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Bandwidth i.Q. Datasheet

Opteq International is acknowledged as an emerging leader in the rapidly evolving world of true network management. We operate according to an independent ethos, remaining inventive, flexible and progressive within a future focused industry. By designing, developing and manufacturing our own proprietary applications on unique hardware server platforms, we retain total control over the quality, performance and reliability of our products.

The Opteq flagship product, Opteq iQ, is the unique customised vehicle through which we measurably impact the businesses of our customers by fully capitalising on the investment made in their network. Opteq identifies the existing barriers that prevent your organisation from realising the full potential of your network architecture. The driving idea behind Opteq iQ is to get the most out of our customer's network ...to thrive in today's fast-paced, data-intensive economy where our customers depend on the corporate network to be truly responsive and secure.

Opteq iQ is designed as a single solution to facilitate the three converging key deliverables of the network management world – Performance, Security and Management.

Singular iQ is at the core of our solutions. All of the Opteq iQ application modules reside on, and exploit the rich functionality provided by Singular iQ. With Opteq's Singular iQ, you have all the comprehensive sets of tools and utilities available to enforce true network management within your organisation.

This modular architecture fundamentally differentiates the Opteq iQ product set from its competitors and underpins Opteq's approach and philosophy towards managing network infrastructure - end-to-end management, customised for each unique installation, from one transparent solution.

Accelerate...

Bandwidth iQ adds maximum value in the areas of visibility, control and optimisation of your network traffic...

Bandwidth iQ is used by thousands of ISP customers worldwide. This demanding customer base has resulted in the highest throughput, lowest latency, most powerful and feature rich bandwidth management product available today.

The ongoing growth and convergence of different traffic types in IP networks has resulted in congestion and increased the complexity of network management. Bandwidth iQ inimitably solves this problem and adds value in the areas of performance, reliability and integrity improvement as well as measurement and control. Whilst most bandwidth management solutions are focused on managing queues, Bandwidth iQ's primary focus is on avoiding the queues in the first place by managing the traffic at the point of ingress and ultimately, if necessary, provide superior traffic prioritisation.

The ability to effectively manage bandwidth for efficiency and throughput is a primary advantage of Bandwidth iQ whilst also providing the ability to prioritise traffic or guarantee bandwidth by application, service, user or any other entity on the network.

Stretch your network to deliver real Business Benefits.

Enhancing your network, building your business, Bandwidth iQ:

- Optimises your network usage and performance.
- Moves best effort delivery to a predictable service.
- Dedicates the correct amount of bandwidth to your users and applications – increasing user productivity satisfaction and performance of all your applications.
- Enforces service level agreements with effective management of your bandwidth – reducing management, support and maintenance costs.
- Allows the business to eliminate and delay costly bandwidth upgrades.

Bandwidth iQ reduces traffic congestion, discards and retransmissions, increasing performance, reliability and integrity providing comprehensive bandwidth management and control.





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Bandwidth i.Q. provides a dynamic solution to managing network traffic...

Functions

- To buffer and smooth congestion peaks so as to reduce or eliminate discards and retransmissions
- To identify (classify) traffic types, hosts, and applications
- To enforce traffic and bandwidth policies
- To deliver guaranteed levels of service
- To deliver more advanced Quality of Service (AQoS)
- To eliminate queuing (QOS)
- To enforce traffic priorities in line with business needs
- To provide reports to enable effective management of traffic

Features

I. Classification

- Ability to classify both inbound and outbound traffic using a single rule
- All protocols (ie IP, IPX, DECnet, IGMP etc.)
- Port Source, Destination or either
- Port Range
- Special filters for packet fragments, SYN set, ACK set, connects (SYN set & ACK not set) and all IP. (TCP header flags)
- IP Address or subnet. Source or Destination Address or both
- Named network object and groups support
- P2P protocols – Gnutella, Morpheus, Kazaa, Bittorrent and variants
- VLAN discovery and filtering (802.1q)
- TOS/Diffserv Matching (802.1p)
- MAC Address. Source or Destination Address or both
- Virtual Host Name Address filtering (eg DNS name, www.opteqint.net)
- URL sub-string or domain from GET or POST
- FTP Protocol sniffing
- SMTP Protocol and address decoding
- HTTP/S Protocol and header decoding
- IM Protocol discovery
- VOIP discovery
- Full layer 7 decoding

2. Actions

- Fixed or automatic rate limiting (TCP window size) using proprietary algorithms
- Manages inbound UDP traffic from the host
- Fine grained control of Bandwidth In, Out or combined (Bit Pacing)
- Minimum (Guaranteed) Bandwidth
- Burst Bandwidth with unlimited triggers
- 10 priority levels with priority thresholds
- Pass-Thru for unmanaged data streams
- Deny to block any traffic stream
- Statistics Only Rules for reporting
- Time-of-day, Day-of-Week, or Weekend activation

Unique Features

- Ability to classify both inbound and out bound traffic using a single rule
- Named network object and groups support
- Global rules for multiple interfaces
- Manages inbound UDP traffic from the host
- Fine grained control of Bandwidth In, Out or combined (Bit Pacing)
- True Gigabit^{PLUS} - highest throughput available on the market
- Lowest latency - on the market
- Unlimited Sessions or Policies
- Caters for exceptional load management/capacity

Product Examples

Bandwidth i.Q.
Please select a menu option below

Welcome to the Opteq quick menu system. Please select a menu option below, or if you are an advanced user you can switch to the advanced menu. Please take note of the help system and wizard options if you are a new/inexperienced user.

Please note that the options presented in the quick menu are not all of the configuration/reporting options, but the most commonly used.

MANAGE BANDWIDTH RULESET | BANDWIDTH I.Q. SETTINGS | MANAGE COMPRESSION RULESET | COMPRESSION I.Q. OPTIONS | WHAT IS HAPPENING ON YOUR NETWORK?

MANAGE QUOTAS | MANAGE TEMPLATES | MANAGE PROFILES | LAUNCH POPUP HELP SYSTEM | You can use the wizard to speed setup up! | HOW MUCH IS COMPRESSION SAVING ME?

SWITCH TO ADVANCED MENU FROM NOW ON | REPORTS QUICKVIEW

WAN1 Link Usage
120Mbps, 96Mbps, 72Mbps, 48Mbps, 24Mbps, 0bps
118.46Mbps, 232bps
In Out

Streams Usage
100%, 80%, 60%, 40%, 20%, 0%
25.06%
Streams

Buffers Usage
100%, 80%, 60%, 40%, 20%, 0%
0%
Buffers

Online Policy/Rule Table for the LAN Interface																			
No.	Group	Name	Dir	Flags	Prot	IP		MAC		TCP	BW/Pps		Burst			Pri	Mrk	Stats	
						Port	Addr	Prot	Addr		TOS	VLAN	Fit	Win	In/Out				Min
Interface (Analyze)											1G/1G bps				900M				
1010	Ifac	P2P			p2p														
1020	Ifac	Spyware			spyware														
2000	Ifac	HighPriority									700M/700M bps		1G						
2010	HighPriority	DNS														9			
2020	HighPriority	AJHTTP			http											8			
2030	HighPriority	IM			im											7			
3000	Ifac	LowPriority									200M/200M bps		500M	Off					
10000	Ifac	OtherTraffic									400M/400M bps		900M	Off		5			

Add Rule Number: Rule Type: Normal Rule

Advanced Options...

Search for number or name:





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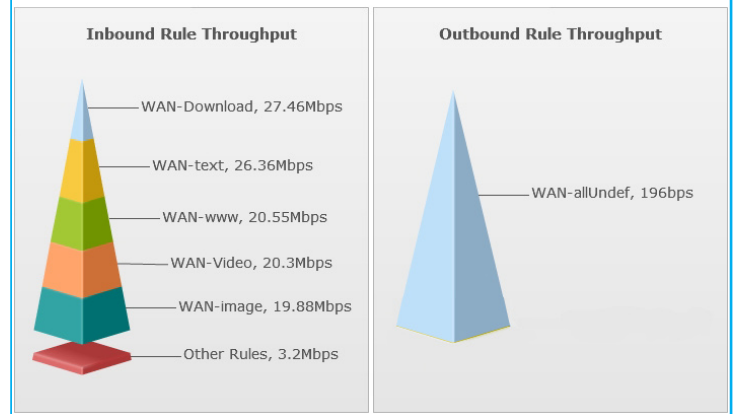
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3. Advanced Features

- Global Priorities definable by any combination of filters
- Multi-port Bandwidth Management at true Gigabit and over
- Unlimited Sessions or Policies
- Change Rules Dynamically in real-time
- Online and Multiple Offline ruleset management with roll-back and backups
- Automatic rule generation from templates on discovery of a new host (IP or MAC address)
- Reverse Limiting (Limit each "session" or user accessing a site)
- Balanced Reverse Limiting (Each client gets proportionate sum of bandwidth)
- Policy Groups with balanced or allocation of bandwidth, nested to unlimited levels
- Advanced Group Functions (balanced groups, member overrides)
- Bandwidth profiles for rule and SLA management
- Daily and/or Monthly Bandwidth Quotas with automatic user and administration notifications
- Unlimited report groups
- SQL statistics reports on any/all policies with ODBC access
- Graphing of any definable address, network or traffic type
- Application load balancing
- Policy groups with balanced or allocation of bandwidth, nested to any level
- ODBC Access
- Full SQL reporting on all bandwidth usage
- User Access filters so that customers/departments can only view applicable statistics
- FUP enforcement and monitoring
- API integration for dynamically managing and changing rules for tens of thousands of users
- Floating Quota's, daily, weekly and monthly Quota management
- Quota reports, force over quota, reset quotas – full API integration for total automation with existing systems
- Integrate with existing billing and network management systems through SNMP, ODBC and SMTP alerting

Product Example

Statistics for Interface:WAN1 Policy:All (Period:11 of 15 seconds)										
Policy	Group	Name	Last In (bps)	Last Out (bps)	Cur In (bps)	Cur Out (bps)	Hits	Drops	Drop %	Dir
Interface			117,753,417	238	114,712,065	187	D:0 B:0/772/15,000			
100	Ifac	JHB-Link	117,753,417	238	125,089,471	184	1,517,249,541	0	0.00	
140	JHB-Link	WAN-peering	8,974	0	8,618	0	287,692,103	0	0.00	
150	WAN-peering	WAN-p2p	8,974	0	8,618	0	287,692,103	0	0.00	
260	JHB-Link	WAN-web	117,405,792	0	125,135,803	0	1,166,484,643	0	0.00	
270	WAN-web	WAN-IM	286,886	0	334,175	0	30,181,651	0	0.00	
280	WAN-web	WAN-VOIP	0	0	0	0	26,374,428	0	0.00	
300	WAN-web	WAN-Audio	2,528,802	0	2,966,169	0	2,074,470,550	0	0.00	
310	WAN-web	WAN-Video	20,304,490	0	21,551,859	0	572,034,012	0	0.00	
320	WAN-web	WAN-Download	27,457,283	0	28,243,600	0	2,146,250,819	0	0.00	
330	WAN-web	WAN-image	19,876,453	0	21,533,870	0	1,341,691,302	0	0.00	
335	WAN-web	WAN-text	26,359,961	0	29,163,350	0	501,318,213	0	0.00	
340	WAN-web	WAN-https	40,623	0	76,971	0	57,709,331	0	0.00	
350	WAN-web	WAN-www	20,551,295	0	21,478,629	0	1,087,657,578	0	0.00	
360	JHB-Link	WAN-mail	2,125	0	2,325	0	370,161,602	0	0.00	
370	WAN-mail	WAN-smtp	2,125	0	2,325	0	370,161,592	0	0.00	
380	JHB-Link	WAN-other	54,843	0	28,855	0	63,040,745	0	0.00	
390	WAN-other	WAN-netbios	6,478	0	6,578	0	13,036,697	0	0.00	
400	WAN-other	WAN-Auth	0	0	0	0	81,074	0	0.00	
420	WAN-other	WAN-ftp	46,464	0	19,747	0	7,853,773	0	0.00	
430	WAN-other	WAN-NetFiles	0	0	0	0	140,455	0	0.00	
440	WAN-other	WAN-icmp	1,827	0	2,570	0	40,014,616	0	0.00	
460	JHB-Link	WAN-Undefined	272,437	196	237,940	167	1,925,299,791	0	0.00	
500	WAN-Undefined	WAN-top	167,365	0	151,977	0	1,611,091,011	0	0.00	
510	WAN-Undefined	WAN-udp	105,071	0	85,727	0	307,925,366	0	0.00	
2000	WAN-Undefined	WAN-allUndef	0	196	279	167	6,282,726	0	0.00	
Interface			117,753,417	196	114,712,065	167	D:0 B:0/772/15,000			



Bandwidth Manager Configuration	
Maximum Buffers	3500
Maximum Streams	10000
Hide Alert Options...	
Buffer Alert	%
Streams Alert	%
Hide Period Options...	
Statistics Period (Seconds)	20
Unburst Period (Seconds)	10
Hide Logging Options...	
Write all periods to SQL	<input type="radio"/> On <input checked="" type="radio"/> Off
Log Statistics to SQL Database?	<input checked="" type="radio"/> On <input type="radio"/> Off
Database Months	3
SQL Log Mark Statistics	<input type="radio"/> On <input checked="" type="radio"/> Off
Hide Alerts and Sensitivity Options...	
Monitor Bandwidth Alerts	<input type="radio"/> On <input checked="" type="radio"/> Off
Over Limit Sensitivity	periods
Resend Sensitivity	periods
Under Limit Sensitivity	periods
Send clearing Alerts	<input type="radio"/> On <input checked="" type="radio"/> Off
Monitor extended statistics	<input checked="" type="radio"/> On <input type="radio"/> Off
<input type="button" value="Commit"/> <input type="button" value="Finished"/>	

