



*influx*/days





# Using FLaNK with InfluxDB for EdgeAI IoT at Scale

**Tim Spann** | Developer Advocate



**Tim Spann, Developer Advocate**  
DZone Zone Leader and Big Data MVB Data DJay



Founded by the original developers of Apache Pulsar and Apache BookKeeper, StreamNative builds a cloud-native event streaming platform that enables enterprises to easily access data as real-time event streams.

**Apache**  **PULSAR** is an open source, cloud-native distributed messaging and streaming platform.

# StreamNative Cloud

Powered by Apache Pulsar, StreamNative provides a cloud-native, real-time messaging and streaming platform to support multi-cloud and hybrid cloud strategies.



Cloud Native



Built for Containers



Flink SQL



StreamNative

[streamnative.io](https://streamnative.io)

# FLiP(N) Stack

- Apache Flink
- Apache Pulsar
- StreamNative's Flink Connector for Pulsar
- Apache NiFi
- Apache + + +



# Apache Pulsar InfluxDB Sink

<https://pulsar.apache.org/docs/en/io-influxdb-sink/>



# Apache Pulsar InfluxDB Sink

```
bin/pulsar-admin sink stop --name influxdb-sink-jetson --namespace default  
--tenant public
```

```
bin/pulsar-admin sinks delete --tenant public --namespace default --name  
influxdb-sink-jetson
```

```
bin/pulsar-admin sinks create --archive  
../connectors/pulsar-io-influxdb-2.8.0.nar --tenant public --namespace  
default --name influxdb-sink-jetson --sink-config-file conf/influxcloud.yml  
--inputs jetsoninflux --parallelism 1
```

```
bin/pulsar-admin sinks get --tenant public --namespace default --name  
influxdb-sink-jetson
```

```
bin/pulsar-admin sinks status --tenant public --namespace default --name  
influxdb-sink-jetson
```

---

<https://pulsar.apache.org/docs/en/io-influxdb-sink/>

# InfluxDB Telegraf MQTT

<https://www.influxdata.com/integration/mqtt-monitoring/>

**MQTT on Pulsar (MoP)**

<https://github.com/streamnative/mop>



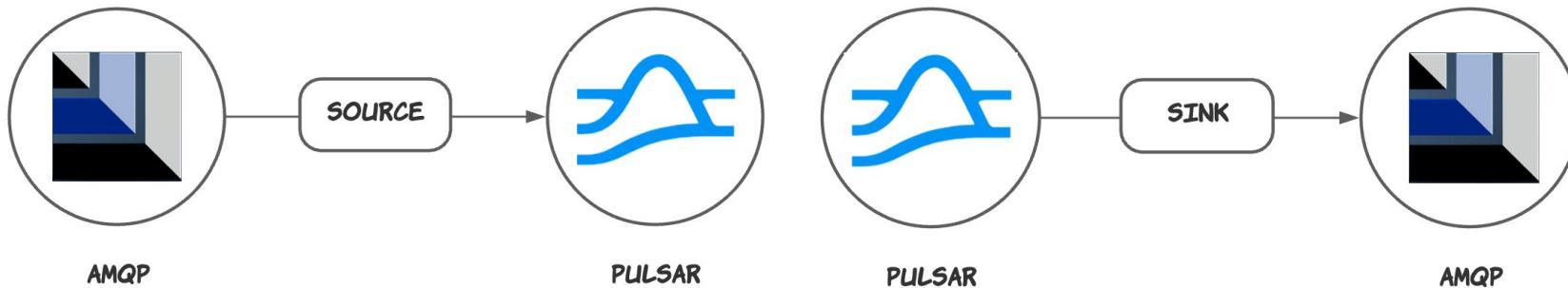
# InfluxDB Telegraf RabbitMQ

**AMQP on Pulsar (AoP)**

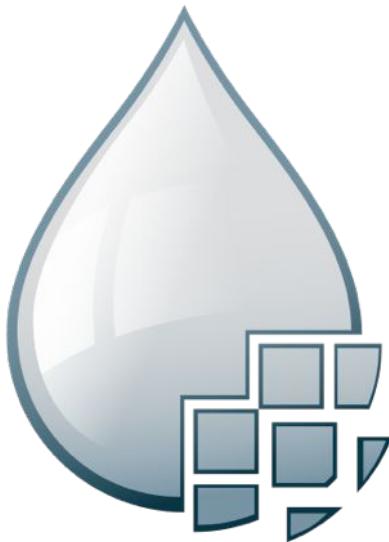
<https://github.com/streamnative/aop>

<https://hub.streamnative.io/connectors/amqp-1-0-sink/>

<https://hub.streamnative.io/connectors/amqp-1-0-source>

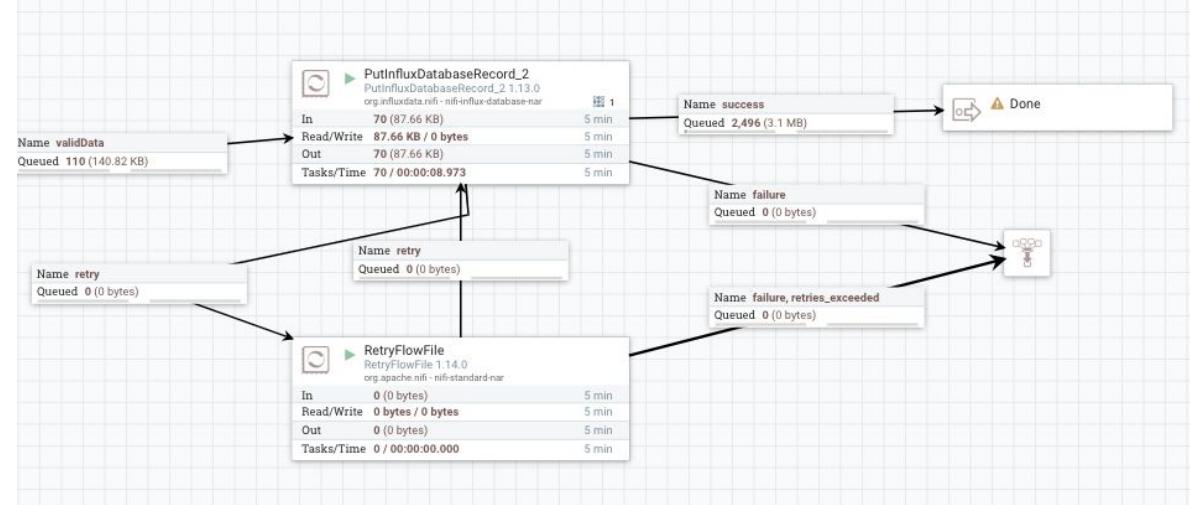


# Why Apache NiFi?



- Guaranteed delivery
- Data buffering
  - Backpressure
  - Pressure release
- Prioritized queuing
- Flow specific QoS
  - Latency vs. throughput
  - Loss tolerance
- Data provenance
- Supports push and pull models
- Hundreds of processors
- Visual command and control
- Over a 300 sources
- Flow templates
- Pluggable/multi-role security
- Designed for extension
- Clustering
- Version Control

# InfluxDB via Apache NiFi

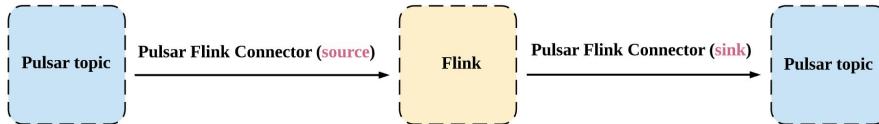


<https://github.com/influxdata/nifi-influxdb-bundle>

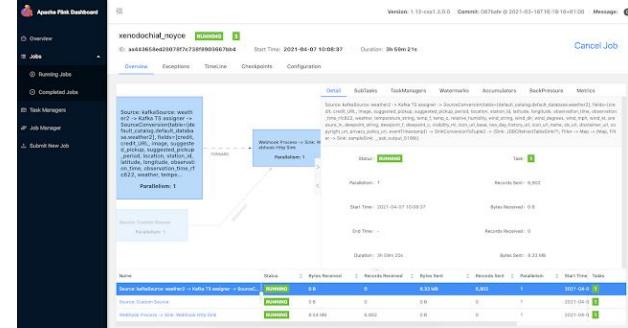
<https://www.influxdata.com/blog/building-a-data-stream-for-iot-with-nifi-and-influxdb/>



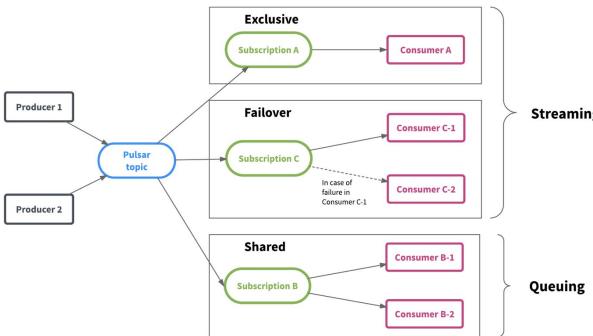
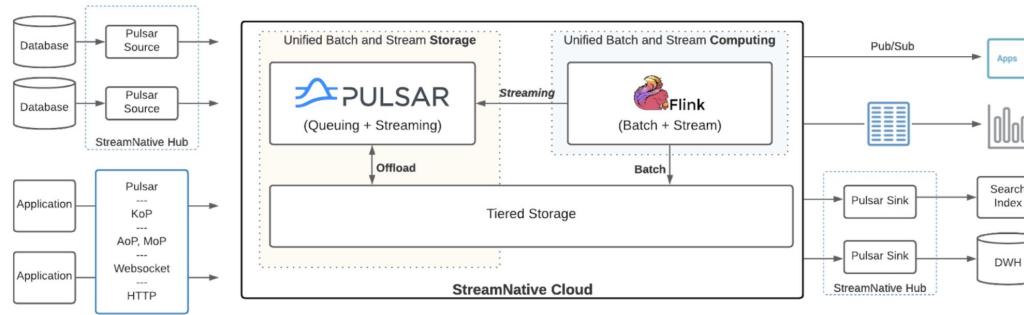
# Why Apache Flink?



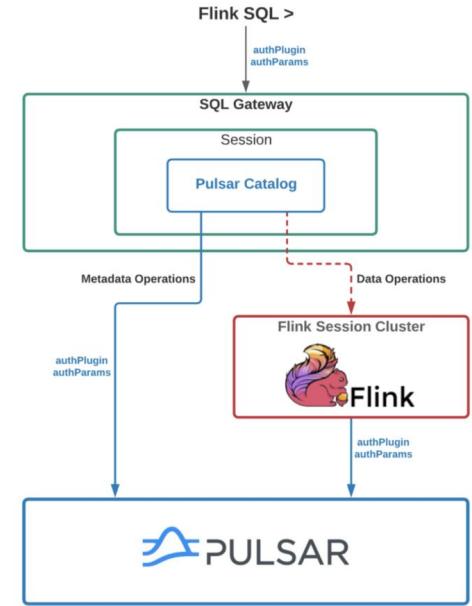
- Unified computing engine
- Batch processing is a special case of stream processing
- Stateful processing
- Massive Scalability
- Flink SQL for queries, inserts against Pulsar Topics
- Streaming Analytics
- Continuous SQL
- Continuous ETL
- Complex Event Processing
- Standard SQL Powered by Apache Calcite



# Flink + Pulsar

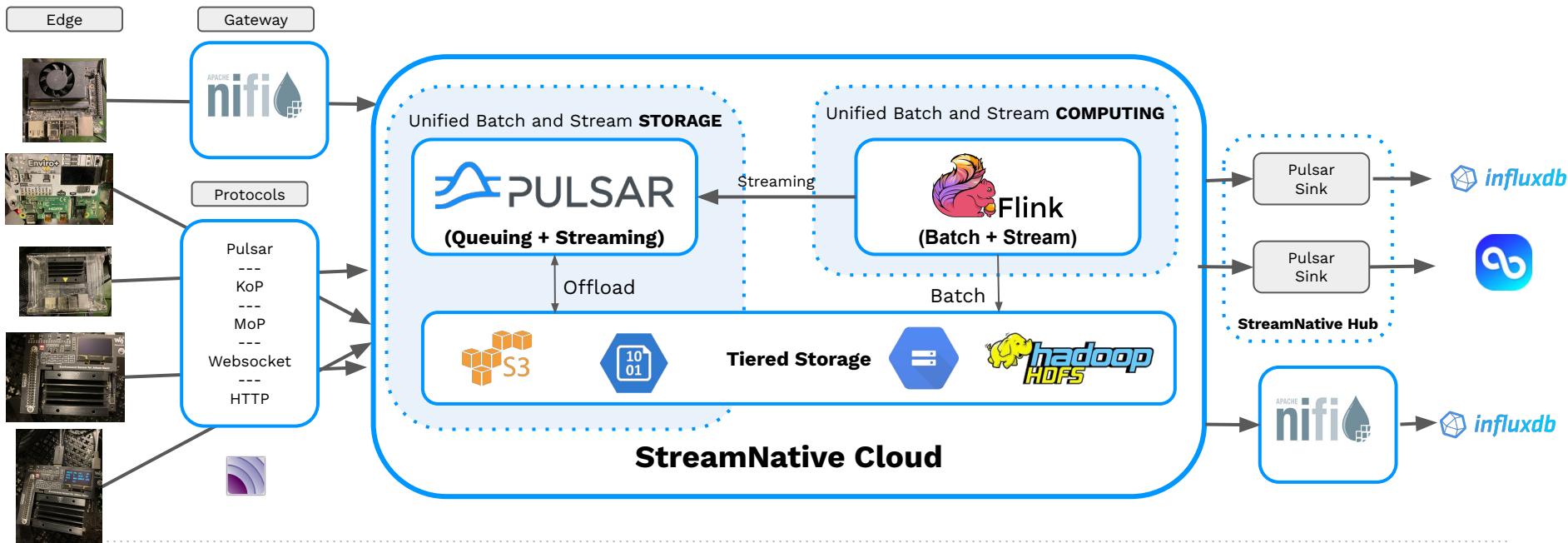


<https://flink.apache.org/2019/05/03/pulsar-flink.html>  
<https://github.com/streamnative/pulsar-flink>  
<https://streamnative.io/en/blog/release/2021-04-20-flink-sql-on-streamnative-cloud>



# End-to-End Streaming Edge App

Apache Flink - Apache Pulsar - Apache NiFi <-> Devices <-> influxdb



# | Using EdgeAI Devices

# DEMO

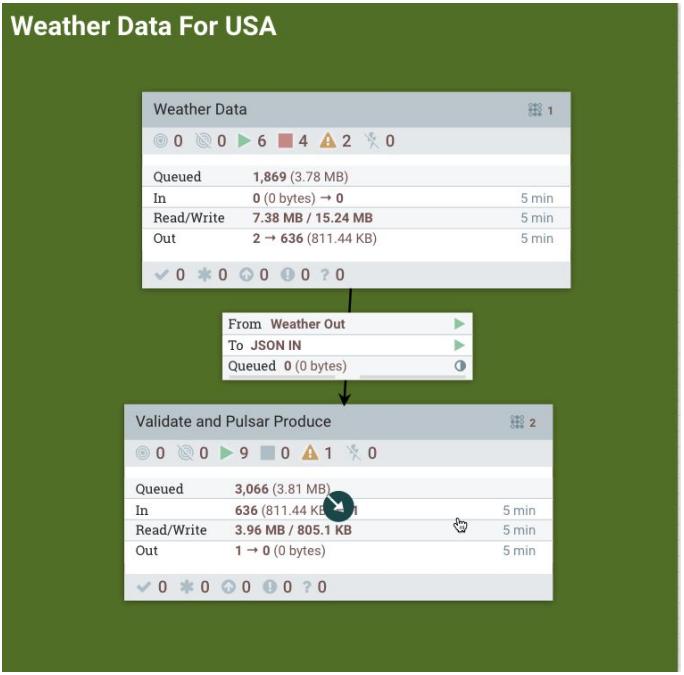


# NVIDIA Device



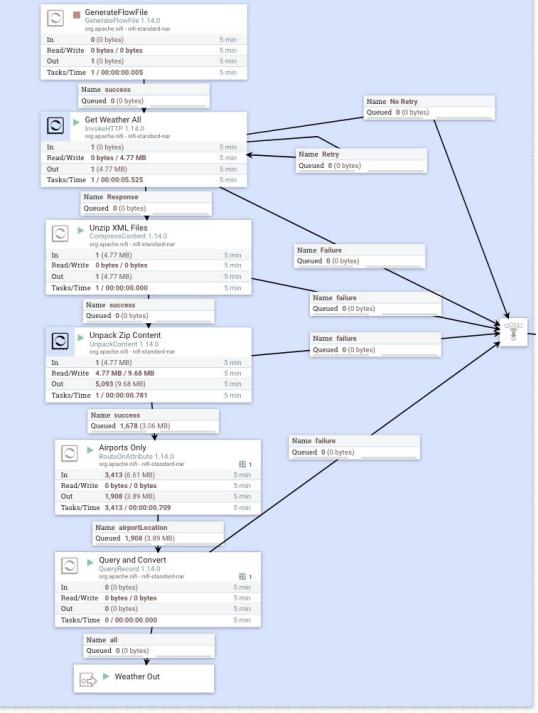
# Apache NiFi

## Weather Data For USA



# Apache NiFi

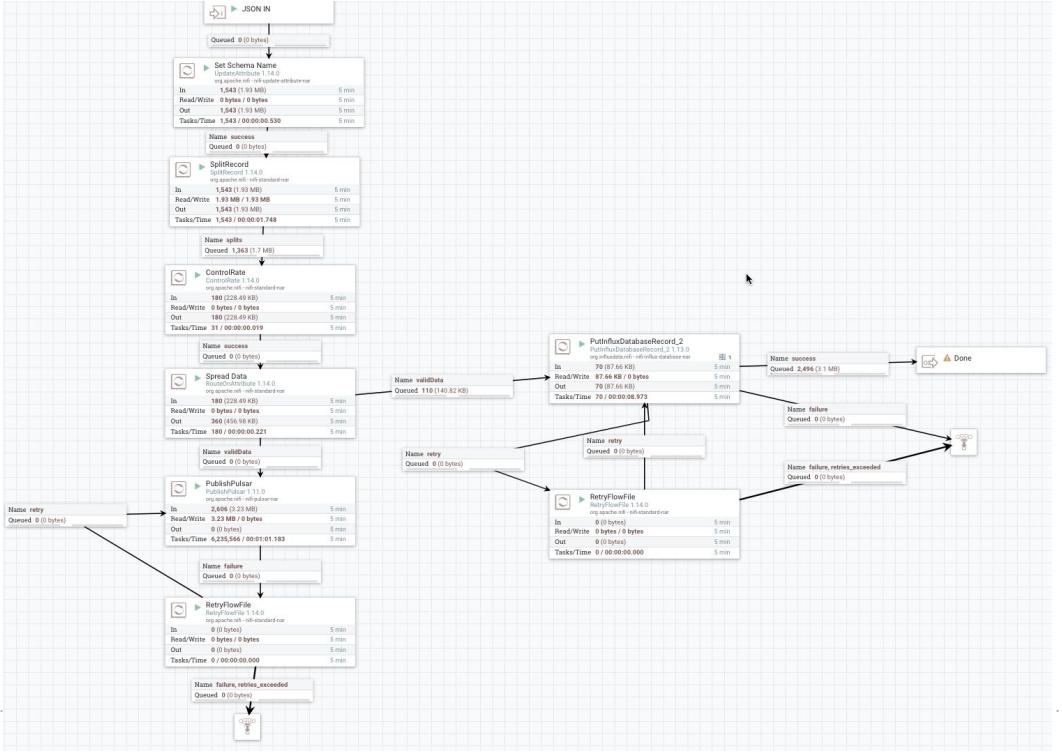
Ingest All US Weather Stations



## Data to Enhance IoT Stream



# Apache NiFi

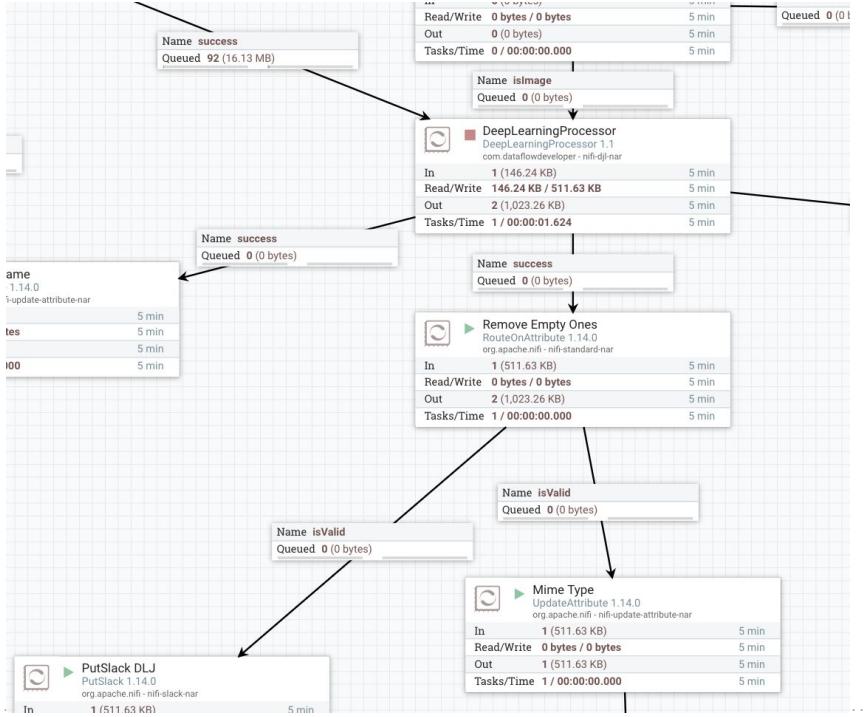


# Apache NiFi

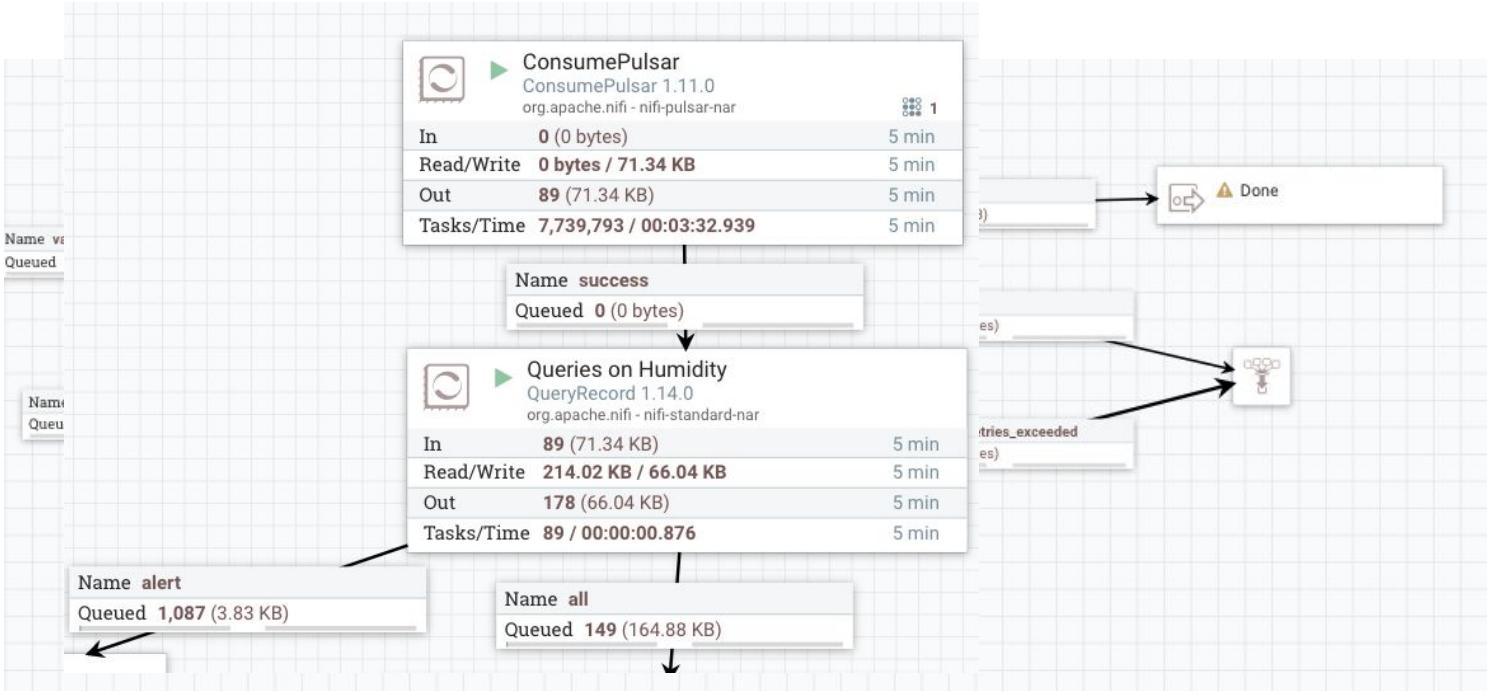
Influxdb properties  
Controller properties



# Apache NiFi

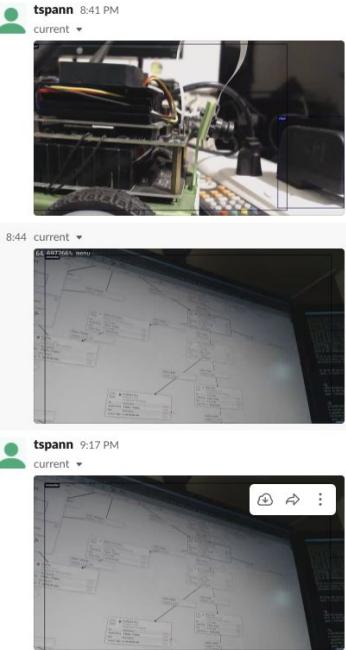


# Apache NiFi



# Apache NiFi

```
# english  
# errors  
# french  
# general  
# heatalert  
# images  
# logerrors  
# meetup  
# movies  
# music  
# mxnet  
# nethope  
# news  
# nifi  
# pandemic  
# provenance  
# random  
# retail  
# sensoralerts  
# status  
# stratadata  
# tensorflow  
# test  
# transit  
# truckviolations  
# weather  
# webrequests  
# workshop
```



```
incoming-webhook APP 8:44 PM  
=====  
Deep Learning Class Label: tvmonitor  
Probability: 0.97  
UUID: c0b1e202-12e9-4a59-a273-b8d53556862e HOST: USER AGENT:  
Rank: 1  
PATH: File: out_video0_gxy_20210925004243.jpg.tvmonitor.png 2021-09-24T20:42:48-0400 153444  
Bounding Box (Height/Width, X,Y)  
0.96/ 0.92  
/  
0.04, 0.04  
,  
Image (Height/Width, X,Y)  
720 / 1280  
/  
0, 0  
,  
=====
```

```
incoming-webhook APP 9:17 PM  
=====  
Deep Learning Class Label: tvmonitor  
File: img_video0_cit_20210925004243.jpg.tvmonitor.png  
Probability: 0.96  
UUID: 94a9b436-9d02-4b10-9ca9-b983ccca7c72 HOST: USER AGENT:  
Rank: 1  
PATH: File: img_video0_cit_20210925004243.jpg.tvmonitor.png 2021-09-24T20:42:48-0400 149754  
Bounding Box (Height/Width, X,Y)  
0.95/ 0.92  
/  
0.04, 0.05  
,  
Image (Height/Width, X,Y)  
720 / 1280  
/  
0, 0  
,
```



# Apache Pulsar

```
tspann@Timothys-mbp apache-pulsar-2.8.0 % ./influxstatus.sh
{
  "numInstances" : 1,
  "numRunning" : 1,
  "instances" : [ {
    "instanceId" : 0,
    "status" : {
      "running" : true,
      "error" : "",
      "numRestarts" : 0,
      "numReadFromPulsar" : 12,
      "numSystemExceptions" : 0,
      "latestSystemExceptions" : [ ],
      "numSinkExceptions" : 0,
      "latestSinkExceptions" : [ ],
      "numWrittenToSink" : 12,
      "lastReceivedTime" : 1633550560478,
      "workerId" : "c-standalone-fw-127.0.0.1-8080"
    }
  } ]
}
```



# StreamNative Cloud

StreamNative Cloud    @International    Organization - sndev    Instance

Search Instances    Create instance

**aws** Ready

**Cluster Details**

**Overview**

Tenants	Namespaces	Topics
5	4	7

Producers Subscriptions

**Usage**

In Rate	Out Rate	In Throughput
0	0	0

Out Throughput	Storage Size
0	0

**Stream Native**

**gke** Ready

**Cluster Details**

**Overview**

Tenants	Namespaces	Topics
3	4	20

Producers Subscriptions

**Usage**

In Rate	Out Rate	In Throughput
0.09	0.07	4.91 Bytes

Out Throughput	Storage Size
3.93 Bytes	1.54 MB

**Stream Native**

**gke-free** Ready

**Cluster Details**

**Overview**

Tenants	Namespaces	Topics
3	3	1

Producers Subscriptions

**Usage**

In Rate	Out Rate	In Throughput
0	0	0

Out Throughput	Storage Size
0	0

**Stream Native**

**nyc** Ready

**Cluster Details**

**Overview**

Tenants	Namespaces	Topics
3	3	3

Producers Subscriptions

**Usage**

In Rate	Out Rate	In Throughput
0.09	0.07	5.07 Bytes

Out Throughput	Storage Size
4.07 Bytes	76.5 KB

**Stream Native**

**sgconnector** Ready

**connectors**

**Cluster Details**

**Overview**

Tenants	Namespaces	Topics
3	3	9

Producers Subscriptions

**Usage**

In Rate	Out Rate	In Throughput
0.09	0.07	5.5 Bytes

Out Throughput	Storage Size
4.4 Bytes	73.61 KB

**Stream Native**



# StreamNative Cloud

StreamNative Cloud

International Organization - sndev Instance - gke

tim.sparr@streamnative.io

OVERVIEW POLICIES

In Throughput	Out Throughput	In Rate	Out Rate
0 Bytes	0 Bytes	0.00	0.00

Subscriptions > New Subscription

Subscription Name	Type	Out Rate	Out Throughput	Msg Expired	Backlog
> reader-536eb1250a	Exclusive	0.00	0 Bytes	0.00	0
> reader-5ba5588002	Exclusive	0.00	0 Bytes	0.00	0
> reader-3779c9a496	Exclusive	0.00	0 Bytes	0.00	0
> reader-a84d1d8678	Exclusive	0.00	0 Bytes	0.00	0
> reader-3cc97cac2c	Exclusive	0.00	0 Bytes	0.00	0
> flink-pulsar-acab44c0-625c-43e9-9313-5e83fbcd877	None	0.00	0 Bytes	0.00	0

Partitions

Partition #	Producers	Subscriptions	In Rate	Out Rate	In Throughput	Out Throughput	Storage Size
topitems3-partition-4	1	2	0.00	0.00	0 Bytes	0 Bytes	22.07 KB
topitems3-partition-3	1	2	0.00	0.00	0 Bytes	0 Bytes	0 Bytes
topitems3-partition-2	1	2	0.00	0.00	0 Bytes	0 Bytes	0 Bytes
topitems3-partition-1	1	2	0.00	0.00	0 Bytes	0 Bytes	0 Bytes
topitems3-partition-0	1	2	0.00	0.00	0 Bytes	0 Bytes	47.81 KB



# StreamNative Cloud

Tenant public Namespace default Topic iotjetonjson

OVERVIEW SCHEMA MESSAGES STORAGE POLICIES

**Schema Type**

JSON

**Schema Definition**

```
1 {
2   "type": "record",
3   "name": "IoTMessage",
4   "namespace": "io.streamnative.examples.oauth2",
5   "fields": [
6     {
7       "name": "camera",
8       "type": [
9         "null",
10        "string"
11      ],
12      "default": null
13    },
14  {
```

Format Code

**Properties**



# StreamNative Cloud

The screenshot shows the StreamNative Cloud interface. On the left, a sidebar displays a catalog structure with 'flink-test / gke' selected. Under this, there's a 'Create Flink Cluster' button and a 'public/default' section containing several tables: 'data-gen-out', 'iotjetsonjson', 'jetsoniot2', 'jetsoniot3', 'kinesis-input', 'kinesis-output', 'orders', 'product', 'sensors', 'test1', 'test3', and '[TENANT\_NAMESPACE] ...'. The main area has tabs for 'Execution Type' (set to 'streaming') and 'Run'/'Stop'. A code editor window contains the following Flink SQL code:

```
1 CREATE TABLE jetsoniot3
2 (
3     id STRING, uuid STRING, ir STRING,
4     end STRING, lux STRING, gputemp STRING,
5     cputemp STRING, te STRING, systemtime STRING, hum STRING,
6     memory STRING,
7     gas STRING, pressure STRING, host STRING, ipaddress STRING, macaddress STRING,
8     gpuinfoof STRING, host_name STRING, camera STRING, filename STRING,
9     volume STRING, cpu STRING, cputempsof STRING, imageinput STRING,
10    networktime STRING, tops STRING, top_ipct STRING,
11    publishTime TIMESTAMP) METADATA;
```

To the right, a 'Table Schema' panel lists the fields and their types:

Field	Type
id	STRING
uuid	STRING
ir	STRING
end	STRING
lux	STRING
gputemp	STRING
cputemp	STRING
te	STRING
systemtime	STRING
hum	STRING
memory	STRING
gas	STRING
pressure	STRING
host	STRING
diskusage	STRING



# StreamNative Flink SQL

StreamNative Cloud    @International    Organization - sndev    Instance - gke

gke

Tenants

Namespaces

Topics

SQL

Clients

Connector

Manage

Catalogs

flink-test / gke

Create Flink Cluster

public/default

Tables

- data-gen-out
- iotjetson
- jetsoniot2
- camera (STRING)
- cpu (DOUBLE)
- cputemp (STRING)
- cputempf (STRING)
- diskusage (STRING)
- filename (STRING)
- gputemp (STRING)
- gpumemp (STRING)
- host (STRING)
- host\_name (STRING)
- imageinput (STRING)
- ipaddress (STRING)

Execution Type: streaming    Run    Stop

Currently, Flink SQL is a preview feature.

```
1 select uuid, camera, ipaddress, networktime, top1pct, top1,
2 cputemp, gpumemp, gpumempf, runtime, host, filename, imageinput,
3 host_name, macaddress, te, systemtime, cpu, diskusage, memory
4 from jetsoniot2 /*+ OPTIONS('scan.startup.mode'='earliest')*/
5 where top1 in ('monitor', 'crane', 'modem', 'envelope', 'person')
```

Result

uuid	camera	ipaddress	networktime	top1pct	top1
xav_uuid_video0_wab_20210927183538	/dev/video0	192.168.1.226	24.956928253173828	67.041015625	mc
xav_uuid_video0_ppz_20210927183613	/dev/video0	192.168.1.226	24.93337631225586	52.490234375	mc
xav_uuid_video0_idn_20210927183647	/dev/video0	192.168.1.226	24.93324851989746	45.605d6875	mc
xav_uuid_video0_gnv_20210927183721	/dev/video0	192.168.1.226	24.91584014892578	51.85546875	mc
xav_uuid_video0_rhh_20210927183754	/dev/video0	192.168.1.226	24.953855514526367	50.48828125	mc
xav_uuid_video0_ztp_20210927183826	/dev/video0	192.168.1.226	25.106399536132812	48.0712890625	mc



# StreamNative Flink SQL

StreamNative Cloud

@International Organization - sndev Instance - gke

GKE

Tenants

Namespaces

Topics

SQL

Clients

Connector

Manage

Catalogs

flink-test / gke

Create Flink Cluster

Tables

camera (1 row)

cpu (DOUBLE)

cputemp (STRING)

cpumem (STRING)

diskusage (STRING)

filename (STRING)

gpumem (STRING)

gpuusage (STRING)

host (STRING)

host\_name (STRING)

imageinput (STRING)

ipaddress (STRING)

macaddress (STRING)

memory (DOUBLE)

networktime (DOUBLE)

runtime (STRING)

Execution Type: streaming

Run Stop

```
1 select top(10), top.cpu, top.cputemp, runtime, systemtime, cpu, diskusage, memory
2 from jettson3 --> CORTON05@jettson3 mode='earliest'
3 where CAST(cputemp as double) > ?;
```

Result

runtime	systemtime	cpu	diskusage	memory
4	09/21/2021 12:05:12	8.5	33077.8 MB	34.1
4	09/21/2021 12:05:18	11	33077.8 MB	34.1
4	09/21/2021 12:05:25	11.7	33077.8 MB	34
4	09/21/2021 12:07:32	12	33077.8 MB	34
4	09/21/2021 12:07:49	12.5	33077.8 MB	34
4	09/21/2021 12:08:07	13	33077.8 MB	34
4	09/21/2021 12:08:24	12.3	33077.8 MB	34.1
4	09/21/2021 12:08:41	12.5	33077.8 MB	34
4	09/21/2021 12:08:58	12.5	33077.8 MB	34
4	09/21/2021 12:09:15	18.3	33077.8 MB	34.1

< 1 ... 190 191 192 193 194 >



# StreamNative Flink SQL

StreamNative Cloud

@International Organization - sndev Instance - gke

gke

Tenants

Namespaces

Topics

SQL

Clients

Connector

Manage

Catalogs

flink-test / gke

Create Flink Cluster

Execution Type: streaming

Run Stop

Currently, Flink SQL is a preview feature.

```
1 SELECT top1, COUNT(*) AS ai_cnt FROM jetsoniot2 /* OPTIONS('scan.startup.mode':'earliest') */ GROUP BY top1
```

Result

top1	ai_cnt
web site, website, internet site, site	1
rule,ruler	2
crane	1
binder, ring-binder	7
mouse, computer mouse	1
laptop, laptop computer	10
modem	2
notebook, notebook computer	28



# StreamNative Flink SQL

StreamNative Cloud

gke

Tenants

Namespaces

Topics

SQL

Clients

Connector

Manage

Catalogs

flink-test / gke

Create Flink Cluster

Execution Type: streaming

Run Stop

```
1 select top1,
2   min(CAST(cputempf as double)) as avgcputempf, min(gputempf) as avggptempf
3 from jetsoniot2 /*+ OPTIONS('scan.startup.mode'='earliest') */
4 group by top1
```

Result

top1	avgcputempf	avggptempf
binder,ring-binder	85	84
web site,website,internet site,site	88	87
rule,ruler	88	88
crane	88	87
monitor	80	100
notebook,notebook computer	81	81
laptop,laptop computer	82	82
mouse,computer mouse	83	83
modem	87	87
radio,wireless	87	87



# Influx Data Explorer

Query 1 +

FROM

\_monitoring  
\_tasks  
pulsar  
**pulsar2**  
+ Create Bucket

Filter  5

\_measurement  
• A Few Clouds  
• A Few Clouds with Haze  
• Clear  
• Drizzle  
• Dust Storm  
■ Fair  
■ Fair and Breezy  
■ Fair and Windy  
■ Fair with Haze  
■ Fair with Haze and Breezy  
■ Fog  
■ Fog and Breezy  
■ Fog and Windy  
■ Fog/Mist  
■ Fog/Mist and Breezy  
...

Filter  4

\_field  
• observation\_time\_rfc822  
latitude  
longitude  
• pressure\_in  
relative\_humidity  
station\_id  
temp\_f  
weather  
wind\_dir  
• wind\_mph

Filter  8

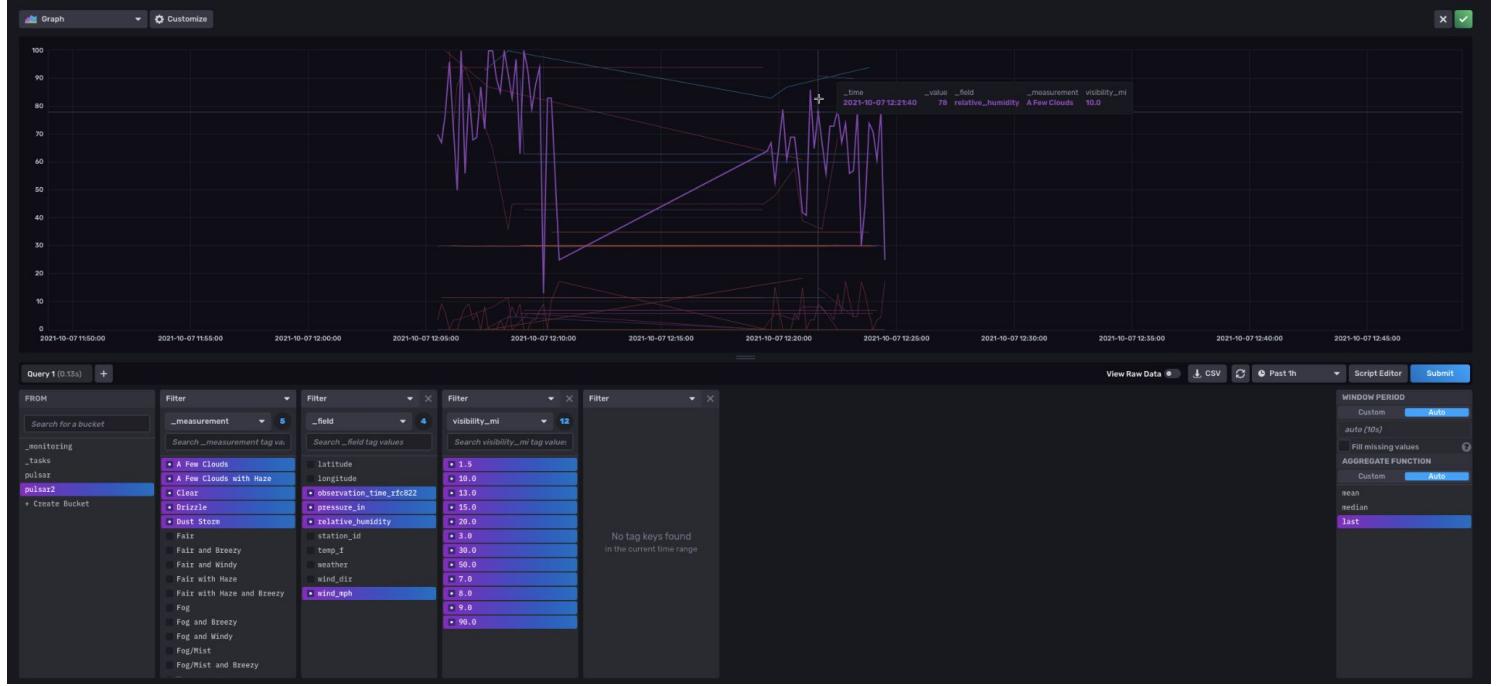
visibility\_mi  
• 1.5  
• 10.0  
• 13.0  
• 15.0  
• 20.0  
• 3.0  
30.0  
50.0  
7.0  
8.0  
• 9.0  
• 90.0

Filter

Loading tag values



# Influx Data Explorer



# Influx Data Explorer

Weather

Add Cell Edit Note Variables Annotations

This dashboard doesn't have any cells with defined variables. [Learn How](#)

Name this Cell

Filter tables...

_start	_stop	_time	_value	_field	_measurement	visibility_mi
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:05:30 EDT	30.00	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:05:50 EDT	30.02	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:06:00 EDT	29.93	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:06:30 EDT	30.05	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:06:40 EDT	30.07	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:06:50 EDT	29.96	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:07:10 EDT	29.98	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:07:20 EDT	30.06	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:07:30 EDT	29.88	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:07:50 EDT	29.98	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:08:10 EDT	30.04	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:08:20 EDT	30.03	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:08:30 EDT	29.96	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:08:40 EDT	30.07	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:09:00 EDT	29.95	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:09:20 EDT	29.97	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:09:30 EDT	29.89	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:09:40 EDT	30.03	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:09:50 EDT	29.99	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:10:00 EDT	30.09	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:10:20 EDT	30.02	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:10:30 EDT	30.05	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:10:40 EDT	30.06	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:10:50 EDT	30.29	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:20:20 EDT	30	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:20:40 EDT	30.11	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:20:50 EDT	30.07	pressure_in	Fair	7.0



# Influx Data Explorer



The screenshot shows the Data Explorer interface with a sidebar on the left containing various navigation links and settings. The main area features a query editor with a table view and a detailed breakdown of a query.

**Query Editor:**

```
SELECT _start, _stop, _time, _value, _field, _measurement, visibility_mi
FROM _field=_relative_humidity,_measurement=Fog and Windy visibility_mi=0.15
WHERE _time > 2021-07-07T12:22:46Z AND _time < 2021-10-07T12:22:46Z
```

**Filter Panel:**

- From: `_field` (selected), `_measurement`, `visibility_mi`
- Filter: `_field` (selected), `_measurement`, `visibility_mi`
- Filter: `_field` (selected), `_measurement`, `visibility_mi`
- Filter: `_field` (selected), `_measurement`, `visibility_mi`

**Window Period:** Custom (Auto)  
Aggregate Function: Custom (Auto)  
Order: Near, Median, Last

# Influx Data Explorer

Weather

Add Cell Add Note Variables Annotations

This dashboard doesn't have any cells with defined variables. [Learn How](#)

field : relative_humidity_measurement = A few Clouds visibility_mi = 8.0	2021-10-07 10:10:09 EDT	2021-10-07 04:10:09 EDT	2021-10-07 12:21:00 EDT	6.89	wind_mph	Partly Cloudy	10.0
field : temp_f_measurement = Partly Cloudy visibility_mi = 7.0	2021-10-07 10:10:09 EDT	2021-10-07 04:10:09 EDT	2021-10-07 12:22:00 EDT	5.07	wind_mph	Partly Cloudy	10.0
field : relative_humidity_measurement = Thunderstorm in Vicinity Drizzle vi	2021-10-07 10:10:09 EDT	2021-10-07 04:10:09 EDT	2021-10-07 12:23:00 EDT	5.66	wind_mph	Partly Cloudy	10.0
field : temp_f_measurement = Fog visibility_mi = 0.15	2021-10-07 10:10:09 EDT	2021-10-07 04:10:09 EDT	2021-10-07 12:24:00 EDT	5.18	wind_mph	Partly Cloudy	10.0
field : pressure_in_measurement = Partly Cloudy visibility_mi = 8.0	2021-10-07 10:10:09 EDT	2021-10-07 04:10:09 EDT	2021-10-07 12:25:00 EDT	4.85	wind_mph	Partly Cloudy	10.0

Line For Weather



# Influx Data Explorer

Data Explorer

Now you can use Notebooks to explore and take action on your data [Create a Notebook](#)

Single Stat    Customize

# 23.43

Query 1 (0.06s) +

FROM Filter Filter Filter Filter

Search for a bucket  \_measurement  \_field  host

\_monitoring  \_measurement tag values  \_field tag values  host tag values

tasks  \_measurement tag values  \_field tag values  host tag values

pulsar  \_measurement tag values  \_field tag values  host tag values

pulsar2  \_measurement tag values  \_field tag values  host tag values

+ Create Bucket

No tag keys found in the current time range



# Influx Data Explorer

Weather

Add Cell Add Note Variables Annotations

This dashboard doesn't have any cells with defined variables. [Learn How](#)

Name this Cell

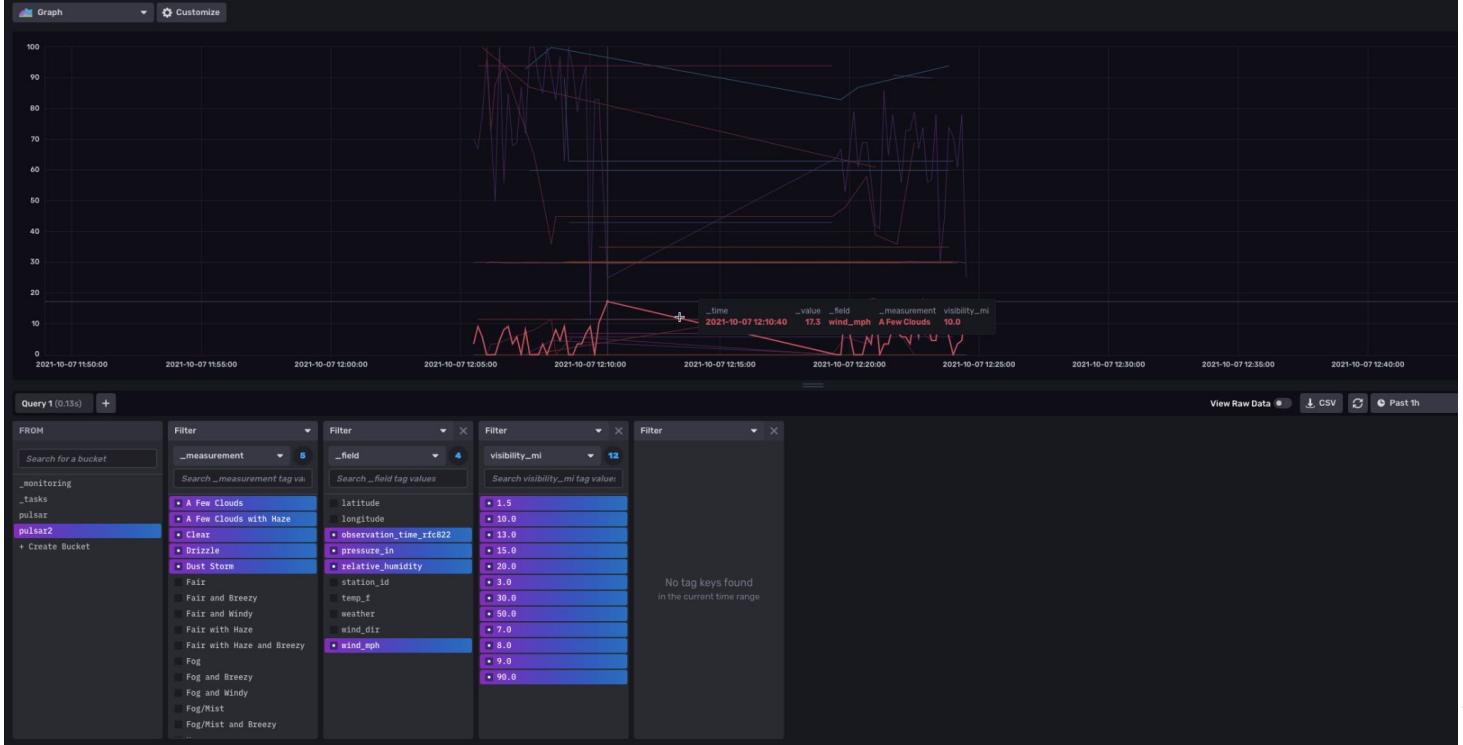
Filter tables...

_start	_stop	_time	_value	_field	_measurement	visibility_mi
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:05:30 EDT	30.00	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:05:50 EDT	30.02	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:06:00 EDT	29.93	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:06:30 EDT	30.05	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:06:40 EDT	30.07	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:06:50 EDT	29.96	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:07:10 EDT	29.98	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:07:20 EDT	30.06	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:07:30 EDT	29.98	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:07:50 EDT	29.98	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:08:00 EDT	30.04	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:08:20 EDT	30.03	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:08:30 EDT	29.96	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:08:40 EDT	30.07	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:09:00 EDT	29.95	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:09:20 EDT	29.97	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:09:30 EDT	29.89	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:09:40 EDT	30.03	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:09:50 EDT	29.99	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:10:00 EDT	30.09	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:10:20 EDT	30.02	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:10:30 EDT	30.05	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:10:40 EDT	30.06	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:19:20 EDT	30.29	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:20:10 EDT	30	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:20:20 EDT	30.11	pressure_in	Fair	7.0
2021-10-07 11:23:04 EDT	2021-10-07 12:23:04 EDT	2021-10-07 12:20:30 EDT	30.07	pressure_in	Fair	7.0

Line For Weather



# Influx Data Explorer





- <https://github.com/tspannhw/FLiP-InfluxDB>
- <https://pulsar.apache.org/docs/en/io-influxdb-sink/>
- <https://pulsar.apache.org/docs/en/io-overview/>
- <https://github.com/tspannhw/Flip-solr>
- <https://github.com/tspannhw/Flip-transit>
- <https://github.com/tspannhw/Flip-iot>
- <https://www.datainmotion.dev/2020/10/flank-streaming-edgeai-on-new-nvidia.html>
- <https://github.com/tspannhw/minifi-jetson-nano>
- <https://github.com/tspannhw/SpeakerProfile/>
- <https://hub.streamnative.io/connectors/influxdb-sink/2.5.1/>
- <https://github.com/tspannhw/minifi-xaviernx/>

# Let's Keep in Touch!



**Tim Spann**

Developer Advocate



@[PaasDev](#)



<https://www.linkedin.com/in/timothyspann>



<https://github.com/tspannhw>

# Questions?

# Thank You

