

Theme	Duration	Time	Title	Presenter	Description
		8:30 - 9:00	Registration		
Intro	15	9:00 - 9:15	Introduction	Tim O'Driscoll (Intel)	Welcome people to the event, describe the agenda, logistics and expectations.
Community Updates	75	9:15 - 10:30	Tech Board Presentation & Panel Discussion	Technical Board	Presentation and panel session with the Technical Board on: Who the Tech Board are, what their responsibilities are, recent issues that they've addressed, future technical priorities/challenges.
	20	10:30 - 10:50			Break
Community Updates	40	10:50 - 11:30	Governing Board Presentation & Panel Discussion	Governing Board	Presentation and panel session with the Governing Board on: Who the Governing Board are, what their responsibilities are, progress to date, future priorities/challenges.
Bus & Device Mgmt	30	11:30 - 12:00	DPDK Bus Updates	Ferruh Yigit (Intel)	DPDK bus infrastructure has been updated for last a few releases. Although these changes should not affect the user application, it worth mentioning the changes. In this talk, I will summarize the bus changes and mention from required modifications in drivers.
Bus & Device Mgmt	15	12:00 - 12:15	Ideas for adding generic HW accelerators to DPDK.	Hemant Agrawal (NXP)	There are various kind of HW accelerators available with SoCs. Each of the accelerator may support different capabilities and interface. Many of these accelerators are programmable devices. In this talk we will discuss various ways to support such accelerators in a generic manner.
	60	12:15 - 1:15			Lunch
Bus & Device Mgmt	30	1:15 - 1:45	Let's hot plug: use uevent mechanism to practice it in DPDK	Jia Guo (Intel)	Hot plug is a key requirement for live migration. So far, the hot plug and fail-safe implementation is still not friendly for PCIe devices. This talk proposes to add a general uevent mechanism in DPDK which include the uevent monitor and failure handler, to make it easy for DPDK users to implement hot plug.
Bus & Device Mgmt	15	1:45 - 2:00	Proposed method for sharing a (PCI) device between multiple PMDs	Fiona Trahe (Intel)	Devices on the PCI bus are found by the bus probe function. For each device, the list of registered drivers (PMDs) is searched until one (only) is found for the device. This presentation proposes a mechanism to share a pci device between multiple PMDs. It may also be extendable to non-pci devices.
Bus & Device Mgmt	30	2:00 - 2:30	DPDK VMBus & Azure Support	Stephen Hemminger (Microsoft)	This is talk about the current status and planned development of VMBus support for DPDK. This talk also gives an overview of how DPDK applications are enabled on Azure Accelerated Networking using the Fail-Safe, TAP and existing drivers. It will cover some of the requirements and plans for the future.
	20	2:30 - 3:00			Break
APIs	40	3:00 - 3:45	rte_security: the case of IPsec offload	Boris Pismenny (Mellanox) Declan Doherty (Intel) Hemant Agrawal (NXP)	Encryption in today's networks is becoming ubiquitous. However, running crypto on general purpose CPUs is costly. In this talk we present joint work by NXP, Intel and Mellanox on offloading protocol processing to hardware providing better utilization of host CPU for packet processing.
APIs	30	3:45 - 4:15	DPDK Quality of Service APIs	Cristian Dumitrescu (Intel) Jasvinder Singh (Intel)	This presentation focuses on the new QoS Traffic Management API for Ethernet devices that was introduced by DPDK release 17.08, as well as the new QoS Traffic Metering and Policing API planned for DPDK release 17.11. We describe the API, device drives currently supporting it and software fall-back strategy using the SoftNIC PMD.
APIs	30	4:15 - 4:45	Service Cores: The path to Abstracting SW/HW CPU Requirements in DPDK	Harry van Haaren (Intel)	Service cores is a library that abstracts the platform, providing an app with a consistent environment. Service cores allows switching of SW and HW PMDs with no application threading changes. This talk introduces service-cores, and opens discussion on how to enable DPDK with service cores.
APIs	20	4:45 - 5:05	Wireless Base Band Device (bbdev)	Amr Mokhtar (Intel)	Wireless Base Band Device (bbdev) proposal for DPDK that abstracts HW accelerators based on FPGA and/or Fixed Function Accelerators that assist with LTE Physical Layer processing. Furthermore, it decouples the application from the compute-intensive wireless functions by abstracting their optimized libraries to appear as virtual bbdev devices.
APIs	20	5:05 - 5:25	DPDK to support InfiniBand Link Layer	Shahaf Shuler (Mellanox)	There are many large InfiniBand clusters in the HPC market, they too would like to gain the DPDK user space high packet rate processing advantage, in addition to the RDMA capabilities. I will present the basic InfiniBand and IPoIB differences from Ethernet, and present results from a live POC on a 20 node cluster with DPDK using IPoIB
		5:30			Close
		6:00 - 8:00			Evening Reception

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CI & Process	45	9:00 - 9:45	Community Activity, CI & Tools	Thomas Monjalon (Mellanox) Qian Xu (Intel) John McNamara (Intel) Ian Stokes (Intel)	The userspace summit is a good place to make a yearly summary of community changes and interactions. It is also important to describe how DPDK interact with other communities. The last part would be about community processes (repositories, distributed CI, bugs tracking, tooling, website, mailing lists and Linux Foundation).
CI & Process	30	9:45 - 10:15	ABI Stability and LTS: Current state and Future	Luca Boccassi (AT&T) Kevin Traynor (Red Hat)	This session will be a panel discussion of the future direction of ABI stability & LTS/Stable releases. In particular it will look at the request for a yearly xx.11 LTS release with a 2 year duration.
Control Plane	15	10:15 - 10:30	Implementing an SR-IOV Hypervisor using DPDK.	Alex Zelezniak (AT&T)	In the presentation we will describe VFd, a hypervisor for SRIOV NICs jointly developed by AT&T and Intel, which uses DPDK and acts as policy enforcement software allowing advanced configuration of SR-IOV capable Network Interfaces. We will provide overview of the use cases and new DPDK API's to support them.
	20	10:30 - 10:50			Break
Control Plane	25	10:50 - 11:15	DPDK SRIOV and control over embedded switch	Alex Rosenbaum (Mellanox)	When working in SRIOV mode, we would prefer to let majority of the traffic to pass in HW directly from/to wire to/from VF, while the OVS-DPDK application only needs to handle exception packet flows on the PF. To support this mode we want to show a new Representor Ports model of the HW switch, which can be controlled from DPDK.
Control Plane	30	11:15 - 11:45	A framework for representation, configuration, and management of virtual function ports in DPDK	Declan Doherty (Intel)	This presentation introduces a port representor framework to DPDK. The framework based around a virtual representor PMD and representor broker plugin for physical function devices, provides the infrastructure to allow SR-IOV virtual function ports to be configured, managed and monitored within a single control application.
VNFs	30	11:45 - 12:15	Improve VNF safety with Vhost-User/DPDK IOMMU support	Maxime Coquelin (Red Hat)	This talk will focus on improving VNF safety with Virtio and Vhost-user backend. Maxime will first describe VNF architecture relying on Virtio/Vhost-user. Then, he will talk about IOMMU support for the Vhost-user backend. Finally, Maxime will provide benchmarks results and discuss ways to improve both performance & safety.
	60	12:15 - 1:15			Lunch
VNFs	30	1:15 - 1:45	Virtio Status Update and New Ring Layout	Zhihong Wang (intel)	The packed ring layout is the next generation ring layout standard for Virtio, which is designed for high performance and still in the proposal stage. This talk will give a quick introduction to this new ring layout definitions and summary the current status, findings and benchmark results of the prototype in DPDK.
CPU Improvements	30	1:45 - 2:15	Power Aware Packet Processing	Chris MacNamara (Intel)	A drive to deliver OPEX saving and performance where and when it's needed. Enter a new era of power optimized packet processing. This talk reviews new & existing dpdk extensions for policy based power control proposed in August and the associated performance benefits.
User Applications	15	2:15 - 2:30	DPDK, VPP and pfSense 3.0	Jim Thompson (Netgate)	pfSense is a open source firewall/vpn appliance, based on FreeBSD, started in 2006 with over 1M active installs. We are basing pfSense release 3.0 on FD.io's VPP, leveraging key DPDK components including cryptodev, while adding a CLI and RESTCONF layer, leveraging FRROUTING and Strongswan.
User Applications	15	2:30 - 2:45	Rapid prototyping of DPDK applications with libmoon	Paul Emmerich (Technical University of Munich)	This talk is about our framework libmoon (https://github.com/libmoon/libmoon), a wrapper for DPDK that makes building DPDK prototypes simple and fast. We've used it for multiple research prototypes as well as our packet generator MoonGen (presented last year here).
	15	2:45 - 3:15			Break
User Applications	15	3:15 - 3:30	Using DPDK with Go	Takanari Hayama (Igel)	In our presentation, we share the lesson learned from our experience using DPDK with Go in order to implement a software router Lagopus2 (https://github.com/lagopus/vsw). We'll explain how we carefully designed DPDK binding in Go to guarantee the type safeness and the performance at the same time.
User Applications	15	3:30 - 3:45	T4P4S: When P4 meets DPDK	Sándor Laki (ELTE Eötvös Loránd University) Kuralamudhan Ramakrishnan (Intel)	T4P4S is a P4 compiler supporting flexible re-targetability without sacrificing high performance packet processing. To achieve this goal, it is split into hardware dependent and independent components. This talk will show the architecture of T4P4S and the design decisions made to support DPDK.
User Applications	15	3:45 - 4:00	Dataplane Networking journey in Containers	Gary Loughnane (Intel)	Our advanced Container Network Interface combines the benefits of containers with DPDK's ultra-low latency and fast packet processing and the results show 28x more performance with SRIOV, DPDK using Vhost-User with OVS-DPDK and VPP.
	60	4:00 - 5:30	Overflow/late topics		
		5:30			Close