

# MarketScope for Application Quality Management Solutions, 1Q08

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**This MarketScope assesses companies that have a baseline for managing quality efforts and carrying out testing activities. This market is undergoing change with a number of acquisitions, and increasing market demand to reduce development and maintenance costs, and to meet greater regulatory demands.**

## WHAT YOU NEED TO KNOW

Traditional focus in the application quality management market has been for specific testing activities (for example, load/stress and functional/regression). The market is shifting as organizations seek greater business value and agility. This involves business analyst more directly in overall quality efforts, along with a shift in focus from finding defects to validation, to ensuring business objectives are being met.

The quality assurance (QA) organization must validate and manage:

- Business functions: Driving down the cost of user acceptance testing (UAT). Requirements management integration is required.
- Ready for production status: How does the application scale? Is it secure?
- Risk status: Increasing regulation (for example, data privacy, compliance) and security requirements while managing costs.

These needs drive a shift in the market, as well as for QA organizations to focus more on the governance issues rather than the specific tasks. In addition, the advent of service-oriented architecture (SOA), increasing complexity and more regulations are renewing the focus on raising quality efforts, but doing so through more-effective approaches. This increases the need for solutions that are well-integrated across the application life cycle, not only during the development cycle but also into production. This market will continue to consolidate. The main enterprise players will expand product breadth through acquisitions, which will force secondary players into specific market niches or nonenterprise deployments.

Although the vendors in this market offer a solid baseline for driving application quality, all have gaps in their product lines, some more significant than others. As the market continues to consolidate, it will polarize into two groups: large vendors and small independent vendors that offer point solutions. Key areas for acquisition during the next three years are static and dynamic analysis, support for packaged solutions, SOA testing, rich client dynamic Web testing and test data management, including obfuscation of sensitive data. There is also a growing amount of development around unit testing, including tools for automatically creating tests, building mock objects and building functional tests.

Another key driver in the market is based on the demands created by the shift to agile development, centralization and globally distributed project teams. Requirements for testing products have changed from testing the product in isolation to integrating the testing with the rest of the product's life cycle, and to support collaboration across the QA team and among the entire project team. Therefore, IT organizations should focus first on testing workflow and quality management issues when selecting a set of tools. This requires evaluating solutions that are entrenched in the organization and what political capital there is to drive changes. Changes cannot be made only in the name of efficiency, but must be tied to identified and consistent errors in established processes.

## MARKETSCOPE

Gartner's MarketScope for Application Quality Management Solutions, 1Q08 provides guidance for enterprises seeking to purchase tools to manage risk and ensure software quality. Our focus is on tools fit for large-scale enterprise use and that are ready out of the box to manage quality requirements and functional testing. This market has been relatively stable from a market share perspective for several years but is undergoing a transformation as organizations seek ways to reduce the cost to deliver and maintain software, and overcome pressure to deliver higher-quality software. It has been known since 1987 that driving quality earlier in the cycle reduces the cost to fix defects. This is driving increased integration between application requirements and test plans and tools that can assess software quality during development.

The key trends in the market are:

- Market consolidation:** During the past 18 months, Segue Software was acquired by Borland, and Mercury (the market leader) was acquired by HP. In addition, IBM and HP recently acquired tools in the security analysis space. This type of consolidation will continue as vendors work to build complete application lifecycle management (ALM) suites and move to integrate development with operations management. Microsoft also continues to expand into this market, adding test management and manual testing in its Rosario release planned to ship during 2009.
- Agile techniques:** Many organizations have begun to use agile development techniques. These practices put a premium value on collaboration and alter the development cycle because requirements are changing and being completed incrementally as the project is under way. Agile methods also focus on the drive to push quality upstream through techniques such as unit testing and code reviews. Agile practices are encouraging vendors in the tool market to build tools that recognize these process changes and address the shift from isolated specialist tools to coordinated suites that share information and manage and update each other in a complementary fashion. For example, leading tool support integration between software requirements and test plans, and as requirements grow or
- change, will force a vendor to update its test plan. This collaborative capability is especially important for globally dispersed organizations to keep information loss among groups to a minimum.
- Regulatory environment:** Regulations surrounding data privacy and auditable change management procedures drive the need for better tools for test data management (IBM recently acquired Princeton Softech to fill this gap) and for workflow-driven solutions that manage and track changes.
- Package application upgrades:** Package applications place additional constraints and different needs on testing organizations than custom development, including lack of access to source and data models, and a high degree of complexity. These products are undergoing a major transformation as they increasingly shift to support SOA and software-as-a-service (SaaS) models, and as vendors continue to consolidate. Packages tax organizations with frequent updates and a great deal of integration, forcing the need for effective test-automation solutions for regression testing. Many organizations, however, have been challenged to achieve acceptable productivity with automation.
- SOA:** Testing for services introduces a great deal of complexity and requires organizations to increase minimum standards just to operate as well as they do currently. Services are supposed to provide business-level agility, yet companies have traditionally struggled with reuse. If services are to provide a dynamically adjustable business operating environment, then they must have a high degree of quality and automation for quality assessment and change impact analysis. This will be a major catalyst for additional acquisitions and could create a shift in market share positions, because standard testing tool frameworks don't readily support more than simple Web services and they need to have a closed loop around change requests, quality, operation change management and impact assessment.
- Lower pricing:** Testing tools and quality management applications can be expensive, just as many pieces of the development tool market have been. We expect that certain segments of the quality and test market will face increased pricing pressure from open source, new smaller organizations and Microsoft's entry into the software testing market. The number of open-source testing tools and newer, lower-cost products for managing quality efforts (for example, Atlassian Jira, Axosoft's OnTime, PassMark TestLog and AppTest Manager) has increased. Because of the dominant positions of Visual Studio and Eclipse, which each provide baselines for integration, it is possible to create a solution that fits together as well as a single-vendor solution. Because no single vendor has a complete comprehensive solution to all aspects of software quality and ALM, many enterprises may like this approach. However, at this point, for most enterprise use, it is better to go with one of the traditional quality management vendors covered in this MarketScope and augment the tools with additional pieces, some of which may be open source. We

expect that pricing pressure will also motivate vendors to look for alternative deployment vehicles, such as SaaS. During the next three to five years, SaaS offerings for load/stress testing likely will become standard for enterprise players.

### Market/Market Segment Description

Quality management is a subset of the ALM market focused on managing application quality through the definition of test cases, tests, acceptance criteria and defects, and reporting on the status of these. The foundation for this category are tools for defining test requirements, identifying test cases and reporting test results. These products may integrate with other pieces, such as project management and requirements management, of the ALM product family.

Quality management also requires a way to assess application correctness through manual or automated tests. These two facilities provide the baseline to define quality and risk, outline how to assess the application's quality and the "does it work" status. Does-it-work analysis should be done not only at a technically correct level but also at the business requirement level. A key evaluation criterion must be how the quality management solution works in concert with your chosen requirement management application. The leading vendors have facilities to manage application functional and nonfunctional requirements, and tie these to test plans. Many other elements – such as maintainability, performance, security and usability – exist to measure quality, and leading products provide facilities to assess a broad set of criteria or integrate data from a variety of tools to present a complete picture. As the market consolidates, it may be possible to find a single vendor that can encompass all quality management and testing; however, organizations usually will have solutions from several vendors.

### Inclusion and Exclusion Criteria

Quality management solutions provide a way to establish quality management standards and to identify when these are met. To

perform this at an enterprise level, tools must support a broad set of platforms and technologies, including traditional and Web clients. Most importantly, they must provide a way to set testing requirements and establish test plans for functional, as well as performance-oriented, tests enabling the QA organization to certify releases. These tools should integrate with solutions for overall project management, versioning and defect management. There are a growing number of independent test case management facilities. This MarketScope does not include these products, but includes only products from vendors that also have an entry in the testing market. In particular, each vendor has not only the ability to manage test cases but also tools for building functional tests that may be executed manually or automatically. Most of these vendors also have load/stress testing products, and some have a wider overall quality strategy. All the vendors have plans for regular releases during the six- to 18-month window, generally with a mix of major and minor updates.

Each vendor in this MarketScope had to meet the following criteria:

- Active market participation – regular product enhancements, support and marketing efforts to define a specific value proposition in the quality management space
- Financial viability – the ability, through cash in the bank, to run the business for at least one year
- Provide enterprises with technical support and training directly or through a partner
- Quality management support – defect tracking, test plan and test case development, management and reporting
- Functional test automation for building and executing functional and regression testing

### Rating for Overall Market/Market Segment

#### Overall Market Rating: Positive

The overall distributed testing tool market is valued at more than \$1 billion and has been growing consistently at 10% to 12% during

Figure 1. MarketScope for Application Quality Management Solutions, 1Q08

	RATING				
	Strong Negative	Caution	Promising	Positive	Strong Positive
AutomatedQA			x		
Borland				x	
Compuware				x	
Empirix				x	
HP					x
IBM					x
Original Software			x		
Seapine Software			x		

As of 25 March 2008

Source: Gartner (March 2008)

## Evaluation Criteria

Table 1. Evaluation Criteria

Evaluation Criteria	Comment	Weighting
Overall Viability (Business Unit, Financial, Strategy, Organization)	Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.	standard
Customer Experience	Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.	standard
Marketing Execution	The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word-of-mouth and sales activities.	high
Offering (Product) Strategy	The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.	high
Innovation	Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.	high
Sales Execution/Pricing	The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support and the overall effectiveness of the sales channel.	standard
Geographic Strategy	The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, directly or through partners, channels and subsidiaries as appropriate for that geography and market.	low

Source: Gartner

the past five years. We expect this growth to accelerate due to the demands of SOA and replacement of legacy applications with new packages and custom solutions. New companies continue to enter the market, as established vendors continue to fill out suites through acquisitions. The acquisition market is driven by this need for suppliers to provide more-complete ALM products and to deal with new “hot spots” around SOA and security. As organizations seek to better manage software assets and face increased complexity, competition and regulations, they are finding that quality management tools and practices provide a fundamental baseline to drive positive results. This need will be especially acute as organizations shift from early Web services implementations to developing SOA, and as packages expand to become service-oriented business applications.

## Vendor Product/Service Analysis

### AutomatedQA

AutomatedQA provides a complete set of software quality products and a simple licensing model that appeal to technical testing teams. With features such as a broad set of choices for scripting language, the ability to use data-driven or object-driven formats, and an all-in-one mentality, all at a low price, AutomatedQA has built a solid following, especially with high-tech companies where testers tend to be software engineers rather than business analysts in end-user organizations.

The company is privately held and headquartered in Beverly, Massachusetts. Primary support is via e-mail and message boards. AutomatedQA provides training services and has a growing number of service partners, but none of the offshore testing service providers are currently partners. Although there are few formal technical partner relationships, the company has been rapidly expanding its global reach through relationships with resellers. The products provide solid technical functionality but lack the support structure and services required for most enterprise users. The products appeal to technically adept users.

AutomatedQA counts several high-tech software and hardware vendors as clients, including several of its competitors in the testing market. The TestComplete product is integrated tightly with Microsoft's Visual Studio Team System product line but lacks similar integration, at this point, to the Eclipse stack or to any of the leading requirements management solutions. Support is provided to interface to version-control systems. Key for the product line is being on top of the latest technical advances, such as support for testing Scalable Vector Graphics (SVG)-based user interfaces and 64 bit applications.

- AutomatedQA products include:
- *TestComplete* – test case management, test automation for functional and load testing, unit testing and coverage analysis, \$999 per named user, \$2,999 per Floating User, \$1,999 per named user Enterprise Edition, \$4,499 per floating user Enterprise Edition
- *AQtime* – performance profiling, \$599 per named user, \$1,899 per floating user
- *AQdevTeam* – defect tracking and project management, \$349 for server, \$249 per named user, \$799 per floating user

- *Automated Build Studio* – provides build management tools that include the ability to call various processes, such as test execution, \$349 per named user, \$999 per floating user

AutomatedQC has shown positive movement in building channels, increasing global presence and technically solid products at a reasonable price. The products are best suited for technically oriented testing teams that want focused solutions and are willing to integrate them with their own ALM solutions. Rating: *Promising*

### Borland

Borland has been a longtime player in application development, and during the past few years has been concentrating more on ALM. This has been done through acquisitions, including the acquisition of Segue Software and its Silk product line, to enter the software quality management market. Borland has assembled a solid portfolio of products but has struggled to execute on the sales and marketing front. It lacks a clear, differentiating message for users. During 2007, Borland moved forward by taking advantage of market conditions such as the disruption brought about by HP's acquisition of Mercury.

Recently, Borland consolidated its development offices and moved corporate headquarters from the San Francisco area to Austin, Texas. Although these changes have helped bring the company to profitability, Borland's focus is more on managing down costs than on revenue growth. The testing products have been a bright spot for Borland, with good growth since the acquisition of the test products. Because of the current state of the market, we believe Borland could become an acquisition target, especially if it can offload its CodeGear application development unit. There is no immediate threat of Borland's being acquired. This (fear of acquisition) should not be a critical deal breaker because Borland has focused a lot of its efforts lately around Open ALM and integration to other vendor products.

The company has a solid presence in the U.S., Europe and Asia/Pacific. It also has a reasonable partner network, including value-added resellers (VARs) and system integrators (SIs), with relationships growing with the outsourcing service companies. Borland's updated message around Open ALM is finally becoming a cohesive vision, and it fits the reality that most organizations will have products from multiple vendors rather than a single provider stack. As the market continues to consolidate, vendors that were in alliances are now competitors striving to provide a whole product, single-vendor solution. Overall, Borland provides a complete ALM product line covering project, requirement, software change and configuration, and quality management solutions. It also has a strong set of resources for process guidance and training, with a focus on capability maturity model integration.

Borland's quality solutions are mature and support a broad set of platforms and technologies, yet are priced lower and with more-flexible licensing than some of the other market leaders. With the breadth of its solution, it has the ability to monitor quality from the planning phase to delivery, and from product requirements to test

requirements and plans. Borland has acquired solid assets, but product functionality likely will evolve slowly because the company's focus currently is on cost management. The key area where the products have leaped forward is in integration across the life cycle. Borland has solid offerings for requirements capture and definition, and the output of these leads directly to defined test cases. This capability not only enables initial traceability but also delivers support for understanding change impact. Borland's Gauntlet application enables real-time reporting of project metrics and supports for continuous integration. These products, together with the traditional baseline of quality management, functional testing and load testing tools, enable Borland to aid companies trying to ensure quality early in the life cycle.

Borland's overall quality products include (all products require Windows but can test non-Windows applications):

- *SilkCentral Test Manager* – Web-based tool for managing reports, test requirements, planning, execution and issue management, named user: \$1,700; concurrent user: \$5,000
- *SilkTest* – functional testing, named user: \$4,500; concurrent user: \$9,000
- *SilkPerformer* – load/stress testing, integration to SilkTest to drive load tests from functional tests Initial pricing (each) for 100 or less virtual users (VUs), shareable across regions and projects:

Tiered pricing decreases with volume.

Web VU, named user: \$267; concurrent user: \$400

Standard VU, named user: \$333; concurrent user: \$500

Premium VU, named user: \$400; concurrent user: \$600

- *Gauntlet* – continuous build and test integration along with source scanning
- *SilkPerformer SOA Edition* – for functional and performance validation of Java and .NET Web services, node locked: \$1,500; concurrent user: \$4,500

Borland presents a strong ALM story with solid testing tools that, through acquisition and better marketing and execution, are back in growth mode. The company has made positive cost-containment moves and clarified its ALM message, which better positions the company to compete. Borland also has been challenged to execute consistently on marketing and sales, which raises questions about its overall viability in a consolidating market. However, Borland is moving in a positive direction and is stronger financially, as well as in marketing execution, than Segue was. Rating: *Positive*

## Compuware

Compuware, headquartered in Detroit, Michigan, was built around mainframe application development and has been moving toward distributed applications. On the quality side, the company has a full set of offerings covering mainframe (No. 1 market share) and distributed (No. 3 market share) testing, and provides solid requirements management integration. The latter is key to the market position of Compuware's quality management strategy, which is built around business requirements and risk-based test

planning and execution. Compuware's solutions are Microsoft-focused, which also have presented challenges to Compuware as Microsoft has expanded into ALM with Team Suite.

Compuware and IBM are the only vendors that provide broad support for test data management, with the ability to extract and obfuscate data from production systems for use in testing. This is one of the areas that is rapidly growing in cost and complexity for users. This functionality is becoming increasingly important as tests need to be accurate but not reveal personally identifiable or sensitive financial information. Another Compuware strength is DevPartner, which aides in driving quality to the developer through static analysis to find common coding errors and security issues.

The Optimal Trace product offers a complete solution for requirements management; integration and traceability from these requirements to the test cases and tests validate that the requirements have been met. This requirements management support blends well with Compuware's support for risk management, which includes a strong dashboard that enables decisions about where to focus efforts or compress schedules based on risk profiles. The missing piece in the ALM suite for Compuware is source change and configuration management, but there is integration to the leading tools in this space.

Compuware has solid global support, although we have seen declines in Europe. It also provides a complete set of offerings for support and training; and the major SIs have relations with Compuware, which has more than 200 implementation partners. The vendor has been building specific practices to mesh with the large offshore service providers, along with support for packaged applications. Compuware, HP and IBM are the vendors with strengths in IT service management (ITSM) and program and portfolio management (PPM).

Compuware Application Reliability Solution (CARS) provides a solid set of best practices and methods; Compuware's other tools provide a well-rounded quality governance platform and a pathway for organizations to progressively improve in overall process maturity. As organizations look to improve their overall quality experiences, it is critical that they do not just acquire tools. Most organizations need to make significant transitions to shore up quality practices and should look for a combination of tools, training and guidance – such as the functionality offered by CARS.

Compuware's tools in the quality management space include:

- *TestPartner* – visual storyboarding tool for functional testing, \$6,100 per named user
- *Application Performance Assurance* – load testing, root-cause performance analysis, \$55,000 base price
- *Quality Management* – test management solution, requirements and risk-driven test planning and functional test automation, \$5,000 to \$17,500 per user
- *DevPartner* – static code analysis, starts at \$2,400 per named user

Compuware offers leading mainframe testing and has a solid position in distributed testing; offshore services are growing stronger, requirements management is outstanding and risk management approaches are strong. The majority of innovation for Compuware is via acquisitions (for example, its Optimal Trace requirement product), but this shows promise along with the company's ability to knit together a relatively cohesive strategy from a broad portfolio. Rating: *Positive*

## Empirix

Empirix entered the quality management market with the first Internet wave, introducing products that were oriented toward new application architectures. The company's ability to drive specific markets – particularly around voice over IP, contact centers and the requirements for high-volume, high-performance Internet applications – helped it build and maintain market share. This focus and solid execution in sales and marketing has driven the company to fourth place in market share. Empirix has had solid growth during the past couple years. It also has built a strong community presence through its QAZone site, which provides a portal for exchanging best practices.

Empirix Web tools (e-Test Suite) only test Web client applications. The company has sales offices in the U.S., Europe and Japan; resellers broaden this coverage. Technical support is available 24/7 and is collocated with each sales office. The company's e-Load and e-Tester products use the same scripting engine so that functional scripts can be reused as baselines for load tests. The tools, like most products in the market, have a visual scripting paradigm and support data-driven testing.

Although the products have open application programming interfaces for extension, Empirix does not ship specific integrations to other ALM solutions or direct partnerships with them. The key value of choosing Empirix is its focus on specific types of applications, which enables it to deliver high productivity to users. In addition, it is one of the few testing vendors to provide monitoring tools for applications in production by using the same scripting engine. The company packages the entire suite – test management, load/stress and functional testing – in a single product. It also leads the market because it has a hosted load-testing offering in addition to traditional load-testing tools.

Empirix's quality product line includes:

- *e-Test Suite* – includes e-Load, (starts at approximately \$20,000), e-Tester (\$4,995 per concurrent user), and e-Manager Enterprise: (\$3,000 per concurrent user) a complete package for managing quality and performing function and load/stress tests
- *e-Load Expert* – hosted load-testing service, base price: \$15,000
- *OneSight* – runtime performance monitoring, base price: \$20,000

As a result of its focus and execution, Empirix has built a solid position and market share, but falls slightly short of providing a complete single-vendor ALM solution. Rating: *Positive*

## HP

HP has maintained its position as the market share leader after acquiring Mercury. At times, the quality products have been lost in the mix of HP software's operations management toolset. Software tends to be lost against HP's hardware portfolio, but the software group is making impressive strides and continues to invest in the quality product line. HP has a compelling vision around the use of technology to optimize results for business that takes them up a level from a simple message around testing and validation. In addition, the company has done the best job of defining its product solutions as part of a center-of-excellence strategy, combining the products with best practices and specific training. The products are among the few that are not bound to Windows and that also support Linux and Solaris. HP has the broadest platform for testing; there are many components – such as two product lines for functional testing, the greatest number of probes for performance testing, products to monitor performance in production to direct load/stress tests and security analysis – but this comes at a cost of complexity and premium pricing.

The HP testing products have more than 50% market share in test management, functional and stress/load testing. Benefits of this share include the greatest number of partners and product integrations, and the most individuals that have worked with the products. The products are well-designed for large organizations and have shown excellent scalability. The combination of solid technology with excellent marketing and sales execution has established the market dominance of these products. HP has continued in this vein, strengthening its relationship with SAP and building good relations with the primary offshore service providers. The capitalization of the company enables it to consider growth through product acquisition. We expect HP to continue to be aggressive in adding to its overall portfolio to better compete across categories with other enterprise-class software companies, such as IBM and BMC Software.

A key value of HP's market share is the availability of skilled resources, as well as strategic vendor relations. Essentially any trained tester, every consulting firm with a test practice, all the major offshore service providers, all the global SIs and several VARs know and support the HP products. This, along with HP's global presence and service division, gives HP a very strong global presence. There has been a little weakening in this position post-acquisition of Mercury because HP also has a solid service group, but this is no different than IBM and has mainly benefited Compuware and Borland. The other advantage of market share is the broad number of integrations to the HP portfolio, including requirement solutions from Blueprint, Borland and IBM, a wide variety of software change and configuration management (SCCM) software, as well as laboratory management software from Surgient and VMware.

HP is one of the few vendors in this market to have products that bridge development and operations, and with an offering in SOA governance, quality and management. Its main product gap is

around the rest of the development life cycle. Since 2007, HP has been extending its test requirements management solution to function as an overall application requirements management tool. It lacks support for modeling, use-case-oriented requirements, source change and configuration management, build automation or unit testing, but has third-party integration to cover many of these aspects; only IBM and Borland support all these areas. The only mainframe testing that HP supports is functional testing for the 3270/5250 user interfaces.

HP's solutions have been proven to meet the needs of large enterprises, but can overwhelm smaller organizations and teams. With QuickTest Professional (QTP), HP enables business analysts and other nonprogrammers to build and execute tests quickly. We expect that the company will stay focused on large-scale enterprise solutions. More critical for long-term success will be HP's ability to fill in the rest of the application life cycle to drive quality across the life time of a software asset, not just the classically defined testing phase and tie this together with its ITSM offerings.

HP's Quality products include (we have not included prices because HP does not publish list prices for its products; and many features that competitors include in the product [or may not have] are extra-cost options from HP):

- *Quality Center* – requirements management, risk-based quality planning, release and cycle management, test case management, defect management
- *Business Process Testing (BPT)* – framework for building reusable, data-driven test components, support for manual, keyword-driven and scripted components, Web-based repository for sharing tests and components, extended capabilities for creating and updating tests for SAP applications
- *QTP* – supports a wide variety of client types, keyword-driven testing, data table for data-driven tests, visual scriptless test development, process guidance with built-in best practices and ability to customize processes, full integration with BPT and Quality Center to maximize reuse and manage tests as part of ALM
- *Quality Management for SAP (includes BPT for SAP and Change Impact Testing)* – supports all key SAP technologies, detects SAP application changes and updates tests, analyzes change impact and recommends what to test
- *Quality Management software for SOA (includes Service Test Management)* – ability to validate applications independent of graphical user interface to test “headless” services, change-impact testing for SOA assets, support for testing from unit level through complex business processes
- *LoadRunner* – load/stress testing tool, provides many probes and protocols, visual test building using QTP engine

HP's strong market share is supported by partnerships and mind share. It has a strong global presence, and its QA software group has a strong track record of innovation. In addition, the company has one of the broadest platforms for distributed quality management, an expanding footprint across ALM, and the ability to understand the market and deliver products that meet its needs. Rating: *Strong Positive*

## IBM

IBM has a solid position, being second in market share in the mainframe and distributed quality management markets, as well as having the most complete coverage throughout ALM and associated development tasks. This gives it a solid position to pursue quality market leader HP, but it is far behind in market share. IBM's product breadth can lead to products being overlooked due to the strengths and challenges of the IBM sales team involved. IBM has leveraged Eclipse very well as a unifying platform to drive integration across the product line, since the majority of the quality management products have been brought to the portfolio through acquisition. This strategy will continue as IBM releases its Jazz platform, which will enable collaboration. Like HP, IBM expanded its quality management offerings in 2007 with an acquisition in security testing. IBM has a solid set of tools for ITSM, but its PPM tools lag behind the leaders.

Another area where Eclipse pays off for IBM is that the tools have been adopted not only by end users but also by other companies as a baseline development technology. SAP's NetWeaver tools are Eclipse-based, meaning that IBM's tools are integrated with life cycle tools that work not only for IBM's Integrated Development Environment but also in NetWeaver and several other environments.

IBM holds a strong position in the market with its Rational Unified Process, which has been widely adopted and has become more agile. This process support, combined with the integrated tools and collaboration support, position IBM well for organizations that want integration between business models, requirements and quality activities. With the breadth of its portfolio, IBM can drive quality processes, backed by tools from requirements to static analysis and unit testing to the delivered product.

Of the traditional testing tool providers, IBM has made the strongest push to support SOA testing, adding support for Business Process Execution Language (BPEL) in addition to the standard Web Services Description Language (WSDL) support provided by other vendors in this MarketScope. These IBM tools are still behind the SOA specialized vendors' tools. However, IBM's strong position in modeling and middleware, along with a strong tool focus, should put it in a good position to deliver more-comprehensive SOA-based applications. IBM is strengthening its modeling and requirements positions through the acquisition of Telelogic. IBM also acquired Princeton Softech, which provides IBM with a very solid entry into test data management. The latter is increasingly important in a service implementation that must be easy to set up and run tests, and where data security is greater due to service interfaces being exposed to partners.

IBM's software quality platform includes:

- *Rational ClearQuest* – defect tracking and test management, tight integration with the ClearCase SCCM solution, \$1,670 per named user
- *Rational Functional Tester* – keyword-oriented functional testing tool, supports Windows and Linux, \$5,450 per named user
- *Rational Performance Tester* – load and stress testing, can drive load from Windows, Linux and z/OS, \$1,540 per named user plus cost for virtual load



- *Rational Tester for SOA Quality* – load and functional testing for BPEL- and WSDL-based applications, \$4,700
- *Rational AppScan* – security analysis for Web applications, coverage analysis, \$14,000

IBM offers a broad overall solution, it can support the largest enterprises, has strong partnerships, displays innovation across the product stack and business approach, has a growing market share in distributed testing and a strong position in mainframe testing. Rating: *Strong Positive*

### Original Software

Original Software is headquartered in the U.K. and, as of 2001, also in North America (offices in Chicago). Founded in 1997, the company is privately held. Its original focus was on the IBM iSeries, and it continues to have a relatively unique portfolio with support for iSeries and Lotus Notes, as well as for Windows and Web application testing. It was one of the early companies to market code-free approaches to testing and ways to self-heal scripts.

Original Software provides a full set of functionality for test automation and quality management, and is relatively unique in having a test data management system. It is one of the few companies to also support manual tests. Its tools enable a test “script” to be captured and for screen-to-screen comparisons and easy bug reporting as users follow the script. The company also has a fairly strong set of processes and practices to increase adoption of the tools in the organization but does not have products for other pieces of the application life cycle, such as software version control or requirements management. The products provide interfaces to XML data to support the broader application life cycle through integration to other products.

Key to Original Software’s message (outside of its more-unique areas, such as iSeries and Lotus Notes) is a script-free approach, driving productivity and enabling business analysts and other nonprogrammers to develop tests. This code-free approach includes strong self-healing capabilities to reduce the impact of application changes on test scripts. Although much of the testing requires business-domain knowledge, developing good tests is a fundamental skill. Enterprises looking at this or other test automation tools should recognize that while business analysts can play a key role for validation, quality specialists are required for detecting defects and software breaks.

Original Software has a variety of offerings but a fairly simple licensing model – one product can be used for manual testing, functional automation and load testing for Windows and the Web. The company offers a stress/load testing solution only for the iSeries. Original Software is one of only a few companies to offer test data extraction support and management for Oracle and iSeries.

Original Software’s quality products include:

- *TestDrive* – functional automated testing, concurrent user: \$9,500
- *TestDrive-Assist* – manual testing, \$3,300
- *TestBench* – test data management, support for iSeries and Oracle, \$11,000 to \$29,000 per server

- *TestLoad* – iSeries load testing, \$4,000 to \$96,000, priced depending on the number of emulated users
- *TestPlan* – test planning and defect management solution, information stored in repository can be shared across teams and projects

Original Software lacks a global presence and doesn’t provide technology partners to round out the ALM story. The company has been building a strong U.S. presence and has solid technology; but with the state of the market, relationships and execution have an overbearing weight for this MarketScope rating. Rating: *Promising*

### Seapine Software

Seapine Software is an independent company located in Mason, Ohio, with additional sales offices in the U.K, Austria and Australia. The company provides ALM solutions for quality management and source code change management. It has focused on building applications that are easy to use out of the box and are available at a much lower price point than many competitive products. Because Seapine has built most of the platform, the products have a consistent user interface and tight integration with each other. However, Seapine tends to build products for small or midsize businesses (SMBs), rather than large-scale enterprise deployments. Although well-integrated and flexible, they lack some of the breadth (no load/stress testing or requirements management solution) of competitive products, and the company lacks the global organization to support large enterprises. Somewhat unique to Seapine’s platform, especially at its price point, is support for Windows, Mac OS, Linux and Solaris.

The company’s main challenge is to develop more commodity solutions. It has created the Seapine Labs Web site, where alpha and beta products are released and other advanced technologies are showcased. There are also interactive wiki-based discussions to build a more participatory product development path. The company has a solid list of customers but is relatively weak on the strategic partner front. VARs help broaden Seapine’s global reach but are not positioned to be strong influences with the global SIs. Seapine provides a variety of training and implementation services, and is capable of providing 24/7 support. To help build a stronger identity, Seapine has been defining specific solution sets for specific vertical markets, including game development, life sciences and financial services. However, these solutions are white papers that identify how companies can use Seapine tools to meet specific needs. To strengthen this strategy, Seapine needs to build acceleration frameworks and build best practices into their workflows to support regulations such as 21 Code of Federal Regulations (21 CFR Part 11).

Seapine needs to target organizations looking at SCCM solutions (often to replace Microsoft Visual SourceSafe) that may have ad hoc defect tracking and little or no real quality management in place currently. Seapine provides a single vendor solution to drive development from a quality perspective, where many of the independent SCCM solutions do not have quality management or

test facilities. To be more effective in this space, Seapine must integrate with or build a requirements management tool and a load/stress testing tool. Its requirements management tool tracks feature requests.

Seapine's quality products include:

- *TestTrack TCM* – test case management, test requirements, customizable workflow, automatic generation of test plans based on test variants, \$595 named user, \$1,495 floating user
- *TestTrack Pro* – issue management with customizable workflow, \$395 named user, \$995 floating user
- *QA Wizard Pro* – functional testing, visual and text-based scripting, Windows-focused, \$2,995 named user, \$7,495 floating user
- *Surround SCM* – provides version control and software configuration management for all test assets, \$595 named and \$1,495 floating user

Seapine has a good focus on SMBs, a strong management team, value-based pricing and good customer interaction. Rating: *Promising*

### Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.

### Gartner MarketScope Defined

Gartner's MarketScope provides specific guidance for users who are deploying, or have deployed, products or services. A Gartner MarketScope rating does not imply that the vendor meets all, few or none of the evaluation criteria. The Gartner MarketScope evaluation is based on a weighted evaluation of a vendor's products in comparison with the evaluation criteria. Consider Gartner's criteria as they apply to your specific requirements. Contact Gartner to discuss how this evaluation may affect your specific needs.

In the below table, the various ratings are defined:

### MarketScope Rating Framework

#### Strong Positive

Is viewed as a provider of strategic products, services or solutions:

- Customers: Continue with planned investments.
- Potential customers: Consider this vendor a strong choice for strategic investments.

#### Positive

Demonstrates strength in specific areas, but execution in one or more areas may still be developing or inconsistent with other areas of performance:

- Customers: Continue planned investments.
- Potential customers: Consider this vendor a viable choice for strategic or tactical investments, while planning for known limitations.

#### Promising

Shows potential in specific areas; however, execution is inconsistent:

- Customers: Consider the short- and long-term impact of possible changes in status.
- Potential customers: Plan for and be aware of issues and opportunities related to the evolution and maturity of this vendor.

#### Caution

Faces challenges in one or more areas.

- Customers: Understand challenges in relevant areas, and develop contingency plans based on risk tolerance and possible business impact.
- Potential customers: Account for the vendor's challenges as part of due diligence.

#### Strong Negative

Has difficulty responding to problems in multiple areas.

- Customers: Execute risk mitigation plans and contingency options.
- Potential customers: Consider this vendor only for tactical investment with short-term, rapid payback.