



**Power
API**



Power API for HPC: Standardizing Power Measurement and Control

Updates

Power API Version 1.0 released!

https://github.com/pwrapi/powerapi_spec

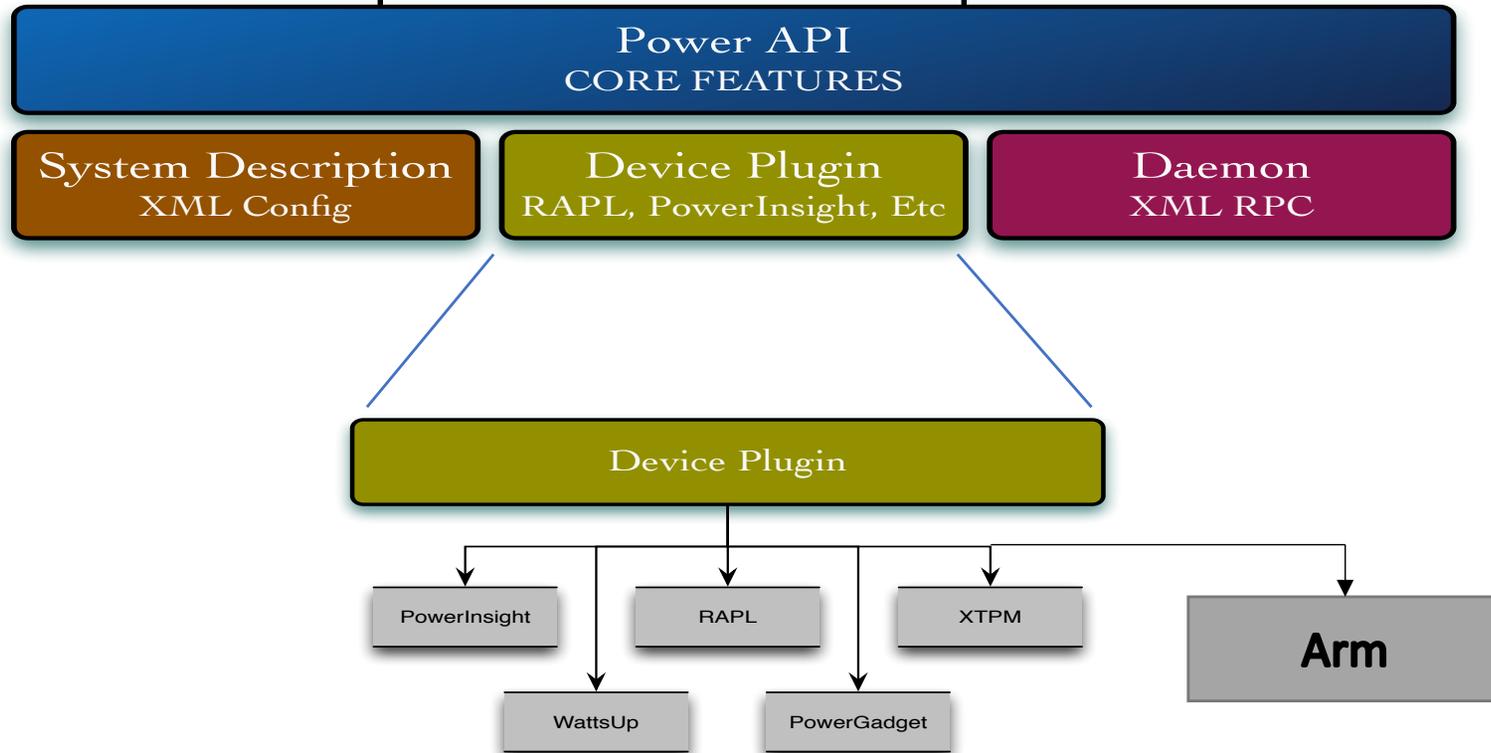
Upcoming discussions:

Generalized Notifications – information passing
between nodes

Power API V1.0

- Community model
 - New Specifications Document
 - Open meetings
 - Multi-institution involvement
- New convenience functions
 - Streamline writing code with object name length queries
- New notification methods between Interface hierarchy
 - Upcoming, coordinating with other communities

Reference Implementation Updates



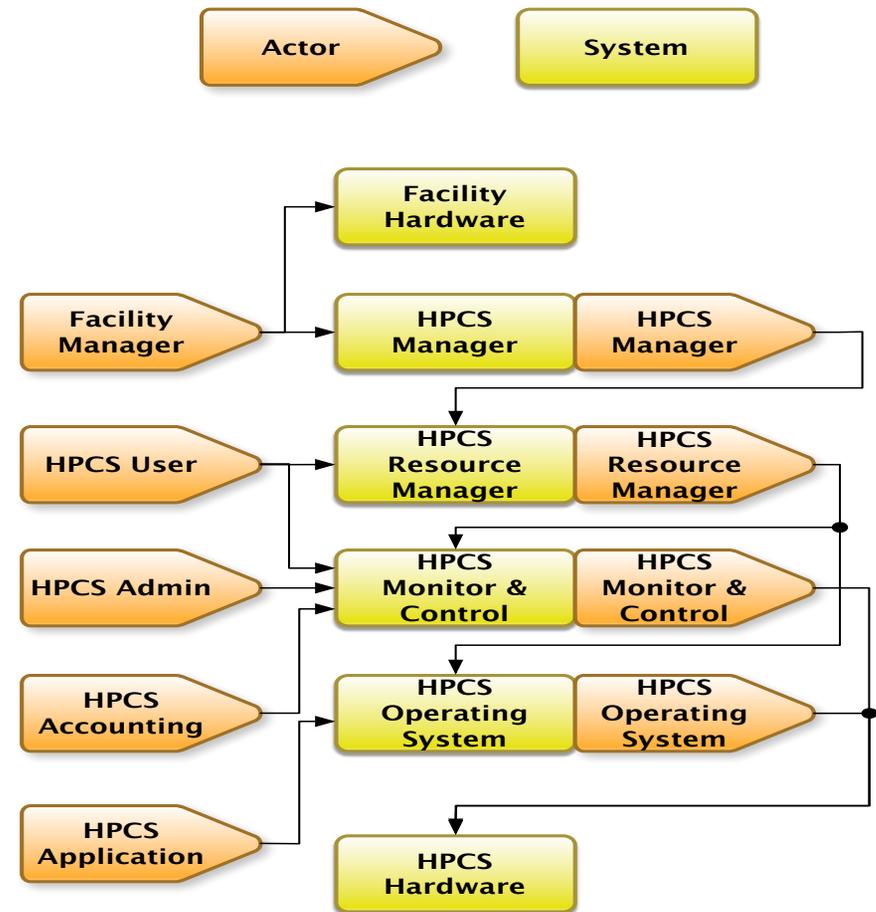
Available online and open source: <http://github.com/pwrapi>

Power API Overview

- Community standard API - EEHPCWG
- The Power API is a comprehensive system software API for interfacing with power measurement and control hardware
- Designed to be comprehensive across many different levels of a data center
- Many different actors can interface with a single API to perform several different roles
- Encompasses facility level concerns down to low level software/hardware interfaces

What is the Power API?

- Broad scoped, portable API
- Multiple actors can interact with the system at different levels
- Each interaction represents an interface that is defined in the Power API

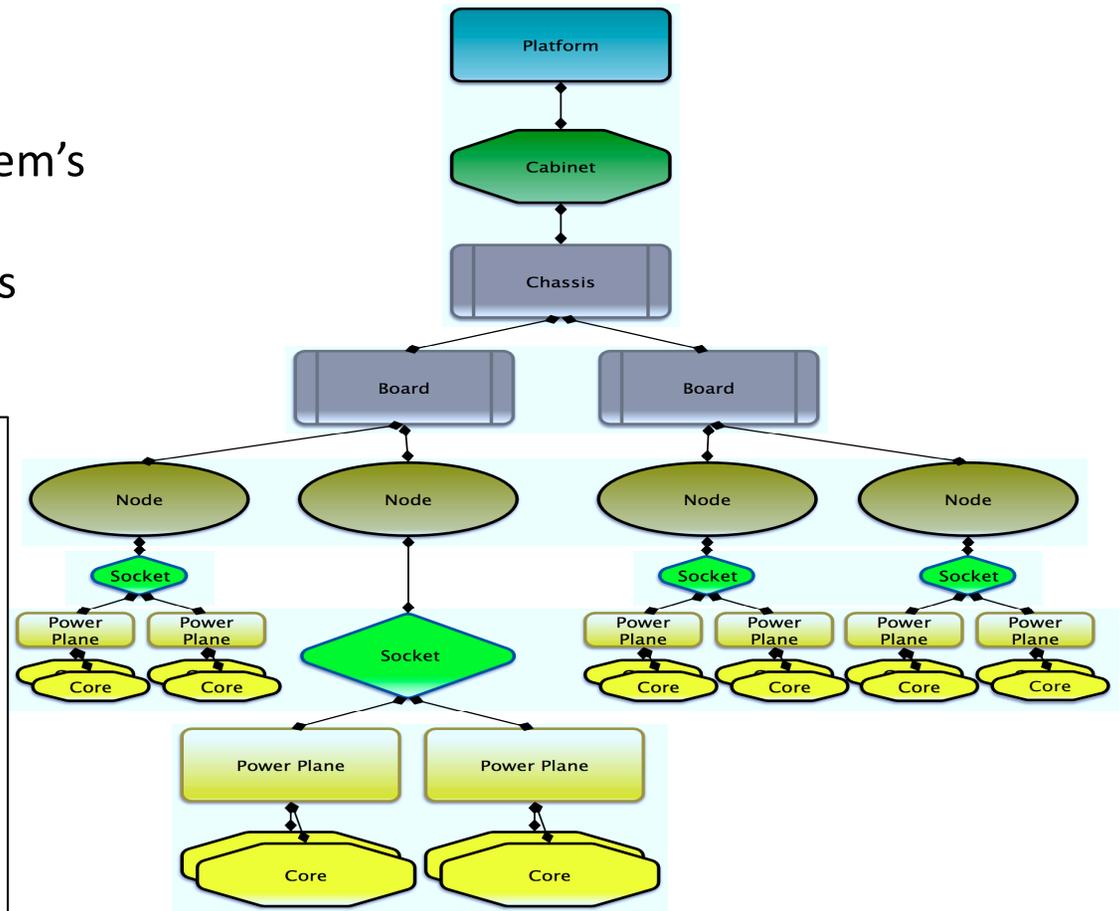


System Description

Presents a navigable view of the system's hardware components

- Can extend to custom object types
- Can be heterogeneous

```
typedef enum {  
    PWR_OBJ_PLATFORM = 0,  
    PWR_OBJ_CABINET,  
    PWR_OBJ_CHASSIS,  
    PWR_OBJ_BOARD,  
    PWR_OBJ_NODE,  
    PWR_OBJ_SOCKET,  
    PWR_OBJ_CORE,  
    PWR_OBJ_POWER_PLANE,  
    PWR_OBJ_MEM,  
    PWR_OBJ_NIC,  
    PWR_NUM_OBJ_TYPES,  
    /* */  
    PWR_OBJ_INVALID = -1,  
    PWR_OBJ_NOT_SPECIFIED = -2,  
} PWR_ObjType;
```



Example System Description