

HCLTech NexGen Automation Platform

Data Quality Engine (DQE) Automation Solution



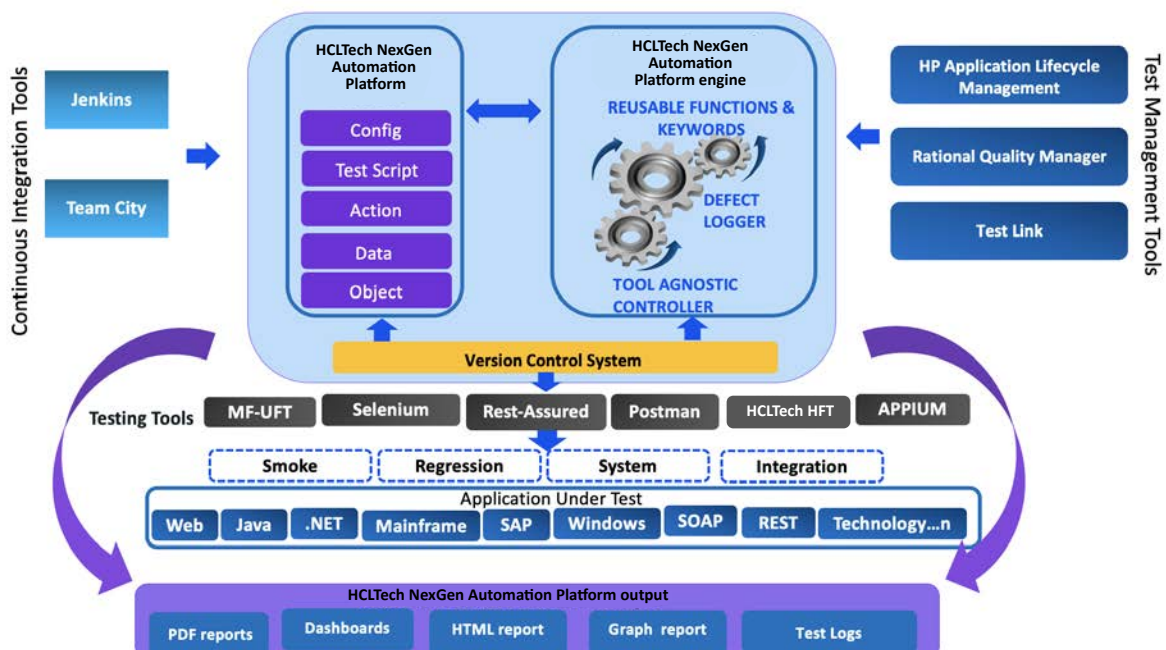


Application testing has evolved from a means of assuring application functionality to a multidisciplinary endeavor that needs substantial planning and effort. With increasing complexities, enterprises need agile testing methods that can simultaneously accommodate regression testing with new features.

To achieve this, testers often need to work with development teams and synchronize with day-to-day project activities. And this is where test automation unlocks testing agility with greater efficiency and cost savings. But implementing test automation is still a challenge for many enterprises.

HCLTech NexGen Automation Platform

HCLTech’s script-less comprehensive solution, is an integrated testing platform that unifies web, desktop, mobile-web applications and API/microservices testing. The industry-standard based, tool-agnostic enterprise-level platform offers complete and comprehensive automation capabilities that unlocks repeatability, reusability and ease of automation.



Developed to directly address the current and future challenges of the IT market, the solution works with a host of functional automation tools including:

- Licensed tools such as Unified Functional Tester (UFT)
- HCLTech-Functional Tester (HFT)
- HCLTech-Integration Tester (HIT)
- HCLTech-Service Virtualization (HSV)

Along with open-source tools such as

- Selenium
- Cypress
- Playwright
- Rest-Assured
- Postman
- SoapUI
- WireMock

It also supports seamless integration with various test and defect management tools.

The comprehensive platform is also embedded with multiple frameworks like Functional, APIs/Microservices, Mobile, Cross Browser and Visual QA. This not only empowers enterprises to overcome test automation challenges but also enhances their overall automation maturity.



Solution features

Some of the industry-defining features of our solution include:

Versatility and ease of use:

The HCLTech NexGen Automation Platform simplifies the development and management of optimized test automation projects across multiple platforms and devices. It also doesn't require programming to create customizable and flexible test suite projects and reports.

Speed and reliability:

The wide automation tool support capability of the platform reduces test cycle times and costs.

It also empowers enterprises in:

- Generating scripts rapidly with 300+ pre-built reusable utilities
- Simplifying script management with a central object repository, a point-and-click approach as well as inbuilt recovery scenarios to handle exceptions

Cloud support:

With HCLTech NexGen Automation Platform, enterprises can run hundreds of parallel acceptance tests to cut down the total testing time. The tests can be run with multiple combinations of browsers and operating systems.

Report generation:

The platform can generate test reports in multiple formats. They are instrumental in speeding up root cause analysis (RCA) with automated screenshot capturing that simplifies bug detection.

Seamless integration:

The platform is widely compatible with existing CIs (Jenkins, Bamboo, DevOps) and test management tools (HP ALM, Zephyr, JIRA, QASE, QTest, Test Rail, Test Link, etc.). This enables easy integration into the existing test setup and automated test management to supercharge agile testing for enterprises.

Solution highlights

HCLTech NexGen Automation Platform simplifies automation framework maintenance with:

- **Script-less mode** which unlocks code-less functionality for step additions, modification of test steps and more from the UI
- **Function import option** which allows incorporating business or custom functions from outside the platform; this eliminates the need to change any framework or codebase
- **Multiple framework integration ability** which helps reduced effort for integrating, executing & maintaining API and Mobile Test Automation solutions
- **Data driven testing** that supports through uploading of external files and database connection
- **Self-healing** which is the cognitive solution for web-based applications that allows automated healing of scripts



Operational benefits

The highly flexible and integrated platform fosters several operational benefits that are immediately apparent. They include:

High scalability and reusability
due to script-less automation

Instant feedback of builds
through DevOps integration

Elimination of programming dependency
on QA and BA

Shielding of manual testers
from tool complexity

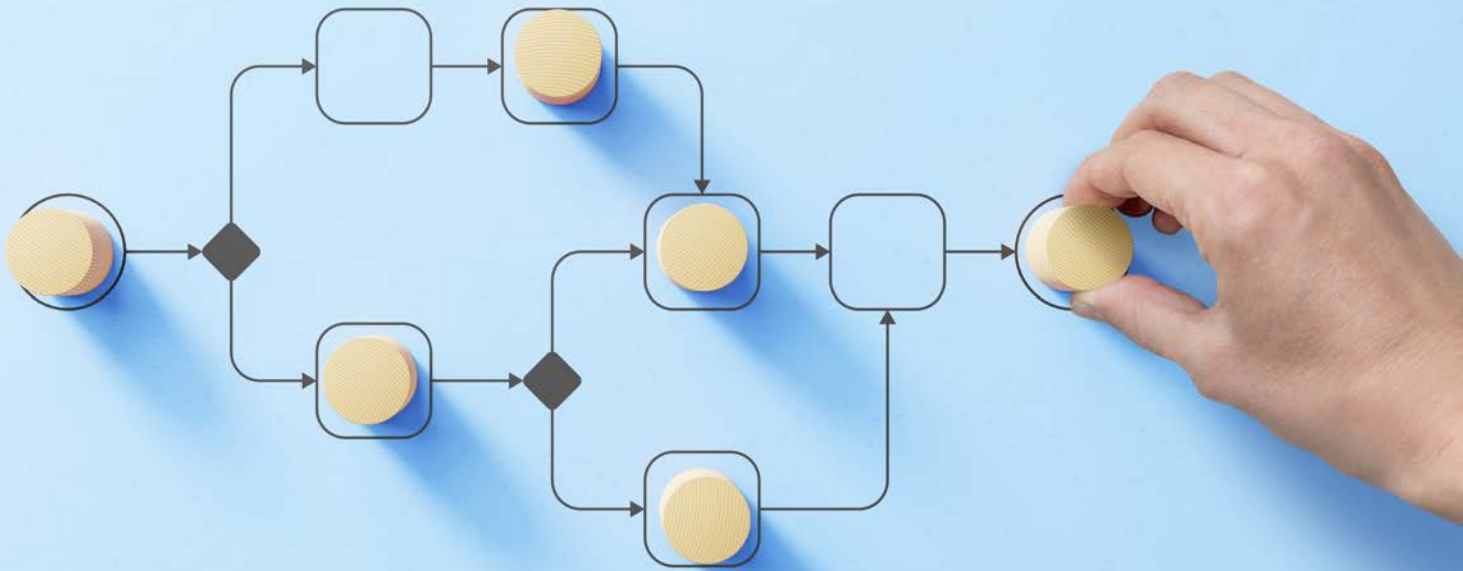
Reduction of manual effort
with over 90% automation achieved in most cases

Reduction in test automation development cycle
times by over 30%

Complete flexibility with script-free testing
for non-programmers

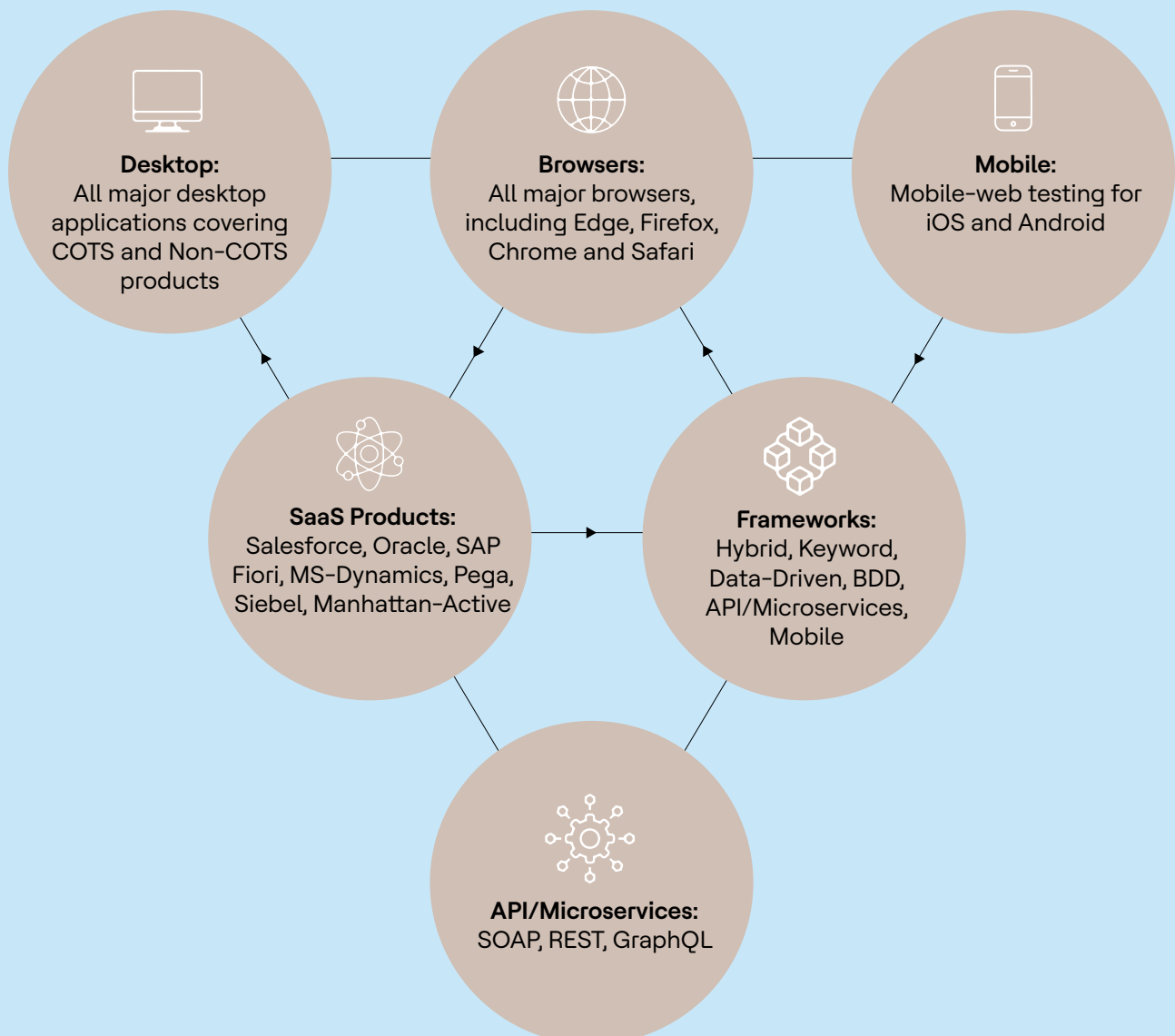
Reduction in cross-browser testing efforts
through concurrent execution of automated tests across browsers

Strategic decision-making across projects
with custom dashboards and analytics



Supported tools and frameworks

The currently supported technologies and frameworks are:



Business benefits

The myriad operational benefits of the HCLTech NexGen Automation Platform trickles onto the business end as well.

- **Improved productivity through collaborative automation**

- **Lower maintenance costs through reusability of test cases**

- **A minimum of 30-40% savings over traditional methods of automation**

- **Tool license cost optimization with an open-source framework**

- **Faster ROI on test automation with reduced automated test development times**

- **Savings of over 40% in automation maintenance costs**

- **20% reduced STLC costs**

Case Study

HCLTech provided a scalable solution offering significant reduction in testing efforts and reusability of test cases at a large German bank. The bank was facing challenges to stay agile and productive with disparate testing activities that was driving up infrastructure costs, time-to-market and productivity losses.

HCLTech was onboarded to adopt a test automation approach that identified automation use cases depending on business impact. We prepared strategies to develop NexGen Automation customizations, reusable components, automated test cases, test datasets and parameterizations. With this implementation, the bank not only reduced release cycle timelines and ROI realization but also experienced:

- More than **97% application automation**
- Reduction of over **90% of the manual execution effort**
- Reduction in **manual regression test effort by 70%**
- Reduction of **40-60% script preparation effort** through reusable generic and business functions
- Significantly **reduced test data setup times** with automation scripts
- Reduction in **release cycles for production releases and weekend outages**
- Multi-platform, device and technology compatibility with **in-house framework testing**

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