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Curriculum
SE Foundations
Average: **108.76%**

0x18. Webstack monitoring

DevOps **SysAdmin** **monitoring**

By: Sylvain Kalache, co-founder at Holberton School

Weight: 1

Project over - took place from Oct 11, 2023 6:00 AM to Oct 12, 2023 6:00 AM

An auto review will be launched at the deadline

In a nutshell…

- **Auto QA review:** 4.5/12 mandatory
- **Altogether: 37.5%**
  - Mandatory: 37.5%
  - Optional: no optional tasks

Concepts

For this project, we expect you to look at these concepts:

- Monitoring (/concepts/13)
- Server (/concepts/67)

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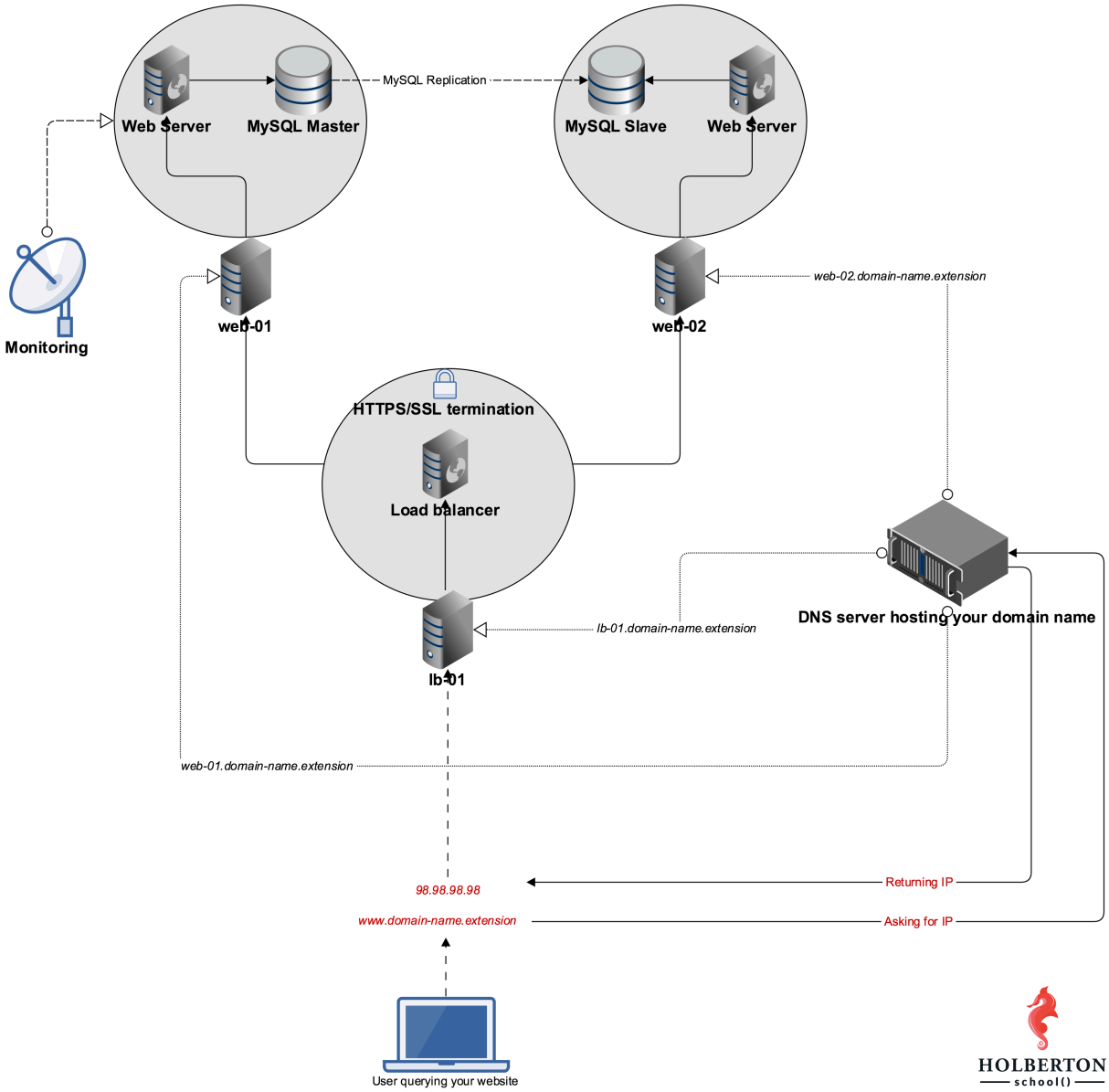
Monitoring



Background Context

"You cannot fix or improve what you cannot measure" is a famous saying in the Tech industry. In the age of the data-ism, monitoring how our Software systems are doing is an important thing. In this project, we will implement one of many tools to measure what is going on our servers.

Web stack monitoring can be broken down into 2 categories:

- Application monitoring: getting data about your running software and making sure it is behaving as expected
- Server monitoring: getting data about your virtual or physical server and making sure they are not overloaded (could be CPU, memory, disk or network overload)

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Resources

Read or watch:

- What is server monitoring (/rltoken/km_XUDAfXEBoXZQsIWEo5Q)
- What is application monitoring (/rltoken/z9jsikINjrsUo2QY5_Xz8g)
- System monitoring by Google (/rltoken/_8KIbIUNzMgKi_LiGMBWAw)
- Nginx logging and monitoring (/rltoken/V3GsrDcMHPdgrizShj4RCg)

Learning Objectives

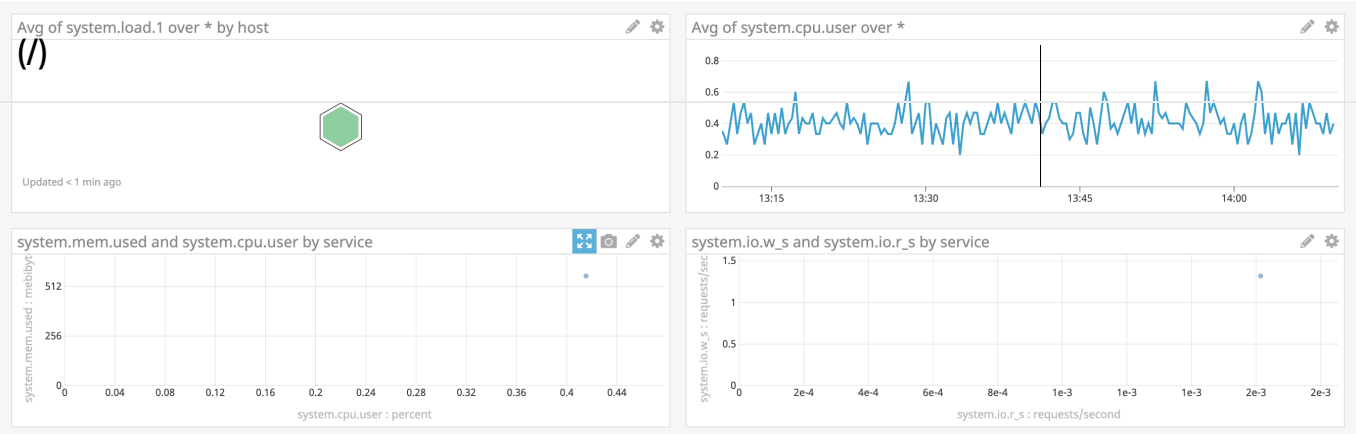
At the end of this project, you are expected to be able to explain to anyone (/rltoken/Bd9r8twsVT3S_8j7-kOLrg), **without the help of Google**:

General

- Why is monitoring needed
- What are the 2 main area of monitoring
- What are access logs for a web server (such as Nginx)
- What are error logs for a web server (such as Nginx)

Copyright - Plagiarism

- You are tasked to come up with solutions for the tasks below yourself to meet with the above learning objectives.
- You will not be able to meet the objectives of this or any following project by copying and pasting someone else's work.
- You are not allowed to publish any content of this project.
- Any form of plagiarism is strictly forbidden and will result in removal from the program.



- Sign up for Datadog - **Please make sure you are using the US website of Datagog (https://app.datadoghq.com)**
- Use the **US1** region
- Install `datadog-agent` on `web-01`
- Create an `application key`
- Copy-paste in your Intranet user profile (here (/rltoken/elXu5CcaGpeK7GxerBb7wQ)) your DataDog `API key` and your DataDog `application key`.
- Your server `web-01` should be visible in Datadog under the host name `XX-web-01`
  - You can validate it by using this API (/rltoken/5BtVPmgzhb96y7jZDGGHOQ)
  - If needed, you will need to update the hostname of your server

Repo:

- GitHub repository: `alx-system_engineering-devops`
- Directory: `0x18-webstack_monitoring`

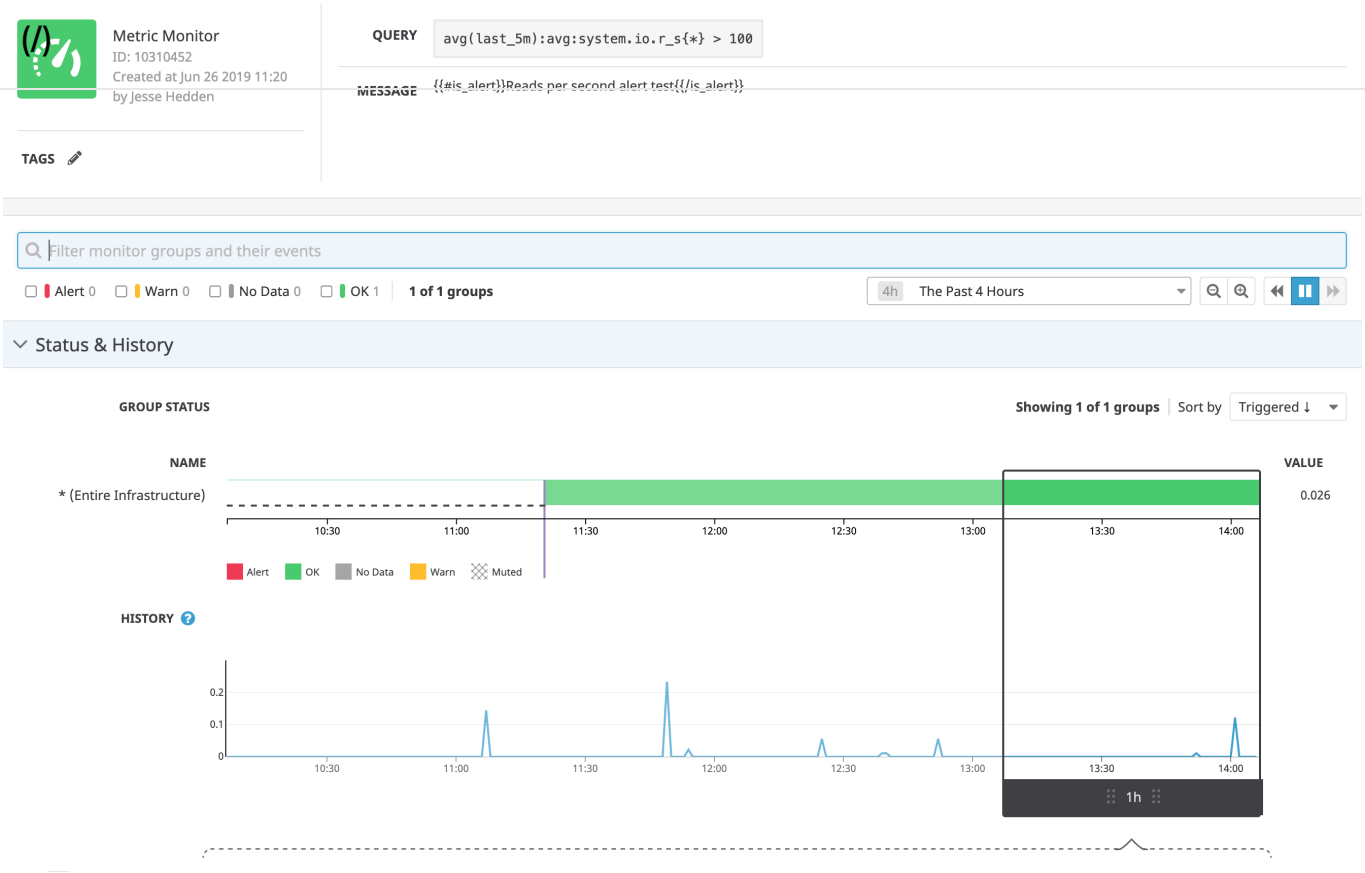
Done! | Help | Check your code | Get a sandbox | QA Review

1. Monitor some metrics

mandatory

Score: 0.0% (*Checks completed: 0.0%*)

Among the litany of data your monitoring service can report to you are system metrics. You can use these metrics to determine statistics such as reads/writes per second, which can help your company determine if/how they should scale. Set up some `monitors` within the `Datadog` dashboard to monitor and alert you of a few. You can read about the various system metrics that you can monitor here: System Check (/rltoken/4RPOEVDTqKXuvyU4Gkj2Bw).



- Set up a monitor that checks the number of read requests issued to the device per second.
- Set up a monitor that checks the number of write requests issued to the device per second.

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Done? | Help | Check your code | Ask for a new correction | Get a sandbox | QA Review

2. Create a dashboard

mandatory

Score: 100.0% (*Checks completed: 100.0%*)

Now create a dashboard with different metrics displayed in order to get a few different visualizations.

- Create a new `dashboard`
- Add at least 4 `widgets` to your dashboard. They can be of any type and monitor whatever you'd like
- Create the answer file `2-setup_datadog` which has the `dashboard_id` on the first line. **Note**: in order to get the id of your dashboard, you may need to use Datadog's API (/rltoken/QhlPcQqUocwWcOkZ9s4mWQ)

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- File: `2-setup_datadog`

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Done! | Help | Check your code | Get a sandbox | QA Review