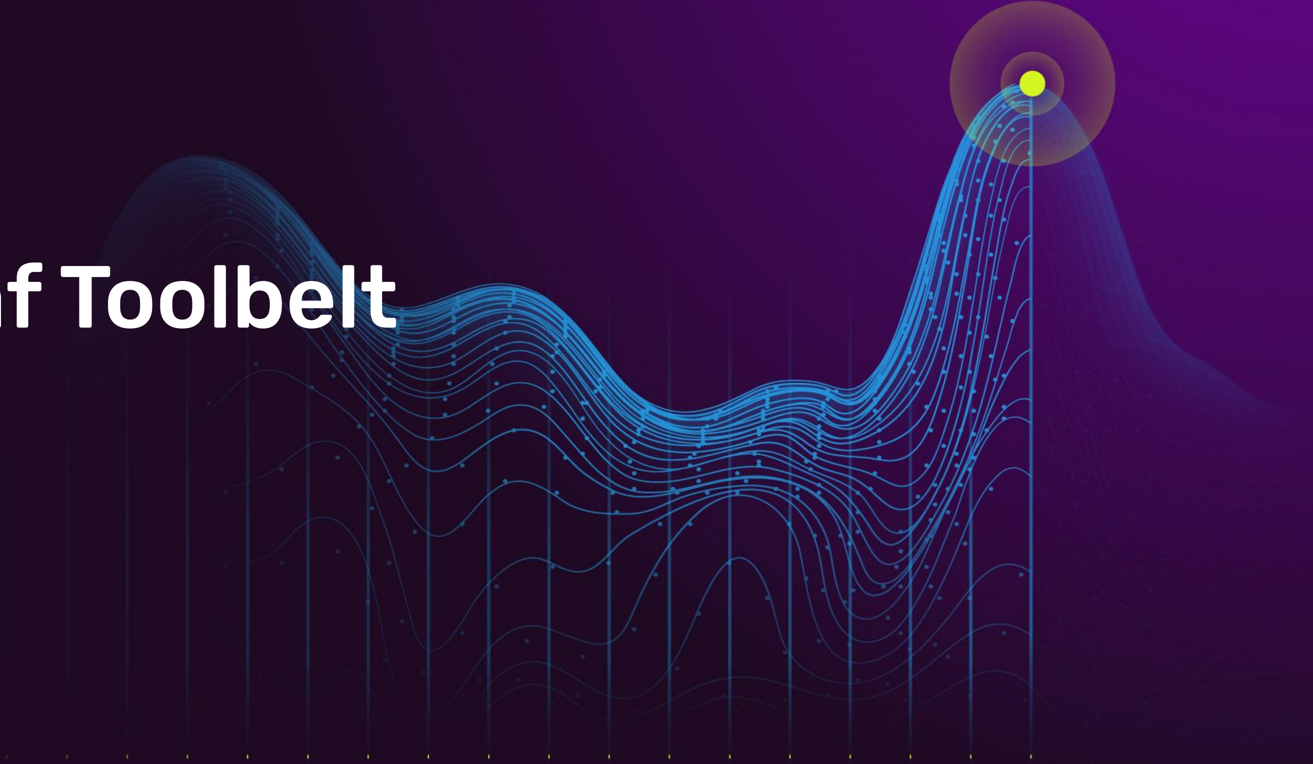
influxdata®
Act in Time

The Telegraf Toolbelt

It can do that, really?



David McKay

Developer Advocate

at InfluxData

@rawkode

- 🏴󠁧󠁢󠁳󠁣󠁴󠁿 Scottish
- 🐭 Has 9 Pets
- 💙 Esoteric Programming Languages
- ☸️ Kubernetes Release Team
- 🤔 Stoic

Introduction Demo

Telegraf is plugin based

Over 200 Plugins

169	Inputs
35	Outputs
15	Processors
14	Parsers
9	Serializers
8	Aggregators

V1.10 (May)

- ➔ Inputs
  - ◆ Google Cloud PubSub
  - ◆ Kinesis Consumer
  - ◆ Kube Inventory
  - ◆ Neptune Apex
  - ◆ Nginx Upstream Checks
  - ◆ Multifile
  - ◆ Stack Driver

- ➔ Outputs
  - ◆ Google Cloud PubSub
- ➔ Serializers
  - ◆ Nowmetric
  - ◆ Carbon2

V1.11 (June)

- Inputs
  - bind9
  - Cisco GNMI
  - Cisco MDT
  - ECS & Fargate
  - GitHub
  - OpenWeatherMap
  - PowerDNS

- Outputs
  - Health
  - Syslog

- Serializers
  - Wavefront

- Aggregators
  - Final

V1.12 (September)

- Inputs
  - apcupsd
  - Docker Logs
  - Fireboard
  - Logstash
  - MarkLogic
  - OpenNTPD
  - uWSGI

- Outputs
  - Exec

- Parsers
  - Form

- Processors
  - Date
  - Pivot
  - Unpivot
  - Tag Limit

There are 3249 telegraf.conf files on GitHub

I used a sample of 1000 telegraf.conf files from GitHub

Output Plugins

→	72%	InfluxDB
→	5%	File
→	2%	Prometheus Client
→	.9%	Graphite
→	.6%	Kafka

Interval

73% Use 10s (Default)

5.6% use 1s

4% use 5s

2% use 1m

1% use 30s

Round Interval

90% True

Jitter

90% None

Omit Hostname

90% False

Output Plugins

➔	71%	1 Output
➔	5%	2 Outputs
➔	2%	0 Outputs
➔	.6%	3 Outputs

Input Plugins

→	17%	1	Input	
→	12%	9	Inputs	
→	10%	8	Inputs	
→	5%	10	Inputs	
→	5%	11	Inputs	
→	5%	6	Inputs	
→	5%	7	Inputs	
→	1	56	Inputs	?!?!

Input Plugins

➔	58%	CPU	➔	47%	Swap
➔	53%	Mem	➔	40%	Process
➔	52%	Disk	➔	31%	Kernel
➔	51%	System	➔	28%	Docker
➔	47%	DiskIO	➔	23%	Net

Multiple Outputs

Multiple Outputs

```
[[outputs.influxdb]]
  urls = ["http://influxdb:8086"]

[[outputs.influxdb_v2]]
  urls = ["http://influxdb2:9999"]
```

Remote Configuration

Remote Configuration

```
telegraf --config <http_uri>
```

Remote Configuration

```
telegraf --config

https://raw.githubusercontent.com
/influxdata/telegraf/master/etc/telegraf.conf
```

Remote Configuration

```
SOME_VAR=abc123 telegraf --config <http_uri>
```

Remote Configuration

```
[agent]
    interval = “${INTERVAL}”

[[outputs.influxdb_v2]]
    token = “${TOKEN}”
```

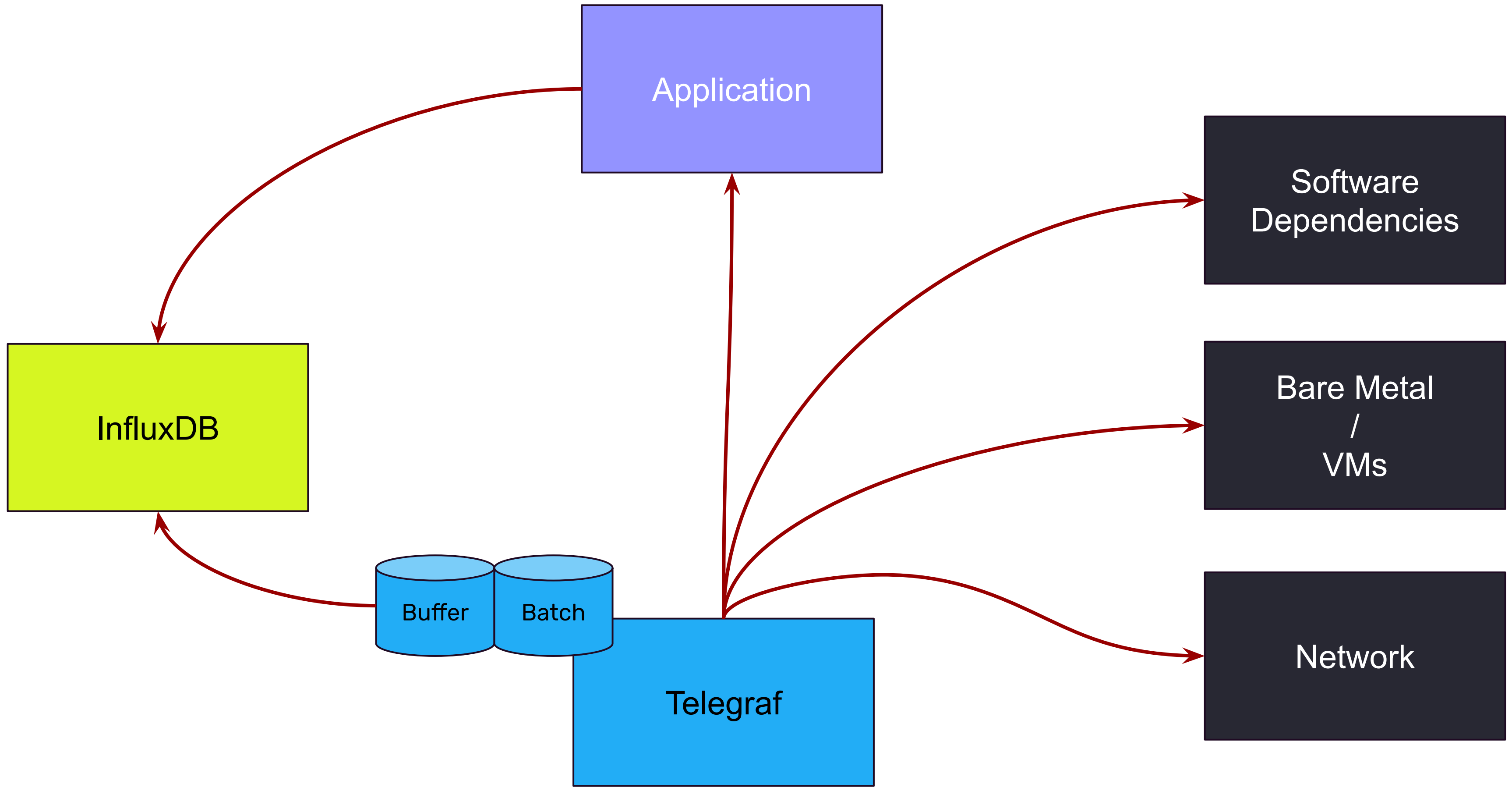
Output Resiliency

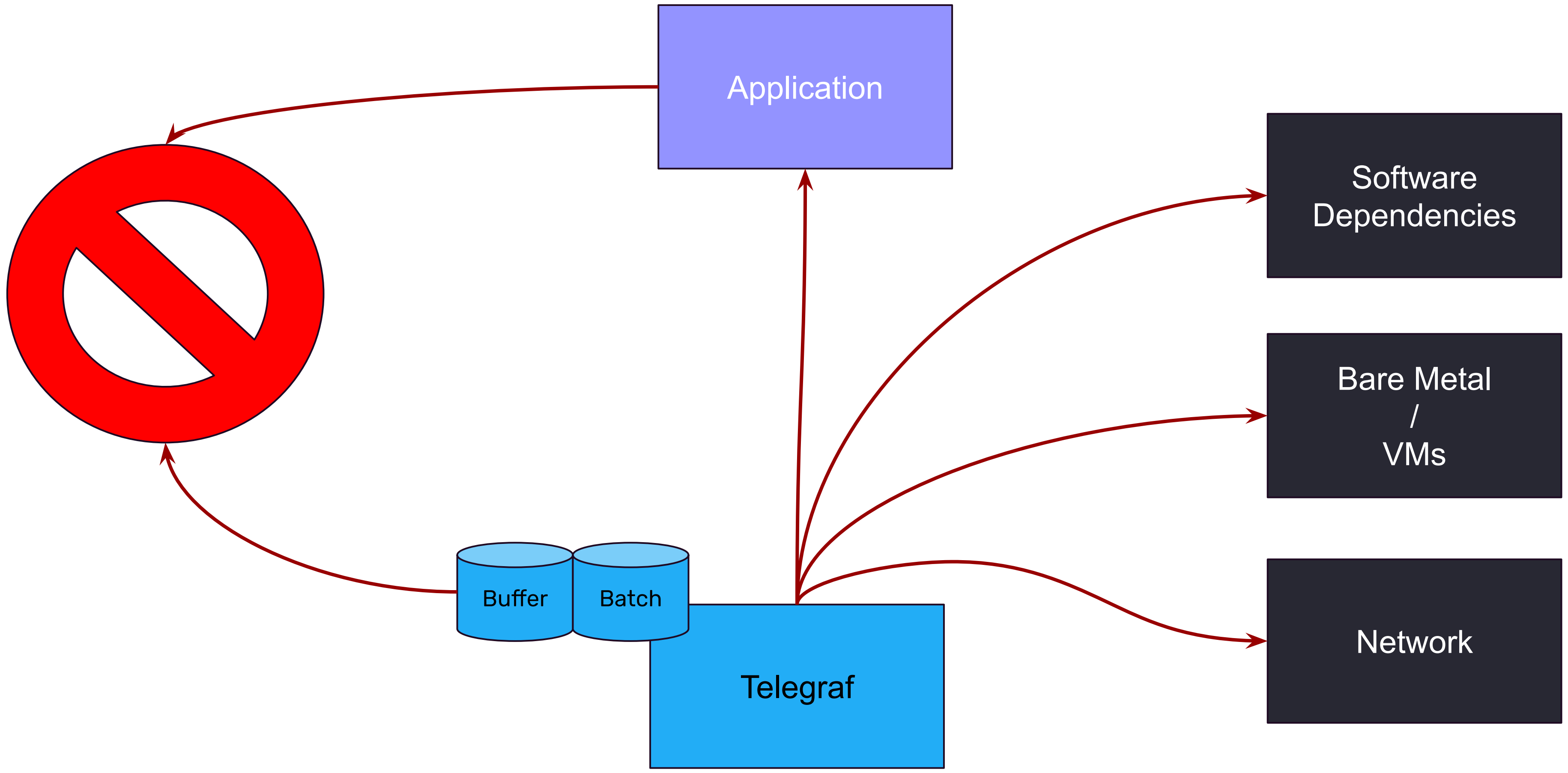
Output Resiliency

Use

`metric_buffer_limit`

to handle downtime of your outputs


Application
Software Dependencies
InfluxDB
Bare Metal / VMs
Buffer
Batch
Telegraf
Network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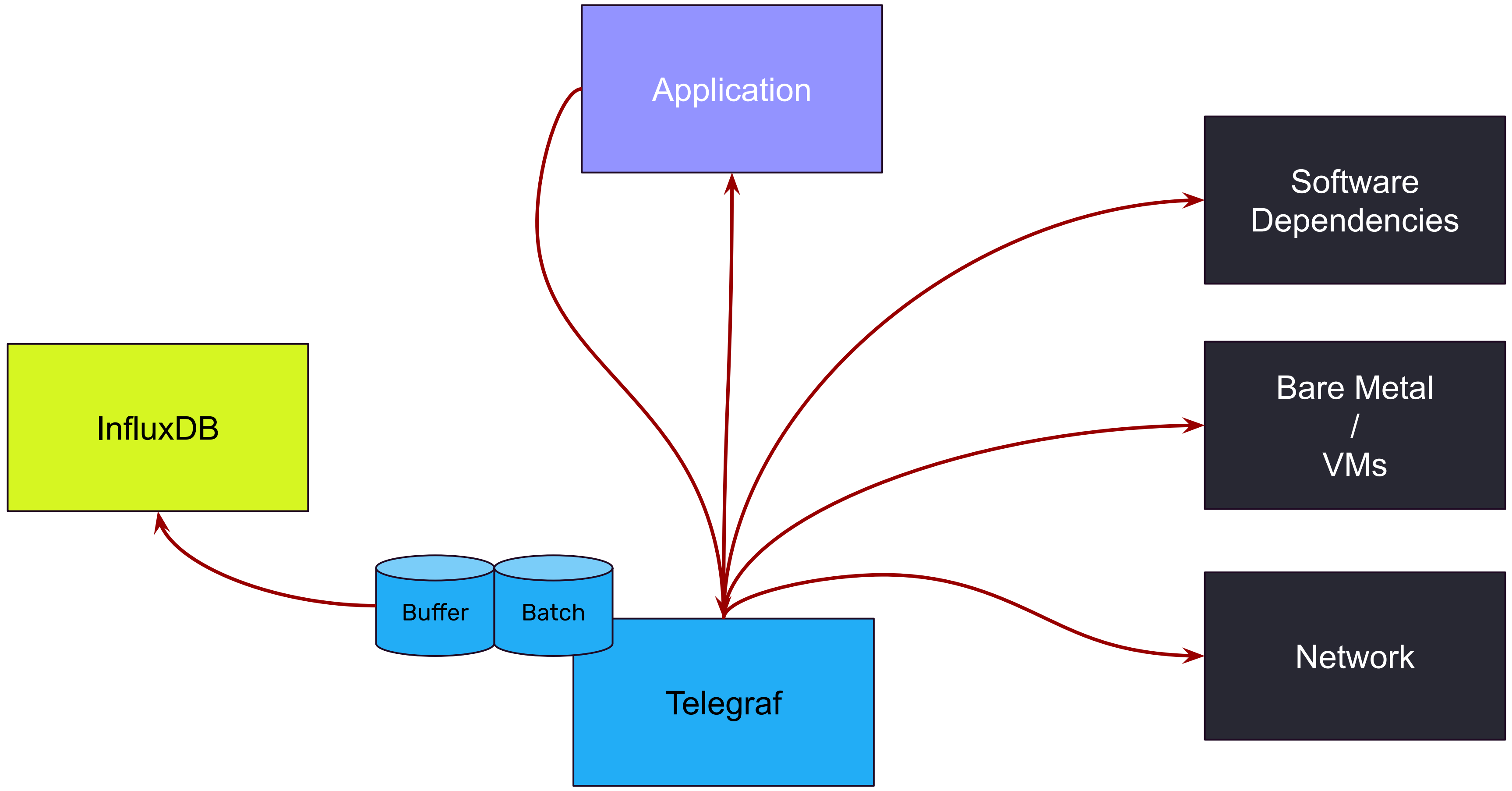
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Output Resiliency

`influxdb_listener`

`http_listener`

Output Resiliency

influxdb_listener

Allows Telegraf to serve as a proxy for the /write endpoint of the InfluxDB HTTP API.

influxdb_listener

```
[[inputs.influxdb_listener]]
  service_address = ":8086"
```

v1 Client Libraries

Output Resiliency

http_listener_v2

Allows Telegraf to accept metrics over HTTP in any supported format

http_listener_v2

```
[[inputs.http_listener_v2]]
  service_address = ":8080"
  data_format = "json"
```

JSON

Docs

```
[[inputs.http_listener_v2]]
  data_format = "json"
  json_name_key = "name"
  tag_keys = [“go_version”]
```

Bring Your Own Telegraf

Plugins come at a cost

```
➜ docker image ls
byot-sample      15.2MB
telegraf          254MB
```

Bring Your Own Telegraf

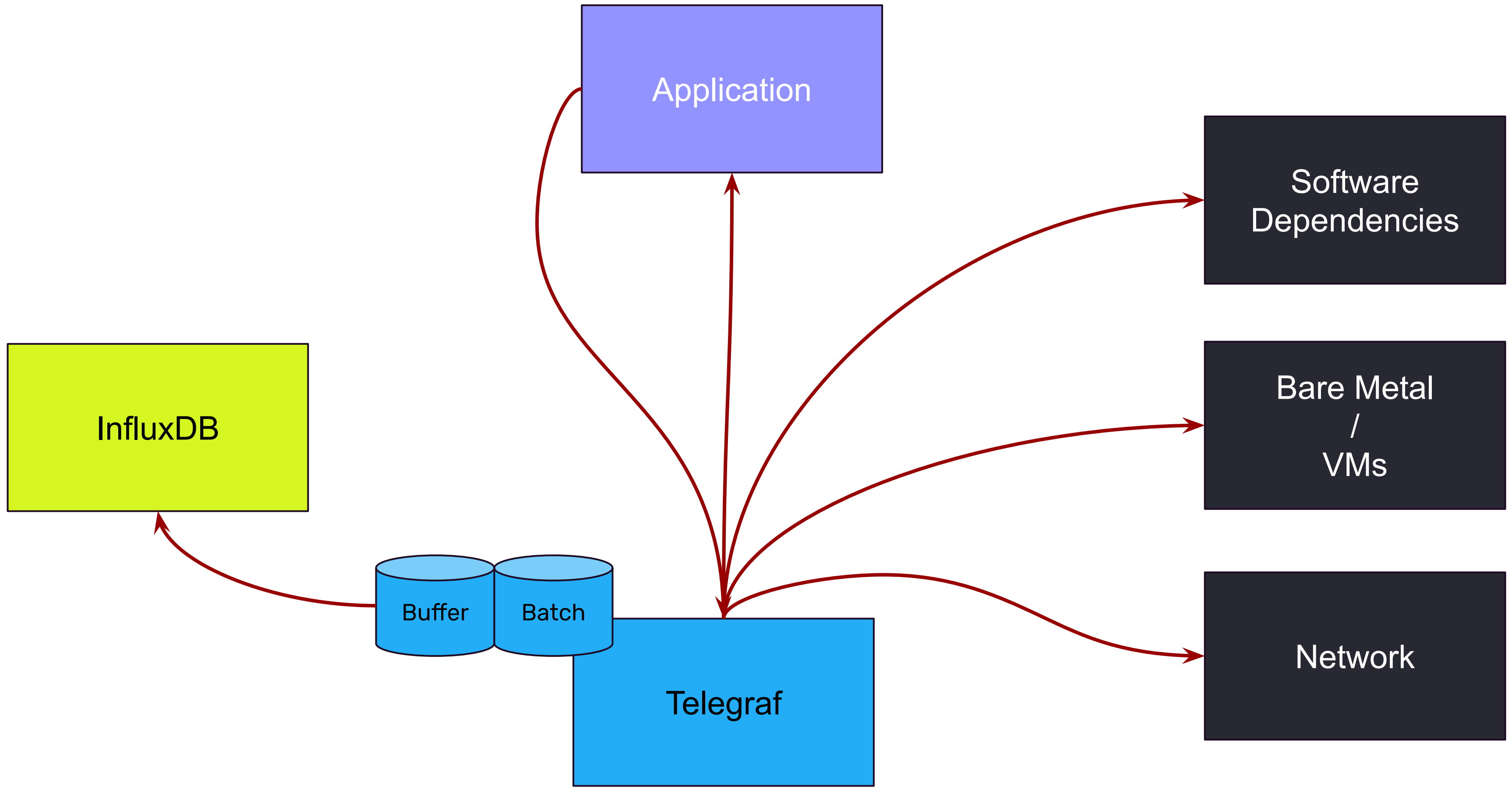
```
FROM rawkode/telegraf:byo AS build

FROM alpine:3.7 AS telegraf

COPY --from=build /etc/telegraf /etc/telegraf
COPY --from=build /binary /bin/telegraf

ENTRYPOINT [ "/bin/telegraf" ]
```

Bring Your Own Telegraf

BYOT

BYOT Example

Click Me! Click Me!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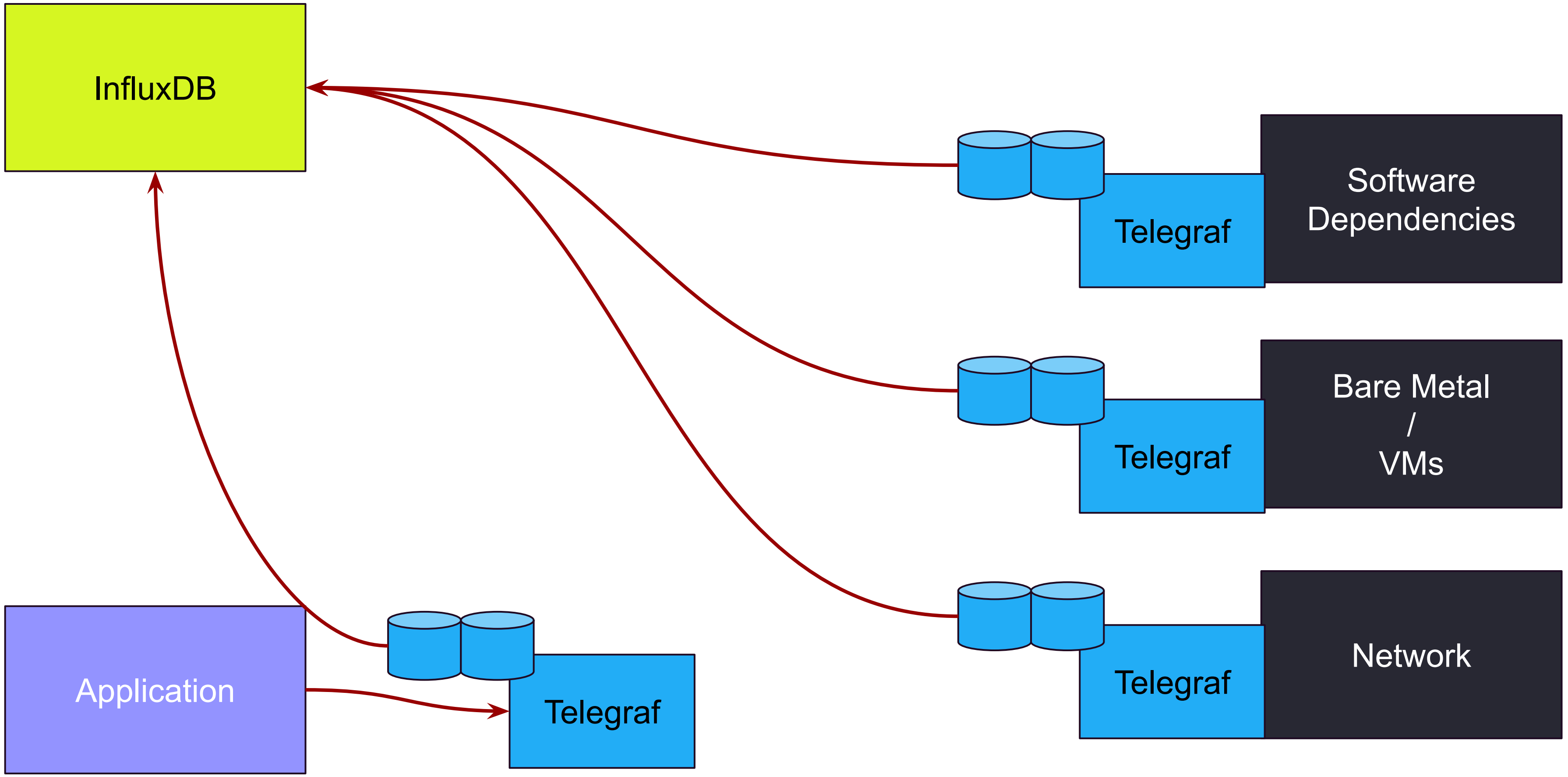
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Telegraf

Internal

Internal

- → Keep an eye on `buffer_size`
- → Make sure you alert on `metrics_dropped`

Health Output

```
@app.route("/health")
def healthcheck():
    return "OK”
```

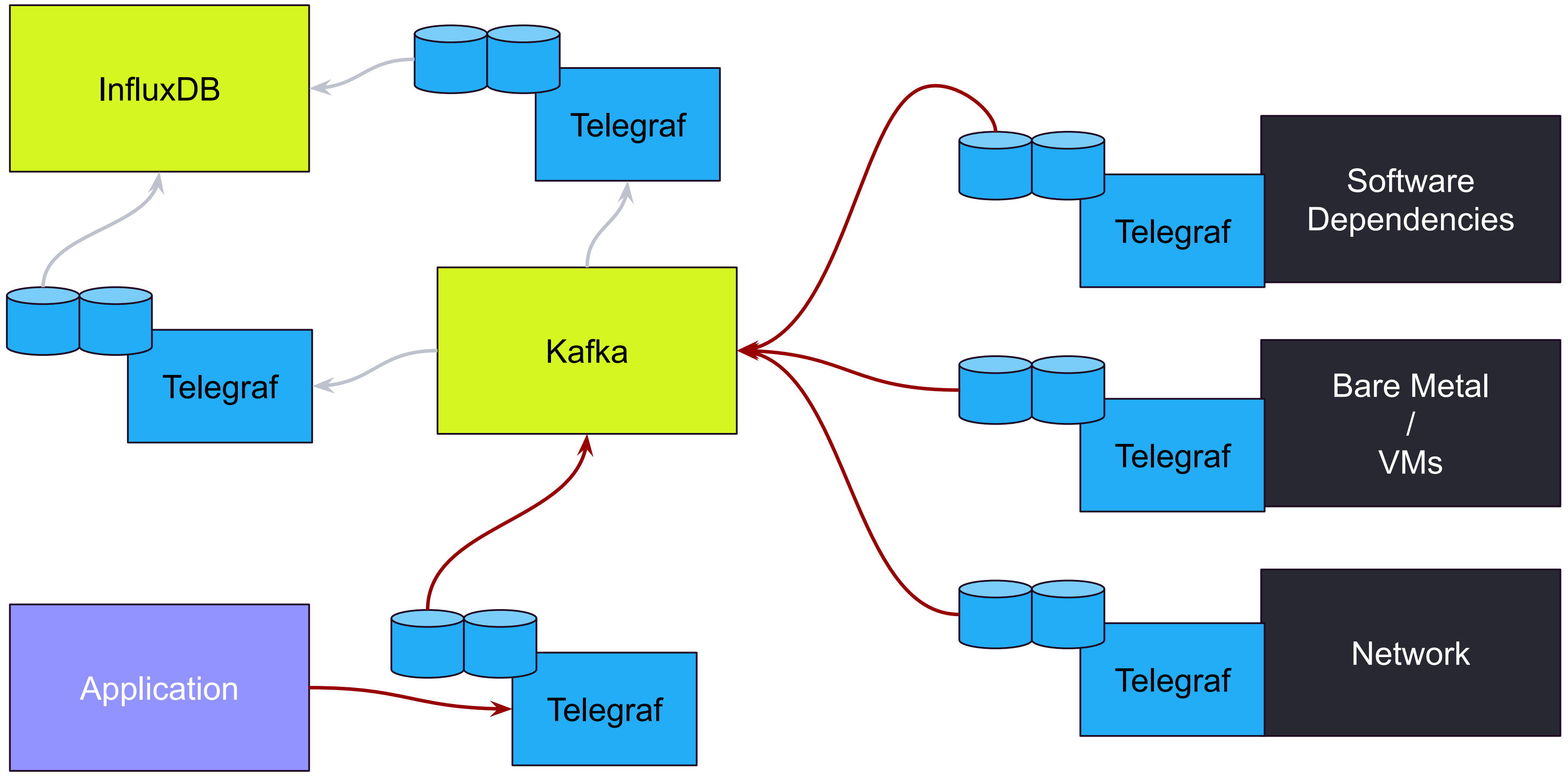
```
@app.route("/health")
def healthcheck():
    return "OK”
```

Health Output

```
[[outputs.health]]
  service_address = "http://:5559"
  namepass = ["web-metrics"]

  [[outputs.health.compares]]
    field = "response_time"
    lt = 0.300
```

Kafka In, Kafka Out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Serverless?

Demo

We’ve covered less than 10 of the 200 plugins https://speakerdeck.com/rawkode

https://github.com/rawkode/influxdb-examples

@rawkode

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