DATASHEET

# API Development

## Builld in Security, improve Productivity and Accelerate Time to Market

Key to secure API development is to make it easy for development teams to deliver security throughout the SDLC, without ever having to leave their preferred development environment. Enterprises are increasingly looking to empower their developers with the right tooling that allows them to build secure APIs while removing any potential security bottlenecks.

## Key Elements of Secure API Development

A crucial element of secure APIs is the development process where specifications are implemented in live APIs. Key considerations here are:

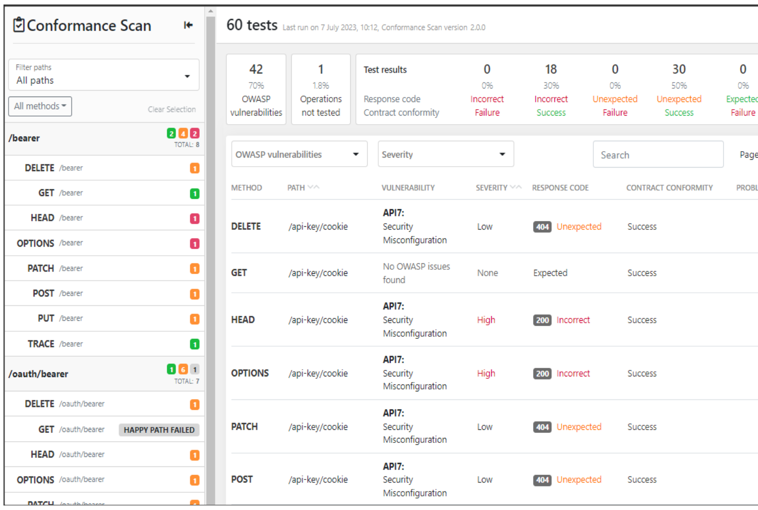
- Choice of languages, libraries, and frameworks
- Correct configuration of frameworks to ensure security best practice is followed
- Defensive coding — do not trust user input, handle all unexpected failures
- Use central points of enforcement of authentication and authorization – avoid 'spaghetti code'

## How 42Crunch Helps

42Crunch helps developers implement API security best practices where the rubber meets the road, namely inside their favorite IDEs. Our developer-friendly tooling allows the development teams to follow security best practices and avoid introducing vulnerabilities into APIs without having to leave their preferred development environments.

API Scan ensures compliance of the API against the original API contract and dynamically scans the API for security weaknesses. With 42Crunch your developers can spend less time fixing and more time innovating.

> 32% of firms admitted to only implementing API security standards in their production environment.
>
> **EMA Report: API security Debunking the Myths 2023**



Conformance Scan

Filter paths
All paths

All methods ▾ Clear Selection

| | | |
|---|---|---|
| **/bearer** | | 2 4 2<br>TOTAL: 8 |
| DELETE | /bearer | 1 |
| GET | /bearer | 1 |
| HEAD | /bearer | 1 |
| OPTIONS | /bearer | 1 |
| PATCH | /bearer | 1 |
| POST | /bearer | 1 |
| PUT | /bearer | 1 |
| TRACE | /bearer | 1 |
| **/oauth/bearer** | | 1 6 1<br>TOTAL: 7 |
| DELETE | /oauth/bearer | 1 |
| GET | /oauth/bearer | HAPPY PATH FAILED |
| HEAD | /oauth/bearer | 1 |
| OPTIONS | /oauth/bearer | 1 |

60 tests Last run on 7 July 2023, 10:12, Conformance Scan version 2.0.0

| 42<br>70%<br>OWASP vulnerabilities | 1<br>1.8%<br>Operations not tested | Test results<br>Response code<br>Contract conformity | 0<br>0%<br>Incorrect<br>Failure | 18<br>30%<br>Incorrect<br>Success | 0<br>0%<br>Unexpected<br>Failure | 30<br>50%<br>Unexpected<br>Success | 0<br>0%<br>Expected<br>Failure |
|---|---|---|---|---|---|---|---|

OWASP vulnerabilities ▾ Severity ▾ Search Page

| METHOD | PATH | VULNERABILITY | SEVERITY | RESPONSE CODE | CONTRACT CONFORMITY | PROBL |
|---|---|---|---|---|---|---|
| DELETE | /api-key/cookie | **API7:** Security Misconfiguration | Low | 404 Unexpected | Success | |
| GET | /api-key/cookie | No OWASP issues found | None | Expected | Success | |
| HEAD | /api-key/cookie | **API7:** Security Misconfiguration | High | 200 Incorrect | Success | |
| OPTIONS | /api-key/cookie | **API7:** Security Misconfiguration | High | 200 Incorrect | Success | |
| PATCH | /api-key/cookie | **API7:** Security Misconfiguration | Low | 404 Unexpected | Success | |
| POST | /api-key/cookie | **API7:** Security Misconfiguration | Low | 404 Unexpected | Success | |