RED HAT FORUMS

Building the cloud-native future with application environments for hybrid and multi-clouds

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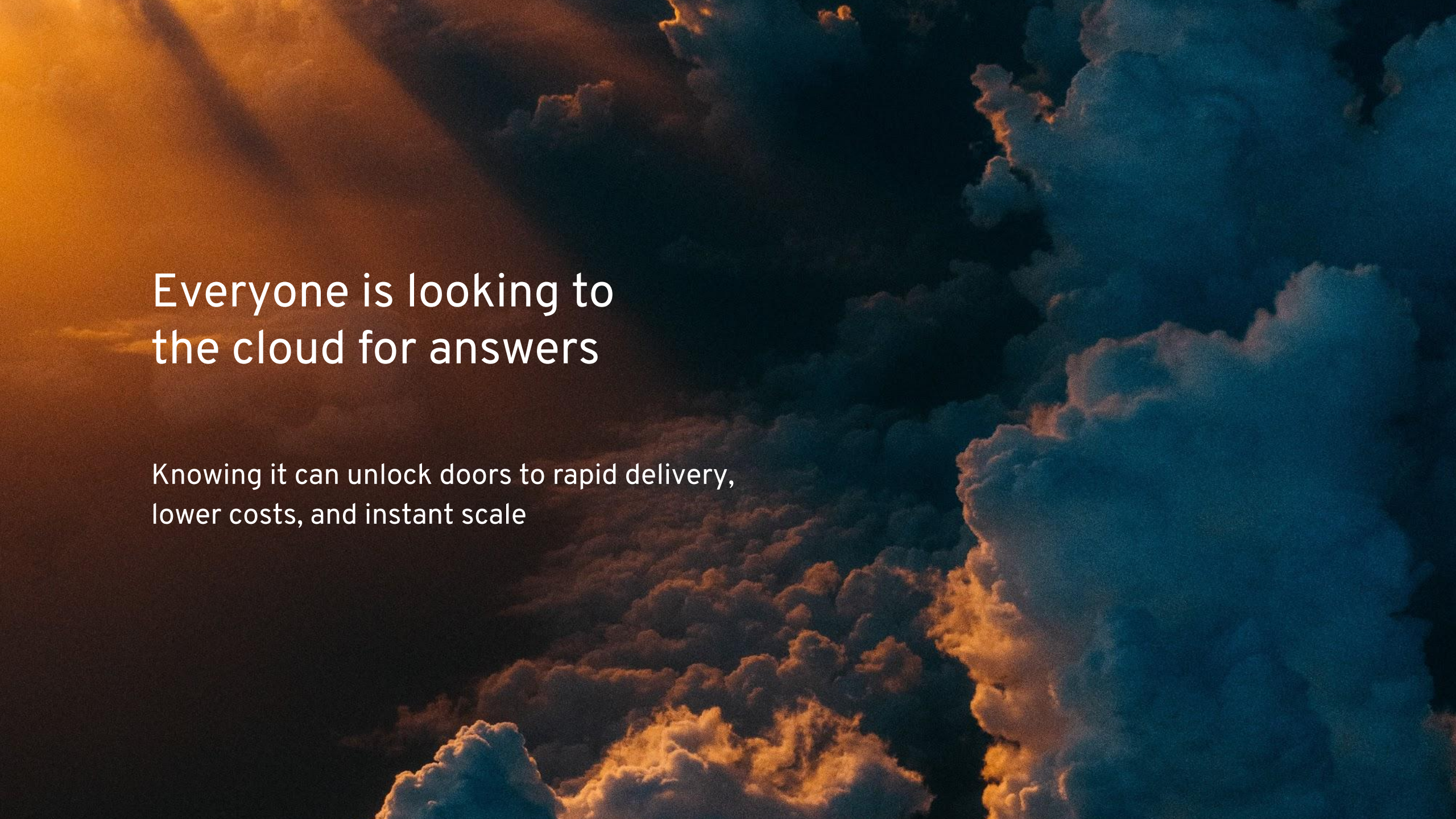
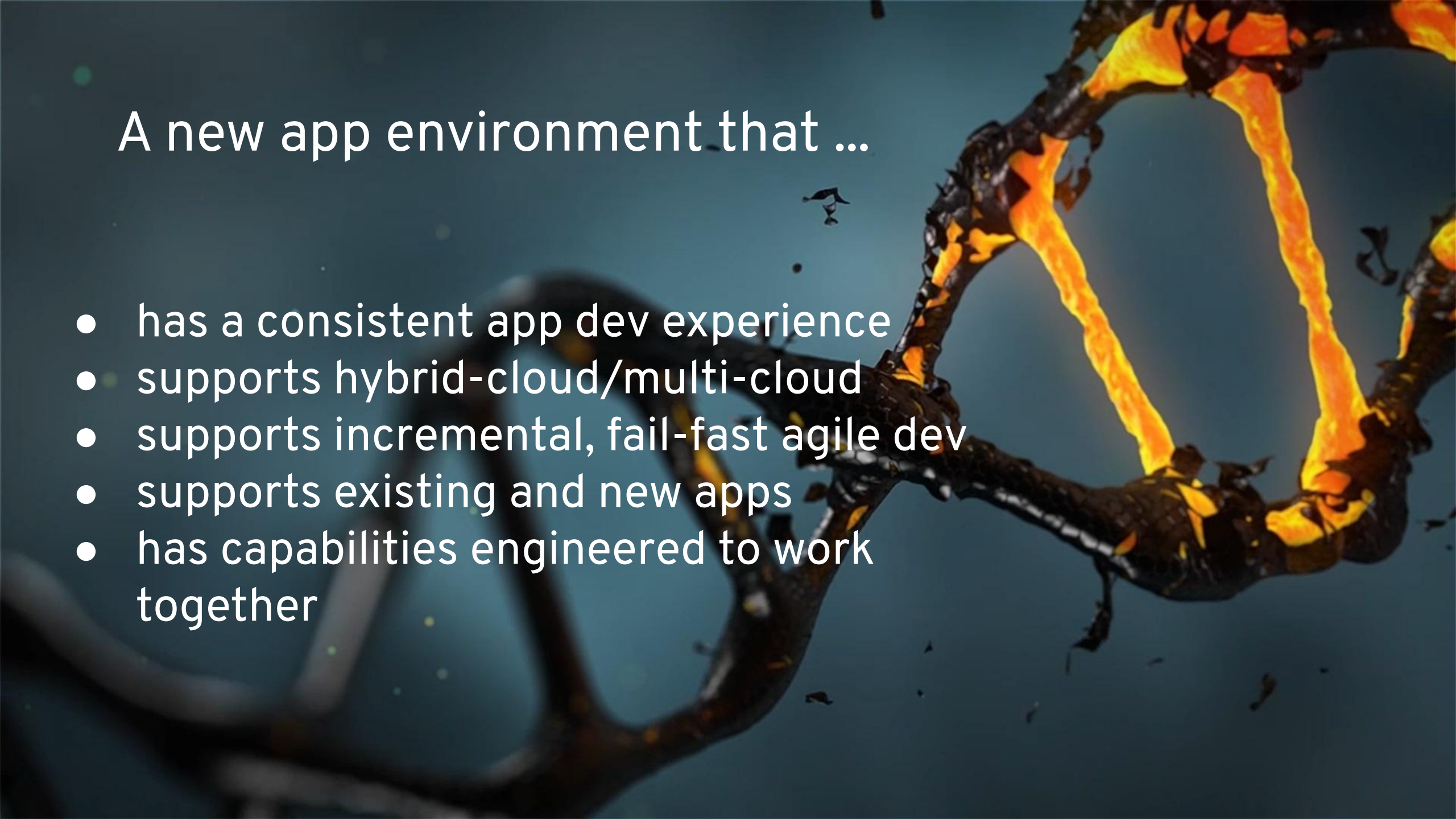
In today’s software-driven enterprise, IT leaders face many tough questions:

How do we deliver great experiences?

How do we build an effective and efficient team?

How do we get ahead of the competition?


Everyone is looking to
the cloud for answers
Knowing it can unlock doors to rapid delivery,
lower costs, and instant scale



A new app environment that ...

- has a consistent app dev experience
- supports hybrid-cloud/multi-cloud
- supports incremental, fail-fast agile dev
- supports existing and new apps
- has capabilities engineered to work together

Providing benefits such as ...

- Optimize and innovate seamlessly across clouds
- Increase developer productivity
- Ensure reliable operations
- Scale for unpredictable workloads
- No single vendor lock-in

An application environment optimized for cloud-native development

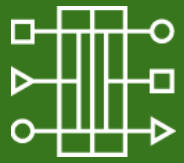
Service based

Best in class cloud-native runtimes, frameworks and languages

In-memory data grid and standards-based enterprise messaging

Single sign-on authentication

App service operators



API driven

Pattern-based integration engine

Process automation & decision making at the microservice level

Managed and secure access to external and internal distributed APIs

Streaming and interconnect messaging

Container focus

Optimized, *container-native* application services

Integrated with Kubernetes

Metrics, monitoring, Day-2 operations through container platform

Framework integration (e.g. Spring Boot, MicroProfile, Quarkus)

DevOps friendly

Developer tooling integration for common CI/CD setups

Compatible with existing tooling for build, test, automation, & artifact management

Red Hat

Building a hybrid-cloud application environment

A COHESIVE AND UNIFIED SET OF CAPABILITIES ENGINEERED TO WORK TOGETHER TO AUTOMATE, INTEGRATE, AND ACCELERATE THE CREATION OF PORTABLE CLOUD-NATIVE APPLICATIONS

Runtimes

Develop new and evolve existing applications

Integration

Connect distributed critical systems

Process Automation & Decision Mgmt

Improve efficiency with automated workflows

Container

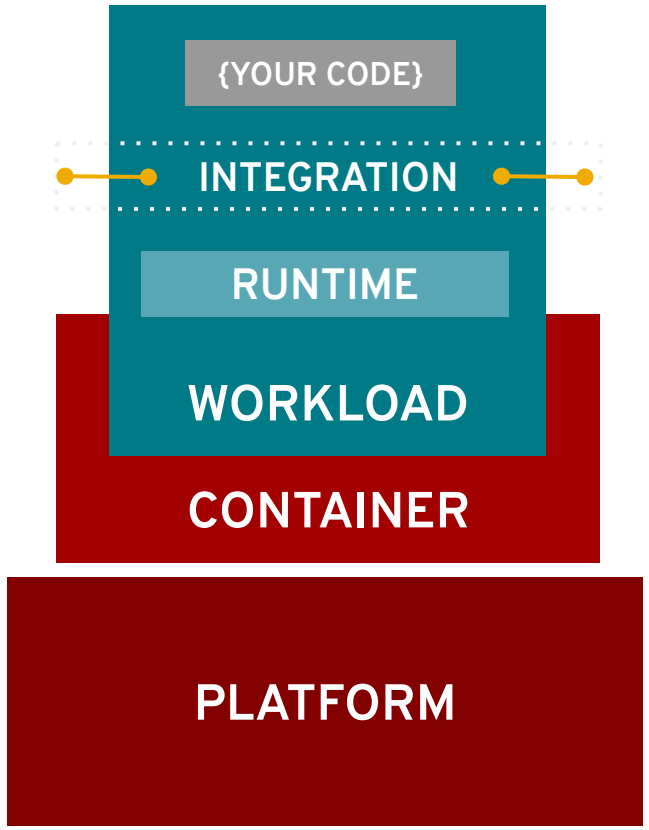
Optimized for hybrid-cloud

Developer Tools

Coherent and consistent development experience

Red Hat

What runs IN the containers matters to the business



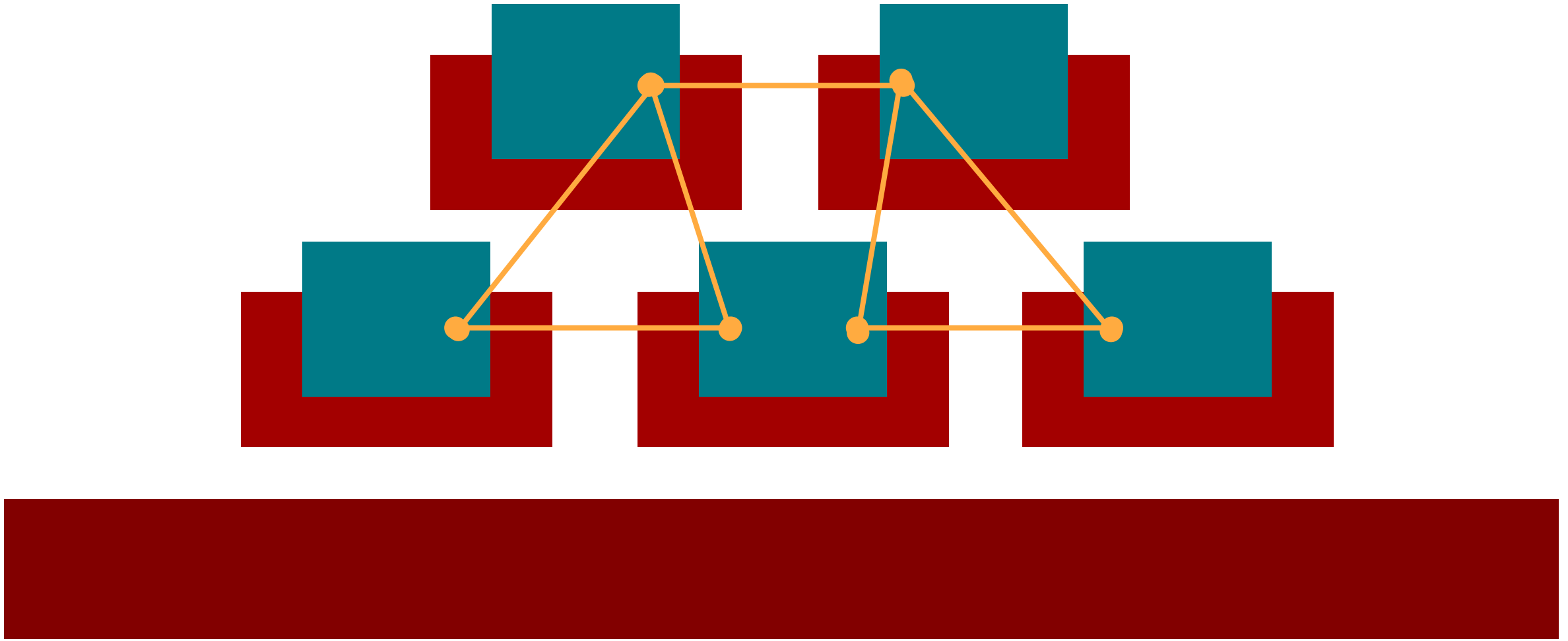
WHAT'S IN THE CONTAINER MATTERS
Your code, your APIs and your runtimes

INCREMENTAL POWER OF CONTAINERS
Ensure portability and scalability thru microservices

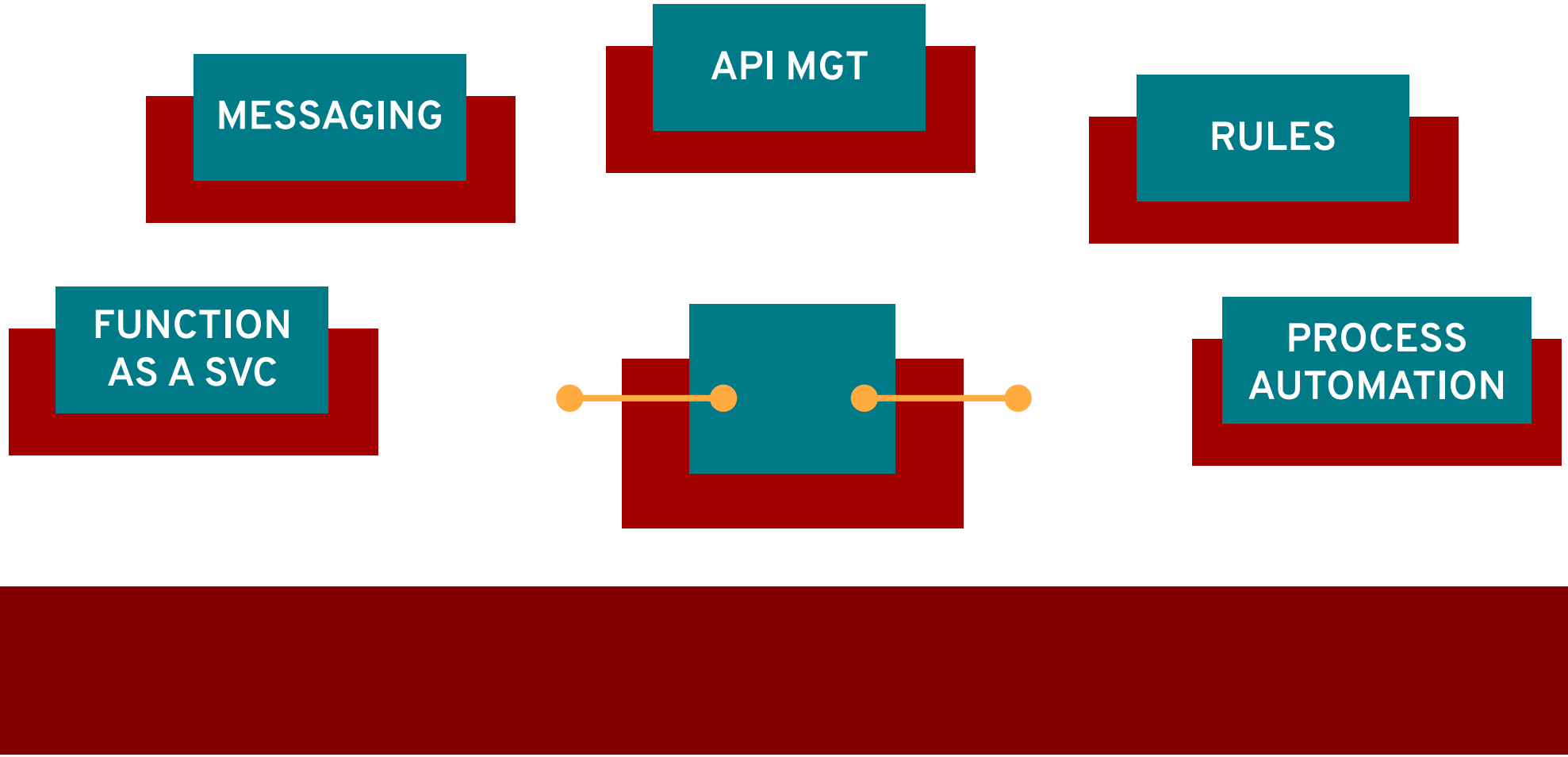
CONTAINER APPLICATION PLATFORM
Use an Enterprise grade Kubernetes platform

Red Hat

What's BETWEEN the containers matters



What's AROUND the container matters



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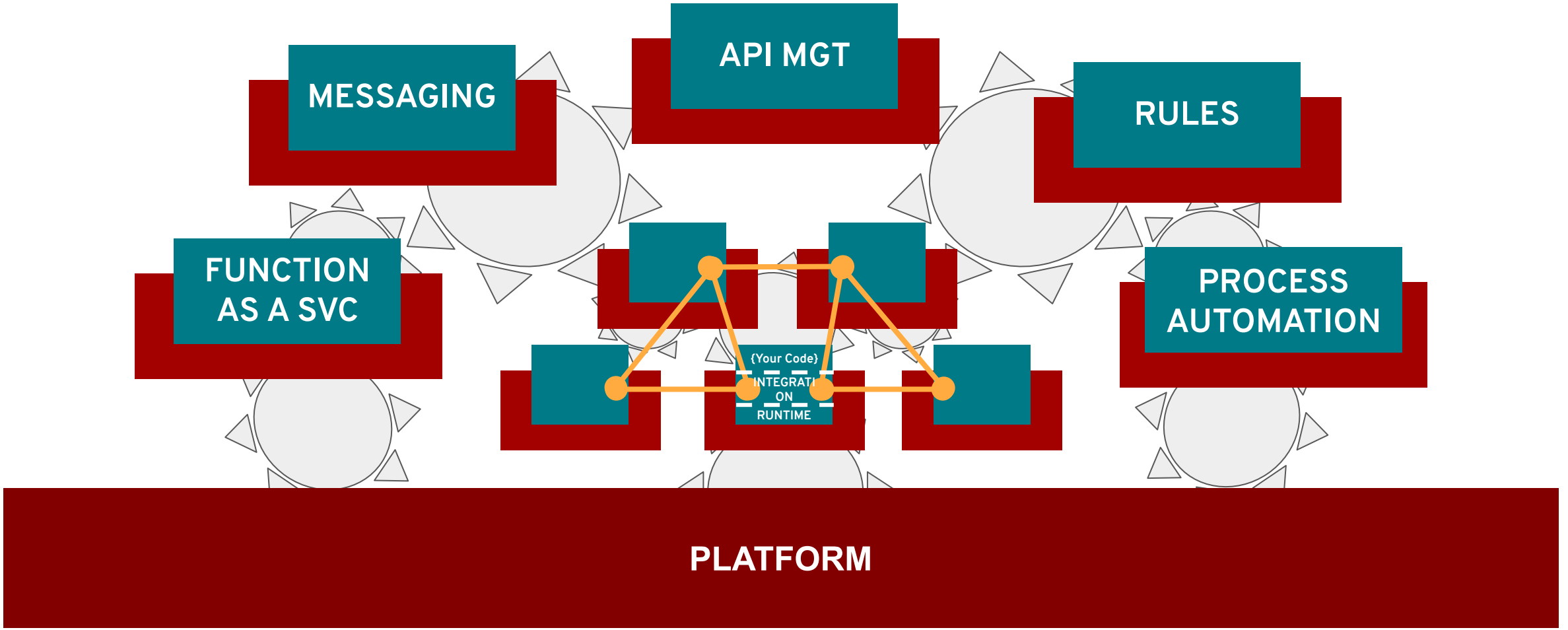
Capabilities engineered to work together



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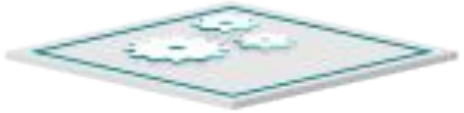
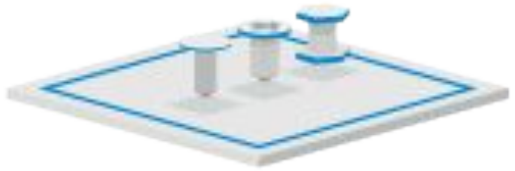
An application environment with Red Hat



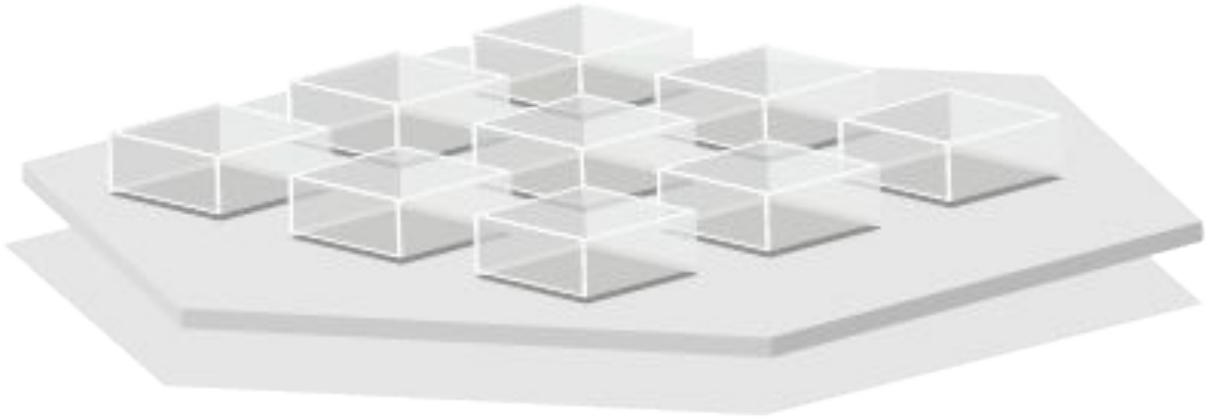
Red Hat Process Automation

Red Hat Integration

Red Hat CodeReady



Red Hat Application Runtimes



RED HAT® OPENSHIFT®

Red Hat

An application environment with Red Hat

LAUNCH SERVICE

JAVA SE OPENJDK	JAVA EE JBOSS EAP/OPEN LIBERTY*	JAVA WEB JBOSS WS	DISTRIBUTED DATA DATA GRID
SERVERLESS CLOUD FUNCTIONS*	SPRING SPRING BOOT	JAVASCRIPT NODE.JS	
SUPERSONIC SUBATOMIC JAVA QUARKUS*	MICROPROFILE THORNTAIL	REACTIVE VERT.X	MESSAGING AMQ BROKER

SECURITY — RED HAT® SSO

Optimized for OpenShift / Kubernetes Services with pre-configured Missions and Boosters
Integration with RH Developer, CI/CD tools, Security Services
Available Application Migration Toolkit
Python, Go and .Net also supported by Red Hat (with a different SLA)

Facilitate cloud native app development ON THE HYBRID CLOUD:

- ✓ Faster getting started
- ✓ Simplify container dev
- ✓ Automate DevOps
- ✓ Standardize tools/processes
- ✓ Fully supported JDK

Red Hat

BANQUE DE FRANCE
EUROSYSTÈME

"Deadlines and process has required a strong agility: we did it !
The most important thing remains to be done: build the platform and populate it. I trust our ability to do this with Red Hat."

Valery Simon,
Head of Architecture

CHALLENGE
Support digital transformation of Banque de France in order to provide better services to citizens and the European Central Bank (ECB).

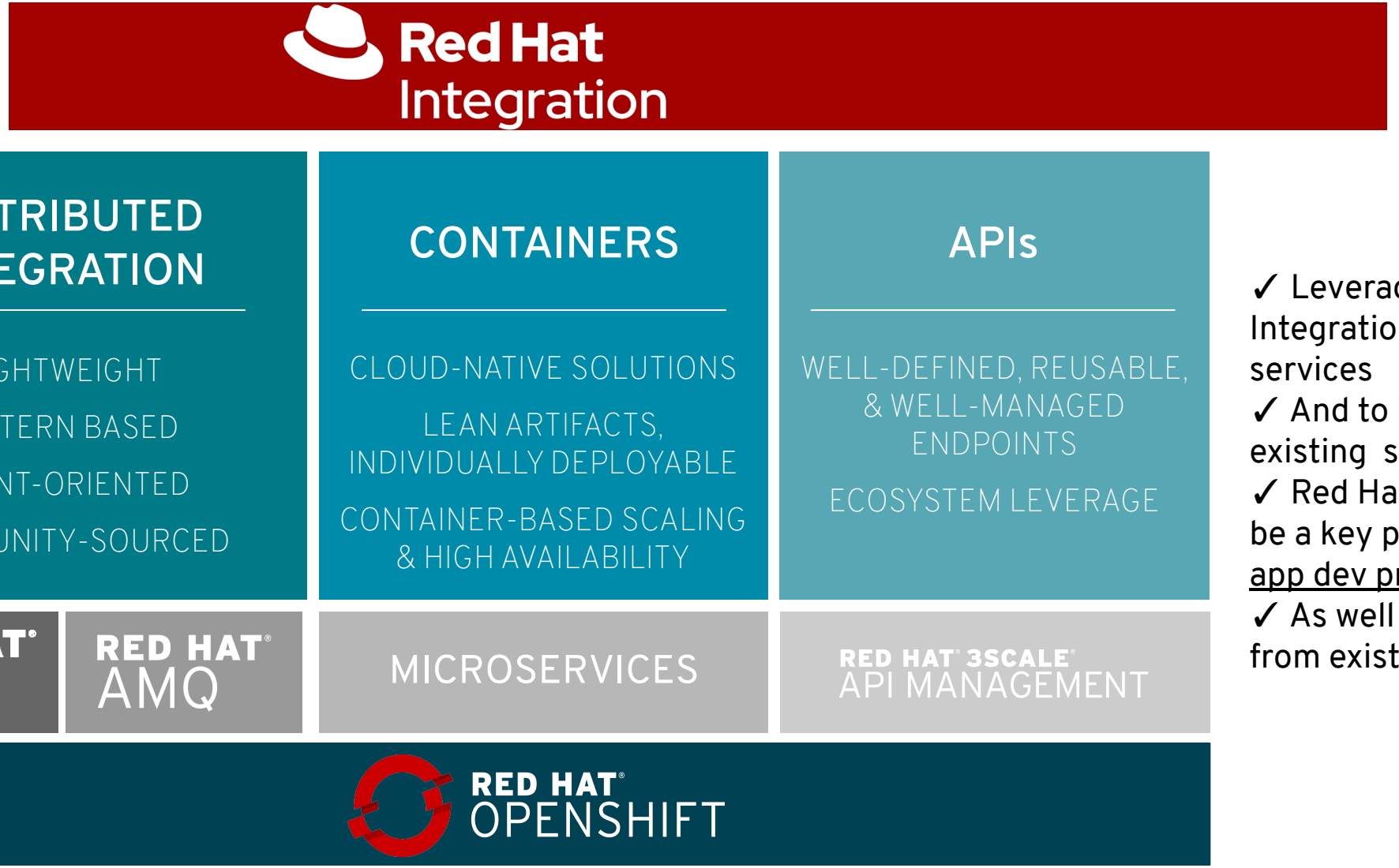
SOLUTION
A large European bank built a new container platform in order to accelerate time to market of new applications, modernize legacy & costly apps, and better manage heterogeneous developer frameworks.

WHY RED HAT
BDF was not able to build the platform with their initial technology choice and wanted to reduce total cost of ownership (TCO) of having multiple development frameworks.
By choosing **Red Hat® OpenShift® & Red Hat OpenShift Application Runtimes**, they are able to achieve both through a comprehensible single partner.

GOALS & METRICS
- 3 year plan to modernize main business critical apps to Red Hat OpenShift® Container Platform
- Being the leader of European System of Central Banks to reply to internal cloud RFP.

PRODUCTS
- Red Hat OpenShift & Red Hat OpenShift Application Runtimes (RHOAR)
- Quay, Container Native Storage (CNS)
- Red Hat Consulting MVP 7 Sprints Co-Designed with Partner

An application environment with Red Hat



✓ Leverage Agile Integration to build new services
✓ And to integrate with existing services and data
✓ Red Hat Integration can be a key platform for all app dev projects
✓ As well as migrations from existing ESB vendors

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Airline Saves Millions in Operations using Red Hat Middleware

Lufthansa Technik

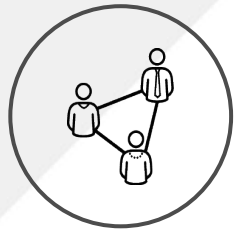
With the help of reusable, modular, microservices based MW components, i.e. Fuse & 3Scale on OpenShift, Lufthansa Technik built a collaborative and easily scalable platform that its customers and partners leverage to deliver solutions with a uniform user experience.

CHALLENGE

With tight schedules and high passenger expectations, the costs directly related to delayed flights were growing quickly.

SOLUTION

- Used Fuse to integrate internal and third-party data storage sources and build predictive analytics to anticipate delays
- 3scale enabled collaboration with third-party developers who are specialized in other areas such as operations, fuel efficiency, or catering



Increased Collaboration

Reduced Costs

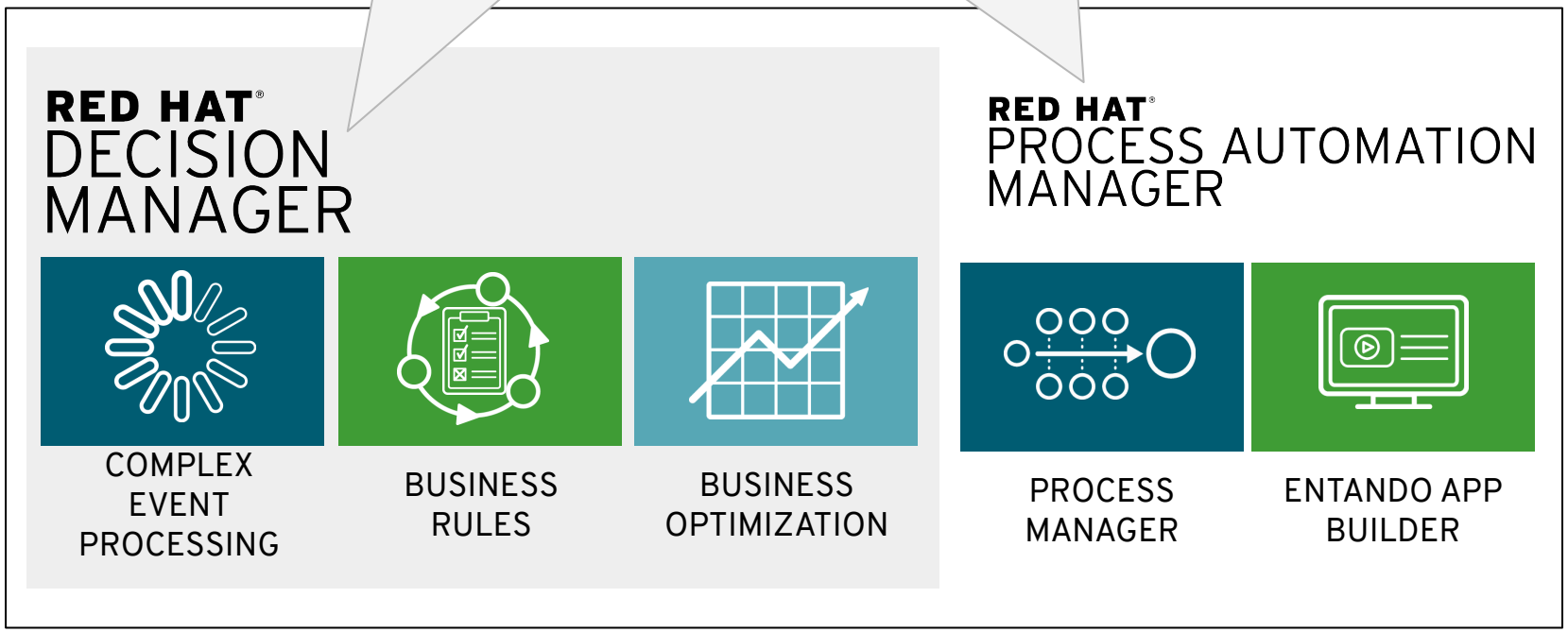
Scalability using MW on OCP

An application environment with Red Hat

Red Hat Process Automation

Embed rules into Cloud applications

Build applications that automate processes



✓ Process Automation Manager- process engine supporting BPMN2 process automation and case management

✓ Decision Manager - rules engine based on the DROOLs project

✓ Business Optimizer-AI constraint satisfaction solver based on OptaPlanner project

✓ Entando UX- Lightweight UX platform for building apps that embed PAM/DM (Lic included)

✓ Trisotech - partner for DMN modeling

Red Hat

ASAHI
旭鉄工株式会社

Saves an estimated
¥300 million
in capital expenditure (CapEx) with IoT solution from Red Hat

CHALLENGE
Improve production efficiency without increasing physical footprint

SOLUTION
Asahi Tekko built an Internet of Things (IoT) mechanism and business rules engine for automated data collection and real-time insight into machine operations.

WHY RED HAT
Asahi Tekko wanted supported open source software from a trusted vendor.

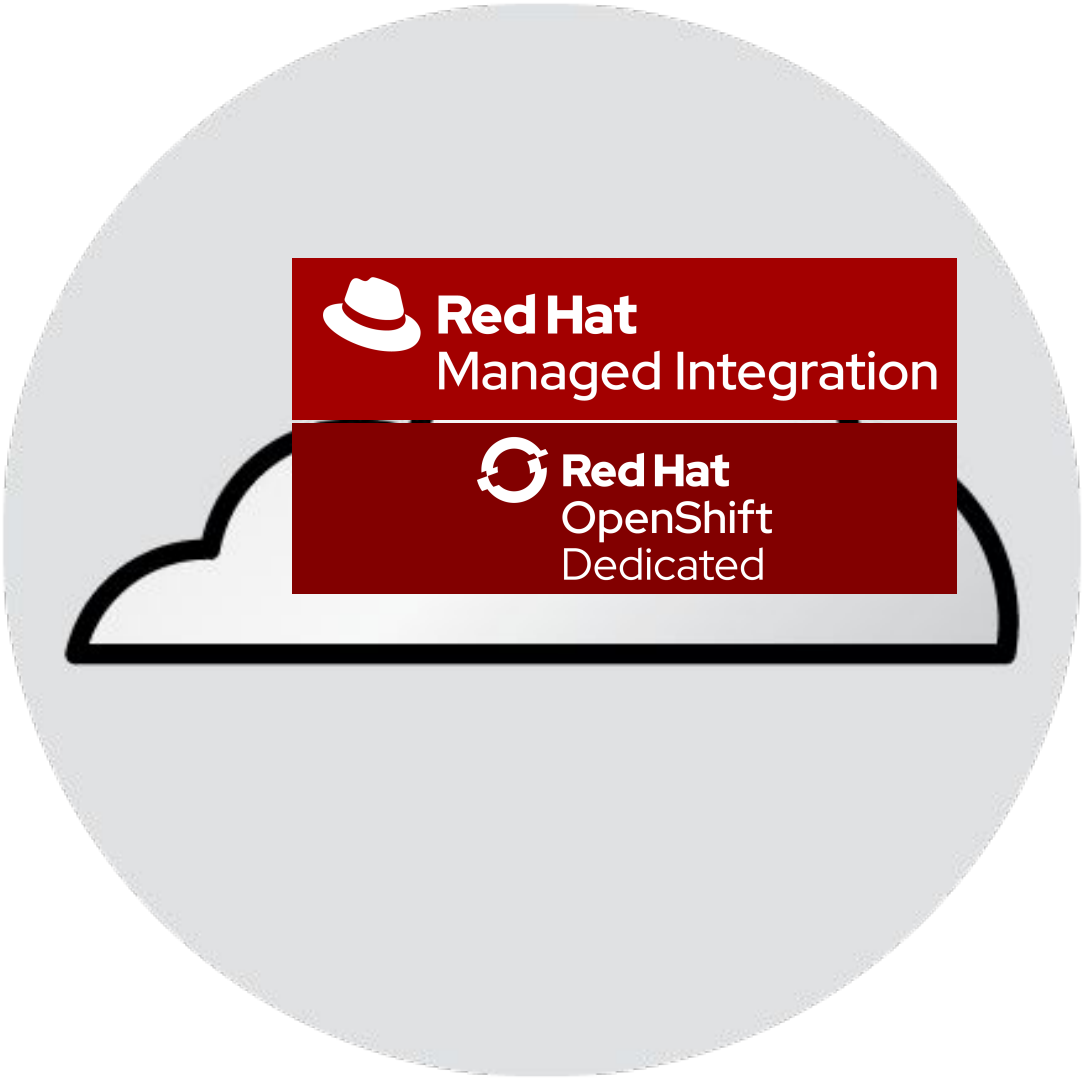
RESULTS
- Reduced new equipment investment
- Improved productivity with real-time data management and insight
- Adopted a new Software-as-a-Service (SaaS) business model

PRODUCTS & SERVICES
Red Hat Enterprise Linux
Red Hat JBoss Enterprise Application Platform
Red Hat Process Automation Manager
Red Hat Consulting

Red Hat

Source: Red Hat case study, Asahi Tekko achieves real-time production management with Red Hat, January 2018.

An application environment in the Cloud - iPaaS



- All the bits of Red Hat Integration
- Operated by Red Hat for you on a public cloud
- Your own instance (not multitenant; no commingled data)
- Fast startup; hands-free management

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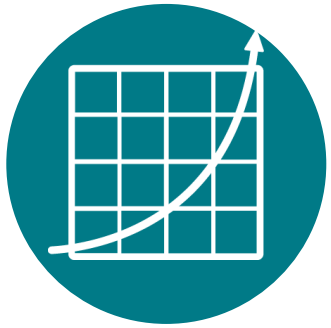
Red Hat Middleware benefits

The open source application environment you need, now and for a faster more flexible future

Productivity



Capabilities engineered to work together increases innovation & the delivery of value to the business

Reliability

Well-tested capabilities put together in standard ways allow apps to be more reliable, scalable, performant, and secure

Flexibility

It supports languages, frameworks, archs & practices for both existing workloads and new development

Hybrid/Multi-cloud

Designed & engineered from the ground up to support the heterogeneous reality of today's enterprise IT

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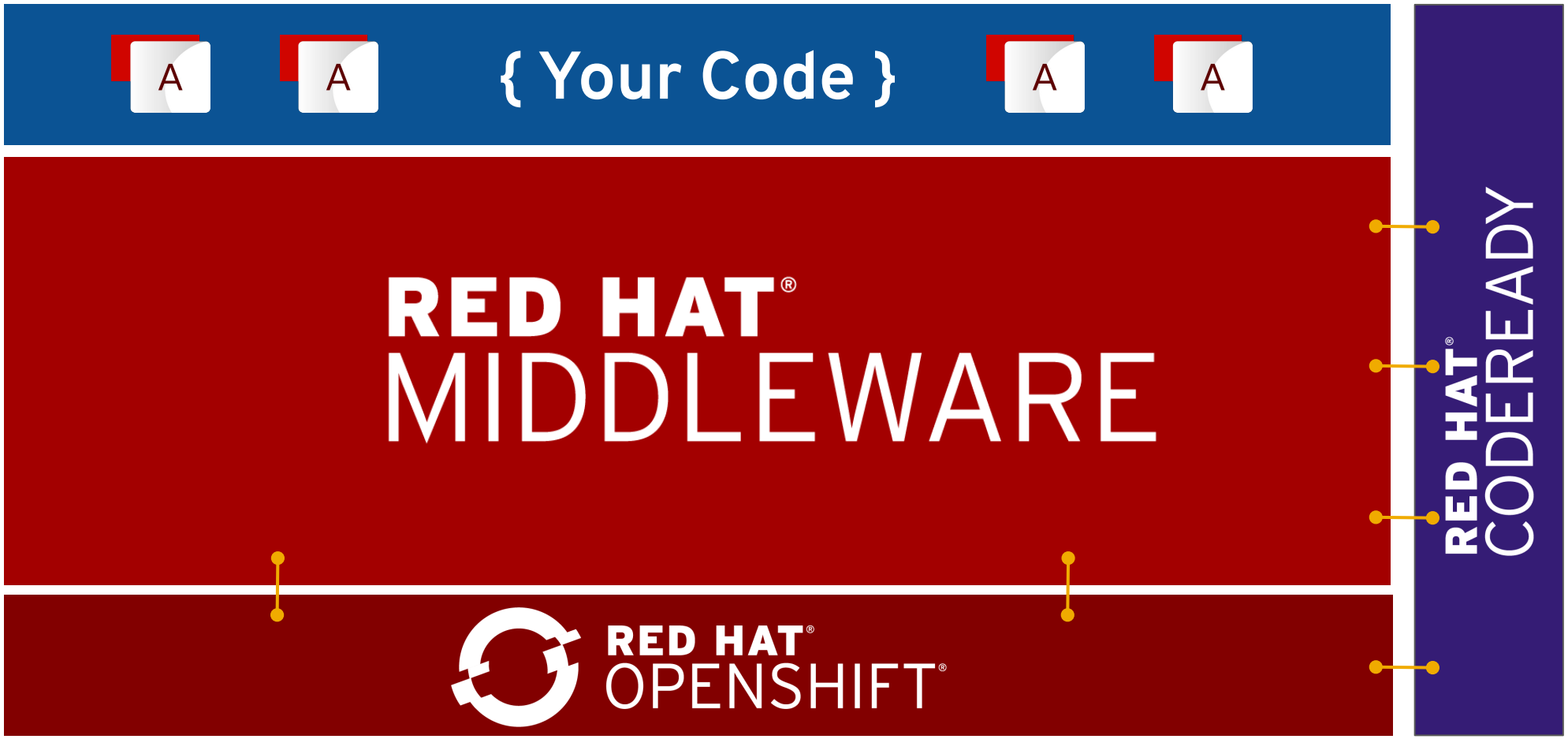
An application environment with Red Hat



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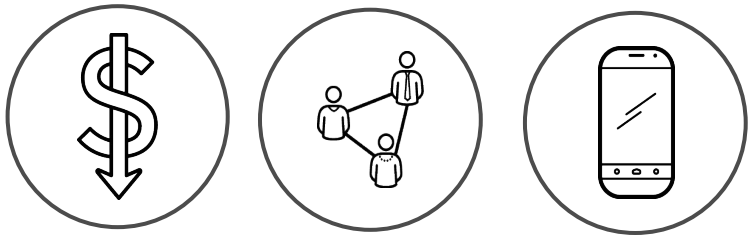
THE “ALWAYS AVAILABLE BANK”

Emirates NBD

With an API-driven architecture, the bank can deploy banking services based on its foundations extremely quickly and seamlessly



Reduced Costs

More time innovating

Open banking

CHALLENGE
Deliver the best, most innovative digital products and services to its growing customer-base. Become the “Always Available Bank” with zero application downtime, for mobile and online banking channels.

SOLUTION:
Sahab ("white cloud" in Arabic) is a private cloud, the first in a bank in the Middle East.

WHY RED HAT
Red Hat is recognized as a market leader in cloud computing innovation. Red Hat’s vision with its products, which operate seamlessly with one another.

RESULTS

- Reduced operational costs for IT, particularly in terms of Capex spend on new hardware due to the higher density of workloads per server
- Increased digital innovation for customers through reduced time to market
- Enhanced competitiveness by geo expansion with a high-quality, consistent CX
- Migrating to 3Scale enabled the bank’s API and open banking journey
- Implementing Red Hat’s Fuse and AMQ (Streams) products to implement Kafka
- 10x higher workload density on virtual servers and 200x on physical ones
- IT cloud teams can focus more on innovation rather than operational challenges

PRODUCTS
OpenShift, 3scale, Fuse, JBoss EAP, RHEL (4-5 years), TAM, AMQ, Consulting, Training

WHAT DIFFERENTIATES US

- Comprehensive set of capabilities engineered to work together
- Open source reciprocity
- Supported and trusted open source
- Agile and agnostic
- Optimized for multi/hybrid-cloud; cloud-agnostic
- Kubernetes native - optimized for OpenShift

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