AWS Elastic Beanstalk

Elastic Beanstalk is a fully managed service provided by AWS that makes it easy to deploy and manage applications in the cloud without worrying about the underlying infrastructure. It is a **Platform as a Service (PaaS)** that simplifies deploying, managing, and scaling web applications and services.

How it works

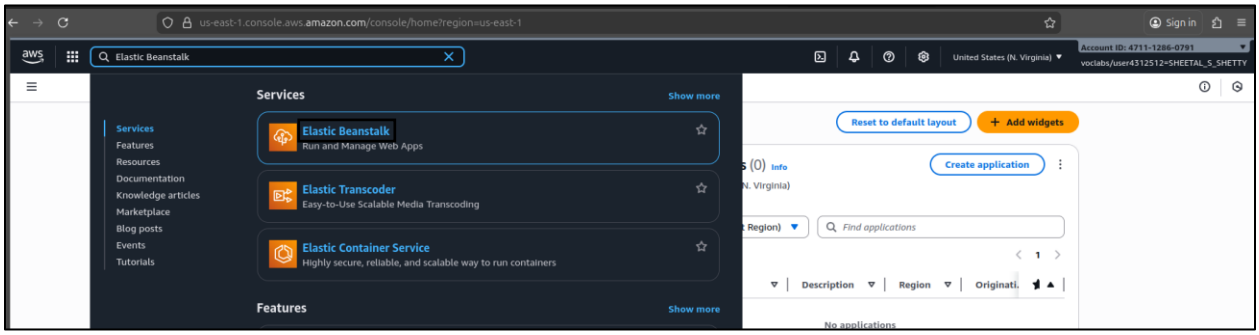
1. You upload your application code (Java, .NET, Node.js, Python, etc.).
2. Elastic Beanstalk automatically handles:
    a. Provisioning and configuring servers (EC2 instances)
    b. Setting up load balancers and Auto Scaling groups
    c. Managing the application environment
    d. Monitoring, logging, and health checks

Who is it for

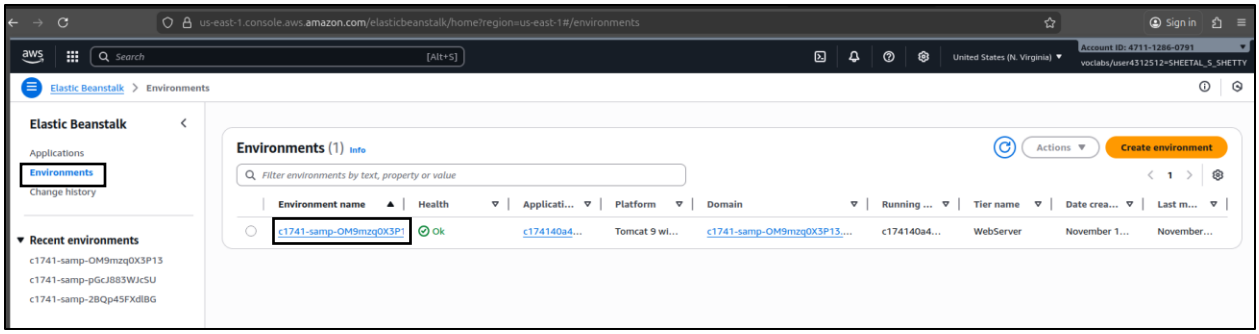
- Developers who want to focus on writing code rather than managing infrastructure
- Small to medium-sized applications that need quick and easy deployment
- Teams that want a managed environment but still need some level of control when required

Lab:

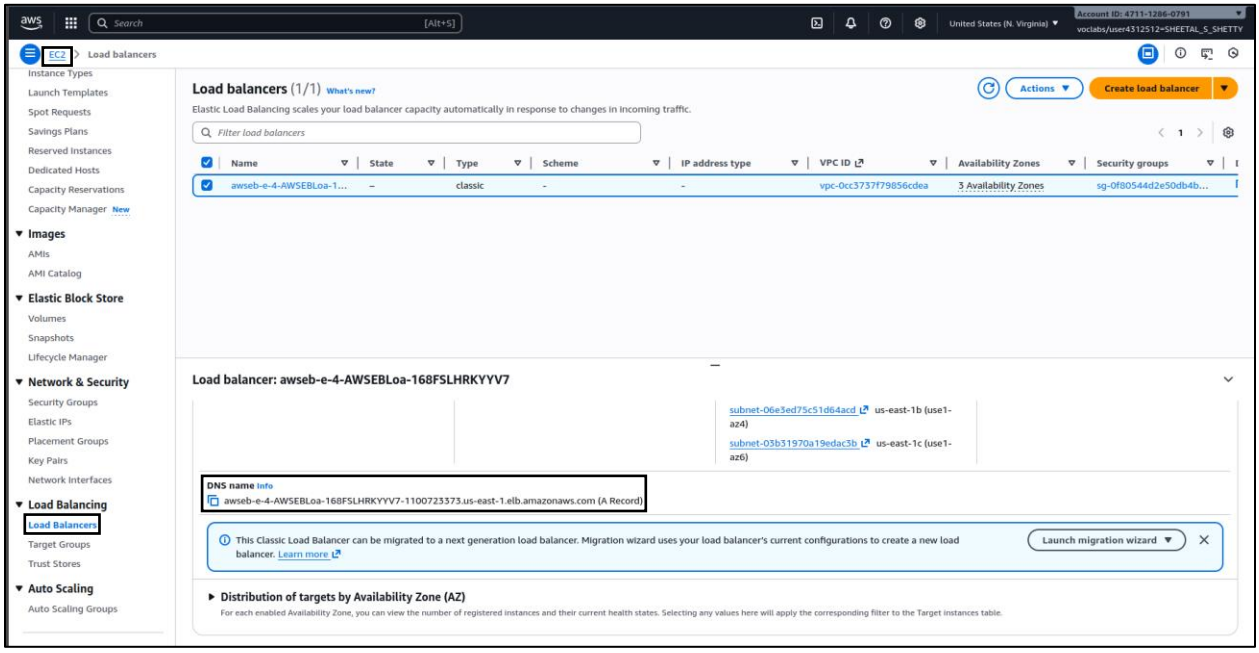
Step1: In the console, in the search box, search and choose **Elastic Beanstalk.**



Under the **Environment,** click on the name of the environment. This opens the Dashboard page for the Elastic Beanstalk environment.



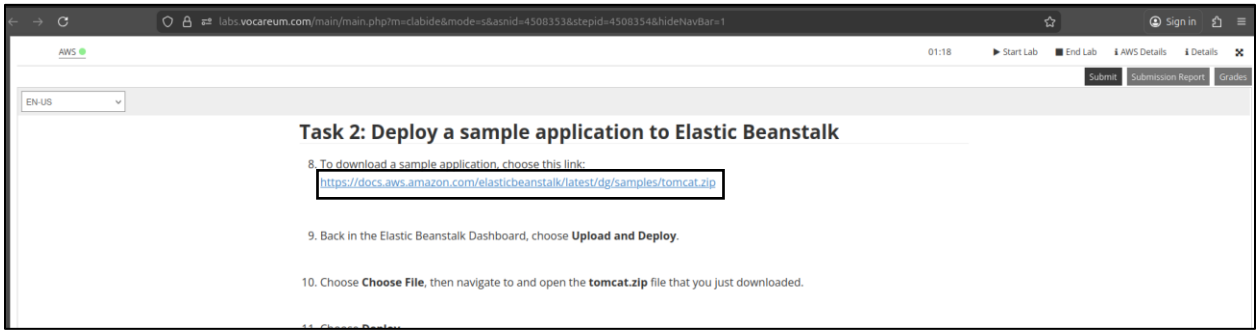
Go to EC2-> Click **Load Balancer** from the left navigation menu and access the **Domain** Name.



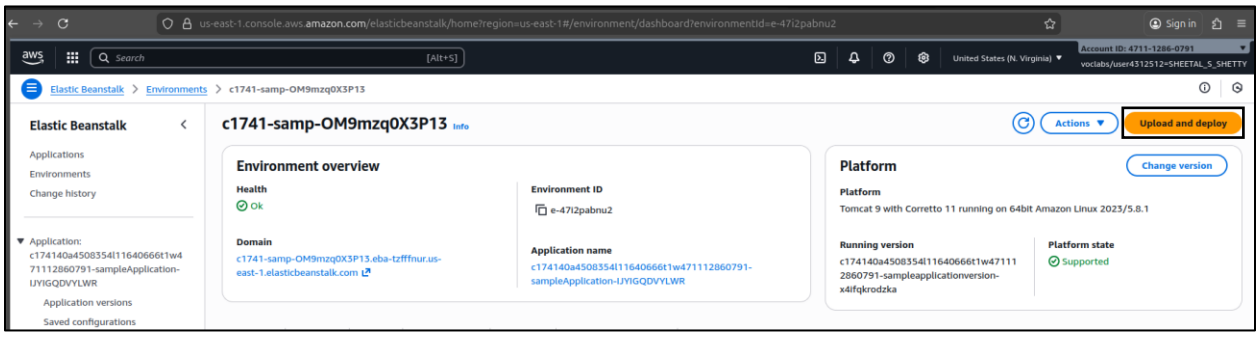
When you open the domain link in browser, AWS launches the EC2 instance with an application server. However, since no application code has been deployed to the Beanstalk environment yet, the page will not display any content. Instead, it will show an **HTTP Status 404 – Not Found** message. This is expected behavior until the application is deployed.

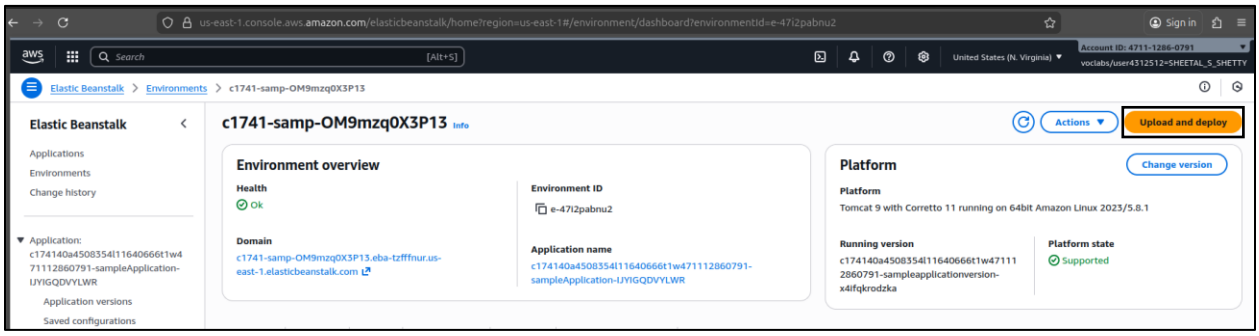
Step2: Deploying a sample application to Elastic Beanstalk.

Go to the AWS current lab instruction page. There, you will find a link to download the sample **tomcat.zip** file. Click on the link, and the **tomcat.zip** file will be downloaded to your system.

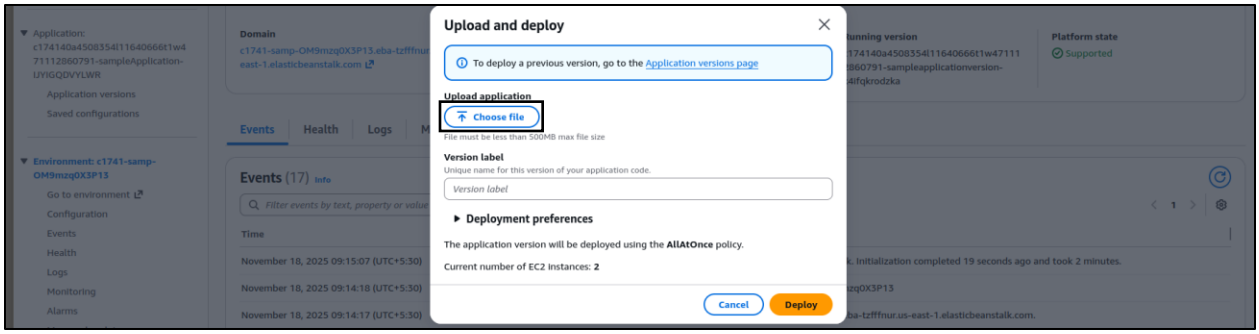


After downloading, return to the Elastic Beanstalk dashboard and continue with the **Upload and Deploy** steps.

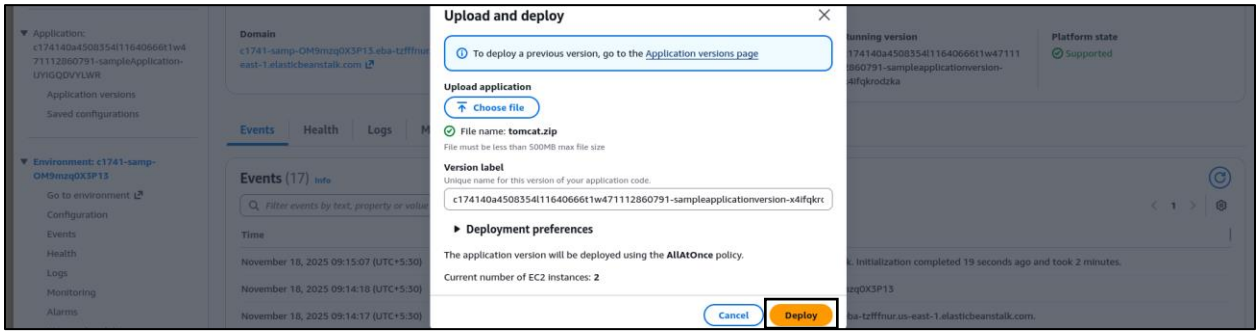




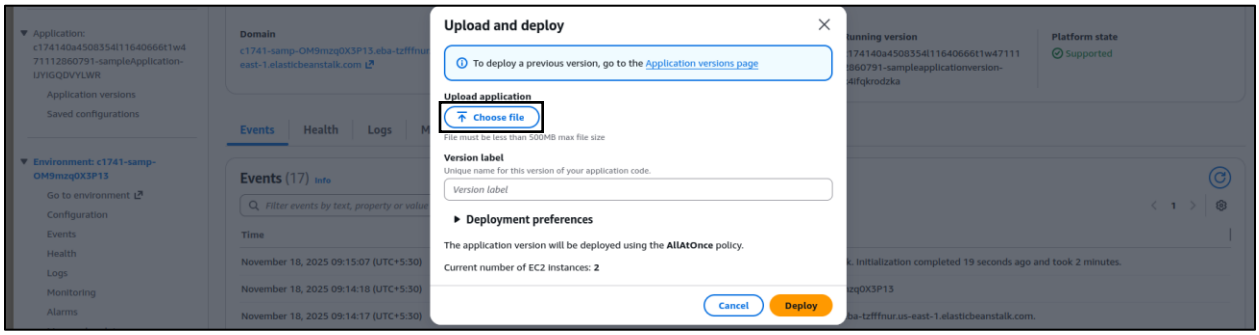
Select **Choose File**, then navigate to the **tomcat.zip** file you downloaded and open it.



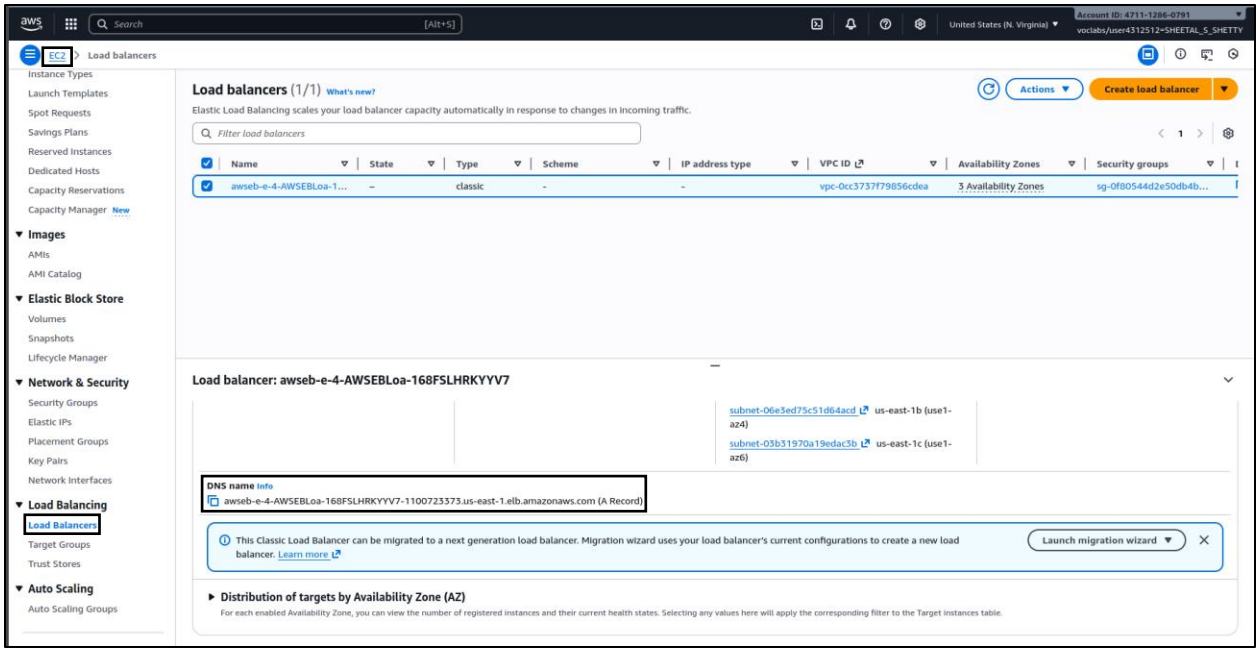
Next, choose **Deploy**.



Elastic Beanstalk will take a minute or two to update your environment and deploy the application.



Step3: Once the deployment is complete, go to EC2-> Click **Load Balancer** from the left navigation menu and access the **Domain** Name.



The deployed **web application** will now be displayed.