Module Completion and Exam Hints

Amazon Route 53

Amazon Route 53

- DNS stands for Domain Name System and acts as the phonebook of the Internet; DNS helps you to resolve names to IP addresses
- Amazon Route 53 is a global, highly available and scalable Domain Name System (DNS) web service
- You can use Route 53 to resolve domains (basic function) and also to register new domains (awstrainingbootcamp.com)

Amazon CloudFront

Amazon CloudFront

- Amazon CloudFront is a web service that speeds up distribution of your static and dynamic web content, to your users
- CloudFront delivers your content through a worldwide network of data centers called edge locations
- CloudFront Regional Edge Caches really help when the content is not popular enough to stay at a CloudFront Edge Location and improve delivery performance for that content

Amazon CloudFront

- Origin is where CloudFront gets the files from (Amazon S3)
- When you want to use CloudFront to distribute your content, you create a distribution (lower latency and increase user experience)

Application Load Balancer

Elastic Load Balancing

- With AWS Elastic Load Balancing, you can achieve fault tolerance for any application by ensuring scalability, performance and security
- Elastic Load Balancing automatically distributes incoming application traffic across multiple targets (i.e. EC2)
- AWS ELB supports three types of load balancers:
 - Network Load Balancers
 - Classic Load Balancers
 - Application Load Balancers

Auto Scaling

Auto Scaling

- Amazon EC2 Auto Scaling helps you ensure that you have the correct number of Amazon EC2 instances available to handle the load for your application (up or down)
- EC2 instances are grouped in *Auto Scaling Groups*:
 - Minimum number of EC2 instances
 - Desired number of EC2 instances
 - Maximum number of EC2 instances
- Scaling policies will automatically launch or terminate instances as your application demands

Relational Database Service (RDS)

Relational Database Service (RDS)

- Amazon Relational Database Service (RDS) is a web service that makes it easier to set up, operate and scale a relational database in the cloud
- Amazon RDS is a fully managed RDS in the cloud, AWS takes care of all the work for you
- A DB instance is just a database environment in the cloud, that runs a DB engine; DBs come in different sizes (DB instance class), with multiple storage options (HDD/SSD)

AWS Lambda

AWS Lambda

- Amazon Lambda is a compute service that lets you run code without provisioning or managing servers
- AWS Lambda executes your code only when needed and scales automatically; you pay only for the compute time you consume, there is no charge when your code is not running
- You can use AWS Lambda to run your code in response to events; as an example, run your code in response to HTTP requests using Amazon API Gateway

Elastic Beanstalk

Elastic Beanstalk

- With Elastic Beanstalk, you can quickly deploy and manage applications in the AWS without having to learn about the infrastructure that runs those applications
- You simply upload your application and Elastic Beanstalk automatically handles the details of capacity provisioning, load balancing, scaling and application health monitoring
- Elastic Beanstalk will provision one or more AWS resources,
 (i.e. Amazon EC2 instances) to run your App

CloudFormation

CloudFormation

- With AWS CloudFormation, you create a template that describes all the AWS resources that you want (like Amazon EC2 instances or Amazon RDS DB instances) and AWS CloudFormation takes care of provisioning and configuring those resources for you
- You don't need to individually create and configure AWS resources and figure out what's dependent on what
- AWS CloudFormation handles all of that

Simple Notification Service (SNS)

Simple Notification Service (SNS)

- Amazon Simple Notification Service (Amazon SNS) is a web service that coordinates and manages the sending or delivery of messages to subscribing endpoints or clients
- Publishers communicate asynchronously with subscribers by producing and sending a message to a topic, which is a logical access point and communication channel
- Subscribers consume or receive the message or notification over one of the supported protocols (i.e. email) when they are subscribed to the topic

CloudWatch

CloudWatch

- With Amazon CloudWatch you can monitor your Amazon Web Services (AWS) resources and the applications you run on AWS in real time
- You can create alarms which watch metrics and send notifications or automatically make changes to the resources you are monitoring when a threshold is breached
- i.e. watch CPU usage of EC2 instances -> ASGs

What's next?

Thank you