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freedom from doubt

NCC Group Secure Coding Training in Java

NCC Group offers the most effective secure coding training available based on years of experience reviewing client source code and improving the security of the software they develop.

Overview

NCC Group assists enterprises and product companies in improving the security of the software they develop. We help to improve security during project design, implementation, testing and also once software is released or running in a production environment.

Our services include application code review where NCC Group consultants identify security flaws including: missing or invalid input validation, improper data sanitization, conversion errors, numeric errors, logical errors, and invalid assumptions and recommend specific fixes and general secure coding practice improvements. Often the best time to eliminate these problems is during development.

We also offer secure coding training courses to help developers develop a security mindset and eliminate security flaws before they are created.

The two-day instructor-led Secure Coding for Java course provides developers with practical guidance for developing Java programs that are robust and secure. Material in this presentation was derived from the Addison-Wesley book *The CERT Oracle Secure Coding Standard for Java* and is supported by the *Secure Coding Rules for Java LiveLessons* videos.

Learning Objectives

Participants should come away from the course with a working knowledge of common programming errors that lead to software vulnerabilities, how these errors can be exploited, and effective mitigation strategies for preventing the introduction of these errors.

In particular, participants will learn how to:

- Explain the need for secure coding
- Follow fundamental secure coding guidelines
- Validate and sanitize data
- Explain the Java Security Model
- Predict how the numerical types behave in Java
- Avoid pitfalls in the use of characters and strings
- Securely process input and output

Moreover, the course encourages programmers to adopt security best practices and develop a security mindset that can help protect software from tomorrow's attacks, not just today's.

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Prerequisites

The course assumes basic Java programming skills but does not assume an in-depth knowledge of software security. The course is designed primarily for Java SE 8 developers but should also be useful to developers using older versions of the SE platform as well as Java EE and ME developers. Course demos and solutions to exercises are presented using the Eclipse IDE but students are free to use any IDE for reviewing example code and performing exercises.

Duration	Two days*
Student Requirements	Some level of familiarity and efficiency in Java programming.
What to bring	A properly equipped laptop (see required equipment)
Pricing	Our pricing is competitive with other specialized training offerings on a per-seat or per-course basis

**Duration can be customized to your schedule.*

Trainer

This courseware has been designed by Robert C. Seacord, a renowned computer scientist and author, known as the "father of secure coding." Robert is a Principal Security Consultant with NCC Group where he works with software developers and software development organizations to eliminate vulnerabilities resulting from coding errors before they are deployed. Previously, Robert led the secure coding initiative in the CERT Division of Carnegie Mellon University's Software Engineering Institute (SEI). Robert is also an adjunct professor in the School of Computer Science and the Information Networking Institute at Carnegie Mellon University. Robert is the author of six books, including *The CERT C Coding Standard, Second Edition* (Addison-Wesley, 2014) *Secure Coding in C and C++, Second Edition* (Addison-Wesley, 2013), and *Java Coding Guidelines: 75 Recommendations for Reliable and Secure Programs* (Addison-Wesley, 2014). Robert is on the Advisory Board for the Linux Foundation and an expert on the ISO/IEC JTC1/SC22/WG14 international standardization working group for the C programming language.

Required Equipment

Students must bring a personal computer equipped with the following:

- Java SE Development Kit 8 (this can be downloaded from http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html)
- Eclipse IDE for Java Developers or other a Java 8 compatible IDE (this can be downloaded from https://www.eclipse.org/downloads/)
- 100MB or greater of free hard disk space
- The latest version of Adobe Reader (this can be downloaded from http://www.adobe.com/products/acrobat/readstep2.html)
- Students will receive instructions on obtaining the course excercises, demos, and examples. Before coming to class on the first day, students should ensure that these resources are available from their personal computers.

Materials Provided

The CERT Oracle Secure Coding Standard for Java and Java Coding Guidelines: 75 Recommendations for Reliable and Secure Programs books authored by Robert C. Seacord and published by Addison-Wesley will be provided. Participants will also receive a DVD containing course and reference materials.

About Security Consulting

NCC Group's North American Security Consulting division was created by uniting many of the best security consultancies, including iSEC Partners, Intrepidus Group, Matasano, NCC Group and NGS. As a part of NCC Group, we are the largest, globally respected security assurance team in the world. Our services leverage our extensive knowledge of security vulnerabilities, penetration testing techniques and software development best practices to enable organizations to secure their assets against ever-present threats. Our security consultants are published authors in the information security field and regular speakers at major industry events, including Black Hat USA and Europe, DEFCON, Hack in the Box, OWASP Appsec USA, Re:Invent, RECon, RSA, Shmoocon, SOURCE, Toorcon, Amazon's ZonCon and Microsoft's BlueHat Security Briefings.

About NCC Group

NCC Group is a leading global information assurance firm, providing freedom from doubt that all critical material is available, protected, and operating as it should be at all times. Information assurance is delivered through escrow and verification, security consulting, website performance, software testing and domain services.

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