INX FAQ

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Getting Connected

Q: *Who is eligible to connect to the exchanges?*

A: The INXes are 100% community operated, and open to any organisation that has their own Internet number resources (ASN + IPV4/IPV6 address space).

Q: *I know all this! How do I get connected already?*

A: Send an email to ops[@]inx.net.za with your ASN, and which site you'd like to connect to. You can also download, sign ,and return a copy of our formal contract. In the spirit of minimising bureaucracy, we do not **require** peers to sign a contact, but we do prefer it, and we **do** expect all peers to play by the Common Sense IX rules.

Q: *Where and how should I connect?*

A: All of the exchanges are multi-site, meaning that you can connect to **any** one of the locations for that specific exchange, and still get access to all peers, at all locations, for that exchange, with zero additional complexity. Choosing which site to connect to, should be done on the basis of what makes best sense according to your network build.

Q: *What equipment is required for connecting to an INX?*

A: You can connect to the INX switch fabric using either a suitable router, or a MetroEthernet service. You require a router that supports BGP4 since all peering is done using BGP. It is common to have dozens of BGP sessions with other members at the exchange and your hardware should be powerful enough to handle this, and the related traffic. If you're in doubt, speak to your router vendor, or ask our helpful Ops team.

Q: *From whom can I get backhaul links to an INX ?*

A: You can approach any licensed ECNS holder to provide you with these services. A number of ISPA's large and medium members will already have a point-of-presence (PoP) at, or near the INX environments and may be able to provide these services.

For larger capacity circuits it may be feasible to obtain dark fibre pairs or DWDM wavelengths into the INX environment.

Q: *Can I get wireless access to an INX?*

A: Yes, although roof or tower space near the INXs is normally limited and it is preferable to connect to an INX via a fibre based circuit. Ultimately, it would be up to the facility provider to determine the rules and processes for installation of radio equipment.

Q: *Who should i contact to get connected?*

A: Our single point of contact is ops @ inx.net.za. We don't require you to sign a contract, but we do prefer it. Here is a copy of our formal contract. Our process is really simple; we verify your intent to connect, issues you with a LOA, and get you up and running.

Costs

Q: *Why is there a port fee for the INXes? Surely IXP-x is better because it's free?*

A: The short answer is that INX-ZA's only source of income is port fees. We don't have any rich parent sponsors. Aside from the regular operating costs of operating the Exchanges, INX-ZA uses the port fees collected to subsidise many community projects, all geared towards sustaining, and improving the Internet ecosystem in South Africa. These include the provision of Critical Internet Services (eg. DNS Roots), training and capacity building, building infrastructure to span across a city, and advocacy for a continued open Internet environment in South Africa. **Port fees are set by the community-elected management committee**, so, if you think that these fees are erroneous, please step up and volunteer for the committee. Additionally, if you'd like to sponsor our work, to help drop/lower port costs, please contact us!

***Q:** What are the port costs?*

A: INX-ZA supports 1/10/100GE Single Mode fibre ports. Each port attracts a monthly fee, and there are no setup fees. ISPA members are eligible for a port fee discount; please contact the ISPA secretariat for additional information.

Port Size	Port Fee	ISPA member discount available
1Gb/s	ZAR 1,495	Please consult the ISPA secretariat for assistance.
10Gb/s	ZAR 3,995	
100Gb/s	ZAR 17,495	

The INXes have a long history of supporting Internet development, and port fees are generally waived for ports used by Critical Infrastructure (such as DNS Root Servers), and other not-for-profit associations located at an INX. The community-elected management committee remains responsible for determining which services it is appropriate to have hosted at the INXes, and when port fees should be waived.

The INX Management committee has waived port fees for DINX.

Zero Fees at ADC sites.

African Data Centres have agreed to subsidise INX port costs for peers at their facilities!

Zero Fees at DPA sites.

Digital Parks Africa have agreed to subsidise INX port costs for peers at their facilities!

Members of the South African ISPA are eligible for discounts on ports; please raise this with the ISPA secretariat.

***Q:** What about cross-connect charges?*

A: INX-ZA does not levy cross-connect charges. Where applicable this is done by the colocation provider. We've negotiated agreements for zero recurring charges if you connect to the INX fabric at any Internet Solutions, xneelo, ADC, or DPA facility. Thusfar, the only colocation provider that charges for cross-connects on a recurring basis is Teraco.

Location	Site Code	Colocation Provider	Once-off Installation	Monthly recurring cost
JINX	PKL	Dimension Data	colo-set	waived
	SMR	xneelo	colo-set	waived*
	HWH	Africa Data Centres	colo-set	waived
	DPA	Digital Parks Africa	colo-set	waived
	ISO	Teraco	colo-set	colo-set
	ADS	Africa Data Centres	colo-set	waived

Location	Site Code	Colocation Provider	Once-off Installation	Monthly recurring cost
DINX	UMH	Dimension Data	colo-set	waived
	RHV	Teraco	colo-set	colo-set

Location	Site Code	Colocation Provider	Once-off Installation	Monthly recurring cost
CINX	BRE	Dimension Data	colo-set	waived
	DPR	Africa Data Centres	colo-set	waived
	NLS	Teraco	colo-set	colo-set

Location	Site Code	Colocation Provider	Once-off Installation	Monthly recurring cost
NMBINX	NWT	Dimension Data	colo-set	waived

* waived if you are pre-cabled to the MMR

Services

Q: *Can I get international bandwidth/transit via an INX?*

A: A connection to an INX merely provides you with the opportunity to exchange traffic with the other networks connected to the same INX. Exactly what traffic you exchange depends on the arrangements you make with those other networks. Some of the other participants may be willing to provide you with an international transit service. There is nothing in the INX policies preventing a member from offering such a service, but it is not a service that the INX provides.

Q: *What are some of the value add services that the INX provides?*

A: Please see the INX Services page for a non-exhaustive description of the services that you can get access to. Please feel free to reach out to our team if you think there's something else we could be doing!

Hosting equipment

Q: *Why can't I host my server at an INX?*

A: INX-ZA is not in the server-hosting business. Most of the INX participants provide hosting services, and INX-ZA does not compete with its membership. Technically, while it may seem appealing to host a server at a central location, there is negligible difference in performance if the server is hosted on the network of a peering participant with a high-speed connection to the INX. We make exceptions for operators of critical Internet infrastructure, like DNS server operators.

BGP and Peering

Q: *Is there a looking glass available?*

A: Yes several! INX-ZA operates https://lg.inx.net.za that will show you a general view of what prefixes are at each of the INXes. Packet Clearing House operates https://lg.pch.net that is connected to DINX, JINX and CINX. Routeviews.org provides similar services for CINX and JINX. In addition, peers are able to see specifics of what the BGP Route Servers via the INX portal.

Q: *Is it safe to peer with the BGP Route Servers?*

A: Yes, INX-ZA maintains strict IRR filters for all route servers peers. Filters are rebuilt automatically every 4h at hh:40.

Q: What about RPKI?

A: We **drop** RPKI INVALIDs.

Policy

Q: *Who sets the rules/policy for the INXes?*

A: INX-ZA's Management Committee is in charge of INX policy. This committee is elected by the peering community and is responsible for developing and implementing policy, for the benefit of the peering community at the INXes. **INX-ZA is proud to be 100% community managed**.

Q: We are a large organisation, and we need a formal contract ..

A: Ok, if you really, really, really need paperwork, here's a copy of our formal contract. In the spirit of minimising bureacracy, we do not **require** peers to sign a contact, but do expect all peer to play by the Common Sense rules.

Q: We're not a large organisation, or we don't really need to sign a contract, but we're curious about your regular "T & C"s

A: Mostly, we expect peers to do The Right Thing (tm), to ensure that the fabric remains stable. We do have a technical policy that all peers are expected to adhere to.

Data Reuse

Q: *What's your relationship to PeeringDB?*

A: We use PeeringDB.com to bootstrap our provisioning process (ie. we populate our database with information that peers publishs in PeeringDB.com). In particular, we capture the contact information, IRR Object, and max-prefixes that the peer has made available to the PeeringDB community. We do not insist that peers have a PeeringDB record, but do encourage it, and can assist peers in setting this up.

Furthermore, we publish nightly updates to PeeringDB that include a peer's IP addresses, port speed, and whether, or not, they are a BGP-RS peer. Peers that select the "Allow IXP update", as part of their PeeringDB account, will automatically have this information updated by us.

Q: *Do you share any other information about peers individual/personal data?*

A: No personal information about any peer is ever shared, or sold, with any third party. We do sometimes perform introductions between prospective peers, but that's only after we receive permission to do so from the peers themselves.

Got Security?

Q: *What security measures do you keep in place at the IX?*

A: Take your pick ..

- [x] One mac address locked per port
- [x] "Learning" disabled
- [x] Rate limits applied for broadcast / unknown mac traffic
- [x] IRR **and** RPKI filtered route servers
  - [x] Bogons and martians filtered
  - [x] Transit-Free networks filtered
- [x] IRR objects for BGP-RS service
- [x] Unwanted frames filtered
- [x] Peering LAN has ASO ROA

If you're looking for something specific, please reach out to our ops team. We are always trying to do better.

Q: *Why aren't you part of the MANRS project?*

A: Quite simply, **we are already doing more than what this project requires**, and we find their wording to be too loose and self-congratulatory. We believe that, their bar is set waaaaaaaaay too low. We have held, and will always hold ourselves, to the highest technical standards possible, and although we exceed their requirements, we have not sought their accreditation.

An exchange in Location X?

Q: *Why isn't there an INX in location X?*

A: INX-ZA is constantly on the look out for additional data centre facilities in order to either expand one of our existing INXs within a particular city or to develop new peering points in other towns and cities to encourage the local exchange of traffic. Please contact us to discuss any opportunities.

Contact & Administrative

Q: *How do I get hold of someone at the INXs?*

A: All correspondence can be directed to ops [at] inx.net.za.

Q:It is 202x!! Can't you come up with a proper website?

A: Probably 🙂 We are not web designers though, so we aim for function before form. We **do** know how to run an IXP though!