

Magic Quadrant for Software Change and Configuration Management for Distributed Platforms

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By itself or in broader ALM solutions, SCCM helps structure development change, configuration and release processes. SCCM products address many of the problems that encumber development teams in their processes, and in their interactions with operations and project management.

WHAT YOU NEED TO KNOW

This document was revised on 30 March 2009. For more information, see the [Corrections page on gartner.com](#).

Software change and configuration management (SCCM) tools support structured approval, work assignments, state monitoring, execution and the reporting of changes to software products for teams and “teams of teams.” SCCM tools collect and preserve the various elements of a software product, such as source code or test case instances, as well as their interrelationships as these elements change and evolve through repeated states of creation, enhancement or repair. SCCM tools enhance the quality and business value of the products by imparting traceability, auditability and accountability to the processes of assembling, configuring or building. The details of how best to implement SCCM are different for services, packages and custom code, and differ with team size, technology and team structure.

SCCM tools are evolving on a path toward integrating tightly with or becoming generalized management platforms for requirements, test plans and other aspects of the application life cycle. Functions that are becoming more common within the products include workflow automation, integration with project management facilities, integration with IT change management (ITCM) tools in operations, multisite support and synchronization. Some products already have added multiplatform support and management support for noncode artifacts (including requirements, content, documentation, test case management, and code packaging and distribution).

Compliance and governance initiatives in the IT organization will remain powerful drivers of demand for these features during the next few years.

MAGIC QUADRANT

Market Overview

The needs of development organizations are evolving rapidly. New development and control techniques are needed to address a greater variety of methods, styles and delivery options (for example, packages, service-oriented architecture and other Web applications). They are also needed to address shorter, more-intense development schedules. Responding to these challenges has caused organizations to evolve and extend their SCCM practices and tooling. Product groups are paying increased attention to auditability, globally distributed development, agile practices, and the progressive

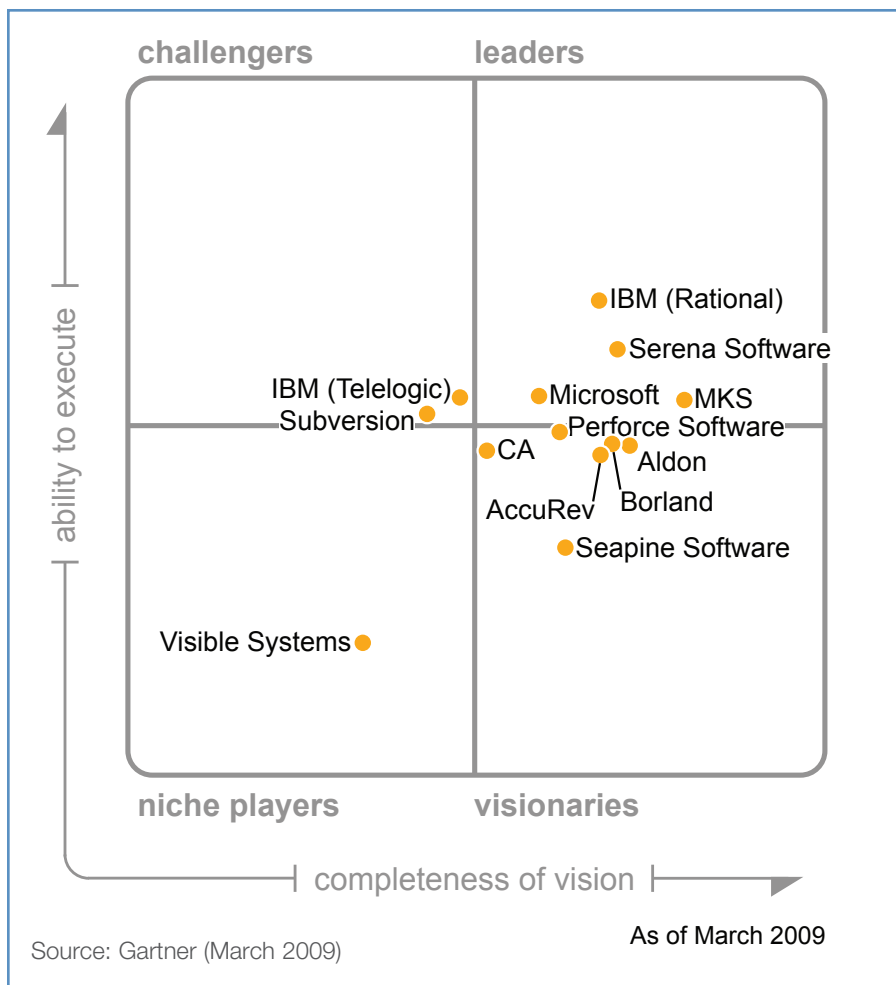
adoption of more-disciplined governance and management oversight. Vendors are responding to these needs with new offerings and product retirements, further transforming the market.

Change Management Is a Fundamental Process

The change, configuration and release capabilities of SCCM tools are central to strong implementations of the planning, measurement, control and reporting capabilities. Application life cycle management (ALM) offerings build on SCCM capabilities to centralize the planning, measurement, control and reporting capabilities otherwise found in portfolio management, service management and test management offerings. Rather than manage duplicate capabilities, many vendors in these spaces are likely to integrate around unified facilities (for planning measurement, control and reporting), positioning these as ALM offerings.

For small IT organizations with mostly manual management processes, little need to coordinate among teams, undemanding production service levels, or point tools for versioning or change, often open-source products are sufficient. On the other hand, as we pointed out in “Application Life Cycle Management Has Found a Home,” many organizations have higher needs for coordination and control, and are moving from SCCM to more-encompassing ALM offerings. During the next three to five years, most high-performance development organizations will add aspects of ALM to their SCCM solutions. SCCM will remain relevant to organizations in the middle stages of maturity, but the focus of innovation will largely shift to ALM. In five to seven years, there will be a substantial restructuring of SCCM and ALM offerings to integrate and interoperate more smoothly with ITCM tools for production and service control. Project and portfolio management offerings will move toward more-comprehensive IT planning and control suites. There will also be a substantial restructuring of SCCM and ALM to support data integration from development to production, thus impacting change (ITCM), configuration and release processes. Emerging examples of this are prebuilt integrations that link SCCM change record IDs and data to an operations change record. Furthermore, ALM and

Figure 1. Magic Quadrant for Software Change and Configuration Management for Distributed Platforms



SCCM products will embrace alternate software delivery models, including software as a service (SaaS) and hosted operations, interoperating with packages, service frameworks and business process management suites.

Tool Functionality Requirements Shift

Commercial products that had been the standard of the sector since the mid-1990s are being abandoned. Many users of Concurrent Versions System (CVS), Visual SourceSafe, Polytron Version Control System (PVCS) and IBM's basic ClearCase are exploring new offerings to see whether they are better able to

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support emerging needs. For example, the open-source solution, Subversion (developed by a community founded by CollabNet in 2000 and hosted on www.tigris.org), is largely supplanting CVS; and IBM acquired Build Forge and Telelogic, and is well into a major upgrade cycle through its Jazz initiative. Serena Software (see Note 1) is consolidating around the Dimensions product line, migrating users from the original Serena Professional Suite (once known as PVCS). Substantial enhancements continue to flow. Microsoft has retired Visual SourceSafe, building out Visual Studio Team System with its Team Foundation Server.

Note 1

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Although IBM's Jazz and Microsoft's additions to the Visual Studio Team System are the most commonly mentioned in trade media, substantial new functionality has come from virtually all market participants during the past 24 months. We expect this to continue. We also expect for most SCCM products to become part of broader offerings that are better characterized as ALM products. This period of innovation will abate by 2010, as the change management core of ALM is solidified and cross-life-cycle integration and automation become the focus.

We expect to see market consolidation driven not only by slower overall market activity, but also by enterprise demands for the most economical and effective control of development change, configuration and release processes.

Market Outlook

Gartner estimates that SCCM tool revenue grew an average of 10% to 13% annually during the past several years. New-product license and maintenance revenue for SCCM was approximately \$810 million in 2007, a 10% growth over adjusted numbers for 2006. A significant follow-on market exists for consulting and services in implementing these tools and the methods to use them. IBM realized almost 45% of SCCM revenue, and almost 50% if the Telelogic acquisition is included. Serena is the only other vendor with double-digit share, with between 15% and 20% share of revenue. The next four vendors – Borland, MKS, Perforce Software and Microsoft – are relatively close in revenue, and together account for about the same revenue as Serena. The \$810 million SCCM market revenue estimate does not take into account consulting or service revenue, including that related to product implementation.

Although demand will be depressed through the beginning of 2010, the need for automation, control and management, along with the need for more-successful deployment of changes to software, make it likely that this sector will have a compound annual growth rate through 2013 of 10 %. However, this growth will be focused on products that incorporate ALM capabilities. Open-source alternatives to SCCM tools that have additional ALM functionality layered on top will be disruptive, reducing revenue from less-complex installations. In addition, challenging capital markets and cost-control measures will pressure marginal vendors. We expect smaller deals during 2009 and into early 2010, with vendors offering significant discounts to weather the slowdown. The potential is high for entry into this space by vendors such as BMC, HP, Oracle and SAP, which are active in related markets. These entries could be through acquisition or by leveraging open-source foundations.

Market Definition/Description

SCCM tools are products and suites that support the structured approval, assignment, monitoring, execution and reporting of changes to software products for teams and teams of teams. Simple versioning and configuration suffice for individuals and small teams, and for loosely coupled projects, but larger efforts involving more than a couple of dozen participants need SCCM products.

Development processes generate many different types of artifacts, including, but not limited to, source code, documentation, test cases, database schema and test data. Each of these artifacts can be treated as an entity or module, and can be versioned, tracked and controlled according to rules set by the development team or higher-level organizations.

SCCM tools are continuing to evolve and can become more-generalized ALM platforms. Additional functionality in some suites includes multiplatform support, management support for noncode artifacts (including requirements, content, documentation, test case management and integration to packaged application change facilities) and code distribution. Interfaces and callable services that permit close integrations with third-party sources of these additional capabilities are desirable, even when some capabilities are included within the package.

Offerings in the SCCM space are grouped into three levels of functionality:

- Lowest-level products focus on the needs of individual developers, providing basic versioning and configuration control.
- Midtier products focus on structured and unstructured collaboration processes for a team of developers. These incorporate more-sophisticated configurations for distributed or parallel development, and add a change (issue and defect) tracking function for the development team as a group (including managers, testers and project leaders, as well as developers).
- High-end products integrate process management functionality to support teams of teams, implementing release management, deployment to more-complex production images and support for multiple parallel processes.

Midtier and high-end products are being extended into broader life cycle coordination, integrating requirements, build management and test case management.

If the scale of deployment is small or the processes are slow-moving, then virtually all functionality beyond versioning can be done manually, but spreadsheets and sticky notes are quickly overwhelmed. As organizations try to move faster and collaborate over broader scopes, tooling and automation become progressively more important. Although the processes that should be supported by tooling will differ, large, fast-moving teams eventually will find benefits in the full scope of the functionality. The major trends of globalization, and increased regulation and compliance oversight, will continue, tipping the industry toward midtier and high-end offerings.

Product Users and Roles

Users will move among three different persona, changing viewpoints as they employ SCCM. These three personas refer to that of an individual practitioner (developer, tester, planner), team members and, finally, teams of teams. With each viewpoint there is a different set of interests, requirements and priorities.

The individual users generate much of the base information, creating the basic artifacts (for example, changes to source code), and interacting with versioning, configuration and access control mechanisms, usually through an integrated development environment (IDE) of choice. Individual users want fast, nonintrusive support that captures each step in their work, and allows detection of and protection from conflicting changes to code elements.

Team members, managers, developers, testers and others participate in the change review process, examining requests for changes or new development requirements for their desirability. These groups and individuals agree on changes, object to changes, accept or approve changes, assign changes as work items, report on progress and request permission for promotions. Team members will use these systems to provide the information to support auditor inquiries. Additionally, build managers, or project managers, and team members will assemble data and artifacts from developers to build executables for use in the various stages of development.

As participants of the release or turnover process, teams of members from related teams must coordinate their individual and cross-team activities, and must be able to orchestrate the deployment of groups of changes, related and unrelated, into complex, heterogeneous production environments. In this role, development staff may delegate asset oversight to their production counterparts, or may contribute to some production processes.

Functions for Individual Developers

This level of configuration management of source and other development artifacts is expected in most organizations, and is demanded in regulated and audited environments. A repository provides basic cataloging, history, recovery and sharing capabilities to developers. By itself, configuration management does little to improve build accuracy; coordination among development, test and production staff; and visibility of the development process. The most basic products only version modules, providing a tag structure for configuration, and are appropriate for small teams and projects. More-elaborate tools (such as open-source Subversion) and basic configuration modules of midtier commercial products support project organization of modules and branched versions, but have limited capabilities on which to build complex processes.

The more sophisticated configuration functions found in midtier tools add support for parallel development with reconvergent development paths, more-sophisticated access and branching models, and difference/comparison tools to ease administration.

Functions for Teams of Developers

Team functionality for SCCM adds change tracking, reporting and management to more-complex versioning support, typically adding support for complex projects and baselines, parallel development and security by role. Teams engaged in long-running projects dealing with a flow of requirements or defects from a deployed project, and any team of more than about 25, will benefit from the deployment of team functionality.

Change management functionality is the glue that implements ALM processes and enables full traceability of an item, from conception through approval and design into deployment. Change management enables the various participants in the development process to assign and report on work, communicate status, and capture important aspects of the design, development and test management processes about the underlying software artifacts. These functions become more important as development speed increases, teams from multiple physical locations collaborate and the volume of artifacts to manage increases.

ALM products require SCCM capabilities for full effectiveness. Some products in this SCCM assessment are parts of broader ALM products. Many other ALM products will integrate with one or more of the products listed in this research for their SCCM functionality. ALM offerings from HP and Compuware are examples of this latter situation.

Integration costs and support costs become significant, and enterprise projects that need change and release control processes generally don't see a cost or operational advantage from starting with open-source version control. We recommend that clients seeking to exploit open source for full SCCM functionality use companies such as CollabNet and Polarion Software for support and extensions, rather than create proprietary extensions.

Team functions for organizations using point versioning and configuration products can be developed by integrating with ALM offerings, such as those of TechExcel and CollabNet, or by incorporating commercial IT workflow components (for example, Atlassian's Jira, Serena's TeamTrack or MKS's Integrity).

Functions for Teams of Teams

Improving the service levels achieved in production environments requires significant automation of build processes and release processes. Multiple teams are common in trying to coordinate when applications span multiple platforms, are developed with the help of outside resources or are based on packaged software solutions. The configuration control, workflow engines and process designers included in the most sophisticated SCCM tools make them attractive to organizations deploying to large-scale production images or to a variety of images with individual demands. Automating the workflow of build processes and release processes improves availability and repeatability. Installation and operation costs for these products generally are less for the same quality of service than the costs of doing builds manually or of adding automation scripts external to products.

Just as stand-alone change tools can be added to supplement the base version and configuration capability, stand-alone tools for build automation can be added as an evolutionary step. Although integrated build functionality is evaluated in this Magic Quadrant, additional stand-alone capabilities for continuous integration and complex build automation are extend products. Urbancode (AnthillPro), OpenMake Software, Atlassian and Electric Cloud are some vendors with stand-alone build offerings. There are also hundreds of open-source offerings, led by Maven and CruiseControl.

This Magic Quadrant focuses on SCCM products that can meet the demands of a team of developers. Many products have at least some functionality to support teams of teams. Although the advanced functionality is deeper in other quadrants, even niche players have significant functionality to bring to the problems of complex development projects.

Inclusion and Exclusion Criteria

To be included in this Magic Quadrant, a distributed SCCM product set must minimally include the following functionality, with integration out of the box:

- Versioning of modules
- Traceable configuration of modules that define an application
- An access and security model to control access and update rights to development or project artifacts
- Robust integration mechanisms to support the integration of other modules
- A promotion model to enable the separation of code modules by life cycle state

In addition, the product sets must contain one or more of the following:

- Tracing and management of issues and changes through their various states
- Support for impact assessment and the merging of code branches
- Workflow management and automation of the change, development configuration and release to production processes
- Support for the coordination of parallel development activities occurring on different, but dependent, platforms or technologies
- Support for at least one of the distributed platforms defined as Windows, Unix (and its variants) or Linux.

Products must be in full availability, be marketed as appropriate for enterprise IT use and have at least 100 deployments of at least 25 users each.

Products that require a mainframe or iSeries platform as part of the solution are excluded. Also excluded are products that primarily support proprietary forms of program objects. Examples of these are products that target SAP and Oracle packaged applications.

There are several classes of version management products that are in use but do not meet these criteria and are currently in limited enterprise use. These include products that do versioning only (such as Vault) and products that use distributed peer-to-peer revision models, rather than client/server models. This latter class of products includes open-source products (such as Git, Mercurial and Monotone), as well as a few commercial offerings.

Added

- Subversion
- IBM (Telelogic) Synergy

Dropped

- Serena Professional
- Telelogic

Evaluation Criteria

Ability to Execute

A software vendor's ability to execute in any market indicates the provider's industry and market presence, reputation, record of business and technical execution, and the degree to which it has delivered the essential core functionality expected of a competitive product supporting change, release and configuration processes within a development organization.

Most buying activity aims at improving the ability of the development organization to respond to rapid release cycles and to improve the ability of teams to collaborate, regardless of their physical location. In addition to the importance of product capabilities, buyers value the ability of the vendor to clearly state its value proposition, the viability of the vendor, customer experiences with the vendor and the vendor's pricing policies. These characteristics are frequently more important than the vendor's speed of market responsiveness to market forces, its marketing flamboyance or the effectiveness of its internal operations. Even so, buyers look for a commitment to the product category, characterized by regular enhancements, a clear product road map and well-funded, effective support organizations. Thus, in the market of SCCM products, the following criteria and weights determine this rating.

Definition of Criteria Contributing to Ability to Execute

Product/Service: The core goods and services offered by the vendor that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets, and skills offered natively or through OEM agreements/partnerships as defined in the market definition. Subcriteria for SCCM include functional assessments of the following:

- Configuration management, including versioning and differencing
- Change management
- Release management
- Build management and support for continuous integration processes
- Integration/coexistence/extension
- Support for multiple platforms
- National language support

Overall Viability (Business Unit, Financial, Strategy,

Organization): Includes an assessment of the organization's overall financial health, the financial and practical success of the business unit, and the likelihood that the business unit will continue investing in the product, continue offering the product and advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all presales activities and the structures that support them. This includes deal management, pricing and negotiation, presales support and the overall effectiveness of the sales channel.

Market Responsiveness and Track Record: The ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of the 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.

Customer Experience: The relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical and account support. This can include ancillary tools, customer support programs (and the quality thereof), the availability of user groups, service-level agreements and others.

Operations: The ability of the organization to meet its goals and commitments. Factors include the ability to meet a regular ship schedule and the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Table 1. Ability to Execute Evaluation Criteria

Evaluation Criteria	Weighting
Product/Service	High
Overall Viability (Business Unit, Financial, Strategy, Organization)	High
Sales Execution/Pricing	High
Market Responsiveness and Track Record	Standard
Marketing Execution	Low
Customer Experience	Standard
Operations	Standard
Source: Gartner (March 2009)	

Completeness of Vision

The fundamental indication of a software vendor's completeness of vision in any market is the degree to which the vendor anticipates and influences prevailing market trends. For SCCM systems, the vision of a vendor is reflected in its ability to track mainstream enterprise requirements, support geographically

complex teams working with many languages and platforms, establish traceability and accountability in the development process, smoothly and economically implement the buyers' processes and tool integrations, and enhance the product with modern capabilities, without detracting from conservative reliability. Thus, a vendor's market understanding, reflected in the strategies it identifies to come to market and the resulting product packaging and positioning, as well as investments in intelligent innovation, is all-important, as prospects try to estimate how well a vendor will remain aligned with its long-term requirements. A vendor that successfully identifies and serves a niche or subset of the market can be a more consistent provider than one that pursues a strategy beyond its capabilities.

Geographic and language strategies are of secondary importance, except to the largest multinational corporations and local markets. Sales, marketing and business model strategies are important to users only as further assurances of the continuing popularity of a vendor's products in the market. For the market of SCCM tools, the following criteria and weights determine this rating.

Definition of Criteria Contributing to Completeness of Vision

Market Understanding: The ability of the vendor to understand buyers' wants and needs, and to translate these into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance these with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the Web site, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service and communication affiliates that extends the scope and depth of market reach, skills, expertise, technologies, services and customer base.

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.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

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.

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	High
Marketing Strategy	Standard
Sales Strategy	Standard
Offering (Product) Strategy	High
Business Model	Low
Vertical/Industry Strategy	Low
Innovation	Standard
Geographic Strategy	Low
Source: Gartner (March 2009)	

Leaders

Leaders in this market are characterized by broad solutions with significant support for ALM deployment. Leaders still face challenges regarding cost, performance, ease of integration or flexibility of deployment. The breadth of solutions enables tailored enterprise deployments that will fit well into large, complex environments (examples include IBM (Rational), Microsoft, MKS and Serena).

Challengers

Challengers in this market have capable SCCM products with large installed bases in SCCM, or in closely related spaces, with substantial resources for sales and distribution. Although these vendors or communities are less complete in their offerings than leaders, they offer substantial value and proven capabilities within the scope of their solutions. Challengers deploy substantial resources to develop and enhance their products (examples include IBM [Telelogic] and the Subversion community).

Visionaries

Visionaries have some outstanding technical elements. In this Magic Quadrant, they are characterized by some innovative technologies, and may offer better price, performance or configurability than some of the leaders, but they have fewer financial, marketing or distribution resources. These challenges may limit growth and the ability to differentiate their offerings. Within the scope of their support, visionaries' products can be superior to leading products in price and suitability (examples include AccuRev, Aldon, Borland, CA, Perforce Software and Seapine Software).

Niche Players

Niche players offer support for platforms and business models that are not well-served by the products in the other categories. Niche offerings often are from smaller vendors that have limited sales and marketing resources. They offer excellent functionality and operational economics in their focus markets. Limited resources slow the evolution of these offerings, but their particular combinations of technical and industry-specific features make them excellent alternative selections for portions of the market (Visible Systems is an example of a niche player).

Vendor Strengths and Cautions

AccuRev

AccuRev has drawn on lessons learned from older products, such as ClearCase, to offer strong support for today's development methods and processes, including agile processes, parallel development, continuous integration and sophisticated release processes. The company has been effective in positioning and selling, and it has steadily evolved its offerings. Administration and support is professional and effective.

Strengths

- AccuRev has built-in best practices to automate and enforce agile and waterfall processes.
- The product is easy to learn and administer (no dedicated administrator required).
- Coexistence with ClearCase is well-supported.
- AccuRev has integrated change management with a common graphical user interface and database back end.
- The company offers 24/7 support.

Cautions

- AccuRev has a small but expanding base of experienced users.
- The product is principally marketed in North America.

Aldon

Aldon has expanded from its strong base in the iSeries with a modern multiplatform SCCM solution. Its focus is on providing a solution for IT organizations that will grow with ALM and service management needs. The company supports today's compliance initiatives.

Strengths

- Release and distribution support are designed for complex and challenging situations.
- The product has strong coordination for multiplatform deployments.
- Aldon supports third-party SCCM products, such as Subversion and Perforce.
- The company has well-thought-out ALM and service management integrations.

Cautions

- The complexity of the update process creates an administrative burden.
- The user interface for life cycle management is very basic.
- The company must build more name recognition outside the iSeries community.

Borland

Borland has focused a lot of attention on building out its Borland Management Suite (BMS) platform and stabilizing its overall ALM message. During 2008, the company updated StarTeam to improve performance in distributed installations, but the pace of innovation around StarTeam has slowed as the focus shifts to a larger ALM message.

Strengths

- Borland supports a variety of platforms through the use of Java.
- The company's marketing message is well-articulated and well-supported by the internal organizational structure.
- Remote caching over the Web provides good performance for geographically distributed teams.
- There is a strong set of integrations and migrations for complementary tools from Borland and other vendors.

Cautions

- Borland needs to rebuild confidence among customers and prospects in its brand, ALM focus and ability to execute on its strategy.
- The company's sales team needs to continue to build its ability to reach and close on enterprise-level decision makers.
- New functionality takes several service packs to stabilize.
- The server needs more-comprehensive monitoring and tuning tools.

CA

In the second half of 2008, CA launched the much improved r12 release of CA Software Change Manager. The many new features, including the modern Eclipse-based user interface, bring this process-based solution back to the point where it compares favorably with other leading alternatives. A reinvigorated sales team and the new product led to significant increases in sales volume in 2008.

Strengths

- CA Software Change Manager is well-integrated with the CA Service Desk Manager and CA IT Asset Manager products.
- The distributed product is complementary to CA Endevor Software Change Manager mainframe solutions and other mainframe tools, and supports cross-platform deployments well.
- CA Software Change Manager r12's new Eclipse workbench provides a single, well-integrated interface to the developer to access both change and build management. This change and build solution is now sold as CA Software Change Manager Premium Edition.
- The product has proved to be scalable to support thousands of remote users supported by a single instance.

Cautions

- CA's profile is lower with development teams than with operations groups.
- Change request management is not as robust as some alternatives.
- CA's integration with IDEs other than Eclipse is not as sophisticated as some alternatives.
- Integrations with testing and requirements tools are relatively new.

IBM (Rational)

IBM is updating the Rational offering through the Jazz initiative, beginning with Team Concert. This will address many of the concerns surrounding the Rational offering, and will simplify and

strengthen Rational's integration and management capabilities. In the meantime, newer, simpler offerings are winning away some users. Users will need to plan if and when they will move or extend from legacy Rational products to their Jazz-enabled counterparts.

Strengths

- The ClearCase/ClearQuest products hold more than 45% of the revenue in this market, and large numbers of developers and administrators are familiar with IBM's offerings.
- There is a rich feature set across ClearCase, ClearQuest and Build Forge, as well as a broad range of integrations and complementary products supporting a variety of development processes.
- IBM offers centralized and replicated support for distributed teams, enabling a variety of development models.

Cautions

- The price for performance is high, especially when multisite functionality is deployed.
- Combinations of ClearCase, ClearQuest and Build Forge can be complex to configure and maintain, and incur high administrative overhead relative to other solutions.
- Replication is resource-hungry. Latency issues for remote teams can be mitigated by configuration and process choices. Version 7.1 made substantial progress toward better performance.

IBM (Telelogic)

IBM has positioned the Synergy product as its preferred solution for system developers (developers of software that will be embedded in or shipped with a product). There is a good base of users in the aerospace, automotive and telephony sectors. Team Concert and the other Jazz offerings will support Synergy and Telelogic Change. Gartner expects that the two product lines will be regarded as one by the next version of this Magic Quadrant. At this point, the coming together of products and support structure isn't finished. Significant progress has been made, but the complementary use of the product lines and absorption and repositioning are still under way.

Strengths

- Access to IBM's sales and support organizations strengthens the global presence of Telelogic's products.
- The technical product functions and features in Synergy rank among the best.
- There is a strong process engine supporting multiple processes central to most functions.
- The product is extremely stable and runs for long periods with minimal administration.
- SCCM is well-integrated with Telelogic's other offerings.

Cautions

- IBM's sales and marketing organizations are still becoming familiar with Telelogic products.
- Longer-term product road maps will depend on IBM preserving the product team and client good will.
- Performance over WAN is an issue, but can be mitigated by configuration and process choices. Synergy version 7 improved performance, but is just reaching production.

Microsoft

Team System is well-architected for ALM extensions, as well as integration with project management and operational processes. It offers reliable, scalable support for Microsoft-centric shops and teams. Support of complex projects from multiple teams and other large enterprise teams is still complex, but is the focus of continuing development. Microsoft's distribution still focuses at lower levels in the organization, and enterprise sales processes are inconsistent.

Strengths

- The product has a flexible process model implemented in a single integrated metadata repository.
- Basing change, versioning and configuration around the concept of work items, rather than physical code changes, reduces programmer overhead for change management.
- Distributed support within a team system project is well-supported with Web proxies.
- Team System has demonstrated scalability.

Cautions

- Transitioning directly from Visual SourceSafe is challenging culturally, technically and financially.
- The server component must be hosted on Windows.
- Clients for non-Microsoft platforms are supplied by a third party.
- There are some administration interfaces, but additional functions will be delivered in later releases.
- The installation process is still spartan and needs to be simplified.
- Security setup and administration are spread throughout the product, and therefore are time-consuming.

MKS

MKS first built a strong SCCM platform and then extended the configuration, collaboration and change management capabilities to requirements, test and distribution management. The company has demonstrated its ability to win and support large companies with global facilities.

Strengths

- The product has a flexible process model implemented in a single integrated data model and metadata repository.
- Differencing to support parallel development is well-executed.
- Good metrics on processes can be obtained from the unified data model and repository.
- Proxies and federated support provide high-performance support for geographically distributed development.

Cautions

- The price of an entry configuration is relatively high. There is no departmental scale starter solution.
- The company and brand are not well-known and have relatively few implementation partners.
- Implementation requires consulting assistance for effective setup.

Perforce Software

Perforce focuses on high-performance versioning and configuration support. A favorite of game developers and other software vendors, the product appeals to sophisticated developers that master the release model.

Strengths

- High performance and scalability of most operations continues to be a focus of Perforce.
- Proxies provide high-performance support for geographically distributed development.
- The product is easy and inexpensive to administer.
- An Apple Mac client with good functionality is available.
- Clients can get quick access to a well-qualified support team.

Cautions

- Change tools must be from another party through a Perforce interface.
- There are no provisions for shared or floating licenses.
- Perforce's enterprise consulting offering is relatively new, with a limited track record.

Seapine Software

Seapine's new repository implementation has allowed the company to add substantial functions, and take full advantage of its user interface work and attractive pricing.

Strengths

- The product is easy to install and upgrade.
- Integrations with Seapine's change and test tool are quite good.
- The product is easy to customize for local practices.
- The product includes an Apple client, as well as more-common Linux, Unix and Windows support.
- The price per seat is low.

Cautions

- The company has not yet focused on large-scale users.
- Relatively few implementation partners are familiar with Seapine's tools.
- Out-of-the-box integrations with third-party products are weak.

Serena Software

Consolidation around the Dimensions product has clarified the product line and simplified the value proposition. Substantial improvements have been made in performance and administration. Investments in requirements and project tool acquisitions strengthen supporting tools and position Serena for growth in the broader ALM category.

Strengths

- There is one repository for requirements, configuration, change and release, providing a sound base for ALM solutions.
- There are strong process automation and release functionalities.
- The product has good support for Eclipse and Visual Studio.
- The product offers centralized and replicated support for distributed teams, enabling a variety of development models.
- Cooperation with Serena ChangeMan ZMF, in particular, and mainframe software systems, in general, is well-supported.

Cautions

- Dimensions Express has relatively low recognition as the new entry solution.
- Implementation of the full solution is time-consuming and requires consulting.
- The presence of two workflow solutions can complicate process design and implementation.
- A significant training program is required for administrators.

Subversion

Subversion is an open-source project founded by CollabNet in 2000 and hosted on www.tigris.org. Although the intention of Subversion was to replace CVS, it quickly surpassed that goal and has continued to expand its capabilities with an enterprise focus. For comparison purposes, we've evaluated the certified Subversion binaries as provided and supported by CollabNet. CollabNet remains the primary corporate sponsor of the Subversion project, and one of a number of sources of commercial training and support.

Subversion offers good version and collaboration support for simple to moderately complex processes. It requires customization to support complex change or release practices. These can be supported with add-ons or custom extensions. CollabNet offers well-packaged solutions for many of these advanced situations.

Strengths

- Subversion's versioning and configuration functionality is supported by a database repository or a file system. It includes good support for offline operations.
- Subversion has a vigorous open-source community, and has support from a variety of commercial organizations.
- Subversion integrates well with many common IDEs and test tools. The open-source community provides a lot of plug-ins and extensions, as well as opportunities to do advanced internal extensions.
- Subversion is available as a hosted offering from several sources.

Cautions

- Working copies with a large number of files and folders will result in slower performance (this is related to the total number of files and folders versus the storage size of the overall working copy).
- Automated resolution of renaming conflicts requires a separate plug-in.
- Partner products are required for issue tracking or project management.
- The Merge Tracking function is new and still evolving.

Visible Systems

Visible Systems focuses on marketing to technical development teams. It serves highly structured and process-oriented software change management (SCM) environments. The company focuses on providing a high level of control and security in the organization.

Strengths

- The product has a clear focus on support for the government-contracting environment; it's installed in major defense contractors.
- Contract terms and conditions are tailored to be attractive for use where subcontractors must be supported.
- The product is easy to learn and maintain, and has a low initial cost and low administrative costs.
- North American-based support is highly personalized.

Cautions

- There are limited installations in larger groups.
- The company is small and has a limited sales and marketing reach.
- There is no current Eclipse plug-in.

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.

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets and skills, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

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.

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.

Market Responsiveness and Track Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

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.

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.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the Web site, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services, and the customer base.

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.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

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, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.