Building a Lambda API with the CDK

David Tucker

TECHNICAL ARCHITECT & CTO CONSULTANT
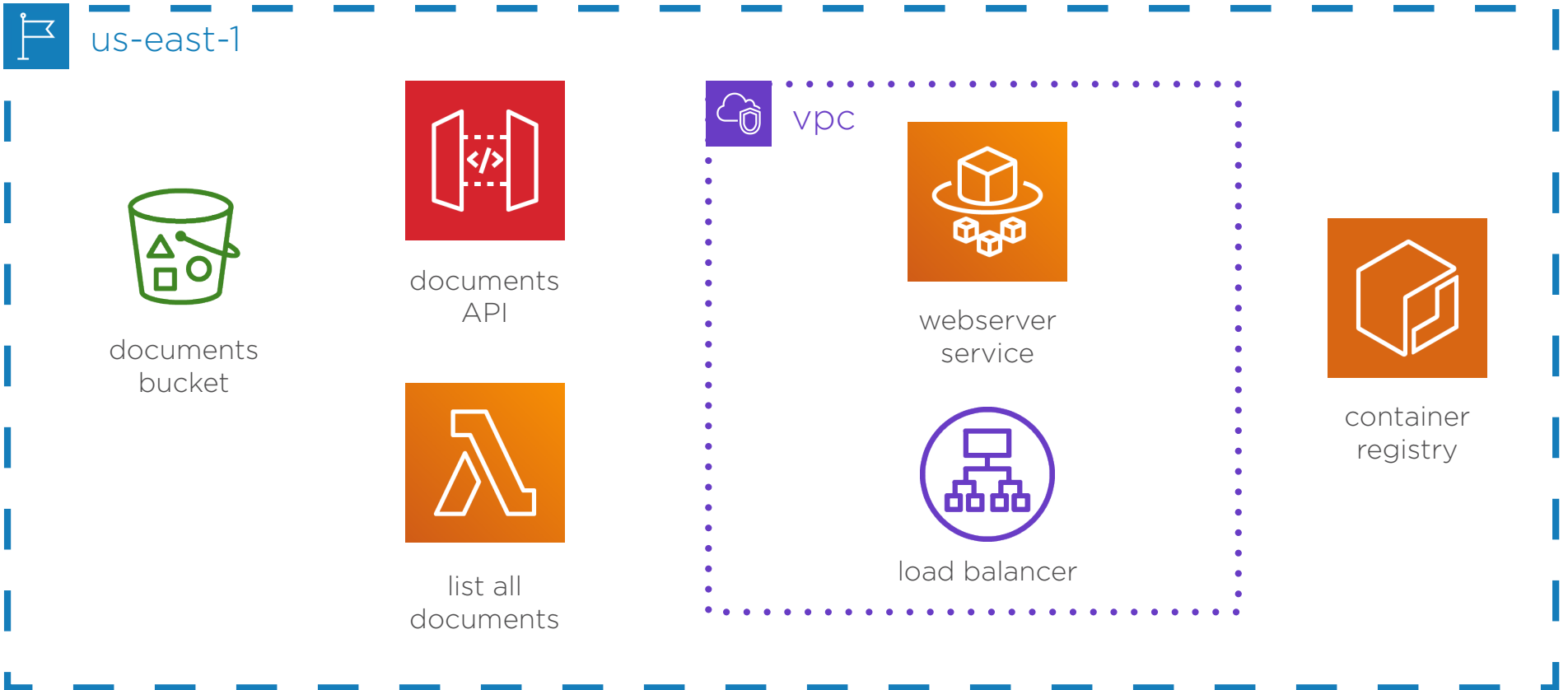
@_davidtucker_   davidtucker.net

Globomantics

Josh has validated the CDK lifecycle

He will first be building the API tier

Needs to be able to:

- Deploy sample content into the documents bucket

- Enable users to view documents without having AWS access

- Have an API that can be integrated with the web frontend

Josh
Cloud Architect

Sample Architecture

us-east-1

documents bucket

documents API

list all documents

vpc

webserver service

load balancer

container registry

Overview

Researching in the CDK documentation the needed packages

Implementing a Lambda function with local code in our project

Configuring our Lambda function to interact with the documents bucket

Deploying documents to an S3 bucket with the CDK

Defining permissions between Lambda, API Gateway, and S3

Creating an API Gateway HTTP API

Researching our Implementation

Demo

Launching the CDK documentation

Reviewing the packages we will need for implementation

Creating a Lambda Function

Demo

Creating our first TypeScript Lambda function

Configuring a service within our existing project

Implementing a Lambda Function in the CDK

Demo

Configuring our Lambda function project within the CDK

Deploying our Lambda function

Verifying our Lambda function within the AWS console

Configuring S3 and Lambda

Demo

Passing environment variables into our Lambda function

Deploying sample documents using S3 deployment with the CDK

Implementing IAM Permissions

Demo

Configuring permissions to enable our Lambda function to call S3

Creating signed S3 URL's for use within our API

Connecting Lambda and API Gateway

Demo

Creating an API Gateway HTTP API

Creating an integration to allow API Gateway to call our Lambda function

Validating our API with Postman