Unlock the Power of the API Economy

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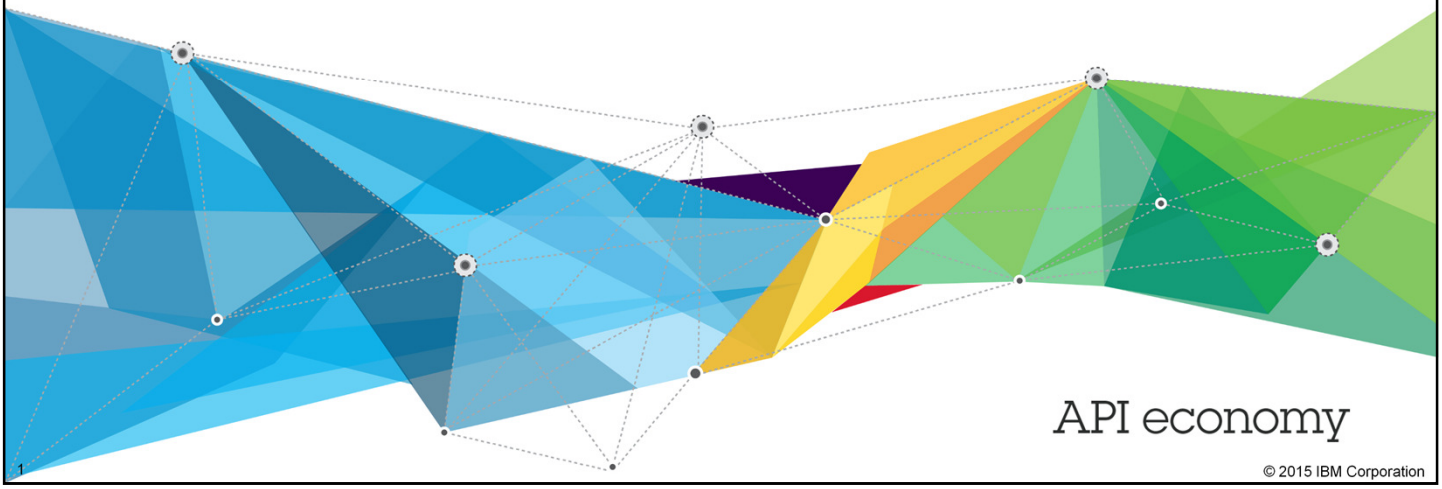
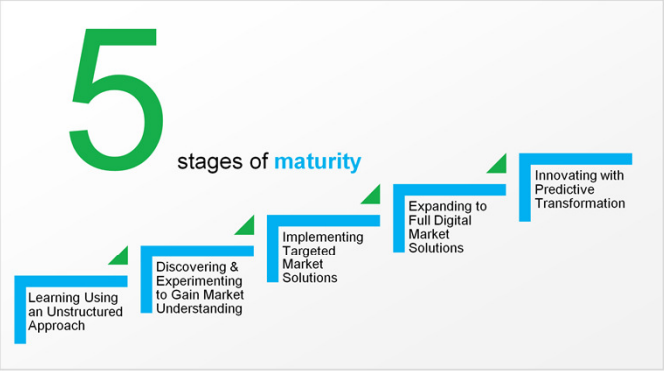
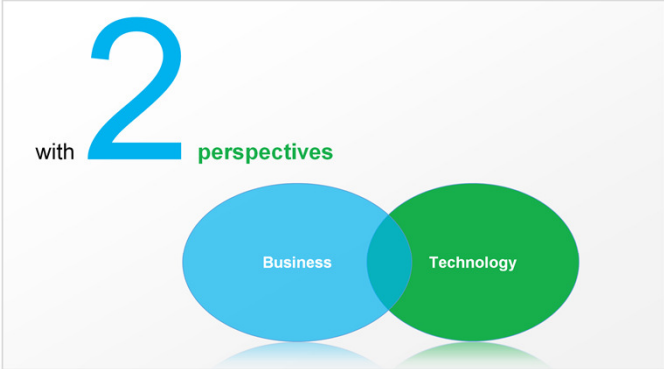


New IBM API Economy Journey Map

Charting the evolution of Digital Transformation





Across several dimensions

- Business approach
- Management
- Architecture
- Information & content
- Process & methods
- Infrastructure

And several factors for each dimension

- Business drivers, perspective, industry integration, monetization
- Organization, audience, communication, measurements
- Style, application architecture, configurability, variability
- Scope, exposure, content management, Taxonomy
- Lifecycle, API Identification, dependency management, Devops
- QoS, deployment, security, availability, performance, scalability

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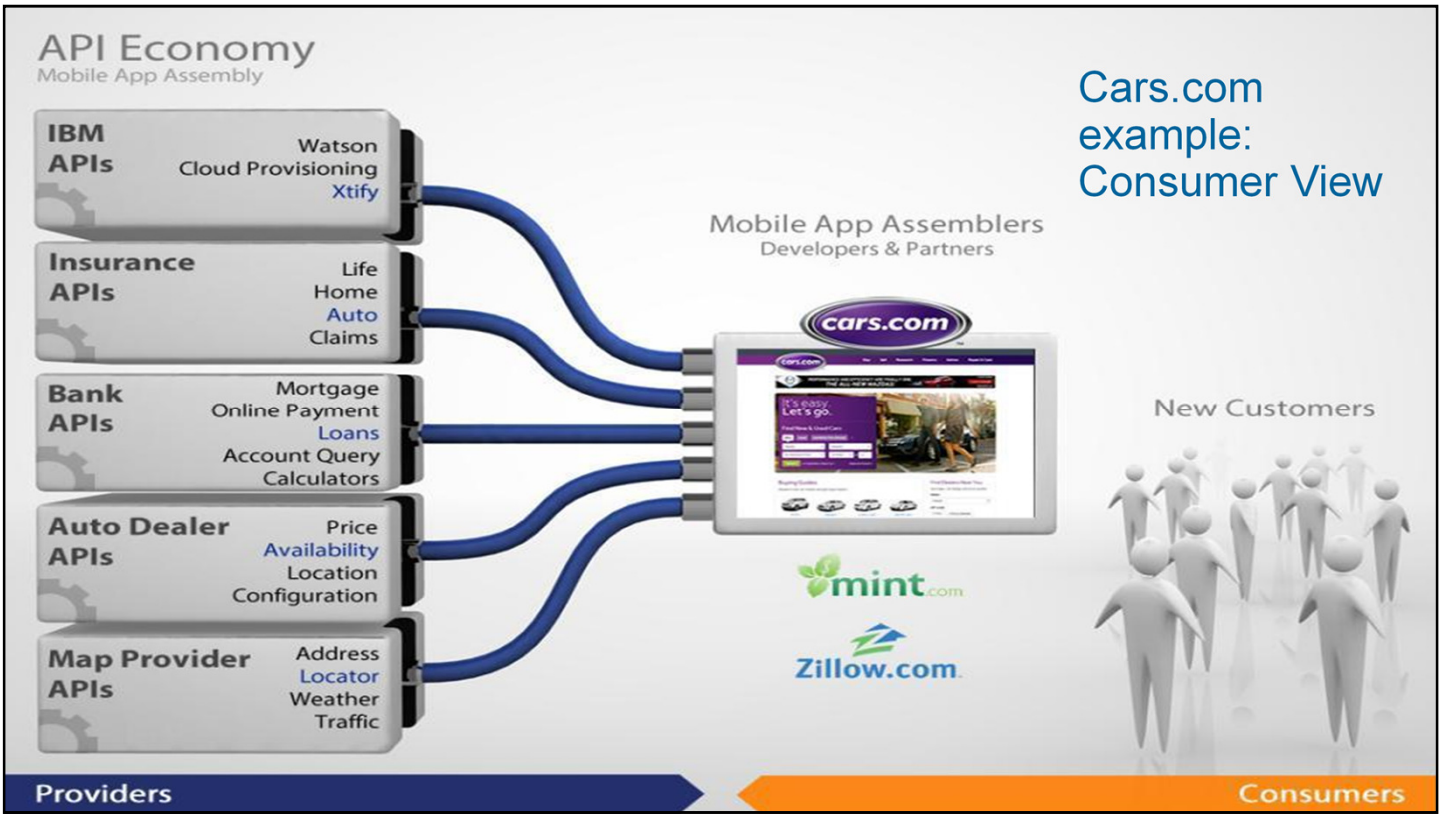
We first want to help clients understand where they are in the journey, so we can determine what help they need



Let's look at the Cars.com mobile app as an example.

Cars.com is a consumer of APIs, and has assembled several 3rd party apis together to form the base function of their cars app.

For example, they use a Map Provider API to provide a "store locator function"

APIs from a car dealer data aggregator for availability of certain makes and models.

They use APIs from a Bank to offer Loan calculators and origination

Auto insurance from an Insurance companies APIs

And can imagine them using the new Xtify API from IBM to provide notifications, that a car they were looking for was now found.

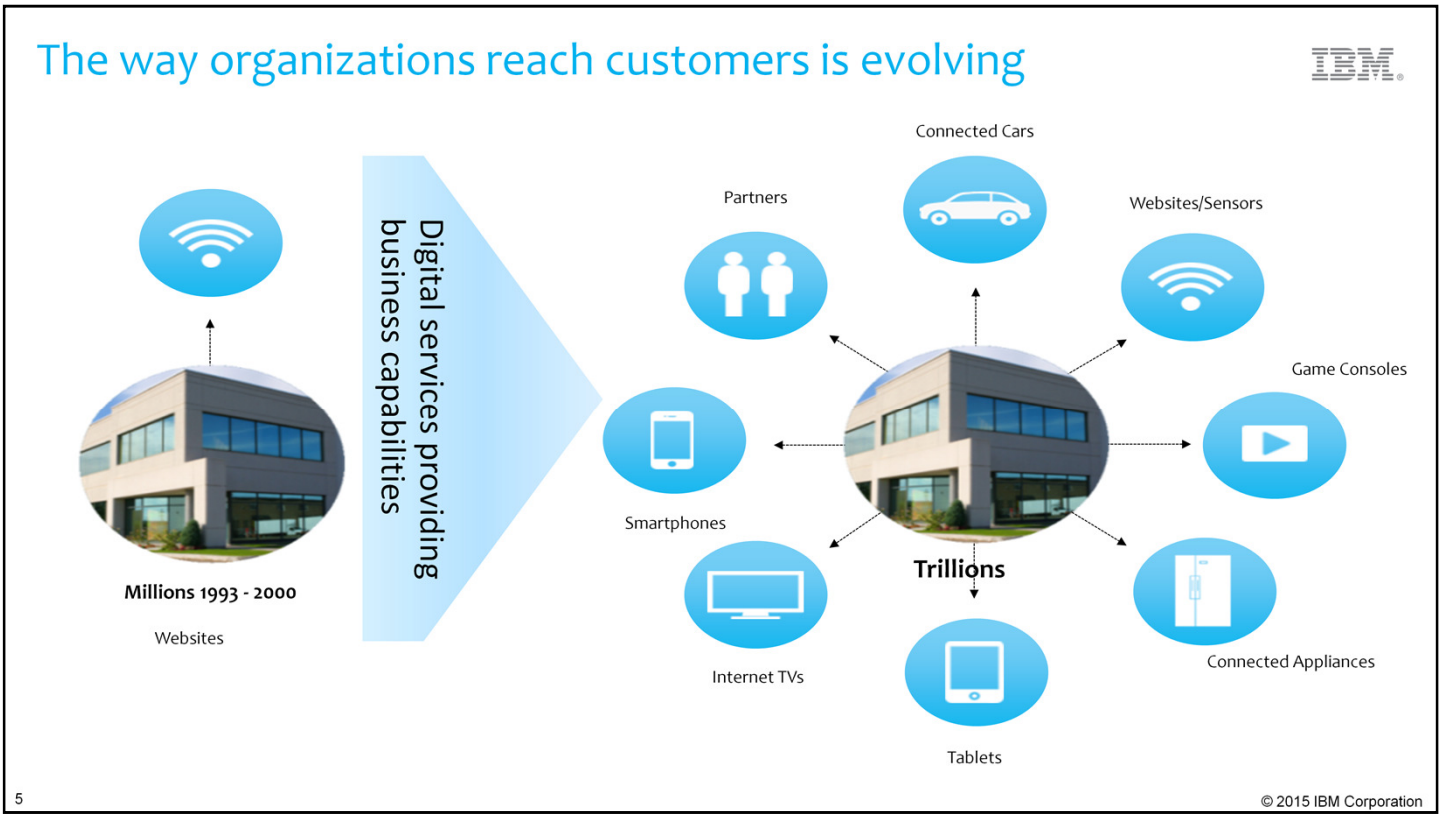
Now, let's look at the API Economy from the Providers perspective

The Bank can extend it's reach beyond customers doing on-line banking.

By offering an API, that includes Mortgage Calculators, Lon Origination, On-line Payment, and Account Query

the bank can reach new mobile app providers link Cars.com (automotive sales), Zillow (on line real-estate), and Mint (financial data aggregator)

Which…

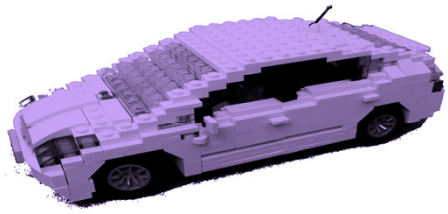


The world is changing. Companies are making their business information available through business APIs to all types of consumers

APIs are not a new name for SOA Services

"How can I increase the **agility and effectiveness of delivery**?"

SOA



Internal
- Integration, reusing and exposing current Services
- Integration of Backend Data & Applications
- Increase the Agility and effectiveness of delivery

"How can I increase the **pace of innovation**?"

APIs

Internal & External
- Increasing Revenue
- Extending customer Reach & Value
- Supporting Sales & Marketing Activities
- Stimulating Business & Technical Innovation

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1. Increasing Revenue

Often an API can be a direct source of revenue. This may involve charging developers for access to the API, facilitating the in-house creation of pay-to-play applications or enabling ecommerce. A key consideration here is that the API must offer something worth paying for.

2. Extending Customer Reach & Value

APIs provide the ideal solution for enterprises that wish to reach new customers or increase the value of current customers by offering existing services via new platforms and devices. In these instances, it is vital to consider technical requirements for these new delivery channels.

3. Supporting Sales & Marketing Activities

APIs can also help a company to market its products and services, without necessarily becoming involved in how these offerings are delivered. Such an API should enable the creation of the kind of engaging, immersive functionality associated with online marketing best practices.

4. Stimulating Business & Technical Innovation

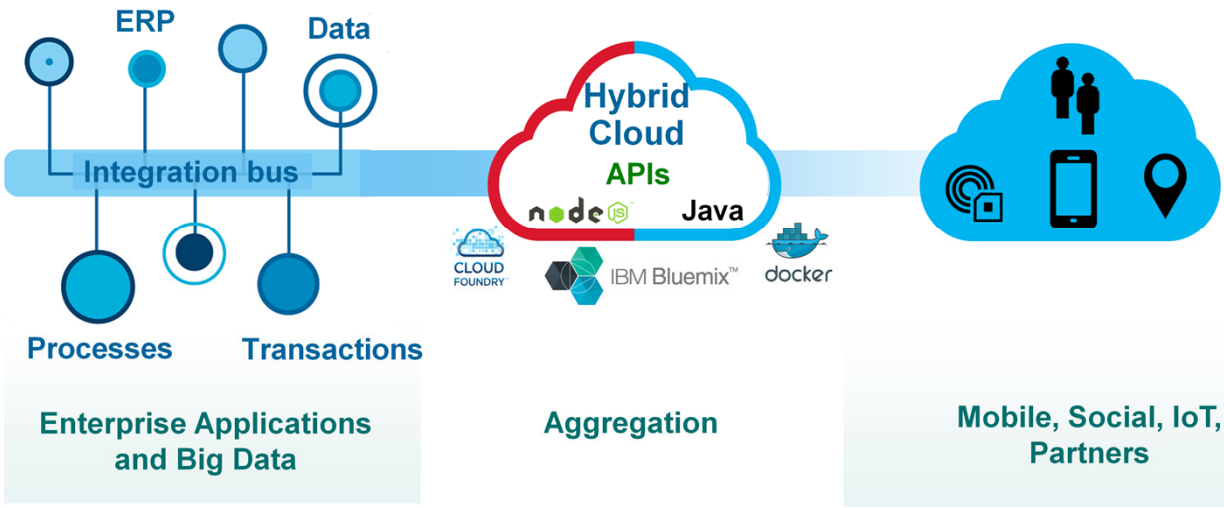
APIs can help an organization develop new systems, offerings and strategies from the inside because they reduce technical barriers to innovation. Specifically, APIs empower organizations to generate and implement ideas without requiring them to change their

backend systems.

5. Easing Integration of Backend Data & Applications

APIs also play a key integration role in a variety of internal IT projects that impact core business goals. In these projects, it is vital to consider the business event or need driving the integration. For example, the integration may result from a merger or from a new regulatory requirement.

Connecting the API economy with multi-speed IT



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Three Questions Lead to Good APIs

IBM

Who is the Audience?

- If you are not clear on the audience you have no clue what makes a good API
- In 2014 More than 80% of API use cases were internal
- APIs are the currency of Cloud and Mobile – often good places to start

What do they want?

- Exposing "what you have" as an API isn't particularly useful
- Good APIs are simple to understand and use
- There is an art to a "delightful API experience"
- Many APIs may not last very long, that is an opportunity not a problem

Under what terms and conditions are you willing to share?

- Un-managed APIs quickly lead to chaos
- Business Ts&Cs are important (Plans)
- Its not a one-way street, give and take
- Make sharing easy

https://developer.ibm.com/apimanagement/2015/05/07/how-to-get-to-two-speed-it/

- Public:
  - APIs are open to any developer who wants to sign up
  - Apps are more targeted towards end consumers
  - The business driver is fostering external innovation, and quickly enter new customer facing ecosystems
- Partner
  - APIs are open to select business partners
  - Apps could be targeted at end consumers or business users
  - The business driver is often linked to the ability to automate processes, exchange data, and accelerate partner on-boarding
- Private
  - APIs are exposed only to existing developers within the enterprise
  - Apps are usually targeted at employees of the enterprise
  - The business driver can be channel consistency, productivity through re-use, and internal innovation

The Business of APIs – Who pays?

For Free

- Drives Adoptions of APIs
- Typically low valued assets
- Drive brand loyalty
- Enter new channels

Example:

Facebook Login API provides free authentication for any Web / mobile app

Developer Pays

- Business Asset must be of high value to the Developer
- For example, marketing analytics, news,
- Capabilities such as credit checks

Example:

Amazon EC2 Web Services – APIs charge per usage to launch and manage virtual servers.

Developer Gets Paid

- Provides incentive for developer to leverage web API
- Ad placements
- Percentage of revenue sold product or services

Example:

Google AdSense APIs pay developers who include advertising content into apps

Indirect

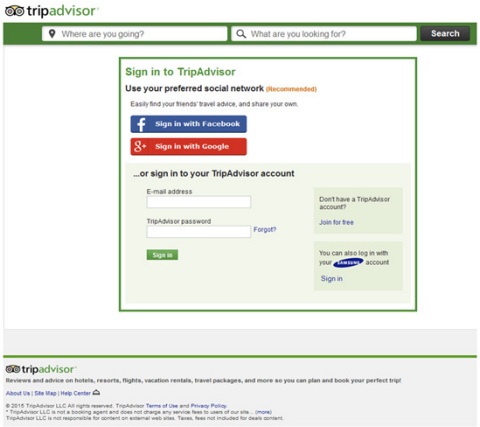
- Use of API achieves some goal that drives business model.
- E.g. Increase awareness of specific content, or offerings

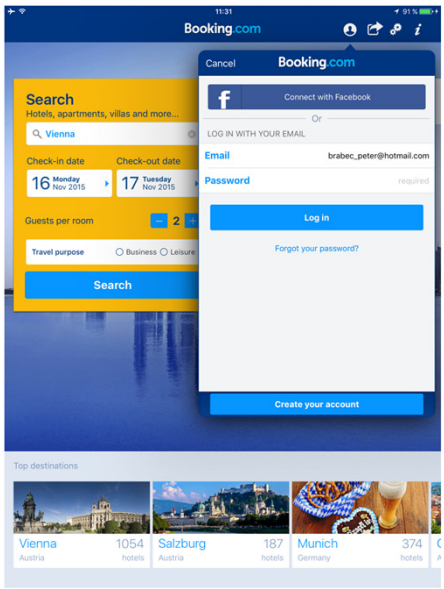
Example:

eBay Trading APIs offer developers access to trading services extending the reach of listings and transactions

Social Login APIs

- supporting sign up/sign in with Social Providers like Facebook, Google, Twitter, LinkedIn, etc,..
- Customers can seamlessly can add support for social login in their applications and services
- No complex changes to existing environment.
- No complex coding required to integrate with providers





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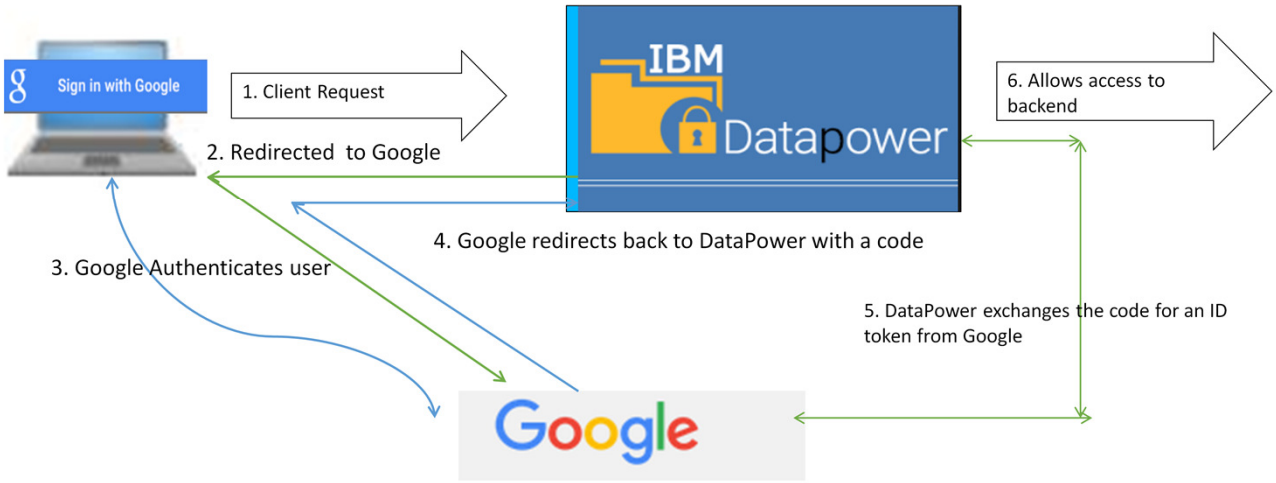
Overview how is Social Login is implemented



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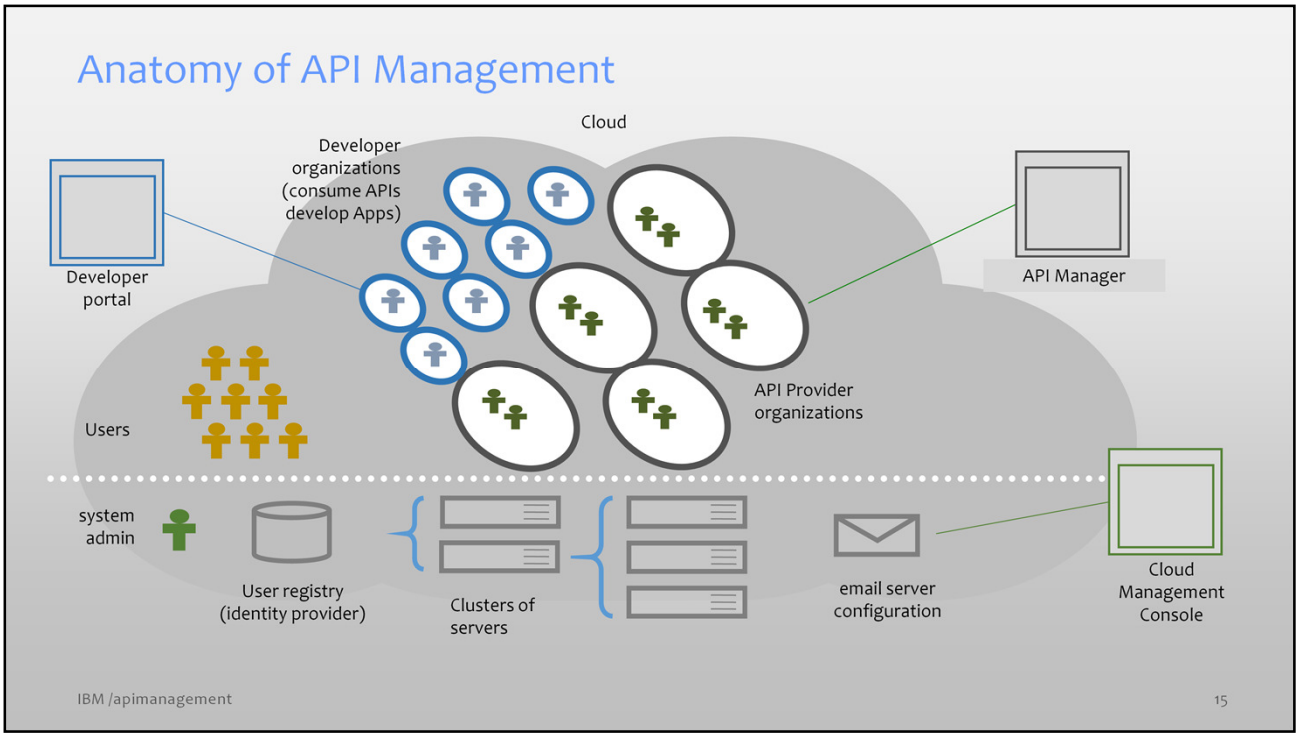
Anatomy of API Management
Cloud
Developer organizations (consume APIs develop Apps)
Developer portal
API Manager
API Provider organizations
Users
system admin
User registry (identity provider)
Clusters of servers
email server configuration
Cloud Management Console
IBM /apimanagement
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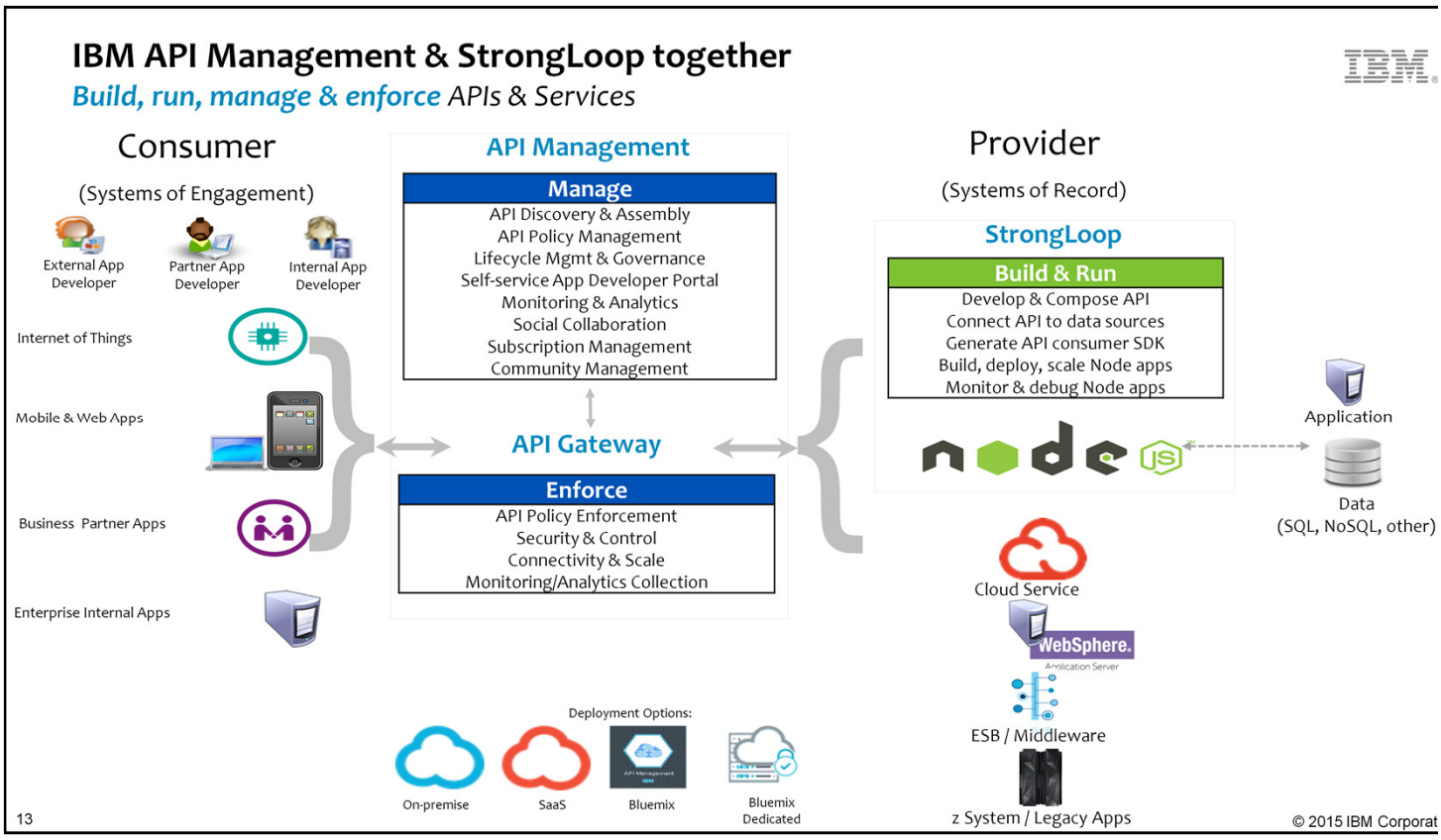


As organizations expose business assets & data as APIs to accelerate digital innovation and unlock nev

The offering is comprised of two components: IBM API Management (APIM) is the **management** plat

Define, Manage, Control & Secure REST & SOAP APIs
Provide **self-service API portals** to internal/external application developers
Publish APIs to multiple developer portals & users
Analyze API usage & performance

API Management uses API Gateway to control APIs

Security, Policy Enforcement, Proxying to services and Gathering API Invocation Data

Developer Portal

Explore API documentation
Provision application keys
Self-service experience

API Manager

Define and manage APIs
Explore API usage with analytics
Manage API user communities

Management Console

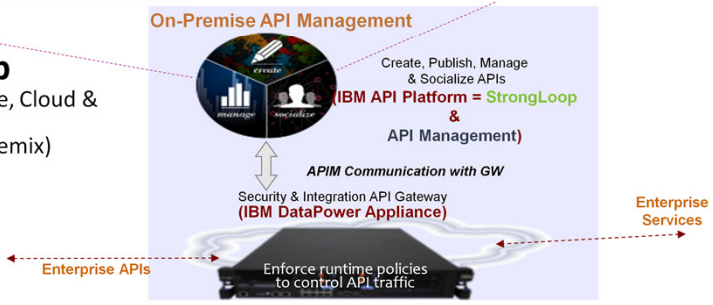
Provision system resources
Monitor runtime health
Scale the environment

API Platform = APIM + StrongLoop

- API Management: Virtual Appliance (On-Premise, Cloud & Bluemix)
- StrongLoop: Software (On-Premise, Cloud & Bluemix)

API Gateway: IBM DataPower Appliance

- On-Premise: Virtual, Physical
- Off-Premise:
- Cloud Appliance
- Part of API Management



A Comprehensive API Foundation

API Economy Starter Pack to jumpstart your entry into the API Economy

StrongLoop
An IBM Company

WebSphere
Application Server

Develop & Compose APIs with Java or Node.js
Connect APIs to data sources
Generate API consumer SDKs
Build, deploy, scale Node apps
Monitor & debug Node apps

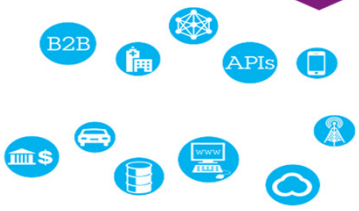
/apimanagement

API Discovery & Assembly
API Policy Management
Lifecycle Mgmt & Governance
Self-service App Developer Portal
API Monitoring & Analytics
Social Collaboration
Subscription Management
Community Management

IBM DataPower Gateways

API Policy Enforcement
Security & Control
Connectivity & Scale
Monitoring/Analytics Collection

Customer success stories

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PEUGEOT
Tangerine
Forward Banking
中交兴路
TransWiseway
WESTJET
M2M Tech
CN
THE
Westpac
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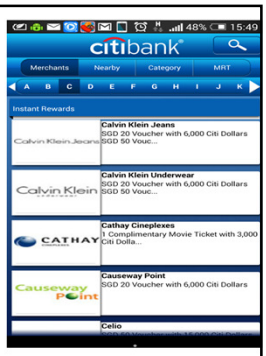

Retail Banking

Show/Hide | List Operati

POST	/retailbanking/v1/login	Validates user credentials (username and password) and retrieve an authorization token required f
GET	/retailbanking/v1/accounts	Retrieves list of accounts with summary informatio
GET	/retailbanking/v1/accounts/{account_id}	Retrieves account with summary information that is linked to the u
GET	/retailbanking/v1/accounts/{account_id}/balances	Retrieves detailed balance informatior
GET	/retailbanking/v1/accounts/{account_id}/transactions	Retrieves list of recent transactions performe
GET	/retailbanking/v1/payee_types	Get a list of Payee Typ
GET	/retailbanking/v1/payees	Get a list of previously created
POST	/retailbanking/v1/accounts/{account_id}/fund_transfers	Submit a funds transfer to

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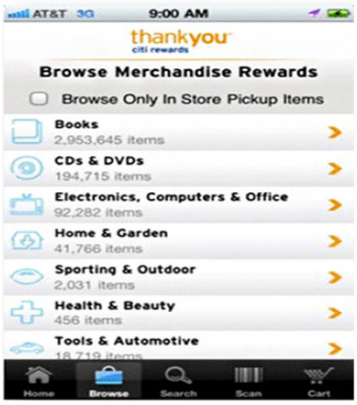

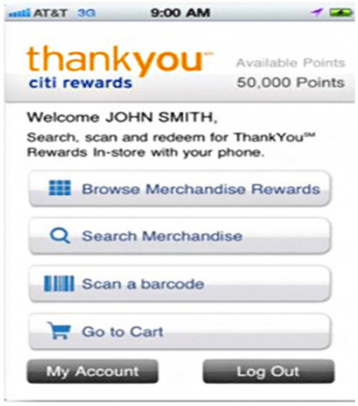

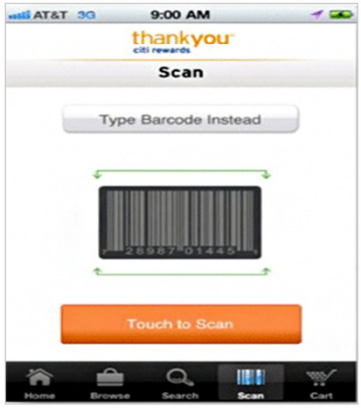

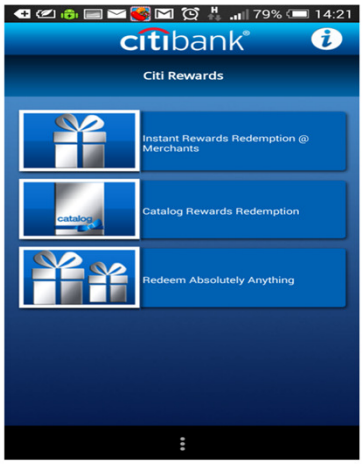

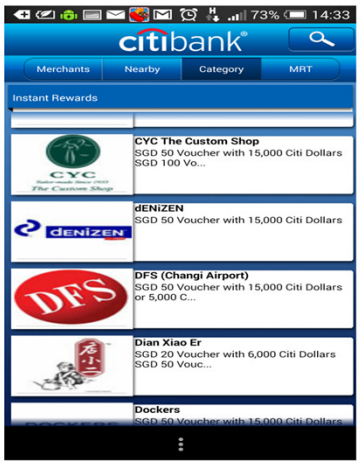

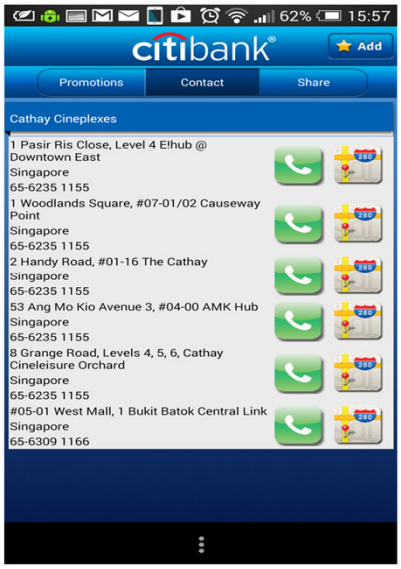

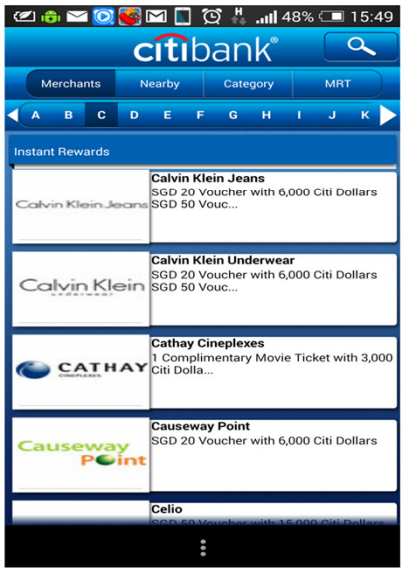

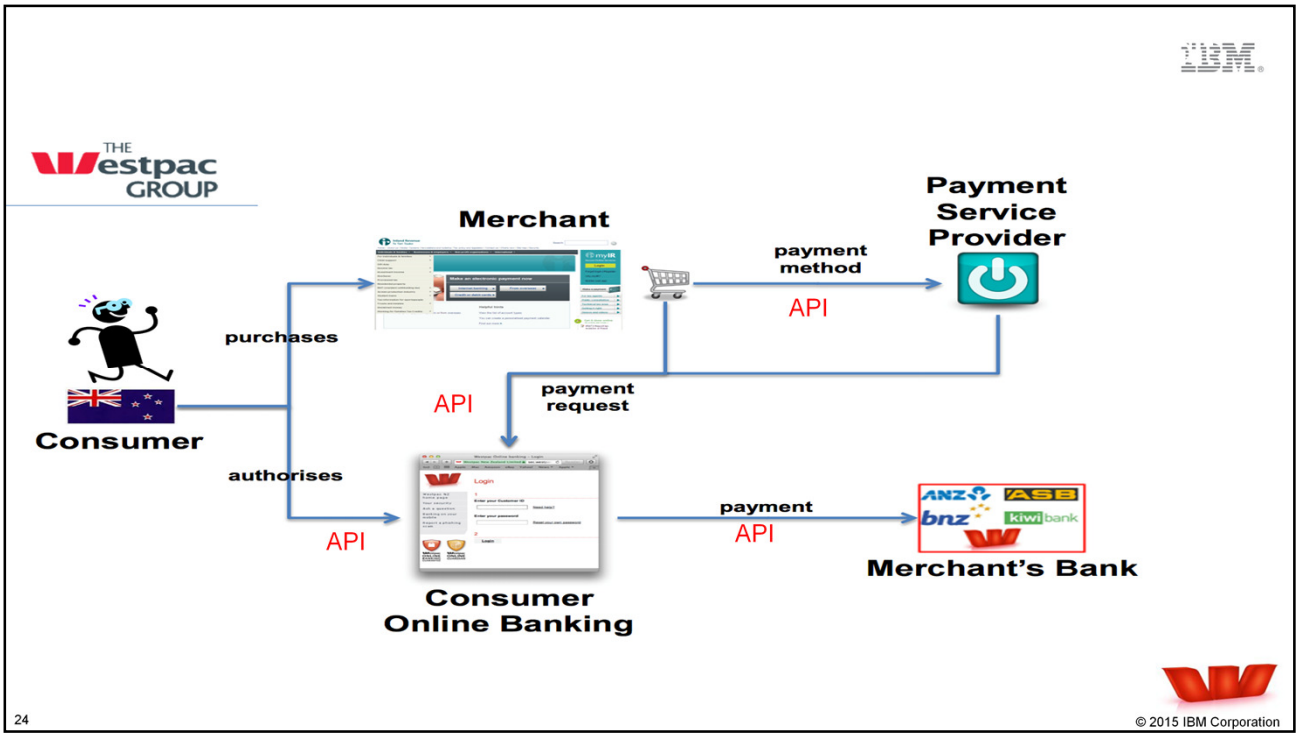
THE Westpac GROUP
Merchant
Payment Service Provider
payment method
API
purchases
Consumer
API
payment request
authorises
API
Login
payment
API
ANZ
ASB
bnz
kiwi bank
Merchant's Bank
Consumer Online Banking
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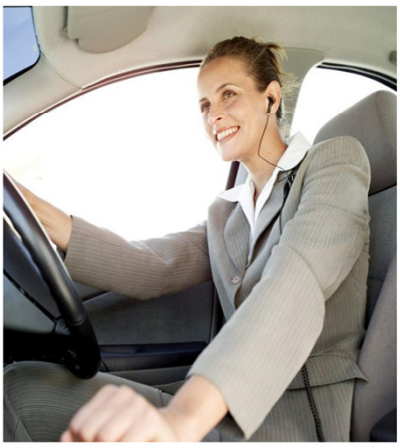
PEUGEOT

PSA PEUGEOT CITROËN

IBM

PSA provides innovative vehicle connectivity with IBM API Management



Business Challenge

- ❑ Offer innovative connectivity services to customers, improve the driver experience, improve safety, and create new revenue sources
- ❑ Improve driving conditions with driver profiling, eco-driving, fleet management, reduce accident risk
- ❑ Collect data to monetize them for partners

Solution

- ✓ IBM API Management & IBM MessageSight

Business Value

- ✓ "Always connected" low-latency reliable communications with the car systems/apps and customer mobile apps
- ✓ Vehicle data APIs published on secure developer portal
- ✓ Internal & external developers use vehicle data to develop mobile applications
- ✓ Drives innovation for Mobile application development

Ford Opens SYNC 3 Platform to Developers via API

At last week's Ford Developer Conference, Ford announced that its new SYNC 3 platform would include an API open to the developer community. API access to the platform will allow developers to build apps that integrate with SYNC 3 enabled vehicles. SYNC 3 enabled vehicles include features such as voice recognition, touch screen, and more.

Ford named the technology that allows app-vehicle communication AppLink. AppLink allows the app developer community to integrate with SYNC 3 enabled vehicles with voice control and allows apps to appear on a vehicle's SYNC screen. Ford first rolled out a developer program in 2013. Since the initial launch, over 90 smartphone compatible apps have been developed for AppLink. The latest release should only increase that number.

New features included with the SYNC 3 release include in-vehicle notifications, voice pass-through, and vehicle information access. In-vehicle notifications allow apps to send push notifications to drivers through the SYNC screen and audio systems. Voice pass-through allows developers to utilize voice-activated services to enhance in-app experiences. Vehicle information access includes real-time vehicle data including fuel economy, battery voltage, external temperature, fuel level, safety belt status, acceleration, driver braking, GPS, speed, tire pressure, VIN, odometer, and engine RPM.

The idea of a connected car continues to materialize. Ford's SYNC 3 platform built upon early connected car technology and API access to the platform widens the potential for app integration with Ford vehicles. To learn more, visit the SYNC site: http://www.ford.com/technology/sync/

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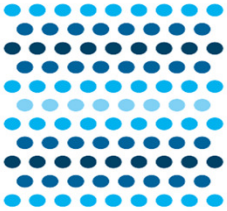
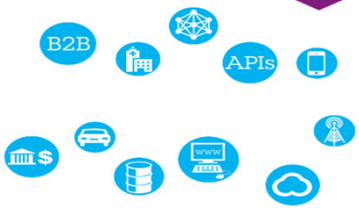
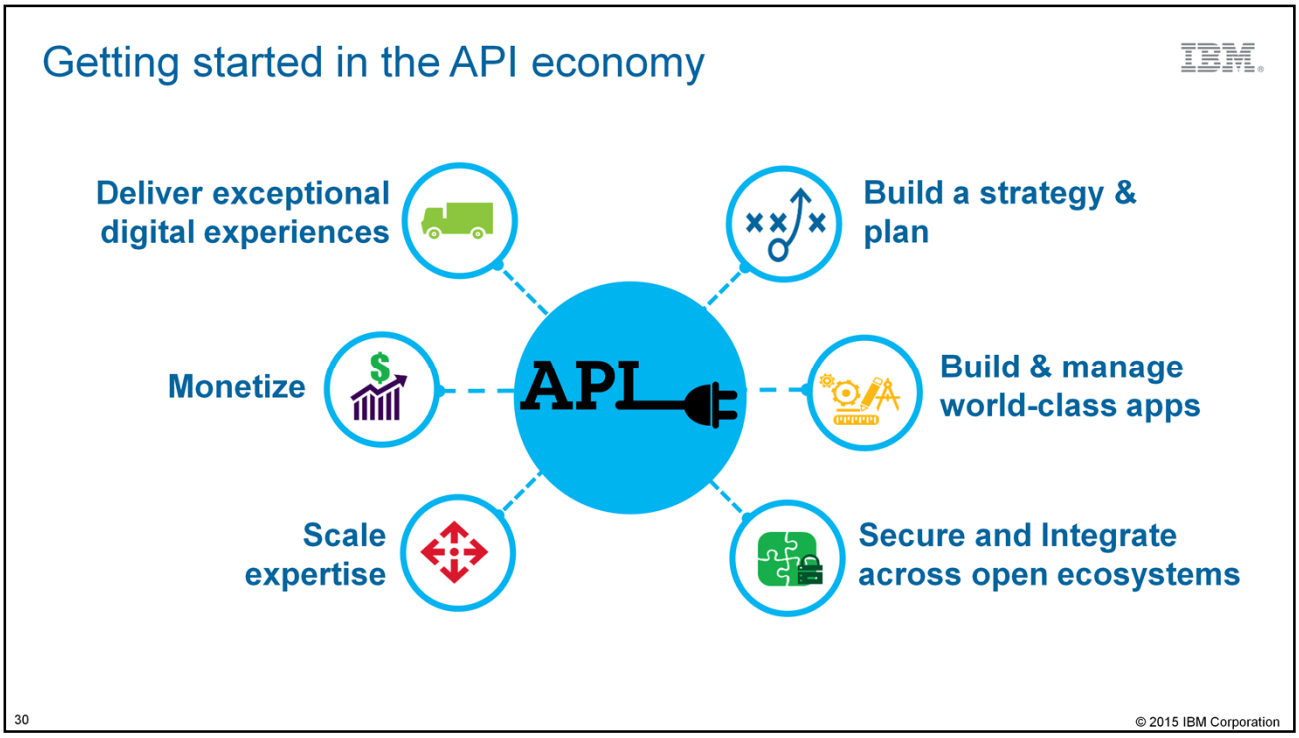
Thank You

Backup: Product highlights & Strategy





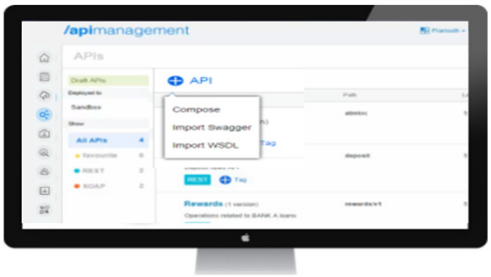


Starting in upper right, go clockwise. Next 2 charts provide more detail (next chart = Build a strategy & plan, chart after that = the other 5)

Enabling businesses to join the API Economy

IBM API Management - on-cloud & on-premise

- **Define & Secure** REST & SOAP APIs, **Publish** to multiple developer portals & users, **Analyze API usage** & performance
- A resilient integrated API runtime gateway infrastructure with IBM **DataPower Gateway** for enforcement of runtime policies to secure & control API traffic
- **Seamlessly move** APIs & Plans **from public to private** cloud or on-prem for complete flexibility



Engage with app developers through portals
- API exploration
- Self-service sign up
- Interactive API testing
- App & Key management
- API usage analytics
- Rate limit notification
- Multiple dev communities
- Build custom portal with blogs, forums

Define, publish & manage APIs
- OAuth security management
- Backend service discovery
- API lifecycle management
- API subscription management
- Data transformation/redaction
- Rate limiting at Plan/Resource level
- API user & Plan management
- API deployment to Gateway
- API security enforcement
- API Analytics to gain business insight
- Custom roles & role-based access control

Manage API environment
- Administer & scale system resources
- Monitor runtime health
- Multi-tenancy

REST APIs to extend/customize
- Developer Portal
- User onboarding
- Integration with API testing tools (SoapUI NG Pro, Ready! API)
- Integration with Content Management System (Drupal)

API Success Requires Addressing Needs of Multiple Stakeholders

API Product Manager

- How can I rapidly release & update my APIs?
- How do I publicize my API?
- How do I measure success?

App Developer

- Where do I access APIs?
- How do I understand the APIs?
- How do I measure success?

API Developer

- How do I assemble APIs?
- How do I manage security?
- Will the infrastructure scale?
- How do I measure performance?

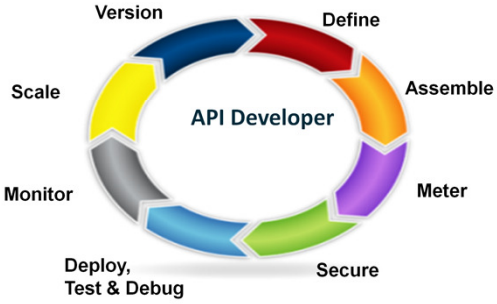
Operations Lead*

- How do I manage all the API Environments that are being requested?
- How can I scale each environment?
- How can I easily find and fix issues?

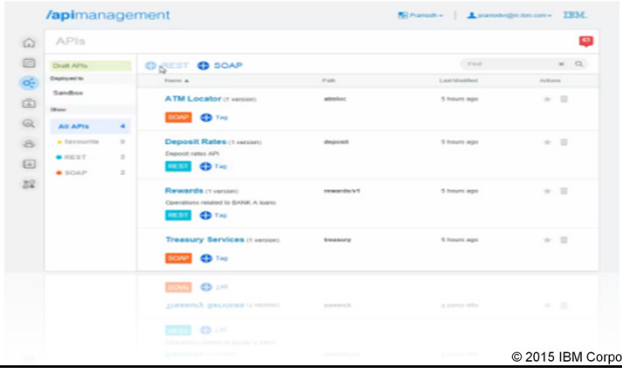
* Not applicable to SaaS

API Developer: Create, Secure & Version APIs

Simple interface accelerates iterative API development & deployment



- Intuitively and iteratively define APIs and associated policies
- Rapidly assemble APIs via configuration, not coding
- Minimize risk with industry leading security & scalability



Node.js Strengths

Very Fast	JIT compiled
Highly Concurrent	No IO bottlenecks
Scalable	Reduce infrastructure by 5X
Full stack	Lightweight, JS back and front, Headless
Simple	Write and maintain 50% lesser code
Evented & JSON	Suited for mobile and IoT
Ecosystem	Biggest OSS community on the planet

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As we look at enterprises that are successfully making the digital transformation, there are a few technological markers – adoption of Node.js happens to be one of those. Why?

It's very lightweight and highly scalable due to its natively asynchronous and event driven architecture.

The simplicity of Node.js is also part of its appeal. Try it out yourself – you can get a server app up and running and waiting for incoming http requests with a few lines of code.

Part of the simplicity also comes from the robust ecosystem that exists around Node.js. Whether you need to integrate with existing enterprise SORs, implement user authentication, encrypt data, or implement any other standard 'application supporting' functionality, chances are that you can find an existing Node.js module that someone has already implemented.

WebSphere Application Server vs. Node.js

Different Types of Servers for Different Styles of Applications

	WebSphere Application Server	Node.js Server
Application characteristics	▪ Stateful Applications • Architected for state management ▪ Computational Intensive and/or Long Running Applications • Multi-threaded architecture ▪ Highest Availability and QOS • Intelligent Management ▪ Maximum transactional integrity and application security • Two phase commit • FIPS certified • Industry tested/hardened	▪ RESTful Applications ▪ High Concurrency/Scale • Single threaded event loop ▪ I/O Intensive • Event driven processing ▪ Asynchronous • Non-blocking ▪ End user synergy • JavaScript on server and end user device ▪ API economy/Microservices • Architected for small reusable/callable services
Typical applications	▪ Back Office Systems ▪ Financial Systems ▪ Analytic Solutions ▪ Enterprise Integration	▪ Mobile Front-end ▪ Social ▪ Video/Streaming applications ▪ Internet of Things
Common attributes	*Production Ready / IBM Supported / Vibrant developer and user communities / Standards based*	

StrongLoop accelerates plans to further integrate Node & Java for developers & Admins

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IBM Node.js and WAS complement one another and enable customers to right fit their runtime deployments.

Node.js is an excellent fit for some application types but not for others. It belongs in customer run time portfolios as an option.

An example Node.js scenario is as a front end to 10K mobile users, we leverage the high concurrency of node to support these users with minimal hardware. If using Java we'd typically allocate a thread to each active user, thousands of threads with associated memory and cpu overhead. Node is typically a "better fit" for this scenario.

On the other hand Node doesn't provide state management, it can be done by end customers using Node add-ons and outside Node state stores, but it's complex and time consuming, whereas Java delivers built in state management. So WAS is a "better fit" for stateful applications. Many transactional applications fall into this category.

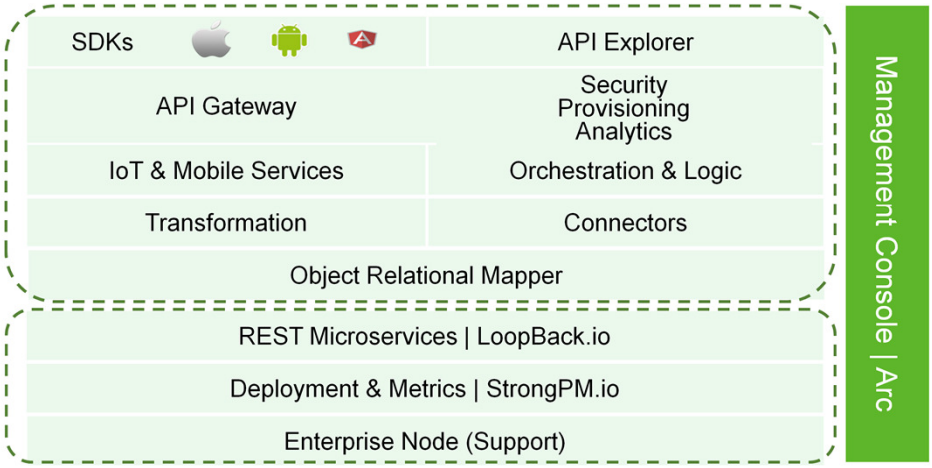
Node is also not a good fit for computationally intensive applications, or long running applications. Any application that will take time to execute will block the rest of the Node server. Java with it's sophisticated multithreading easily handles this type of application.

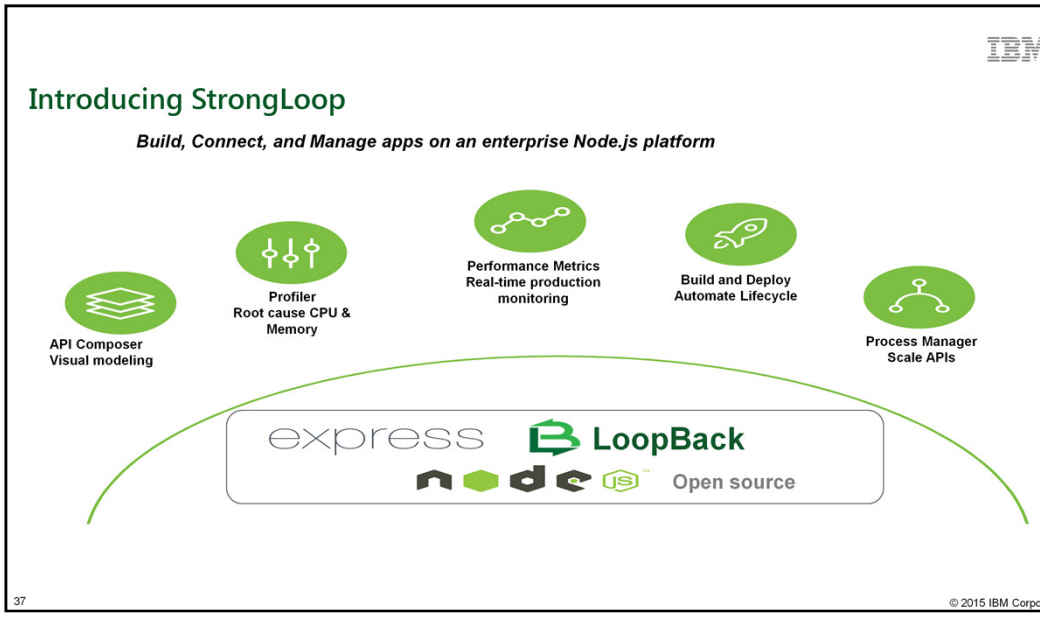
Enterprises need both Java and Node.js in order to right fit their run time implementations.

IBM StrongLoop Overview

API Composition & Management

"NodeOps"



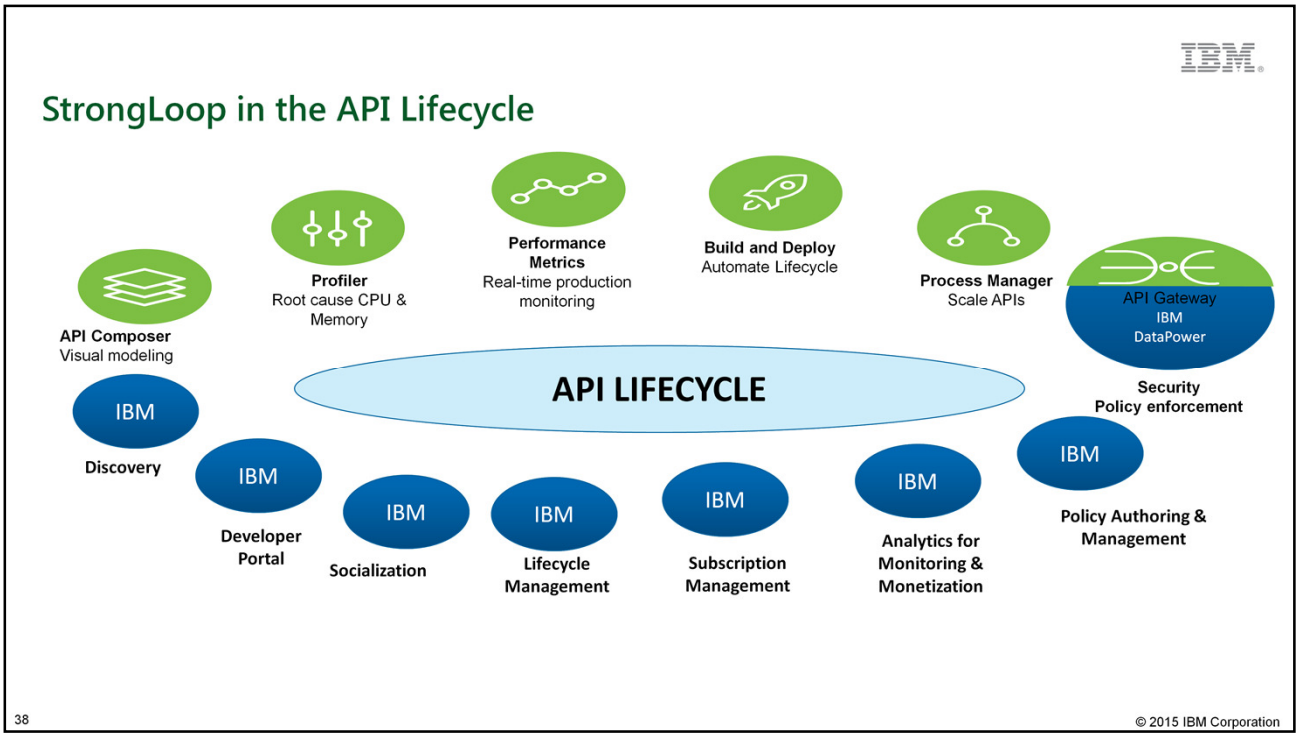


To put it simply, StrongLoop is a solution that will enable our customers to build, connect, and manage APIs on a Node.js platform.

The solution includes node.js frameworks, development tools, tools to help package and deploy node.js apps, a runtime, and management tools that help organizations to operate and monitor a node.js environment.

StrongLoop's API capabilities are built on top of the popular LoopBack and Express Node.js frameworks. LoopBack delivers rapid API creation capability and Express provides a Node.js middleware stack on top of which those APIs run. StrongLoop is a significant contributor to both frameworks.

StrongLoop's Process Manager and performance insight capability allow administrators to manage Node.js runtimes and get insight into the performance and health of those runtimes.



StrongLoop strengthens our commitment to a Hybrid Cloud, Agile Unification Platform and builds upon our commitment to the API Economy. SL brings agile development using Node.js to the enterprise.

- Think of **StrongLoop API Composer** as a composition / creation tool for REST-based **microservices –** These are much like existing Web Services that we compose using IIB, WebSphere Application Server, BPM, etc.
- Think of **StrongLoop Arc** as the platform to enhance our Hybrid Runtime for Systems of Engagement – **4th Tier**.
- **StrongLoop Arc** brings an API composition platform targeted for edge of enterprise use cases such as IOT, Mobile, Social Applications. These applications usually have characteristics such as I/O Intensity, Asynchronous, High Concurrency, and live in the API Economy.
- **IBM APIM** puts structure around API's that can be discovered, shared, socialized, subscribed, monetized, & controlled
- **IBM APIM** is built for easy consumption and control of API's. Whereas **StrongLoop Arc** is about composition of API's on top of Node.js
- **StrongLoop** launches IBM further into the Node.js for enterprise business – much like when we leapt into J2EE with our acquisition of Transarc
- **Security: DataPower** remains IBM's strategic Security and Policy Enforcement Gateway. However, we are looking to extend DataPower with a lightweight, distributed gateway. StrongLoop brings a pre GA API Gateway that may fit well with our strategy.
- Futures: We expect to see additional modules such as Rational Test Workbench components for StrongLoop Arc. We will look at how the API Gateway will compliment the work we are doing to enhance our strategic gateway, DataPower, as a lightweight distributed (parent/child) gateway.

New Open API Initiative

IBM is working to ensure APIs can be open & accessible

- The Open API Initiative (OAI), a Linux Foundation Collaborative Project
  - To address the challenges of standardizing and documenting the APIs that are driving today's API economy
  - Based upon the widely adopted Swagger specification and format (donated by SmartBear), for open collaboration and governance via a broad community of vendors and users
  - The OAI goal is a vendor-neutral, portable and open specification for providing technical metadata for RESTful APIs

IBM is working with a broad coalition of companies to form the Open API Initiative (OAI), to address the challenges of standardizing and documenting the APIs that are driving today's API Economy revolution. The initiative will be managed as a working group guided by The Linux Foundation, and will build upon the work of the Swagger Project, as sponsored by SmartBear Software, Inc. Founding OAI members are comprised of a mix of leading software vendors and progressive end-users, and include; 3Scale, apigee, CapitalOne, Google, IBM, intuit, Mircosoft, PayPal, SmartBear, and Restlet.

The OAI goal is to create an openly governed, technical community within which members may easily contribute to building a vendor-neutral, portable, and open specification for providing metadata for REST APIs. This open framework will allow both humans and computers to discover and understand the capabilities of the respective services with a minimal amount of implementation logic. The OAI will promote and facilitate the adoption and use of the "Open API Definition Format"(OADF) as an open industry specification. With an OADF compliant API, you get interactive documentation, client SDK generation, and discoverability.

IBM is proud to be at the forefront of many of today's leading open source initiatives

(e.g. the OpenStack Project, the Cloud Foundry Foundation, and the Node.js Foundation, etc.), that build strong communities, promote open governance, and ultimately provide tremendous value for our clients.

Some Q&A for additional background.

1. Why did IBM decided to help convene (or join) this group? What do we as a company hope to get out of this -- so what is our business goals? IBM took note of the fact that the Swagger Project (Spec and Tooling) was beginning to gain a following among a broad mix of Web API developers (including our own), and had more momentum that many other options such as WSDL, WADL, RAML, etc. The business value is it speeds overall application development by solving common problems related to API creation, while improving code quality. At a high level, it does this via the following:

.Clarity - The User Interface (UI) helps communicate what the API is and how it works

.Simplicity - The specification is simple enough that developers have written integrations to every modern programming language, therefore leveraging the community for polyglot capabilities

.Independence - Because no single fully established vendor was initially behind the project AND it has intrinsic value, it has been catching on at the 'grass roots' level

2. Do we know what the other companies (Google and Apigee specifically) plan to do on day one -- i.e. donate code to this group? What I am trying to figure out is IBM just signing a piece of paper on day one and the other organizations will do more -- and say more. I am aware of no large vendor planning a major contribution at this time, however there is some friction between Apigee and SmartBear regarding past contributions which they are working to resolve.

You should also be aware of the following:

Amazon's Swagger Importer Points to New Wave of API Automation, August 25 2015

http://www.programmableweb.com/news/amazons-swagger-importer-points-to-new-wave-api-automation-tooling/2015/08/25

Inside the Azure API Tools for MS Visual Studio, March 30, 2015

https://visualstudiomagazine.com/articles/2015/03/30/azure-api-tools-for-visual-studio-2013.aspx

3. What is the timeline for our team to donate code to the Linux Foundation and this working group if not this month? What is inhibiting us to do so? Aarti has indicated that the IBM team is planning to contribute and has ideas, but for now has said that those contributions need to come with IBM staffing and support - plans for which are still TBD. Our team is doing some Proof of Concept integration work in conjunction with our focus on the Cloud Foundry PaaS Project, but it is still early.

In most cases, IBM prefers to start contributions after a project has taken steps towards open governance, not just leveraging an open source license for the code itself.

Investments in Industry Ecosystems

Banking

BIAN REST APIs

- IBM is working with the Banking Industry Architecture Network (BIAN) to create common IT standards for the banking industry, specifically:
  - IBM created common banking API definitions based on BIAN standards.
  - IBM has created REST APIs based on BIAN standards so banks won't have to start from scratch to create their API's. This move will also help standardize application components and simplify and accelerate the creation of applications.

"We are pleased to be working with IBM to promote banking industry standards and encourage collaborative, innovative solutions for banks. .. IBM's sharing of banking industry APIs – with the additional operational value from IBM's Banking Industry models – will accelerate development, propel adoption and set the stage for enhanced business benefits and future growth."

– Hans Tesselaar, Executive Director, BIAN

Healthcare

HL7 & FHIR

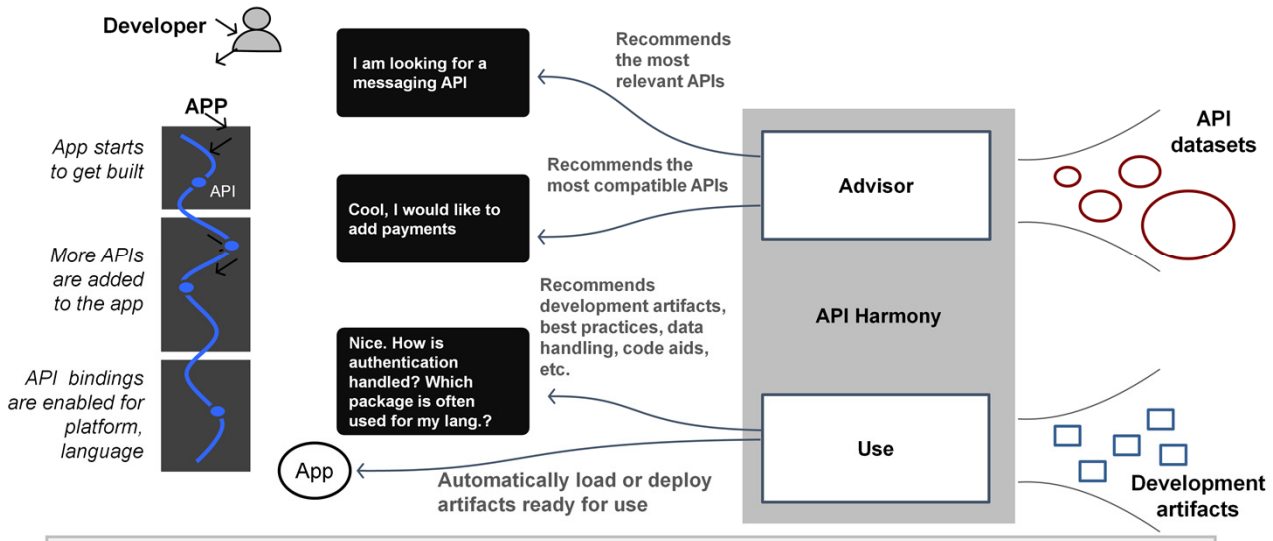
- IBM is working with HL7 standards organization on the Fast Healthcare Interoperability Resources (FHIR) API standard for exchanging healthcare information electronically.
- IBM is creating a sandbox for developers to develop and test FHIR APIs on IBM BlueMix.

"The HL7 Organization looks forward to the innovative results we expect from IBM to support the development of the FHIR (Fast Healthcare Interoperability Resources) standard. IBM brings a wealth of experience in healthcare enterprise IT, and shares HL7's goal of driving FHIR to be pervasive in the healthcare industry. Our work together will help shape the FHIR standard of the future."

– Dr. Charles Jaffe, CEO, HL7

API Harmony – Building applications in the Cognitive era

Matchmaking APIs and creating "smarter" developers – IBM BlueMix Labs



The best place to **find**, **learn about**, and **use** web APIs.

New API Harmony Features

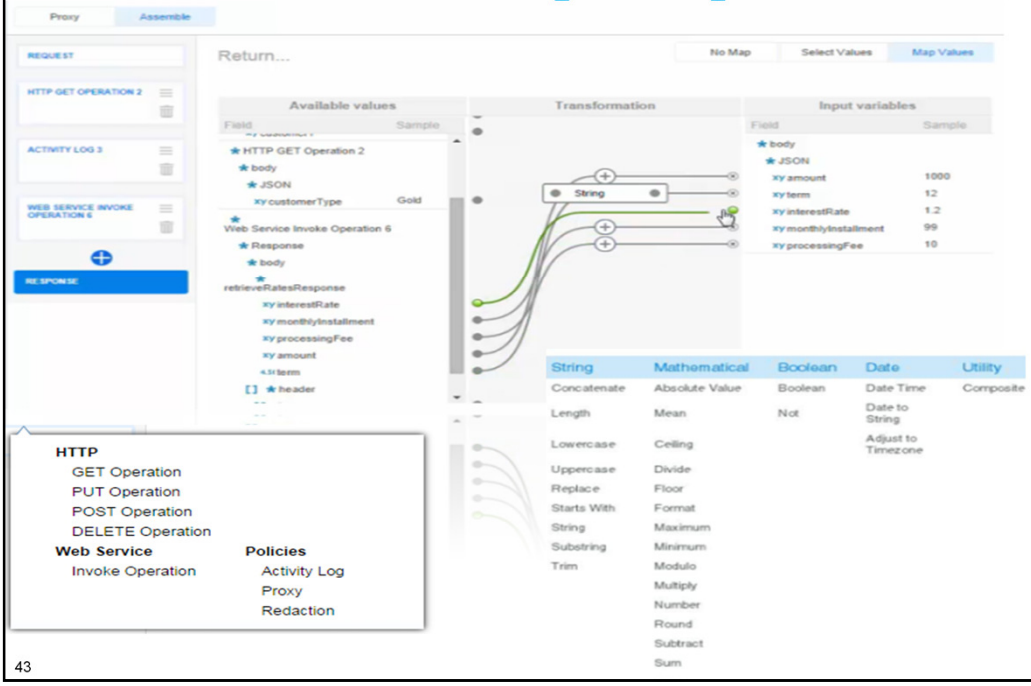
- New data sources to find APIs and API usage. Semi-automated and crowd-aided mechanisms are capturing new APIs.
  - New ability to mine GitHub to find references of API usage, which are populated in our graph to provide an interactive experience.
  - New Stack Overflow integration provides insights on API usage by the developer community.
  - New social media sharing via Twitter enables the sharing of APIs through that medium.
  - A new micro-service architecture in a DevOps model allows us to add and try new capabilities.
  - API Harmony is now accessible from all Bluemix zones.

Follow API Harmony @apiHarmony and at apiful.io.

API Harmony
Experimental

Runs On
IBM Bluemix™

API Developer:
Assemble New APIs Through Configuration



- Assemble a new API by combining multiple REST or SOAP services into a **composite API**
- **Provide examples** of the request and response messages, headers and parameters
- **Drag and connect** linking the request and response messages
- **Transform** the message elements with a click

API Providers & Consumers:
Test API readiness with Ready! API plugin

API Consumers

Import:

Use Ready! API testing platform to **Import** SOAP & REST API definitions directly from IBM API Mgmt Dev portal for unit/functional testing, load testing, service virtualization & more

- Select any API from Dev Portal
- Auto-generate test suite
- Validate functionality and resiliency
- Virtualize for application testing

Ready! API SoapUI NG

Ready! API ServiceV Pro

Ready! API LoadUI

API Providers

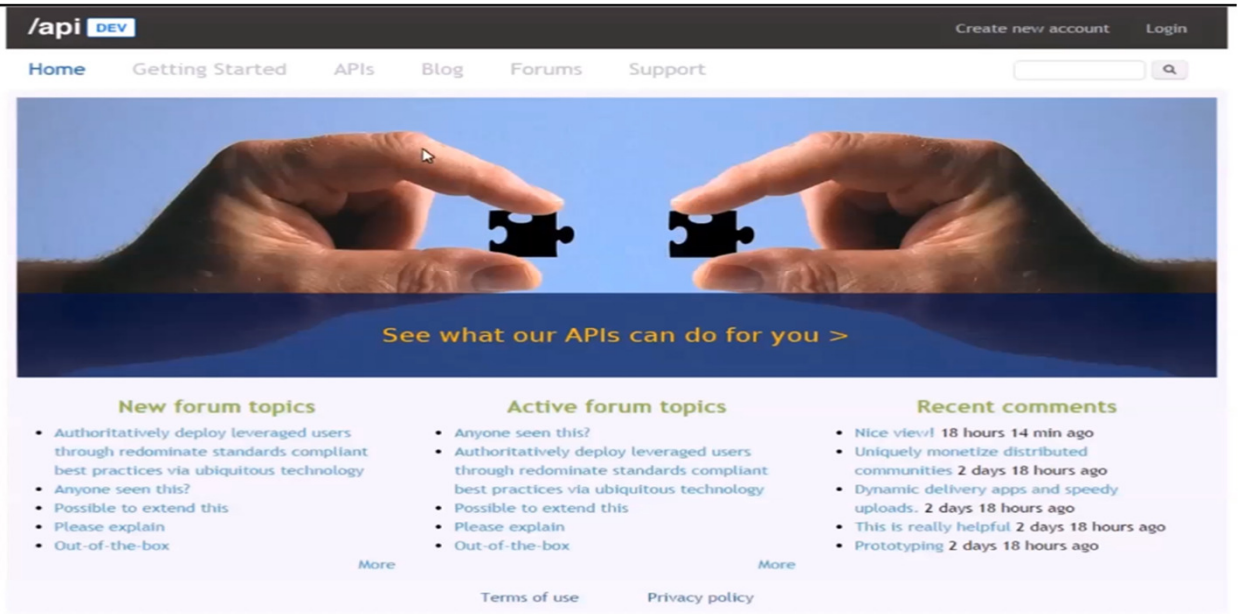
Export:

Define new APIs in Ready! API product by uploading Swagger, WADL, RAML, WSDL, etc., and then test the API.

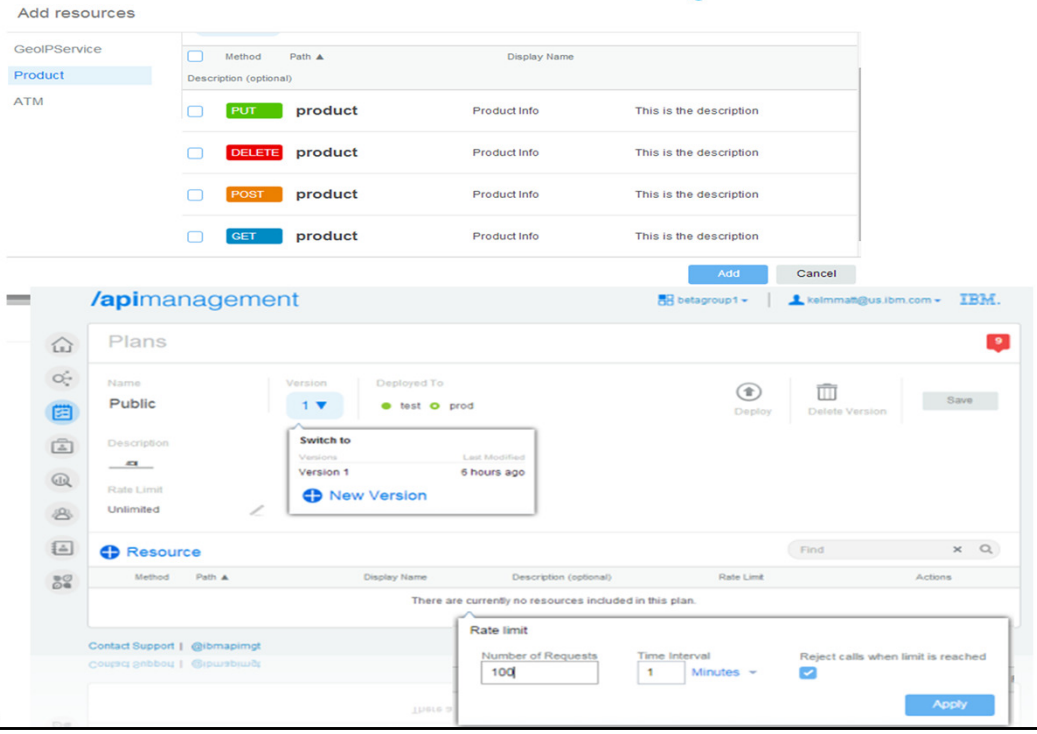
- Commit to a full range of tests – functional, load, security
- When ready, click a button to **Export** API to insert the tested API into API Manager UI

SMARTBEAR & IBM

Custom API Portal using IBM API Mgmt & Drupal CMS



API Provider: “Productize” APIs using Plans



- Introduce **API Trial Use**
- **Free**, limited plans can be made available alongside **premium** plans
- For example, a free plan could be **unrestricted**, and a premium plan **restricted**
- Include multiple **APIs** and **Resources** per Plan
- **Version** your Plans
- Apply **Rate Limit** by Plan or Resource
- Reject calls when limit reached

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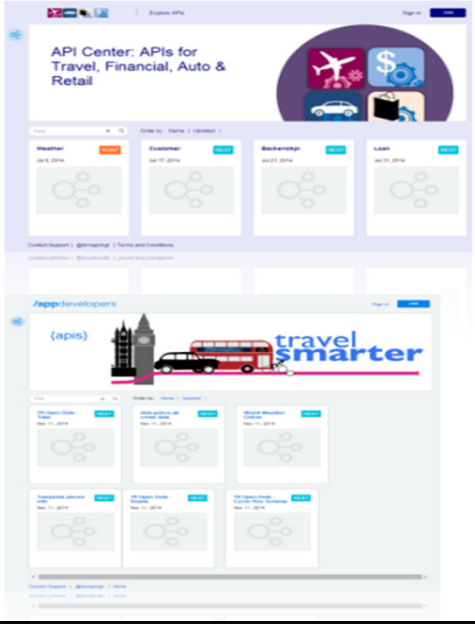
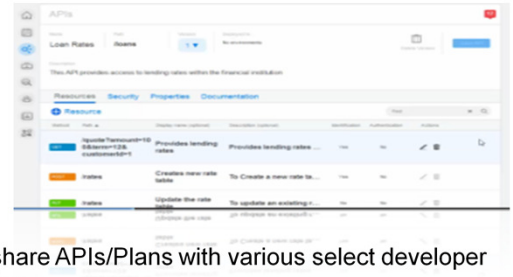
API Provider: Publish your APIs to multiple developer portals

Multiple Developer Portals



API Manager



API Provider

Publish

App Developers In group 1

App Developers in group 2

Securely share APIs/Plans with various select developer communities

- **Fine grained** plan deployment
- **Non-disruptive Publish**: Replace a currently published version of a Plan without any disruption in API availability

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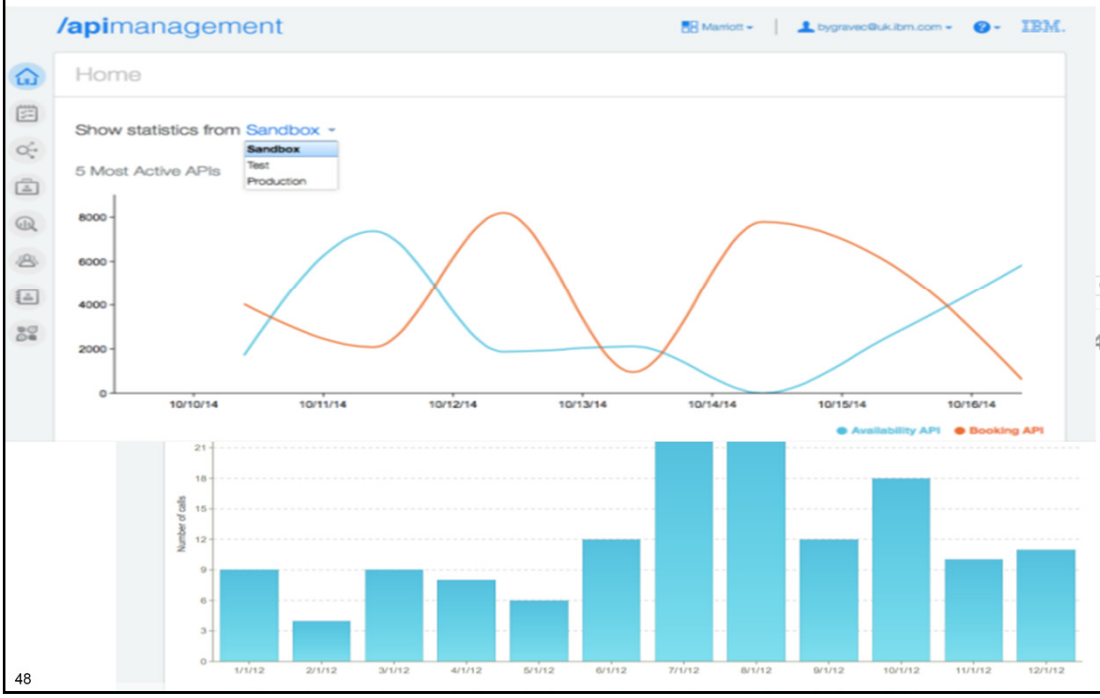
API Provider: Gain Business Insights



- Pinpoint **key market fluctuations and find correlations** related to your business
- **Analytics** for both API provider and application developer:
- **Analyze performance** of APIs
- Enables **chargeback or billing** for API consumption

App Developer: Register application

/appdevelopers

siddevorg | sid.bhatia@gmail.com

Application

MyMobileApp1

MyMobileApp1

Client ID: ••

Client Secret: Click show to retrieve the client secret

Show | Reset | Show | Reset

Subscribed Plans: None

Redirection URL for OAuth (optional):

https://localhost

Description:

Awesome app

Contact Support | @acmedev | Home

Client ID: 908badcf-5d7f-4654-9119-aacc39c4d3

Client Secret: P3gE3wX4uE6pP6uC1fN5bP4uA4iN3p

Hide | Reset | Dismiss | Reset

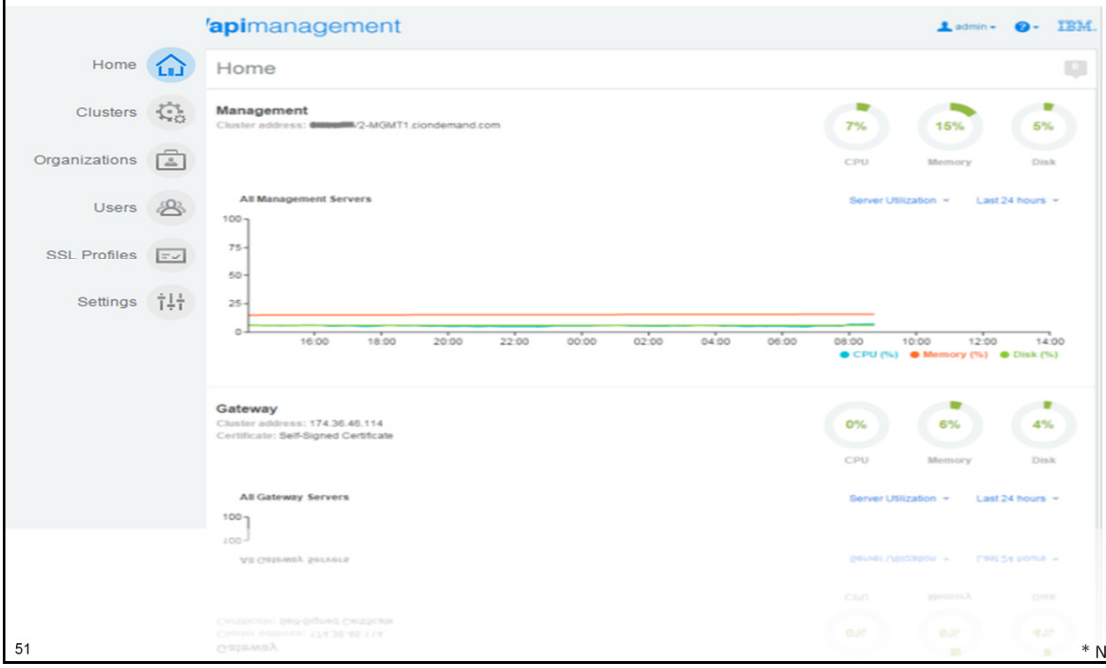
The client secret will only be shown one time. Please make a note of it as it cannot be retrieved; only verified or reset. Click 'Dismiss' to clear the secret from the screen.

- **Register** new application
- Request **security keys** with enhanced privacy
- **Deferred retrieval of** client secret

App Developer: Analyze App Performance, Get notified

- Monitor **most active** applications and APIs
- Rate limit **developer notifications**

IT Admin: Manage Overall Environment*



- At-a-glance server **utilization metrics**
- **Management & Gateway Server utilization** - CPU, Memory, Disk
- **Usage over time** available by drilling down

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* Not applicable to SaaS

Easy out of the box setup.
LDAP or internal identity provider support.

Clients are unlocking the real power of the API economy

Unlocking the real power of the API economy:

Exposing your core capabilities through an API to an ecosystem of developers, customers and partners, opening up entirely new opportunities for innovation, new revenue streams and expanded channels

NEW API Economy Client

YES BANK

Growing foreign exchange business by providing digital banking services to business partners

citi

Exposing services as APIs to drive mobile app innovation through an external developer ecosystem

GoDaddy

Accelerated solution delivery for reseller partners via APIs to drive revenue growth

PEUGEOT

Monetizing connected car data via APIs for external business partners

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YES Bank

Today, IBM also announced that YES Bank in India has taken initial steps to enter the API Economy by implementing IBM API Management to provide next-generation banking to its customers. With API Management, YES Bank can now reveal its core business assets and data to an ecosystem of industry partners and end users transforming the way banking is done in India. The API Banking platform opens up multiple business channels by helping the bank build new digital partnerships with their clients and tap into the growing market of inward remittance from Indians abroad.

Citi

With APIM, can:

•Offer 3rd party merchants secure standards-based access to key business services as APIs, with a self-service experience

•Provide a private ecosystem for partners and a central repository with usage analytics

•API platform and hackathons help drive innovation for Mobile application development

GoDaddy

Business Requirement

GoDaddy needed a modern solution for exposing APIs to drive new business and bring on new partners, a highly important aspect of their overall technical strategy.

Solution

StrongLoop LoopBack Framework and a collaborative partnership provided consistent, modern REST-based APIs for resellers and other GoDaddy partners. Other features such as throttling, authentication, and analytics made LoopBack the optimal choice for enabling the next generation of GoDaddy APIs.

Results

Co-developing a solution with StrongLoop has allowed us to accelerate the delivery of solutions to our reseller partners and drive revenue growth for them. Our external APIs are an incredibly important aspect of our overall technical strategy. -- *Elissa Murphy, Chief Technology Officer, GoDaddy*

Peugeot

Peugeot story at:

https://w3-connections.ibm.com/blogs/WSSuccessStories/entry/websphere_and_big_data_technology_help_peugeot_charge_into_car2car_and_mobile_to_offer_innovative_connected_car_services?lang=en

Customer-facing slide on Peugeot reference in this APIM references deck:

https://w3-connections.ibm.com/communities/service/html/communityview?communityUuid=3fd24b59-2d55-4fd1-a470-107cec8cf057#fullpageWidgetId=W2f2ef9e89a68_4f7c_95d2_663c9eefccdd&file=2198f2c3-7dfe-46f2-a9ba-5da01fdf012a

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