User Stories 7: Notification - Alert Manager

`Alert Manager :`

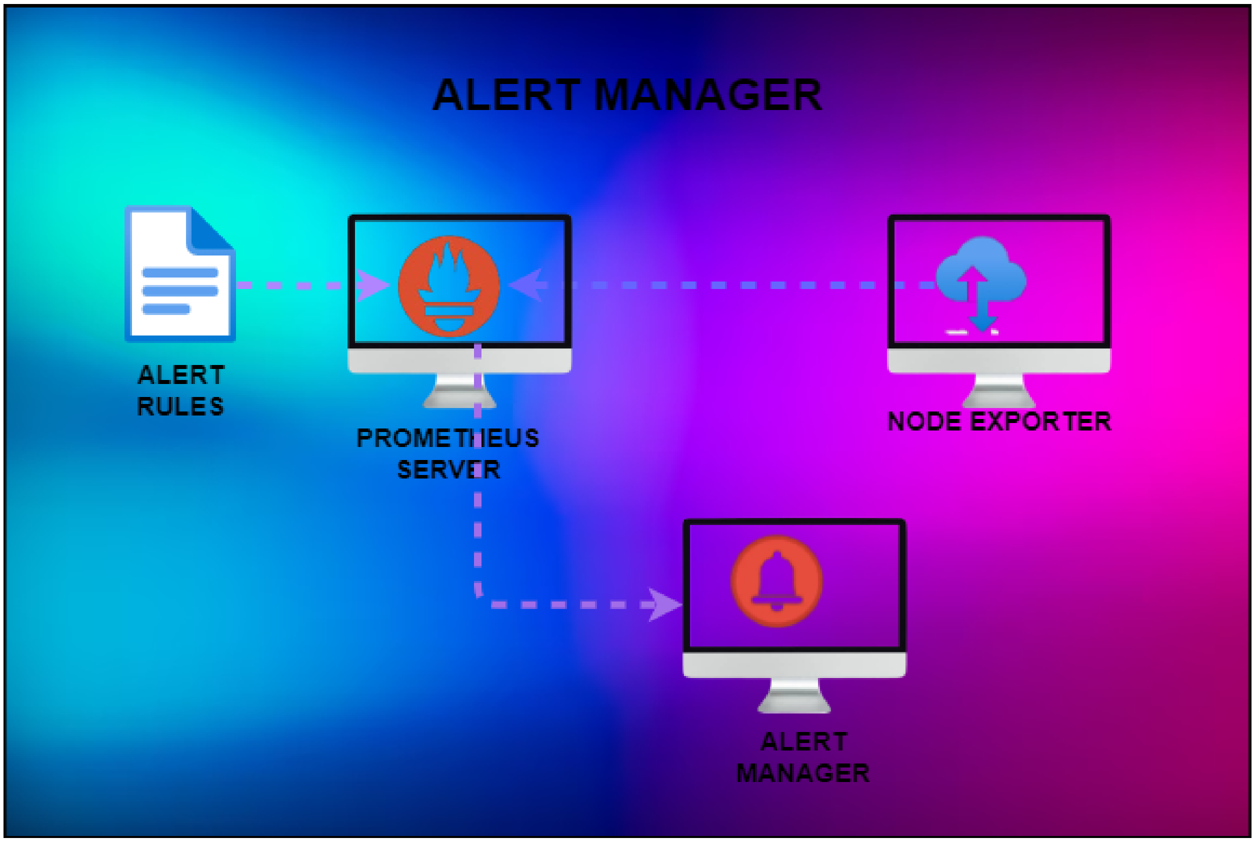
> 👉 Alertmanager is a component of the Prometheus monitoring system. It is responsible for handling alerts sent by Prometheus servers and then managing the routing, deduplication, and notification of these alerts to various receivers such as email, Slack, PagerDuty, etc.

`configuring alert manager prerequisites`

- ☑ ~~Prometheus~~
- ☑ ~~node exporter~~
- ☑ ~~Alert manger~~

ALERTING USING PROMETHEUS, ALERT-MANAGER AND NODE-EXPORTER

REPO: https://github.com/muralialakuntla3/prometheus-alertmanager.git



STEPS:

1. `Setup Prometheus, Alertmanager and Node Exporter Servers`
2. `Create service file for Prometheus, Alertmanager and Node Exporter`
3. `Configure Prometheus with Node exporter server`
4. `Configure Prometheus with Alertmanager server`
5. `Real time Testing with our node-exporter service`
6. `Configure alertmanager to fire slack notification`
7. `Real time Testing with node-exporter service to get slack notification`

Setup Prometheus, Alertmanager and Node Exporter Servers

`Launch 3 servers`

- □ Capacity: 2 cpu & 4 gb RAM
- □ Ebs: 10 gb Storage
- □ Ports to Open: 22, 80,443, 9090, 9100, 9093(Alert Manager)

Step-1: Install Prometheus and Create a Service file:

Install and Create service file for Prometheus

- Login to prometheus server and install prometheus
  - Visit: prometheus.io
  - **./prometheus —**-------for manually running prometheus

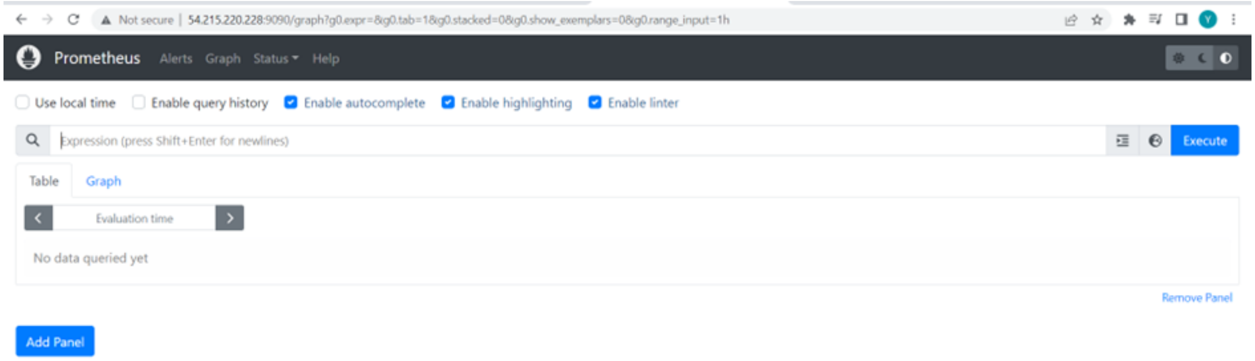
https://github.com/prometheus/prometheus/releases/download/v2.50.0-rc.1/prometheus-2.50.0-rc.1.linux-amd64.tar.gz

```
!#/bin/bash
sudo apt update

sudo wget https://github.com/prometheus/prometheus/releases/

sudo groupadd --system prometheus

sudo useradd -s /sbin/nologin --system -g prometheus promethe

sudo mkdir /var/lib/prometheus

sudo mkdir -p /etc/prometheus/`
sudo mkdir -p /etc/prometheus/rules.s

sudo mkdir -p /etc/prometheus/files_sd

sudo tar xvf prometheus-2.45.0-rc.0.linux-amd64.tar.gz

cd prometheus-2.45.0-rc.0.linux-amd64

sudo mv prometheus promtool /usr/local/bin/

sudo mv prometheus.yml /etc/prometheus/prometheus.yml

sudo tee /etc/systemd/system/prometheus.service<<EOF
[Unit]
Description=Prometheus
Documentation=https://prometheus.io/docs/introduction/overvie
Wants=network-online.target
After=network-online.target

[Service]
Type=simple
User=prometheus
Group=prometheus
ExecReload=/bin/kill -HUP $MAINPID
ExecStart=/usr/local/bin/prometheus \
  --config.file=/etc/prometheus/prometheus.yml \
  --storage.tsdb.path=/var/lib/prometheus \
  --web.console.templates=/etc/prometheus/consoles \
  --web.console.libraries=/etc/prometheus/console_libraries \
  --web.listen-address=0.0.0.0:9090 \
  --web.external-url=

SyslogIdentifier=prometheus
Restart=always
```

```
[Install]
WantedBy=multi-user.target
EOF
```

Starting Service , enabling service and assinging permissions

```
sudo chown -R prometheus:prometheus /etc/prometheus

sudo chown -R prometheus:prometheus /etc/prometheus/*

sudo chmod -R 775 /etc/prometheus

sudo chmod -R 755 /etc/prometheus/*

sudo chown -R prometheus:prometheus /var/lib/prometheus/

sudo chown -R prometheus:prometheus /var/lib/prometheus/*

sudo systemctl daemon-reload

sudo systemctl start prometheus

sudo systemctl enable prometheus
```


Not secure | 54.215.220.228:9090/graph?g0.expr=&g0.tab=1&g0.stacked=0&g0.show_exemplars=0&g0.range_input=1h

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

No data queried yet

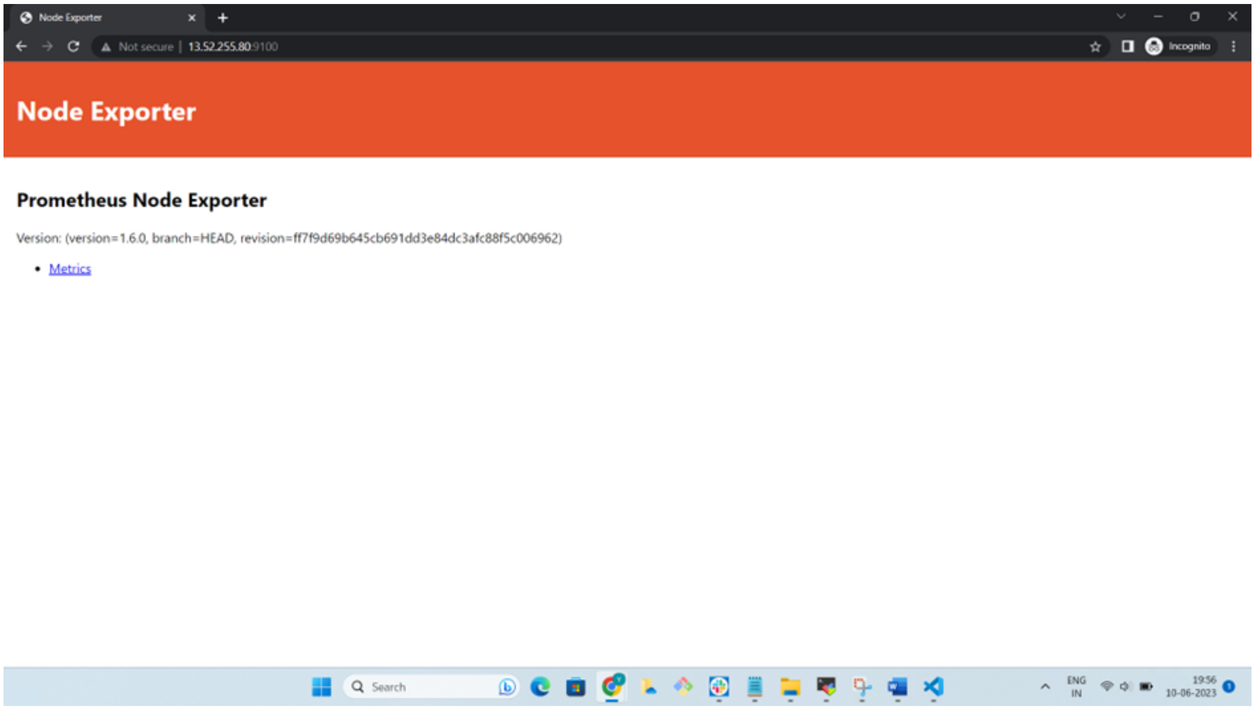
Step 2 : Install Node Exporter and create a Service file :

- Allow the Inbound rule 9100 which is the port number of node-exporter
- To install the node-exporter visit the official website site https://prometheus.io
- For the Installation of node-exporter we have created a below script file
- Name of the script file is node-exporter.sh

```
!#/bin/bash
sudo apt update

sudo wget https://github.com/prometheus/node_exporter/releases/d

sudo groupadd --system prometheus

sudo useradd -s /sbin/nologin --system -g prometheus prometheus
sudo mkdir /var/lib/node

sudo tar xvf node_exporter-1.6.0.linux-amd64.tar.gz

cd node_exporter-1.6.0.linux-amd64

sudo mv node_exporter /var/lib/node

sudo tee /etc/systemd/system/node.service<<EOF
[Unit]
Description=Prometheus Node Exporter
Documentation=https://prometheus.io/docs/introduction/overview/
Wants=network-online.target
After=network-online.target

[Service]
Type=simple
User=prometheus
Group=prometheus
ExecReload=/bin/kill -HUP $MAINPID
ExecStart=/var/lib/node/node_exporter

SyslogIdentifier=prometheus_node_exporter
Restart=always

[Install]
WantedBy=multi-user.target
EOF
```

```
sudo chown -R prometheus:prometheus /var/lib/node

sudo chown -R prometheus:prometheus /var/lib/node/*
sudo chmod -R 775 /var/lib/node

sudo chmod -R 755 /var/lib/node/*

sudo systemctl daemon-reload

sudo systemctl start node

sudo systemctl enable node
```

- Take the public ip of the instance and check in browser for the node-exporter



Node Exporter

Prometheus Node Exporter

Version: (version=1.6.0, branch=HEAD, revision=ff7f9d69b645cb691dd3e84dc3afc88f5c006962)

- Metrics

Configure Prometheus with node exporter in

Prometheus server by editing Prometheus.yaml file

Step 3 : Install ALERT-MANAGER Create a Service file :

- Login to alert-manager server and install alert Manager

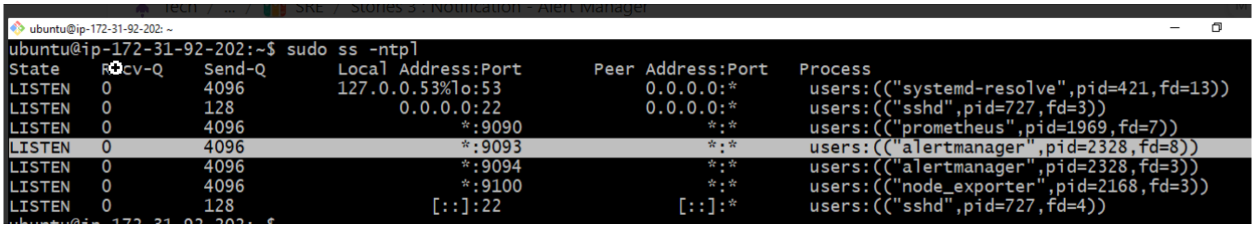
> 👉 Visit: prometheus.io

```
wget https://github.com/prometheus/alertmanager/releases/dowr
tar -xvf alertmanager-0.26.0.linux-amd64.tar.gz
```

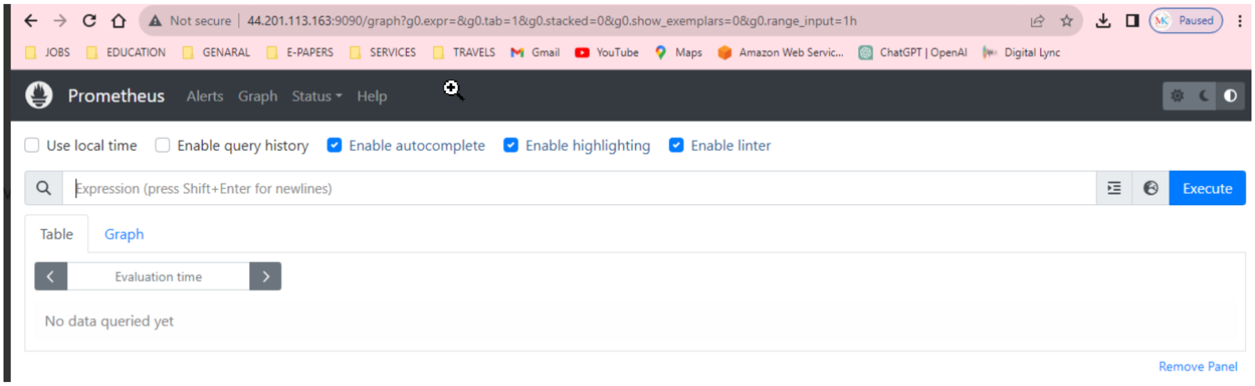
ALERT-MANAGER SERVICE FILE:

Manual Running service :

- cd alertmanager-0.26.0.linux-amd64/
- ./alertmanager —--------for manually running
- Browse the alertmanager   -ip**:9093**



```
ubuntu@ip-172-31-92-202:~$ sudo ss -ntpl
State      Recv-Q     Send-Q        Local Address:Port        Peer Address:Port    Process
LISTEN     0          4096          127.0.0.53%lo:53               0.0.0.0:*        users:(("systemd-resolve",pid=421,fd=13))
LISTEN     0          128                 0.0.0.0:22               0.0.0.0:*        users:(("sshd",pid=727,fd=3))
LISTEN     0          4096                  *:9090                     *:*        users:(("prometheus",pid=1969,fd=7))
LISTEN     0          4096                  *:9093                     *:*        users:(("alertmanager",pid=2328,fd=8))
LISTEN     0          4096                  *:9094                     *:*        users:(("alertmanager",pid=2328,fd=3))
LISTEN     0          4096                  *:9100                     *:*        users:(("node_exporter",pid=2168,fd=3))
LISTEN     0          128                  [::]:22                  [::]:*        users:(("sshd",pid=727,fd=4))
```



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

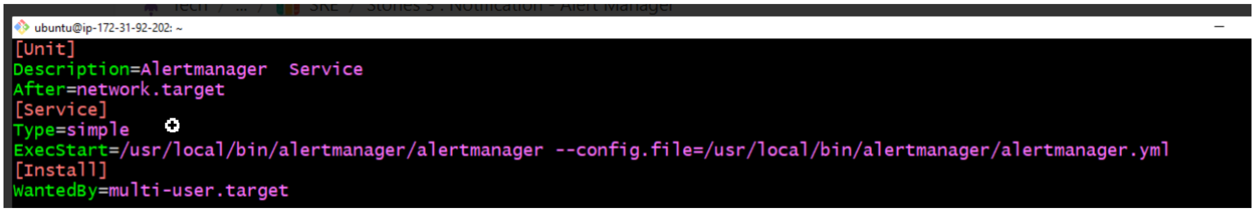
Expression (press Shift+Enter for newlines)

No data queried yet

SERVICE FILE:

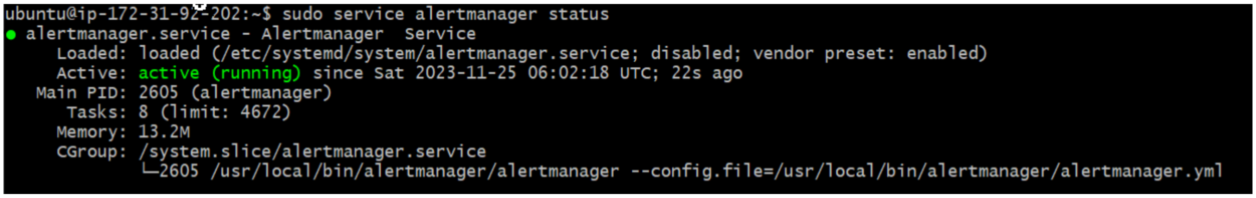
```
sudo mkdir /usr/local/bin/alertmanager
sudo cp -rf alertmanager-0.26.0.linux-amd64/* /usr/local/bin/ale
sudo vi /etc/systemd/system/alertmanager.service
```

```
[Unit]
Description=Alertmanager Service
After=network.target
[Service]
Type=simple
ExecStart=/usr/local/bin/alertmanager/alertmanager --config.file
[Install]
WantedBy=multi-user.target
```

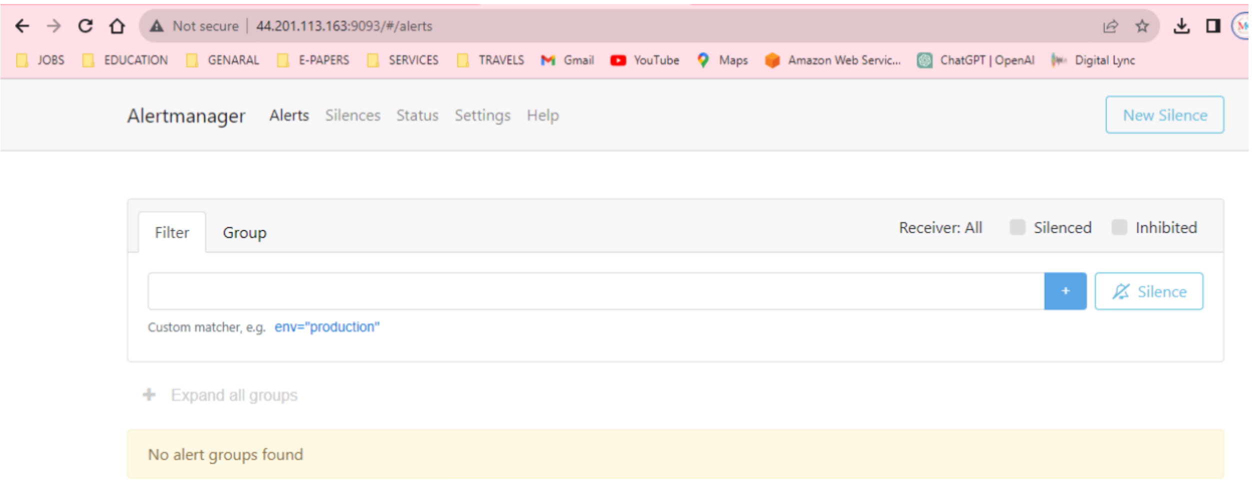


```
[Unit]
Description=Alertmanager  Service
After=network.target
[Service]
Type=simple
ExecStart=/usr/local/bin/alertmanager/alertmanager --config.file=/usr/local/bin/alertmanager/alertmanager.yml
[Install]
WantedBy=multi-user.target
```

```
sudo systemctl daemon-reload
sudo service alertmanager start
sudo service alertmanager status
```



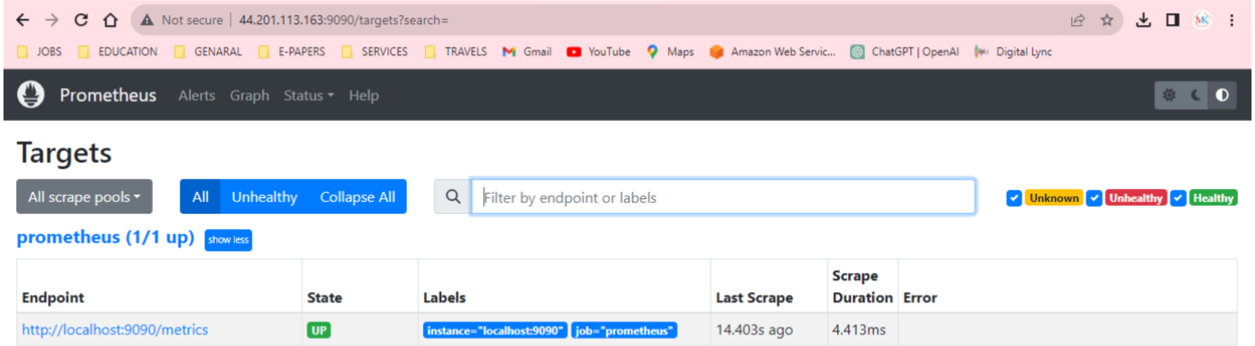
```
ubuntu@ip-172-31-92-202:~$ sudo service alertmanager status
● alertmanager.service - Alertmanager  Service
     Loaded: loaded (/etc/systemd/system/alertmanager.service; disabled; vendor preset: enabled)
     Active: active (running) since Sat 2023-11-25 06:02:18 UTC; 22s ago
   Main PID: 2605 (alertmanager)
      Tasks: 8 (limit: 4672)
     Memory: 13.2M
     CGroup: /system.slice/alertmanager.service
             └─2605 /usr/local/bin/alertmanager/alertmanager --config.file=/usr/local/bin/alertmanager/alertmanager.yml
```



No alert groups found

Step-4: Configure Prometheus with Node exporter server

- Goto prometheus browser and check targets



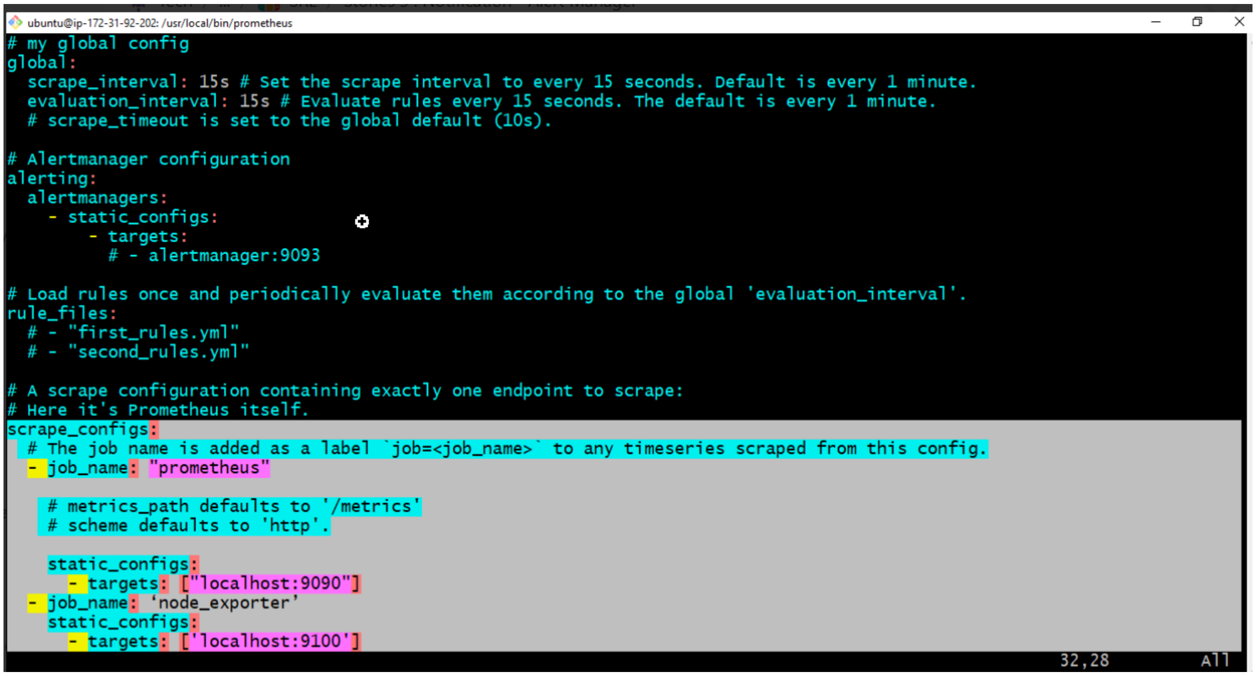
Targets

prometheus (1/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	14.403s ago	4.413ms	

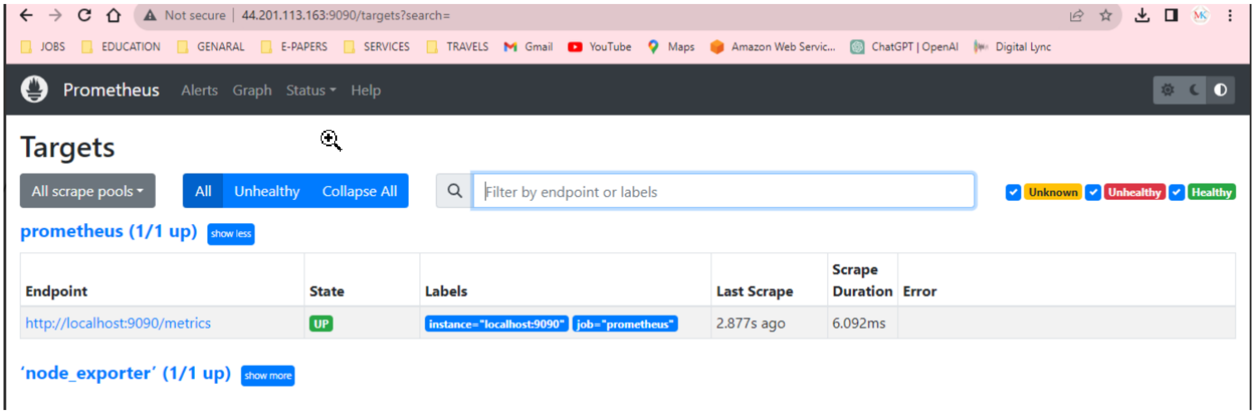
- Login to prometheus server
  - Add scrap_config in prometheus.yml under scrap config
  - Edit targets & node_exporter ip
  - cd /usr/local/bin/prometheus
  - sudo vi prometheus.yml
    - scrape_configs:
    - - job_name: ‘node_exporter’
    - static_configs:
    - - targets: ['node-exporter-ip:9100']

```
scrape_configs:
  - job_name: ‘node_exporter’
    static_configs:
      - targets: ['localhost:9100']
```



```
# my global config
global:
  scrape_interval: 15s # Set the scrape interval to every 15 seconds. Default is every 1 minute.
  evaluation_interval: 15s # Evaluate rules every 15 seconds. The default is every 1 minute.
  # scrape_timeout is set to the global default (10s).

# Alertmanager configuration
alerting:
  alertmanagers:
    - static_configs:
        - targets:
          # - alertmanager:9093

# Load rules once and periodically evaluate them according to the global 'evaluation_interval'.
rule_files:
  # - "first_rules.yml"
  # - "second_rules.yml"

# A scrape configuration containing exactly one endpoint to scrape:
# Here it's Prometheus itself.
scrape_configs:
  # The job name is added as a label `job=<job_name>` to any timeseries scraped from this config.
  - job_name: "prometheus"

    # metrics_path defaults to '/metrics'
    # scheme defaults to 'http'.

    static_configs:
      - targets: ["localhost:9090"]
  - job_name: ‘node_exporter’
    static_configs:
      - targets: ['localhost:9100']
                                                                          32,28          All
```

- sudo systemctl daemon-reload
- sudo service prometheus start
- sudo service prometheus status
- Goto prometheus browser and check targets
-



Targets

prometheus (1/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	2.877s ago	6.092ms	

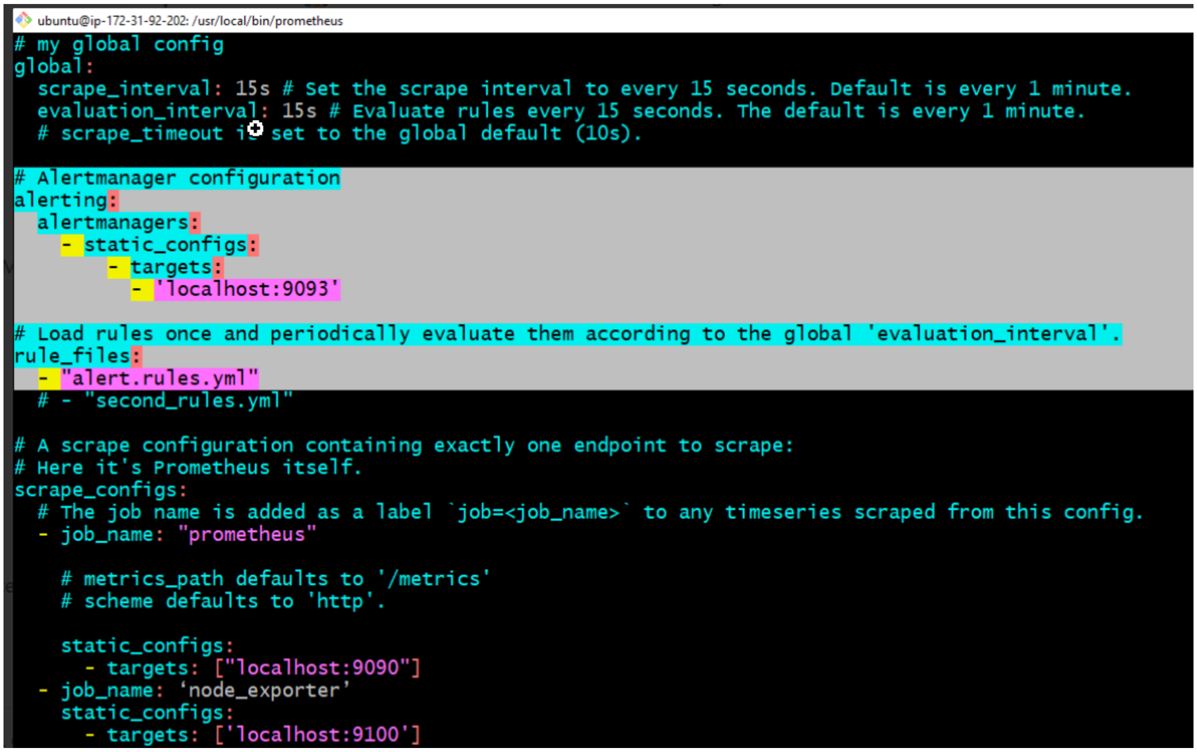
‘node_exporter’ (1/1 up)

Step-4: Configure Prometheus with Alertmanager server

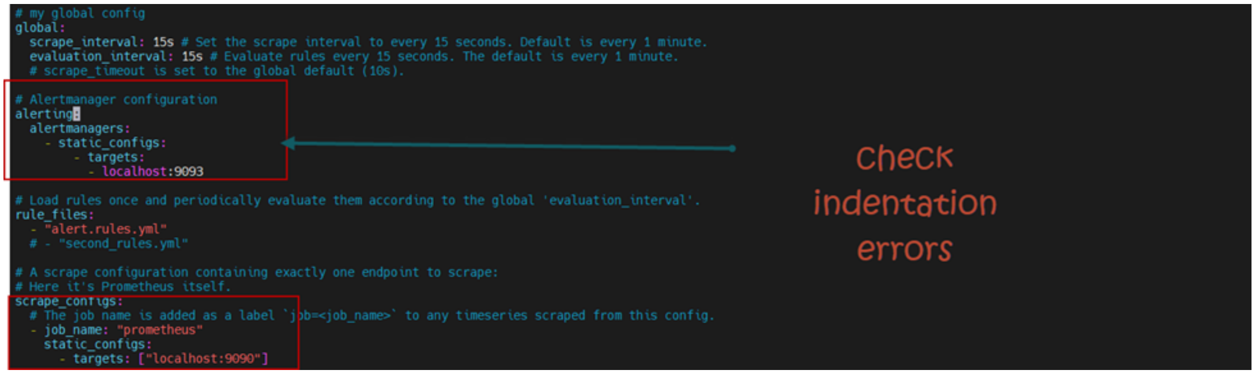
- Login to prometheus server
    - Update alertmanager ip address
    - Specify rule files and configuration

  sudo vi prometheus.yml

```
# Alertmanager configuration
alerting:
  alertmanagers:
    - static_configs:
        - targets:
          - localhost:9093

# Load rules once and periodically evaluate them according to
rule_files:
  - "alert.rules.yml"
 #- "second_rules.yml"

# A scrape configuration containing exactly one endpoint to s
# Here it's Prometheus itself.
scrape_configs:
```



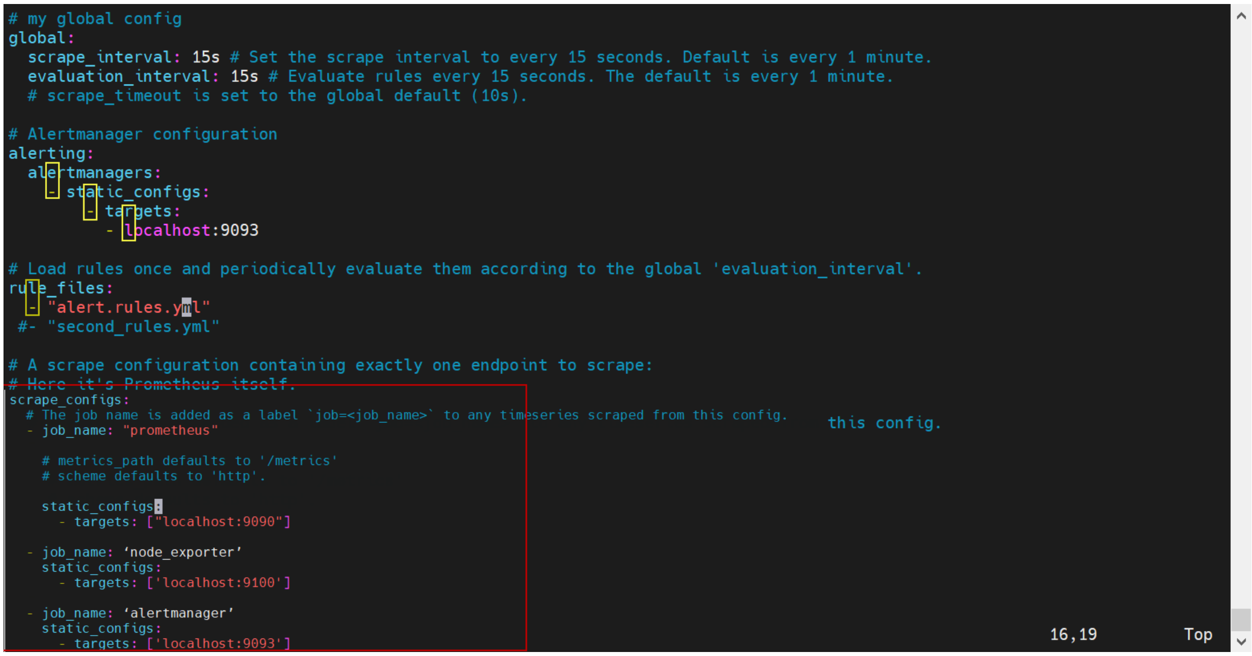
```
# my global config
global:
  scrape_interval: 15s # Set the scrape interval to every 15 seconds. Default is every 1 minute.
  evaluation_interval: 15s # Evaluate rules every 15 seconds. The default is every 1 minute.
  # scrape_timeout is set to the global default (10s).

# Alertmanager configuration
alerting:
  alertmanagers:
    - static_configs:
        - targets:
          - 'localhost:9093'

# Load rules once and periodically evaluate them according to the global 'evaluation_interval'.
rule_files:
  - "alert.rules.yml"
  # - "second_rules.yml"

# A scrape configuration containing exactly one endpoint to scrape:
# Here it's Prometheus itself.
scrape_configs:
  # The job name is added as a label `job=<job_name>` to any timeseries scraped from this config.
  - job_name: "prometheus"

    # metrics_path defaults to '/metrics'
    # scheme defaults to 'http'.

    static_configs:
      - targets: ["localhost:9090"]
  - job_name: ‘node_exporter’
    static_configs:
      - targets: ['localhost:9100']
```



```
# my global config
global:
  scrape_interval: 15s # Set the scrape interval to every 15 seconds. Default is every 1 minute.
  evaluation_interval: 15s # Evaluate rules every 15 seconds. The default is every 1 minute.
  # scrape_timeout is set to the global default (10s).

# Alertmanager configuration
alerting:
  alertmanagers:
    - static_configs:
        - targets:
          - localhost:9093

# Load rules once and periodically evaluate them according to the global 'evaluation_interval'.
rule_files:
  - "alert.rules.yml"
  # - "second_rules.yml"

# A scrape configuration containing exactly one endpoint to scrape:
# Here it's Prometheus itself.
scrape_configs:
  # The job name is added as a label `job=<job_name>` to any timeseries scraped from this config.
  - job_name: "prometheus"
    static_configs:
      - targets: ["localhost:9090"]
```

check indentation errors

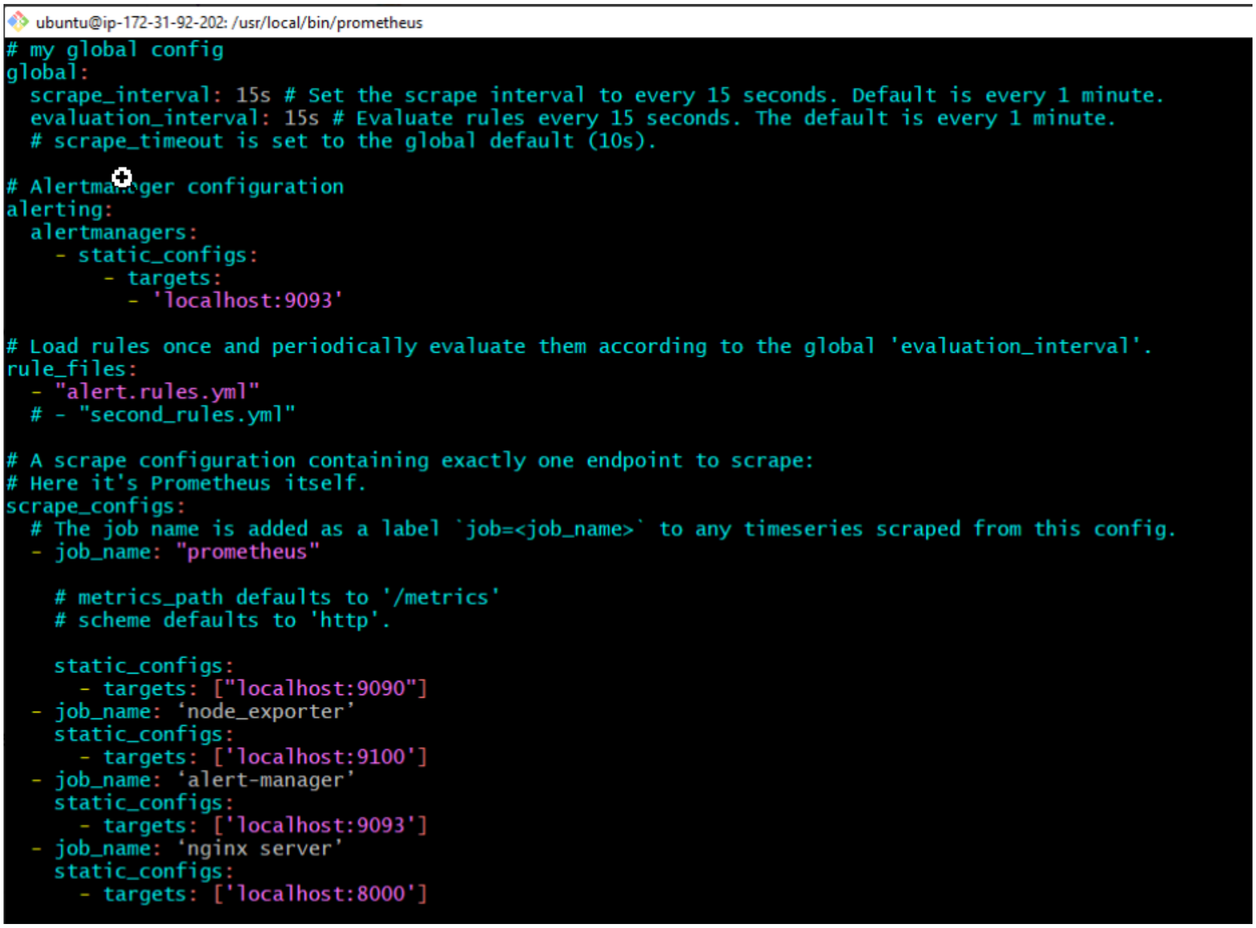
```
Note : Avoid intendation Errors
```



```
# my global config
global:
  scrape_interval: 15s # Set the scrape interval to every 15 seconds. Default is every 1 minute.
  evaluation_interval: 15s # Evaluate rules every 15 seconds. The default is every 1 minute.
  # scrape_timeout is set to the global default (10s).

# Alertmanager configuration
alerting:
  alertmanagers:
    - static_configs:
        - targets:
          - localhost:9093

# Load rules once and periodically evaluate them according to the global 'evaluation_interval'.
rule_files:
  - "alert.rules.yml"
 #- "second_rules.yml"

# A scrape configuration containing exactly one endpoint to scrape:
# Here it's Prometheus itself.
scrape_configs:
  # The job name is added as a label `job=<job_name>` to any timeseries scraped from this config.      this config.
  - job_name: "prometheus"

    # metrics_path defaults to '/metrics'
    # scheme defaults to 'http'.

    static_configs:
      - targets: ["localhost:9090"]

  - job_name: ‘node_exporter’
    static_configs:
      - targets: ['localhost:9100']

  - job_name: ‘alertmanager’
    static_configs:
      - targets: ['localhost:9093']                                               16,19         Top
```

```
# Alertmanager configuration
alerting:
  alertmanagers:
    - static_configs:
        - targets:
          - localhost:9093

# Load rules once and periodically evaluate them according to th
rule_files:
  - "alert.rules.yml"
 #- "second_rules.yml"

# A scrape configuration containing exactly one endpoint to scra
# Here it's Prometheus itself.
scrape_configs:
  # The job name is added as a label `job=<job_name>` to any tim
  - job_name: "prometheus"
```

```
    # metrics_path defaults to '/metrics'
    # scheme defaults to 'http'.

    static_configs:
      - targets: ["localhost:9090"]

  - job_name: ‘node_exporter’
    static_configs:
      - targets: ['localhost:9100']

  - job_name: ‘alertmanager’
    static_configs:
      - targets: ['localhost:9093']
```


ubuntu@ip-172-31-92-202: /usr/local/bin/prometheus

```
# my global config
global:
  scrape_interval: 15s # Set the scrape interval to every 15 seconds. Default is every 1 minute.
  evaluation_interval: 15s # Evaluate rules every 15 seconds. The default is every 1 minute.
  # scrape_timeout is set to the global default (10s).

# Alertmanager configuration
alerting:
  alertmanagers:
    - static_configs:
        - targets:
          - 'localhost:9093'

# Load rules once and periodically evaluate them according to the global 'evaluation_interval'.
rule_files:
  - "alert.rules.yml"
  # - "second_rules.yml"

# A scrape configuration containing exactly one endpoint to scrape:
# Here it's Prometheus itself.
scrape_configs:
  # The job name is added as a label `job=<job_name>` to any timeseries scraped from this config.
  - job_name: "prometheus"

    # metrics_path defaults to '/metrics'
    # scheme defaults to 'http'.

    static_configs:
      - targets: ["localhost:9090"]
  - job_name: ‘node_exporter’
    static_configs:
      - targets: ['localhost:9100']
  - job_name: ‘alert-manager’
    static_configs:
      - targets: ['localhost:9093']
  - job_name: ‘nginx server’
    static_configs:
      - targets: ['localhost:8000']
```

Step 5 : Now create alert_rules.yml file in prometheus.yml file location

cd /etc/prometheus/prometheus.yaml

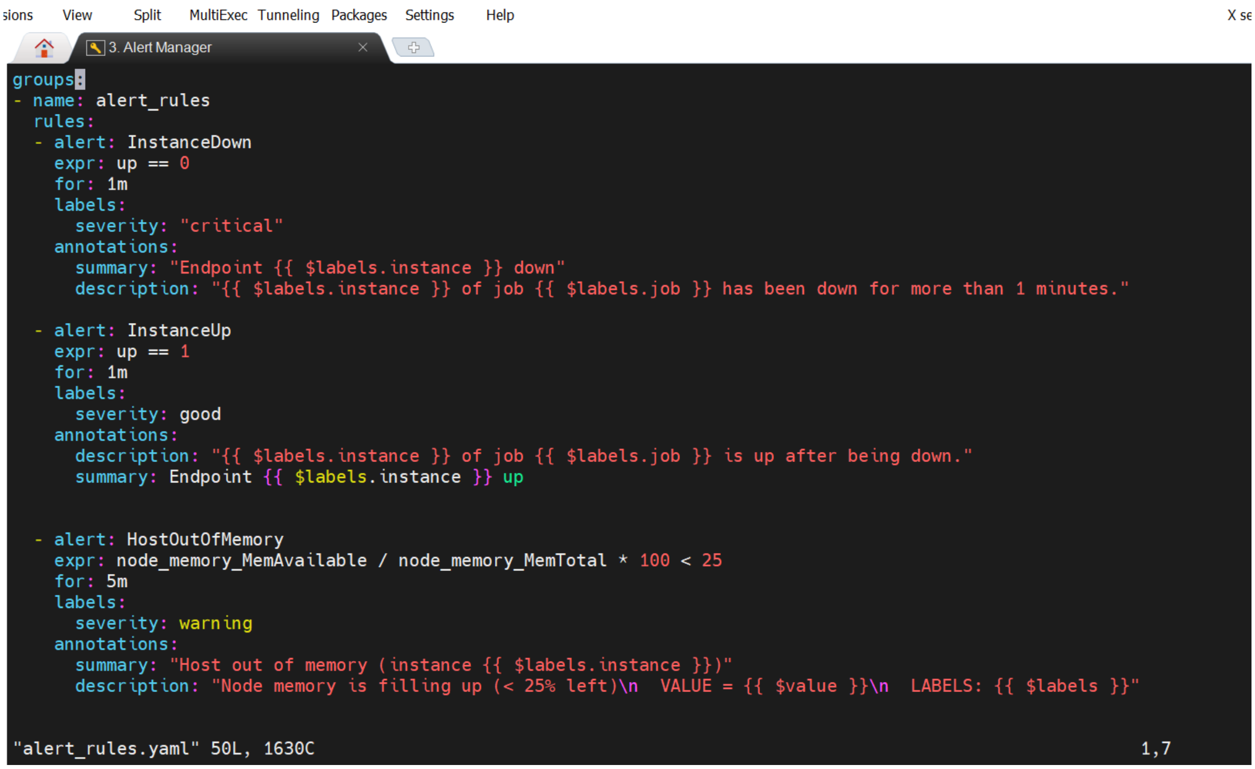
- We are creating 4 alerts

```
sudo vi alert.rules.yml
```

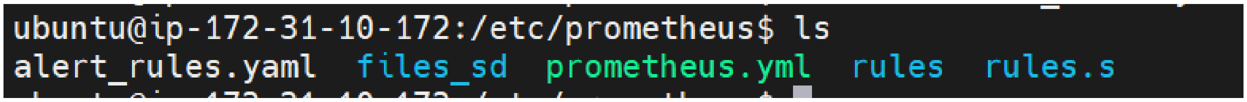
note :   create inside promtheus folder

```
groups:
- name: alert_rules
  rules:
  - alert: InstanceDown
    expr: up == 0
    for: 1m
    labels:
      severity: "critical"
    annotations:
      summary: "Endpoint {{ $labels.instance }} down"
      description: "{{ $labels.instance }} of job {{ $labels.job

  - alert: InstanceUp
    expr: up == 1
    for: 1m
    labels:
      severity: good
    annotations:
      description: "{{ $labels.instance }} of job {{ $labels.job
      summary: Endpoint {{ $labels.instance }} up


  - alert: HostOutOfMemory
    expr: node_memory_MemAvailable / node_memory_MemTotal * 100
    for: 5m
    labels:
      severity: warning
    annotations:
      summary: "Host out of memory (instance {{ $labels.instance
      description: "Node memory is filling up (< 25% left)\n  V


  - alert: HostOutOfDiskSpace
```

```
    expr: (node_filesystem_avail{mountpoint="/"}  * 100) / node_
    for: 1s
    labels:
      severity: warning
    annotations:
      summary: "Host out of disk space (instance {{ $labels.inst
      description: "Disk is almost full (< 50% left)\n  VALUE =


  - alert: HostHighCpuLoad
    expr: (sum by (instance) (irate(node_cpu{job="node_exporter_
    for: 5m
    labels:
      severity: warning
    annotations:
      summary: "Host high CPU load (instance {{ $labels.instance
      description: "CPU load is > 80%\n  VALUE = {{ $value }}\n
```



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

  - alert: InstanceUp
    expr: up == 1
    for: 1m
    labels:
      severity: good
    annotations:
      description: "{{ $labels.instance }} of job {{ $labels.job }} is up after being down."
      summary: Endpoint {{ $labels.instance }} up


  - alert: HostOutOfMemory
    expr: node_memory_MemAvailable / node_memory_MemTotal * 100 < 25
    for: 5m
    labels:
      severity: warning
    annotations:
      summary: "Host out of memory (instance {{ $labels.instance }})"
      description: "Node memory is filling up (< 25% left)\n  VALUE = {{ $value }}\n  LABELS: {{ $labels }}"

"alert_rules.yaml" 50L, 1630C                                                                    1,7
```



```
ubuntu@ip-172-31-10-172:/etc/prometheus$ ls
alert_rules.yaml  files_sd  prometheus.yml  rules  rules.s
```

Restart everything :

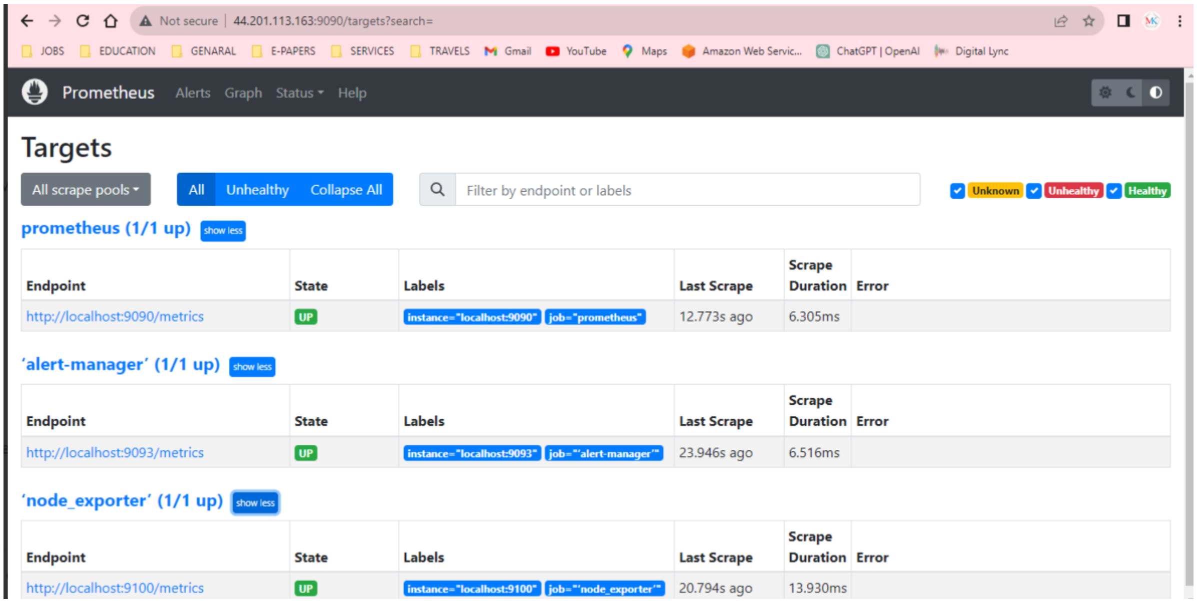
Prometheus

Alertmanager

```
sudo systemctl deamon-reload
sudo systemctl restart prometheus
sudo systemctl restar alertmanager
```

Step 6: Testing Alerts with node-exporter service by stopping the service

- Now goto prometheus browser
    - Check targets
    -



Targets

prometheus (1/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	12.773s ago	6.305ms	

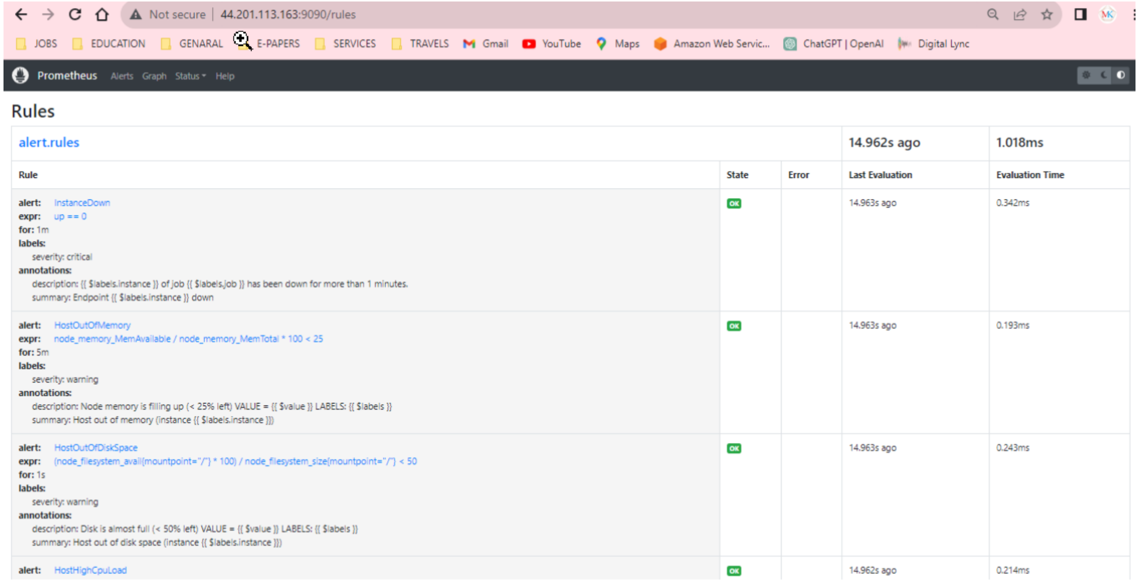
'alert-manager' (1/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9093/metrics	UP	instance="localhost:9093" job="'alert-manager'"	23.946s ago	6.516ms	

'node_exporter' (1/1 up)

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9100/metrics	UP	instance="localhost:9100" job="'node_exporter'"	20.794s ago	13.930ms	

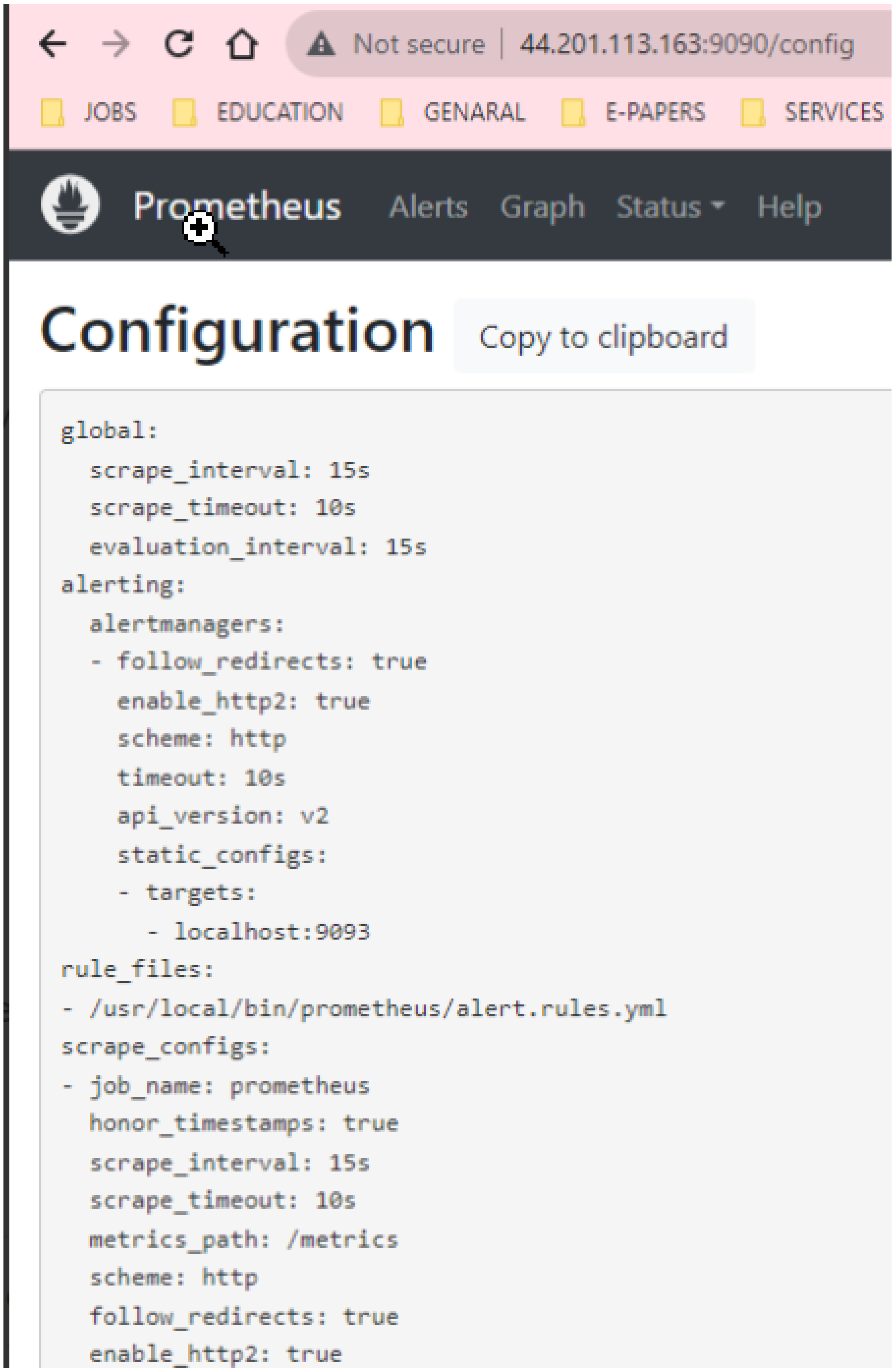
- Status
  - Rules
    - Alert rules
    -



Rules

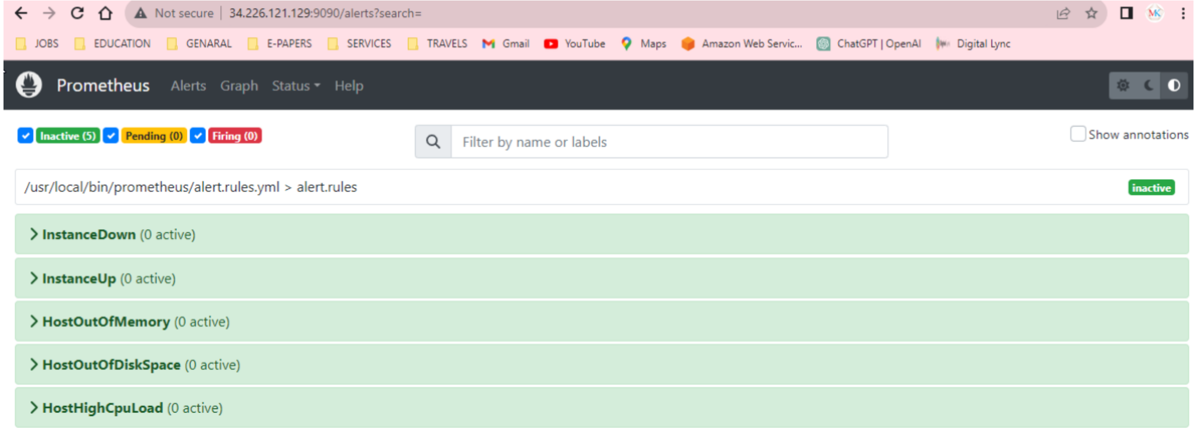
alert.rules			14.962s ago	1.018ms
Rule	**State**	**Error**	**Last Evaluation**	**Evaluation Time**
alert: InstanceDown **expr:** up == 0 **for:** 1m **labels:** severity: critical **annotations:** description: {{ $labels.instance }} of job {{ $labels.job }} has been down for more than 1 minutes. summary: Endpoint {{ $labels.instance }} down	OK		14.963s ago	0.342ms
alert: 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 }} summary: Host out of memory (instance {{ $labels.instance }})	OK		14.963s ago	0.193ms
alert: HostOutOfDiskSpace **expr:** (node_filesystem_avail{mountpoint="/"} * 100) / node_filesystem_size{mountpoint="/"} < 50 **for:** 1s **labels:** severity: warning **annotations:** description: Disk is almost full (< 50% left) VALUE = {{ $value }} LABELS: {{ $labels }} summary: Host out of disk space (instance {{ $labels.instance }})	OK		14.963s ago	0.243ms
alert: HostHighCpuLoad	OK		14.962s ago	0.214ms

- Configuration
  - Here you will see complete prometheus.yml
  -



```
global:
  scrape_interval: 15s
  scrape_timeout: 10s
  evaluation_interval: 15s
alerting:
  alertmanagers:
  - follow_redirects: true
    enable_http2: true
    scheme: http
    timeout: 10s
    api_version: v2
    static_configs:
    - targets:
      - localhost:9093
rule_files:
- /usr/local/bin/prometheus/alert.rules.yml
scrape_configs:
- job_name: prometheus
  honor_timestamps: true
  scrape_interval: 15s
  scrape_timeout: 10s
  metrics_path: /metrics
  scheme: http
  follow_redirects: true
  enable_http2: true
```

- Alerts
    - Here you will see alerts
    -



☑ Inactive (5) ☑ Pending (0) ☑ Firing (0)

/usr/local/bin/prometheus/alert.rules.yml > alert.rules inactive

> **InstanceDown** (0 active)

> **InstanceUp** (0 active)

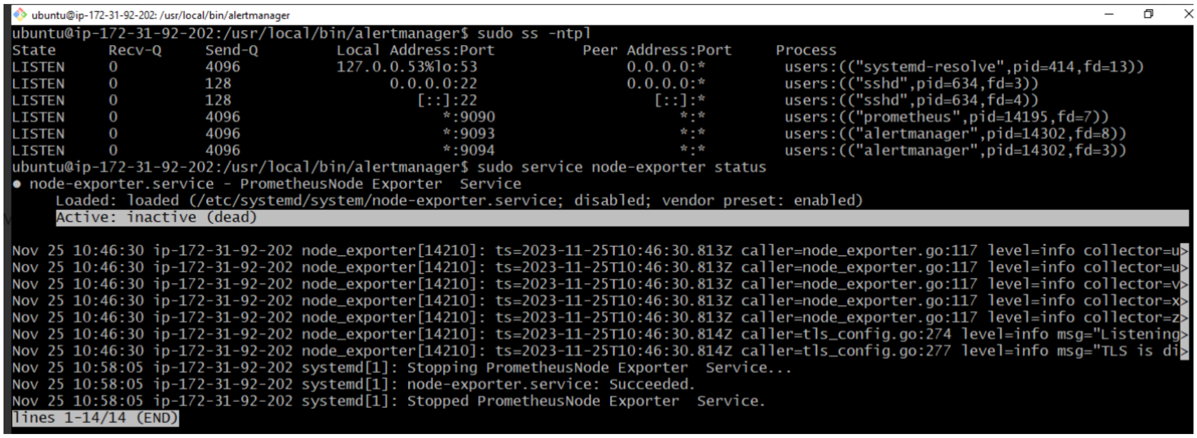
> **HostOutOfMemory** (0 active)

> **HostOutOfDiskSpace** (0 active)

> **HostHighCpuLoad** (0 active)

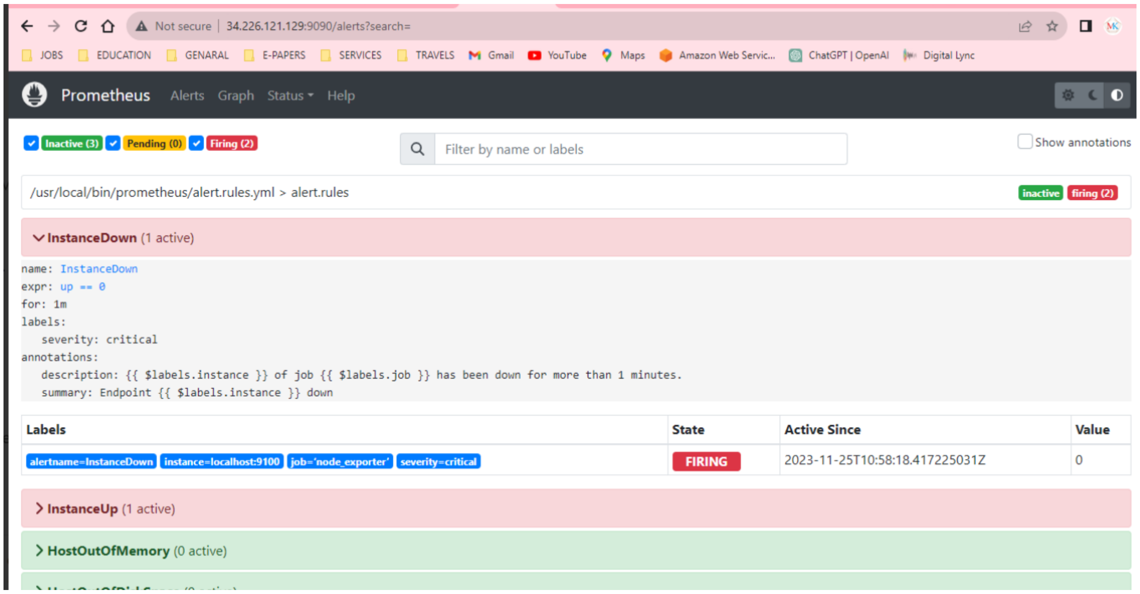
Testing:

- Down one server node-exporter
- Goto your node-exporter server
    - sudo service node-exporter stop
    - sudo service node-exporter status
    -



```
ubuntu@ip-172-31-92-202:/usr/local/bin/alertmanager$ sudo ss -ntpl
State      Recv-Q     Send-Q        Local Address:Port          Peer Address:Port     Process
LISTEN     0          4096          127.0.0.53%lo:53                 0.0.0.0:*         users:(("systemd-resolve",pid=414,fd=13))
LISTEN     0          128                 0.0.0.0:22                 0.0.0.0:*         users:(("sshd",pid=634,fd=3))
LISTEN     0          128                    [::]:22                    [::]:*         users:(("sshd",pid=634,fd=4))
LISTEN     0          4096                      *:9090                     *:*         users:(("prometheus",pid=14195,fd=7))
LISTEN     0          4096                      *:9093                     *:*         users:(("alertmanager",pid=14302,fd=8))
LISTEN     0          4096                      *:9094                     *:*         users:(("alertmanager",pid=14302,fd=3))
ubuntu@ip-172-31-92-202:/usr/local/bin/alertmanager$ sudo service node-exporter status
● node-exporter.service - PrometheusNode Exporter  Service
     Loaded: loaded (/etc/systemd/system/node-exporter.service; disabled; vendor preset: enabled)
     Active: inactive (dead)

Nov 25 10:46:30 ip-172-31-92-202 node_exporter[14210]: ts=2023-11-25T10:46:30.813Z caller=node_exporter.go:117 level=info collector=u>
Nov 25 10:46:30 ip-172-31-92-202 node_exporter[14210]: ts=2023-11-25T10:46:30.813Z caller=node_exporter.go:117 level=info collector=u>
Nov 25 10:46:30 ip-172-31-92-202 node_exporter[14210]: ts=2023-11-25T10:46:30.813Z caller=node_exporter.go:117 level=info collector=v>
Nov 25 10:46:30 ip-172-31-92-202 node_exporter[14210]: ts=2023-11-25T10:46:30.813Z caller=node_exporter.go:117 level=info collector=x>
Nov 25 10:46:30 ip-172-31-92-202 node_exporter[14210]: ts=2023-11-25T10:46:30.813Z caller=node_exporter.go:117 level=info collector=z>
Nov 25 10:46:30 ip-172-31-92-202 node_exporter[14210]: ts=2023-11-25T10:46:30.814Z caller=tls_config.go:274 level=info msg="Listening>
Nov 25 10:46:30 ip-172-31-92-202 node_exporter[14210]: ts=2023-11-25T10:46:30.814Z caller=tls_config.go:277 level=info msg="TLS is di>
Nov 25 10:58:05 ip-172-31-92-202 systemd[1]: Stopping PrometheusNode Exporter  Service...
Nov 25 10:58:05 ip-172-31-92-202 systemd[1]: node-exporter.service: Succeeded.
Nov 25 10:58:05 ip-172-31-92-202 systemd[1]: Stopped PrometheusNode Exporter  Service.
lines 1-14/14 (END)
```

- Goto prometheus browser
    - Check alerts
        - You will see alert: node-exporter down
        -



☑ Inactive (3) ☑ Pending (0) ☑ Firing (2)

Filter by name or labels

□ Show annotations

/usr/local/bin/prometheus/alert.rules.yml > alert.rules

inactive firing (2)

InstanceDown (1 active)

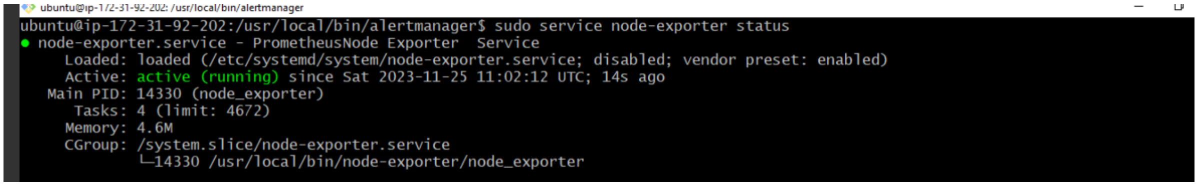
```
name: InstanceDown
expr: up == 0
for: 1m
labels:
   severity: critical
annotations:
   description: {{ $labels.instance }} of job {{ $labels.job }} has been down for more than 1 minutes.
   summary: Endpoint {{ $labels.instance }} down
```

Labels	State	Active Since	Value
alertname=InstanceDown instance=localhost:9100 job='node_exporter' severity=critical	FIRING	2023-11-25T10:58:18.417225031Z	0

InstanceUp (1 active)

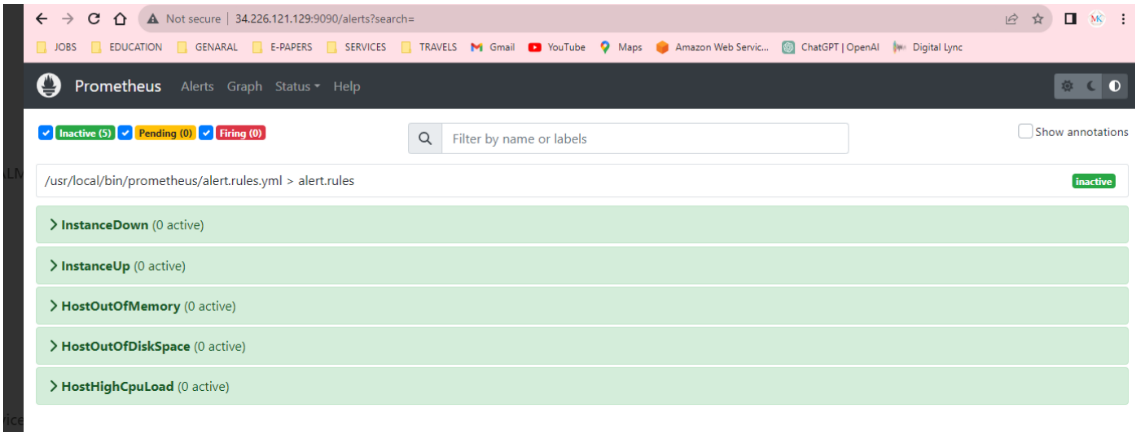
HostOutOfMemory (0 active)

- Goto your node-exporter server
  - sudo service node-exporter start
  - sudo service node-exporter status
  -



```
ubuntu@ip-172-31-92-202:/usr/local/bin/alertmanager$ sudo service node-exporter status
● node-exporter.service - PrometheusNode Exporter  Service
     Loaded: loaded (/etc/systemd/system/node-exporter.service; disabled; vendor preset: enabled)
     Active: active (running) since Sat 2023-11-25 11:02:12 UTC; 14s ago
   Main PID: 14330 (node_exporter)
      Tasks: 4 (limit: 4672)
     Memory: 4.6M
     CGroup: /system.slice/node-exporter.service
             └─14330 /usr/local/bin/node-exporter/node_exporter
```

- Goto prometheus browser
  - Check alerts
    - You will see alert: node-exporter up
    -



/usr/local/bin/prometheus/alert.rules.yml > alert.rules inactive

> **InstanceDown** (0 active)

> **InstanceUp** (0 active)

> **HostOutOfMemory** (0 active)

> **HostOutOfDiskSpace** (0 active)

> **HostHighCpuLoad** (0 active)