

The terms “Traffic Control” and “Quality of Service” are used in the terminology of packet-switching based computer networks. They refer to control mechanisms, which can assign different priorities to different data flows or guarantee certain properties according to the requirements of an application (e.g. bandwidth, latency, accessibility). The properties guaranteed by the Quality of Service are especially important if the line capacity is limited, especially for applications that need to transmit data in real-time (IP telephony), since these types of applications usually require stable dataflow and are sensitive to delays. This thesis analyzes the current situation in Traffic Control configuration in Linux. The Linux kernel offers a variety of functions for the classification and scheduling of network traffic. However the configuration of traffic control is proving challenging, since the basic concept used is difficult to understand and the configuration language – “tc”- is very difficult to use. Based on the analysis of the current situation, a universal and extensible framework - the jpQOS - was designed and implemented. This allows easy to use and well arranged configuration and monitoring of the QoS using a unified graphical user interface.