AMD

FINANCIAL ANALYST DAY 2022

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Server CPU Leadership

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Senior Vice President and General Manager, Server Business Unit

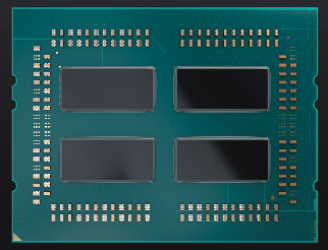
CAUTIONARY STATEMENT

This presentation contains forward-looking statements concerning Advanced Micro Devices, Inc. (AMD) including, but not limited to, the timing, availability, features, functionality and expected benefits of AMD's adaptive computing products; AMD's momentum and TAM; AMD's silicon roadmap; and AMD's new revenue opportunities and path forward, which are made pursuant to the Safe Harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are commonly identified by words such as "would," "may," "expects," "believes," "plans," "intends," "projects" and other terms with similar meaning. Investors are cautioned that the forward-looking statements in this presentation are based on current beliefs, assumptions and expectations, speak only as of the date of this presentation and involve risks and uncertainties that could cause actual results to differ materially from current expectations. Such statements are subject to certain known and unknown risks and uncertainties, many of which are difficult to predict and generally beyond AMD's control, that could cause actual results and other future events to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. Investors are urged to review in detail the risks and uncertainties in AMD's Securities and Exchange Commission filings, including but not limited to AMD's most recent reports on Forms 10-K and 10-Q.

AMD does not assume, and hereby disclaims, any obligation to update forward-looking statements made in this presentation, except as may be required by law.

OUR JOURNEY OF RELENTLESS SERVER EXECUTION

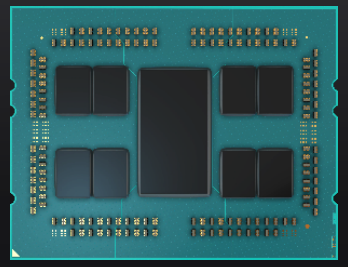
1st Gen EPYC™ CPU



"Naples"

- National Labs
- Storage

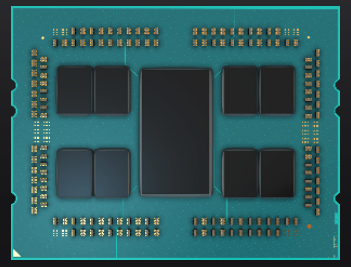
2nd Gen EPYC CPU



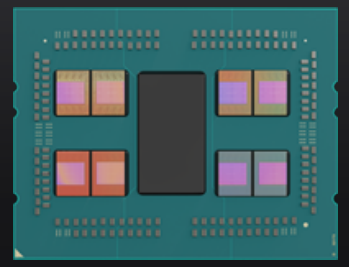
"Rome"

- High-End Enterprises
- Supercomputer
- Leading IaaS, Search

3rd Gen EPYC CPU



"Milan"



"Milan-X"

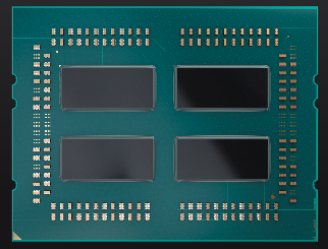
- Commercial HPC Users
- Hybrid Cloud and HCI
- Leading GREEN500 and TOP500 Lists
- Collaboration, Social Media, eCommerce

2017 → 2019 → 2021 → 2022

As of May 30, 2022 TOP500 and GREEN500 lists.

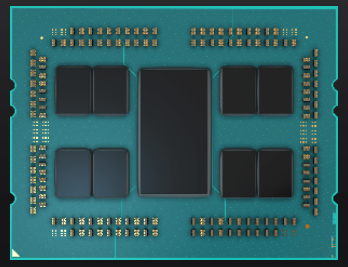
OUR JOURNEY OF OPTIMIZED SERVER SOLUTIONS

1st Gen EPYC™ CPU



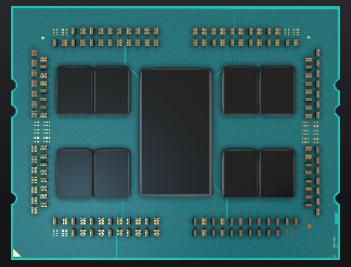
50+ Solutions

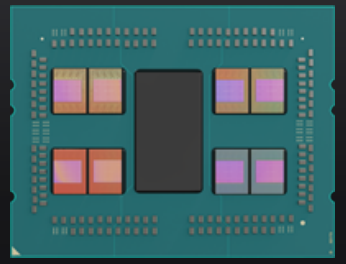
2nd Gen EPYC CPU



500+ Solutions

3rd Gen EPYC CPU





1000+ Solutions

Windows Server 2016 Certified

hadoop

vmware vSAN ReadyNodes

SUSE

redhat

MySQL

Ansys

SYNOPSYS

Windows Server 2019 Certified

CLOUDERA

ALTAIR

simplivity

NUTANIX

HPE DX Appliance

Microsoft SQL Server

DELL VXRAIL

Lenovo ThinkAgile

SIEMENS

mongoDB.

CISCO VALIDATED DESIGN

FreeBSD

ORACLE

TigerGraph

docker

Windows Server 2022 Certified

SHEARWATER

cadence

EMERSON

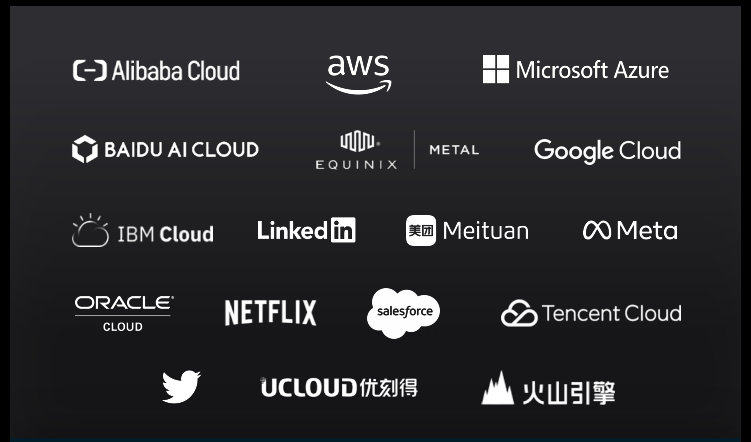
splunk>

citrix

Azure Stack HCI

2017 → 2019 → 2021 → 2022

OUTSTANDING MOMENTUM WITH 3RD GEN AMD EPYC™ CPUs



Cloud

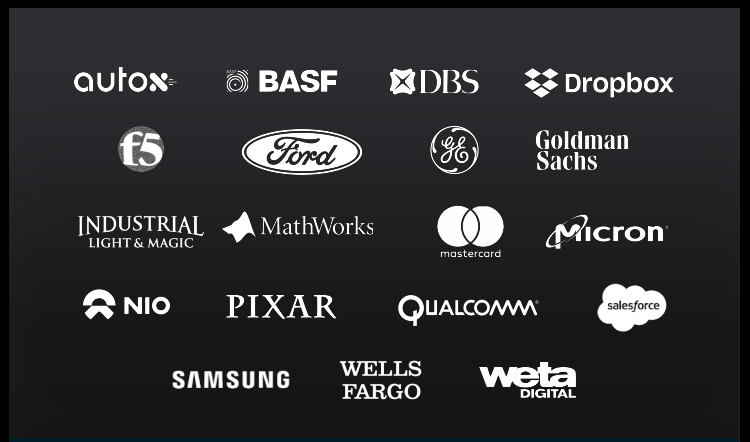
1.6X VM density

Up to 30% lower TCO

HPC

Up to 1.5X FP performance

Up to 100% more simulations per day



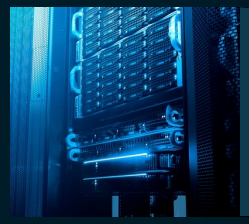
Enterprise

1.6X on-line transactions per second

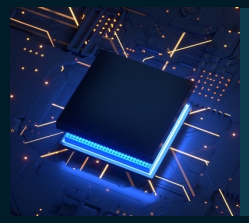
Up to 41% lower TCO for HCI

See endnotes EPYC-025, MLNTCO-020, MLNX-033A, MLNXTCO-001, MLN-101, MLNTCO-021 . Results may not be typical.

THE OPPORTUNITY AHEAD



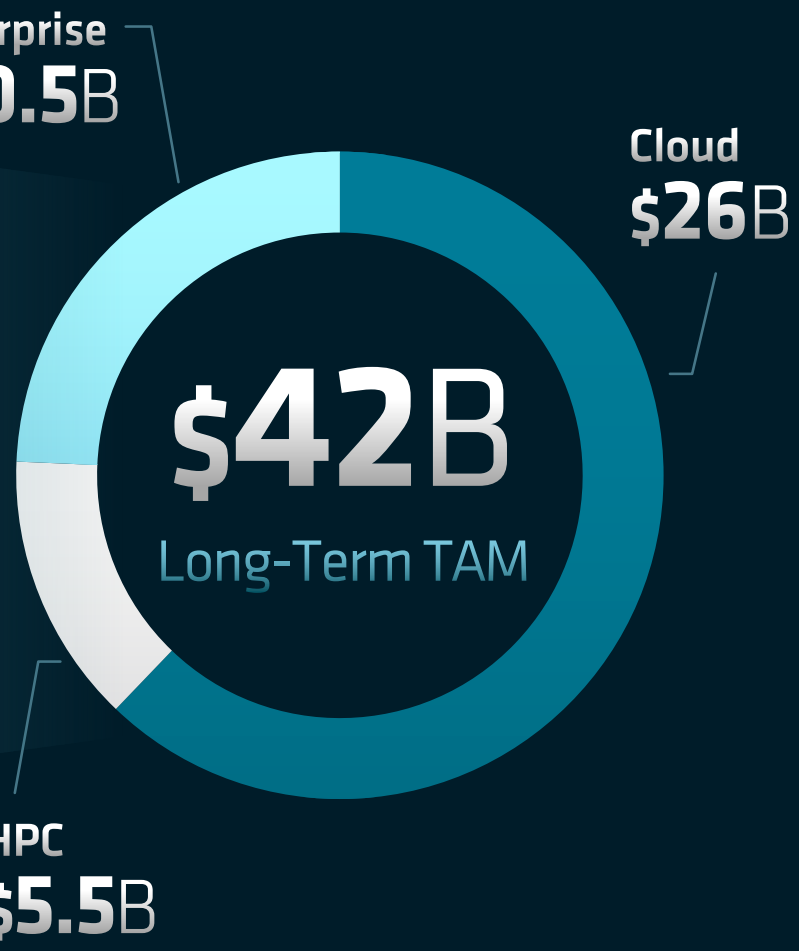
Cloud service proliferation



Expanding use cases for AI and CPU inference

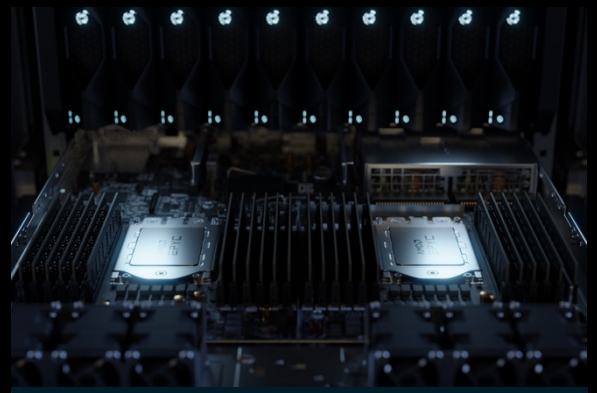
Harnessing value in massive data

Workload Diversity

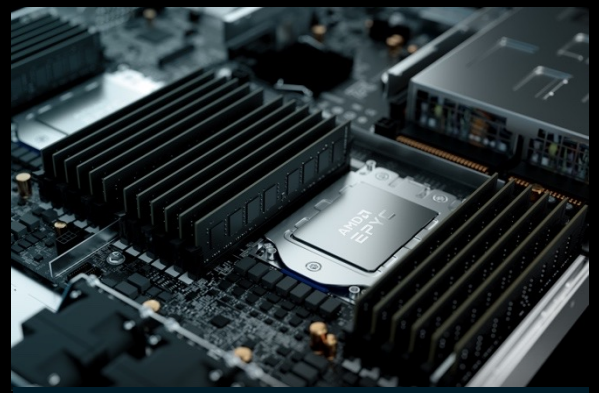


Based on AMD internal data

THE NEXT ERA OF LEADERSHIP



Highest Performing General Purpose Silicon



Optimized Silicon for Diverse Workloads

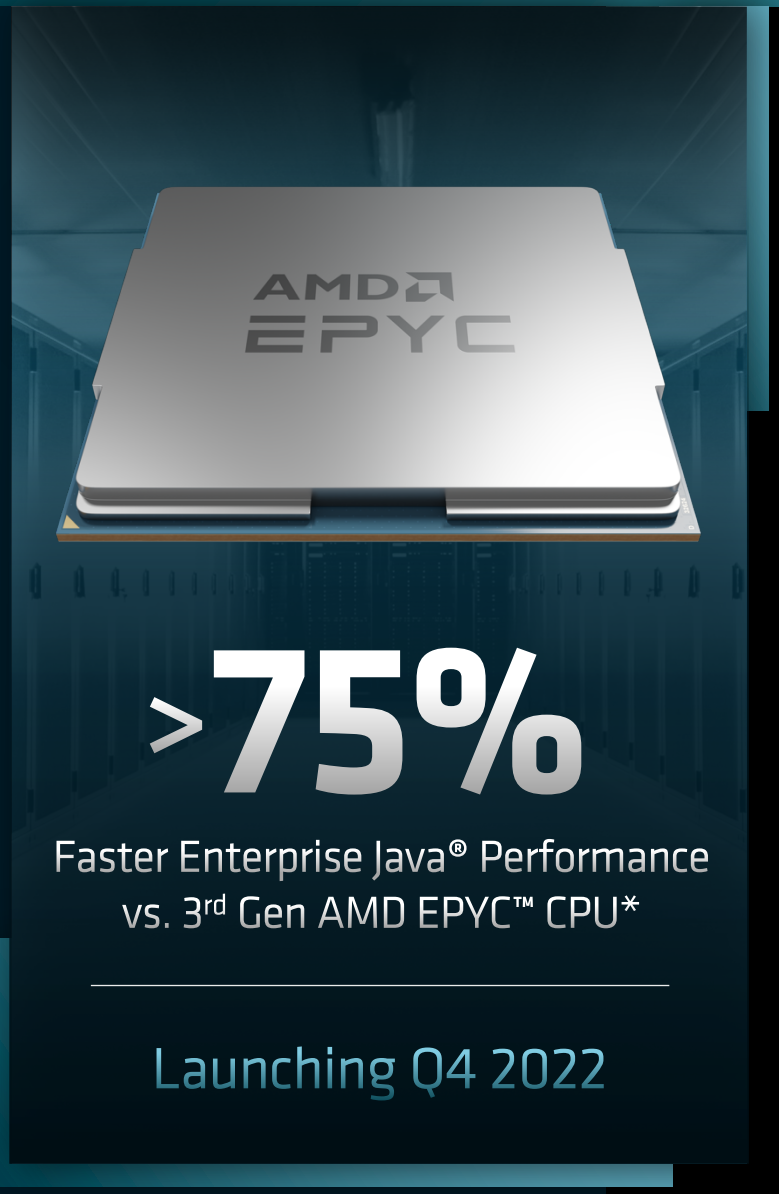
Full Stack Solutions

Ecosystem Scale and Partnerships

Accelerating Customer Time To Value

INDUSTRY LEADING OPTIMIZED SILICON

All roadmaps are subject to change.



“GENOA”

EXTENDING COMPUTE LEADERSHIP

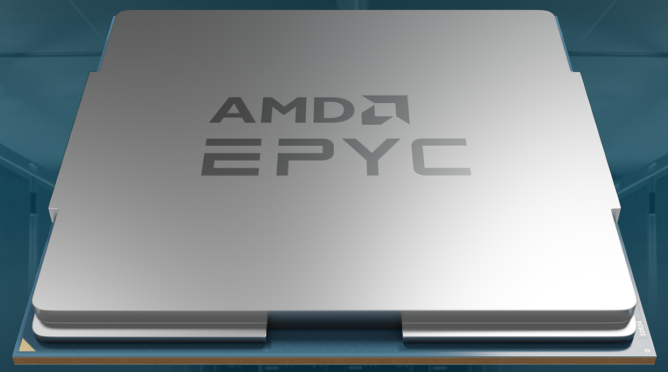
>75%

Faster Enterprise Java® Performance
vs. 3rd Gen AMD EPYC™ CPU*

Launching Q4 2022

- Leadership Socket and Per-Core Performance
  Up to 96 “Zen 4” Cores in 5nm
- Leadership Memory Bandwidth and Capacity
  12 Channels DDR5
- Next Generation I/O
  PCIe® Gen 5 | Memory Expansion with CXL™
- Advances in Confidential Computing
  Memory Encryption | Direct and CXL Attached

*96c “Genoa” vs. EPYC 7763. See Endnotes SP5-003, SP5-005, SP5-007. Preliminary data and projections subject to change



"BERGAMO"

CLOUD NATIVE LEADERSHIP

2X

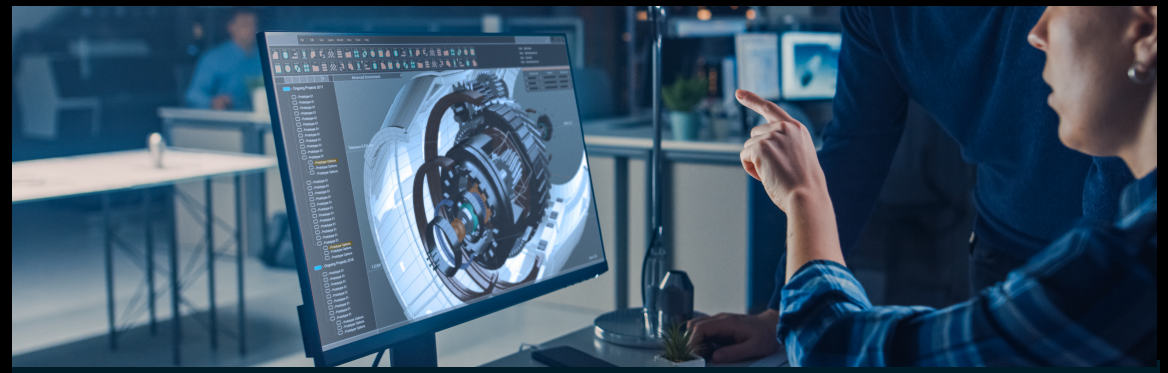
Cloud Container Density
vs. 3rd Gen AMD EPYC™ CPU*

Available 1H 2023

- Leadership Scale Out Performance
  Up to 128 "Zen 4c" Cores
- Highest Thread Density
  Up to 256 Threads
- SP5 Platform Compatible
  12 Memory Channels | PCIe® Gen 5
- "Zen 4" ISA Compatible
  No Software Port Required

*128c "Bergamo" vs. EPYC 7763. See endnote SP5-006. Preliminary data and projections subject to change. See endnote BGM-001.

INTRODUCING



“GENOA-X”

Optimized for **technical computing** and **databases**

Up to 96 “Zen 4” Cores in 5nm

1+ GB L3 Cache Per Socket

Coming in 2023

“SIENA”

Optimized for **intelligent edge** and **telco**

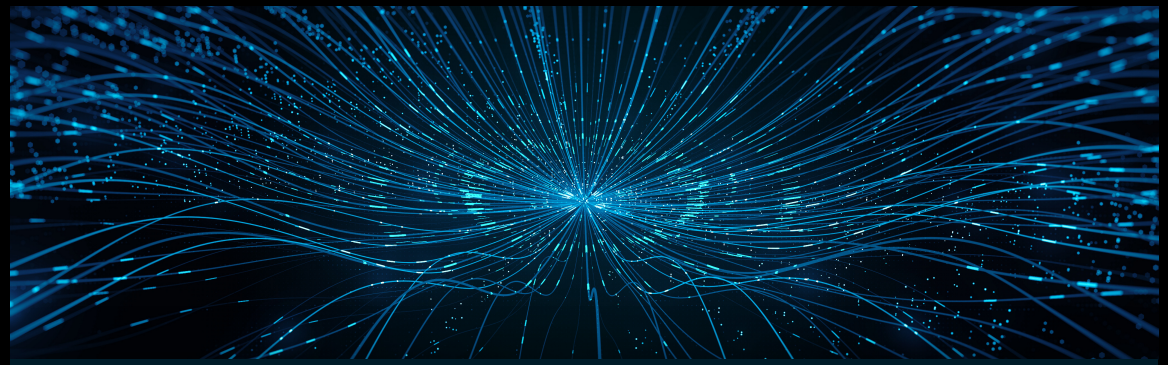
Up to 64 “Zen 4” Cores Lower Cost Platform

Optimized Performance-Per-Watt

Coming in 2023

See endnote GD-204.

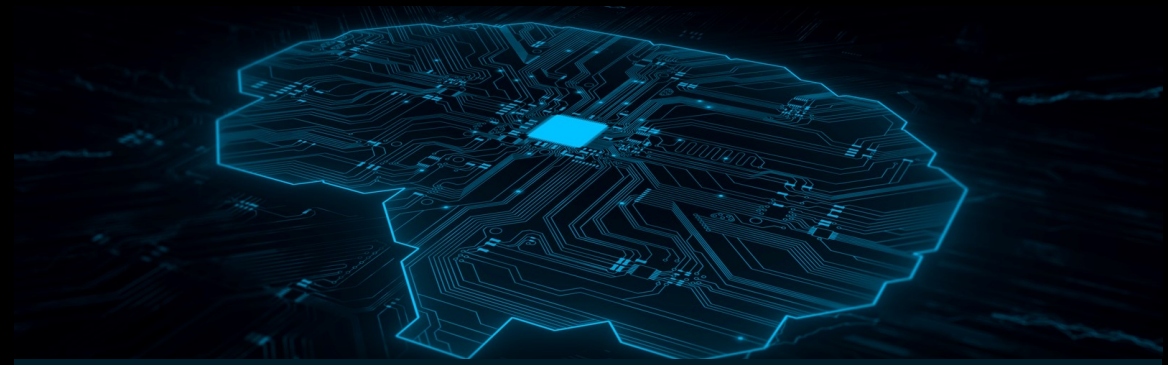
OPTIMIZED SOLUTIONS FOR DATA AND AI



Database and Analytics

Industry Leading Solutions

- OEM ready nodes, reference designs and integrated OEM products
- 60+ world records



AI Inference

ZenDNN Inference Software

- Supports TensorFlow, PyTorch and ONNX Run Time
- Deployed in data centers today with leadership recommendation engine performance

See endnote EPYC-022B.

GROWING ECOSYSTEM WITH 4TH GEN AMD EPYC™ PROCESSORS

2X
Number of Solutions

SOLUTIONS

Altair · anjuna · Ansys · BEAMR · BROADCOM · cadence · CANONICAL · casa systems · ceph · citrix · CLOUDERA · Couchbase · DASSAULT SYSTEMES · DATASTAX · docker · elastic · esi get it right · Excelero · FreeBSD · hadoop · JMA · JUNIPER NETWORKS · KIOXIA · MariaDB · MAVENIR · MEMSQL · Micron · Microsoft · NEURAL MAGIC · mongoDB · MySQL · NETSCOUT · NOKIA · NUTANIX · ORACLE · PGS SOFTWARE · PostgreSQL · Quobyte · Radisys · Red Hat · redislabs · ROBIN · SAMSUNG · ScaleMP · SIEMENS · SK hynix · splunk> · StorMagic · SUSE · SYNOPSYS · TigerGraph · TRANSWARP · VELOCIX · VERTICA · WEKA · vmware · Western Digital

CLOUD SERVICES

aws · Alibaba Cloud · Microsoft Azure · EQUINIX METAL · Google Cloud · IBM Cloud · ORACLE CLOUD · Tencent Cloud

PLATFORMS

Atos · ASRock · ASUS · CISCO · DELL Technologies · FOXCONN · GIGABYTE · H3C · Hewlett Packard Enterprise · Inventec · Lenovo · MiTAC · msi · QCT · SUPERMICRO · TYAN · wiwynn · wistron

ACCELERATING OUR GROWTH

Large and Growing Opportunity

$42B TAM across key segments

Product Leadership and Momentum Today

Leading cloud, HPC and enterprise performance

Expanding Portfolio of Silicon and Solutions

Delivering Si and software optimized to the workload

See MLN-016C, MLNX-047, MLN-092B.

Endnotes

- EPYC-022B: For a complete list of world records see http://amd.com/worldrecords.
- EPYC-025: 64-core 3rd Gen EPYC 7xx3 CPUs compared to a maximum 40-core 3rd Gen Intel Xeon Platinum 8380.
- GD-204: “Technical Computing” or “Technical Computing Workloads” as defined by AMD can include: electronic design automation, computational fluid dynamics, finite element analysis, seismic tomography, weather forecasting, quantum mechanics, climate research, molecular modeling, or similar workloads
- SP5-003: Estimated SPECrate®2017_int_base comparison based on internal AMD estimates. The 4th Gen EPYC score is based on engineering projections and the EPYC 7763 system score is a measured SPECrate score, using two different AMD reference systems as of 4/5/2022. OEM published scores and performance/CPU TDP Watt will vary based on system configuration and use of production silicon. SPEC®, SPEC CPU®, and SPECrate® are registered trademarks of the Standard Performance Evaluation Corporation. See www.spec.org for more information.
- SP5-005: Server-side Java multiJVM workload demo comparison based on AMD measured testing as of 6/2/2022. Configurations: 2x 96-core AMD 4th Gen EPYC (pre-production silicon) on a reference system versus 2x 64-core EPYC 7763 on a reference system. Java version JDK18. OEM published scores will vary based on system configuration and use of production silicon.
- SP5-006: 128-core 4th Gen EPYC CPU compared to a maximum 64-core 3rd Gen EPYC 77x3 options for 2x the container/core density
- SP5-007: 4th Gen EPYC CPUs have 12 channels of DDR5 memory vs. 3rd Gen Intel Xeon Scalable CPUs with 8 channels of DDR4 memory and announced standard “Sapphire Rapids” with 8 channels of DDR5 memory
- MLN-016C: Results as of 03/28/2022 using SPECrate®2017_int_base. The top scores of EPYC 7773X and 7763 are statistically tied. The AMD EPYC 7763 scored 861, http://spec.org/cpu2017/results/res2021q4/cpu2017-20211121-30148.html and 7773X scored 864, http://spec.org/cpu2017/results/res2022q1/cpu2017-20220228-31120.html which is higher than all other 2P scores published on the SPEC® website. SPEC®, SPECrate® and SPEC CPU® are registered trademarks of the Standard Performance Evaluation Corporation. See www.spec.org for more information.
- MLN-101: SAP® SD 2-tier comparison based on best performing systems published at www.sap.com/benchmarks as of 5/5/2021, 2x AMD EPYC™ 7763 scored 75,000 benchmark users (https://www.sap.com/dmc/benchmark/2021/Cert21021.pdf) which supports 56% more benchmark users than the top “Ice Lake” 3rd Gen 2x Intel® Xeon® Platinum 8380 that scored 48,000 benchmark users (https://www.sap.com/dmc/benchmark/2021/Cert21026.pdf). 2x AMD EPYC 7H12 scored 69,499 benchmark users, https://www.sap.com/dmc/benchmark/2020/Cert20023.pdf). SAP and SAP logo are the trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and in several other countries.
- MLN-092B: SPECjbb® 2015-MultiJVM Critical comparison based on best performing 2P systems published at www.spec.org as of 10/26/2021, 2x AMD EPYC™ 7763 scored 313,824 SPECjbb® 2015-MultiJVM Critical-jOPS (339,338 max-jOPS, https://www.spec.org/jbb2015/results/res2021q3/jbb2015-20210701-00688.html) which has 47% higher critical server-side Java® operations than the top “Ice Lake” 2x Intel® Xeon® Platinum 8380 that scored 213,195 critical-jOPS (269,094 max-jOPS, https://www.spec.org/jbb2015/results/res2021q3/jbb2015-20210810-00701.html). 2x AMD EPYC 7H12 scored 248,942 critical-jOPS (315,663 max-jOPS, http://spec.org/jbb2015/results/res2020q2/jbb2015-20200423-00550.html). SPEC® and SPECjbb® are registered trademarks of the Standard Performance Evaluation Corporation. See www.spec.org for more information.
- MLNX-033A: SPECrate®2017_fp_base comparison based on best performing systems published at www.spec.org as of 10/26/2021. Configurations: 2x AMD EPYC 7773X (745 SPECrate®2017_fp_base, http://spec.org/cpu2017/results/res2022q1/cpu2017-20220228-31118.html, $17600 1Ku price total, 560W total TDP) versus 2x Intel Xeon Platinum 8380 (489 SPECrate®2017_fp_base, http://spec.org/cpu2017/results/res2021q2/cpu2017-20210521-26361.html, $17332 1Ku price total, 540W total TDP) for 1.52x the performance at 1.5x the score per total CPU $ and 1.47x the performance/Watt. AMD 1Ku pricing and Intel ARK.intel.com specifications and pricing as of 3/15/22. SPEC®, SPEC CPU®, and SPECrate® are registered trademarks of the Standard Performance Evaluation Corporation. See www.spec.org for more information.
- MLNX-047: SPECrate®2017_fp_base comparison based on best performing systems published at www.spec.org as of 03/28/2022. A server with 2x AMD EPYC 7773X (745 SPECrate®2017_fp_base, http://spec.org/cpu2017/results/res2022q1/cpu2017-20220228-31118.html) is higher than all other 2P SPECrate®2017_fp_base scores. SPEC®, SPEC CPU®, and SPECrate® are registered trademarks of the Standard Performance Evaluation Corporation. see www.spec.org for more information.

Endnotes

- MLNTCO-020: This scenario contains many assumptions and estimates and, while based on AMD internal research and best approximations, should be considered an example for information purposes only, and not used as a basis for decision making over actual testing. The Bare Metal Server Greenhouse Gas Emissions TCO (total cost of ownership) Estimator Tool compares the selected AMD EPYC™ and Intel® Xeon® CPU based server solutions required to deliver a TOTAL_PERFORMANCE of 10000 units of integer performance based on the published scores for Intel Xeon and AMD EPYC CPU based servers. This estimation reflects a 3-year time frame.This analysis compares a 2P AMD EPYC EPYC_7763 powered server with a SPECrate®2017_int_base score of 861, https://spec.org/cpu2017/results/res2021q4/cpu2017-20211121-30148.pdf; compared to a 2P Intel Xeon Platinum_8380 based server with a SPECrate®2017_int_base score of 602, https://spec.org/cpu2017/results/res2021q2/cpu2017-20210521-26364.pdf. Both AMD EPYC and Intel based servers use the same cost for the following elements of the analysis: server chassis size of 2RU at a cost of $2500 per chassis; internal storage $380; physical servers managed per admin: 30; fully burdened cost per admin $110500; server rack size of 42; space allowance per rack of 27 sq feet; monthly cost of data center space $20 per sq foot; cost per kW for power $0.12; power drop per rack of 8kW; and a PUE (power usage effectiveness) of 1.7. The EPYC powered solution is estimated to take: 12 total 2P EPYC_7763 powered servers at a hardware only acquisition cost of $23748 per server, which includes $7890 per CPU, total system memory of 1024GB, which is 8GB of memory / core and a total system memory cost of $5088; internal storage cost of $380. The total estimated AMD EPYC hardware acquisition cost for this solution is $284976. Each server draws ~755.1412kWhr per month. For the 3 years of this EPYC powered solution analysis the: total solution power cost is ~$66548.88 which includes the PUE factor; the total admin cost is ~$132600, and the total real estate cost is ~$38880, using 2 racks. The total 3 TCO estimate for the AMD solution is $523004.88. The Intel based solution is estimated to take 17 total 2P Platinum_8380 powered servers at a hardware only acquisition cost of $24206 per server, which includes $8099 per CPU, total system memory of 1024GB, which is 12.8GB of memory / core and a total system memory cost of $5088; internal storage cost of $380. The total estimated Intel hardware acquisition cost for this solution is $411502. Each server draws ~751.4912kWhr per month. For the 3 years of this Intel based solution analysis the: total solution power cost is ~$93822.048 which includes the PUE factor; the total admin cost is ~$187851, and the total real estate cost is ~$58320 using 3 racks. The total 3 TCO estimate for the Intel solution is $751495.048. AMD EPYC powered servers have a $228490 lower 3-year TCO. Delivering 10000 estimated score of SPECrate®2017_int_base performance produces the following estimated results: the AMD EPYC solution requires 29% fewer servers [1-(AMD server count / Intel server count)]; 33% less space [1-(AMD rack count / Intel rack count)]; 29% less power [1-(AMD power cost / Intel power cost)]; providing a 30% lower 3-year TCO [1-(AMD TCO / Intel TCO)]. delivering ~98 or ~1% Better w/ AMD SPECrate®2017_int_base solution score AMD EPYC_7763 powered servers save ~227276.4kWh of electricity for the 3 years of this analysis. Leveraging this data, using the Country / Region specific electricity factors from the '2020 Grid Electricity Emissions Factors v1.4 – September 2020', and the United States Environmental Protection Agency 'Greenhouse Gas Equivalencies Calculator', the AMD EPYC powered server saves ~103.01 Metric Tons of CO2 equivalents. This results in the following estimated savings based on United States data, Emissions Avoided equivalent to one of the following: 22 USA Passenger Cars Not Driven for 1 year; or; or 7.45 USA Passenger Cars Not Driven Annually; or; or 11640 Gallons of Gasoline Not Used; or; oror Carbon Sequestered equivalent to: 1700 Tree Seedlings Grown for 10 years in USA; or; or 41.2 Acres of USA Forests Annually.The 2020 Grid Electricity Emissions Factors v1.4 – September 2020 data used in this analysis can be found at https://www.carbonfootprint.com/docs/2020_09_emissions_factors_sources_for_2020_electricity_v14.pdf and the US EPA Greenhouse Gas Equivalencies Calculator used in this analysis can be found athttps://www.epa.gov/energy/greenhouse-gas-equivalencies-calculatorAMD processor pricing based on 1KU price as of Sept 2021. Intel® Xeon® Scalable Gen 1 and Gen 2 CPU data and pricing from https://ark.intel.com as of September 2021. Intel Xeon Gen3 Scalable Ice Lake pricing and data from https://newsroom.intel.com/wp-content/uploads/sites/11/2021/05/3rd-Gen-Intel-Xeon-Scalable-Processor-SKU-Stack-with-RCP.pdf on 09/01/2021. All pricing is in USD. SPECrate® scores as of Jan 14, 2022. SPEC®, SPECrate® and SPEC CPU® are registered trademarks of the Standard Performance Evaluation Corporation. See www.spec.org for more information. AMD EPYC performance numb ers based on the identified benchmark reported scores or the user provided score where indicated. Product and company names are for informational purposes only and may be trademarks of their respective owners.Results generated by: AMD EPYC™ BARE METAL SERVER and GREENHOUSE GAS EMISSIONS TCO ESTIMATION TOOL; VERSION 4.2

Endnotes

- MLNTCO-021: This scenario contains many assumptions and estimates and, while based on AMD internal research and best approximations, should be considered an example for information purposes only, and not used as a basis for decision making over actual testing. The AMD EPYC™ SERVER VIRTUALIZATION and GREENHOUSE GAS EMISSIONS TCO ESTIMATION TOOL tool compares the 2P AMD EPYC™ and the 2P Intel® Xeon® server solutions required to deliver 1200 total virtual machines (VM), requiring 1 core and 8GB of memory per VM. The analysis includes both hardware and virtualization software components. Hardware costs (CPU + memory + storage + chassis): The 2P AMD 64 core EPYC_7713 processor used in this solution analysis provides 128 total cores per server, each processor cost $7060 and the server uses 32 x 32GB DIMMs to achieve the minimum required memory footprint, in a 1RU server chassis that cost $2200, and requires 1 server racks. The AMD solution has a total estimated hardware acquisition cost of $217880. The 40 core Intel Xeon Platinum_8380 processor used in this solution analysis provides 80 total cores per server. Each processor cost $8666 and the server uses 16 x 64GB DIMMs to achieve the minimum required memory footprint, in a 2RU server chassis that cost $2500 and requires 2 server racks. The Intel solution has a total estimated hardware acquisition cost of $390060. OPERATING COSTS: The core assumptions for this analysis are as follows: Cost of power @ $0.12 with kwatts (kW) of power to each rack and a PUE (power usage effectiveness) of 1.7 and a server rack size of 42RU. Each server has 1 hard drives drawing 3 watts each. Server Admin annual salary is $85000 managing 30 physical servers with a salary burden rate of 30%. The VM Admin salary is $85000, with a burden rate of 30% and managing 400 VMs.AMD has estimated OpEx costs as follows: a hardware admin cost of $110500, a real estate cost of $19440, and a power cost of $40208.4, for a total estimated 3 year TCO cost (hardware cost and operating expense) of $388028 with AMD. Estimated OpEx costs for Intel are: hardware admin cost of $165750, real estate cost of $38880, and power cost of $58704.HARDWARE TCO: This is the CapEx and OpEx directly associated with the hardware. The AMD EPYC_7713 solution requires 10 - 2P servers with a CapEx of $217880 with a total estimated 3 year TCO cost (CapEx plus OpEx) of $388028. The Intel Platinum_8380 processor requires 15 - 2P servers with a CapEx of $390060 with a total estimated 3 year TCO cost (CapEx plus OpEx) of $653394. The AMD solution has an estimated 41% lower hardware TCO for this virtualization solution, 1 - ($388028 ÷ $653394) = 41%, than the Intel solution.VIRTUALIZATION TCO: Analysis is based on the following estimates: 3 year Virtualization (hardware, operating, and software cost) for the Intel solution is $2005974 and $1621248 for the AMD solution. This means that the AMD solution is ~19% less expensive over three years. 1 - ($1621248 ÷ $2005974) = 19%. The EPYC solution 1st year TCO is $844816 and the Intel 1st year TCO is $1167418. The AMD solution 1st year TCO per VM of $704.01 where the Intel 1st yr. solution is $972.85. The AMD 1st year TCO per VM is $268.83, or ~28% lower than Intel. The 1st year TCO per VM is calculated by taking the 1-year TCO (hardware, software, and 1st year OpEx) and dividing it by the total number of VMs. The virtualization software used in this analysis is VMware with a VMware® vSphere Enterprise Plus w/ Production support license. This analysis uses license pricing of $5968 per Socket + Core with 3 year support. More information on VMware software can be found @ https://store-us.vmware.com/vmware-vsphere-enterprise-plus-284281000.html. For 1200 VMs with 1 core(s) per VM, and 8 GB of memory per VM, the Intel Platinum_8380 processor requires 15 servers, and 60 licenses. The AMD EPYC_7713 solution requires 10 servers and 40 licenses. The AMD solution requires 33% fewer servers than the Intel solution. The AMD server and virtualization software license cost are $456600, and the Intel cost are $748140. Hardware and virtualization cost are ~$291540 or ~39% Lower w/ AMD. AMD EPYC_7713 powered servers save ~154132.2kWh of electricity for the 3 years of this analysis. Leveraging this data, using the Country / Region specific electricity factors from the '2020 Grid Electricity Emissions Factors v1.4 – September 2020', and the United States Environmental Protection Agency 'Greenhouse Gas Equivalencies Calculator', the AMD EPYC powered server saves ~69.86 Metric Tons of CO2 equivalents. This results in the following estimated savings based on United States data, Greenhouse Gas Emissions Avoided of one of the following: 15 USA Passenger Cars Not Driven for 1 year; or; 5 USA Passenger Cars Not Driven Annually; or; 173382 Miles Driven by Avg Passenger Car; or; or CO2 Emissions Avoided from: 7894 Gallons of Gasoline Not Used; or; 77261 Pounds of Coal Not Burned in USA; or; 9 USA Homes' Electricity Use for 1 year; or; 3 USA Homes' Electricity Use Annually; or;or Carbon Sequestered equivalent to: 1153 Tree Seedlings Grown for 10 years in USA; or; 84 Acres of USA Forests in 1 year; or; 27.94 Acres of USA Forests Annually.The 2020 Grid Electricity Emissions Factors v1.4 – September 2020 data used in this analysis can be found at https://www.carbonfootprint.com/docs/2020_09_emissions_factors_sources_for_2020_electricity_v14.pdf and the US EPA Greenhouse Gas Equivalencies Calculator used in this analysis can be found athttps://www.epa.gov/energy/greenhouse-gas-equivalencies-calculatorVirtualization software pricing sourced online as of 09/14/2021. Third party names are for informational purposes only and may be trademarks of their respective owners. All pricing is in USD.AMD CPU pricing based on 1KU price as of January 2022. Intel® Xeon® Scalable CPU data and pricing from https://ark.intel.com as of January 2022. All pricing is in USD.Results generated by: AMD EPYC™ SERVER VIRTUALIZATION and GREENHOUSE GAS EMISSIONS TCO ESTIMATION TOOL - v10.13

Endnotes

- MLNXTCO-001: This scenario contains many assumptions and estimates and, while based on AMD internal research and best approximations, should be considered an example for information purposes only, and not used as a basis for decision making over actual testing. The AMD EPYC™ AMD 3D V-Cache™ VALUE ANALYSIS & GHG TOOL compares the selected AMD EPYC™ and Intel® Xeon® CPU based server solutions required to deliver a TOTAL_PERFORMANCE of 4600 jobs per day with Ansys® cfx-50 using the performance scores in this analysis for Intel Xeon and AMD EPYC CPU based servers. This estimation reflects a 3-year time frame.This analysis compares a 2P AMD EPYC_7573X (32 cores per CPU) powered server with a Ansys® cfx-50 jobs per day of 484.67; to a 2P Intel Platinum_8362 (32 cores per CPU) based server with a Ansys® cfx-50 jobs per day of 239.51. A server powered by the EPYC_7573X can deliver up to 102% more jobs per day than the Platinum_8362 based server. Both AMD EPYC and Intel based servers use the same cost for the following elements of the analysis: server chassis size of 2RU at a cost of $2500 per chassis; internal storage $380; physical servers managed per admin: 30; fully burdened cost per admin $110500; server rack size of 42; space allowance per rack of 27 sq feet; monthly cost of data center space $20 per sq foot; cost per kW for power $0.12; power drop per rack of 12kW; and a PUE (power usage effectiveness) of 1.7. The AMD EPYC powered solution is estimated to take 10 total 2P EPYC_7573X powered servers at a hardware only acquisition cost of $19564 per server, which includes $5590 per CPU, total system memory of 1024GB, which is 16GB of memory / core and a total system memory cost of $5504; internal storage cost of $380. The total estimated AMD EPYC hardware acquisition cost for this solution is $195640. Each server draws ~754kWhr per month. For the 3 years of this analysis the: EPYC total solution power cost is ~$55406 which includes the PUE factor; the total admin cost is ~$110499, and the total real estate cost is ~$19440 using 1 rack(s). The total 3-year TCO estimate for the EPYC solution is $370802.The Intel based solution is estimated to take 20 total 2P Platinum_8362 powered servers at a hardware only acquisition cost of $20080 per server, which includes $5828 per CPU, total system memory of 1024GB, which is 16GB of memory / core and a total system memory cost of $5504; internal storage cost of $380. The total estimated Intel hardware acquisition cost for this solution is $401600. Each server draws ~743kWhr per month. For the 3 years of this analysis the: Intel total solution power cost is ~$109203 which includes the PUE factor; the total admin cost is ~$221001, and the total real estate cost is ~$38880 using 2 rack(s). The total 3-year TCO estimate for the Intel solution is $750318. AMD EPYC powered servers have a $379516 or 51% lower 3-year TCO.Delivering a minimum score of 4600 for Ansys® cfx-50 produces the following estimated results: the EPYC_7573X solution requires 50% fewer servers; takes 50% less RU space; 49% less power. AMD EPYC_7573X powered servers save ~448315 kWh of electricity for the 3-years of this analysis. Leveraging this data, using the Country / Region specific electricity factors from the '2020 Grid Electricity Emissions Factors v1.4 – September 2020', and the United States Environmental Protection Agency 'Greenhouse Gas Equivalencies Calculator', the AMD EPYC powered server saves ~203.19 Metric Tons of CO2 equivalents. This results in the following estimated savings based on United States data, for any one of the following:Greenhouse Gas Emissions Avoided: 44 USA Passenger Cars Not Driven for 1 year; or 15 USA Passenger Cars Not Driven Annually; or 510604 Miles Driven by Avg Passenger Car; oror CO2 Emissions Avoided from: 22960 Gallons of Gasoline Not Used; or 224520 Pounds of Coal Not Burned in USA; or 37 USA Homes' Electricity Use for 1 year; or 12 USA Homes' Electricity Use Annually; oror Carbon Sequestered equivalent to: 3353 Tree Seedlings Grown for 10 years in USA; or 244 Acres of USA Forests in 1 year; or 81.27 Acres of USA Forests Annually.The 2020 Grid Electricity Emissions Factors v1.4 – September 2020 data used in this analysis can be found at https://www.carbonfootprint.com/docs/2020_09_emissions_factors_sources_for_2020_electricity_v14.pdf and the US EPA Greenhouse Gas Equivalencies Calculator used in this analysis can be found at https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.Pricing per CPU is 1kU pricing for AMD and Intel published pricing at https://ark.intel.com/, January 2022. All pricing is in USD. All performance numbers are based on AMD internal testing, February 2022. AMD tests were run with pre-production B1 CPUs on AMD reference platforms. Intel tests were run on production platforms. Product and company names are for informational purposes only and may be trademarks of their respective owners.Results generated by the: AMD EPYC™ AMD 3D V-Cache™ VALUE ANALYSIS & GHG TOOL: v3.10