

Magic Quadrant for Job Scheduling, 2006

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More than 50 vendors participate in the job-scheduling market. Gartner has rated nine of these providers, based on their market impact and on our clients' inquiries.

WHAT YOU NEED TO KNOW

Job-scheduling requirements have changed from traditional date- and time-based scheduling to event-based scheduling. Integration with packaged and composite applications has become a requirement for end-to-end automation. This evolution of job-scheduling tools from simple task-based scheduling to providing business process automation, coupled with the severe business process impact of choosing the wrong tool, makes the choice of a job-scheduling tool critical. To lower the total cost of ownership (TCO), while improving quality of service (QOS), enterprises will need to choose a single tool that's capable of scheduling, managing dependencies and automating across a heterogeneous computing environment. Companies should expect more consolidation in this market.

Implementing a traditional, platform-based, time and date job-scheduling solution is relatively easy; however, providing an end-to-end business automation solution is not. Hence, a job-scheduling vendor's vision and ability to invest in implementation, support and training customers across various geographic locations, either directly or through partners, are keys to achieving return on investment (ROI). Selecting a vendor and tool from the Leaders quadrant should not be an automatic choice.

MAGIC QUADRANT

Market Overview

According to Gartner Dataquest, between 2005 and 2010, the job-scheduling market will show a compound annual growth rate (CAGR) of 7.8%. This will result from new requirements driven by enterprises that are automating their business processes across a heterogeneous computing environment, rather than from traditional date- and time-based job scheduling.

Job scheduling is often considered a mature market, in which all problems have been solved, and the choices have been consolidated into a handful of dominant vendors. However, this hasn't happened. Users in this market continue to be challenged by new requirements resulting from the adoption of newer technology and the complexity of the IT infrastructure.

Traditional job-scheduling tools performed just date- and time-based scheduling on or across individual computing platforms, such as Unix, z/OS and Windows. Recently, event-based scheduling and batch application integration (see Note 1) have become part of the key requirements. This is because 70% of business processes are performed in batch, rather than in real time (see Note 2).

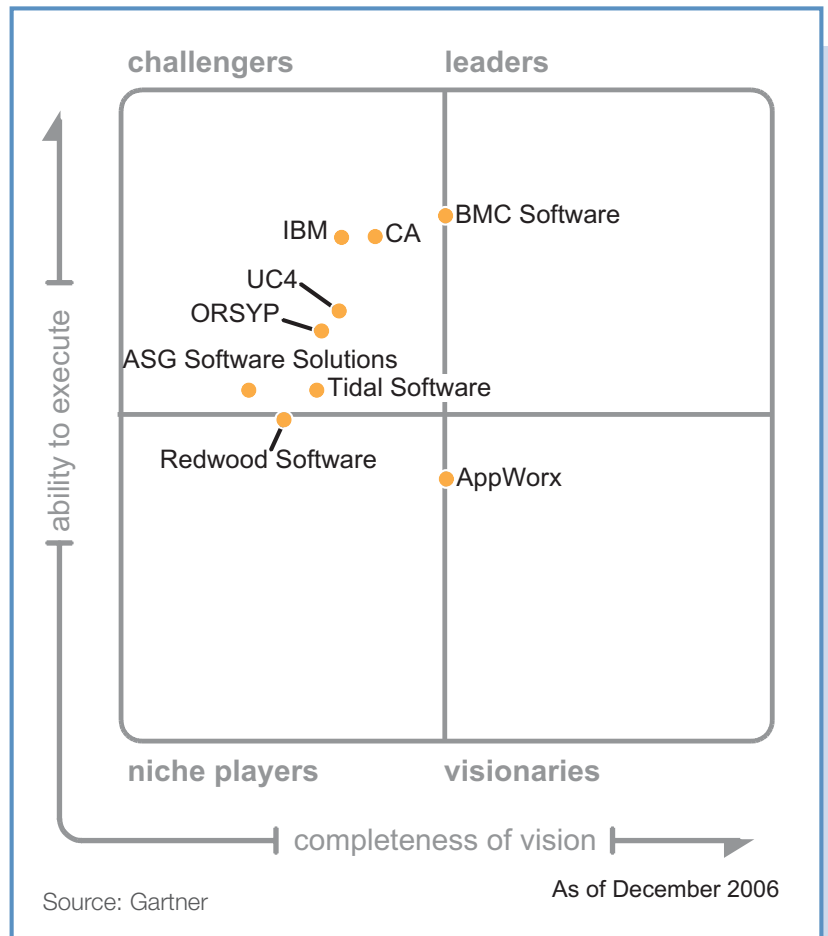
Platforms such as Java application servers for composite applications and the widespread adoption of packaged applications (such as those from SAP and Oracle) have increased the requirements of job-scheduling tools capable of handling (that is, subscribing/publishing) events. These processes are originating from such sources as Web services, JMS and WebSphereMQ and require the ability to automate a business process end to end.

Thus, many vendors have begun to offer technologies and products that support date- and time-based scheduling, event-based scheduling and adapters for integration with applications for end-to-end automation. Furthermore, it is becoming increasingly important to link job interdependency and job status information to the appropriate business processes in real time, to do business impact analysis and to assign resources to solving problems related to mission-critical business processes, which has caused many vendors to integrate their tools with business service management (BSM) applications. Integration with change management databases (CMDBs) to maintain batch services data for better change and configuration management has also emerged as a requirement to support reporting for compliance requirements.

Job-scheduling tools need to evolve toward the IT Workload Automation Broker vision (see Note 3). The changes and new requirements highlighted above have moved the positioning of all the vendors to the left of the Magic Quadrant, because these requirements affect the Completeness of Vision criteria. We have also seen the pricing and licensing turbulence from 2004 and 2005 stabilize at a lower level: The tools are cheaper now, especially for traditional job scheduling, which clearly benefits customers. The market consolidation that started this year with CA's acquisition of Cybermation will continue throughout 2007 and 2008, because larger vendors of traditional scheduling tools are looking to address new market requirements.

In predominately mainframe-only job-scheduling environments, vendors such as BMC, CA and IBM are incumbents or are highly visible. In a purely packaged-application scheduling environment, vendors such as AppWorx, Redwood Software (mainly in SAP environments) and Tidal Software are significant. In a purely distributed, cross-platform scheduling environment, vendors such as ASG, ORSYN, Tidal Software and UC4 are highly visible. In highly scalable, single-product-based, cross-platform

Figure 1. Magic Quadrant for Job Scheduling, 2006



environments (including mainframe), vendors such as BMC, CA (with its acquired Cybermation products) and UC4 are key players.

Market Definition/Description

A job-scheduling tool automates tasks that are business processes by themselves or are parts of a business process (such as funds transfer between banks), based on date, time and events. These tools must be able to automate these tasks on various platforms (including Linux, Windows and OS/400); across various applications (such as SAP, Oracle and custom applications); across composite applications enabled by technologies (such as Web services); and in atomic batch business processes in various applications.

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Note 1 Examples of Event-Based Scheduling and Batch Application Integration

A task or job can be triggered by an event – a component's change of state, the arrival of a specific message in a message queue or the arrival of a file. The task or job, in a Java environment, is then passed to a utility bean that can start several dependent tasks, such as calling an EJB or a Remote Method Invocation object, or instantiating a Java object.

The mobile telephone industry needs to automate provisioning, rating, billing information and billing processes across various applications. Processes or jobs start every few seconds, triggered by events such as customer voice calls or data traffic generation. These are executed on different operating systems, application server platforms, home-grown applications and packaged applications. Customers may see these processes as billing information arriving via Short Message Service (SMS) or e-mail, or through another application integrated using Web services.

The insurance industry has adopted scenario-based models for valuation and risk analysis. These need to be processed quickly. The applications that gather and process data must be integrated, and there is only a short processing window for the data. Insurers can no longer process claims overnight. They must base processing on an event or calendar schedule.

Source: Gartner

Note 2 Online vs. Batch Processing

Most enterprise applications were designed with little or no integration in mind. However, to achieve the speed of execution required by business processes, applications cannot be treated as autonomous islands of information. Data must be easily exchanged among different systems and applications. Seventy% of the required integration is batch integration. Batch data is not processed in real time, or online while the user is waiting. For example, an Internet bank may give online approval of loans to its customers, but the actual customer data, such as details of credit and transfers of money, is processed later, in a batch environment. At that time, the customer details are grouped together and sent to an external bureau or another internal application for processing.

Another example is a large, Web-based online trading and bidding company that found that every online customer transaction (for example, placing a bid) generated 10 batch processes spanning internal and external applications. These need managing and automation.

Source: Gartner

Note 3 IT Workload Automation Broker

These tools provide batch application integration capabilities to automate straight-through processing requirements based on events, workload and schedules. They manage dependencies across applications and infrastructure platforms, within and among companies. These toolsets will emerge, mainly from job-scheduling, application integration and process automation tools. Capabilities to handle WebSphere MQ, Java Messaging Service, Web services and business component events are only now emerging. Furthermore, complete end-to-end automation based on integration with workload management, virtualization technologies, process modeling, grid computing and the use of Web services across custom and packaged applications in a heterogeneous environment has not been accomplished.

Source: Gartner

Inclusion and Exclusion Criteria

The vendors in this Magic Quadrant were included based on the following criteria:

- Gartner frequently received queries about the vendors and/or their offerings.
- The annual revenue of the vendor, including maintenance, was more than \$15 million.
- The functional and technical capabilities of the tool: The tool should be able to cover a wide range of platforms (including servers and application servers), applications and middleware (such as WebSphereMQ and JMS). In addition, it should automate jobs or processes end-to-end across these platforms.
- There were a significant number of customers and customer references.
- The vendor operated with significant geographical coverage.

Added

None

Dropped

Since the last Magic Quadrant, CA has acquired Cybermation; hence, Cybermation is no longer separately represented.

Evaluation Criteria

Ability to Execute

Gartner uses the Ability to Execute criteria to position vendors and technology providers in the Magic Quadrant. This axis represents Gartner's view of how well a company or product is doing, according to the appropriate criteria. In job scheduling, a vendor's management focus, R&D investment and sales channels are important indicators of its ability to execute. With the expected consolidation of job-scheduling tools during the next two years,

customers will want to use a single tool across the entire computing environment. Hence, vendors' approach to and methodology for competitive replacement will become increasingly important indicators of success.

Many enterprises are moving away from using multiple tools for multiple environments – such as one for traditional job scheduling and another for packaged applications – and toward using a single application that can provide end-to-end automation across all the islands of automation without manual intervention. Most enterprises that have been successful have used a single job-scheduling tool across all these environments.

Gartner evaluates technology providers on the quality and efficacy of the processes, systems, methods or procedures that enable IT provider performance to be competitive, efficient and effective, and to positively affect revenue, retention and reputation. Ultimately, vendors are judged on their ability and success in capitalizing on their vision.

Product Service: Core job-scheduling tools and services that compete in and serve the defined job-scheduling market. This includes current product/service capabilities, QOS, feature sets and skills, whether offered natively or through original equipment manufacturer (OEM) agreements and partnerships defined in the market definition.

Overall Viability (Business Unit, Financial, Strategy, Organization): Financial viability includes an assessment of the organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue to invest in the product, offer the product and advance the state-of-the art in the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all pre-sales activities and the structure that supports them. This includes deal management, pricing and negotiation, pre-sales 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 and its ability to grow through competitive replacements.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the vendor's message to influence the market, promote the brand and business, increase

awareness of its 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, thought leadership, word-of-mouth and sales activities.

Customer Experience Relationships: The 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 and also includes ancillary tools, customer support programs (and the quality thereof), availability of user groups and service-level agreements (SLAs).

Operations: The vendor's ability to meet its goals and commitments. A key factor is the quality of the organizational structure, including the skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

The Completeness of Vision criteria evaluate vendors on their ability to convincingly articulate logical statements about current and future market directions, innovations, customer needs and competitive forces and how well they map to the Gartner position. Ultimately, vendors are rated on their understanding of how market forces can be exploited to create opportunities. Gartner evaluates how the providers' vision aligns with industry trends and evolving market requirements, their understanding of technical and market issues, their ability to differentiate products and grow their businesses, and their emphasis on best practices and the ease of deploying job-scheduling tools, not just on product features.

We examine build-vs.-buy strategies for augmenting functionality, knowledge of core competencies, and the ability to partner to fill gaps in the product portfolio. Industry perception and market recognition by prospects, partners and competitors, based on a compelling and consistent marketing message, is included. A vendor can succeed financially without a vision, but it will not become a leader without a clearly defined vision or strategic plan. This should include plans for articulating the vision and plans to differentiate the vendor's offering from competitors' offerings.

Table 1. Ability to Execute Evaluation Criteria

Evaluation Criteria	Weighting
Product/Service	standard
Overall Viability (Business Unit, Financial, Strategy, Organization)	high
Sales Execution/Pricing	standard
Market Responsiveness and Track Record	low
Marketing Execution	standard
Customer Experience	high
Operations	standard
Source: Gartner	

Market Understanding: The ability of the vendor to understand buyers' needs and translate them into products and services. Vendors that show the highest degree of vision listen and understand buyers' wants and needs, and can shape or enhance them 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 to extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: A vendor's approach to product development and delivery that emphasizes differentiation, functionalities, methodologies and feature sets as they map to current and future requirements.

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

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

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

Geographic Strategy: The technology provider'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.

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	low
Marketing Strategy	low
Sales Strategy	standard
Offering (Product) Strategy	high
Business Model	standard
Vertical/Industry Strategy	no rating
Innovation	standard
Geographic Strategy	low
Source: Gartner	

Leaders

Vendors positioned in the Leaders quadrant have a large, satisfied installed base and a high degree of visibility in the market (for example, frequent consideration and success in competitive situations). They offer robust, highly scalable applications and have the strategic vision to address evolving enterprise requirements in the areas of integrating with packaged applications, supporting new application and composite application architectures, integration with BSM tools, integration with service desk tools and the ability to perform end-to-end automation.

Challengers

Vendors in the Challengers quadrant are solid vendors today and can perform well for many enterprises. They are significant in terms of size and financial resources, but they may be lacking in vision, deployability, innovation or overall understanding of market trends.

Visionaries

Vendors in the Visionaries quadrant are forward-thinking and are often technically focused. They have recognized and responded to longer-term market trends, but they may lack the recognition, sales and marketing strength, or overall size to compete and execute with consistency.

Niche Players

Niche players are a combination of new entrants to the market, vendors with limited vision or execution, and providers that focus on a small segment of the market and do it well. Their narrow focus reduces vision ranking and limits their addressable market, reducing their ability to execute. However, the narrow focus enables them to achieve great depth of functionality in their chosen areas.

Vendor Comments

AppWorx

During the past few years, AppWorx has improved its ability to execute. It has kept its focus on vertical industries, such as retail and utilities, and targeted large Oracle deployments with success. AppWorx has also focused on developing the batch application integration area by accommodating events arising from packaged applications and has broadened its platform coverage from mainly Unix, Linux and Windows platforms to include OS/400, OpenVMS and the mainframe. In addition to supporting a broad range of packaged applications, AppWorx now supports Web services jobs, has a SOAP application programming interface (API) and is able to integrate with JMS. AppWorx (which is also the name of the job scheduler) exploits its strengths in business process automation by providing good integration with such applications as Retek (now called Oracle Retail), Oracle Applications (including PeopleSoft) and SunGard Higher Education Banner.

It is able to expose APIs to enable business applications to initiate jobs and job chains (multistep jobs) to perform automated functions without using the AppWorx graphical user interface (GUI). This automation is based on events related to many different conditions inside and outside the applications. This functionality enables AES to perform end-to-end automation. Thus, AppWorx's biggest strength is the business process automation area with vertical industry applications. Although AppWorx has good job-scheduling capabilities, the company has been slow to market and position the product in the traditional job-scheduling area.

AppWorx has a traditional master-agent architecture in which the master and agent use compression to lower the network traffic. AppWorx's architecture uses object orientation and, hence, is efficient in object and job reuse. AppWorx has improved its GUI, which is written in Java and accessible as a Java applet (via a Java 2 browser), as well as a stand-alone Java application, and it's easier to use than its previous GUI. AppWorx only supports the Oracle database as a repository for the jobs defined with its job-scheduling tool. AppWorx needs to improve its integration with mainframe-based job schedulers and aggressively market in vertical segments to accurately reflect its deep technical integration with packaged applications.

AppWorx needs to sharpen its positioning in the traditional job-scheduling areas, particularly in its business process automation installed base. It also needs to target replacement opportunities for migrating other job schedulers to AppWorx and to productize the migration expertise it has built up during the past few years. AppWorx has been investing in the non-U.S. market to improve its international visibility, sales and support infrastructure.

ASG Software Solutions

To refocus on job scheduling, ASG has formed a dedicated job-scheduling business unit under the brand Opscentral, enhancing its commitment to this market. It has also introduced a new product, ASG-Zena, during the past few years. ASG-Zena has become a challenger in the distributed job-scheduling market and provides a Java-based scheduling solution for Unix, AS/400, z/Linux, Windows and Linux environments. It supports event-based scheduling, as well as traditional date- and time-based scheduling. In addition, ASG-Zena integrates with ASG-Zeke, the company's mainframe job scheduler (acquired from Platinum Technologies after CA's acquisition of Platinum), to address legacy platform requirements. ASG-Zena also integrates with ERP applications, such as SAP, Oracle, Oracle/PeopleSoft and Oracle/J.D. Edwards.

ASG has received XBP II Job Scheduling Interface certification from SAP, as well as Oracle's PeopleSoft Enterprise Application certification. It has integration capabilities with relatively new platforms, such as .NET framework and Java 2 Platform Enterprise Edition (J2EE) application servers and is able to invoke .NET methods, and it can publish and subscribe to JMS and MSMQ events. It also provides a standby server for fault tolerance.

The ASG-Zena product uses a traditional master-agent architecture for Windows, Unix and Linux platforms and an agentless approach (in which the agent is hosted on a remote server) for such platforms as AS/400. The agentless technique can result in a light footprint, quick implementation and low server resource usage; however, generically, the drawback of an agentless approach are the potentially higher network bandwidth requirements, limited autonomous functionality, security issues, inability to integrate with applications and inability to collect deep metrics. In developing ASG-Zena, ASG signaled the end of its relationship with AppWorx as a partner for distributed systems scheduling. ASG has a separate product, Zeke, which is a stable mainframe job scheduler that has not evolved as quickly as its ASG-Zena product. However, Zeke has seen improvement in the Critical Path Identification area.

ASG-OpsCentral is a Java-based, common user interface that handles cross-platform jobs across ASG-Zeke and Zena, provides a single console for alerts, and integrates ASG-Zebb products for rerun and restart of jobs. It also provides a GUI for defining and managing processes and jobs across multiple instances of Zeke and Zena. Since its launch in late 2003, the awareness of ASG-Zena was initially low in the market, even in the ASG customer base. Due to renewed focus on marketing, awareness is rising.

Despite ASG's ability to migrate mainframe customers from other job-scheduling tools to Zeke, it has not seen major growth in this area, due to a lack of focus and marketing. ASG's licensing and pricing policies are considered to be the most flexible in the industry, and most of its customers emphasize this factor. ASG has shown renewed commitment to this market through focus, growing its business unit, and increasing its marketing and product investment. ASG needs to continue to improve the integration between Zeke and ASG-Zena and to build technology and sales partnerships to improve the breadth, depth and awareness of its solutions.

BMC Software

BMC's core capabilities involve a single product, CONTROL-M, which schedules across a wide range of platforms and applications. In 2004, it added the important capability of Batch Impact Manager (BIM), which enables enterprises to relate jobs to the business processes they automate, assess business impact and assign SLAs based on business priorities, as part of BMC's BSM vision. CONTROL-M was one of the first products from BMC to implement this vision. BMC has also integrated BIM with its Atrium CMDB product, in which the CMDB maintains batch services that can be discovered or stored from CONTROL-M. This will improve the change management process in the job-scheduling environment.

BMC has devised multiple ways to handle events, using the CONTROL-M Business Process Integration (BPI) Suite to improve integration with Web services and Enterprise JavaBeans (EJBs). Improvements in CONTROL-M's integration and automation include using APIs with software products, such as WebSphere MQ and JMS. In early 2006, BMC launched an agentless architecture for CONTROL-M for distributed systems scheduling, improved forecasting to identify potential bottlenecks (supporting what-if scenarios) and using the CONTROL-M/Forecast product and embedded reporting to provide canned reports in such areas as Sarbanes-Oxley reporting.

Although BMC has addressed the issues of CONTROL-M's ease-of-use during the past two years, the product is still perceived as non-intuitive by many of its customers. Customers who have implemented CONTROL-M v.6.3 have reported an improvement in this area. Pressure on BMC to grow top-line revenue and to reduce costs has affected certain key partnerships. In particular, BMC's close relationship with SAP in the job-scheduling area has been usurped by Redwood.

In 2006, BMC saw growth in task-based licensing (based on the number of jobs, as opposed to server-tier-based) for CONTROL-M, because more of its customers prefer a "pay as you use" model. BMC's transition in its go-to-market strategy to address non-named accounts through resellers is not fully mature, and our

customer feedback suggests that after-sales support from BMC has been largely inconsistent across various geographies. However, CONTROL-M continues to appear on most large, scalable and new environment requirements shortlists. BMC will continue to face increasing competitive and pricing pressure from some of the new challengers.

CA

During the past two years, CA has seen changes in its senior management team and its product branding. It has also acquired Cybermation (see “CA’s Acquisition of Cybermation Bolsters Its Competitive Stance With IBM in the Job Scheduling Market”), which had been a competitor. CA’s strategy and vision include moving job scheduling toward workload automation, similar to the IT Workload Automation Broker. This will result in a single product from its current collection of seven individual job-scheduling tools: CA-7, CA-Scheduler, CA-JobTrac, CA-Autosys, CA-Enterprise Job Manager, ESP m-series and ESP d-series. This convergence will eventually involve Cybermation’s ESP m-series for mainframe-based schedulers and CA-Autosys for distributed system schedulers.

CA will start with the common user and administration interface, the Unicenter Workload Control Center (UWCC) and build on the r11 foundation. This strategy execution has altered slightly – CA had launched its Unicenter Enterprise Job Manager (UEJM) product two years ago to address customer concerns about integrating the user interface for all the CA scheduling products and to provide an abstraction layer over all the scheduling products. The UWCC now provides a role-based administration and monitoring interface and an opportunity to define the business process view, based on the management of job workloads. CA’s planned architectural improvements, starting with the use of Cybermation’s agent technology (Cybermation had developed a common agent technology for its mainframe-based m-series and its distributed systems, d-series job schedulers) for all its products is a good starting point for rationalizing its product portfolio. Nonetheless, reaching the ultimate goal of just two products will require a long process.

CA also plans to target Cybermation’s ESP d-series product at mainly small-and-midsize businesses (SMBs) as a departmental solution. Its distributed systems enterprise customers mainly purchase Autosys, and the Unicenter job management product is rarely proposed. CA has improved its pricing and licensing policy, its management focus on job scheduling, and its worldwide sales and support channels. As part of the r11 strategy, CA has delivered some technical improvements, such as Web GUIs and the integration of Autosys and e-Trust, for improved security management.

CA needs to improve Autosys’ event-driven capabilities to include support for Java application server platforms, WebSphereMQ and JMS. It also needs to improve its integration with packaged applications, such as SAP, and improve its focus on this market. CA’s success in this market will be determined by how it migrates its products to Cybermation’s superior technology and successfully resists job-scheduling vendors that are targeting its installed base.

IBM

Based on its plans to improve the architecture of the Tivoli Workload Scheduler (TWS), policy-based scheduling, dynamic scheduling, workload management and BSM, as well as its use of virtualization and grid engines, IBM/Tivoli’s vision has improved. Furthermore, it also launched a separate Tivoli Dynamic Workload Broker product in October 2006, which is based on the IT Workload Automation Broker principles. IBM’s overall service management vision is based on building an automation portfolio by integrating tools to provide an end-to-end automation scenario.

Through 2006, IBM has integrated TWS for z/OS and TWS distributed with Tivoli Enterprise Portal (TEP) for automating workflows based on business priorities. The company has integrated TWS with TBSM to automate workflows and assess impact based on business priorities, and it has moved the TWS base to WebSphere and provided Web services APIs to integrate with Java-based custom applications. It has also improved the agents for packaged applications, such as SAP, Oracle E-Business Suite and PeopleSoft; integrated with Tivoli Dynamic Workload Broker to better use available resources; and integrated with TWS LoadLeveler to use grid technologies and TWS for Virtualized Data Centers to manage workloads on virtualized server resources. In addition, the TWS family of products has been integrated with Tivoli Provisioning Manager (TPM), Tivoli System Automation (TSA), Tivoli CCMDB and IBM Workload Manager (WLM).

However, delivering integration at various levels (that is, from the data level to the process level for the different tools) is not a trivial exercise, and it’s a long-term vision for IBM. Today, IBM’s customers for their purely job-scheduling tools perceive Tivoli Workload Scheduler for z/OS and Tivoli Workload Scheduler for distributed systems as separate non-integrated products. IBM’s planned architectural upgrades have improved the master scheduler as it replaced elements of Tivoli Management Framework (TMF) by WebSphere and the flat file system with a DB2 relational database as part of the TWS Distributed 8.3 release in April 2006. These changes will improve the stability and functionality of TWS; however, they will involve migration to the new version.

Since April 2006, IBM/Tivoli has renewed its attention on TWS product range through investments in improving its integration with packaged applications, particularly SAP, Oracle and PeopleSoft, as well as on functionality improvements of TWS. IBM’s start in making improvements to the TWS family in 2006 did not capitalize early enough on the WebSphere platform’s event-driven capability to improve its scheduling capability and aggressively target this market. Although TWS is sold as a stand-alone product, IBM’s relatively high positioning in the Magic Quadrant results from its direct sales channel and its ability to “bundle” deals in which many IBM products are sold together as part of an integrated value offering that includes job schedulers.

ORSYP

This vendor’s Dollar Universe job-scheduling product is dominant in France, popular in Europe and is showing increased visibility in North America, particularly in the U.S. Mainly a distributed systems job scheduler, it demonstrates wide platform coverage and has a predominant installed base in Unix and Windows environments. Dollar Universe has improved its technical capabilities in many

areas, particularly integration with mainframe-based schedulers, such as JES2/JES3, CA-7 and Tivoli Workload Scheduler for z/OS, and the company has developed an agent for the z/OS mainframe platform.

However, it does not have many customers in the traditional mainframe area. ORSYN has developed new functionality to launch jobs from Dollar Universe using Web services and exposing certain job-scheduling functionalities in Dollar Universe as Web services. It has also developed the functionality required to perform scheduling, sequencing, networking and tracking services. It is available as J2EE components able to be installed and to run on a J2EE application server, such as WebSphere or WebLogic.

Since August 2006, Dollar Universe has been able to integrate and invoke Web services and publish and subscribe to JMS, leading to improvements in its event-driven capabilities. Although Dollar Universe integrates well with packaged applications – such as SAP (which has certified Dollar Universe), Oracle and Oracle/PeopleSoft (it is a certified Oracle/PeopleSoft partner) – it needs to specifically target these markets. To address this, ORSYN hired an alliances and channel manager in mid-2006.

ORSYN has also begun building relationships with Microsoft and Lucent and has renewed its relationship with Bull and other service providers to widen its market coverage. It has not fully exploited its worldwide relationship with HP, particularly in this area, and ORSYN's other competitors have had better sales relationships with HP. Furthermore, HP is fully engaged with integrating its Peregrine and Mercury acquisitions.

Architecturally, Dollar Universe is different from some of the other job-scheduling products on the market. It uses a peer-to-peer architecture with a proprietary, flat-indexed file system on each platform. It also uses object-oriented technology, reducing the number of calendars, jobs and other objects that need to be re-defined. This gives the product a natural fault-tolerant capability or continuous availability. Although the proprietary, flat-indexed file system can be tuned for better performance and scalability, architecturally, it has the potential to cause reliability issues, especially after a system crash. However, this adverse impact has not yet been reported by any of ORSYN's customers.

ORSYN has been in the U.S. market for more than five years; however, due to a lack of focused marketing and vague go-to-market strategy, it has not significantly increased its presence and customer base. ORSYN has begun to address these issues by making much-needed organizational changes throughout 2006.

Redwood Software

During the past few years, Redwood has transformed itself from a purely traditional job-scheduling vendor to accommodate packaged (SAP, Oracle and PeopleSoft) and custom (Java) application scheduling toward its process automation vision. It is challenging many established vendors, particularly in the SAP scheduling environment, where SAP is embedding Redwood's Cronacle job scheduler as part of its NetWeaver stack.

Redwood has focused on SAP and Java environments during the past two years, and, in particular, its SAP focus has resulted in Redwood developing a job scheduler for SAP, rather than SAP developing its own. This partnership has now more focus and visibility through aggressive marketing in North America and SAP's agreement to resell Redwood Software's Cronacle product worldwide as "SAP Central Job Scheduling by Redwood."

Redwood has made other functional and performance improvements to its core Cronacle product and Cronacle Beans product for Java environments. Cronacle's latest version interfaces with JES2 and JES3 to enable submission of and tracking of JCL on z/OS or OS/390 mainframes. However, Redwood does not have many customers that have exploited these features. Cronacle Beans, Cronacle's Java and J2EE scheduling component, can now run on z/OS systems. This includes dependency handling between the mainframes and other systems from a single administrative and operational console.

Redwood was one of the earlier vendors to move to an event-driven architecture and realize the importance of J2EE platforms. It has built event-driven capabilities, such as publish and subscribe to JMS queues and topics and has embedded Cronacle Beans with leading Java application servers. However, Redwood has not developed specific adapters for MSMQ, WebSphereMQ or Web services technologies. It has been able to publish its own APIs (Java, SQL and PL.SQL) as Web services, but does not currently support schedule Web services described by WSDL or have the ability to invoke Web services defined in a UDDI repository.

Cronacle's architecture is different from traditional job-scheduling tools. It uses process servers (or agents) on every platform that needs scheduling, and each process server consists of many sub-agents that communicate with each other and with a central repository to provide a degree of fault tolerance. This repository has traditionally been an Oracle database, but Redwood now supports SQL Server, DB2 (on IBM Mainframe, Unix, Windows and System i5) and Derby databases.

For SAP implementations, SAP Central Job Scheduling by Redwood is able to support all databases supported by SAP through SAP's database-independent layer. Cronacle's architecture is object-oriented, which makes the reuse of objects and jobs easier and more efficient. It supports Windows- and Web-based user interfaces, and customer feedback indicates that users need Oracle skills to use the product effectively. Redwood has recently formed partnerships with SAP service providers to take its product to market globally. Redwood's challenge is to effectively execute its relationship with SAP, simplify its licensing, and improve its visibility and execution globally.

Tidal Software

Tidal's vision and its ability to execute have improved as a result of organizational changes instituted three years ago by its new CEO, who has managed to focus the company, build a product suite, grow revenue and improve operational profitability. Tidal has also improved the functionality of Tidal Enterprise Scheduler (TES) by

supporting event-based scheduling through file, time, calendar, e-mail, database and variable events, in addition to traditional date- and time-based scheduling.

Tidal's Correlex, an analysis engine developed for its application management product Horizon, has been integrated with TES to extend its ability to handle complex event scenarios. Tidal will continue to invest in building an integrated suite of performance management and job-scheduling tools. TES also provides a Web services implementation of the scheduler API. With this service, customers can create custom scheduling, automation and reporting solutions.

TES provides complete WSDL documents for each Web services method. These documents can be imported into Visual Studio.NET, JBuilder, Eclipse or any other Web-services-enabled integrated design environment (IDE) to build program code to interface with the API for developers to use. It has also broadened the different platforms it supports from a purely Windows-based platform to include z/OS, Linux, OpenVMS, Dynix, Alpha and Himalaya. Tidal supports the OS/400 platform through an agentless adapter solution.

In addition to Windows, Tidal supports Unix and Linux as platforms for its master scheduler. Tidal have invested in improving the capability of TES, from a departmental to an enterprise solution, and it is now integrated with such applications as SAP, Oracle, Oracle/PeopleSoft, Oracle/J.D. Edwards and Informatica ETL. It is able to schedule Web services published by an application.

Tidal is now visible in enterprise scheduling environments, especially where there is a need for new and evolving requirements. At the same time, it has continued to focus on Microsoft platforms, technologies and channels. This master will exploit the Microsoft platform, while providing the same cross-platform functionality as the Java-based master.

TES provides two types of GUIs, via a native Windows NT/2000/XP client and a Web browser. Both interfaces offer full product functionality, regardless of platform. Tidal's customer and prospect feedback indicates that clients like TES's user-friendly interface. TES uses traditional master-agent technology architecture and supports Microsoft's SQL Server and Oracle as the back-end databases.

Tidal has good market awareness in the North American market, but needs to improve its marketing in other geographies, while maintaining focus on its competencies. It also needs to continue to develop core job-scheduling functionality along the vision of IT Workload Automation Broker.

UC4

UC4 have significantly improved its ability to execute through a clear focus. In 2006, it was acquired by a private equity firm, Carlyle Group, which has injected cash into the company to grow

the business. UC4's CEO and management team have been retained. During the past few years, they have managed to transform their company and product brand to UC4 without significant disruption to the business. As a result, UC4 appears on many enterprises' shortlists when there is a requirement to include new environments.

The company grew its revenue by more than 20% year over year and has reported profitability from 2004 onward. Improved focus on the North American and Central European markets has resulted in a loyal customer base in those regions. Thus, it appears on many North American customers' shortlists, especially for its distributed systems scheduling solution, primarily competing with Tidal Software.

UC4:global is a scalable product that supports a wide range of platforms from highly proprietary, such as IBM z/OS, HP's NSK, Bull GCOS and Fujitsu/Siemens BS2000, to open-systems platforms, such as, Unix, Linux and Windows. UC4:global is primarily designed for the distributed systems environment, and the master can also be hosted on the IBM mainframe if it has a Linux partition.

UC4 has good integration with packaged applications, such as tools from SAP, Oracle and Siebel Systems. Furthermore, UC4:global can handle JMS events, integration with virtualization technologies such as VMWare, WebSphereMQ integration and scheduling of Web services. It needs to develop additional functionality in this latter area and in BSM. Its relationship with SAP soured somewhat about two years ago, when SAP announced a partnership with Redwood; however, it has been steadily improving, and this has not affected the company's ability to integrate with SAP (UC4:global is SAP-certified).

The company has continued to win deals and develop a substantial installed base. UC4:global has a thin-client, Java application-based GUI, as well as a Web GUI, and it is relatively easy to use. However, because the product has its origins in production-class job scheduling, its user interfaces are perceived as IT operations-centric, as opposed to the ones that would appeal to Windows administrators. Architecturally, UC4:global has traditional master-agent architecture and is object-oriented to enable the reuse of jobs and objects. It also supports multiple back-end databases, such as Oracle, DB2 and SQL Server.

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, skills, etc., 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 of the individual business unit to continue investing in the product, to continue offering the product and to advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all pre-sales activities and the structure that supports them. This includes deal management, pricing and negotiation, pre-sales 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 in order 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, 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, etc.

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 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 product 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 set 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 verticals.

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.