TECHNICAL SOLUTION BRIEF

ENHANCING API SECURITY
with Cloudflare API Shield

42CRUNCH HAS THE UNIQUE CAPABILITY TO FEED TRULY SECURITY TESTED APIs INTO THE API SECURITY LIFECYCLE.

42Crunch implements a proactive approach to API security by certifying Swagger/ OAS files at design time. These files are used to build the security policies for Cloudflare, protecting APIs at runtime.

While API gateways have facilitated widespread API adoption, they've also led to an increase in API attacks - now the most common vector for data breaches of enterprise web applications.

Although the API gateway functionality in Cloudflare's API Shield offers useful features like mTLS, rate limiting and basic content verification, it's insufficient for comprehensive API protection. Complete protection requires an approach that offers security at every stage of the API lifecycle. To address this 42Crunch integrates with Cloudflare, offering robust security testing and governance policies. This ensures end-to-end API security, safeguarding organizations against a wide range of vulnerabilities and threats.

CLOUDFLARE API SHIELD

- Endpoint Detection and Management
- API Gateway
- JSON Web Tokens Validation
- mTLS activation
- JSON Schema Validation

DESIGN TIME SECURITY GOVERNANCE **42CRUNCH**

- Prevent OAS API Top 10 vulnerabilities in your API
- Increase the quality of JSON schemas to be used in Schema validation policies
- API Conformance testing at every step of the implementation
- Automatic API Security Testing as part of your CI/CD pipeline
- Improve your APISecOps
- Deliver security certified OAS files into your API Gateway Schema Validation

AUTOMATING API SECURITY WITH 42CRUNCH

Leveraging 42Crunch,Cloudflare API Shield users reduce manual tasks and automate security into the API workflow in order to get secure code quickly out the door and into production. Following the deployment patterns below, Confluence API Shield users can focus on enhancing API utilization and innovation. By leveraging the strengths of both 42Crunch and Cloudflare API Shield, you can achieve a comprehensive and robust security posture for your APIs, ensuring protection from a wide range of threats and vulnerabilities.

AUTOMATE YOUR SECURE API LIFECYCLE

CI/CD PIPELINE

API Design

Test and harden your OpenAPI Specification(OAS) for known (OWASP API Top 10) vulnerabilities and best practices.

API Implementation

Verify your API Implementation complies with the OpenAPI Specification and your own security policies.

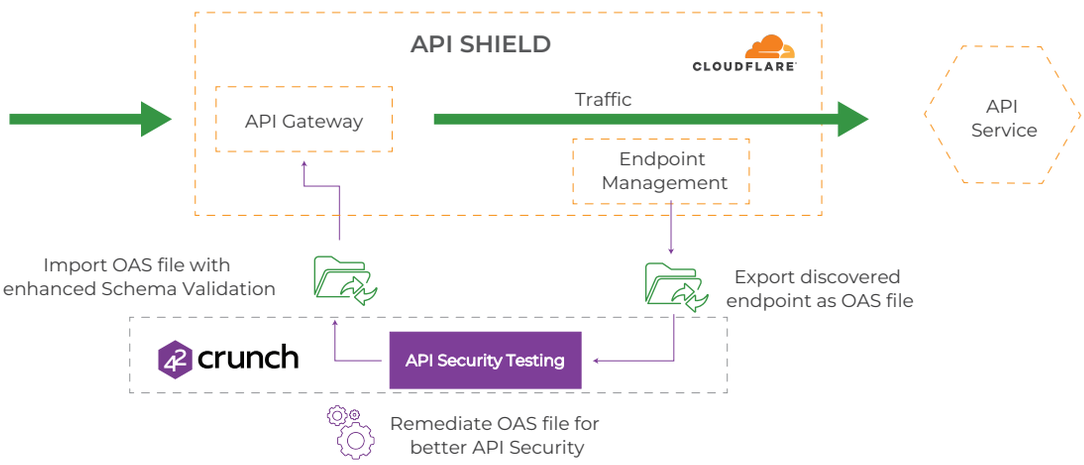
API Runtime Protection

Feed the secured OpenAPI Specification file into Cloudlfare API shield, enabling the API Gateway to protect your API calls.

HOW **42CRUNCH** ENHANCES THE **CLOUDFLARE API SHIELD**

Enhanced real-time protection with an improved OpenAPI Specification:

- Discover unmanaged Endpoints
- Export these endpoints as OAS file
- Run 42Crunch Audit and Scan for improved security posture
- Remediate possible vulnerabilities in the OAS
- Import improved OAS for greater real-time protection



Improved real-time protection with updated OpenAPI Specification:

- Find OAS file as part of the Development lifecycle
- Run 42Crunch Audit and Scan for improved security posture
- Remediate possible vulnerabilities in the OAS
- Import improved OAS for better real-time protection