



International Next Generation Network Services

In the global economy your business needs to perform internationally both through your own network of operations and through chosen partnerships and alliances. Driven by this need for extended connectivity, 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 Network service brings you the full benefits of deploying IP and Ethernet VPN across your international operations, delivering you a reliable, secure and agile solution.

- **Lower Total Cost of Ownership:** effective backbone, simplified management and reduced capital investment
- **Agility:** flexible and dynamic connectivity as needed
- **Consistency and quality:** predictable and measurable network performance
- **Future-proof:** a platform on which you can build with confidence

With our Next Generation Network (NGN) service, KPN International combines IP and Ethernet in a single VPN. We make it easy for you: we provide a consistent service with a single platform, helpdesk and Service Level Agreement. Our Next Generation VPN service types are designed to meet the different needs of every business we serve:

• **International NGN service: IP-VPN**
Designed to interconnect businesses with large, multi-site networks covering multiple geographies. It is an any-to-any, MPLS-based IP-VPN service. You can select from service enhancements including Quality of Service, Class of Service and Managed CPEs.

• **International NGN service: E-Line**
This service is designed to satisfy high bandwidth demands and is typically chosen for interconnecting larger sites and data centers. It provides point-to-point Ethernet connections. Service enhancements include remote peering (connecting to internet exchanges) and Managed Ethernet devices (CPE).

• **International NGN service: 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.

• **International NGN service: ICI**
Especially suited for local (in-country) breakout to the internet, the International Corporate Internet (ICI) service provides web connectivity.

Next Generation Network advantages
KPN International has chosen a hybrid Ethernet and IP approach for our NGN service. This allows you to combine service types to achieve your ideal balance between agility, performance and optimal TCO. By combining IP-VPN, E-Line, E-LAN and ICI services, you achieve ubiquitous, stable and predictable network coverage across your business. You also benefit from VPN access in locations where Ethernet is not yet available.

Rationalized and simple engagement is a key characteristic of NGN services. We provide numerous managed service options as an integral part of the NGN proposition. These include back-up, secure remote access, WAN acceleration and more. Our market-leading KPNCare monitoring service is fully tuned to support the growing base of NGN customers.

The KPN International Next Generation Network service is a flexible and future-ready platform for effective business communication. It is designed to make life easier for you, simplifying network management and improving performance wherever in the world you need connectivity.



International Next Generation Network

Service Specifications

Next Generation Network Service Type	Topology	Port Circuit Capacity	Features
IP-VPN	any-to-any	128 Kbit/s – 1000 Mbit/s	<ul style="list-style-type: none"> • Multiple Class of Service options • Fully Managed CPE • Resilience • Remote Access Services • Security and Internet Access
E-Line	point-to-point	<ul style="list-style-type: none"> • 2 Mbit/s – 10 Mbit/s (increments of 2 Mbit/s) • 10 Mbit/s – 100 Mbit/s (increments of 10 Mbit/s) • 200, 250, 300, 400, 500, 1000 Mbit/s 	<ul style="list-style-type: none"> • Fully Managed CPE • Quality of Service
E-LAN	any-to-any	<ul style="list-style-type: none"> • 10 Mbit/s – 100 Mbit/s (increments of 10 Mbit/s) • 200, 500 and 1000 Mbit/s 	<ul style="list-style-type: none"> • Fully Managed CPE • Quality of Service
ICI	-	<ul style="list-style-type: none"> • 1 Mbit/s – 1000 Mbit/s 	<ul style="list-style-type: none"> • Fully Managed CPE • Full webhosting, exchange, storage and domain options • IP address options

Next Generation Network coverage

Core of multiple DWDM links of up to 100 Gbit/s providing:

- Full coverage of 22 European countries (further expanding into more than 20 neighboring countries)
- Full U.S. coverage (with gateway to the Caribbean and Latin/South America)
- Gateway to the Middle East via Istanbul
- Gateway to Asia/Pacific via Hong Kong

Backbone

- Juniper and Cisco carrier-grade edge
- Low latency, full IP (MPLS) backbone capabilities
- 24/7 dedicated network monitoring/management
- 24/7 customer support

Installed base

- 55,000 IP-VPN installations and 9,000 Ethernet installations across Europe

Standards

- Next Generation Network services are engineered to MEF (Metro Ethernet Forum) standards and are MEF-9 and -14 certified
- 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)

Contact KPN International

www.kpn.com/international

The Netherlands

P.O. Box 30000
2500 GA Den Haag
T +31 10 428 9571
sales@kpn-international.com

The Netherlands

Van Heuven Goedhartlaan 121
1181 KK Amstelveen
T +31 20 5456 789
sales@kpn-international.com

Germany

Darmstaedter Landstr. 184
60598 Frankfurt
T +49 69 96874 270
info@kpn.de

United Kingdom

4th Floor, Regina House
1 Queen Street
London EC4N 1SW
T +44 20 3417 7053
uksales@kpn-international.com

France

12/14 Rond Point des
Champs Elysées, 75008 Paris
T +331 5353 1521
frsales@kpn-international.com

The information provided in this document is intended for informational purposes only and is subject to change without notice. All rights reserved.