Lecture #09

Agenda

* Review Assignment #06
* Email Service
* Continuous Deployment (GitHub + GitHub Actions + Amazon CodeDeploy)
* Discuss Assignment #07

Demos

* Continuous Deployment with GitHub, GitHub Actions, and AWS CodeDeploy
* Troubleshooting CodeDeploy

Reading

Emails

* [Amazon Simple Email Service](https://aws.amazon.com/ses/)

GitHub Actions

* [Introduction to GitHub Actions](https://docs.github.com/en/actions/learn-github-actions/introduction-to-github-actions)
* [Managing workflow runs](https://docs.github.com/en/actions/managing-workflow-runs)
* [Encrypted secrets](https://docs.github.com/en/actions/reference/encrypted-secrets)

AWS CLI

* [CodeDeploy](https://docs.aws.amazon.com/cli/latest/reference/deploy/index.html)
* [S3 API](https://docs.aws.amazon.com/cli/latest/reference/s3api/index.html)

EC2

* [Instance Metadata and User Data](http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instance-metadata.html)
* [EC2 UserData](https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-properties-ec2-instance.html#cfn-ec2-instance-userdata)

IAM

* [AWS::IAM::Role](https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-resource-iam-role.html)
* [AWS::IAM::Policy](https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-resource-iam-policy.html)
* [AWS::S3::Bucket](https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-properties-s3-bucket.html)
* [Using an IAM Role to Grant Permissions to Applications Running on Amazon EC2 Instances](http://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles_use_switch-role-ec2.html)

AWS CodeDeploy

* [AWS CodeDeploy AppSpec File Reference](http://docs.aws.amazon.com/codedeploy/latest/userguide/app-spec-ref.html)
* [AWS CodeDeploy](http://docs.aws.amazon.com/codedeploy/latest/userguide/welcome.html)
* [CodeDeploy](https://docs.aws.amazon.com/codedeploy/latest/userguide/welcome.html)
* [Overview of CodeDeploy Deployment Types](https://docs.aws.amazon.com/codedeploy/latest/userguide/welcome.html#welcome-deployment-overview)
* [Troubleshooting CodeDeploy](https://docs.aws.amazon.com/codedeploy/latest/userguide/troubleshooting.html)

CI/CD

*Note: Access ACM articles using*[*ACM Digital Library*](https://library.northeastern.edu/research/resources/items/acm-digital-library)

* [Manual Work is a Bug](https://queue.acm.org/detail.cfm?id=3197520)
* [Continuous Delivery Sounds Great, but Will It Work Here?](https://queue.acm.org/detail.cfm?id=3190610)
* [AWS CodeDeploy AppSpec File Reference](http://docs.aws.amazon.com/codedeploy/latest/userguide/app-spec-ref.html)
* [AWS CodeDeploy](http://docs.aws.amazon.com/codedeploy/latest/userguide/welcome.html)
* [Using an IAM Role to Grant Permissions to Applications Running on Amazon EC2 Instances](http://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles_use_switch-role-ec2.html)