

IBM Consulting



G-Cloud 15

IBM – Red Hat OpenShift (OCP) Services on Cloud

Service Definition Document

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IBM Red Hat OpenShift (OCP) Services on Cloud

Offering Description

IBM is a global leader in delivering application and data migration and modernisation across major cloud platforms, including Google Cloud, AWS, and Azure. We enable comprehensive application portfolio transformation and DevOps modernisation through the adoption of Red Hat OpenShift Container Platform and a robust open-source technology stack.

- Delivers incremental value through application transformation, combining existing application modernisation with new-age application development.
- Provides a consistent and certified technology stack built on open, secure, and market-leading technologies.
- Enables delivery on any cloud platform without vendor lock-in.
- Supports redesign of legacy applications using microservices architectures to run natively on any cloud within Red Hat OpenShift containers.
- Leverages open-source development and community models to drive agility.
- Includes modernisation assessment led by Design Thinking, featuring deep discovery and insights into the application portfolio, followed by planning appropriate modernisation approaches for different application sets, defining target architecture (including coexistence design), and creating an iterative, value-driven execution plan.
- Facilitates technical debt removal and optimisation through approaches such as refactoring, re-platforming, and containerisation.
- Enables application reengineering and transformation to cloud using API enablement, in-place modernisation, re-architecture, modularisation of applications, and development of microservices.
- Delivers application portfolio transformation through a combination of existing and modern approaches, leveraging both native services and best-of-breed tools and services.

Today, cloud adoption is widespread: while initial estimates many years ago suggested perhaps only ~ 20% of workloads had migrated, more recent data indicates that **around half to three-quarters of enterprise workloads** now run in cloud or hybrid-cloud environments — reinforcing that there remains a significant portion for many organisations to migrate. For a successful next-phase transformation (Chapter 2), focusing on migrating the remaining core workloads and optimizing hybrid-cloud capabilities continues to be a strategic priority.

IBM's expertise, collaborative approach, and access to Hybrid multi-cloud, Z systems and Red Hat engineers enable us to:

- Craft an Accelerated Modernisation Roadmap using discovery tools to reduce data centre footprint and accelerate time-to-value.
- De-risk the Move to Cloud with superior economics and proven methodologies.
- Identify, build, and secure APIs to deliver measurable business value.
- Refactor applications for microservices architecture to optimise the application portfolio.
- Create new revenue streams by modernising and virtualising data access while improving system integration and performance.
- Ensure regulatory compliance on demand through robust governance and security frameworks.
- Enable a productive and secure developer experience with modern tools and practices.
- Embed DevSecOps and Agile practices within client organisations for continuous innovation.
- Support a flexible landing zone to foster innovation and scalability.



IBM Red Hat OpenShift (OCP) Services on Cloud

Service Overview

IBM helps clients align their cloud strategies with their business objectives through a comprehensive set of capabilities:

Features

- Accelerated client response through simplified solutioning guidance.
- Rapid, outcome-based ideation and execution using the IBM Garage approach, combining skills from across the IBM ecosystem and client teams.
- Leverage Red Hat cloud capabilities and best practices to enhance portability, security, and open-source adoption.
- Dynamic Delivery ensures workforce resilience with Anytime, Anywhere delivery.
- Expert advisory services on security and compliance across hybrid infrastructures.
- Application portfolio modernisation – identify, migrate, or modernise applications to Red Hat OpenShift.
- Digital capability building through a co-creation model, from MVP to scale.
- Cloud-native application development at scale using Red Hat cloud capabilities.
- Enterprise-wide DevSecOps framework establishment and accelerated adoption.
- AI-based Services Control Tower for end-to-end visibility into application operations.
- Monitoring and management of applications and infrastructure leveraging DevSecOps principles and practices.
- Red Hat-specific management and operations best practices and toolchains for consistent delivery.

Benefits

- Improved agility and time-to-market by 40 to 60%, enabling faster delivery of business outcomes.
- 20% reduction in application spend, unlocking new revenue streams and enhancing customer service experience.
- 25–30% faster time-to-market for new services through improved mainframe data access and visualisation.
- Accelerated ROI – delivered 30% quicker than alternatives using IBM's Modernisation Toolkit.
- Reduced risk and improved quality through an analytics-led, structured re-engineering approach.
- Up to 30% reduction in operational costs across the IT portfolio.
- Enhanced value in core business functions through faster ecosystem and partner integration.
- Empowered IT and development teams with the latest cloud-native capabilities and skills.
- Access to IBM Garage Method for Cloud Toolkit and pre-built reference architectures.
- Solution patterns that accelerate and simplify functions, products, and releases.

Key Differentiators

- IBM Garage-led co-creation of new business capabilities at an accelerated pace, leveraging best practices from hyperscalers (AWS, Azure, GCP, IBM Cloud, etc.) to deliver customer-centric modernisation initiatives and faster value realization
- IBM Garage Methodology for Cloud Modernisation addressing portability, interoperability, compliance, and security across multiple cloud platforms and providers.
- Innovative engagement model featuring pre-built solution offerings and ISV partnerships.
- Dynamic delivery model enabling a real-time network of innovation micro-centers with access to virtual global talent pools for resilient, portable, rapid cloud platform-based application development.
- Proven experience in supporting mission-critical workloads for Fortune 500 and other clients, ensuring successful implementation of modernisation programs where integration of legacy and modern systems poses significant challenges.
- Architectural guidance and reference implementation, including motivations for service and product selection and guidance for solution customization.
- Accelerated realization through purpose-built advisory and containerisation tooling (e.g., Red Hat Pathfinder, IBM Cloud Transformation Advisor, MTA, ADDI, TOPAZ, ACA, ARC, etc.).
- Industry domain expertise ensuring compliance and conformance with specific cybersecurity and regulatory standards and requirements.
- Red Hat OpenShift-specific accelerators for environment setup, DevSecOps tooling, and cloud-native code generation.
- Unique approach to security alignment, helping clients adapt security controls to the realities of a hybrid cloud IT estate.

IBM Red Hat OpenShift (OCP) Services on Cloud

Addressing Business Needs

We partner with you to align cloud strategies with business objectives, leveraging deep industry expertise, advanced tools, and proven methodologies to deliver digital-ready solutions that meet a wide range of business requirements.

IBM's Red Hat OpenShift services accelerate the creation of a future-ready business, optimising cost and reducing technical debt.

IBM provides the skills, methods, and tooling to de-risk complexity through the IBM Garage, which leverages an outcome-driven approach to quickly identify key enterprise challenges and engages experts from across the IBM ecosystem to co-create solutions that deliver business value.

This approach aligns IT with business requirements, reduces operating costs to free up capital for innovation, and enhances the overall application security posture.

How do we manage the Application development for Cloud?

Many organisations struggle with limited application knowledge, capabilities, and tools, which impacts their ability to successfully execute an application development plan. IBM addresses these challenges through a structured, outcome-driven approach:

- Prescriptive guidance for designing and developing applications aligned with hyperscalers and other cloud platforms (AWS, Azure, GCP, IBM Cloud), leveraging pre-built architecture patterns, delivery models, and estimation frameworks.
- IBM Garage Method for Cloud and Tooling, including automated candidate microservice recommendations and creation, accelerating time-to-value and improving affordability.
- AI-driven and market-leading modernisation tools such as ADDI, CAST, DevOps Commander, and Pathfinder to evaluate application codebases and validate IT/business requirements, enabling co-creation of the most suitable strategy.
- Cloud security enablement based on industry-leading practices, regulations, and compliance standards.
- Scalability solutions to overcome complexity in application landscapes and enable seamless integration of legacy and modern systems.
- Co-creation, co-execution, and collaboration with client teams to introduce new ways of working and deliver transformation efficiently.

IBM's modernisation approach transforms applications and data to enable customer-centric innovation and deliver exceptional client experiences.

IBM Red Hat OpenShift (OCP) Services on Cloud

Service Definition

IBM Application & Data Migration / Modernisation on Hyperscaler using OCP

IBM delivers a comprehensive Application and Data Migration / Modernisation service that maximises value from your cloud transformation journey. Our approach empowers clients to rapidly containerise application components with Red Hat OpenShift, while significantly reducing total cost of ownership (TCO) through an open, portable architecture.

An in-depth analysis of applications at the code level identifies dependencies and determines the level of remediation required. These insights, combined with new business requirements, form the basis for a detailed design of the modernised application. This process includes code conversion, containerisation, remediation, and new development as needed.

In addition to Modernisation Discovery, IBM Design Thinking workshops with IT and business stakeholders help identify opportunities for enhancement. Together, these insights enable the creation of detailed blueprints for the modernised application and comprehensive execution plans.

Development of Applications on Modern Cloud Platforms Includes:

- Designing and enabling applications to run on current, supported operating platforms, middleware, and databases
- Deploying applications to the target cloud on OpenShift, using deployment patterns that ensure optimal performance.

Each application is built to implement necessary changes for the new platform. An efficient Factory approach accelerates execution, leveraging the IBM Garage Method for Cloud and associated automation toolsets.

- IBM embeds security at every stage of the application migration and modernisation journey to ensure compliance, resilience, and trust across hybrid and multi-cloud environments. Our security approach includes:
 - Zero Trust Architecture – Implementing identity-centric security controls to protect workloads across cloud and on-premises environments.
 - DevSecOps Integration – Embedding security into the development lifecycle with automated vulnerability scanning, compliance checks, and secure coding practices.
 - Regulatory Compliance – Aligning with industry-leading standards and regulations such as GDPR, ISO 27001, SOC 2, and PCI DSS to meet client-specific requirements.
 - Container Security – Leveraging Red Hat OpenShift's built-in security features, including image scanning, role-based access control (RBAC), and policy enforcement for containerised workloads.



- Data Protection – Ensuring encryption of data at rest and in transit, along with secure key management practices.
- Continuous Monitoring – Using AI-driven tools and IBM Cloud Pak for Security to detect, respond, and remediate threats in real time across hybrid environments.
- Security Posture Assessment – Conducting regular assessments to identify risks and strengthen security controls across applications and infrastructure.

IBM Red Hat OpenShift (OCP) Services on Cloud

Migration and Modernisation Patterns

To help clients address the complexity within their application portfolios, IBM has developed a framework of Solution Patterns that drives consistency in transformation approaches. These patterns embed modern methods and practices through IBM Garage delivery, supporting the migration and modernisation journey for complex workloads.

Examples of Solution Patterns and Offerings

Application Migration / Remediation

- Application and data migration – like-for-like (VM-to-VM, VM-to-bare metal).
- Application migration with remediation – e.g., Unix-to-Linux, OS upgrades.
- COTS migrations and SaaS enablement.

Application Containerisation

- Containerisation of Java, non-Java, and Cloud Foundry applications to OpenShift.
- Database re-platforming and migration to cloud environments.

Application Modernization

- Re-architecting applications and modernising UI, integration layers, and databases.

Mainframe Application Modernisation

- Performance optimisation and language conversion.
- Re-architecting, creating new APIs, and modernising stored procedures.

Cloud Application Development and DevOps

- Cloud-native development using microservices architecture.
- API development and exposure for integration.
- Enterprise and partner application integration.
- DevSecOps and Site Reliability Engineering (SRE) enablement.
- Low-code development using platforms such as PEGA and PowerApps.
- Data-centric API exposure and management.

IBM Red Hat OpenShift (OCP) Services on Cloud

IBM Approach

IBM brings the advantage of extensive experience working with some of the world's largest organisations, successfully transforming complex and mission-critical services in a cloud-agnostic manner. Our approach is built on robust methodologies, proven processes, and personalised engagement, ensuring secure, scalable, and outcome-driven modernisation.



We prioritise your business objectives and focus on building trusted, long-term relationships, underpinned by industry-leading experience and capabilities. Our goal is to ensure you gain maximum value from every engagement and achieve outcomes that matter for your organisation.

With extensive experience across multiple public cloud platforms and deep expertise in Red Hat and OpenShift, IBM delivers a truly cloud-agnostic approach for all your transformation needs—now and in the future.

The IBM Garage methodology enables safe and secure workload modernisation, leveraging automation to accelerate delivery and reduce risk. Key elements include:

- Continuous Discovery – Monitoring for changes, schedule impacts, and prioritisation.
- Multi-cloud by Design – Built on Red Hat OpenShift to enable seamless workload mobility.
- Automation and Orchestration – Accelerates execution, reduces risk, and integrates DevSecOps practices.
- Development Squads – Scalable teams driving end-to-end development using a consistent methodology.

IBM Red Hat OpenShift (OCP) Services on Cloud

Why IBM?

Experience

Extensive track record of delivering major multi-cloud transformations for Fortune 500 companies across AWS, Azure, IBM Cloud (formerly Bluemix), Google Cloud, and private clouds built on Red Hat OpenShift.

Complexity

Proven capability to develop applications from scratch and execute large-scale migrations involving thousands of applications.

Expertise

Global network of cloud consultants and specialists with deep experience in IBM Cloud, Red Hat OpenShift, AWS, Azure, Google Cloud, and more.



Our Delivery Principles

We operate on a set of principles that guide how we think and act in delivering value to our clients:

- Building long-term relationships founded on innovation, trust, and service excellence
- Applying Design Thinking and Agile practices to shape and execute change programs effectively
- Embedding cognitive and emerging technologies into enterprise processes for smarter operations
- Leveraging hybrid multi-cloud solutions to support evolving business needs
- Developing and deploying world-class talent to deliver exceptional outcomes
- Using consistent, modern methods and tools, continuously refining them to accelerate value delivery
- Thriving in globally dispersed, multi-disciplinary engagements, enabled by advanced collaboration tools
- Implementing robust governance and security measures to ensure business and IT operations remain secure and compliant throughout the transformation journey

IBM Red Hat OpenShift (OCP) Services on Cloud Services and Innovation

Garage Method for Cloud

The IBM Garage Method for Cloud is a curated set of practices and workflows designed to help organizations rapidly design, build, deploy, and scale innovative solutions. It combines Enterprise Design Thinking, Lean Startup, and Agile DevOps principles to enable continuous design, delivery, and validation of new functionality.

Containerisation

Containerization delivers agility, scalability, and portability of workloads, driving speed and efficiency in cloud transformation.

This innovation has delivered measurable benefits during a cloud migration for a leading UK bank:

- Reduced remediation effort for application layer components, cutting end-to-end migration timelines by up to 35%
- Rapid application infrastructure scalability, adding containers with minimal effort by replicating application images across new VMs
- Portability across environments and cloud providers, minimizing future remediation for infrastructure and framework currency—resulting in faster upgrades and lower costs when changing providers

Garage Method for Cloud Toolkit

The IBM Garage Method for Cloud Toolkit is a suite of integrated tools and assets built on a scalable, flexible architecture, supported by an analytics engine and automation. It helps clients accelerate their transformation journey to a multi-cloud environment.

This toolkit enables faster cloud adoption through automation for greater efficiency and provides deeper analytical insights for improved decision-making. Key benefits include:

- Up to 40% reduction in time and effort to process new sources of information
- Up to 25% reduction in errors from manual migration activities
- Up to 25% reduction in time and effort required for migration tasks

Development and Migration Factories

Our Application Development and Migration Factories act as a comprehensive design and delivery engine to drive cloud adoption, combining people, processes, and tools. These services are continuously updated based on lessons learned and include:

- A core set of services to help clients transform applications and infrastructure for cloud
- Common services such as solution design, architecture, and design thinking, leveraged as needed for client delivery
- Factory operations services to support delivery, including talent and skill management, capacity planning, and financial operations

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About IBM

Supporting Government

We help government organisations in the UK and worldwide deliver and transform essential public services – our teams are passionate and proud about helping you to make a real difference to people's lives.

Government Services Supported by IBM:

	Defence and Intelligence
	Public Safety and Policing
	Healthcare
	Life Sciences
	Tax & Revenue Management
	National Infrastructure
	Social Care
	Education
	Work and Pensions

The problems we solve for clients are complex and cannot be satisfied with technology alone. They require a partner that can also offer deep industry expertise and a relationship of trust.

IBM combines the portfolio, people and sense of purpose necessary to meet today's enterprise demands. Every day, we support and manage complex delivery for government clients where the impact of delivery has wide-reaching impact on citizens and national services.

We bring access to the industry experience, insight and technology capability to deliver and operate secure, scalable, optimised and available services for government.

We support you by bringing:

- Industry expertise – Professionals who understand and are passionate about delivering quality public services and can bring industry insights and apply innovation to your business processes
- Trust and security capabilities – Protecting valuable data and insights and deploying new innovations responsibly
- Innovative technology – Expertise in areas such as AI, blockchain, 5G, Automation, IoT, cybersecurity and quantum, delivered in a Hybrid Cloud environment
- Experienced Services professionals to support strategy, innovation and deliver transformation and change to processes, applications, and cloud infrastructure
- Global alliances – valuable partnerships with the world's leading vendors

This is IBM in the UK

We have worked together with organisations in the UK for over 100 years, with a rich history of joint innovation and achievements, built on trusted relationships.



Cloud

Together, IBM and Red Hat are working to deliver the world's only **next-generation hybrid multicloud platform**



Changing the world

IBM was awarded **World Changing Company of the Year 2019** by Fast Company



Tech talent

IBM runs P-TECH schools in 18 countries, helping **>100,000 students build skills for careers of the future**



Economy

IBM has been **integral to the UK economy for >100 years**, and is one of its largest tech employers



Royal recognition

29 UK IBMers received **honours from the Queen** for contributions to tech and society



Inventors

IBM UK is home to many Master Inventors, with **>250 patents filed last year alone**



R&D

In the UK alone, IBM **invests £170 million in R&D** each year



Diversity

IBM won the **Global Diversity Award 2019** and the ENEI's **Gold Standard**



Labs

IBM Labs comprise the **largest group of UK software talent** in any single company



Graduates

IBM is committed to developing future talent – we are **Target Jobs' Graduate Employer of the Year 2019**



Quantum

IBM Q, the world's most advanced quantum computing initiative for commercial use, is being used by CERN



Volunteering

IBM dedicates **>20,000 volunteering hours every year** for a better society



Environment

IBM's **focus on sustainability** began in 1971 with our first environmental policy

IBM