Virtual LoadMaster™ Datasheet

Cloud & Virtual Application Delivery

Kemp's Virtual LoadMaster (VLM) is a fully featured load balancer and 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.
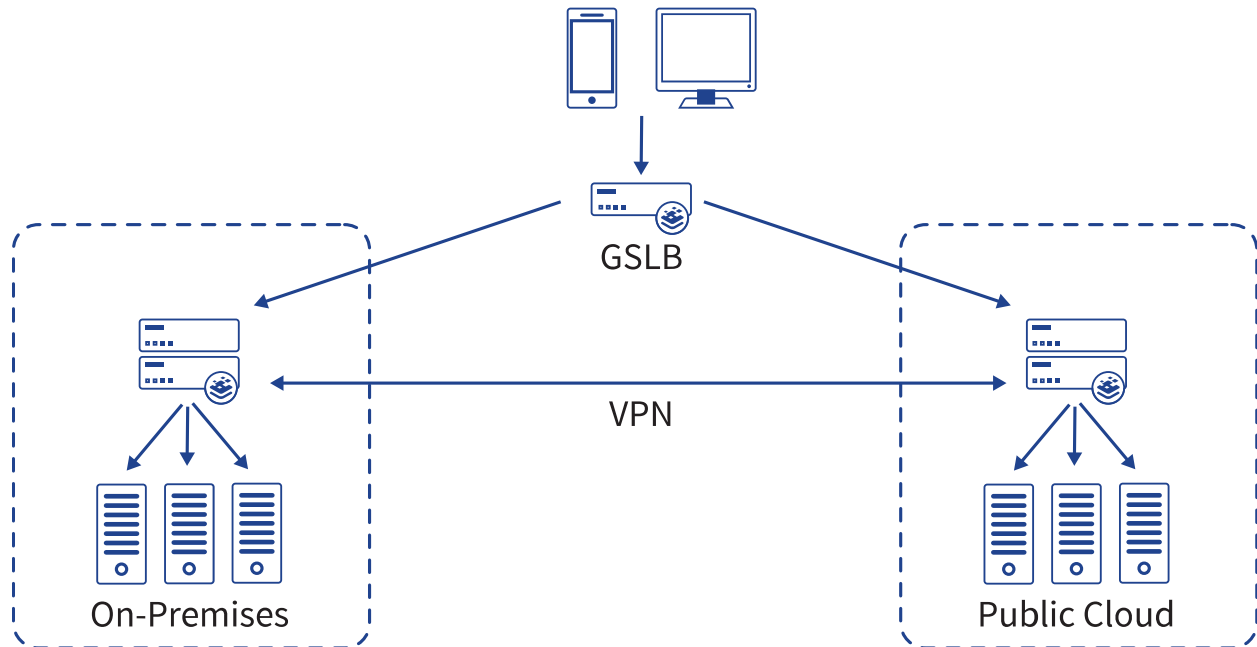

Figure 1- LoadMaster Hybrid Topology

Deliver Anywhere

Virtual LoadMaster instances can be deployed on all major hypervisors and on 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

Virtual LoadMaster can be licensed using permanent or subscription licenses on each instance or with metered licensing across multiple Virtual LoadMaster 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 Virtual LoadMasters 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 load balancing resources to simplify the administration of multi-load balancer environments. The LoadMaster API (RESTful and PowerShell) enables automation of load balancer deployment, configuration and administration and integration of load balancer operations with DevOps and hypervisor management frameworks.

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Support Subscriptions

LoadMaster support subscriptions offer flexibility, simplicity and value to meet your application delivery requirements and challenges. Support 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.

LoadMaster Annual Subscriptions (VLM-500, VLM-10G) include an Enterprise Plus Support Subscription as standard.

LoadMaster Support Subscription Tiers

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

STANDARD	ENTERPRISE *INCL. STANDARD FEATURES*	ENTERPRISE PLUS *INCL. ENTERPRISE FEATURES*
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
- HTTP/2 Support
- 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, 1.3) and SSL (2.0, 3.0)
- Support for EV (Extended Validation) certificates
- OCSP 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
- FIPS 140-2 Level 1 (Level 2 on FIPS models)
- STARTTLS mail protocols (POP3, SMTP, IMAP)

Administration

- Change auditing
- Web User Interface (WUI)
- SSH & physical console
- 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 public clouds
- Authenticated NTP

Features

Kemp 360 Central

- Included with Enterprise and Enterprise Plus Subscriptions
- LoadMaster Configuration Management
- Automated LoadMaster backups
- Centralized & scheduled firmware updates
- LoadMaster logfile consolidation
- Performance Management
- 3rd party load balancer support

Kemp 360 Vision

- Included with Enterprise and Enterprise Plus Subscriptions
- 24/7 Automated issue escalation service
- Proactive issue management
- Integrated with Kemp Support ticketing

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

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
- HTTP/HTTPS health check
- Active/Active High Availability

LoadMaster Licensing Options

BYOL Licensing

BYOL (perpetual) licenses are available across all cloud and hypervisor platforms. Apply a Support Subscription to a perpetual license to define the support level and features enabled.

	VLM-200	VLM-3000	VLM-5000	VLM-10G
Public Cloud (Azure & AWS)	✓	✓	✓	✓
Hypervisor (Hyper-V, VMware, XEN, KVM, VirtualBox)	✓	✓	✓	✓

Subscription (Annual) Licensing

Subscription Licenses are available for one or three years on all cloud and hypervisor platforms and include Enterprise Plus Support Subscription as standard.

	VLM-500	VLM-10G
Public Cloud (Azure & AWS)	✓	✓
Hypervisor (Hyper-V, VMware, XEN, KVM, VirtualBox)	✓	✓

PAYG Licensing

PAYG (Pay-As-You-Go) licenses provide hourly usage licenses on Azure and AWS that includes platform usage and Kemp instance licensing.

	VLM-200	VLM-500	VLM-3000	VLM-5000	VLM-10G	VLM-500-WAF
Public Cloud (Azure & AWS)	✓	✓	✓	✓	✓	✓

Metered Licensing

Metered Licensing (MELA) offers a monthly subscription option based on aggregate peak usage by licensed Virtual LoadMaster instances. A single metered license enables the deployment of Virtual LoadMaster instances on any supported cloud or hypervisor platform with no license limits on the instance capacity.

	MELA-1G	MELA-10G	MELA-25G	MELA-100G
Aggregate Throughput	1 Gbit	10 Gbit	25 Gbit	100 Gbit
Max. Virtual LoadMaster Instances	Unlimited	Unlimited	Unlimited	Unlimited
Platform	Cloud & Hypervisor	Cloud & Hypervisor	Cloud & Hypervisor	Cloud & Hypervisor

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LoadMaster Platform Support

Virtual LoadMaster on Hypervisor

Virtual LoadMaster is available on Hyper-V, VMware, XEN, KVM and VirtualBox.

	VLM-200	VLM-500	VLM-3000	VLM-5000	VLM-10G
Subscription Tiers Supported	All	N/A	All	All	All
Licensing model supported§	BYOL	Annual	BYOL	BYOL	BYOL, Annual
Licensed Performance					
Load Balancer Throughput	200 Mbps	500 Mbps	3 Gbps	5 Gbps	10 Gbps
SSL TPS	200	500	4,000	10,000	12,000
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	1000/1000

Virtual LoadMaster on Cloud

Virtual LoadMaster is available on Azure and Amazon Web Services and their Government variants.

	VLM-200	VLM-500	VLM-3000	VLM-5000	VLM-10G	VLM-500‖ WAF
Subscription Tiers Supported	All	N/A	All	All	All	N/A
Licensing model supported§	BYOL,PAYG	Annual	BYOL,PAYG	BYOL,PAYG	BYOL,PAYG, Annual	PAYG
Licensed Performance						
Load Balancer Throughput	200 Mbps	500 Mbps	3 Gbps	5 Gbps	10 Gbps	500 Mbps
SSL TPS	200	500	4,000	10,000	12,000	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	1000/1000	1000/500

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

§ BYOL (Bring-Your-Own-License) 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 license 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.