

Code Sight

Find and fix application security defects as you code

Benefits

Easy to use

- Install and start fixing code and open source dependency issues in only a few minutes with an intuitive IDE extension UI
- Get alerts for code issues in every file you open, save, or edit with the auto-scanning feature

Better code

- Shift left by fixing issues *before* you check in your code
- Address issues in source code, open source dependencies, API calls, cryptography, infrastructure-as-code, and more
- Know what to fix and how with clear and precise remediation guidance directly in the IDE

Increased productivity

- Get real-time code analysis with IDE-optimized scanning
 - WebGoat in 3 seconds
 - Apache Hadoop in 10 seconds (800 files and 1M lines of code)
- Avoid costly rework by discovering defects early, not during downstream tests

Overview

Code Sight™ is an IDE-based application security solution that helps you find and fix security issues as you code, without switching tools or interrupting your workflow. Combining static application security testing (SAST) and software composition analysis (SCA), Code Sight gives you real-time alerts and visibility into

- Security weaknesses (CWEs) in your code
- Known vulnerabilities (CVEs) in open source dependencies
- Insecure infrastructure-as-code (IaC) configurations
- Potential secrets/sensitive data leakage risks
- Vulnerable API usage

Code Sight is blazing fast and can analyze large codebases in seconds. Detailed remediation guidance provided directly in the IDE helps you fix issues fast today and write better code going forward.

Code Sight also complements and improves the effectiveness of centralized AST analysis integrated into your CI pipelines or performed as part of QA. It enables you to address defects *before* you check code in, so you can avoid the costly rework that is required when vulnerabilities aren't discovered until downstream testing.

```

Encryption.java
app > src > main > java > com > htbridge > pivaa > handlers > Encryption.java
37      * Weak random number generator
38      * @return
39      */
40     public static String rng() {
41         Random rnd = new Random();
42         int n = rnd.nextInt(100000) + 1;
43
44         return Integer.toString(n);
45     }
46
47     /**
48     * Encrypt DATA
49     * @param value
50     * @return
51     */
52     public static String encryptAES_ECB_PKCS5PA
53     try {
54         byte[] key = {
55             1, 2, 3, 4, 5, 6, 7, 8, 8,
56         };
57         SecretKeySpec skeySpec = new Secret
58
59     Cipher cipher = Cipher.getInstance("AES/ECB/PKCS5Padding");
60     cipher.init(Cipher.ENCRYPT_MODE, skeySpec);
61
62     byte[] encrypted = cipher.doFinal(value.getBytes());
63
64     Base64 b64 = new Base64();
65     System.out.println("encrypted string: " + new String(b64.encodeBase64(encrypted)));
66
67     return new String(b64.encodeBase64(encrypted));
68     } catch (Exception ex) {
69         ex.printStackTrace();
70     }
71
72     return "";
73     }
74
  
```

ISSUE: Insecure Cipher
 Select Dismiss

A vulnerable block cipher mode is used in the transformation string provided to the `javax.crypto.Cipher.getInstance()` method. The block cipher mode does not include message authenticity. Thus, the ciphertext could be tampered with by an attacker without being discovered.

Remediation:
 Use an encryption mode that includes message authentication which will prevent malicious tampering. Consider GCM or CCM modes.

Checker: insecure_cipher_core_java_block_cipher_mode
 First detected: 2 hours ago
 Last scanned: 2 hours ago

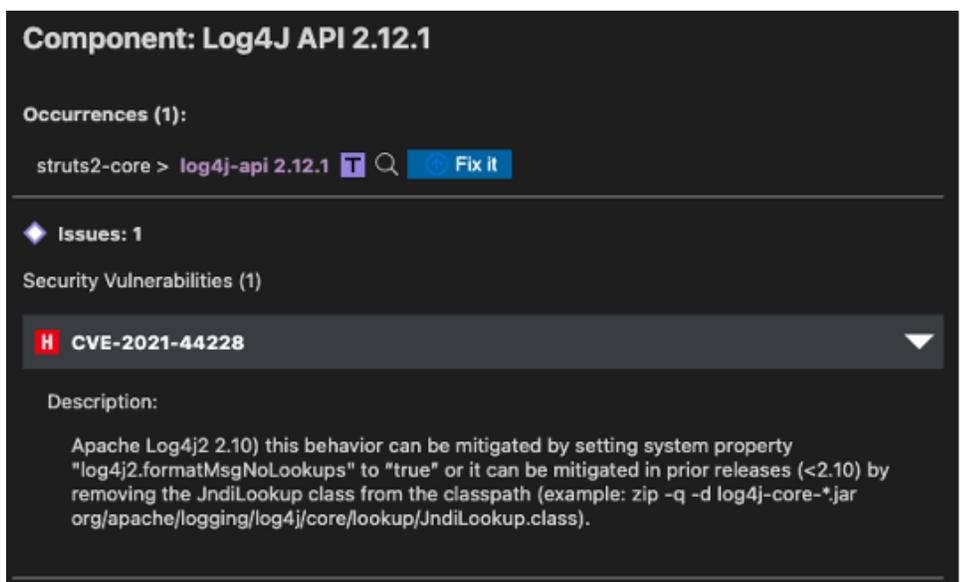
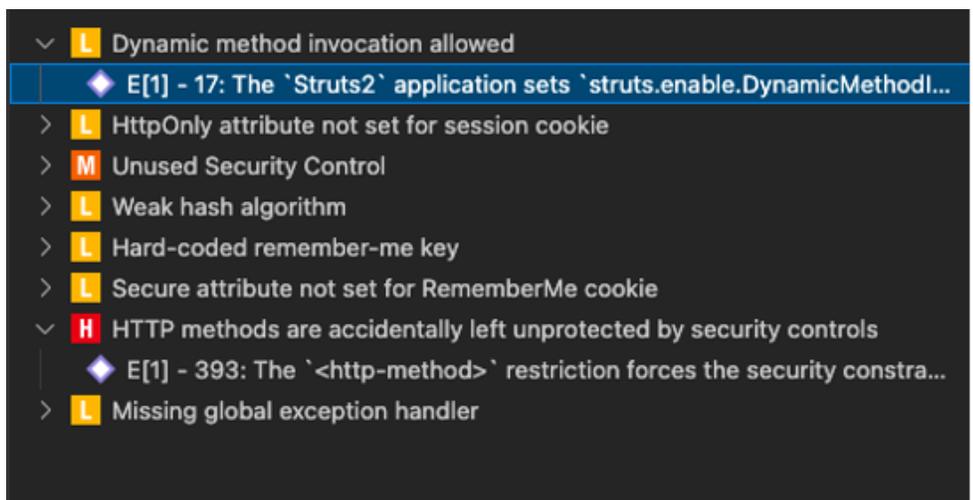
Code Sight Standard Edition features

Integrated static analysis

- Code Sight automatically scans and analyzes source code and infrastructure-as-code files as you work.
- Detected issues are highlighted directly in the editor window for easy identification.
- Hovering over a highlighted line of code displays details including issue description and remediation guidance.
- You can apply recommended code fixes for many vulnerabilities with a single click.

Integrated software composition analysis

- Code Sight identifies known security vulnerabilities in both direct and transitive open source dependencies.
- View the vulnerability description as well as CVE and/or Black Duck Security Advisory ID directly in the IDE.
- Severity information based on CVSS score helps you quickly prioritize which issues to fix first.
- Remediation guidance helps you select the next available vulnerability-free or lower-risk version of the component.



Code Sight Standard Edition | Technical Specification

IDE and languages

IDE

- Visual Studio Code

Languages

- Java
- JavaScript
- TypeScript

IaC platforms and file formats

Platforms

- AWS CloudFormation
- ELK
- Helm
- Kubernetes
- Terraform

File formats

- HCL (Terraform)
- HTML
- JSON
- JSX
- Properties
- TOML
- TSX
- Vue
- XML
- YAML

Additional language and IDE support available when using Code Sight with Coverity® SAST or Black Duck® SCA.

This datasheet applies to Code Sight Standard Edition license 2022.1.0 and later releases.

The Synopsys difference

Synopsys Software Integrity Group provides integrated solutions that transform the way development teams build and deliver software, accelerating innovation while addressing business risk. Our industry-leading portfolio of software security products and services is the most comprehensive in the world and interoperates with third-party and open source tools, allowing organizations to leverage existing investments to build the security program that's best for them. Only Synopsys offers everything you need to build trust in your software.

For more information about the Synopsys Software Integrity Group, visit us online at www.synopsys.com/software.

Synopsys, Inc.
690 E Middlefield Road
Mountain View, CA 94043 USA

U.S. Sales: 800.873.8193
International Sales: +1 415.321.5237
Email: sig-info@synopsys.com

©2022 Synopsys, Inc. All rights reserved. Synopsys is a trademark of Synopsys, Inc. in the United States and other countries. A list of Synopsys trademarks is available at www.synopsys.com/copyright.html. All other names mentioned herein are trademarks or registered trademarks of their respective owners. February 2022