
AWS
re:Invent
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SVS211

How AWS Application Composer helps you and your team build great apps

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Chase Douglas

Principal Engineer

AWS Serverless Application Experience



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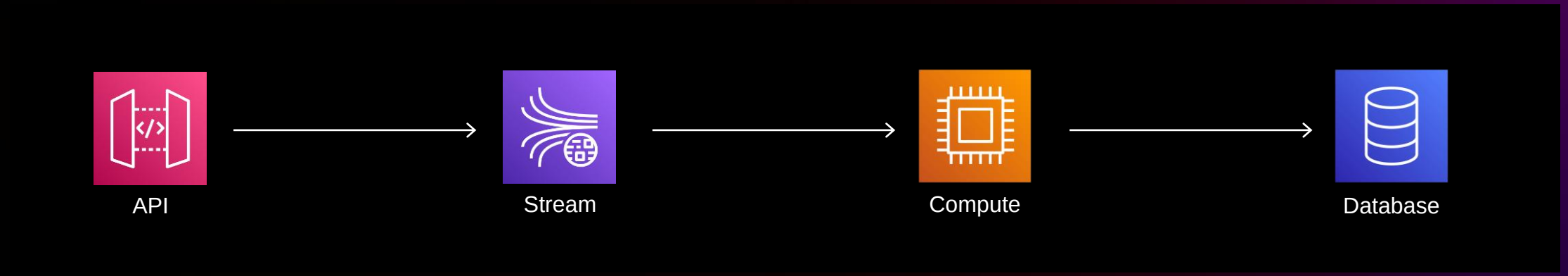
AWS Serverless Application Experience

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ERROR


ALERT
Intrusion Detected
0 1 0 1 1 0 1 0 1 0 0 1 0 1 1 0 1 0 1 0 0 1
1 0 1 0 0 1 0 1 0 1 1 1 1 0 0 1 0 1 0 1 1 1

Scalable and Resilient Architectures

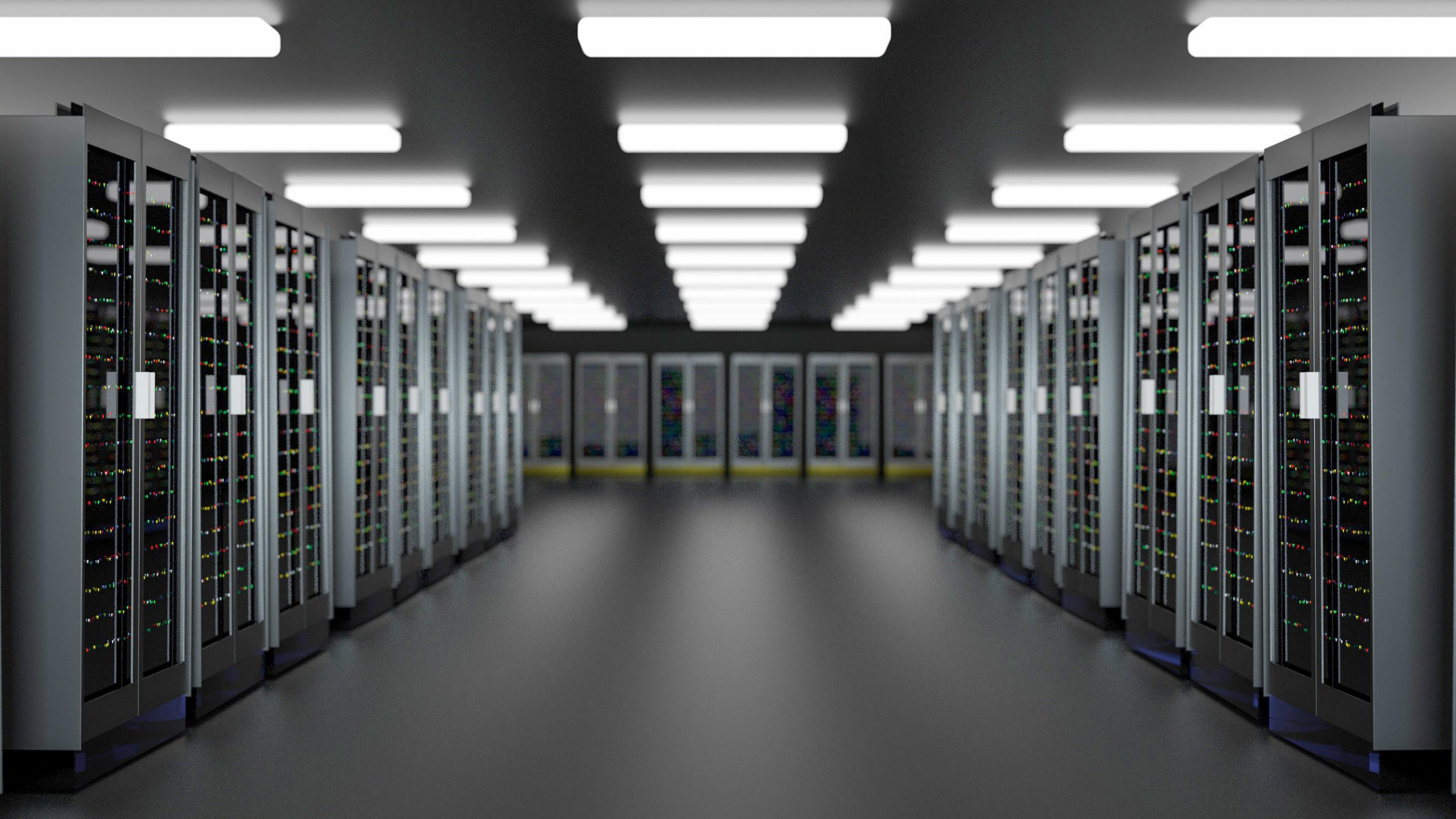


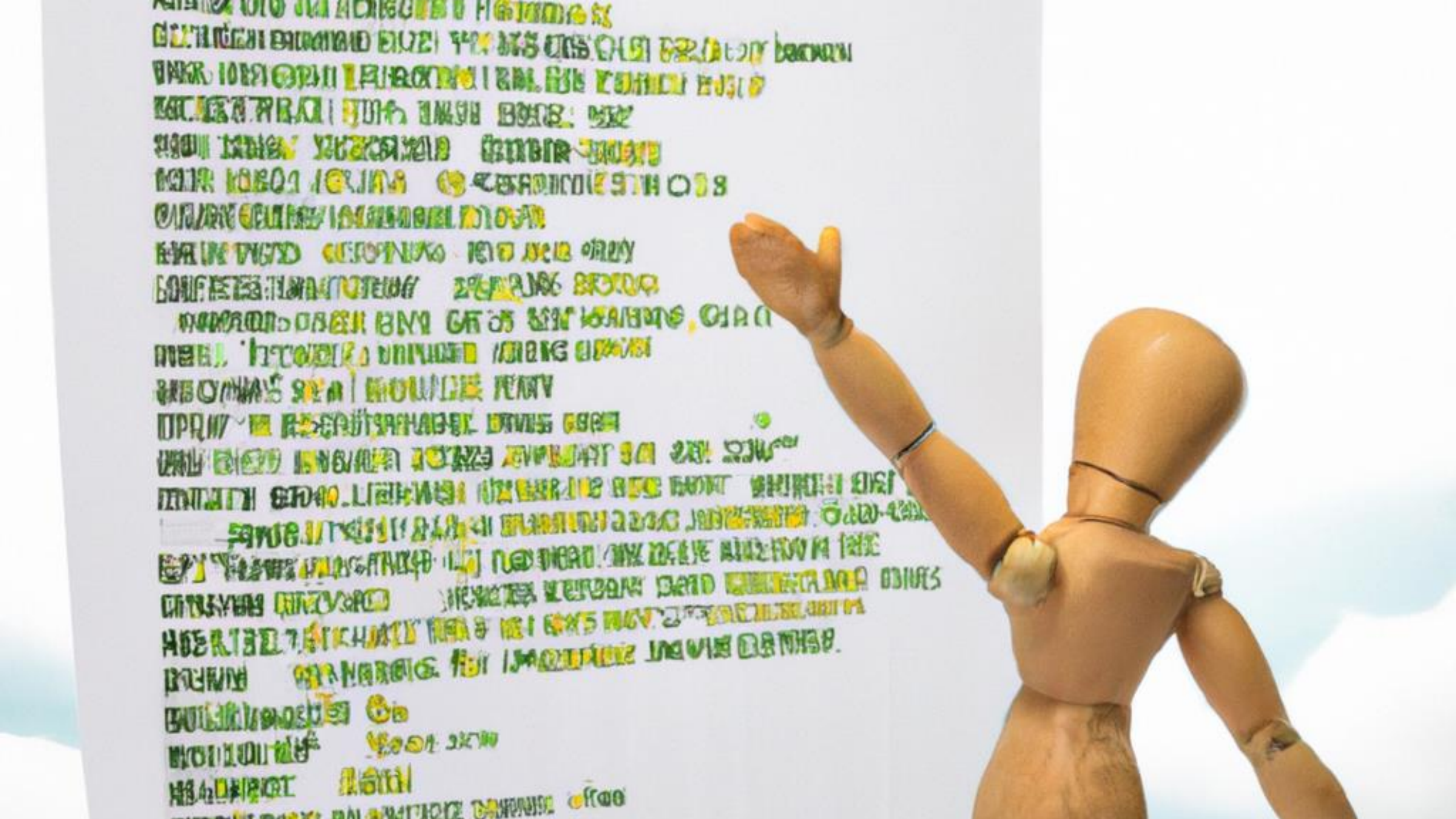
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Ryan Coleman – Automation Enthusiast

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Serverless success means . . .

No servers to provision or manage

Scales with usage

Pay for value

Easier to architect for scale, security, and operations

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Serverless success requires . . .

Infrastructure-as-code (IaC)

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Infrastructure-as-code

```
Resources:
  Bucket:
    Type: AWS::S3::Bucket
    Properties:
      BucketName: !Sub ${AWS::StackName}-bucket-${AWS::AccountId}
      BucketEncryption:
        ServerSideEncryptionConfiguration:
          - ServerSideEncryptionByDefault:
              SSEAlgorithm: aws:kms
              KMSMasterKeyID: alias/aws/s3
      PublicAccessBlockConfiguration:
        IgnorePublicAcls: true
        RestrictPublicBuckets: truen
BucketBucketPolicy:
    Type: AWS::S3::BucketPolicy
    Properties:
      Bucket: !Ref Bucket
```

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Serverless success requires . . .

Infrastructure-as-code (IaC)

Knowledge of serverless architecture patterns

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Serverless Patterns Collection

Submit a pattern

Use serverless patterns to quickly build integrations using AWS SAM and CDK templates. Filter by pattern and copy the template directly into your application.

Filters (7 templates) Reset

Type

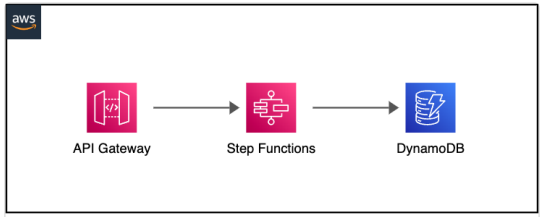
- [ ] CDK
- [ ] SAM
- [ ] Serverless Framework
- [ ] Terraform
- [ ] Terraform (with modules)

Language

- [ ] .NET
- [ ] .Net
- [ ] C#
- [ ] Go
- [ ] Java
- [ ] Node.js
- [ ] PowerShell
- [ ] Python
- [ ] Rust
- [ ] TypeScript

Services

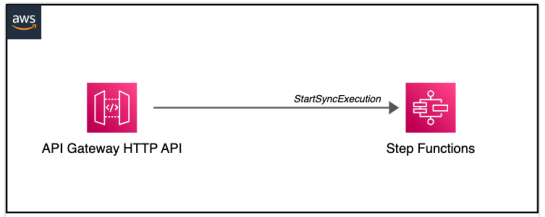
- [ ] AWS Amplify



API Gateway to Step Functions to DynamoDB

API Gateway REST API endpoint to Step Functions to DynamoDB

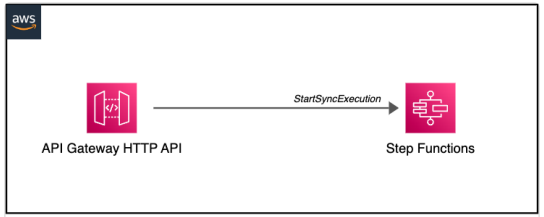
SAM Node.js View pattern



API Gateway to Step Functions

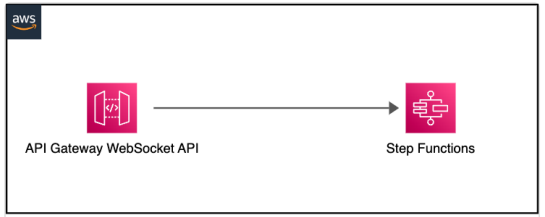
Create an API Gateway HTTP APIs endpoint that starts a Step Functions syncronous Express Workflow

CDK .NET View pattern



API Gateway to Step Functions

Create an API Gateway HTTP APIs endpoint that starts a Step Functions syncronous Express Workflow



API Gateway WebSocket API to Step Functions Express (Asynchronous Execution)

Start Step Functions Express Workflow asynchronous execution via WebSocket API

Serverless success requires . . .

Infrastructure-as-Code (IaC)

Knowledge of serverless architecture patterns

Knowledge of important configuration details

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Amazon S3 on Outposts
Amazon SageMaker
EventBridge Scheduler
Secrets Manager
AWS Service Catalog
AWS Service Catalog AppRegistry
Security Hub
Amazon SES
Signer
Amazon SimpleDB
Amazon SNS
AWS::SNS::Subscription
AWS::SNS::Topic
Subscription
AWS::SNS::TopicPolicy
Amazon SQS
IAM Identity Center
Step Functions
Systems Manager
AWS Support App
Amazon Timestream
AWS Transfer Family
VoiceID

AWS::SNS::Topic

RSS

Filter View All

The `AWS::SNS::Topic` resource creates a topic to which notifications can be published.

Syntax

To declare this entity in your AWS CloudFormation template, use the following syntax:

JSON

```
{
  "Type" : "AWS::SNS::Topic",
  "Properties" : {
      "ContentBasedDeduplication" : Boolean,
      "DataProtectionPolicy" : Json,
      "DisplayName" : String,
      "FifoTopic" : Boolean,
      "KmsMasterKeyId" : String,
      "SignatureVersion" : String,
      "Subscription" : [ Subscription, ... ],
      "Tags" : [ Tag, ... ],
      "TopicName" : String
    }
```

On this page
Syntax
Properties
Return values
Examples
See also

Serverless success requires . . .

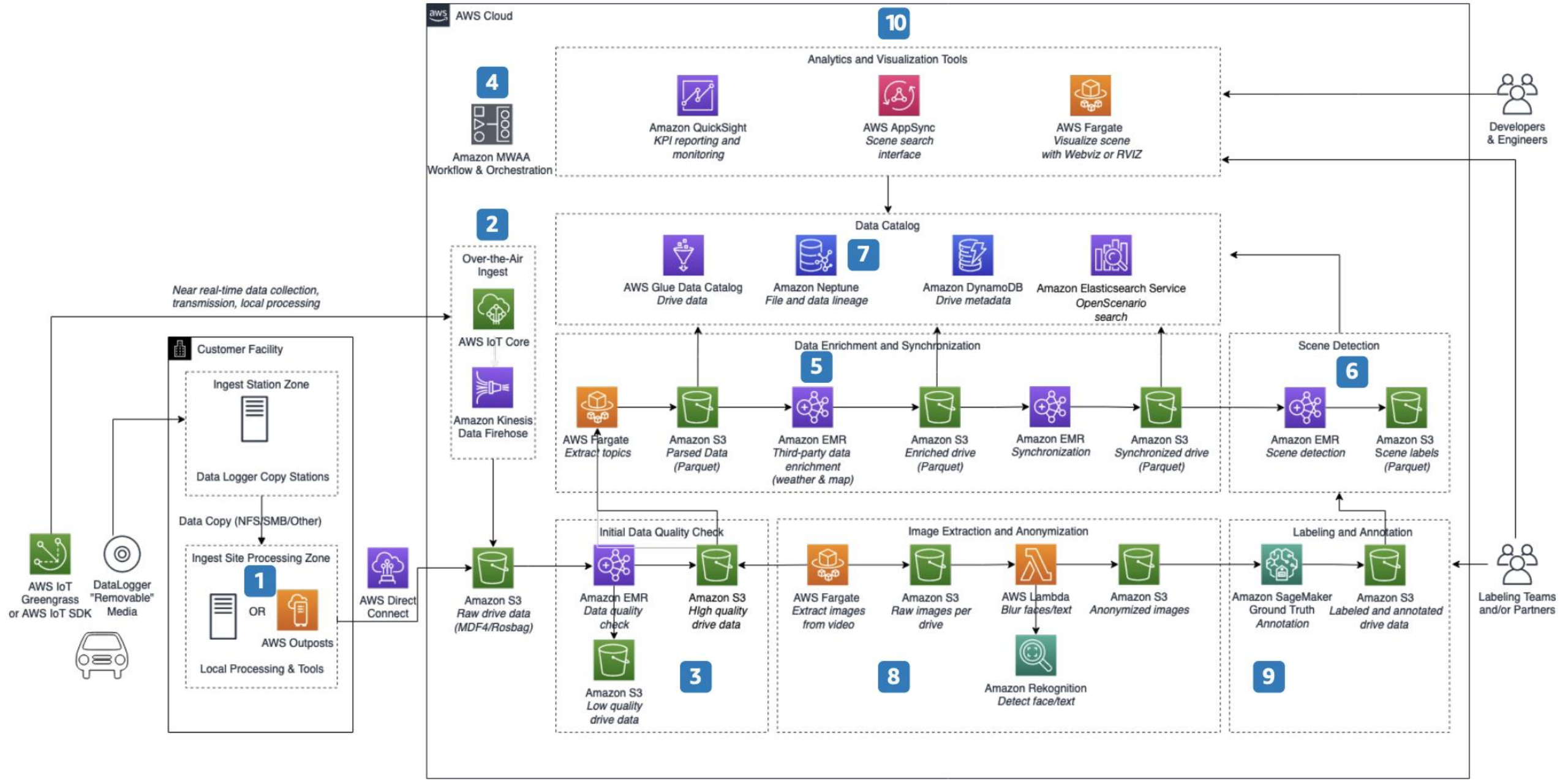
Infrastructure-as-code (IaC)

Knowledge of serverless architecture patterns

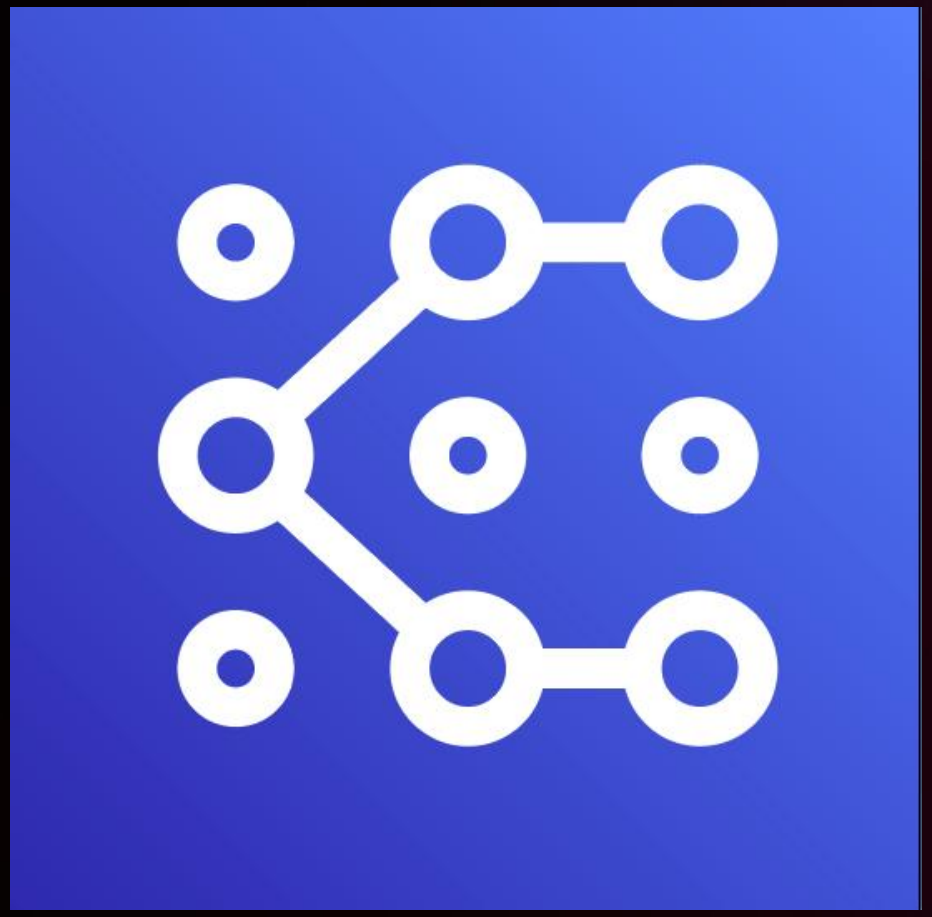
Knowledge of important configuration details

Up-to-date architecture diagrams

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AWS Cloud
10
Analytics and Visualization Tools
Amazon QuickSight
KPI reporting and monitoring
AWS AppSync
Scene search interface
AWS Fargate
Visualize scene with Webviz or RVIZ
Developers & Engineers
4
Amazon MWAA
Workflow & Orchestration
2
Over-the-Air Ingest
Data Catalog
AWS Glue Data Catalog
Drive data
Amazon Neptune
File and data lineage
7
Amazon DynamoDB
Drive metadata
Amazon Elasticsearch Service
OpenScenario search
Near real-time data collection, transmission, local processing
AWS IoT Core
Amazon Kinesis Data Firehose
Data Enrichment and Synchronization
5
Scene Detection
6
AWS Fargate
Extract topics
Amazon S3
Parsed Data (Parquet)
Amazon EMR
Third-party data enrichment (weather & map)
Amazon S3
Enriched drive (Parquet)
Amazon EMR
Synchronization
Amazon S3
Synchronized drive (Parquet)
Amazon EMR
Scene detection
Amazon S3
Scene labels (Parquet)
Customer Facility
Ingest Station Zone
Data Logger Copy Stations
Data Copy (NFS/SMB/Other)
Ingest Site Processing Zone
1
OR
AWS Outposts
Local Processing & Tools
AWS IoT Greengrass or AWS IoT SDK
DataLogger "Removable" Media
AWS Direct Connect
Amazon S3
Raw drive data (MDF4/Rosbag)
Initial Data Quality Check
Amazon EMR
Data quality check
Amazon S3
HIgh quality drive data
Amazon S3
Low quality drive data
3
Image Extraction and Anonymization
AWS Fargate
Extract images from video
Amazon S3
Raw images per drive
AWS Lambda
Blur faces/text
Amazon S3
Anonymized images
Amazon Rekognition
Detect face/text
8
Labeling and Annotation
Amazon SageMaker Ground Truth
Annotation
Amazon S3
Labeled and annotated drive data
9
Labeling Teams and/or Partners

AWS Application Composer (Preview)



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AWS Application Composer (Preview)

Drag-and-drop modern application architectures

Build APIs, background batch processing, event-driven workloads

Generate well-architected configurations

Teach teams of engineers how to manage infrastructure-as-code

Communicate architecture within teams and with stakeholders

aws

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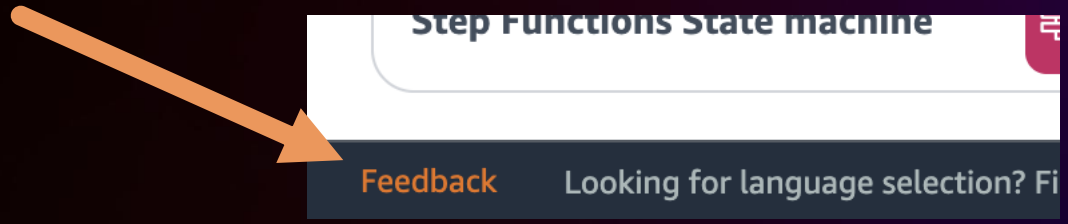
AWS Application Composer (Preview)



Try it out today in the AWS Console

Let us know your what you'd love to see: #AWSAppComposerWishlist

Give our team direct feedback in the AWS Console!



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Q&A

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Thank you!

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