HCLTech | Red Hat

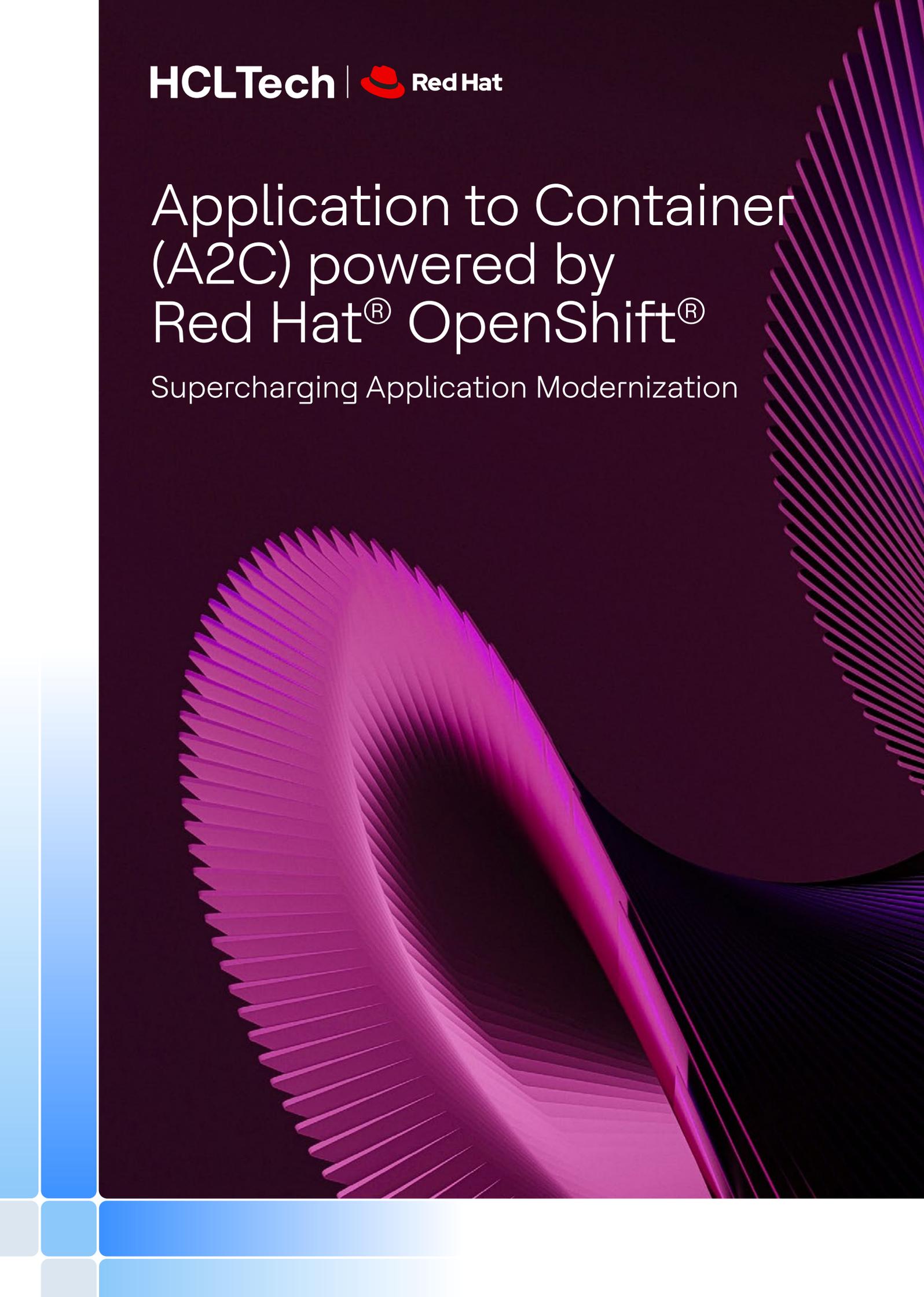# Application to Container (A2C) powered by Red Hat® OpenShift®

Supercharging Application Modernization

The adoption of containerization technology is on the rise , with an increasing number of enterprises embracing it. This exponential growth is driven by it's superior approach that enhances application development, deployment and management.

HCLTech and Red Hat have collaborated to develop Application to Container (A2C) a cloud-based service that containerizes and deploys workloads using the Red Hat® OpenShift® Platform, which is designed to assist enterprises in modernizing and transforming their applications using standardized and automated processes.

Businesses looking to migrate their cloud-native applications require a well-thought-out strategy, architecture and roadmap to determine the most appropriate applications and data to migrate to the cloud and accelerate modernization. HCLTech provides a full spectrum of services, from strategy to execution, to help clients transform existing applications, enabling the quick realization of business outcomes. Together with Red Hat, we help to standardize across environments, develop cloud-native applications and integrate, automate, secure and manage complex systems.

Key challenges

During containerization, enterprises often face three major challenges that can impede their widespread adoption and success. These challenges can result in unforeseen organizational obstacles, leading to delays, cost overruns and potential project failures.

Unpredictable outcomes:
The success of containerized projects are challenging to predict due to the complexity of legacy applications, varying infrastructure requirements and potential compatibility issues.

Unpredictable pricing:
The pricing of migration services is opaque and variable, making it challenging for organizations to estimate project costs accurately. Containerization solution providers often charge a fee based on the number of containers, application complexity, migration duration, offering a tiered pricing structure or fixed-fee engagement.

Uneven quality experience:
Inconsistent quality experience during migration can result in performance issues, security vulnerabilities and operational difficulties. The proficiency and experience of the service provider, as well as their adherence to industry standards, plays a crucial role in determining the overall quality of the migration process.

To meet the demand for quicker, more responsive service, businesses are adopting a more agile, contemporary approach to application delivery. Organizations that successfully migrate to contemporary applications, including container-based systems, can generate new business value and gain a competitive edge.

Navigating containerization challenges with A2C

Application to Container (A2C) powered by Red Hat OpenShift focuses on three key elements to address the above challenges. HCLTech's Customer Service factory service ensures consistent and predictable outcomes, standardized delivery processes and transparent pricing, fostering reliable customer experiences.

Outcome-based delivery:
Clearly defined in-scope and out-of-scope activities, pre-measured and validated timelines, effort for each service and measurable outcomes for every service delivery.

Standardized delivery:
The structured approach features well-defined steps guided by pre-scripted runbooks, ensuring consistent data collection through standardized templates and enforcing clear entry/exit criteria with defined checklists.

Catalog-based transparent pricing:
Factory service ensures transparent pricing for all its solutions by offering well-defined SMC classification and pricing buckets.

Application to Container (A2C) powered by Red Hat OpenShift

The Application to Container (A2C) powered by Red Hat OpenShift provides a comprehensive approach to containerizing and migrating applications leveraging Red Hat OpenShift Container Platform. The flexible and scalable framework can migrate many applications, from simple web to complex enterprise applications.

Red Hat OpenShift is an open-source container platform that utilizes Kubernetes technology to help companies achieve the following:

• Faster time to market by reducing debugging time

• Lower costs by improving resource utilization

• Enhanced security and scalability

Kubernetes has become the de facto standard for container orchestration and management. OpenShift intelligently figures out the optimal way to run containers and monitors the health of clusters just like a thermostat monitors the ambient temperature to keep your house at a constant warmth. Moreover, it can run on hybrid or multicloud environments, giving clients multiple options to choose the best for their needs.

Work Breakdown Structure – The WBS is divided into the following six phases:

Assessment
This phase evaluates application readiness for containerization and identifies potential issues

Containerization
Conversion of non-containerized workloads into containerized applications

Platform design and build (ARO)
This involves designing and building a customer-specific, final production-grade ARO cluster ready for application deployment

Migration design
The migration plan outlines the steps to migrate the application to OpenShift

Migration
Migration to the target platform encompasses pre-migration readiness assessment, validation testing, cutover support and seamless handover to the BAU team

BPM onboarding of WBS

All the modules in the WBS are modeled on the JBPM tool, meaning the modules can be easily automated and managed

Process simulation

A dry run of the migration process identifies potential gaps in the process and validates the steps involved

Tech simulation

A tech simulation is a pilot execution that validates the effort and solution using a pilot/sample application

Training material

The Application to Container (A2C) powered by Red Hat OpenShift framework includes training material for the delivery squad, such as boot camp and hackathon

A2C service – key features

Standardized services
- Template-based process with outcome-based delivery
- Cost transparency
- Real-time progress visibility

Faster resources onboarding
- Well-defined and standardized entry and exit criteria
- On-demand skilled resource onboarding

Governance and risk mitigation
- Agile methodology
- Standardized toolset
- Predefined RACI

Standardized tools
- HCL IPs/accelerates
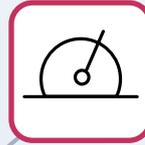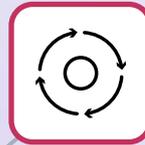- Predefined 500+ blueprints, scripts and templates

Continuous improvement
- Knowledge Repository
- Customer-specific learnings, processes, SOP, culture
- Industry best practices

Streamlined processes
- Change management at the application or component level
- Demand/workload management
- Cost management

Assembly line-based execution
- Parallel execution
- Standard treatment plans
- Agile methodology
- Backlog management

Why Application to Container (A2C)

The combination of HCLTech A2C Offering on Red Hat OpenShift can help clients achieve successful application modernization and benefits such as:

- Reduced application complexity, which allows for more agile development using microservices

- The ability to deliver frequent and responsive updates to quickly address customer demands

- Higher availability application delivery with the ability to scale more rapidly

- Flexibility to run anywhere and to avoid vendor lock-in

- Security throughout the entire application lifecycle

HCLTech Cloud Native and AI Labs

- HCLTech's Cloud Native and AI Labs focuses on creating and launching new innovative capabilities, training, performing POCs and cloud native strategies

Factory model

- Ability and flexibility to scale up/down based on volume and business needs

- Agile and high-performance squads that can be quickly re-calibrated based on workload

IPs and accelerators

- HCLTech will bring its IPs and accelerators that help with cloud assessment, cloud platform setup, cloud migration and operations like one-click, KMP etc.

Proven framework

- A2C is an industry-aligned Service for App Modernization to help enterprises for faster Container as a Service (CaaS) adoption

Cloud ecosystem partnerships

- Strong partnership with OEM/cloud providers for architecture validation guidance and support at any time of implementation

Highlights

- Meticulously defined and tested service delivery steps

- Process-driven delivery for consistent excellence

- Transparent pricing for service

- Seamless end-to-end process with integrated tools - from GTM to project onboarding to delivery

Application to Container (A2C) powered by Red Hat OpenShift

6

Success story

USA-based Fortune 500 utility company

Scope

- Assessment of applications and identification of candidates with the highest value on containers
- Build Azure Kubernetes Service (AKS) based container platform with best practices and embedded security
- Containerize shortlisted applications and set CI/CD pipelines
- Knowledge transfer and training of customer teams

Solution

- Multi-region Azure Kubernetes Services (AKS) implementation integrated with an application gateway, Azure Key Vault
- Containerized Java and NET applications with minor refactoring with added security (SSL)
- Created Azure DevOps CI/CD pipelines for automated deployment
- Enabled customer teams to support and maintain the AKS implementation and containerized workloads

Impact

- Improved customer understanding of containers and their benefits
- Self-service and reusable artifacts to scale platforms or build new environments in the future
- Sustainable cloud migration journey with containers accelerating innovation across organizations and future cost savings

HCLTech's edge

HCLTech's Application to Container (A2C) powered by Red Hat OpenShift stands out from the competition due to its comprehensive approach to containerization and migration, underpinned by three key differentiators:

- Structured WBS
- Comprehensive runbooks
- Leveraging IPs

HCLTech and Red Hat combine years of experience and technology to help clients modernize costly, monolithic applications to meet the demands of the current marketplace. A2C provides performance at the speed and scale of digital, while enabling multiple new options and remaining vendor agnostic.

A2C holistic approach, coupled with standardized and automated processes, ensures a predictable, cost-effective and secure migration experience for organizations seeking to transition to containerized environments.

For more information contact us at hcltechconnect1@hcl.com

HCLTech
Supercharging Progress™

www.hcltech.com