Bandwidth or QOS

Sandra Borthick’s article “Mr. QOS vs. Mr. Bandwidth” (2005) discusses the debate over the need for Quality of Service (QOS) guidelines or simply increasing bandwidth. First, this essay will explain the background for the debate question. It will then discuss both sides of the debate according to her article. Finally, with a deeper understanding of arguments for both sides, a position will be taken and rationalized.

During the internet’s early years, data transmission speeds were a slow 10Mbps. There were not as many “connected” users nor did they use high-bandwidth services. As the internet has become ubiquitous in both business and daily life, the number of users has risen. In addition, as multimedia data has become more in demand by those users, the need for faster and faster transmission speeds has skyrocketed. In order to meet those demands, internet infrastructure had to evolve and the transmission speeds have increased up to 10Gbps (Greene, 2007). Demand continues to rise as does internet traffic. As such, the question becomes, to businesses continue to invest in infrastructure to support more bandwidth or do they implement QOS mechanism to manage the traffic better.

On the one hand there are those who believe that data flows prone to disruption by lost or delayed packets need QOS to ensure they work (Borthick, 2005). The thought process behind this argument is that, for example, even 10 second delays causes noticeable and annoying disruptions for users of voice data. Since there will eventually be some circumstances of heavy traffic, which might impede sensitive data flows like voice and video, they ought to have QOS mechanisms that ensure these flows have priority over other non-essential data.

On the other side of the debate, there are those who believe that with enough bandwidth all traffic issues are a moot point (Borthick, 2005). The argument goes that data which is susceptible to delayed or dropped packets, like voice and video, don’t need QOS guidelines. Instead, they simply need more more bandwidth. Moreover, how would priority data be determined in the first place. What if all of the traffic is considered important? If all data is important, then a stratified QOS mechanism based on type of data is not possible. Furthermore, to date the internet has both grown and been effective without QOS.

Now that we understand the arguments on both sides of the debate, we can make an informed decision regarding which side we will support. Personally, I agree with the proponents of more bandwidth. This is a method of fixing the problem that has worked historically and would continue working. For example, one article (Bartlett, 2010) regarding QOS and bandwidth, recommends network administrators manage video conferencing data bandwidth demands by have QOS agreements with network teams involved. However, the article goes on to state that the network itself needs to meet the expected bandwidth demand. “Design the network to support the expected demand” (Bartlett, 2010). In other words, have people pay for QOS agreements in line with their bandwidth demands, but ultimately you will need to increase bandwidth to meet the traffic demands. Either way providers will make money on their services, the demand for which is increasing. The question becomes, however, whether they will treat all data flow similarly or if they will charge more money for some services as compared to others.

References

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