

KEMP Technologies LoadMaster 2500



Traditionally, web server load balancing has been an expensive luxury only enterprises have been able to afford with the majority of solutions easily on the wrong side of five figures. SMBs don't have such deep pockets but help is at hand as the LoadMaster series of appliances from Kemp Technologies aims to offer a range of high performance features at a very sensible price. On review is the 2500 which represents the second rung on the LoadMaster ladder and despite its comparatively modest price tag delivers a sophisticated range of capabilities including server load balancing, SSL acceleration and Layer 7 content switching.

The system is implemented as a 1U rack server and Kemp has avoided the temptation to overcharge for the hardware - one reason why many competing solutions are more expensive. The 2500 is endowed with a good specification with enough grunt to handle 1000 TPS (transactions per second) for SSL acceleration plus 3,000 simultaneous SSL connections and it supports up to 256 virtual and 1,000 physical servers out of the box. High availability is also an option as you can link two appliances together for failover. Only two of four ports are the Gigabit variety but in most scenarios these are probably all that will be used.

The LoadMaster adheres to the standard concepts for server load balancing as you define virtual services on your public side and link these to multiple physical servers on the LAN. A number of deployment options are available as the appliance can function in a one-armed mode where it sits behind an existing firewall and only uses one port as all servers and services are on the same network. We went for the two-armed mode as this allowed us to place our test servers on one network and our clients on another.

Installation is fairly straightforward and you can choose from connecting a monitor and USB keyboard to the appliance or accessing its CLI via a serial port connection. We opted for the former and found it simple enough to use as we fired up a quick start wizard and entered details of our network-side and farm-side IP addresses along with VLAN IDs, name servers and the default gateway. High availability is also configured from here where the appliance pairs

are given their own IP addresses and configured as partners.

Moving on to the secure web management interface we were pleased to see a substantial improvement over its predecessor. Previously, you had to put up with an amateurish design and limited access where, for example, the various network and port details could only be viewed from a local connection. Now it looks much more professional but, more importantly, offers improved access allowing all features to be easily managed remotely. From the system configuration screen you can now view and modify the port addresses and enter all DNS and routing details.

Setting up virtual servers is a cinch as you define them with an IP address, port number and protocol and then add physical servers to each one using their real IP address. Five load balancing options are on offer with the default round robin mode intercepting incoming requests and distributing them to each server in strict rotation. Weightings can be assigned to each server in the farm thus ensuring the better specified servers have more to do.

Traffic distribution can be determined by the least number of connections and including weightings in this mode gives you Kemp's preferred method of load balancing. There's more as an agent based mode requires ASCII files to be provided by each server which have numerical values showing their loading and these are used to adapt the balancing.

Layer 4 inspection can maintain persistent connections where the appliance uses source and destination IP addresses to ensure a specific client is always directed to the same server. Layer 7 inspection takes this up a notch as you can use actual content to set up persistent connections along with features including session IDs, URLs and cookies. In a basic farm you'll probably have a bunch of servers providing identical services but for environments where farms comprise servers offering different content you can include rules. These inspect HTTP content and are used to direct a host to the correct server. Even SSL acceleration is on the menu allowing the appliance to reduce the workload on the farm by terminating encrypted connections and sending

Rating: ★★★★★

Price: £3,449 exc VAT

Company: KEMP Technologies

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Verdict: The LoadMaster 2500 proves you don't have to pay a fortune for web server load balancing. It delivers a range of sophisticated features, is extremely easy to deploy and its low price makes it a very affordable option for SMBs.

unencrypted traffic to the servers.

For testing we deployed Windows Server 2003 web servers on the LAN with some also running web mail and FTP services. We had no problems linking our real servers to virtual services and our test clients only had to point their browsers at the new virtual IP address where the requested service was loaded as normal. Standard web services continued unabated and users were none the wiser that their web mail and FTP requests were being handled by the appliance. Along with general web access we tested using the web mail components in Ipswitch's iMail Server 8 and we could also access our FTP services via the LoadMaster using tools such as the excellent FileZilla utility. For the latter we declared two real servers both running Windows FTP services with identical file locations and configured them in a single virtual service. We used two clients to access and download a range of files and from the LoadMaster statistics interface we could see the load being shared across both members of the virtual service.

For the price the LoadMaster 2500 is offering a remarkable range of features. Typical competition comes from Barracuda's Load Balancer appliances where, although the entry level 240 costs less, it pales into insignificance as it doesn't support Layer 7 inspection or SSL acceleration. The 440 does support these features but is poor value as its hardware spec is only good enough for a paltry 200 TPS for SSL acceleration and its IPS services will incur a yearly subscription fee. No, if you want a dedicated low-cost server load balancing appliance that doesn't sacrifice on features then check out the LoadMaster series.

Reviewed by Dave Mitchell