

The logo for itkonekt, featuring the lowercase letters 'it' in a stylized font followed by 'konekt' in a clean, sans-serif font. The background is a vibrant purple gradient with abstract geometric shapes like circles and dots.

SECURE CODING IN JAVA

Two-day workshop with Victor Rentea

www.itkonekt.com



VICTOR RENTEA

// Java Champion, ex Lead Architect @IBM

<https://twitter.com/VictorRentea>

Victor is a Java Champion, and one of the top Technical Trainers, **having trained more than 1.5K developers in dozens of companies worldwide.**

Victor's talks are regularly top-rated at the largest international conferences in Europe: his live-coding sessions are lightning-fast but well crafted, full of enthusiasm, deep insights and take-away tips. His passion is Simple Design, Refactoring, and Unit Testing, about which he regularly talks at top conferences. His personal commitment is to seed passion for writing clean, professional code.

About workshop

SECURE CODING IN JAVA

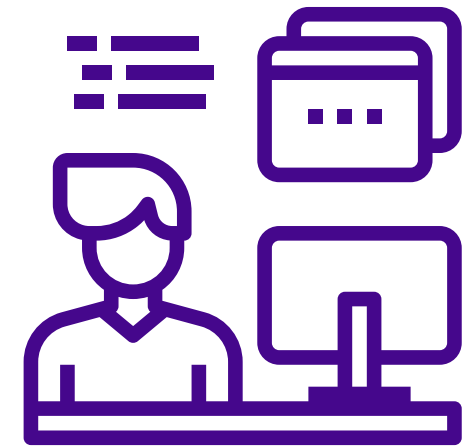
This workshop starts by reviewing the essential cryptography and web-security concepts and techniques. The top web attacks identified by OWASP (<https://owasp.org/>) are then explained and fixed with Spring Framework in several ways comparing the tradeoffs of each option. We'll then dive into the two main coordinates of security: authentication and authorization and we'll explore the mainstream practices as well as some advanced use-cases that will lead us to discover many details of the Spring Security framework.

Why is this workshop for you?

THIS WORKSHOP IS FOR YOU IF:

- YOU HAD SECURITY ISSUES IN PRODUCTION
- YOU RECEIVED A PEN-TEST (PENETRATION-TEST) REPORT
- YOU WANT TO MAKE SURE THAT YOUR APPLICATION WON'T HAVE ANY SECURITY INCIDENTS IN PRODUCTION
- YOU ARE LOOKING FOR A REVIEW OF YOUR TEAM'S SECURE CODING PRACTICES

About workshop - prerequisites



PREREQUISITES

PRIOR CONTACT WITH SECURITY CONCERNS IS RECOMMENDED.

About workshop - what will you learn?

✓ Cryptography Basics:

- Encryption: Symmetric / Asymmetric; [opt] Java code exercise
- Hashing; [opt] Java code workshop
- Digital Signatures; [opt] Raw Java code workshop
- Certificates, Certificate Authorities, Self-Signed; steps for creating a certificate; signing certificates vs end certificates
- Keytool workshop

✓ Web Security Concepts:

- SSL, 2-SSL; Setting up SSL on a Tomcat/Spring Boot App; TLS-1.2 outdated
- Sessions and Cookies; httpOnly flag
- CORS Workshop

About workshop - what will you learn?

✓ Authentication Mechanisms

- Form-login
- Basic + Digest
- API Token
- Token-based (JWT), performance considerations, design alternatives

✓ OAuth2:

- Main Concepts
- Manually login via Postman calls
- Workshop: Implementing WebSSO using KeyCloak + Spring Boot OAuth

About workshop - what will you learn?

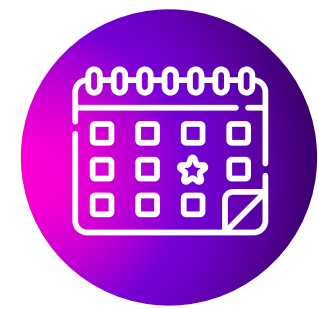
- ✓ OWASP Top 10 Web Application Security Risks (<https://owasp.org/www-project-top-ten/>):
 - Injection: SQL, *QL
 - Uploading Files, zip bombs and zip slips
 - Broken Authentication
 - Sensitive Data Exposure
 - XXE Attacks: exposing sensitive files, Denial-of-Service with xml bombs
 - Broken Access Control (best practices discussed in the next section)
 - Cross-Site Scripting (XSS): input HTML sanitization (eg vs RichText)
 - Cross-Site Request Forgery (CSRF) + token protection
 - Insecure Deserialization + fix
 - Using Components with known vulnerabilities - example
 - Monitoring security threats

About workshop - what will you learn?

✓ Implementing Authorization using Spring:

- URL-based (Spring/web.xml)
- Annotation Based (@PreAuthorized/@RolesAllowed)
- Data jurisdiction (ACLs)
- Custom Permission Evaluator
- Enhancing user data from an internal user data source
- Automated Testing Backend Authorization using Spring Boot Tests or bash scripts [opt]

Workshop details



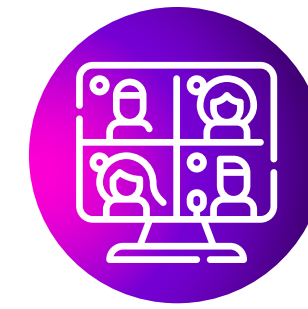
APRIL
13TH & 14TH



TIME: 9h-17h CEST



LIMITED NUMBER
OF PARTICIPANTS:
25



ONLINE



LANGUAGE:
ENGLISH

**NUMBER OF
PARTICIPANTS IS
LIMITED! HURRY
UP AND BOOK
YOUR SPOT!**

www.itkonekt.com