IBM **Bluemix**

Digital Innovation Platform

What is **Bluemix**?

The Bluemix Platform

Global // Hybrid // Open

Build modern apps that thrive on data

Easily & Securely leverage your existing API's & Data

Optimize and transform existing apps

Foster a culture of continuous innovation & delivery

Core Platform
Global // Hybrid // Open

App Centric Compute
PaaS // Container // VM's

API's
IBM // 3rd Party // Yours

Data Driven App's
Watson // IoT // Big Data

Powered by Open
IaaS // PaaS // SaaS

Built for enterprise
Development // Integration // DevOps

How does Bluemix work?

Bluemix is built on 3 open key compute technologies: **Cloud Foundry**, **Docker**, and **OpenStack**.

Extending each of these with a growing number of **services**, robust **DevOps tooling**, **integration** capabilities, and a seamless **developer experience**.
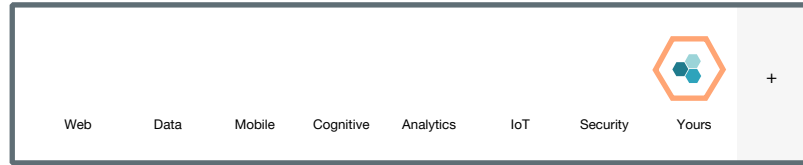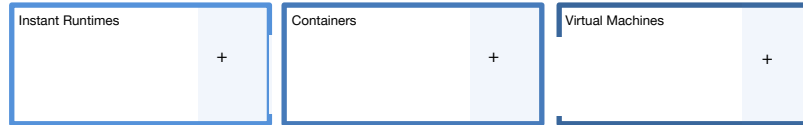
DevOps Tooling

Integration & API Mgmt
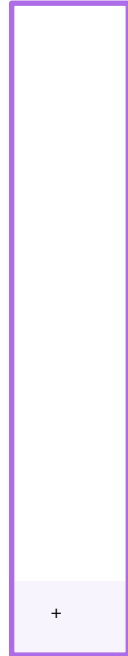
Your Own Hosted Apps / Services

Catalog of Services that Extend Apps' Functionality

| Web | Data | Mobile | Cognitive | Analytics | IoT | Security | Yours | + |

Flexible Compute Options to Run Apps / Services

| Instant Runtimes + | Containers + | Virtual Machines + |

Platform Deployment Options to meet Workload Requirements

| Bluemix Public | Bluemix Dedicated | Bluemix Local* |

Powered by IBM SoftLayer | In Your Data Center

+

+

Built on the Highest Performing Cloud Infrastructure

Spanning across the globe

A different kind of data center

- Every location designed, built, and operated to the **same standardized point of deployment** (PoD) based spec
- **24/7 on-site security** and rigorous controls
- **Public, private, and management networks** all separated
- More than **2,000Gbps between data centers** and **network points of presence** (PoPs)
- **Unmetered inbound public bandwidth** and fully **unmetered bandwidth between data centers**

Entirely automated

- **SoftLayer API** controls everything
- **Bare metal** and **virtualized servers** in the same platform
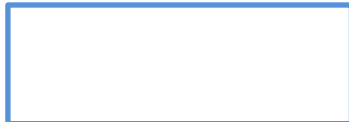
SOFTLAYER®
an IBM Company

Carrier grade private network with over 2,000 Gbps of connectivity

Over 29 global locations with geographic disperse network PoPs

Flexible Compute options

Devs get to **choose** the level of **infrastructure abstraction** and **fine-tuned control** that suits their apps and services.

Instant Runtimes

The highest level of infrastructure abstraction. Focus on the app.

Containers

Powerful, but less resource intensive than VMs. Key to support hybrid portability.

Virtual Machines

Control all the way down to the operating system.

What's different about Bluemix?

.java
liberty

- Extends Cloud Foundry with DevOps tooling, integration capabilities, and seamless app management
- Support for 7 key languages and the option to use a community buildpack.

- Docker as-a-service means no VMs to manage
- A repository of enterprise-grade images which are trusted and secure
- Enhanced performance and scalability
- Integrated monitoring, logging, networking, and storage

- Deploy and manage VMs consistently across public, dedicated, and private instances with a single dashboard.
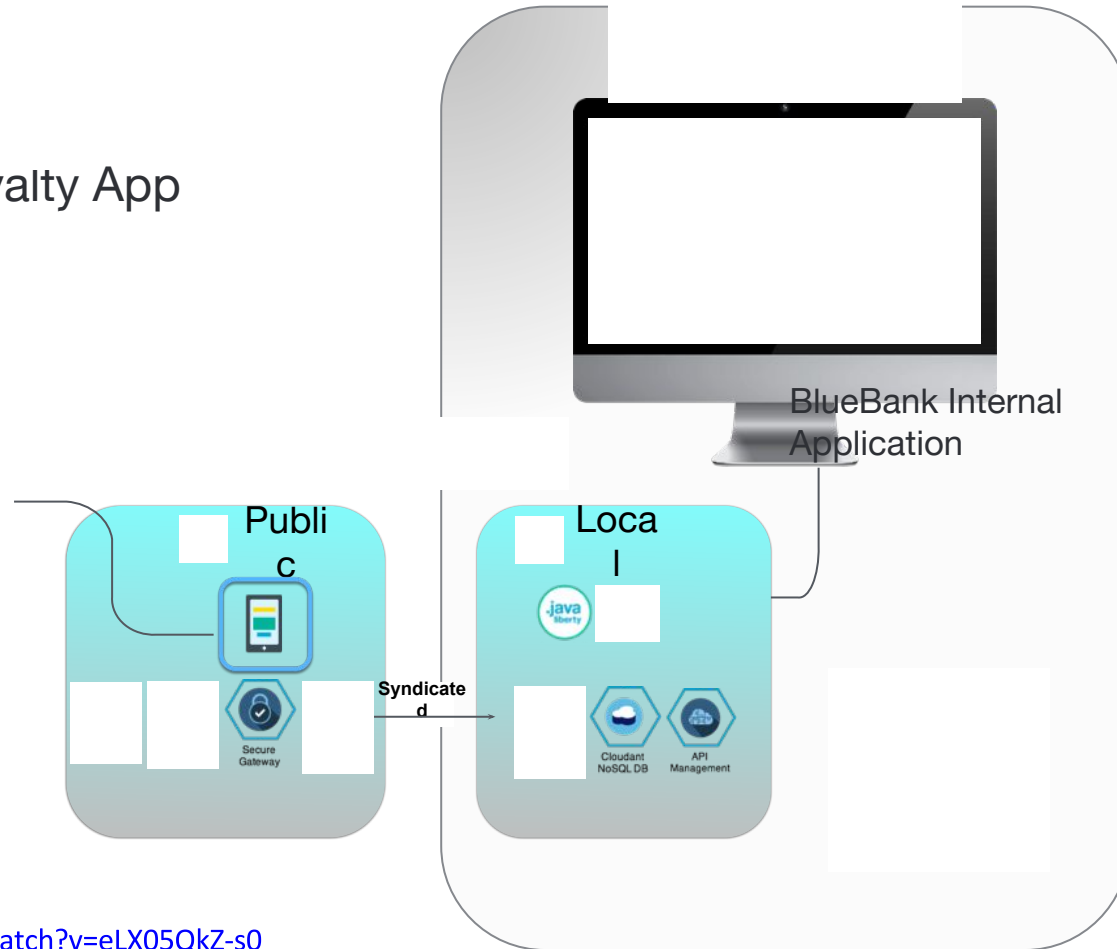- Connect to your own OpenStack infrastructure

click

Let's see it!

Hybrid Customer Example

Customer Loyalty App

BlueBank Internal
Application

Publi
c

Loca
l

Secure
Gateway

**Syndicate
d**

Cloudant
NoSQL DB

API
Management

**Live Demo:** https://www.youtube.com/watch?v=eLX05QkZ-s0

Bluemix is **open**

to set your innovation free

More openness and choice than ever before

Bluemix avoids vendor lock in. You choose how you build, deploy and manage your apps. Bluemix makes the infrastructure available for you.
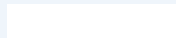
Compute

Choose the level of **infrastructure abstraction** based on your app's architectural needs.
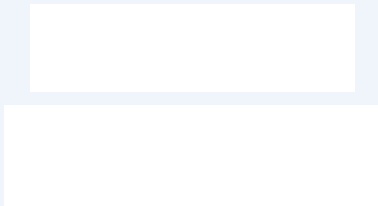
Dev Tooling

From editors, to source code management, to continuous delivery, you can **use Bluemix' powerful tooling** or easily **bring your own**.

Location

Deploy apps to Bluemix **Public** (in a growing number of geos), your own Bluemix **dedicated cloud**, or Bluemix that runs **within your data center (Local*)**.
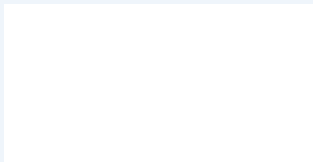
Services

Pick from a catalog of **IBM**, **third party**, **open source**, or **your own** services to extend your apps.
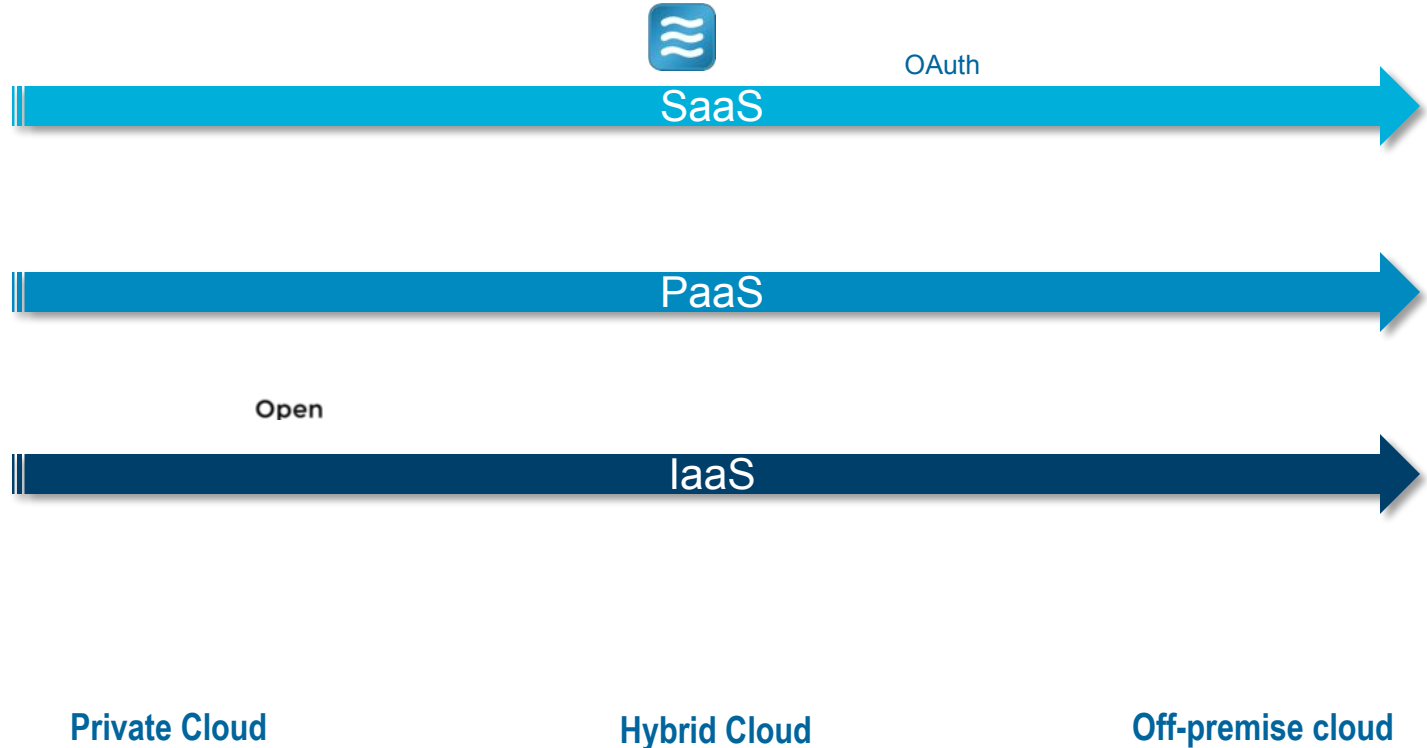
IBM

Third Party

Open Source

Yours

IBM's Cloud is Open By Design

Open technology lynchpins maximize the effectiveness of your Cloud investments

OAuth

SaaS

PaaS

Open

IaaS

Private Cloud

Hybrid Cloud

Off-premise cloud

Bluemix can be **deployed**
for everyone, …..everywhere

2 Years of Bluemix

Evolution based on customer need:
- *More compute choices*
- *Deployment flexibility*
- *Increased support for hybrid scenarios*
- *Deeper foundation services*
- *Further depth of control for IT admins*
- *Improved performance and scale of open source*

Today

Bluemix Local
140+ services

Feb 2015

Virtual Machines
Containers
100+ services

Nov 2014

Bluemix Dedicated
London Region
70 services

June 2014

35 services
New pricing structure

Feb 2014

Public PaaS
5 Services
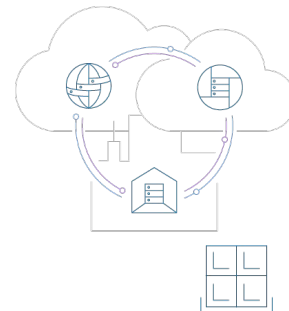
We deliver everywhere, so you can start anywhere

Public

Tap into over 100 IBM and many 3rd party services across mobile, IoT, Watson and more, to power your modern apps and services.

Dedicated

Experience an unmatched combination of security and time to value in a cloud, that feels like a natural extension of your existing network.

Local

Take advantage of the true value of cloud behind your firewall, with the help of our first-of-its-kind approach to private cloud delivery.

A powerful set of hybrid deployment models

Across public, dedicated and local cloud, has the same look and feel

Key experiences unify the platform deployments

A True Seemless Experience

Bluemix – Public Cloud

Bluemix is a multi-tenant, **open-standard**, cloud-based **platform** for **building**, **running, and managing applications.**

Build your apps, your way
Use the most prominent compute technologies to power your app: Cloud Foundry, Docker, OpenStack.

Scale more than just instances
Development, monitoring and logging tools, allow the developer to run and manage the entire application.

Extend apps with services
A catalog of IBM, third party, and open source services, allow the developer to stitch an application together quickly.

Deploy and manage hybrid apps seamlessly
Get a seamless dev and management experience, across a number of hybrid implementations options.

Layered Security
IBM secures the platform and infrastructure and provides you with the tools to secure your apps.

Flexible Pricing
Try compute options and services for free and, when you're ready, pay only for what you use. Pay as you go and subscription models offer choice and flexibility.
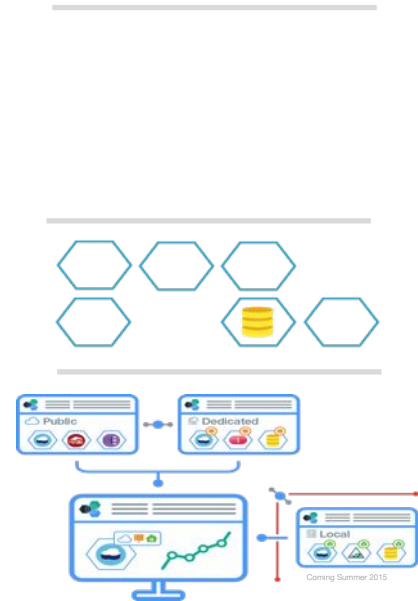
Bluemix – Private Cloud

Bluemix Private Cloud is a single-tenant, **open-standard**, cloud-based **platform** for **building**, **running, and managing applications,** available in a Dedicated or Local implementation.

Bluemix Dedicated

Dedicatd to you
A single tenancy envoirnment that is dedicated to you – allowing you to satisfy regulatory and legal compliance

Focus on your App's – Not Iron
Focus on building customer applications and services. IBM manages the platform and your dedicated services

Global Locations
Bringing you closer to your users with dedicated living in any SoftLayer data center around the globe

Bluemix Local

Deployment Choice
Bluemix Local runs on either VMWare or OpenStack driven infrastructure.

*OpenStack coming soon

Portable Apps & Services
Move workloads as performance requires, or regulations change

We're on call – 24/7
Experts are always at hand to solve your problems. Premium support options are available to meet your requirements

Bluemix offers you choice!

What is the difference between the offerings?

	Public	Dedicated	Local
Tenancy	Multi	Single	Single
Payments	Pay-Go & Subscription	Subscription	Subscription
Infrastructure	IBM Provided	IBM Provided	Customer Provided
Provisioning	Instant	2 weeks*	Customer Dependent
IaaS	Softlayer	Softlayer	Openstack or VMWare
Softlayer	Dallas & London	Any Location	NA
Catalog	Public	Syndicated	Syndicated

*Typically limited by customer network and security configuration

Bluemix provides **services**
for everyone, …..everywhere

A broad range of IBM and 3rd Party Services available

Commerce

Healthcare

Analytics

Watson

Security

Watson on Bluemix

Watson is creating a new partnership between people and computers, that enhances, scales and accelerates human expertise

IBM Watson services available on Bluemix are the building blocks for developers to create the next generation of cognitive applications to transform the way businesses engage with their customers, discover, innovate and make decisions

…build with Watson

IBM Mobile Services

Core App & Platform Services

Core services that just about every App needs

Push
Increase User Engagement with Mobile Push Notifications

Cloudant
The Ultimate Data Store for Mobile Apps

Mobile Client Access
Simplified Mobile App User Authentication

StrongLoop Arc Enterprise Node.js to build, deploy, scale manage and deploy your mobile APIs

App Lifecycle Services

Capabilities to manage the lifecycle of your Apps

Mobile App Server
Manage, secure, and optimize enterprise mobile apps

AppScan Mobile Analyzer
Identify Mobile App Security Exposures

Mobile Quality Assurance
Continuously Improve Mobile User Experience

Contextual Services

Capabilities to enable apps, to make users more productive based on context

Mobile Content Manager
Create, manage, and deliver more relevant in-app content

Presence Insights
Enables Apps with Intelligent Mobile Location Data

Continuous Innovation & Delivery

Fit for the enterprise: The DevOps experience is unified and open across Bluemix compute technologies, delivery methods, and integrated systems.

Internet of Things Foundation

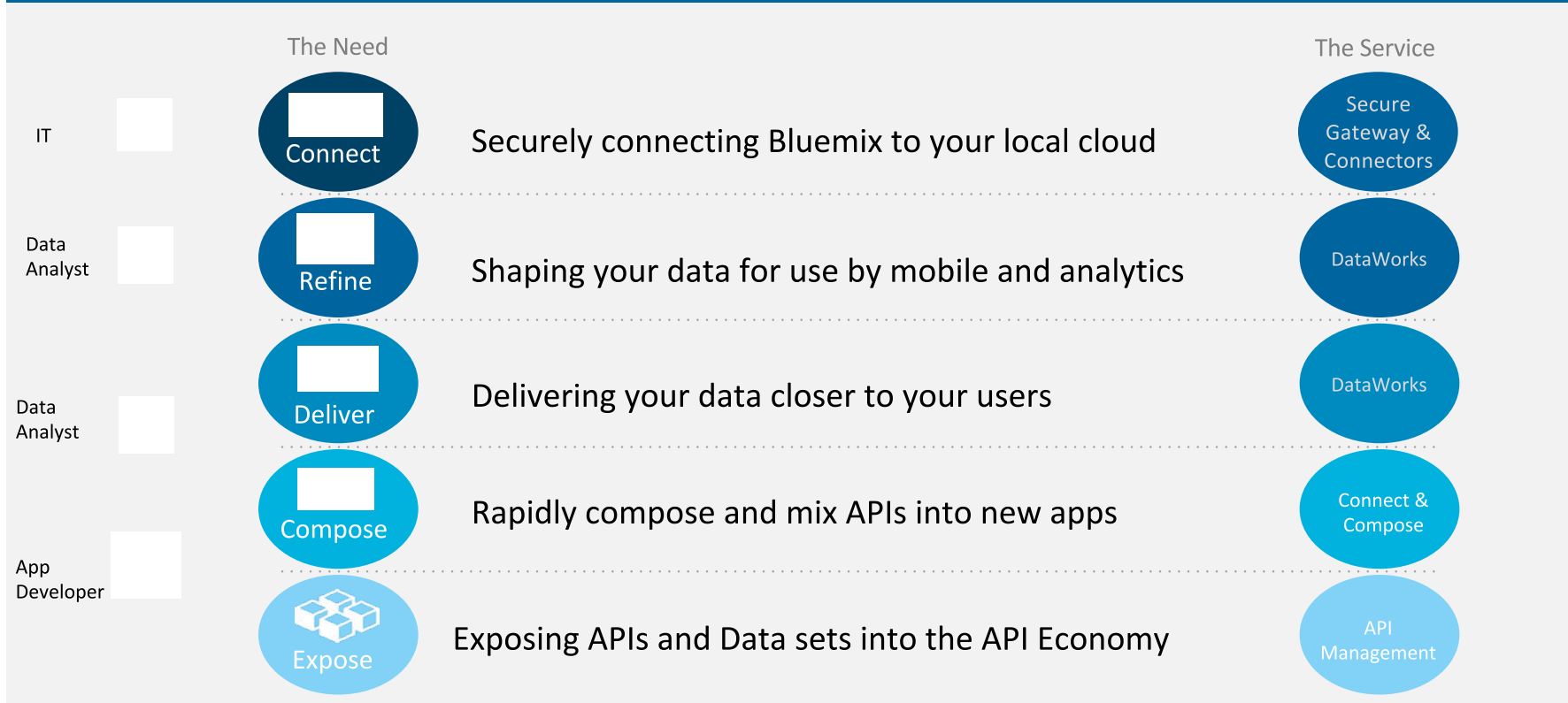Set up and manage your connected devices, so all your app's can access the data

Turn new sources of data into value with IoT

New Patterns of Integration using Bluemix

Hybrid Integration

The Need

The Service

| IT | **Connect** | Securely connecting Bluemix to your local cloud | Secure Gateway & Connectors |
Data Analyst	**Refine**	Shaping your data for use by mobile and analytics	DataWorks
Data Analyst	**Deliver**	Delivering your data closer to your users	DataWorks
App Developer	**Compose**	Rapidly compose and mix APIs into new apps	Connect & Compose
	Expose	Exposing APIs and Data sets into the API Economy	API Management

Secure Gateway - creating a hybrid connection to your on-premises data

Connect

IBM Secure Gateway: Provides secure connectivity from Bluemix to other applications and data sources running on-premise, or in other clouds.

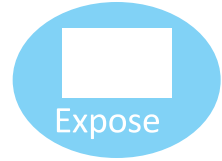**What's unique?**

- Unique passport feature allows for single step download, install, and secure setup of client
- Flexible Gateway topology allows segregation, Load Balancing, and Fault tolerance
- Layered security on the cloud side and client side
- API / SDK for secure connect directly from app
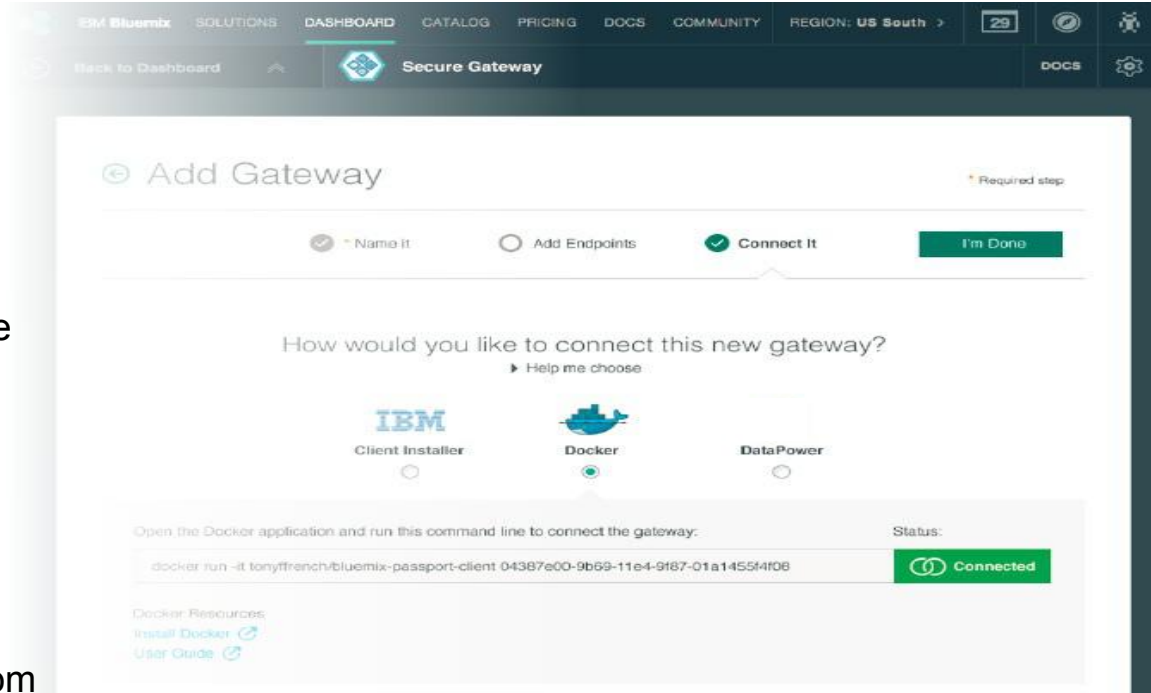
API Management to publish an API to Bluemix for your developers to use as a service

Expose APIs and Data

Expose

IBM API Management: Enterprise API Management experience for all of your Bluemix APIs. Discover APIs from on-premises resources. Secure, layer policy, publish, and manage your APIs.

What's unique?

- Externalize an API from Bluemix to allow secure, governed, monitored usage of your app
- Discover and load APIs to Bluemix from on premise sources like z/OS Connect and an ESB
- Enable partners to innovate on your APIs by publishing into their Bluemix orgs via safe opt-in process

Bluemix will **work**
for everyone

How do you get started?

Sign up in minutes. Pay only for what you use.

Friction free adoption

- **30 day trial (no credit card required)** - Designed to allow testing of an entire application on the platform
- **Free tier for every service** - encourages experimentation using new services with applications already running on Bluemix
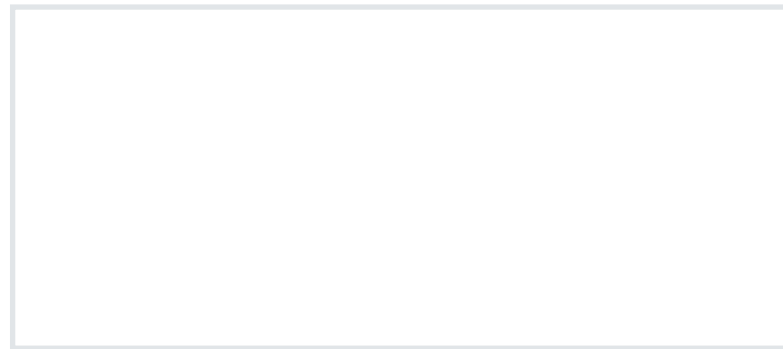
Multiple Commitment Models

- **Pay-as-you-go** - optimized for flexibility, no long term commitment
- **Subscription** - term based and optimized for cost, discounted from pay as you go rates

Self Service

- From zero to coding in **less than 5 minutes**
- **Credit card** supported in many countries - or IBM paper through your IBM rep

Public Pricing Structure

Pay as you go

- **Use case:** Uncertainty around capacity or longevity of the application
- User pays for usage of service metrics in excess of the free tier
- Billed monthly and available via credit card only
- List rates and no discounting is applied: value captured by no commitment and customer flexibility

Subscription

- **Use case**: Heavy use, more predictable workload and multiple concurrent applications per account
- User commits to spend level per period of time for discounts over pay as you go rates on the platform
- Overages charged at pay as you go rates
- Discounting (2x2 matrix)
    - -Duration - 6, 12 and 36 month increments. Automatic and inside sales renewal
    - -Spend on the platform
- Co term will be allowed in order for a customer to increase their spend

Future Considerations

Note: All prices are in USD and are subject to change without notice

A subscription of Bluemix Public is always needed to run both Dedicated and Local Bluemix

Bluemix in **numbers**

so you are never left alone

Bluemix In Numbers

1.5B+   API calls per day

1M   Users since Jan 1

Largest   Cloud Foundry, OpenStack, and Native Container public deployment

180,000+   New Application starts per month

COMPOSE
AN IBM COMPANY