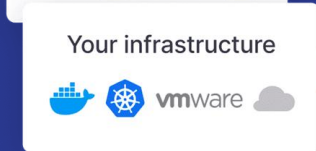
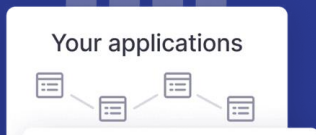
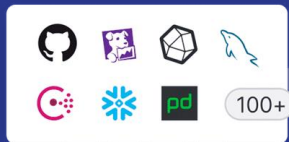


Grafana

串聯上百種數據的可視化平台



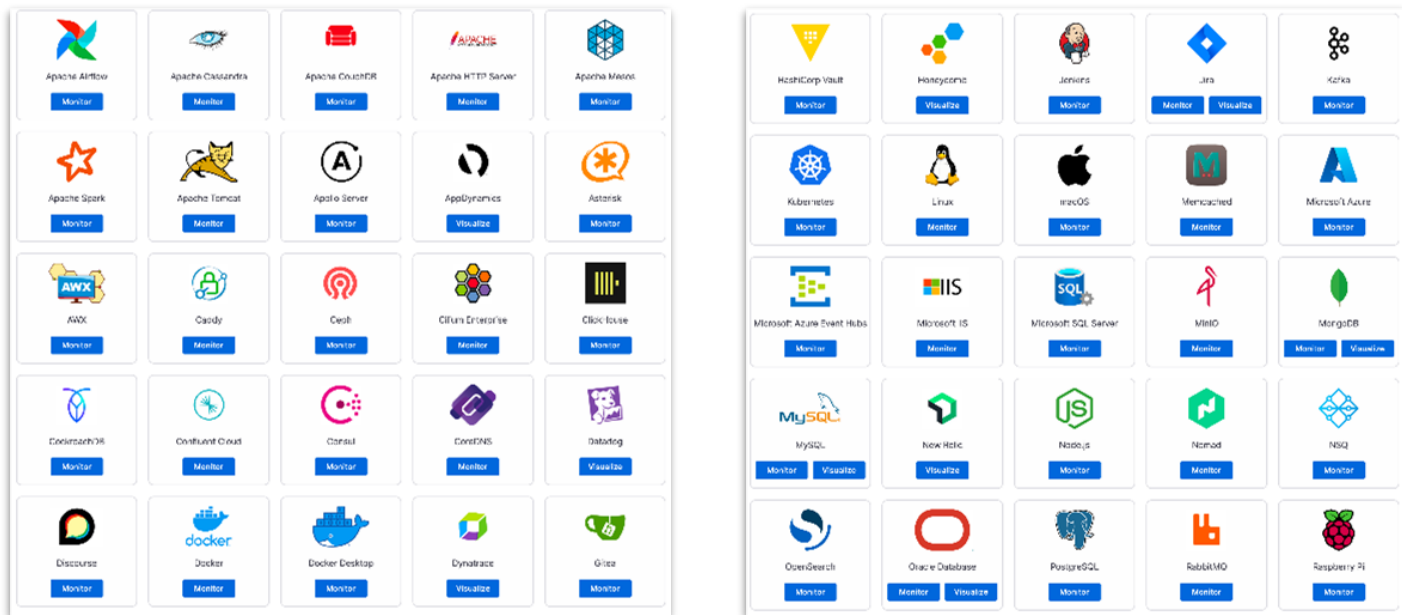
Metrics

Logs

Traces

使用 Grafana 統一您的數據

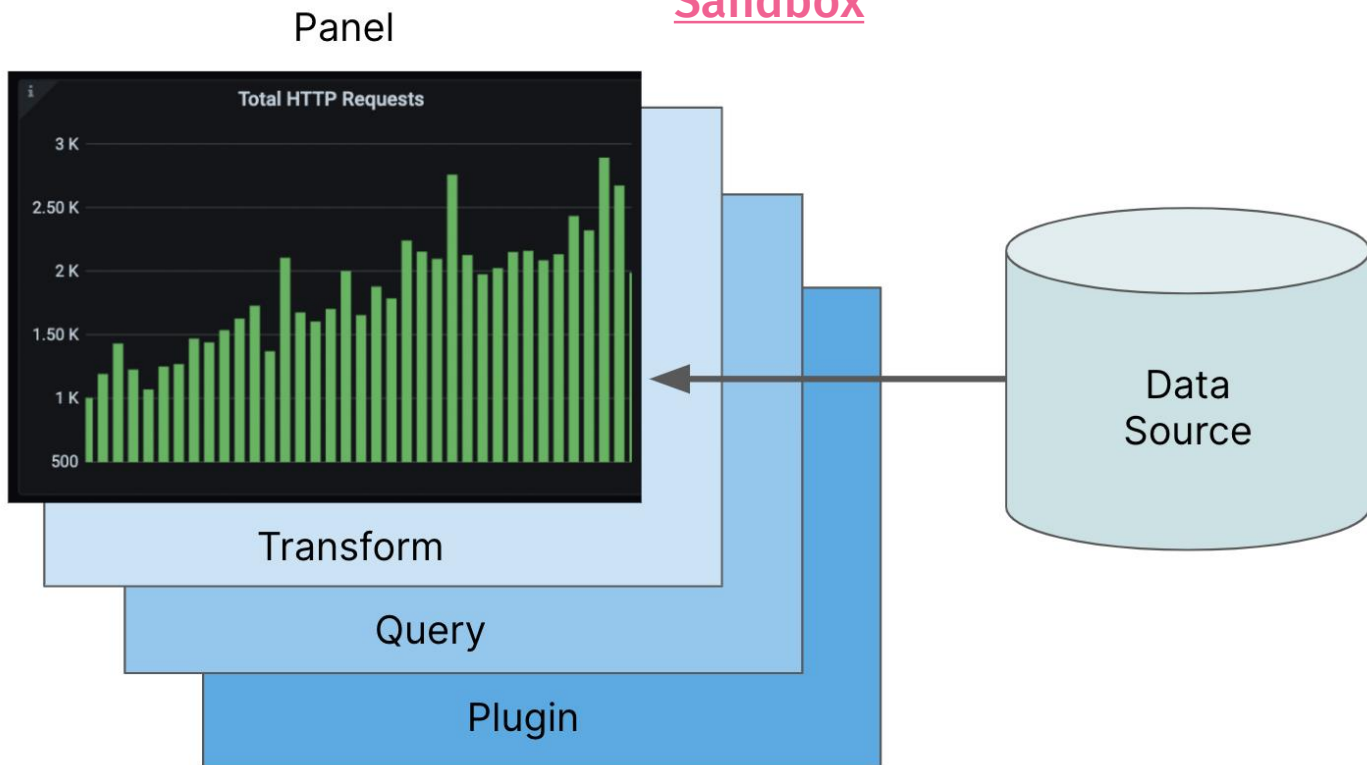
提供對300 +數據源的即時訪問，包括Elasticsearch，Jira，Datadog，Splunk，InfluxDB，Oracle，MongoDB等的企業外掛程式。



Dashboard 組合架構

↳ [Grafana](#)

[Sandbox](#)



~ CPU

CPU

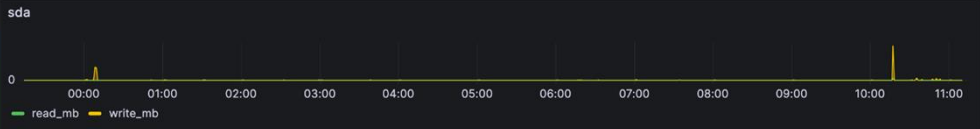


CPUS

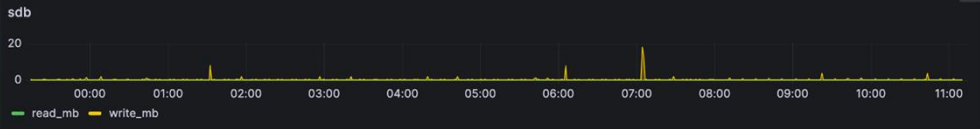


~ Disk

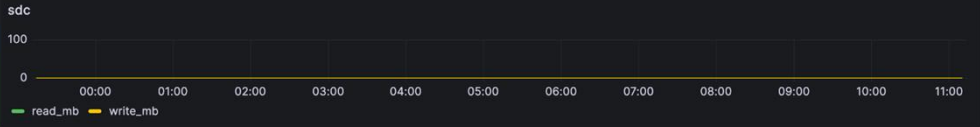
Busy



Busy



Busy



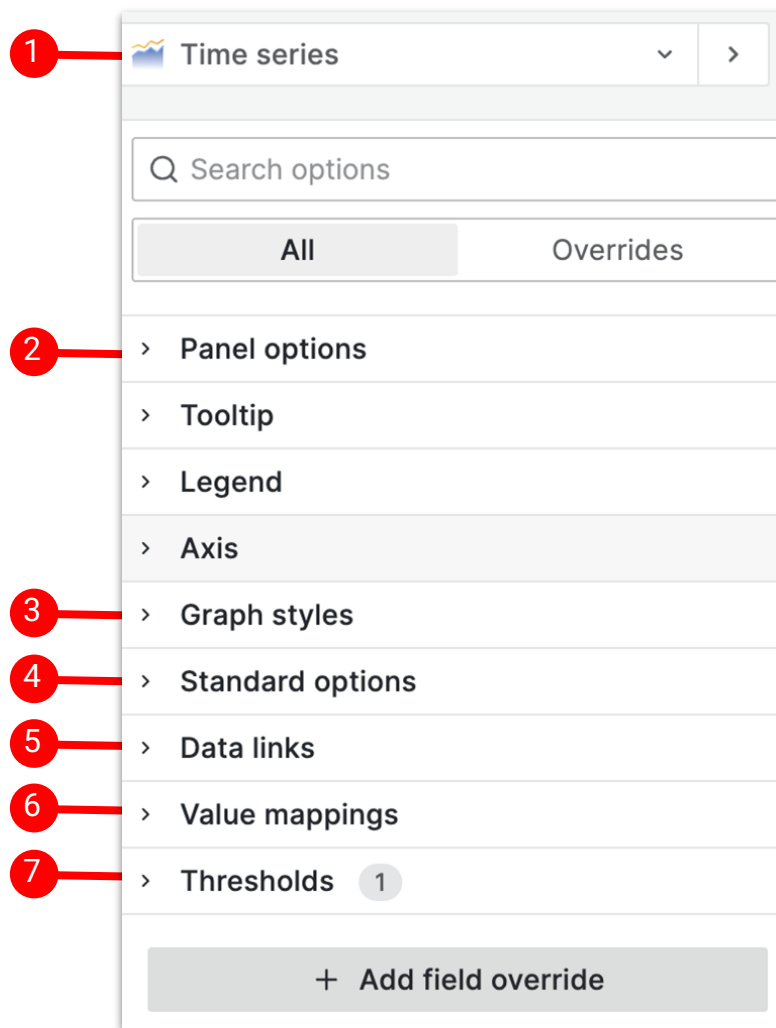
~ Filesystem

Usage



Panel 常用功能說明

- 1 圖表呈現樣式：例折線圖、圓餅圖、表格
- 2 針對圖表整體編輯選項：標題名稱命名、連結
- 3 針對圖表顯示細節設定：呈現的線條粗細、透明度
- 4 針對文字顯示細節設定：單位、欄位名稱
- 5 根據圖表內部的欄位做連結定義
- 6 針對欄位值重新定義，例如 1 表示 on，0 表示 off
- 7 針對欄位值高低給予不同的顏色顯示，例如閾值定義為 1000，超過 1000 顯示紅色，1000 以下顯示綠色



添加 InfluxDB 資料源

Data Sources / InfluxDB
Type: InfluxDB

Settings

Alerting supported

Name: InfluxDB-demo Default

Query Language

Flux

InfluxQL
The InfluxDB SQL-like query language.

Flux
Advanced data scripting and query language. Supported in InfluxDB 2.x and 1.8+

選擇 v2 flux 語法

添加 InfluxDB 資料源

InfluxDB Details

| | |
|---------------------|----------------|
| Organization | data |
| Token | |
| Default Bucket | default bucket |
| Min time interval ⓘ | 10s |
| Max series ⓘ | 1000 |

必填

✓ datasource is working. 3 buckets found

Back Explore Delete **Save & test**

點擊按鈕後，顯示有找到**bucket**的訊息
代表連接成功

建立 InfluxDB Bucket

Load Data

SOURCES BUCKETS TELEGRAF SCRAPERS API TOKENS

Filter buckets...

data
Retention: Forever ID: 8f0fb0de4a7b61f
+ Add a label

ipoc_sysload_176
Retention: 90 days ID: c7f7c4b67323f99d
+ Add a label

1

Create Bucket X

Name*

data ✓

Delete Data

NEVER OLDER THAN

30 days ▲

Custom duration

1 hour

6 hours

12 hours

24 hours

48 hours

72 hours

+ CREATE BUCKET

命名

數據保留時間

What is a Bucket?

A bucket is a named location where time series data is stored. All buckets have a Retention Policy, a duration of time that each data point persists.

write data into your bucket

SETTINGS

SETTINGS

上傳數據到 InfluxDB

The screenshot displays the 'Load Data' interface in InfluxDB. At the top, there are navigation tabs for SOURCES, BUCKETS, TELEGRAF, SCRAPERS, and API TOKENS. Below these is a search bar labeled 'Filter buckets...' and a dropdown menu for 'Sort by Name (A → Z)'. The main area shows two buckets: 'oss_metrics' and 'test'. Each bucket has a retention policy and an ID, and an 'Add a label' button. A blue '+ ADD DATA' button is visible next to each bucket. On the right side, a modal window is open, showing options for loading data: 'Configure Telegraf Agent', 'Line Protocol' (highlighted with a red box), 'CSV Upload', 'Client Library', and 'Scrape Metrics'. The 'Line Protocol' option is described as 'Quickly load an existing line protocol file.' Below the modal, another '+ ADD DATA' button is highlighted with a red box.

Load Data

SOURCES BUCKETS TELEGRAF SCRAPERS API TOKENS

Filter buckets... Sort by Name (A → Z)

oss_metrics
Retention: 30 days ID: b71dd96a14b297d7
+ Add a label + ADD DATA

test
Retention: Forever ID: ce6c7aeb884ff3bc
+ Add a label + ADD DATA

Configure Telegraf Agent
Configure a Telegraf agent to push data into your bucket.

Line Protocol
Quickly load an existing line protocol file.

CSV Upload
Quickly load an existing csv file.

Client Library
Write data easily from your own application.

Scrape Metrics
Add a scrape target to pull data into your bucket.

Line Protocol



BUCKET

+ CREATE BUCKET

data

ipoc_sysload_176

oss_metrics

test

UPLOAD FILE

ENTER MANUALLY

Precision: Nanoseconds



data.txt



WRITE DATA

CANCEL

Create InfluxDB Token

The screenshot shows the InfluxDB interface. On the left is a dark sidebar with the InfluxDB logo and a user profile for 'admin data'. Below the profile are navigation links: 'Load Data', 'Sources', 'Buckets', 'Telegraf', 'Scrapers', 'API Tokens' (highlighted), 'Data Explorer', 'Notebooks', 'Dashboards', 'Tasks', and 'Alerts'. The main content area is titled 'Load Data' and has tabs for 'SOURCES', 'BUCKETS', 'TELEGRAF', 'SCRAPERS', and 'API TOKENS'. Under the 'API TOKENS' tab, there is a search box labeled 'Filter Tokens...' and a dropdown menu set to 'Sort by Description (A → Z)'. Below these is a message: 'Looks like there aren't any API Tokens, why not generate one?'. A blue button labeled '+ GENERATE API TOKEN' is visible, with a dropdown menu open below it. The dropdown menu contains two options: 'All Access API Token' and 'Custom API token'. The 'All Access API Token' option is highlighted with a red rectangular box.

Create InfluxDB Token

The screenshot shows the 'Generate a Custom API Token' dialog in InfluxDB. The description is 'grafana'. The 'Resources' table lists permissions for various buckets. The 'Read' column for 'All Buckets' and 'ipoc_sysload_176' is highlighted with a red box.

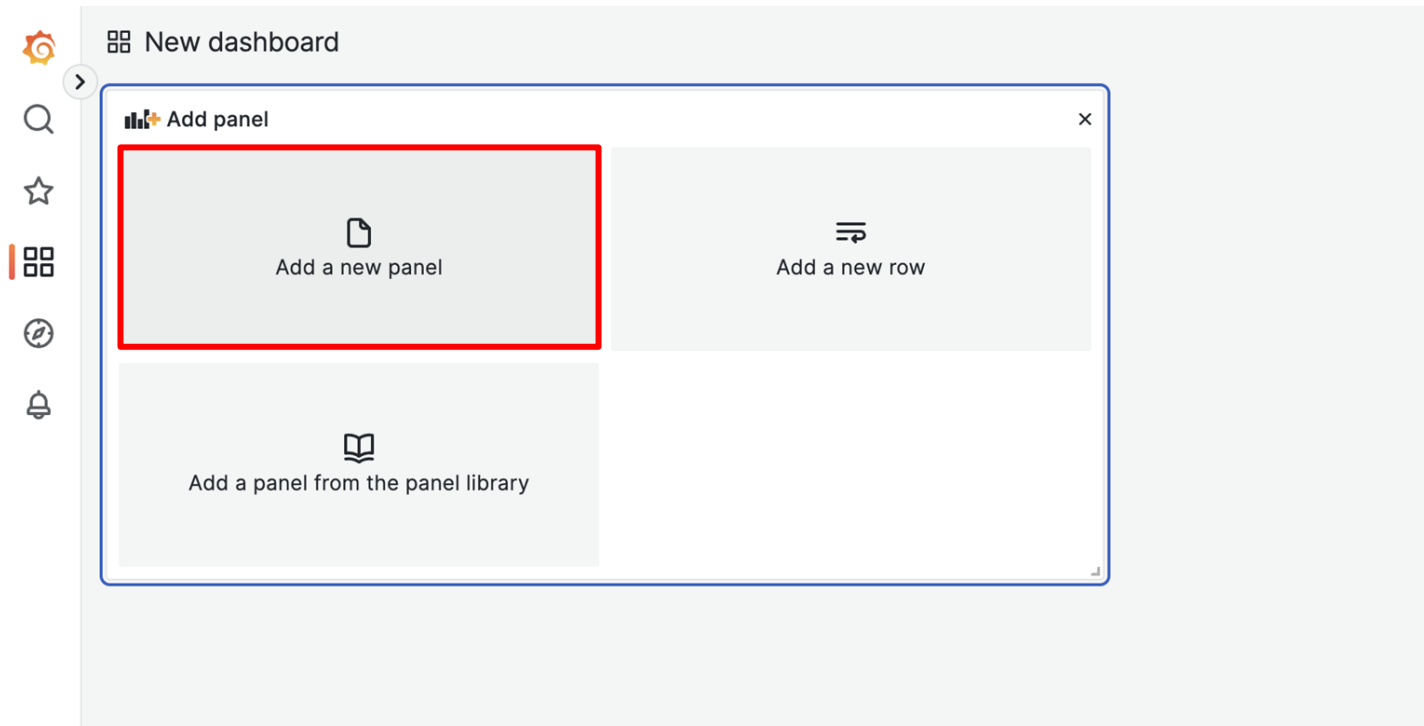
| Resources | Read | Write |
|-------------------------|-------------------------------------|--------------------------|
| ▼ Buckets | | |
| All Buckets | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Individual Bucket Names | | |
| ipoc_sysload_176 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| _monitoring | <input type="checkbox"/> | <input type="checkbox"/> |
| _tasks | <input type="checkbox"/> | <input type="checkbox"/> |

針對給grafana連接的token可以只給讀取bucket的權限

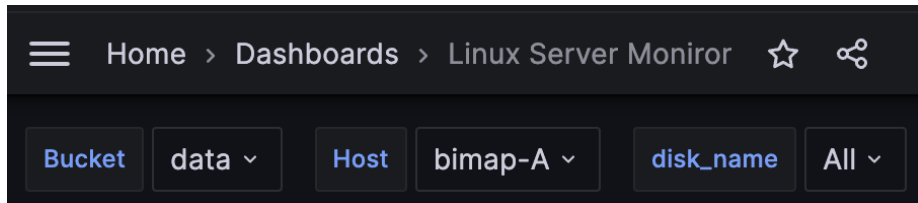
添加 Dashboard



添加 Panel



建立變數：Bucket 下拉選單



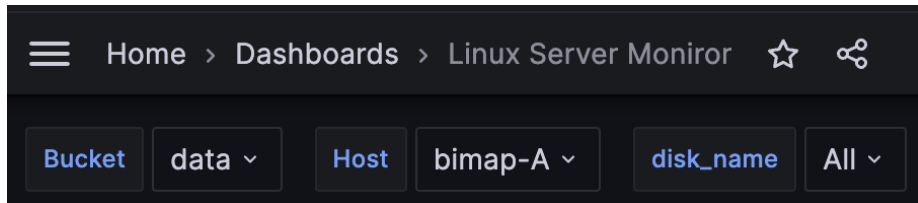
```
buckets ()
```

```
|> filter(fn: (r) => r.name !~ /^_/)
```

```
|> rename(columns: {name: "_value"})
```

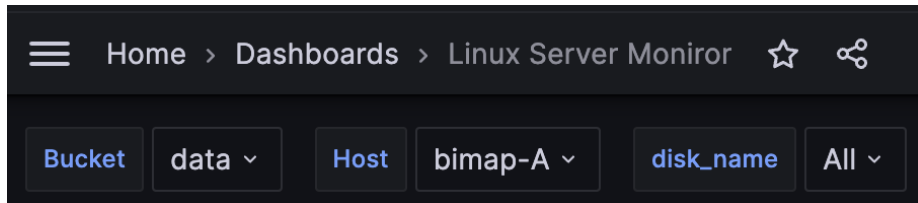
```
|> keep(columns: ["_value"])
```

建立變數：Host 下拉選單



```
import "influxdata/influxdb/v1"
v1.tagValues(
  bucket: "${Bucket}",
  tag: "host",
  predicate: (r) => true
)
```


建立變數：Disk_name 選單



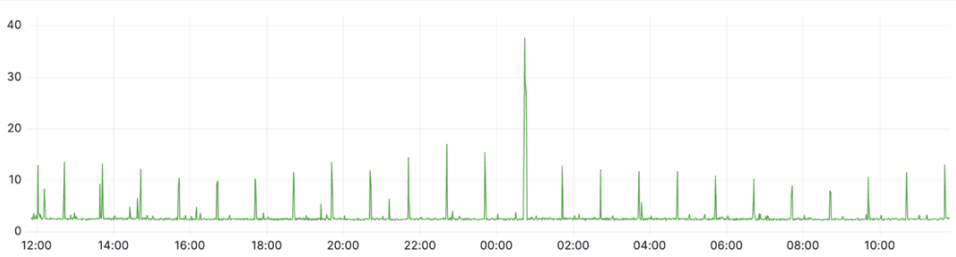
```
import "influxdata/influxdb/schema"

schema.tagValues(
  bucket: "${Bucket}",
  tag: "disk_name",
  predicate: (r) =>
    r.host == "${Host}",
  start: v.timeRangeStart,
  stop: v.timeRangeStop
)
```

使用 Data links 帶入變數

New dashboard / Edit Panel

Table view Fill Actual Last 24 hours Time series



cpu_usage (cpu_name="total", host="influxdb-uat-177", os="linux")

Query 1 Transform 0 Alert 0

Data source InfluxDB Query options MD = auto = 1008 Interval = 1m Query inspector

```
1 from(bucket: "ipoc_sysload_176")
2   |> range(start: v.timeRangeStart, stop: v.timeRangeStop)
3   |> filter(fn: (r) => r["_measurement"] == "cpu")
4   |> filter(fn: (r) => r["host"] == "influxdb-uat-177")
5   |> filter(fn: (r) => r["cpu_name"] == "total")
6   |> filter(fn: (r) => r["_field"] == "cpu_usage")
7   |> aggregateWindow(every: v.windowPeriod, fn: mean, createEmpty: false)
8   |> yield(name: "mean")
```

Search options

All Overrides

No value
What to show when there is no value

-

Data links

+ Add link

Value mappings

Add value mappings

Thresholds

+ Add threshold

80

Base

Thresholds mode
Percentage means thresholds relative to min & max

Absolute Percentage

查找變數

The image shows a Grafana dashboard with an 'Edit link' dialog box open. The dialog has a title bar 'Edit link' and a close button. A red text overlay reads '輸入 \$ 可自動帶出可用變數選單'. The 'URL' field contains '\$' and is highlighted with a red box. A dropdown menu is open below it, listing various variable options. The background shows a time series graph and a query editor.

輸入 \$ 可自動帶出可用變數選單

URL

- \$
- Field Name
- Field labels.cpu_name
- Field labels.host
- Field labels.os
- Value Numeric
- Value Text
- Value Raw
- Value Time
- Fields Time
- Fields cpu_usage
- Fields cpu_name

```
1 from(bucket: "ipoc_sysload_176")
2   |> range(start: v.timeRangeStart, stop: v.timeRangeStop)
3   |> filter(fn: (r) => r["_measurement"] == "cpu")
4   |> filter(fn: (r) => r["host"] == "influxdb-uat-177")
5   |> filter(fn: (r) => r["cpu_name"] == "total")
```

欄位名使用變數



Q Search options

All

Overrides

Choose

Min

Leave empty to calculate based on all values

auto

Max

Leave empty to calculate based on all values

auto

Decimals

0

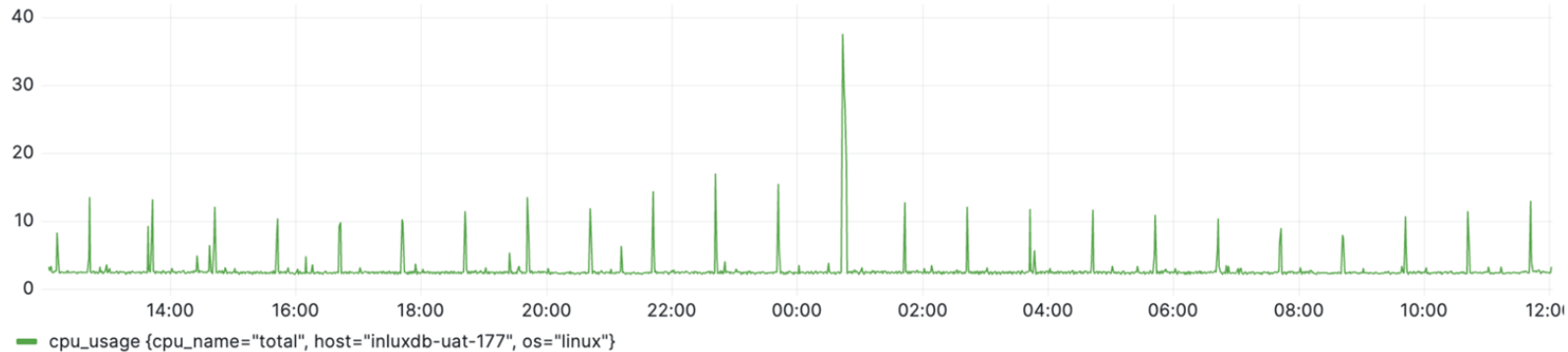
Display name

Change the field or series name

`$_field.name`

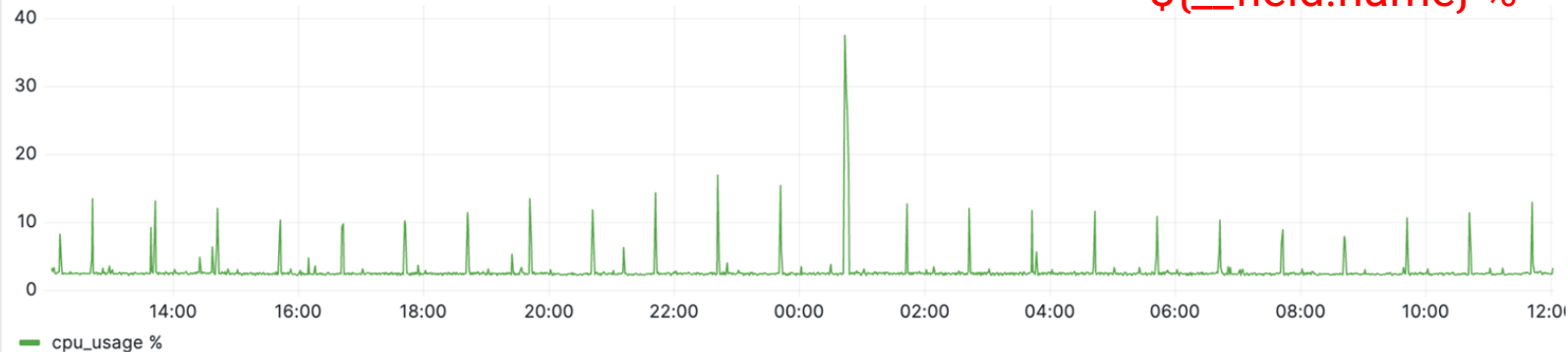
`$_field.name`

CPU 使用率



CPU 使用率

`${_field.name} %`



Before

建立儀錶板的目標是什麼？要解決什麼問題

After

需要多少說明讓別人理解你的儀錶板

儀錶板最佳實踐

X 一次性儀錶板

○ 設置查詢變數

X 大量複製的儀錶板

○ 設計分層可向下探索到下一個級別

X 大量瀏覽儀錶板

○ 定義閾值與區分顏色來簡化資訊