# AWS Cloud9

### Overview

AWS Cloud9 is an integrated development environment, or IDE.

### Brain Dump

The AWS Cloud9 IDE offers a rich code-editing experience with support for several programming languages and runtime debuggers, and a built-in terminal. It contains a collection of tools that you use to code, build, run, test, and debug software, and helps you release software to the cloud

### EC2 environment

You can instruct AWS Cloud9 to create an Amazon EC2 instance, and then connect the environment to that newly created EC2 instance. This type of setup is called an EC2 environment.

### SSH environment

You can instruct AWS Cloud9 to connect an environment to an existing cloud compute instance or to your own server. This type of setup is called an SSH environment.

# AWS CodeCommit

### Overview

AWS CodeCommit is a version control service that enables you to privately store and manage Git repositories in the AWS cloud.

### Brain Dump

AWS CodeCommit is a version control service hosted by Amazon Web Services that you can use to privately store and manage assets (such as documents, source code, and binary files) in the cloud

This is a HIPAA Eligible Service. For more information about AWS, U.S. Health Insurance Portability and Accountability Act of 1996 (HIPAA), and using AWS services to process, store, and transmit protected health information (PHI),

# AWS CodeBuild

### Overview

AWS CodeBuild is a fully managed build service in the cloud. CodeBuild compiles your source code, runs unit tests, and produces artifacts that are ready to deploy

### Brain Dump

AWS CodeBuild is a fully managed build service in the cloud. CodeBuild compiles your source code, runs unit tests, and produces artifacts that are ready to deploy. CodeBuild eliminates the need to provision, manage, and scale your own build servers. It provides prepackaged build environments for popular programming languages and build tools such as Apache Maven, Gradle, and more. You can also customize build environments in CodeBuild to use your own build tools. CodeBuild scales automatically to meet peak build requests.

CodeBuild provides these benefits:

Fully managed – CodeBuild eliminates the need to set up, patch, update, and manage your own build servers.

On demand – CodeBuild scales on demand to meet your build needs. You pay only for the number of build minutes you consume.

Out of the box – CodeBuild provides preconfigured build environments for the most popular programming languages. All you need to do is point to your build script to start your first build.

# AWS CodeDeploy

### Overview

AWS CodeDeploy is a deployment service that automates application deployments to Amazon EC2 instances, on-premises instances, serverless Lambda functions, or Amazon ECS services

### Brain Dump

AWS CodeDeploy can deploy application content that runs on a server and is stored in Amazon S3 buckets, GitHub repositories, or Bitbucket repositories. CodeDeploy can also deploy a serverless Lambda function. You do not need to make changes to your existing code before you can use CodeDeploy..

# AWS CodePipeline

### Overview

AWS CodePipeline is a continuous delivery service that automates the building, testing, and deployment of your software into production

### Brain Dump

Automate your release processes: CodePipeline fully automates your release process from end to end, starting from your source repository through build, test, and deployment. You can prevent changes from moving through a pipeline by including a manual approval action in any stage except a Source stage. You can release when you want, in the way you want, on the systems of your choice, across one instance or multiple instances.

CodePipeline can deploy applications to EC2 instances by using CodeDeploy, AWS Elastic Beanstalk, or AWS OpsWorks Stacks. CodePipeline can also deploy container-based applications to services by using Amazon ECS. Developers can also use the integration points provided with CodePipeline to plug in other tools or services, including build services, test providers, or other deployment targets or systems.

# AWS CodeStar

### Overview

AWS CodeStar is a cloud-based service for creating, managing, and working with software development projects on AWS

### Brain Dump

You can quickly develop, build, and deploy applications on AWS with an AWS CodeStar project. An AWS CodeStar project creates and integrates AWS services for your project development toolchain. Depending on your choice of AWS CodeStar project template, that toolchain might include source control, build, deployment, virtual servers or serverless resources, and more. AWS CodeStar also manages the permissions required for project users (called team members). By adding users as team members to an AWS CodeStar project, project owners can quickly and simply grant each team member role-appropriate access to a project and its resources.

# AWS X-Ray

### Overview

AWS X-Ray helps developers analyze and debug distributed applications in production or under development, such as those built using microservice architecture

### Brain Dump

AWS X-Ray helps developers analyze and debug distributed applications in production or under development, such as those built using microservice architecture. With X-Ray, you can understand how your application and its underlying services are performing so you can identify and troubleshoot the root cause of performance issues and errors.

X-Ray provides an end-to-end view of requests as they travel through your application, and shows a map of your application’s underlying components. You can use X-Ray to analyze both applications in development and in production, from simple three-tier applications to complex microservices applications consisting of thousands of services.