Experiment 2

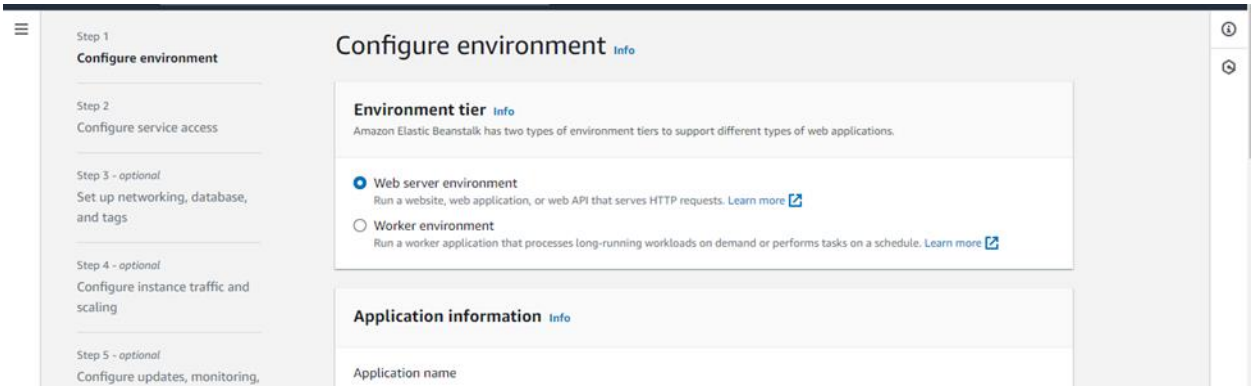
Aim: To Build Your Application using AWS CodeBuild and Deploy on S3 / SEBS using AWS CodePipeline, deploy Sample Application on EC2 instance using AWS CodeDeploy.

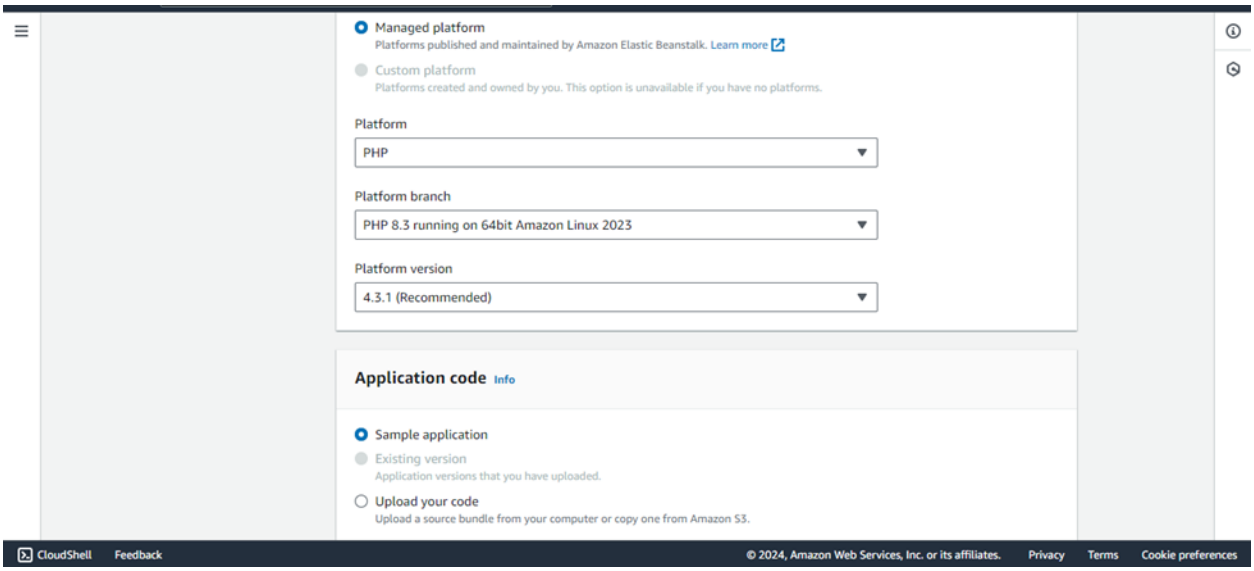
Theory:

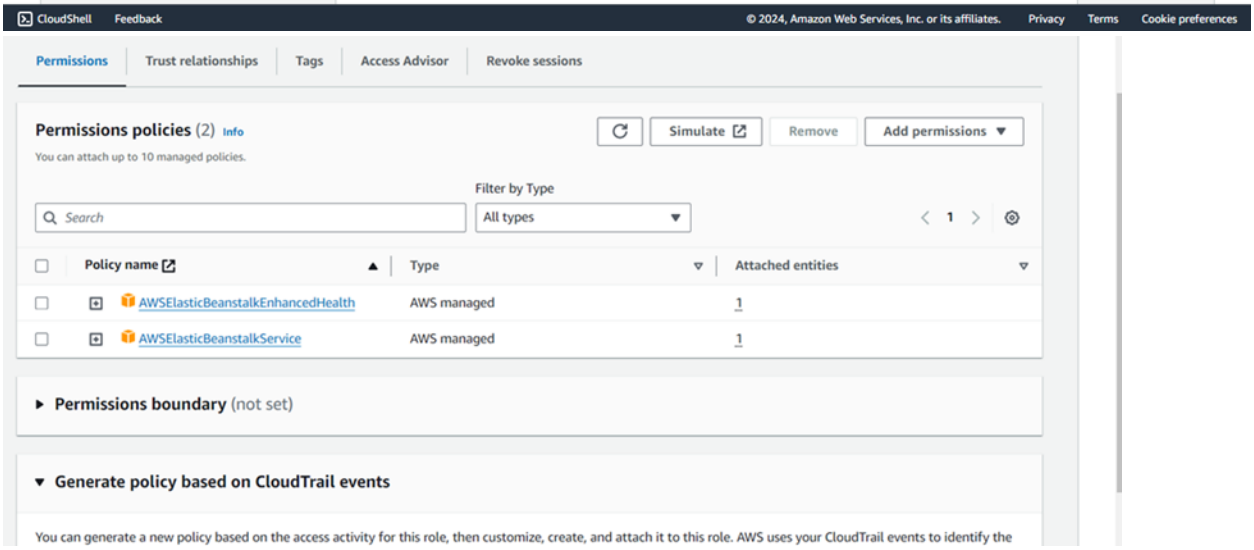
Continuous deployment allows you to deploy revisions to a production environment automatically without explicit approval from a developer, making the entire software release process automated.

You will create the pipeline using AWS CodePipeline, a service that builds, tests, and deploys your code every time there is a code change. You will use your GitHub account, an Amazon Simple Storage Service (S3) bucket, or an AWS CodeCommit repository as the source location for the sample app's code. You will also use AWS Elastic Beanstalk as the deployment target for the sample app. Your completed pipeline will be able to detect changes made to the source repository containing the sample app and then automatically update your live sample app.

Output:


Step 1
Configure environment
Step 2
Configure service access
Step 3 - optional
Set up networking, database, and tags
Step 4 - optional
Configure instance traffic and scaling
Step 5 - optional
Configure updates, monitoring,
Configure environment Info
Environment tier Info
Amazon Elastic Beanstalk has two types of environment tiers to support different types of web applications.
Web server environment
Run a website, web application, or web API that serves HTTP requests. Learn more
Worker environment
Run a worker application that processes long-running workloads on demand or performs tasks on a schedule. Learn more
Application information Info
Application name


Managed platform
Platforms published and maintained by Amazon Elastic Beanstalk. Learn more
Custom platform
Platforms created and owned by you. This option is unavailable if you have no platforms.
Platform
PHP
Platform branch
PHP 8.3 running on 64bit Amazon Linux 2023
Platform version
4.3.1 (Recommended)
Application code Info
Sample application
Existing version
Application versions that you have uploaded.
Upload your code
Upload a source bundle from your computer or copy one from Amazon S3.


CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
Permissions
Trust relationships
Tags
Access Advisor
Revoke sessions
Permissions policies (2) Info
You can attach up to 10 managed policies.
Simulate
Remove
Add permissions
Filter by Type
Search
All types
Policy name
Type
Attached entities
AWSElasticBeanstalkEnhancedHealth
AWS managed
1
AWSElasticBeanstalkService
AWS managed
1
Permissions boundary (not set)
Generate policy based on CloudTrail events
You can generate a new policy based on the access activity for this role, then customize, create, and attach it to this role. AWS uses your CloudTrail events to identify the

August 28, 2024 17:56:37 (UTC+5:30)	INFO	Environment update completed successfully.
August 28, 2024 17:56:37 (UTC+5:30)	INFO	New application version was deployed to running EC2 instances.
August 28, 2024 17:56:15 (UTC+5:30)	INFO	Instance deployment completed successfully.
August 28, 2024 17:56:08 (UTC+5:30)	INFO	Instance deployment: You didn't include a 'composer.json' file in your source bundle. The deployment didn't install Composer dependencies.
August 28, 2024 17:56:04 (UTC+5:30)	INFO	Deploying new version to instance(s).
August 28, 2024 17:55:42 (UTC+5:30)	INFO	Environment update is starting.
August 28, 2024 17:52:57 (UTC+5:30)	INFO	Successfully launched environment: KomalBeanstalk-env
August 28, 2024 17:52:05 (UTC+5:30)	INFO	Added instance [i-0759f922553b2bed7] to your environment.
August 28, 2024 17:51:52 (UTC+5:30)	INFO	Instance deployment completed successfully.
August 28, 2024 17:51:47 (UTC+5:30)	INFO	Instance deployment: You didn't include a 'composer.json' file in your source bundle. The deployment didn't install Composer dependencies.
August 28, 2024 17:51:23 (UTC+5:30)	INFO	Waiting for EC2 instances to launch. This may take a few minutes.
August 28, 2024 17:51:08 (UTC+5:30)	INFO	Created EIP: 65.0.39.79

Conclusion:

Building and deploying an application using AWS CodeBuild, CodePipeline, and CodeDeploy demonstrates the power of automated CI/CD in the cloud. AWS CodeBuild compiles code, runs tests, and prepares software packages, while CodePipeline automates the release process, ensuring faster and consistent deployments. Deploying to S3 or SEBS enables scalable hosting of static and serverless applications, and CodeDeploy manages the deployment to EC2 instances, ensuring minimal downtime and easy rollback. This streamlined approach enhances development efficiency, reduces errors, and accelerates application delivery, showcasing the benefits of cloud-based automation and infrastructure management.