MLAB

Measurement Lab

http://measurementlab.net

OPEN TECHNOLOGY INSTITUTE

@NewAmerica

Independent, Public Interest Network Performance Measurement

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How can we understand our connections to the Internet?

By Measuring Them!!

Loading...

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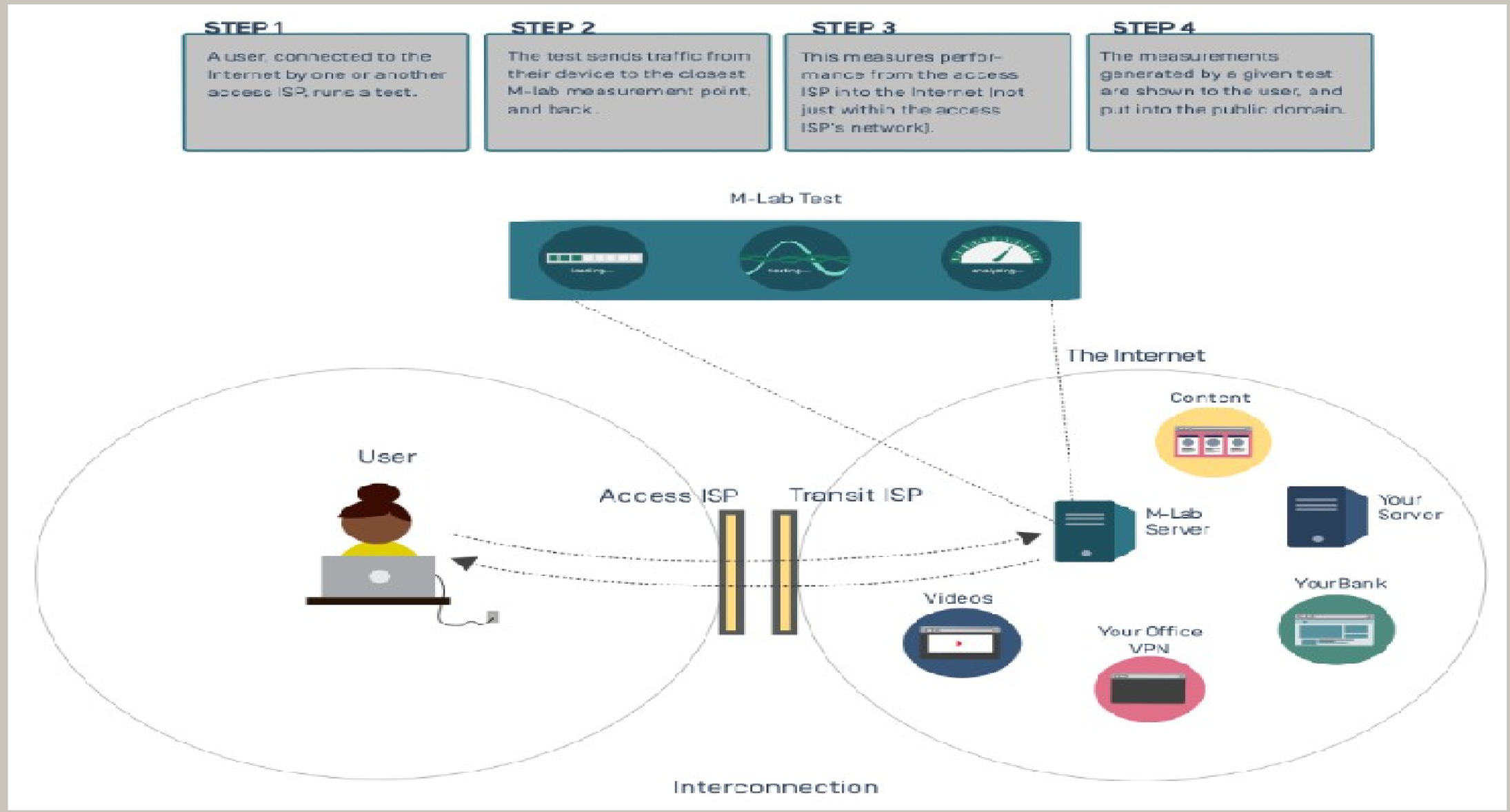
How M-Lab Collects Information

Measurements from Everyone



M-Lab's Global Footprint

Servers on Every Continent and Growing

M-Lab's Global Footprint

Tests from Every Country

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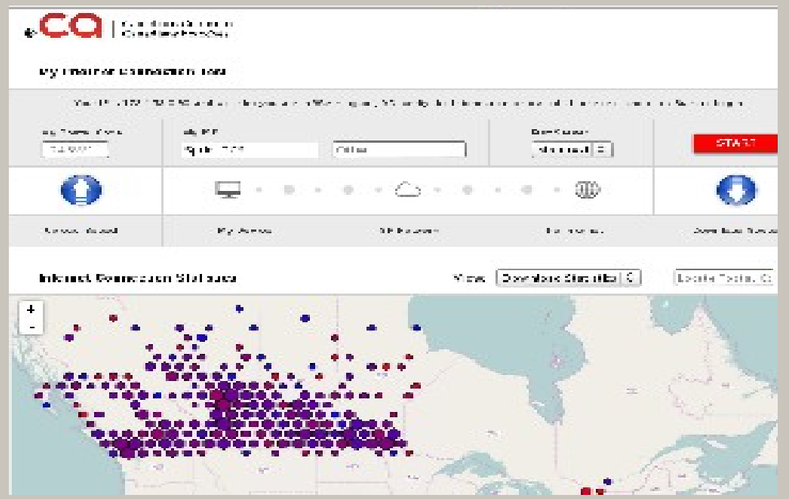
National Regulators Using M-Lab

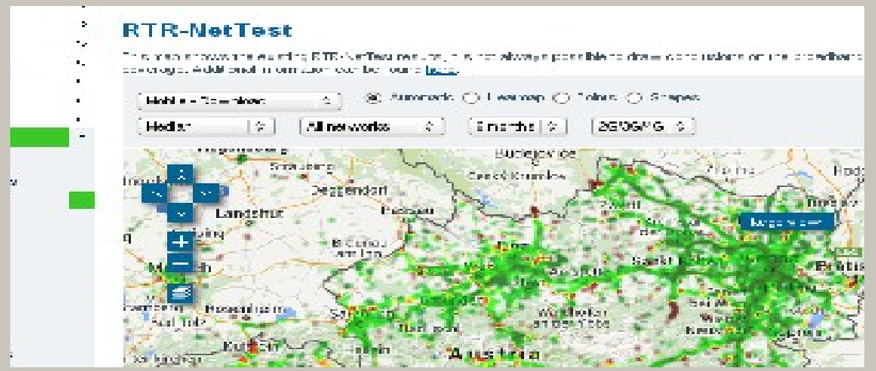
- United States
- Greece
- Austria
- Canada

United States (FCC) - http://www.fcc.gov/reports/measuring-broadband-america-2014

Greece - http://hyperiontest.gr/



Canada - http://www.cira.ca/

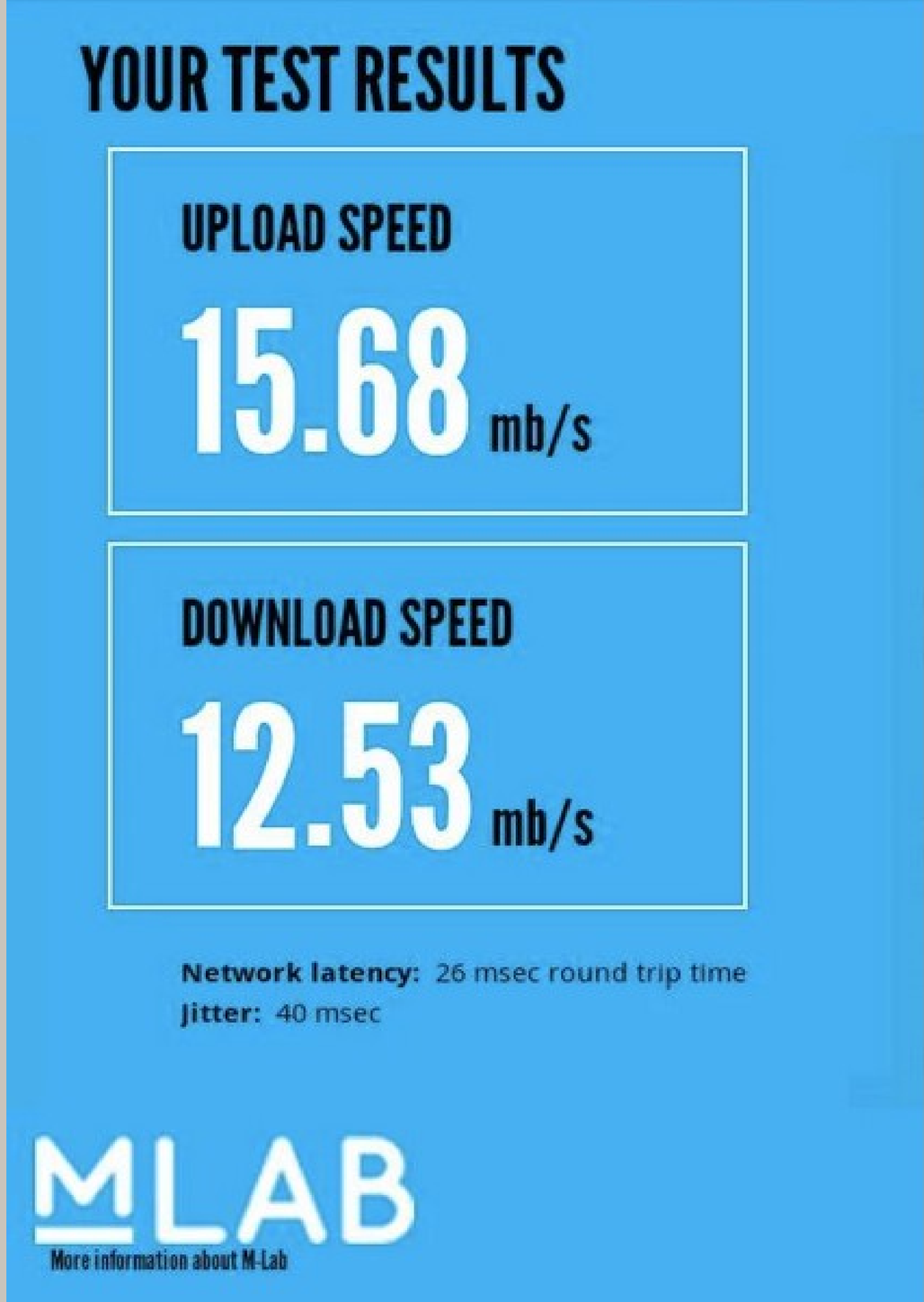


Austria - https://www.netztest.at/en/Karte

Throughput Measurements

M-Lab hosts two active throughput measurements:

- Network Diagnostic Tool (NDT)
- BISmark
- NDT is integrated with numerous applications and receives 200,000 tests from 100,000 clients per day.
- Nearly every country is well-covered.



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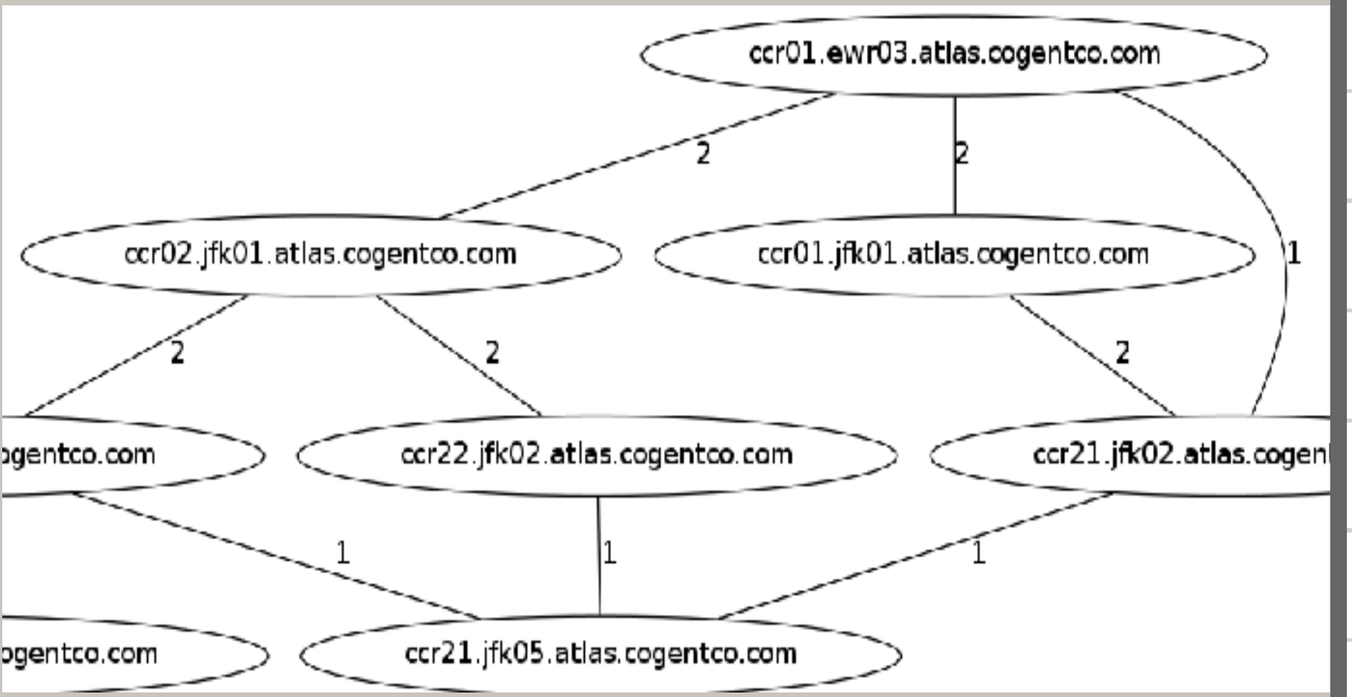
Path Information

Measurement Lab collects paris-traceroutes for every attempt to connect to its sites.



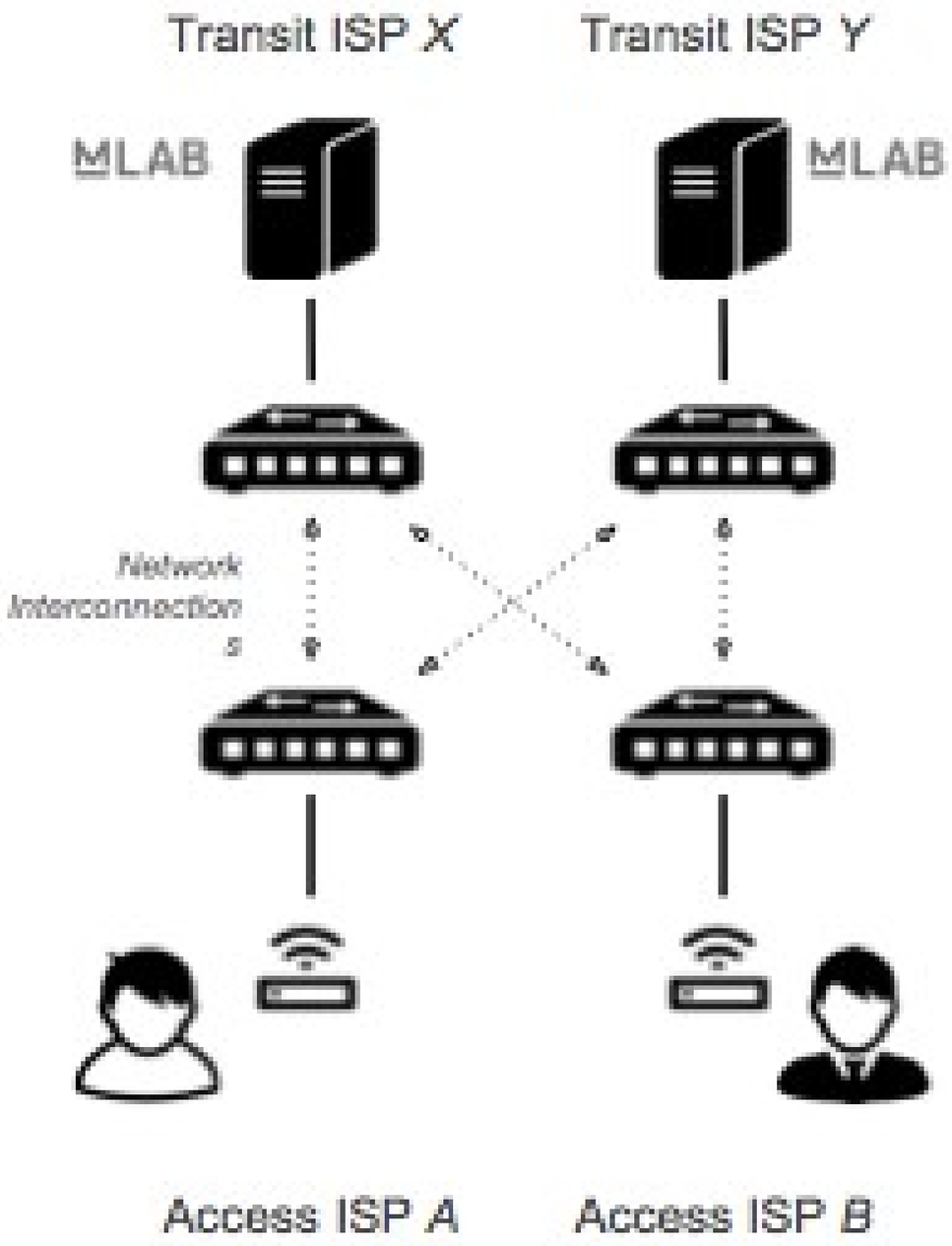
connection_spec_server_ip	paris_traceroute_hop_src_ip	paris_traceroute_hop
217.163.1.89	217.163.1.65	195.219.83.101
217.163.1.89	195.219.83.101	80.231.130.129
217.163.1.89	80.231.130.129	80.231.154.17
217.163.1.89	80.231.154.17	80.231.153.58
217.163.1.89	80.231.153.58	5.23.24.6
217.163.1.89	5.23.24.6	195.154.1.71
217.163.1.89	195.154.1.71	62.210.74.143
217.163.1.102	5.23.24.6	195.154.1.71
217.163.1.102	195.154.1.71	62.210.74.143
217.163.1.102	80.231.153.58	5.23.24.6
217.163.1.102	80.231.154.17	80.231.153.58
217.163.1.102	80.231.130.129	80.231.130.86

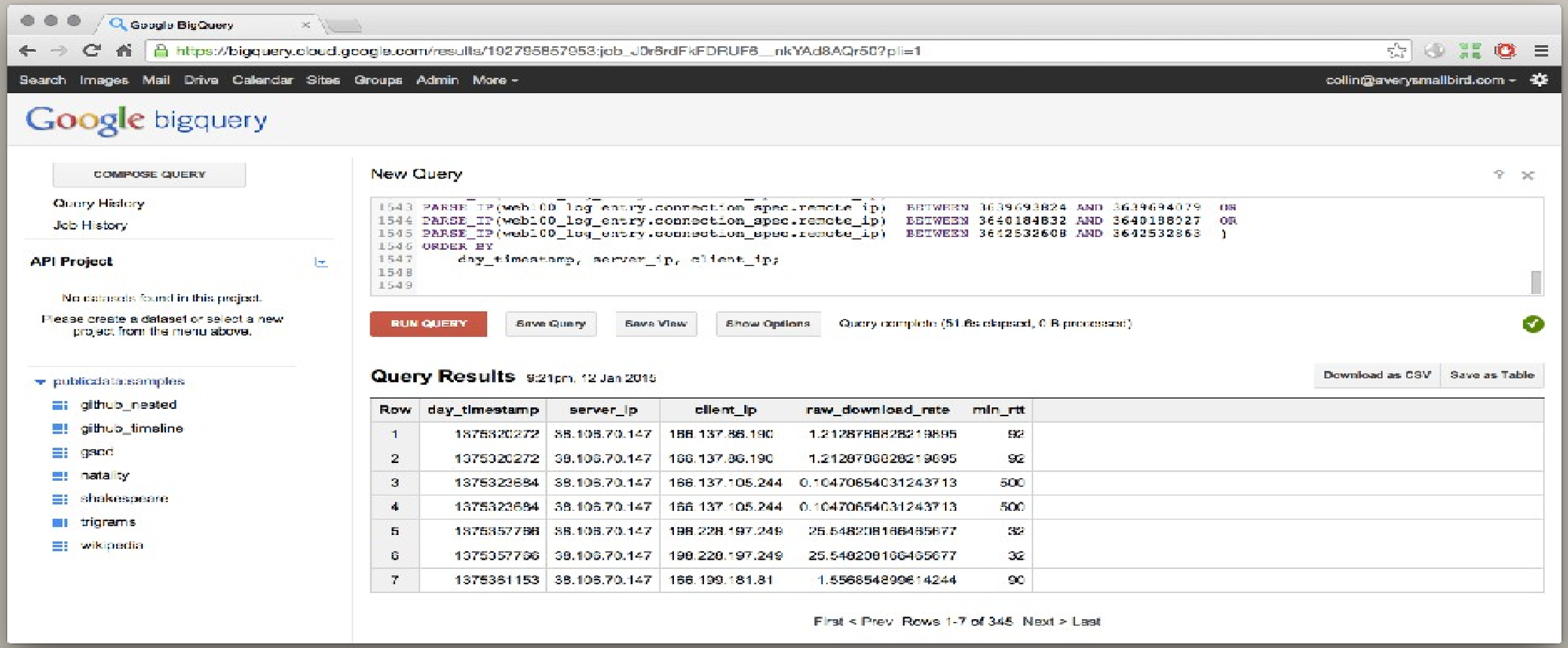
Measurement Server Placement

M-Lab servers are in multiple, well connected transit networks

Our tests mirror the consumer experience – tests that cross ISP interconnection boundaries

This allows us to make inferrence comparisons about data from Access ISPs connected to different Transit ISPs





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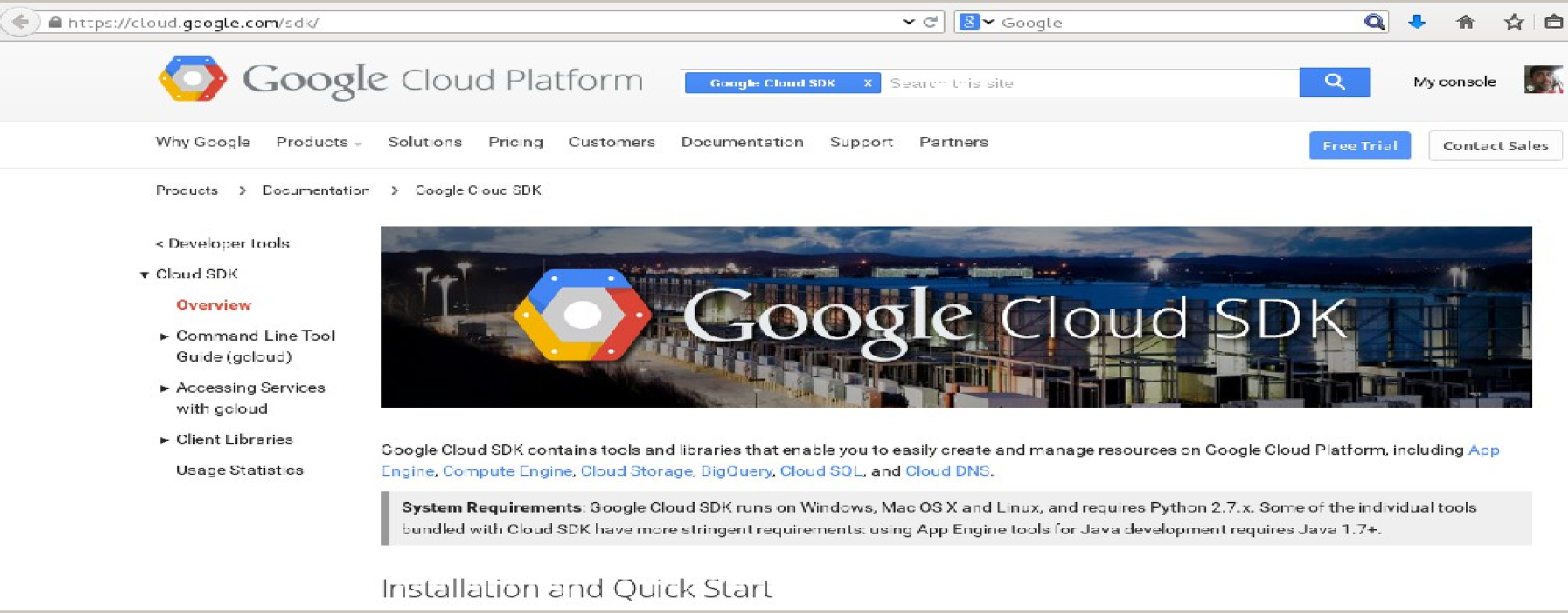
Raw Data: BigQuery Web Access

Structured Database Access



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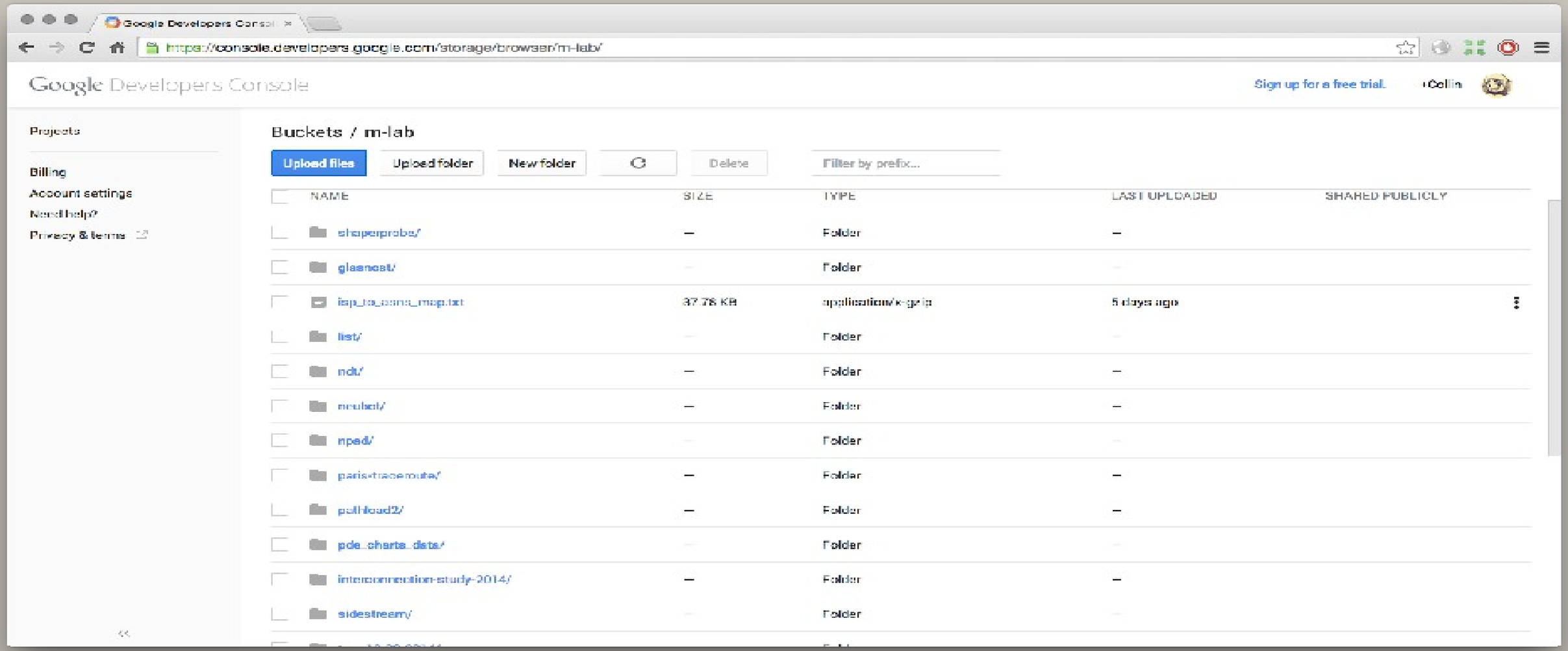
Raw Data: BigQuery
Google Cloud SDK

Structured Database Access



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Raw Data: Cloud Storage

Raw Datafile Access

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