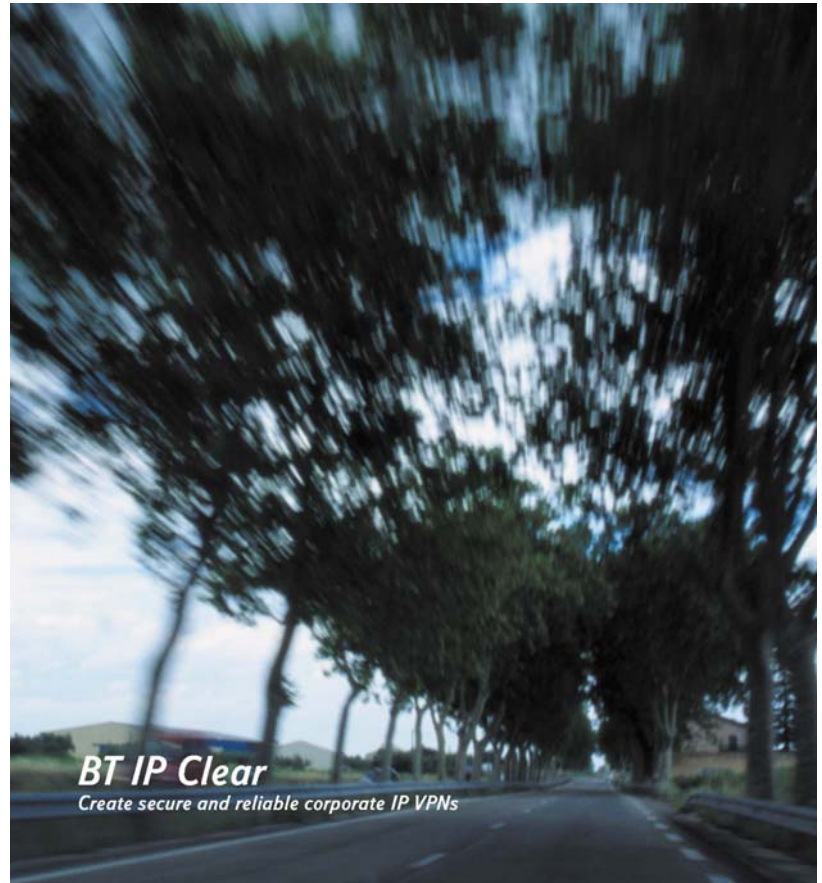


BT IP Clear



For Pricing on IP Clear contact Westlake Communications 0800 298 8011

www.westlake.co.uk



Create secure and reliable corporate IP VPNs

BT IP Clear is an Internet Protocol (IP) access service that allows you to connect sites with different bandwidth requirements to create a secure, corporate IP Virtual Private Network (VPN). You can converge Voice over IP, mission-critical applications and standard data traffic over a single IP infrastructure using our Classes of Service. IP Clear enables you to communicate efficiently with colleagues, partners and suppliers, and create intranets and extranets.

Creating scalable and flexible networks with true any-to-any connectivity is straightforward with IP Clear. Whether you already have a VPN or are starting from scratch, you can obtain a network that meets your needs exactly, either using IP Clear as a standalone service or in conjunction with IP-enabled FrameStream, CellStream and SMDS.

A complete networking solution

Why choose an IP platform?

IP is quickly becoming the de facto standard for data networking and is used by all the latest business applications. IP networks enable users based at any site to access applications and information wherever they are hosted. This is why so many companies are now looking to IP VPNs to meet their business needs.

IP Clear uses Multi-Protocol Label Switching (MPLS) – an industry standard. BT's MPLS network is one of the largest in the world. Powered by Cisco® this dedicated platform not only supports our customers' IP traffic, but also offers one of the highest levels of security currently available – which is equivalent to that offered by our traditional VPN services.

How do I create a network using IP Clear?

At its simplest, all that is needed is an IP Clear access circuit at each of the sites you wish to connect. BT then sets up a secure IP VPN – or several secure IP VPNs – between these sites so that you can share data.

What if I have a VPN already?

IP Clear can form part of an integrated solution. Using BT's IP-enabled services, you can connect any FrameStream or CellStream site or SMDS Closed User Group (CUG) directly to the MPLS network. This capability allows you to set up an IP VPN that can be accessed via IP Clear or any IP-enabled access type, including dial. The advantage is that you retain the benefit of the investment you have made in your existing networks and can continue to use them alongside your IP Clear VPN.



The benefits of IP Clear

Convergence

Because IP Clear offers three Classes of Service (CoS), you can converge your voice and data applications over a single platform. IP Clear is designed specifically for Voice over IP so you can take advantage of BT's VoIP offerings (including Multimedia VoIP and VoIP Port) whilst simultaneously ensuring optimal performance for your mission-critical applications and standard data, such as e-mail and file-transfer. Thus you need only manage and maintain one platform for all your communication needs.

Any-to-any connectivity

Traditional data networks use point-to-point connections or Permanent Virtual Circuits (PVCs) to send traffic from site to site. This involves pre-configuring and managing connections and makes full meshing impractical and often leads to complex network topologies. Because the IP Clear service is fundamentally 'connectionless' sites can exchange information without the need to establish fixed connections. This allows you to scale networks more easily and to take advantage of distributed hosting.

Integrated dial access

IP Clear provides an integrated dial access option, enabling your teleworkers, mobile sales people or even small sites to access the corporate network via PSTN, ISDN or mobile devices.

Fully unbundled service

No routers are included as part of the IP Clear service. This gives you the flexibility to build a bespoke network without the constraints that may be imposed by a bundled offering. Instead you can use your existing equipment or purchase it from a chosen supplier.

Greater scalability and flexibility

A single network built using IP Clear can support thousands of sites. And because all IP Clear and IP-enabled sites can work together seamlessly, you have scalable access to the IP VPN via a range of access bandwidths from 56 kbit/s (dial) to 622 Mbit/s (CellStream).

IP Clear Reach

Now you can use IP Clear to extend your network to sites in Europe and beyond. IP Clear offers reach to over 60 countries around the globe. This allows any-to-any connectivity between all your UK and international sites. The service offers port speeds up to E3/T3, service level agreements, web based reporting and end-to-end differentiated classes of service – all on a fully owned and managed global private IP infrastructure.

A high level of resilience

The MPLS core network is owned, maintained and managed end-to-end by BT, ensuring security and reliability. This highly resilient platform has been designed to cope with core link and node failures. In the event of a problem, traffic will be rerouted to ensure that it reaches its destination. Additional resilience options are available for selected access circuits.



Network integration

IP Clear enables seamless integration with IP-enabled CellStream, FrameStream and SMDS, and all sites can be linked to share IP information using the MPLS network. For example, an IP-enabled FrameStream site can access the same IP VPN as an IP-enabled SMDS CUG and a dial user. This makes IP Clear ideal for merging networks or migrating gradually to IP.

Scenarios

Government department

A government department with a large network based on SMDS is experiencing significant growth and needs to incorporate additional sites within the network. Because the department plans to migrate the whole network to IP in due course, it decides to connect the new sites by using IP Clear. By IP-enabling its SMDS CUGs, it will ensure that all authorised parties can work together and share information in an environment that is resilient and secure.

Retailer

A retail organisation plans to link 200 UK sites, at various speeds, to support electronic point-of-sale (EPOS) and credit card transactions. Using IP Clear to link its branch sites and head office into a VPN, the company can roll out its new applications quickly and efficiently. And by using Classes of Service, it can implement a Multimedia Voice over IP solution, eradicating the need for a separate voice network.

Classes of Service (CoS)

With IP Clear CoS you can choose to converge your voice, mission-critical applications and standard data traffic over a single IP infrastructure. By choosing the appropriate CoS you can prioritise your applications to ensure optimum performance. There are three Classes of Service for IP Clear:

Class 1 – Voice

Designed for Voice over IP, Class 1 manages round trip delay, packet delivery and jitter to ensure your voice and time-sensitive services run smoothly. Class 1 traffic takes priority over Class 2 and Class 3 traffic. Class 1 can use up to 50% of total bandwidth available.

Class 2 – Premium

Ideal for your mission-critical applications, such as ERP, Class 2 takes priority over Class 3 traffic. Class 2 can use up to 90% of total access bandwidth or 100% if Class 2 only is chosen.

Class 3 – Standard

Designed for standard data such as e-mail, web-browsing and file-transfer, Class 3 can use 100% of access bandwidth (if not being used



by Class 1 or Class 2). 10% of bandwidth is always reserved for Class 3. You can choose the following combinations of CoS:

- Classes 1, 2 and 3
- Classes 2 and 3
- Class 2 only
- Class 3 only (this is the default – IP Clear without CoS)

Voice over IP

You can maximise your investment in your IP Clear network by running one of BT's VoIP services, using Class 1. Multimedia VoIP is a hosted IP service that can deliver voice, video and collaborative working applications to the desktop over IP Clear. Incorporating a migration path for customers with legacy voice systems, this service offers flat-rate off-net calls, tariff-free internal calls and potential cost savings through consolidating your networks and management. Hardware is managed in the VoIP network.

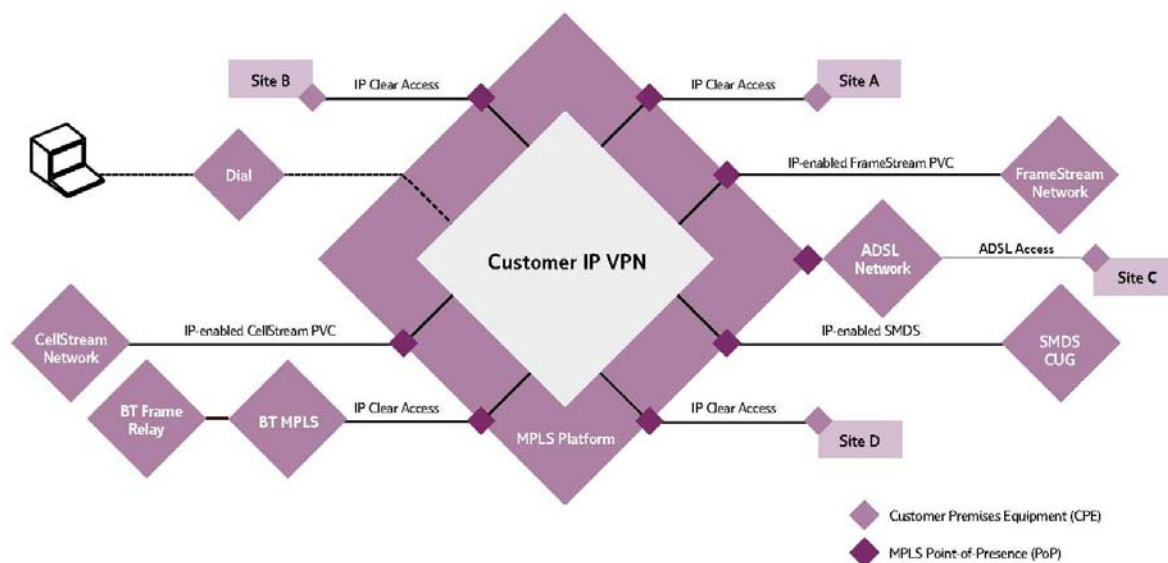
Pricing

Pricing consists of an initial access connection charge plus an annual rental charge, based on your selected bandwidth. Discounts are available for services extending beyond two years.

With more than 40 pricing points, charges are largely distance independent. Out of area charges will be incurred for sites more than 40km from a PoP.

Classes of Service (Class 1 and Class 2) will incur an incremental rental charge per kbit/s per annum, in addition to the standard access rental. Class 3 is included in standard connection and rental charges

IP Clear and interworking over MPLS





IP Clear Access

There are seven IP Clear access bandwidths: 128 kbit/s, 256 kbit/s, 512 kbit/s, 1 Mbit/s, 2 Mbit/s, 34 Mbit/s and 155 Mbit/s.

Standard

- Available from 128 kbit/s to 34 Mbit/s
- Delivered over a single access bearer
- Most cost-effective option

Secure

- Available at 34 Mbit/s and 155 Mbit/s
- Delivered over BT's highly resilient SDH infrastructure

Secure +

- Available at 2 Mbit/s, 34 Mbit/s and 155 Mbit/s and at 2 Mbit/s Flex
- Offers the highest level of resilience and availability over BT's SDH network
- Dual links are routed diversely with no common failure point into your site or the BT network

ADSL Access

- 256 kbit/s, 512 kbit/s, 1 Mbit/s and 2 Mbit/s available from DSL enabled exchanges

IP-enabled services

Each of our VPN services – SMDS, FrameStream and CellStream – has an IP-enabled option that allows users to connect to an IP VPN using the MPLS platform. Once connected to the IP VPN, all of these sites can share IP communications – regardless of the access mechanism. For example, an IP Clear site, an IP-enabled FrameStream site and an IP dial user could all work seamlessly in the same IP VPN. Furthermore, IP-enabling does not disrupt your primary service – which means that you can continue to use your existing FrameStream, CellStream or SMDS network while using an IP VPN too.

IP Dial Access

You can dial into your corporate VPN via PSTN, ISDN or mobile by using a FreeFone number, Lo-Call number or Surf Anytime. Dial-in access to the corporate network provides greater flexibility and is ideal for mobile workers, sales executives, teleworkers or small offices.