Cloud & Virtual Application Delivery

Progress Kemp LoadMaster 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.

Deliver Anywhere

Virtual LoadMaster (VLM) 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.

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-3000 and VLM-MAX) and cloud (AWS & Azure) pay-as-you-go 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:

<table>
<thead>
<tr>
<th>Standard support</th>
<th>Enterprise support</th>
<th>Enterprise Plus support</th>
</tr>
</thead>
<tbody>
<tr>
<td>10x5 Customer Support</td>
<td>24x7 Customer Support</td>
<td>24x7 Customer Support</td>
</tr>
<tr>
<td>Software Updates</td>
<td>Software Updates</td>
<td>Security Patches</td>
</tr>
<tr>
<td>Security Patches</td>
<td>Security Patches</td>
<td></td>
</tr>
<tr>
<td>L4-L7 Application Delivery</td>
<td>L4-L7 Application Delivery</td>
<td>L4-L7 Application Delivery</td>
</tr>
<tr>
<td>Network Telemetry</td>
<td>Network Telemetry</td>
<td>Network Telemetry</td>
</tr>
<tr>
<td>Intrusion Prevention</td>
<td>Intrusion Prevention</td>
<td></td>
</tr>
<tr>
<td>Edge Security Pack</td>
<td>Edge Security Pack</td>
<td></td>
</tr>
<tr>
<td>Kemp 360 Vision - managed service for application monitoring &amp; preemptive alerting</td>
<td>Kemp 360 Vision - managed service for application monitoring &amp; preemptive alerting</td>
<td></td>
</tr>
<tr>
<td>Kemp 360 Central - centralized management &amp; orchestration software</td>
<td>Kemp 360 Central - centralized management &amp; orchestration software</td>
<td></td>
</tr>
<tr>
<td>Web Application Firewall (WAF) with updated reputation data daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSLB with updated reputation data daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floating License</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Features**

**Network Telemetry**
- Export network flow data to Flowmon Collector in the industry standard IPFIX protocol format.
- Leverage the power of Flowmon Collector to store and analyze flow data, gaining visibility into the entire application value delivery chain to identify bottlenecks, misconfigurations, and potential security issues.
- Combine LoadMaster-exported data with IPFIX data from other network nodes on Collector to gain a complete picture of your infrastructure.
- View LoadMaster data on Flowmon Collector in dashboards and widgets specific to LoadMaster and the Virtual Services defined on it.

**Web Application Firewall (WAF)**
- Real-time application threat mitigation
- Updated reputation data daily
- Threats mitigated
  - Cookie tampering
  - Cross site request forgery
  - Cross site scripting
  - Data loss prevention
  - SQL injection
  - PCI-DSS Section 6.6 compliance

**Intrusion Prevention**
- Snort compatible IPS
- Allow/Deny IP by address

**Global Server Load Balancing (GSLB)**

**Scheduling and Balancing**
- Round Robin
- Weighted Round Robin
- Chained Failover (Fixed Weighting)
- Regional
- Real Server Load
- Location Based
- Scale to 256 nodes per FQDN
- Use EDNS to direct client traffic

**Security**
- Allow/Deny List (Access Control List)
- Updated reputation data daily
- DDoS mitigation

**Health Checking & Failover**
- ICMP health checking of server farm machines
- Layer 4 TCP checking
- HTTP/HTTPS health check
- Active/Active High Availability

**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

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
• 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
• 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 syslog support
• Automated configuration backup
• Selective restore of configuration
• Connection draining
• Comprehensive logging and reporting
• SNMP support
• Diagnostic shell with in-line tcpdump

Security
• Allow/Deny List (Access Control List)
• IP address filtering
• IPsec Tunnel support
• DDoS mitigation, including L7 rate-based attacks
• IPsec VPN to Azure, AWS, and public clouds
• Authenticated NTP
**Kemp® 360 Central®**

- Centralized management and orchestration
- Included with Enterprise support subscription, and Enterprise Plus support subscription
- LoadMaster configuration management
- Automated LoadMaster backups
- Centralized & scheduled firmware updates
- LoadMaster logfile consolidation
- Performance management
- 3rd party load balancer support

**Kemp® 360 Vision®**

- Managed service for application monitoring & preemptive alerting
- Included with Enterprise support subscription, and Enterprise Plus support subscription
- 24x7 automated issue escalation service
- Proactive issue management
- Integrated with Kemp Support ticketing

**LoadMaster Licensing Options**

**Perpetual Licensing**

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.

<table>
<thead>
<tr>
<th></th>
<th>VLM-500</th>
<th>VLM-3000</th>
<th>VLM-MAX</th>
<th>VLM-GEO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Cloud and Hypervisor</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

**Subscription Licensing**

Subscription licenses are available for one or three years on all cloud and hypervisor platforms. Enterprise Plus support subscription included as default.

<table>
<thead>
<tr>
<th></th>
<th>VLM-500</th>
<th>VLM-3000</th>
<th>VLM-MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Cloud and Hypervisor</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>
PAYG Licensing

PAYG (Pay-As-You-Go) licenses provide hourly usage licenses on Azure and AWS that includes platform usage and Kemp instance licensing. All PAYG Virtual LoadMasters include WAF and GEO (GSLB) with updated reputation data daily and Edge Security Pack as standard and do not require any additional subscription purchase.

<table>
<thead>
<tr>
<th>VLM-FREE</th>
<th>VLM-500</th>
<th>VLM-3000</th>
<th>VLM-MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

SPLA Licensing

Service Provider Licensing Agreement (SPLA) provides monthly usage licenses.

<table>
<thead>
<tr>
<th>VLM-SPLA-50</th>
<th>VLM-SPLA-100</th>
<th>VLM-SPLA-500</th>
<th>VLM-SPLA-3000</th>
<th>VLM-SPLA-GEO</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

Metered Licensing

Metered Licensing is a monthly subscription based on aggregate peak usage by licensed Virtual LoadMaster instances.

<table>
<thead>
<tr>
<th>Subscription Tiers</th>
<th>10 Gbit</th>
<th>25 Gbit</th>
<th>50 Gbit</th>
<th>100 Gbit</th>
<th>Unlimited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Cloud and Hypervisor</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

Pooled Licensing

Pooled Licensing is a monthly subscription allowing the overall pool capacity to be licensed dynamically to LoadMaster instances.

<table>
<thead>
<tr>
<th>Subscription Tiers</th>
<th>50 Gbit</th>
<th>100 Gbit</th>
<th>200 Gbit</th>
<th>300 Gbit</th>
<th>400 Gbit</th>
<th>500 Gbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Cloud and Hypervisor</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>
LoadMaster Platform Support

Virtual LoadMaster on Hypervisor

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

<table>
<thead>
<tr>
<th></th>
<th>VLM-500</th>
<th>VLM-3000</th>
<th>VLM-MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subscription Tiers Supported</strong></td>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td><strong>Licensing model supported</strong></td>
<td>Perpetual, Subscription</td>
<td>Perpetual, Subscription</td>
<td>Perpetual, Subscription</td>
</tr>
<tr>
<td><strong>Licensed Performance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Load Balancer Throughput</td>
<td>500 Mbps</td>
<td>3 Gbps</td>
<td>Uncapped*</td>
</tr>
<tr>
<td>SSL TPS</td>
<td>500</td>
<td>4,000</td>
<td>Uncapped*</td>
</tr>
<tr>
<td>Layer 4 Concurrent Connections</td>
<td>3,000,000**</td>
<td>3,000,000**</td>
<td>Uncapped*</td>
</tr>
<tr>
<td>Max Servers/ Virtual Clusters</td>
<td>1,000/1,000</td>
<td>1,000/1,000</td>
<td>1,000/1,000</td>
</tr>
</tbody>
</table>

Virtual LoadMaster on Cloud

Virtual LoadMaster is available on Azure and AWS and their Government variants.

<table>
<thead>
<tr>
<th></th>
<th>VLM-500</th>
<th>VLM-3000</th>
<th>VLM-MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subscription Tiers Supported</strong></td>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td><strong>Licensing model supported</strong></td>
<td>BYOL, PAYG</td>
<td>BYOL, PAYG</td>
<td>BYOL, PAYG</td>
</tr>
<tr>
<td><strong>Licensed Performance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Load Balancer Throughput</td>
<td>500 Mbps</td>
<td>3 Gbps</td>
<td>Uncapped*</td>
</tr>
<tr>
<td>SSL TPS</td>
<td>500</td>
<td>4,000</td>
<td>Uncapped*</td>
</tr>
<tr>
<td>Layer 4 Concurrent Connections</td>
<td>3,000,000</td>
<td>3,000,000**</td>
<td>Uncapped*</td>
</tr>
<tr>
<td>Max Servers/ Virtual Clusters</td>
<td>1,000/1,000</td>
<td>1,000/1,000</td>
<td>1,000/1,000</td>
</tr>
</tbody>
</table>

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.

* Performance dependent on allocated system resources.
**Based on minimum 2GB memory configuration for a VLM
* All specifications are subject to change without prior notice.