Streaming Data Analysis Using Multi-Cloud Strategy

Ft. r/wallstreetbets

What is Multi-Cloud?

Multi-cloud is a strategy where an organization leverages two or more cloud computing platforms to perform various tasks.

Why Multi-Cloud?

✓ Choose best service from each provider
✓ Safe alternatives for cloud backup
✓ Selective pricing

Multi-Cloud Use Case

Following which stocks Reddit's WallStreetBets crowd is talking about was a tactic that paid off well in 2021 because of GameStop and AMC Entertainment.
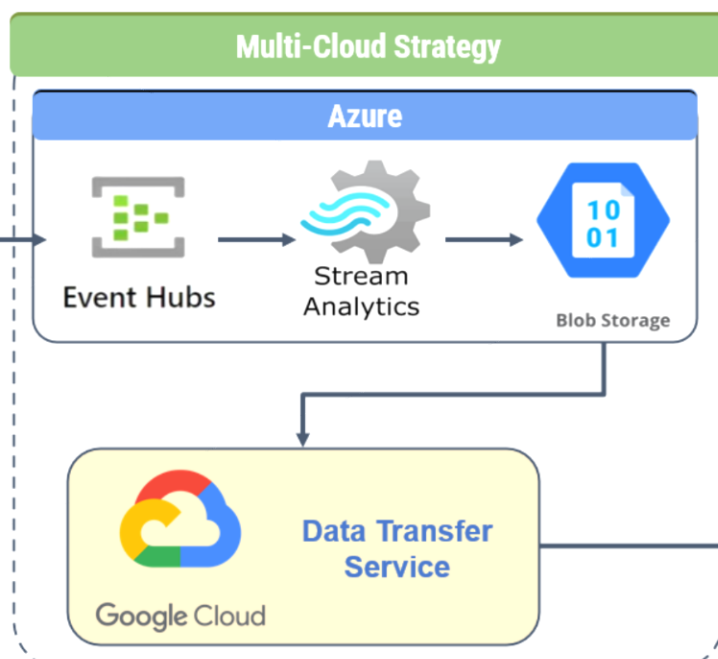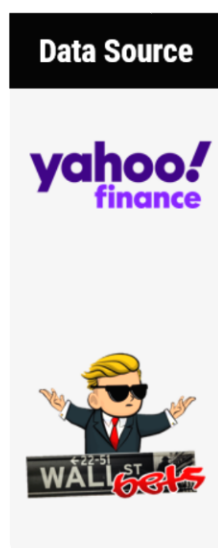
We are interested in visualizing popular stocks from WallStreetBets using the latest multi-cloud strategy.

GameStop
1.8 MILLION PROFIT

Data Ingestion	Data Storage	Dashboarding

Multi-Cloud Strategy

Data Source

yahoo! finance

Azure

Event Hubs → Stream Analytics → Blob Storage

Google Data Studio

Data Transfer Service

Google Cloud

Process Roadmap

Data Source

Reddit API

Extract stock symbols for top trending posts.

python™

Use python script to pull data from the API's and push it to cloud storage

Reddit API

Get: Stock Volume
50 Day Moving Avg
200 Day Moving Avg
Previous day closing price
Daily price for last 30 days
Live Price

Data Storage

Azure Events Hub
Events hub instance capture data from python

Azure Stream Analytics Job
Scheduled SQL query to convert event data to a table

Blob Storage/ADLS Gen2
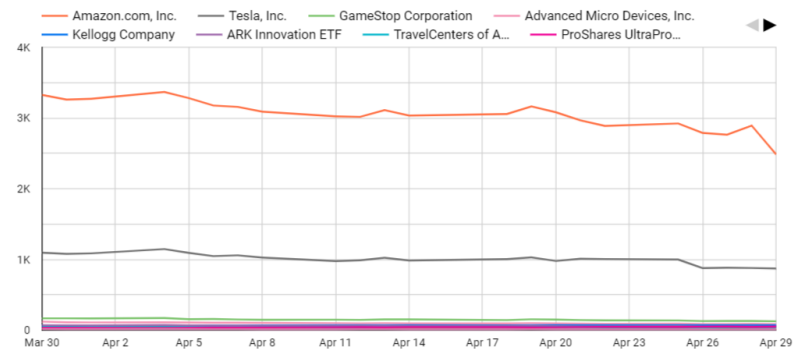Stores the table from Stream Analytics job in a csv file

Google Data Transfer Service
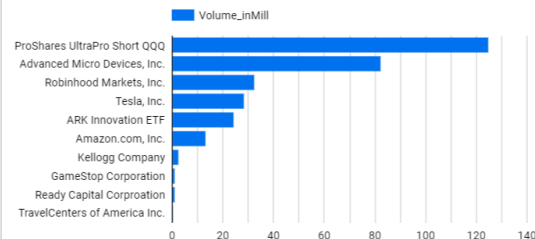Scheduled data transfer job connects to Azure container

Google Cloud Storage
Files from Azure are stored in Google Cloud storage bucket

Dashboard Overview

Historic Daily Closing Prices of Trending Stocks in Last Month

Amazon.com, Inc. — Tesla, Inc. — GameStop Corporation — Advanced Micro Devices, Inc. — Kellogg Company — ARK Innovation ETF — TravelCenters of A... — ProShares UltraPro...

(chart: Mar 30 – Apr 29, values 0 to 4K)

The Volume of Shares (in Million) of Trending Stocks

Volume_inMill

ProShares UltraPro Short QQQ
Advanced Micro Devices, Inc.
Robinhood Markets, Inc.
Tesla, Inc.
ARK Innovation ETF
Amazon.com, Inc.
Kellogg Company
GameStop Corporation
Ready Capital Corproation
TravelCenters of America Inc.

(x-axis: 0 20 40 60 80 100 120 140)

%change in liveprice of selected company vs it's previous day closing price

-10%

(livePrice is 10% *below* target)

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Group 13

Check Our Video on YouTube!

https://youtu.be/iZopI_Rtcw0