# API SERVICE BUS


A HIGH SPEED, EASY TO USE, ASYNCHRONOUS API INTEGRATION BUS

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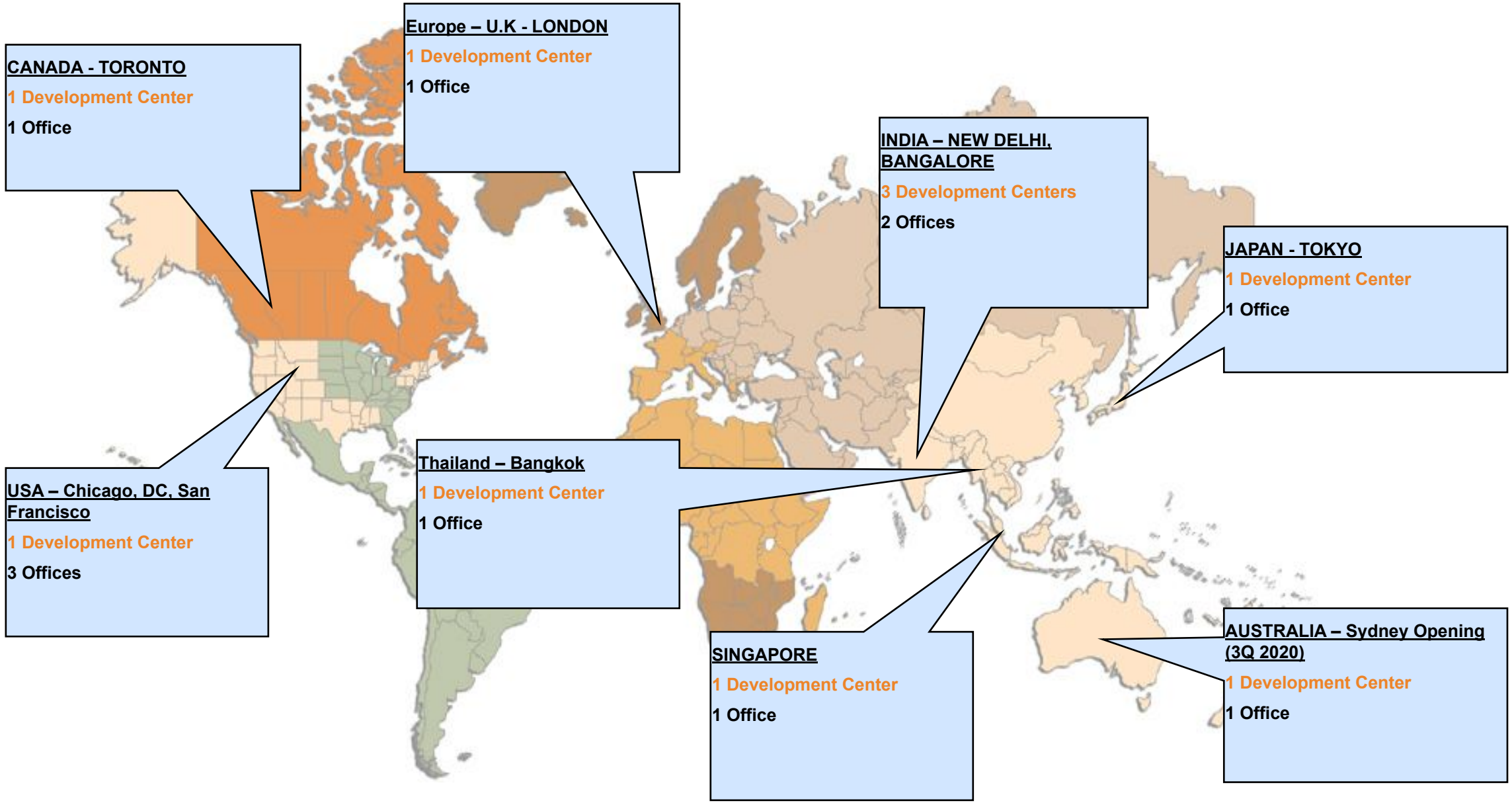
# ABOUT TEKMONKS

- A full service, fast growing, and highly skilled technology firm.
- US founded and headquartered in Washington DC
- Work with largest Fortune 500 companies worldwide
- Zero debt company with a de-risked operating model, maintaining two years of operating cash reserves.
- 98% rate of repeat business, history of success and satisfied clients.
- ISO 9001:2015 QMS certified
- Strong partnerships with AWS, Azure, Microsoft, IBM etc.


**Vision Statement**

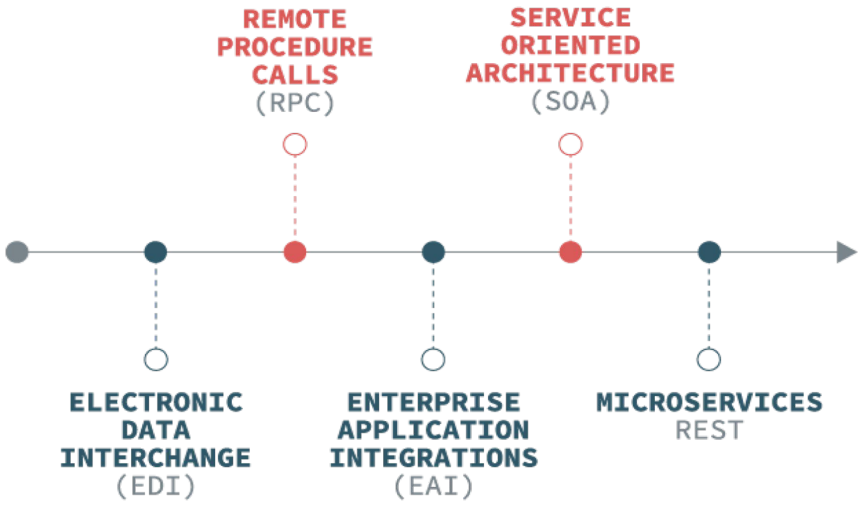
**To be a reputable Global Corporation providing quality solutions for business issues using technology and highly skilled people.**

# TekMonks Operates from 7 Countries, 8 Major Cities



# THE JOURNEY

# SOA TO MICROSERVICES




## Modern Enterprise Architecture – API Based

The SOA Enterprise Architecture has evolved and finally got realized with API Based Microservices

- Application and partner endpoints are now exposed as REST/JSON based microservices
- APIs are lightweight, scalable, easy to adopt
- Integrate with all programming languages
- New paradigms like responsive Web Applications and Mobile applications are impossible to build without REST/JSON APIs
- Enterprise applications are increasingly being built as an aggregation of consumers and producers of APIs.
- Even EDI is giving way to Message based APIs (ASB includes an EDI X12 to JSON convertor).

The future of Enterprise Applications and B2B Partner business communications is clearly via REST/JSON APIs

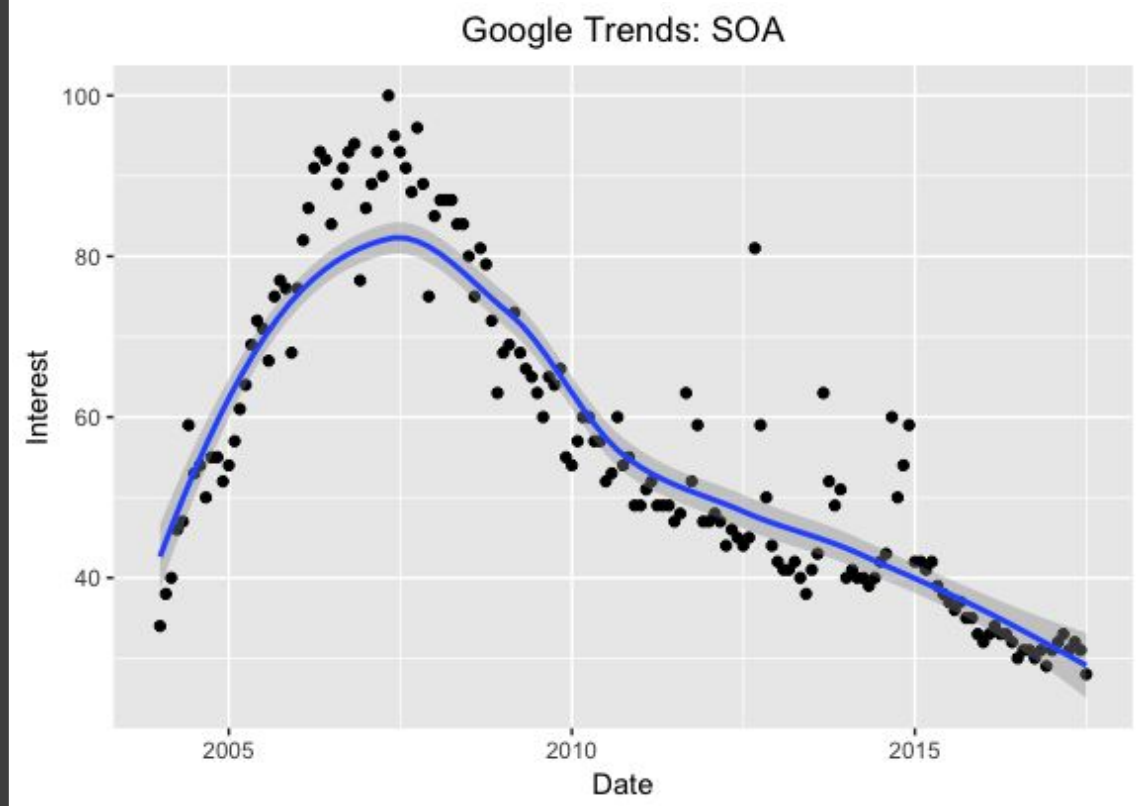
# PROBLEMS WITH TRADITIONAL ESBS IN AN API FIRST WORLD

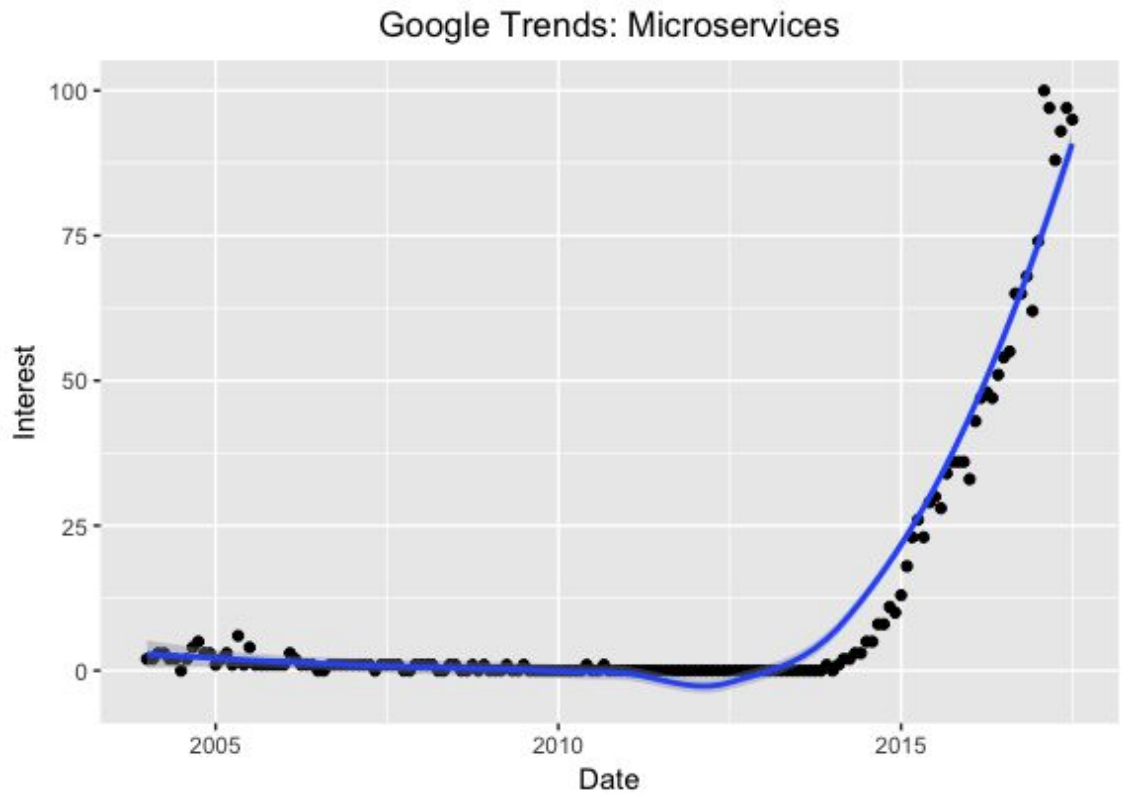

- ESBs were designed for SOA architecture – specifically the XML, Java and SOAP based Enterprise Architecture of 2000s.
- They are fat and monolithic – heavy and slow, based on document models, (XML DOM) and not lightweight messages
- Flow based – ESBs integrate process based SOA applications in slow, synchronous, heavy integration flows, not suited for dynamic, per message based API endpoints and Enterprise transactions
- All ESBs - IBM IIB, Mule, Tibco use XML, SOAP and Synchronous flows as their core engine

- SOA has now evolved into the Microservices Architecture
  - SOA Architecture – Complex Fat Pipes with Centralized Logic (ESB)
  - Microservices Architecture – Smart endpoints and message driven pipes

- ESBs are not compatible with the Microservices Architecture

Using an ESB in a modern message driven, API first Enterprise is like fitting a square peg into a round hole



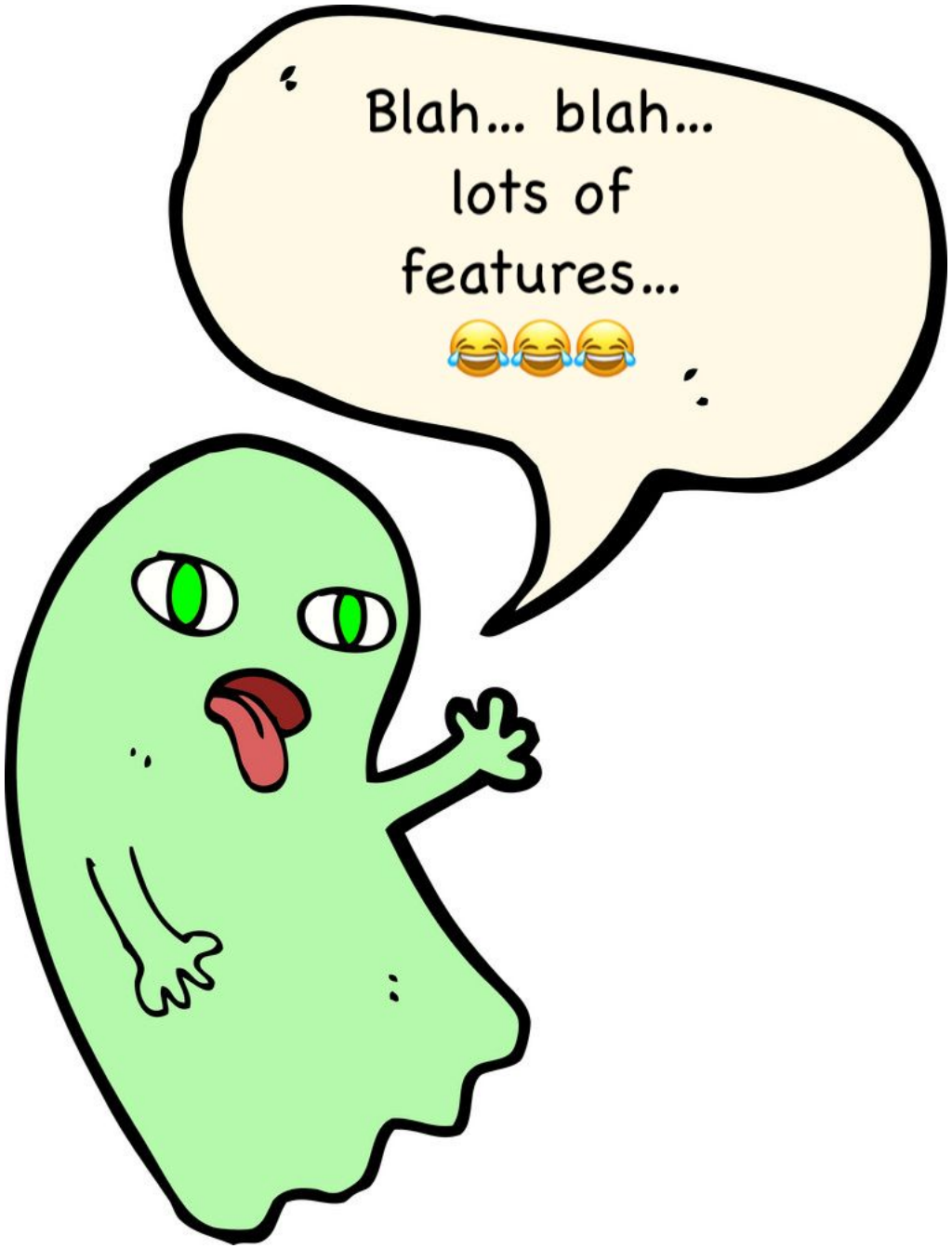

https://redmonk.com/sogrady/2017/07/20/soa-microservices/

# THE SOLUTION MESSAGE DRIVEN API SERVICE BUS

API based business integration and real time data exchange is now the norm

- We are living in a "data and message first" world of REST APIs. Businesses need a lightweight, high performance, asynchronous, API Based Integration platform.

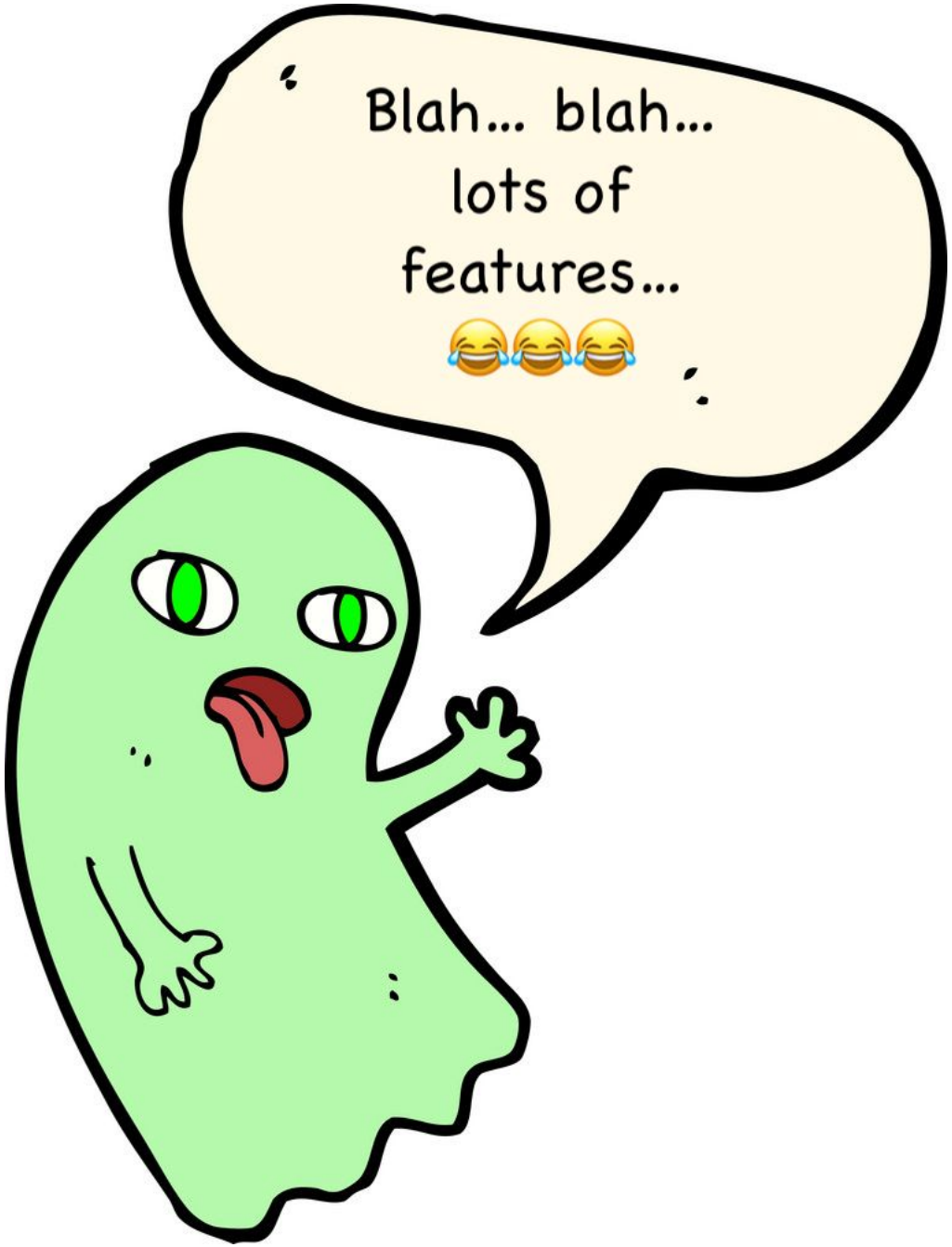
- TekMonks ASB is the first, and so far, the only, API Integration Bus, built specifically for modern API based applications and API economy.




# ASB Can Easily…

- API enable partner endpoints to existing Enterprise systems
- Orchestrate and connect APIs to each other, enabling information to flow
- Convert existing systems and data to API Endpoints exposed to internal and external partners
- Compose new APIs by orchestrating existing APIs
- Secure API endpoints with encrypted JSON, and API keys

- ASB is Asynchronous, message and event driven, not based on waterfall like flow models.
- Message based data flows as a foundation for (near) real-time and also batch processing
- In the past, everything was built on data stores (data at rest), making it impossible to build flexible, agile services to act on data while it is relevant.
- Act as the central asynchronous bus for events between any number of sources and sinks.




- A bus built by design for zero downtime, handling the failure of services and nodes and networks and rolling upgrades.
- Proven capability to process millions of messages an hour, using only 2 cores and with minimal memory requirements due to the asynchronous I/O and lightweight JSON architecture of the bus.
- Transform data and events from any format to JSON / APIs.
  - Connect anything: programming language, APIs like REST, open standards, proprietary tools and legacy applications.
- Message based routing implies data is processed when it is available by applications which can use it to drive business processes forward.

Future Proof: Built for futuristic AI Based applications, which need to moving large amounts of data and events for machine learning and AI processing engines.

# ASB BENEFITS


Flexibility Flexibility that scales from API microservices exposed by partners, to multi-gigabytes of data produced by batch jobs

Message Driven Flows APIs use Request/Response model and are messaging endpoints. ASB is designed ground up for routing, transforming and orchestrating such messages, thereby transforming old systems into modern API endpoints.

Independent and decoupled business microservice APIs The APIs are managed as products, with their own lifecycle. Loose coupling allows for independent processing between producers and consumers.

Very High Scalability Due to the asynchronous I/O based architecture, and the lightweight JSON data model. Reducing cloud and infrastructure costs.

JSONata Support For high-speed, rich JSON transformations


# USE CASES FOR ASB

Enterprise Wide Microservices Architecture ASB provides the API integration layer for Modern Microservices Architecture

Transform legacy applications and databases to Managed API endpoints.

Mission-critical, real-time applications Messages are processed as they arrive e.g., payments, fraud detection, customer experience.

Decoupled integration between different legacy applications and modern applications.

Message-driven processing of big data sets For example, logs, social feeds, AI data

Analytics For business intelligence, data science, machine learning)

# NEXT STEPS

1. Ask us for a no obligation POC.

2. Don’t build from scratch, let us help you…

3. Email: sales@tekmonks.com


THANK YOU