Hyper-V support in DPDK

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Agenda

Hyper-V overview
  Architecture
  Networking

Hyper-V DPDK Roadmap
  17.04 release
  Follow on features

Future plans and Issues
Hyper-V Overview
Subtitle

• Integrated since Windows Server 2008
  • Type 1 hypervisor
  • Requires hardware virtualization
  • Core of Azure cloud

• Generations
  • 1 – VM with legacy BIOS and optional emulated devices
  • 2 – VM with UEFI secure boot no emulated devices
Hyper-V driver Roadmap

- 0.1 – Unreleased
  - Developed by Brocade as part of vRouter
- 1.0 – 17.04 DPDK
  - Joint development
  - Basic functionality
- 1.1 – 17.07 DPDK
  - Performance
  - Multi queue
  - SR-IOV
  - VFIO API
  - Integration (tests, examples) etc.
SRIOV issues

- Ethernet driver model
  - Notification on other device state changes
  - Inject packets from other device
  - Multiple devices same MAC

- Bonding driver
  - Zero conf setup?
Future plans

• Improved Host/Guest communication
  • Leverage Direct path
  • Better layout
  • Security
• DPDK support in Windows guest?