

Testing Insurance Applications Using HP Tools

Gain significant efficiencies when testing pre-packaged applications like Guidewire

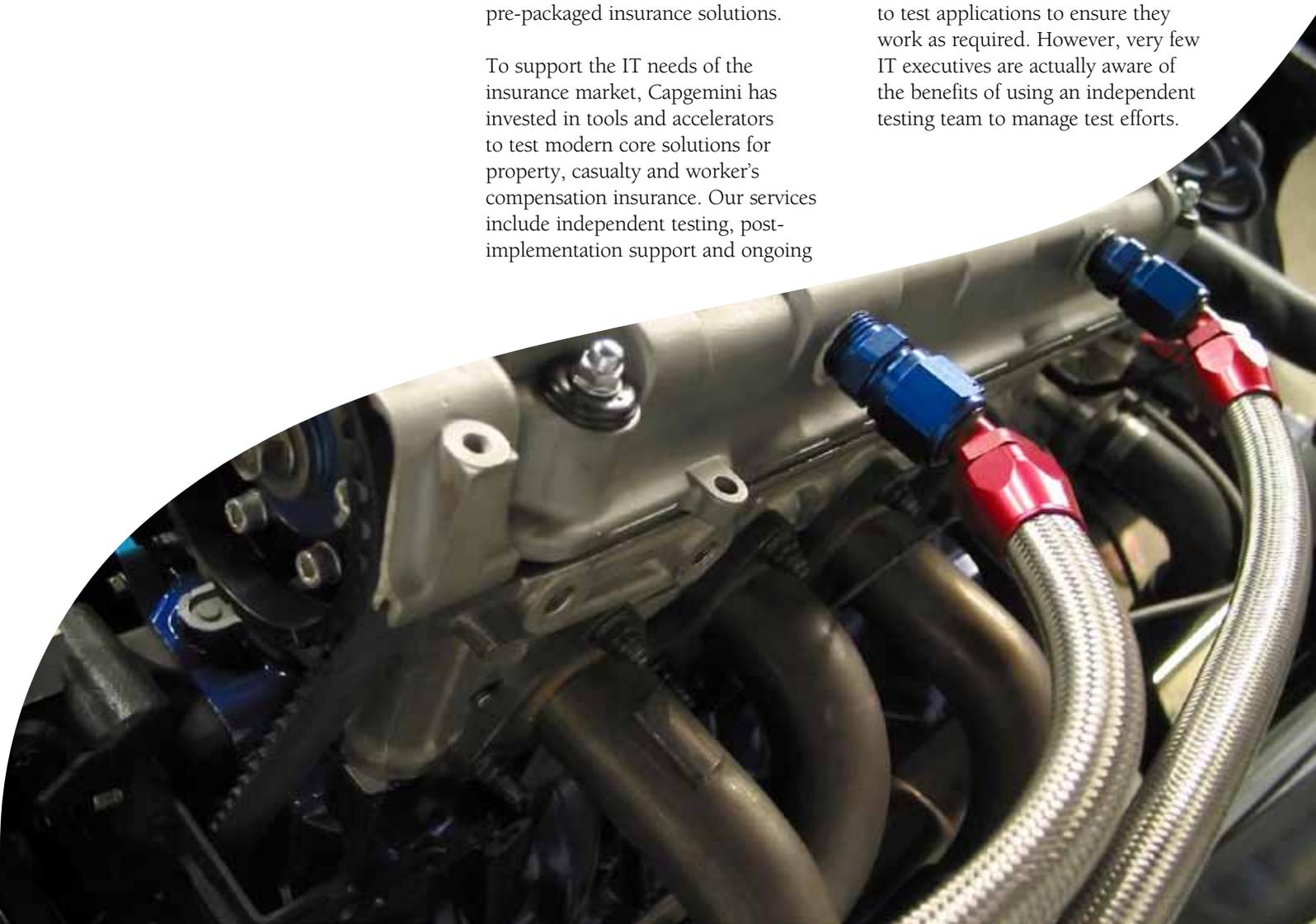
After years of managing and maintaining complex, customized applications, insurance companies are increasingly moving towards packaged applications for their IT systems. Market standard tools for quality management, automated testing and load testing make it possible to gain significant efficiencies when testing pre-packaged insurance solutions.

To support the IT needs of the insurance market, Capgemini has invested in tools and accelerators to test modern core solutions for property, casualty and worker's compensation insurance. Our services include independent testing, post-implementation support and ongoing

maintenance of industry-standard insurance products such as Guidewire ClaimCenter. We've partnered with HP to provide standard testing and test management solutions tailored to insurance systems.

Why test independently?

Everyone knows that it is important to test applications to ensure they work as required. However, very few IT executives are actually aware of the benefits of using an independent testing team to manage test efforts.



About the HP and Capgemini Alliance

Achieve your business outcomes with integrated solutions from HP and Capgemini. Our in-depth industry and technology experience combined with our proven approach help drive measurable results that support the demands of your business—today and into the future.

HP and Capgemini work side-by-side with you to make the most of your investments and help you achieve results in this rapidly changing world. We use a proven relationship model to help you construct a clear-cut path of where you need to be and how to get there. We've done this for clients large and small for almost 20-years, and we can do it for you.

For First Time Package Implementations: Verification and Validation

First time package implementations are usually intended to sunset existing systems. The new application must be customized to fit very specific workflow models, processes, regulatory and user needs which are unique to your business.

Implementing pre-packaged insurance solutions for the first time can be daunting. With our experience implementing and testing industry leading insurance applications like Guidewire for some of the world's largest insurers, Capgemini can help:

- Use our proprietary conversion testing framework—driven by HP Quality Center software—to validate the conversion of claims from legacy applications to customized or pre-packaged solutions
- Apply checks and balances across converted policies or claims to validate information such as the policy or claim exposure volume or financials
- Provide standard out-of-the-box test cases and automation suites for prepackaged insurance solutions
- Manage and monitor project defects using a standard set of test management metrics so your team can agree on the severity and priority of defects to better direct development efforts
- Eliminate or minimize defect leakage to subsequent stages such as user acceptance or production
- Reduce the overall testing effort using Capgemini's proprietary accelerators
- Create scripts to measure system performance and address bottlenecks
- Build automation suites to reduce testing redundancy in regression testing
- Employ market-leading test management tools to store, manage and prepare standard metrics on testware

- Use a proven, reliable approach for all accounts to predict and manage test widgets

Since integration testing forms a key piece of any insurance package implementation, Capgemini can help test interfacing applications. We use a proprietary integration framework which has a proven track record with standard integration points like ISO, AIB, MRB, Innovation and Allegient. Our accelerated test automation approach provides significant cost savings by reducing manual efforts to test critical but repeatable test conditions.

For Upgrades: Improved Efficiencies & Productivity

For companies that are currently using a pre-packaged insurance solution, Capgemini can help you roll out new insurance products and offerings by supporting the creation of new administrative capabilities. We provide:

- Progression testing for new enhancements and customizations
- Expertise in testing new lines of business using HP standard test management software
- Regression testing for existing lines of business using automation and risk-based testing
- Defect leakage analysis using HP Quality Center metrics
- System performance optimization through the development and upgrade of performance scripts using HP LoadRunner software

Reusable Test Assets

Our library includes test cases, test scripts, test plans, test automation framework, models, in-house testing tools and training materials. By leveraging prepackaged content, Capgemini offers our clients an accelerated solution that reduces testing timelines by up to 50%.

Exhibit 1. Reusable Assets for Guidewire ClaimCenter

Artifacts	ClaimCenter 4.0	ClaimCenter 5.0	ClaimCenter 6.0
Use Case Models	5	19	5*
Use Case Documentation	130	148	100*
Test Scenarios through Blueprint Requirement Center	309	480	200*
Test Cases - Manual	374	317	372
Automation Scripts - Hybrid Framework (QTP)	14	56	10*
Function Libraries	55	62	50*
Objects in Object Repository	279	348	100*
Components for BPT	16	190	15*
Macro Test Case generator for Segmentation & Assignment		1	
Estimation Template		1	
Test Plan/Test Strategy Template		1	
Automated Test Data Generator		1	

*Work in progress

Capgemini has built reusable testware around ClaimCenter which helps us improve productivity, increase quality and provide faster turnaround for your projects. Our ClaimCenter test repository is uploaded and available in HP Quality Center.

Model-based Testing Approach

Capgemini's testware has been developed with a model-based testing approach using Testing Workbench. This dramatically accelerates product validation since tests with 100% coverage are generated automatically. The models can be updated to create required test cases. For our clients, model-based testing:

- Confirms requirements are complete and understood
- Verifies no mechanical errors or gaps
- Automatically generates test cases, requirements and bi-directional traceability

- Creates just the tests you need—high risk and business critical
- Integrates with HP and IBM solutions

How We Do It

Capgemini uses a structured methodology that combines our deep insurance experience and strong technical skills so we can test pre-packaged and customized solutions end-to-end without adding substantial time and cost. Our testing offerings cover the testing lifecycle and include data conversion and functional, system integration, regression and acceptance testing.

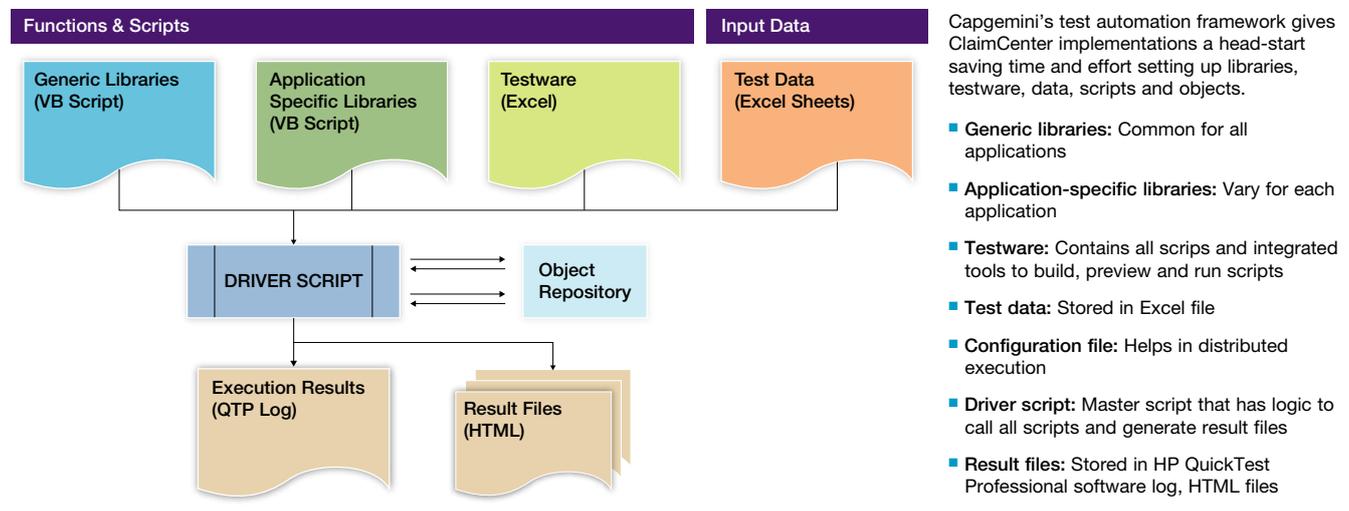
For integration testing, Capgemini uses a two step approach to test integration points. This approach can be used for testing internal integration points or external vendor systems:

- **Step 1:** Verify the payloads and XMLs after the inbound/outbound requests have been sent either from external systems or ClaimCenter
- **Step 2:** Validate data in ClaimCenter screens and interfacing systems using test data generator developed on Vugen (HP Loadrunner)

By providing two levels of validation, we can verify that the data is passing thru correctly.

Guidewire has an out-of-the-box process for data conversion which generally is configured based on your business requirements. This can be a complicated, customized conversion process which involves creating extension tables and columns, executing mapping rules and thoroughly verifying business rules to ensure that the conversion meets your business requirements.

Exhibit 2. Automation framework architecture



Capgemini approaches data conversion for Guidewire with a two step verification process:

- **Step 1:** Database migration testing. We perform testing for base tables, extension tables and mapping rules using the source and target databases
- **Step 2:** Application and business process validation. Our focus here is to validate application and business process flows on the new ClaimCenter application that point to the target ClaimCenter database

Capgemini can also validate integration techniques such as:

- GScript templates
- Web service APIs
- Plug-ins
- Events and messaging
- Bulk data import
- XML validations

For more information, contact us at insurance@capgemini.com.

Tailored, optimized testing lifecycle

Capgemini can help you streamline the testing lifecycle for pre-packaged insurance projects by leveraging our accelerators to reduce the overall testing effort. The testing lifecycle is optimized for package testing and then tailored to your specific needs such as:

- Transaction-focused testing
- Customizable execution components
- Customizable business rule validation



About Capgemini and the Collaborative Business Experience

Capgemini, one of the world's foremost providers of Consulting, Technology and Outsourcing services, has a unique way of working with its clients, called the Collaborative Business Experience.

Backed by over three decades of industry and service experience, the Collaborative Business Experience™ is designed to help our clients achieve better, faster, more sustainable results through seamless access to our network of world-leading technology partners and collaboration-

focused methods and tools. Capgemini utilizes a global delivery model called Rightshore® which aims to offer the right resources in the right location at competitive cost, helping businesses thrive through the power of collaboration.

Capgemini reported 2009 global revenues of EUR 8.4 billion and employs over 90,000 people worldwide.

More information about our services, offices and research is available at www.capgemini.com.