A Guide to Internet Traffic Management

More of us are using the internet – and using it for longer – than ever before.

What we do online has also changed dramatically.

All this has led to the internet becoming increasingly busy.

To ensure that networks operate efficiently, fixed-line and mobile internet service providers (ISPs) can restrict or ration traffic on their networks, or give priority to some types of traffic over others during peak periods or more generally.

This is known as '**traffic management**' or '**traffic shaping**'.

Ofcom

Why do ISPs do this?

Congestion is one reason.

Think of the internet as a series of motorways.

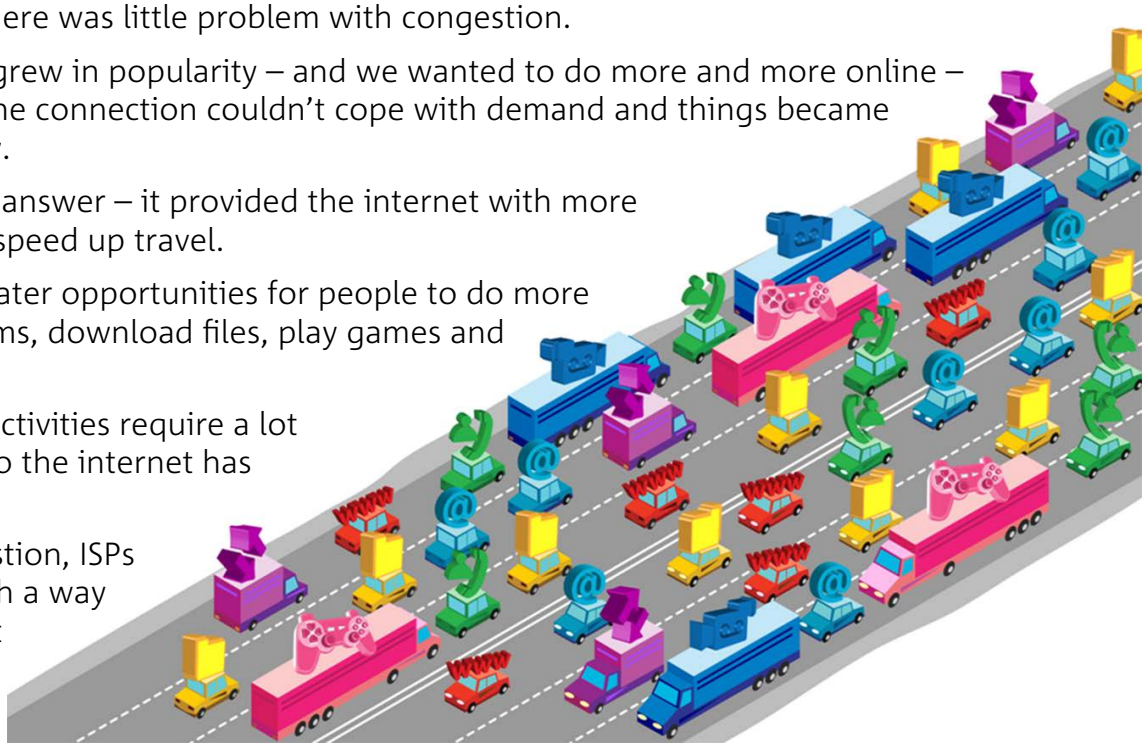
In the early days of the web, it was mainly used for email and browsing, and fewer people were online. Back then there was little problem with congestion.

But as the internet grew in popularity – and we wanted to do more and more online – the old dial-up phone connection couldn't cope with demand and things became congested and slow.

Broadband was the answer – it provided the internet with more motorway lanes to speed up travel.

It also provided greater opportunities for people to do more – such as stream films, download files, play games and make video calls.

But many of these activities require a lot of bandwidth and so the internet has become very busy.

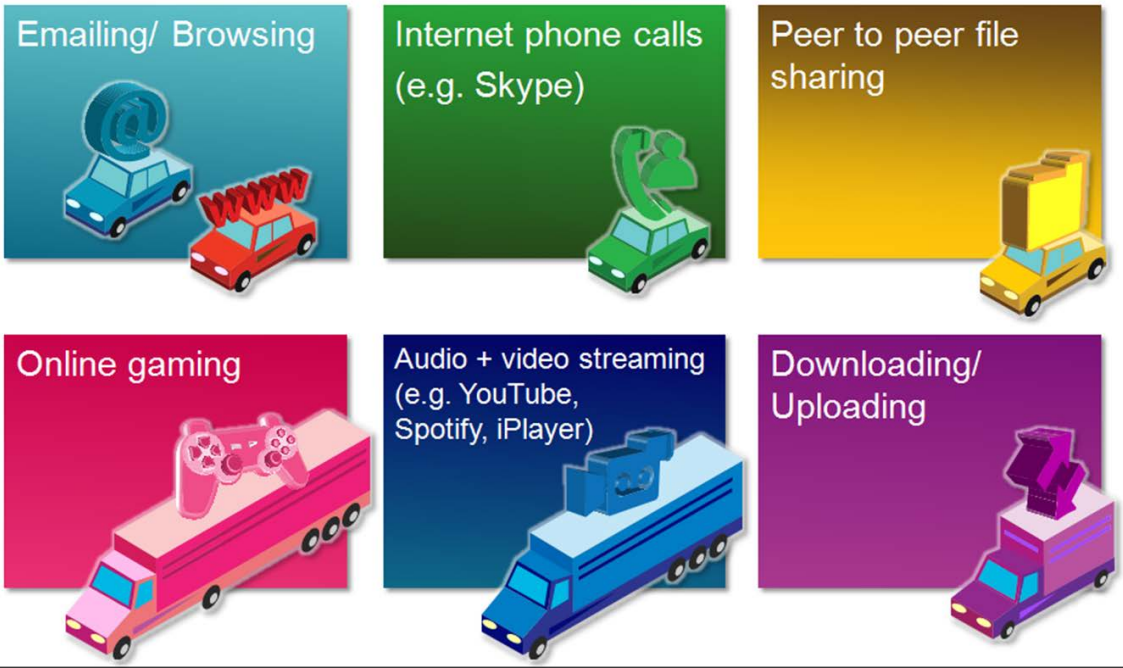


To deal with congestion, ISPs had to come up with a way to keep the internet running without slowing everything down.

So they reconfigured their motorways by introducing 'priority lanes' for certain types of internet traffic.

Internet traffic can be thought of as being represented by different types of vehicles. Activities like streaming video are the lorries and take up a lot of space, whereas emailing or browsing are smart cars and much smaller.

Types of traffic on the motorway



What does this mean in practice?

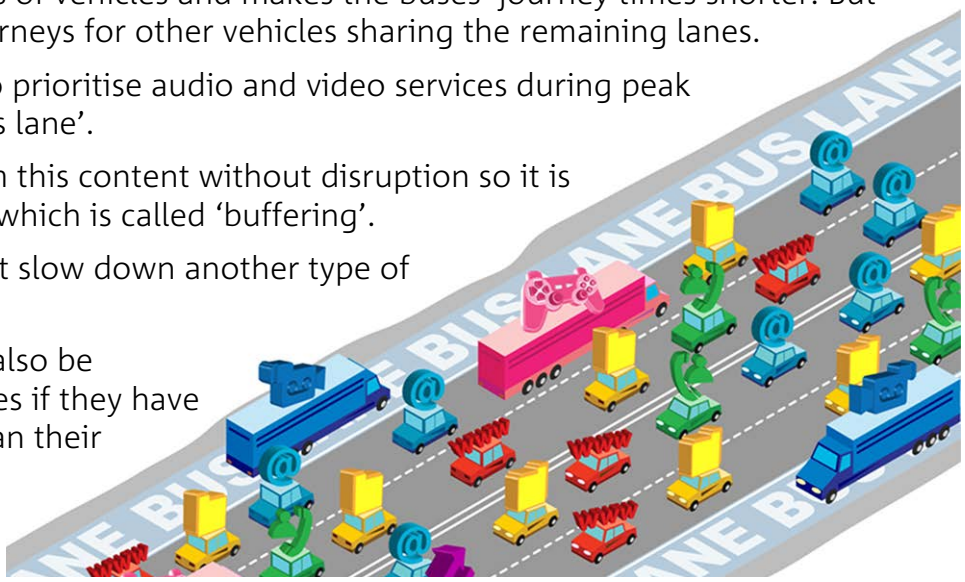
You can think of it in the same way that traffic is managed on roads. For example, a bus lane gives priority to buses over other types of vehicles and makes the buses' journey times shorter. But this can mean slightly longer journeys for other vehicles sharing the remaining lanes.

An individual ISP might decide to prioritise audio and video services during peak times by putting them in the 'bus lane'.

This should allow users to stream this content without disruption so it is less likely to suffer interruption, which is called 'buffering'.

To protect this service they might slow down another type of traffic – such as file sharing.

Speeds for individual users may also be temporarily reduced at peak times if they have been using the internet more than their package allows.



Other factors can also affect your fixed or mobile broadband connection

Regardless of your ISP's traffic management policy there are a number of other reasons why the speed or quality of your connection may not be performing to the level that you expect.

A few of these include:

- The line that provides your internet connection to your home could be damaged;
- The device that you use to access the internet (computer, mobile phone, dongle, gaming console) may not be set up correctly;
- The quality of your phone signal and whether you are indoors or outdoors;
- There could be issues with the performance of your internet router or hub (e.g. WiFi interference); or
- There could be faults related to specific content providers or their applications.

So if you have a problem with your connection we suggest contacting your provider in the first instance. They should be able to help you work out what the cause is and how you might be able to fix it.

How can I find out about my ISP's internet traffic management policy?

Each ISP has its own traffic management policy and so when choosing a provider you should check their policy meets your needs.

Below you will find links to policies of the largest providers. If your ISP is not on this list, visit your provider's website or speak to their customer services department.

BT	Virgin Media (National and Cable)
Karoo	O2 (Home broadband and mobile broadband)
Plusnet	EE (Handsets, broadband and mobile broadband)
Sky	Three
TalkTalk	Vodafone

Ofcom