

WAF security level and comparison

This report presents a **direct performance comparison** between SKUDONET's Web Application Firewall (WAF) and a Cloudflare WAF solution.

Using **gotestwaf**, a specialized security testing tool, we simulate real-world attacks to measure each WAF's ability to block threats and secure web applications.

What is gotestwaf, and How Does It Work?

gotestwaf is an advanced testing tool designed to simulate various types of web and API attacks. By mimicking common threats like SQL injections, cross-site scripting (XSS), and remote file inclusion (RFI), it evaluates the effectiveness of a WAF in real-time.

After testing, gotestwaf assigns a security rating based on the WAF's ability to detect and block these attacks, offering a clear, measurable comparison of security performance.

ENVIRONMENT Description of the Tests Overview

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Client (Testing Tool)

Tool Used: *gotestwaf*

Purpose: An API and WAF attack simulator used to test the effectiveness of each WAF solution against common threats.

Backend Environment

Simple web server with a "Hello World!" setup.

Controlled environment to simulate attacks and measure each WAF's response.

WAF Endpoints Tested

Both endpoints were configured with the respective WAF module to observe **performance under similar conditions.**

What This Report Checks

API and WEB Protection Level

This test measures each WAF's ability to protect API endpoints and web applications against simulated attacks.

Simulation Tool (gotestwaf)

Evaluates WAFs by simulating various API and web-based attacks, assigning a security rating based on the number of blocked attacks.

Tested WAF Configurations

SKUDONET: WAF module fully enabled.

Cloud WAF SaaS Leader: Pro plan with default security

configurations.

Types of Simulated Attacks

SQL Injection (SQLi): Manipulates database queries to extract or alter sensitive data.

Cross-Site Scripting (XSS): Injects malicious scripts into webpages viewed by users.

Remote File Inclusion (RFI): Loads external files with harmful code into the application.

Remote Code Execution (RCE): Executes code remotely on the server to gain control.

Local File Inclusion (LFI): Accesses sensitive local files on the server.

Session Fixation: Hijacks a user's session to gain unauthorized access.

Data Leakages (SQL, PHP, JAVA, etc.): Exposes sensitive data like credentials or personal information.

Tested WAF Configurations

SKUDONET

WAF default Configuration

Method enforcement scanner detection protocol enforcement protocol attack application attack LFI application attack RFI application attack RCE application attack PHP application attack Generic application attack XSS

application attack SQLi
application attack Session fixation
application attack JAVA
data leakages
data leakages SQL
data leakages JAVA
data leakages PHP
data Leakages IIS
web Shells protection

Cloudflare

Business Plan Activated with WAF

OWASP core Ruleset Leaked Credential checks Managed Rulesets

Up to 310 Cloud Rules 100 WAF Rules

Performance Comparison



Performance Comparison

Cloudflare Business gotestwaf result

Endpoint https://skudo-networks.com is configured with Cloud WAF SaaS Leader

Overall grade:



56.1 / 100

Project name: generic

URL: http://waf.skudo-networks.com/ Testing Date: 12 November 2024 GoTestWAF version: unknown

Test cases fingerprint: c4d9cb74807fac06bcf62e636f6d4e60
Used arguments:--url http://waf.skudo-networks.com/

SKUDONET gotestwaf result

Endpoint https://skudo-networks.com is configured with SKUDONET WAF module

Overall grade:

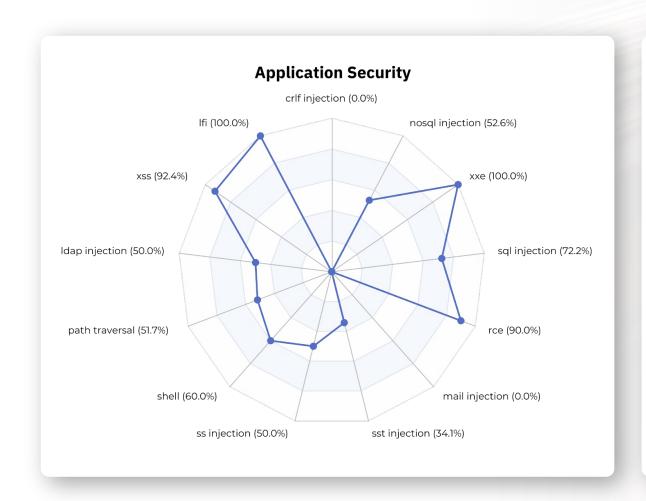


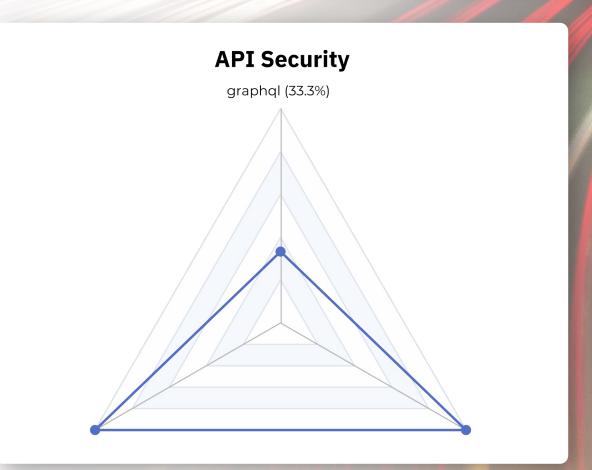
Project name : generic

URL: https://skudo-networks.com/ Testing Date: 14 October 2024 GoTestWAF version: unknown

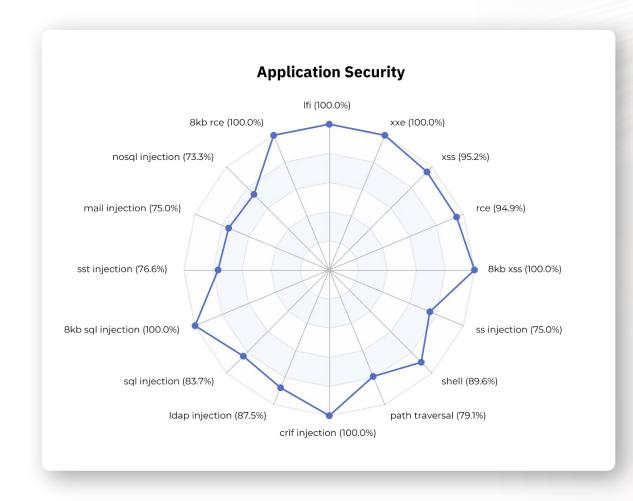
Test cases fingerprint: c4d9cb74807fac06bcf62e636f6d4e60
Used arguments: --url https://skudo-networks.com/

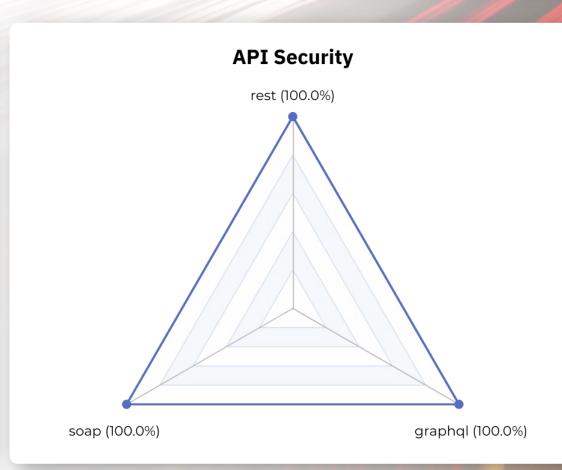
Cloudflare Business Gotestwaf Results





SKUDONET Gotestwaf Results





Performance Comparison

94.9/100

Security level for SKUDONET v10 WAF

- Grade A as protection level 94.9/100
- 100% protection on xss, sqli, crlt, xxe, rce and lfi attacks.
- 100% protection in APIs REST, Graphql and SOAP.

56.1/100

Security level for Cloudflare Business WAF

- Grade F protection level 56.1/100
- 100% protection on Ifi and xxe.
- 33% protection in APIs Graphql, no protection for SOAP and REST APIs.

COST COMPARISON

Price Analysis



SKUDONET

Standard Plan

€950

/node per year

- Unlimited SKUDONET security rules.
- Standard Plan: Software updates and upgrades, unlimited cases, and technical support via tickets.
- SKUDONET for SaaS: unlimited free host names.
- Include DDoS protection for the network layer (L3)

Cloudflare

Business Plan

€2400

/node per year

- Security Cloud rules: up to 310 rules.
- Business Support: incidents, chat, and community forums.
- Cloud for SaaS: <100 free host names.
- Does not include DDoS protection for the network layer (L3)



"An Application Delivery Controller made secure and easy to manage, ready to work in any Environment with capabilities compared with the market leader, a simple license model makes SKUDONET an alternative for Load Balancing and Cyber Security"



Thank You

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