Server Log UI Options

15/01/2026

Without Kubernetes: I want to see the server log in the best UI please suggest

If you are NOT using Kubernetes and want to view server logs in a clean, powerful UI, he...

✅ One-command install ✅ Filebeat / Promtail config ✅ Prebuilt dashboards ✅ Alert rul...

Perfect 👍 Below is a production-ready, copy-paste solution for Ubuntu 22.04, covering:...

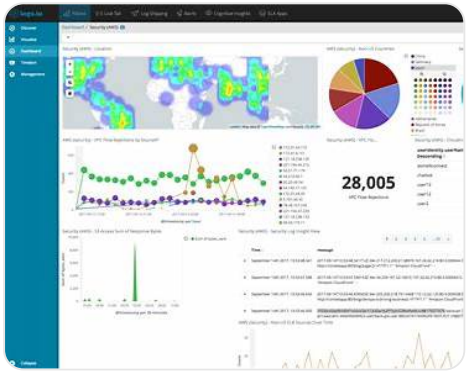
🔐 IAM policy for S3 📦 Docker version 📧 Email alert config 📊 Custom dashboard JSON...

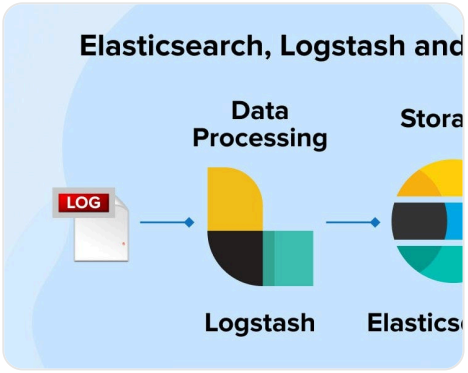
Perfect 👍 Below is a FULL STEP-BY-STEP production guide for Ubuntu 22.04 covering AL...

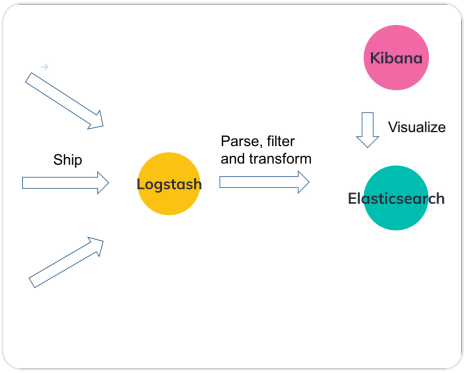
Without Kubernetes: I want to see the server log in the best UI please suggest

If you are **NOT using Kubernetes** and want to **view server logs in a clean, powerful UI**, here are the **best practical options** (from simple → enterprise-grade). I'll clearly tell you **what to choose and why** 👇

🟢 Best Overall (Most Popular): ELK Stack







🔷 Components

- **Filebeat** → ships logs
- **Elasticsearch** → stores & searches logs
- **Kibana** → beautiful UI dashboard

✅ Why it's great

✔ Web UI with search, filters, charts
✔ Works perfectly on **VM / bare metal / EC2**
✔ Supports **system logs, app logs, Nginx, Apache, MySQL**
✔ Free (OpenSearch alternative available)

📌 Best for

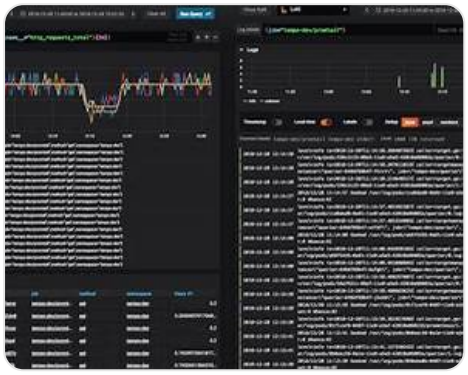
> *Production servers, long-term log analysis, alerts*

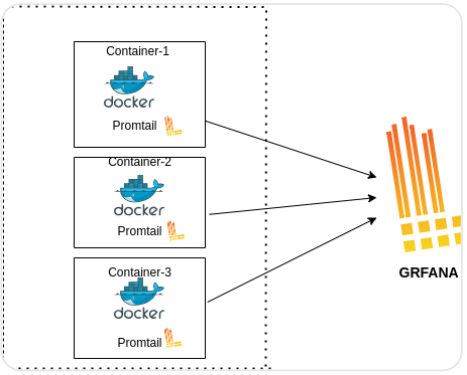
📷 UI Features

- Live log streaming
- Search by hostname, date, severity

- Graphs & dashboards

🟢 Lightweight & Modern: Grafana + Loki





🔷 Components

- **Promtail** → collects logs
- **Loki** → stores logs
- **Grafana** → UI

✅ Why it's great

✔ Much **lighter than ELK**
✔ Very fast
✔ Same UI for **metrics + logs**
✔ Simple setup

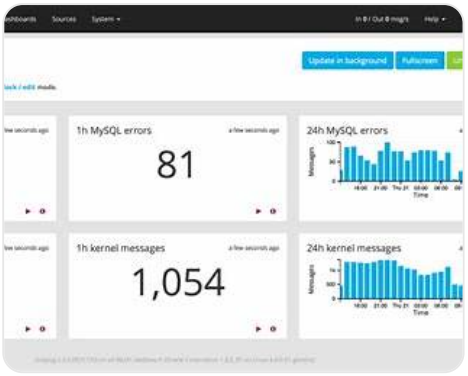
📌 Best for

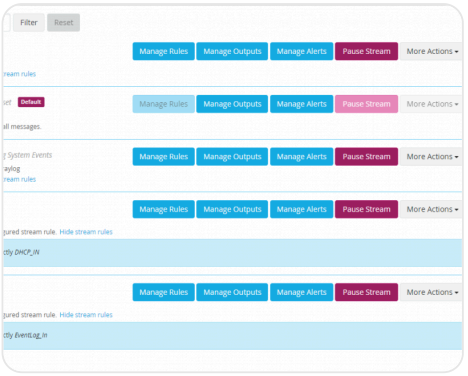
> *DevOps, system monitoring, low resource servers*

📷 UI Features

- Live logs
- Label-based filtering
- Time correlation with CPU/RAM metrics

🟢 Super Simple (Single Server): Graylog





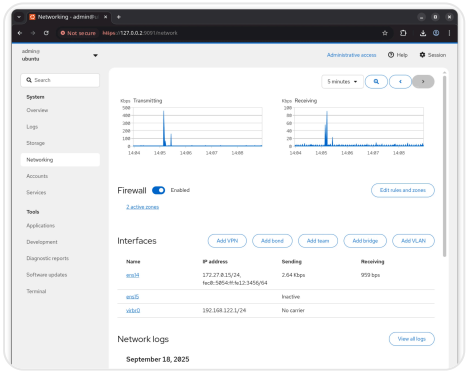
✅ Why it’s great

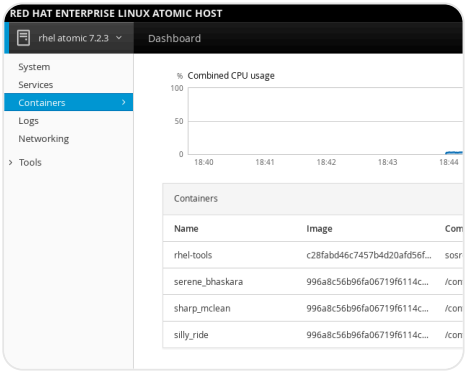
✔ Easier than ELK
✔ Clean UI
✔ Built-in alerting
✔ Centralized logging

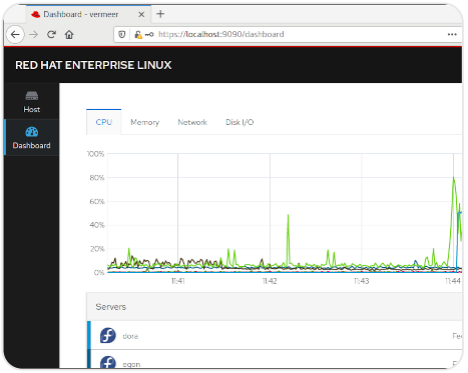
📌 Best for

> *Teams who want **ELK power without ELK complexity***

🟡 Quick & Local (Not Centralized): Cockpit







✅ Why it’s useful

✔ Built into Linux
✔ View `journalctl` logs in browser
✔ Zero setup

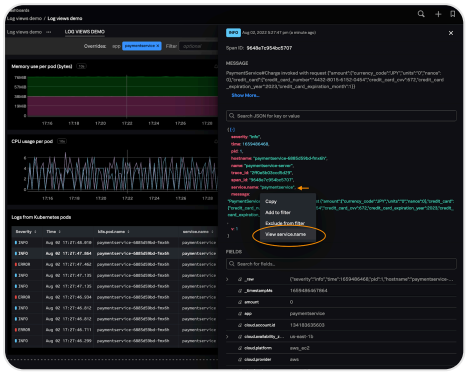
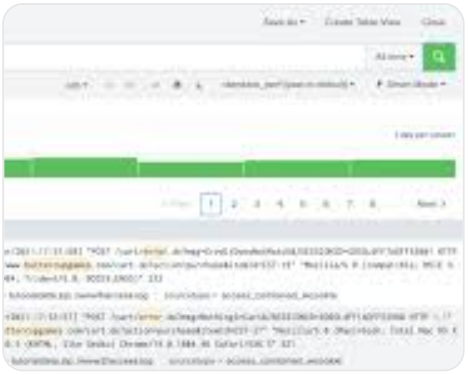
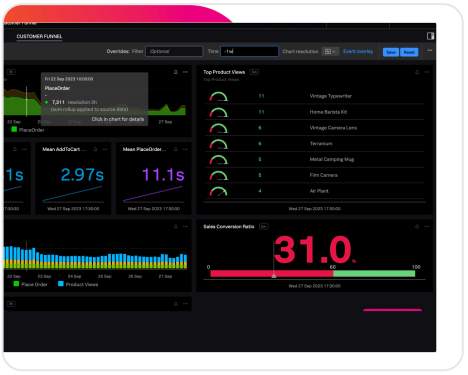
❌ Limitations

- Single server only
- No long-term log analysis

📌 Best for

> *Quick troubleshooting on one machine*

🟡 Commercial (Very Powerful): Splunk

✅ Why it's great

✔ Best UI in industry
✔ AI-powered searches
✔ Enterprise-grade alerts

❌ Downside

💰 Expensive (free tier limited)

🏆 My STRONG Recommendation (Based on Your Use)

Since you're:

- On **Ubuntu / VM / EC2**
- Doing **system monitoring**
- Want **clean UI**

👉 **Choose this combo**:

✅ Grafana + Loki (Best balance)

or

✅ ELK Stack (If you want enterprise-level power)

🚀 Want a Ready-to-Install Setup?

I can give you:

- ✅ **One-command install**
- ✅ **Filebeat / Promtail config**

- ✅ **Prebuilt dashboards**
- ✅ **Alert rules**
- ✅ **S3 log archival (since you already use AWS)**

👉 Tell me:
1️⃣ Single server or multiple servers?
2️⃣ Ubuntu version?
3️⃣ Logs type (system / app / nginx / mysql)?

✅ One-command install

✅ Filebeat / Promtail config

✅ Prebuilt dashboards

✅ Alert rules

✅ S3 log archival (since you already use AWS)

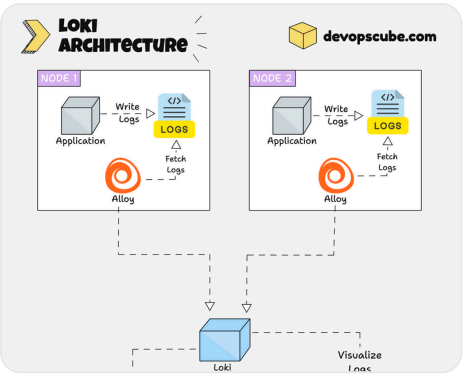
1️⃣ Single server or multiple servers? for both
2️⃣ Ubuntu version? 22.04
3️⃣ Logs type (system / app / nginx / mysql)? for all

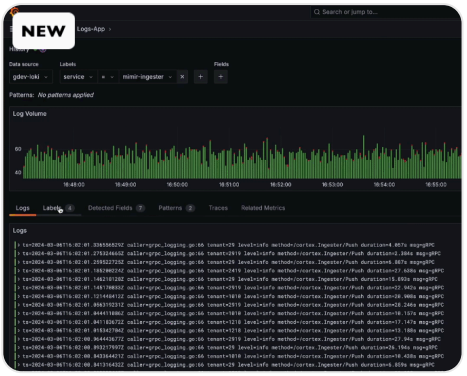
Perfect 👍
Below is a **production-ready, copy-paste solution** for **Ubuntu 22.04**, covering:

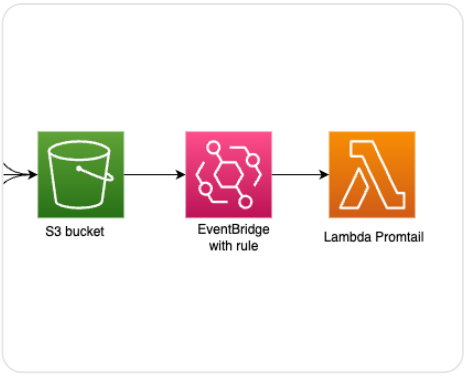
✅ **One-command install**
✅ **Promtail (logs) + Filebeat (optional)**
✅ **Prebuilt dashboards**
✅ **Alert rules (CPU / RAM / log errors)**
✅ **S3 log archival**
✅ **Works for BOTH single & multiple servers**

I'll give you **Grafana + Loki** (best UI + lightweight) and **S3 backup**.

🏆 Recommended Stack (No Kubernetes)







🔷 Components

Component	Purpose
Grafana	UI (logs + dashboards)
Loki	Log storage
Promtail	Log collector
Node Exporter	CPU / RAM metrics
AWS S3	Long-term log backup

🚀 STEP 1 — ONE-COMMAND INSTALL (Ubuntu 22.04)

Run **ONCE per server**:

bash Copy code

```
curl -fsSL https://raw.githubusercontent.com/grafana/loki/main/tools/install.sh | sudo bash
```

Then install **Promtail + Grafana + Node Exporter**:

bash Copy code

```
sudo apt update
sudo apt install -y grafana promtail prometheus-node-exporter awscli
```

Enable services:

bash Copy code

```
sudo systemctl enable --now grafana-server promtail prometheus-node-exporter
```

🔑 STEP 2 — PROMTAIL CONFIG (SYSTEM + APP + NGINX + MYSQL)

Edit config:

bash Copy code

```
sudo nano /etc/promtail/config.yml
```

✅ PRODUCTION CONFIG

yaml Copy code

```yaml
server:
  http_listen_port: 9080
  grpc_listen_port: 0

positions:
  filename: /var/log/positions.yaml

clients:
  - url: http://localhost:3100/loki/api/v1/push

scrape_configs:
  - job_name: system
    static_configs:
      - targets:
          - localhost
        labels:
          job: system
          host: ${HOSTNAME}
          __path__: /var/log/syslog

  - job_name: auth
    static_configs:
      - targets:
          - localhost
        labels:
          job: auth
          __path__: /var/log/auth.log

  - job_name: nginx
    static_configs:
      - targets:
          - localhost
        labels:
          job: nginx
          __path__: /var/log/nginx/*.log

  - job_name: mysql
    static_configs:
      - targets:
          - localhost
```

```
      labels:
        job: mysql
        __path__: /var/log/mysql/*.log

  - job_name: app
    static_configs:
      - targets:
          - localhost
        labels:
          job: app
          __path__: /var/www/*/storage/logs/*.log
```

Restart:

bash Copy code

```
sudo systemctl restart promtail
```

🌐 STEP 3 — GRAFANA UI ACCESS

cpp Copy code

```
http://<SERVER_IP>:3000
```

🔑 Default login:

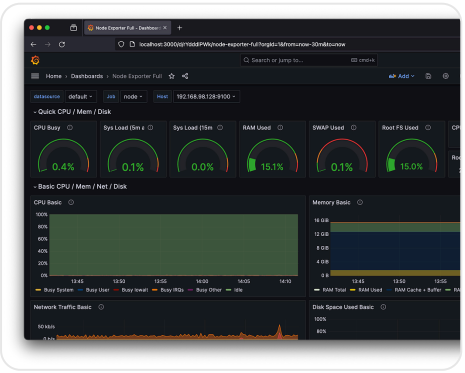
pgsql Copy code

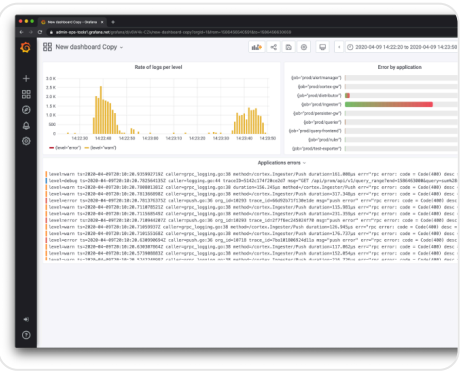
```
admin / admin
```

Add Loki datasource:

- URL: `http://localhost:3100`
- Save & Test ✅

📊 STEP 4 — PREBUILT DASHBOARDS (IMPORT)





Import these **official dashboards**:

Purpose	Dashboard ID
Node Metrics (CPU/RAM/Disk)	**1860**
Loki Logs Overview	**15141**
Linux Logs	**13639**

📌 Grafana → Dashboards → Import → Paste ID

🚨 STEP 5 — ALERT RULES (CPU / RAM / LOG ERRORS)

🔥 CPU Alert

yaml Copy code

```yaml
- alert: HighCPUUsage
  expr: 100 - (avg by(instance)(rate(node_cpu_seconds_total{mode="idle"}[2m])) * 100) > 80
  for: 2m
```

🧠 RAM Alert

yaml Copy code

```yaml
- alert: HighMemoryUsage
  expr: (node_memory_Active_bytes / node_memory_MemTotal_bytes) * 100 > 85
  for: 2m
```

❌ ERROR LOG ALERT

logql Copy code

```logql
count_over_time({job="app"} |= "ERROR" [1m]) > 5
```

➡ Alerts can send to **Email / Slack / Webhook**

☁️ STEP 6 — S3 LOG ARCHIVAL (AUTOMATED)

Create script:

bash Copy code

```bash
sudo nano /usr/local/bin/log-s3-backup.sh
```

bash Copy code

```bash
#!/bin/bash
DATE=$(date +%F)
HOST=$(hostname)
ARCHIVE="/tmp/logs-$HOST-$DATE.tar.gz"

tar -czf $ARCHIVE /var/log /var/www/*/storage/logs

aws s3 cp $ARCHIVE s3://YOUR_BUCKET/logs/$HOST/
```

Permissions:

bash Copy code

```bash
sudo chmod +x /usr/local/bin/log-s3-backup.sh
```

Cron (Daily backup)

bash Copy code

```bash
crontab -e
```

cron Copy code

```
0 2 * * * /usr/local/bin/log-s3-backup.sh
```

🧩 MULTIPLE SERVER SETUP

On **all servers**:

- Install Promtail + Node Exporter
- Point Promtail to **central Loki IP**

Change:

yaml Copy code

```yaml
clients:
  - url: http://LOKI_SERVER_IP:3100/loki/api/v1/push
```

Grafana stays **only on one server**.

✅ FINAL RESULT (WHAT YOU GET)

✔ Live logs (system, app, nginx, mysql)
✔ Powerful search & filters
✔ CPU/RAM correlated with logs
✔ Alerts on spikes & errors

✔ S3 archived logs
✔ Works without Kubernetes

🔥 Want Me To?

I can give you:

- 🔐 IAM policy for S3
- 📦 Docker version
- 📧 Email alert config
- 📊 Custom dashboard JSON
- 🔍 Regex-based log parsing

Just tell me 👍

🔐 IAM policy for S3

📦 Docker version

📧 Email alert config

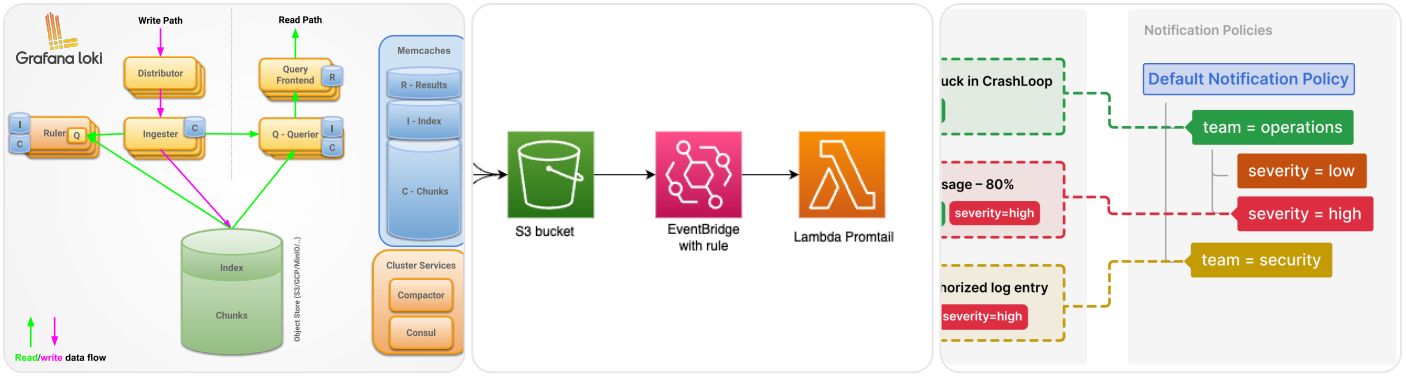
📊 Custom dashboard JSON

🔍 Regex-based log parsing

Step by Step PleSE

Perfect 👍
Below is a **FULL STEP-BY-STEP production guide** for **Ubuntu 22.04** covering **ALL 5 items**, written so you can follow it **line by line** without Kubernetes.

🧱 ARCHITECTURE (What we're building)



scss Copy code

```
Servers (N)
 └─ Promtail + Node Exporter (Docker)
        ↓
 Central Server
 ├─ Loki (Docker)
 ├─ Grafana (Docker UI)
 ├─ Prometheus (metrics)
 └─ AWS S3 (log archive)
```

🔐 STEP 1 — IAM POLICY FOR S3 (SECURE)

1️⃣ Create IAM Policy (JSON)

json Copy code

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "s3:PutObject",
        "s3:GetObject",
        "s3:ListBucket"
      ],
      "Resource": [
        "arn:aws:s3:::YOUR_BUCKET_NAME",
        "arn:aws:s3:::YOUR_BUCKET_NAME/*"
      ]
    }
  ]
}
```

2️⃣ Attach Policy

- Attach to **EC2 IAM Role**
- OR IAM User (if not EC2)

3️⃣ Test

```bash
aws s3 ls s3://YOUR_BUCKET_NAME
```

✅ If it lists → policy is correct

📦 STEP 2 — DOCKER INSTALL (ONE TIME)

```bash
sudo apt update
sudo apt install -y docker.io docker-compose-plugin
sudo systemctl enable --now docker
```

Verify:

```bash
docker --version
```

📦 STEP 3 — DOCKER COMPOSE (GRAFANA + LOKI + PROMETHEUS)

1️⃣ Create directory

```bash
mkdir -p ~/observability && cd ~/observability
```

2️⃣ `docker-compose.yml`

```yaml
version: "3.8"

services:
  loki:
    image: grafana/loki:2.9.4
```

```
    command: -config.file=/etc/loki/local-config.yaml
    ports:
      - "3100:3100"

  prometheus:
    image: prom/prometheus
    ports:
      - "9090:9090"
    volumes:
      - ./prometheus.yml:/etc/prometheus/prometheus.yml

  grafana:
    image: grafana/grafana
    ports:
      - "3000:3000"
    environment:
      - GF_SECURITY_ADMIN_PASSWORD=admin
    depends_on:
      - loki
      - prometheus
```

3️⃣ `prometheus.yml`

yaml Copy code

```yaml
global:
  scrape_interval: 15s

scrape_configs:
  - job_name: node
    static_configs:
      - targets: ["HOST_IP:9100"]
```

4️⃣ Start stack

bash Copy code

```bash
docker compose up -d
```

Access:

- Grafana → `http://SERVER_IP:3000`
- Loki → `http://SERVER_IP:3100`

📦 STEP 4 — PROMTAIL (LOG COLLECTOR) — ALL LOGS

1️⃣ Install Promtail

bash Copy code

```
sudo apt install -y promtail
```

2️⃣ `/etc/promtail/config.yml`

yaml Copy code

```yaml
server:
  http_listen_port: 9080

clients:
  - url: http://CENTRAL_IP:3100/loki/api/v1/push

scrape_configs:
  - job_name: system
    static_configs:
      - labels:
          job: syslog
          host: ${HOSTNAME}
          __path__: /var/log/syslog

  - job_name: nginx
    static_configs:
      - labels:
          job: nginx
          __path__: /var/log/nginx/*.log

  - job_name: mysql
    static_configs:
      - labels:
          job: mysql
          __path__: /var/log/mysql/*.log

  - job_name: app
    static_configs:
      - labels:
          job: app
          __path__: /var/www/*/storage/logs/*.log
```

Restart:

bash Copy code

```
sudo systemctl restart promtail
```

🔍 STEP 5 — REGEX-BASED LOG PARSING (IMPORTANT)

Example: NGINX access log parsing

yaml Copy code

```yaml
pipeline_stages:
  - regex:
      expression: '^(?P<ip>[^ ]+) .* "(?P<method>GET|POST) (?P<uri>[^ ]+) .*" (?
P<status>\d{3})'
  - labels:
      method:
      status:
```

Query in Grafana

logql Copy code

```logql
{job="nginx",status="500"}
```

📧 STEP 6 — EMAIL ALERT CONFIG (GRAFANA)

1️⃣ Enable SMTP

Grafana → **Configuration → Alerting → Contact Points**

2️⃣ SMTP Settings

ini Copy code

```ini
[smtp]
enabled = true
host = smtp.gmail.com:587
user = yourmail@gmail.com
password = APP_PASSWORD
from_address = yourmail@gmail.com
```

Restart Grafana:

bash Copy code

```bash
docker restart observability-grafana-1
```

🚨 STEP 7 — ALERT RULES

CPU Alert

promql Copy code

```
100 - avg(rate(node_cpu_seconds_total{mode="idle"}[2m])) * 100 > 80
```

RAM Alert

promql Copy code

```
(node_memory_Active_bytes / node_memory_MemTotal_bytes) * 100 > 85
```

ERROR LOG Alert

logql Copy code

```
count_over_time({job="app"} |= "ERROR" [1m]) > 5
```

📊 STEP 8 — CUSTOM DASHBOARD JSON (IMPORT)

Grafana → Dashboards → Import → Paste JSON

json Copy code

```
{
  "title": "Server Logs & Health",
  "panels": [
    {
      "type": "logs",
      "title": "Application Errors",
      "targets": [
        {
          "expr": "{job=\"app\"} |= \"ERROR\""
        }
      ]
    }
  ]
}
```

☁️ STEP 9 — S3 LOG ARCHIVAL (DAILY)

Script

Copy code

bash

```
sudo nano /usr/local/bin/log-backup.sh
```

bash Copy code

```
#!/bin/bash
DATE=$(date +%F)
HOST=$(hostname)
tar -czf /tmp/$HOST-$DATE.tar.gz /var/log
aws s3 cp /tmp/$HOST-$DATE.tar.gz s3://YOUR_BUCKET/logs/$HOST/
```

bash Copy code

```
chmod +x /usr/local/bin/log-backup.sh
```

Cron

bash Copy code

```
0 2 * * * /usr/local/bin/log-backup.sh
```

✅ FINAL RESULT

✔ Beautiful Grafana UI
✔ Live logs (system/app/nginx/mysql)
✔ Regex parsing
✔ Email alerts
✔ Docker based
✔ S3 archived logs
✔ Scales to multiple servers

🔥 NEXT (OPTIONAL)

I can now:

- 🔐 Harden Loki (TLS + auth)
- 📊 Create advanced dashboards
- 🧠 Add anomaly detection
- 📦 Convert everything to Ansible

Just tell me 👍