

## TIX Memorandum of Understanding

The undersigned, representative of \_\_\_\_\_ (ISP), hereby confirms the participation of the above mentioned ISP in the Tanzania Internet Exchange (TIX).

The Technical and Organizational Requirements below are accepted and will be adhered to.

Company Name: \_\_\_\_\_

Address: \_\_\_\_\_

Admin Contact: \_\_\_\_\_ (Name) \_\_\_\_\_ (Email)

Technical Contact: \_\_\_\_\_ (Name) \_\_\_\_\_ (Email)

Signature: \_\_\_\_\_

Name in print: \_\_\_\_\_

Date: \_\_\_\_\_

Filled by TIX: \_\_\_\_\_

Port on TIX switch: \_\_\_\_\_

IP on TIX net: 198.32.179. \_\_\_\_

ASN: \_\_\_\_\_

### A. Technical requirements

- Peers will be provided with 2U rack space. There might be restrictions in the future when capacity is limited.
- TIX provides its participants with a layer-2 Ethernet switch fabric and a layer-3 route reflector.
- Participants may only connect equipment which they own and operate themselves to the TIX. They may not connect equipment on behalf of third parties.
- Peers may only utilize a single layer-2 MAC address to place a single layer-3 router per port allocated from the TIX switch fabric.  
This layer-3 router shall be housed at TIX facility.
- It is preferred that each participant have their own Autonomous System number, peers without an ASN allocation will be assigned an ASN from private ASN space by the TIX Management Committee. Any peer who has previously been connected to the TIX using private ASN and then later acquires their own public ASN must notify the TIX Management Committee as soon as possible in order to incorporate this development into the BGP peering at TIX.
- TIX participants will advertise routes to their IP address range(s) to the TIX route reflector(s).  
Peers shall not advertise routes other than their own, without the prior written permission of the assigned holder of the address space.
- Participants will peer with all other participants at the TIX without bias or disregard.
- Peers shall not advertise a next-hop other than their own.
- Peering between routers across TIX will be via BGP-4.
- Peers shall not generate unnecessary route flap, or advertise unnecessarily specific routes in peering sessions with other participants across TIX.
- Peers shall not point their default route to the TIX.  
Participants must have one separate link to the Internet, independent of the Internet Exchange.
- Participants must, on all interfaces connected to the TIX 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.
- Peers must, on all interfaces connected to the TIX switch fabric, disable any duplex, speed, or other link parameter auto-sensing.
- Peers must set netmasks on all interfaces connected to the TIX to include the entire TIX peering LAN. (currently 198.32.179.0/25)
- Participants shall not announce ("leak") prefixes including some or all of the TIX peering LAN to other networks without explicit permission of TIX.

- Participants must clearly label all equipment that resides at the TIX facility with ownership and contact information.
- Participants will not touch equipment and/or cabling owned by other participants and installed at TIX or in the room containing the TIX without the explicit permission of the participant who owns the equipment.
- Peers should not routinely use the TIX switch fabric for carrying traffic between their own routers.
- Participants will not install traffic monitoring software to monitor traffic passing through TIX, except through their own ports. TIX 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.
- TIX does not make statistics of the aggregate traffic flow over the exchange switch available to the public.
- 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.

For clarification:

- ISPs should advertise all their networks to the IXP.
- ISPs must not offer or sell transit traffic (Internet access) over the exchange medium. (Routers at the Exchange Point can be connected by other media than the exchange switch)
- ISPs should not use multiple links to the IXP for the purpose of routing their internal traffic.
- ISPs should accept all routes advertised by all other peers and route traffic through the Exchange (the purpose of it).

### B. Organizational Requirements

- Participants have a duty of confidentiality to the other TIX Participants in TIX affairs.
- All peers must accept to peer with the Route Reflector and thus with everyone else.
- Peers must provide 24x7 contact details for use by TIX staff.
- In matters of TIX, the primary means of communication will be via email.
- Peers must not refer customers or customers' agents to TIX staff. All queries must be directed through the peer's support staff.
- Peers must not carry out any illegal activities through TIX. They are to obey the laws of the country.
- Participants will pay annual fees in advance. Failure to do so will result in immediate disconnection. Fees are detailed in Annex C below.  
It is Participants responsibility to ensure that all contact information held by TIX in connection with their participation is correct and up to date.
- All applications to join the TIX must follow the correct 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 full port connection fee for the current calendar year.
- Any complaints must be referred in writing to the TIX Management Committee of TISPA. The working group will discuss them at the next meeting. The decision can be revised by the Board of TISPA, in which case that will be final.
- The TIX 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.
- Participants of the 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.

### C. Fees schedule

TIX will charge each participant a port connection fee. This will allow the peer to connect to the designated 10/100Mbit port on the TIX switching fabric.

The fee for TISPA members is set to USD 1,000.00 for one calendar year, payable in advance to TISPA. For peers who are not members of TISPA the fee is USD 1,500.00 per calendar year.

A once-off setup fee of USD 500.00 will be charged upon successful connection to TIX.