Student Thesis

Anomaly Detection using Flow Data

Advanced Flow Functions for Traffic Anomaly Detection

- Develop advanced flow features for Vermont
- Evaluate new features for traffic anomaly detection purposes
- Develop dynamic config reloading interface
- Extensive C++ knowledge required

More information:

https://www.net.in.tum.de/~gasser

Student Thesis

Siblings in the Wild

Detecting IPv6-IPv4 pairs based on few data points

- Existing approach fingerprints remote hosts based on hardware (clock skew!) and software (TCP stack) characteristics
- Refine existing approach to use as few data points as possible
- Combine active measurements with passive observations
- Develop high-performance code for active measurements and/or passive observations
- Focus shiftable: Active/Passive, Coding/Analysis
- Depending on focus: Python, C, Lua

More information:

https://www.net.in.tum.de/~scheitle

M.Sc. Thesis

Comparing IPv6/IPv4 Paths in the Internet

How resilient is it to use IPv6 and IPv4 at the same time?

- Measure paths towards targets on IPv4 and IPv6
- Compare paths using a variety of metrics: How many routers are the same?
- Assess how much overlap exists between paths and the level of protection against short-lived outages
- Complications: Load Balancers, Tunnels, ...
- Required: Python, Routing knowledge

More information:

https://www.net.in.tum.de/~scheitle

GINO: Global INternet Observatory

Monthly research area meetings

- Connect students and advisors working on Internet-wide measurements
- Discuss ongoing research, published papers, and highlights from conferences

For students

- Get an overview of current research and theses
- Get to know other students and researchers in the field
- Learn about methods and tools used and share tips & tricks
- Scout for possible theses

Next meeting: End of February → after exam period ☺

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https://net.in.tum.de/projects/gino