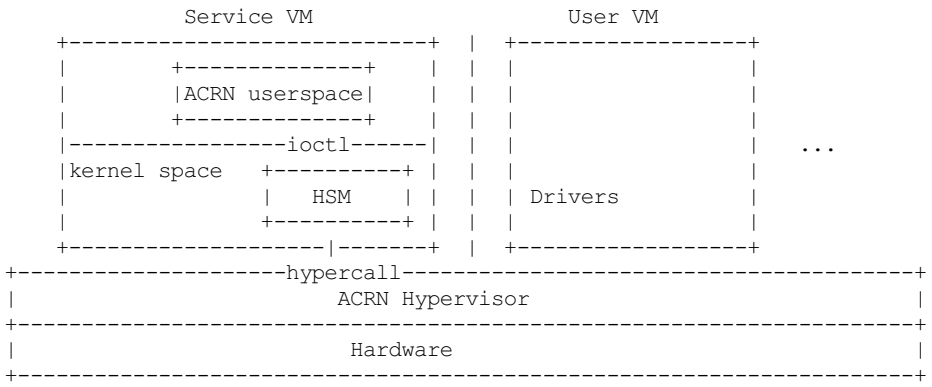
ACRN Hypervisor Introduction

The ACRN Hypervisor is a Type 1 hypervisor, running directly on bare-metal hardware. It has a privileged management VM, called Service VM, to manage User VMs and do I/O emulation.

ACRN userspace is an application running in the Service VM that emulates devices for a User VM based on command line configurations. ACRN Hypervisor Service Module (HSM) is a kernel module in the Service VM which provides hypervisor services to the ACRN userspace.

Below figure shows the architecture.



ACRN userspace allocates memory for the User VM, configures and initializes the devices used by the User VM, loads the virtual bootloader, initializes the virtual CPU state and handles I/O request accesses from the User VM. It uses ioctls to communicate with the HSM. HSM implements hypervisor services by interacting with the ACRN Hypervisor via hypercalls. HSM exports a char device interface (/dev/acrn_hsm) to userspace.

The ACRN hypervisor is open for contribution from anyone. The source repo is available at https://github.com/projectacrn/acrn-hypervisor.