World class events require world class infrastructure and connectivity

Powering AWS re:Invent with a Custom-Built, Highly Resilient Network

AWS (Amazon Web Services)
aws.amazon.com

- AWS is the most broadly adopted cloud computing platform in the world, providing scalable infrastructure, data and AI services to help enterprises modernize and accelerate innovation
- re:Invent is AWS' flagship event, uniting the global cloud community to explore, engage and build the future of technology
- 2025 marked the 14th annual event, all hosted in Las Vegas, NV, having grown from less than 10,000 to more than 60,000 attendees since 2013

Challenges
- Double-Digit YoY attendee growth
- ~430 TB of traffic and 23+ Gbps peak throughput
- Highly demanding expectations of global attendees
- Logistical Disruptions like World Cup 2022 traffic spikes & Formula 1 construction impacts

Solutions
- **Lumen® Dark Fiber** for secure, scalable, hyperscaler-grade connectivity
- **Wavelengths** deliver high-bandwidth & predictable performance for massive data movement
- **Lumen® Private Connectivity Fabric℠** for fast, secure, flexible networking
- **Lumen® Ethernet Services** to link new locations in multiple configurations securely

Results
- Zero customer impacting outages across a decade of partnership
- ~430 TB transferred during re:Invent with peak throughput exceeding 23 Gbps
- ~50,000 concurrent Wi-Fi users supported seamlessly
- Global blueprint & standard for AWS events

~430 TB
Data transferred during re:Invent

~50,000
Concurrent Wi-Fi users supported seamlessly

7
Venues connected via dedicated fiber ring

LUMEN®

Challenge

Uncompromising Reliability for a Global-Scale Event

AWS re:Invent is one of the world's largest, most complex temporary network deployments – a popup "city" whose success depends entirely on flawless, high-capacity connectivity. For more than a decade, Brian Searcy and the AWS Event Networking team have relied on Lumen to design, build, and operate a resilient, low latency, multi-venue backbone that steadily grows in capacity and connectivity to meet the event's growing demands.

Through co-investment, engineering partnership, and continuous innovation, AWS and Lumen have built a bespoke, metro Las Vegas infrastructure- a first-of-its-kind custom private network that has become the blueprint for AWS's largest global events. AWS re:Invent cannot tolerate downtime – not for live streaming, registration, hybrid sessions, demos, or critical onsite applications.

Brian and team needed a partner capable of engineering a resilient network that could absorb any outage, load spike, or physical disruption without impacting the attendee experience. As Searcy notes, "A reliable network underpins everything at large events and should be transparent to the end customer. The network connectivity should be like oxygen: customers trust it's there, and never even think about it."

AWS strives "to be Earth's most customer-centric company" and to meet that challenge, Lumen strives to be AWS' most customer-centric partner.

Solution

A Custom, City Scale Private Network Built for AWS

Over more than a decade, Lumen and AWS co-engineered a permanent, cloud grade and AI-ready network infrastructure across Las Vegas – transforming what began as temporary circuits into a reliable, scalable year-round backbone tailored for hyperscaler performance.

A robust dark fiber ring seamlessly links all major conference venues to two strategically located data centers—one owned by Lumen and the other managed by a third party—while multiple high-capacity 10G wavelengths extend connectivity to AWS data centers as far away as Seattle. This architecture enables uncompromising resiliency and redundancy, safeguarding event operations against any single point of failure and supporting the high-performance demands of AWS re:Invent.

Newly added in 2025 were redundant and burstable 10G ethernet connections to Harry Reid International Airport terminals to accommodate traffic spikes. These support event registration and badge printing services to arriving event attendees, another strategy carefully designed to improve the overall experience.

> " Walking around at the end of it and just knowing that we've pulled off something almost nobody can do – it's a pretty epic undertaking."
>
> – **Brian Searcy**
>   Principal Technical Program Manager – Networking
>   Amazon Integrated Security

Solution Set

- Lumen® Private Connectivity Fabric℠
- Lumen® Dark Fiber
- Lumen® Wavelength Solutions
- Lumen® Ethernet Services

Results and Future Plans

World Class Reliability, Year After Year

Brian and team now set their sights on the global stage. They lead network planning and operation at 30+ events across the world, including AWS Global Summits and partner events.They are frequently on the road, from London to Sydney and Rio de Janeiro. The planning and testing cycles are long, and flights are longer.

Then there's the topic on every enterprise leader's mind: AI, machine learning and LLMs. The team is well underway discussing strategy and hatching plans. Searcy explains, "if a team comes to us and says…we need 100 gigs to stream data to train a model…we want to show off satellite connectivity from space…how do we enable it so we can say, 'yes, you can have that?' It's our job to say yes".

To accommodate the asks, Brian is actively researching Lumen's on-demand connectivity capabilities and the recently announced, co-developed solution, AWS Interconnect - last mile, designed to eliminate last-mile traffic bottlenecks and simplify connectivity to AWS.

866-352-0291 I lumen.com I info@lumen.com

LUMEN®