



The New Business of the Network: HP Network Functions Virtualization (NFV)

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Cloud Ambassador

Accelerated Change

- the 2015 market should the trend continue...

7.7B
mobile phones



15 billion
connections



85% of global
workforce mobile



1B fixed broadband
subscribers



183B apps downloaded per year

46% of new IT spending on cloud

Darwin: adapt (transform) or become extinct



Why Network Functions Virtualization (NFV)?

Its all about transformation

Hypothesis:

The CSP business is undergoing a fundamental and tectonic shift from a world of “calling”, to a world of “always connected services”, this is driving a functional shift in the use of the network as well as a unprecedented change in the CSP business model.



Telecom challenges and why NFV now?

The facts

Challenges

- Innovation at devices and OTT side
- Number of devices explode data and signaling traffic with unexpected peaks
- Inflexible proprietary elements with high ASICs development cost
- Revenue trends for Comms Service Providers and Network Equipment Providers force more cost reduction and operational efficiency

Why now?

- IP everywhere: BB/LTE, Core, Cloud
- LTE opportunity to re-engineer the network and IT with frontier blurring
- Cache, profile and inspect traffic more efficiently
- Virtualization and Cloud mature in the Data Center, SDN trend
- COTS servers now supporting Gb Ethernet data processing

Save cost and reduce time-to-market for new services

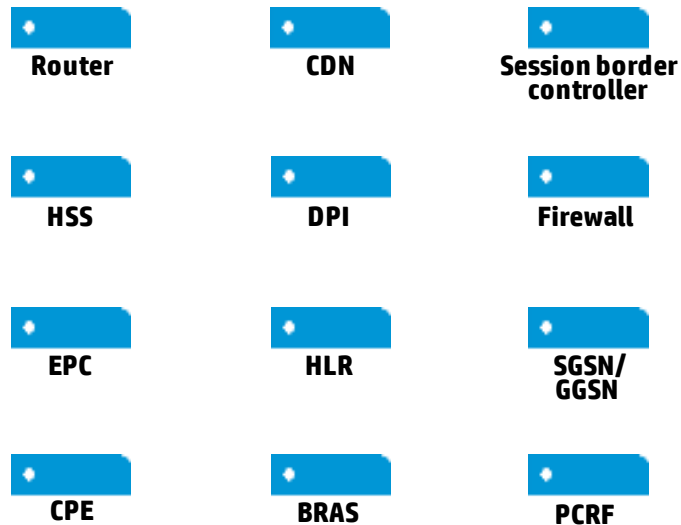


What is NFV?

Application of IT virtualization techniques for core network functions running in software

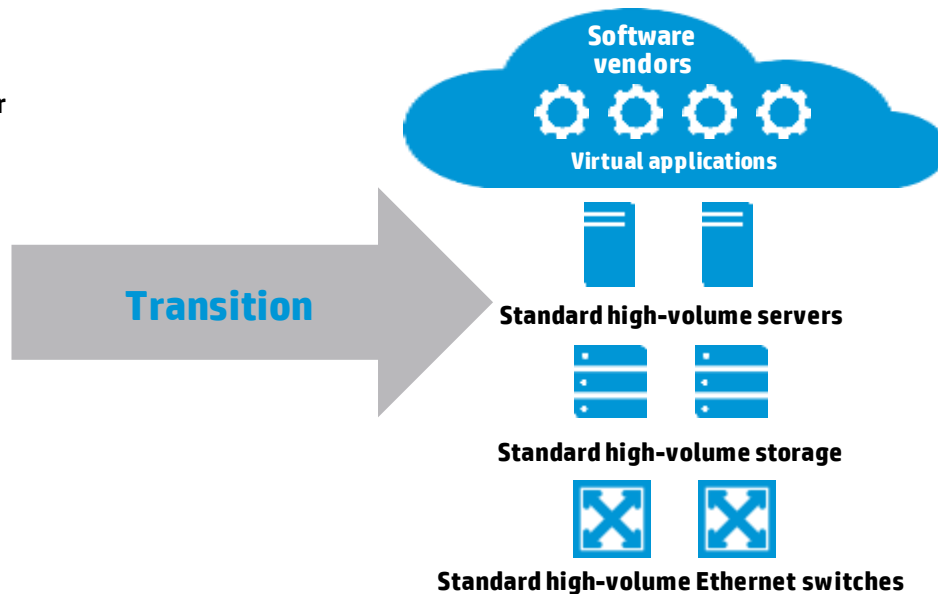
Classic network appliance approach:

- Cumbersome
- Proprietary
- Manual



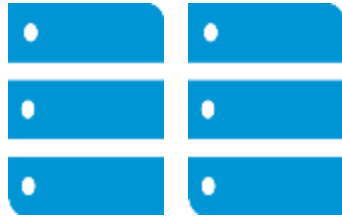
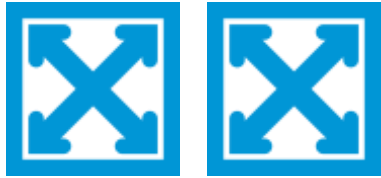
Network virtualization approach:

- Agile
- Standard
- Automated



HP in NFV & SDN

HP has all the key ingredients for the NFV transition



**Standard high-volume
Ethernet switches**

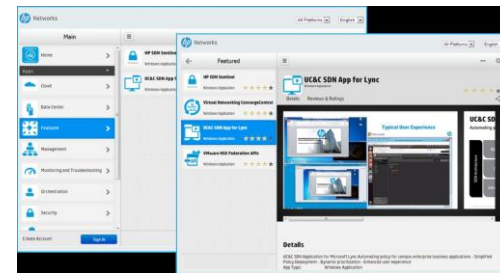
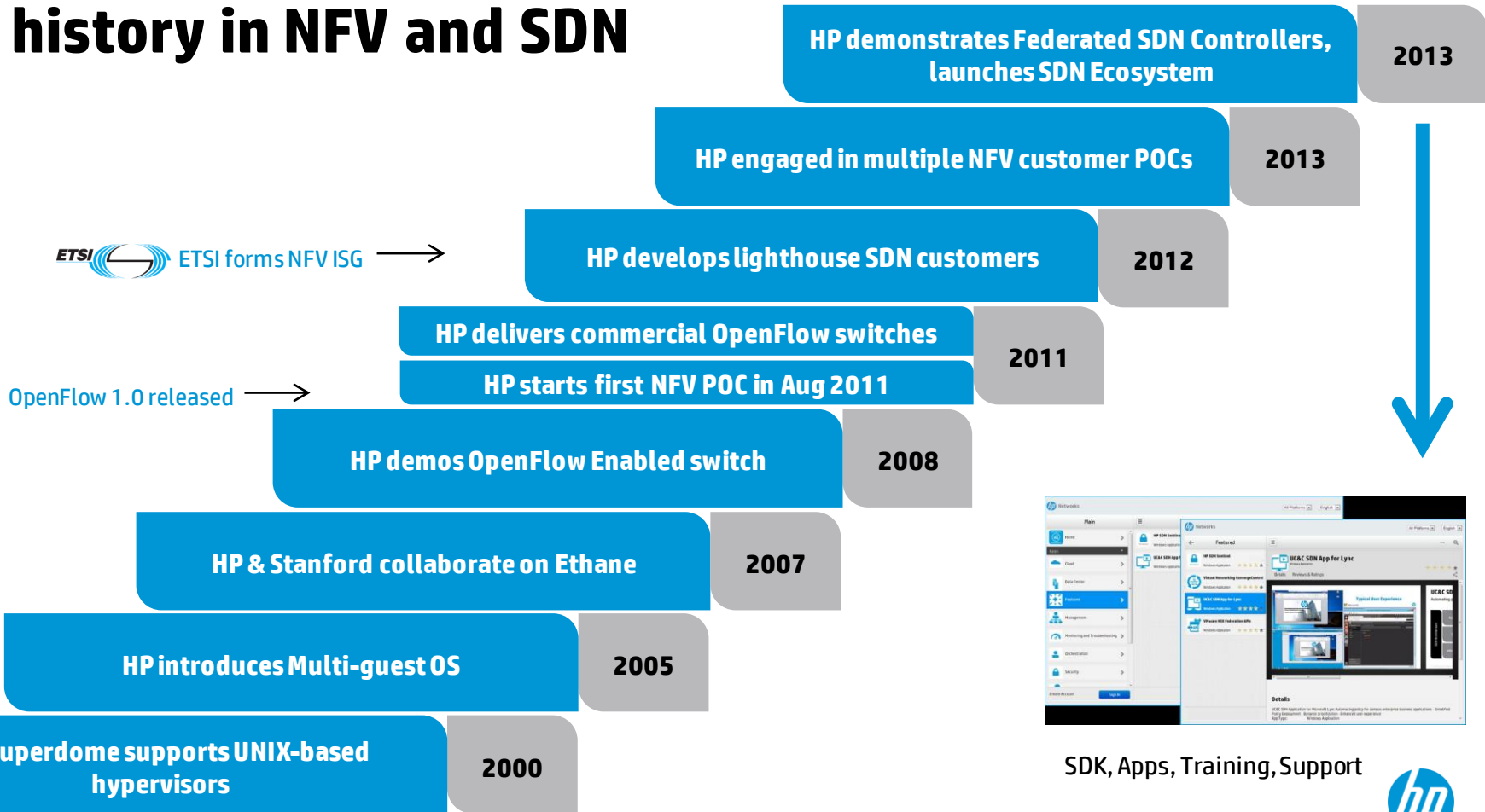
**Standard high-volume
storage**

**Industry-standard
servers**

**Telecom
Software**

Partner Ecosystem

HP history in NFV and SDN



SDK, Apps, Training, Support



Leadership in Standards Bodies

HP solutions are based on CSP-defined needs



European Telecommunications Standards Institute

HP co-chairs and contributes to multiple groups in the NFV ISG



OPEN NETWORKING
FOUNDATION

Open Network Foundation

HP is a founding member and chairs the Extensibility working group

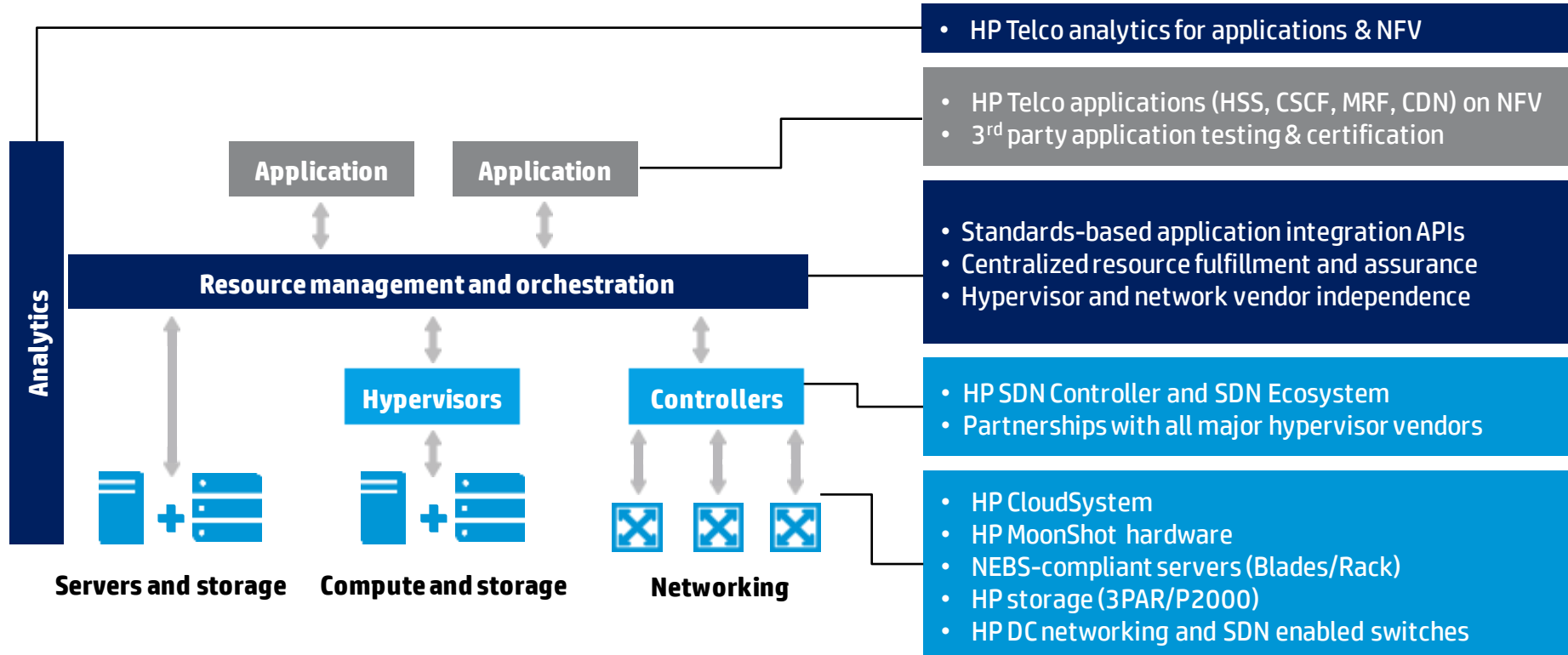


Alliance for Telecommunications Industry Solutions

HP participates in the ATIS SDN Landscape Team

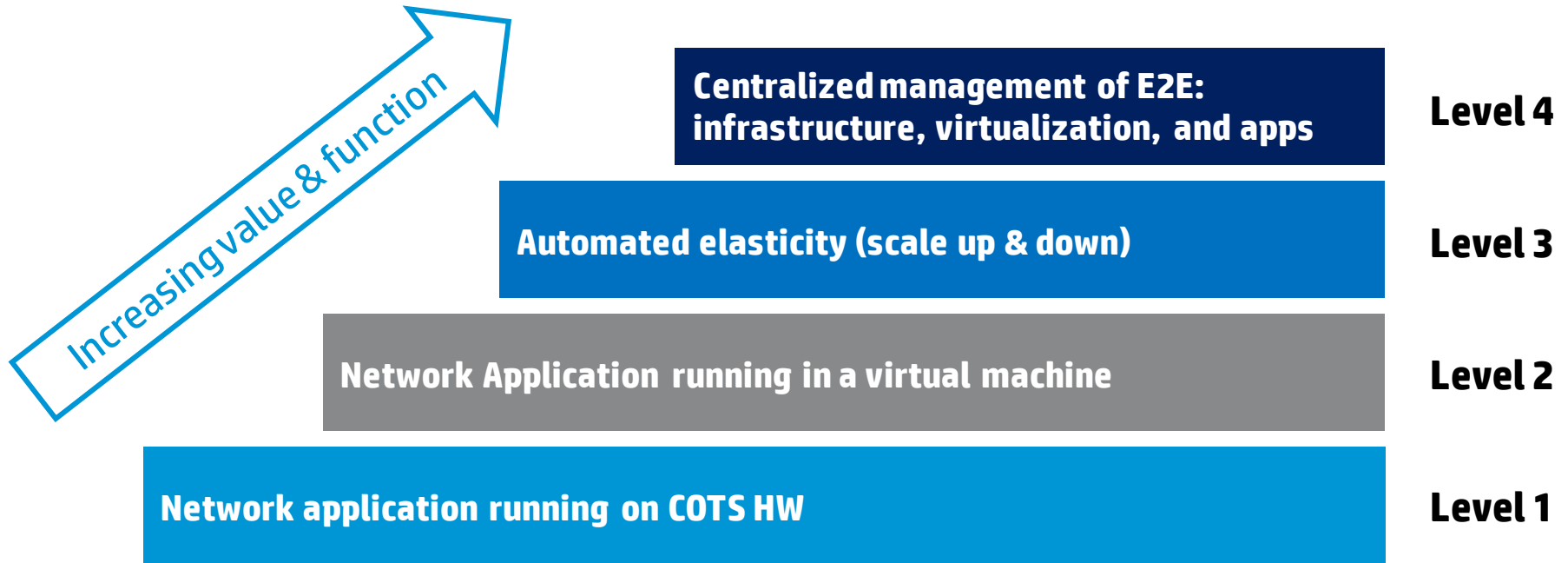
HP Delivers Open, Simplified Architecture

Open standards enabling many partners

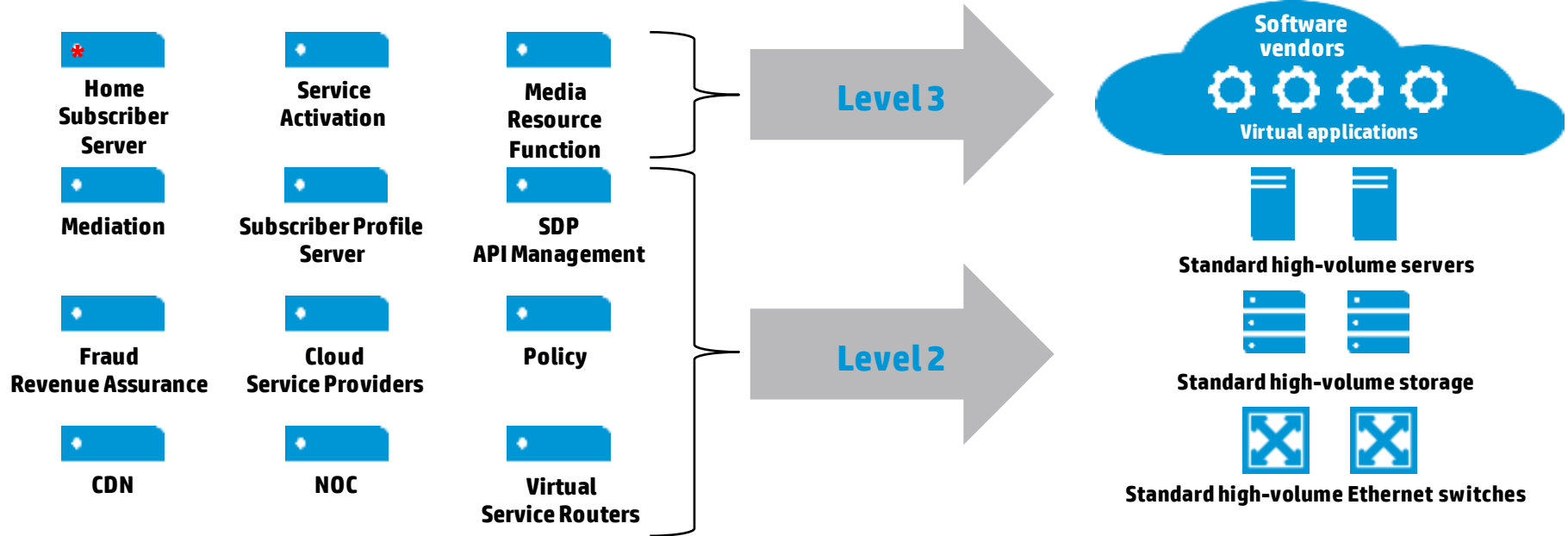


HP view of the NFV capability

Four different levels that can be supported simultaneously



HP CSP Applications (VNF's)



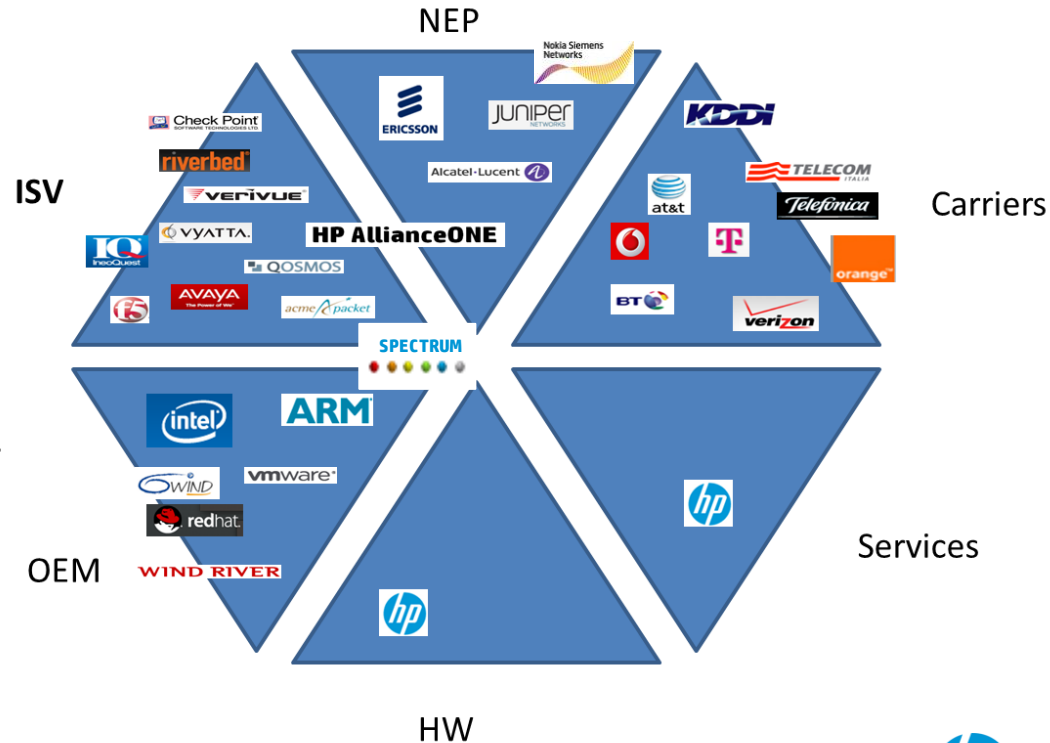
* Prototype



HP NFV Partnership Ecosystem

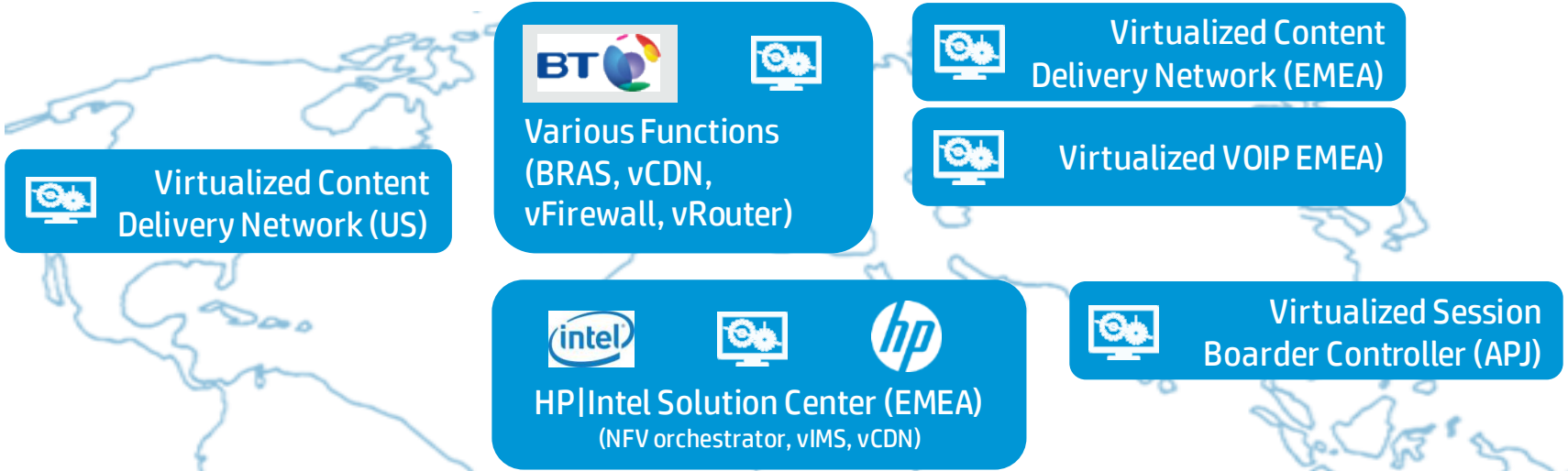
No single vendor has all the answers

- Partner ecosystem designed to provide comprehensive and complete NFV solutions
- HP AllianceONE program gives partners access to HP technologies to accelerate development, integration and time to market
- Heavy CSP participation helps validate solutions ahead of onsite PoC or customer trial
- Intel solution centers provide a convergence location for the AllianceONE members to solve Industry specific problems



NFV in Action today

Example ongoing Proof-of-Concepts



NFV becomes big business in 2014!



Why HP?



- Expertise and knowledge of CSP's network and IT
- World class NFV optimized infrastructure
- Open architecture enabling choice
- Portfolio of VNF's
- Open NFV partner ecosystem
- End-to-end lifecycle approach



Thank you

