AWS re:Invent

NOV. 29 – DEC. 3, 2021 | LAS VEGAS, NV

CMP209

Harnessing the power of edge compute to innovate

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Amazon Web Services

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Application continuum

REINVENTING HYBRID CLOUD FOR VARYING APPLICATION REQUIREMENTS

AWS Regions

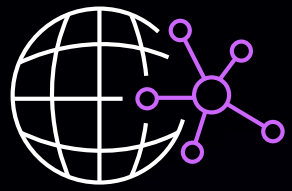
Scale



Most web and enterprise applications – such as email, collaboration, and intranet applications – are easily migrated to AWS Regions

AWS edge locations or on premises

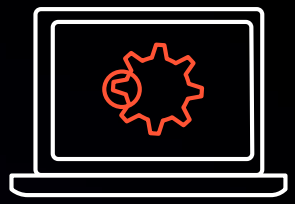
Residency



Regulations or contractual obligations dictate that data and infrastructure reside in specific countries, states, or provinces

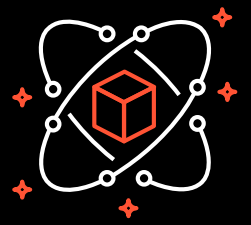
Closest to users or on premises

Local data processing



Transcoding, filtering, caching, and alerting applied at the edge; large datasets that can't be easily moved

Ultra-low latency



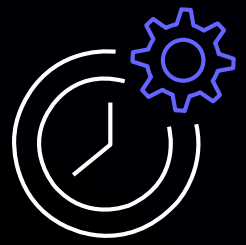
Equipment and processes sensitive to compute latency; interactive workloads such as AR/VR, design, and visualization; complex workloads that span a variety of local host or storage systems

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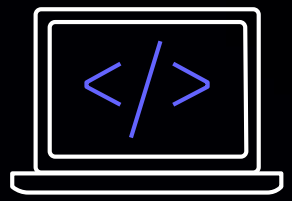
Customers want the same experience across environments



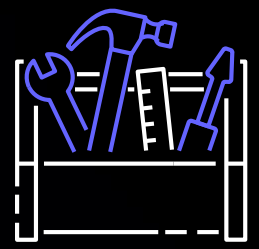
Same reliable, secure, and high-performance infrastructure



Same operational consistency



Same services and APIs



Same tools for automation, deployments, and security controls



Same pace of innovation as in the cloud

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Extending the cloud

DELIVERING CLOUD ANYWHERE CUSTOMERS NEED IT

Global



AWS Regions

25+

Metro centers



AWS Local Zones

16+

5G networks



AWS Wavelength

17+

On premises



AWS Outposts

65 countries and territories

Smart devices



AWS IoT Greengrass
FreeRTOS

Rugged edge



AWS Snow Family

Same infrastructure, services, APIs, and tools for a consistent experience

aws

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Edge computing is touching every industry



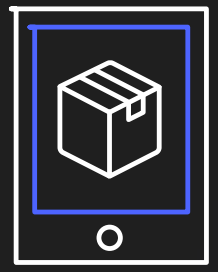
Media and entertainment



Manufacturing



Automotive



Retail



Telecom

and more . . .

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Media and entertainment

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The M&E industry landscape – What is driving the interest in 5G and edge computing?



New paradigms for content creation



New consumption and distribution models

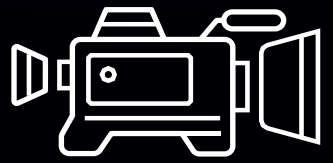


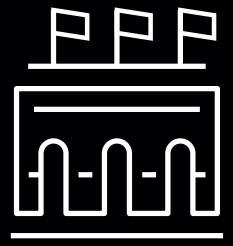
Evolving technology and platforms

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New use cases in M&E enabled by edge computing

Video production at the edge





Interactive live events

Shared media experiences





Ultra responsive gaming

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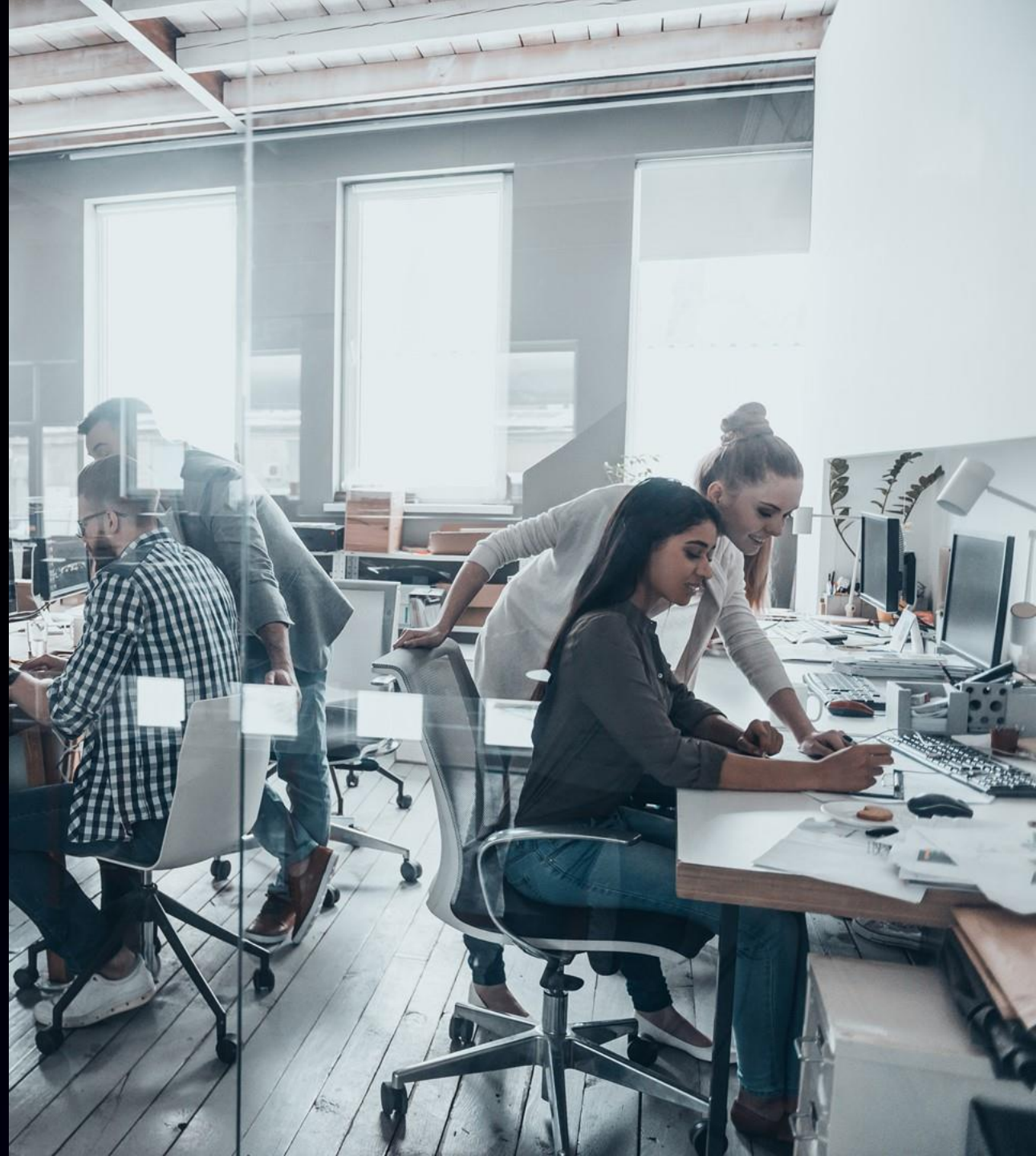
Faster content creation

"We have many artists and content creators who can benefit from bringing the on-premises infrastructure they use day to day to the cloud. However, every second counts, especially when it comes to the time it takes to compile and render 3D models and animations. By taking advantage of access to AWS's highly performant and cost-effective compute resources, we have been able to migrate portions of our content creation process to AWS Local Zones ensuring an even better experience for artists."

Nils Pommerien
Director, Cloud Infrastructure Engineering

NETFLIX

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Expanding our Local Zones footprint



AWS Wavelength



5G partners

verizon

KDDI

SK telecom

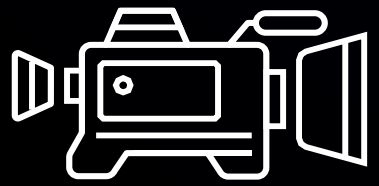
vodafone business

Bell

aws

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New way to experience live events



View live events from multiple angles at 4K



Pull up instant statistics served from edge compute locations



Provide participatory experiences

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Low-latency gaming anywhere

"Using AWS Outposts, we were able to reduce Valorant latency by 5–10 ms for players in strategic regions during the COVID-19 epidemic. Rapidly lowering latency for hard-to-reach areas without the need to deploy and manage hardware was a huge win."

Zach Blitz
Head of Infrastructure
Riot Games

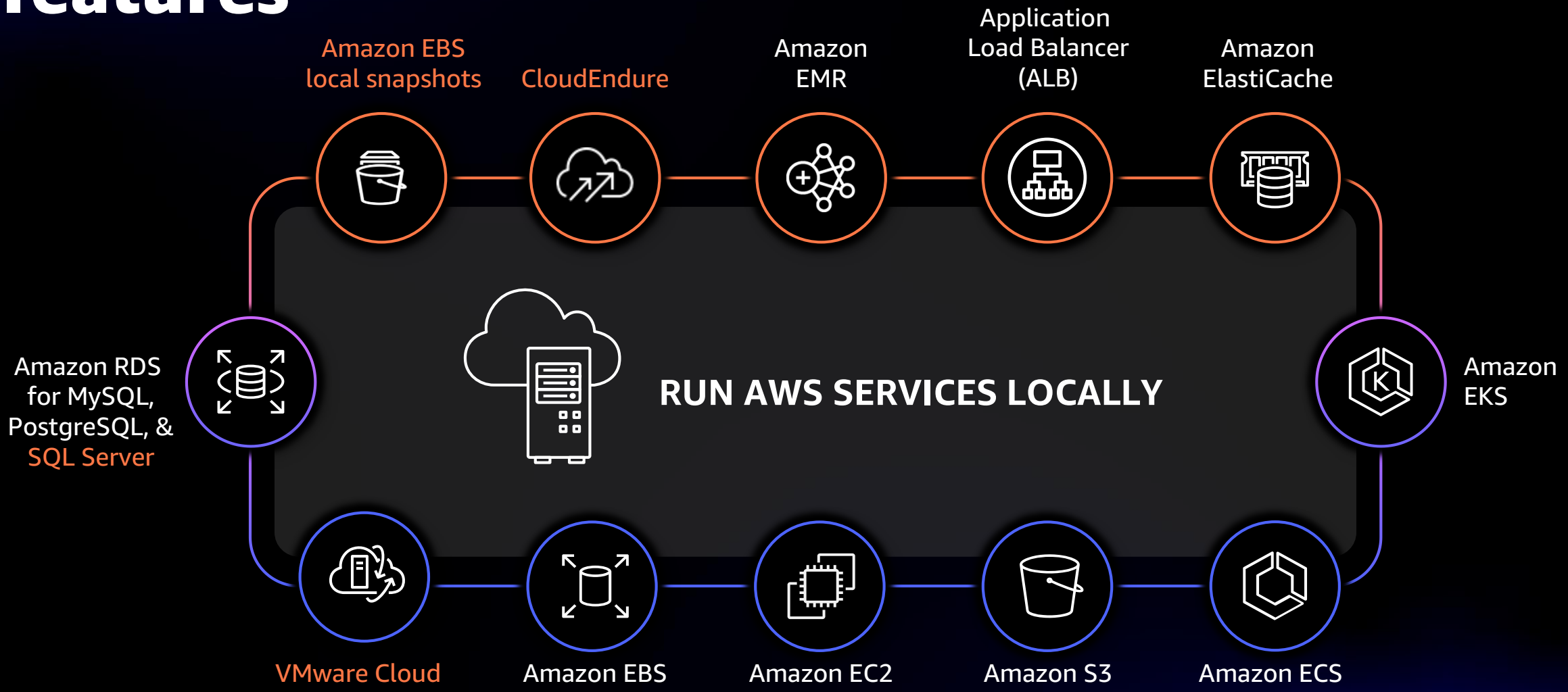


RIOT GAMES

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Rapid innovation: Newest AWS Outposts features

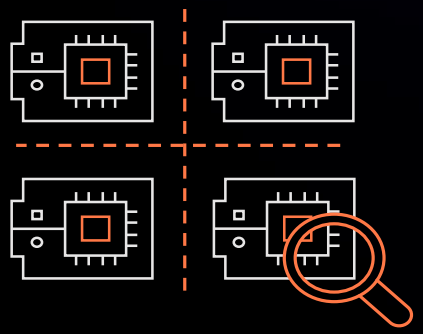


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Manufacturing

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New use cases enabled by edge computing



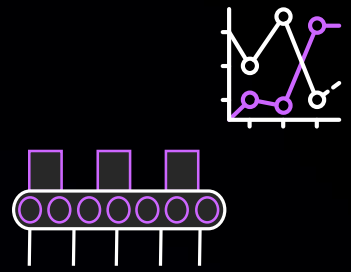
QA automation with computer vision

Identify and report defects in near real time



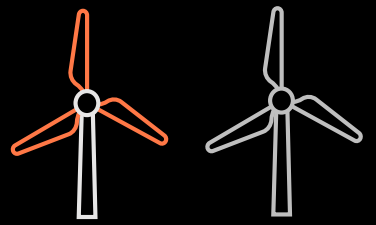
Track and trace

Improved logistics efficiency via increased automation



Preventive maintenance

Better efficiency and cost management



Product quality via digital twin

Optimized performance accuracy, more effective training

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Edge computing options for smart manufacturing

Public MEC

AWS Wavelength

Public LTE/5G network





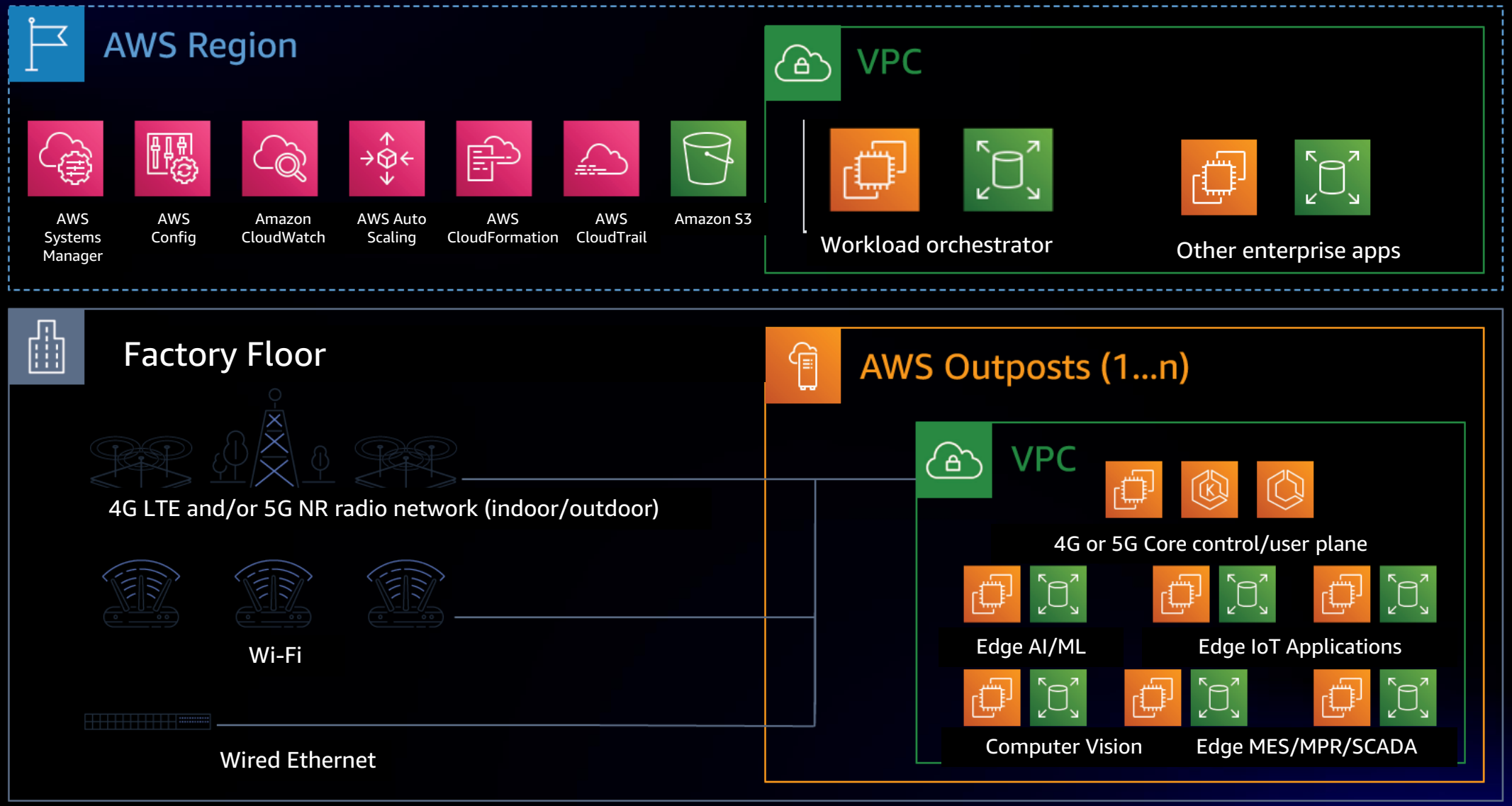
AWS Outposts

Private LTE/5G network

Private MEC

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Smart manufacturing and private MEC

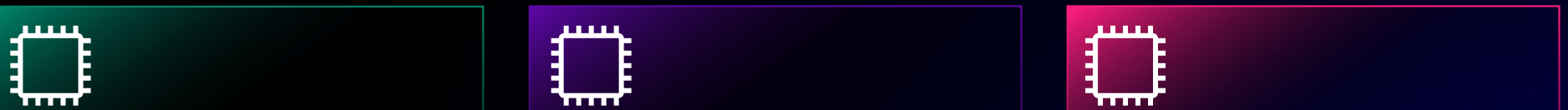


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NEW LAUNCH

AWS Outposts 1U and 2U servers

AWS infrastructure, services, APIs, and tools on premises for low-latency and local data processing – now with smaller form factors



Choose between a 1U form factor with an AWS Graviton2 processor or a 2U form factor with an Intel processor

Run AWS services locally – including EC2, ECS, EKS, and edge services like AWS IoT Greengrass

Simple device installation by either your on-premises personnel or an AWS preferred third-party vendor

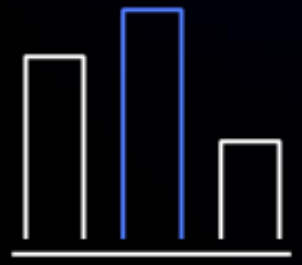
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Private 5G technology

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Private 5G technology



Improved performance

Low-latency, high-throughput network for applications



Extended coverage

Secure, reliable, long-range connection for indoors and outdoors



Granular traffic control

Application-specific traffic policies



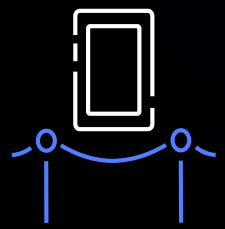
Scale to massive devices

Add more devices as your business needs grow

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Deploying a private cellular network is hard



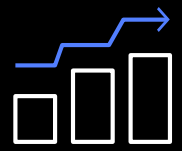
Upfront designing and planning, often for peak capacity



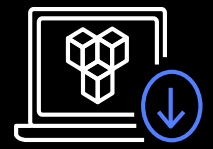
Integration of hardware and software components procured from multiple vendors



IT integration for device authentication and security policies



Opaque licensing and pricing models



Difficult to scale as network traffic needs change or grow

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PREVIEW

AWS Private 5G

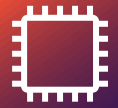
Fully managed service to install, operate, and scale your private cellular networks



Order and deploy a private mobile network with just a few clicks in the AWS console



Automatically configures, deploys, and manages the mobile network



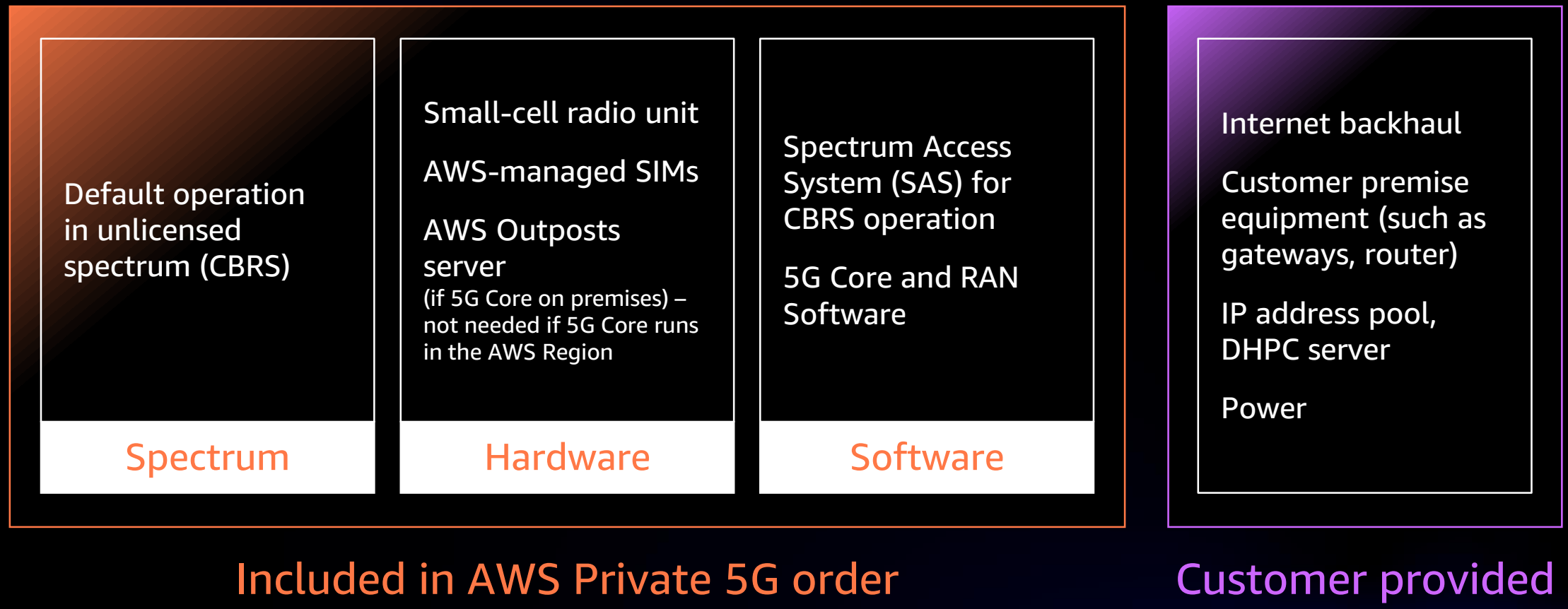
Scales easily to accommodate more connected devices or increase in network traffic

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AWS Private 5G

COMPONENTS AND FEATURES



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Creating a community of developers and application builders

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Accelerating innovation with AWS Wavelength

Growing library of developer tools and infrastructure



Zero Trust Networking



SDWAN



Managed K8s operations



Application acceleration



Private access ZPA



WebRTC streaming

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Accelerating innovation with AWS Wavelength

Growing library of developer tools and infrastructure

NETFOUNDRY
Zero Trust Networking

vmware
SDWAN

RAFAY
Managed K8s operations

CONFLUENT
Application acceleration

zscaler
Private access ZPA

Ant Media
WebRTC streaming

APN solutions made possible with AWS Wavelength

mawari
AR Concierge/Docent experiences

NET4
Reinventing logistics with video analytics

broadpeak
Video delivery over 5G

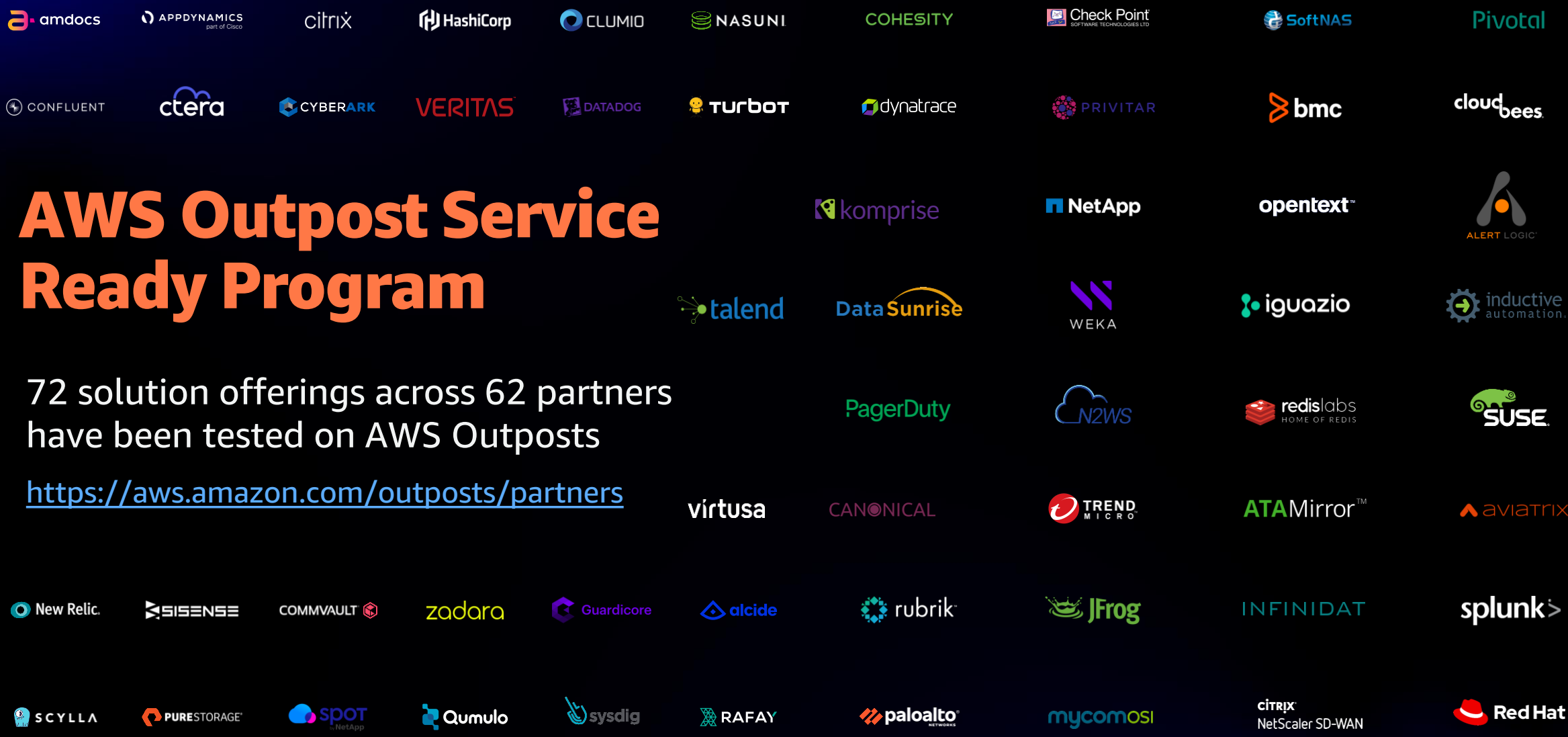
tcs | TATA CONSULTANCY SERVICES
Intelligent, real-time quality inspections

SPORTABLE
AR & IoT for Sports

Multicasting
Video streaming for live events

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AWS Outpost Service Ready Program

72 solution offerings across 62 partners have been tested on AWS Outposts

https://aws.amazon.com/outposts/partners

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Innovation powered by edge compute

Global



AWS Regions

Metro centers



AWS Local Zones

5G networks



AWS Wavelength

On premises



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Smart devices



AWS IoT Greengrass
FreeRTOS

Rugged edge



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Thank you!

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