



IXP-Jedi (lightning talk)

Measuring how many
local paths stay local

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RIPE
NCC

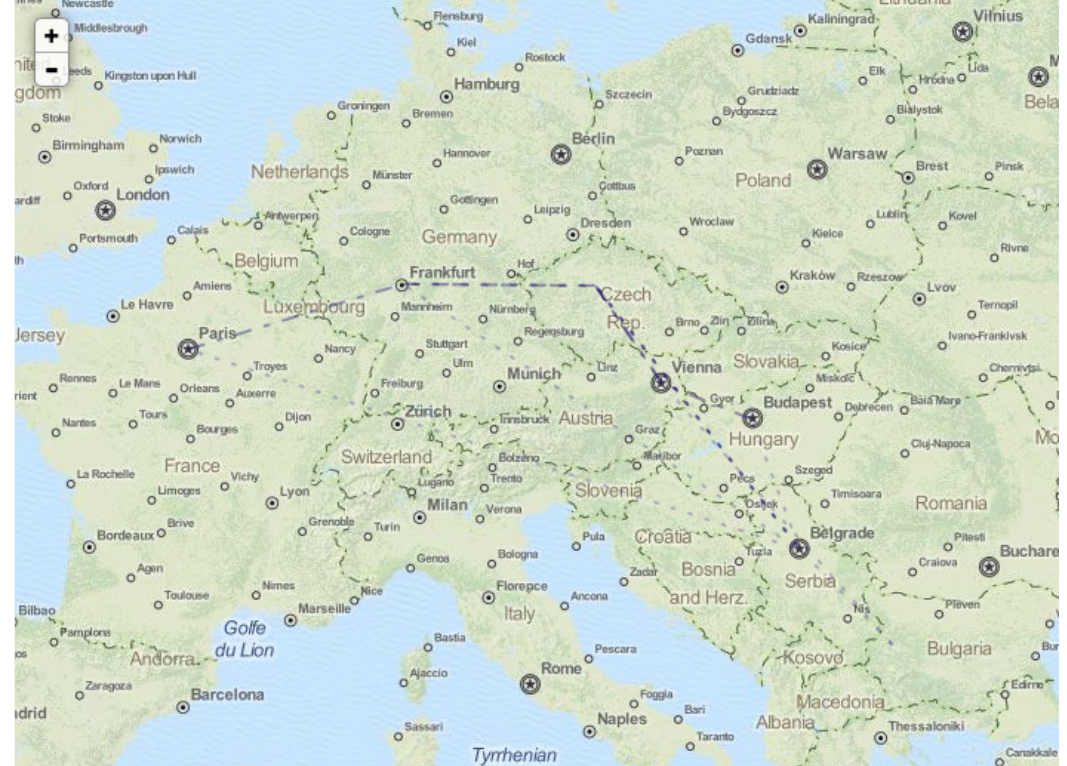
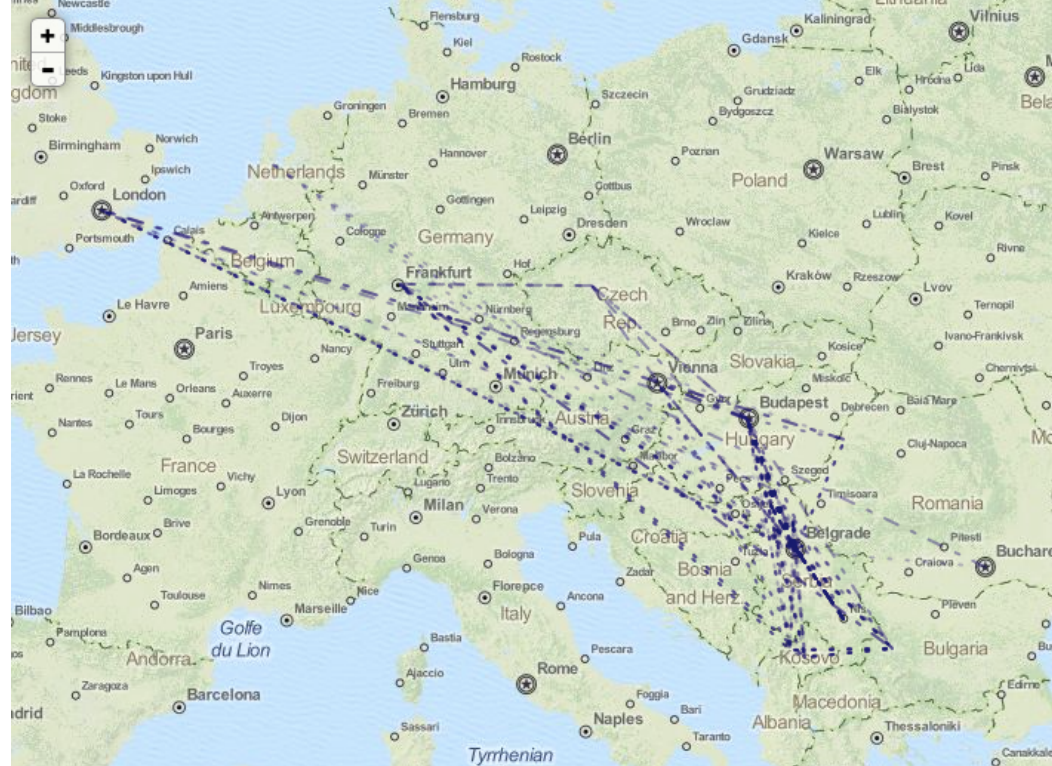
- IXP-Jedi tool & concept by Emile Aben:
 - <https://labs.ripe.net/Members/emileaben/measuring-ixps-with-ripe-atlas>
- Intro & methodology
 - example of the host country of SEE4
- Map
- Grid
 - drill down to details;
 - interactive
- Other countries in SEE4 region
- Actions

- Method:
 - Traceroute measurements using RIPE Atlas
 - Identify ASNs in the country, and IXP LAN
 - Mesh: from all (*) country probes to each other
 - Hops geolocated using “OpenIPMap” database
- Example for Serbia:
 - <http://sg-pub.ripe.net/emile/ixp-country-jedi/RS-2015-04/geopath/>
- Benefits:
 - insight: how much traffic stays within the country?
 - where do the external paths go?
 - peering & traffic optimization

Difference between IPv4 & IPv6 paths

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These maps show the IPv4 paths (left) and IPv6 paths (right) seen in traceroutes. Indirect links in traceroutes (ie. with hops inbetween without answer, or no geoloc) are shown with dotted lines, direct links with lines with long-short alternating pattern.



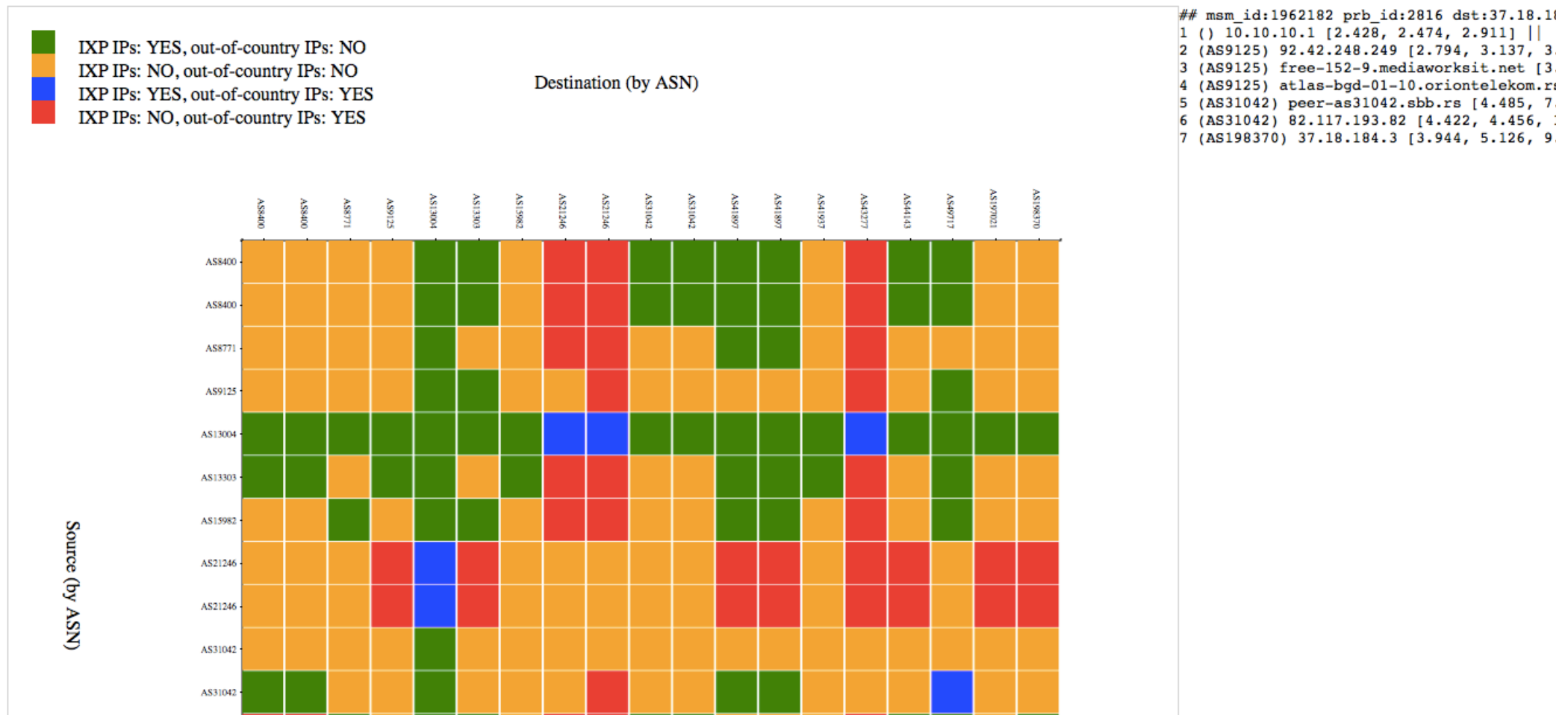
- Snapshot (this week!) of the paths that do, or do not, stay local

Paths going via an IXP?

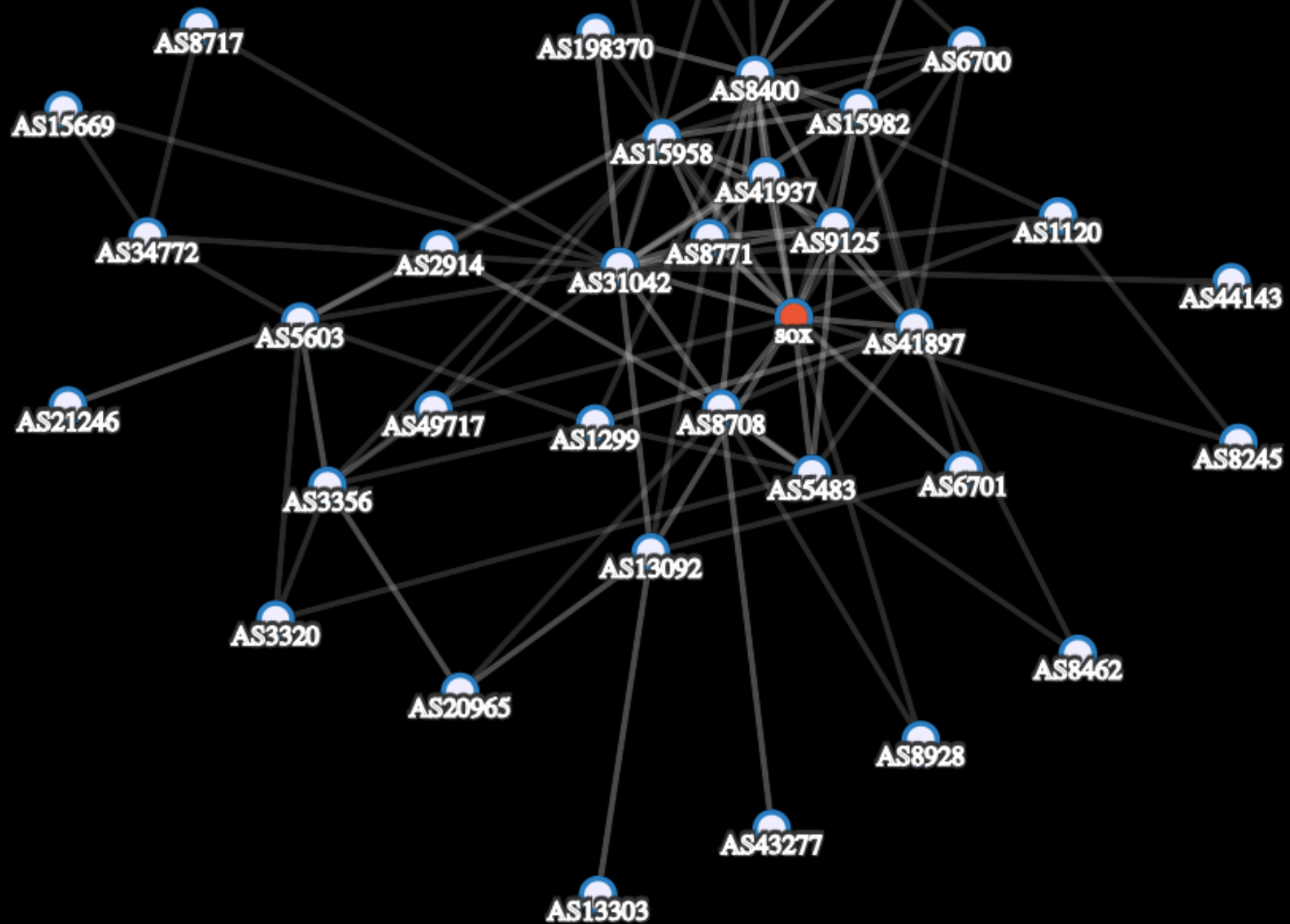
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- Interactive tool!

- <http://sg-pub.ripe.net/emile/ixp-country-jedi/RS-2015-04/ixpcountry/>



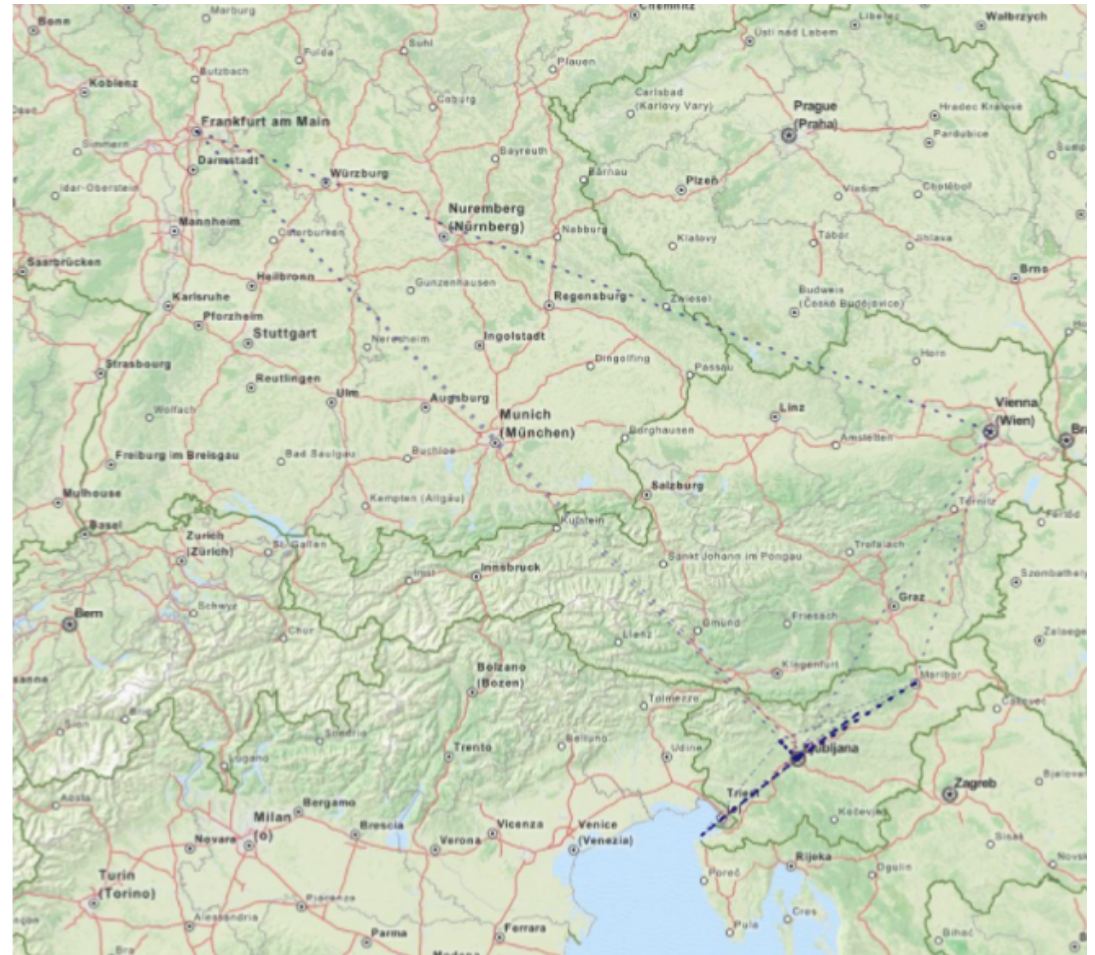
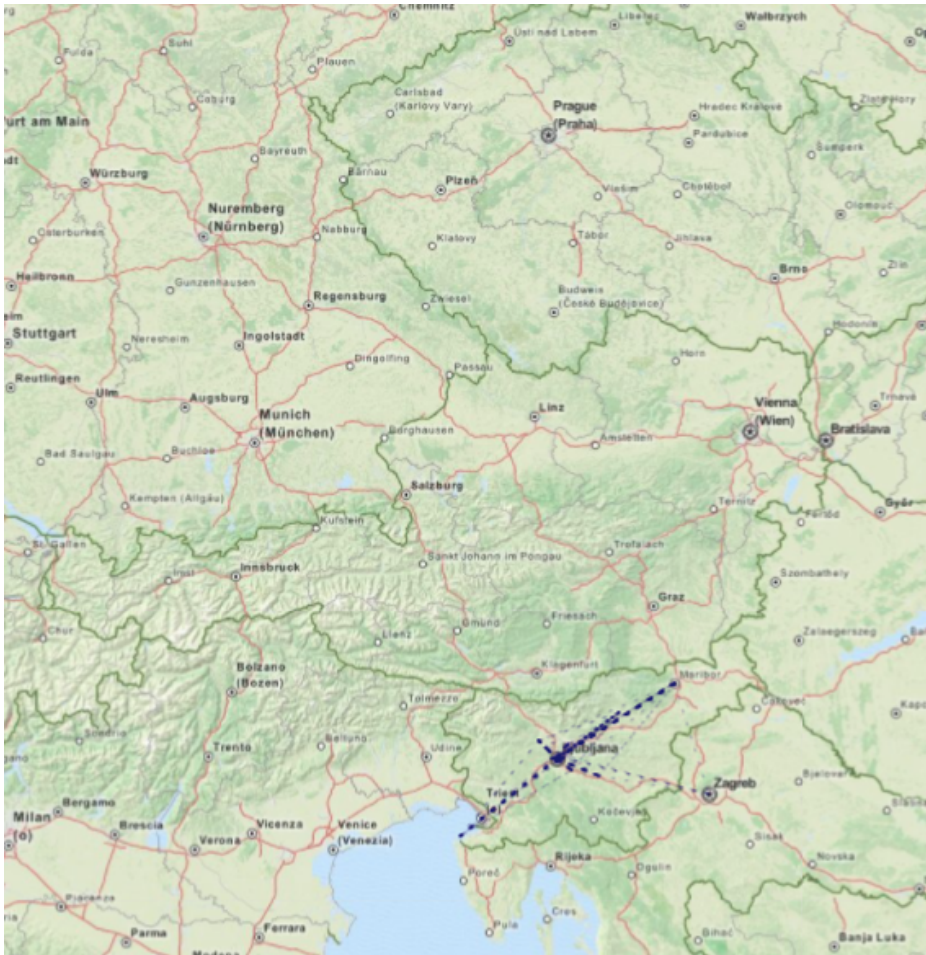
- By using this interactive tool you can...
 - <http://sg-pub.ripe.net/emile/ixp-country-jedi/RS-2015-04/ixpcountry/>
- ... select the path that is going out of country
 - talk to your upstream(s)
- ... select the path that is not going via a local IXP
 - make a new peering agreement
- If you spot hops without correct geolocation in the traceroute, contribute to the OpenIPMap!
 - <https://marmot.ripe.net/openipmap/>
 - <https://github.com/RIPE-Atlas-Community/openipmap>



Other countries in SEE region

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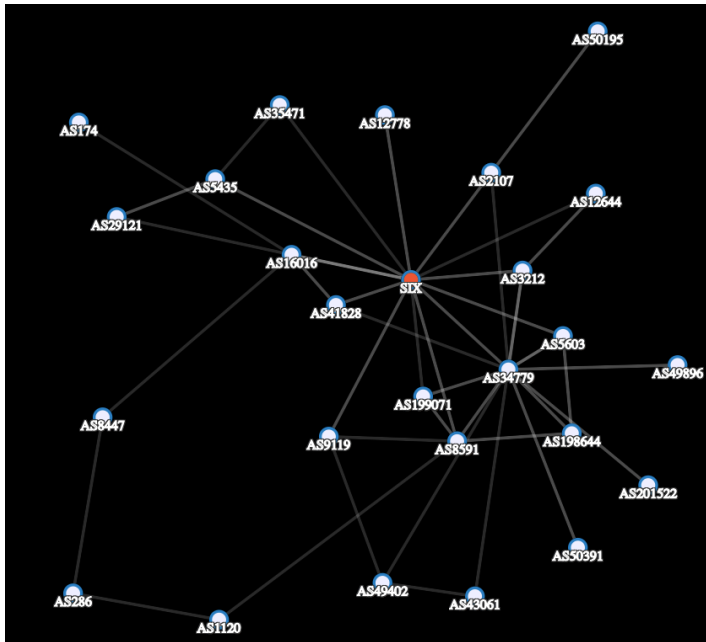
- <http://sg-pub.ripe.net/emile/ixp-country-jedi/SI-2015-04/geopath/>
- [s/SI/{RO, BG, HR, BA, ME, AL, GR}/](#)



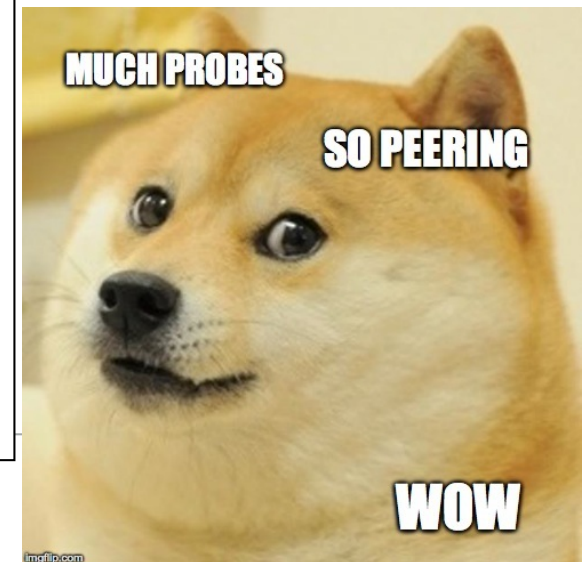
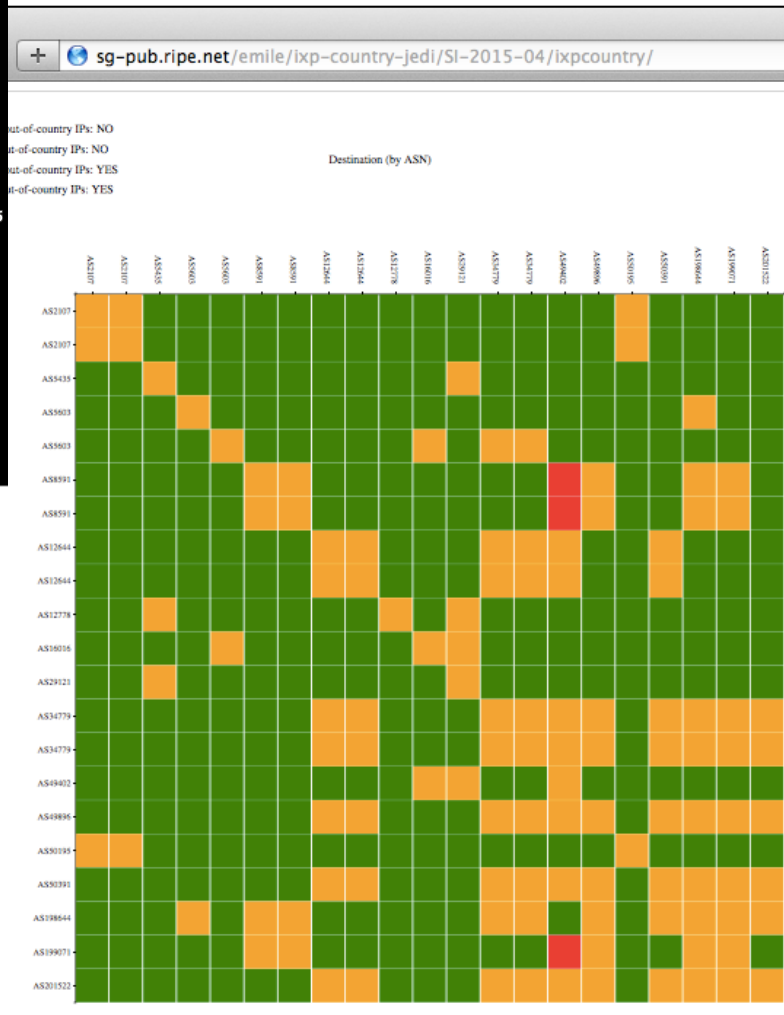
Slovenia: much probes, so peering, wow!

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- <http://sg-pub.ripe.net/emile/ixp-country-jedi/SI-2015-04/ixpcountry/>

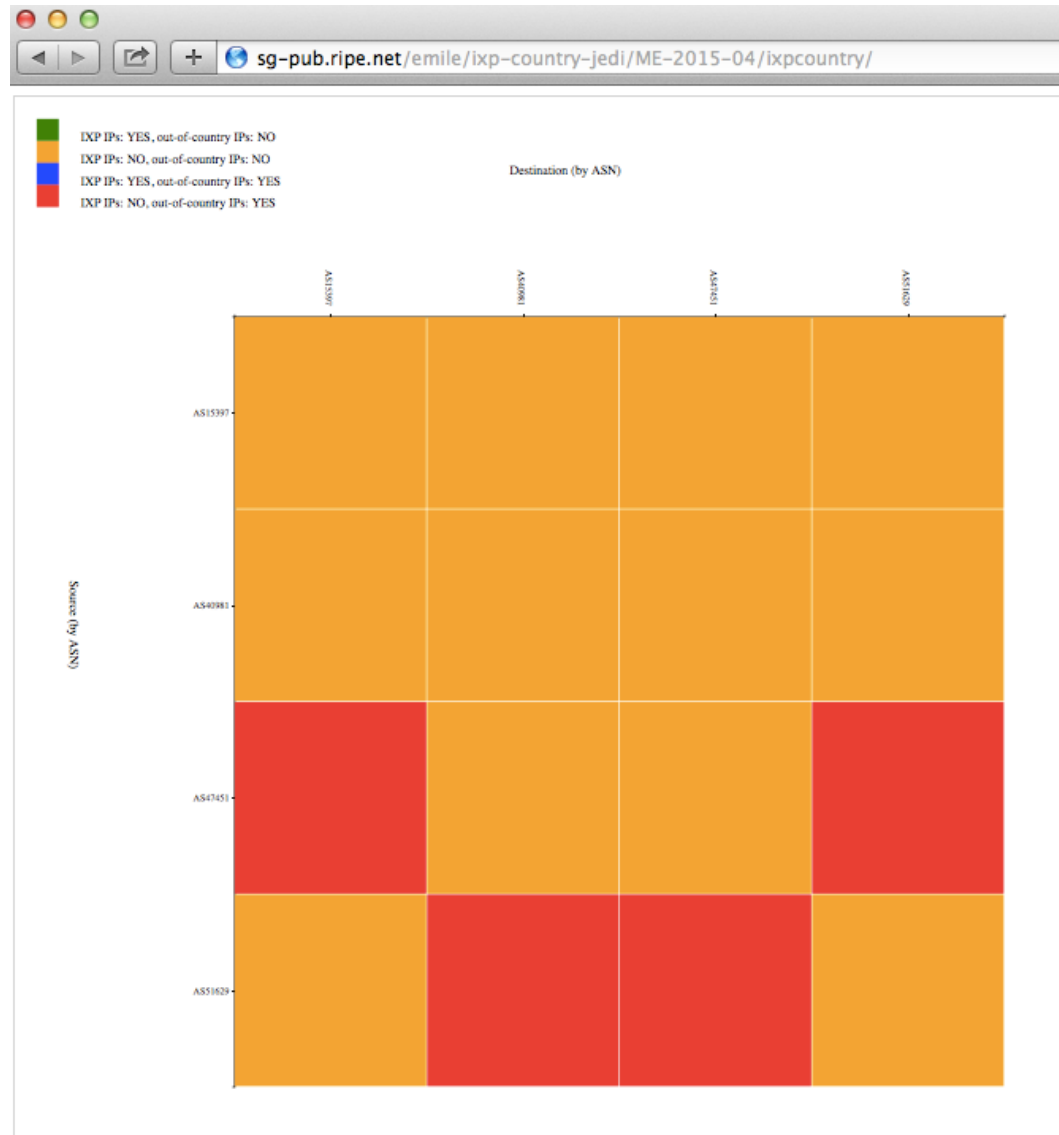


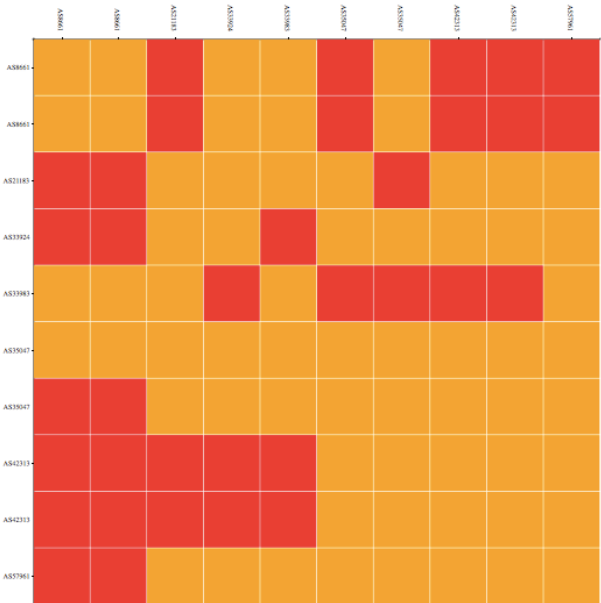
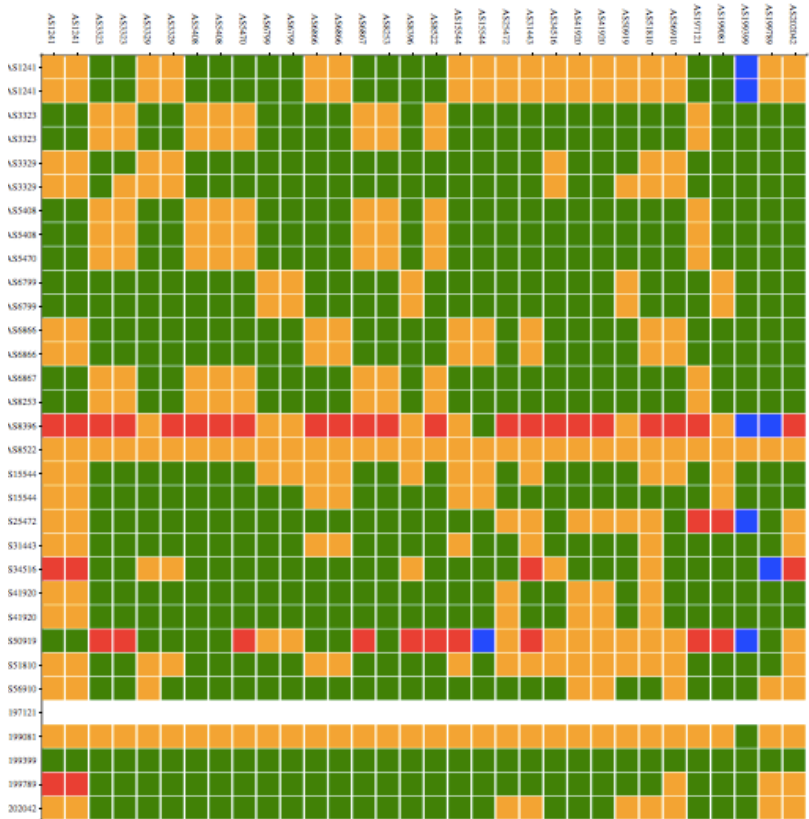
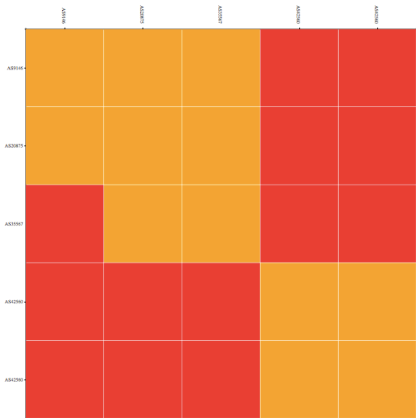
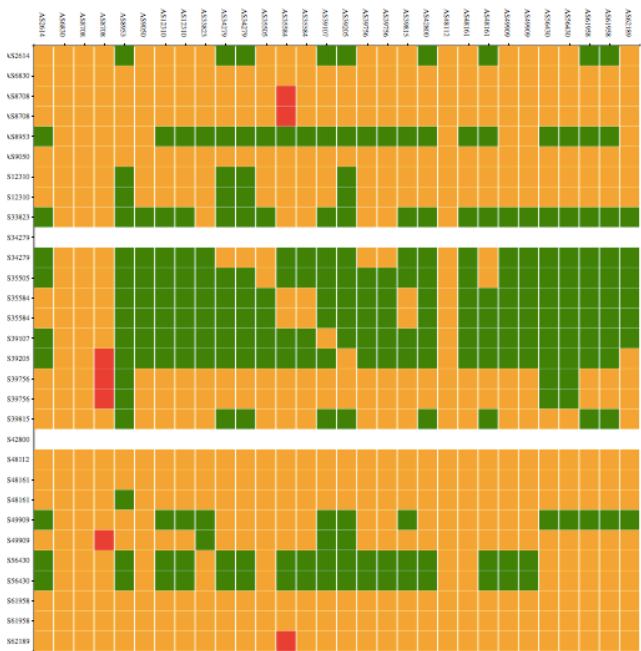
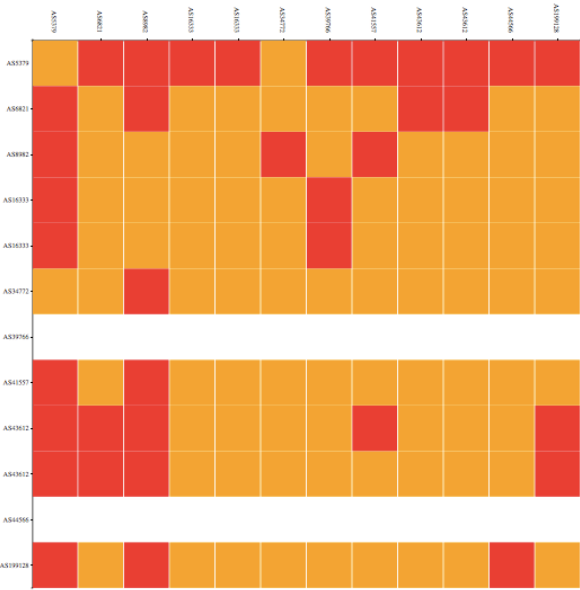
Source (by ASN)



Montenegro: no IXP (yet), 4 probes :(

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- Use this tool to optimize your ASN's routing!
 - Check out the URLs
 - Find your ASN in the mesh
 - Find the person from another ASN
 - Take them out for tea :)
- If your ASN is not on the graph, apply for RIPE Atlas probe
- Add more probes to your country to increase “resolution”
- Contribute to OpenIPMap to improve infrastructure geolocation