

Thesis
M.Sc.

IDP,
Guided
Research

Collecting Flow Data at High Rates

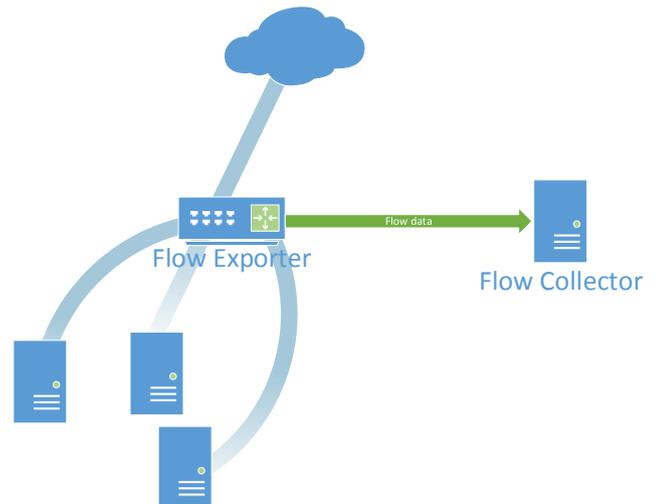
Motivation

Flow data are an important source for various tasks such as network monitoring, accounting, attack detection and mitigation. NetFlow, IPFIX and sFlow are protocols which are used to provide flow information.

We developed a software toolkit for the creation and processing of network flow data called Vermont (Versatile Monitoring Toolkit). Vermont was successfully used to handle flow data from our own Autonomous System as well as networks which provide more flow data.

However, Vermont is not yet capable to fully process thousands of flow records and write them to a database. Since it is to be expected that the amount of flow data will only increase in the future, a fast approach to process flow data is needed.

In a previous project we developed an IPFIX flow generator which was used to test Vermont's limitations and bottlenecks. You should build on this preliminary evaluations and find areas for performance improvements in Vermont. Additionally Vermont's performance should be compared to other flow collection utilities.



Your Task

- Find other flow collection utilities and compare their performance to Vermont's
- Evaluate Vermont's performance for specific use cases and find areas for improvements
- Make Vermont faster :)

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