



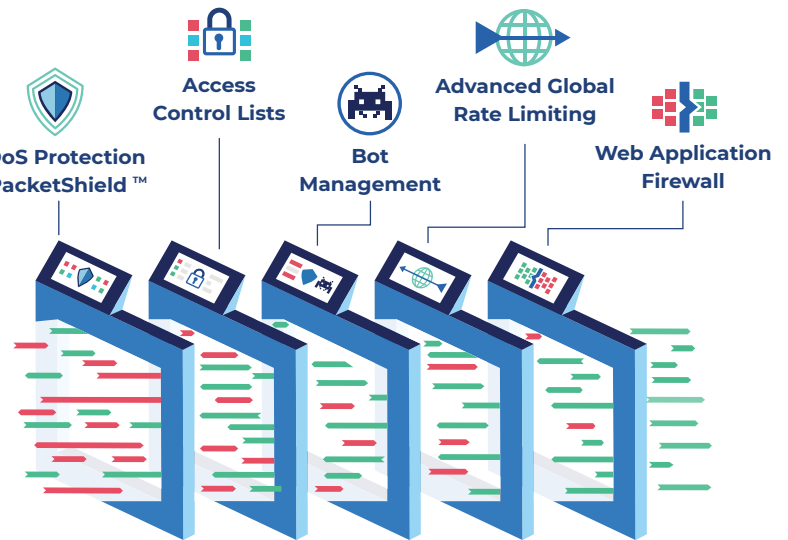
# High-Performance Security for Apps and APIs

Every application is different. Instead of a one-size-fits-all solution, HAProxy Enterprise provides customizable security layers that form the building blocks of application and API security. We give you the power to build deep, targeted, and scalable security adapted perfectly to your infrastructure.

## Harness Defense in Depth

A single line of defense will inevitably fail. Combine HAProxy Enterprise’s high-performance security layers to form an ironclad defense against a broad spectrum of threats.

Line-rate packet filtering, Access Control Lists (ACLs), client fingerprinting, realtime cluster-wide tracking, and our WAF work together to share intelligence and make fast, accurate decisions.

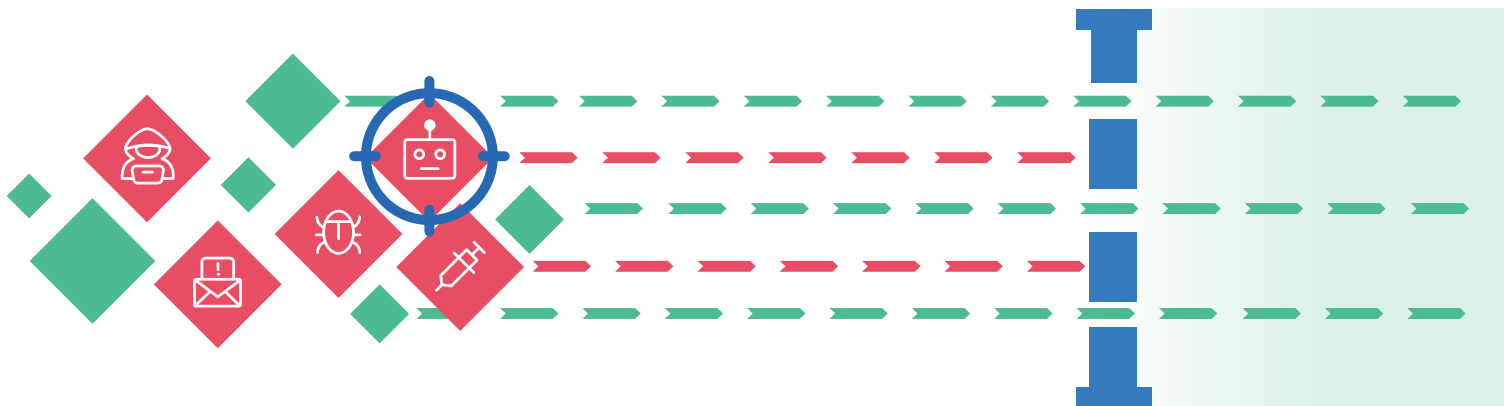


## Defeat Evolving Threats

From DDoS to fraud, automated bots threaten your business at massive scale. Wield the power of HAProxy’s sophisticated security layers to inspect, filter, and protect real-time network traffic. Efficiently detect and block your biggest threats—including the OWASP Top Ten.

## Implement Adaptable Security

Your traffic and threat profiles are unique. What looks normal for other businesses raises red flags for yours. HAProxy Enterprise lets you customize the security signals, weightings, and thresholds that determine responses at each layer. Make informed decisions about the attacks and anomalous activity affecting your systems.



# The Building Blocks of Application Security

Security incidents such as DDoS attacks, bot threats, and data theft cost companies millions in lost revenue. HAProxy's security capabilities leverage an extremely efficient, flexible, and dynamic code base—with a robust SSL stack, industry-leading ACL, and Stick Table tracking systems.

**HAProxy Enterprise** and **HAProxy Fusion** keep you ahead of today's threats by extending the core capabilities of HAProxy. These include cluster-wide, real-time behavioral analysis; content inspection; adaptive response policies; a high-performance WAF; and centralized security policy management, SSL certificates, and observability.

## Advanced ACLs and Tracking

### ► Flexible Access Control Lists (ACLs) Provide Matching Based on a Myriad of Options:

- IP / CIDR
- SSL Data
- Map File Support
- Logical Operator Support
- Request/Response Headers and Paths

### ► Realtime Cluster-wide Tracking:

- Generic Key-Value Storage
- Combine any Number of Metrics
- Real Time Tracking on any Number of Metrics:
  - Request/Error Rate and Counts
  - Unique Page Views per IP or User-Agent
  - Rate and Counts of Unique User-Agents per IP
  - Number of WAF Violations from an IP or User-Agent
  - And Much More

## DDoS and Bot Protection

### ► Detect and Protect against:

- GET/POST Floods
- Web Scraping
- Brute Forcing
- Vulnerability Scanning
- And Much More
- Advanced Fingerprinting

### ► Response Policies:

- Request Rate Limiting, Shadow Banning, Tarpitting, and Dropping
- Challenge/Response and reCAPTCHA Support



## Client Fingerprinting

- Identify bots and scanners immediately
- Triangulate data to form a unique ID
- Uncover clients that spoof HTTP headers

## Web Application Firewall

- High Performance
- Blacklist / Signature Support
- Whitelist Support
- ModSecurity Ruleset Support
- Detailed Logging
- Whitelist Only Mode

## SSL

- ECC/RSA
- OCSP Stapling
- Reduce Latency by Using OpenSSL Async Engine
- TLS Session Resumption
- Built-in Heartbleed Protection
- Zero Round Trip Time Resumption (0-RTT)

## Extra Capabilities

- HTTP Header Sanitization
- Response Body Injection
- IP Masking Support
- Lua Scripting Support
- Runtime API
- Dynamic Update Support