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

API301-R

Operational best practices for event-driven architectures

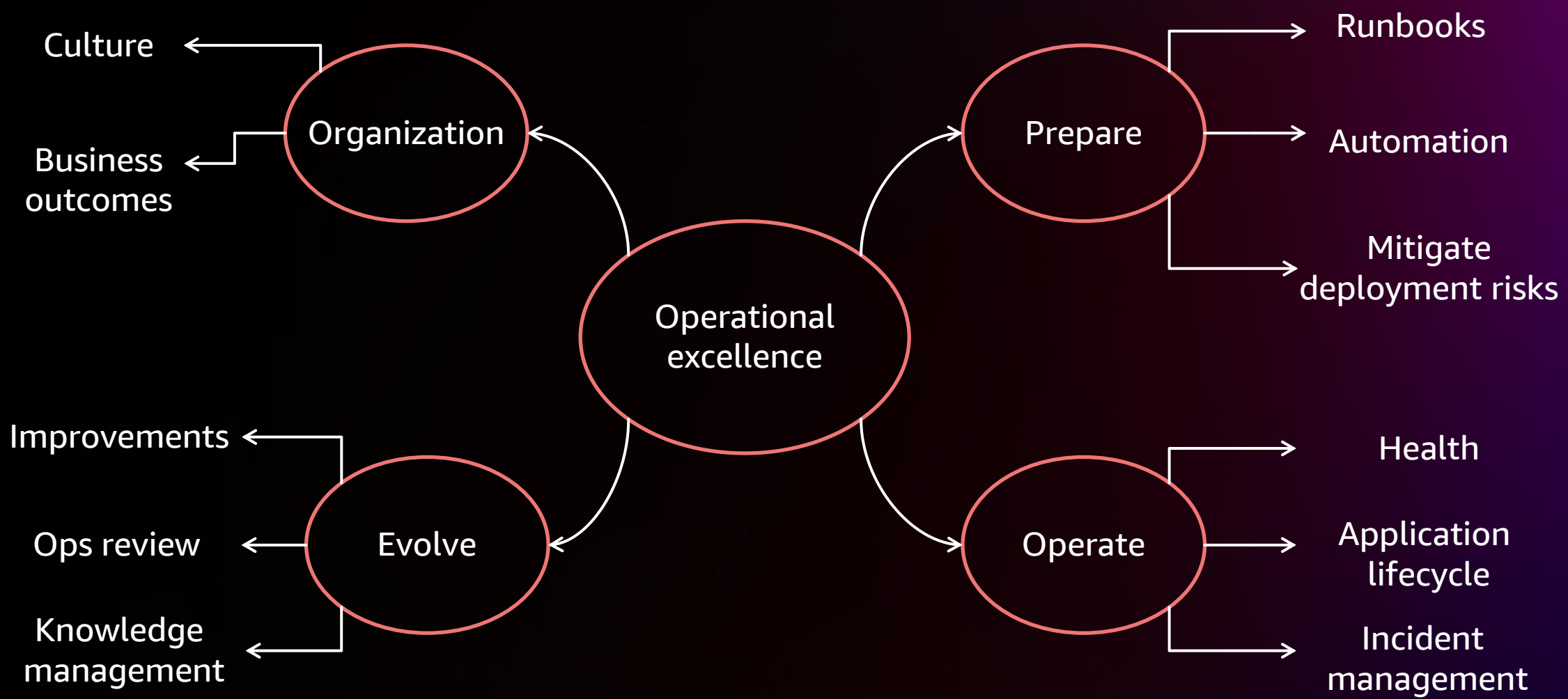
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Operational excellence

ACTIVITIES AFTER WORKLOAD IS DEPLOYED

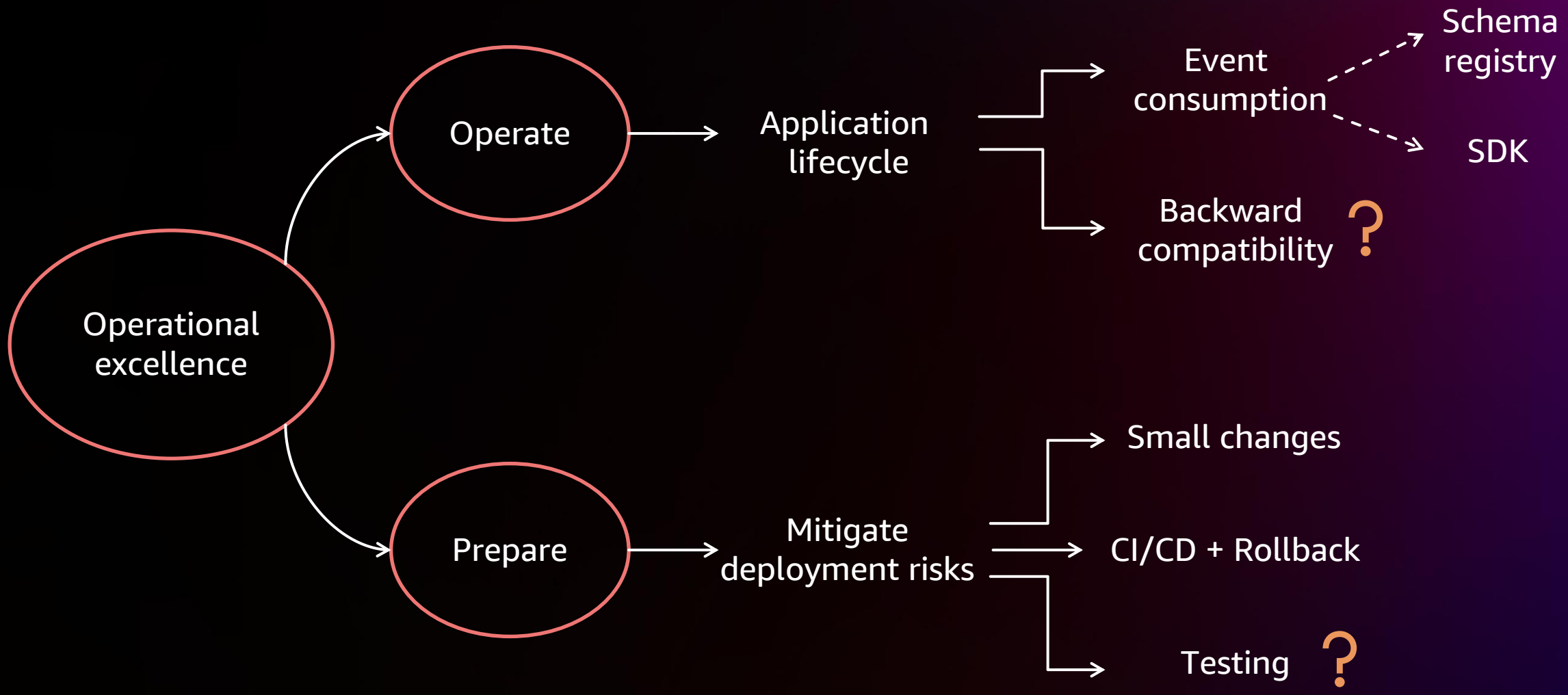


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Operational excellence

FOCUS TODAY



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Ensuring backward compatibility

Schema testing

Validate event schema used by the consumer is the same, or a subset of the schema published by the producer

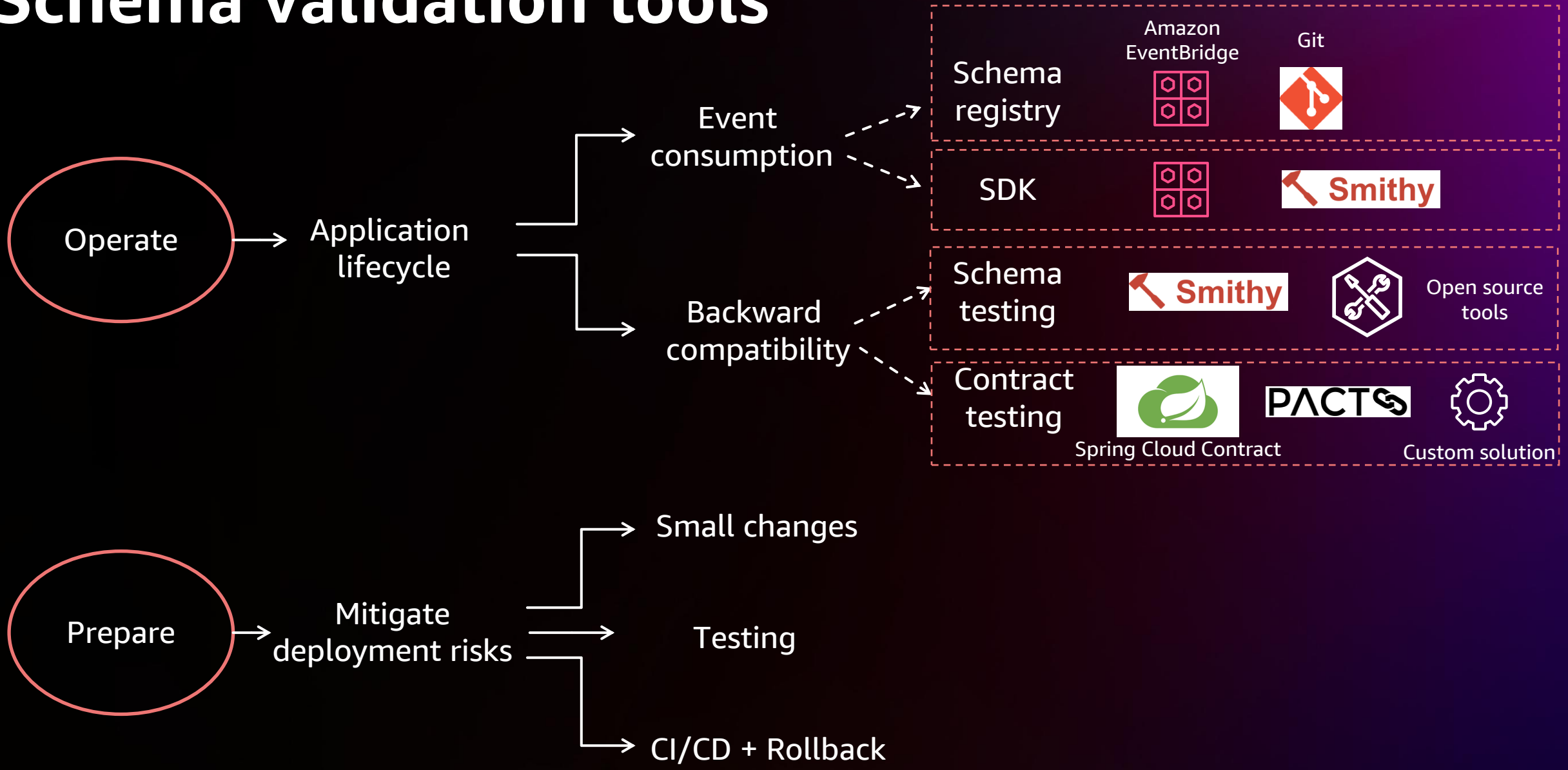
Contract testing

Validate content of events sent and received conform to a shared understanding of “contract”

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Schema validation tools



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Testing integration

Emulation

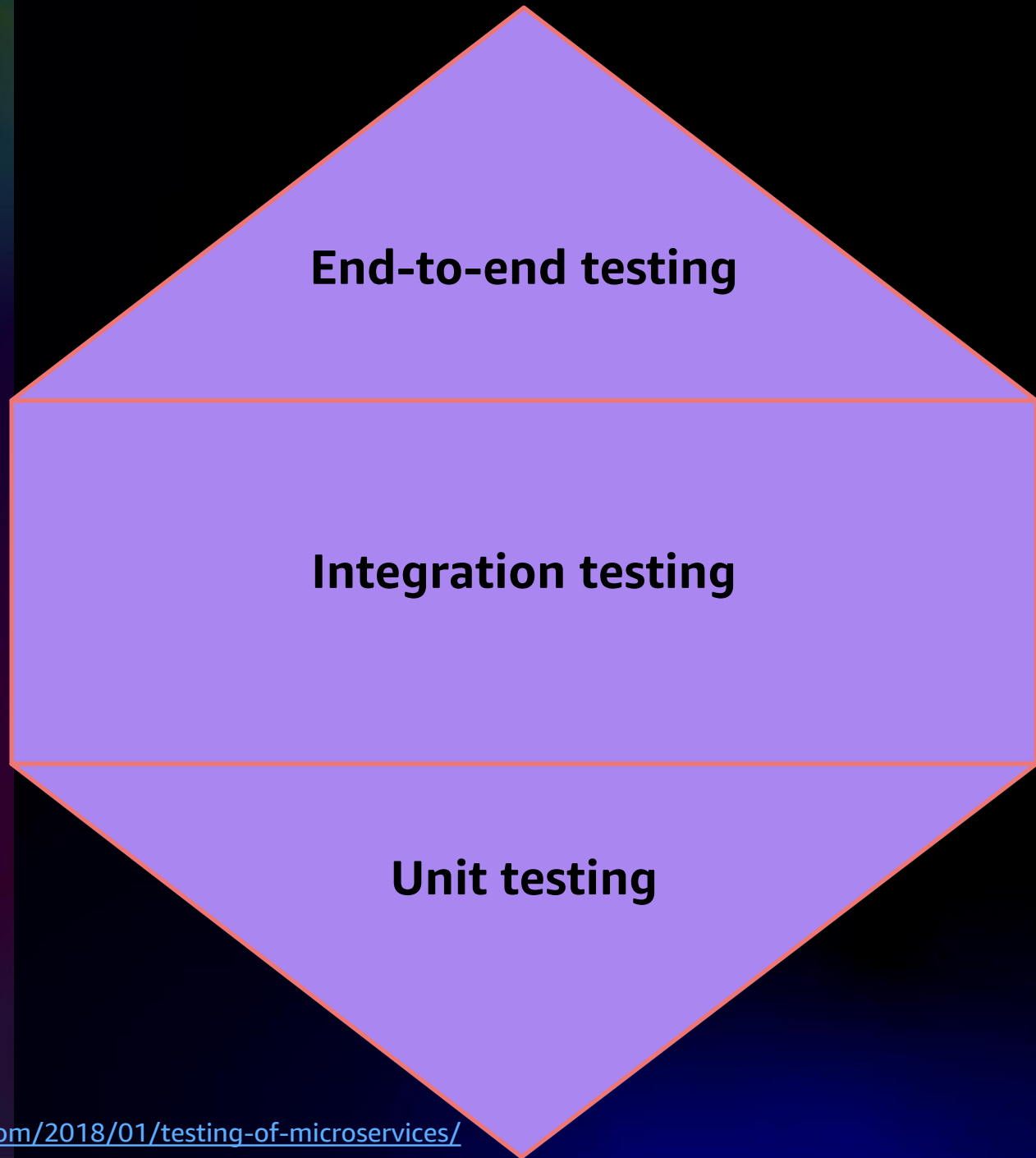
Using desktop applications that resemble services in the cloud

Mocks

Replacement objects that simulate the behavior of cloud services

Testing in the cloud

Tests run against architecture components previously deployed into the cloud



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https://engineering.atspotify.com/2018/01/testing-of-microservices/

Summary

Operate → Application lifecycle

- Event consumption
  - Schema registry — Amazon EventBridge, Git
  - SDK — Smithy
- Backward compatibility
  - Schema testing — Smithy, Open source tools
  - Contract testing — Spring Cloud Contract, PACT, Custom solution

Prepare → Mitigate deployment risks

- Small changes
  - Integrations — Custom solution
- Testing
  - Stack per dev — AWS SAM, AWS CDK, IaC tools
  - Account per dev
- CI/CD + Rollback

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Chalk talk resources

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Related sessions

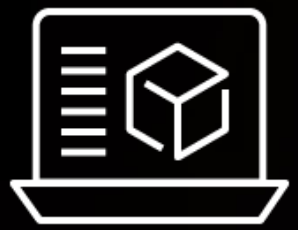
ID	Title	Type	Schedule
API311	Building next-gen applications with event-driven architectures	Breakout	Monday, 10:00 AM
API306	Building event-driven architectures	Workshop	Wednesday, 2:30 PM
API303	Application integration patterns for microservices	Breakout	Wednesday, 7:45 PM
SVS312	Building Serverlesspresso: Creating event-driven architectures	Breakout	Thursday, 3:30 PM
API307	Designing event-driven integrations using Amazon EventBridge	Breakout	Thursday, 4:15 PM

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Thank you!

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