



Power Management and Thermal Control Microconference

Device power management based on platform firmware

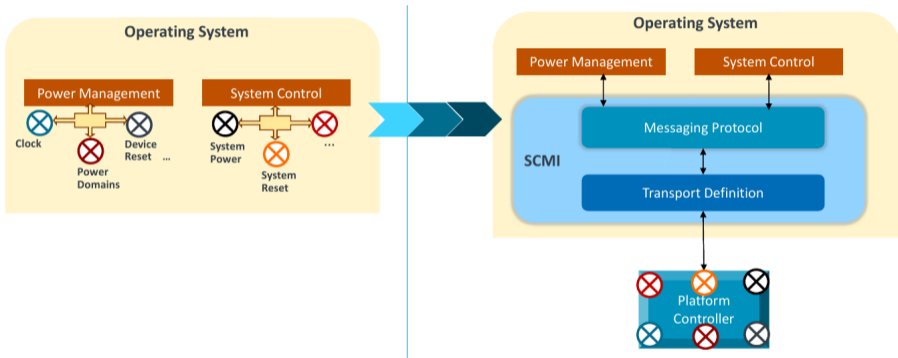
Linux Plumbers Conference 2019
Lisbon - Portugal

Sudeep Holla <sudeep.holla@arm.com>

September 10, 2019

Introduction - What is SCMI ?

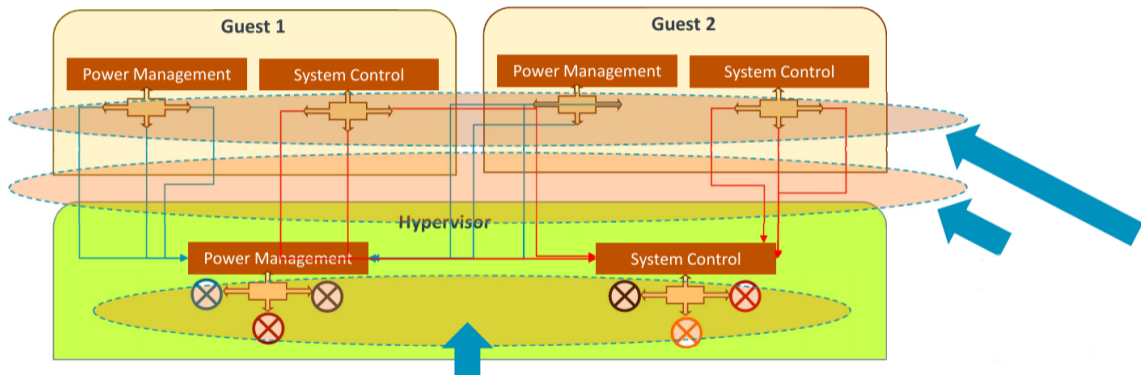
Motivation behind System Control & Management Interface



Less Fragmentation, More Common Code, Platform Firmware, More secure!

Introduction - What is SCMI ?

Where we are in virtualized systems

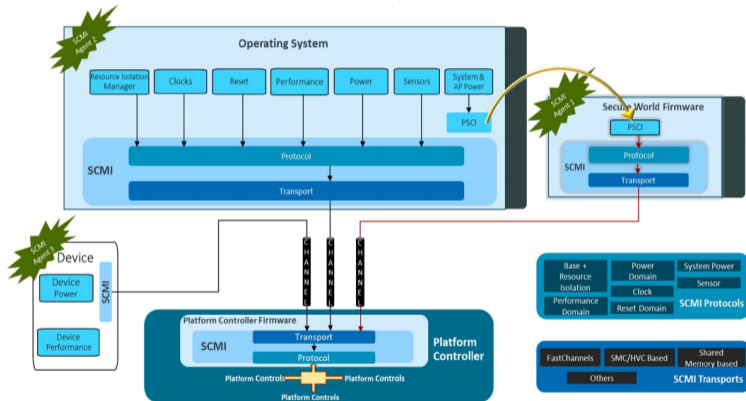


Upgradeability, Maintainability, Time-To-Market

SCMIv2.0 – Top Level View

- Dynamic Discovery
- Power & Performance Management
- Reset Domain, Sensors, Notifications
- Device based isolation & permission management
- Fast Transport: Reg/Shmem with Doorbell(opt)

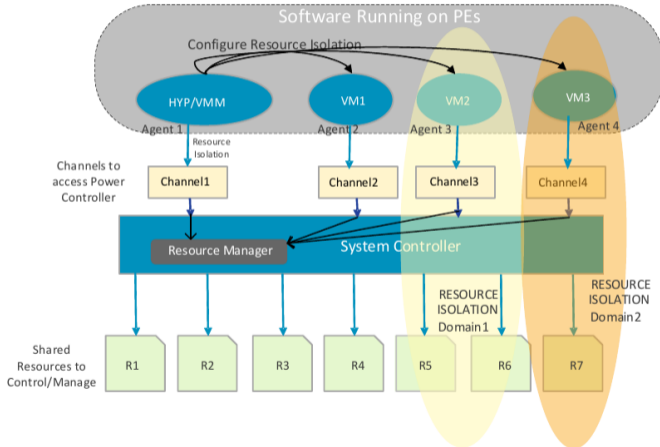
System Control & Management Interface v2.0



SCMlv2.0 - Device based isolation & permission management

- Minimal Hypervisor interference designs
- Resource Manager manages shared resources
- System Controller allows discovery of only those commands and ID's that are configured for agent
- Dedicated device assignment to VMs (passthrough mode)

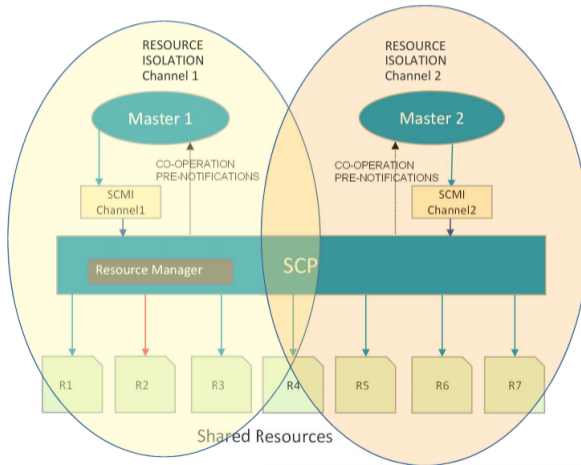
Hardware Assisted Virtualization



SCMlv2.0 - Device based isolation & permission management

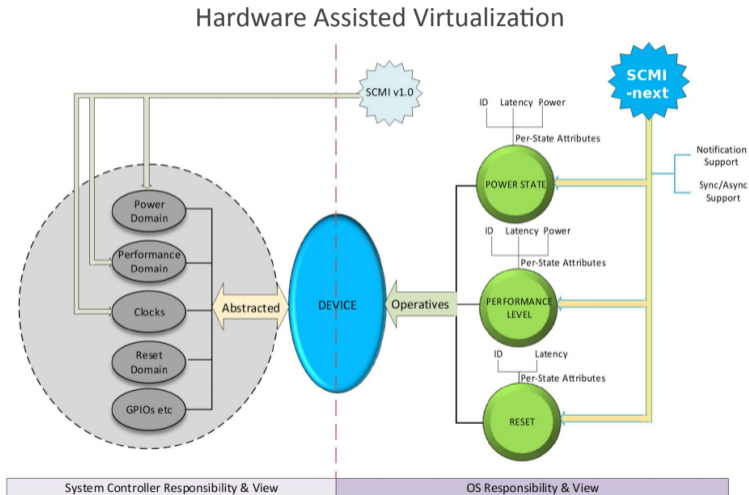
- Co-operative Multi Master Systems

- Each master co-operates to transition system resources according to wishes of a specific agent/master, since SCP cannot turn off resources when in use



SCMI-next: Device Protocol

- Device advertises
 - Power States
 - Performance Levels
 - Reset States
- System Controller
 - Abstracts and Manages platform specific details
 - Creates device attributes from constituent domains
 - Manages Domain Dependencies for Device Management





Thank you

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References

- SCMI v2.0 Specification