Magic Quadrant for Application Release Automation

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The ARA market is rapidly evolving in response to growing enterprise requirements to both scale DevOps initiatives and improve release management agility across multiple cultures, processes and generations of technology. This research helps I&O leaders make better-informed decisions.

Strategic Planning Assumption

By 2020, 50% of global enterprises will have implemented at least one application release automation solution, up from less than 15% today.

Market Definition/Description

Application release automation (ARA) tools provide a combination of automation, environment modeling and release coordination capabilities to simultaneously improve the quality and the velocity of application releases. ARA tools enable best practices in moving application-related artifacts, applications, configurations and even data together across the application life cycle process. These tools are a key part of enabling the DevOps goal of achieving continuous delivery with large numbers of rapid, small releases.

Approximately seven years old, the ARA solution market reached an estimated $228.2 million in 2016, up 31.4% from $173.6 million in 2015. The market is continues to be expected to grow at an estimated 20% compound annual growth rate (CAGR) through 2020.

Magic Quadrant

Figure 1. Magic Quadrant for Application Release Automation

Source: Gartner (September 2017)

Vendor Strengths and Cautions

Arcad Software

Founded in 1992, Arcad Software is a privately held company headquartered in Chavanod, France. The company was started by its founder to deliver automation-oriented solutions supporting the

IBM i (introduced as AS/400, then later renamed eServer iSeries) platform. Arcad has built its business around a strategic business and technological partnership with IBM, with several products that extend key offerings sold directly by IBM. In subsequent years, the company has taken steps to broaden its platform support, ultimately resulting in the release of its fully multiplatform ARA product Drops in 2010.

In the latest release of Drops (v.2.6), the company focused on delivering a new reporting module that enables greater deployment KPI visibility. New script content (including database-rollback-focused content) and remote agent installation and updating capabilities were also added to the latest release. Although these enhancements are significant, continued work on improving, enhancing and simplifying the user experience across multiple user types and skill levels remains a key growth opportunity to more effectively compete in the ARA market. The company recognizes the need for, and plans to provide, a SaaS delivery method option.

Arcad has a direct presence in North America, EMEA and Asia/Pacific; however, it will continue to leverage its partner network and existing customer base as its primary route to new opportunities for its ARA solutions. The product is offered on both a perpetual and term licensing basis with on-premises delivery.

Arcad's ARA revenue is estimated by Gartner to be between $3 million and $5 million per year.

Strengths

- Strong support for the IBM i platform and engagement with its associated community is unique in the ARA market.
- An attractive alternative option for enterprises looking to enhance or extend their investments in IBM Rational's application development life cycle management (ADLM) tooling to support or provide visibility into DevOps activities.
- The company's efforts to directly address application data challenges associated with release activities are unique.

Cautions

- The company's profile outside of the IBM i platform market remains low.
- The company's primary channel partner (IBM) is also an ARA competitor, making it challenging to successfully position a strategic multiplatform product.
- Drop's user experience is best-described as functional.

CA Technologies (Automic)

Founded in 1976, CA Technologies is a publicly traded company headquartered in New York. In recent years, the company has been actively shifting investments to better address developer and DevOps requirements. In 2013, the company acquired Nolio, an early ARA leader that's product was first released in 2006 to solidify its ARA solution (CA Release Automation) to fill a gap in its DevOps

offerings. In early 2017, CA Technologies acquired Automic adding breadth and depth to both geographical coverage and its product portfolio. While the company has historically marketed multiple related products and has articulated a postacquisition strategy for these offerings, the product portion of this research will focus on Automic Release Automation, CA's stated (as of the publication of this research) primary ARA offering going forward.

Automic Release Automation is built on the Automic automation platform, which provides scalability, resilience, security and enterprise management connectivity. In the most recent release (v.12), the company focused on user experience (UX) improvements, environment blueprint provisioning and simplifying upgrading. Moving forward, CA will need to respond to growing demand for additional orchestration, environment management, optimization analysis and "codification" of all aspects of the solution. Automic Release Automation is typically delivered either as an on-premises solution or as a hosted offering.

CA Technologies primarily uses a direct sales channel, but also maintains a rich channel that includes multiple technical, sales and integration partnerships across the world.

CA Automic Release Automation revenue is estimated by Gartner to be between $25 million and $35 million per year.

Strengths

- CA Automic's mature Automation Engine continues to serve as a reliable foundation for an enterprise ARA solution.
- Out-of-the-box support for large enterprise commercial off-the-shelf (COTS) applications (e.g., Siebel, SAP) and mainframe platforms remains a compelling differentiator in this market.
- The solution's "automation platform" nature makes it well-suited for enterprises with significant investments in — and intentions to integrate ARA functions with — workload automation, IT process automation and service orchestration tools.

Cautions

- Potential impacts to future product delivery, support and vision due to acquisition and business-integration-related disruptions are yet to be determined.
- The Automic solution is more difficult than average to implement, so implementation services and adequate training should be planned for to achieve expected results.
- The CA offering commands a premium price in this market, but is available in flexible increments and bundles.

Clarive

Founded in 2010, Clarive is a privately owned company headquartered in Madrid. The company started as a consulting services company serving large telecommunications providers and financial institutions with ADLM and change management transformation projects. Solely focused on

providing a platform to support this type of transformation, Clarive has built a product designed to leverage existing investments in multiple forms of automation and service management.

The company has focused on enhancing the release pipeline quality management capabilities of the product with the release of Clarive v.6.8. In particular, Clarive has added solution interpretation and (automated/manual) guidance features to support release-focused root cause analysis. Also, machine learning (ML) algorithms have been added to the rule engine for proactive and reactive analysis of pipelines, environments, productivity and quality. While the product's release coordination capabilities have improved in the latest release, further integration of collaboration features and customizable dashboards (modified by users, not administrators) is needed to reinforce the product's platform value going forward. The company also acknowledges the need to make even greater use of the product's ML capabilities to maximally exploit its differentiating potential.

In 2017, Clarive has focused its geographical support through establishing new reseller partnerships across EMEA, Latin America and North America. The company recently partnered with CollabNet to capitalize on its experience in North America, while adding 10 partners so far this year to support Latin America; and it also plans to open offices in London. While the company is relatively small, it is growing at a significant pace: approximately 180% year over year in both customer and revenue terms.

Clarive's ARA revenue is estimated by Gartner to be between $3 million and $5 million per year.

Strengths

- ARA functionality spans multiple generations of technology (from mainframe to microservices).
- The company's incorporation of machine learning (that is, artificial intelligence for IT operations [AIOps]) capabilities to enhance ARA activities is unique.
- Clarive's user experience is unified and extremely flexible.

Cautions

- The sheer breadth of product capability can make it particularly challenging to keep implementation and cost impacts under control.
- The Clarive solution is more difficult than average to implement and maintain, so implementation services and adequate training should be planned for to achieve expected results.
- The company's market visibility remains comparatively small, but is improving.

Electric Cloud

Founded in 2002, Electric Cloud is a private company headquartered in San Jose, California. The company's ARA history began in 2012 with the release of ElectricDeploy, an add-on to its ElectricCommander orchestration engine. In 2014, Electric Cloud released ElectricFlow, a single

product built on the ElectricCommander platform that provided and enhanced the functionality previously delivered across two products (ElectricCommander and ElectricDeploy). ElectricFlow v. 7.2, released in March 2017, is an ARA product designed to enable and simplify provisioning, build and release of multitiered applications in a model-driven way. The company targets both large and midsize enterprises across all verticals where software is mission-critical (including financial services, retail, government, automotive and aerospace/defense).

The company is focused on supporting DevOps and continuous delivery processes. ElectricFlow v. 7.2 builds on driving release automation on a single platform, rather than as siloed products. The focus for the current release included enhancing support for microservice-based applications, expanding container technology support, new pipeline management capabilities, introducing serverless computing support, and new in-product, in-context tutorials to speed ramp-up times. ElectricFlow is primarily delivered as an on-premises product, but is also available as a hosted solution via a partner.

In North America, Electric Cloud's sales and marketing model is direct, using territory development and inside sales representatives while leveraging partners for global reach. The company continues to improve and market its freemium offering (Community Edition) to broaden user adoption of small or midsize business (SMB) customers. Moving forward, the company will need to direct as much effort to supporting the analytical, continuous improvement opportunities of comprehensive release automation strategies as it has on addressing task automation challenges for DevOps initiatives.

Electric Cloud's ARA revenue is estimated by Gartner to be between $10 million and $25 million per year.

Strengths

- An easy-to-use interface accelerates team and application onboarding across multiple user types, while the solution's DSL can also be used to model and execute objects (e.g., application, environment, pipelines, processes and releases).
- Product enhancements and their cadence as well as client interactions demonstrate a strong ability to commit and deliver on customer needs and requests.
- The company has been able to build a diverse customer base emphasizing its offerings' competitive total cost of ownership.

Cautions

- Currently, no SaaS deployment option is available, although a hosted option is available from a partner.
- Expanded container platform and serverless (function platform as a service [fPaaS]) computing support is relatively new and thus unproven in enterprise use cases as yet.
- The company has limited visibility outside of the DevOps community.

IBM

IBM was founded in 1911 and is based in Armonk, New York. IBM entered the ARA market with the introduction of SmartCloud Continuous Delivery in 2012, which was followed by the 2013 acquisition of UrbanCode. Focused on application release challenges of highly complex enterprise, the IBM solution is a combination of the UrbanCode Deploy and UrbanCode Release products. The IBM UrbanCode Deploy product primarily provides the core deployment automation and environment modeling capabilities for the ARA solution; while the IBM UrbanCode Release product provides the enterprise release coordination capabilities of the ARA solution.

The company has focused on further simplifying the configuration of advanced and intricate deployment types, stronger cloud integration and support, and scalability enhancements with the release of UrbanCode Deploy 6.2.4. During the same time frame, focused changes for UrbanCode Release 6.2.1 include access to SLA tasks, improved implementation experience, systemwide notifications and audit-centric updates for logins and permissions. The company acknowledges and expects to respond to continued demand for further enhancements to its cloud platform support, user experience and third-party tool support.

Although IBM's ARA solutions are most commonly sold to application support and application operations groups, and are frequently included in larger sales and renewals that include other IBM solutions, IBM is investing heavily in growing business partners that can expand IBM's reach outside of traditional IBM accounts.

IBM's ARA revenue is estimated by Gartner to be between $30 million and $40 million per year.

Strengths

- IBM continues to lead the ARA market in terms of annual revenue with a substantial customer base.
- IBM provides the greatest number of delivery options in which its ARA solution can be consumed (SaaS, PaaS feature, hybrid, on-premises), which mirrors the ARA solution's ability to support multiple application delivery options.
- The IBM UrbanCode solution is particularly compelling for users with heavy investments in IBM software and platforms (e.g., mainframe/z Systems).

Cautions

- The IBM UrbanCode offering, both in part (available in flexible increments and bundles) and as a whole, commands a premium price in this market.
- Architectural design and implementation choices have complicated ongoing solution maintenance requirements (e.g., agent updating) for some customers and Gartner clients.
- Most enterprises will require the entirety of ARA solution capabilities spread across both separately purchased products, adding procurement and implementation complexity.

Inedo

Inedo was founded in 2007 and is headquarters in Berea, Ohio. It started as a custom software and development training company, but launched BuildMaster, its initial ARA product in 2010. BuildMaster has since been supplemented by the release of a companion continuous configuration automation (CCA) tool, Otter, in 2016. BuildMaster was developed to provide a reusable process model to manage and integrate different tools and components needed to support a delivery pipeline.

Although this analysis focuses on BuildMaster and Otter, Inedo also provides ProGet for package management requirements. In the latest release of BuildMaster (v.5.6.9), the company focused on improved source control, issue tracking integration and integration into Otter (v.1.5.5). BuildMaster supports management of multiple release pipelines, which can consist of a single line of patched code or a sophisticated, layered application stack requiring multiple quality control checks, database changes and specific server configurations. Moving forward, Inedo is working to improve its support of more complex releases.

Inedo targets industries with strict security and compliance regulations and cross-sells to its established user base for its ProGet product. Inedo uses certified service and technology partners, as well as regional-specific partners where necessary. BuildMaster and Otter are reasonably priced on a per-user basis (either perpetual or subscription) and accessed directly from the website as an on-premises web application.

Inedo's ARA revenue is estimated by Gartner to be between $3 million and $5 million per year.

Strengths

- Inedo's solution is easy to use with seamless transitions between both graphical and scripting language/programmatic style interfaces.
- Inedo has a track record of successfully using innovative, educational marketing techniques to gain visibility.
- Inedo's ARA solution will appeal to those requiring both CCA and ARA capabilities.

Cautions

- Inedo lacks a SaaS delivery option.
- Reporting capabilities are comparatively weak.
- A majority of solution utilization to date has been within the Microsoft ecosystem, warranting greater scrutiny by those with a large mix of technologies to manage.

Micro Focus

Founded in 1976, Micro Focus is a United Kingdom-based global software company. Micro Focus entered the ARA market with its May 2016 acquisition of Serena Software as a fully owned subsidiary. Serena's 15-year history as a release management solution provider began with IBM

System z, and evolved to coordinate releases across both distributed and mainframe environments. It offered ARA solutions first through a reselling partnership with Nolio (which was later acquired by CA Technologies), then in 2012 with its own product, built using a combination of acquired and organically developed technologies. For 35 years Serena targeted large, highly regulated enterprises with software development life cycle tools. Micro Focus plans to build on Serena's solution to deliver a complete ARA technology stack designed for enterprises.

Micro Focus concentrated on developing extensive modification to the integration framework to support external events and endpoint registration in the 2017 release of Release Control (v.6.2) and Deployment Automation (v.6.2) by extending scheduling, integration, analytics, planned versus actual delivery, and "what if" modeling. Integration updates allow plug-in models to support comprehensive real-time integrations into third-party tools. Improvements in user interface, process simplification and integrations into the Micro Focus technology stack were also included. While integrating Release Control into the Micro Focus technology stack is an important move forward, a continued focus on further integration with other portfolio offerings will only enhance competitiveness. Multiple delivery options with license feature enablement to allow customers to only pay for the modules that they need indicate the company understands the market demand for flexibility.

Micro Focus uses direct sales (globally in more than 75 countries), as well as global alliances and channel partners including system integrators, industry outsourcing organizations and a few service partners. The company also has strategic partners targeted by geographic region who recommend, co-sell and develop the solution architecture to reach a large diverse customer base in highly regulated, high-growth industries.

Micro Focus' ARA revenue is estimated by Gartner to be between $5 million and $10 million per year.

Strengths

- Balanced support for integration with both agile/DevOps and waterfall development tooling ecosystems will appeal to many enterprises.
- The solution's strong integration capabilities (plug-ins), process workflows that support both templates and custom processes, as well as customer support are the positive attributes most often cited by Gartner clients.
- Micro Focus' ARA solution supports flexible, multiple-deployment models with modularity that allows customers to pay for only what is needed.

Cautions

- Modification to the integration framework to support external events and endpoint registration can be complicated and difficult to implement.
- Minimal customer/peer community size and engagement are frequently cited by Gartner clients as concerns.

- Taking full advantage of the offering's most significant differentiating feature (integrated Continuous Inspection) requires no less than three individual products (Release Control, Deployment Automation and Dimensions CM).

Microsoft

Founded in 1975, Microsoft is a public company headquartered in Redmond, Washington. The company entered the ARA market through its acquisition of a partner's business unit (InRelease from InCycle) in 2013. Microsoft's current ARA solution is delivered via SaaS through Visual Studio Team Services (VSTS) and via the on-premises Team Foundation Server (TFS) product. Microsoft offers consumer and enterprise technology solutions spanning many markets, including application development and IT operations management.

In its latest release, the company has enhanced its deployment and orchestration capabilities to better address broad enterprise requirements. Microsoft also has continued to further integrate release management features with other Visual Studio, Team Foundation Server (TFS) and Azure services. The company continues to improve the extensibility of the solutions' architecture, while building and supporting integration content (plug-ins) in order to better address the platform diversity needs of release automation. A renewed focus on addressing expanding release coordination capabilities that extend beyond developer and DevOps team requirements remains an opportunity for growth.

Microsoft's "cloud first, mobile first" strategy is evident in its investments into ARA-supporting features and functions. Application development and DevOps play key roles in all facets of this transformation, which strongly values platform agnosticism, diversity and flexibility — attributes that the company is not colloquially known for, but continues to work to address. Success in embracing these values will only enhance the company's competitive position in the ARA market.

Microsoft's ARA revenue is estimated by Gartner to be between $5 million and $10 million per year.

Strengths

- Integration and interoperability with Visual Studio and Team Foundation Server on multiple levels make the solution attractive to enterprises and teams looking to extend the value of investments in those platforms.
- The Microsoft offering's ability to be consumed in on-premises, SaaS and hybrid delivery models remains a differentiator and is appealing to enterprises looking for flexibility.
- Microsoft's global ecosystem of products, platforms, services, partners and customers represents a powerful selling engine that is marketing to a massive potential customer base.

Cautions

- ARA solution capabilities are incorporated in offerings designed primarily around application developer needs, and may not appeal to IT operations specialists or their skill sets.

- While the solution supports use with both Microsoft and third-party tools, little significant use of the offering outside of the Microsoft ecosystem by customers has been observed.
- Release coordination capabilities are relatively weak, with little focus on planning and integrated use of outside operational context (e.g., change management processes).

Octopus Deploy

Founded in 2011, Octopus Deploy is a privately held company headquartered in Brisbane, Australia. The company was created by its founder to solve for and simplify the challenges associated with automating deployments. Octopus Deploy has built a business around delivering one (ARA) product that, until somewhat recently, was focused almost exclusively on supporting .NET developers and the broader Microsoft ecosystem. The company has built a large customer base over the years, effectively utilizing a go-to-market (low-/zero-touch selling, low price) and product strategy well-suited to a developer population; yet it is finding itself working hard to keep up with that same base's growing requirements around platform support, usability, performance and scalability.

In the v.3.12 release of Octopus Deploy, the company focused on delivering a new, simplified onboarding experience to speed time to value for new users of the product. Significant performance improvements and global template step updating were also added to capabilities introduced in previous releases of the version 3 product. Although these enhancements are meaningful, continued work on expanding and extending support of non-Microsoft technologies and simplifying the management of dependencies across multiple, complex applications and their components remain key growth opportunities to more effectively compete in the ARA market.

Octopus has a direct presence in Australia, however it will continue to leverage its low-/zero-touch selling model and existing customer base as its primary route to new opportunities for its ARA product. The company does utilize partners to provide support in other geographies for training, implementation and support needs. The product is offered on a perpetual licensing basis with on-premises delivery.

Octopus Deploy's ARA revenue is estimated by Gartner to be between $5 million and $10 million per year.

Strengths

- The product's low cost and ease of use make it an attractive option to get started with ARA.
- Support for the Microsoft application ecosystem is extensive.
- The company has demonstrated discipline in maintaining product and operational focus while balancing growing and broadening customer demands.

Cautions

- Support of non-Microsoft technologies, and architectural and performance improvements to support enterprise scale are relatively recent.

- Release coordination capabilities are best-described as tactical, primarily focused on real-time execution issues as opposed to long-term optimization.
- Integrations with and support of IT operations management tools and processes outside of a DevOps/continuous delivery context are minimal.

OpenMake Software

Founded in 1995, OpenMake Software is a privately held company headquartered in Santa Fe, New Mexico. While the company has offered an ARA product for the past six years, it is best-known for its flagship offering, Meister, a build automation product. With a heritage in building tools for developers, the company actively responded to customers' needs for meeting operational challenges associated with environment management and release coordination. OpenMake's offering is based on an acquired ARA solution, Deploy Manager (from Trinem), which was recently rebranded from Release Engineer to DeployHub Pro. DeployHub Pro provides agentless release automation, with blueprints for delivery, a back-end deployment version control engine, and collaboration tools for continuous feedback.

In the latest DeployHub Pro release (v.8.0), the company focused on enhancements around change request tracking, incremental version jumping, release planning and a continuous feedback loop. In particular, v.8 brings an important integration with change request tracking tools including Jira, Bugzilla and GitHub. This integration allows DeployHub Pro to track change requests against components, applications and releases, and gives users visibility into where change requests are within the pipeline. The new release planning tool allows releases to be planned and rescheduled from inside the product. Additionally, the Jenkins plug-in was enhanced to allow a "notification" mode as well as the ability to perform deployments, which allows users to track builds against components and to track where those builds have been deployed. Finally, a feedback-loop-themed reporting capability is now available for each deployment displaying the source files changed, the commits, continuous integration (CI) builds and change requests for each component and application, and where they have been deployed. The company continues to work toward addressing the demand for a SaaS delivery option.

For most of its life, OpenMake has relied on partners (like CA Technologies and others) to effectively market and sell its offerings; however, recent years have seen the company increase its direct selling capabilities in the U.S. and EMEA while leveraging partners for global reach. The company's release of a free open-source version supporting continuous deployment for project teams using CI/continuous delivery (CD) may yield additional opportunities to acquire paying enterprise customers.

OpenMake's DeployHub Pro revenue is estimated by Gartner to be between $3 million and $5 million per year.

Strengths

- DeployHub Pro's affordable price makes it attractive to new teams looking to get started with ARA.

- The company's build automation experience and credibility have been critical to its ability to successfully position its offerings to both developers and operations teams.
- OpenMake's strong integrations with Jenkins and Red Hat's Ansible make it a compelling option for those looking to extend those tool investments.

Cautions

- The company's market visibility remains low, making it challenging to acquire new customers at the pace needed to sustain continued investment.
- The selection of integrations provided out of the box is not as broad as several competitors.
- DeployHub Pro's user experience has improved, however it continues to lag several competitors.

Puppet

Founded in 2005, Puppet is a privately held company headquartered in Portland, Oregon. While the company has offered products for the past 12 years, the initial technology was entirely open-sourced. As adoption increased, the demand for commercially supported offerings also increased, prompting the company to release Puppet Enterprise, the first version of its enterprise platform, in 2011. The company continues to provide commercial and open-source capabilities that automate the provisioning and operations of infrastructure, middleware and applications.

In the latest release (2017.2), the company focused on enriching its graphical web UI with additional workflows and accessible actions. Additionally, a new more comprehensive Jenkins plug-in to more directly support continuous delivery as well as continued refinements to the Puppet Query Language were added. Although these improvements are important steps in Puppet's commercial offering evolution, enhancing and simplifying the user experience across multiple user and skills levels remain a growth opportunity to more effectively compete in the ARA market. The company continues to recognize the value of hybrid delivery models and open source as key differentiators.

Senior leadership changes over the past year have brought a renewed focus and execution in growing both direct and partner sales and support capabilities, particularly in the Asia/Pacific (APAC) region. While the primary go-to-market strategy remains a "land and expand" direct sales model by converting open-source users to its commercial enterprise offering, increased efforts to expand enterprise sales capabilities will continue to grow in strategic importance for some time to come.

Puppet's ARA revenue is estimated by Gartner to be between $5 million and $10 million per year.

Strengths

- Puppet's credible, visible and free open-source offering remains a powerful method for infiltrating organizations of all sizes with a highly functional product that can support both ARA and CCA use cases.

- Puppet Enterprise provides a common language for managing both applications and infrastructure, with orchestration capabilities that deliver and operate applications in a common way.
- The product's model-driven approach allows users to model the applications and underlying infrastructure once, and then the code can be tested, shared and reused across environments.

Cautions

- The solution's most often utilized user experience paradigm is command line scripting, which may require additional training to use effectively.
- Puppet's product and marketing strategies are sharply focused on managing modern applications and infrastructure.
- Much of the company's historically positioned strategic value centers on efficiencies gained via standardization of configuration semantics that has yet, and is unlikely, to materialize.

Red Hat (Ansible)

Founded in 1995, Red Hat is a publicly traded company headquartered in Raleigh, North Carolina. The company started with a vision of developing open software through a collaborative ecosystem of developers, IT leaders, open-source software (OSS) supporters and business partners. In October 2015, Red Hat acquired Ansible (originally AnsibleWorks), an open-source delivery automation engine. Red Hat Ansible Tower is the commercial offering that overlays control, knowledge and delegation on top of the Red Hat Ansible Engine.

The company has focused Red Hat Ansible Tower on supporting and expanding its base of users with a bottom-up approach to automation. In particular, Red Hat Ansible Tower 3.1 delivers enhanced multiplaybook workflows, log aggregation outputs, extends on the high availability (HA) clustering with active clustering, and smart search to make items in Tower's object lists easier to find. In previous releases, the UI was enhanced to extend automation to a broader group by including notifications that keep teams informed without requiring them to use the Tower interface.

While a growing part of Red Hat's global sales efforts, Red Hat Ansible continues to primarily be positioned via a direct, inbound model. Users begin by adopting the free, open-source Red Hat Ansible Engine and the company converts those that want the additional capabilities provided by the Tower offering into paying customers. Moving forward, the company will need to continue to nurture its channel partner network and the Red Hat enterprise sales force to maximize its ARA market penetration.

Red Hat's ARA revenue is estimated by Gartner to be between $3 million and $5 million per year.

Strengths

- The Red Hat Ansible Tower GUI with API and role-based access control is lightweight but scalable and easy to use.

- The product's open-source foundation is written in a language (Python) that is relatively simple to read and pervasively used.
- The Red Hat Ansible offerings have strong company and community support that is friendly and open.

Cautions

- The automation engine component's primary user experience paradigm is command line scripting, which may require additional training to use effectively.
- Red Hat's product and marketing strategies for Ansible are sharply focused on managing modern applications and infrastructure, limiting the solution's appeal to enterprises with significant legacy (Mode 1) investments.
- The product's current documentation lacks critical detail and breadth.

XebiaLabs

Founded in 2008, XebiaLabs is a privately held company with its headquarters in Boston. XebiaLabs was a spinoff from the IT services and consulting firm Xebia. XebiaLabs was one of the first ARA solution vendors, making an early name for itself with its agentless approach to managing deployments, and with its support of both Java and .NET applications. The XebiaLabs ARA solution comprises two products: XL Deploy (released in 2009), used for application deployment automation and environment management; and XL Release (released in 2013), used for orchestrating, automating and providing visibility into the release pipeline. XebiaLabs' products are focused on enterprises with a diverse set of application release needs, including legacy platforms, cloud environments and DevOps practices. XebiaLabs has specifically targeted the financial services, retail, telecom, technology and transportation industries; however, Gartner receives client inquiries on XebiaLabs from a broad range of companies in many industries.

XebiaLabs' products have clean, easy-to-use interfaces. The process for building a release flow is logical and well-designed (components, linkages and integrations), while a grid display provides a scalable way to understand the progress and status of all active releases with a clear, uncluttered view. The XL Deploy and XL Release v.6.2 releases focused on a number of key enhancement themes, including risk assessment analytics, enhancements to code-centric management capabilities and broadening integration support. This emphasis has resulted in improvements to the solution's release coordination capabilities, and its ability to support a broader swath of user types and involved technologies (application performance monitoring [APM], mainframes, containers and public cloud services).

XebiaLabs has direct sales in North America, Western Europe and India, with partners in regions without direct sales presence. The products are offered on a term basis with on-premises delivery and a subscription business model. It also offers a 30-day trial for a full-function version.

XebiaLabs' ARA revenue is estimated by Gartner to be between $10 million and $25 million per year.

Strengths

- Ease and speed of implementation due to agentless design are frequently cited by Gartner clients as key positive attributes.
- The XL Release product's modern UI and project planning orientation are useful for customers looking to start their ARA initiatives with release coordination.
- Large organizations may find the model-based deployment plans easier to implement and maintain than workflow-based deployments.

Cautions

- The ARA solution's model-driven approach may not appeal to those looking to drive deployments via a workflow paradigm.
- Agentless deployment may present challenges for organizations looking for remote, endpoint or triggered release methods.
- User interface disparity is noticeable across the products comprising the solution.

Vendors Added and Dropped

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

Added

Arcad Software, Octopus Deploy and Red Hat (Ansible) have been added to this year's research.

Dropped

BMC and MidVision were dropped as they did not meet current inclusion criteria for this research.

Inclusion and Exclusion Criteria

Vendors were required to meet the following minimum criteria to be considered for the 2017 Magic Quadrant and Critical Capabilities for ARA:

Product-Related Criteria

- The ARA solution must include automation, environment modeling and release coordination functionality across no more than two individual products.

- The ARA solution must provide the ability to use its automation, environment modeling, and release coordination functionality in a coordinated, integrated, and consistent manner supporting the entire delivery pipeline.
- The ARA solution must include support for continuous application release (e.g., DevOps practices) in automation, environment modeling and release coordination functionality.
- The ARA solution or any of its components must not have a functional or commercial dependency on other products or services provided by the vendor itself or other vendors (for example, ARA functionality provided as a feature of a public cloud service or PaaS offering).
- Automation:
  - The solution must provide a set of customizable content (tasks, components and functions) that is intended to reduce the dependence on or, in many cases, eliminate homegrown scripts or manual efforts used in the course of an application release.
  - The solution must provide the ability to utilize this content to fully automate the tasks associated with an application release.
    - For example, an application release can be automatically performed upon a developer's code commit.
- Environment modeling:
  - The solution must have the ability to discover, use, create, and maintain models of existing or planned environments composed of multiple application and infrastructure resources used to support all application life cycle/delivery pipeline stages.
  - The solution must have the ability to monitor, report and remediate configuration drift.
  - The solution must have the ability to deploy application binaries, packages or other artifacts to target environments.
- Release coordination:
  - The solution must provide workflow engines that assist in documenting, automating, coordinating and tracking activities (human and machine) across the various tasks associated with application deployment and governance.
  - The solution must support planning, communication and analysis while enforcing segregation of duties.
  - The solution must provide project, calendar and scheduling management capabilities.
  - The solution must allow release management activity tracking by role and individual.
  - The solution must integrate with change control and/or IT service management (ITSM) tools.

Non-Product-Related Criteria

- The ARA solution vendor must have at least $3 million in annual revenue derived solely from ARA products.
- The ARA solution vendor must have sales or partner network presences that span at least two of the following regions: North America, South America, Europe, Middle East, Asia, Africa and Australia.
- The ARA revenue and installed base must be specific to the ARA solution in the Magic Quadrant. It cannot include revenue and customers from other products (acquired or developed in-house) that are not part of the Magic Quadrant submission.
- The vendor must have at least 40 paid customers that use its ARA solution in a production environment:
  - The ARA solution must be paid for by the customer and used to automate the release of two or more production applications across two or more production environments that are delivering revenue-generating or cost-reduction business value.
  - The ARA solution must concurrently use at least two of the three core ARA functions (automation, environment modeling, release coordination).
  - The customer must use the ARA solution to automate the production deployment of an application across a minimum of 100 nodes.

Additional Vendors Offering Some or All ARA Capabilities

The following sample vendors did not meet the inclusion criteria to be included in this research, but do come up in ARA-related inquiries:

- Atlassian
- CloudBees Jenkins
- CollabNet
- Chef
- Flexagon
- HashiCorp
- Orca
- Plutora
- SaltStack
- VMware

Evaluation Criteria

Ability to Execute

Product or Service: Gartner makes judgments from a variety of inputs to evaluate the capabilities, quality, usability, integration and feature set of the solution, including the following functions:

- Automation of the release:
  - Customizable content (tasks, components and functions)
  - Utilization of content to fully automate tasks associated with an application release
- Environment modeling:
  - Discover, use, create, and maintain models of existing or planned environments composed of multiple application and infrastructure resources used to support all application life cycle/ delivery pipeline stages
  - Deploy application binaries, packages or other artifacts to target environments
- Release coordination:
  - Workflow that assists in documenting, automating, coordinating and tracking activities (human and machine) across the various tasks associated with application deployment and governance
  - Support of planning, communication and analysis while enforcing segregation of duties
  - Project, calendar and scheduling management capabilities
  - Release management activity tracking by role and individual
  - Integration with release planning, change control, IT service management and development tools (build and test)

Overall Viability: We consider the vendor's company size, market share and financial performance (such as revenue growth and profitability). We also investigate any investments and ownership, and any other data related to the health of the corporate entity. Our analysis reflects the vendor's capability to ensure the continued vitality of its ARA offering.

Sales Execution/Pricing: We evaluate the vendor's capability to provide global sales support that aligns with its marketing messages; market presence in terms of installed base, new customers and partnerships; and flexibility and pricing within licensing model options, including packaging.

Market Responsiveness/Record: We evaluate the execution in delivering and upgrading products consistently, in a timely fashion, and meeting roadmap timelines. We also evaluate the vendor's agility in terms of meeting new market demands, and how well the vendor receives customer feedback and how quickly the desired features are built into the product.

Marketing Execution: This is a subjective measure of brand and mind share through client, reference and channel partner feedback. We evaluate the degree to which customers and partners have positive identification with the product, and whether the vendor has credibility in this market.

Customer Experience: We evaluate the vendor's reputation in the market, based on customers' feedback regarding their experiences working with the vendor, whether they were glad they chose the vendor's product and whether they planned to continue working with the vendor. Additionally, we look at the various ways in which the vendor can be engaged, including social media, message boards and other support avenues.

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

Table 1. Ability to Execute Evaluation Criteria

Evaluation Criteria	Weighting
Product or Service	High
Overall Viability	Low
Sales Execution/Pricing	Medium
Market Responsiveness/Record	High
Marketing Execution	Medium
Customer Experience	High
Operations	Not Rated

Source: Gartner (September 2017)

Completeness of Vision

Market Understanding: This criterion evaluates vendor capabilities against future market requirements. The market requirements map to the market overview discussion and look for the following functionality:

- Automation of the release process
- Environment modeling
- Release coordination
- Scalability and performance
- Usability and access

Marketing Strategy: We evaluate the vendor's capability to deliver a clear and differentiated message that maps to current and future market demands, and, most importantly, the vendor's marketing effectiveness to the ARA market through its website, advertising programs, social media, collaborative message boards, tradeshows, training and positioning statements.

Sales Strategy: We evaluate the vendor's approach to selling ARA in the appropriate distribution channels, including channel sales, inside sales and outside sales.

Offering (Product) Strategy: We evaluate product scalability, usability, functionality and delivery model innovation. We also evaluate the innovation related to the delivery of products and services.

Business Model: This is our evaluation of whether the vendor continuously manages a well-balanced business case that demonstrates appropriate funding and alignment of staffing resources to succeed in this market. Delivery methods will also be evaluated as business model decisions, including the strength and coherence of on-premises and SaaS solutions.

Vertical/Industry Strategy: We evaluate the targeted approaches in marketing and selling into specific vertical industries.

Innovation: This criterion includes product leadership and the ability to deliver ARA features and functions that distinguish the vendor from its competitors. Specific considerations include resources available for R&D and the innovation process.

Geographic Strategy: This is our evaluation of the vendor's ability to meet the sales and support requirements of IT organizations worldwide. In this way, we assess the vendor's strategy to penetrate emerging markets.

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	High
Marketing Strategy	High
Sales Strategy	Medium
Offering (Product) Strategy	High
Business Model	High
Vertical/Industry Strategy	Low
Innovation	High
Geographic Strategy	Low

Source: Gartner (September 2017)

Quadrant Descriptions

Leaders

The Leaders quadrant comprises vendors that are currently pushing the ARA market forward and are likely to continue doing so. Growth of this market has not, is not and will not be achieved solely through technological advancement, but rather in combination with effective sales, marketing, and support.

Challengers

The Challengers quadrant is composed of vendors who have built a significantly large installed base of customers successfully using their solutions to automate application releases, albeit within a scope that does not currently encompass the full breadth of current and future enterprise ARA requirements.

Visionaries

The Visionaries quadrant is composed of vendors who have built a compelling strategy to address current and future ARA customer needs, but currently lack a critical mass of market awareness needed to leverage their differentiation. For example, this year's Visionaries have incorporated differentiated capabilities, like AIOps technologies or continuous code inspection functionality, into their offerings that both expand and extend ARA market potential.

Niche Players

The Niche Players quadrant is composed of those vendors with solutions that cater to specific use cases, platform support, skill sets, budgets or regions. While they all provide an ARA solution's core capabilities, their offering's appeal will typically emphasize one of those capabilities over the others. With the right investments, any of these vendors could further exploit their differentiation to address market needs in ways that today's Leaders may find difficult to match.

Context

Organizations should not utilize the Leaders quadrant as a shortlist of appropriate vendors, but instead should build a list of criteria that describes their current and future needs, and then select from vendors that best meet those requirements. Organizations should select a vendor that has both a history of and future plans for focusing on this market. Careful consideration should be given to required skills, training, process and deployment investments, because these factors will have a much greater impact on the overall value realized from an ARA solution investment than any specific functional capability found in a given tool.

The Magic Quadrant is not a direct evaluation of the ARA products that these vendors offer. This analysis complements the "Critical Capabilities for Application Release Automation," which applies three critical capabilities that differentiate the most popular large-enterprise-focused products on

the market, and four persona-based use cases. The use cases filter and prioritize the capabilities that will have the greatest beneficial impact from ARA products offered by these vendors. Gartner strongly recommends that organizations use this research in conjunction with the Critical Capabilities research, inquiries with analysts, and other Gartner research to define their requirements and select solutions that match their needs.

In the course of this research, several key observations emerged from the providers' strategies that should be carefully considered during an organization's ARA strategy formulation and solution selection, including:

- A growing demand to use ARA solutions to:
  - Successfully scale multiple, existing continuous delivery pipelines that currently rely on heavily scripted, extended CI/build orchestration (e.g., Jenkins, Hudson, Ant, TFS, TeamCity, etc.) and CCA tools.
  - Define, automate, orchestrate and manage multiple release pipelines and their supporting toolchains.
  - Provide visibility, orchestration, and management capabilities across multiple container, container orchestration, and container management systems.
  - Comprehensively support, automate, and orchestrate environment management requirements (e.g., automated provisioning, configuration, data management, drift detection, request and availability management, etc.), particularly in support of test automation and quality efforts.
  - Support complex, comprehensive release/service transition management requirements often requiring some level of integration with project and portfolio, change, service, and configuration management systems.
  - Provide a "chain of custody" for all code, all artifacts, and all actions across release activities.
  - Automate and orchestrate the release of COTS applications and their components.
- Average list pricing for ARA solutions continues to drop, due in large part to the continued entrance of new vendors providing ARA capabilities either in whole or in part.
- Several ARA solutions are composed of multiple products, which can enable modular adoption of ARA capabilities, but can likewise complicate expectation management, procurement, implementation, training and ongoing operational maintenance.
- Some ARA vendors have put significant focus on improving their reporting and analysis capabilities in response to demand; however, this remains an area of improvement for most.
- Out-of-the-box integration coverage continues to improve; however, it remains variable across ARA solutions.

- While the use of role definitions to manage access to information, and the ability to create and initiate actions are pervasive across ARA solutions, the use of the role as a frame to optimize team and individual efficiency and effectiveness is minimal.
- Pricing and packaging (capability and units of measure) of ARA solutions vary significantly from vendor to vendor, making comparisons challenging.

Market Overview

Demand for new applications and features delivered at an increasingly faster pace to support business agility continues to drive investment in DevOps initiatives for the foreseeable future (see "Market Trends: DevOps — Not a Market, but a Tool-Centric Philosophy That Supports a Continuous Delivery Value Chain"). In particular, DevOps-ready (ARA and CCA) tools are recognized as providing the enterprise with the capabilities required to manage the application release process consistently (in the form of a "minimally viable process") across the entire life cycle, across hundreds of application pipelines that depend on multiple supporting toolchains that themselves span multiple technology generations, without introducing additional speed-killing complexity.

The tumultuous and transformative nature of enterprise adoption of DevOps has, unsurprisingly, resulted in multiple buying centers for ARA solutions, a trend expected to continue in the near term. It is fair to characterize much of the ARA (and CCA, container and public cloud service) acquisition to date as being a "shadow IT" response to a lack of suitable, consumable resources made available to development/DevOps teams by internal IT operations organizations. Driving this increased buyer diversity in recent months is the growing use of ARA solutions as a common pipeline definition and orchestration service to multiple DevOps toolchains, as well as their growing utilization as a connection point with traditional IT operations management tools and processes (for example, ITSM and APM tools).

In re-examining all activities associated with a particular application's release, many teams find a reliance on inconsistent and often manual methods in all stages (build, test/quality assurance [QA], preproduction and production), spanning code, environments and infrastructure. These efforts can be led by development, operations or combined DevOps teams, so prioritizing where to start a release initiative and, consequently, what specifically to evaluate can vary significantly by enterprise. Therefore, ARA vendors are adding more capabilities and specific integrations to accommodate the three most common, key evaluation requirements: automation, environment modeling and release coordination.

The solutions are typically targeted to replace and/or incorporate a combination of manual processes, homegrown scripts, CCA tools and overextended build/continuous integration systems. The agility and quality benefits of ARA solutions become increasingly obvious as DevOps initiatives scale beyond a handful of applications, and as requirements to interact with or enhance traditional IT resources and operations activities surface. The tools themselves have reached adequate maturity to support the code movement and environmental management of very large implementations (hundreds of applications across thousands of infrastructure elements and the tens of thousands of interdependencies between them). However, tools vary greatly in approach.

Innovation from vendors is still needed for aspects of release coordination (interdependencies, capacity and performance planning, communications, and so on) at scale.

Over the past seven years Gartner has witnessed the ARA market, which initially formed around a handful of small startups that focused on core Java and .NET automation functions, transform into a diverse set of vendors offering at least some significant ARA capability. ARA solutions continue to arrive as new, organic offerings and as extensions of existing product offerings by both new and established vendors. Acquisitions of ARA and adjacent ecosystem technologies continue and are expected to do so in response to emerging technology adoption (containerization and other isolation technologies), increased investment in automation technologies, and evolving customer needs.

Acronym Key and Glossary Terms

Function Platform as a Service (fPaaS)/ Serverless Computing	The term "serverless" is a misnomer; serverless computing models do, in fact, require servers, but the servers are opaque to the consumer. The basis of serverless computing is built around very fine-grained units of the consumer's custom application logic packaged as functions, which are delivered as a service triggered by events. These function services are referred to as "function PaaS" (fPaaS), and they are a subset of serverless computing. Serverless architectures describe applications that are composed entirely of these functions, as well as third-party services and frameworks, thereby greatly reducing the amount of infrastructure being maintained.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Market Guide for Continuous Configuration Automation Tools"

"Hype Cycle for DevOps, 2017"

"Market Trends: DevOps — Not a Market, but a Tool-Centric Philosophy That Supports a Continuous Delivery Value Chain"

"Choosing the Right Tools for Your DevOps Toolchain"

"How to Build a DevOps Release Team"

"How Markets and Vendors Are Evaluated in Gartner Magic Quadrants"

Evidence

The Magic Quadrant is a reflection of a broad-based research effort:

- Over 300 inquiries with Gartner clients inquiring about ARA solutions during the past 18 months.
- Many in-person discussions and other interactions with the vendors within this Magic Quadrant.

- A detailed vendor survey requiring responses to more than 150 questions.
- As part of the Magic Quadrant process, Gartner conducted a survey of organizations using online tools in May 2017 through August 2017. The survey participants were customer references nominated by each of the vendors in this Magic Quadrant. These surveyed customers were asked 53 questions about their experiences with the vendors and their solutions. The results were used in support of the assessment of the ARA solution market. We obtained 87 full responses representing companies headquartered across several different geographic regions.
- A live product demonstration from each of the 13 participating Magic Quadrant vendors, where each was requested to demonstrate its ability to support specific functions (more detail is available in "Critical Capabilities for Application Release Automation").
- Other data and insight gathered via publicly available means.

Evaluation Criteria Definitions

Ability to Execute

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

Overall Viability: 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/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 website, 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.

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