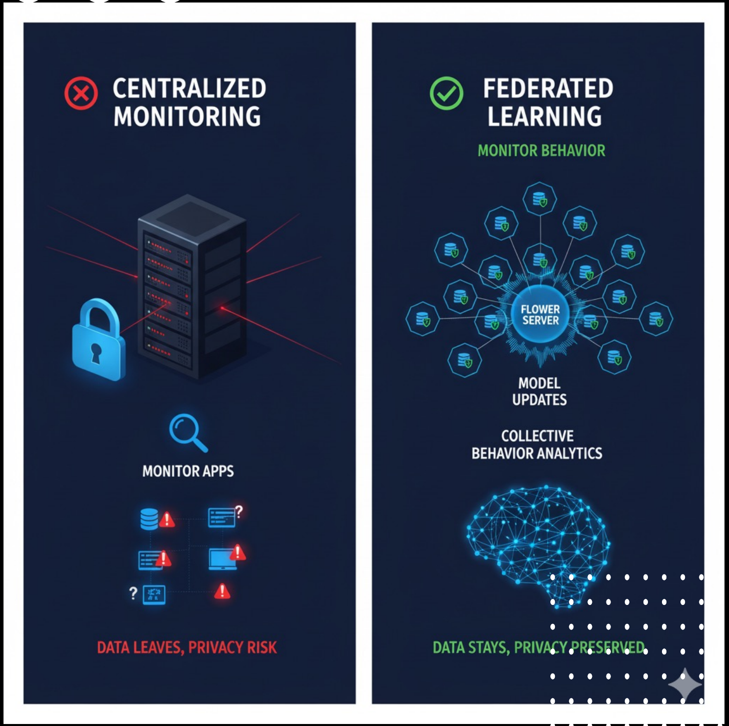
Stop Monitoring Apps; Start Monitoring Behavior

- The Problem:
  A subtle memory leak ➔ slow DB queries ➔ HTTP 500 errors.
  i.e. 'unknown unknowns'!
- The Data:
  A mix of all raw server logs (syslog, auth, Nginx, DB)
  - Creates a high-dimensional 'data-fingerprint' of a healthy server.
  - No need for log parsing (=loss of information)
  - Model: A transformer-based model learns the "language" of a healthy server
- Federated vs Centralized (Why?):
  - Saves huge amounts of bandwidth (weights vs. logs).
  - The global model learns from a massive, diverse baseline of "normal" behavior.
  - Privacy: No raw, sensitive logs are ever shared.
- Stack: Flower, PyTorch, Exalsius.
- Data: 3 public datasets (~1GB each).
  - Datasets are mixed, and distributed between clients using flower simulation


CENTRALIZED MONITORING
MONITOR APPS
DATA LEAVES, PRIVACY RISK
FEDERATED LEARNING
MONITOR BEHAVIOR
FLOWER SERVER
MODEL UPDATES
COLLECTIVE BEHAVIOR ANALYTICS
DATA STAYS, PRIVACY PRESERVED