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BT

WIDE AREA NETWORKING PRODUCTS

Providing a business platform to
carry voice and data between
multiple sites



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A WAN primarily connects your sites. It brings them all together, whether they're next door or at opposite ends of the UK, but it also does much more. It creates a platform for applications to work effectively, and allows data and voice to be transferred securely, so everyone can log in and work efficiently from wherever they are.

BT Networking services

BT's core network supports its main data networking services: IP Virtual Private Network (VPN), Ethernet VPN, BT Managed WAN and Internet VPN.

BT has invested £10 billion in its Next Generation Network allowing it to expand, improve coverage and connect more customers in more locations. The network also supports faster speeds, provides several access options and is more reliable and resilient than ever before.

Benefits

Performance that's reliable – BT's single, core network is purpose-built unlike some competitors' networks, which are 'bolted' together. It means fewer steps are needed to carry voice and data so it's much less likely to slow down or fail. It's also easier to diagnose problems and they can be resolved much faster.

Your network is in safe hands with BT and we'll help you avoid unnecessary downtime. Why? Because BT's network meets the industry's benchmark – the UK's Critical National Infrastructure standards, which means it dual routes traffic for total reliability.

- ▶ **Affordable** – BT's data network is extensive. With 1,776 Points of Presence (PoP), it provides easy access so you can benefit from high-speed solutions that are very cost-effective too.
- ▶ **More choice** – To help customers benefit from the latest innovations and make the most of their network, BT continually invests in new technology. This means BT offers the widest range of delivery options, the very latest solutions and a choice of access technologies.
- ▶ **Unrivalled support** – BT's service is second to none with the highest levels of availability. It offers market-leading Service Level Agreements (SLAs), which set out exactly what customers can expect – from on-time delivery and fault repair to performance targets.



- ▶ **Prioritise the important stuff** – BT makes it easier for customers to manage their traffic through its Class of Service (CoS). Data, email, IP Voice and video can be given their own levels of priority within BT's core network, ensuring that every business-critical application runs effectively.
- ▶ **A range of management options** – Whatever your needs, BT can help; from 'wires-only' to fully and proactively monitored and managed networks. You can rely on BT's knowledge and expertise for whatever level of support you need.

BT WAN SOLUTIONS

BT Managed WAN

BT provides a fully managed service for IP Connect and Ethernet Connect, which aims to minimise the impact of any network issues on your business. This includes round-the-clock proactive network management and covers monitoring, fault diagnosis and repairs.

Customers can access a wide range of reports online to analyse their network's performance. You'll be able to see if anything's affecting performance and spot potential capacity issues. There are also reports that help you make an informed decision about when a device needs replacing.

This managed service provides customers with reassurance about performance, security, reliability and manageability and is designed to help support your current and future IT needs. It can be integrated with other solutions from BT, such as IP Voice, IT services and cloud, offering a long-term, flexible option.

BT's WAM managed service includes:

- ▶ **The network solution:** IP Connect or Ethernet Connect.
- ▶ **The routers:** Cisco with break/fix maintenance.
- ▶ **Management support:** Install and network management service
- ▶ **A single monthly bill**



Ethernet VPN

Ethernet Services can be a more cost-effective way for customers to get more bandwidth compared to traditional leased line and IP based services like IP Connect. These services are typically used to connect two sites, but can also be set up to serve multiple site networks.

BT's WAM managed service includes:

- ▶ **Ethernet Connect** – Lets customers create a nationwide network in a variety of configurations, including point-to-point, hub and spoke and any-to-any. Speeds are up to 2.5Gbps.
- ▶ **Ethernet Connect Global** – Similar to Ethernet Connect but operates internationally.
- ▶ **SHDS Connect** – An ultra-low latency service using dedicated fibre optic cables that allows you to directly connect two or more local buildings. With speeds of 10M, 100M and 1G, SHDS Connect is very cost-effective for customers with sites that are relatively close together (up to 45km). Ethernet Connect is usually better for customers connecting sites that are further apart.
- ▶ **Optical Connect** – For customers who need low latency and very high bandwidths to connect into a data centre or for mirroring servers or Storage Area Networks. There are no restrictions on the distance between sites and speeds of up to 1.6Tbps are available.

IP VPN

IP VPN is an entirely private secure network between multiple sites enabling them to communicate using all the day-to-day business applications, such as email, file transfer, database enquiries, voice calls or video. It's designed to provide the highest levels of performance and security.

You may use the term Multi Protocol Label Switching (MPLS). MPLS is the technology BT uses to make sure it has a high-performance, high-availability core. This core has the ability to give higher priorities to different types of traffic, such as voice, video or a customer's priority applications.

BT's IP VPN product portfolio includes:

- ▶ **IP Connect** – Similar to IP Converge but 'wires-only' service without a managed router.
- ▶ **IP Connect Global** – An international service.

Internet VPN

An internet-based WAN infrastructure may appeal in some cases because it can be a cost-effective and readily available alternative to other technologies. To link offices together, all you have to do is connect each one to the internet, using whatever access technology is most suitable for that site (broadband, Ethernet in the First Mile (EFM), leased line etc). Security is a key consideration and VPN software/encryption is vital. Firewalls and other security/threat management devices will be needed at each site, as well as a security management service to make sure the network remains secure.

HOW BT SERVICES CAN MEET YOUR NEEDS

Here's a guide to help you understand how BT solutions work and can benefit you.

	BT Managed WAN	IP VPN (IP Connect unmanaged)	Ethernet VPN (Ethernet Connect unmanaged)	Internet VPN
PURPOSE	Connects sites to each other using a high-performance private network – either IP Connect or Ethernet Connect. Provides connectivity to the Internet from the cloud and Microsoft Azure, as well as Amazon Web Services and Office 365.	Connects sites to each other using a high-performance private network.	Connects sites to each other using a high-performance Next Generation private network.	Connects sites to each other using a high-performance Next Generation private network.
SUITABILITY	Suits businesses with 2 to 100 sites on an any-to-any network.	Suits businesses with 2 to 1,000+ sites.	Suits businesses with 2 to 50 sites on an any-to-any network and is ideal inside the BT Managed WAN for those customers who require Ethernet at all sites.	Suits businesses with 2 to 1,000+ sites.
NEEDS MET	<ul style="list-style-type: none"> • Focus on running the business and not the network. • Plug any in-house skills gaps or replaces in-house skills and resources through outsourced network management and monitoring. • Provides reporting on network and application performance as well as capacity and device management. 	<ul style="list-style-type: none"> • Keep control of the routers. • Security of a private network and guaranteed performance. • Centralised control of network, performance/ application reporting and billing. • Offers 6 levels of CoS. • International coverage. • Choice of access technologies including ADSL2+. 	<ul style="list-style-type: none"> • Keep control of IP layer. • Security of a private network and high-speed performance. • High bandwidth capacity for large data transfers. • Offers 5 levels of CoS. • Offers range of topology options. • Choice of access technologies excluding ADSL2+. 	<ul style="list-style-type: none"> • Offers VPN connectivity and provides internet access too. • Good for remote/ mobile/ home workers. • Relatively quick to deploy. • Simple entry level cost. • Supports IP Voice (BTnet not BT Broadband). • Choice of access technologies including ADSL2+.
KEY CONSIDERATIONS	No in-house expertise required.	Must have own in-house network team to deploy and manage the routers.	Must have own in-house network team to deploy and manage the routers and the IP layer.	Must be able to create own VPN with security or this can be supplied by BT iNet.
SLA AND SLG	Dependent on network but SLA can cover availability, jitter, latency, packet delivery. SLG covers on-time delivery, repair and core network performance.	SLA covers availability, jitter, latency, packet delivery. SLG covers on-time delivery, repair and core network performance.	SLA covers availability, jitter, latency and packet delivery. SLG covers on-time delivery and repair.	SLA covers delivery, availability and latency for BTnet but not the VPN or any broadband accesses.

WHY BT?

BT is a recognised global Network Service Provider leader, and is consistently named by Gartner as a leader in its Global Network Service Providers Magic Quadrant. You can rely on BT's high performance network to keep your people connected both now and in the future and meet your changing needs, such as moving to the cloud.