Internet Traffic Management

There continues to be phenomenal growth of Internet traffic throughout the world. Bell, similar to other providers here in Canada, may be required to manage its network in such a way that no customer, service or application consumes excessive bandwidth which may impede the use and enjoyment of other customers. Bell is using Internet Traffic Management to ensure we deliver bandwidth fairly to our customers during peak periods of Internet usage. In order to continue to ensure a consistently high level of service for all of our customers, traffic management allows Bell to deliver a consistent and reliable experience to all its customers who use real-time sensitive applications like browsing, video streaming and instant messaging during peak periods of Internet usage.

So, how is Bell managing traffic on its network?

Bell is using the latest, state-of-the-art technology to improve the customer experience for a vast majority of our customers' favourite applications (such as Internet Browsers, E-mail, Instant Messaging, Streaming Video, etc.) as required during peak periods on the Internet, while ensuring all customers receive fair use of the network when there is heavy Internet traffic. In addition, Bell continues to make significant investments in network capacity and speed to meet the growing Internet demand.

When was this launched?

These traffic management measures began in October 2007.

Are other ISPs doing the same?

Yes. Other Internet Service Providers (ISPs) in Canada are implementing similar solutions to continue to maintain adequate service levels.

Why was this introduced? What are some of the applications that will benefit?

The phenomenal growth of Internet traffic seen by all the ISPs has been causing congestion on the Internet. Bell has chosen to reduce the impact of this congestion by using a combination of increased capacity and better Internet Traffic Management during periods of peak usage. This solution will also ensure that all our customers get fair use of the Internet during these periods. As a result, many types of online experiences will be improved, such as the following common applications:

"Real-time" applications like -

Browser Applications (Internet Explorer, Safari, Firefox)
Email Applications (Outlook Express, Outlook, WebMail)
Instant Messaging
Internet Radio
Streaming video, etc.

As well as "client-server" download services like -

Microsoft Windows Update

How does this improve customers' online experience?

By better balancing Internet traffic, this solution helps protect and improve the performance of these common applications for all customers. Bell's technology solution is only active during peak usage periods (currently 4:30 p.m. to 2:00 a.m.) when Internet traffic becomes congested in order to maximize the ability for customers to use and enjoy their Bell Internet service.

What is Deep Packet Inspection (DPI) and what does it have to do with Internet traffic management?

Deep packet inspection or DPI is a technology used in the industry to examine the types of traffic going across a network, but not the content. During peak periods, Bell uses DPI to identify peer-to-peer (P2P) file sharing traffic which is less time sensitive than other real-time sensitive applications, such as web browsing or video streaming. Because P2P file sharing applications are less time sensitive, they can be slowed when Internet traffic becomes congested during peak periods without interrupting use of the service.

When Bell uses DPI as part of its traffic management measures during peak periods of Internet usage, we do not examine the actual content of traffic nor do we collect any personal information as part of the process.

So, who does this affect and what traffic is subject to traffic management?

These traffic management measures impact only those Bell Internet High Speed service customers who are using common peer-to-peer (P2P) file sharing applications during scheduled traffic management periods. Customers using P2P file sharing applications may experience an increase in duration time to download and upload files during peak usage periods. These customers may consider running their P2P file sharing application longer to complete their P2P uploading or downloading activities or consider using P2P file sharing applications during the off-peak periods when there is no scheduled traffic management.

Traffic management will not impact customers using other Internet applications or services.

What are peer-to-peer (P2P) file-sharing applications?

P2P file-sharing applications provide the ability to share files on-line via an Internet connection between multiple computers that are often unknown to the user. Computers can communicate with each other even if you are not present and engaged in using the computer.

If you are using P2P file sharing, Bell recommends that you protect your computer by installing and updating Anti-Virus and Firewall software on a regular basis, as well as enabling Network Address Translation (NAT) on your primary gateway/router if so equipped to ensure your computer is not being used by others without your knowledge.

The only requirements for a computer to join a peer-to-peer network is an Internet connection and P2P software. Common P2P software applications include:

bitTorrent	Gnutella
Limewire	Kazaa
eDonkey	eMule
WinMX, etc.	

When will this occur?

Customers may experience extended download and upload times when using P2P file sharing applications during the daily scheduled traffic management period which is currently scheduled from 4:30 pm to 2:00 am EST for Bell Internet DSL and 4:30 p.m. to 1:00 a.m. EST for Bell Internet Portable and Rural. The current upload/download rate speeds only for P2P file-sharing usage are gradually decreased at the beginning of the peak period (from full speed down to 512 kbps at 4:30 p.m. and then down to 256 kbps at 6:00 p.m.) and then gradually increased towards the end of the peak period (up from 256 kbps to 512 kbps at 1:00 a.m. and then up to full speed at 2:00 a.m.).

Are there other applications that could be impacted by Bell's traffic management measures?

If you're using an application/protocol during peak periods, such as encrypted FTP and find that it cannot attain full speed, please first ensure that you are using the standard port assigned for the application/protocol in question (as per the IANA: http://www.iana.org/assignments/port-numbers).

If you cannot find the application/protocol listed in the IANA's website or you're not currently using the assigned port listed, it is possible that the application/protocol being used may be impacted by traffic management if you are using a P2P file sharing application at the same time.

To resolve this issue, please close the affected application and ensure that all P2P file sharing applications are also not running. When you turn back on the affected application, ensure you are using the standard port assigned and that no P2P file sharing applications are open at the same time.

Note: It may take up to 10 minutes after terminating the P2P applications before you restart the affected application to ensure the application is not affected by traffic management.

If the problem continues to exist after performing the above steps, please contact our support desk at 1 866 323-1181 (Ontario) 1 888 966-6766 (Québec).

Is Bell blocking Internet access? Is Bell monitoring customers' online activities?

No. Bell does not block any type of Internet traffic or application, nor do we proactively monitor the content of customer communications or activities on the Internet.

Internet traffic management is based on the requirement to optimize network bandwidth resources, not on the content for which these resources are used.

Is Bell Internet access shared?

No. Your Internet access is not shared with any other Bell Internet customer.

Is Bell allowed to do this?

Bell has a responsibility to maximize the ability for all customers to use and enjoy their Bell Internet service and a responsibility to deliver bandwidth fairly to its customers.

Bell

In order to fulfill these responsibilities, Bell is entitled under the terms of the Service Agreement to utilize technology that maintains or enhances the performance of the Service and the integrity of its network. Also, the Service Agreement and Acceptable Use Policy (AUP) prohibit the use of the Service in a way that impairs the operations or efficiency of the Service or creates an unusually large burden on our networks. To help ensure this does not happen during peak periods, Bell is using traffic management measures to better balance Internet traffic and deliver fair use of the network to all of our customers.