

# Infraestructura Tecnológica

The TICK stack is a collection of products from the developers of the time-series database InfluxDB. It is made up of the following<sup>1)</sup>

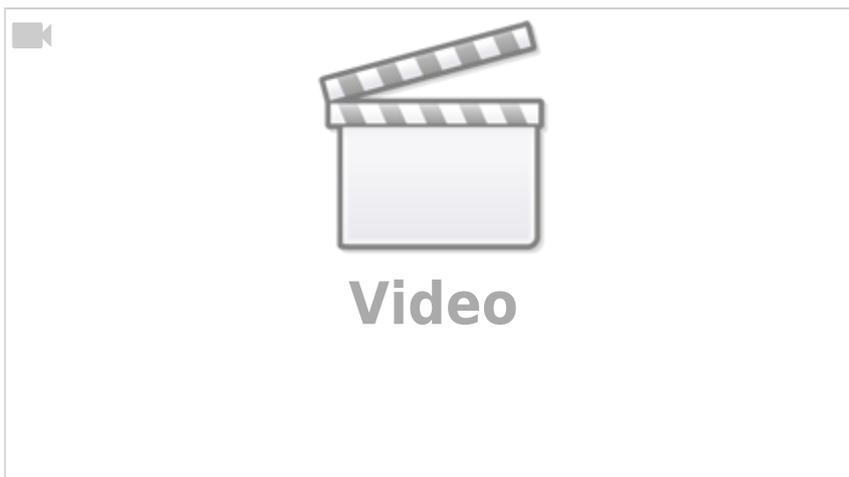
components:

- **Telegraf** collects time-series data from a variety of sources.
- **InfluxDB** stores time-series data.
- **Chronograf** visualizes and graphs the time-series data.
- **Kapacitor** provides alerting and detects anomalies in time-series data.

You can use each of these components separately, but if you use them together, you'll have a scalable, integrated open-source system for processing time-series data.

In this tutorial you'll set up and use this platform as an open-source monitoring system. You'll generate a bit of CPU usage and receive an email alert when the usage gets too high.

<https://www.influxdata.com/blog/building-iot-time-series-demo/>



[https://www.youtube.com/watch?v=woepS38F\\_90](https://www.youtube.com/watch?v=woepS38F_90)

<https://www.influxdata.com/time-series-platform/>

<https://forums.docker.com/t/docker-and-iptables-configuration-startup/904>

<https://github.com/CWempe/rest2influxdb/blob/master/rest2influxdb.sh>

<http://blog.sequenceiq.com/blog/2014/08/12/docker-networking/>

<https://www.digitalocean.com/community/tutorials/how-to-configure-the-linux-firewall-for-docker-swarm-on-ubuntu-16-04>

## MQTT

<http://platformio.org/lib/show/89/PubSubClient/examples> <https://pubsubclient.knolleary.net/>

<http://platformio.org/lib/show/346/AsyncMqttClient> <https://github.com/marvinroger/async-mqtt-client>

<http://marvinroger.viewdocs.io/async-mqtt-client/>

## influx data format

[https://docs.influxdata.com/influxdb/v1.3/write\\_protocols/line\\_protocol\\_tutorial/](https://docs.influxdata.com/influxdb/v1.3/write_protocols/line_protocol_tutorial/)  
<https://docs.influxdata.com/influxdb/v1.3/concepts/glossary/#timestamp>

timestamp tiene una formato definido por la precisión, para ajustarlo se hace por medio de un parámetro

<https://docs.influxdata.com/influxdb/v1.3/tools/api/#write>

<https://support.influxdb.com/hc/en-us/articles/205177928-What-time-formats-are-allowed->

Query String Parameter	Optional/Required	Description
precision=[ns,u,ms,s,m,h]	Optional	

[https://docs.influxdata.com/influxdb/v1.3/concepts/schema\\_and\\_data\\_layout/](https://docs.influxdata.com/influxdb/v1.3/concepts/schema_and_data_layout/)

## ESP8266 Wireless NTP Server

<https://www.epochconverter.com/programming/c>

<https://www.hackster.io/Absolutelyautomation/esp8266-based-wireless-ntp-server-b77926>

<http://www.instructables.com/id/ESP8266-Wireless-NTP-Stratum1-Server/>

<https://hackaday.io/project/28013-esp8266-gps-ntp-server>

1)

<https://www.digitalocean.com/community/tutorials/how-to-monitor-system-metrics-with-the-tick-stack-on-ubuntu-16-04>

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