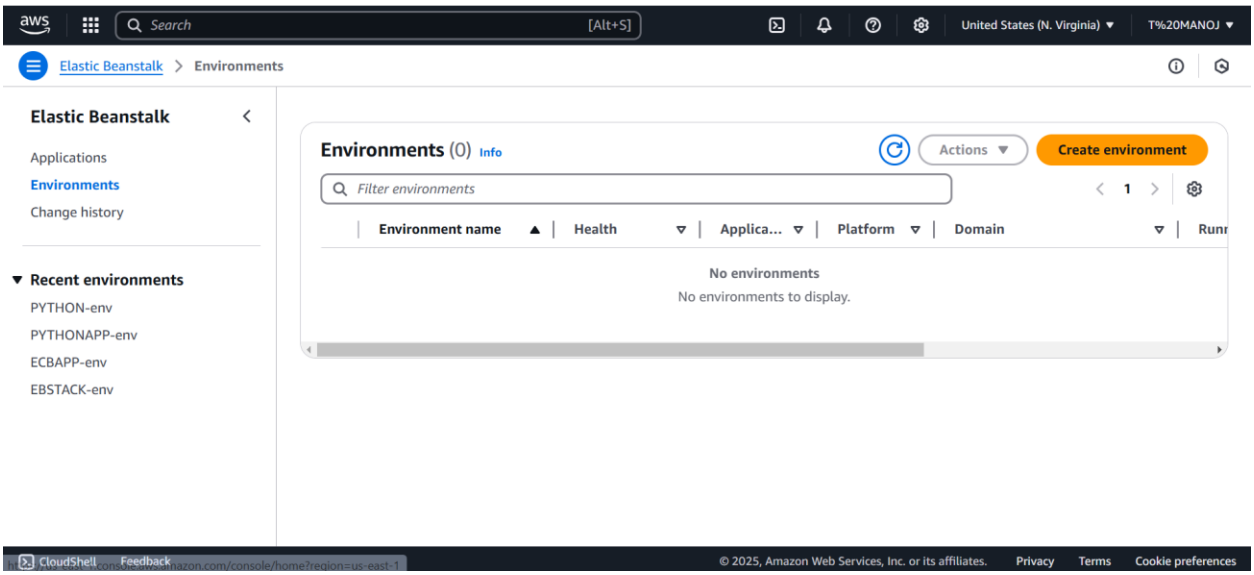
AWS Elastic Beanstalk Deployment - Python Application (Blue-Green Deployment)

NAME : T MANOJ

Step 1: Create an Elastic Beanstalk Environment

1. Navigate to AWS Elastic Beanstalk in the AWS Management Console.
2. Click on Create a new environment.
3. Choose Environment Type: Select Web Server Environment.
4. Enter Environment Name: PYTHONAPP.
5. Select Platform:
    a. Platform: Python.
    b. Platform Branch: Choose the latest available Python version.
6. Set Permissions:
    a. Assign the required IAM role for Elastic Beanstalk.
7. Choose S3 Bucket:
    a. Select an S3 General Bucket for storing deployment artifacts.
8. Click Create Environment.


Search
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United States (N. Virginia)
T%20MANOJ
Elastic Beanstalk
Environments
Elastic Beanstalk
Applications
Environments
Change history
Recent environments
PYTHON-env
PYTHONAPP-env
ECBAPP-env
EBSTACK-env
Environments (0) Info
Actions
Create environment
Filter environments
Environment name
Health
Applica...
Platform
Domain
No environments
No environments to display.
CloudShell
Feedback
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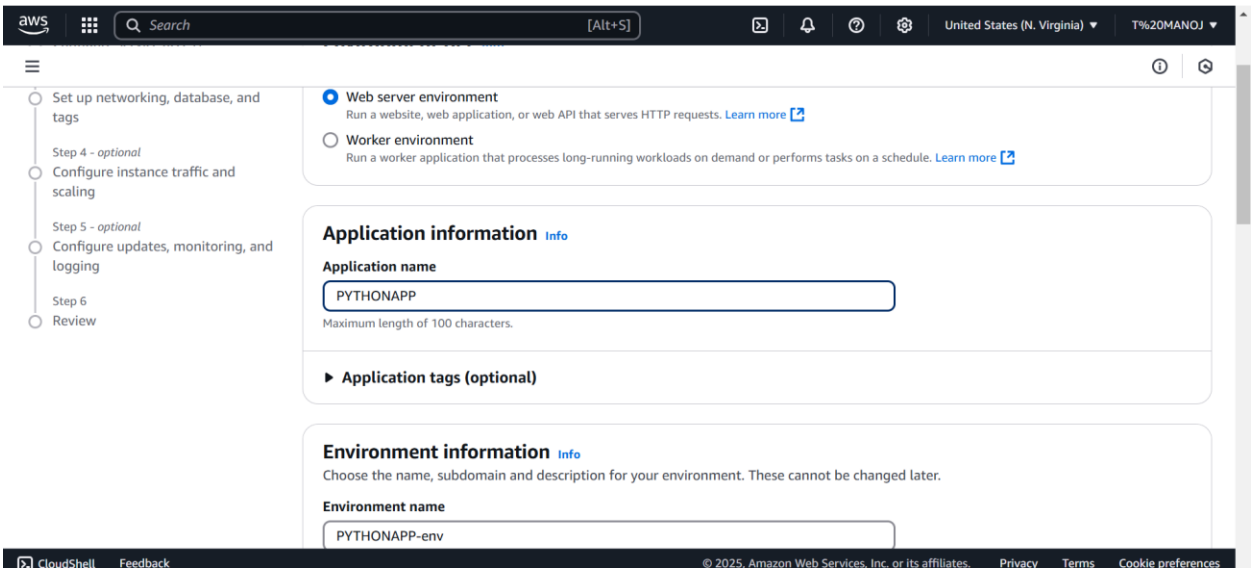
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Set up networking, database, and tags
Step 4 - optional
Configure instance traffic and scaling
Step 5 - optional
Configure updates, monitoring, and logging
Step 6
Review
Web server environment
Run a website, web application, or web API that serves 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
PYTHONAPP
Maximum length of 100 characters.
Application tags (optional)
Environment information Info
Choose the name, subdomain and description for your environment. These cannot be changed later.
Environment name
PYTHONAPP-env
CloudShell
Feedback
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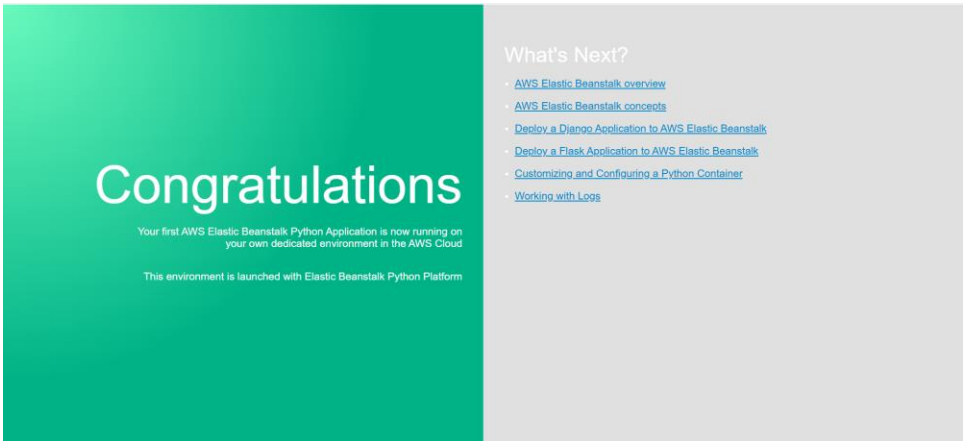
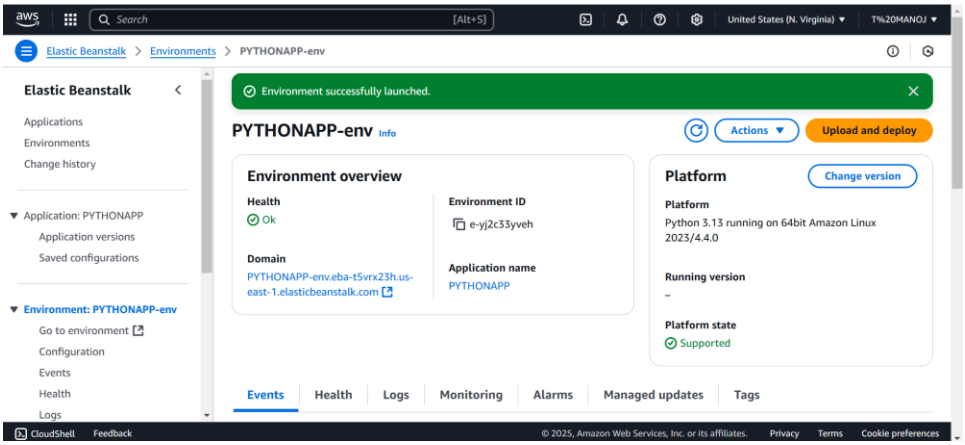
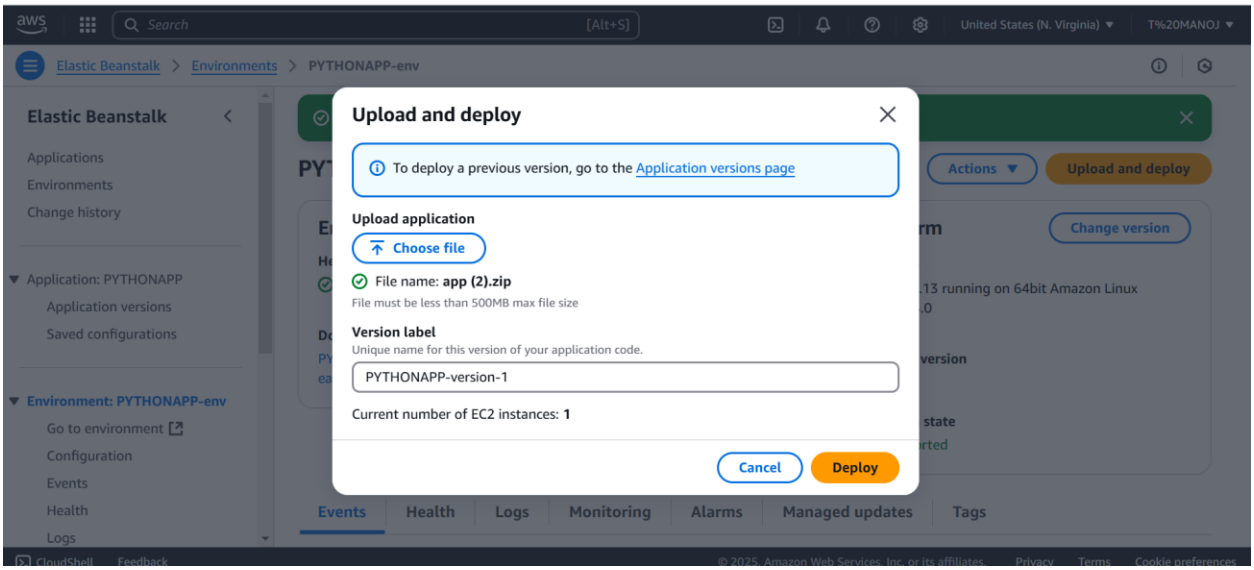
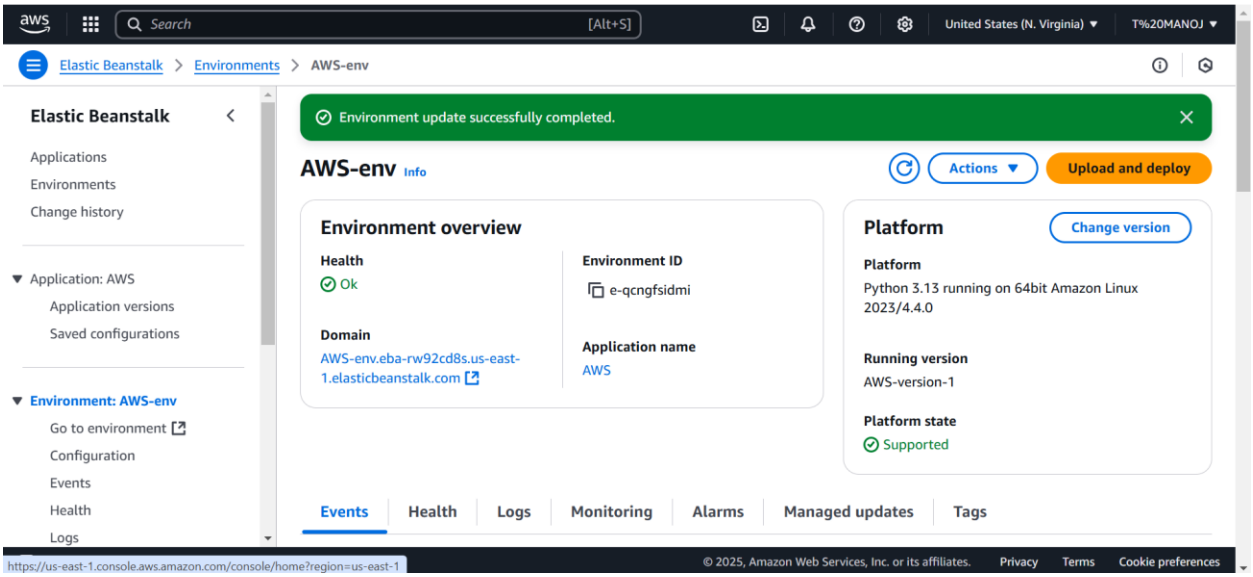




Step 2: Deploy the Initial Application

1. Once the environment is created, navigate to Upload and Deploy.
2. Upload your Python application package (`version-1.zip`).
3. Click Deploy and wait for the deployment to complete.
4. Open the provided Elastic Beanstalk URL in a browser.
5. Verify the application output.

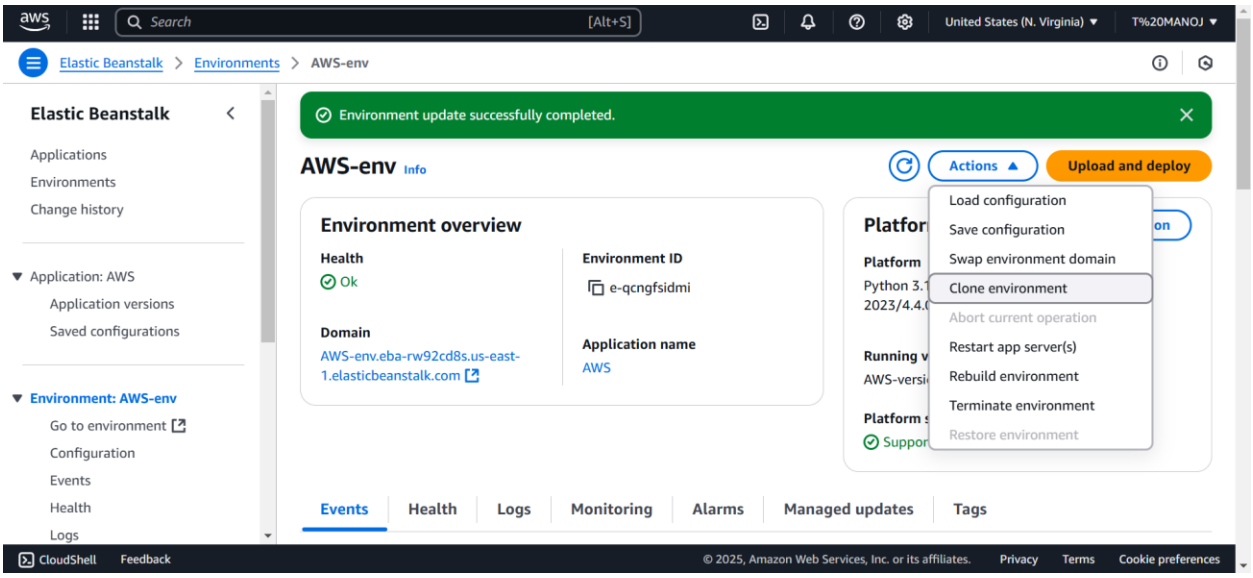




Step 3: Clone the Environment (Blue-Green Deployment)

1. Go to the Elastic Beanstalk Dashboard.
2. Select the existing environment (PYTHONAPP).

3. Click on Actions → Clone Environment.
4. Name the cloned environment (PYTHONAPP-V2).
5. Ensure that all configurations, including S3 bucket, permissions, and platform, remain the same.
6. Click Create Environment and wait for the cloned environment to launch.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Elastic Beanstalk > Environments > AWS-env
Elastic Beanstalk
Applications
Environments
Change history
Application: AWS
Application versions
Saved configurations
Environment: AWS-env
Go to environment
Configuration
Events
Health
Logs
Environment update successfully completed.
AWS-env Info
Actions
Upload and deploy
Load configuration
Save configuration
Swap environment domain
Clone environment
Abort current operation
Restart app server(s)
Rebuild environment
Terminate environment
Restore environment
Environment overview
Health
Ok
Environment ID
e-qcngfsidmi
Domain
AWS-env.eba-rw92cd8s.us-east-1.elasticbeanstalk.com
Application name
AWS
Events
Health
Logs
Monitoring
Alarms
Managed updates
Tags
CloudShell
Feedback
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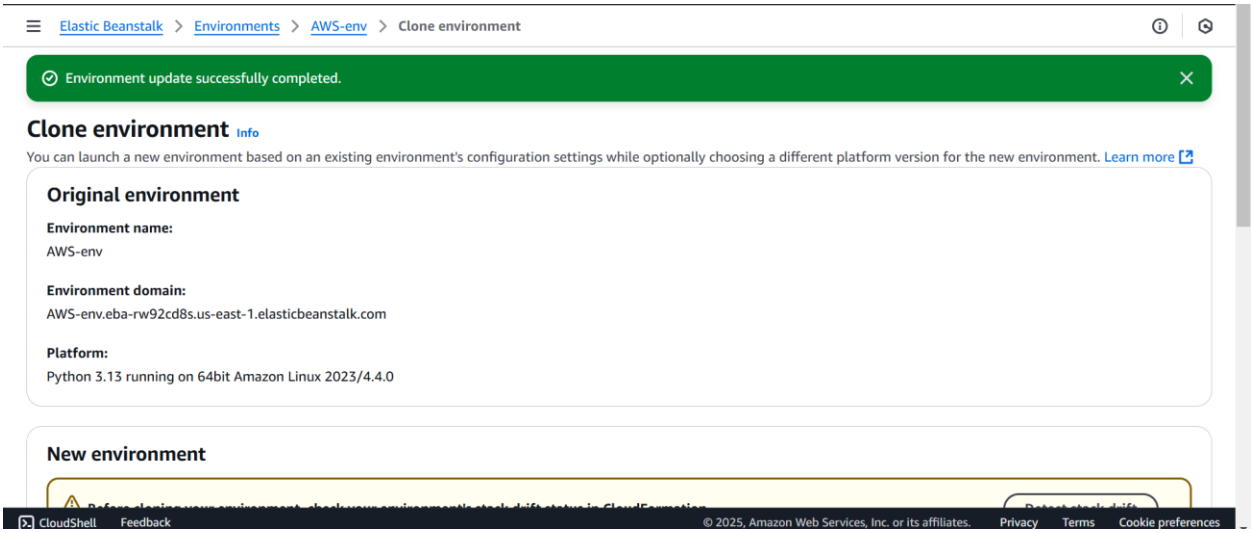
Elastic Beanstalk > Environments > AWS-env > Clone environment
Environment update successfully completed.
Clone environment Info
You can launch a new environment based on an existing environment's configuration settings while optionally choosing a different platform version for the new environment. Learn more
Original environment
Environment name:
AWS-env
Environment domain:
AWS-env.eba-rw92cd8s.us-east-1.elasticbeanstalk.com
Platform:
Python 3.13 running on 64bit Amazon Linux 2023/4.4.0
New environment
CloudShell
Feedback
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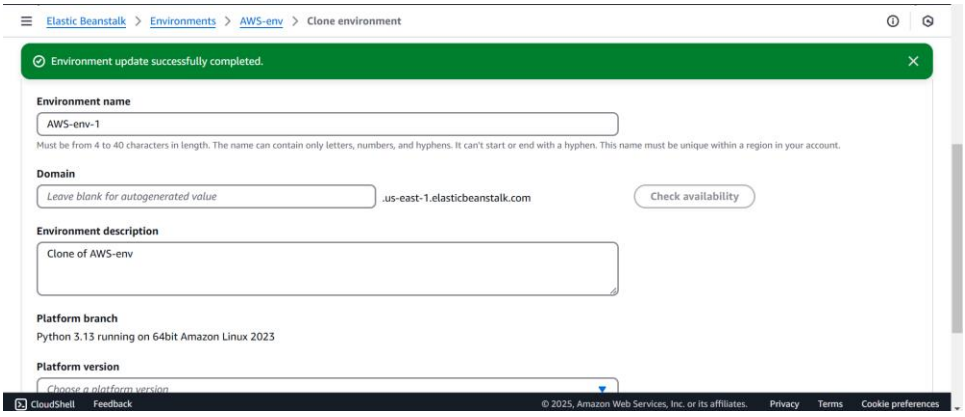
Elastic Beanstalk > Environments > AWS-env > Clone environment
Environment update successfully completed.
Environment name
AWS-env-1
Must be from 4 to 40 characters in length. The name can contain only letters, numbers, and hyphens. It can't start or end with a hyphen. This name must be unique within a region in your account.
Domain
Leave blank for autogenerated value
.us-east-1.elasticbeanstalk.com
Check availability
Environment description
Clone of AWS-env
Platform branch
Python 3.13 running on 64bit Amazon Linux 2023
Platform version
Choose a platform version
CloudShell
Feedback
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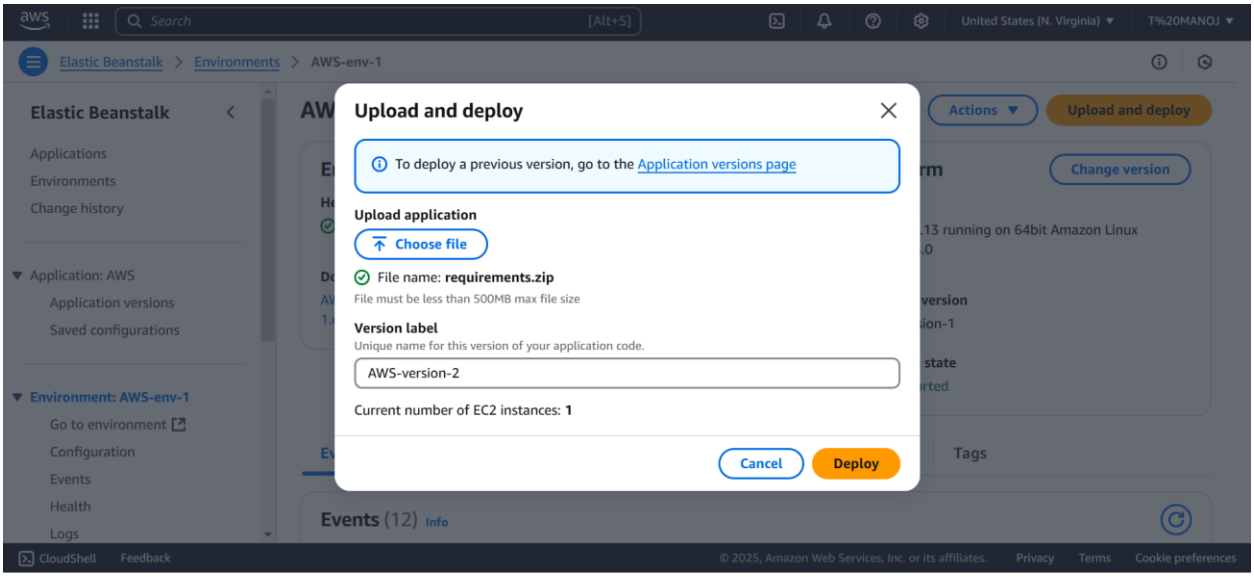
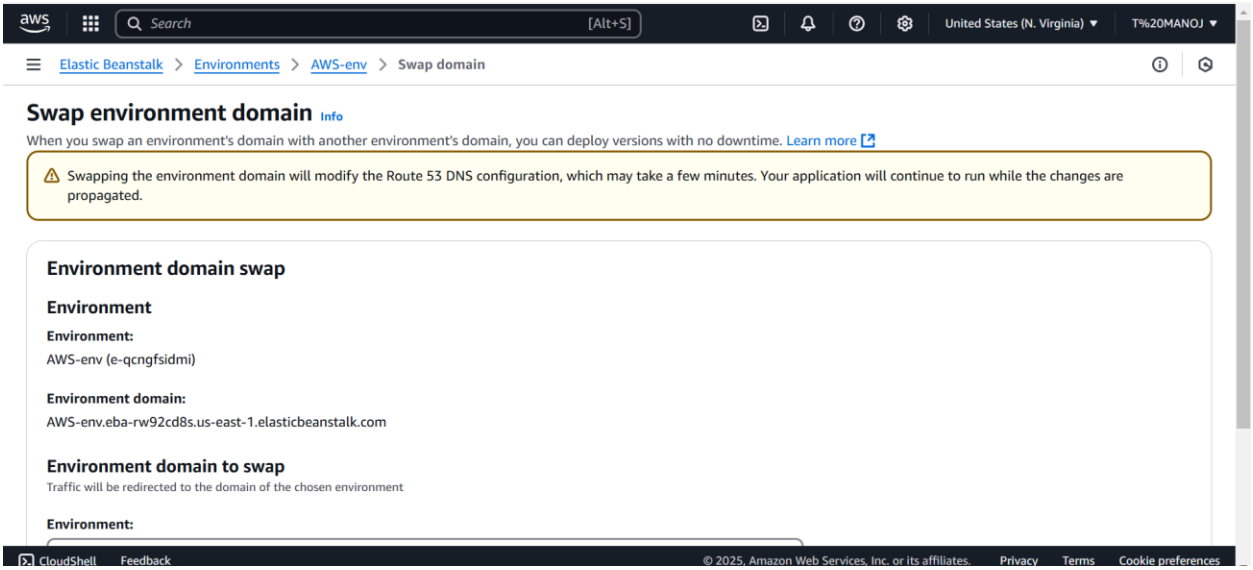
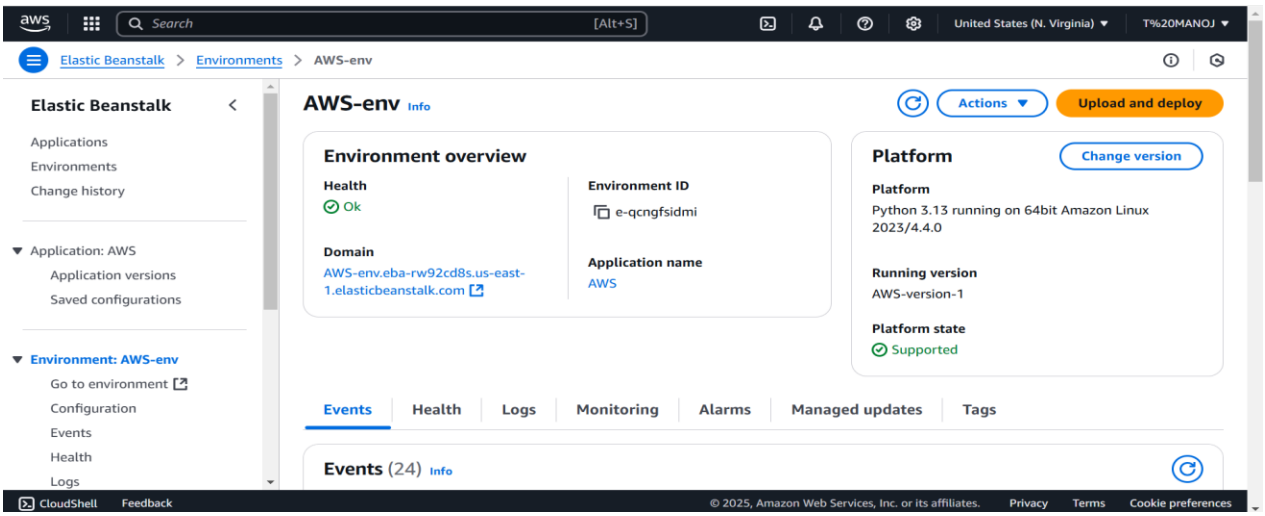
Step 4: Deploy New Version in the Cloned Environment

1. Navigate to the PYTHON-V2 environment.
2. Click on Upload and Deploy.
3. Upload the new version of your Python application (PYTHONAPP-v-2.zip).
4. Click Deploy and verify the output in the browser.

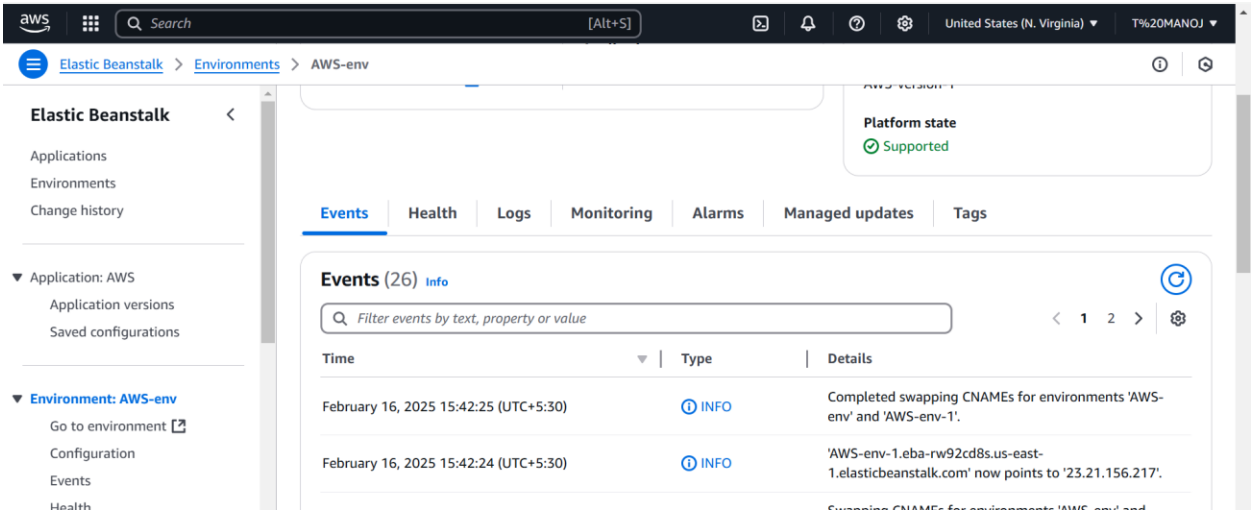






Step 5: Swap the URLs for Blue-Green Deployment

1. Go to Elastic Beanstalk Dashboard.
2. Select Actions → Swap Environment URLs.
3. Choose PYTHON (Version-1) and PYTHON-V2 (Version-2) for swapping.
4. Confirm the swap to route traffic to the new version.



Step 6: Validate and Monitor

1. Open the environment URL in a browser to confirm the new version is active.
2. Monitor the health of the application using Elastic Beanstalk logs.
3. If needed, roll back by swapping URLs again.