Summary Report

The AWS Academy Cloud Foundations Module 6 focuses on Compute services provided by AWS. Key topics include:

1. **Compute Services Overview**: AWS offers various compute services like Amazon EC2, AWS Lambda, and AWS Elastic Beanstalk, each catering to different use cases.

2. **Amazon EC2**: Provides resizable virtual machines in the cloud. Users can launch instances from Amazon Machine Images (AMIs), configure security groups, and manage storage options. EC2 supports multiple instance types optimized for different workloads.

3. **EC2 Cost Optimization**: AWS offers pricing models like On-Demand, Reserved, and Spot Instances to optimize costs. The four pillars of cost optimization are right-sizing, increasing elasticity, choosing the optimal pricing model, and optimizing storage choices.

4. **Container Services**: AWS supports containerization with services like Amazon Elastic Container Service (ECS), Amazon Elastic Kubernetes Service (EKS), and Amazon Elastic Container Registry (ECR). Containers are lightweight, portable, and efficient for running applications.

5. **AWS Lambda**: A serverless compute service that runs code in response to events without managing servers. Lambda supports multiple programming languages and offers pay-per-use pricing.

6. **AWS Elastic Beanstalk**: A Platform-as-a-Service (PaaS) that simplifies deploying and managing web applications. It supports multiple programming languages and frameworks, handling infrastructure provisioning, scaling, and monitoring.

7. **Hands-On Activities**: The module includes labs and activities to practice launching EC2 instances, creating Lambda functions, and deploying applications with Elastic Beanstalk.

8. **Key Takeaways**:

1 EC2 provides scalable virtual machines.

1 Lambda enables serverless computing.

1 Elastic Beanstalk simplifies application deployment.

1 Containers offer efficient application deployment with ECS, EKS, and ECR.

The module concludes with a knowledge check and additional resources for further learning.