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# Route servers: an update on Euro-IX activity

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### Brief background

- Most Euro-IX members that offer route servers do so using Quagga
- As peering communities at IXPs grow larger, route servers and multi-lateral peering (MLP) become more & more important
- Quagga is not reliable, especially under load







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## Options

- Replace Quagga with something else:
  - Bird? (developed at NIX-CZ)
  - OpenBGPd? (used at PL-IX & under consideration at AMS-IX
  - There don't seem to be many other options
- Improve Quagga, either:
  - Generally?
  - Specifically for IXPs?
- 'Protect' whatever route server is used?
  - Has some merit, but undermined if the route server is poor
- Write a new routing daemon from scratch?
  - Last resort option, costly/time-consuming



Euro-IX route

server activity

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## A role for Euro-IX?

#### Given that:

- 1. We are the largest organisation of IXPs
- 2. IXPs have the greatest dependency on Quagga (or alternatives) for MLP
- 3. Part of our purpose is to act for the good of the IXP community
- 4. Centrally, or via members, we can raise funds for relevant development projects

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#### We decided to act!





### So what have we done?

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- 1. Established a route server database
- 2. Formed a virtual working group
- 3. Collected funding commitments
- 4. Published a request for proposals
- 5. Evaluated the responses to our RFP
- 6. Accepted and commenced funding a Quagga improvement project
- 7. Resolved that testing is a key issue...
- 8. Considered funding a further (non-Quagga) project



#### Route server database

Browse by Daemon

My Route Server

Euro-IX Route Server Database

Browse by IXP

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Recent Updates

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Recent Updates					
IXP	RS at IXP?	<u>RS name</u>	In use?	<u>Daemon</u>	Version
SwissIX	Yes	rs2.swissix.ch	Yes	OpenBGPd	CVS
SwissIX	Yes	rs1.swissix.ch	Yes	OpenBGPd	cvs
DE-CIX	Yes	rs2.de-cix.net	Yes	Quagga	0.98.6
NIX.CZ	Yes	rs1.nix.cz	Yes	Quagga	0.99.10 + cv:
LONAP	Yes	rs1.lonap.net	Yes	OpenBGPd	head



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## The projects (1)

- Quagga improvement project is mainstream development
  - <u>Not</u> a fork for IXPs
- Currently doing profiling
  - But this has emphasised the need for a testing platform
    - Identified lots of scope for code improvement
      - (which will be the next phase)



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## The projects (2)

- Good proposal received for a completely new route server
  - To be adapted from current, related codebase
- Agreed in principle to fund proof of concept stage
  - Just sorting out how we evaluate this
  - Working title is BOGART

## Euro-IX

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# This is now the key area – Especially performance testing

Testing

- We have had some great contributions and offers
  - Special thanks to AMS-IX for testing stuff
- Current issue is how to tie all this together....





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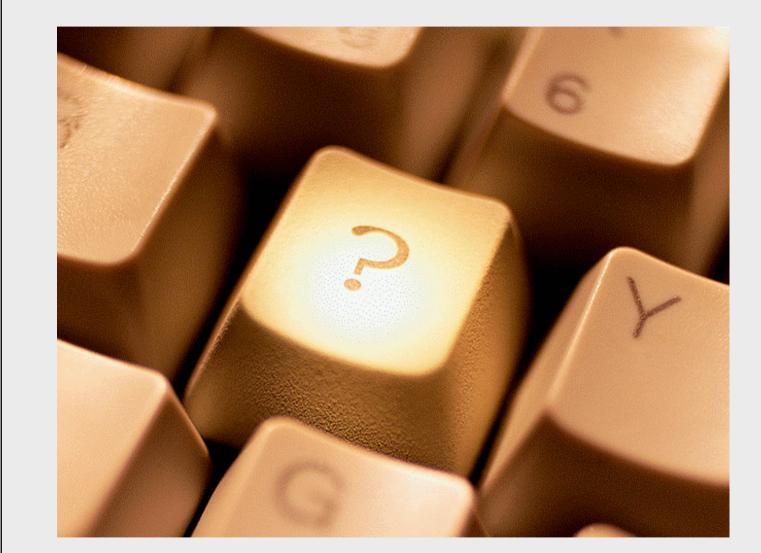
### Where we hope to be

4 IXP route server candidates:

- An improved Quagga
- Bird
- OpenBGPd
- BOGART
- All fit for MLP deployment



#### Questions?



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