

CIX

RIPE SEE 4

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15 years of CIX



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Agenda

- Internet facts about Croatia
- Motivation
- Founding of CIX
- Last 15 years of CIX
- Challenges

Some Facts (mostly Internet) about HR

- Population ~4,284,889 (2011 census)
- Estimated 63% of population is using Internet (2012)
- Broadband Internet access (HAKOM Q4 2014):
 - Fixed (xDSL) 1.340.180 subscriptions
 - Mobile 384.999 (M2M) subscriptions (2.539.270 mobile phones)
 - Density 31,28%
- HAKOM – Croatian Regulatory Agency (established in 2008), former HAT (from 2003)
- From 1st Jul 2013 27th EU Member State

Motivation

In 2000

- SRCE building is a major National Research and Education Network (CARNet) exchange point (star topology) + international contact point; telco exchange point
- The following Internet entities were active or 'just to become':
 - CARNet (NREN)
 - HT d.d. (Croatian telecom, incumbent)
 - ISKON Internet d.o.o. (newcomer)
 - VIP-NET GSM d.o.o. (newcomer)
 - HRT (Croatian radio & TV)
- All 5 were present with telco capacities in SRCE building...

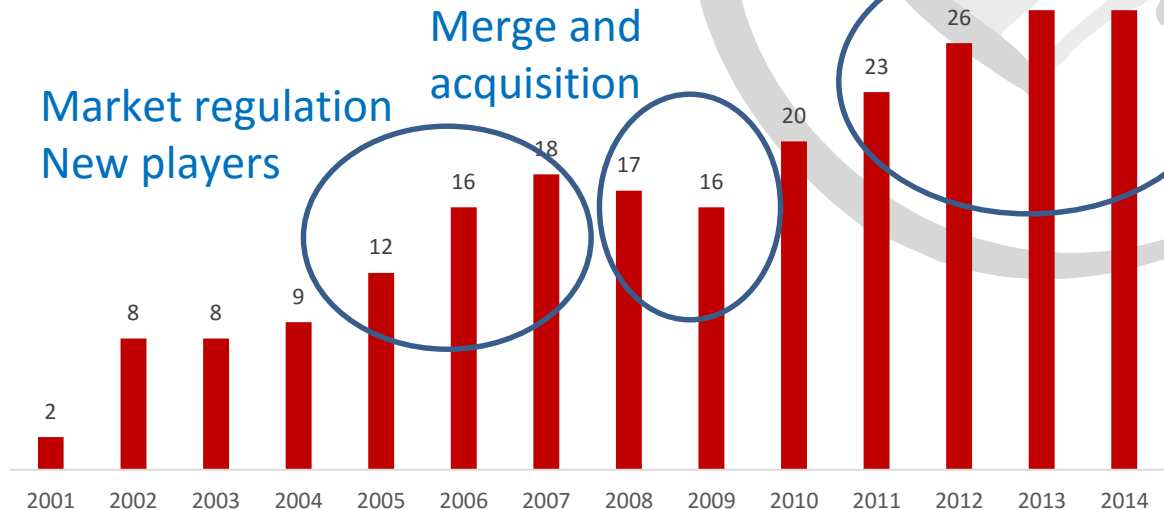
Founding of CIX

- ❖ Rules and regulation signed by 5 ISPs in 2000 – 15 anniversary
- ❖ Initiated by academic community
- ❖ Hosted and operated by SRCE
- ❖ Neutral and not-for-profit
- ❖ Available to all ISPs in Republic of Croatia, equally for commercial and non-commercial or private networks
- ❖ Considering members as partners; CIX policy, CIX Council, Presiding member in the CIX Council

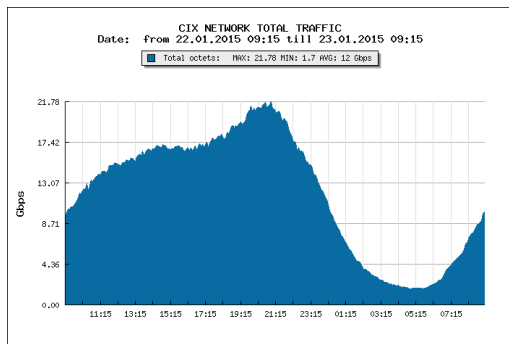
CIX members

International members (4 new), CDN

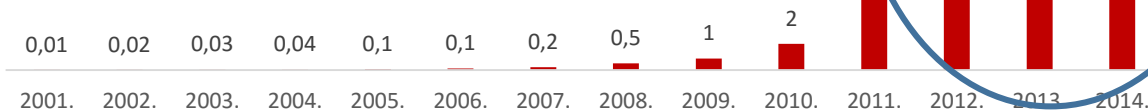
Local members (lot of ISP, 1 gov, 1 edu, 2 HR CDN)



CIX traffic (PB)

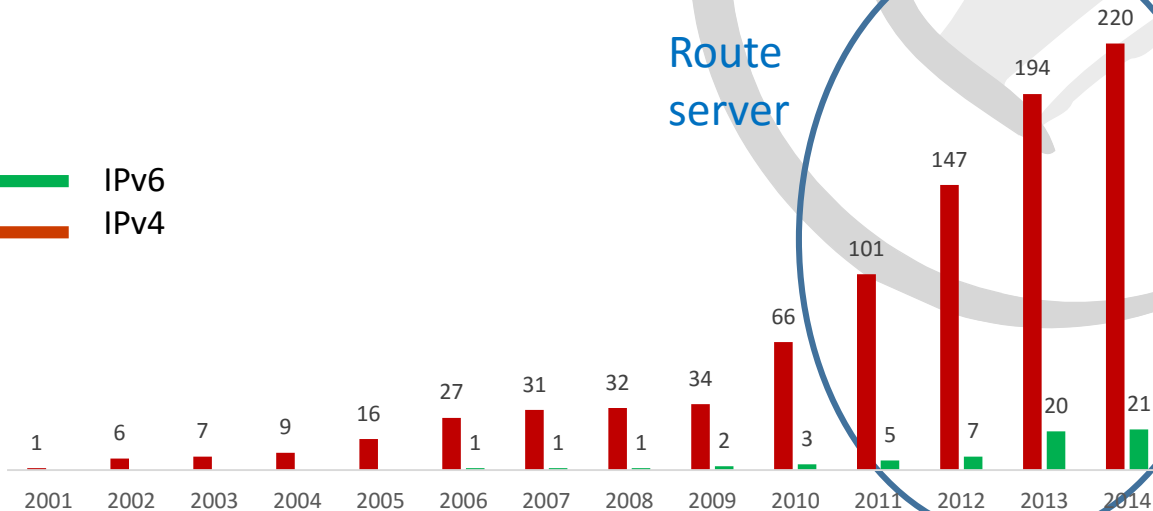


New members (4 international)
More bw => video
CDNs



CIX Peerings

IPv6
IPv4



Challenges

- Membership:
 - Expenditure in size and importance
 - Different size issues (peering?)
- Topology:
 - One location or distributed ?
- Content:
 - Attraction of major Croatian content providers (HRT just left? Policy?)
 - World CDNs (lack of business case, legal problems, copyright).
- Services :
 - 24/7 ?

Thank you !

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www.srce.hr

www.cix.hr



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www.srce.unizg.hr/otvoreni-pristup



The 'srce' logo, featuring a stylized heart icon and the text 'srce' in a bold, black, sans-serif font, with 'otvoreni pristup' written in a smaller, black, sans-serif font below it.