AWS Certified Solutions Architect: Associate - 11.0 Additional Key Services

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Title: DevOps Services

Subtitle: AWS Certified Solutions Architect: Associate

11.4 DevOps Services

DevOps

- AWS OpsWorks
  - Configuration management service
  - Built around open-source Chef solution
  - Most applications require multiple services
    - ELB
    - App Servers
    - Database Servers
  - OpsWorks combines them into a *stack* (Diagram)
  - *Layers* are defined to manage scaling and other tasks
  - Example uses
    - Multi-tier web applications
    - Continuous Integration
- AWS CloudFormation
  - Version control system for AWS resources
  - Uses *templates* and *stacks* to manage solutions (Diagram)
  - *templates* are JSON text files that define the resources
  - The resources combine to form a *stack*
  - *parameters* can be used to modify the stack for testing (Diagram)
  - Uses
    - Launch test environments
    - Replicate between environments
    - Deploy in new AWS regions
- AWS Elastic Beanstalk
  - Dead-simple platform for deploying web applications
  - Components
    - *application*: Logical collection of components
    - *application version*: Specific, labeled iteration of an application
    - *environment*: The application
    - *environment configuration*: Parameters that define how the application behaves
  - Supported platforms
    - Java
    - Node.js
    - PHP
    - Python
    - Ruby
    - Go
    - Containers
      - Tomcat
      - Passenger
      - Puma
      - Docker
- AWS Trusted Advisor (Diagram)
  - Reports on your account based on best-practices
    - Cost optimization
    - Security
    - Fault tolerance
    - Performance improvement
  - Four checks provided at no cost
    - Service Limits
    - Security Groups - Specific Ports Unrestricted
    - IAM Use
    - MFA on Root Account
  - Business or Enterprise support plan adds over 50 other checks
- AWS Config
  - Security and Governance solution
  - Provides inventory, configuration history and change

notifications for AWS resources
- Maintaines Configuration Items for every resource in a region
- Use case
    - Discovery
    - Change management
    - Continuous Audit and Compliance
    - Troubleshooting
    - Security and Incident Analysis
- Integrates with CloudTrail
- Configuration items are stored in S3
- History file is populated every 6 hours by default