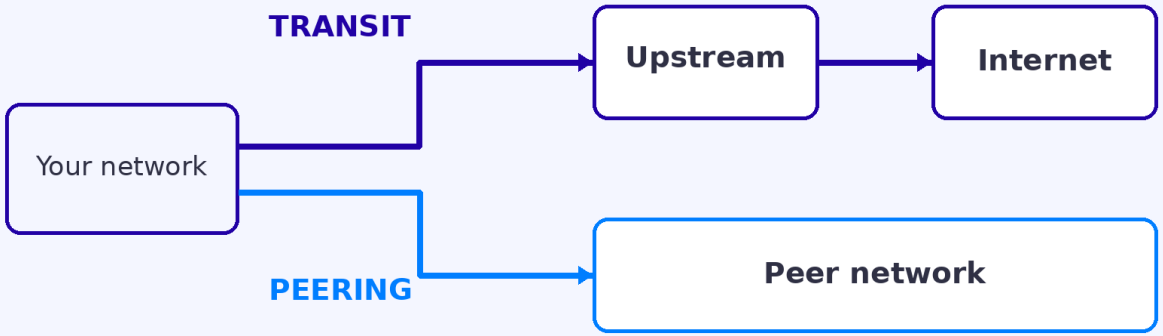
InterLAN-IX as a Regional Interconnection Platform:
Connecting Moldova to the Romanian Internet Ecosystem

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MDNOG 1 · Chișinău · 9 October 2026

Why networks peer

- Peering allows networks to exchange traffic directly between their users and services.
- Operators choose peers that are relevant to their customers, such as content providers or other access networks.
- Moving traffic to peering can reduce the amount carried over paid transit.
- A more direct path can improve latency and service quality when routing and capacity allow it.
- Direct contact with peers helps operators resolve routing problems and plan additional capacity.

Transit and peering



- Transit provides access to the wider Internet through an upstream provider.
- Peering provides access to the networks and destinations that a peer agrees to announce.
- Traffic to a peer can use the direct connection, while traffic to other destinations continues over transit.
- Most operators use both transit and peering to reach the destinations their customers need.
- BGP routing policies determine which available path the operator uses.

The cost of peering

- Peering often involves no payment between peers for the traffic they exchange.
- The connection still has costs: the IX port, transport, cross-connects and equipment.
- Staff time is also needed to configure, monitor and maintain peering.
- Savings depend on how much traffic moves from transit to peering and how transit is billed.
- Capacity must cover busy hours and allow room for traffic growth.

Paths and service quality

- Direct peering can avoid an unnecessary detour through an upstream network.
- A shorter physical path can reduce latency and improve application response times.
- Enough capacity during busy hours helps avoid congestion and packet loss.
- Direct contact with the peer helps investigate routing and performance problems.
- Results depend on content location and routing policies, so operators should measure the actual service quality.

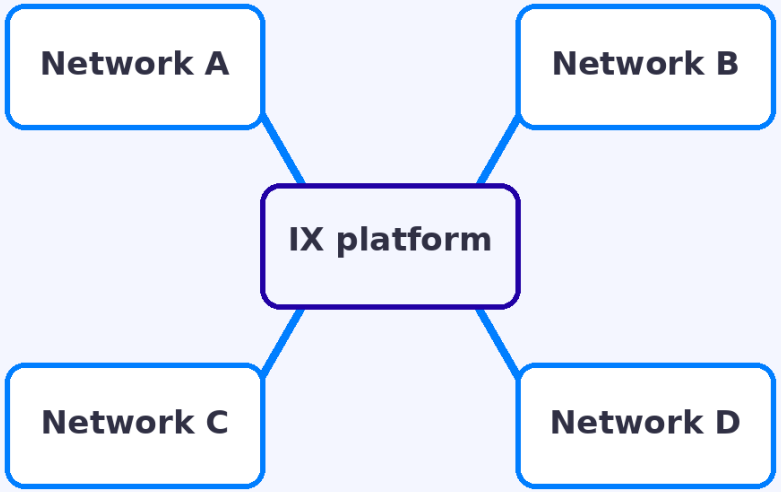
Private peering



- Two networks arrange a dedicated connection between their routers.
- In the same data centre, this can be a cross-connect between their equipment.
- They establish BGP sessions and agree which routes to exchange.
- Dedicated capacity can make sense when the traffic volume between them justifies the cost.
- Connecting to more peers usually requires additional links, ports and cross-connects.

Public peering at an IX

- Networks connect their routers to the shared infrastructure of an Internet exchange.
- One IX port gives access to many potential peers through the same physical connection.
- Participants exchange routes through route servers or bilateral BGP sessions.
- Each network chooses its peers and controls which routes it announces and accepts.
- Traffic passes directly between participating networks across the IX.

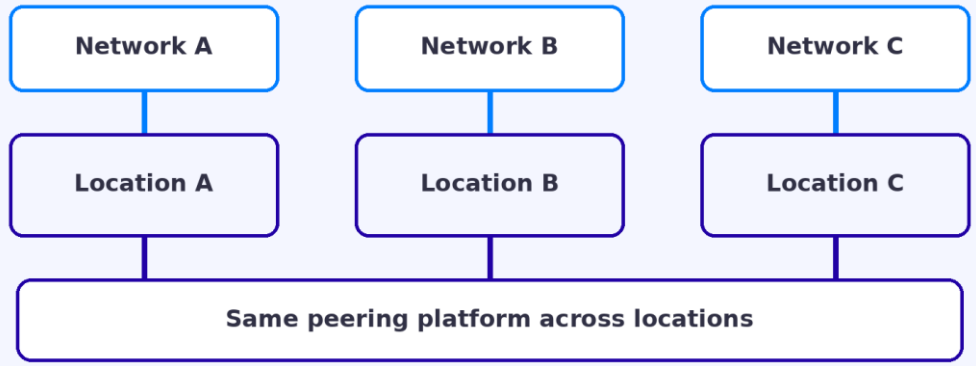


What an IX provides

- An Internet exchange provides shared infrastructure where independent networks interconnect.
- The IX operates the switching platform, connection ports and links between its locations.
- Access providers, content networks and other participants can exchange traffic on the same platform.
- Each participant remains responsible for its router, BGP configuration and peering policy.
- Operators use peering for available destinations and transit for wider Internet reachability.

What makes an IX distributed?

- A distributed IX operates at multiple points of presence connected by its infrastructure.
- Networks join at different locations and use the same peering platform.
- Participants can peer with each other even when their routers are in different cities.
- Each operator chooses a connection location that fits its network and available transport.
- Links between IX locations carry traffic between participants connected at different sites.

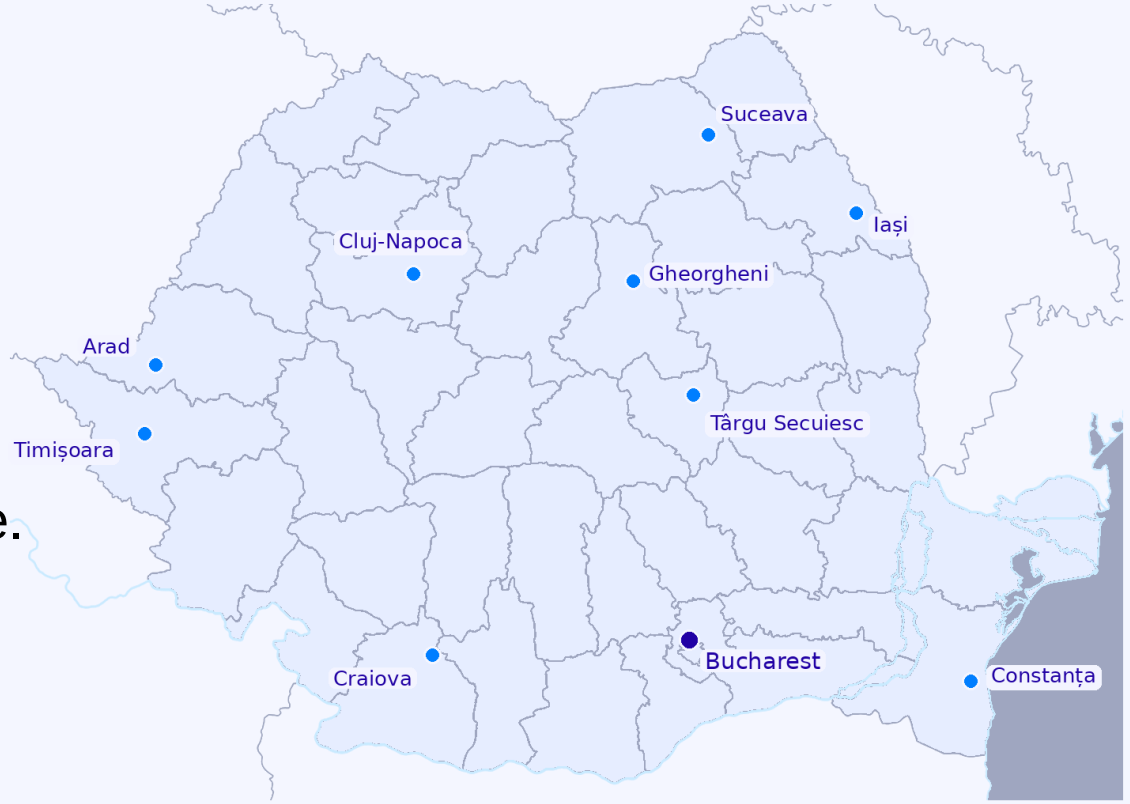


Why InterLAN-IX expanded

- Regional locations in Romania make the exchange easier to reach for local operators.
- These operators bring their customers and traffic onto the shared peering platform.
- Frankfurt provides a location where content networks and CDNs can connect to InterLAN-IX.
- Sofia also brings content networks onto the platform and supports regional interconnection.
- Participants can reach potential peers across these locations through their existing IX connection.

InterLAN-IX across Romania

- Bucharest is the central hub, with eight points of presence, including NXDATA-1 and NXDATA-2.
- Nine regional cities give local operators more options for joining the exchange.
- Operators choose a connection location that fits their infrastructure.
- All locations provide access to the same peering platform and potential peers across InterLAN-IX.



Map: NordNordWest / Wikimedia Commons, CC BY-SA 3.0 · City markers: geographic coordinates

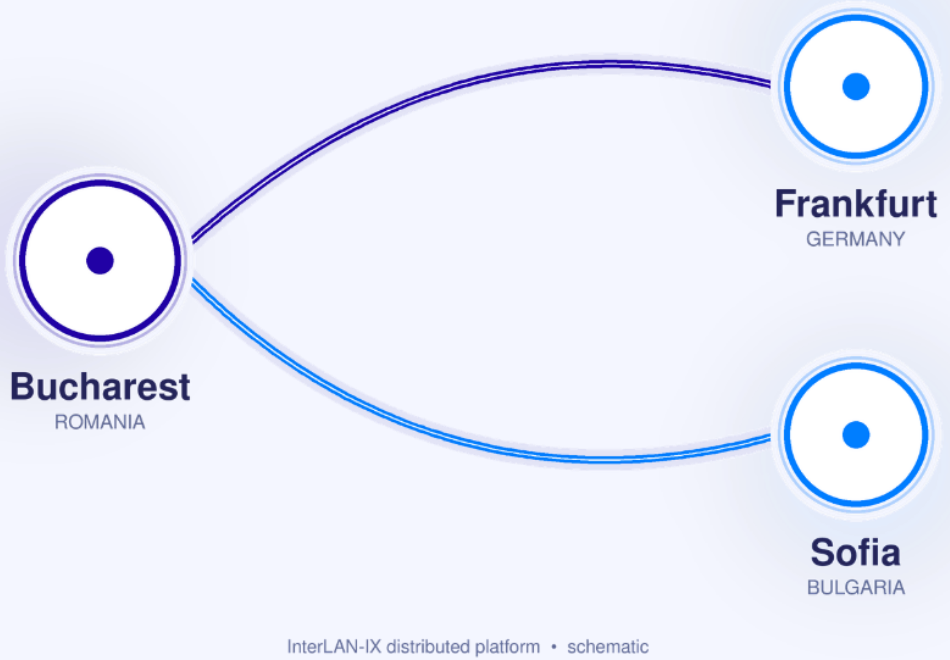
Frankfurt and Sofia

Frankfurt — Equinix FR5

- Provides a connection location for content networks and CDNs.
- Makes these participants available for peering across InterLAN-IX.

Sofia — Telepoint

- Connects content networks and CDNs to the platform.
- Supports interconnection with other operators in the region.



Both locations are part of the same peering platform. Participants can reach peers there through their existing InterLAN-IX connection.

InterLAN-IX today

- Around 150 participating networks from Romania, the region and beyond.
- 19 operational points of presence across Romania, Frankfurt and Sofia.
- 215 connected ports, with approximately 5.08 Tbps of total connected capacity.
- Aggregate traffic reached a recorded peak of 1 Tbps in February 2026.
- Participants use the platform for peering and additional services such as TVX.

Port options and connected capacity

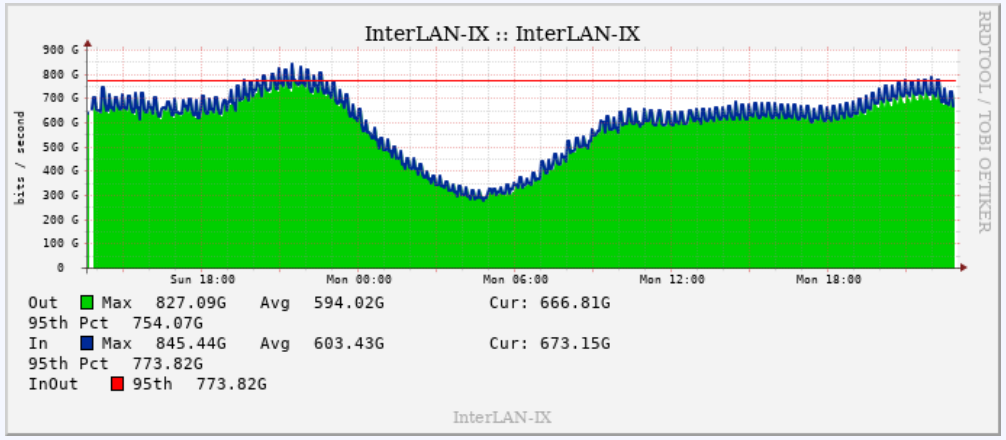
Location	1G	10G	40G	100G	400G	800G
Bucharest — NXDATA-1 / NXDATA-2	✓	✓	✓	✓	✓	Ready
Bucharest — other locations	✓	✓	✓	✓	—	—
Regional locations in Romania	✓	✓	—	—	—	—
Frankfurt — Equinix FR5	✓	✓	✓	✓	✓	Ready
Sofia — Telepoint	✓	✓	✓	✓	✓	Ready

215 connected ports · Approximately 5.08 Tbps of total connected capacity

Who connects to InterLAN-IX?

- Access networks bring traffic from residential and business customers.
- Content and cloud networks provide services those customers use.
- Hosting providers connect websites, servers and customer applications.
- Transport providers and other operators connect networks and infrastructure.
- DNS operators, research networks, media and institutions add further destinations.
- Each participant chooses its peers according to its traffic and peering policy.

Traffic at InterLAN-IX



- The graph shows aggregate traffic across the exchange.
- Traffic follows a daily cycle, with quieter hours and busier periods.
- Busy-hour demand helps operators plan port capacity and upgrades.
- Each participant’s traffic depends on its customers and active peering relationships.
- The graph covers the displayed period. The historical 1 Tbps peak is a separate measurement.

Networks from Moldova already participate

These networks connect to InterLAN-IX in Bucharest:

Moldtelecom · AS8926	Trabia · AS43289
StarNet · AS31252	Inovare Prim · AS60602
STISC · AS39279	AlexHost · AS200019

- Each operator uses its own connectivity to reach the exchange.
- Their IX connection gives access to potential peers across the platform.
- Each network chooses its peering relationships and routing policy.

How a network from Moldova connects

- Use existing or new transport connectivity to reach an InterLAN-IX location in Bucharest.
- Connect the operator’s router to an IX port and configure the peering interface.
- Identify participants that carry traffic relevant to the operator’s customers.
- Establish BGP sessions with the route servers and bilateral sessions where needed.
- Monitor traffic and routing, then add peers or increase capacity as demand grows.

Route servers and bilateral peering

Route servers

- Most peering at InterLAN-IX uses the route servers.
- Sessions with the route servers simplify BGP route exchange with many participants.
- Route distribution follows participants’ peering policies and route filters.

Bilateral peering

- Two participants establish BGP sessions directly with each other.
- These sessions use the same IX port and shared infrastructure.
- Some networks require bilateral sessions as part of their peering policy.

Traffic passes directly between participants across the IX. Route servers exchange routes and do not forward packets.

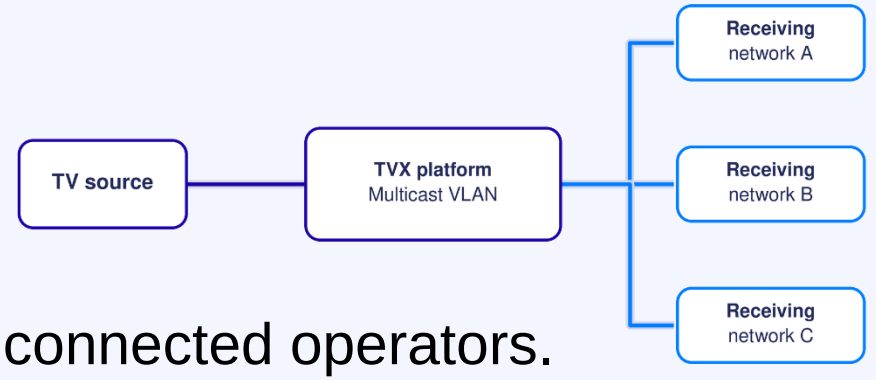
Services supporting network operations

- Anycast DNS services include root servers, AS112 and RIPE NCC AuthDNS.
- BGP collectors include RIPE NCC RIS RRC22, BGP.tools and RouteViews.
- An NTP server contributes to the ro.pool.ntp.org time service.
- Ookla and nPerf servers in Bucharest support connection speed testing.
- IXP Manager provides participant information and tools for managing IX connections.

What a network operator gains

- One IX connection provides access to potential peers across the InterLAN-IX platform.
- Direct peering can improve paths to content and services used by customers.
- Moving useful traffic to peering can reduce transit costs or delay transit capacity upgrades.
- Route servers simplify peering with many networks, while bilateral sessions support individual arrangements.
- Operators can add peers as traffic changes and work directly with them on routing and capacity.

TVX: Multicast TV distribution



- TVX distributes TV and audio streams between connected operators.
- A separate VLAN carries TVX traffic over existing InterLAN-IX ports.
- Operators can contribute streams or receive them for their own TV services.
- Multicast distributes each stream to multiple receivers over shared infrastructure.
- Receiving operators need the relevant retransmission rights from content providers.

InterLAN and the operator community

- RONOG brings network operators together to share experience and meet potential peers.
- InterLAN has hosted RIPE meetings, Euro-IX forums and the European Peering Forum.
- Support for IXP Manager and PeeringDB contributes to tools used by operators worldwide.
- The Romanian translation of PeeringDB makes the platform more accessible to local users.
- Support for the Euro-IX Fellowship helps exchange operators participate in the community.

Conclusions

- Peering lets networks exchange traffic directly with destinations relevant to their users.
- The benefits depend on available peers, routing, capacity and the total cost of connecting.
- InterLAN-IX brings participants in Romania, Frankfurt and Sofia onto one peering platform.
- Networks from Moldova already use the platform through connections in Bucharest.
- One IX connection can support more peering relationships as an operator’s needs grow.
- TVX and operational services provide additional uses for the platform.

Questions?

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