



Starting an IXP: Lessons learnt

Bosnia and Herzegovina

Bosnia and Herzegovina Internet Exchange Point
BHIX

RIPE NCC Regional Meeting
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Background of Bosnia and Herzegovina

- Population: 3,840,000 (2010. estimate)
- Internet penetration: 32 % (2009. data)
- **400,000 subscribers, 1,4 million users**
- Around 40 ISPs
- Incumbent: BH Telecom
 - 120,000 broadband (ADSL) users (2010 data)
- Internet scene is growing fast
 - Flat rate Internet widely available
 - T-Com Croatia and Telecom Serbia still the largest transit providers



Starting an IXP in BiH

- All ISPs naturally try to exchange traffic with peers at no cost
- ISPs want to minimise transit costs
- Joining an IXP gives ISPs an advantage
- Lower latency, higher bandwidth
- Lower costs, higher profit
- Freeing up transit links
- Potential for local content and domestic services



Help

- Currently supported by
 - UTIC
 - Euro IX
 - Several ISPs
- Problems in communication and attracting ISPs
- Candidate for ISOC funding for November 2011
- Possible donations for equipment from government, or other IXPs
- Possible help from regulatory agency



Lessons learnt from MENOG 7, Istanbul

- IXP is an absolute standard and necessity
- Countries without an IXP rely on transit
- Keeping local content *local*
- Possibility for ISPs, domestic services, local content offers
- Opening space for e-services, web apps, online mirrors, repositories, multimedia streaming, hosting services, game servers, online TV etc.



Lessons learnt from MENOG 7, Istanbul

- Peering involves exchange of participants' **local** traffic only
- IXP should be neutral or based in/run by academic institution
- Free-of-charge ports in the beginning
- IXP's objective is peering, not profit.



Current problems

- Lack of ISP interest to join IXP
- Not realising benefits of IXP
- Attracting *key players* on the market



Current stage

- Having talks with ISPs
- Promoting the idea and benefits of IXP
- Getting support from UTIC to eventually open up an IXP in their facilities; UTIC is the ideal, neutral and independent place for IXP



ISPs involvement

- Currently 3 ISPs showed interest in joining an IXP and support the idea
- Google willing to join BHIX with its Google Cache Content servers as soon as the BHIX opens



Plans for future

- Bring the idea to finalisation
- Open up an IXP
- Increase the amount of local traffic and domestic content
- Attract key players and incumbent provider
- Improve Internet in Bosnia and Herzegovina



Summary

- IXPs are absolute necessity, regardless of traffic levels
- IXPs save money, grow Internet infrastructure & business
- Standard in almost every country
- Viability and interest for IXP in BiH needs to grow
- Opening an IXP will greatly impact and benefit local Internet industry

Questions?

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Thank you!

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