Update on IX Initiatives in Iran

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Summary

• Who am I?
• Presentation of Tehran IX
  • Background
  • Governance
  • Policies
  • Architecture
  • Statistics
• Benefits
• Way Forward and Next Steps
Who am I?

• Shahab Vahabzadeh
  
• 27 Years Old

• BS: Computer Science, Software Engineering

• MS: MBA in Marketing

• IP Engineer and System Administrator

• CTO / CIO at Asiatech

• Consultant to TIC and CRA in running IXP and CDN

• Geek

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Background

• Tehran IXP is owned by Telecommunication Infrastructure Company (TIC), a government agency.

• The IXP was officially launched 6 months ago (Approximately October 2014).

• IXP launched because of:

  • ISPs, Data Centers and Content Providers have the need to interconnect with each other

• The IXP is physically located in a TIC’s facility in Tehran:

  • 40% of total Internet Traffic is coming from Tehran.

  • 60% of Internet Service Providers aggregate their traffic from other cities to Tehran.
Governance

- IXP owned by Telecommunication Infrastructure Company (TIC)
  - TIC is the only Upstream of Internet Bandwidth in Iran
  - TIC has efficient facilities in all cities, mostly in two major points in Tehran
  - TIC has SLAs on their agreements
  - All ISPs in different cities of Iran have connectivity to TIC
  - All Content Providers have connectivity to TIC
  - There is no formal Technical Committee helping in running IXP
Policies

• Members must sign an agreement with TIC for getting physical connectivity

• Members can request 1Gbps or 10Gbps connectivity depending on their needs

• TIC charge members only by port, not traffic used

• Peering is bilateral:
  • Most ISPs exchange traffic at no cost
  • Content Providers are interested in getting money from ISPs
The IX runs on Layer 2 Switch Fabric (Cisco Nexus Switches)

Everything runs on VLAN

For every peering you can get a VLAN from TIC, Example:

- PEER1-PEER2: VLAN100
- PEER1-PEER3: VLAN101
- PEER2-PEER3: VLAN102

No additional services like Route Server, Looking Glass, NTP, etc.
Statistics

- As IXP owned by TIC, the statistics are not publicly available
- Approximately exchanged traffic must be near 100Gbps
- Current traffic ratio of 1:3 (ISPs to Content Providers)
Statistics

• List of peers at the IXP (Also +AS12880 {TIC})
  
• AS43754 {Asiatech}

• AS43005 {Pishgaman Tose-e Ertebat}

• AS39501 {Sabanet}

• AS51074 {Mabna}

• AS42337 {Respina}

• AS24631 {Azadnet}
Benefits

• Reduce transit usage, therefore network costs for ISPs are also reduced

• Reduce the latency between IX participants, equal to increasing User Experience

• Increase the Robustness and Availability of routes.

• Example of this Benefits:
  
  • Asiatech is using %30 of its traffic from IXP (7~8Gbps from 20Gbps)
  
  Means saving 26*STM1 (4Gbps) Internet Bandwidth
Way Forward and Next Steps

• Getting more Peers in the IXP

• Running IXP in different cities like: Tabriz, Shiraz and Mashhad

• Exploring the development of other services at the IXP
  • Route Server to facilitate Multi Lateral Peering Agreements
  • Hosting the first DNS Root Servers in Iran
  • NTP Services
  • Looking Glass
Q&R

Any Questions?
“Imagine a world in which every single human being can **freely share** in the sum of all knowledge.”

Thank You