IXP.mk - Progress Update on the first IXP in Macedonia

Past, Present, Future…

Vladislav Bidikov, FCSE, UKIM, Macedonia

Some history

- Initial idea started before RIPE SEE4 (Belgrade 2015)
- December 2016 – FCSE starts the project "Research platform (testbed) for high availability internet connections", - several year project for cooperation and research of possible ways to improve connectivity to between major ISP and University networks
- December 2016 – First meeting with help from RIPE/ISOC for getting key players on board, main focus IPV6
- March 2017-December 2017 – Start the initiative, analyze the market

RIPE

Initial idea

- Have a neutral entity to host/run the IXP (Faculty of Computer science and Education)
- Start with few small/medium ISP and Universities
- Education to management in order to get them interested and join the IXP
- Run it as a non-profit IXP (as long as the project has resources from the Faculty) and design a model to make it self sustainable
- Create a non-formal community around the project which will then become NOG.mk
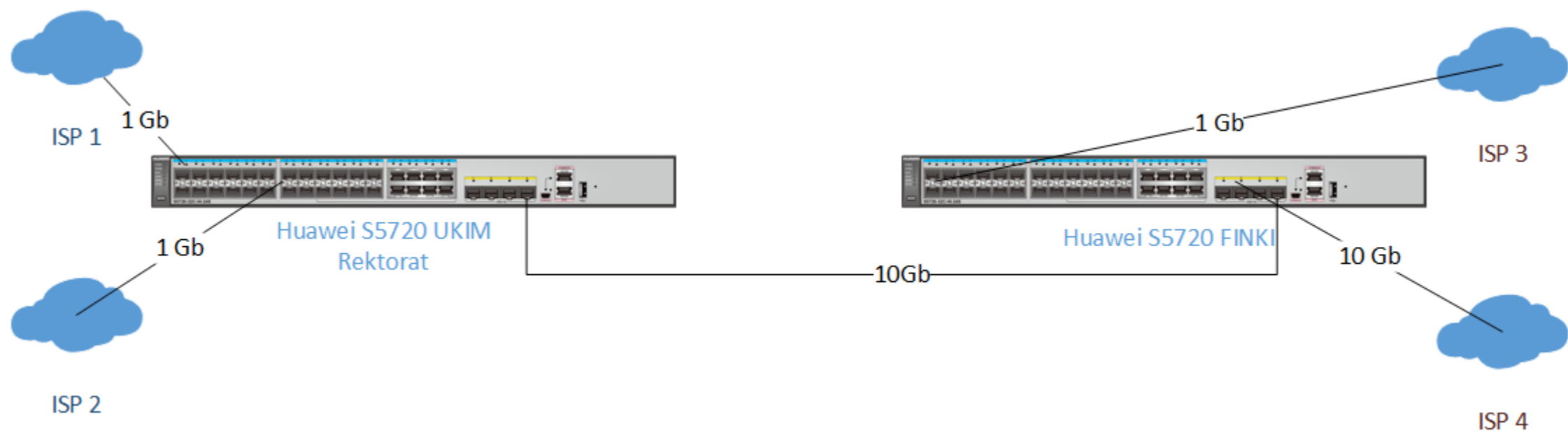
Idea is still valid: 4 years now :)

RIPE

The idea (part 2)

- Improve the University Fiber network (upgrade to 10G capacity) – DONE…
- Install RIPE Atlas Anchor @ FCSE - DONE…
- Have initial plan for the infrastructure of the IXP – DONE …
- Have several key players on board
  - 2 ISPs
  - 2 National systems (Govermental) systems
  - 1 University
- Sign MoU (when needed) with key players in order to join the project – DONE …

RIPE

ISP 1

1 Gb

1 Gb

Huawei S5720 UKIM
Rektorat

ISP 2

10Gb

Huawei S5720 FINKI

1 Gb

ISP 3

10 Gb

ISP 4

RIPE

~~The idea (part 3)~~ Status update

- Initial Huawei switches online and configured (10G interconnection)
- IXP Manager installed
- Got AS + IP space for IXP.mk – Thanks to Arnold & DE-CIX
- 2 Route Servers online
- IXP.mk is considered live from 09.07.2018
- Visited to EURO-IX @ Venice via Fellowship (meet quite a lot of new friends)
- 4 Peers – 2 on the way
- Content players already on the way (with some problems)
- DNS instances on the way (Waiting for paper documents to arrive in Verisign)
- Google Cache Servers – need to decide best option
- Hardware donation for 1/10/40Gb switches in progress from ISOC (awaiting the great news any day now)

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The future (2019)

- The Faculty (FCSE) has the staff (experts, engineers) for the project – and is committed to support the project until 2021
- Increase local fiber coverage to foster better connections to the IXP
- Need to find strategical partner for international fiber connectivity – this prevents several Content providers & Tier 1 to come
- Big companies can see the benefit and help with donations – anyone having dark fiber from Skopje to Sofia in the audience ☺
- 40G interconnection between the main locations – looking for possible donations since optics are almost impossible to procure over tender procedures
- Extension of PoP locations (in order to reach more potential users) – we see possible third location where we need to collocate IXP.mk switch

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The (long) future

- Cooperation with other projects: GEANT, RIPE, …
- Cooperation with the industry: Big transit providers, hardware vendors, Content providers …
- Finally form the NOG.mk as a independent project (probably again under the University umbrella)
- Transfer from IXP initiative to a full IXP (legal procedures) in the next 3-5 years and make IXP.mk self sustainable

RIPE

Connect with us – www.ixp.mk

Questions?

vladislav.bidikov@finki.ukim.mk

@bidikov

RIPE