

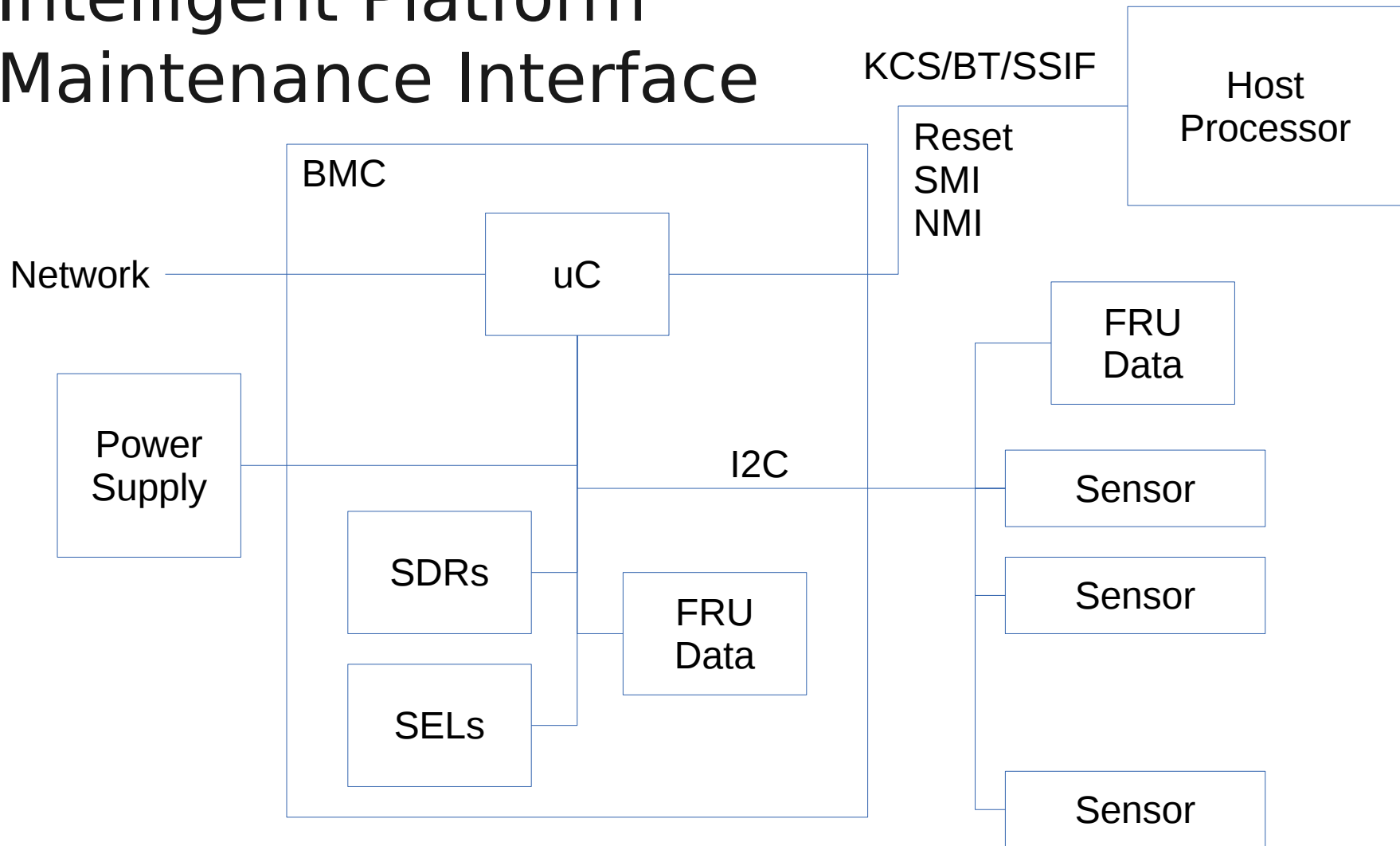
QEMU and IPMI KVM Forum 2015



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What is IPMI?

Intelligent Platform Maintenance Interface

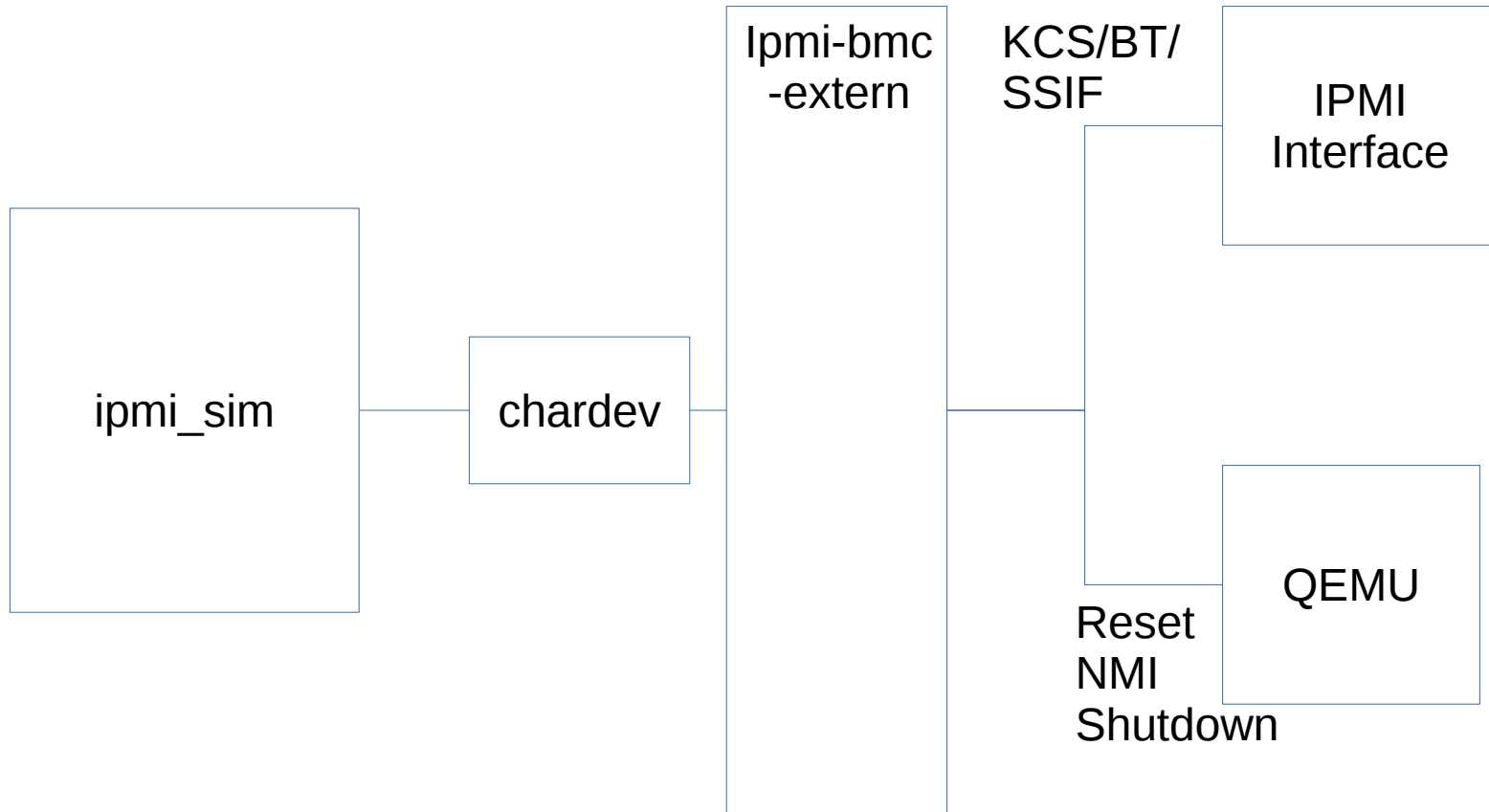


Two basic QEMU IPMI emulations

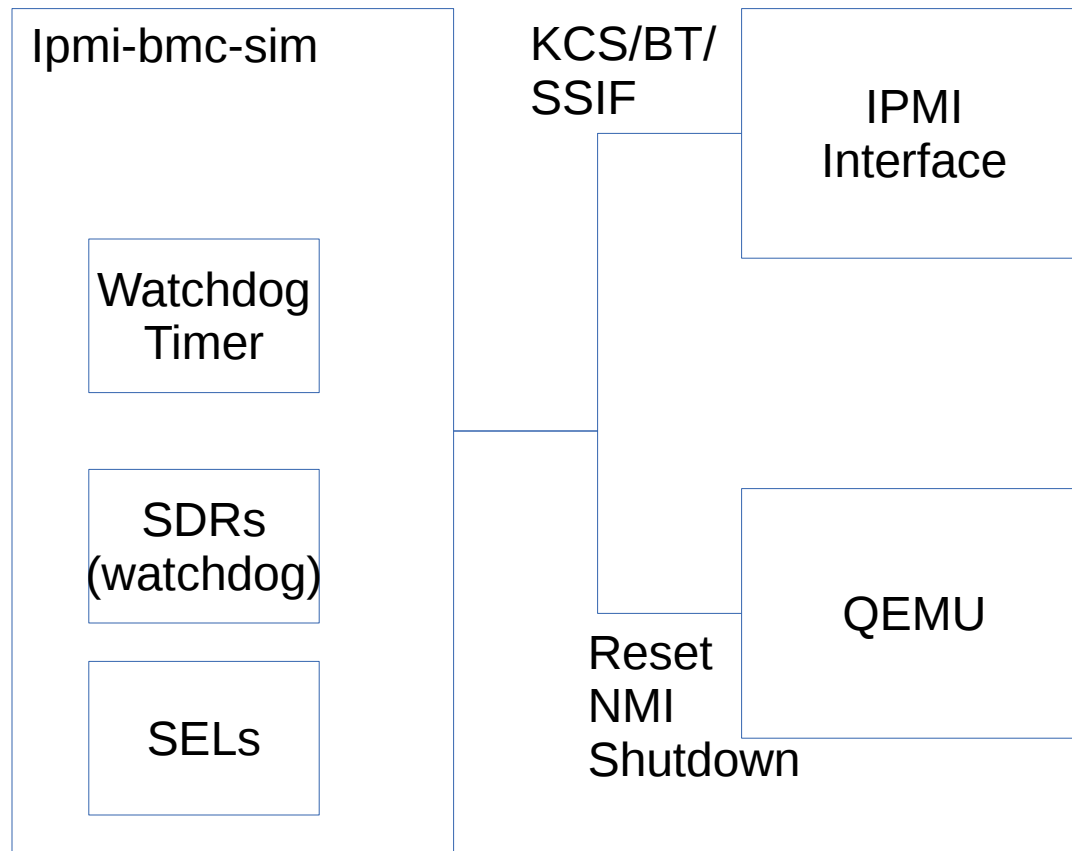
- Internal
 - Basic BMC inside QEMU
 - Supports very basic emulation and a watchdog timer
- External
 - Connects to an external BMC over a chardev
 - OpenIPMI ipmi_sim supports a fairly complete BMC emulation capability



QEMU External BMC



QEMU Internal BMC



Why would I want to do this?

- Use existing management software to manage virtual systems.
- Simulate your system to cause events you could never reproduce in a real system.
- Allow the IPMI maintainer to reproduce bad hardware reported by others.
- Fool software that wants IPMI to be there
- Watchdog timer



Starting a BMC in QEMU

- Create a BMC, normally done from `ipmi_sim`
 - `-device ipmi-bmc-sim,id=bmc0`
 - `-chardev socket,id=ipmichr0,host=localhost,port=9002,reconnect=10`
`-device ipmi-bmc-extern,chardev=ipmichr0,id=bmc0`
- Attach the BMC to an interface
 - `-device isa-ipmi-kcs,bmc=bmc0,irq=5`
 - `-device isa-ipmi-bt,bmc=bmc0,irq=0`

Demos

- Internal simulator with watchdog timer
- External simulator power management
- External simulator with watchdog timer
- External simulator setting sensor value



What's left?

- Upstream the main code
- SSIF (later)
- Where to get it now?
 - <https://github.com/cminyard/qemu>
 - <http://sourceforge.net/projects/openipmi>



Issues

- Security
- Users require extensive knowledge of IPMI to set up a BMC. It takes a while to understand the IPMI spec.
(However, basic power management is pretty easy:
<http://apahim.livejournal.com/2395.html>)