IXP

IXP Setup Checklist

IXP Policies & Documentation

IP Resources & Management

Room setup

Equipment Setup

Equipment Configuration & Testing

ISP/Members

Information & Documentation

IP Resources

Connectivity

Equipment Setup

Equipment Configuration & Testing

Confirm that the IXP LAN Peering prefix is not leaked (no

Develop Interconnection policy for the IXP

Information on how members connect (Admin and Technical)

Membership joining forms and requirements

Billing information, charges and payment methods available

Develop a Network Design for the IXP, Room layout, Cabinet setup plan, types of equipment, etc

Develop a System and Application Services design for the IXP

Obtain lists of circuit IDs from each ISP that's going to connect

List the IXP on PeeringDB

Develop an IPv4 & IPv6 address plan for Peering LAN (assume IPv4 /24 & IPv6 /48 will be minimum allocation)

Develop an IPv4 & IPv6 address plan for IXP-Management LAN (assume IPv4 /24 & IPv6 /48 will be minimum allo

Acquire IXP Public IPv4 and IPv6 address space for the IXP from AfriNIC

Acquire IXP ASN from AfriNIC

Identify ISP that will provide transit for the IXP-Management LAN at least 2Mbps

Acquire a suitable domain name for the IXP with local ccTLD

Identify ISP that will provide secondary DNS Services for the IXP DNS service

Ensure that power and redundancy (UPS, batteries, etc) are installed and working - test by simulating failure

Ensure that the cabling is ready and well labled

Ensure that HVAC is installed and working - test

Confirm the security features meet the agreed requirements

Ensure that all IXP equipment have their rack-mount accessories and tools are available

Rackmount IXP Switch, Servers etc as per the Network design documentation or per ideal layout of the room

Connect the equipment to the cables and verify

Power up the equipment to complete burn-in test

Configure the IXP Core Peering Switch and;

- setup the VLANs as per documentation

- setup management IP's

- setup SNMP access and password

- setup descriptions on all interfaces

Install and Configure the IXP Route Servers and;
- Assign IP Address from IXP Peering LAN Prefix as per IP Plan
- Configure BGP using IXP Peering ASN
- Configure BGP filters
- Pre-configure ISP peers with passwords
Configure the IXP Mail Server, Ticketing System and;
- setup IXP domain
- setup spam filters, etc
- setup mailng lists for members
- setup ticketing system options
Configure the IXP Webserver and;
- setup wesbite with information available under IXP Policy and Documentation
- Setup internal wiki for internal documentation under IXP Policy & Documentation
Configure DNS Server and;
- setup rDNS service for the IXP Peering LAN Prefixes
- setup rDNS service for the IXP Management Prefixes
- configure authoritative DNS and Resource Records for the IXP Domain name & services
Configure the statistics and monitoring server and services and;
- setup member statistics on the IXP Core peering Switch
- setup member aggregate statistics on the IXP Core peering Switch
- setup monitoring tools for all services
Configure and test IXP Management connectivity
- Configure BGP with transit provider(s)
- Check to ensure BGP announcements are propergating
Configure IXP Management System (optional)

Confirm that the ISP has completed and signed the Service Contract/Membership joining form
- Verify the ISP's Peering Coordinator Contact information (phone & email)
- Verify the ISP's 24/7 NOC contact information (phone & email)
Confirm if the Member has a peering policy and is published on their website. If not advise them on why they ne
Confirm if the Member has published their peering contact information on their website for other peers
Confirm if the Member is listed on PeeringDB - If not advise them on why they need to enlist

Confirm ISPs have public ASN. If not, explain how to apply for these
Confirm ISPs have Provider Independent (PI) public address space that can be routed over the IX.
If ISP does not have PI address space, make sure relevant ISPs have LOAs to route the space.

Confirm with colo that crossconnects from each of these are in place -- and tested -- to the IX
Confirm circuit connections to the IX from each ISP are in place
Check to ensure that no interface errors are reported on the connections

Confirm router equipment for each ISP at IX and they have the right rack mount accessories
Check that each router has BGP capability.
 If no router onsite (eg. Metro-circuits) confirm that each ISP has a device capable of BGP back on premises.
ISPs to install router equipment
Logs of serial numbers, etc should be made
Label all the Members equipment

Configure ISP Router
- Assign Peering IP from Peering LAN Prefix as per assignment
- Configure e-BGP between peer router and the Route-Server
- Configuree e-BGP between peer router and the Route-Collector (if available)
- Configure e-BGP inbound and outbound filters as per Member's and IXP peering policy
- Configure e-BGP Attributes (local pref and communities) as per ISP's peering policy
- Configure iBGP with other iBGP speakers on the ISP network
Connect the ISP Router on the Assigned IXP Switch Port
Configure the ISP port on the Switch to the Quarantine VLAN
Activate the ISP Port on the IXP Switch
Confirm that no "back-to-lan-bridging" is in place.
Confirm end-to-end addressing is working (ie. ping test from IX router to HQ)
Confirm that the router is not sending prohibited protocols as defined by the technical policy
If member is clean, return them to the peering VLAN
Confirm ISP's IX prefixes are not less preferred than prefixes seen via transits
Confirm ISP's announcement are, at least, consistent with prefixes announced to transits
Confirm that the IXP LAN Peering prefix is not leaked (no-export-policy) to transit providers