



SonarQube
Cloud

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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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Contents

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

- 1 Brand changes - 28 oct 2024
- 2 Introduction
- 3 Why Use SonarCloud?
- 4 Key Features
- 5 How SonarCloud Works
- 6 SonarCloud in Action
- 7 Integration with GitHub and CI/CD Pipelines

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SonarQube
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Raymond Pap,
István-Lehel
Balázs

Brand changes
- 28 oct 2024

Introduction

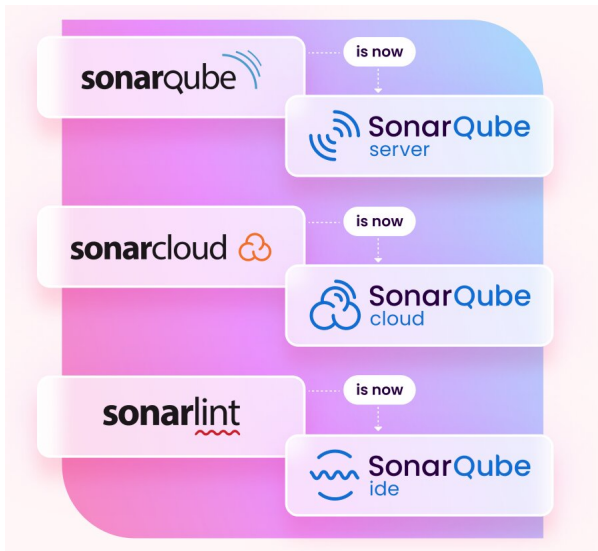
Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines





What is Sonar?

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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

- 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**.

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Balázs

Brand changes
- 28 oct 2024

Introduction

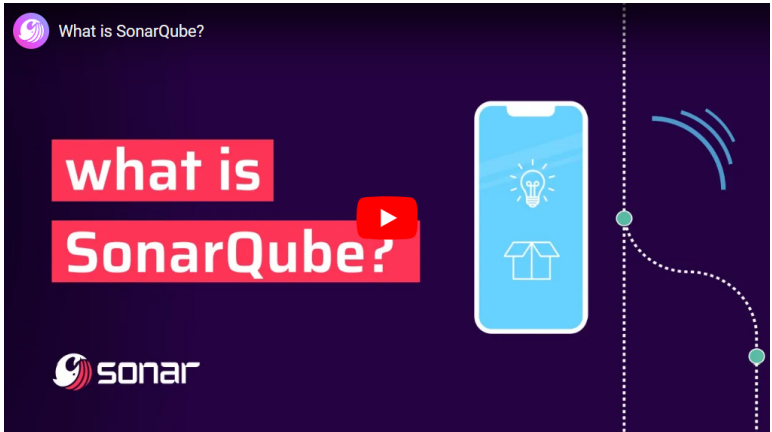
Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines





Importance of Code Quality

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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

- **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

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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

- **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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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

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



Security Benefits

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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

- **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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Brand changes
- 28 oct 2024

Introduction

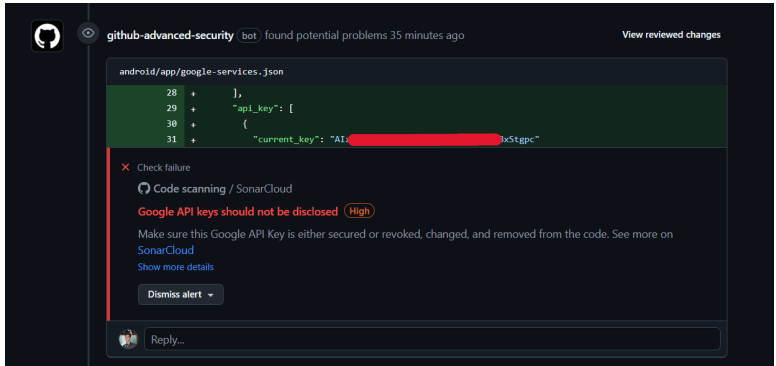
Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines



github-advanced-security bot found potential problems 35 minutes ago [View reviewed changes](#)

```
android/app/google-services.json
28 +   },
29 +   "api_key": [
30 +     {
31 +       "current_key": "AIzaSyBxStgpc"
```

✗ Check failure

Code scanning / SonarCloud

Google API keys should not be disclosed High

Make sure this Google API Key is either secured or revoked, changed, and removed from the code. See more on [SonarCloud](#)

[Show more details](#)

Dismiss alert





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Brand changes
- 28 oct 2024

Introduction

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SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines

- Solution suggestion in SonarCloud:

Noncompliant code example

```
props.set("google-api-key", "zAIJf4Sux4MjGwvxkarrf1LPuACdyNSjzsyIoRI") // Noncompliant
```

Compliant solution

```
props.set("google-api-key", System.getenv("GOOGLE_API_KEY"))
```



Development Best Practices

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- 28 oct 2024

Introduction

Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines

- **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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Introduction

Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines



Language Support

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Introduction

Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines



Integration Capabilities

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- 28 oct 2024

Introduction

Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines



Cloud-Based Convenience

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Introduction

Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines



Static Code Analysis

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Brand changes
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Introduction

Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines



Quality Gates

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Brand changes
- 28 oct 2024

Introduction

Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines

- **Definition:**

- Quality Gates are a set of conditions that determine whether code meets predefined quality standards.

- **Key Metrics:**

- **Coverage:** Enforces sufficient test coverage.
- **Bugs/Vulnerabilities:** Blocks critical issues.
- **Code Smells:** Prevents maintainability problems.
- **Duplications:** Limits duplicate code.

- **Outcome:** Pass/fail check to ensure high code standards are met.



Dashboard and Reports

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Introduction

Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines



Example Workflow

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- 28 oct 2024

Introduction

Why Use
SonarCloud?

Key Features

How
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Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines



Live Demo

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Brand changes
- 28 oct 2024

Introduction

Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines



Setting Up SonarCloud in GitHub

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Brand changes
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Introduction

Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines



Basic Pipeline Configuration

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- 28 oct 2024

Introduction

Why Use
SonarCloud?

Key Features

How
SonarCloud
Works

SonarCloud in
Action

Integration
with GitHub
and CI/CD
Pipelines