CodeCommit

If you are studying for AWS Developer Associate Exam, this guide will help you with quick revision before the exam. it can use as study notes for your preparation.

Dashboard | Other Certification Notes

CodeCommit

- **Version Control** is the ability to understand changes that happened to the code over time (and possibly roll back)
- This is enabled by using a version control system such as Git
- A git repository can live on your machine or on a central online repository
- Benefits:
  - Collaborate with a team of developers
  - Make sure the code is backed-up somewhere
  - Makes sure it's fully viewable and auditable
- AWS CodeCommit
  - private git repositories
  - No size limits on the repositories (scale seamlessly)
  - Fully managed and highly available
  - The code is only in your AWS cloud account
  - Increased security and compliance
  - Secure (encrypted access control, etc)
- CodeCommit Security
  - Interactions are done using git
  - Authentication with Git
    - SSH Keys: AWS Users can configure SSH keys in their IAM Console
    - HTTPS: Done through AWS CLI Authentication helper or generate HTTPS credentials
    - MFA: Multi Factor Authentication
  - Authorization with Git
    - IAM Policies manage user / roles rights to the repositories
  - Encryption
    - Repositories are automatically encrypted at rest using KMS
    - Encrypted in transit (can only user HTTPS or SSH both secure)
  - Cross Account access:
    - Do not share your SSH keys
    - Do not share your AWS credentials
    - Use IAM Role in your AWS account and use AWS STS (with AssumeRole API)
- Github vs. CodeCommit
  - Similarities
    - Github and CodeCommit can be integrated with AWS CodeBuild
    - Both support HTTPS and SSH authentication
  - Differences
    - Security
      - Github: Github Users
      - CodeCommit: AWS IAM users & roles
    - Hosted
      - Github: hosted by Github
      - CodeCommit: managed & hosted by AWS
    - UI
      - Github UI is fully featured
      - CodeCommit is minimal
- CodeCommit notifications
  - You can trigger notifications in CodeCommit using AWS SNS(Simple Notification Service) or AWS Lambda or AWS CloudWatch Event Rules
  - Use cases for notifications SNS / AWS Lambda notifications:
    - Deletion of branches
    - Trigger for pushes that happens in master branch
    - Notify external Build System
    - Trigger AWS Lambda function to perform codebase analysis (maybe credentials got committed in the code?)
  - Use cases for CloudWatch Event Rules:
    - Trigger for pull request updates (created / updated / deleted / commented)

- Trigger for pull request updates (created / updated / deleted / commented)
- Commit comment events
- CloudWatch Event Rules goes into an SNS topic