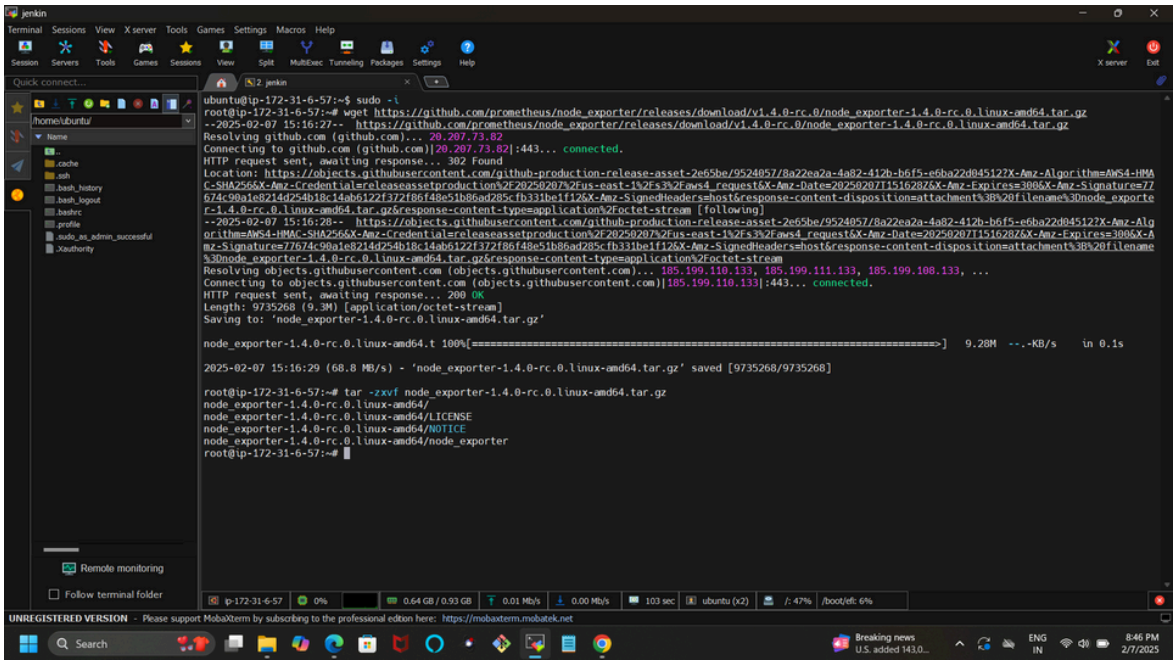
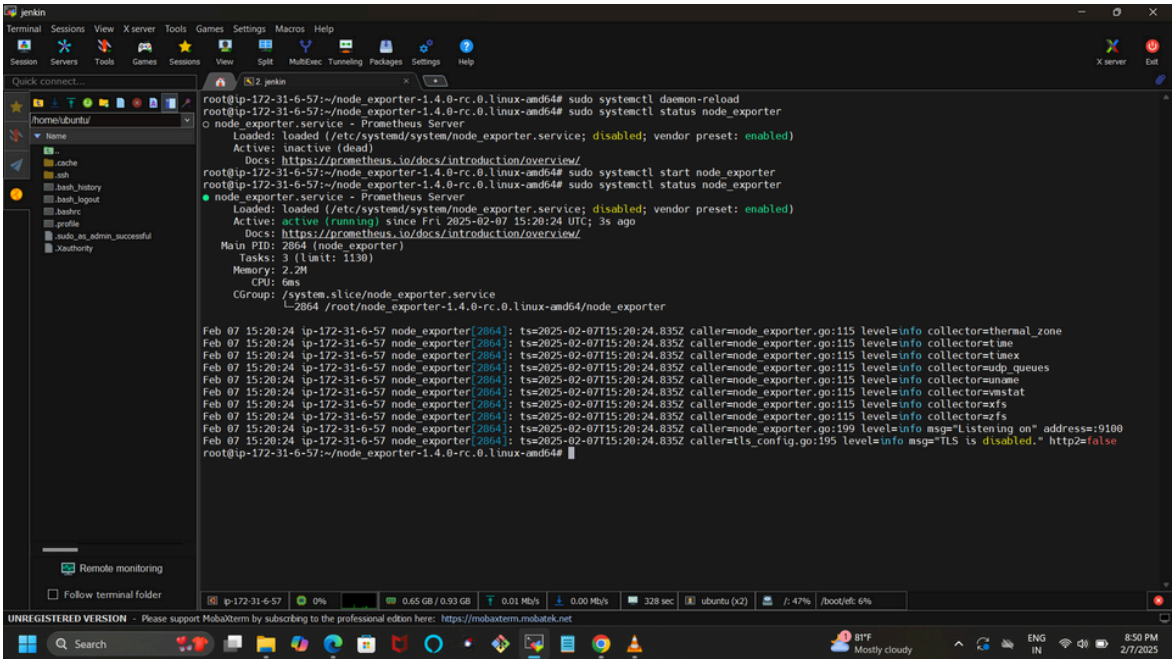
Module - Prometheus and Grafana
Date of submission - 7/02/25
Submitted by - Chandra Sekhar

L1 - Create Grafana Dashboard to Monitor CPU and Memory Utilization of Jenkins Build Server using Prometheus Data source

Step1- first we download node exporter on jenkins master node then we connet it to prometheus node




jenkin
root@ip-172-31-6-57:~/node_exporter-1.4.0-rc.0.linux-amd64# sudo systemctl daemon-reload
root@ip-172-31-6-57:~/node_exporter-1.4.0-rc.0.linux-amd64# sudo systemctl status node_exporter
○ node_exporter.service - Prometheus Server
Loaded: loaded (/etc/systemd/system/node_exporter.service; disabled; vendor preset: enabled)
Active: inactive (dead)
Docs: https://prometheus.io/docs/introduction/overview/
root@ip-172-31-6-57:~/node_exporter-1.4.0-rc.0.linux-amd64# sudo systemctl start node_exporter
root@ip-172-31-6-57:~/node_exporter-1.4.0-rc.0.linux-amd64# sudo systemctl status node_exporter
● node_exporter.service - Prometheus Server
Loaded: loaded (/etc/systemd/system/node_exporter.service; disabled; vendor preset: enabled)
Active: active (running) since Fri 2025-02-07 15:20:24 UTC; 3s ago
Docs: https://prometheus.io/docs/introduction/overview/
Main PID: 2864 (node_exporter)
Tasks: 3 (limit: 1130)
Memory: 2.2M
CPU: 6ms
CGroup: /system.slice/node_exporter.service
└─2864 /root/node_exporter-1.4.0-rc.0.linux-amd64/node_exporter
Feb 07 15:20:24 ip-172-31-6-57 node_exporter[2864]: ts=2025-02-07T15:20:24.835Z caller=node_exporter.go:115 level=info collector=thermal_zone
Feb 07 15:20:24 ip-172-31-6-57 node_exporter[2864]: ts=2025-02-07T15:20:24.835Z caller=node_exporter.go:115 level=info collector=time
Feb 07 15:20:24 ip-172-31-6-57 node_exporter[2864]: ts=2025-02-07T15:20:24.835Z caller=node_exporter.go:115 level=info collector=timex
Feb 07 15:20:24 ip-172-31-6-57 node_exporter[2864]: ts=2025-02-07T15:20:24.835Z caller=node_exporter.go:115 level=info collector=udp_queues
Feb 07 15:20:24 ip-172-31-6-57 node_exporter[2864]: ts=2025-02-07T15:20:24.835Z caller=node_exporter.go:115 level=info collector=uname
Feb 07 15:20:24 ip-172-31-6-57 node_exporter[2864]: ts=2025-02-07T15:20:24.835Z caller=node_exporter.go:115 level=info collector=vmstat
Feb 07 15:20:24 ip-172-31-6-57 node_exporter[2864]: ts=2025-02-07T15:20:24.835Z caller=node_exporter.go:115 level=info collector=xfs
Feb 07 15:20:24 ip-172-31-6-57 node_exporter[2864]: ts=2025-02-07T15:20:24.835Z caller=node_exporter.go:115 level=info collector=zfs
Feb 07 15:20:24 ip-172-31-6-57 node_exporter[2864]: ts=2025-02-07T15:20:24.835Z caller=node_exporter.go:199 level=info msg="Listening on" address=:9100
Feb 07 15:20:24 ip-172-31-6-57 node_exporter[2864]: ts=2025-02-07T15:20:24.835Z caller=tls_config.go:195 level=info msg="TLS is disabled." http2=false
root@ip-172-31-6-57:~/node_exporter-1.4.0-rc.0.linux-amd64#
Remote monitoring
Follow terminal folder
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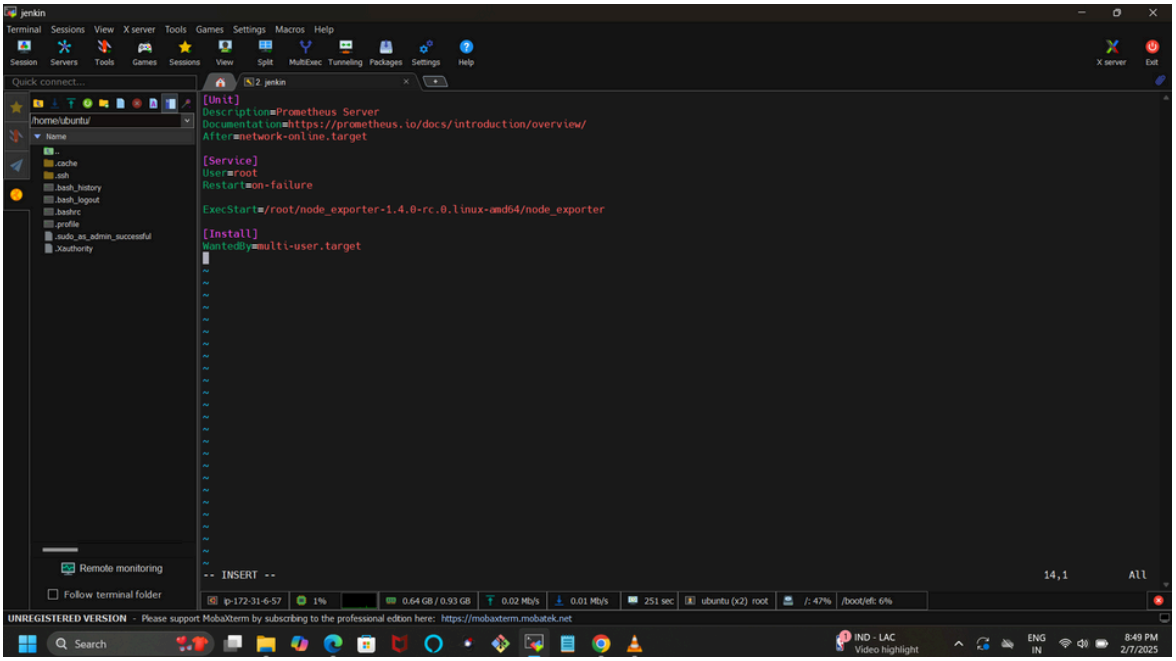
Search
81°F Mostly cloudy
8:50 PM 2/7/2025


jenkin
[Unit]
Description=Prometheus Server
Documentation=https://prometheus.io/docs/introduction/overview/
After=network-online.target
[Service]
User=root
Restart=on-failure
ExecStart=/root/node_exporter-1.4.0-rc.0.linux-amd64/node_exporter
[Install]
WantedBy=multi-user.target
-- INSERT --
14,1 All
Remote monitoring
Follow terminal folder
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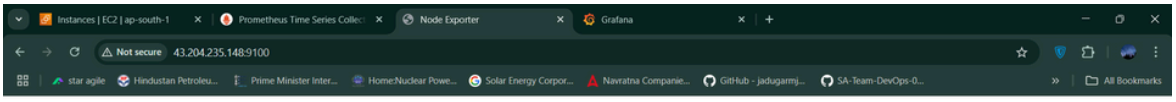
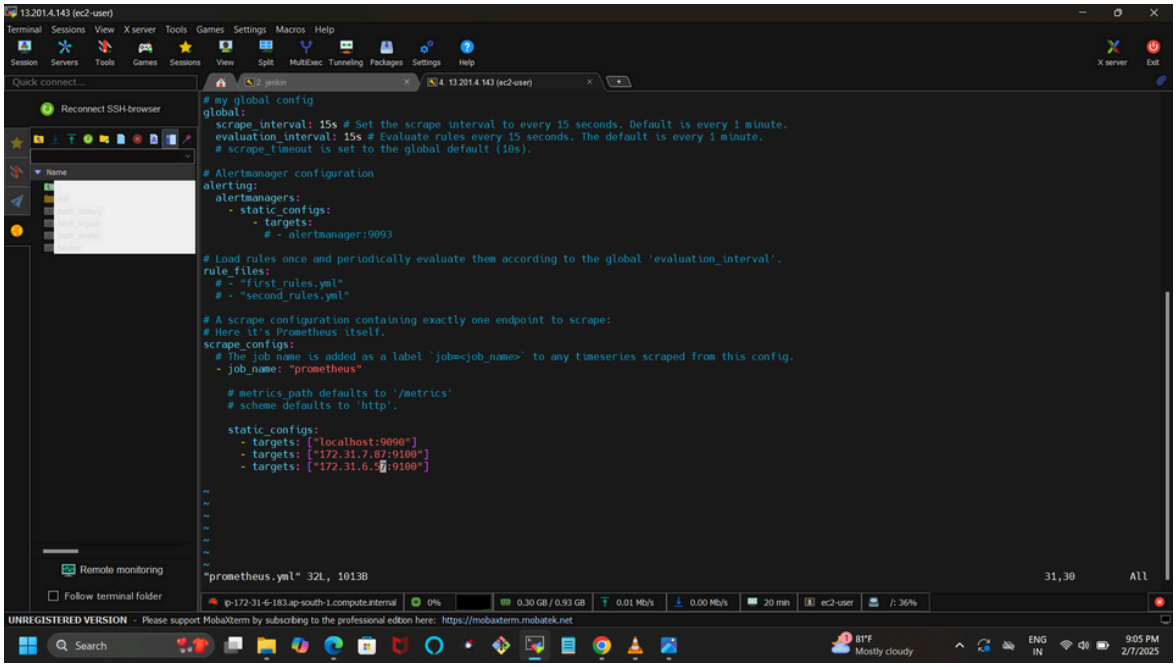
Search
IND - LAC Video highlight
8:49 PM 2/7/2025

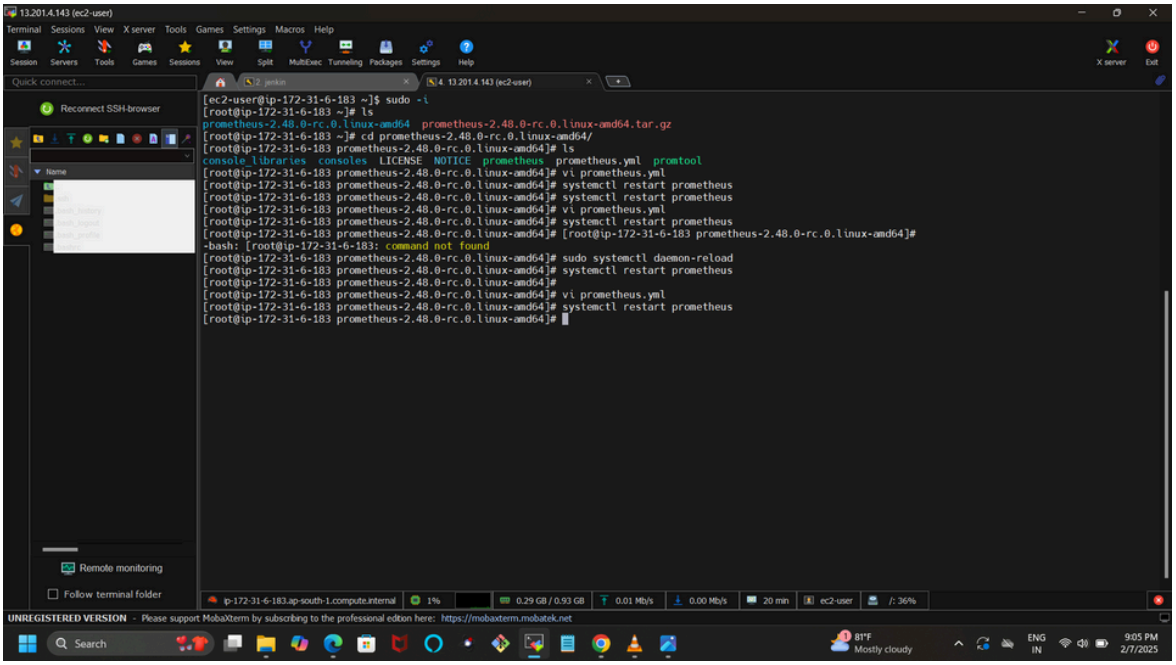

Instances | EC2 | ap-south-1
Prometheus Time Series Collec
Node Exporter
Grafana
Not secure 43.204.235.148:9100
Node Exporter
Metrics

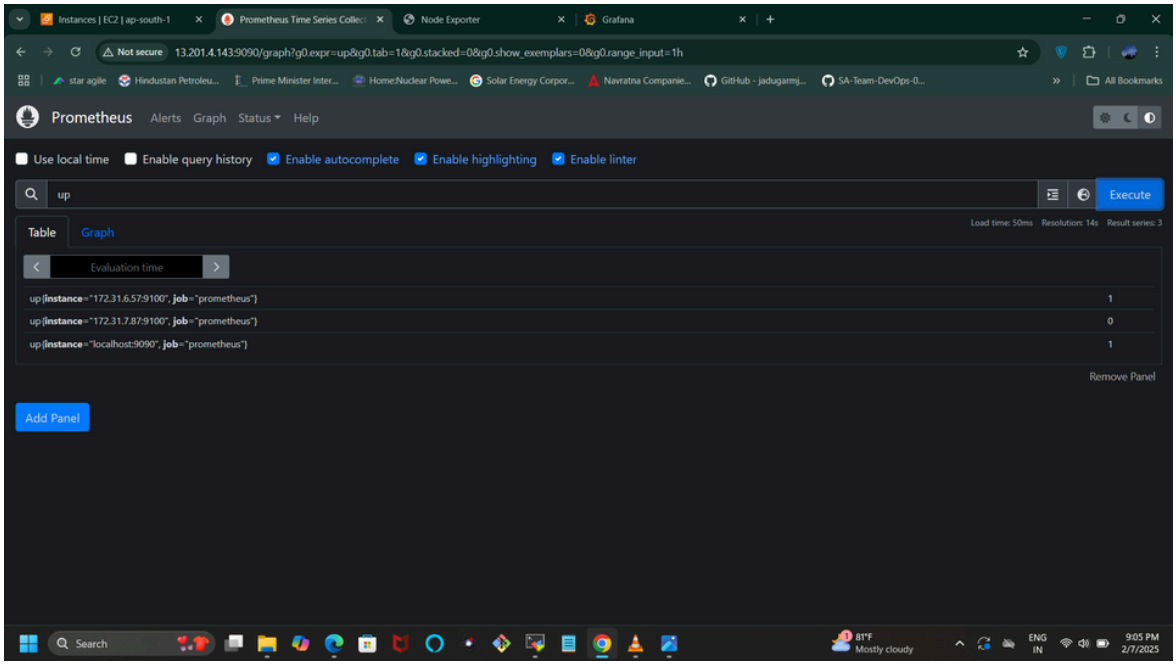
Search
81°F Mostly cloudy
9:04 PM 2/7/2025

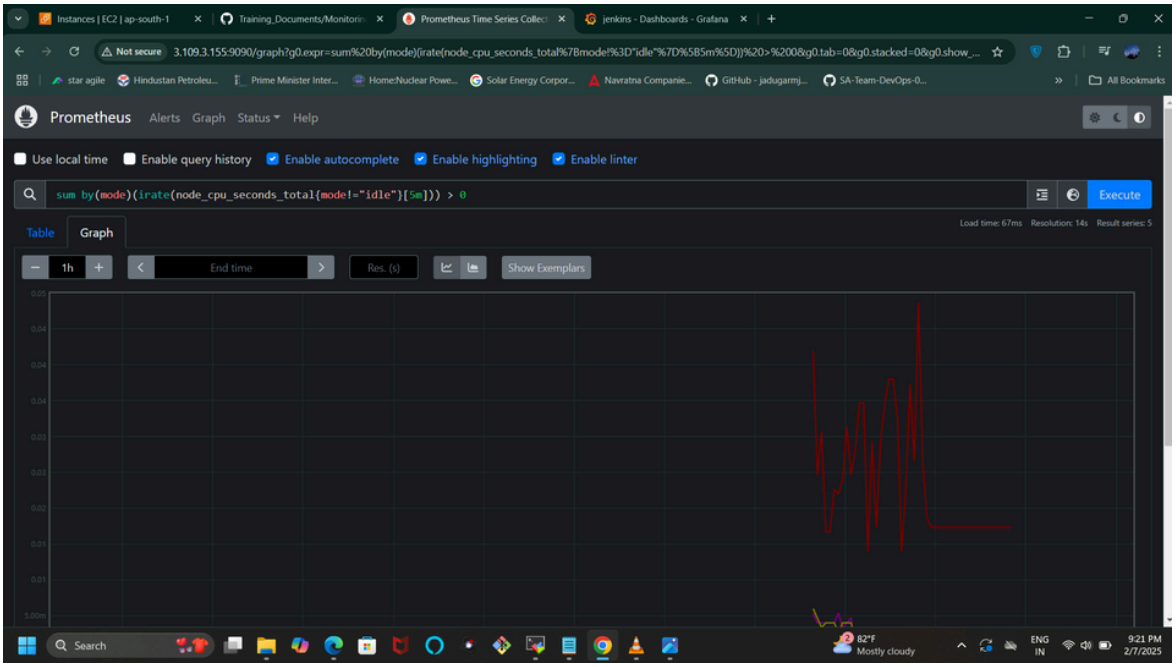
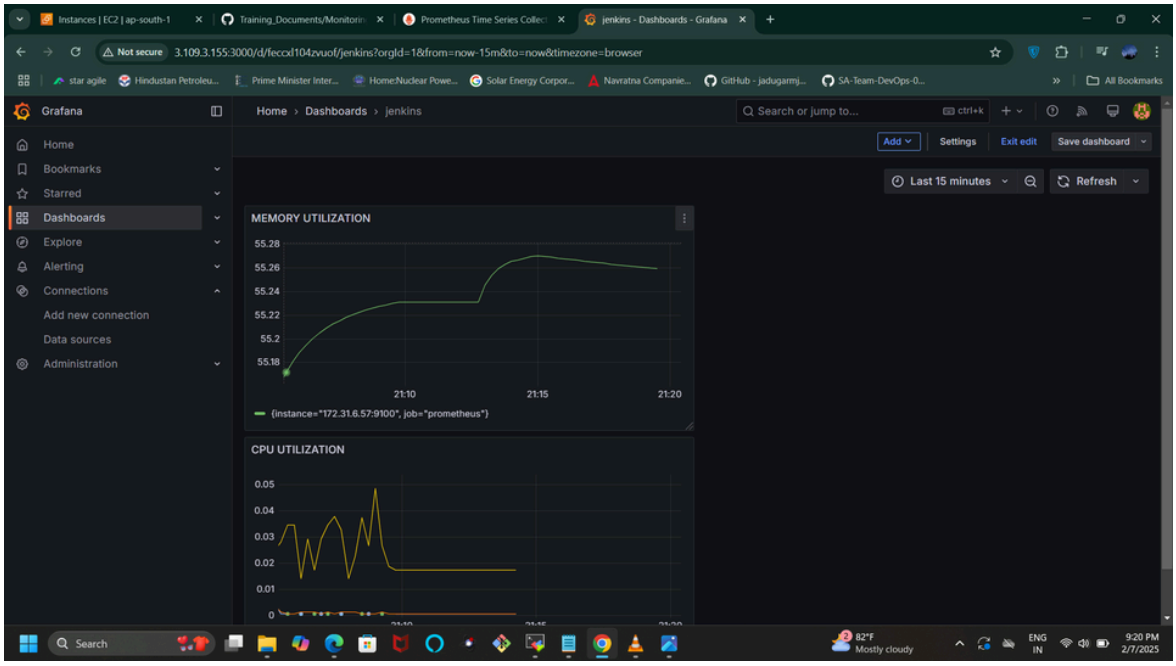
connecting the jenkins master node to prometheus node using node exporter.



restarting the server after adding jenkins server




Instances | EC2 | ap-south-1
Prometheus Time Series Collec
Node Exporter
Grafana
Not secure
13.201.4.143:9090/graph?g0.expr=up&g0.tab=1&g0.stacked=0&g0.show_exemplars=0&g0.range_input=1h
Prometheus
Alerts
Graph
Status
Help
Use local time
Enable query history
Enable autocomplete
Enable highlighting
Enable linter
up
Execute
Table
Graph
Load time: 50ms
Resolution: 14s
Result series: 3
Evaluation time
up{instance="172.31.6.57:9100", job="prometheus"} 1
up{instance="172.31.7.87:9100", job="prometheus"} 0
up{instance="localhost:9090", job="prometheus"} 1
Remove Panel
Add Panel
Search
81°F
Mostly cloudy
ENG
IN
9:05 PM
2/7/2025


Instances | EC2 | ap-south-1
Training_Documents/Monitorin
Prometheus Time Series Collec
jenkins - Dashboards - Grafana
Not secure
3.109.3.155:9090/graph?g0.expr=sum%20by(mode)(irate(node_cpu_seconds_total%7Bmode!%3D"idle"%7D%5B5m%5D))%20>%200&g0.tab=0&g0.stacked=0&g0.show_...
Prometheus
Alerts
Graph
Status
Help
Use local time
Enable query history
Enable autocomplete
Enable highlighting
Enable linter
sum by(mode)(irate(node_cpu_seconds_total{mode!="idle"}[5m])) > 0
Execute
Table
Graph
Load time: 67ms
Resolution: 14s
Result series: 5
1h
End time
Res. (s)
Show Exemplars
Search
82°F
Mostly cloudy
ENG
IN
9:21 PM
2/7/2025

we can see the dashboard with CPU And Memeory Utilization Visuals