

Packet filtering is an essential feature of any operating system that aims to function as a network router or gateway. This thesis aims to extend the HelenOS operating system to support this functionality.

We analyze packet filters present in modern operating systems and implement a HelenOS service that provides a configurable and extendable packet filter. We also modify the HelenOS networking stack so that it allows an arbitrary service to function as a packet filter. We demonstrate the extendability of our implementation on a basic variant of the NAT mechanism.