

SAMSUNG AXIS

**Rolling Window
Transfer Quotas**

Enforcing Usage Controls to Drive Network Efficiency and Throughput

Bandwidth is today's currency, and, at all times, network operators must ensure reliable and dependable throughput for efficient performance. This makes it imperative for operators to keep control of end-user behavior and to set certain parameters for network reliability. Enforcing a real-time maximum information rate (MIR) is a critical aspect of this process. Applying



enforcement elements, such as equalization, hierarchies, bursting and other real-time manipulations, is necessary. Samsung Axis provides a unique solution that brings all these control capabilities to network operators in a flexible, scalable and easy-to-use solution.

Real-time MIR manipulations, although necessary, have their own limitations, as they fail to completely address end-user behavior. Most authentic end users need high speeds of reliable and dependable connectivity at certain periods, when they are using bandwidth-heavy applications. However, since this is not an on-going need, they are not willing to pay a premium for the high speeds of connectivity. In this situation, enforcing transfer quotas is an effective way of addressing the issue. The Samsung Axis solution enhances transfer quotas to a higher level with the application of rolling windows and instant policy-based enforcement manipulations.



20 megabits/second = 150 MB/minute = 9GB/hour

Operators can lay policies and specify time windows for the detection of high-utilization behavior of end users, thereby allowing rolling windows quota transfers. This builds on top of the MIR manipulations, which are typically enforced instantly and are enabled for a few seconds. However,



with the Samsung Axis solution, rolling window quotas can be configured for time thresholds over minutes, hours, days or even months, depending on the network operators' specifications. This allows operators to man the same predictable overall bandwidth utilization over time, which in turn results in end-user satisfaction while keeping a check on bandwidth utilization and costs.

Deployment Methodology and Benefits

Setting lower limits of quota transfers can result in unsatisfactory experience for many end users. Instead, an alternative way of deploying is to set higher default MIR—for example, 20 Mbps over 5 minutes of rolling window quota, which would then allot the entire end-user base to include a 4 Mbps real-time MIR. The 10 Mbps MIR will be enough to satisfy most end users, while the rolling window prevents usage abuse.

The solution enables network operators to make shifts in their policy settings. This enables rolling window quotas to be tiered, which allows the incorporation of varied limits/reductions to MIR based on whether heavy utilization behavior continues.

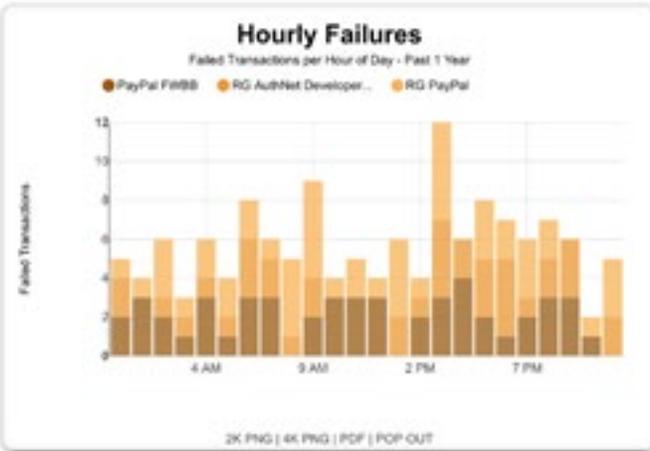
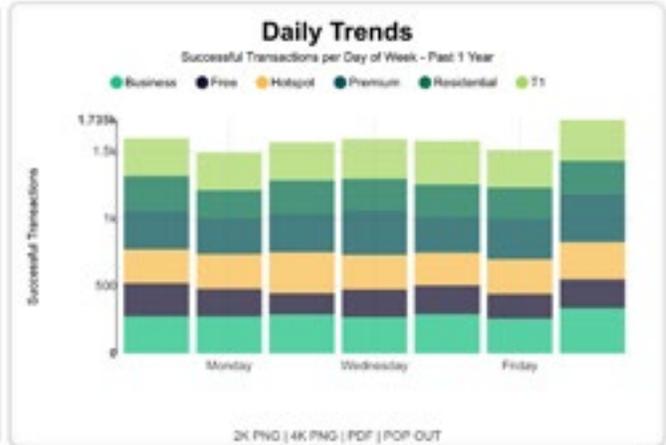
Assuring Network Efficiency Through a Range of Plug-Ins

Network operators can also implement policies—based on usage behavior—of HTML upsell advertising, overuse warnings and automatic redirection to a payment page through the Samsung Axis solution. The solution is capable of enforcing a full spectrum of possibilities, from communicating to the end user regarding the overage condition to exerting limited or comprehensive control to modify end-user behavior.

Billing

Past Revenue	
Time Period	Revenue
Last 24 Hours	\$4,734.70
Last 7 Days	\$32,745.19
Last 2 Weeks	\$63,970.47
Month-to-Date	\$3,695.90
Last 30 Days	\$137,110.99
Year-to-Date	\$321,426.67
Last 12 Months	\$321,426.67

Projected Revenue	
Time Period	Revenue
1 Week	\$0.00
1 Month	\$0.00
6 Months	\$0.00
1 Year	\$0.00

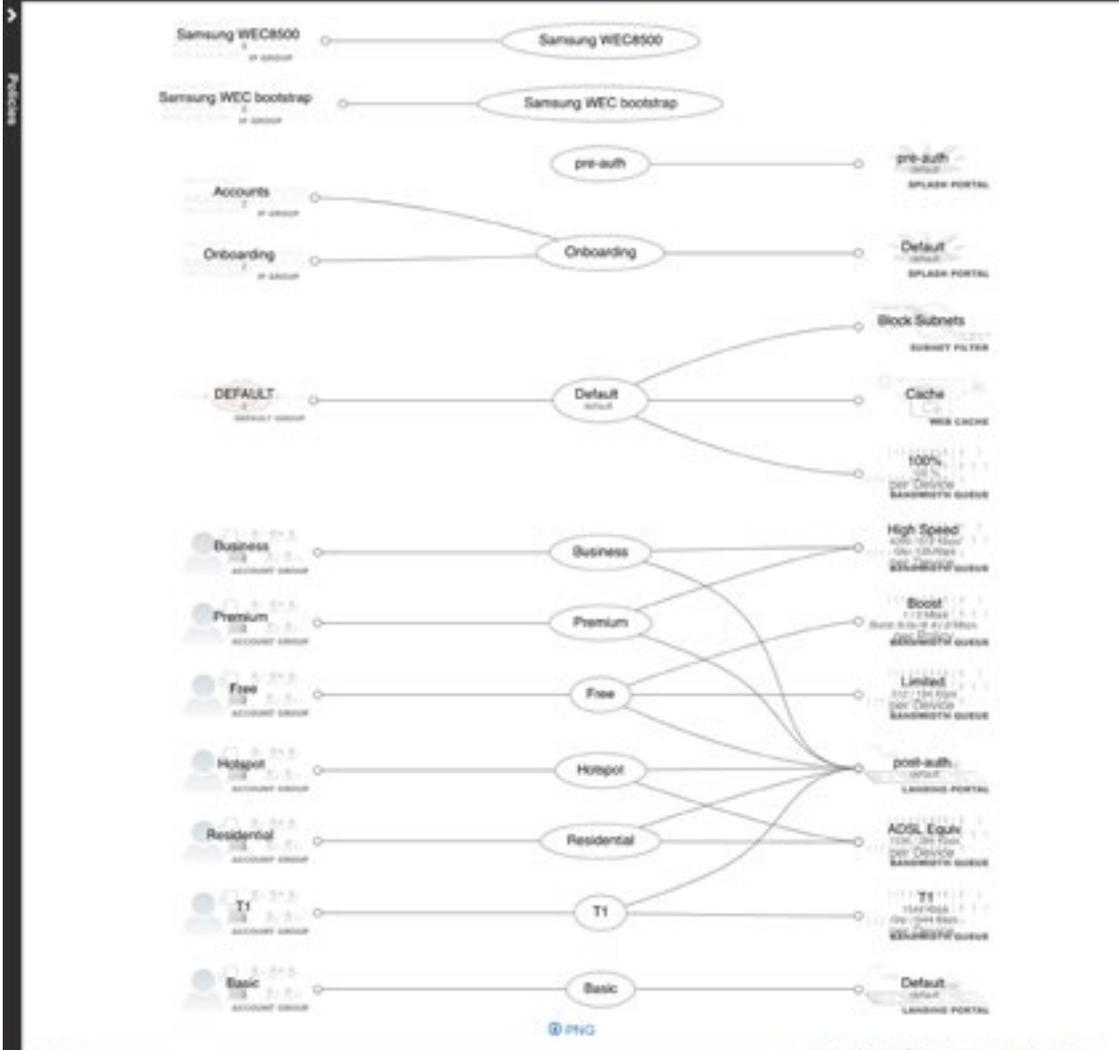


Amount	Charged	Account	Name	Plan	Gateway
\$15.71	36 minutes ago	bedwards1724	Edwards	Free	PayPal FWBB
\$6.98	36 minutes ago	egonzalez4088	Gonzalez	Residential	RG PayPal
\$26.45	52 minutes ago	proberson9911	Robinson	Residential	RG PayPal
\$1.99	1 hour ago	chenderson3462	Henderson	Free	RG PayPal
\$35.87	1 hour ago	cbaker1113	Baker	Residential	RG AuthNet Dev...
\$20.22	1 hour ago	ajones3144	Jones	Residential	RG AuthNet Dev...
\$29.99	1 hour ago	lmarinez5714	Martinez	Residential	PayPal FWBB
\$99.99	1 hour ago	lmarin5925	Marin	Business	RG AuthNet Dev...
\$7.20	1 hour ago	jbell773	Bell	Business	RG PayPal
\$24.33	2 hours ago	kwilson7296	Wilson	T1	RG PayPal

12 latest charges out of 1927 total AR transactions

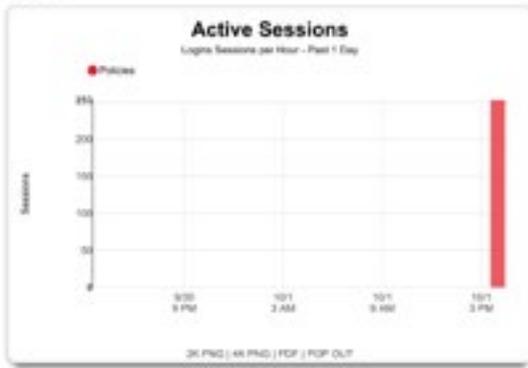
Amount	Attempted	Account	Gateway	Failure
\$17.96	4 hours ago	kbrown9400	PayPal FWBB	Transaction failure
\$15.80	7 hours ago	bryan584	RG AuthNet Develo...	Transaction failure
\$14.34	9 hours ago	ehayes7217	PayPal FWBB	Transaction failure
\$4.22	14 hours ago	paylor766	PayPal FWBB	Transaction failure
\$38.22	1 day ago	ncarter1062	PayPal FWBB	Transaction failure
\$2.77	1 day ago	abuller9595	RG AuthNet Develo...	Transaction failure
\$35.87	1 day ago	joberts2842	RG PayPal	Transaction failure
\$28.37	1 day ago	ogonzalez1706	RG AuthNet Develo...	Transaction failure
\$3.97	1 day ago	lpeno4417	PayPal FWBB	Transaction failure
\$39.23	1 day ago	juma9665	RG AuthNet Develo...	Transaction failure

11 latest failed attempts out of 138 total failed transactions



Policies [Batch](#) [Zoom](#) [Export](#) [Search](#) [Create New](#)

Name	Default	WAC Group	IP Group	Account Group	Shared Credential Group	RADIUS Group	LDAP Group	
Basic	-	-	-	Basic	-	-	-	Web Graph Edit Delete Show
Business	-	-	-	Business	-	-	-	Web Graph Edit Delete Show
Default	✓	-	-	-	-	-	-	Web Graph Edit Delete Show
Free	-	-	-	Free	-	-	-	Web Graph Edit Delete Show
Hotspot	-	-	-	Hotspot	-	-	-	Web Graph Edit Delete Show
Onboarding	-	-	Onboarding, Accounts	-	-	-	-	Web Graph Edit Delete Show
Premium	-	-	-	Premium	-	-	-	Web Graph Edit Delete Show
Residential	-	-	-	Residential	-	-	-	Web Graph Edit Delete Show
Samsung WEC bootstrap	-	-	Samsung WEC bootstrap	-	-	-	-	Web Graph Edit Delete Show
Samsung WEC6500	-	-	Samsung WEC6500	-	-	-	-	Web Graph Edit Delete Show
T1	-	-	-	T1	-	-	-	Web Graph Edit Delete Show
pre-auth	-	-	-	-	-	-	-	Web Graph Edit Delete Show



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