Abstract

Due to the increasing demand towards network engineering, it has become very hard to haven an overview in a network. Big Companies, such as Cisco or HP offer solutions for that problem, however these solutions cost a fortune. There are also free products, e.g. Nagios. These free versions often have the disadvantage of having a very complex setup. Thus specialists are needed, which again leads to high costs.

Problem/Objective

To monitor small networks the above mentioned professional solutions are not 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 Windows and Linux.

## Methodology

Nagios has been a first idol for us. Our approach was to monitor the basic functions, e.g. a HTTP-Service.   
We choose C\# as our coding language, which builds on the 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).