



TISPA

Position paper on SADC RIXPs

TISPA background

TISPA, the Tanzania ISP Association, is promoting development in the communications sector, improving Internet interconnection, and furthering the generation of value in the communications sector locally, and regionally.

TISPA has created and operated IXPs in the country since 2004. TISPA has always aimed to make interconnection as easy and affordable as possible. This is so that network operators can inter-connect - easily - and can optimise their traffic to use local peering to the maximum. Through this value is created to end-users and a better Quality-of-Service was delivered by operators.

IXPs are important building blocks in the local Internet ecosystem. They allow for cheap traffic flows of high volume to be efficiently transferred between a large numbers of players. However, IXPs do not connect end-users, nor do they directly connect online services. These are all connected on respective networks, be that CDNs, consumer networks, government networks or others.

IXPs transfer traffic between a multitude of these networks, but do not originate or sink traffic themselves.

As such, IXPs have no reason to be connected to other IXPs. For increased benefit to their members, IXPs wish to have many networks connected to them, including carriers which can offer improved regional traffic routing to other parties.

IXPs are also not setup to support transporting data over significant distances. They are specialised to support interconnection within a location (city).

It is considered to be overly specific to go as far as requiring for IXPs to connect. In our understanding the aim should be to optimise the generation of value in the communications sector in a given country or sub-region (such as SADC).

With regards to the Internet, this optimisation should aim to ensure that

- Traffic stays within the region, and
- Resources do not have to be spent outside for communication within the region.
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That means we should try to keep traffic as much as possible within the region, encourage any network operator to optimise towards that goal.

At TIX we have 37 networks connected. 32 of these are traditional networks, not any cast instances of DNS services.

Out of these 32, two are directly connected to the designated SADC RIXP in South Africa, 25 are indirectly connected to the RIXP and only 5 are not reachable via the designated SADC

RIXP in South Africa (where it should be noted that one of the 5 is reachable via another IXP in South Africa)

With this existing connectivity it is fortunately possible today for any operator to obtain services from carriers to ensure efficient local and regional routing of their traffic. Not every single network in Tanzania would have to be directly connected to an IXP in South Africa; but they can instead choose to obtain services from the carriers to route traffic optimally.

Recommendations:

- Encourage all networks to peer at local IXPs
- Encourage all networks to have arrangements for optimal routing for regional traffic, eg within SADC
- For IXPs to lower access restrictions, allow any network to connect, including non-local operators
- For carriers to connect to multiple IXPs
- For carriers to offer services for regional connectivity (partial routing table), eg to allow Tanzanian customer networks to transfer traffic with SADC destinations efficiently
- For government and regulators to not restrict operators from connecting to IXPs; eg network operator from country A should be permitted to connect and peer at IXP(s) in country B without restriction, as this
 - a) Helps to keep regional traffic within the region, and
 - b) Does not constitute selling of services
- For government and regulators to further ease cross-border connectivity
- For government and regulators to lower costs of communications services on national infrastructure (eg NICTBB) and to avail additional infrastructure components (eg unused fiber pairs) to operators in order to establish additional capacities

In short TISPA (and other IXPs) envision that individual ISPs, Telcos, peers and carriers should connect to as many IXPs and RIXPs by using carriers that are peering at each IXP and RIXP. We do not see connecting to other IXPs as something an IXP should do themselves, but rather IXP will facilitate carriers to do that.

Submitted to the Ministry for Works, Transport and Communication,

TISPA

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