

Article – Fibre for Business

Dispelling the myths of Fibre Internet for Business

Mike Wemyss, Technical Director, Fibreplus Ltd.

Despite significant improvement in internet speeds over the last five years, in this part of the world we are still, so to speak, driving on gravel roads rather than motorways.

What does “Ultra-Fast” mean, why do we need it and how will you connect? Here is some handy advice.

Why the need for speed?

Despite the help of tax dollars for the UFB roll out, a common customer response to marketing efforts around fibre upgrades is to say they are quite happy on their \$99 per month business ADSL line.

For some businesses there may be little advantage to a fibre internet connection, however as we become increasingly dependent on the internet to function and make money there are several reasons for most businesses to consider fibre:

- **Speeds** – Fibre internet provides the same speed for uploading as it does for downloading with speeds from 5mbps to 1000mbps and higher.
- **SaaS, cloud and hosted solutions** – As applications move off premise they are reliant on the internet to function, so low bandwidth can have an impact on speed and therefore productivity. This also applies to companies hosting servers in data centres.
- **Growing file sizes** – We’re now in a High Definition world for video and imagery, which means much larger file sizes with HD video files that can reach the 8GB mark. Uploading such large files over ADSL can be a slow process and also consume a large chunk of your internet connection, having an impact on your other internet dependent services such as email, POS systems and SaaS/cloud-based applications.
- **New methods of communications** – Phone communications have gone through a revolution, moving from analogue to digital and the world of VoIP, but the quality of a VoIP conversation, particularly for video calling, can degrade sharply without adequate bandwidth. ADSL can support the requirements for most VoIP telephone systems but fibre internet can offer more stability with higher bandwidth and the same upload and download speeds, and by allocating a portion of your internet capability for VoIP only.
- **Improved reliability** – The well-reported Telecom ADSL outages at the end of 2012 left businesses without connectivity for a significant period of time leading to loss of business and productivity. QoS or Quality of Service can be an important factor in reliability and defines a guaranteed level of service. At present the Vector Fibre network is the only MEF (Metro Ethernet Fibre) certified network in New Zealand, MEF certification requires a QoS enabled system.

Dispelling the myths of Fibre Internet for Business

The problem with ADSL

ADSL and ADSL+2 work well and prices are reasonable, but they are old technology that is potentially holding back the productivity of your business. It can provide ‘up to 8mbps’, but the key is in the phrase ‘up to’. This means that, depending on how far you are from the exchange and your ISP’s contention levels, you could experience much slower speeds.

This is because the further from the exchange you are the more degraded the signal across copper wire can become, which decreases bandwidth and lowers the overall performance and speed. ‘Contention’ is the ratio of the potential maximum demand to the actual bandwidth. The higher the contention ratio, the greater the number of users that may be trying to use the actual bandwidth at any one time and, therefore, the lower the effective bandwidth offered.

Back to the loading analogy, the speed you travel on the motorway is directly proportional to the number of cars on the road. For most low-cost internet you’ll be in the region of 20:1 and up to 50:1 with some ISPs.

For home use this might not be an issue but for business use, you should know what your ISPs contention ration is and if your productivity is being affected whether fibre is the answer.

So how do you get fibre?

There are already relatively extensive fibre networks in Auckland, Wellington and Christchurch and various other networks being used by business and schools etc. These networks are expanding and probably the best known right now (in the North Island at least) is the Chorus UFB network.

To connect to the fibre network you need to have fibre running to your building. The fibre backbone may already be connected to your building, but if not your service provider will connect you (for a fee) or use a third party such as Chorus. For high rise buildings the connection will typically be in the basement comms room. From here you have two options:

1. For speeds of up to 100mbps you can run a copper CAT5 cable (standard network cable) from the basement to your office. The length of cable required is not likely to be long enough to cause degradation of signal.
2. For speeds up to and over 100mbps, a fibre connection directly to your office may prove to be more future-proof as you can increase your internet bandwidth without the need to change the connection.

You should be able to plug your firewall or router into the newly-installed standard network connection. ADSL modems are not fit for purpose so you will need to invest in a network router that is high-speed capable. Once the installation is complete, you can choose the access bandwidth, internet speed and data plan based on your requirements and price.

Dispelling the myths of Fibre Internet for Business

Fibre contentious too

Contention also exists in the world of fibre internet, in particular to provide low-cost plans. It has its place in the market, and if you see fibre internet at the same price as ADSL you can be sure that there will be contention in place. It is possible to purchase 1:1 or direct connections, which are not contended, for a fee, and the cost is not unrealistic for those who require the lift in speed and reliability.

While early adopters of fibre broadband may not notice much effect from contention, future uptake could change that significantly, so take some time to understand how contention could impact the quality of service that you will receive now, and in the future.

If you are seeking a quality connection ensure you know the contention rate you are signing up for. Be wary of suppliers saying they have zero contention unless their prices fit with uncontended bandwidth.

Costs

For most of us the fibre non-contended 1000mbps option is just not in the budget but we can't afford to stay with ADSL in the long run either, so we go for something midrange, which in fibre means the 10mbps to 50mbps mark. Prices will vary depending on data caps, contention and the access and internet bandwidths.

As the saying goes “Pay peanuts, get monkeys”. In the world of the internet peanuts will get you heavily contended bandwidth and potential negative effects on performance. You may be able to get by on an ADSL connection for now, but for comfort, speed and toward the future, the extra spend on fibre is worthwhile.

About Fibreplus Ltd.

FibrePlus is New Zealand owned and operated company that provides Ultra-Fast internet through Fibre Broadband connections for Schools, Educational Institutes and Businesses.

We supply Business connections to the VectorFibre network. This is available in buildings with an existing VectorFibre connection, or buildings with another Fibre connection enabled such as the UFB network.

Here are the fast and reliable business grade internet solutions.

- ◆ **InfiNet** - High performance business Internet access at a flat monthly rate. You can choose bandwidth required, and with no limit on the total volume of traffic, InfiNet is ideal to access cloud services and other Internet applications.
- ◆ **DirectNet** - High performance business Internet access at a flat monthly rate with NO contention. DirectNet gives you a superior Internet service and is ideal for large organisations. You will receive dedicated access to both international and domestic Internet with no limit on the total volume of traffic.