**Summary Table on Key Features and Tomcat Suitability**

| **Load Balancer** | **Key Features** | **Performance** | **Ease of Use** | **Pros** | **Cons** | **Tomcat Suitability** |
| --- | --- | --- | --- | --- | --- | --- |
| Apache HTTP Server | Web server with LB module | Moderate | Moderate | Familiar, modular | Not designed as full LB | Basic LB functionality |
| Seesaw | Simple LB for Linux clusters | Moderate | Simple | Lightweight, good for simple setups | Limited features | Limited |
| HAProxy | Very high throughput, TCP & HTTP LB | Excellent | Moderate | Very stable, best for high load | Steeper learning curve | Excellent |
| Traefik | Dynamic config, modern protocols, cloud-native | Good | Easy (auto config) | Great for microservices, integrates well with K8s | Limited advanced tuning | Good for HTTP/HTTPS fronting |
| Nginx | High performance, proxy & LB, SSL support | Excellent | Moderate | Highly flexible, widely adopted | Complex config for some use cases | Excellent |

**Feature-based Comparison**

| **Feature** | **Traefik** | **Nginx** | **HAProxy** | **Seesaw** | **Apache HTTP Server** |
| --- | --- | --- | --- | --- | --- |
| Flexibility & Scalability | Very flexible, cloud-native | Flexible, high scalability | Highly scalable, flexible | Limited scalability | Limited flexibility |
| Health Monitoring & HA | Strong health monitoring & auto recovery | Good health monitoring | Excellent HA & failover | Basic HA | Basic HA |
| Security Features | Modern security support | Mature security features | Strong security focus | Basic security | Basic security |
| User Interface & Management | Web UI, CLI, APIs | CLI, third-party UIs | CLI, web stats page | CLI only | CLI only |
| Cost Efficiency | Open-source, low cost | Open-source, low cost | Open-source, low cost | Open-source | Open-source |

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| **Parameter Category** | **Traefik** | **Nginx** | **HAProxy** | **Seesaw** | **Apache HTTP Server** |
| --- | --- | --- | --- | --- | --- |
| **Configuration Parameters** | Dynamic config, supports multiple protocols; connection limits & timeouts configurable; supports various load balancing algorithms | Static and dynamic config; connection limits, timeouts; round-robin, least connections, IP hash | Highly configurable; connection limits, timeouts; advanced algorithms like consistent hashing | Basic configuration; connection limits, simple algorithms like round-robin | Modular config; basic connection limits and algorithms |
| **Health Check Parameters** | HTTP, TCP, gRPC health checks; customizable thresholds | HTTP, TCP health checks with thresholds | Comprehensive health checks with threshold settings | Basic TCP health checks | HTTP health checks; limited threshold config |
| **Performance Metrics** | Good response times; throughput depends on backend | Excellent response times & throughput | High performance, optimized for TCP/HTTP | Moderate performance | Moderate; not optimized primarily as LB |
| **Alerting Thresholds** | Integrates with Prometheus, supports alerting rules | Supports alerting with third-party tools like Prometheus | Supports alerting via stats socket, external tools | Limited alerting support | Limited native alerting support |
| **Capacity Planning** | Auto scaling support with orchestration (Kubernetes) | Manual scaling; supports container orchestration | Scales well vertically & horizontally | Limited scaling options | Not ideal for large scale LB |
| **Security Parameters** | Supports ACLs, Let's Encrypt, OAuth integration | Supports ACLs, SSL termination, security modules | ACLs, SSL, rate limiting, IP whitelisting | Basic ACLs and SSL | Supports SSL, basic ACLs |
| **Deployment Parameters** | Hot reload, zero downtime deployment with rolling updates | Supports graceful reloads | Supports graceful reloads, zero downtime | Simple deployment; no hot reload | Basic deployment, reload required |
| **Testing Parameters** | Supports load testing via integrations | Widely tested under load | Industry standard for high load | Less commonly used for heavy load testing | Not commonly used as dedicated LB for testing |