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* |  | |
| *Memory* |  | |
| *Disk* |  | |
| *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. | | |
| *Release Engineer and Monitoring Engineer would be involved in the process of an emergency hotfix release to the production.  Release Engineer is responsible for change management and code releases. He/She takes care of all code and environment dependencies to make sure deployment goes smooth. He/She takes care of communication as well. A monitoring engineer would take care of system stability with the help of dashboards and alerts using various metrics. He/She will notify the team if there are any red flags and based on those inputs developers and the release engineer can decide action points.* | | |
| 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 and System Architect should be invited to the meeting. The team lead manages the resources needed and can decide the scope and capacity required. Team lead has the vision to evaluate the project and time value. On the other hand, the System Architect is responsible for creating scalable infrastructure required for the new product. The system architect can evaluate the product build and technical resources required.* | | |
| 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? | | |
| *The Monitoring Engineer would be the primary resource from the SRE team, who will help with monitoring system performance and raising flags in case of any issues. The monitoring engineer checks the dashboards which fetch the information about system health using various metrics. The monitoring engineer also makes sure of managing alert rules. Based on inputs from the monitoring engineer, corrective actions or rollback decisions are taken.* | | |

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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? | | |
| *Between 15:25 to 15:30 the API endpoint is down, and after 15:35 the API becomes healthy again.* | | |
| 4b. If there was no SRE team, how would this outage affect customers? | | |
| *The customers would not be able to access the website, they will get an error with http status code 500.* | | |
| 4c. What could be put in place so that the SRE team could know of the outage before the customer does? | | |
| *The alert can be configured to notify the SRE Team via emails or slack notifications about the API endpoint throwing error.* | | |

| **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)? | | |
| *The instance 10.0.0.68 has the increase in traffic, and approximately 5000 bytes it had received.* | | |
| 5b. Which team members on the SRE team would be interested in this graph and why? | | |
| *The system architect and infrastructure engineer would be interested in this graph, because the alert threshold has been set to 3500 bytes and the network has recorded 2000 excessive bytes traffic. These two people will analyze the network activity and decide an action plan to handle it from the perspective of infrastructure and operations.* | | |

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