SonarQube Cloud

Hunor Ördög, Norbert-Raymond Pap, István-Lehel Balázs

Brand changes - 28 oct 2024

Introduction

Why Use SonarCloud?

Key Features

How SonarCloud Works

SonarCloud in Action

Integration with GitHub and CI/CD Pipelines

SonarQube Cloud

formerly SonarCloud

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2024 November

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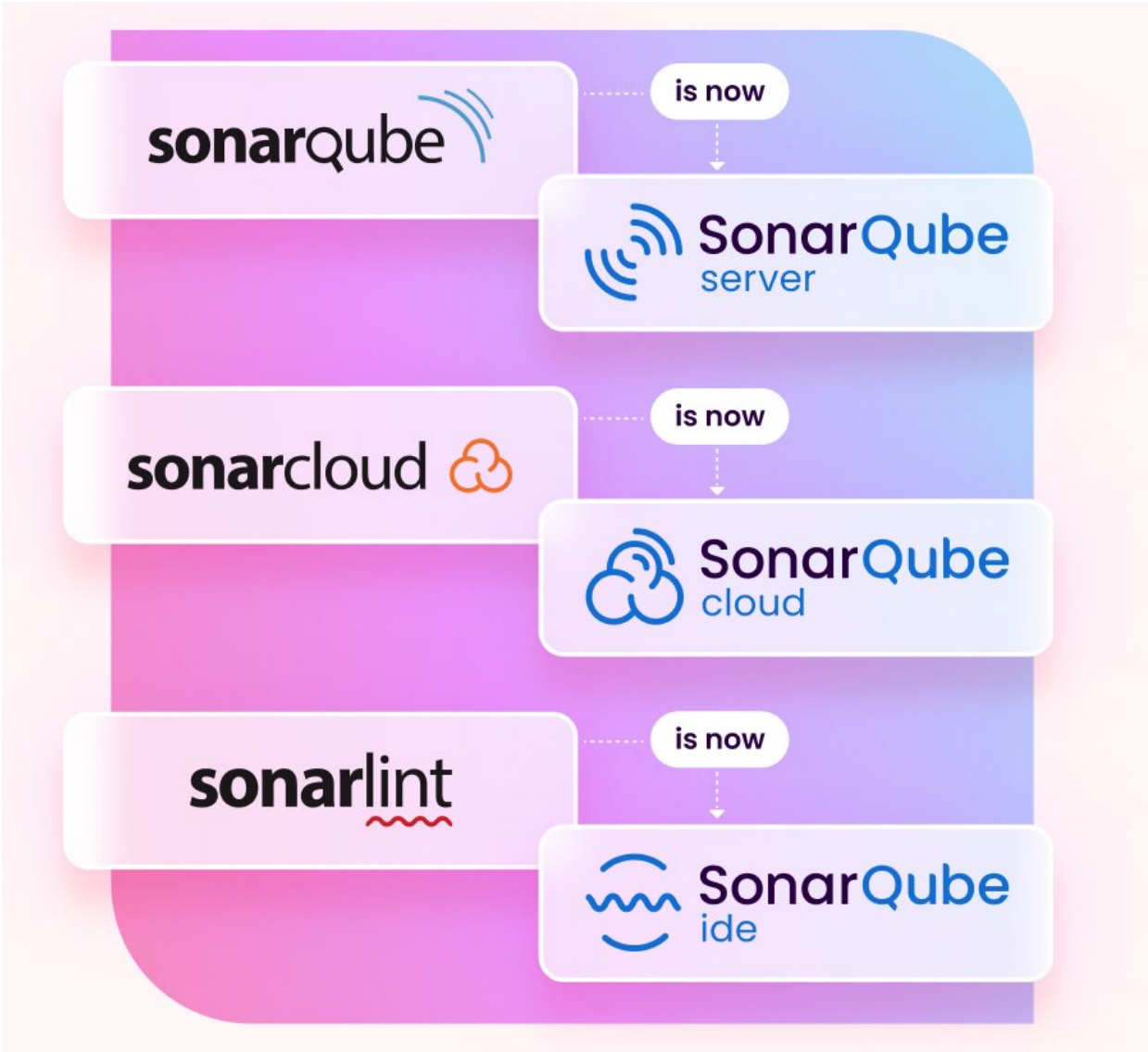

What is Sonar?

- Tool for **code quality** and **security** throughout the development lifecycle.
- Catch **bugs**, **vulnerabilities**, and **design issues** (Duplicated code, Large methods, Inconsistent naming).
- Improve **maintainability**, **readability**, and **security**.

What is Sonar?

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Importance of Code Quality

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- **Enhances Code Maintainability**: Ensures code is clean and structured, making future modifications easier.
- **Prevents Technical Debt**: Identifies potential issues early to avoid accumulating maintenance burdens.

Importance of Code Quality

- **Reduces Defects and Bugs**: Early detection of code issues minimizes the chance of runtime errors.
- **Improves Team Collaboration**: Sets a standard for quality, enabling consistent and effective code reviews.

Importance of Code Quality

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- **Facilitates Learning and Growth**: Promotes best practices, reinforcing sound coding principles for developers.

Security Benefits

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- **Vulnerability Detection**: Sonar identifies security vulnerabilities and potential exploits in your code, helping prevent data breaches and security incidents.
- **OWASP Compliance**: Ensures code adheres to recognized security standards like OWASP Top 10, promoting industry-level security practices.

Security Benefits

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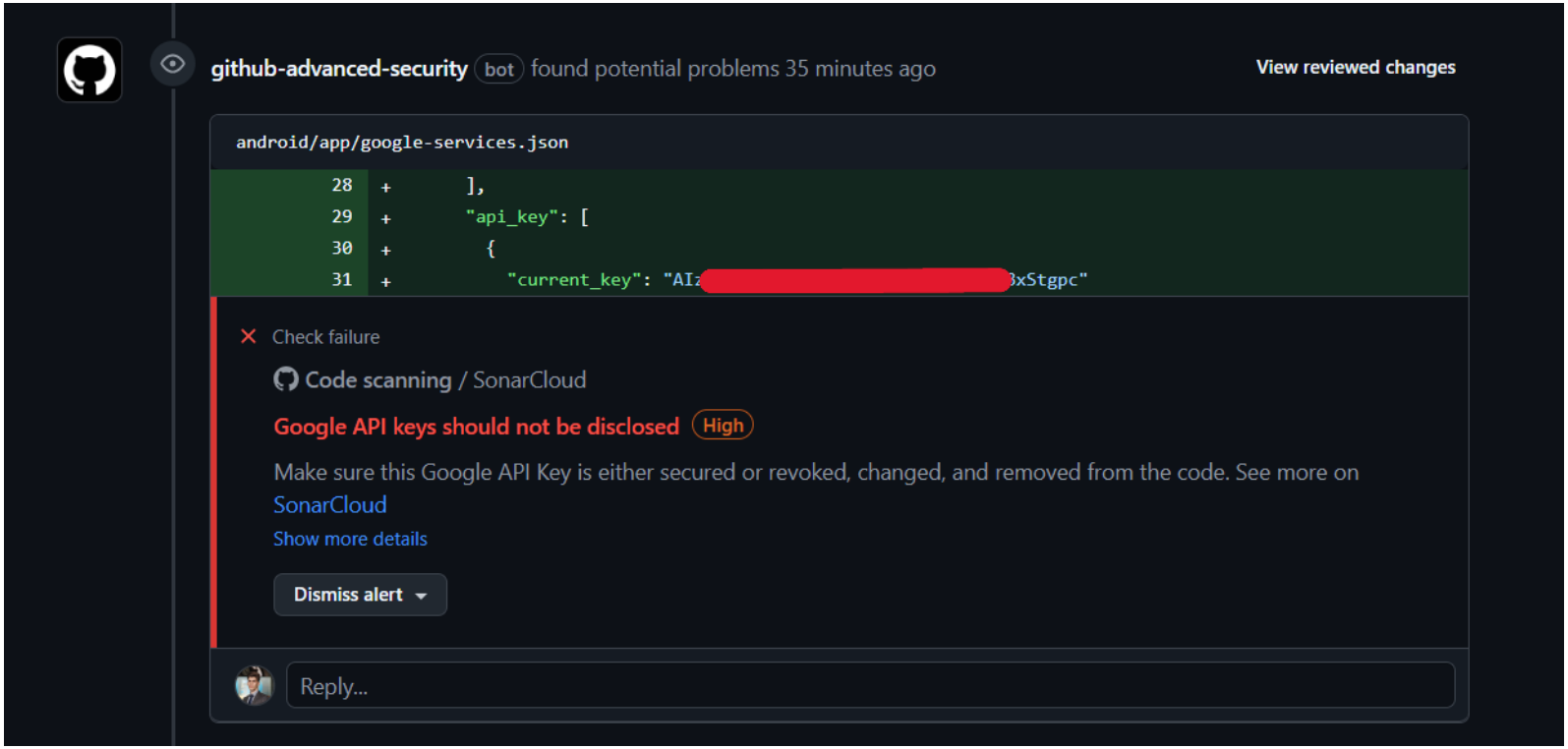
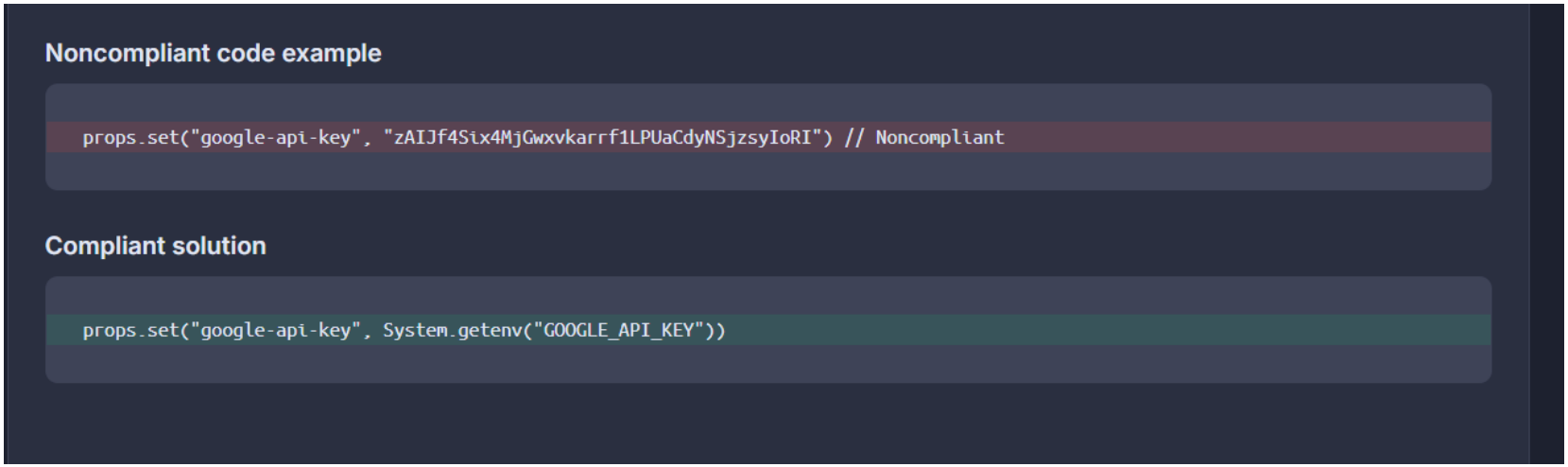


Security Benefits

Solution sugestion in SonarCloud:



Development Best Practices

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- **Code Smell Detection**: Highlights suboptimal code structures that could lead to future maintenance problems.
- **Enforces Coding Standards**: Automates the application of style and quality guidelines, ensuring consistency across the codebase.
- **Automated Quality Gates**: Sets pass/fail criteria for code quality, allowing only compliant code to merge into main branches, maintaining high development standards.

Code Analysis

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Language Support

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Integration Capabilities

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Cloud-Based Convenience

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Static Code Analysis

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Quality Gates

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Dashboard and Reports

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Example Workflow

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Live Demo

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Setting Up SonarCloud in GitHub

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Basic Pipeline Configuration

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