AWS Observability Stack Integration

Combine Grafana with Prometheus (Self-hosted)

Step-by-Step Process:

1. Install Prometheus on EC2

- Launch EC2 (Amazon Linux 2 / Ubuntu).

- Download Prometheus:

wget https://github.com/prometheus/prometheus/releases/latest/download/prometheus-*.tar.gz

- Extract and move to /usr/local/bin.

- Create prometheus.yml config file.

- Start Prometheus:

./prometheus --config.file=prometheus.yml

2. Configure Security Group

- Allow inbound on TCP 9090 for Prometheus web UI (restrict to your IP).

3. Install Grafana on EC2

- amazon-linux-extras enable grafana

- yum install -y grafana

- systemctl enable --now grafana-server

4. Add Prometheus as a Data Source in Grafana

- Log in to Grafana (http://:3000).

- Go to Configuration → Data Sources → Add Data Source → Prometheus.

- Set URL to http://:9090.

- Save & Test.

5. Build Dashboards

- Create a new dashboard.

- Use PromQL queries (e.g., node_cpu_seconds_total).

- Import community dashboards from Grafana.com.

6. Optional: EC2 Exporter / Node Exporter

- Install node_exporter on monitored EC2s.

- Configure Prometheus to scrape node_exporter endpoints.

7. Security Best Practices

- Use reverse proxy (Nginx) + HTTPS.

- Restrict SG rules to specific IPs.

- Enable Grafana authentication with IAM / SSO if needed.