

Optimize development and operations to maximize ROI with IBM WebSphere



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

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



Operational optimization is imp

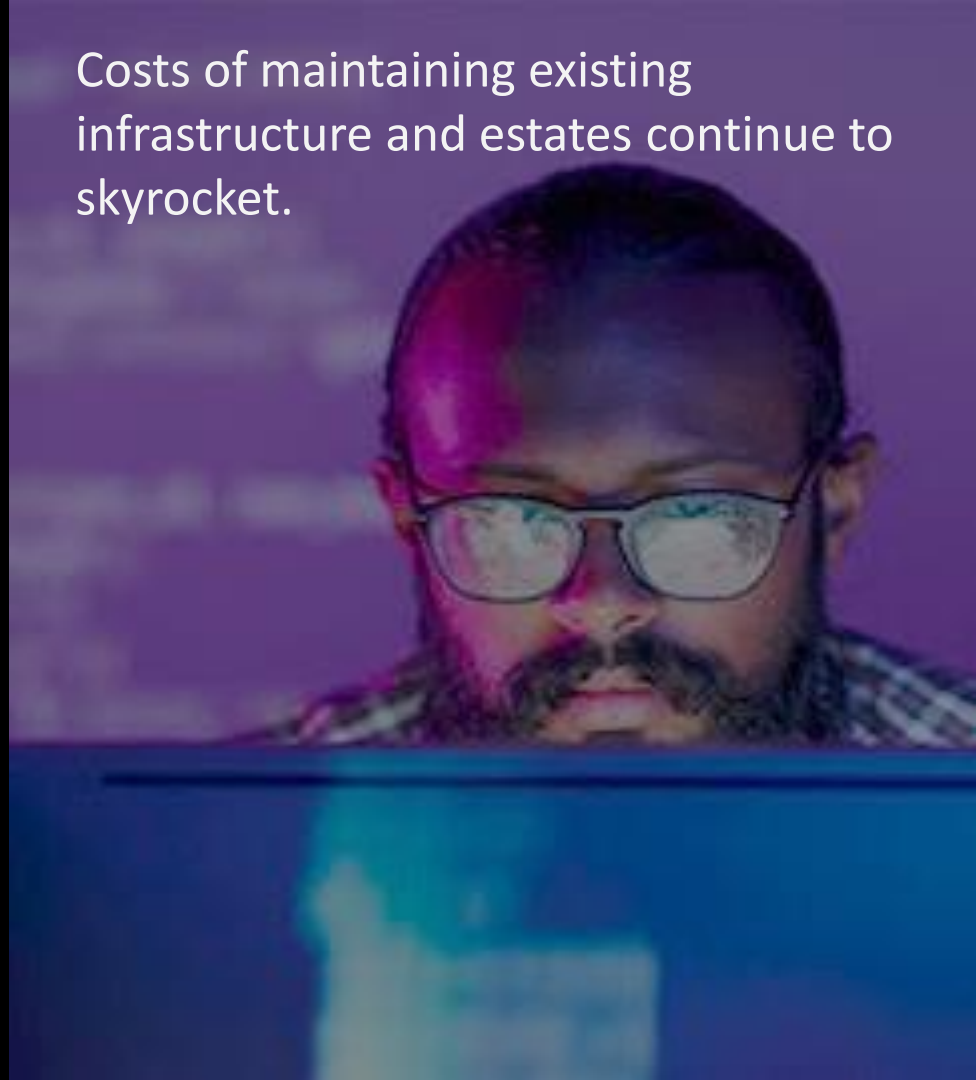
“Our WebSphere operations are complex”

“Lack of cloud skills across infrastructure and architecture is a huge challenge”

“We can’t even start innovation projects that would help the organization face challenging times like these”

IBM WebSphere Customers, 2020

Costs of maintaining existing infrastructure and estates continue to skyrocket.





Left alone 40%

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

IDC FutureScape: Worldwide IT Industry 2020 Predictions, Doc #US45599219, Oct 2019
Gartner: Application Modernization Should Be Business-Centric, Continuous and Multiplatform 15 August 2019, ID G00430084

Massive transformation
programs are hard to
greenlight and often fail to
deliver quick results.

How do you break through to
innovation?



Rx

**Immediate optimization,
achievable modernization
steps, flexibility of licensing and
deployment options across
existing and future IT estates**

This approach reduces costs immediately, extends the life of existing investments, and keeps the organization focused on maximizing ROI while setting them up for modernization success.

WebSphere standard support through 2030

Stability & Longevity for Existing Workloads

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.

Rx For Immediate Savings Through Optimization

IBM Cloud Pak for Applications and WebSphere are the destinations for application workloads

- **All of the capabilities and technologies needed for application and operational optimization**, modernization and cloud enablement of your existing and future IT estates
- Simple, ratio-based deployment flexibility
- Run existing and new workloads side-by-side as you transition to containers

IBM Cloud Pak for Applications and WebSphere Platform

- WebSphere Application Server | WebSphere ND | WebSphere Base | Liberty Core | Open Liberty
- Red Hat OpenShift and Red Hat Runtimes
- IBM Modernization & Developer Tools: Transformation Advisor | Mono2Micro | Application Navigator | WebSphere Migration Toolkit

Benefits

- Protect existing WAS investment
- Mix and match programs needed and change the mix over time
- Subscription benefits include lower initial acquisition costs and customers pay for use rather than pay for support and updates
- Provides everything needed to begin or accelerate the modernization journey –recommendations, reports, artifacts
- Container deployments achieve 4X throughput and half the response time
- Deploy WAS VM and container-based workloads side-by-side with ratio-based flexibility
- Transition to cloud at your own pace!

6 Reasons Why WebSphere Liberty

Supports Java EE, great for monoliths and microservices

Just enough runtime



80% disk and 56% memory saving

Low operating cost



4x increased density over Tomcat & Spring Boot

Continuous delivery



Zero-effort security fixing & zero technical debt

Zero migration



100% v2v & fixpack migration saving

Kubernetes optimized



Self-tuned optimal perf, production-ready, kube-native

Developer experience



Container & kube-native experience, rapid inner loop

Higher scalability
Increased Security
Lower overhead

Potential 158% ROI over three years

Optimize application management

IBM Application Navigator, available now in WAS 9.0.5

"I have too many views, from too many tools, with too many inconsistencies - making it difficult to determine the root cause of an issue or get the information I need to make decisions." – WAS customer



ICP Console
and Resource



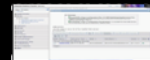
Liberty Admin Center



Grafana Metric Views



Kibana Log Views



WAS Admin Console

- Single Pane of Glass to see all your apps and environments across Cells, Collectives and Containers
- Easy to install, no-charge component of WAS ND
- Smart actions to access the tools you need

IBM Cloud Private

Applications / stock-trader /

stock-trader ● Normal

Status	Name	Kind	Namespace	Platform	Action
Normal	lovely-frontend	Deployment,Liberty	default	Kube	
Normal	notification-backend	Deployment,Liberty	default	Kube	
Normal	notification	Deployment,Liberty	default	Kube	
Normal	stock-trader	Deployment,Liberty	default	Kube	
Normal	stock-trader	Deployment,Node.js	default	Kube	
Normal	loyalty-level-ingress	Ingress	default	Kube	
Normal	notification-ingress	Ingress	default	Kube	
Normal	portfolio-ingress	Ingress	default	Kube	
Normal	stock-quote-ingress	Ingress	default	Kube	
Normal	trader-ingress	Ingress	default	Kube	
Normal	loyalty-level-service	Service	default	Kube	
Normal	notification-service	Service	default	Kube	

Licensing options

License and Support

(Perpetual Licenses)

“Buy”

- Non-expiring license to use the software
- Annual renewal payments for maintenance (software subscription) and support
- Higher initial investment (compared to term options)
- *May offer the opportunity for different accounting treatment than subscription models

Monthly Term Licenses

(Uncommitted Monthly Term)

“Rent”

- Renewable monthly license, including right to use the software plus maintenance and support during the coverage period (no ongoing right to use)
- Allows for shorter-term rentals – ideal for temporary or seasonal spikes in usage (“bursting”) to augment other license types
- Higher annual cost than annual subscription (Committed Term)
- Can renew, modify size, or terminate contract at renewal date

Subscription

(Committed Term Subscription)

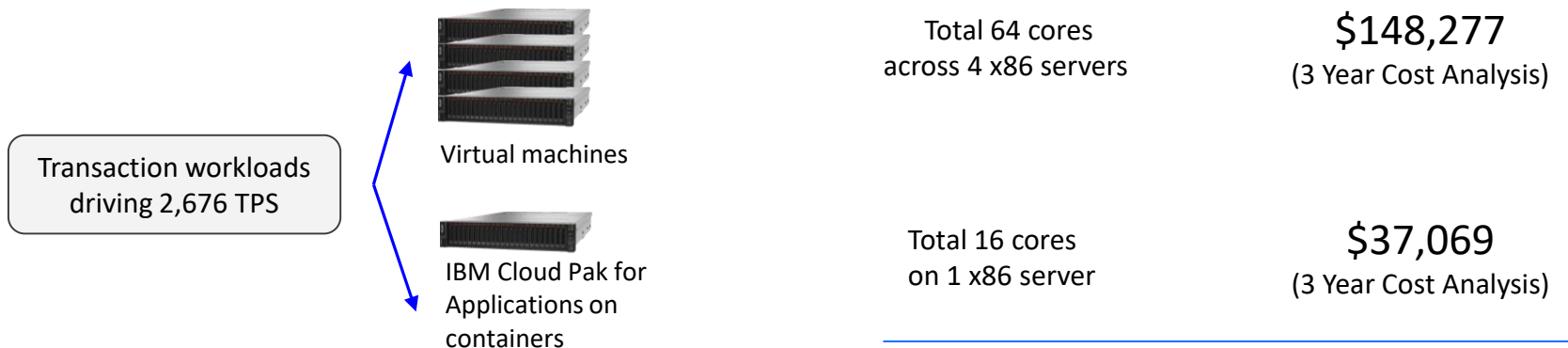
“Lease”

Available on IBM Cloud Pak for Applications

- Renewable annual license, includes the right to use the software plus maintenance and support during the coverage period (no ongoing right to use)
 - Note that contract minimum is 12 months, but flexible terms of up to 60 months are available
- Lower initial investment than perpetual licenses, lower annual cost than monthly term
- Can renew, modify size, or terminate contract at renewal date (quantity fixed during term)
- Predictable annual billing during term for budgeting license renewal fees
- Available as an upgrade from traditional software S&S for selected programs

Modernize to Optimize

IBM Cloud Pak for Applications on containers can enable a **75% reduction** in annual infrastructure costs with minimal application changes



4X Core Reduction

75% Lower cost

Transaction workloads using containers run on fewer cores with lower infrastructure cost than classic virtualized environments

¹ Annual server maintenance, administration and facilities costs include hardware maintenance, server labor, networking, floor space and energy costs for x86 servers over three years running transaction workloads in virtual machines versus IBM Cloud Pak for Applications containers. Both virtual machine and container environments were run to simulate a variance in CPU demand with a peak-to-average ratio of 7 to 1 driving a total of 2,676 TPS over 33 containers and eight virtual machines. The IBM Cloud Pak for Application environment was comprised of one 16-core Cascade Lake x86 server running 33 containers. The virtual machine environment was comprised of four 16 -core Cascade Lake x86 servers. The results were obtained under laboratory conditions, not in an actual customer environment. IBM's internal workload studies are not benchmark applications. Infrastructure costs are based on client data from IT Economics assessments. x86 hardware pricing is based on IBM analysis of U.S. prices as of June 2020 from IDC. For more information contact IT_Economics@us.ibm.com, or learn more at <https://www.ibm.com/downloads/cas/POANK8YE>

Modernize to Optimize

Transformation Advisor

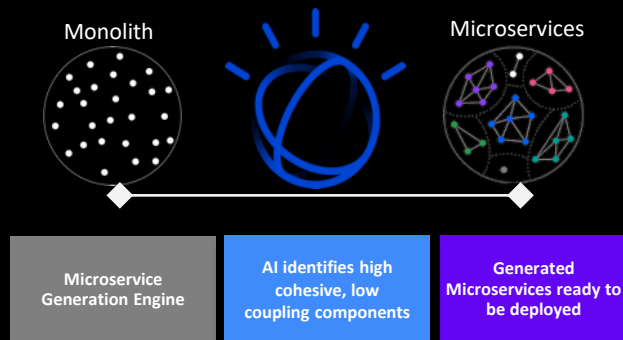
- Accelerate deployment of Liberty or WAS Base in containers on private or public cloud with quickly evaluations of Java EE applications and messaging infrastructure
- Analyze deployments with ease to determine complexity of modernization, including z/OS
- Obtain detailed reports, generate artifacts, and automate deployments for simple application modernization
- Facilitate a familiar TA modernization experience for any middleware with SDK capability e.g. IBM Integration Bus

Mono2Micro

(beta)

Accelerate modernization by automating the process of application refactoring with AI-powered:

- Recommendations
- Semantic analysis
- Code portion needed for refactoring



A major US healthcare provider

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

Achieving operational efficiency & cost benefits

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:

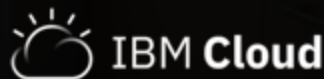
- Analyze & move more traditional WAS ND apps to Liberty
- Adopt container management platform

Outcome:

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

Solution Components:

- IBM WebSphere Liberty



Next Steps

Register

- Weekly optimization, modernization and cloud enablement shows focused on WebSphere applications

ibm.biz/ApplicationsThursdays

Get Started

- Schedule a free 30-minute consultation

ibm.com/cloud/websphere-application-platform

Thank you



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WAS 9.0.5

- Simplified app-centric management for hybrid deployments
- Proactive problem determination with logging & monitoring
- Replaces the scheduled 9.0.0.12 fixpacks

WebSphere Application Server ND 9.0.5

Prepare for a container/cloud future and move when you are ready

Hybrid Deployment components:

- Operational and application navigation
- Logging and Monitoring
- Transformation Advisor
- Metering



Application Navigator

Visibility, problem determination, and contextual actions across VMs & containers

WAS 9.0 Service Clock Reset

Transitions take time, transform at your own speed with support through at least 2030

Standard support through at least 2030, with optional extended support for +3 years

WebSphere Modernization Value Comparison

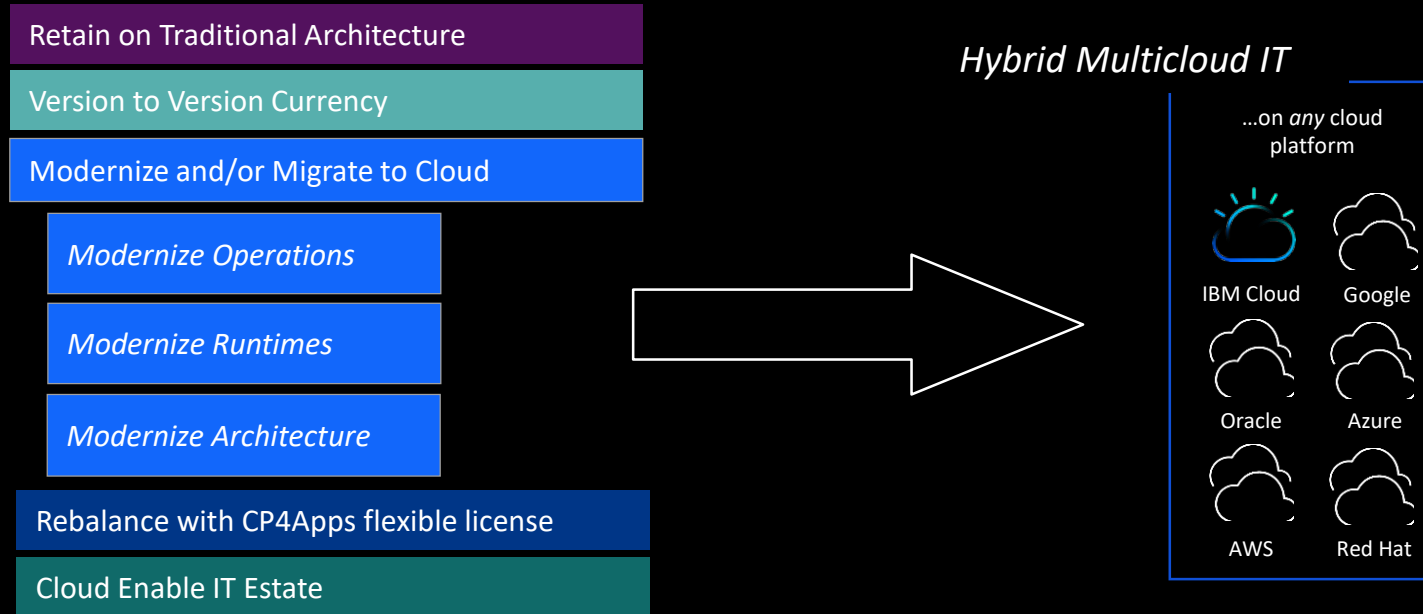
	Modernize Operations	Modernize Runtimes	Modernize Architecture
Value			Cloud Native
			Agile Delivery
		Cloud Enabled	
		Cost Savings	
		Technical Debt Reduction	
	Flexible Deployment		
Recommended End State	Application	Application	Microservices
	tWAS	Liberty	Liberty
	Containers	Containers	Containers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

New

Existing

Unlock: Modernize and leverage existing investments

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



Right-Sizing and Modernization

Two Complementary Value Streams

Right-Sizing

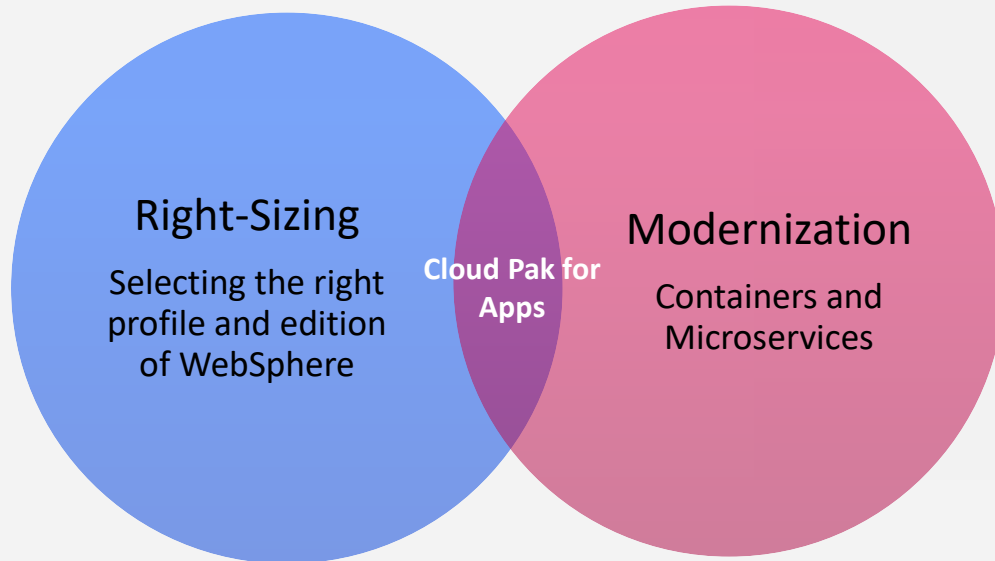
Desired Outcomes

Modernization

Cost Reduction through software license savings

Operational Efficiencies by moving to lighter-weight middleware offerings

Readiness for container-based architectures and microservice



Cost Savings through improved hardware density (Containers)

Application Portability (Containers)

Faster, more Consistent Deployments (Containers)

Improved Business Agility (Microservices)