



OCP SUMMIT

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Project Olympus OpenBMC

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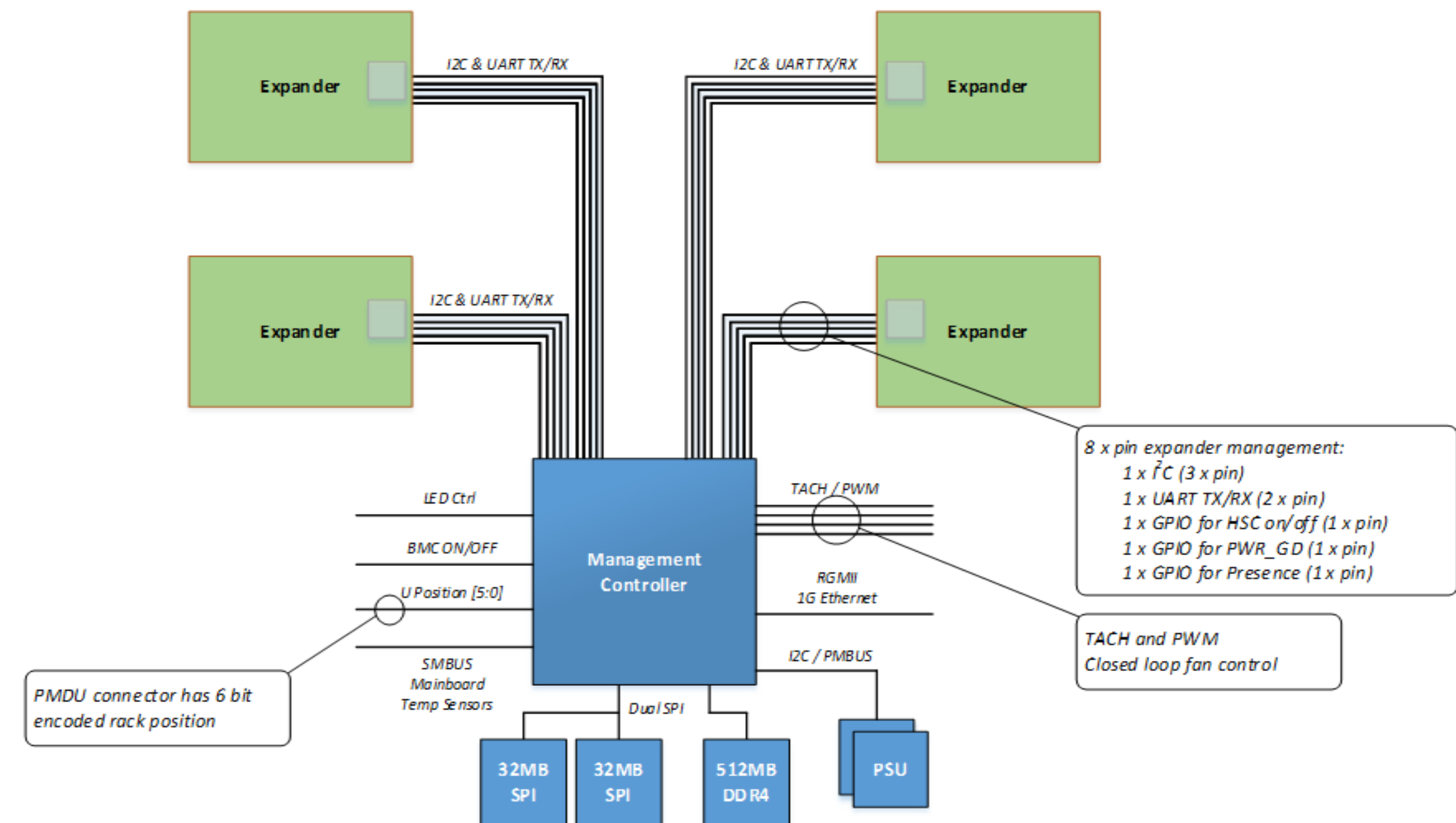
Project Olympus OpenBMC

- Microsoft Adoption of OpenBMC
- Microsoft OpenBMC contribution Roadmap
- Project Olympus OpenBMC
- Next Step

OpenBMC Adoption

- Adopted 1.5 Years ago as a result of Microsoft commitment to fully realize open H/W platform
- Targeted @ on low volume project Olympus H/W platform with moderate manageability
- Successfully customized to ship on 3 different Project Olympus H/W platform
- Created a community among Microsoft Partners

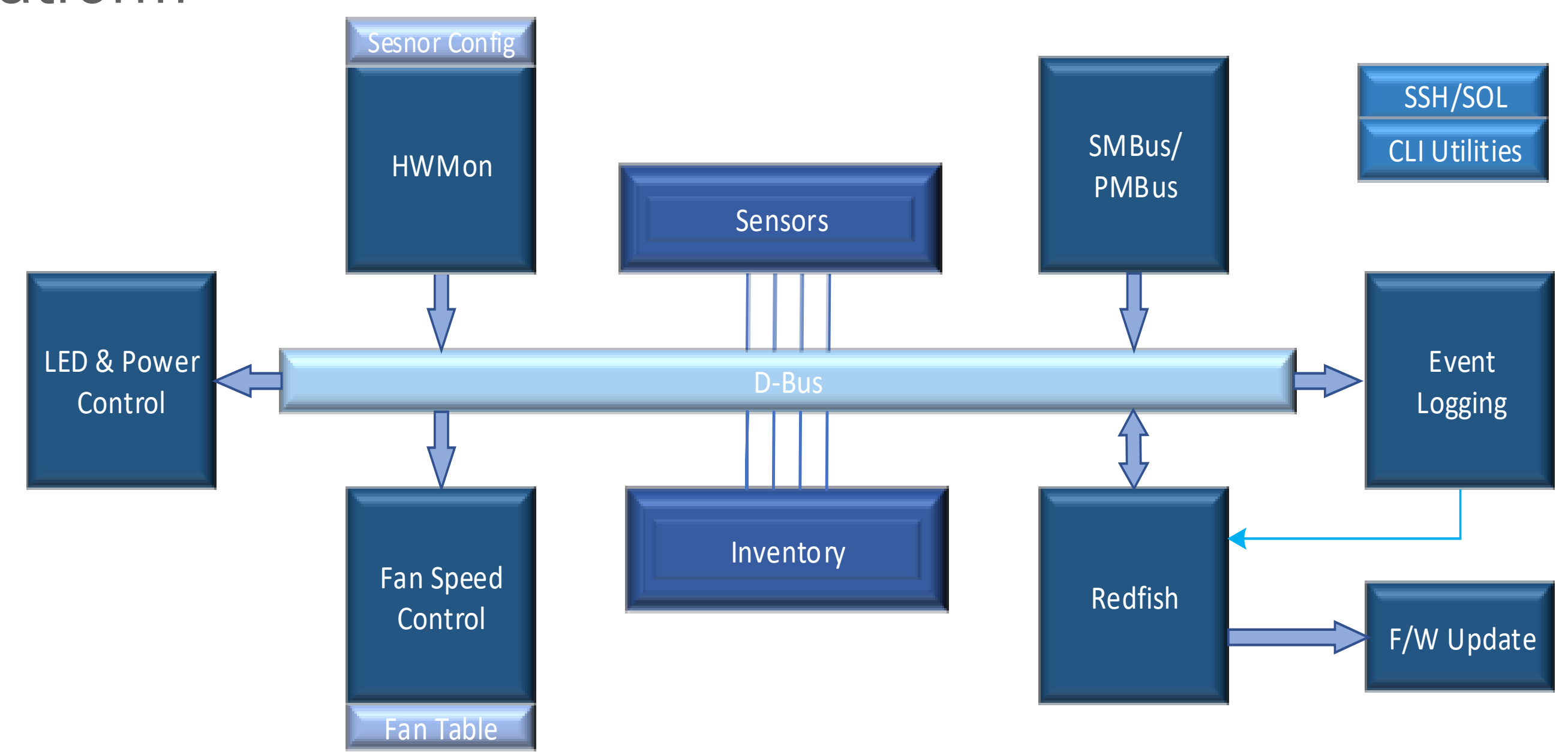
Figure 1 Baseboard Management Controller (BMC)



Microsoft OpenBMC



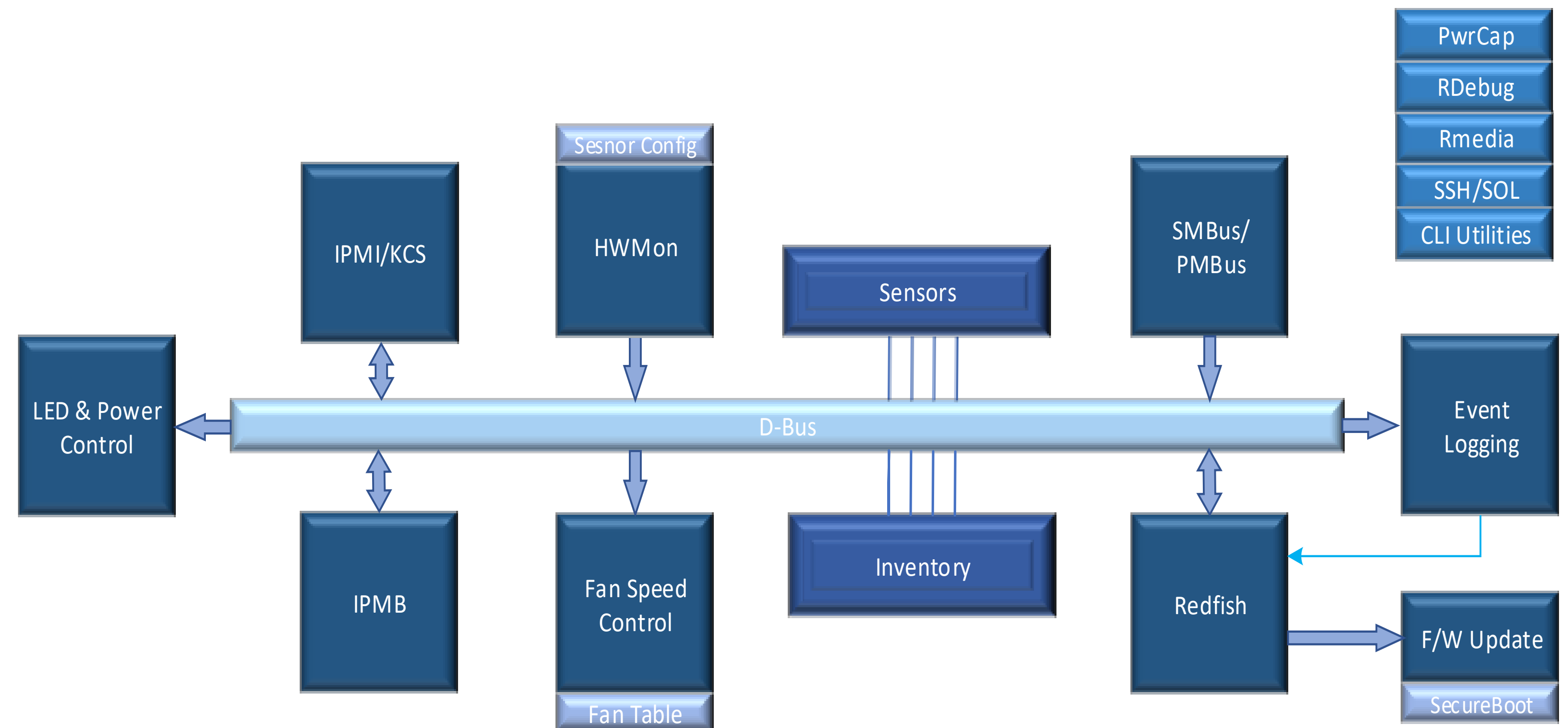
- Extended ,Optimized and Shipped on Storage platform
- F/W update : Dual flash and Signing support
- Redfish: Storage profile
- SMBus for satellite controllers
- PMBus for PSU monitoring
- Fan Speed Control
- SOL/SSH



Project Olympus OpenBMC roadmap



- Project Olympus openBMC workgroup
 - Redfish/Server profile
 - IPMI/KCS/SSIF
 - IPMB
 - LED/Power Control
 - Power Capping
 - Remote media
 - Remote Debug
 - Secure boot
 - Host tools

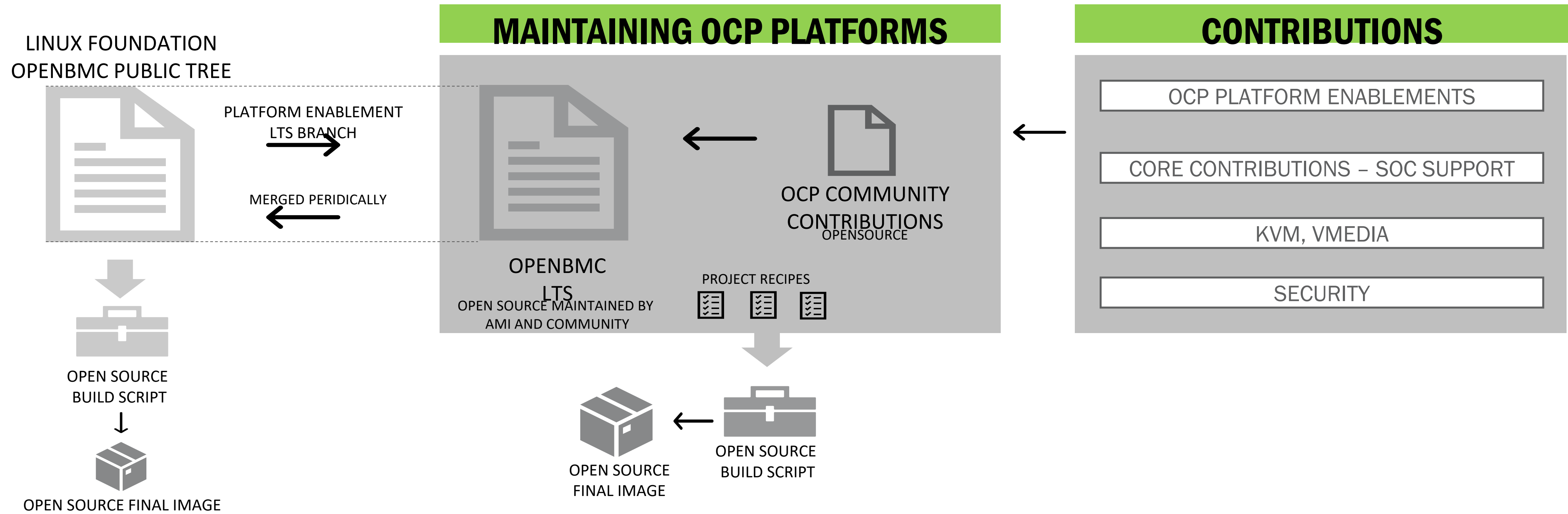


The slide features a header with the title 'Technical Challenges' in white text on a green background. The background image shows a server room with racks of equipment. The main content area is white with a light gray horizontal bar at the top.

Technical Challenges

- To achieve a long-term supported stable codebase for product delivery
 - Marinating a Long Term Support codebase is necessary for successful product delivery
- To achieve a robust, production-worthy stack for the OCP platforms
 - Defining the QA metrics for the Long Term Supported codebase for real product delivery
- To address Security/Vulnerability advisories
 - Defining the Security Analysis (Vulnerability tests, PEN tests, Certifications etc.) Metrics
 - Support for all hardware security implementations for all platform architectures (HROT, Image Signing Process etc.)

AMI's commitment to OpenBMC & OCP Platforms



AMI's contributions for Project Olympus

- KCS Interface
 - KCS Device Driver
 - KCS Interface Service
- Serial Over LAN
 - IPMI based SOL
 - Can be used with standard ipmitool – Ex: `ipmitool -H <BMC IP> -I lanplus sol activate`
- I2C over LAN (Bridge)
 - Read/Write I2C device over LAN interface
 - Can be used with standard ipmitool
- IPMI LAN Interface

AMI's contributions for Project Olympus



- Chassis Power Usage
 - Control Chassis power over LAN and KCS Interface
 - Standard ipmitool can be used for both KCS and LAN interface
- Platform Sensor support:

Sensor Name	Sensor Value	Units	Status	LNR	LC	LNC	UNC	UC	UNR
Temp_Outlet	23.00	degrees C	ok	na	5.000	10.000	60.000	80.000	na
Temp_2U_SensorB	21.00	degrees C	ok	na	5.000	10.000	60.000	80.000	na
P3V3	3.300	Volts	ok	na	2.500	3.000	3.500	4.000	na
P5V	5.100	Volts	ok	na	3.000	4.200	5.500	6.000	na
P12V_AUX	12.400	Volts	ok	na	11.400	11.700	12.500	13.000	na
P1V05_STBY_PCH	1.060	Volts	ok	na	0.700	0.900	1.200	1.500	na
PVNN_STBY_PCH	0.910	Volts	ok	na	0.600	0.800	1.200	1.400	na
P3V3_STBY	3.300	Volts	ok	na	2.500	3.000	3.800	4.000	na
P5V_STBY	5.100	Volts	ok	na	4.000	4.500	5.800	6.000	na
P3V_VBAT	0.100	Volts	ok	na	2.500	2.800	3.300	3.700	na

AMI's contributions for Project Olympus



Supported IPMI Commands (both KCS & LAN Interface):

Command Name	Example
Get Device ID	raw 0x6 0x1
Get Chassis Capabilities	raw 0x0 0x0
Get/Set Lan configuration	lan print 1
Get SEL Information	raw 0xa 0x40
Get SEL Time	0xa 0x48
Chassis Control Command	chassis power <on/off/cycle/reset/status>
Get SDR Information	sdr
Get SEL Information	sel
Reserve SEL	raw 0xa 042
Read FRU	fru
Get Sensor Information	sensor
Get Sensor Threshold	raw 0x4 0x27 <sensor number>
Get Sensor Reading	raw 0x4 0x2D
Get Sensor Type	raw 0x4 0x2F <sensor number>
I2C Master Write/Read	raw 0x6 0x52 0x6 0x4c 1 1
Get SOL Info	sol info
SOL Activate	sol activate
Get BT Capabilities	raw 0x6 0x36
Cold Reset	bmc reset cold



Next Step

- Continue development effort to complete Project Olympus Server manageability features
- Join Project Olympus workgroup and provide feedback
- Download and try the OpenBMC support for Project Olympus:
- <https://github.com/ProjectOlympusOpenBMC>



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