**Observability** in Kubernetes (and cloud-native systems) is the ability to **understand what's happening inside your system** based on the data it produces — specifically **logs**, **metrics**, and **traces**. These three pillars work together to give a full picture:

* **Logs** are detailed records of events (e.g., container errors, pod restarts) and help in **debugging specific issues**.
* **Metrics** are numerical measurements (like CPU usage, memory, request latency) that enable **monitoring and alerting** over time.
* **Traces** follow the flow of a request across multiple services (like from frontend to backend), helping identify **bottlenecks and performance issues**.

In Kubernetes, tools like **Prometheus** (metrics), **ELK or Loki** (logs), and **Jaeger or OpenTelemetry** (tracing) are commonly used to build an **observability stack**. Together, they allow teams to detect problems early, understand root causes, and ensure system health.