

# CP4Apps Webinar Series

## Modernizing Applications with Cloud Pak for Applications



**Keith Whitehead**

Worldwide Sales

Hybrid Cloud Application Platform



**Ken Parmelee**

Director, Cloud Pak for Applications &

WebSphere



# Only 20%

of enterprise workloads have  
moved to the cloud. <sup>1</sup>

# Why?

Organizations are facing an unprecedented convergence of technological, social, and regulatory forces.

- Time to market challenges
- High operational costs
- Managing complexity

While new apps and the cost of maintaining existing skyrockets

# 500M

New digital apps and services by 2023 (IDC)

# 40%

IT budget consumed by technical debt compounding through 2025 (Gartner)

# Build and modernize apps that drive growth

## **Monolithic apps and databases**

Large, complex, difficult to innovate



## **Cloud native architecture**

Adopt a common model based on containers and microservices

## **Slow service delivery**

Inefficient development; inaccessible data



## **Innovate and leverage investments**

Understand when to refactor, replace, move, or maintain existing apps with data

## **Siloed organizations**

Development and IT operations



## **High performance agile culture**

Leverage DevOps & DataOps methodologies to achieve continuous delivery

# 69%

experience more rapid growth; better security for company and customer data

# 63%

have improved employee productivity rates

# Your successful application strategy

Unleash

Unlock

Optimize



## Unleash Experiences

- Create innovative cloud-native solutions faster
- Benefits of scale and rapid deployment
- Infused with security and operational insights



## Unlock Legacy

- New value through continuous modernization
- Modernize and leverage existing investments as you move applications
- Realize operational benefits of cloud and containers



## Optimize Investments

- Lower development and maintenance costs
- Deploy existing apps with ultimate flexibility; “Right size” between editions anytime
- Mix and match, scale up or down as you modernize at your pace.

Open  
standards and  
open source  
create the  
best cloud  
architecture



Enterprise-grade  
software on the most  
secure public cloud

Deep industry expertise

Built on Linux OS,  
delivered by Containers,  
managed by Kubernetes

Robust open source  
ecosystem



Transform, run, and  
manage your critical  
workloads —  
anywhere

# WebSphere standard support 2030

## Stability & Longevity for Existing Workloads



**Optimize:** Run existing apps

Run existing workloads

No need to migrate

More time to modernize

Stay the course on key priorities

From 8.5.5 to 9.0.5

Committing to broader  
transformation goals – data, cloud,  
agile

Version	Release Date	Standard Support (with IBM JDK 8)	Extended Support (with IBM JDK 8)
WAS 8.5.5	2012	2030	2033
WAS 9.0.5	2017	2030	2033



IBM will provide standard support for WebSphere Application Server versions 8.5.5 and 9.0.5, with IBM JDK 8, through at least 2030.  
For WAS 8.5.5 and WAS 9.0.5 - WAS ND, WAS (Base) and WAS Family Edition.

# Unlock: Modernize and leverage existing investments

Unleash

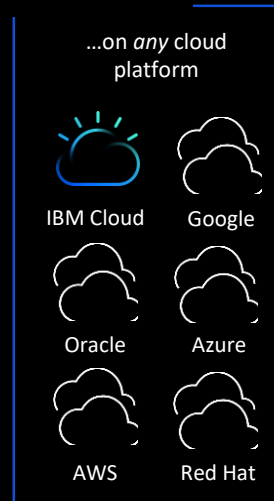
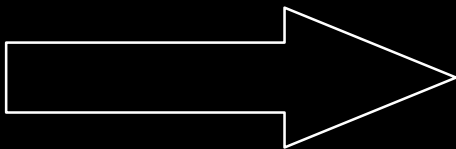
Unlock

Optimize

*How do you choose the optimum approaches for your organization's needs?*



*Hybrid Multicloud IT*





# CP4Apps Modernization Value Comparison

	Modernize Operations	Modernize Runtimes	Modernize Architecture
Value			Cloud Native
			Agile Delivery
		Cost Savings	
		Technical Debt Reduction	
	Flexible Deployment		
CP4Apps Recommended End State	Application	Application	Microservices
	tWAS	Liberty	Liberty
	Containers	Containers	Containers
	OpenShift	OpenShift	OpenShift
Mod Tools	Transformation Advisor		Mono2Micro (beta)

New

Existing

A major US  
healthcare  
provider

Modernization  
lead to optimized  
resource usage  
by 75% and  
reduced  
infrastructure  
footprint by 50%

#### Business Challenge:

A major US healthcare provider wanted to increase operational efficiency and cost benefits while improving application performance by moving closer to cloud native technologies and techniques and leveraging a lighter weight runtime.

#### Solution:

##### *Migration Overview*

- Moved to WebSphere Liberty & Java 8 on VMs
- Re-wrote some legacy pieces of the app

#### Next Steps:

- Analyze & move more traditional WAS ND apps to Liberty
- Adopt container management platform

#### Outcome:

- Lower licensing costs
- Infrastructure consolidation
- Streamlined deployment
- Dynamic scalability
- Improved application performance
- Cloud/Container ready

*Achieving operational efficiency & cost benefits*

#### Solution Components:

- IBM WebSphere Liberty



MASSACHUSETTS

## Modernizing mission-critical and enterprise systems – incorporating new technology while retaining existing investments

[Learn more](#)



### Business Challenge:

Blue Cross Blue Shield of Massachusetts processes extremely large transaction volumes related to healthcare claims and enrollment, including 94 million eligibility requests in just one year. With its market share increasing, the company wanted to adopt a cloud-based technology platform to gain greater flexibility in handling transaction volume spikes. And it wanted to make this change in both the shortest time and with the smallest cost investment possible.

### Solution:

Working with the IBM® Garage, the company gained expertise in rapid application modernization, including agile development techniques, and tested mission-critical apps on IBM Cloud Pak™ for Applications on Red Hat OpenShift software. The scalable, containerized infrastructure helps the company incorporate new technologies while retaining—and evolving—existing technology investments.

### Outcome:

- Complete demo of new system in 4 weeks
- Optimized resource usage
- Automation for faster ongoing improvements

*“As a customer-focused company, modernized systems allow us to provide the best service we can. Our technology can scale to meet customer demand around the clock without downtime.”*

Aline Yurik  
Director of Software Engineering  
Blue Cross Blue Shield of Massachusetts

### Solution Components:

- IBM Garage
- IBM Cloud Pak for Applications on Red Hat OpenShift



# Architectural Modernization

Business Needs = *Fast! + Agile!*

“I need applications to be more agile in order to adjust and shift in response to rapidly dynamic market demands”

“I need diverse and easy to use tools and capabilities to build anywhere, at any pace”

“I need my applications to scale dynamically, achieve peak performance and adhere to security requirements regardless of where they are deployed”

Elite Software Delivery Performance

Deployment Frequency  
*On Demand*  
*(multiple deploys per day)*

Lead Time for Changes  
*Less than one day*

Time to Restore Service  
*Less than one hour*

Change Failure Rate  
*0-15%*

71% of CEOs say improved agility and faster time to market is top priority

# Architectural Modernization is Hard

## Pain

*I have no idea what to do with this application*



*I don't know how to architect applications for the cloud*



*I want to be able to use the right tool for the right job*



*I want to minimize vendor lock in, and increase portability*



*I need help to put all this together*



## Relief

Robust modernization toolkit

Best practices for software development and delivery tools for Cloud Native

Broadest range of supported runtimes

Market-leading hybrid cloud, enterprise Kubernetes platform

Expert services



# Transformation Advisor

*Available now. Enhancements available in CP4Apps v4.2: June 12*

Quickly evaluates on-premises Java EE applications and messaging infrastructure to accelerate deployment to accelerate Liberty containers on private or public cloud

Introspects deployments to determine complexity of modernization

Provides recommendations, detailed reports, artifacts, and automated deployment for simple application modernization

More Info: <http://ibm.biz/cloudta>



# v4.2

enhancements

- Analyzes WebSphere deployments on z/OS
- Supports traditional WebSphere Application Server base in containers

# Mono2Micro

(new, open beta) AI based automatic transformation of monoliths into microservices

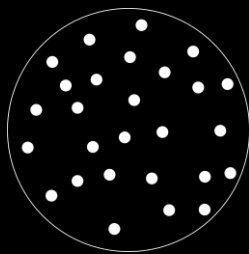
*Beta available now. Sign up for the Mono2Micro [beta release](#)*



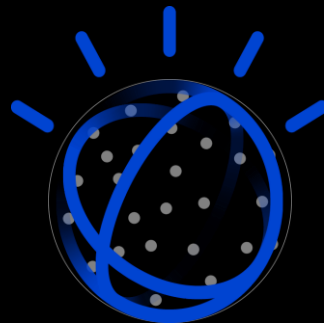
**Unlock:** Modernize and leverage existing investments

Mono2Micro's AI capabilities generate recommendations, semantic analysis and a significant portion of the code needed for refactoring

Monolith

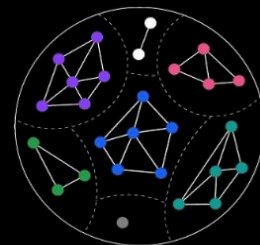


Microservice Generation Engine



AI identifies high cohesive, low coupling components

Microservices

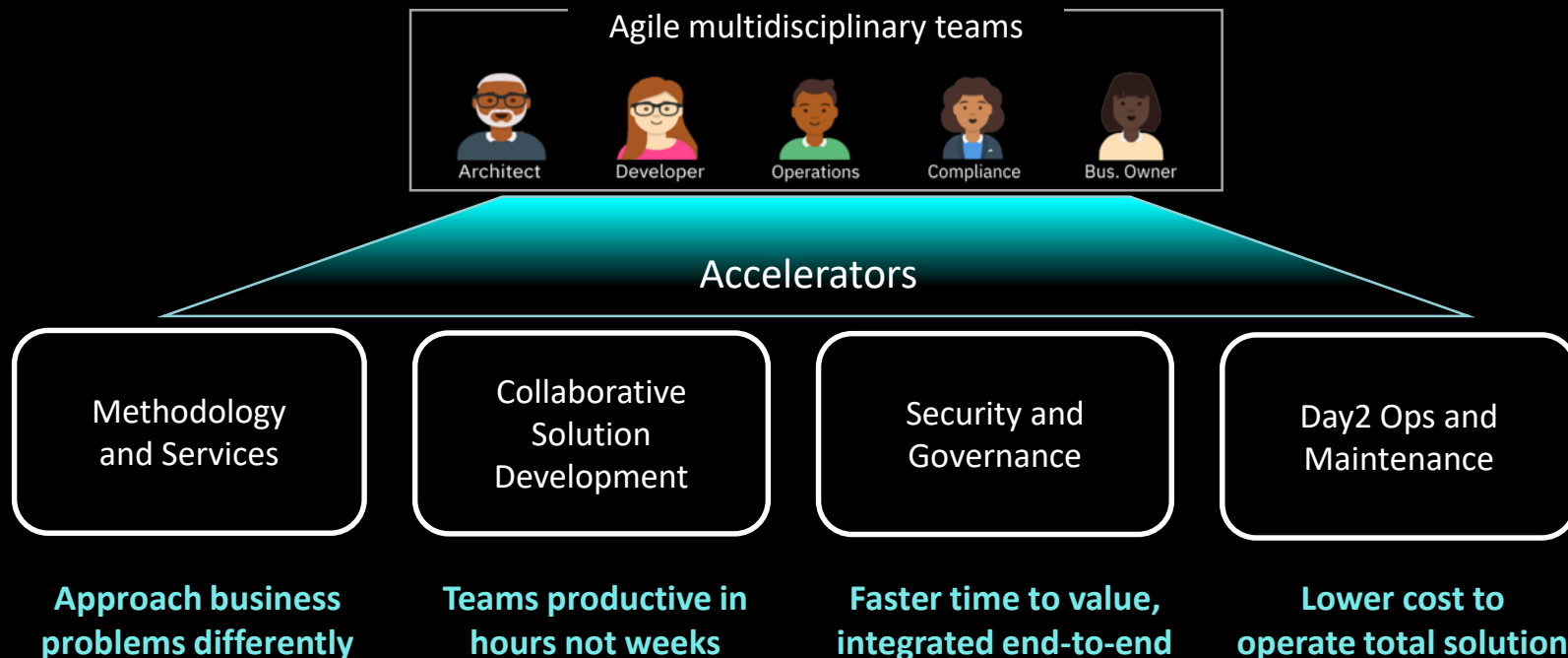


Generated Microservices ready to be deployed

User can interactively refine recommended Microservices

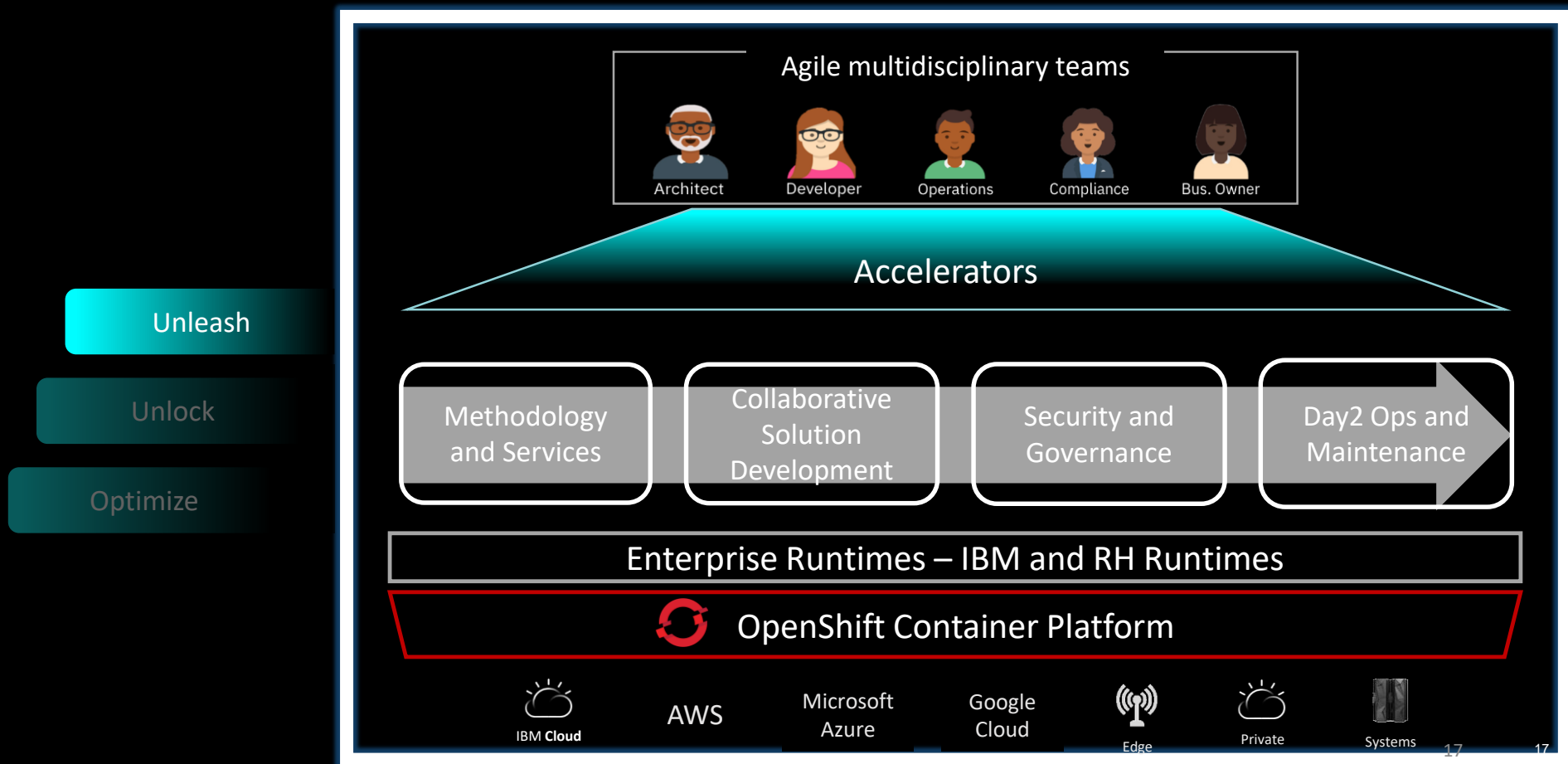
# Accelerators for Teams

*Frictionless cloud-native development for multidisciplinary teams*





# CP4Apps: Accelerating Cloud-native **solutions** faster from idea to production



# Cloud Pak for Applications

*The ultimate flexibility across open source, platform, runtimes, and tools all in one place!*



- **CHOICE:** Build new cloud-native apps on the broadest range of supported runtimes
- **PORTABILITY:** OpenShift Container Platform for hybrid multi-cloud
- **FLEXIBILITY:** “Right-size” and modernize between the various WAS editions.
- **CONTROL:** Empower teams to start quickly with increased productivity and enterprise governance
- **EXCLUSIVES:**
  - *Perpetual and term licensing available*
  - *Supported Transformation Advisor*
  - *Accelerators for Teams*
  - *Availability on Power and Z*
  - *Common Services*



***“The ability of application leaders to realize their application visions for the future depends on the plans they put in place today.”***

Source: Gartner, Predicts 2020: Application Leaders , 14 January 2020, ID G00464148

**Cloud Pak for Apps  
delivers solutions fast  
and reliably by...**

**Unleash**

**Unlock**

**Optimize**

**Adapting to Demands  
and Transforming the  
Customer Experience**

**improving time  
to market by up  
to 50%**

**Changing Culture and  
Embedding New Skills  
and Capabilities**

**eliminating 99%  
of application  
defects**

**Innovating While  
Balancing Speed-to  
Delivery, Cost and Risk**

**reducing  
total cost to  
develop new  
apps by up to  
30%**

# Upcoming Webinars

Date	Title	Register
June 18 11am ET	<b>Here's what's new in IBM Cloud Pak for Applications v4.2</b> Invite your clients to hear Ken Parmelee and Geoff Pirie discuss: <ul style="list-style-type: none"><li>• Cloud Pak for Applications' latest version and its ability to rapidly build and manage the applications that drive customers' business forward, with cost reduction and ROI</li><li>• Enhancements to Cloud Pak for Applications' solutions, runtimes, and tools that provide the widest set of capabilities in one offering</li><li>• How to use Cloud Pak for Applications to accelerate innovation while being more flexible and resilient</li></ul>	<a href="https://ibm.biz/BdqanV">ibm.biz/BdqanV</a>

# Thank you

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[ibm.com/cloud/cloud-pak-for-applications](https://ibm.com/cloud/cloud-pak-for-applications)

