

Why does CAS manage its network?

CAS manages its network to deliver the best possible broadband Internet experience to all of its customers. High-speed bandwidth and network resources are not unlimited. Managing the network is essential to promote the use and enjoyment of the Internet by all of our customers. We use reasonable network management practices that are consistent with industry standards. We also try to use tools and technologies that are minimally intrusive. Just as the Internet continues to change and evolve, so too, will our network management practices to address the challenges and threats on the Internet.

All Internet service providers need to manage their networks and CAS is no different. In fact, many of them use the same or similar tools that CAS does. If we didn't manage our network, our customers would be subject to the negative effects of spam, viruses, security attacks, network congestion, and other risks and degradations of the service. By engaging in reasonable and responsible network management, CAS can deliver the best possible broadband Internet experience to all of its customers.

How does CAS manage its network?

CAS uses various tools and techniques to manage its network, deliver its service, and ensure compliance with the Acceptable Use Policy and the Customer Agreement for Residential Services available on our website. These tools and techniques are dynamic, like the network and its usage, and can and do change frequently. For example, these network management activities may include identifying spam and preventing its delivery to customer email accounts and using other tools and techniques that CAS may be required to implement in order to meet its goal of delivering the best possible broadband Internet experience to all of its customers.

Does network management change over time?

Yes. The Internet is highly dynamic. As the Internet and related technologies continue to evolve and advance, CAS' network management tools will evolve and keep pace so that we can deliver an excellent, reliable, and safe online experience to all of our customers. We will provide updates here and in other appropriate locations if we make important or significant changes to our network management techniques.

How does the current congestion management technique work?

The current congestion management technique works as follows:

If a certain area of the network nears a state of congestion, the technique will ensure that all customers have a fair share of access to the network. It will identify which customer accounts are using the greatest amounts of bandwidth and their Internet traffic will be temporarily managed until the period of congestion passes. Customers will still be able

to do anything they want to online, and many activities will be unaffected, but they could experience things like: longer times to download or upload files, surfing the Web may seem somewhat slower, or playing games online may seem somewhat sluggish.

The technique does not manage congestion based on the online activities, protocols or applications a customer uses; it only focuses on the heaviest users in real time, so the periods of congestion typically tend to be very fleeting and sporadic.

It is important to note that the effect of this technique is temporary and it has nothing to do with a customer's aggregate monthly data usage. Rather, it is dynamic and based on prevailing network conditions as well as a customer's data usage over a very recent period of time.

Does the congestion management technique target peer-to-peer ("P2P") or other applications, or make decisions about the content of my traffic?

No. The technique is "protocol-agnostic," which means that the system does not manage congestion based on the applications being used by customers. It is also content neutral, so it does not depend on the type of content that is generating traffic congestion. Said another way, customer traffic is congestion-managed not based on the applications or content being used, but based on current network conditions and recent amounts of data transferred by users.

How does the congestion management technique impact me and my use of the Internet service?

With this technique, most customers will notice no change in their Internet experience. The goal of congestion management is to enable all users to have access to a fair share of the network at peak times, when congestion occasionally occurs. Congestion management focuses on the consumption activity of individual customer accounts that are using a disproportionate amount of bandwidth. As a result, and based on our experience with this technique, we have determined that the large majority of customers are not be affected by it. In fact, based on our experience, we find that on average less than one percent of our High-Speed Internet customers are affected by the approach. Our experience also shows that when our systems apply the congestion management technique to an individual user's account, it is usually only in effect for a very brief period of time.

How often does CAS expect to use this congestion management technique?

Based on our experience using this system, CAS has determined that select portions of the network tend to be in a congested state only for relatively small portions of the day, if at all.

CAS monitors how user traffic is affected by this system and will make the adjustments reasonably necessary to ensure that our Internet customers have a high-quality online experience. CAS also routinely evaluates its overall

network performance and periodically enhances its network by adding capacity to address congestion and other performance issues.

Can you give me some "real world" examples of how much bandwidth consumption would be considered too much? For example, how many movies would I have to download to be affected by this congestion management technique?

Since the technique is dynamic and works in real time, the answer really depends on a number of factors including overall usage, time of day and the number of applications a customer might be running at the same time. First, the local network must be approaching a congested state for our technique to even look for traffic to manage. Assuming that is the case, customers' accounts must exceed a certain percentage of their upstream or downstream (both currently set at 70%) bandwidth for longer than a certain period of time, currently set at 15 minutes.

A significant amount of normal Internet usage by our customers does not last that long. For example, most downloads would have completed within that time, and the majority of streaming and downloading will not exceed the threshold to be eligible for congestion management. And the majority of longer-running applications, such as VoIP, video conferencing, and streaming video content (including HD streaming on most sites) will not exceed these thresholds either.

The point of the technique is to deliver the best overall online experience possible. The technique should help ensure that all customers get their fair share of bandwidth resources to enjoy all that the Internet has to offer and that includes surfing the web, reading email, downloading movies, watching streaming video, gaming or listening to music.

Does this congestion management technique apply to both Commercial and Residential services?

Yes.

Is CAS Digital Phone affected by this congestion management technique? What about other VoIP providers?

CAS Digital Phone is a separate facilities-based IP phone service that is not affected by this technique. This phone service also does not affect the last mile capacity for, or the performance of, the Internet service.

CAS customers who use VoIP providers that rely on delivering calls over the public Internet who are also using a disproportionate amount of bandwidth during a period when this congestion management technique goes into effect may experience a degradation of their call quality at times of network congestion. It is important to note, however, that VoIP calling in and of itself does not use a significant amount of bandwidth. Furthermore, our experience with this technique does not indicate any significant change in the quality of VoIP calls, even for managed customer traffic during periods of congestion.

Does CAS block P2P traffic or applications like BitTorrent, Gnutella, or others?

No. CAS does not block P2P traffic or applications like BitTorrent, Gnutella, or others as part of its current network congestion management technique.

Does CAS discriminate against particular types of online content?

No. CAS provides its customers with full access to all the lawful content, services, and applications that the Internet has to offer. However, we are committed to protecting customers from spam, phishing, and other unwanted or harmful online content and activities. CAS uses industry standard tools and generally accepted best practices and policies to help it meet this customer commitment. In cases where these tools and policies identify certain online content as harmful and unwanted, such as spam or phishing Web sites, this content is usually prevented from reaching customers. In other cases, these tools and policies may permit customers to identify certain content that is not clearly harmful or unwanted, such as bulk email or Web sites with questionable security ratings, and enable those customers to inspect the content further if they want to do so.

CAS provides to its subscribers Internet service which has been filtered by third party providers of material which CAS in good faith believes and considers to be obscene, lewd, lascivious, filthy or otherwise objectionable. If you believe that a web page has been blocked inadvertently and is not applicable to the content described above, please contact our help desk at info@cascable.com and request a review of the site. If the site does not contain any content as described above, CAS will immediately provide access to the web page requested on the first level of access. If your request is invalid and access is not granted on the first level of access and you would prefer to view any web page that is initially blocked out on the first level of access, you may use an anonymous Web proxy or an anonymous HTTP proxy to access the site. Any use of a proxy is done at your own risk.

Does CAS employ network security practices in addition to the congestion management technique?

Yes. As described above, CAS employs a number of practices to help prevent unwanted communications such as spam as well as protect the security of our customers and network. CAS limits the number of login, SMTP, DNS, and DHCP transactions per second (at levels far above 'normal' rates) that customers can send to CAS's servers in order to protect them against Denial of Service (DoS) attacks. We do not disclose the exact rate limits in order to maintain the effectiveness of these measures, which ensure that these critical services are available for all of our customers.

In order to further protect our customers, CAS blocks a limited number of ports that are commonly used to send spam, launch malicious attacks, or steal a customer's information, for example. In addition, CAS conducts several security initiatives.

Does CAS have rules regarding the attachment of devices to its network by customers?

In order for a cable modem device to be approved for use on the network, it must pass CableLabs certification, UL certification, FCC certification, and CAS device testing covering things like DOCSIS performance and integration with CAS's network and systems.

How can I contact CAS if I have any questions about network management?

Go to the page at <http://www.cascable.net/contact.html> for more information about contacting CAS Customer Service.