

# **(DBM) Dynamic Bandwidth Management Demonstration**

**Unique Applied Patent Technology**

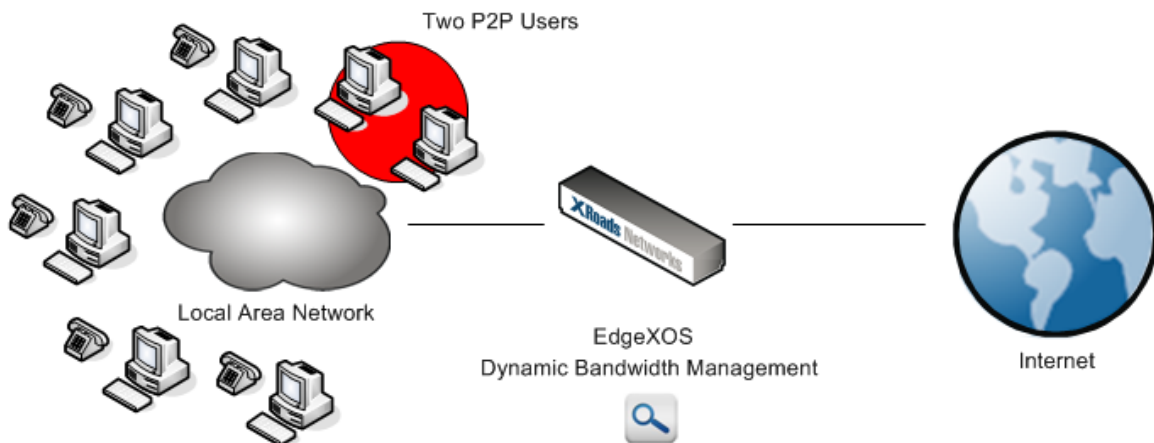
**By XRoads Networks**

## When to deploy Dynamic Bandwidth Management (DBM):

- Ensure bandwidth for VoIP applications.
- Guarantee responsiveness for mission critical applications like CRM and Citrix.
- Minimize the possibility of a few users choking the entire network using recreational or malicious applications.

### Example

DBM provides automated shaping of top bandwidth users as defined by the network administrator. This demonstration is based on the following example network:

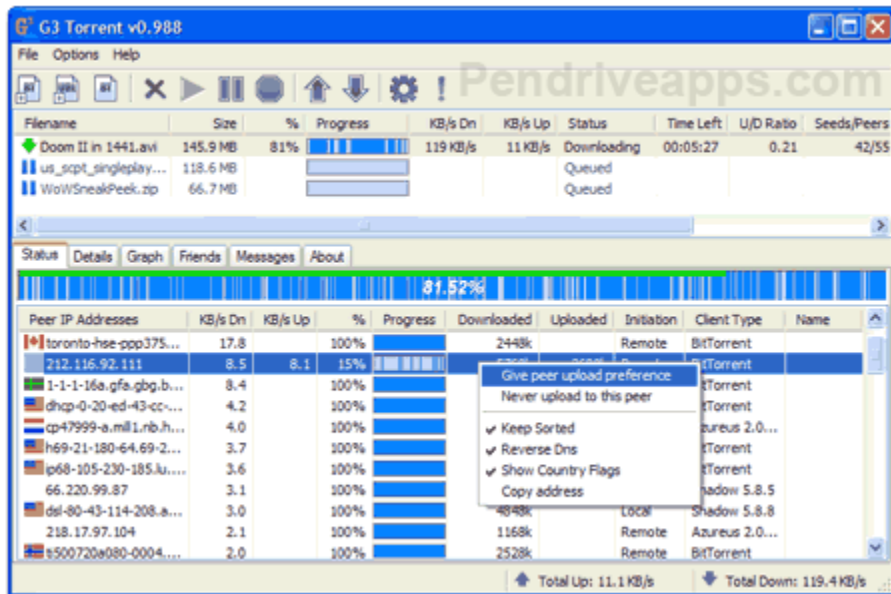


**Goal: Ensure at least 100Kbps of bandwidth per VoIP and limit usage of recreational peer-to-peer applications like Bit Torrent.**

Within this example network there are 25 users, each with a workstation and a VoIP phone. The total available bandwidth is 10Mbps download and 3Mbps upload.

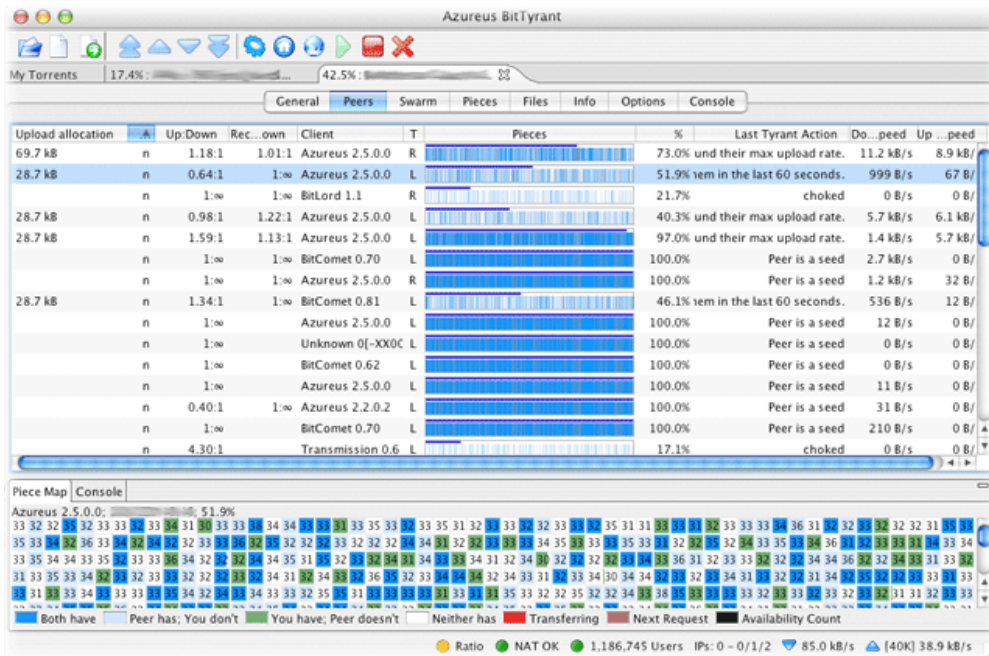
The VoIP phones take priority over all other traffic. Recreational applications, and/or applications which are not deemed critical should specifically be limited.

Within the network, one user has obtained a copy of G3 Torrent, one of the many variations of Bit Torrent. They are using this application to download a number of files from different servers across the Internet.



Note: P2P applications are constantly changing, and no pre-defined list of applications will ever be able to accurately shape all of them.

Another user has obtained a different variant of the BitTorrent P2P applications called BitTyrant which is a good name for this application as it consumes a great deal of bandwidth.



Together these two users are taking over 8Mbps of bandwidth from the network, which is slowing everyone else down.

When combined with normal usage from other users there is not enough bandwidth left to make reliable VoIP calls or to ensure availability for critical applications like Citrix and CRM systems.

The EdgeXOS platforms' DBM technology works differently from other application-based traffic shapers, which can only shape based on pre-defined signatures and become quickly outdated.

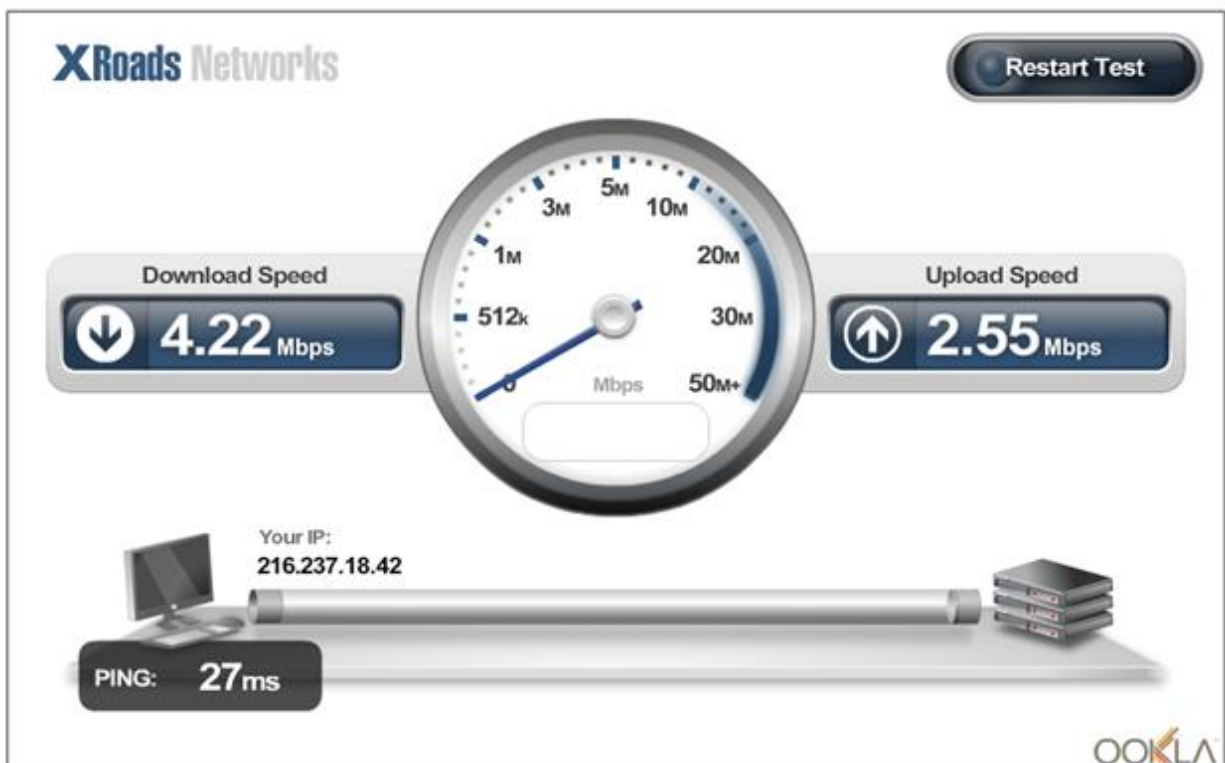
Instead of just relying on a predefined list of applications, the EdgeXOS platform can automatically adjust to throttle new P2P or file sharing applications and do so only during periods of high utilization.

The dynamic nature of our technology means that pre-defined lists are not required, and thus your traffic shaping solution will never be “out-of-date” unlike some other traffic shapers on the market.

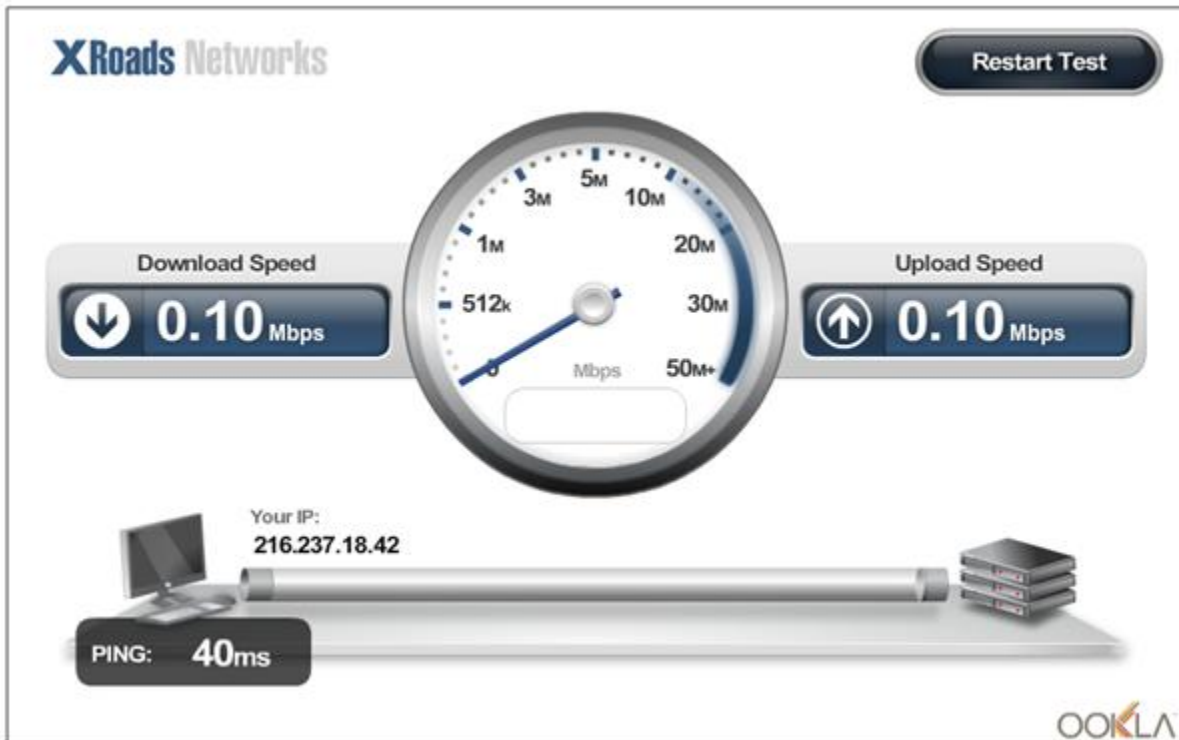
With various control points, the network administrator can quickly customize the dynamic bandwidth manager to tailor the shaping to meet your specific network environment.

In our example, a user that was using over 4Mbps of bandwidth is immediately slowed to only using 2Mbps, and is gradually slowed to approx. 100Kbps over the course of several minutes.

### Before



## After

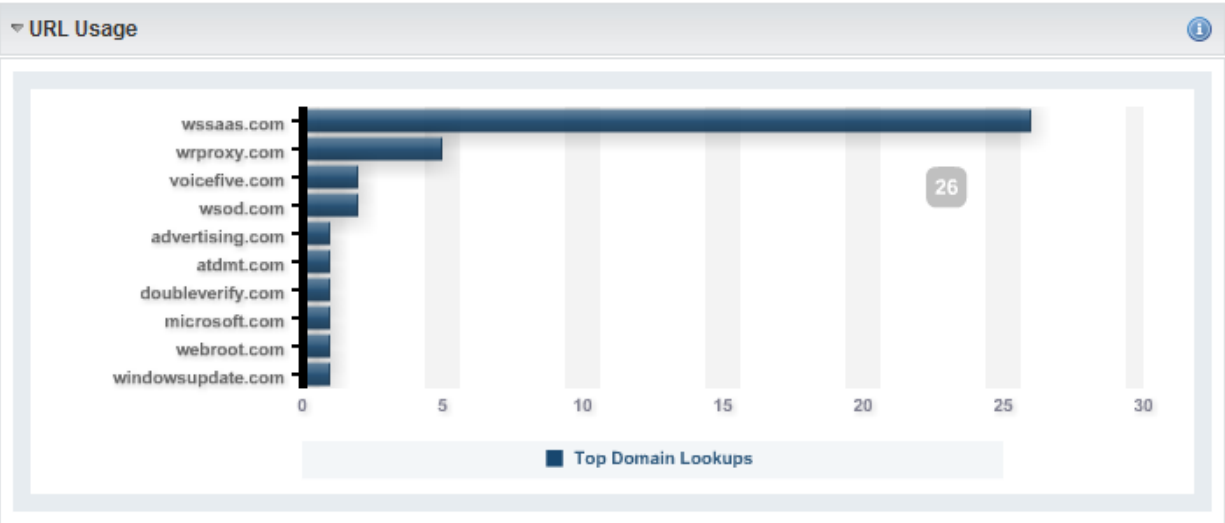
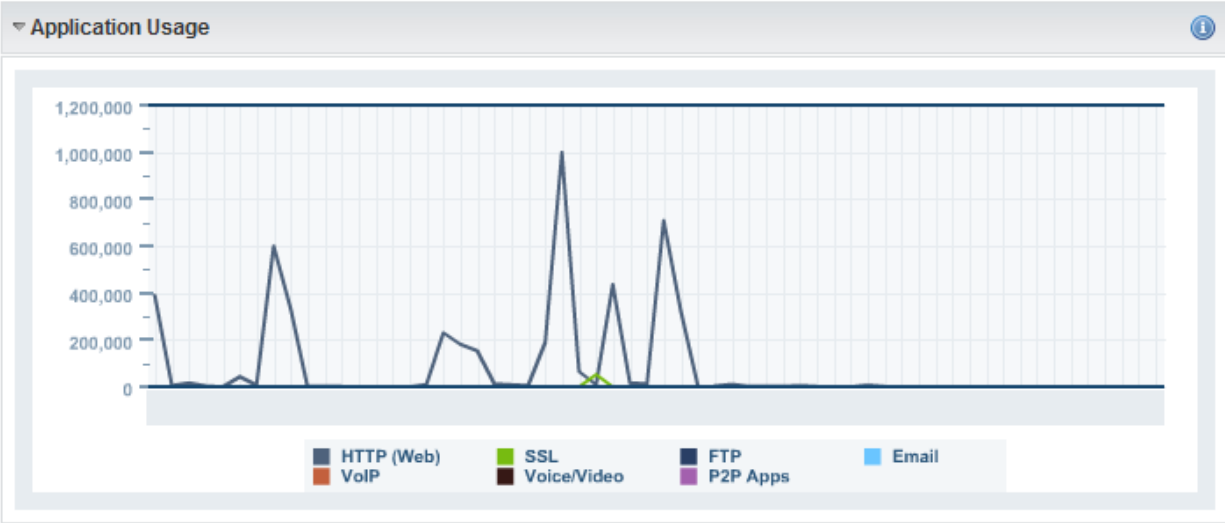


This unique shaping capability immediately allows for high quality VoIP calls and ensures reliable access to Citrix applications for the other 23 users on the network.

DBM can also be used to quickly identify who the top users are and what sites they are accessing using the EdgeXOS platforms' built-in reporting capabilities.

DBM Reporting

Inbound Throttling	Address	Stage
Active	192.168.168.137	7
Active	192.168.168.138	7
Inactive	192.168.168.45	



For more information on our Dynamic Bandwidth Management (DBM) functionality or our network reporting capabilities, please contact an XRoads Networks representative.