

**DELIVERING
PROFESSIONAL
PROACTIVE
SUPPORT & SERVICES**

IT

**MAKE THE RIGHT
BROADBAND CONNECTION
FOR YOUR BUSINESS**

NET TECHNICAL SOLUTIONS LTD
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net technical solutions

INTRODUCTION

Nowadays most businesses rely heavily on an Internet connection to keep their organisation up and running and to communicate effectively with customers, prospects, suppliers and staff. However, not all businesses are connected in the same way and so you need to be sure that you have the right Internet connection to keep your business operational and maximise your communications.

There are now many different options of Internet connectivity available and making the right choice for your business can be confusing. In this document we have outlined the basic differences between the services on offer so that you can work out which route to take to ensure that you have the most appropriate Internet connection for your business needs.

INTERNET CONNECTION - THE NEED FOR SPEED

Internet connection speed is the speed that data is transferred between your device(s) and the Internet - it can also be referred to as bandwidth.

You can enjoy a variety of Internet speeds depending on which broadband option you choose. Broadband speeds are measured in Megabits per second (**Mbps**) and refer to how quickly you can get information from the Internet to your computer (**your download speed**) and how quickly you can send information from your computer to the Internet (**your upload speed**). So download speed is the important factor when receiving large emails or downloading large files from the Internet, whilst upload speed is important when sending large data files, or backing up your data to the Cloud for example.

The higher the number of Mbps you have, the faster your online speed should be:

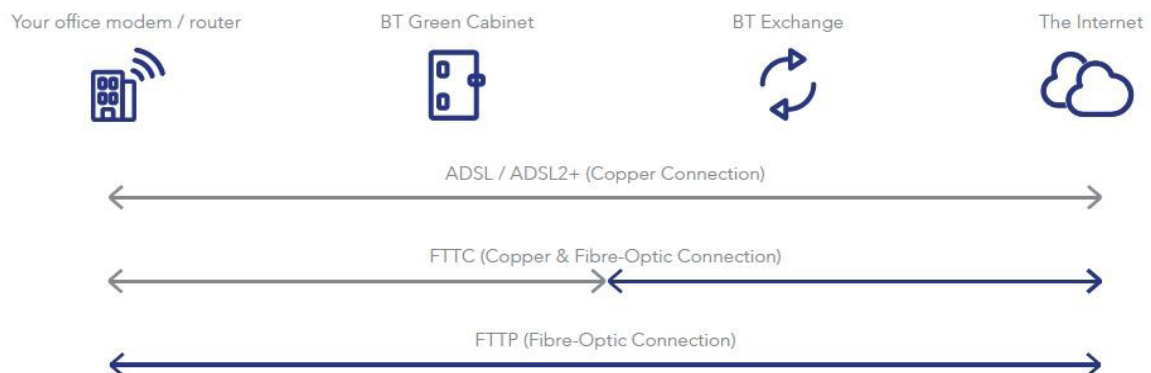
- The maximum rate at which data can be received over an Internet connection is known as the downstream bandwidth.
- The maximum rate at which data can be sent is known as the upstream bandwidth.
- As most people download more data than they upload, the downstream bandwidth is higher than the upstream bandwidth. So it's the downstream bandwidth that's measured when you first connect to the Internet.

INTERNET ACCESS - BROADBAND

Broadband is the common name we give to Internet access regardless of the technology that it's delivered over.

A broadband connection, like a telephone line, is never switched off and can be accessed at any time. The speed depends on your distance from the local telephone exchange and the signal deteriorates over distance, so the closer you are to your exchange, the higher your speed.

The most basic type of broadband connection is known as **ADSL (Asymmetric Digital Subscriber Line)** and is most commonly delivered over the copper telephone wires in your street, but can also be delivered over satellite, cable or mobile. Speeds vary dramatically but peak at 8Mbps download and 0.5Mbps upload. It is still the most widely available broadband connection in the UK, however most businesses opt to have **ADSL2+** which is a superior version providing a more stable connection and slightly faster speeds of up to 24Mbps download and 1.3Mbps upload.



FIBRE BROADBAND

Fibre Broadband works in essentially the same way as Broadband but uses fibre-optic cable to deliver the service, giving you superfast Internet speeds. As the signals can travel at the speed of light, both download and upload speeds are significantly quicker than standard broadband. Fibre broadband also comes in two choices:

1. FTTC (Fibre to the Cabinet) This is the most widely available, and whilst the majority of the connection uses fibre-optic, the final part (which runs from the green BT street cabinet to your offices) uses standard copper wire (traditional BT phone lines) in the same way as ADSL. Depending on how far your office is from the BT cabinet you can enjoy Internet speeds of up to 80Mbps download and 20Mbps upload but you will need to check your FTTC availability with your provider.

2. FTTP (Fibre to the Premises) This is true fibre optic connectivity to your business as the entire connection runs over fibre optic cable, from the local BT exchange right up to your business premises. It is perfect for any business that relies on Internet performance on a daily basis or has heavy Internet users or big consumers of media who want a consistent experience offering speeds up to 330 Mbps download and 30Mbps upload. Although becoming more common, it is only available in limited areas so we would need to check the broadband options in your area.



ETHERNET

Ethernet connectivity works in essentially the same way as Broadband and Fibre but utilises Ethernet technology to deliver the service, giving you even faster Internet speeds.

Whereas Broadband is not a dedicated line and speeds can fluctuate up and down depending on a number of factors, Ethernet circuits are dedicated to your business and offer guaranteed download and upload speeds, as well as superior uptime and SLAs. Ethernet connectivity comes in a number of different forms:

- **EoFTTC** stands for **Ethernet over Fibre to the Cabinet** and is the most cost-effective Leased Line option for providing symmetrical bandwidth (the same download and upload speed). EoFTTC is widely available and can be delivered in as little as 20 working days, with bandwidths provided up to **20Mbps** in increments of 2Mb. Customer premises must be in a Fibre to the Cabinet enabled area to take advantage of EoFTTC services.
- **EFM** stands for **Ethernet in the First Mile** and utilises multiple copper pairs rather than fibre, offering significant cost savings when compared with a fibre-based leased line and leaving zero opportunity for loss of service. With speeds between of up to **35Mbps**, EFM offers no compromise in service and is supported by the same 100% SLA as all of the products in our Leased Line portfolio.
- **Internet Leased Lines** provide the ultimate scalability of up to **1Gbps** on a single Fibre Access Circuit, and can be provided up to 35Km between your office and the nearest network Point of Presence (PoP) with no degradation in bandwidth. Ethernet services cover over 90% of UK business premises using only best of breed components and suppliers to deliver optimum traffic performance. This is the best option to avoid downtime, with guaranteed uptime, fully resilient implementation using dual circuits along fully diverse paths, fully managed routers and automatic failover between circuits, all monitored 24/7. Naturally, Internet Leased Lines are typically the most costly, however in recent years the costs have come down dramatically, primarily due to the competition in the market.

GETTING CONNECTED

To connect your business telephone line to the Internet you will need a modem, usually contained within a router, which will connect your network to that of your Internet Service Provider (ISP).

The router may contain a 'firmware firewall' which is basic software providing a layer of protection from cyber threats. For business users however, we strongly recommend upgrading your basic router to a 'hardware firewall', which offers far greater protection, manageability and flexibility as well as having the option to add layers of security through a Unified Threat Management (UTM) bundle.

At Net Technical Solutions we have partnered with award winning ISPs **Zen Internet** and **Gamma Telecom** to provide the full range of Internet services for our customers.

In ALL cases the services are fully managed by the Net Technical team in terms of pre-sales, installation and after-sales support, however our own service is complemented with back-to-back support arrangements with each ISP giving our customers added peace of mind.

All services are billed and administered by Net Technical so there will never be a need for our customers to contact the ISP directly.



Gamma

WHY CHOOSE OUR BUSINESS BROADBAND SERVICE

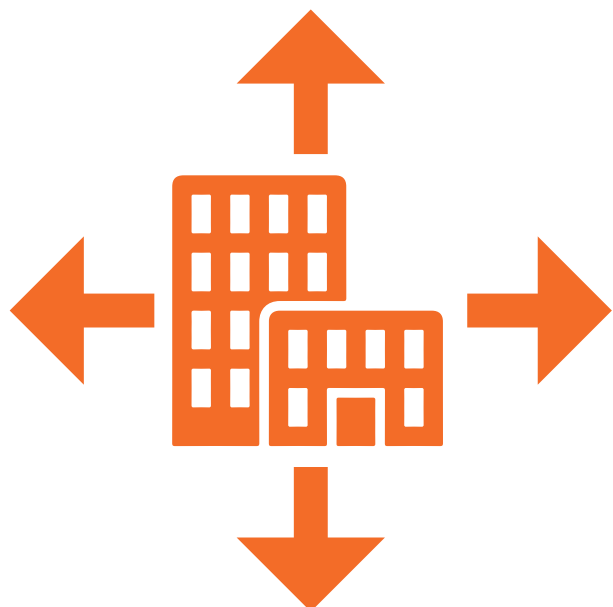
So as you can now see, making the correct choice of ISP and choosing the right type of Internet connection can be one of the most important decisions you make for your business. Get it wrong, and you could be in for a painful experience!

There is so much to consider, such as download and upload speeds, contention, data usage, reliability, security and ultimately price, however, our team can support and guide you through the process and make the correct recommendations for your specific requirements.

What we offer:

- **Critical Care option** gives you access to enhance technical support and a Service Level Agreement for if or when things go wrong.
- **UK based customer services** and technical support functions.
- **No traffic shaping** - unlike other suppliers, we won't slow your connection speed down at any time of day or night.
- **Range of packages** to suit your needs.

If you currently have an Internet connection through Net Technical and would like to discuss any of the above options in more detail, or if your Internet is currently with another ISP and you would like to transfer to Net Technical, please contact one of our Account Managers on **01252 235 235** and they will be delighted to assist you.



ABOUT NET TECHNICAL SOLUTIONS

NET TECHNICAL SOLUTIONS is a Managed Service Provider with nearly 20 years' experience in providing personalised IT services to a variety of organisations throughout Surrey, Berkshire, Hampshire and the Home Counties. During the lifetime of our business we have grown from effectively a one man band into a medium sized organisation and throughout the years have probably employed most IT Support models available and have learnt from talking to our customers what works and what doesn't work.

We currently have a responsive and skilled team of 35 people, offering the full package for all ICT requirements, from day to day PC, server and network support through to network installations, strategy and advice.

Our range of services includes:

- **Proactive IT Service Desk** – friendly and experienced staff who are on hand to deal with your issues and resolve them quickly, supported by our own bespoke case management system.
- **Advice and guidance** – through regular reviews and checks, we can make sure that your existing equipment is kept up-to-date and working efficiently.
- **Supply and installation** – based on impartial advice, we can help you select the right upgrades or new equipment to meet your budget and technical requirements and keep your network up to date.
- **Network security** – by putting in place the right support, software and hardware, we can keep your company's network and critical data protected from unwanted threats, viruses and malware.
- **IT services** – from Internet connectivity, domain/web hosting and Office 365, through to spam filtering, anti-virus and offsite backup, we can cater for all your additional IT service requirements. We can even provide Software Development services if you are looking to develop your own bespoke application.

For more information please visit www.ntsols.com or contact us on **01252 235 235 to request a brochure or to book a free-of-charge, no obligation consultation.**

WE AIM TO UNDERSTAND YOUR BUSINESS

NOT JUST YOUR IT

NET TECHNICAL SOLUTIONS provides professional, proactive IT support and services for business organisations of all different shapes and sizes. As a friendly, talented and experienced team, we are dedicated to building strong customer relationships and delivering excellent service at an honest price. We love what we do and are constantly investigating new technologies and ways of working, so that we can continually provide reliable solutions that add real value and help create efficient, productive business environments.

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Microsoft
Partner

Gold Small and Midmarket Cloud Solutions
Gold Cloud Productivity
Silver Application Development
Silver Datacenter

“ Having been burned by inadequate IT helpdesks many times over the years and patronised or, conversely, baffled by ‘techspeak’, it is with pleasure that I feel moved to commend your support team and the service I have received. I was helped through the problem with consummate professionalism and your engineer approached the issue with a really friendly but efficient approach. ”
Mark Calvert, AHL

“ Please accept our thanks, following the recent server installation. The whole project, which included moving onto Office 365, was carefully planned and executed with very little disruption to our business. I was concerned that there would be long periods of downtime so I was delighted when we were able to continue working within about 45 minutes of switch-over. ”
Mark Staples, PPK

“ We are really pleased to have found Net Technical Solutions and are delighted with the development work that you have carried out for us. Right from the start, we were offered friendly, professional advice and the work was carried out with great diligence and attention to detail. The system is far easier to use and has made a real difference to staff productivity. The staff at Net Technical are always so helpful and explain the technical issues in a non-patronising way, which has been very reassuring. ”
Stephen Hamlet, IAPA

CLIENT INDUSTRY SECTORS

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