

Cloud and Virtual Application Delivery

KEMP's Virtual LoadMaster (VLM) is a fully featured Application Delivery Controller (ADC) that supports all the major application workloads with easy to use templates. It offers key features such as SSL offload along with advanced authentication and traffic delivery options.

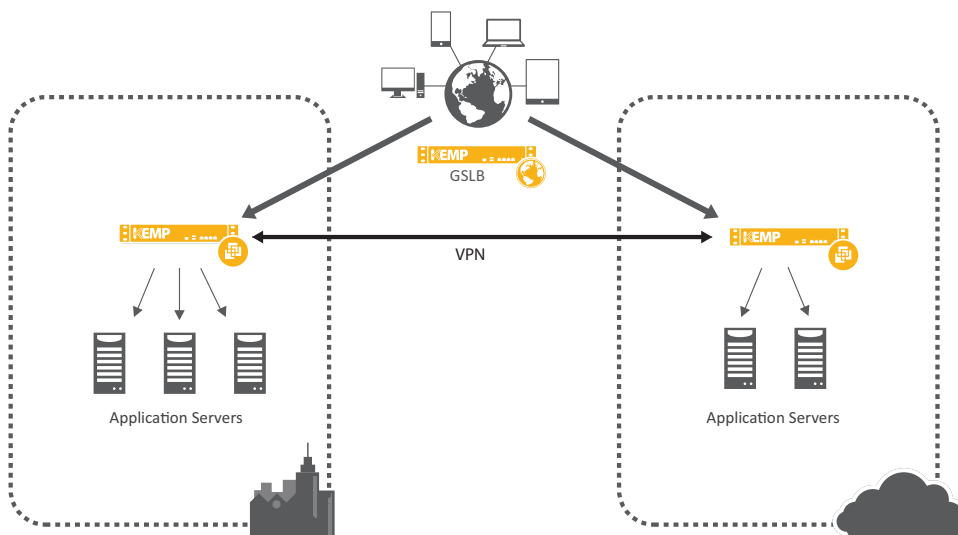


Figure 1- LoadMaster Hybrid Topology

Deliver Anywhere

VLM instances can be deployed on all the major hypervisor platforms and on the leading public Cloud services with a consistent set of features regardless of where deployed. Consistency across a wide range of platforms greatly simplifies cloud migration and hybrid cloud deployments with seamless migration and reduced management complexity.

Flexible Licensing

VLM can be licensed using traditional permanent licenses on each instance or with metered licensing across multiple VLM instances. Metered licensing provides the flexibility to deploy and retire load balancing resources on-demand greatly simplifying DevOPS environments and application scaling.

Easily Managed

Regardless of where VLMs are deployed, a consistent administration interface is presented via Web UI, API and KEMP 360 Central. KEMP 360 Central provides cross-platform configuration and monitoring of ADC resources to simplify the administration of multi-ADC environments. The LoadMaster API (RESTful and PowerShell) enables automation of ADC deployment, configuration and administration and integration of ADC operations with DevOPS and hypervisor management frameworks.

Feature Subscriptions

LoadMaster subscriptions offer flexibility, simplicity and value to meet your application delivery requirements and challenges. Subscriptions are annual and can be upgraded and downgraded as application delivery demands change for maximum flexibility. The tiers are mapped to common customer challenges and requirements, simplifying the task of selecting the appropriate feature set and support levels. This also offers additional value of up to 40% when compared to individually selecting features.

LoadMaster Feature Subscription Tiers

Each subscription tier adds to the features and services delivered by lower tiers as follows

Standard	Enterprise <i>Incl. Standard Features</i>	Enterprise Plus <i>Incl. Enterprise Features</i>
10x5 Customer Support	24x7 Customer Support	WAF with rule updates
Software Updates	Edge Security Pack (ESP)	GSLB with IP Reputation
Security Patches	Intrusion Prevention	Floating License
L4-L7 Application Delivery	KEMP 360 Vision	
	KEMP 360 Central	

Features

L4-L7 Application Delivery

General

- Server Load Balancing (SLB) for TCP/UDP based protocols
- TLS (SSL) Offload
- Layer 7 Content Switching
- Transparent caching for HTTP/HTTPS
- Compression of static and dynamic HTTP/HTTPS content
- Up to 1000 Virtual and 1000 Real Servers
- NAT-based forwarding
- Support for Direct Server Return (DSR) configurations
- Configurable S-NAT support
- VLAN Trunking (802.1Q)
- Link interface bonding (802.3ad)
- IPv6 support for addressing and features
- IPv6 - IPv4 bidirectional conversion

Health Checking

- Aggregated health checks
- ICMP health checking
- Layer 7 checking against any target server port
- Active/Hot Standby configurations for High Availability
- Stateful Failover
- Scale-out Clustering
- Aggregated health checks

Session Persistence

- Source IP (L4)
- TLS (SSL) SessionID (L4)
- HTTP/HTTPS Browser-session (L7)
- HTTP/HTTPS WebClient-session (L7)
- RDP Login ID (L7)
- Port Following for mixed HTTP/HTTPS sessions
- Session reconnection for Microsoft RDS

Scheduling and Balancing Methods

- SDN Adaptive
- Round Robin
- Weighted Round Robin
- Least Connection
- Weighted Least Connection
- Agent-based Adaptive
- Chained Failover (Fixed Weighting)
- Source-IP Hash
- Layer 7 Content Switching
- Global Server Load Balancing (GSLB)
- AD Group based traffic steering

SSL/TLS Features

- Configurable TLS (1.0, 1.1, 1.2) and SSL (2.0, 3.0)
- Support for EV (Extended Validation) certificates
- OCSF certificate validation
- Server Name Identification (SNI) support
- Support for up to 1,000 TLS (SSL) certificates

- Automated TLS (SSL) certificate chaining
- Certificate Signing Request (CSR) generation
- STARTTLS mail protocols (POP3, SMTP, IMAP)

Administration

- Change auditing
- Web User Interface (WUI)
- SSH
- RESTful and PowerShell APIs
- VMware vRealize Orchestrator
- Context based help (WUI)
- Real time display of performance and availability
- Application templates
- Remote syslogd support
- Automated configuration backup
- Selective restore of configuration
- Connection draining
- Comprehensive logging and reporting
- SNMP support
- Diagnostic shell with in-line tcpdump

Security

- Permit /Deny Access Control Lists
- IP address filtering
- IPsec Tunnel support
- DDoS mitigation, including L7 rate based attacks
- IPSec VPN to Azure, AWS and vCloud Air public clouds
- Authenticated NTP

Edge Security Pack

- Microsoft TMG replacement
- Pre-Authentication
- Multi-Domain authentication & SSO
- X.509 client certificate authentication
- Custom login forms
- Two factor authentication
- SAML, Active Directory, RADIUS & LDAP
- Forms to Forms based authentication

Intrusion Prevention

- Snort Compatible IPS
- Permit/Deny IP by address
- Automated IP reputation updates for GSLB

KEMP 360 Central

- LoadMaster Configuration Management
- Automated LoadMaster backups
- Centralized & scheduled firmware updates
- LoadMaster logfile consolidation
- Performance Management
- 3rd party ADC support

KEMP 360 Vision

- 24/7 Automated issue escalation service
- Proactive issue management
- Integrated with KEMP Support ticketing

Web Application Firewall (WAF)

- Real-time application threat mitigation
- Daily rule updates
- Threats Mitigated
 - Cookie tampering
 - Cross site request forgery
 - Cross site scripting
 - Data loss prevention
 - SQL Injection
- PCI-DSS Section 6.6 compliance

Global Server Load Balancing (GSLB)

Scheduling and Balancing

- Round Robin
- Weighted Round Robin
- Chained Failover (Fixed Weighting)
- Regional
- Real Server Load
- Location Based

Security

- Black List (Access Control List)
- IP reputation filtering with automatic updates
- DDoS mitigation

Health Checking & Failover

- ICMP health checking of server farm machines
- Layer 4 TCP checking
- Automatic reconfiguration for defective real server
- Active/Active High Availability

Virtual LoadMaster on Hypervisor

	Microsoft Hyper-V	vmware®	Xen	KVM	
	VLM-200	VLM-2000	VLM-5000	VLM-10G	VLM-Free*
Subscription Tiers Supported	All	All	All	All	N/A
Licensed Performance†					
Load Balancer Throughput	200 Mbps	2 Gbps	5 Gbps	10 Gbps	20 Mbps
SSL TPS	200	1,000	10,000	12,000	50
Concurrent Layer 4 Connections‡	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Max Servers/ Virtual Clusters	100/256	1000/1000	1000/1000	1000/1000	1000/500

Virtual LoadMaster on Cloud

	Microsoft Azure	amazon web services			vmware®	
	Incl. Microsoft Azure for Government	Incl. AWS GovCloud			vCloud Air	
	VLM-200	VLM-2000	VLM-5000	VLM-10G	VLM-Free*	VLM-500 WAF
Subscription Tiers Supported	All	All	All	All	N/A	N/A
Licensing model supported§	BYOL,PAYG	BYOL,PAYG	BYOL,PAYG	BYOL,PAYG	BYOL	PAYG
Licensed Performance†						
Load Balancer Throughput	200 Mbps	2 Gbps	5 Gbps	10 Gbps	20 Mbps	500 Mbps
SSL TPS	200	1,000	10,000	12,000	50	500
Concurrent Layer 4 Connections‡	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Max Servers/ Virtual Clusters	100/256	1000/1000	1000/1000	1000/1000	1000/500	1000/500

* VLM-Free is community supported.

† Achievement of this licensed performance level depends on hypervisor/cloud resources allocated.

‡ As tested with 1 vCPU and 1 GB memory allocated. L4 concurrent connections scale linearly with additional allocated RAM.

§ BYOL (Bring Your Own Licence) instances are subject to cloud platform charges based on the VM size deployed. PAYG (Pay as you Go) is an hourly billing scheme that includes the KEMP licence and cloud platform charges.

|| VLM-500 WAF includes daily WAF rule updates and is only available as an hourly-billed PAYG instance on Azure and AWS clouds.

Virtual LoadMaster – Metered Licensing

Metered Licensing offers a licensing option based on aggregate peak usage by licensed VLM instances.

Metered Licensing Agreement (MLA)

	MLA-1G	MLA-2G	MLA-3G	MLA-4G
Aggregate Throughput	1 Gbit	2 Gbit	3 Gbit	4 Gbit
Max. VLM Instances	100	100	100	100
Platform	Cloud & Hypervisor	Cloud & Hypervisor	Cloud & Hypervisor	Cloud & Hypervisor

KEMP also provide Metered Enterprise License Agreement (MELA) for large organizations with licenses of up to 500 Gbit. Cont atc your KEMP representative for further details.