Two-weekly Report

Group number: **Group 6**
Project: **3**
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Over the last few weeks I have continued to work on the monitoring of the target machine. We have found that not only can we collect and visualise the metrics using monitoring tools, but we can also set up an alert manager to keep us informed of the status of the node.

So basically we can define a list of rules inside Prometheus. We can attach a flag to the rule depending on the current situation, and we can also regulate if we want to get all the information about the host's status change. For example, if 70% of memory is used, the high memory usage rule with the ẅarningflag will fire, if 85% of memory is used, the c̈riticalr̈ule will fire. The Alert Manager will catch all rules that fire and depending on the condition we have defined, we will receive the message by email or it is also possible to use the Slack communication platform.

Prometheus supports the creation of rules to monitor the machine, as well as the Prometheus and Alert Manager system itself. So far I have added the rules to control memory usage, CPU usage, disk space availability, node state, read/write latency and so on.

The Alert Manager has also been successfully configured to send an email when a rule with a critical flag is triggered. The content of the e-mail will look like the one in Figure 1.

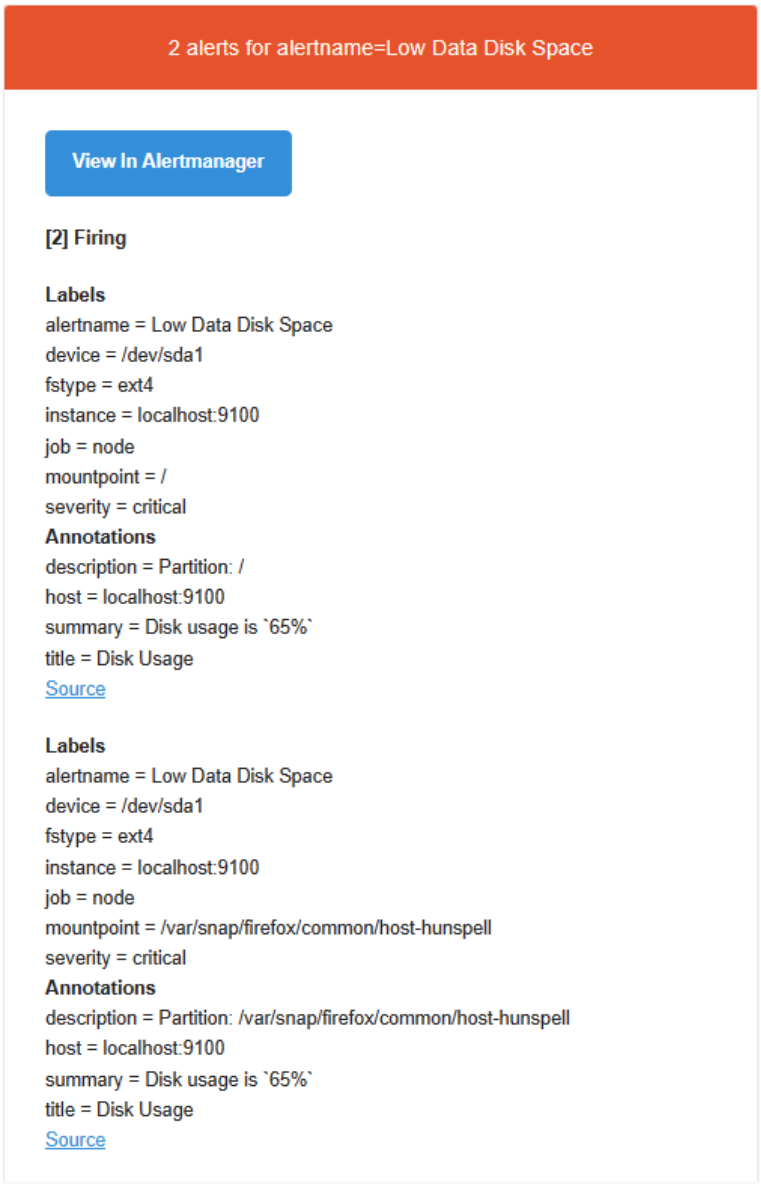

Figure 1: Alert message from Prometheus Alert Manager

Our team's desire is also to apply machine learning to predict, based on the metrics collected, whether the migration should take place. So my next tasks might be to help other members with this. We will also be working together on the written report of all our work.