Magic Quadrant for On-Premises Application Integration Suites

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VIEW SUMMARY

Enterprises need application integration functionality that supports a variety of integration patterns using a spectrum of approaches, from systematic to adaptive. We examine vendors with on-premises products that address the resulting wide range of integration use cases.

Market Definition/Description

This document was revised on 30 July 2014. The document you are viewing is the corrected version. For more information, see the Corrections page on gartner.com.

Application integration is defined as making independently designed applications work together. In 2008, Gartner published a seminal paper (see "Understanding the Three Patterns of Application Integration") identifying three integration patterns:

Data consistency — The objective of application and data integration is making data across all applications consistent. For example, if a customer changes a billing address in a CRM application, that changed data is pushed out to other applications (such as accounting, billing and ERP) so those applications can update their databases with the new data.

Multistep process — This entails orchestrating the execution of a sequence of business process activities, regardless of whether these activities are performed by software (applications or services), humans or intelligent devices, such as a printer or a programmable logic controller. Comprehensive support for multistep process integration involves supporting multiple styles of business integration, including system-to-system, collaborative, document-centric and administrative.

Composite application — This creates what appears to be a single application, purpose-built from the ground up to address user requirements. When examining the deployment of the application, users will find components, both business logic and data, that are part of existing production applications.

Initially, these integration patterns were applied for internal, application-to-application (A2A) integration and for integrating an organization's applications with those of its trading partners — that is, B2B integration. Today, the patterns are applied to a broader array of application integration projects:

Synchronizing data in SaaS applications with on-premises applications (for example, synchronizing customer data in a cloud-based CRM application with customer information in an on-premises ERP system)

Extending data in on-premises applications with data obtained from operational technologies and the Internet of Things (IoT) to address a broad range of objectives, from marketing to operational business intelligence

Supporting the incorporation of cloud services into new compositions — that is, cloud service integration

Creating new compositions using mobile apps and on-premises back-end services that enable new customer relationships and empower customers to interact with your enterprise in new ways, thereby creating new opportunities

Supporting the deployment of multienterprise processes that bring new efficiencies and cost savings upstream in supply chain management (SCM), and downstream to warehouse management and third-party logistics activities

In 2011, Gartner introduced the concept of Nexus of Forces driven by:

Social computing, which changed the behavior of customers and employees.

Mobile computing, which gives organizations new ways to access applications and data, act as a platform for social computing and provide a new platform for information.

Cloud computing, which provides new styles of delivery and acts as a platform for social computing, mobile computing and information.

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

Information, often in the form of big data, provides context for social, mobile and cloud computing.

The interaction of Nexus of Forces with one another amplifies the effect of the forces taken individually, which is what makes the Nexus of Forces so impactful to integration.

Today, digital business is driven by the interrelation of people, business and things. In 2012, a CEO of a large multinational enterprise stated that the ability to marry real-time customer data with real-time performance data of the company's products is "the Holy Grail in our business."

The challenge is that there will be 30 billion devices in the IoT by 2020, according to Gartner research (see "What the Board of Directors Needs to Know About Digital Business"). These devices will introduce new modes of interaction among users, adding to the infrastructure and integration requirements of enterprises.

Magic Quadrant

Figure 1. Magic Quadrant for On-Premises Application Integration Suites

Source: Gartner (July 2014)

Vendor Strengths and Cautions

Adeptia

Adeptia is not as widely known as the Leaders in this Magic Quadrant. It has been offering application integration technology since 2003, and has grown organically, maintaining a single-package concept. Adeptia Integration Suite (AIS) 6.2 supports multiple integration project types — including A2A, service-oriented architecture (SOA), B2B, business process management (BPM) and data management — that can be incorporated into a package requiring only one installation.

The feature set is founded on an enterprise service bus (ESB) and supports data mapping, process design and execution (orchestration), all within a single code base. The platform is designed to support all integration patterns (data consistency, multistep process and composite application integration) found in A2A, B2B and cloud-to-on-premises integration project types. Its features are enabled via keys as the necessary licenses are procured. AIS stores its metadata using a single repository, which also supports collaboration. However, Adeptia has limited support for mobile integration and lacks comprehensive plans for integrating with devices.

With more than 430 customers, Adeptia is used across a range of verticals, including healthcare (UnitedHealthcare), mobile devices (Nokia) and investment banking (MassMutual). A factor that significantly contributed to this growth is that Adeptia offers multiple consumption models, including commercial software licenses, subscription, hosted services and cloud-hosted integration services.

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.

Strengths

Adeptia provides a comprehensive, integrated and feature-rich application infrastructure suite with leading technologies to support systematic application integration, SOA infrastructure requirements and BPM technology. Its entire set of features is implemented in a single code base eliminating the need for costly integration activities.

Adeptia offers a large variety of consumption models: commercially licensed software, enterprise licensing, subscription-based pricing for on-premises deployments, managed services and cloud hosted models, including infrastructure as a service (IaaS) and platform as a service (PaaS). This establishes an advantage for Adeptia, as more than 50% of its target audience has adopted integration technology. Adeptia uses pricing effectively, making its products attractive increasingly to conservative large businesses, as well as small or midsize businesses (SMBs).

Adeptia grew 21% during 2013, when some leading vendors grew less than 5%.

Adeptia is revamping its marketing with the message that integration technology must support both business and IT. Its initial offering, Adeptia Connect, has a user experience similar to that of a social Web property (e.g., TweetDeck).

Cautions

Adeptia's greatest challenge is gaining visibility in a market where the incumbent Leaders have huge sales and marketing budgets.

Adeptia currently lacks functionality to address some upcoming types of integration projects. For example, its basic API management capabilities provide only limited support for mobile app integration.

Adeptia lacks comprehensive plans for supporting the integration of devices that can be located on-premises (e.g., programmable logic controllers, RFID sensors) or accessed via the IoT (e.g., smart alarm systems, refrigerators, automobiles).

Adeptia offers adapters to endpoints, such as salesforce.com and Microsoft Dynamics CRM, and has partnered with RSSBus for an additional 20 cloud adapters. However, this combined portfolio is more limited than several competing vendors' offerings.

Axway

Axway's technology portfolio has been assembled through internal development and several successful acquisitions. Example products for systematic application integration projects are Axway B2Bi 2.0, Axway API Gateway 7.3, Axway ProcessManager 2.3, Axway Transfer CFT 3.1, Axway PassPort 4.6.0 and Axway Sentinel 4.0.1. These products have been adopted in industries such as automotive, pharmaceutical, logistics, the public sector, financial services and healthcare.

Axway's products and services focus on helping customers connect, manage and optimize data flows across the enterprise, to B2B communities, and to cloud and mobile devices. The Axway product portfolio and solutions address B2B, integration and managed file transfers (MFTs). Axway API Gateway supports SOA governance and API management. It has advanced its use to govern data flows, regardless of the type of integration that is executed.

Axway is experiencing growing pressure from competing megavendors, proliferating integration platform as a service (iPaaS) offerings and smaller specialists (such as Extol International and Adeptia) that are pursuing B2B use cases at a lower price point. Other Leaders are responding to this situation with iPaaS, because its costs are based on resource consumption. Axway's strategy remains that of creating differentiating functionality focused on application services governance.

Strengths

With $332.5 million revenue in 2013, Axway has sufficient revenue to separate it from Visionaries. Moreover, its growth of 10.8% in 2013 is more than the large integration vendors (IBM, Oracle, Software AG, Tibco Software and Microsoft). Axway's brand awareness is strongest in Europe and the U.S.

Axway has strong B2B gateway, API management and MFT capabilities, which are available as on-premises software and hosted offerings.

Founded on its API management functionality, Axway's strategy is valuable and unique. The company helps customers connect, manage and optimize data flows across the enterprise, to B2B communities, and to cloud and mobile devices.

Axway offers mature and widely adopted technology for file-based integration projects.

Cautions

Axway is experiencing growing pressure from megavendors, proliferating iPaaS offerings and smaller specialists pursuing B2B use cases at low price points. While other Leaders are responding to this situation with iPaaS, Axway's strategy remains that of creating differentiating functionality.

Axway API Gateway contains ESB suite functionality. However, Axway's marketing does not advertise its ESB capabilities. This puts it behind other ESB suite providers when a prospective customer requires technology for near-real-time, low-latency A2A integration projects.

Awareness of the Axway brand, as well as third-party resources for professional services, is limited outside the U.S. and EMEA. Awareness could potentially improve since Axway recently opened offices in Melbourne, Australia, and Sao Paulo, Brazil.

Fiorano Software

Founded in 1995, Fiorano Software (referred to as Fiorano) was one of the first vendors to offer an

ESB product. Its application integration products include Fiorano SOA Platform 10.1, FioranoMQ 10.0, Fiorano API Management 10.1, Fiorano B2B 10.1 and Fiorano Adapters.

Fiorano's ESB is architected to be deployed as a set of peer servers that are monitored and managed by a central Fiorano ESB Enterprise Server. This architecture enables services to communicate directly with each other, resulting in an efficient, facilitated peer-to-peer architecture without going through a central hub. The facilitated peer-to-peer architecture makes it particularly well-suited for the integration of real-time systems. The U.S. Coast Guard Spill Planning, Exercise and Response System (SPEARS) project used it to integrate applications and to integrate data from a wider range of devices, including aircraft transponders, radar, sonobuoys and satellites.

Fiorano offers compatibility with diverse OSs and application servers. It connects natively to applications developed using a number of programming styles, including Java, C++ and .NET. It requires only the availability of Java Runtime Environment (JRE) 1.6 or later as a runtime container.

Fiorano's highly productive development process — i.e., what is specified graphically is exactly what is executed — provides adopters with the advantage of a single technology that can support systematic and adaptive integration projects.

Strengths

- Fiorano is one of the earliest ESB vendors. Fiorano-facilitated peer-to-peer architecture makes it well-suited for the integration of real-time systems (e.g., transponders, radar sonobuoys and satellites) and specialized use cases for integrating devices from the IoT.
- Fiorano offers a unique and highly productive interface development process. The graphical specification is exactly what is executed, which makes it usable for developers who are not integration specialists.
- The vendor has a proven, scalable and reliable message-based integration platform that can be used on-premises or as the Fiorano Cloud Platform, a cloud-hosted (but not iPaaS) offering. As a cloud-hosted service, Fiorano Cloud Platform enables cloud service integration.
- Fiorano can address a broad range of use cases, including integrating applications (simple to high end) and sophisticated SOA (including event-driven architecture [EDA]), on-premises and cloud-based applications or services, and operational technologies (system integration). This enables it to target large enterprises with complex interface requirements. SMBs increasingly adopt Fiorano because of its ability to connect natively to .NET applications, a significantly low list price and ease of use.

Cautions

- Fiorano has top-rated technology, but, after almost 20 year in business, it has a limited number of clients. The vendor has a small sales staff and relatively low market visibility.
- Because Fiorano is a small business (less than 500 people), it likely will encounter challenges in attracting small, risk-averse technology adopters.
- Fiorano SOA Platform has API management, but its features are not as comprehensive as those provided by vendors with more mature implementations.
- The Fiorano B2B offering is relatively new, has been adopted by fewer enterprises than B2B gateway software from other providers, and has not yet demonstrated the ability to scale to a large number (millions) of B2B interactions per day. It does not use MFT technology, which delivers documents reliably, one-time only, to external endpoints, and lacks some benefits of MFT, such as end-to-end visibility into B2B interactions.

Fujitsu

Fujitsu's application integration product family includes Interstage Service Integrator 9.5.1, Interstage Host Access Service 10.0.1 (SOA adapter to Fujitsu mainframe), Interstage Information Integrator 11.0.1, Interstage Interaction Manager 10.1.0 (Web development/integration), and Interstage Information Quality 10.2.0 (data quality).

Fujitsu extends its Interstage application integration platform with products such as Interstage AR Processing Server (augmented reality), Interstage Big Data Complex Event Processing Server 1.1.0, and in-memory computing technologies Interstage eXtreme Transaction Processing Server 1.1.0 and Interstage Teracotta 4.0.1, which support integration scenarios requiring extreme speed. Fujitsu is updating the user experience of its portfolio to address systematic and adaptive (bimodal) development approaches by incorporating offerings such as RunMyProcess.

Fujitsu's integration products have been adopted by many industry segments, including financial, telecom, public sectors (e.g., social Web infrastructure) and manufacturing, which demand high performance, reliability and availability.

Fujitsu has two distinctive go-to-market strategies for its Interstage business: (1) Leverage system integration business, in which Fujitsu has the best track record in Japan, to address new market segments requiring innovation and agility such as the game industry; and (2) Focus on prepackaged solutions to leverage its presence as a hardware provider outside Japan.

Strengths

- Fujitsu Interstage Service Integrator is a mission-critical, proven ESB, which is one of the key products supporting Fujitsu's (approximately) $31 billion technology solution business (system platform, hardware, sourcing and system integration services).
- Fujitsu offers a broad spectrum of Interstage integration capabilities, including applications, data, cloud, mobile and machine-to-machine integration which can be applied to address requirements from Nexus of Forces projects (mobile, cloud, information, social) and IoT.

Fujitsu Interstage has established its reputation in demanding, large-scale mission-critical use scenarios with thousands of large-enterprise customers that are a part of an installed base in more than 40 major countries.

In its Innovation Centers in the U.S. and the U.K., Fujitsu has demonstrated coupling its integration technology with Interstage AR Processing Server to connect mobile devices, cameras and apps with back-end end systems to support the movement of structured and unstructured content. This has resulted in multiple million dollar sales.

Cautions

Most of Fujitsu's Interstage initiatives and products are first released in Japan, where most of the resulting revenue comes from. Consequently, its brand recognition and installed base outside Japan are still developing.

Fujitsu provides multiple products that support on-premises and cloud integration projects, but the integration of those offerings at the product and metadata management levels is not smooth.

Fujitsu's API management offering is under development, making it late to market; its features seem to be basic and miss the vision of an API ecosystem and marketplace.

Fujitsu's Interstage business depends on its system integration business in Japan. This makes it difficult for the vendor to develop an innovative vision of Interstage and to demonstrate its capability outside Japan.

IBM

IBM has been a player in the application integration middleware market since the early 1990s, when it introduced IBM MQSeries (now IBM WebSphere MQ) message-oriented middleware (MOM). The company has been expanding its offerings in the application integration suite market through acquisitions (e.g., Ascential Software, Cast Iron, DataPower and Sterling Commerce) and by internal development, including WebSphere Application Server, IBM Integration Bus (formerly WebSphere Message Broker), and WebSphere Service Registry and Repository.

During 2013, IBM added API Management to its product line to support an increasing volume of transactions taking place on mobile and in the cloud. IBM updated products to provide deeper insights with offerings that can be assembled into a platform for intelligent business operations.

IBM's products relevant in the on-premises application integration suite market are WebSphere Transformation Extender 8.4, Sterling Connect:Direct 5.1.1, Rational Asset Manager 7.5.1.1, Sterling B2B Integrator 5.2.4, WebSphere Application Server 8.5, IBM Business Monitor 8.0.1, WebSphere MQ 7.5, PureApplication Systems 1.1. Other products are API Management 2.0; WebSphere Cast Iron Cloud Integration as a cloud service, virtual appliance and hardware appliance, 7.0; WebSphere DataPower Appliances XG45, XI52, XB62, hardware and virtual editions, 6.0.1; IBM Integration Bus 9.1; and WebSphere Service Registry and Repository 8.5.

Strengths

IBM has brand recognition, global reach and market share in key application infrastructure middleware segments. It has mind share, and a large and loyal installed base of hardware and software products leveraged for IBM sales to support application integration projects.

The company has a comprehensive product line, including market-leading offerings in MOM, ESB, MFT and application integration and middleware (AIM) appliances, as well as strong contenders in B2B gateways, cloud integration and application service governance. When combined with IBM's partner program, which provides a range of consulting and professional services, IBM demonstrates it has the technology and the expertise to meet almost any large integration challenge.

A wealth of marketing initiatives and vertical and horizontal solutions (e.g., Smarter Cities, Smarter Commerce, Smarter Oil and Gas, and Smarter Banking) containing process templates and integration frameworks are driving adoption of IBM's application infrastructure products within a variety of use cases, including application integration projects.

At Impact, the annual user conference, IBM emphasized its focus on the composable business and cloud, with integration services for IBM Bluemix being a key building block in connecting everything together. IBM is committing substantial resources for delivering products that support its vision for integration.

Cautions

The implementation of large-scale application integration projects may require many IBM products. (Gartner considered 12 products when assessing IBM. Most organization will use approximately half that number of products.) The total cost of the set necessary for a client's projects can be expensive and may require a significant number of professional services to get the multiple products up and running, configured and working together to address the user organization's requirements.

The pace of IBM's acquisitions in the application infrastructure space continuously presents IBM with product rationalization and positioning challenges. These challenges could expose users to product discontinuity or migration problems when using some of the noncore products, such as the recent move away from WebSphere ESB.

Despite plans to simplify the ESB product portfolio, IBM still offers a variety of products with some overlapping features. For example, there are some integration scenarios that can be fulfilled by using IBM Integration Bus, WebSphere Cast Iron, WebSphere Transformation Extender or the WebSphere DataPower XI52/XB62 in isolation or in combination. This makes it difficult for potential users to determine which products will best suit their requirements.

While IBM has a capable product family for almost every integration need, the products are sufficiently complex that (excluding WebSphere Cast Iron) they are not best-suited for adaptive integration or citizen integrator approaches.

Infor

Infor is primarily a provider of packaged and SaaS business applications. The company entered the on-premises integration platform suite market in February 2011, with the release of the Infor Intelligent Open Network (ION) platform founded on ION Connect, an event-based ESB technology. In ION, every business event is normalized as a canonical object. ION's primary goal is to enable plug-and-play interoperability across Infor's packaged applications and SaaS offering. However, it is often used to integrate with third-party software products and cloud services.

During the past three years, the ION platform has been extended in functionality to include workflow capability and event management (ION Process), a real-time event repository (ION Business Vault), a B2B software gateway (ION Connect 3P), an elastic scaling and multitenant foundation (ION Grid), a metadata repository (ION Registry), technology and packaged application adapters, and an adapter development toolkit. ION Desk is the unified modeling, development, monitoring and management tool for the platform. Infor plans to make ION available as an iPaaS (ION Cloud Edition) in 3Q14. The Infor10 Motion extends ION with a mobile-enabling platform. A variety of Infor-provided mobile apps leverage Infor10 Motion, but the product's functionality is only partially available to clients and partners.

The evaluation of Infor in this Magic Quadrant is based on ION v.11.1 released in February 2014.

Strengths

Despite being in the market for a relatively short time (less than three years), the ION product has accumulated a notable installed base of approximately 2,000 clients in North America (over 60% of the company's customers), EMEA (around 30%) and Asia/Pacific (10%). Midsize and large organizations use the product to integrate Infor cloud-based and on-premises applications with each other and with third-party applications.

ION is based on an original EDA that supports rapid integration between Infor applications and provides detailed visibility of end-to-end (in flight and completed) business processes. The business events dispatched through ION can be stored in an event repository (the Business Vault), which can be utilized for analytics or to retrieve past events. ION provides RESTful/JavaScript Object Notation (JSON) interfaces (ION Pulse APIs) that applications can use to publish and receive events. The core event-based architecture is extended with SOAP and REST connectivity, workflow, event management and prepackaged integration with Infor's applications and social networking environment (Infor Ming.le).

Reference clients cite ease of use, reliability, low cost and rapid, plug-and-play integration of Infor applications as some of the ION's strengths.

In addition to releasing ION Cloud Edition, Infor's road map for ION includes the introduction of a rich set of APIs and API management capabilities to expand mobile app integration capabilities, further integration between Infor ION and Infor Ming.le, operational intelligence support, and the availability of prepackaged integration processes as cloud services.

Cautions

Despite its open, standards-based architecture, ION primarily attracts Infor application clients that need to integrate and automate business processes spanning multiple Infor, and possibly some non-Infor, applications. The strong focus of this type of scenario makes it scarcely appealing for organizations with a zero or minimal Infor footprint in their application portfolios.

Most ION public references and ION clients Gartner spoke with are midsize organizations, often integrating a relatively small number of applications (less than 10) and managing relatively low volumes of daily business events (tens of thousands). Therefore, the platform's ability to support large-scale use cases is yet to be fully proven.

ION provides a mapping capability that can support translation from XML to/from some electronic data interchange (EDI) formats (e.g., Electronic Data Interchange for Administration, Commerce and Transportation [EDIFACT] and ANSI X11). Clients needing to extend the ION-capabilities to other forms of EDI-based integration are supported via a third-party specialized partner (Trubiquity).

The company's road map for ION lags leading competitors in areas such as advanced support for mobile app integration (e.g., database replication, Web streaming), in-memory computing enablement, MFT, advanced B2B capabilities (e.g., trading-partner community management) and IoT integration.

InterSystems

InterSystems is a privately owned company offering application infrastructure and packaged applications. It is a leader in the healthcare application infrastructure and integration markets, where it demonstrates market-leading insight and execution. Its application and data integration capabilities are provided by InterSystems Ensemble (launched in 2003), its collection of prebuilt integration adapters and its adapter development framework. InterSystems Ensemble v.2014.1 is an integrated application development, deployment, composition and integration platform built on the vendor's Caché object and relational database. InterSystems Ensemble is available as a hosted service on Amazon Web Services (AWS).

InterSystems HealthShare builds on InterSystems Ensemble, and provides specialized application integration and analytics capabilities for the healthcare industry. The company claims to have more than 1,500 customers, of which the significant majority is in the healthcare industry.

InterSystems is a steady and strong player in a niche market. Its investment in key application functionality for healthcare customers, in an industry that is undergoing some dramatic changes, indicates the company's insight and ability to execute in that market. However, InterSystems' effort to expand beyond the healthcare industry and build generally recognized brand name and market share have had limited success, despite multiple years of efforts. A new company investment in this initiative is expected.

Strengths

- InterSystems has a well-integrated technology suite with some advanced capabilities, including a dual-mode (object-oriented and relational) database (Caché), an internal architecture based on event processing on the InterSystems Ensemble platform, a large collection of application and protocol adapters (especially rich for the healthcare industry), multilayer business process orchestration tools, and increasingly sophisticated business analytics (InterSystems DeepSee and iKnow).
- Name recognition in the healthcare industry as an integration technology provider (InterSystems Ensemble), as well as advanced support of healthcare industry integration standards and protocols, enables InterSystems to compete effectively against the software industry megavendors, such as IBM, Oracle and Microsoft.
- InterSystems' formidable presence in the healthcare industry is based on a profitable private business with no debt, and a growing worldwide presence and large number of independent software vendor (ISV) partners. Its offerings for electronic health record exchange — InterSystems HealthShare and InterSystems TrakCare — maintain the vendor's vertical industry leadership as the worldwide healthcare industry undergoes continuous strategic changes.

Cautions

- Despite a multiyear effort, InterSystems experiences limited adoption as an application integration platform provider outside the healthcare market. This, combined with a minimal presence in and influence on industry trends, consortia and standards initiatives (outside healthcare), has limited the vendor to being a Niche Player in the overall application infrastructure market.
- The company is relatively slow in responding to the general market trends: It has no support for MFT, API management, social, private cloud or IoT technologies and only basic support of cloud and mobile application integration (although the continuing investment in business analytics is a notable exception driven by the demand for greater contextual awareness in healthcare decisions).
- InterSystems Ensemble is unavailable as iPaaS, but is available on AWS as a hosted offering. InterSystems Ensemble is not a cloud-enabled product: It does not provide self-service management, is not designed for elastic sharing of resources and does not take advantage of AWS auto-scaling. The longer the company delays updating InterSystems Ensemble to support private and public cloud, the more it will see more customers migrate to third-party cloud-native integration solutions.
- The proprietary internal architecture of InterSystems Ensemble and Caché makes it difficult to natively integrate acquired technologies beyond simple API-based interoperability. This limits the company's ability to rapidly grow through acquisition. Relying on internal organic growth to compete in the general market may be a slow and expensive strategy.

Microsoft

Microsoft's primary integration offerings include BizTalk Server 2013 R2 for on-premises integration, and Microsoft Azure BizTalk Services and Microsoft Azure Service Bus for integration hosted in the Microsoft Azure cloud platform. BizTalk Server has the largest customer base of any commercial offering (excluding unsupported open-source software [OSS] offerings).

With BizTalk Server 2013 R2, Microsoft has switched to a per-core licensing model, which requires that a minimum of four cores be purchased for a production server. The product continues to be tightly integrated with Visual Studio and Team Foundation Server. Microsoft has declared its intention to support the hosting of interfaces developed using BizTalk Server to its BizTalk Services offering. BizTalk Server 2013 R2 incorporates Microsoft's BizTalk ESB Toolkit, which had been provided as a separate, but free-of-charge, offering.

With BizTalk Services, Microsoft is investing heavily in cloud integration capabilities. It plans to evolve BizTalk Services to include features comparable with BizTalk Server, such as data transformation, orchestration, a business rule engine and business activity monitoring. Until BizTalk Server and BizTalk Services are functionally at parity and it has been demonstrated that a BizTalk Server interface will execute on BizTalk Services, Microsoft customers will increasingly have to decide whether to implement interfaces on BizTalk Server or BizTalk Services and Azure Service Bus.

Strengths

- Microsoft estimates that BizTalk Server has more than 12,000 integration customer deployments worldwide. This installed base has resulted in the broad availability of service providers and consultants with BizTalk Server skills, as well as a thriving market for BizTalk Server add-ins, such as BizTalk360 (a tool frequently adopted to provide more efficient monitoring and management of BizTalk Server).
- BizTalk Server makes extensive use of the programming model, which enables .NET developers to adapt to BizTalk Server's approach to developing interfaces. This results in a large pool of developers from which organizations can draw to support the development, operation and maintenance of BizTalk Server interfaces.

Microsoft uses price as a competitive advantage for its current SOA infrastructure offerings: BizTalk Server and BizTalk Server hosted on Microsoft Azure. The .NET framework and AppFabric are provided at no additional cost as part of Windows environments.

Microsoft continues to provide, to the greatest extent possible, portability of BizTalk Server interfaces to BizTalk Services.

Cautions

Microsoft is expanding BizTalk Services with releases of new features approximately every two months. However, the current BizTalk Services will not support many of the BizTalk Server features embedded in interface flows, which could potentially impact the long-term viability of investments that customers have made in BizTalk Server.

Microsoft's cloud-first strategy is resulting in functionality supporting initiatives such as mobile app integration and the integration of devices in the IoT added to Azure (e.g., Azure Mobile Services). BizTalk Server users pursuing such initiatives should plan on implementing a hybrid platform containing BizTalk Server and Azure services.

The growing maturity and adoption of OSS application integration offerings, available for free (but with support and maintenance subscription costs) likely will attract customers that previously would have chosen BizTalk Server because of its CPU-based licensing.

MuleSoft

MuleSoft is a venture-capital-funded OSS company that provides software subscriptions and cloud services (e.g., iPaaS, built on the open-source Mule technology). Driven by its customers and ecosystem, MuleSoft has organized its extensive portfolio of features into three platforms: Anypoint Platform for SOA, Anypoint Platform for SaaS Integration and Anypoint Platform for APIs. Depending on the platform, the features may include Mule ESB, Anypoint Studio, Anypoint DataMapper, Anypoint Connectors (adapters), Mule Enterprise Management, Mule Business Event Analyzer, Anypoint Enterprise Security, Anypoint Service Registry, Mule BPM, Mule APIkit and Mule Rules Engine. Anypoint Platform for SaaS requires Gold support, and high availability and clustering requires Platinum support.

MuleSoft competes in a market where many vendors offer classically licensed commercial software products requiring capital expenditure. In response to this state of affairs, MuleSoft pursues an open-core, commercial open-source model. The core ESB is an open-source-community product. MuleSoft sells license subscriptions to its Anypoint Platform products.

One of the early OSS ESB providers, MuleSoft has evolved its offerings to focus on supporting integration, regardless of whether the applications are hosted on-premises or in the cloud. However, many offerings (e.g., adapters) are oriented toward supporting integration involving cloud-based resources.

Strengths

The vendor has over 3 million downloads, production deployments in 4,100 organizations and 850 supported customers worldwide, with a growing number of references using Mule ESB in mission-critical deployments.

Anypoint Studio, MuleSoft's integrated development environment (IDE), offers graphical and code-level views of integration logic that remain synchronized, regardless of where changes are made. Anypoint Studio integrates with Maven to manage metadata for A2A, B2B, cloud-to-on-premises and cloud-to-cloud integration.

MuleSoft is focused on supporting cloud-based integration. Two-thirds of its more than 120 adapters use cloud-based resources.

MuleSoft has leveraged its venture capital funding to differentiate it from competitors. It is particularly adept at capitalizing on the Web, often appearing in articles identified by Google alerts and in Google click-through ads.

Cautions

MuleSoft's offerings compete with other vendors' open-core offerings, and commercial products with feature sets that include MFT capabilities, and more comprehensive BPM and business rule management offerings. Thus, some OSS consumers might consider other OSS offerings that provide this functionality.

MuleSoft's support of data integration is currently limited. It supports transformation, batch scheduling and data synchronization, and the movement of data to and connectivity with big data stores, such as Apache Hadoop, MongoDB and Cassandra. However, it lacks critical features, such as data modeling and the capture of metadata, data profiling and quality, data federation/virtualization, and high availability and disaster recovery of data. Thus, some OSS consumers might consider other OSS providers with more comprehensive data integration suites.

MuleSoft lacks extensive B2B integration features, such as trading-partner management, connection self-provisioning and a portal that enables trading partners with limited IT skills to input transaction data as an alternative to sending EDI documents, for example.

MuleSoft supports Message Queue Telemetry Transport (MQTT), Advanced Message Queuing Protocol (AMQP) and Object Management Group Data Distribution Service (OMG DDS) needed for integrating with devices in the IoT. It has not yet addressed the complex processing of events from those devices or the real-time analytics needed to support operational business intelligence.

Oracle

Oracle's application infrastructure middleware offering — Oracle Fusion Middleware (OFM) — has been evolving through internal development and acquisitions. Since the acquisition of Sun Microsystems in 2010, Oracle owns the intellectual property of the key Java technology set. Oracle sells OFM as a set of stand-alone products and product suites, but elements of the stack are also leveraged as enablers for its packaged application business, public cloud initiative (Oracle Cloud) and Oracle Engineered Systems offerings.

Primary in OFM's support of application integration is Oracle SOA Suite (Oracle Service Bus, Oracle BPEL Process Manager, Oracle Business Rules, Oracle B2B, Oracle JDeveloper and other components). SOA Suite supports Oracle Service Registry and Oracle Enterprise Repository for application service governance, and Oracle Enterprise Manager for administration, monitoring, management and governance.

The evaluation of Oracle for this Magic Quadrant considers the current OFM 11g and OFM 12c versions of the products. WebLogic Server and Oracle Coherence 12c have been available since early 2012. Oracle SOA Suite 12c, Oracle BPM Suite 12c and Oracle JDeveloper 12c were released in June 2014.

Strengths

With approximately $3.3 billion in product licenses and maintenance revenue in 2013, Oracle is the second-largest application infrastructure middleware vendor in the market, according to Gartner market share data. Organizations worldwide in many vertical industries have successfully deployed combinations of OFM products, in a large number of cases to support large and business-critical application integration and SOA scenarios. These projects involve Oracle's packaged applications, as well as non-Oracle-centric applications.

OFM provides a comprehensive, integrated (a common development toolset, management environment, metadata services and runtime platform) and feature-rich application infrastructure offering, complemented by Oracle's data integration technology (sold separately). Oracle SOA Suite provides leading technologies to support a wide range of application integration and SOA infrastructure requirements.

Reference clients cite the comprehensiveness of the platform, its ability to support a wide range of use cases, reliability, stability, performance (especially in combination with the Oracle Exalogic integrated system), ample support for technology standards, and the high level of integration with many acquired components as strengths for the Oracle SOA Suite.

Oracle's 12-month road map for OFM addresses key application integration technologies (e.g., enhanced mapping, a new MFT capability, REST/JSON support, Web sockets, big data connectivity, API management), emerging requirements (e.g., cloud service integration via support for popular Oracle and non-Oracle SaaS applications), delivery models (public cloud and integrated systems) and advanced quality of service (QoS) — zero downtime patching, fast failover, and improved in-memory enablement via Coherence. A significant part of these new capabilities is available in Oracle SOA Suite 12c.

Cautions

Oracle SOA Suite 11g clients mention challenges due to long and cumbersome installation and setup processes, often requiring specialized skills, as well as complexity in monitoring, management and problem determination.

Many reference clients said Oracle was a difficult vendor to deal with from a commercial perspective; some large and loyal OFM users continue to report dissatisfaction with Oracle's standard support.

Although it incorporates some API management capabilities in the Oracle Mobile Platform, the company lags other vendors in this hot new area.

Oracle's growing number of B2B integration vertical offerings (e.g., healthcare, SCM, travel and transportation) will increase the company's ability to compete against B2B specialists and other application integration middleware providers. Nonetheless, Oracle hasn't reached the same market awareness and momentum of the incumbent B2B players in these markets.

Red Hat

In September 2012, Red Hat acquired FuseSource, an OSS ESB provider, from Progress Software. The products are based on Apache offerings ServiceMix, ActiveMQ, Camel and CXF. Red Hat released v.6 of Red Hat JBoss Fuse and Red Hat JBoss A-MQ in April 2013, and v.6.0 of Red Hat JBoss Fuse Service Works in February 2014, which added service orchestration (jBPM and RiftSaw), rules processing (Drools), a structured service framework and visual tools (SwitchYard), service life cycle management (Overlord Design Time Governance [DTGov]) and business transaction monitoring capabilities (Overlord Runtime Governance [RTGov]).

While Red Hat has had integration capabilities since the incorporation of JBoss ESB in the JBoss SOA suite (the predecessor of JBoss Enterprise SOA Platform), it has only recently shifted its marketing and sales focus to being an integration vendor as well. Red Hat's drive to be a major player in the IaaS and PaaS markets has helped it shift focus, although it is still seen as developer-centric. Red Hat's strategy is to provide a number of PaaS solutions (e.g., application, integration, BPM and mobile) for cloud and on-premises deployment models. When combined with Red Hat's marketing focus to accelerate application development and performance, integrate applications, services and data, and automate business processes and decisions, Red Hat has the potential to provide a powerful on-premises integration suite that complements its application development/deployment and BPM offerings.

Strengths

JBoss Fuse offers a solid foundation of OSS application integration components (including

Apache ActiveMQ, Camel and CXF), which are extended with management, monitoring and governance capabilities and an IDE. The JBoss middleware portfolio extends these with a broad array of complimentary offerings, including JBoss Enterprise Application Platform, JBoss Data Grid, JBoss Portal Platform, JBoss Enterprise BRMS and BPM Suite, JBoss Enterprise Data Virtualization and Red Hat OpenShift.

The broad acceptance of the JBoss Enterprise Application Platform, based on the JBoss Application Server, across most verticals and geographies, as well as its commitment to be fully open source, has a strong and growing appeal for many IT organizations, including governments.

The Red Hat engineers are prolific contributors to Apache communities that create and extend the integration offerings (e.g., Apache Camel, Karaf, CXF, ActiveMQ). This ensures that they understand the technologies and are able to provide excellent support.

With Red Hat already providing solutions such as Red Hat Enterprise Virtualization and Red Hat OpenShift that focus on large-scale deployments and cloud computing, the company has shown it understands iPaaS, putting it in a strong position for the next generation of self-service application and integration middleware.

Cautions

Organizations that use Red Hat JBoss Enterprise SOA Platform will have to migrate to Red Hat JBoss Fuse platforms to take advantage of the latest integration capabilities, which will be the focus of Red Hat development, or move to another vendor's platform.

The initial JBoss Fuse offerings are targeted toward technical developers and are more difficult to use than HTML5-based offerings from competing providers.

Red Hat is more well-known for RHEL and Fedora Linux distributions and JBoss Enterprise Application Platform, than for its integration products. As a result, it generally isn't one of the first names that appear on RFP shortlists for integration projects. Red Hat has changed its marketing to address awareness of its integration capabilities, but still has some way to go.

The adapters offered by Red Hat are primarily technical in nature (e.g., DBMSs and MOM). However, it partners with GT Software for mainframe adapters, SAP for SAP integration solutions, and others for industry-specific adapters. Red Hat is creating adapters in the Apache Camel community, but is a little behind some of the other vendors in this space.

SAP

SAP on-premises integration platform capabilities consist of several products in the SAP NetWeaver product family. The most relevant products are SAP Process Orchestration (SAP PO) 7.4 and SAP Gateway 2.08. SAP PO incorporates the former SAP NetWeaver Process Integration and SAP NetWeaver BPM products and provides ESB, application services governance, orchestration and B2B integration capabilities. SAP Gateway primarily supports integration of mobile apps with SAP back-end applications via the REST/Open Data (OData) protocol. SAP PO went through a major architectural refresh in v.7.31 when the product was moved on top of a Java foundation. Previously, SAP PO required users to deploy a Java application server and the SAP Basis/Advanced Business Application Programming (ABAP) stack (SAP's proprietary application platform/programming language). SAP Gateway currently only deploys on the Basis/ABAP stack.

SAP technologies are available as stand-alone products, but are often embedded in, or prerequisites for, several other SAP offerings. For example, SAP PO deployment is required to support SAP master data management (MDM). When consuming SAP PO and SAP Gateway for SAP-to-SAP integration, clients do not need to pay a license for the products. However, they need to pay for a license when using the products for non-SAP applications.

SAP's on-premises integration platform products are sold worldwide through the company's direct sales organization, typically to organizations that have a significant number of SAP packaged applications. Consequently, SAP PO and SAP Gateway penetration in geographies and verticals reflects adoption of SAP's packaged applications.

Strengths

SAP on-premises integration platform technology accounts for a massive installed-base — more than 6,000 clients for SAP PO and its predecessors (SAP Process Integration [PI] and SAP eXchange Infrastructure [XI]), and more than 9,000 for SAP Gateway. SAP application customers use the technology to support use cases ranging from medium scale and complexity, to large-scale and business-critical scenarios involving a variety of SAP and non-SAP applications and/or large communities of partners.

SAP PO provides a wide and mature range of classic A2A and B2B integration capabilities extended with a rich portfolio of prepackaged integration templates. Clients cite the stability of the platform; the simplified deployment, development and management of the single Java stack; and the distributed, scale-out architecture enabled by the Advanced Adapter Engine as some of the product's key strengths.

SAP's on-premises integration platform is increasingly integrated with the SAP Hana in-memory DBMS. Thus, SAP has an opportunity to natively leverage in-memory computing to provide greater scalability, performance and real-time operational intelligence capabilities in the context of integration projects.

SAP's vision is further improved by a road map covering API management, AS4/ebXML support, trading-partner community management, MFT, enhanced integration with SAP Solution Manager, further product consolidation (e.g., a Java-based version of SAP Gateway to be integrated in SAP PO) and general availability of SAP Hana Cloud Integration (an iPaaS rendition of several SAP integration technology components).

Cautions

Despite the notable improvements and simplification delivered in recent versions of SAP PO, the product does not appeal to organizations with limited or no SAP applications and cloud services, or with minimal SAP technology skills.

Some reference clients deem SAP's on-premises integration platform technology unsuitable for supporting adaptive integration and agile development methods in projects of low to medium complexity, a stringent time to value and continuously evolving requirements.

Some reference clients mentioned the following areas as needing improvement: integration of SAP PO, Gateway and Data Service, fully rounded-up support from SAP Solution Manager, MFT capability, native B2B support (in some cases, clients must complement SAP PO's B2B features with a third-party's components — e.g., for trading-partner management) and an end-to-end monitoring capability.

SAP's road map for on-premises integration technology is, in many instances, aimed at catching up with industry leaders (e.g., in areas such as API management, trading-partner community management, MFT, REST support in SAP PO, SOAP over Java Message Service [JMS] and SaaS adapters), rather than at introducing innovations. For example, SAP hasn't yet articulated a strategy for supporting IoT integration.

Seeburger

Seeburger is one of the major European integration vendors. It has established itself as a strong international player, mainly based on the quality of its technology (the intellectual property is completely owned by Seeburger) and sustained, reliable service for customers worldwide for more than 27 years. Its Business Integration Server (BIS) 6.5.1 (released in June 2013) is founded on a service bus, has orchestration functionality and contains a high-performance, any-to-any transformation engine mapping between an application specific format and XML, or EDI.

Although Seeburger BIS is best-known for its support of B2B integration, it can also support A2A and cloud-to-on-premises integration projects. Seeburger BIS is the basis for the company's on-premises, cloud and managed services, enabling a hybrid integration platform option for its customers, when required. Combined with its certified industry solutions or professional service offerings, which create Seeburger-certified integration flows for its customers, Seeburger has gained a well-deserved reputation for quality. Improvements in deployment options have delivered a zero downtime platform that only enhances this reputation.

Strengths

With more than 8,000 on-premises customers, plus users of its cloud and managed services, Seeburger is renowned for multienterprise B2B projects and its technology. Being developed entirely in-house, Seeburger technologies are well-integrated and stable.

Seeburger has added MFT technology (Seeburger File Exchange [See FX]) to BIS, which extends the A2A and B2B interaction styles that BIS supports.

By providing the same technology base for its on-premises integration, cloud and managed services, Seeburger provides migration paths among its offerings, as well as hybrid solutions when required, thus increasing the delivery options for its customers.

Seeburger has a particularly strong reputation for integrating SAP systems in A2A and B2B scenarios, providing the company with a large target market for its products.

Cautions

Seeburger's exclusive focus on internally developed technology excellence has limited its ability to grow through technology acquisitions.

Although BIS contains an ESB, it is relatively new and not widely adopted as a stand-alone offering.

Seeburger's future as an independent company continues to be the subject of speculation. Good technologies typically survive acquisitions, but there is a higher-than-average risk of a change in company ownership.

Seeburger faces growing competition from IBM (Sterling B2B Integrator), Axway (which acquired Vordel), Oracle and SAP. A significant portion of Seeburger revenue is from its B2B partnership with SAP. SAP continues to promote Seeburger as a partner. However, SAP customers wanting to deploy a B2B gateway on-premises are finding that SAP is heavily promoting the technologies it obtained from the Crossgate and Ariba acquisitions for managed services.

Software AG

Software AG emerged as a notable application infrastructure middleware vendor through a combination of internal development and numerous acquisitions, including webMethods, IDS Scheer, Terracotta, my-Channels, JackBe, LongJump and Apama (from Progress Software). The application integration and SOA project markets have been strategic for Software AG since its early days as a middleware vendor, generating approximately 60% of the company's annual product revenue. This revenue comes primarily from direct sales in the U.S. (Software AG's largest market), EMEA, other countries in the Americas and, to a lesser extent, from the Asia/Pacific region. The key verticals for Software AG's on-premises integration platform are banking, insurance, government and transportation/logistics.

The evaluation of Software AG's position in this Magic Quadrant is based on the functionality provided by the webMethods 9.6 family of products (released in April 2014). This includes webMethods Integration Server, supporting ESB and orchestration requirements; webMethods CloudStreams for cloud service integration; webMethods Mobile Suite for mobile app integration;

webMethods Broker and webMethods Universal Messaging for MOM; webMethods Active Transfer for MFT; webMethods Business Process Management Suite (BPMS), providing process orchestration capabilities. The list also includes webMethods Trading Networks for B2B integration; webMethods Adapters; webMethods EntireX and ApplinX for mainframe integration; CentraSite for metadata management and application service governance; webMethods Mediator and webMethods Insight for application service governance; webMethods Designer for integration logic modeling and development; and webMethods Command Central for centralized administration and management.

Strengths

The webMethods Suite is a comprehensive, advanced and proven application infrastructure product set for A2A, B2B, cloud service integration and mobile app integration projects. Some key characteristics of the webMethods Suite are a common runtime container, unified design and development tool, unified metadata management, common management platform, integrated business process/technical modeling through BPMN 2.0, native cloudiness (multitenancy and elastic scalability), universal messaging (supporting server, desktop, mobile and device connectivity), event processing and in-memory data grid.

The webMethods Suite installed base amounts to over 4,000 clients, worldwide. Clients leverage the technology in multiple usage scenarios, including large-scale and business-critical application integration and SOA deployments in multiple vertical markets and geographies.

Reference clients mention the platform stability/reliability, functional completeness and ease of development, and fast release migration as strengths for the platform.

Software AG's vision for the webMethods Suite addresses key application integration standards, technologies, deployment models and emerging requirements. The most notable planned improvements include OData support; API management functionality; business analytics; business user-friendly mapping tool; low latency, brokerless messaging; cloud services, mobile app and big data integration; Software AG Integration Live; a PaaS rendition of its on-premises platform and support for in-memory computing, EDA and intelligent business operations.

Cautions

Software AG integration technology revenue grew in 2013, although slower in some segments (application services governance and B2B gateway software) compared with the market and some of its traditional competitors. As most of the established vendors in this space, Software AG is facing increased competition from nimbler, and fast-growing OSS and iPaaS players that provide mature and low-cost-of-entry integration and SOA platforms.

Some organizations deem the webMethods Integration Platform unsuitable for supporting adaptive integration approaches and agile development methods (i.e., for projects of low to medium complexity, but with stringent time to value and continuously evolving requirements).

Some reference clients mentioned IT operation and integration with recently acquired technologies as areas that need improvement.

The 12-month road map for the platform doesn't address the emerging convergence of data and application integration requirements and doesn't include a strong value proposition for IoT (despite several relevant technology enablers already in Software AG's portfolio and some notable production deployments).

Talend

Talend, founded in 2006, is headquartered in Los Altos, California, and Suresnes, France. Initially focused on data integration technologies, Talend introduced application integration capabilities in 2010, and has a comprehensive integration suite. Talend provides three levels of integration capability, each with different costs and support models: (1) Talend Open Studio for ESB is based on an open-source license, is free of charge and has optional support available; (2) Talend Enterprise ESB has a commercial license and follows a subscription model with support included; and (3) Talend Platform for Enterprise Integration is a combination of Talend components, including data integration, application integration, data quality, service governance and BPM, all running on the Talend unified platform.

During 2013 and early 2014, Talend provided a number of updates to its platform, including a new Data Mapper; enhancements to its SOA governance; improved integration between its ESB and BPM components; the ability to automate deployments to cloud, such as Amazon Elastic Compute Cloud (Amazon EC2); and a refresh to its open-source core components, such as Apache ActiveMQ, which includes AMQP and MQTT. All Talend products are integrated, and metadata is managed in a single repository.

Talend pursues an open-core, commercial open-source model providing mission-critical features, support and maintenance via subscriptions. The company offers BPMS functionality via a partnership with Bonitasoft.

Talend is the first vendor in this market to offer a platform that integrates a suite for application integration with data integration and BPM technologies through a common repository/environment.

Strengths

Talend Open Studio for ESB is founded on the broadly adopted Apache CXF, Camel, Karaf and ActiveMQ open-source offerings, to which its engineers are active contributors.

Talend uses a graphical approach to implementing Apache Camel Enterprise Integration Patterns, which includes an all-in-one feature for testing the implementation of these enterprise integration patterns.

Talend's go-to-market approach is to offer five unique platforms—big data, data management,

data services, enterprise integration and MDM — plus a single combined offering, Platform Universal. All the platforms are integrated via a single repository, differentiating Talend from many of its competitors. Its vision for a single platform for integration makes it one of the few vendors trying to realize the synergies between data and application integration.

Talend has a good understanding and vision of the integration space as a whole, reflected in the breadth of its offering and the product road map.

Cautions

Talend is methodically expanding into its established markets (i.e., U.S. and EMEA) and opening up offices in Tokyo and Beijing in the Asia/Pacific region. However, it lacks a worldwide installed base comparable with the leading integration vendors.

Talend started as a data integration company and recently entered the ESB suite category. Talend provides strong support for REST; however, for API management, it relies on third-party API management products. This could rule Talend out by organizations with an API agenda, especially if they are expecting all that functionality as part of the Talend platform today.

Like most OSS-based vendors competing in this space, Talend has a share of the enterprise integration suite market of less than 1%, whereas the top five proprietary vendors hold 60% market share among them. There is a broad base of developers familiar with the underlying technologies.

Tibco Software

Tibco Software is a leading provider of integration middleware founded in 1997. During 2013, it garnered $239.7 million in ESB suite software license revenue, up from $223.0 million in 2012. This resulted in a 7.5% share of a $2.57 billion market (see "Market Share: All Software Markets, Worldwide, 2013"). Its portfolio of products for application integration includes Tibco ActiveMatrix Service Bus, Tibco ActiveMatrix BusinessWorks (AMBW), BusinessConnect, Tibco Foresight and Enterprise Message Service (EMS).

A long-standing player in application integration, Tibco has improved AMBW, EMS and BusinessConnect. For example, its IDE supports the graphical development of WS-* and RESTful services, and the implementation of Web APIs. Tibco introduced ActiveMatrix BusinessWorks Express, an integration platform for Web and mobile projects. To ramp up performance required by such projects, Tibco ActiveMatrix Service Grid is being used underneath its integration offerings. Tibco has embarked on efforts to simplify the user experience of its products so that its on-premises products can better compete with high-productivity iPaaS offerings.

Beyond application integration, Tibco offers integrated, near-neighbor products to support BPM (e.g., ActiveMatrix BPM), CEP (e.g., Tibco BusinessEvents) and business activity monitoring activities (e.g., LiveView from the StreamBase acquisition). These offerings are supplemented by Silver Fabric, a cloud-management platform that has the potential to support a hybrid cloud integration scenario in which Silver Fabric can deploy and manage instances of BusinessWorks in private and public cloud environments.

Strengths

Tibco exhibits excellent market presence, with $239.7 million in ESB suite software license revenue resulting in a 7.5% share of a $2.57 billion application integration suite market.

Tibco provides a comprehensive set of proven application integration products, with a modern, OSGi-compliant architecture. Typically, user solutions built with this product set are hosted in the innovative ActiveMatrix container technology. The product line is in-memory-computing-enabled by deploying Tibco ActiveSpaces, which is integrated with AMBW, EMS and other Tibco offerings.

Offerings that support near-neighbor activities, including the implementation of APIs (e.g., ActiveMatrix Policy Director and ActiveMatrix Service Performance Manager), BPM and CEP are tightly integrated with Tibco's foundational application integration products, AMBW and EMS.

Tibco continues its investment in marketing integration through focused "waves" of content that typically run six to eight weeks, and are centered on key Integration topics. These waves include thought leadership whitepapers, webinars, videos and blogs.

Cautions

Tibco developed AMBW Express for organizations such as SMBs, seeking simple solutions that go beyond "good enough" integration at a cost less than OSS offerings. Adoption of the products is not widespread. This may be due to SMBs' penchant for iPaaS offerings targeted at the citizen developer.

Tibco recognizes the importance of integration with IoT, and it has products that will help. However, it lacks IoT messaging that identifies those products and tells organizations the roles their current products should perform.

For enterprise license agreements (ELAs) Tibco collaborates with customers to establish the products and number of licenses that will be deployed. At the end of the ELA, deployed licenses are converted to perpetual licenses, and the organization owns all the Tibco licenses that have been deployed. Several Gartner clients have deployed more instances of the products than necessary to support their required integration, resulting in higher than expected support and maintenance charges and dissatisfied customers. Prospects considering an ELA with Tibco must ensure the product units they plan to deploy are required.

Tibco continues with its commercial software license business model. AMBW is facing increasing competition from OSS ESB providers, but Tibco is yet to respond with competitive price

alternatives (e.g., subscription-based pricing for AMBW). However, AMBW Express, which allows organizations to connect four applications with an unlimited number of services, is offered at $7,000 per processing core used in production.

WSO2

WSO2 offers an open-source platform that contains a broad range of application infrastructure and IT tools, including an enterprise integration platform suite and multiple related technologies. Its broad portfolio of capabilities contains components that are intentionally streamlined and somewhat minimalist in terms of functionality, eliminating infrequently used features and focusing on the needs of enterprise integration, and the deployment of newer applications and architectures.

WSO2 adoption has been accelerating. More than 100 paying organizations use WSO2's integration capabilities, including some enterprises with high-scale IT projects and cloud service providers. (Note: This is only the count of the paying customers. More than 1,000 organizations have downloaded the open-source code and are using it unsupported and unaccounted for.) The majority of the company's integration software business is in North America, with some in EMEA and other regions. WSO2 headquarters are in the U.K. and Sri Lanka, where it maintains offshore development and support.

Its offerings relevant to integration projects include WSO2 API Manager 1.6.0, WSO2 Business Process Server 3.2.0, WSO2 Business Rules Server 2.0.0, WSO2 ESB 4.8.1, WSO2 Message Broker 2.1.0, WSO2 Governance Registry 4.6.0, WSO2 Business Activity Monitor 2.4.0, WSO2 CEP 3.0.0 and WSO2 Application Server 5.2.1. The software is largely based on Apache projects (notably, the WSO2 ESB is based on Apache Synapse). All the components of the WSO2 suite are available under an open-source license, which results in a significant percentage of users operating without support agreements and without generating revenue for WSO2 (a common case with open-source software).

Strengths

- All open-source technology supports the perception of lower vendor lock-in, greater openness and lower costs, which are attractive characteristics for many mainstream organizations. Adoption by Apache of some core WSO2 technology (Stratos) further enhances its standing as the open technology platform.
- A broad portfolio of capabilities related to integration — including support of streams, CEP, API management, multiple options in mobile, process management and data integration, extensible connector architecture, plus its native private and public cloud capabilities — support customers' long-term planning for increasingly advanced and demanding integration infrastructure. These form a basis for long-term relationships with customers, adding to the company's viability.
- Some advanced use cases, including IoT and Web-scale volumes, demonstrate the modern nature of the internal architecture of WSO2 OSGi-based technology suite and the ability of the company to track the fast-changing market. Prospects and customers in the leading edge of business and technology innovation require these features.
- A cloud-based development and operations platform (WSO2 App Factory) enables organizations to reduce capital costs of on-premises integration projects by offloading development and testing new solutions to a "rented space" in the cloud. It can also be a basis for hybrid integration infrastructure and provides a natural evolution road map for integration strategy planners.

Cautions

- Although the company has shown good growth during the past 12 months, it has the resources and market share of an early player. Open-source competitors are improving execution and developing strong name recognition. Closed-source competitors are expanding to cloud, mobile and other modern use scenarios. Building a share in this market is a challenge for WSO2.
- WSO2's focus on IT developers limits its ability to attract mainstream enterprise customers, as some of the focus in adoption of integration solutions extends from systematic central IT projects to include line of business (LOB) adaptive integration and citizen integration. This new audience is looking for high user productivity and prebuilt integration for popular endpoints. Targeting LOB prospects can be a challenge to the organization accustomed to targeting central IT developers.
- A simplified approach to B2B integration focused on API interaction works well for some customers' requirements. A multienterprise business remains highly strategic and central to many mainstream enterprises. Limited support for this use case can reduce market share for WSO2, despite its innovations elsewhere. A focus on modern use cases in systems of innovation is essential, but underserving the established architectures in systems of record can be a challenge to the company.

Vendors Added and Dropped

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

Infor was added to this Magic Quadrant because it qualified on required functionality and revenue.

Dropped

Aurea was dropped from this Magic Quadrant because it shifted from selling application infrastructure to vertical solutions using its infrastructure.

Honorable Mention

The following vendors are not included in this research because they are small (less than $15 million in revenue) or do not meet other inclusion criteria. However, they are appropriate for certain situations and sometimes compete against the vendors that are covered in this Magic Quadrant:

AdroitLogic (www.adroitlogic.org) is a privately owned company providing support and maintenance for a variety of open-source technologies, including UltraESB, a Java-based ESB.

LogiCoy (www.logicoy.com) is a privately owned company providing support and maintenance for a variety of open-source technologies, including OpenESB, a Java-based ESB.

Magic Software Enterprises (www.magicsoftware.com) is a privately owned company providing a variety of platforms, including the Magic xpi Integration Platform.

Neudesic (www.neudesic.com) is a privately owned company providing system integration services and Neuron ESB, a .NET-based ESB.

Inclusion and Exclusion Criteria

Vendors included in this Magic Quadrant must have sufficient technology and expertise in their portfolios (regardless of packaging) to be sole application infrastructure providers for all types of systematic application integration projects. Following are the key technical characteristics that are essential to such offerings.

Communications: Vendor offerings must implement an interoperability layer that supports interactions among application and system components via a variety of protocols, including HTTP/plain old XML (POX), REST, SOAP, Internet Inter-ORB Protocol (IIOP), MQTT, .NET remoting, MOM and file transfer. Vendor offerings must enable a broad array of interaction styles, such as request/reply, conversation, publish and subscribe, and asynchronous messaging. Vendor offerings should support the idempotent delivery of messages: (1) guarantee the delivery of each message; (2) deliver each message only once; and (3) deliver messages in the order sent by the source program(s).

Data Transformation: Vendor offerings should support the translation of data from the format, structure and semantics native to the source application to that required by the target applications. Offerings are assessed on the basis of support for vertical protocol standards (for example, SWIFT, Health Level Seven [HL7], ACORD and National Council for Prescription Drug Programs [NCPDP]) and communications protocol standards (for example, Applicability Statement 1 [AS1], AS2, AS3, electronic business message service specification (ebMS) and RosettaNet Implementation Framework [RNIF]).

Orchestration: Vendors should provide technology that hosts the execution of process logic spanning interactions with multiple back-end services or applications with the aim of implementing composite services or automated system-to-system processes. Typically, these orchestrations enable short-term processes (i.e., processes that complete within seconds or minutes). In some cases, these processes may run for hours, days or even weeks. Process state should be maintained for the duration of the logical unit of work (for example, for an entire RosettaNet partner interface process). This technology usually provides only basic support for human-based activities, primarily aimed at exception handling and error recovery.

Application Connectivity: Vendors should provide an array of adapters or wrappers — i.e., technology that combines design tools and runtime software to implement programs that act as "glue," bridging protocol differences and connecting to databases, as well as popular packaged applications and SaaS offerings.

Development Environment: Each vendor must provide a software application that provides comprehensive facilities to enable integration staff to efficiently design, implement, test and deploy integration interfaces and service interfaces.

B2B Interactions: Vendors should provide connection provisioning capabilities for B2B protocols, such as AS2, EDI and ebMS. Vendors should support Web services-based connections with external business partners. Support for trading-partner management and partner self-provisioning is expected.

Governance: Governance is the assignment of decision rights to ensure desirable behavior. Vendor support is expected for managing the life cycle of integration solutions during design time and to manage qualities of service at runtime. Expected functionality includes a registry/repository, policy definition and management, and API management.

Security: Vendors should implement effective security support to enable capabilities such as authentication of endpoints, authorization of service or interface access, message/document encryption/decryption, digital signature processing, message/service invocation logging, and token/certificate management.

Administration and Monitoring: Vendors should provide technology that enables visibility into, and

effective management of, the solutions that are created through the integration of programs and services.

This Magic Quadrant considers only products that are available for implementation on user-controlled infrastructures. This could be traditional data center infrastructure or private cloud deployments, as well as hosted (and possibly public) IaaS environments. This Magic Quadrant does not consider platforms that are available only as cloud service offerings.

Vendors that limit themselves to serving a single vertical market may be suitable for organizations in those industries, but are not covered in this Magic Quadrant. Qualifying vendors must have significant revenue from multiple vertical markets.

Each vendor's entire set of product offerings is considered, without regard to product packaging. The vendor must deliver and support all the capabilities just described. Some of the technology in the evaluated portfolio might be repackaged from a third party. This is acceptable as long as the user's primary support experience is with the vendor being assessed. Delegating Level 3 support is acceptable.

There must be evidence of production success (at least 30 paying production customers) by the vendor as a sole provider of technology for this project type.

Vendors with annual product license and maintenance revenue of more than $15 million from application infrastructure deployments may be considered for inclusion in this Magic Quadrant. In the case of vendors pursuing a subscription-based, open-source business model, the threshold for consideration is $10 million in annual product subscription revenue.

Vendors must realize substantial revenue from at least two of five global regions: North America, Latin America, EMEA, the Asia/Pacific region.

This Magic Quadrant evaluates 17 vendors that offer the greatest and broadest market penetration for on-premises application integration suites, and meet all the functional inclusion criteria noted above.

Evaluation Criteria

Ability to Execute

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

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	Medium

Source: Gartner (July 2014)

Completeness of Vision

Gartner analysts evaluate technology providers on their ability to convincingly articulate logical statements about market direction, innovation, customer needs, and competitive forces, and how well these statements map to the relevant Gartner position. Ultimately, technology providers are rated on their understanding of how market forces can be exploited to create opportunities for the provider.

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	High
Marketing Strategy	Medium
Sales Strategy	Medium
Offering (Product) Strategy	High

Business Model	Low
Vertical/Industry Strategy	Medium
Innovation	High
Geographic Strategy	Medium

Source: Gartner (July 2014)

Quadrant Descriptions

Leaders

Leaders in the Magic Quadrant for On-Premises Application Integration Suites are vendors with a proven, comprehensive and integrated set of products that customers use for projects such as A2A, B2B, cloud-to-on-premises and cloud-to-cloud integration. They have a large installed base of products. Leaders can cross-sell their integration solutions, and have demonstrated their ability to anticipate technology and market trends by extending their offerings to support the data consistency, multistep process and composite application integration styles that occur in systematic integration projects. They also have a sizable installed base of international clients, many of which demonstrate their satisfaction by periodically upgrading to new product versions.

Optimally, Leaders support a bimodal approach (systematic and adaptive) to application integration. They provide a comprehensive ESB suite offering, as well as the ability to integrate that offering with relevant technologies (including community management, data integration, SOA and integration governance, and BPM). Leaders demonstrate a strong commitment to this market through focused value propositions and go-to-market strategies (for example, by packaging platforms and/or by providing integrated product and service offerings specific for this market). Leaders must support the most relevant industry standards — for example, SOAP-based and RESTful Web services, BPEL, BPMN and OSGi — and offer a well-defined product road map addressing most of the emerging requirements, such as cloud/SaaS integration.

Established leadership (achieved through organic growth or acquisitions) in the adjacent application platform infrastructure market is a common trait among application integration Leaders. This, in part, reflects some commonality in the technology required in application hosting and application integration usage scenarios. Leadership also is a consequence of the logical progression of the most advanced users having adopted a systematic approach to application integration to selecting a shared approach to SOA infrastructure. Consequently, organizations that endorsed one of the Leaders' platforms to support their systematic application integration projects find it natural and nondisruptive to adopt the same platform (or some extensions and/or variants) to also support their SOA infrastructure requirements.

The offerings of the Leaders are rich and mature. Despite the efforts of most Leaders to devise entry-level versions of their technologies, their products are sometimes considered too complex or too expensive for organizations with minimal experience in systematic application integration, or for businesses that are budget-constrained or looking for a focused, fast-to-deploy and easy-to-use platform.

Challengers

Challengers are vendors that have demonstrated that their technology can support the implementation of numerous large business integration projects and have built platforms capable of effectively competing against, and often besting, those of the Leaders. These vendors are followers, rather than leaders, in providing innovative features, or their innovations are limited to a specific problem. Some vendors in the Challengers quadrant do not focus on marketing messages, value propositions or comprehensive geographic coverage. Challengers have the opportunity to become Leaders through greater product innovation, combined with a marketing and sales focus on all aspects of application integration (A2A, B2B and cloud-based applications).

Visionaries

Visionaries demonstrate innovation from product and technology perspectives. They have significant investments in integration technology, and their prospects for survival and growth depend on their ability to establish a strong presence in the market for application integration. Some large Visionaries have relatively small installed bases for their products. In some cases, their production readiness is not yet proven by a full spectrum of mission-critical deployments.

Through diligent and focused execution, some Visionaries may become Leaders. However, limited sales, marketing, engineering and support resources create enormous obstacles for such ambitions. Many of these vendors are likely to be acquired by larger companies, but some offer excellent and highly innovative products that, at times (often, in particular use-case scenarios), will outperform large vendors' offerings.

Often, products from vendors in the Visionaries quadrant can be used with point products from other vendors to create a comprehensive middleware infrastructure that has all the features offered by the one-stop-shopping suites of the large vendors in the Leaders quadrant.

Niche Players

A Niche Player often offers good, or even excellent, integration technology. However, sometimes the focus of that Niche Player on a specific vertical market has resulted in products that are less useful in integration problems outside that niche domain. Alternatively, a vendor may lack focus on this problem space, which, for it, is a marginal business. Vendors positioned in the Niche Players quadrant have limited sales, marketing and support resources, or are committed to only one geography or installed base.

Nevertheless, application integration technology from a Niche Player can be an optimal choice for specific classes of users (for example, in a particular vertical market where the vendor's integration technology is focused, or in the geography where the vendor is located). Additionally, Leaders' and Challengers' products are often too complex and expensive for SMBs, or for companies whose requirements are not overly demanding. Companies with less-stringent requirements may find suitable products from Niche Players and Visionaries.

A vendor in the Niche Players quadrant could emerge as a Visionary through a greater commitment to innovation and focus on on-premises application integration suites.

Context

There are two macro trends and drivers, Nexus of Forces and digital business, which will increase use of on-premises application integration suite offerings.

In 2011, Gartner identified four forces that would have a dramatic effect on the way businesses operate: the cloud, mobility, social networking and the explosion in information (see "Re-Imagine IT Using Insights From Symposium's Analyst Keynote" — Note: This document has been archived; some of its content may not reflect current conditions). Taken individually, each force is innovative and disruptive. Taken together, they heighten the importance of the Nexus of Forces. This Nexus of Forces continues to revolutionize business; and will continue to shape how organizations evolve their use of IT.

The Nexus of Forces will increase the types of integration to:

- Connect SaaS applications with on-premises applications
- Evolve the way applications manage APIs to facilitate connecting to external endpoints, including mobile apps and trading partners
- Connect to social Web properties accessing customer data to facilitate sentiment analysis
- Ensure application integration platforms are able to deal with the huge increases in the volume, variety and velocity of information

In "Get Ready for Digital Business With the Digital Business Development Path," Gartner defines digital business as the creation of new business designs by blurring the digital and physical worlds. It promises to usher in an unprecedented convergence of people, business and things that disrupts existing business models — even those born of the Internet, e-business and digital marketing eras. By 2020, more than 7 billion people and businesses, and at least 35 billion devices, will be connected to the Internet. With people, businesses and things communicating, transacting and even negotiating with one another, a new world comes into being — the world of digital business. Businesses that succeed in this new and disruptive world will be the ones that can capture the combined power of people, businesses and things by picturing how new value is created. To capture that power, IT will be required to encompass endpoints that are in the IoT.

Digital business will increase the amount and types of integration to:

- Gather events from the IoT
- Connect to CEP technology to process base events into aggregates that decision makers can consume easily
- Connect to real-time analytics that display the aggregations in a manner that enables decision makers to make considered, but fast, decisions
- Convey events that invoke automated responses to events, when appropriate

During the next 12 months, directors of integration and other IT leaders who need to tackle a variety of integration requirements should look at the providers in this Magic Quadrant when:

- Supporting a bimodal (systematic and adaptive) approach to application integration
- Looking for technology to support mission-critical interfaces
- Planning to complement on-premises integration middleware with iPaaS offerings targeting cloud service integration, mobile app integration (MAI) and API requirements in the context of an integration strategy holistically supporting traditional systematically oriented and agile integration requirements

Market Overview

Application integration technology burst into the middleware market in the mid-1990s. At that time, sophisticated integration products were offered exclusively by specialists — vendors that provided application integration technology. Initially termed "message brokers," the products from these vendors focused on providing a graphical approach to specifying the business logic required to transform and intelligently route data among applications to achieve data consistency. From 1999 through 2001, IBM and Microsoft entered the application integration market, where they have since been joined by Oracle, SAP and Fujitsu and others.

As the popularity of SOA applications began to grow, ESB technology was introduced to mediate interactions between consumers and services. The products offered by application integration vendors evolved in the same manner — adding features (in the form of services) that resulted in a comprehensive suite. Ultimately, due to growing functional overlap, the two markets (SOA and application integration) merged.

Specialists' offerings continue to be the most innovative, with megavendors being fast followers. Although specialists sometimes outmaneuver megavendors through innovations such as BPM tools, business activity monitoring features and CEP capabilities, megavendors counter by sowing fear, uncertainty and doubt (FUD) about the viability of small vendors. Eventually, megavendors match the innovation of specialists through internal development or acquisition. Today, megavendors and specialists are expanding sales to provide one-stop shopping for a broad set of assets complementary to application infrastructure (such as solutions, services, patterns and templates) and that add significant value to organizations involved in SOA, API, BPM and CEP initiatives.

As the popularity of application integration rose, interest in B2B collaboration also rose. Many companies became disenchanted with the cost of private, proprietary EDI value-added network (VAN) services. They began seeking software alternatives that provided community management and secure, message-based transport over TCP/IP networks and the Internet, and that now expose services that allow trading partners to transact business in a more timely and efficient manner compared with exchanging documents.

Until the past few years, users tended to implement integration projects for A2A and B2B projects separately; however, users are increasingly looking for a consolidated integration solution to A2A and B2B problems. Thus, three important trends have driven the consolidation of internal and external integration project styles onto this version of the application integration Magic Quadrant:

- Application infrastructure vendors have extended their portfolios to include products that support integration with external endpoints.
- Vendors of B2B products are extending their portfolios to include products that support A2A integration.
- Enterprises are consolidating disparate B2B integration and application integration initiatives, which includes technologies, best practices and governance.

Open-source offerings continue a three-year trend of growing at rates greater than their closed-source competitors. Thus, the application integration suite market is mature. In 2014, ESB suites, a foundational feature in application integration suites, are no longer included in the Hype Cycle for Application Infrastructure. This means that more than 50% of the target audience has adopted ESB suites. Nevertheless, new offers continue to emerge and consolidation continues.

The hype around application integration and SOA has moved on to initiatives that have gained popularity and marketing hype. Examples include the API economy, digital business, the IoT and the mobile imperative. The dynamics associated with these megatrends will drive the need for application integration suites to add features, advancing the market and causing the technologies assessed in this Magic Quadrant to remain foundational for these new endeavors