Abstract

Due to the increasing demand for network engineering, it has become difficult to have an overview in a network. Big Companies, such as Cisco or HP offer solutions for that problem, however, these solutions are not always cost effective. An alternative option is to use free products like Nagios. These free versions often have the disadvantage of having a very complex setup which require specialists which again can lead to high costs.

Problem/Objective

To monitor small networks, the professional solutions mentioned above are not always suitable, since their potential is barely unleashed. Our thesis was aimed to develop a compact solution, which would be able to monitor a small network (max. 50 devices). Desired functions are for instance the scan of a LAN or the inspection of services. In addition to that it should run on Windows and Linux.

## Methodology

Nagios has been our first idol. Our approach was to monitor the basic functions, e.g. a HTTP-Service.   
We chose C# as our coding language, which builds on the .net framework under Windows and on the Mono framework under Linux. Once our objectives were clear, we divided the project in parts. With the help of the distributed revision control system “Git”, a quite smooth collaboration was possible.

Results  
The output of all our work is a program with a CLI, a GUI and an intern data management. Our LAN-Monitoring is a basic and compact solution for network surveillance. It comes with handy features (e.g. port scan) or service inspection (e.g. HTTP-Checker).