



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



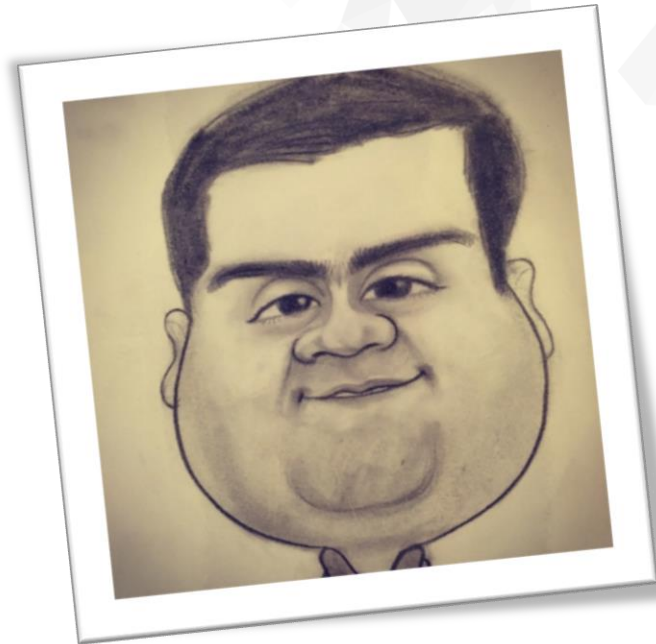
Who am I?

- **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

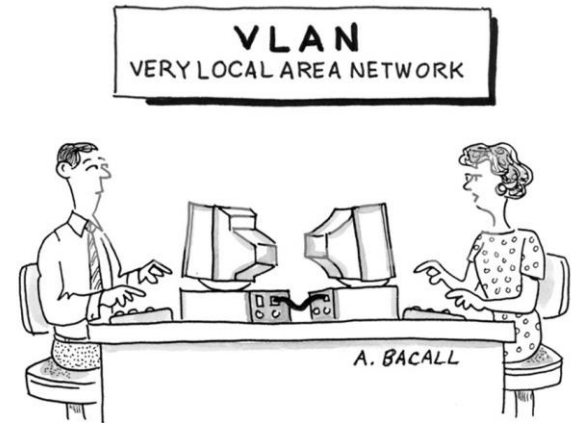
- **IXP owned by Telecommunication Infrastructure Company (TIC)**
 - TIC is the only Upstream of Internet Bandwidth in Iran
 - TIC has efficient facilities in all cities, mostly in two major points in Tehran
 - TIC has SLAs on their agreements
 - All ISPs in different cities of Iran have connectivity 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

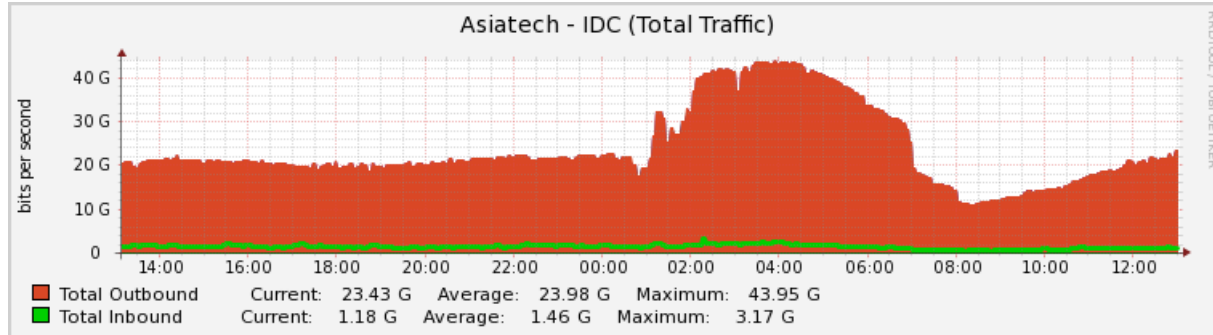
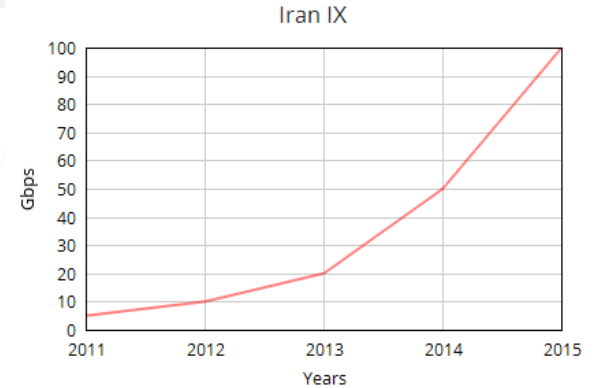
Architecture

- 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