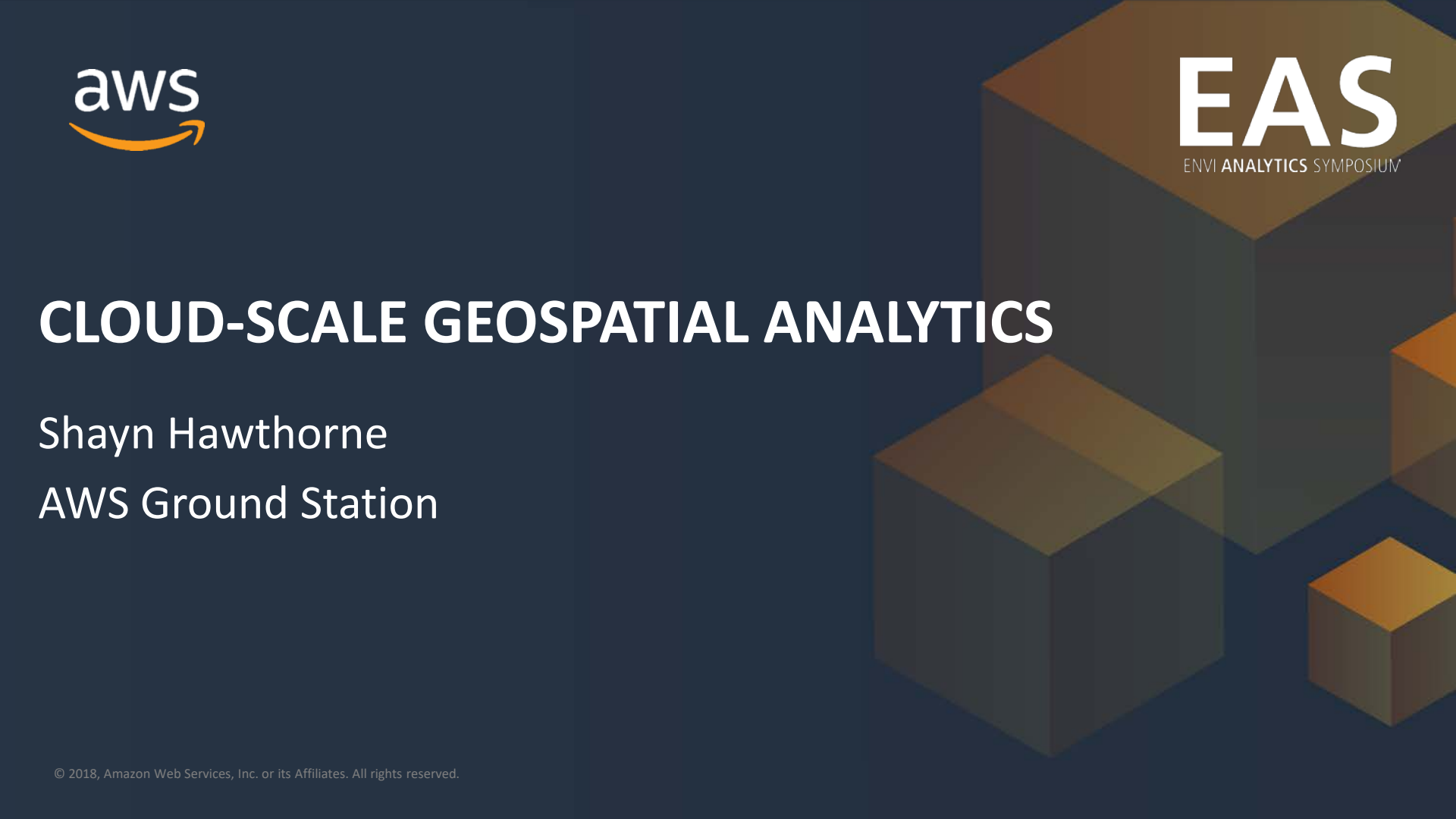


CLOUD-SCALE GEOSPATIAL ANALYTICS

Shayn Hawthorne

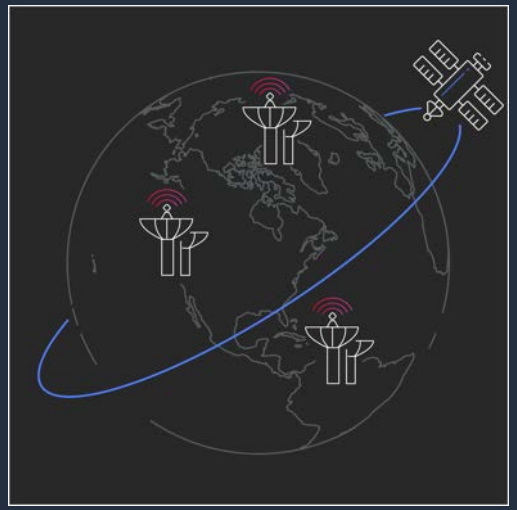
AWS Ground Station

THOUSANDS OF SATELLITES, MASSIVE DATA

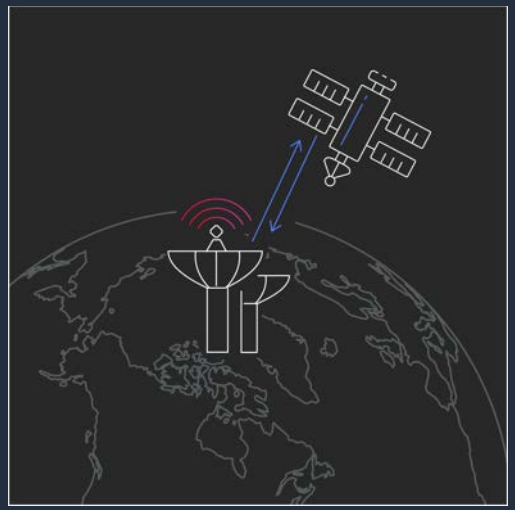
HOW WE GET SATELLITE DATA TODAY

CHALLENGES WITH SATELLITE DATA

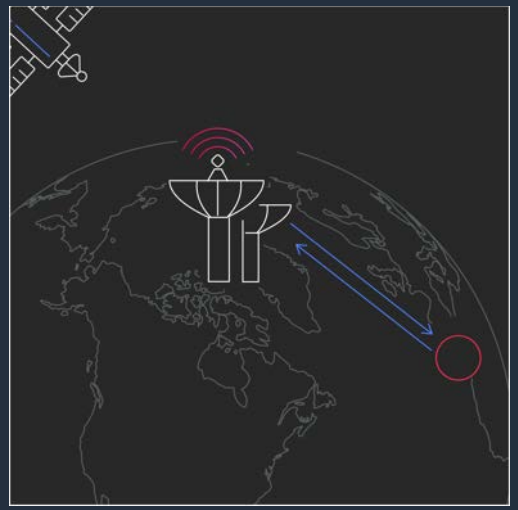
Need for ground stations (antennas and computing infrastructure) located around the world



Downloading & uploading data requires custom software and workflows



Data must be migrated to the cloud to be used for processing, analytics, and machine learning



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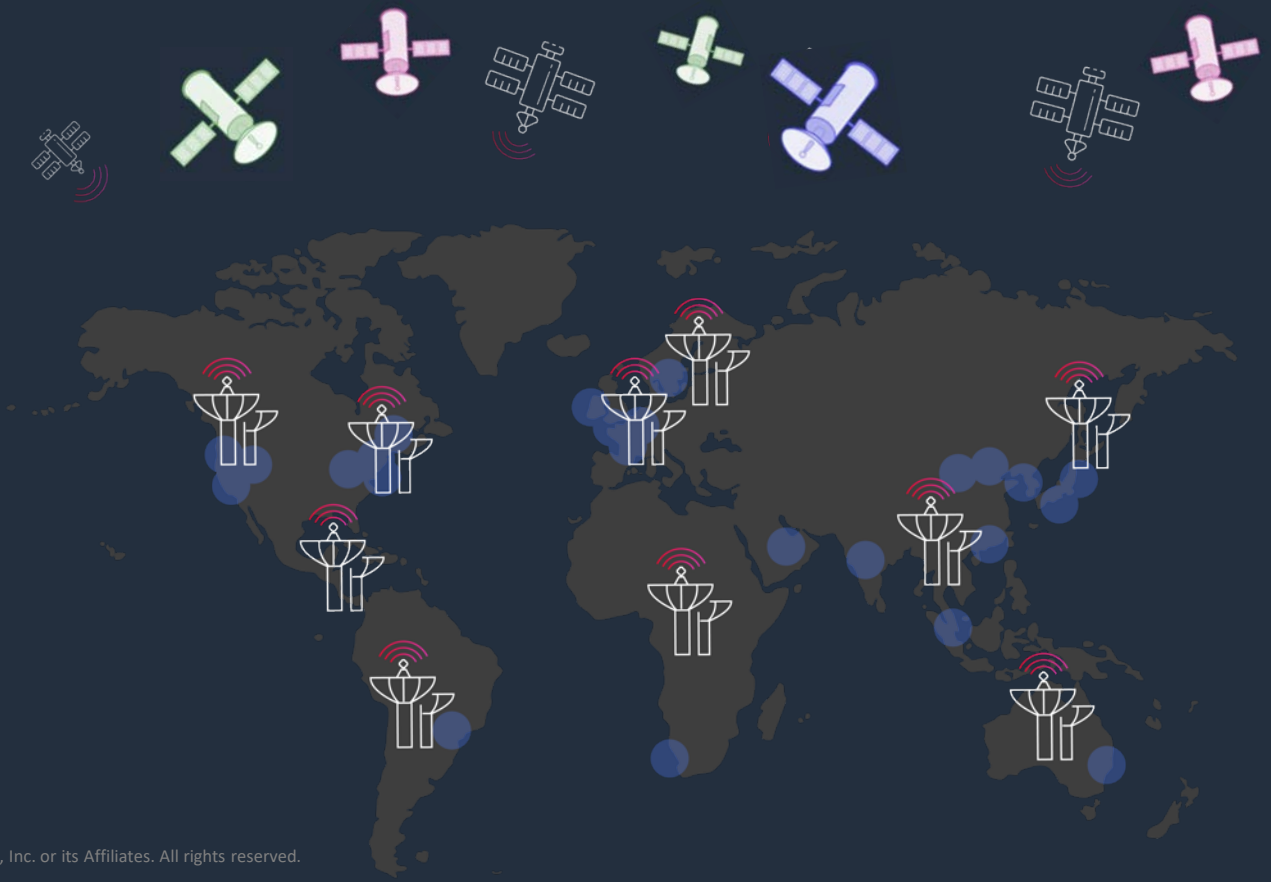
CHALLENGES WITH SATELLITE DATA

WHAT DOES CLOUD-SCALE ENABLE?

FULLY MANAGED, SCALABLE NETWORK



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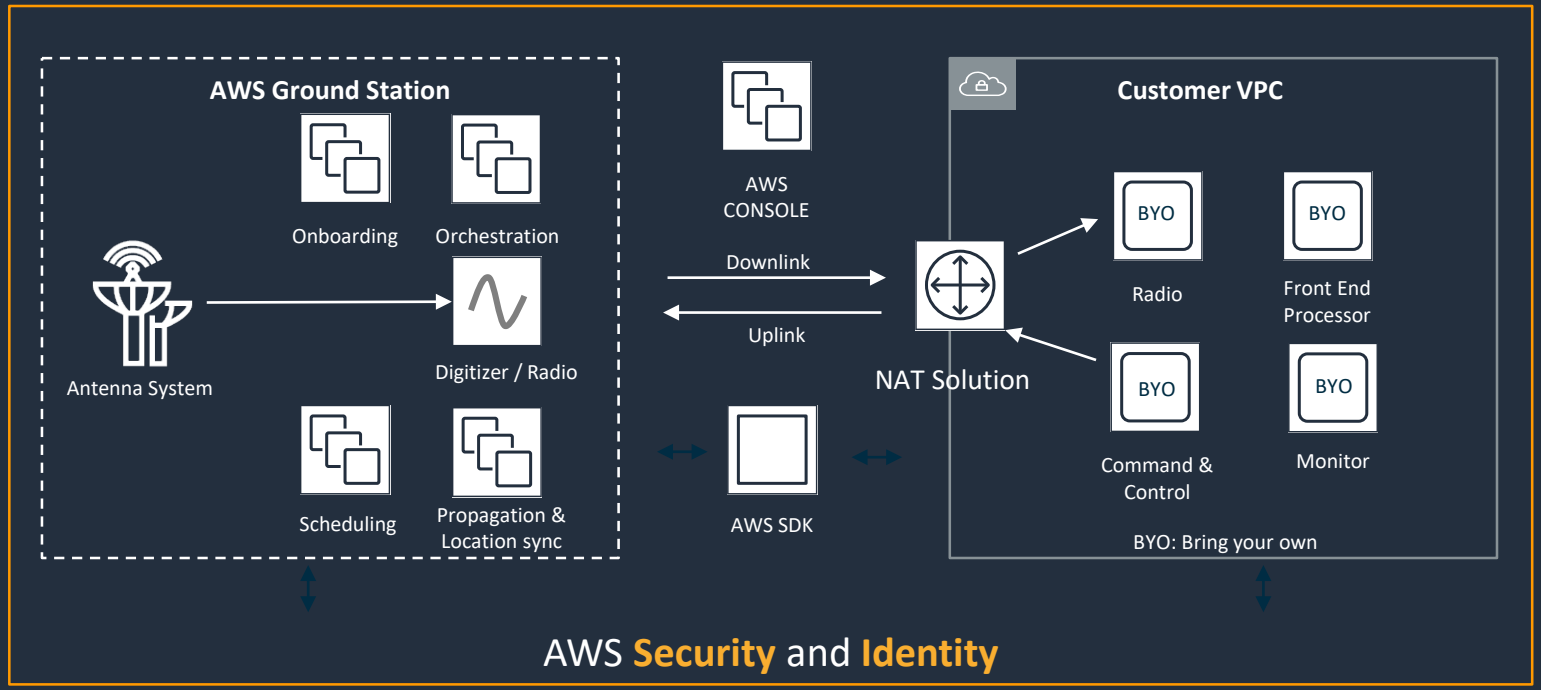
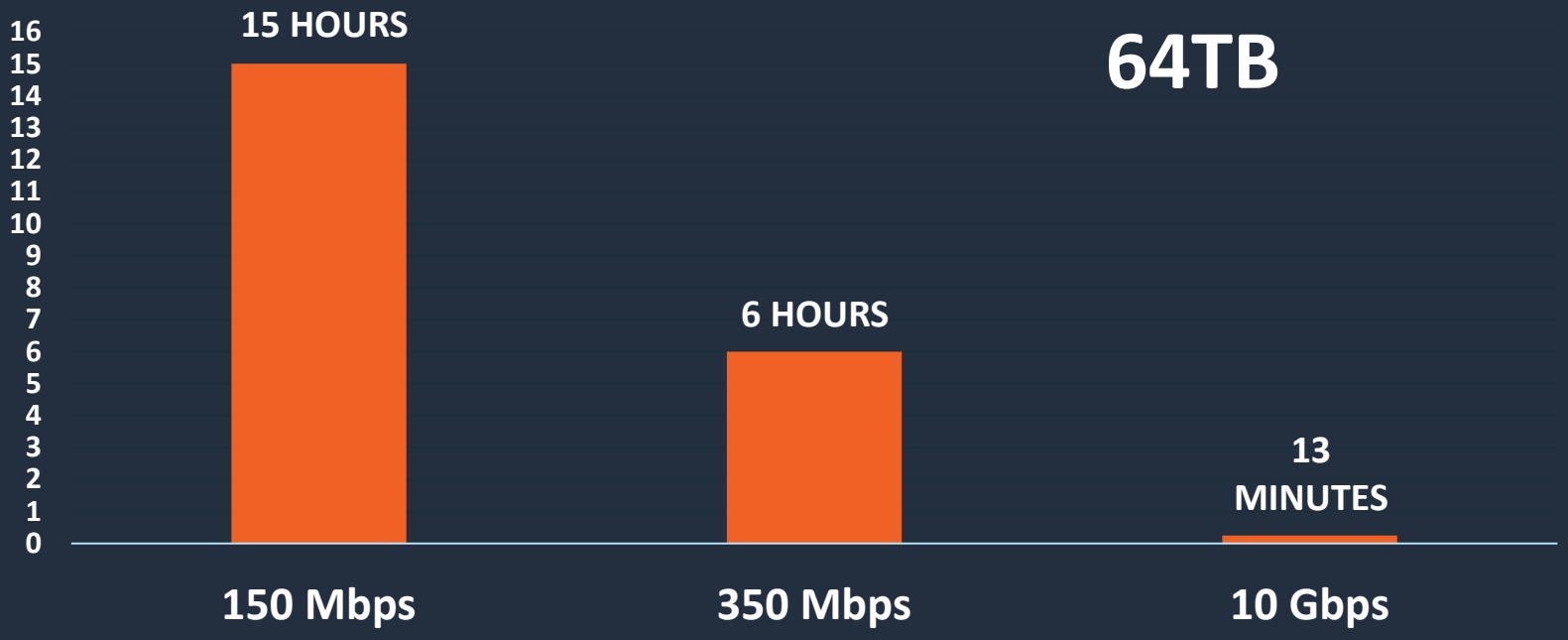
MOVES EVERYTHING BUT THE SATELLITE TO THE CLOUD



HIGH THROUGHPUT, LOW LATENCY



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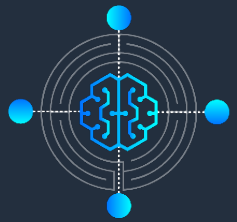
DIRECT ACCESS TO ANALYTICS

Amazon EC2 for command and downlink instances

Amazon Rekognition for real time satellite analysis



Amazon SageMaker for custom ML apps to apply to satellite imagery data

Amazon Redshift to store processed satellite data in a structured data warehouse

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CLOUD-SCALE GEOSPATIAL ANALYTICS
NEAR-REAL-TIME PRODUCTS & ANALYTICS

- Create products in your VPC at the antenna
- Access services in milliseconds
- Track your schedule, usage, and billing
- Security, roles, and IAM
- On site storage

Imagine Virtual DACS and a World Where Customers Receive Data in Seconds

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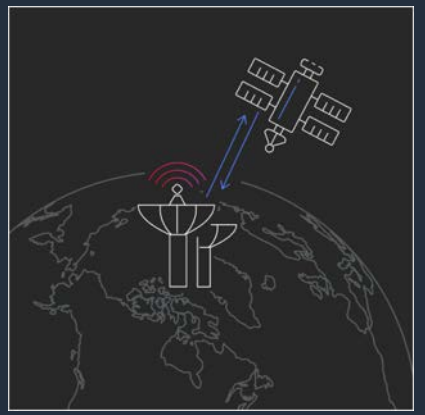
CLOUD-SCALE GEOSPATIAL ANALYTICS
NEAR-REAL-TIME DISSEMINATION

- 100s of Gbytes in minutes
- Text notifications
- Email alerting
- Access services in milliseconds



Imagine Alexa Telling Customers When Requested Imagery Was Available

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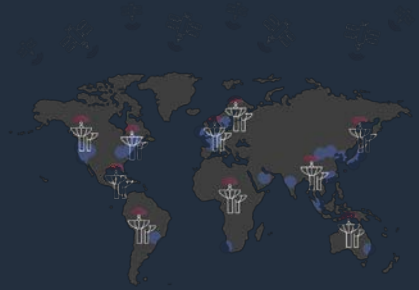
CLOUD-SCALE GEOSPATIAL ANALYTICS
NEAR-REAL-TIME FUSION & DATA OVERLAYS

- Wireless network activity
- Digital electrical meters
- Freeway monitors
- In situ tasking
- SCADA



- Synthetic Aperture Radar
- Electro-optical
- Hyperspectral
- AIS/ADS-B
- GIS

Imagine How IOT Could Change Everything

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Summary

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THANK YOU!