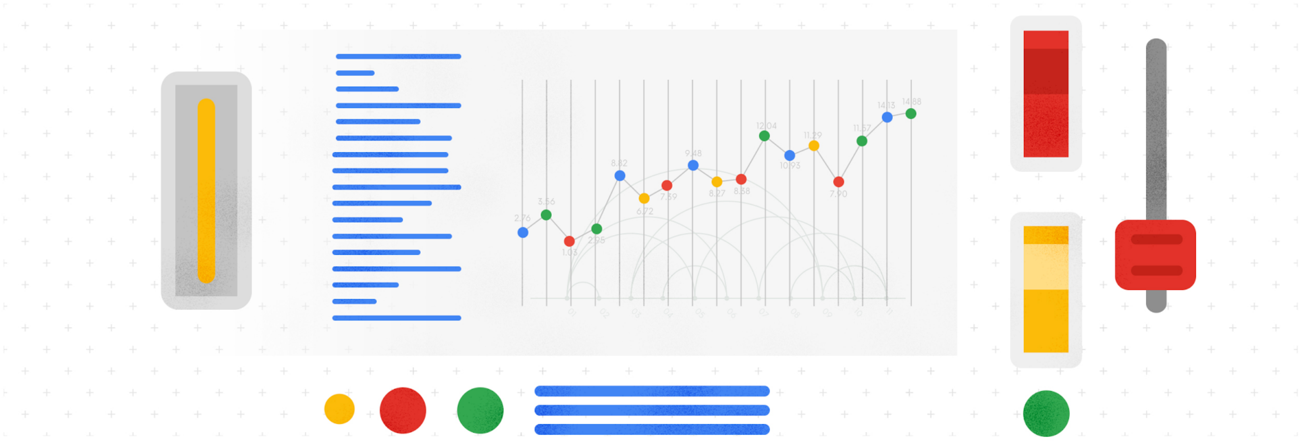
MANAGEMENT TOOLS

Use the Dashboard API to build your own monitoring dashboard



Charles Baer

Monitoring UI, use the dashboards API to download the JSON configuration, then use

The Cloud Monitoring API provides a resource called projects.dashboards which offers a familiar set of methods: create, delete, get, list, and patch. The REST API accepts JSON payloads, which you can use to create dashboards, update existing dashboards or delete dashboards. Using the API requires a basic understanding of Cloud Monitoring dashboards. For details about creating dashboards in the Monitoring console, you can read the Creating charts section in the docs to find all the details.

The dashboard JSON payload

In order to create a dashboard via the dashboards API, you need to define several objects in the JSON payload data. This part is easy if you call the API to export the JSON configuration from an existing dashboard.

Here's an example JSON payload:

```
{
  "displayName": "Data Processing Dashboard",
  "gridLayout": {
    "columns": "2",
    "widgets": [
      {
        "title": "Dataflow (traffic)",
        "xyChart": {
          "dataSets": [
            {
```

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```
                  "scale": "LINEAR"
```

```
            ]
        }
    }
```

There are several structures in the dashboard data model to understand:

- **displayName**—the human-readable name of the dashboard
- **gridLayout, rowLayout, columnLayout**—the container for the widgets
- **widgets**—the container for the chart items
- **xyCharts**—a chart model that displays data on a 2D (X and Y axes) plane
- **dataSets**—data for the chart object, which includes the details used to gather the specific data in a timeSeriesFilter object, including the metric name, metric filters and how the metric is aggregated.
- **xAxis, yAxis**—definitions affecting the presentation of the axes
- **chartOptions**—definitions affecting the mode of the chart

Building the dashboard JSON payload the easy way

A simple approach to building a dashboard configuration is to first create a dashboard in the Cloud Monitoring console, then use the dashboards API to export the JSON

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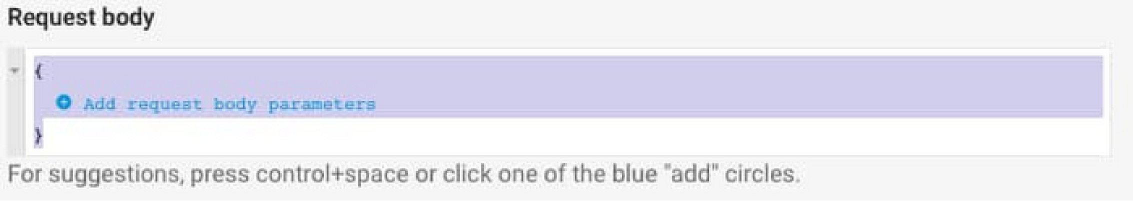
method. Note that you'll need to have a Cloud Monitoring Workspace defined and the

1. Create the dashboard, click the blue “TRY IT!” button to open the “Try this API” feature on the right-hand side of the projects.dashboards.create method.

2. Enter a value for the parent input form in the pattern “projects/YOUR_PROJECT_ID,” replacing your own GCP project ID that contains the Cloud Workspace where you want to create the dashboard for the “YOUR_PROJECT_ID” string value.

3. Highlight the default values in the “Request Body” input form, then copy/paste the JSON configuration for the dashboard.

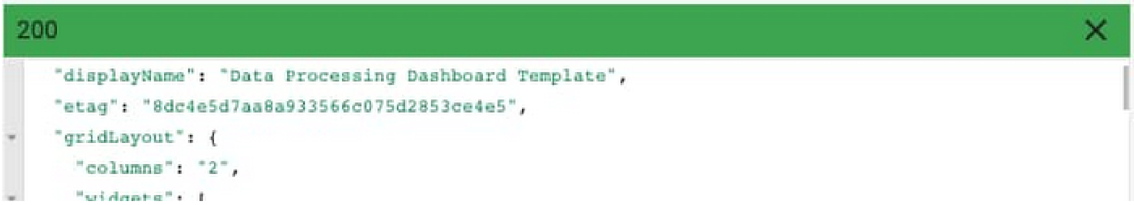


Request body

```
{
  Add request body parameters
}
```

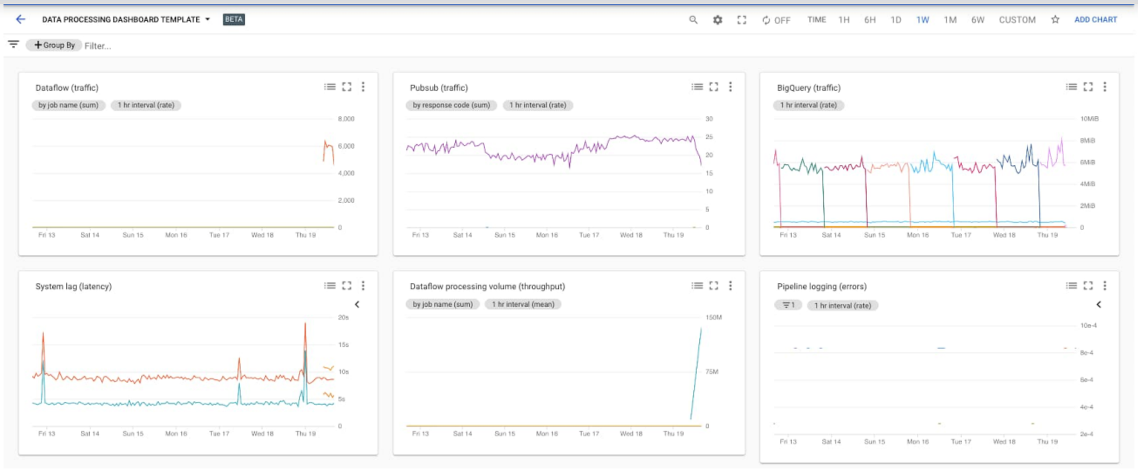
For suggestions, press control+space or click one of the blue "add" circles.

4. Click the “EXECUTE” button at the bottom of the page. If all goes well, you should see a green HTTP “200” response code, along with the JSON description of the dashboard you just created.



200

```
  "displayName": "Data Processing Dashboard Template",
  "etag": "8dc4e5d7aa8a933566c075d2853ce4e5",
  "gridLayout": {
    "columns": "2",
    "widgets": [
```



Exporting an existing dashboard

A common use case for this API is to export existing dashboard configurations, which can then be used to create a dashboard in another Workspace. You can export the configuration by calling the projects.dashboards.get method with the name of the dashboard.

1. Open the projects.dashboards.get API documentation and click the blue “TRY IT!” button, which opens the “Try this API” feature on the right-hand side of the page.

2. Enter a value for the parent input form in the pattern “projects/YOUR_PROJECT_ID/dashboards/YOUR_DASHBOARD_ID” replacing the host

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```
  "name": "projects/52154416267/dashboards/e6ee2110-efc0-431e-bc1a-ce26
  "displayName": "Data Processing Dashboard",
  "etag": "7ae2443361aad9ac1cefda03a45c56e1",
  "gridLayout": {
    "columns": "2",
  ....
   }
}
```

4. Save this JSON configuration as a file. To use it to create a new dashboard, you have to make three changes to the JSON configuration:
a. Remove the “name” key/value pair
b. Remove the “etag” key/value pair
c. Update the “displayName” key/value to reflect the name for your new dashboard

5. Open the projects.dashboards.create API documentation and click the blue “TRY IT!” button which opens the “Try this API” feature on the right-hand side of the page.

6. Enter a value for the parent input form in the pattern “projects/YOUR_PROJECT_ID,” replacing your own GCP project ID that contains the Cloud Workspace where you want to create the dashboard for the “YOUR_PROJECT_ID” string value.

7. Click the “EXECUTE” button at the bottom of the page. If all goes well, you should see a green HTTP “200” response code along with the JSON description of the dashboard that you just created. The JSON snippet below shows the name of the dashboard which you'll

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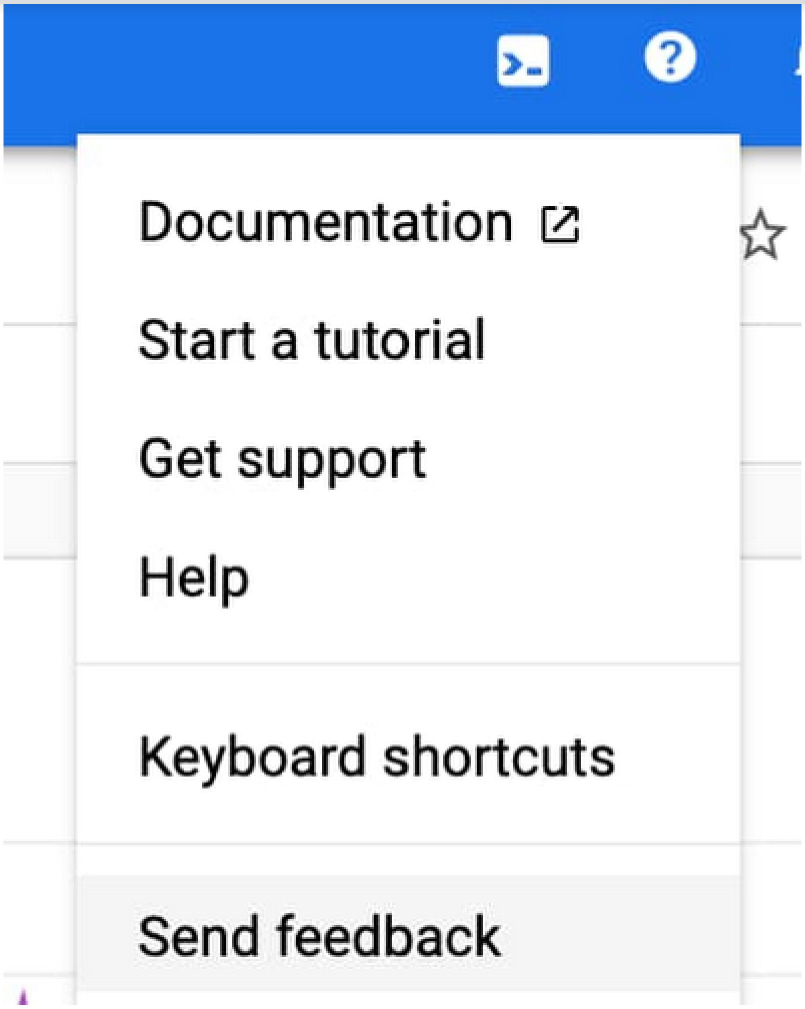
Managing Dashboards documentation. We're working on features to make the API even



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