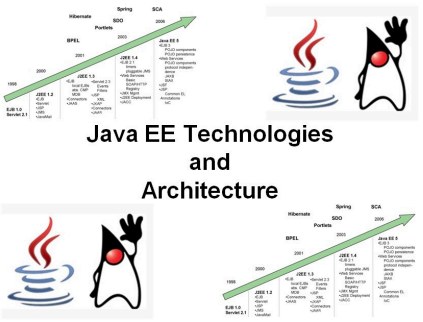
Jakarta EE Technologies

Duration: 5 days **Price: € 3299**

Open Schedule



Audience Course Jakarta EE Technologies

The course Jakarta EE technologies is intended for System architects and developers who want make the correct Java technology choices for their system and environment and application administrators who want to get a better understanding of various Java technologies.

Prerequisites Jakarta EE Technologies

General basic knowledge of software architecture and knowledge of the Java platform is required to participate in this course.

Realization Training Jakarta EE Technologies

This course has a very practical nature but it is not a programming course. Central is the understanding of the operation of a technology. The theory is interspersed with short case studies. Modern IDE's such as Eclipse and NetBeans and Application Servers like JBoss and Tomcat are used. The course material is in English.

Official Certificate Jakarta EE Technologies

After successful completion of the course the participants receive an official certificate Jakarta EE Technologies.

Content Jakarta EE Technologies

The course Jakarta EE Technologies is intended for system architects who are involved in the deployment of Jakarta EE technology. The participants learn how to make the right choices between competing options. The course provides an overview and comparison of different modern Jakarta EE technologies and brings the knowledge of the participants on a higher level.

Jakarta EE platform

After an overview of the Jakarta EE platform, the most important components, Servlets and JSPs, are treated. The JSF Framework as MVC layer on the basis of Servlets and JSPs is also discussed. Furthermore, Single Page Applications are explained and the Ajax technology which is based on asynchronous requests to the server is treated.

JavaScript Frameworks

The essence of various JavaScript frameworks such as Angular, React and Vue are also on the course program. Then we go into Java Management Extensions, JMX, which enable the monitoring and management of Java Applications and Servers.

Enterprise Beans

The other important component of the Jakarta EE platform, Enterprise Beans or EJBs, will be discussed as well. And also attention is paid to the options for persistence in Java (JDBC and Persistence API).

Web Services en Micro Services

The modules SOAP and REST Services provide an overview of the Java Web Service technology. The implementation of a Micro Service Architecture and the various frameworks that can be used for this purpose are on the course program as well.

JMS en Security

The course ends with a discussion of the Java Messaging Service (JMS) and security in the Jakarta EE platform with policies, certificates, authentication, authorization, JSON Tokens, API keys and JAAS.

Modules Jakarta EE Technologies

Module 1 : Jakarta EE Architecture	Module 2 : Servlets and JSP's	Module 3 : Java Server Faces
Jakarta EE Standard	What is a Servlet?	JSF Feature Overview
Jakarta EE Servers	Servlet Initialization	Request Processing Phases
Web Components	HTTP Protocol	Server Side UI Components
EJB Components	Form Submission	JSF Component Libraries
Persistent Entities	Concurrent Access	Deployment Descriptor
Standard Java Beans	What is a JSP?	Faces Configuration File
Layered Architecture	Translation and Request Time	Facelets Page Structure
Container Services	Scopes in Web Applications	Managed Beans
Jakarta EE Web Services	ServletContext Scope	Expression Language
Deployment Descriptors	Session and Request Scope	Facelet Default Navigation
Annotations	Web Application Structure	Event Handling
Packaging in EAR Files	Classic MVC Pattern	Validators and Convertors
Module 4 : Single Page Applications	**Module 5 : JMX**	**Module 6 : Enterprise Java Beans**
Classic Web Application Model	Java Management Extensions	EJB Features
Ajax Web Application Model	JMX Goal	Session Beans
Single Page Applications	Where is JMX used	Statefull and Stateless
Typical Ajax Interactions	Managed Beans	Architecture of an EJB
Creating XMLHttpRequest	MBean flavors	Remote versus Local Clients
XMLHttpRequest Methods	JMX Architecture	Web Service Clients
XMLHttpRequest Object Properties	Java SE Mbeans	EJB 3.x Programming Model
Sending the Request	Naming MBeans	Life Cycle Session Beans
XMLHttpRequest readyState	MBean Server	Session Bean Pools
responseText and responseXML	Registering Mbeans	Activation and Passivation
JavaScript Frameworks	Manipulating MBeans	Message Driven beans
Angular, React and Vue	Notification Listener	Life Cycle MDB Beans
Module 7 : Persistence Technologies	**Module 8 : SOAP Services**	**Module 9 : REST Services**
Direct File I/O and Serialization	What is a Web Service?	What is REST?
JDBC Overall Architecture	RPC versus Document Style	Standard HTTP Methods
JDBC Drivers and URL's	XML-Schema	ID and Links
Object Relational Mapping	Java XML Mapping	Reference Implementation
Persistence API in EJB 3.x	Java API XML Binding	JAX-RS
Entity Classes	JAXB Binding Life Cycle	Addressing
Entity Manager	JAXB API	Path Parameters
Persistence Context	SOAP Messages	Content Negotation
Persistence Unit	Web Service Description Language	Multiple Representations
Entity Lifecycle	JAX-WS	Stateless Communications
Merging Objects	Service Side Programming Model	Container Item Pattern
Managing Identity	Client Side Programming Model	Map, Key, Value Pattern
Module 10 : Micro Services	**Module 11 : Java Messaging Service**	**Module 12 : Java Security**
What are Microservices?	What is JMS?	Authentication and Authorization
Creating HTTP MicroServices	Messaging Characteristics	JAAS
Consuming HTTP MicroServices	JMS API	Declarative Security
MicroService Frameworks	Publish and Subscribe	Programmatic security
Spring BOOT	Point tot Point	Form Based Authentication
Automatic Configuration	JMS Architectural Components	Basic and Digest Authentication
Application Packaging	Message Types	Secure Sockets Layer
DropWizard MicroServices	Creating and Receiving Messages	Encryption Types
Reactive Microservices	Message Driven Beans	REST Service Security
From Callbacks to Observables	MessageListeners	JSON Web Tokens
Message Based Microservices	onMessage method	API Keys

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