

**TalkTalk
Business**

Business Grade Connectivity

The pathway to future growth

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1 Executive summary

The internet offers an enormous range of potential benefits for modern businesses, providing companies have the required level of connectivity. As online solutions become more crucial to the way firms operate, so does the importance of ensuring online availability at all times.

Companies can benefit in a number of ways from upgrading to business grade connectivity solutions - such as business broadband, EFM and Ethernet - which ensure they have access to the bandwidth, reliability and flexibility they need to grow.

They may be able to reduce costs, improve security, optimise customer service, become more agile and cope with evolving demands by upgrading to business grade connectivity.

Businesses need to think about which type of solution best supports their end goals, and then form a strategy for deployment utilising the expertise of a specialist provider. The choices companies make could determine how competitive they are in the months and years to come.

2 Connectivity in the digital age

During the first few years of the 21st century, advances in connectivity have brought the internet to life, helping to showcase the vast potential of the platform. Few sectors, industries or individual business processes have been left untouched by continuing innovation, with the emergence of online solutions creating infinite opportunities. Almost every company now uses the internet in some form, and an increasing number are recognising the value of higher grade connections. Eager to access a growing range of transformative tools, they are assessing the case for an upgrade.

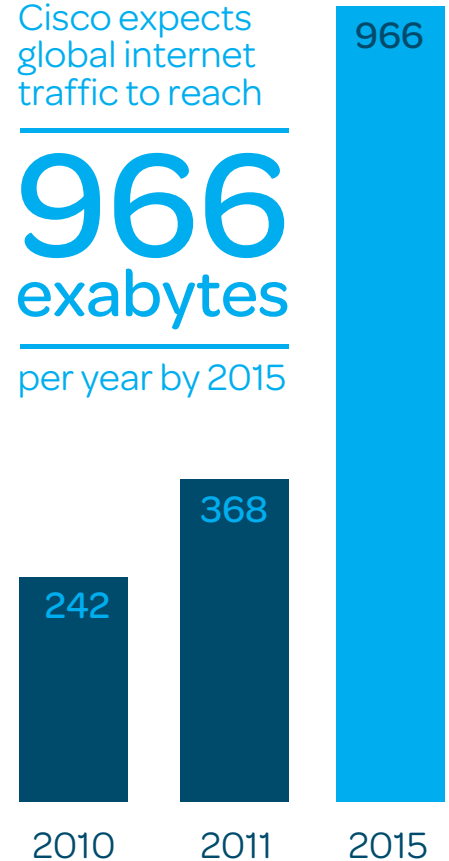
As online functionality increases, networks are battling an exponential rise in data demands and bandwidth requirements. Cisco expects global internet traffic to reach 966 exabytes per year by 2015, four times the current level, while IDC has forecast 50% annual growth over the same period. New adopters may account for some of this additional traffic, but much of the increased demand can be attributed to existing users. Recognising the value of the internet, businesses are doing more online - turning to services such as VoIP, video conferencing and unified communications to add value. This in turn is creating a need for faster, sturdier and more flexible connectivity.

"With increasing business demands accelerating the need to converge voice, data and video onto a unified communications network, businesses will need to evolve their strategies in order to support employees in accessing new technologies in an efficient and secure way."

Cisco expects global internet traffic to reach

966
exabytes

per year by 2015



...4 times the current level

3 Business Grade Connectivity

Demand for enhanced connectivity is being driven by consumers - who want to shop online and engage with businesses in real-time - but also from within the enterprise as employees demand new capabilities. Eager to use smarter working techniques and productivity tools, employees are urging their bosses to embrace online solutions.

Business leaders are being pushed towards enhanced connectivity, but at the same time, pulled in by a strong economic case. The potential to reduce costs, increase agility and boost output is not lost on decision makers, who also understand the risks of not investing. Should they suffer from slower speeds, patchier service and inferior reliability than their rivals, both customers and their own workforce could be alienated.

In a recent study of business owners, 57% claimed their companies were being held back by poor connectivity. Eager to avoid being part of this statistic, they are looking to add speed, flexibility and resilience to their connections. In a tough economic climate, decision makers are viewing business grade connectivity as a genuine competitive differentiator.

"The rollout of next-generation digital infrastructure will unlock innovation across the economy, allowing businesses to serve customers in new ways, and to tap new markets for growth."

Rhian Kelly, Director for Business Environment,
Confederation of British Industry

4 The case for an upgrade

Costs

As businesses aim to increase efficiencies, the role of hosted services cannot be understated. In Q4-2011, 81% of corporates were using, experimenting with or planning to adopt online tools, with the potential for reduced costs a principle driver. Hosted services - delivered by a third-party specialist over a secure network connection - allow companies to switch from capital to operational expenditure, since companies only pay for what they use.

KPMG found that 76% of firms are seeking a competitive advantage through the use of hosted services. But unless they have business grade connectivity, most will fail to achieve this goal. Companies need fast, resilient and flexible connections to cope with high bandwidth services, ensuring workers can utilise cloud software, platform and infrastructure at any time, in any location.

Security and continuity

Business leaders understand the importance of securing networks, conscious of the fines and negative press which follow data breaches. They are also aware of the reputational damage caused by such incidents - estimated at between 12% and 25% of their brand value following a data breach.

The use of secure networks and resilient connections - even across multiple sites - helps ensure sensitive data is kept under lock and key. Business grade connectivity also gives companies the option of using hosted security solutions, supplied by a third-party data centre specialist. Such providers typically have larger budgets than individual clients, meaning they can afford to offer top-tier security solutions.

"Keeping a firm's internet connection safe, not just from viruses or spam but also external threats such as industrial espionage via hacking, is vitally important for any company with trade secrets or sensitive commercial relationships to protect."

Mark Jackson, Editor-in-Chief,
ISPReview.co.uk

The ability to store data in the cloud - an option reserved for business grade users - also offers assistance from a business continuity perspective. Having data backed-up off-site gives firms a better chance of surviving theft, technology failure or natural disaster. Some 87% of business leaders claimed a failure to recover data would be 'damaging', while 23% thought it would be 'disastrous' for their organisation.

Availability

In an Ofcom study, 97% of firms described 'availability' as business-critical - making it the top connectivity requirement. Service outages - often attributed to a loss of connectivity - cause multiple problems for businesses. Some 50% of firms believe downtime is damaging to their reputation, while 35% think it affects customer loyalty. Recognising the causal link between interrupted services and revenue loss, firms are keen to minimise downtime, even if this requires additional investment.

Another problem with IT outages is the effect on employee productivity, given that many workers rely upon the internet day-to-day. Research suggests the average business suffers 14 hours of downtime per year, during which time staff can only work at 63% of their optimum productivity. Nearly half (44%) of employees reported a loss of morale as a result. Clearly as more business processes move online, outages become increasingly damaging - between June 2010 and February 2012, the cost per hour of downtime rose by an average of 65%.

Scalability

Demand for bandwidth grew at a compound annual growth rate of 57% between 2007 and 2011. But since many firms were in the pre-hosting stage during this period - and consequently had lower data demands than today - this growth rate will likely accelerate in the months and years to come. Business leaders and their employees are discovering new roles for the internet, including hosted services, driving demand for additional data.

The upshot is that companies must take a holistic and strategic approach to connectivity. Solutions need to be fully future-proofed - ready to cope with increased requirements as they emerge. If businesses cannot upscale connectivity according to bandwidth demands, companies will see their online savings capped and overall growth stifled.

"Connections need to be established with flexibility in mind to evolve and upscale with the changing and increasingly demanding needs of business users.

"But connectivity also needs to be a perfect fit for unique organisational requirements in the here and now."

Lance Spencer, Director of Connectivity Services, TalkTalk Business

Remote working

As businesses target optimum efficiency and productivity, many are looking beyond the confines of the traditional office. Advances in connectivity mean staff can now select their own working environment - all they need is internet access and a web-enabled device. This is a major plus for companies, particularly as many are now trading 24/7 through their online operations.

Workers need to be contactable and available at any time, in any location - otherwise the heightened expectations of 21st century consumers cannot be met. Business grade connectivity allows firms to respond to calls, emails, instant messages and social media posts in real-time, and this helps them establish a positive brand impression.

The global mobile worker population is expected to total 1.3 billion people by 2015 - 37.2% of the total workforce . Already one in eight businesses, and a fifth of public employers, are encouraging staff to work from home . The upshot is that more individuals will be using laptops, smartphones and tablets on a daily basis, placing greater pressure on business networks.

"The proliferation of mobile devices has led to a fundamental requirement for the right network which is capable of handling the bandwidth, security, and mobility involved in the movement from office to home."

Richard Roberts, Head, Cisco's UK partner organisation

5 Connectivity options

Broadband

As an important catalyst for the wider digital revolution, broadband has freed companies from the confines of slow, inflexible and unstable dial-up connections. The availability of greater bandwidth, speeds and reliability means the internet can flourish, and demonstrate its potential as a vehicle for change. Using broadband services, companies have been able to augment key business processes and reimagine some altogether.

In the UK, both the public and private sectors are investing heavily in broadband networks, eager to facilitate further online capability. Fibre broadband coverage is fast-increasing in urban areas, with cable and ADSL services presenting a viable alternative for those awaiting an upgrade. In rural Britain, a combination of wireless, mobile and satellite broadband is gradually bridging a connectivity gap created by the uneven distribution of super-fast services.

A worrying issue is the number of companies persisting with outmoded legacy connectivity, despite the availability of more suitable options. Whether through active choice or lack of knowledge, 70% of small firms were still using residential broadband connections in 2011, despite their ill-fitting nature. Business broadband services - which offer prioritised data traffic - are available to most UK companies, yet many are failing to take advantage.

"If your business relies on internet access or has many employees needing internet access, you may want to look for a business broadband service."

"These typically offer higher service and support levels and can provide additional features, but at extra cost."

Business Link, Government's online resource for businesses

Ethernet in the first mile (EFM)

Ethernet in the first mile (EFM) is ideally suited to companies which have outgrown business broadband, but are continuing to operate under tight budgetary constraints. The solution uses multiple bonded copper pairs to deliver a high-speed service - up to 20Mbps at up to 4km from the local exchange - allowing companies to utilise data-heavy applications. Despite lacking the hype and publicity of fibre broadband, EFM is viewed by many as an ideal replacement for legacy connectivity.

High performing yet relatively affordable, EFM bridges the gap between business broadband and premium Ethernet services. Users can benefit from symmetrical download and upload speeds and dedicated, uncontended bandwidth. Data is transferred over resilient connections with in-built safeguards, ensuring companies enjoy both speed and reliability from their connection. And EFM is also entirely scalable, which may appeal to businesses with an eye on expansion.

Ethernet

With voice and data networks converging, larger firms are seeing the value in top grade solutions - ensuring the best speeds, reliability, flexibility and manageability. Fully future-proofed to accommodate greater bandwidth demands, Ethernet offers all the benefits of EFM solutions but on a grander scale. The networking protocol is capable of delivering rapid speeds across secure connections, ensuring it has a wide range of uses across industry sectors.

Ethernet frees businesses from data restrictions and allows them to benefit from full traffic control and quality of service options. Users can also have maximum confidence in the security and resilience of their connection, whether they are transferring voice, video or data, in-house or from a remote location. The question for business leaders is how much are they willing to pay for business grade solutions?

"Businesses need a network with a wide geographic reach but it must be based on a secure and resilient architecture."

Lance Spencer,
Director of Connectivity
Services, TalkTalk Business

MPLS IPVPN

Companies with employees based over multiple sites need access to secure, high-quality connectivity that will allow different applications, and use types to be prioritised to optimise the available bandwidth. Over 90% of enterprises in the UK use MPLS IPVPN-based services to meet this need. This allows firms to standardise processes and achieve similar rates of productivity in each workplace.

As remote working increases and more data is shared over a variety of platforms, MPLS IPVPN infrastructures are helping to ensure data security and confidentiality. Using business broadband or Ethernet for their IPVPN, companies are able to transfer sensitive data securely across their networks, offering valuable peace of mind.

"10 Gigabit Ethernet (GbE) along with the emerging 40GbE switch segments are leading the market to higher levels, proving the point that growth in applications, virtualisation, and mobility has to be looked at in conjunction with the underlying wired infrastructure."

Business Link, Government's online resource for businesses

6 Choosing an appropriate solution

With 46% of firms set to adopt extra data services in next 12 months, the UK stands on the precipice of a connectivity gap. Firms may understand the benefits of online solutions and even devise deployment strategies, but they will make little progress without the required infrastructure in place. To benefit from high-bandwidth, high-benefit IT solutions, businesses require connectivity befitting of the task.

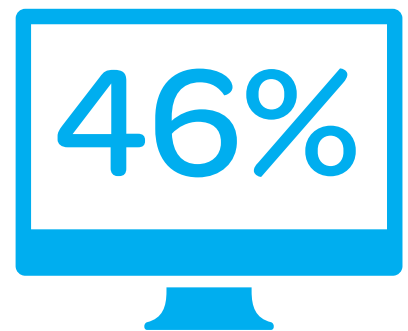
Each individual business needs to assess its own requirements and carefully consider which solution is a best-fit - accounting for factors such as size, location, distribution of workers, online activity, budget and project goals. Companies need to invest in business grade, but also ensure they do not pay for services exceeding their practical requirements - few start-ups require EFM or full Ethernet from the off.

Business broadband is the obvious starting point for many companies, particularly small enterprises. With a secure, dedicated connection and prioritised traffic, firms can ensure maximum availability while delivering the benefits of hosted solutions and collaboration tools to the front line. Such connections offer sufficient scope for growth, and support a high level of performance in the years to come.

Businesses with grander ambitions - such as those trading on a national/international scale - may look towards EFM and Ethernet for their best-fit, conscious of the need for the highest quality of service and maximum flexibility. This appears to be the preference of corporate enterprises as they future-proof their connections - the Telecommunications Industry Association expects Ethernet to lead business communications spending through to 2015 with a compound annual growth rate of 4.5%.

"As the strain on business' IT connectivity increases, so does the need to ensure an organisation has a tailored, best-fit solution to support its requirements."

Lance Spencer,
Director of Connectivity Services, TalkTalk Business



of firms are set to adopt extra data services in next 12 months

7 Ensuring a successful upgrade

Once companies have established a case for business grade connectivity, their attention should turn to ensuring a successful upgrade. Not only must firms select the right solution, but they need to choose a reputable service provider with the necessary level of expertise. When considering connectivity providers, business should consider the following:

Are our business needs fully understood?

Providers must be able to tailor connectivity according to individual demands, identifying potential pain points and offering solutions. The account handler should understand any quirks in the client's business - it should not be a one-size-fits-all approach.

What are our bandwidth requirements?

Providers should have some insight into a firm's bandwidth needs based upon its profile - factors such as number of employees, level of cloud activity, and expansion plans will serve as a guide, ensuring a suitable match.

Is the provider product-neutral?

Companies must be able to select the solution they are most comfortable with - broadband, EFM, Ethernet or an MPLS IPVPN. The provider should offer guidance, but from an agnostic perspective.

Wide range of resilience options

A full range of resilience options must be available - from simple broadband back-up through to multiple building entries on completely segregated networks. This ensures exactly the right amount of resilience can be provided in the most cost-effective way for each site type.

How long will the transition take?

Business grade connectivity is an attractive proposition, but companies cannot afford extended downtime during the upgrade. Providers must be able to guarantee a seamless migration, ensuring business continuity.

How much will business grade connectivity cost?

Businesses should not be pressured into taking solutions they cannot afford - rapid speeds and unlimited data are little use to an insolvent company. Conversely, firms should be wary of 'budget' services in case there is a catch.

Is the provider's network up to the task?

Networks should be reliable, resilient and have a wide geographic reach. Ofcom discovered the top three requirements of connectivity customers are availability (97%), download speeds (88%) and resilience (87%).

Is the network sufficiently secure?

What steps does the provider take to secure their network infrastructure and protect sensitive data? And how will they assist in the data recovery process should services be disrupted?

Is bandwidth scalable?

Can firms adjust their bandwidth according to changing network demands? Providers should offer a simple and transparent pricing structure, which enables firms to upscale in line with business growth, rather than pre-empting it.

Can the connectivity provider be trusted?

Selecting a well-known provider with a positive reputation may reduce the risk of experiencing ongoing quality issues. References should be available from existing and former clients, so long as the provider has nothing to hide.

Will the provider offer ongoing support?

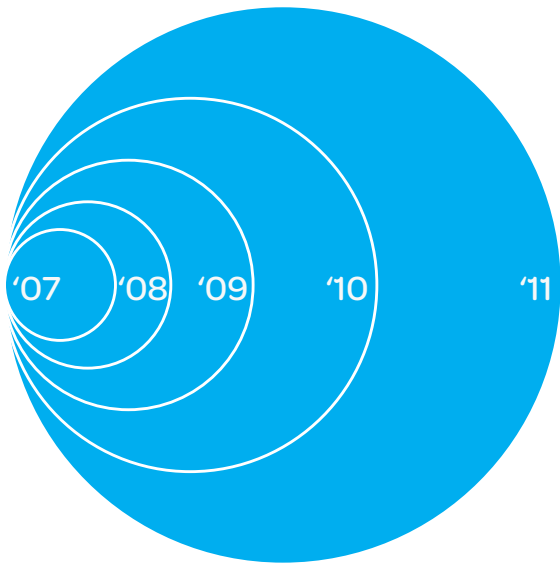
Will the provider offer customer support and technical assistance beyond migration? How quickly will the provider deal with technical problems? Selecting a collaborative and proactive account handler can ensure remedies are provided rapidly when required.

Can service quality be guaranteed?

How does the provider intend to deliver business grade connectivity on an ongoing basis? As the connectivity specialist, they should be able to explain the technical aspects of the partnership, ensuring clients fully understand the services they are paying for.

What are the options for the future?

Providers should have insight into the future potential of business grade connectivity - and the role it can play in achieving organisational growth over the years to come.



Bandwidth expenses are expected to increase by

15%
year on year

Bandwidth demand grew at a compound annual growth rate of 57% between 2007 and 2011

8 Laying the foundations for the Year of the Cloud

As the demands placed on IT connectivity increase, so does the importance of tailored, best-fit solutions capable of meeting companies' bandwidth needs. Volumes of data created, shared and consumed continue to rise both inside and outside the enterprise - creating demand for greater speed, agility, capacity, and reliability. If companies want to keep pace with their rivals, they may have little choice but to invest in additional capacity.

Every company is facing a similar set of challenges when it comes to connectivity. The rise in data consumption and bandwidth requirements is being witnessed across the board, meaning every firm operating online will have to review connectivity at some point. Many will choose to upgrade their solutions, while others will opt to stick with their legacy connections. But either way, firms cannot push back the rising tide of data - only ride the wave as best they see fit.

Business grade connectivity offers value in a number of ways - helping to drive ecommerce, foster mobile working, secure data, facilitate communication and support hosted services. Without adequate network capacity, productivity will suffer, costs will rise and revenue will be lost from the organisation. So as the reliance of voice and data connectivity increases, business grade can no longer be seen as a discretionary extra. For companies of all shapes and sizes, it is fast-becoming an essential utility.

"You could say that any firm which shuns the need for superfast connectivity either simply doesn't need the internet or hasn't yet fully understood how they could benefit from it."

Mark Jackson, Editor-in-Chief, ISPreview.co.uk



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