
AWS
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HYB204

How to deploy a private mobile network within days using AWS Private 5G

Priyanka Jindal

Principal Product Manager
Amazon Web Services

Brian Searcy

Principal TPM Event Technology
Amazon Web Services

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Agenda

What is AWS Private 5G?

How it works

Use cases

Customer story

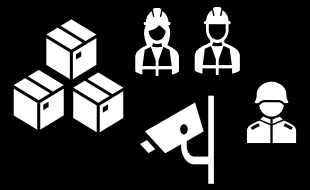
Additional resources

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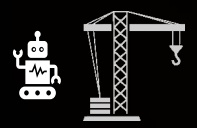
Private mobile network connectivity drivers



Dedicated network capacity for enterprise wireless networks



Extended coverage over large areas or a combination of indoor and outdoor coverage for seamless mobility

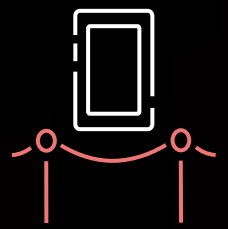


Critical workloads that require network security and network quality of service levels across specific industries

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Deploying a private mobile network with legacy approaches is hard



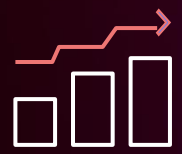
Upfront designing and planning, often for peak capacity



Integration of hardware and software components procured from multiple vendors



IT integration for device authentication and security policies



High upfront costs and opaque licensing and pricing models



Difficult to scale as network traffic needs change or grow

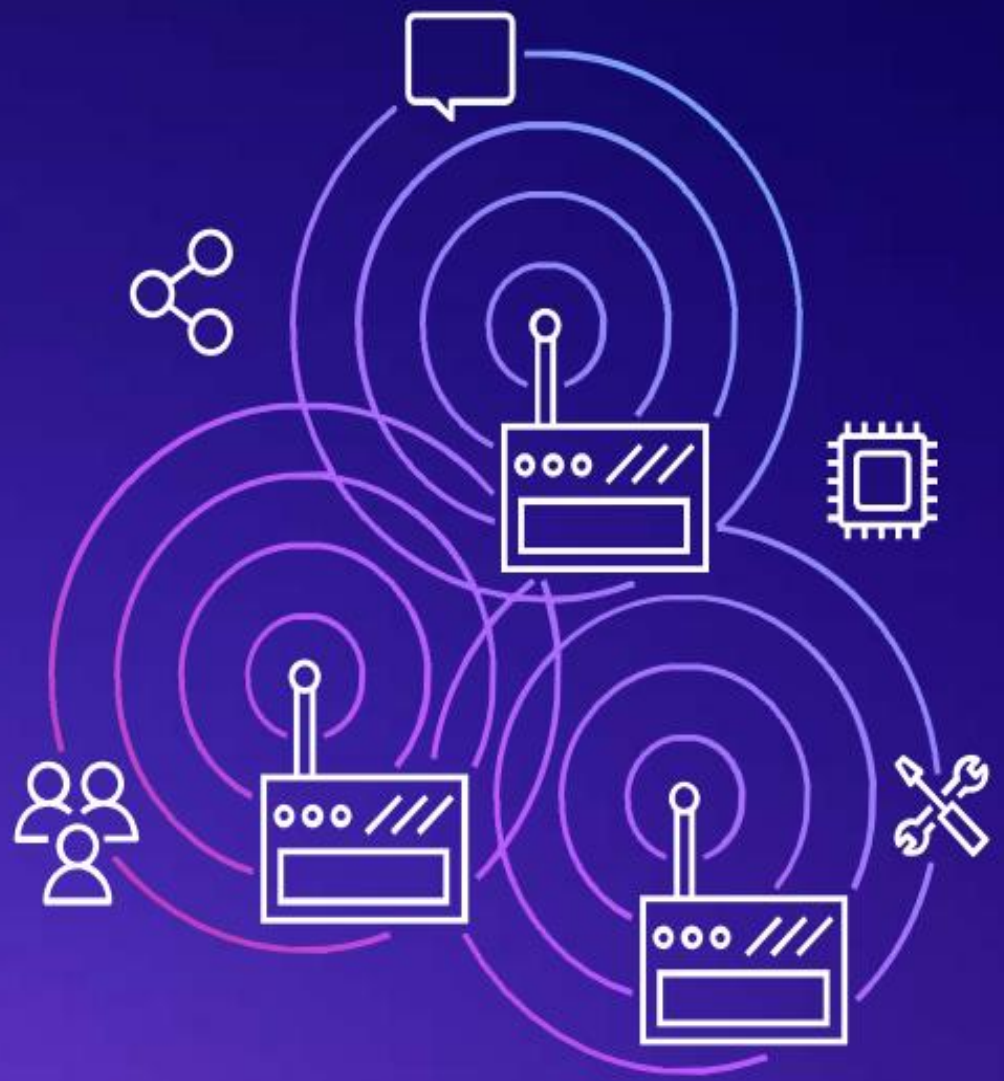
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Simplifying private mobile networks

AWS Private 5G

Set up and scale a private mobile network at your facility – shrinking months of complex planning and integrations down to days



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AWS Private 5G

Managed service
With preintegrated hardware and software, and an out of the box experience

Operates in shared spectrum
No need for license

No per device charges
Pay for the coverage and capacity you need, not the number of devices you connect

NEW **On-demand network scaling**
For expanding coverage or connecting additional devices



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AWS Private 5G

AWS control plane

- Self-serve, hassle-free ordering using the AWS Console or APIs

AWS provided hardware and software

- Pre-provisioned radio units and SIMs
- Automated infrastructure provisioning and mobile core deployment and configuration
- Radio unit (RU) registration with Spectrum Access System

AWS managed software updates and maintenance

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How Private 5G works

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AWS Private 5G resources

Network is a logical construct and includes a collection of Network Sites and SIMs that are registered with that Network.

Network Site represents the physical location, and is a collection of radio units (RUs) and a Mobile Core for those RUs .

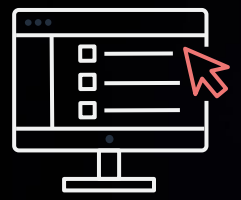
Network Resources include RUs and Device Identifiers (i.e., SIMs). RUs require internet connectivity to the AWS Region and SIMs go in the end-user equipment.

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How Private 5G works

Create a Network and a Network Site



Select location

Understand networking and power requirements

Create an Order



Order a network based on your coverage and capacity needs.

Start small and expand on-demand.

Receive delivery and complete activation



Hardware delivered to you

Plug it into power

Provide internet connectivity to RUs

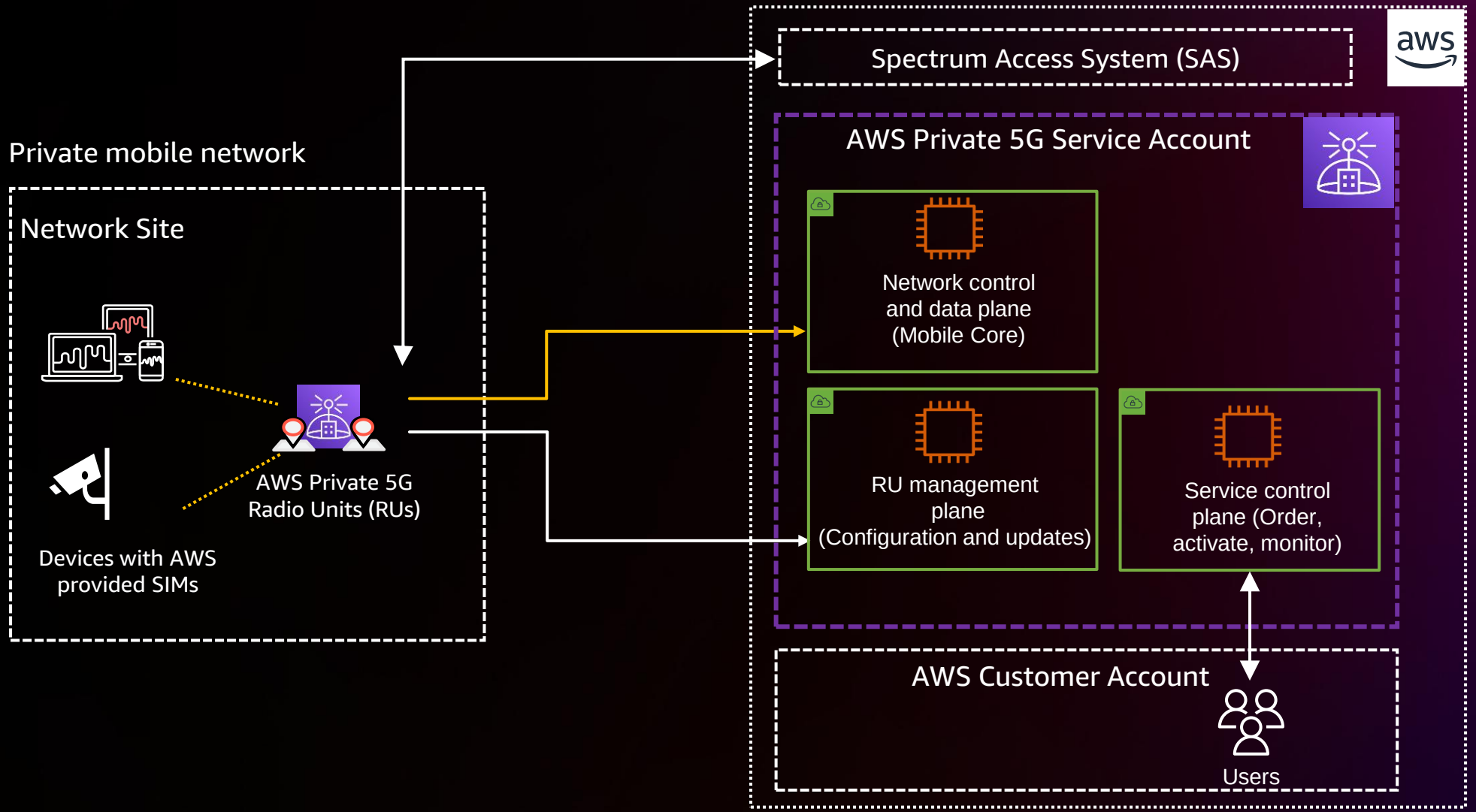
Register RUs for spectrum grant

Insert SIMs in your end-devices

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How Private 5G works



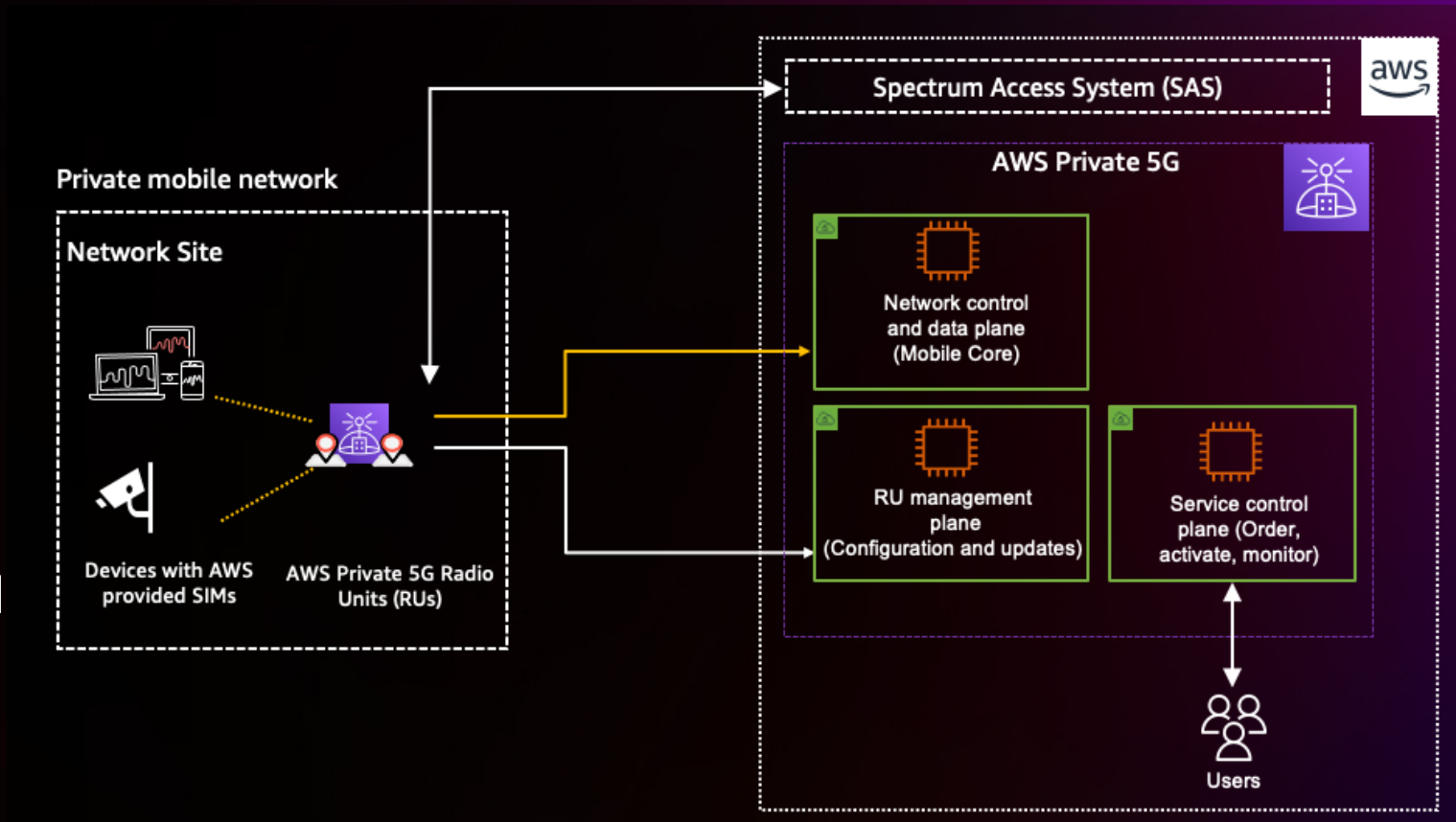
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Withstanding failures

AWS Private 5G components within the Region are redundant

AWS will update firmware or ship a replacement if there are hardware defects

Customers plan where RUs are installed to account for spare or overlapping coverage (with an option to work with partners available through the AWS Marketplace)



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Managing network security

Identity-centric trust fundamental to cellular technology



- SIM-based authentication to restrict network access to authorized devices or users

SIMs in AWS Private 5G as AWS Identity and Access Management (IAM) resource



- for API-invocation access permissions, for example, “deactivate SIMs”

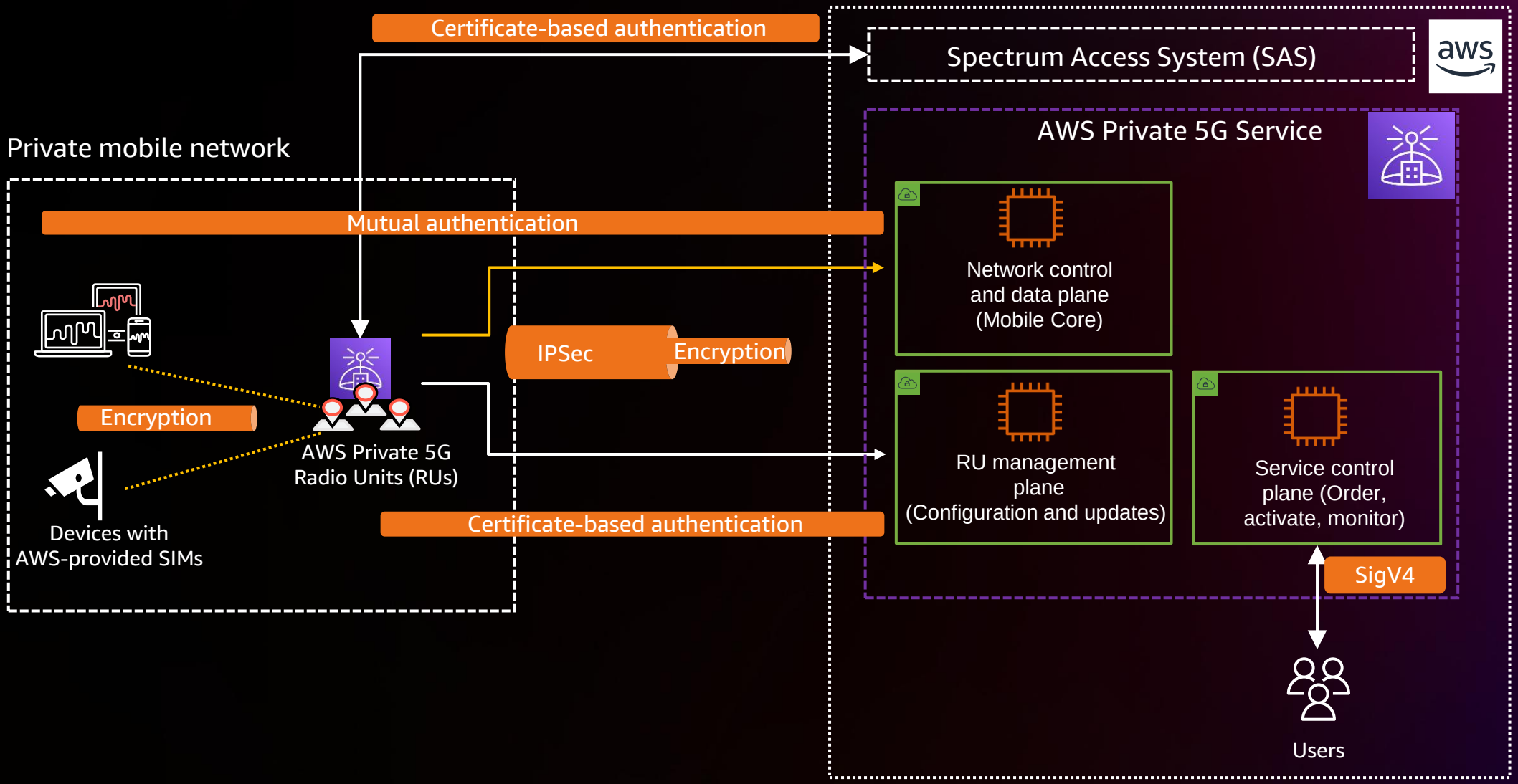
Network-centric trust using AWS tools such as Amazon Virtual Private Cloud (VPC)



- isolate user traffic for each customer’s network

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Managing network security

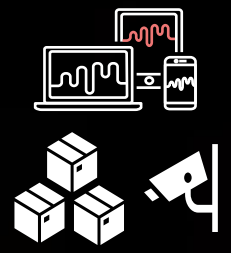


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Use cases

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Common AWS Private 5G uses



Extended coverage and seamless mobility for surveillance cameras, inventory scanners, and handhelds in environments like warehouses, airport tarmacs, construction sites, garages, or shipping yards

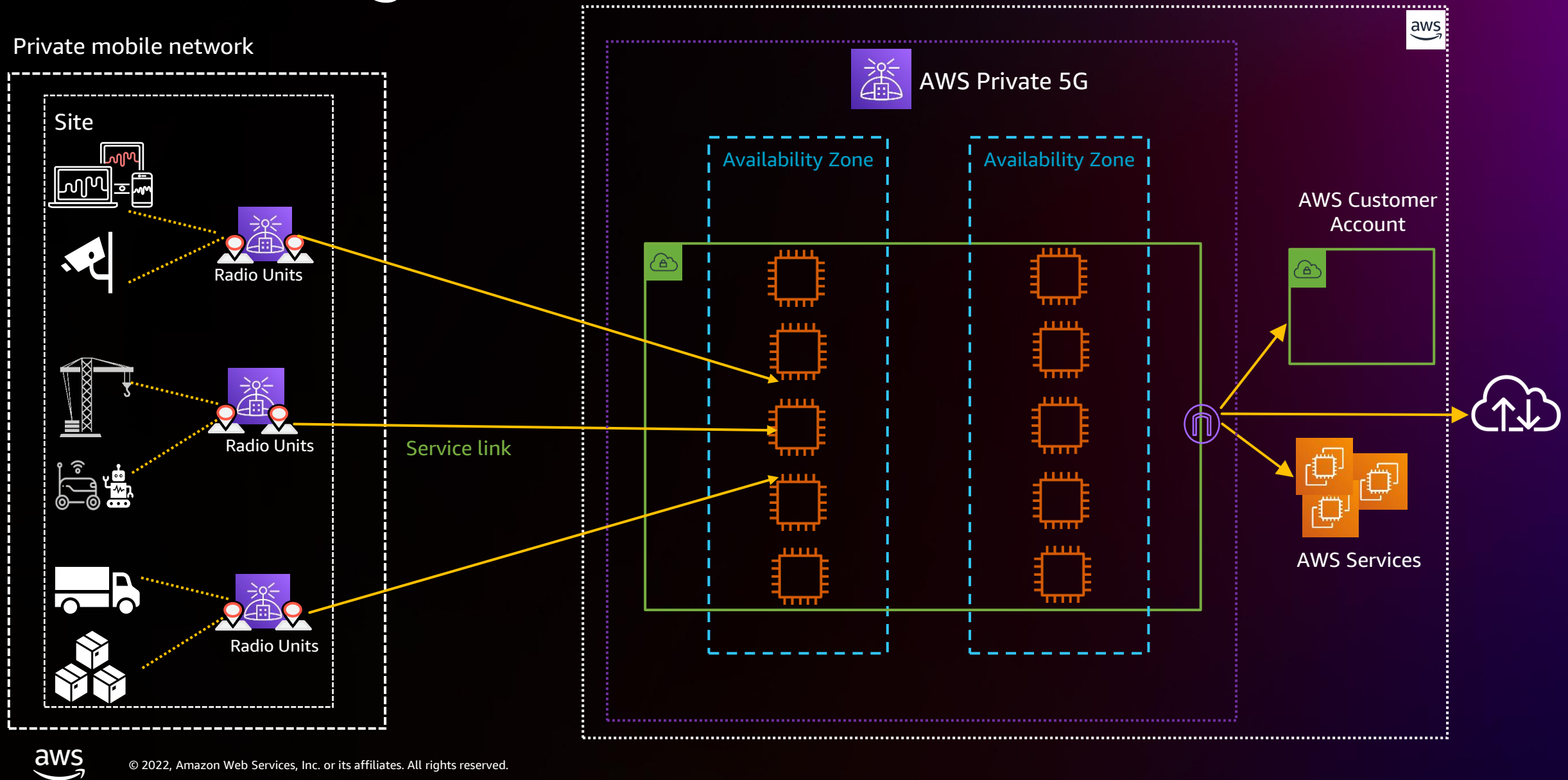


Seasonal wireless networks for point of sale, kiosks, and other connectivity at corporate or sporting events, graduation ceremonies, and natural disasters

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Networking with AWS Private 5G



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Customer story

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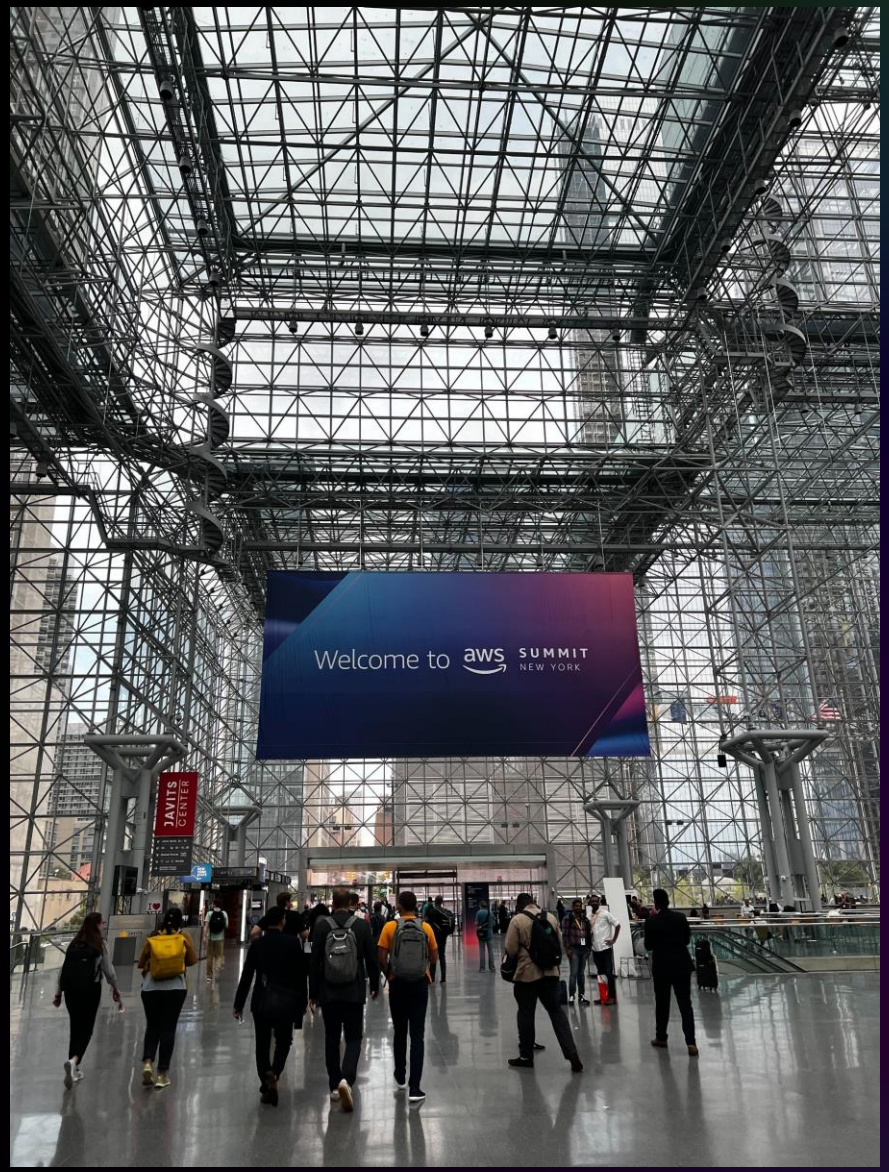
Amazon events







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Where Wi-fi presents challenges



Access with shared username and password



Inconsistent performance transitioning indoors to outdoors



Competition between devices and network resources for airtime

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Why AWS Private 5G?



Security

allows only authorized devices to connect, no shared credentials



Agility

enables just in-time deployments with ease of ordering and setup, and out of the box configuration



Scalability

ability to adapt the network based on event demands and device requirements



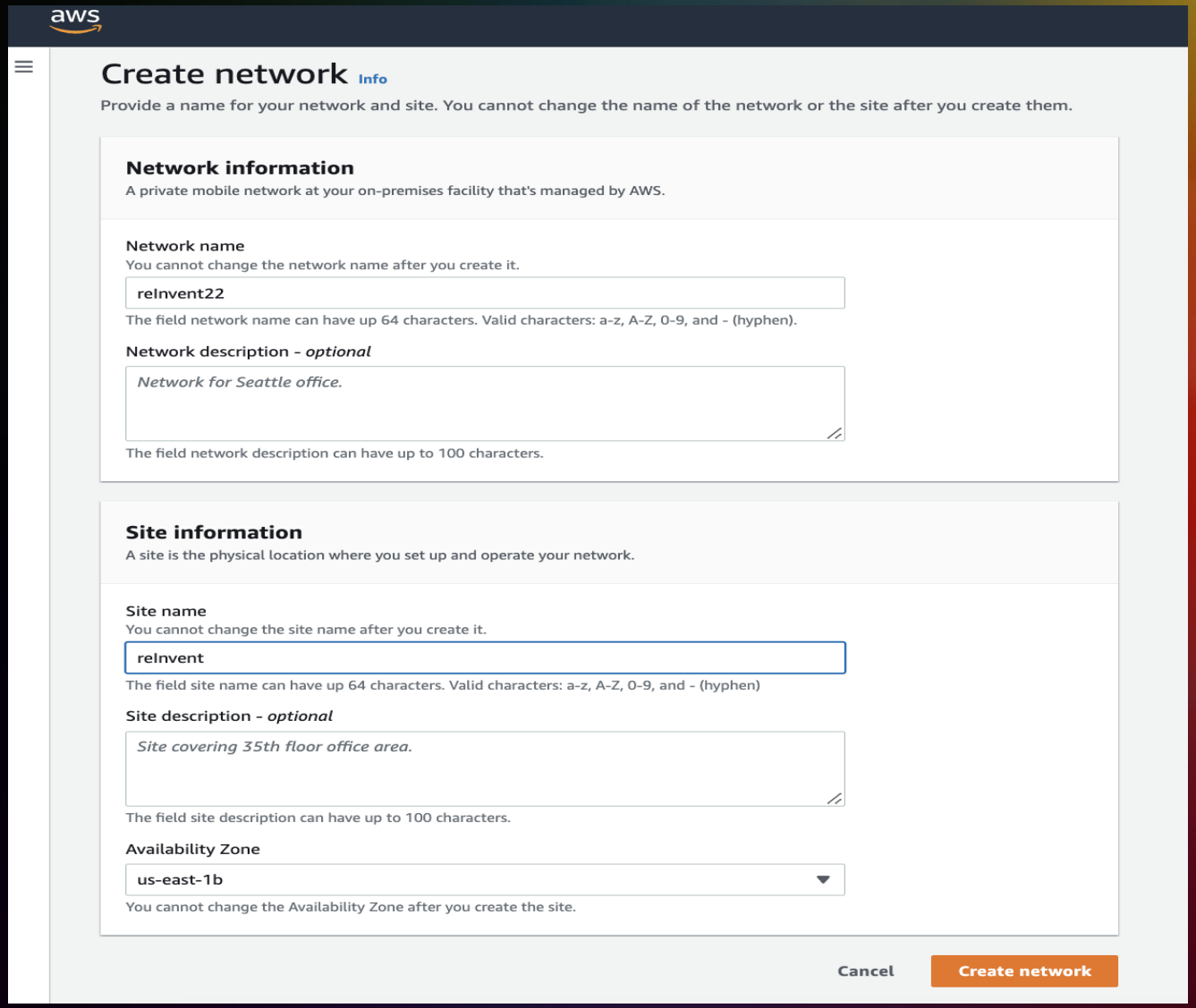
Performance

private network with dedicated bandwidth ensures reliable performance for diverse end applications

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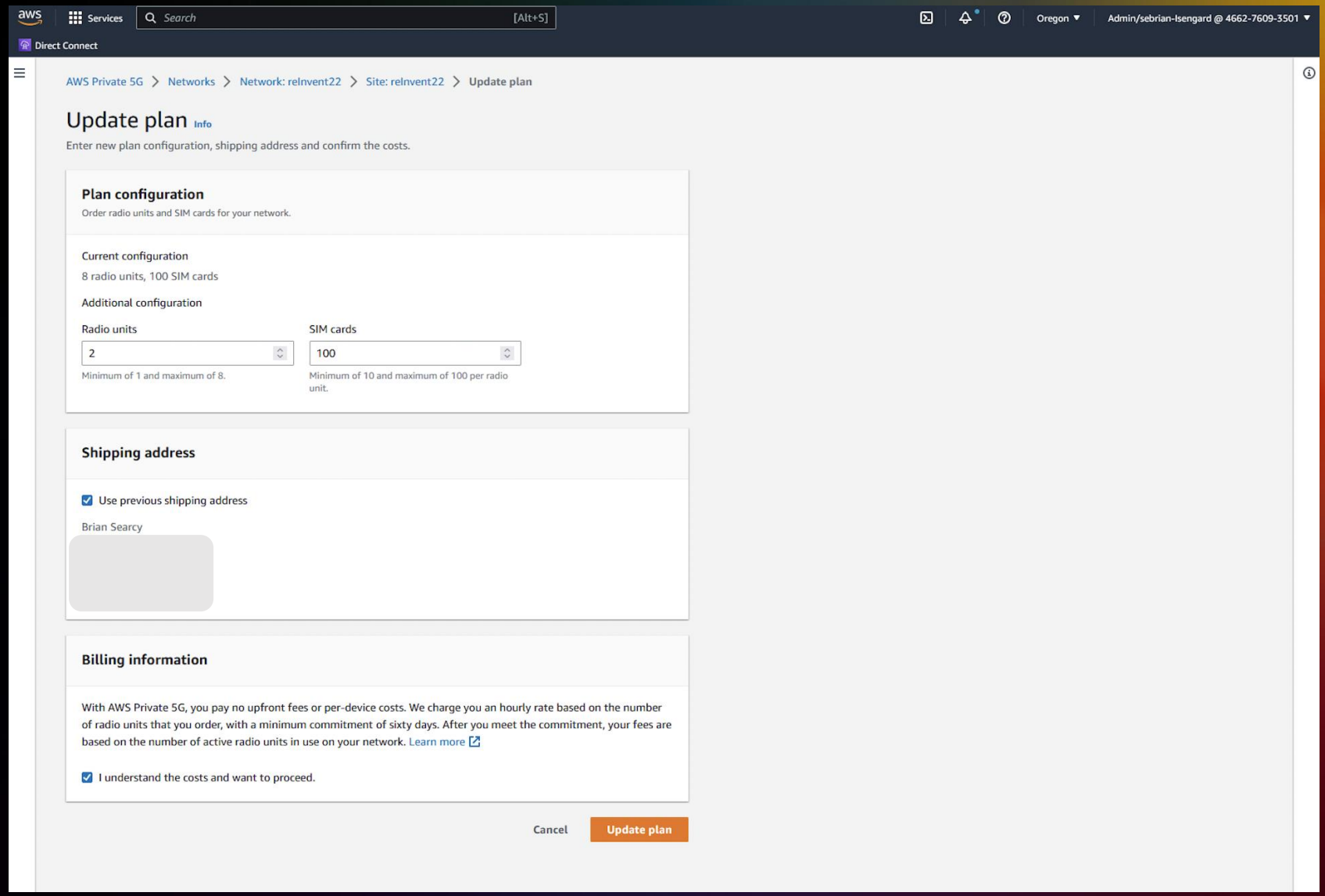
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Ordering



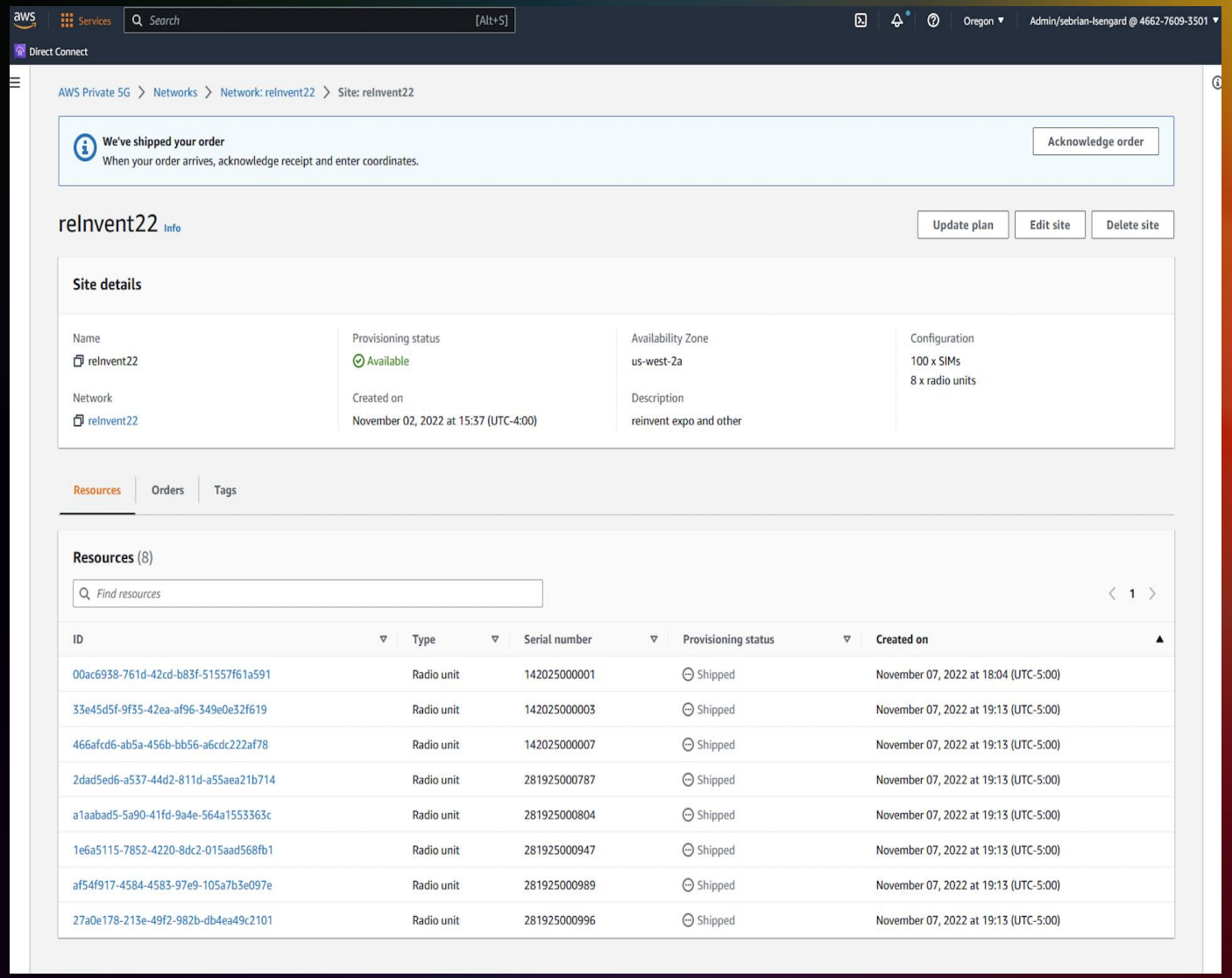
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Ordering



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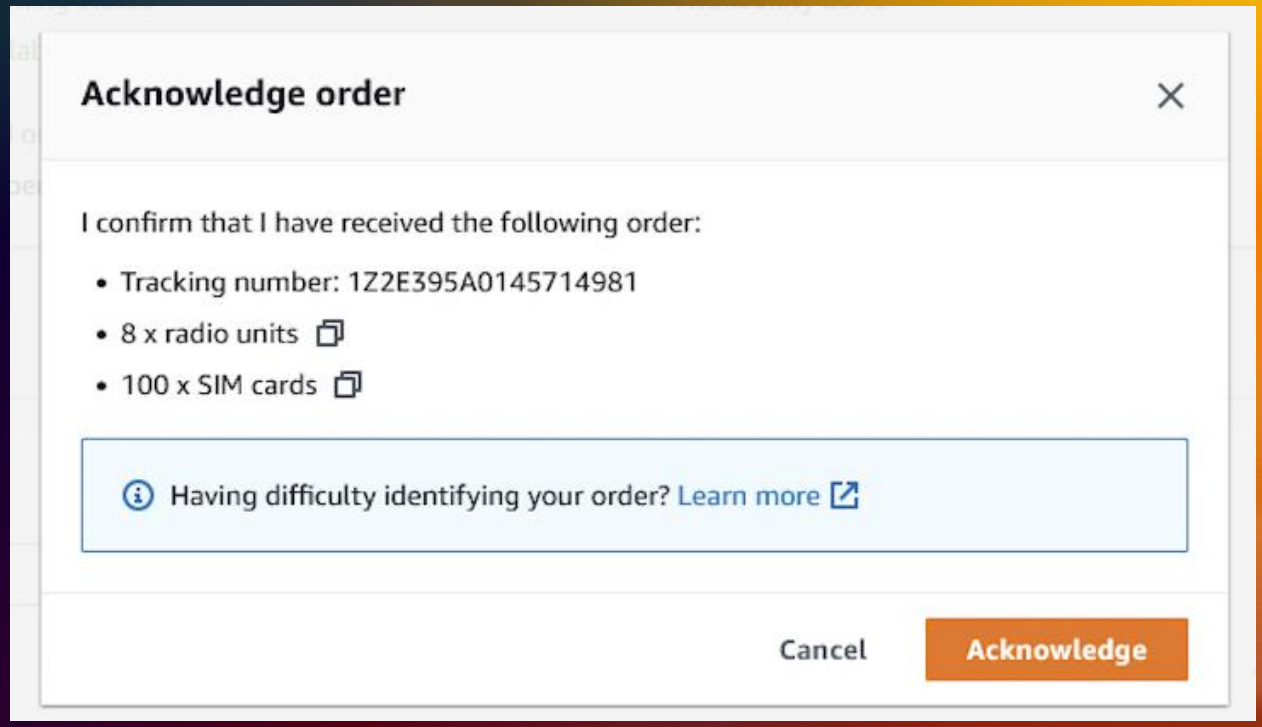
Ordering



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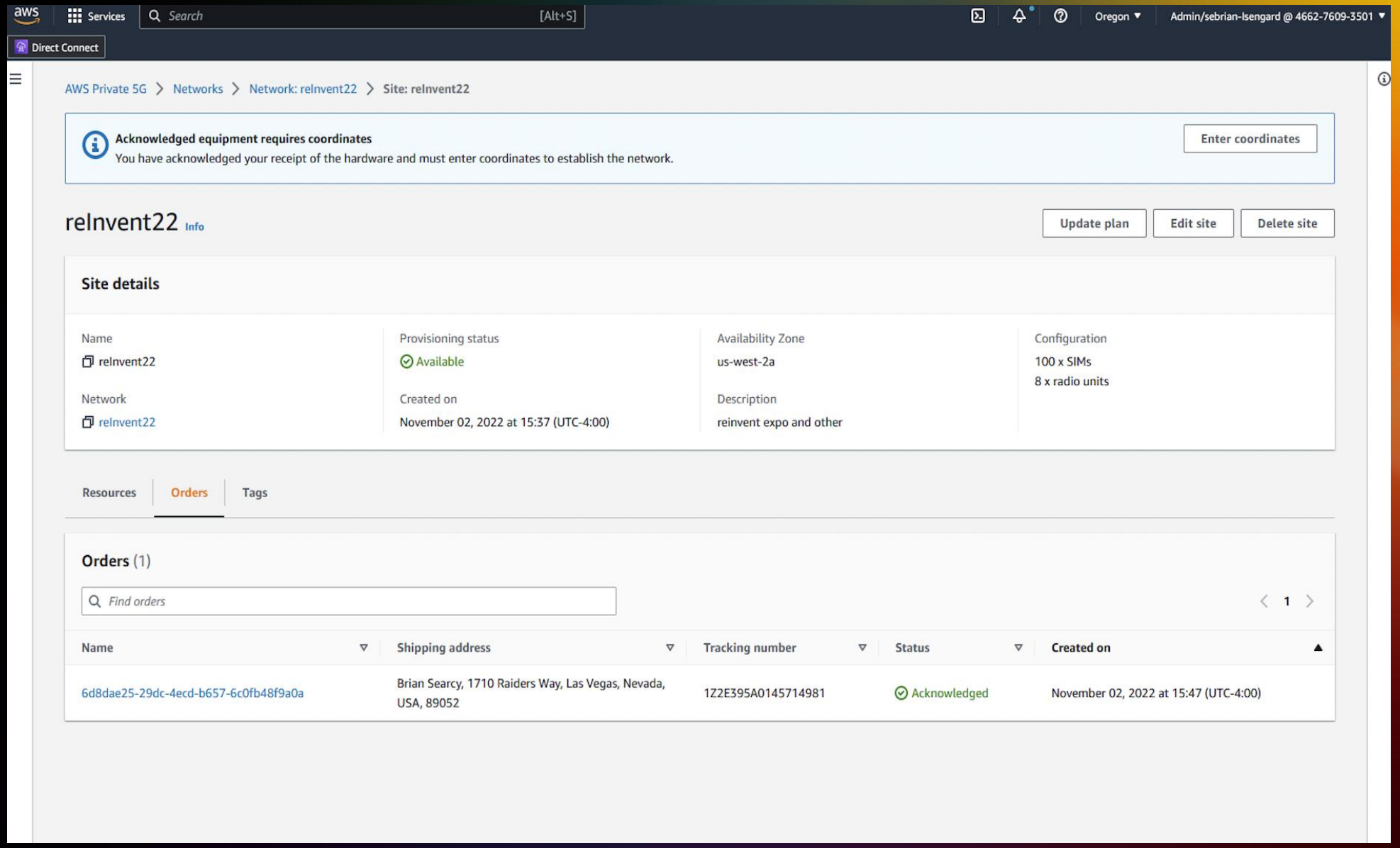
Activation





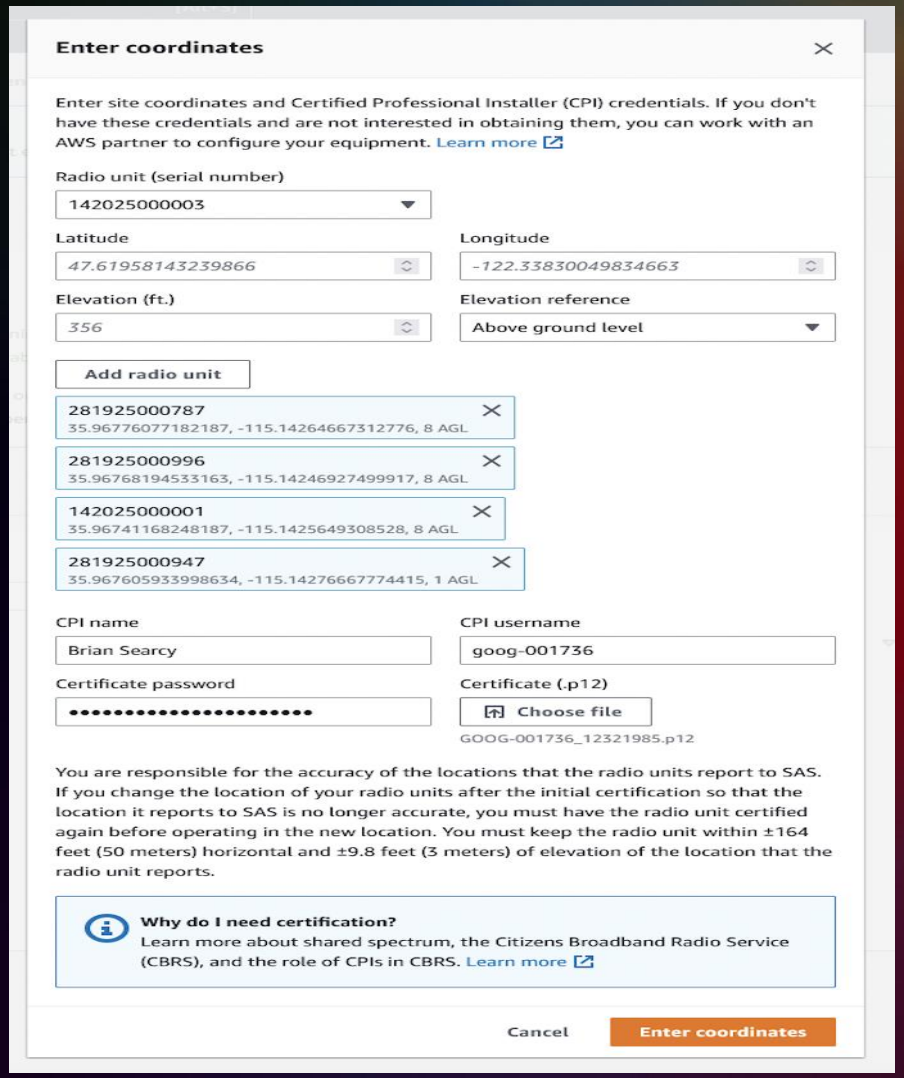
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Activation



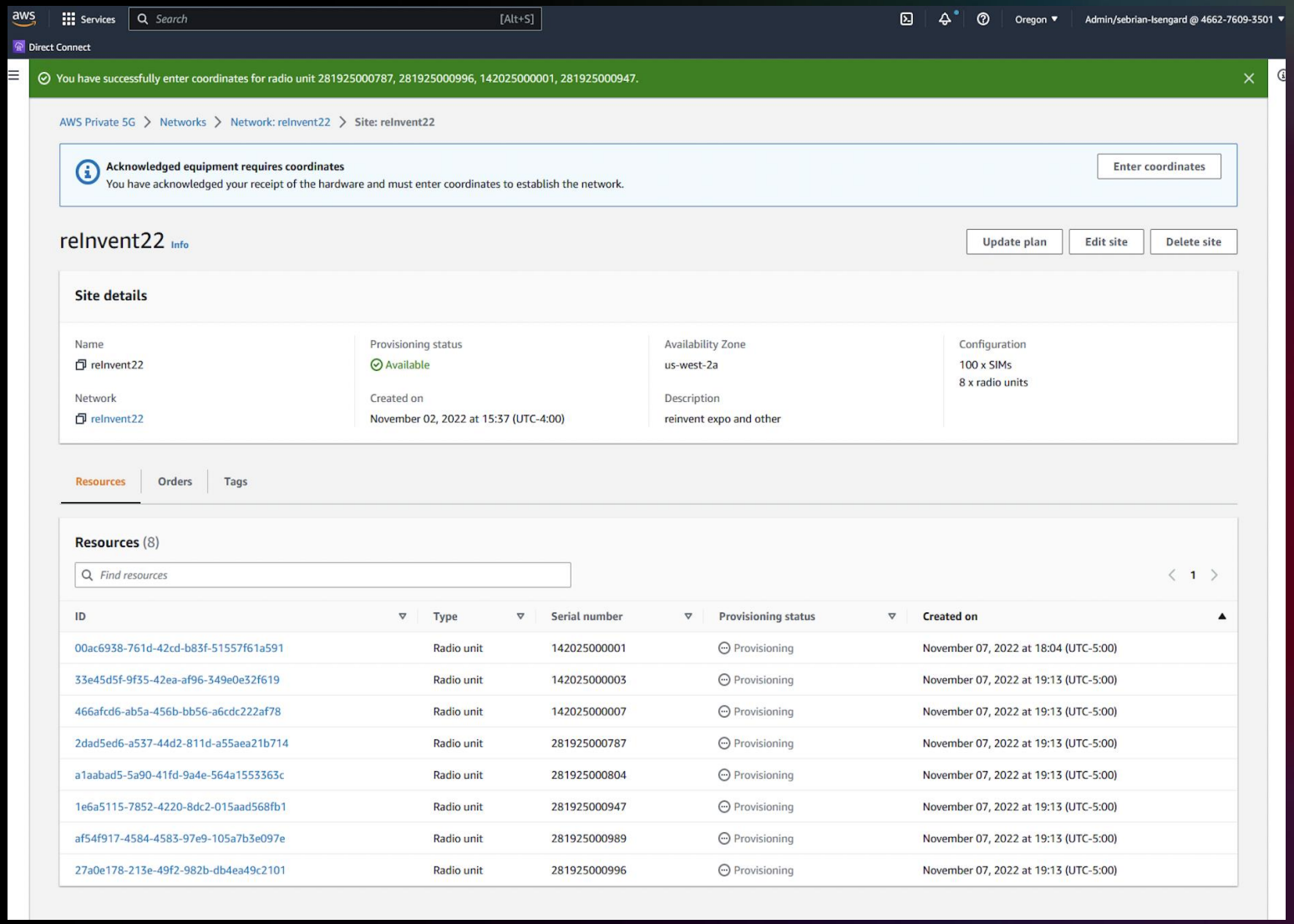
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Activation



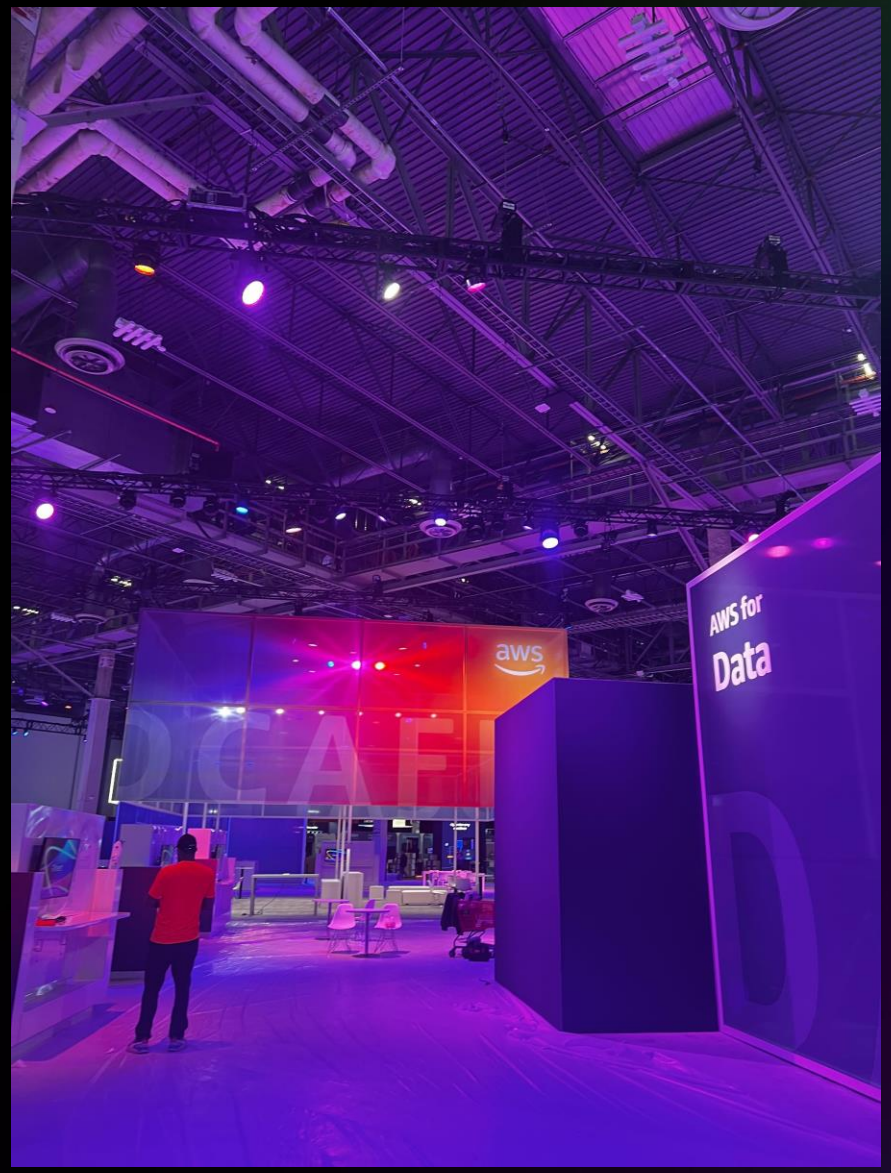
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Activation





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Future use cases



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Demos and additional resources

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See the AWS Private 5G demos







AWS Private 5G – Demo

November 30th, Wednesday, 10:30–10:50 AM
AWS Village Theater
Venetian | Level 2 | Expo Hall

AWS Hybrid Kiosk

AWS Village
Venetian | Level 2 | Expo Hall

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Additional resources

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Thank you!

Priyanka Jindal

Email
prjindal@amazon.com

LinkedIn
https://www.linkedin.com/in/jindalpriyanka/

Brian Searcy

Email
sebrian@amazon.com



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