Building a Serverless Electronic Health Record System from Scratch

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Exploring New Technology While Creating Business Value
Creating a Single Point of Health Data
Traditional Web Application vs Serverless Web Application
Why Serverless?
Our Serverless Stack

S3  IAM  Cognito  API Gateway  Cloudsearch  DynamoDB  S3
Authentication in Service Oriented Single Page Applications

S3  IAM  Cognito  API Gateway  Cloudsearch  DynamoDB  S3
Identity Provider

S3
Okta Active Directory
Json Web Token
Identity Broker

Cognito
Granular Roles and Monitoring

Identity Access Manager
Balancing Data Decisionmaking and Exploration

S3  IAM  Cognito  API Gateway  Cloudsearch  DynamoDB  S3
Upload

DynamoDB  S3  API Gateway  Cloudsearch
Search

API Gateway

Cloudsearch
Exams

DynamoDB

API Gateway

Cloudsearch
Making Serverless Production-Ready for Your Organization
Developer Environments
Deployment Pipelines
Monitoring
Versioning
Documentation
Keep Reassessing
Lessons Learned

▪ Electronic health record systems will become increasingly unbundled and there is an opportunity to help shape what best practices should be.

▪ A serverless approach provides the built-in benefits of a service-oriented architecture that is highly componentized into resilient third party services.

▪ Serverless-as-a-backend allows you to stand a system up quickly and to add more defined architecture to it over time.

▪ Serverless architecture’s lack of convention presents challenges in linking services in a way that scales with your performance and feature development needs.

▪ When exploring new technology at your organization, find experiments you can timebox, sandbox, and review when necessary.
Thanks for spending this summer day with me

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