

WSO2con2025



What is Egress API Management?





- The diner must verify their reservation/payment (API key, OAuth).

- The restaurant limits how many orders a diner can place (API rate limits).

INGRESS APIM

- The waiter checks if the order is understandable (Schema validation).
- The waiter ensures the order goes to the correct kitchen station (Load balancing).

- Choosing the best supplier based on availability (e.g., OpenAI vs. Azure OpenAI).

- Using the identification to interact with suppliers. (API Keys)

EGRESS APIM

- 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?

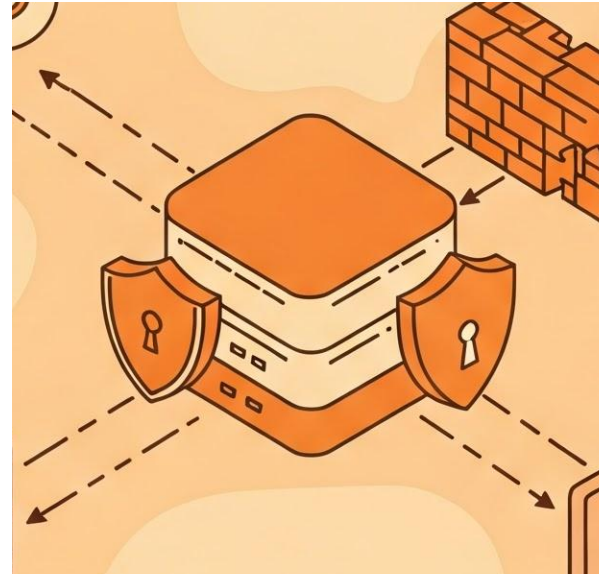
Controls API traffic entering the organization

Ensures security, authentication, and access control

Why Organizations Need It?

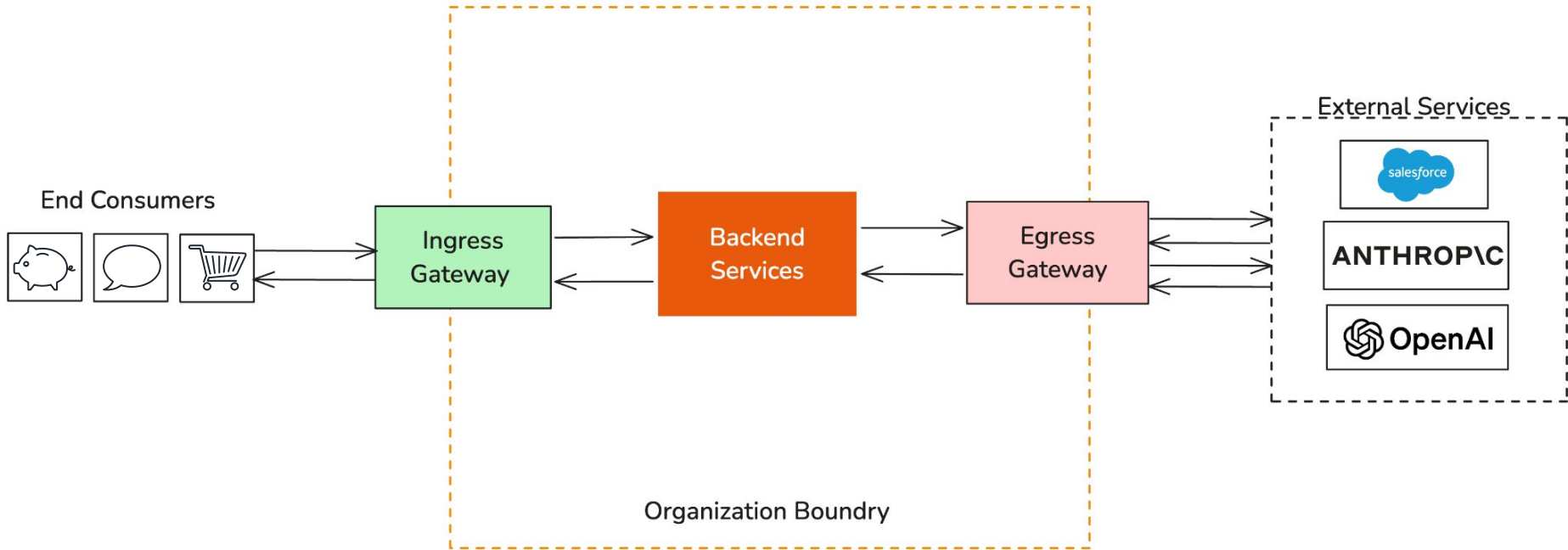
Standardized API exposure

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.





Why Egress APIs Matter?

The background is a vibrant space scene with a color gradient from orange-red on the left to dark blue and purple on the right. It is filled with numerous stars of varying sizes and colors, some with prominent four-pointed diffraction patterns. In the lower-left quadrant, there is a large, semi-transparent teal planet with a thin ring system. In the lower-right quadrant, there is a smaller, semi-transparent purple planet with a thin ring system. The overall aesthetic is clean and modern, typical of a tech presentation.



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.

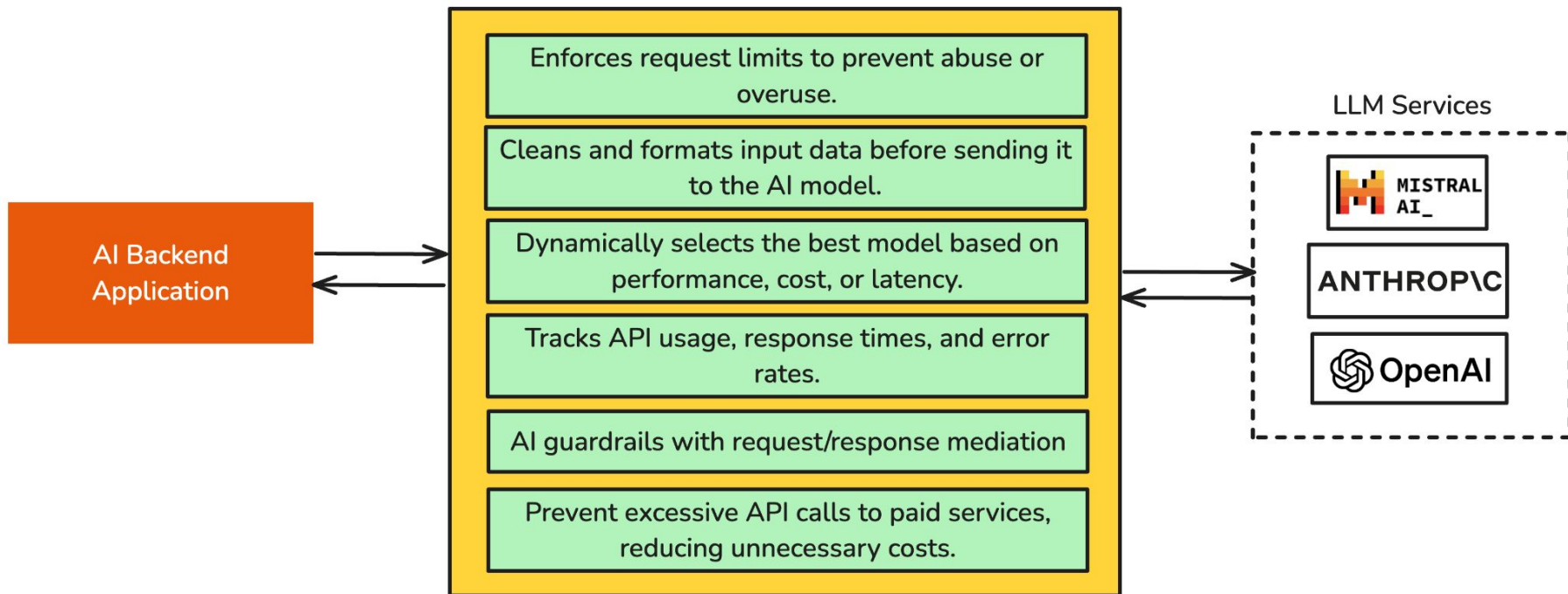
Real World Scenario – Gen AI Services

The background is a vibrant space-themed gradient transitioning from orange and red on the left to dark blue and purple on the right. It is filled with numerous small white stars and several larger, stylized planets. One planet in the lower-left is a reddish-orange sphere with a thin ring system. Another planet in the lower-right is a blue sphere with a thin ring system. A large, bright star with a prominent four-pointed diffraction pattern is located in the upper-left quadrant.

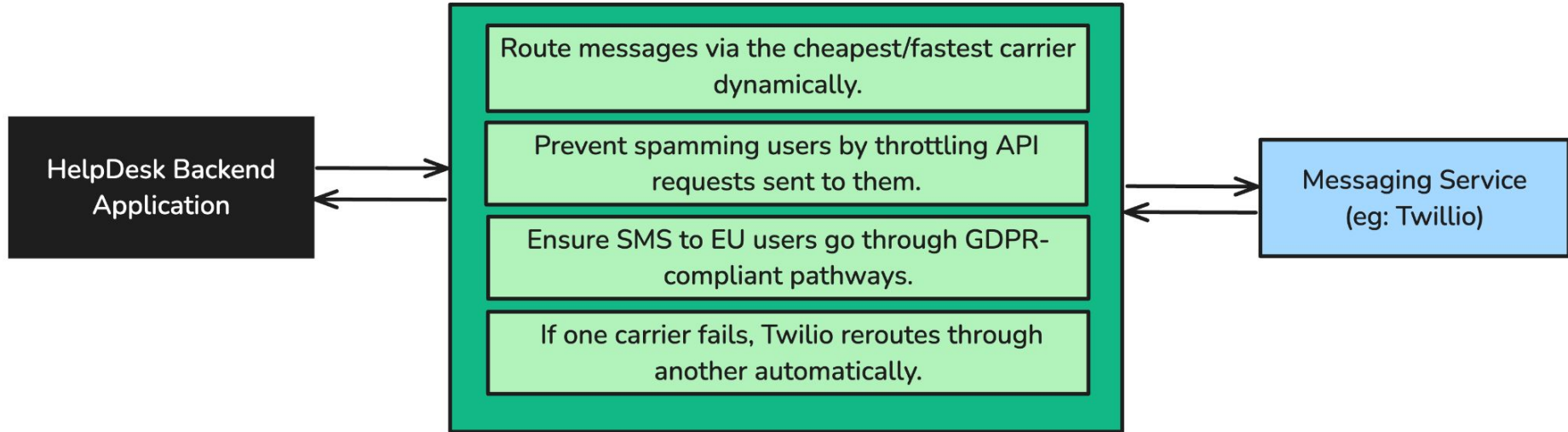
Egress API Management was always a problem to solve, but with GenAI services the need multiplied.



Egress Gateway

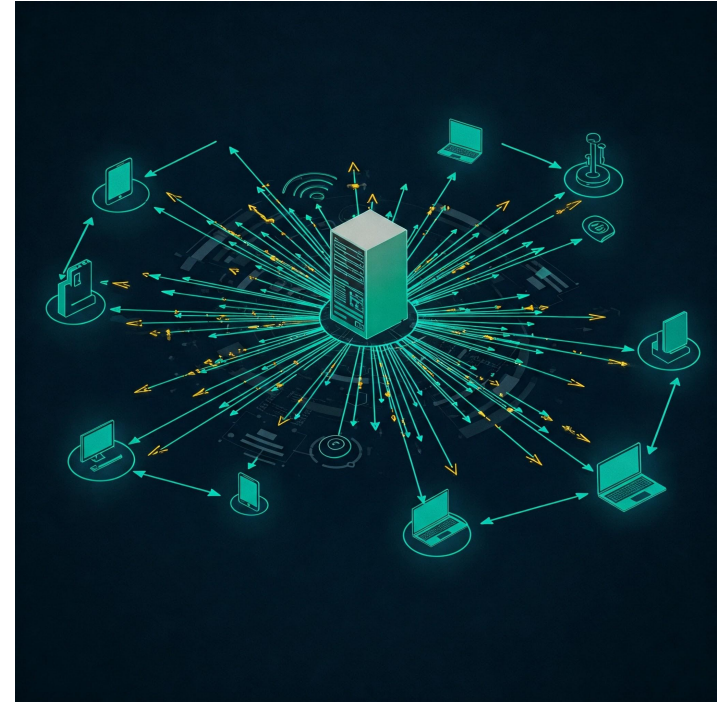


Egress Gateway



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

The background is a colorful gradient from orange on the left to purple on the right, filled with numerous stars of varying sizes and colors. In the lower-left corner, there is a large, glowing green planet with a prominent ring system. In the lower-right corner, there is a smaller, glowing blue planet with a thin ring system. The overall aesthetic is futuristic and cosmic.

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

The background is a vibrant space-themed gradient transitioning from orange-red on the left to dark blue and purple on the right. It is filled with numerous small white stars and several larger, stylized planets. One large planet with a ring system is visible in the lower-left quadrant, and a smaller ringed planet is in the lower-right quadrant. The overall aesthetic is futuristic and cosmic.

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!



The background features a dark, space-like environment with a nebula in shades of red and orange. Scattered throughout are various 3D geometric shapes, including cubes and rectangular prisms, rendered in a blue-to-purple gradient. Some shapes have a glowing effect, and there are also some smaller, fainter shapes. A large, dark blue sphere is visible on the left side.

Thank you!

WSO2con2025
