Introduction

Agenda

- **Trends in the market**
- **Intelligent Payments**

Moving to cloud

- Finance, public sector, energy

Moving to cloud

• Finance, public sector, energy

• PAYG

Move away from central IT

- Empower LoB and partners

- Acceptance that innovation happens at the edge

- Accept and enable a more controlled form of shadow IT

- Enable agile fail-fast approaches

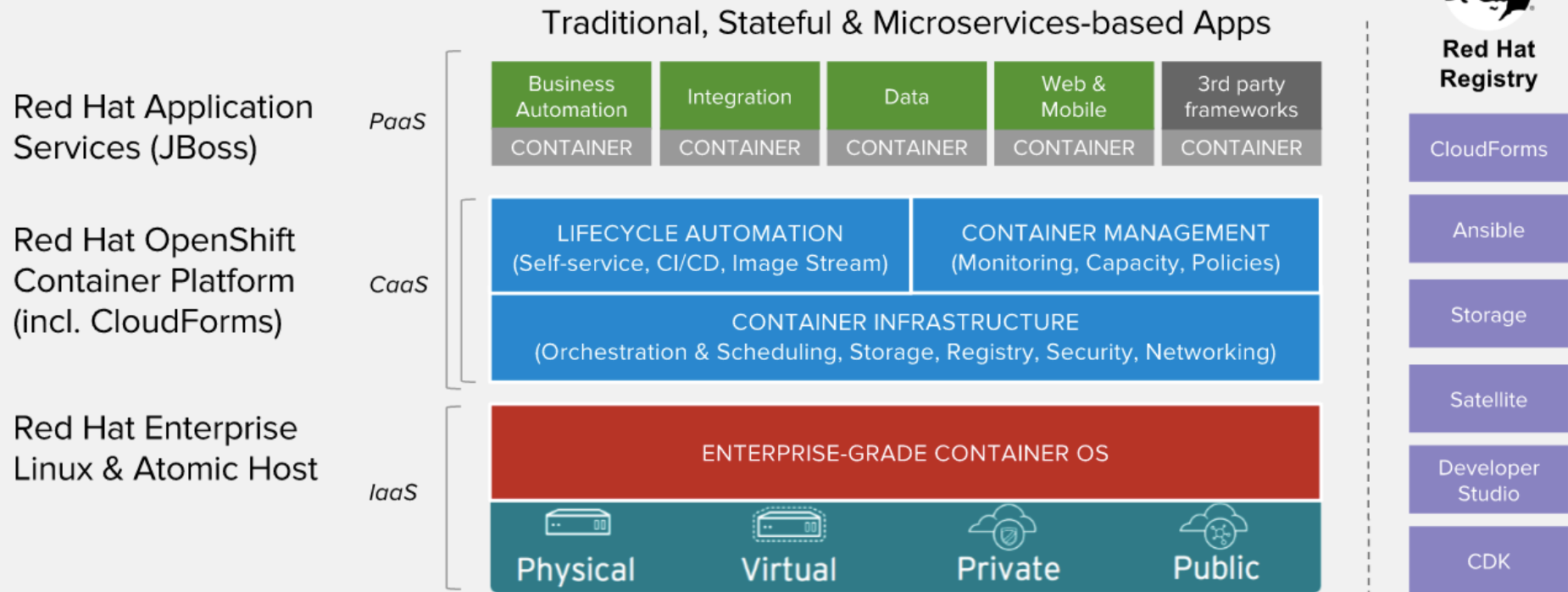Intelligent Payments   redhat.

Microservices

- SOA is dead

- Teams want to make incremental changes and release quickly

- 2 Pizza Teams

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Do it all for cheaper and on-demand

- Infrastructure Efficiency

- Staff Efficiency

- Operational Efficiency

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Red Hat Container Stack & Tools

Traditional, Stateful & Microservices-based Apps

Red Hat Registry

Red Hat Application Services (JBoss) — *PaaS*

Business Automation	Integration	Data	Web & Mobile	3rd party frameworks
CONTAINER	CONTAINER	CONTAINER	CONTAINER	CONTAINER

Red Hat OpenShift Container Platform (incl. CloudForms) — *CaaS*

LIFECYCLE AUTOMATION (Self-service, CI/CD, Image Stream)	CONTAINER MANAGEMENT (Monitoring, Capacity, Policies)

CONTAINER INFRASTRUCTURE
(Orchestration & Scheduling, Storage, Registry, Security, Networking)

Red Hat Enterprise Linux & Atomic Host — *IaaS*

ENTERPRISE-GRADE CONTAINER OS

Physical   Virtual   Private   Public

CloudForms

Ansible

Storage

Satellite

Developer Studio

CDK

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Intelligent Payments

Overview

- **Originally formed to provide gateway and risk services to large merchants in the gaming sector**
- **Providing gateway services to some of the largest corporate merchants in Europe**
- **Developed turnkey low cost payments solution for SME merchants**
- **Channel partnerships with major acquirers in Europe**
- **Management team - original founders and senior management at OmniPay together with payments and fraud execs from gaming sector**

Selection of Intelligent Payments customers:

Business Case for OpenShift at IPG

- **Challenge at IPG to refactor existing in-house application for multitenancy, scalability and high availability whilst providing business continuity to customer base.**

- **Business case to implement multitenancy driven by cost savings, and scalability for SME market.**

- **Solution needed to support security levels compliant with industry requirements, PCI-DSS.**

- **Solution can be deployed to a private hosted environment**

Business And Functional Requirements

- **How to refactor current application into smaller modules or libraries in a gradual timeline, while still managing customer base and new customers.**

- **Evaluating solutions, looking for ESB and application integration platform.**

- **Support existing Active-MQ product for inter-application messaging**

- **Preference to use Open source solutions, focused on Apache ServiceMix (Apache ActiveMQ, Apache Camel, Apache CXF, and Apache Karaf), with premium support backing.**

- **FUSE ESB (a recently acquired Red Hat product in 2013), fulfilled all the requirements.**

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Benefits of FUSE ESB (Apache ServiceMix) at IPG

- **Using Apache Karaf that is powered by OSGi enables the ability to package applications in modular plug-ins that can be deployed independently and dynamically. This is essential for refactoring the existing applications into more maintainable components, without a very long development cycle. a.k.a. Microservices.**

- **Opens up the possibility of outsourcing development for specific functionality without disclosing the entire code source.**

- **Supports Enterprise Integration Patterns via Apache Camel that enable application routing and integration.**

- **A Web Services Framework via Apache CXF that Integrates applications with SOAP, XML/HTTP and RESTful HTTP. This facilitate the construction of an API foundation.**

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Challenges

- **Training and upskilling on the open source standards and frameworks used in the product, namely Apache ServiceMix (karaf, camel, CXF).**

- **Operations / Maintenance for production environment. How to setup a highly available setup, with rolling updates to minimize or eliminate downtime . IMPORTANT!**

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Roadmap

- **Deploy FUSE ESB as a highly available, scalable service. Reduce network complexity, and provide cluster session persistence.**

- **Next step Upgrade OpenShift Enterprise 3.x, and deploy FUSE as xPaaS.**