

DATA SHEET

# PRX TRAFFIC MANAGER

PRX Traffic Manager is a comprehensive and cost-effective bandwidth management solution enabling operators to monitor and control network traffic per application and per subscriber. It detects applications with a combination of layer-7 deep packet inspection (DPI) and behavioral traffic analysis. All of today's major protocols, including encrypted and obfuscated protocols such as Skype, BitTorrent, eDonkey or Winny, can be defined based on a number of criteria. The integrated QoS management allows the optimization of classified traffic. Extensive accounting and reporting features provide in-depth application- and subscriber-aware network visibility.



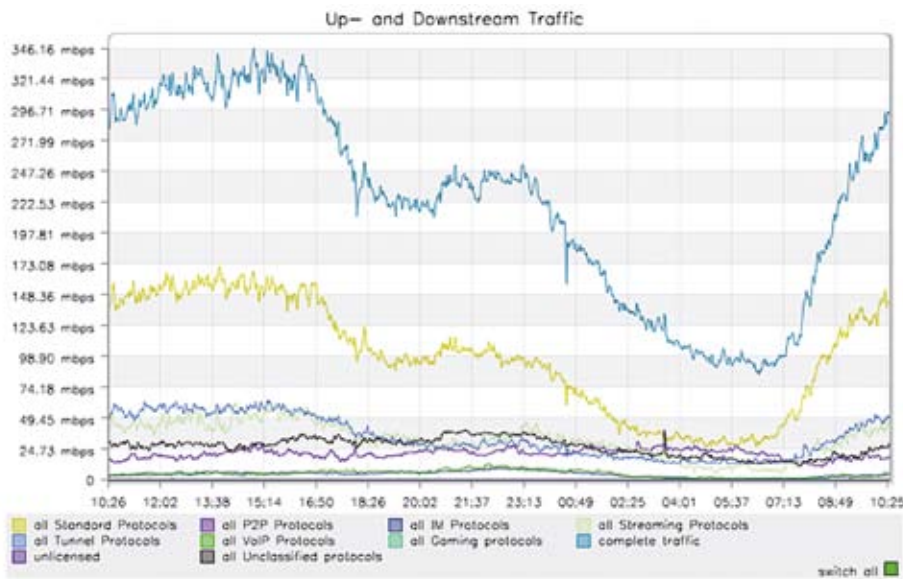
## THE BANDWIDTH AND PERFORMANCE CHALLENGE

Today's bandwidth intensive applications often use up a disproportionately high amount of network resources. The challenge operators face because of this is twofold: On one side, these kinds of services are the very reason for new subscribers to sign up for broadband Internet access. On the other, the excessive use by too many simultaneous users drives up infrastructure costs. More importantly, all this adversely affects the quality of experience for

interactive applications such as Web browsing, Internet telephony, and online gaming. Highly time-sensitive applications like Internet telephony or video on demand are less attractive when the QoS suffers from jitter and latency. 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.

## HIGHLIGHTS

- Layer-7 protocol detection with DPI and behavioral analysis
- Detection of encrypted protocols like Skype, BitTorrent, eDonkey/eMule, Winny
- Subscriber-level bandwidth and policy management
- Support of asymmetric network traffic
- Full subscriber and application reporting with Net Reporter



**PRX TRAFFIC MANAGER SOLUTION**

At the top of the to-do list of operators when it comes to network management are therefore two things: getting fine-grained statistics about application and subscriber activities in the network and using that data to manage the traffic and services.

With PRX Traffic Manager ipoque provides operators a sophisticated bandwidth management solution based on deep packet inspection, helping them to identify, monitor, and manage traffic on a per-subscriber basis. PRX Traffic Manager reduces communication and infra-

structure costs as well as increases customer satisfaction through guaranteed QoS. Thus operators can keep pace with the growing traffic without continually investing in more bandwidth. They can offer subscribers a consistent quality of experience and extra services.

**PRX TRAFFIC MANAGER HIGHLIGHTS**

PRX Traffic Manager uses ipoque's layer-7 deep packet inspection and behavior analysis technology to detect even the most elusive protocols, even if they use advanced obfuscation,

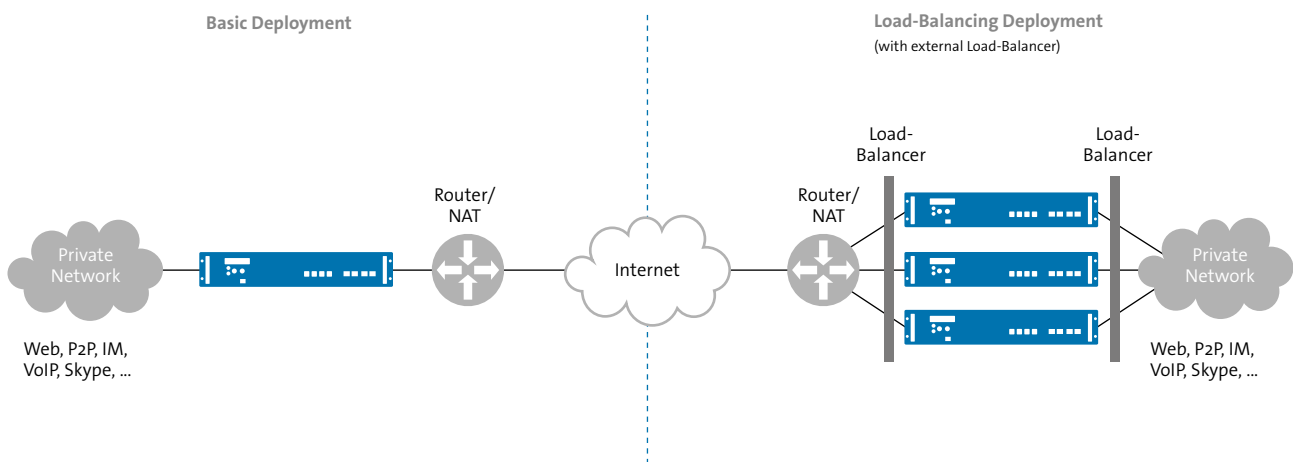
port hopping, encryption and other techniques to hide from detection.

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 so that providers can offer legal P2P services with no copyright infringements.

**COMPREHENSIVE PROTOCOL SUPPORT**

- Support for over 200 protocols
- All standard protocols for Web, e-mail and file transfer
- All important protocols for P2P file sharing, Internet telephony, media streaming, instant messaging, tunneling, online gaming
- Custom-defined protocols
- Traffic management and statistics for MPLS-labeled, VLAN-tagged and DSCP-labeled traffic
- Tunnel decapsulation for GRE, IP-in-IP and GTP-U tunnels
- Integrated QoS management

**PRX TRAFFIC MANAGER – DEPLOYMENT SCENARIOS**



## ULTIMATE PERFORMANCE

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- Optimized to meet the performance requirements of even the most demanding network environments
- Performance scales up to fully loaded gigabit links
- Packet latency below 0.1 millisecond
- PRX-2G and PRX-5G support 3 network links, and PRX-1100 supports 2 links per system and can handle asymmetric network traffic on these links

## EASY TO INSTALL AND OPERATE

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- Transparent bridge operation for a seamless integration into existing network environments
- Simple configuration via Web-based management console

## HIGH AVAILABILITY

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- Network connectivity maintained through the built-in bypass switch for all 1000Base-T copper interfaces during firmware updates or in case of a system failure

## STATISTICS, LOGGING, ACCOUNTING AND REPORTING

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- Graphical usage statistics per link, subscriber group, application and application class for configurable time intervals ranging from one hour to one year
- Predefined reports issued to regain control over the network, detailing the network usage from different perspectives
- All statistical data automatically exported at different aggregation levels (i.e. per link, per subscriber, per user group) for subsequent processing in external accounting systems
- Fine-granular service usage information through optional application-level connection logging to an external syslog server

## FLEXIBLE SUPPORT AND SERVICES

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- Worldwide 24x7 support with 4 hours reaction time
- Regular protocol signature updates
- E-mail, phone and remote installation support
- Customization services for specific requirements not available in off-the-shelf products

## BENEFITS

Reduced communication and infrastructure costs

Comprehensive network visibility

QoS management per application and subscriber

Restrict unauthorized network access

Tiered service and pricing models

Subscriber policy management

**PRX PLATFORMS**

Performance	PRX-1100	PRX-2G	PRX-5G
Throughput	400 Mbit/s	2 Gbit/s	4 Gbit/s
Packet Rate	150,000 Packets/s	500,000 Packets/s	700,000 Packets/s
Number of Active Connections	2 million <sup>1</sup>	4 million <sup>1</sup>	20 million <sup>1</sup>
New Connection Rate	150,000 Flows/s	500,000 Flows/s	700,000 Flows/s
<b>Configuration Limits</b>			
Policy Classes	100	100	100
Class Policy Rules	500	1,000	1,000
Active Subscribers	32,000	250,000	500,000
Active Subscriber Policy Rules <sup>2</sup>	320,000	2.6 million	5 million
Subnets	100	100	100
Subnet Exceptions	50	100	100
Profiles	50	50	50
<b>Interfaces</b>			
Network Ports (Int./Ext.)	4x 10/100/1000Base-T	2x 10/100/1000Base-T and optional: 4x 10/100/1000Base-T or 4x SFP	2x 10/100/1000Base-T and optional: 4x 10/100/1000Base-T or 4x SFP or 2x 10GBase-CX4 or 2x XFP
Hardware Bypass	Yes	Yes (1000Base-T)	Yes (1000Base-T)
Management Port	10/100/1000Base-T	10/100/1000Base-T	10/100/1000Base-T
Chaining Port	10/100/1000Base-T	10/100/1000Base-T	10/100/1000Base-T
Console Port	Serial RJ-45	Serial RJ-45	Serial RJ-45
<b>Hardware</b>			
Size (W x H x D in mm)	1U rack mount 450 x 45 x 295	1U rack mount 427 x 44 x 480	2U rack mount 424 x 88 x 600
Weight	4.5 kg	8 kg	25 kg
Power	100-240 V, 50/60 Hz, 100 W	100-240 V, 50/60 Hz, 250 W	Redundant, AC 90-264V, 47-63Hz, 460W, optional: DC -48 to -60V
<b>Protocol Support Includes <sup>3</sup></b>			
Peer-to-Peer (P2P) Protocols	AppleJuice, Ares, BitTorrent (encrypted and unencrypted), DirectConnect, eDonkey, KaZaa/FastTrack, Filetopia, Freenet, Gnutella, iMesh, Manolito, Mute, OpenFT, OFF, Pando, SoulSeek, Thunder/Webthunder, WinMX, Winny, XDCC		
Voice over IP (VoIP) Protocols	H.323, IAX, MGCP, SIP, Skinny, Skype		
Instant Messenger (IM)	Gadu-Gadu, IRC, PoPo, Jabber/Google Talk, MSN, Oscar, Yahoo, Paltalk, QQ		
Streaming Protocols	AVI, Feidian, Flash, Icecast, Kontiki, MMS, Move, MPEG, OGG, ORB, PPLive, PPStream, QQ, QuickTime, Real Media Stream, RTP, RTSP, SCTP, SHOUTcast, Slingbox, SopCast, TVAnts, TVUPlayer, UUSee, V CAST, VeohTV, Windows Media Stream, Zattoo		
Standard Protocols	Citrix, BGP, DHCP, DNS, EGP, FTP, HTTP, ICMP, IGMP, IMAP, MySQL, NFS, NTP, OSPF, pcAnywhere, POP3, PostgreSQL, RDP, SMB/CIFS, SMTP, SNMP, SSSDP, STUN, Telnet, Usenet, VNC, Direct Download Link (DDL)		
Gaming Protocols	Battlefield, Half-Life 2 and Mods, Quake, Second Life, Steam, World of Warcraft, Xbox		
Tunnel Protocols	SSL, GRE, HamachiVPN, IPsec, OpenVPN, SoftEthernet, SSH, Tor, VPN-X, VTun, L2TP		
<b>Options</b>			
Reporting	enables export of reporting data including: per application, per subscriber statistics, top talker statistics for applications and subscribers		

<sup>1)</sup> The given number of active flows and the number of subscribers are not necessarily supported at the same time. The number of supported active flows can be increased by decreasing the number of subscribers. One subscriber uses as much memory as ten flows.

<sup>2)</sup> Up to 10 Policy Rules per Subscriber

<sup>3)</sup> For detailed protocol support information, check [www.ipoque.com/protocol-support](http://www.ipoque.com/protocol-support)