

Internet measurements project

Ripe Atlas Probes

- The RIPE Atlas probes are listed there: <https://atlas.ripe.net/probes/>
- (Create a RIPE NCC access account at: <https://access.ripe.net/registration>)
- Retrieve the list of public probes as CSV (using the API) — document how you do that;
- Start by computing **flat statistics**: Make an histogram of the probes by country, of the number of probes per AS etc.

Traceroutes

- From a (large) set of traceroute traces, build the list of AS traversed by the traffic;
- Build the (apparent) graph of ASs from these measurements;
- How does this complement the data gathered from a BGP looking glass?
- Can we find an example of discrepancy between the looking glass data and the traceroutes?
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Graph analysis

- Propose a set of attributes per AS, computed from traceroute data. For instance, you can count the number of appearances of a given AS. You can compute the centrality (does the AS appear in the middle or at the edge...), the degree (number of neighbor ASs)... etc.
- Can we also use the observed RTTs to enrich the data?
- From this set of attributes, you can then classify the ASs using technics such as KNN. Can you find ressources that would corroborate your findings?

DNS Root servers

- What are the DNS root servers? What is anycast?
- Could you imagine some exploitation of this data, other than e.g. <https://atlas.ripe.net/results/maps/root-instances/>