# The Launch of Bosnia and Herzegovina Neutral Internet Exchange (BHNIX)

## By Enes Halilovic, BHNIX

#### How it all started: An overview

The official launch of the first Internet exchange point (IXP) in Bosnia and Herzegovina, the BHNIX, took place 27 November 2019, at the University of Sarajevo Rectorate. Since Bosnia and Herzegovina was the only European country without an IXP, a group of professionals from relevant fields and enthusiasts started talks about establishing one. The initial talks started at the national Internet governance forum (IGF) in 2017. Upon consulting several national Internet Service Providers (ISPs), we decided to start working on the first ever national IXP. The next meeting with the dominant ISPs in the country was co-organised with the Ministry of Communications and Transport of Bosnia and Herzegovina, in January 2018. The Memorandum of Understanding (MoU) between University of Sarajevo and three ISPs was signed in April 2018.



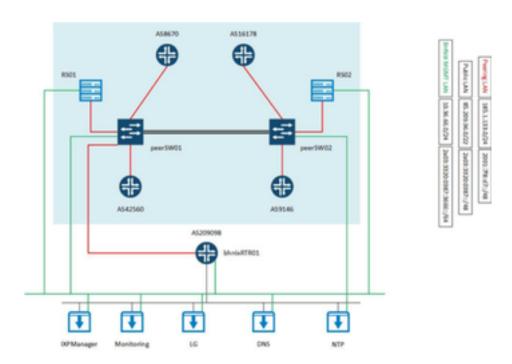
What establishing the **BHNIX** means for the country:

Bosnia and Herzegovina is no longer the last European country without IXP

- Providing local exchange of Internet traffic improves national Internet ecosystem
- Organizing functional technical community
- Acquiring community knowledge and experiences
- Potential for capacity building with relevant stakeholders
- Promoting technical research and excellence in the areas of networking and Internet technologies

The initial platform for the future development of this project has been created together with our local partners BHTelecom, Logosoft, and Telemach, recognized as leaders in these fields.

Technically, BHNIX is implemented as a Layer 2 Internet Exchange located in Sarajevo. Its networking equipment consists of a switching platform with a combination of 1G and 10G ports. The BIRD-based route servers are used for managing peering relationships. IXP itself is managed through the IXP Manager, an administrative portal and access system for BHNIX members.



#### BHNIX activities in the near future

We see BHNIX as a strong basis for establishing and developing local IT community and a provider of hosting services for the "common good". Given that the current number of affiliated members is the result of a

predefined initial project goal, we expect the number to increase in the coming period.

Hosting anycast DNS root servers, secondary ccTLD servers, as well as NTP servers will certainly be one of BHNIX's top priorities.

BHNIX plans to engage the local community through capacity building meetings, workshops, and other practical educational activities.

We are supporting the establishment and development of local internet technical community in the form of local Network Operator Group (NOG). The key goals of this community are to provide collaborative space, share information and operational experience, and to organize workshops, meetings and conferences.



## With the help and support of... Thank you note

From the start, we have been encouraged by the continued support of numerous organizations and individuals, which helped the team solve challenges.

We would like to highlight the valuable support to <u>the Internet Society</u> (ISOC), also the donor of one of the peering switches. Kind thank you goes to Mr Jan Žorž (ISOC) for his selfless dedication and helpful advice throughout.

Special appreciation for the dedication, helpful professional suggestions, and continuous encouragement goes also to Packet Clearing House (PCH),

Serbian Open Exchange (SOX), Arnold Nipper from PeeringDB, and Hisham Ibrahim from RIPE NCC, for which we are grateful.

Last but not the least, thank you to the <u>EURO-IX Association</u> and its representatives for the opportunity to attend the 35th EURO-IX Forum held in Zaandam (Netherlands).

### **About UTIC**

The <u>University Tele-Informatics Center (UTIC)</u> was established in 1996, becoming the first Internet access provider (ISP) in Bosnia and Herzegovina. UTIC has also been assigned a significant role of the national registry of <u>.BA domain</u>, a key resource for the development of the Internet in Bosnia and Herzegovina. Within the University of Sarajevo (UNSA), UTIC is the leading institution in the field of information and communication technologies (ICT).

UTIC sees itself as a neutral entity with enough knowledge, experience and ability to initiate and lead the establishing of the first IXP in Bosnia and Herzegovina, BHNIX, and common good services.