

## Java EE EJB Business Components

### Audience Course Java EE EJB Business Components

Java developers that want to learn how to develop of Java EE EJB business components.

### Prerequisites Java EE EJB Business Components

To participate in this course knowledge and experience with Java programming is required. Knowledge of Java Web development is beneficial for a proper understanding.

### Realization Training Java EE EJB Business Components

The theory is explained using presentation slides and is interspersed with practical exercises. Demos are used to clarify the theory. All topics that are asked in the Java EE Enterprise JavaBeans Developer Certified Expert Exam (1Z0-895) are discussed. The course material is in English.

### Official Certificate Java EE EJB Business Components

After successful completion of the course participants receive an official certificate Java EE EJB Business Components.

Duration: 3 days

Price: € 2250

[Open Schedule](#)



Java EE Business Component  
Development with EJB's



## Content Course Java EE EJB Business Components

This course focuses on Enterprise JavaBeans, as specified in the EJB 3.x specification as part of the latest version of Java EE.

### Enterprise Bean Types

Attention is paid to the different types of Enterprise Beans like Session Beans, Message Driven Beans and Singleton Beans.

### JNDI

The Java Naming and Directory Interface (JNDI) is discussed and the simplification of how beans can be located and instantiated through injection. Attention is also payed to the lifecycle of the different types of beans and to concurrency issues.

### Annotations

The important role that annotations play in Java EE and EJB's is discussed as well. Annotations do their work in many places such as in establishing links with resources and the realization of persistence.

### EJB Query Language

Also the use of the EJB Query Language and the implementation of Object Relational Mapping in EJB 3.x is part of the course schedule. Also the use of transactions in a Java EE environment is considered.

### Security

Attention is paid to the Java EE security architecture and the various authentication and authorization strategies. JMS and its use in combination with Message Driven Beans is also on the course program.

### Best Practices

And finally the focus is on best practices and design patterns in EJB technology.

## Modules Course Java EE EJB Business Components

Module 1 : Java EE Intro	Module 2 : Enterprise Java Beans (EJB)	Module 3 : JNDI and Injection
Java Editions Java EE versions Enterprise Applications Java EE Servers Web Components EJB Components JavaBean components Web Services Java EE API's EAR Files Deployment Descriptors Annotations	Session Beans Statefull and Stateless Life Cycle Session Bean Architecture of an EJB EJB Object at work Client Access Remote versus Local Clients Web Service Clients Singleton Beans Concurrency management strategy Message Driven beans Life Cycle Message Driven Beans	Naming Services Directory Services Locate resources with JNDI JNDI Architecture JNDI InitialContext JNDI Naming Context EJB Environment Standard JNDI SubContexts Dependency Injection DataSource Injection Injection of EJB References Example EJB Injection
Module 4 : Java Persistence API	Module 5 : Callbacks and Listeners	Module 6 : Session Beans
Entity Classes Entity Manager Persistence Context Entity Identity Entity Lifecycle Entity Relationships Persisting Objects Removing Objects Merging Objects Managing Identity	Life Cycle Callback methods Entity Listeners Life Cycle Callback Rules Signature Life Cycle Callbacks Signature Entity Listeners @PrePersist and @PostPersist @PreRemove and @PostRemove @PreUpdate and @PostLoad Multiple Invocation Callbacks Invocation Order	Session Beans Overview Stateless Session Beans Event callbacks Asynchronous communication Singleton session bean Singleton concurrency access Stateful Session Beans Passivating and Activating Remote Business Interface Calling Business Methods
Module 7 : Message Driven Beans	Module 8 : Timer Service	Module 9 : Interceptors
Messaging Characteristics Publish and Subscribe Point tot Point What is JMS? Message types Message Driven Beans MessageListeners onMessage method	Timer Service Scheduling Timers Creating Timers Timeout method rules Canceling and Saving Timers Timer Service interface Timer interface Timer handle interface	What are Interceptors? Interceptor Classes @AroundInvoke Example Interceptor Interceptor Lifecycle Interceptor Types Default Interceptors Exclude Interceptors
Module 10 : Transactions	Module 11 : Security	Module 12 : EJB and Web Services
Transactions Demarcating Boundaries Container Managed Bean Managed Client Managed Transaction Attributes Session Synchronization Before Completion After Completion	Java EE and EJB Security Programmatic Security Java EE authorization strategies Declarative Security Using Programmatic Security Method Permissions DeclareRoles ejb-role-ref role-link	Web Service Types REST versus SOAP Structure SOAP Message What is WSDL? Stateless Session Bean Endpoint JAX-WS Publishing an Endpoint Web Service Annotations JAX-RS
Module 13 : EJB Best Practices	Module 14 : Clustering	Optional : Annotations and JMX
Define Best Practices Benefits of EJB best practices Java EE Patterns Effective Exception Handling EJB Design Patterns Session Facade Composite View Front Controller	What is clustering? Thin Client Clustering Thick Client Clustering Clustering Stack JGroups and JCache HA-JNDI HA-Smart Proxies SLSBs and SFSBs	What are annotations? Single value annotations Normal annotations Meta-Annotations What is JMX? Managed Beans Naming MBeans MBean Server