



**Euro-IX  
route  
server  
activity  
report**

**RIPE59**

**October  
2009**



# Route servers: an update on Euro-IX activity

**Nick Hilliard  
INEX & RS-VWG**



**Euro-IX  
route  
server  
activity  
report**

**RIPE59**

**October  
2009**



# 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





**Euro-IX  
route  
server  
activity  
report**

**RIPE59**

**October  
2009**



# 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  
report**

**RIPE59**

**October  
2009**



# 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

We decided to act!



**Euro-IX  
route  
server  
activity  
report**

**RIPE59**

**October  
2009**



# So what have we done?

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



**Euro-IX  
route  
server  
activity  
report**

**RIPE59**

**October  
2009**



# Route server database

## Euro-IX Route Server Database

**Recent Updates**

**Browse by IXP**

**Browse by Daemon**

**My Route Server**

### Recent Updates

<u>IXP</u>	<u>RS at IXP?</u>	<u>RS name</u>	<u>In use?</u>	<u>Daemon</u>	<u>Version</u>
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



**Euro-IX  
route  
server  
activity  
report**

**RIPE59**

**October  
2009**



# The projects (1)

- Quagga improvement project is mainstream development
  - **Not** 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)



**Euro-IX  
route  
server  
activity  
report**

**RIPE59**

**October  
2009**



# 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  
route  
server  
activity  
report**

**RIPE59**

**October  
2009**



# Testing

- This is now the key area
  - Especially performance 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....



**Euro-IX  
route  
server  
activity  
report**

**RIPE59**

**October  
2009**



# Where we hope to be

4 IXP route server candidates:

- An improved Quagga
- Bird
- OpenBGPd
- BOGART

All fit for MLP deployment

~~Euro-IX~~

**Euro-IX  
route  
server  
activity  
report**

**RIPE59**

**October  
2009**

~~Euro-IX~~

# Questions?

