TISPA IXP Memorandum of Understanding

The undersigned, representative of _____ ("peer"), hereby confirms the participation of the above mentioned network at TIX (called "the IXP" below) in Dar es Salaam.

This Memorandum of Understanding (MoU) is between the undersigned and TISPA, the Tanzania Internet Service Providers' Association, registered with No 13073 under the Societies Ordinance(1954), to regulate IXP connectivity affairs. The Technical and Organizational Requirements below are accepted and will be adhered to.

Organisation Name: _____

Address: _____

_____

_____

Admin Contact: _____ (Name)

_____ (Email)

_____ (Phone)

Technical Contact: _____ (Name)

_____ (Email)

_____ (Phone)

Signature & Stamp: _____

Name in print: _____

Date: _____

ASN: _____

planning to use BGP route server (yes/no): _____

IRR AS-SET object to use for filtering in BGP route server: _____

Filled by TIX:

TIX switch and Port: Sw: _____ port: _____

IP on TIX peering LAN: IPv4: 196.223.5. _____ /24 IPv6: 2001:43f8:: _____ /64

This MoU comes into effect when the document signed by the peer is received by TISPA. It will continue to be in place until any party notifies termination to the other according to section C 12, or if peer fails to meet the obligations in section C 6.

A. Peer's technical requirements
1. Subject to availability, peer will be provided with 2U rack space.
2. The IXP provides its participants with access to port(s) on a layer-2 Ethernet switch fabric connecting several peers.
3. Participants may only connect equipment which they own and operate themselves to the IXP. They may not connect equipment on behalf of third parties.
4. Peers may only utilize a single layer-2 MAC address to connect a single layer-3 router per port allocated from the IXP switch fabric.
5. Each participant must have their own (public) Autonomous System number.
6. Peers shall not advertise routes other than their own and their customers, without the prior written permission of the assigned holder of the address space.
7. Peers shall not advertise a next-hop other than their own.
8. Peering between routers across the IXP will be via BGP-4.
9. Peers shall not generate unnecessary route flap in peering sessions with other participants across the IXP.
10. Peers shall not point their default route or any other static route to the IXP route servers or any peer.
11. Participants must, on all interfaces connected to the IXP switch fabric, disable Proxy ARP, ICMP redirect, CDP, IRDP, directed broadcasts, IEEE802 Spanning Tree, any interior routing protocol broadcasts, and any MAC layer broadcasts other than ARP or inverse-ARP.
12. Peers must, on all interfaces connected to the IXP switch fabric, disable any duplex, speed, or other link parameter auto-sensing.
13. Peers must set netmasks on all interfaces connected to the IXP to include the entire IXP peering LAN.
14. Peers shall avoid congestion on their interfaces or transmission links at or into the IXP so as to not cause unwanted latency for traffic at the IXP.
15. Participants must not announce ("leak") prefixes including some or all of the IXP's peering LAN to other networks without

explicit permission of the IXP.

16. Participants must clearly label all equipment that resides at the IXP facility with ownership and contact information.

17. Participants will not touch equipment and/or cabling owned by other participants and installed at the IXP or in the room containing the IXP without the explicit written permission of the participant who owns the equipment.

18. Peers should not routinely use the IXP switch fabric for carrying traffic between their own routers.

19. Participants will not install traffic monitoring software to monitor traffic passing through the IXP, except through their own ports. The IXP may monitor any port but will keep any information gathered confidential, except where required by law or where a violation of this Memorandum of Understanding has been determined by TISPA.

20. TISPA does make statistics of the aggregate traffic flow over the exchange switch available to the public.

21. Participants shall endeavour 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.

22. Peers must establish BGP sessions (for all applicable address families), for the duration of their participation at the IXP, to the Route collectors operated at the IXP and shall advertise all prefixes normally advertised to a peer at the IXP.

B. Best practice recommendations

1. IXP participants are encouraged to advertise routes to their IP address range(s), and the ones of their customers, to the IXP route servers. In case de-aggregated prefixes are advertised to upstreams, it is recommended to advertise the same also to all peerings, including to the BGP route servers.

2. IXP participants are encouraged to keep IRR information in Internet Routing Registries (IRRs) updated (AS-SET and route[6] objects).

3. IXP participants are encouraged to keep their information in PeeringDB (https://peeringdb.com/) updated.

C. Organizational Requirements

1. Participants have a duty of confidentiality to the other IXP Participants in IXP affairs.

2. Peers must provide 24x7 contact details for use by TISPA or IXP staff.

3. In matters of the IXP, the primary means of communication will be via email.

4. Peers must not refer customers or customers' agents to IXP staff. All queries must be directed through the peer's support staff.

5. Peers must not carry out any illegal activities through the IXP. They are to obey the laws of the country.

6. Participants will pay annual fees in advance. Failure to do so will result in immediate disconnection. Fees are detailed in Section D below.

7. It is participants' responsibility to ensure that all contact information held by TISPA in connection with their participation is correct and up to date.

8. All applications to join the IXP must follow the joining procedure as follows:
Applications will be accepted, provided this MoU including the Technical and Organisational Requirements as well as the fees are accepted and the MoU is signed and necessary details given. Applications must be accompanied by the setup fee and the port connection fee for the current calender year.

9. All parties to this MoU agree to indemnify and hold harmless all other parties.

10. Any complaints must be referred in writing to the IXP Management Committee of TISPA. The working group will discuss them at the next meeting. The decision can be revised by the Board of TISPA. Disputes not resolved through these means can be referred to courts in the United Republic of Tanzania.

11. TISPA will not provide rebates of any sort for down time. TISPA and TIX do not warrant or assume any liability or responsibility for services provided or not provided.

12. Participants of TIX must give 3 months notice in writing to TISPA if they intend to stop using the IXP. There will be no refund on charges under any circumstances.

D. Fees

Fees for connections to the IXP under this MoU are specified in TISPA's IXP connection fee schedule, available at
https://www.ix.ne.tz/ix_fees.html
TISPA will give 3 months notice for any changes in these fees.