

OCP Tech Talks: Networking

May 10-12, 2022

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Agenda

- Introduction to OCP Networking Project
- Key updates since the last summit in Nov 2021
- Review today's talks



The OCP Networking Project

- **Charter:** Facilitate and enable innovative **open** HW and SW that enable network solutions for hyperscale, large enterprise, and large telco through collaboration with the wider OCP ecosystem
- Supports sub-projects anchoring around particular focus areas
 - Open Network Install Environment (ONIE)
 - OpenNetworkLinux (ONL)
 - Switch Abstract Interface (SAI)
 - Enterprise Connectivity Solutions (ECS)
- Project Wiki: <https://www.opencompute.org/wiki/Networking>

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Key updates to OCP Networking

- New sub-projects launched!
 - NIC Software (Mar '22): Focus on NIC networking SW features
 - AEC Interconnect (Apr '22): Focus on Active Electrical Cables
- SONiC sub-project has moved from OCP to Linux-Foundation

Agenda of Talks: Day 1, May 10

8.35 - 8.55 AM	Rita Hui (Microsoft) Shri Khare (Meta)	SAI sub-project updates
9.00 - 9.10 AM	Steven Noble (Amazon)	OpenNetworkLinux sub-project updates
9.10 - 9.25 AM	Jack Redpath (ArsiaLabs) Jeff Strange (Target)	Enterprise Connectivity Solutions (ECS) sub-project updates
9.30 - 9.55 AM	Jakub Kicinski (Meta) Willem De Bruijn (Google)	Datacenter NIC crypto offloads - progress
10.00 - 10.25 AM	David Iles (NVIDIA)	Adaptive Routing For AI Clusters and Storage Fabrics (Ethernet)
10.30 - 10.55 AM	David Iles (NVIDIA)	Data Center Fabrics need to be Smart at every Tier – not just the edge
11.00 - 11.25 AM	Jay Vargas (Scala Computing) Dan Mihailescu (Keysight)	A Novel Approach For Experimentation, From Lab Testing To Large Data Center Simulations

Call for action: Day 1

- OCP Global Summit: Oct 18-20
 - Call for papers is launched
 - Submit your abstract. Closes June 19
- SAI
 - Contribute to SAI
 - ASIC Vendors: Increase SAI API Coverage
- Enterprise Connectivity Solutions
 - Join the sub-project mailing list and twice-monthly calls

Call for action: Day 1

- NIC Software: Join the effort
 - Wiki: opencompute.org/wiki/Networking/NIC_Software
 - Meetings: 2nd Monday of the month, 10am PT
- NVIDIA: Collaborate with community on standardizing “Adaptive Routing” (Data-plane and Control-plane)

Agenda of Talks: Day 2, May 11

8.30 - 8.55 AM	Qing Wang, Thang Pham, Abhijit Chakravarty, Arun Mohan, Tom McCandlish (Meta)	200G/400G FR4 large-scale deployment in Meta's data center
9.00 - 9.25 AM	Chris Berry, Chet Powers (Meta)	Automating Triaging of Network Circuit Flaps and Port Failures
9.30 - 9.55 AM	Absar Ulhassan (Meta)	Multi-Path Interference Detection for intra-DC links
10.00 - 10.25 AM	Xu Wang (Meta)	OCP driven standardization to deliver high volume NPO switch systems for the future
10.30 - 10.55 AM	Ivan Kong (Ragile Networks)	51.2Tbps NPO Switch Practice and Challenges

Call for action: Day 2

- Large scale optics deployment experience takeaways
 - Supply chain flexibility
 - Continuous improvement
 - Diversification of manufacturing footprint
- Triaging link failures in large scale deployments
 - Standardize Optics (CMIS) and (X)PHY (SAI) telemetry parameters
 - Support high-speed collection of telemetry data
 - Share your triaging experiences

Call for action: Day 2

- Need to develop reliable methods to detect high values of Multi-path interference
- NPO Switch Systems
 - Looking for feedback on physical / mechanical aspects of the card
 - Feedback on standardizing and addressing challenges
 - power envelope
 - mezzanine connector
 - mid-board / optical connector
 - cooling challenges for 1RU NPO Switches
 - power distribution challenges

Agenda of Talks: Day 3, May 12

8.30 - 8.55 AM	Don Barnetson (Credo Semiconductor) Run Almog (DriveNets)	The HiWire Consortium Joins Forces with OCP to Standardize Active Electrical Cables (AECs)
9.00 - 9.25 AM	Jack Redpath (ArsiaLabs)	OCP Gigabit Access Switch for Enterprise - Community Spec. Review
9.30 - 9.55 AM	Mingxuan Li (China Unicom) Tina Tsou (ARM/LF)	EdgeFaaS Collaborative R&D for Open Edge Scenarios
10.00 - 10.25 AM	Venkat Pullela, Manodipto Ghose, Parth Parikh, Nitesh Jha (Keysight)	Testbed in a Box - SONiC case study
10.30 - 10.55 AM	Cliff Grossner (OCP Foundation)	OCP HW-SW co-design strategy. OCP and L/F working together

Call for action: Day 3

- Join the OCP sub-project on AEC Interconnect and help develop the ecosystem
- Enterprise Gigabit Switch [specifications](#)
 - Join ECS bi-monthly calls
[https://www.opencompute.org/wiki/Networking/Enterprise_Connectivity_Solutions_\(ECS\)](https://www.opencompute.org/wiki/Networking/Enterprise_Connectivity_Solutions_(ECS))
 - Contribute to the specifications

Call for action: Day 3

- Engage on EdgeFaaS / Open Edge use cases
- SONiC testbed in a box
 - Join and collaborate in the SONiC test workgroup @ <https://groups.google.com/g/sonic-test-workgroup>
 - Share your testing requirements and strategies at OCP
- SIOV Contribution: Contribute to revision 2 specification when the call is out
- SONiC community will continue to collaborate with OCP on SAI, OCP recognized hardware, and Enterprise features