



LINBIT
STORAGE
DAY

3. Ampere Altra + LINBIT SDS + CloudStack



AMPERE® + **LINBIT** SDS + **apachecloudstack**
Altra.

Speakers



Giles Siret
CEO



Philipp Reisner
CEO



Peter Pouliot
Sr. Developer Advocate



Christian Helmholz
Business Development



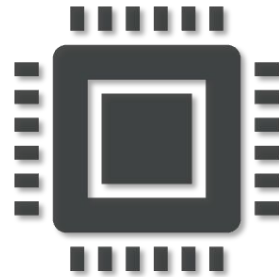
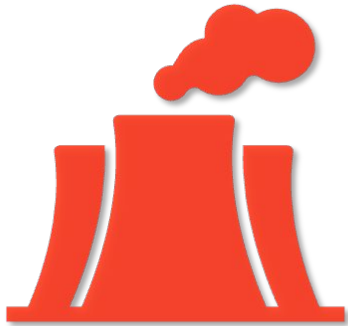


A Modern Semiconductor Company
Building the First Cloud Native Processors
for the Sustainable Cloud

Cloud Computing on Ampere Processors

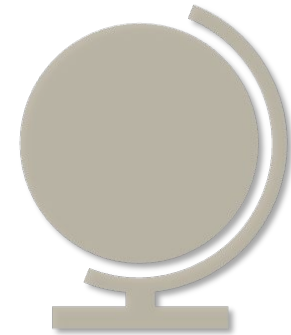
Help save the world!

**Carbon Emission &
Energy Cost
Problems Rising**



**Ampere Available
Across Major
CSPs & OXMs**

**Aarch64 ISA
Mature Ecosystem
Leading Performance
Efficiency**



Join Us



What is Ampere all about?

RISC – Reduced Instruction Set Computer

“one clock, one instruction”

Inherently power efficient

Instruction set is **different from CISC** (Complex Instruction Set Computer) architecture (e.g. Intel and AMD processors)

Aarch64 Architecture – (ARM -- Advanced RISC Machine)

Arm Holdings plc develops licensable technology (core designs, instruction sets) for RISC computing including the ARM architecture family (Aarch32, Aarch64)

Aarch64 is the 64-bit extension of the ARM architecture family

Ampere Computing LLC

Develop high core count, power efficient Cloud Native Processors utilizing Aarch64 architecture

Ampere Ultra Family → based on Arm Neoverse N1 core design → 32-128 cores

Ampere One Family → custom design, fully Arm (Aarch64) ISA compliant → 136-192 cores

Ampere delivers...

Industry-leading efficiency for cloud native computing

Maximum performance per \$ (cloud)

Maximum performance per watt or rack (on prem)

Maximum core density per socket

Maximum, linear performance scalability

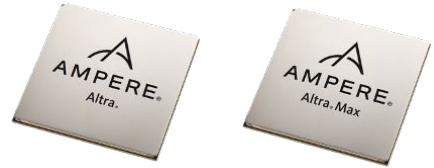


This is not new...

HARDWARE



... raise adoption and education.



... maximizes scalability and performance.

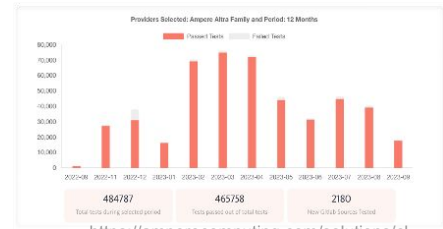


... proliferate IoT and Edge.

https://en.wikipedia.org/wiki/Raspberry_Pi
https://en.wikipedia.org/wiki/Apple_M1
https://en.wikipedia.org/wiki/ARM_Cortex-M

SOFTWARE

Automated Regression Testing



<https://amperecomputing.com/solutions/cloud-native>



100s of "Ready-to-Deploy" Apps & Tools

Performance Testimonial

Target outcome: Max IOPS Performance (Cluster)

Incumbent setup: 12 x dual socket Intel Xeon Platinum 8280L

Ampere-LINBIT setup: 3 x single socket Ampere Altra Max M128-30

End results demonstrated:

Up to **25.5M IOPS** // **~71%** higher // **~10.6M** increase

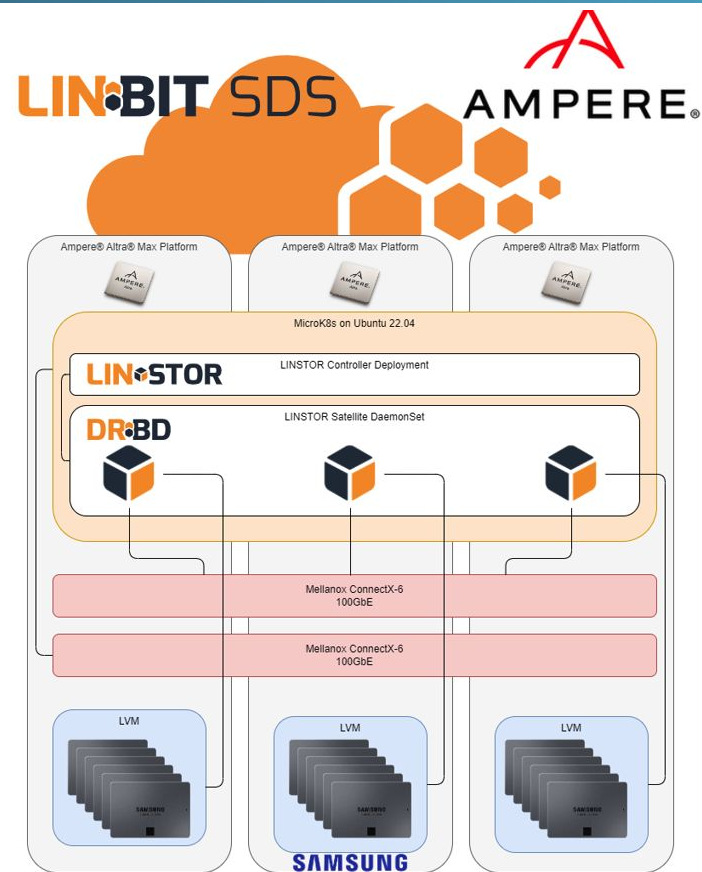
Reduce total stack from 12 systems to 3 systems **75% improvement**

Reduce total CPU count from 24 to 3 **87.5% improvement**

Reduce total CPU cost by **95%** (based on MSRP)

find the full details here:

<https://linbit.com/blog/benchmarking-on-ampere-altra-max-platform-with-linbit-sds/>



Q&A

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