

Building on AWS

WEEK 1

Welcome to the Course

Welcome to Building on AWS
Meet the instructors
Discussion: Introduce yourself
What are we building this course? Project Intro
Intro to Week 1

Getting Started on AWS

Why should I (developer) build on the AWS cloud?
AWS Free Tier
Quiz
Exercise 1: Creating an AWS Account
Service Oriented Architectures and APIs in AWS
Exercise 2: Hello Amazon EC2
Quiz

Cloud Infrastructure and Responsibility

Understanding AWS Infrastructure
Networking: Amazon Virtual Private Cloud (VPC)
AWS vs Developer responsibility in the cloud
Quiz
EC2 Metadata
Exercise 3 - Logs, SSH, instance metadata
Quiz

Week 1 Discussion
Weekly Readings/Resources

Building on AWS

WEEK 2

Intro to Week 2

Invoking AWS APIs/ AWS Identity and Access Management (IAM)

Create an AWS IAM user/access key video

Exercise 4: AWS IAM user, CLI, Boto, access keys

AWS APIs

Amazon S3

Intro to Amazon S3

Amazon S3 Access Control

Working with our Development Environment

Developing on AWS Cloud

Exercise 5: AWS Cloud 9

Quiz

Amazon Rekognition

Introduction to Amazon Rekognition

Exercise 6: Amazon Rekognition

Week 2 Discussion

Weekly Readings/Resources

Building on AWS

WEEK 3

Intro to Week 3

Storing Structured Data using AWS Managed Databases

AWS IAM Roles

Amazon Relational Database Service

Exercise 7: Amazon RDS

Quiz

Availability and Application Failure

Availability

What could go wrong?

Elastic Load Balancer

Exercise 8: Deploy an instance add ALB

Quiz

Week 3 Discussion

Weekly Readings/Resources

Building on AWS

WEEK 4

Intro to Week 4

Adding Support for Users and Private Data to the Application

Amazon Cognito

Authorization Flows in Our Application

Securing the Connection to the Server with TLS

End-to-End and At Rest

Using SSH Tunnel to Connect to C9

Exercise 9: Adding Amazon Cognito

Quiz

Week 4 Discussion

Weekly Readings/Resources

Exercise - Challenge — Adding Polly to your applicatio

Building on AWS

WEEK 5

Intro to Week 5

Debugging and Profiling a Distributed System

AWS XRay

Exercise 10: Adding X-Ray

Quiz

Taking a Task Off the Server Asynchronously

Intro to AWS Lambda

Exercise 11: AWS Lambda

Quiz

Week 5 Discussion

Weekly Readings/Resources

Building on AWS

WEEK 6

Intro to Week 6

Making our System More Distributed

Event Driven Architectures

How do AWS services do Async?

Queueing and On-Premises Hardware

Amazon Simple Queuing Service

Exercise 12 - Amazon SQS

Course Wrap up

Couse Wrap up and Preview of Next course

End of Course Assessment

Weekly Readings/Resources

Week 6 Discussion