How much bandwidth do you really need? Other factors to consider when choosing an internet connection for your business

Buying consumer broadband is a fairly straightforward affair. After an initial run-through comparing prices against available download speeds in your area, you choose your provider, and cross your fingers that you'll get the speed they hope rather than promise to give you. Business broadband, by stark contrast, can be more complicated, with words like contention ratio, guaranteed bandwidth, SLAs, upload speeds, 99.9% uptime, 24/7 network support etc. all entering the fray. These may not be words you're familiar with, but they are arguably more important for the quality of your connection than the download speed and monthly price that consumers have to base their decision on.

Given that 71% of small businesses couldn't survive longer than a day without internet access*, it is essential to first learn what all this technical jargon means. Once you understand the terminology, you must then learn *how you use* your internet connection to decide which factors are most important to you. Your internet connection must meet your exact business needs, otherwise you risk the frustration of a connection that stifles productivity when you need it most, or the wasteful one that is far in excess of your needs.

Different business, different requirements
So, how much bandwidth do you really need? Firstly, you should recognise that no two businesses are the same; so bandwidth requirements vary from company to company, depending on the nature of the business itself and its work patterns. For example, a florist with a simple website and online ordering system will require less bandwidth than an online brokerage firm of 50+ traders. Have a think about how much, and *how* you use your internet connection first before investigating your connectivity options.

Contention ratios
In a nutshell, the contention ratio defines the maximum number of users sharing the connection between your local exchange and your ISP. It is the single most important factor beyond download speed when choosing a connection. A high contention ratio means there are likely to be more people sharing your line, and a lower contention means there are less. For example, if you have a 20:1 contention ratio, then you could be sharing your bandwidth with up to 19 other people. The more people using your line, the slower it will be. Since contention ratios are so important, we have dedicated an entire article to it here. Take a read, but bottom line: when comparing ISPs, always ask for the lowest contention ratio possible.

Guaranteed bandwidth
Once you understand the implications of contention ratios, you should check whether your bandwidth is guaranteed or not. A low contended (5:1) business ADSL or SDSL connection will deliver close to if not exactly the speed quoted most of the time, but it is rarely guaranteed. Only with a completely uncontended line, such as EtherStream, SureStream or Leased Line, will you get guaranteed bandwidth. With these connections, you get the full bandwidth all the time, irrespective of whether it's peak time or not.

Peaks and troughs
While total bandwidth requirements vary immensely, it is also worth noting that businesses have times when they use the internet more than others; peaks and troughs. While browsing the internet uses relatively little bandwidth, downloading a large file takes up a lot more (if only for a short

period of time). If your connection is not fast enough, this short-term peak will have a detrimental affect on everyone else's connection. In order to avoid these bottleneck issues, most businesses should choose their connection speed based on how much bandwidth they need at *peak times*. However if you would like to make a saving and can tolerate these bottlenecks when they occur, then reducing your connection speed is a viable option. You just need to be sure that these dips in performance will not affect your businesses' ability to function.

Symmetry: The growing importance of upload speed

Rarely quoted in the consumer world, upload speed is fast becoming one of the most important factors when choosing an internet connection. This is due to the rise of business tools such as cloud computing (Google Apps, Salesforce etc.), IP telephony and video conferencing – which all require high upload ***and*** download speeds to function.

Most consumer internet packages are based on ADSL, where the A stands for *Asymmetric* i.e. download and upload speeds are different. In the case of an 8 Mbps ADSL connection, the 8 Mbps refers to the download speed. Such a connection would only offer an upload speed of around 0.8 Mbps (one tenth of the advertised download speed). This was fine for browsing the internet five years ago, but is very limiting today. If you are considering a move to IP telephony or cloud computing, centralising your application servers at one location, or just like to regularly share files with other offices, you should ask your ISP about symmetrical connections. SDSL, SureStream, EtherStream and Leased Line are all examples of symmetrical connections from Easynet Connect.

Buying a business broadband connection may seem daunting at first, but once you understand the terminology and how you use your connection, the process should be more straightforward. Your ISP should discuss your priorities and understand how you use the internet before they prescribe the right connection for you.

* **'Soaring Not Surfing' report carried out by Quocirca on behalf of Easynet Connect, 2008.**