



## Single Upstream with IXP

This section discusses how we scale multiple peerings with our network, using what is known as an Internet Exchange Point.

Internet Exchange Points are open neutral interconnects where network operators (with their own Internet resources) are able to freely interconnect. An IXP is the most efficient and effective way of scaling interconnections between network operators in any one location.

Lots of information about IXPs is available from many locations, including the [Euro-IX](#) website, the [IXPDB](#), as well as in the links noted at the foot of the page.

## Participating in an IXP

The section describes how to participate at an Internet Exchange Point. The description is high level as each and every IXP will have their own nuances, variations on the general theme. Discussion with the IXP operator is important to understand their requirements.

We won't discuss why joining an IXP is important - the Value of Peering has already covered why peering is essential for a network operator's business.

Nor will we discuss which IXP to join - there are many factors involved, but common advice is to join the "local IXP" as that will host network operators with similar common interest, content, and customers, and likely will give the best peering opportunities.

## Joining the IXP

Every Internet Exchange Point will have some form of requirements to join them so you can participate in peering there.

Requirements can be as simple as:

- Agreeing basic best practice behaviours
- Agreeing how to access the location, building, datacentre (both for putting connectivity in there, as well as for human access for maintenance work)
- For non-profit member driven IXPs, becoming a member of the IXP
- For commercial IXPs, agreeing and signing a contract of engagement
- Understanding how to establish peering (be it bi-lateral with other members, or via the IXP's

Route Server infrastructure)

- Understanding how to use the IXPs member portal (IXP Manager or other).
- Agreeing on any annual cost sharing or fees for the IXP

## Connecting to the IXP

## Establishing Peering at the IXP

## References

This content is sourced from many contributors, including:

- [IXP Design Presentation](#) - Philip Smith
- [Value of Peering Presentation](#) - Philip Smith
- [BGP Videos](#) - Network Startup Resource Center

[Back to 'Establishing Peering' page](#)

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<https://bgp4all.com/pfs/> - **Philip Smith's Internet Development Site**

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