Benchmarking of Elastic Cellular Core

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Background & Challenges

- Constraints of physical middleboxes
- Shift to an elastic core
- Studied in class - > "KLIEN"

- Installation

- Challenges
  - Poor Documentation of OAI
  - Extensive Configuration required
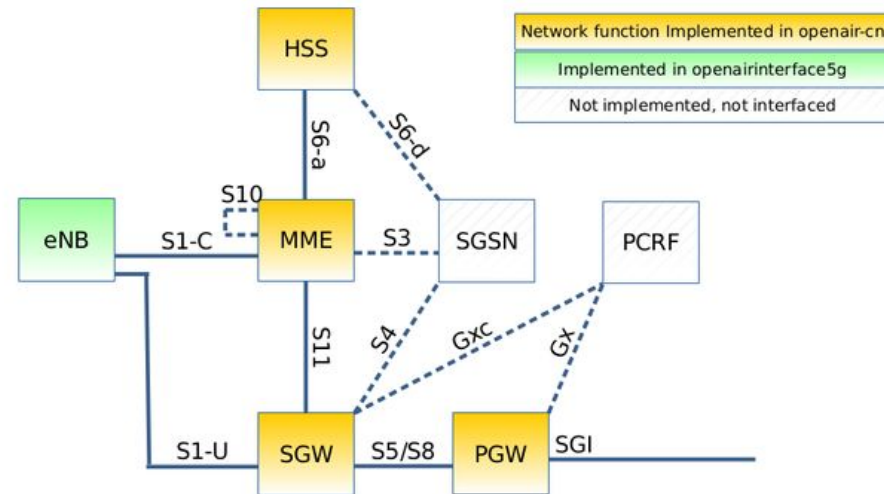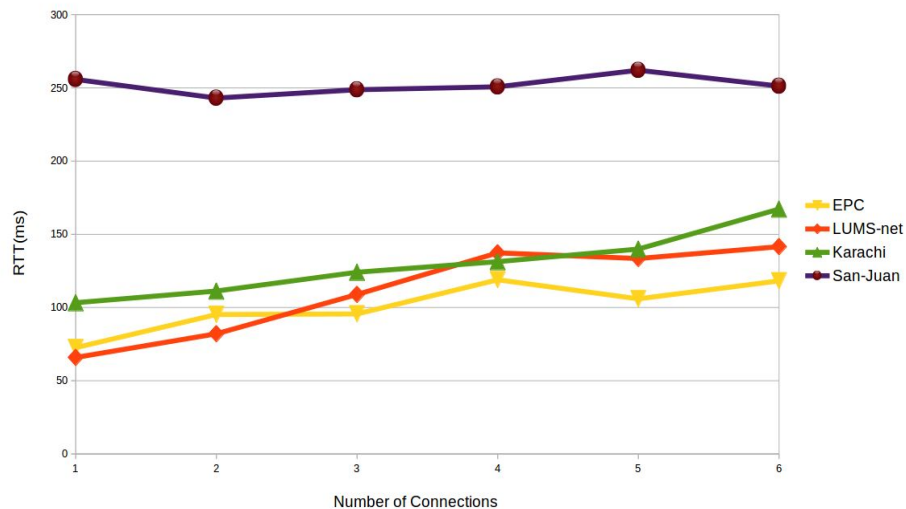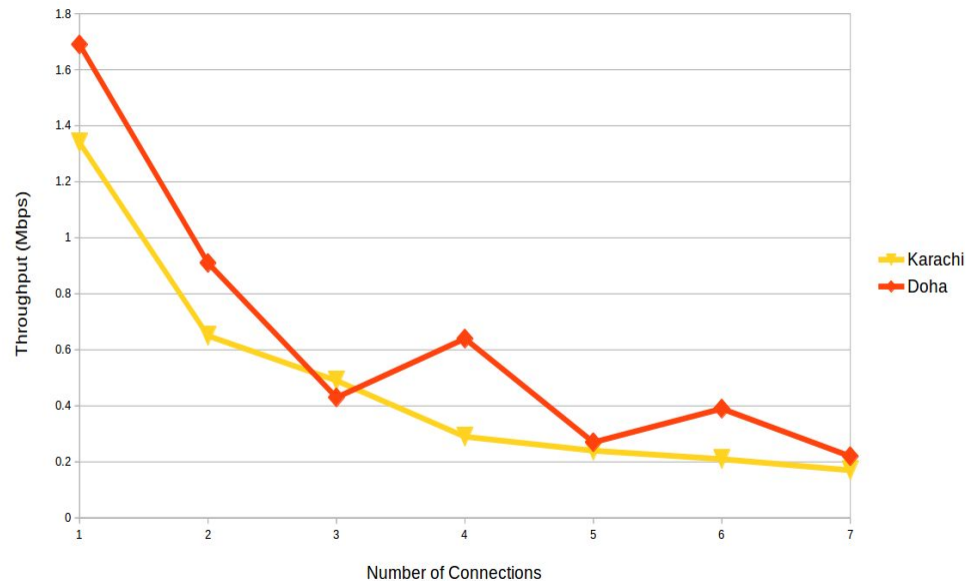 - Unstable Emulation (frequent crashes)

Figure 1 EURECOM core network entities overview

Results

Number of Connections VS RTT(Ping Response)

Number of Connections VS Throughput

Conclusion

- Need for more rigorous examination.

- Results show that increasing processes degrades performance.

- EPC is Latency-friendly but throughput decreases exponentially in multiple bandwidth-hungry connections, unfairly.

- Constraints of OAI (emulation tool), significant configuration needed.