



 Drive Results.

# Developing in the Cloud, for the Cloud, with IBM Bluemix

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**IBM**

**RUC2014**  
Rational User Conference



# App development is about speed and choice



# The app revolution

Fundamentally changing the way we interact with technology.

## Apps are everywhere

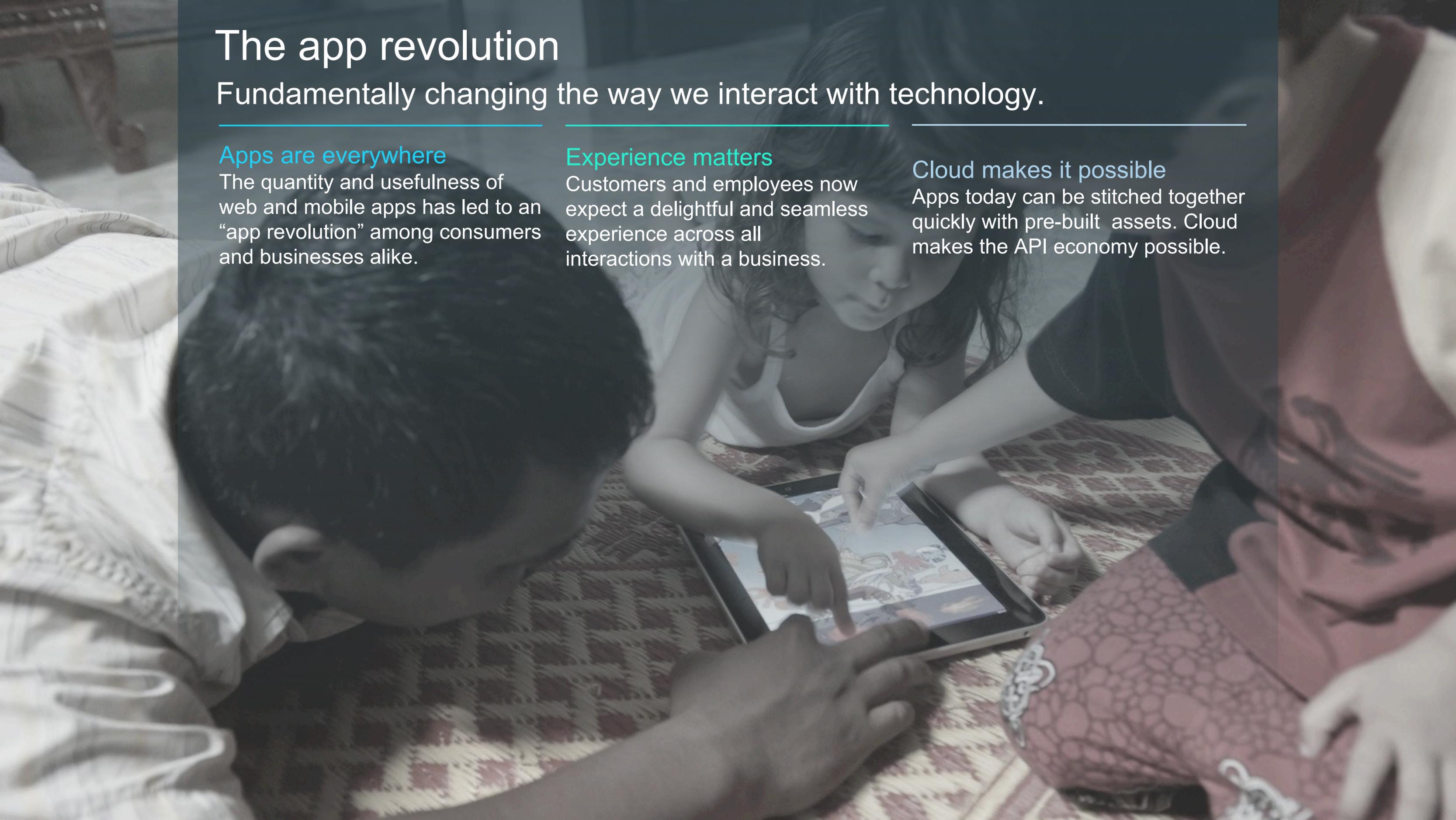
The quantity and usefulness of web and mobile apps has led to an “app revolution” among consumers and businesses alike.

## Experience matters

Customers and employees now expect a delightful and seamless experience across all interactions with a business.

## Cloud makes it possible

Apps today can be stitched together quickly with pre-built assets. Cloud makes the API economy possible.



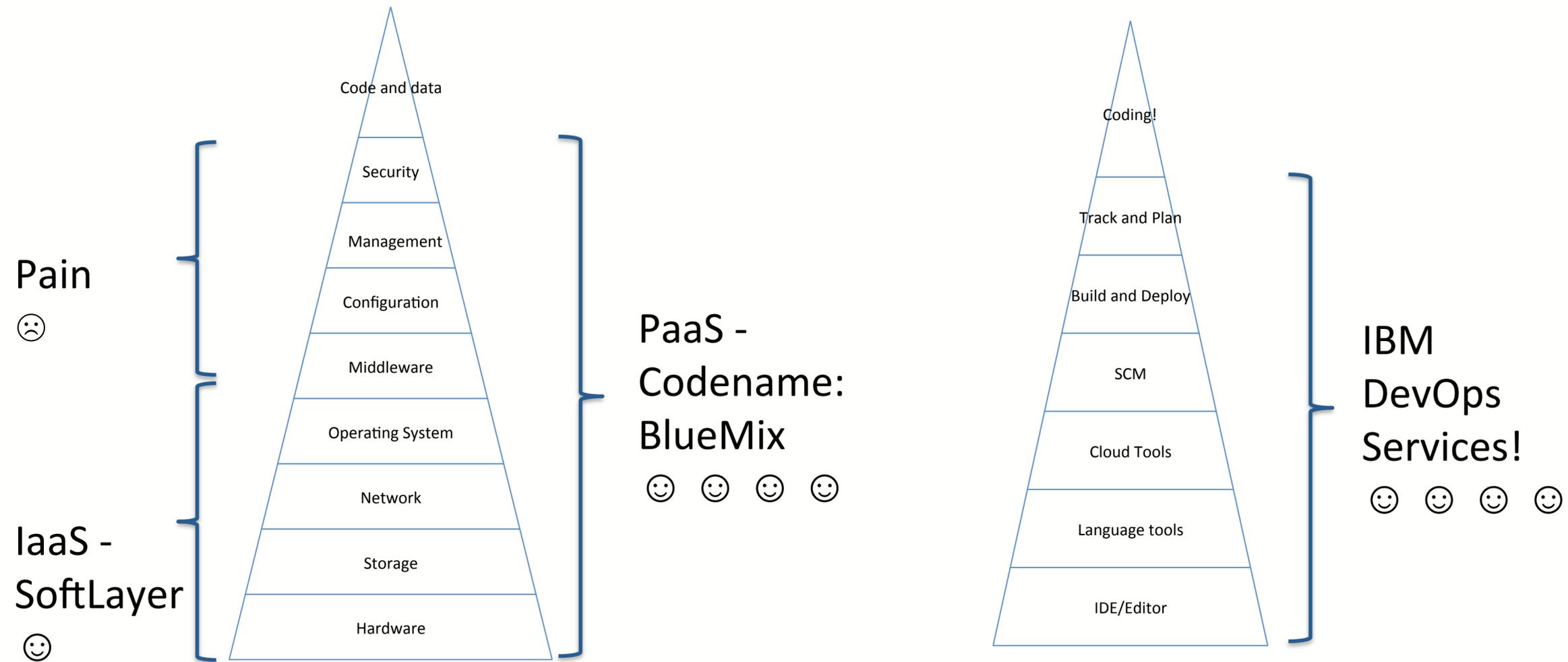


# Cloud Opens Up New Possibilities for Developers

- Access to services that were never available before
- Ability to bring and access the data that you need
- Launch new initiatives to directly engage your clients



# Developing in the Cloud, for the Cloud



Read->Sample code->Fork->run on BlueMix  
in under a minute!



# What is Bluemix?

Bluemix is an open-standard, cloud-based platform for building, managing, and running applications of all types (web, mobile, big data, new smart devices, and so on).



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## Go Live in Seconds

The developer can choose any language runtime or bring their own. Zero to production in one command.

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## DevOps

Development, monitoring, deployment, and logging tools allow the developer to run the entire application.

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## APIs and Services

A catalog of IBM, third party, and open source API services allow the developer to stitch an application together in minutes.

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## Layered Security

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

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## On-Prem Integration

Build hybrid environments. Connect to on-premise assets plus other public and private clouds.

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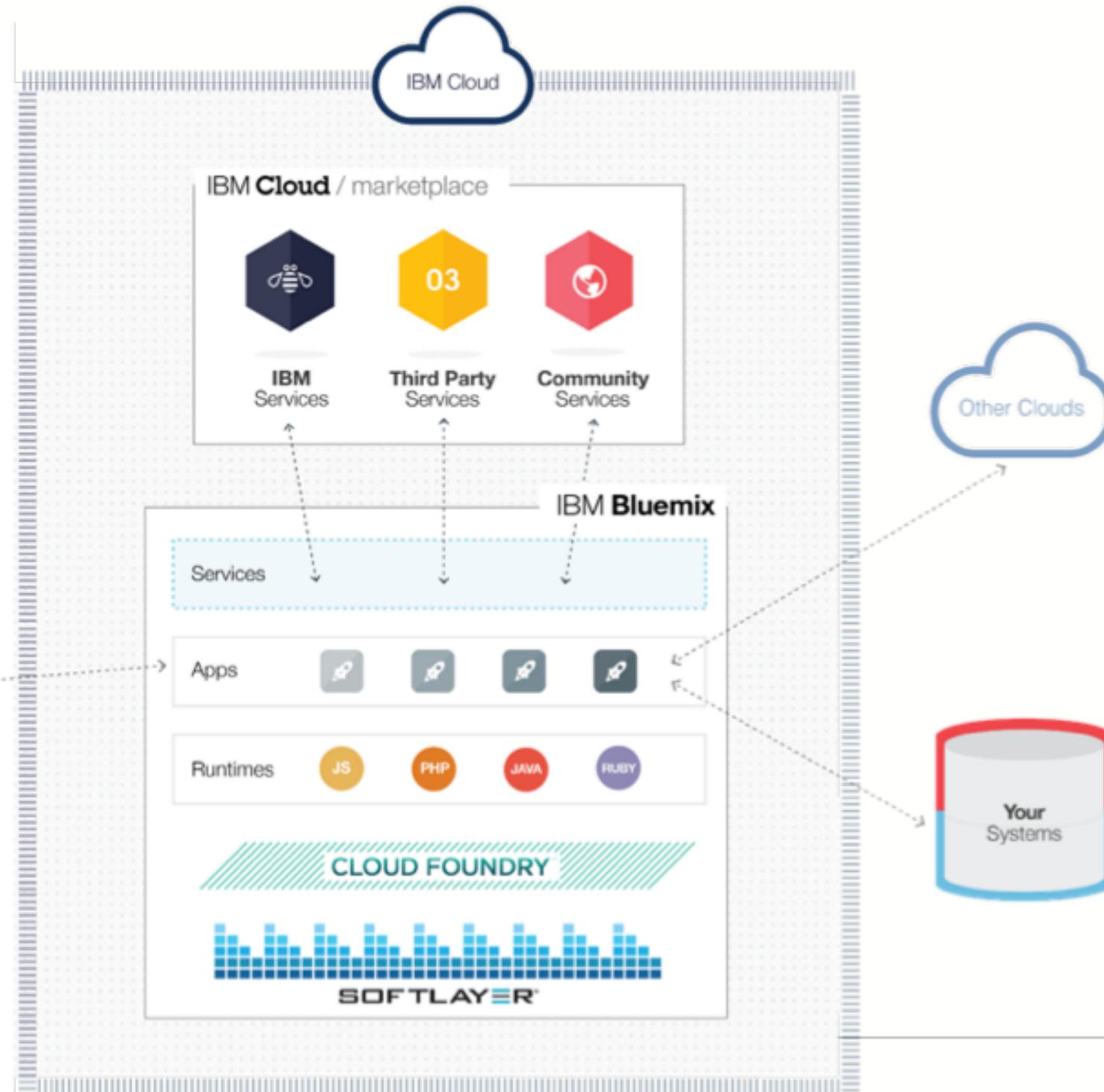
## Flexible Pricing

Sign up in minutes. Pay as you go and subscription models offer choice and flexibility.



# How does Bluemix work?

Bluemix embraces Cloud Foundry as an open source Platform as a Service and extends it with IBM, third party, and community built services.





# Run your apps in seconds

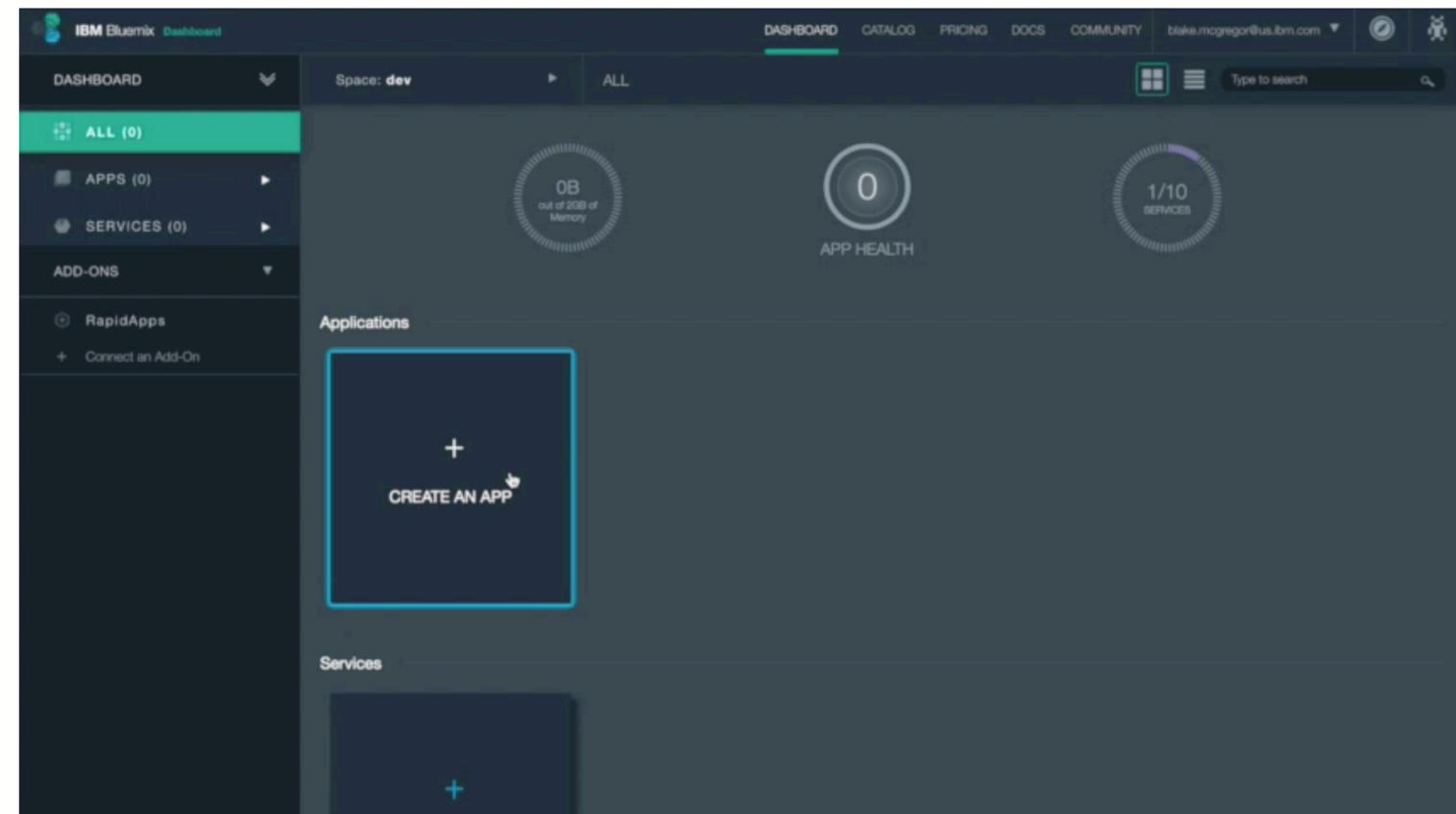
Zero to production in one command. Setup made simple.

## No VM or middleware setup

- Provision runtimes in seconds
- Auto and manual scaling options

## Multiple language support

- Java Liberty, JavaScript, and Ruby provided
- Bring any language from the community







# Build cognition into your apps with Watson

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

- Eight cognitive services
- Available only in Bluemix
- What customers are saying:

|   |   |  |   |
|---|---|--|---|
| <p><b>Concept Expansion</b><br/>Maps euphemisms or colloquial terms to more commonly understood phrases</p> | <p><b>Language Identification</b><br/>Identifies the language in which text is written</p>  | <p><b>Machine Translation</b><br/>Globalize on the fly. Translate text from one language to another</p>                | <p><b>Message Resonance</b><br/>Communicate with people with a style and words that suits them</p>            |
| <p><b>Question and Answer</b><br/>Direct responses to user inquiries fueled by primary document sources</p> | <p><b>Relationship Extraction</b><br/>Intelligently finds relationships between sentence components (nouns, verbs, subjects, objects, etc.)</p> | <p><b>User Modeling</b><br/>Improved understanding of people's preferences to help engage users on their own terms</p> | <p><b>Visualization Rendering</b><br/>Graphical representations of data analysis for easier understanding</p> |



*“we’re able to work with cognitive computing capabilities that **we couldn’t dream of creating ourselves** - it’s a fantastic opportunity and a real **chance to transform our industry**”*



*“...we were able to **quickly and easily embed Watson's capabilities** into our eyeQ insights platform to provide an even **more personalized shopping experience**”*

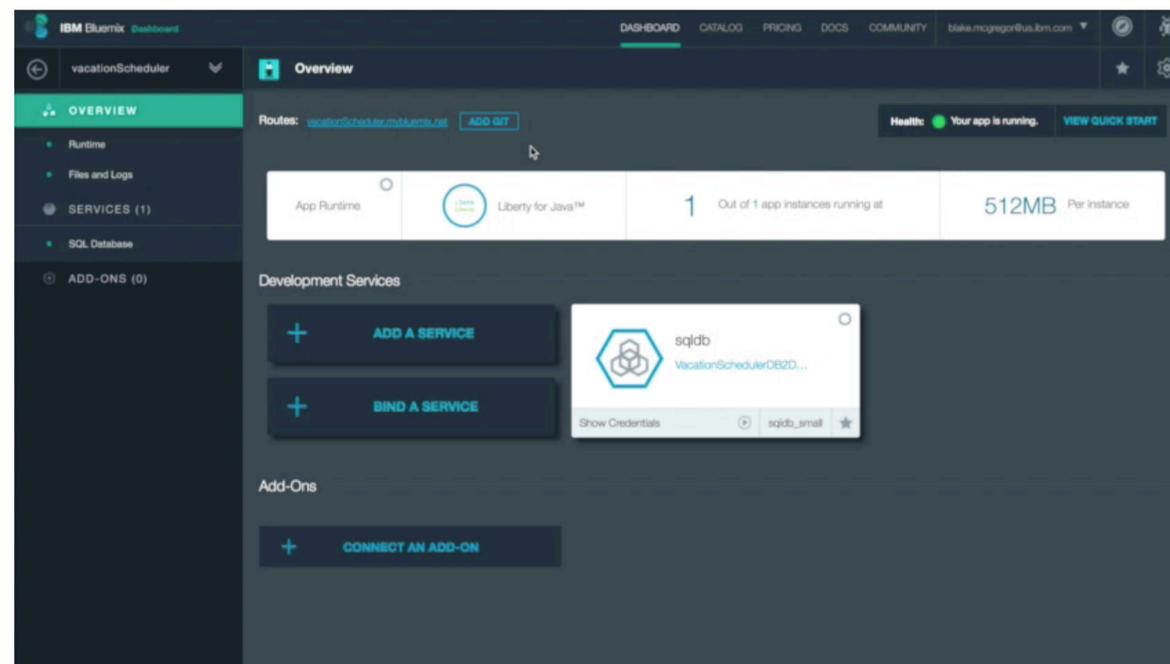


# Pick your own development tooling

Code wherever you work best. Deploy in seconds.

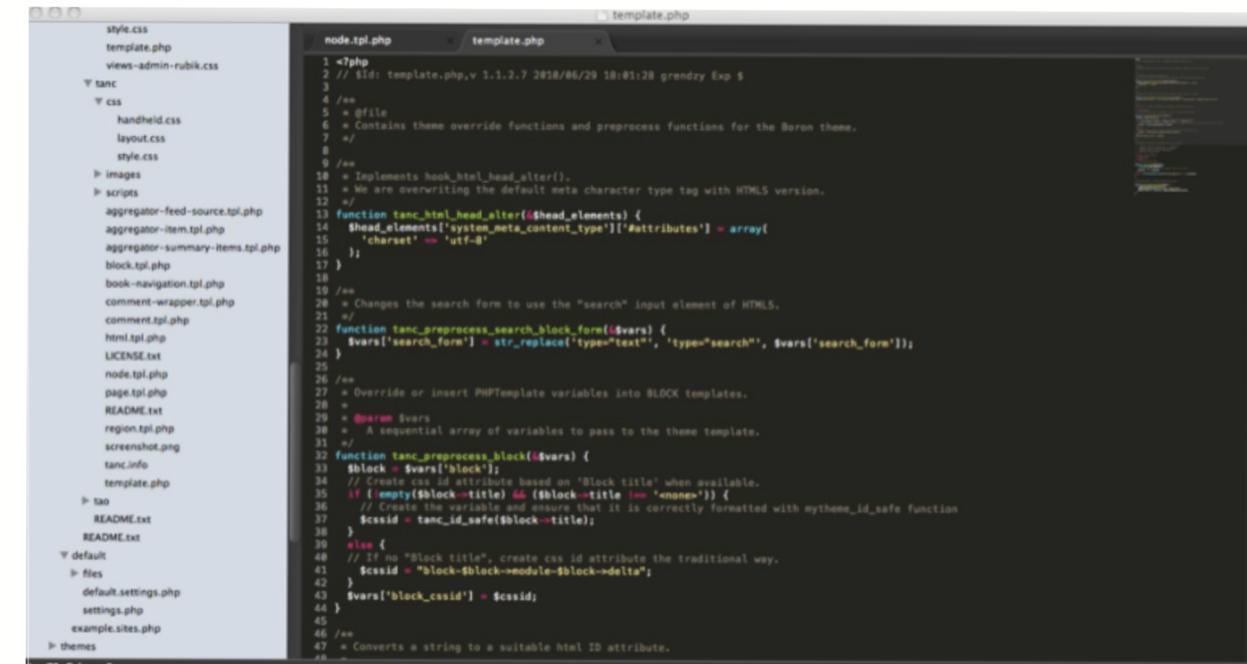
## IBM provided

Fully integrated repository and web editor to deploy directly to Bluemix.



## Use your own

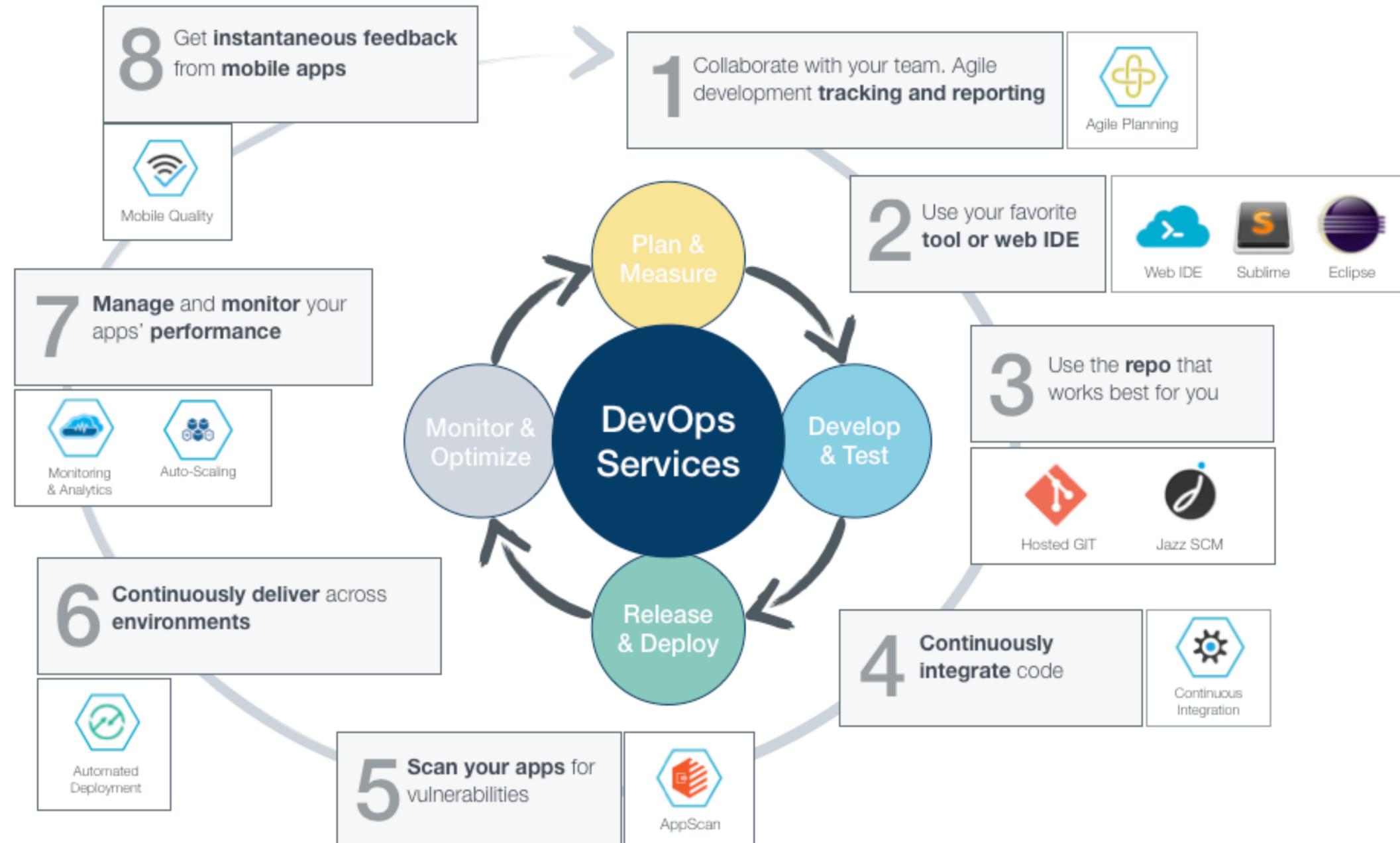
Use your editor (e.g. Sublime, Eclipse) and deploy through the Cloud Foundry command line.





# Tooling that spans the entire app lifecycle

Bluemix doesn't stop at "cf push." It provides a seamless and flexible experience across the entire application lifecycle.





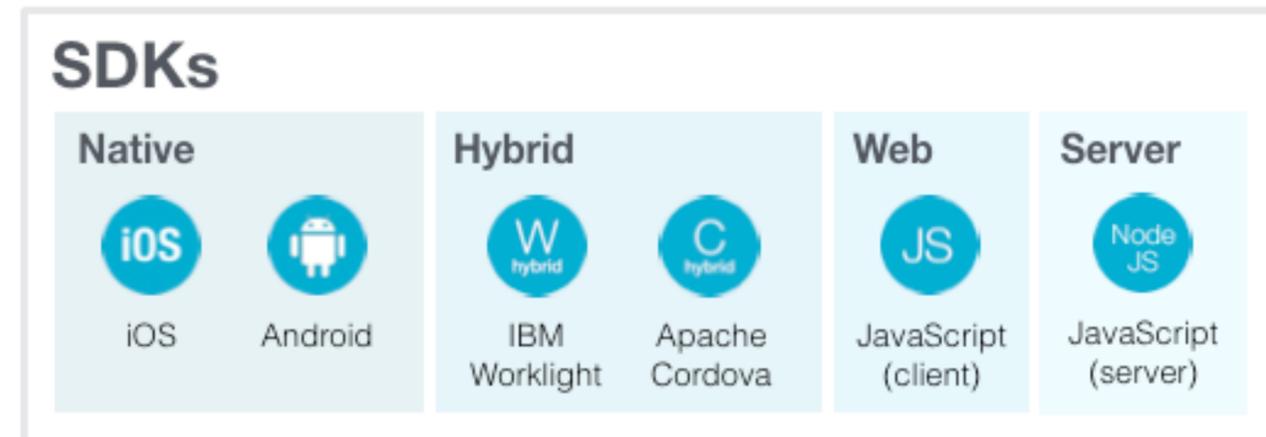
# Mobile development: Easier with Bluemix

Incorporate **pre-built, managed, and scalable** cloud **services** into your mobile applications (**native, hybrid, or web**). Extend even further server-side with Node.js. All of this made easier with **six simple and flexible SDKs**.

Bluemix



Client





# Integrate with your on-premises applications

Securely connect to and leverage data/functionality from your existing systems.



Secure Connector



API from On-Premises



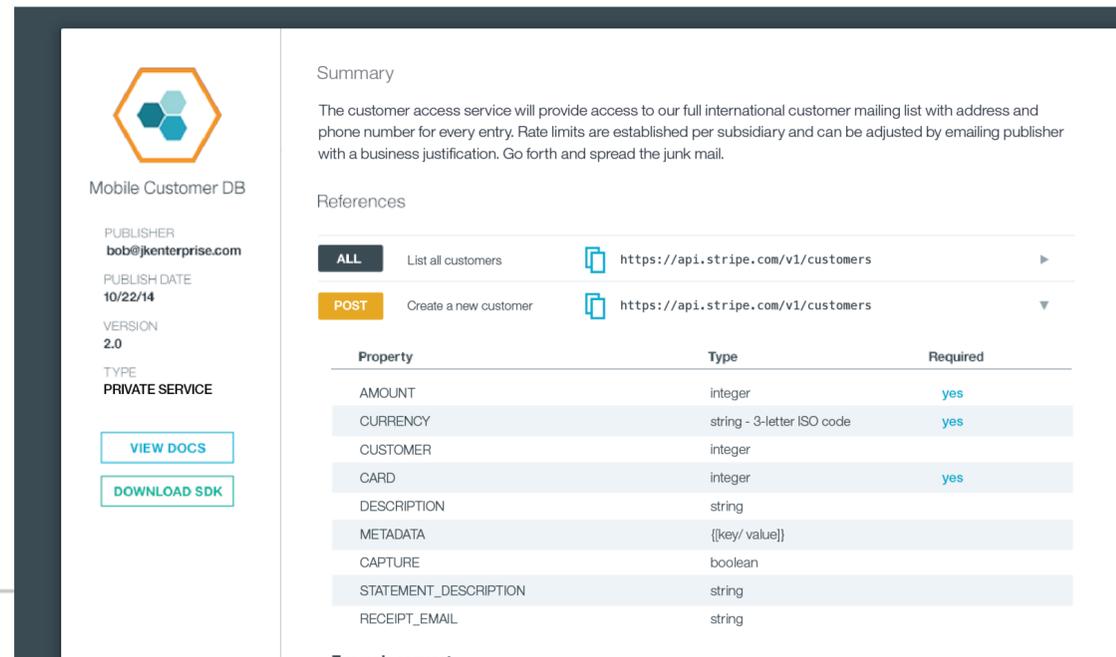
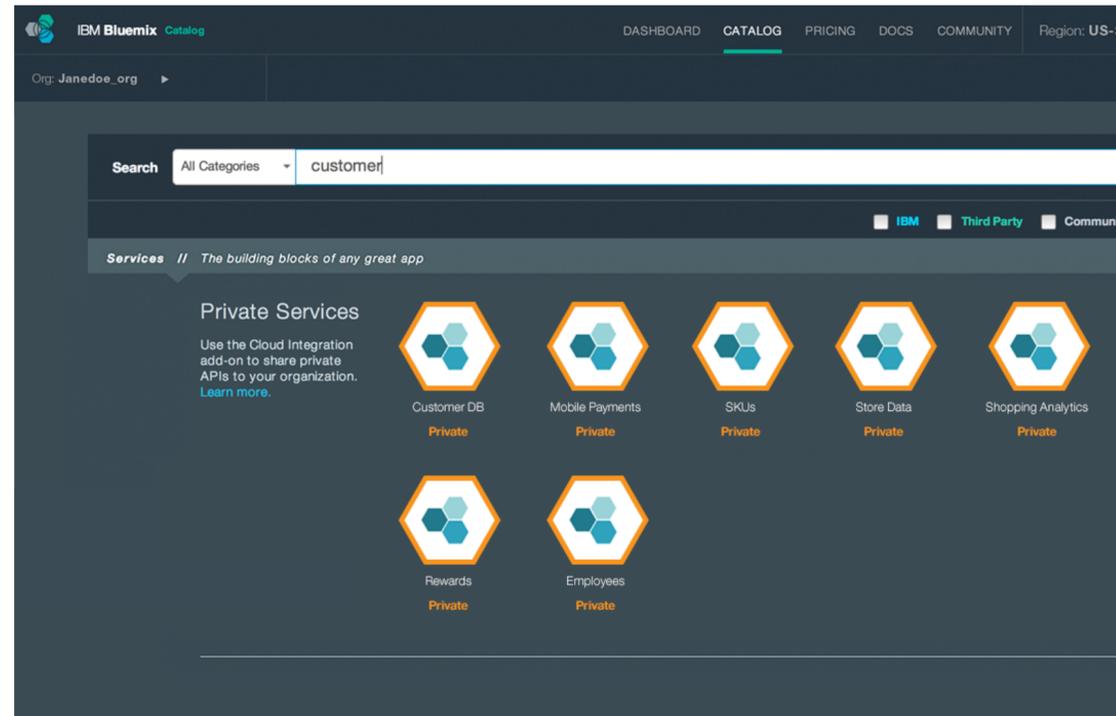
Cast Iron Integration



Embedded Private API Catalog



Data Orchestration (Future)



Mobile Customer DB

PUBLISHER  
bob@kenterprise.com  
PUBLISH DATE  
10/22/14  
VERSION  
2.0  
TYPE  
PRIVATE SERVICE

[VIEW DOCS](#)

[DOWNLOAD SDK](#)

### Summary

The customer access service will provide access to our full international customer mailing list with address and phone number for every entry. Rate limits are established per subsidiary and can be adjusted by emailing publisher with a business justification. Go forth and spread the junk mail.

### References

- ALL** List all customers <https://api.stripe.com/v1/customers>
- POST** Create a new customer <https://api.stripe.com/v1/customers>

| Property              | Type                       | Required |
|-----------------------|----------------------------|----------|
| AMOUNT                | integer                    | yes      |
| CURRENCY              | string - 3-letter ISO code | yes      |
| CUSTOMER              | integer                    |          |
| CARD                  | integer                    | yes      |
| DESCRIPTION           | string                     |          |
| METADATA              | {[key/ value]}             |          |
| CAPTURE               | boolean                    |          |
| STATEMENT_DESCRIPTION | string                     |          |
| RECEIPT_EMAIL         | string                     |          |

Example request



# Getting Started with BlueMix and DevOps Services

## BlueMix

- Start at [bluemix.net](http://bluemix.net)
- Visit the BlueMix dev2dev community at: <http://lbmdw.net/bluemix>
- Browse the samples at [docs/samples](#)
- Use it as a sandbox to learn the new Web technologies:
  - MongoDB/Cloudant(CouchDB) – NoSQL databases
  - Node.js and Express – Javascript server runtimes and frameworks
  - Jade, Angular.js, dust.js Web UI frameworks

## DevOps Services

- Create a git repo for your Bluemix app
- Create a project, join a project, fork one of the samples
- Run a mini-PoC using one of the tutorials
- Use a project to collaborate with IBM or another partner



Sample code - BlueMix dev

Codename: BlueMix x Demo - JazzHub: Software dev... x http://simplese...g.bluemix.net/ x Sample code - BlueMix dev x

https://www.ibmdev.net/bluemix/docs/sample-code/ Google

IBM developerWorks. Sign in dW

Codename: BlueMix Dev DOCS GET HELP FORUM EVENTS BLOG Search

What is Bluemix?  
Getting started  
Articles  
Sample code  
Announcements and known issues

## Sample code

FEATURED

# nodejsandwebpush

Node.js application that incorporates IBM Web Push notifications in a web application. The application simulates content and page changes, returning mobile notifications from the IBM Web Push Campaign manager.

**GET THE CODE**

MORE SAMPLE APPLICATIONS

**MySQL Upload App** **NEW**

Node.js application that uses the MySQL database to help

**PostgreSQL Upload App** **NEW**

Java application that uses the PostgreSQL database to

**CloudTrader**

Java EE application which requires a DB2 service. Compatible with Session



# Host a Bluemix **Hackathon** for your devs

A Bluemix hackathon is an IBM-led two day event (at one of your locations) where your developers come together to harness the power, speed, and flexibility of Bluemix and compete to build awesome applications.



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Create innovative apps  
Your devs want to innovate without boundaries - let them create something incredible and have some fun.

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Guide the vision  
You get to choose the competition "prompt." Meaning you guide the vision of what gets created.

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Learn something new  
We'll bring a Bluemix expert to demo, teach, and enable during the event. Your devs will undoubtedly learn new skills.

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Realize value quickly  
You'll get to judge live, working applications that may deliver real value after two days. Imagine what 10, 30, 60 days would do.

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Compete and get noticed  
Devs love to compete - what's more, they want to impress you. Let them compete to build the best hackathon app.

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The ultimate test  
Who better to test out Bluemix than the people who will end up using it? Let your developers decide.



# Core use cases

What more than 60,000 applications have told us.

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## Web Applications

- Enabling online experiences in the physical store for retail
- Leverages BlueMix for data collection APIs and dashboards
- Reduction of infrastructure setup from days to minutes by moving off of a pure IaaS

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## APIs and On-Prem Integration

- Providing APIs that are integrated into the BlueMix experience
- Leveraging existing on premise databases and technologies
- Building mobile applications that connect to on-prem data via Bluemix

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## Mobile Back Ends

- Back end services replacing custom code hosted on IaaS (e.g. Push Notification)
- Cloud Code for offloading business logic from the mobile client
- Integrated into iOS and Android native applications using Bluemix SDK

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## Analytics and Reporting

- Embed IBM Cognos business intelligence content into apps
- Use IBM Analytics Warehouse to store and analyze business data, fast
- Gain immediate visibility and control over app performance and availability



# Thank you!

\* Come see more Bluemix and DevOps Services at my session later today...