

INFOSYS MCCAMISH SYSTEMS API GATEWAY

Enabling the Digital Insurance Business with API based architecture

Digital customers want seamless experiences across channels, platforms, and devices. The interactions on these channels rely on the organization's information management system. Rapid adoption of micro services architecture has led to distributed information systems, and companies are turning to Application Program Interface (API) Gateways to effectively manage their service portfolios and access the right information easily.

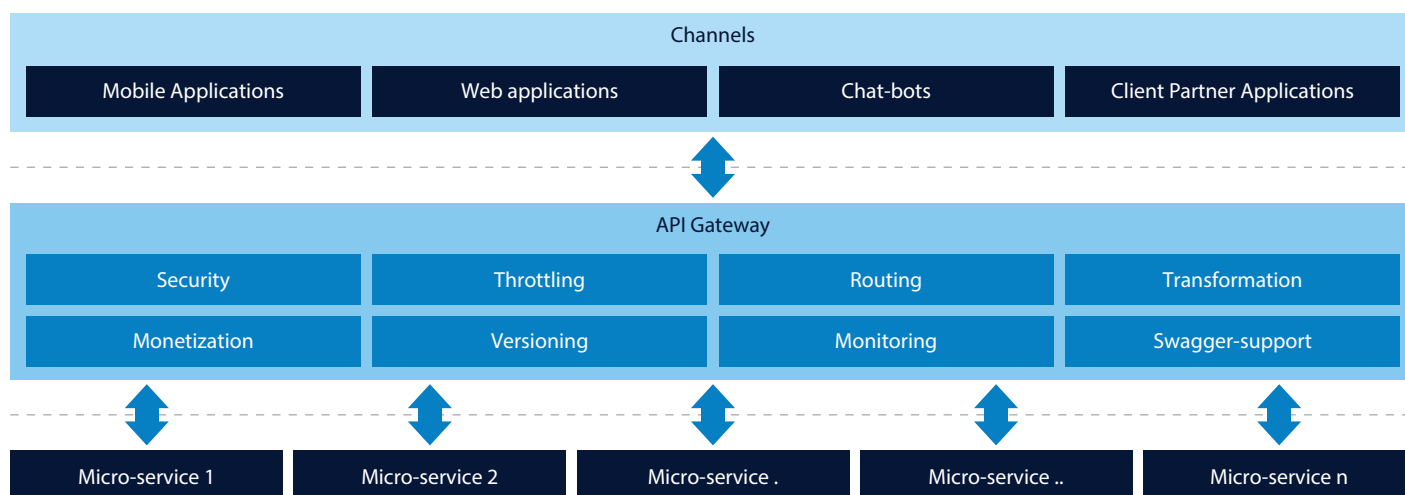


Fig: API Gateway and its capabilities

The McCamish Approach to APIs

The goal of Infosys McCamish is to publish its platform's APIs in a standard and proficient way to its clients, where every client can access the McCamish environment based on their system requirements.

API First Design and Staging	API Versioning	Swagger Support
Data Transformation	Routing	API Lifecycle

We use the WSO2 API Manager tool based on WSO2 carbon platform for managing McCamish APIs. This includes:

- 1. API Publisher:** Empowers API developers to manage the McCamish APIs for consumers. Enables designing, prototyping, backend integration, and publishing the APIs while also accounting for access control, mediation, versioning, and blocking.
 - 2. API Store:** Supported by the swagger tool, API store enable consumers to search and view the published APIs from McCamish based on their subscription levels.
 - 3. API Gateway Admin Interface:** Helps manage internal and external service users, and their roles. The interface can be used to integrate with other user stores, identity providers, and view lifecycle stages of all APIs.
 - 4. API Key Manager:** Maintains and authenticates access tokens issued to the user.
 - 5. API Traffic Manager:** Regulates traffic to the API Gateway by managing service levels based on subscription tiers. Based on the service levels, it validates the throttling policy on each request, and provides a verdict to API gateway.
- API Gateway:** Working on OAuth2 OpenID connect protocol, API Gateway is the central component on API management and acts like a proxy of different API endpoints. In addition, API gateway uses different handlers for throttling, and analytics for the API calls and route them to the respective API back ends, executing the mediation logic, if applicable. Along with API gateway, McCamish uses API Analytics to monitor APIs and analyze usage patterns.

Benefits of McCamish API Gateway

- Provides a single point of entry for all micro-services
- Separates external public APIs from internal microservice APIs
- Prevents cyber-attacks by adding an additional layer of security to microservices
- Enables support for mixing communication protocols
- Provides visibility into performance and availability of the app
- Allows throttling to control the usage of APIs by consumers
- Decreases microservice complexity and speeds up development time by addressing common concerns such as access control
- Allows usage based tracking for consumption based billing

Role of APIs in the McCamish product roadmap

Infosys McCamish has been implementing micro-services architecture for our products that serve 35+ clients in the insurance space. A growing demand to integrate with the McCamish ecosystem, multiple micro-services deployed as distributed services, and need for a single-point of entry into the system has made the API Gateway one of the most important components in McCamish product roadmap.

We currently use system, experience, and partner APIs for development in our products such as VPAS Web®, Self-service portal, and Agent portal. Clients also consume these into their own ecosystem.

System APIs	Experience APIs	Partner APIs
Connect the core business systems directly to the API gateway with the methods directly exposed to the clients. The consumers have to understand proper input and output parameters and same API method can be used for different functionalities.	APIs are exposed using representational state transfer (REST) standards with proper resource naming strategy and defined verbs for better user experience. There can be further hierarchy to the resources, based on the collection of resources, for example, Policies API can have further hierarchies such as billing, financial history, to fetch a particular information of the policy etc.	Built on the top of experience APIs or specifically designed for a particular client's system requirement. The clients may need such APIs for integration of their own systems or third party systems, which are looking for a specific type of input-output formats.

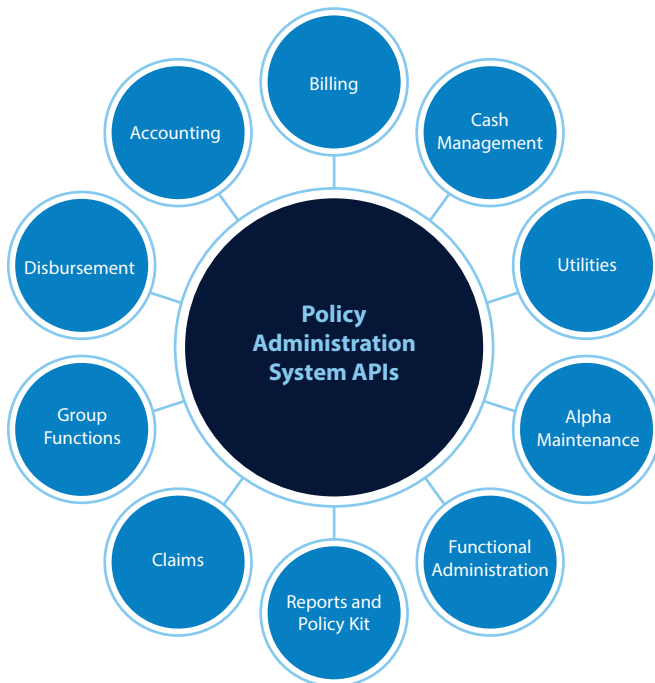


Fig: Business Domains of McCamish APIs

With clients developing new product lines on technologies such as wearables, smart contracts, bots, system integration has become very vital on different technology platforms. McCamish is engaging with clients to expedite and enrich their product capabilities by supporting them with their policy administration system. In the new polyglot environment with different organizations, an API Gateway is the perfect solution to publish, manage, and monitor APIs from McCamish for its clients.

About Infosys McCamish

Infosys McCamish a U.S. based subsidiary of Infosys BPM, a part of Infosys (NYSE:INFY) is a leader in providing best in class technology platforms and service solutions for the financial services industry. With deep domain experience with Life Insurance companies, Work Site Product providers and Retirement companies globally we partner with our clients to help them stay ahead of the innovation curve. We offer integrated end-to-end transformative BPM services, and have journeyed through the table-stakes of effectiveness and efficiency with an ever-increasing focus on enhancing stakeholder experience and empathy.



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