

# HAProxy Enterprise

## Software Load Balancer & Application Delivery Controller

HAProxy Enterprise combines HAProxy, the world's most widely used software load balancer and application delivery controller, with enterprise class features, services and premium support.

HAProxy Enterprise is a powerful product tailored to the goals, requirements and infrastructure of modern enterprises.



## Why choose HAProxy Enterprise?

### Robust and cutting-edge code base

HAProxy Enterprise combines the best of HAProxy Community stable and development versions. It provides a robust, reliable code base plus the latest cutting-edge features.

### Enterprise suite

Administration and security-focused modules, tools and scripts.

### Reliable performance

Proven reliability since 2000 and extreme performance based on innovative code optimizations.

### Versatility

HAProxy Enterprise runs in all environments, from bare metal, containers and virtual servers to on-premise data centers or public/private clouds. It integrates with popular DevOps and service discovery tools.

### Extensible features

Robust core code allows for the native delivery of a wealth of features based on powerful configuration language.

### Support

Full 24x7 support and 5-year maintenance guarantee for HAProxy Enterprise Premium customers.

### Advanced security

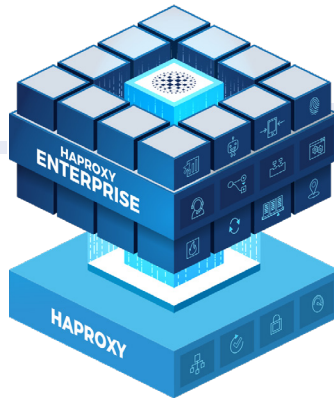
Through mitigating attacks for top sites in the world, our powerful DDoS and anomalous behavior detection engine was born and constantly improves.

### Expertise

Team of experts including the HAProxy core development team for incident response and complex troubleshooting.

### Reputation

Trusted by many of the top websites and cloud providers in the world.



## Features Comparison Table

FEATURES COMPARISON	HAPROXY Enterprise	HAPROXY
Advanced HTTP/TCP Load Balancing and Persistence	✓	✓
Advanced Health Checks	✓	✓
Application Acceleration	✓	✓
Advanced Security	✓	✓
Advanced Administration	✓	✓
Backported Features From HAProxy Dev Branch	✓	✗
24x7 Support	✓	✗
Real-time Dashboard	✓	✗
VRRP and Route Health Injection HA Tools	✓	✗
ACL, Map, and TLS Ticket Key Synchronization	✓	✗
Advanced Application-based DDoS and Bot Protection	✓	✗
Bot Detection	✓	✗
Web Application Firewall	✓	✗
HTTP Protocol Validation	✓	✗
Real-time Cluster-wide Tracking	✓	✗

# HAProxy Enterprise Features



## Security

- ▶ **Reverse Proxy**  
Proxy all traffic from the Internet to your application servers through HAProxy, exposing only intended services and logging requests.
- ▶ **HTTP Validation**  
Validate that requests comply with the protocol specifications before sending them on to application servers.
- ▶ **Advanced Application-based DDoS Protection**  
Blocks requests from clients based on multiple metrics and criteria over a configurable time window.
- ▶ **Anomalous Behavior Protection**  
Combine multiple metrics about a client's behavior for smarter routing and access decisions.
- ▶ **Dynamic Update**  
Updates ACL, Map, or TLS ticket key files in memory normally loaded from disk during HAProxy startup during runtime.
- ▶ **Traffic Filtering**  
Use ACLs to detect any condition in HTTP(S) traffic and route or block the request as desired.
- ▶ **Antibot Module**  
Send a Javascript challenge to requests selected by ACL rules.
- ▶ **reCAPTCHA**  
Present a Google reCAPTCHA v2 or v3 challenge to clients that exhibit anomalous traffic patterns.
- ▶ **Fingerprint Module**  
Generate a unique identifier based on a client request.

- ▶ **Sanitize Module**  
Filter and verify that HTTP header names and contents comply with the HTTP specification.
- ▶ **WAF Module**  
Enable the high-performance Web Application Firewall, which supports multiple modes including blacklist-based signature support, whitelist-only mode, and ModSecurity ruleset support.



## Load Balancing

- ▶ **Comprehensive LB Methods**  
Load balance by round robin, least connections, URI, IP address and several hashing methods.
- ▶ **Advanced Routing Decisions**  
Send requests to specific application clusters based on URL, domain name, file extension, client IP address, the health state of backends, number of active connections, SSL client certificate, and more.
- ▶ **Stickiness/Persistence**  
Maintain users' sessions based on TCP/IP information or any property of the HTTP request (cookies, headers, URI, and more).
- ▶ **Extensive ACL System**  
Make advanced decisions based on any TCP/IP information or HTTP attribute with full logical operator support.
- ▶ **LUA Scripting Support**  
Extend and customize HAProxy with Lua scripts that have access to the request/response pipeline.



## High Availability

- ▶ **Advanced Health Checks**  
Gain flexibility when monitoring your backend servers with both active and passive health checks. You can also deploy Agent software to remotely push state changes to HAProxy from your monitored servers.
- ▶ **Slow Start**  
Slowly increase the rate of new sessions sent to a backend when it comes up instead of sending traffic all at once.
- ▶ **Slow Stop**  
Drain requests from servers, while allowing users to finish their sessions.
- ▶ **Traffic Overload Protection**  
Limit the maximum number of connections assigned to application servers, either sending them to other server clusters or queuing the requests in HAProxy if that limit is reached.
- ▶ **Hitless Reloads**  
Eliminate lost connections. Reloads of HAProxy Enterprise do not lose any connections during upgrades or changes to the configuration.
- ▶ **Route Health Injection (RHI)**  
An optimized version of third-party software that allows for the control of routing protocol announcements based on the health of the network and the HAProxy service for active/active clustering.
- ▶ **VRRP**  
An optimized version of the keepalived daemon for active/passive clustering.
- ▶ **Traffic Shadowing**  
Mirror requests from one environment to another for testing new features.



## Application Acceleration

- ▶ **High-Performance SSL/TLS**  
Terminate TLS on the HAProxy load balancer, optionally establishing a TLS connection to the backend server for end-to-end encryption.
- ▶ **Advanced SSL Algorithm Selection**  
Automatically pick the optimal certificate for a given client, enabling simultaneous use of ECC and RSA.
- ▶ **HTTP/2 Support**  
Accelerate end-to-end communication using the HTTP/2 protocol.
- ▶ **gRPC**  
Route and load balance gRPC calls between services, taking advantage of its efficient, binary serialization.
- ▶ **Multithreading**  
Split processing across multiple threads while sharing the same memory space.
- ▶ **Object Caching**  
Offload static content delivery from your application servers so they can perform their primary duty—delivering the application.
- ▶ **Connection Pooling**  
Reuse idle connections between HAProxy and your backend servers to save time.
- ▶ **Compression**  
Reduce bandwidth usage by compressing HTTP responses from backends before passing them on to clients.
- ▶ **Geolocation Support**  
Load geolocation databases from multiple vendors into HAProxy for advanced request handling, routing, and for passing information on to your application servers. Includes live updating of databases.
- ▶ **Device Intelligence**  
Gets information about a client by passing the user-agent string to one of HAProxy's supported device detection databases.



## Administration

- ▶ **Runtime API**  
Programmatically pull data from or make changes to HAProxy during runtime.
- ▶ **DNS for Service Discovery**  
Dynamically scale the number of application servers by querying a service registry over DNS.
- ▶ **Server Templates**  
Provision multiple application servers with a single server line to be filled in during runtime.
- ▶ **Real-Time Dashboard**  
View your services' health, traffic rates, and load aggregated across multiple load balancer instances. Administer enabling, disabling and draining of backends.
- ▶ **Data Plane API**  
Programmatically add, modify or remove sections of your configuration using the HTTP API.
- ▶ **Cluster-wide Tracking**  
Provides real-time aggregated values from stick tables across multiple processes or servers in a cluster which allows for real-time cluster-wide tracking.
- ▶ **SSO Module**  
Enable SSO (Single Sign On) on a Microsoft Active Directory domain.
- ▶ **Extensive Logging**  
Log information about requests, with support for syslog and cloud-native logging.



## SUPPORT

...  
**HOURS**  
**24x7**

...  
**COMMUNICATION**  
E-Mail, Phone or Web,  
Slack Live Chat

...  
**CRITICAL ISSUE**  
Target Response Time - **30 mins**

...  
**MODERATE ISSUE**  
Target Response Time - **2 days**

...  
**INFORMATIONAL ISSUE**  
Target Response Time - **3 days**

...  
**CONSULTATIVE SUPPORT**

...  
**PROMPT MAINTENANCE  
AND UPDATES**