



Unify Your AI, Edge, and Multicloud Strategies to Accelerate Innovation



An optimized infrastructure can drive growth for your organization

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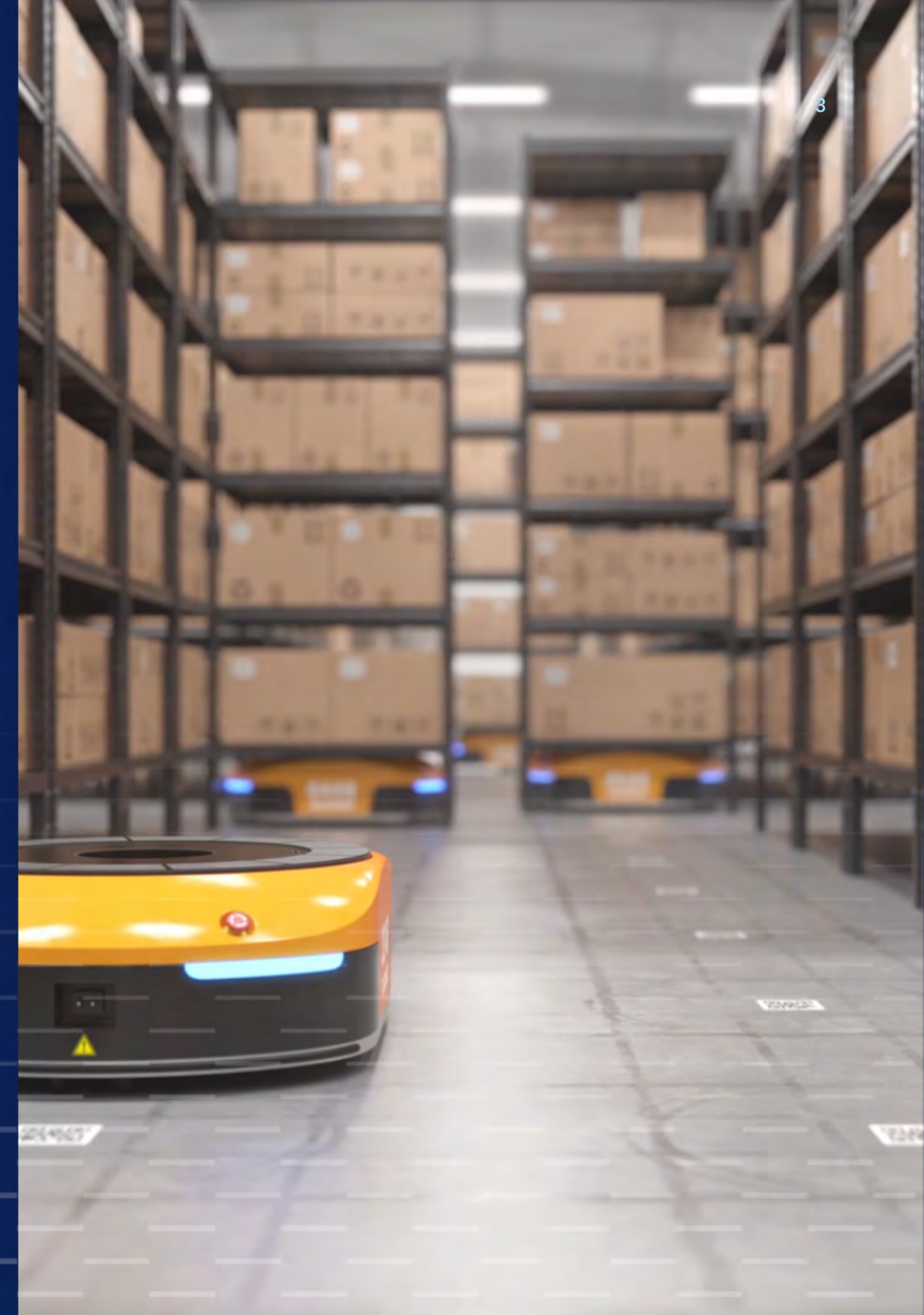
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It all starts with data

Data is at the core of every organization, and AI (artificial intelligence) is enabling new ways to act upon this data and innovate faster.

Powered by graphics processing units (GPUs), AI workloads are improving outcomes and transforming industries. But for organizations to enjoy the full benefits of AI, they need an infrastructure that can bring those workloads to their data. Those that can supply a rich stream of quality data, while optimizing AI to run across their edge and multicloud environments, will generate significant competitive advantage.



What is the edge,
multicloud, and AI?



The evolution of the edge

The edge is the place where data is acted on near its point of creation to generate immediate, essential value.

Internet of Things (IoT) devices and sensors act upon this data near its point of creation – removing the transport of large volumes to a data center – to enable new efficiencies with real-time processes. To stay at the forefront of innovation, organizations need an infrastructure that can seamlessly integrate AI and other emerging technologies, while securing the vast volumes of data they generate.

By 2027, 62% of total data will be computed at or near the edge.

Source: <https://www.delltechnologies.com/asset/en-us/solutions/business-solutions/customer-stories-case-studies/building-a-sustainable-enterprise-edge.pdf>



The agility of multicloud

Organizations often possess multiple cloud deployments for their data, applications and systems.

Creating a consistent multicloud system across public and private clouds provides flexibility and scalability previously lacking from legacy data centers, while offering the ability to mix and match the right services to the right workloads. The rising challenge now is the vast majority of data is generated at the edge and accessing that data requires extending multicloud architectures to the edge. The interplay between edge and multicloud is key to tapping into your data's full potential.

The perception and progression of AI

AI is now a mainstream tool with vast real-world applications for organizations, helping them to complete tasks faster, more efficiently and with better results.

AI tools generate immediate insights and create action from interesting data – and that data is being generated at the edge. Organizations must find a way to integrate AI into their workflows so they can leverage real-time insights that create new value and competitive advantage.

61% of respondents believe competitors will gain an advantage by harnessing data insights

Source: Based on Dell Technologies "The Breakthrough Study" April 2022. Fieldwork conducted August-October 2021. Research and Analysis conducted by Vanson Bourne on behalf of Dell Technologies.



How can the edge, multicloud and AI
work together in your organization?



In the past, organizations may have developed their edge and multicloud strategies in isolation. But to leverage the full power of AI and extract your data's maximum value, you need edge and multicloud working together within a well-balanced ecosystem.

Edge and AI

The edge and AI are becoming increasingly interconnected. The low-latency environment of the edge is crucial for AI applications that require real-time or near-real-time processing.

AI inferencing at the edge facilitates the extraction of real-time insights from streaming data generated by sensors, cameras and other IoT devices or edge servers. By analyzing data at the edge, organizations can gain immediate insights into operational performance, detect anomalies or patterns in data streams, and make timely decisions to improve efficiency, safety and productivity.

With AI at the edge, real-time decision-making can come to life, fueling cost optimization and the streamlining of processes across all industries.

Edge and multicloud

As more data is produced outside of the data center, organizations are leveraging their edge as an extension of their multicloud estate. The connection between these multicloud locations and functions is the local edge compute, which dynamically decides where each piece of data should go and how it's processed.

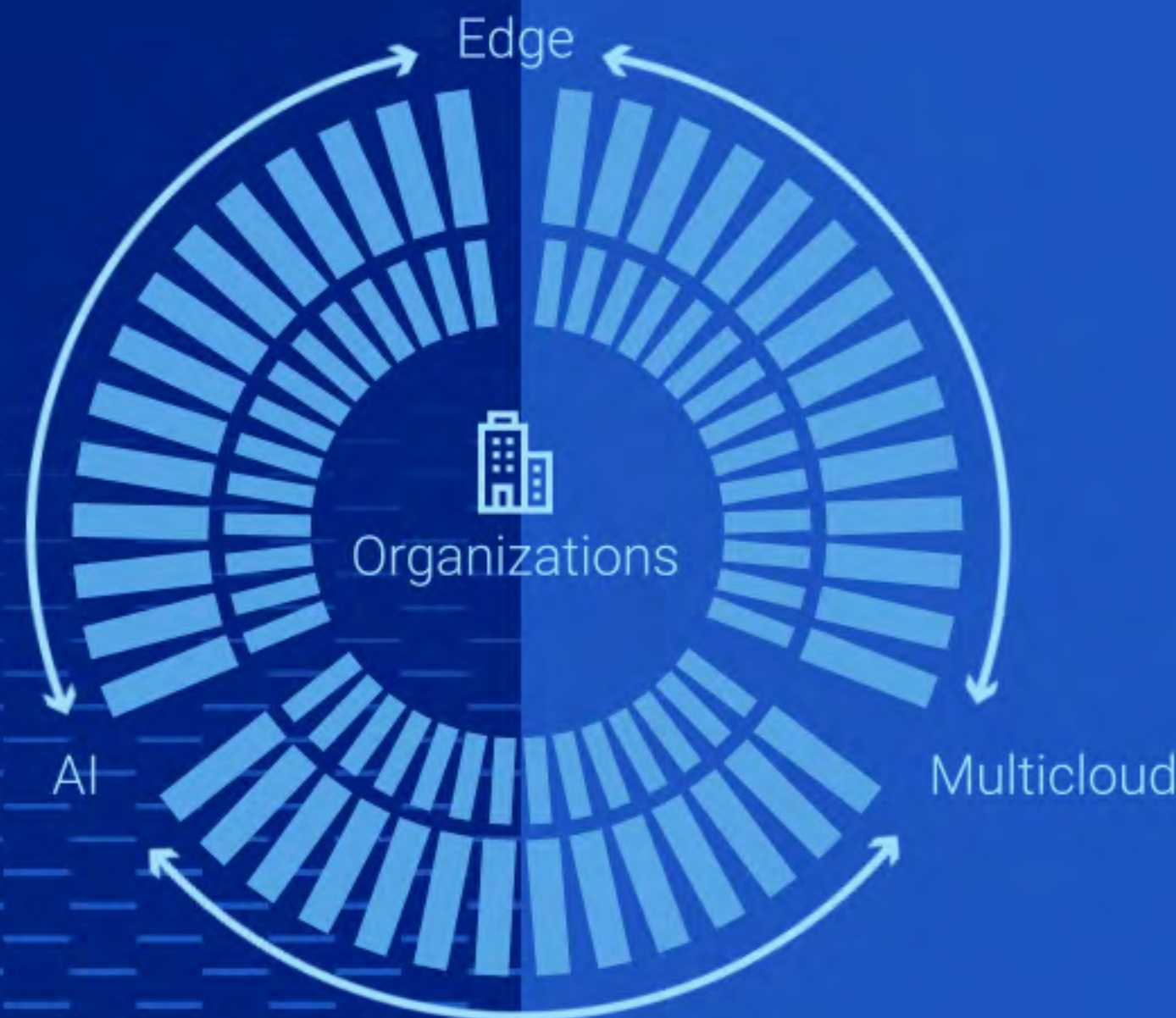
Data could be distributed to a data center, multiple clouds or stay local to the edge for immediate processing onsite. Once processed, it could be deleted, or sent somewhere for further processing, processed for long-term storage or archived onsite for short-term storage. This approach ensures organizations only pay for the resources they need, while leveraging data at its most valuable.

AI and multicloud

The edge is both a location where data is generated and also put to use for AI locally for inferencing.

Whereas multicloud, inclusive of the data center, is often used for the more compute intensive task of fine-tuning and model creation.

Therefore it's important to have these environments unified so that you can get value from data using AI both in action at the edge, and later for refinement in the multicloud.



Build a future-ready, optimized edge

The edge is complex and there are a number of data-centric challenges that can stall progress. These include:



Speed

Your data is most valuable at its point of creation at the edge. Organizations must find a way to capitalize upon fast-moving data generated by a variety of sources in near-real time.



Scale

As more edge locations, devices and data streams come online, IT must be able to connect and centralize infrastructure at scale to maintain smooth operations.



Security

Your organization and customer data may be stored across multiple clouds, and too sensitive to move without potentially violating privacy laws, ethical considerations etc.



Unifying edge, multicloud and AI will not only solve these challenges, but can provide a foundation that's optimized for future workloads.

Transformative Technology

Dell Technologies and NVIDIA are leading the way with the technology you need to build a future-ready, optimized edge:

- The broadest edge portfolio, including AI and edge-optimized software and hardware
- A global ecosystem of partners ready to help you succeed
- Our broad expertise — spanning global industries, telecom systems, services and OEM capabilities — puts us in a unique position to help you navigate these complexities and design an optimized infrastructure for your organization

NativeEdge

ACCELERATE AI INNOVATION AT THE EDGE

- A forward-thinking edge operations software platform developed for a multicloud world
- Automate, manage and securely scale your edge operations across multiple sites from a central location
- Integrate real-world edge devices into your IT ecosystem
- Turn off components with automation to save capacity when needed — crucial for edge sites or remote locations with finite resources
- Make all your data and application pipelines into a software-defined edge package that can be deployed on a platform
- Open design works with any AI solution, software application, IoT framework, OT vendor solution and multicloud environment
- Zero Trust-enabling technologies across data, application and infrastructure layers to ensure integrity and safety of your edge estate

Ruggedized Servers

PURPOSE-BUILT FOR THE EDGE

- Intelligent servers leverage NVIDIA GPUs for AI workloads
- Ruggedized chassis can be deployed in dusty environments or exposed spaces
- Designed to withstand shock, vibration, dust and temperatures ranging from -20°C to +65°C
- Short depth fits in a field rack, on a desk or table, or can be hung on a wall — offering flexibility over traditional servers
- iDRAC securely manages deployment and updates across massively distributed networks
- Used across manufacturing, retail and digital cities as well as distributed Telecom environments



The Dell AI Factory with NVIDIA

From improving operational efficiency to driving innovation, AI has the power to transform business operations and outcomes.

However, AI implementation within enterprises is a challenging task due to the need for:

- Narrowing down vast possibilities into the most impactful use cases
- Managing, preparing and ensuring security and governance of critical enterprise data
- Providing the uncompromising performance required by AI applications
- Sourcing the technical skills required to integrate point solutions
- Ensuring appropriate and accurate responses

Embracing this AI era requires rethinking everything, from how your environments are built to accommodate the power necessary for AI, to aligning business needs with the right technologies. At Dell Technologies, we're helping organizations build their AI factories by offering them the complete blueprint they need: AI-optimized technologies, open ecosystems, expert services and best practices.

As enterprises operate in a world where data is increasingly distributed across multiple locations, the Dell AI Factory with NVIDIA supports deployment options across the entire enterprise landscape. These integrated AI solutions combine Dell's broad infrastructure portfolio with industry-leading NVIDIA GPUs, Networking and NVIDIA AI Enterprise software for core data centers, edge deployments (utilizing Precision AI-ready workstations, NVIDIA AI Workbench and PowerEdge -XR servers) and cloud through our growing cloud service provider ecosystem.

Harness the power of edge, multicloud and AI today

Regardless of where your organization is in its edge journey, Dell Technologies and NVIDIA can provide the expertise to solve your existing problems, while building the long-term infrastructure you need to thrive on the AI ecosystem.

Our portfolio of purpose-built hardware, software and services provide a simplified, secure edge infrastructure for your organization, enabling you to distribute AI workloads to your enterprise data and produce innovative outcomes. Streamlined deployment at scale will help you power any use case, underpinned by enterprise-grade security that enables you to capitalize on your edge so that you can:

- Leverage AI when you need it to act faster and accelerate innovation
- Modernize your edge infrastructure, for simplified deployment of edge AI, workloads and operations at scale
- Embed cybersecurity expertise throughout your edge estate, enabling you to expand with confidence while protecting data, users, devices, networks and applications

Learn how the edge, multicloud and AI can generate competitive advantage in your industry – visit our [**Edge Resource Library**](#).

AI Edge MC