



# International Next Generation VPN

## Agility, value and optimal TCO

In the new global economy, your business needs to perform internationally through your own network operations and through partnerships and alliances. For this reason, more and more businesses are adopting Ethernet services as the most effective approach to international networking. KPN International calculates that 55 percent of European enterprises have already made this choice. Our Next Generation VPN service brings your international business the full benefits of deploying IP and Ethernet VPN across your operations: it delivers agility, value and optimal TCO.

- **Lower Total Cost of Ownership:** service rationalises the backbone, simplifying management and reducing capital investment
- **Agility:** helps business to achieve flexible connectivity as needed
- **Consistency and quality:** gives predictable and measurable performance right across the network
- **Future-proof:** creates a communications platform which you can build on with confidence

With our Next Generation VPN service, KPN International combines IP and Ethernet in a single VPN. We make it easy for you by providing a consistent service with a single service platform, single helpdesk and a single service level agreement. Our Next Generation VPN service types are designed to meet your different business needs:

### International Next Generation IP-VPN

Designed to interconnect business across large, multi-site networks covering multiple geographies. It is an any-to-any, MPLS-based IP-VPN service. You can select service enhancements including Quality of Service, Class of Service and Managed CPEs.

### International Next Generation E-Line

This service is designed to satisfy high bandwidth demands and is typically chosen when you need to interconnect larger sites and data centers. It provides point-to-point Ethernet connections.

### International Next Generation E-LAN

Ideal when you need to interconnect multiple international sites with a simple, economically priced Ethernet WAN. It is an any-to-any, VPLS-based VPN.

KPN International has chosen a hybrid Ethernet & IP approach for our Next Generation VPN service. This allows you to combine service types in a way which achieves the ideal balance between agility, performance and optimal TCO.

By combining IP-VPN, E-Line and E-LAN services, you achieve ubiquitous, stable and predictable network coverage across your international business. You also benefit from VPN access in those locations where Ethernet is not yet available.

Rationalised and simple engagement is a key characteristic of Next Generation VPN. We can provide managed service options such as back-up and secure remote access as an integral part of the service proposition. Our market-leading KPNCare monitoring and intelligence service is fully tuned to support our growing base of Next Generation VPN customers.

Next Generation VPN is a flexible and future-ready platform for your effective international business communication. It is designed to make life easier for you, simplifying network management and improving performance wherever in the world you need to be connected.



# International Next Generation VPN

## Service Specifications

Next Generation Service Type	Topology	Port Circuit Capacity	Availability	Features
IP-VPN	any-to-any	• 128 kbit/s – 100 Mbit/s	99.5 - 99.98%	<ul style="list-style-type: none"> <li>• 4 Class of Service options</li> <li>• Managed CPE</li> <li>• Resilience</li> <li>• Remote Access Services</li> <li>• Security and Internet Access</li> </ul>
E-Line	point-to-point	<ul style="list-style-type: none"> <li>• 2 Mbit/s – 20 Mbit/s (increments of 2 MB/s)</li> <li>• 20 Mbit/s – 100 Mbit/s (increments of 10 MB/s)</li> <li>• 200 Mbit/s – 500 Mbit/s (increments of 50 MB/s)</li> </ul>	99.8%	<b>Quality of Service</b> <ul style="list-style-type: none"> <li>• Premium (99.98% throughput guarantee)</li> <li>• Entry-level (20% throughput guarantee)</li> </ul>
E-LAN	any-to-any	• 10 Mbit/s – 100 Mbit/s (increments of 10 Mbit/s)	99.8%	<b>Quality of Service</b> <ul style="list-style-type: none"> <li>• Entry-level (20% throughput guarantee)</li> </ul>

*Note: different service speeds are available on request*

**Next Generation Network** — Core of multiple DWDM links of up to 40 Gbit/s covering 22 European countries and the USA

**Expanded coverage** — Global coverage achieved through strategic partnerships with SingTel, Telefonica and Sprint

**Backbone** — Juniper and Cisco carrier-grade edge

**Installed base** — 55,000 IP-VPN installations and 9,000 Ethernet installations across Europe

**In-country coverage** — Over 30 access partners in various countries to gain high granularity of local access

**Standards** — Next Generation VPN is engineered to MEF (Metro Ethernet Forum) standards. KPN International is an active member of the MEF.

### E-Line and E-LAN

- IETF - working groups:
  - pwe3 - <http://www.ietf.org/html.charters/pwe3-charter.html>
  - l2vpn - <http://www.ietf.org/html.charters/l2vpn-charter.html>
  - MAUs - <http://www.ietf.org/rfc/rfc1515.txt?number=1515>
- ITU-T - Study Groups 13 and 15
- IEEE 802 standards

### IP-VPN

- RFC 4364 (replaces RFC 2547 bis)

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