
AWS
re:Invent
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ANT318-R

Build event-based microservices with AWS streaming services

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Agenda

What are the benefits and challenges with microservices?

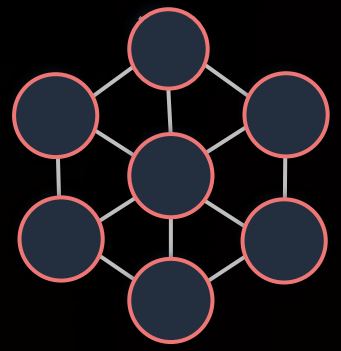
Why should we build serverless event-based microservices?

How do AWS serverless services help build stateful event-driven architectures?

Call to action

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Why microservices?



Microservices

Agility

Easier to scale

Faster to develop

Developer choice

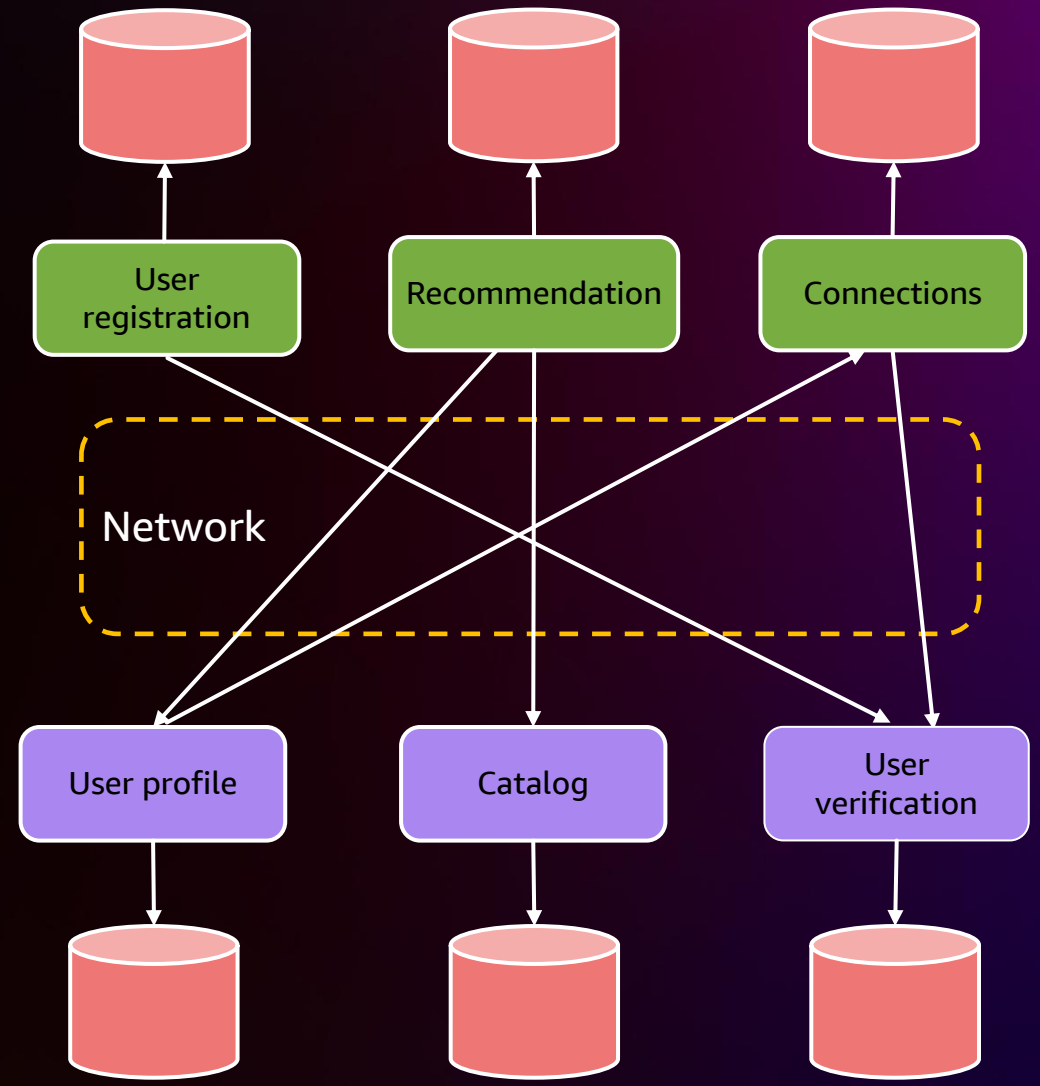
Enabling innovation

Accelerating time to market for new features

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What challenges can you identify?

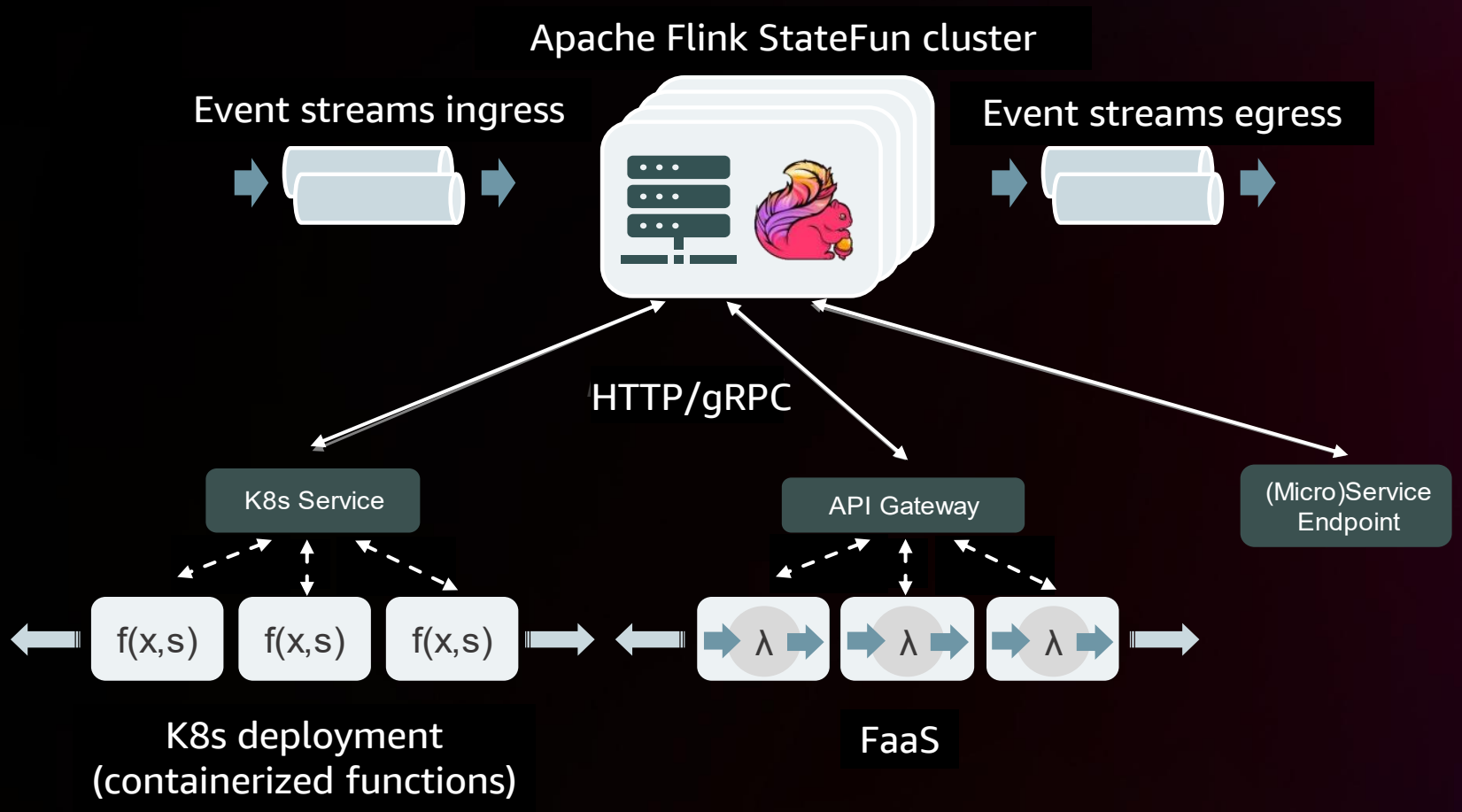
- Operational excellence
- Reliability
- Performance efficiency
- Security
- Cost optimization
- Sustainability



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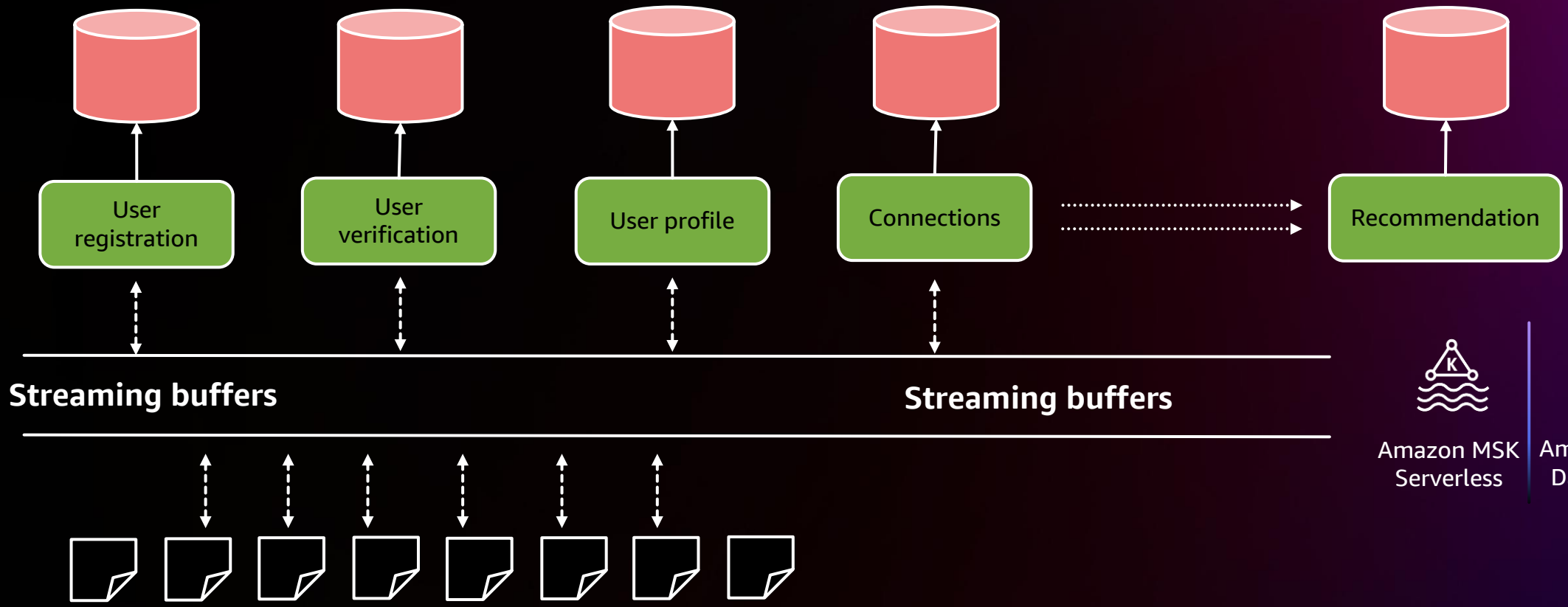
Apache Flink Stateful Functions

POLYGLOT EVENT-DRIVEN FUNCTIONS FOR DISTRIBUTED STATEFUL APPLICATIONS



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What challenges can you identify?

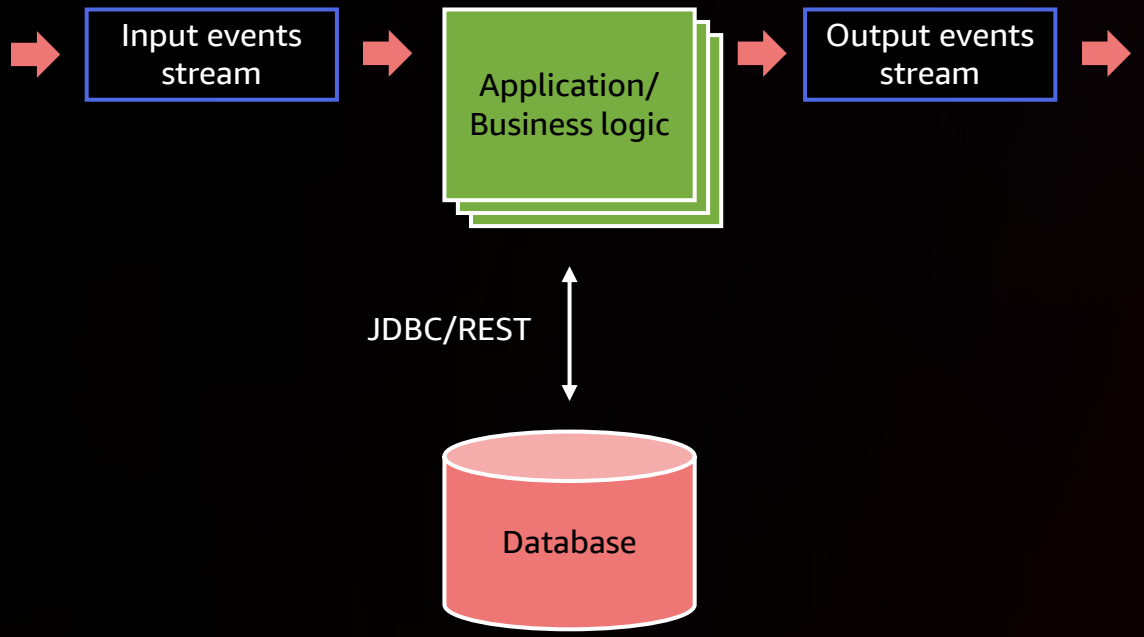


Amazon MSK Serverless

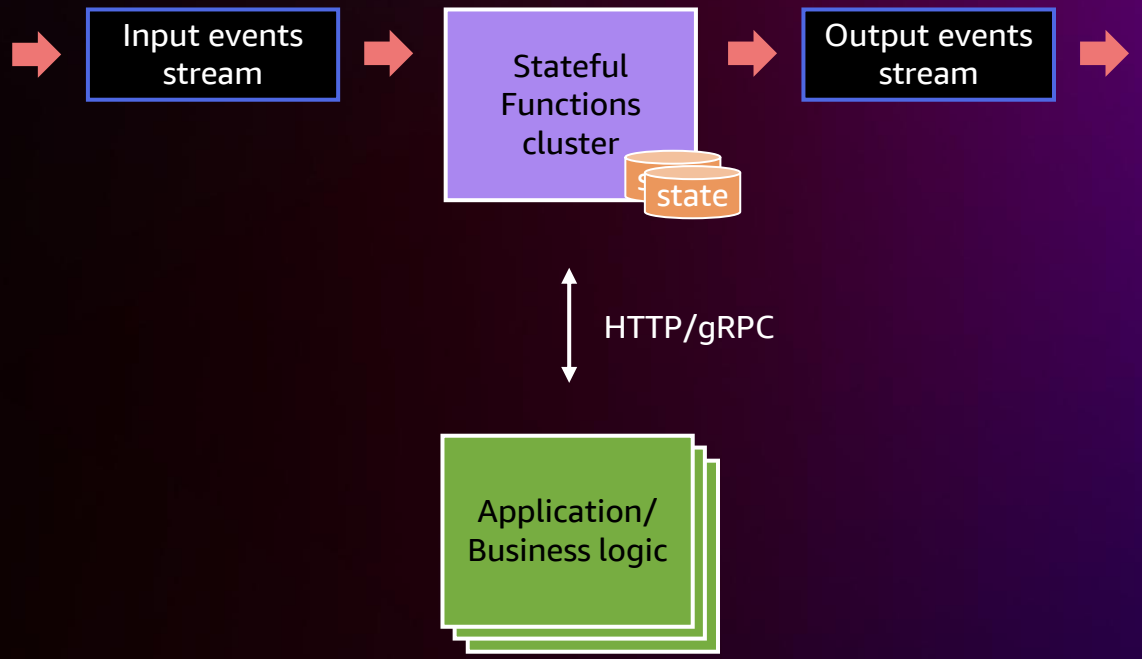
Amazon Kinesis Data Streams

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Event-driven applications with StateFun



Traditional database-backed microservice



Event-driven function

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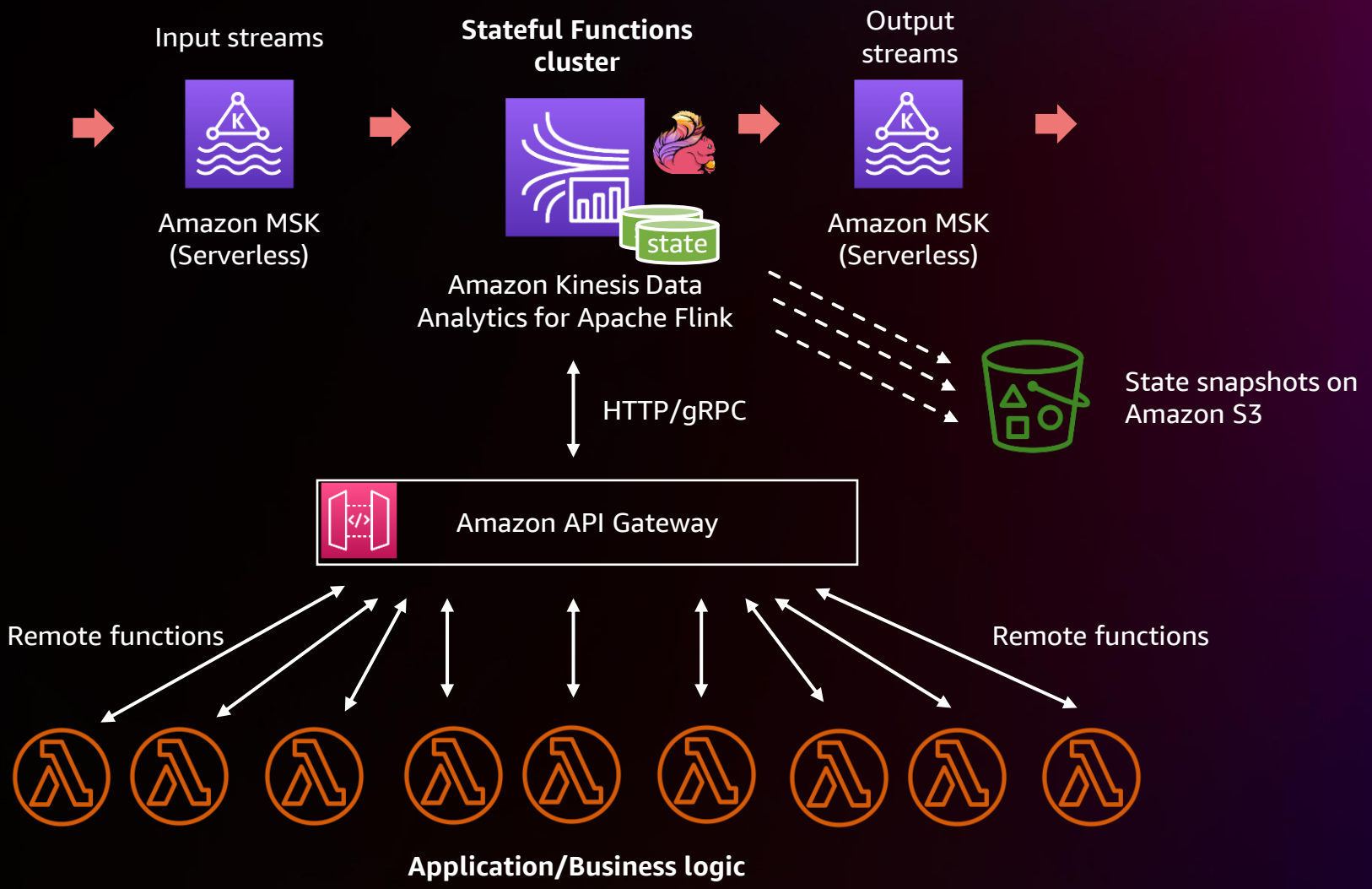
Event-driven applications with StateFun

- ✓ Clearly defined ingress and egress
- ✓ Simplified composability
- ✓ Decoupling of application logic and state management
- ✓ Locally embedded state – no databases required
- ✓ Exactly once semantics

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Putting it all together



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Call to action

- AWS Well-Architected and the Six Pillars
- Apache Flink official documentation
- Apache Flink Stateful Functions
- Amazon MSK Serverless
- Amazon Kinesis Data Streams
- Amazon Kinesis Data Analytics
- AWS Lambda
- Introducing Amazon Kinesis Data Analytics Studio

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