AWS re:Invent

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

STG329-R2

Migrate business-to-business gateway traffic for real-time business insights

Michael Ingardia
Sr. Solutions Architect
AWS

Smitha Sriram
Sr. Product Manager
AWS

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Agenda

Define business-to-business (B2B) integration concepts, terms, and definitions

Example architectures

Demo

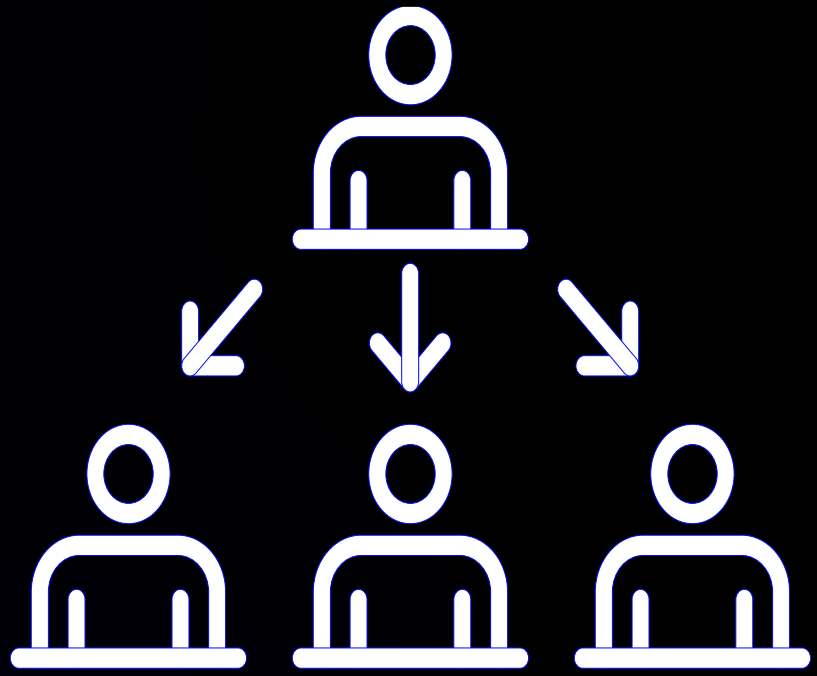
Case study examples

Q&A

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Challenges of B2B integration architectures

- Control limited to one side of the integration
- Sensitivity to changes that affect your partners
- File-based integration more common than API integration



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Managed file transfer vs. B2B integration

Managed file transfer

- Concerned with movement of files, protocols, and other file transfer-based mechanism
- Route files to and from sources and destination
- Does not typically include translation of the files
- Vocabulary: Where is my file?

B2B integration

- Includes the same footprint as managed file transfer
- Adds more functionality around trading partner management, orchestration, and data translation
- Vocabulary: How many orders did we get this month? What was the number one product ordered?

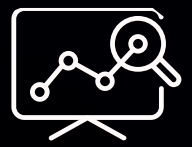
aws

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B2B integration patterns



Protocol gateway



B2B gateway



Value-added network

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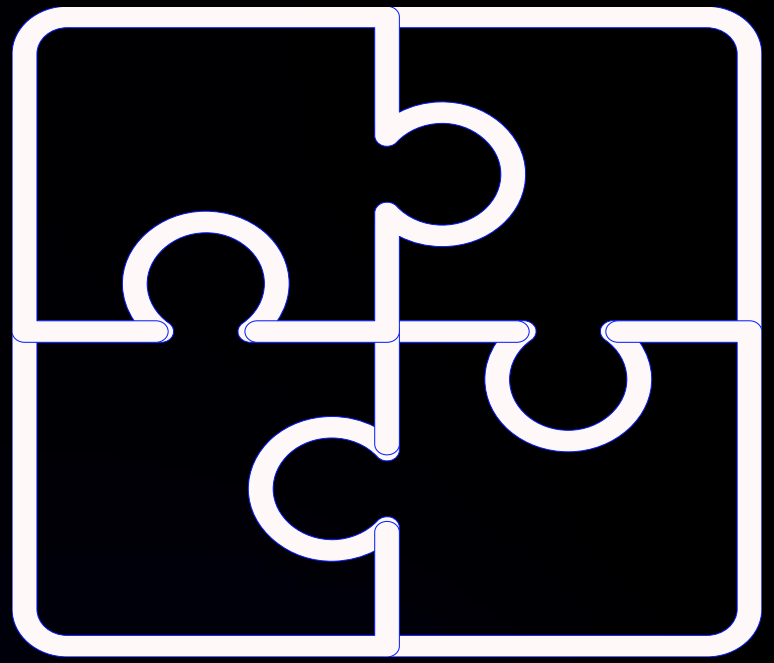
B2B integration solution space

B2B gateways		Managed services	Value-added networks
IBM Sterling	Jitterbit	MuleSoft	IBM Sterling
Axway	ArcESB	IBM Sterling	OpenText
Boomi		CoEnterprise	TrueCommerce

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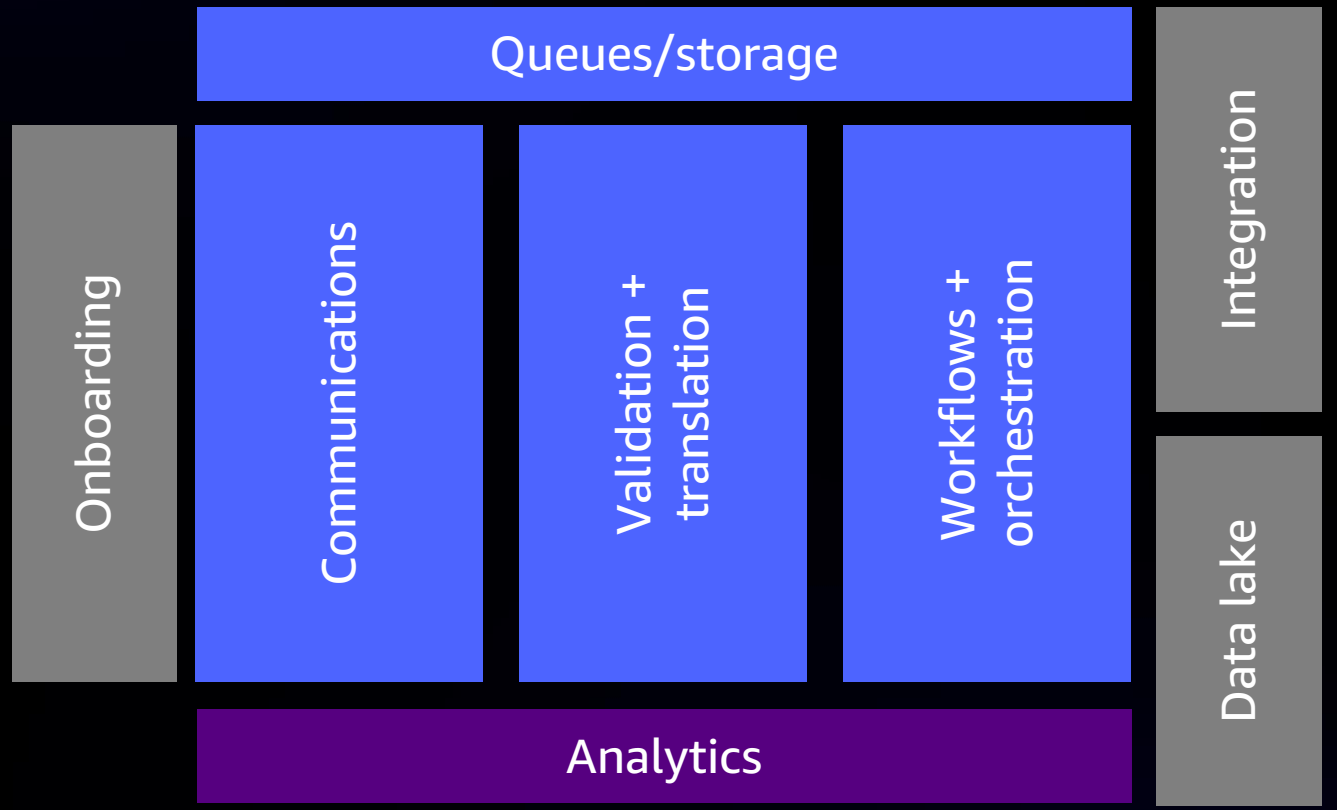
Typical components of a B2B integration gateway

- Communication adapters
- Object store
- Standards library
- Data mapper or translator
- Orchestrator
- Configuration database for trading partners
- Integration adapters
- Onboarding tools



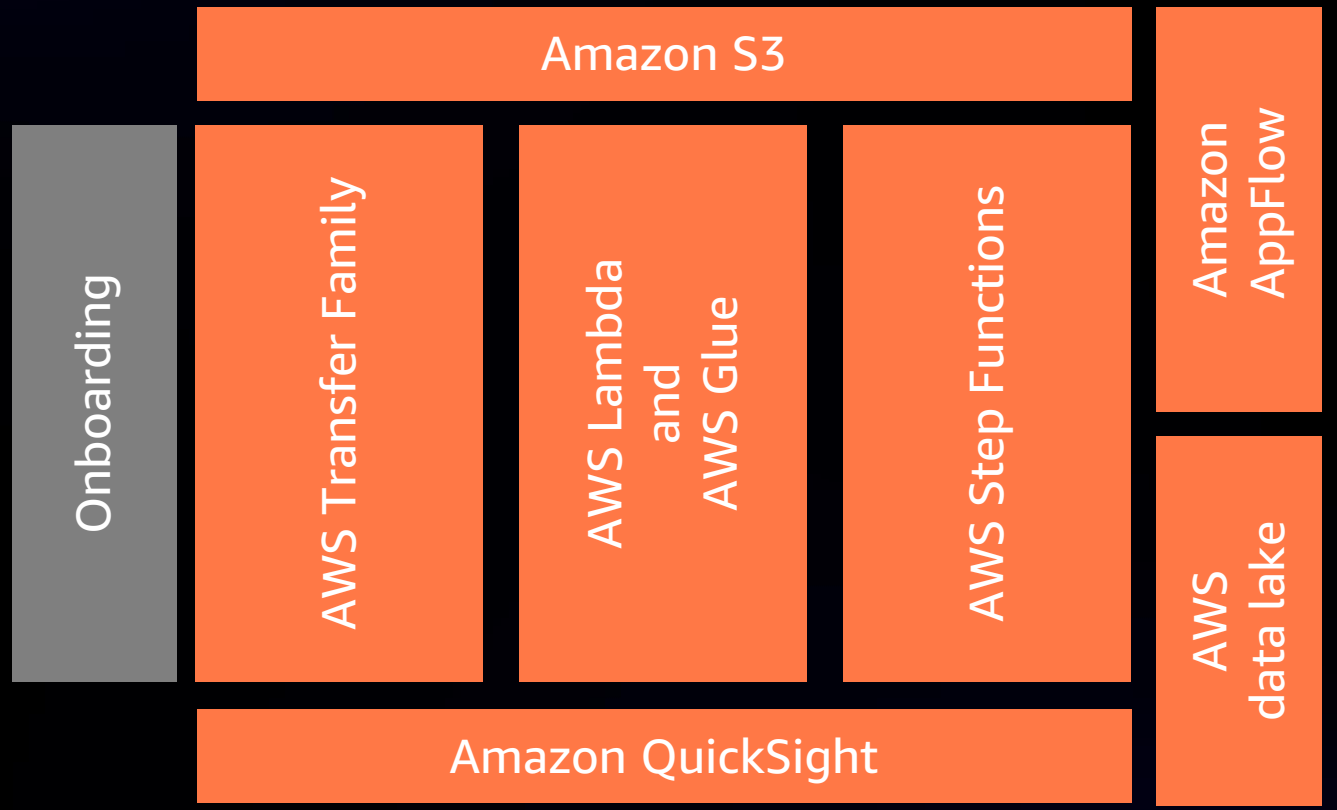
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B2B integration components



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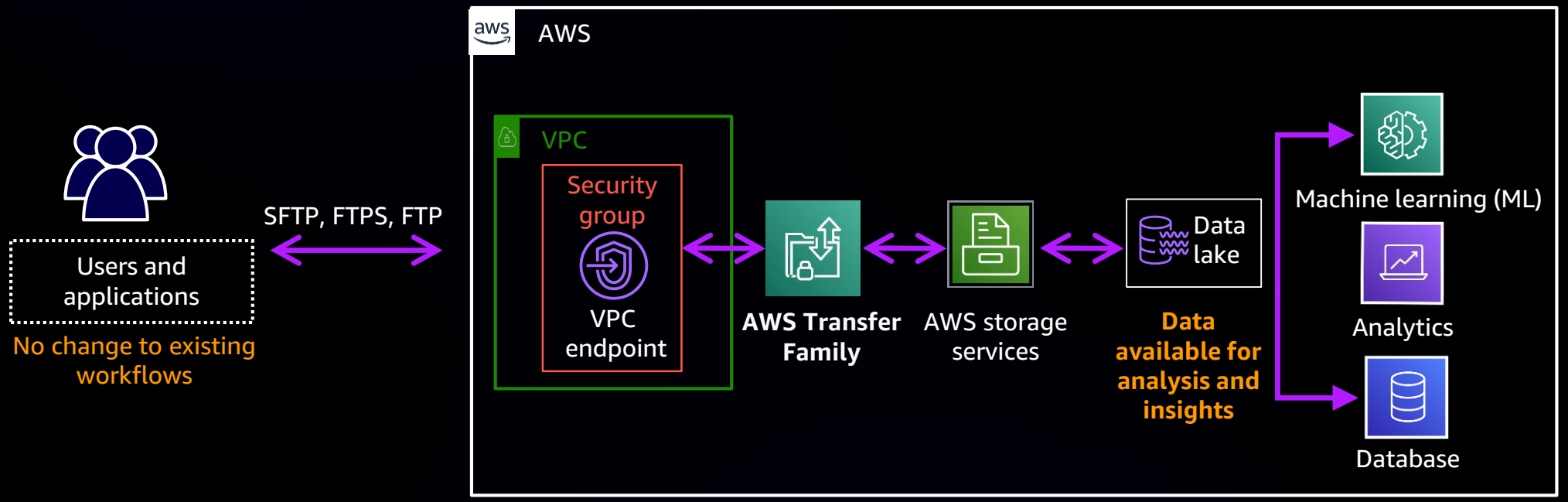
B2B integration components with AWS



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Dive into AWS Transfer Family & how it works

TYPICAL DEPLOYMENT ARCHITECTURE – VPC-HOSTED OR PUBLICLY ACCESSIBLE

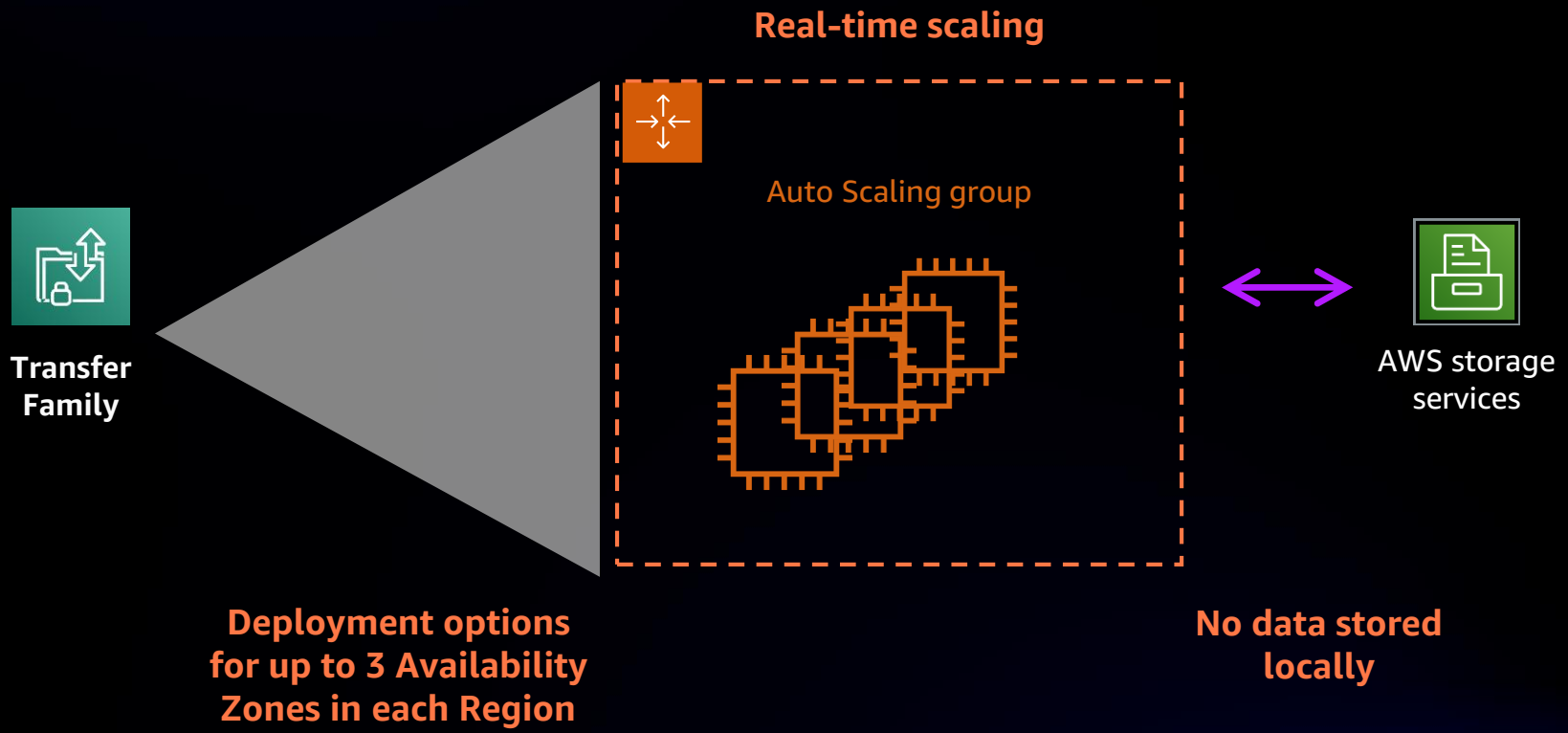


Breakout session STG208

AWS Transfer Family: The future of managed file transfer

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How Transfer Family manages high availability and scaling

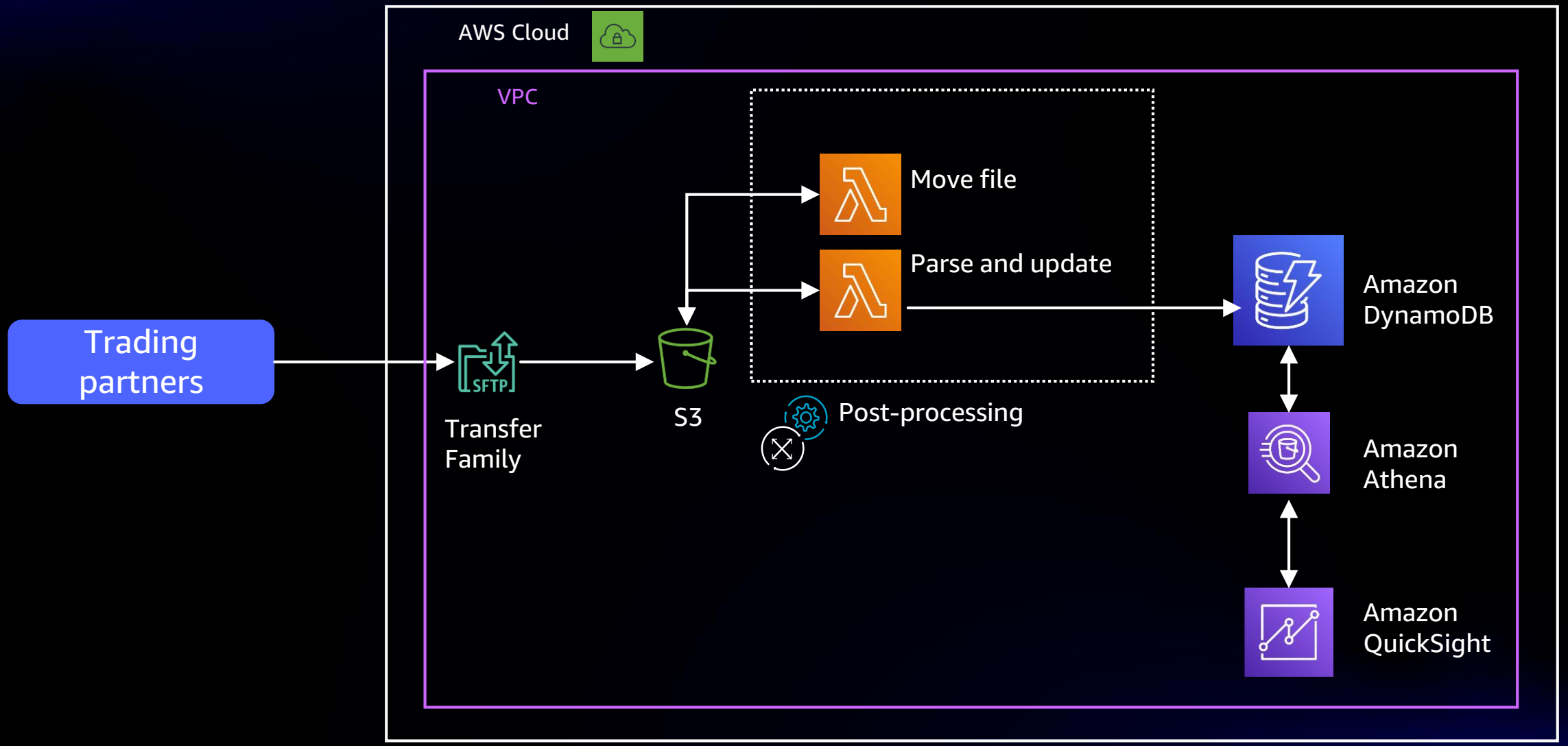


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Example architectures

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Simple architecture

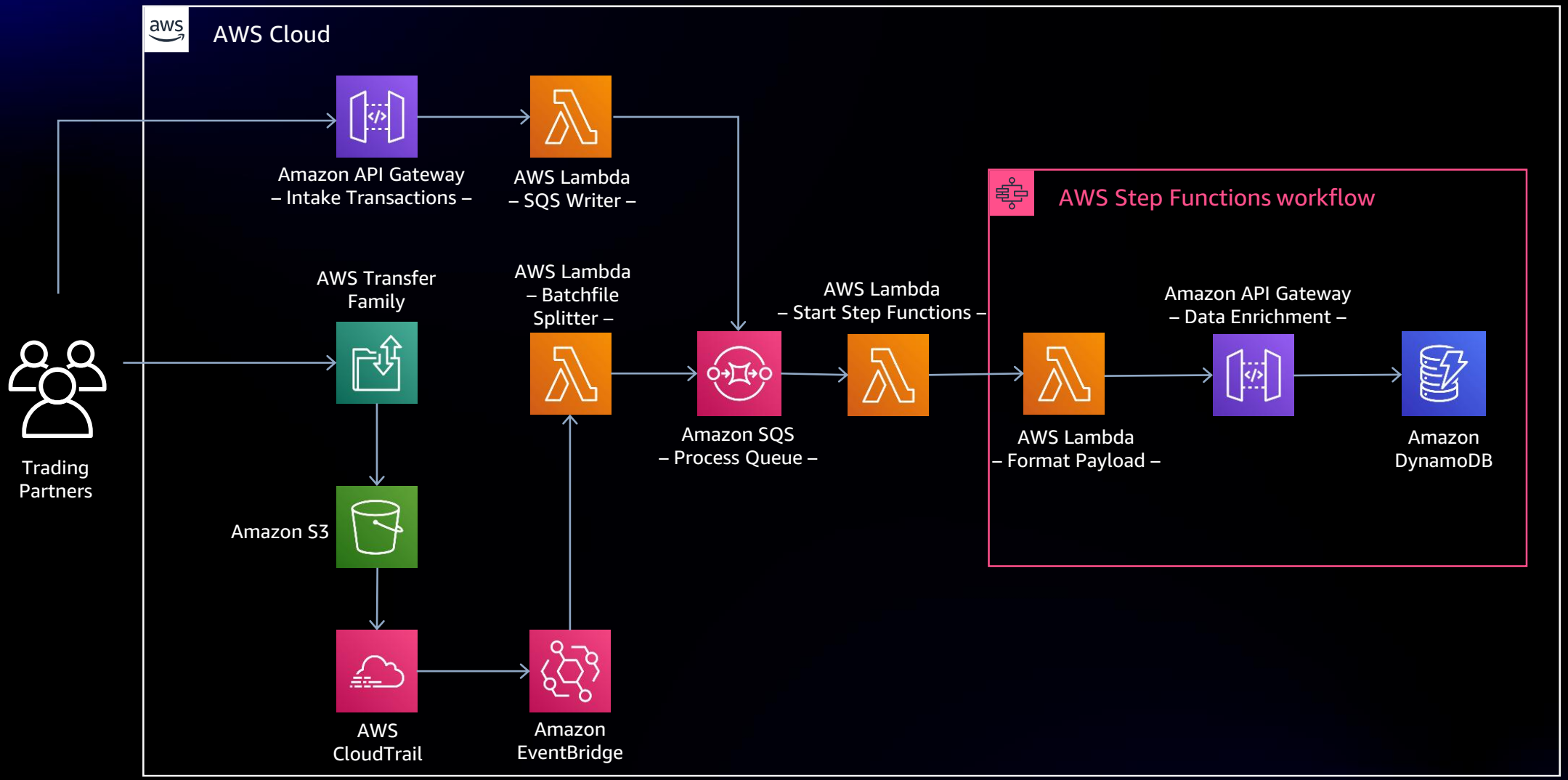


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Support both API- and file-based interactions

- Accept both “batch/files” and “real-time” API interactions
- Provide event infrastructure to allow developers to hook interesting events
  - File received
  - Order received
  - File sent
  - Validation error
- Validate payloads and reject if not valid
- Integrate with Amazon OpenSearch Service to quickly look up which information has been received

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Blog post: https://aws.amazon.com/blogs/compute/simplifying-b2b-integrations-with-aws-step-functions-workflow-studio/

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What are some aspects of architecture that are most important to you?

Question for the audience

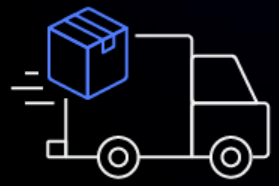
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What are some challenges you face when migrating your environment?

Question for the audience

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Typical use cases for B2B integration



Order to cash

Taking orders from various channels and sending them to fulfillment systems



Purchase to pay

Sending purchase orders to suppliers and monitoring inbound shipments



Inventory synchronization

Taking inventory from multiple sources to gain an end-to-end picture of inventory



Payments

Sending payments for processing and financial information retrieval; integrating the data with accounting systems

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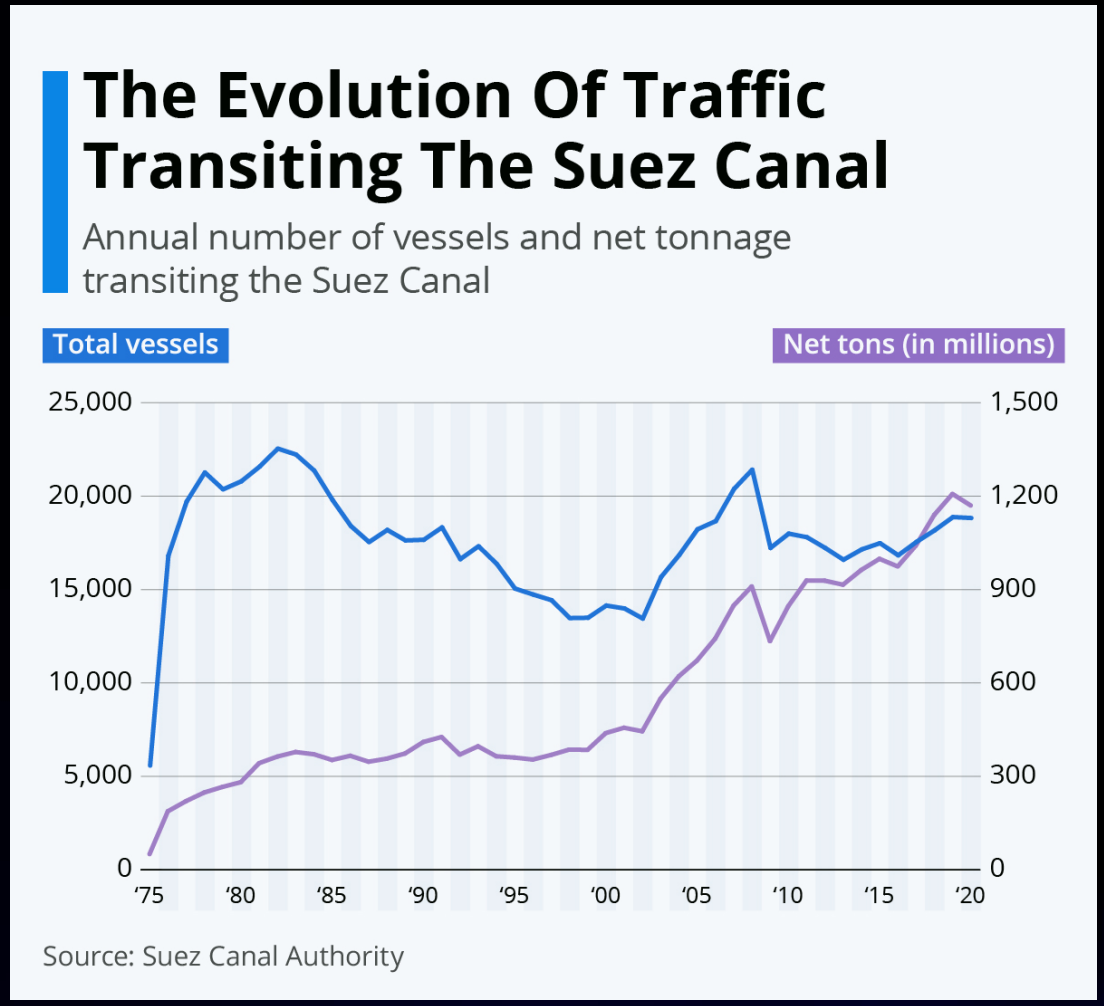
B2B integration and supply chain

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Suez Canal blockage

A CASE STUDY

- Crucial waterway in global trade
- 12% of global trade passes through daily
- Shipping container, Ever Given, blocked the Suez Canal in March 2020
- Blocked 450 ships
- Estimated $6.7 million (USD) per minute

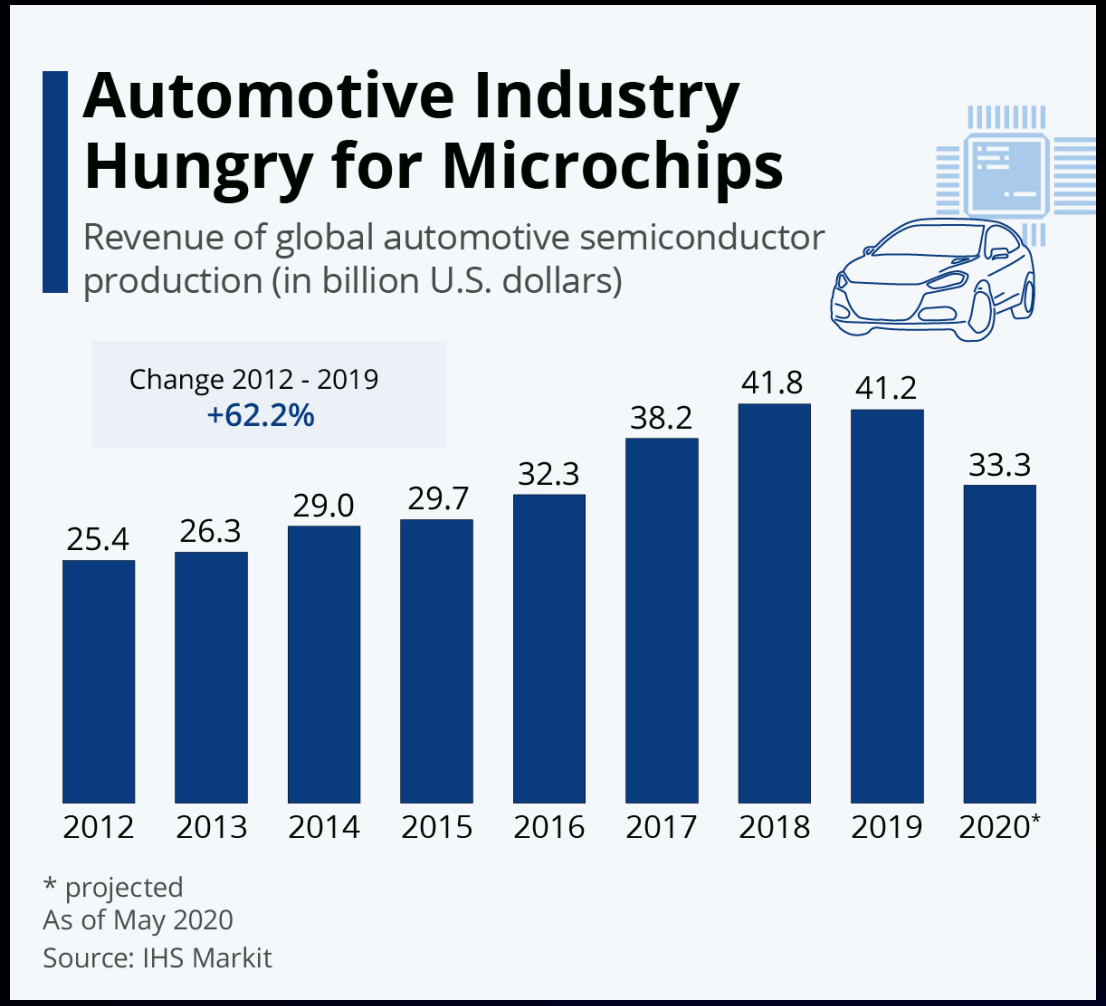


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Global chip shortage

A CASE STUDY

- Decline in vehicle sales and manufacturing plant closures
- Rise of working and learning from home
- Increased demand for notebooks and tablets
- Increased demand for entertainment devices
- Increased demand from hyperscale operators and telecommunications providers

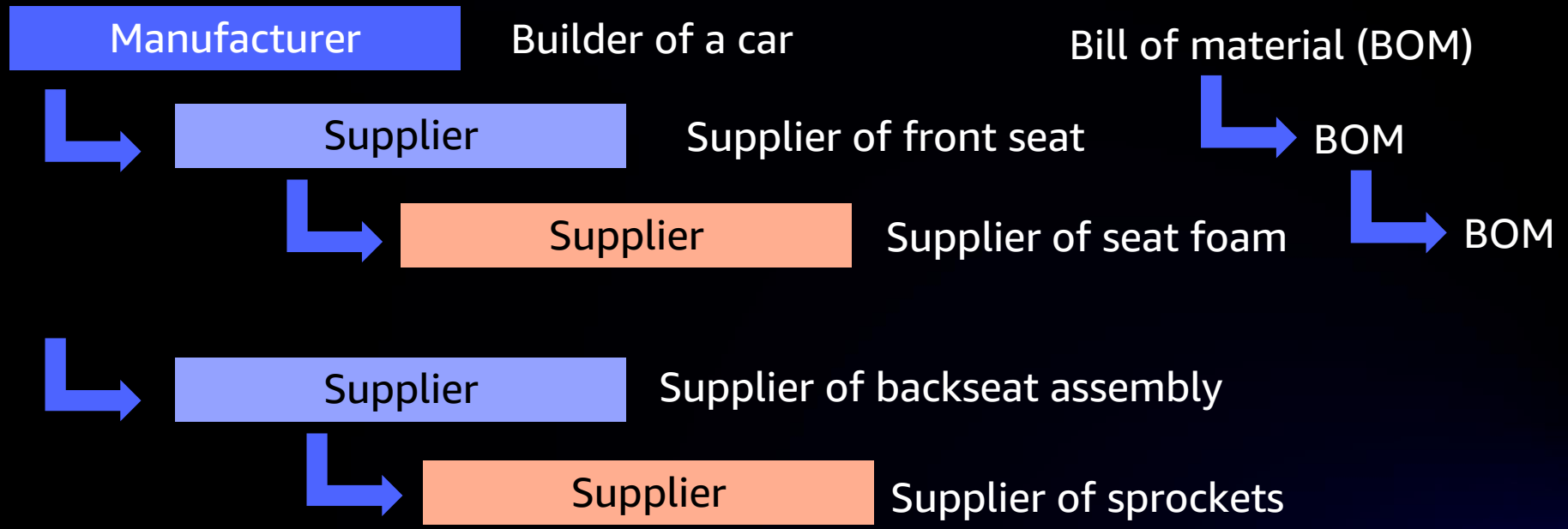


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Modeling multi-tiered supply chain dependencies

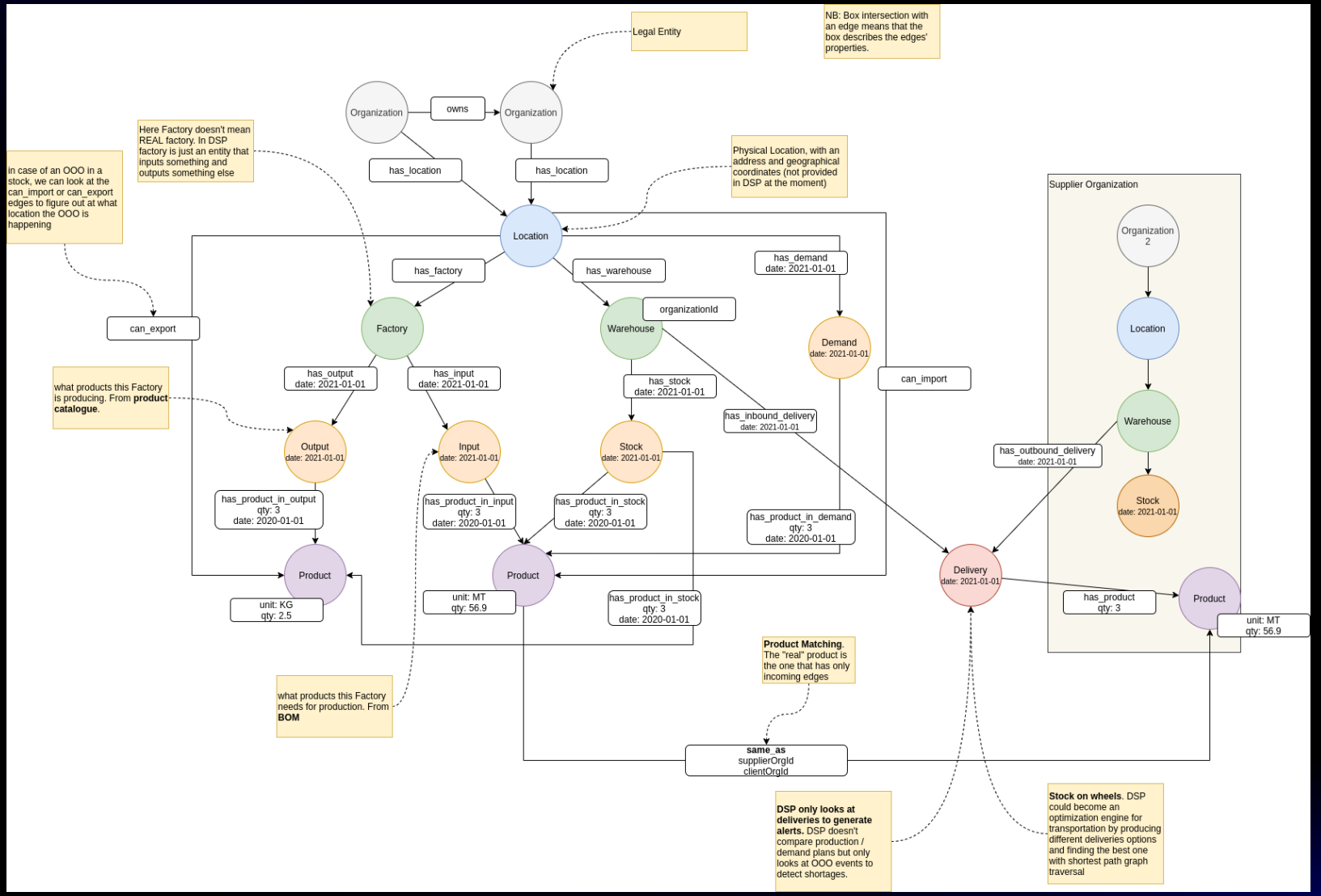
Manufacturer production plan

1	2	3	4	5	6	7	8	9	10	11	12	13
200	300	250	400	100	50	25	100	150	300	400	400	250



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Modeling connected relationships



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Architecture

Supplier

BOM

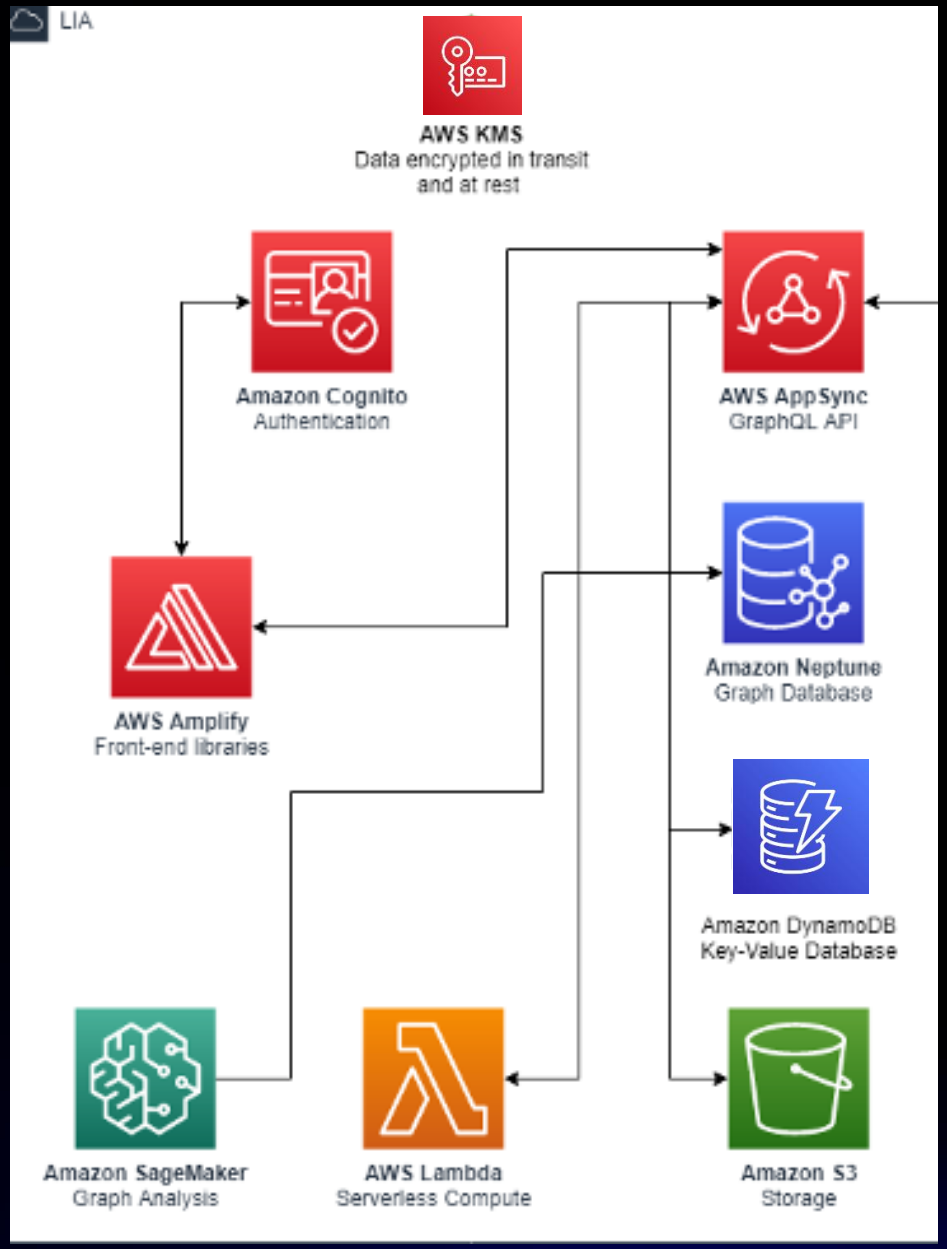
Shipments

Inventory levels

Purchase orders

SFTP/FTPs

S3



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Demo - Automotive

Save Simulate

Entities

Entities, or things, that populate your Supply Chain

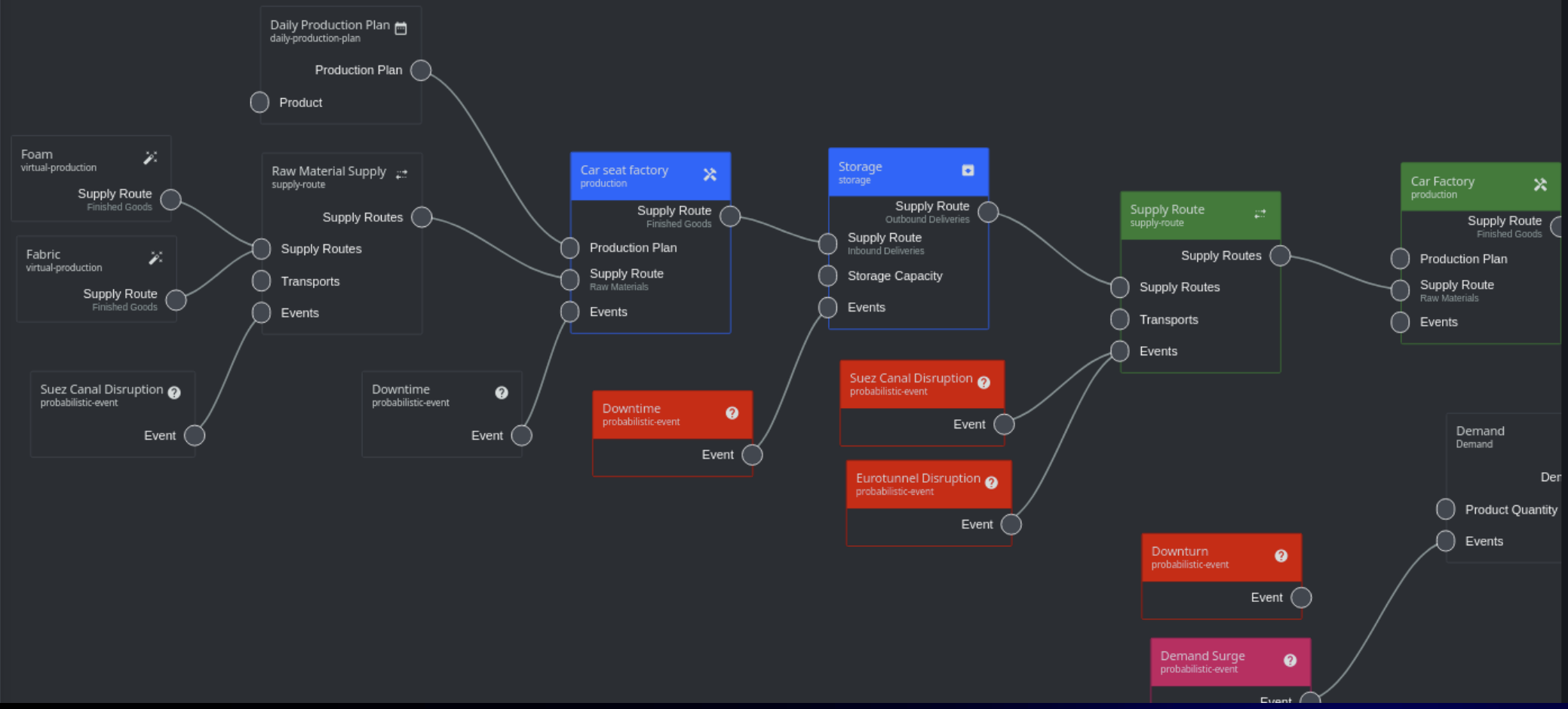
Search

- Business (1)
- Location (0)
- Product (0)
- Raw Material (0)
- Bill of Materials (0)

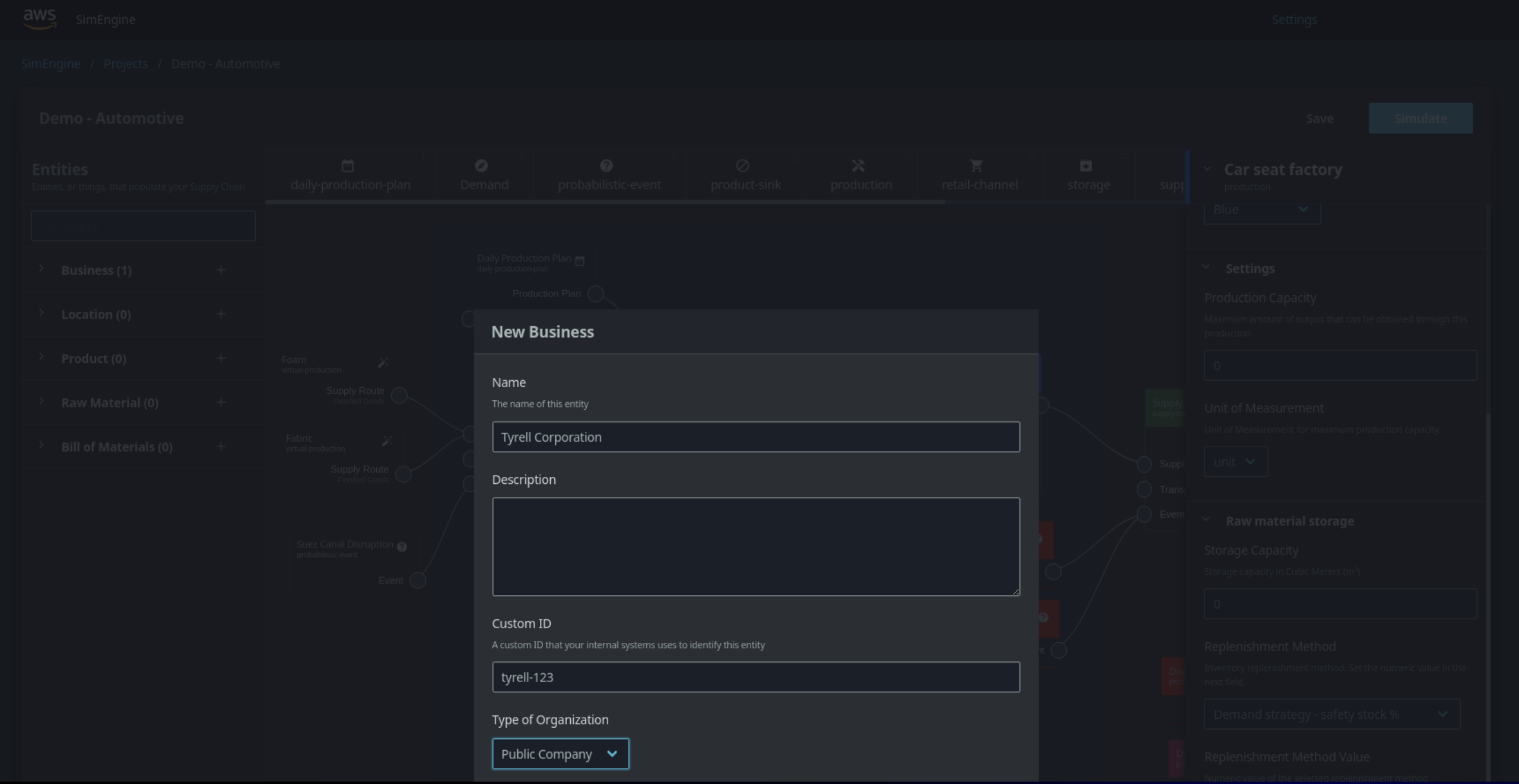
daily-production-plan | Demand | probabilistic-event | product-sink | production | retail-channel | storage | supp

Retail Channel

retail-channel



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Demo - Automotive

Save Simulate

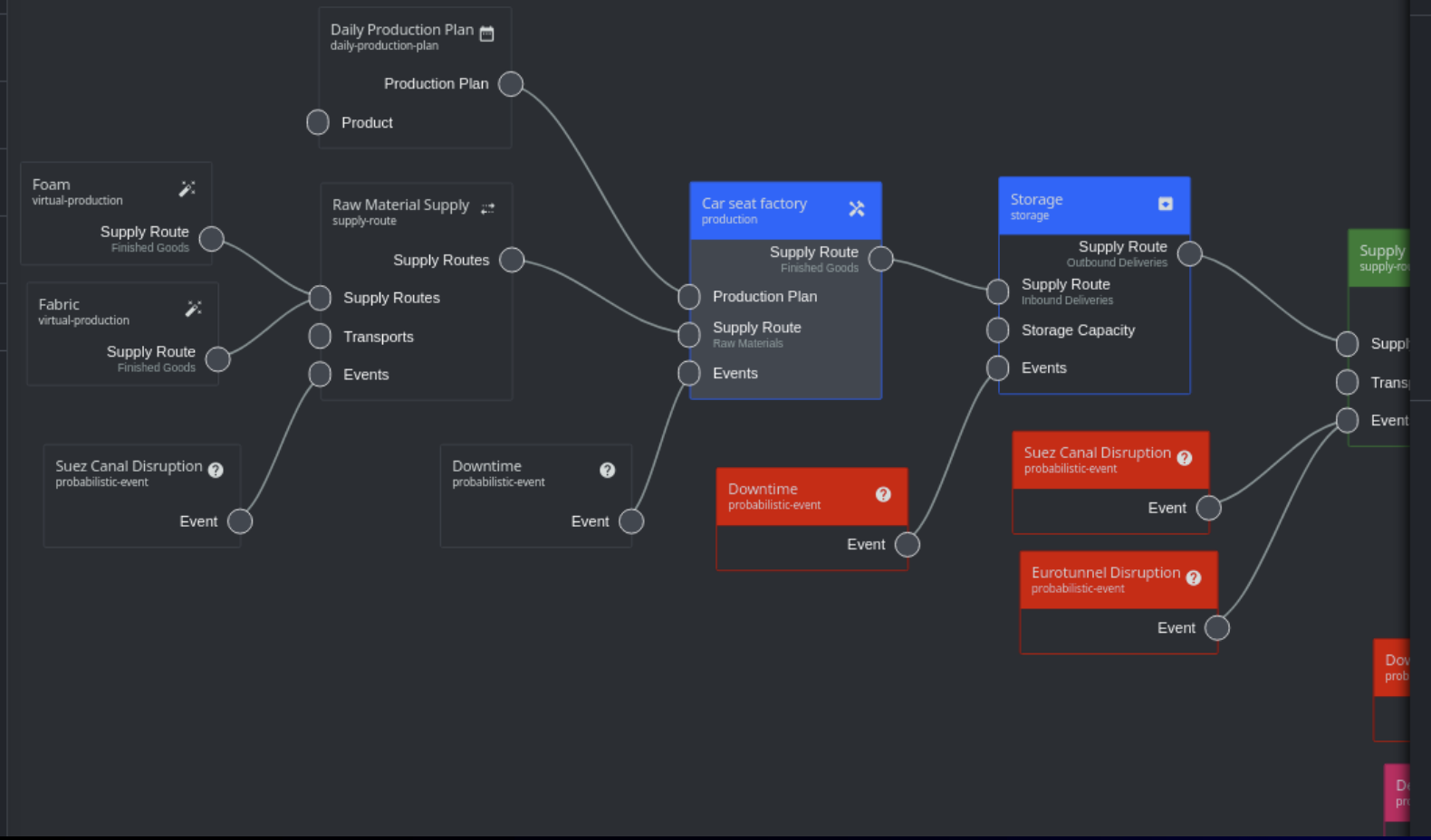
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- Raw Material (0)
- Bill of Materials (0)

daily-production-plan | Demand | probabilistic-event | product-sink | production | retail-channel | storage | supp



Car seat factory

production

Blue

Settings

Production Capacity

Maximum amount of output that can be obtained through this production

0

Unit of Measurement

Unit of Measurement for maximum production capacity.

unit

Raw material storage

Storage Capacity

Storage capacity in Cubic Meters (m^3)

0

Replenishment Method

Inventory replenishment method. Set the numeric value in the next field.

Demand strategy - safety stock %

Replenishment Method Value

Numeric value of the selected replenishment method

aws

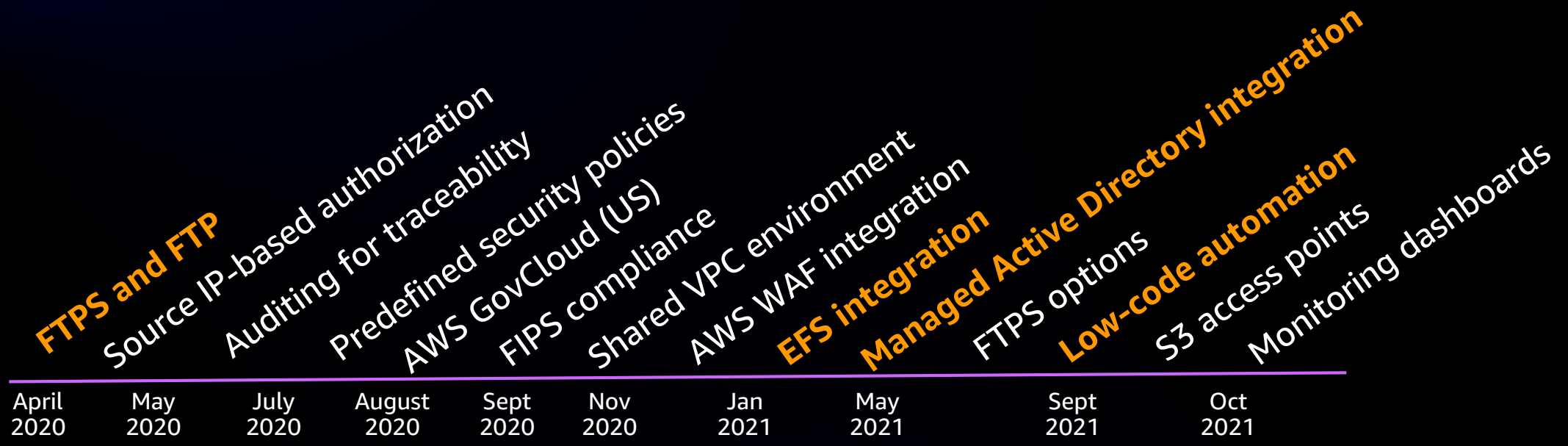
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What is most important to you?

Question for the audience

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Transfer Family pace of innovation



20 AWS commercial Regions, China, and AWS GovCloud (US)!

PCI HIPAA Health Insurance Portability & Accountability Act AICPA SOC

Check services in scope for more!

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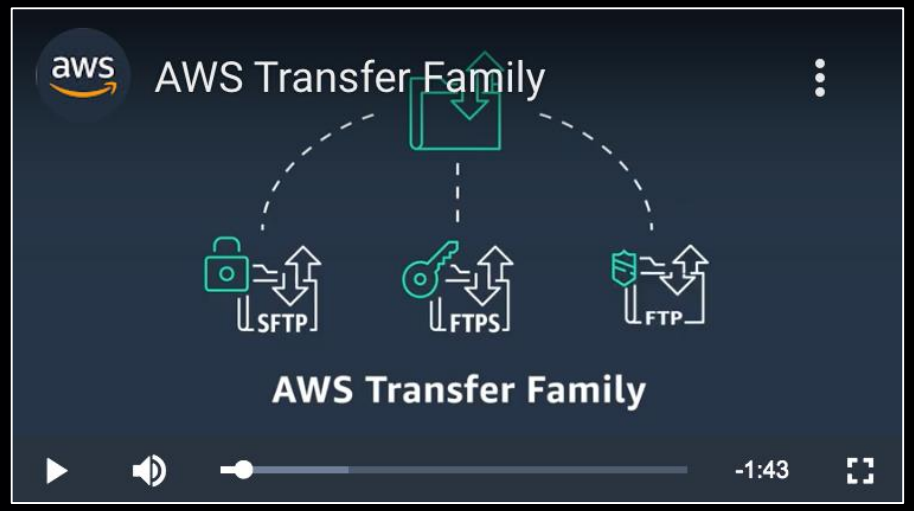
Additional resources

Product website
aws.amazon.com/aws-transfer-family/

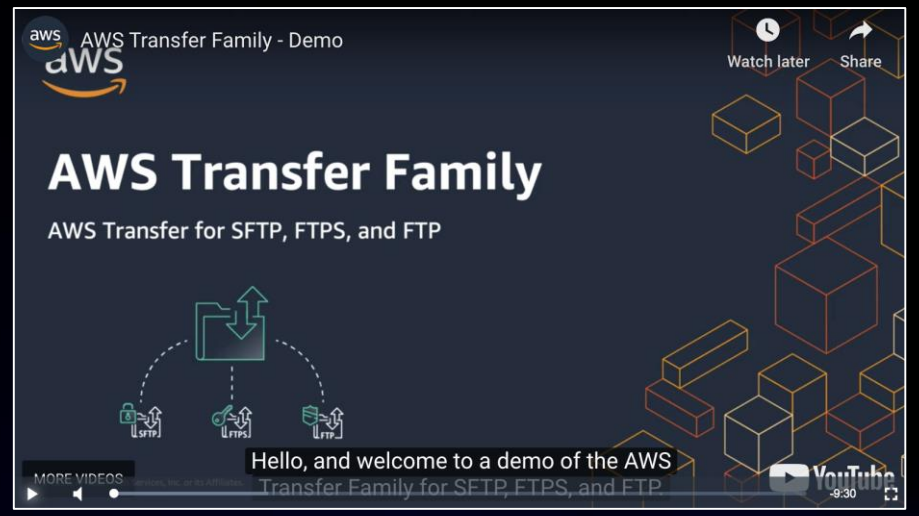
User guide
docs.aws.amazon.com/transfer/latest/userguide/what-is-aws-transfer-family.html

Customer references
[Liberty Mutual]
[Discover Financial]

[Introductory Video]



[Product demo video]



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Thank you!

Michael Ingardia
ingardm@amazon.com

Smitha Sriram
srsmitha@amazon.com

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