

Misc infrastructure - Feature # 94: Optionally traffic shape customers instead of letting them go into overage

Status:	New	Priority:	Normal
Author:	admin	Category:	
Created:	2012-02-27	Assigned to:	
Updated:	2012-03-21	Due date:	
Subject:	Optionally traffic shape customers instead of letting them go into overage		
Description:	<p>When it's estimated that a customer will exceed their data transfer limit, BitFolk sends out email warnings notifying them of that. In cases where it is the outbound quota that may be exceeded, it could be an option that instead of just warning, BitFolk could apply a rate limiter to the customer's network interface such that it would be impossible for the customer to exceed their quota. This would mean that the customer's network performance would be intentionally made worse in order to avoid extra charges.</p> <p>For example, a customer with a monthly quota of 200GB has transferred 150GB and is 15 days in to the measuring period. That would result in a predicted usage of 300GB, and so overage charge for 100GB. Instead, their network interface could be restricted to 50GB per 15 days = 3,333MB/day = 139MB/hour = 2MB/min = 39kB/sec = 309kbit/sec. At 309kbit/sec it would then be impossible to exceed outbound quota.</p> <p>If the customer managed to reduce their average usage below 309kbit/sec then this would allow more scope for the rate limit to be loosened as time went on. For example, if the same customer continued for five days with an average of only 50kbit/sec, that would be an extra 6,250bytes/sec = 540MB/day = 2,700MB/five days. 150,000+2,700 = 152,700MB = 7,625MB/day over 20 days and a predicted usage of 229,050MB (30G overage) for the month. To fall inside the quota they must use no more than (200,000-152,700)/10=4730MB/day = 438kilobit/sec. So the rate limit could be loosened a bit.</p> <p>It would be important to make sure that the customer is aware that for the network to feel performant, it must be allowed to burst to higher bandwidth levels. That is, even if you only transfer 10GB of data a month, being able to burst up to 100s of megabit/sec for a very short period of time means that this feels faster than if it were limited to moderate bandwidth all the time. So even if the rate limit included some allowance for burst traffic, it is definitely going to make the customer's experience worse.</p> <p>h3. Advantages</p> <ul style="list-style-type: none">* Customer can choose to never receive an additional bill for overage.* Removes scenario where customer's VPS starts doing something that is causing massive data transfer (e.g. bittorrent of popular file) at a time when they are away from their email, so blow through quota and into overage before they are aware. <p>h3. Disadvantages</p> <ul style="list-style-type: none">* Complicated. Unconvinced that there is a large group of customers who can understand this, find it desirable, yet for some reason don't want to implement it themselves* The only thing stopping any customer implementing this themselves is knowing how and bothering to do it. Better done as a wiki article?		

History

2012-02-27 18:42 - admin

Fixed list formatting, added "only outbound" disadvantage.