

QEMU is a machine emulator that is able to emulate environment of various hardware platforms, including PC, PowerPC, ARM and SPARC. The goal of this master thesis is to port QEMU to HelenOS, thus allowing developers run the emulation of HelenOS inside HelenOS. The thesis contains a detailed analysis of the possible porting approaches (including the port of prerequisite libraries or their replacements) and an analysis of the features of QEMU (a reasonable subset of all features of QEMU) that are essential for achieving the goal and features that can be omitted in the prototype implementation. The primary focus of the implementation is to support the PC (x86 and x86-64) guest environment. Although not part of the prototype implementation, the thesis also focuses on analyzing the requirements for running QEMU as a virtualization hypervisor in HelenOS.