

SonarQube Training

COURSE CONTENT

GET IN TOUCH



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About Multisoft

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About Course

SonarQube Training equips professionals with the skills to continuously assess and improve software quality through automated code inspection. The course covers static code analysis, quality profiles, quality gates, security vulnerability detection, technical debt management, code coverage evaluation, and CI/CD integration. Through hands-on implementation and practical use cases, participants learn how to enforce coding standards, strengthen application security, and maintain high-quality software throughout the development lifecycle.

Module 1: Introduction to SonarQube

- ✓ Evolution of static code analysis
- ✓ Understanding code quality principles
- ✓ SonarQube architecture and components
- ✓ Editions and licensing overview
- ✓ Supported programming languages
- ✓ Enterprise use cases

Module 2: Installation and Initial Configuration

- ✓ Installing SonarQube
- ✓ Database configuration
- ✓ Elasticsearch fundamentals
- ✓ Server startup and verification
- ✓ Initial administration settings
- ✓ Environment best practices

Module 3: Project Analysis

- ✓ Creating and managing projects
- ✓ Configuring SonarScanner
- ✓ Running code analysis
- ✓ Branch and pull request analysis
- ✓ Multi-language project scanning
- ✓ Reviewing analysis results

Module 4: Code Quality Management

- ✓ Bugs and code smells
- ✓ Maintainability metrics
- ✓ Reliability ratings
- ✓ Technical debt calculation
- ✓ Code duplication analysis
- ✓ Code coverage concepts

Module 5: Security Analysis

- ✓ Security vulnerabilities
- ✓ Security Hotspots
- ✓ OWASP-related rules
- ✓ Secure coding practices
- ✓ Compliance monitoring
- ✓ Risk prioritization

Module 6: Quality Profiles and Quality Gates

- ✓ Creating Quality Profiles
- ✓ Rule activation and customization
- ✓ Managing coding standards
- ✓ Configuring Quality Gates
- ✓ Project-level policies
- ✓ Governance strategies

Module 7: CI/CD Integration

- ✓ Jenkins integration
- ✓ GitHub Actions integration
- ✓ Azure DevOps pipelines
- ✓ GitLab CI/CD
- ✓ Maven and Gradle integration
- ✓ Automated quality checks

Module 8: Administration and User Management

- ✓ User authentication
- ✓ Roles and permissions
- ✓ Project administration
- ✓ Portfolio management
- ✓ System monitoring
- ✓ Backup considerations

Module 9: Reporting and Dashboards

- ✓ Understanding project dashboards
- ✓ Quality trends
- ✓ Technical debt reports
- ✓ Executive reporting
- ✓ Issue tracking
- ✓ Performance monitoring

Module 10: Enterprise Implementation and Best Practices

- ✓ Scaling SonarQube environments
- ✓ Performance optimization
- ✓ Enterprise deployment strategy
- ✓ DevSecOps integration
- ✓ Real-world implementation scenarios
- ✓ Best practices and troubleshooting