



# INTEL OPEN SOURCE FOR SDN/NFV

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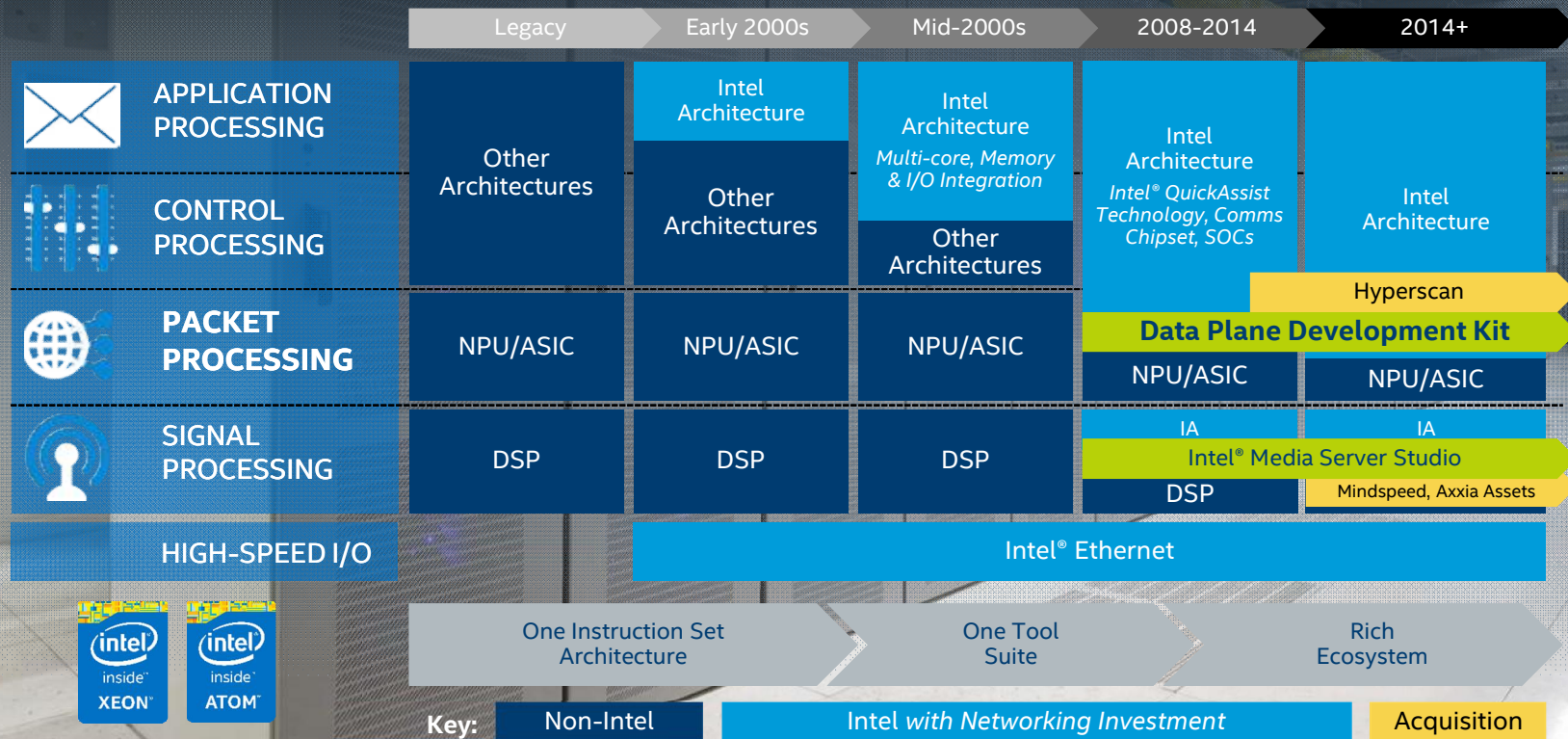
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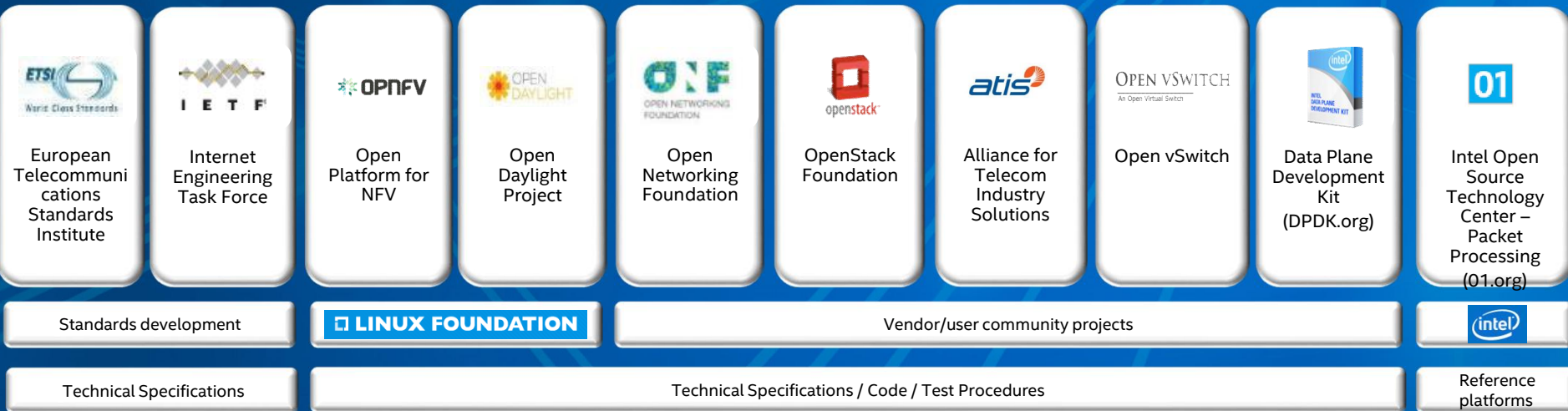
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# NPG Strategy: 4:1 Workload Convergence on IA



# Leadership in Enabling Network Transformation



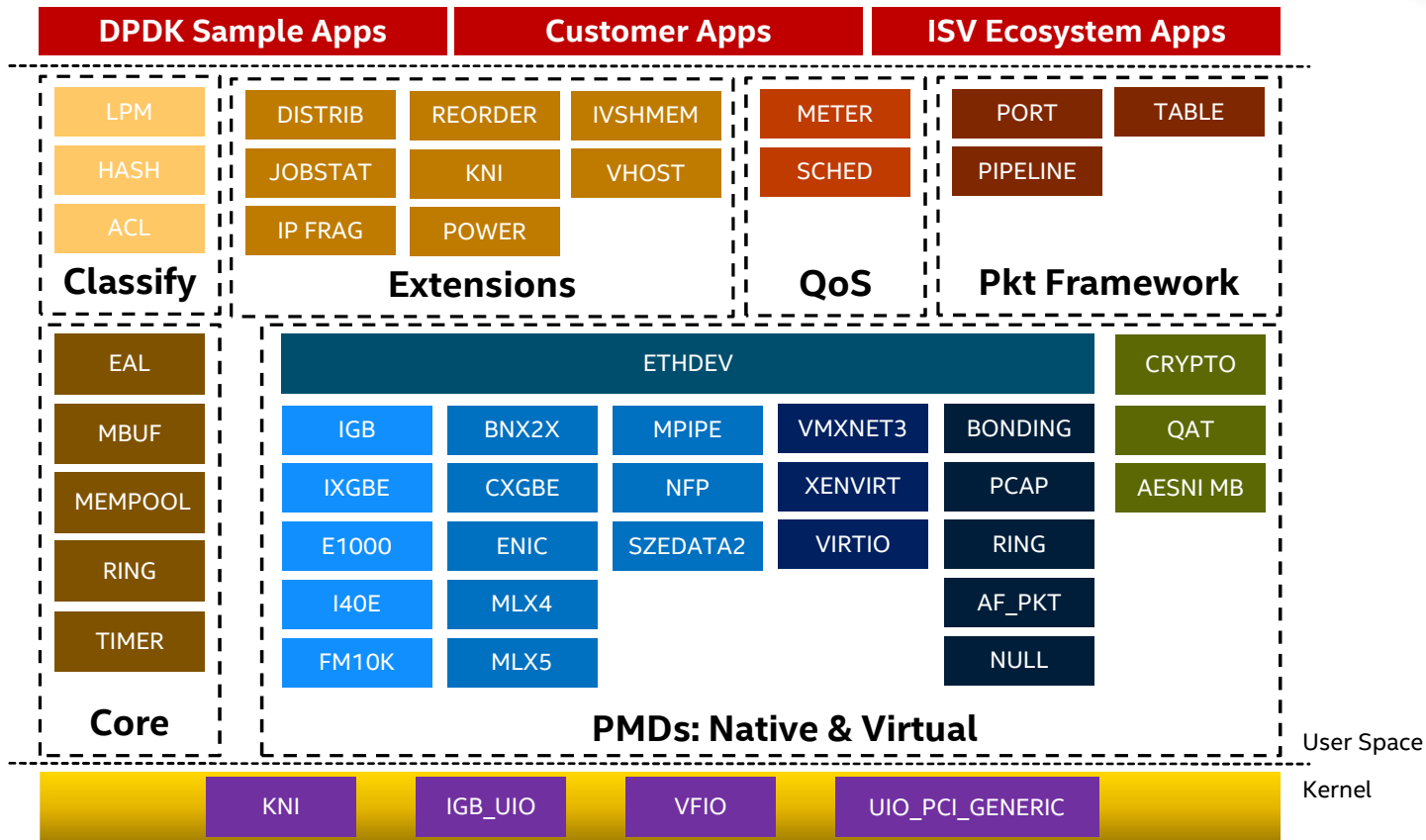
Investing in contributions to 10 SDN/NFV initiatives

Across the entire contribution spectrum  
Specifications -> Code -> Test -> Reference Platforms



# DPDK OVERVIEW

# DPDK Architecture



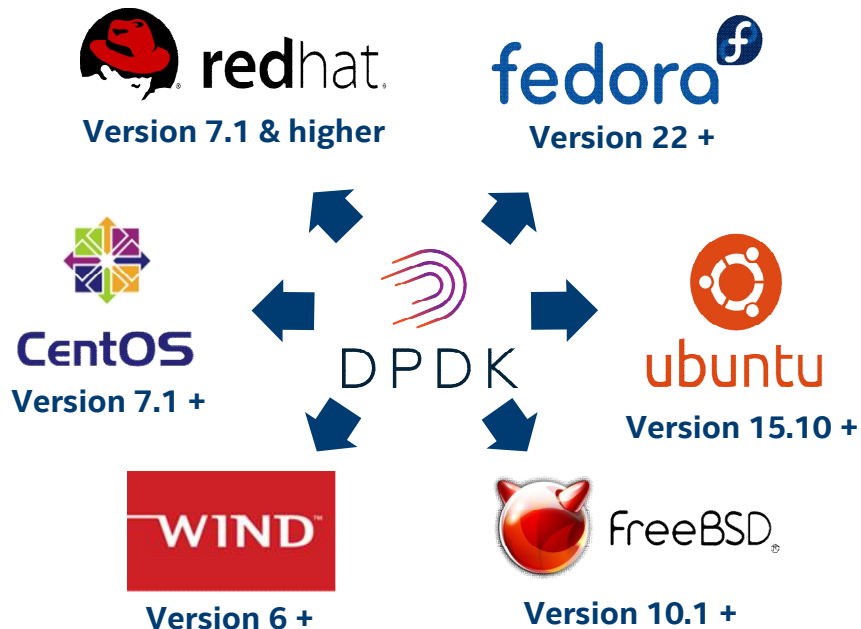


# DPDK Ecosystem

Commercial support and higher-layer application software based on DPDK is available from the following companies:



DPDK is also available as part of the following OS distributions:

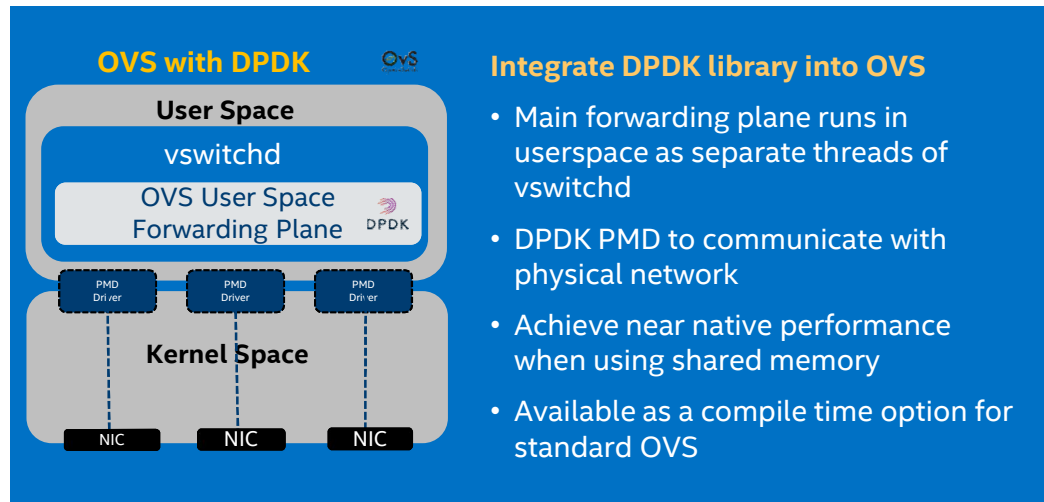
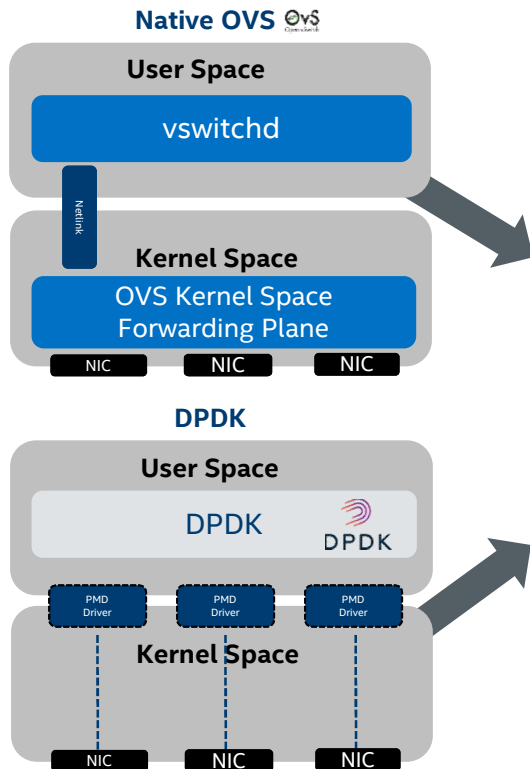




# OPEN VSWITCH (OVS)

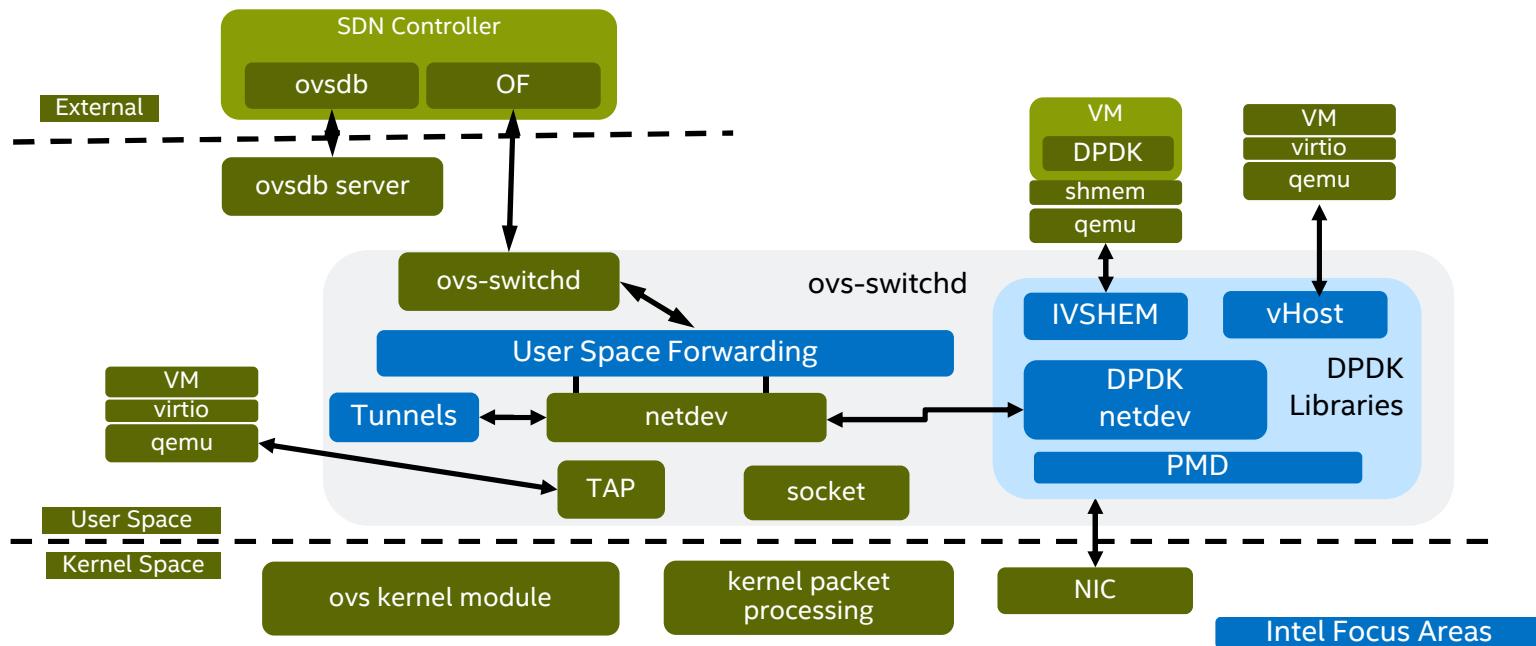


# OVS Architecture



# Open vSwitch with DPDK Architectural Approach

Integrating DPDK to Accelerate Open vSwitch®





**FD.IO**

# FD.io (pronounced Fido)

Open source collection of projects delivering high performance data I/O

- Data services build on top of DPDK

Two initial sub-projects contributed by Cisco

- Vector Packet Processing library (VPP)
- ODL compatible management agent

Usable in cloud, Virtual Machines, containers, bare metal and others

- Library that needs integration

Continuous Performance Lab (CPL)

- Fully automated testing infrastructure/verification of code/feature

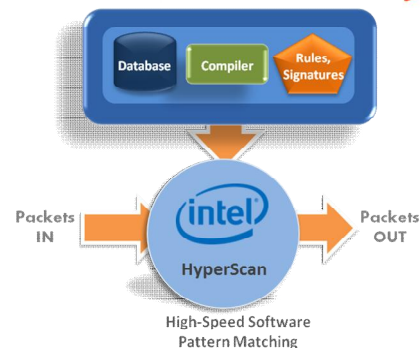
Broad industry participation

- Communication Service Providers, Public Cloud Providers, Massively Scalable Datacenter, Financials, IT Vendors, Semiconductor Vendors

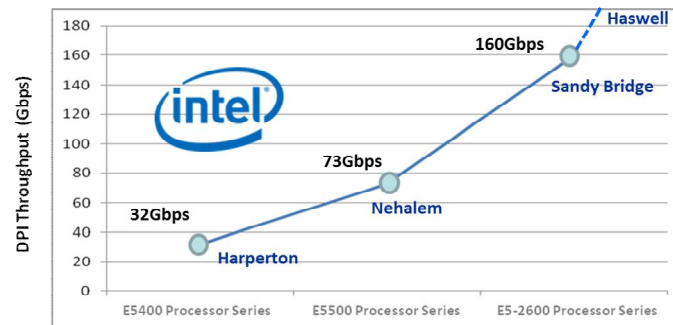
# RELATED PACKET PROCESSING TECHNOLOGIES

# Hyperscan

- Software Regex (Pattern Matching) engine
  - Regex and Fixed-string matching
  - Massively parallel matching
- Scan content for malware
  - Using customers' patterns sets
- High performance
  - Market moving to software DPI
- Fully scales IA
- Low latency and overhead
- Portable, easy to integrate
- Wide application
  - Network Security and infrastructure equipment suppliers



Hyperscan scalability on Intel® Xeon® Multi-core Processor Series



Using the same test criteria and database for every platform benchmark

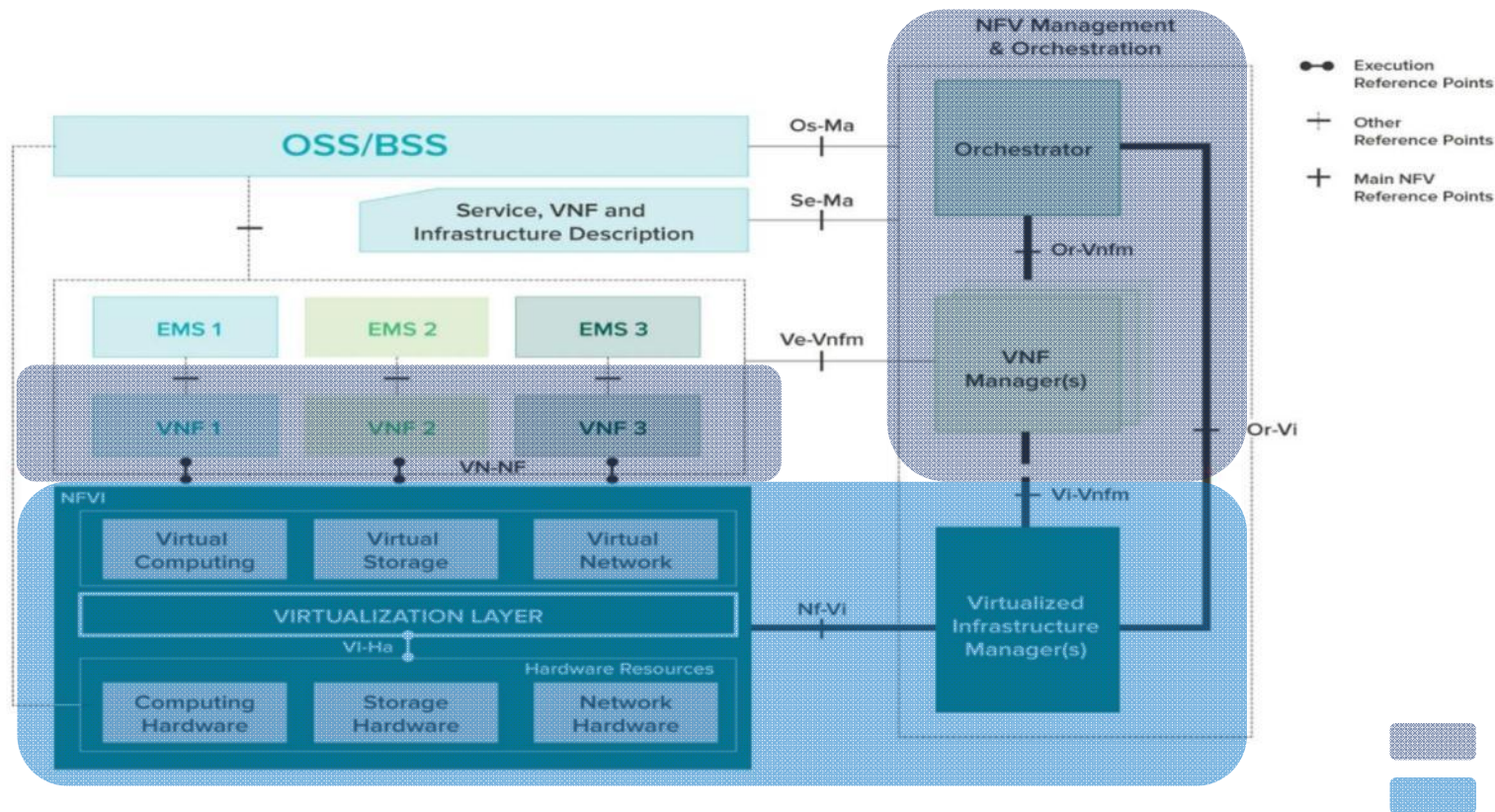
**Intel® Architecture + DPDK + HyperScan -> Best in class DPI**



# ONP : OPEN NETWORK PLATFORM

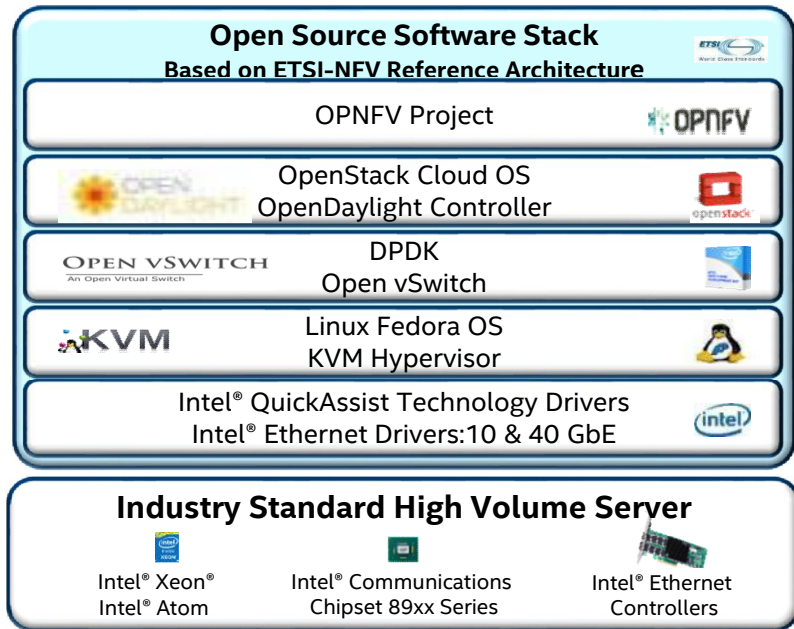


# INTEL® ONP REFERENCE ARCHITECTURE - ETSI NFV REFERENCE ARCHITECTURE





# INTEL® OPEN NETWORK REFERENCE ARCHITECTURE



## What is Intel ONP?

Reference Architecture that brings together hardware and open source software ingredients

Optimized server architecture for SDN/NFV in Telco, Enterprise and Cloud

Vehicle to drive development and to showcase solutions for SDN/NFV based on IA

Reference Architecture delivered quarterly on 01.org in the form of:  
Reference open source software  
Reference Architecture Guide

**Intel ONP is not a commercial product**