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```

InfluxDB data source

```
{{< docs/shared "influxdb/intro.md" >}}
```

This topic explains options, variables, querying, and other options specific to this data source. Refer to [Add a data source]({{< relref "../add-a-data-source.md" >}}) for instructions on how to add a data source to Grafana. Only users with the organization admin role can add data sources.

Data source options

To access data source settings, hover your mouse over the **Configuration** (gear) icon, then click **Data sources**, and then click the data source.

InfluxDB data source options differ depending on which query language you select: InfluxQL or Flux.

Note: Though not required, it's a good practice to append the language choice to the data source name. For example:

- InfluxDB-InfluxQL
- InfluxDB-Flux

InfluxQL (classic InfluxDB query)

These options apply if you are using the InfluxQL query language. If you are using Flux, refer to [Flux support in Grafana]({{< relref "influxdb-flux.md" >}}).

Name	Description
Name	The data source name. This is how you refer to the data source in panels and queries. We recommend something like InfluxDB-InfluxQL .
Default	Default data source means that it will be pre-selected for new panels.
URL	The HTTP protocol, IP address and port of your InfluxDB API. InfluxDB API port is by default 8086.
Access	Server (default) = URL needs to be accessible from the Grafana backend/server, Browser = URL needs to be accessible from the browser. Note: Browser (direct) access is deprecated and will be removed in a future release.
Allowed cookies	Cookies that will be forwarded to the data source. All other cookies will be deleted.

Name	Description
Database	The ID of the bucket you want to query from, copied from the Buckets page of the InfluxDB UI.
User	The username you use to sign into InfluxDB.
Password	The token you use to query the bucket above, copied from the Tokens page of the InfluxDB UI.
HTTP mode	How to query the database (GET or POST HTTP verb). The POST verb allows heavy queries that would return an error using the GET verb. Default is GET .
Min time interval	(Optional) Refer to Min time interval({{< relref "#min-time-interval" >}}).
Max series	(Optional) Limits the number of series/tables that Grafana processes. Lower this number to prevent abuse, and increase it if you have lots of small time series and not all are shown. Defaults to 1000.

Flux

For information on data source settings and using Flux in Grafana, refer to [\[Flux support in Grafana\]](#)([{{< relref "influxdb-flux.md" >}}](#)).

Min time interval A lower limit for the auto group by time interval. Recommended to be set to write frequency, for example **1m** if your data is written every minute. This option can also be overridden/configured in a dashboard panel under data source options. It's important to note that this value *must* be formatted as a number followed by a valid time identifier, e.g. **1m** (1 minute) or **30s** (30 seconds). The following time identifiers are supported:

Identifier	Description
y	year
M	month
w	week
d	day
h	hour
m	minute
s	second
ms	millisecond

Query languages

You can query InfluxDB using InfluxQL or Flux:

- InfluxQL is a SQL-like language for querying InfluxDB, with statements such as **SELECT**, **FROM**, **WHERE**, and **GROUP BY** that are familiar to

SQL users. InfluxQL is available in InfluxDB 1.0 onwards.

- Flux provides significantly broader functionality than InfluxQL, supporting not only queries, but built-in functions for data shaping, string manipulation, joining to non-InfluxDB data sources and more, but also processing time-series data. It's more similar to JavaScript with a functional style.

To help you choose the best language for your needs, here's a comparison of Flux vs InfluxQL, and why InfluxData created Flux.

InfluxQL query editor

Enter edit mode by clicking the panel title and clicking **Edit**. The editor allows you to select metrics and tags.

InfluxQL query editor

Filter data (WHERE)

To add a tag filter, click the plus icon to the right of the **WHERE** condition. You can remove tag filters by clicking on the tag key and then selecting **--remove tag filter--**.

Regex matching

You can type in regex patterns for metric names or tag filter values. Be sure to wrap the regex pattern in forward slashes (/). Grafana automatically adjusts the filter tag condition to use the InfluxDB regex match condition operator (**=~**).

Field and Aggregation functions

In the **SELECT** row you can specify what fields and functions you want to use. If you have a group by time you need an aggregation function. Some functions like derivative require an aggregation function. The editor tries to simplify and unify this part of the query. For example:

The above generates the following InfluxDB **SELECT** clause:

```
SELECT derivative(mean("value"), 10s) /10 AS "REQ/s" FROM ....
```

Select multiple fields Use the plus button and select **Field > field** to add another **SELECT** clause. You can also specify an asterisk ***** to select all fields.

Group By

To group by a tag, click the plus icon at the end of the **GROUP BY** row. Pick a tag from the dropdown that appears. You can remove the "Group By" by clicking on the **tag** and then click on the x icon.

Text Editor Mode (RAW)

You can switch to raw query mode by clicking hamburger icon and then **Switch editor mode**.

If you use Raw Query be sure your query at minimum have **WHERE \$timeFilter**. Also, always have a group by time and an aggregation function, otherwise InfluxDB can easily return hundreds of thousands of data points that will hang the browser.

Alias patterns

- \$m = replaced with measurement name
- \$measurement = replaced with measurement name
- \$1 - \$9 = replaced with part of measurement name (if you separate your measurement name with dots)
- \$col = replaced with column name
- *tag_{example}tag = replaced with the value of the 'exampletag' tag. The syntax is 'tag yourTagName (must start with \$tag)'.* To use your tag as an alias in the ALIAS BY field then the tag must be used to group by in the query.
- You can also use `[[tag_hostname]]` pattern replacement syntax. For example, in the ALIAS BY field using this text **Host: [[tag_hostname]]** would substitute in the **hostname** tag value for each legend value and an example legend value would be: **Host: server1**.

Querying logs

Querying and displaying log data from InfluxDB is available in [Explore]({{< relref "../explore/_index.md" >}}), and in the [logs panel]({{< relref "../visualizations/logs-panel.md" >}}) in dashboards. Select the InfluxDB data source, and then enter a query to display your logs.

Log queries

The Logs Explorer (the **Measurements/Fields** button) next to the query field shows a list of measurements and fields. Choose the desired measurement that contains your log data and then choose which field Explore should use to display the log message.

Once the result is returned, the log panel shows a list of log rows and a bar chart where the x-axis shows the time and the y-axis shows the frequency/count.

Filter search

To add a filter, click the plus icon to the right of the **Measurements/Fields** button or a condition. You can remove tag filters by clicking on the first select and choosing **--remove filter--**.

Annotations

Annotations({{< relref “../dashboards/annotations.md” >}}) allows you to overlay rich event information on top of graphs. Add annotation queries using the Annotations view in the Dashboard menu.

An example query:

```
SELECT title, description from events WHERE $timeFilter ORDER BY time ASC
```

For InfluxDB, you need to enter a query like the one in the example above. The **where \$timeFilter** component is required. If you only select one column, then you do not need to enter anything in the column mapping fields. The **Tags** field can be a comma-separated string.