



Supervised by : Dr. Lendák Imre

Personal area network monitoring and analytics (PANaMA)



Team Members



Pipelines

1

Pipeline 1: Collect packet capture (PCAP) data, convert to session data, submit to the PANaMA system.

2

Pipeline 2: Collect process information on mobile devices, convert to a data stream and submit to the system.

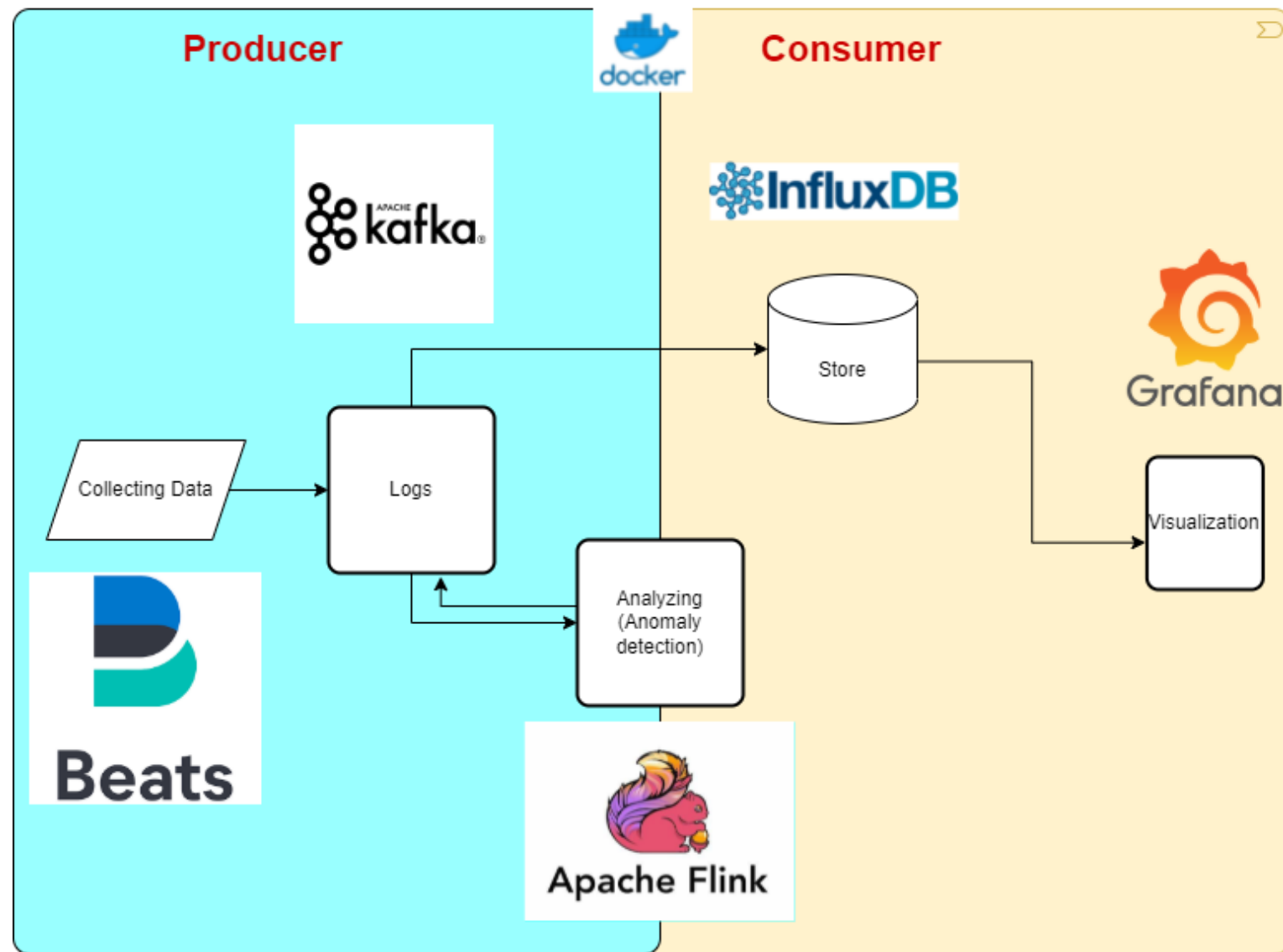
3

Pipeline 3: Detect per-user anomalies in the data collected.

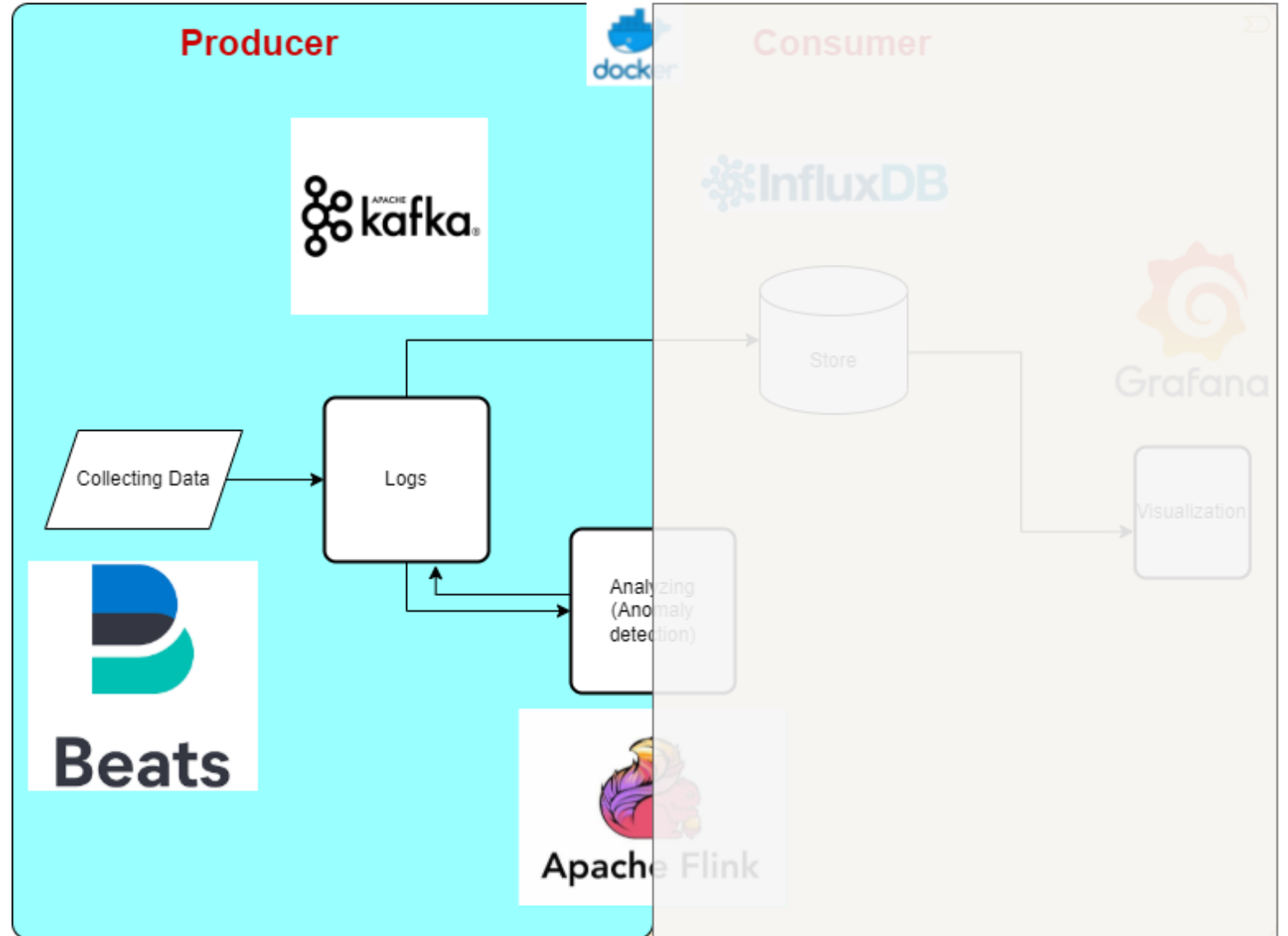
4

Pipeline 4: Detect system-wide anomalies. Correlate data from different users.

The Architecture of the System (The Big Picture)



Pipelines 1 and 2 (Data Collecting)



Data Sources

The icon for Metricbeat is a blue rounded rectangle with a white rounded rectangle inside it.

Metricbeat

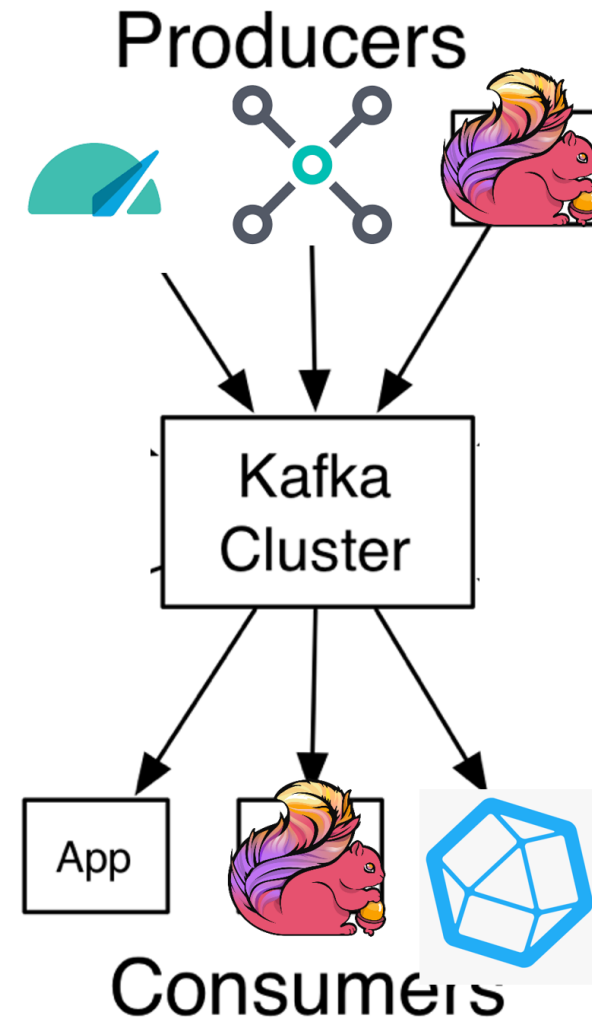
Hardware Data (CPU , Ram , Traffic ..etc)

The icon for Packetbeat is a blue rounded rectangle with a white rounded rectangle inside it.

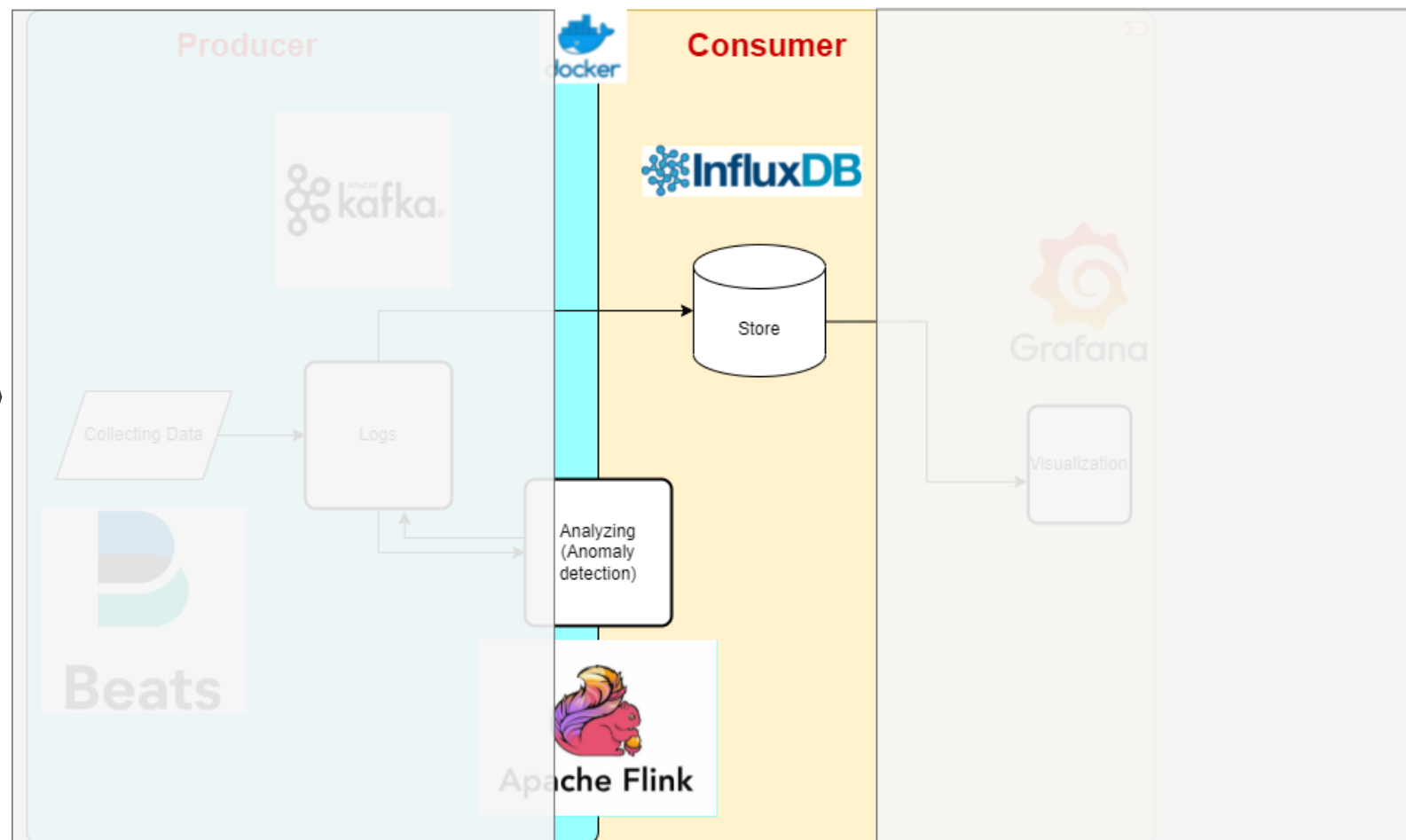
Packetbeat

PCAP/Network Data

Data Streaming



Pipelines 3 and 4 (Data Analyzing)

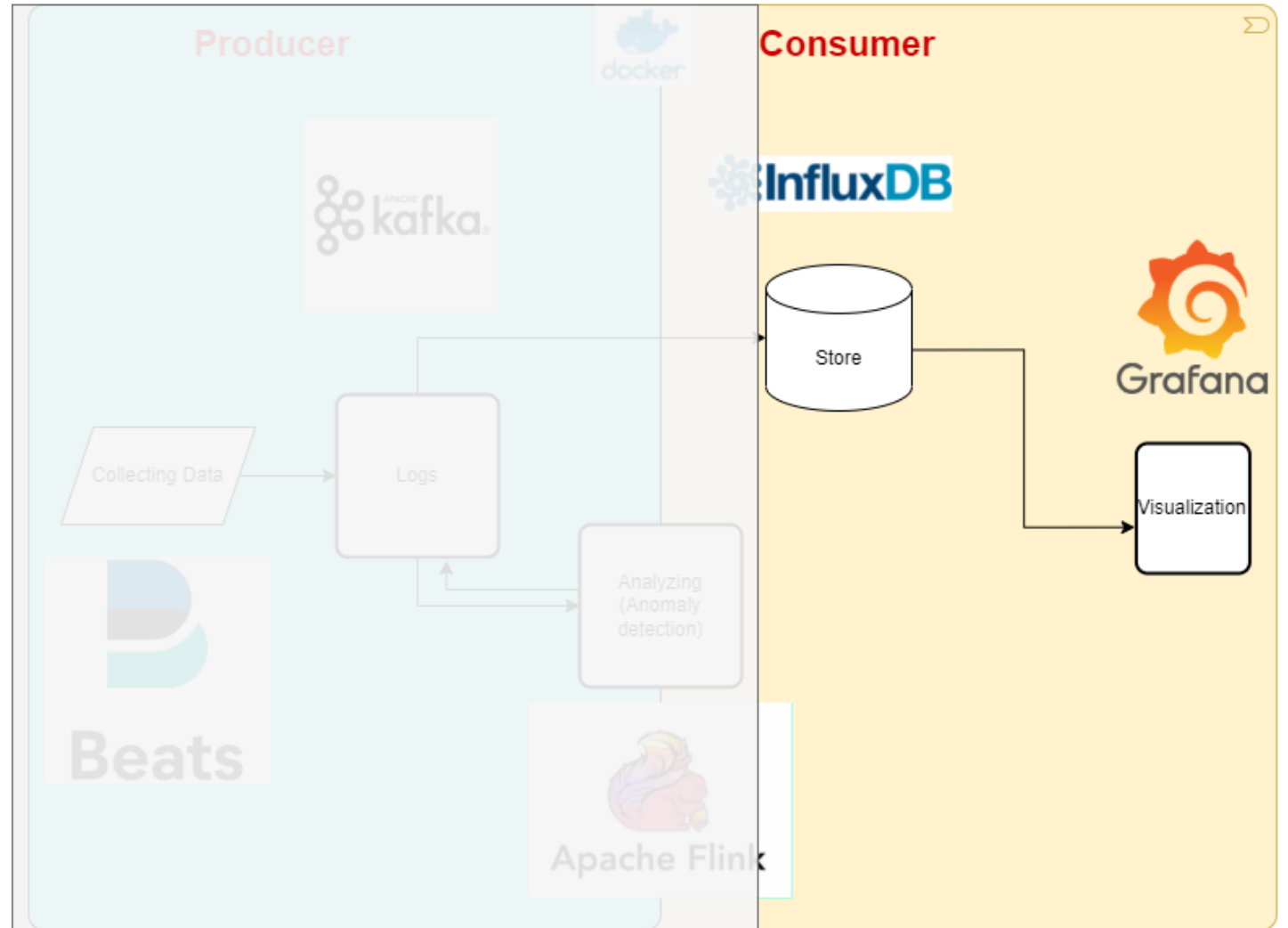


Data
Analyzing



Apache Flink

Data Storage and Visualization



Data Storage and Visualization



Grafana



influxdata[®]

Thank You

