

Impacto da IA na Infraestrutura dos Data Centers

Eli Batista
Director and Country Manager
Siemon



DATACENTER
FORUM BRASIL 2025

Tecnologias avançadas para a inovação na
indústria dos Data Centers

Bicsi
CALA

Impacto da IA na Infraestrutura dos Data Centers



30 de Novembro de 2022





ChatGPT

Dezembro de 2022



Março 2023



**Microsoft
Copilot**

Nov 2023



INTRODUCING



Dez 2023



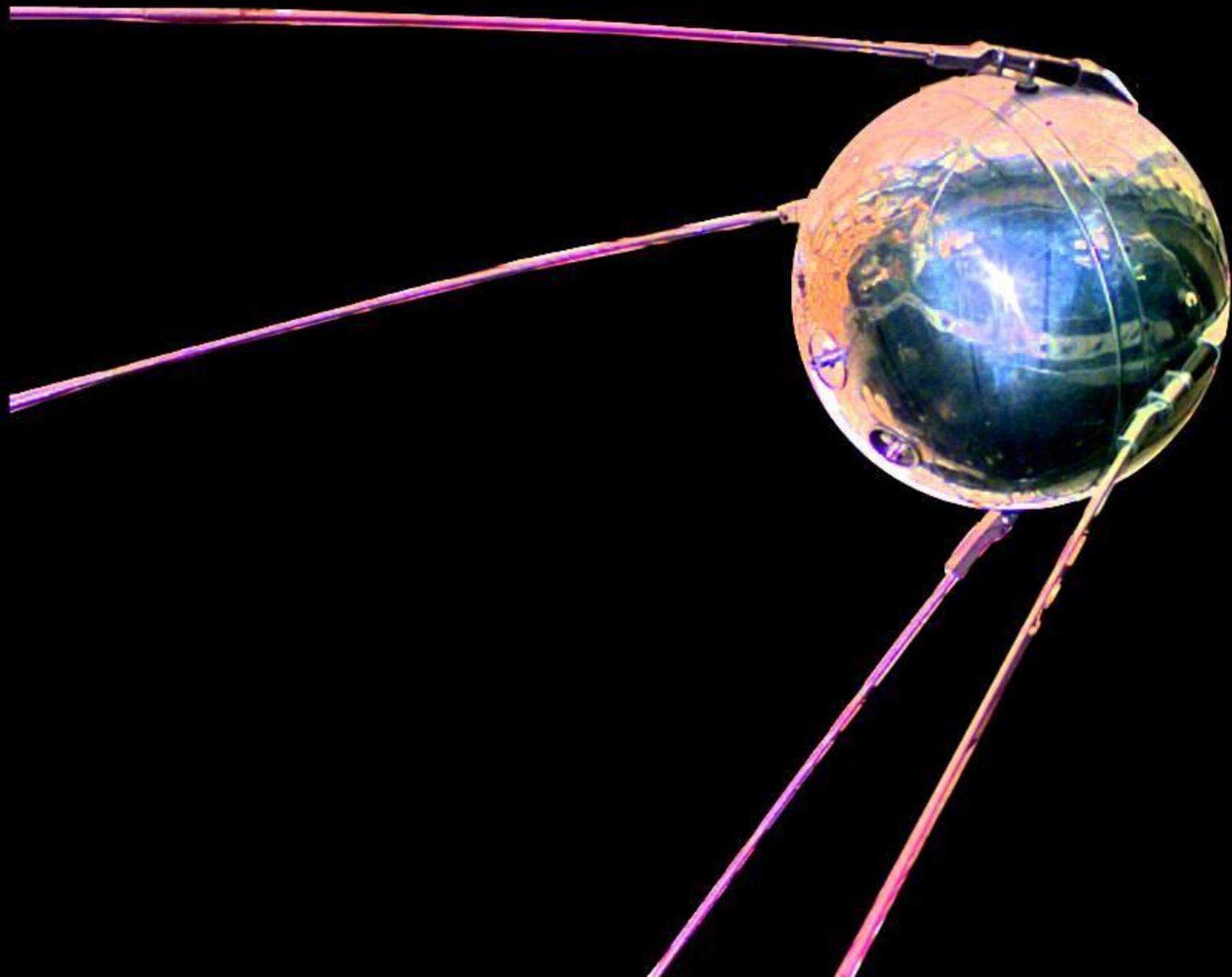
Claude BY ANTHROPIC



Jan 2024



Gemini



"All the News
That's Fit to Print"

The New York Times.

LATE CITY EDITION

U. S. Weather Bureau Report (Page 33) forecasts:
Cloudy and cool today and tonight.
Mostly fair tomorrow.
Temp. range: 65—53. Yesterday: 62.4—49.2.

VOL. CVII..No. 36,414.

© 1957, by The New York Times Company.
Times Square, New York 36, N. Y.

NEW YORK, SATURDAY, OCTOBER 5, 1957.

10¢ beyond 100-mile zone
from New York City

FIVE CENTS

SOVIET FIRES EARTH SATELLITE INTO SPACE; IT IS CIRCLING THE GLOBE AT 18,000 M. P. H.; SPHERE TRACKED IN 4 CROSSINGS OVER U. S.

HOFFA IS ELECTED TEAMSTERS' HEAD; WARNS OF BATTLE

Defeats Two Foes 3 to 1
—Says Union Will Fight
'With Every Ounce'

Text of the Hoffa address
is printed on Page 6.

By A. H. RASKIN

Special to The New York Times.

MIAMI BEACH, Oct. 4—The scandal-scarred International Brotherhood of Teamsters elected James R. Hoffa as its president today.

He won by a margin of nearly 3 to 1 over the combined vote of two rivals who campaigned on pledges to clean up the nation's biggest union.

Senate rackets investigators and Hoffa critics in the union rank-and-file immediately opened actions to strip the 44-year-old former warehouseman from Detroit of his election victory.

A jubilant Hoffa exhibited, however, greater concern over the possibility that his union might be ousted from the American Federation of Labor and Congress of Industrial Organizations. He appealed for time to prove that he could make the teamsters "a model of trade unionism."

The parent organization has ordered the 1,400,000-member Teamsters Union to get rid of corrupt leadership by Oct. 24 or face suspension. Hoffa said he felt actions by the union at its week-long convention here should satisfy the federation.



IN TOKEN OF VICTORY: Dave Beck, retiring head of the Teamsters Union, raises hand of James R. Hoffa upon his election as union's president. At right is Mrs. Hoffa.

FAUBUS COMPARES HIS STAND TO LEE'S

Says He Will Remain Loyal
to People of Arkansas—
All Is Quiet at School

By HOMER BIGART

Special to The New York Times.

LITTLE ROCK, Ark., Oct. 4—Gov. Orval E. Faubus said to-

Flu Widens in City; 10% Rate Predicted; 200,000 Pupils Out

By ROBERT ALDEN

Asian influenza continued to spread through the city yesterday.

Commissioner of Hospitals Morris A. Jacobs reported that there were ten times more respiratory infections than during the comparable period a year ago.

ARGENTINA TAKES EMERGENCY STEPS

State of Siege Proclaimed
in Buenos Aires Region
—Arrests Reported

By Reuters.

BUENOS AIRES, Oct. 4—A state of siege, suspending constitutional guarantees, was

COURSE RECORDED

Navy Picks Up Radio
Signals—4 Report
Sighting Device

By WALTER SULLIVAN

Special to The New York Times.

WASHINGTON, Saturday, Oct. 5—The Naval Research Laboratory announced early today that it had recorded four crossings of the Soviet earth satellite over the United States.

It said that one had passed near Washington. Two crossings were farther to the west. The location of the fourth was not made available immediately.

It added that tracking would be continued in an attempt to pin down the orbit sufficiently to obtain scientific information of the type sought in the International Geophysical Year.

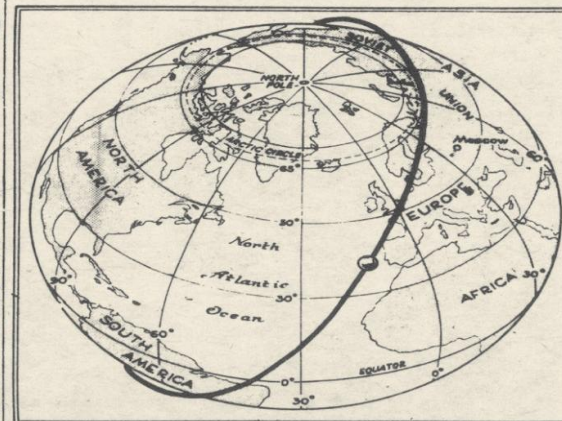
[Four visual sightings, one of which was in conjunction with a radio contact, were reported by early Saturday morning. Two sightings were made at Columbus, Ohio, and one each from Terre Haute, Ind., and Whittier, Calif.]

Press Reports Noted

Soviet newspapers reported several weeks ago that the Soviet satellites would broadcast on frequencies in the neighborhood of twenty and forty megacycles. More exact frequencies were given by Soviet scientists at a conference on rockets and satellites that took place here this week.

Presumably the Naval Research Laboratory, which is responsible for the United States satellite program under the National Academy of Sciences, immediately set up receivers on those frequencies.

The tracking system estab-



The New York Times
The approximate orbit of the Russian earth satellite is shown by black line. The rotation of the earth will bring the United States under the orbit of Soviet-made moon.

Device Is 8 Times Heavier Than One Planned by U.S.

Special to The New York Times.

WASHINGTON, Oct. 4—Leaders of the United States earth satellite program were astonished tonight to learn that the Soviet Union had launched a satellite eight times heavier than that contemplated by this country.

Dr. Joseph Kaplan, chairman of the United States program for the International Geophysical Year, described the 184-pound weight as "fantastic." The heaviest American satellites are to weigh twenty-one and a half pounds.

The actual launching, nevertheless, did not take the American scientists by surprise. At the end of working sessions on

SATELLITE SIGNAL BROADCAST HERE

Impulse Carried on Radio
and TV—First Reported
by Long Island Station

560 MILES HIGH

Visible With Simple
Binoculars, Moscow
Statement Says

Text of Tass announcement
appears on Page 3.

By WILLIAM J. JORDEN

Special to The New York Times.

MOSCOW, Saturday, Oct. 5—The Soviet Union announced this morning that it successfully launched a man-made earth satellite into space yesterday.

The Russians calculated the satellite's orbit at a maximum of 560 miles above the earth and its speed at 18,000 miles an hour.

The official Soviet news agency Tass said the artificial moon, with a diameter of twenty-two inches and a weight of 184 pounds, was circling the earth once every hour and thirty-five minutes. This means more than fifteen times a day.

Two radio transmitters, Tass said, are sending signals continuously on frequencies of 20,005 and 40,002 megacycles. These signals were said to be strong enough to be picked up by amateur radio operators. The trajectory of the satellite is being tracked by numerous scientific stations.

Due Over Moscow Today

Tass said the satellite was moving at an angle of 65 degrees to the equator and would pass over Moscow twice today. "Its flight," the ment added, "will be in the rays of the setting sun with the simplest optical is such as binoculars

Bicsi
CALA

Jan 2025



deepseek

Dia 27 de Janeiro de 2025

“....empresas do setor nos Estados Unidos e na Europa chegaram a atingir perdas de

US\$ 1 trilhão em valor de mercado...”

Onde vamos Chegar ?



2003



2015





2016

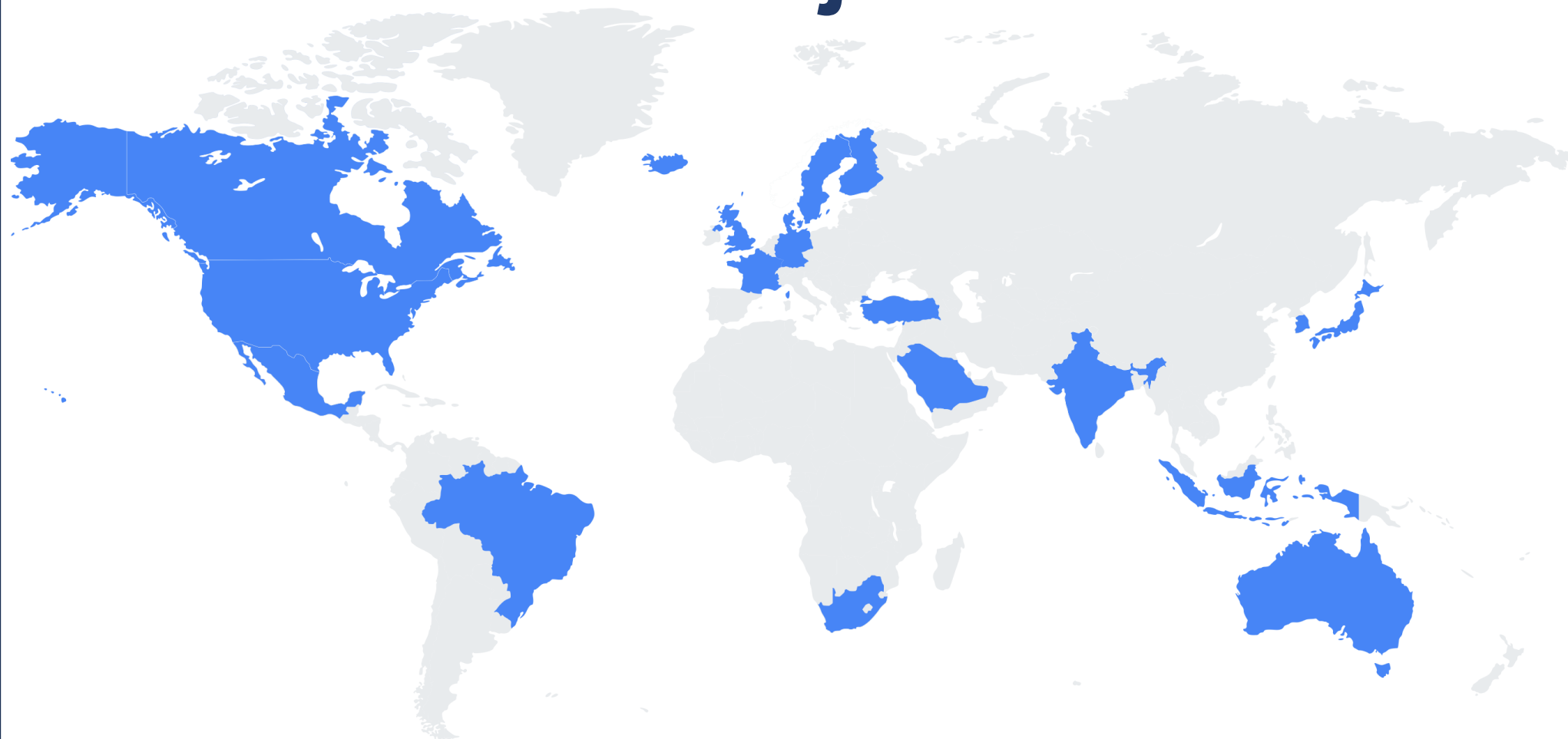


2025



18 de abril à 3 de junho

B
R
A
S
I
L

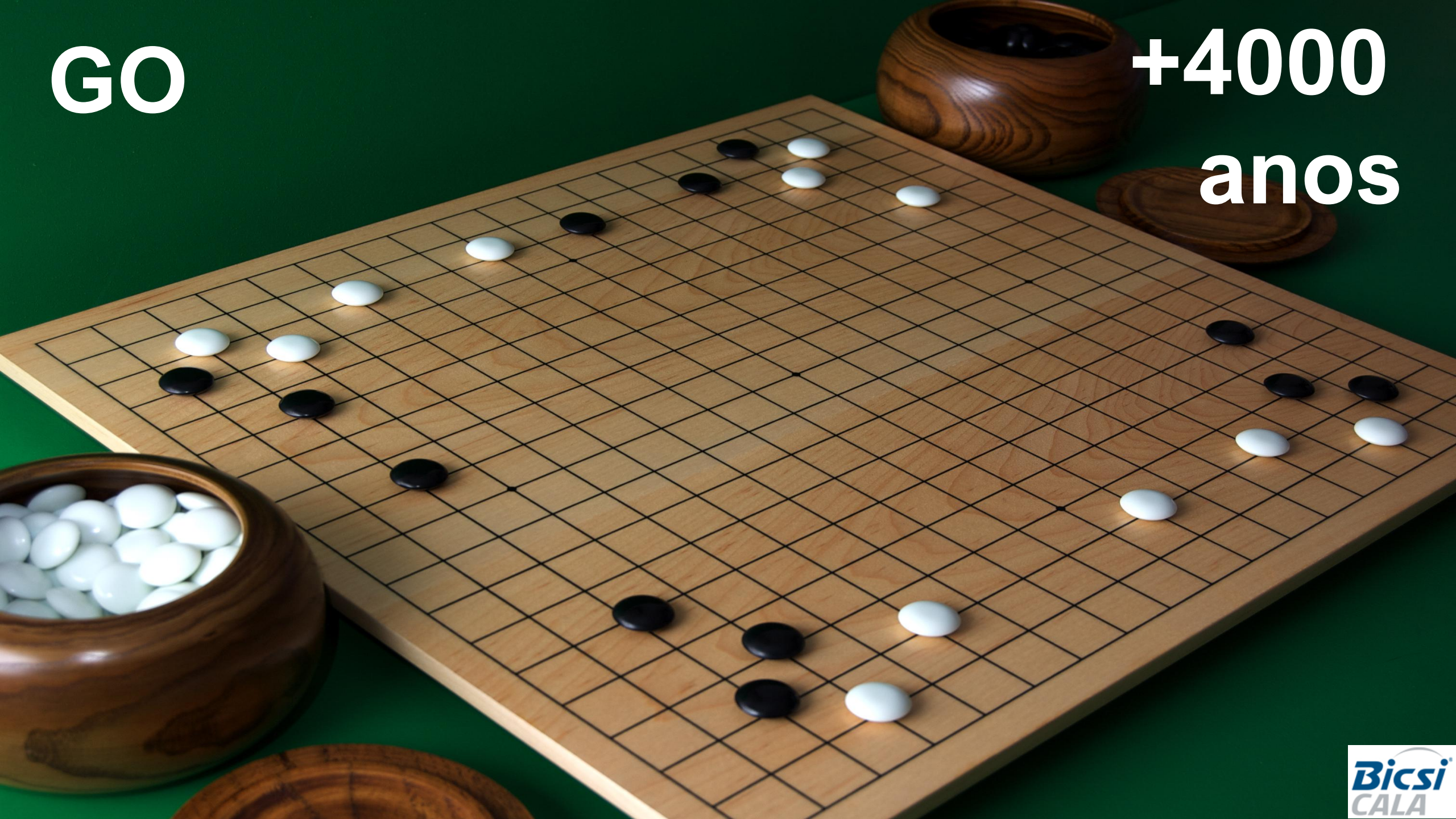


US	1,047	France	179	Australia	118	Brazil	351	Kuwait*	3
Canada	200	Nordics	177	South Korea	118	Indonesia	116	South Africa*	7
UK	175	Japan	117	Taiwan	116	Saudi Arabia*	18	UAE*	
Germany	175	India	117	Mexico	350	Turkey*	35	Qatar*	



GO

+4000
anos





Geopbyte

2025

Brotonbyte

Yottabyte

Zettabyte

Exabyte

2016

2015

Petabyte

Terabyte

Gigabyte

Mb

2005

Dados

- 1 Bit = Binary Digit
- 8 Bits = 1 Byte
- 1024 Bytes = 1 Kilobyte
- 1024 Kilobytes = 1 Megabyte
- 1024 Megabytes = 1 Gigabyte
- 1024 Gigabytes = 1 Terabyte
- 1024 Terabytes = 1 Petabyte
- 1024 Petabytes = 1 Exabyte
- 1024 Exabytes = 1 Zettabyte
- 1024 Zettabytes = 1 Yottabyte
- 1024 Yottabytes = 1 Brontobyte
- 1024 Brontobytes = 1 Geopbyte
- 1024 Geopbytes = 1 Saganbyte
- 1024 Saganbytes = 1 Pijabyte
- 1024 Pijabytes = 1 Alphabyte
- 1024 Alphabytes = 1 Kryatbyte
- 1024 Kryatbytes = 1 Amosbyte
- 1024 Amosbytes = 1 Pectrolbyte
- 1024 Pectrolbytes = 1 Bolgerbyte
- 1024 Bolgerbytes = 1 Sambobbyte
- 1024 Sambobbytes = 1 Quesabyte
- 1024 Quesabytes = 1 Kinsabyte
- 1024 Kinsabytes = 1 Rutherbyte
- 1024 Rutherbytes = 1 Dumbnibyte
- 1024 Dumbnibytes = 1 Seaborgbytte
- 1024 Seaborgbyttes = 1 Bohrbyte
- 1024 Bohrbytes = 1 Hassiubyte
- 1024 Hassiubytes = 1 Meitnerbyte
- 1024 Meitnerbytes = 1 Dormstadbyte
- 1024 Dormstadbytes = 1 Teoentbyte

+++ Velocidade



9,58s 44,7 km/h


692.000 km/h



Parker Solar Probe


Velocidade



Peter Paluch 

Cisco Employee

Member since 07-29-2005

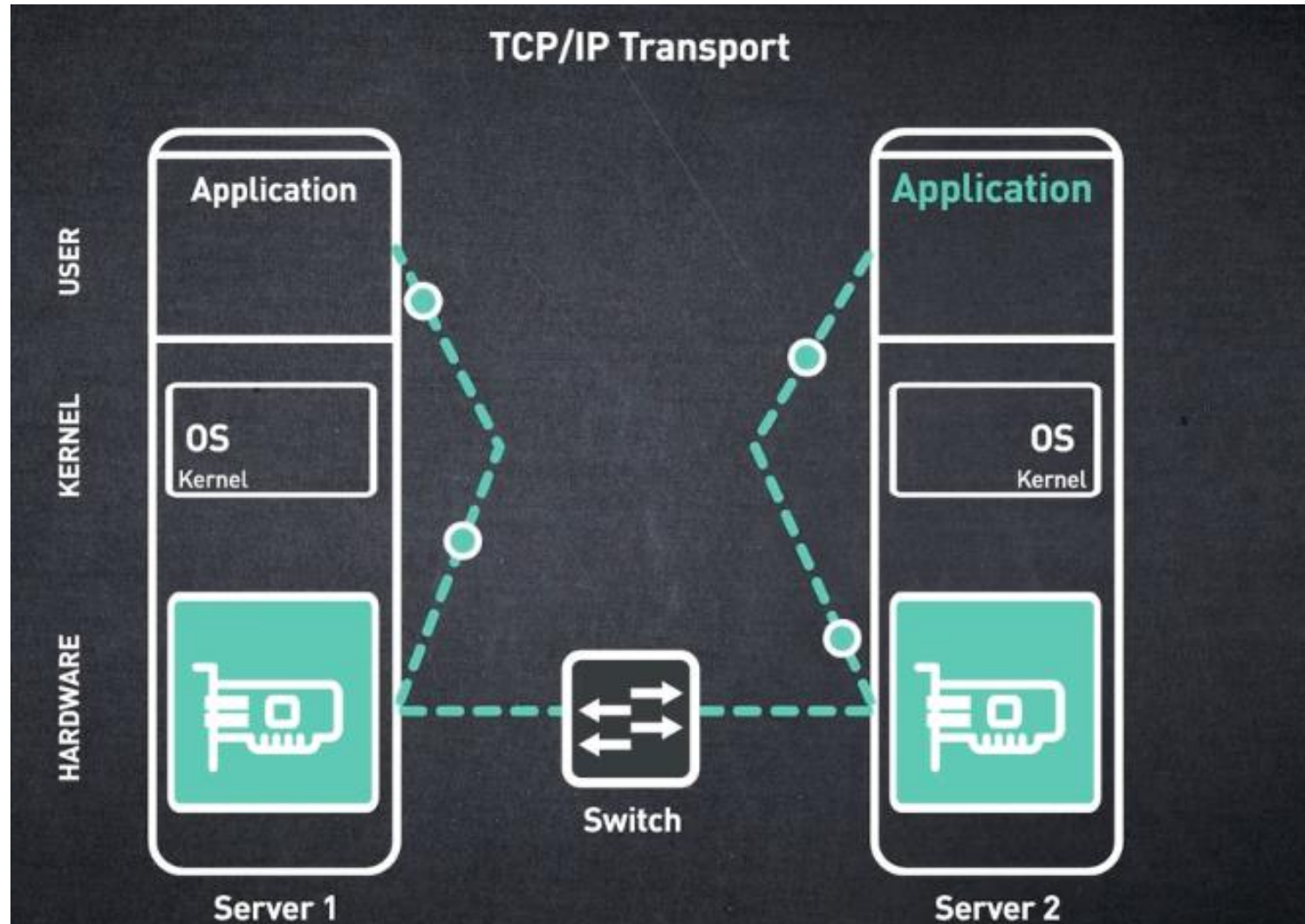
 05-30-2024



0,8
nanosegundos

0,000000001

Infiniband



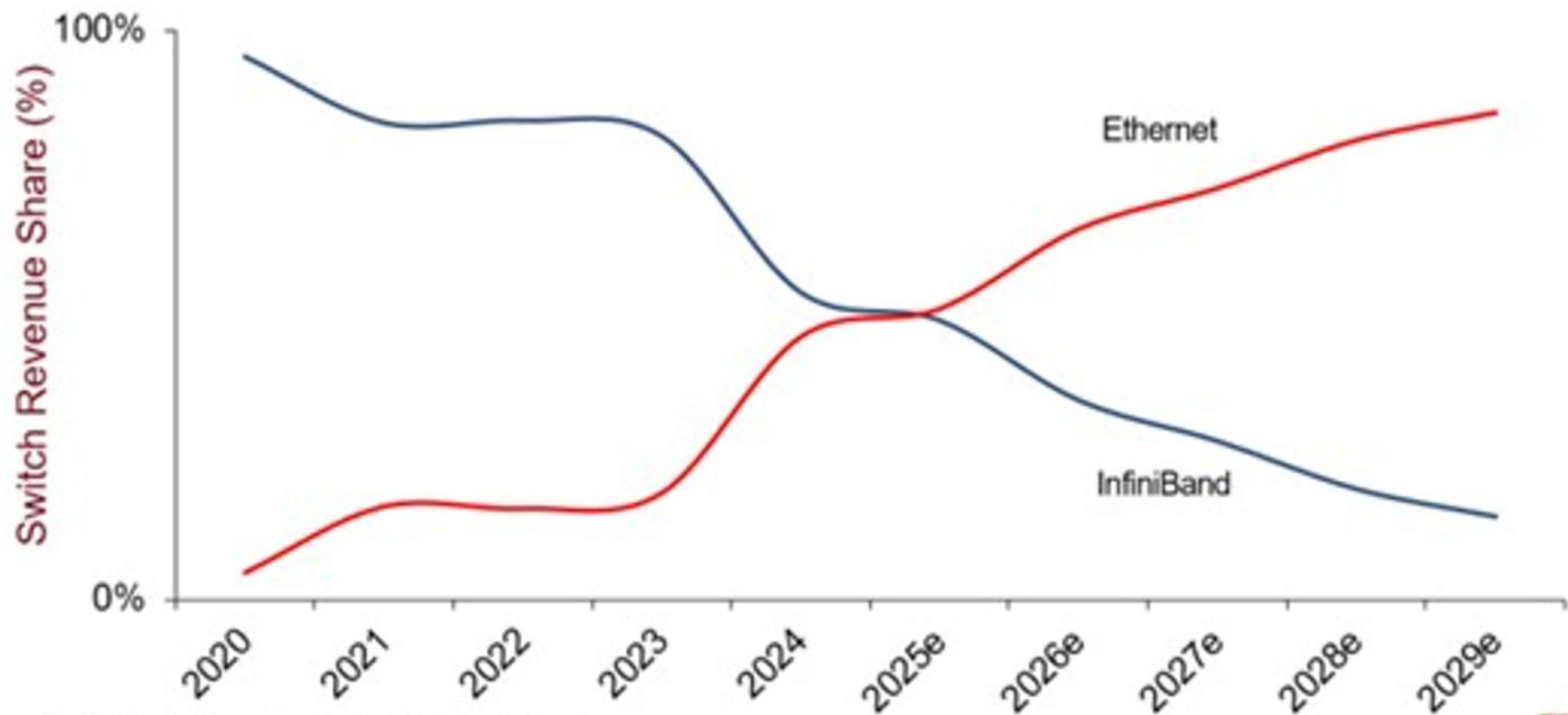


InfiniBand ou Ethernet

UEC
Ultra Ethernet Consortium

Infiniband

Sep/25

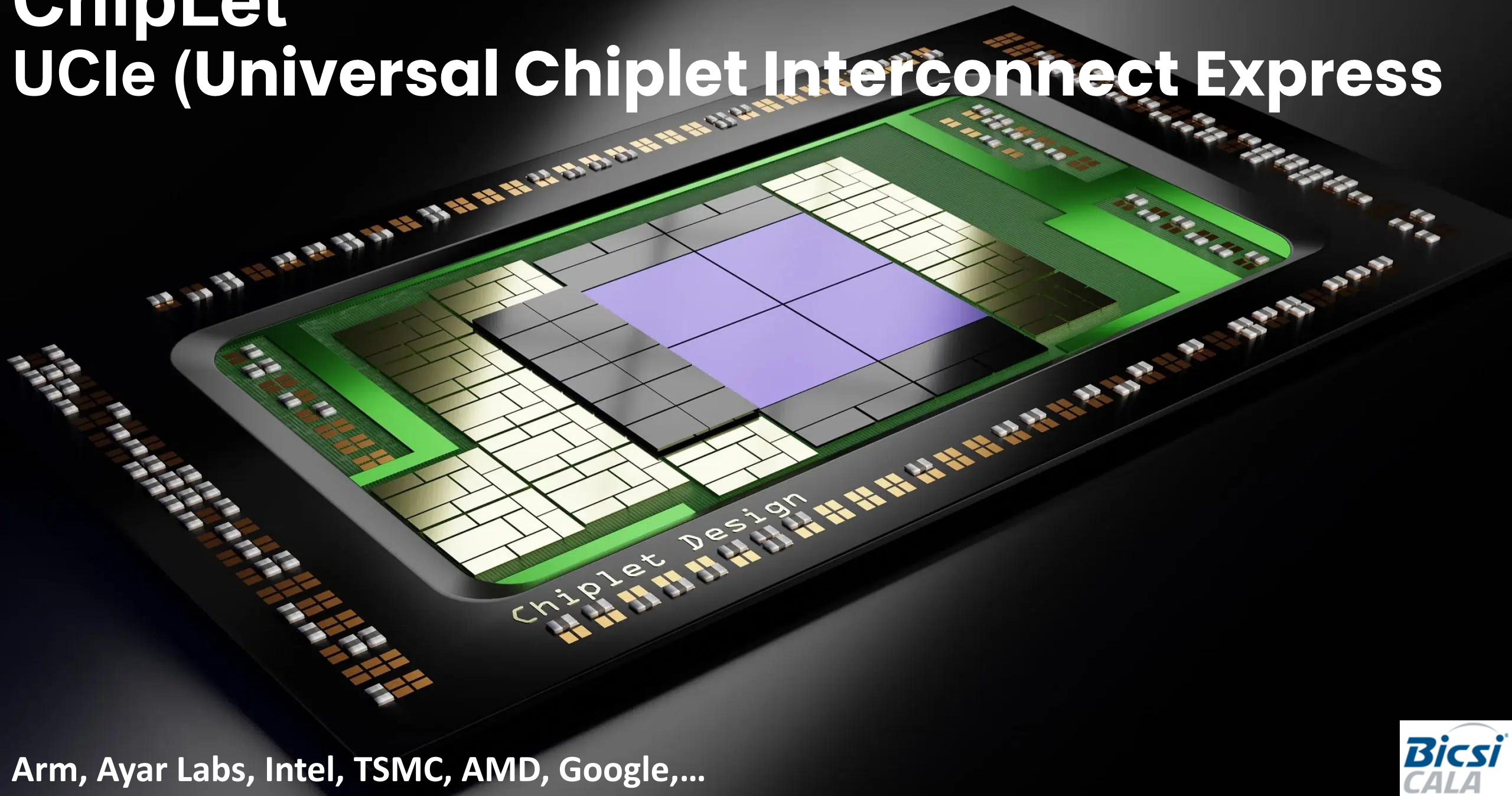


Source: Dell'Oro AI Networks for AI Workload Report
Scale-out only, excludes scale-up



ChipLet

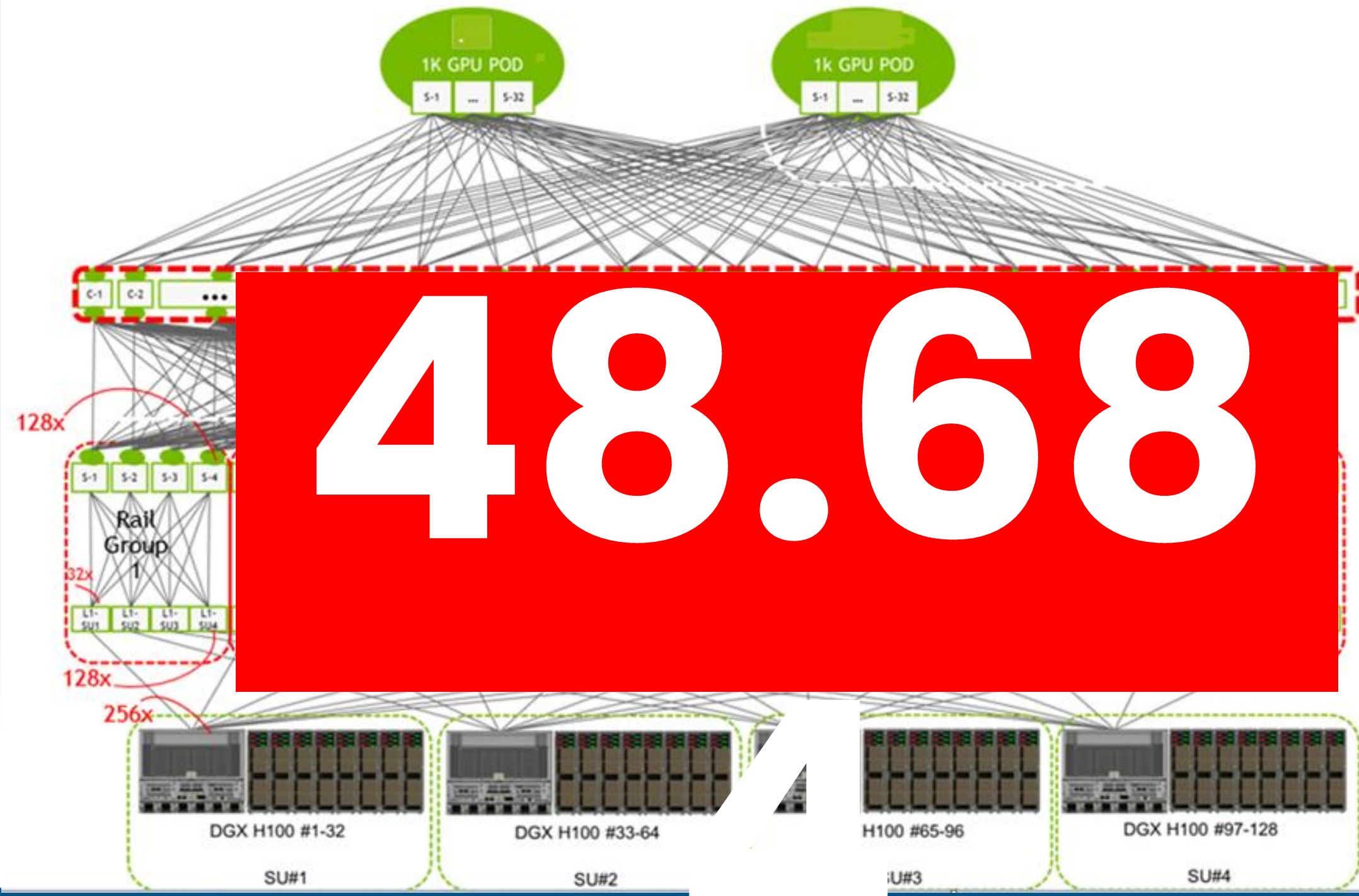
UCIe (Universal Chiplet Interconnect Express)



Arm, Ayar Labs, Intel, TSMC, AMD, Google,...

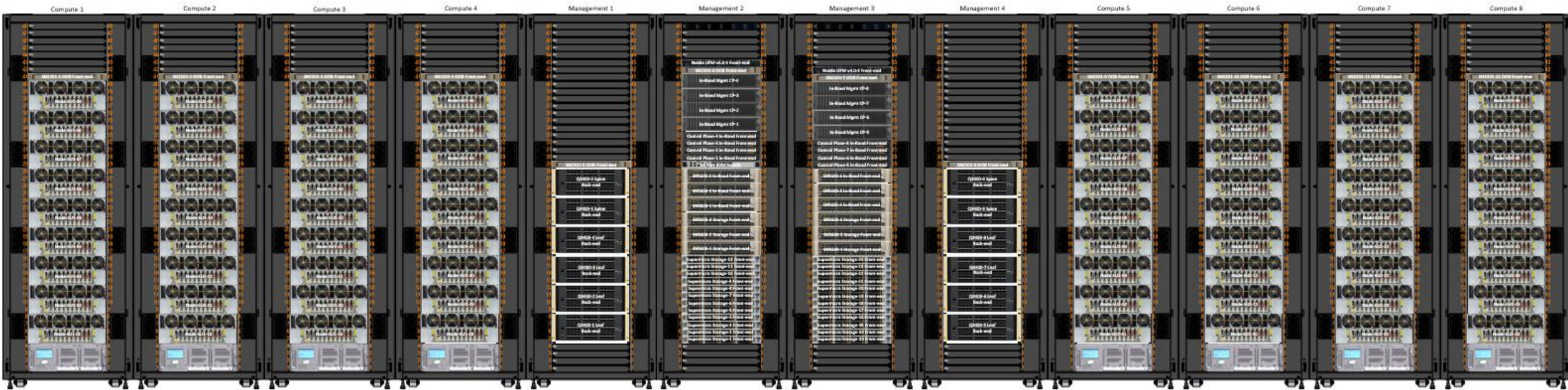


48.68



NVIDIA B300 72-node XDR Example

9 DLC Nodes per Cabinet - NVIDIA Q3400 1.6T & SN5600 800G Switches

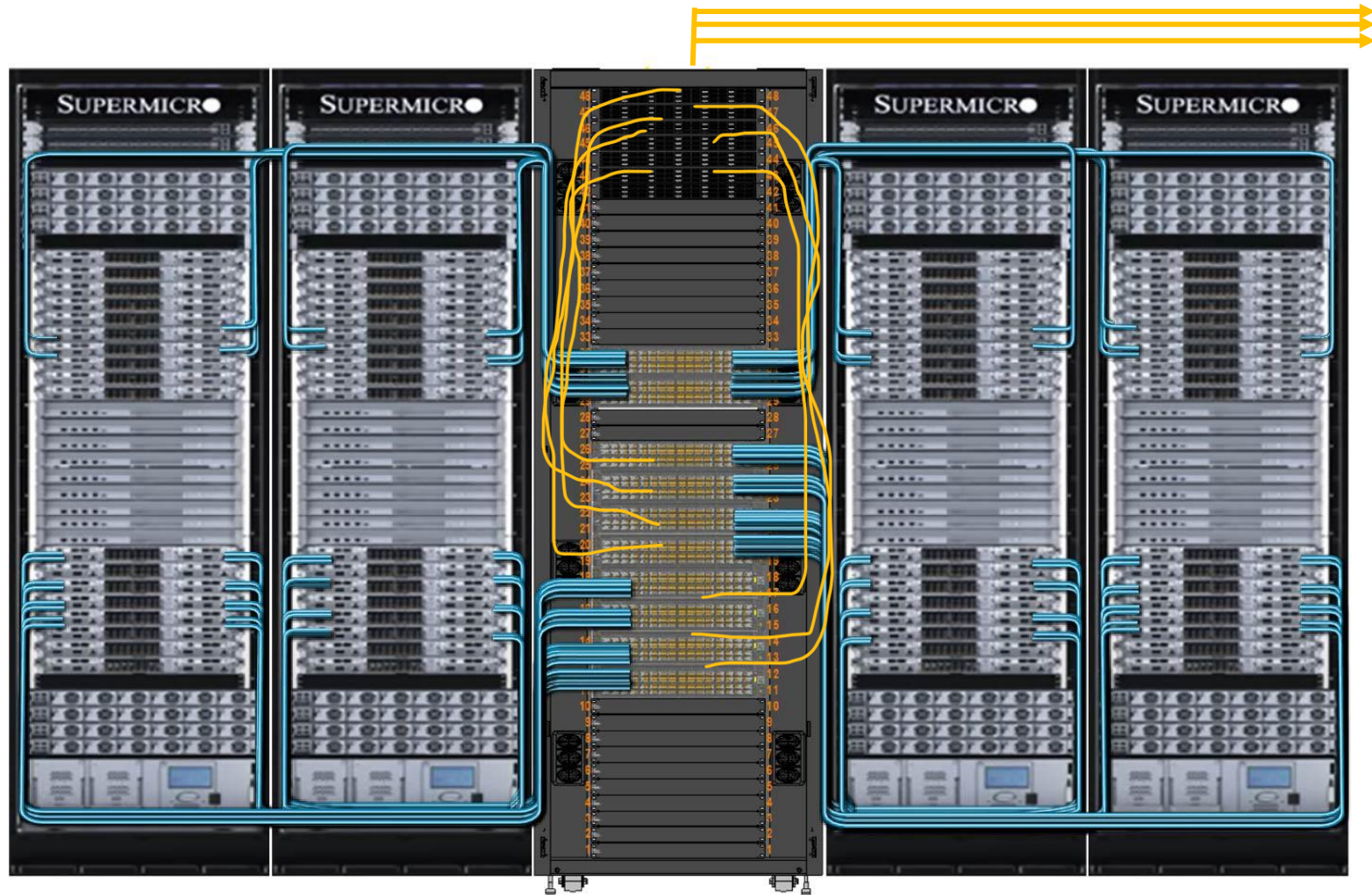


Example | Cabling Design for B300

Per Node: Compute: 8 x XDR 800G | Storage/In-Band Management: 2 x 400G | Out-of-Band Management: 1 x 1GbE

NVIDIA NVL72 Uses Case w/ GB300 800GbE

AECs for Leaf to Node/Fiber to Spine Switches





New Clouds



Centro Avançado de Computação de Hefei, na China

+ 2.500 Servidores

➤ 100K

➤ + 1300Kg por Rack até 1.800K

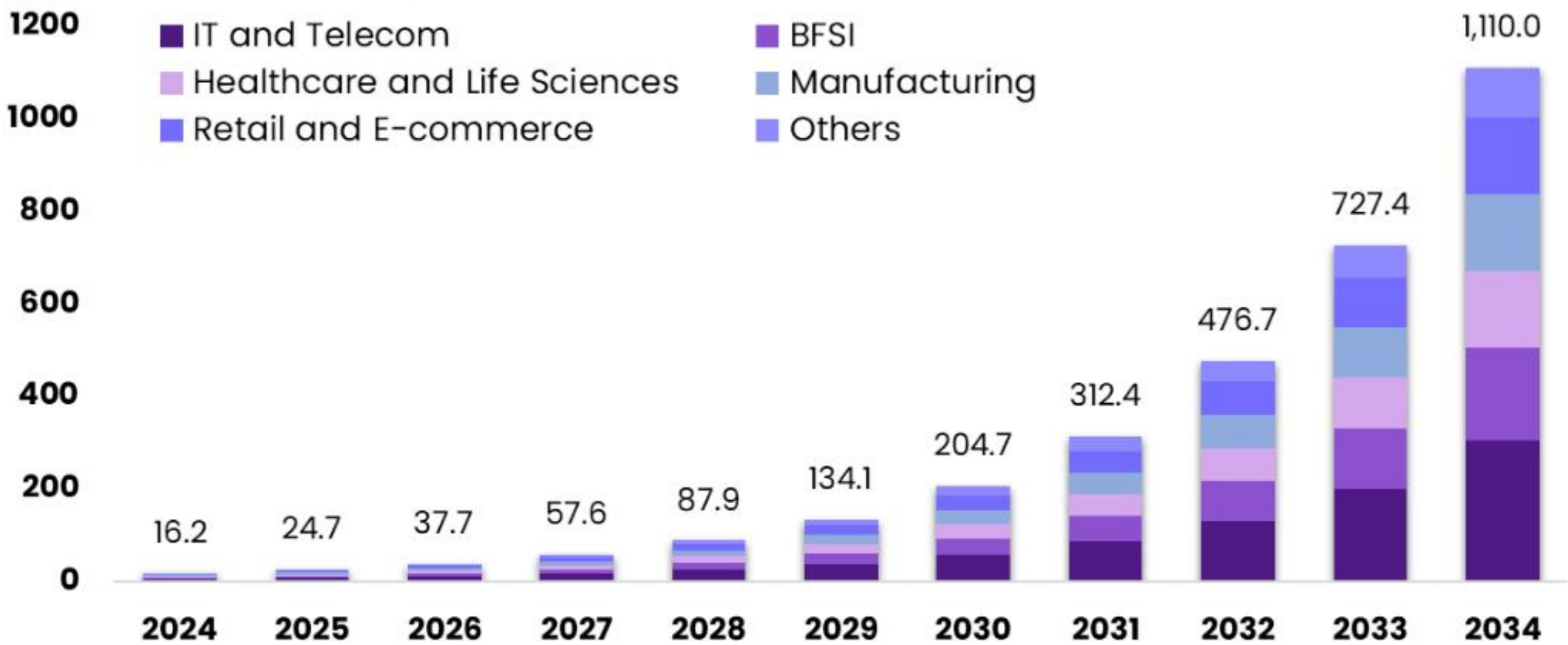
➤ >100Kw

➤ + 267.000 conexões

(DAC e AOC, Fibras, Cobre, MTP/MPO)

Mercado Neocloud

Size, By End-user Industry, 2025-2034 (USD Billion)



Nov-2025 – ABI Research (AN-6465)

Mercado Neocloud



Oct-2025 – Moodor Intelligence

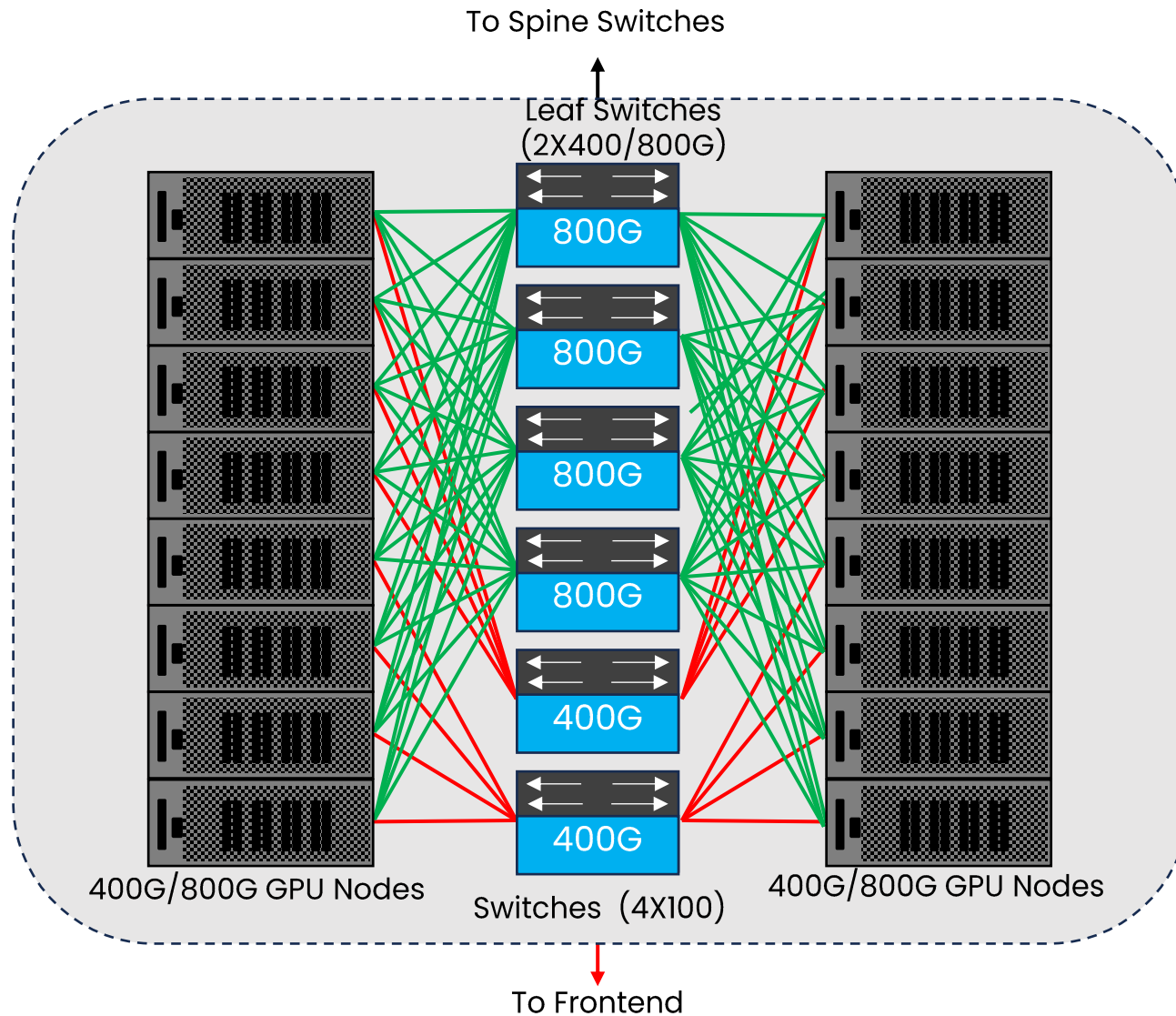


Bloomberg Tech

MICROSOFT BETS \$33B ON NEOCLOUD FIRMS TO EASE AI CRUNCH

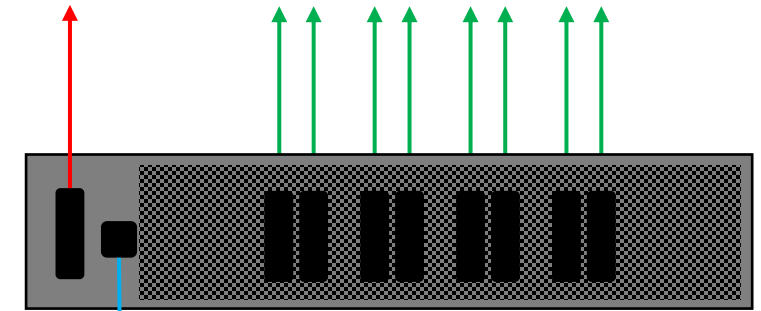
Bicsi
CALA

Back-end, Switch-to-Node



100G/200G/400G
Storage/In-Band
Mgt Connections
to Front-end

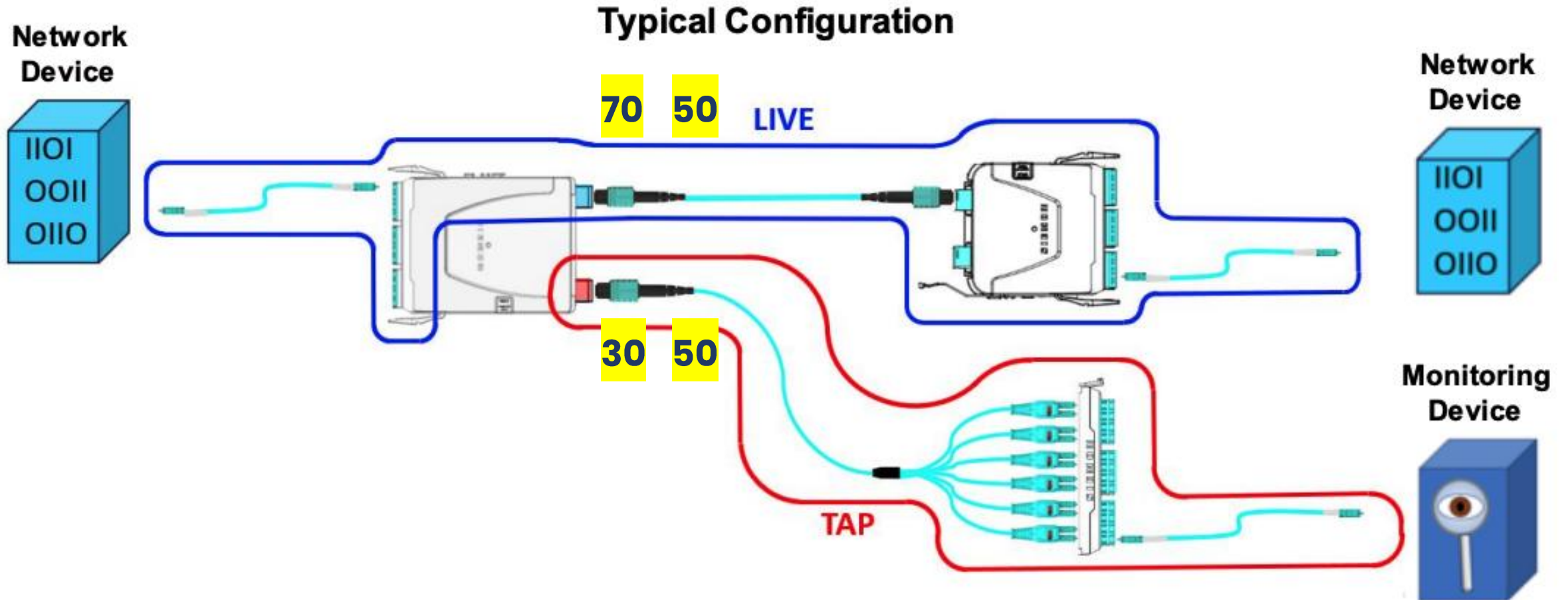
400G/800G
GPU Compute Connections to
Leaf Switches



8-GPU Node

- GPU Interconnect
- Storage/In-Band Mgmt
- Switch-to-Switch

TAP - Test Access Points

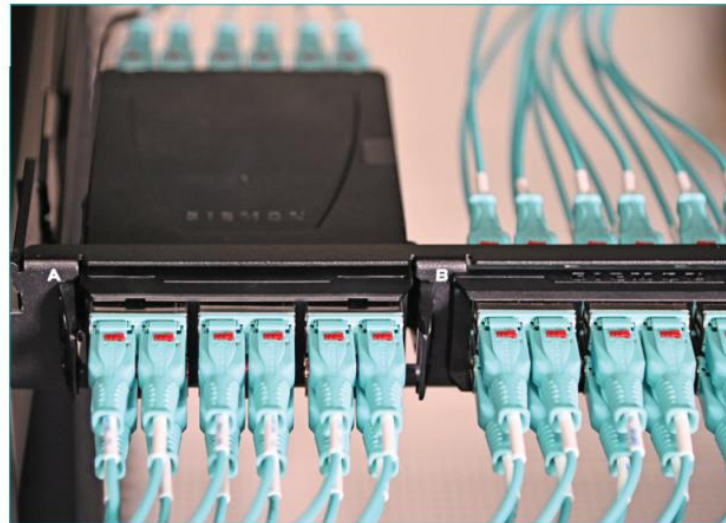
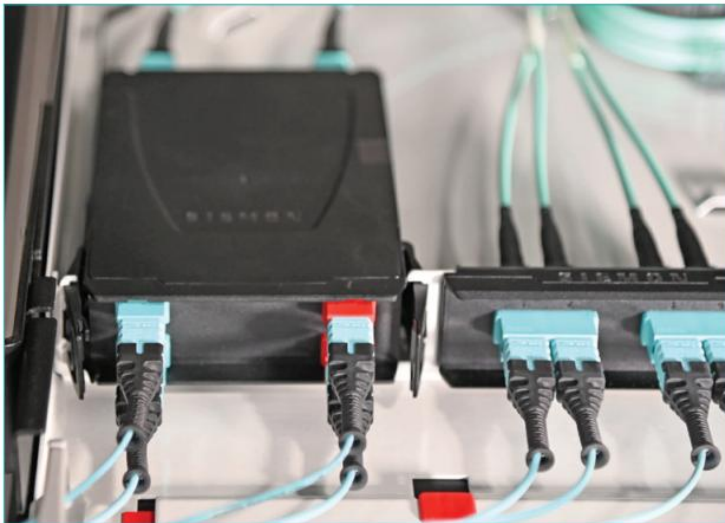


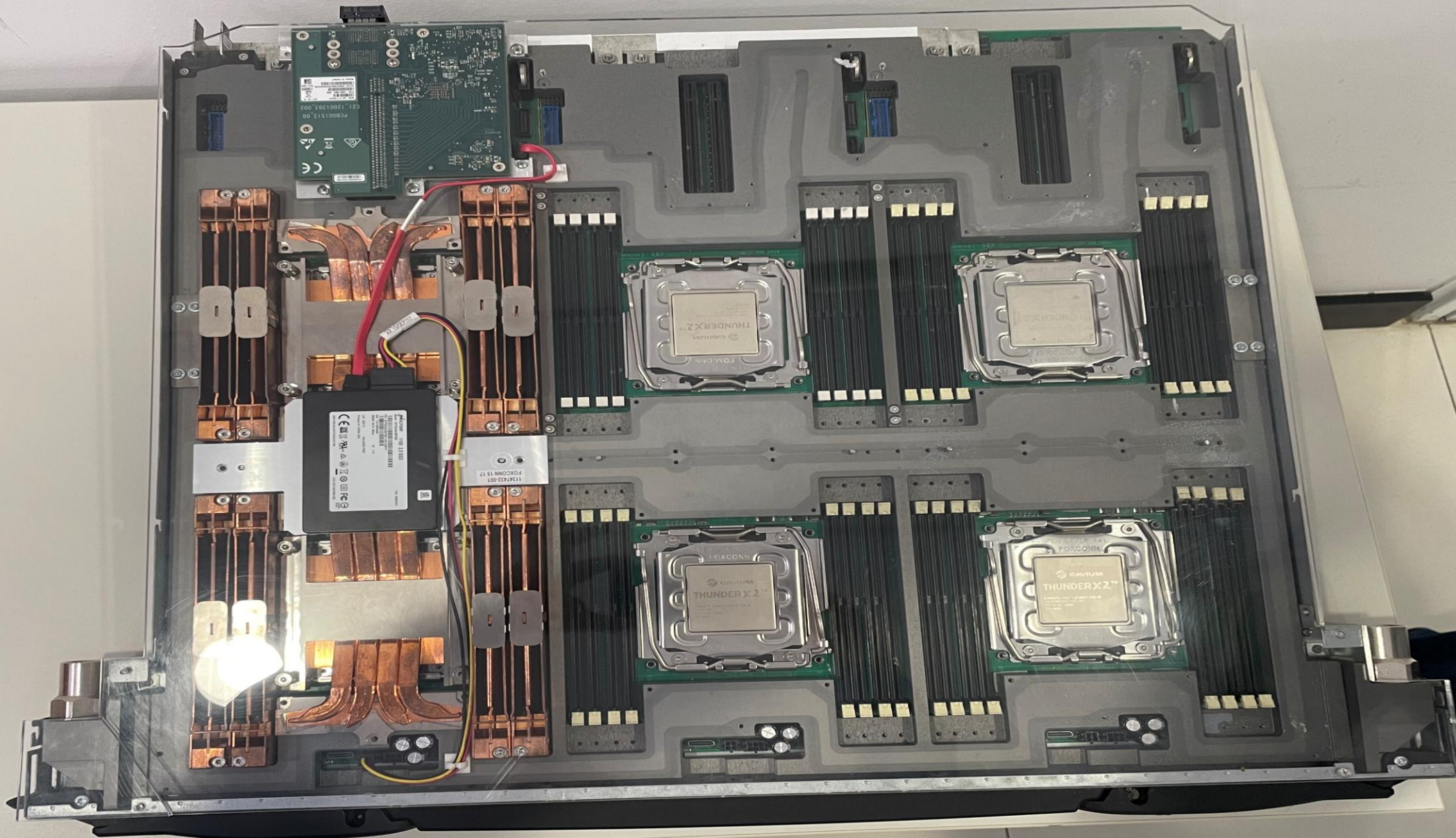
TAP - Test Access Points

MTP-to-MTP TAP Module



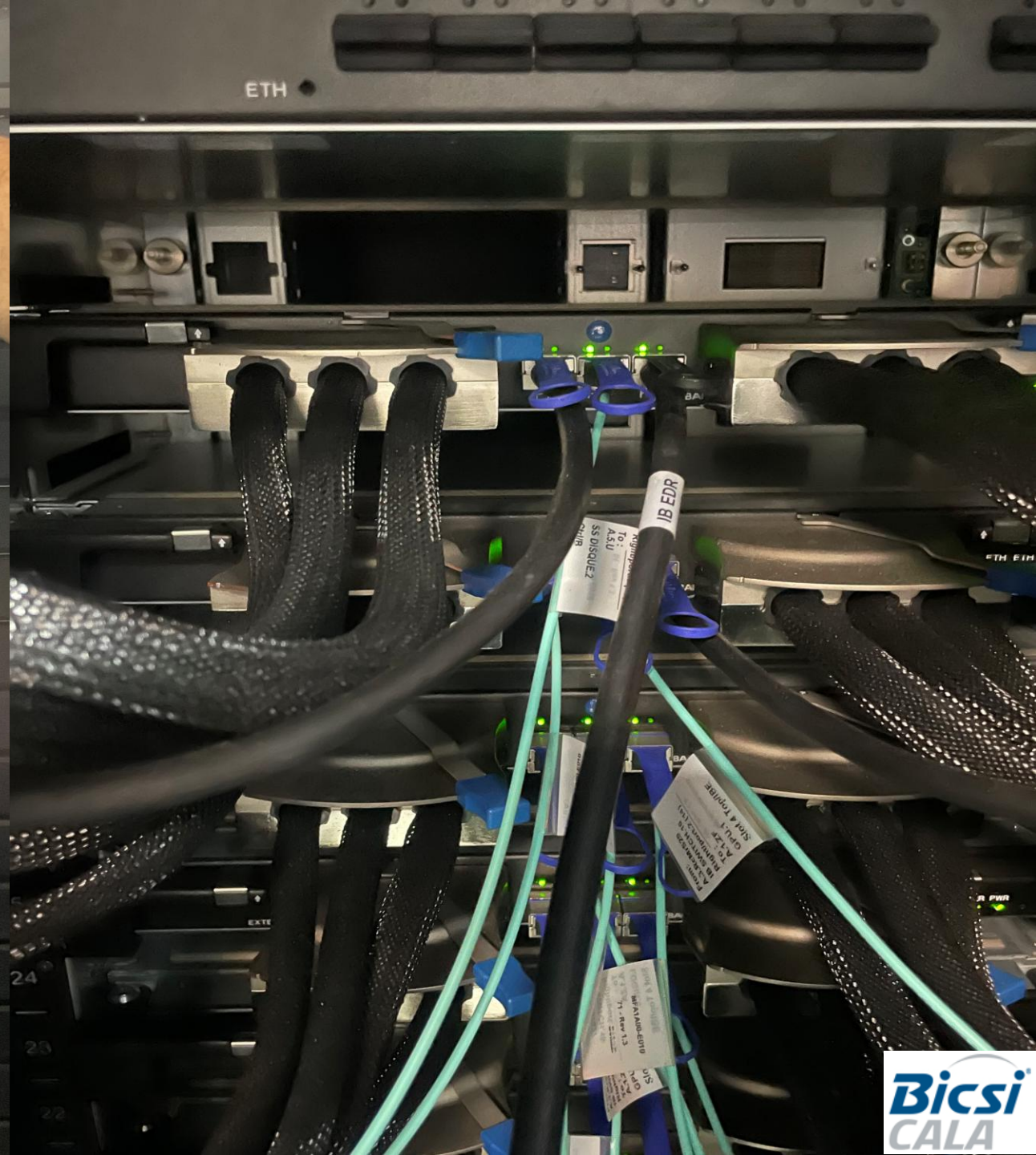
LC-to-LC TAP Module



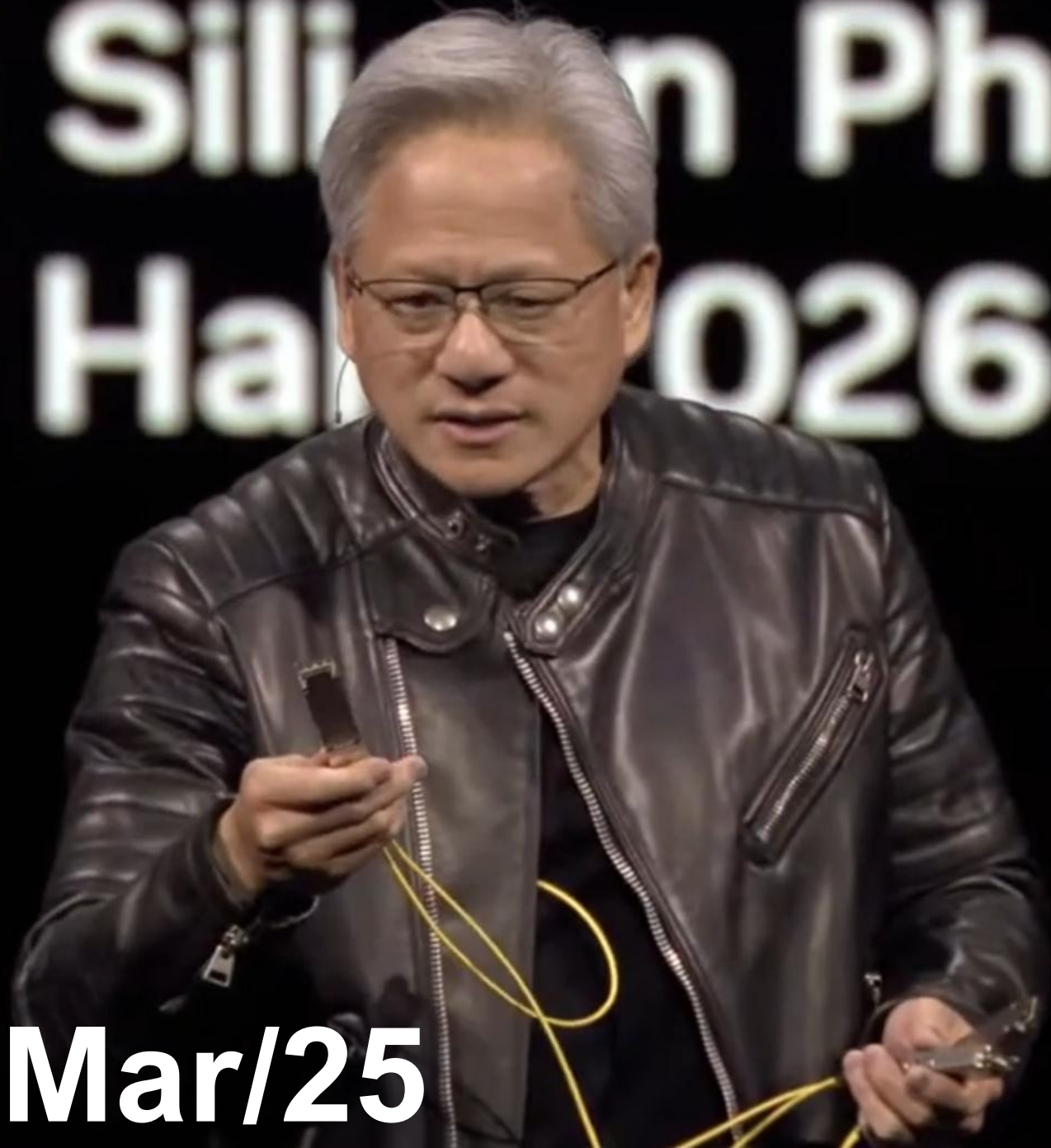








nted Silicon Photonics
2nd Half 2026



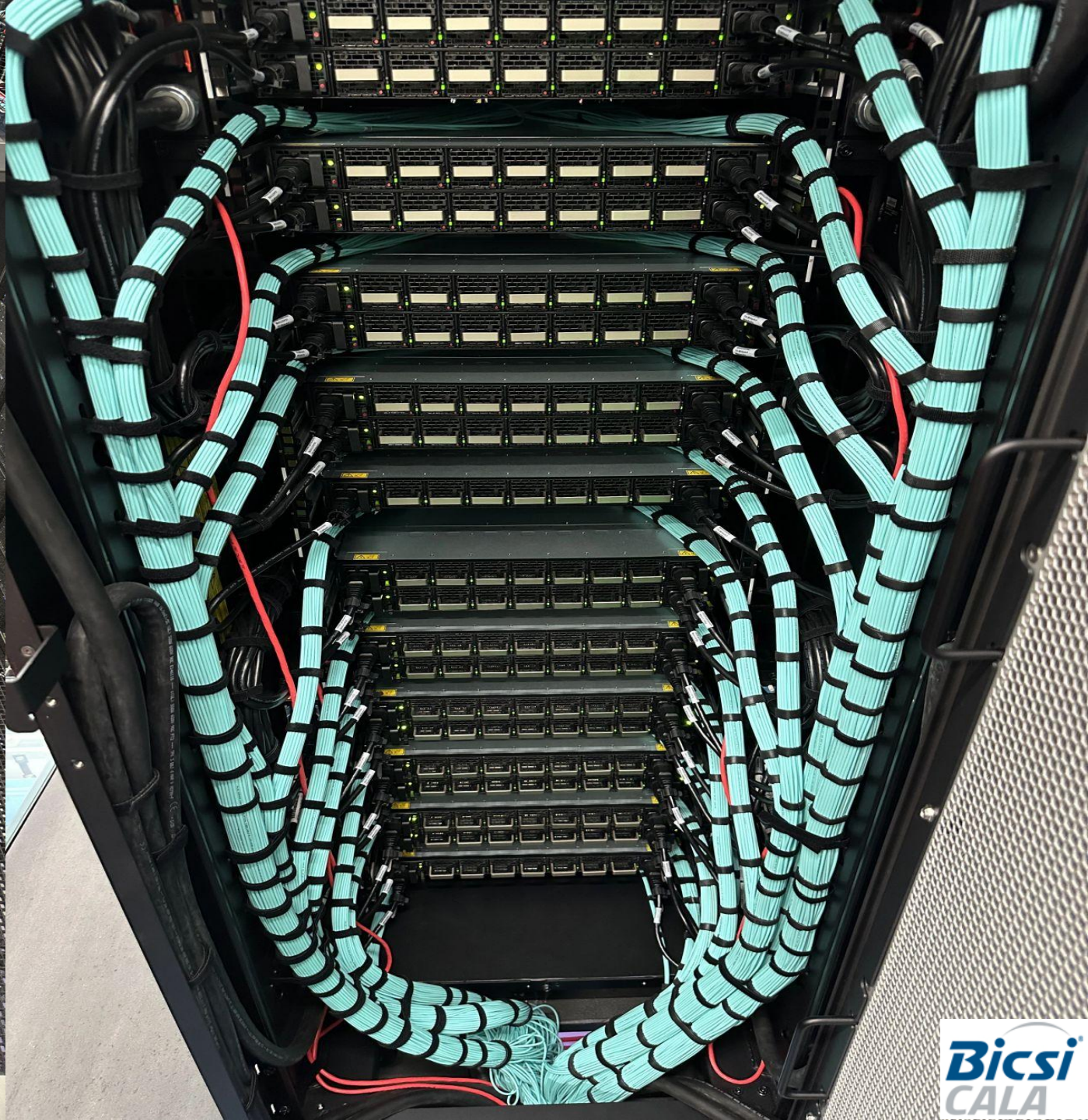
Jensen Huang

GTC – Mar/25

nted Silicon Photonics
2nd Half 2026

1.6T









Muito Obrigado



Eli Batista

Country Manager – Brazil

11-9-8101-0717

Eli_batista@siemom.com