



Architecture diagrams for financial services

Algorithmic Trading on AWS



Algorithmic Trading on AWS: Architecture diagrams for financial services

Copyright © 2026 Amazon Web Services, Inc. and/or its affiliates. All rights reserved.

Amazon's trademarks and trade dress may not be used in connection with any product or service that is not Amazon's, in any manner that is likely to cause confusion among customers, or in any manner that disparages or discredits Amazon. All other trademarks not owned by Amazon are the property of their respective owners, who may or may not be affiliated with, connected to, or sponsored by Amazon.

Table of Contents

Algorithmic trading **i**

Algorithmic trading diagram 1

Further reading 2

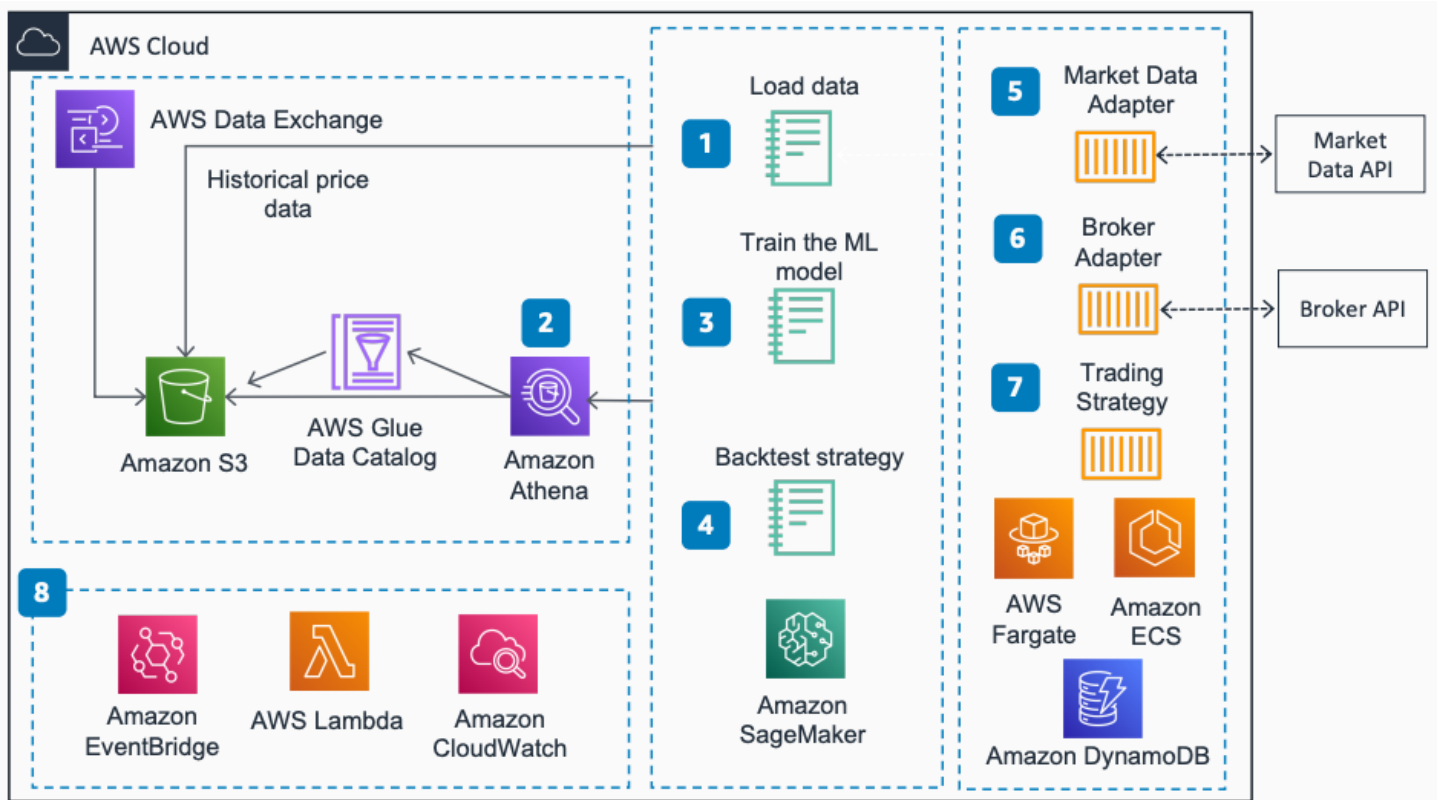
Diagram history 2

Algorithmic Trading on AWS

Publication date: **December 21, 2020** ([Diagram history](#))

With this architecture, you can backtest and host machine learning (ML)-based algorithmic trading strategies. The solution uses [Amazon Elastic Container Service](#) with [AWS Fargate](#) for containerized services, [Amazon SageMaker AI](#) for model training, and [Amazon DynamoDB](#) for transactional data storage.

Algorithmic trading diagram



The following steps describe the data flow and trading components for this architecture:

1. Get historical price data from AWS Data Exchange or external market data sources.
2. Catalog historical price data in [AWS Glue Data Catalog](#) and query data by using [Amazon Athena](#).
3. Train the ML model for ML-based trading strategies by using SageMaker AI.
4. Run the backtest for your trading strategy as a task through AWS Fargate and Amazon ECS.
5. Run the Market Data Adapter as a service through AWS Fargate and Amazon ECS. Feed data into DynamoDB.

6. Run the Broker Adapter as a service through AWS Fargate and Amazon ECS. Use DynamoDB as the transaction store.
7. Run the Trading Strategy as a service through AWS Fargate and Amazon ECS.
8. Use [Amazon EventBridge](#) for job scheduling with [AWS Lambda](#) functions. Use [Amazon CloudWatch](#) for monitoring.

Further reading

For additional information, see the following resources:

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

Diagram history

To receive updates about this reference architecture diagram, subscribe to the RSS feed.

Change	Description	Date
Initial publication	Reference architecture diagram first published.	December 21, 2020

RSS subscription requirement

To subscribe to RSS updates, you must have an RSS plugin enabled for the browser you are using.