Intelligent QoS with PacketController High Performance Bandwidth Management Solutions

PacketController represents the new generation of bandwidth management in policy enforcement. It provides all the features you need to control the amount of bandwidth with stunning performance.

We design our solution with Simplicity in mind. To simplify the traffic management through a top-notch user interface with concise information and reports. This would fit the situation of every organization with diverse requirement. Together with our best and professional support team, we would be able to provide the best configured solution for the clients.

TCP Rate Limiting

TCP Rate limit provides the ability to restrict a certain traffic flow characteristic such as connections-per-second, packets-per-second, number-of-queries, type-of-queries, etc.

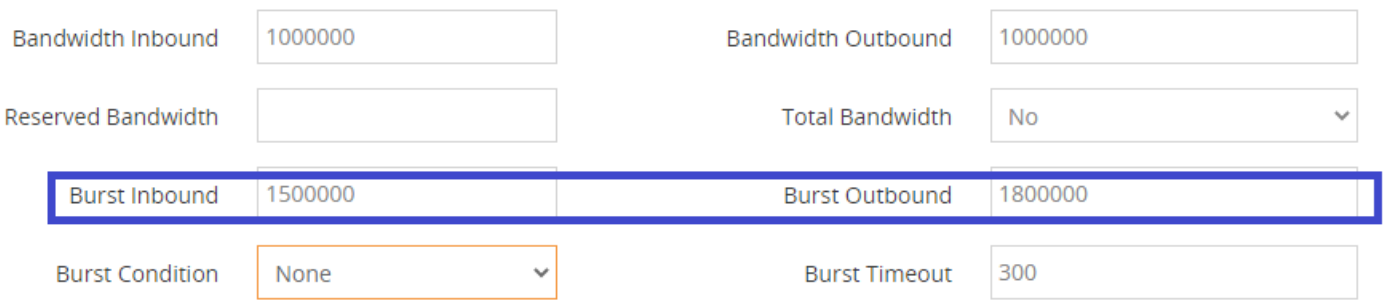
PacketController proprietary TCP Rate Limiting reduces TCP receive window on the fly and retains excess packets in a buffer and then schedules the excess for later transmission over increments of time. This effectively eliminates the overhead of queue backup on the network and produces a smoothed packet output rate.

TCP Optimization

PacketController utilizes several technologies for TCP optimization by splitting the latency between the subscriber network and the Internet network.

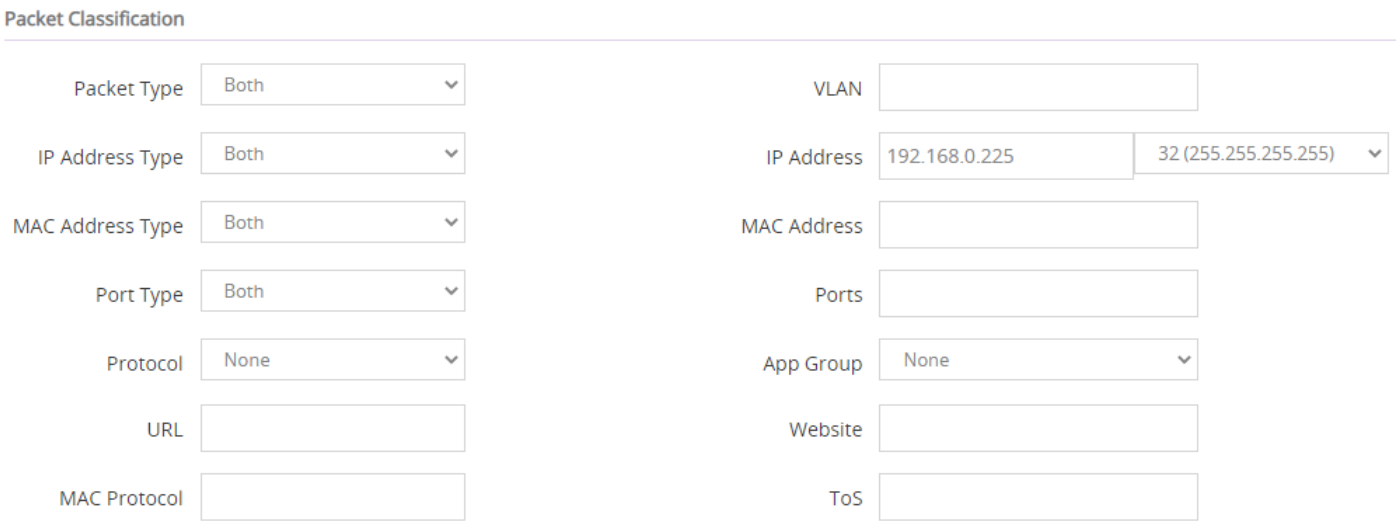
Asymmetrical Burst

PacketController is capable of asymmetrical burst implementation to go beyond normal rate for a limited time.



Rich Classification

PacketController is capable of doing packet classification based on IP Address, Port, VLAN, priority, protocol, website, URL MAC address and ToS etc.



Prioritization

PacketController utilizes strict priority queuing method to prioritize traffic through network. Prioritization is applied by policy and is equivalent to CoS (class of service) levels 0–9.

Flexible Plans for Subscriber Service Provisioning

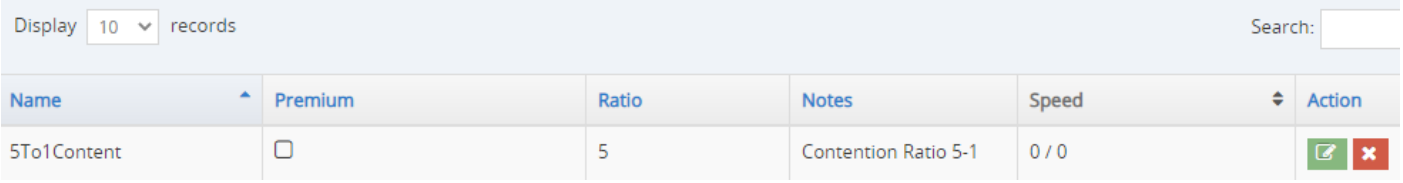
PacketController supports 4 categories of plans to do the throttling per subscriber:

- Service Plan: The speed rate
- Time Plan: The speed rate switched on date/time
- Quota Plan: Monthly/Daily quota
- App Plan: The micro-management of protocol at certain speed rate

Sequence	Name	App Group	Protocol	Port	Service Plan	Action
1	apprule1		p2p		512Kbps	
2	apprule2		http		10Mbps	
3	BlockPornSite	wsgroup				

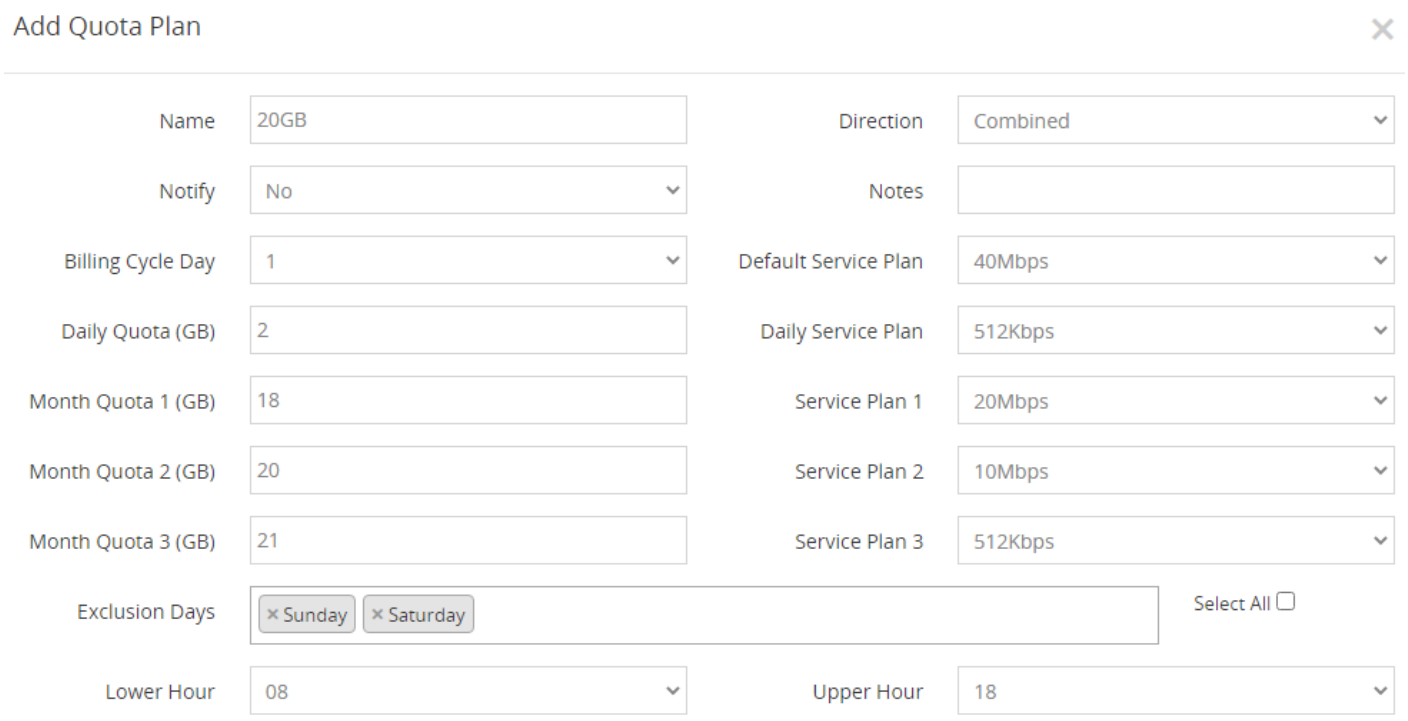
Contention Ratio

PacketController supports contention ratio. The bandwidth pool adjusted dynamically based on the number of users added to this contention ratio group.



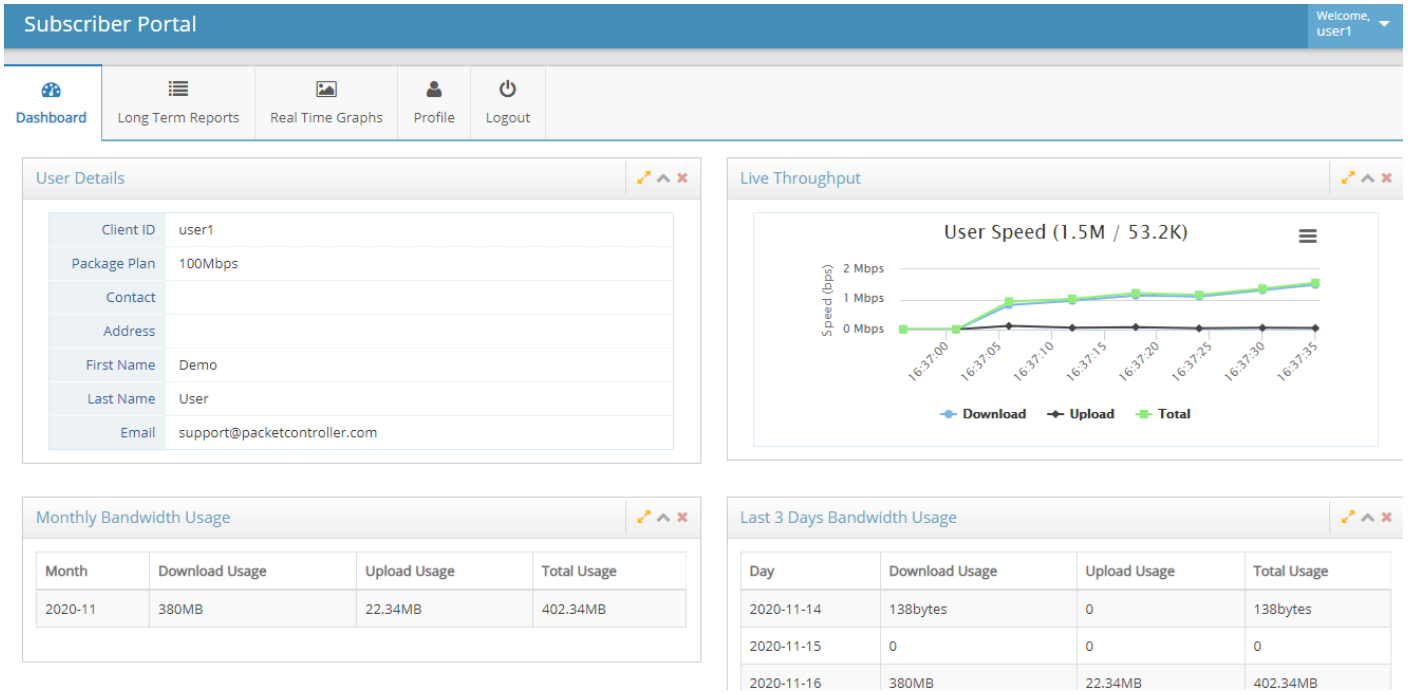
Monthly/Daily Quota

The built-in quota manager provides the tools to manage the throughput of one subscriber based on usage.



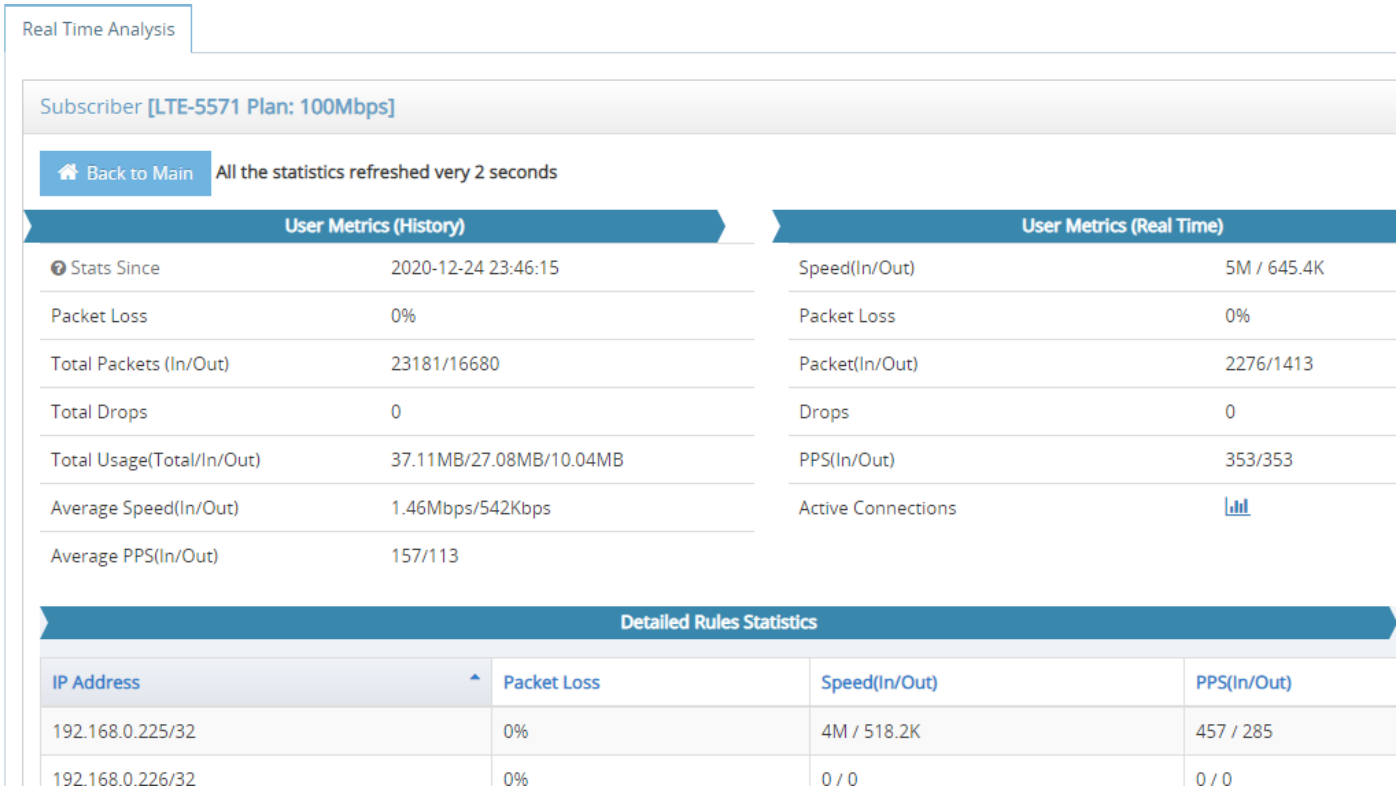
Self-Service Portal

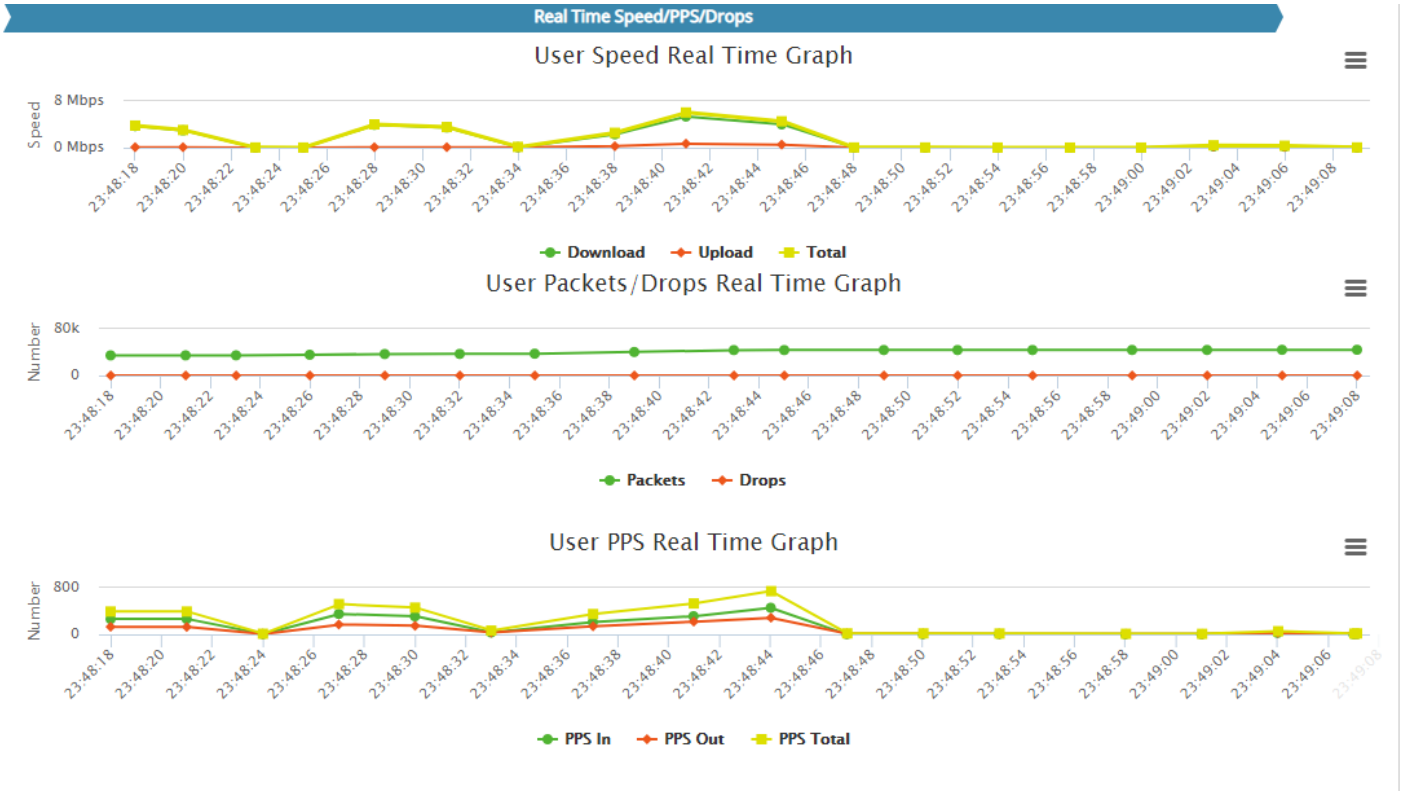
The self-service portal is for subscriber to view their set of bandwidth usage reports/graphs, both in real time and long-term.



Real-Time Subscriber Insights

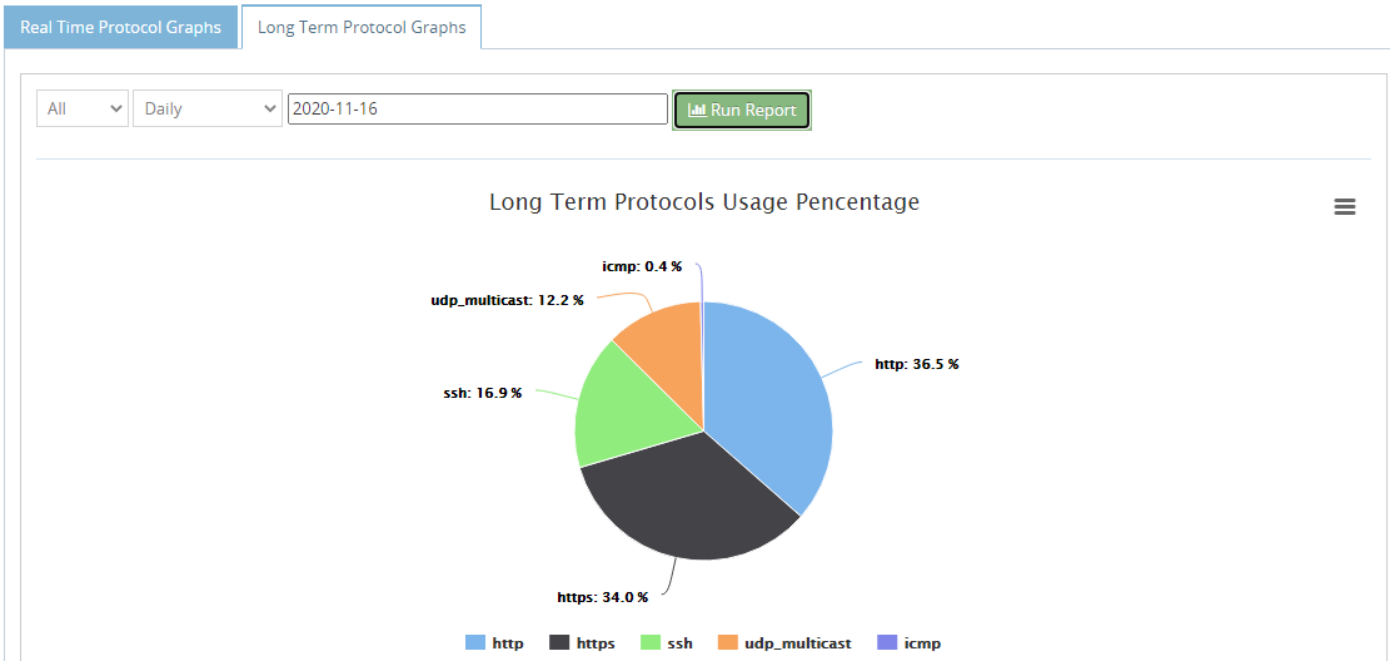
The subscriber analysis provides proactive subscriber quality monitoring, which helps helpdesk people to quickly and efficiently diagnose subscriber network issues.





Network Visibility

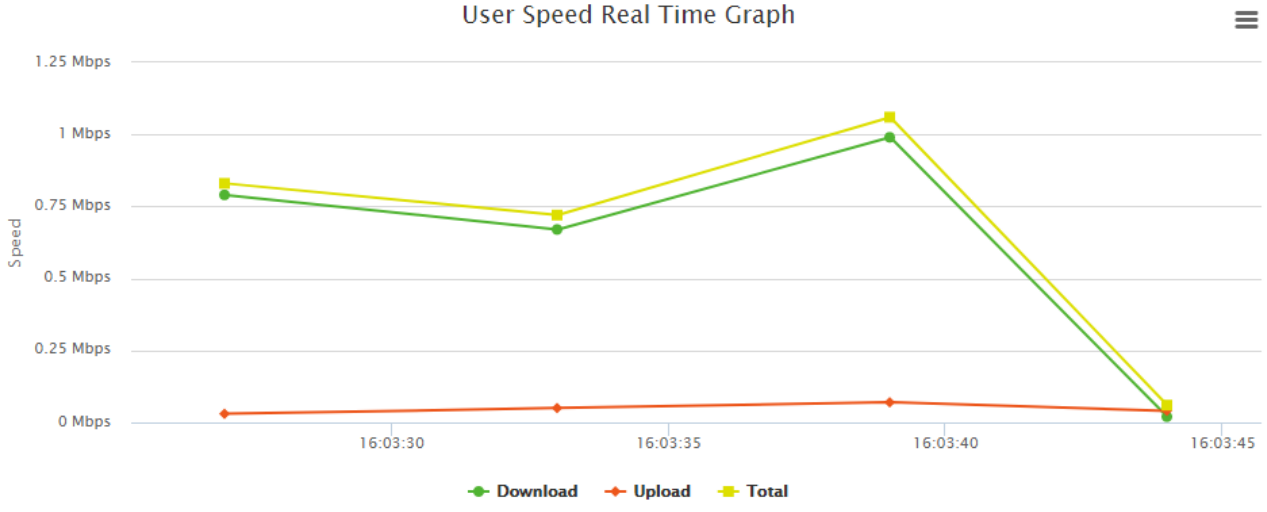
PacketController provides in-depth network visibility on overall network and per subscriber, both in real-time and long term.



Display 10 records Search:

Connection	Ports	Protocol	DNS	Speed
192.168.0.225<->2.21.71.97	57828<->443	https	<->a2217197.deploy.static.akamaitechnologies.com	1025Kbps/34Kbps
192.168.0.225<->34.202.111.167	58709<->443	https	<->ec234202111167.compute1.amazonaws.com	2Kbps/744bps
192.168.0.225<->34.202.111.167	58710<->443	https	<->ec234202111167.compute1.amazonaws.com	2Kbps/424bps
192.168.0.225<->162.247.242.19	57299<->443	https	<->bam.nrdata.net	48bps/1Kbps
192.168.0.225<->52.159.49.199	57320<->443	https	<->	208bps/1Kbps
192.168.0.225<->23.203.68.192	57313<->443	https	<->sb.scorecardresearch.com	408bps/856bps
192.168.0.1<->239.255.255.250	59569<->1900	udp_multicast	<->	1Kbps/0
192.168.0.225<->18.204.39.211	57459<->443	https	<->abcnews.hb.omtrdc.net	168bps/920bps
192.168.0.225<->54.161.123.29	58708<->443	https	<->sock197mt1.pusher.com	352bps/696bps
192.168.0.225<->211.38.95.228	58230<->8989	http	<->	680bps/336bps

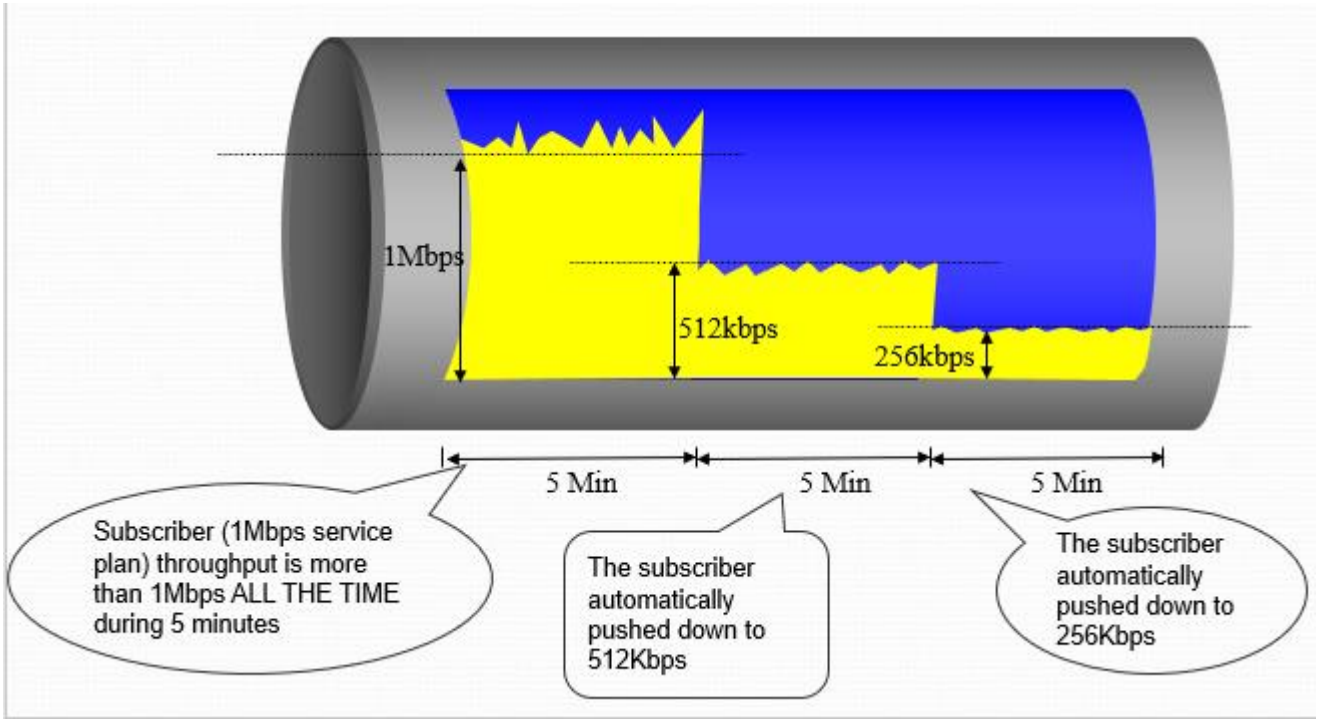
Showing 1 to 10 of 50 entries Previous 1 2 3 4 5 Next



Intelligent QoS

PacketController goes beyond the regular bandwidth management by intelligent QoS implementation:

- Predict the appropriate bandwidth settings on overall network and per subscriber by collecting the usage pattern
- Optimize the bandwidth settings automatically



Display 10 records Search:

Order	Name	Group	Criteria	Kickdown Plan	Action
1	kickdown512	usergroup1	users in group,if total speed > 1000000 in 5 minutes	512Kbps	
2	kickdown256	usergroup1	users in group,if total speed > 450000 in 10 minutes	256Kbps	

Display 10 records Search:

Trigger	BW Floating Pecentage	Floating Direction	Threadhold Inbound	Threadhold Outbound	Action
scalertrigger	150%	Increase	900000000	900000000	

Port em0 Default View Manage

Display 10 records Search:

ID	Name	IP	Group	App	Service Plan	Speed	Action
100	pcbox	192.168.0.168				0 / 0	
9999	BranchA9999	192.168.0.225	BranchA		2048Kbps	1.5M / 265.9K	
10000	BranchA	192.168.0.0/24(Src)			2048Kbps	1.5M / 265.9K	

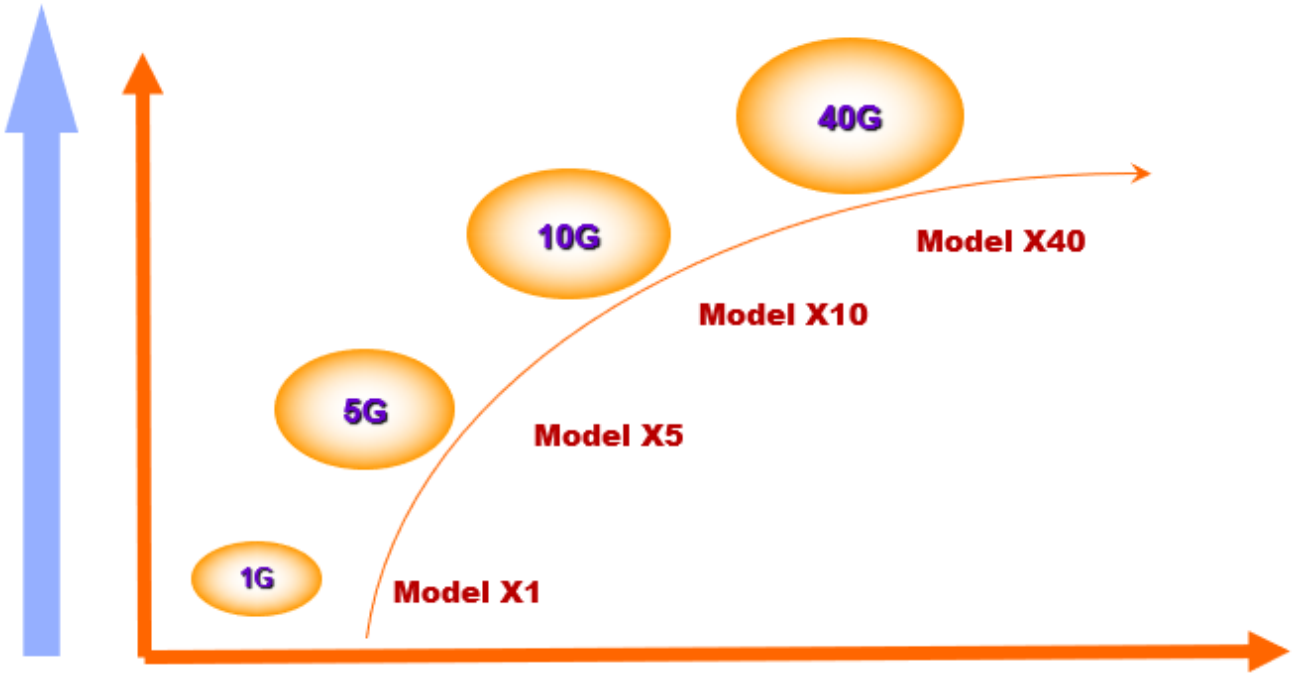
The dynamical rule generated by system

PacketController Products/Platforms

PacketController provides both hardware appliance and software-only options to meet your requirements.

Software-only version (Up to 10Gbps throughput) runs on certified commodity server to provide full featured bandwidth management. The software-only version has flexible license options: from 10Mbps to 10Gbps. The virtual appliance is ideal for small and medium business and delivers 100% uptime for mission critical bandwidth management while staying within your budget.

All PacketController hardware platforms (Up to 40Gbps throughput) are designed with high performance in mind.



Hardware Platform Specification

	X1	X5	X10	X40
Performance				
License (Full Duplex)	300Mbps 500Mbps 1Gbps	2Gbps 3Gbps 4Gbps 5Gbps	10Gbps	20Gbps 40Gbps
Number of Connections	1,500,000	3,500,000	8,500,000	20,000,000
Number of Subscribers	15,000	60,000	100,000	200,000
Network Interface				
Gigabit Copper	4	4	Optional	0
Gigabit Fiber	Optional	Optional	Optional	0
10GE Fiber	0	2	2	2
40GE Fiber	0	0	0	2
Management Copper	1	2	2	2
Hardware Specification				
Processor	Intel Quad Core	Intel 8-core	Intel 10-core	MIPS
Memory (ECC RAM)	8GB	16GB	32GB	64GB
Storage	60GB SSD	120GB SSD	256GB SSD	1TB SSD
ASIC Hardware	N/A	N/A	N/A	Yes
Dimensions (W x D x H)	430mm (W) x 509mm (D) x 88mm (H)			
Rack Units (Mountable)	2U	2U	2U	2U
Unit Weight	8 kgs	9 kgs	10 kgs	10 kgs
Power Supply	2U single power supply	2U Redundant 300W	2U Redundant 350W	2U Redundant 500W
Heat in BTU/hour	1050	1050	2200	2200
Operating Ranges	Temperature 0° - 40° C | Humidity 10% - 85%			

All PacketController Hardware Appliances support either built-in failover/bypass and external bypass switch.
The specifications, performance numbers are subject to change without notice, and may vary depending on configuration and environmental conditions.

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