from direct to remote peering

global growth beyond borders

a guide to optimising network reach and cost efficiency, enhancing digital experiences, and accelerating digital transformation through IXPs

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a kt company

The internet is growing faster than ever, driven by surging content growth across streaming, gaming, social media and other data-intensive services. At the same time, e-commerce, digital banking, fintech, AI, and enterprise applications like Microsoft Azure Peering Service (MAPS) are powering digital economy expansion worldwide.

Added to this, growing enterprise technology trends like cloud and edge computing, SaaS platforms, real-time applications, and distributed workforces are placing increasing demands on networks across the globe at a rapid pace, with no signs of slowing down.

Service providers and enterprises need reliable, low-latency connections to partners, platforms and services, whether these are cloud providers, content delivery networks, or other global partners.

However, balancing performance, cost, and global reach continues to be a persistent challenge. For service providers, these challenges are amplified by the need to manage large-scale traffic efficiently, maintain SLAs for multiple clients, and rapidly scale network reach across regions while controlling operational costs.

Peering at Internet Exchange Points (IXPs) has become an essential tool for meeting these demands. By exchanging traffic directly, organisations can improve performance, reduce transit costs, and gain greater control over how data flows across networks. Service providers have long used peering to scale efficiently across the globe, and a growing number of enterprises in high-demand sectors such as finance, gaming, broadcasting, research and travel are incorporating it into their digital transformation strategies.

Traditionally, peering required direct connections and the physical deployment of infrastructure at each IXP. Direct peering delivers strong performance, but it often comes with significant costs, setup time, and operational complexity. Remote peering, however, is a highly flexible alternative that offers the same high-performance access to multiple IXPs without complex on-site infrastructure. This model provides faster deployment, wider global reach, reduced costs, and simpler management.

In this eGuide, we explore the shift from direct to remote peering, why it is gaining momentum, how the approaches differ, and why more service providers and enterprises in data-intensive industries should use remote peering to enhance network performance, optimise costs, and accelerate their digital transformation roadmap.

the global connectivity shift

global internet traffic grew by

17%

in 2024

Cloudflare Radar

international bandwidth demand surpassed

6.4 Pbps

in 2024 – triple the demand of 2020

TeleGeography

in the last five years, total IXP capacity has increased by

44%

while global IXP membership has grown by 35%

Internet Society Pulse

as of 2025, there are

1K+

active IXPs globally, with a total capacity of over 2.15 Pbps

Internet Society Pulse

2025 saw a new global peak traffic record of

25 Tbps

data throughput

DE-CIX

direct vs remote peering

direct peering

A dedicated, private connection with full control over routing policies. The organisation physically deploys its own router and cross-connect at an IXP, typically when operating a large network with heavy traffic at specific exchange points.

remote peering

A virtual presence at one or more IXPs, using a third-party provider's infrastructure. This removes the complexity of installing and managing physical hardware locally, since the chosen provider carries traffic from the organisation's point of presence to the IXP over its own backbone.

key differences

infrastructure

Direct peering requires on-site equipment and cabling, while remote peering is virtual.

deployment time

Direct peering can take weeks or months to arrange, but remote peering can be activated in days.

cost profile

Direct peering involves CapEx plus recurring costs, whereas remote peering typically follows a service-based OpEx model.

scalability

Remote peering offers immediate reach to multiple IXPs through one partner, while direct peering requires new physical infrastructure.

With the ongoing surge in global internet traffic and cloud-first strategies, it is impractical for many organisations to deploy and manage physical infrastructure in every market they serve. Remote peering removes those barriers, enabling enterprises and service providers to scale and respond to evolving demands at a much faster rate, without high upfront investment.

IXPs provide a direct path between networks, reducing the number of hops that the data needs to take. This improves latency, packet loss and jitter, which is especially critical for financial trading, live streaming, online gaming and unified collaboration tools. Remote peering with an expert partner also adds resilience and redundancy to networks by connecting to multiple IXPs. If one route experiences downtime or congestion, traffic can quickly be rerouted to another.

remote peering benefits

With the right remote peering partner, enterprises and service providers can gain the following benefits:

extensive global reach

Direct interconnectivity with leading global IXs via a selection of on-ramp locations, and access to an extensive network of peering members.

cost optimisation

Virtual presence removes the need for substantial upfront infrastructure investments. Pay only for the required bandwidth and connections, with flexible contract terms.

simple management

An expert partner can handle IX memberships and onboarding, with a single contract for connectivity and peering services.

flexibility & scalability

Access multiple IXPs remotely and on-demand, with the flexibility to scale bandwidth according to demands.

enhanced user experiences

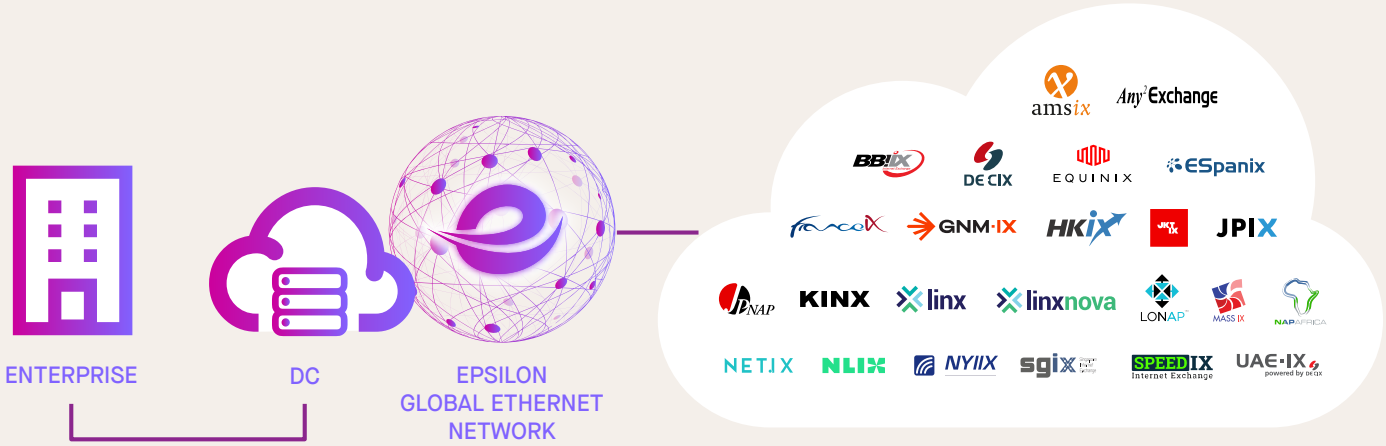
Optimal performance and ultra-low-latency connectivity for bandwidth-sensitive applications.

fast deployment

Preferred peering partners can be reached through a single interconnection port at a convenient location, saving time and cost.

our remote peering solution

Epsilon's award-winning remote peering solution offers seamless, on-demand access to leading global internet exchanges via a single port interconnection.



Available via Epsilon's NaaS platform Infiny, it utilises reliable Ethernet connectivity to ensure low latency and low jitter connections with guaranteed throughput.

view IX on-ramp locations

peer remotely at

20+

internet exchanges

150+

global internet exchange on-ramp locations

14K+

peering members

scalable bandwidth options up to

100G

CASE STUDY

going global with on-demand remote peering

Moratelindo, a leading Indonesian telecommunications provider, partnered with Epsilon to expand its global reach and enhance content delivery for its customers.

challenge

Establishing a presence at multiple global IXs was very costly and complex for Moratelindo to manage alone, which caused obstacles when trying to expand its global footprint.

solution

Epsilon's remote peering solution, accessed via NaaS platform Infiny, provided Moratelindo with on-demand access to global IXPs. This enabled Moratelindo to connect to IXs such as Any2Exchange in the U.S., AMS-IX in Europe, HKIX in Hong Kong and JPIX in Japan, with minimal upfront investments.

outcomes

Remote peering enabled Moratelindo to bring content closer to end users with reduced latency, improving user experiences. Epsilon's Infiny platform has provided Moratelindo with access to an evolving partner ecosystem, as well as simplifying bandwidth scalability according to demands, and enabling seamless expansion into new markets.

local presence. global reach.

The shift from direct to remote peering is a necessity in today's digital economy, where service providers and enterprises must deliver high-quality connectivity across borders without being constrained by the cost and complexity of physical infrastructure. Remote peering offers a faster, more flexible, and cost-efficient route to achieving that goal.

Book a consultation today to discover how Epsilon's remote peering can help you extend your network reach, reduce costs, enhance user experiences and accelerate your digital transformation – all through a single partner.

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interconnecting your world:
20 years of remote peering experience

Epsilon Telecommunications is a leading global software-defined network provider delivering a comprehensive suite of end-to-end connectivity and communication solutions, including remote peering, to the world's largest carriers and enterprises.

With Infiny, our award-winning Network-as-a-Service (NaaS) platform, we enable seamless, on-demand peering at leading Internet Exchange Points. Backed by a high-performance global network spanning Europe, the Middle East, the United States, and Asia, we give you the agility and reach to truly interconnect your digital world.

ready to take your remote peering strategy further?

talk to an expert →

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