Server Load Balancer

PLANET LB-8000 L4 Server Load Balancer is a high performance layer 4 switching device that enables enterprises and ISPs to load-balance all IP-based applications and to create a High Availability (HA) web environment. Powered by dual Xeon™ processors and equipped with Gigabit Ethernet NICs, it is best suited for web sites or other IP-based applications with intensive traffic volumes. Direct routing mode makes sure that this product will not become the bottleneck of heavy traffic applications such as FTP or streaming.

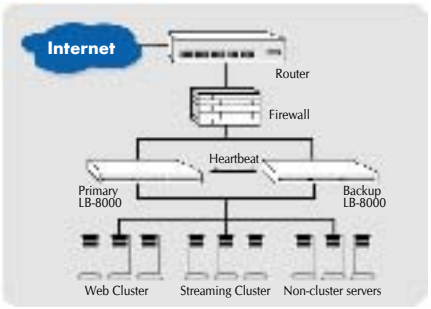
It is specially designed for web environment that cannot afford downtime. Embedded OS greatly enhances the reliability of the LB-8000. Server health check is constantly done by the LB-8000 to ensure no packet is forwarded to crashed servers. In addition, the cost of failover is minimized by ultra high speed failover and bi-directional stateful failover. Heartbeat signals are going through both network and serial cable to prevent unnecessary failover and active-active problem.

The LB-8000 is simply the best choice of server load balancers that helps you easily maximize the performance and availability of your web system at minimal costs.

Key Feature

Super High Availability

- The LB-8000 constantly checks the server status to make sure no request from users is forwarded to malfunctioning servers. Graceful shutdown ensures no connection gets lost when users take down servers for maintenance. Moreover, the cost of failover is minimized by high speed failover and bi-directional stateful failover. Finally, features such as Nice Fail Back or Dual-path Heartbeat effectively reduce failover costs.



Ultimate Performance

- Dual Xeon processors with Hyper-Threading technology provide the LB-8000 with ultra fast performance compared to other L4 switches. With Hyper-Threading technology, processor-level threading can be utilized which offers more efficient use of processor resources for greater parallelism and improved performance on the LB-8000. Besides, Gigabit Ethernet network interface gives the LB-8000 maximum network capacity. Finally, for applications with huge traffic flows such as FTP or streaming, the LB-8000 also supports direct routing mode to allow streaming or data flows sent back to clients without going through the LB-8000.

Unlimited Scalability

- The LB-8000 does not put limitation on the number of clusters (a.k.a. VIP) and also the number of real servers. System admin does not need to pay extra license fees to scale the system.

Manageability

- System admin can easily manage the LB-8000 through Web GUI or CLI. The bi-directional sync function makes sure that configurations and logs are always the same between two LB-8000. In addition, with the LB-8000, system admin can easily monitor the status of real servers through GUI. Also, system admin can manage contents in real servers through IP forwarding or VPN mechanism. Finally, email alert and SNMP trap makes sure that system admin gets informed as soon as system fault happens.

Cost Effectiveness

- Not only is the LB-8000 a cost-effective choice but it also helps your business avoid the possible loss due to the system downtime. Also, the LB-8000 makes sure that all servers are working at full capacity, which further saving the cost of buying extra servers.

Key Feature

Load Balancing for most IP-based Applications

- The LB-8000 can load-balance most IP-based applications, such as web, email, FTP or streaming. You can also apply LB-8000 to other enterprise applications that have web-based GUI, including IBM WebSphere, Cold Fusion, BEA WebLogic Servers and Sun iPlanet Servers and so on.

Multiple Load Balancing Methods

- The LB-8000 provides both static and dynamic modes for load-balancing servers. Static modes contain round robin and weighted round robin. Dynamic modes include least connections and weighed least connections.

Exible Network Configurations

- It supports NAT (network address translation), direct routing and IP tunneling configurations. System admin will be able to choose the appropriate configuration according to the applications and environment

Server Health Check

- The LB-8000 regularly checks the status of each server to make sure no traffic is forwarded to the malfunctioning ones. The health check includes ICMP check (Layer 3), port check (Layer 4) and content check (Layer 7). System admin can freely define which level of health check to do.

Graceful Shutdown

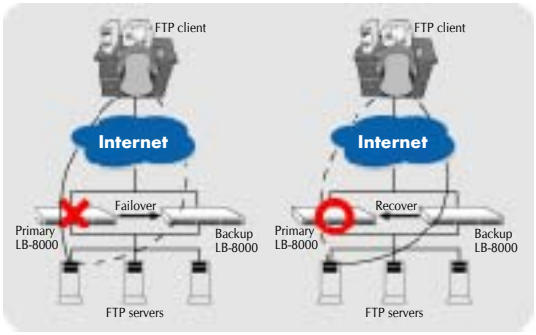
- The DISABLE feature helps you to take off a working server without losing any connection. The LB-8000 will signal system admin when all transactions on a particular server are finished.

Redundancy of LB-8000

- Active-standby mode eliminates the single point of failure. Also, fast network-based failover through heartbeat minimizes the costs of failover.

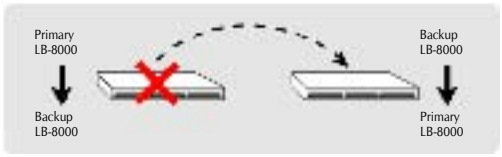
Bi-directional Stateful Failover

- Real time synchronization between primary and backup LB-8000 ensures that two load balancers keep the same information about TCP connections and persistence. This state mirroring function, also called stateful failover, guarantees that no TCP connections or persistence information get lost during failover. Moreover, LB-8000 makes stateful failover bi-directional, which means stateful failover applies no matter the failover happens from primary to backup or vice versa.



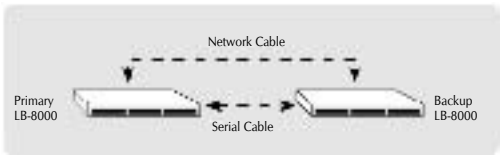
Nice Fail Back

- With Nice Fail Back, backup LB-8000 will become primary after failover happens. That way, even if original primary LB-8000 recovers afterwards, failover will not happen again. This feature can reduce times of failover and raise the availability of system



Dual-path Heartbeat

- Heartbeat signals between two LB-8000 are sent through both network and serial cable. Failover will not happen until backup fails to get the heartbeat signals from primary through both routes. This feature prevents unnecessary failover and avoids the problem that two LB-8000 are trying to become active (master) due to the network failure.



Active / Passive FTP Support

- The LB-8000 put special efforts on FTP application. No matter active or passive FTP, in NAT or direct routing mode, It makes sure that FTP data session goes to the same real server with FTP control session and the load can be still balanced

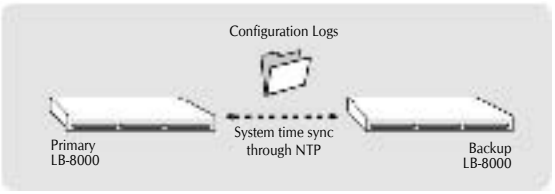
Key Feature

Superior Reliability and Stability

- Embedded operating system provides superior reliability and stability.

Synchronization of Configurations and Logs

- Bi-directional sync function makes sure that primary and backup the LB-8000 always keep the same configurations and logs.



SNMP Support

- The LB-8000 provides its enterprise MIB and will send out TRAP messages to SNMP manager when necessary.

Security

- IP masquerade protects real servers from being exposed to Internet directly. SSH/Base64 allow system admin to manage the LB-8000 safely

APC UPS Support

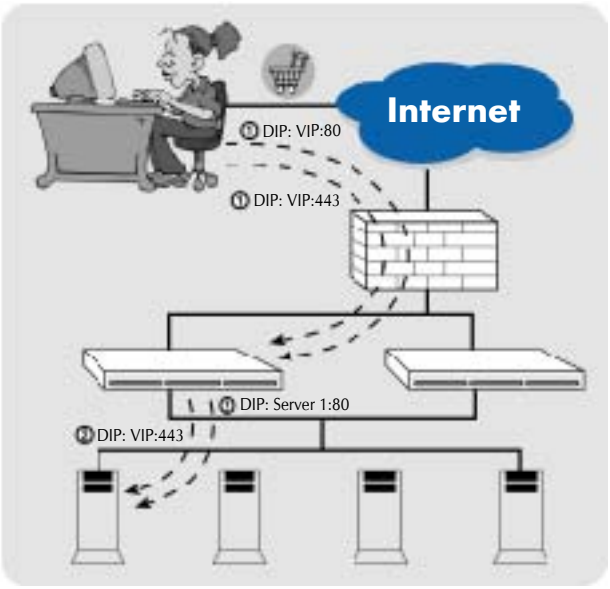
- The LB-8000 can work with APC UPS to be shutdown safely while a power problem suddenly happens on site.

GUI/CLI User Interface

- System administrators can manage the LB-8000 through both GUI (graphical user interface) and CLI (command line interface).

ECOM Protocol

- ECOM protocol makes sure the persistence is still valid when e-commerce visitors are going to SSL pages from normal web pages.



Sticky Connections

- For session-based applications, to keep the integrity of session data, the LB-8000 can always forward the traffic from the same IP address to the same real server.

Real Time Status Monitoring and Statistics

- Through a Java Applet-based monitor, system admin can monitor the status of the LB-8000, real servers and network in a real time basis.

Network Interoperability

- Static route, DNS proxy and outbound NAT provide system admin maximum flexibility to fit the LB-8000 into existing network environment.

Detailed Logging

- The LB-8000 provides detailed logging function for system, management, HA, connection and alert. System admin will be able to export log data and also monthly summary report will be sent by emails.

Email Alert

- When the LB-8000 or real servers fail, system admin will be informed through an alert message.

Specification

Product	Server Load Balancer
Model	LB-8000
Hardware	
CPU	Dual 2.4 GHz Intel® Xeon® processors with 512KB L2 cache, supporting 400/533MHz front side bus speed
Memory	512MB Registered ECC DDR SDRAM, upgradeable to 4GB
Nework Interface	2 x 10/100/1000Mbps Gigabit Ethernet port
Drive Bay	Slim 24X CD-ROM
Thermal Heat Sink	The CPU heat sinks provide the following features: • Support Intel® Xeon® 2.4GHz processor (or above) with FSB 400/533MHz • Copper fins provide superior heat conductivity
Power supply	350W 1U power supply 100-240V 9A AC
Power consumption	Maximum 200W, 680 BTU
Temperature	0~40 Degree C (operating), -10~70 Degree C (storage)
Humidity	5%~ 95% (non-condensing)
Emission	EMI: FCC part 15, CE
Dimensions (H x W x D)	42.4 x 425 x 622.3 mm
Weight	10kg (Net weight)
LED Indicators	PWR, DOM, LAN1, LAN2, SVR, ACT
Button	1 for reset/factory reset
Console	1 x VGA + 1 x PS2 interface for monitor and keyboard
ON/OFF switch	1 x ON/OFF switch
Software	
Compatible Server OS	Windows, Mac OS, Linux, UNIX and all other OS supporting TCP/IP
Supporting Protocols or Applications	• WEB: HTTP, HTTPS, ASP, PHP, JSP, VB (virtual basic script), Active X, JAVA, RML, CGI • Email: POP3, IMAP, SMTP • FTP: active and passive mode under NAT and direct routing • Streaming: RTSP, MMS • Other TCP/UDP based protocols: Telnet, NNTP, LDAP, RADIUS, DNS… etc.
Load Balancing Modes	Round robin, weighted round robin, least connections and weighted least connections
Traffic Management Modes	NAT, direct routing and IP tunneling
Server Health Check	ICMP, port and content check
Fault Tolerance	Bi-directional stateful failover Active-standby configuration Nice fail back Dual-path heartbeat
User Interface	Web GUI, based on Java Applet Command line interface, through console, Telnet or SSH
TFTP Support	Upload the batch configuration file through TFTP.
Scalability	No limit on real server number and cluster (VIP) number
Contents Management in Real Servers	IP Forwarding, VPN (PPTP)
Detailed Logging	System, management, HA, connection and alert with export and monthly report function.
SNMP Support	SNMP enterprise MIB and SNMP Trap
Other Features	Embedded OS Graceful Shutdown Active/Passive FTP Support Static Route NTP (network time protocol) Support Firmware Upgrade through CD APC UPS Support Java Applet-based Real Time Status Monitoring Sync of Configurations and Logs ECOM Protocol Source IP Persistence Email Alert DNS Proxy Outbound NAT

Ordering Information

LB-8000	Server Load Balancer

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