE while not needing to drill down into the details of particular APIs or runtime specifications. Developers may also find this course quite useful as a starting point for one or more of our courses in specific Java EE technology -- it gives a great sense of the big picture before one dives into the details of Servlets, JSP, JSF, EJB, or Java web services.

The course is presented seminar-style, with no hands-on exercises for students and no need for lab equipment. The instructor demonstrates several sample Java EE applications, including web applications, EJBs, JMS, and web services, and can go into source code, WebLogic specifics, and other details to suit the interests of the audience. But the focus is on architecture, and on boiling down a very complex system to its essential features: code portability, components and containers, metadata and declarative development. Students come to understand the roles that various Java EE technologies play in a multi-tier, enterprise application, and acquire the terminology and basic workings of each.

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### Prerequisites

- Some prior experience with business software is assumed, but there are no formal prerequisites for this course.



## Learning Objectives

- Understand the role of Java EE in the development of enterprise software in the Java language.
- Understand how Java EE facilitates integration of Java components with non-Java systems including relational databases, the World Wide Web, message queues, CORBA objects, and web services.
- Appreciate the importance of the container/component architecture, which gives Java EE servers the ability to take a great deal of grunt-work off of the shoulders of the application.
- Describe how containers are able to provide enterprise features to compliant application components, such as remote connectivity, scalability, availability, security, and transaction support.
- Explain the use of source-code annotations and XML deployment descriptors as a way of reducing programming workload and communicating with the Java EE application server.
- Understand the deployment process and know the general structure of web, EJB, and enterprise archive files.

### **Timeline: 1 days.**

A 1/2-day timeline when presenting as a lead-in to other WebLogic training for developers is also possible.





## **Chapter 1. History and Overview**

- Structured Programming
- Object-Oriented Programming
- 4GLs and RAD
- Java
- Java EE and the Outside World
- Versions Upon Versions

## **Chapter 2. Concepts**

- The Virtual Machine and Runtime
- How Does It Work?
- Containers and Components
- Three Containers
- Aspect-Oriented Programming
- Java EE as an AOP Platform
- Annotations
- Deployment Descriptors
- Remote Connectivity
- Scalability
- Availability
- Security
- Transactionality

## **Chapter 3. Technology**

- JDBC
- Servlets
- JavaServer Pages
- Java Naming and Director Interface
- The Component Environment
- Multi-Tier Applications
- JavaServer Faces
- Enterprise JavaBeans
- Java Persistence API
- Ajax
- Java Message Service
- APIs for Web Services

## **Chapter 4. Tools, Standards, and Portability**

- Java IDEs





Web Servers and Containers  
The WebLogic Server  
Standards and Portability  
What Is and Isn't Standardized  
Beyond Java EE

## Chapter 5. Development and Administration

Development Process  
Assembling WARs and EJB JARs  
Assembling EARs  
Verifiers  
External Resources  
Administrative Tools  
Administrative Tasks  
Remote Administration and Domains

## Appendix A. Learning Resources

### System Requirements

<b>Hardware Requirements (Minimum)</b>	1 GHz, 1 GB RAM, 3 GB disk space.
<b>Hardware Requirements (Recommended)</b>	2 GHz, 2 GB RAM, 5 GB disk space.
<b>Operating System</b>	Tested on Windows XP Professional.
<b>Network and Security</b>	Limited privileges required -- please see our standard security requirements at <a href="http://capcourse.com/Guides/Security.html">http://capcourse.com/Guides/Security.html</a> .
<b>Software Requirements</b>	Course software should be viable on all systems for which WebLogic 10.3 is available.

