



GUVI Zen Class DevOps

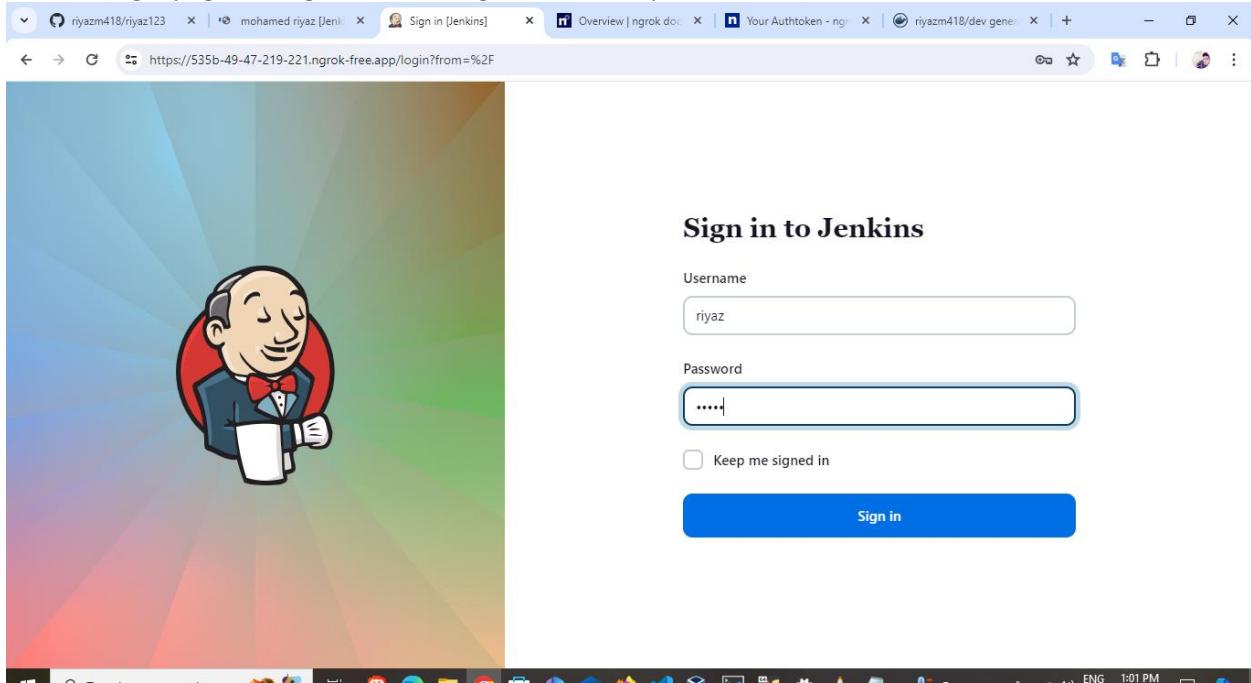
Capstone Project

- 1.Name : Mohamed riyaz
- 2.E-mail: riyazm418@gamil.com
- 3.Batch Code: DO11WD-E
- 4.Github repo URL : <https://github.com/riyazm418/riyaz123.git>
- 5.Deployed site URL : <http://3.110.168.158>
- 6.Docker Images Name : docker pull riyazm418/prod:prod, docker pull riyazm418/dev:dev

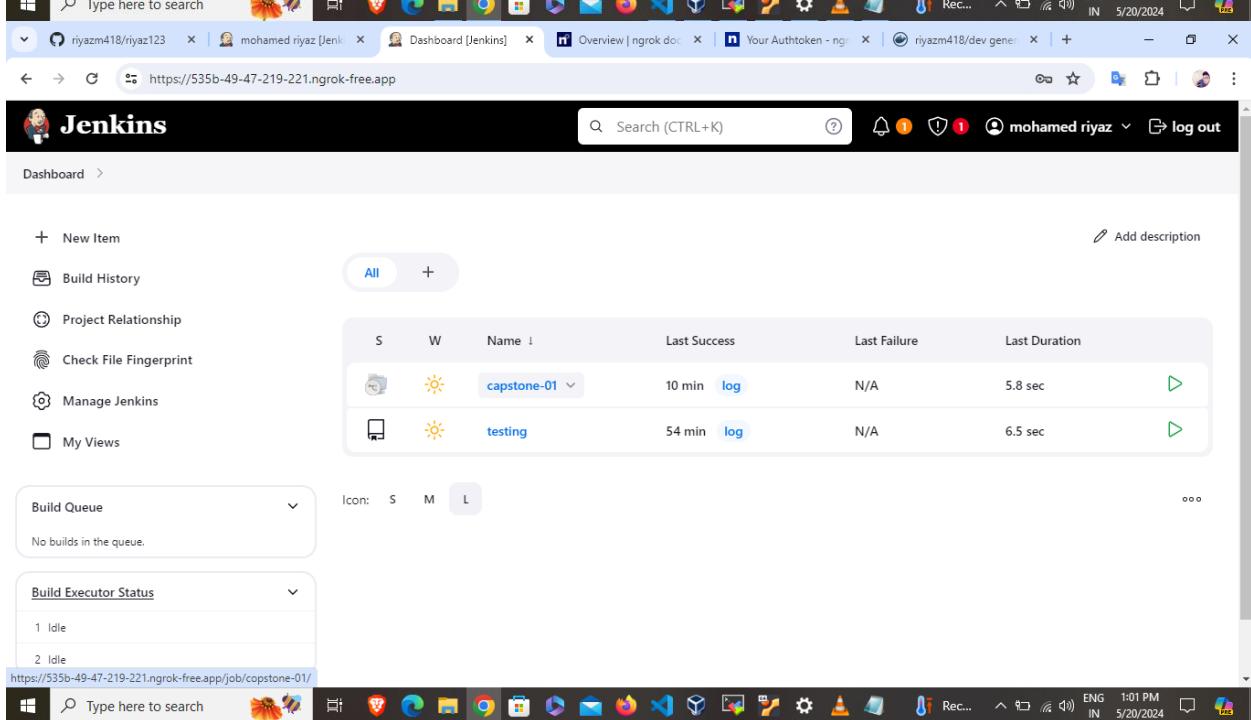
Tools are Used

- 1.Version Control Tools : GIT
- 2.Containerization Tool : Docker
- 3.Continuous Integration Tool : Jenkins, CI/CD automation
- 4.Monitoring Tools : Prometheus
- 5.Visualizations Tool : Grafana
- 6.Scripting language : Bash scripting
- 7.Operating Systems : Linux
- 8.Cloud Environments : AWS
- 9.Web Server : Nginx

Jenkins (login page, configuration settings, execute step commands)



The screenshot shows the Jenkins login page. It features a large, colorful background image of the Jenkins mascot, a bald man in a tuxedo holding a mug. To the right of the image is the title "Sign in to Jenkins". Below the title are two input fields: "Username" containing "riyaz" and "Password" containing ".....". There is also a checked checkbox labeled "Keep me signed in" and a blue "Sign in" button.



The screenshot shows the Jenkins dashboard. At the top, there is a navigation bar with links for "Dashboard [Jenkins]", "Overview | ngrok doc...", "Your Authtoken - ng...", and "riyazm418/dev gener...". Below the navigation bar is the Jenkins logo and the word "Jenkins". A search bar says "Search (CTRL+K)". On the left, there is a sidebar with links for "New Item", "Build History" (which shows "capstone-01" and "testing" builds), "Project Relationship", "Check File Fingerprint", "Manage Jenkins", and "My Views". The main area displays a table of build information:

S	W	Name	Last Success	Last Failure	Last Duration
		capstone-01	10 min ago	N/A	5.8 sec
		testing	54 min ago	N/A	6.5 sec

Below the table are sections for "Build Queue" (empty) and "Build Executor Status" (2 Idle). The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray.

Screenshot of a Jenkins pipeline configuration page for 'capstone-01'.

The page shows the following details:

- Status:** capstone-01
- Folder name:** capstone-01
- Branches (2):**

S	W	Name	Last Success	Last Failure	Last Duration
✓	Cloud	dev	10 min #14	41 min #12	41 sec
✓	Sun	master	6 min 35 sec #2	N/A	32 sec
- Actions:** Disable Multibranch Pipeline
- Build History:** Build History link
- Project Relationship:** Project Relationship link
- Check File Fingerprint:** Check File Fingerprint link
- Rename:** Rename link
- Pipeline Syntax:** Pipeline Syntax link

The right side of the screen shows a Windows taskbar with various pinned icons and the system tray.

Dashboard > capstone-01 > Configuration

Plain text [Preview](#)

Branch Sources

Git
Project Repository [?](#)
https://github.com/riyazm418/riyaz123.git

Credentials [?](#)
riyazm418/******** (myGitHub credential)

+ Add ▾

Behaviours

Discover branches [?](#)

Save **Apply**

Type here to search ENG IN 1:06 PM 5/20/2024

Dashboard > capstone-01 > Configuration

Property strategy
All branches get the same properties

Add property ▾

Git
Project Repository [?](#)
https://github.com/riyazm418/riyaz123.git

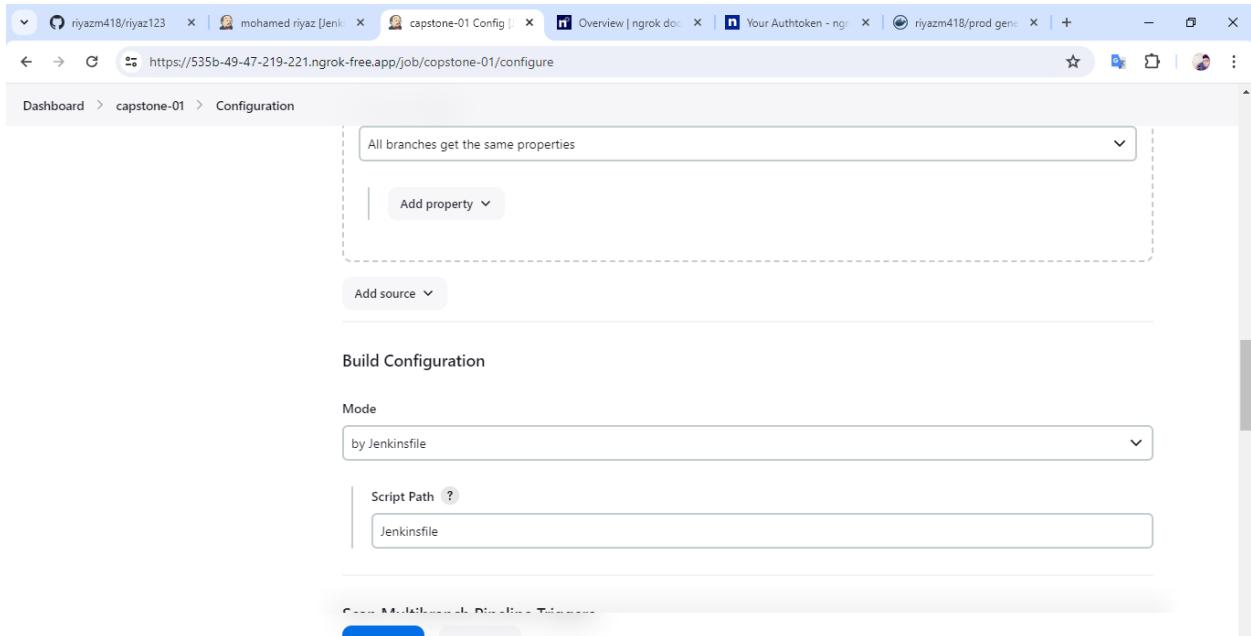
Credentials [?](#)
riyazm418/******** (myGitHub credential)

+ Add ▾

Behaviours

Discover branches [?](#)

Save **Apply**



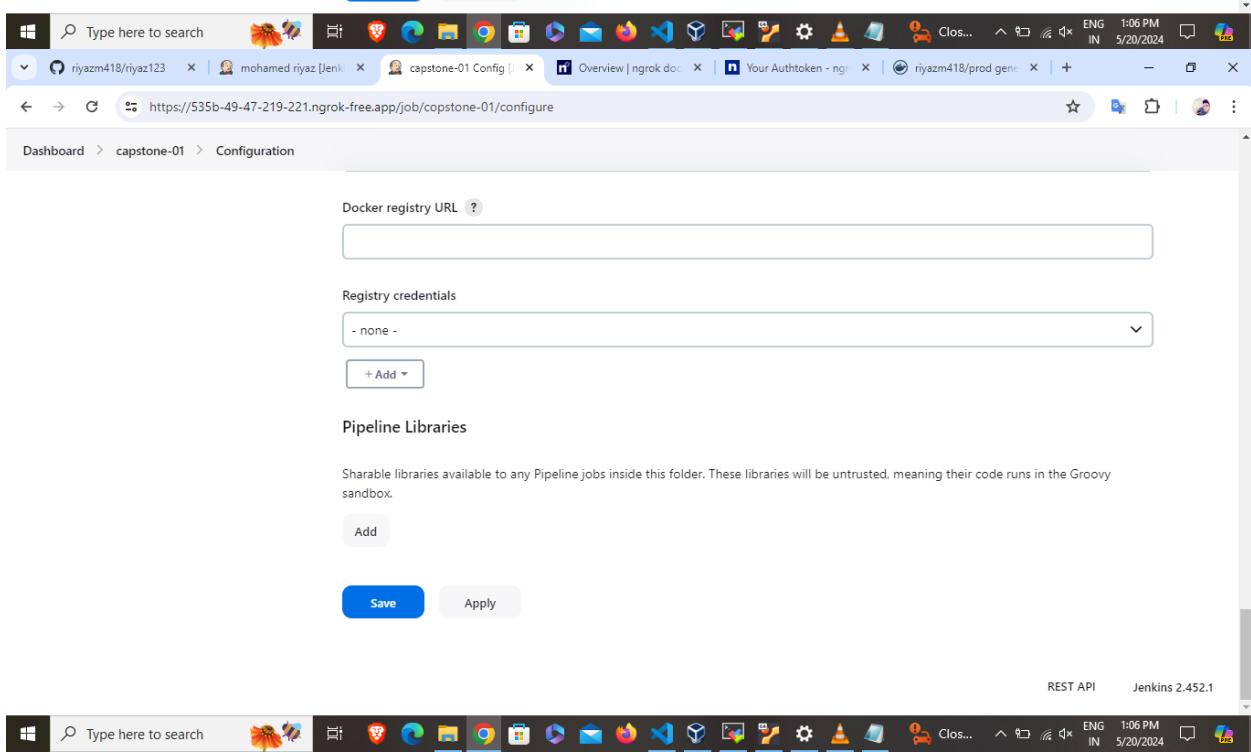
The screenshot shows the Jenkins Pipeline configuration page for a job named 'capstone-01'. The 'Build Configuration' tab is selected. Under 'Mode', it is set to 'by Jenkinsfile'. The 'Script Path' is specified as 'Jenkinsfile'. At the bottom, there are 'Save' and 'Apply' buttons.

Build Configuration

Mode
by Jenkinsfile

Script Path ?
Jenkinsfile

Save Apply



The screenshot shows the Jenkins Pipeline configuration page for a job named 'capstone-01'. The 'Pipeline Libraries' tab is selected. It displays a note about sharable libraries and an 'Add' button. At the bottom, there are 'Save' and 'Apply' buttons.

Docker registry URL ?

Registry credentials
- none -

+ Add

Pipeline Libraries

Sharable libraries available to any Pipeline jobs inside this folder. These libraries will be untrusted, meaning their code runs in the Groovy sandbox.

Add

Save Apply

REST API Jenkins 2.452.1

Screenshot of a Jenkins configuration page for a pipeline job named "capstone-01".

The "General" section shows the job is enabled, with a display name of "capstone-01" and a description of "capstone-01".

The "Branch Sources" section is selected in the sidebar. It contains a "Git" configuration block with a project repository URL of "https://github.com/riyazm418/riyaz123.git" and a credential selection dropdown containing "riyazm418/******/ (myGitHub credential)". There is also a "Behaviours" section with a "Discover branches" option.

At the bottom, there are "Save" and "Apply" buttons.

Screenshot of Jenkins Configuration for capstone-01

The screenshot shows the Jenkins configuration interface for the 'capstone-01' job. The configuration includes:

- Git**: Project Repository set to <https://github.com/riyazm418/riyaz123.git>.
- Credentials**: GitHub credential named 'riyazm418/***** (myGitHub credential)'.
- Behaviours**: A 'Discover branches' step is present.
- Property strategy**: All branches get the same properties.

Buttons at the bottom: Save, Apply.

Screenshot of Jenkins Pipeline Stage View for dev

The Jenkins pipeline stage view for the 'dev' stage of the 'capstone-01' job. The stage is marked as successful (green checkmark). The stage view table shows the following metrics:

Declarative: Checkout SCM	Clone Repository	Build Docker Image (dev)	Build Docker Image (prod)	Deploy Application (dev)	Declarative: Post Actions	
Average stage times: (Average full run time: ~38s)	1s	1s	25s	0ms	2s	216ms
#14 May 20 12:50 No Changes	2s	1s	29s		1s	220ms
#13 May 20 12:22 1 commit	1s	1s	25s		2s	214ms

Left sidebar: Status, Changes, Build Now, View Configuration, Full Stage View, Pipeline Syntax.

Bottom navigation: Build History (trend), Filter..., Jenkins logo, Type here to search, Taskbar icons.

<https://0475-49-47-219-221.ngrok-free.app/job/capstone-01/job/dev/14/console>

Console Output

```

Branch indexing
> git rev-parse --resolve-git-dir /var/lib/jenkins/caches/git-f0265b59d6efaf359ec87944287fb3a8/.git # timeout=10
Setting origin to https://github.com/riyazm418/riyaz123.git
> git config remote.origin.url https://github.com/riyazm418/riyaz123.git # timeout=10
Fetching origin...
Fetching upstream changes from origin
> git --version # timeout=10
> git --version # 'git version 2.45.1'
> git config --get remote.origin.url # timeout=10
using GIT_ASKPASS to set credentials myGitHub credential
> git fetch -t --force --progress --origin +refs/heads/*:refs/remotes/origin/* # timeout=10
Seen branch in repository origin/dev
Seen branch in repository origin/master
Seen 2 remote branches
Obtained Jenkinsfile from 729ed420eefc460913c1f315cc820a916ce5c485
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/capstone-01_dev
[Pipeline] {
[Pipeline] stage

```

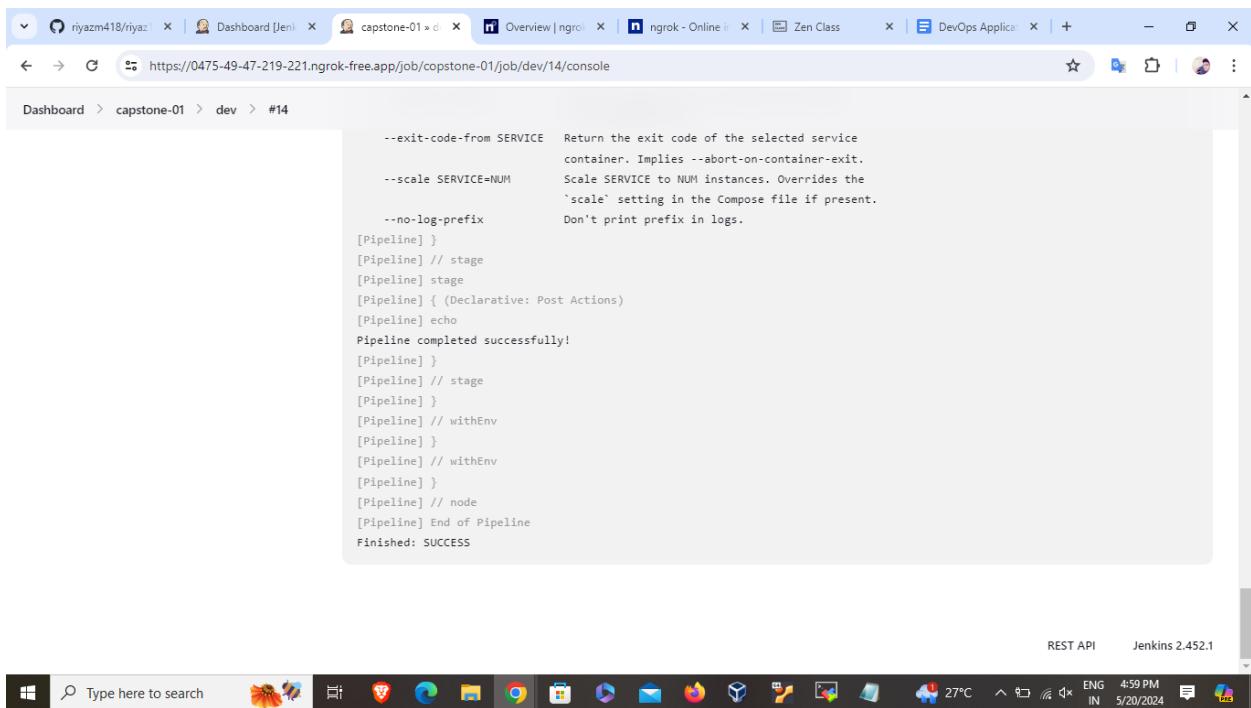
```

Sending build context to Docker daemon 3.75MB

Step 1/3 : FROM nginx:alpine
--> 501d84f5d064
Step 2/3 : LABEL Name="Mohamed Riyaz"
--> Using cache
--> d39b866a5917
Step 3/3 : COPY . /usr/share/nginx/html
--> 821323f64522
Successfully built 821323f64522
Successfully tagged devops-build:v1.0
[Pipeline] sh
+ docker login -u riyazm418 -p Rahila@100
WARNING! Using --password via the CLI is insecure. Use --password-stdin.
WARNING! Your password will be stored unencrypted in /var/lib/jenkins/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
[Pipeline] sh
+ docker tag devops-build:v1.0 riyazm418/dev:dev
[Pipeline] sh
+ docker push riyazm418/dev:dev
The push refers to repository [docker.io/riyazm418/dev]
bcbf7ec18269: Preparing
c495f7b0d7d: Preparing

```



The screenshot shows a Windows desktop environment. At the top, there is a taskbar with various icons including a search bar, file explorer, and browser. On the right side of the taskbar, system status indicators show the date (5/20/2024), time (4:59 PM), temperature (27°C), battery level (ENG IN), and signal strength.

The main window is a web browser displaying a Jenkins pipeline log. The URL in the address bar is <https://0475-49-47-219-221.ngrok-free.app/job/capstone-01/job/dev/14/console>. The log output is as follows:

```
--exit-code-from SERVICE  Return the exit code of the selected service
                           container. Implies --abort-on-container-exit.
--scale SERVICE=NUM      Scale SERVICE to NUM instances. Overrides the
                           `scale` setting in the Compose file if present.
                           Don't print prefix in logs.
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Declarative: Post Actions)
[Pipeline] echo
Pipeline completed successfully!
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

AWS (EC2-Console, SG configs)

Screenshot of the AWS EC2 Instances page showing two running instances: capstone01 and monitoring.

Instances (1/2) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability zone
capstone01	i-0c0e04f56cdea59f6	Running	t2.micro	2/2 checks passed	View alarms	ap-south-1
monitoring	i-0d310be66f12ea74	Running	t2.micro	2/2 checks passed	View alarms	ap-south-1

i-0c0e04f56cdea59f6 (capstone01)

Details | Status and alarms New | Monitoring | Security | Networking | Storage | Tags

Instance summary

Instance ID	i-0c0e04f56cdea59f6 (capstone01)
IPv6 address	-
Instance state	Running

Public IPv4 address copied: 3.110.168.158 | open address

Private IPv4 addresses: 172.31.6.41

Public IPv4 DNS: ec2-3-110-168-158.ap-south-1

Security Groups (2) Info

Name	Security group ID	Security group name	VPC ID
-	sg-02580b22afeb4b5be	default	vpc-0906ec83903882d54
capstone_security	sg-0040a6bfc8dff1c74	launch-wizard-1	vpc-0906ec83903882d54

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules [Info](#)

Security group rule ID	Type	Protocol	Port range	Source	Description - optional	Info
	Info	Info		Info		Info
sgr-046d17b8c641cb346	SSH	TCP	22	Cust... ▾	<input type="text"/> 49.47.219.221/32 X	Delete
sgr-07557825e5e12a661	HTTP	TCP	80	Cust... ▾	<input type="text"/> 0.0.0.0/0 X	Delete
sgr-096361c246489c7e6	Custom TCP	TCP	9090	Cust... ▾	<input type="text"/> 0.0.0.0/0 X	Delete
sgr-06e704dcbe50f170	HTTPS	TCP	443	Cust... ▾	<input type="text"/> 0.0.0.0/0 X	Delete
sgr-0fce084e4b16f1cf5	Custom TCP	TCP	9093	Cust... ▾	<input type="text"/>	Delete

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26°C ENG 12:50 AM IN 5/20/2024

Inbound rules [Info](#)

Security group rule ID	Type	Protocol	Port range	Source	Description - optional	Info
	Info	Info		Info		Info
sgr-096361c246489c7e6	Custom TCP	TCP	9090	Cust... ▾	<input type="text"/> 0.0.0.0/0 X	Delete
sgr-06e704dcbe50f170	HTTPS	TCP	443	Cust... ▾	<input type="text"/> 0.0.0.0/0 X	Delete
sgr-0fce084e4b16f1cf5	Custom TCP	TCP	9093	Cust... ▾	<input type="text"/> 0.0.0.0/0 X	Delete
sgr-0d4cc6976f4db37fe	Custom TCP	TCP	3000	Cust... ▾	<input type="text"/> 0.0.0.0/0 X	Delete
sgr-0b9e1068b6bbd6439	Custom TCP	TCP	9100	Cust... ▾	<input type="text"/> 0.0.0.0/0 X	Delete

[Add rule](#)

[CloudShell](#) [Feedback](#)

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26°C ENG 12:51 AM IN 5/20/2024

The screenshot shows the AWS EC2 Instances page. The left sidebar navigation includes EC2 Dashboard, EC2 Global View, Events, Instances (selected), Instances Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity, Reservations (New), Images (AMIs, AMI Catalog), and Elastic Block Store. The main content area displays 'Instances (1/2) Info' with a search bar and filters for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability zone. Two instances are listed:

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability zone
capstone01	i-0c0e04f56cdea59f6	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1
monitoring	i-0d0310be66f12ea74	Running	t2.micro	2/2 checks passed	View alarms +	ap-south-1

A modal window for instance i-0c0e04f56cdea59f6 (capstone01) is open, showing the Details tab. It displays the Public IPv4 address (3.110.168.158) which is being copied. Other details shown include Instance ID (i-0c0e04f56cdea59f6), Instance state (Running), and Private IPv4 addresses (172.31.6.41). The modal has tabs for Status and alarms, Monitoring, Security, Networking, Storage, and Tags.

Docker hub repo with image tags

Screenshot of the Docker Hub homepage showing the user's repositories:

User: riyazm418

- riyazm418 / prod (Private, Security unknown, 0 stars, 2 forks)
- riyazm418 / dev (Public, Security unknown, 0 stars, 7 forks)
- riyazm418 / my-nginx (Public, Security unknown, 0 stars, 5 forks)
- riyazm418 / httpd.riyaz (Public, Security unknown, 0 stars, 2 forks)

A sidebar on the right shows a "Create An Organization" section with a lock icon and a "Create and manage users and grant access to your repositories." link.

Screenshot of the Docker Hub repository page for riyazm418/prod:

Repository: riyazm418/prod

General tab selected. Tags section shows 2 tags: prod (Image, Pulled 5 minutes ago) and devops-build-prod (Image, Pulled 20 hours ago). Automated Builds section shows a note about connecting to GitHub or Bitbucket for automatic builds.

Docker commands:

```
docker push riyazm418/prod:tagname
```

The screenshot shows the Docker Hub interface for the repository `riyazm418/dev`. The top navigation bar includes links for Dashboard [Jenkins], master [capstone-01], Overview | ngrok doc, Your Authtoken, and the current repository. The main header has tabs for Explore, Repositories (selected), and Organizations, along with a search bar and a public view button.

General Repository Details:

- Repository name: `riyazm418/dev`
- Last updated: 10 minutes ago
- Description: Dev repo for devops_build:v1.0
- Category: INCOMPLETE
- Docker commands: `docker push riyazm418/dev:tagname`

Tags:

Tag	OS	Type	Pulled	Pushed
<code>dev</code>		Image	---	10 minutes ago
<code>devops-build-prod</code>		Image	17 hours ago	18 hours ago

Automated Builds:

Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.

Available with Pro, Team and Business subscriptions. [Read more about automated builds](#).

Tags for prod:

TAG	Digest	OS/ARCH	Last pull	Compressed Size
<code>prod</code>	f0854d359edo	linux/amd64	---	20.94 MB
<code>devops-build-prod</code>	ce5cf8ce7383	linux/amd64	21 hours ago	20.2 MB

System Status:

Type here to search

Windows taskbar icons: File Explorer, Task View, Edge, Firefox, Mail, File Manager, Task Scheduler, VNC, Settings, Task Manager, Weather, System, Network, Power, Volume, Battery, Language, Date & Time, and a system status icon.

riyazm418/dev Tags | Docker Hub

https://hub.docker.com/repository/docker/riyazm418/dev/tags

dockerhub Explore Repositories Organizations Search Docker Hub ctrl+K ? R

riyazm418 / Repositories / dev / Tags Using 1 of 1 private repositories. Get more

General Tags Builds Collaborators Webhooks Settings

Sort by Newest Filter Tags Delete

TAG

dev

Last pushed 2 hours ago by riyazm418

Digest	OS/ARCH	Last pull	Compressed Size
73a9bc7097db	linux/amd64	---	21.1 MB

devops-build-prod

Last pushed 19 hours ago by riyazm418

Digest	OS/ARCH	Last pull	Compressed Size
37fbc5a87a5d	linux/arm64	19 hours ago	21.62 MB

Type here to search 31°C 2:31 PM 5/20/2024 ENG IN

Deployed site page

Not secure http://3.110.168.158

Home Login SignUp

OnlineShop

OnePlus 9 5G	Iphone 13 mini	Samsung s21 ultra	xiomai mi 11
5.4 inch display	399	5.4 inch display	399
Add to Cart	Add to Cart	Add to Cart	Add to Cart
OnePlus 9 5G	Iphone 13 mini	Samsung s21 ultra	xiomai mi 11

Type here to search 26°C 12:49 AM 5/20/2024 ENG IN

Monitoring health check status

```
# HELP go_gc_duration_seconds A summary of the pause duration of garbage collection cycles.
# TYPE go_gc_duration_seconds summary
go_gc_duration_seconds{quantile="0"} 0
go_gc_duration_seconds{quantile="0.25"} 0
go_gc_duration_seconds{quantile="0.5"} 0
go_gc_duration_seconds{quantile="0.75"} 0
go_gc_duration_seconds{quantile="1"} 0
go_gc_duration_seconds_sum 0
go_gc_duration_seconds_count 0
# HELP go_goroutines Number of goroutines that currently exist.
# TYPE go_goroutines gauge
go_goroutines 9
# HELP go_info Information about the Go environment.
# TYPE go_info gauge
go_info{version="go1.22.2"} 1
# HELP go_memstats_alloc_bytes Number of bytes allocated and still in use.
# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 815856
# HELP go_memstats_alloc_bytes_total Total number of bytes allocated, even if freed.
# TYPE go_memstats_alloc_bytes_total counter
go_memstats_alloc_bytes_total 815856
# HELP go_memstats_buck_hash_table_sys_bytes Number of bytes used by the profiling bucket hash table.
# TYPE go_memstats_buck_hash_table_sys_bytes gauge
go_memstats_buck_hash_table_sys_bytes 1.448882e+06
# HELP go_memstats_frees_Total number of frees.
# TYPE go_memstats_frees_total Total number of frees.
# TYPE go_memstats_frees_total counter
go_memstats_frees_total 713
# HELP go_memstats_gc_sys_bytes Number of bytes used for garbage collection system metadata.
# TYPE go_memstats_gc_sys_bytes gauge
go_memstats_gc_sys_bytes 1.548352e+06
# HELP go_memstats_heap_alloc_bytes Number of heap bytes allocated and still in use.
# TYPE go_memstats_heap_alloc_bytes gauge
go_memstats_heap_alloc_bytes 815856
# HELP go_memstats_heap_idle_bytes Number of heap bytes waiting to be used.
# TYPE go_memstats_heap_idle_bytes gauge
go_memstats_heap_idle_bytes 1.76128e+06
# HELP go_memstats_heap_inuse_bytes Number of heap bytes that are in use.
# TYPE go_memstats_heap_inuse_bytes gauge
go_memstats_heap_inuse_bytes 2.105344e+06
# HELP go_memstats_heap_objects Number of allocated objects.
# TYPE go_memstats_heap_objects gauge
go_memstats_heap_objects 7646
```

Type here to search 31°C ENG IN 5/19/2024

Not secure http://13.200.242.121:9100/metrics

Prometheus Alerts Graph Status Help

Use local time Enable query history Enable autocomplete Enable highlighting Enable linter

Expression (press Shift+Enter for newlines)

Table Evaluation time Remove Panel

No data queried yet

Add Panel



```

# HELP go_gc_duration_seconds A summary of the pause duration of garbage collection cycles.
# TYPE go_gc_duration_seconds summary
go_gc_duration_seconds{quantile="0"} 0
go_gc_duration_seconds{quantile="0.25"} 0
go_gc_duration_seconds{quantile="0.5"} 0
go_gc_duration_seconds{quantile="0.75"} 0
go_gc_duration_seconds{quantile="1"} 0
go_gc_duration_seconds_sum 0
go_gc_duration_seconds_count 0
# HELP go_goroutines Number of goroutines that currently exist.
# TYPE go_goroutines gauge
go_goroutines 9
# HELP go_info Information about the Go environment.
# TYPE go_info gauge
go_info{version="go1.22.2"} 1
# HELP go_memstats_alloc_bytes Number of bytes allocated and still in use.
# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 815856
# HELP go_memstats_alloc_bytes_total Total number of bytes allocated, even if freed.
# TYPE go_memstats_alloc_bytes_total counter
go_memstats_alloc_bytes_total 815856
# HELP go_memstats_buck_hash_sys_bytes Number of bytes used by the profiling bucket hash table.
# TYPE go_memstats_buck_hash_sys_bytes gauge
go_memstats_buck_hash_sys_bytes 1.448882e+06
# HELP go_memstats_frees_Total number of frees.
# TYPE go_memstats_frees_Total total counter
go_memstats_frees_Total 713
# HELP go_memstats_gc_sys_bytes Number of bytes used for garbage collection system metadata.
# TYPE go_memstats_gc_sys_bytes gauge
go_memstats_gc_sys_bytes 1.548352e+06
# HELP go_memstats_heap_alloc_bytes Number of heap bytes allocated and still in use.
# TYPE go_memstats_heap_alloc_bytes gauge
go_memstats_heap_alloc_bytes 815856
# HELP go_memstats_heap_idle_bytes Number of heap bytes waiting to be used.
# TYPE go_memstats_heap_idle_bytes gauge
go_memstats_heap_idle_bytes 1.76128e+06
# HELP go_memstats_heap_inuse_bytes Number of heap bytes that are in use.
# TYPE go_memstats_heap_inuse_bytes gauge
go_memstats_heap_inuse_bytes 2.105344e+06
# HELP go_memstats_heap_objects Number of allocated objects.
# TYPE go_memstats_heap_objects gauge
go_memstats_heap_objects 7646

```

Prometheus Alerts Graph Status Help

Use local time Enable query history Enable autocomplete Enable highlighting Enable linter

node_cpu_seconds_total

Graph

Evaluation time

node_cpu_seconds_total(cpu="0", instance="13.200.242.121:9100", job="capstone", mode="idle")	4127.2
node_cpu_seconds_total(cpu="0", instance="13.200.242.121:9100", job="capstone", mode="iowait")	7.27
node_cpu_seconds_total(cpu="0", instance="13.200.242.121:9100", job="capstone", mode="irq")	0
node_cpu_seconds_total(cpu="0", instance="13.200.242.121:9100", job="capstone", mode="nice")	3.58
node_cpu_seconds_total(cpu="0", instance="13.200.242.121:9100", job="capstone", mode="softirq")	0.29
node_cpu_seconds_total(cpu="0", instance="13.200.242.121:9100", job="capstone", mode="steal")	6.79
node_cpu_seconds_total(cpu="0", instance="13.200.242.121:9100", job="capstone", mode="system")	15.52
node_cpu_seconds_total(cpu="0", instance="13.200.242.121:9100", job="capstone", mode="user")	39.95

Remove Panel

Add Panel



The screenshot shows the Prometheus Targets page. At the top, there's a navigation bar with links for Alerts, Graph, Status, and Help. Below the navigation is a search bar with the placeholder "Filter by endpoint or labels". Underneath is a table titled "Targets" with two sections: "capstone (1/1 up)" and "prometheus (1/1 up)".

capstone (1/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://13.200.242.121:9100/metrics	UP	instance="13.200.242.121:9100" job="capstone"	8.584s ago	17.014ms	

prometheus (1/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	13.134s ago	5.461ms	

The screenshot shows a Google Docs document titled "DevOps Application Deployment Capstone". The document contains the following content:

Monitoring:

- Setup a monitoring system to check the health status of the application. (Open-source)
- Sending notifications only if the application goes down is highly appreciable

Submission:

- Github repo URL, deployed site URL, docker images name must be added in the submission
- Upload the screenshots of below mentioned to github repo:
 - Jenkins (login page, configuration settings, execute step commands)
 - AWS (EC2-Console, SG configs)
 - Docker hub repo with image tags
 - Deployed site page
 - Monitoring health check status

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Prometheus Alerts Graph Status Help

Inactive (4) Pending (0) Firing (0)

Filter by name or labels

alert.rules.yml > alert.rules

> InstanceDown (0 active)

> HostOutOfMemory (0 active)

> HostOutOfDiskSpace (0 active)

> HostHighCpuLoad (0 active)

Type here to search

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Prometheus Alerts Graph Status Help

Inactive (4) Pending (0) Firing (0)

Filter by name or labels

alert.rules.yml > alert.rules

> InstanceDown (0 active)

```
name: InstanceDown
expr: up == 0
for: 1m
labels:
  severity: critical
annotations:
  description: {{ $labels.instance }} of job {{ $labels.job }} has been down for more than 1 minutes.
  summary: Endpoint {{ $labels.instance }} down
```

> HostOutOfMemory (0 active)

```
name: HostOutOfMemory
expr: node_memory_MemAvailable / node_memory_MemTotal * 100 < 25
for: 5m
labels:
  severity: warning
annotations:
  description: Node memory is filling up (< 25% left)
  VALUE = {{ $value }}
  LABELS: {{ $labels }}
```

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Prometheus

- Inactive (4)
- Pending (0)
- Firing (0)

Filter by name or labels Show annotations

inactive

alert.rules.yaml > alert.rules

▼ InstanceDown (0 active)

```
name: InstanceDown
expr: up == 0
for: 1m
labels:
  severity: critical
annotations:
  description: {{ $labels.instance }} of job {{ $labels.job }} has been down for more than 1 minutes.
  summary: Endpoint {{ $labels.instance }} down
```

▼ HostOutOfMemory (0 active)

```
name: HostOutOfMemory
expr: node_memory_MemAvailable / node_memory_MemTotal * 100 < 25
for: 5m
labels:
  severity: warning
annotations:
  description: Node memory is filling up (< 25% left)
  VALUE = {{ $value }}
  LABELS: {{ $labels }}
```

Type here to search

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Prometheus

- All scrape pools
- All Unhealthy

Filter by endpoint or labels

Unknown Unhealthy Healthy

capstone (0/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://13.200.242.121:9100/metrics	DOWN	instance="13.200.242.121:9100" job="capstone"	23.257s ago	10.0s	Get "http://13.200.242.121:9100/metrics": context deadline exceeded

prometheus (1/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	12.806s ago	6.420ms	



Prometheus

Targets

capstone (0/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://13.200.242.121:9100/metrics	DOWN	instance="13.200.242.121:9100" job="capstone"	16.395s ago	10.0s	Get "http://13.200.242.121:9100/metrics": context deadline exceeded

prometheus (1/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	5.945s ago	4.999ms	

Type here to search

App passwords

Sign in with app passwords

Spam (49) - riyazm418@gmail.com

Recent security activity

Prometheus Time Series Col

Prometheus

Targets

capstone (0/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://13.200.242.121:9100/metrics	DOWN	instance="13.200.242.121:9100" job="capstone"	12.504s ago	10.0s	Get "http://13.200.242.121:9100/metrics": context deadline exceeded

prometheus (1/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	2.52s ago	6.935ms	



Not secure http://13.234.35.143:9090/alerts?search=

Prometheus

Alerts Graph Status Help

Inactive (3) Pending (0) Firing (1)

Filter by name or labels

Show annotations

inactive firing (1)

Type here to search

App passwords Sign in with app passwords Spam (49) - riyazm418@gmail.com Recent security activity Prometheus Time Series Col...

Not secure http://13.234.35.143:9090/alerts?search=

Prometheus

Alerts Graph Status Help

Inactive (3) Pending (0) Firing (1)

Filter by name or labels

Show annotations

inactive firing (1)

Labels

Labels	State	Active Since	Value
alertname=InstanceDown instance=13.200.242.121:9100 job=capstone severity=critical	FIRING	2024-05-19T17:11:51.229188355Z	0

InstanceState

HostOutOfMemory (0 active)

HostOutOfDiskSpace (0 active)

HostHighCpuLoad (0 active)

25°C ENG IN 5/19/2024 11:27 PM

Not secure http://13.234.35.143:9090/alerts?search=

Prometheus

Alerts Graph Status Help

Inactive (3) Pending (0) Firing (1)

Filter by name or labels Show annotations

alert.rules.yaml > alert.rules

inactive firing (2)

InstanceDown (2 active)

```
name: InstanceDown
expr: up == 0
for: 1m
labels:
  severity: critical
annotations:
  description: {{ $labels.instance }} of job {{ $labels.job }} has been down for more than 1 minutes.
  summary: Endpoint {{ $labels.instance }} down
```

Labels	State	Active Since	Value
alarmname=InstanceDown,instance=13.200.242.121:9100,job=capstone,severity=critical	FIRING	2024-05-19T18:02:51.229188355Z	0
alarmname=InstanceDown,instance=3.110.188.217:9100,job=capstone,severity=critical	PENDING	2024-05-19T18:03:06.229188355Z	0

> HostOutOfMemory (0 active)

> HostOutOfDiskSpace (0 active)

Not secure http://13.234.35.143:9090/targets?search=

Prometheus

Targets

All scrape pools ▾ All Unhealthy Collapse All Filter by endpoint or labels

Unknown Unhealthy Healthy

capstone (1/1 up) show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://3.110.188.217:9100/metrics	UP	instance="3.110.188.217:9100",job="capstone"	4.195s ago	14.589ms	

prometheus (1/1 up) show less

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090",job="prometheus"	9.337s ago	5.210ms	



