Observing Cloud Resources

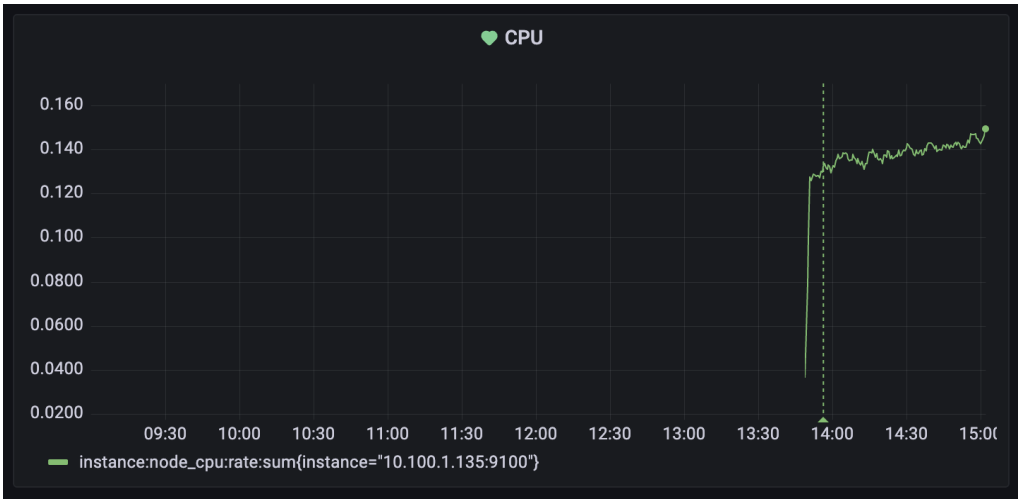
SRE Assessment Template

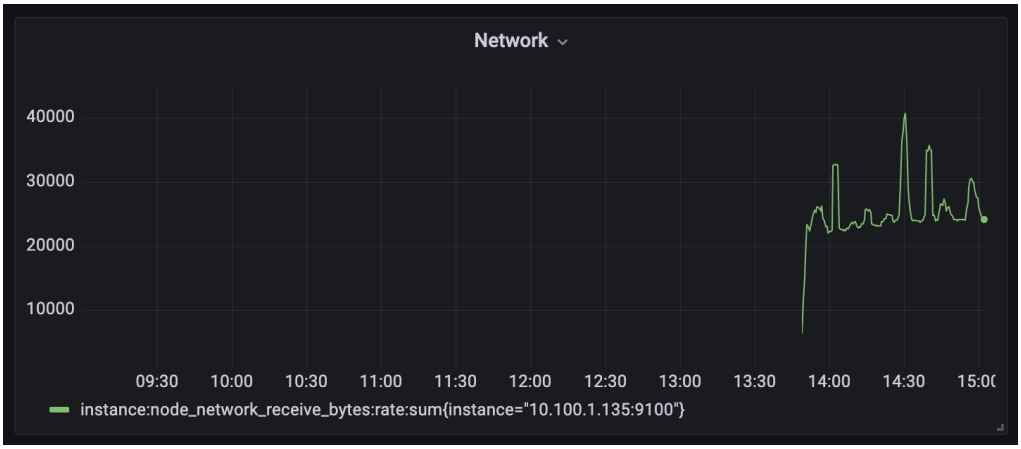
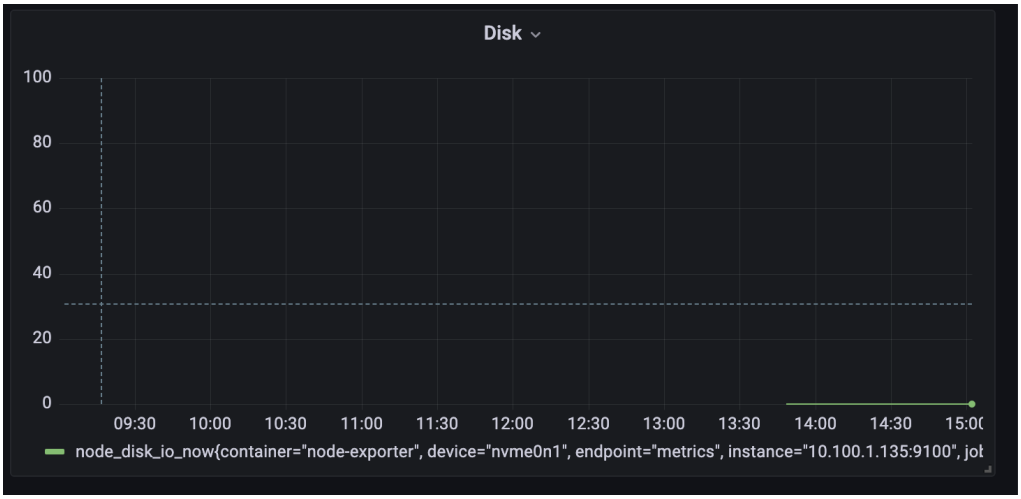
Categorize Responsibilities

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`

```
ubuntu@ip-172-31-37-70:~$ sudo systemctl status node_exporter
● node_exporter.service - Node Exporter
   Loaded: loaded (/etc/systemd/system/node_exporter.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2023-04-21 18:00:05 UTC; 34min ago
 Main PID: 763 (node_exporter)
    Tasks: 4 (limit: 1104)
   CGroup: /system.slice/node_exporter.service
           └─763 /usr/local/bin/node_exporter

Apr 21 18:00:05 ip-172-31-37-70 node_exporter[763]: level=info ts=2023-04-21T18:00:05.601Z caller=node_exporter.go:115 collector=thermal_zone
Apr 21 18:00:05 ip-172-31-37-70 node_exporter[763]: level=info ts=2023-04-21T18:00:05.601Z caller=node_exporter.go:115 collector=time
Apr 21 18:00:05 ip-172-31-37-70 node_exporter[763]: level=info ts=2023-04-21T18:00:05.601Z caller=node_exporter.go:115 collector=timex
Apr 21 18:00:05 ip-172-31-37-70 node_exporter[763]: level=info ts=2023-04-21T18:00:05.601Z caller=node_exporter.go:115 collector=udp_queues
Apr 21 18:00:05 ip-172-31-37-70 node_exporter[763]: level=info ts=2023-04-21T18:00:05.601Z caller=node_exporter.go:115 collector=uname
Apr 21 18:00:05 ip-172-31-37-70 node_exporter[763]: level=info ts=2023-04-21T18:00:05.601Z caller=node_exporter.go:115 collector=vmstat
Apr 21 18:00:05 ip-172-31-37-70 node_exporter[763]: level=info ts=2023-04-21T18:00:05.601Z caller=node_exporter.go:115 collector=xfs
Apr 21 18:00:05 ip-172-31-37-70 node_exporter[763]: level=info ts=2023-04-21T18:00:05.601Z caller=node_exporter.go:115 collector=zfs
Apr 21 18:00:05 ip-172-31-37-70 node_exporter[763]: level=info ts=2023-04-21T18:00:05.602Z caller=node_exporter.go:199 msg="Listening on" address=:9100
Apr 21 18:00:05 ip-172-31-37-70 node_exporter[763]: level=info ts=2023-04-21T18:00:05.604Z caller=tls_config.go:191 msg="TLS is disabled." http2=false
```

Host Metric (CPU, RAM, Disk, Network)	Dashboard
CPU	

Memory	
Network	
Disk	

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.

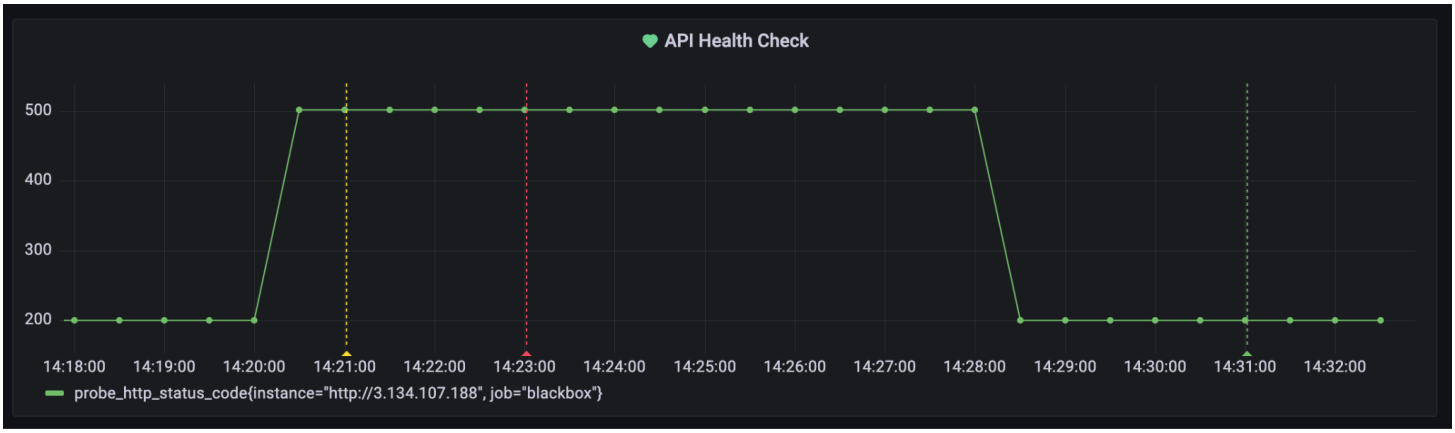
- *Release Manager: Because there will be code changes, so this person need to be aware of things that is going to be live.*
- *Monitoring engineer: There is a chance the hotfix can go wrong, it would be great if monitoring engineer can stand by.*

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: At this phrase there are lot of discussion, we need a person can know/contribute to the plan and divide/guide the entire teams in right direction* - *System architect: With the knowledge of current infrastructure, this person can have some suggestion and feedback to have better plan for scalable product.*
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: This guy should be involved because they know what is being released and how much impact of this. In worst case senario, they can have to roll back the release.*

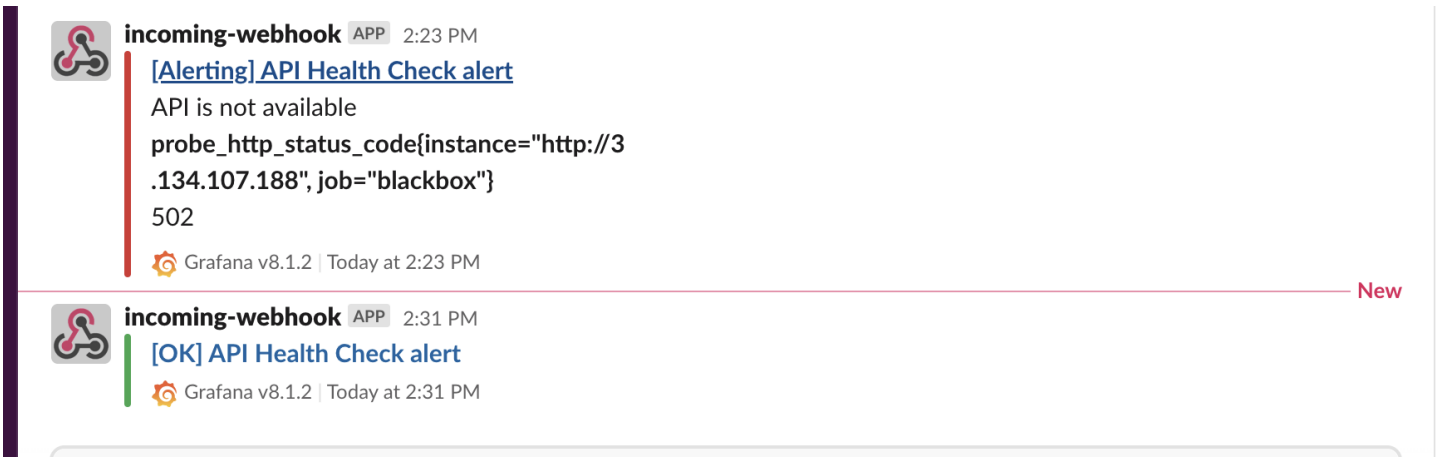
Team Formation and Workflow Identification

API Monitoring and Notifications

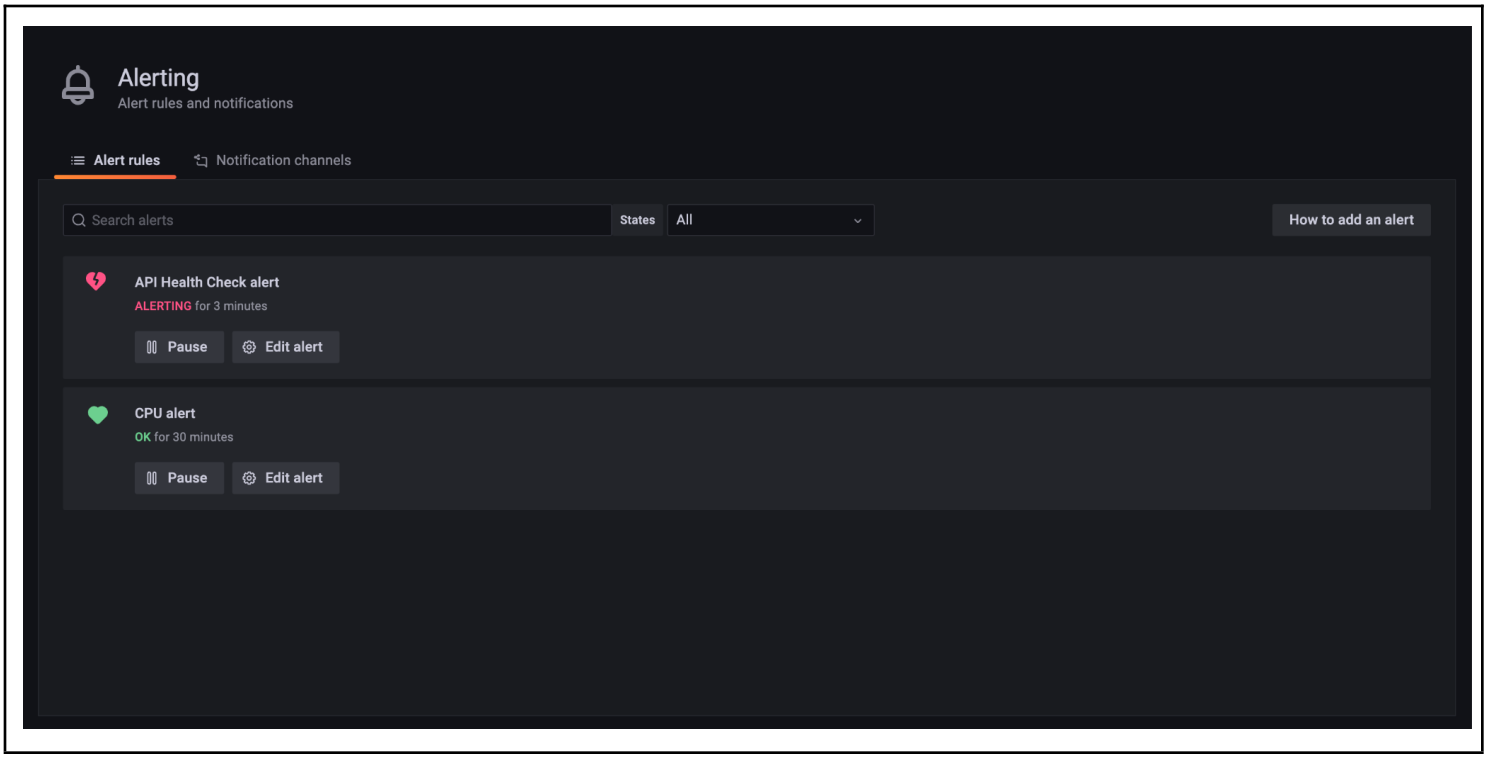
Display the status of an API endpoint: Provide a screenshot of the Grafana dashboard that will show at which point the API is unhealthy (non-200 HTTP code), and when it becomes healthy again (200 HTTP code).



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

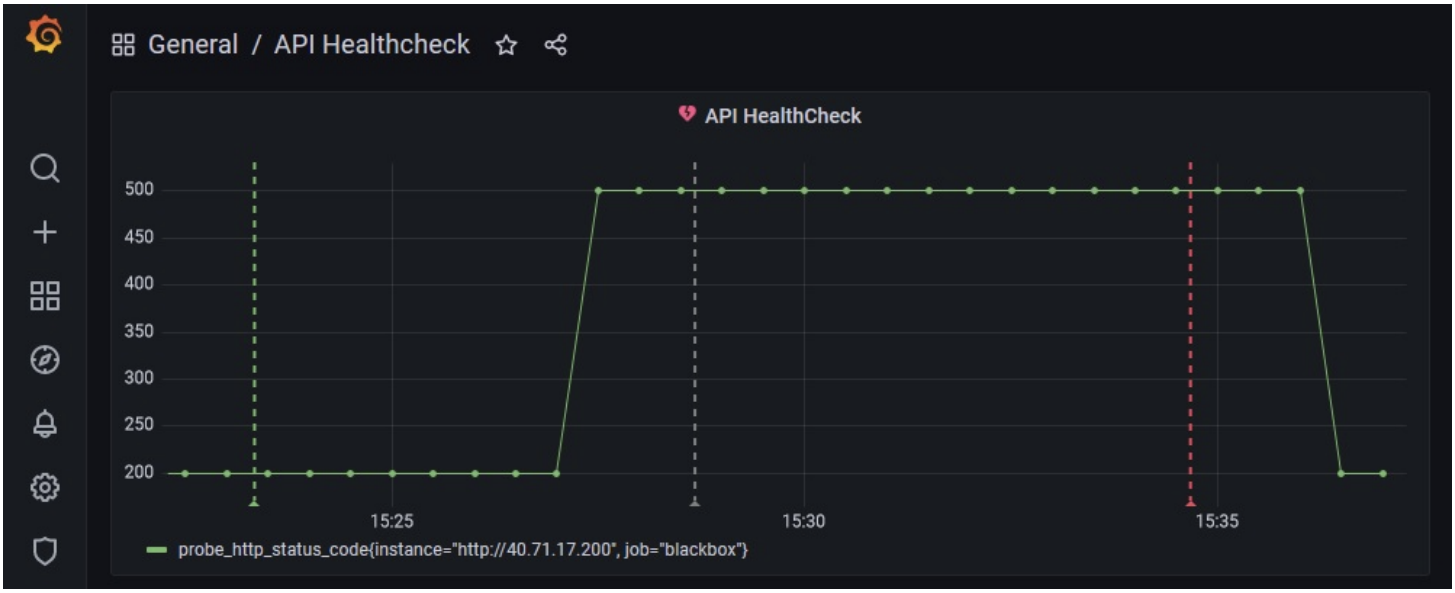


Configure alert rules: Provide a screenshot of the alert rules list in Grafana.


Alerting
Alert rules and notifications
Alert rules
Notification channels
Search alerts
States
All
How to add an alert
API Health Check alert
ALERTING for 3 minutes
Pause
Edit alert
CPU alert
OK for 30 minutes
Pause
Edit alert

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, API status was 500 code, it means API is not available*
- *At 15:36, it backs to normal status when API returns 200 code*

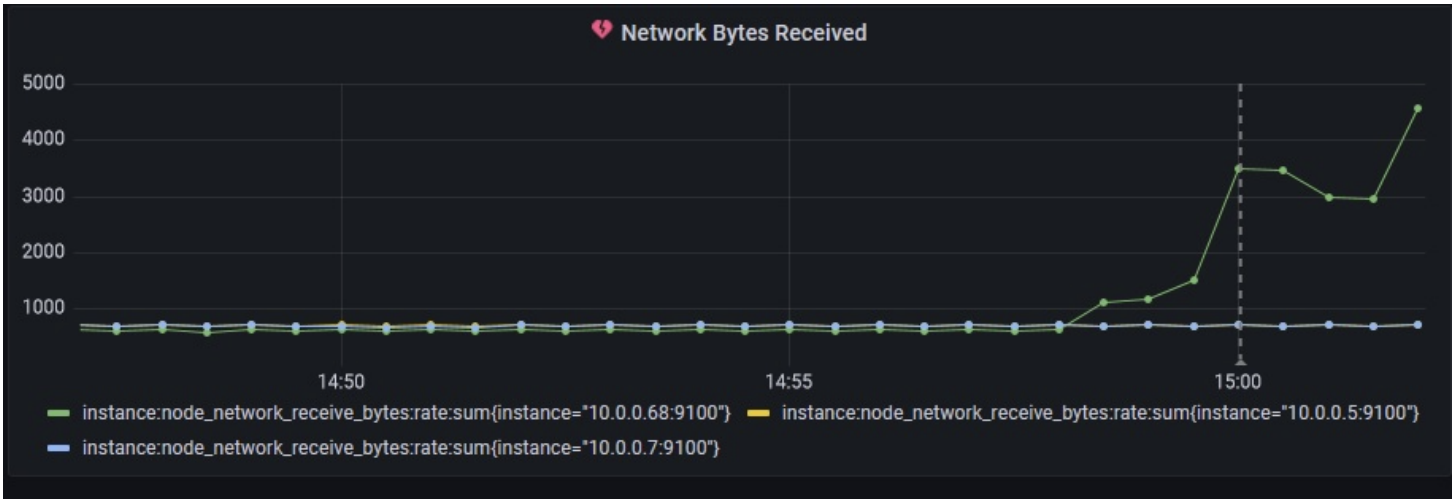
4b. If there was no SRE team, how would this outage affect customers?

- *Downtime: The system may be down for an extended period, resulting in customers being unable to access the service or application.*
- *Reputation Damage: An extended outage or data loss could damage the organization's reputation, causing customers to lose trust in the service or application.*

4c. What could be put in place so that the SRE team could know of the outage before the customer does?

We can have Synthetic Monitoring in place so that SRE team can forseen the outage before someone complaint about it

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*
- *Approximately 3500*

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

- *System Architect: this is the person which will create scalable infrastructure. So when there is a spike like this and it happens in pattern, they can think about scalabilty of the system.*
- *Monitoring Engineer: Usually first to know of an incident. This person would need to understand this graph and create proper alerts around these spikes*