

OWASP TOP 10 2021

Description

The primary aim of the OWASP Top 10 is to educate developers, designers, architects, managers, and organizations about the consequences of the most important web application security weaknesses. The Top 10 provides basic techniques to protect against these high risk problem areas - and also provides guidance on where to go from here.

Disclaimer

This document or any of its content cannot account for, or be included in any form of legal advice. The outcome of a vulnerability scan (or security evaluation) should be utilized to ensure that diligent measures are taken to lower the risk of potential exploits carried out to compromise data.

Legal advice must be supplied according to its legal context. All laws and the environments in which they are applied, are constantly changed and revised. Therefore no information provided in this document may ever be used as an alternative to a qualified legal body or representative.

A portion of this report is taken from OWASP's Top Ten 2021 Project document, that can be found at <http://www.owasp.org>.

Scan Detail

Target	http://10.136.108.108:3128/
Scan Type	Full Scan
Start Time	Nov 13, 2025, 5:13:35 PM GMT
Scan Duration	18 minutes
Requests	1961
Average Response Time	6ms
Maximum Response Time	88628ms
Application Build	v24.6.240626115
Authentication Profile	-

Compliance at a Glance

CATEGORY

- | | |
|---|------------------------------------------------|
| 0 | A01 Broken Access Control |
| 1 | A02 Cryptographic Failures |
| 0 | A03 Injection |
| 1 | A04 Insecure Design |
| 2 | A05 Security Misconfiguration |
| 0 | A06 Vulnerable and Outdated Components |
| 1 | A07 Identification and Authentication Failures |
| 0 | A08 Software and Data Integrity Failures |
| 0 | A09 Security Logging and Monitoring Failures |
| 0 | A10 Server-Side Request Forgery |

Detailed Compliance Report by Category

This section is a detailed report that explains each vulnerability found according to individual compliance categories.

A01 Broken Access Control

Access control enforces policy such that users cannot act outside of their intended permissions. Failures typically lead to unauthorized information disclosure, modification, or destruction of all data or performing a business function outside the user's limits.

No alerts in this category

A02 Cryptographic Failures

The first thing is to determine the protection needs of data in transit and at rest. For example, passwords, credit card numbers, health records, personal information, and business secrets require extra protection, mainly if that data falls under privacy laws, e.g., EU's General Data Protection Regulation (GDPR), or regulations, e.g., financial data protection such as PCI Data Security Standard (PCI DSS).

SSL/TLS Not Implemented

This scan target was connected to over an unencrypted connection. A potential attacker can intercept and modify data sent and received from this site.

CWE

CWE-319

CVSS2

AV:N/AC:M/Au:N/C:P/I:P/A:N

Access Vector	Network
Access Complexity	Medium
Authentication	None
Confidentiality	Partial
Integrity Impact	Partial
Availability Impact	None

CVSS3

CVSS:3.1/AV:N/AC:L/PR:N/UI:R/S:U/C:L/I:L/A:N

Base Score	5.4
Attack Vector	Network
Attack Complexity	Low
Privileges Required	None
User Interaction	Required
Scope	Unchanged
Confidentiality	Low
Integrity Impact	Low
Availability Impact	None

CVSS4

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

Base Score	5.1
Attack Vector	Network
Attack Complexity	Low
Attack Requirements	None
Privileges Required	None
User Interaction	Active
Confidentiality Impact to the Vulnerable System	Low
Integrity Impact to the Vulnerable System	Low
Availability Impact to the Vulnerable System	None
Confidentiality Impact to the Subsequent System	None
Integrity Impact to the Subsequent System	None
Availability Impact to the Subsequent System	None

Impact

Possible information disclosure.

<http://10.136.108.108:3128/>

Verified

Request

```
GET / HTTP/1.1
Referer: http://10.136.108.108:3128/
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Encoding: gzip,deflate,br
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/125.0.0.0 Safari/537.36
Host: 10.136.108.108:3128
```

Recommendation

The site should send and receive data over a secure (HTTPS) connection.

A03 Injection

Injection flaws, such as SQL, NoSQL, OS, and LDAP injection, occur when untrusted data is sent to an interpreter as part of a command or query. The attacker's hostile data can trick the interpreter into executing unintended commands or accessing data without proper authorization.

No alerts in this category

A04 Insecure Design

Insecure design is a broad category representing different weaknesses, expressed as "missing or ineffective control design." Insecure design is not the source for all other Top 10 risk categories. There is a difference between insecure design and insecure implementation. We differentiate between design flaws and implementation defects for a reason, they have different root causes and remediation. A secure design can still have implementation defects leading to vulnerabilities that may be exploited. An insecure design cannot be fixed by a perfect implementation as by definition, needed security controls were never created to defend against specific attacks. One of the factors that contribute to insecure design is the lack of business risk profiling inherent in the software or system being developed, and thus the failure to determine what level of security design is required.

Permissions-Policy header not implemented

The Permissions-Policy header allows developers to selectively enable and disable use of various browser features and APIs.

CWE

CWE-1021

CVSS2

AV:N/AC:L/Au:N/C:N/I:N/A:N

Access Vector	Network
Access Complexity	Low
Authentication	None
Confidentiality	None
Integrity Impact	None
Availability Impact	None

CVSS3

CVSS:3.1/AV:N/AC:L/PR:N/UI:R/S:C/C:N/I:N/A:N

Base Score	0.0
Attack Vector	Network
Attack Complexity	Low
Privileges Required	None
User Interaction	Required
Scope	Changed
Confidentiality	None
Integrity Impact	None
Availability Impact	None

CVSS4

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

Base Score	0.0
Attack Vector	Network
Attack Complexity	Low
Attack Requirements	None
Privileges Required	None
User Interaction	Active
Confidentiality Impact to the Vulnerable System	None
Integrity Impact to the Vulnerable System	None
Availability Impact to the Vulnerable System	None
Confidentiality Impact to the Subsequent System	None
Integrity Impact to the Subsequent System	None
Availability Impact to the Subsequent System	None

Impact

<http://10.136.108.108:3128/>

Locations without Permissions-Policy header:

- http://10.136.108.108:3128/

Request

```

GET / HTTP/1.1
Referer: http://10.136.108.108:3128/
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Encoding: gzip,deflate,br
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/125.0.0.0 Safari/537.36
Host: 10.136.108.108:3128
Connection: Keep-alive

```

References

[Permissions-Policy / Feature-Policy \(MDN\)](#)

<https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/Feature-Policy>

[Permissions Policy \(W3C\)](#)

<https://www.w3.org/TR/permissions-policy-1/>

A05 Security Misconfiguration

Security misconfiguration is commonly a result of insecure default configurations, incomplete or ad hoc configurations, open cloud storage, misconfigured HTTP headers, and verbose error messages containing sensitive information. Not only must all operating systems, frameworks, libraries, and applications be securely configured, but they must be patched and upgraded in a timely fashion.

Permissions-Policy header not implemented

The Permissions-Policy header allows developers to selectively enable and disable use of various browser features and APIs.

CWE

CWE-1021

CVSS2

AV:N/AC:L/Au:N/C:N/I:N/A:N

Access Vector	Network
Access Complexity	Low
Authentication	None
Confidentiality	None
Integrity Impact	None
Availability Impact	None

CVSS3

CVSS:3.1/AV:N/AC:L/PR:N/UI:R/S:C/C:N/I:N/A:N

Base Score	0.0
Attack Vector	Network
Attack Complexity	Low
Privileges Required	None
User Interaction	Required
Scope	Changed
Confidentiality	None
Integrity Impact	None
Availability Impact	None

CVSS4

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

Base Score	0.0
Attack Vector	Network
Attack Complexity	Low
Attack Requirements	None
Privileges Required	None
User Interaction	Active
Confidentiality Impact to the Vulnerable System	None
Integrity Impact to the Vulnerable System	None
Availability Impact to the Vulnerable System	None
Confidentiality Impact to the Subsequent System	None
Integrity Impact to the Subsequent System	None
Availability Impact to the Subsequent System	None

Impact

<http://10.136.108.108:3128/>

Locations without Permissions-Policy header:

- <http://10.136.108.108:3128/>

Request

```

GET / HTTP/1.1
Referer: http://10.136.108.108:3128/
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Encoding: gzip,deflate,br
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/125.0.0.0 Safari/537.36

```

References

[Permissions-Policy / Feature-Policy \(MDN\)](#)

<https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/Feature-Policy>

[Permissions Policy \(W3C\)](#)

<https://www.w3.org/TR/permissions-policy-1/>

Insecure HTTP Usage

It was detected that your web application uses HTTP protocol, but doesn't automatically redirect users to HTTPS.

CWE

CWE-16

CVSS2

AV:N/AC:L/Au:N/C:N/I:N/A:N

Access Vector	Network
Access Complexity	Low
Authentication	None
Confidentiality	None
Integrity Impact	None
Availability Impact	None

CVSS3

CVSS:3.1/AV:N/AC:L/PR:N/UI:R/S:C/C:N/I:N/A:N

Base Score	0.0
Attack Vector	Network
Attack Complexity	Low
Privileges Required	None
User Interaction	Required
Scope	Changed
Confidentiality	None
Integrity Impact	None
Availability Impact	None

CVSS4

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

Base Score	0.0
Attack Vector	Network
Attack Complexity	Low
Attack Requirements	None
Privileges Required	None
User Interaction	Active
Confidentiality Impact to the Vulnerable System	None
Integrity Impact to the Vulnerable System	None
Availability Impact to the Vulnerable System	None
Confidentiality Impact to the Subsequent System	None
Integrity Impact to the Subsequent System	None
Availability Impact to the Subsequent System	None

Impact

In some circumstances, it could be used for a man-in-the-middle (MitM) attack

<http://10.136.108.108:3128/>

Request

```
GET / HTTP/1.1
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Encoding: gzip,deflate,br
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/125.0.0.0 Safari/537.36
Host: 10.136.108.108:3128
Connection: Keep-alive
```

Recommendation

It's recommended to implement best practices of HTTP Redirection into your web application. Consult web references for more information

References

[HTTP Redirections](#)

https://infosec.mozilla.org/guidelines/web_security#http-redirections

A06 Vulnerable and Outdated Components

Components, such as libraries, frameworks, and other software modules, almost always run with full privileges. If a vulnerable component is exploited, such an attack can facilitate serious data loss or server takeover. Applications using components with known vulnerabilities may undermine application defenses and enable a range of possible attacks and impacts.

No alerts in this category

A07 Identification and Authentication Failures

Application functions related to authentication and session management are often implemented incorrectly, allowing attackers to compromise passwords, keys, or session tokens, or to exploit other implementation flaws to assume other users' identities.

SSL/TLS Not Implemented

This scan target was connected to over an unencrypted connection. A potential attacker can intercept and modify data sent and received from this site.

CWE

CWE-319

CVSS2

AV:N/AC:M/Au:N/C:P/I:P/A:N

Access Vector	Network
Access Complexity	Medium
Authentication	None
Confidentiality	Partial
Integrity Impact	Partial
Availability Impact	None

CVSS3

CVSS:3.1/AV:N/AC:L/PR:N/UI:R:S:U/C:L/I:L/A:N

Base Score	5.4
Attack Vector	Network
Attack Complexity	Low
Privileges Required	None
User Interaction	Required
Scope	Unchanged
Confidentiality	Low
Integrity Impact	Low
Availability Impact	None

CVSS4

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

Base Score	5.1
Attack Vector	Network
Attack Complexity	Low
Attack Requirements	None
Privileges Required	None
User Interaction	Active
Confidentiality Impact to the Vulnerable System	Low
Integrity Impact to the Vulnerable System	Low
Availability Impact to the Vulnerable System	None
Confidentiality Impact to the Subsequent System	None
Integrity Impact to the Subsequent System	None
Availability Impact to the Subsequent System	None

Impact

Possible information disclosure.

<http://10.136.108.108:3128/>

Verified

Request

```
GET / HTTP/1.1
Referer: http://10.136.108.108:3128/
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Encoding: gzip,deflate,br
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/125.0.0.0 Safari/537.36
Host: 10.136.108.108:3128
Connection: Keep-alive
```

Recommendation

The site should send and receive data over a secure (HTTPS) connection.

A08 Software and Data Integrity Failures

Software and data integrity failures relate to code and infrastructure that does not protect against integrity violations. An example of this is where an application relies upon plugins, libraries, or modules from untrusted sources, repositories, and content delivery networks (CDNs). An insecure CI/CD pipeline can introduce the potential for unauthorized access, malicious code, or system compromise. Lastly, many applications now include auto-update functionality, where updates are downloaded without sufficient integrity verification and applied to the previously trusted application. Attackers could potentially upload their own updates to be distributed and run on all installations. Another example is where objects or data are encoded or serialized into a structure that an attacker can see and modify to be vulnerable to insecure deserialization.

No alerts in this category

A09 Security Logging and Monitoring Failures

Insufficient logging and monitoring, coupled with missing or ineffective integration with incident response, allows attackers to further attack systems, maintain persistence, pivot to more systems, and tamper, extract, or destroy data. Most breach studies show time to detect a breach is over 200 days, typically detected by external parties rather than internal processes or monitoring.

No alerts in this category

A10 Server-Side Request Forgery

SSRF flaws occur whenever a web application is fetching a remote resource without validating the user-supplied URL. It allows an attacker to coerce the application to send a crafted request to an unexpected destination, even when protected by a firewall, VPN, or another type of network access control list (ACL).

No alerts in this category

Coverage

 <http://10.136.108.108:3128>