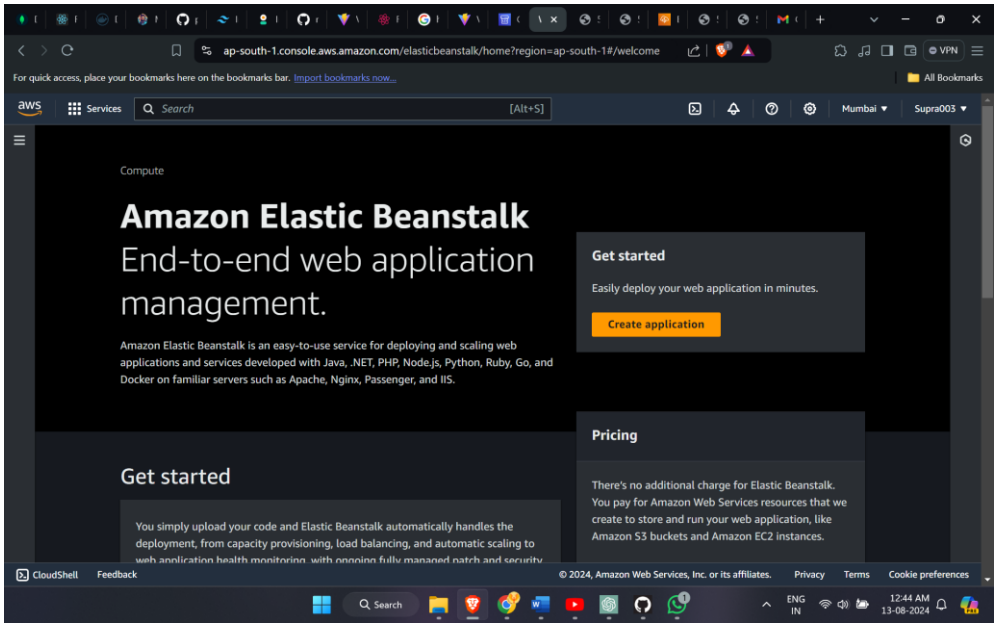
Experiment 02

Name: Prajyot Shinde **Roll no: 57**

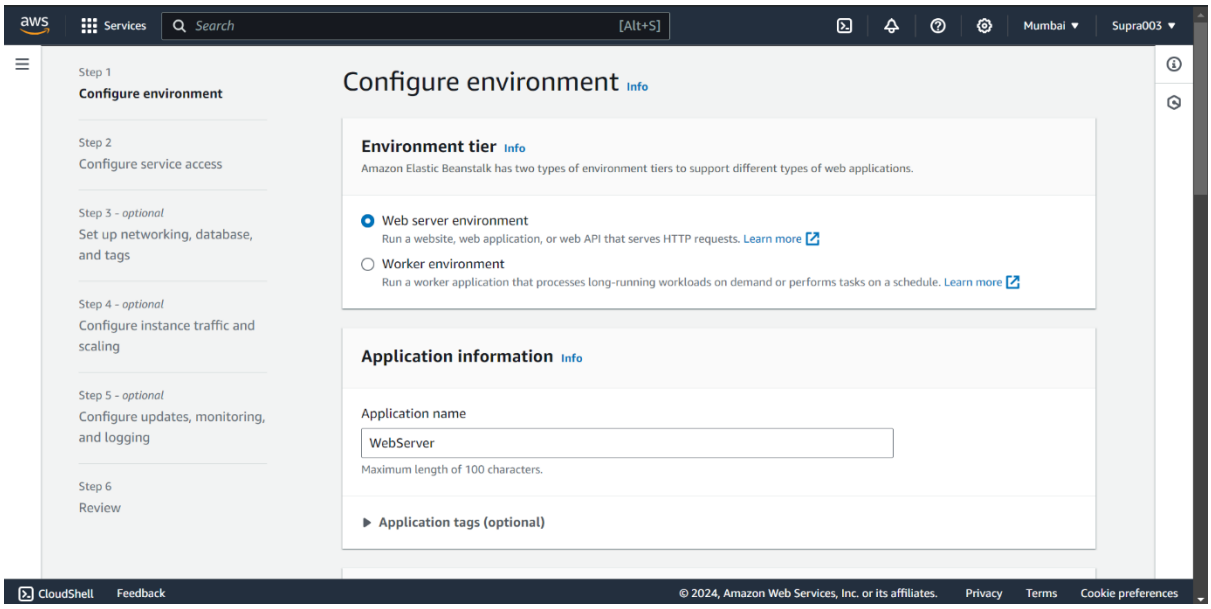
Aim: To Build Your Application using AWS CodeBuild and Deploy on S3 / SEBS using AWS CodePipeline, deploy Sample Application on EC2 instance using AWS CodeDeploy.

Step-1: Beanstalk Deployment

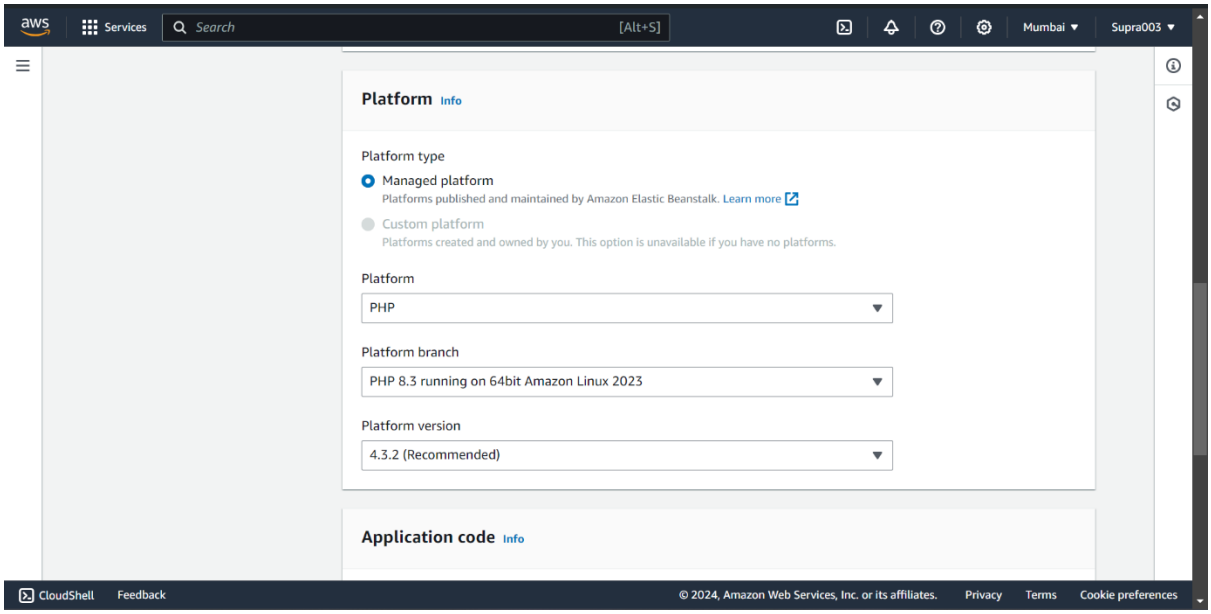
1. Login to your AWS account and search for Elastic Beanstalk in the search box



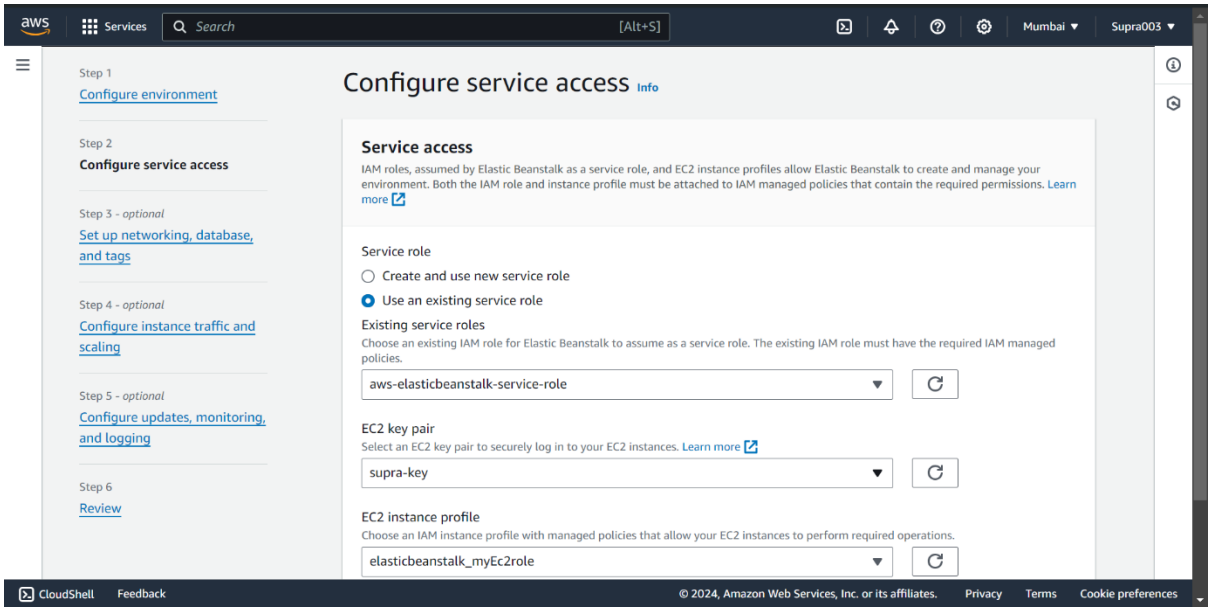
2. Open up Elastic Beanstalk and name your web app.

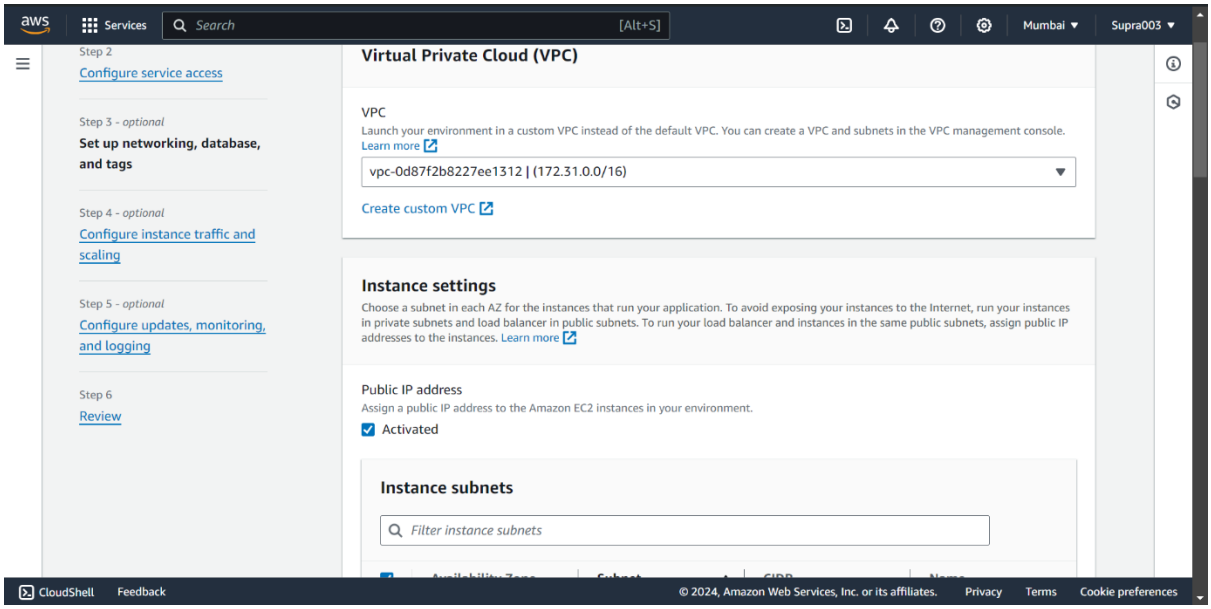


3. Choose Python from the drop-down menu and then click Create Application.



4. Choose the proper options




Services
Search
[Alt+S]
Mumbai
Supra003
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
Virtual Private Cloud (VPC)
VPC
Launch your environment in a custom VPC instead of the default VPC. You can create a VPC and subnets in the VPC management console.
Learn more
vpc-0d87f2b8227ee1312 | (172.31.0.0/16)
Create custom VPC
Instance settings
Choose a subnet in each AZ for the instances that run your application. To avoid exposing your instances to the Internet, run your instances in private subnets and load balancer in public subnets. To run your load balancer and instances in the same public subnets, assign public IP addresses to the instances.
Learn more
Public IP address
Assign a public IP address to the Amazon EC2 instances in your environment.
Activated
Instance subnets
Filter instance subnets
CloudShell
Feedback
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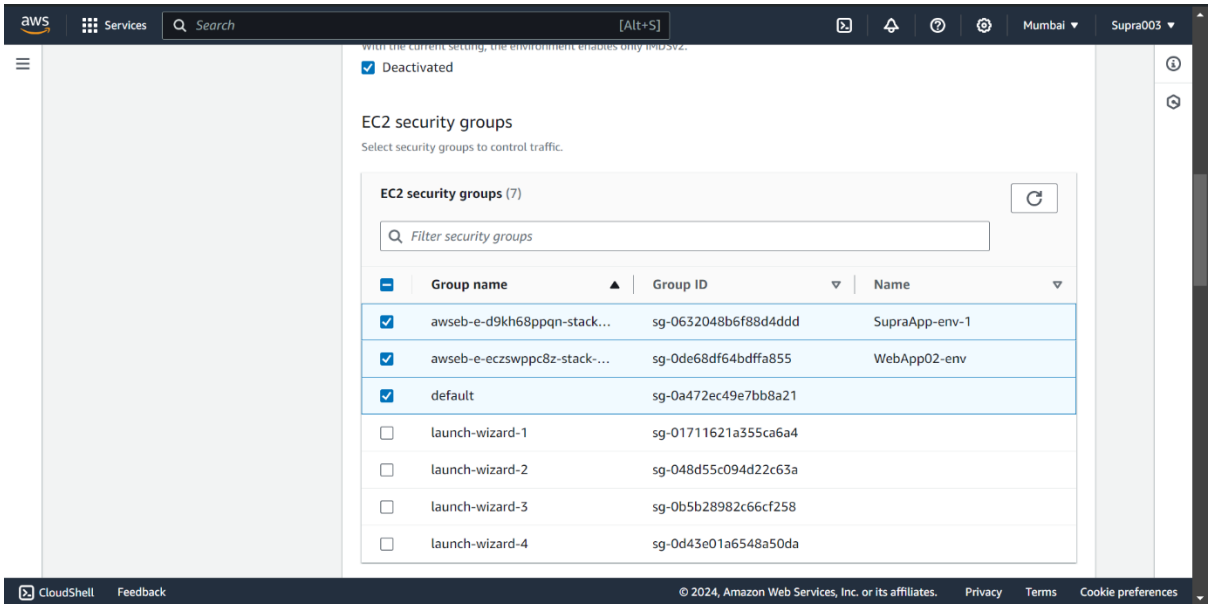
Services
Search
[Alt+S]
Mumbai
Supra003
Deactivated
EC2 security groups
Select security groups to control traffic.
EC2 security groups (7)
Filter security groups
Group name
Group ID
Name
awseb-e-d9kh68ppqn-stack...
sg-0632048b6f88d4ddd
SupraApp-env-1
awseb-e-eczswppc8z-stack-...
sg-0de68df64bdffa855
WebApp02-env
default
sg-0a472ec49e7bb8a21
launch-wizard-1
sg-01711621a355ca6a4
launch-wizard-2
sg-048d55c094d22c63a
launch-wizard-3
sg-0b5b28982c66cf258
launch-wizard-4
sg-0d43e01a6548a50da
CloudShell
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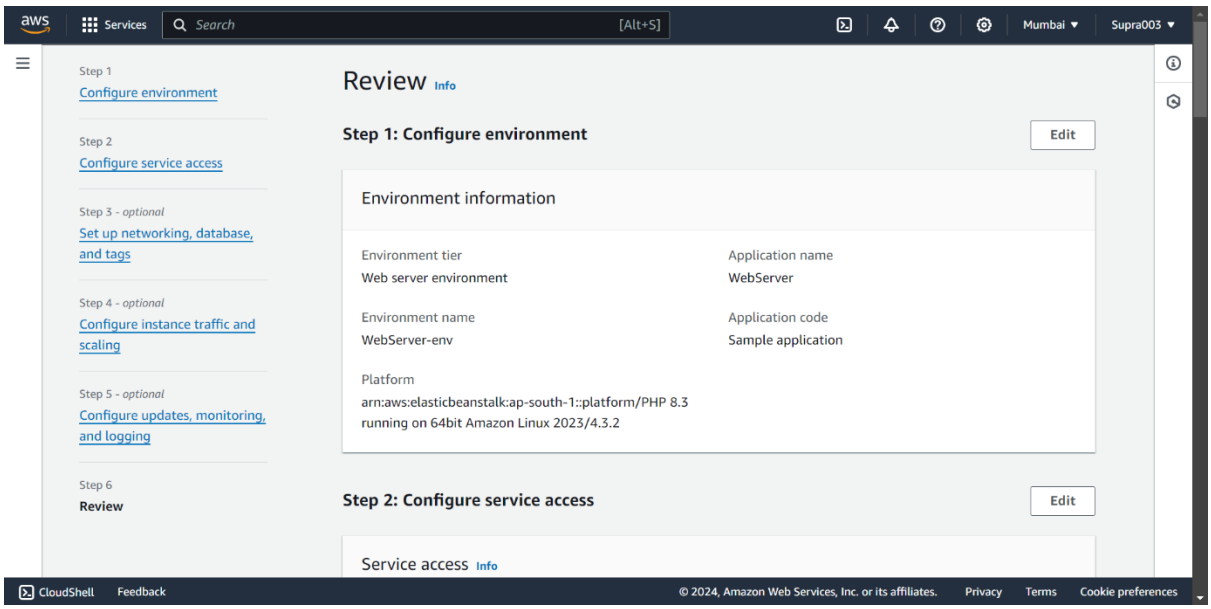
Services
Search
[Alt+S]
Mumbai
Supra003
Step 1
Configure environment
Step 2
Configure service access
Step 3 - optional
Set up networking, database, and tags
Step 4 - optional
Configure instance traffic and scaling
Step 5 - optional
Configure updates, monitoring, and logging
Step 6
Review
Review
Info
Step 1: Configure environment
Edit
Environment information
Environment tier
Web server environment
Application name
WebServer
Environment name
WebServer-env
Application code
Sample application
Platform
arn:aws:elasticbeanstalk:ap-south-1::platform/PHP 8.3 running on 64bit Amazon Linux 2023/4.3.2
Step 2: Configure service access
Edit
Service access
Info
CloudShell
Feedback
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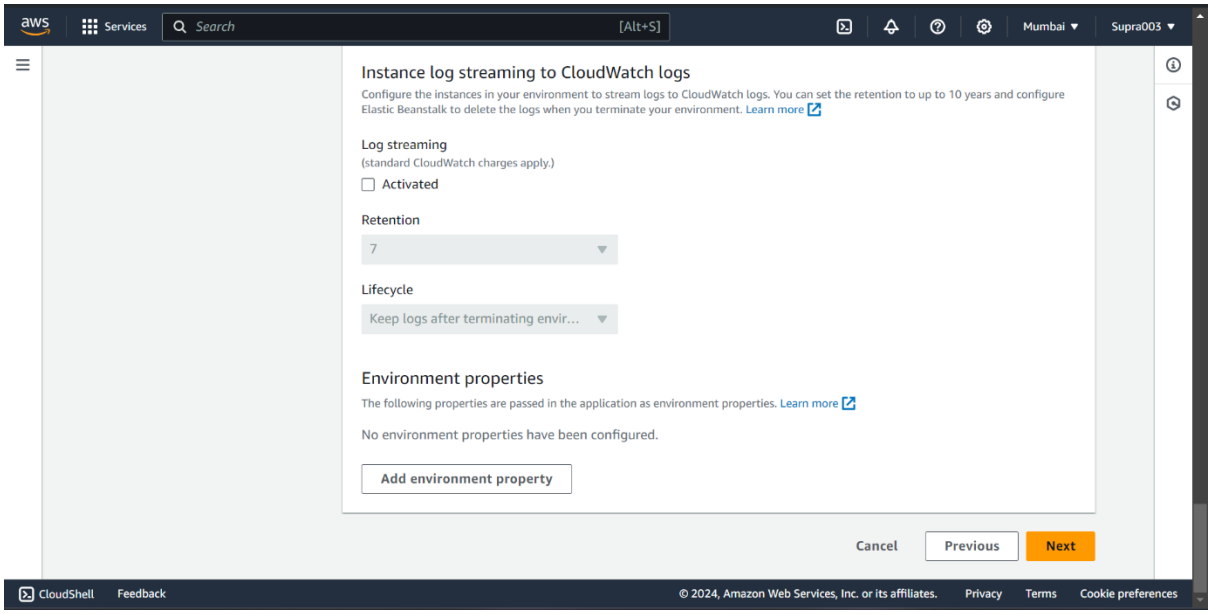
aws
Services
Search
[Alt+S]
Mumbai
Supra003
Instance log streaming to CloudWatch logs
Configure the instances in your environment to stream logs to CloudWatch logs. You can set the retention to up to 10 years and configure Elastic Beanstalk to delete the logs when you terminate your environment. Learn more
Log streaming
(standard CloudWatch charges apply.)
Activated
Retention
7
Lifecycle
Keep logs after terminating envir...
Environment properties
The following properties are passed in the application as environment properties. Learn more
No environment properties have been configured.
Add environment property
Cancel
Previous
Next
CloudShell
Feedback
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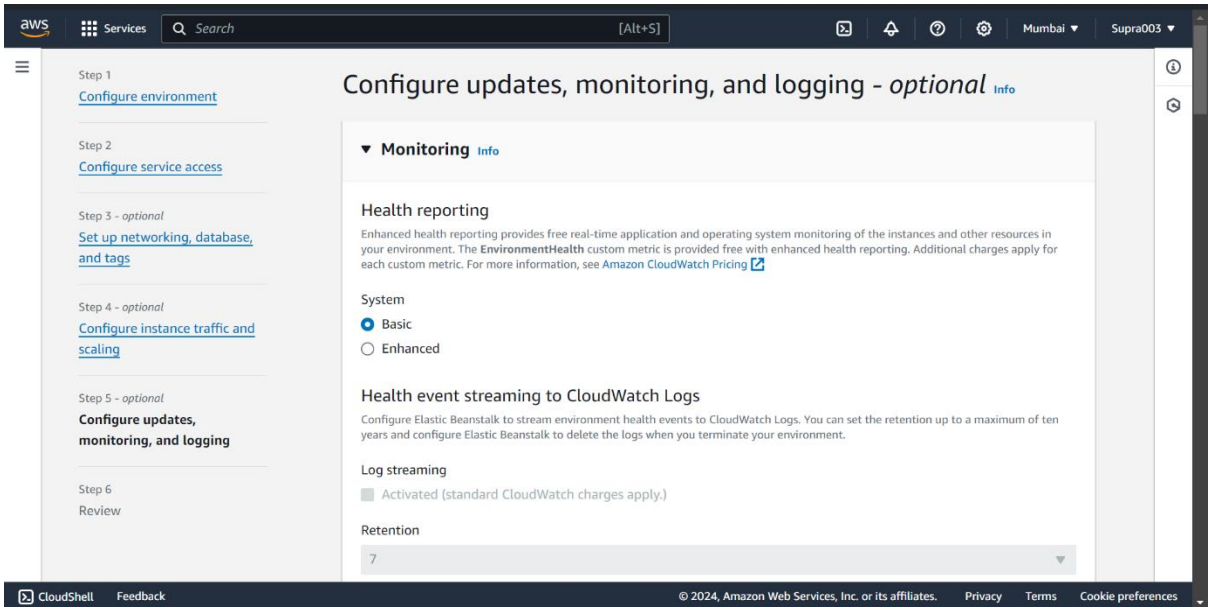
aws
Services
Search
[Alt+S]
Mumbai
Supra003
Step 1
Configure environment
Step 2
Configure service access
Step 3 - optional
Set up networking, database, and tags
Step 4 - optional
Configure instance traffic and scaling
Step 5 - optional
Configure updates, monitoring, and logging
Step 6
Review
Configure updates, monitoring, and logging - optional Info
Monitoring Info
Health reporting
Enhanced health reporting provides free real-time application and operating system monitoring of the instances and other resources in your environment. The EnvironmentHealth custom metric is provided free with enhanced health reporting. Additional charges apply for each custom metric. For more information, see Amazon CloudWatch Pricing
System
Basic
Enhanced
Health event streaming to CloudWatch Logs
Configure Elastic Beanstalk to stream environment health events to CloudWatch Logs. You can set the retention up to a maximum of ten years and configure Elastic Beanstalk to delete the logs when you terminate your environment.
Log streaming
Activated (standard CloudWatch charges apply.)
Retention
7
CloudShell
Feedback
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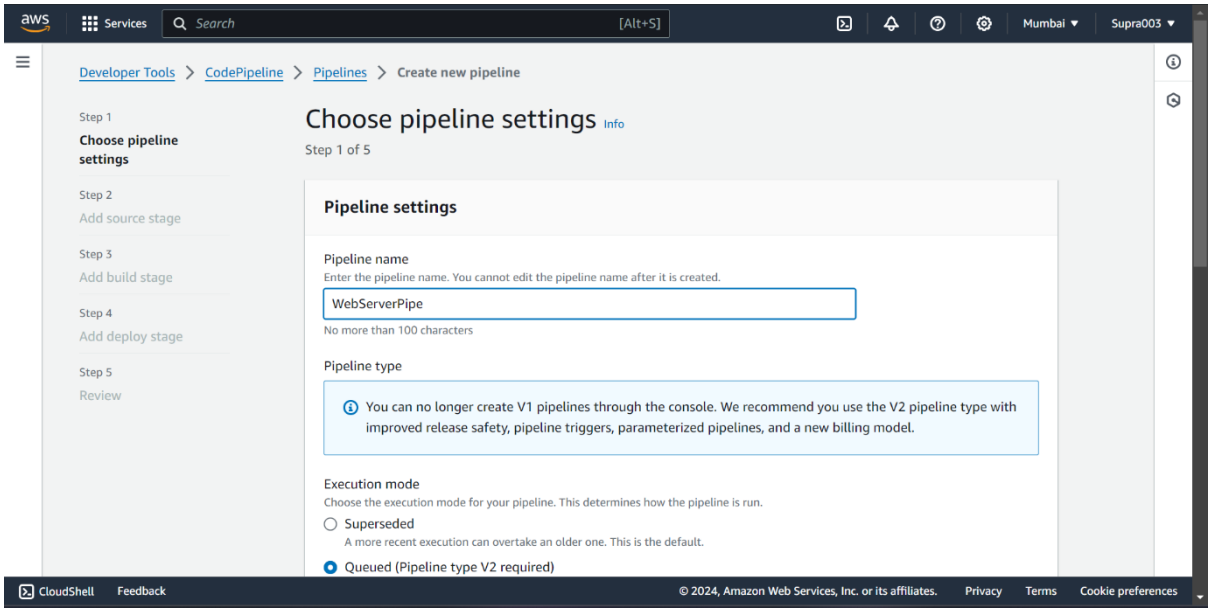
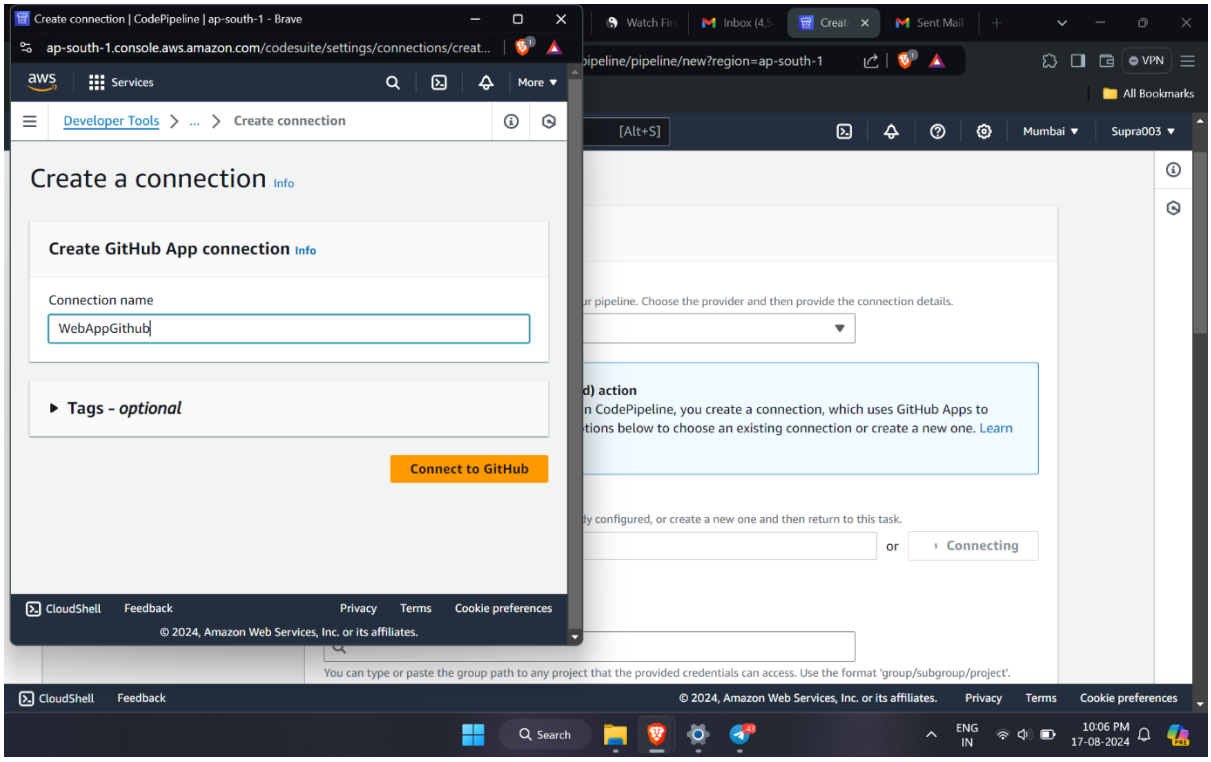
Step-2: Creating CodePipeline

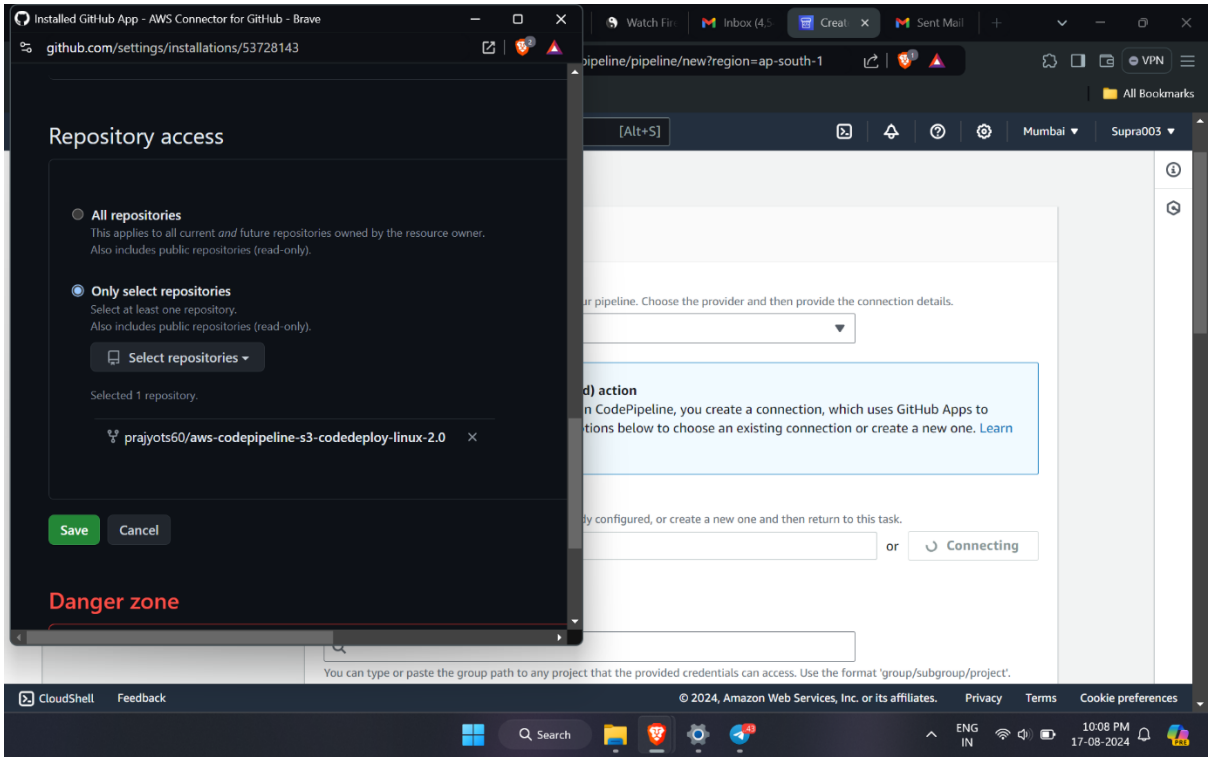
Beanstalk creates a sample environment for you to deploy your application. By default, it creates an EC2 instance, a security group, an Auto Scaling group, an Amazon S3 Bucket, Amazon CloudWatch alarms and a domain name for your Application.

Create a CodePipeline and give pipeline name



Create a Github connection




Installed GitHub App - AWS Connector for GitHub - Brave
github.com/settings/installations/53728143
Repository access
All repositories
This applies to all current and future repositories owned by the resource owner.
Also includes public repositories (read-only).
Only select repositories
Select at least one repository.
Also includes public repositories (read-only).
Select repositories
Selected 1 repository.
prajyots60/aws-codepipeline-s3-codedeploy-linux-2.0
Save
Cancel
Danger zone
pipeline/pipeline/new?region=ap-south-1
[Alt+S]
Mumbai
Supra003
ur pipeline. Choose the provider and then provide the connection details.
d) action
n CodePipeline, you create a connection, which uses GitHub Apps to
tions below to choose an existing connection or create a new one. Learn
dy configured, or create a new one and then return to this task.
or
Connecting
You can type or paste the group path to any project that the provided credentials can access. Use the format 'group/subgroup/project'.
CloudShell
Feedback
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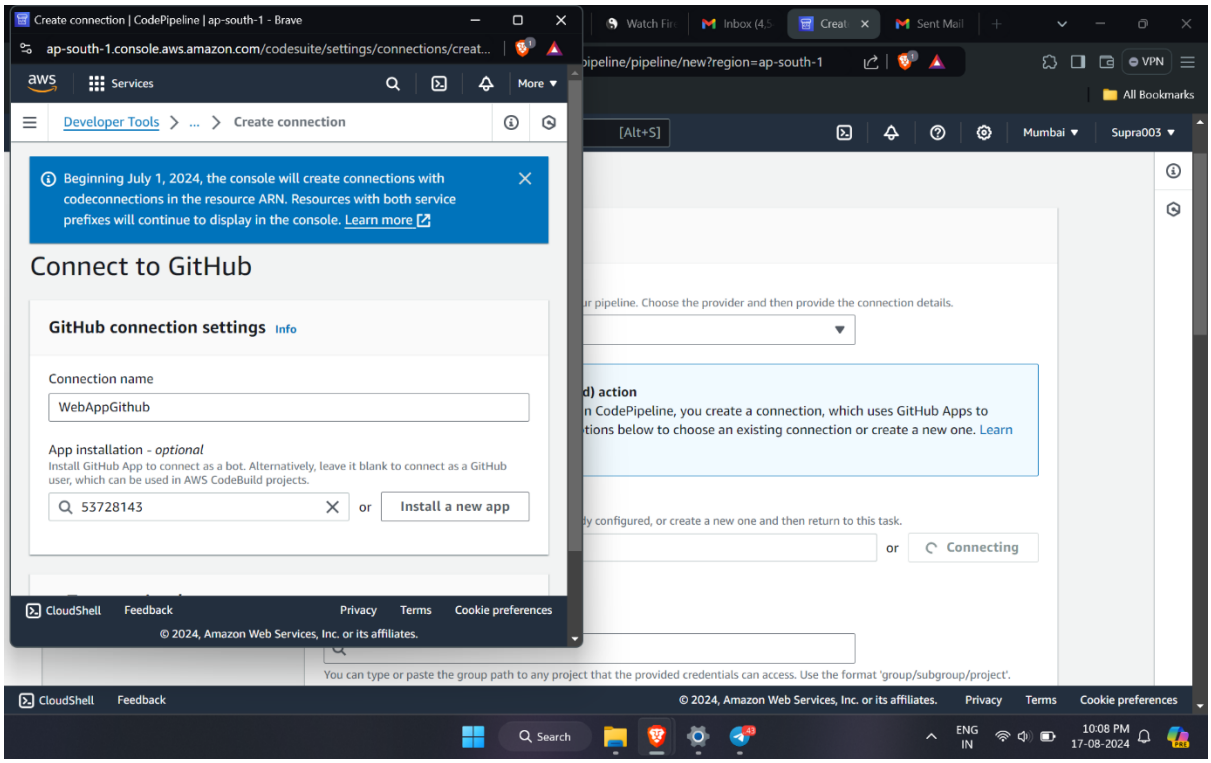
Cookie preferences
Search
ENG
IN
10:08 PM
17-08-2024


Create connection | CodePipeline | ap-south-1 - Brave
ap-south-1.console.aws.amazon.com/codesuite/settings/connections/creat...
aws
Services
More
Developer Tools
...
Create connection
Beginning July 1, 2024, the console will create connections with codeconnections in the resource ARN. Resources with both service prefixes will continue to display in the console. Learn more
Connect to GitHub
GitHub connection settings
Info
Connection name
WebAppGithub
App installation - optional
Install GitHub App to connect as a bot. Alternatively, leave it blank to connect as a GitHub user, which can be used in AWS CodeBuild projects.
53728143
or
Install a new app
CloudShell
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Terms
Cookie preferences
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pipeline/pipeline/new?region=ap-south-1
[Alt+S]
Mumbai
Supra003
ur pipeline. Choose the provider and then provide the connection details.
d) action
n CodePipeline, you create a connection, which uses GitHub Apps to
tions below to choose an existing connection or create a new one. Learn
dy configured, or create a new one and then return to this task.
or
Connecting
You can type or paste the group path to any project that the provided credentials can access. Use the format 'group/subgroup/project'.
CloudShell
Feedback
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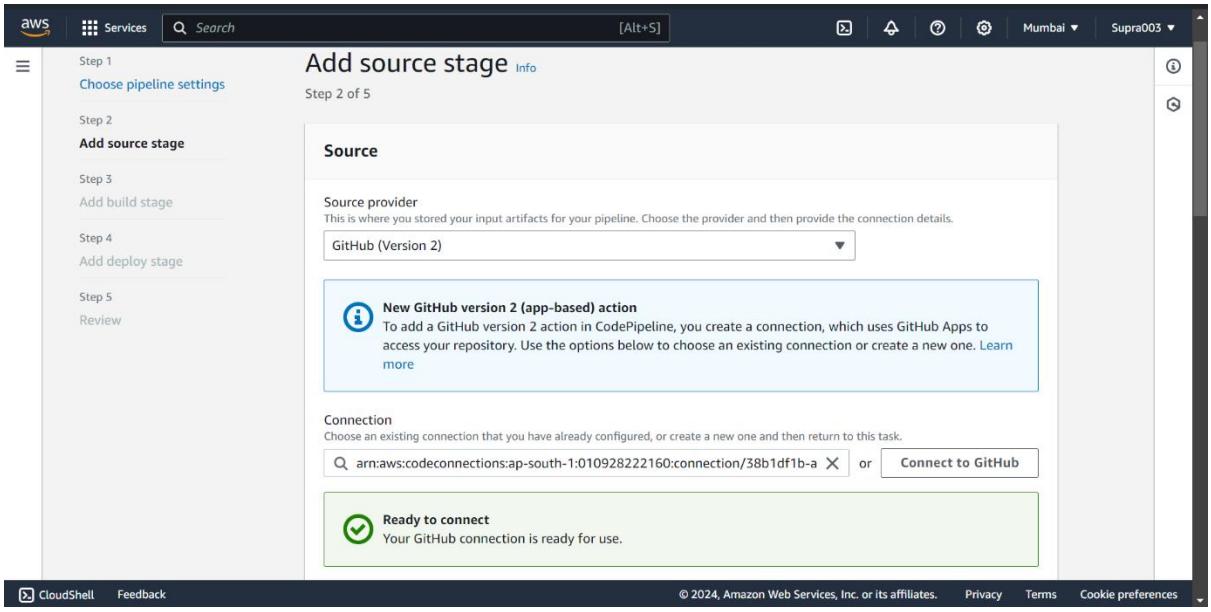
Terms
Cookie preferences
Search
ENG
IN
10:08 PM
17-08-2024


aws
Services
Search
[Alt+S]
Mumbai
Supra003
Step 1
Choose pipeline settings
Step 2
Add source stage
Step 3
Add build stage
Step 4
Add deploy stage
Step 5
Review
Add source stage Info
Step 2 of 5
Source
Source provider
This is where you stored your input artifacts for your pipeline. Choose the provider and then provide the connection details.
GitHub (Version 2)
New GitHub version 2 (app-based) action
To add a GitHub version 2 action in CodePipeline, you create a connection, which uses GitHub Apps to access your repository. Use the options below to choose an existing connection or create a new one. Learn more
Connection
Choose an existing connection that you have already configured, or create a new one and then return to this task.
arn:aws:codeconnections:ap-south-1:010928222160:connection/38b1df1b-a
or
Connect to GitHub
Ready to connect
Your GitHub connection is ready for use.
CloudShell
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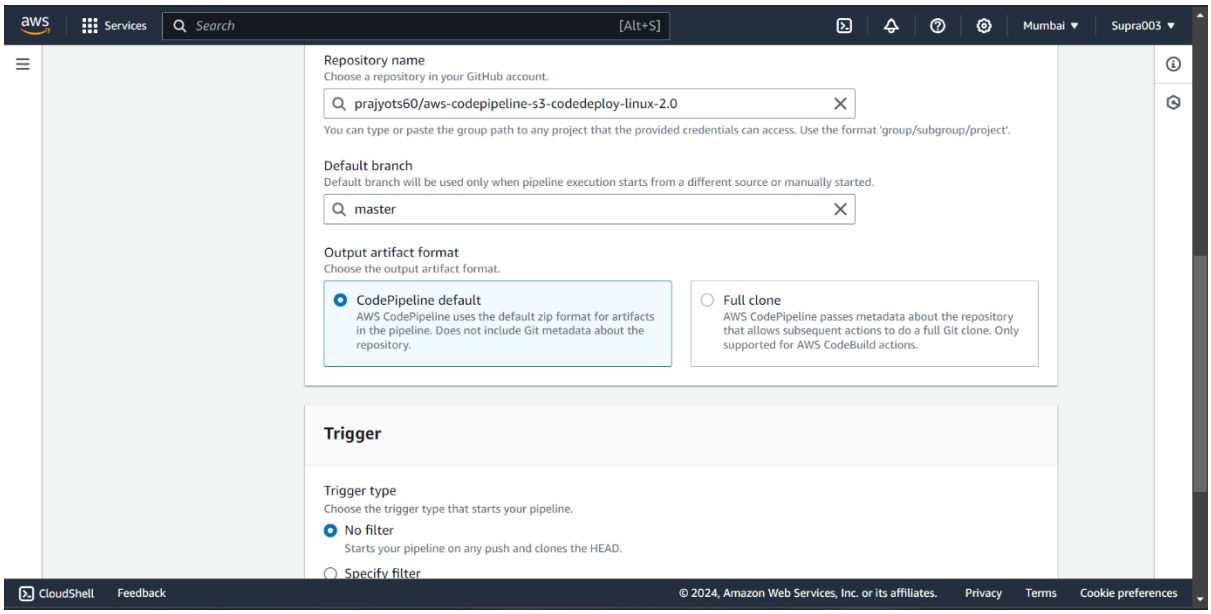
aws
Services
Search
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Mumbai
Supra003
Repository name
Choose a repository in your GitHub account.
prajyots60/aws-codepipeline-s3-codedeploy-linux-2.0
You can type or paste the group path to any project that the provided credentials can access. Use the format 'group/subgroup/project'.
Default branch
Default branch will be used only when pipeline execution starts from a different source or manually started.
master
Output artifact format
Choose the output artifact format.
CodePipeline default
AWS CodePipeline uses the default zip format for artifacts in the pipeline. Does not include Git metadata about the repository.
Full clone
AWS CodePipeline passes metadata about the repository that allows subsequent actions to do a full Git clone. Only supported for AWS CodeBuild actions.
Trigger
Trigger type
Choose the trigger type that starts your pipeline.
No filter
Starts your pipeline on any push and clones the HEAD.
Specify filter
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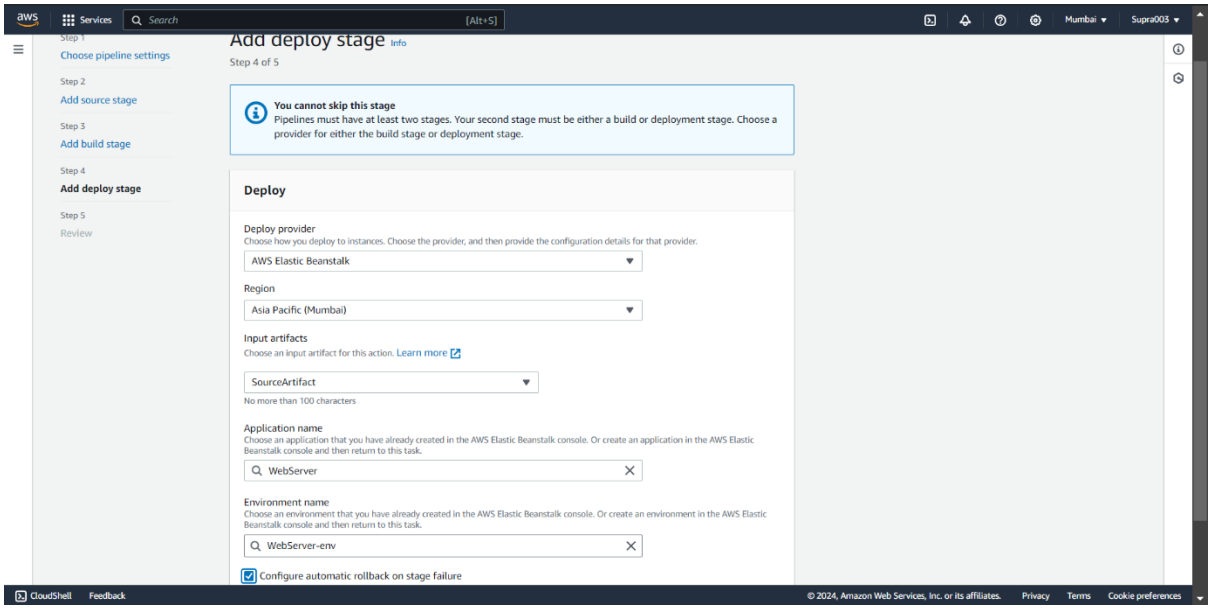
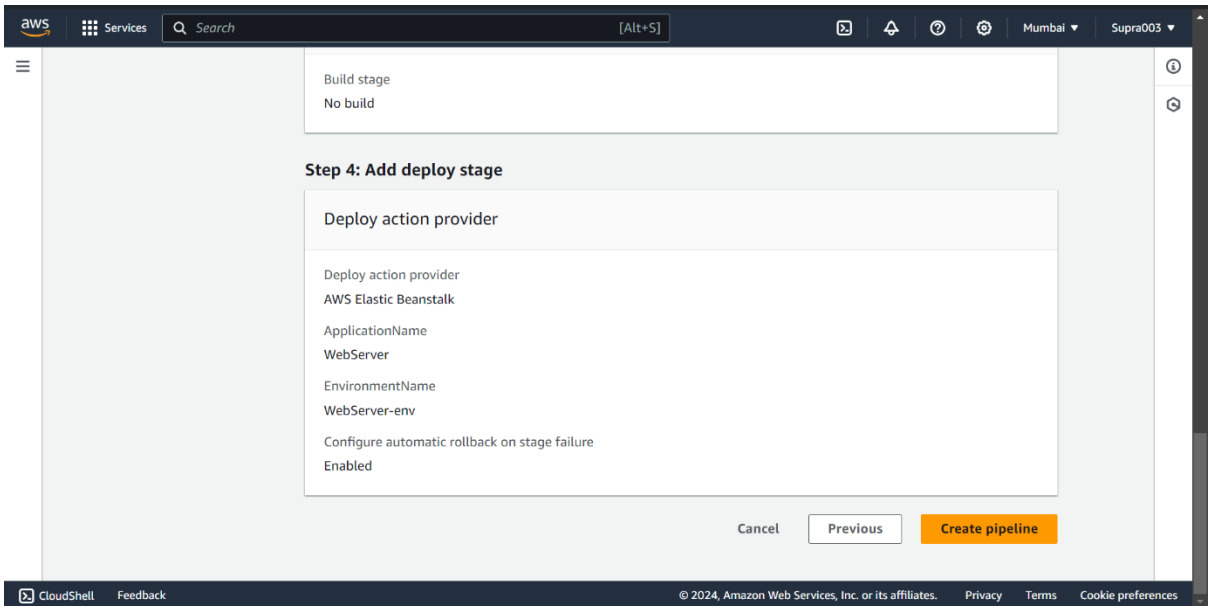
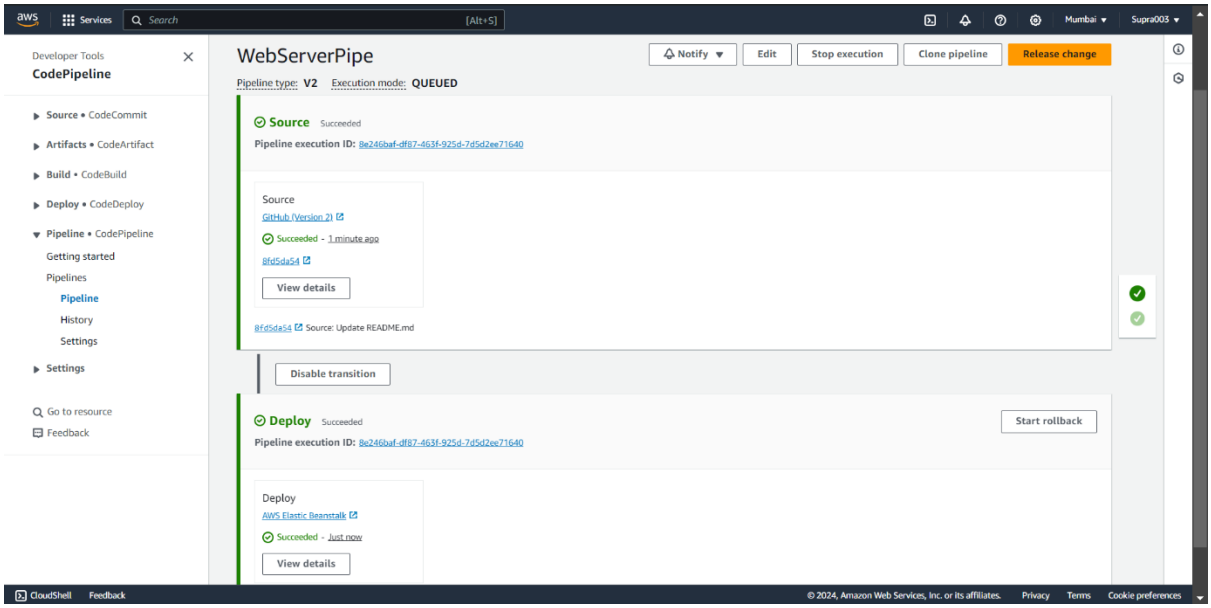
For deploy choose elastic beanstalk

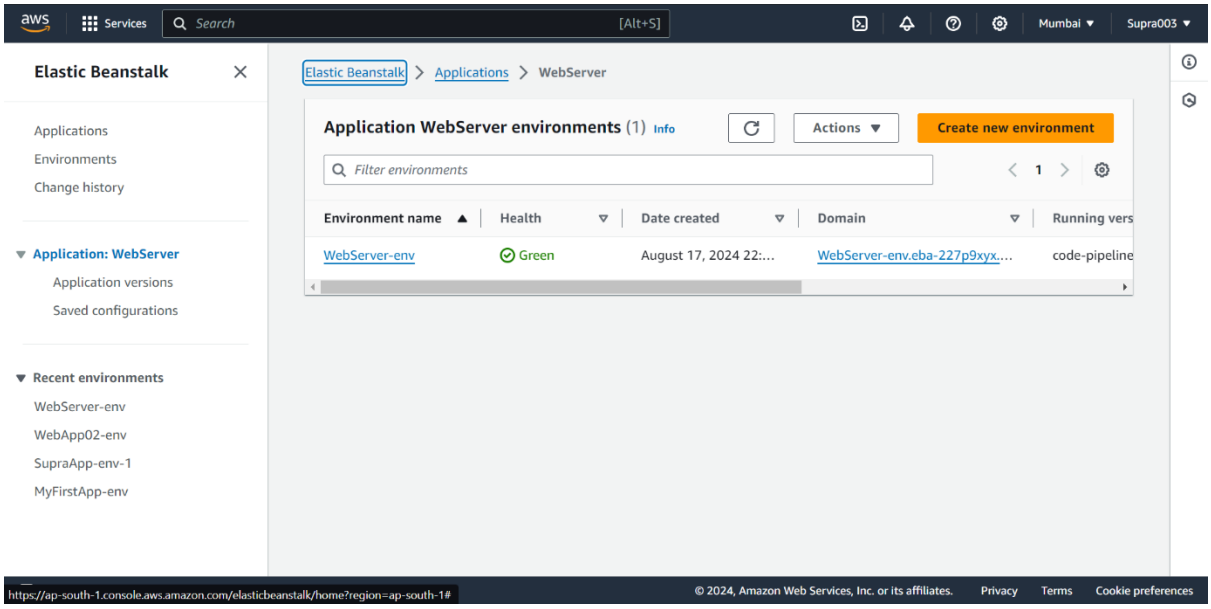


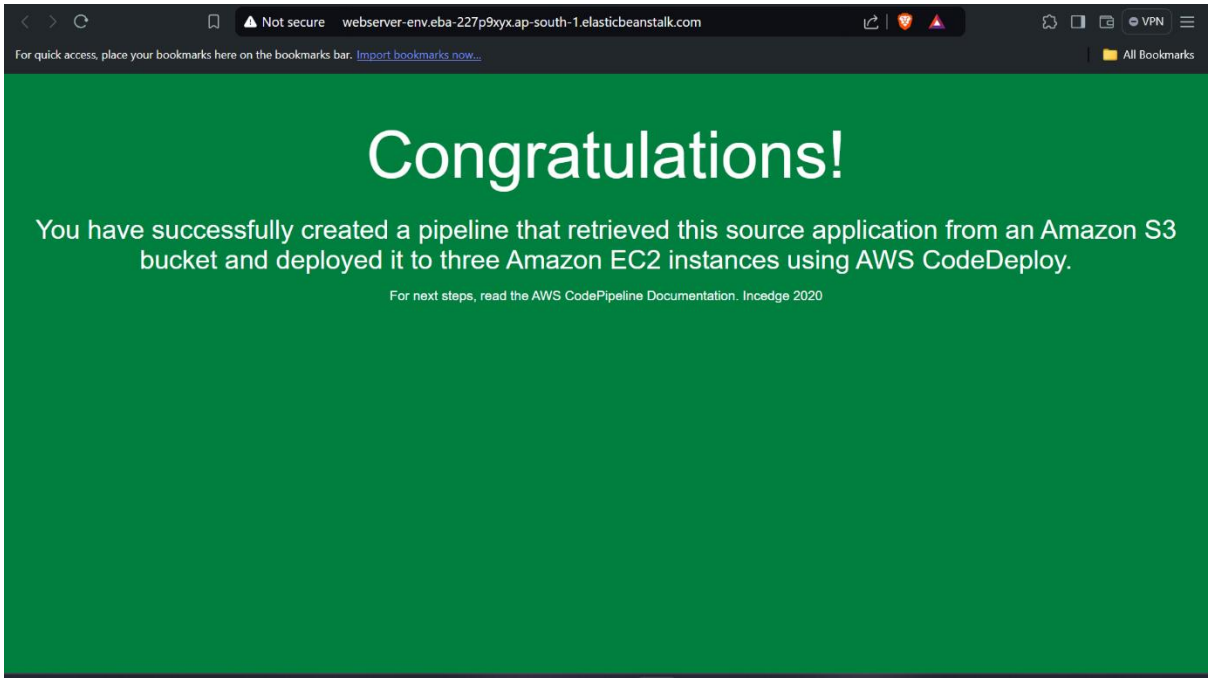


Make connection between code pipeline and beanstalk. And Green means successfully connected.



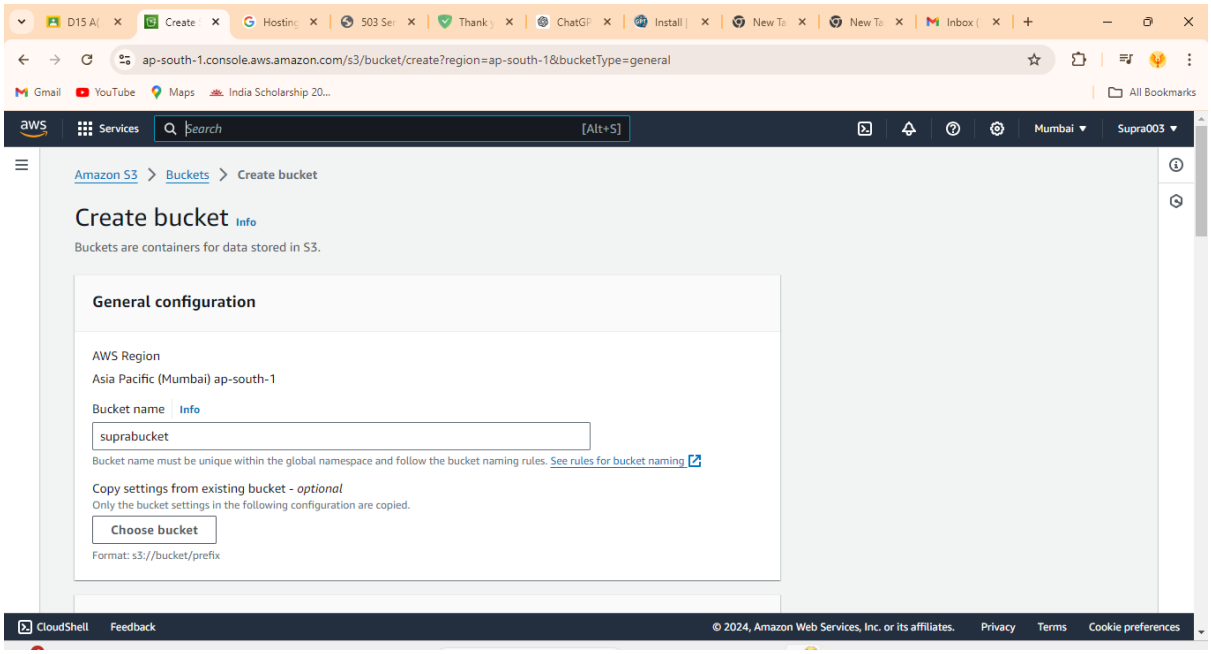
Click on domain to view you hosting site

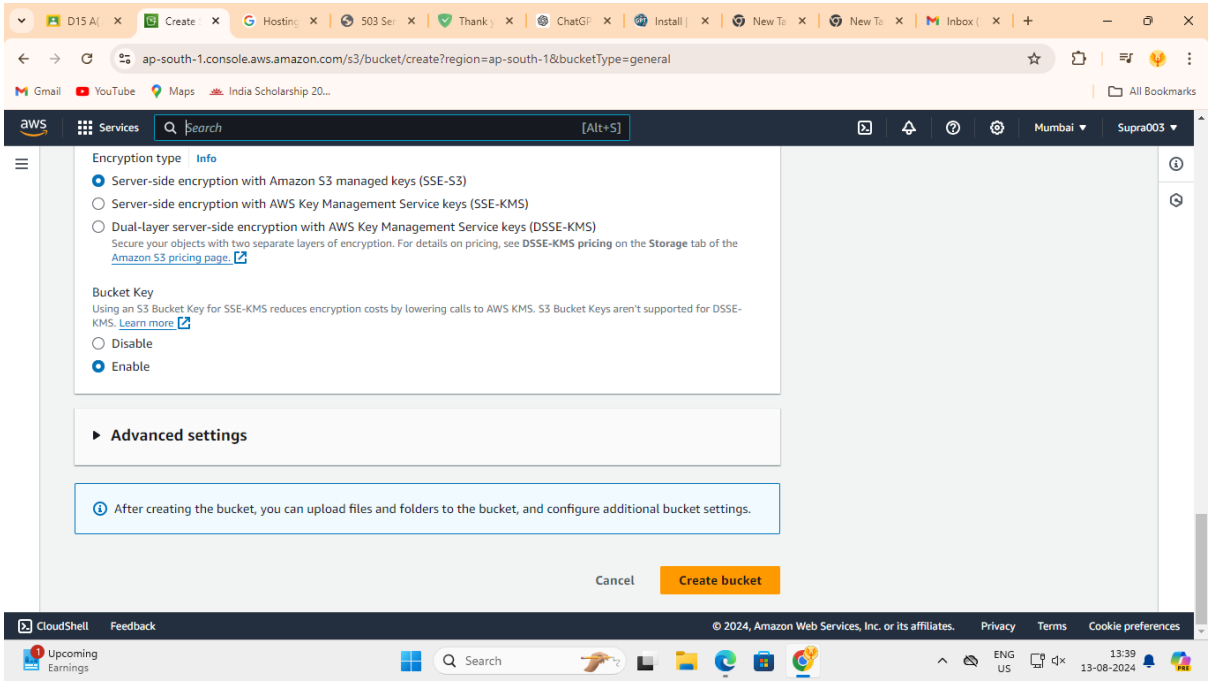


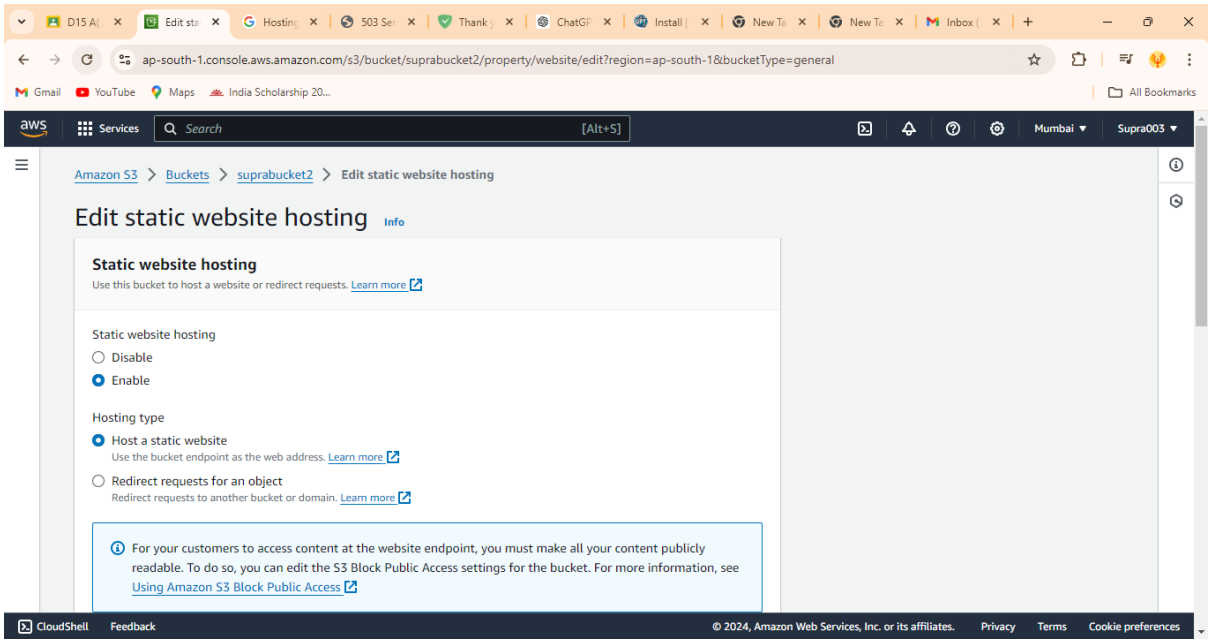

Not secure
webserver-env.eba-227p9xyx.ap-south-1.elasticbeanstalk.com
VPN
For quick access, place your bookmarks here on the bookmarks bar. Import bookmarks now...
All Bookmarks
Congratulations!
You have successfully created a pipeline that retrieved this source application from an Amazon S3 bucket and deployed it to three Amazon EC2 instances using AWS CodeDeploy.
For next steps, read the AWS CodePipeline Documentation. Incedge 2020

Experiment 01-(a)

Hosting a static website on Amazon S3






ap-south-1.console.aws.amazon.com/s3/bucket/suprabucket2/property/website/edit?region=ap-south-1&bucketType=general
Services
Search
[Alt+S]
Mumbai
Supra003
Amazon S3 > Buckets > suprabucket2 > Edit static website hosting
Edit static website hosting
Info
Static website hosting
Use this bucket to host a website or redirect requests. Learn more
Static website hosting
Disable
Enable
Hosting type
Host a static website
Use the bucket endpoint as the web address. Learn more
Redirect requests for an object
Redirect requests to another bucket or domain. Learn more
For your customers to access content at the website endpoint, you must make all your content publicly readable. To do so, you can edit the S3 Block Public Access settings for the bucket. For more information, see Using Amazon S3 Block Public Access
CloudShell
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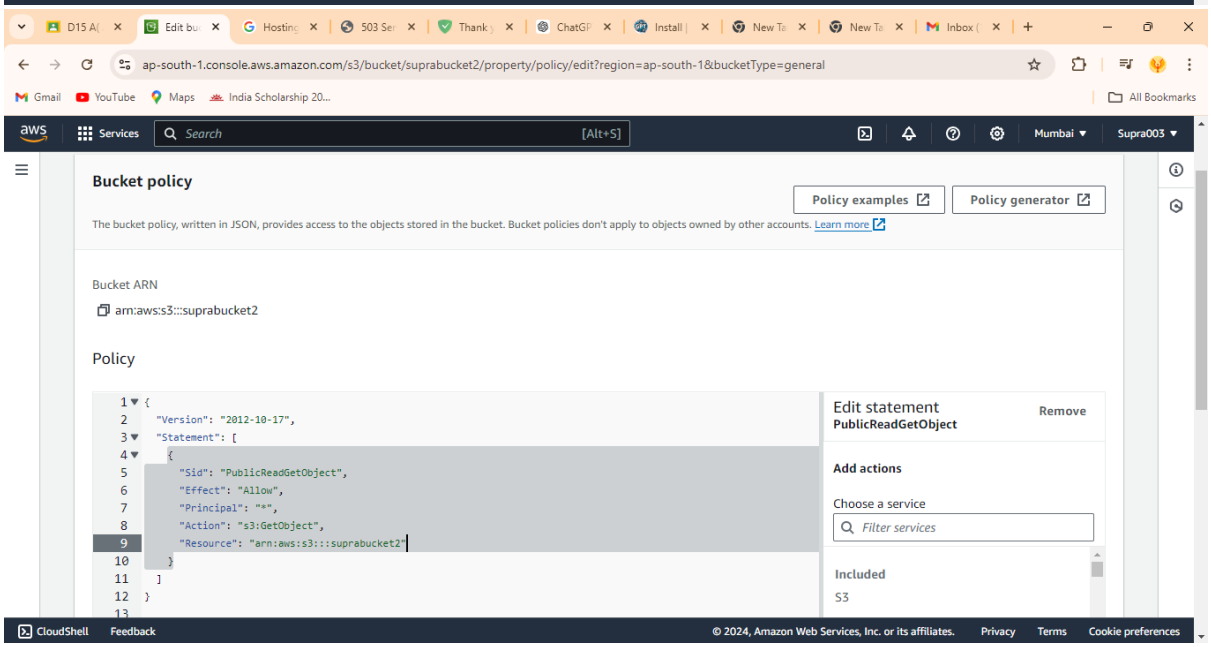
ap-south-1.console.aws.amazon.com/s3/bucket/suprabucket2/property/policy/edit?region=ap-south-1&bucketType=general
Services
Search
[Alt+S]
Mumbai
Supra003
Bucket policy
Policy examples
Policy generator
The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts. Learn more
Bucket ARN
arn:aws:s3:::suprabucket2
Policy
{
"Version": "2012-10-17",
"Statement": [
{
"Sid": "PublicReadGetObject",
"Effect": "Allow",
"Principal": "*",
"Action": "s3:GetObject",
"Resource": "arn:aws:s3:::suprabucket2"
}
]
}
Edit statement
PublicReadGetObject
Remove
Add actions
Choose a service
Filter services
Included
S3
CloudShell
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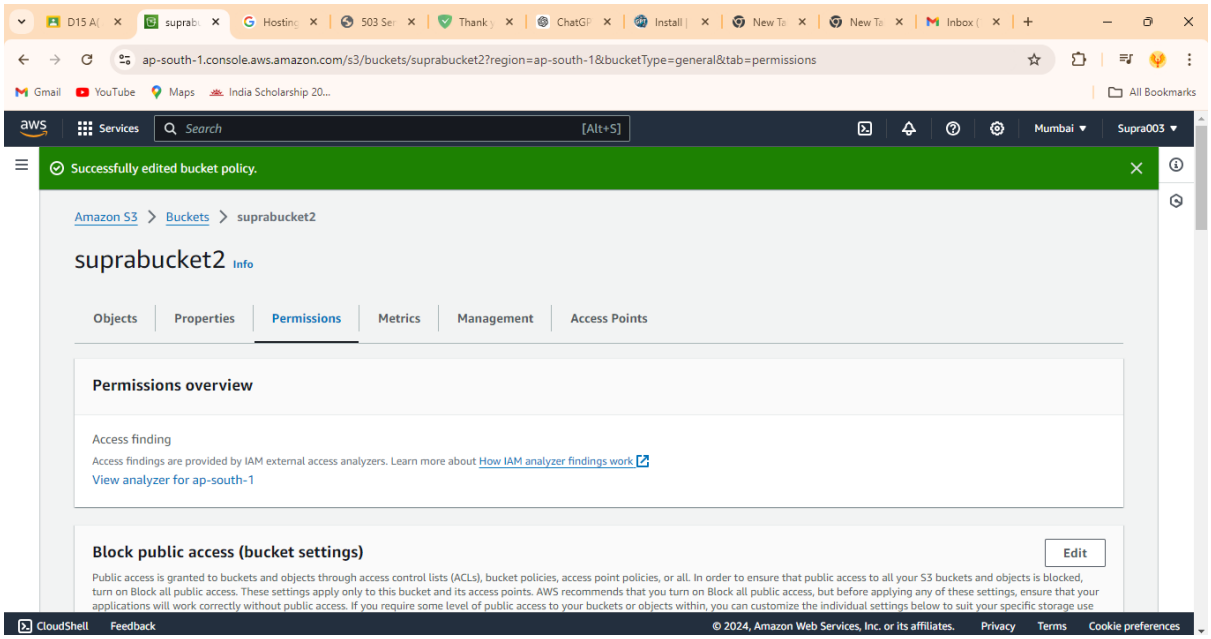
ap-south-1.console.aws.amazon.com/s3/buckets/suprabucket2?region=ap-south-1&bucketType=general&tab=permissions
Successfully edited bucket policy.
Amazon S3 > Buckets > suprabucket2
suprabucket2 Info
Objects
Properties
Permissions
Metrics
Management
Access Points
Permissions overview
Access finding
Access findings are provided by IAM external access analyzers. Learn more about How IAM analyzer findings work
View analyzer for ap-south-1
Block public access (bucket settings)
Edit
Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to all your S3 buckets and objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to your buckets or objects within, you can customize the individual settings below to suit your specific storage use
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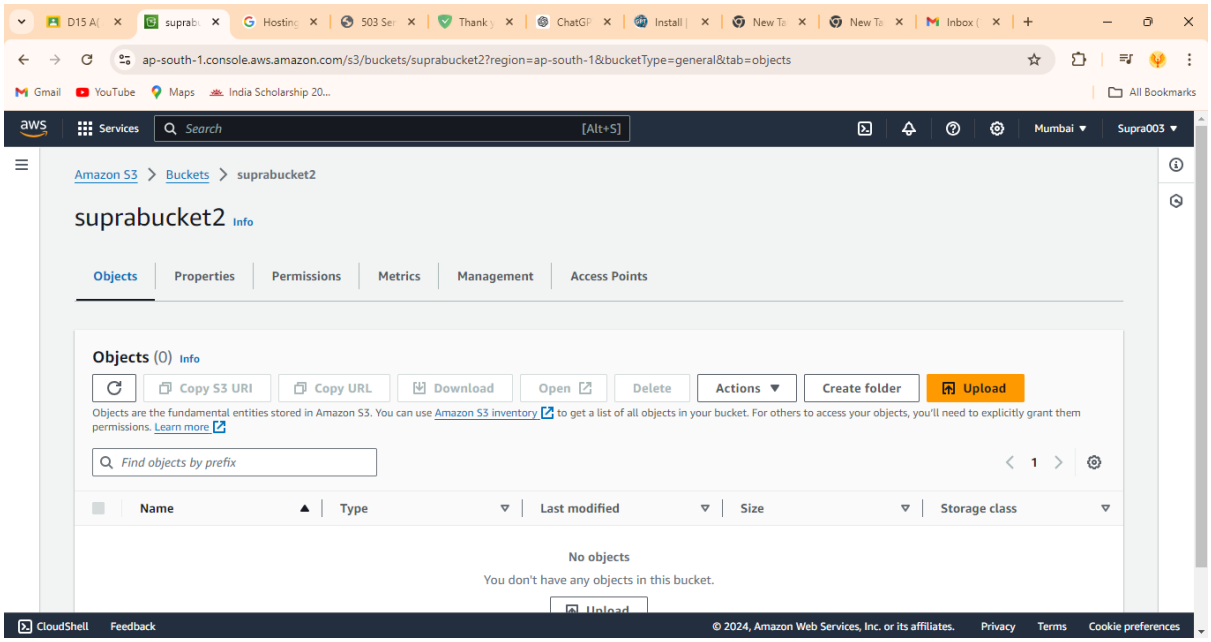
ap-south-1.console.aws.amazon.com/s3/buckets/suprabucket2?region=ap-south-1&bucketType=general&tab=objects
Amazon S3 > Buckets > suprabucket2
suprabucket2 Info
Objects
Properties
Permissions
Metrics
Management
Access Points
Objects (0) Info
Copy S3 URI
Copy URL
Download
Open
Delete
Actions
Create folder
Upload
Objects are the fundamental entities stored in Amazon S3. You can use Amazon S3 inventory to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. Learn more
Find objects by prefix
Name
Type
Last modified
Size
Storage class
No objects
You don't have any objects in this bucket.
Upload
CloudShell
Feedback
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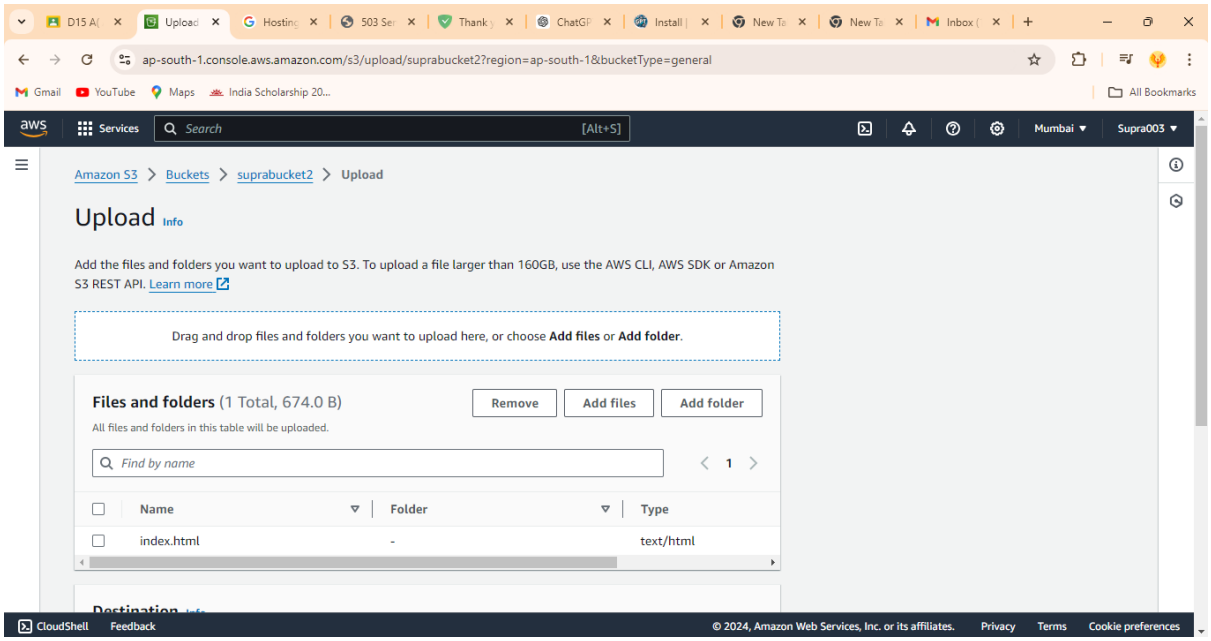
ap-south-1.console.aws.amazon.com/s3/upload/suprabucket2?region=ap-south-1&bucketType=general
Services
Search
[Alt+S]
Mumbai
Supra003
Amazon S3 > Buckets > suprabucket2 > Upload
Upload Info
Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. Learn more
Drag and drop files and folders you want to upload here, or choose Add files or Add folder.
Files and folders (1 Total, 674.0 B)
All files and folders in this table will be uploaded.
Remove
Add files
Add folder
Find by name
Name
Folder
Type
index.html
-
text/html
CloudShell
Feedback
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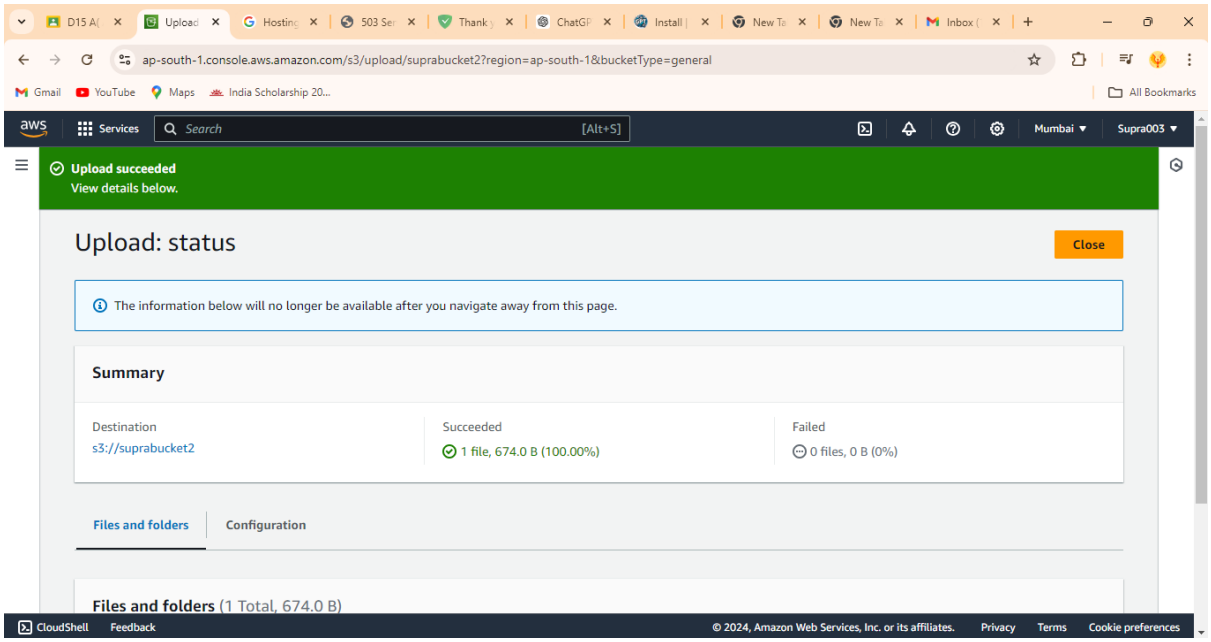
ap-south-1.console.aws.amazon.com/s3/upload/suprabucket2?region=ap-south-1&bucketType=general
Services
Search
[Alt+S]
Mumbai
Supra003
Upload succeeded
View details below.
Upload: status
Close
The information below will no longer be available after you navigate away from this page.
Summary
Destination
s3://suprabucket2
Succeeded
1 file, 674.0 B (100.00%)
Failed
0 files, 0 B (0%)
Files and folders
Configuration
Files and folders (1 Total, 674.0 B)
CloudShell
Feedback
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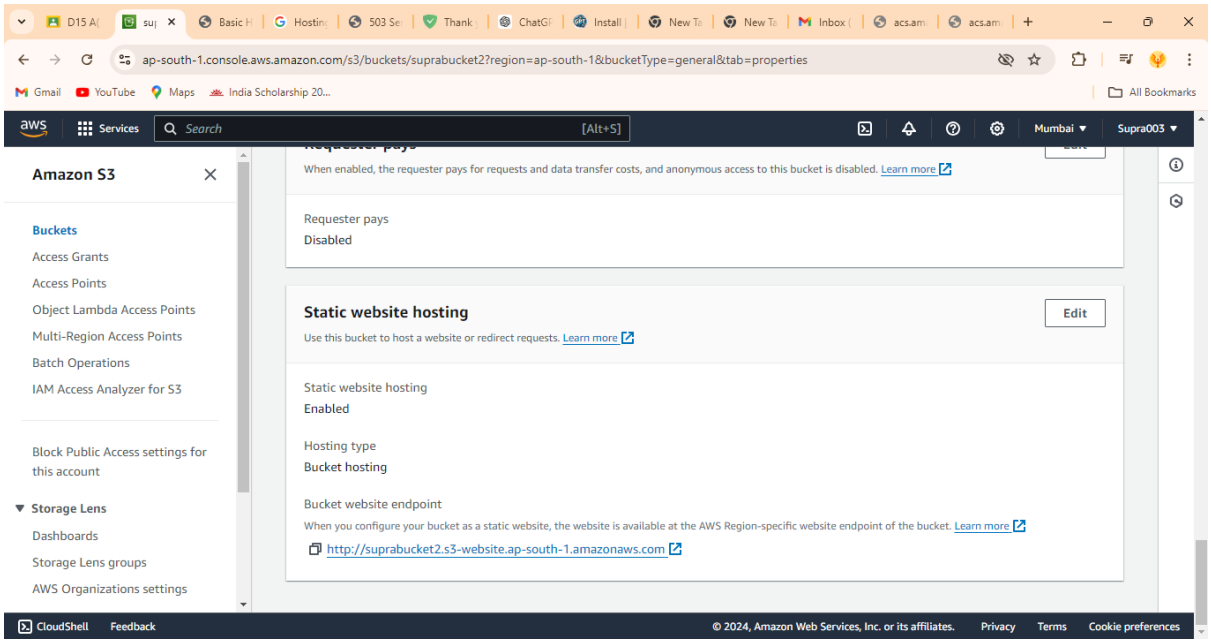
ap-south-1.console.aws.amazon.com/s3/buckets/suprabucket2?region=ap-south-1&bucketType=general&tab=properties
Amazon S3
Buckets
Access Grants
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
IAM Access Analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
Storage Lens groups
AWS Organizations settings
When enabled, the requester pays for requests and data transfer costs, and anonymous access to this bucket is disabled. Learn more
Requester pays
Disabled
Static website hosting
Use this bucket to host a website or redirect requests. Learn more
Edit
Static website hosting
Enabled
Hosting type
Bucket hosting
Bucket website endpoint
When you configure your bucket as a static website, the website is available at the AWS Region-specific website endpoint of the bucket. Learn more
http://suprabucket2.s3-website.ap-south-1.amazonaws.com
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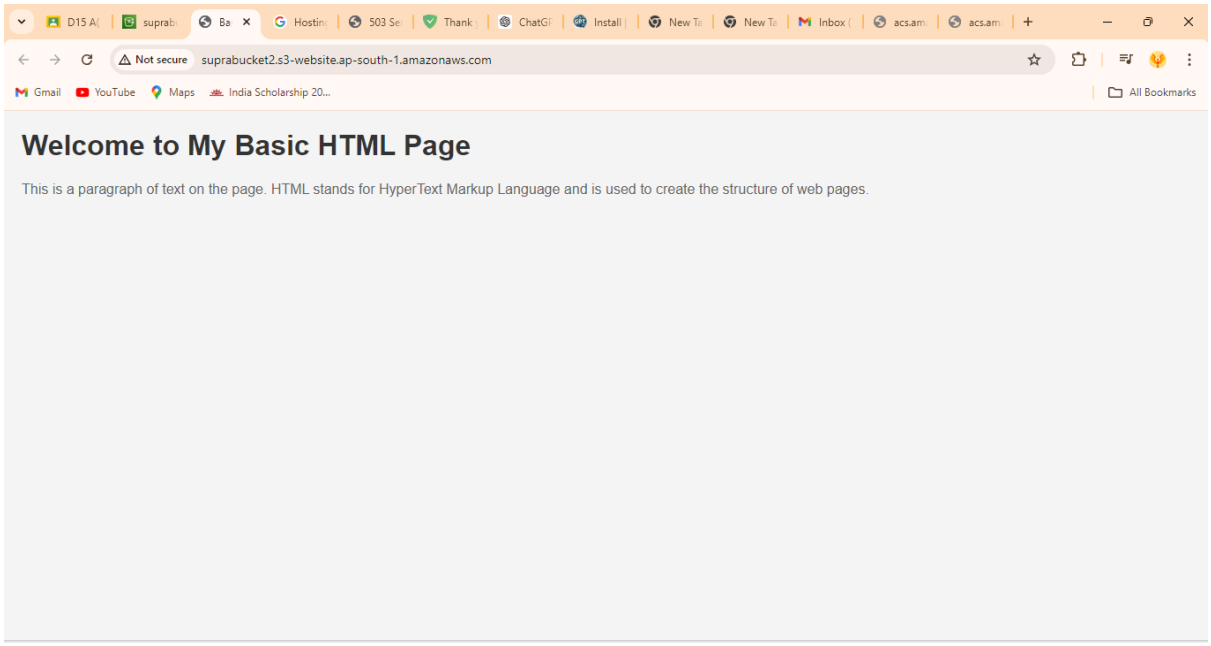
Not secure
suprabucket2.s3-website.ap-south-1.amazonaws.com
Welcome to My Basic HTML Page
This is a paragraph of text on the page. HTML stands for HyperText Markup Language and is used to create the structure of web pages.