**Any Complete Monitoring System will be Composed of:**

**1. Time-Series Data**

**Time-series data** is data that is in a series of time intervals. Some examples include:

* Blood-sugar level checked at the top of every hour
* Daily closing value of Microsoft stock
* Monthly rainfall by city
* Available disk space by the minute

Another way I like to describe time-series data is "anything with a timestamp and at least 10 data points." Therefore, data collected from your monitoring system is time-series data!

**2. Data Aggregator**

A **data aggregator** is a system that collects and groups data by type or data source. One way to think of data aggregators is like a database with extra tooling to aid in data collection.

**3. Data Visualizer**

A **data visualizer** takes copious amounts of seemingly unintelligible data from the data aggregator and produces useful charts and graphs.

### Monitoring Tools

| **Data Aggregator** | **Details** | **Visualizers** |
| --- | --- | --- |
| Graphite | Mature, Open-Source, Installable | Grafana |
| Loggly | Managed, Cloud-Based, Powerful tooling | Built-In |
| Datadog | Managed, Cloud-Based, Built-in AI/ML | Built-In |
| Prometheus | Open Source, Lightweight, Self-Contained, Installable | Grafana |
| Logstash | Open Source, Cloud-Based or Installable | Kibana |
| CloudWatch | Built-In to AWS | Built-In |