DPDK Community Update

Jim St. Leger
Director, Software Product Marketing, Intel
DPDK Governing Board Chair
June 24, 2019
DPDK in the Media

The Linux Foundation Is Changing The Fabric Of Networking

By Guy Daniels
Jun 22, 2018

OpenSwitch and the DPDK projects deliver open networking upgrades for telcos

Linux Networking Efforts Advances with New DPDK and OpenSwitch Releases

By Sean Michael Kerner | Posted Jun 22, 2019
Who else is using DPDK

中国用户

Global User

欢迎大家加入DPDK会员，为社区贡献力量！
Software Projects Consuming DPDK

vSwitches/vRouters
- VPP
- Open vSwitch
- BESS
- Lagopus
- tungsten fabric
- Cloud Router
- vmware

DPDK in OS Distros
- redhat
  Version 7.1 +
  Version 10.1 +
- ubuntu
  Version 15.10 +
- WIND
  Version 6 +
- fedora
  Version 22 +
- CentOS
  Version 7.1 +
- Windows

Packet Generators
- TRex
- Pktgen
- Ostinato
- MoonGen

TCP/IP Stacks
- mTCP
- TLDK & VPP
- F-Stack
- Seastar
- LWIP DPDK

Storage
- Storage Performance Development Kit (SPDK)
- ceph
- Seastar
A Continuous Growing Community

**What's new in the past year (just to name a few...)**
- vhost post-copy
- better dynamic logging support
- base band device
- port representor
- vDPA
- af_xdp driver
- Windows support
- libte_telemetry
- libre_stack
- ice driver
- fpga bus driver
- virtio1.1
- musl compatibility improvements
- hotplug
- compress device
- bpf support
- libre_ipsec
- raw device
- RCU support
- ipn3ke driver
- memory enhancements
- virtio-user enhancements for container
- better new offload API support
- generic multi-process communication channel

**Active Contributors**

Microsoft
IBM
arm
NXP
SOLARFLARE
CISCO
NETRONOME
BROCADE
MEMLANOX TECHNOLOGIES
CANONICAL
Linaro
Red Hat
Cloudius
RehiveTech
MARVELL
EZCHIP
SEMIAHALF
Chelsio
IGEL
BROADCOM
QLOGIC
OCTEOS
SUNPHASE
EMC
Dell
IBM
HP
Cisco
Intel
AMD
Supermicro
Hewlett-Packard
Lenovo
NVIDIA
Google
Facebook
Microsoft
Apple
Amazon
Alibaba
Tencent

dpdk.org

强大的开源社区，持续的前沿技术输入！
DPDK Release Growth

19.05 Release Stats:
1057 patches
142 authors
46 new contributors
>20 contributing orgs

DPDK 19.05 Release

- Deep community involvement! **1057** patches from **142** contributors!
- Main feature list
  - Updated driver support for various NICs
  - Asymmetric Crypto and compression enhancements
  - Virtio 1.1 initial support
  - Non-Blocking Stack Mempool Handler
  - Initial Windows Support
  - Power management
  - AF_XDP PMD

More details at https://doc.dpdk.org/guides/rel_notes/release_19_05.html
Upcoming Events in Bordeaux and US

DPDK Summit Userspace, Bordeaux
**September 19-20, 2019**
2-day event

DPDK US Summit, San Jose
**December, 2019**
2-day event

https://www.dpdk.org/events/
## Agenda in the morning

<table>
<thead>
<tr>
<th>Time</th>
<th>Duration</th>
<th>Presenter</th>
<th>Company</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 - 9:15</td>
<td>15</td>
<td>Jim St leger</td>
<td>Intel</td>
<td>Opening</td>
</tr>
<tr>
<td>9:15 - 9:40</td>
<td>25</td>
<td>Tao Yang, Xuekun Hu</td>
<td>Intel</td>
<td>Archive stable high performance DPDK on modern multi-core CPU</td>
</tr>
<tr>
<td>9:40 - 10:05</td>
<td>25</td>
<td>Fan Zhang, Ping Yu</td>
<td>Intel</td>
<td>DPDK IPsec: a scalable high performance library for your IPsec application</td>
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<tr>
<td>10:05 - 10:30</td>
<td>25</td>
<td>Yijun Hou</td>
<td>Alibaba</td>
<td>DPK Slab Allocator and applied it to zero-copy stack</td>
</tr>
<tr>
<td>10:30 - 10:45</td>
<td>15</td>
<td>Shu Ma</td>
<td>Alibaba</td>
<td>DPDK based userspace TCP/IP stack testing</td>
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<tr>
<td>10:45 - 11:00</td>
<td>15</td>
<td></td>
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<td>破</td>
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<tr>
<td>11:00 - 11:20</td>
<td>20</td>
<td>Ben-Shahar Belkar</td>
<td>Huawei</td>
<td>Developing CI/CD for Huawei Smartnic DPDK PMD using DTS</td>
</tr>
<tr>
<td>11:20 - 11:45</td>
<td>25</td>
<td>Sharan Santhanam</td>
<td>NECLAB</td>
<td>Building DPDK Unikernels with Unikraft</td>
</tr>
<tr>
<td>11:45 - 12:10</td>
<td>25</td>
<td>Zijiang Zhou</td>
<td>JD</td>
<td>Networking Products Based on DPDK Integrated with Kubernetes Container Networking Contiv</td>
</tr>
<tr>
<td>12:10 - 13:10</td>
<td>60</td>
<td></td>
<td></td>
<td>午休</td>
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## Agenda in the afternoon

<table>
<thead>
<tr>
<th>Time</th>
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<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:10 - 13:35</td>
<td>25</td>
<td>Xiaohua Wang</td>
<td>Ericsson</td>
<td>5G Core network load test system with DPDK</td>
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<tr>
<td>13:35 - 14:00</td>
<td>25</td>
<td>Jingjing Wu</td>
<td>Intel</td>
<td>DPDK: Accelerate Remote Rendering of Cloud Gaming</td>
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<tr>
<td>14:00 - 14:15</td>
<td>15</td>
<td>Rosen Xu</td>
<td>Intel</td>
<td>Flow and HQoS DPDK Acceleration Using 100GBE Intel Programmable Acceleration Card</td>
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<td>14:15 - 14:35</td>
<td>20</td>
<td></td>
<td></td>
<td><strong>Break</strong></td>
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<tr>
<td>14:35 - 15:00</td>
<td>25</td>
<td>Tim O'Driscoll</td>
<td>Intel</td>
<td>Balancing Application Performance and Portability</td>
</tr>
<tr>
<td>15:00 - 15:25</td>
<td>25</td>
<td>Joyce Kong, Gavin Hu</td>
<td>ARM</td>
<td>Vhost and virtio on ARMv8 performance tuning and optimization</td>
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<td>15:25 - 15:40</td>
<td>15</td>
<td>Linsi Yuan</td>
<td>Baidu</td>
<td>Practice of ovsdpdk in Baidu</td>
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<tr>
<td>15:40 - 15:55</td>
<td>15</td>
<td>Xiaolong Ye</td>
<td>Intel</td>
<td>Integrating AF_XDP into DPDK</td>
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</table>

Thank You – The DPDK Event Team

• Zhihong Wang, Intel
• Tim O’Driscoll, Intel
• Jim St. Leger, Intel
• Cunming Liang, Intel
• Ferruh Yigit, Intel
• Konstantin Ananyev, Intel
• Bruce Richardson, Intel
• George Zhao, Huawei
• Maxime Coquelin, Red Hat
• Philippe Robin, ARM
• Thomas Monjalon, Mellanox
• Yong Wang, ZTE
• Trishan de Lanerolle, The Linux Foundation
• Sana Ali, The Linux Foundation
Final Thoughts

- Focus here, multitask elsewhere
- Timing suggestion:
  - 25 min sessions: 20 min talk + 5 min Q&A
  - 15 min sessions: 12 min talk + 3 min Q&A
- Have fun! 😊