CERTIFICATION SUCCESS GUIDE

ENTERPRISE ARCHITECT FOR JAVA™ 2 PLATFORM, ENTERPRISE EDITION (J2EE™) TECHNOLOGY

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introduction

GET AHEAD, STAY AHEAD

We developed this Certification Success Guide to help you gain visibility for your most valuable asset – your skills. At Sun, we know that the future starts in the minds of the people that take our technologies to the next level. Our future is you, and we're committed to your success.

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http://suned.sun.com/US/certification/

Java™ technology certification is a valuable, career-building opportunity – and a great way to help you take charge of your career. We're behind you from the start with education, training, and the resources you need to help you reach your certification goals.

Sun Educational Services offers courseware and certification to support you in expanding your career opportunities and creating the systems and applications that fuel the future. Our learning paths provide at-a-glance training and education information, so you know what you need to learn to successfully prepare for exams.

The Benefits of Certification

FOR THE INDIVIDUAL

Becoming certified in Java technology can help you improve your career potential, gain more respect, and increase job security. With certification, you have hard evidence that you're qualified for the tasks that lie ahead, helping you increase your opportunities for professional advancement, such as salary increase, job role modifications, or promotions.

FOR THE CORPORATION

Corporations that employ certified individuals do so to gain a competitive advantage. The skills that are verified during the certification process are the same skills that can help lead to decreased time to market, increased productivity, less system failure, and higher employee satisfaction rates.

Recruiting certified employees and certifying existing employees can lead to a more stable work environment, which in turn can lead to greater success as a whole. When companies demonstrate that they are willing to invest in their employees, those employees can be more productive, more loyal, and are more likely to remain in their jobs.

Certification Requirements Checklist

The Sun Certified Enterprise Architect for J2EE™ Technology is composed of three elements: a multiple-choice exam, an architecture and design project, and an essay exam.

You must successfully complete all three elements to become certified. The exam details are as follows:

STEP 1. SUN CERTIFIED ENTERPRISE ARCHITECT FOR J2EE TECHNOLOGY – MULTIPLE-CHOICE EXAM.

> Available at: Authorized Prometric testing centers
>
> Exam number: 310-051
>
> Prerequisites: None
>
> Exam type: Multiple choice, short answer, and drag and drop
>
> Number of questions: 48
>
> Pass score: 68%
>
> Time limit: 75 minutes
>
> Cost: US$150, or as locally priced

STEP 2. SUN CERTIFIED ENTERPRISE ARCHITECT FOR J2EE TECHNOLOGY – ARCHITECTURE AND DESIGN PROJECT.

> Available at: My Certification database at
>
> > http://suned.sun.com/US/certification/my_certification/index.html
>
> Exam number: none
>
> Prerequisites: Successful completion of the multiple-choice exam
>
> Exam type: Architecture and design project
>
> Number of questions: N/A
>
> Pass score: 70%, subject to the evaluation of the essay exam and validation of the authenticity of
> > the assignment
>
> Time limit: None
>
> Cost: As locally priced at the time of registration for the essay exam

STEP 3. SUN CERTIFIED ENTERPRISE ARCHITECT FOR J2EE TECHNOLOGY – ESSAY EXAM.

Available at: Authorized Prometric testing centers

Examination number: 310-061

Prerequisites: Successful completion of the multiple-choice exam and submission of the architecture and design project

Exam type: Essay

Number of questions: 4

Pass score: N/A (please refer to the score in Step 1 above)

Time limit: 90 minutes

Cost: US$150, or as locally priced

Supporting Courseware

Our courseware offerings provide information to help you pass certification exams and do your job with confidence. For the Sun Certified Enterprise Architect for J2EE Technology, supporting courseware includes:
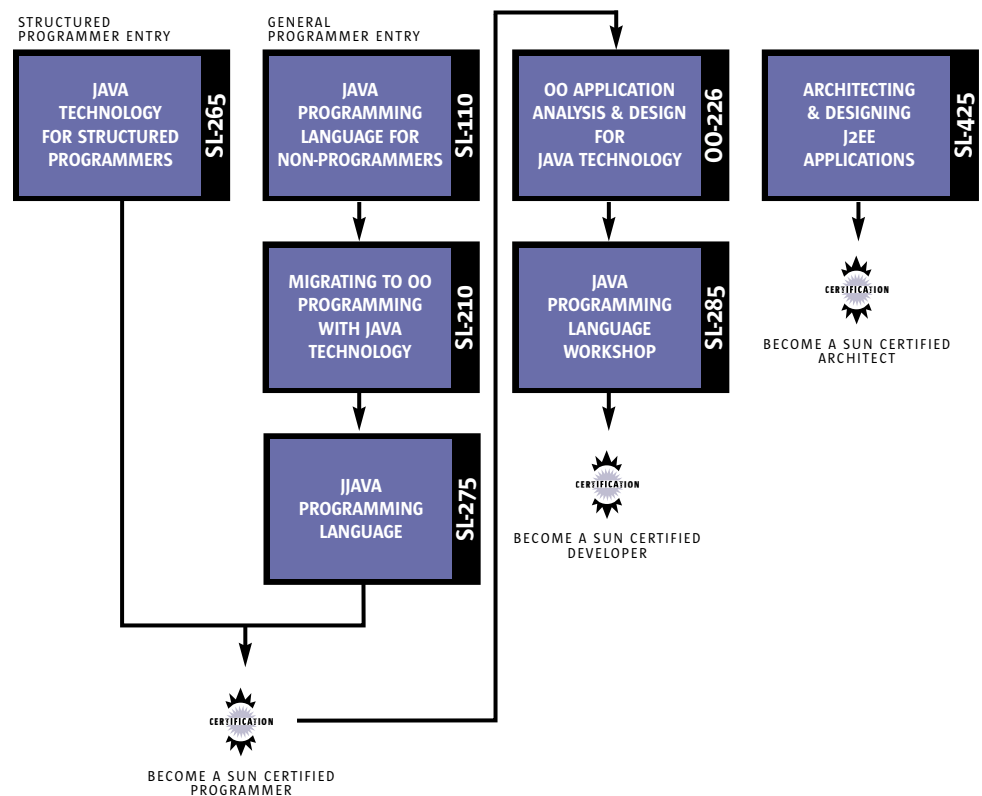
Architecting and Designing J2EE Applications
Course Number: SL-425
Duration: 4 days
Delivery: Instructor led

JAVA TECHNOLOGY CERTIFICATION LEARNING PATH

STRUCTURED PROGRAMMER ENTRY

GENERAL PROGRAMMER ENTRY

| JAVA TECHNOLOGY FOR STRUCTURED PROGRAMMERS — SL-265 | JAVA PROGRAMMING LANGUAGE FOR NON-PROGRAMMERS — SL-110 | OO APPLICATION ANALYSIS & DESIGN FOR JAVA TECHNOLOGY — OO-226 | ARCHITECTING & DESIGNING J2EE APPLICATIONS — SL-425 |

MIGRATING TO OO PROGRAMMING WITH JAVA TECHNOLOGY — SL-210

JAVA PROGRAMMING LANGUAGE WORKSHOP — SL-285

CERTIFICATION
BECOME A SUN CERTIFIED ARCHITECT

JJAVA PROGRAMMING LANGUAGE — SL-275

CERTIFICATION
BECOME A SUN CERTIFIED DEVELOPER

CERTIFICATION
BECOME A SUN CERTIFIED PROGRAMMER

Steps to Certification

1. PREPARE FOR TESTING

Review the exam objectives in this guide to help verify that you have sufficient knowledge to complete them successfully.

2. VERIFY THE EXAM NUMBER AND REGISTER FOR THE MULTIPLE-CHOICE EXAM

When you're ready to register for the multiple-choice exam, you can purchase an exam voucher from your local Sun Educational Services office. To find your local office, go to http://www.sun.com/service/suned and choose the country in which you want to take the test.

3. CONTACT PROMETRIC TO SCHEDULE YOUR EXAM

The exam takes place at an authorized Prometric Testing Center. To register for a convenient date, time, and location, go to http://www.2test.com for information on your local Prometric office. In some countries, you may register for the exam online.

4. TAKE YOUR EXAMINATION

Before starting the exam, you must agree to maintain test confidentiality and sign the Certification Candidate Pre-Test Agreement, which can be viewed at http://suned.sun.com/US/certification/register/policies.html. If you do not sign the agreement, you will not be allowed to take the exam.

After completing your exam, you'll receive your score and a section-by-section assessment of your test performance. Your exam results will be available at http://suned.sun.com/US/certification/my_certification/index.html within three to five business days. If you do not pass the exam, you must wait two weeks before taking it again.

5. REGISTER FOR THE ARCHITECTURE AND DESIGN PROJECT

Once you've successfully completed the multiple-choice exam, you can purchase the architecture and design project from your local Sun Educational Services office. Within 24 hours, you'll be given permission to download the project. To find your local office, go to http://www.sun.com/service/suned and choose the country in which you want to register.

6. DOWNLOAD AND SUBMIT THE ARCHITECTURE AND DESIGN PROJECT

Go to My Certification database to download the architecture and design project at http://suned.sun.com/US/certification/my_certification/index.html .

Once you've completed the project, you can submit your work by uploading it to My Certification database.

7. VERIFY THE EXAM NUMBER AND REGISTER FOR THE ESSAY EXAM

After you've submitted the architecture and design project and you're ready to register for the essay exam, you can purchase an exam voucher from your local Sun Educational Services office. To find your local office, go to http://www.sun.com/service/suned and choose the country in which you want to take the test.

Once you've received the voucher, repeat steps three and four. You'll receive your score and performance feedback from the Sun Certification database at http://suned.sun.com/US/certification/my_certification/index.html within three to four weeks. If you do not pass, you may do the architecture and design project again and resubmit it for an additional US$150 fee (or as locally priced). You will not have to retake the essay exam.

After you've successfully completed all of the certification requirements, you'll receive a Welcome Kit from Sun, which includes a letter of congratulations, a personalized certificate, a lapel pin and a logo license agreement which, once signed, allows you to use the Java Technology logo on your business card. At that time, you might want to start thinking about the next certification in your professional future. To begin preparation, visit http://suned.sun.com/US/certification/ to download the Certification Success Guide for the next certification in your career path.

Testing Objectives

Testing objectives for the Sun Certified Enterprise Architect for J2EE Technology include:

COMMON ARCHITECTURES
- Given an architecture described in terms of network layout, list benefits and potential weaknesses associated with it

LEGACY CONNECTIVITY
- Distinguish appropriate from inappropriate techniques for providing access to a legacy system from Java technology code given an outline description of that legacy system

ENTERPRISE JAVA \BEANS™
- List the required classes/interfaces that must be provided for an Enterprise JavaBean™ component
- Distinguish between stateful and stateless session beans
- Distinguish between session and entity beans
- Recognize appropriate uses for entity, stateful session, and stateless session beans
- State the benefits and costs of container-managed persistence
- State the transactional behavior in a given scenario for an enterprise bean method with a specified transactional attributed as defined in the deployment descriptor
- Given a requirement specification detailing security and flexibility needs, identify architectures that would fulfill those requirements
- Identify costs and benefits of using an intermediate data-access object between an entity bean and the data resource

ENTERPRISE JAVABEANS™ CONTAINER MODEL:
- State the benefits of bean pooling in an Enterprise JavaBeans container
- Explain how the Enterprise JavaBeans container does lifecycle management and has the capability to increase scalability

PROTOCOLS:
- Given a list of some of its features, identify a protocol that is one of the following: HTTP, HTTPS, IIOP, or JRMP
- Given a scenario description, distinguish appropriate from inappropriate protocols to implement that scenario
- Select common firewall features that might interfere with the normal operation of a given protocol

APPLICABILITY OF J2EE™ TECHNOLOGY:

- Identify application aspects that are suited to implementation using J2EE technology
- Identify application aspects that are suited to implementation using Enterprise Java Beans
- Identify suitable J2EE technologies for the implementation of specified application aspects

DESIGN PATTERNS:

- Identify the most appropriate design pattern for a given scenario
- Identify the benefits of using design patterns
- State the name of a Gamma et al. design pattern given the UML diagram and/or a brief description of the pattern's functionality
- Identify benefits of a specified Gamma et al. design pattern
- Identify the Gamma et al. design pattern associated with a specified J2EE technology feature

MESSAGING:

- Identify scenarios that are appropriate to implementation using messaging, Enterprise JavaBeans technology, or both
- List benefits of synchronous and asynchronous messaging
- Identify scenarios that are appropriate to implementation using messaging
- Identify scenarios that are more appropriate to implementation using asynchronous messaging, rather than synchronous
- Identify scenarios that are more appropriate to implementation using synchronous messaging, rather than asynchronous

INTERNATIONALIZATION:

- State three aspects of any application that might need to be varied or customized in different deployment locales
- List three features of the Java programming language that can be used to create an internationalizable/localizable application

SECURITY:

- Identify security restrictions that Java 2 technology environments normally impose on applets running in a browser
- Given an architectural system specification, identify appropriate locations for implementation of specified security features and select suitable technologies for implementation of those features

Sample Questions

1. Which statement describes active replication for fault tolerance?

    A. Active replication requires all members to execute the same invocation.

    B. Active replication requires the master member to synchronize state with the slave members.

    C. Active replication requires the master member to notify the slave members for each invocation.

    D. Active replication requires the master member to send state to the fault tolerance backplane.

2. A shipping company is building an enterprise system to track the location of packages. One part of the tracking system is a network of wireless inventory devices. The devices can only be accessed using a custom, synchronous TCP/IP protocol. How should you encapsulate interaction with the wireless inventory system?

    A. with a Java class that uses a JMS to interact with the inventory system

    B. with a distributed CORBA object that uses IIOP to interact directly with the inventory system

    C. with an EJB™ stateful session bean that uses Java sockets to interact with the inventory system

    D. with an EJB entity bean that uses container-managed persistence to encapsulate the inventory system

3. Which object can be used to increase cross-database and cross-schema portability?

    A. entity bean

    B. home object

    C. session bean

    D. data-access object

4. What are two features of HTTPS? (Choose two.)

    A. It is secure.

    B. It is connectionless.

    C. It is connection-based.

    D. It is used for load balancing.

    E. It is used for remote object communications.

5. You are developing a system with the following requirements:

Users will access the system using a standard Web browser.

All incoming requests will be filtered based on the user's IP address.

The response to the request will be an appropriate static HTML page, based on the user's IP address.

Which two J2EE technologies should be used to handle HTTP requests? (Choose two.)

    A. JSP
    B. JTS
    C. EJB
    D. SNMP
    E. servlets

6. What are two benefits of the Singleton pattern? (Choose two.)

    A. It encourages use of global variables.
    B. It controls access to a single instance.
    C. It permits a variable number of instances.
    D It allows a collection of objects to be manipulated as a single object.

7. What is an advantage of asynchronous messaging?

    A. a simple architecture
    B. Components get an immediate response.
    C. Components are guaranteed delivery of a response.
    D. Components can make requests then perform tasks without waiting for a response.

8. Which two items explicitly support writing programs for international audiences? (Choose two.)

    A. int primitive type
    B. char primitive type
    C. java.lang.String class
    D. java.lang.Integer class

9. Which statement is true?

    A. Classes loaded into a browser from the local network are trusted.
    B. Classes loaded into a browser from remote sources are trusted if they are signed.
    C. Classes loaded into a browser from remote sources are trusted if they are in a signed jarfile.
    D. Classes loaded from a jarfile on a remote source can sometimes be trusted even if the jarfile is unsigned.
    E. Classes loaded from a signed jarfile are trusted if the public key associated with the jarfile's signature is
      marked as trusted in the keystore.