

What's New in API Connect & DataPower Gateways



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Agenda

- The Market Point of View & Trends
- Your Feedback. Our Investments 2019
- Tell Me What's New & Cool
- Let's Watch Some Live Action



25 minutes

15 minutes

Obsessive Focus on User Experience & Simplicity

Winner of iF Design Award 2019

Significant investment in 2018 driving user research, design sessions, stake holder workshops with non-IBM and IBM clients

Persona-based based brand new design catering to various organizations focusing on developer, API product manager, API admin

Simplified concepts for specific personas e.g. a developer can create & publish APIs in less than 5 clicks while IT/Ops can design availability zones across various clouds to deploy APIs anywhere



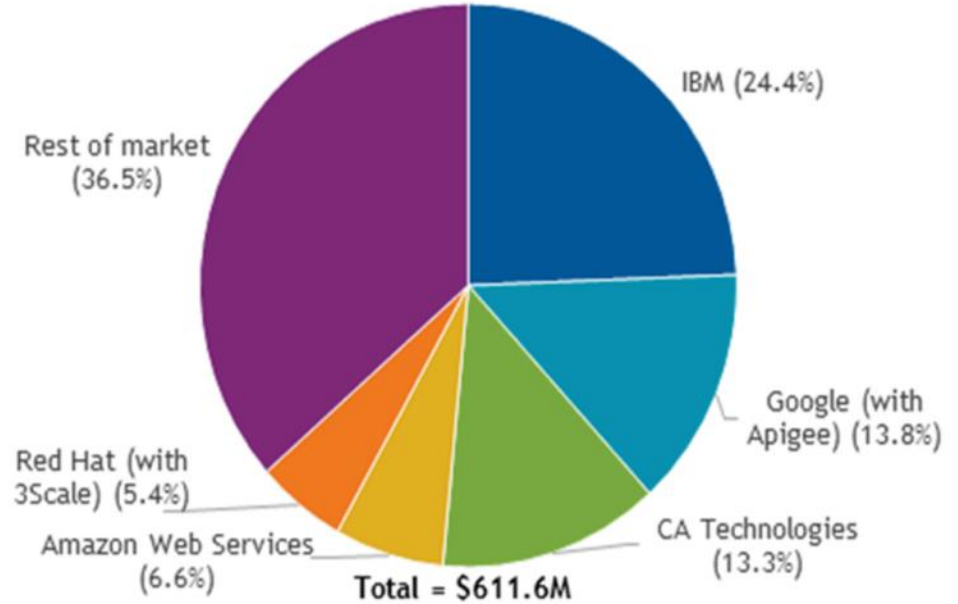
[Winner of the 2019 iF Design Award](#)

IBM API Connect: Ranked #1 in API Management

Ranked #1 in market share with nearly double the share of the next closest vendor (IDC June 2018)

Trusted by enterprises of all sizes across industries and geographies

Worldwide API Management Revenue Share by Vendor



Source: IDC, 2018

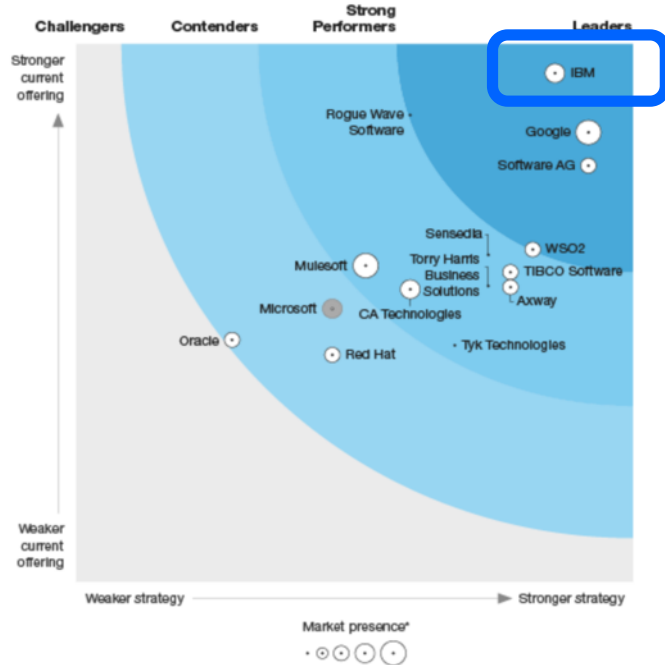
[Learn more](#)

Leader in Forrester & Gartner 2018 Reports

THE FORRESTER WAVE™

API Management Solutions

Q4 2018



*A gray marker indicates incomplete vendor participation.

2018 Forrester Wave API Management Magic Quadrant:

- IBM API Connect is **clearly** in the **Leaders** Quadrant again!

2018 Gartner API Management Magic Quadrant:

- IBM API Connect in **Leaders** Quadrant with several vendors
- Did not take into account IBM's v2018 release plans as Gartner focuses on GA versions only

API Integration Market Trends

API back ends are distributed across multiple on-premises and off-premises clouds

API volume explosion requires performance, without sacrificing security

API Integration is becoming a core IT function, requiring ease of operations for developers and admins alike

Modern integration architectures with API, Application, Messaging, Events and Fast File Transfer are being adopted



What's New in 2019

Multi-Cloud Fabric



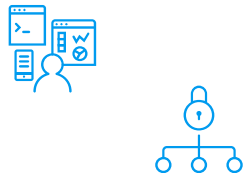
Scalability, flexibility & IBM managed options through a Microservices and Cloud native architecture across any cloud

Performant & Secure



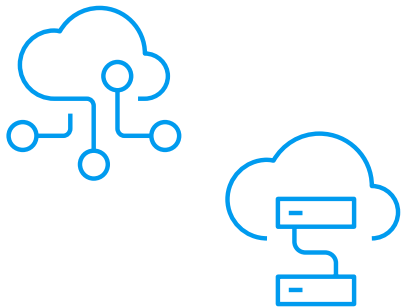
Security-hardened and highly performant API Gateway service laying the foundation for growing API projects and volumes

Agile Operations



Simple and easy operations for developers and administrators with automation and reduced overhead

Multi-Cloud Fabric



- **Built Into IBM Cloud Integration Platform** for an integrated UX across integration styles
- **New & Simpler UX** on IBM Cloud API Connect Reserved Instance
- **Multi-Cloud deployment flexibility** with microservices & Kubernetes-based API Connect
- **Improved Transaction Latency** thorough co-location of API Gateway & Analytics with Systems of Records
- **Handle SLAs & Usage Spikes** by auto-scaling components (i.e. API Gateway)
- **Improved Resiliency** through autonomic API Gateway cluster management

IBM Cloud Integration Platform

Most powerful integration platform on the market

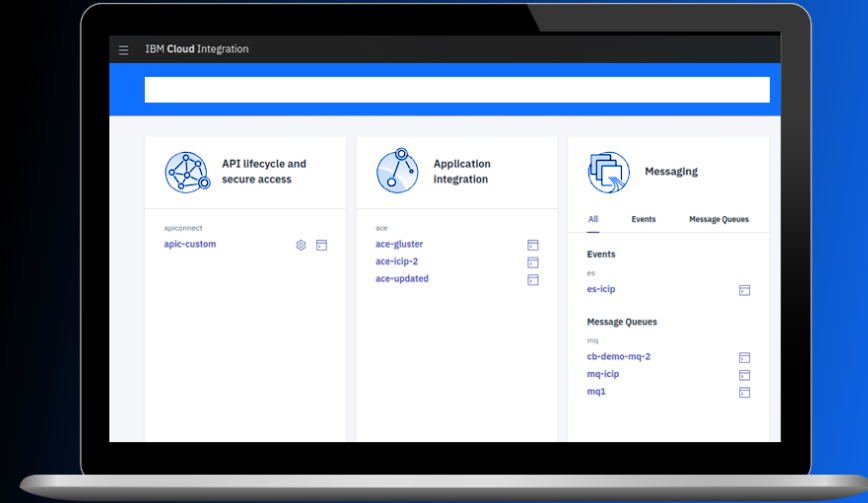
- NEW offering incorporating traditional and modern integration including APIs, App Integration, Message queuing, Event streams and Fast file transfer

Deploy wherever needed

- Supports deployment on-premises or in any cloud

Enterprise grade

- Secure, scalable modern architecture



IBM **Cloud**
Integration

Businesses can **save** $\frac{1}{3}$ of their integration cost, **gaining 3x** the speed

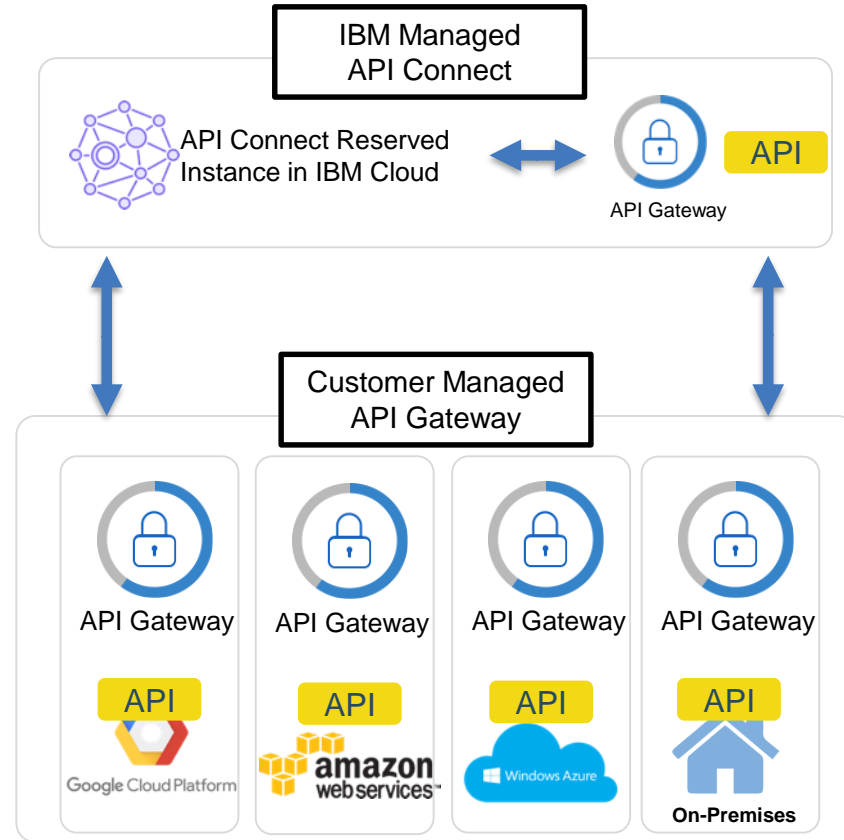
Modern User Experience on API Connect Reserved

Reserved Instance with improved experience delivering productivity enhancements with v2018+ as SaaS

Bring your own gateway to securely expose APIs on-premise or in third-party Clouds

Active-active high availability with new APIC Reserved Instance High Availability add-on

Unlimited API Gateway licenses for customer managed use at no additional charge in APIC Reserved Instance deployment



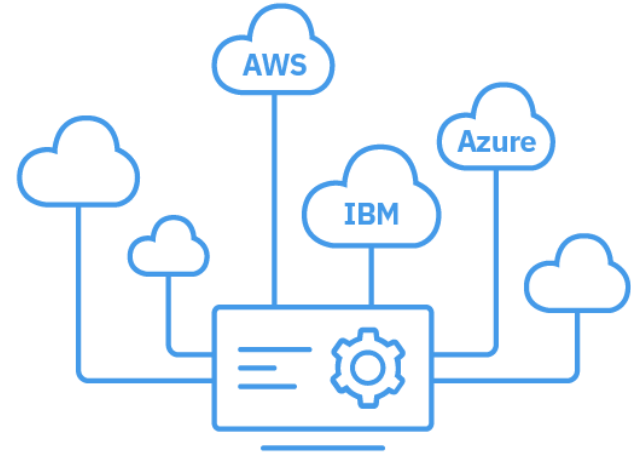
Multi-Cloud Deployment Flexibility

Flexibility to deploy on cloud using
Standard Kubernetes, IBM Cloud Private,
Red Hat OpenShift & VMWare

**Performant, reliable and low latency
architecture** with co-located gateway
deployed with analytics

**Enhanced operational efficiency with
hybrid deployment topology** with
components on any cloud

Hybrid licensing for IBM and Customer
managed deployments with a unified API
call volume based business model

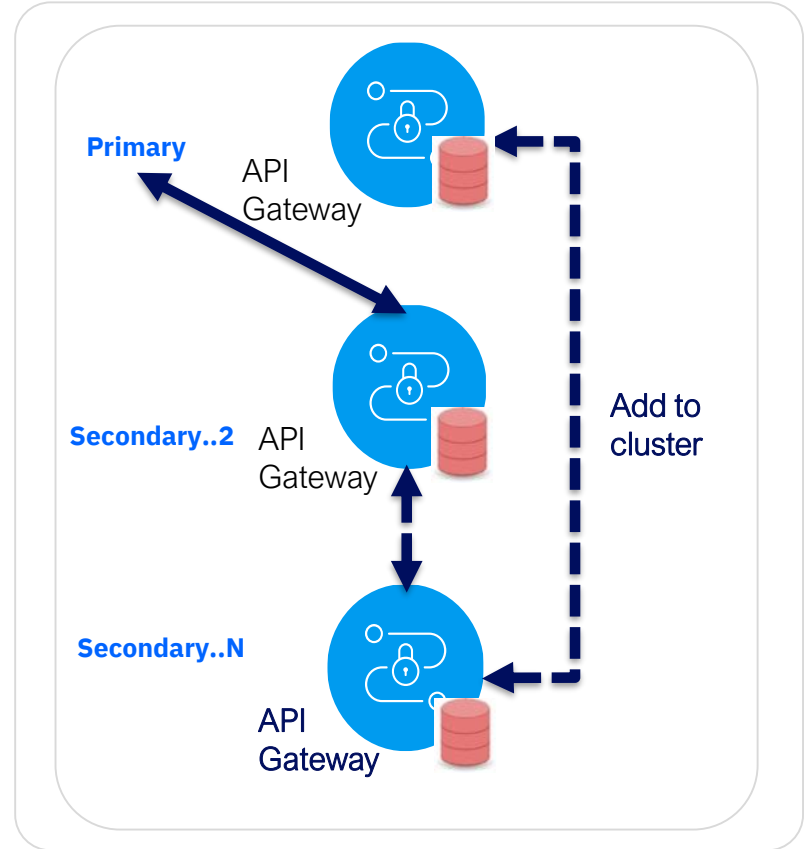


Runtime Scale for Usage Spikes

Scale API gateway clusters to adhere to SLAs and handle volume spikes

Autonomous gateway management, deploy gateways on multiple clouds without any operational impact

Self-healing gateways optimizing scaling for usage spikes to improve runtime resiliency



Performant and Secure



- **Istio Integration** for improved performance & security by passing API header and tokens into Istio
- **Open API V3 support** to meet security industry standards (i.e. PSD2) & improve reuse
- **OpenBanking & PSD2 Compliant** including flexible JWT and OAuth features
- **5X Improved Performance** with cloud-native API-centric Gateway Service
- **Fast Time to Value** through Out of the Box policies for API Gateway Service
- **Enterprise Specific Security Support** through OAuth flow customization
- **Expanded Security** with OIDC, CAPTCHA, Perimeter, DNS check on Portal, etc.

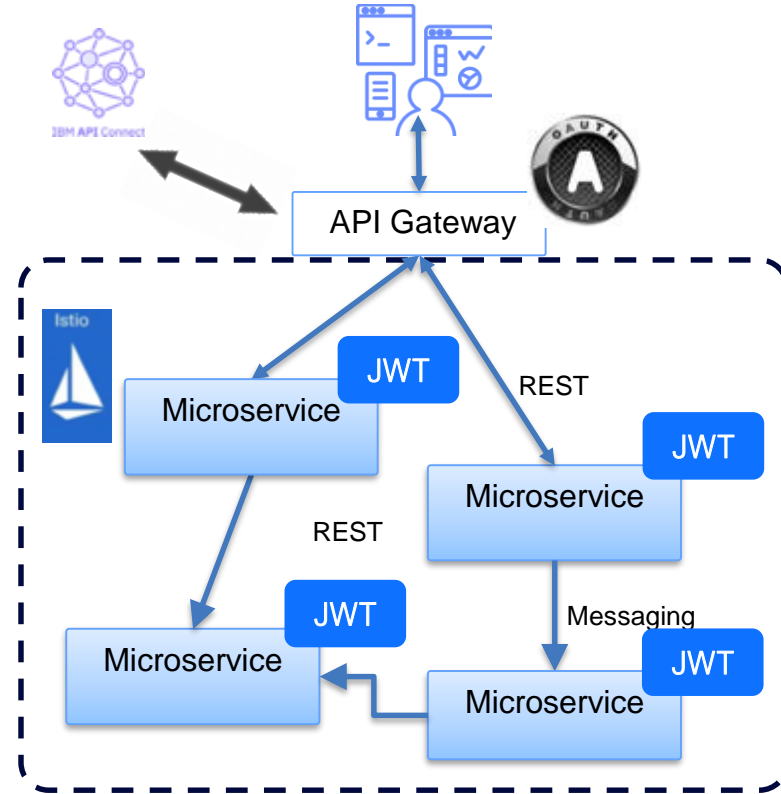
Istio Service Mesh Integration for Security, SLA & Resiliency

Istio ready architecture complimenting API management and microservices management

No code end to end security by combining ingress security (i.e. OAuth) with microservices security (i.e. JWT validation)

Intelligent and dynamic routing based on business logic via meta-data injected into the mesh provided by API Connect

First API management platform to propagate API security, rate limit from API Gateway into Istio for micro services SLA (i.e. Gold vs. Silver users)



Open API V3 support for Open Banking / PSD2

Open API V3 support of Berlin Group
NextGenPSD2 framework through CLI

Accelerate your PSD2 adoption with set of Open
Banking specifications for exposing banking
information securely

Manage and enforce other OAI3 APIs within the
same constructs



THE *Berlin* GROUP
A EUROPEAN STANDARDS INITIATIVE

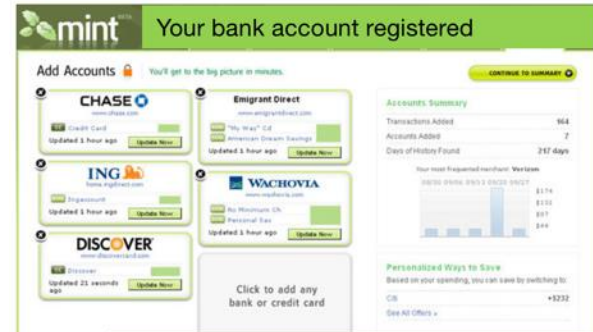


Protect your Client with Advanced Security

Accelerates market delivery of APIs by delivering support for OpenID Connect to provide Single-Sign-On (SSO) and identity validation using JSON Web Tokens (JWT)

Granularity to Revoke OAuth access token using enhanced token management

Advanced OAuth Consent with Dynamic scope enforcement during API Invocation



If Mint.com account is compromised
Revoke Mint's access to your bank

CHASE Revoke access to following apps

- ☒ Mint.com
- ☐ Personal Capital

10X Performance Increase with New API Gateway Service

Past (up to 2017)

10X Performance Increase

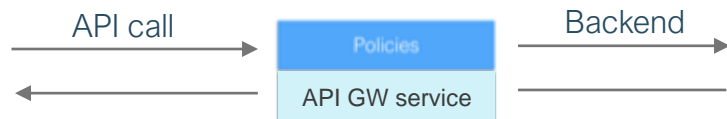
Present (2018+)

Traditional DataPower Service for APIs



2759 TPS

New API Gateway Service specific for APIs



29932 TPS

- ~30,000 TPS with 8ms latency
- Find publicly available report [here](#)

Policies for Enforcement on API Gateway Service

Gateway Script and XSLT policy support provides flexible message mediation & dynamic security enforcement

Dynamic Routing support through Conditional Policy

Enforce strong security through Parse, JSON and XML Schema Validation policy

OpenID Connect support to enable banks to meet PSD2 / Open Banking regulations

OAuth Token revocation to enable self-service token management

Built-in policies for new API Gateway Service

Foundational	Security	Mediation
Invoke	API Key	Map
Activity Log	JWT Validate	JSON/XML
Rate Limit	JWT Generate	Gateway Script
Throw	OAuth Policy	XSLT
Set Variable	Parse (Threat Detection)	
Conditional	Validate	
	User Security	
	OpenID Connect	

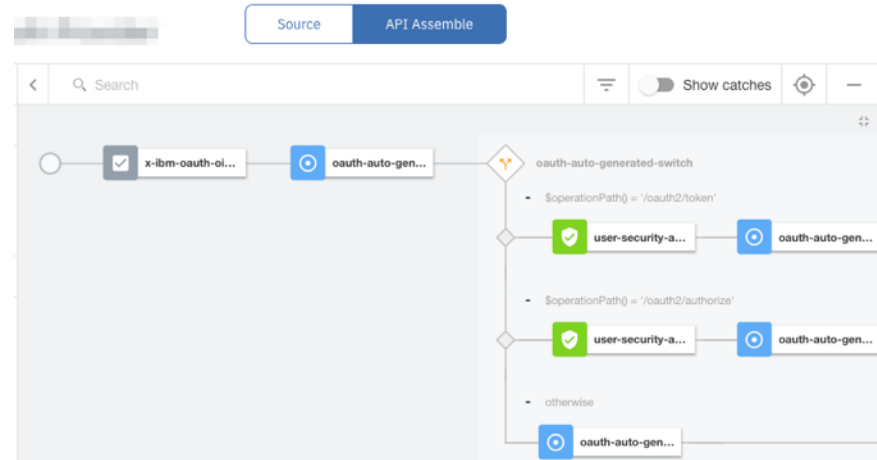
Meeting Security Needs through New Flexible OAuth Provider

Rapid OAuth policy creation to quickly create OAuth provider security without deep security expertise

Improved governance capabilities on managing OAuth providers with flexible administrative access control to enforce enterprise standards

Ability to meet every new business demands with customizable OAuth assembly

New User Security policy to enforce authentication & authorization in API assembly, adapting to unique enterprise security needs



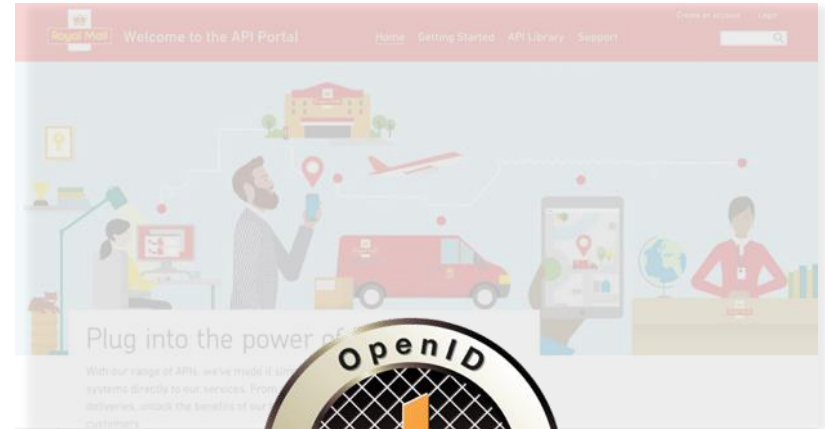
Hardened Portal Security

Supports OpenID Connect for accelerated developer on-boarding and social login

Enable PSD2/ Open Banking compliance to programmatically onboard consumers using REST Management APIs and OpenID Connect

Enhanced spam protection against spam bots with CAPTCHA and honeypot

Detect and prevent malicious attacks with perimeter and DNS check



Agile Operations



- **No-Code Automated API Testing & Monitoring** for Developer productivity
- **Local API Test & Monitor App** to speed adoption
- **Granular Migration** to transform current topology into a modern topology
- **Line of Business Autonomy** with OOTB API updates for Blue/Green deployments
- **Integrated Security with ODIC for Enterprise identity providers** governing API developer and admin user access
- **Auto-Generated GraphQL APIs** via LoopBack for Developer productivity
- **Reduced TCO** with DataPower Operations Dashboard plugin for Splunk
- **Cloud-Native operational resiliency** with Istio integration

API Connect Test and Monitor

No code necessary, visual composer to create tests in < 1 minute

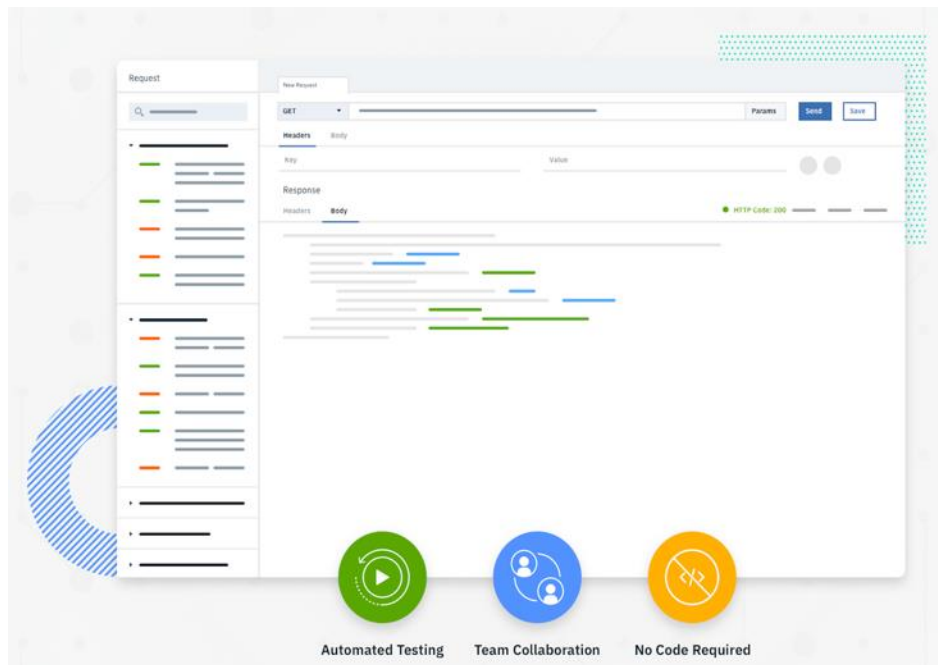
Automated testing and monitoring to understand API performance and behavior

Collaborate and win as a team by sharing tests and detect errors earlier

No charge as a standalone offering via Cloud and native Desktop application

Bundled with IBM products to become ubiquitous within enterprises

Deep engagement with Developer community to win together



Granular Migration to Future-Proof Deployment

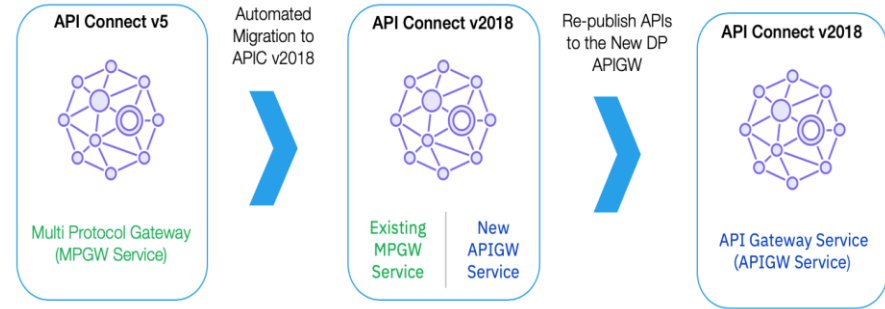
Automated migration to modern v2018 architecture in few simple steps

Flexible and granular ability as well to choose what you want to migrate and easily make changes if necessary

Run current APIs as-is on modern v2018 architecture

Faster time to market with dry-run migration capability to validate migration success before executing

Continued support in-line with IBM Support lifecycle for v5



Flexible Publishing Control

Near zero-downtime and rollback capabilities via Blue/Green deployments

Simplified Blue/Green deployment support out of the box for new API updates with ease

Granular control to selectively publish APIs to specific gateways providing flexibility for multiple line of business operation

The screenshot shows a web interface for publishing a product. The title bar says 'Publish from Flights Product'. Below it, there's a section 'Publish To' with a placeholder 'Description goes here'. Under 'Organization', a dropdown menu shows 'Acme Air'. Under 'Catalog', a dropdown menu shows 'Sandbox'. A section titled 'Select the spaces and gateway services to publish this product to' contains a list of spaces. 'Space 01' is selected and expanded, showing a list of gateway services: 'Gateway Service US Main', 'Gateway Service US West', 'Gateway Service US Central', and 'Gateway Service US East', all of which are checked. Below this, there are five other spaces (Space 02 to Space 06) with their respective checkboxes unchecked. At the bottom, there's a button labeled 'Select a different cloud'. In the bottom right corner, there are 'Cancel' and 'Publish' buttons, with a mouse cursor clicking on the 'Publish' button.

← Publish from Flights Product

Publish To
Description goes here

Organization
Acme Air

Catalog
Sandbox

Select the spaces and gateway services to publish this product to

☒ **SPACE**

▼ ☒ Space 01

GATEWAY SERVICE

☒ Gateway Service US Main
☒ Gateway Service US West
☒ Gateway Service US Central
☒ Gateway Service US East

> ☐ Space 02
> ☐ Space 03
> ☐ Space 04
> ☐ Space 05
> ☐ Space 06

Select a different cloud

Cancel Publish

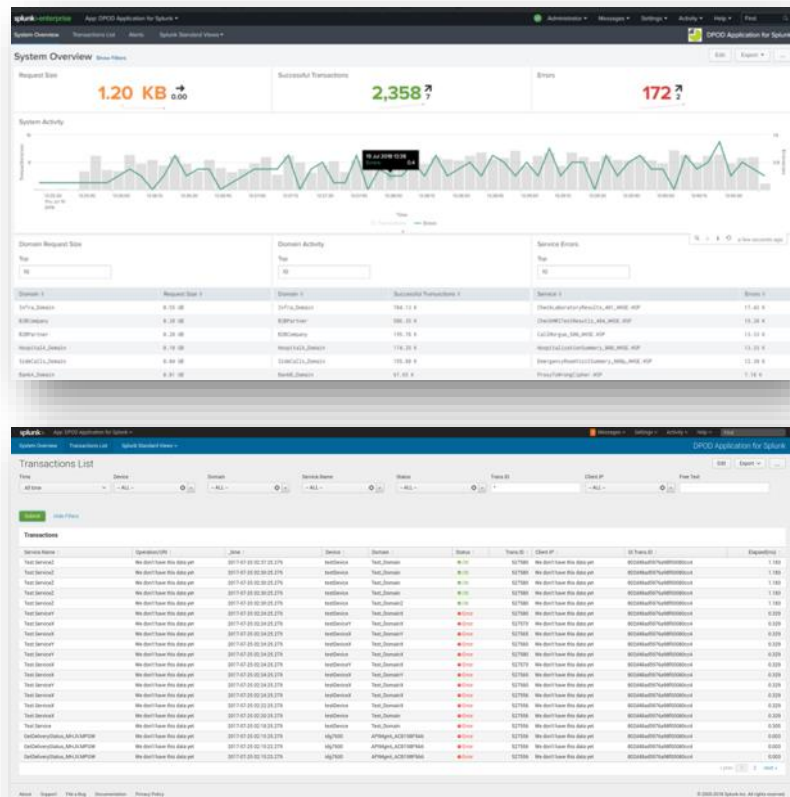
Enhanced Troubleshooting with DataPower Operations Dashboard

Powerful API diagnostics with detailed views across latency, version, policy, and consumer

Non-intrusive tracking of transactions across multiple gateways without any manual policy instrumentation

Supercharged performance for demanding workloads via new distributed, federated server architecture

Reduce Splunk licensing cost with DPOD plug-in for Splunk, empowering Splunk admins unique operational insight collected from DPOD



GraphQL Support via LoopBack OASGraph

IBM – a Founding Member of GraphQL Linux Foundation

Open sourced OASGraph for GraphQL (IBM Research Project) to drive ecosystem and adoption

Rapidly translate existing REST interfaces to auto-create GraphQL interface using OASGraph

Simplified user experience through open-source LoopBack tooling

Support for Open API V3 to meet industry standards



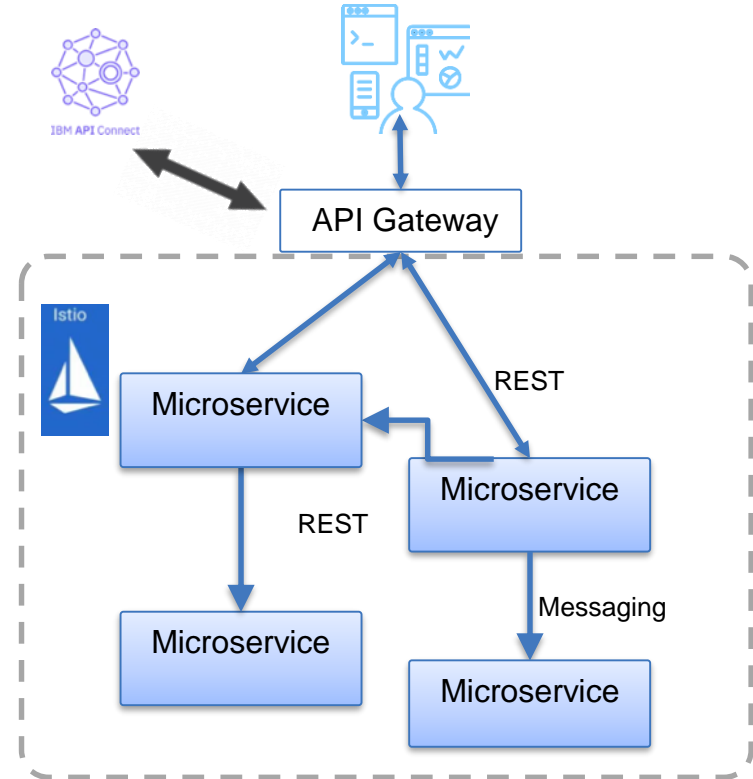
[Learn more](#)

Cloud-Native Operational Resiliency with Istio Integration

New cloud-native patterns enabled through Istio, API Connect and DataPower integration

Increased operational resiliency, leveraging Istio capabilities such as circuit breaker and A/B deployment patterns

Intelligent and dynamic routing based on business logic via meta-data injected into the mesh provided by API Connect



Thank You

