
WSO2CON2025

What is Egress API Management?

INGRESS APIM

- The diner must verify their reservation/payment (API key, OAuth).
- The restaurant limits how many orders a diner can place (API rate limits).
- The waiter checks if the order is understandable (Schema validation).
- The waiter ensures the order goes to the correct kitchen station (Load balancing).

EGRESS APIM

- Choosing the best supplier based on availability (e.g., OpenAI vs. Azure OpenAI).
- Using the identification to interact with suppliers. (API Keys)
- Tracking how much is spent on ingredients (AI API token consumption).
- The cook processes raw ingredients into a plated meal (Data formatting).

Securing API Traffic Coming In

What is Ingress API Management?

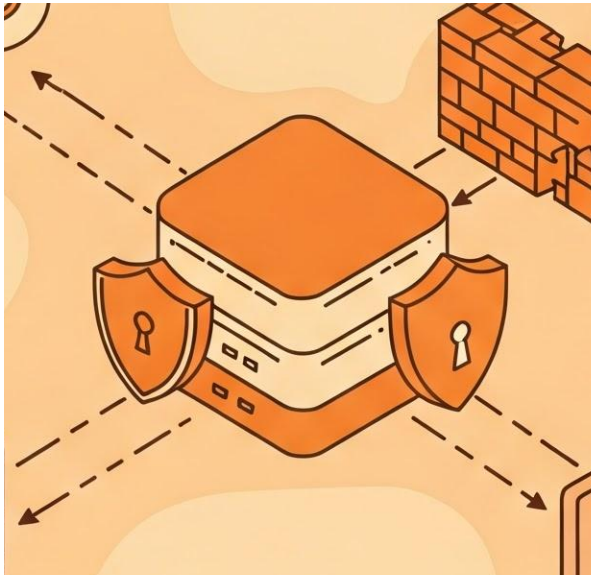
Controls API traffic entering the organization

Ensures security, authentication, and access control

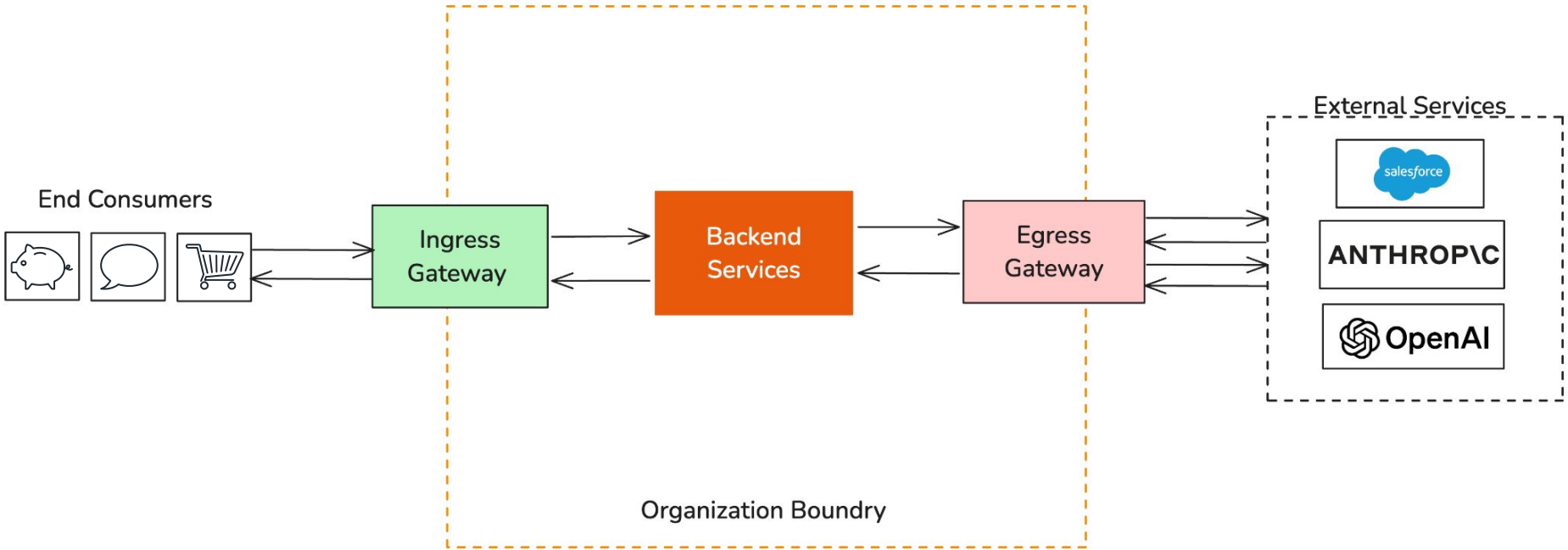
Why Organizations Need It?

Standardized API exposure

Secure and compliant access control



Egress API Management refers to the policies, controls, and monitoring mechanisms used to manage outbound API requests from an organization's systems or services to external APIs.


End Consumers
Ingress Gateway
Backend Services
Egress Gateway
External Services
salesforce
ANTHROP\C
OpenAI
Organization Boundry

Why Egress APIs Matter?

With AI and SaaS apps, external API calls aren't just nice-to-haves,

they're the backbone!

Key Challenges in Egress API Management

Security Risks: 94%[1] of Orgs have faced API security issues

Performance: Slow external services disrupt apps.

Cost: Uncontrolled usage spikes expenses.

Compliance: Data privacy violations risk fines.

Vendor Lock-In: Tightly coupled to specific AI models or SaaS endpoints

Lack of Visibility: Shadow SaaS APIs used by teams

[1] https://salt.security/blog/its-2024-and-the-api-breaches-keep-coming

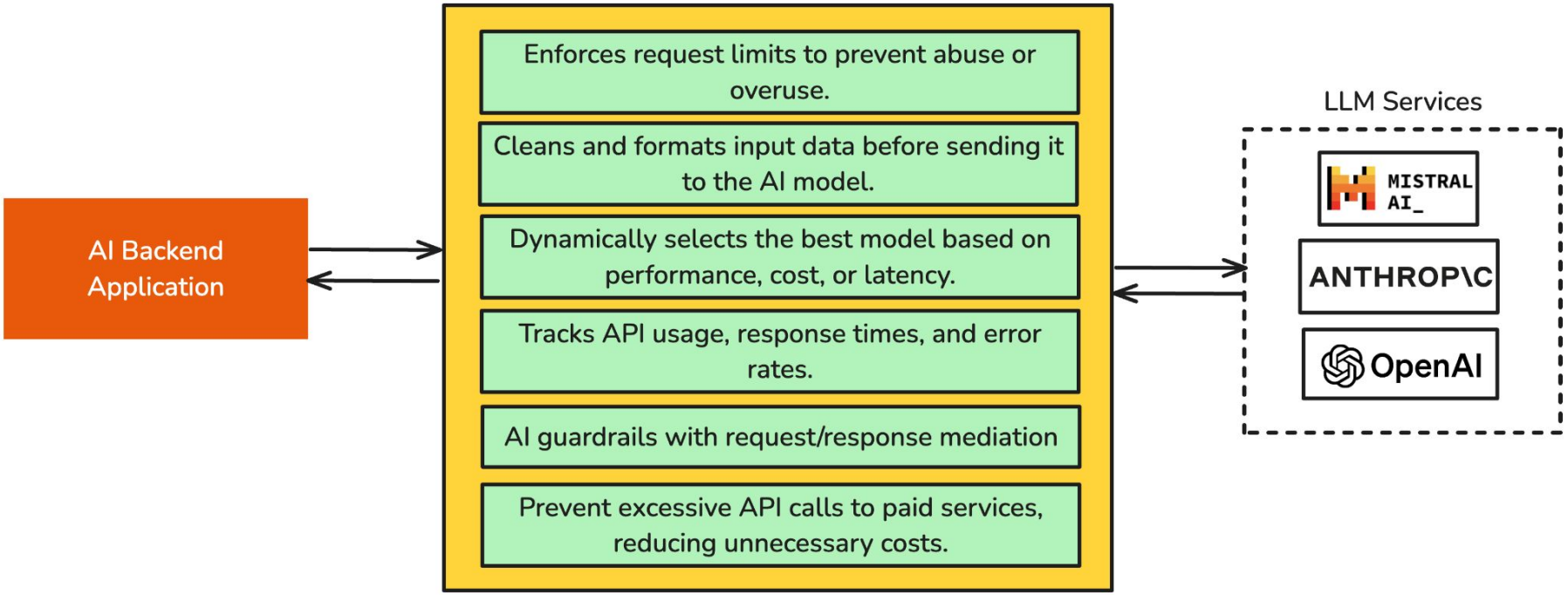
The Role of Egress API Gateways

- **Unified Control Plane for Outbound APIs**:
  Centralized governance over API calls made to third-party services.
- **Dynamic Credential Management:**
  Secure handling of API keys, OAuth tokens, and client certificates.
- **Rate Limiting & Cost Control**:
  Prevent excessive API calls to paid services, reducing unnecessary costs.
- **Observability & Monitoring:**
  Track request latency, error rates, and costs associated with third-party API usage.
- **Security & Compliance Enforcement**: Protect sensitive data by applying policies like masking, logging, and access control.
- **Flexible Routing & Failover**:
  Enable vendor-agnostic routing, allowing fallback mechanisms for critical services.

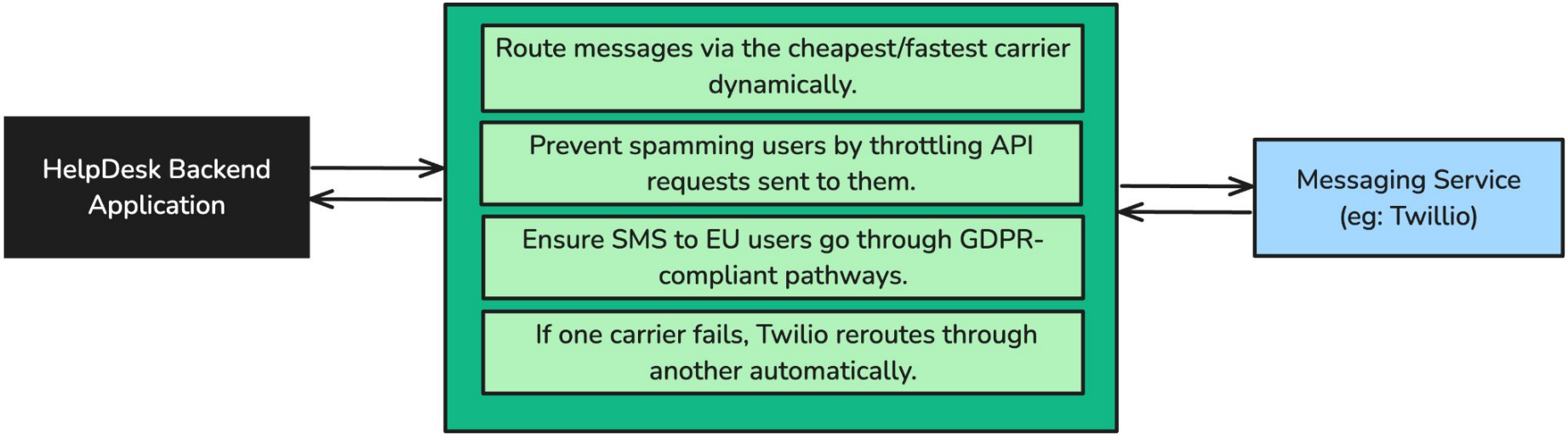
Real World Scenario– Gen AI Services

Egress API Management was always a problem to solve, but with GenAI services the need multiplied.

Egress Gateway

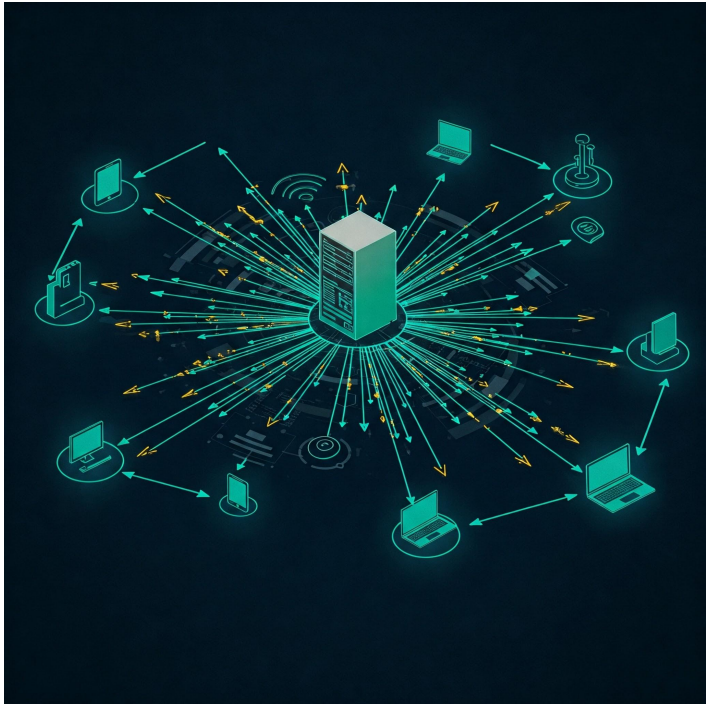


Egress Gateway



Other Scenarios

- **SaaS Integrations** – Managing API calls to services like Salesforce, Google Workspace, or Stripe.
- **Financial Transactions** – Ensuring secure, resilient and rate-limited requests to payment gateways.
- **Data Enrichment & Other External APIs** – Fetching market data, weather updates, or analytics from third-party sources.



Getting Started: Actionable Steps

How to Get Started?

- Map external API dependencies.
- Centralize credentials securely.
- Set up monitoring and logging.
- Add resilience mechanisms.
- Optimize usage for cost.
- Review compliance needs.

Latest Trends Shaping Egress Management

- **AI/ML Driven Security**: Anomaly detection in API traffic.
- **New Protocols (gRPC & GraphQL)**: These protocols require new egress strategies for caching, observability, and rate limiting.
- **Developer-Centric Egress Management**: Improved developer experiences make managing egress APIs easier than ever.
- **Zero Trust Security Models**: Strict Identity Verification: Implementing zero trust principles where every egress request is authenticated and authorized, minimizing security risks associated with outbound traffic.
- **Data Residency and Compliance**: Geo-Aware Egress Routing: Ensuring that egress traffic complies with regional data residency laws and regulations, such as GDPR, by routing data appropriately.

Egress API management is essential for AI and SaaS success.
It complements ingress for a holistic API strategy.

Act now: Secure, optimize, and innovate!

Upcoming API Management Sessions

Upcoming API Management Sessions

- **Conference Day 3 (Thursday, March 20th)**

Advancing API Governance for Scalable Systems →

Vidura Gamini Abhaya
Vice President, Solutions Architecture, WSO2

Federated API Management for Enterprise Agility →

Sanjeewa Malalgoda
Director of Engineering, WSO2

Bijira: API PaaS for the Cloud and AI-Native Era →

Pubudu Gunatilaka
Associate Director & Architect, WSO2

Customer Panel: Journeys in Enterprise Modernization Through API Management →

Question Time!


Thank you!
WSO2CON2025