

Ovum Decision Matrix: Selecting an Integration PaaS (iPaaS) Solution, 2015-2016

Tackling cloud and hybrid integration challenges

Publication Date: 15 Apr 2015 | Product code: IT0022-000339

Saurabh Sharma



Summary

Catalyst

The rise of software-as-a-service (SaaS) and the increasing heterogeneity of enterprise applications portfolios and data sources have necessitated a shift to suitable alternatives to traditional integration approaches. Integration platform-as-a-service (iPaaS), a sub-segment of PaaS, continues to evolve as an integration approach capable of meeting a wide range of integration needs, including on-premise, cloud, B2B, and mobile application integration. Enterprises should consider iPaaS as a means to ease the complexity of hybrid integration as they continue to focus on managing the complex interplay of business needs and persistent budget constraints, and still achieve faster time to integration. This Ovum Decision Matrix (ODM) is a comprehensive evaluation to help enterprise/solution/integration architects, integration competency center (ICC)/integration center of excellence (COE) directors/managers, and line-of-business (LOB) leaders select an iPaaS solution best suited to their specific requirements.

Ovum view

IT is swamped with initiatives focused on enabling new business models, customer engagement channels, sales and marketing strategies, and service delivery capabilities. However, there is little respite from persistent time and budget constraints. The role of an ICC is undergoing a significant change, with LOBs more aggressive in moving ahead with the adoption of agile approaches to integration to cater for the requirements of business-critical initiatives. iPaaS has benefited from this change, which signifies a strategic shift in enterprises' integration strategy.

Integration is often messy and complex and beyond the core competencies of IT. In the case of small and midsize enterprises (SMEs), the proposition of maintaining dedicated and skilled resources to support integration requirements is not attractive, and is at times beyond the IT budgets. These issues and constraints have led to the emergence of iPaaS.

Ovum's analysis reveals that six out of the nine vendors included in the ODM have already supported enterprise-scale integration initiatives, which involve three or more use cases, including those extending beyond SaaS and on-premise integrations, such as, for example, B2B/mobile application/social application integration. This signifies the acceptance of iPaaS as a "many-to-one" integration approach, while also indicating the higher maturity of key iPaaS provisions.

The evolving iPaaS vendor landscape comprises both established and specialized integration vendors, and some of these vendors have evolved from a "data integration" lineage, while for others iPaaS was a natural extension to their middleware portfolio. Nevertheless, most iPaaS vendors have expanded the capabilities of their solutions beyond core competency to improve positioning as a cloud-based application and data integration platform. This includes delivery of API management and data quality and management services on top of iPaaS.

A growing number of iPaaS vendors have not made the transition into a fragmented market. In fact, the top four vendors in this ODM account for over 45% of the global iPaaS market size. While this figure might reduce in future, it is highly unlikely that this market will follow a normal distribution. Nevertheless, a lower barrier to entry will continue to motivate the incubation of smaller iPaaS

vendors, while major vendors strengthen their market position. Ovum forecasts rapid growth for global iPaaS market, which is expected to cross the \$900m mark in 2019.

Ovum envisages the future of iPaaS as a much broader “Enterprise Integration-as-a-Service” phenomenon. This implies an evolution toward delivery of cohesive and flexible integration capabilities via the cloud for meeting application, B2B, and data integration, mobile enablement, API management, Internet of Things (IoT) integration, and process orchestration requirements of large enterprises.

Key findings

- iPaaS continues to expand beyond cloud service integration, and is increasingly being used for hybrid integration scenarios involving a mix of on-premise, SaaS, B2B, and/or mobile application integration.
- Integration vendors with a rich “integration-as-a-service” heritage have evolved into leading iPaaS vendors.
- With the increasing need to “do more with less”, ICCs/integration COEs are embracing agile approaches to integration. LOB-led iPaaS adoption is quite common.
- The role of iPaaS in enterprise integration continues to expand, as evidenced by the increase in average subscription/deal size for relatively mature iPaaS solutions.
- The competition in the iPaaS vendor landscape continues to increase, with several major middleware vendors introducing/announcing their iPaaS solutions over the last six to nine months.
- Major iPaaS vendors have enhanced the overall value proposition of their solutions by offering low-latency processing, data management, and API management capabilities on top of iPaaS.
- 2015 will see major iPaaS vendors using more aggressive sales and marketing strategies and operations to expand their reach and increase market share.
- The highly competitive and rapidly evolving nature of this market has led to the disappearance of some smaller iPaaS vendors. Despite the hype, it takes several years, as well as well-planned and careful execution of product and commercial strategies to develop a profitable and sustainable iPaaS business of substantial size.
- Agility and not just total cost of ownership (TCO) reduction is a key factor driving a shift toward iPaaS.
- iPaaS adoption could still stall as a result of inertia from enterprise integration practitioners having qualms about “reskilling”, and the potential redundancy of integration skills developed over several years.

Vendor solution selection

Inclusion criteria

The criteria for inclusion of an iPaaS solution in this ODM are as follows:

- The iPaaS solution should be available as a “standalone” cloud-based integration platform providing necessary tools, integration components, and resources for faster development of integration flows connecting SaaS and on-premise/other SaaS applications (or cloud-based data stores).
- Prebuilt connectors and integration templates offered with the iPaaS solution should not be confined to a specific SaaS ecosystem or available for only a very limited number of SaaS applications.
- From the perspective of core platform services, the iPaaS solution should have essential cloud characteristics, such as multi-tenancy, resource sharing, and rapid scalability, as well as allowing usage tracking and metering and supporting enforcement of service-level agreements (SLAs).
- The iPaaS solution should provide a centralized console for scheduling, monitoring, and managing integrations.
- The iPaaS solution should provide enterprise-grade security and governance features and capabilities, such as transport layer and application and network-level security and support for implementation and administration of governance policies.
- The iPaaS solution should have been generally available as of September 30, 2014. The vendor must have at least 30 enterprise (paid) customers using its iPaaS solution as of December 31, 2014.

Exclusion criteria

An iPaaS solution is not included in the ODM if:

- Integration capabilities/services are limited to cloud services brokerage (CSB)/integration brokerage arrangements.
- Integration capabilities/services are limited to B2B integration delivered via the cloud under self-managed or managed services models.
- Its usage is limited to the delivery of packaged integration for vendor’s own SaaS applications or those provided by a specific set of independent software vendors (ISVs).
- The customer base is confined to only a few specific vertical industries.
- The vendor has no direct contact with end users (enterprise customers), and customer support and interaction is taken care of by ISV/SaaS/platform/channel partners. While some vendors may have a channel-sales-only approach or predominantly focus on a “packaged integration” business model, there should be some process for direct customer interaction.
- Its usage is limited to loading and replication of data to, from, and between cloud environments.
- It caters mainly for the requirements of citizen integrators.

Ovum ratings

Market leader

This category represents a leading iPaaS solution that Ovum believes is worthy of a place on most technology selection shortlists. The vendor has established a commanding market position with its

iPaaS solution demonstrating relatively high maturity, good innovation and enterprise fit, and the capability of effectively meeting the requirements of a wider range of integration use cases, as well as executing an aggressive product roadmap and commercial strategy to drive enterprise adoption and business growth.

Market challenger

An iPaaS solution in this category has a good market position and offers competitive functionality and good price-performance proposition, and should be considered as part of the technology selection. The vendor has established a significant customer base with its iPaaS solution demonstrating substantial maturity and catering for the requirements of a range of integration use cases, as well as continuing to execute a progressive product and commercial strategy.

Market follower

An iPaaS solution in this category is typically aimed at specific integration use cases and/or customer segment(s), and can be explored as part of the technology selection. It can deliver the requisite integration capabilities at reasonable subscription charges for specific integration requirements.

Market and solution analysis

What exactly is an iPaaS solution?

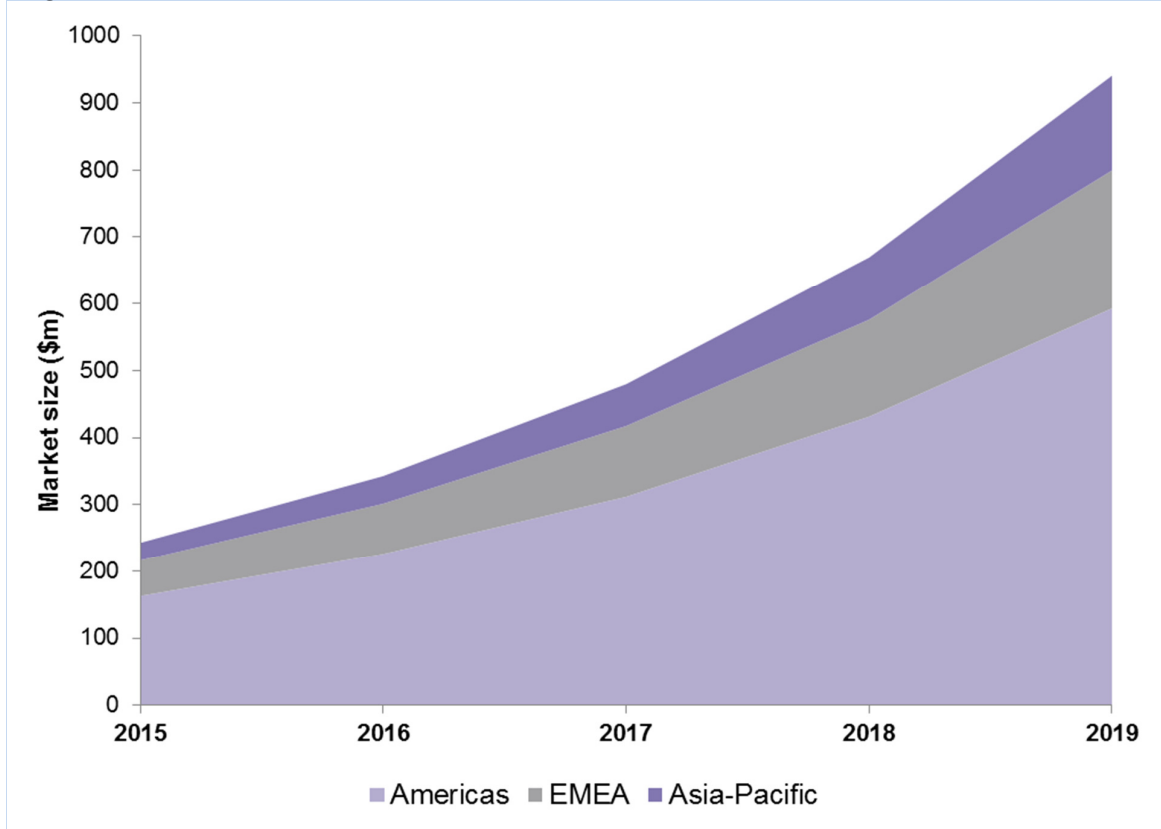
Multi-tenancy, rapid scalability, a user-friendly development interface, and a rich set of prebuilt connectors and integration templates are the basic features of any iPaaS solution. Only multi-tenant, scalable cloud-based integration platforms providing the necessary tools and dedicated resources for faster development of integration flows connecting different applications and data sources, as well as offering enterprise-grade data security and governance for such interactions, can be termed as iPaaS solutions.

Merely delivering application and/or data integration capabilities via the cloud on subscription basis does not amount to iPaaS provision. In addition, Ovum does not consider an integration service confined to B2B integration delivered via the cloud to be an iPaaS solution.

Global iPaaS market size forecast

Ovum expects the global spend on iPaaS solutions to grow at a compound annual growth rate (CAGR) of 40% over the next four years, reaching \$940m by the end of 2019 (see Figure 1). For 2015, Americas (North, Central, and Latin America) will account for about 67% of the global iPaaS market, followed by Europe, the Middle-East, and Africa (EMEA) region with a 22% share. Asia-Pacific's share in the global iPaaS market size is expected to increase from about 11% in 2015 to 15% by the end of 2019.

Figure 1: Global iPaaS market size forecast, 2015-2019



Source: Ovum

Because integration practitioners and enterprise architects are now more open to integration approaches that improve developer productivity and allow them to “do more with less”, the next wave of iPaaS adoption will be driven by enterprise ICCs/integration COEs.

Of course, there will be some qualms about “reskilling” and potential redundancy of integration skills developed over several years, but then IT leaders are not inclined to defend legacy at a strategic level. Indeed, 46% of the respondents to a recent survey conducted by Ovum agreed that existing enterprise service bus (ESB)/service-oriented architecture (SOA) infrastructure offers less flexibility and is difficult to maintain. In addition, 88% of respondents indicated an inclination to adopt cloud-based integration platforms for appropriate integration scenarios.

Emerging iPaaS use cases

Ovum has closely tracked the emergence of iPaaS in the enterprise integration landscape and it is clear that both midsize and large enterprises realize the value iPaaS solutions deliver in terms of faster time to value and TCO savings. The first generation of iPaaS, which could be termed as a more robust and comprehensive version of integration-as-a-service solutions, was mainly used for on-premise-to-SaaS and SaaS-to-SaaS integration. However, over the last 12 to 18 months, there have been several implementations extending the use of iPaaS to on-premise-to-premise, B2B, and mobile application integration.

There are two facets to this trend. First, iPaaS adoption in several enterprises was driven by LOBs and once IT became conversant with the features and functionality of the solution, the use of iPaaS was extended to other integration scenarios. Second, several iPaaS vendors have expanded the features and capabilities of their solutions to cater for the needs of less-complex on-premise and B2B integration, and API management. For example, while key iPaaS vendors such as IBM, Dell Boomi, and MuleSoft are already offering API management capabilities along with their iPaaS solutions, other iPaaS vendors such as SnapLogic, Cloud Elements, and Flowgear have introduced an initial version of API management capabilities. In addition, SAP has partnered with Apigee to offer API management capabilities (using Apigee Edge) with SAP HANA Cloud Integration.

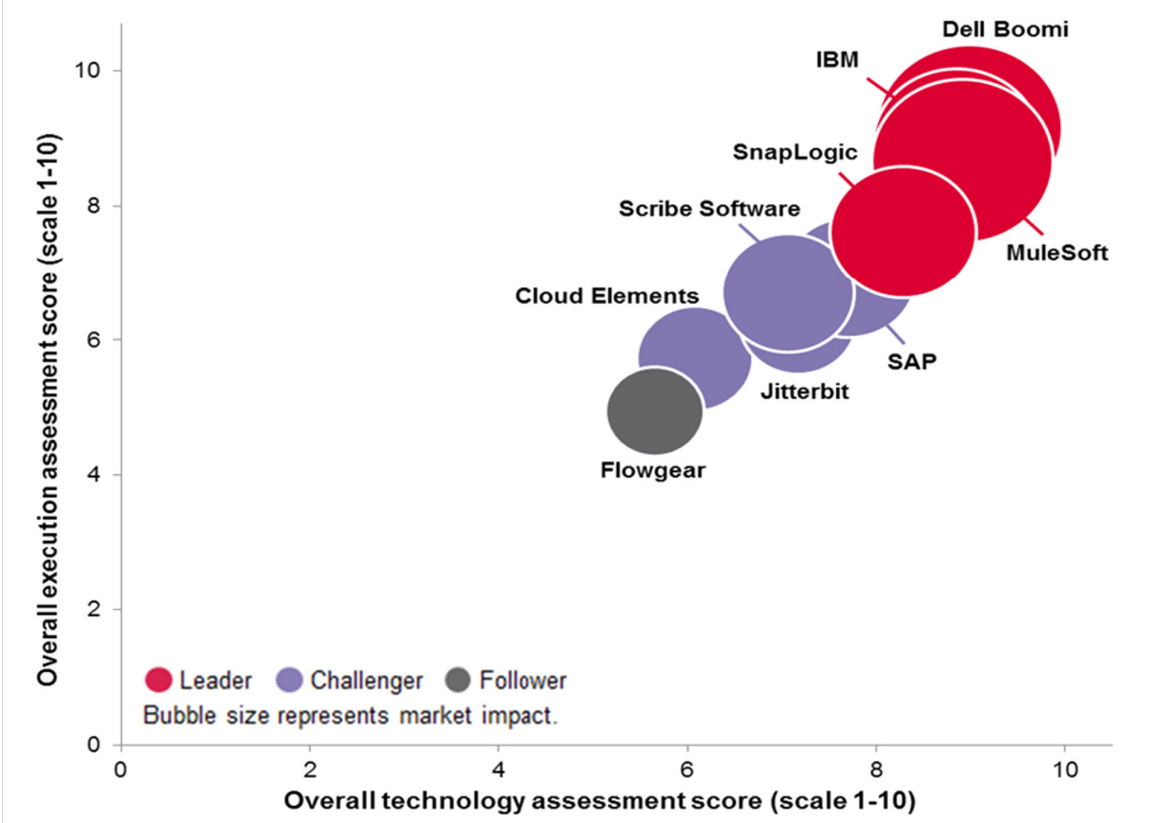
In the context of mobile application integration, iPaaS solutions enable users to expose data associated with on-premise and SaaS applications as representational state transfer (REST) APIs for consumption by mobile applications. iPaaS vendors are also working on supporting “near realtime” integration for data-intensive integration scenarios. In addition, some iPaaS solutions allow on-premise deployment of runtime engines enabling on-premise-to-on-premise integration. This is particularly important for mitigating data security and privacy concerns regarding the use of iPaaS for enterprise application integration (EAI)-type scenarios

Ovum Decision Matrix: iPaaS, 2015-2016

The ODM bubble charts in Figures 2 and 3 represent the results of a comprehensive evaluation of nine iPaaS solutions meeting the inclusion criteria. Table 1 includes “Leaders”, “Challengers”, and a “Follower” as per the results and specifications of ODM evaluation and ratings framework.

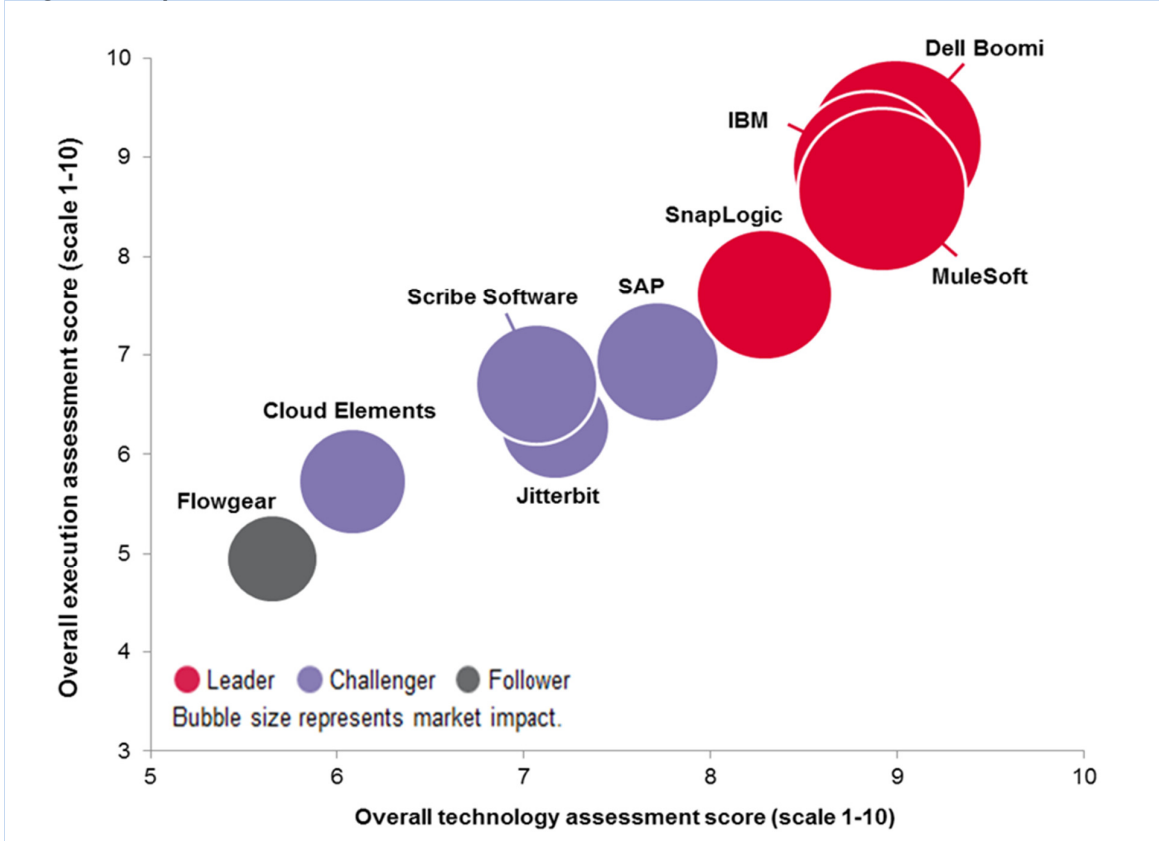
As shown in Figure 2, there are a couple of distinct clusters, representing vendors having a relatively small difference in overall scores across technology and execution dimensions. Market impact scores determining the bubble size were calculated based on the revenues and revenue growth achieved by various iPaaS vendors in 2014.

Figure 2: Ovum Decision Matrix: iPaaS, 2015-2016



Source: Ovum

Figure 3: Expanded view of Ovum Decision Matrix: iPaaS, 2015-2016



Source: Ovum

Table 1: Ovum Decision Matrix: iPaaS 2015-16

Market leaders	Market challengers	Market follower
Dell Boomi	SAP	Flowgear
IBM	Scribe Software	
MuleSoft	Jitterbit	
SnapLogic	Cloud Elements	

Source: Ovum

Market leaders: Dell Boomi, IBM, MuleSoft, and SnapLogic

The four Leaders: Dell Boomi, IBM, MuleSoft, and SnapLogic achieved high scores across evaluation criteria under technology and market impact dimensions. As shown in Figure 3, there is stiff competition between the three leaders constituting this cluster. Meanwhile, SnapLogic has executed an aggressive product roadmap and strategy to evolve into a leading iPaaS vendor.

The combination of Dell Boomi AtomSphere iPaaS and Dell Boomi master data management (MDM) offers a unified platform for data integration, MDM, and data quality services. Dell Boomi has gradually expanded API management capabilities of AtomSphere iPaaS, including the provision for monitoring key metrics related to low-latency integration processes, to cater for the requirements of midsize-to-large enterprises. Dell Boomi AtomSphere was introduced as a "first generation"

integration-as-a-service solution in 2008 and since then has evolved into a leading iPaaS solution with a significant foothold in the medium-to-large enterprise segment.

IBM WebSphere Cast Iron Cloud Integration is a relatively mature solution capable of supporting a range of integration needs, including cloud-to-cloud, on-premise-to-cloud, and mobile application integration. It offers easy connectivity to several other WebSphere middleware platforms to cater for key integration requirements, including B2B integration (via IBM Sterling Commerce suite) and API management. It can be used with IBM Mobile Foundation bundle to achieve connectivity between mobile applications developed on IBM Worklight and other on-premise and SaaS applications.

MuleSoft CloudHub has matured significantly since its introduction in February 2011, and is widely used by midsize-to-large enterprises for achieving cloud service integration. MuleSoft has executed an aggressive product roadmap and strategy to achieve impressive subscription growth over the last two-to-three-year period. MuleSoft CloudHub offers easy federation with Mule ESB, a lightweight and scalable ESB, to effectively support hybrid integration needs. In addition, MuleSoft Anypoint Platform for mobile enables API-led connectivity with backend applications and data sources, such as Salesforce.com, ServiceNow, SAP, and Siebel applications/platforms.

SnapLogic has developed momentum by achieving rapid growth in terms of revenue and customer base. SnapLogic has demonstrated good product innovation, both in terms of core architectural attributes and integration capabilities, and continues to execute an aggressive product strategy. Despite not having an early-mover advantage, it has emerged as a key competitor to Dell Boomi, IBM, and MuleSoft. Its REST-based modular architecture provides support for the scalability required to meet complex integration requirements. Other key features include support for low-latency processing, big data integration capabilities, and integration flow monitoring and management via the SnapLogic mobile app.

Market challengers: SAP, Scribe Software, Jitterbit, and Cloud Elements

SAP HANA Cloud Integration (HCI) is a strategic offering aimed at midsize-to-large enterprises, in particular, existing SAP application and middleware customers. It is worth noting that not many iPaaS solutions have evolved at a rate comparable to that of SAP HCI, and there is little doubt that SAP will be able to execute the current, aggressive product roadmap at a similar rate. SAP HCI runs on SAP HANA Cloud Platform, SAP's in-memory platform-as-a-service (PaaS), and is a complementary offering to SAP Process Orchestration (PO) and SAP Data Services. It has rapidly evolved into an enterprise-grade open iPaaS solution, which can be used in combination with SAP's on-premise middleware to meet hybrid integration requirements.

Scribe Software's iPaaS offers several key features and capabilities, including a connector development kit (CDK), comprehensive integration lifecycle management, dedicated security mediator, "drag and drop" mapping, and prebuilt integration templates. Scribe Software has achieved significant growth since the introduction of its iPaaS solution, which continues to build on a rich heritage in customer data integration. Scribe Software has the right foundation, both in terms of product roadmap and sales strategy, and can effectively compete with major iPaaS vendors for customer data integration requirements.

Jitterbit Harmony was made generally available in April 2014, and the company claims that by the end of October 2014 it had over 50,000 users for its iPaaS solution. It builds on the capabilities of Jitterbit Enterprise Cloud Edition, an integration-as-a-service solution introduced in 2010. Jitterbit is targeting midsize-to-large enterprises with a mix of cloud-based application, data, and process-integration capabilities offered at reasonable subscription charges. The Harmony Winter 2014 release introduced a new messaging system to help ensure guaranteed delivery, as well as adding new failover and scaling capabilities.

Cloud Elements offers a developer-centric iPaaS, marketed as an “API aggregation and management platform” that helps reduce development effort and achieve faster time to value in integration projects. The platform supports multi-tenant integrations, extending the benefits of the underlying “one-to-many” approach to a large number of customers/accounts. In the two year of its existence, Cloud Elements has made good progress, both in terms of the adoption and evolution of its iPaaS solution. The subscription growth achieved over the last couple of years and the Series A funding secured last year have provided Cloud Elements with the financial muscle required for executing an aggressive product roadmap.

Market followers: Flowgear

Flowgear iPaaS is relatively limited in scope and execution, and this is also reflected in its limited market presence (see bubble size in Figures 2 and 3). Flowgear, a subsidiary of Global Micro Solutions, is the only iPaaS vendor based in South Africa. Its iPaaS solution caters for the requirements of on-premise-to-on-premise, on-premise-to-SaaS, and SaaS-to-SaaS integration. The integration platform supports multi-API workflow development and governance, while also offering specific capabilities of a mobile backend-as-a-service (MBaaS) provision. Flowgear had about 30 SME customers in the EMEA region as of the end of 2014.

Emerging iPaaS vendors

Table 2 includes vendors that have introduced/announced/previewed their iPaaS offerings over the last 6 to 9 months. While these iPaaS solutions did not meet the inclusion criteria, and consequently, were not evaluated in this ODM, Ovum is keeping an eye on their evolution and uptake.

Table 2: Emerging vendors: iPaaS, 2015-16

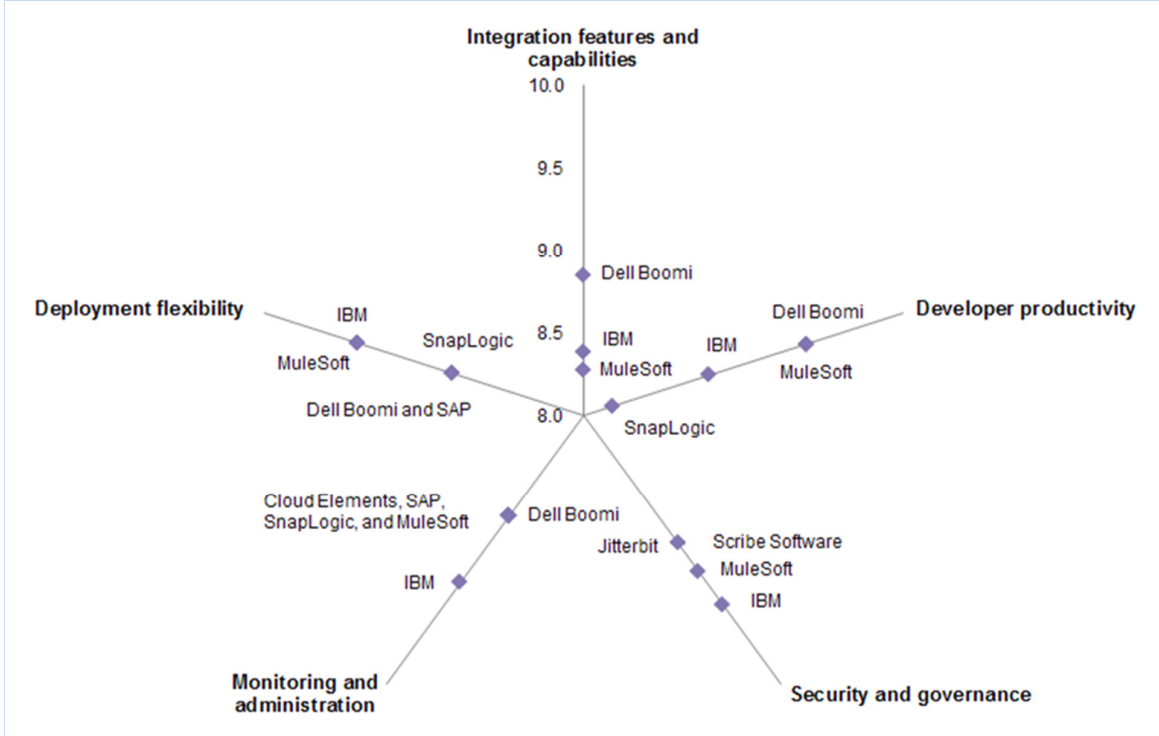
Software AG
Oracle
Red Hat

Source: Ovum

Market leaders

Market leaders: technology

Figure 4: Ovum Decision Matrix: iPaaS, 2015-2016 market leaders: technology



Source: Ovum

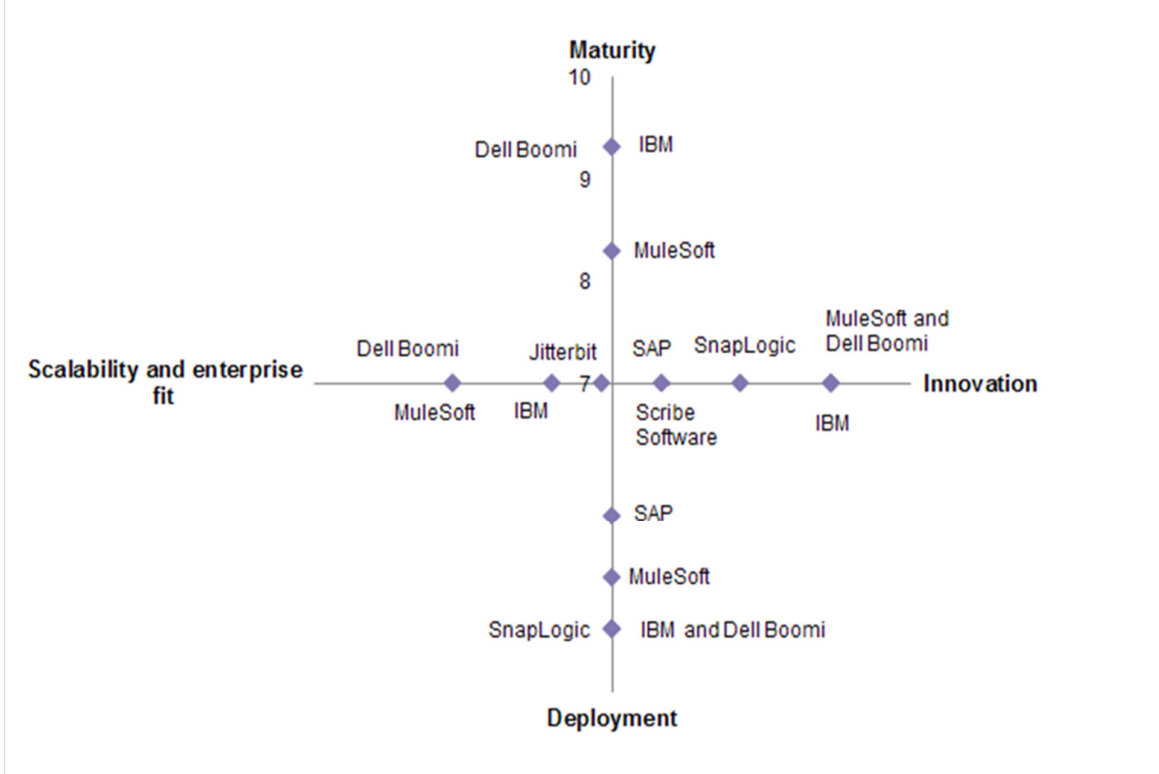
Figure 4 shows vendors with top-three scores within the range of 8-10 (on a scale of 1-10, including those having the same scores) for each category of the ODM technology dimension. Integration features and capabilities and developer productivity are two critical criteria for technical evaluation of iPaaS solutions. Dell Boomi, IBM, and MuleSoft are top three vendors in terms of integration features and capabilities, while all four leaders, including SnapLogic, have high scores against the parameters covered under the “developer productivity” criteria.

In the context of data security and governance, IBM, MuleSoft, Scribe Software, and Jitterbit have top-three scores, followed by Dell Boomi and SnapLogic. IBM, MuleSoft, SAP, SnapLogic, and Cloud Elements scored well in terms of monitoring and administration capabilities. IBM, MuleSoft, Dell Boomi, and SAP offer greater deployment flexibility.

The “methodology” section of this ODM provides details on specific features and capabilities assessed across various categories of technology, execution, and market impact dimensions.

Market leaders: execution

Figure 5: Ovum Decision Matrix: iPaaS, 2015-2016 market leaders: execution



Source: Ovum

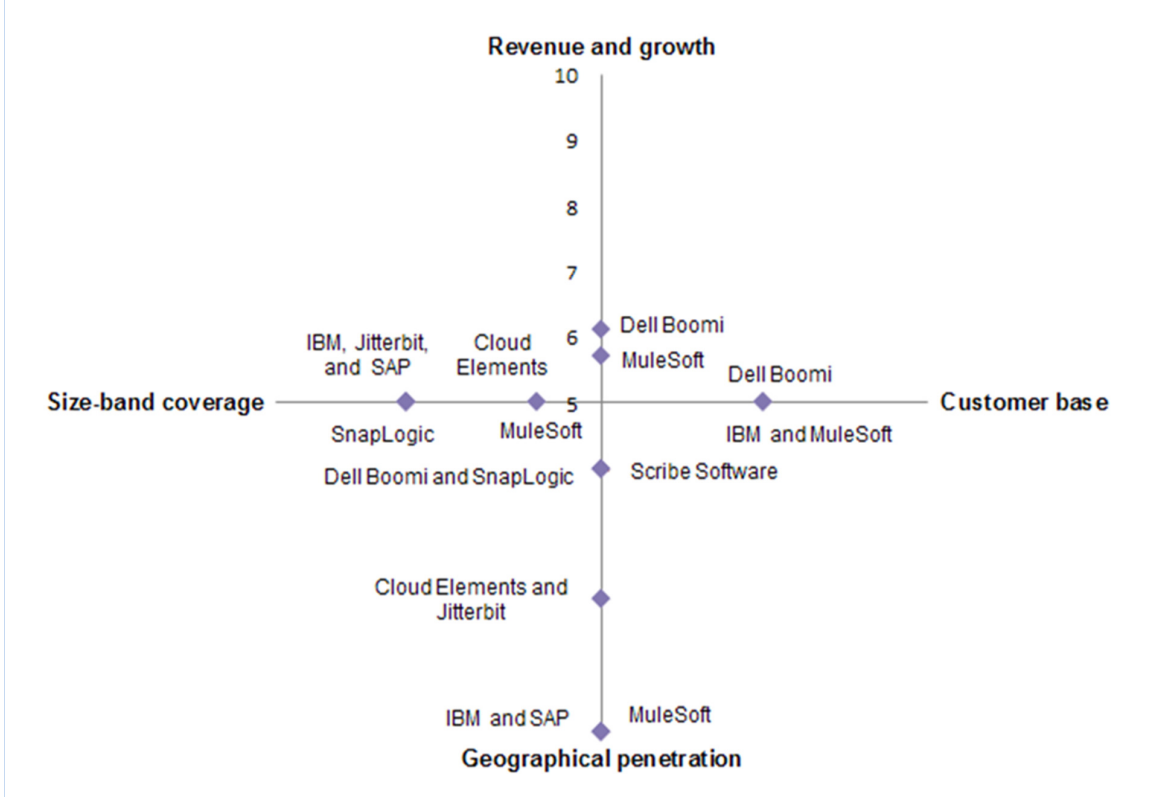
Figure 5 shows vendors with top-three scores within the range of 7-10 (on a scale of 1-10, including those having same scores) for each category of the ODM execution dimension. “Maturity” and “scalability and enterprise fit” have higher weightings than the two other criteria groups under execution dimension. In the context of maturity: Dell Boomi, IBM, and MuleSoft have top-three scores, while IBM, Dell Boomi, MuleSoft, and Jitterbit have higher scores against the parameters covered under “scalability and enterprise fit” criteria group.

The innovation offered by an iPaaS solution in terms of product strategy, architecture, and commercial model can be a differentiating feature and an indicator of long-term product roadmap and execution commitment. IBM, Dell Boomi, and MuleSoft, SnapLogic, SAP, and Scribe Software scored well in this category. Dell Boomi, IBM, SnapLogic, MuleSoft, and SAP have high scores for the “deployment” criteria group.

Vendors having high scores across both technology and execution dimensions demonstrate a good balance between product and commercial strategies, and have established a good footprint across midsize-to-large-sized enterprises.

Market leaders: market impact

Figure 6: Ovum Decision Matrix: iPaaS, 2015-2016 market leaders: market impact



Source: Ovum

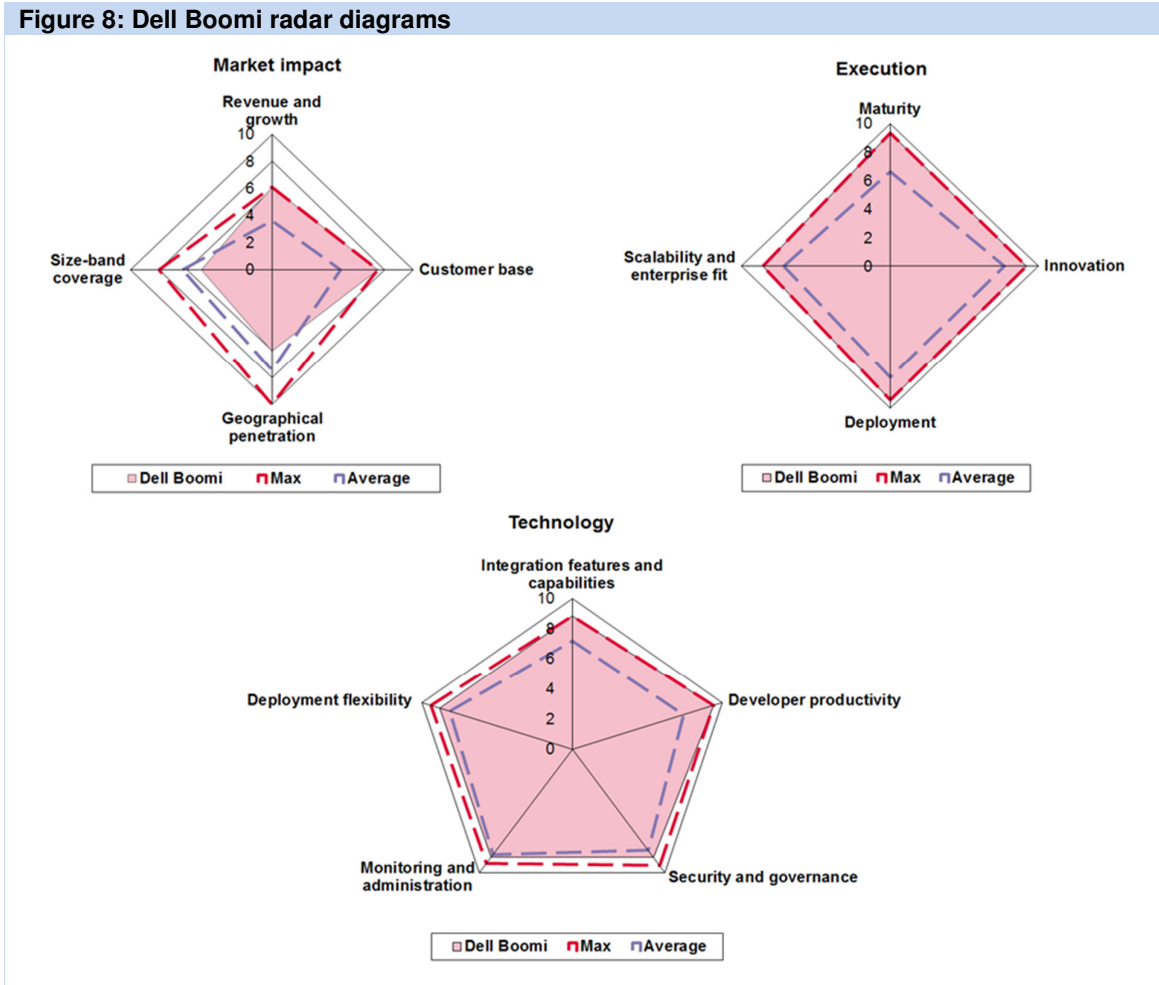
Figure 6 shows vendors having the top three scores within the range of 5-10 (on a scale of 1-10, including those having same scores) for each category of the ODM market impact dimension. The overall market impact score is predominantly based on corresponding vendor score for “revenue and growth” criteria group. The corresponding evaluation criteria were quite stringent and therefore, only Dell Boomi and MuleSoft achieved a score above 5. Dell Boomi, IBM, and MuleSoft have top-three scores for “customer base” criteria group.

IBM, Jitterbit, SAP, SnapLogic, MuleSoft, and Cloud Elements score well against the evaluation criteria covered under “size-band coverage”, which also indicates the diversity of the existing customer base. All vendors, except for Flowgear, have a score above 5 for the “geographical penetration” criteria group.

Vendor analysis

Dell Boomi (Ovum recommendation: Leader)

Figure 8: Dell Boomi radar diagrams



Source: Ovum

Ovum SWOT Assessment

Strengths

Platform maturity and developer-centric features and capabilities

Ovum's analysis indicates that the average number of integration processes per user for AtomSphere is substantially higher than that for other major competing platforms, signifying the higher level of maturity of AtomSphere iPaaS. The platform offers a range of developer productivity features and capabilities, including a data-mapping suggestion engine, automated suggestions for faster error resolution, a real-time dashboard, native message queuing, and JSON support. Some of these are key differentiators for AtomSphere iPaaS.

Extensive customer base and solid renewal rate

According to the latest update, Dell Boomi has more than 2,800 customers and a solid renewal rate of 96%. There has been a significant increase in renewal rate over the last 12 to 18 months, and this coupled with new business wins in the large enterprise segment has resulted in rapid subscription revenue growth. These figures also indicate the success of AtomSphere product strategy that continues to focus on expanding customer support and engagement features.

Weaknesses

Limited presence and reach in Europe and Asia-Pacific regions

Given that Dell Boomi is a major vendor in this market with over six years' experience, the percentage of revenue that could be attributed to customers in Europe and Asia-Pacific is small. Dell Boomi has limited presence and reach (direct and via partners) in these rapidly growing iPaaS markets. This hinders its ability to compete head on with other major iPaaS vendors outside the Americas.

Opportunities

Under-penetrated large enterprise customer segment

In the past, iPaaS adoption in large enterprises was mainly driven by LOBs, and ICCs played a limited role in the selection and subsequent use of iPaaS across different integration initiatives. However, with enterprise IT leaders showing greater inclination to adopt agile approaches to integration, iPaaS adoption is expected to increase in the large enterprise segment. This trend is also expected to result in a significant increase in average subscription revenue/deal size. Dell Boomi is well placed to take advantage of this opportunity.

API management on top of iPaaS

Dell Boomi has gradually expanded the API management capabilities of AtomSphere iPaaS, and several additional enhancements are expected to be introduced over the next three to four months. API management on top of iPaaS is emerging as a key use case, particularly for exposing integrations connecting on-premise and SaaS applications as REST APIs for consumption by mobile applications. Dell Boomi should focus on exploiting the opportunity presented by this emerging use case.

Threats

Major vendors offering iPaaS solutions

In addition to IBM, several other major middleware vendors, including SAP, Software AG, and Microsoft, are offering iPaaS solutions that continue to gain traction in large enterprises. With time, Dell Boomi is expected to face significant competition from these vendors, especially because they have a well-established customer base using on-premise/traditional middleware platforms.

AtomSphere's credentials are largely unproven in complex B2B and on-premise integration scenarios

While some customers are using AtomSphere iPaaS for less complex B2B integration (B2B e-commerce via AS2 connections), its credentials in supporting complex B2B integration needs, including rapid partner onboarding and management, managed file transfer (MFT), and support for industry-specific communication standards, are largely unproven. Likewise, AtomSphere is not widely used for data-intensive integration and/or low-latency messaging. This is an area that needs to be addressed to strengthen competitive positioning (for example, against IBM) and secure business beyond primary iPaaS use cases.

Methodology

An invitation and ODM spreadsheet including questions across three evaluation dimensions were sent to all vendors meeting the inclusion criteria, with all except for Informatica and Microsoft opting to participate. Ovum had thorough briefings with the final nine vendors to discuss and validate their responses to the ODM questionnaire.

Technology assessment

Ovum identified features and capabilities that would differentiate between leading iPaaS solutions. The criteria groups and associated percentage weightings are as follows:

Integration features and capabilities (weighting assigned =35%)

- supported use cases: SaaS-to-SaaS, on-premise-to-on-premise, B2B, mobile, and social application integration
- supported transformations:
 - Simple object access protocol (SOAP) or extensible markup language (XML) over Java message service (JMS)/HTTP to REST/JSON services/APIs
 - File-based interfaces (used for B2B integration) to REST services/APIs
 - JSON to XML
- support for real-time and batch-mode integration
- content-based routing capability
- Extract, transform and load (ETL) tool
- data quality services (data profiling, de-duplication, enrichment, cleansing, matching, and so on) offered by the iPaaS solution
- support for "service aggregation" (combining APIs/services associated with different back-end applications for development of composite functionality/high-level data exchange functions)

Developer productivity (weighting assigned =30%)

- user-friendly configuration wizard/drag-and-drop tool/integration flow development interface/graphical integrated development environment
- pre-built connectors/integration templates/mappings for:
 - CRM applications
 - ERP applications
 - Human capital management (HCM) applications
 - Marketing automation
 - Messaging
 - Databases
 - Collaboration applications
 - Financial applications
 - Big data processing frameworks
 - Content management systems

- CDK or template development kit
- unit testing and regression testing tools
- provision for modification of exiting connectors/integration templates or components
- availability of sample code, documentation, best practices, and collaboration venue as part of developer support
- self-service to end users
- error handlers
- version control for integration processes (for example, rollback to a previous state/version)
- support for cloning of configurations (for example, running an existing orchestration with a different set of endpoints)
- support for monetization of new connectors developed by third-party developers and partners
- automated suggestions for error resolution
- availability of a free trial version

Data security and governance (weighting assigned = 10%)

- dedicated security mediator or security gateway for SaaS integration
- provision for providing granular access privileges to individual resources
- provision for storing and retrieving access credentials across different environments
- support for lightweight directory access protocol (LDAP) integration
- provision for isolation between different tenants
- support for HTTPS (HTTP over SSL), Secure FTP (FTP over SSH) and FTPS (FTP over SSL), OAuth, secure database connectivity, and Kerberos
- support for logging and resolving security errors (for example, authentication failures)
- provision for encryption of password/credentials during the development of integration flows
- support for compliance of regulations, such as SSAE 16, PCI, and HIPAA
- support for implementation and administration of security and governance policies, including exception handling

Monitoring and administration (weighting assigned =10%)

- configuration of error/failure alerts and notifications
- command line interface (CLI) for administration functions
- a web console for
 - Monitoring resource utilization/system health/runtime performance
 - Monitoring production integrations
 - Changing, stopping, and disabling/deleting configurations/integration processes
 - Network monitoring
- support for monitoring via mobile devices
- web API for development of client applications for management (creating, changing, stopping or deleting configurations) of integration processes
- built-in fault-tolerance and recovery mechanisms

- a load balancer or other suitable provision for management of workloads spread across different runtime engines

Deployment flexibility (weighting assigned =15%)

- deployment options: appliance and public cloud, private cloud/On-premise, hybrid deployment (including the scenario when only runtime engine is deployed on-premise)
- provision for switching (includes reuse of integration processes/configurations) between different deployment models
- easy federation with traditional integration platforms (for example, ESB)
- professional services for supporting large-scale implementations
- delivery of integration services via a regional/nearby data center
- customer training: online and classroom/onsite training
- cloud deployment of various architectural components
- flexibility to switch between different infrastructure-as-a-service (IaaS) providers

Execution assessment

In this dimension, Ovum assessed the capability of an iPaaS solution across the following key areas:

Maturity (weighting assigned =36%): identifying the current state of the solution with reference to the overall maturity of iPaaS as an integration approach.

Innovation (weighting assigned =20%): identifying innovation in key areas, such as product strategy, architecture, and commercial model and assessing the value delivered to enterprise users.

Deployment (weighting assigned =20%): assessment criteria and points of information related to various deployment issues, including time taken for development of custom integrations, partner network, SLA compliance, customer support, and migration tools.

Scalability and enterprise fit (weighting assigned =24%): assessing the scalability of an iPaaS solution across different scenarios and its alignment with mainstream IT architectures and roadmaps.

Market impact assessment

Market impact was assessed on the basis of revenues and revenue growth achieved by different iPaaS vendors in 2014. While other evaluation criteria (customer base, geographical penetration, and size-band coverage) were assigned minimal weighting (1% each), the corresponding figures offer useful insight via market impact radar diagrams.

Appendix

Further reading

2015 Trends to Watch: Integration and Middleware, IT0022-000217 (November 2014)

Easing Hybrid Integration Complexity with the SOA and iPaaS Combination, IT016-001503 (July 2013)

Integration PaaS: A Unified and Pragmatic Approach to Cloud, On-premise, and B2B Integration, IT016-001484 (May 2013)

Framework: Ovum Integration PaaS (iPaaS) Reference Architecture, IT016-001547 (December 2013)

Author

Saurabh Sharma, Senior Analyst, Software – Infrastructure Solutions

saurabh.sharma@ovum.com

Ovum Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Ovum's consulting team may be able to help you. For more information about Ovum's consulting capabilities, please contact us directly at consulting@ovum.com.

Copyright notice and disclaimer

The contents of this product are protected by international copyright laws, database rights and other intellectual property rights. The owner of these rights is Informa Telecoms and Media Limited, our affiliates or other third party licensors. All product and company names and logos contained within or appearing on this product are the trademarks, service marks or trading names of their respective owners, including Informa Telecoms and Media Limited. This product may not be copied, reproduced, distributed or transmitted in any form or by any means without the prior permission of Informa Telecoms and Media Limited.

Whilst reasonable efforts have been made to ensure that the information and content of this product was correct as at the date of first publication, neither Informa Telecoms and Media Limited nor any person engaged or employed by Informa Telecoms and Media Limited accepts any liability for any errors, omissions or other inaccuracies. Readers should independently verify any facts and figures as no liability can be accepted in this regard – readers assume full responsibility and risk accordingly for their use of such information and content.

Any views and/or opinions expressed in this product by individual authors or contributors are their personal views and/or opinions and do not necessarily reflect the views and/or opinions of Informa Telecoms and Media Limited.



CONTACT US

www.ovum.com

analystsupport@ovum.com

INTERNATIONAL OFFICES

Beijing

Dubai

Hong Kong

Hyderabad

Johannesburg

London

Melbourne

New York

San Francisco

Sao Paulo

Tokyo

