

36th Cycle

Accelerating observability of cloud-native workloads with programmable network hardware Alessandro Cornacchia

Supervisor: Prof. Paolo Giaccone, Prof. Andrea Bianco



Short term: next steps for MicroView: implement host-SmartNIC data-path and profile its overhead on running microservices.

Long term: virtual networks within the hosts largely remain black-boxes. Pushing telemetry to break this boundary is a crucial step we want to explore towards achieving end-to-end visibility of cloud-native application.

Published works: 1 journal, 3 conferences

- Submitted works: 1 conference
- Cornacchia A., Canini M, Benson T., Bilal M., "MicroView: observability with time granularity", CoNeXT SW 2023, under review
- Cornacchia A., Bianchi G., Bianco A., and Giaccone P., "Staggered HLL: near-continuous-time cardinality estimation with no overhead", Computer Communications, vol. 193, 2022, pp. 168-175.

PhD program in Electrical, Electronics and Communications Engineering

