

AWSOME DAY
ONLINE CONFERENCE

Unleashing the power of AWS with Intel

Akanksha Balani

AWS APJ Alliance Head @ Intel
Global AI and HPC GTM Lead
Intel



Data transformation across industry



Consumer

Smart Assistants
Chatbots
Search
Personalization
Augmented Reality
Robots



Health

Enhanced Diagnostics
Drug Discovery
Patient Care
Research
Sensory Aids



Finance

Algorithmic Trading
Fraud Detection
Research
Personal Finance
Risk Mitigation



Retail

Support
Experience
Marketing
Merchandising
Loyalty
Supply Chain
Security



Government

Defense
Data Insights
Safety & Security
Resident Engagement
Smarter Cities



Energy

Oil & Gas Exploration
Smart Grid
Operational Improvement
Conservation



Transport

Autonomous Cars
Automated Trucking
Aerospace
Shipping
Search & Rescue



Industrial

Factory Automation
Predictive Maintenance
Precision Agriculture
Field Automation



Other

Advertising
Education
Gaming
Professional & IT Services
Telco/Media
Sports

Over 93% of the world's data runs on Intel

81M+

Intel® Xeon®
processors
deployed in the
past 3 years

20+

years of
delivering
incredible
performance gen
on gen

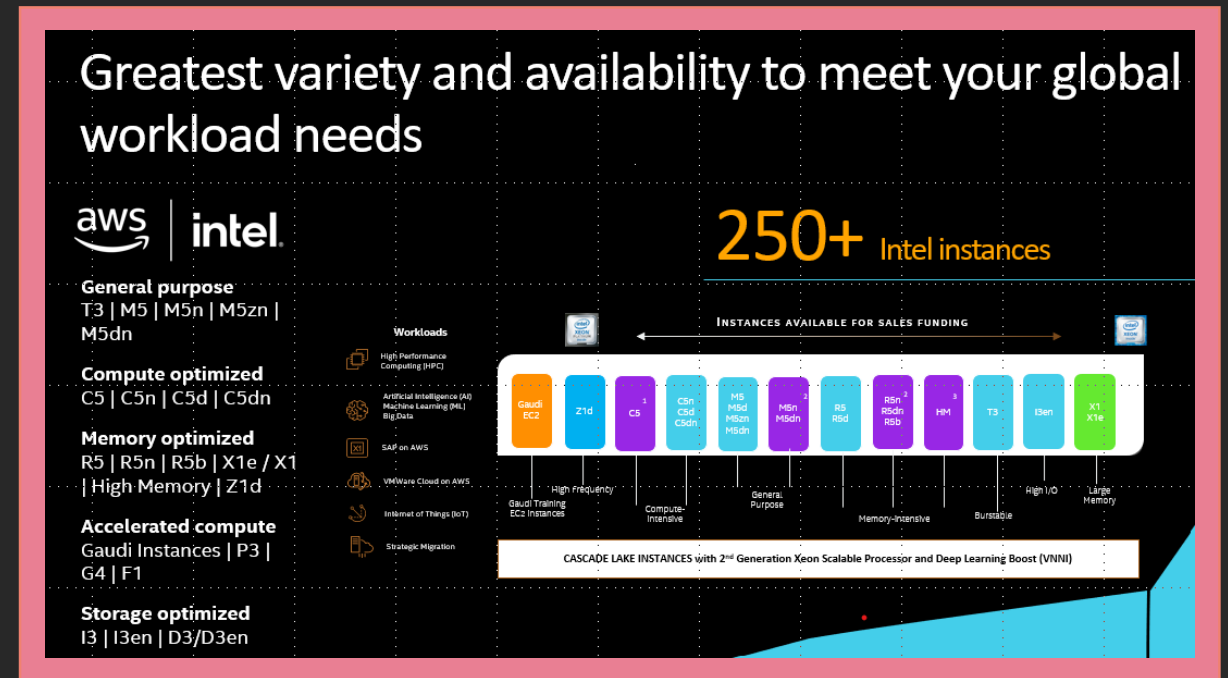
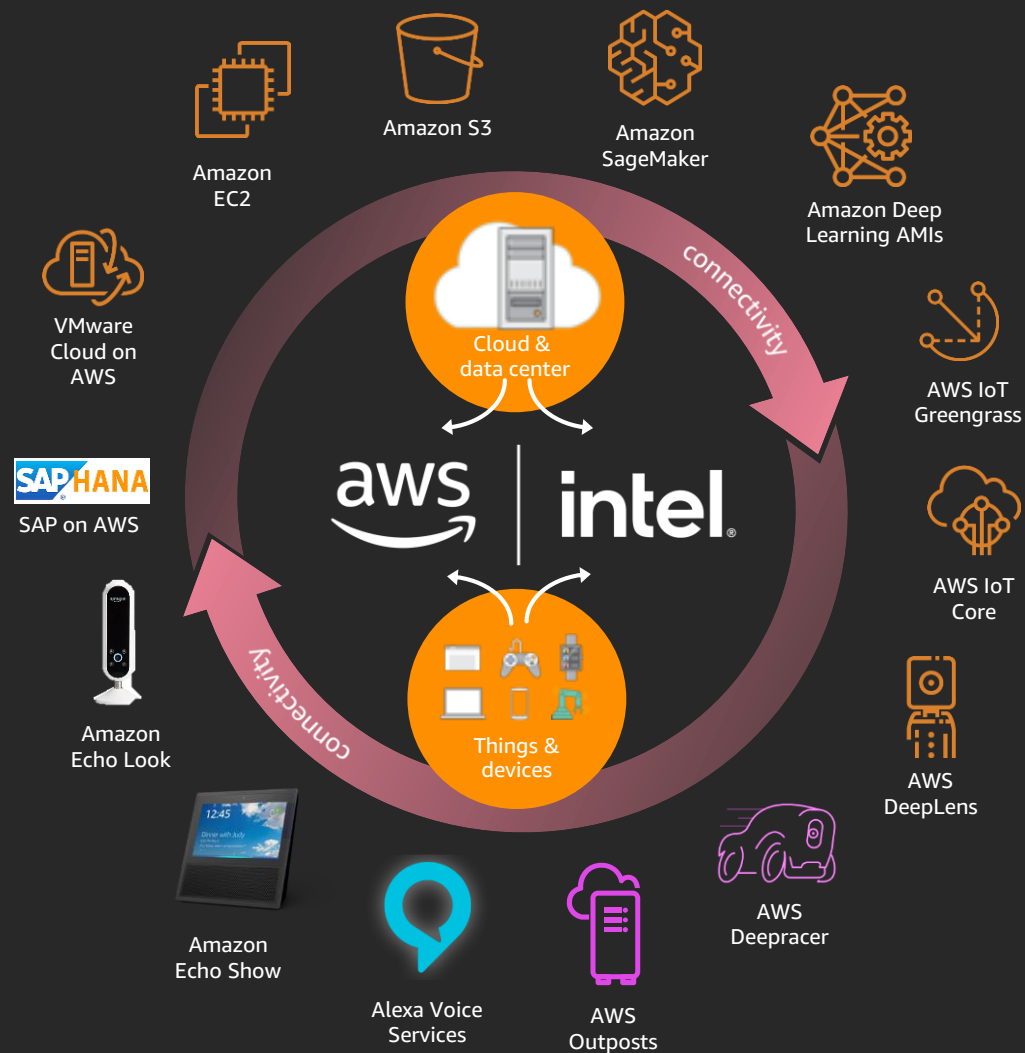
#1

Nearly all early
commercial
vRAN
deployments are
running on Intel

50%+

Of core network
workloads
virtualized in
2020, the
majority running
on Intel® Xeon®
processors

What does Intel do with Amazon?



Key Workloads

- Strategic migrations
- AI/ML
- HPC
- SAP
- Hybrid Edge

“Intel is a very deep partner of AWS and will be for a long time. That’s not changing.”



Andy Jassy,
CEO, Amazon

Greatest variety and availability to meet your global workload needs



250+ Intel instances

16 years of partnership

General purpose

T3 | M5 | M5n | M5zn | M5dn

Compute optimized

C5 | C5n | C5d | C5dn

Storage optimized

I3 | I3en | D3/D3en

Memory optimized

R5 | R5n | R5b | X1e / X1 | High Memory | Z1d

Accelerated compute

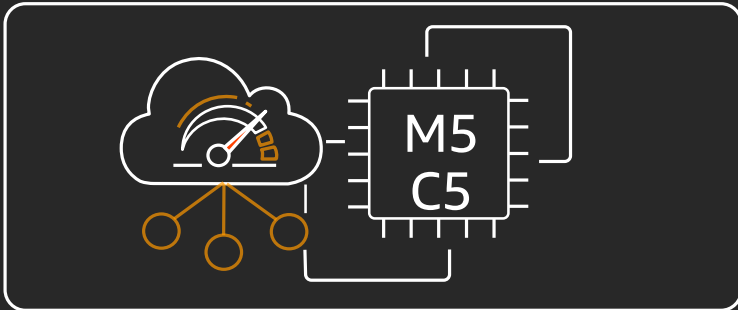
Gaudi Instances | P3 | G4 | F1

2017

2021

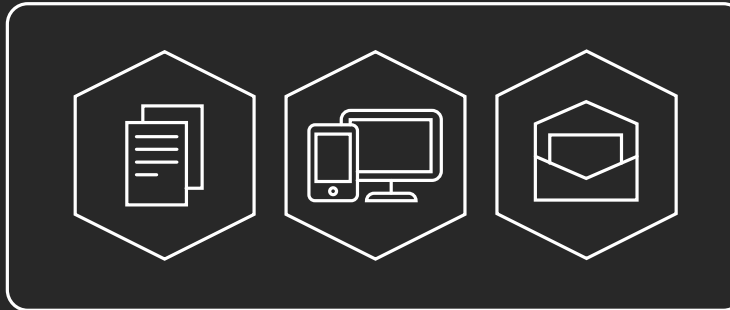
Benefits of Intel® Xeon® Scalable Processors

Price / Performance



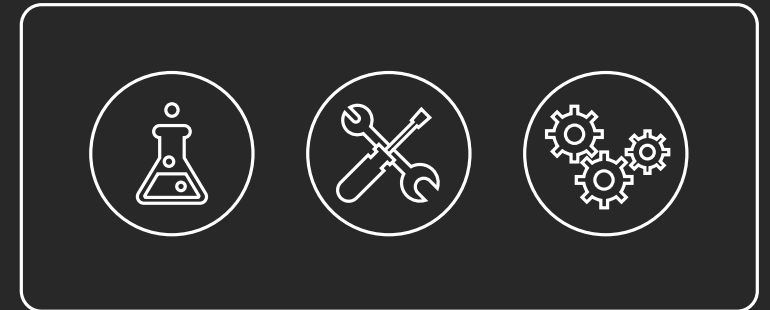
1.25x Price/Perf
SpecINT

World-Class Ecosystem



20k+ Intel Software
Engineers

Workload Optimizations



Up to **1.7M** TPM*
MS SQL

4.1x Price/Perf
High Perf Linpack

1k+ ISV applications
optimized for
Intel architecture






Up to **480k** SAPS Benchmark**
SAP

* AWS SQL Server Performance on AWS <https://s3.amazonaws.com/aws-database-blog/artifacts/whitepapers/SQL-Server-Performance-on-AWS.pdf>

** SAP: <https://www.sap.com/dmc/benchmark/2018/Cert18041.pdf> and AWS: <https://aws.amazon.com/blogs/awsforaws/new-sap-certifications-for-aws-instances-and-world-record-benchmark-results/>

AWS EC2 Instance offerings - optimized by use case

Not exhaustive – focused on newer instances

Balanced workloads	Compute-intensive, HPC, data lakes, network appliances	High performance databases, in-memory databases	High IOPS at low cost	Accelerated W/Ls machine learning, 3D rendering
				
General Purpose	Compute Optimized	Memory Optimized	Storage Optimized	Accelerated Computing
T3 Burstable CPU usage SKX/CLX - 24C	C5 High Performance \$/perf Optimized SKX - 18C CLX - 24C	R5, R5b Up to 768GiB of Memory SKX - 24C	I3 NVMe SSD Storage and Bare Metal Instances BDX - 16C	P3dn P3 with Local Host Attached NVMe SSDs and up to 100Gbps Network Bandwidth SKX - 24C
M5 Non-Burstable CPU usage SKX/CLX - 24C	C5d C5 With Local Host Attached NVMe SSDs SKX - 18C CLX - 24C	X1 One of the Lowest Price/GiB of RAM HSX - 16C (4 socket)	I3en NVMe SSD Storage and Bare Metal Instances SKX - 24C	G4 2 NVIDIA Tesla M60 GPUs per CPU CLX - 24C
M5d M5 With Local Host Attached NVMe SSDs SKX/CLX - 24C	C5n C5 with up to 100Gbps Network Bandwidth SKX - 18C	X1e X1 with Extended Memory Footprint HSX - 16C (4 socket)	H1 Compute and Memory Balanced, Up to 16TB HDD Storage BDX - 16C	F1 4 FPGAs per CPU BDX - 16C
M5zn M5 With Local Host Attached NVMe SSDs SKX/CLX - 24C		Z1d Single threaded compute optimized with high memory SKX - 12C	D3, D3en Up to 366 TB HDD Storage, Lowest Price/Disk Throughput Perf CLX - 24C	Habana Gaudi AI/ML COMING SOON Up to 8 accelerators 40% better price/perf than current GPU-based instances
		Bare Metal 8 Socket Xeon with 6 TiB Memory up to 24 TiB; SKX/CLX - 28C		

Intel on AWS = Broadest choice of optimized instances tuned to your enterprise workloads

Data Centric Workloads – Database, Data Analytics, Big Data

- SAP / SAP HANA
- VMware Cloud on AWS
- Oracle
- SQL Server

AI / ML

HPC

AWS Outposts for Hybrid, Edge

IoT



Windows
workloads



Hybrid and low
latency
workloads



SAP



HPC & AI

Summary

Amazon EC2 > 250 instance types for database, SAP, VMware, AI, HPC and more



- Close collaboration between Intel and AWS has resulted in best-in-class end-user experience and customer successes.
- Instance types with the best TCO on Intel to accelerate your customers' applications across a variety of workloads.
- Existing solutions for deployment with many successful outcomes delivering both high performance and cost savings.

Thank you!

Akanksha Balani
AWS APJ Alliance Head @ Intel
Global AI and HPC GTM Lead
Intel