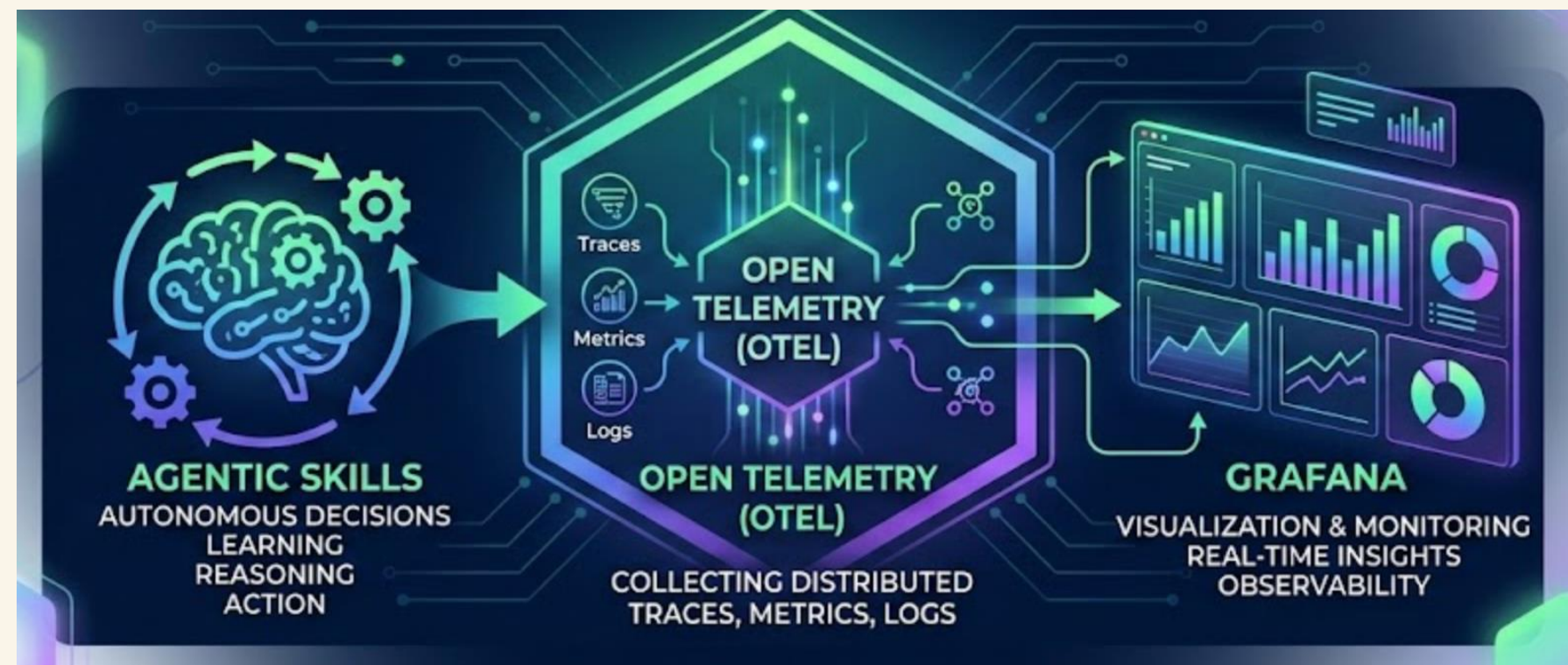


menti.com
7576 1479

Blind to Boundless: Agentic Observability with Otel & Grafana

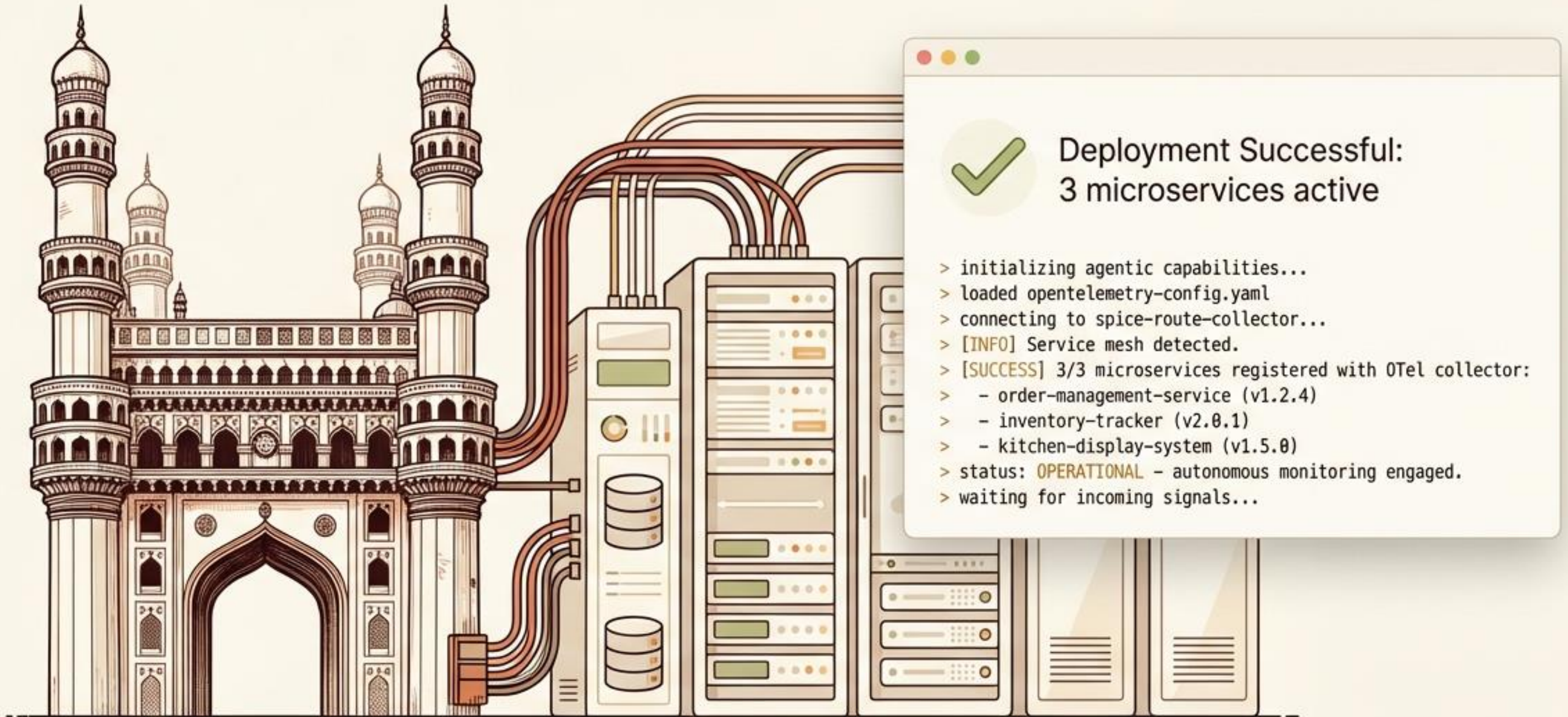


VINAY GATTU

28 Feb 2026

Autonomous Observability in the Cloud Kitchen

Serving OpenTelemetry with Agentic Skills



Upgrading the Kitchen: The AI Ops Evolution



AI Prompts

Natural language requests asking an AI model to generate a recipe or code snippet.



AI Workflows

Pre-defined sequences of automated tasks, executed via simple slash commands.



MCP Servers

Standardized interfaces connecting AI to external data sources—like giving the chef access to the pantry.



Agentic Skills

Autonomous, reusable tools with direct environment access to execute complex operations.

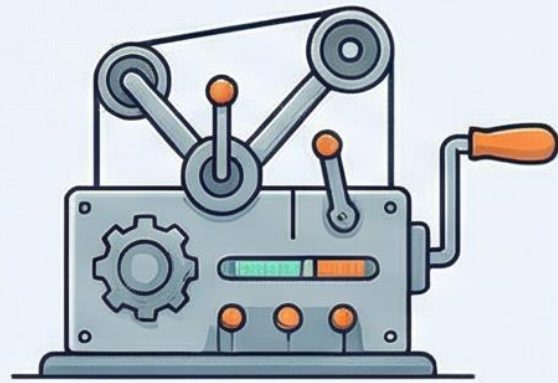
Architecting the AI Stack: A Restaurant Guide to Agentic Workflows

Modern AI systems operate in "stacks" where different layers handle instructions, logic, and data. This infographic uses a restaurant analogy to demystify these layers, showing how an **Agent** (the Chef) uses **Skills** (recipes) and **MCP Servers** (the pantry) to fulfill a user's request.



Scripts vs. Agentic Skills: Adding the Intelligent Layer

Direct Script Execution (The Manual Approach)



Command-Driven Rigidity



Users must know exact file paths and specific parameters to initiate any action.



Blind Execution

Scripts execute without checking environment state, leading to immediate crashes upon error.



AI "Agent Skill" Layer

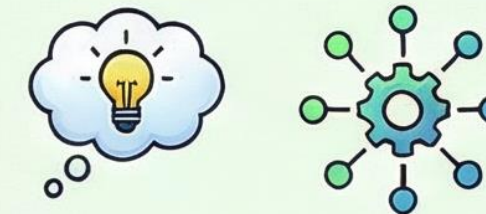
Agentic Execution (The Intelligent Layer)



AI agent

Intent-Driven Operations

Agents translate natural language requests into the correct technical commands automatically.



Autonomous Error Recovery










Agents intercept failures to run diagnostics and fix issues without human intervention.



Raw Output Noise

Results are delivered in dense JSON or YAML logs that require manual sifting.

Experience Comparison

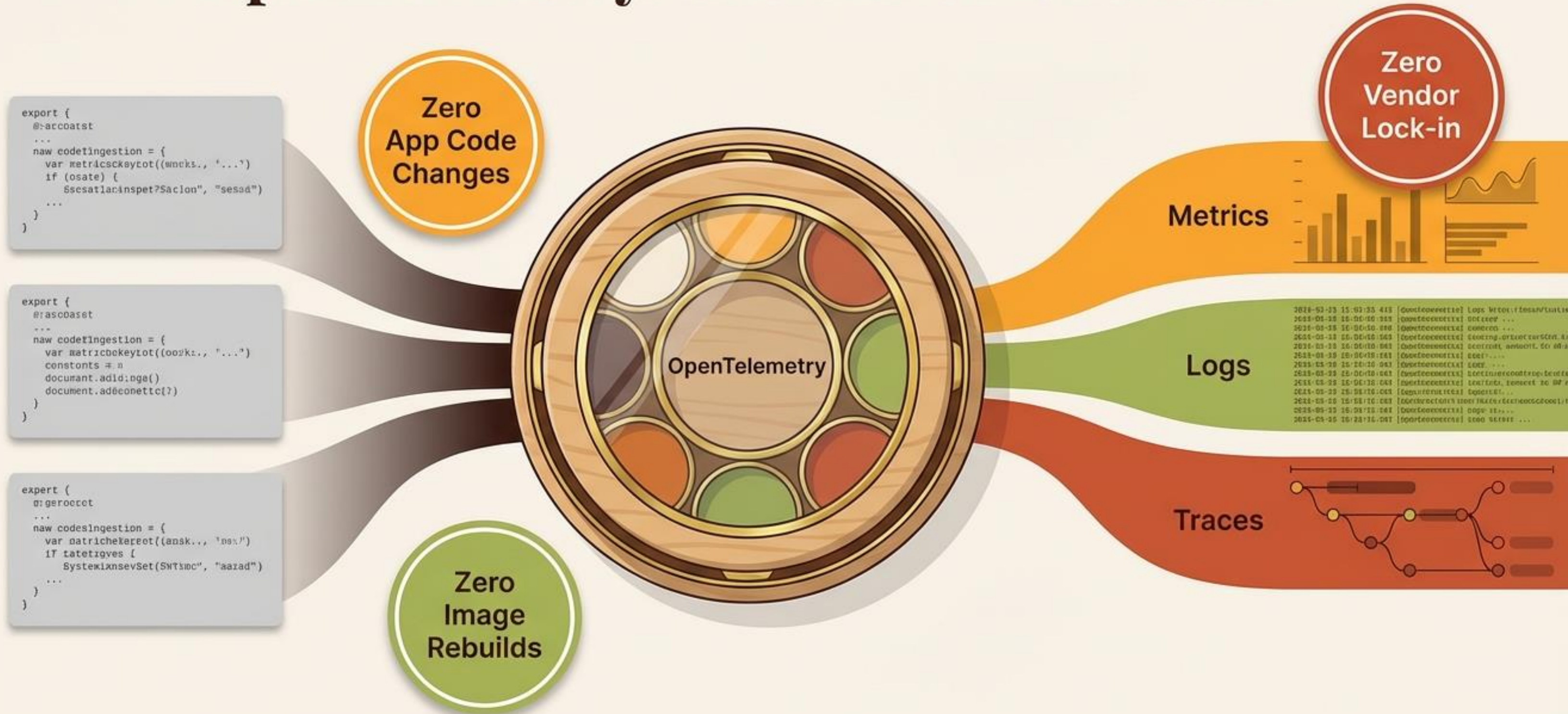
Feature	Direct Script Execution	Agentic Skill Execution
 Input Method	 Precise CLI Commands	 Natural Language / Slash Commands
 Context	 Blind to Environment	 Aware of IDE, Cluster, and State
 Feedback	 Raw Stack Traces	 Synthesized Human Summaries



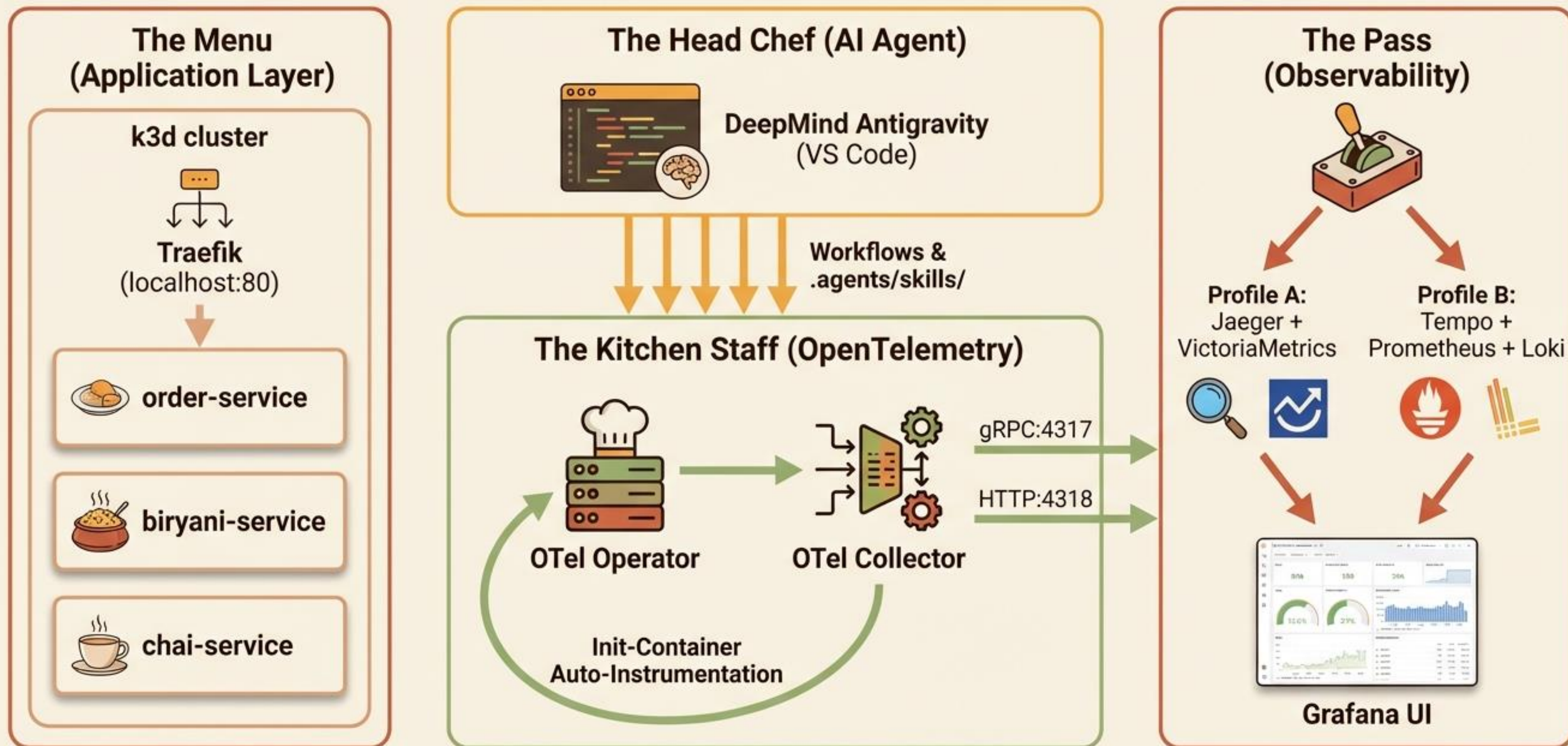
Intelligent Composability

Agents logically sequence multiple skills to solve complex, multi-step problems autonomously.

OpenTelemetry: The Universal Masala



Architecture: Inside the Cloud Kitchen



Step 1: The Empty Kitchen (Baseline)

- **Status:** Apps running, stack up.
- **Command:** Agent runs `/cluster-health-check`
- **Result:** Pods are healthy, but zero active traces exist. The kitchen is cooking, but we can't see the orders.

```
> /cluster-health-check|
```



Step 2: Adding the Masala (Live Application)

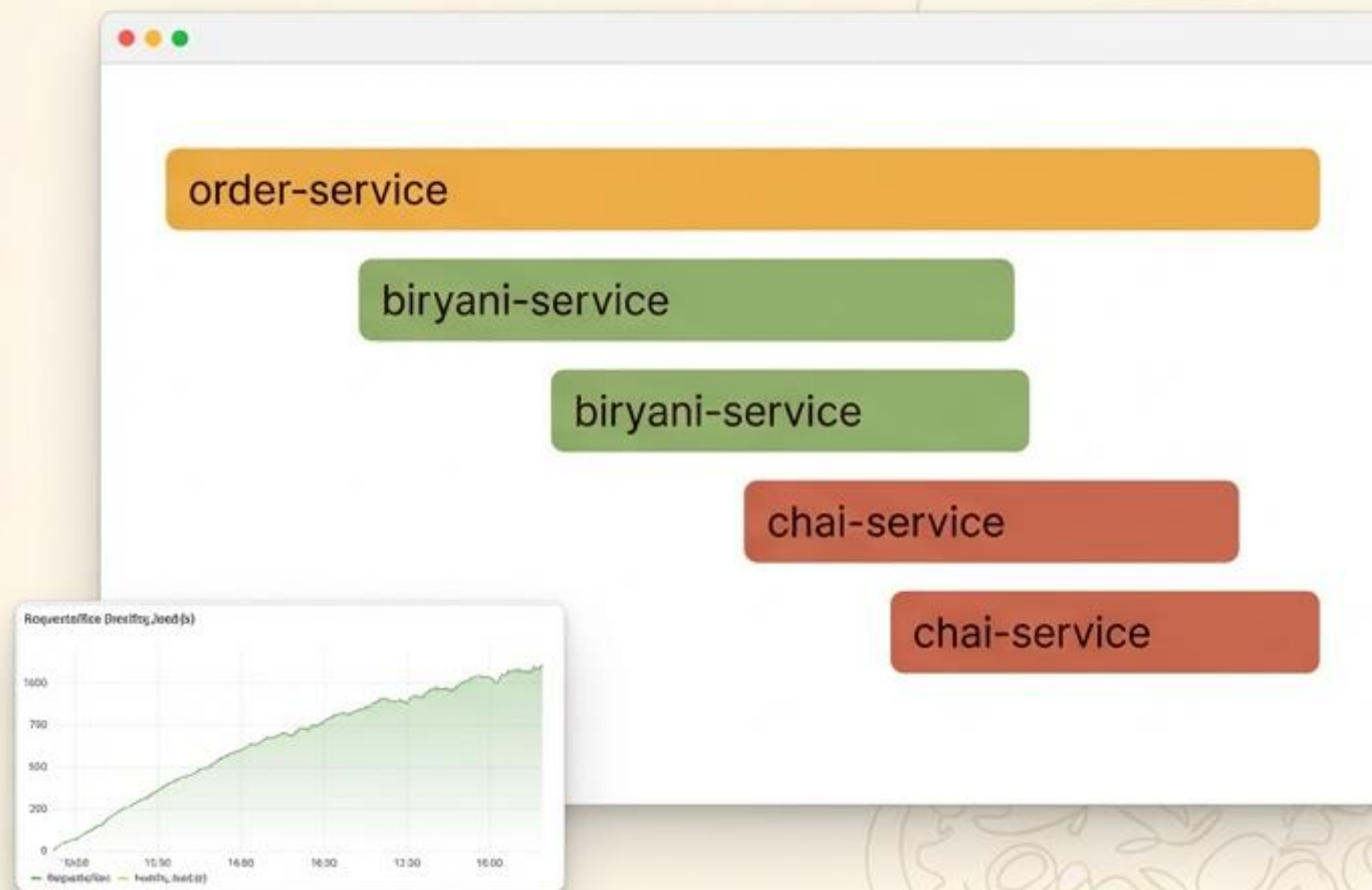
- **Prompt:** Hey, instrument my apps with OTel
- **Action:** Agent invokes /apply-otel-instrumentation
- **Execution:** Installs cert-manager -> OTel Operator -> creates Instrumentation CR -> patches deployment annotations.
- **Outcome:** Pods restart with injected Python SDK.



Zero
Manual
Scripting.

Step 3: The Lunch Rush (Healthy Load)

- **Action:** Run `healthy_load.js` via k6 (200 requests/minute)
- **Visibility:** Grafana streams live metrics from VictoriaMetrics.
- **Tracing:** Full trace waterfall visible across order -> biryani / chai services.



Step 4: Changing the Platter (Switching Backends)

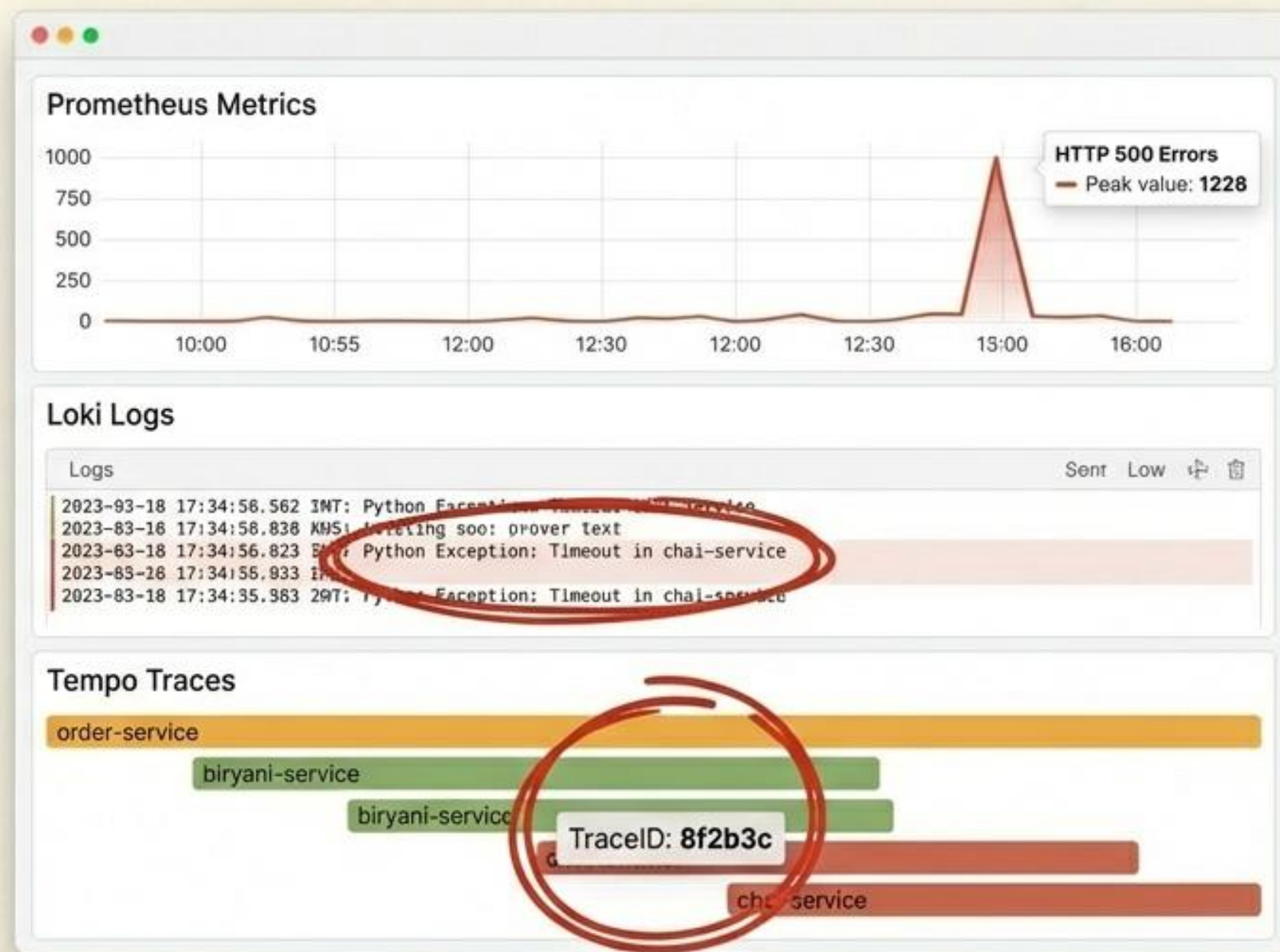
- **Prompt:** Switch OTel to demo config
- **Action:** Agent runs `/switch-otel-config demo`
- **Execution:** OTel Collector ConfigMap is patched.
- **Outcome:** Data reroutes to Prometheus, Tempo, and Loki. Zero pod restarts needed.

Before & After



Step 5: Catching Burnt Chai (Error Tracking)

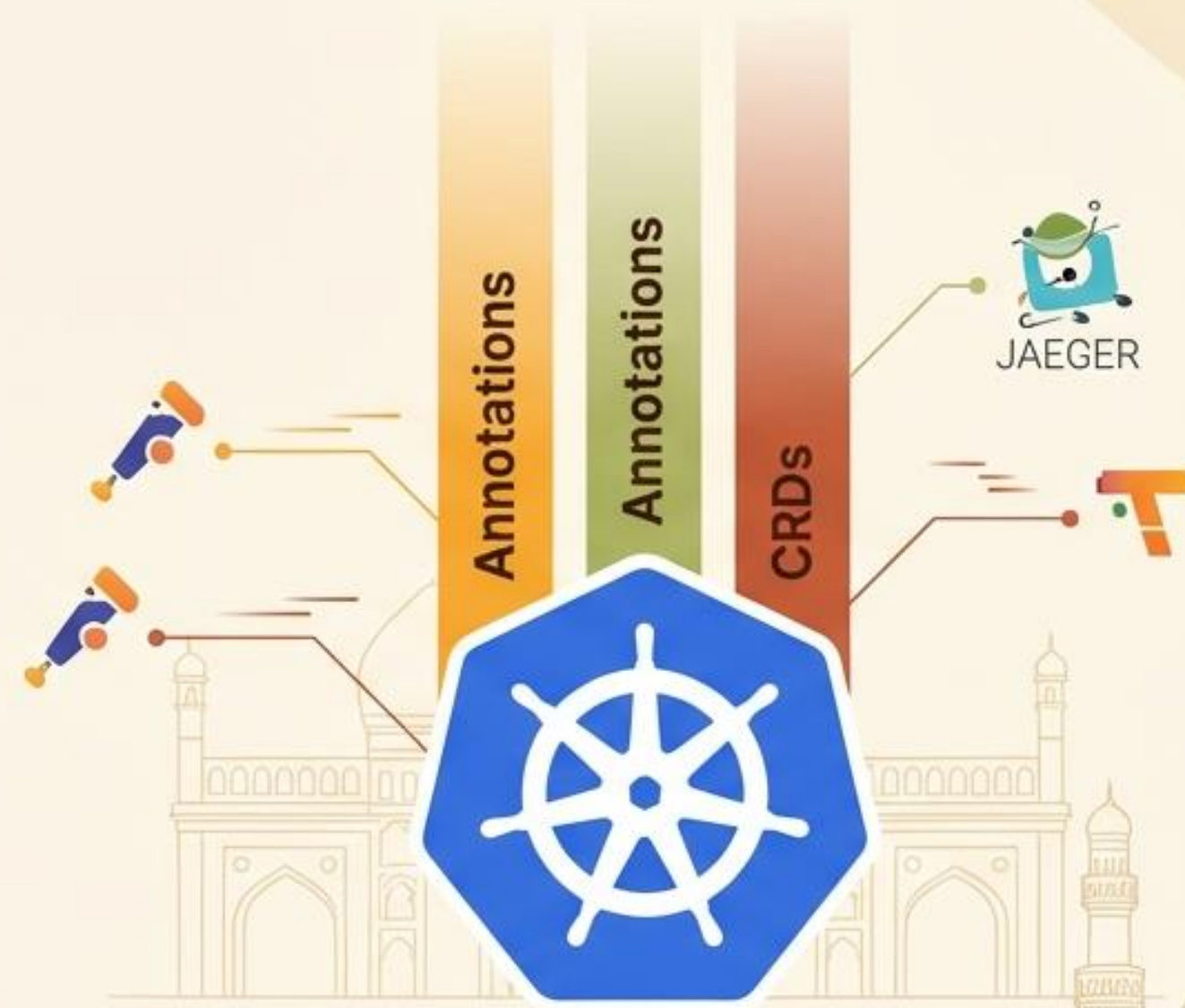
- **Action:** Run error_load.js via k6 (150 requests/minute)
- **Visibility:** Tempo traces + Prometheus metrics + Loki logs seamlessly unify.
- **Result:** Instantly pinpoint the failing service without context switching.



Step 6: Closing the Kitchen (Clean Removal)

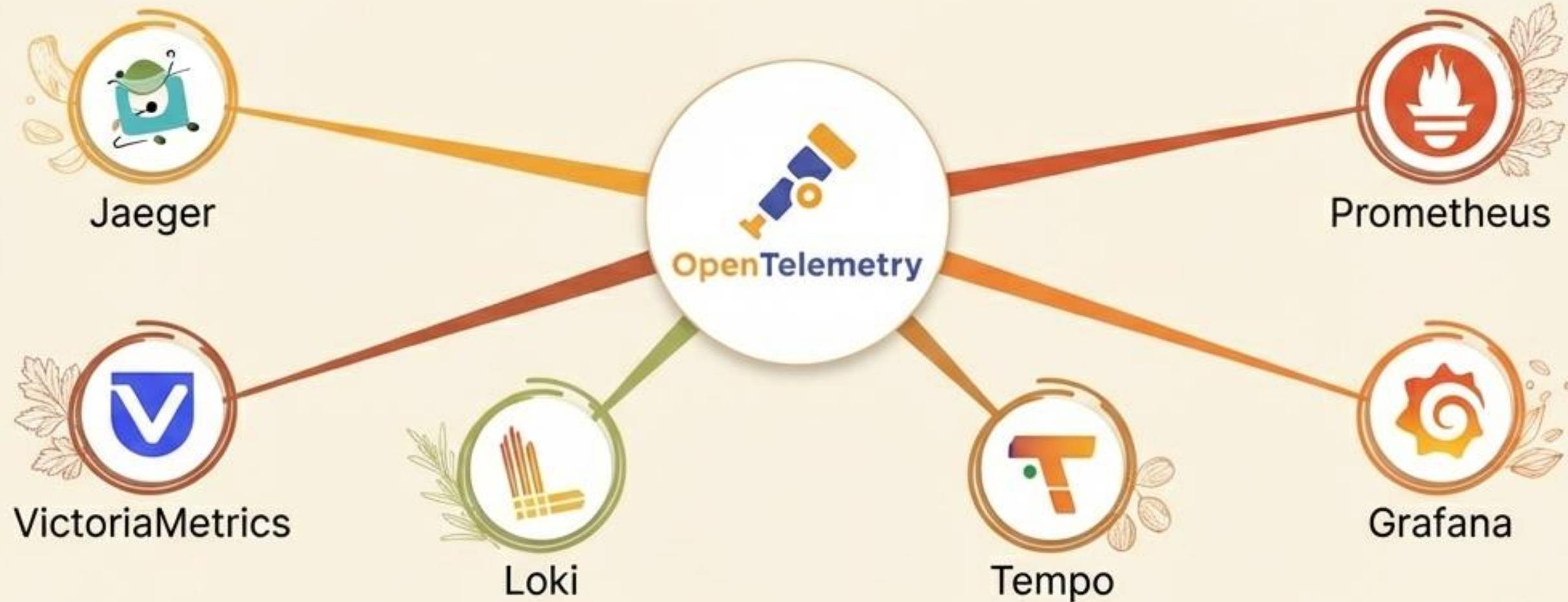
Prompt: Remove OTel instrumentation

- **Action:** Agent runs `/remove-otel-instrumentation`
- ✓ **Execution:** Strips annotations, deletes Instrumentation CR.
- 🧹 **Outcome:** Pods restart clean. Jaeger and Tempo cease receiving new traces.



Total Flexibility: Best-in-Class by Choice

OpenTelemetry is the great enabler. Every modern product is now OTel-compliant. You have the absolute power to test, evaluate, and switch monitoring tools freely at the backend without touching application code.



Agentic Speed: Ops at the Speed of Thought



Repeatable: Reusable SKILL.md definitions standardize complex deployments.



Accessible: Plain-English interfaces lower the barrier for intricate Kubernetes orchestration.



Fast: Eliminates manual scripting and context switching. What used to take hours of YAML writing now takes seconds.



**Hours of YAML →
Seconds of
Plain English**

The Perfect Blend

Autonomous operations and OpenTelemetry compose together beautifully—just like Irani Chai and Osmania Biscuits.
The CNCF ecosystem provides the ingredients; Agentic AI provides the speed.

Thank
YOU

