

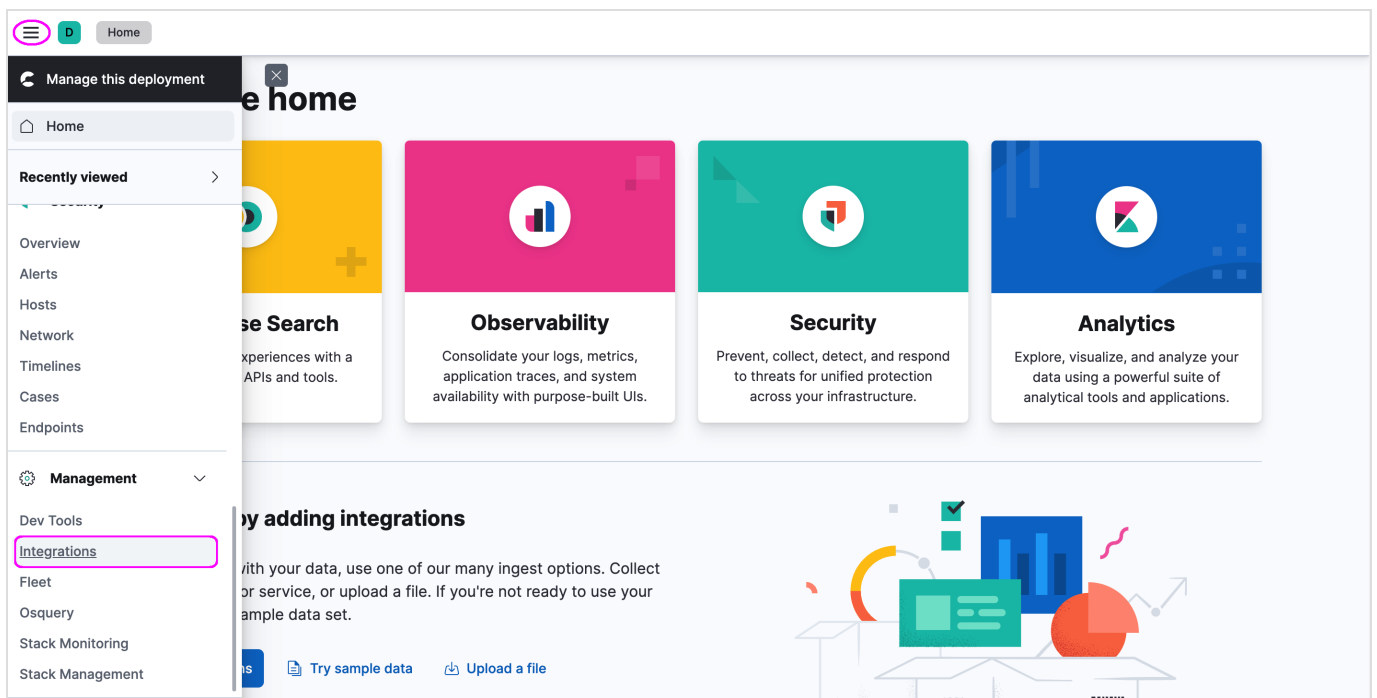
Lab 3: Metrics

Objective:

In this lab, you will explore how to collect system metrics with Elastic Agent and index them into Elasticsearch. You will also explore Kibana dashboards and see you can monitor both system and Nginx metrics.

1. When you add the Nginx integration, by default it also installs the system integration. Since you have already enrolled an agent for the Nginx integration in the previous lab, the agent is actually collecting metrics for both integrations. Let's take a closer look at the system integration.

First, select **Integrations** from the main menu in **Kibana**.



2. Then, select the **Installed integrations** tab and access the **System** integration. Note that the **System** integration also collects both logs and metrics by default, like the **Nginx** integration.

Integrations

Choose an integration to start collecting and analyzing your data.

Browse integrations **Installed integrations**


All installed **5**


Updates available **0**


Search for integrations


Only installed Elastic Agent integrations are displayed.


To learn more about integrations and the Elastic Agent, read our [announcement blog post](#).

**Elastic APM**
Ingest APM data

**Elastic Agent**
Collect logs and metrics from Elastic Agents.

**Fleet Server**
Centrally manage Elastic Agents with the Fleet Server integration


**Nginx**
Collect logs and metrics from Nginx HTTP servers with Elastic Agent.

**System**
Collect system logs and metrics from your servers with Elastic Agent.

3. On the **System** integration page, access **Integration policies** to confirm that one agent is already enrolled.

Integrations System [View deployment details](#)

[Browse all integrations](#)




System

Elastic Agent

Version 1.6.4 | Agent policies 1 | [Add System](#)

Overview **Integration policies** Assets Settings

Integration policy	Version	Agent policy	Last updated by	Last updated	Agents	Actions
system-1	v1.6.4	Agent policy... rev. 2	 2413852628	10 minutes ago	1	...

Rows per page: 20

[1](#)

4. Now, select the **Edit integration** action to check the **System** integration configurations.

System Elastic Agent

Version 1.6.4 Agent policies 1 Add System

Overview Integration policies Assets Settings

Integration policy	Version	Agent policy	Last updated by	Last updated	Agents	Actions
system-1	v1.6.4	Agent policy... rev. 2	2413852628	10 minutes ago	1	Add agent Edit integration Upgrade integration policy Delete integration

Rows per page: 20

5. Since we are not interested in Windows event logs, disable the collection of this type of logs and click **Save integration**.

Integrations System system-1 View deployment details

Cancel

Edit System integration

Agent policy Agent policy 1

Modify integration settings and deploy changes to the selected agent policy.

Integration settings

Choose a name and description to help identify how this integration will be used.

Integration name system-1

Description Optional

> Advanced options

☒ Collect logs from System instances

☐ Collect events from the Windows event log

☒ Collect metrics from System instances

☐ Collect logs from third-party REST API (experimental)

Cancel Save integration

You'll be warned that this change affects one agent. Click **Save and deploy changes**.

Save and deploy changes

This action will update 1 agent

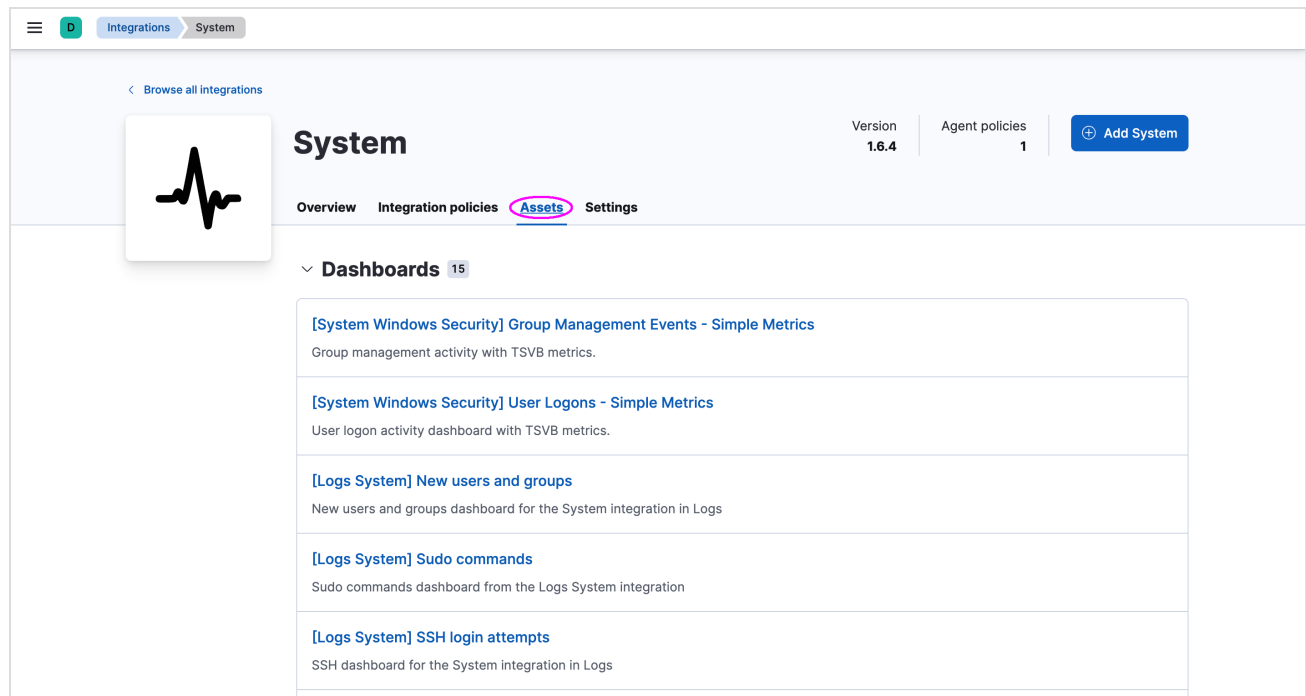
Fleet has detected that the selected agent policy, **Agent policy 1**, is already in use by some of your agents. As a result of this action, Fleet will deploy updates to all agents that use this policy.

This action can not be undone. Are you sure you wish to continue?

Cancel

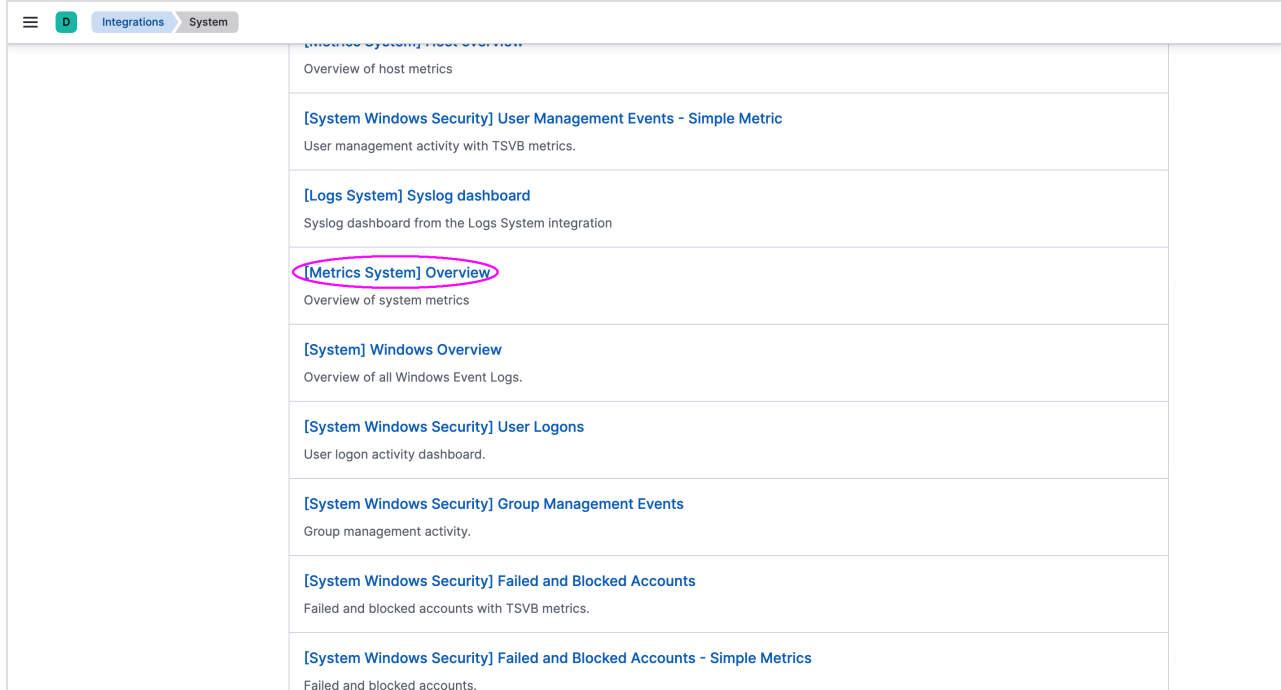
Save and deploy changes

6. Next, select **Assets** to see the available dashboards for the system integration.

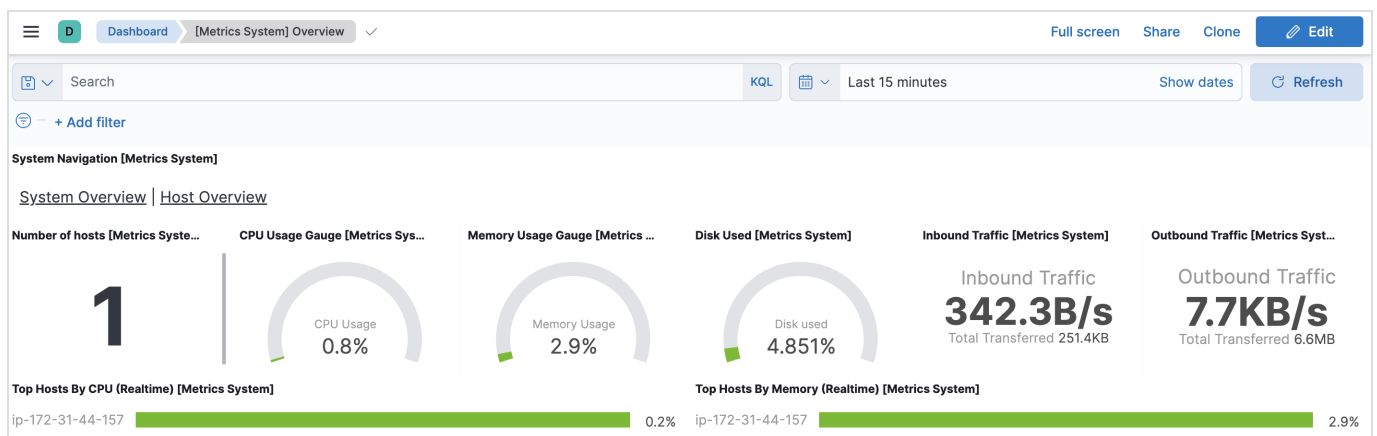


The screenshot shows the Fleet web interface. At the top, there's a navigation bar with 'Integrations' and 'System' tabs. Below this, a header section for the 'System' integration includes a version '1.6.4' and 'Agent policies 1'. A blue 'Add System' button is on the right. The main content area has a sidebar with 'Overview', 'Integration policies', 'Assets' (highlighted with a red circle), and 'Settings'. The 'Assets' tab is active, showing a list of dashboards under the heading 'Dashboards 15'. The list includes: '[System Windows Security] Group Management Events - Simple Metrics', '[System Windows Security] User Logons - Simple Metrics', '[Logs System] New users and groups', '[Logs System] Sudo commands', and '[Logs System] SSH login attempts'. Each item has a brief description of the dashboard's content.

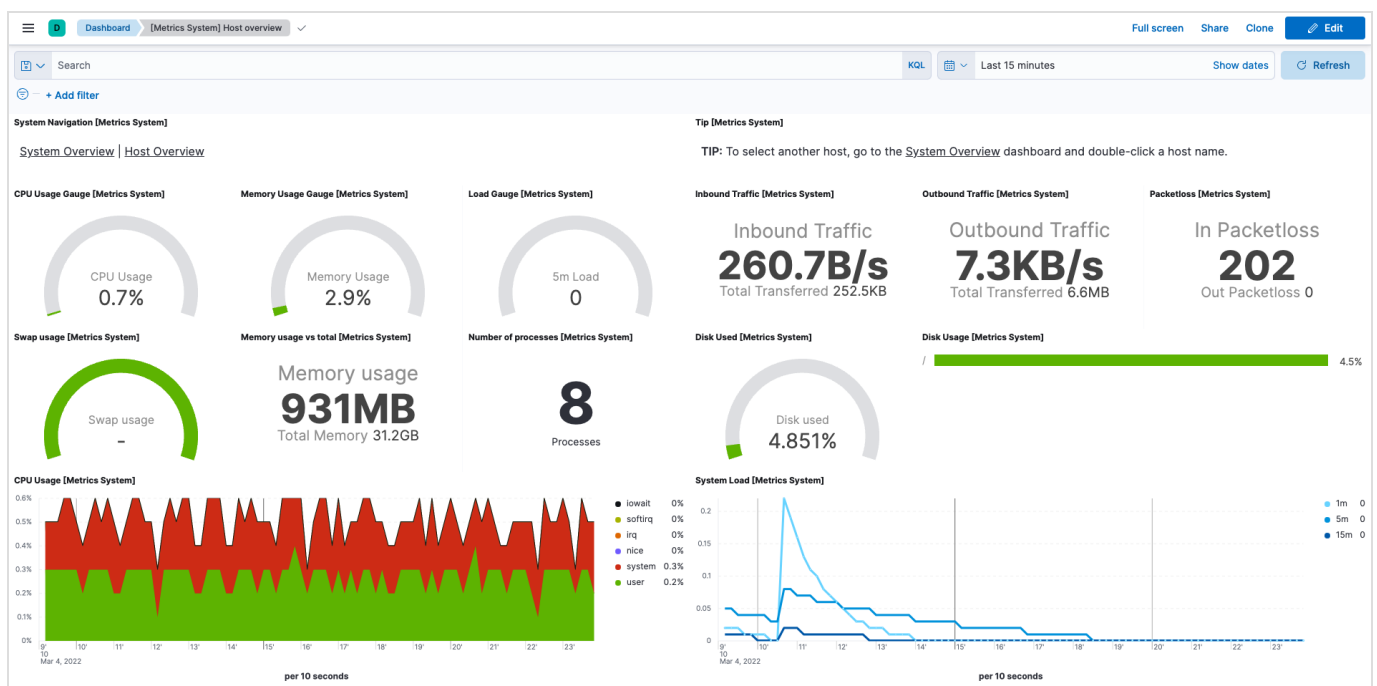
7. Scroll down and open the **[Metrics System] Overview** dashboard.



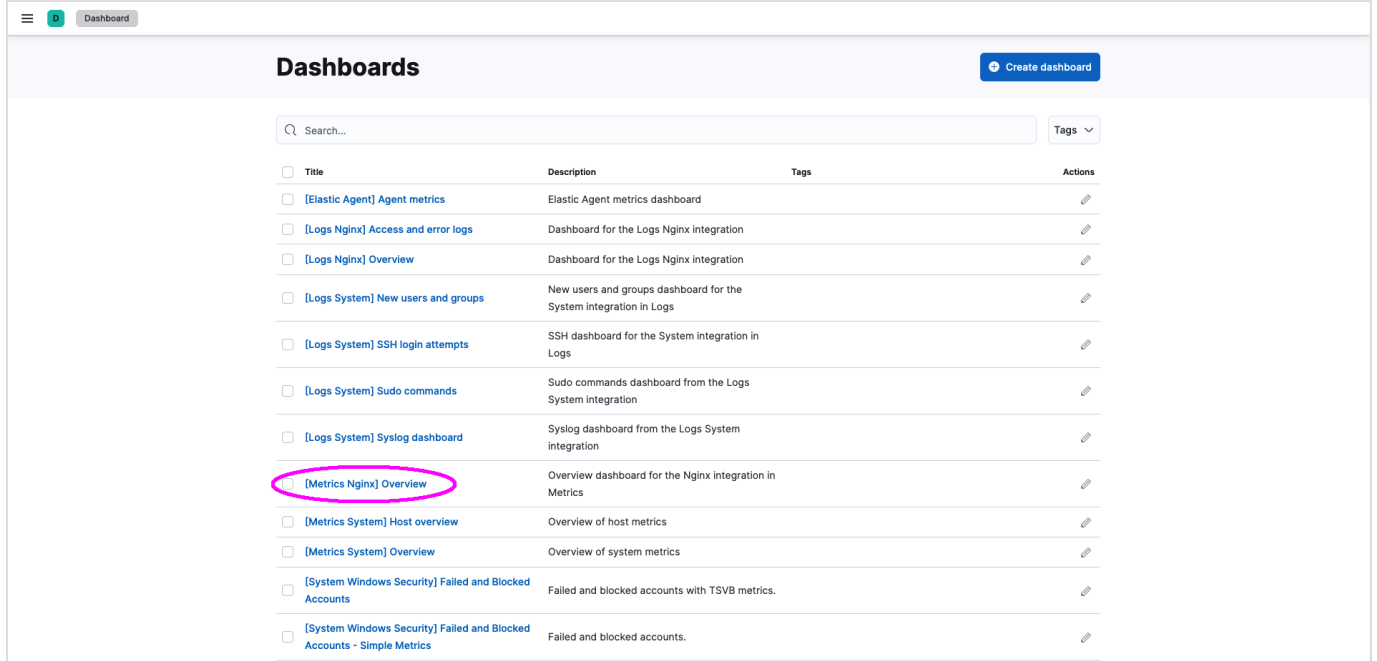
You will see something similar to this dashboard:



8. Click **Host Overview** at the top of the current dashboard to see a dashboard with more information that Elastic Agent collected from your lab environment host.



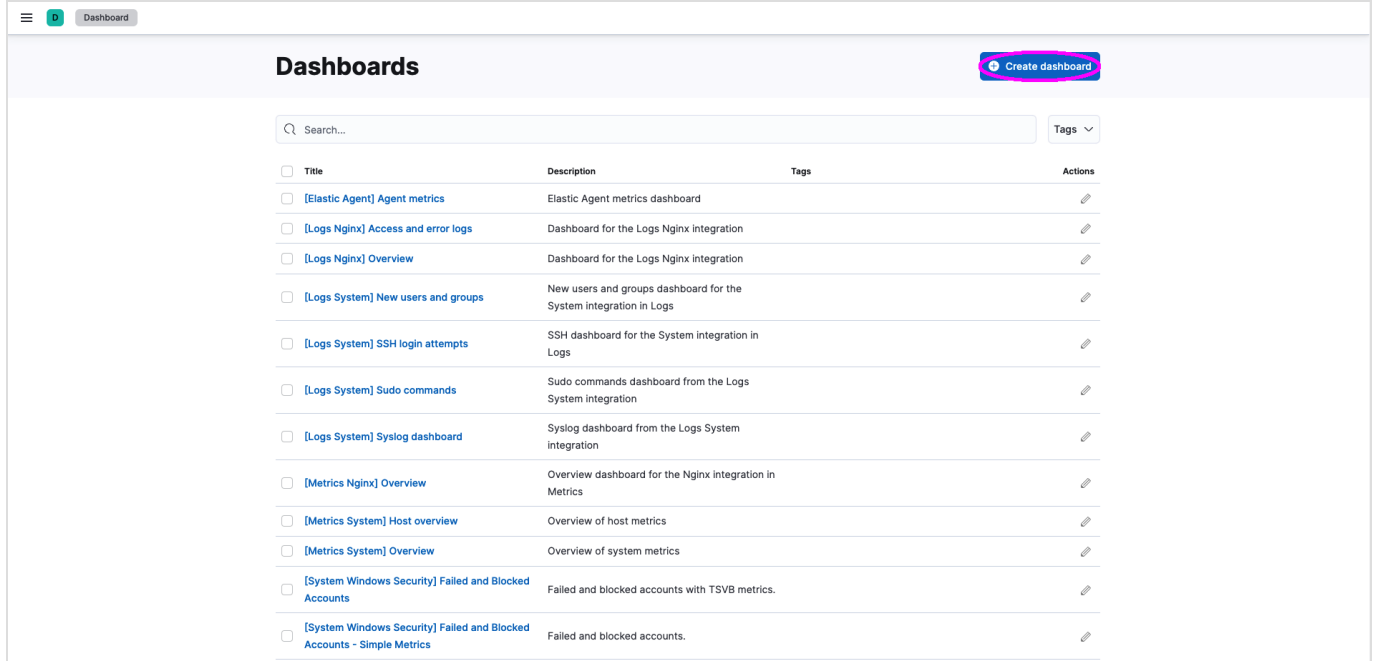
9. Go back to the Kibana dashboards overview and open the **[Metrics Nginx] Overview** dashboard.



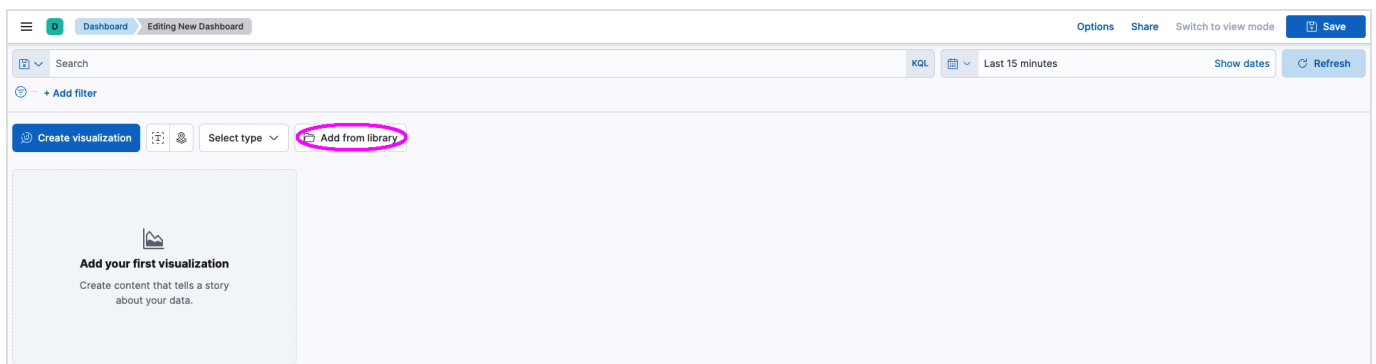
You will see something similar to this dashboard:



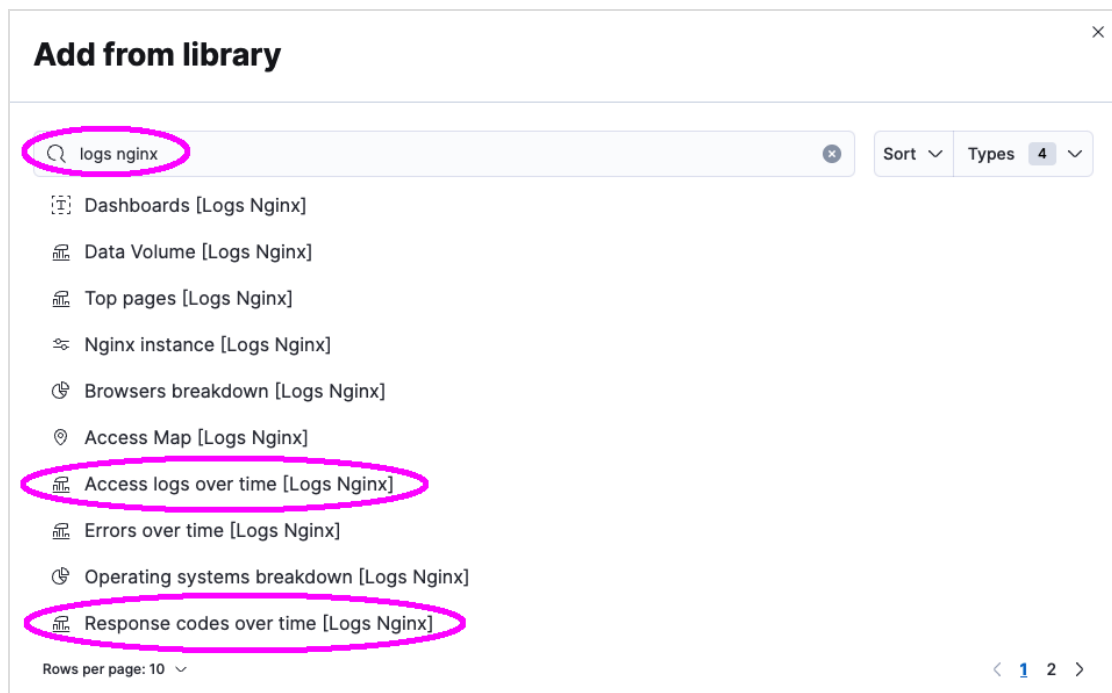
- Go back to the Kibana dashboards overview and click **Create dashboard**. You will create a dashboard to compare the Nginx logs and metrics collected by Elastic Agent.



Click **Add from library** to start adding visualizations to your dashboard.



Use the query bar to filter by **logs nginx** visualizations and add the following logs visualizations: **Access logs over time** and **Response codes over time**.



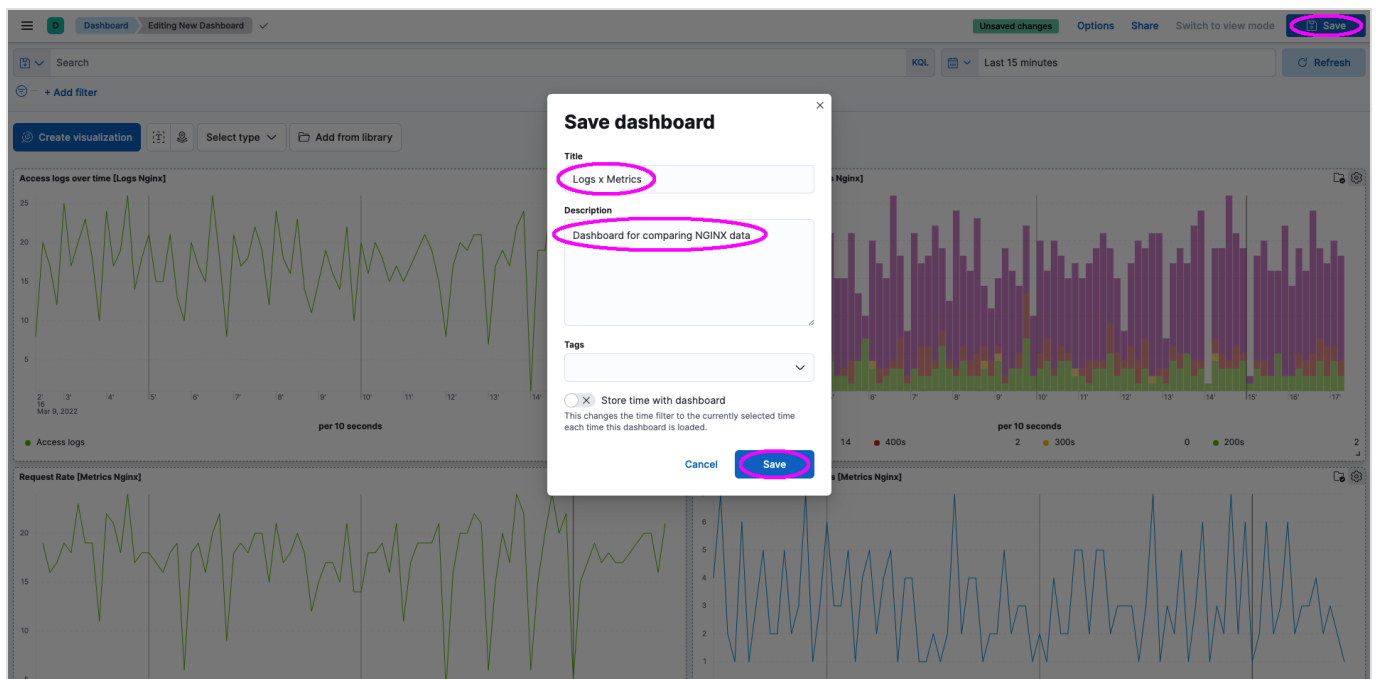
Now filter by **metrics nginx** visualizations to add the following metrics visualizations: **Request Rate** and **Reading / Writing / Waiting Rates**.

Add from library

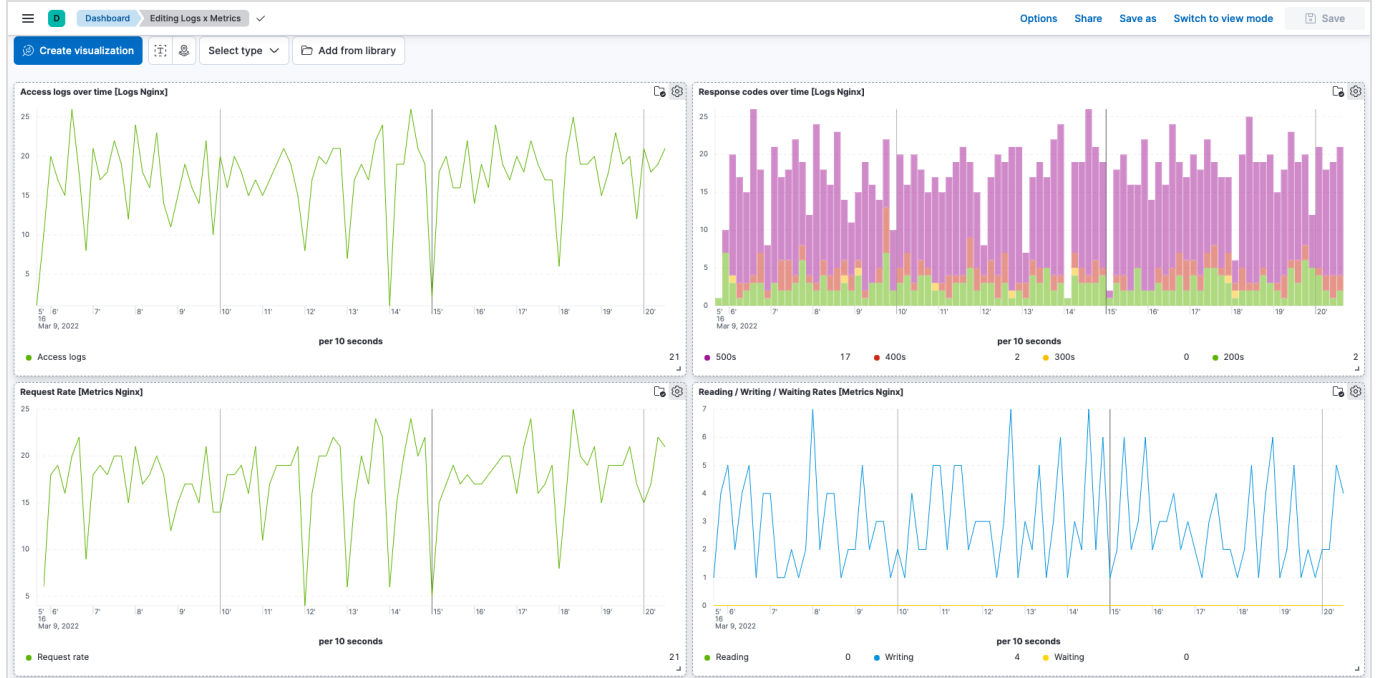
metrics nginx

- Active connections [Metrics Nginx]
- Request Rate [Metrics Nginx]
- Total requests [Metrics Nginx]
- Processed requests [Metrics Nginx]
- Drops Rate [Metrics Nginx]
- Heartbeat / Up [Metrics Nginx]
- Nginx instance [Metrics Nginx]
- Accepts and Handled Rate [Metrics Nginx]
- Reading / Writing / Waiting Rates [Metrics Nginx]

Close the **Add from library** dialog and save your dashboard as **Logs x Metrics**.



Your dashboard shows Nginx logs and metrics:



Notice that you can use both logs and metrics to check how many requests per seconds you have, as shown in **Access logs over time** and **Request Rate** visualizations. The open source version of Nginx does not provide metrics about response codes, but you can use Elastic Agent to get this information from Nginx logs, as you can see in the **Response codes over time** visualization. With Nginx logs you can also check the location, operating system, browser, duration, and many other information about the requests. However, Nginx logs do not tell you how many connections were accepted, handled, and dropped. In this case, you can use Elastic Agent to collect this information as well as the number of active connections and how many connections are reading, writing, and waiting, as you can see in the **Reading / Writing / Waiting Rate** visualization.

✓ Summary:

In this lab, you collected system and Nginx metrics with Elastic Agent and indexed them into Elasticsearch. You also explored Kibana dashboards and saw how you can monitor these metrics.