

IBM Consulting



G-Cloud 15 IBM - Quality Engineering - Cloud Testing Services Service Definition Document

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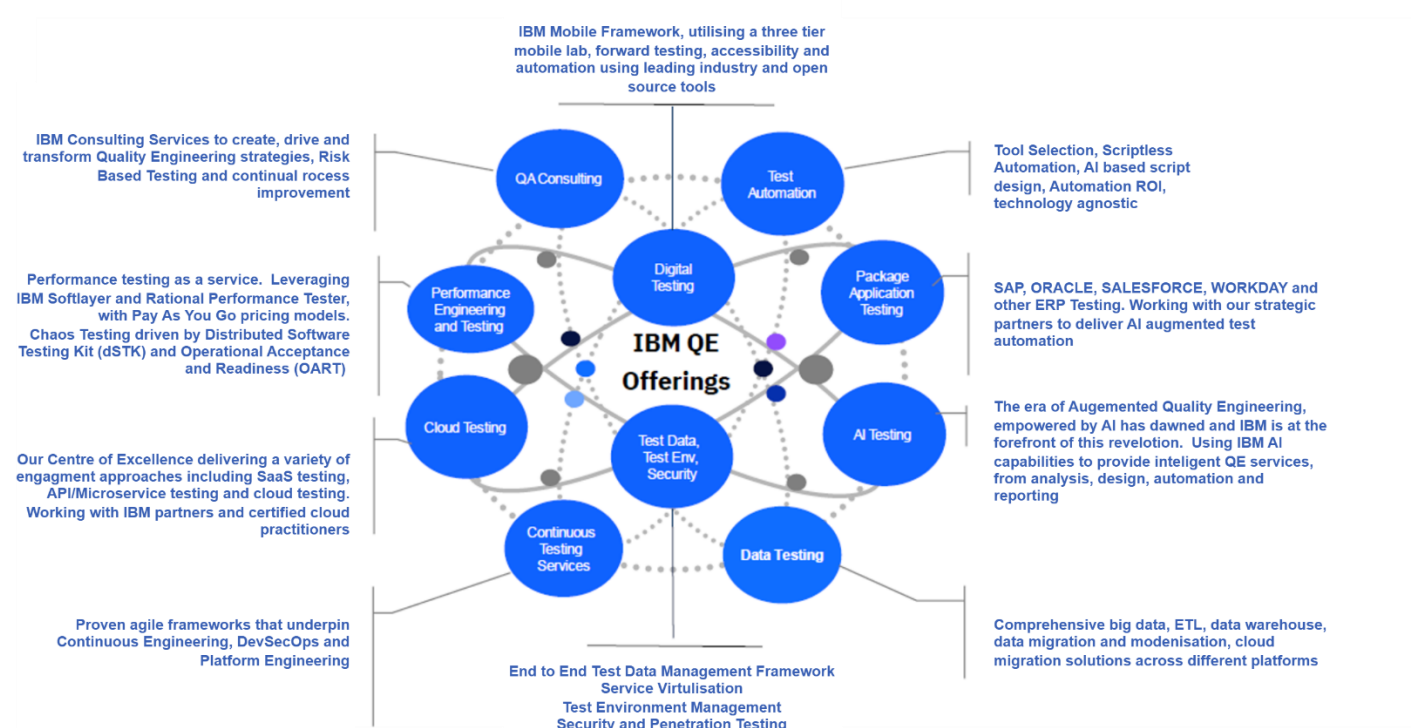
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IBM Quality Engineering – Cloud Testing Services

Our offering Framework

Cloud Testing Services are part of IBM QE (IBM Quality Engineering) offerings. IBM QE offerings cover the full breadth of testing needs.

The purpose of these services is to help you deliver quality government services at scale and to get increasingly complicated applications to market faster, with fewer defects and at a lower cost.



IBM's cloud testing services provide a comprehensive, integrated approach to cloud testing, helping businesses ensure the quality, performance, and security of their cloud applications.

IBM Quality Engineering – Cloud Testing Services

Service Overview

Features

- Cost savings
- Scalability, easy scaling of resources up and down.
- Faster time to market
- Improved collaboration
- Greater reliability
- Access to the latest technology
- Better test coverage
- Reduced CapEx
- Meeting regulatory and compliance requirements.

Benefits

- IBM Cloud Testing allows you to scale your testing resources up or down as needed easily, providing flexibility and cost savings
- **Security:** IBM Cloud Testing provides robust security features, including data encryption and access controls, to help protect your sensitive information
- **Integration:** IBM Cloud Testing can be easily integrated with other IBM Cloud services and tools, allowing for seamless collaboration and data sharing
- **Automation:** IBM Cloud Testing supports automated testing, which can help reduce errors and increase efficiency in the testing process
- **Real-time insights:** IBM Cloud Testing provides real-time insights and analytics, allowing you to identify and address any issues that arise during testing quickly
- **Expert support:** IBM Cloud Testing offers expert support and resources, including documentation, tutorials and a dedicated support team, to help you get the most out of the service.

Key Differentiators

- **Advanced Test Automation:** IBM offers advanced test automation that allows for the efficient and accurate testing of applications
- **Integrated Testing Platform:** IBM's cloud testing services provide an integrated testing platform that allows for the testing of applications across a variety of environments, including mobile, web and desktop
- **Scalability and Flexibility:** IBM's cloud testing services are highly scalable and flexible
- **Security and Compliance:** IBM's cloud testing services provide robust security and compliance features, including data encryption, access controls and audit trails.

Real World Case Studies

- **UK financial institution.** Royal Bank of Scotland (RBS) used IBM's cloud testing services to test its online banking application. By using IBM's cloud testing services, RBS was able to reduce its testing time by 25%, improve the quality of its application and reduce costs
- **A global insurance company** used IBM's cloud testing services to test their insurance application. By using IBM's cloud testing services, AIG reduced testing time by 40%, improved application quality, and lowered costs.

IBM Quality Engineering - Cloud Testing Services

Addressing Business Needs

Cloud testing is a type of software testing that verifies the functionality, performance and security of applications & systems that run in the cloud. It involves testing cloud-based applications & systems for scalability, availability, and reliability, and can include functional, performance, security, and compatibility testing.

Cloud testing can be performed using a variety of tools & techniques, including automated, manual, and load testing tools. It is essential to ensure the quality and reliability of cloud-based applications & systems.



IBM can help you address your requirements for testing essential government digital services with rigour and depth. We can help you address your key business needs, including:

Cost savings: Cloud testing services can reduce costs associated with purchasing and maintaining testing hardware and software.

Scalability: Cloud testing services enable easy scaling of testing resources up or down as needed, providing flexibility to meet changing business needs.

Faster time-to-market: Cloud testing services provide quick, easy access to testing resources, enabling more rapid development and release cycles.

Improved collaboration: Cloud testing services enable easy collaboration across teams & geographically dispersed locations, enhancing communication and coordination.

Enhanced security: Cloud testing services offer advanced security features, including data encryption and access controls, to protect sensitive information.

Greater reliability: Cloud testing services offer high availability and disaster recovery, ensuring testing can continue even during outages.

Access to the latest technology: Cloud testing services can provide access to the latest testing tools and technologies, without the need for significant upfront investment.

Better test coverage: Cloud testing services offer a wide range of testing environments & configurations, enabling more comprehensive testing and improved defect detection.

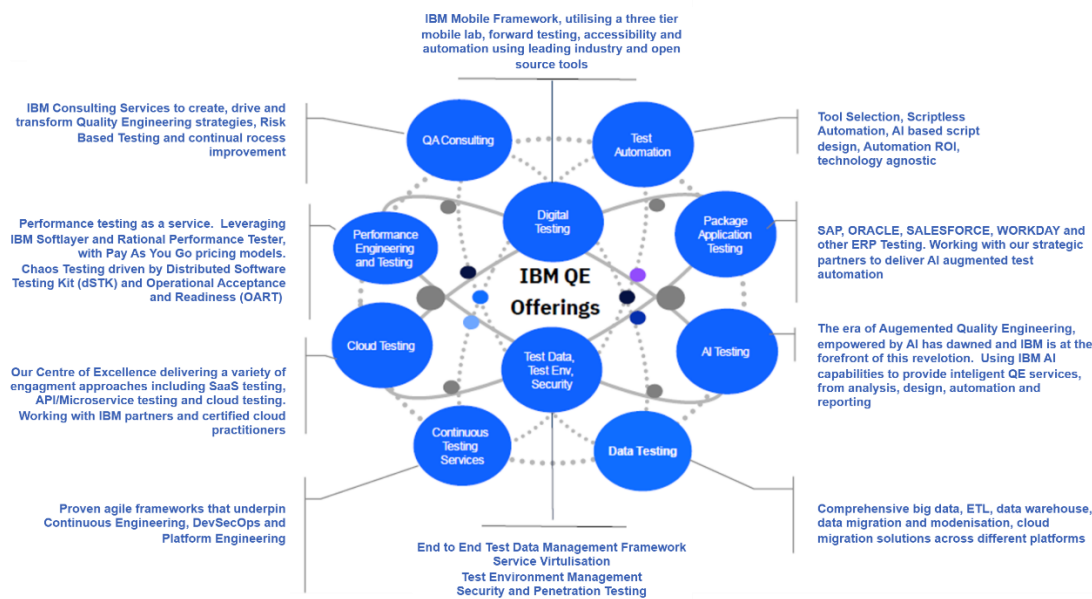
Compliance: Cloud testing services can help organisations meet regulatory and compliance requirements for testing.

Innovation: Cloud testing services can provide a platform for testing new technologies and approaches, enabling organisations to stay ahead of the curve and remain competitive.

IBM Quality Engineering – Cloud Testing Services

Service Definition

IBM's cloud testing services provide a comprehensive, integrated approach to cloud testing, helping businesses ensure the quality, performance, and security of their cloud applications.



The diagram above details all the IBM QE offerings. Those offerings highlighted in BLUE are in scope for these Cloud Testing Services.

Test Data Management: IBM offers test data management services to ensure that testing is performed with accurate, up-to-date and secure data. This includes data masking, data virtualisation, and data provisioning.

Test Environment Management: IBM provides test environment management services to ensure testing is conducted in a controlled, consistent environment. This includes managing virtual machines, containers and test data environments.

Test Automation: IBM offers test automation services to reduce manual testing efforts and improve testing efficiency. This includes automating functional, performance and security testing.

Test Consulting: IBM provides test consulting services to help businesses optimise their testing processes and improve their testing maturity. This includes developing the test strategy and improving the test process.

Functional Testing: IBM provides functional testing services to validate the functionality and usability of cloud applications. This includes testing web services, APIs, mobile applications, and accessibility.

Performance Testing: IBM offers performance testing services to measure the speed, scalability and reliability of cloud applications. This includes load testing, stress testing and capacity planning.

Security Testing: IBM provides security testing services to identify vulnerabilities and protect sensitive data in cloud applications. This includes penetration testing, vulnerability assessments and source code reviews.



Compatibility Testing: IBM offers compatibility testing services to ensure cloud applications work seamlessly across devices, operating systems, and browsers.

Continuous Testing: IBM provides continuous testing services to enable automated testing throughout the software development lifecycle. This includes integrating testing into DevSecOps pipelines and using AI and machine learning to accelerate testing.

Managed Testing Services: IBM offers end-to-end testing services, from test planning through execution to reporting. This includes a test management, test execution and test reporting.

IBM Quality Engineering Cloud Testing Services

IBM IGNITE Quality Platform

To support all our offerings, IBM also provides the IGNITE Quality Platform. The platform is an AI-enabled framework that helps you move from detection to prevention faster, with higher quality and lower cost.

The IBM IGNITE Platform provides a set of loosely coupled tools in a toolchain to support industry-leading quality and testing services. Our services are built around real Quality and Testing experience, working with highly critical systems for government and other industries. We have made extensive investments in toolchains, automation and robotics to deliver quality services that go beyond traditional testing.

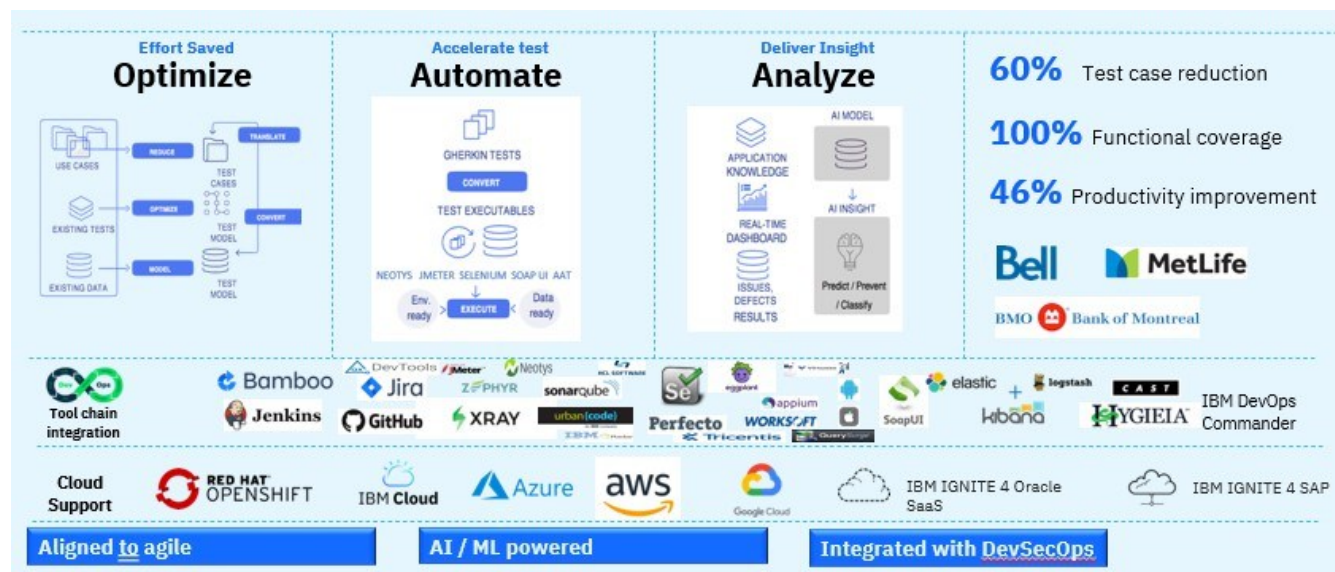
We combine our industry-leading IBM Quality Platform with a blend of other commercial tools, such as Provar, Copado, ConformIQ, Tosca, Eggplant, Virtuoso, SmartBear, UFT, Headspin, Jenkins, and Jira, to deliver AI-directed test automation, enabling clients to streamline testing processes, reduce costs, and achieve superior outcomes.

The three phases depicted below are:

Optimise to save costs whilst ensuring coverage (through Combinatorial, Risk-Based or Model-based testing techniques).

Automate to accelerate Testing using AI-infused tools.

Analyse with AI-infused tools to identify trends, and Root Cause Analysis to deliver actionable insights.



- IBM is a recognised leader in Quality Engineering and Testing Services :
- Gartner: Magic Quadrant for API Management and Testing, October 2023,
 - The Forrester Wave™: AI Decisioning Platforms, Q2 2023:
 - Gartner: Market Guide for Application Testing Services, January 2022,
 - The Forrester Wave™ : Continuous Automation and Testing Wave 2021,
 - IDC 2018 : IBM Delivers Market –Leading Software Test Automation.

IBM Quality Engineering – Cloud Testing Services

IBM Approach

The most critical systems that support government organisations demand quality outcomes. To achieve this, we take an asset-driven approach to delivery and bring extensive expertise in Quality and Testing methods.

We categorise our approach into six areas, each of which has a set of specific activities:

Governance

- Environmental governance
- Data governance
- Quality governance
- Control functions

Stakeholders

- Strategy & Digital Testing
- Product ownership
- Communications approach
- Stakeholder engagement

Inception

- Onboarding
- Coaching
- Training
- Location management

Team

- Team sizing and structure
- Quality standards
- Tooling and automation
- Metrics

Process Integration

- Demand
- Branching and merging
- Testing approach
- Path to live

Ways of Working

- Methods
- Empowering Team
- Transparency
- Continuous Improvement



**We have a
“Test Less, Test Right”
mantra and we believe
in accelerating testing
using AI to improve root
cause identification
and achieve faster
resolutions.**

IBM Quality Engineering – Cloud Testing Services

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 and Revenue Management



National Infrastructure



Social Care



Education



Works and Pensions

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

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, with the impact of delivery reaching far beyond citizens and national services.

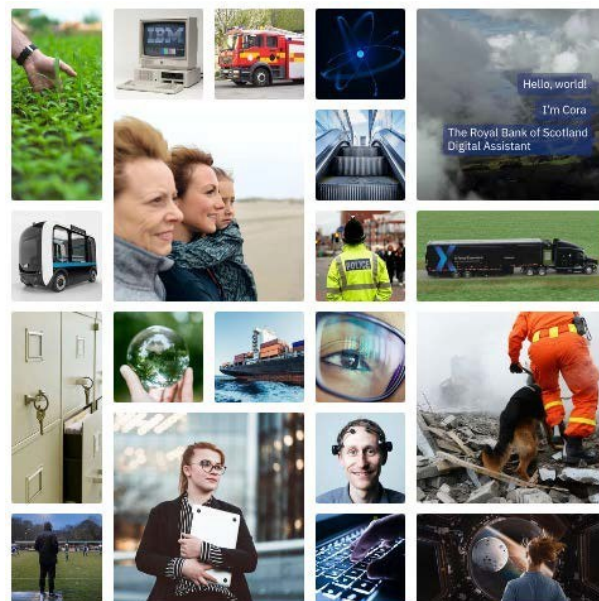
We bring industry experience, insight, and technology capability to deliver and operate secure, scalable, optimised, and available services for government.

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 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**



Economy

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



R&D

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



Quantum

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



Environment

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



Artificial Intelligence

IBM develops **watsonx based generative AI solution** for the Austrian federal armed forces **to provide fact-based evaluation and classification** for the ability to remain capable of acting in the light of risk scenarios.



Changing the world

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



Royal recognition

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



Diversity

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



Graduates

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



Volunteering

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



Tech talent

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



Inventors

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

