



**SRCE**

**UNIVERSITY OF ZAGREB  
UNIVERSITY COMPUTING CENTRE**

**CIX**

**CROATIAN INTERNET EXCHANGE**

**PEERING DAYS 2019**



# University of Zagreb – beginning 350. academic year

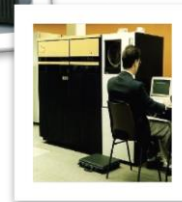


- officially founded at 23 September 1669 by King Leopold I Habsburg who issued a decree granting the status and privileges of a university to the Jesuit Academy of the Royal Free City of Zagreb
- Today:
  - a strongly research-oriented institution, contributing with over 50 percent to the total research output of the country
  - 34 faculties and academies in 3 cities
  - 3 campuses
  - 70.000+ students
  - 12.500+ student graduations per year
  - 300-500 PhD promotions per year



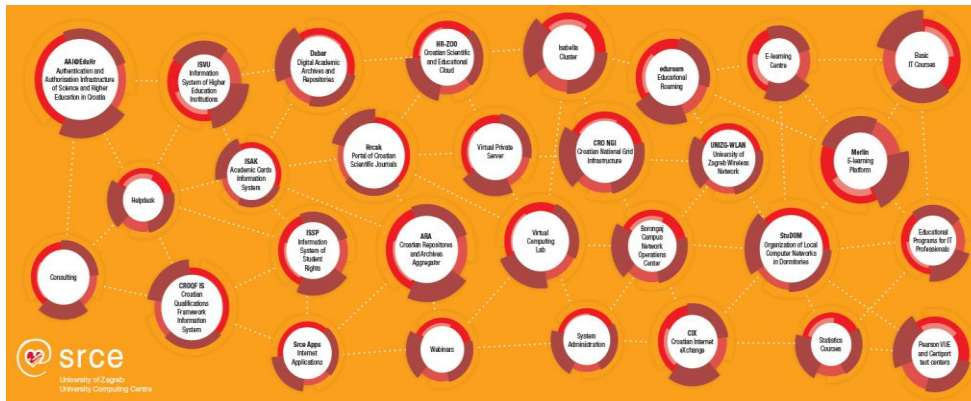
# Some facts from the history of SRCE...

- 1972 - First training courses for end-users at temporary UNIVAC 1106 System
- 1974 - UNIVAC 1100 - the biggest & fastest computer "in this part of Europe" and new building for SRCE
- **1981 - SIZIF - System of Scientific Information of Croatia**
- **1984 - Information System for Sarajevo'84 Olympic Games**
- **1987 - First supercomputer in Srce (CONVEX)**
- 1989 - First UNIX based production servers
- 1990 - BITNET connection
- **1991 - Start of the CARNet (Croatian Academic and Reserach Network) pro**
- **1992 - First Internet connection**
- 1993 - Croatian Internet Top Level Domain - .hr
- 1995 - First ATM (155 Mbps) connection within academic network
- **2000 - Croatian Internet eXchange (CIX)**
- 2002 - GÉANT Point of Presence (PoP)
- **2002 – HPC cluster Isabella established**
- 2003 - National grid project - CRO-GRID started
- 2004 - GigaCARNet network up & running
- **2005 - National grid infrastructure CRO NGI up & running**
- **2006 - National authentication and authorization infrastructure AAI@EduHr up & running**
- **2007 - University e-learning strategy and E-learning center**
- **2011 - First computing and data infrastructure services "from the cloud"**
- 2015 – New DC SRCE2 - Data Center at Borongaj Campus
- **2015 - Dabar – national infrastructure of Digital Academic Archives and Repositories**
- 2015 - edu4IT – New education program and certification of IT professionals in A&R



# SRCE Today

- e-infrastructure – reliable services 24/365 + access to state-of-the-art ICT
- education – enabling users to use ICT & support usage of ICT in education and research
- knowledge, expertise, support, cooperation



- ◀ ~ 50 services
- 135 employees
- 9 org.units
- 2 data centers
- 3 locations in Zagreb



# CIX – Croatian Internet eXchange

- Founded in 2000
- Neutral, not-for-profit
- Located in Zagreb (distributed on two locations)
- Run by SRCE – University computing centre, University of Zagreb
- 34 members

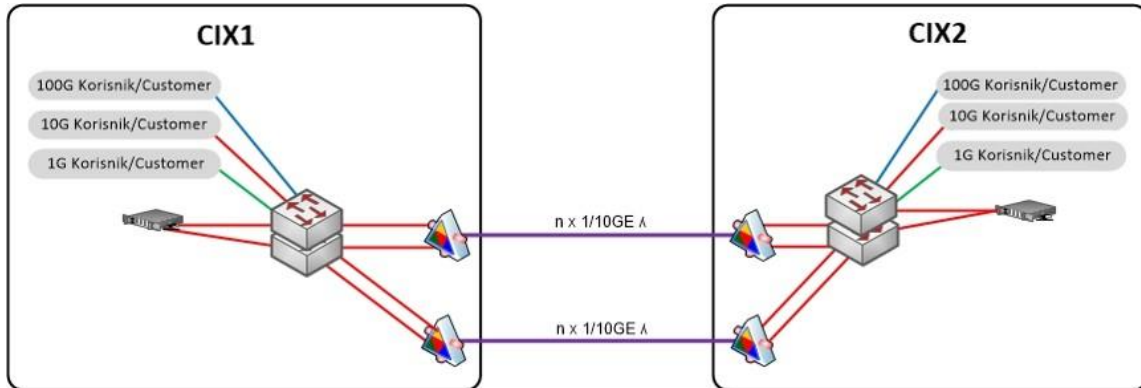
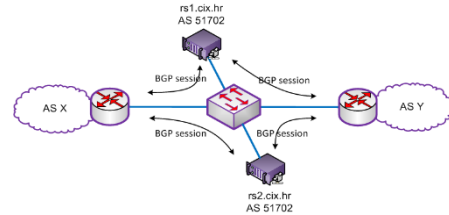


## CIX - details

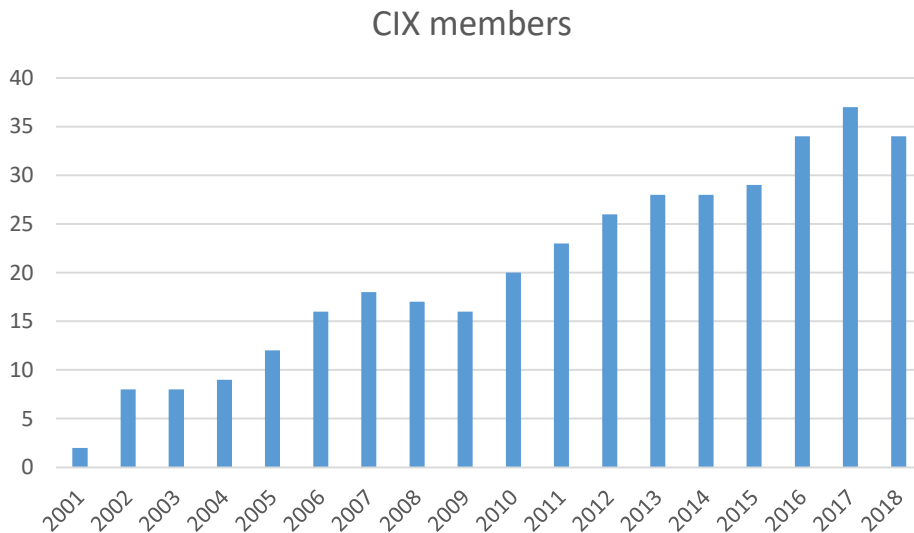
- Equipment : Extreme Networks, Cube Optics
- Port types : 1GE, 10GE, 100GE
- Route Servers (OpenBGPD)
- IXP manager



# CIX infrastructure



# CIX in numbers



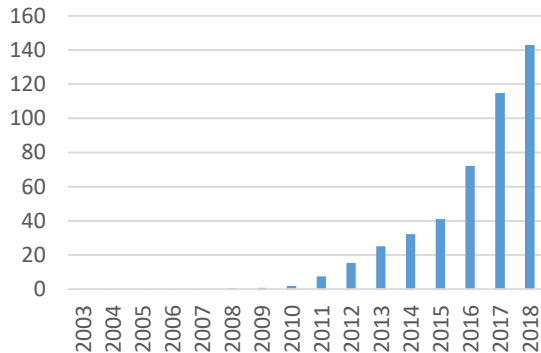
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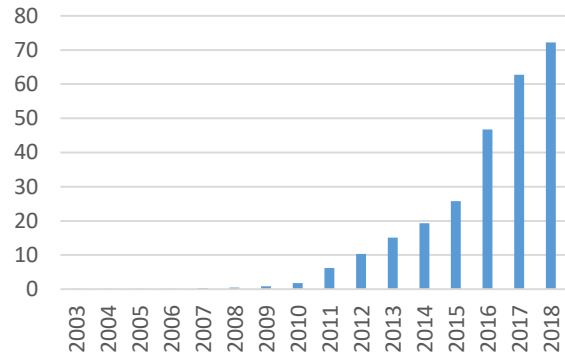


# CIX in numbers

Transferred data [PB]



Peak traffic [Gbit/s]

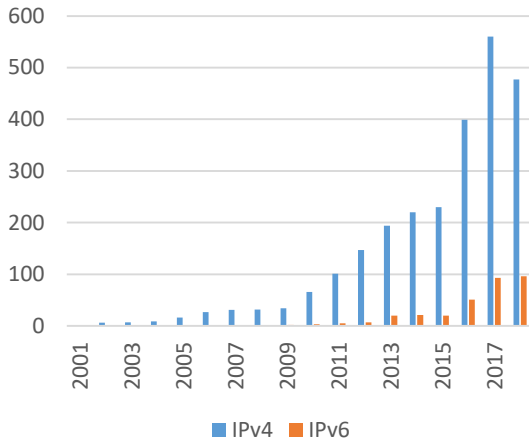


<https://www.cix.hr/en/about-cix/traffic-statistics/history>

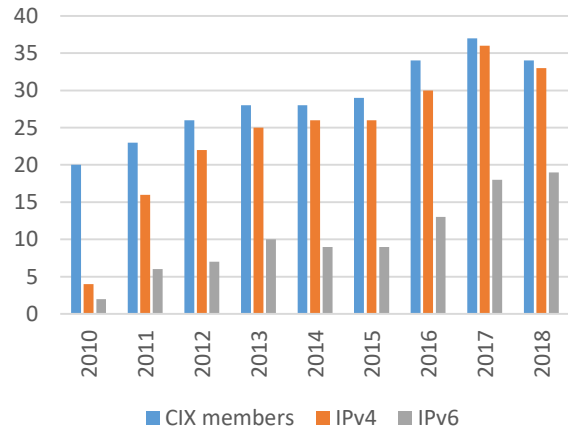


# CIX in numbers

## Total peerings



## Route server peerings



<https://www.cix.hr/en/about-cix/traffic-statistics/history>





**Questions ?**





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