

International Next Generation IP-VPN

MPLS solution with guaranteed quality of service

Recent years have witnessed rapid growth rates in computer network traffic. A wide variety of new applications have appeared and the convergence of other, more traditional networks (voice and data) is underway.

The new types of network traffic vary tremendously in their operational requirement: some require significant bandwidth, others have strict timing requirements. International Next Generation IP-VPN is an end-to-end managed solution allowing you to define the bandwidth and traffic engineering requirements by application, with guaranteed quality of service. The unrivalled security, reliability and flexibility enable your company to meet today's and tomorrow's network requirements.

- Extremely secure solution with private network separated from internet infrastructure
- Available from over 50 POPs throughout Europe and USA
- Global reach via partner networks and industry leading service levels
- QoS traffic engineering on a per application basis to ensure critical traffic always has priority
- Future-proof technology enabling convergence of other networks
- Fully integrated internet access is available
- Tailor-made service with multiple service options

Efficient and reliable software applications play a vital role in today's economy. The ability to exchange timely information between partners, suppliers and customers enhances your company's productivity, performance, profitability and success. Therefore, it is not surprising that reliable and secure network infrastructure, combined with high quality transport of information, backed up by state-of-the-art service levels, are criteria that drive the decision making of most information and communications technology (ICT) managers.

The International Next Generation IP-VPN service offers you a proven network solution that is industry leading and provides a reliable and secure environment with guaranteed quality of service. The service is enabled over KPN International's pan-European state-of-the-art MPLS network. This finely meshed multiple gigabit network provides access via more than 50 Points of Presence throughout Europe, the USA and worldwide through carefully selected regional and global partners.

Unlike services provided over the public Internet, International Next Generation IP-VPN is separated from the public infrastructure

on physical as well as on logical level, ensuring that this service has extremely high levels of reliability and security when compared to public IP-VPN. Whereas IP-based networks provide a "best-effort" service that can be subject to unpredictable delays and data loss, with the Class of Service feature of this MPLS-based IP-VPN service it is possible to implement Quality of Service traffic engineering into your IP-VPN on a per-application basis. It creates application awareness within your network with a minimum bandwidth per class, which ensures delivery of high priority traffic ahead of lower priority traffic.

This unrivalled and highly secure network design combined with our industry leading service levels sets a new standard in your private networking for now and the future. To ensure a tailored solution, your company can choose from several service options to enhance the basic service. Our International Next Generation IP-VPN service provides you with significant room to increase the performance of your wide area network whilst increasing security and reducing cost.



International Next Generation IP-VPN

Service Specifications

Service available from _____ More than 50 PoPs in: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, United Kingdom, USA. Global coverage with our partners SingTel, Sprint and Telefonica.

Access speeds _____ Ranging from 64 kbit/s to 100 Mbit/s

Service Levels _____

Availability
Guaranteed end-to-end availability per Service Class, including local access and routers up to 100% (with Premium service and full resiliency)

Packet Delivery
> 99.7%

Latency
Intra Europe < 60ms; Trans Atlantic < 80ms (RTT; with Premium service)

Classes of Service (CoS) _____ KPN International IP VPN offers 4 Classes of Service

Real-time
Provides the highest possible guarantees on latency and throughput. Reserved for latency-sensitive applications: Voice over IP (VoIP) or Video over IP traffic.

Premium
Provides guarantees on latency and throughput. Premium any-to-any higher priority service, for delay-sensitive applications e.g. SAP, ERP, multi-media and videoconferencing applications.

Business
Provides guarantees on latency. Regular any-to-any medium priority service, for non-delay sensitive applications e.g. database replication and FTP-based services.

Default
Best effort service. Any-to-any, value-for-money flexible transport solution for delay-tolerant and bursty applications e.g. e-mail and web browsing. This Class is the default Class; all traffic not prioritized in the other queues will be serviced in this Class.

Service Options _____ **International Next Generation IP-VPN service**
A cost effective and flexible service accessible through customer managed equipment. Allowing for maximum flexibility at minimum expense

Additional features and options _____

Managed Router Service
Installation and maintenance of the customer premises router available with a variety of interfaces and service options, ranging from installation and on-site maintenance to fully managed solutions

Internet Access
Integrated dedicated Internet access to KPN's international Internet backbone

Added availability and reliability
Multiple diversified access for higher availability; Resilient CPE; Dual Homing; Out-of-band management

Data Encryption
DES or 3DES encryption available for additional security

Design & Planning
Project management, site survey, plan design, security support

Pricing _____ Pricing is based on the following elements: CPE, Access Circuit, Port speed, CoS. Attractive discounts available for large volumes and multi-year contracts

Network management _____ Proactive 24/7. Extensive web-based network management service (including realtime traffic reporting, QoS compliance reporting per Service Class, network availability and latency)

Customer care _____ Dedicated customer care 24/7

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