

JAV450 : Java EE Overview

Code : JAV450 **Duration :** 1 day

Audience :

Developers, designers, managers and architects who want to get an overview of the capabilities and operation of the Java EE, Enterprise Edition, platform.

Prerequisites :

To participate in this course knowledge of modern software technologies such as C++, Java or .NET and Web applications is desirable.

Realization :

The theory is discussed by means of presentation slides. The concepts are illustrated with demos and there is opportunity to practice. The course material is in English.

Contents :

This course provides an overview of the Java EE standard as it is implemented in application servers like GlassFish, WebSphere and JBoss. The demands of enterprise applications such as scalability, failover and distribution are discussed and how these demands are met by the Java EE platform. Attention is paid to the role of the various Java EE Application Components as Java Servlets, Java Server Pages and Enterprise Java Beans. In this respect the JSF Framework for Java Web Applications is also discussed. Key Java EE services such as JNDI (Java Naming and Directory Interface) and JTA (Java Transaction API) are part of the subject matter. The various options for accessing databases are treated as well. Attention is paid both to the SQL-based Java Database Connectivity (JDBC) technology and to the new Persistence API for storing objects directly. Furthermore other Java technologies in the context of Java EE, such as Web Services based on SOAP and REST are discussed as well. During the day several application servers and Enterprise Java Bean containers that rely on the Java EE standard are addressed. If time permits, JMX, Java Management Extensions, as an optional module, is treated.

Module 1 : Java EE Intro

- Java Editions
- Enterprise Application Challenges
- Java EE Standard
- Java EE Servers
- Web Components
- EJB Components
- Java EE and Web Services
- Deployment Descriptors
- Annotations
- Packaging in EAR Files
- Java EE Deployment
- Configurable Services
- Java EE API's
- New Java EE Feature

Module 4 : Java EE Persistence

- Java EE Persistence
- Direct File I/O
- Serialization
- Java Database Connectivity
- JDBC Drivers and URL's
- Transparent Persistence
- Object Relational Mapping
- Persistence API
- Entity Classes
- Entity Manager
- Persistence Context
- Entity Managers

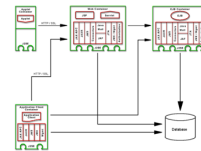
Module 2 : Servlets, JSP and JSF

- What is a Servlet?
- Simple Servlet
- What is a JSP?
- Simple JSP
- Benefits of JSP
- Translation and Request Time
- Problems with Servlets and JSP
- Classic MVC Pattern
- Model 2 Architecture
- Scopes in Web Applications
- ServletContext Scope
- Session Scope
- Java Web Applications
- Web Application Structure
- MVC Frameworks
- Java Server Faces

Module 5 : Java EE Web Services

- What is a Web Service?
- Web Service Standards
- Web Service Types
- XML-Schema, SOAP and WSDL
- JAX-WS Web Services
- Servlet Based Endpoint
- Stateless Session Bean Endpoint
- JAX-WS Annotations
- REST Web Services
- Resource URI Access

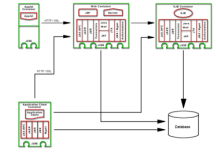
Category :



Java EE



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Module 3 : Enterprise Java Beans (EJB)

- What are Enterprise Beans?
- Types of Enterprise Beans
- Distributed Object Foundation
- Architecture of an EJB
- Enterprise Bean Class
- EJB Object at work
- Remote Interface
- Home Object at Work
- Session Beans
- Statefull and Stateless
- Session Bean Pooling
- Message Driven Beans
- JNDI Naming Context
- Locate resources with JNDI
- Dependency Injection

Optional Module : JMX

- What is JMX?
- JMX Goal
- Where does JMX API fit?
- Managed Beans
- JMX Architecture
- Java SE 5.0 MBeans
- Standard MBeans
- Implementing MBeans
- Naming MBeans
- MBean Server
- Registering MBeans