

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`

```
Using username "ec2-user".
Authenticating with public key "EC2_key_pairs"
Last login: Mon Jan 16 13:05:29 2023 from dalb-188-101-022-141.188.101.pools.vod
afone-ip.de

┌─┴─┴─┴─┐
┌─┴─┴─┴─┐ Amazon Linux 2 AMI
└─┴─┴─┴─┘

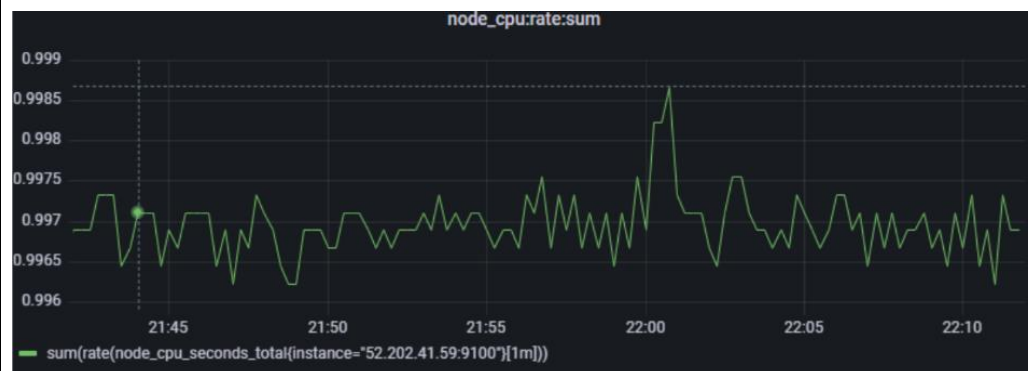
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-92-158 ~]$ sudo systemctl status node_exporter
Unit node_exporter.service could not be found.
[ec2-user@ip-172-31-92-158 ~]$ sudo systemctl status node-exporter
node-exporter.service - Prometheus Node Exporter Service
Loaded: loaded (/etc/systemd/system/node-exporter.service; enabled; vendor preset: disabled)
Active: active (running) since Mon 2023-01-16 20:25:58 UTC; 39s ago
Main PID: 2950 (node_exporter)
CGroup: /system.slice/node-exporter.service
└─2950 /usr/local/bin/node_exporter

Jan 16 20:25:58 ip-172-31-92-158.ec2.internal node_exporter[2950]: level=info ts=2023-01-16T20:25:58.494Z caller=node_exporter.go:112 collector=thermal_zone
Jan 16 20:25:58 ip-172-31-92-158.ec2.internal node_exporter[2950]: level=info ts=2023-01-16T20:25:58.494Z caller=node_exporter.go:112 collector=time
Jan 16 20:25:58 ip-172-31-92-158.ec2.internal node_exporter[2950]: level=info ts=2023-01-16T20:25:58.494Z caller=node_exporter.go:112 collector=timex
Jan 16 20:25:58 ip-172-31-92-158.ec2.internal node_exporter[2950]: level=info ts=2023-01-16T20:25:58.494Z caller=node_exporter.go:112 collector=rudp_queues
Jan 16 20:25:58 ip-172-31-92-158.ec2.internal node_exporter[2950]: level=info ts=2023-01-16T20:25:58.494Z caller=node_exporter.go:112 collector=uname
Jan 16 20:25:58 ip-172-31-92-158.ec2.internal node_exporter[2950]: level=info ts=2023-01-16T20:25:58.494Z caller=node_exporter.go:112 collector=vmstat
Jan 16 20:25:58 ip-172-31-92-158.ec2.internal node_exporter[2950]: level=info ts=2023-01-16T20:25:58.494Z caller=node_exporter.go:112 collector=xfs
Jan 16 20:25:58 ip-172-31-92-158.ec2.internal node_exporter[2950]: level=info ts=2023-01-16T20:25:58.494Z caller=node_exporter.go:191 msg="Listening on" address=:9100
Jan 16 20:25:58 ip-172-31-92-158.ec2.internal node_exporter[2950]: level=info ts=2023-01-16T20:25:58.494Z caller=tls_config.go:170 msg="TLS is disabled and it cannot be enabled on the fly." http2=false
[ec2-user@ip-172-31-92-158 ~]$
```

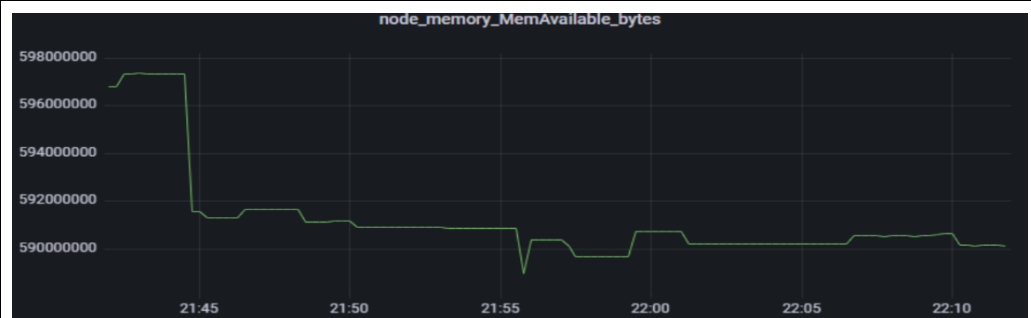
Host Metric (CPU, RAM, Disk, Network)

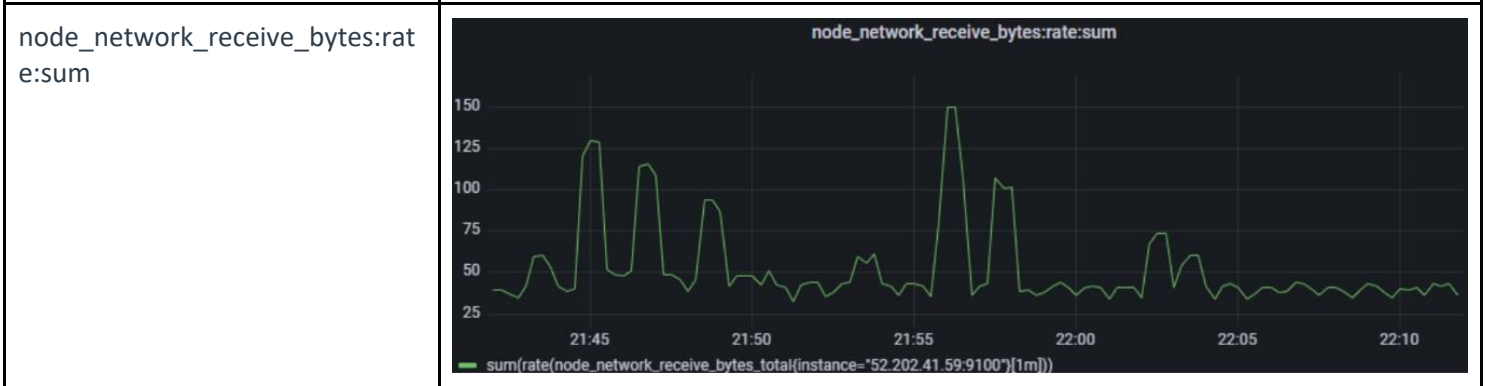
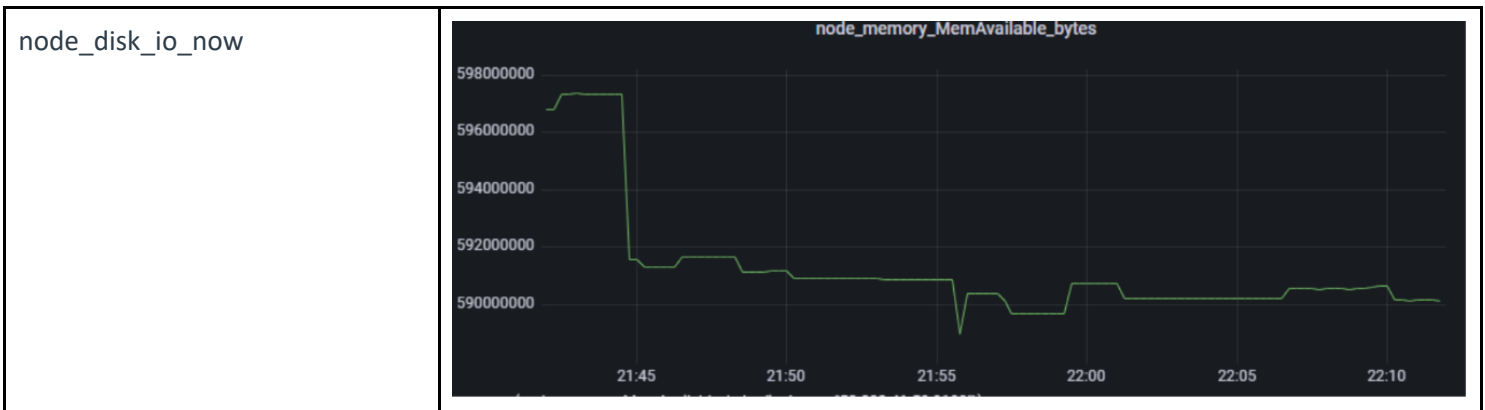
Dashboard

node_cpu:rate:sum



node_memory_MemAvailable_bytes





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.	<i>SRE team probably would contribute with their release manager and their monitoring engineer. The release manager oversees any code releases (including hotfixes) as part of his/her responsibility for the entire change management. Additionally, the monitoring engineer would support the procedure with continuous checks of monitoring and alerting.</i>
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.	<i>SRE team probably would involve their system architect as well as the infrastructure engineer. The infrastructure engineer offers support when dealing with questions around capacity planning. The system architect supports the team in creating robust and efficient system architectures that satisfy technical requirements and customer needs simultaneously.</i>
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?	<i>Its probably the monitoring engineer who is the first to know about the production issue. She/he will be the first to sort things out together with affected teams in production.</i>

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.

The screenshot shows an email interface for MailHog. The email is from "Grafana" <admin@grafana.localhost> with the subject "[FIRING:1] http200 webapps (http://52.202.41.59:5050 blackbox)" and to <example@email.com>. The email body is in HTML format and displays a Grafana alert firing. The alert is titled "Firing: 1 alert for alertname=http200 grafana_folder=webapps". It shows the alert is firing for the http200 alert. The value is B=0, C=1. The labels are alertname: http200, grafana_folder: webapps, instance: http://52.202.41.59:5050, and job: blackbox. There are buttons for Silence and Source. At the bottom, it says "Go to alerts page". The footer of the email says "Sent by Grafana v9.3.2 © 2022 Grafana Labs".

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



Alerting

Learn about problems in your systems moments after they occur

[Alert rules](#) [Contact points](#) [Notification policies](#) [Silences](#) [Alert groups](#) [Admin](#)

Search by data source

All data sources

Search by label

Q Search

State

Firing

Normal

Pending

Rule type

Alert

Recording

View as

Grouped

List

State

1 rule: 1 normal

+ New alert rule

Grafana

Alerts > webapps

1 rule | [Edit](#) [Filter](#)

State	Name	Health	Summary	Actions
Normal	http200	ok		View Edit Delete

Silence

Show state history

Evaluate Every 1m Data source Prometheus
For 5m

Matching instances

Search by label

Q Search

State

Normal 1

Alerting

Pending

NoData

Error

State Labels

Created

> Normal

alertname=http200

grafana_folder=Alerts

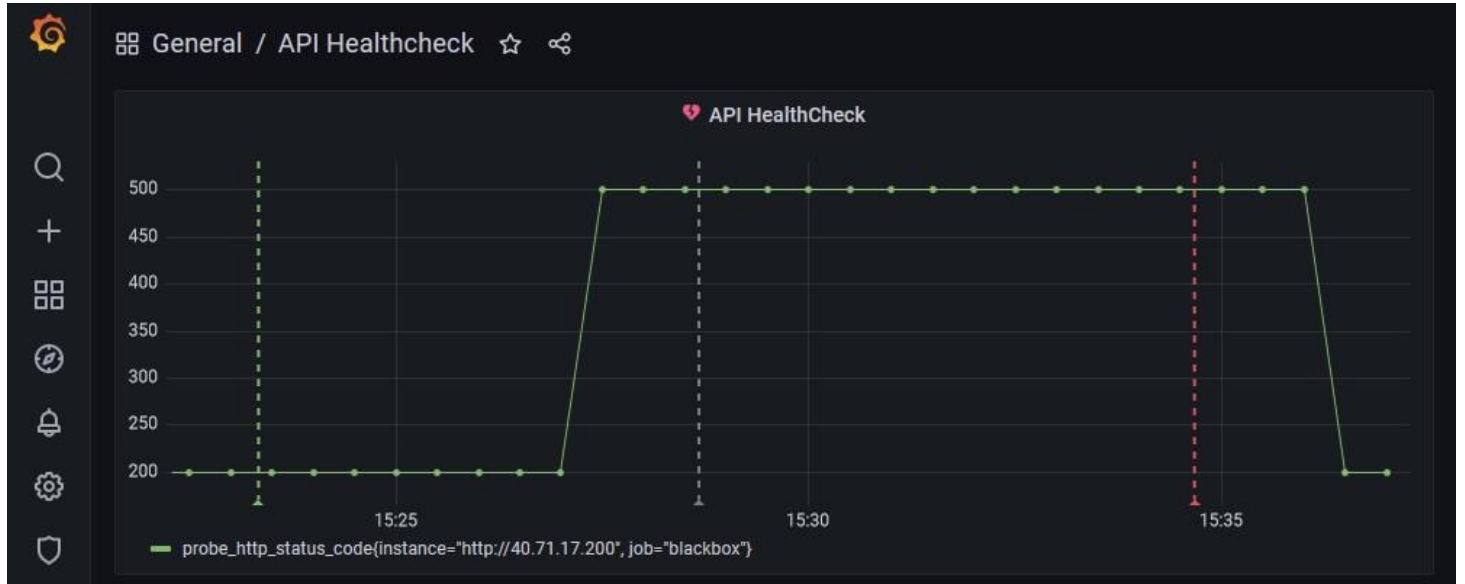
instance-http://52.202.41.59:8080

job=blackbox

-

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?

The service went down around 15:26 and was up again around 15:37.

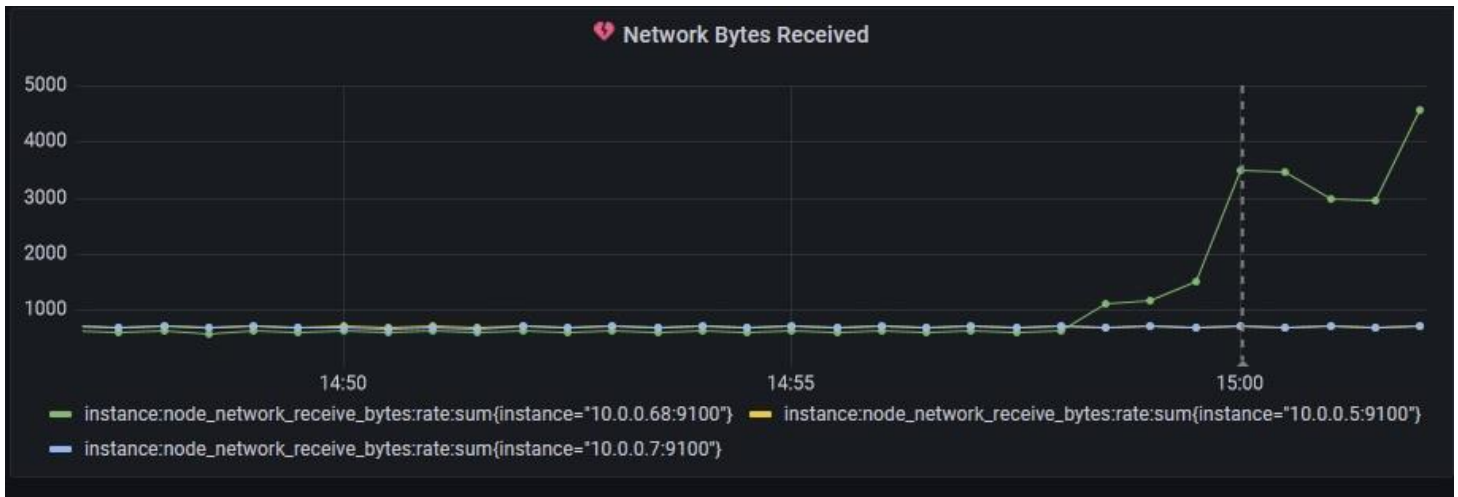
4b. If there was no SRE team, how would this outage affect customers?

Customers would have experienced a total service failure for around 11 minutes, since the server did not respond with 200 during that time.

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

Setup blackbox exporter to test the endpoint continuously, then build grafana dashboards plus alerts on top.

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)?

10.0.0.68 showed increased traffic higher than 3kb.

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

- SRE Monitoring Engineer, because he/she is responsible for the monitoring
- SRE Infrastructure Engineer, because he/she is responsible for the system infrastructure including network components
- optionally the SRE System Architect, since he/she might have a broader view with additional inputs