The Impact of COVID-19 on Last-mile Latency

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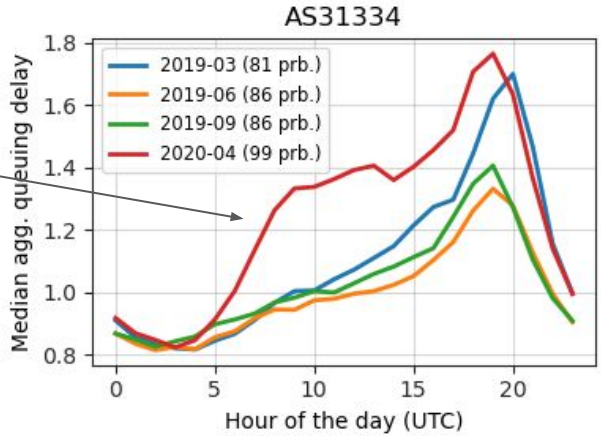
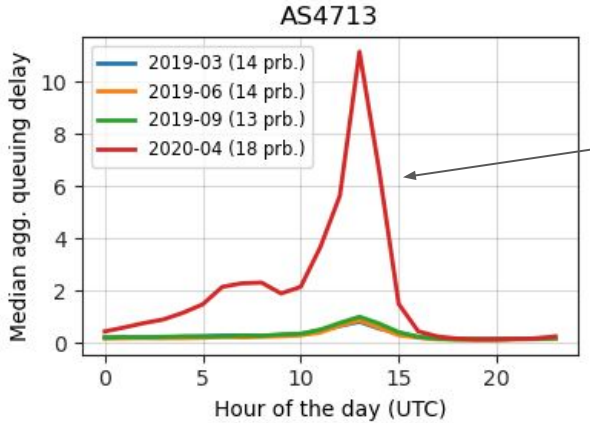
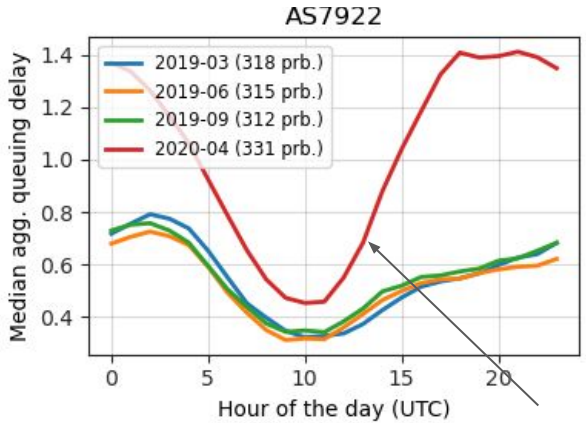
Example Last mile latency (RIPE Atlas)

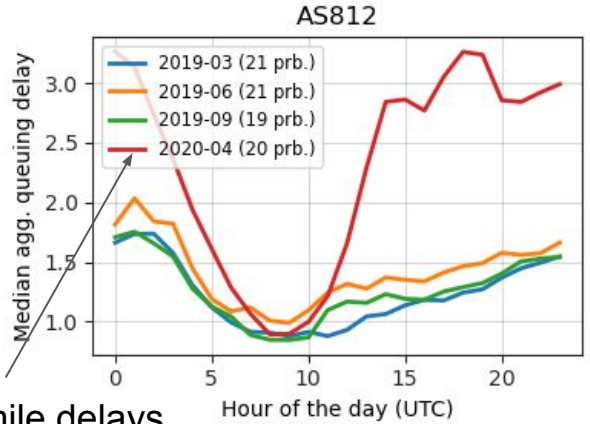
Small delay Increase during daytime





Severe last-mile congestion

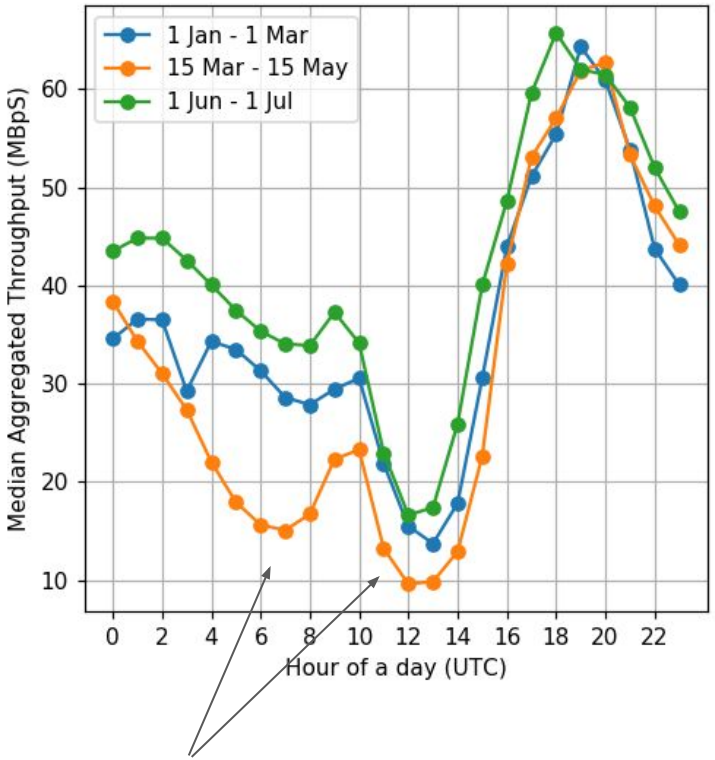




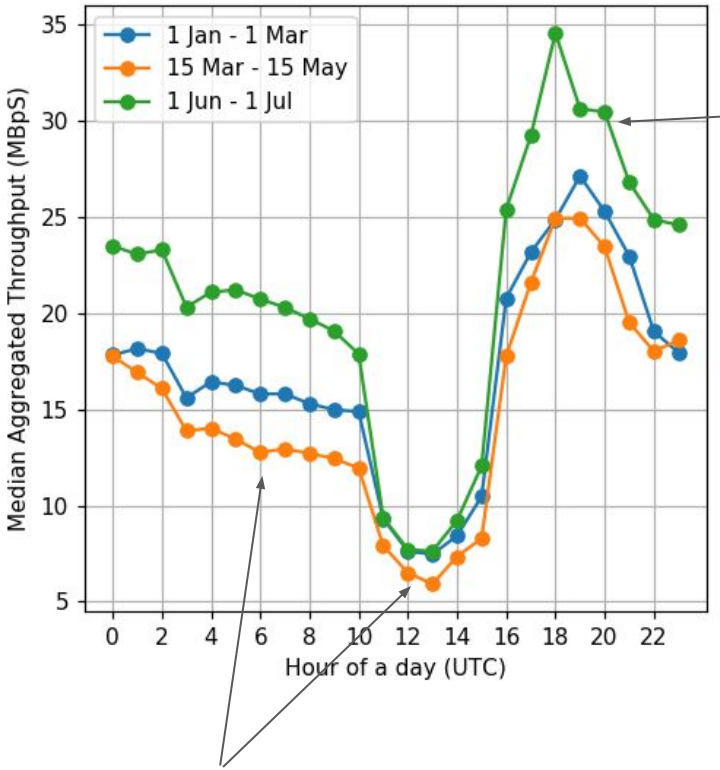
Higher last-mile delays during lockdown

Throughput in Japan (MLab ndt data)

NTT OCN



Softbank



Faster Internet after COVID!

Two drops per day during stay-at-home (up to 50% decrease during daytime)

Summary

- Overall 55% more ASN with higher last-mile latencies during COVID-19 (RIPE Atlas)
- In Japan:
  - Clear throughput drop and increased last-mile latency during stay-at-home measures
  - Last-mile congestion on legacy network (PPPoE)
  - Mobile network unaffected (throughput)
- See also:
  - https://last-mile-congestion.github.io/ (paper and more results)
  - https://ihr.iijlab.net/ihr/en-us/covid19 (inter-domain latency)