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# Virtual LoadMaster™ Datasheet

Industry's best virtual load balancer…
maximum value, flexibility and performance

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# 雲端 & 虛擬版本的高效能應用程序傳遞平台

Kemp 的 Virtual LoadMaster，是功能齊全的負載平衡器和應用程式傳遞控制器（ADC），透過方便使用的模板，支援所有應用程式的工作負擔。 它提供像是 SSL 卸載、高級身份認證，以及流量傳遞選項之類的關鍵功能。

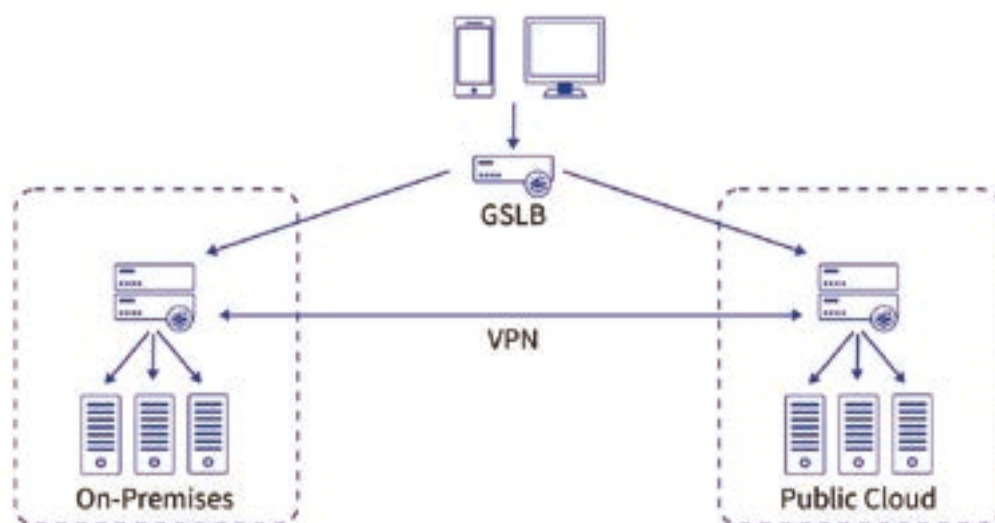

Figure 1- LoadMaster Hybrid Topology

## 隨處可安裝

Virtual LoadMaster（VLM）可在所有主要虛擬機及公有雲上進行部署，具有與實體設備功能一致的特性。跨各種平台的一致性簡化了雲平台遷移和混合雲部署的作業，實現了無縫遷移並降低管理複雜性。

## 彈性的使用權限

可以使用永久授權，或是訂閱制對 Virtual LoadMaster 進行管理，也可以對多個 Virtual LoadMaster 以計量制，依照需求靈活地進行部署或移除負載資源之用量，進而大大簡化 DevOps 環境和應用程式擴展的繁瑣步驟。

## 簡易的管理

無論在何處進行 Virtual LoadMaster 部署，都可以透過 Web UI、API 和 Kemp 360 Central，提供一致的管理界面。 Kemp 360 Central 提供跨平台的配置和負載資源的監視，簡化必須同時管理多個負載平衡器的狀況。 LoadMaster API（RESTful 和 PowerShell）讓負載平衡器部署、配置和管理的自動化得以實現，與 DevOps 和虛擬設備管理框架有效整合。

# 支援訂閱模式

LoadMaster 訂閱模式可提供靈活性，簡單性及其價值性，滿足應用程式傳遞的要求和挑戰。 支援每年一次的訂閱模式，可隨著應用程式需求的變化進行升級或降級，以實現最大的靈活性。 面對客戶常見的挑戰和需求，選擇適當的功能集變得更為簡易。

LoadMaster 提供年度訂閱（VLM-500，VLM-3000和VLM-MAX）和雲平台（AWS 和 Azure）的隨付即用，以及Enterprise Plus 訂閱機制。

# LoadMaster 支援分層訂閱機制

各訂閱階層的功能和服務整理如下：

| STANDARD SUPPORT | ENTERPRISE SUPPORT | ENTERPRISE PLUS SUPPORT |
|---|---|---|
| 10x5 Customer Support | 24x7 Customer Support | 24x7 Customer Support |
| Software Updates | Software Updates | Software Updates |
| Security Patches | Security Patches | Security Patches |
| L4-L7 Application Delivery | L4-L7 Application Delivery | L4-L7 Application Delivery |
| | Edge Security Pack | Edge Security Pack |
| | Intrusion Prevention | Intrusion Prevention |
| | Kemp 360 Vision<br>- managed service for application monitoring & preemptive alerting | Kemp 360 Vision<br>- managed service for application monitoring & preemptive alerting |
| | Kemp 360 Central<br>- centralized management & orchestration software | Kemp 360 Central<br>- centralized management & orchestration software |
| | | WAF with rule updates |
| | | GSLB with IP Reputation |
| | | Floating License |

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# 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 1,000 Virtual and 1,000 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
- 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

- 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
- 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