



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

Results of the IXP-Tools Code-Sprint (mini-Hackathon)

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Goals of the RIPE NCC Hackathons



- bring together operators, researchers, designers, coders
- combine creative skills
 - .. & get feedback for RIPE NCC
- contribute useful tools for operators
- make new connections
- have fun!





Previous hackathons

- labs.ripe.net/hackathons
 - RIPE Atlas [DataViz](#) (March 2015)
 - RIPE Atlas [Tools for operators](#) (October 2015)
 - RIPE Atlas [Interfaces](#) (April 2016)
 - [IXP-tools](#) (October 2016)
 - IXP-tools [Code-Sprint](#) (April 2017)
 - DNS Measurements (April 2017)

- All [code on GitHub](#)

IXP-tools Code Sprint

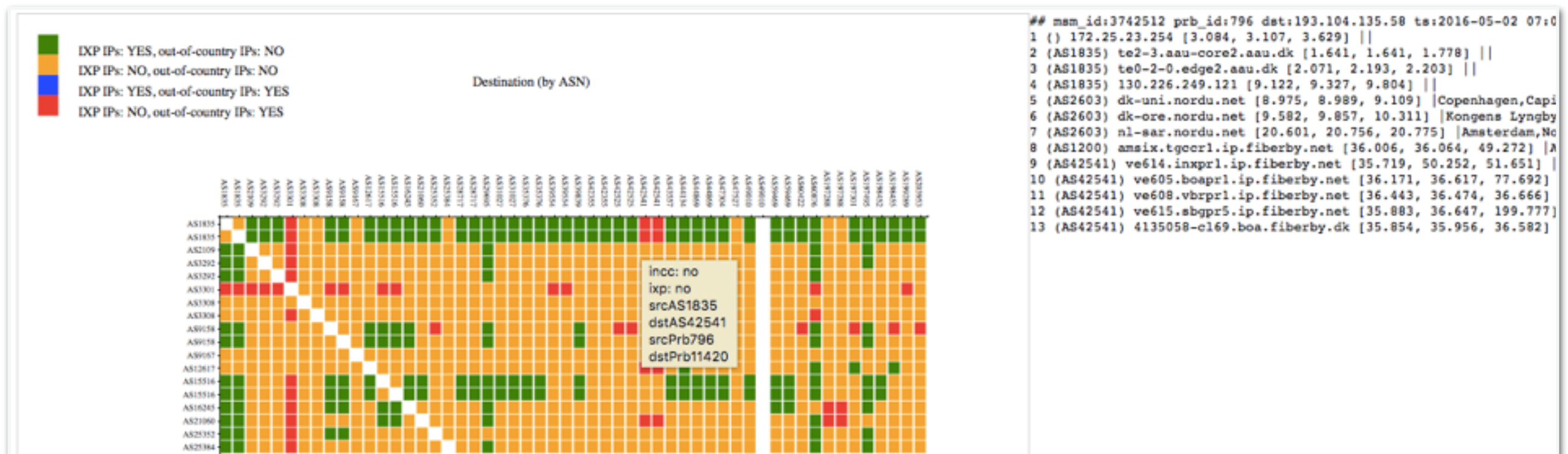


- Continuation of IXP-Tools Hackathon
 - reminder: weekend before RIPE73; 32 people, 7 projects : 11 IXPs, researchers, developers, operators
 - Petros Gigis (FORTH): research internship at RIPE NCC
 - Vasileios Giotsas (CAIDA): reward visit to continue work
- Code-Sprint: smaller scale: 5-6 April 2017
 - two IXPs + two researchers; two working days
 - two projects
- RIPE Labs article

Original: IXP Country Jedi



- RIPE Atlas Traceroute mesh per country
 - <http://sg-pub.ripe.net/emile/ixp-country-jedi/>
- Is the path going through an IXP?
- Is the path going out of the country?



Improvements to IXP-Country-Jedi



- View per source ASN
- Only display “interesting” destination ASNs:
 - the path goes out of the country
 - there is no direct peering
- Drill-down into traceroutes

IXP Country Jedi Main page GeoPath AS Graph IXP Country IXP LANs Probe Tags Per ASN Report

This report contains potentially interesting information per ASN (Autonomous System). It tries to display the most interesting paths to other ASNs in the same country that host RIPE Atlas probes.

Select ASN: AS 6799

Category	Destination ASN	Path (Source Probe Id -> Dest Probe Id)
Source AS 6799	AS 3329	27936 -> 2950 (v4)
Source AS 6799	AS 3329	5001 -> 2950 (v4)
Intermediates (17 Destination ASNs)	AS 1241	12723 -> 27936 (v4)
Intermediates (17 Destination ASNs)	AS 1241	12723 -> 5001 (v4)
Intermediates (17 Destination ASNs)	AS 1241	27936 -> 12723 (v4)
Intermediates (17 Destination ASNs)	AS 1241	5001 -> 12723 (v4)
Intermediates (17 Destination ASNs)	AS 6866	
Intermediates (17 Destination ASNs)	AS 6867	
Intermediates (17 Destination ASNs)	AS 8248	
Intermediates (17 Destination ASNs)	AS 15544	
Intermediates (17 Destination ASNs)	AS 25472	
Intermediates (17 Destination ASNs)	AS 34516	
Intermediates (17 Destination ASNs)	AS 50919	
Intermediates (17 Destination ASNs)	AS 51810	
Intermediates (17 Destination ASNs)	AS 56910	
Intermediates (17 Destination ASNs)	AS 197580	
Intermediates (17 Destination ASNs)	AS 201494	
Intermediates (17 Destination ASNs)	AS 202684	

Detecting Remote Peerings



- Prototype: <http://inspire.edu.gr/rp/>
- Improvements:
 - daily bulk data creation & processing, based on RIPE Atlas
 - APIs for accessing data (IXP view, ASN view, metrics/IP)

```
IXP Remote Peering Api
```

```
Api Root
```

```
Api Root
```

```
The default basic root view for DefaultRouter
```

```
GET /api/
```

```
HTTP 200 OK
```

```
Allow: GET, HEAD, OPTIONS
```

```
Content-Type: application/json
```

```
Vary: Accept
```

```
{
```

```
  "status": "http://127.0.0.1:8000/api/status/",
```

```
  "ixp": "http://127.0.0.1:8000/api/ixp/",
```

```
  "asn": "http://127.0.0.1:8000/api/asn/",
```

```
  "metrics/ip": "http://127.0.0.1:8000/api/metrics/ip/"
```

```
}
```


News: BirdsEye implemented!



- Another one of the hackathons projects lives!
- "BirdsEye" looking glass
 - *Secure Micro Service for Querying Bird*
- Live service: <http://lg.ecix.net/>

The screenshot shows the BirdsEye web interface. On the left, a dark sidebar contains the BirdsEye logo and a list of route servers: rs1.ber.ecix.net (IPv4), rs1.ber.ecix.net (IPv6), rs2.ber.ecix.net (IPv4), and rs2.ber.ecix.net (IPv6), all running Bird 1.6.2. The main content area displays details for rs1.ber.ecix.net (IPv4) (195.43.89.12). It includes a search bar with the text "Filter by Neighbour, ASN or Description". Below the search bar is a table with the following data:

Neighbour	ASN	State	Uptime	Description	Routes Recv.	R Fi
194.9.117.1	25074	up	2 months	AS25074 194.9.117.1 MESH GmbH	141	5

On the right side of the interface, there is a status box indicating "Last Reconfig: Monday, April 10, 2017 10:46 AM" and "Daemon is up and running" with a battery icon.

Take part in our hackathons!



- Join us next time!
 - October 2017: location & topic to be announced
 - Spring & Autumn 2018
- Be a host / local partner / juror
- Be a sponsor
- Use the software & tools
 - Share your use cases and success stories
- Modify the code, contribute improvements
 - all the code is on [GitHub](#)



Additional Slides

Old: IXP Tools Hackathon Projects



- Universal looking glass
 - Load MRT dumps from any collector and query it "looking-glass style"
- Bird's eye
 - An API (and UI, and CLI) for insight into BIRD
- Remote Peering Jedi
 - Detecting remote peers at IXPs and geolocate them
- Peer Match-making
 - What peerings may be useful for me?

Old: IXP Tools Hackathon Projects



- IXP Valuator
 - Measure the IXPs' role in connecting local eyeballs with local content
- PeerMe ("make peering great again")
 - Discover and generate possible peering (configurations) between ASNs
- Pinder (Tinder for Peering)
 - Swipe Right On A New Peering Relationship

Projects from previous hackathons



- All code on GitHub:
 - <https://github.com/RIPE-Atlas-Community/ripe-atlas-community-contrib/blob/master/README.md>
- labs.ripe.net/hackathons
 - DataViz: <https://labs.ripe.net/Members/becha/ripe-atlas-hackathon-results>
 - Tools for operators <https://labs.ripe.net/Members/becha/ripe-atlas-tools-hackathon-results>
 - Interfaces <https://labs.ripe.net/Members/becha/ripe-atlas-interface-hackathon-results>
 - IXP-tools <https://labs.ripe.net/Members/becha/ixp-tools-hackathon-results>