Lecture #05

Agenda

* Assignment #02 Review
* Networking Fundamentals
* Infrastructure as Code
  + AWS SDK
  + AWS CLI
  + AWS CloudFormation
* Assignment #03 discussion

Demos

* Infrastructure as Code w/CloudFormation

Reading

Networking

* [Amazon Virtual Private Cloud Documentation](https://aws.amazon.com/documentation/vpc/)
* [Virtual Private Cloud (VPC) on Google Cloud Platform](https://cloud.google.com/vpc/)
* IPv4
* [IPv6](https://en.wikipedia.org/wiki/IPv6)
* [Network Address Translation (NAT)](https://en.wikipedia.org/wiki/Network_address_translation)
* [Reserved IP addresses](https://en.wikipedia.org/wiki/Reserved_IP_addresses)
* [Private network](https://en.wikipedia.org/wiki/Private_network)
* [Multicast](https://en.wikipedia.org/wiki/Multicast)
* [Subnetwork](https://en.wikipedia.org/wiki/Subnetwork)
* [CIDR Notation](https://en.wikipedia.org/wiki/Classless_Inter-Domain_Routing#CIDR_notation)
* [OSI Model](https://en.wikipedia.org/wiki/OSI_model)
* [Internet Protocol Suite](https://en.wikipedia.org/wiki/Internet_protocol_suite)
* [VPC Networking Components such as Network, Interfaces, Route, Tables, Internet, Gateways, Egress-Only, Internet, Gateways, DNS, Elastic, IP, Addresses,VPC, Endpoints, NAT, VPC, Peering, ClassicLink](https://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Networking.html)

Infrastructure as Code

* [What is ‘infrastructure as code’ and why should you embrace it?](https://www.cio.com/article/3017722/what-is-infrastructure-as-code-and-why-should-you-embrace-it.html)
* [How to Leverage Infrastructure-as-Code With DevOps Best Practices](https://dzone.com/articles/how-to-leverage-infrastructure-as-code-with-devops)
* [Infrastructure as Code: A Reason to Smile](https://www.thoughtworks.com/insights/blog/infrastructure-code-reason-smile)

AWS Command Line Interface

* [AWS Command Line Interface](https://aws.amazon.com/cli/)
  + [Install AWS CLI](http://docs.aws.amazon.com/cli/latest/userguide/installing.html)
  + [Configure AWS CLI](http://docs.aws.amazon.com/cli/latest/userguide/cli-chap-getting-started.html)
* [Tools for Amazon Web Services](https://aws.amazon.com/tools/)

CloudFormation

* [AWS CloudFormation](https://aws.amazon.com/cloudformation/)
* [CloudFormation Intrinsic Function References](https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/intrinsic-function-reference.html)
* [AWS CloudFormation Templates](https://aws.amazon.com/cloudformation/resources/templates/)
* [AWS CloudFormation Documentation](https://docs.aws.amazon.com/cloudformation/index.html)
* [AWS resource and property types reference](https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-template-resource-type-ref.html)