

Fixing Tools Not Problems

Our Long Journey The Tool Treadmill Part 2

Part 3 of 7: Steps 4-7 & The Pattern

Step 4 Big Data Tools

Hadoop Spark Kafka etc

⚙️ My IoT work generated **tons of data.**

Old DBs couldn't handle it.

⚙️ Tried partitioned DBs NoSQL then Hadoop Spark etc.

⚙️ They worked for scale!

Step 4 The Big Data Challenge

Operational Complexity Skills Gap

⚙️ But setting them up keeping them running was **really complicated**.

⚙️ Needed **special skills**.

⚙️ Problem Solved Handling massive data.

New Problem **Managing complex distributed systems**.

Step 5 Docker Containers

Fixing Environment Inconsistencies

⚙️ This was awesome fixing **"it works on my machine!"**.

⚙️ Packaged everything neatly
improved consistency.

Step 5 The Container Scale Problem

Needing Orchestration

⚙️ But with lots of containers you needed something to **manage them...**

⚙️ Problem Solved DLL-Hell/Env Consistency.

New Problem **Managing containers at scale.**

Step 6 Kubernetes K8s

Powerful Container Orchestration

⚙️ K8s manages containers super powerful became standard.

⚙️ Handled deployment scaling networking etc.

Step 6 The K8s Complexity

Learning Curve Operational Burden

⚙️ But K8s is famously **complex to learn** and operate correctly.

⚙️ Problem Solved Managing containers at scale.

New Problem **The complexity of Kubernetes itself.**

Step 7 Microservices

Breaking Monoliths Team Autonomy

⚙ Breaking big apps made teams
faster more independent.

Good!

⚙ Solved monolith inflexibility.

Step 7 Distributed Systems Complexity

New Set of Problems

⚙️ But now problems like **services talking** tracking issues across parts ensuring transactions.

⚙️ Problem Solved Monolith inflexibility.

New Problem **Distributed system complexity.**

See The Pattern

Solving Problems Adding Complexity

- ⚙ Every step forward solved something real.
- ⚙ But always seemed to **add a new kind of complexity.**
- ⚙ Spent so much energy just **fighting the tools.**

The Real Cost

Losing Focus Drowning in Complexity

⚙️ Main goal delivering value **quickly simply** often got lost.

⚙️ The waste I saw A lot from teams **drowning in tool complexity.**

Next

Can AI Be Different

⚙️ This history sets the stage for a crucial question.

⚙️ How might AI break this cycle?

Is it just another tool?

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