State of the Tanzanian Internet

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Agenda

- Overview
- History
- Status
- Environment
- Observations
  - The gap
Tanzania

- 37 live provider ASNs seen
- With 63 members the 6th biggest AfriNIC
- 4th most ASNs (77)
- Area 947k km²
- Population 50m (2016)
- USD 1,006 GDP p.c (2016)

https://bit.ly/2OLZOmm
https://bit.ly/2znBz8J
History

- Until 2009 all on VSAT
- Several providers, bidirectional services, including to enterprise
- Many islands, connected to Europe (e.g., Norway)
  - When connecting (peering) some ISPs we still have many sites unconnected
- National backhaul
History - 2

- Seacom July 2009
- Eassy 1 year later
- NICTBB to backhaul submarine capacity upcountry
  - Better than VSAT, replacing them
- Subscriptions went from kbps to Mbps
- Backhaul networks had to be upgraded
- More traffic passing through Dar es Salaam
IPv6 - allocated/assigned

https://www.vyncke.org/ipv6status
IPv6 - announced
IPv6 - alive

https://www.vyncke.org/ipv6status
IPv6 – traffic (Google)

https://www.vyncke.org/ipv6status
Infrastructure

• Data Center
  – NIDC
  – TIGO
  – Vodacom
  – NMB Bank

• Metro fiber
  – 4-5 companies

• National fiber
  – NICTBB
  – Consortium (Airtel, Tigo, Zantel)
  – Vodacom
Infrastructure -2

• Submarine Cables
  – SEACOM
  – Eassy
  – SEAS
Interconnection

- TIX, Dar, since 2004, 35 peers
- AIXP, Arusha, since 2006, 14 peers
- MIXP, Mwanza, since 2016, 10 peers
- ZIXP, Zanzibar, May 2018
- DIXP, Dodoma, June 2018
• Increase of taxation.
  - Excise duty
  - Are communications services a luxury?
Environment - 2

- NICTBB
  - Managed by TTCL
  - Pricing elsewhere is cheaper
All (licensees) to connect to IXPs

11 Any licensee who hosts content for electronic accessibility or transmits or carries internet traffic shall make available within the nearest located Internet Exchange Point premises, an interface, equipment or facility that shall enable connectivity with the Internet Exchange Point.

https://bit.ly/2xGDHXb
IXPs to be interconnected

12.- (1) All Internet Exchange Points deployed in the United Republic shall be directly connected to one another.

https://bit.ly/2xGDHXb
Future

• What could be better?
The GAP

Dar – Mombasa

• Big content is coming to Mombasa
  – Cloudflare, Google, soon Facebook

• Currently packets get wet (through the water)
  – Or via Nairobi (…)

• There should be a better, shorter way
  – And it should not be SDH…
The end

Questions?

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