INTEL® NETWORK TECHNOLOGY WORKSHOP OPENING REMARKS

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Data Explosion Driving Network Transformation

BILLIONS OF DEVICES WILL GET CONNECTED

VIDEO STREAMING IS EXPLODING

ULTRA-LOW LATENCY MACHINE TO MACHINE COMMUNICATIONS

Network Infrastructure Opportunities

DEVICES/THINGS

INDUSTRIAL

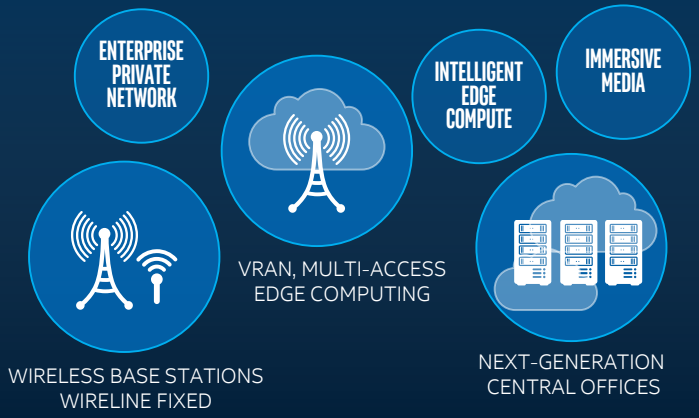
ENTERPRISE

RESIDENTIAL

Drive future proofing for capabilities that land on the Edge

ACCESS/EDGE

FIXED MOBILE CONVERGENCE:
driven by large NGCO and services



WIRELESS ACCESS
RAN, vRAN and Distributed RAN

CORE

MOBILE CORE: transforming with NFV infrastructure (VoLTE, vIMS, vEPC)

CLOUD/DATA CENTER

IT CLOUD: FW, LBs, CDN and DPI functions all increasing

Challenge: Drive incremental revenue by delivering innovative services

Network Transformation

– Moving The Network At Cloud Pace

CLOUD-READY:
POOLED COMPUTE, NETWORK & STORAGE
Standardized, Commercial-Grade Solutions

FLEXIBLE:
SOFTWARE-DEFINED, DYNAMIC NETWORKS
Next-Generation Network Architectures

DISTRIBUTED:
SERVICES DELIVERY & AGILITY
Business Process Transformation

2nd Gen Intel® Xeon® Scalable Platform

– World-class Infrastructure For Transformed Networks

MICRO-ARCHITECTURE & ACCELERATION

- Integrated Intel® Advanced Vector Extensions 512
- Intel® Optane™ DC persistent memory
- Intel® Deep Learning Boost for inference
- Available with Intel® QuickAssist Technology

INTEL® ETHERNET 800 SERIES

- New with Application Device Queues (ADQ) and Dynamic Device Personalization (DDP) along with DPDK and Kernel networking advancements

INTEL® INFRASTRUCTURE MANAGEMENT TECHNOLOGIES

- Industry-leading Intel® Virtualization Technology
  - Seamless VM migration for over 5 generations
- Enhanced Intel® Resource Director Technology
  - New Intel resource orchestration software
- INTEL® Speed Select Technology
  - Prioritize workload performance

Broadest selection of SKUs for customers unique and evolving needs to improve TCO

Unlocking Platform Performance with Software

HYPERSCAN.IO

Hyperscan is a high-performance multiple regex matching library available as open source with a C API.

DPDK
DATA PLANE DEVELOPMENT KIT

The Data Plane Development Kit is a set of software libraries for accelerating packet processing workloads on COTS hardware platforms.

.io

The Universal Data plane relentlessly focused on data IO speed and efficiency for more flexible and scalable networks and storage.

SCALABLE PLATFORMS


INTEL® XEON® PROCESSORS


INTEL ATOM® PROCESSORS


INTEL® CORE™ PROCESSORS


VPU


INTEL® FPGA


INTEL® ETHERNET CONTROLLER


INTEL® QUICKASSIST TECHNOLOGY

Converge The Workloads

Services (IoT Verticals, Comms, Cloud, Enterprises)

Developer Edge Frameworks (e.g., AWS, Azure, Baidu, Alibaba)

APPLICATION WORKLOAD CONVERGENCE

Network Edge SW | Network Functions | Open Visual Cloud | RAN SW

NETWORK PLATFORM

Application & Service Orchestration/Virtualization
(e.g., Kubernetes, OpenStack)

Industry Standard Interfaces for Efficient, Programmable, Scalable Data Plane
(e.g., DPDK, SPDK, vSwitch, Hyperscan, FD.io, Tungsten Fabric)

Use rich and flexible software frameworks for
faster customer solution readiness and deployments

Partnerships: Winning With The Ecosystem

INVEST
OPEN SOURCE AND STANDARDS

3GPP · 5GAA Automotive Association · CLOUD FOUNDRY · CLOUD NATIVE COMPUTING FOUNDATION · DPDK · ETSI World Class Standards · katacontainers · kubernetes · ONAP · OPEN DAYLIGHT · Open Source MANO · openstack · OPNFV · OvS Open vSwitch · .io · TELECOM INFRA PROJECT · AKRAINO EDGE STACK

INDUSTRY COLLABORATION
INTEL® NETWORK BUILDERS &
INTEL® DEVELOPER ZONE

350+ Members

35+ Comms SPs

100+ POCs/Trials/Deployments Based on Member Solutions

13,000+ Developers Trained Worldwide

12,000+ Network Builder University Program Members

50+ Network Edge Ecosystem Program Members

251,480+ IDZ Page Views

intel select solution

intel XEON PLATINUM inside — **NFVI** NETWORK FUNCTIONS VIRTUALIZATION INFRASTRUCTURE

HUAWEI · QCT · Lenovo · NOKIA · redhat · ubuntu

intel XEON inside — **uCPE** UNIVERSAL CUSTOMER PREMISES EQUIPMENT

ADVANTECH · CASWELL · Lanner · PREMIER · Silicom Connectivity Solutions · SUPERMICRO · ubuntu

Intel® Select Solutions for Visual Cloud available Q2'19

Use industry-leading ecosystem programs
to drive edge transformation and enable developers

Continuous Innovation Driving Business

Intel, Baidu sign 3-year deal to collaborate in cloud, AI, 5G

Intel and Baidu on Thursday announced a new, three-year agreement to collaborate on technology related to Baidu's core businesses -- namely, cloud, AI, autonomous driving, 5G and edge technologies. Building on 10 years of partnership, the deal revolves around Intel optimizing its platforms and products for the Chinese tech giant.

Researchers mine cache of Intel processors to speed up data packet processing

Developed with Ericsson Research, the slice-aware memory-management scheme allows frequently used data to be accessed more quickly via the last-level cache of memory (LLC) of an Intel Xeon CPU. By establishing a key-value store and allocating memory in a way that it maps to the most appropriate LLC slice, they demonstrated both high-speed packet processing and improved performance of a key-value store. The team used the proposed scheme to implement a tool called CacheDirector, which makes Data Direct I/O (DDIO) slice-aware and published a conference paper, Make the Most out of Last Level Cache in Intel Processors, which was presented at EuroSys 2019 in the spring.

Lanner Electronics upgrades processors in flagship network appliance line

Lanner Electronics' four flagship network appliances, the NCA-6210, NCA-5710, NCA-5520, and FX-3230 models, are being upgraded to the 2nd generation Intel Xeon Scalable Family Processors, that feature up to 28 cores per processor, Intel AVX-512 instructions, and Intel QuickAssist technology.

Nokia Puts a Physical Box at the Edge to Support Cloud, 5G

Inside that box is a commoditized x86 architecture running an Intel processor. The chassis can support up to five servers, with those servers upgradeable to a Nokia chipset for more capacity.

Ericsson, Intel Team Up on 5G Software-Defined Infrastructure

Ericsson and Intel are jointly developing a hardware management platform for service providers targeting 5G, NFV, and distributed cloud.

Call For Action

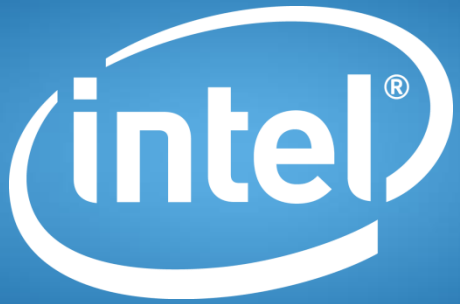
PARTNER with the ecosystem

INNOVATE continuously

WIN together

Focus here, multitask elsewhere

- Presentations & discussion
- Demo during breaks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