A Detector for Asymmetric Routing over an IXP

A RIPE Atlas Hackaton Project

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The Problem

- Smaller ISPs are often new to BGP and misconfigure their edge (* and larger ones)
- Misunderstanding traceroutes they are not bidirectional
- Asymmetric routing is a common problem IXP operators deal with

The Solution

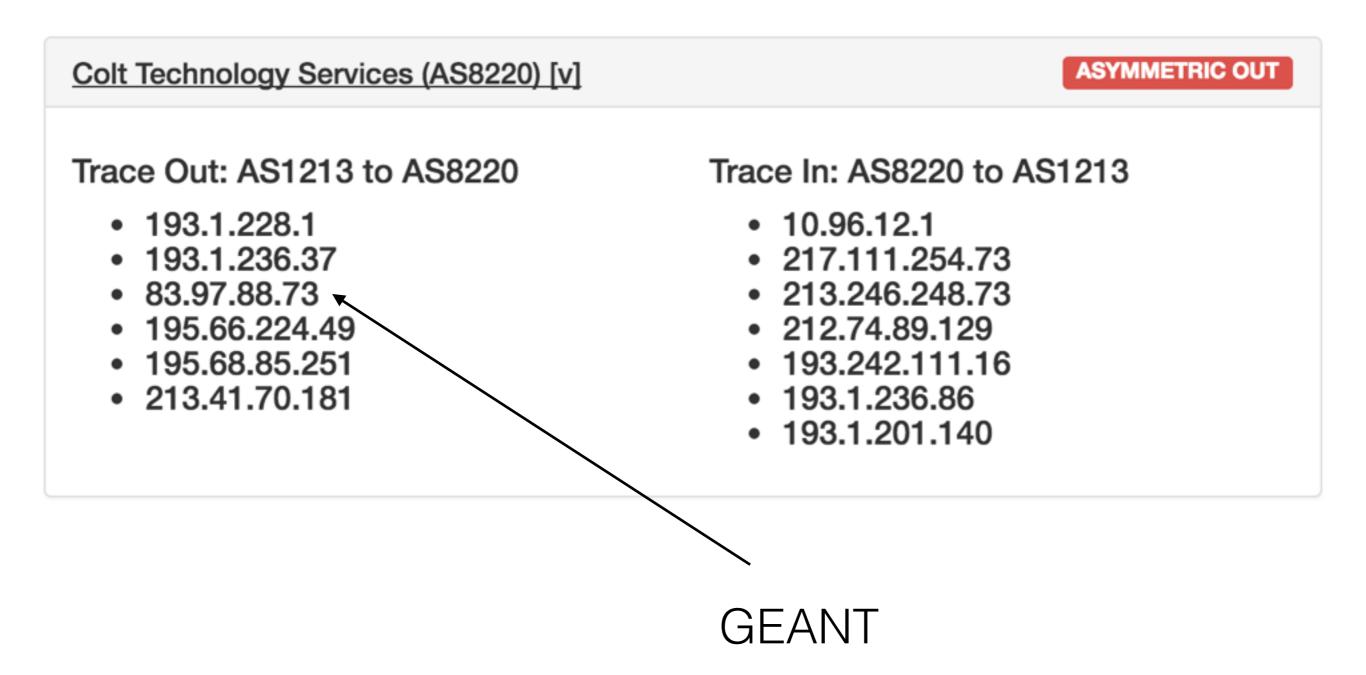
- Use RIPE Atlas probes to create bi-directional traceroute measurements between AS' at an exchange
- Constraints:
 - IXP must use the JSON export schema
 - Only supports networks with public (active) Atlas probes

Results

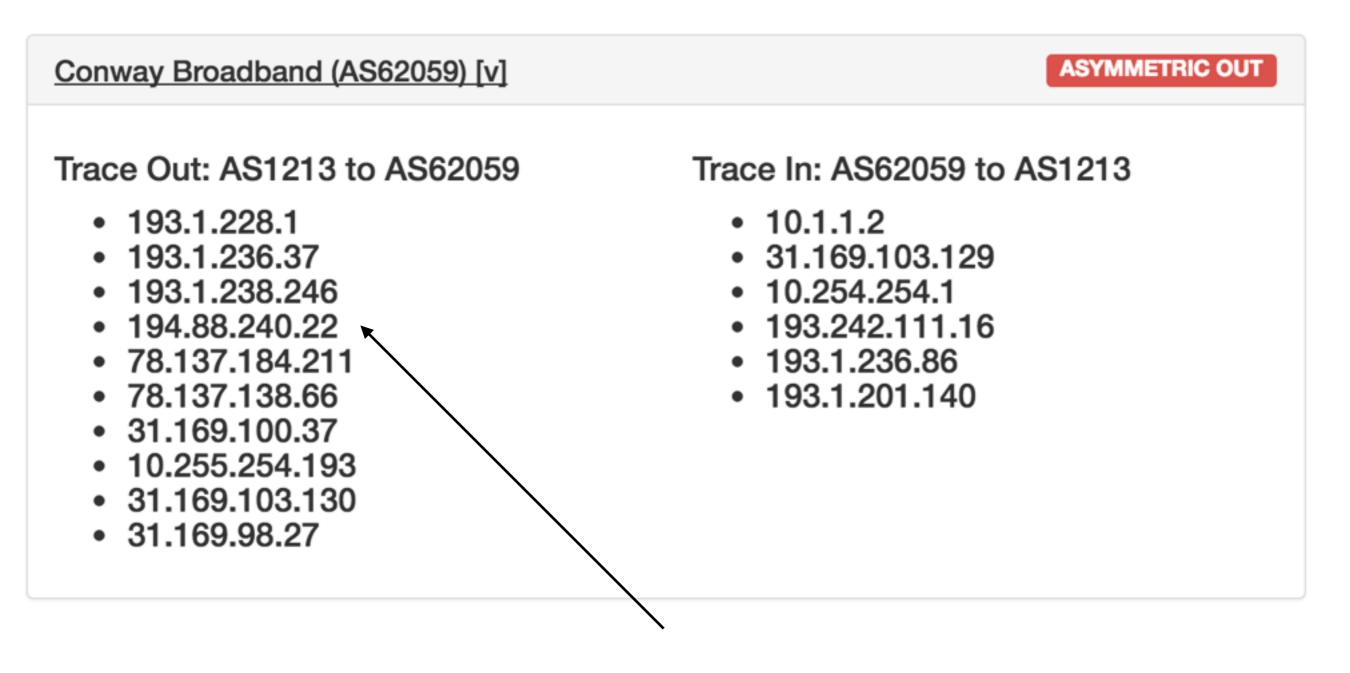
Results for: HEAnet (AS1213) @ INEX (IPv4)

Verizon Business (AS702) [v]	NON IXP
Cable & Wireless Worldwide (AS1273) [v]	NON IXP
BT Ireland (AS2110) [v]	SYMMETRIC
Eircom Net (AS5466) [v]	TRACE FAILED
Hibernia Networks (AS5580) [v]	NON IXP
Virgin Media Ireland Ltd (AS6830) [v]	NON IXP
Hurricane Electric (AS6939) [v]	SYMMETRIC
Colt Technology Services (AS8220) [v]	ASYMMETRIC OUT

Results



Results



INEX LAN2 via Viatel (AS31122)

Disclaimer & Thanks

- Disclaimer:
 - This is the fruit of a hackaton! Expect bugs, nondefensive programming, databases definitely harmed.
- Thanks:
 - RIPE Atlas team, Vesna and Michela
 - Comcast for sponsoring

Try it Out

http://ard.inex.ie/

Get the code (and some docs) at:

https://github.com/inex/ixp-as