


Lenovo 360: Smarter Technology for all

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Smarter technology for all

Lenovo Sustainability

inetum 
realdolmen
Positive digital flow

Lenovo

WHY LENOVO

Four decades of journey

1984-1993



Entrepreneurship

- 11 entrepreneurs
- CNY 200,000 (US\$25,000 in 1984) in startup funding

1994-2003



Own PC brand

- Launched own PC brand
- #1 in China in 1997
- #1 in AP in 1999

2004-2013



Globalization

- Acquired IBM PCD in 2004
- Navigated global financial crisis

2014-Today

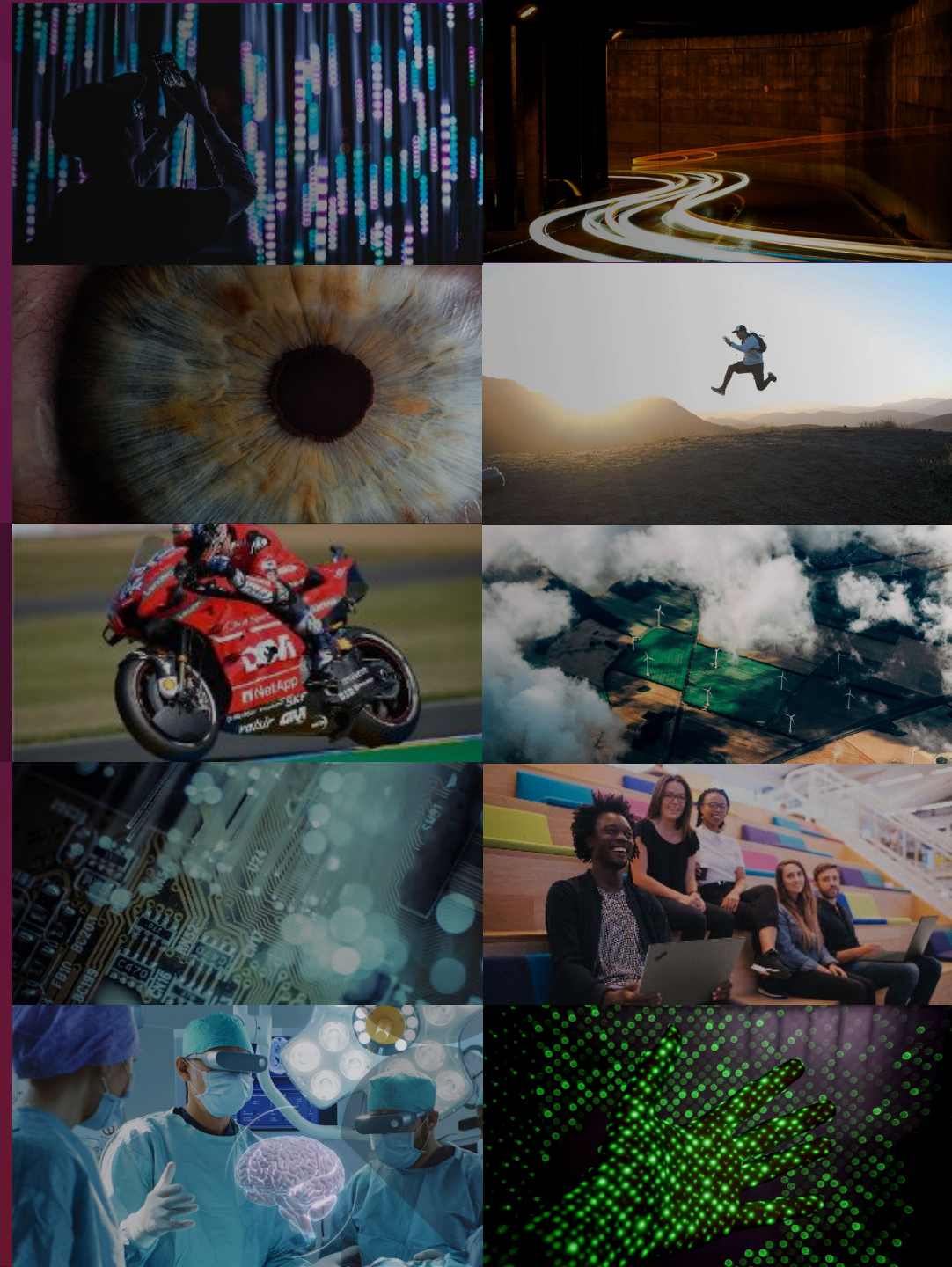


Transformation

- Acquired Motorola Mobility and IBM x86 servers in 2014
- 3S strategy
- Transforming to solution provider

Lenovo Smarter technology for all

“We’re committed to delivering technology that improves human outcomes. We’re not developing tech for tech’s sake; we are purposeful in delivering human-centered innovation”





Lenovo 360

Evolving our world together

Adapt to change
with strength, agility
and expertise.

The power of 360 means one global and local partner, ready to deliver all your customers technology needs in one place.
From a Mobile phone to a fully-fledged Data Center Solution.

From Pocket to the Cloud.

Solutions & Services

- Smart Verticals & IoT
- Attached & Managed services
- TruScale As-a-Service



Infrastructure Solutions

- Legacy of innovation
- Unique thermal & power solutions
- #1 in reliability & performance

PC & Smart Devices



PC & Smart Devices

- Scale as the market share leaders
- Rich history of innovation
- Diversity of form factors

Data Center & Beyond



Solutions & Services

Mobile Business

Mobile Business

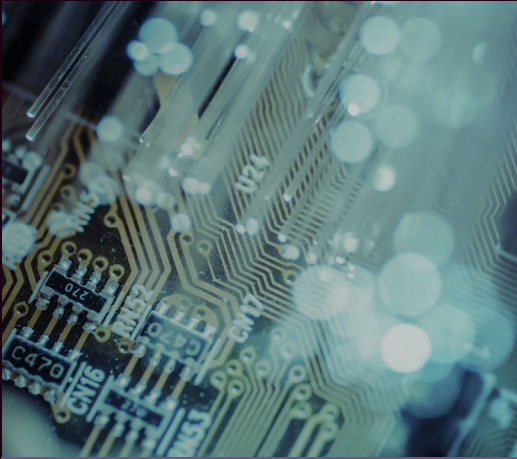
- First to market with 5G modular device
- Existing relationships with large Telco
- Expertise in radio consumer devices



Journey to Net-Zero

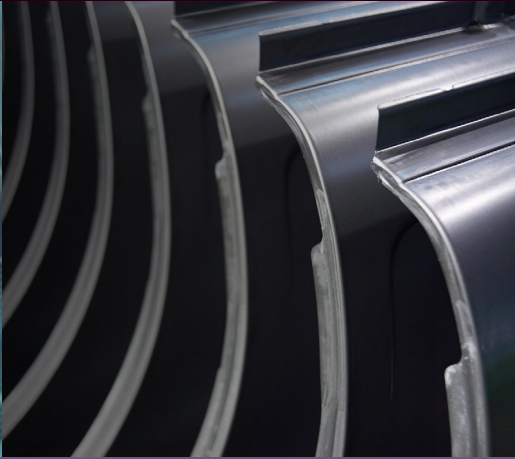
After exceeding our 2020 emissions reduction goal, one year ahead of target, we've now set a vision to achieve net-zero by 2050.

Green Innovation Highlights



Water-Cooling Technology

Lenovo's water-cooling technology offers energy efficiency features to save energy, reduces operational costs and contributes to a green environment



Low Temperature Solder

Lenovo uses a new and more sustainable process to build stronger, more reliable devices and conserve energy



Recycled Plastic

Lenovo uses post-consumer recycled content in laptops, desktops, workstations, monitors, and accessories



Bio-Based Packaging

Lenovo's lighter bio-based packaging reduces the overall package size, resulting in a 6.7% efficiency improvement in transportation CO₂ emissions



Product End-of-Life Management

Lenovo's Product End-of-Life Management (PELM) program is an important part of its efforts to support a transition to a circular economy

What's on everyone's wish list?



Smarter approach

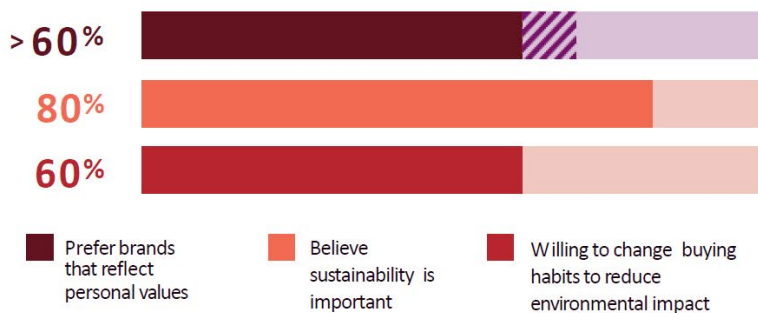
Delivering the right technology solutions to keep your employees, leadership, and customers engaged.

Corporate responsibility

60%+ of consumers prefer brands that reflect their personal values.

Sustainable practices

80% of consumers indicate sustainability is important to them and 60% are willing to change buying habits to reduce environmental impact.



Plastic free packaging

- Retail Packaging will use Bamboo + Sugarcane fiber gift box.
- Standard Packaging will use Bamboo + Sugarcane fiber inner carton cushions.
- 100% rapid renewable & 100% home compostable.
- This Bamboo fiber material ranks as the “Greenest” level of sustainability metrics – Compostable.
- Unlike most “compostable” plastics that require industrial composting, these Bamboo + Sugarcane fiber materials are 100% home compostable and/or can be recycled as paper.





Biofuel via Sea

Lenovo, is committing to further reduce its carbon footprint in transportation by partnering with Maersk's ECO Delivery solutions for ocean freight shipments of its PC, smart devices, and infrastructure products from manufacturing locations in China to Asia Pacific and Europe.

Maersk biofuels for ocean transport is estimated to reduce CO2 emissions by more than **80%** versus existing fossil-fuel based fuel.

Prioritizing sustainability within supply chains is becoming increasingly critical, and this latest partnership is another step for Lenovo as part of its goal to remove one million tons of greenhouse gas emissions from its supply chain by Fiscal Year 2025/26. This goal is in addition to its own ambitious science-based environmental targets that the company introduced in 2020.

Lenovo

Sustainability Services


Helping customers reaching their environmental targets in a lifecycle offering.



**Smarter
technology
for all**

Lenovo

thanks.



Infrastructure Solutions Group

Our Businesses at a Glance



ISG Vision

Be the most trusted partner -
empowering customers' **Intelligent Transformation**
and helping solve humanity's greatest challenges

Our Strategic Intent

- From server only to full-stack infrastructure of hardware, software & services provider
- From on-prem IT infrastructure to full hybrid infrastructure solutions provider

Smarter technology for all

Lenovo Infrastructure Solutions V3

The broadest portfolio announcement in Lenovo's history

Innovative. Optimized. Sustainable Solutions.

Lenovo

Innovation for the New Era of IT

Lenovo engineers developed Infrastructure Solutions V3, a comprehensive portfolio that delivers scalable solutions and services to accelerate the New Era of IT.



Lenovo expands our ThinkSystem V3 Servers

Powered by next-gen AMD EPYC and Intel Xeon Scalable Processors



Racks



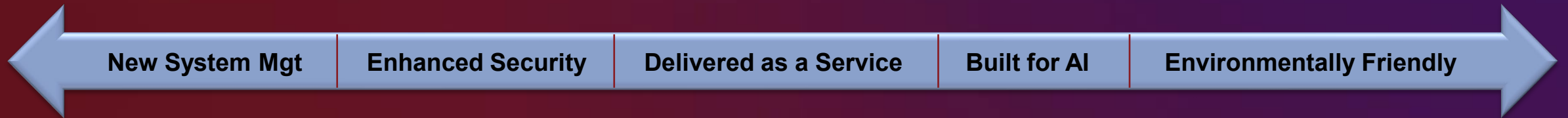
Towers



Mission-Critical



High-Density



Accelerated Compute

- Conduct financial analysis up to **70% faster**
- Develop AI models up to **2X faster***

Compute with Confidence

- **Most reliable x86 platforms** for the 8th year*

Industry-leading performance

- Produced more than **800 performance world records** since 2001, **3X** our nearest competitors

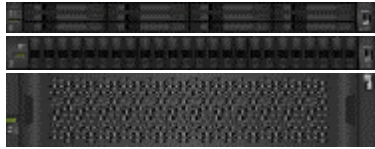
Supercomputing leadership

- Helping customers solve **humanities greatest challenges** with Supercomputers

15 new Servers

- **Processing workloads of any size**, for SMBs to Hyperscalers

A proven portfolio that delivers performance when and where you need it most!



Easy to deploy & manage

Seamless Consumption

Secure computing

Partnership Advantage

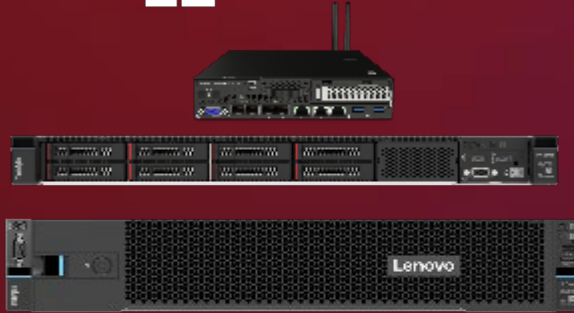
36 new systems

Providing the most efficient and optimized data infrastructure solutions

Lenovo delivers new ThinkAgile V3 Systems

Hyper-converged and converged systems simplify and accelerate deployments

Microsoft



ThinkAgile MX & SXM

NUTANIX



ThinkAgile HX

vmware



ThinkAgile VX

New System Mgt

Enhanced Security

Delivered as a Service

Open Architecture

Built for AI

Faster insights, scalability, performance, and security

- Up to 50% more VMs/machine
- Up to 25% increase in VDI users

Hybrid Cloud Advantage

- Turn-key cloud solutions
- Edge to cloud deployment
- GPU acceleration for AI workloads

Faster Deployment

- Up to 85% faster deployment with pre-integrated software, hardware, and support

Up to 47% better TCO

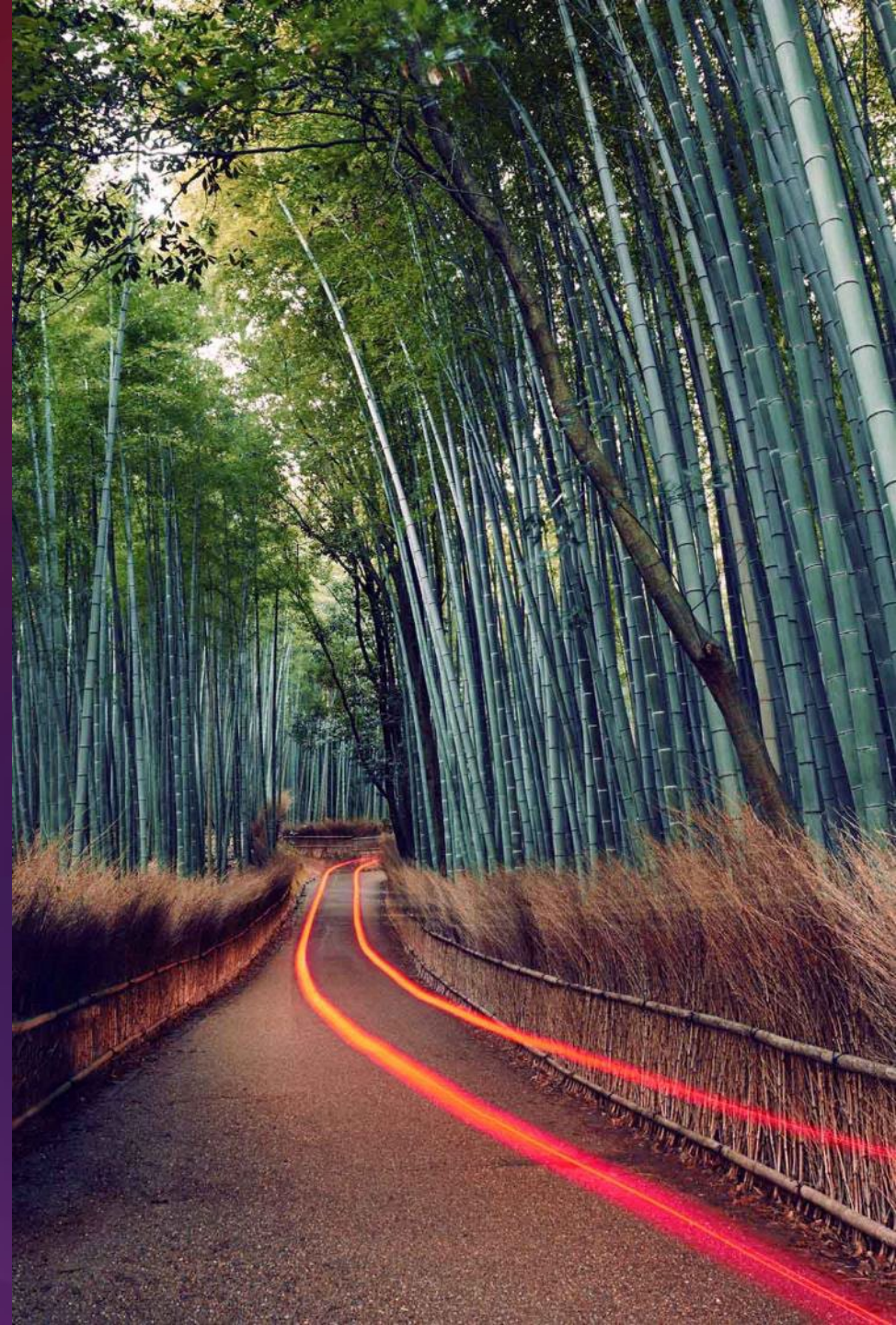
- Single point of contact
- 360-degree visibility with enhanced monitoring

32 new systems

or a wide range of workloads.

Pre-built, cloud-integrated, pre-validated systems to enable turnkey deployments at scale.

Sustainable Computing



Sustainability End to End

How We Service

Lenovo TruScale

Avoids over-provisioning, reducing energy consumption for a lower carbon footprint

Lenovo Asset Recovery

15 years experience in asset recycling and more than 1M+ assets properly disposed

CO2 Offset Services

Carbon offset credits fund projects, including reforestation, renewable energy, and solar

How We Build

100% Recyclable Packaging

Including the use of 90%+ recycled foam and bags made from 30% ocean bound plastic

Factory Integrated Racks

Saving 3.5 million pounds of cardboard and 1.8 million pounds of plastic over 5 years

Lenovo TruScale™ Sustainable Solutions

Features: IT hardware is right-sized all the time.

- Utilization and metering eliminate over-provisioning
- Fine grade tuning on power consumption by turning on/off cores
- Technology measures actual usage of HW rather than allocation

Benefit: Genuine pay-as-you-go reduces your energy impact.

- Helps you avoid over-provisioning, which reduces energy usage for a lower carbon footprint
- Only deploy what you need to use



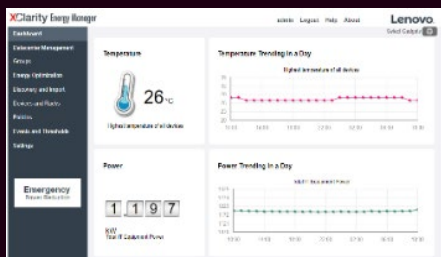
Lenovo Innovation: Sustainable Computing

Lenovo Energy- Efficient Technologies

Energy Management Tooling

Measure, manage, optimize power

xClarity Energy Manager (LXEM)



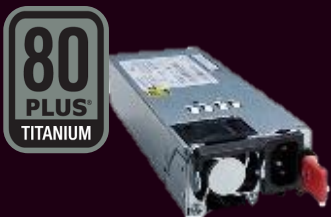
Energy Aware Runtime (EAR)



Efficient Component Selection

Same work, less power

Titanium Power Supplies



Idle Power State Controls

Dynamically optimize the frequency and power control

Low Loss Materials

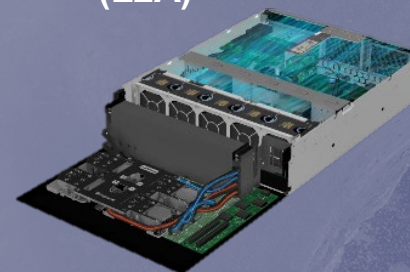


Liquid-Cooling with Lenovo Neptune™

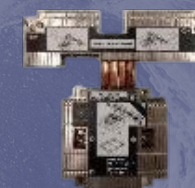
Heat Mitigation Innovation

Lower fan speed, less power

Liquid to Air Exchanger (L2A)



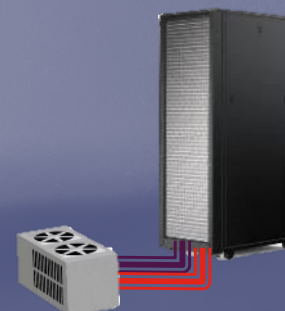
Thermal Transfer Module (TTM)



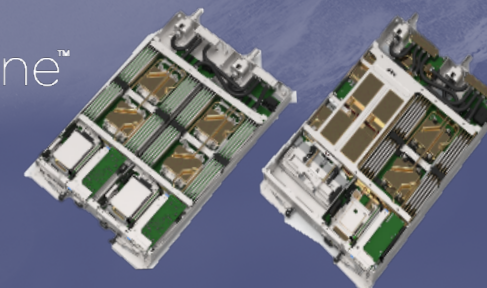
Liquid Cooling

Rethink how cooling gets done

Rear Door Heat Exchanger



Direct Liquid Cooled Systems



Lenovo Neptune™ Direct Water-Cooling helps you optimize performance, density and energy consumption

- Up to 40% reduction in power costs from a 3.5x improvement in thermal efficiencies vs. air-cooled system
- Industry-leading cooling solutions ranging from liquid-assisted air cooling to direct water-cooled CPUs and GPUs – ideal for accelerated workloads like visualization, simulation/modeling, HPC, AI
- The latest version of Neptune supports both 4th Generation Intel® Xeon® Scalable and 4th Generation AMD EPYC™ processors and NVIDIA GPUs



Liquid Cooling Technology

Smart Control Software

- Minimizes power consumption for each workload with SW

Thermal Transfer Module

- Special heat sink to transfer heat quickly
- Enables higher perf processors
- \$2,100 / year per rack energy savings

Rear Door Heat Exchanger

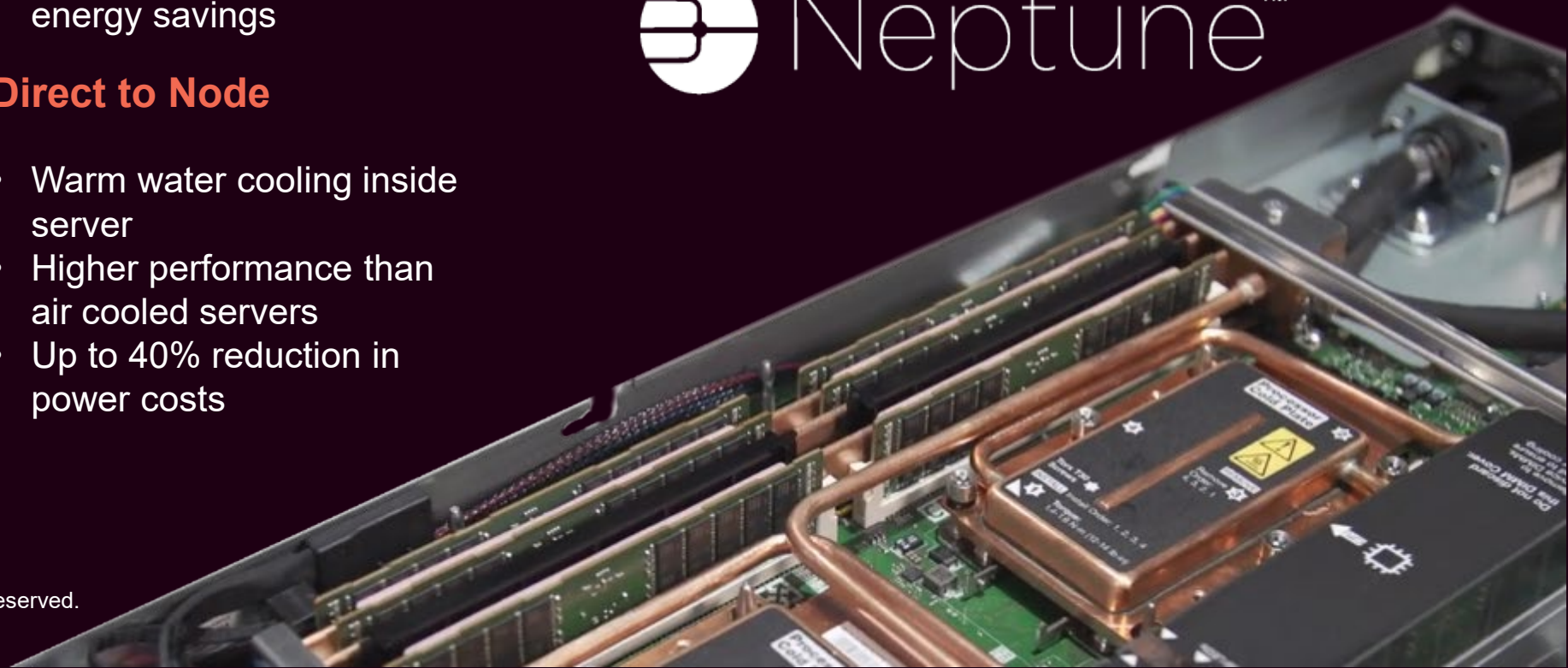
- Rack option takes heat out of data center in chilled water
- Saves enough power to run 4,000 LED bulbs

Direct to Node

- Warm water cooling inside server
- Higher performance than air cooled servers
- Up to 40% reduction in power costs

A leader in innovative technology

Pioneering liquid cooling for the enterprise
Leadership born in HPC



Lenovo Neptune™ expanded to new servers

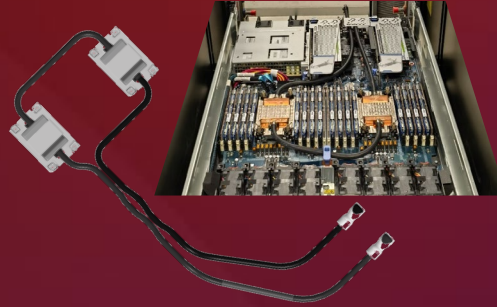
Optimize performance, density, and energy consumption



1

NEW

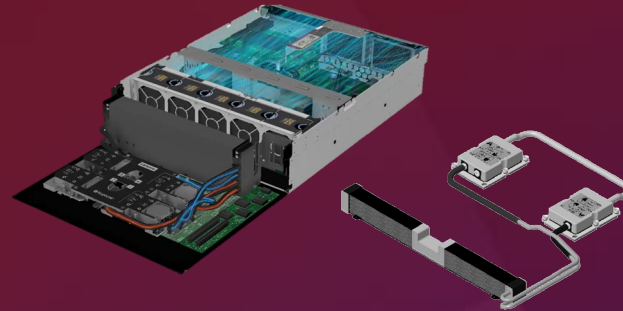
Liquid-to-Liquid (L2L)
Cooling Design



- ThinkSystem SR630 V3 (High Vol Rack)

2

Liquid-to-Air (L2A)
Cooling Design

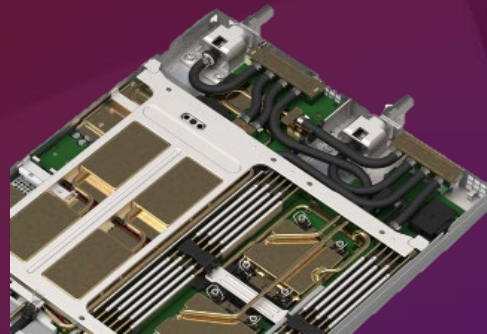


Expanded to New Servers

- ThinkSystem SR630 V3 (High Vol Rack)

3

Direct Water Cooling (DWC)
Design in 5th Generation



- ThinkSystem SD650 V3 (High Density)
- ThinkSystem SD650-I V3 (High Density)
- ThinkSystem SD665 V3 (High Density)
- ThinkSystem SD665-N V3 (High Density)

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thanks.