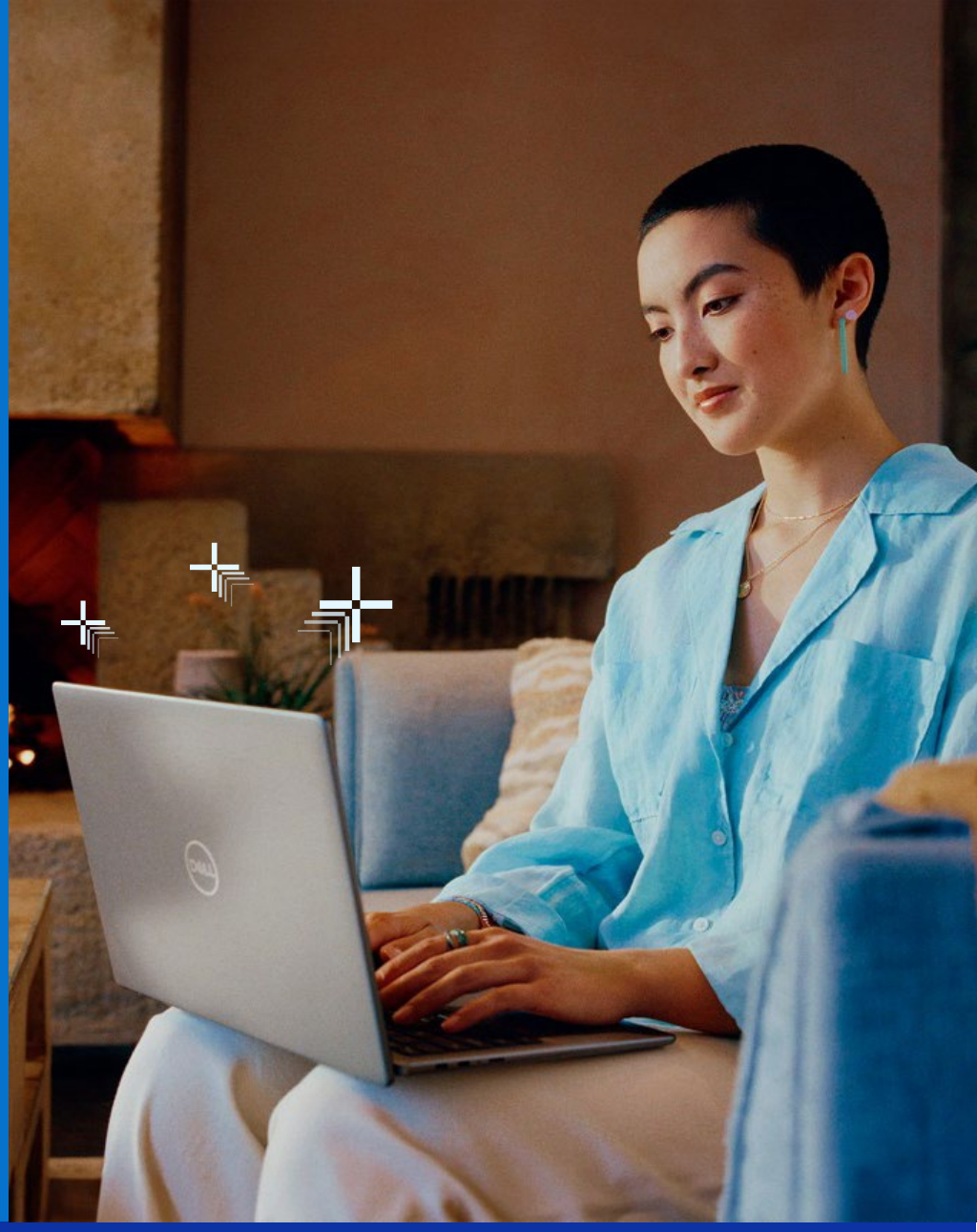
DELL Technologies

Advance AI Sustainably

The Dell AI Factory helps reduce the environmental impact of AI



AI and GenAI are changing the metrics for global energy demand

According to Gartner®, AI and generative AI (GenAI) are driving **rapid increases in electricity consumption,** with data center forecasts over the next two years reaching **as high as 160% growth.**[1]

2.5% of global electric use

consumed by data centers by 2027[2]

330.77 million metric tons of CO_2

predicted to be released by the world's data centers in 2027[2]

Power your top use cases with an energy-efficient, sustainable AI factory

The Dell AI Factory

Our approach to embracing and implementing sustainable AI

Achieve your AI goals sustainably with Dell Technologies

Gain sustainability insights

Reporting, assessments and services provide insights for evaluating and creating a more sustainable IT environment.

Telemetry

- Track and forecast energy and emissions enterprise-wide.
- Automate power and thermal management in real time.
- Leverage Dell APEX AIOps infrastructure observability to enhance sustainability.
- Use Dell OpenManage for power throttling and capping functionality.

Improve energy and operational efficiency

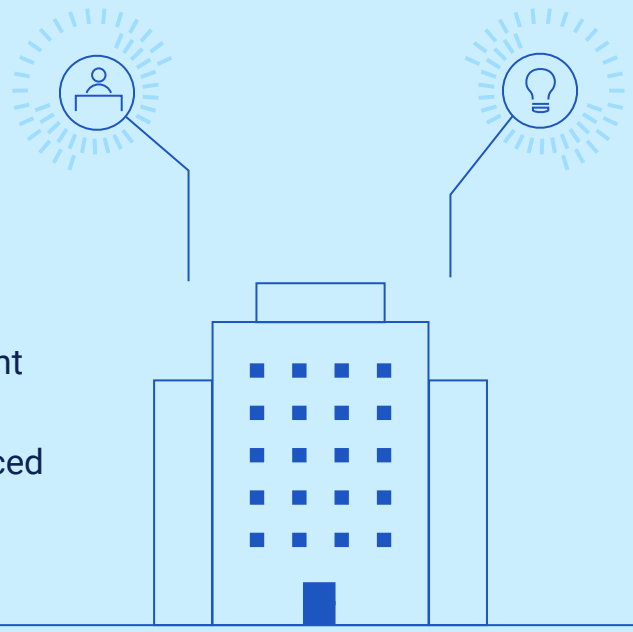
Dell Technologies can help you design a more sustainable data center with Dell Pro Consult Advisory Services and the Get Efficient Assessment.

ProConsult Advisory Services

- Assess your data center and deliver a strategic plan to achieve efficiency and lower emissions.
- Design strategies for a low-carbon, energy-efficient data center.

Get Efficient Assessment

- Provide insight into how current energy consumption and associated costs can be reduced by leveraging the power of the Dell Technologies portfolio.



Sample results

Information shown is based on actual Dell customer data using the Get Efficient Assessment. Actual results will vary.

72%
less power and cooling[3]

86%
less rack space[3]

~$150k
savings over 5 years[3]

77%
more performance[3]

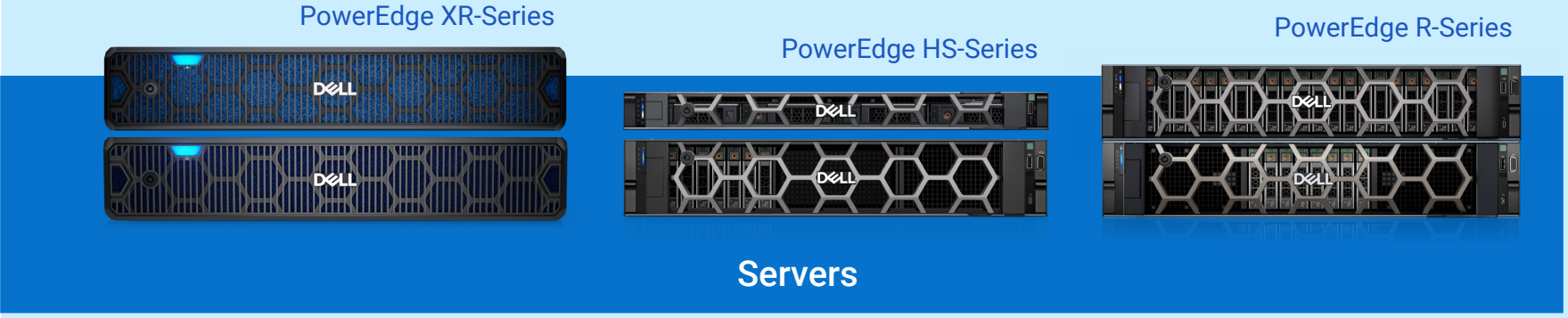
Servers, storage and networking that balance workloads and energy consumption can better meet your needs while saving energy and optimizing resources.

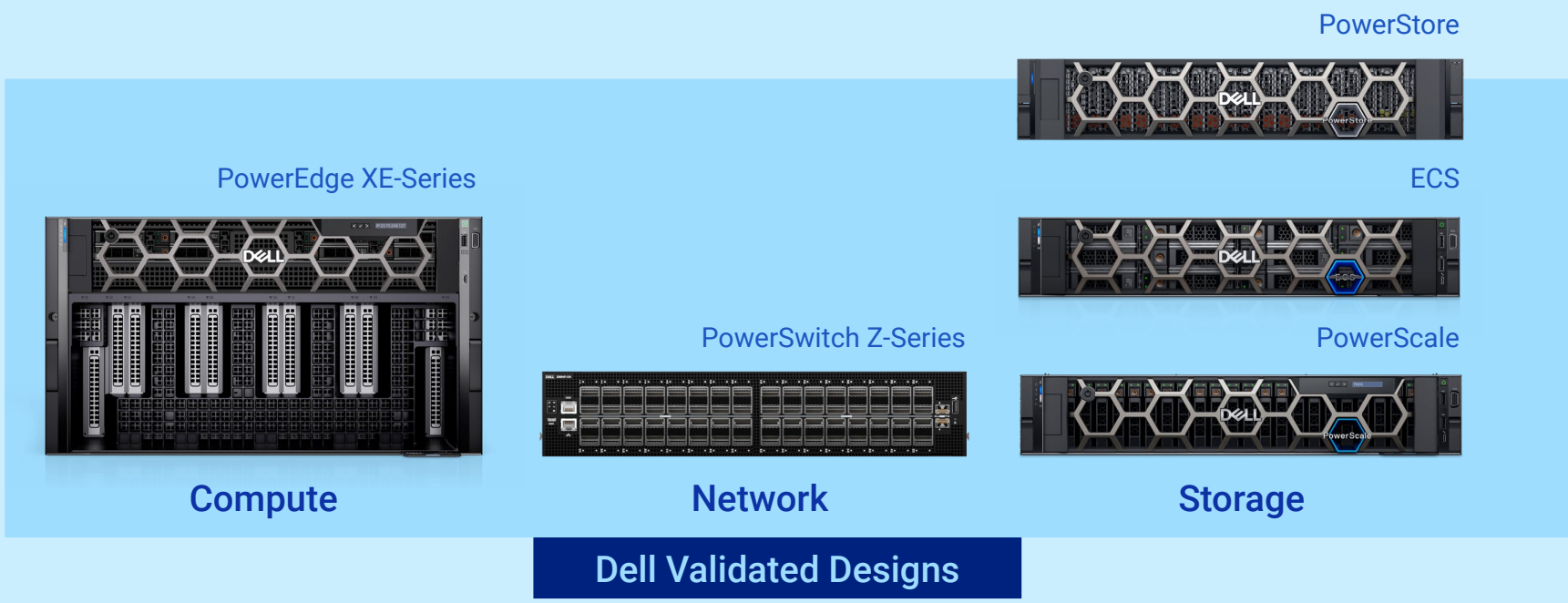
Up to 10X
higher performance per watt using direct-to-chip and rack-level liquid cooling[4]

5:1 data reduction
increases efficiency to reduce energy needs.[5]

#1 in energy efficiency
with more EPEAT registered platforms than the competition[6]

More ENERGY STAR
Certified servers than any other vendor[7]





Transition to AI with circularity in mind

Ensure responsible use and retirement when upgrading to new and more sustainably made technologies.

Refresh responsibly

Promote reuse and recycling of your hardware to minimize waste and keep products and materials in the circular economy.

Asset recovery services

We make it easy for our customers to retire legacy IT equipment securely and responsibly, unlocking value that can be put toward future innovation.

- Data protection and security
- Value recovery
- Environmental compliance
- Maintain control and insight

Choose more sustainable devices

Circular design, sustainable packaging, durability and serviceability minimize environmental impact and support sustainable IT practices.

More sustainable materials in AI PCs and servers

Dell products often use recycled materials such as recycled plastic, reclaimed carbon fiber, recycled cobalt, steel, copper and recycled and low-emission aluminum.

Responsible packaging

The latest generation of Dell PowerEdge servers feature recycled steel and come shipped in 100% recycled and reused packaging.[8]

Efficient and less wasteful products

Dell products are designed to be more efficient and less energy-intensive, utilizing high-capacity systems advanced compression and deduplication to minimize waste. Dell offers parts and tutorials to extend the life of hardware.

Multipack packaging

Shipping in quantities of five or more? Consider a multipack for up to 76.6% reduction in packaging material.[9]

Take steps toward sustainability

[1] Gartner, What Must Global Executives Do Now to Prepare for Future AI Energy Disruption? (For Gartner Subscribers Only), Jorge Lopez, Bob Johnson, et al., 3 July 2024.

[2] IDC, Datacenters: Best Practices to Mitigate the Environmental Sustainability Impact of GenAI, Doc #US51948224, January 2024.

[3] Based on real Dell customer data using the Get Efficient Assessment. Actual results will vary. July 2024.

[4] With Dell PowerEdge servers. Based on performance per watt gains of 1.46x to 10.6x with built-in accelerators on a range of AI, database and networking workloads. See A19-A25, D1, D2, D5, N16 at intel.com/processor claims: 5th Gen Intel® Xeon® Scalable processors. Results may vary.

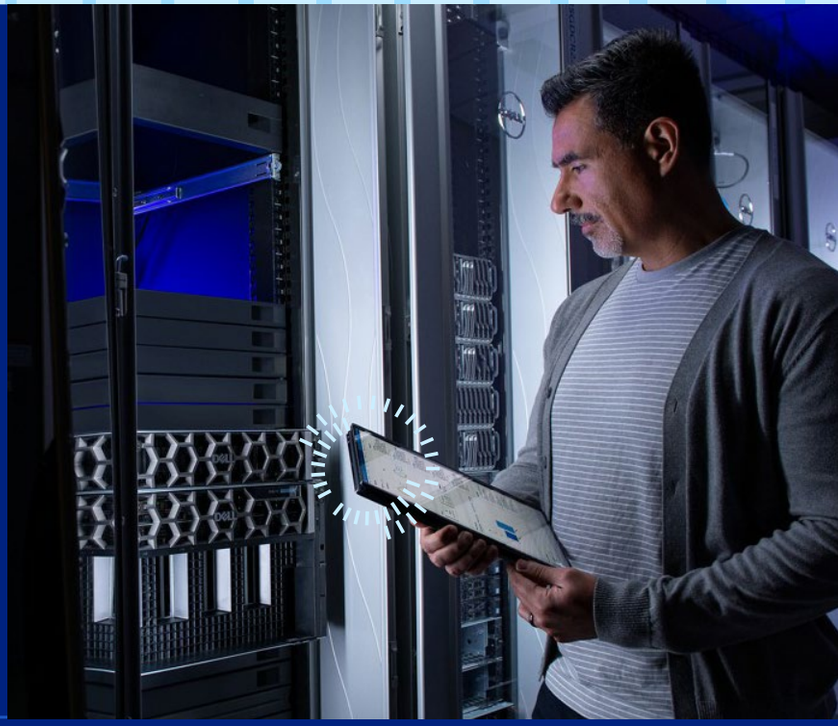
[5] Based on Dell analysis comparing primary storage data reduction guarantees vs Dell's Storage Data Reduction program, May 2024. For PowerStore, applies to new arrays initially installed with PowerStoreOS 4.0. For details, see All-Flash Data Reduction Guarantee Terms and Conditions. Actual data reduction rates will vary.

[6] Based on Dell analysis of EPEAT registered servers, February 2024. EPEAT registered where applicable. EPEAT registration varies by location. See www.epeat.net for registration status by location.

[7] Based on Dell analysis of entries on www.energystar.gov.

[8] Dell blog, PowerEdge .next for Cloud and Near-edge Deployments, May 2024.

[9] Based on internal analysis, April 2024.



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