InfluxDb

Overview

InfluxDB is an open-source time series database developed by InfluxData. It is written in Go and optimized for fast, high-availability storage and retrieval of time series data in fields such as operations monitoring, application metrics, Internet of Things sensor data, and real-time analytics

> A time series database (TSDB) is a database optimized for time-stamped.

Use cases of InfluxDb

- Observability of hundreds of microservices prouding millions of metrics related to hosts, applications, traffic.

- To Create Actionable Insights
- Cloud Kubernetes monitoring tool

Core Concepts

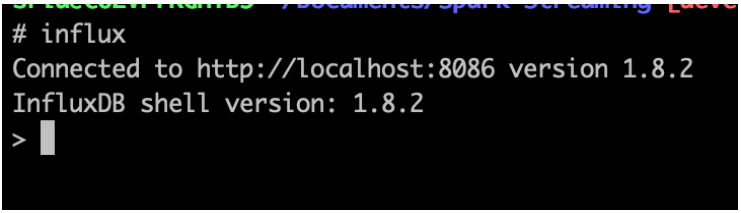
- **Database** : A logical container for users, retention policies, continuous queries, and time series data.
- **field key-vlaue** set: The collection of field keys and field values on a point.
- **measurement** : The part of the InfluxDB data structure that describes the data stored in the associated fields. Measurements are strings.
- **point** : In InfluxDB, a point represents a single data record, similar to a row in a SQL database table. Each point:
- **tag key-vlaue** set : The collection of tag keys and tag values on a point.
- **timestamp**: The date and time associated with a point. All time in InfluxDB is UTC.

Comparing Influx with SQL databases

- An InfluxDB measurement is similar to an SQL database table.
- InfluxDB tags are like indexed columns in an SQL database.
- InfluxDB fields are like unindexed columns in an SQL database.
- InfluxDB points are similar to SQL rows.

Quick Start

- From the root of the project run : **docker-compose ps | grep 'influx'**
- If above doesnt give any results, then run: **docker-compose up -d influx_grafana**
- Enter into the influx container **docker-compose exec influx_grafana sh**
- start Influx shell: **influx**



InfluxQL

```
CREATE DATABASE NOAA_water_database
exit
curl https://s3.amazonaws.com/noaa.water-database/NOAA_data.txt -o NOAA_data.txt
influx -import -path=NOAA_data.txt -precision=s -database=NOAA_water_database
influx
SHOW measurements
SELECT COUNT("water_level") FROM h2o_feet
SELECT * FROM h2o_feet LIMIT 5
```

Flux

InfluxQL and other SQL-like query languages for querying and analyzing data. Flux uses functional language patterns making it incredibly powerful, flexible, and able to overcome many of the

limitations of InfluxQL. This article outlines many of the tasks possible with Flux but not InfluxQL and provides information about Flux and InfluxQL parity.

Highlights

- InfluxDB can maintain high write speeds over a long period of time
- It comes with UI as well: chronograph
- Its available as cloud service as well
- Most popular time series data base

References

https://www.influxdata.com/customers/

https://docs.influxdata.com/influxdb/v1.8/concepts/glossary/

https://docs.influxdata.com/influxdb/v1.8/

https://docs.influxdata.com/influxdb/v1.8/query_language/sample-data/