Observing Cloud Resources

*SRE Project Template*

# Categorize Responsibilities

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| **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 | |
| *[TODO: copy screenshot here]* | |
| **Host Metric**  **(CPU, RAM, Disk, Network)** | **Dashboard** |
| *Dashboard showing all metrics*  *Including alerts.* |  |
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| **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. *The release manager should be involved to handle:*  * *Change management to ensure that other parts of the organization is aware of the new release being rolled out.* * *The code that is rolled out is verified and ready.* * *Is in control of the roll out procedure as well as how to roll back if needed.*  1. *The monitoring engineer should be involved to:*  * *Create dashboards to monitor systems when the change is applied.* * *Create alerting channels and monitoring.* * *This engineer will also be the one that has the knowledge to see if all is well.* | |
| 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. *Team lead:*    1. *To keep all focused on the tasks.*    2. *Lay out the workflow for the team.*    3. *Coordinate tasks between team members.*    4. *Coordinate architecture changes.* 2. *System architect:*    1. *Develop a scalable infrastructure.*    2. *Document and describe the infrastructure including diagrams to visualize the solution.*    3. *Recommend new technologies with pros and cons.* | |
| 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 release engineer would know how to roll back the hot fix but he might need assistance from an infrastructure engineer. The release engineer has the big picture and knows the plans but the infrastructure engineer has hands on experience with the system and he could be the primary resource to locate and possible find and fix the culprit instead of doing a full roll back.* | |

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# Team Formation and Workflow Identification

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| **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). |
| *I wasn't able to kill the flask app. It would have been nice to know what to kill/crash.*  *ps -aux | grep -i flask gave no results.* |
| 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. |
| *My session crashed/timed out hence I didn't get this. Instead I added an image showing alerts received in slack.* |

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# Applying the Concepts

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| **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? |
| Service is up at 15:36. |
| 4b. If there was no SRE team, how would this outage affect customers? |
| *The monitoring engineer would notify the front line that a service has been down for a period.*  *If there were no SRE team this would not happen and the front line wouldn’t be able to communicate the incident to affected customers.* |
| 4c. What could be put in place so that the SRE team could know of the outage before the customer does? |
| *A monitoring service could be set up to monitor the system. If the service went down an alarm would be sent to the operations to take immediate action hopefully rectifying the issue before customers would notice.*  *The monitoring engineer would notify the incident and create the needed reports.* |

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| **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 10.0.0.68 received approximately 4500 bytes/s at 15:02. The biased traffic load is about 750 bytes/s* |
| 5b. Which team members on the SRE team would be interested in this graph and why? |
| *The team lead and monitoring engineer.*  *The team lead needs to know whether he is to allocate more resources to teams if things are turning bad and that more groups need to be involved.*  *The monitoring engineer would be able to quickly identify an incident or a traffic trend caused by other circumstances.* |

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