



Example IXP Policy Document

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November 26, 2012

This Document

This IXP policy document constitutes a set of common rules that all participants must abide by. By connecting to the IXP you acknowledge that you understand and agree to all of the terms of the policy document. Failure to comply with any of these rules may result in immediate disconnection the IXP without notice.

The terms of the policy document are are revised periodically. Revisions will be published to the IXP mailing list 30 days before they take effect. By remaining connected to the IXP, you agree to abide by the revised policy document.

Governance

The IXP is a neutral and independent organization, constituted as a multi-party agreement between its participants, and governed by the terms of this IXP policy document.

The IXP does not mediate, arbitrate, or participate in any agreements or business dealings with or between participants. With the exception of this policy document, the IXP does not contract with or enter into any other agreements with participants.

The IXP does not receive, handle, possess, or pay money, debt, or instruments of value.

The IXP shall meet any needs through voluntary donations by any party, whether participant or non-participant.

Each participant is solely responsible for its own costs incurred in participating in the IXP.

The IXP shall be operated by an uncompensated Board of Directors of three individuals (collectively referred to in this document as the IXP operator) elected by the participants. Elections shall be held once per year, with ninety days advance notice. Each participant, or group of participants under common ownership, shall have one equally-weighted vote in the election of the board. Participants are defined as parties that are connected to the IXP switch fabric, are exchanging traffic with at least one other participant, and are in compliance with the terms of this policy document.

All members' votes, as well as all business of the meeting, shall be recorded in minutes, which shall be made publicly available on the UIXP web site. Any individual can be nominated or self-nominate for election to the board, with the caveat that the board members are individually and jointly responsible for the labor of maintaining the exchange. That is, no one should volunteer to stand for election to the board if they are unwilling to perform at least a third of the small amount of work necessary to keep the exchange operating, and to do so without compensation of any kind. The membership should, in considering how to cast their votes for board members, carefully evaluate the technical and business competence, as well as the energy and spirit of volunteerism, of the candidates. Board members shall act upon their own personal and individual authority, and shall not be representatives of any employer,

UIXP member organization, or other party. Board members shall attempt to govern the IX in accordance with technical and policy best-practices generally accepted within the global community of IX operators.

All IXP technical, business, and operational documents shall be made publicly available on the IXP web site.

Connection and Disconnection

The IXP shall attempt to make resources available to participants in accordance with need. Specifically, the IXP operator shall allocate ports to members based upon estimate or evidence of each member's relative ability to fill the port with beneficial traffic. In priority, ports shall be allocated to new members before second or additional ports are allocated to existing members.

When a port faster than the minimum speed has been allocated and is under-utilized, the IXP operator may reclaim it to support the demonstrated use of another participant.

Participants should engage in future capacity planning, and should plan to add or upgrade switch ports and external connectivity whenever they reach 70% peak utilization.

Participants must exchange traffic with at least one other participant within three months of receiving their port and address allocations. Ports which remain idle for more than three months may be reclaimed by the IXP operator at any time.

The IXP operator may disconnect any participant without prior notice under the following conditions:

- Failure to comply with this policy document
- To comply with a statutory requirement of a valid regulatory authority
- To comply with a warrant or subpoena issued by a law enforcement authority with proper jurisdiction
- For scheduled or emergency maintenance
- To preserve the stability of the IXP or protect other participants

Participants may only connect equipment which they own and operate themselves to the UIXP. They may not connect equipment on behalf of third parties.

The IXP is not responsible for any losses incurred as a result of disconnection from, or reliance upon, the IXP. The service is provided as-is, without warranties expressed or implied, including fitness for any particular purpose.

Operational Practices

All participants must subscribe to and monitor the IXP announcement email list.

Participants shall endeavor to provide advance notice via email to each of their BGP peers, in the event that a service disruption or discontinuity of BGP peering can be foreseen.

All participants must maintain 24-hour contact information through the IXP web portal, and must respond immediately to communication from the IXP operator.

Any participant-owned or operated equipment or cabling connected to the IXP must be clearly and visibly labeled with the name and valid contact information of the participant.

No participant shall interfere with the equipment or cabling of the IXP or another participant without explicit advance written permission from the relevant party, and advance notification to the IXP operator.

Participants shall proactively monitor their own use of the IXP, and attempt to prevent the transmission of traffic that abuses the IXP and other participants' bandwidth.

Participants have a duty of confidentiality to each other regarding information learned in the course of IXP use and operation. This applies particularly to the IXP operator.

The IXP operator shall publish aggregate traffic statistics on the IXP web site.

Layer 2 Technical Policies

100base and 10base Ethernet interfaces facing the switch must have speed and duplex settings configured explicitly. They may not use auto-negotiation or auto-sensing.

Ethernet 2 / DIX Ethernet / 802.3 Ethernet framing is required on the IXP peering LAN. LLC / SNAP / 802.2 framing is not permitted.

802.1q tagging of Ethernet frames is only permitted by explicit advance written permission of and coordination with the IXP operator.

Ports of the same speed on the same IXP switch may be aggregated together using IEEE 802.3ad link aggregation control protocol, by explicit advance written permission of and coordination with the IXP operator.

Ethernet data types other than 0x0800 (IPv4), 0x86dd (IPv6), and 0x0806 (ARP) may be discarded.

Broadcast, multicast, and link-local traffic other than ARP and ICMPv6 Neighbor Discovery may be discarded.

Devices facing the IXP may not proxy ARP.

In the event that a participant (or participants under the same ownership) has multiple ports on the IXP switch, traffic may not be routinely forwarded between those ports across the IXP switch.

Only switch fabric extensions may present more than one MAC address facing an IXP switch port.

The switch fabric extension procedure is as follows: a technical proposal shall be made to the IXP operator, accompanied by full documentation. This documentation shall be published on the announcement mailing list and the IXP web site for comment by the participants and the public for a period of no less than thirty days, whereupon the IXP operator shall determine whether the proposer is allowed to perform the proposed interconnection. No more than one such proposal shall be entertained at a time, and any subsequent modifications to the interconnected equipment shall be similarly documented and approved by the IXP operator.

Layer 3 Technical Policies

No packets may be routed to the IXP IP broadcast address from devices that are not directly attached to the peering LAN.

The IXP peering subnet may not be BGP advertised by participants.

Each participant must have at least one public Autonomous System Number (ASN) issued by a recognized Regional Internet Registry (LACNIC, ARIN, RIPE, APNIC, or AfriNIC). ASNs reserved for private use shall not be used on the IXP.

Participant routers facing the IXP may use only IP addresses and net masks assigned to them by the IXP operator. IPv6 addresses (link & global scope) shall be explicitly configured and not auto-configured. IPv6 site-local addresses shall not be used.

Participants may not employ default, static, or policy routes to direct traffic across the IXP.

Participants may not direct traffic to others unless it has been solicited via the announcement directly to the participant of a matching IP prefix.

Participants may not advertise a route with a next-hop other than their own router. Specifically, NEXT_HOP_SELF must be set.

Participants may only announce prefixes for which they are either the holder of record as indicated in an RIR whois, for which they hold a signed Letter of Authorization from the holder of record, or for which they are otherwise authorized by cryptographic signature of the holder of record.

Participants are strongly encouraged to aggregate their routing announcements in conformity with RFC2519, *A Framework for Inter-Domain Route Aggregation*.

All participants must advertise to the IXP looking-glass the union of all prefixes advertised to any other participants at the IXP. The looking-glass shall be used solely for diagnostic and capacity-planning purposes.



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