RED HAT
FORUM
Europe, Middle East & Africa

redhat.

xPAAS Track

Menny Tsarfaty
Solution Architect, Manager
Red Hat

Agenda

- xPAAS – Red Hat
- E&M Cloud Offering based on Red Hat Cloud Suite
- Innovation, Not Infrastructure: Google Cloud
- The Enterprise Cloud Overview: Microsoft & Red Hat Partnership
- Live Demo: Red Hat OpenShift Container Platform
- Live Demo: Mobile Application Platform, Red Hat MBaaS

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xPAAS and Container

Menny Tsarfaty
Solution Architect, Manager
Red Hat

Agenda

- Why do we need it
- What does it mean PAAS … And xPAAS
- Red Hat solutions and platform
- Some use cases : Mobile, IoT, DevOps
- Customer use case and value

The market have been changed

A **disruptive innovation** is an innovation that helps **create a new market and value network**, and eventually disrupts an existing market and value network (over a few years or decades), displacing an earlier technology. The term is used in business and technology literature to describe innovations that improve a product or service in ways that the market does not expect, typically first by designing for a different set of consumers in a new market and later by lowering prices in the existing market.

Source: Wikipedia

1.3M Apps for iPhone

160B Emails Daily 97% Spam.

4.3B Google Searches Daily.

90% Texts Read in 3 Minutes.

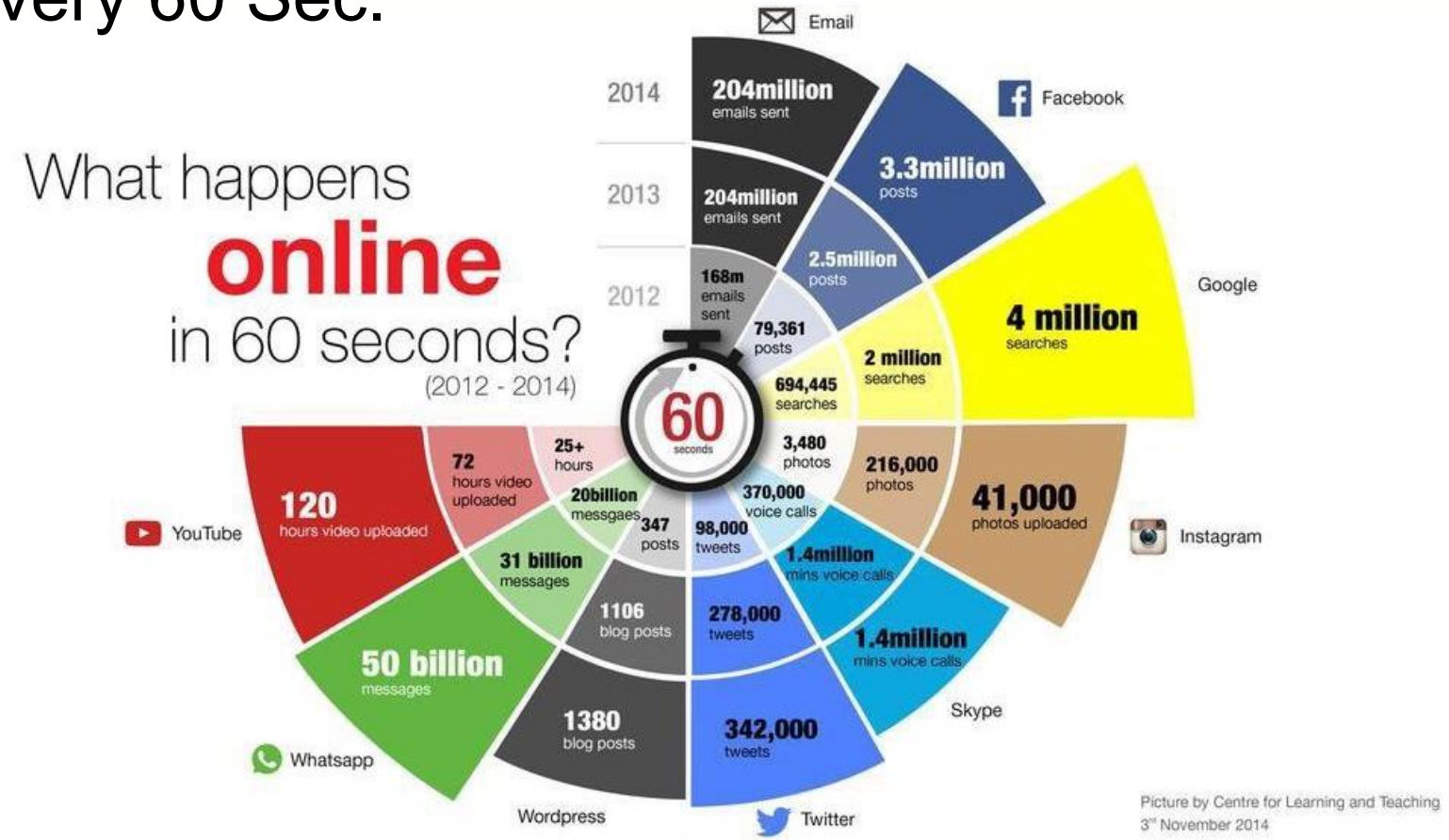
40 Zeta data By 2020

3.9 Devices per Person.

200m Tweets daily

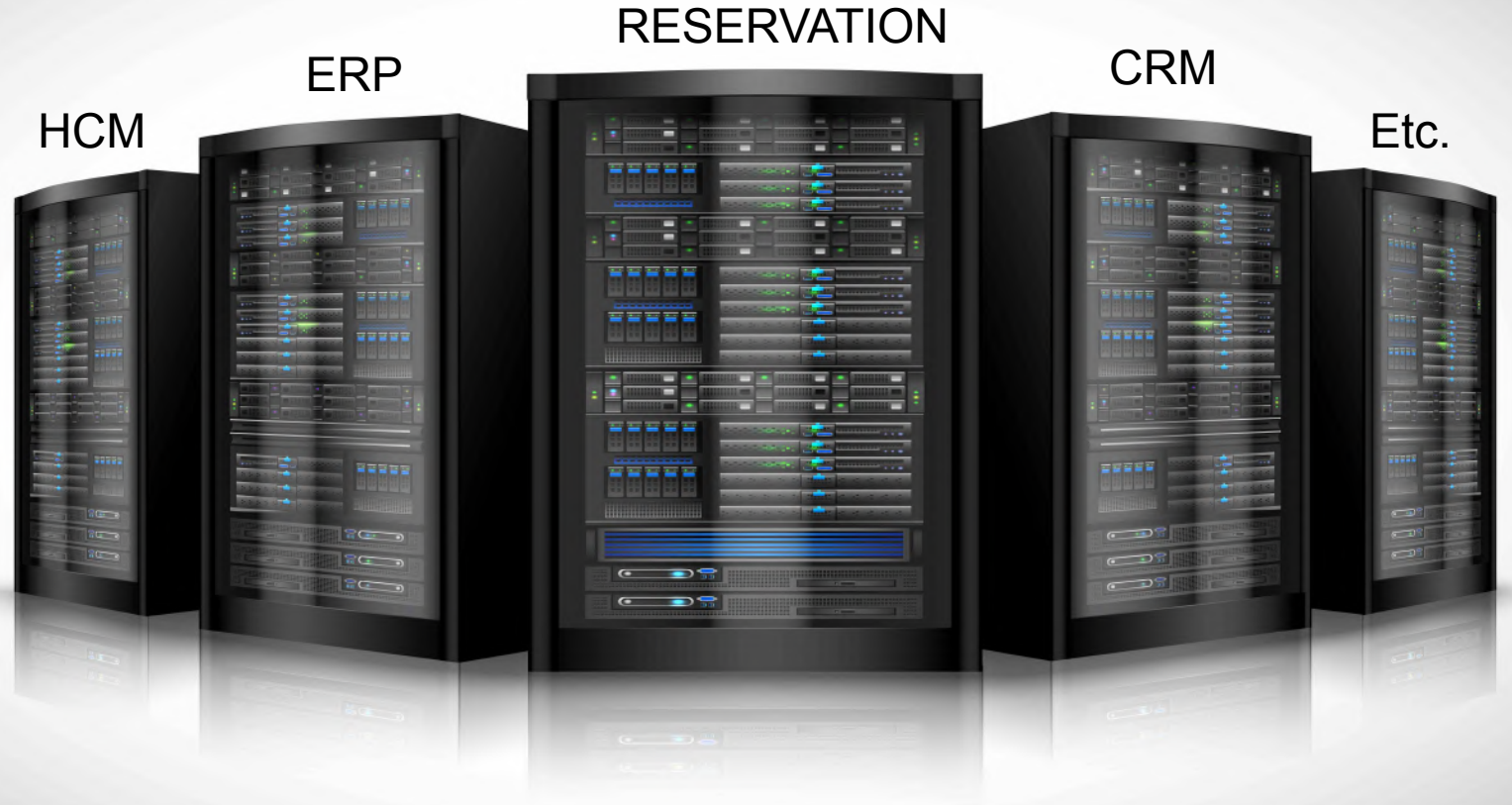
1.1M Apps for Android

Every 60 Sec.


What happens
online
in 60 seconds?
(2012 - 2014)
Email
2014
204million
emails sent
2013
204million
emails sent
2012
168m
emails
sent
Facebook
3.3million
posts
2.5million
posts
79,361
posts
Google
4 million
searches
2 million
searches
694,445
searches
60
seconds
3,480
photos
216,000
photos
41,000
photos uploaded
Instagram
370,000
voice calls
1.4million
mins voice calls
1.4million
mins voice calls
Skype
278,000
tweets
342,000
tweets
Twitter
98,000
tweets
347
posts
1106
blog posts
1380
blog posts
Wordpress
20billion
messgaes
31 billion
messages
25+
hours
72
hours video
uploaded
120
hours video uploaded
YouTube
50 billion
messages
Whatsapp
Picture by Centre for Learning and Teaching
3rd November 2014

Consumerization…

From Systems of Record



To Systems of Engagement

It’s a Changing World

“By 2017, 70% of mobile professionals will conduct work on personal, smart, mobile devices using at least one form of application containment.”
Gartner Nov 2014

From Systems of Record to Systems of Engagement

“39% of all companies and 48% of larger companies are finding it difficult to distribute mobile applications to their workers' devices, and around a half are struggling to apply consistent security policies to their mobile assets.”
Yankee 451 Nov 2014

Emergence of Bimodal or 2-Track IT

SYSTEMS OF RECORD		SYSTEMS OF ENGAGEMENT
Transactional	process	Collaborative
Technology-centric	focus	User-centric
Proprietary	technology	Open
Waterfall	approach	DevOps & Agile
Java & .Net	framework	Polyglot & Lightweight
Physical & Virtual	infrastructure	Cloud
Monolithic	architecture	Microservices
Web	application	Mobile
MODE 1		MODE 2

* Some even argue for tri-modal!!! http://blog.gardeviance.org/2014/11/bimodal-it-is-long-hand-for-snafu.html

PaaS

Platform as a service (**PaaS**) is a category of cloud computing services that

“without the complexity of building and maintaining the infrastructure”

or appliance) inside the firewall, or as software deployed on a public infrastructure as a service.

Gartner - xPAAS

- **Business** innovations demand **agility and event processing** at web scale. New cloud platform

- Business innovations demand **agility and event processing** at web scale. New cloud platform technologies are meeting this challenge, but IT lacks the skills or policies to adopt them.

embedded in SaaS and other offerings — all have an increasing role in cloud architecture.

Leader in integration solutions

FORRESTER

Figure 6 Forrester Wave™: Hybrid² Integration: Deep Integration, Q1 '14

Red Hat leader in 3 categories:

- ✓ Deep Integration
- ✓ Cloud Integration
- ✓ Internet of Things (IoT)

This leadership position is reflective of all JBoss Integration Technologies:

- ✓ JBoss Fuse
- ✓ JBoss A-MQ
- ✓ JBoss Data Virtualization

On A Macro Level

Platform Companies

Marshall Van Alstyne
Boston University & MIT

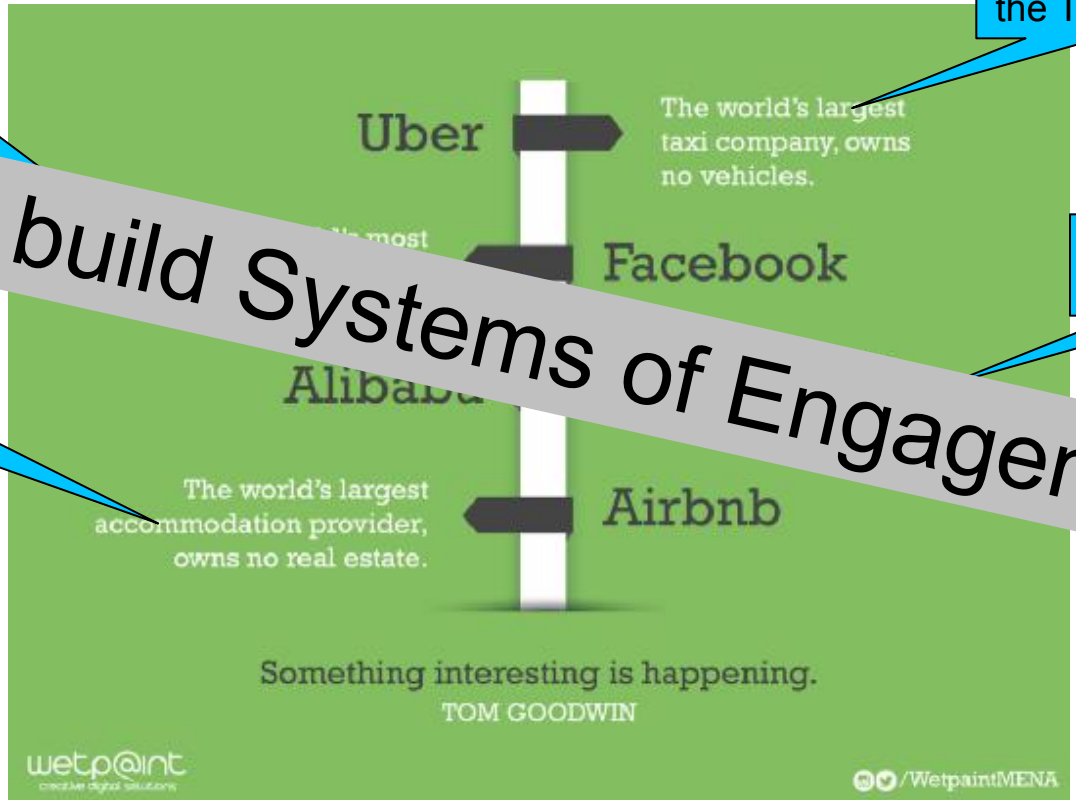
Lets talk on this companies …….

They don't own the Taxi

They don't Own/Write the Co

They don't own the Goods

They don't own the Rooms



They build Systems of Engagement

Lets talk Red Hat

xPAAS

- ✓ API Management Services (apiPaaS)
- ✓ Application Development Services (adPaaS)
- ✓ Application Platform Services (aPaaS)
- ✓ Business Analytics Platform Services (baPaaS)
- ✓ Business Process Management Services (bpmPaaS)
- ✓ Business Rule Platform Services (brPaaS)
- ✓ Database Platform Services (dbPaaS)
- ✓ Data Broker Platform Services (dbrPaaS)
- ✓ Event-Processing Services (epPaaS)
- ✓ Function Platform Services (fPaaS)
- ✓ Enterprise Horizontal Portal Services (Portal PaaS)
- ✓ In-Memory Data Grid Services (imdgPaaS)
- ✓ Integration Platform Services (iPaaS)
- ✓ Internet of Things Platform Services (IoTPaaS)
- ✓ Managed File Transfer Services (mftPaaS)
- ✓ Master Data Management Services (mdmPaaS)
- ✓ Message-Oriented Middleware Services (momPaaS)
- ✓ Mobile Back-End Platform Services (mbPaaS)

3scale

RED HAT OPENSHIFT

FEEDHENRY

RED HAT MOBILE

RED HAT®
OPENSHIFT

PAAS lets you accelerate app delivery

Craftwork

Physical

How to Build an App:

1. Have Idea
2. Get Budget
3. Submit hardware acquisition request
4. Wait
5. Get Hardware
6. Rack and Stack Hardware
7. Install Operating System
8. Install Operating System Patches
9. Create user Accounts
10. Deploy framework/appserver
11. Deploy testing tools
12. **Code**
13. Test
14. Buy and configure Prod servers
15. Push to Prod
16. Launch
17. Order more servers to meet demand
18. Wait…
19. Deploy new servers
20. Etc.

Virtualized

How to Build an App:

1. Have Idea
2. Get Budget
3. Submit VM Request request
4. Wait
5. Deploy framework/appserver
6. Deploy testing tools
7. **Code**
8. Test
9. Configure Prod VMs
10. Push to Prod
11. Launch
12. Request VMs to meet demand
13. Wait
14. Deploy app to new VMs
15. Etc.

Assembly Line

With PaaS

How to Build an App:

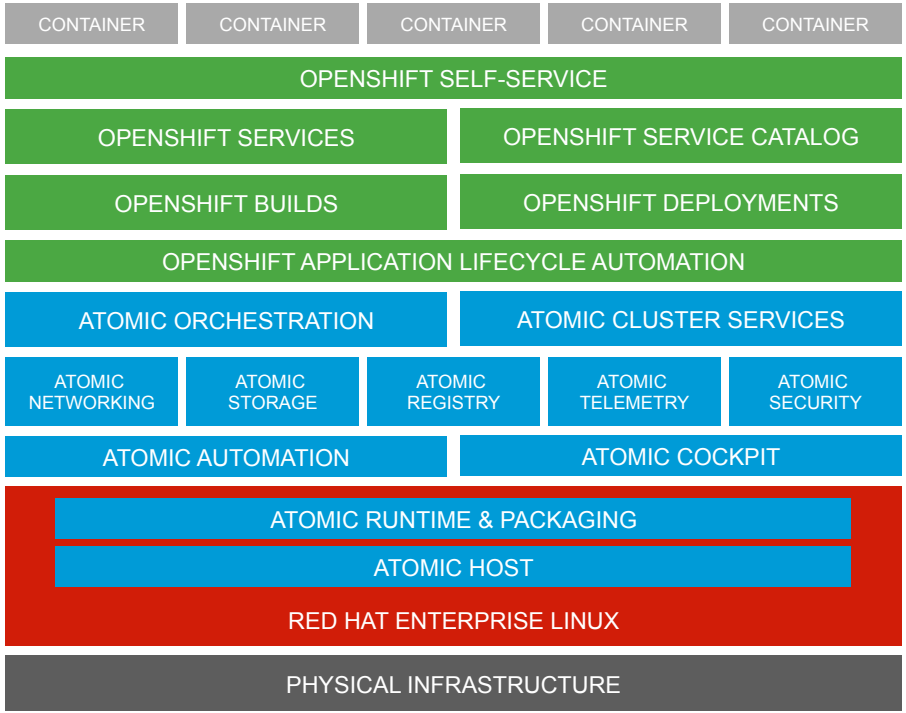
1. **Have Idea**
2. **Get Budget**
3. **Code**
4. **Test**
5. **Launch**
6. **Automatically Scale**

An integrated PaaS solution

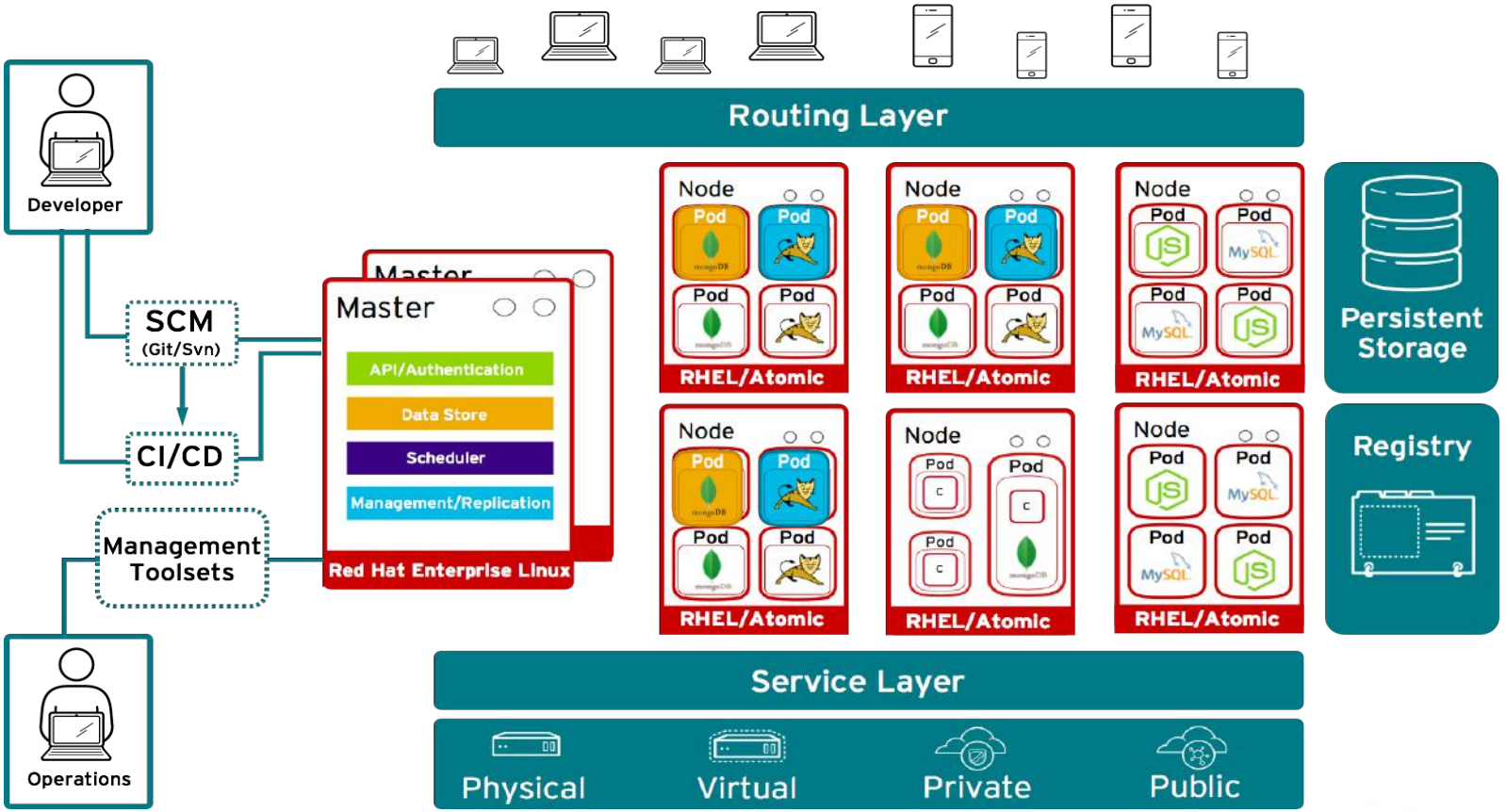
Container based PaaS combine engine & orchestration to provide high level end-user value.

- **Enterprise-grade user management**
  - Authentication / Quotas
  - Multi-User Collaboration
  - **Self Service portal**
  - CLI / Web UI / API
- **Developer oriented**
  - Build Automation & **Source-to-Image**
  - Manage release cycles
  - Integration with **Existing CI & Build Systems**
  - Deployment Automation & Regions / Zones
- **On demand Infrastructure service**
  - SSL Termination
  - Load balancer / SGBD / Etc

OpenShift 3

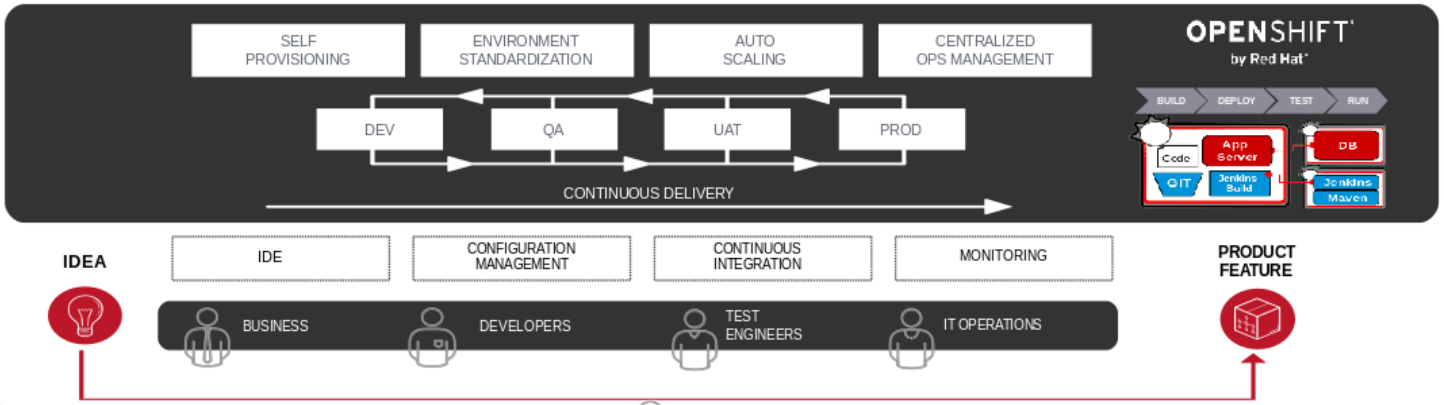

CONTAINER
CONTAINER
CONTAINER
CONTAINER
CONTAINER
OPENSHIFT SELF-SERVICE
OPENSHIFT SERVICES
OPENSHIFT SERVICE CATALOG
OPENSHIFT BUILDS
OPENSHIFT DEPLOYMENTS
OPENSHIFT APPLICATION LIFECYCLE AUTOMATION
ATOMIC ORCHESTRATION
ATOMIC CLUSTER SERVICES
ATOMIC NETWORKING
ATOMIC STORAGE
ATOMIC REGISTRY
ATOMIC TELEMETRY
ATOMIC SECURITY
ATOMIC AUTOMATION
ATOMIC COCKPIT
ATOMIC RUNTIME & PACKAGING
ATOMIC HOST
RED HAT ENTERPRISE LINUX
PHYSICAL INFRASTRUCTURE

Developers, Testers access OpenShift via web, CLI or IDE



OpenShift value proposition

Bring Continuous Delivery to increase go-to market



Developers & Test engineers

- Self-service
- Simplified process for new environment
- Don't care about underlying infrastructure
- CI capabilities
- Standardized deployments

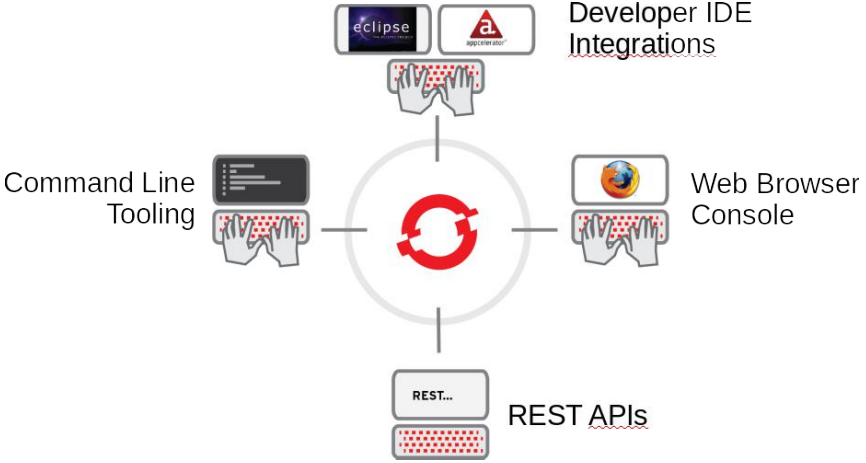
IT operations

- Standardized & Automated platform
- Maximized resources utilization
- Automated scalability & elasticity
- Supported software
- Secured-multitenancy deployments
- Unified management

Business & Management

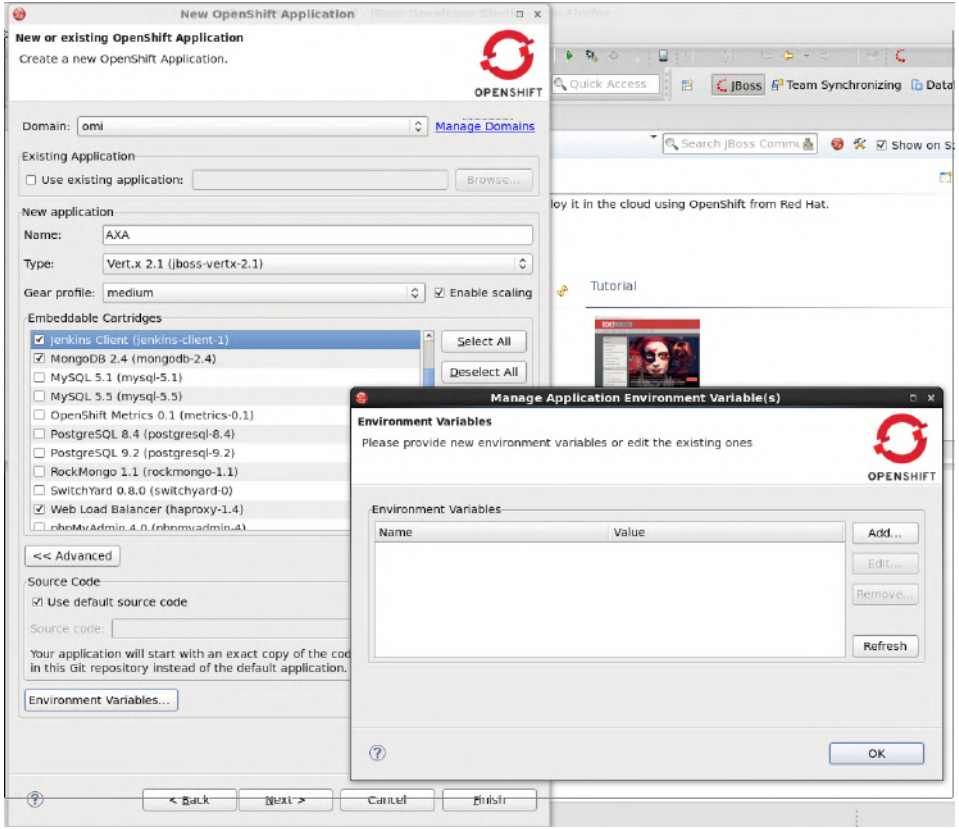
- Faster go to Market
- Reduced costs
- Pay as you go
- Charge-back
- Quality of Service

Use best suited tool to develop and manage your applications



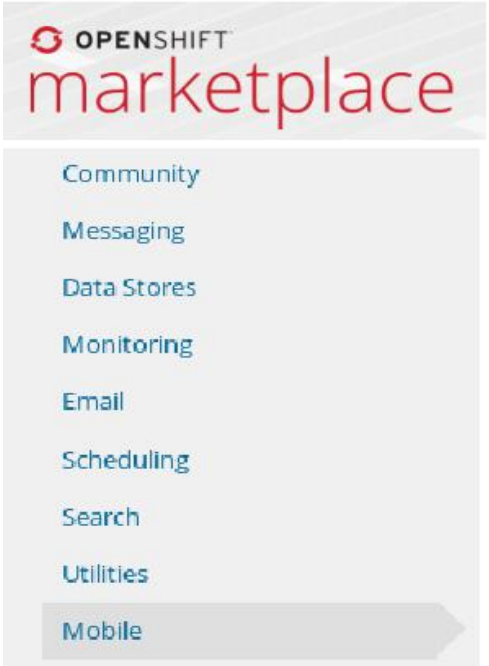
 # Create App
$ rhc app create -a javasample -t jbossas-7

 # Add MongoDB
$ rhc app cartridge add -a javasample –c mongodb-2.0



PaaS extensibility with large 3rd Party ecosystem

Bring the best of community and partners software and tools in OpenShift marketplace



VERT.X

Vert.x
High performance application platform for the JVM.

Enables you to write scalable , asynchronous, web enabled applications in Java, JavaScript, CoffeeScript, Ruby, Python or Groovy Learn More

Searchly Elasticsearch
Search Made Simple. Powered-by Elasticsearch

Search Made Simple - Powered By Elasticsearch Learn More

BlazeMeter
The JMeter Load Testing Cloud

BlazeMeter is a self-service, web and mobile load testing platform (PaaS) providing developers an enterprise grade, out-of-the-box load testing solution. 100% compatible with Apache JMeter™. Learn More

Memcached Cloud
Enterprise-Class Memcached for Developers

A fully-managed cloud service for hosting and running your Memcached in a reliable and fail-safe manner. Learn More

AppDynamics
The world's best application monitoring for web and mobile applications.

If your business runs on software, Application Intelligence is for you. Get real-time insight from your applications—how they're being used, how they're performing, where they need help. This is true Application Intelligence for your digital business. The world's best monitoring for web and mobile applications. Learn More

And many more....

API Management

Creating & exposing APIs is the tip of the iceberg

Metering and Billing

Security & Authentication

Documentation Portal

Scalability & Policies

Monitoring

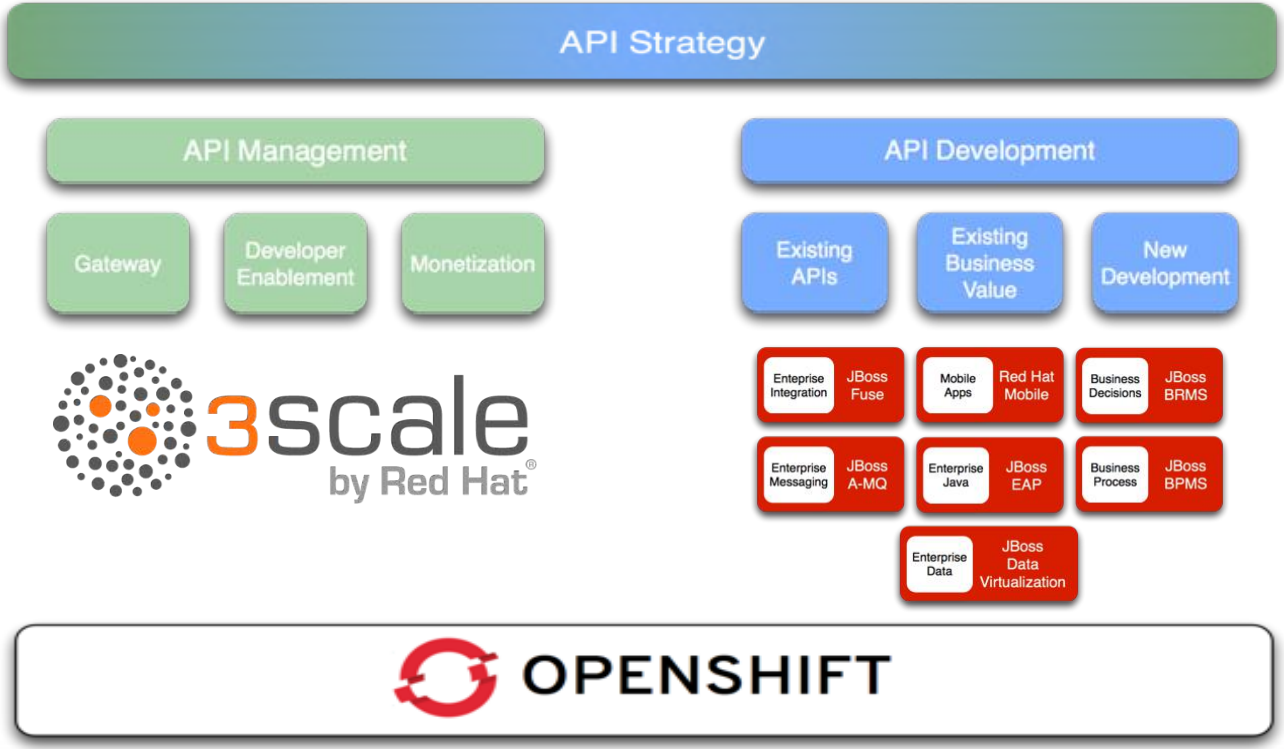
Version Control

Lifecycle Management

Provisioning & Alerts

Testing

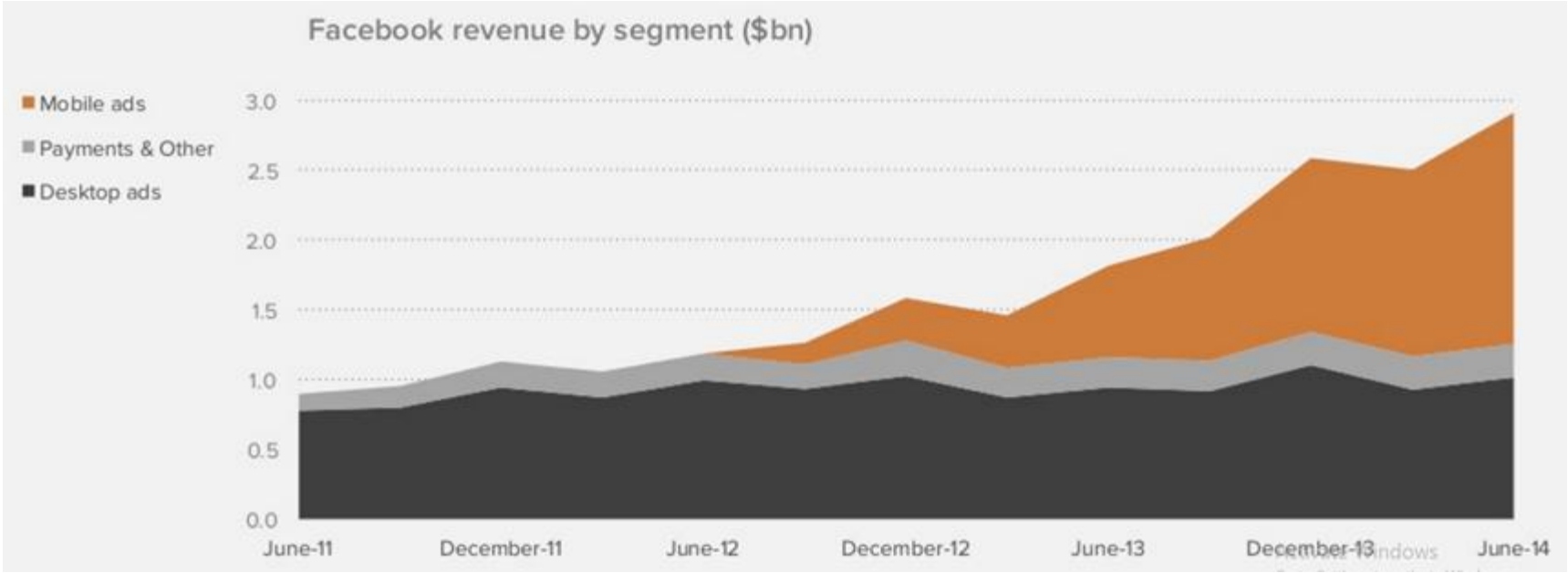
Building an API Strategy with Red Hat 3scale



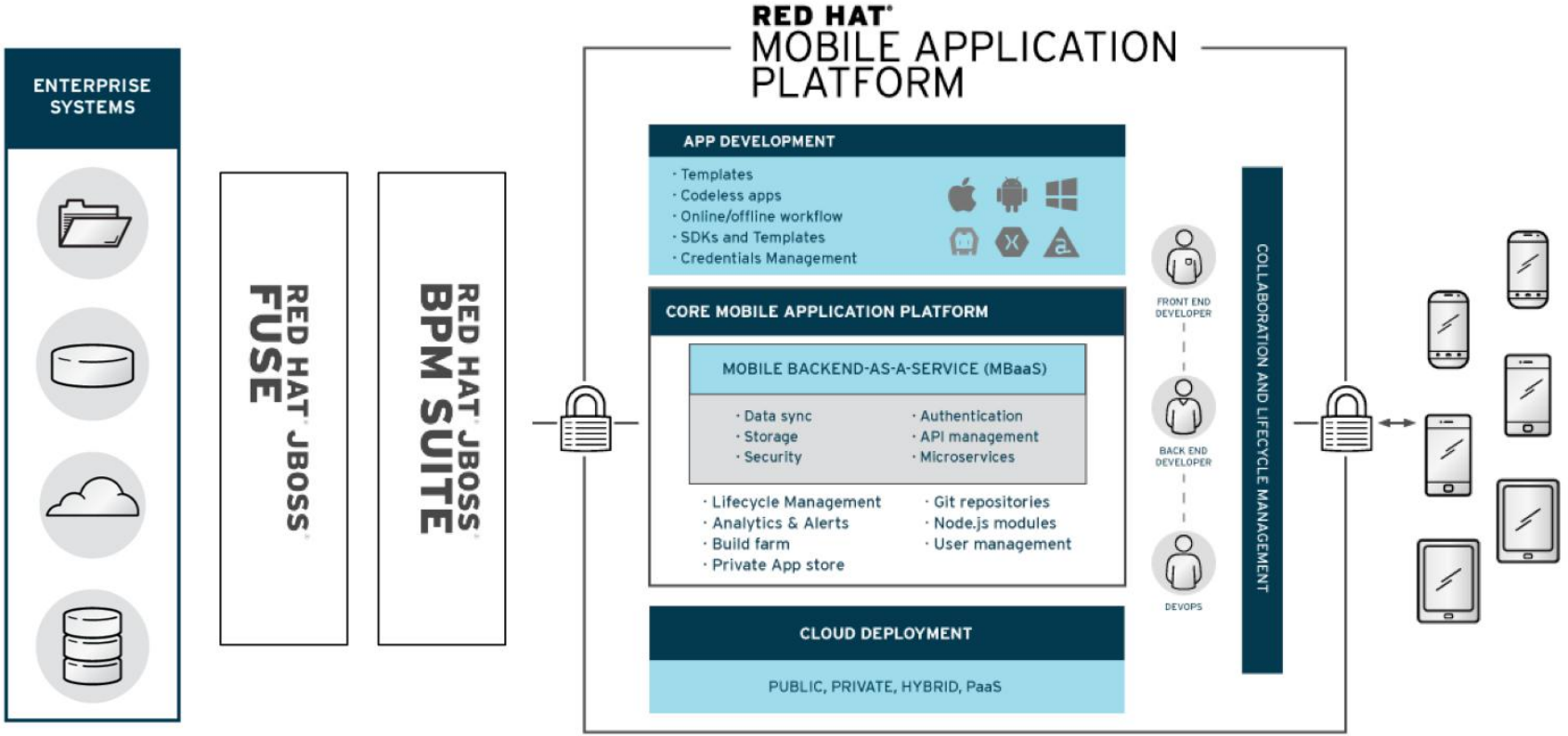
FEEDHENRY™

RED HAT®
MOBILE

Facebook Doubled the Mobile Ad. Revenue

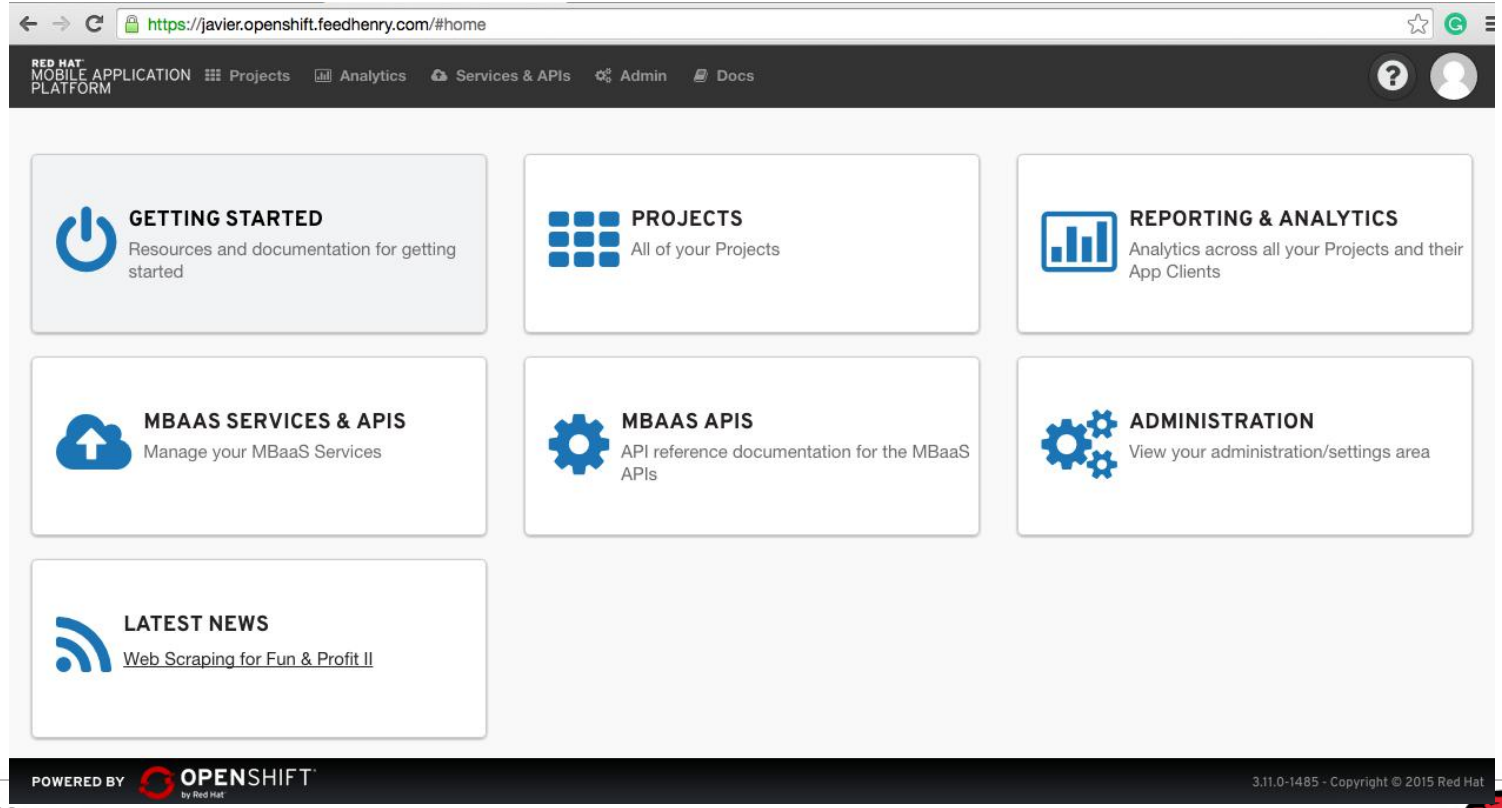


Red Hat MAP


ENTERPRISE SYSTEMS
RED HAT JBOSS FUSE
RED HAT JBOSS BPM SUITE
RED HAT MOBILE APPLICATION PLATFORM
APP DEVELOPMENT
· Templates
· Codeless apps
· Online/offline workflow
· SDKs and Templates
· Credentials Management
CORE MOBILE APPLICATION PLATFORM
MOBILE BACKEND-AS-A-SERVICE (MBaaS)
· Data sync
· Storage
· Security
· Authentication
· API management
· Microservices
· Lifecycle Management
· Analytics & Alerts
· Build farm
· Private App store
· Git repositories
· Node.js modules
· User management
CLOUD DEPLOYMENT
PUBLIC, PRIVATE, HYBRID, PaaS
FRONT END DEVELOPER
BACK END DEVELOPER
DEVOPS
COLLABORATION AND LIFECYCLE MANAGEMENT

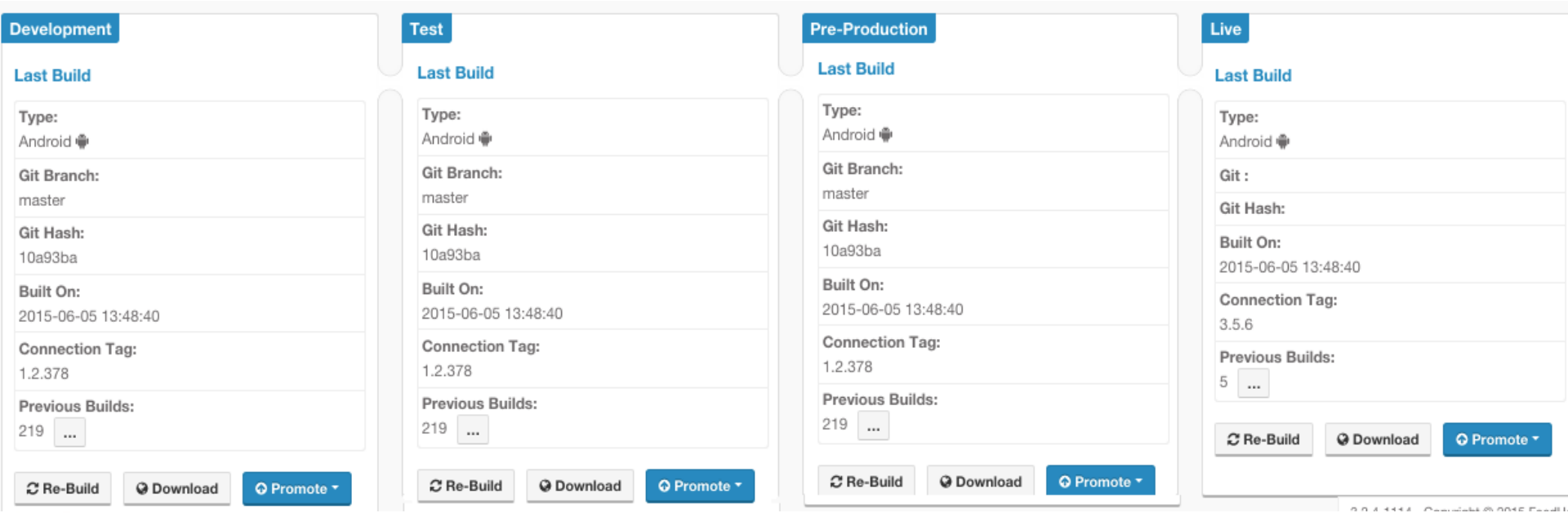
Access to Developers

MBaaS hosted on OpenShift Online



Application Lifecycle Management

Provides the ability to define a set of software environments e.g. Dev, Test, Pre-Production, Production. Enables DevOps processes in a mobile context



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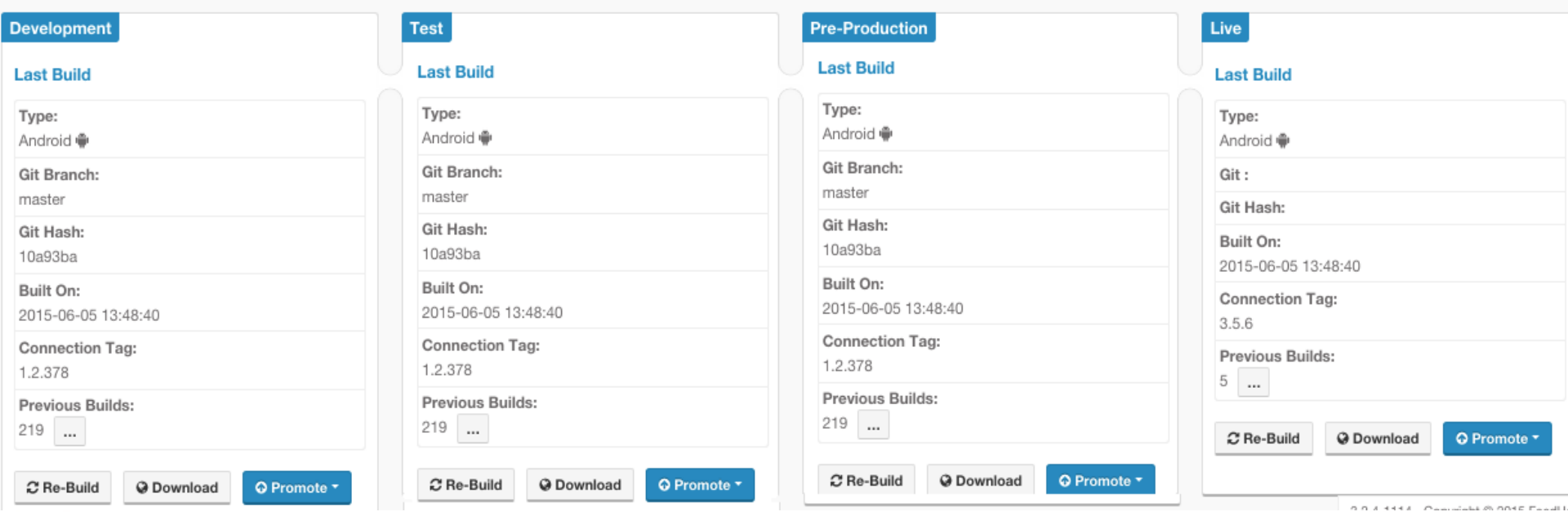
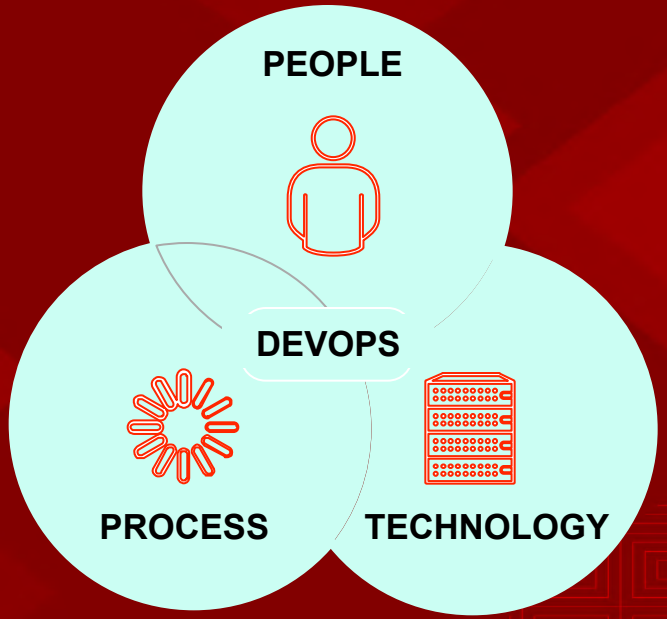


redhat.

Project – How to do it



How Red Hat consulting accelerates DevOps

Red Hat Consulting in OpenShift Container Platform, Ansible, CloudForms and Other Cloud Automation Technologies

RED HAT CONSULTING

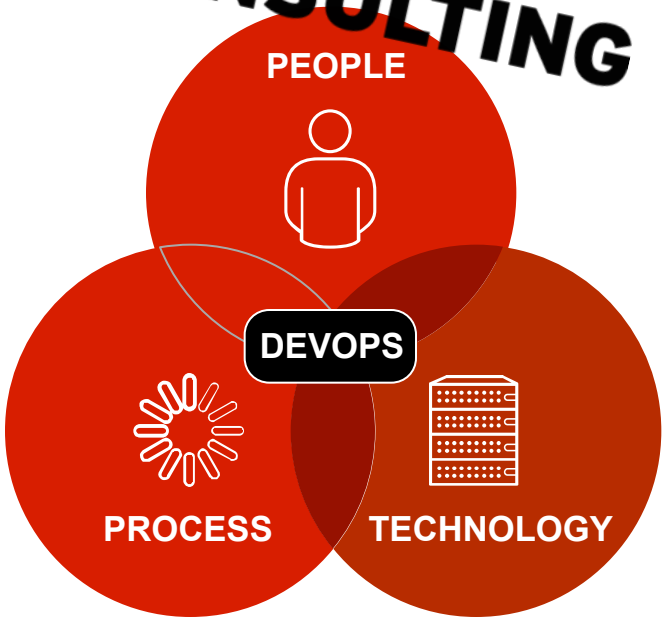
At the intersection of open source cloud **technology** with **people** and **processes**:

Technology and People

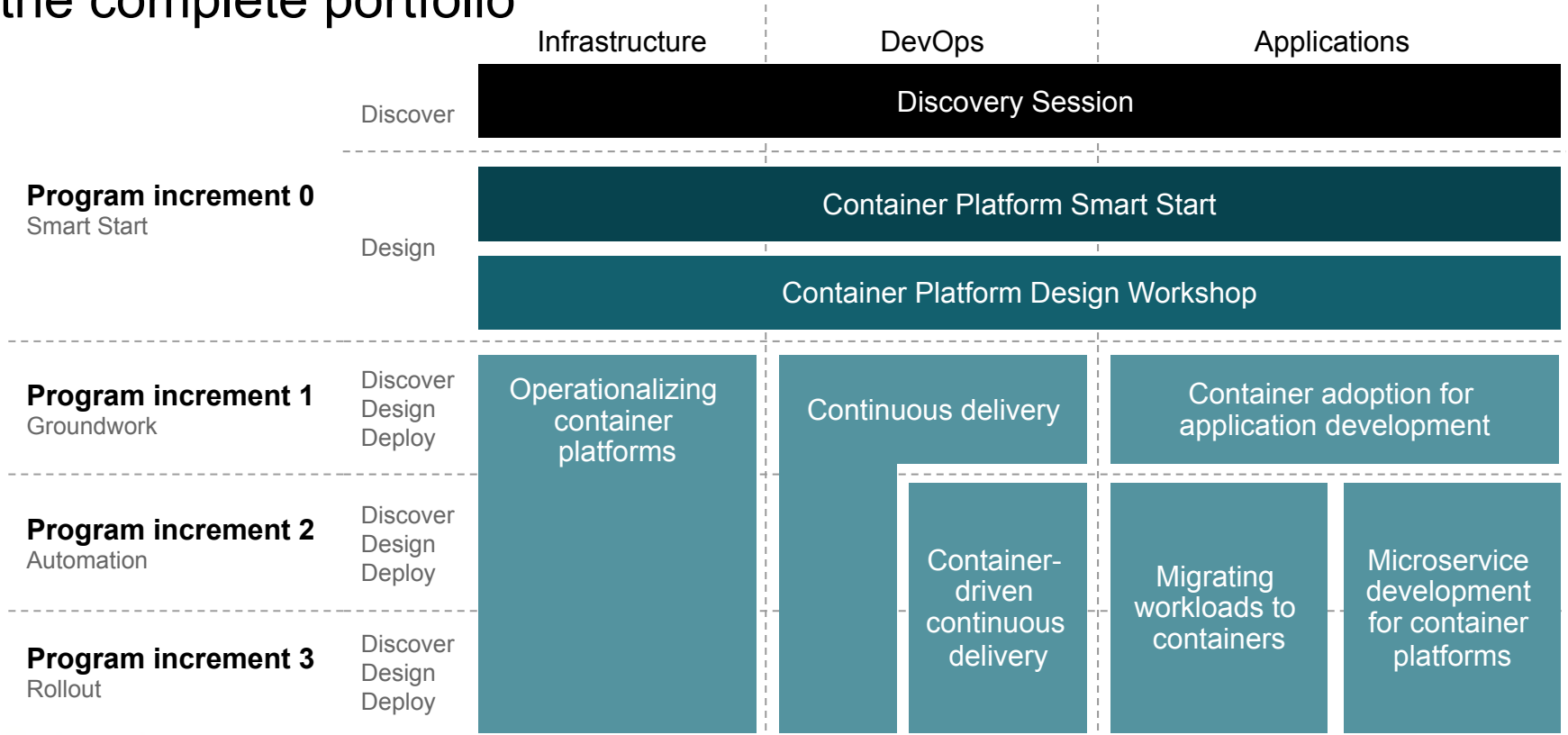
- Providing onsite **subject matter experts on Red Hat products** with reachback to Red Hat Engineering
- **Mentoring service providers** on operationalizing OpenShift
- Smoothing organizational transition to cloud architecture and deployment models

Technology and Process

- Integrating OpenShift 3 and Ansible with automated deployment pipelines and CI/CD processes
- Adapting application design and workflow where necessary to take advantage of OpenShift automation



Modernize application delivery with container platforms: the complete portfolio



Customers and Value

ACHIEVE AND SURPASS ORGANIZATIONAL GOALS

FICO targets new markets with **OpenShift Enterprise** based FICO ANALYTIC CLOUD to grow revenues and market share.

ENABLE ORGANIZATIONAL AGILITY

COMPETITIVE THREATS

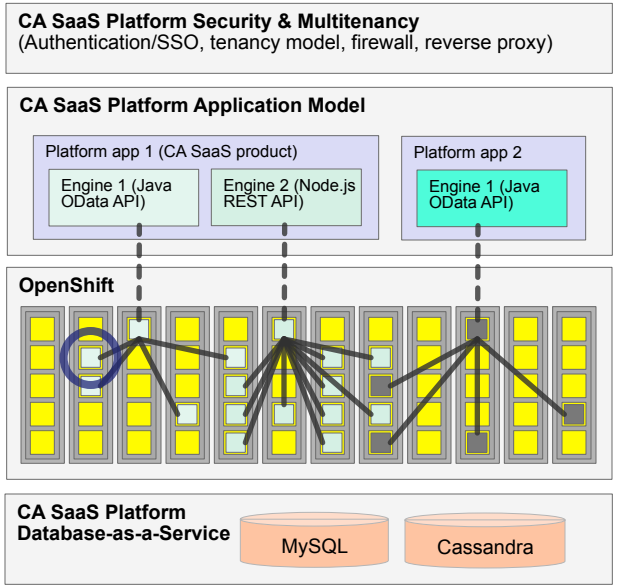
MARKET DYNAMICS

TECHNOLOGY TRENDS

HOW? **NEED FLEXIBILITY AND SPEED IN IT SERVICE DELIVERY**

ENABLE ORGANIZATIONAL AGILITY

CA reboots with SaaS offerings built on a foundation of **OpenShift Enterprise**



DECREASE COSTS

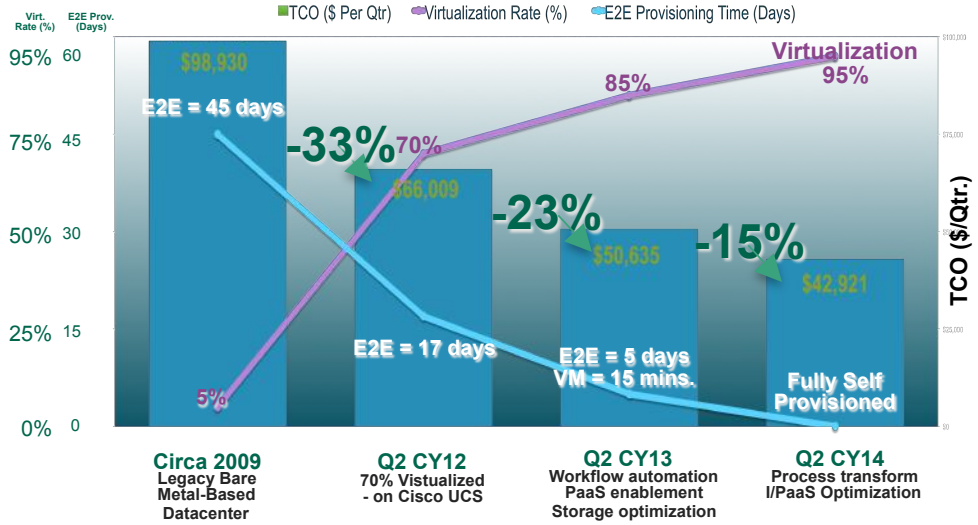
OPEX	CAPEX	ENERGY

HOW? **NEED OPERATIONAL AND INFRASTRUCTURE EFFICIENCY**

DECREASE COSTS

CISCO™

Cisco moves to **OpenShift Enterprise** across Internal IT for standardization and efficiency.



Source: Cisco IT GIS–August 2013

REDUCE RISK

SECURITY	DATA LOSS	COMPLIANCE

HOW? **NEED SECURITY, RELIABILITY, ACCOUNTABILITY**

REDUCE RISK

US Gov't Financial Agency adopts **OpenShift Enterprise** because of built-in Security capabilities and OS foundation.

THE END

WHO
WHAT
WHERE
WHEN
WHY
HOW
QUESTIONS
ANSWERS

START HERE
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Thank You

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