OCP HW management challenges, Nokia experience

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OCP HW management challenges

TOPICS:

• Background & target
• Solution alternatives
• Managing HW components
• Improvement needed
• Summary
OCP HW management
Background & target

All OCP HW types and other variants in portfolio
• Servers, switches, storages, power supply etc.

High level requirements:
• Best feature set for most computing needs
• Openness
• Cost efficient solution for our customers
  – CAPEX
  – OPEX
• Ease of operations & management
• Automation of operations
OCP HW management
Solution alternatives

HW management from HW component supplier
• several products & mixed user experience

Partner with HW management SW suppliers
• none available for our needs

Use open source solutions for HW management
• many tools & options available
• many HW management domains covered by open source projects, e.g.
  – Monitoring
  – Inventories
• none with complete feature coverage

-> need to develop own solution
OCP HW management
Managing HW components

One critical part is interfacing with HW
Selected to use Ironic for key element in interfacing with HW
• HW agnostic design
• Large community support
But it’s not enough...
• HW interfaces have vendor specific attributes
• Well known shortcomings of IPMI
• Other interface alternatives available & emerging, such as Redfish or Open BMC API
OCP HW management
Improvement needed for HW interfacing

Aim to common OCP HW management interface
Existing activities have not gone into deep enough details, more effort needed
Define concrete common interpretation on how to use HW management interfaces
Redfish usage needs to be defined in more detailed level, OCP reference for Redfish
Enable HW suppliers to support common Redfish for OCP
Ensure Open BMC can support the same common approach
Summary

Vendor specific HW management interfaces prohibit generic solutions
Existing activities in right direction, but not detailed enough
Define concrete common interpretation on how to use latest HW management interfaces
Enable HW suppliers to support common interface for OCP