

# An Internet Exchange for Scotland

## Unite Infrastructure. Ignite Local Economies.

An important element of global Internet traffic is called 'peering', which is usually the settlement-free exchange of traffic between individual service and content providers. LINX was established to facilitate peering, and has done so very successfully. A key element of this is our mutuality - LINX is owned by the entities that it serves.

LINX originally grew and prospered in London, where we have a very extensive network, spanning many different data centres. LINX's backbone network in London means that our members have a choice as to where they connect. We realised, however, that this success in London was perhaps inhibiting the establishment of peering points in the rest of the UK, so with the active support of our members, we put in place a UK regional peering strategy to address this.

### Benefits of Peering and using an Internet Exchange

- Improved performance
- Low latency
- Greater resilience
- Control of traffic routing

## LINX Scotland: Benefiting the local economy

LINX Scotland encourages local digital businesses. It reduces the dependency of industry on London and other major digital conurbations, giving them the benefit of lower local overheads. Faster more reliable digital services provide a fertile environment for SMEs which in turn contributes to the regional digital economy stimulating local growth.

**"We are delighted to welcome the establishment of a dedicated Internet Exchange for Scotland. This will allow ISPs to securely pass traffic to each other, enhancing the digital offering both within and outside the country. I also want to recognise the key contribution of LINX, who worked with the industry and Scottish Government to make this happen."**

**John Swinney**  
Scottish Cabinet Secretary for Finance,  
Employment and Sustainable Growth

### Supporting the LINX regional peering strategy

To support the LINX regional peering strategy members are able to connect to a 1GE port at any of LINX's six LANs purely for the price of the membership fee

This reduction in costs now gives members:

- Added incentive to peer at all our local exchanges:
- More peering at local exchanges makes the Internet faster and more reliable for end users
- Better connectivity for businesses which stimulates the local economy
- Lower cost of entry for SMEs.

LINX can afford to take a long term view with LINX Scotland, it is expected that the exchange will become self sustaining, and LINX are happy to support the exchange throughout this period. Ever rising traffic levels drives a certain amount of network operator expenditure, and there will be economies to be gained by keeping traffic local. Similarly for content networks as traffic rises it becomes increasingly hard to scale just in London. The cited reasons being availability of space/power and suitably redundant fibre routes, but also network architectures that don't scale infinitely in one place. This should all help to drive new interconnection points outside of London.

LINX Scotland might be slightly ahead of the curve in testing for viability now, but that is perhaps no bad thing - since it enables the bigger picture to emerge at a pace, supports Scotland as a digital community and puts LINX at the forefront of Internet innovation.

# LINX Scotland Peering Platform

LINX Scotland is located at two sites, Pulsant in South Gyle near Edinburgh, and DataVita Fortis in Airdrie, close to Glasgow. The sites are interconnected by two diversely routed links. The peering LAN itself is a VPLS instance which ensures fast failover should one of the links fail. LINX Scotland is not connected back to the LINX exchange in London as our mission is to keep Scottish traffic in Scotland.

A multi-site deployment gives members choice of colocation provider and carrier. It also enables LINX to improve redundancy and increase resilience of the exchange.

## Technical specification

- Extreme X460 switch
- Management router
- Route Server
- Route Collector
- Monitoring Server
- IPv4 Peering LAN
- IPv6 Peering LAN

## Services available at LINX and LINX Scotland

- 1G, 10G and 100G peering ports
- ConneXions partnership scheme
- 24/7 support services
- Private peering
- Infrastructure support
- Route server for multilateral peering
- Rack space rental
- Colocation services
- Traffic statistics

## Who would benefit from using the Exchange

- Internet service providers
- Content delivery networks
- Hosting companies
- Network service providers
- Data rich transactional enterprises

**LINX's mutual approach to enhancing connectivity of the local digital infrastructure, based on an industry led approach**

## About LINX

The London Internet Exchange (LINX) was founded in 1994 to facilitate the exchange of traffic between Internet service providers.

LINX is a not for profit Internet exchange. Before LINX was founded, most of the traffic between UK service providers was exchanged in the USA, which is both inefficient and a costly way of doing it. LINX's mission was therefore to keep traffic local - and it did this originally in London, as one of the world's first not-for-profit Internet exchanges. Keeping traffic local has been responsible for many of the improvements in Internet services that we have all come to rely on. This has contributed to the general improvement in the Internet services that we, as end users, are familiar with. Our mission was, and is, to work for the good of the Internet and to 'keep traffic local'.

Today, LINX includes networks in the north-west of England, Scotland, Wales and Northern Virginia in the USA.

## Why Should I Join LINX Scotland?

LINX Scotland was set up to help enhance the UK's internet infrastructure with the aim of keeping traffic local. By joining LINX and connecting at LINX Scotland you can deliver your customers a better and faster experience. You don't need to pay for transport to and from London and you get to attend LINX community meetings and events for free.

LINX membership also brings with it the benefit of up to 1G of capacity free at LINX Scotland as well as a 1G at no charge at the Manchester, London and Cardiff exchanges too. You will also benefit from the work of the LINX Public Affairs team who work on behalf of LINX's members on regulatory matters. Put simply LINX membership gives your business competitive advantage over an organisation that isn't connected.

**London Internet Exchange Ltd**

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