openlegacy
OPEN INNOVATION

IBM MQ & API Connect

Product Comparison

Executive Summary

The purpose of this document is to analyze the differences between the IBM MQ Series commercial solution for the generation of services and their consumption, as well as the API generation and administration solution called IBM API Connect. Both solutions are offered in combination by IBM to cover the lifecycle of the APIs.

The initial part of the document analyzes the publicly available information of IBM MQ Series and API Connect, followed by an analysis of videos and tutorials accessible to the general public that are designed to educate technologist regarding the scope and functionality. This information shows how APIs are created, managed and orchestrated to generate API-based business functionality

A summary table of differences between the IBM solution and OpenLegacy and its current functionalities in version 4.3 is also provided.

IBM MQ Series and IBM API Connect Overview

IBM MQ - was designed to integrate IBM zSeries and iSeries solutions and is based on the concept of asynchronous message management. The concept is simply based on the principle of queuing and managing messages so that the legacy system functions as a single dispatcher.

In the 1990s, IBM created this technology with the idea of solving the following challenges:

1) Redundancy based on persistence
2) Traffic peaks
3) Improvement of web page load times
4) Run batch processes for efficiency
5) Transaction planning and concurrency challenges
6) Improve scalability, resilience and monitoring

These problems typically occurred when a server with great computing power interacted with clients of much lower capacity. Today open platforms have great processing capabilities and respond to the most demanding transaction volumes. Today it is more common to find that the legacy systems generate the bottlenecks due to the high costs of their growth.

However, many organizations maintain this old middleware scheme because there were considerable investments made in the past and many complex services have been developed on those platforms that are difficult to change.

IBM API Connect - according to IBM, API Connect is a cloud-based API management solution designed to make your job easier. You will find simple coding, self-service developer portals, real-time analysis and built-in security. Everything is ready to use the first day. Its main features are:

1) Creation of APIs
2) Security and administration
3) Socialization
4) Tests and monitoring
5) Built-in analytics
6) Multi-cloud design

Source: https://www.ibm.com/cloud/api-connect

The tool is designed to create an ecosystem of APIs where legacy systems use the old MQ platforms and the services already designed on it, in conjunction with new open technologies. API Connect aims to orchestrate and manage the APIs in such a way that complex functionalities can be created with access to cross-platform data.

Based on the tutorials published by IBM, other training videos and comparative documents published on the web, an analysis of the functionality was carried out with the following conclusions:

The tutorial videos show the generation of orchestrated functionality of several APIs consuming pre-existing services or copying them from other sources or adding basic connectors to JDBC databases.

The solution generates a data model to establish the relationship between the data of one API and the next, losing the concept of portability and autonomy of an API.

Once the solution is installed via the command line, you can access the API administration environment (which is not a development environment).

Furthermore:

1) The queue management system is a single point of failure
2) MQ does not fit naturally for DevOps solutions
3) MQ does not support synchronous activities
4) Taking MQ as a base, the services that access the legacy systems must be coded manually
5) No evidence has been found that API Connect automatically generates integration code

OpenLegacy	Topic	IBM – MQ API Connect
Generates microservices from code Supports synchronous and asynchronous event messaging between legacy system and microservice Fast, secure and application specific Function specific microservices so easy to leverage in common micro architectures	Business logic	Generic messaging – need to map it to the legacy code No support for synchronous messaging Additional infrastructure for messaging makes it slower Microservices are all based on messaging and therefore are not specific to functionality Dependency on MQ series
No single point of failure	Resiliency	Queue can fail and whole system is at risk

Supports DevOps process Microservices are separate entities for test/build Reusability/Coexistence of existing components (including MQ) Customizable	Integration and Coexistence	Reliant on IBM for upgrades and new versions Proprietary processes
Only need to rebuild specific APIs when functionality changes	Maintenance & Support	Monolithic application where everything is reliant on each other – Have to rebuild all each time
Fully automatically generated Java code to connect end to end applications	Automation	

About OpenLegacy

OpenLegacy accelerates delivery of innovative digital services from legacy systems in days or weeks versus months. Our microservices-based API integration and management software reduces manual effort by automating API creation, simplifies the process by avoiding layers of complexity, and improves staff efficiency and API performance. Our software directly accesses and extends business logic to web, mobile or cloud innovations in the form of Java objects, REST APIs or SOAP. Most importantly, this process is not only fast, easy and secure, but also does not require special staff skills or changes to existing systems or architecture. Together, business and IT teams can quickly, easily and securely meet consumer, partner or employee demands for digital services without altering or replacing core systems. Learn why leading companies choose OpenLegacy at ww.openlegacy.com.

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