

# EMA Radar™ for Workload Automation (WLA)

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Q1 2016: Report Summary and BMC Profile

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ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) Radar Report

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# EMA Radar™ for Workload Automation: Q1 2016 Report Summary and BMC Profile

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# EMA Radar™ for Workload Automation: Q1 2016 Report Summary

## Introduction

The 2012 EMA Workload Automation Radar Report credited the rising focus on cloud and IT-as-a-Service with raising the importance of workload automation (WLA) and its sister discipline, IT process automation (ITPA). Cloud adoption is certainly greater today than it was in 2012, but it is far from complete adoption across all organizations; only a fraction of businesses utilizing cloud run 100% of their workloads in the cloud. Therefore, cloud is still a significant trend that impacts workload automation and enterprise IT, but it is no longer seen as the radical new technology. Cloud matured and cloud orchestration is beginning to standardize around a few products. In addition, IT-as-a-Service has been largely adopted into the thinking of IT departments, even if it is not as fully-adopted as was first envisioned. Several new trends now produce more disruptive influences on workload automation today.

The two broad trends with the greatest impact on WLA at the time of this analysis are Digital Transformation and the increasing rate of change to IT environments:

- **Digital transformation- using data, pervasive connectivity, and easy to use mobile devices to change the way businesses interact with their customers and conduct their core activities.** Many new services are being created that rely on large amounts of data and require analytics and visualization. Users demand fast response times. Many of these services expose IT problems to customers and business users who are accustomed to real-time access to data and digital services. Digital transformation increases the pressure on WLA systems to move more and larger files and deliver on tighter processing windows. Problems are more transparent. Business users want more insight behind the curtain. Digital transformation results in the need for more predictive analytics, dynamic workload placement to leverage cloud resources, and increased self-service tools for IT and business users.
- **Faster rate of change** – Continuous Delivery and DevOps are reactions to business demands for faster development of new applications and services and more frequent updates. Improving the relationship and processes between development and operations is certainly a good thing, but moving faster and changing more often can cause more breakage. Automation brings consistency and predictability. Workload automation and IT process automation tools can bring release automation, provide self-service for developers, and expose APIs to allow developers to incorporate scheduling directly into applications. What-if modeling of new jobs and job stream changes can assist schedulers in the rapid incorporation of changes.

Workload automation allows an organization to visualize and execute end-to-end business processes. WLA continues to evolve to allow IT to move faster and integrate new technologies. Workload automation may have its roots in scheduling batch jobs on mainframes, but in its modern and still-evolving form, it is a foundation of successful hybrid cloud computing and is key to integrating new technologies and processes in a rapid-fire IT world. The 2016 EMA Workload Automation Radar Report reflects these trends in the measurement criteria it used to evaluate today's leading solutions.



# EMA Radar™ for Workload Automation: Q1 2016 Report Summary

## Research Methodology

The major challenge of this type of market evaluation is to avoid creating a simple feature comparison. EMA is aware that in order to be valuable for the end customer, any analyst report must thoroughly research and consider the client perspective. As enterprise IT is generally focused on solving actual customer challenges, each software feature is only relevant to this report if it solves a specific and important business problem.

To remain entirely objective, EMA based this Radar Report on a comprehensive survey with over 600 data points that can, for the most part, be measured unambiguously. All survey questions were founded on customer feedback and vendor responses; they were thoroughly verified by a sequence of product demonstrations and end-customer interviews.

EMA acknowledges that in WLA, as well as in most other arenas of enterprise IT, there is no one best solution for every customer. Therefore, EMA evaluated each product along five dimensions:

- Functionality
- Architecture and Integration
- Deployment and Administration
- Cost
- Vendor Strength

Based on these five dimensions, a potential client might select a solution that is only rated as average in terms of functionality, but is easily deployed, requires minimal maintenance, and costs significantly less than some of the functionality leaders.

EMA's guidance along these five dimensions will enable potential clients to determine which solutions warrant a closer look. This determination can mean narrowing down the field to only three vendors, or it may cause an organization to include lower cost alternatives into its RFP process. *This report will have achieved its purpose if EMA has provided potential WLA customers with the background knowledge and guidance necessary to confidently make this pre-selection decision.*



# EMA Radar™ for Workload Automation: Q1 2016 Report Summary

## Progress Since 2012

Significant industry progress has been made since the 2012 WLA Radar Report was released almost four years ago:

- **Support for All of Major Public Clouds, Whether SaaS, PaaS, or IaaS** – While most organizations use one or two public clouds (e.g., AWS, Google, vCloud, Softlayer, Azure, etc.) along with their on-premises operations, most WLA solutions support many cloud solutions. All the popular cloud providers have some level of support in one or more products. While most products can place and monitor workloads running in a public cloud, the best include support for workload mobility to allow workloads to move freely in a hybrid cloud environment between on-premises and various public cloud environments as needed.
- **Automate and Monitor Workloads from a Single Point across Hybrid Environments** – Today, you should expect to monitor all your workloads, wherever they may be at the moment, through a single view.
- **WLA as a SaaS Offering** – Several solutions are available as SaaS.
- **More Complex Scheduling** – More complex event-based scheduling allows for triggers such as file transfers, email or messaging, API, database, system startups, and other events to execute processes. Some WLA solutions can interrogate data and certain data can then be used as a trigger.
- **Critical Path Monitoring** – Over the past four years, predictive analytics has gone from being a new idea supported by only a few products to becoming a part of every major WLA solution. Predictive analytics has evolved into the ability to not just monitor the critical path, but to look downstream and highlight potential problems before they happen, thus providing the opportunity to head them off and the facility to predict their impacts on other workloads.
- **Modeling New Workloads** – Carrying analytics capabilities beyond current workloads, many products now have the capacity to model new workloads, making run-time predictions and anticipating the impact.
- **Integration with Service Management Systems and Awareness of SLAs** – In 2012, only a few products were SLA-aware. Today, most have deeper integrations to service management systems and include SLA awareness.
- **Open Integration Options** – RESTful APIs and other open programmatic interactions are now supported in more WLA products. Many products open up full UI functions and expand the integration of WLA with other systems.
- **Integrate Applications and Share Customization with others** – More WLA products include expanded tools and support for building application integrations, providing independence from vendor built integrations. As more users go down the path of building integrations, opportunities to share these customizations in vendor-hosted communities emerge.
- **Involving LOB Users in Workload Status** – Moving beyond dashboards for operations staff, more WLA solutions are supporting dashboards that enable line-of-business (LOB) users to obtain self-service status updates. Business users can be included in both the happy and not-so-happy outcomes of workloads delivered to them through browsers and mobile apps.
- **Convergence between WLA and ITPA** – Many vendors have built out or acquired and merged IT process automation solutions, converging workload automation and ITPA.



# EMA Radar™ for Workload Automation: Q1 2016 Report Summary

## Measurement Criteria

During the Q4 2015 through Q1 2016 WLA Radar research process, EMA used the following requirements to evaluate the participating vendors. Please keep in mind that these categories were weighted differently, depending on their importance to a business-driven WLA solution. The measures that define each category evaluated are detailed below:

### Architecture and Integration

#### Architecture

- **Business Focus** – Dashboards, reports, triggers, service catalog integration, auto-discovery, SLA awareness, and others.
- **Scalability, performance, and reliability** – Number of endpoints, size of active deployments, hardware required for specific workloads, support for virtualized and cloud environments, and others.
- **Dynamic workload placement** – SLA-driven thresholds, business impact analysis, workload placement factors (e.g., utilization, performance, policies, compliance issues, etc.), cloud support, cost of workload placement, multiple endpoints, resource contention, and others.
- **Breadth of Platform Support** – Operating systems supported.
- **Breadth of Application and Database support** – Common business applications and databases supported.
- **Disaster Protection** – Fault tolerance, high availability, failover, automated job rerun, manual job rerun, mid-job restart, auto remediation, alternate schedules, and others.

#### Integration/Interoperability

- **Comprehensive API** – Exposed scheduler elements for job stream objects and performance metrics and supported API standards such as JAVA RMI, SOAP, REST, etc.
- **Cloud Integration** – Dynamic placement in the cloud and specific public clouds supported.
- **CMDB Integration** – CMDBs supported and extent of support.
- **ITPA Integration** – Built-in, companion, and third party process automation features and products supported.
- **Capacity Management Integration** – Creating, reconfiguring, or decommissioning virtual machines, shifting workloads, and ensuring performance based on SLAs.
- **MFT Integration** – File transfer capabilities supported natively, integration with third-party file transfer products, and file transfer features supported.

# EMA Radar™ for Workload Automation: Q1 2016 Report Summary

## Functionality

### Features

- **End-to-end Monitoring** – Dashboard views for job stream performance across all environments, real-time performance by business unit, historical performance, performance against SLAs, overview (e.g., jobs on-time, about to be late, late, and failed).
- **Compliance Management** – Templates for specific compliance standards (e.g. HIPAA, SOX, or PCI), custom compliance policies, real-time compliance monitoring, compliance aware job placement, and standard compliance reporting.
- **Triggering** – Available triggers (e.g., calendar, events, dependencies, file actions, message queue, email events, applications, databases, SNMP traps, etc.), message queues supported, types of calendars supported, multiple conditions, conditional logic, and priorities.
- **Self-service Portal** – Capabilities provided to business users such as triggering, editing, defining, viewing status, and restarting jobs, job streams or automated processes; dashboard views; and mobile device support.
- **Forecasting, Analytics and Reporting** – Native and third-party predictive analytics, warning thresholds, critical path views, past job performance, decision heuristics, graphical job dependency views, modeling of new jobs, historic performance reporting, GANTT and PERT charts, job processing costs, and others.
- **Alerting** – Means of alerting (e.g. SNMP, Email, Text, etc.), alert priorities, customization of notifications, routing rules, and others.
- **Security** – Security roles, role-based access, and others.
- **What-if Scenarios** – Simulating the effects of new job streams on existing jobs, new job streams on SLAs, and performance of jobs under development.
- **Conditional Logic and Auto Remediation** – Automatic issue resolution, remediation based on events, historic data, or predictive, and others.
- **Logging/Auditability** – Activities logged including user interactions, job statuses, errors, result logs, schedule changes, logins and logouts, resource contentions job stream performance, and others.

### Ease of Use

- **Simplicity of GUI** – GUI elements, graphical wizards (e.g., creating jobs, dependencies, deploying agents, creating reports, defining job priorities, defining SLAs, defining auto remediation sequences, etc.), web based aspects of UI, dashboard customizations, and others.
- **SLA and Policy Awareness** – SLAs and Policies throughout the product.
- **Root Cause Analysis** – Diagnostic information collected including error messages, active processes, instructions at time of failure, open files, files' operations at time of failure, performance metrics, resource availability, and others.
- **Mobile Device Support** – Mobile environments supported (e.g., iOS, Android, Windows) and the UI features supported on each environment.
- **Available Help Resources** – Online knowledge base, videos, online training and others.

# EMA Radar™ for Workload Automation: Q1 2016 Report Summary

## Deployment and Administration

### Ease of Deployment

- **Deployment Time/Effort** – Deployment options, trials, training, proof of concept, installers, high availability setup, and install services.
- **Conversion Facilities** – Conversion tools for CRON, VBScript, PowerShell, and specific competitor products.
- **Job Discovery and Import** – Auto-discovery of jobs, job dependencies, job streams, schedule files, etc.
- **Staff Training** – Available training onsite, via video, interactive tutorials, etc.

### Support and Services

- **Customer Support** – Support hours and means of support (e.g., phone, email, chat), forums, knowledge base, help functions, online manuals, etc.
- **Professional Services** – Direct services supported including report creation, system configuration, business planning, prototype creation, custom scripting, online training, videos, on location training, etc.

### Ease of Administration

- **Console ease-of-use** – Console design, features, web and mobile support, and others.
- **Upgrade process** – Maintenance windows, wizards, test and development environments, roll-back for agents, console or UI, and others.
- **Test Environments** – Availability within the production install.
- **Automation of Management** – Auto-remediation, failover, and automated management features.

### Cost Advantage

- **Flexibility of Licensing Model** – Pricing options including by job, MIPS, sockets, cores, concurrent jobs, enterprise license, etc.
- **Pricing Scenarios** – Several specific configurations and job volumes were defined to be priced by each vendor.
- **SaaS Availability** – SaaS often has a lower startup cost and can provide a better option for smaller customers, so points were awarded for SaaS options.
- **Professional Services** – Availability and pricing.

### Vendor Strength

- Vision
- Strategy
- Financial strength
- Research and development
- Channel and partnerships
- Market credibility



# EMA Radar™ for Workload Automation: Q1 2016 Report Summary

## Vendors Included in this Report

### *Evaluation Criteria*

Each product feature was required to fulfill the following three criteria in order to be credited with a specific element or capability:

- **General availability:** The features needed to be generally available in the solution set at the time of the evaluation. Features that were in beta testing or that were scheduled to be included in later releases of the management suite were not eligible for consideration. The cutoff date was November, 2015.
- **Included in Cost:** All features that were part of the evaluation also had to be priced into the total product cost. In order to evaluate the total cost for each product, EMA provided each vendor with four hypothetical customer scenarios so that comparable list pricing could be evaluated.
- **Documentation:** All reported features had to be clearly documented in publicly-available resources such as user manuals or technical papers for verification.



# EMA Radar™ for Workload Automation: Q1 2016 Report Summary

## EMA Workload Automation Radar Results

The total product value is defined by comparing the overall product strength of each WLA solution (y-axis of Figure 1) with its cost efficiency (x-axis of Figure 1). “Product Strength” combines evaluation scores for “Functionality” and “Architecture and Integration.” “Cost Efficiency” is calculated from the scores achieved from the “Cost Advantage” and “Deployment and Administration” categories. The size of each vendor’s bubble indicates the vendor’s strength as identified in its individual review.

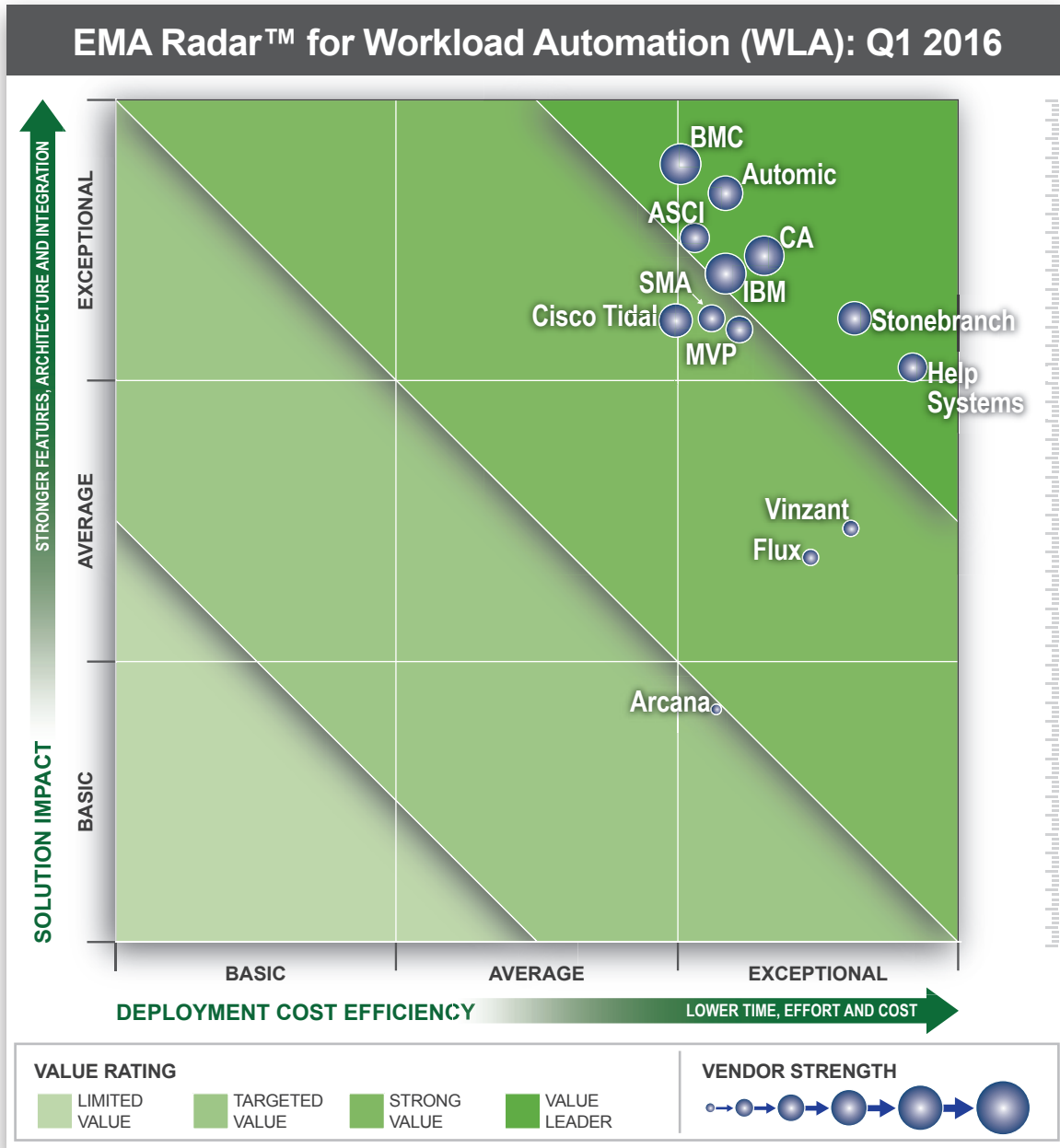


Figure 1. WLA Bubble Chart

# EMA Radar™ for Workload Automation: Q1 2016 Report Summary

## Key Changes Compared with the 2012 WLA Radar Report

When comparing the 2016 chart with the previous graph compiled in 2012, EMA makes the following observations:

- EMA included three additional vendors: IBM (was included in 2010, but opted out in 2012), SMA, and Vinzant.
- UC4 was renamed Automic and acquired Orsyp.
- Network Automation, included in the 2012 report, was acquired by HelpSystems and integrated with its Skybot Scheduler product.
- ASG opted out of the 2016 report, given incremental improvements of the product due to financial challenges starting in 2012. ASG emerged from financial restructuring in 2015, and bi-modal Zeke and Zena enhancements are underway. EMA expects ASG to be included in the next refresh of this report.
- Cisco Tidal is now “Strong Value.”
- ASCI, HelpSystems, and IBM are now “Value Leaders.”



### Value Leader: BMC

**BMC:** As in 2012, BMC Control-M is the strongest product in this year’s WLA Radar Report, achieving the highest overall score on Functionality and Architecture and Integration. EMA was impressed by BMC’s business-focused and digital transformation strategy. In addition to offering excellent predictive analytics capabilities for service-level aware critical path management and dynamic workload distribution, BMC has added Workload Change Manager, providing a collaboration portal that automates and simplifies application workflow creation. The new Application Integrator provides a wizard-based interface to create application adapters that can be shared in the Application Hub open community. In addition to tight integration with Amazon EC2 and VMware vCenter, Control-M provides deep integration with the Hadoop ecosystem, making Control-M an excellent choice for managing Big data workloads. Control-M is an outstanding choice for organizations that intend to give WLA its rightful place as a data center discipline with significant business impact.

## Special Award – BMC: Most Comprehensive Big Data Support

BMC Control-M provides deep integration with the Hadoop ecosystem including support for HDFS, MapReduce, DistCp, Pig, Hive, HiveServer2, Sqoop, Tajo, and Spark. This integration extends all of the capabilities and benefits of the entire Control-M solution for Big data technologies. Application-specific job forms enable any Control-M user to easily build Big data jobs. Developers can quickly and easily build composite workflows that include Big data and conventional components without the need to perform extensive scripting. Workflow execution provides real-time integration with Yarn and the Hadoop environment, ensuring accurate statusing of workload progress and support for even complex operational actions such as “kill” and retrieval of Yarn tracker logs. Automatic success/failure analysis and capture of job output simplify error analysis and shorten repair times when failures occur. While many products have addressed the unique requirements of Big data processing, EMA believes that Control-M provides the most comprehensive support for automating and managing Big data workloads.



# EMA Radar™ for Workload Automation: Q1 2016 Report Summary

## Future Outlook

WLA products have added sophisticated features over the four years since the release of the last EMA WLA Radar Report, but bigger shifts are on the horizon. While many users are not taking full advantage of all these features, more and more organizations are beginning to mature their scheduling functions and broaden the exposure and benefit of WLA solutions across their organizations. It is not uncommon in many IT management disciplines for products to offer features and process maturity well ahead of most organizations' readiness to take advantage of such advancements. Some organizations push the envelope and work with product vendors to advance the discipline, deploying new releases swiftly. However, many organizations operate multiple releases behind and progress more slowly. Some advancements cannot wait, as business demands pull them into production quickly; file handling and support for BI and big data are examples. Other features like self-service for business stakeholders have rolled out more slowly with many organizations just beginning to address taking advantage of such features. So while your organization may not yet be using all the latest features, it is beneficial to understand where the discipline is heading.

EMA expects continued improvements in the following areas as WLA continues to evolve:

- **Embedded Scheduling** – Several products have incorporated scheduling APIs and components that enable development teams to embed scheduling directly into applications. Continuous delivery will change the relationship between development and scheduling, and applications will be deployed with scheduling intelligence built-in. EMA believes embedded scheduling will spread to more products and its capabilities will be expanded.
- **Monitoring/Control of Release Process** – As DevOps and continuous delivery become more common, there will be more need to orchestrate the application release process. EMA believes WLA solutions will increase capabilities for monitoring and automating the release process.
- **User Community Awareness** – Only a few products currently have user communities and forums that enable the sharing of apps, add-ons, templates, and other customizations built by users. EMA believes this trend will continue. With more API support and the ability to embed scheduling awareness into applications, the discipline will be advanced by users' innovations, taking advantage of more open WLA products.
- **Agent Change Management** – WLA solutions are predominately agent-based. With thousands of servers in many on-premises and public cloud environments, updates to agents can be overwhelming. As hybrid cloud adoption continues, further advancements in change management will become necessary.
- **Data Awareness, File Transfer Control, and Manipulation** – Many products have incorporated or integrated managed file transfer (MFT). Big data is big business for WLA solutions, and has increased the attention and challenges of moving data. While Hadoop and many commercial tools have some built-in scheduling capabilities, they do not come close to the features and controls of the WLA solutions. While big data support exists in many products today, EMA believes more awareness and control, and even minor manipulations of data and file transfer processes, are likely as big data gets bigger and more automation is applied to these workloads.



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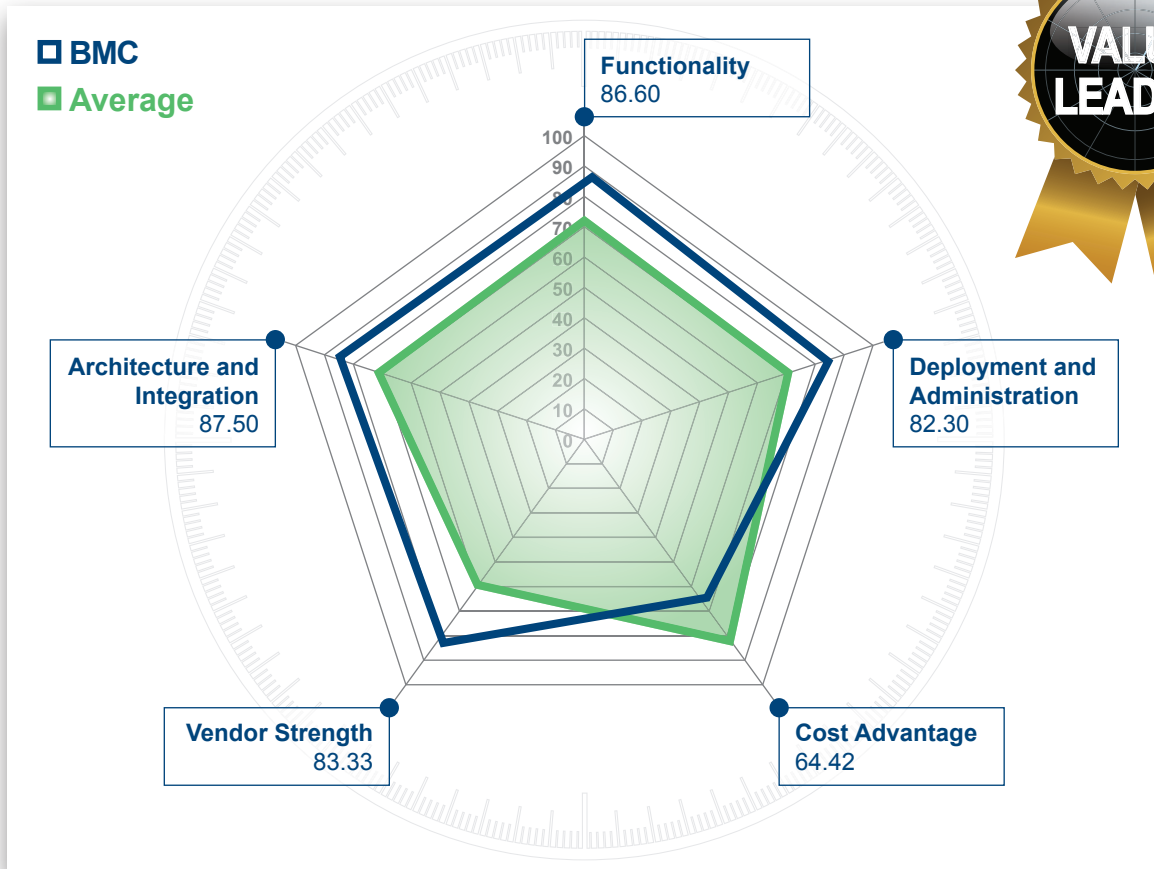
- **Increased Self-Service and Business Stakeholder Involvement** – Many products have added web-based features, dashboards, and mobile apps to give business stakeholders more visibility into the status and outcomes of the jobs important to them. Only a small number of organizations seem to be taking advantage of self-service functionality, with many just starting down this path. EMA believes more organizations will adopt the capabilities currently available, while WLA products will further advance the ability to bring more transparency and value to business stakeholders.
- **Cognitive Computing** – While this improvement may seem more futuristic than other trends, cognitive computing systems are becoming more involved in all aspects of business computing. WLA will benefit from this trend, too. Client interviews for this report were conducted with folks who have been on the job for 2-23 years, with 15-19 years of experience not uncommon. There is a lot of “tribal knowledge” locked up in the minds of these individuals. EMA believes that encapsulating that knowledge into cognitive systems like IBM Watson™ will create intelligent auto remediation and improve WLA in currently unforeseen ways.

Workload automation may have its roots in scheduling batch jobs on mainframes, but in its modern and still-evolving form, it is a foundation of successful hybrid cloud computing and key to integrating new technologies and processes. WLA is a mature space, but a new chapter in its lifecycle is being written as digital transformation is driving IT advancements and the command and control systems of IT are being stressed to keep up.



# EMA Radar™ for Workload Automation: Q1 2016 BMC Profile

## BMC Profile



### Overview

Headquartered in Houston, Texas, and founded in 1980, BMC Software was taken private in September, 2013 by a group led by Bain Capital and Golden Gate Capital for about \$6.9 billion. Since going private, BMC has a new energy and has enhanced its leadership ranks with many industry veterans. The company's new strategic focus on digital transformation is driving direction across all product lines and has brought new focus to the role of workload automation in supporting digital transformation.



**BMC**

*Most Comprehensive Big Data Support*

*Radar™ for Workload Automation Q1 2016*

Control-M, BMC's workload automation product, became part of BMC's portfolio through the acquisition of New Dimension Software for \$673 million in 1999. In 2004, BMC released Batch Impact Manager, a predictive analytics-driven tool that helps administrators diagnose critical path issues before they turn into business problems. BMC was timely in adding virtualization and cloud support. Most recent additions to the product include Workload Change Manager in 2014 and Application Integrator with its Application Hub open community in 2015. BMC has been leading the market in new features and capabilities in workload automation for some time. Its Control-M product had the highest Product Strength score in this evaluation, a position that BMC held in both the 2010 and 2012 EMA Radar Reports for WLA.



# EMA Radar™ for Workload Automation: Q1 2016 BMC Profile

Control-M Enterprise Manager is the central management console tying together Control-M for z/OS and Control-M for distributed environments (see Figure C). The Control-M architecture supports agent-based and agentless scheduling and is aligned around business services. All jobs are linked to these services and the relationships between services and jobs may also be stored within BMC's Atrium CMDB.

To dynamically provision, manage, and decommission workload processing resources, Control-M integrates with the Amazon EC2 API, VMware vCenter, as well as with the APIs of BMC's own BladeLogic data center management software.

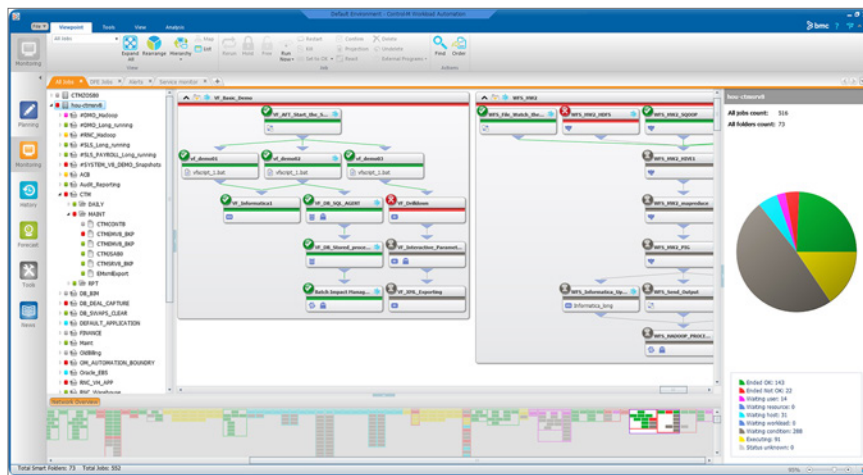


Figure C. Control-M Workload Automation

Control-M integrates with a wide range of operating systems and enterprise applications. The product automatically discovers and manages the critical path that must be monitored when orchestrating these distributed resources. To provide excellent disaster protection, Control-M offers fault-tolerant agents with high availability managed from the built-in Control-M Configuration Manager as well as BMC Performance Manager. The Control-M API is comprehensive, exposing all job objects to external enterprise applications.

Control-M shines from a features perspective, offering everything an organization needs to manage workloads in a centralized and transparent manner. SLA-awareness and compliance management are key differentiators for Control-M. Proactively identifying bottlenecks and deriving their impact on corporate SLAs is one of Control-M's core strong points. As importantly, Control-M prioritizes potential and actual issues based on business impact, ensuring the efficient use of data center personnel. As Control-M is infrastructure-aware – driven by the BMC Atrium CMDB – the software is able to determine business impact based on a multitude of enterprise software systems such as ERP, CMS, DMS, CRM, etc. This situational awareness is also leveraged when allowing administrators to simulate the business impact of workload changes and additions. Based on its business-awareness, Control-M is able to dynamically distribute workloads between physical, virtual, and cloud environments that can be provisioned or reserved to ensure consistent service levels. Dynamically placing workloads in existing or automatically-created resources based on their importance derived from corporate SLAs brings the organization a significant step closer to its ultimate goal of IT resource optimization with maximum agility.

# EMA Radar™ for Workload Automation: Q1 2016 BMC Profile

Starting with version 8, which was released after the last WLA Radar in 2012, Control-M implemented a simplified user interface that exposes all Control-M capabilities in a more efficient way and requires less training. With additional enhancements in version 9, the simplified user interface provides:

- A single UI for Planning, Monitoring, Forecasting, and History
- Streamlined high-frequency activities
- Consistent menus and flows
- A domain with a feed for YouTube Control-M training and discussion on community forums.
- Workload Change Manager – a browser-based interface that allows Developers and Operations Staff to collaborate on new workloads or makes changes to existing ones.

Also new is BMC Control-M Workload Change Manager, which gives developers the ability to quickly build accurate workflows that adhere to automatically-enforced enterprise-defined standards. Automation features manage important quality control functions and reduce deployment time, while schedulers retain authority for approving workflows and putting them into production.

Big data support is another key addition. Control-M provides deep integration with the Hadoop ecosystem, including support for HDFS, MapReduce, DistCp, Pig, Hive, HiveServer2, Sqoop, Tajo, and Spark. Workflow execution provides real-time integration with Yarn and the Hadoop environment to ensure accurate status of workload progress and support for even complex operational actions such as “kill” and retrieval of Yarn tracker logs.

Excellent SLA-awareness and issue prioritization make it easy for administrators to monitor the critical path and prioritize issues, freeing up staff hours and lowering the TCO. When discussing Control-M administration, it is essential to talk about the product’s auto-remediation capabilities. Control-M intercepts error messages from the actual job or from the operating system and automatically performs a set of remediation actions such as job restart, dataset deletion, catalog cleanup, etc. For added job stream resiliency, Control-M offers the ability for the administrator to define custom recovery procedures that are triggered by pre-defined failure events.

## Evaluation Summary

### Architecture and Integration:

Control-M received the highest score on Architecture and Integration of all products reviewed. Under the category of Architecture, Control-M had the strongest showing in Business Focus, Scalability, and Breadth of Application and Database Support. Within the Integration category, Control-M scored very well on Comprehensive API, CMDB Integration, ITPA Integration, and Capacity Management Integration.

### Functionality

Control-M received the highest score on Functionality of all products reviewed, scoring well on both Features and Ease of Use. On the Features category, Control-M did particularly well on Compliance Management, What-if Scenarios, and Logging/Auditability. Control-M also showed well on End-to-End Monitoring, Triggering, and Self-Service Portal. On the Ease of Use category, Control-M scored well on Simplicity of GUI, SLA and Policy Awareness, Root Cause Analysis, and Available Help Resources.

### Deployment and Administration

Control-M scored strong on Job Discovery, Staff Training, Professional Services, Test Environments and Automation of Management. The one low scoring area was the Upgrade Process.





# EMA Radar™ for Workload Automation: Q1 2016

## BMC Profile

### Cost Advantage

BMC's licensing model is flexible and can be based on the number of CPU sockets or on the number of active jobs. This flexibility has allowed BMC to gain traction with mid-sized deployments, in addition to its sweet spot of large enterprise customers. In terms of deployment, licensing, and maintenance cost, BMC is in line with its main competitors.

### Vendor Strength

BMC has a long history in the workload automation space and with 2,500 customers is one of the most well-established vendors in the market place. Now that BMC is a private company, it no longer provides transparency into revenues and earnings. After several transitory years leading up to and working through the transaction making BMC private, the company now appears to have a new energy and focus around Digital Enterprise Management. Control-M Workload Automation continues to be an important part of the BMC portfolio and continues to see investment in RandD and strategic focus.

### Strengths and Limitations

#### Strengths

- **Application Integration:** Control-M Application Integrator provides a wizard-based interface to create an adapter for any application, extending full Control-M automation capabilities to the application. Administration of the newly-integrated application is also centralized in the same way as other supported applications.
- **Workload Change Management:** BMC Control-M includes Workload Change Manager, a collaboration portal that automates and simplifies application workflow creation across the environments of development, test, and production to dramatically improve speed and quality of deployments. Development and Operations groups can communicate from the same interface, which helps accelerate delivery of business services.
- **Integrated SLA management:** BMC provides integrated SLA management that is truly abstracted from the actual job stream. Managing SLAs outside of job definitions is essential for visibility and control. Meeting SLAs is, or at least should be, the ultimate goal of any IT organization, as providing SLA-insights to business users is more than just “the icing on the cake.” Control-M supports a strictly policy-driven approach to WLA, ensuring SLA and regulatory compliance, as well as consistency in terms of workload design and placement.
- **Self Service:** The BMC Control-M self-service dashboard provides a simple, service-centric view for business users. Self-service users can monitor progress of their workloads and request changes as necessary. All changes are recorded to the log and can be configured to require approval.
- **Mobile applications:** Control-M offers a self-service application for iOS and Android devices, providing access to relevant workload performance data and remediation features.

#### Limitations

- **Perceived as too expensive for the SMB market:** As a leader in the enterprise space, BMC is often perceived as too expensive for the mid-market or even for higher end SMBs. BMC is currently working hard on correcting this issue by simplifying its pricing model and streamlining the implementation process.
- **No SaaS option:** Control-M is only available as a software distribution. A SaaS offering could provide a lower cost and easy on-ramp for the SMB market, but such an option has not yet been offered.

### **About Enterprise Management Associates, Inc.**

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals and IT vendors at [www.enterprisemanagement.com](http://www.enterprisemanagement.com) or [blogs.enterprisemanagement.com](http://blogs.enterprisemanagement.com). You can also follow EMA on [Twitter](#), [Facebook](#) or [LinkedIn](#).

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