OpenShift: positioning

PaaS, xPaaS, DevOps Context

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Red Hat

The need for speed ……..

THE WORLD WE LIVE IN TODAY

Changing landscapes ....

Customers and consumers

- Ubiquitous access to data and services
- Impatient, want everything NOW
- Increased QoS expectations

Businesses

- New opportunities and markets
- Intense competition
- **Small time frames** to get products and services out
- **Increased apps demand** and the need to **rapidly innovate**

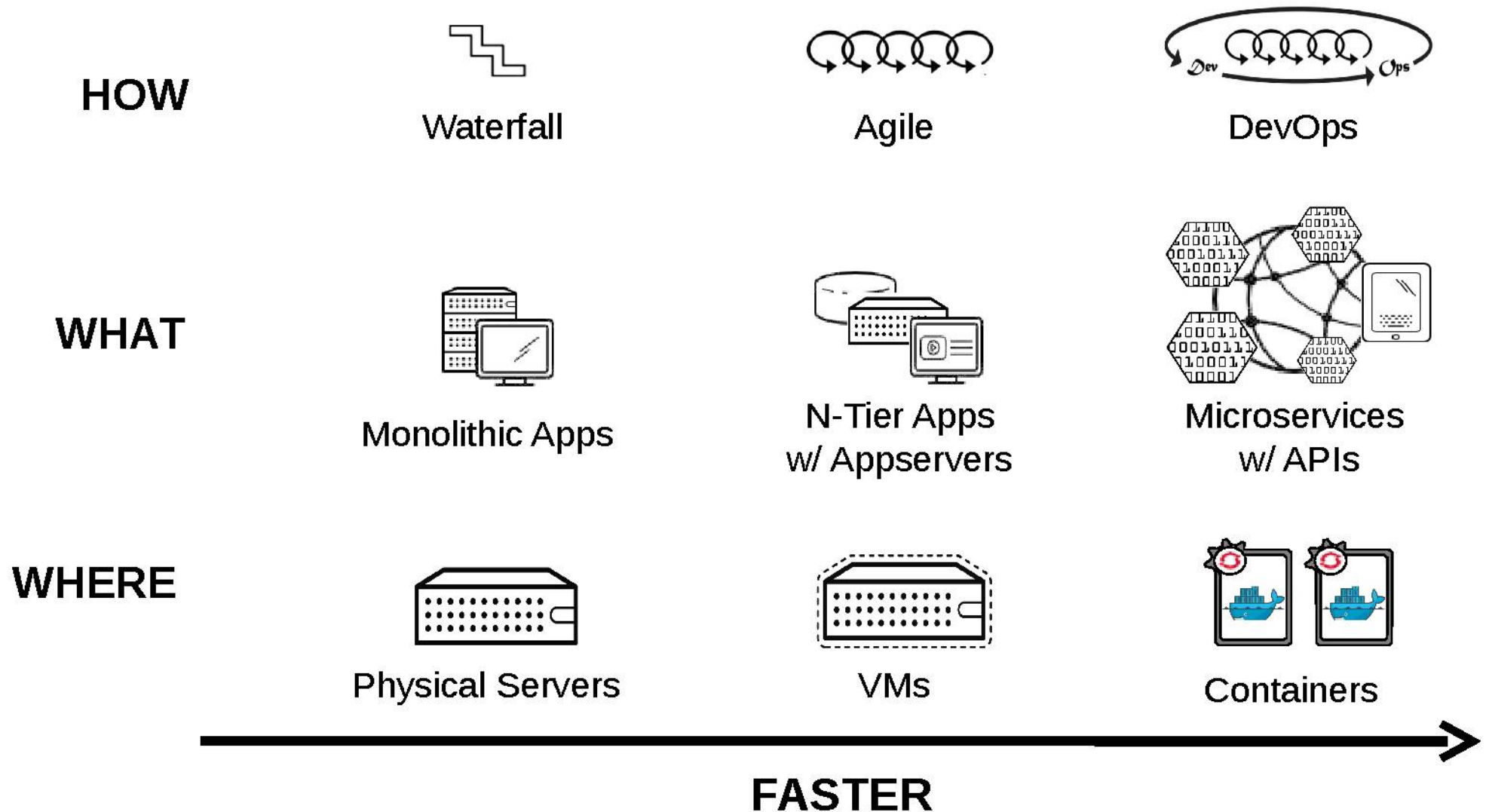## Deploy application services as quickly as business demands change

Traditional Software Delivery Environment
Current Pain points and limitations

➢ **Developer productivity**

➢ **Highly manual and long deployment timelines**

➢ Applications break in production that were fine in Dev and QA

➢ **Reproducing application environments** for any given version of the application

➢ **Lack of standard operating environments**

THE NEED FOR SPEED
THE ACCELERATION OF APPLICATION DELIVERY FOR THE BUSINESS

HOW

Waterfall

Agile

DevOps

WHAT

Monolithic Apps

N-Tier Apps
w/ Appservers

Microservices
w/ APIs

WHERE

Physical Servers

VMs

Containers

FASTER

redhat.

WHAT IS DevOps ?

The DevOps movement was born of the need to improve IT service delivery agility. Underpinning DevOps is the philosophy found in the Agile Manifesto, which emphasizes people (and culture) and seeks to improve collaboration between operations and development teams. DevOps implementers also attempt to better utilize technology—especially automation tools that can leverage an increasingly programmable and dynamic infrastructure from a life cycle perspective.

Gartner.

- Agile methodologies
- Continuous feedback loops
- Continuous Delivery
- Establish self-service operating environments

PEOPLE
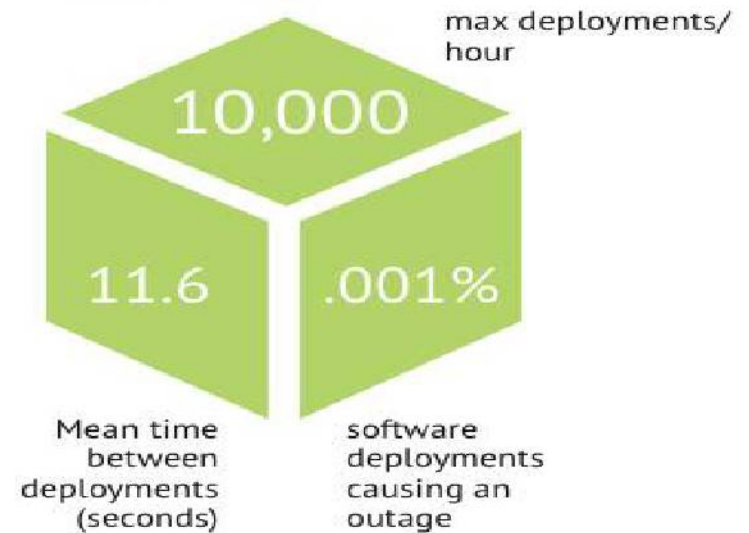
DEVOPS

PROCESS TECHNOLOGY
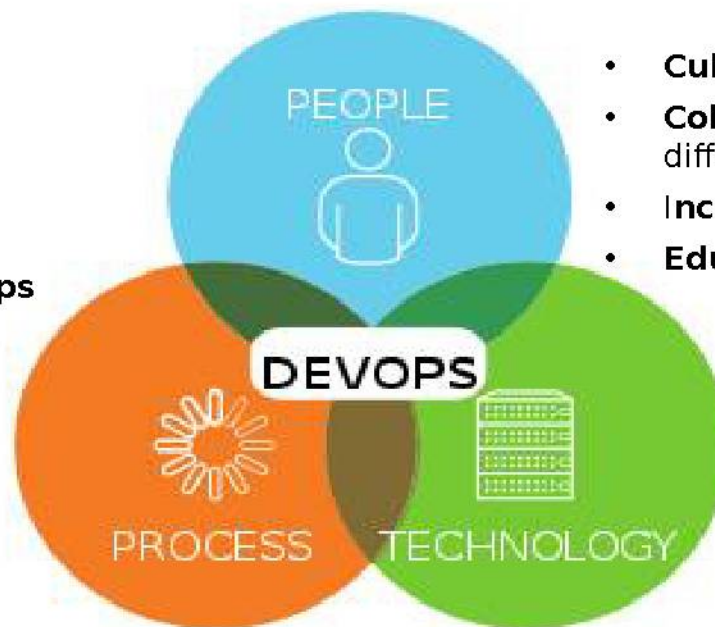
- **Cultural paradigm shift**
- **Collaboration** and **involvement** of different teams (Dev, Ops)
- **Incent/Reward** Experimentation
- **Education** & **Evangelization**

- End2End **Automation**
- **Standardized and consistent** environments (Dev,Test <--> QA, Prod)
- **Faster application environment provisioning**

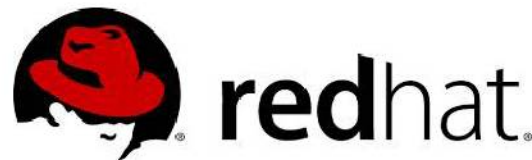**redhat.**

Who has adopted a DevOps strategy ?
The Best get (much) Better, (much) Faster

Google code
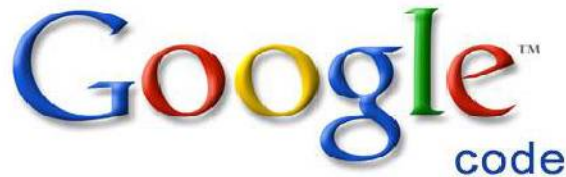
15000+ developers in 40+ offices
4000+ projects under active development
5500+ submissions per day on average
Development on one branch - submissions at head
All builds from source
20+ sustained code changes per minute with 60+ peaks
50% of code changes monthly
75+ million test cases run per day

amazon web services

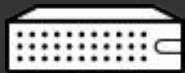max deployments/ hour

10,000

11.6 | **.001%**

Mean time between deployments (seconds)

software deployments causing an outage

NETFLIX

redhat

GE

Linked in

Fidelity INVESTMENTS

Disney

YAHOO!

M&S

facebook

redhat.

WHY DEVOPS POWERED BY OPENSHIFT...

Cloud Service Models
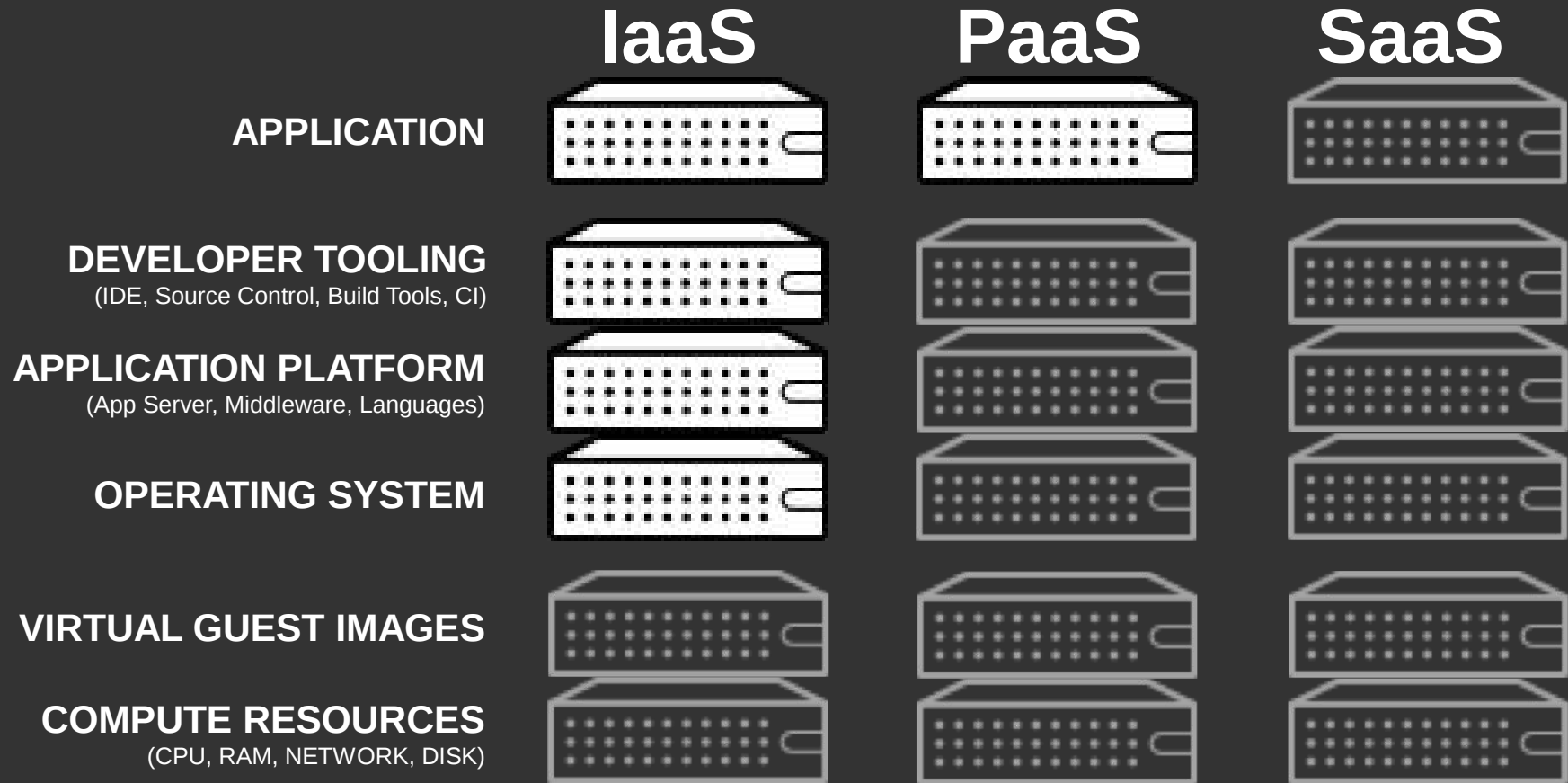
	IaaS	PaaS	SaaS
APPLICATION	▣	▣	▢
DEVELOPER TOOLING (IDE, Source Control, Build Tools, CI)	▣	▢	▢
APPLICATION PLATFORM (App Server, Middleware, Languages)	▣	▢	▢
OPERATING SYSTEM	▣	▢	▢
VIRTUAL GUEST IMAGES	▢	▢	▢
COMPUTE RESOURCES (CPU, RAM, NETWORK, DISK)	▢	▢	▢

Provided and Controlled by Cloud Consumer

Automated and Managed by the Cloud Provider

Increased Control

Increased Automation

What is PaaS ?
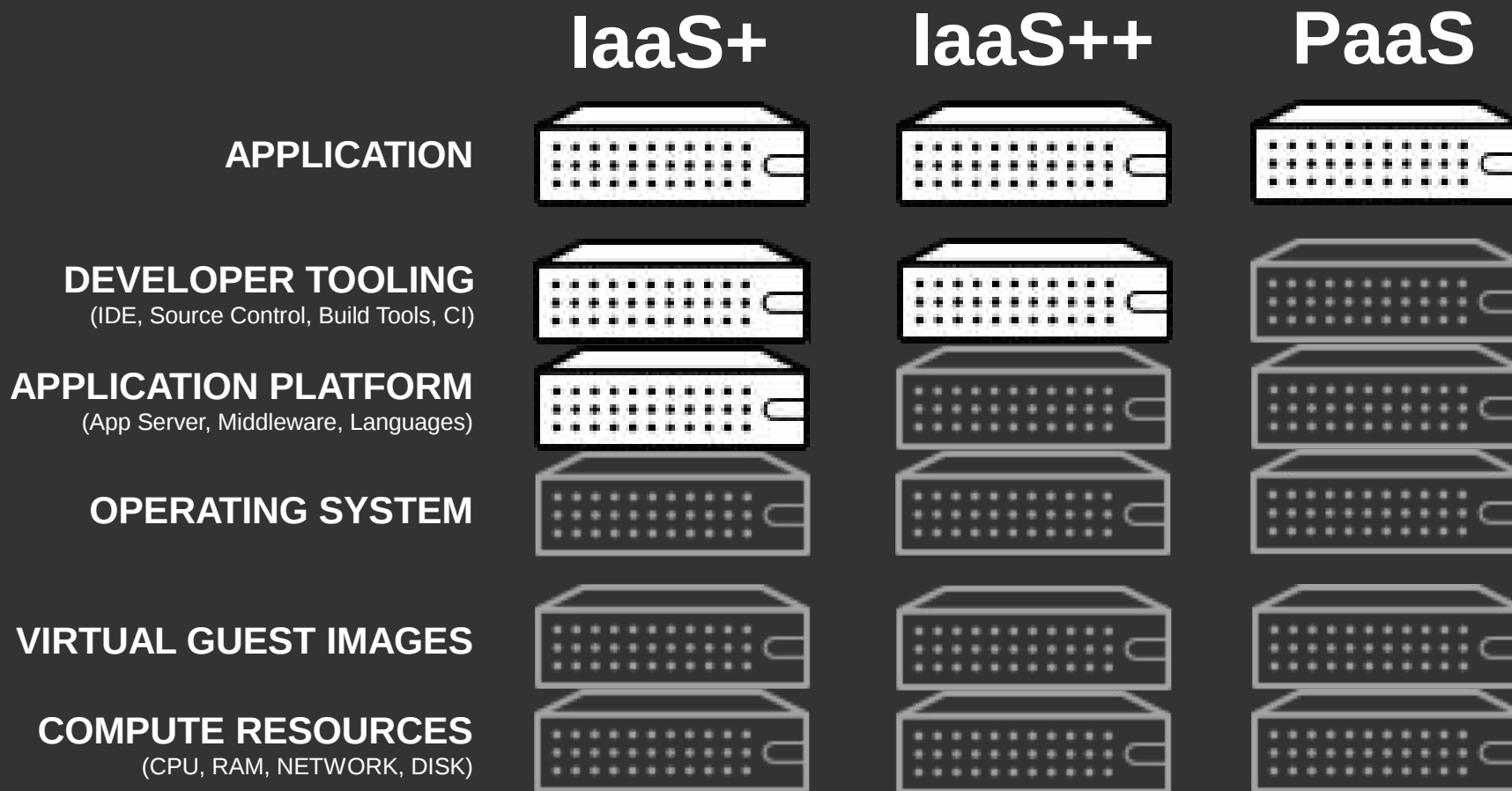
	IaaS+	IaaS++	PaaS
APPLICATION			
DEVELOPER TOOLING (IDE, Source Control, Build Tools, CI)			
APPLICATION PLATFORM (App Server, Middleware, Languages)			
OPERATING SYSTEM			
VIRTUAL GUEST IMAGES			
COMPUTE RESOURCES (CPU, RAM, NETWORK, DISK)			

Provided and Controlled by Cloud Consumer

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Red Hat Offerings

	OpenStack	CloudForms	OpenShift
APPLICATION			
DEVELOPER TOOLING (IDE, Source Control, Build Tools, CI)			
APPLICATION PLATFORM (App Server, Middleware, Languages)			
OPERATING SYSTEM			
VIRTUAL GUEST IMAGES			
COMPUTE RESOURCES (CPU, RAM, NETWORK, DISK)			
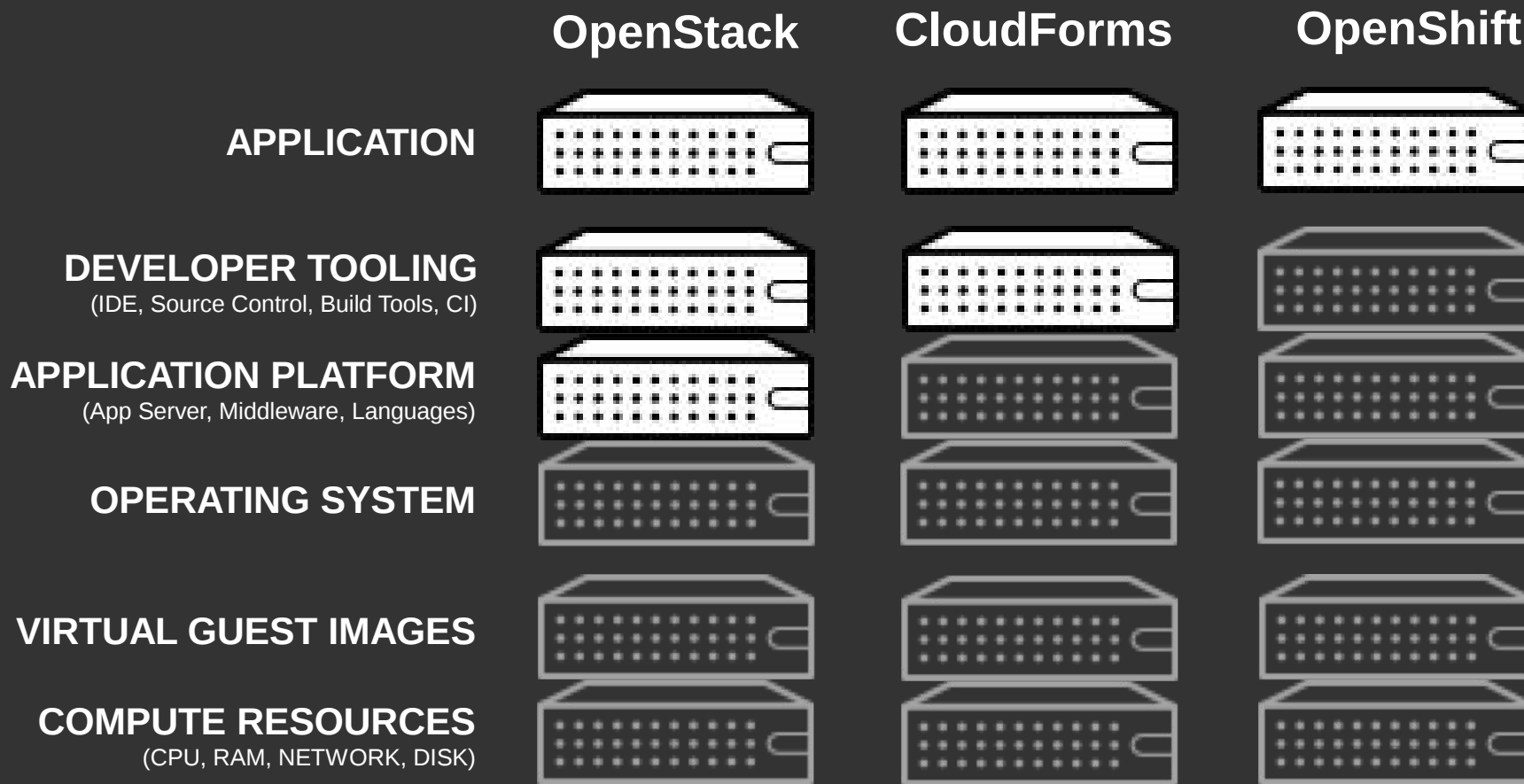
Provided and Controlled
by Cloud Consumer

Automated and Managed
by the Cloud Provider

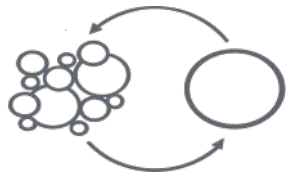Increased Control

Increased Automation

How Openshift enables and accelerates DEVOPS
## Accelerating Services delivery

Platform and Applications provisioning automation

- Standardized containers (operating environments and configurations)

- Platform and applications configuration as code

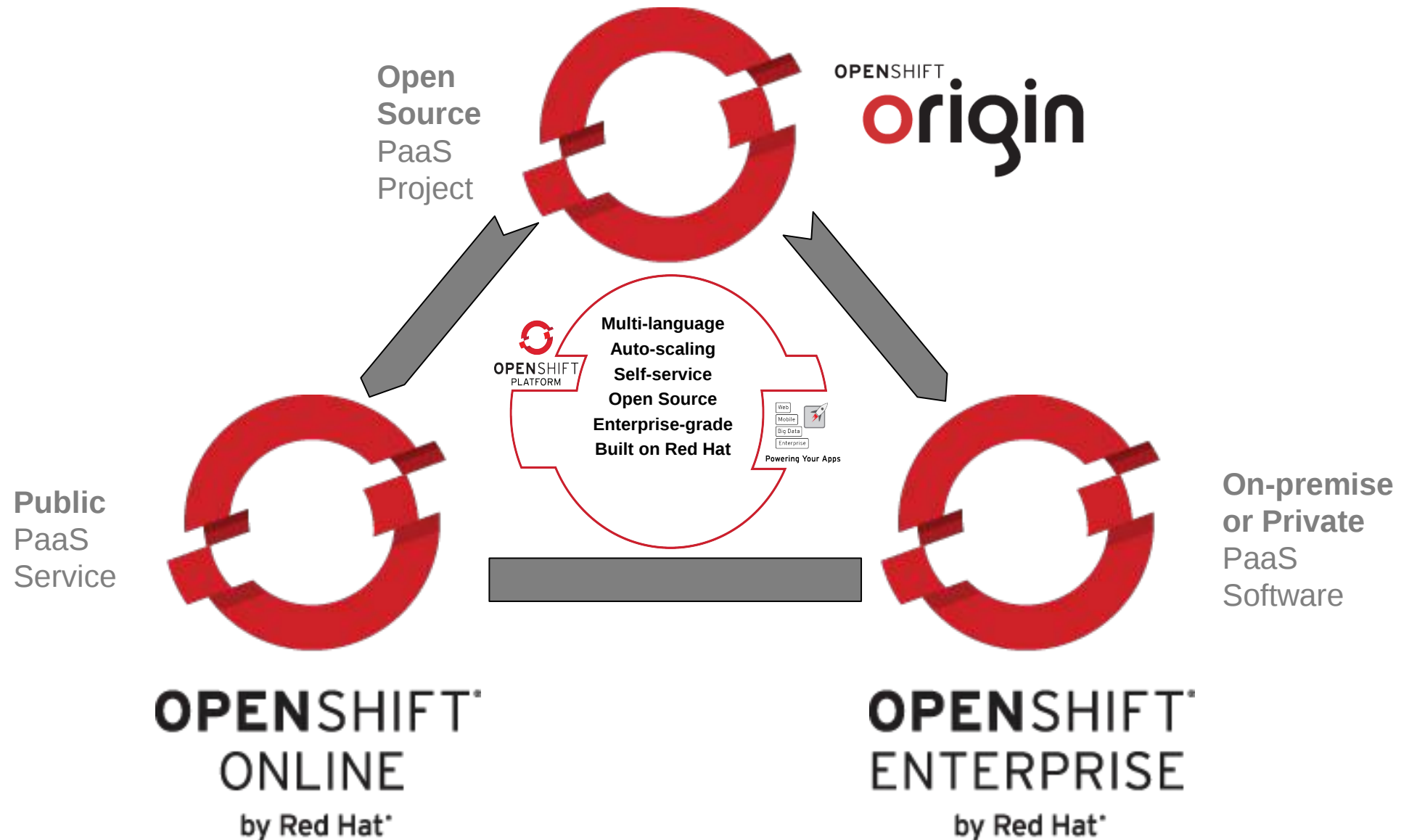## Continuous Integration and Continuos Delivery

- Integration with major DevOps tools (eg: Jenkins, Maven, GIT, ..)

- Ready-to-go framework for application configuration as code

- Just-in-time delivery (and tear-down) of single-purpose platforms

- Enables prototyping
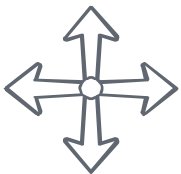
Auto-scaling
Increase resources utilization beyond virtualization
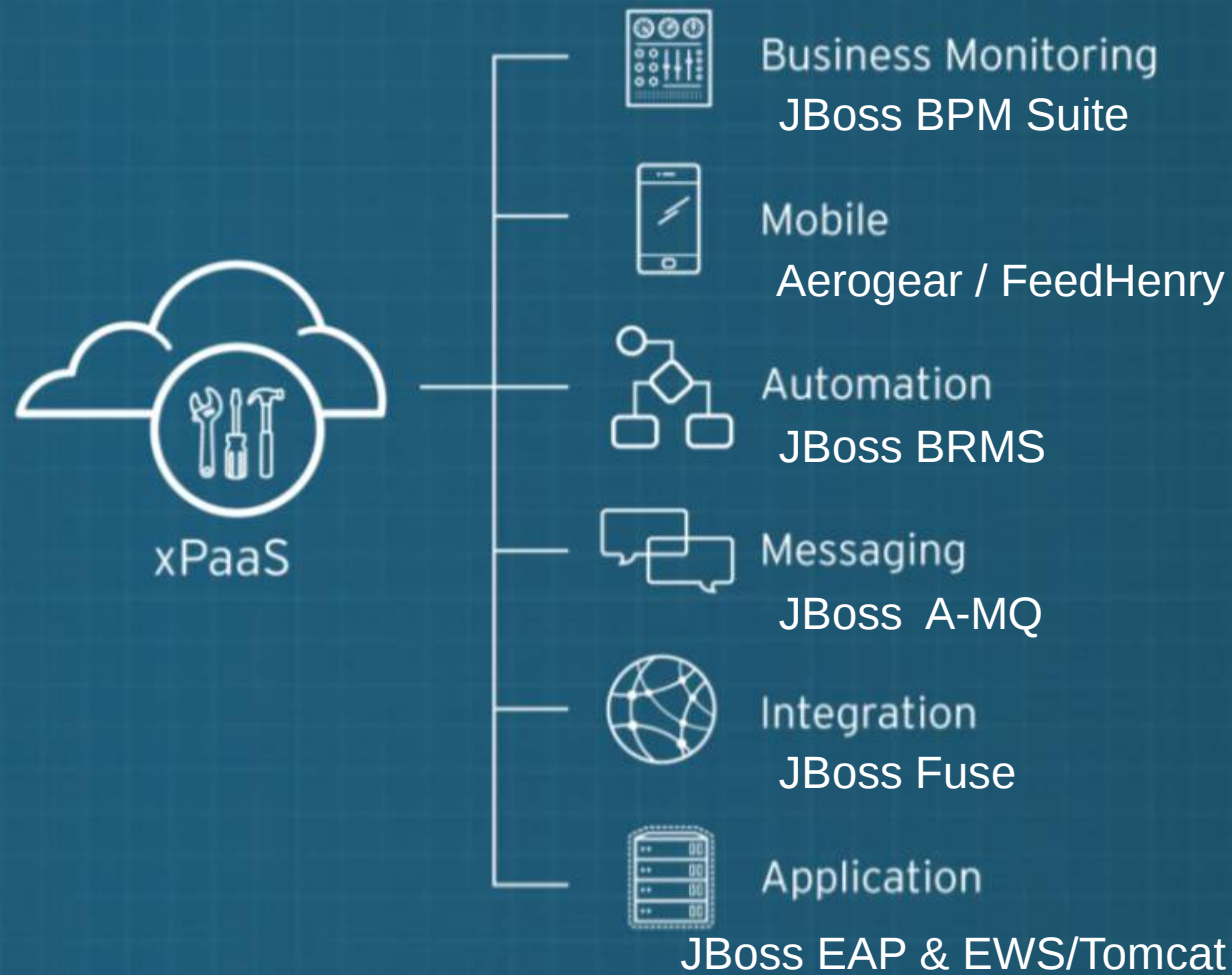
Red Hat's PaaS Strategy

xpaas

JBOSS XPAAS SERVICES FOR OPENSHIFT
SOLVING MORE COMPLEX APPLICATION NEEDS USING A COMMON PLATFORM

> Build, deploy, provision and manage modern enterprise applications

> Built on OpenShift with JBoss Middleware

> Increases builder productivity across the platform's capabilities

xPaaS

Business Monitoring
JBoss BPM Suite

Mobile
Aerogear / FeedHenry

Automation
JBoss BRMS

Messaging
JBoss A-MQ

Integration
JBoss Fuse

Application
JBoss EAP & EWS/Tomcat

redhat.

Application paas

- JBoss Enterprise Application Platform
- No special APIs—just standard enterprise Java™ code
- PaaS UX simplifies deployment, scaling, configurations and updates

| Integration PaaS	BPM PaaS	Mobile PaaS
Application PaaS		
OPENSHIFT by Red Hat		

ON-PREMISE   PRIVATE   PUBLIC
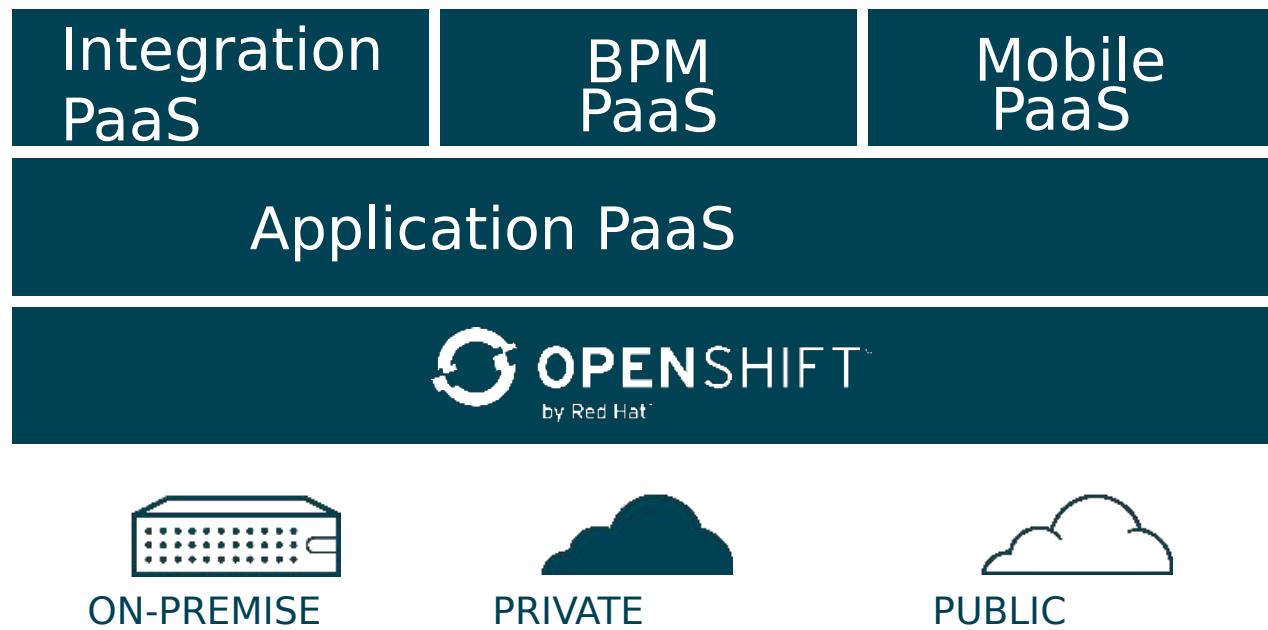
integration paas

- Red Hat JBoss Fuse service/messaging and data integration
- Run integration in public cloud or on-premise
- PaaS UX simplifies connection, route, and queue configurations
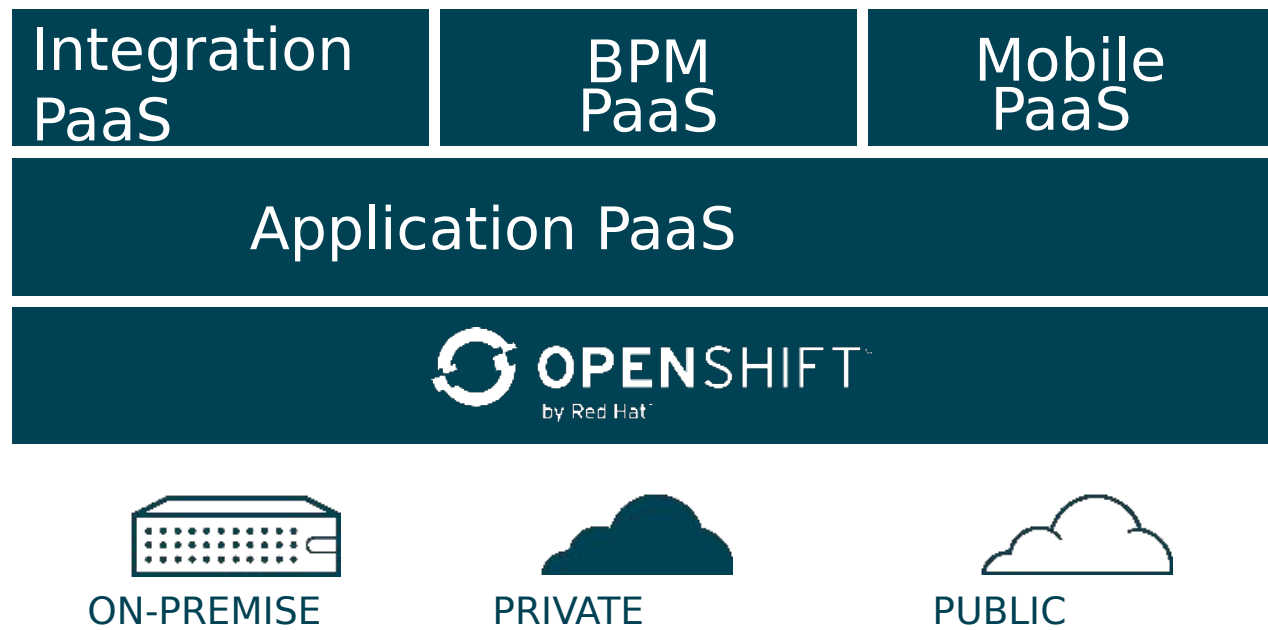
bpm paas

- Create process models using cloud service
- Export to business process management (BPM) platform
- Run BPM in cloud or on-premise
- Orchestrate applications and services spanning cloud and on-premise
- PaaS UX simplifies configuration
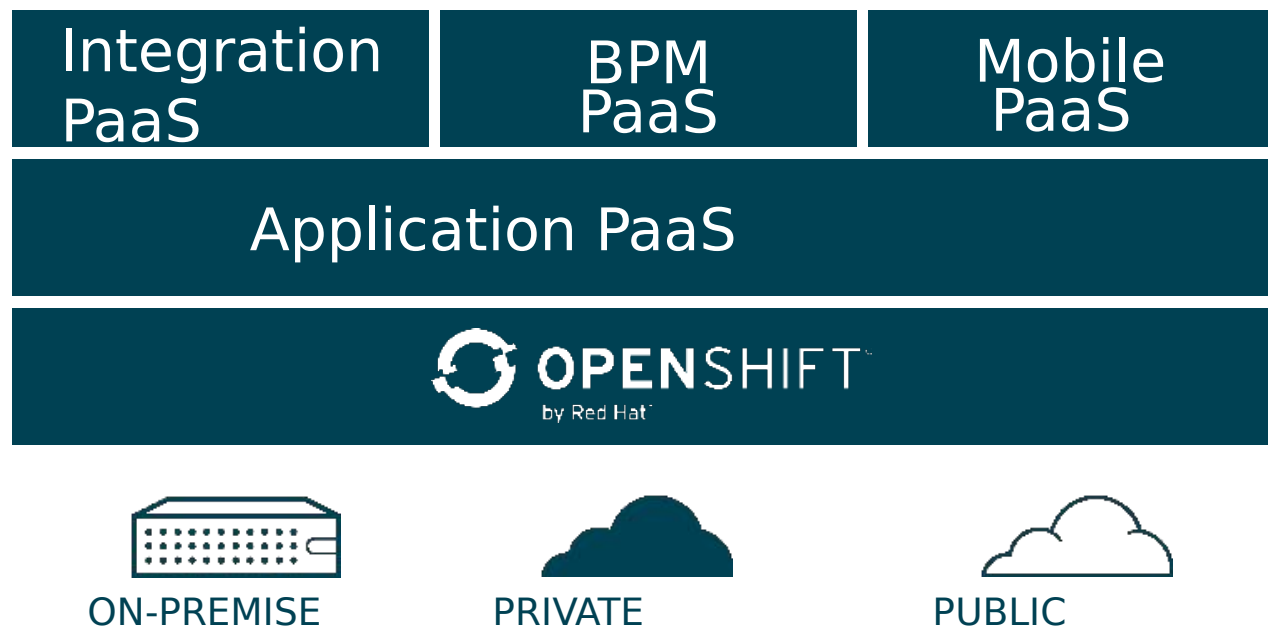
Mobile backend paas

- Push notification, security, data encryption, offline, and data sync
- Support for native, hybrid, and mobile web apps
- Run backend in public cloud or on premise
- PaaS UX simplifies notification, integration configuration, API development
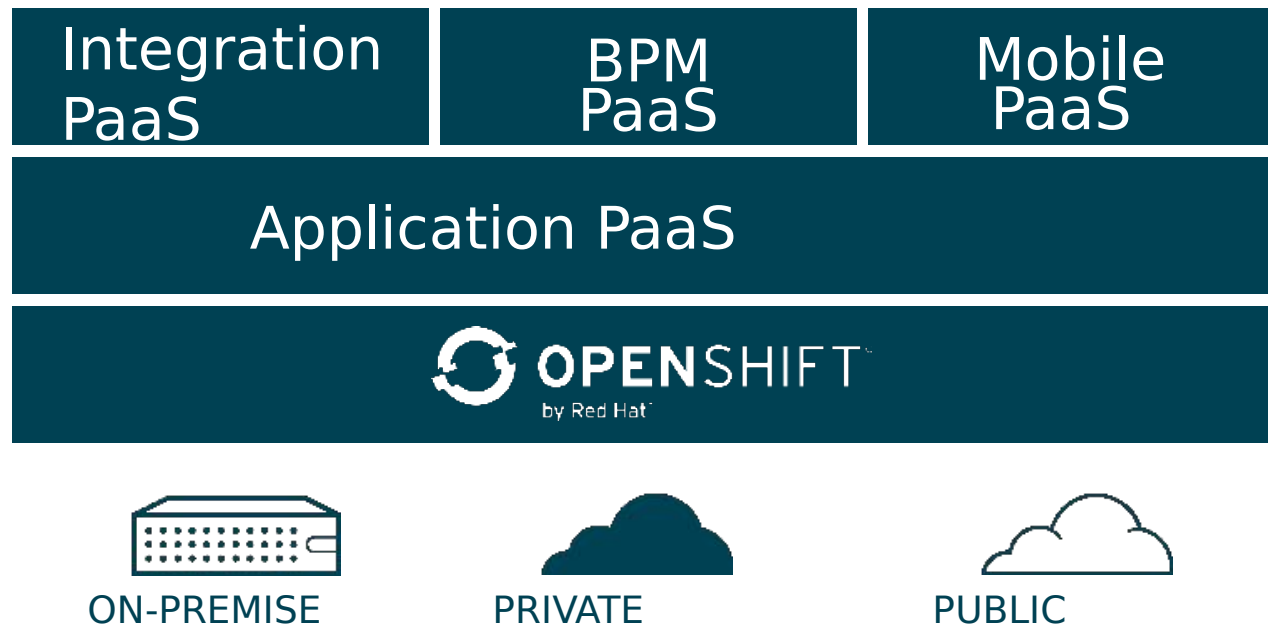
OPENSHIFT ADOPTION

redhat.

OPENSHIFT ONLINE SUCCESS

OpenShift Online has experienced significant growth in adoption

2M

Applications Deployed since Launch

87M

Requests / Day

130%

User growth
April 2013-April 2014

129%

App Growth
April 2013-2014

New Gears profiles
Created new gear size to consume larger apps and gear profile

small.highcpu

Add-on Storage
Allowing additional capacity by need

Geo Expansion
Expanding to 14 new countries in the EU zone
OSO Hosted in AWS EU Region

JBoss / xPaaS
Bringing higher level services to public cloud

Silver, Bronze Plans
New paid plan.

Marketplace
SaaS partner services consumed from OpenShift

NEW

Get Started Today!

OPENSHIFT ONLINE by Red Hat

DEDICATED NODE SERVICES

OPENSHIFT by Red Hat

ISOLATED GEARS
Your nodes will only contain your gears and applications.

CUSTOM GEAR SIZES
Each dedicated node allows you to determine the memory, storage, and CPU share for all of your isolated gears.

CONFIGURABLE SETTINGS
Dedicated nodes can be configured to work with internal datastores, Firewalls, VPN, and other custom requirements.

MANAGED INFRASTRUCTURE
Dedicate nodes are backed by the same experienced Operations team that supports OpenShift Online.

EXPANDED REGIONAL AVAILABILITY
Dedicated Node Services are available for purchase in more regions than other OpenShift plans and allow for custom regional hosting.

AWARD-WINNING RED HAT SUPPORT
Dedicated Node Services come with access to award-winning Red Hat support.

https://www.openshift.com/products/pricing/dedicated-node-services   https://blog.openshift.com/dedicated-node-services-enterprise-users/

redhat.

OPENSHIFT ENTERPRISE ADOPTION

Public References

Why OpenShift
- Streamline Developer enablement for Dev/Test
- Great efficiency for Production deployments
- OpenShift on OpenStack
- Technical Foundation for DevOps

… and more

OPENSHIFT ADOPTION @ FICO™

LEADING ISV IN FINANCIAL SERVICES has built and Analytic cloud based platform on Openshift

"Once we actually looked at and had all of the conversations with all the various people, there was really only one choice and that was OpenShift".

The only people that actually understood what it was that we were talking about was the Red Hat guys. The Cloud Foundry guys were good about talking about deploying Spring-based frameworks and, you know, that sort of stuff, but once we ran the PoCs and had deeper conversations, there was really only one choice."

Tony McGivern - CIO

70% Reduction in Apps Development time

60% Reduction in Maintenance Costs (simpler, faster and easier)

90% reduction in Time to Deploy models

6 Months running live in Production

5% - 40% increased decision accuracy

http://gartner.mediasite.com/Mediasite/Play/4c29e2287c7949cea4b4f8d0367410b01d?sc_cid=701600000
00eGEFAA2&elq=997abd3fad6a49d4ae23e1c7136994bb

redhat.

OPENSHIFT REVIEWS

InfoWorld

JULY 30, 2014

GET TECHNOLOGY RIGHT®

Review: OpenShift shines for developers and ops

From the pain-free install and easy app deployment to gear idling and automatic scaling, OpenShift fulfills the promise of platform as a service

redhat.

Communities Interest !!!

OpenShift Question: openshift@redhat.com
OpenShift Users: users@lists.openshift.redhat.com
Origin Developers: dev@lists.openshift.redhat.com

@openshift

www.openshift.com/blogs

www.facebook.com/openshift
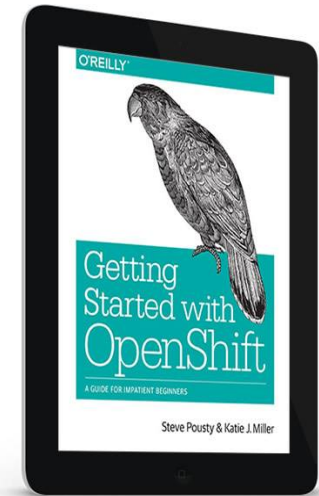
plus.google.com/communities/114361859072744017486

github.com/openshift

OpenShift Users: irc.freenode.net #openshift
Origin Developers: irc.freenode.net #openshift-dev

trello.com/openshift

- http://www.jboss.org/openshift/

- **Cartridges & Apps community development**
  - https://www.openshift.com/marketplace
  - https://www.openshift.com/developers/download-cartridges#examples
  - https://www.openshift.com/tags/cartridges
  - https://www.openshift.com/quickstarts/all?order=created&sort=desc

Completely Open

redhat.

What makes OpenShift different ?
TAKEAWAYS

- Large Open Source Languages, Frameworks and software **choice included** and **supported** by Red Hat

- **Developer experience**

- **Extensible Architecture**

- **Built from proven Enterprise-class technology:**

  - build on leading enterprise linux platform **Red Hat Enterprise Linux**

  - **Complete stack supported by Red Hat**

- **Secure** Containers model for **multi-tenancy**

- **Automatic Application Stack** Provisioning

- **Automatic Application** Scaling

- **Independent of** Infrastructure / Virtualization layer