

IXes in South Asia

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Countries

- Afghanistan
- Bangladesh
- Bhutan
- India
- Maldives
- Nepal
- Pakistan
- Sri Lanka

Afghanistan

- 6 ISPs
 - NEDA, Ariana Telecom, CeReTechs, InstaNet, Trasil Telecom, Itehad Internet Company
 - Difficult to say how many links, 200 Cyber Café in Kabul
 - ACCA : World Bank run ISP
 - UN Organizations have their own links
- Regulation in progress
 - National and International ISPs
- All ISPs still not licensed
- Connectivity is through V-SAT, most private ISPs are customers of larger ISPs in Pakistan
- MOIC and AFGNIC thinking about initiating and IX

Bangladesh - BDIX

- Ongoing work since November..active work since last four months
- 100+ ISPs, many small ISPs are neighborhood business. They get their bandwidth from larger ISPs
- BDIX- project funded by UNDP through SDNBD to include 20 largest ISPs at the BDIX this year.
- BDIX working group / mailing list has participation from ISP Association. IX mailing list still not populated properly.
- Connectivity equipment partially funded by the project. Wireless connectivity to be used initially due to difficult regulatory regime.
- Switch and IX equipment provided by PCH, IX LAN block provided by EP.net
- July 30, 2003, first IX workshop with 35 Participants
- Late September/mid-October, Cisco ISP/IXP workshops to be held to enable ISPs to participate at the IX.



Bhutan

- Only One ISP – Druk Net
 - Around 10,000 access account
 - About 40-50K users
 - Connectivity through VSAT
 - Multi homed

India - NIXI

- National Internet Exchange of India is a government funded project with participation from ISPs (www.nixi.org)
- Non-profit company established to undertake the job
- Plan to establish four IXes in Delhi, Mumbai, Chennai and Kolkata
- Delhi IX location identified and has been turned on with 8 ISPs (last month)
 - Cisco 2950-48 Switch
 - Cisco 3600 route server
 - Mandatory Peering
- Private Peering between a few ISPs already there, traffic levels not known
- NIXI policy mandates peering between all members, but discussions continuing
- There's been a lot of talk for many years, and good to see something happening.

Maldives

- Again only one Private ISP – Focus Comp
 - Island Country
 - Two reasonably high population area
 - VSAT connectivity
 - NO local IXes
 - Some interesting wireless experiments ☺
- Government ISP also exists – run by incumbent telephone company

Nepal -npIX

- Update
 - Migrated all 6 ISPs to BGP
 - Two ISPs facing connectivity problems
 - traffic growing at 10-15% , Some ISPs showed tremendous traffic increase
 - Average Traffic is 2.5 MBps
 - Peaked at 5 MB in June when high school results were announced
 - Plan to interconnect the two switch
 - to be done in September
 - Inclusion of non-ISPs started – University and other Agencies with own Satellite links working towards connectivity to the IX
 - <http://traffic.npIX.net.np>

Pakistan

National Information Infrastructure

Existing, Short & Mid-Term Plan **2002**
Optical Fibre Routes



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Pakistan

- PIE – Pakistan Internet Exchange is a transit selling exchange for the PTCL – the incumbent Telco.
 - ISPs were not allowed to have independent gateway but had to connect through PIE. This has been changed, but take up has been slow
 - ISPs allowed to have download only links
 - PIE also used by government to try and regulate content.
- Recently, new telecom policy –hopefully for the better
- IX formation hindered by connectivity problems and lack of knowledge
- ISPs interested in forming an IX – basic work started, hopefully something to update in the next meeting
- co-location agreement exists so should be easy to get going

Sri-Lanka : LISPA-IX

- Lanka IX
 - Longest operational IX in South Asia
 - An activity of the Sri Lanka ISP association
 - Operated by Lanka Com on behalf of the ISPs
 - Static Routes used so far
 - Plan to migrate to BGP, Cisco ISP/IXP workshop concluded last month
 - No website available
 - Traffic level at 6-7 MBps
 - Traffic stats and website to be made public soon

Thank you

- Information here collected through travel to 5 countries (AF, BD, IN, NP, LK) and others through interaction with folks in those countries
- Pakistan fiber network slide and diagram, originally presented at SANOG II meeting, 27 July by Farhan Liaquat
- Thanks to Philip Smith (Cisco), Bill Woodcock (PCH), Md. Aslam (AF), Kapil Chawla (IN), Hakikur Rahman (BD), Tee Emm (PK), Rohith Udalagama (LK)

Questions ????