THE VIRTUOUS CYCLE OF GROWTH

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50 BILLION CONNECTED THINGS ARE COMING
DATA IS EXPLODING

TERA → PETA → EXA

40,000 GB PER DAY
1,000,000 GB PER DAY
1.5 GB PER DAY
4,000 GB PER DAY
3,000 GB PER DAY
**Intel’s Priorities:**

**Cloud, AI & Network**

**5G, Memory, FPGAs**

**Data-rich Things**
THE CASE FOR 5G

- Next Generation Wireless
- Faster with lower latency
- Distributes intelligence throughout the network

2G
Cellular Comms.

3G
Data and the 'app' revolution

4G
Faster data rates

5G
Reactive, smart, and connected devices
INTEL STRATEGY: 5G END-TO-END

Cloud
Core Network
Access Network
Wireless Technology
Smart Devices

Intel's Scale Meets 5G Scope
THE CASE FOR BETTER MEMORY & STORAGE

INTEL 3D NAND TECHNOLOGY
- LOWER COST & HIGHER DENSITY

INTEL® OPTANE™ TECHNOLOGY
- HIGHER PERFORMANCE

The case for better memory & storage using Intel 3D NAND technology offers lower cost and higher density. Intel® Optane™ technology further improves performance.
INTEL® OPTANE™ SSD: PERFORMANCE

Performance Depends on Workload: RocksDB* Example

Up to 3x Throughput Advantage

Up to 10x Latency Advantage

Delivering Higher QoS

Get more work done within the same time

In an SSD optimized database such as RocksDB on our prototype drives vs Intel SSD DC P3700 Series NAND-based drive. Intel® Optane™ SSD 140GB prototype compared to the Intel® SSD DC P3700 Series 140GB (NAND) Intel tested using RocksDB Test 5. Quanta Leopard base board, 2x Intel® Haswell CPUs (2.5 GHz, 12 core, HT Enabled, 8 DDR4 DIMMs, 256GB, 32GB Used, CentOS 7.2, no OS changes XFS FS with FB build/mount opts, TRIM enabled, P3700 (50% capacity used) and Intel Optane Based Prototype (75% capacity used).
INCREIBLE DENSITY

1PB IN 42U
w/2 TB HDDs

1PB IN 1U
w/INTEL® 3D NAND SSDs
Diverse Data Center Demands

FPGA Acceleration Improves Many of These Workloads

The case for accelerators: FPGAs
FPGAs: SMART CHOICE FOR NETWORK OFFLOADS

General Purpose

XEON PROCESSOR
General purpose applications

XEON PHI PROCESSOR
Parallel applications

FPGA
Offload for changing algorithms

Targeted

ASIC
Offload for stable algorithms

*Source: Intel estimates
PORTFOLIO FOR ARTIFICIAL INTELLIGENCE

EXPERIENCES

THINGS & DEVICES

CONNECTIVITY

CLOUD DATA CENTER

AI COMPUTE CYCLES WILL GROW 12X BY 2020

CAPABILITIES

- MACHINE/DEEP LEARNING
- REASONING SYSTEMS
- PROGRAMMABLE SOLUTIONS
- COMPUTER VISION
- DEPTH SENSING
- TOOLS & STANDARDS

EXPERIENCES
SOFTWARE DEFINED INFRASTRUCTURE

APPLICATIONS
define the resources needed

INFRASTRUCTURE
assures efficiency and service levels
The case for Software Defined Infrastructure

- Reduce time to service deployment
- Remove barriers to innovation

Desired State: Time to provision new service measured in minutes
Sample 5 Year TCO of 10,000 OS Instances ($K)

SDI DRIVES TCO SAVINGS

Improve workforce efficiency: 20-60%

Software savings: ≤70%

Reduced Infrastructure/ Facility cost: 10-20%

Improved hardware utilization: 10-20%

Open SDI offers TCO reductions of 50%+ through automation of manual support and increased resource utilization.
CISCO ASAP DATA CENTER

1. OPTIMIZE INFRASTRUCTURE
   - Nexus
   - UCS
   - Next-Gen Firewalls
   - Converged/Hyperconverged
   - Performance
   - Scale
   - Security

2. SIMPLIFY OPERATIONS
   - Automation
   - Unify Policy
   - 50+ Eco-System

3. BUILD CLOUD-NATIVE APP STACK
   - Containers
   - Self-Service
   - DevOps Tools

4. CHOOSE YOUR HYBRID CLOUD
   - CliQr
   - Private
   - Managed
   - Public
   - App. Benchmark
   - Extend Policy
   - Securely Move Data & Workloads

5. REAL-TIME ANALYTICS
   - Monitor Every Flow/Transaction
   - App Dependency
   - On-Prem & Cloud
BUILDING A STRONG PARTNERSHIP

FROM THE EDGE
THROUGH THE INTELLIGENT NETWORK
TO THE DATA CENTER

* Other names and brands may be claimed as the property of others.
Thank you