Observing Cloud Resources

*SRE Project Template*

# Categorize Responsibilities

| **Prometheus and Grafana Screenshots** | | |
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| 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 | | |
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| **Host Metric**  **(CPU, RAM, Disk, Network)** | **Dashboard** | |
| *CPU* |  | |
| *Disk IO* |  | |
| *Memory* |  | |
| *Network* |  | |
| **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. | | |
| 1. ***Release Manager: He would be responsible to take care of release, in case something goes bad, he can rollback to previous stable state.*** 2. ***Monitoring Engineer: He would monitor the impact of the new release, if the new fix has brought down the previously acknowledged issue or not.***   *Note: Apart from above 2 roles, some senior roles like* ***Team Lead*** *could also be involved to oversee the deployment and impact.* | | |
| 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. | | |
| 1. ***System Architect: He should be part of early meetings to figure out the required infrastructure/tools recommendations. This will help in cost analysis of the product. Also he will be responsible to provide high level designs and document technical/non-functional requirements that will be used as reference by implementation teams.*** 2. ***Team Lead: Team lead will plan the tasks and may create delivery timelines/schedules. He will make sure all impedance/blockers are clear for the team so that the team can focus on implementation.*** | | |
| 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: As the incident has already been detected by the monitoring team and this has caused some major issue, Release Manager first should be responsible to bring the system back to normal state using release rollback.*** | | |

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# Team Formation and Workflow Identification

| **API Monitoring and Notifications** | | |
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| 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). | | |
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| Create a notification channel: Provide a screenshot of the Grafana notification which shows the summary of the issue and when it occurred. | | |
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| Configure alert rules: Provide a screenshot of the alert rules list in Grafana. | | |
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# Applying the Concepts

| **Graph 1** | | |
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| 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? | | |
| ***Around 15:29 the http status returned is 500 which means api is down, it returned back to normal state at around 15:38.*** | | |
| 4b. If there was no SRE team, how would this outage affect customers? | | |
| ***Without a SRE team proactive monitoring of infrastructure would be a challenge, which resulted in customers most probably acknowledging the outage before the engineering team. This will have a negative impact on business.*** | | |
| 4c. What could be put in place so that the SRE team could know of the outage before the customer does? | | |
| ***Proper alerting and monitoring stack on infrastructure and applications will keep inform the engineering team about any potential outage or issue before it occurred. This give engineering team enough time to fix/mitigate the issue so that it does not propagate to end users/customers.*** | | |

| **Graph 2** | | |
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| 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 with ip:10.0.068* had the increase in traffic, the received bytes is in the range of 1000-4800. Spike can be observed around 14:58 (approx).** | | |
| 5b. Which team members on the SRE team would be interested in this graph and why? | | |
| ***Monitoring Engineer: He/She will keep an eye on possible upcoming issues, thus he/she keeps observe the increase bytes received either through graph or alerting.*** | | |

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