SECURITY AUDIT REPORT API VULNERABILITY ASSESSMENT

Executive Summary

The security audit of the API endpoint **https://reqres.in/** was conducted to identify potential misconfigurations and information leaks. The assessment revealed that while the API has robust **Bot Mitigation** and **Clickjacking** protections in place, it suffers from Insecure **CORS policies and Infrastructure Leakage** that could be exploited in a targeted attack.

Technical Findings

Finding A: Insecure CORS Configuration (High Risk)

- **Observation:** The header Access-Control-Allow-Origin: http://localhost:5173 was identified.
- **Description:** The API explicitly trusts requests coming from a local development server (Vite default port).
- **Impact:** An attacker could host a malicious website that, if visited by a developer with a local server running on that port, could perform unauthorized actions or leak sensitive data via the developer's authenticated session.
- **Recommendation:** Remove localhost from the allowed origins in production. Use a strict allow-list of verified production domains.

Finding B: Infrastructure Information Leakage (Medium Risk)

- **Observation:** The header Via: 1.1 heroku-router was detected.
- **Description:** Although the service is behind Cloudflare, the Via header confirms that the underlying application is hosted on Heroku.
- **Impact:** This reduces the effort required for an attacker to perform "fingerprinting." They can now focus on Heroku-specific vulnerabilities or platform-specific bypasses.
- **Recommendation:** Configure the server or the Cloudflare WAF to strip the Via and X-Request-Id headers before the response reaches the client.

Finding C: Successful Bot Mitigation (Positive Finding)

- **Observation:** Attempting to automate requests via Postman triggered a **403 Forbidden** with **cf-mitigated: challenge.**
- **Description:** The Cloudflare WAF correctly identified the request as automated/non-browser traffic and issued a security challenge.
- **Impact:** This protects the API from large-scale scraping and automated brute-force attacks.

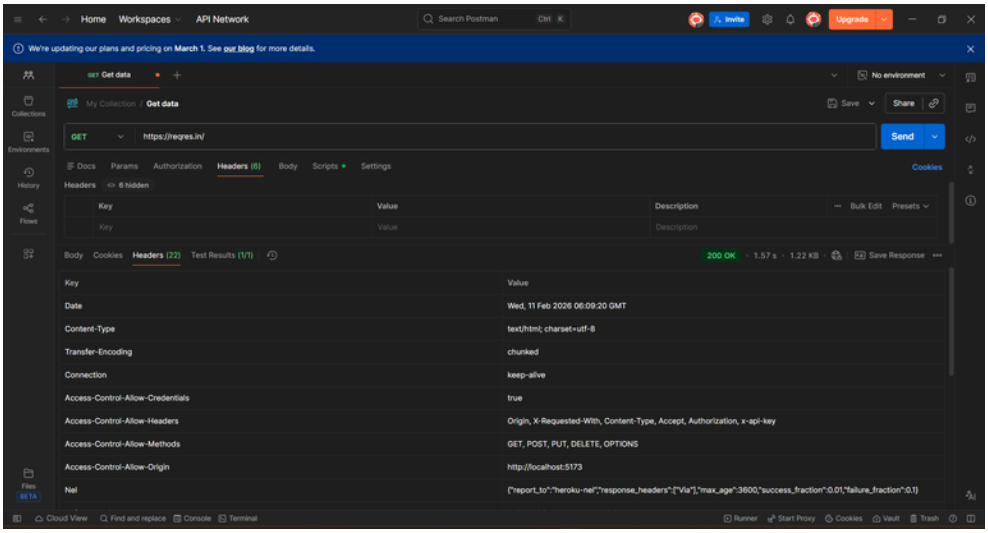
Evidence Summary Table

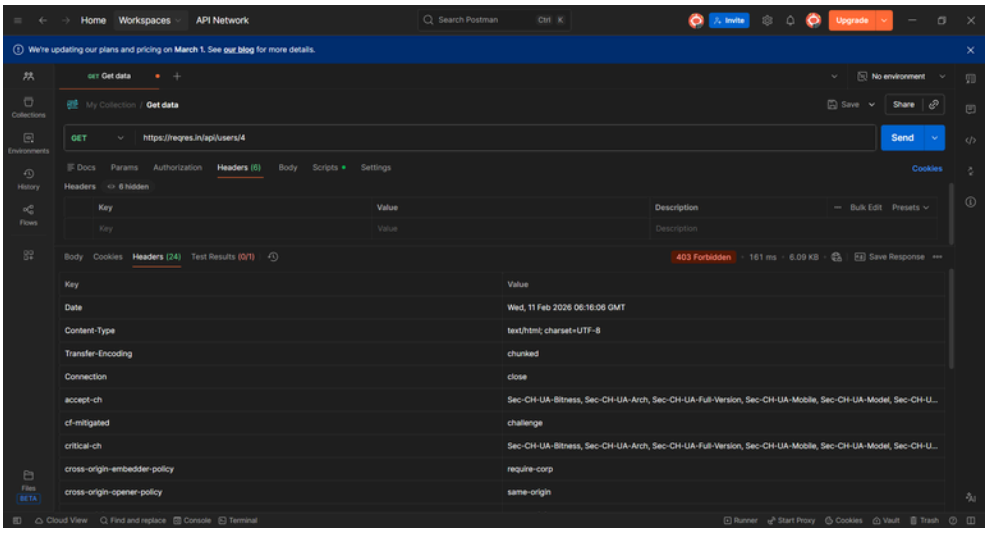
Header	Value / Result	Security Status
Access-Control-Allow-Origin	http://localhost:5173	❌ **Vulnerable**
Via	1.1 heroku-router	⚠️ **Information Leak**
X-Frame-Options	DENY / SAMEORIGIN	✅ **Secure**
X-Content-Type-Options	nosniff	✅ **Secure**
WAF Status	cf-mitigated: challenge	✅ **Active Defense**

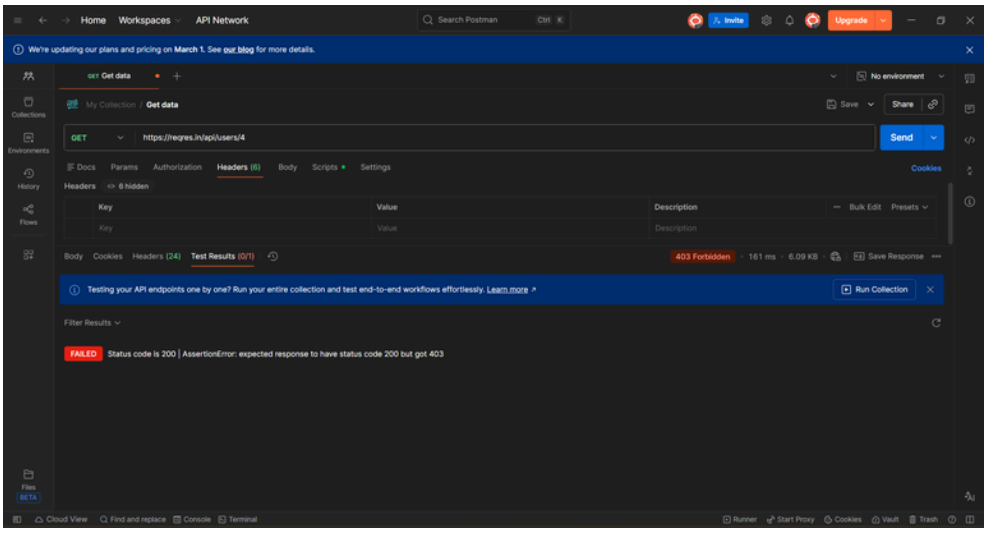
Final Recommendation

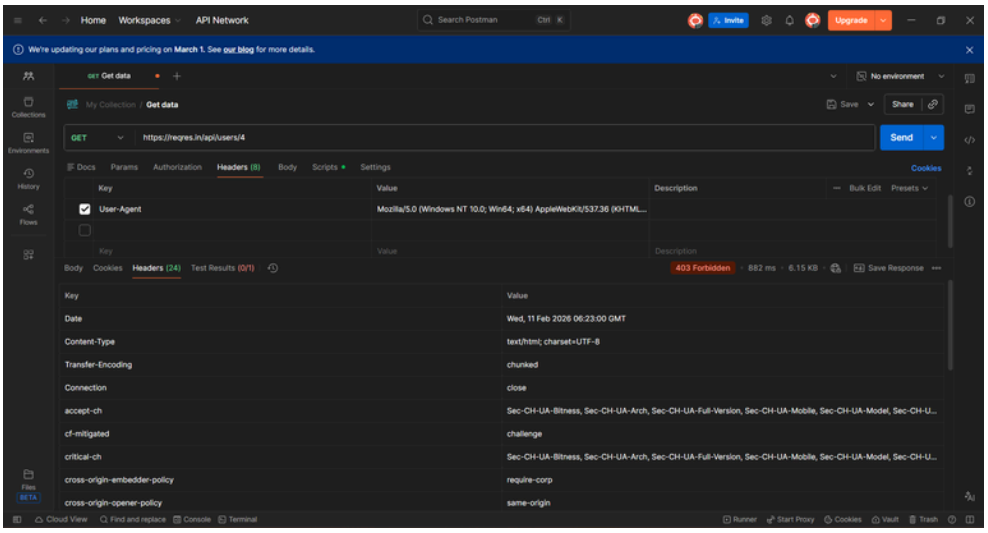
To complete the security hardening of this API, the development team should prioritize fixing the **CORS policy** and masking the backend infrastructure headers. The current **anti-bot** measures are performing as expected and should be maintained.

EVIDENCES






Home
Workspaces
API Network
Search Postman
Ctrl K
Invite
Upgrade
We're updating our plans and pricing on March 1. See our blog for more details.
GET Get data
No environment
My Collection / Get data
Save
Share
GET
https://reqres.in/api/users/4
Send
Docs
Params
Authorization
Headers (6)
Body
Scripts
Settings
Cookies
Headers 8 hidden
Key
Value
Description
Bulk Edit
Presets
Body
Cookies
Headers (24)
Test Results (0/1)
403 Forbidden
161 ms
6.09 KB
Save Response
Testing your API endpoints one by one? Run your entire collection and test end-to-end workflows effortlessly. Learn more
Run Collection
Filter Results
FAILED
Status code is 200 | AssertionError: expected response to have status code 200 but got 403
Collections
Environments
History
Flows
Files
BETA
Cloud View
Find and replace
Console
Terminal
Runner
Start Proxy
Cookies
Vault
Trash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https://reqres.in/api/users/4
Send
Docs
Params
Authorization
Headers (8)
Body
Scripts
Settings
Cookies
Key
Value
Description
Bulk Edit
Presets
User-Agent
Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML...
Body
Cookies
Headers (24)
Test Results (0/1)
403 Forbidden
882 ms
6.15 KB
Save Response
Key
Value
Date
Wed, 11 Feb 2026 06:23:00 GMT
Content-Type
text/html; charset=UTF-8
Transfer-Encoding
chunked
Connection
close
accept-ch
Sec-CH-UA-Bitness, Sec-CH-UA-Arch, Sec-CH-UA-Full-Version, Sec-CH-UA-Mobile, Sec-CH-UA-Model, Sec-CH-U...
cf-mitigated
challenge
critical-ch
Sec-CH-UA-Bitness, Sec-CH-UA-Arch, Sec-CH-UA-Full-Version, Sec-CH-UA-Mobile, Sec-CH-UA-Model, Sec-CH-U...
cross-origin-embedder-policy
require-corp
cross-origin-opener-policy
same-origin
Collections
Environments
History
Flows
Files
BETA
Cloud View
Find and replace
Console
Terminal
Runner
Start Proxy
Cookies
Vault
Trash