Vidyavardhini's College of Engineering and Technology

Department of Artificial Intelligence & Data Science

AY: 2023-24

Class:	TE	**Semester:**	VI
Course Code:	CSL605	**Course Name:**	Skill Based Lab course : Cloud Computing

Name of Student:	Soham Ajit Dahanukar
Roll No. :	13
Experiment No.:	3
Title of the Experiment:	To study and Implement Platform as a Service using AWS Elastic Beanstalk.
Date of Performance:	
Date of Submission:	

Evaluation

Performance Indicator	Max. Marks	Marks Obtained
Performance	5	
Understanding	5	
Journal work and timely submission	10	
Total	20	

Performance Indicator	Exceed Expectations (EE)	Meet Expectations (ME)	Below Expectations (BE)
Performance	4-5	2-3	1
Understanding	4-5	2-3	1
Journal work and timely submission	8-10	5-8	1-4

Checked by

Name of Faculty :

Signature :

Date :

Experiment No. 3

Aim: To study and Implement Platform as a Service using AWS Elastic Beanstalk/ Microsoft Azure App Service

Objective: Understand the concept of PaaS and implement using Own Cloud which gives universal access to files through a web interface.

Theory:

- PaaS is a platform for programming developers and brings benefits - SaaS is used for but from the software development point.
- It is the computer platform that provides the facility to use web applications quickly. With ease, without buying & maintaining web-development, PaaS has a similarity with that SaaS except that SaaS delivers software over the web.
- In contrast, PaaS provides a platform for the creating of software delivered over the web.
- PaaS has a feature of a point-and-click tool that allows non-programmers to develop web applications.
- App-Engine of Google & Force.com, Windows Azure, AppFog, Openshift, and VMware Cloud Foundry are PaaS examples.
- Advantages of PaaS:
    - Scalability: of users ranges from hundreds to thousands.
    - Prebuilt Business Plan: PaaS vendors provide pre-defined business functionality for users to directly start the project.
    - Low Cost: Development via PaaS requires a computer & a good internet connection and less investment in hardware & software.
    - Instant Community: PaaS providers facilitates user providing online communities where a developer can get new ideas & share their experience & advice.
    - Simple & easy to use
- Disadvantages of PaaS are as follows:
    - Vendor Migration: Migration from one PaaS vendors' application to another PaaS vendor will create some problem.
    - Data-Privacy: The privacy of data can get hamper if it is not held within the company's boundary or organization.
    - Mix-up Complexity: Some of the applications developed may be local while others are from the cloud, which may increase the complexity.

Steps:

Step1 : Login to AWS console and go to Elastic Beanstalk

Step 2: Click on Create Application

Step 3: Write Application information : Name, Tag,Platform etc.

Step 3: Write Application information : Name, Tag,Platform etc.

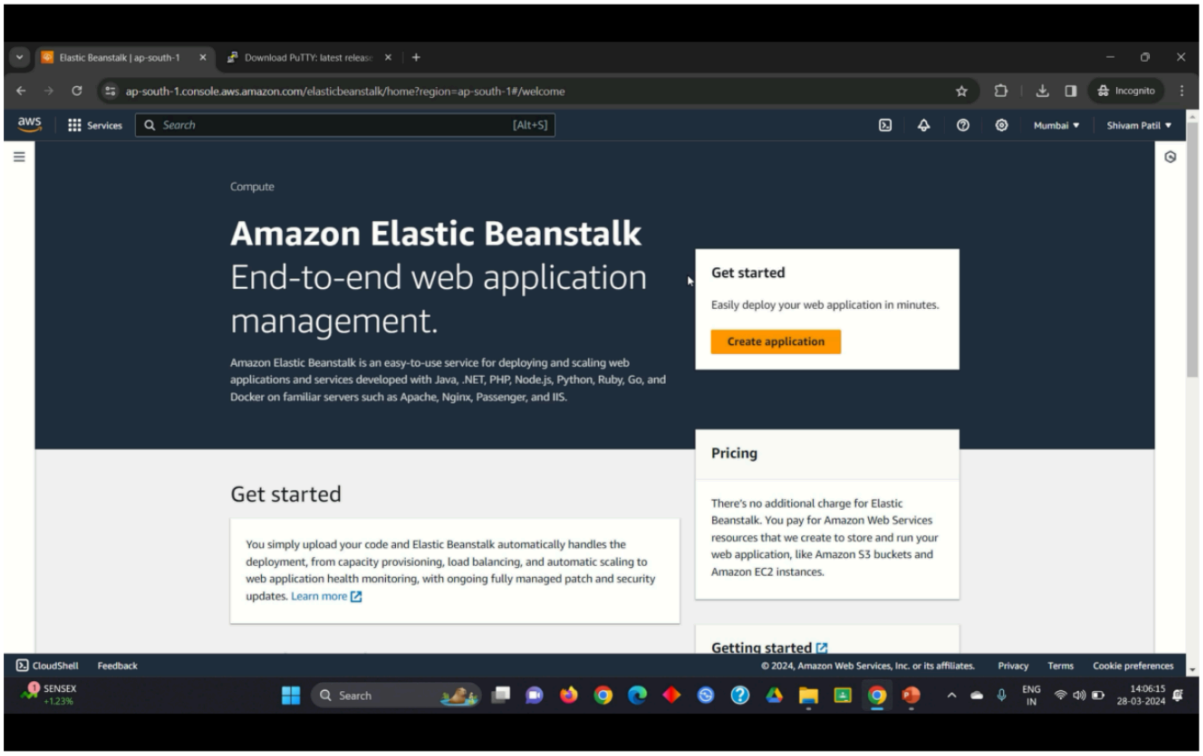
This will take a few minutes.

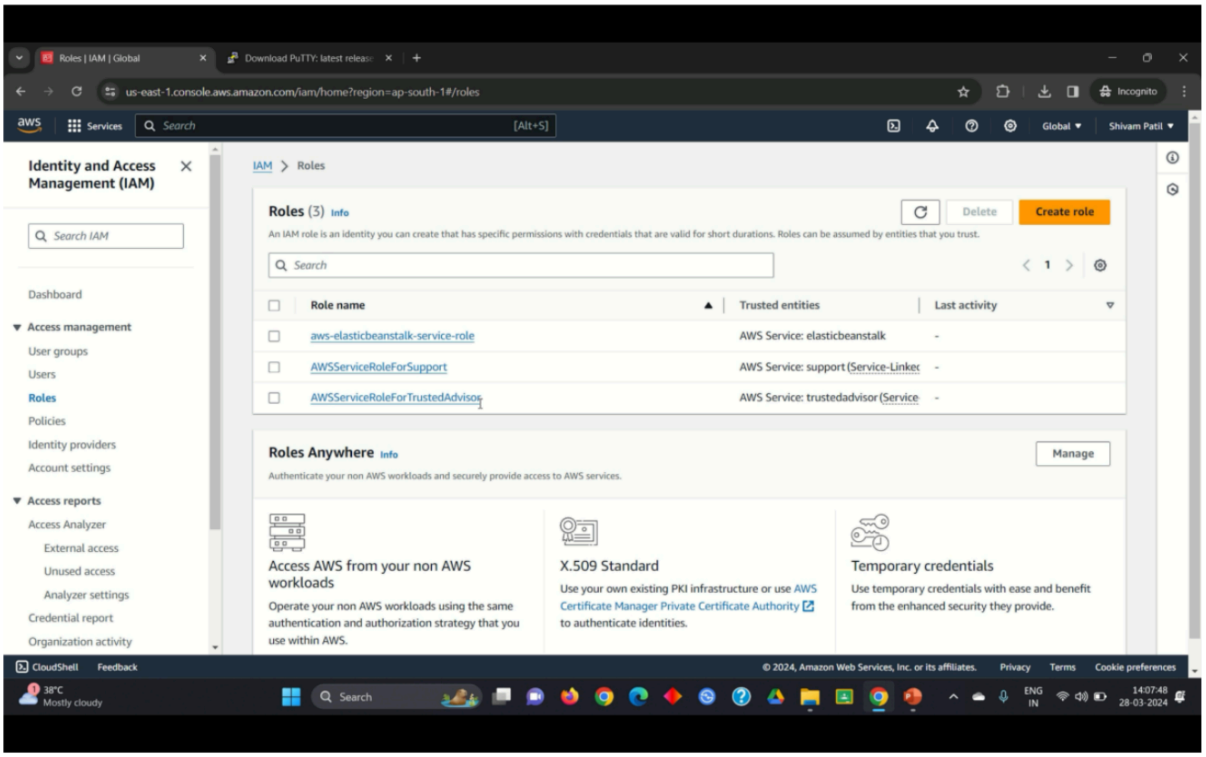
Step 5: Click on Environments -> Check the health of Environment wait till it becomes 'OK

Step 6: Click the URL

To Delete the application and Environment (Select it and in Action -Delete/Terminate : give conformation

Output/Observation:




Roles | IAM | Global
Download PuTTY: latest release
us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/roles
Incognito
aws
Services
Search
[Alt+S]
Global
Shivam Patil
Identity and Access Management (IAM)
Search IAM
Dashboard
Access management
User groups
Users
Roles
Policies
Identity providers
Account settings
Access reports
Access Analyzer
External access
Unused access
Analyzer settings
Credential report
Organization activity
IAM > Roles
Roles (3) Info
An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.
Delete
Create role
Search
1
Role name
Trusted entities
Last activity
aws-elasticbeanstalk-service-role
AWS Service: elasticbeanstalk
AWSServiceRoleForSupport
AWS Service: support (Service-Linke
AWSServiceRoleForTrustedAdvisor
AWS Service: trustedadvisor (Service
Roles Anywhere Info
Authenticate your non AWS workloads and securely provide access to AWS services.
Manage
Access AWS from your non AWS workloads
Operate your non AWS workloads using the same authentication and authorization strategy that you use within AWS.
X.509 Standard
Use your own existing PKI infrastructure or use AWS Certificate Manager Private Certificate Authority to authenticate identities.
Temporary credentials
Use temporary credentials with ease and benefit from the enhanced security they provide.
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
38°C
Mostly cloudy
Search
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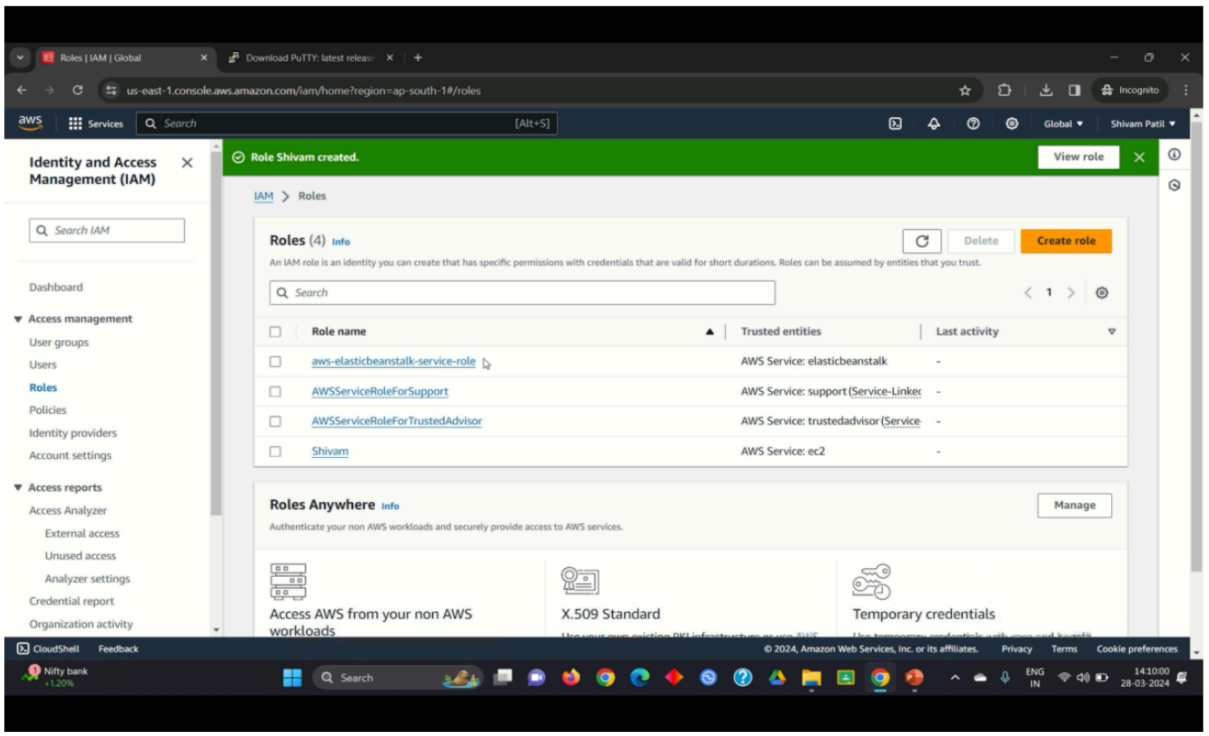
28-03-2024


Roles | IAM | Global
Download PuTTY: latest release
us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/roles
Incognito
aws
Services
Search
[Alt+S]
Global
Shivam Patil
Identity and Access Management (IAM)
Role Shivam created.
View role
Search IAM
Dashboard
Access management
User groups
Users
Roles
Policies
Identity providers
Account settings
Access reports
Access Analyzer
External access
Unused access
Analyzer settings
Credential report
Organization activity
IAM > Roles
Roles (4) Info
An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.
Delete
Create role
Search
1
Role name
Trusted entities
Last activity
aws-elasticbeanstalk-service-role
AWS Service: elasticbeanstalk
AWSServiceRoleForSupport
AWS Service: support (Service-Linke
AWSServiceRoleForTrustedAdvisor
AWS Service: trustedadvisor (Service
Shivam
AWS Service: ec2
Roles Anywhere Info
Authenticate your non AWS workloads and securely provide access to AWS services.
Manage
Access AWS from your non AWS workloads
X.509 Standard
Temporary credentials
CloudShell
Feedback
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Privacy
Terms
Cookie preferences
Nifty bank
+1.20%
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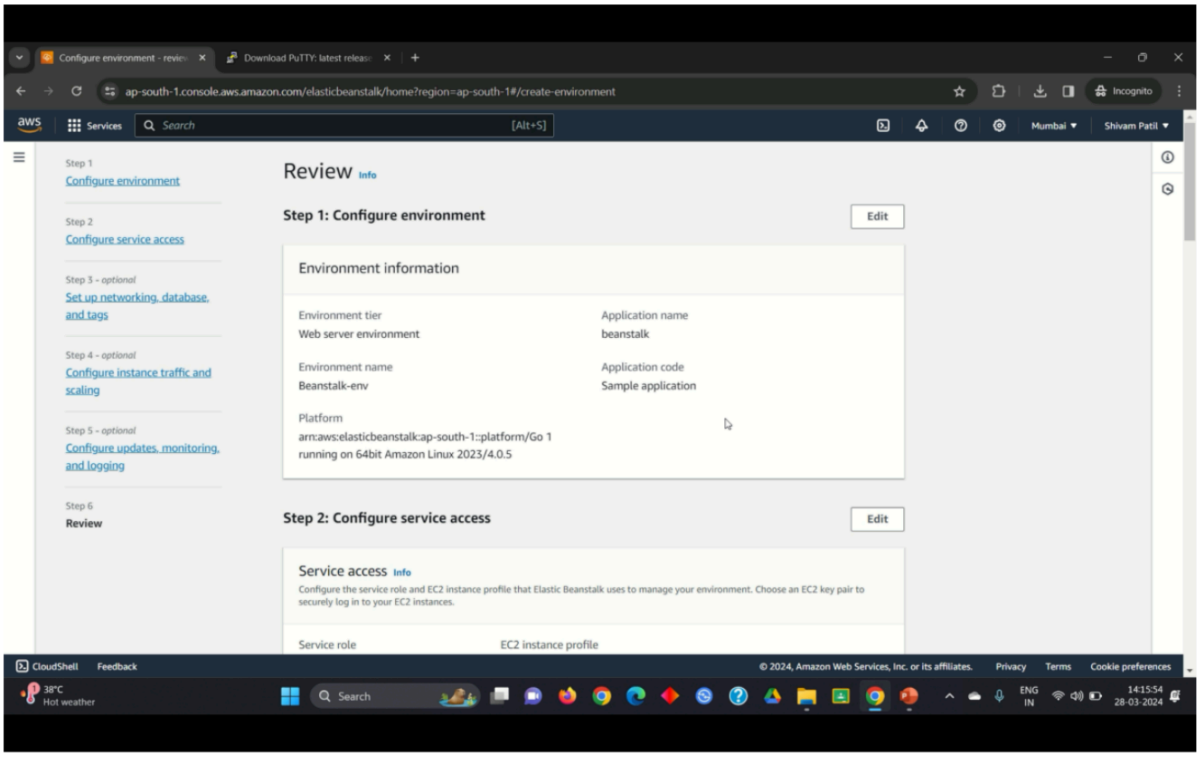
Configure environment - revie
Download PuTTY: latest releas
ap-south-1.console.aws.amazon.com/elasticbeanstalk/home?region=ap-south-1#/create-environment
Incognito
aws
Services
Search
[Alt+S]
Mumbai
Shivam Patil
Step 1
Configure environment
Step 2
Configure service access
Step 3 - optional
Set up networking, database, and tags
Step 4 - optional
Configure instance traffic and scaling
Step 5 - optional
Configure updates, monitoring, and logging
Step 6
Review
Review Info
Step 1: Configure environment
Edit
Environment information
Environment tier
Web server environment
Application name
beanstalk
Environment name
Beanstalk-env
Application code
Sample application
Platform
arn:aws:elasticbeanstalk:ap-south-1::platform/Go 1 running on 64bit Amazon Linux 2023/4.0.5
Step 2: Configure service access
Edit
Service access Info
Configure the service role and EC2 instance profile that Elastic Beanstalk uses to manage your environment. Choose an EC2 key pair to securely log in to your EC2 instances.
Service role
EC2 instance profile
CloudShell
Feedback
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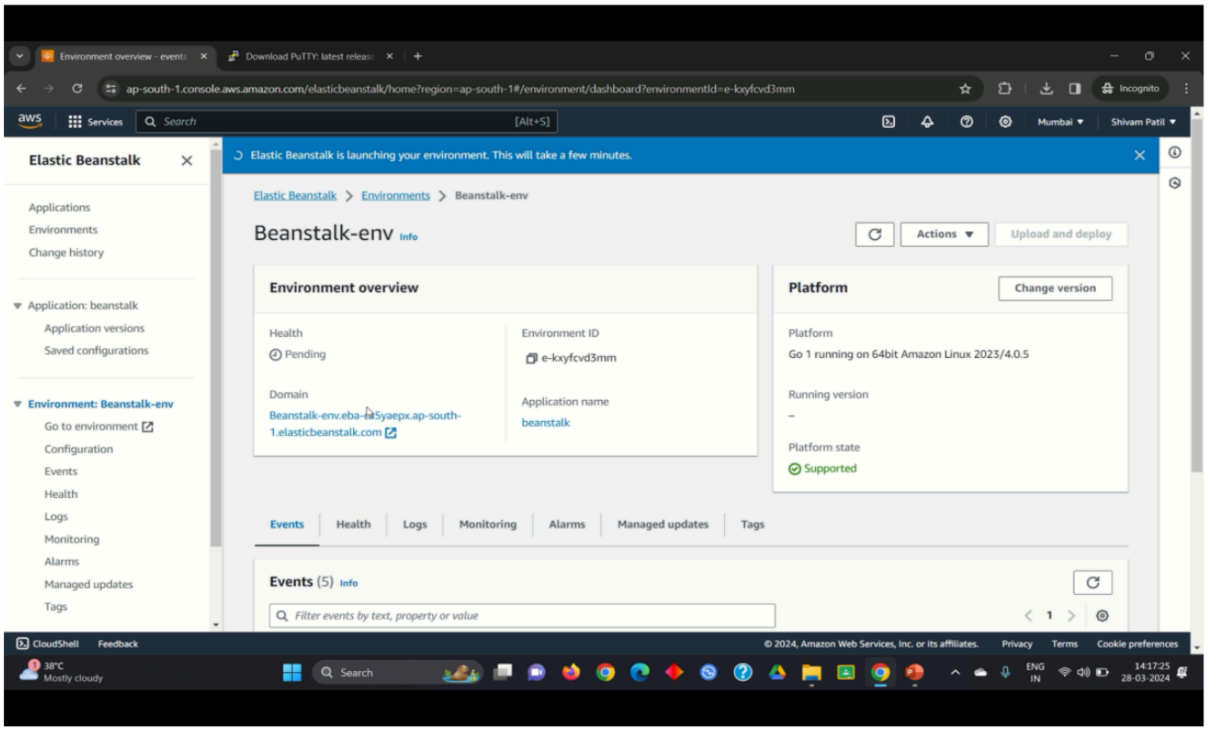
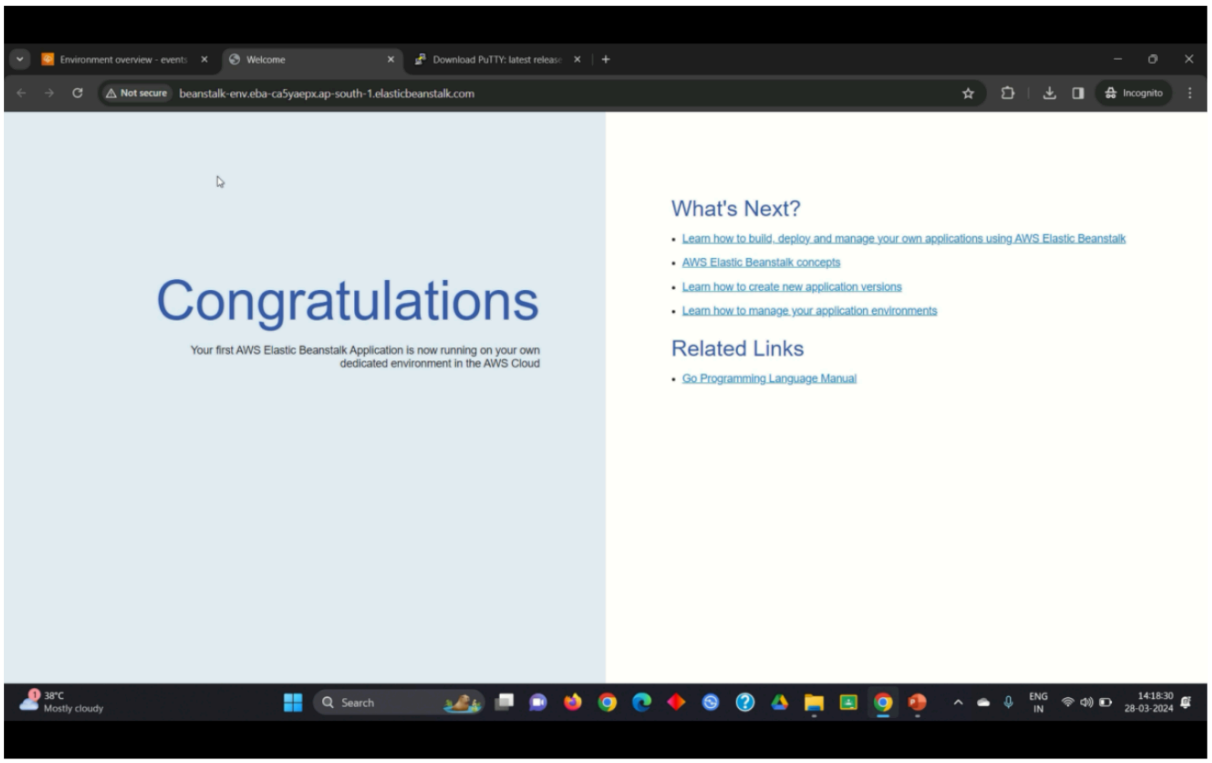
Privacy
Terms
Cookie preferences
38°C
Hot weather
Search
ENG
IN
14:15:54
28-03-2024


Environment overview - events
Download PuTTY: latest releas
ap-south-1.console.aws.amazon.com/elasticbeanstalk/home?region=ap-south-1#/environment/dashboard?environmentId=e-kxyfcvd3mm
Incognito
aws
Services
Search
[Alt+S]
Mumbai
Shivam Patil
Elastic Beanstalk
Applications
Environments
Change history
Application: beanstalk
Application versions
Saved configurations
Environment: Beanstalk-env
Go to environment
Configuration
Events
Health
Logs
Monitoring
Alarms
Managed updates
Tags
Elastic Beanstalk is launching your environment. This will take a few minutes.
Elastic Beanstalk > Environments > Beanstalk-env
Beanstalk-env Info
Actions
Upload and deploy
Environment overview
Health
Pending
Environment ID
e-kxyfcvd3mm
Domain
Beanstalk-env.eba-e5yaepx.ap-south-1.elasticbeanstalk.com
Application name
beanstalk
Platform
Change version
Platform
Go 1 running on 64bit Amazon Linux 2023/4.0.5
Running version
-
Platform state
Supported
Events
Health
Logs
Monitoring
Alarms
Managed updates
Tags
Events (5) Info
Filter events by text, property or value
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences
38°C
Mostly cloudy
Search
ENG
IN
14:17:25
28-03-2024



Conclusion:

Installing Platform as a Service (PaaS) in cloud computing simplifies application development, deployment, and management by providing pre-configured environments and services. It streamlines the setup process, reducing administrative overhead and time-to-market for developers. Additionally, PaaS offerings often include scalability, reliability, and security features, enabling organizations to focus on building and delivering innovative applications without worrying about underlying infrastructure complexities.