Business Internet Buyers Guide

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▶▶▶▶ Your internet connectivity options explained

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The internet plays an increasingly important part of our everyday lives whether we are working in an organisation or at home. Whereas previously the workplace was the location where technology was often readily available our homes are becoming increasingly reliant on faster internet connections to help us enjoy the digital activities we chose. This rise in connected devices at home is at the same time being incorporated in our workplace and users are increasingly expecting at least the same level of consistent connectivity to help them carry out their daily tasks using modern cloud-based software and devices.

Choosing the best internet service for your home is relatively straight forward and more often only two types of broadband services are available. When choosing the best internet service for your business the options depending on your location can be many and with agreements lasting twelve months or more it is important to choose the right connection which will satisfy your business needs now and over the term of the agreement. Getting it wrong can be costly and can affect your organisations growth plans for the future.

Reading this guide and following the five simple steps will give you:

▶▶▶ **A better understanding of the types of internet connectivity available.**

▶▶▶ **Why speed isn't the most important factor.**

▶▶▶ **The pros and cons of various internet services.**

▶▶▶ **What to look out for when choosing your next internet connection.**

▶▶▶ **A checklist to help ensure you choose the right connection including ways to buy using available grants.**

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Introduction

Internet connectivity is one of the most important services required by today's businesses whatever the size of the organisation including more recently than ever before the ability for remote workers to communicate effectively. Without reliable internet connections an organisation will undoubtedly experience loss of business due to not being able to support its customers, suppliers, and communications internally. A poor and inconsistent internet connection can also affect both internal and remote communications including cloud-based operations throughout the business. The inability to communicate effectively if this continued for a length of time will ultimately have a significant impact on any growth plans for the future. The problems could extend even further including retaining and attracting new employees which could find inefficient systems frustrating to use as online tasks become cumbersome.

As more and more software programs are accessed via the cloud everyday simple operations such as sending emails and creating documents depend on a reliable internet connection that can accommodate the current and future needs of the organisation. The increase in using additional technology to make the organisations even more efficient such as video conferencing and VoIP (voice over IP) telephone systems for both office and remote users create an even greater reliance on a good and reliable internet connection.

"We believe from listening to people that frustration in the workplace can occur when the internet connection is slow and intermittent the effects of which will slow down productivity in-turn costing the organisation money."

Why at times does my broadband speed fluctuate?

Over the years the speed of the internet connection has often been the first consideration as the broadband services available at your home were often the same as those available at your workplace. The move from standard broadband internet known as ADSL to fibre broadband meant faster connection speeds, however, users continue to comment that the speed when uploading and downloading information fluctuates especially at certain times of the day.

When choosing the best internet connection for your organisation it is important to factor in these often daily fluctuations as you may find the service reliable in the morning, however, systems slow down or stop altogether during peak times of the day. It is well known throughout the UK that standard broadband services often slow down when more users are on the network typically in the afternoon which can affect not only the ability to access and send information but also the quality and consistency of voice reliant systems such as VoIP telephone systems.

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It's all about the bandwidth!

In understanding which internet connection is right for your business it is important to understand the speed, otherwise known as bandwidth and how this can affect the overall service and performance of the internet connection.

Bandwidth is measured in megabits per second (Mbps) and is the maximum rate at which you can both download and upload data from the internet. The more data-intensive activities you typically do and the more devices you are using on the same connection, the more bandwidth you'll need for your organisation and or workplace.

Understanding bandwidth

As mentioned, bandwidth is the maximum rate you can download data from the internet to your equipment and devices. We have found that one way to explain bandwidth is to think of it as an everyday garden hose. If for example you need to fill a 50-gallon pool of water and the hose only gives out 2 gallons of water every minute then you'll be waiting 25 minutes to fill the pool. If you cannot wait this long to fill the pool, then you'll need a bigger hose that can deliver more water at say 10 gallons per minute. By using this bigger hose then you'll fill the same pool in five minutes.

Bandwidth can be compared to the size of the hose. The larger the hose the more data you can send down or receive at any given time.

Download and Upload Speeds explained.

Whilst fast download speeds are important, and very often you will see internet providers advertising fast download speeds, it is also important to choose an internet connection that has both a high download and upload speed.

▶▶▶ **Download speed** is the speed at which information or data is transferred from the internet to your device. The greater the download speed means you can receive information such as emails, attachments, videos from the internet quicker compared to using an internet connection with a slower download speed.

◀◀◀ **Upload speed** is often in the business sector considered the most important of the two speeds as this affects the rate at which information is transferred from your device to the internet. This is therefore critical if your organisation is using cloud-based programs, video conferencing and VoIP telephone systems. The faster the upload speed, generally the smoother your online experience will be. Upload speeds also affect the speed of which you carry out the majority of your daily tasks such as sending emails for example. It is therefore important when choosing the best internet connection for your organisation to consider the upload speed and how this may fluctuate during certain times of the day.

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The following chart shows the most common types of UK internet connections and will help you understand the key differences between the available services in your area.

Understanding the key differences between the available services in your area. The following chart shows the most common types of UK internet connections.

	BROADBAND (Shared Internet Access)			DEDICATED INTERNET ACCESS (All yours and not shared)	
	ADSL (Asynchronous Digital Subscriber Line)	**FTTC** (Fibre to the cabinet)	**FTTP** (Fibre to the Premises)	**EoFTTC** (Ethernet over Fibre to the Cabinet)	**Fibre Ethernet** (Leased Line)
Max Download Speeds	17 Mbps	80 Mbps	1000 Mbps (1Gb)	76 Mbps	10-1000 Mbps (1Gb)
Max Upload Speeds	2 Mbps	20 Mbps	220 Mbps	20 Mbps	10-1000 Mbps (1Gb)
Does the speed reduce the further you are located from your local exchange?	Yes	Yes	No	Yes	No
Is the circuit shared and therefore contended with other users?	Yes	Yes	Yes	No	No
SLA (Service Level Agreement) **included?**	No	No	No	7 Hours	5 Hours
This type of circuit is ideal for:	Home/Micro business or sole trader with 1-2 users browsing the internet and using email.	Home/Small Office with 3-10 users browsing the internet and using email and minimal non-essential cloud based applications. With no control over the amount of bandwidth subscribers, the reliability of cloud access services can be affected.	Offices with 3-50 for users that have outgrown broadband and are looking for a cost-effective way to move up to ethernet connectivity. Suitable for browsing the internet, email. VoIP telephony, and accessing cloud-based applications including video conferencing.	Offices with 3-30 users which have outgrown broadband and are looking for a cost-effective way to move up to ethernet connectivity. Suitable for browsing the internet, email, VoIP telephony, and accessing cloud-based applications including light use of video conferencing.	Office with 10 –100+ Users. For growing businesses which rely on internet connectivity for multiple cloud-based applications and that require a service level agreement that supports critical business activities.
Things to consider:	Shared service, therefore, speeds can fluctuate during peak times. No service level agreement in the event of service issues.	Shared service, therefore, speeds can fluctuate during peak times. No service level agreement in the event of service issues.	Shared service therefore speeds can fluctuate during peak times. No service level agreement in the event of service issues.	Speeds can fluctuate depending on the distance from the exchange and the quality of the copper connection in the last mile.	Rental price is typically higher than all other internet connectivity options.

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Step Two – It's not just about the speed!

In addition to good upload and download speeds, organisations require resilience and minimal or no fluctuation of speeds and whilst no internet service can currently guarantee 100% reliability in the event of an outage it is wise to choose an internet connection that has a Service Level Agreement (SLA). An SLA will ensure the network provider fixes the problem within a set time frame providing peace of mind for the organisations that critical cloud-based services will resume.

A reliable internet connection is critical to ensure services such as cloud-based programs, e-commerce software, website marketing tools, video conferencing, voice over IP (VoIP) telephone systems and not forgetting the streaming of the all-important favourite office music station function. Without a reliable internet connection that has the required amount of consistent bandwidth, the organisation will be affected.

Internet connections that offer poor resilience will ultimately affect the future of the organisation so getting this right is important for the success of the business.

"Resilient internet connections are equally as important as fast internet connections."

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Step Three – Understanding the Pros and Cons between Broadband and Dedicated Internet Access.

Broadband, ADSL, FTTC and FTTP.

As mentioned earlier in this guide, the majority of UK internet connections are classed as broadband and are either ADSL, FTTC and FTTP the latter two being the faster fibre connections. These services whilst at low cost are shared with as many as forty-nine other users and therefore the service can fluctuate depending on various times of the day and the type of uploading and downloading activity in your area.

The following are some basic facts about broadband technology.

Shared Connection - Based on a low-cost rental, contended broadband circuits are shared with other users who will be using the same internet connection. Typically contended broadband circuits are shared with up to forty-nine other users. It is not uncommon that at peak times of the day the speed of the connection will be slower as more users are on the same network.

Distance from the local telephone exchange - The difference in speeds can vary greatly depending on the distance you are located from your local telephone exchange. The further you are located from the exchange the slower the connection. This coupled with a shared connection can significantly affect the internet connection and you may find that certain times of the day systems which rely on the internet will be affected.

Upload vs download speeds -
Typically, internet service providers (ISPs) provide more bandwidth for downloading information such as websites and cloud-based services such as Netflix. If you are using the internet at home this may not be an issue, however, if your systems require bandwidth to upload for example images or updates to software such as accounting programs, then upload speeds are more important and will affect how your business can save and efficiently share information. Upload speed is usually listed as the second number after the download speed — for example, 4 Mbps:1 Mbps and will often be less than your download bandwidth.

Dedicated Internet Access (Leased lines) - If your business systems cannot risk the fluctuations and uncertainty of shared broadband services, then the next option is to consider a dedicated internet connection which is sometimes called a private connection or leased line. Whilst more expensive the key difference with these types of circuits includes consistent and guaranteed bandwidth.

The same fast download and upload Speeds - Dedicated Internet Access provides the same speeds whether you are uploading or downloading information. If your business is using multiple cloud-based systems and services as well as VoIP telephone systems in addition to sending information to remote workers and customers, then a dedicated internet connection is the option to consider.

Your very own non-shared service - A dedicated internet connection is like having your motorway just for your business. No matter what time of the day both your upload and download speeds will be consistent and will not slow down with other bandwidth traffic during peak times of the day. This service is ideal for organisations which cannot run efficiently with a slow, unreliable and fluctuating internet service and use critical cloud-based applications within their businesses.

Reliability - Dedicated Internet connections include a service level agreement (SLAs) which are effectively a guarantee that in the event of any service-related queries, your internet connection will be back up and running within hours compared to potentially days with contended shared broadband services. If your organisation is considering increasing the volume of cloud-based systems, then a dedicated internet connection should be the preferred choice.

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Does my business require a fast upload speed?

This quick checklist will determine whether your business requires an internet connection with a fast and reliable upload speed now or in the future.

▶▶ Are you or will you be making voice calls over the internet using a VoIP telephone system?

▶▶ Does your business back-up large files to the cloud whether during the day or at specific times?

▶▶ Are you considering increasing your remote working strategy whereby colleagues will be accessing central applications throughout the day?

▶▶ Does or will your business be using multiple cloud-based systems such as accounts, design, marketing, email, and CRM software?

▶▶ Do you use video streaming software for video conferencing?

Whereas previously organisations only used one or a few of the above, more and more businesses and their employees are using systems at the same time which require consistent internet connectivity. Organisations are therefore having to adapt to cater to the increasing demand for a faster and more reliable internet connection to operate their businesses effectively.

Ok, I have decided that a high speed internet connection is the best solution for my business – So what next?

Fortunately, there are just a few options to choose from as follows:

Shared Internet (FTTP)	Dedicated Internet (EoFTTC)	Dedicated Internet (Fibre Ethernet)
Fibre to the Premises (FTTP) is a connectivity technology that is based on fibre optic cable being installed directly from the local telephone exchange to the business location. Whilst this type of internet connection is still shared and therefore the speeds will fluctuate, FTTP is up to 40 times faster than copper-based broadband mentioned earlier in this guide.	Ethernet over Fibre-to- the-Cabinet (EoFTTC) is considered an entry-level leased line option. This type of circuit provides a very fast and cost-effective solution. The service includes a service level agreement, therefore, providing reliability and peace of mind.	Fibre Ethernet (Direct Internet Access) is ideal if internet access is critical to your organisation. This type of internet connection is currently the fastest in the UK and is delivered using a private end to end fibre service. The internet connection provides dedicated and constant bandwidth and is widely used by many businesses that require fast and consistent connectivity to run their organisations.

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What to look out for when choosing a new internet connection.

Availability

Every contract should specify how much uptime you can expect to receive. Promises of at least 99.9 percent availability may sound impressive, but this equates to around six hours of downtime a year. Availability of 99.99 percent means less than an hour of downtime per year, which could make a big difference for some businesses.

Jitter

Typically more apparent on contended broadband connections, Jitter refers to how much variability there is in the speeds you receive. Like latency, this can become important for real-time applications such as VoIP telephony where a smooth and consistent level of performance is required.

Latency

Typically more apparent on contended broadband connections, latency refers to the amount of time it takes data to traverse the network. The higher the latency, the greater the delay there will be in data arriving at the other end. it's not directly related to bandwidth as a network with fast download speeds can still suffer from poor latency. If you rely heavily on real-time tools such as video conferencing a low-latency solution will be essential. Satellite internet connectivity is an example of a type of internet service with typically fast internet speeds although it experiences high latency as the signal has to travel further.

Support

You should be aware of the level of support you will be entitled to should anything go wrong. Dedicated internet connections should offer fix times of just a few hours if there is any disruption. However, if your business is using a consumer-grade shared broadband service, you can expect to be in a queue and may have to wait up to several days for a repair.
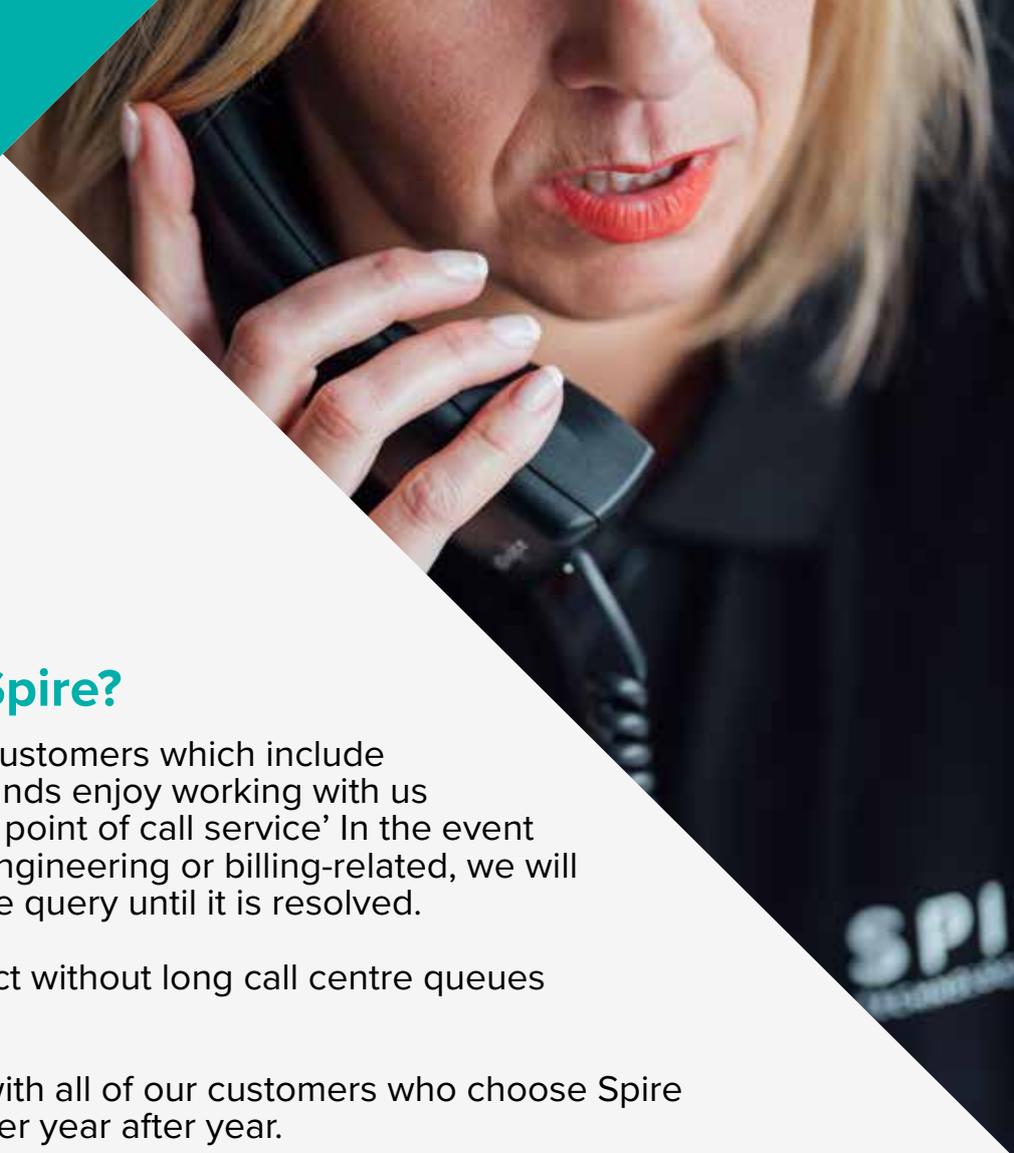
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Over recent years the government has helped businesses whether located in towns and cities or rurally to help pay for new internet connectivity.

Over recent years the government has helped businesses by offering a grant to help pay for new internet connectivity. The current £2500 grant will significantly help you if you are considering a leased line connection with a speed that can accommodate 1000Mb (1Gb) in the future. Like most grants there is a set criteria, however many thousands of UK businesses have already taken advantage of the available funds so if you are considering enhancing your internet service it is always wise to act now as in some instances services can take several months before they go live and usually there is nothing to pay until this date.

If you are considering a new leased line connection, then act fast and take advantage of the limited offer.

All services are subject to availability based on your postcode. For specific pricing and availability in your postcode area call **0330 2050250** or email **connectivity@spiretechgroup.com** today.

Why Choose Spire?

For many years our customers which include many well-known brands enjoy working with us as we provide a 'one point of call service' In the event of a query whether engineering or billing-related, we will take care of the entire query until it is resolved.

▶▶▶ Single Point of contact without long call centre queues for any questions.

▶▶▶ A sound reputation with all of our customers who choose Spire as their service partner year after year.

▶▶▶ Consistent communication via a dedicated account team that has an average of five years of service.

▶▶▶ Competitive pricing and flexible agreements.

▶▶▶ Spire works with all the major carriers so can review all options based on availability and service levels.

▶▶▶ Well established, Spire has been trading since 2002.

▶▶▶ Accredited partnerships with major UK suppliers and carriers.

▶▶▶ Always going the extra mile and taking a long term view of everything we do.

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