
AWS
re:Invent

DOP203

Learn how teams at Amazon rapidly release features at scale

Brian Handy

Software Development Engineer

AWS

AWS re:Invent

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What will you learn in this session?

What is application configuration?

Common problems while deploying configuration

How do we solve for this at Amazon?

Best practices that you can take away for your applications

Demo



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Story time: Does this sound familiar?



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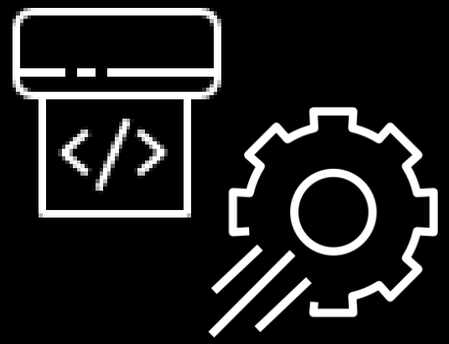
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What is application configuration?



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Common application configuration use cases



Feature flags – Deploy features, and then enable them on the fly

Manage throttling and resource configurations

User onboarding and allow-listing

How do teams generally manage application configuration?



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Pattern 1: Managing configuration in code

Advantages

- Simple
- Takes advantage of safety in deploying code

Drawbacks

- Slow
- Cannot decouple code deployments from configuration deployments
- Difficult to distinguish configuration errors from code errors
- Difficult to rollback

Pattern 2: Managing configuration in a separate database

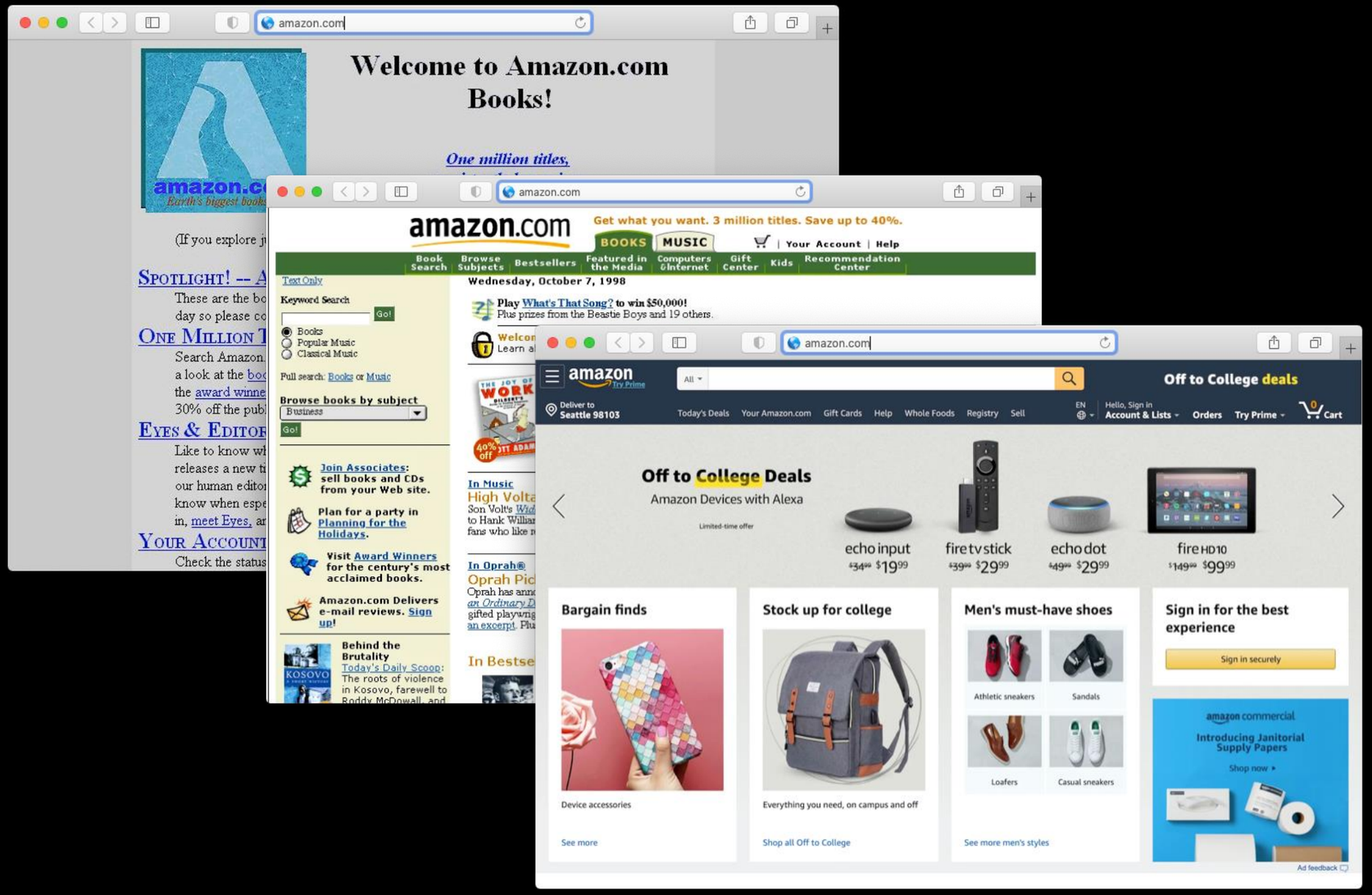
Advantages

- Fast

Drawbacks

- Requires operational effort to maintain and scale
- Can cause immediate outages
- No built-in monitoring
- Difficult to rollback

How did we solve this problem?



As our technology evolved, we needed internal tools to deploy application configuration with the same operational scrutiny as code changes

AWS AppConfig



Fast

Deploy configuration in seconds



Scalable

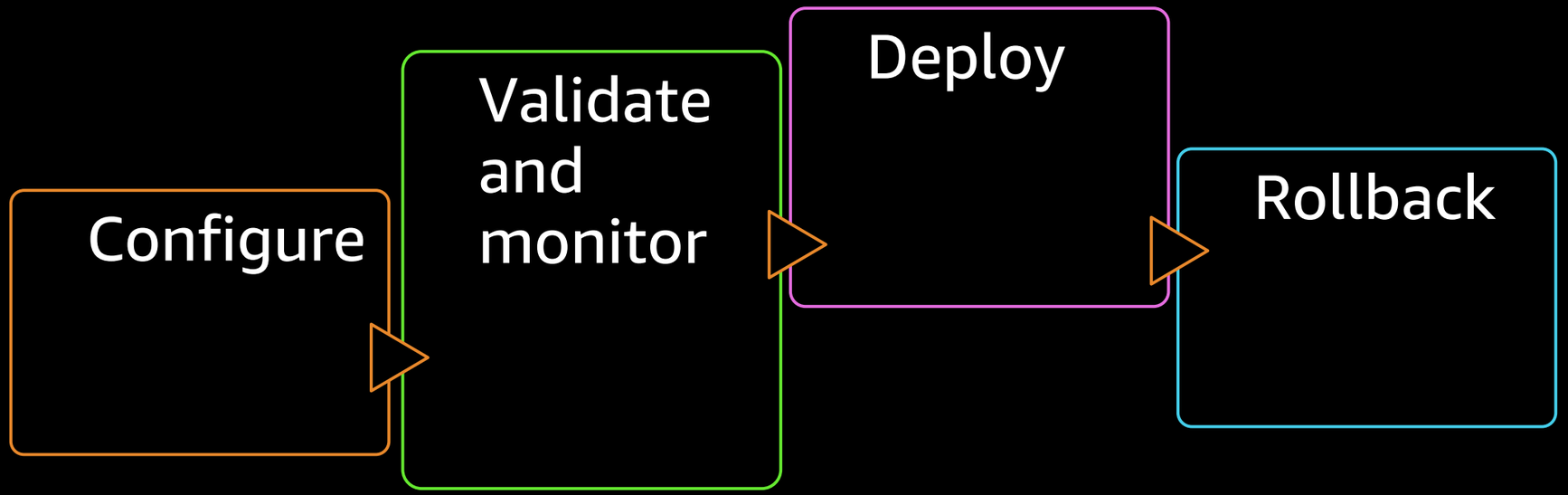
Scales to the size of any enterprise, no matter where your application is running

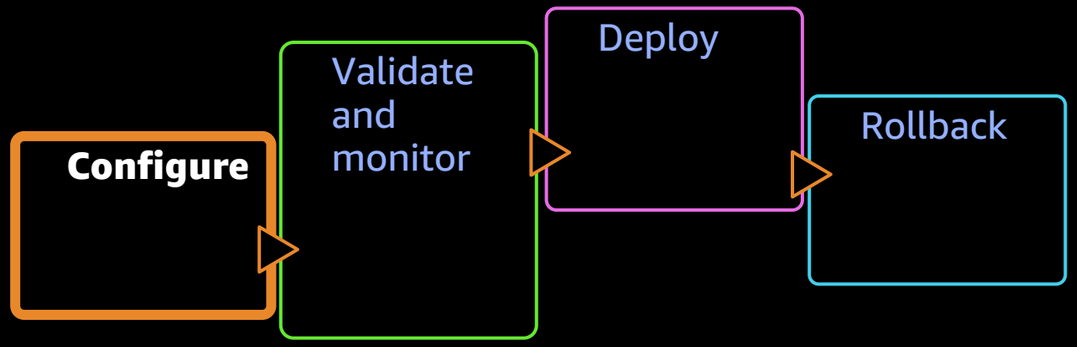


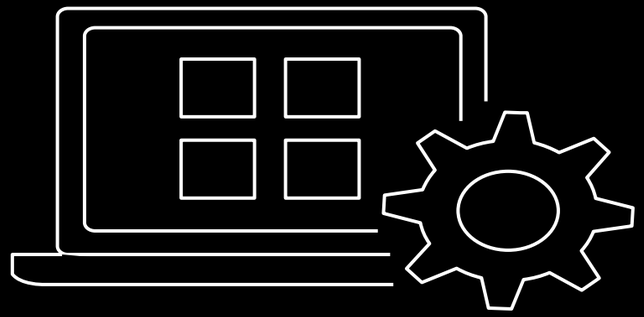
Safe

Validate configuration, deploy gradually, monitor, and rollback

AWS AppConfig





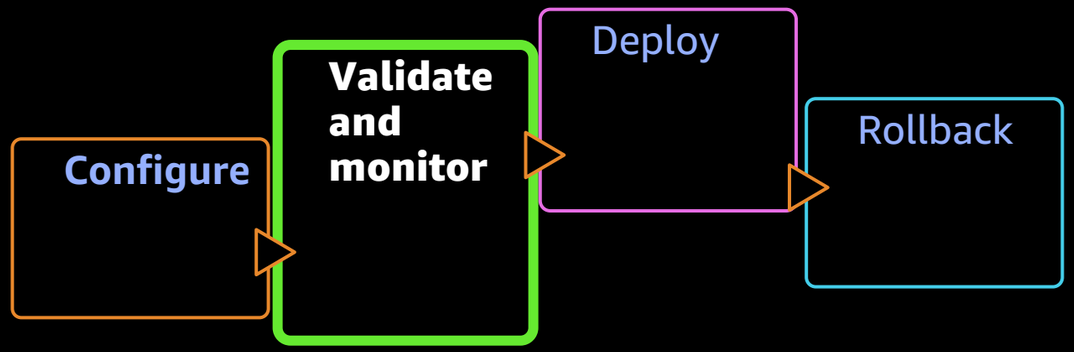


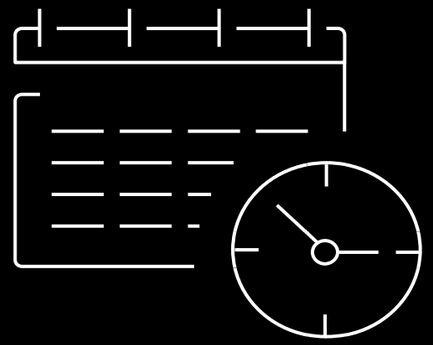
AWS AppConfig hosted configurations

Amazon S3 objects

AWS Systems Manager documents

AWS Systems Manager parameters

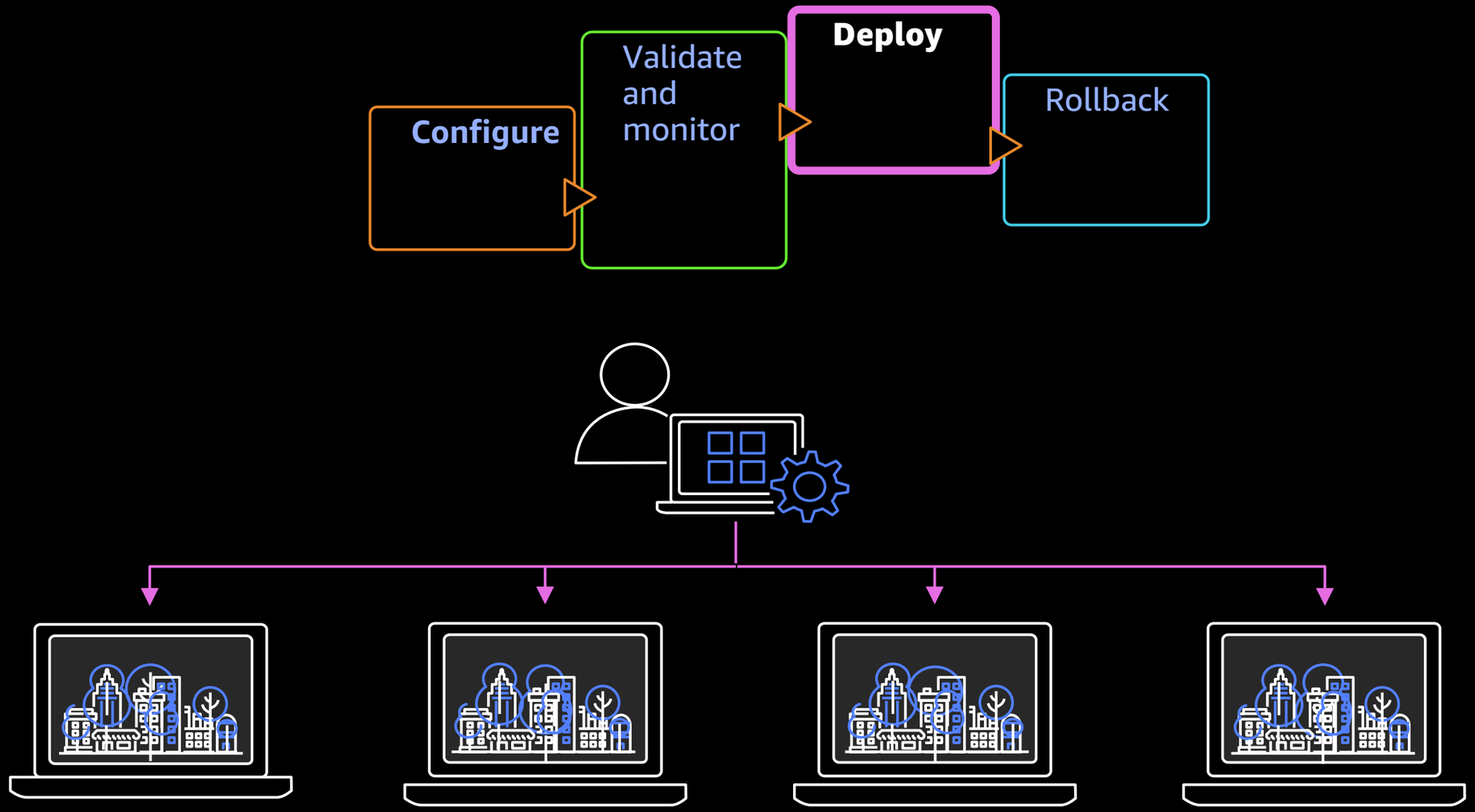




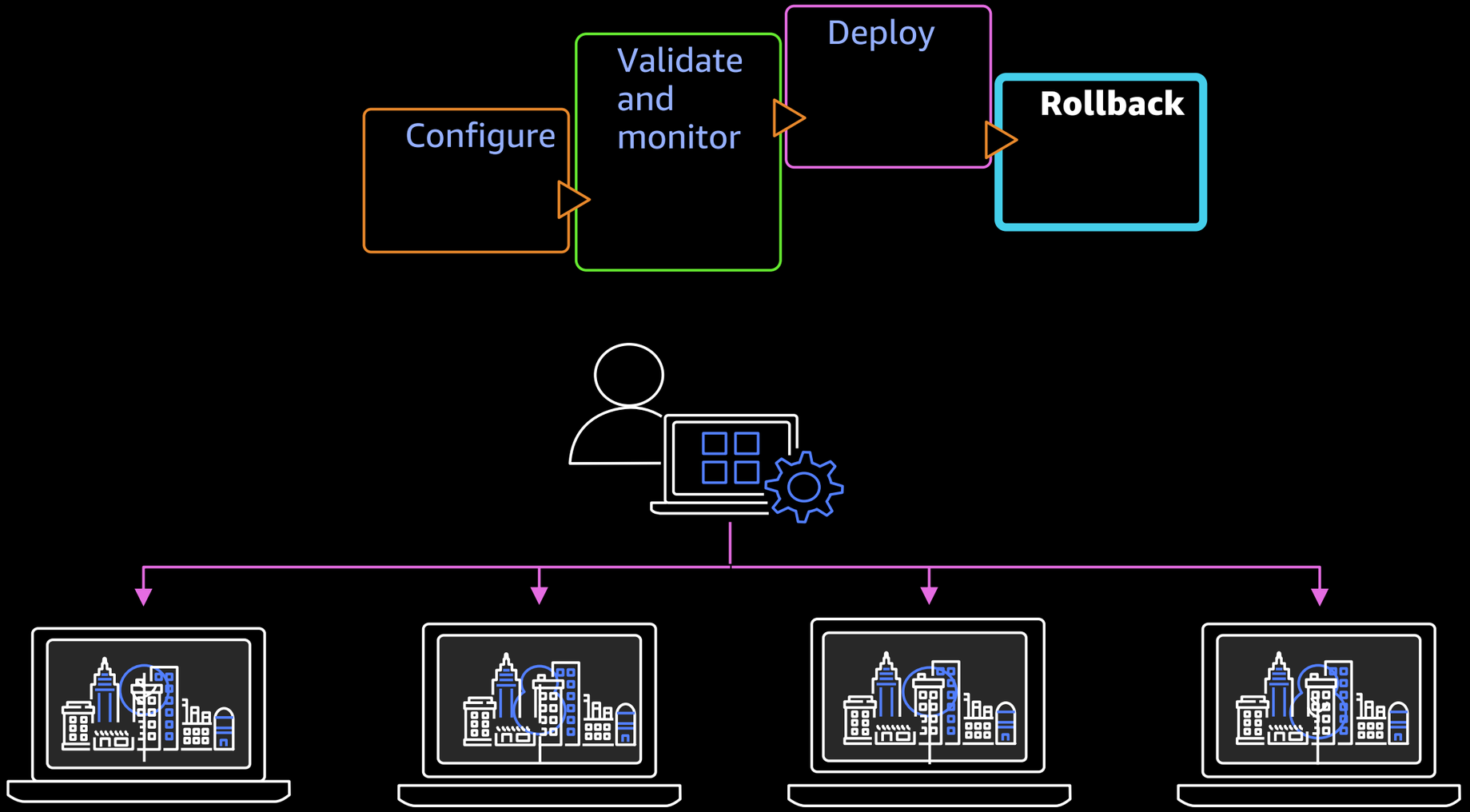
Syntactic validation against a JavaScript Object Notation (JSON) schema

Semantic validation against AWS Lambda function

Monitor for errors with Amazon CloudWatch integration

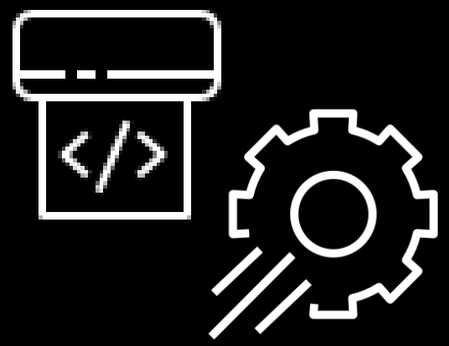


Controlled deployments to your targets



Automatic rollback in case of errors

What else do developers need?



Build and test automation

Check in configuration to repository and automatically run tests

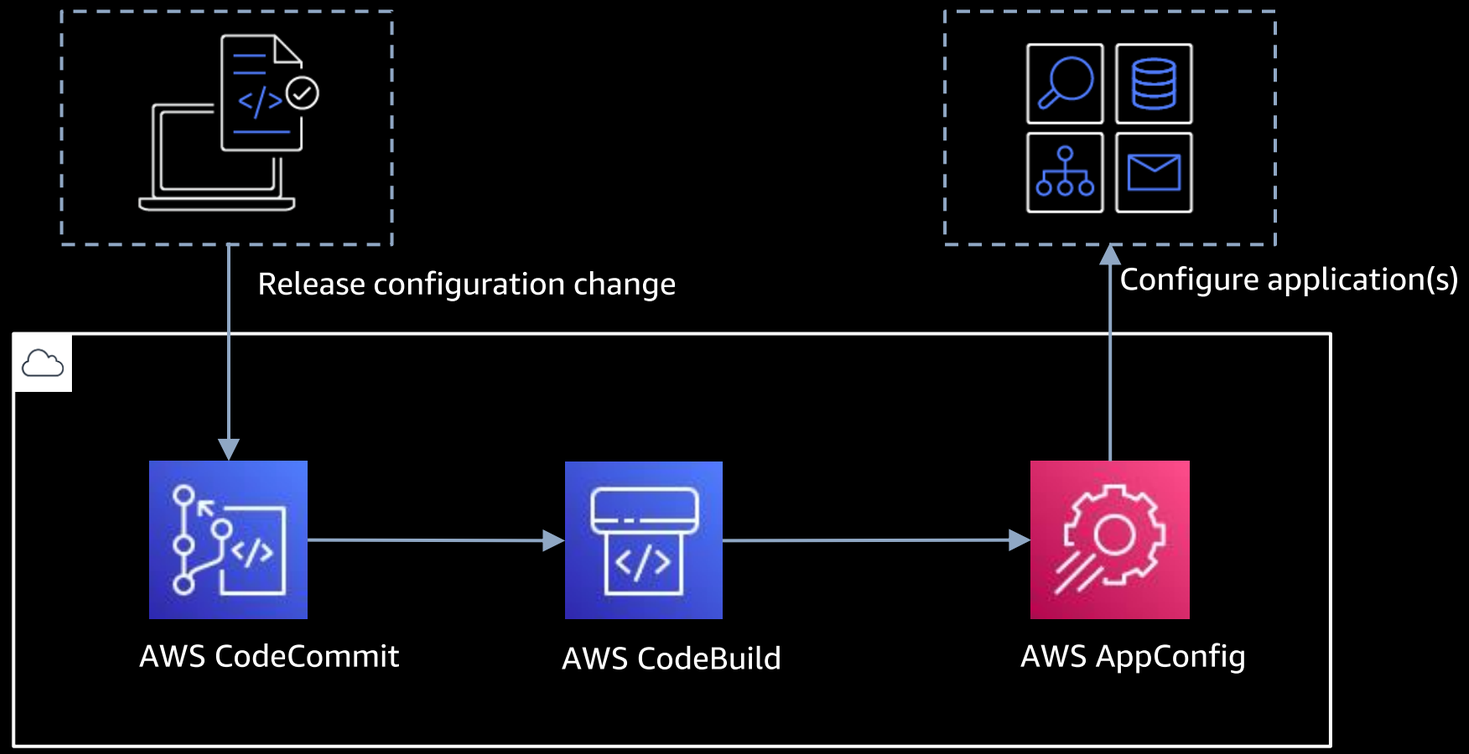
Integration testing

Automatic integration testing between Regions

Deployment automation

Deploy configuration in an automated manner across Regions, applications, and environments

AWS AppConfig and AWS CodePipeline



Thank you!



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