
Product: Tony

Report: Pentest Report Example

PEN-DOC20240115144451

Shub, https://www.shub_pentest.com

14-01-2024

Project Overview

Description

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Executive Summary

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Summary of Findings Identified

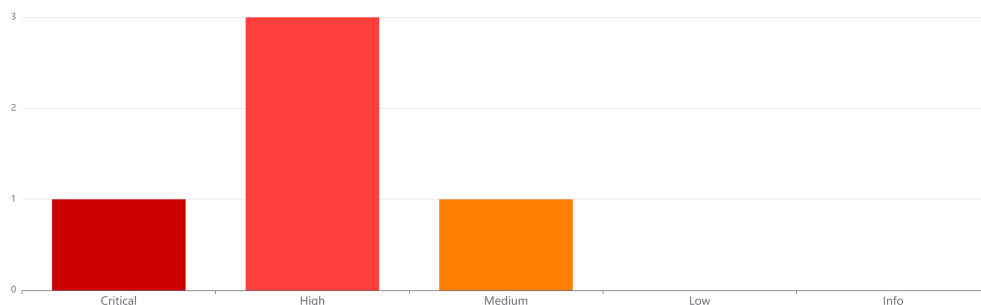


Figure 1: Executive Summary

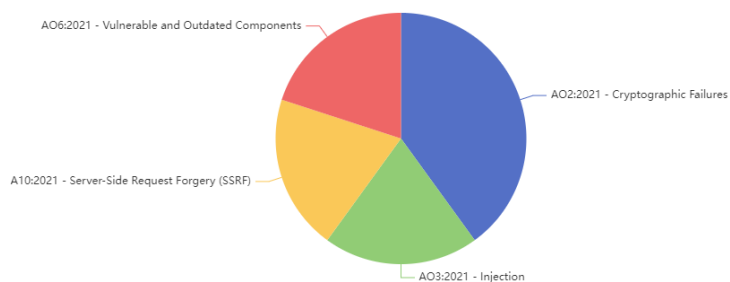


Figure 2: Breakdown by OWASP Categories

1 Critical MD5 Usage

2 High SQL Injecion

3 High Crypto Failure

4 High SSRF

5 Medium Bloop Change

Scope

In Scope

Test

Out of Scope

Test

Methodology

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Recommendations

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Findings and Risk Analysis

MD5 Usage



Severity: Critical

CVSS Score: 9.3

CVSS Vector: CVSS:4.0/AV:N/AC:L/AT:N/PR:N/UI:N/VC:H/VI:N/VA:N/SC:H/SI:L/SA:H

OWASP

2 - Cryptographic Failures

Description

The application in question was observed using the MD5 cryptographic algorithm for hashing passwords. This algorithm is known to be deprecated and weak, making it an unsuitable choice for modern security requirements.

Location

<https://example.com/user/settings>

Impact

The utilization of a deprecated and weak cryptographic algorithm like MD5 makes the application highly susceptible to cyber attacks. A potential attacker can leverage well-known vulnerabilities within the MD5 algorithm to compromise user passwords, leading to unauthorized access to sensitive information.

Proof of Concept

TBC

Recommendation

- It is recommended to immediately upgrade the password hashing system to a more secure cryptographic algorithm.
- Alternatives like SHA-256 or bcrypt should be considered for password hashing.
- A thorough security review of the entire application needs should be carried out to identify and correct any other outdated security practices.

References

- https://owasp.org/www-project-top-ten/2021/A02_2021-Cryptographic_Failures

- <https://en.wikipedia.org/wiki/MD5>
- <https://csrc.nist.gov/Projects/Hash-Functions/NIST-Policy-on-Hash-Functions>

SQL Injecion



Severity: High

CVSS Score: 7.8

CVSS Vector: CVSS:4.0/AV:N/AC:L/AT:N/PR:N/UI:N/VC:N/VI:N/VA:N/SC:L/SI:H/SA:L

OWASP

3 - Injection

Description

An Injection flaw was identified in the target system. This flaw allows an attacker to send untrusted data to an interpreter that is incorporated into a command or query. The attacker's hostile data can trick the interpreter into executing unintended commands or accessing unauthorized data.

Location

/login.php

Impact

If successfully exploited, an attacker can take advantage of code injection to execute arbitrary code, modify the database, inject malicious content into outputs, compromise user information or even take over the server which can potentially lead to a complete system compromise.

Proof of Concept

TBC

Recommendation

- Implement a whitelist for server-side input validation and filtering.
- Use parameterized queries or prepared statements to prevent SQL injections.
- Ensure that user privileges are limited to the minimum necessary for their role to reduce the impact of a successful attack.
- Regularly update and patch all systems, software, and plugins.
- Conduct regular security reviews of your application and server.

References

- https://owasp.org/www-project-top-ten/2017/A1_2017-Injection.html
- <https://cwe.mitre.org/data/definitions/77.html>

- https://owasp.org/www-project-web-security-testing-guide/latest/4-Web_Application_Security_Testing/07-Input_Validation_Testing/05-Testing_for_SQL_Injection

Crypto Failure



Severity: High

CVSS Score: 7.7

CVSS Vector: CVSS:4.0/AV:N/AC:L/AT:N/PR:N/UI:N/VC:N/VI:N/VA:N/SC:N/SI:N/SA:H

OWASP

2 - Cryptographic Failures

Description

Cryptographic failures refer to the vulnerabilities and weaknesses in the implementation of cryptographic algorithms and protocols. These failures can lead to security breaches by attackers who can exploit the vulnerabilities to gain unauthorized access, tamper with sensitive data, or perform other malicious activities.

Location

<https://example.com/user/settings>

Impact

The impact of cryptographic failures can be significant and widespread. It can result in the compromise of confidential information, such as passwords, credit card details, and other sensitive data. Attackers can use this information for identity theft, financial fraud, or other forms of malicious activities. Furthermore, cryptographic failures can also lead to the loss of integrity and authenticity of data, as well as the potential for unauthorized modifications or tampering.

Proof of Concept

TBC

Recommendation

- Ensure that cryptographic algorithms and protocols are implemented correctly and securely.
- Regularly update and patch cryptographic libraries and components to address any known vulnerabilities.
- Follow secure coding practices and guidelines while developing and implementing cryptographic functions.
- Perform thorough security testing, including cryptographic testing, to identify and fix any vulnerabilities or weaknesses.
- Stay updated with the latest cryptographic standards and best practices.

- Regularly monitor and analyze cryptographic logs and alerts to detect any potential attacks or breaches.
- Implement a strong key management system to protect cryptographic keys from unauthorized access.
- Employ proper encryption mechanisms, such as using strong algorithms and key sizes.
- Ensure that proper key exchange and authentication mechanisms are in place to prevent man-in-the-middle attacks.
- Consider using reputable and audited cryptographic libraries and components.

References

- https://owasp.org/www-project-top-ten/2021/A02_2021-Cryptographic_Failures

SSRF



Severity: High

CVSS Score: 7.7

CVSS Vector: CVSS:4.0/AV:N/AC:L/AT:N/PR:N/UI:N/VC:N/VI:L/VA:N/SC:H/SI:N/SA:N

OWASP

10 - Server-Side Request Forgery (SSRF)

Description

During the penetration testing engagement, a Server-Side Request Forgery (SSRF) vulnerability, labelled as OWASP A10:2021, was identified. This vulnerability allows an external attacker to manipulate the system into executing requests on behalf of the server. This could be used to create requests to internal services, resulting in potential unauthorized access to sensitive data or internal management interfaces.

Location

<https://example.com/user/profile>

Impact

The potential impact of this vulnerability is high, given that successful exploitation can offer an attacker internal network access. With the help of this vulnerability, an attacker can bypass firewalls, probe internal servers, and access restricted data. This can lead to unauthorized access, data leakage, denial of service or even command execution.

Proof of Concept

TBC

Recommendation

- Implement a whitelist of IP addresses or ranges that it will communicate with.
- Use a server-side proxy to validate, filter, and restrict any network request made by the application.
- Always use strong access controls and least privilege policies for internal services.
- Regularly patch and update applications and servers to prevent vulnerabilities that might be used as a part of SSRF attacks.

References

- https://owasp.org/www-community/attacks/Server_Side_Request_Forgery
- https://cheatsheetseries.owasp.org/cheatsheets/Server_Side_Request_Forgery_Prevention_Cheat_Sheet.html
- <https://cwe.mitre.org/data/definitions/918.html>

Bloop Change



Severity: Medium

CVSS Score: 5.4

CVSS Vector: rewtgergerg

CWE

108 - Struts: Unvalidated Action Form

OWASP

6 - Vulnerable and Outdated Components

Description

Yada ada yada get heked yada yada yada

Location

Test

Impact

Test

Proof of Concept

Test

Recommendation

Test

References

Test