
AWS
re:Invent
NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

BWP302

How Alloy synced Amazon data in real time

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Co-Founder, CTO
Alloy Automation

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Solutions Architect
Amazon

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Agenda

What is Buy with Prime

Collaboration with Alloy

- What is Alloy
- Architecture deep dive

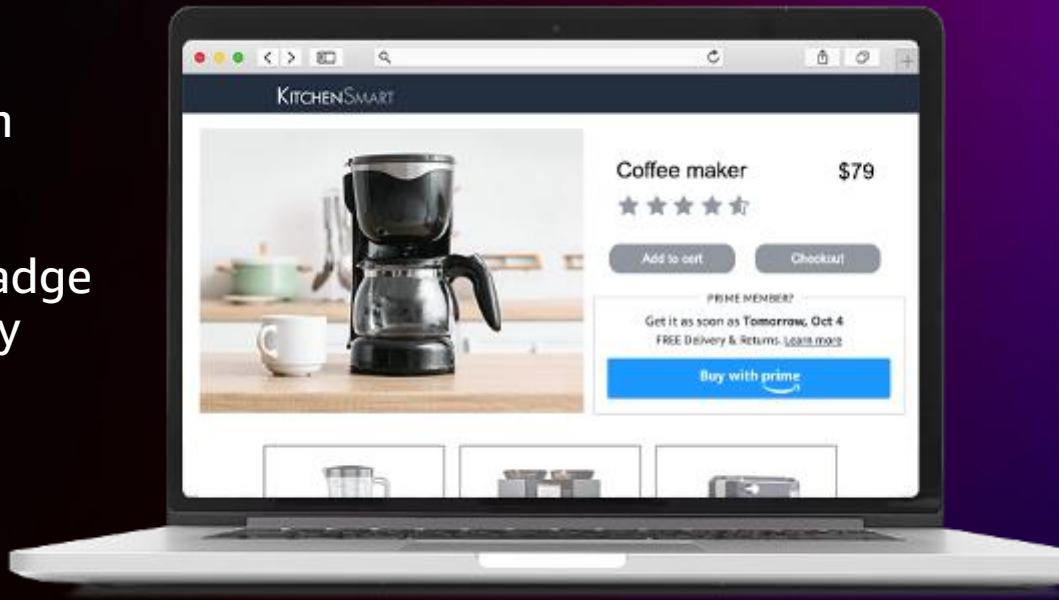
Conclusion

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What is Buy with Prime?

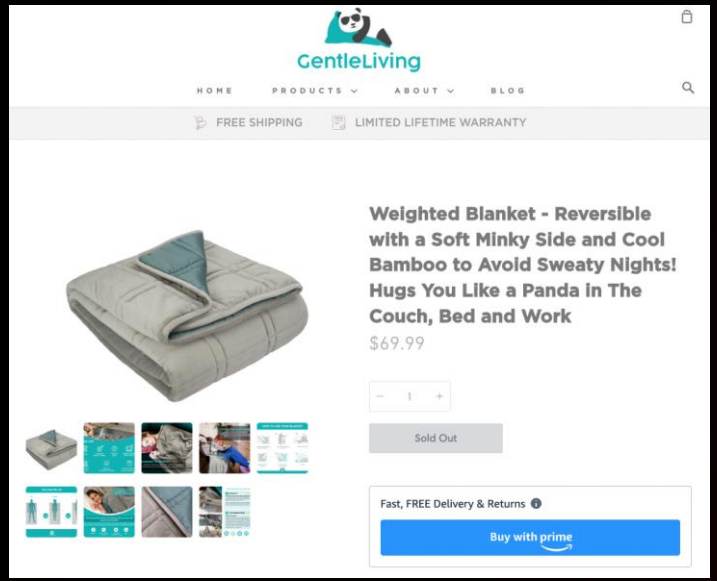
With **Buy with Prime**, merchants can grow their direct-to-consumer (DTC) ecommerce site by converting more shoppers with the Buy with Prime badge – offering fast, FREE 1-day and 2-day shipping and a checkout experience millions of shoppers know and trust from Amazon.com

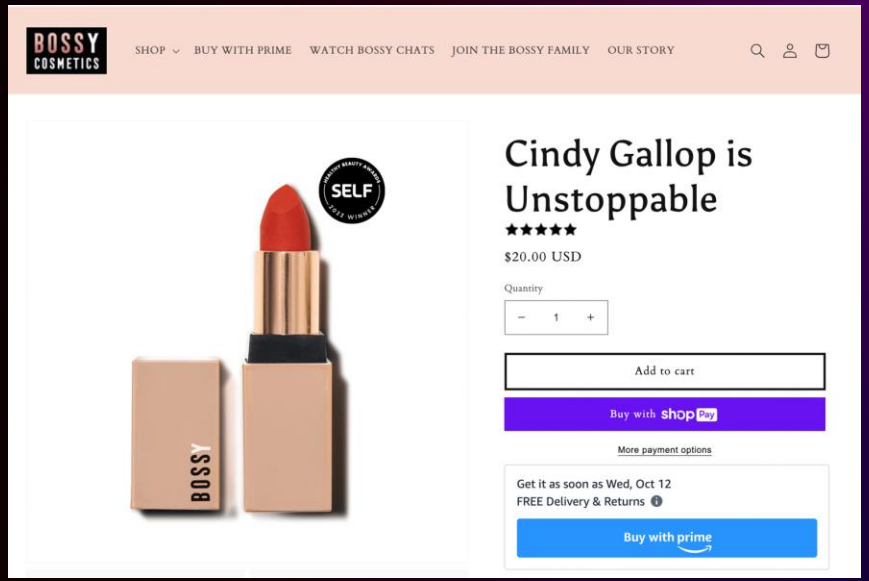


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Merchants today

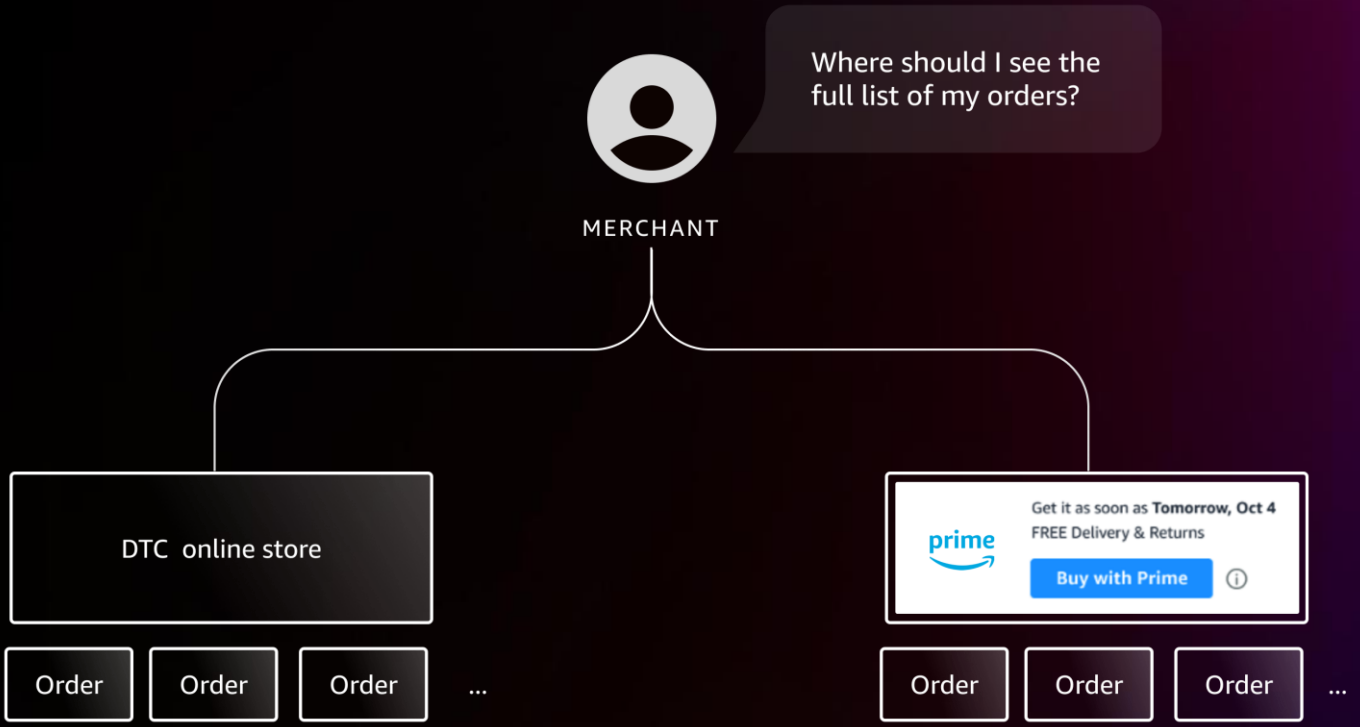
- Gentle Living
- Bossy Cosmetics





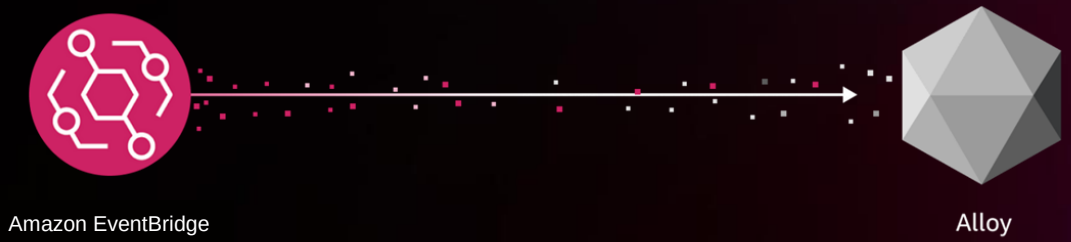
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Buy with Prime problem statement



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Components of Buy with Prime



GraphQL API - used to read orders, etc.

Empower flexible and efficient queries without overfetching and underfetching

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Components of Buy with Prime



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Alloy

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What is Alloy?

Alloy is a no-code workflow automation and orchestration tool for e-commerce companies. We connect with over 220+ integrations – everything from platforms like Shopify to Magento to ERPs like NetSuite.

Backed by a16z, Bain Capital, Y Combinator, and dozens of career e-commerce veterans.



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Problem

Connecting Buy with Prime to DTC Sites

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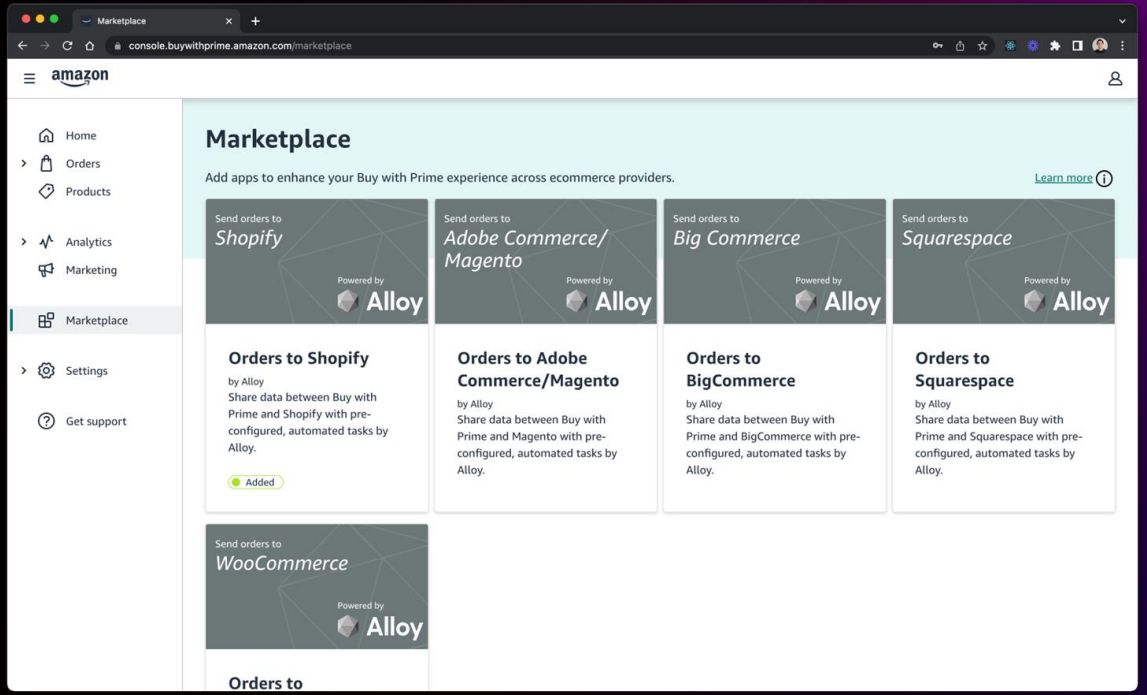
Goal

- To enable Buy with Prime merchants to connect to external 3rd-party systems.
- Templatize common use cases to enable merchants to go live with integrations in a few minutes.

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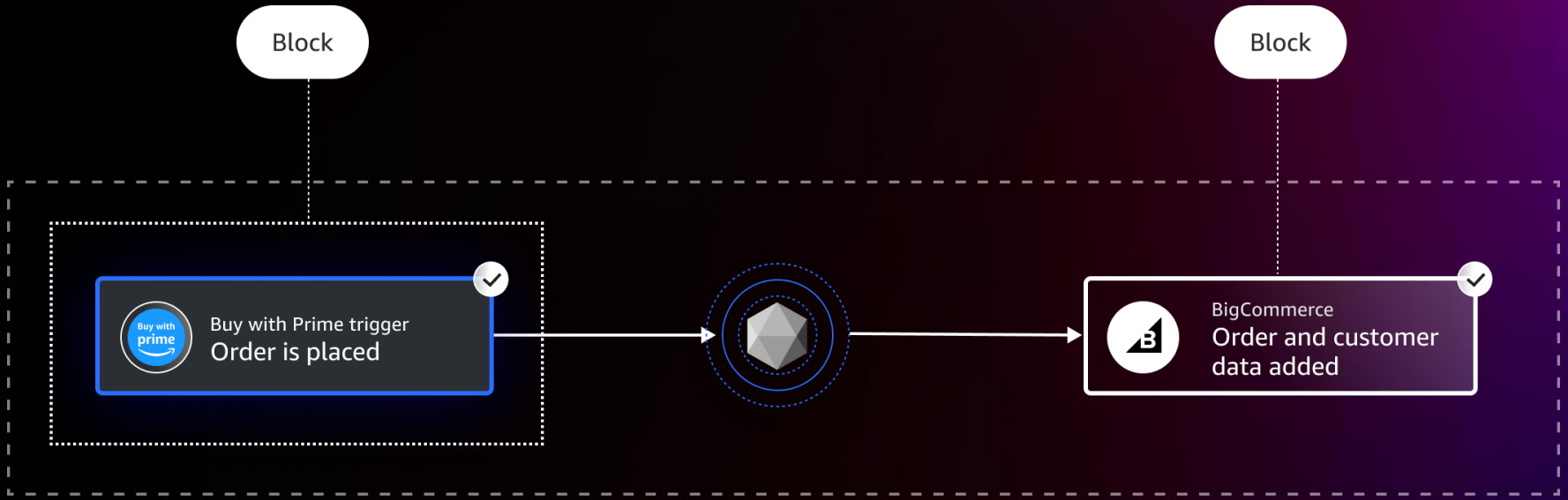


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Key terminology

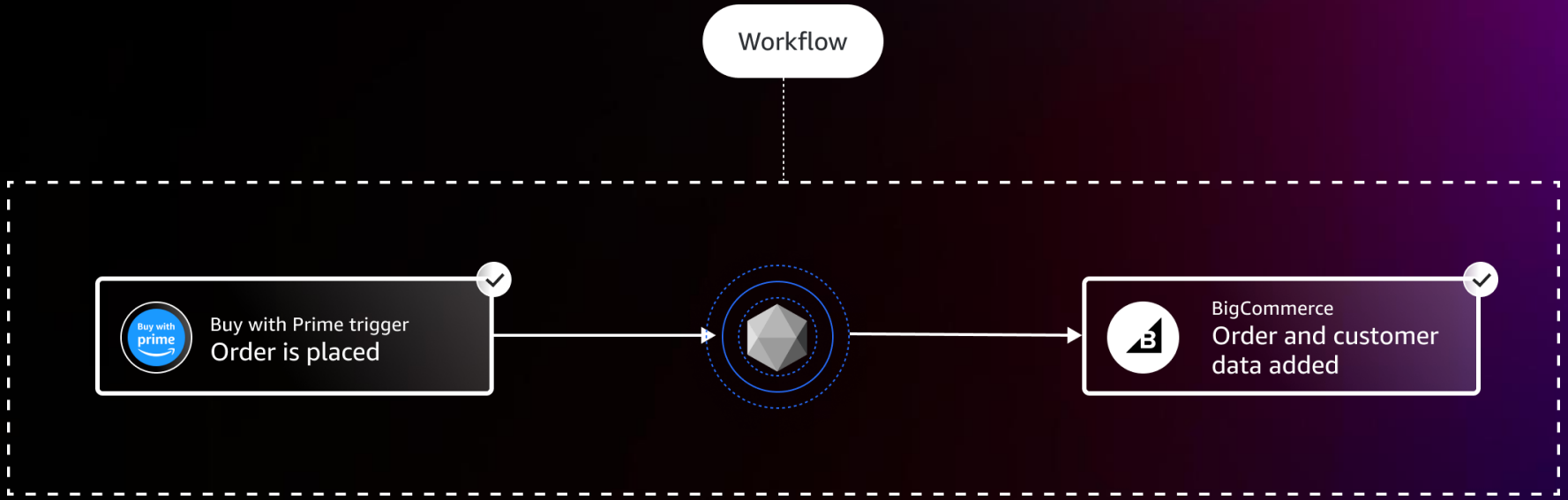
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Blocks



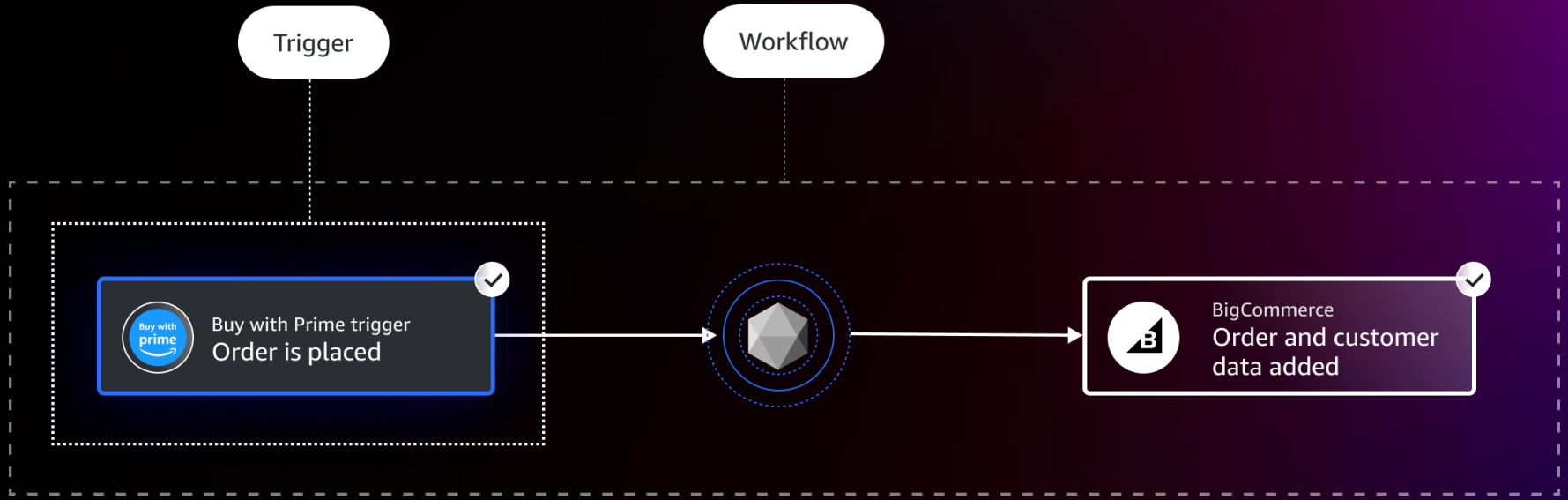
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Workflow



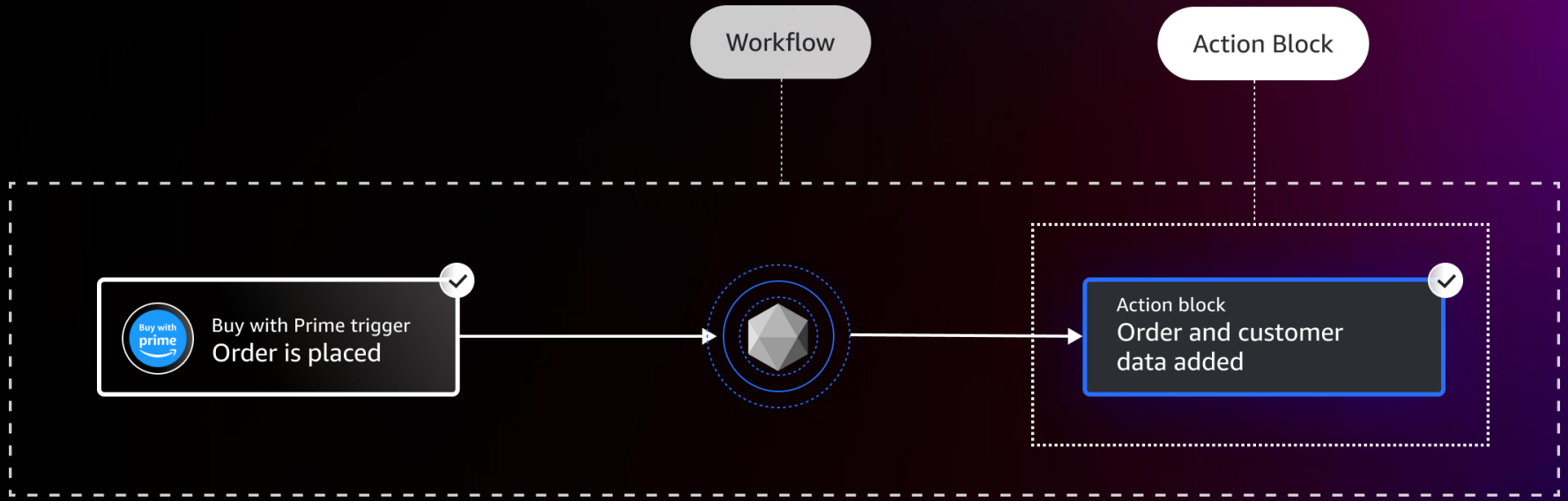
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Trigger Block



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Action Block



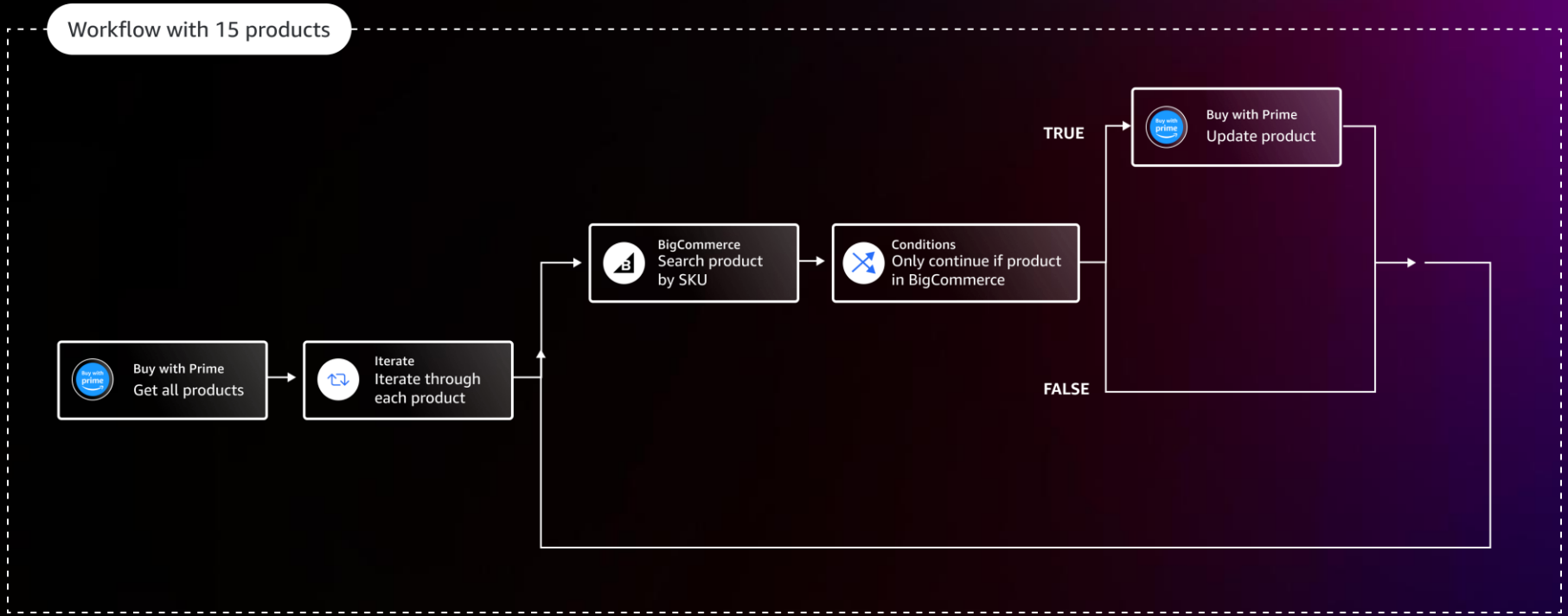
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Recipe



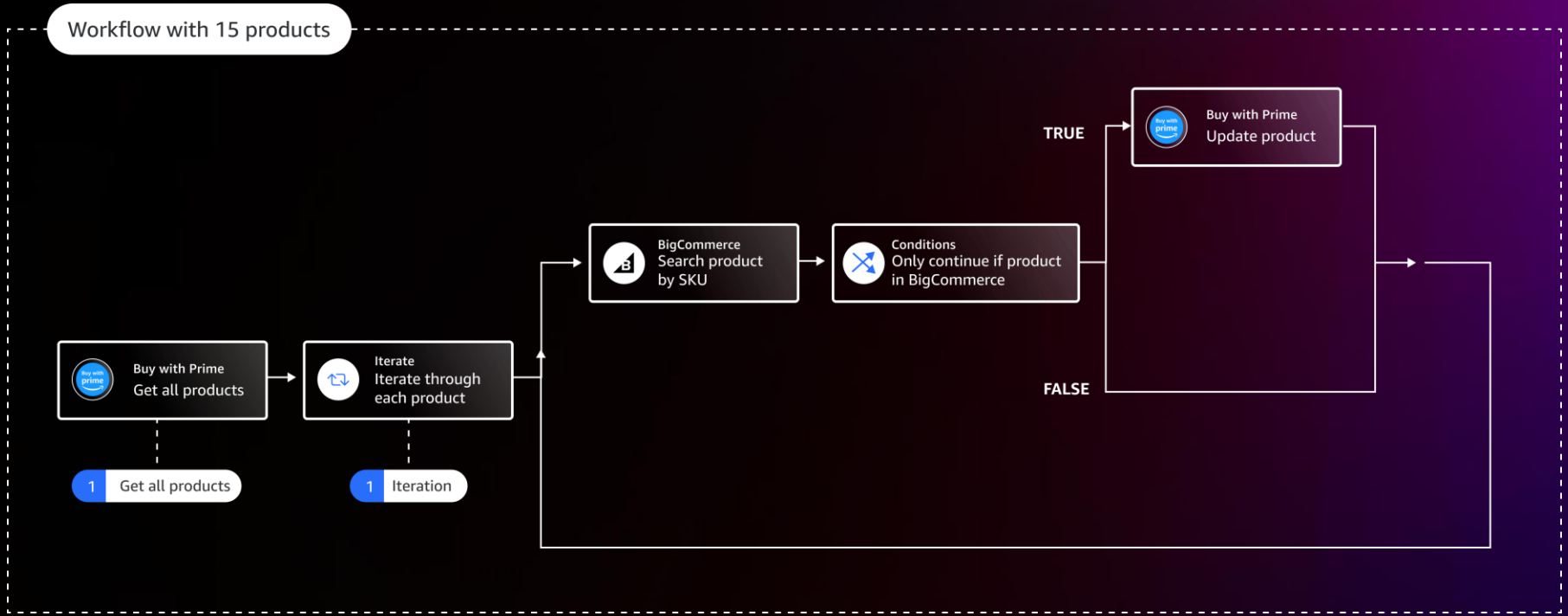
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App Action



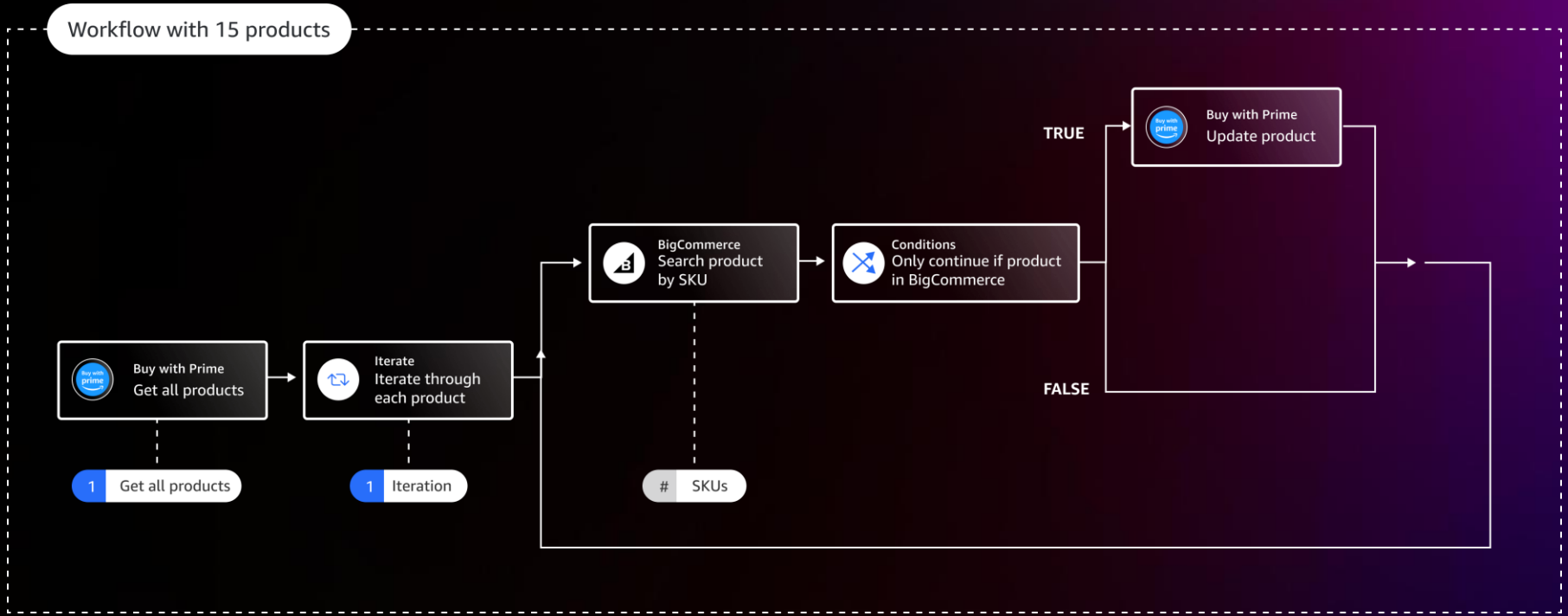
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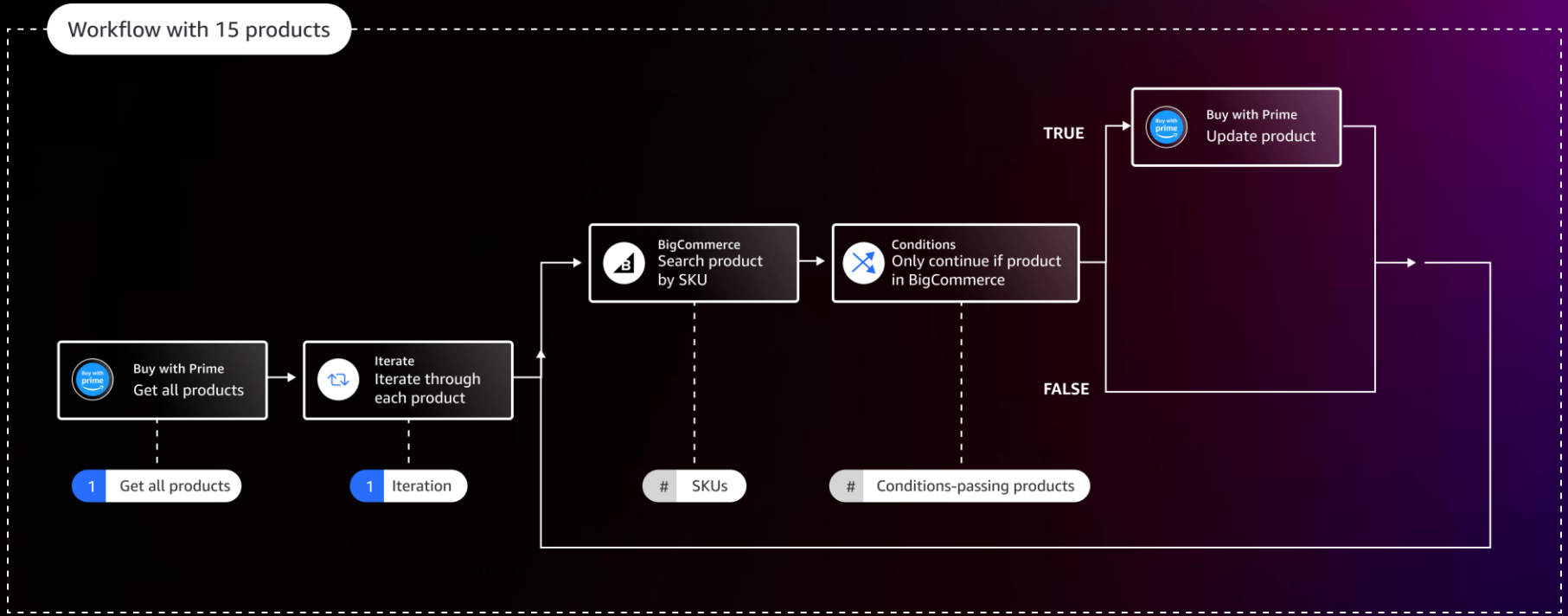
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Demo

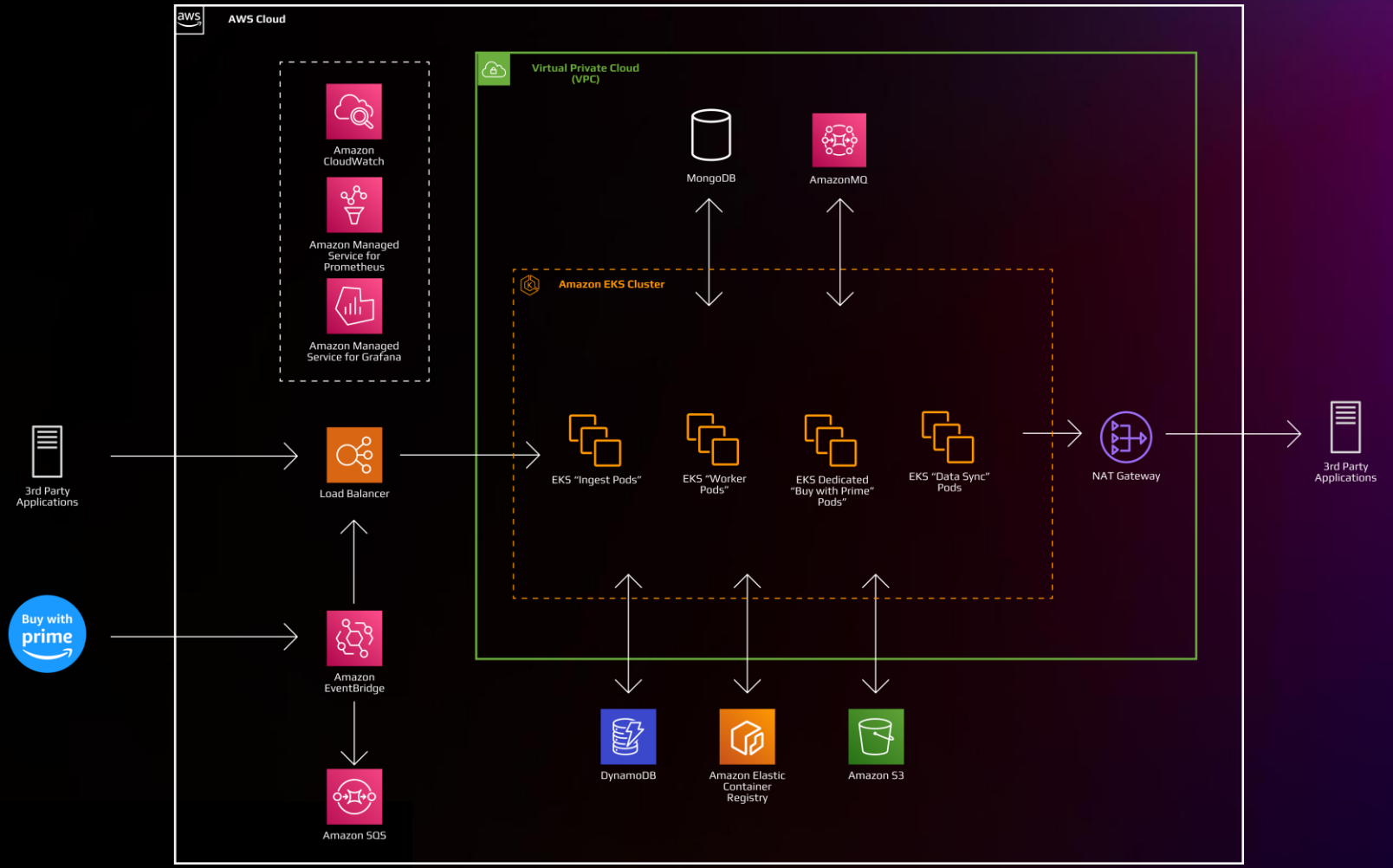
Buy with Prime → DTC Order Sync Use Case

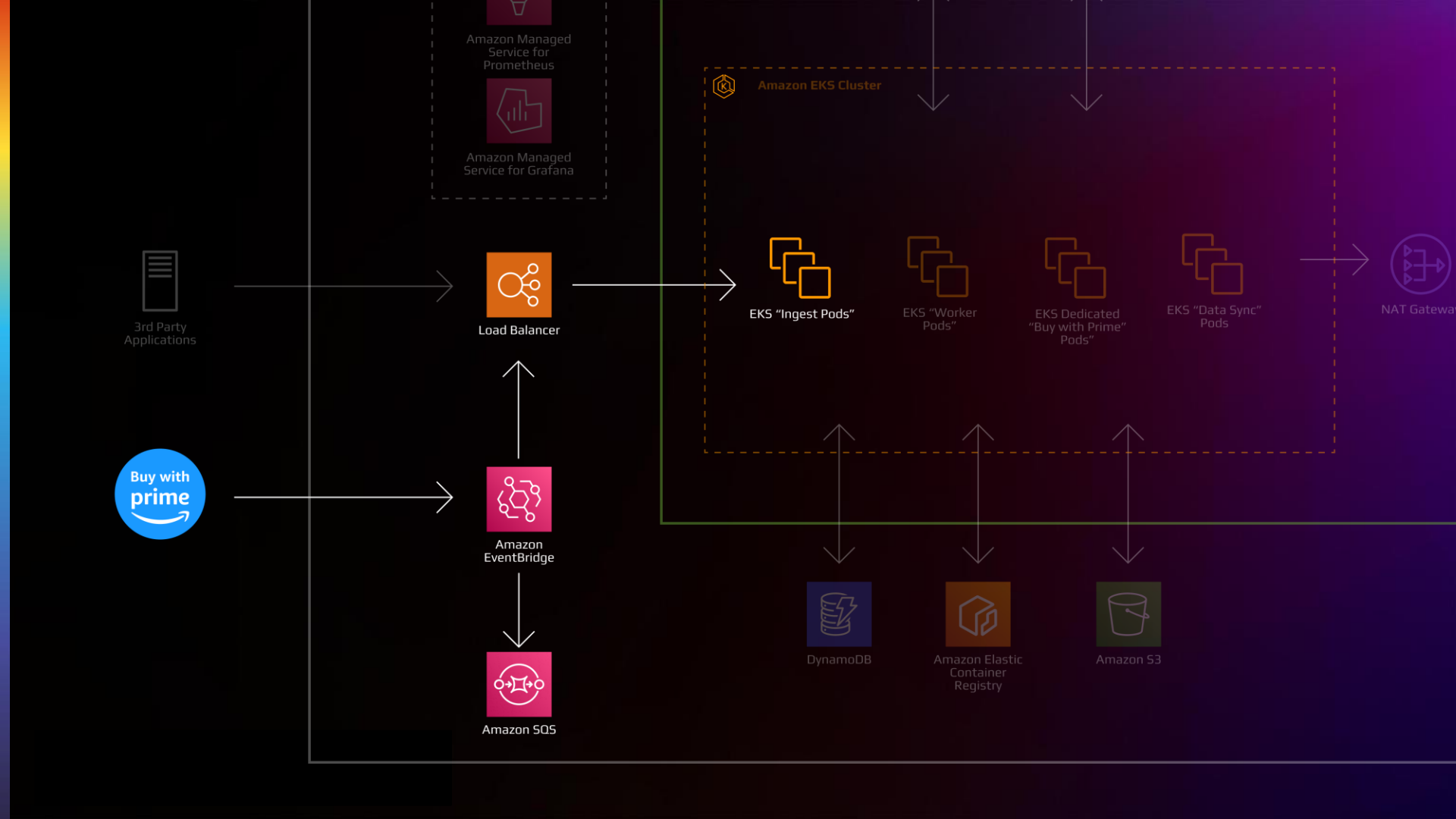
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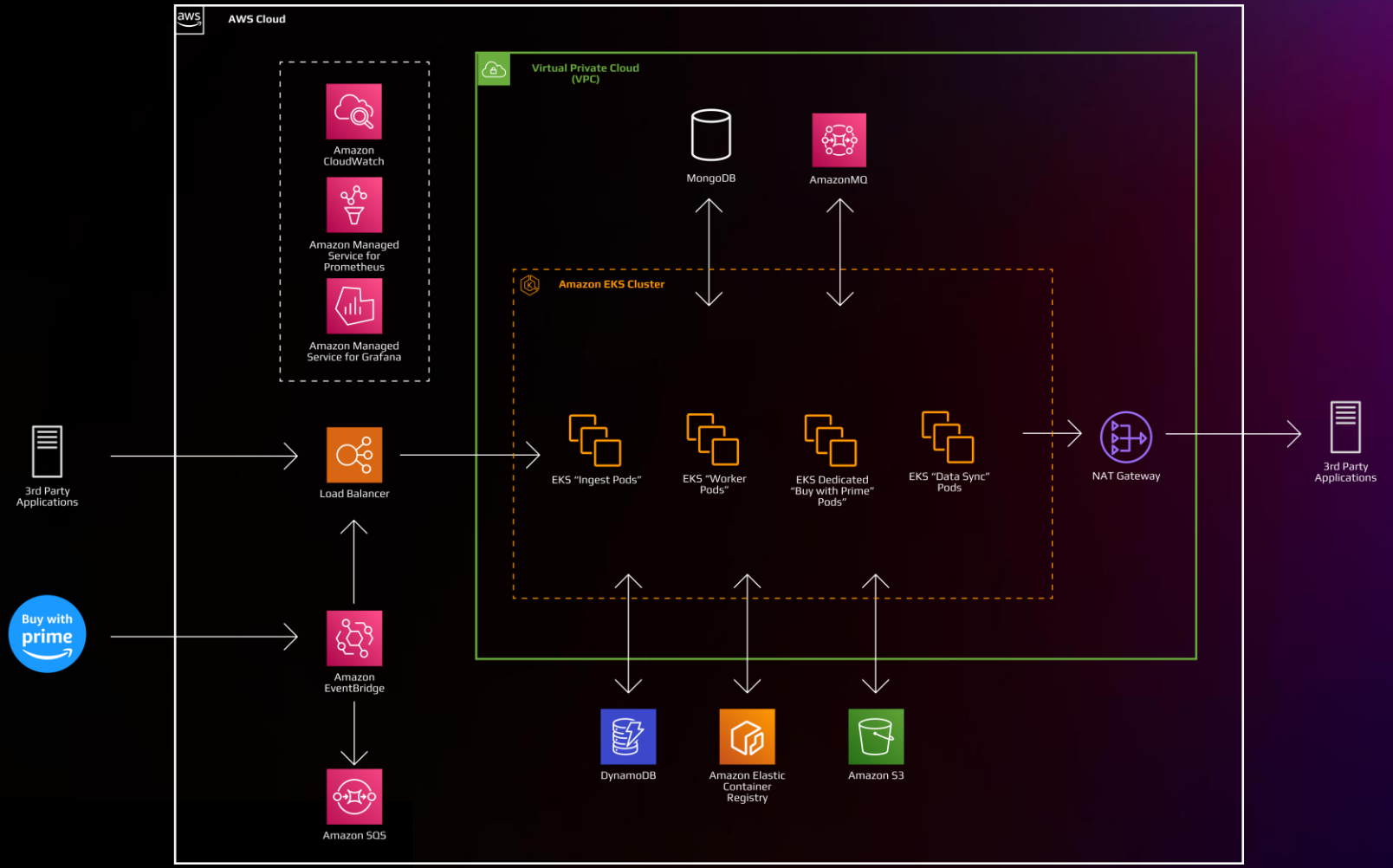
Architecture deep dive

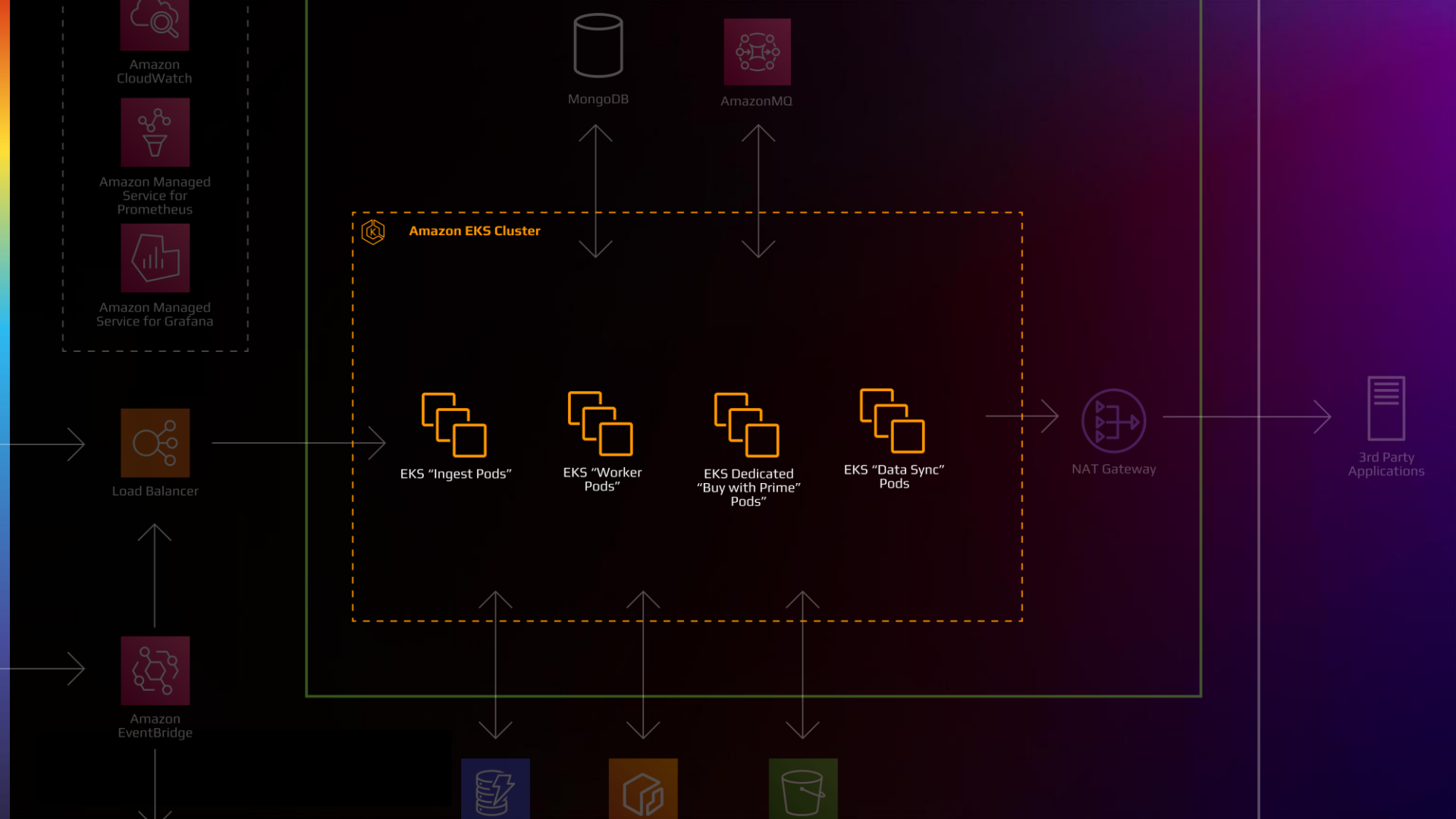
Under the hood

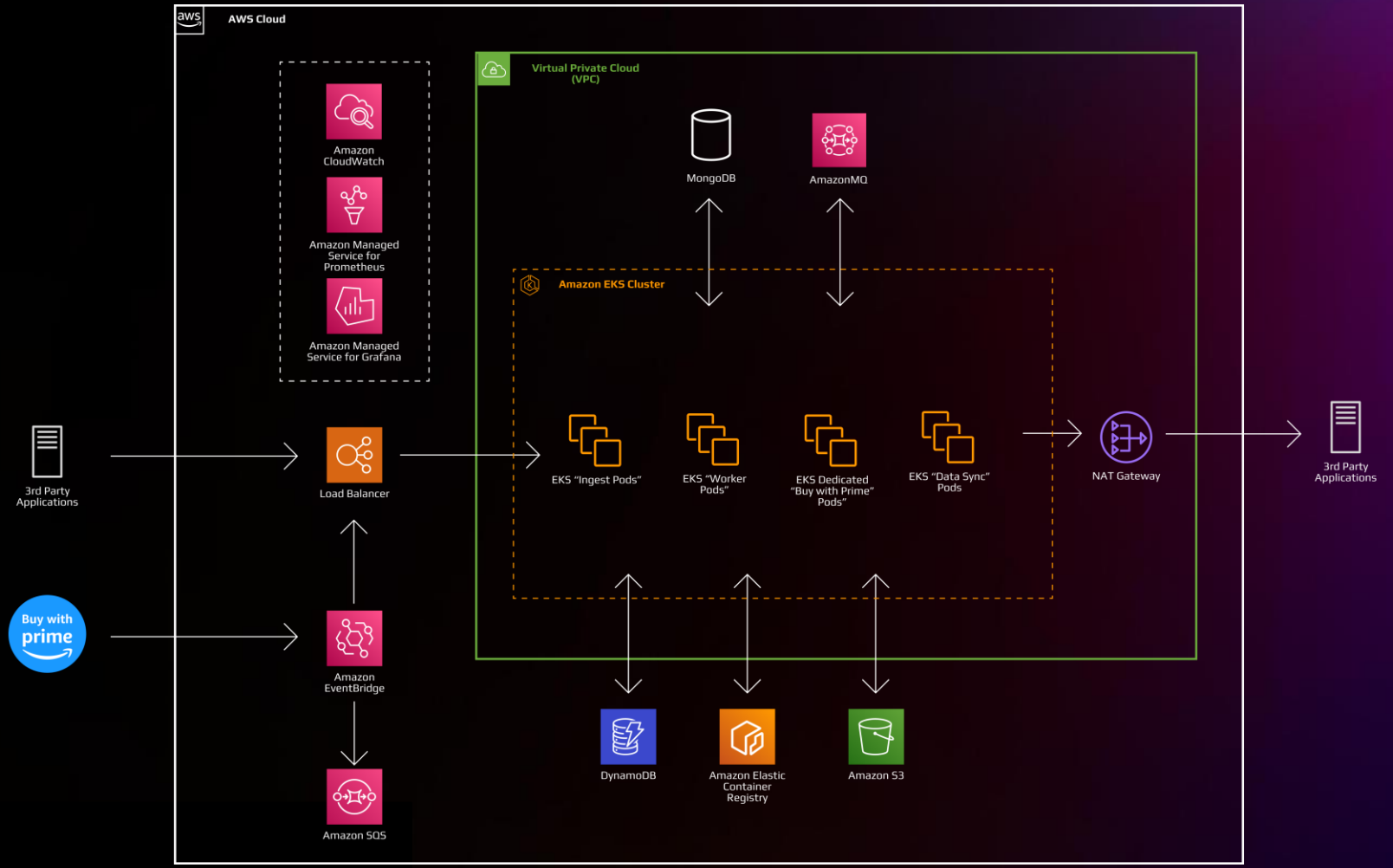
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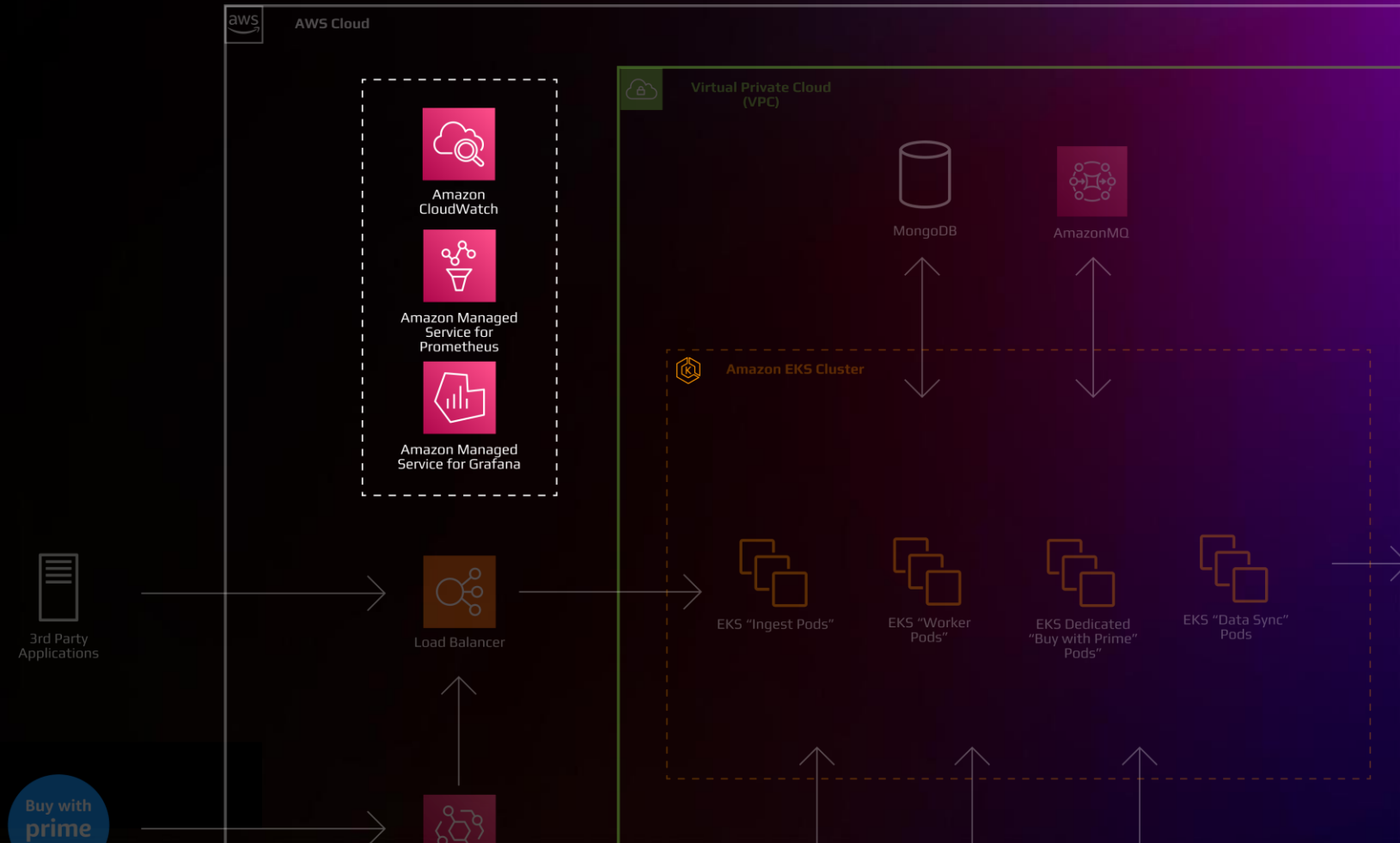

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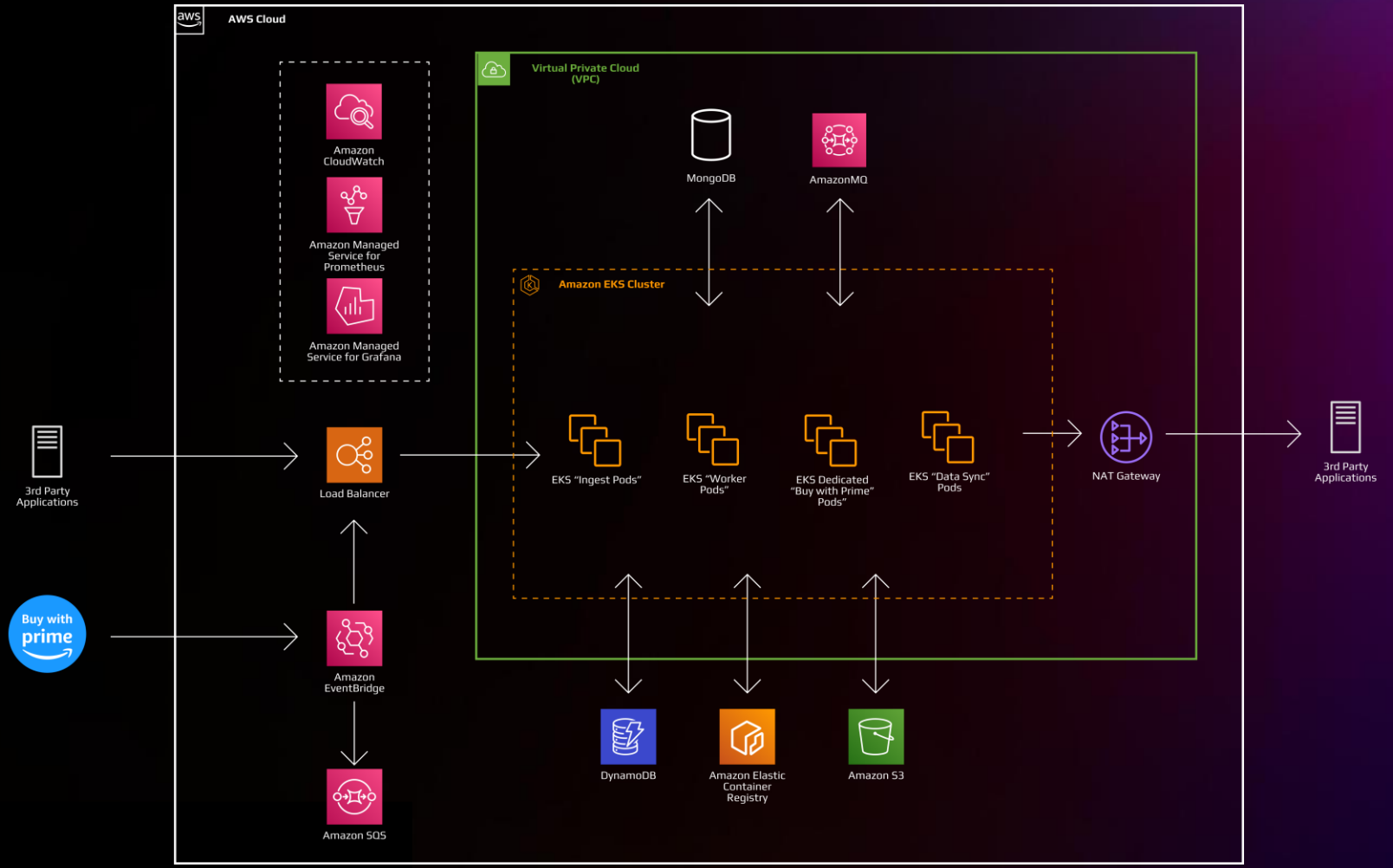

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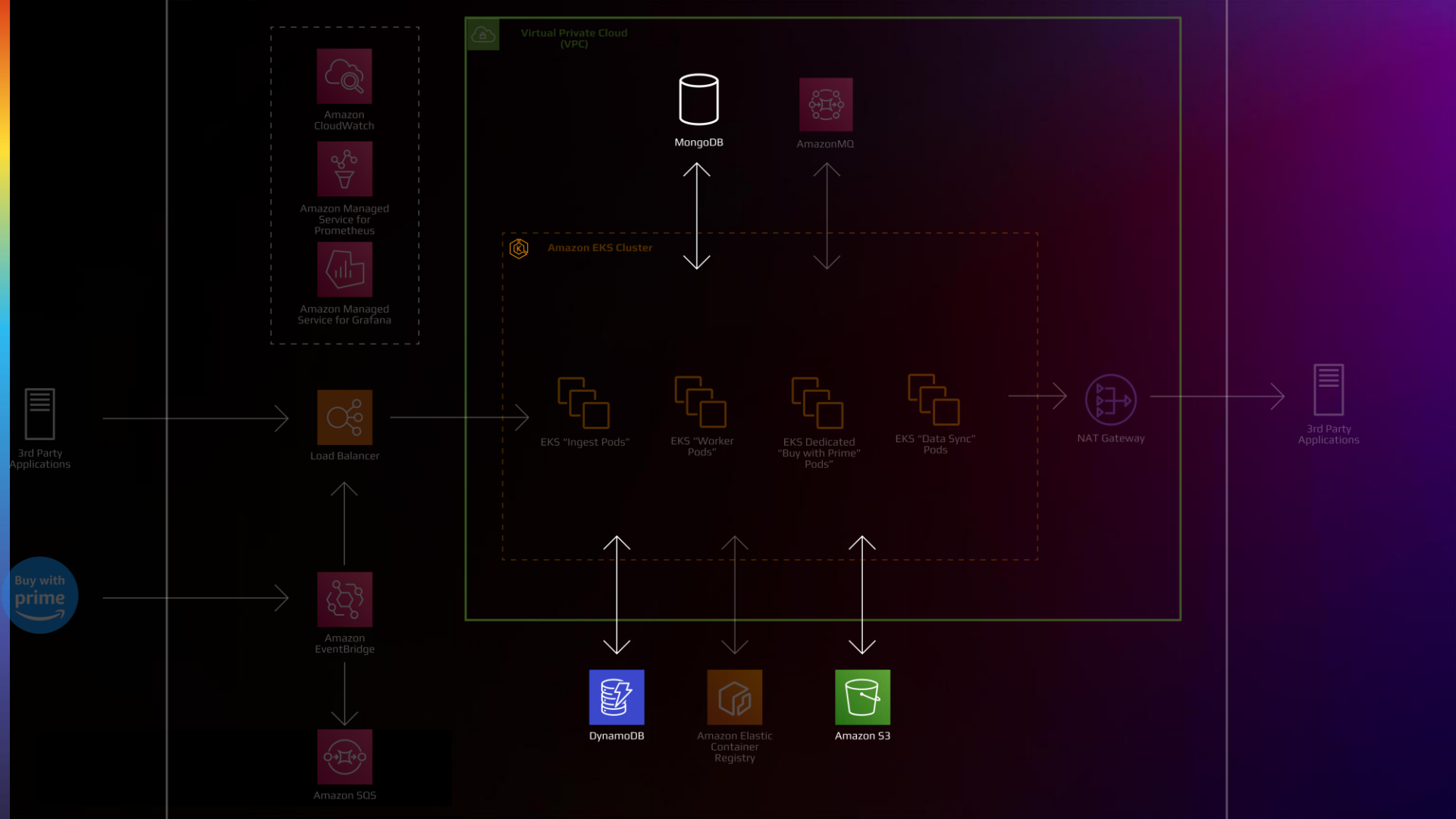

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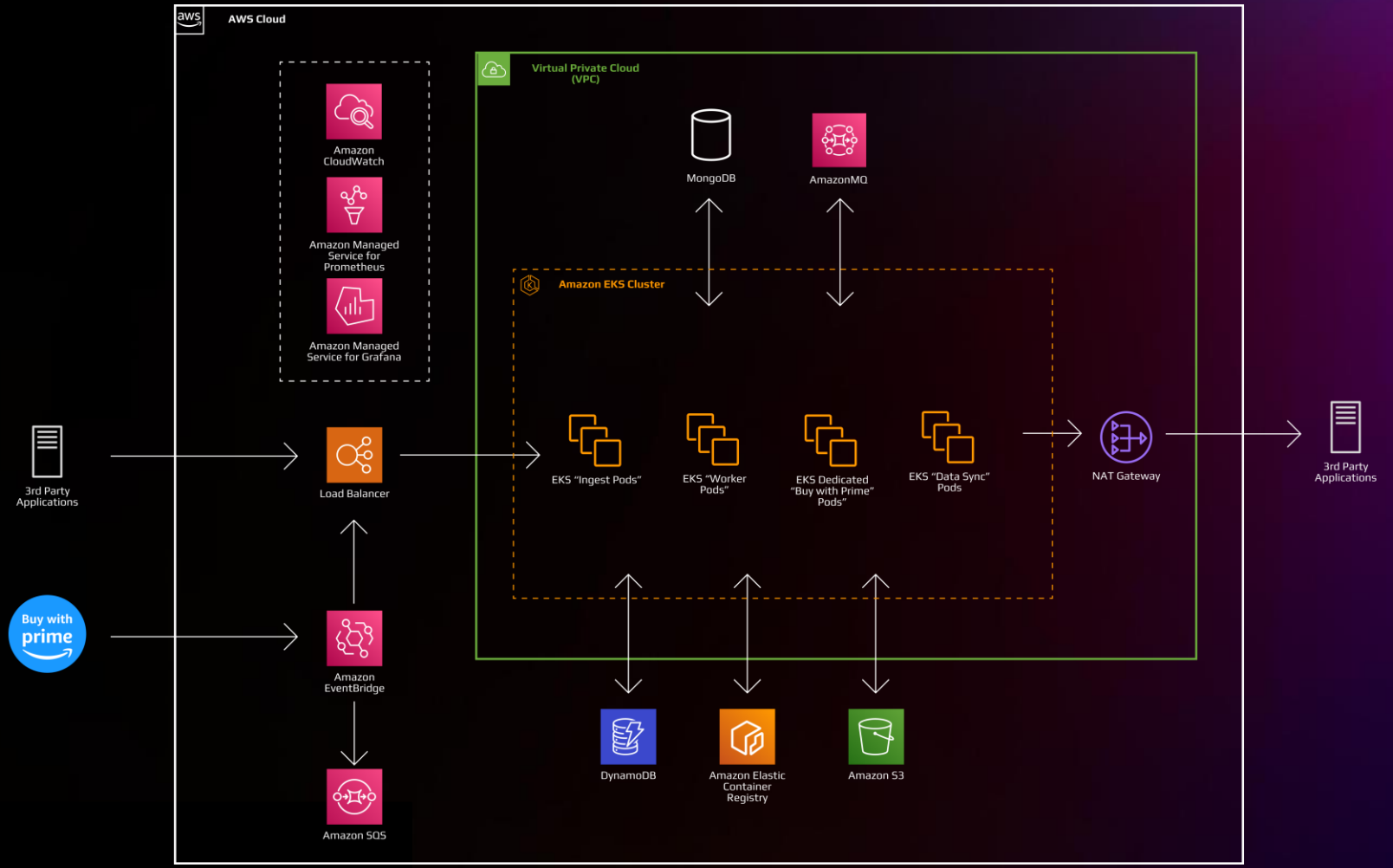

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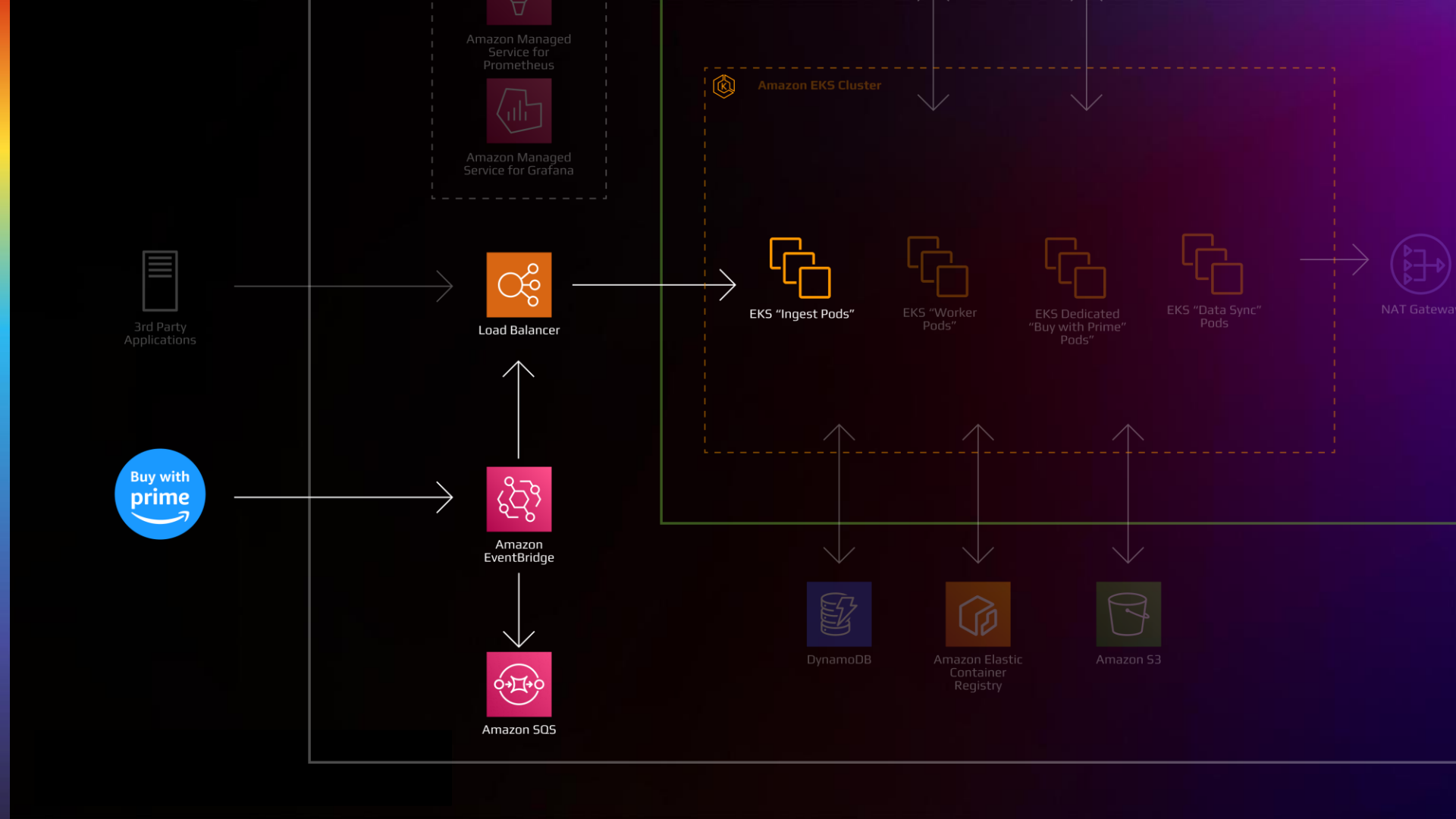

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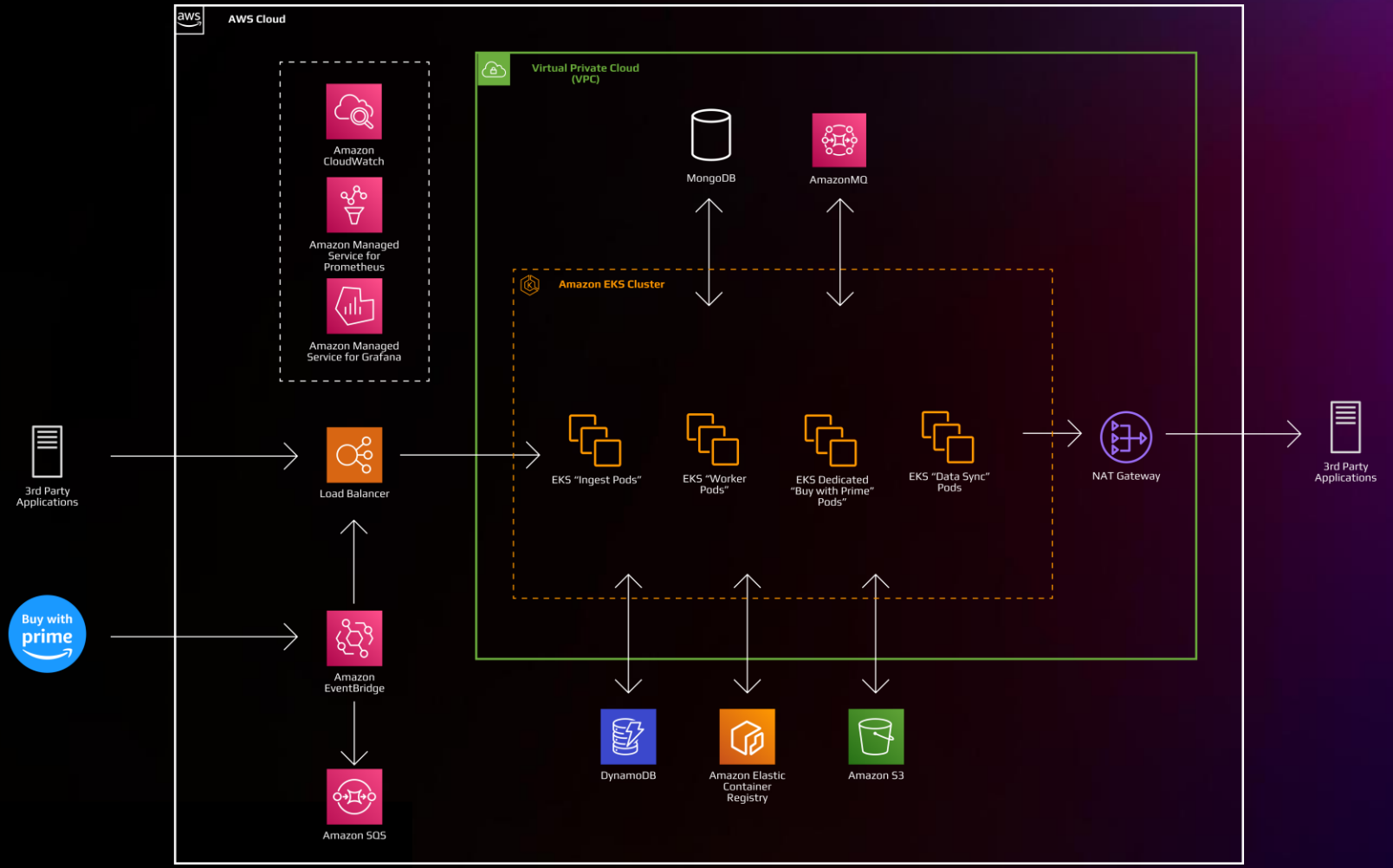

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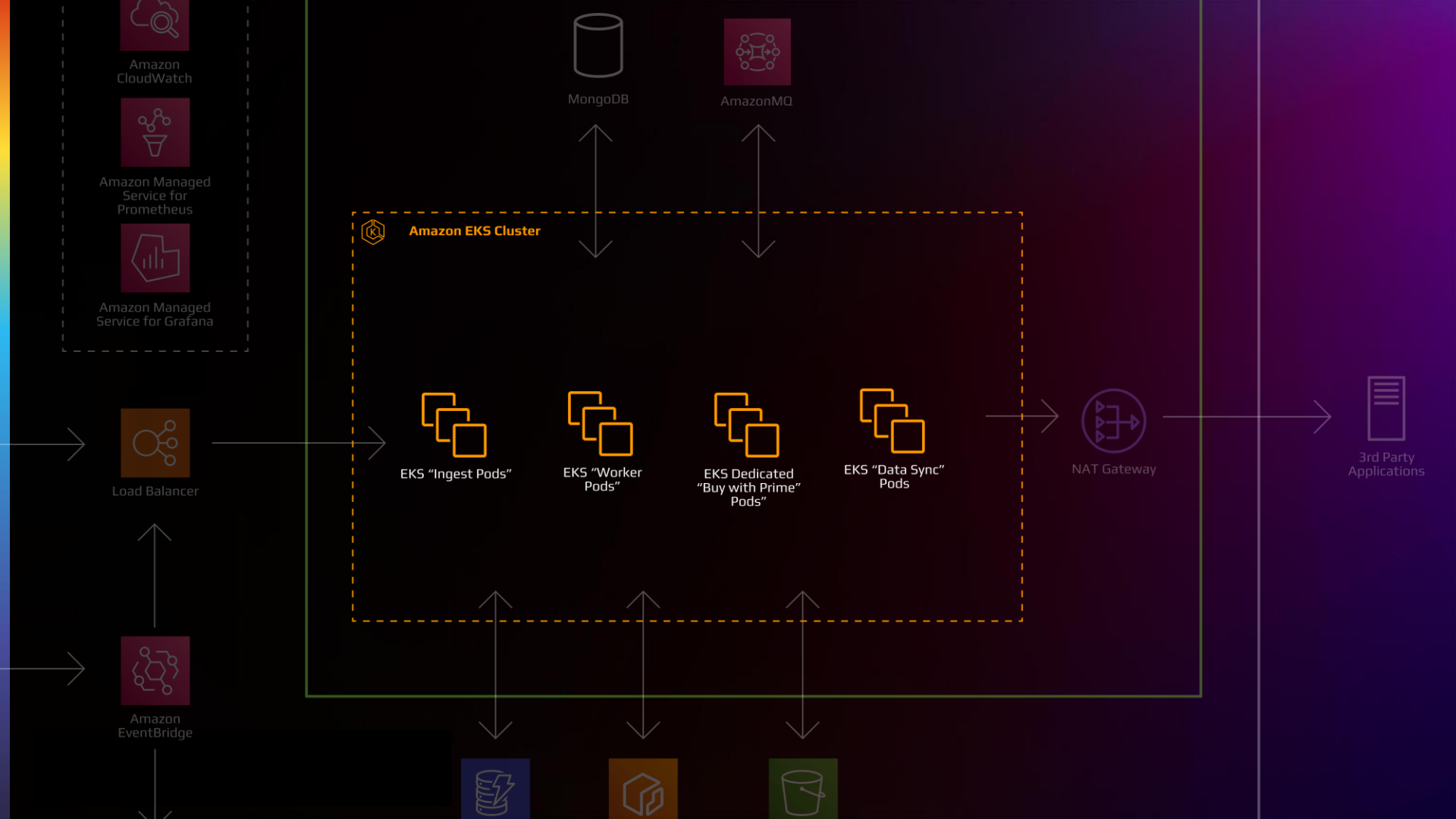

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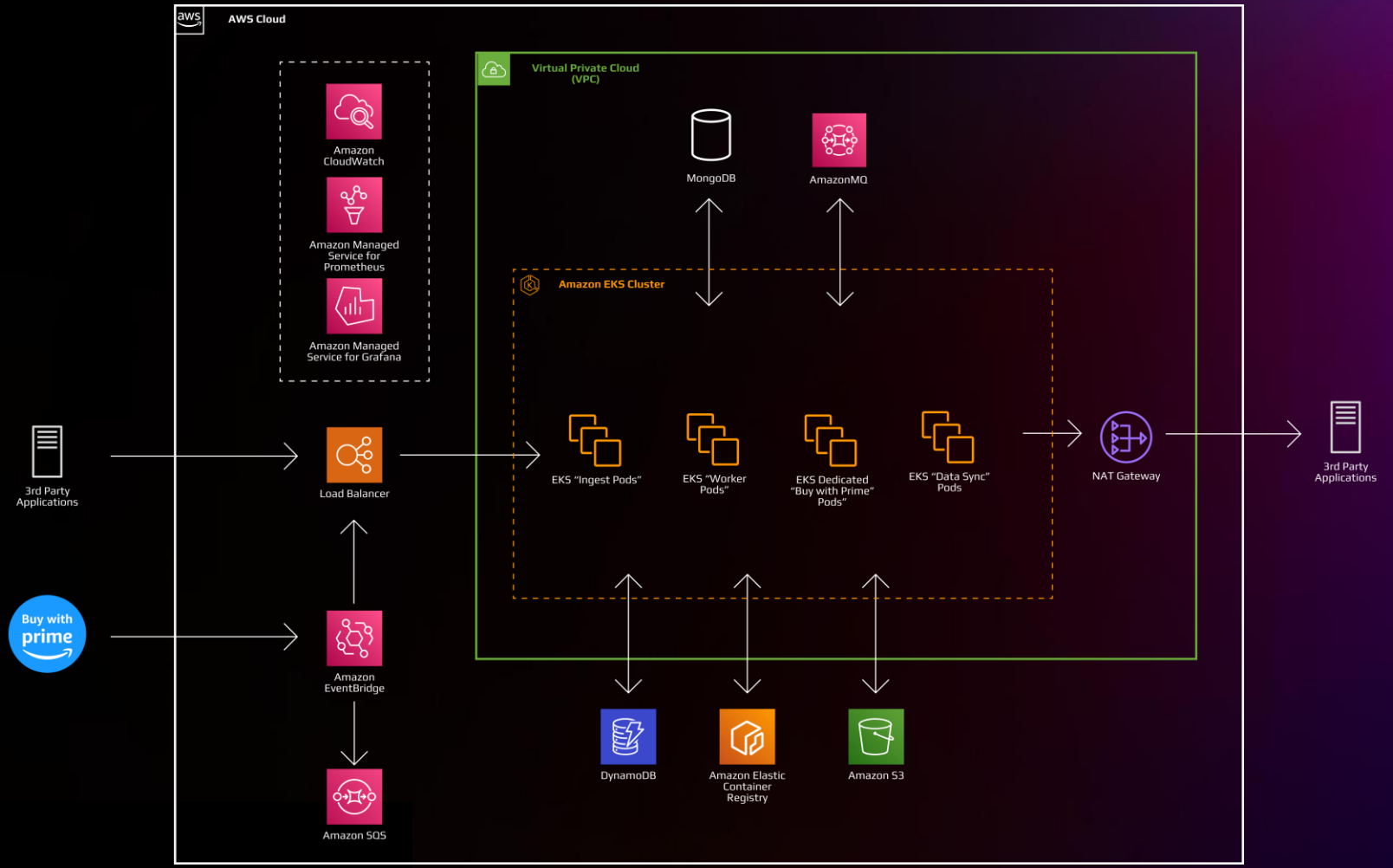

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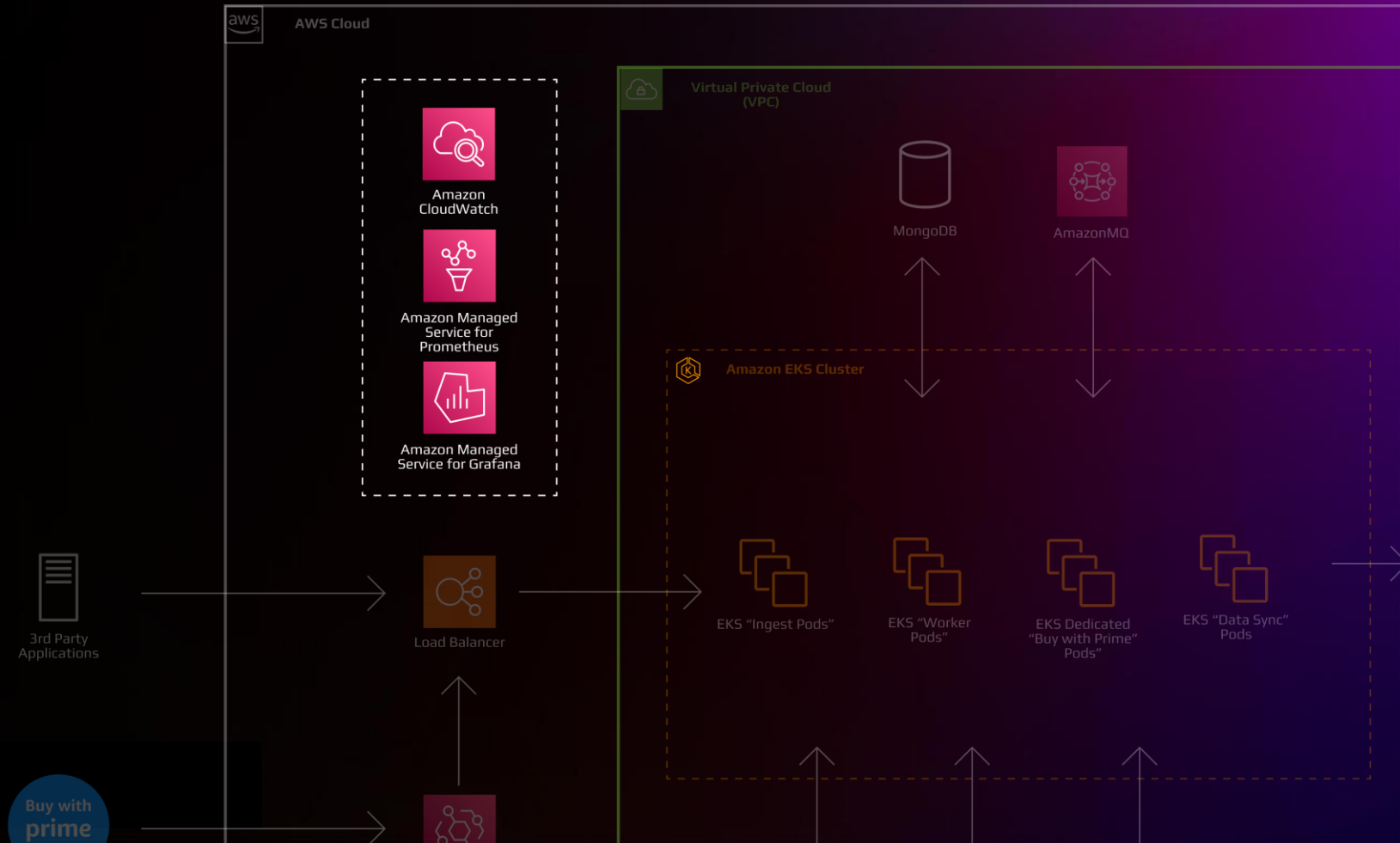

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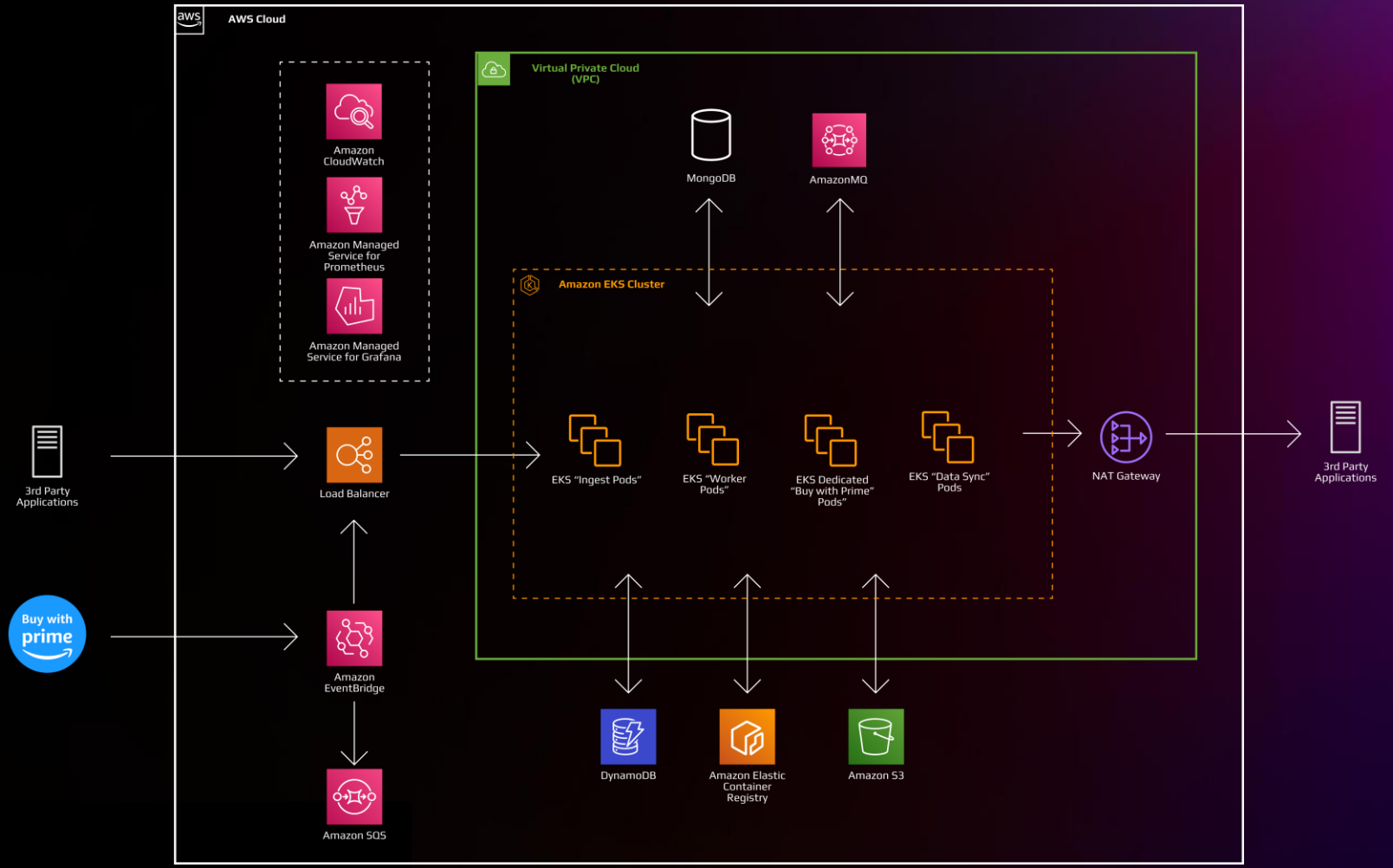

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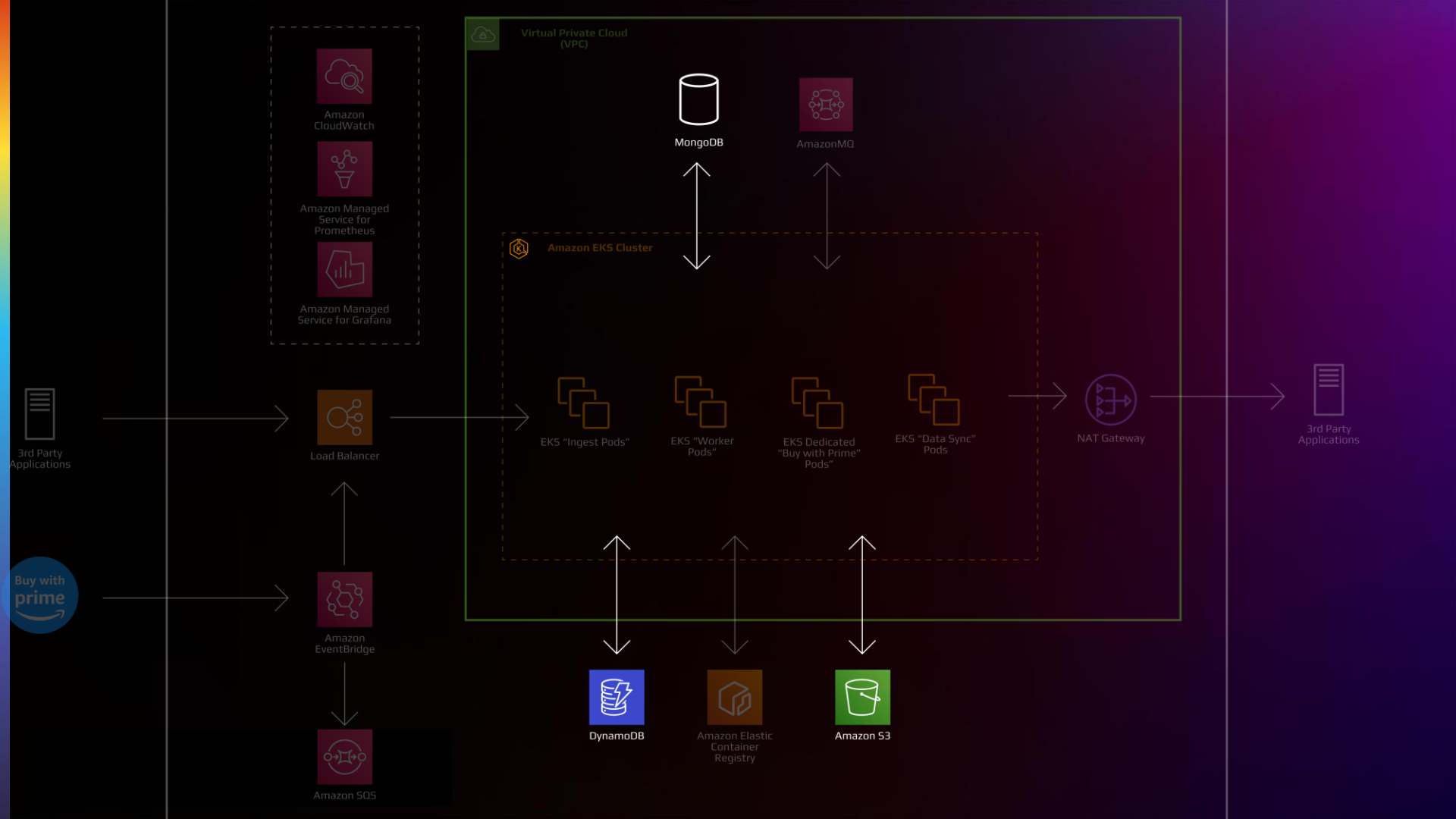

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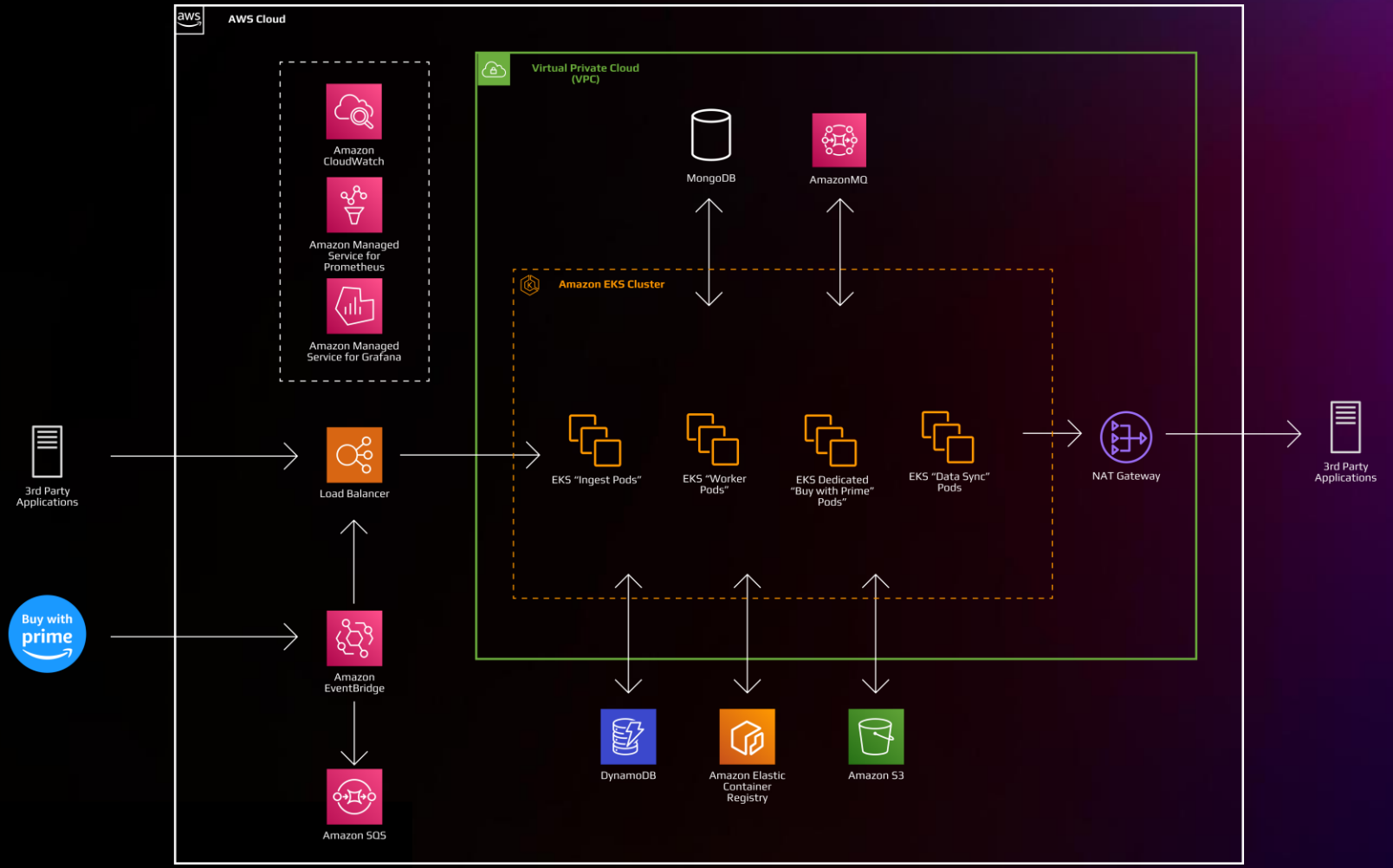

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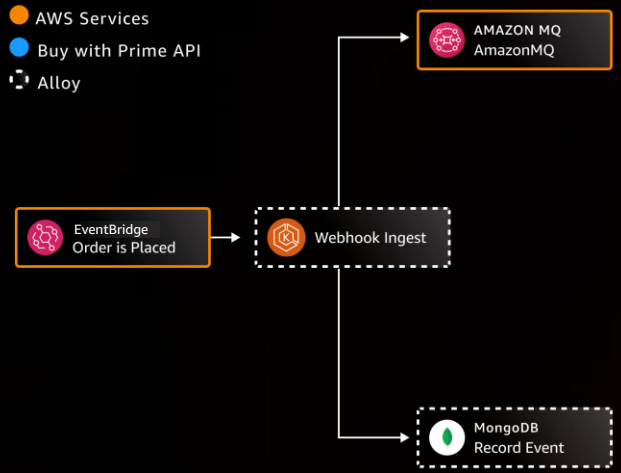

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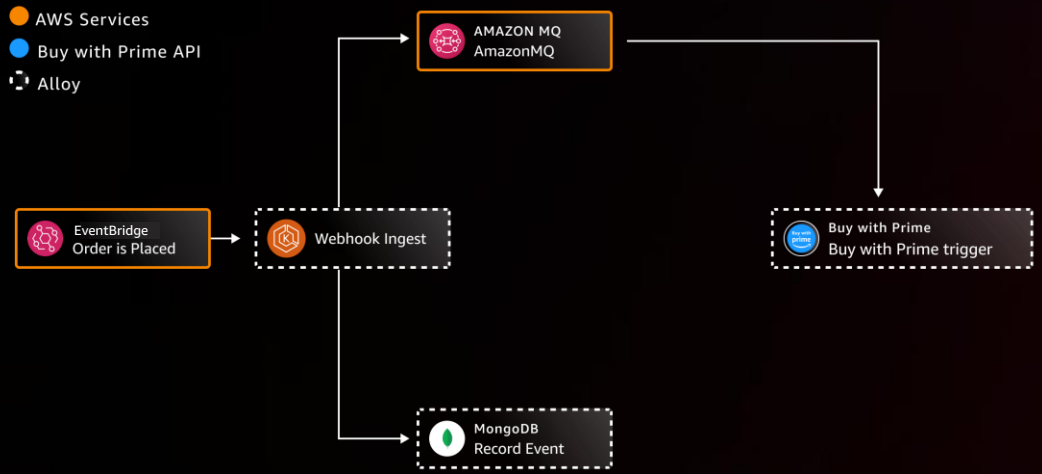

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Data flow



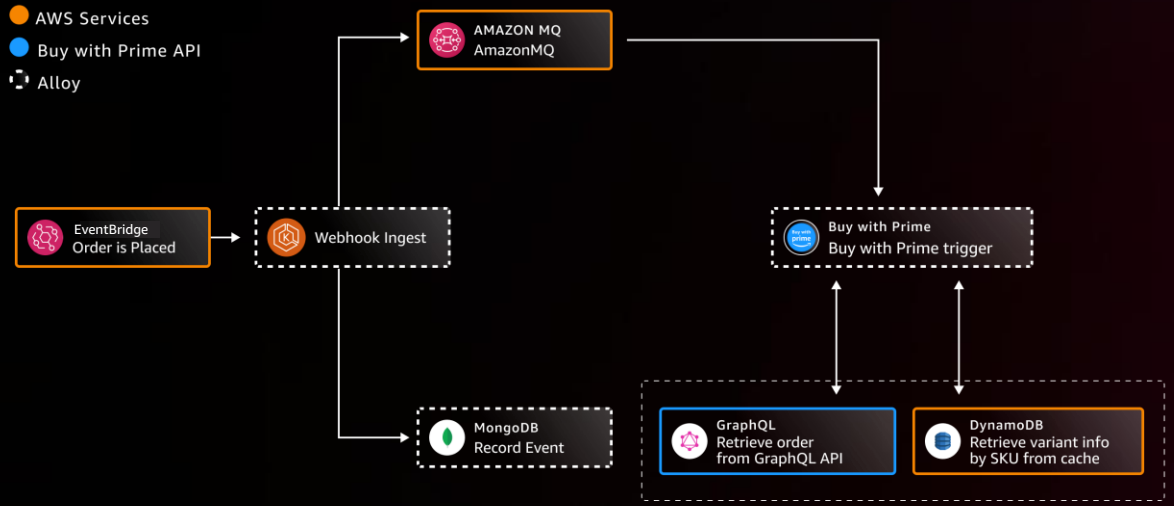
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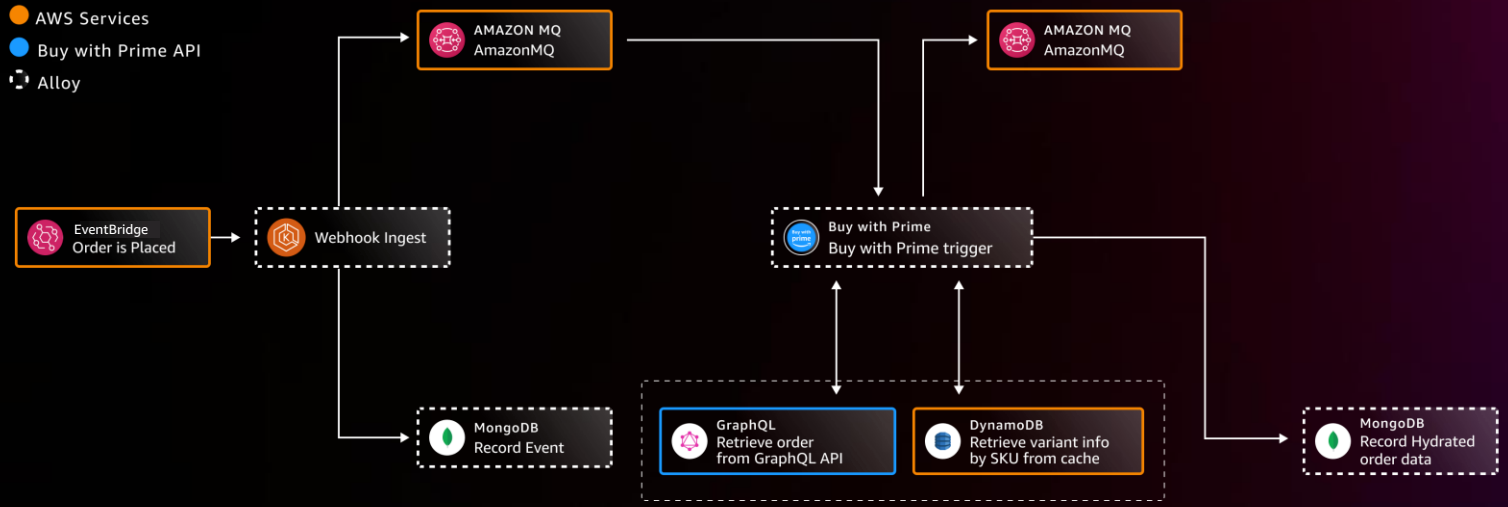
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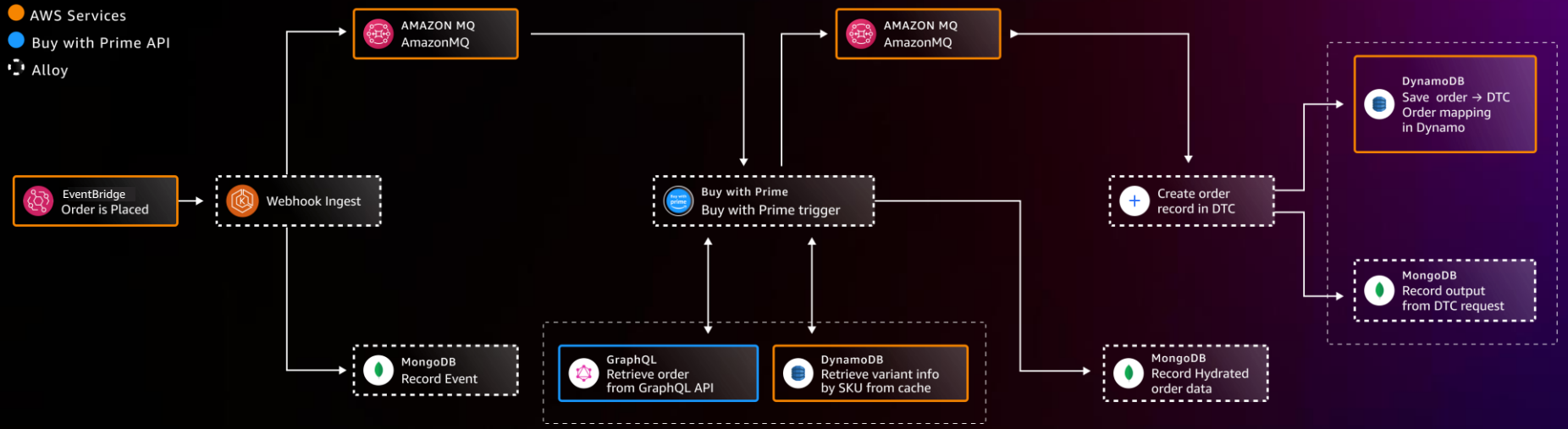
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Scalability

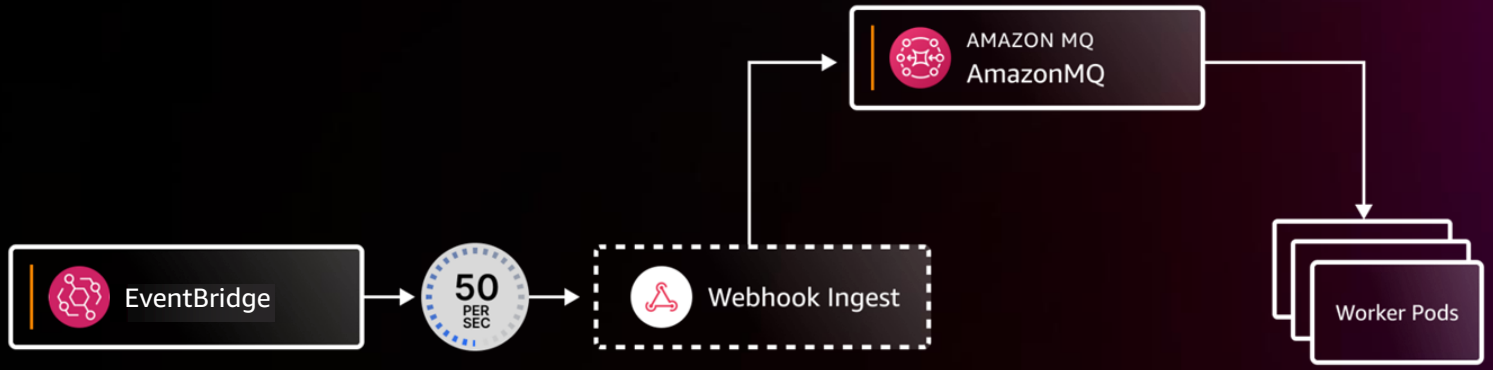
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Traffic Spike



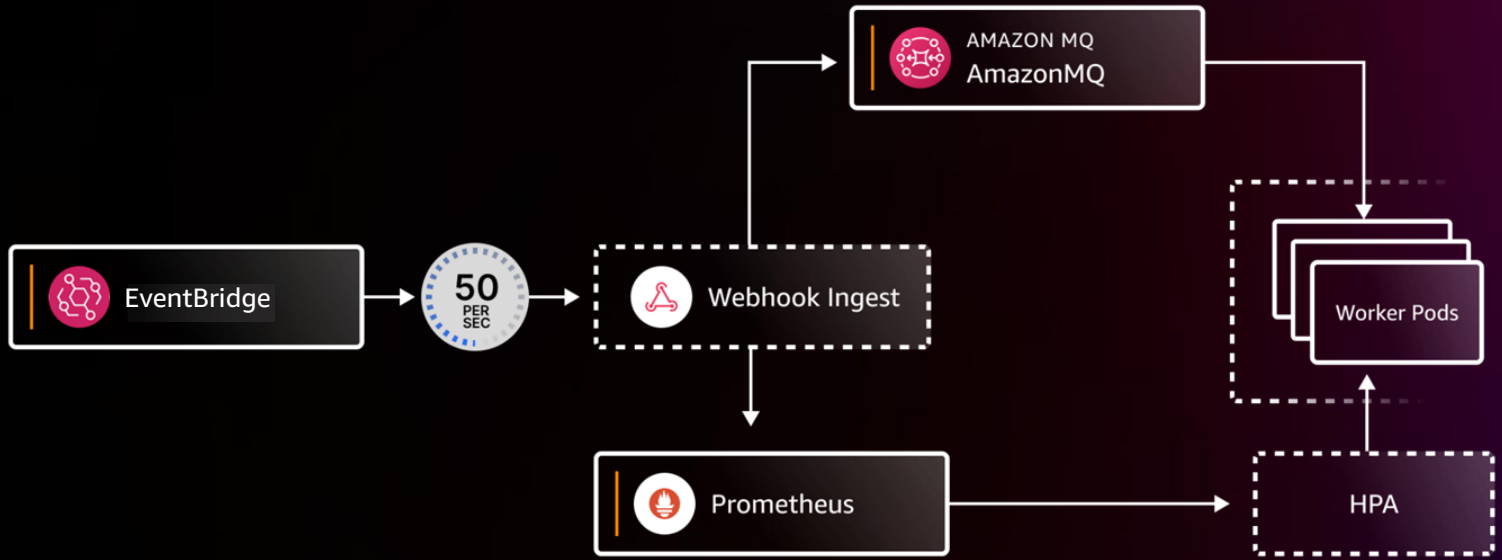
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Traffic Spike



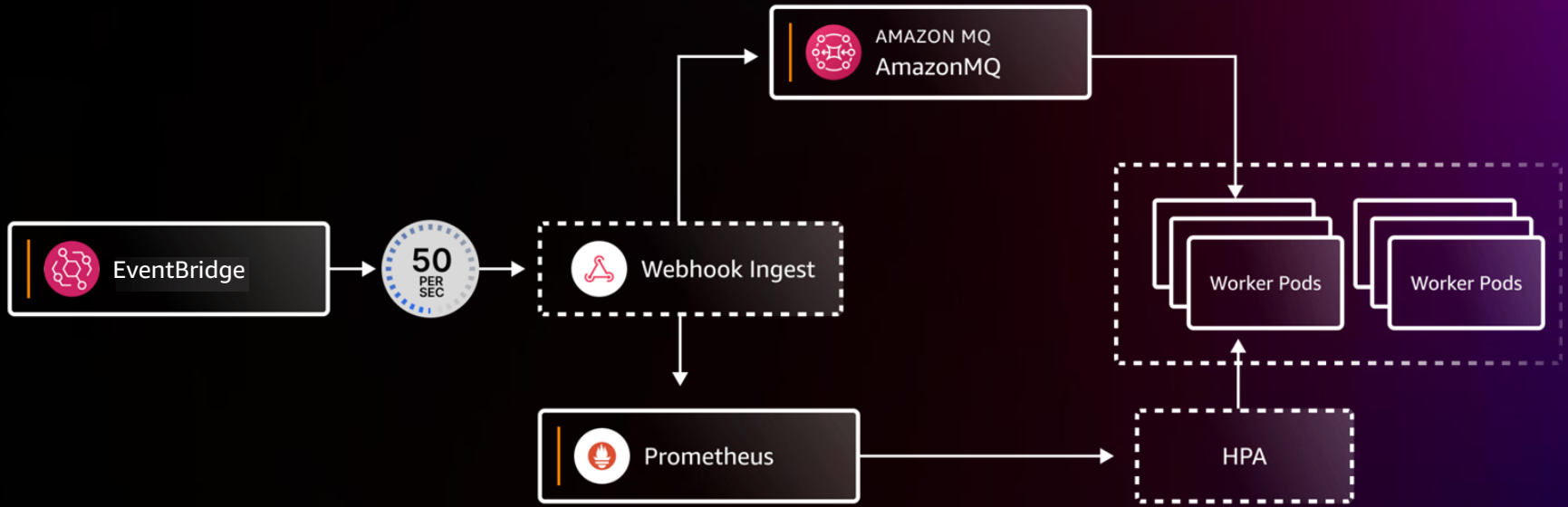
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Traffic Spike



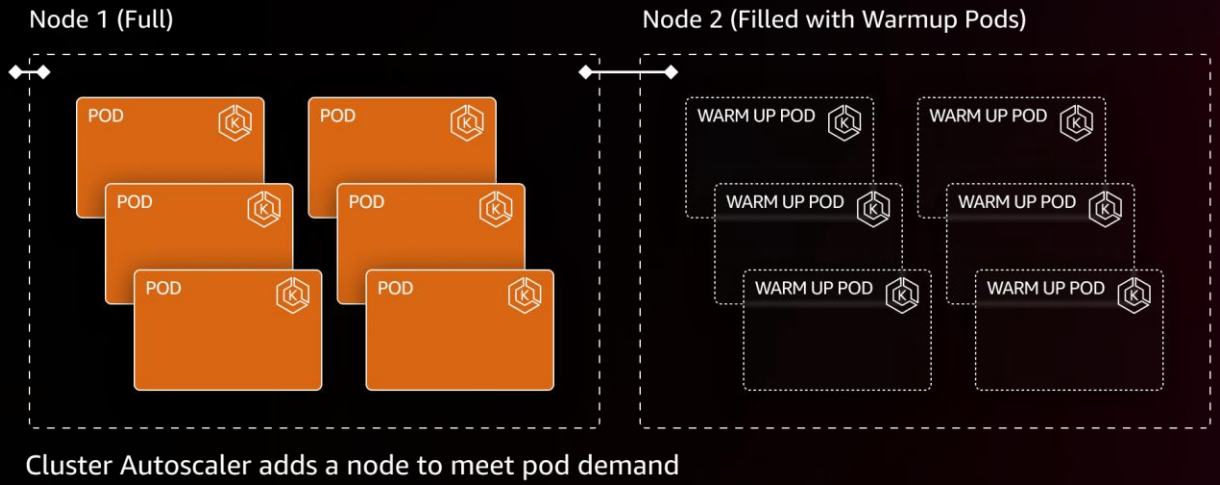
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Traffic Spike



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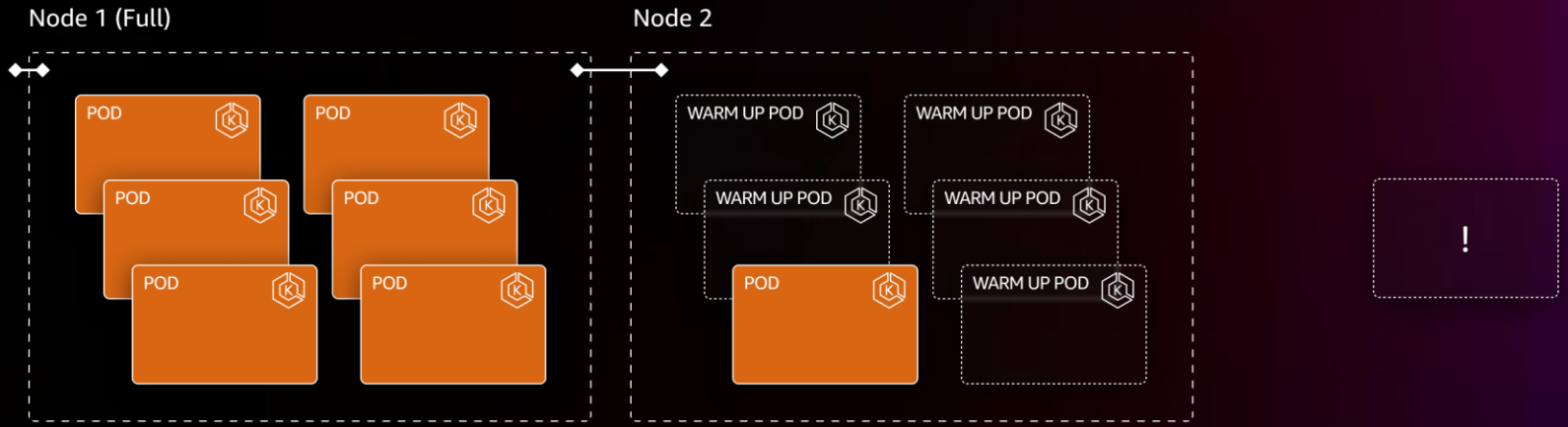
Cluster Autoscaling



Cluster Autoscaler adds a node to meet pod demand

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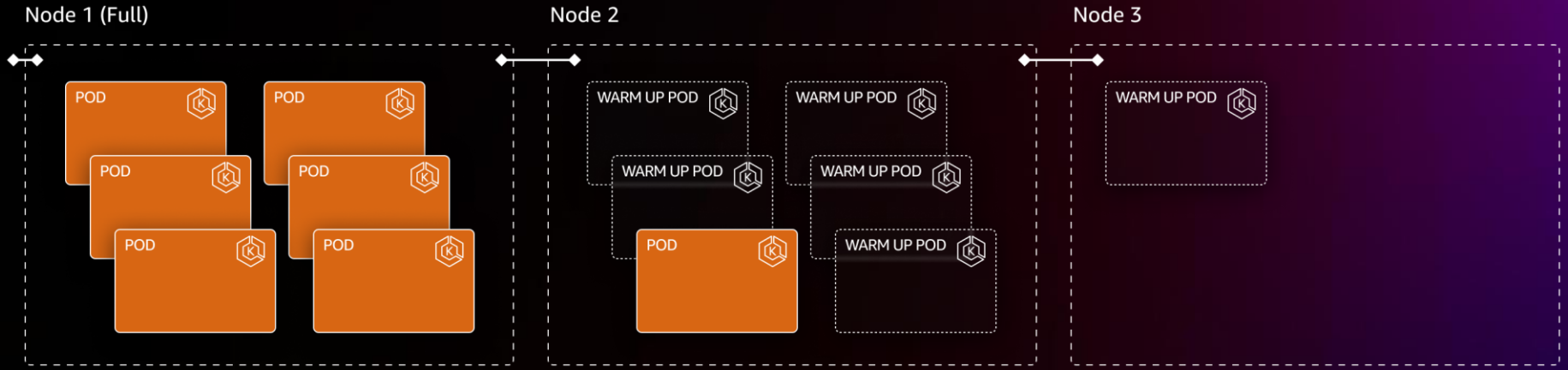
Cluster Autoscaling



HPA Creates more pods because of spike of incoming events

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Cluster Autoscaling



Cluster Autoscaler adds a node to meet pod demand

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Failure handling

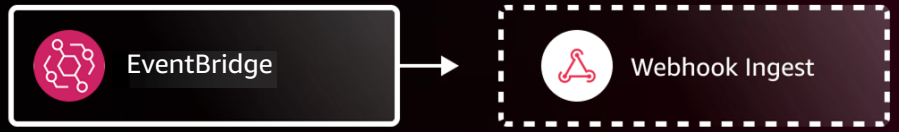
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Dead letter queue



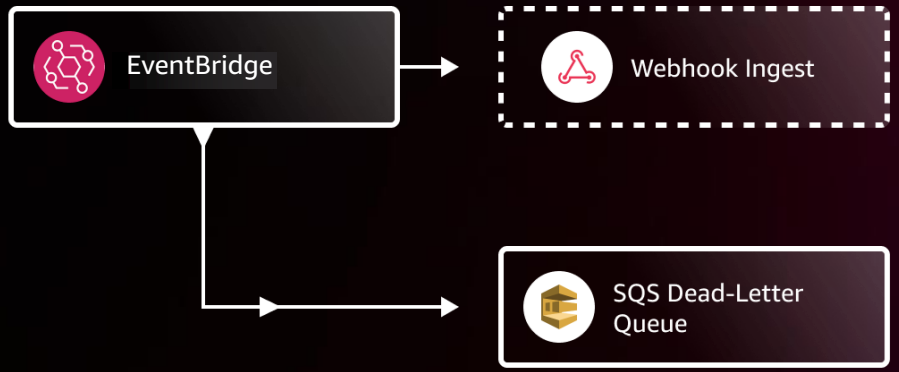
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Dead letter queue



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Dead letter queue



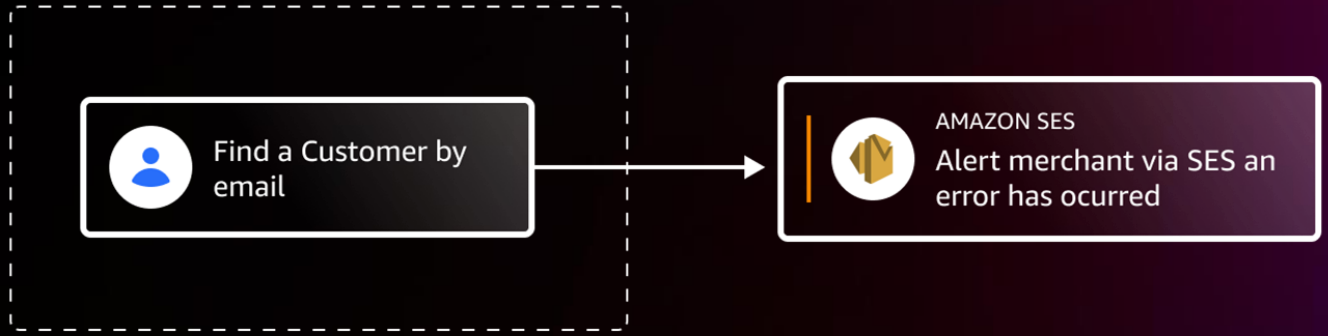
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Connector error handling



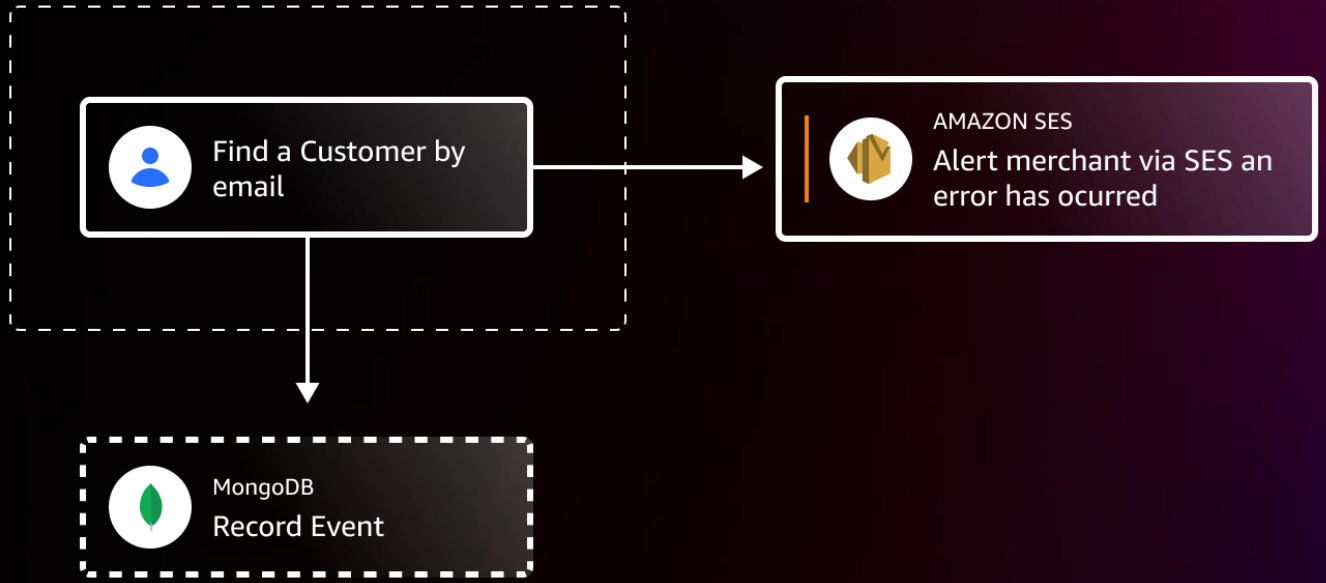
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Connector error handling



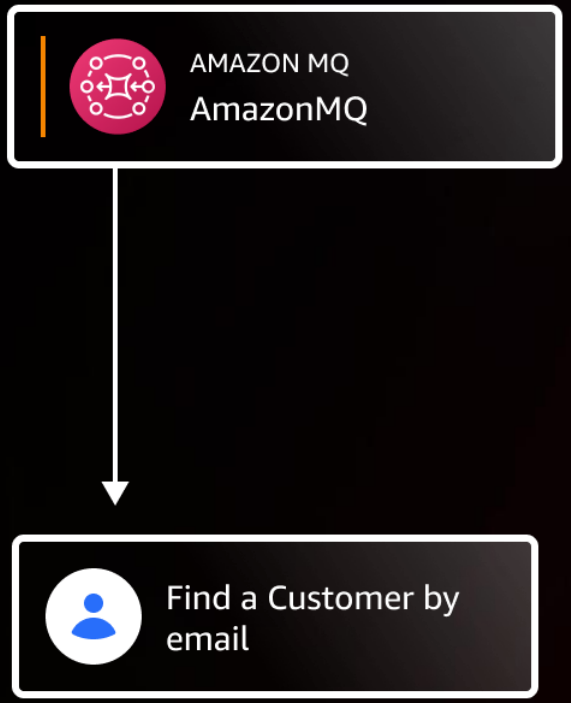
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Connector error handling



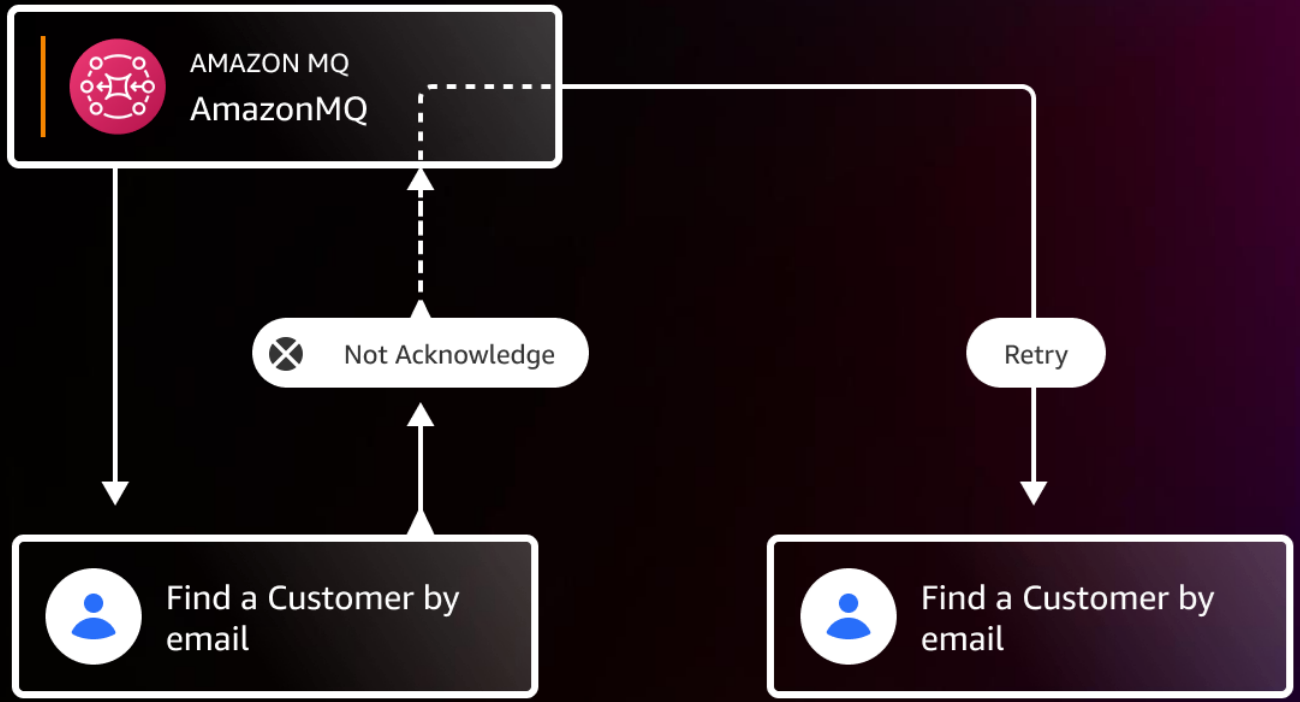
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Infra failure



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Infra failure

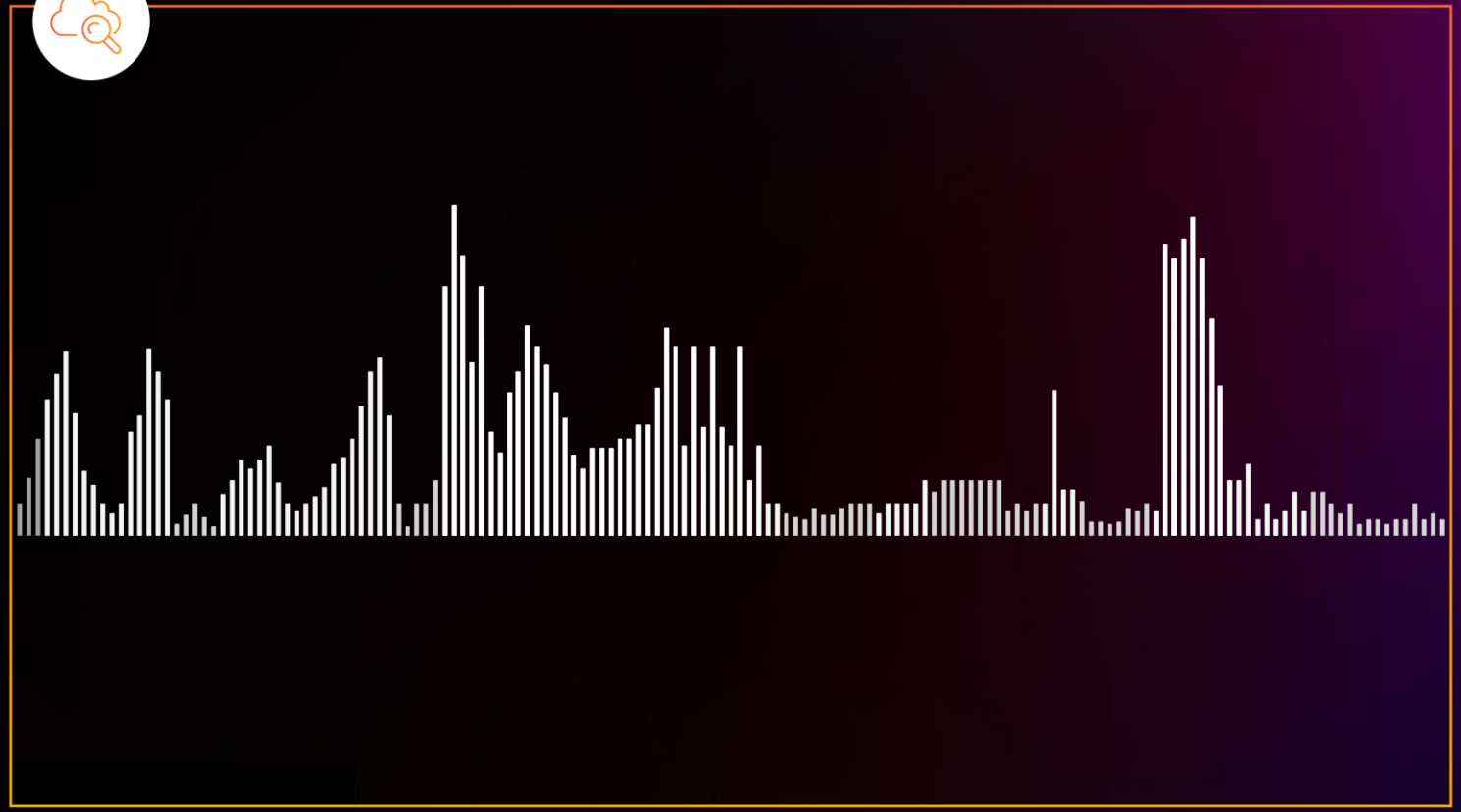


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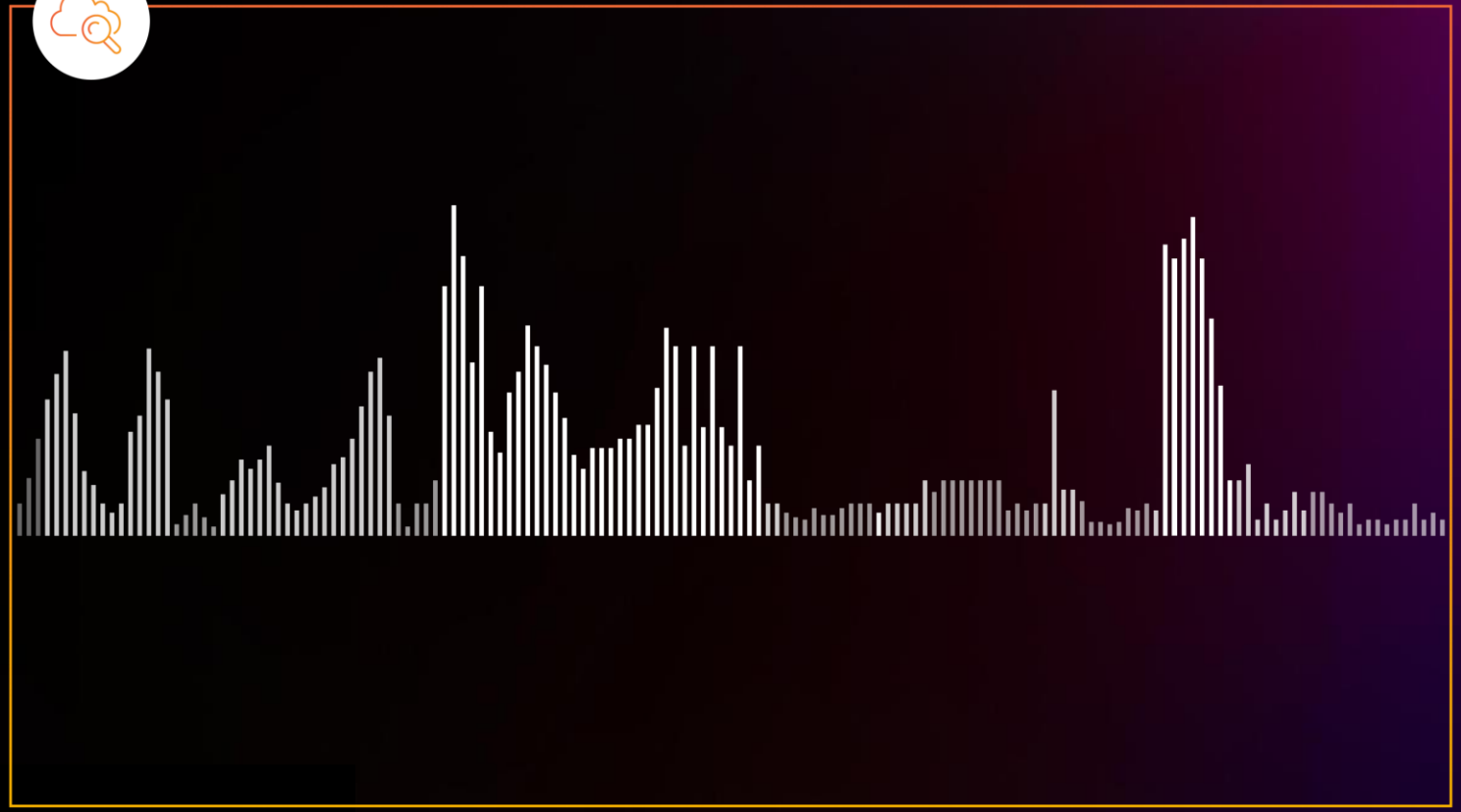
Monitoring

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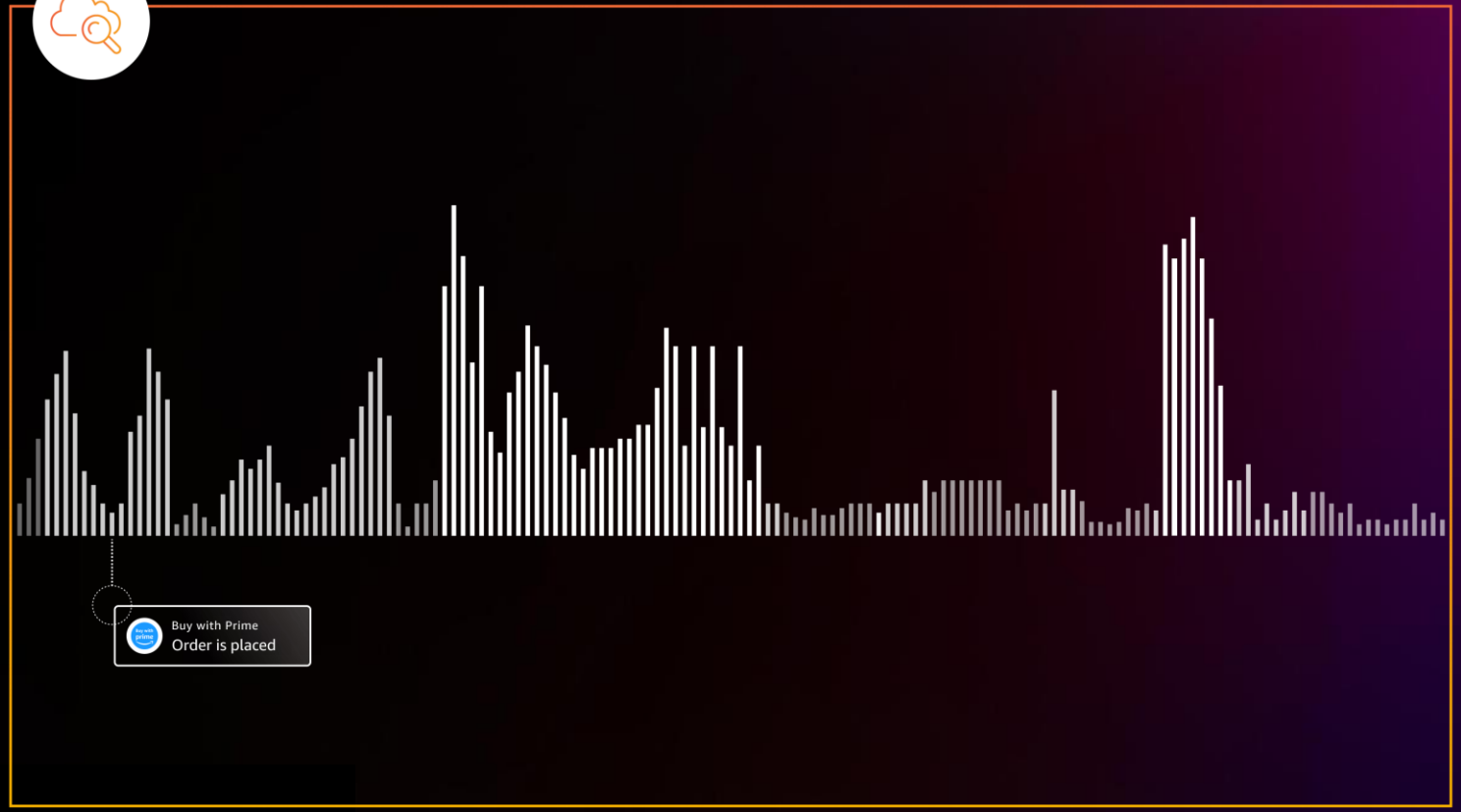
Monitoring



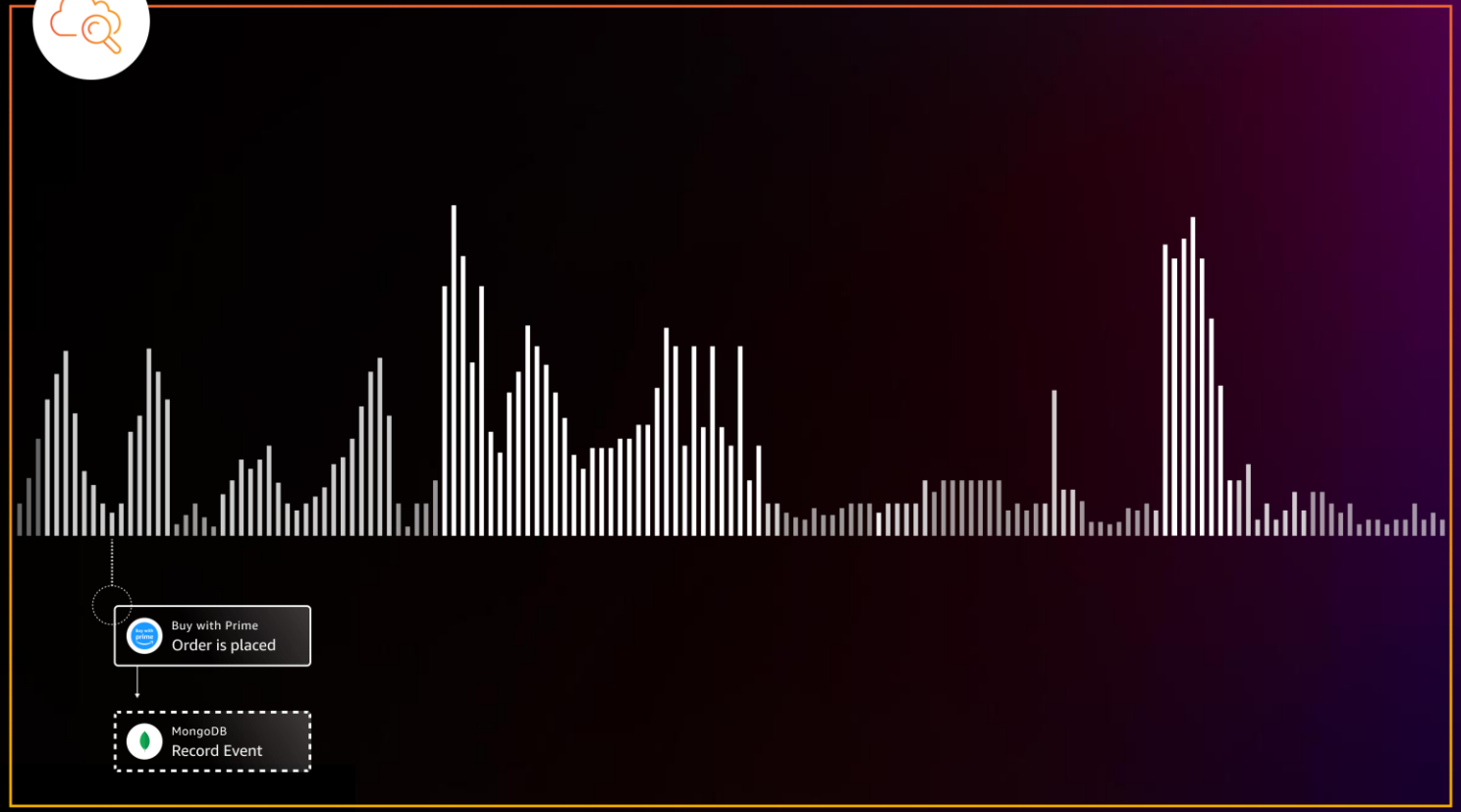
Monitoring



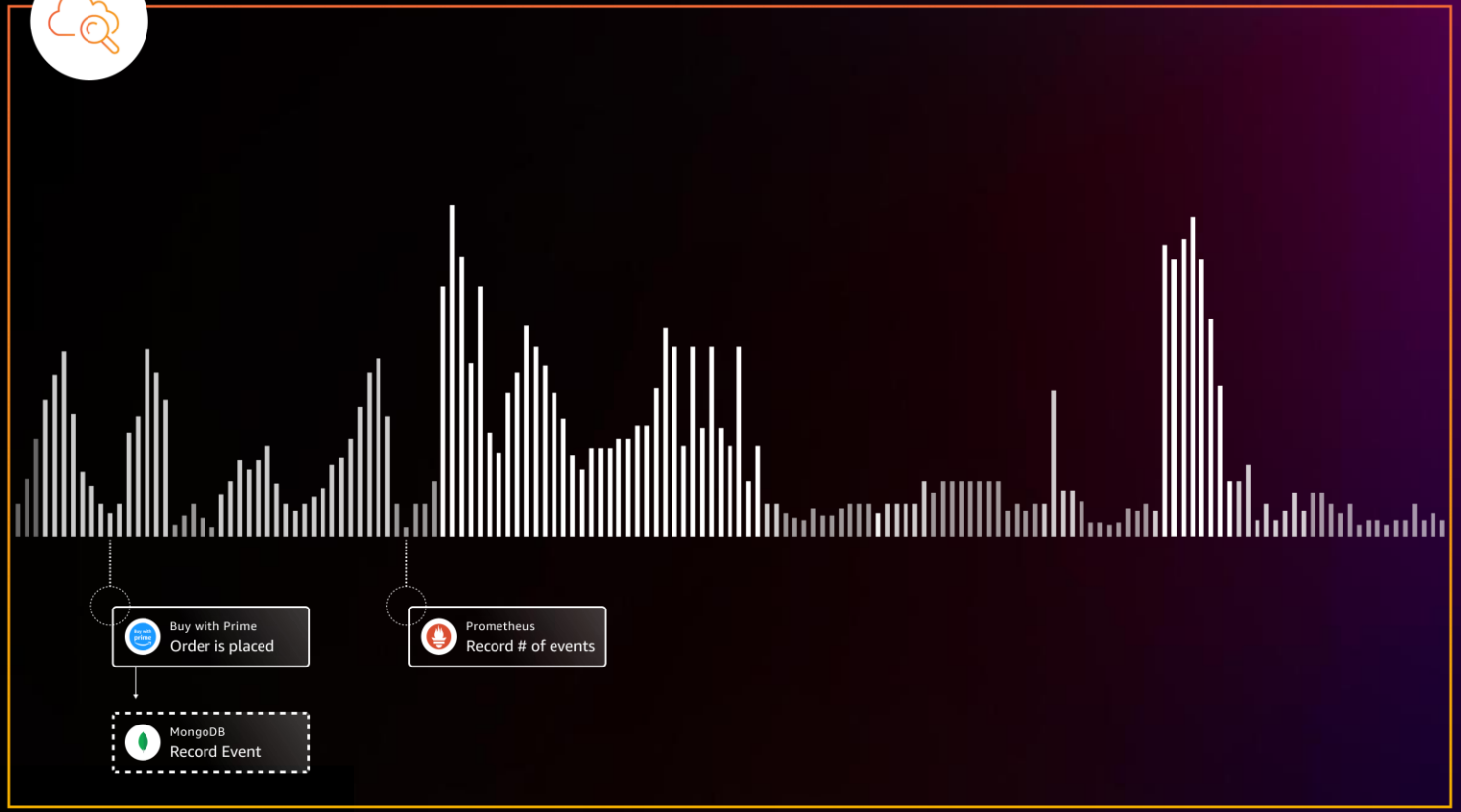
Monitoring



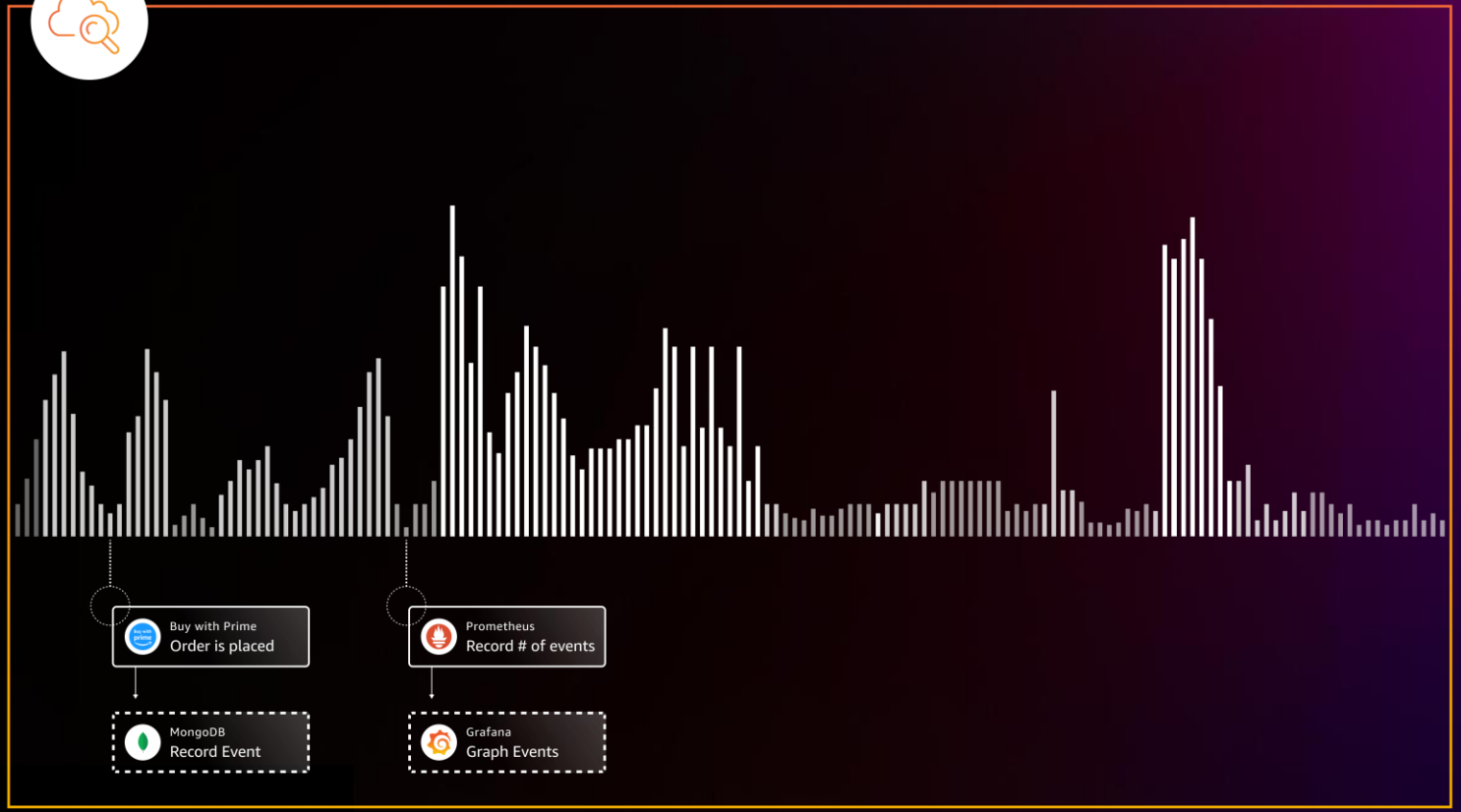
Monitoring



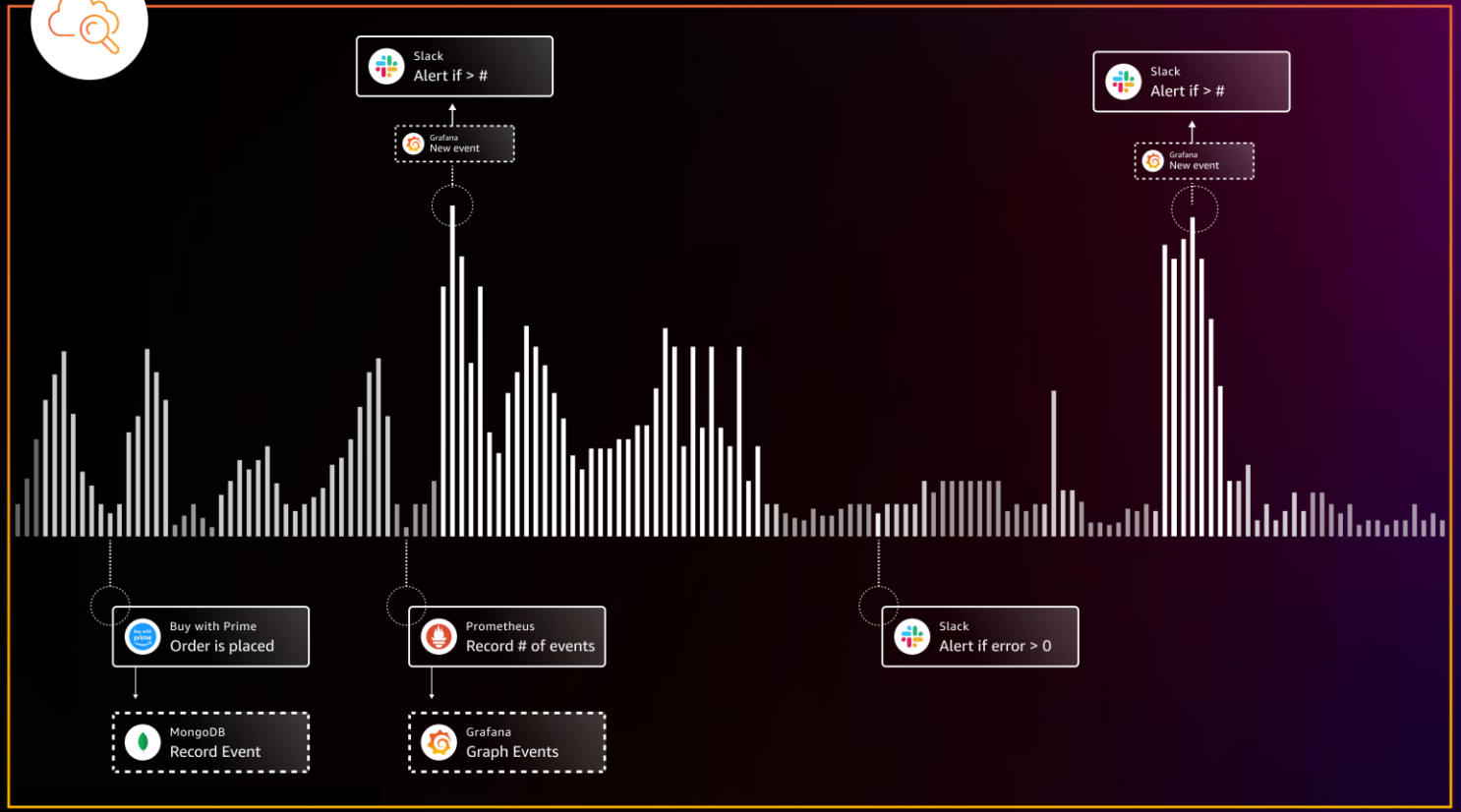
Monitoring


Buy with Prime
Order is placed
Prometheus
Record # of events
MongoDB
Record Event

Monitoring


Buy with Prime
Order is placed
Prometheus
Record # of events
MongoDB
Record Event
Grafana
Graph Events

Monitoring


Slack
Alert if > #
Grafana
New event
Slack
Alert if > #
Grafana
New event
Buy with Prime
Order is placed
Prometheus
Record # of events
Slack
Alert if error > 0
MongoDB
Record Event
Grafana
Graph Events

Recap

How alloy integrates with BWP

The data flow

Scalability

Failure handling

Monitoring

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Conclusion

Key architecture decision points in the Alloy integration with Buy with Prime:

- Scalability
- Fault tolerance/error handling
- Utilization of managed services

We highly value Buy with Prime Partners – interested? Join our waitlist – reach out to our team! Ask us questions! We want to work with you.

aws

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What's next

- Learn more about Buy with Prime in AWS Demo theater

- Join the Buy with Prime community to be part of the new ecommerce world



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Thank you!

Gregg Mojica (he/him)

Co-Founder, CTO
Alloy Automation

Yuval Schaal (she/her)

Solutions Architect
Amazon





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