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Sign up

Sonarqube trainingCode analysis, security and quality tool

3 days (21 hours)

Presentation

Our Sonarqube training course will teach you how to use this automatic code review tool to help you deliver clean code, analyzing and detecting any defects in your code so you can fix them.

The training course will familiarize you with this tool, so that your development team has a code quality and security technology that will fit into your company's environment.

In this course, you'll learn how to integrate it into various [DevOps platforms](#). It's easy to integrate with GitHub, GitLab, Azure and Bitbucket.

The tool will integrate into your workflow and detect problems in your code to help you carry out continuous code inspections of your projects.

As with all our training courses, this one will highlight [the latest advances](#) in this technology, ensuring that you are always up to date with the tool's new features.

Objectives

- Master Sonarqube
- Integrate on different DevOps platforms
- Mastering project management

Target audience

Developers.

Prerequisites

Basic programming skills.

Sonarqube training program

Day 1- Introduction to SonarQube & Docker

Introducing SonarQube

- Static code analysis tool
- Detection: bugs, vulnerabilities, code smells
- Complementarity with linters
- Continuous quality in a DevOps approach Manual

installation of SonarQube

- VM creation (AWS)
- Installation:
 - SonarQube
 - Sonar Scanner CLI
 - Scanning a Git repository
- Debrief :
 - Manual, fragile process
 - Difficult to reproduce
 - Limited

maintenance Introduction

to Docker

- Key concepts: containers, images, volumes
- Docker Hub
- Benefits :
 - Speed
 - Insulation
 - SonarQube

portability via Docker

- Create a new VM (Ubuntu or Amazon Linux, different for each participant)
- SonarQube installation via Docker
- Local installation of Sonar Scanner CLI
- Scanning a Git repository

- Debrief :
 - Faster, more reliable installation
 - Fewer configuration errors
 - Easily reproducible environment
 - CLI scanner can be docked

Day 2 - GitLab CI/CD & SonarQube integration Day

1 summary quiz

Introduction to SCM (GitLab, etc.)

Setting up GitLab CI

- Creating a GitLab account
- Deploying a personal GitLab Runner (VM)

Introduction to CI/CD

- Concepts :
 - Pipeline
 - Job
 - Internship
- Interest :
 - Automation
 - Reduce human error
 - Fast, reliable delivery

Premier pipeline CI

- Creating a .gitlab-ci.yml file
- Displaying a "Hello world" message
- Debrief :
 - First steps in automation
 - Understanding how a pipeline works
 - Basis for integrating other tools (SonarQube)

SonarQube integration in GitLab CI

- Repository with real source code
- SonarQube analysis integrated into the pipeline
- Debrief :
 - Pipeline: a continuous quality tool
 - Seamless integration of SonarQube
 - A concrete view of a DevOps chain

Day 3 - Customization & Good Quality Practices

Summary Quiz Day 2

Explanation: Quality Profiles & Quality Gates

Quality Profiles

- Definition: set of rules applied to a project
- Objectives :
 - Adapting rules to real needs
 - Deactivating unnecessary rules
- Actions :
 - Creating a personalized profile
 - Modification and association with a project
- Debrief :
 - Profile tailored to project requirements
 - Reducing "noise" in Quality Gates

analyses

- Definition: analysis validation/failure criteria
- Examples:
 - Zero blocking bugs
 - Test coverage > 80%.
 - No new technical debt
- Actions :
 - Creating a customized gate
 - Failure simulation
 - Pipeline integration
- Debrief :
 - Quality Gate: quality tolerance threshold
 - Adaptation according to project phase or

context TP Final - DevOps mini-project

- Objective:
 - Cloning an existing project
 - Define a customized Quality Profile + Gate
 - GitLab CI integration
 - Validation/failure based on code quality
- Debrief :
 - A complete view of the DevOps chain
 - Integrating quality into the development cycle
 - Transportability in a professional

environment Closing the course

- Quiz / Final summary
- Collecting feedback (oral or form)
- Thanks & congratulations
- Sharing complementary resources

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.