AWS re:Invent

MGT309-R

Automating cloud operations with AWS Management and Governance

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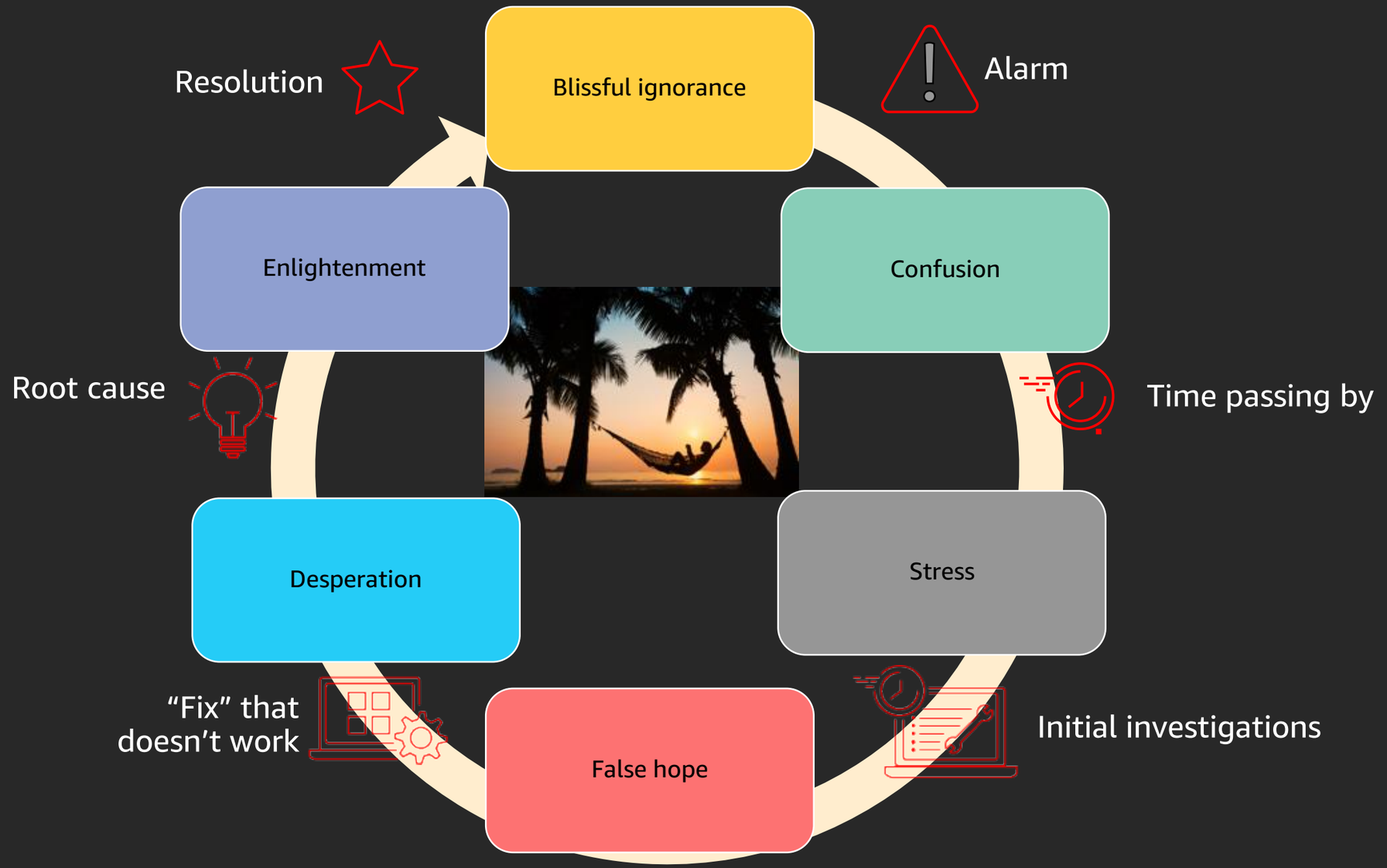
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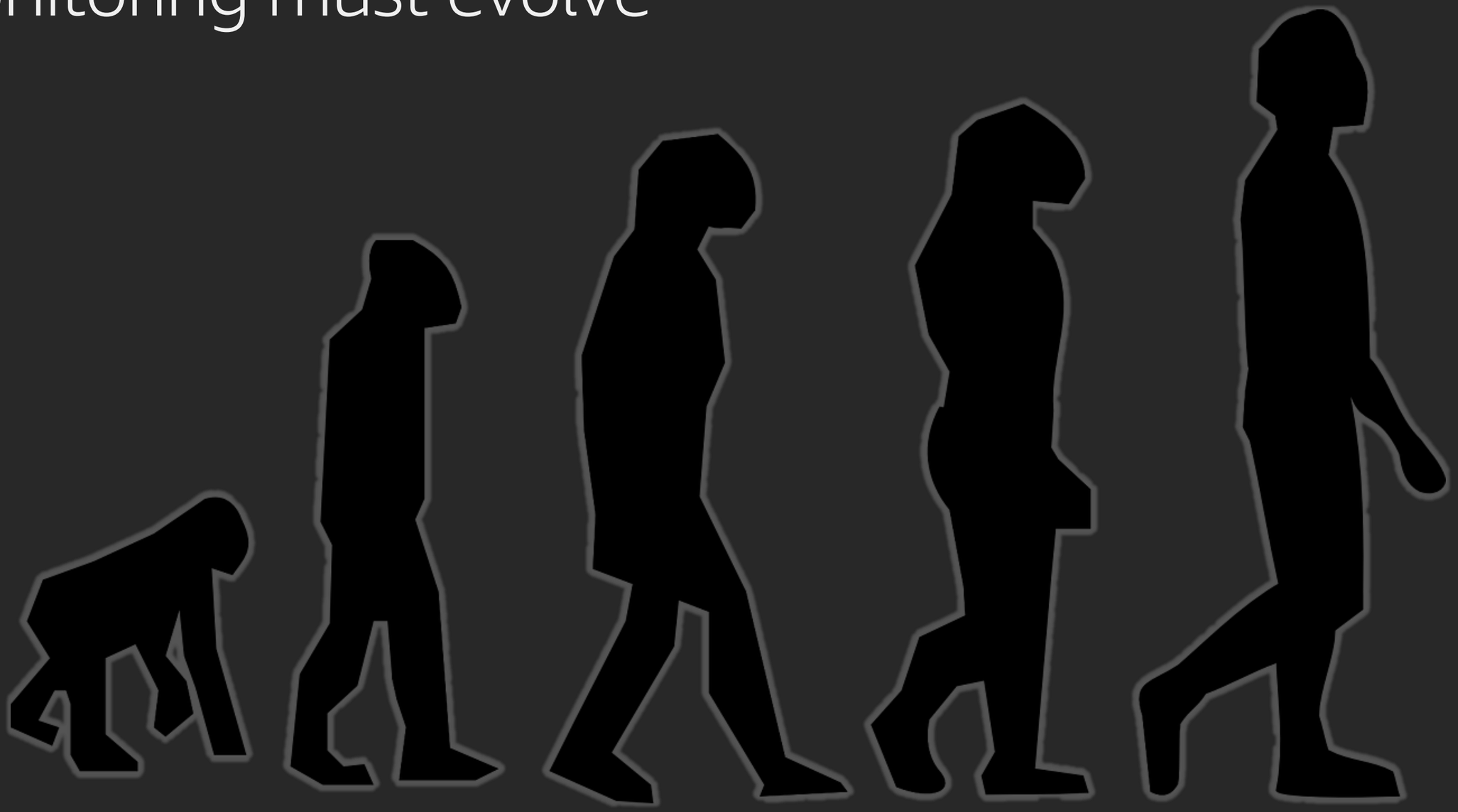
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Reactive monitoring



Monitoring must evolve



Monitoring must evolve



Monolithic to microservice



Short-lived resources



Devices & Data

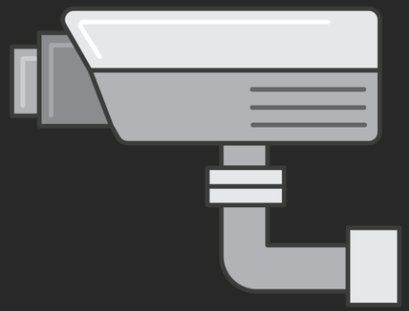


Faster release velocity

The AWS Well-Architected Framework



Operational excellence



Security



Reliability



Performance efficiency



Cost optimization

https://aws.amazon.com/well-architected/

The definition of operational excellence

The ability to run and monitor systems to deliver business value and to continually improve supporting processes and procedures



Design principles of operational excellence

Perform operations as code

Annotate documentation

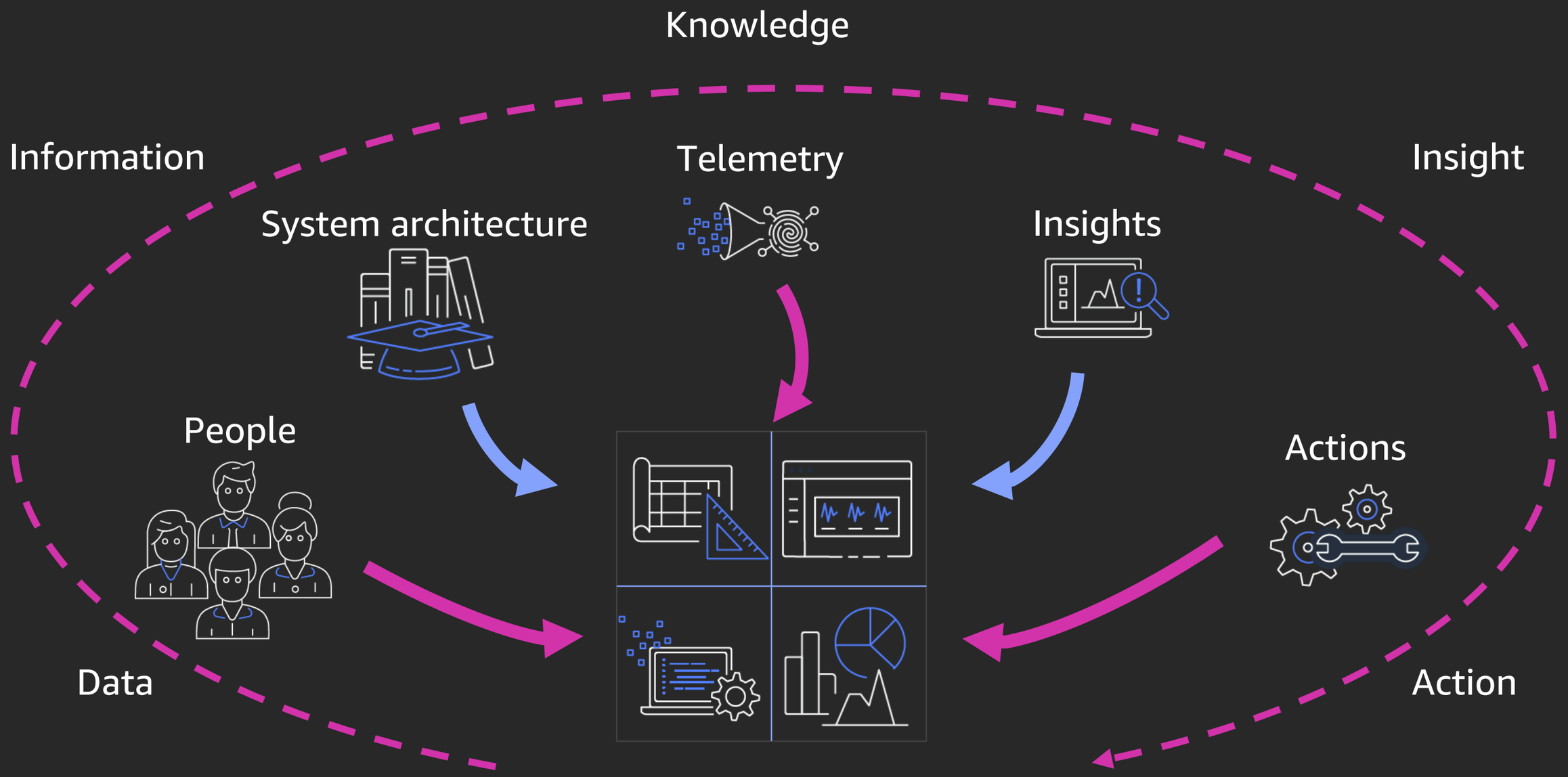
Make frequent, small, reversible changes

Refine operations procedures frequently

Anticipate failure

Learn from all operational failures

What goes into an observability plan



AWS Management and Governance tools



Amazon CloudWatch



AWS X-Ray



AWS CloudTrail



AWS Systems Manager

Amazon CloudWatch and AWS X-Ray



CloudWatch

- Metrics
- Logs
- Events
- Alarms
- Dashboard

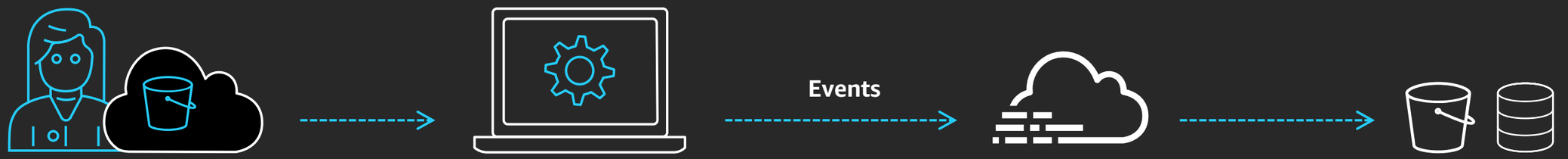


X-Ray

- Trace
- Debugging
- Service map
- Latency detection (server & client)

AWS CloudTrail

- Conducts compliance audits of account activity using automatically recorded and centrally stored event logs
- Performs security audits and operational troubleshooting using API usage events
- Applies governance automatically in response to API events using custom workflows
- Raises alarms in response to account activity



Customer defines an Amazon S3 bucket for storage

Account event occurs generating API activity

CloudTrail captures and records the API activity

A log with API calls is delivered to the S3 bucket and optionally delivered to Amazon CloudWatch Events and logs

AWS Systems Manager capabilities



Resource groups



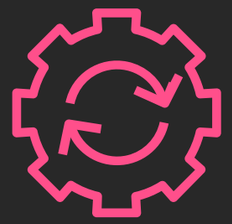
Patch manager



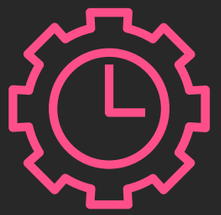
State manager



Run command



Automation



Maintenance window



Inventory



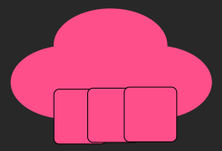
Parameter Store



Session manager



OpsCenter



Distributor

Related breakouts

MGT301 – Cut through the chaos: Gain operational visibility and insight

SVS309 – Architecting and operating resilient serverless systems at scale

CON328 – Improving observability of your containers

ANT330 – Intuit: Moving from monitoring to observability using Amazon ES

MGT204 – Finding the signal in the noise when running cloud-native apps

MGT302 – Enable AWS adoption at scale with automation and governance

MGT304 – Automate everything: Options and best practices

Thank you!

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