



Achieving Duck Creek Test Automation using Hexaware's Intelligent Test Automation platform



Digital disruption is changing business dynamics, and P&C insurers have been implementing packaged products like Duck Creek OnDemand to accelerate their digital journeys. Insurance organizations are also competing with aggressive timelines and high-quality standards for rollouts of the Duck Creek suite of products. These new rollouts and continuous changes to products mandate an assurance model that enables enterprises to deliver a defect-free product at a significant pace. Therefore, insurance software testing is of immense importance. The journey, however, has its own set of obstacles.

Typical Issues in Testing for the Duck Creek Suite of Products

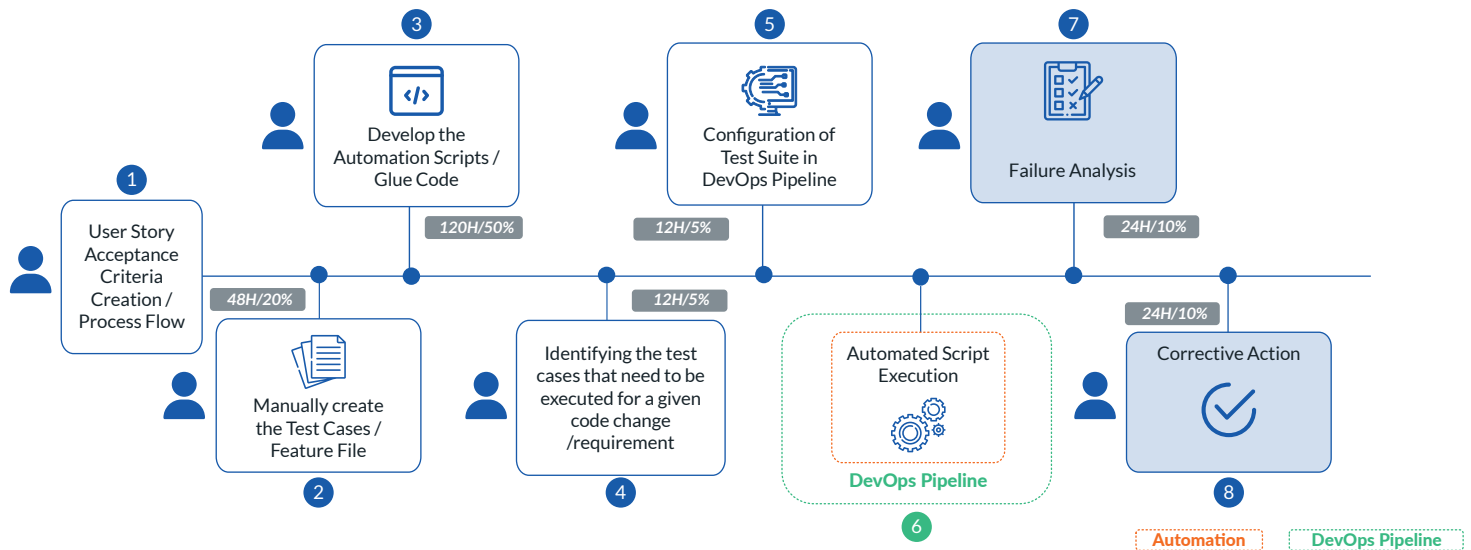
- Multiple manual testing cycles and lack of automation in test design, leading to increased test cycle time and delays in go-to-market
- Test coverage is not adequately defined due to frequent changes, leading to bugs in the production
- Test automation development effort falls behind the Duck Creek development/customization effort leading to zero continuous testing in the DevOps pipeline and increased release cycle time
- Automation is rather partial. It misses covering validation interoperability of the Duck Creek suite and its integration with existing applications within the organization and external interfaces
- Testing environmental challenges such as unavailability of environment for time travel testing and integration services impede the end-to-end testing

Hence, the need of the hour is an autonomous testing system that can achieve Testing Singularity, learning from human actions and independently deploying learning outcomes across the entire system in real time.

Hexaware's Intelligent Test Automation Platform for Duck Creek, is an integrated platform powered by artificial intelligence, machine learning, deep learning and NLP to make both functional and non-functional testing autonomous across all phases of the testing lifecycle and all layers of an application (UI, service and data). It drastically improves quality and reduces time and effort incurred for testing activities. The vision is to enable transcendence from automation to autonomy.

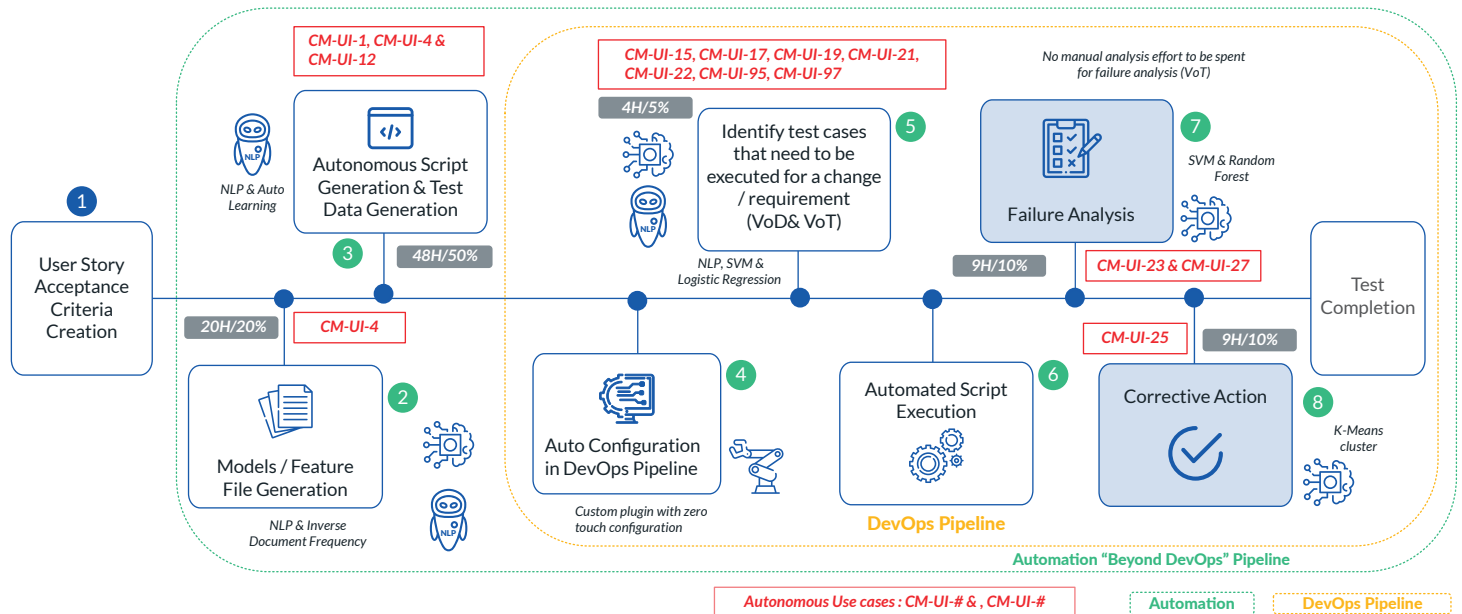
Through the Intelligent Test Automation platform, Hexaware has reimagined the way testing is performed and a day in life of a tester, resulting in reduced manual intervention in testing activities.

The below picture depicts the typical day in the life of a Duck Creek application tester. The activities start from Analysis, Test Design, Test Data Setup, Automation Test Design and Execution, Failure Analysis and Corrective Action.



Out of all the activities, only the Test Execution is automated, and most of the actual testing activities are manually performed. With our platform, most of these testing activities can be automated, and the whole feedback cycle can be improved.

A Day in the Life of a Duck Creek tester with Hexaware's Intelligent Test Automation Platform



The above picture depicts the various use cases and the indicative AI/ML solutions adopted by Hexaware's test automation platform to autonomously perform the below activities:

- Autonomous test generation from acceptance criteria leveraging the Models/Feature files NLP technologies
- Autonomous test data provisioning through smart integration and intelligent insights from production usage
- Autonomous test script generation through the adoption of NLP technology
- Autonomous and dynamic test selection and configuration in DevOps Pipeline using AI/ML algorithms
- Autonomous and Just-in-time test infrastructure provisioning before test execution leveraging AI/ML and smart integrations with cloud platforms

- Self-Healing and intelligent test execution to reduce the execution cycle time leveraging AI/ML algorithms and clustering techniques
- Autonomous root cause analysis and corrective actions leveraging Analytics and AI/ML algorithms

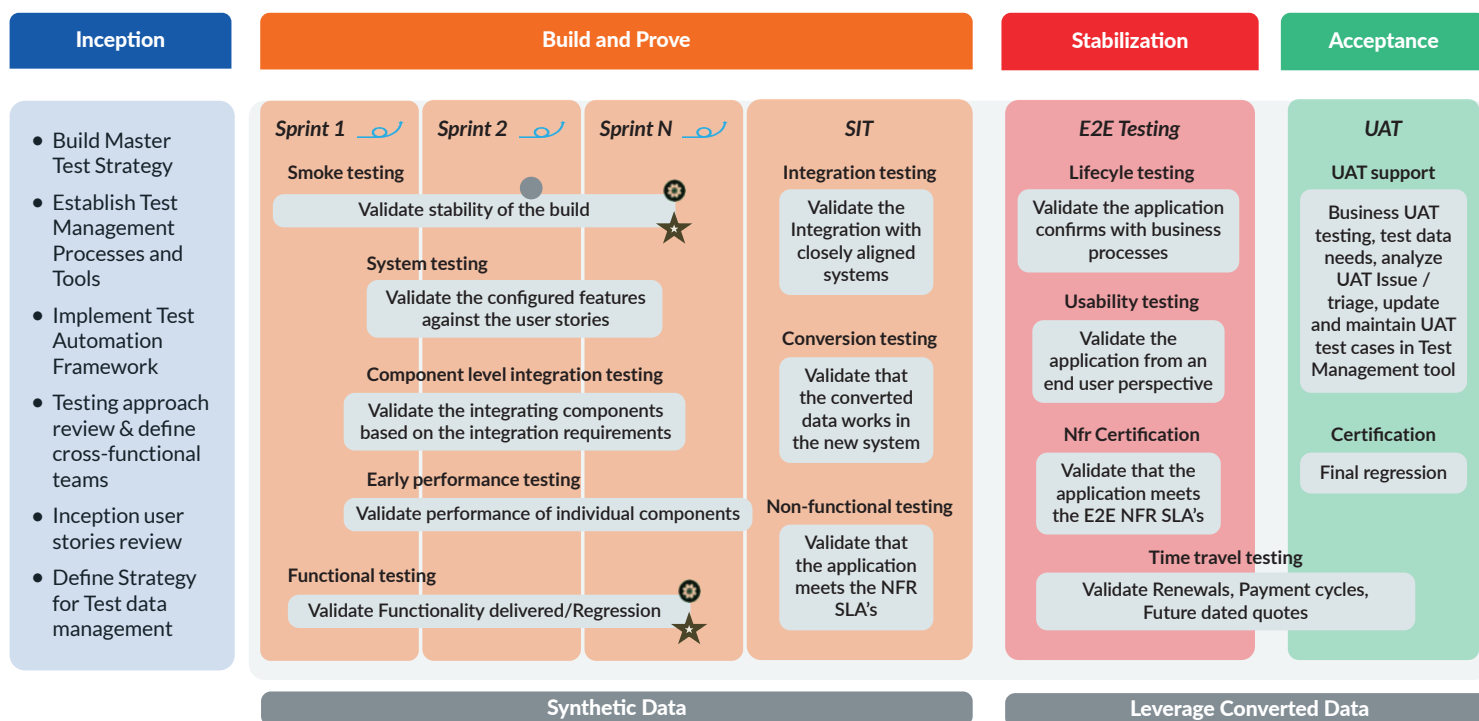
While our vision is to deliver Autonomous Testing to all Duck Creek customers, we understand that an insurer's testing organization may be at different levels of test automation maturity (i.e. No Automation or Partial Automation to Full Automation). For insurers with a low or medium level of automation maturity, we recommend customers adapt an automation-first approach for testing of Duck Creek suite. Automation first approach for the end-to-end testing of Duck Creek implementations will help organizations to reach a high automation state, which is vital for orchestrating Autonomous Testing innovations.

Automation-First Approach for Duck Creek Testing

Our automation-first approach for the Duck Creek suite drives continuous testing and ensures automation adoption, early feedback, metrics-based measurement, and business agility based on the following elements:

- LOB level strategy- identification of critical regression pack, end-to-end testing, non-functional testing with metrics-based governance
- Model-driven testing leveraging our test repository for Duck Creek suite- Business process models and automated generation of test cases
- Automation across the Duck Creek testing lifecycle with a combination of commercial, open-source and in-house built tools and accelerators, including Duck Creek's TAC tool
- Well established testing approach within and outside the sprint, including non-functional testing
- Continuous testing and AI/ML-based solutions to identify potential improvement

The types of testing needed across various phases of Duck Creek suite implementation is depicted in the picture below. Hexaware has developed solutions to address each of these testing needs, which is detailed in the section below.



Our automation-first approach expands the reach of automation outside of test execution to other phases of testing like test case design, test data preparation, environment provisioning and reporting. This is achieved by leveraging a combination of commercial, open-source, TAC-Duck Creek's automation framework and in-house automation solutions for testing across the Duck Creek testing lifecycle in the UI, data, and API layers. A brief summary of our automation testing solutions for the Duck Creek suite is described in the picture below:

01 System Testing

- **UI** - Pages, field attributes and business rules
- **Rating** - Rate factors and rating rules, rating engine validation
- **Forms / Documents** - Static, dynamic & free flow forms / documents for format, alignment and populated content based on various transactions

06 Performance Testing

Execute performance tests on Policy systems, monitor & analyze statistics :

- Volume - # of Users, # of concurrent users
- Response time for transactional activity
- Web Service Response time
- Batch performance

05 Data Centric

- Data Volume/ Reconciliation, Data Content/ Field Mapping and validation of rules in staging for policy renewals
- Validation of policy renewals in the migrated system



02 End to End Testing

- Ready to use **OOTB models for Duck Creek Policy, Claims, Billing**
- Over 2000 Functional test scripts available from Day 1

03 Services Testing Framework

- Services testing automation framework
- Service Virtualization for Duck creek Interactions with Upstream and Downstream systems for Time Travel Testing

04 Multi-Browser Testing

- Browser compatibility across multi browsers and their versions

Why Hexaware?

Hexaware's Testing Value Proposition for Duck Creek

Reduces overall cost of testing by 40%



Saves 50% on testing efforts

Reduces time-to-market

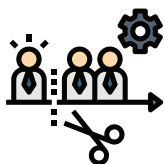


Accelerates cycle time by 4X

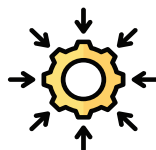
Enhances quality



Improves test coverage with more than 99% defect removal efficiency



Eliminates 90% of manual efforts



Reduces 30% of the DevOps cycle time





About Hexaware

Hexaware is a global IT services company empowering businesses worldwide to realize digital transformation at scale and speed. Our three-pronged strategy of Automate Everything®, Cloudify Everything® and Transform Customer Experiences® endeavors to drive human-machine collaboration for solving complex business problems. We enable future-ready organizations and market leaders to create lasting business value by helping them offer touchless immersive customer experiences through full-cloud enablement, digital product engineering and extreme automation.

We serve customers in Banking, Financial Services, Capital Markets, Healthcare, Insurance, Manufacturing, Retail, Education, Telecom, Hi-Tech & Professional Services (Tax, Audit, Accounting and Legal), Travel, Transportation and Logistics. We deliver highly evolved services in Rapid Application prototyping, development and deployment; Build, Migrate and Run Cloud solutions; Automation-based Application support; Enterprise Solutions for digitizing the back-office; Customer Experience Transformation; Business Intelligence & Analytics; Digital Assurance (Testing); Infrastructure Management Services; and Business Process Services.

We believe technology is a magical thing, and our purpose is to create smiles through great people and technology. Headquartered in New Jersey for North America, London for Europe and Singapore for the Asia Pacific, Hexaware services customers in over two dozen languages from every major time and regulatory zone.

Learn more about Hexaware at <https://www.hexaware.com>. Take an immersive 360° virtual tour of our campuses worldwide at <https://www.hexawareimmersive.com>.

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Safe Harbor Statement

Certain statements in this press release concerning our future growth prospects are forward-looking statements, which involve a number of risks, and uncertainties that could cause actual results to differ materially from those in such forward-looking statements. The risks and uncertainties relating to these statements include, but are not limited to, risks and uncertainties regarding fluctuations in earnings, our ability to manage growth, intense competition in IT services including those factors which may affect our cost advantage, wage increases in India, our ability to attract and retain highly skilled professionals, time and cost overruns on fixed-price, fixed-time frame contracts, client concentration, restrictions on immigration, our ability to manage our international operations, reduced demand for technology in our key focus areas, disruptions in telecommunication networks, our ability to successfully complete and integrate potential acquisitions, liability for damages on our service contracts, the success of the companies in which Hexaware has made strategic investments, withdrawal of governmental fiscal incentives, political instability, legal restrictions on raising capital or acquiring companies outside India, and unauthorized use of our intellectual property and general economic conditions affecting our industry.