ikanos

OPEN SOURCE CAPABILITY ENGINE
APACHE 2.0 · CREATED BY **NAFTIKO**

Spec-driven integration for AI agents and apps

Turn the APIs you already own into governed capabilities.

Describe a capability in **one YAML file**. Ikanos calls your existing APIs, keeps only the fields that matter, and serves the result as **MCP**, **Skills**, and **REST**.

No code to write or compile.

IN
Existing APIs
Orders · CRM · internal services

↓

IKANOS
One capability spec
consume · compose · govern

↓

OUT
MCP · Skills · REST
for agents, apps, and partners

```
$ curl -fsSL naftiko.github.io/ikanos/install.sh | sh
# or run 'docker pull ghcr.io/naftiko/ikanos:latest'

$ cat support.yml
capability:
  consumes:                # APIs you already have
  - import: orders
  - import: crm
  aggregates:              # compose the workflow
  - namespace: support
    flows:
      order-status:
        steps:
          order: { call: orders.get-order }
          customer: { call: crm.get-customer }
  exposes:                 # what agents see
  - type: mcp
    tools: { order-status: { ref: support.order-status } }

$ ikanos validate support.yml  # check before it runs
$ ikanos serve support.yml     # MCP server is live
```

AI agent sees one tool, not two APIs

Where is order A-4471?

```
tool call  order-status({ "order": "A-4471" })
```

```
{ "order": "A-4471", "status": "shipped", "eta": "2026-10-06",
  "customer": "Meridian Freight", "tier": "priority" }
```

Order A-4471 shipped and arrives Oct 6. The customer is **Meridian Freight**, a priority account.

Features

Spec-driven
Declare the whole capability in YAML. No Java, no handlers, no glue code.

Multi-protocol
One spec serves MCP, Skills, and REST from a single deployment.

Right-sized context
Shape and filter responses so agents get only the fields a task needs.

Composable
Chain and join calls across APIs into one clean, task-shaped tool.

OpenAPI-friendly
Import Swagger or OAS 3.x, and export REST adapters as OpenAPI.

Cloud native
One Docker image with OpenTelemetry tracing and Prometheus metrics.

Try Ikanos in the Playground

shipyard.naftiko.io/playground

Docs at **shipyard.naftiko.io/ikanos** · Code at **github.com/naftiko/ikanos**

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Naftiko
naftiko.io