

WSO2con

AFRICA

SEPT 22 - 24, 2026 | NAIROBI, KENYA

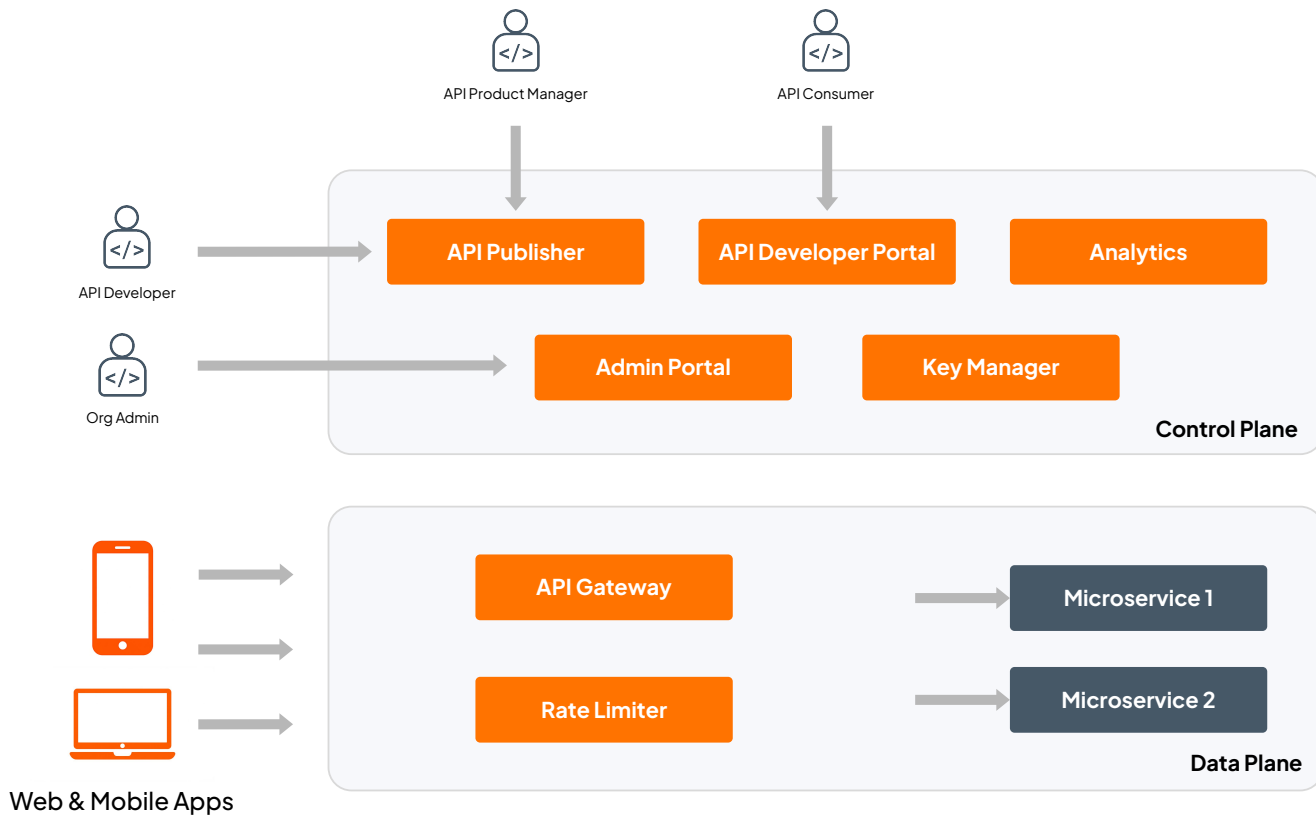
Hybrid Architecture and Multi-Gateway Control



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Platform BU, WSO2

Traditional API Management



Modern Architectures Demand More



Infrastructure Complexity

- Multi Cloud
- Hybrid (Cloud + On-prem)
- Edge Deployments



Compliance & Performance

- Data residency
- Low latency
- Regional routing



API Diversity

- REST APIs
- Event APIs
- AI / Agent APIs

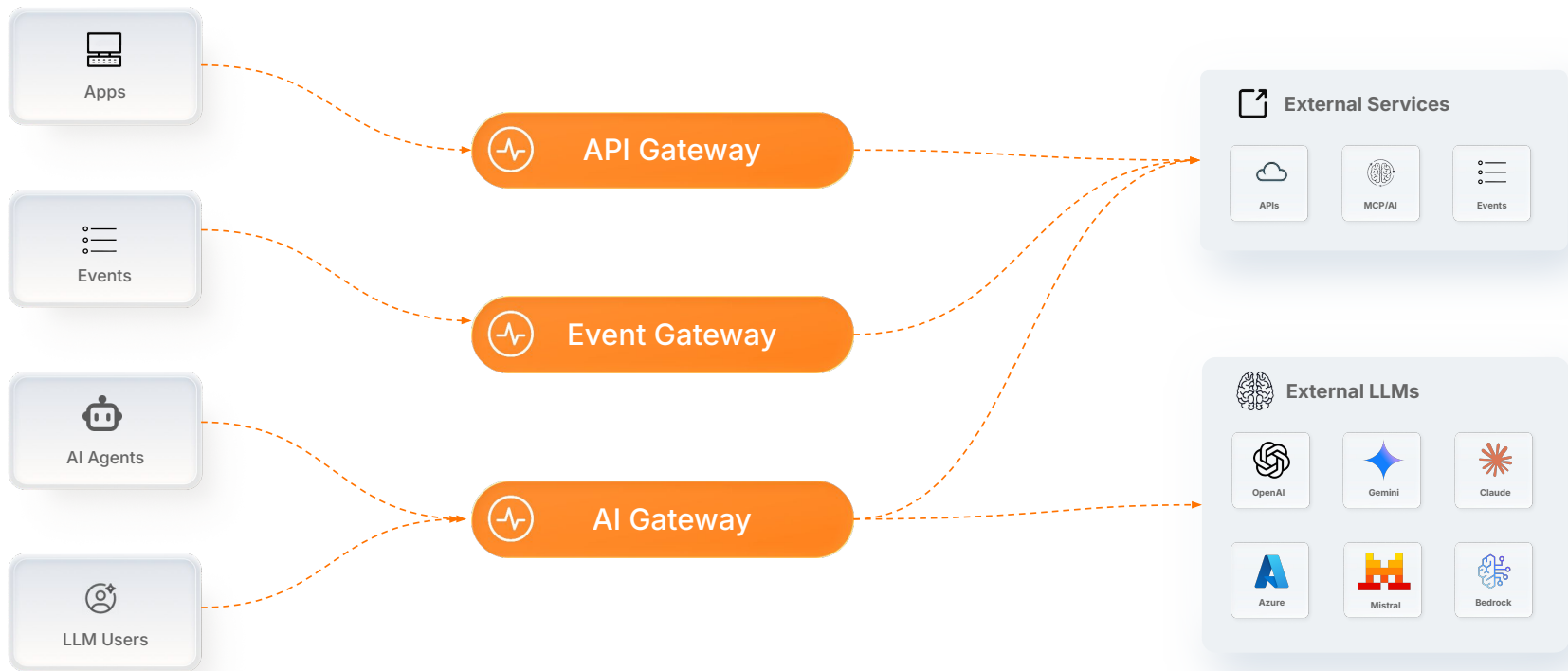


Organizational Scale

- Team autonomy
- Business-unit ownership
- Independent release cycles

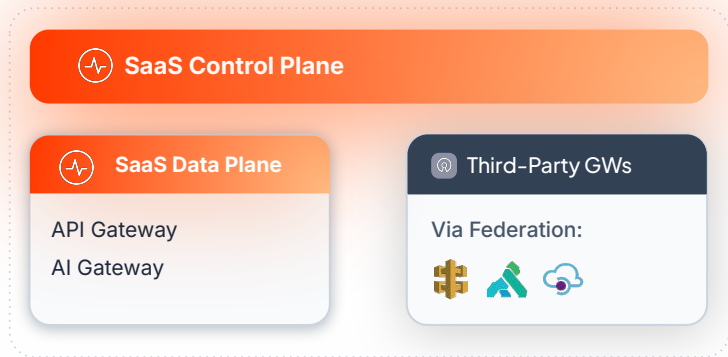


The Single Gateway Model is Reaching Its Limits

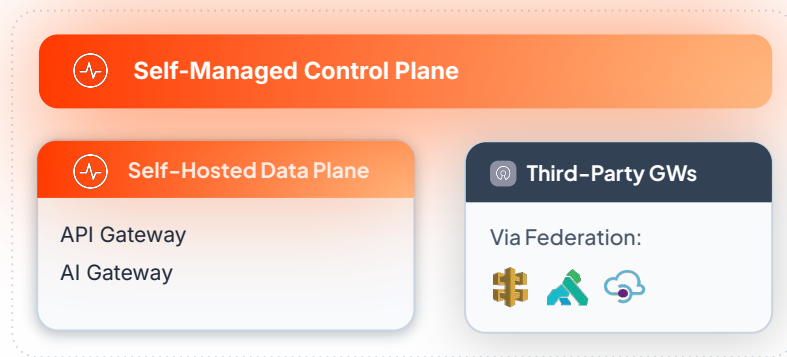


Deployment Models

Deployment Models



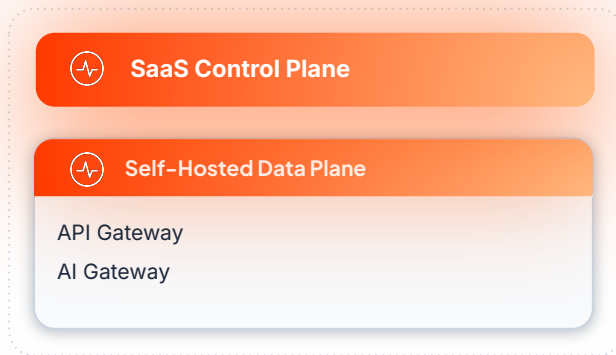
SaaS



Self Managed



Deployment Models...



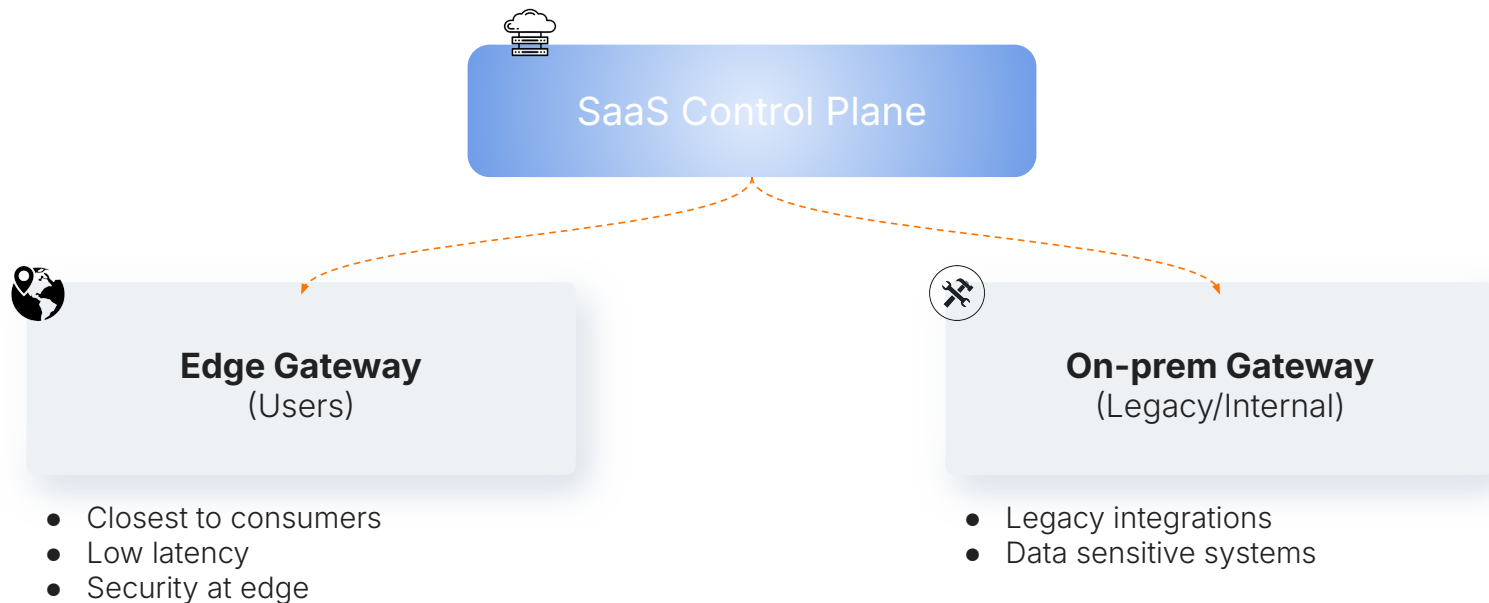
Hybrid



Hybrid Architecture

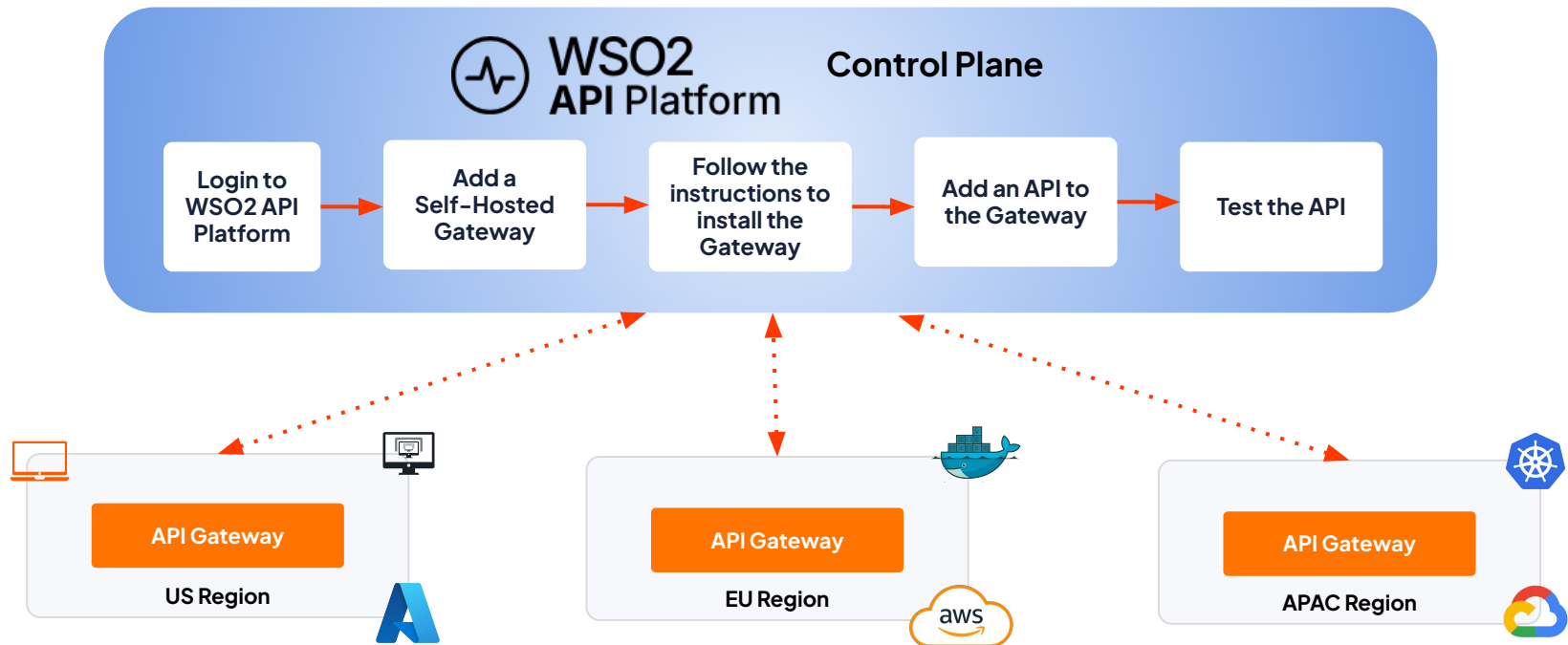
Hybrid Architecture

Combining multiple deployment models to meet business and technical needs.



Introducing Self-Hosted Gateways for the WSO2 API Platform

Self Hosted Gateways



Self Hosted Gateways...

WSO2 API Platform

Organization: pubudugunatlaka

[← Back to Gateways](#)

Add Self-Hosted Gateway

General Details

Type

API Gateway

AI Gateway

Event Gateway Beta

Name

US Gateway

Description (Optional)

Enter description

Configurations

URL

https://localhost:8443

Associated Environment

Development

Back

Add

[Quick Start](#) [Virtual Machine](#) [Docker](#) [Kubernetes](#)

Prerequisites

- cURL installed
- unzip installed
- Docker installed and running
- Docker Compose installed

Step 1: Download the Gateway

Run this command in your terminal to download the gateway:

```
curl -sLO https://github.com/wso2/api-platform/releases/download/gateway/v1.1.0/wso2apip-api-gateway-1.1.0.zip && \
unzip wso2apip-api-gateway-1.1.0.zip
```

Step 2: Configure the Gateway

Run this command to create wso2apip-api-gateway-1.1.0/configs/keys.env with the required environment variables:

```
cat > wso2apip-api-gateway-1.1.0/configs/keys.env << 'ENVFILE'
MOESIF_KEY=your-moesif-key>
GATEWAY_CONTROL_PLANE_HOST=connect.bjina.dev
GATEWAY_REGISTRATION_TOKEN=your-gateway-token>
ENVFILE
```

Step 3: Start the Gateway

1. Navigate to the gateway folder.

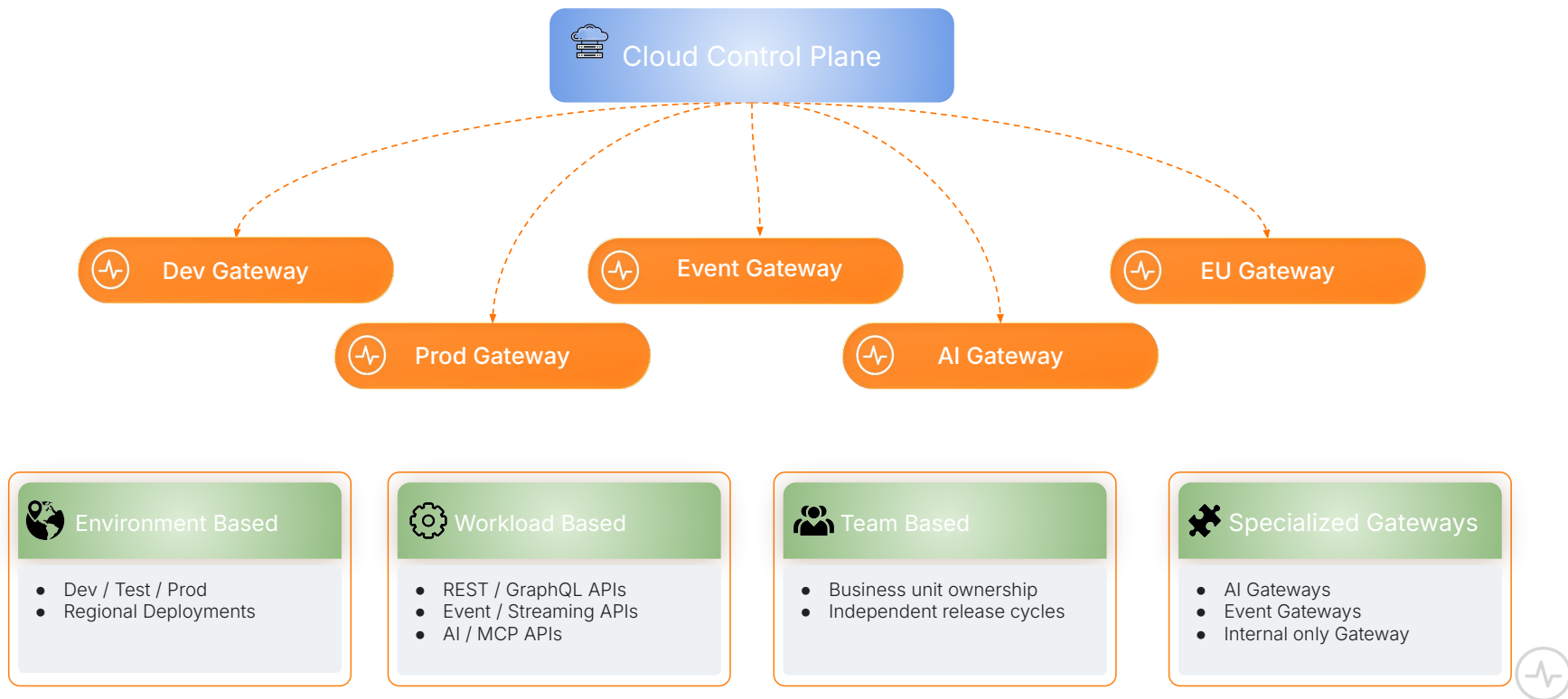
```
cd wso2apip-api-gateway-1.1.0
```

2. Run this command to start the gateway using the configs/keys.env file created in Step 2:

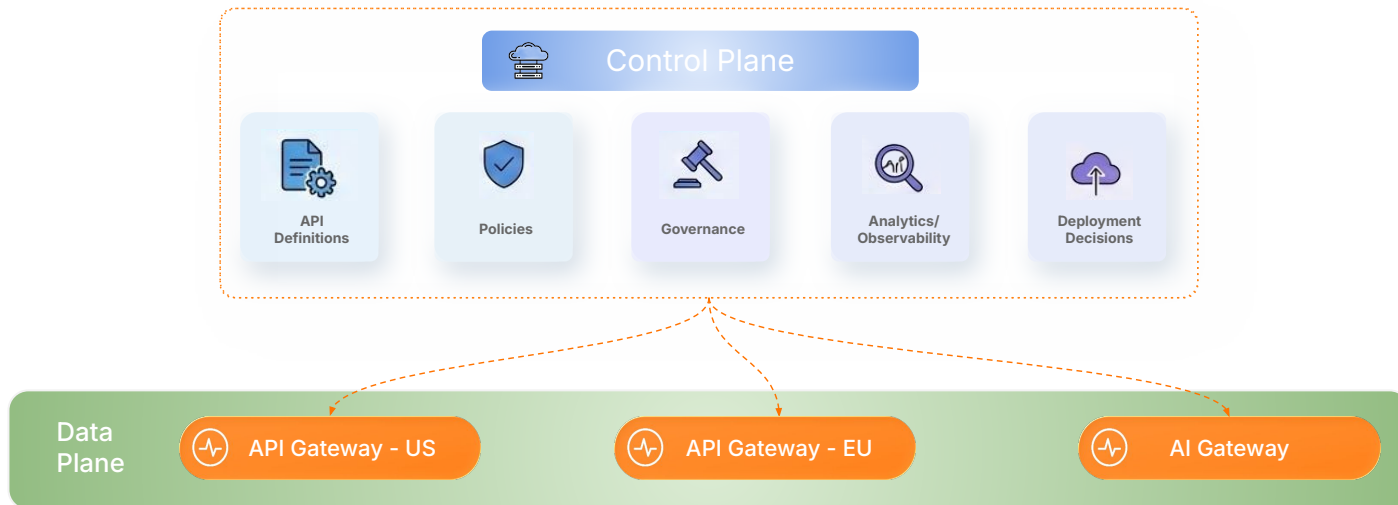
```
docker compose --env-file configs/keys.env up
```



Self Hosted Gateways...



Centralized Control, Decentralized Execution



Control Plane Functionality

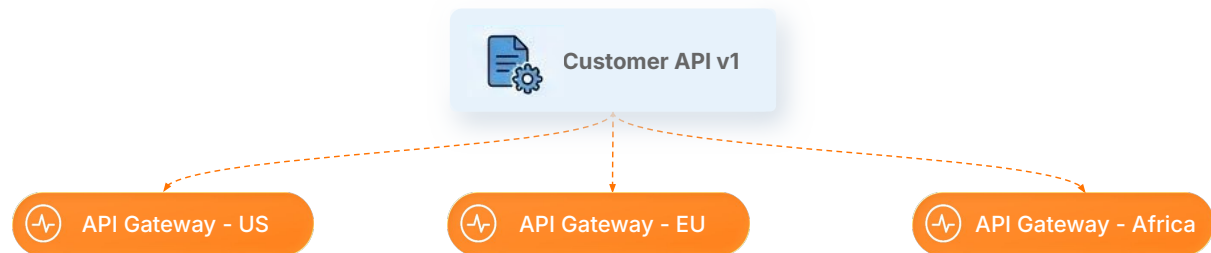
- Design and publish APIs
- Define policies
- Manage lifecycle/versioning
- View Analytics centrally
- Decide where APIs get deployed

Data Plane Functionality

- Receive requests
- Enforces policies locally
- Routes/ transforms traffic
- Handles region specific traffic



One API Definition, Many Deployments



Define once, apply everywhere

Security

Rate Limits

AI Guardrails

Any gateway policy

Selective Deployments

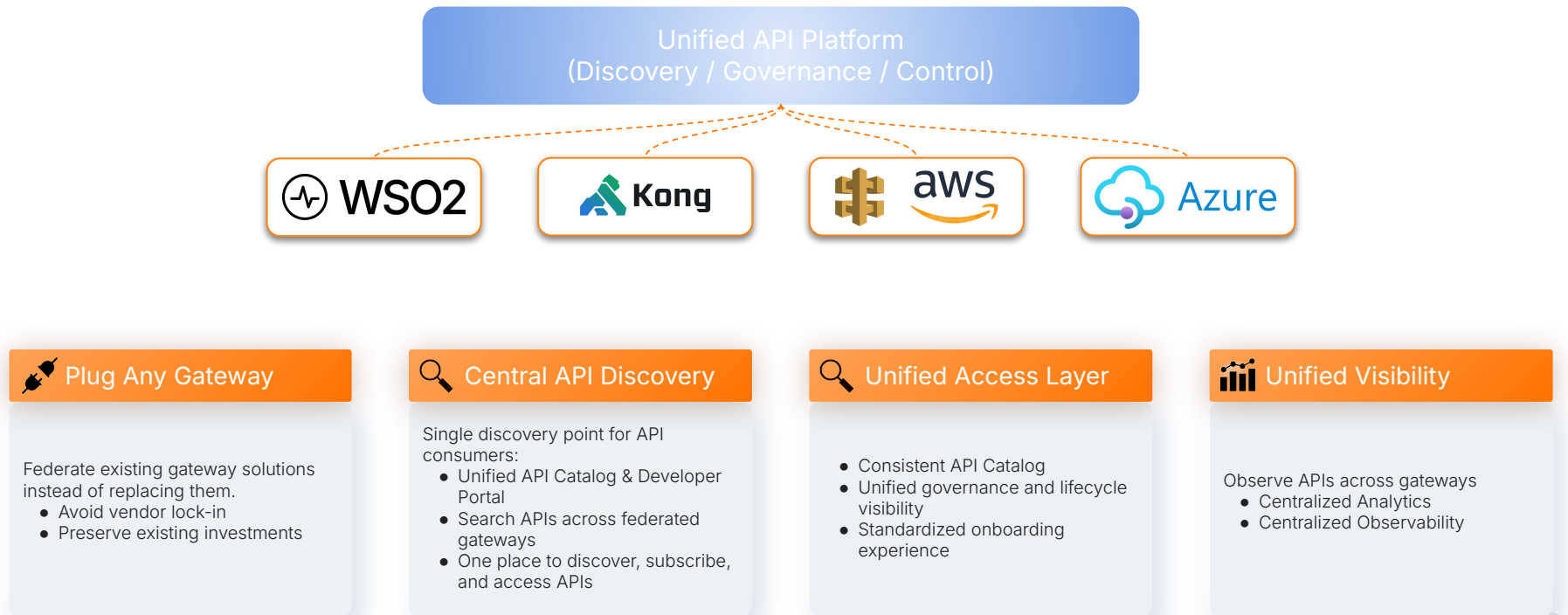
- Region based
 - US only
 - EU only
- Environment based
 - Dev / Prod
- Gateway type based
 - AI Gateway
 - Event Gateway



Govern Traditional APIs and AI APIs under the same Platform



Gateway Federation: Unifying Distributed API Gateways



Use Cases

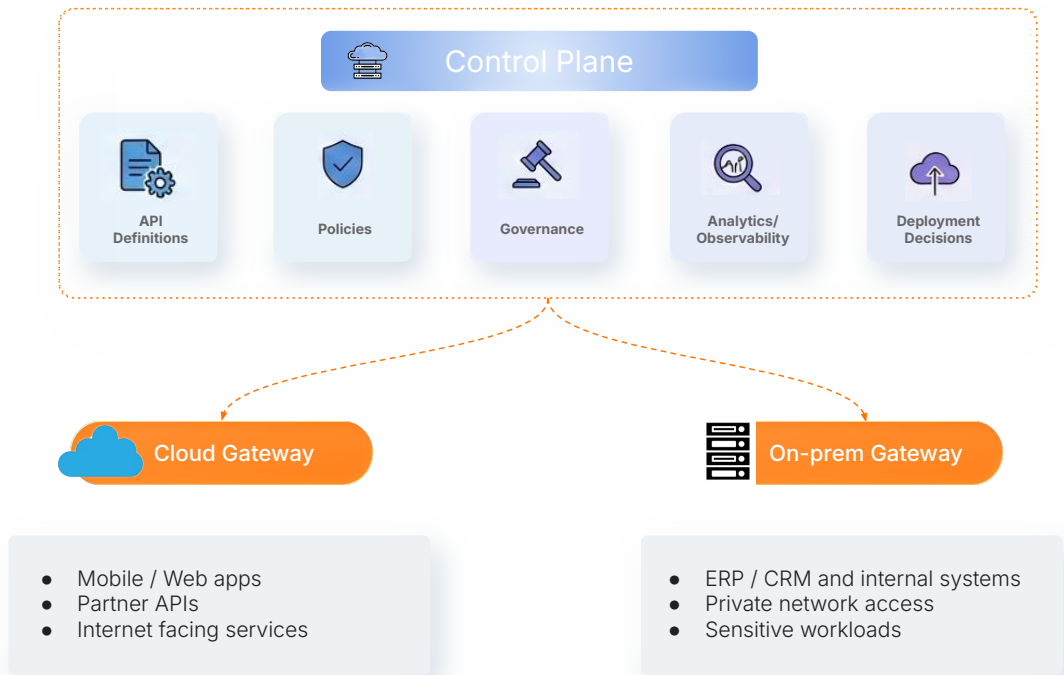
Use Case: Multi-Region SaaS APIs



Global APIs with local compliance and performance



Use Case: Hybrid Enterprise Integration



Modernize externally, integrate internally



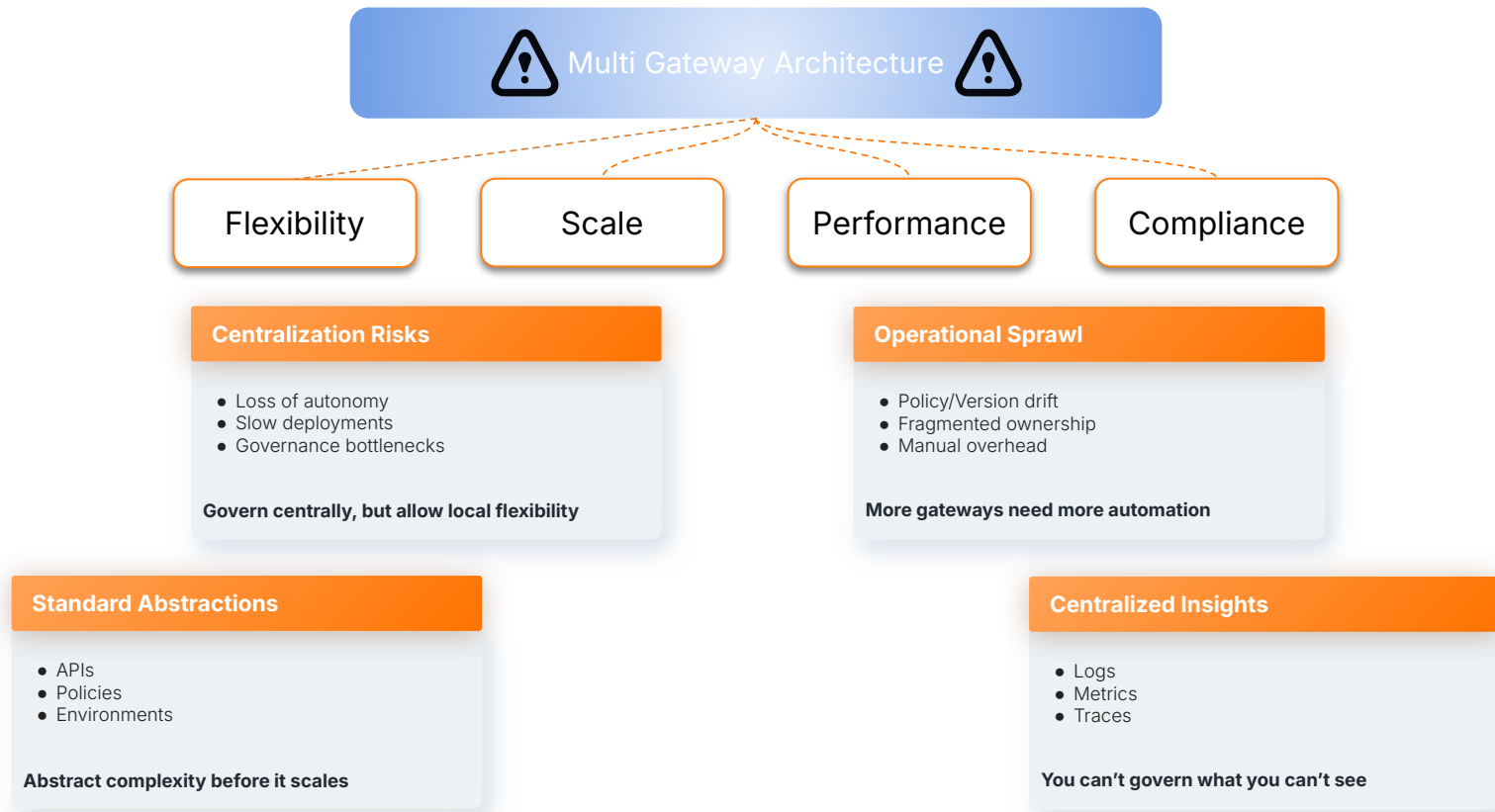
Use Case: AI + Traditional APIs



Separate runtimes, unified governance



Lessons Learned & Common Pitfalls



Key Takeaways



Hybrid Architectures are the New Reality

Cloud, on-prem, edge, and AI runtimes now coexist.



Centralized Control Enables Distributed Gateways

Govern APIs, policies, and deployments without centralizing traffic.



Gateway Federation Reduces Fragmentation

Unify discovery, governance, and visibility across heterogeneous gateways.



Future Gateways Will Be AI-Aware and Policy-Driven

API gateways are evolving into intelligent distributed runtimes.





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Question Time!



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Thank You!

