

AWS re:Invent

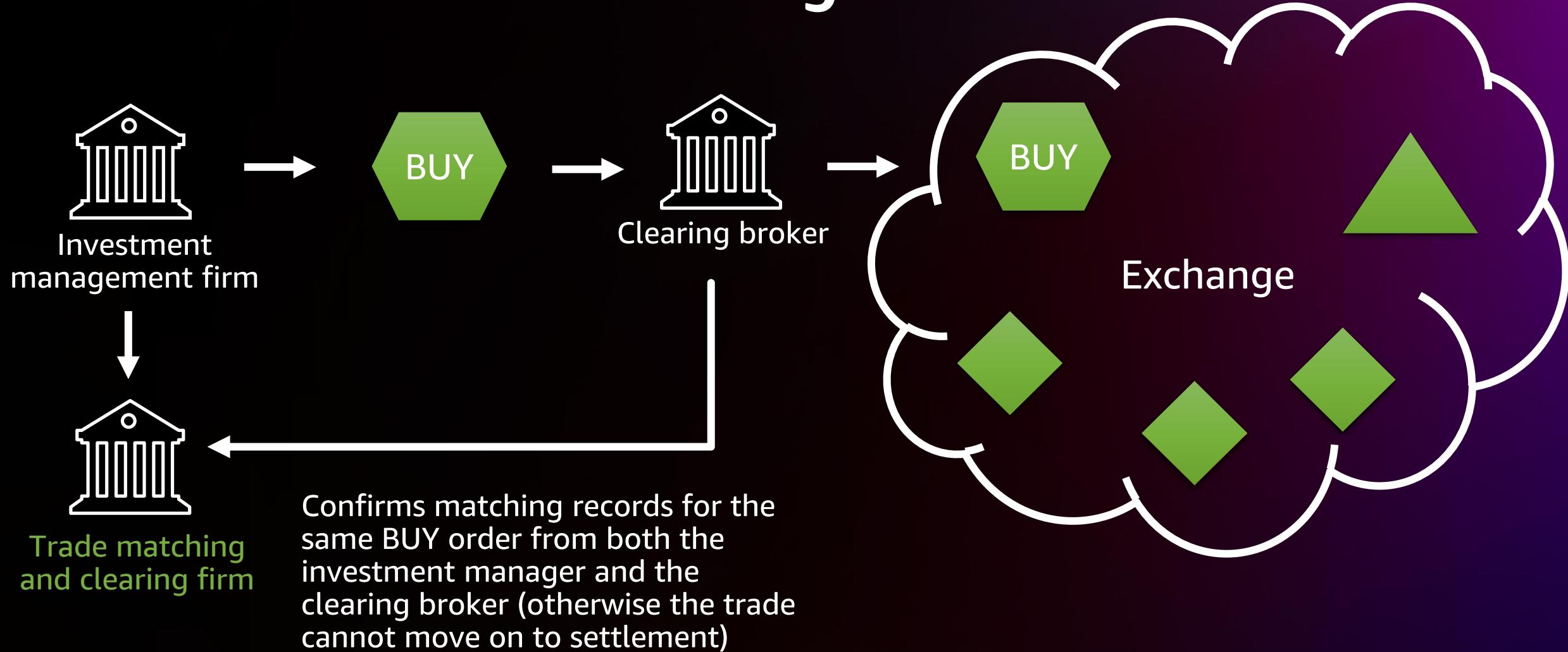
NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

Advanced cross-Region disaster recovery patterns

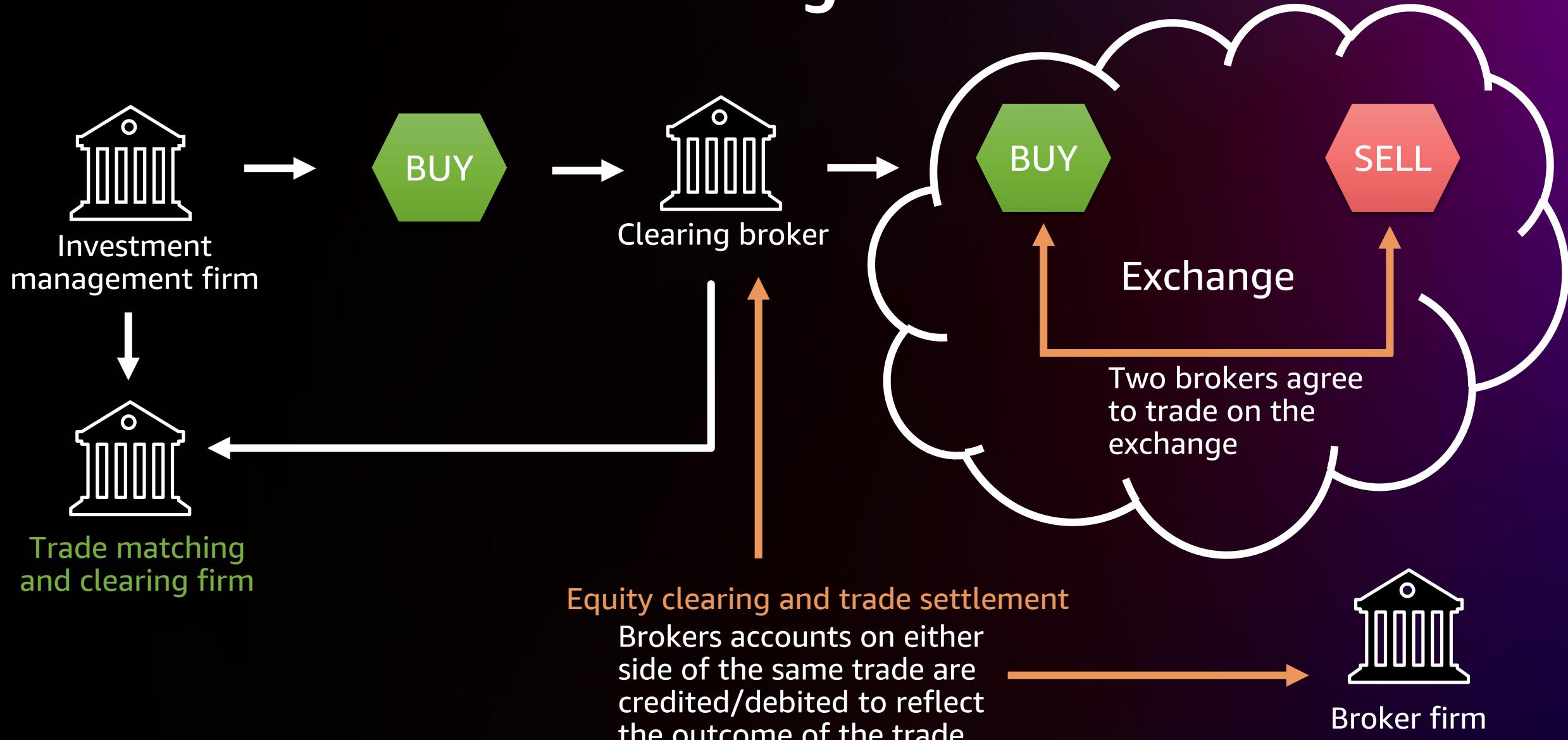
Shivani Sharma
Solutions Architect
AWS

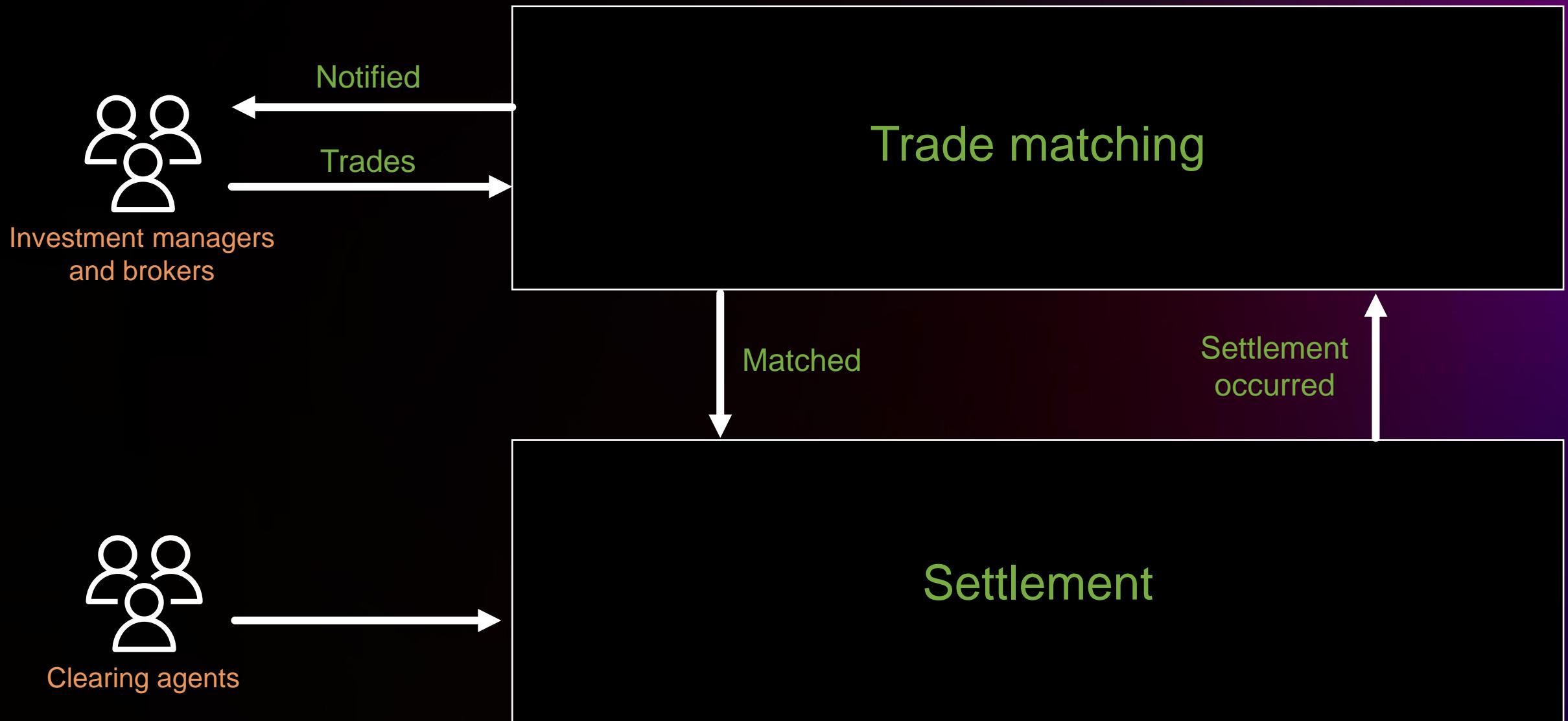
Bikash Behera
Solutions Architect
AWS

Use case: Trade matching

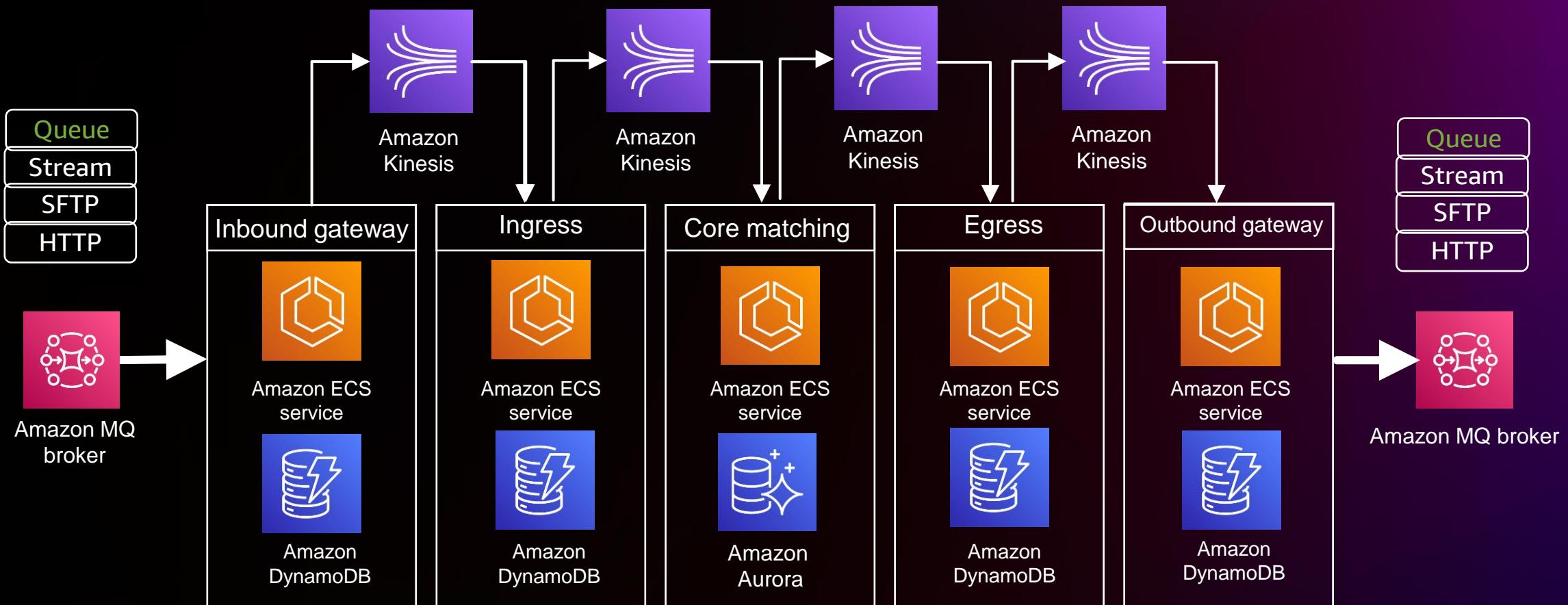


Use case: Trade matching





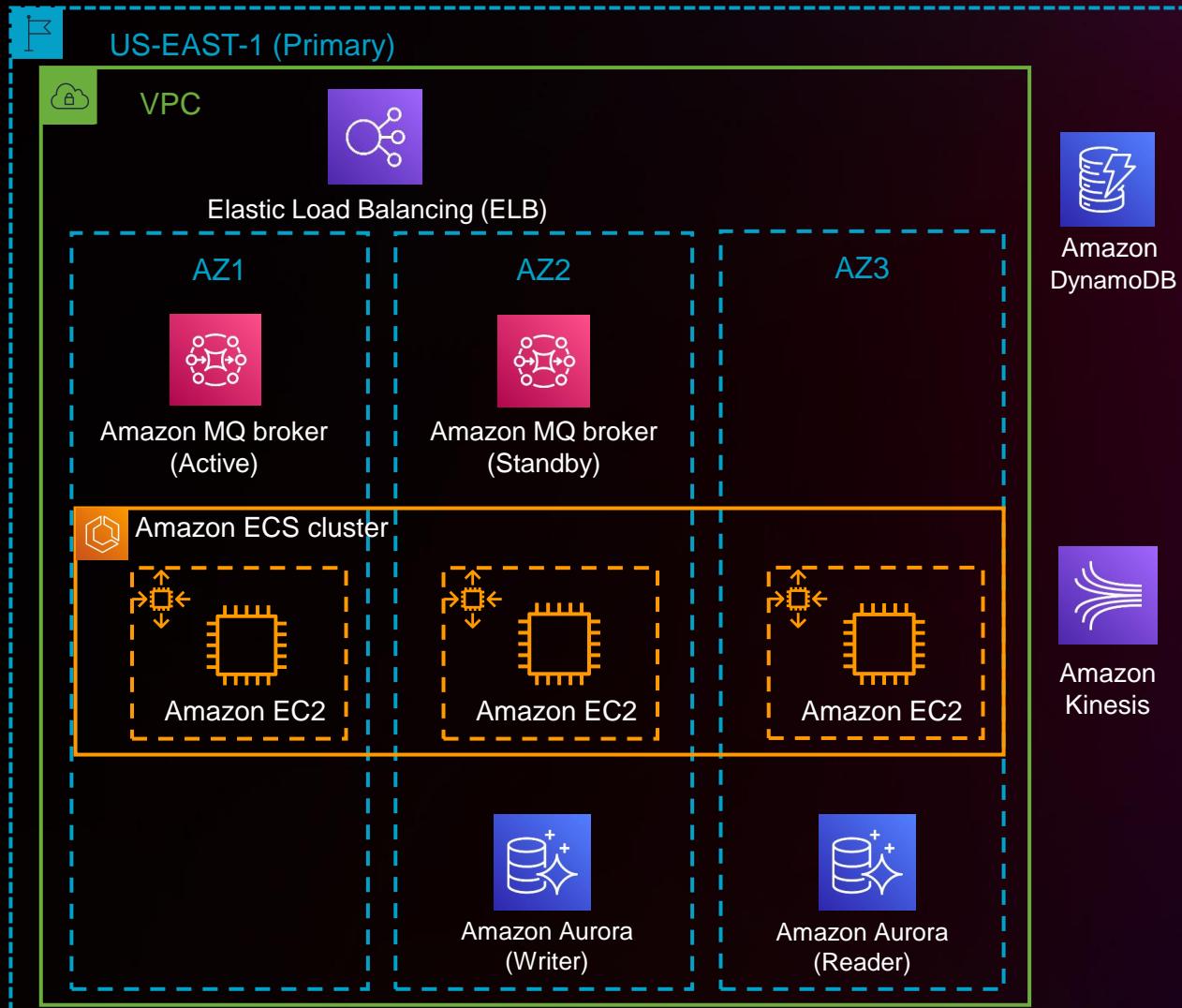
Trade matching application overview



Workshop architecture



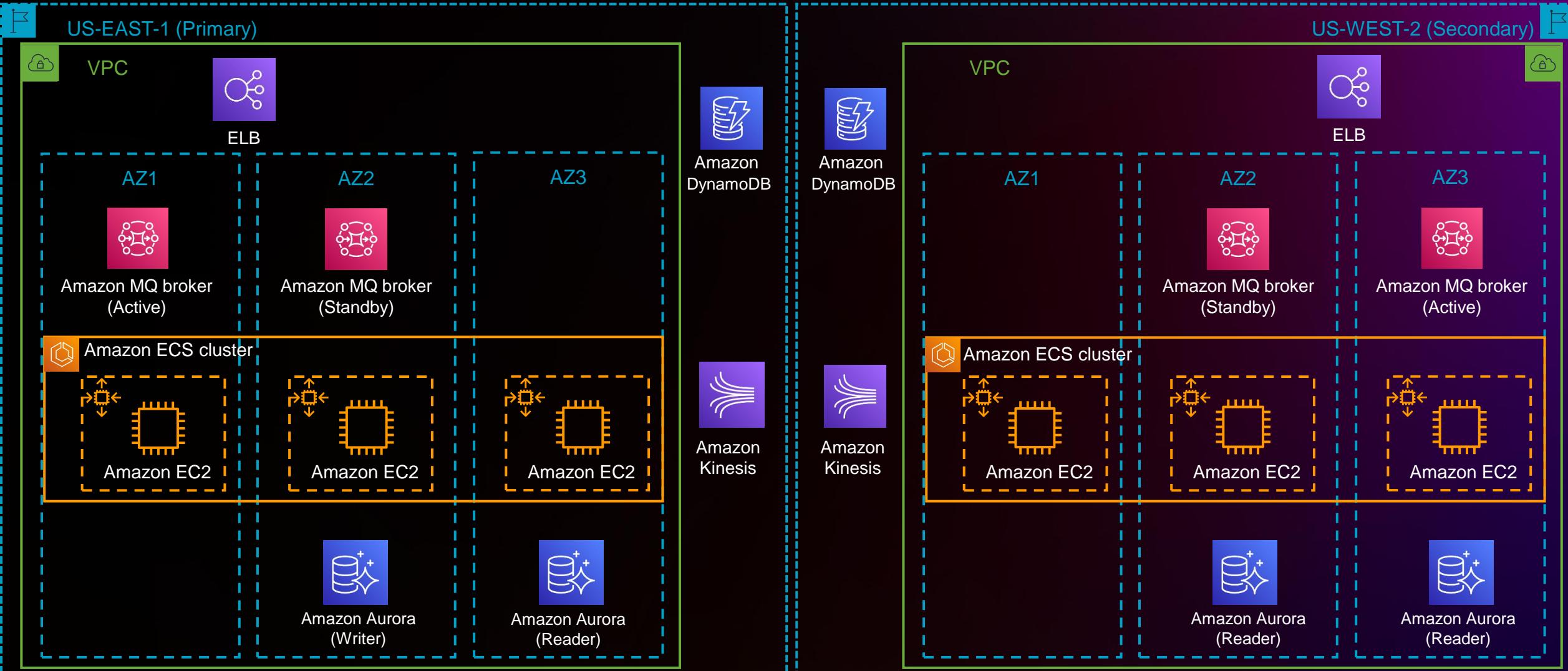
Amazon Route 53



Multi-Region architecture



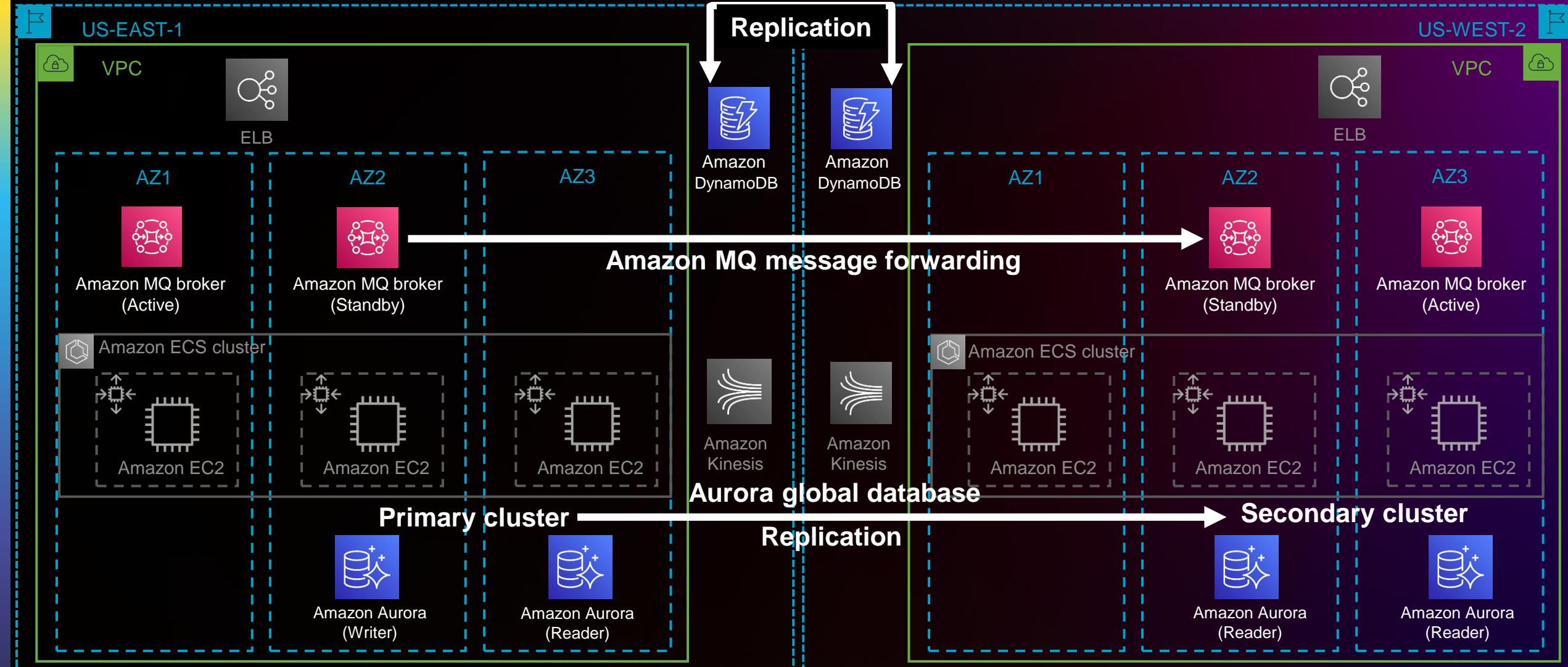
Amazon Route 53



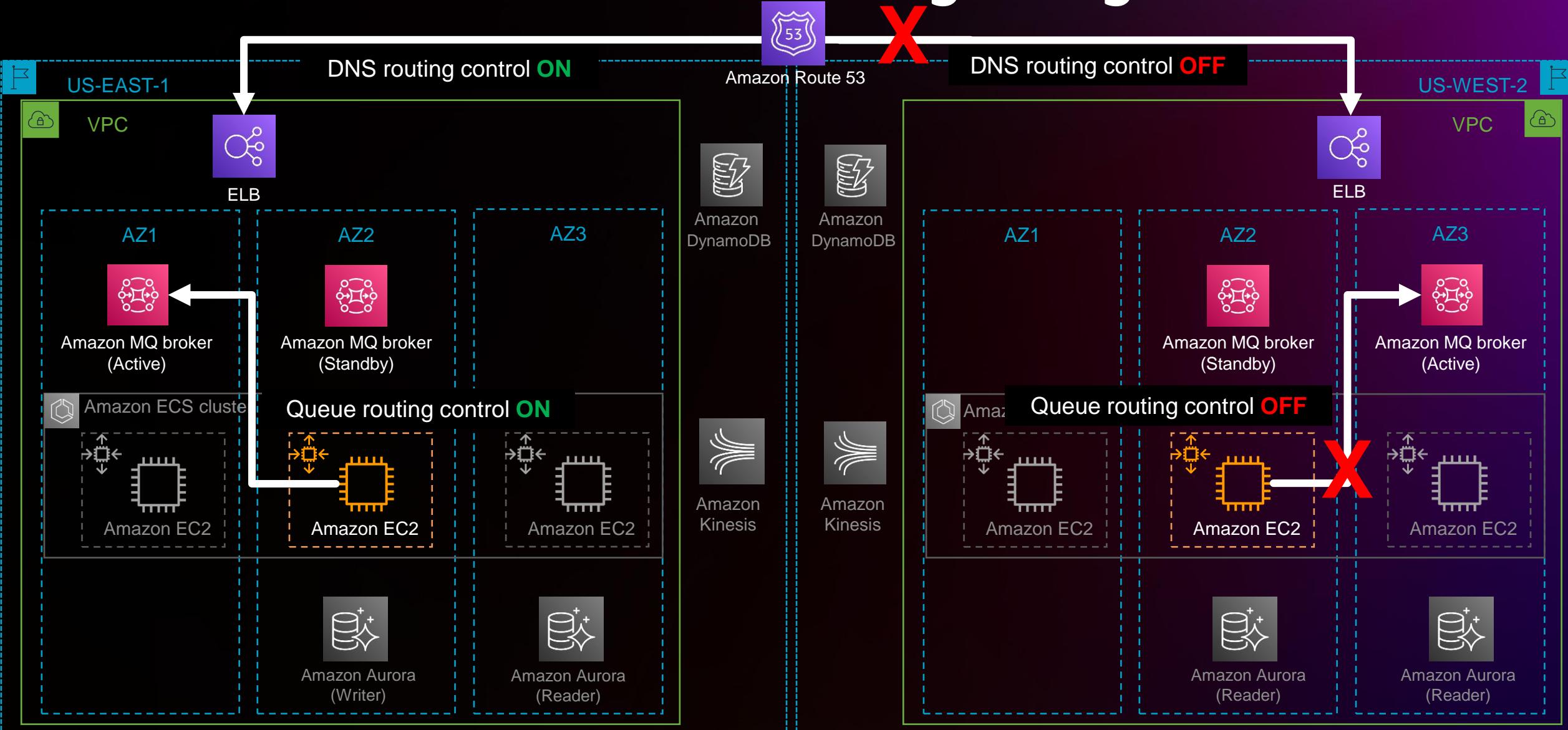
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Module 1: Cross-Region replication

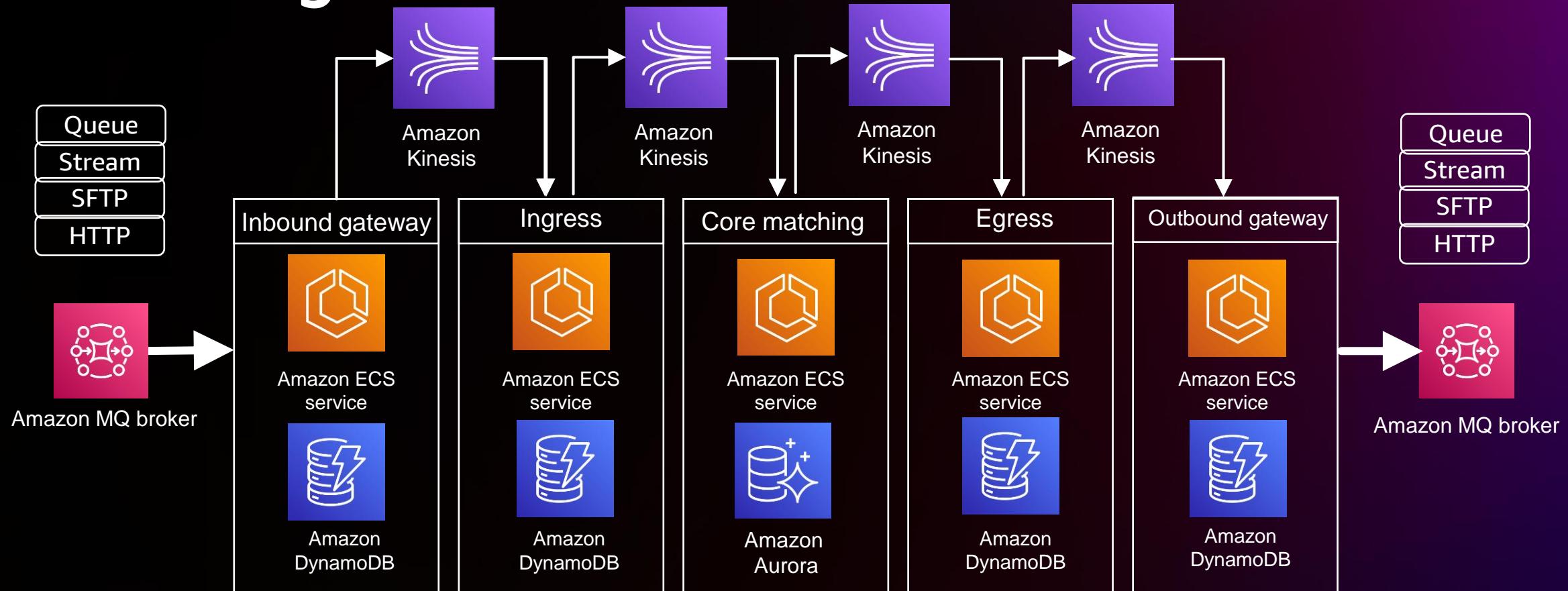
DynamoDB global table



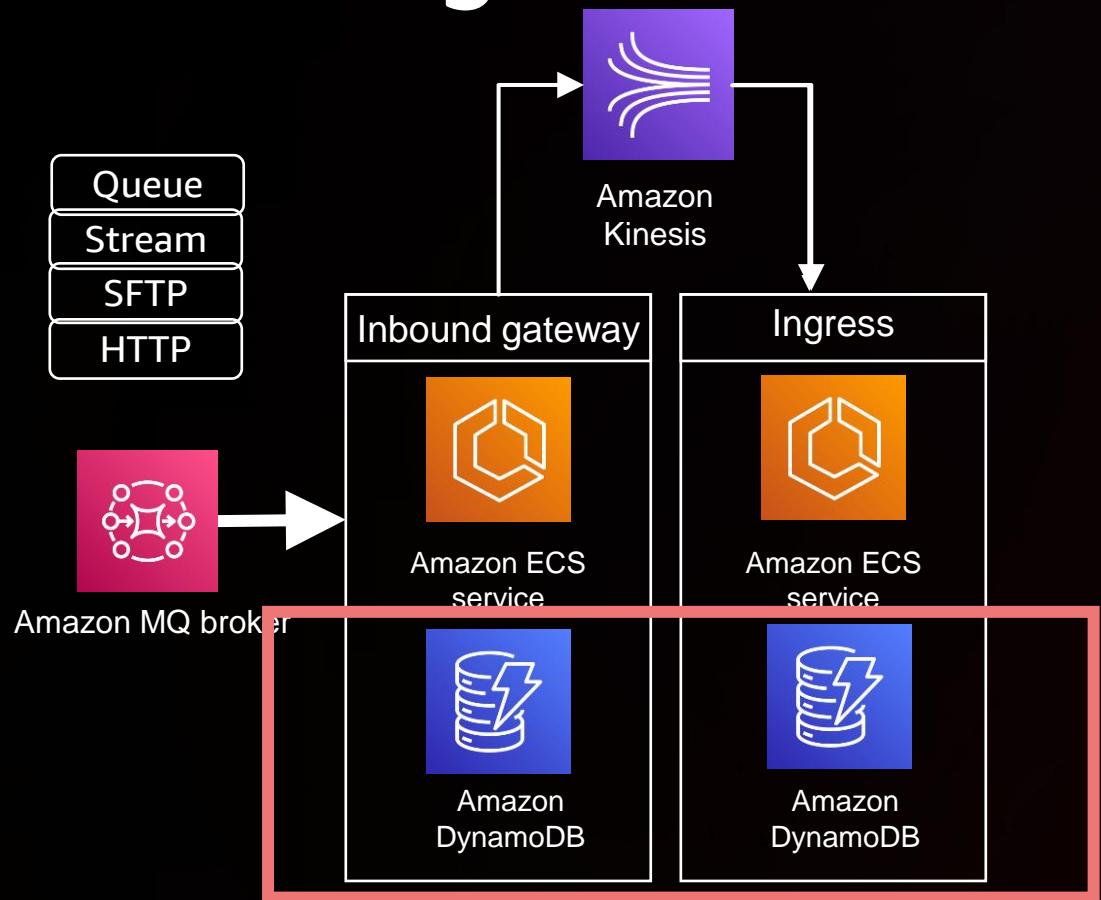
Module 2: Global traffic shifting using Route 53 ARC



Module 3: Reconciliation and exactly-once processing



Module 3: Reconciliation and exactly-once processing



- The applications are designed for idempotency, and each incoming message is assigned a globally unique UUID
- Each step of the process is stored externally and replicated so we can query adjacent data stores to reconcile missing messages

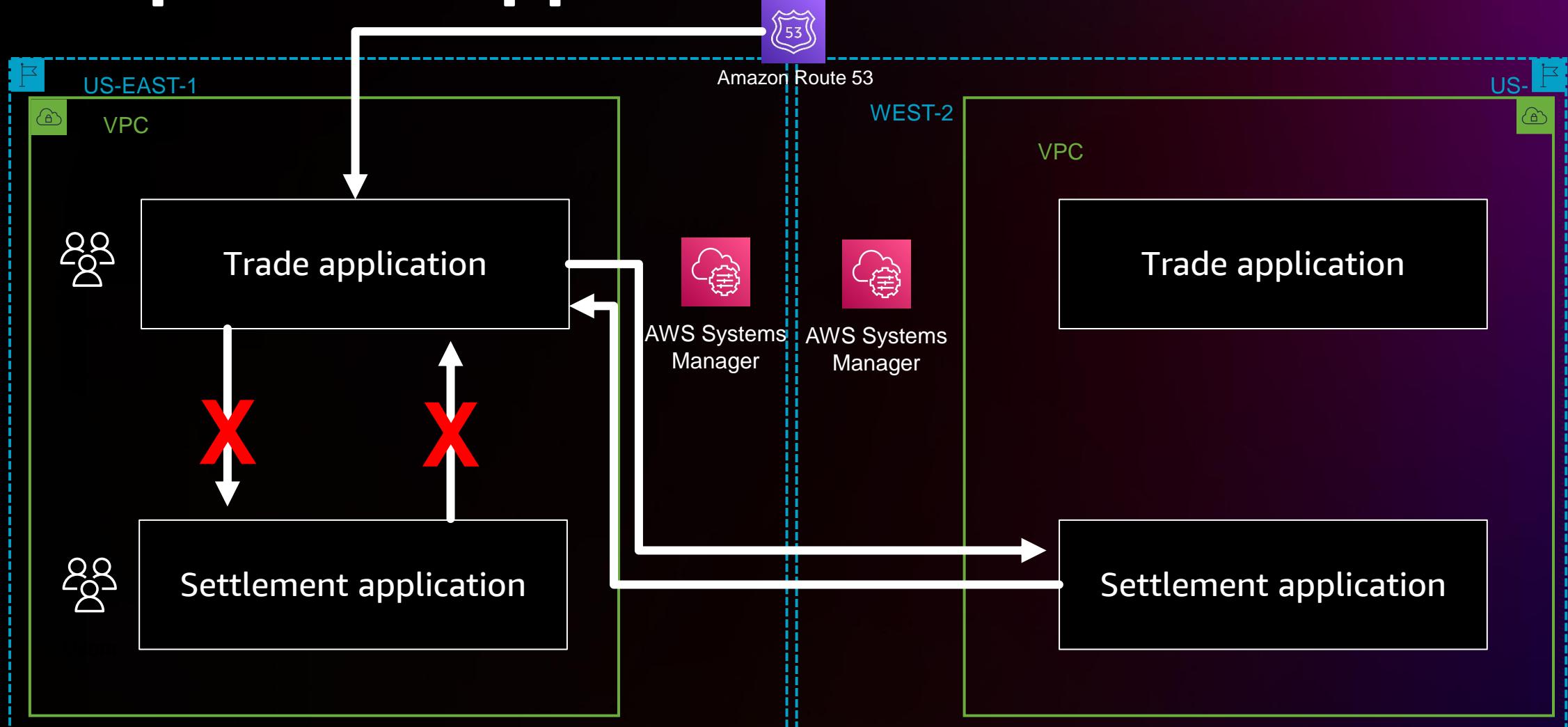
Module 4: Big red button for failover

1. Close the flow of messages in the primary Region
2. Rotate the application from the primary to the secondary Region
3. Reconcile and replay any lost messages between any application components
4. Open the flow of messages in the secondary Region

AWS Systems
Manager



Module 5: Disaster recovery orchestration for co-dependent applications



Starting the workshop

Workshop URL: <https://tinyurl.com/fsi307>

Workshop Hash: 9e7d-09f42e-fa

Thank you!

Shivani Sharma

awsshivs@amazon.com

Bikash Behera

behebika@amazon.com



Please complete the session
survey in the **mobile app**