

# SOA with API Connect & DataPower Gateways

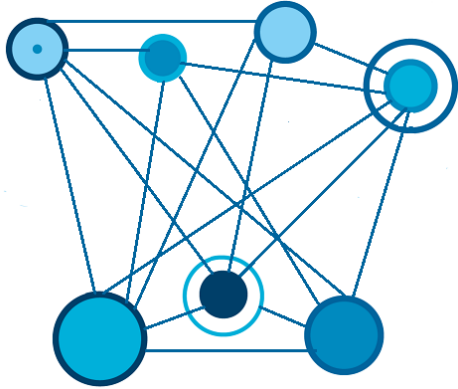
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Valentin Hristov



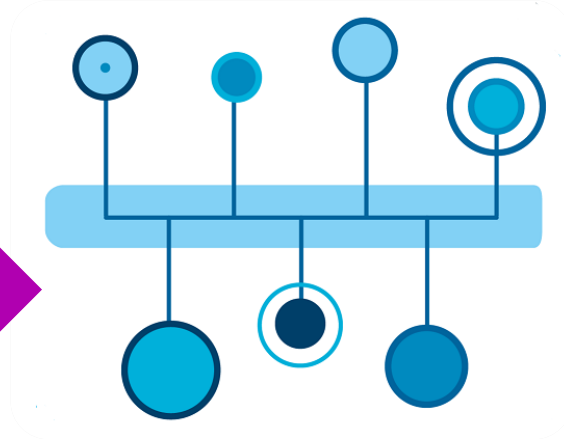
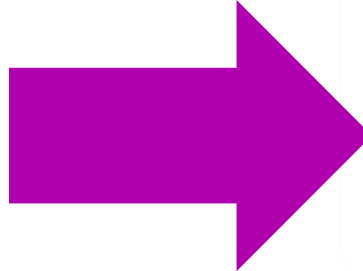
## We've got an adapter for that!

Business applications need to be able to exchange data with other applications to maximise value.



### Building connections point-to-point is expensive and inflexible

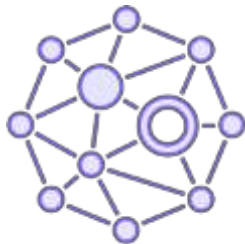
- Quickly deteriorates into architectural spaghetti
- Hard to build and expensive to maintain
- Resistant to change



### IBM Integration Bus simplifies connecting applications

- Provides a huge range of adapters out of the box. Connect anything to anything
- Simplifies maintenance & avoids rewrites in response to new integration requirements
- Provides greater flexibility adding anonymity between producers and consumers of data
- Adds insight into applications and business value they bring

# What is IBM API Connect?



IBM **API** Connect

## The Scalable Multi-Cloud API Platform

A complete, modern and intuitive API lifecycle platform to create, securely expose and manage APIs across clouds to power digital applications



### Create

Automatically create and test APIs to expose data, microservices, enterprise applications and SaaS services.



### Secure

Easily apply built-in and extensible policies to secure, control and mediate the delivery of APIs with unmatched scale.

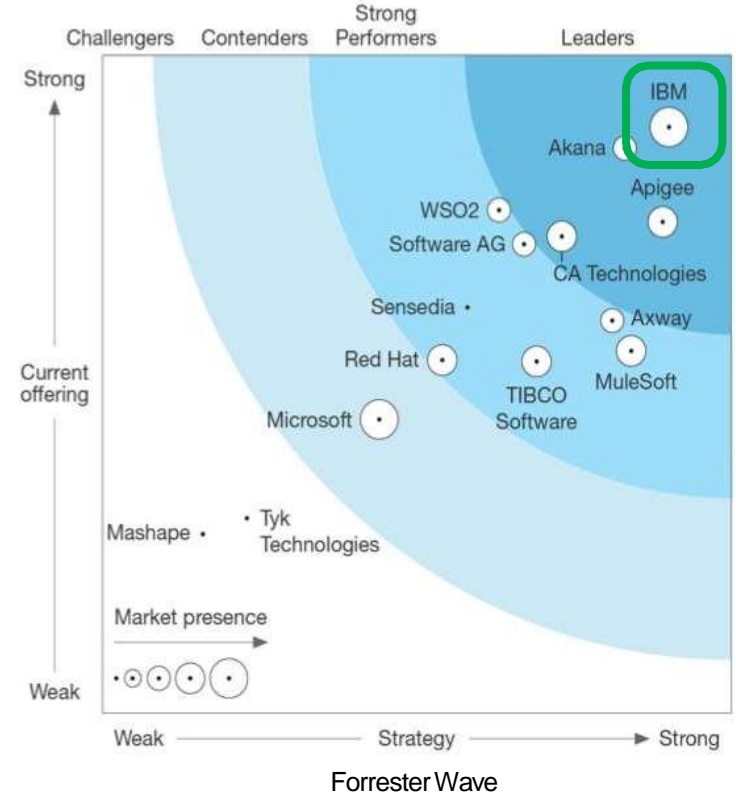


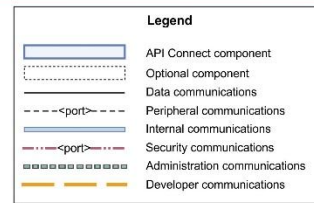
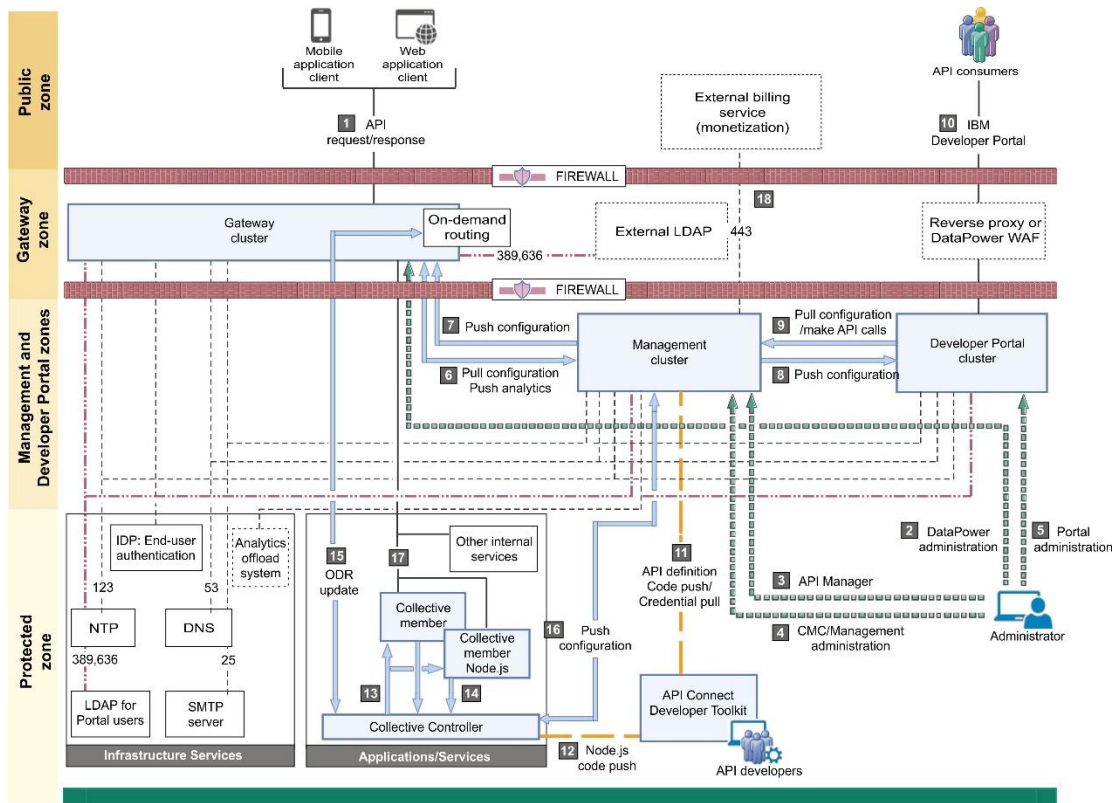
### Manage

Rapidly publish, lifecycle govern, socialize, analyze, monitor and monetize APIs with built-in capabilities.

# IBM API Connect: Ranked #1

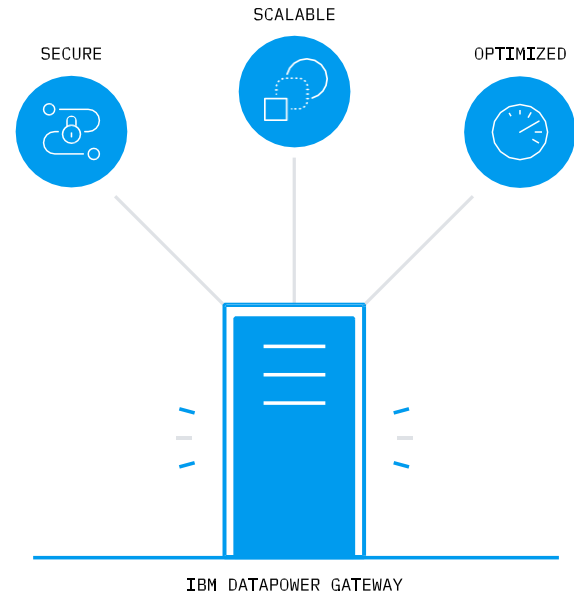
- **Ranked as Leader by all Analysts**
  - ✓ Forrester, Gartner, IDC, Ovum
- **Trusted by enterprises of all sizes** across industries and geographies
  - ✓ **500+** API Connect clients
  - ✓ **2,000+** DataPower Gateway clients





# Secure & Control your APIs with Industry leading API Gateway

- **Secure to the core** with signed, encrypted gateway image without external software dependencies to minimize risk
- **Proven API security policies** at runtime to quickly protect services and data across multi-clouds
- **Performant & scalable architecture** to help meet SLAs and improve client user experience
- **Optimized drag & drop built-in policies** for security, traffic control & mediation to accelerate time to value
- **Flexible and extensible** to align with enterprise requirements and enable quick customization



# Next Generation DataPower Gateway (IDG) X2 Appliance

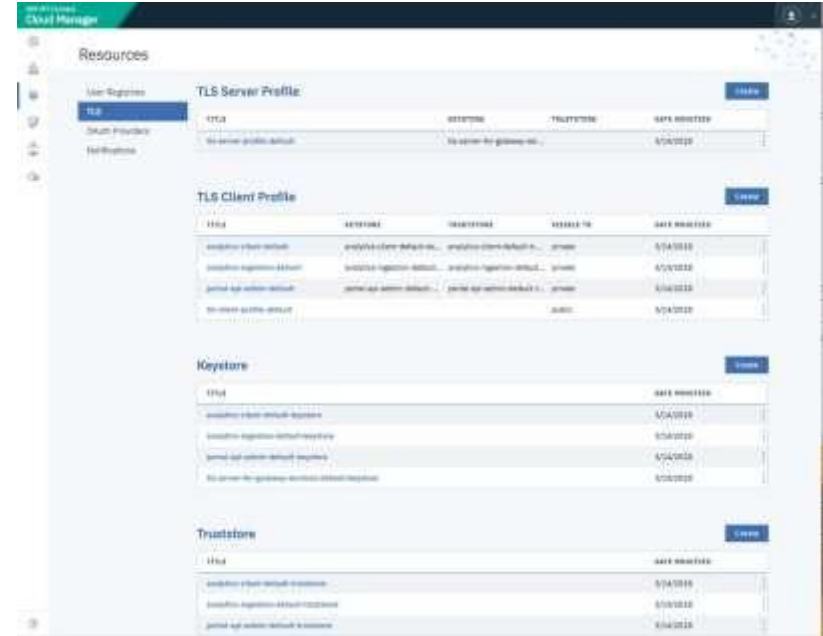
- **Up to 2X performance** with next generation hardware architecture compared to IBM DataPower Gateways (IDG) for lower TCO
- **2X 10GbE network ports** compared to IDG to accelerate application responsiveness
- **Up to 4X RSA operations** with 2048-bit keys using the optional Hardware Security Module (HSM)
- **Enhanced memory and workload capacity** available for higher performance and/or to run additional tenants
  - ✓ **One tenant for no-charge** for API Connect workloads on each DataPower Gateway physical appliance



*Action: Plan now to refresh existing XG45, XI52 and XB62 DataPower physical appliances that reach end of service in 2019 with IDG X2.*

# Security & Governance Tooling

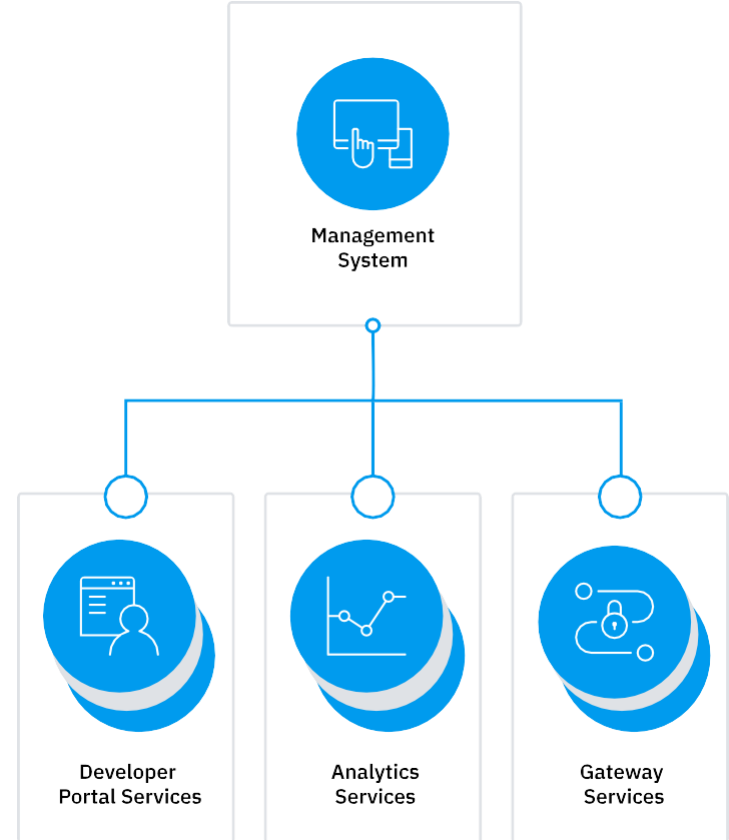
- **Control Visibility and share** resources such as gateways, user registries etc. for greater governance and control
- **OAuth Provider integration**, built from the API Manager to be leveraged for API security
- **Enhanced TLS Profiles** such as ciphers for fine grained control
- **Role Based Access Control** extended to Cloud and Consumer orgs for granular control
- **Email Templates** for notifications including invites and tasks for customization to match corporate branding





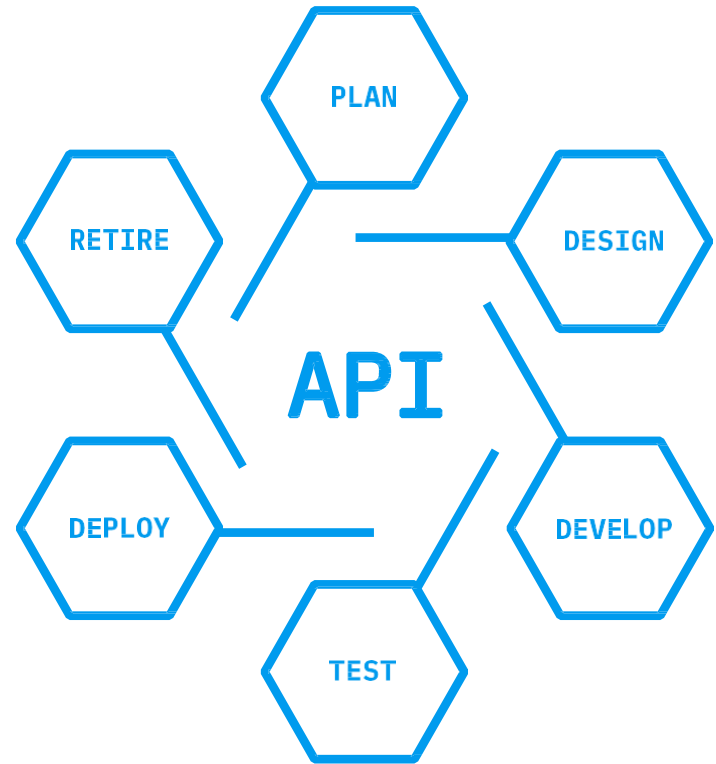
# API Connect V2018.1: Component options

- **Standalone API Analytics component** to scale independently based on API project growth
- **Zero to N portal clusters** can be configured to a API Connect deployment to align with API project growth
- **Native install of APIC toolkit** for enhanced user experience
- **V5 to V2018 Upgrade** through automated migration scripts with a parallel stack setup following modern software practices, coming 2Q18



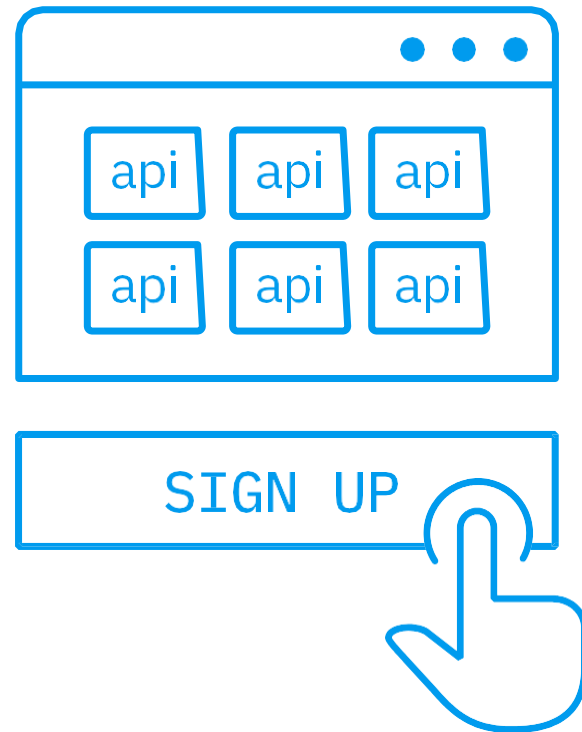
# Manage the Lifecycle of your APIs

- **Define & Import REST or SOAP APIs** to put those assets under governance
- **Package APIs into Products** and tailor them to target specific consumer markets
- **Publish and Promote** across different environments to align with DevOps practices
- **Manage and Control API Lifecycle and versioning** from staging to deprecation to meet corporate governance needs
- **Subscription and Community management** to grow go-to-market channels



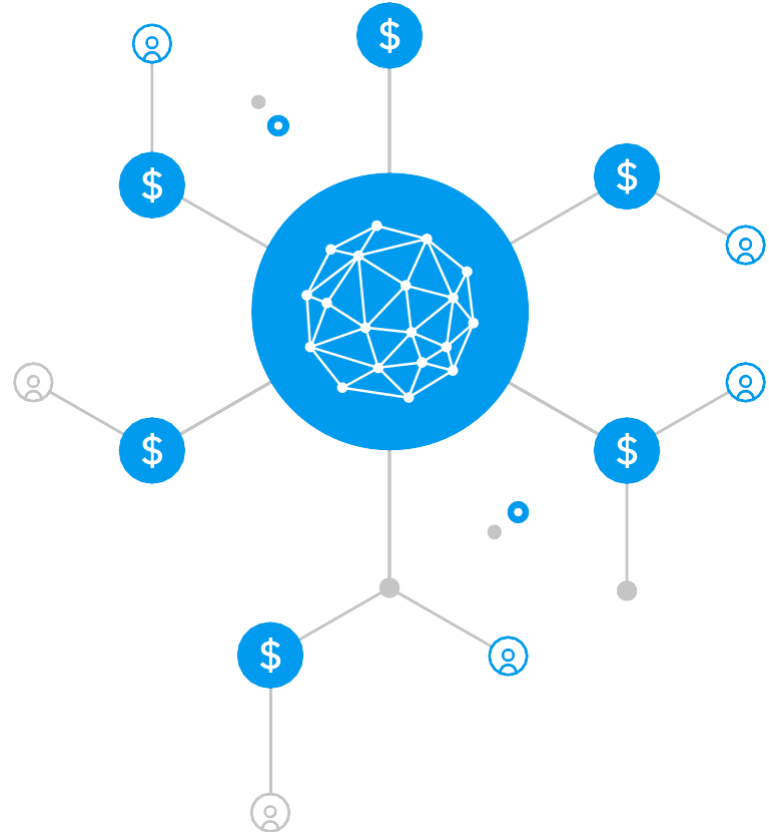
# Socialize and Engage with API Consumers to drive adoption

- **Self-service, branded Portal** across multiple API provider lines of businesses within an organization to socialize APIs
- **Engage with API consumers** via community building features: blogs, forums, ratings etc.
- **Governance & autonomy** to each provider organization to manage their APIs, products, plans and multiple gateway endpoints independently within their 'Space'



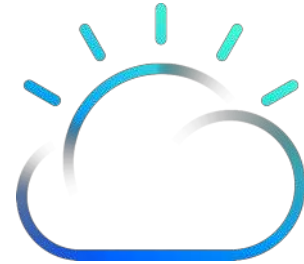
# Monetize your API Calls

- **Modern approach & intuitive user experience** providing flexibility to define pricing details
- **Subscription pricing** to enable recurring payments, popular in SaaS go-to-market strategies
- **Stripe integration OOTB** for smooth user-onboarding and payment collection
- **Analytics, customizable reports** for detailed insights into revenue, usage of monetized APIs
- **Offload API usage data** to existing enterprise tools to handle customized invoicing processes



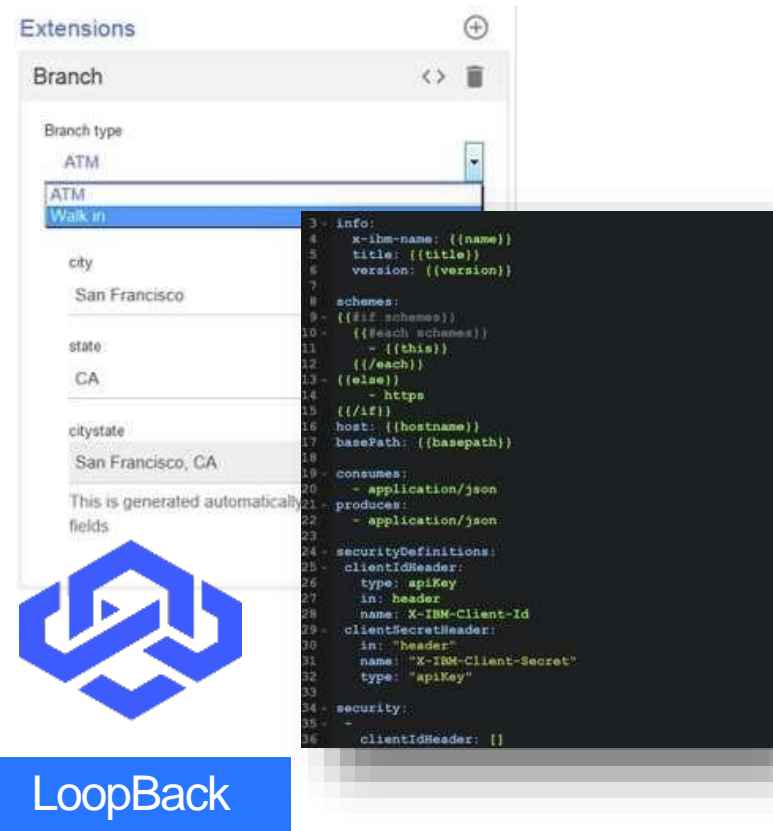
# API Connect V2018.1: Deployment Options

- **New Docker-based images with K8 orchestration** for container based deployments on a customer managed K8 environment or on IBM Cloud Private
- **VMWare OVA support** for clients to run on their existing established enterprise virtualization platform
- **Customer modifiable open VM images** based on standard Ubuntu OS for clients to customize based on corporate governance needs
- **API Gateway available in hardened cloud, virtual and physical appliance form factors** to improve security and time to value



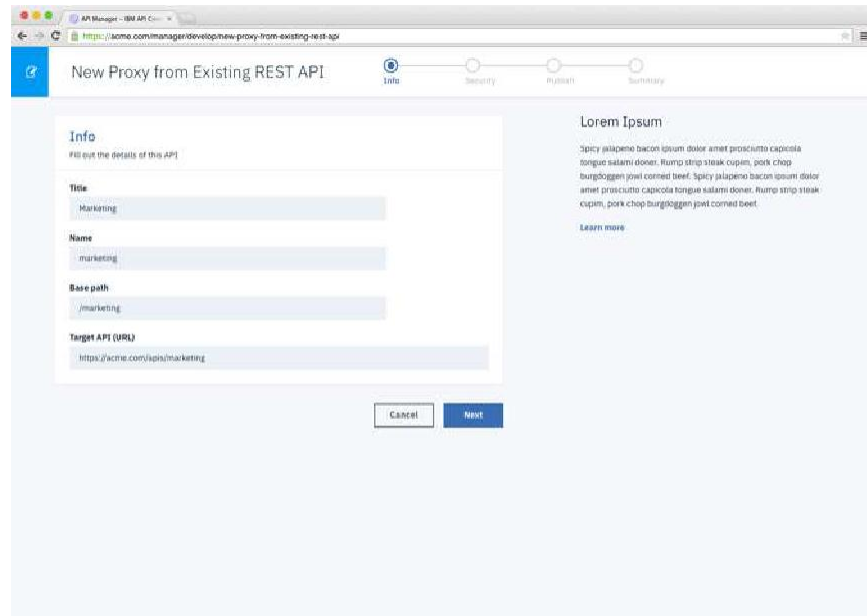
# Accelerate API Developer Productivity

- **Enforce corporate standards** through templates for API and API Product definitions
- **Simplify API categorization & search** through customer defined metadata
- **API Gateway behavior control** based on the additional metadata
- **Integrated Loopback Experience** for Interaction tier
- **Integrated with API Connect Toolkit** for simpler user experience to create APIs



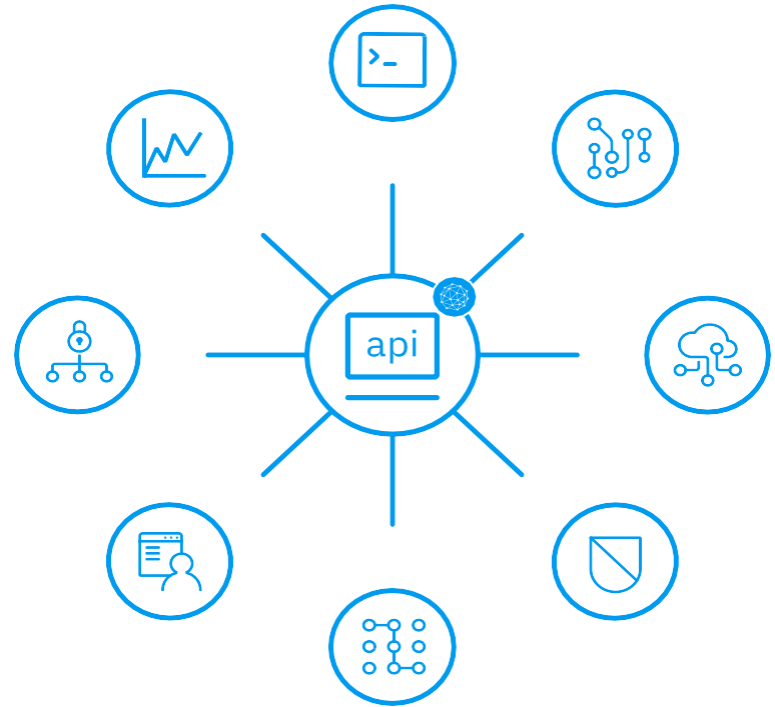
# API Connect V2018.1: WOW! Experience for Developers to Get Started

- **90% reduction in time** to create your first API
- **Radically improved developer experience** simplifying API definition and policy addition
- **Three Easy steps** to create an API Proxy and make it live on the gateway for testing
- **Create a live endpoint in 30 seconds** with rate limiting, security and automatically create an API Key for testing
- **Native install of APIC toolkit** for enhanced user experience



# API Connect V2018.1: DevOps Ready for CI/CD Needs

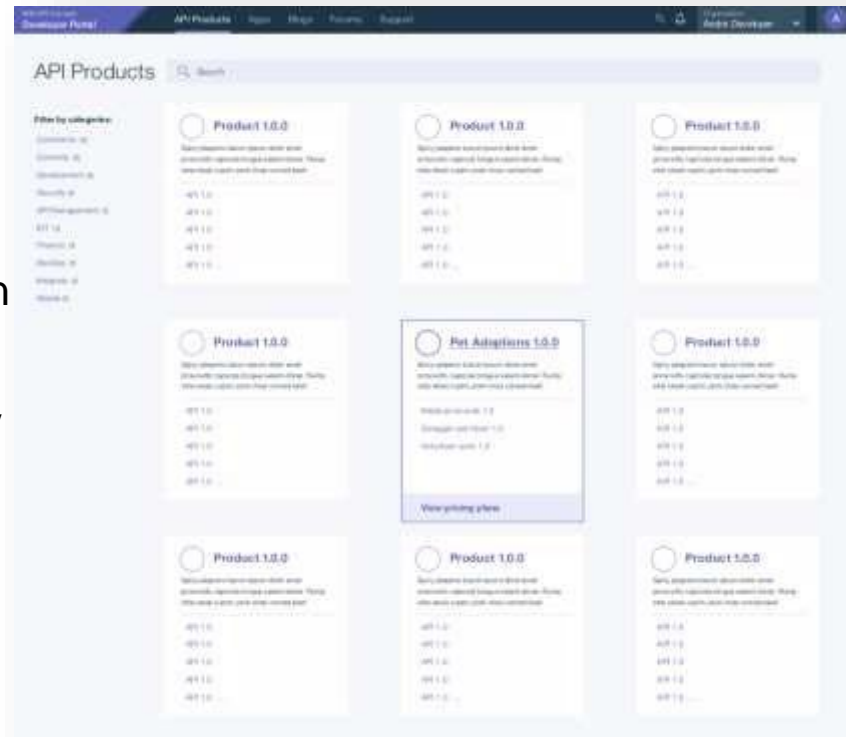
- **Comprehensive set of Public APIs** to API Connect for CI/CD integration and automation
- **Command Line Interfaces (CLIs)** for each API operation facilitating end to end automation
- **Orchestrate VMWare** install using cloud-init configuration for simpler operations and lower TCO





# API Connect V2018.1: What's New in Developer Portal

- **Modern UI/UX design** based on customer and market feedback
- **Simple, powerful and extensible** customizations built on open-source Drupal8
- **Fast track app creation** with a simple subscription wizard designed to reduce friction
- **Delight and increase app developer productivity** with a first class Portal Analytics experience
- **Effectively engage your developer community** with custom email support



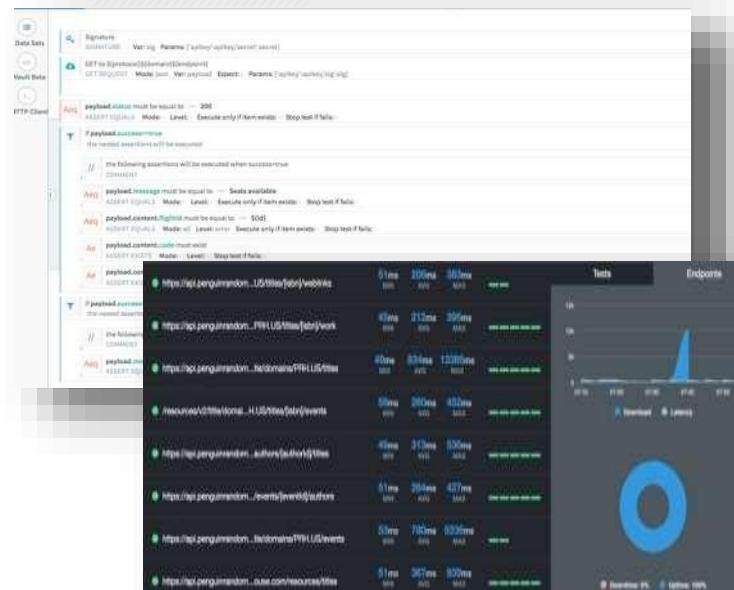
# API Connect V2018.1: Continuing Innovation across API Lifecycle

- **Control visibility and share** resources such as gateways, user registries, etc for greater governance and control
- **Email Templates** for notifications including invites and tasks for customization to match corporate branding
- **Associate Analytics to specific Gateway** services to manage latency between them
- **Role Based Access Control** extended to Cloud & Consumer orgs for granular control
- **Federated User Registry** support providing flexibility to associate multiple identity management systems
- **New API Security policy definition** at the catalog-level reducing API development complexity & simplifying user experience
- **Enhanced TLS Profiles** such as ciphers for fine grained control
- **Catalog Properties and Space Properties** to control environment specific variations

*and much more ...*

# Iteratively Test and Monitor the health of your APIs


- **Two steps in < 1 minute** to test your API endpoint
- **No code, visual composer** to create test sequences
- **Validate payloads** through pre-built assertions
- **Integrate in to CI/CD processes** for testing automation using pre-built plugins
- **Continuous performance & behavior monitoring** of the deployed APIs from across the globe
- **Monitoring dashboards & test reports** to provide insights and easy diagnosis of any errors



Account Information | ap

Valentin

Not secure | https://apiportal.ibsbg.bg/ibs/sb/node/115



api group

Create an account

Login

Home

Getting started

API Products

Blogs

Forums

Support

Q

PSD2 1.0.0

APIs

Account Information 1.0

Operations

GET /banks

GET /banks/{bankid}

GET /banks/{bankid}/...

GET /banks/{bankid}/...

GET /banks/{bankid}/...

GET /my/banks/{bankid}/...

Definitions

Bank

BankAccountOwner

Amount


TransactionBank

BankAccountOverview

TransactionAccount

TransactionDetails

BankAccountDetailsVi...



Account Information 1.0

Open API

☆☆☆☆☆

No votes yet

Description

PSD2 introduces the concept of the account information service provider (AISP), which will allow consumers to view all of their various financial institution account details through just one portal. Accessing all of a consumer's account data in one place can provide insights to the said consumer, not to mention cross-sales opportunities to the AISP and others. **All data provided & created are only for sample**

Documentation

[Directive on Payment Services \(PSD\)](#)

Endpoints

https://192.168.0.9/ibs/sb

PRODUCTION

DEVELOPMENT

production

https://apigate.ibsbg.bg/ibs/sb

PRODUCTION

DEVELOPMENT

development

Paths

/banks

GET /banks

cURL

Ruby

Python

PHP

Java

Node

Go

Swift

C

C#

Subscribe

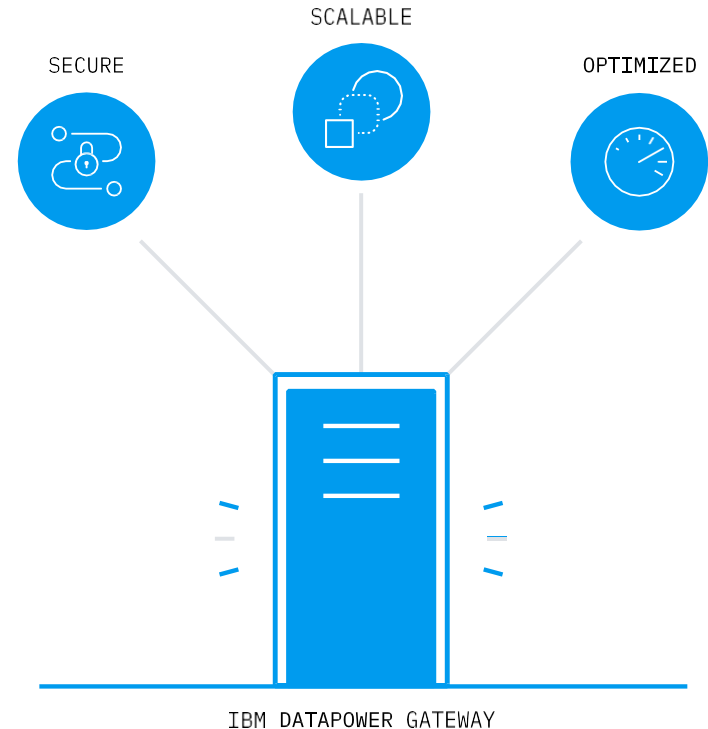
Support

[Discuss this API in the forum](#)

https://192.168.0.9/ibs/sb

# DataPower API Gateway Service: Secure & Performant APIs

- **Secure to the core** with self-contained signed & encrypted image to minimize risk, plus proven security policies to quickly protect APIs
- **Up to 5X increased performance** with natively built API Gateway using purpose-built technology for native OpenAPI/Swagger REST and SOAP APIs
- **Multi-cloud scalability and extensibility** to help meet SLAs and improve client user experience
- **Optimized drag & drop built-in policies** fully unleash the power of the gateway for security, traffic control and mediation including flexible OAuth, enhanced JSON & XML threat protection



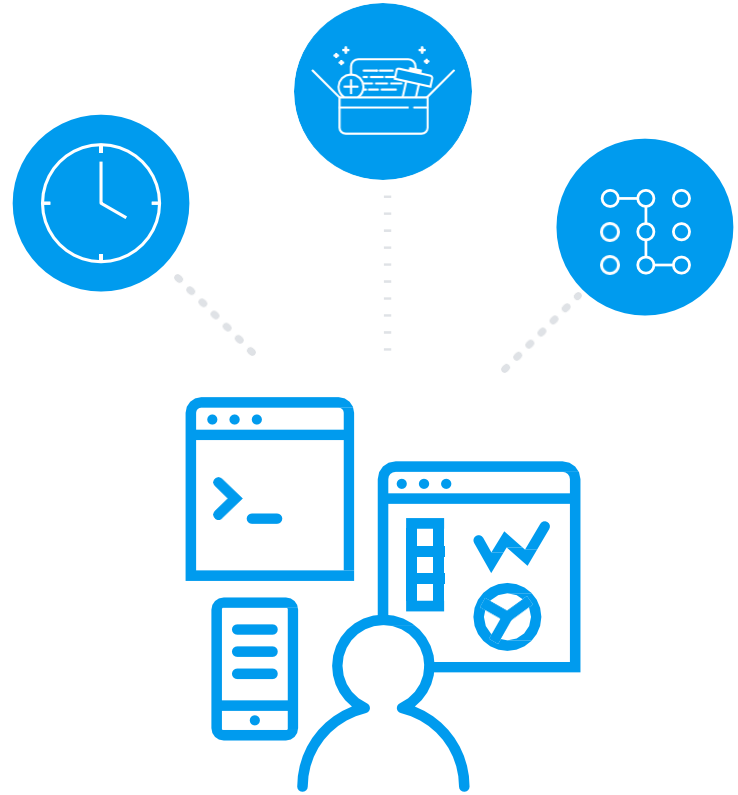
# DataPower Operations Dashboard (DPOD) V1.0.7

- **Adds support for DataPower Gateway X2**
- **Monitor tenants** running on DataPower physical appliances with the new Isolated Tenant Module support
- **UX/UI improvements** with transaction export and latency alert capabilities
- **Tighter integration with IBM API Connect** with new Recent Activity dashboard that displays a high-level overview of APIs activity
- **Improved DevOps** with Firmware upgrade plan capability for both virtual and physical for factors
- **Enhanced reporting capabilities** with new URI summary and detailed latency reports



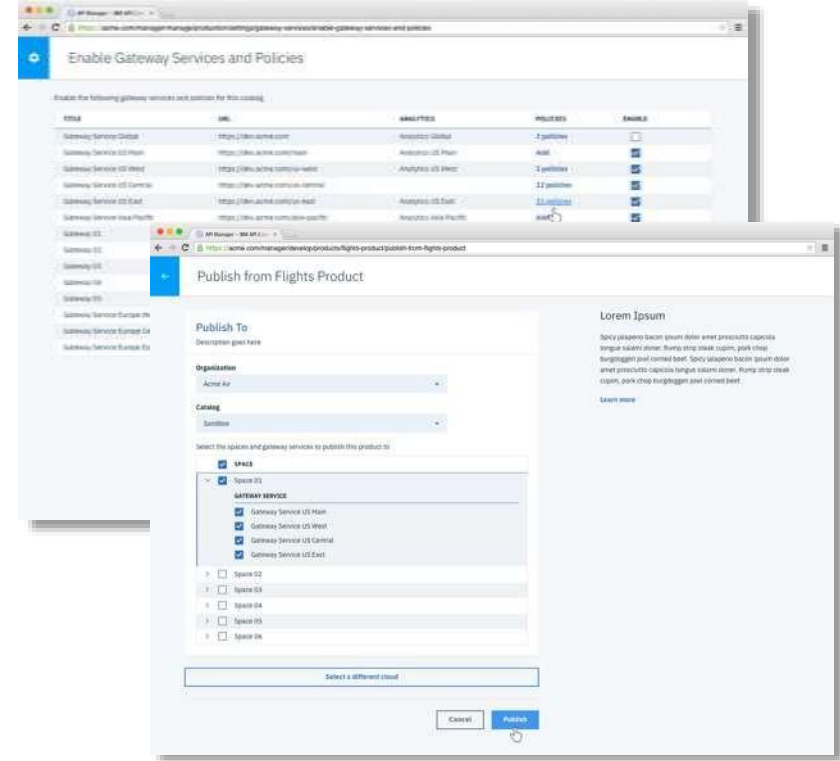
# UI/UX Overhaul

- **Seamless movement and workflow** through Cloud Manager and API Manager, with breadcrumbs and IA hierarchy
- **Developer Centric Experience** that focuses on rapid API creation and testing reducing time to market for digital development teams
- **Radically improved API editor** simplifying API definition and policy addition
- **Native install of APIC toolkit** for enhanced user experience



# Gateway Service Management

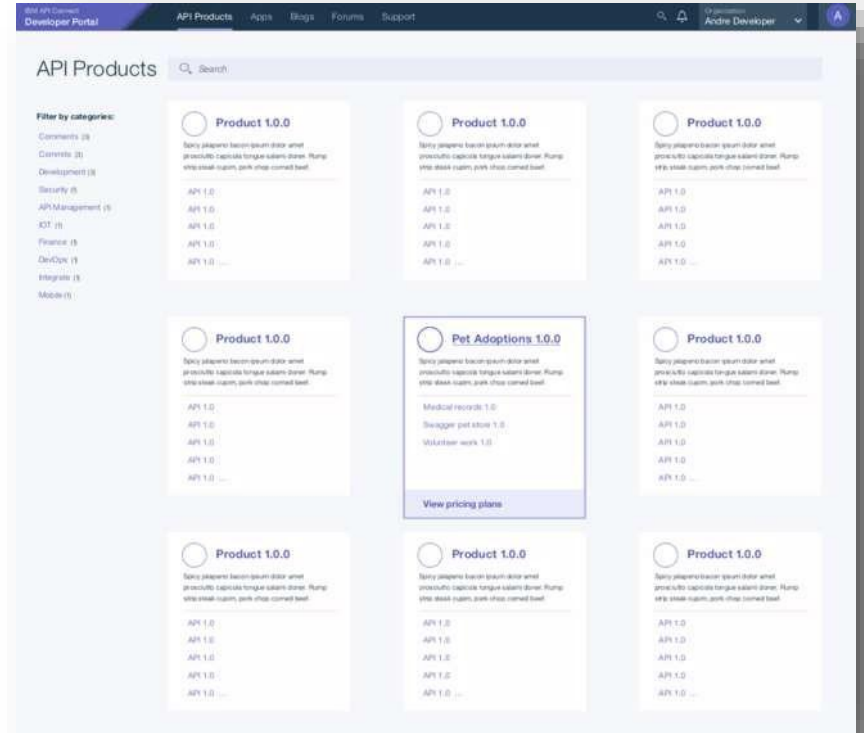
- **Configure geo-graphic High Availability**, of gateway services, and analytics to increase global application performance
- **Scope the available gateway services and their policies**, to minimize error and meet corporate governance and security standards
- **Rolling Updates of APIs** with the ability to selectively publish API definitions to gateway services
- **Simplified Management of API deployments** to gateways runtimes, with enhancements to publishing capabilities and





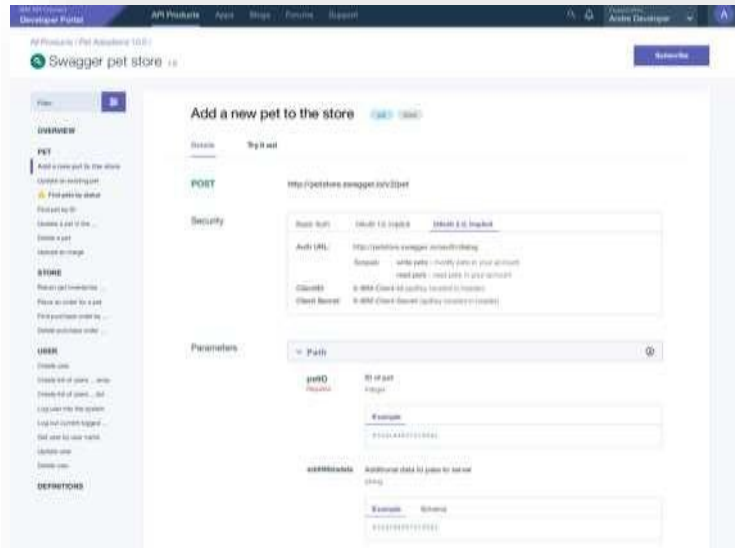
# UX/UI Redesign

- **Modern UI/UX design** based on customer and market feedback
- **Fast, focused, and engaging experience** for developers
  - Pick up and go quickly with a familiar
- **Enhanced developer productivity** focused on reducing information overload
- **Seamless and consistent design** with the rest of API Connect



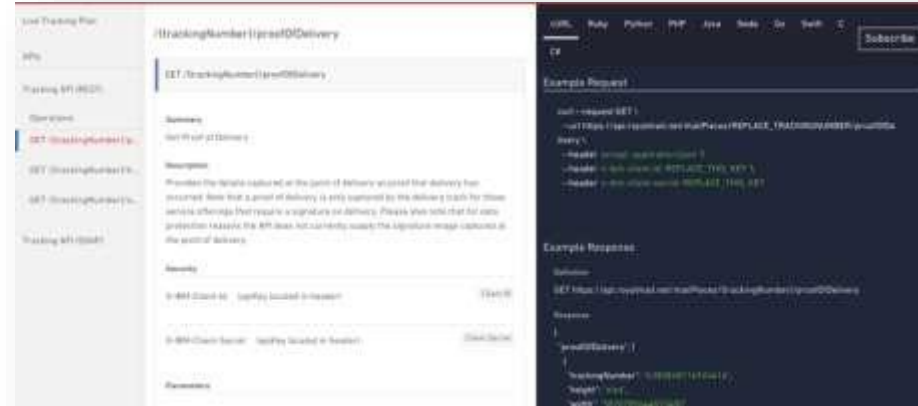
Modern UI/UX

# UX/UI Redesign – New vs Old



IBM v.NextAPI Explorer

VS.



IBM v5API Explorer

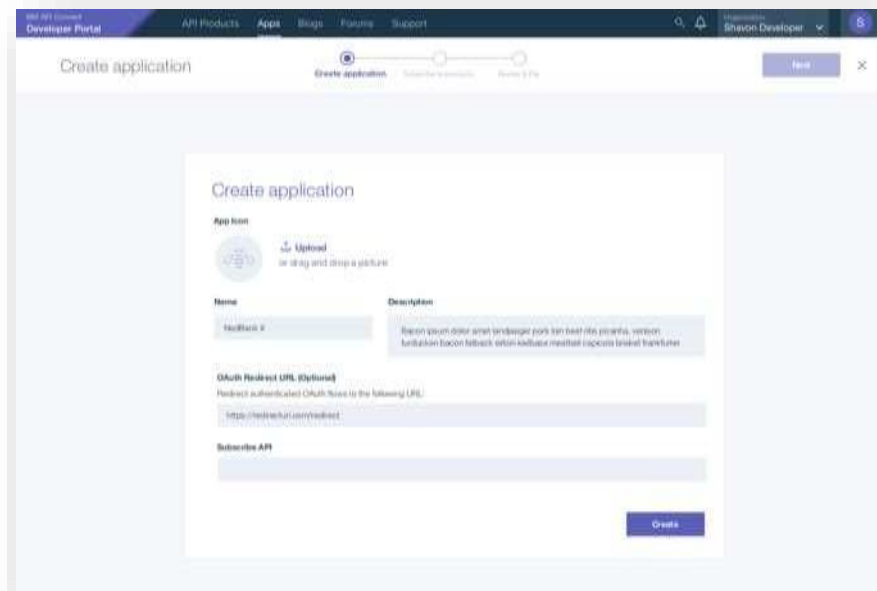
# Enhancements

- **Simple, powerful and extensible** customizations built on open-source Drupal 8
- **Improved branding and styling** capabilities with additional CSS classes
- **Faster loading times and increased performance** through an improved UI and backend optimizations
- **Enhanced Portal security** to prevent malicious threats such as spam bots
- **Meet emerging globalization needs** with a fully translated Portal



# Easy to Learn

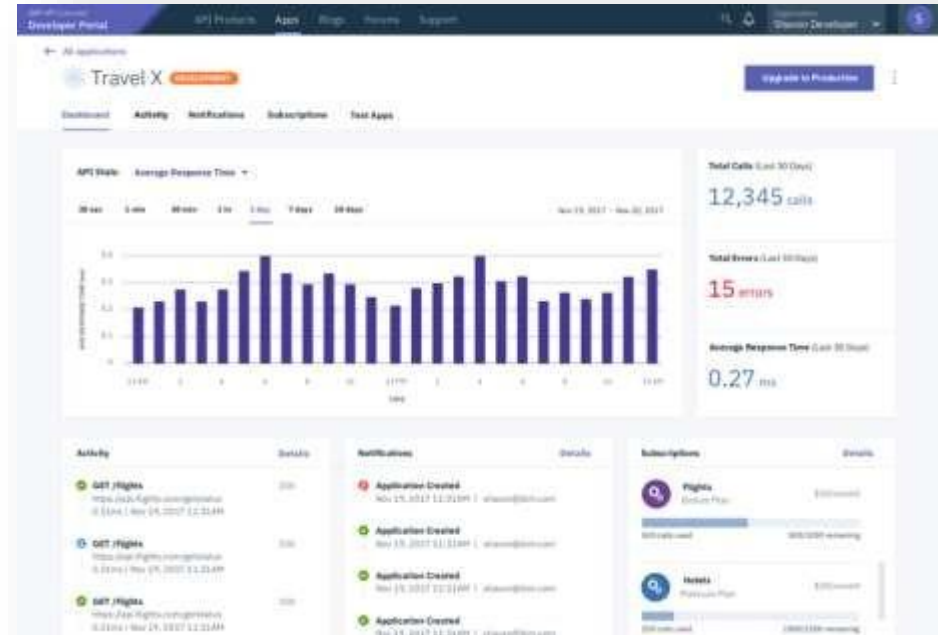
- **Fast track app creation** with a simple subscription wizard designed to reduce friction
  - App developers create more apps by remaining productive and focused
- **Reduce confusion** and need to reference documentation with inline help for Portal admins
- **Improved documentation** with more tutorials, detailed guides and more



Guided subscription wizard

# Portal Analytics

- **Delight and increase app developer productivity** with a first class analytics experience
- **Provides granular and actionable insights** app developers need into their app
- **Easily configure notifications** based on analytic data that are sent via Portal and email
- **Performant and faster loading speeds** for analytic visualizations



v.Next Portal Analytics

# Community Engagement

- **Effectively engage your developer community** with custom email support
- **Easily brand emails** with a WYSIWYG editor and token support
- **Configurable ‘from’ address** to select who the email is coming from
- **Advanced ability to select who you send ‘to’**
  - Send based on user type or event and rule based
- **Automatically translated emails** depending on the users preferred language

*“they must communicate with API users, both individually and as a community”*

- Forrester

# UI/UX Redesign

- **Stronger management experience** with interactive dashboards and visualizations
  - Explore data on the Discover page
  - Filter suggestions from the data for field of interest
- **Accelerate productivity** with ability to clone dashboards, visualizations, and searches with one click
- **Auto completion** available in visualization fields
- **View aggregate usage patterns** within bounded regions using thematic region maps

