

Application Name:	Altro Mutual
Version Number:	
Assessment Type	Dynamic Application Security Assessment
Report Published Date:	13/4/2026
Scheduling ID	

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## 1 Introduction and Background

Application security assessment was performed on Altro Mutual Online Banking Application. The assessment period was from 6 Apr'26 to 13 Apr'26.

The Altro Mutual application is a publicly accessible demo online banking platform used for security testing and training purposes. The application simulates real-world banking functionalities such as account management, fund transfers, user authentication, and customer interactions. The system processes user-related information such as account details, transaction data, login credentials, and feedback information.

## 2 Objective

- Verify the implementation of security controls within the application in alignment with OWASP Top 10 (2025) and industry best practices.
- Identify, prioritize, and document security vulnerabilities discovered during testing.
- Provide recommendations for remediation to improve the overall security posture of the application.

## 3 Approach

- Performed application reconnaissance and mapped available endpoints and functionalities.
- Conducted Dynamic Application Security Testing (DAST) on Altro Mutual hosted at <https://altro.testfire.net>.
- Utilized Burp Suite Community Edition for intercepting, modifying, and analyzing HTTP requests and responses.
- Performed manual vulnerability testing aligned with OWASP Top 10 (2025) categories.
- Tested for vulnerabilities such as Injection (XSS), Broken Access Control, CSRF, Security Misconfiguration, Business Logic Flaws, and Session Management issues.
- Analyzed findings based on severity and potential impact.
- Documented vulnerabilities along with proof of concept and remediation recommendations.

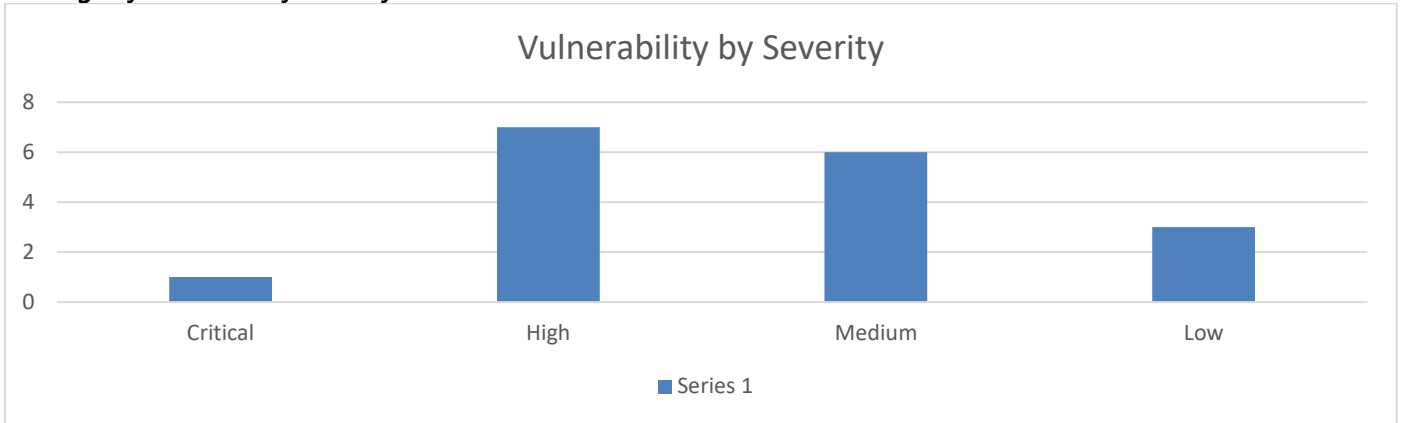
### Constraints:

- Testing was limited to Burp Suite Community Edition capabilities.
- No automated authenticated scanning tools (e.g., Burp Pro, WebInspect) were used.
- Testing was performed only on the publicly accessible demo environment.

**4 Executive Report**

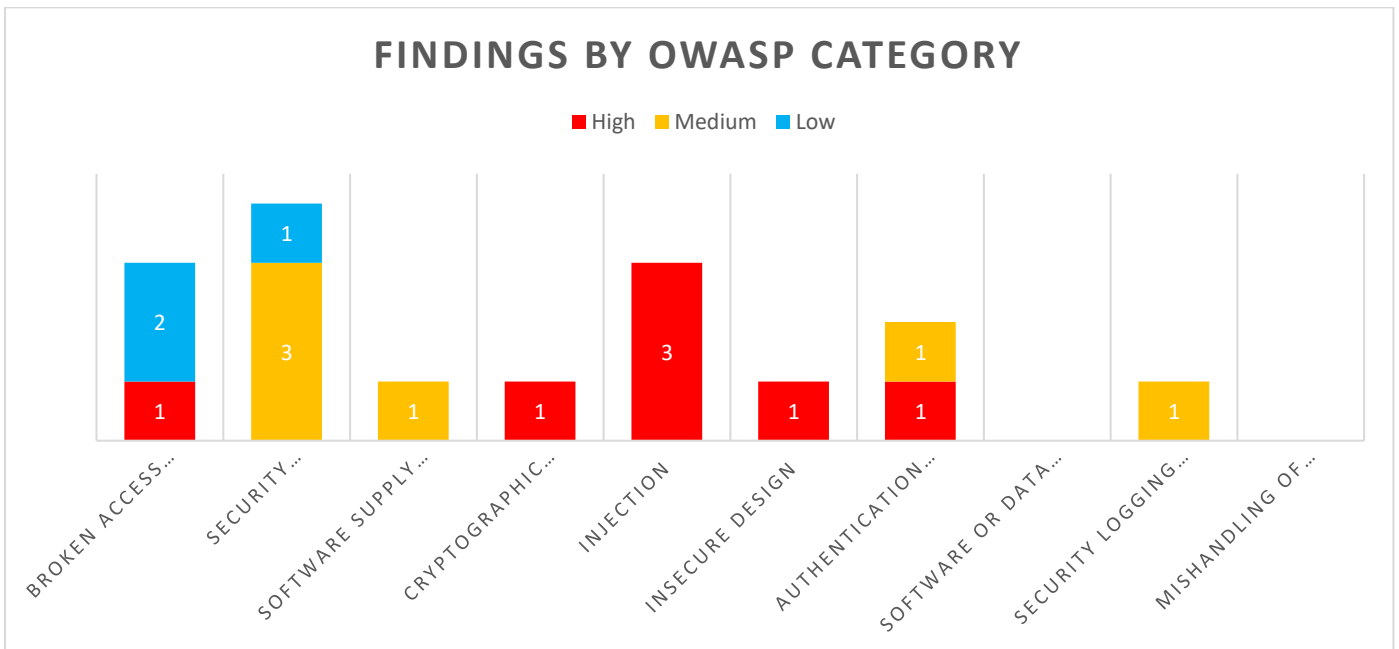
Executive summary of vulnerabilities identified during Dynamic Application Assessment of **ALTRO MUTUAL**

**Findings by Vulnerability Severity**



Absence of a bar chart represents there are no vulnerabilities for that severity level

**Findings by OWASP Category**



**List of Vulnerabilities**

The full list of findings can be found in the Technical Testing Results section below.

Sl. No.	eGRC Finding ID	Finding	Severity	# instances identified	Finding status	Target date for remediation
1		Broken Access Control	High	Web App		
2		Injection	Critical	Web App		
3		Cryptographic Failure	High	Web App		
4		Authentication Failures	High	Web App		
5		Insecure Design	High	Web App		
6		Injection	High	Web App		
7		Injection	High	Web App		
8		Security Misconfiguration	Medium	Web App		
9		Software Supply Chain Failures	Medium	Web App		
10		Security Logging and Monitoring Failures	Medium	Web App		

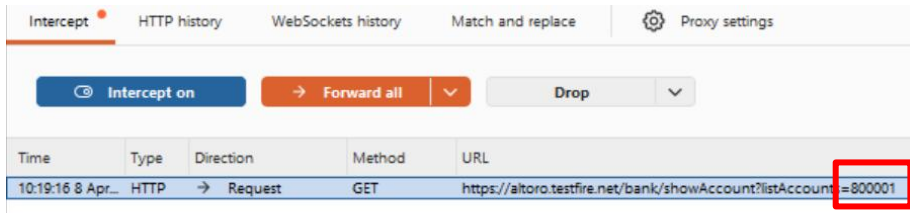
11		Security Misconfiguration	Medium	Web App		
12		Authentication Failures	Medium	Web App		
13		Security Misconfiguration	Medium	Web App		
14		Broken Access Control	Low	Web App		
15		Security Misconfiguration	Low	Web App		
16		Broken Access Control	Low	Web App		

## 5 Technical Testing Results

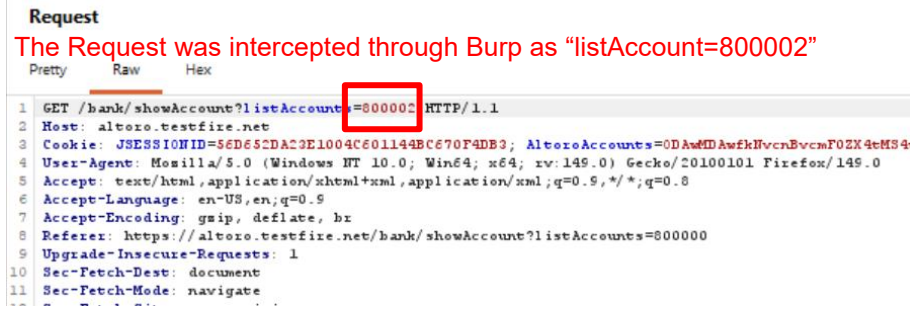
## 1. Broken Access Control Allowing Unauthorized Account Data Access

<b>Risk Rating</b>	High
<b>Category</b>	Broken Access Control
<b>Description</b>	<p>The application exposes a direct object reference via the parameter:  <code>/bank/showAccount?ListAccounts=800001</code></p> <p>By modifying the value to:  <code>ListAccounts=800002</code></p> <p>we were able to access another user's account data without authorization checks.</p>
<b>Impact</b>	<ul style="list-style-type: none"> <li>• Unauthorized access to other users' financial data</li> <li>• Exposure of sensitive information (balances, transactions)</li> <li>• Potential for fraud or account manipulation</li> <li>• Loss of confidentiality and integrity</li> <li>• Regulatory/legal consequences (especially for financial systems)</li> </ul> <p>In real-world scenarios, this could lead to:</p> <ul style="list-style-type: none"> <li>• Account takeover chaining</li> <li>• Data exfiltration at scale (enumerating account IDs)</li> </ul>
<b>Recommendation</b>	<ol style="list-style-type: none"> <li>1. Enforce Server-Side Authorization</li> <li>2. Use Indirect References</li> <li>3. Implement Access Control Checks Everywhere</li> <li>4. Add Monitoring &amp; Rate Limiting</li> <li>5. Security Testing</li> </ol>
<b>Finding Id</b>	
<b>Target Date</b>	
<b>Affected URLs</b>	

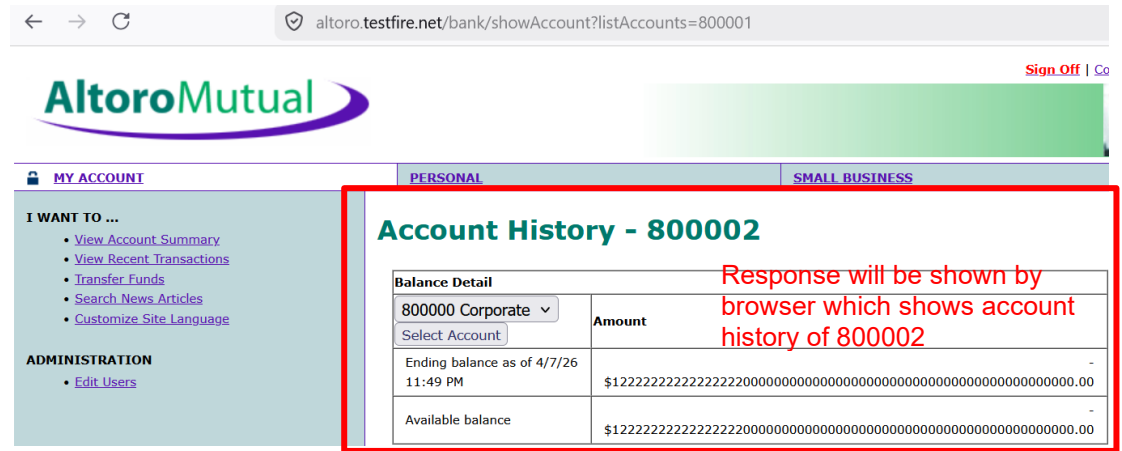
Evidences



The Request from client was "listAccount=800001"



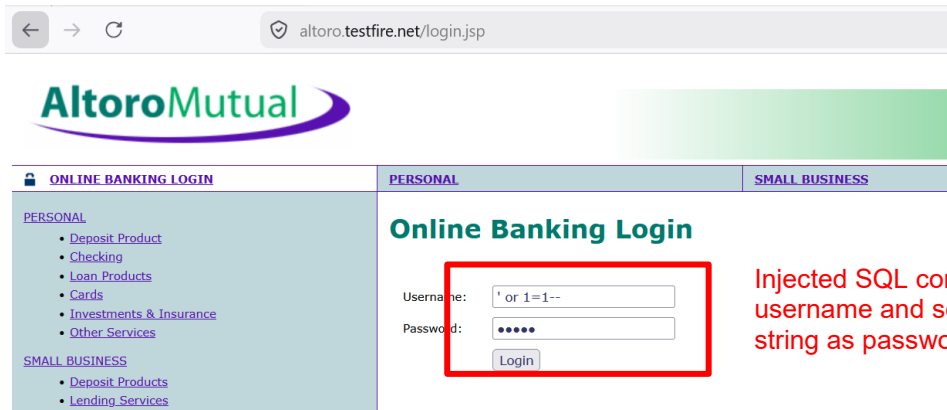
The Request was intercepted through Burp as "listAccount=800002"



Management response

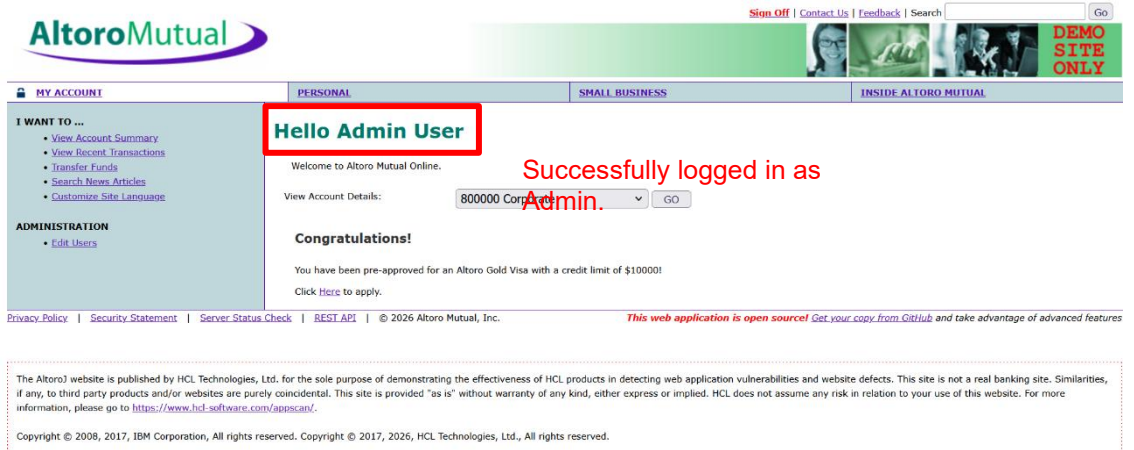
djaGDJGjfakj

## 2. SQL Injection in Login Endpoint Allowing Authentication Bypass

Risk Rating	Critical
Category	Injection
Description	<p>The application is vulnerable to SQL Injection in the login functionality (/doLogin endpoint). By injecting SQL payload into the username field:</p> <p>' or 1=1--</p> <p>The backend query logic is altered, causing the authentication check to always evaluate as true. This allows login without valid credentials.</p> <p>This occurs because:</p> <ul style="list-style-type: none"> <li>User input is directly embedded into SQL queries</li> <li>No input validation or parameterization is enforced</li> </ul>
Impact	<ul style="list-style-type: none"> <li>Authentication bypass (login without credentials)</li> <li>Full account takeover</li> <li>Unauthorized access to sensitive financial data</li> <li>Potential database compromise (depending on exploitation level)</li> <li>Data extraction, modification, or deletion</li> </ul> <p>In real-world scenarios, this can escalate to:</p> <ul style="list-style-type: none"> <li>Dumping entire user databases</li> <li>Privilege escalation (e.g., admin access)</li> </ul>
Recommendation	<ol style="list-style-type: none"> <li>Use Parameterized Queries (Prepared Statements)</li> <li>Input Validation &amp; Sanitization</li> <li>Use ORM / Safe Database Libraries</li> <li>Least Privilege Principle</li> <li>Implement Web Application Firewall (WAF)</li> <li>Error Handling</li> </ol>
Finding Id	
Target Date	
Affected URLs	
Evidences	 <p>The screenshot shows the Altoro Mutual Online Banking Login page. The URL in the browser is <code>altoro.testfire.net/login.jsp</code>. The page has a navigation menu with 'PERSONAL' and 'SMALL BUSINESS' tabs. The 'PERSONAL' tab is selected, and the 'Online Banking Login' form is visible. The 'Username' field contains the injected SQL command <code>' or 1=1--</code>, which is highlighted with a red box. The 'Password' field contains several dots. A 'Login' button is located below the password field. A red text annotation to the right of the form reads: 'Injected SQL command in username and some random as password.'</p>

```

Request
Pretty Raw Hex
1 POST /doLogin HTTP/1.1
2 Host: altroo.testfire.net
3 Cookie: JSESSIONID=38707C5EEA2F94C062DD6EF40A549849; AltroAc
  "0D AwMD AwfkHvcnBvcnF0ZX 4tMS 4wRTEwMDKw4MD AwMD F+Q2h1 Y2tpbmd+MS 4w
  Mnxw4MD AwMDU+Q2h1 Y2tpbmd+MS 4wRTMyfDgwMD AwHn.5TYX ZpbmdzfjU2MT AwL
  XJk f jIyMT IyLjk2fA=="
4 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:149.
5 Accept: text/html,application/xhtml+xml,application/xml;q=0.9
6 Accept-Language: en-US,en;q=0.9
7 Accept-Encoding: gzip, deflate, br
8 Content-Type: application/x-www-form-urlencoded
9 Content-Length: 46
10 Origin: https://altroo.testfire.net
11 Referer: https://altroo.testfire.net/login.jsp
12 Upgrade-Insecure-Requests: 1
13 Sec-Fetch-Dest: document
14 Sec-Fetch-Mode: navigate
15 Sec-Fetch-Site: same-origin
16 Sec-Fetch-User: ?1
17 Priority: u=0, i
18 Te: trailers
19 Connection: keep-alive
20
21 uid=%27+or+1%2D1--&passw=hkhks&btnSubmit=Login
    
```



Management response djaGDJGjfakj

### 3. Plaintext Transmission of Password in Authentication Request

Risk Rating High

Category Cryptographic Failures (Sensitive Data Exposure)

Description The application transmits user credentials (password) in **plaintext** within the HTTP request. From the captured request (via proxy), the password parameter is visible directly:  
password=admin

This indicates that:

- The password is **not encrypted or protected at the application layer**
- Sensitive data is exposed in transit and potentially in logs/intermediary systems.



#### 4. Unrestricted Login Attempts (Brute Force Vulnerability)

Risk Rating

High

Category

Authentication Failures

Description

The application does not implement any rate limiting or account lockout mechanism on the login functionality. An attacker can perform unlimited login attempts using automated tools such as Burp Suite Intruder.

This allows attackers to brute-force user credentials and gain unauthorized access.

Impact

- Account compromise
- Unauthorized access to sensitive user data
- Potential financial fraud (banking app context)
- Credential stuffing attacks possible

Recommendation

1. Implement **account lockout** after 5 failed attempts
2. Add **CAPTCHA** after repeated failures
3. Enforce **rate limiting** (e.g., max 5 requests/minute)
4. Implement **multi-factor authentication (MFA)**
5. Monitor and alert on suspicious login activity

Finding Id

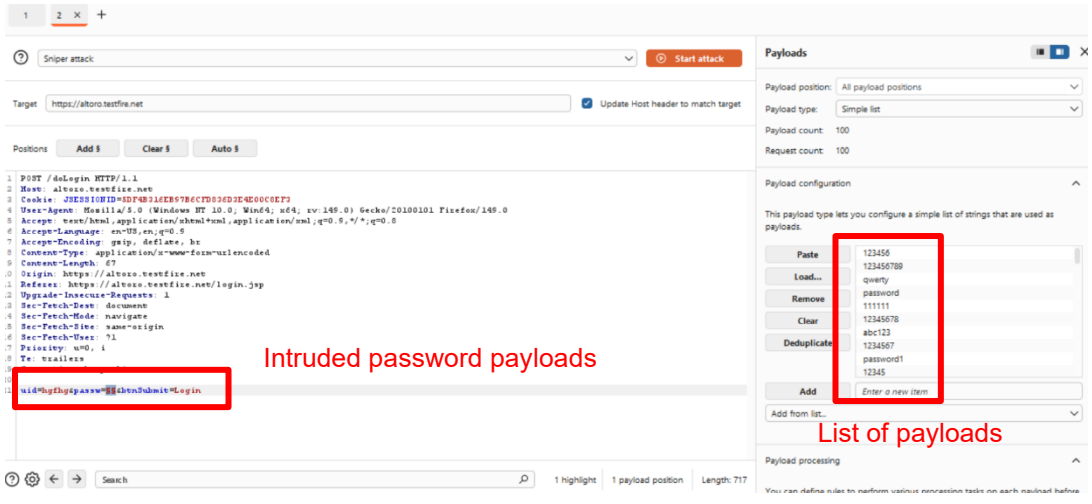
Target Date

Affected URLs

Evidences

Request ^	Payload	Status code	Response received	Error	Time
76	love	302	242		
77	abcd1234	302	242		
78	shadow	302	245		
79	football1	302	246		
80	love123	302	237		
81	superman	302	237		
82	jordan23	302	249		
83	jessica	302	252		
84	monkey1	302	246		
85	12qwaszx	302	245		
86	a12345	302	243		
87	baseball	302	243		
88	123456789a	302	244		
89	killer	302	247		
90	asdf	302	251		
91	samsung	302	237		
92	master	302	244		
93	azerty	302	241		
94	charlie	302	239		
95	asd123	302	241		
96	soccer	302	241		
97	0000766403	302	242		
98	88888888	302	246		
99	jordan	302	246		
100	michael1	302	238		

Burp Intruder attack executed with multiple payloads  
 All responses returned.  
 HTTP 302 (redirect)  
 No blocking or delay observed, No CAPTCHA or  
 account lockout triggered after repeated attempts



Management response  
djaGDJGjfakj

**5. Business Logic Flaw in Fund Transfer (Unauthorized Parameter Manipulation & Duplicate Transaction)**

Risk Rating **High**

Category Insecure Design

**Description** The fund transfer functionality does not properly validate user input or enforce business rules. By intercepting and modifying the request, an attacker can change critical parameters such as fromAccount, toAccount, and transferAmount. Additionally, the same transaction request can be replayed multiple times, resulting in duplicate processing of the transfer.

This indicates a lack of server-side validation and absence of controls to prevent transaction replay or duplicate submissions.

- Impact**
- Unauthorized transfer of funds between accounts
  - Manipulation of transaction amounts
  - Duplicate transactions leading to financial loss
  - Compromise of data integrity and trust in the system

- Recommendation**
1. Implement strict server-side validation for all transaction parameters
  2. Ensure users can only transfer funds from accounts they own
  3. Add transaction integrity controls (e.g., unique transaction IDs, anti-replay tokens)
  4. Prevent duplicate submissions using mechanisms like one-time tokens or request validation
  5. Enforce proper business rules (e.g., valid account pairing, positive amount checks)

Finding Id

Target Date

Affected URLs

Evidences

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**SMALL BUSINESS** **INSIDE ALTRO**

## Transfer Funds

From Account: 800000 Corporate

To Account: 800001 Checking

Amount to Transfer: 100

26 Altro Mutual, Inc. *This web application is open source! Get your copy from GitHub.*

Time	Type	Direction	Method	URL
11:17:44 10 Ap...	HTTP	→ Request	POST	https://altro.testfire.net/bank/doTransfer

### Request

Pretty Raw Hex

```

1 POST /bank/doTransfer HTTP/1.1
2 Host: altro.testfire.net
3 Cookie: JSESSIONID=42B0ED1202E93BDCE42867E082ECA6C7; AltroAccounts=
  "0DAwMDAwfkNvcnBvcnFOZX4tMS4wMTEkOTg0NTY3ODI3OTJFMjR0ODAwMDAwfkNoZW5raW5nfjEwMDEkMjE2
4 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:149.0) Gecko/20100101 Firefox/
5 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
6 Accept-Language: en-US,en;q=0.9
7 Accept-Encoding: gzip, deflate, br
8 Content-Type: application/x-www-form-urlencoded
9 Content-Length: 78
10 Origin: https://altro.testfire.net
11 Referer: https://altro.testfire.net/bank/transfer.jsp
12 Upgrade-Insecure-Requests: 1
13 Sec-Fetch-Dest: document
14 Sec-Fetch-Mode: navigate
15 Sec-Fetch-Site: same-origin
16 Sec-Fetch-User: ?1
17 Priority: u=0, i
18 Te: trailers
19 Connection: keep-alive
20
21 fromAccount=800000&toAccount=800005&transferAmount=100000&transfer=Transfer+Money
  
```

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**PERSONAL** **SMALL BUSINESS** **INSIDE ALTRO M**

## Transfer Funds

From Account: 800000 Corporate

To Account: 800000 Corporate

Amount to Transfer:

100000.0 was successfully transferred from Account 800000 into Account 800005 at 4/10/26 12:51 AM.

Management response  
djaGDJGjfakj

## 6. Reflected Cross-Site Scripting (XSS)

Risk Rating

High

Category

Injection

Description

The application is vulnerable to Reflected Cross-Site Scripting (XSS) due to improper validation and sanitization of user-supplied input. Malicious scripts injected into input fields are reflected in the response and executed in the user's browser.

For example, injecting:

```
<script>alert(1)</script>
```

in the query parameter successfully executes JavaScript, confirming the presence of XSS.

Impact

- Execution of arbitrary JavaScript in victim's browser
- Session hijacking via cookie theft
- Phishing attacks and user redirection
- Defacement of web pages
- Unauthorized actions performed on behalf of users

Recommendation

1. Implement proper input validation and output encoding
2. Use context-aware encoding (HTML, JavaScript, URL)
3. Apply Content Security Policy (CSP) headers
4. Sanitize all user inputs on both client and server side
5. Use secure frameworks/libraries that automatically escape output

Finding Id

Target Date

Affected URLs

Evidences



### Feedback

Our Frequently Asked Questions area will help you with many of your inquiries. If you can't find your question, return to this page and use the e-mail form below.

**IMPORTANT!** This feedback facility is not secure. Please do not send any account information in a message sent from here.

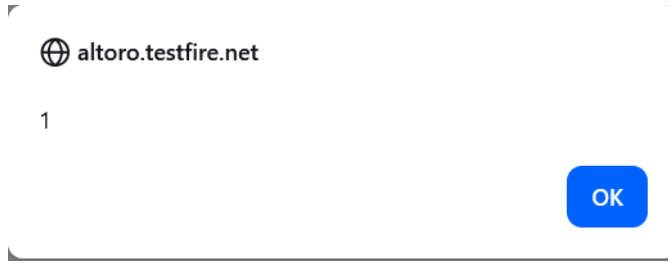
To: **Online Banking**

Your Name:

Your Email Address:

Subject:

Question/Comment:



**Management response** djaGDJGjfakj

**7. Reflected Cross-Site Scripting (XSS) via HTML Injection in content Parameter**

**Risk Rating**

High

**Category**

Injection

**Description**

The application is vulnerable to Reflected Cross-Site Scripting (XSS) through the content parameter in /index.jsp. User-supplied input is reflected in the HTTP response without proper sanitization or encoding, allowing HTML content to be injected and rendered in the browser. It was observed that crafted input containing HTML tags was successfully rendered as a clickable link in the response, confirming improper handling of user input.

**Impact**

- Attackers can inject malicious HTML content into web pages
- Enables phishing attacks by embedding deceptive links
- Can manipulate the user interface and mislead users
- May be escalated to full XSS (JavaScript execution)

**Recommendation**

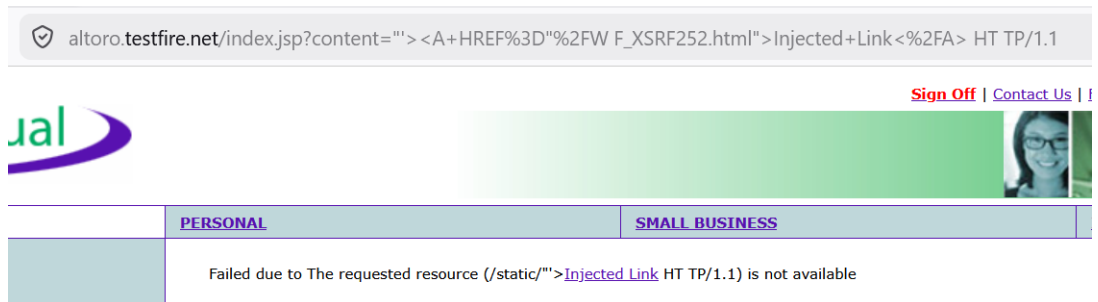
1. Implement proper input validation and sanitization
2. Apply context-aware output encoding (HTML encoding)
3. Use security controls such as Content Security Policy (CSP)
4. Avoid directly reflecting user input in responses without filtering

**Finding Id**

**Target Date**

**Affected URLs**

**Evidences**



Management response	djaGDJGjfakj
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### 8. Sensitive Information Disclosure via Verbose Error Message in content Parameter

Risk Rating	Medium
-------------	--------

Category	Security Misconfiguration
----------	---------------------------

Description	<p>The application exposes internal implementation details when invalid input is supplied to the content parameter:</p> <pre>/index.jsp?content=../WEB-INF/web.xml</pre> <p>Instead of returning a generic error, the application discloses:</p> <ul style="list-style-type: none"> <li>• Internal Java class names</li> <li>• Servlet mappings</li> <li>• Application structure</li> <li>• Framework details (e.g., GlassFish, IBM AppScan components)</li> </ul> <p>This indicates improper error handling and lack of secure configuration.</p>
-------------	--



Impact	<p>This vulnerability allows attackers to:</p> <ul style="list-style-type: none"> <li>• Map internal application architecture</li> <li>• Identify hidden endpoints such as: <ul style="list-style-type: none"> <li>○ /admin/addUser</li> <li>○ /admin/changePassword</li> <li>○ /doTransfer</li> </ul> </li> <li>• Discover backend technologies and frameworks</li> <li>• Perform <b>targeted attacks</b> (IDOR, SQLi, auth bypass, etc.)</li> </ul> <p>This significantly <b>reduces attack complexity</b> and helps chain further exploits.</p>
--------	--



Recommendation	<ol style="list-style-type: none"> <li>1. Disable Verbose Error Messages</li> <li>2. Implement Custom Error Pages</li> <li>3. Remove Sensitive Data from Responses</li> <li>4. Input Validation</li> <li>5. Restrict Access to Internal Resources</li> </ol>
----------------	--



Finding Id	
------------	--

Target Date	
-------------	--

Affected URLs	
---------------	--

Evidences

The screenshot shows the Burp Suite interface. At the top, there are buttons for 'Send', 'Cancel', and 'Burp AI'. Below that, the 'Request' tab is active, showing a 'Pretty' view of an HTTP GET request. A red box highlights the request line: `GET /index.jsp?content=../WEB-INF/web.xml HTTP/1.1`. A red annotation above this line reads: "Intercepting request with ../WEB-INF/web.xml which contains important information of the website." Below the request, various headers are listed, including Host, Cookie, User-Agent, Accept, Accept-Language, Accept-Encoding, Upgrade-Insecure-Requests, Sec-Fetch-Dest, Sec-Fetch-Mode, Sec-Fetch-Site, Sec-Fetch-User, Priority, Te, and Connection.

The 'Render' tab is also visible, showing a list of classes and methods from the response. The response is a 404 Not Found page. The rendered content includes a navigation menu with categories like PERSONAL, SMALL BUSINESS, and INSIDE ALTORO, each with sub-links for Deposit, Product, Checking, Loan, Products, Cards, Investments & Insurance, and Other Services. The right side of the render view shows a stack of Java classes and methods, such as `com.ibm.security.appscan.altoromutual.listener.StartupListener`, `AuthFilter AuthFilter`, `AdminFilter AdminFilter`, `org.glassfish.jersey.servlet.ServletContainer`, `javax.ws.rs.Application`, `com.ibm.security.appscan.altoromutual.api.AltoroAPI 1 RedirectServlet`, `RedirectServlet`, `LoginServlet LoginServlet`, `AccountViewServlet AccountViewServlet`, `TransferServlet TransferServlet`, `CCApplyServlet CCApplyServlet`, `SubscribeServlet SubscribeServlet`, and `FeedbackServlet FeedbackServlet`.

Management response djaGDJGjfakj

9. Use of Outdated Apache Tomcat (Apache-Coyote/1.1) with Known CVE Vulnerabilities

Risk Rating

Medium

Category

Software Supply Chain Failures

Description

The application discloses the use of Apache-Coyote/1.1, which is the HTTP connector used by Apache Tomcat. This indicates that the backend server is running a version of Apache Tomcat that may be outdated or unpatched, potentially exposing the application to publicly known vulnerabilities (CVEs).

Server identification is typically observed in HTTP response headers such as:

Server: Apache-Coyote/1.1

Outdated versions of Apache Tomcat are associated with multiple critical vulnerabilities, including but not limited to:

- Remote Code Execution (RCE)
- Information Disclosure
- Authentication bypass
- Denial of Service (DoS)

The application exposes numerous internal and administrative endpoints that are accessible or discoverable by unauthenticated or low-privileged users.

---

**Impact**

- Remote Code Execution (RCE)
- Sensitive file disclosure
- Server compromise
- Unauthorized access to internal resources
- Full takeover of application server

---

**Recommendation**

1. Upgrade Server
2. Remove Version Disclosure
3. Disable Unused Services
4. Regular Vulnerability Management

---

**Finding Id**

---

**Target Date**

---

**Affected URLs**

---

**Evidences**

CVE-2005-2090

Jakarta Tomcat 5.0.19 (Coyote/1.1) and Tomcat 4.1.24 (Coyote/1.0) allows remote attackers to poison the web cache, bypass web application firewall protection, and conduct XSS attacks via an HTTP request with both a "Transfer-Encoding: chunked" header and a Content-Length header, which causes Tomcat to incorrectly handle and forward the body of the request in a way that causes the receiving server to process it as a separate HTTP request, aka "HTTP Request Smuggling."

<https://nvd.nist.gov/vuln/detail/cve-2005-2090>

---

**Management response**

djaGDJGjfakj

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**10. Insufficient Logging and Monitoring of Authentication Attempts****Risk Rating****Medium****Category**

Security Logging and Monitoring Failures

**Description**

The application fails to implement adequate logging and monitoring mechanisms for authentication activities. Multiple failed login attempts can be performed without triggering any alerts, account lockout, or defensive response. This indicates that login attempts are either not properly logged or not actively monitored, allowing malicious activities to go undetected.

**Impact**

- Attackers can perform brute-force or credential stuffing attacks without detection
- Delayed or no response to ongoing attacks
- Increased risk of account compromise
- Lack of forensic data for incident investigation

**Recommendation**

1. Implement detailed logging for all authentication attempts (successful and failed)
2. Configure real-time monitoring and alerting for suspicious activities (e.g., multiple failed logins)
3. Integrate SIEM solutions for centralized monitoring.
4. Establish thresholds for triggering alerts and automated responses.
5. Regularly review logs and conduct security audits.

**Finding Id****Target Date****Affected URLs****Evidences**

Request ^	Payload	Status code	Response received	Error	Timeout	Lengt
76	love	302	242			126
77	abcd1234	302	242			126
78	shadow	302	245			126
79	football1	302	246			126
80	love123	302	237			126
81	superman	302	237			126
82	jordan23	302	249			126
83	jessica	302	252			126
84	monkey1	302	246			126
85	12qwazsx	302	245			126
86	a12345	302	243			126
87	baseball	302	243			126
88	123456789a	302	244			126
89	killer	302	247			126
90	asdf	302	251			126
91	samsung	302	237			126
92	master	302	244			126
93	azerty	302	241			126
94	charlie	302	239			126
95	asd123	302	241			126
96	soccer	302	241			126
97	FQRG7CS493	302	242			126
98	88888888	302	246			126
99	jordan	302	246			126
100	michael1	302	238			126

Management response  
djaGDJGjfakj

### 11. Multiple Sensitive Open Ports Exposing Internal Services

Risk Rating

Medium

Category

Security Misconfiguration

Description

The application server exposes multiple network ports (21, 22, 25, 80, 443, 8080, 8443, 3306) that are accessible externally. Several of these ports correspond to sensitive services such as FTP (21), SSH (22), SMTP (25), Tomcat/Web services (8080, 8443), and MySQL database (3306).

These services are exposed without proper access restrictions, increasing the attack surface and indicating improper server hardening and configuration.

Impact

- Unauthorized access to critical services (FTP, SSH, Database)
- Potential database compromise via exposed MySQL port
- Exposure of administrative interfaces (e.g., Tomcat on 8080/8443)
- Increased risk of brute-force and service-specific attacks
- Higher likelihood of exploitation of known vulnerabilities

Recommendation

1. Close all unnecessary and unused ports
2. Restrict access to sensitive services using firewall rules (IP allowlisting)
3. Disable publicly accessible database services (e.g., MySQL)
4. Secure administrative interfaces behind authentication and VPN
5. Regularly perform port scanning and service audits
6. Follow secure server hardening best practices

Finding Id

Target Date

Affected URLs

Evidences

#### ➔ Found 3 open ports (1 host)

65.61.137.117			
Port Number	Protocol	State	Service Name
80	TCP	open	http
443	TCP	open	https?
8080	TCP	open	http

Management response  
djaGDJGjfakj

### 12. Weak Session Management – Session ID Not Invalidated After Logout

Risk Rating	Medium
Category	Authentication Failures
Description	The application does not properly invalidate user sessions upon logout. It was observed that the same session identifier (JSESSIONID) remains valid even after the user logs out and logs back in. This indicates that session tokens are not being regenerated or invalidated, allowing reuse of existing sessions.
Impact	<ul style="list-style-type: none"> <li>• Session fixation attacks may be possible</li> <li>• Unauthorized users can reuse old session IDs to gain access</li> <li>• Increased risk of account compromise if session tokens are exposed</li> <li>• Users may remain authenticated unintentionally</li> </ul>
Recommendation	<ol style="list-style-type: none"> <li>1. Invalidate session tokens immediately upon logout</li> <li>2. Generate a new session ID upon successful login</li> <li>3. Implement proper session lifecycle management</li> <li>4. Use secure cookie attributes such as HttpOnly and Secure</li> <li>5. Set appropriate session timeout and expiration policies</li> </ol>

Finding Id

Target Date

Affected URLs

Evidences

```

Pretty    Raw    Hex
-----
1 | POST /doLogin HTTP/1.1
2 | Host: altro.testfire.net
3 | Cookie: JSESSIONID=512C2F5E1E5B118572F3F4C05ABD663E;
4 | User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64;

```

```

Pretty    Raw    Hex
-----
1 | GET /bank/main.jsp HTTP/1.1
2 | Host: altro.testfire.net
3 | Cookie: JSESSIONID=512C2F5E1E5B118572F3F4C05ABD663E; A1
4 | User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; r

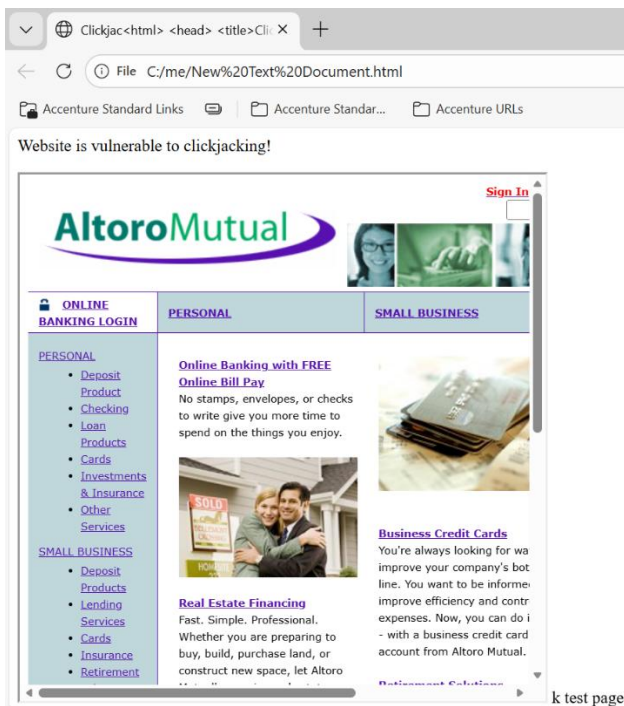
```

Management response  
djaGDJGjfakj

13. Clickjacking Vulnerability due to Missing Frame Protection

<b>Risk Rating</b>	<b>Medium</b>
<b>Category</b>	Security Misconfiguration
<b>Description</b>	The application is vulnerable to Clickjacking as it allows its pages to be embedded within an <iframe> on an external domain. This occurs due to the absence of appropriate security headers such as X-Frame-Options or Content-Security-Policy. A proof-of-concept HTML page was created that embeds the application inside an iframe, successfully loading the target page. This confirms that the application does not restrict framing and is susceptible to UI redressing attacks.
<b>Impact</b>	<ul style="list-style-type: none"> <li>• Attackers can trick users into clicking hidden or disguised elements</li> <li>• Unauthorized actions can be performed on behalf of the user</li> <li>• Potential compromise of sensitive operations (e.g., fund transfers)</li> <li>• Increased risk of phishing and social engineering attacks</li> </ul>
<b>Recommendation</b>	<ol style="list-style-type: none"> <li>1. Implement X-Frame-Options header with values DENY or SAMEORIGIN</li> <li>2. Use Content-Security-Policy with frame-ancestors 'none' or trusted domains only.</li> <li>3. Ensure all sensitive pages are protected against framing</li> <li>4. Perform regular security header audits</li> </ol>
<b>Finding Id</b>	
<b>Target Date</b>	
<b>Affected URLs</b>	

Evidences



```

Payload:
<html>
<head>
<title>Clickjac</title>
</head>
<body>
<p>Website is vulnerable to clickjacking!</p>
<iframe src="http://testfire.net/" width="500"
height="500"> </iframe>
</body>
</html>

```

**Management response** djaGDJGjfakj

#### 14. Open Redirect via URL Parameter

**Risk Rating**

Low

**Category**

Broken Access Control

**Description**

The application accepts a user-controlled url parameter (e.g., /bank/customize.jsp?url=...) and reflects or processes it without proper validation. This allows an attacker to manipulate the parameter and redirect users to unintended or potentially malicious destinations. The observed behavior shows that injected values are processed and displayed, indicating insufficient validation or sanitization of redirect inputs.

**Impact**

Attackers can craft malicious links that appear to originate from a trusted domain, leading users to phishing sites or malicious content. This can result in credential theft, session hijacking, or malware distribution. It also damages user trust in the application.

**Recommendation**

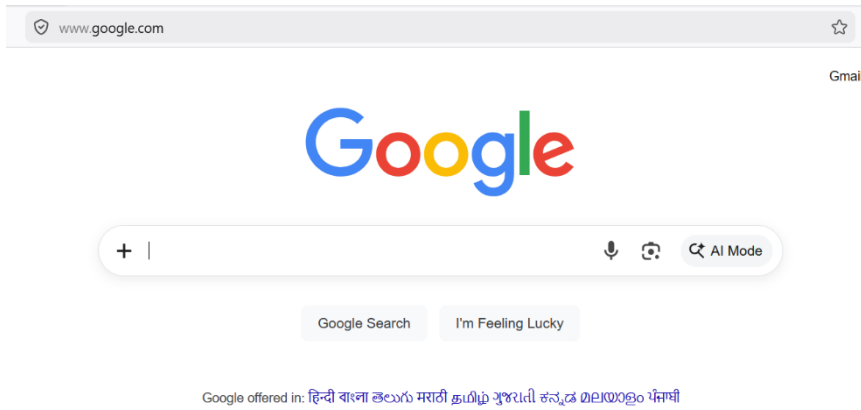
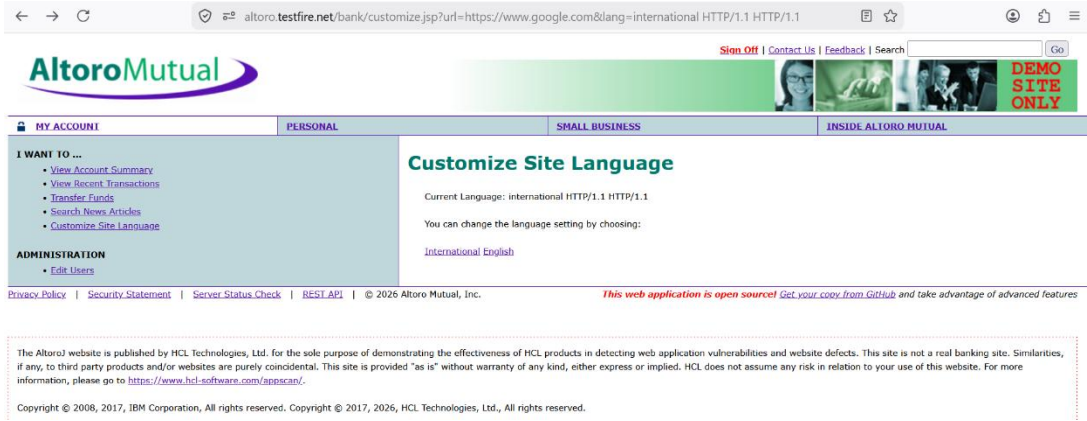
Validate and restrict redirect URLs to a predefined allowlist of trusted domains. Avoid directly using user-supplied input for redirection. Implement proper input validation and encode output where necessary. Additionally, use indirect references (e.g., mapping IDs to URLs) instead of exposing raw URLs in parameters.

**Finding Id**

**Target Date**

**Affected URLs**

Evidences



Management response

djaGDJGjfakj

15. Cross-Site Request Forgery (CSRF) in Login Functionality

Risk Rating

Low

Category

Broken Access Control

Description

The application is vulnerable to Cross-Site Request Forgery (CSRF) in the /doLogin endpoint. The login request does not include any anti-CSRF token or additional validation mechanism to verify the authenticity of the request. As a result, an attacker can craft a malicious request that forces a victim’s browser to perform unintended login actions without their consent.

Impact

- Attackers can force users to log in as a different account (Login CSRF)
- May lead to session confusion or misuse of application functionality
- Can be used as a stepping stone for further attacks such as phishing

Recommendation

1. Implement anti-CSRF tokens for all state-changing requests
2. Validate CSRF tokens on the server side
3. Use SameSite cookie attributes (Strict or Lax)
4. Require re-authentication or additional verification for sensitive actions

Finding Id

Target Date

Affected URLs

Evidences

```

Pretty Raw Hex
1 POST /doLogin HTTP/1.1
2 Host: altro.testfire.net
3 Cookie: JSESSIONID=512C2F5E1E5B118572F3F4C05ABD663E; AltroAccounts="0DAwMDAwfkHvcnEvcnFO2X4
4 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:149.0) Gecko/20100101 Firefox/149.0
5 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
6 Accept-Language: en-US,en;q=0.9
7 Accept-Encoding: gzip, deflate, br
8 Content-Type: application/x-www-form-urlencoded
9 Content-Length: 37
10 Origin: https://altro.testfire.net
11 Referer: https://altro.testfire.net/login.jsp
12 Upgrade-Insecure-Requests: 1
13 Sec-Fetch-Dest: document
14 Sec-Fetch-Mode: navigate
15 Sec-Fetch-Site: same-origin
16 Sec-Fetch-User: ?1
17 Priority: u=0, i
18 Te: trailers
19 Connection: keep-alive
20
21 uid=admin&pass=admin&btnSubmit=Login
    
```

Management response  
djaGDJGjfakj

**16. Missing Security Headers Leading to Increased Attack Surface**

Risk Rating **Low**

Category Security Misconfiguration

Description The application is missing several important HTTP security headers that help protect against common web attacks.  
From the scan results:

- Missing **Strict-Transport-Security (HSTS)**
- Missing **Content-Security-Policy (CSP)**
- Missing **X-Content-Type-Options**

These headers are essential for enforcing browser-side security controls. Their absence increases the risk of exploitation through client-side attacks.

Impact

- Increased risk of **Man-in-the-Middle (MITM)** attacks (no HSTS)
- Exposure to **Cross-Site Scripting (XSS)** (no CSP)
- MIME sniffing attacks (no X-Content-Type-Options)
- Overall weaker browser-side security posture

While not directly exploitable alone, these significantly **amplify other attacks**.

Recommendation

- Implement Security Headers

Strict-Transport-Security: max-age=31536000; includeSubDomains  
Content-Security-Policy: default-src 'self'  
X-Content-Type-Options: nosniff

Finding Id

Target Date

---

## Affected URLs

---

### Evidences

```
- Nikto v2.6.0
-----
+ Your Nikto installation is out of date.
+ Target IP:      65.61.137.117
+ Target Hostname: altoro.testfire.net
+ Target Port:    80
+ Platform:      Unknown
+ Start Time:    2026-04-08 01:18:51 (GMT-4)
-----
+ Server: Apache-Coyote/1.1
+ No CGI Directories found (use '-C all' to force check all possible dirs) CGI tests skipped.
+ [013587] /: Suggested security header missing: referrer-policy. See: https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/Ref
+ [013587] /: Suggested security header missing: strict-transport-security. See: https://developer.mozilla.org/en-US/docs/Web/HTTP/H
+ [013587] /: Suggested security header missing: content-security-policy. See: https://developer.mozilla.org/en-US/docs/Web/HTTP/CSP
+ [013587] /: Suggested security header missing: x-content-type-options. See: https://developer.mozilla.org/en-US/docs/Web/HTTP/Head
+ [013587] /: Suggested security header missing: permissions-policy. See: https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/
+ [999967] /: Web Server returns a valid response with junk HTTP methods which may cause false positives.
+ Scan terminated: 0 errors and 6 items reported on the remote host
+ End Time:      2026-04-08 01:19:55 (GMT-4) (64 seconds)
-----
```

---

### Management response

djaGDJGjfakj

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**6 Next Steps**

Findings will have to be remediated within the Accenture Security remediation timelines. The BU security officer would ensure remediation as per the agreed timelines. Accenture Security will document and track the progress within the Archer [eGRC](#) system.

**7 Vulnerability Remediation Timeline**

The below remediation timeline is according to Accenture Security Standards.

Severity Level	Severity Description
Critical/High	The exploitation of a "Critical/High" vulnerability could cause a significant damage to the functionality of underlying system coupled with substantial data loss/exposure to an unauthorized user. Such findings must be fixed in less than 30 days.
Medium	Medium severity bugs allow attackers to read or modify limited amounts of information, or which are not harmful on their own but potentially harmful when combined with other bugs. Such findings must be fixed within 90 days.
Low	A vulnerability caused by unnecessary services or services providing information leakage which could be useful to an attacker to execute other more sophisticated attacks. Such findings must be fixed within 180 days.