DPDK Support on Azure

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Agenda

- DPDK support overview
  - Linux Azure networking
  - DPDK Azure
- Availability
- Roadmap
Hyper-V driver Roadmap (2016)

0.0 – Unreleased
   - Developed as part of vRouter
   - Joint development
   - Basic functionality

1.0 – 17.04 DPDK
   - Performance
   - Multi queue
   - SR-IOV
   - VFIO API
   - Integration (tests, examples) etc.

1.1 – 17.07 DPDK
   - Performance
   - Multi queue
   - SR-IOV
   - VFIO API
   - Integration (tests, examples) etc.
Different, But Better.
Azure Accelerated Networking
Linux Accelerated Networking

User

Application

TCP/IP

Bonding

NetVSC

Mlx4

Kernel

Virtual Hardware

NDIS

VMBus

ConnectX3 VF
DPDK Architecture

• Mellanox DPDK drivers
• TAP PMD
• Fail-Safe PMD
• TC redirect glue
DPDK Azure Network

DPDK Application

Fail Safe PMD

TAP PMD

Mlx4 PMD

RDMA

MLX4 Provider

TCP/IP

TC redirect

NetVSC

TAP

NDIS VMBus

ConnectX3 VF

User

Kernel

Virtual Hardware
Limitations

- Kernel 4.14 (or backport)
- DPDK 17.11
- Azure
  - Developer preview
  - 8 or more core
  - Creation only
  - Rollout by region
DPDK Azure Roadmap

Today

- Azure AN (preview)
- Ubuntu 16.04 +
- DPDK 17.11
  - TAP PMD
  - Failsafe PMD

Planned

- Azure AN (default)
- All major distro
- DPDK 18.04?
  - Netvsc PMD
  - Transparent VF
Hyper-V and Azure Credits

**Mellanox**
- Raslan Darawsheh
- Olga Shern
- Eyal Mizrachi

**6Wind**
- Gaetan Rivet
- Adrien Mazarguil
- Olivier Matz
- Pascal Mazon
- Thomas Monjalon

**Microsoft**
- Josh Poulson
- Madhan Sivakumar
- Gabriel Silva

**Intel**
- Ferruh Yigit
- Qi Zhang
- Keith Wiles

**Brocade**
- Chas Williams
- Eric Kinzie
- Jan Blunck
- Nachiketa Prachanda
- Sven-Thorsten Dietrich
- Wen Chiu
Thank you