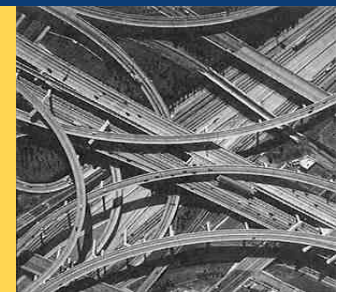


XRoads Networks, Inc.

Traffic Shaping Overview

Revision 3.3.1

April 2006



Why Shape Traffic?

- **Traffic Shaping – The ability to control and/or limit network usage by certain users/applications and guarantee or prioritize bandwidth for other users and/or critical applications.**
- ◆ **Bandwidth costs are associated with monthly usage.**
- ◆ **Organizations spend thousands each year for malicious, recreational, and other unauthorized bandwidth usage.**
- ◆ **Additional costs are incurred through productivity losses due to poor critical application performance.**



How To Shape Traffic

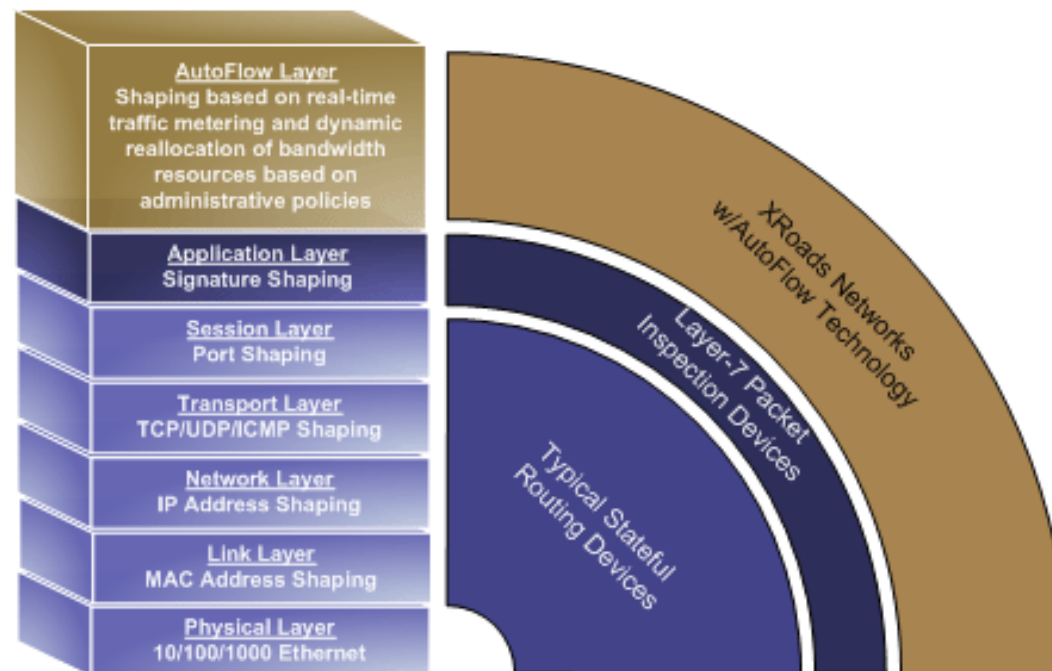
- ◆ **A small number of users can slow down the entire network.**
 - ◆ Group based policies can be created which limit end-user traffic based on IP address, MAC, or application.
- ◆ **Malicious or recreational traffic can severely effect critical application responsiveness.**
 - ◆ Layer-7 application throttling identifies bandwidth intensive applications like peer-to-peer and media streaming and can limit the amount of bandwidth they use.
- ◆ **Costs are incurred through productivity losses due to poor critical application performance.**
 - ◆ Critical applications can be given priority access to network bandwidth to ensure responsiveness and throughput.

When Traffic Shaping Is Not Enough

- ◆ **Some applications like VoIP and SAP may require dedicated or redundant connectivity.**
 - ◆ With multiple built-in WAN connections the Edge appliance can easily route applications over a secondary WAN link while providing complete redundancy for ALL network traffic.
- ◆ **What if additional bandwidth is still required after the optimization has been implemented?**
 - ◆ With the ability to combine various broadband connections the Edge appliance provides an easy and inexpensive upgrade path.
- ◆ **Controlling bandwidth costs is becoming a primary concern for many IT organizations.**
 - ◆ Only the Edge appliances has the ability to provide Best Path Routing over multiple WAN links.

Deep Packet Inspection

- ◆ The Edge appliances utilize Layer-7 signature matching to peer directly into the actual content of packets traversing the appliance.



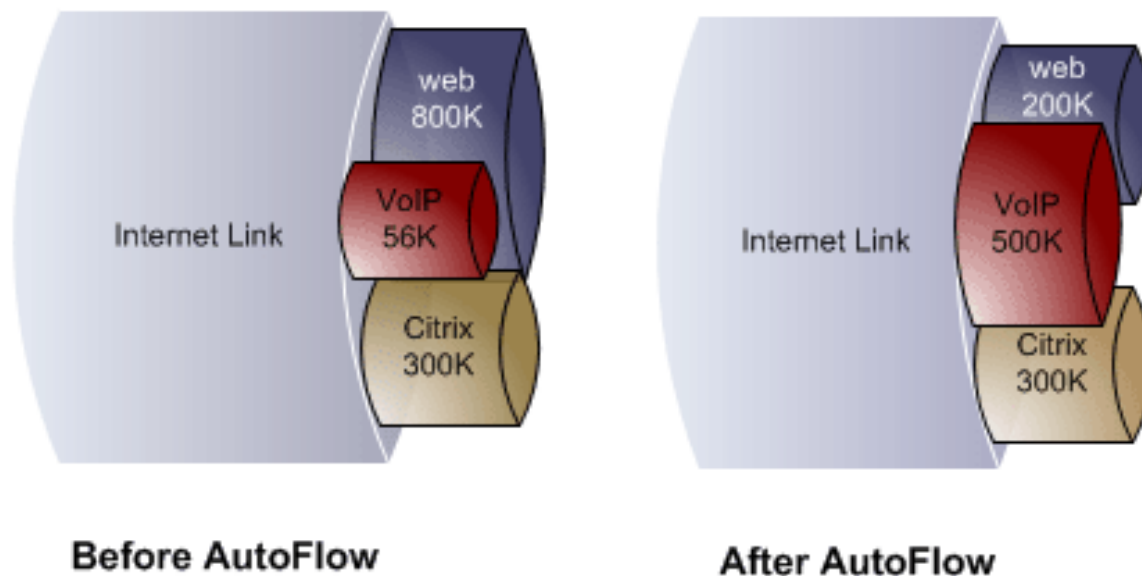
Policy Based Traffic Shaping

- **Problem: Need to guarantee bandwidth for existing critical applications/users and lock down abuses.**
- ◆ **Solution: Policy based traffic shaping.**
 - Network administrators can create policies which lock down bandwidth on a per user, server, or application basis. Priority to bandwidth can also be assigned to expedite critical traffic.



AutoFlow

- **Problem: How to provide additional bandwidth for critical applications when its needed the most?**
- ◆ **Solution: AutoFlow automatically reallocates bandwidth resources for critical applications.**



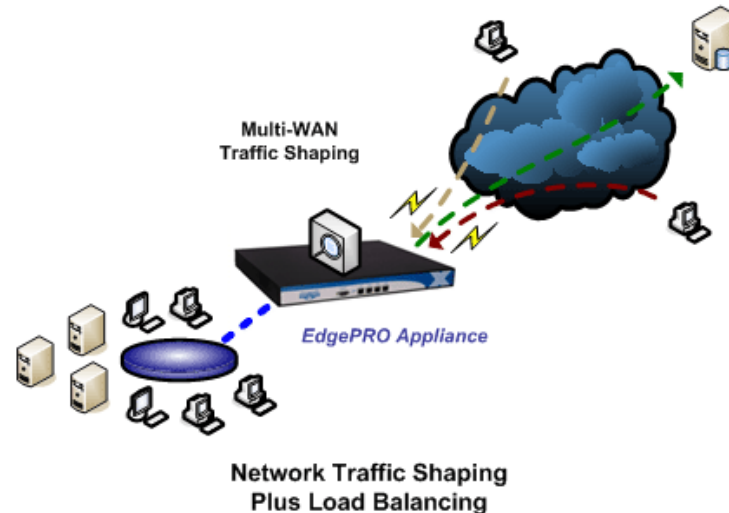
Traffic Shaping Solutions

- **Problem: Need to guarantee bandwidth for existing critical applications/users and lock down abuses.**
- ◆ **Solution: Policy based traffic shaping.**
 - Network administrators can create policies which lock down bandwidth on a per user, server, or application basis. Priority to bandwidth can also be assigned to expedite critical traffic.



Multi-WAN Traffic Shaping

- **Problem:** What happens when traffic is being shaped to its optimal amount, but additional bandwidth is still required?
- ◆ **Solution:** Unlike our competition, the Edge appliances have the ability to increase bandwidth by load balancing additional WAN connections.



Designed with simplicity in mind!

- Easy to configure and navigate
 - ◆ Web based interface HTTP/HTTPS
 - ◆ Remote CLI via SSH
- Graphical reporting
 - ◆ WAN usage reporting
 - ◆ Detailed traffic and policy reporting
- Additional features
 - ◆ Network packet sniffer
 - ◆ Syslog server
 - ◆ Server monitoring



Summary / ROI

- ROI (Return On Investment) – The average organization can lose \$50-100 per hour per employee based on loss of productivity caused by network slowdowns and interruptions in service.
- ◆ Based on that statistic, an average 25 person office can lose between \$3,000 and \$10,000 per quarter.
- ◆ By implementing an EdgeXL product an organization can see cost savings with the first quarter.
- ◆ Lower costs, increase productivity, and provide an upgrade path to lower cost bandwidth and redundancy in the future with the EdgeXL product line.



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