



Leading UK ISP HOUXOU ensures 24 * 7 optimized internet services while catering for ever increasing demand from all sectors.

Background

Houxou has been providing reliable and professional internet services since 1994. This experience means they are ideally positioned to promise high levels of quality in areas such as access speed, uptime, scalability, security and customer service.

The Problem

8 Mbps and 16 Mbps XDSL has been around for some time now and with the onslaught of 24mb ADSL puts increasing pressure on carriers to deliver. Throwing bandwidth exponentially at the problem did not seem a viable option. Prior to installing the Opteq solution the usage of p2p and other downloads was climbing at an exponential rate with the addition of each new customer.

The costs of DSL bandwidth to the ISP is still relatively prohibitive so Houxou set out to seek a solution that offered the best return for investment for controlling and optimizing the existing infrastructure so that growth was kept in line with business objectives and that services for both corporate and home based customers was guaranteed.

Houxou were seeking a solution that would provide real time visibility, control and optimization of the protocols in use on the network in the most comprehensive way. After analyzing the market and testing various equipment an Opteq iQ solution was chosen. "Internet Traffic identification in excess of 90% plus the ability to control all traffic types in both directions including non TCP/IP– i.e.: UDP for VOD and VOIP from a central location was unique" says Simon Billis and continues "All other solutions tested could not control the rate of incoming UDP from my customer base and therefore this *uncontrollable* traffic had the ability of seriously disrupting the QoS policies I had put in place. Given the fact that VoIP is predominantly UDP these are important considerations in a world market that is starting to rely heavily on VoIP, VOD and streaming media."

The Cure

Houxou installed an Opteq OP2500 into the network just behind the core router that feeds the DSL network providing Houxou the following benefits.

- Network Visibility: Full layer 7 visibility of network traffic.
- Real-time Monitoring and alerting which helps identify issues on the network before they become potential problems.
- Bandwidth management allocating bandwidth to services based on current average demand.
- Transparent web caching.
- Increased Link Lifespan.
- Increased Revenue & Decreased costs.



“It allows us to monitor our traffic profiles and usage in a way that allows us to intelligently allocate bandwidth to latency sensitive applications based on current user demand and its time-of-day policies also permits us to limit large downloads during working hours if for example our business and home customers require the bandwidth for VOIP. The rules are adjusted automatically so we are assured that our users are getting the best value for money at all times”

“We are also able to identify certain Trojans on the network and block those out adding value and protection to our client base while also monitoring and controlling the average sync connections on the network which would alert and protect us from the majority of DDOS attacks” says Simon Billis.

“Opteq iQ is a modular, fully integrated product suite, designed and built on a singular solution architecture providing advanced functionality, scalability and performance,” says Sean Brett, Business Development manager for Opteq Europe. “This offering provides unparalleled consistency, manageability, ease of use and a fast, measurable return on investment. Basically the solution specializes in ISP optimization and there are a number of modular technologies that may be deployed on the same or across multiple units if necessary to cater for demand”

The transparent cache was enabled with no disruption to network traffic and no client side configuration required. Houxou experienced immediate savings in excess of 40 % in terms of actual HTTP bandwidth saved and more importantly because those items are cached they are delivered back to the user at line speed which has resulted in significant speed improvements. Cached items are delivered on average back to the users at 4ms as opposed to the average 150ms for non cached items.

“Opteq is the only product on the market that we are aware of that actually “emulates” precise link speeds and paces hosts down to the specified bit rate without having to queue traffic. If there is a queue then there is already congestion. Most competing products we looked at have to have a queue in order to work at all so they have to cause latency first even when there is no congestion.” Continues Simon Billis.

“If the Opteq iQ detects a queue forming either on the link limitation or for any individual user then it paces lower priority traffic coming into the network by slowing it down at the sending hosts until there is no queue again. Essentially high priority traffic has a free flowing path through the network at all times.” Says Sean Brett.

As hosts are paced through Opteq’s proprietary host pacing technology, hosts on either end of the connection adjust their communication rates. This is irrespective of the protocol they are using. This is due to the simple reality that all applications that are written to communicate on the internet have flow control mechanism built into them or they would not work. Withholding ack's and window resizing generally across the flows allows the unit to manage many hundreds of thousands of hosts without the processor overload problems that many have in this space at high speeds. (As they HAVE to manage each TCP session to pace the user, who could have hundreds or thousands of sessions open, whilst queuing outgoing UDP and doing nothing about the rate of incoming non TCP / IP. Whereas the Opteq would have one rule per user and little if no congestion)

“Opteq took just 15 minutes to configure. That was both the bandwidth management & Cache modules running on the same device and we have seen immense network performance improvements. In a nutshell we commend Opteq to any ISP or enterprise that is serious about managing their bandwidth” – Simon Billis – Houxou.com – London.