

## Oracle Certification

[Home](#) [Certification Paths](#) [Exams](#) [Preparation](#) [Support](#) [Benefits](#) [News and Community](#)



### Java Enterprise Edition 5 Enterprise Architect Certified Master Exam (Step 1 of 3)



[Print this Exam](#)

<b>Exam Number:</b>	<b>1Z0-864</b>	<b>Duration:</b>	<b>120 minutes</b>
<b>Associated Certifications:</b>	<a href="#">Oracle Certified Master, Java EE 5 Enterprise Architect</a>	<b>Number of Questions:</b>	<b>64</b>
<b>Exam Product Version:</b>	<b>Java EE,</b>	<b>Passing Score:</b>	57% <a href="#">View passing score policy</a>
<b>Exam Price:</b>	<b>Rs 8014</b> <a href="#">More on exam pricing</a>	<b>Validated Against:</b>	<b>This exam is validated against Enterprise Edition 5.</b>
		<b>format:</b>	<b>Multiple Choice</b>

#### ► Registration:

[Register for this Ex](#)

[Certification Value Packages:](#) Save up to 20% on training and get an extra exam retake with this all-inclusive package.

#### Exam Preparation

#### Exam Topics

##### Section 1: Application Design Concepts and Principles

- Explain the main advantages of an object-oriented approach to system design including the effect of encapsulation, inheritance, and use of interfaces on architectural characteristics.
- Describe how the principle of "separation of concerns" has been applied to the main system tiers of a Java Platform, Enterprise Edition application. Tiers include client (both GUI and web), web (web container), business (EJB container), integration, and resource tiers.
- Describe how the principle of "separation of concerns" has been applied to the layers of a Java EE application. Layers include application, virtual platform (component APIs), application infrastructure (containers), enterprise services (operating system and virtualization), compute and storage, and the networking infrastructure layers.

##### Section 2: Common Architectures

- Explain the advantages and disadvantages of two-tier architectures when examined under the following topics: scalability, maintainability, reliability, availability, extensibility, performance, manageability, and security.
- Explain the advantages and disadvantages of three-tier architectures when examined under the following topics: scalability, maintainability, reliability, availability, extensibility, performance, manageability, and security
- Explain the advantages and disadvantages of multi-tier architectures when examined under the following topics: scalability, maintainability, reliability, availability, extensibility, performance, manageability, and security.
- Explain the benefits and drawbacks of rich clients and browser-based clients as deployed in a typical Java EE application.
- Explain appropriate and inappropriate uses for web services in the Java EE platform

##### Section 3: Integration and Messaging

- Explain possible approaches for communicating with an external system from a Java EE technology-based system given an outline description of those systems and outline the benefits and drawbacks of each approach.
- Explain typical uses of web services and XML over HTTP as mechanisms to integrate distinct software components.
- Explain how JCA and JMS are used to integrate distinct software components as part of an overall Java EE application.

##### Section 4: Business Tier Technologies

- Explain and contrast uses for entity beans, entity classes, stateful and stateless session beans, and message-driven beans, and understand the advantages and disadvantages of each type.
- Explain and contrast the following persistence strategies: container-managed persistence (CMP) BMP, JDO, JPA, ORM and using DAOs (Data Access Objects) and direct JDBC technology-based persistence under the following headings: ease of development, performance, scalability, extensibility, and security.
- Explain how Java EE supports the deployment of server-side components implemented as web services and the advantages and disadvantages of adopting such an approach.
- Explain the benefits of the EJB 3 development model over previous EJB generations for ease of development including how the EJB container simplifies EJB development.

##### Section 5: Web Tier Technologies

- State the benefits and drawbacks of adopting a web framework in designing a Java EE application

- ▶ Explain standard uses for JSP pages and servlets in a typical Java EE application.
- ▶ Explain standard uses for JavaServer Faces components in a typical Java EE application.
- ▶ Given a system requirements definition, explain and justify your rationale for choosing a web-centric or EJB-centric implementation to solve the requirements. Web-centric means that you are providing a solution that does not use EJB components. EJB-centric solution will require an application server that supports EJB components.

#### Section 6: Applicability of Java EE Technology

- ▶ Given a specified business problem, design a modular solution that solves the problem using Java EE.
- ▶ Explain how the Java EE platform enables service oriented architecture (SOA) -based applications.
- ▶ Explain how you would design a Java EE application to repeatedly measure critical non-functional requirements and outline a standard process with specific strategies to refactor that application to improve on the results of the measurements.

#### Section 7: Patterns

- ▶ From a list, select the most appropriate pattern for a given scenario. Patterns are limited to those documented in the book - Alur, Crupi and Malks (2003). Core J2EE Patterns: Best Practices and Design Strategies 2nd Edition and named using the names given in that book.
- ▶ From a list, select the most appropriate pattern for a given scenario. Patterns are limited to those documented in the book - Gamma, Erich; Richard Helm, Ralph Johnson, and John Vlissides (1995). Design Patterns: Elements of Reusable Object-Oriented Software and are named using the names given in that book.
- ▶ From a list, select the benefits and drawbacks of a pattern drawn from the book - Gamma, Erich; Richard Helm, Ralph Johnson, and John Vlissides (1995). Design Patterns: Elements of Reusable Object-Oriented Software.
- ▶ From a list, select the benefits and drawbacks of a specified Core J2EE pattern drawn from the book - Alur, Crupi and Malks (2003). Core J2EE Patterns: Best Practices and Design Strategies 2nd Edition.

#### Section 8: Security

- ▶ Explain the client-side security model for the Java SE environment, including the Web Start and applet deployment modes.
- ▶ Given an architectural system specification, select appropriate locations for implementation of specified security features, and select suitable technologies for implementation of those features
- ▶ Identify and classify potential threats to a system and describe how a given architecture will address the threats.
- ▶ Describe the commonly used declarative and programmatic methods used to secure applications built on the Java EE platform, for example use of deployment descriptors and JAAS.