Deep Dive: How NICs Work Today

WGTLGO ("We Got The Last Good One")

Chairs:
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Note Well

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● BCP 54 (Code of Conduct)
● BCP 78 (Copyright)
● BCP 79 (Patents, Participation)
● https://www.ietf.org/privacy-policy/ (Privacy Policy)
Agenda

● Administrivia + Intro (10 minutes)
  ○ Note Well
  ○ Agenda Bashing
  ○ Scribe Dragooning
  ○ Jabber
  ○ Remote participation
  ○ Blue Sheets
  ○ Introduction

● Presentation (55 minutes)
  ○ Clarifying questions only please

● Q&A (25 minutes)
Introduction: Focus

● In Scope
  ○ Basic NIC support
  ○ Hardware offload from host stack functionality
  ○ Linux kernel is reference for architecture and APIs

● Out of Scope:
  ○ Kernel bypass
  ○ Smaller CPE level devices or Large ASICs
  ○ Virtualization offload technology
  ○ Storage/NIC Interfacing
Introduction: Technology Relationship to IETF

- Protocol implementation
- Nodes that performing both host and forwarding functions
- NICs can accelerate host protocol processing
  - TCP, UDP, QUIC
  - TLS, IPsec
  - NVO3 - Tunnelling and Network Virtualization
- Accelerate forwarding functions
  - L2 -> Ln filtering and forwarding
  - QoS handling
Introduction: Presenters

- Tom Herbert  [Intel]
- Simon Horman  [Netronome]
- Andy Gospodarek  [Broadcom]
Introduction: Acknowledgements

The following people have contributed and/or shaped the content of these slides:

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