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Act in Time

3 Reasons Why Your Cloud Architecture Needs a Time Series Platform

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As you adopt:

DevOps
Docker
Kubernetes

You’re going to need better monitoring

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What You Will Need To Monitor

- DevOps Toolchain(s)
- Containerized Applications
- Containers
- Kubernetes Clusters (nodes, pods, etc)

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Kubernetes Adoption is Growing

73,833	473	2,490	Top 2	Top 100	Top 0.01%
Commits	Releases	Contributors	Starred Go Project	Forked GitHub Project	Starred GitHub Project

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Why Care About Better Monitoring

UPTIME: High uptime requires sub-second visibility into architecture

COMPLEXITY: Ecosystems of microservices requires cross-domain visibility

SCALE: Legacy systems can’t handle the volume of metrics generated

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Emergence of Time-Series Platforms for Advanced Monitoring

New Workloads of Metrics and Events

Explosion of Connected Things

Instrumentation of the Virtual World

Consolidating of Metrics/Events Data

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What makes **Events and Metrics** Unique?

- All time-stamped data
- Generated in regular and irregular periods
- Huge volumes of data

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What makes a **Time Series** platform different?

- Ingestion of large volumes of metrics
- Real-time queries of large data sets
- Rapid eviction and transformation of data
- Down sampling of high precision data
- Storage optimization and compression

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The New Architectural Approach

SQL	Search	Big Data	Time Series
Orders and Order Lines	Logs and web pages	Volume and variety	Metrics and Events
ORACLE	splunk>	hadoop	influxdata

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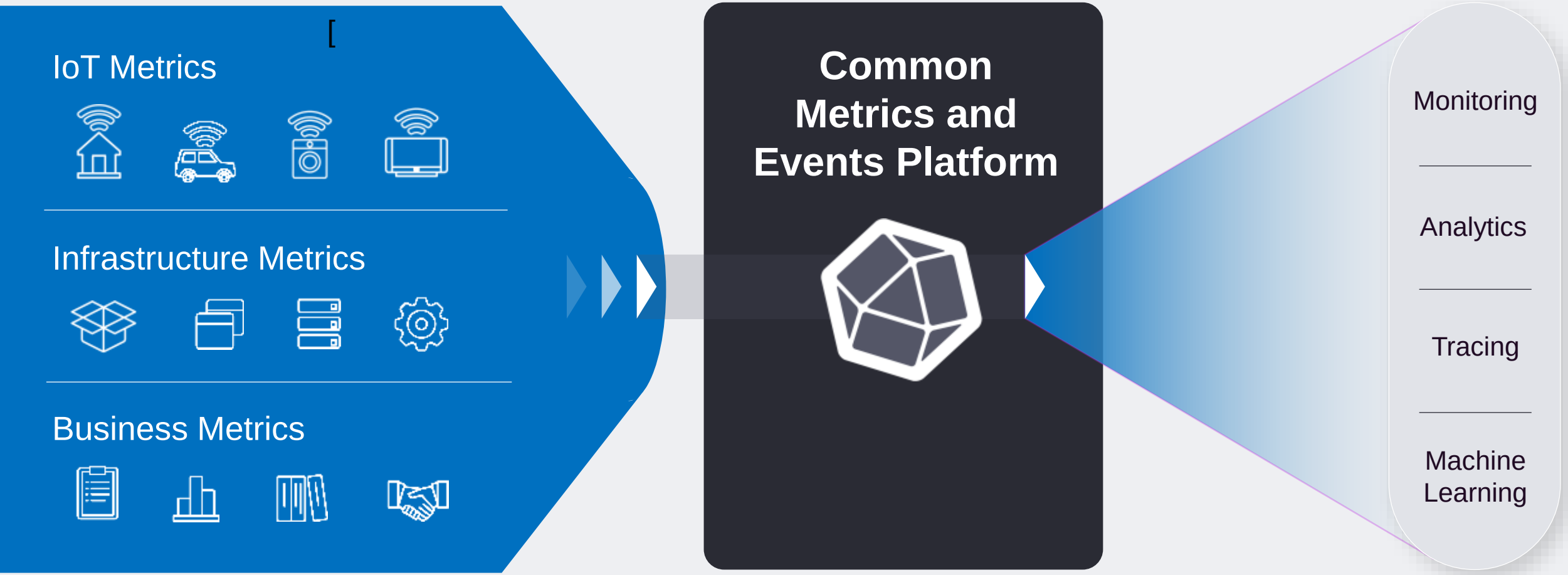
What is InfluxDB?

Platform Strategy:
Be The Platform of Choice for All Metrics and Event Workloads



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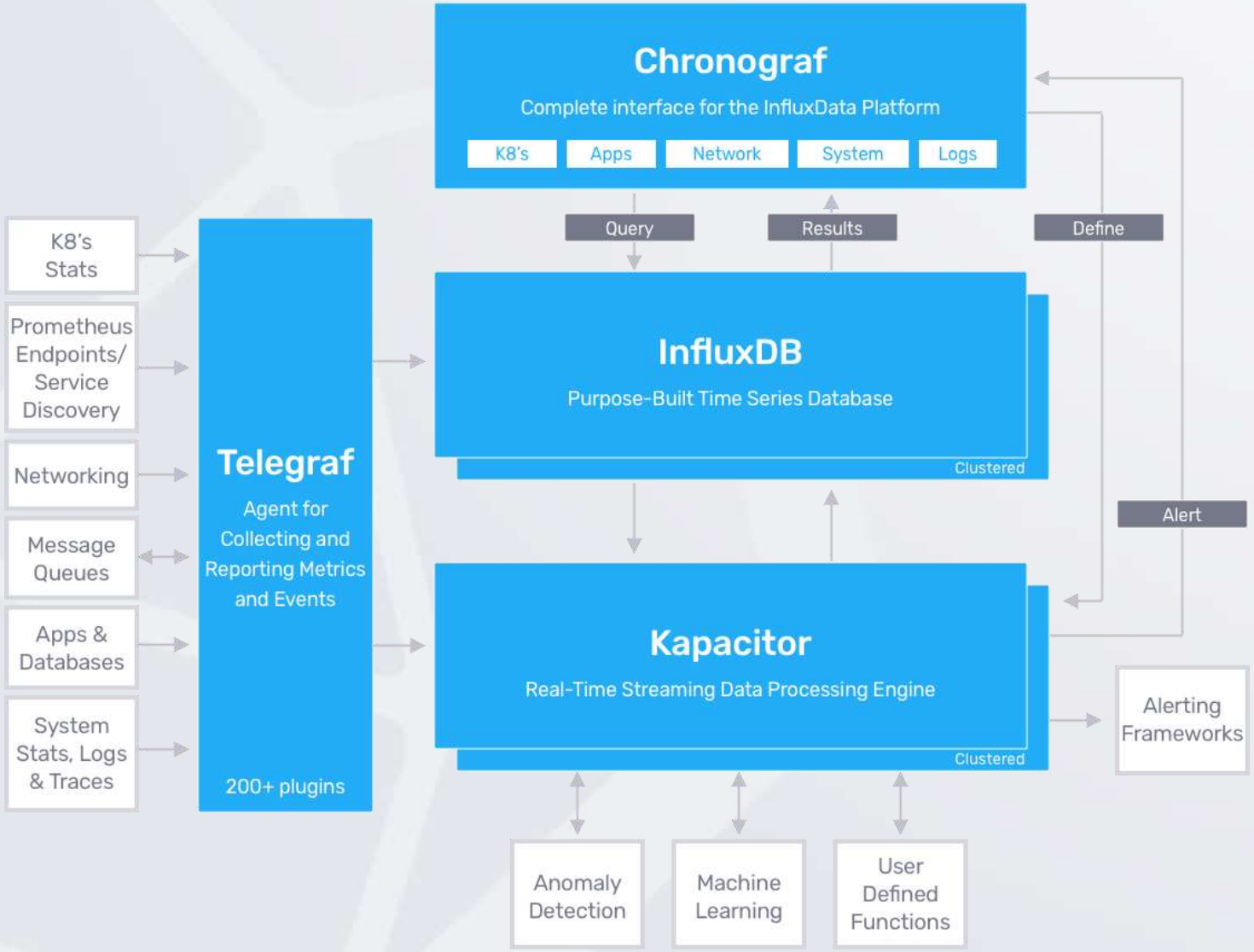
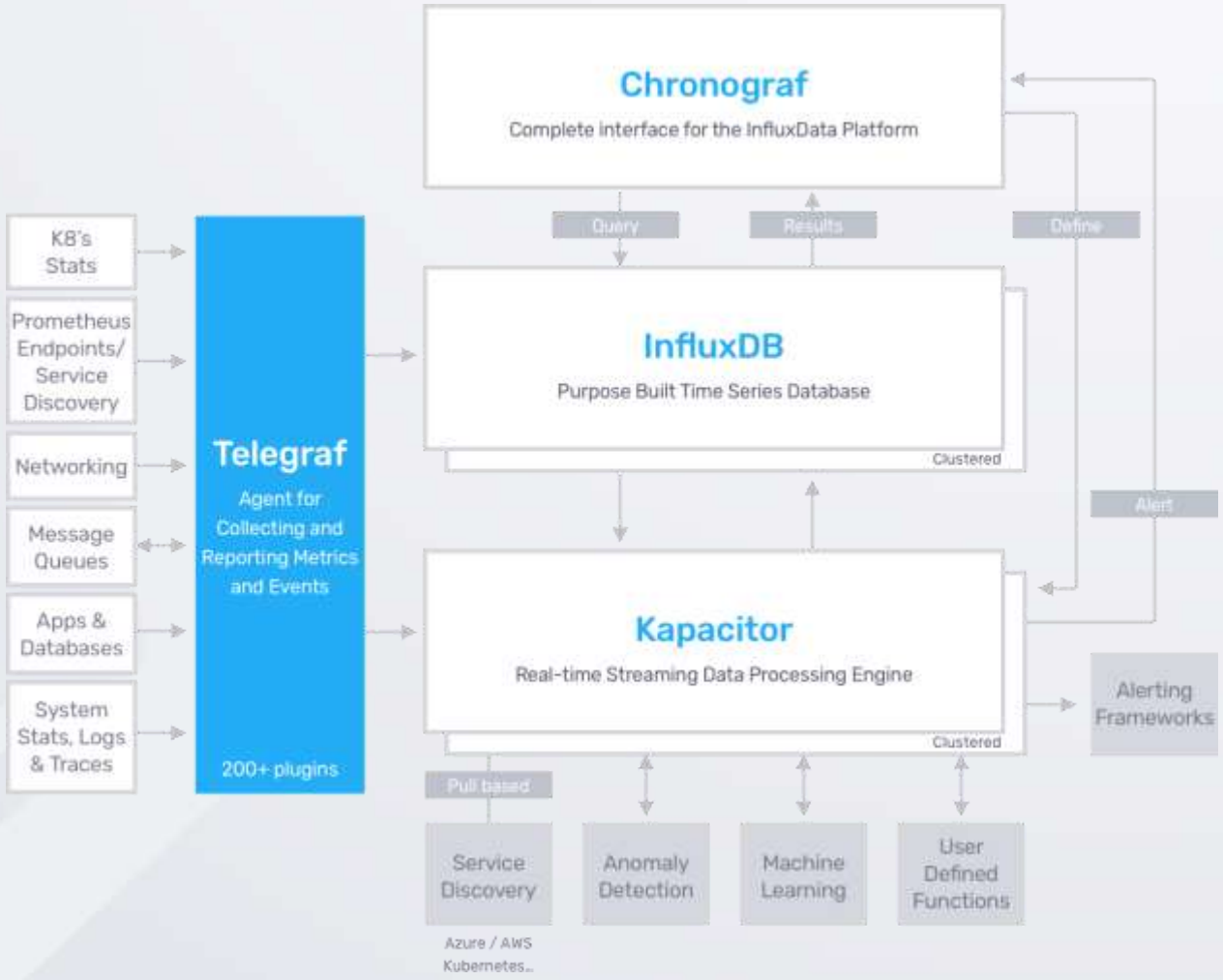
InfluxDB's TICK Stack



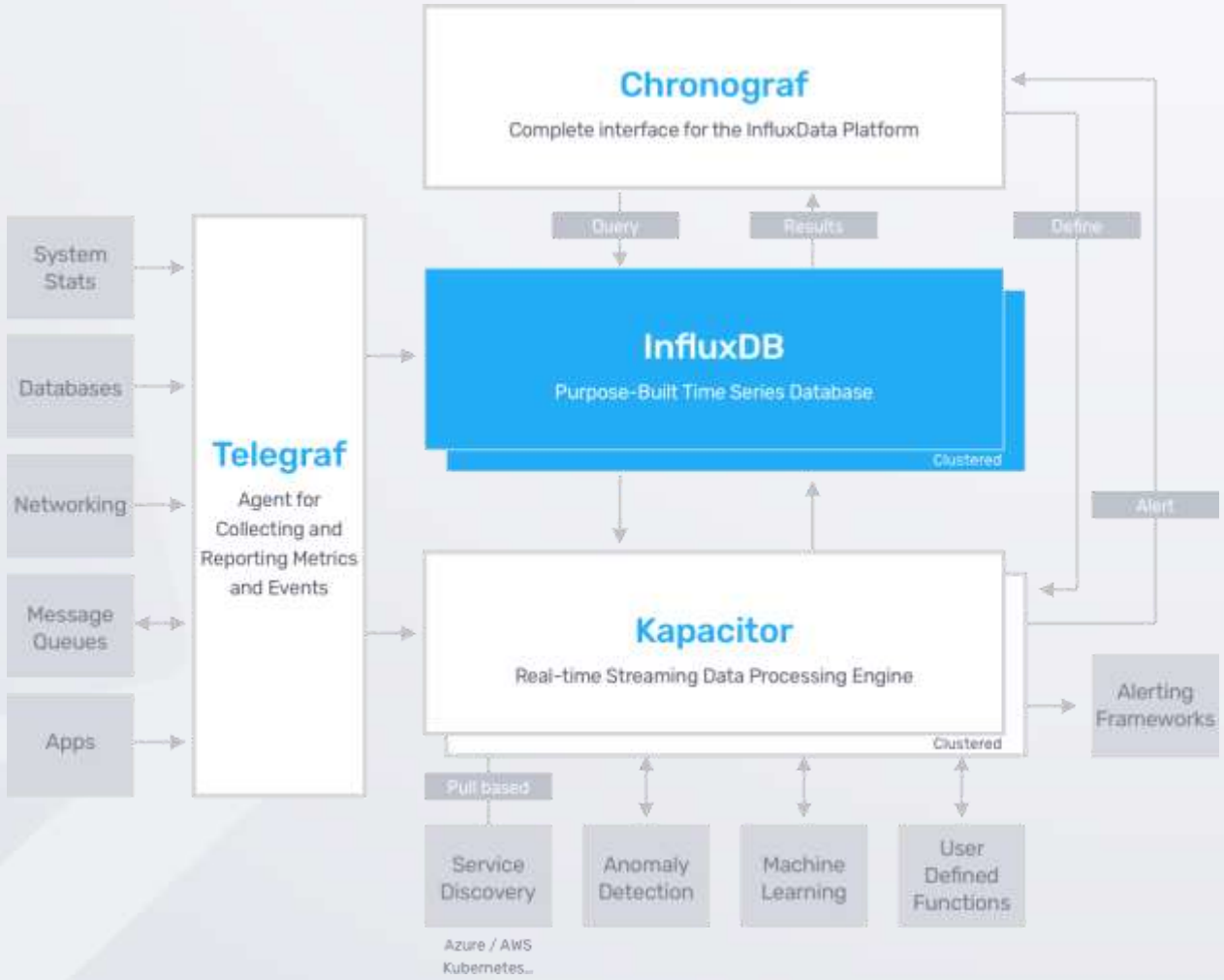
Telegraf: Agent for Collecting and Reporting Metrics and Events

- Telegraf is plugin-driven and has the concept of 4 distinct plugin types to collect and report metrics:
- Input plugins collect metrics from the system, services, or 3rd party APIs
- Processor plugins transform, decorate, and/or filter metrics
- Aggregator plugins create aggregate metrics (e.g. mean, min, max, quantiles, etc.)
- Output plugins write metrics to various destinations
- Over 200 plugins, more added every few weeks



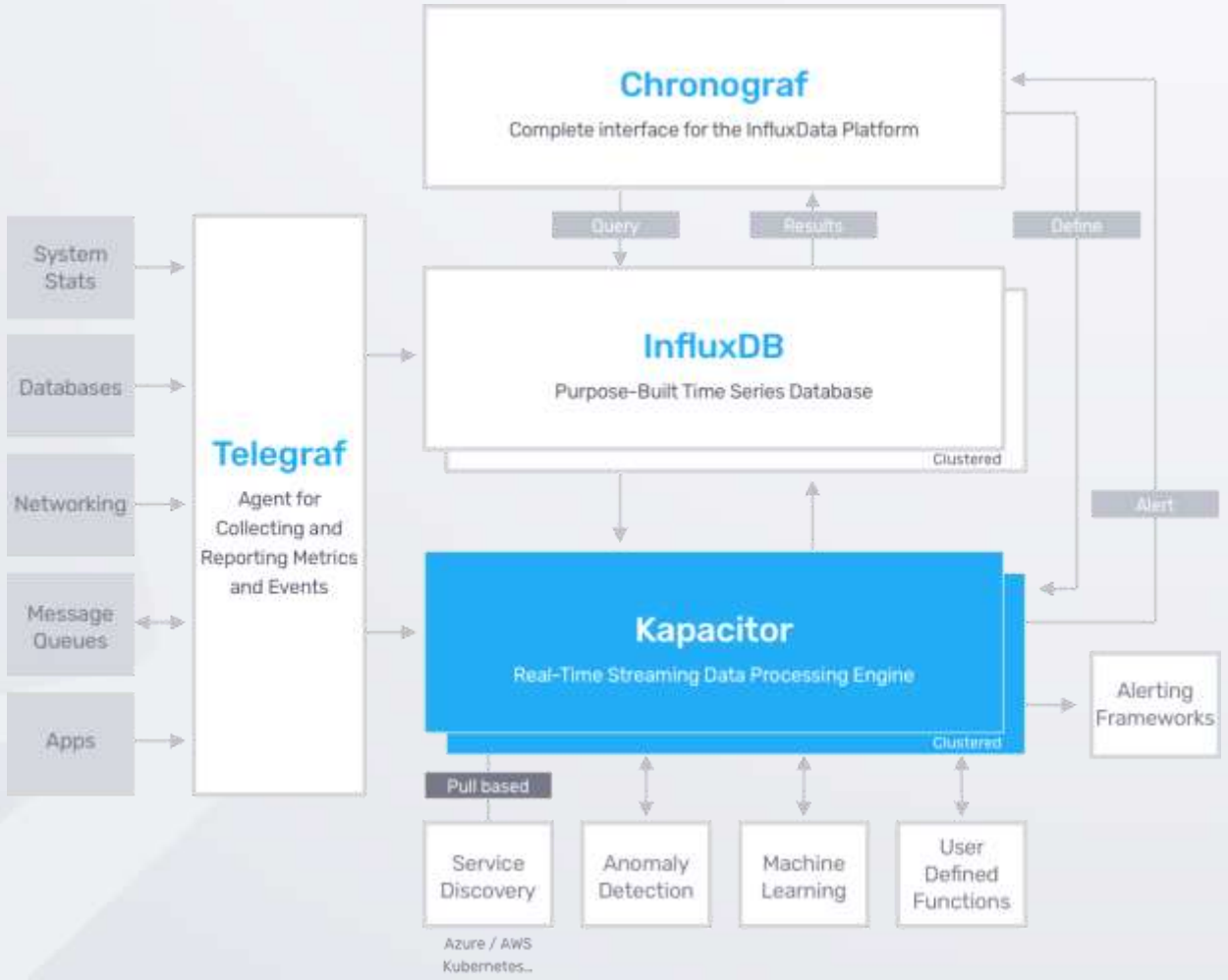
InfluxDB: The Modern Time Series Database

- Time-series database built from the ground up to handle high write & query loads
- Custom high performance data store written specifically for timestamped data, (DevOps monitoring, application metrics, IoT sensor data, & real-time analytics)
- Conserve space on your machine by configuring
  - to keep data for a defined length of time
  - automatically expiring
  - deleting any unwanted data from the system
- Offers a SQL-like query language for interacting with data



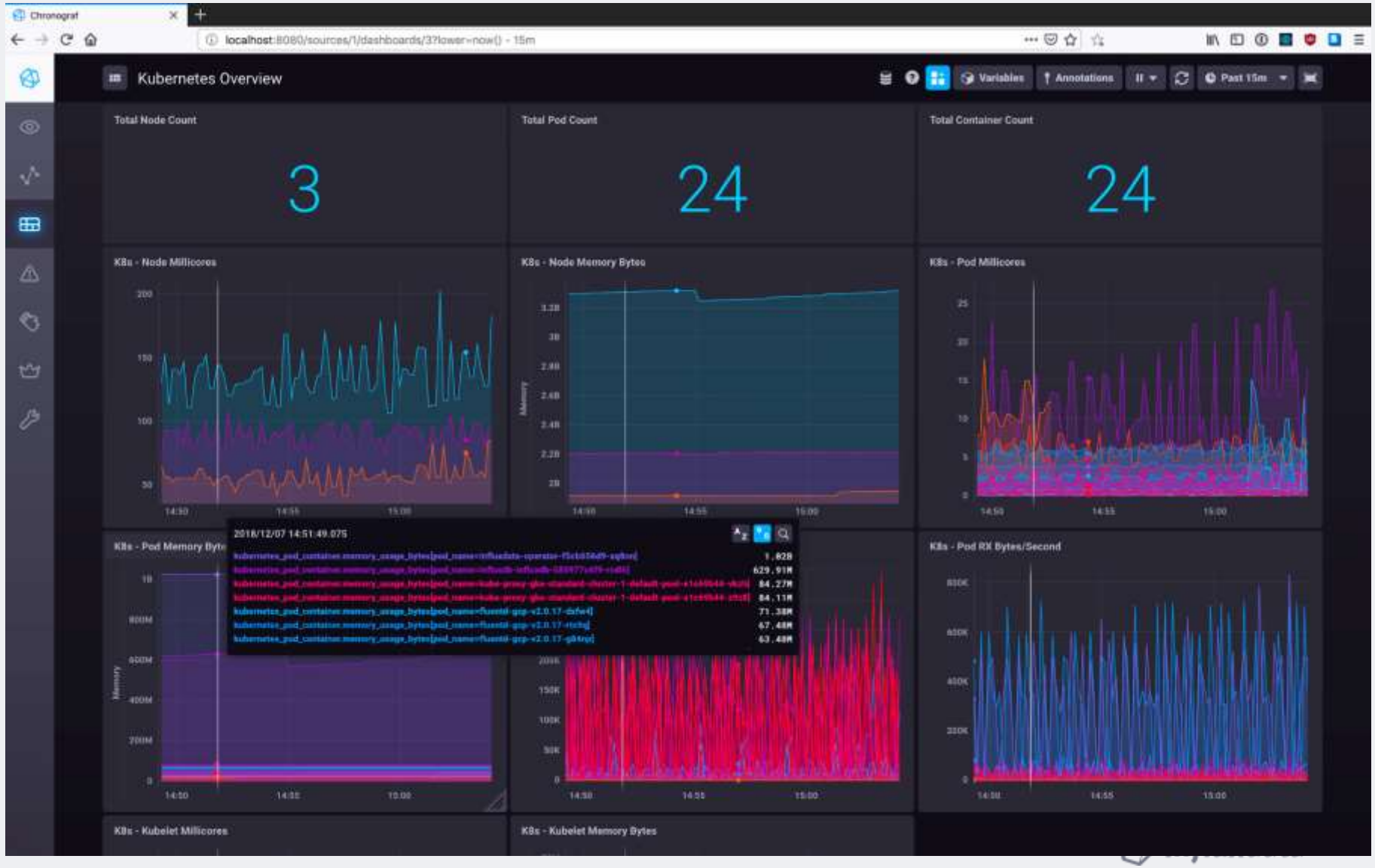
Kapacitor: Real-time Streaming Data Processing Engine

- Native data processing engine
- Processes both stream and batch data from InfluxDB
- Plug in custom logic or user defined functions to
  - process alerts with dynamic thresholds
  - match metrics for patterns
  - compute statistical anomalies
  - perform specific actions based on these alerts like dynamic load rebalancing
- Integrates with Slack, HipChat, OpsGenie, Alerta, Sensu, PagerDuty, and more



Chronograf

- Configuration
- Dashboards
- Visualization
- Data Explorer
- Templates & Libraries
- Alerting & Automation



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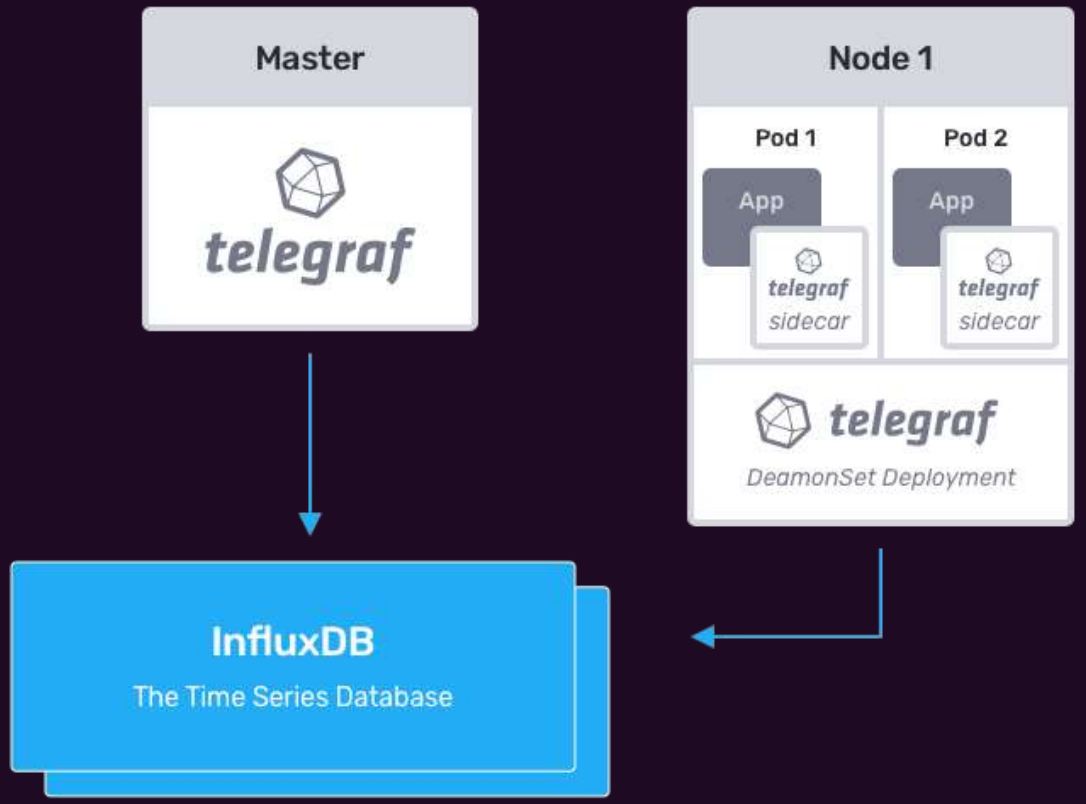
InfluxDB can monitor Kubernetes, Docker and the Apps



Telegraf is deployed as a DaemonSet on the node and as a sidecar on the pod(s)

Benefits

- Deploy Telegraf as a Daemonset for the node and a sidecar for pods
- Get consistent metrics out of Telegraf for the nodes and the pods
- Implement push style metrics for the whole cluster

Use InfluxDB to monitor the K8s cluster (master, nodes, and pods) to gain:

- Consistency in metrics
- Long-term storage and HA
- Enable push-style metrics

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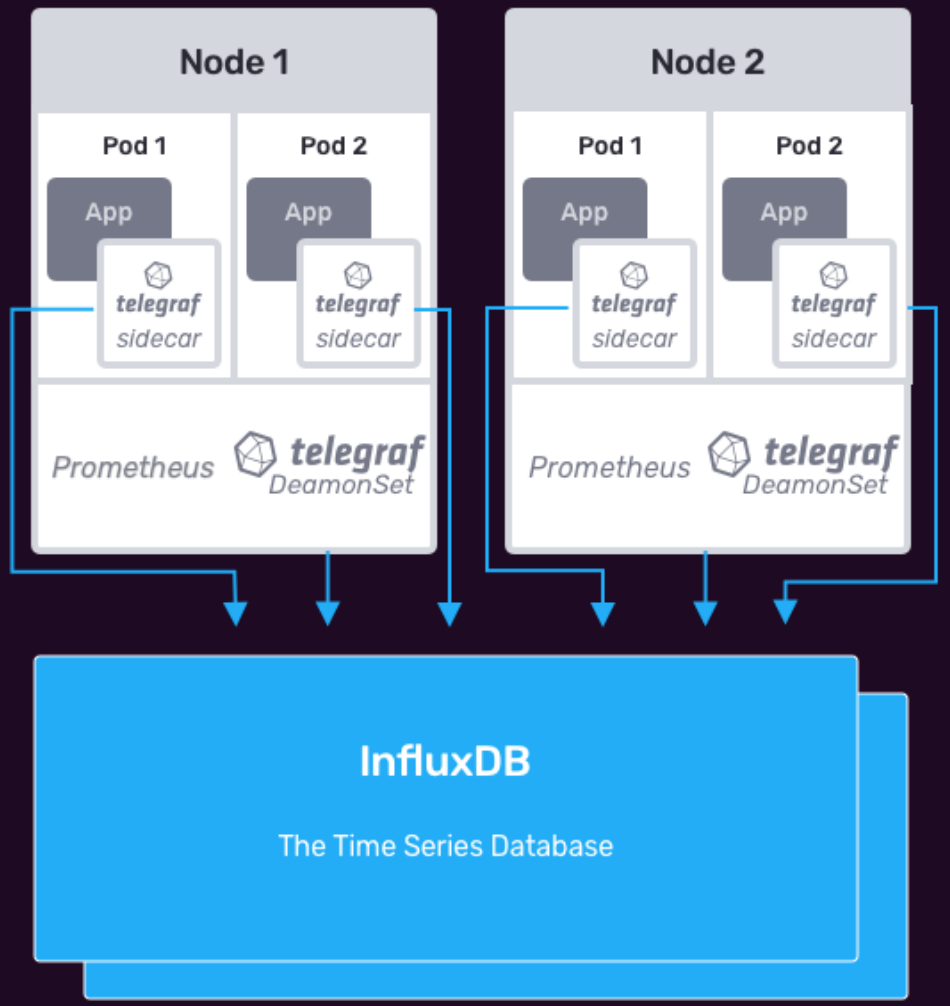
InfluxDB can co-exist in a Prometheus Ecosystem



BENEFITS

- Build on your investment in Prometheus
- Telegraf scrapes Prometheus endpoints
- Get full functionality of Telegraf
- Use Prometheus style metrics when required

Complement your Prometheus investment with InfluxDB to gain
- Long Term storage and HA
- Add ‘push’ style metrics to Prometheus’s ‘pull’ style

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I have Prometheus, why do I need InfluxDB?

Active Full Stack Monitoring with InfluxDB

Driving K8s with InfluxDB

- **Helm Charts**
- Deploy Telegraf as a DaemonSet to start monitoring nodes, pods and containers.

- **Service Operator**
- Operators simplify deployment and backup of InfluxDB OSS using familiar *kubectl* commands.

- **Hashicorp Terraform module(s)**
- InfluxDB Enterprise Terraform Module for AWS is available now

Documentation | **Landing Page**

In a nutshell..

If you want a single platform for metrics and events in your company, then you'll need to supplement Prometheus to deliver.

InfluxDB works with both K8s and non-K8s sources to deliver **full stack monitoring**.

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Thank you

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