



Architecture diagrams for transportation and logistics

Data Platform for Ports and Inland Logistics Facilities



Data Platform for Ports and Inland Logistics Facilities: Architecture diagrams for transportation and logistics

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Table of Contents

Data platform for ports

i

Data platform for ports diagram

1

Further reading

2

Diagram history

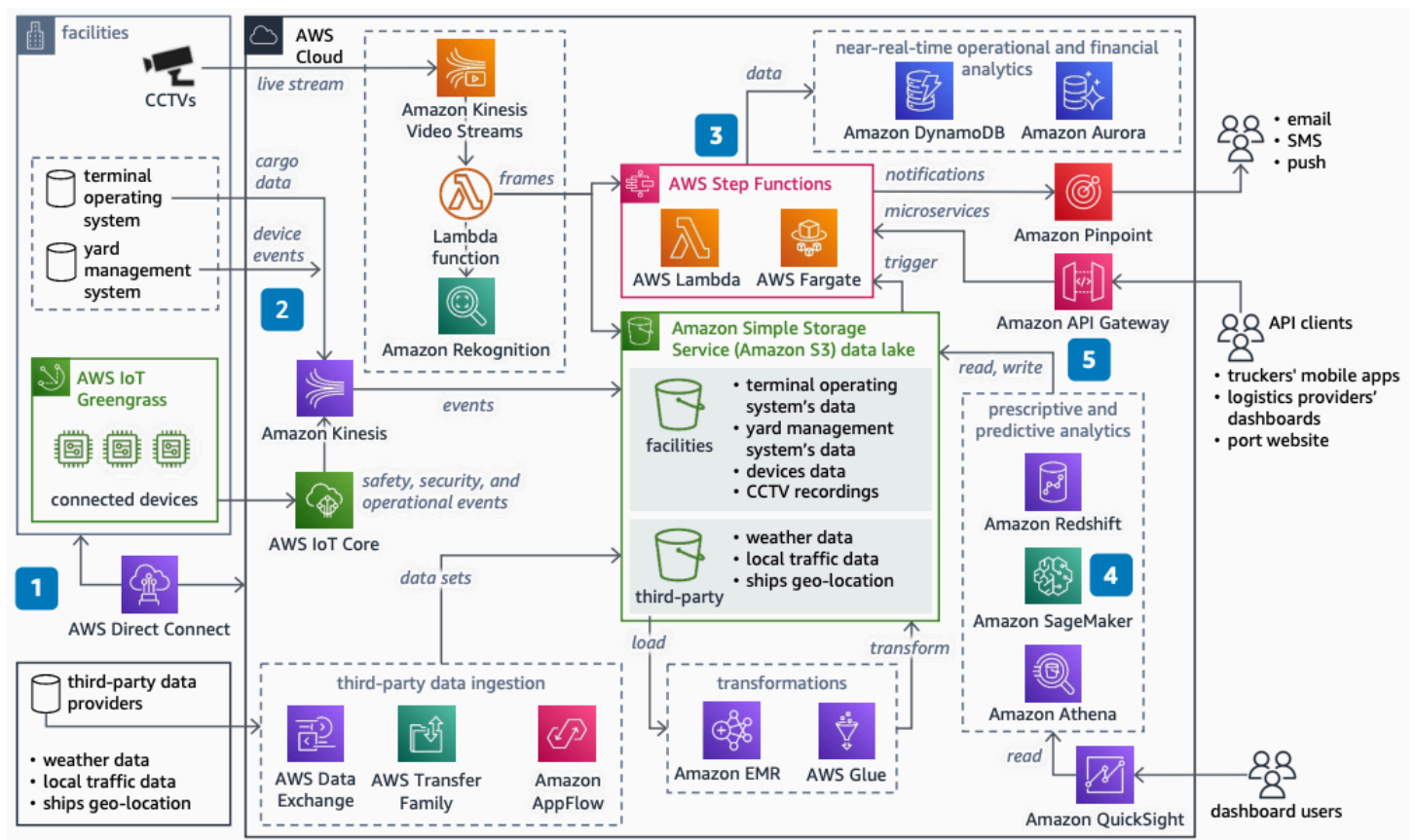
2

Data Platform for Ports and Inland Logistics Facilities

Publication date: **August 23, 2022** ([Diagram history](#))

With this architecture, you can eliminate data silos across port terminals and logistics facilities. Build a scalable, low-cost data platform with near-real-time visibility. Improve profitability with ML, analytics, and workflow automation. The solution uses [AWS IoT Core](#) for device connectivity, [Amazon SageMaker AI](#) for predictive analytics, and [AWS Step Functions](#) for workflow automation.

Data platform for ports diagram



The following steps describe the data ingestion and analytics components for this architecture:

1. Build a data pipeline from Enterprise Resource Planning (ERP) systems, IoT-enabled assets, and third-party data providers. Use the AWS global footprint to connect multiple ports and create a unified data stream.

2. Deploy an elastic and scalable data ingestion solution. Increase resilience, security, availability, and fault tolerance. Expand or reduce capacity based on seasonal trade fluctuations without upfront capital.
3. Automate back-office and operational workflows by using AWS Step Functions. Reduce overheads and improve management of safety, security, and equipment gating operations.
4. Use SageMaker AI and [Amazon Rekognition](#) for predictive and prescriptive analytics. Reduce operational costs through equipment usage optimization, route and fuel optimization, and maintenance planning.
5. Turn data into actionable knowledge with [Amazon Redshift](#) and [Amazon Quick Sight](#). Disseminate alerts with [Amazon Pinpoint](#). Share key metrics with partners through [Amazon API Gateway](#).

Further reading

For additional information, see the following resources:

- [AWS Architecture Icons](#)
- [AWS Architecture Center](#)
- [AWS Well-Architected](#)

Diagram history

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Change	Description	Date
Initial publication	Reference architecture diagram first published.	August 23, 2022

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