

PRX Traffic Manager

Datasheet
PRX-10G

Benefits

- Reduced communication and infrastructure costs
- Comprehensive network visibility
- QoS management per application and subscriber
- Restrict unauthorized network access
- Tiered service and pricing models
- Network policy management



PRX-10G

PRX-10G Traffic Manager is a carrier-grade bandwidth management solution scalable up to six Gigabit Ethernet or six 10 Gigabit Ethernet links enabling operators to monitor and control network traffic per application and per subscriber. It features load balancing, high availability with automatic hardware fail-over and optional NEBS compliance.

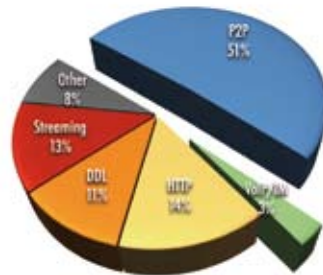
PRX Traffic Manager detects applications with a combination of layer-7 deep packet inspection (DPI) and behavioral traffic analysis. All major protocols – including P2P file sharing, instant messaging, media streaming and Internet telephony – are supported. The integrated QoS management allows prioritization, shaping and blocking of classified traffic. Extensive accounting features provide in-depth application- and subscriber-aware network visibility.

The Bandwidth and Performance Challenge

Bandwidth intensive applications such as peer-to-peer-based file sharing (P2P) use up a disproportionately high amount of network resources. This drives up communication and infrastructure costs and adversely affects the service quality of important business applications such as ERP and CRM systems, as well as next generation applications like Internet telephony or video on demand.

P2P networks are used on a massive scale to distribute copyright-protected content, which can cause legal consequences for network operators. Many file sharers are also using one-click file hosting services providing direct download links to the shared content (DDL). Specifically, ISP and educational networks often encounter a small percentage of heavy users consuming a large proportion of the available bandwidth.

Traditional Internet gateway products such as firewalls often fail to recognize these applications, as they frequently use stealth techniques like protocol obfuscation and encryption to evade detection. In many instances, such systems are overwhelmed by the large number of parallel connections that are opened by these applications.



Source: ipoque Internet study 2007

Key Features

- 60 Gbit/s throughput
- Layer-7 protocol detection with DPI and behavioral analysis
- VoIP, P2P, IM, media streaming, Web, e-mail protocol support
- Detection of encrypted protocols like Skype, BitTorrent, eDonkey/eMule, Winny
- Subscriber-level bandwidth and policy management
- Proven IBM BladeCenter technology
- Up to 6x GigE or 6x 10-GigE links
- Up to 12 active load-balancing blades with automatic fail-over
- Online firmware updates
- IBM predictive failure analysis technology®
- Energy efficient
- Optional NEBS compliance and 48V DC power supplies
- Over 12 million subscribers
- Over 4.2 million packets per second
- Over 240 million concurrent connections
- Over 4 million new connections per second
- Permit legal and block illegal file sharing
- Regular signature updates
- Fast integration as transparent bridge
- Web GUI for simple administration

PRX Traffic Manager Solution

PRX Traffic Manager uses ipoque's layer-7 deep packet inspection and behavioral analysis technology to detect even the most elusive protocols, no matter if they use advanced obfuscation, port hopping, encryption or other techniques to hide from detection.

PRX Traffic Manager provides comprehensive and detailed insight into the network's per-application and per-user traffic. This information can be used to define bandwidth management rules to prioritize, shape, block and log individual applications' traffic either in total or for individual users or user groups.

Operators can offer tiered network service and pricing models along with flexible and fair bandwidth allocation. Premium applications can be prioritized and bandwidth-intensive P2P or streaming applications can be limited.

PRX Traffic Manager provides a unique white listing feature for BitTorrent trackers to allow providers to offer legal P2P services with no copyright infringements.

Voice over IP and Skype

All important protocols used for Internet telephony based on Voice over IP (VoIP) are supported, including SIP, Skype and H.323. The availability of phone service can be selectively controlled per protocol, user and VoIP provider. The integrated QoS functionality of PRX Traffic Manager can enforce priority and guaranteed bandwidth for these real-time applications. Detailed call logging functions can be activated to analyze the service usage.

Simple Installation and Operation

PRX Traffic Manager operates as a transparent bridge for a seamless integration into existing network environments. The Web-based management console allows simple configuration.

Statistics, Logging and Accounting

The management console provides graphical usage statistics per link, user group, application and application class for configurable time intervals. A number of predefined reports help to regain control over the network, detailing the network usage from different perspectives.

All statistical data can be automatically exported at different aggregation levels (i.e. per link, per user, per user group) for subsequent processing in external accounting systems. Optional application-level connection logging, either internal or to an external syslog server, provides fine-granular service usage information.

Ultimate Performance

PRX Traffic Manager has been optimized to meet the performance requirements of the most demanding network environments. Performance scales up to fully loaded 10 gigabit links. Its internal design avoids packet queuing yielding latencies below 0.1 millisecond.

Scalability and High Availability

The PRX-10G based on IBM BladeCenter technology provides unparalleled scalability and hardware fail-over capabilities. Packet processing blades can be added as the network load rises. Packets from up to six links are distributed over the available blades. In case of a blade failure, the remaining blades take over and the failed blade can be replaced. All components are hot-pluggable. Hot-standby blades are also supported.

Support

BladeCenter parts can be replaced based on IBM's worldwide support network.

PRX-10G

Performance

Throughput (Gbit/s)	60
Packet Rate (Packets/s)	4.2 million
Number of Active Flows	240 million
New Flow Rate (Flows/s)	4 million

Configuration Limit

Subscribers	12 million
Policy Classes	100
Rules per Policy Class	100
Active Rules per Subscriber	20
Active Rules per System	240 million
Subnets	1,200
Subnet Exceptions	1,200
Profiles	600

Interfaces

Network Ports (Int./Ext.)	12x Gigabit Ethernet 10/100/1000 Base-T or SFP; optional: 12x 10 Gigabit Ethernet
Management Port	10/100/1000Base-T
Chaining Port	10/100/1000Base-T
Console Port	integrated KVM switch

Hardware

Size	7U rack mount, NEBS-3 compliant: 8-12U
Weight (kg)	60-150
Power	Up to 4 redundant, AC 200-240V, 2000W, optional: DC -48 to -60V
Certifications	optional: NEBS Level 3

Protocol Support Includes

Peer-to-Peer (P2P) Protocols	AppleJuice, Ares, BitTorrent, DirectConnect, eDonkey, FastTrack, Filetopia, Freenet, Gnutella, Manolito, Mute, SoulSeek, WinMX, XDCC, QQ
Voice over IP (VoIP) Protocols	H.323, IAX, SIP, Skype
Instant Messenger (IM)	IRC, Jabber/Google Talk, MSN, Oscar, Yahoo

Optional Modules

Streaming Protocols	Flash, Joost, MMS, MPEG, Real Media Stream, Quicktime, Windows Media Stream
Standard Protocols	DDL, FTP, HTTP, IMAP, POP3, SMTP, Usenet
Gaming Protocols	XBOX, HalfLife2, Steam, World of Warcraft
Tunnel Protocols	HamachiVPN, SoftEther, SSH, TOR, VPN-X
Advanced Reporting	subscriber reporting <ul style="list-style-type: none"> per-application, per-subscriber statistics top talker statistics for applications and subscribers automatic CSV format FTP export connection logging for all applications incl syslog support
IP Control	subscriber traffic management <ul style="list-style-type: none"> policy classes to implement tiered service levels for subscriber groups rules per subscriber, per class and per link static subscriber-IP address mapping dynamic subscriber-IP address mapping via DHCP, RADIUS and static MAC addresses