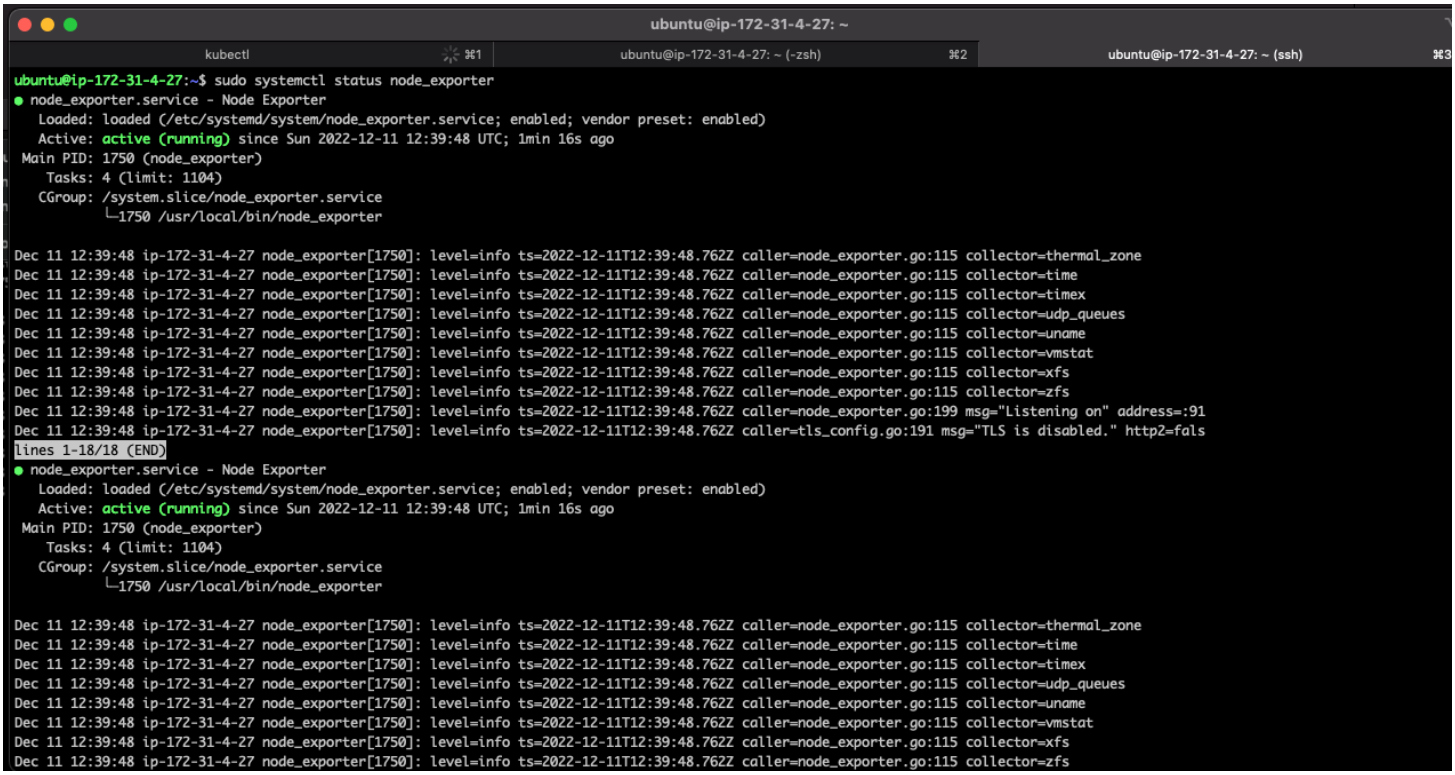
Observing Cloud Resources

SRE Project Template

Categorize Responsibilities

Prometheus and Grafana Screenshots

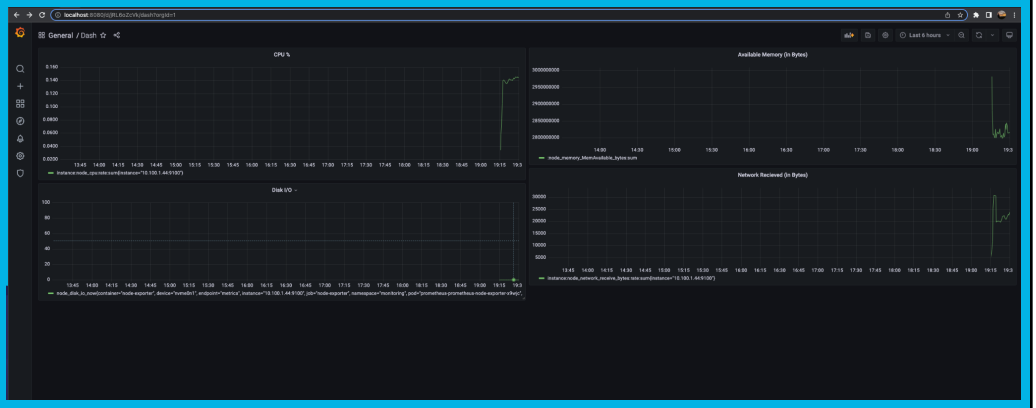
Provide a screenshot of the Prometheus node_exporter service running on the EC2 instance. Use the following command to show that the system is running: `sudo systemctl status node_exporter`

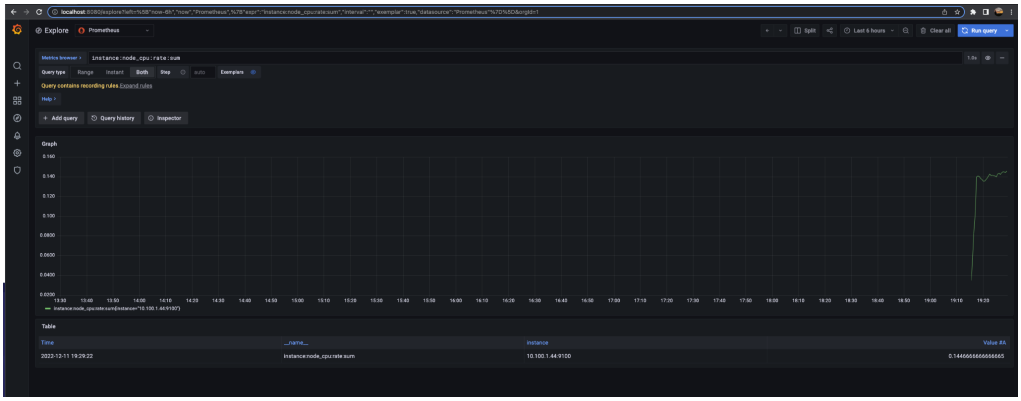
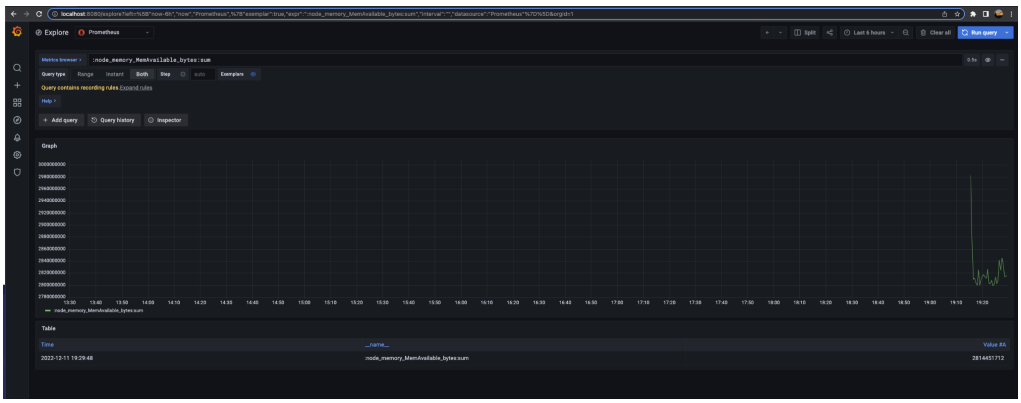
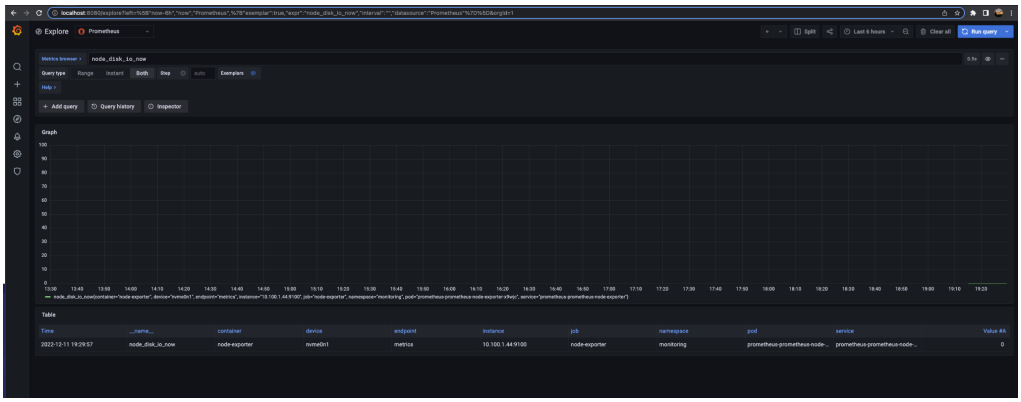
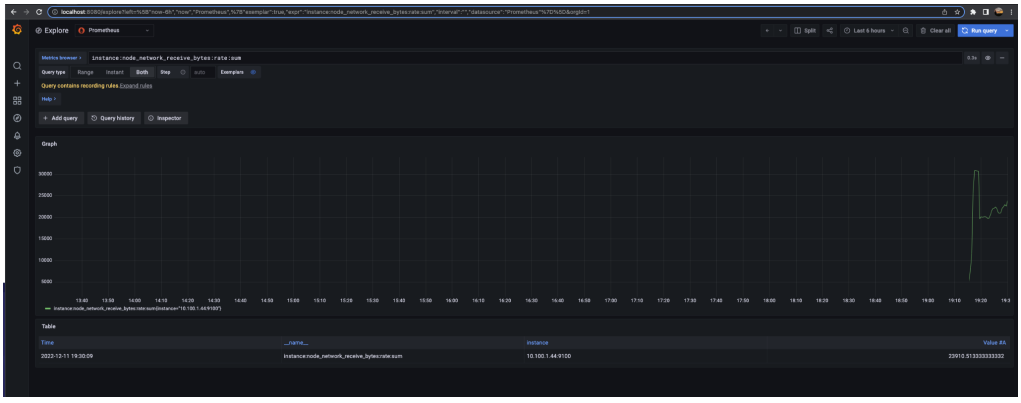


Host Metric

(CPU, RAM, Disk, Network)

Dashboard



CPU %	
Available Memory	
Disk I/O	
Network Recieved	

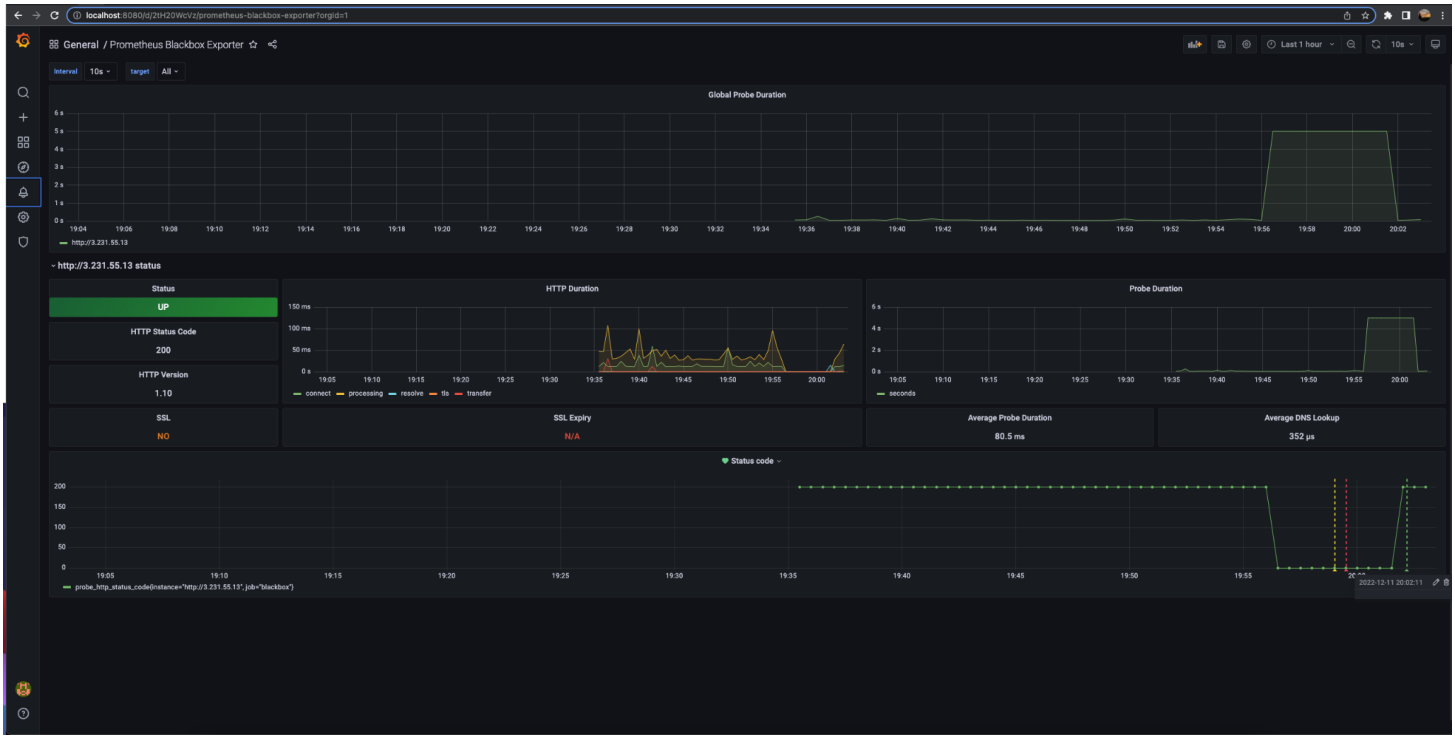
Responsibilities

1. The development team wants to release an emergency hotfix to production. Identify two roles of the SRE team who would be involved in this and why.
Team Lead - *ensures each team member coordinates with other members, and makes sure they contribute towards successful hotfix release.* ***Release Manager -*** *ensures the code has all dependencies satisfied and ensures proper communication is sent to the stakeholders. The release manager executes the code release and any rollback procedures if needed.*
2. The development team is in the early stages of planning to build a new product. Identify two roles of the SRE team that should be invited to the meeting and why.
Team Lead - *contributes to architecture design meetings and helps form workflow for the team* ***System Architect -*** *is responsible for creating infrastructure that is easily scalable and replicable.They also make recommendations on ways to implement newer technologies and architecture and provide migration paths from existing infrastructure*
3. The emergency hotfix from question 1 was applied and is causing major issues in production. Which SRE role would primarily be involved in mitigating these issues?
Release Manager

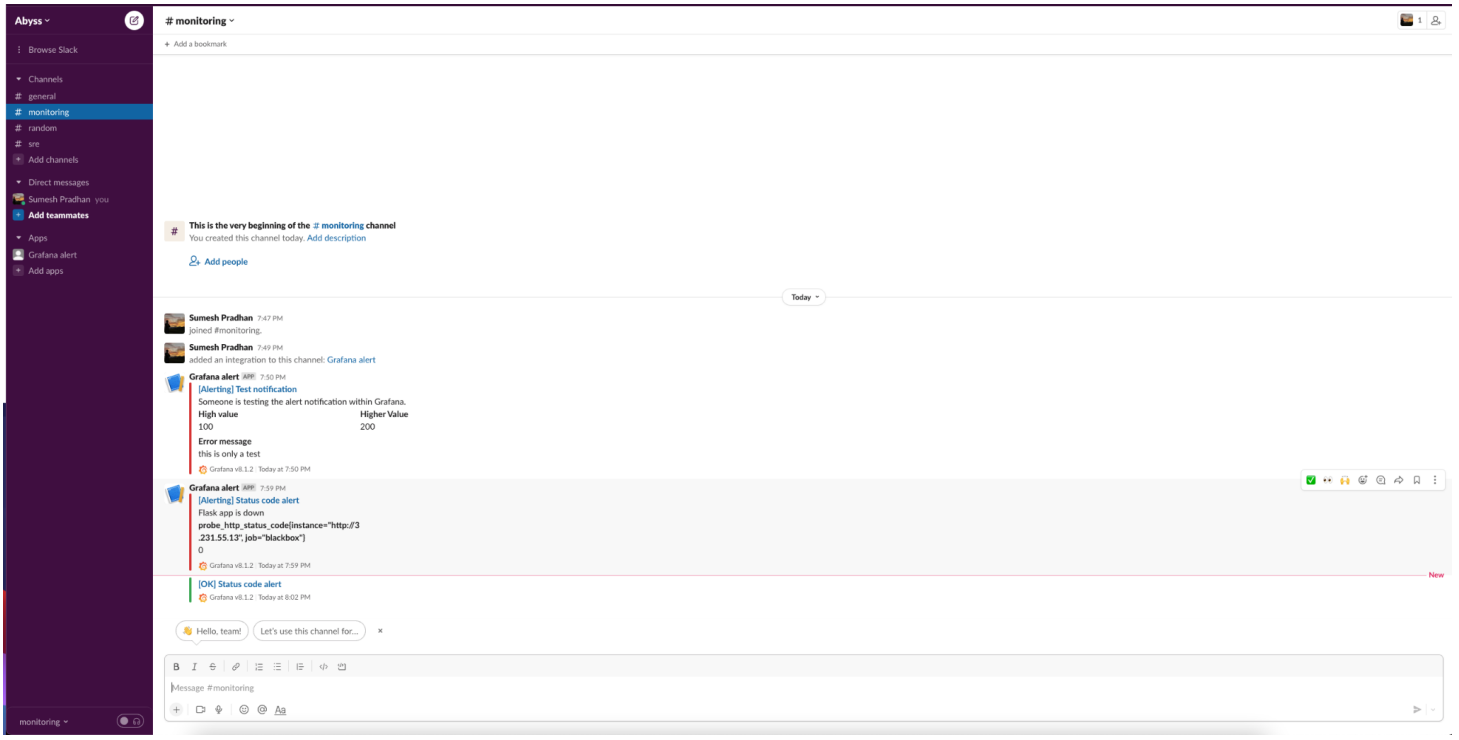
Team Formation and Workflow Identification

API Monitoring and Notifications

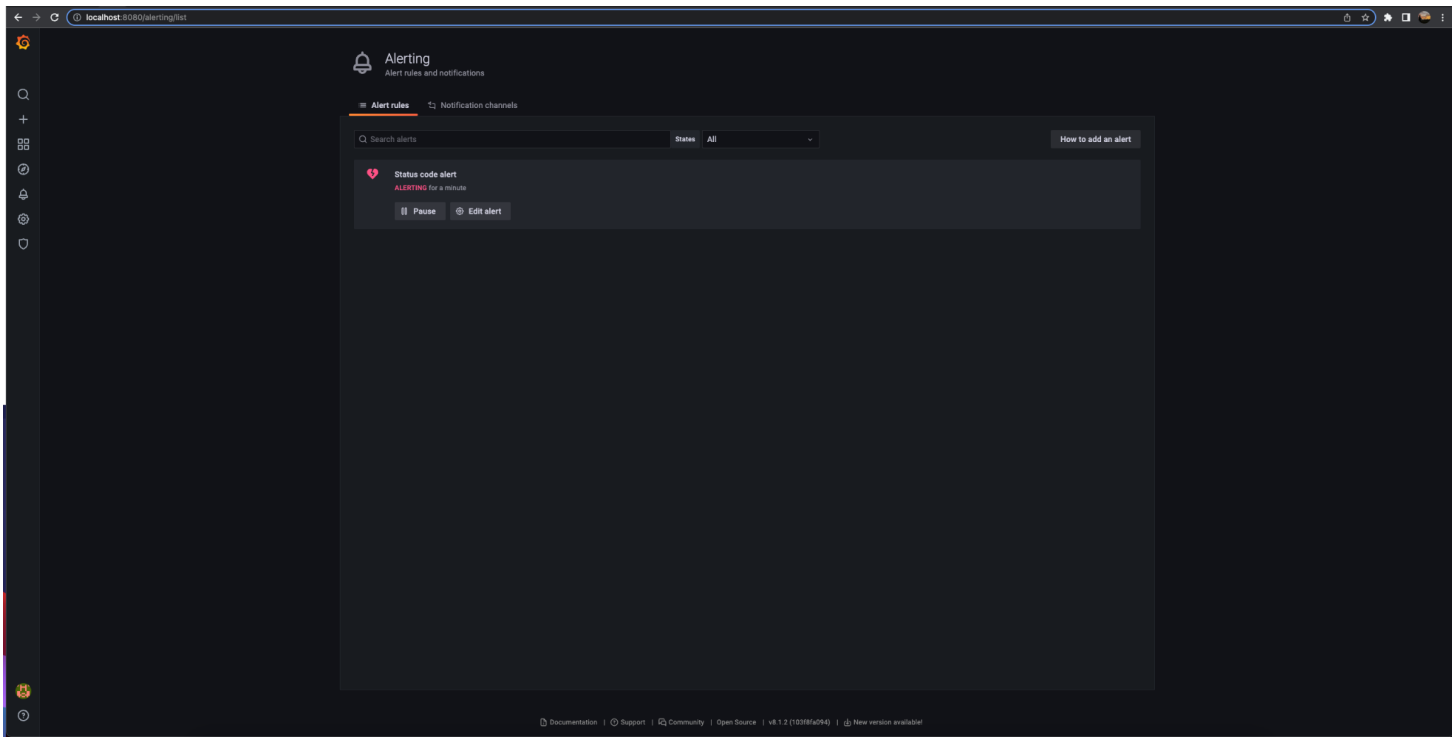
Display the status of an API endpoint: Provide a screenshot of the Grafana dashboard that will show at which point the API is unhealthy (non-200 HTTP code), and when it becomes healthy again (200 HTTP code).



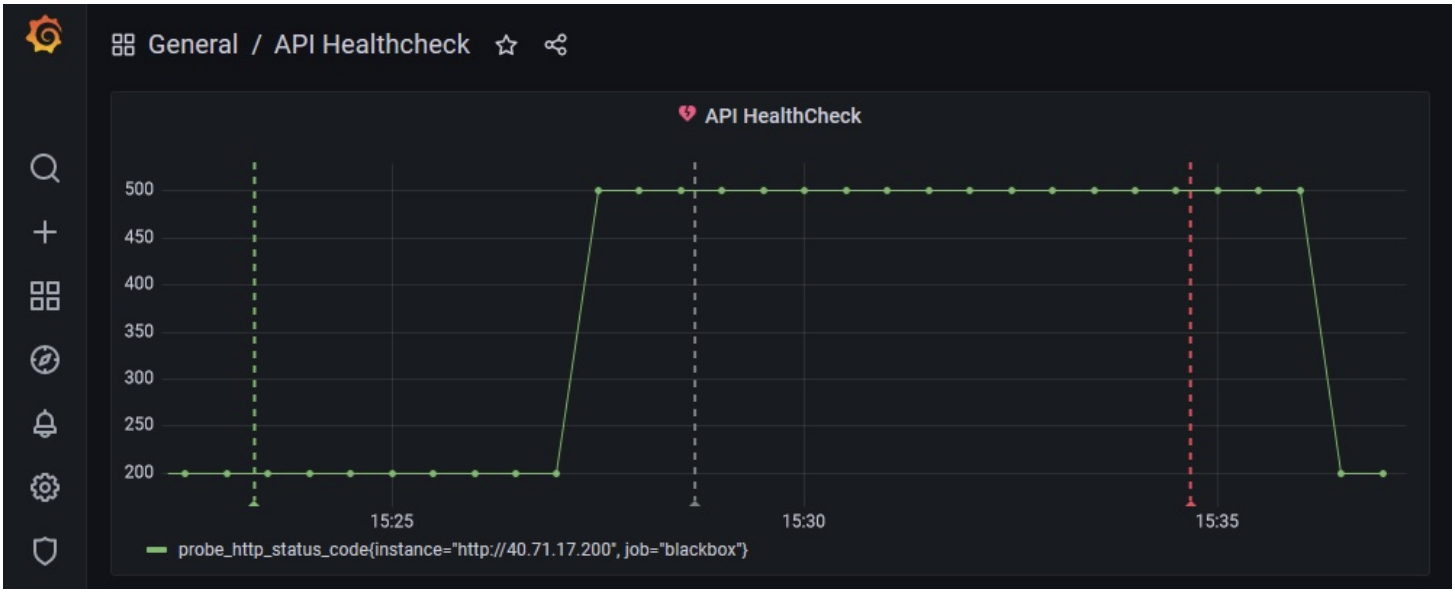
Create a notification channel: Provide a screenshot of the Grafana notification which shows the summary of the issue and when it occurred.



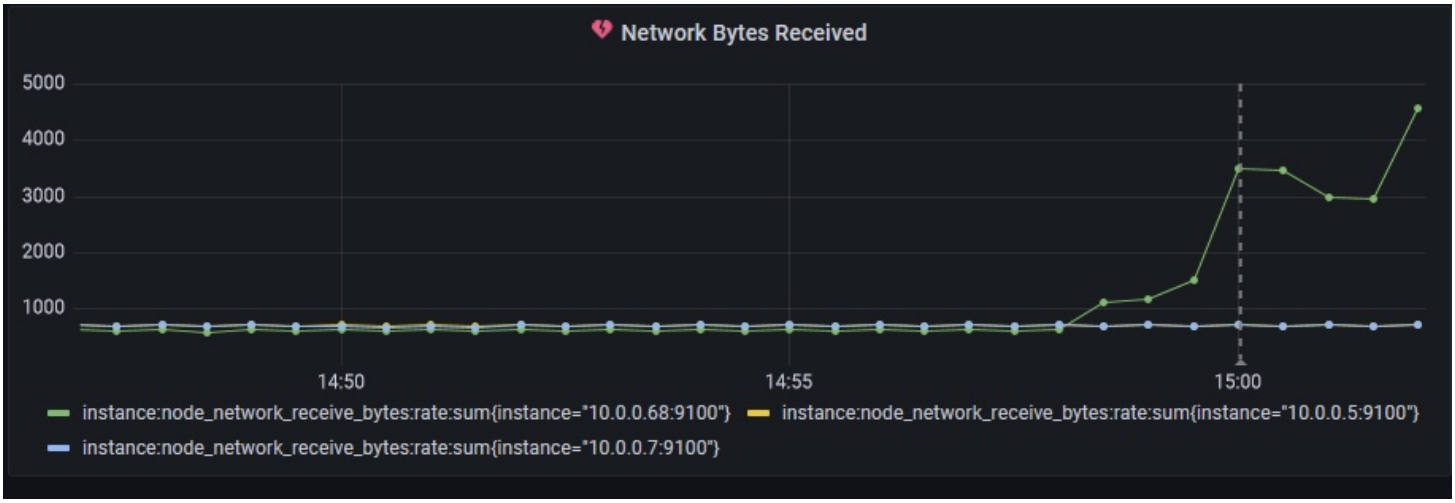
Configure alert rules: Provide a screenshot of the alert rules list in Grafana.



Applying the Concepts

Graph 1

4a. Given the above graph, where does it show that the API endpoint is down? Where on the graph does this show that the API is healthy again?
*At **15:27:30** the API endpoint is down with **500**, and at **13:36:30** the endpoint is back up again with **200** status.*
4b. If there was no SRE team, how would this outage affect customers?
The customers would have to wait for a longer time for the service to be back up again, or they may even have to reach out the Engineers to inform the service is down, if they are still unaware of the outage.
4c. What could be put in place so that the SRE team could know of the outage before the customer does?
Synthetic monitoring on the API with an alert(+alerting channel) having a high sensitivity.

Graph 2



5a. Given the above graph, which instance had the increase in traffic, and approximately how many bytes did it receive (feel free to round)?

*Instance: **10.0.0.68:91000** at **15:00** received about **3500 bytes***

5b. Which team members on the SRE team would be interested in this graph and why?

In general, the whole SRE team would be interested in this data, but primarily it would be the Monitoring Engineer, to analyze and set an alert if required, when such a scenario occurs again, and secondly the Infrastructure Engineer, to make sure the existing infrastructure can handle such a load, or whether it needs to be scaled.