

The Forrester Wave™: Mobile Infrastructure Services, Q3 2015

Ten Providers That Matter And How They Stack Up

by Michael Facemire and Jeffrey S. Hammond
September 10, 2015

Why Read This Report

In Forrester's 112-criteria evaluation of mobile infrastructure service vendors, we identified 10 significant software and service providers — AnyPresence, Appcelerator, IBM, Kinvey, Kony, Microsoft, MobileSmith, Oracle, Red Hat, and SAP — in the category and researched, analyzed, and scored them. This report details our findings about how well each vendor fulfills our criteria and where they stand in relation to each other to help application development and delivery (AD&D) professionals select the right partner for their mobile infrastructure services needs.

Key Takeaways

AnyPresence, Kony, And Red Hat Lead The Pack

Forrester's research uncovered a market in which AnyPresence, Kony, and Red Hat lead the pack. Appcelerator, Kinvey, IBM, Microsoft, Oracle, and SAP offer competitive options. MobileSmith is a market Challenger.

The MIS Market Is Growing As Developers Look For Prebuilt Infrastructure Services

The MIS market is growing because front-end mobile developers don't want to spend time building their own back-end mobile services. They'd rather focus on building great mobile apps.

Engagement, Analytics, And App Management Services Are Differentiators In The MIS Market

As middleware, backend-as-a-service (BaaS), and API management markets converge into mobile infrastructure platforms, engagement services, analytics, and mobile app management become key differentiators of platform breadth.

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Notes & Resources

Forrester conducted detailed product evaluations in May 2015 and interviewed 10 vendor companies and multiple customer references for each: AnyPresence, Appcelerator, IBM, Kinvey, Kony, Microsoft, MobileSmith, Oracle, Red Hat, and SAP.

Related Research Documents

- [Brief: Mobile Middleware — Right Or Wrong?](#)
- [Brief: Services Supplant Mobile Middleware](#)
- [Choose The Right Mobile Development Solutions](#)
- [Cloud Mobile Development: Enabled By Back-End-As-A-Service, Mobile's New Middleware](#)
- [Market Overview: Mobile Infrastructure Services Aid Developers](#)

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Infrastructure Services Speed The Mobile Mind Shift

Investment in custom-built mobile apps is growing, including both customer-facing and enterprise mobile apps. In Forrester's Business Technographics® Global Developer Survey, 2015, we see that 41% of developers have worked with mobile or mobile web apps in the past 24 months, a substantial jump from 31% in 2014 (see Figure 1).

Business leaders are putting a high priority on rolling out new mobile products and services to support customers and employees as they embrace the mobile mind shift, and developers are doing their best to respond.¹ But building mobile apps presents a daunting challenge: Demands for faster updates and tighter integrations to existing systems of record pressure developers to build more capabilities, faster. And it doesn't help when they are building the same app multiple times for iOS and Android, while Windows 10 looms on the horizon. In client inquiries, it's a common refrain that mobile development teams are looking to do more and work smarter without breaking budgets. That's why cross-platform mobile solutions remain on developers' wish lists, despite their skepticism about the ultimate fidelity of app engagement and concerns over capital costs.

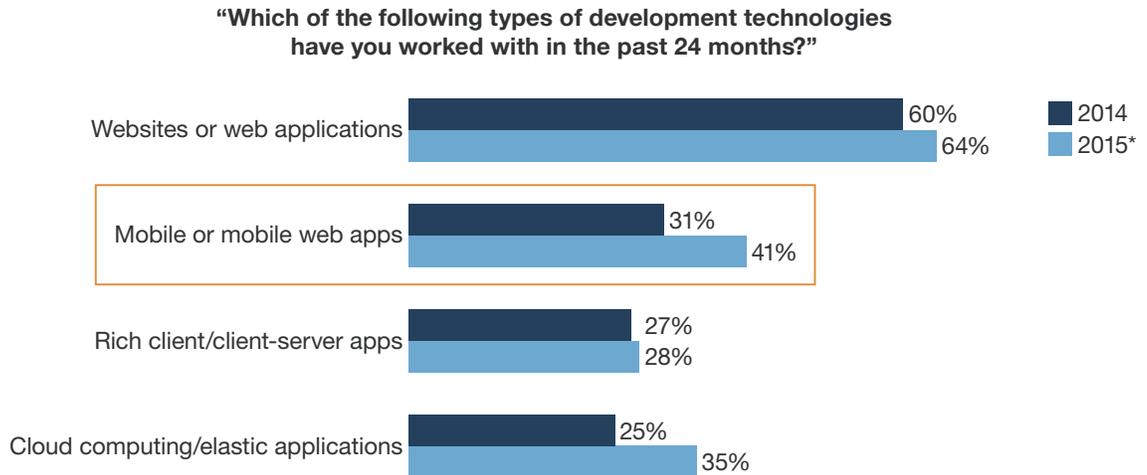
But a compromise is emerging in leading development shops, where development teams acquire cross-platform mobile infrastructure services that don't proscribe any particular front-end mobile technology. In this way, teams that insist on a native app approach can still use the same services as teams building apps using HTML5 technologies like Apache Cordova and Sencha or teams using cross-platform tools like Facebook React Native or Xamarin. In response, we see providers from at least five different directions expanding their product offerings to meet the needs of front-end mobile developers for timesaving mobile infrastructure services (see Figure 2).

There are dozens of vendors jockeying to provide developers mobile infrastructure software or services. We've analyzed 10 leading vendors that offer multiple types of mobile infrastructure services to shorten the decision cycle for application development pros. While we think that best-of-breed mobile specialists will remain an important part of this market for the near future, we also expect more development shops to look to consolidate their mobile infrastructure services with a smaller set of suppliers or a single supplier when practical and cost-effective.

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FIGURE 1 More Developers Are Building Mobile Apps And Mobile Websites



Base: 1,716 global developers
*Base: 1,943 global developers
(multiple responses accepted)

Source: Forrester’s Business Technographics® Global Developer Survey, 2014

*Source: Forrester’s Business Technographics Global Developer Survey, 2015

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FIGURE 2 Multiple Markets Converge To Provide Infrastructure Services

Vendor category	Market entry tactics	Vendor examples
Mobile backend-as-a-service (MBaaS)	<ul style="list-style-type: none"> • Add on-premises capabilities to on-demand services • Broaden services to include specialist features (e.g., analytics, notification) 	Kinvey Red Hat AnyPresence
Mobile middleware	<ul style="list-style-type: none"> • Separate front-end tools from services • Create client-side native APIs • Add cloud-based deployment 	Kony MobileFabric IBM MobileFirst Platform Oracle Mobile Cloud Service
API management	<ul style="list-style-type: none"> • Generate native mobile APIs • Acquire mobile specialists 	Axway Apigee WSO2
Public cloud	<ul style="list-style-type: none"> • Acquire mobile specialists, MBaaS players • Extend core service investments to support mobile 	Amazon Web Services Microsoft Azure App Service Google Cloud Save IBM Bluemix mobile services
Mobile specialist	<ul style="list-style-type: none"> • Offer best-of-breed services • Broaden services offered to expand reach • Add native APIs to container 	Urban Airship Sittrion Adobe Experience Manager Moovweb OpenMarket Good Technology Twilio

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Mobile Infrastructure Services Evaluation Overview

To assess the state of the mobile infrastructure services market and see how the vendors stack up against each other, Forrester evaluated the strengths and weaknesses of 10 leading mobile infrastructure services vendors, looking at the depth of their capabilities across seven classes of mobile infrastructure services that development teams need.

The Strongest Current Offerings Support Seven Types Of Mobile Infrastructure Services

After examining past research, several years of client inquiries, and vendor and expert interviews, we developed a comprehensive set of evaluation criteria across seven types of mobile infrastructure services. We evaluated vendors against 112 criteria related to the service types and vendors' ability to provide them at scale now and in the future. We grouped the resulting criteria into three high-level buckets:

- › **Current offering.** Our analysis looked for providers that showed the most balance and breadth in the mobile infrastructure services offered. We looked for: 1) good current capabilities across seven types of mobile infrastructure services (see Figure 3); 2) flexible delivery of mobile infrastructure services via public cloud, on-premises, or hosted options; 3) client-side support for front-end developers via software development kits (SDKs) or plug-ins that support native or hybrid app development; and 4) life-cycle management support that aids testing and staging of pre-production apps, including gathering beta feedback.
- › **Strategy.** To assess strategy, we examined each vendor in terms of: 1) vision — a compelling picture of where these solutions will be in the next two to three years, what additional mobile infrastructure services they will offer, and whether vendors are forcing market convergence or reacting to it; 2) customer satisfaction — while we expect that every vendor will be able to field customers using the platform, we looked for examples of customers with compelling production apps deployed at scale to get a sense of how these services could be used; 3) speed to market — in a rapidly converging market that already prizes high-velocity development, we find that teams expect regular updates that keep up with iOS and Android client capabilities and 4) alliances — in many cases, we find that vendors are plugging gaps in the embedded services they offer through third-party partnerships with other mobile specialists. We did not score these third-party integrations with full marks in current offering, as they require additional purchases, but we have acknowledged their value as part of an adaptive strategy.
- › **Market presence.** To score market presence, we analyzed three areas: 1) client base and growth specific to mobile infrastructure services; 2) the number of mobile apps deployed and the highest-scale deployments; and 3) overall revenues and dedicated revenue from the vendors mobile infrastructure services offerings.

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FIGURE 3 Seven Mobile Infrastructure Services That Mobile Developers Need

MIS services	Description
Identity and security	Linking individual users' mobile identity to corporate systems is a key app builder need. Identity services build on existing directory services while providing lightweight authentication, authorization, and accounting of what the individual users are allowed to do.
Offline data sync	Synchronization of data that supports offline mobile experiences often requires a store-and-forward architecture with support for data conflict resolution.
User engagement	Innovative mobile apps fully engage customers by making use of device notifications, GPS, beacons, the accelerometer and other sensors.
Analytics/APM	Mobile success relies on rapid user feedback. Client and server-side analytics give developers an end-to-end view of an app's performance and how it's being used.
Data/integration	Connecting to back-end systems and transforming that data into a mobile-optimized format requires a consistent, consumable API. Wrapping the APIs in a client-side SDK that front-end developers can consume is even better.
Data aggregation and business logic	APIs solve data access challenges, but often mobile activities drive business processes. These services allow developers to build custom business logic to restructure and aggregate data from multiple back-end systems.
App management	Apps can be distributed through public app stores or enterprise app stores, and need feedback mechanisms and app management to support a full end-to-end mobile development life cycle.

Evaluated Vendors Broadly Support Mobile Infrastructure Services

Forrester included ten vendors in the assessment: AnyPresence, Appcelerator, IBM, Kinvey, Kony, Microsoft, MobileSmith, Red Hat, Oracle, and SAP. To determine which vendors to examine, we fielded an open survey in March, and then reviewed the submissions of more than two dozen vendors. We selected each of these vendors based on their responses to survey questions. Each of these vendors (see Figure 4):

- › **Supports a broad range of mobile infrastructure services.** We asked whether each vendor had support for the following services types: mobile identity and security, offline client data, engagement services, analytics, connectors to enterprise systems of record, connectors to custom data sources, support for server-side execution of business logic, mobile app management, and deployment and delivery services. Vendors that did not claim support for at least eight of these nine service types were excluded.
- › **Support for hosted or public cloud deployment.** One trait that separates mobile middleware solutions and mobile infrastructure services is the speed that developers can self-provision them. Accordingly, we eliminated any solutions that did not offer services that could be deployed in a hosted or public cloud environment.

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- › **Proven customer adoption.** Vendors that could not provide at least three customer references were excluded. Our evaluation included interviews with contact customer references to validate their use of vendor solutions. Those conversations are reflected in the vendor scores.
- › **A generally available solution.** While we recognize that the mobile infrastructure services market is converging at the speed of light, clients need a product they can order and deploy, not beta bits. All the solutions we reviewed were generally available as of July 1, 2015.

FIGURE 4 Mobile Infrastructure Services Vendor Selection Criteria

Vendor	Product evaluated	Product version evaluated
AnyPresence	AnyPresence Platform, JustAPIs	7
Appcelerator	The Appcelerator Platform	4.0
IBM	IBM MobileFirst Platform	7
Kinvey	Kinvey Mobile Backend-as-a-Service platform	May 2015
Kony	Kony Mobility Platform	6
Microsoft	Azure Mobile Services, App Service, Visual Studio, Visual Studio Online, Visual Studio 2015 Preview	7.1
MobileSmith	MobileSmith	4
Oracle	Oracle Mobile Cloud Service	15.2.3
Red Hat	Red Hat Mobile Application Platform	3
SAP	SAP Hana Cloud Platform, SAP Mobile Platform, SAP Mobile Secure	1.0, 3.0 SP07, 2.8

Vendor inclusion criteria

Vendors that currently offer generally available services in at least six of the following nine categories: identity and security, offline data services, customer engagement services, analytics, connectors to existing systems of record and /or custom data sources, support for server-side business logic, mobile app management, and development tools or deployment services.

Vendors agree to provide up to three customer references for the purposes of gauging levels of current customer satisfaction.

Forrester clients demonstrate significant levels of interest in the vendor, warranting a deeper examination of their capabilities.

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Converging Services Drive The MIS Market, But Capability Gaps Remain

Our evaluation of the 10 selected vendors validates our analysis of an emerging mobile infrastructure services market that will subsume the mobile middleware and mobile backend-as-a-service markets. Vendors from both those segments scored well by offering a broad set of headless services that can be consumed through multiple deployment options. That said, even the strongest vendors showed some gaps in the completeness of their offerings, especially when it comes to embedded engagement services, analytics, and mobile app management services. There's room for additional growth, and we see a market where leaders are just emerging (see Figure 5):

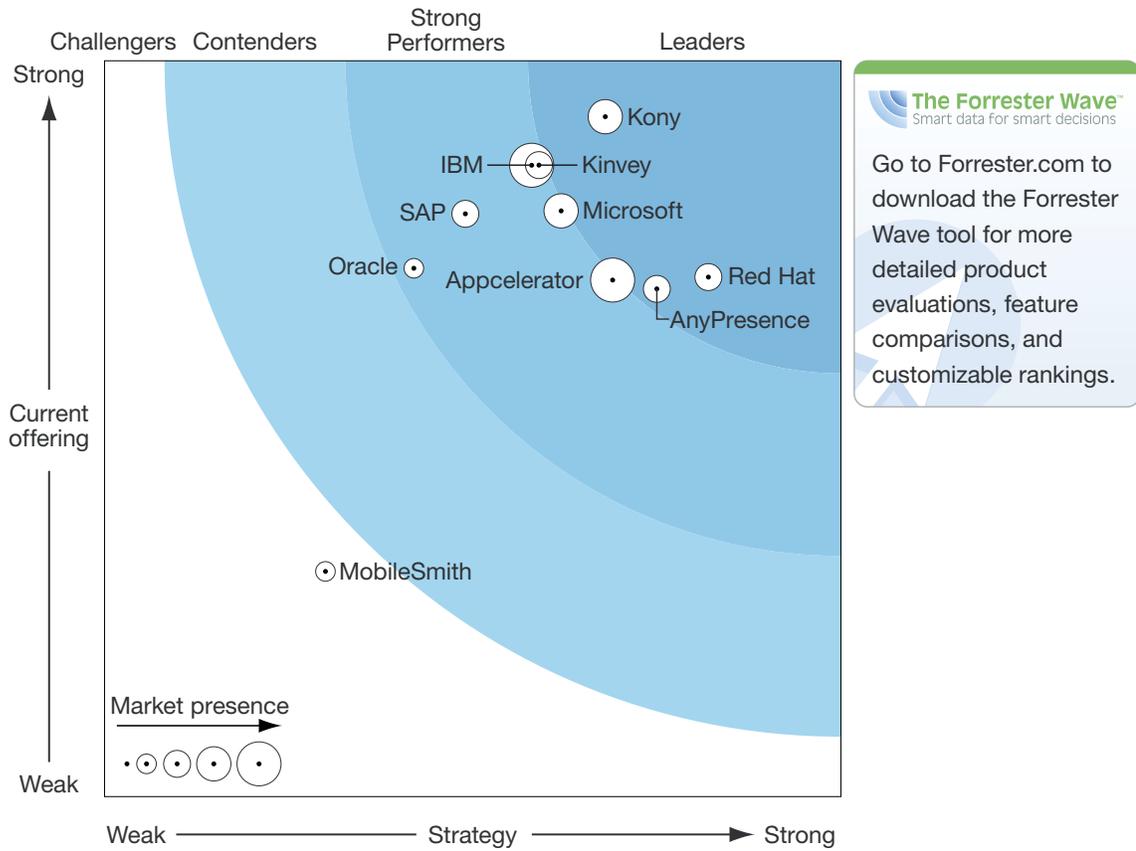
- › **AnyPresence, Kony, and Red Hat carve out a narrow lead among MIS providers.** Proving the consolidation of the mobile middleware and backend-as-a-service space, we see one vendor from the middleware market and two from the backend-as-a-service market emerge as Leaders in this year's MIS Wave evaluation. Kony achieved its position through its overall breadth of offering, successfully distinguishing their front-end services from back-end services, and providing a highly differentiated set of development tooling. AnyPresence took a different route: Its feature set met all the necessary criteria, but it stands out when we evaluate its strategy, including consistent platform updates, forward-looking vision, and highly positive customer references. Red Hat has moved into this market through acquisition of FeedHenry, and is quickly moving to connect its backend-as-a-service offerings to Red Hat's own extensive set of integration tooling, JBoss Fuse. Combined, these three vendors set the bar for mobile infrastructure services.
- › **Appcelerator, IBM, Kinvey, Microsoft, Oracle, and SAP are Strong Performers.** IBM, Microsoft, Oracle and SAP have battled in the enterprise software space for many years, and that battle continues in the mobile enablement space. It's quite a statement about the BaaS industry that Appcelerator and Kinvey join them as Strong Performers in the MIS Wave evaluation. Each of these vendors is strong across the major mobile infrastructure disciplines — the biggest differentiator in the group is market presence. We expect this to normalize as awareness increases and existing customers expand their usage of the product. Our analysis shows that each of these vendors would be well suited to act as the centerpiece of nearly all enterprise mobility solutions.
- › **MobileSmith challenges by focusing on the needs of low-code developers.** MobileSmith succeeds in being a low-code, rapid mobile app builder that leverages existing REST APIs to expose back-end data. This focus on rapid development and ease of use for business developers and non-developers alike limits them in this assessment of broad, headless mobile infrastructure services. That said, clients looking for a tool to quickly generate functional mobile apps shouldn't overlook MobileSmith. Baseline capabilities exist in nearly all of the key enterprise mobility categories that Forrester investigates, but strength in any one of them isn't core to MobileSmith's success criteria, thus establishing them as a Challenger in today's market.

This evaluation of the mobile infrastructure services market is intended to be a starting point only. We encourage clients to view detailed product evaluations and adapt criteria weightings to fit their individual needs through the Forrester Wave Excel-based vendor comparison tool.

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FIGURE 5 The Forrester Wave™: Mobile Infrastructure Services Q3 2015



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FIGURE 5 The Forrester Wave™: Mobile Infrastructure Services Q3 2015 (Cont.)

	Forrester's Weighting	AnyPresence	Appcelerator	IBM	Kirvey	Kony	Microsoft	MobileSmith	Oracle	Red Hat	SAP
CURRENT OFFERING	50%	3.45	3.51	4.29	4.29	4.62	3.98	1.53	3.59	3.53	3.96
Identity and security services	10%	5.00	5.00	5.00	5.00	5.00	5.00	1.75	5.00	4.40	3.80
Data and offline access	15%	2.90	1.50	3.80	4.40	5.00	4.25	0.90	5.00	5.00	5.00
Engagement services	15%	3.50	4.40	4.55	4.00	4.40	3.20	1.35	1.35	2.75	2.80
Analytics	15%	2.50	4.70	4.20	4.20	4.25	4.25	1.65	3.55	2.10	2.95
Integration/data connectors	15%	4.00	3.25	4.50	4.85	4.55	4.00	0.00	4.20	4.20	4.85
Business logic	10%	4.50	3.75	4.50	5.00	4.50	5.00	1.75	4.50	4.50	5.00
App management	5%	1.05	1.40	2.60	2.40	5.00	2.90	2.70	3.35	2.25	4.50
Deployment	5%	5.00	4.01	5.00	5.00	5.00	2.31	5.00	2.31	3.35	5.00
Client-side development	5%	2.75	3.25	5.00	3.63	5.00	4.70	2.38	2.25	3.75	2.75
Quality/life cycle management	5%	2.50	2.50	3.00	2.50	3.75	2.50	1.75	2.50	1.25	2.50
STRATEGY	50%	3.75	3.45	2.90	2.95	3.40	3.10	1.50	2.10	4.10	2.45
Platform updates	5%	4.00	5.00	4.00	5.00	4.00	5.00	4.00	5.00	5.00	3.00
Simultaneous update	5%	5.00	5.00	5.00	5.00	5.00	0.00	5.00	0.00	0.00	5.00
Vision	45%	4.00	3.00	3.00	3.00	3.00	3.00	1.00	3.00	5.00	1.00
Alliances	25%	2.00	4.00	2.00	2.00	4.00	2.00	0.00	2.00	4.00	4.00
Customer references	20%	5.00	3.00	3.00	3.00	3.00	5.00	3.00	0.00	3.00	3.00
MARKET PRESENCE	0%	2.40	4.40	4.40	2.90	3.90	3.50	1.60	1.40	2.10	3.00
Total vendor revenue from all sources	10%	1.00	3.00	5.00	1.00	3.00	5.00	1.00	5.00	3.00	3.00
Vendor revenue percentage	5%	5.00	5.00	1.00	5.00	5.00	1.00	5.00	1.00	1.00	1.00
Installed base	20%	3.00	3.00	5.00	3.00	5.00	3.00	1.00	1.00	1.00	5.00
Apps	25%	1.00	5.00	5.00	3.00	3.00	3.00	1.00	1.00	3.00	5.00
Net customers	20%	3.00	5.00	5.00	1.00	5.00	3.00	3.00	1.00	1.00	1.00
Deployment	20%	3.00	5.00	3.00	5.00	3.00	5.00	1.00	1.00	3.00	1.00

All scores are based on a scale of 0 (weak) to 5 (strong).

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Vendor Profiles

Leaders

- › **AnyPresence.** AnyPresence is a market Leader in mobile infrastructure services due to strength in the core disciplines of the space, current customers that cannot find enough good things to say, and a vision for the future that will not disrupt today's success. AnyPresence was an early entrant into the backend-as-a-service market, yet created a unique offering in that the product isn't a BaaS itself, but instead creates BaaS instances based on customer requirements. This model affords flexibility in core areas like enterprise data connectivity, a robust business logic platform, and a frequent platform update schedule for both cloud and on-premises deployments. This also fuels its vision going forward to play in today's B2E and B2C markets, while allowing AnyPresence to be a Leader in the burgeoning B2B2C market.
- › **Kony.** Kony is a market Leader in mobile infrastructure services due to its multiyear re-engineering effort that separated the KonyOne mobile middleware solution into separate front-end design tools and services for back-end data access (Kony MobileFabric). This reflects in the Wave with strength in both enterprise data access and robust offline data support along with front-end strength in engagement and identity services. Rarely is the topic of "enterprise middleware" accompanied by "intuitive design tools," but the Kony Visualizer sets the standard here. Tying this all together is a solid set of business partners that help Kony fill nearly all needs in the mobile software development life cycle.
- › **Red Hat.** Red Hat is a newcomer to the mobile infrastructure services space, but FeedHenry, the independent software vendor (ISV) it acquired to jump into enterprise mobility, is far from an entry-level product. FeedHenry was well-known in Europe pre-acquisition — living under the Red Hat umbrella will help grow that awareness worldwide. In doing so, Red Hat will be promoting strengths in enterprise data connectivity, offline synchronization, and an outstanding vision for the future of the product that is exciting many clients that we spoke to. One concern, as with any acquisition, is how the parent company may affect the current product direction. Forrester will keep a close eye on this and provide updates here as needed. We'd also advise prospective adopters to invest in developers with experience and strong skills in Node.js, as it will maximize their investments in Red Hat's platform.

Strong Performers

- › **Appcelerator.** Appcelerator's strength is driven by a vibrant history within the mobile development community. Many are aware of the Titanium development studio and multiplatform development tool. Working with this development community allowed it to identify common front-end needs for back-end services, leading to the creation of the Appcelerator platform. MIS services include solid app identity and security, engagement, and app deployment services, combined with rapid, regular updates to the overall platform.

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- › **IBM MobileFirst Platform.** IBM's approach to mobile middleware is similar to that of its suite of middleware products — attack with a broad market offering backed by a well-known services organization. This places IBM squarely within the group of strong mobile infrastructure services performers. IBM continues to hone the technique of seeing a market need, acquiring solid players to fill parts of that need, and then bringing them together under one blue roof for their established customer set. Look no further than its current offering to see this evolution in mobile — only one vendor finished stronger when comparing the full set of current platform features. In 2016 and beyond, we expect to see IBM's pace of innovation pick up as it finishes consolidating its acquisitions and fully moving them onto self-provisioning, public cloud infrastructure.
- › **Kinvey.** Kinvey pioneered the backend-as-a-service market.² As BaaS evolved to encompass API management functionality and grew to be a viable alternative to the mobile middleware space, Kinvey evolved as well. It embraced the need for robust enterprise data access, added deployment options that span many varieties of hybrid, and provided a modern Node.js-based business logic platform that supports any number of corporate use cases. These investments, along with a continuous, consistent schedule of updating both the hosted and on-premises deployments land it squarely as a Strong Performer in this Wave evaluation.
- › **Microsoft.** Microsoft embodies the new model of mobile infrastructure services. Instead of a single product that addresses the full suite of enterprise needs, it offers a loosely coupled collection of services built on Azure that companies can choreograph into a tailored solution. This allows Microsoft to leverage Azure's strengths in identity and security services, enterprise data connectivity, offline support, and analytics to make it a Strong Performer in the mobile infrastructure services space. While critics focus on its inability to break into the mobile client hardware space, its investment in the back end of mobile solutions delighted the customers that we spoke with, making its MIS strategy a pillar for future success.
- › **Oracle Mobile Cloud Service.** Oracle's Mobile Cloud Service (MCS) is the newest product in this Wave evaluation (released for general availability in June 2015), but it's far from new to the mobile game. MCS is much more than a simple "cloudwashing" of their previous product, ADF Mobile. When ADF Mobile struggled to get market traction, Oracle went back to the drawing board, looked at the current challenges facing companies building mobile apps, and built MCS. While Oracle placed on the low end of the Strong Performer range in our evaluation, we expect its position to strengthen in the future, as current offering scores were limited by a lack of live customer deployments at scale paired with below-average analytics, engagement services, and client-side development feature sets. These are all functional areas that Oracle has on the near-term product road map for improvement.
- › **SAP Hana Cloud Platform mobile services.** SAP has an incredible mobile opportunity — it's hard to find large enterprises that don't use SAP to power part of their business; but it's equally hard to find large enterprises that rely solely on SAP to mobilize those same business areas. Placing all the mobile offerings (driven by acquisitions over the last few years) under a single Hana Cloud Platform

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umbrella is a good start to addressing this challenge, and we're seeing strong customer interest in SAPUI5 and the Fiori design paradigm. Competing as a standalone mobile infrastructure services player will require SAP to leverage strengths in app management, offline synchronization, and business logic platforms while improving subpar offerings in mobile engagement services.

Challengers

- › **MobileSmith.** MobileSmith succeeds in being a low-code, rapid mobile-app builder that leverages existing REST APIs to expose back-end data. This focus on rapid development and ease-of-use for business developers and non-developers alike limits them in this assessment, yet those looking for a tool to quickly generate functional mobile apps shouldn't overlook MobileSmith. Baseline capabilities exist in nearly all of the key enterprise mobility categories that Forrester investigates, but strength in any one of them isn't core to their success criteria, thus positioning MobileSmith as a Challenger in today's market.

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Gain greater confidence in your decisions by working with Forrester thought leaders to apply our research to your specific business and technology initiatives.

Analyst Inquiry

Ask a question related to our research; a Forrester analyst will help you put it into practice and take the next step. Schedule a 30-minute phone session with the analyst or opt for a response via email.

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Learn about interactive advisory sessions and how we can support your initiatives.

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Supplemental Material

Survey Methodology

Forrester's Business Technographics Global Developer Survey, 2015 was fielded to 1,943 developers located in Australia, Brazil, Canada, China, France, Germany, India, New Zealand, the UK, and the US.

Forrester's Business Technographics Global Developer Survey, 2014 was fielded to 1,716 business and technology decision-makers located in Australia, Brazil, Canada, China, France, Germany, India, New Zealand, the UK, and the US from SMB and enterprise companies with two or more employees.

Each calendar year, Forrester's Business Technographics fields business-to-business technology studies in 10 countries spanning North America, Latin America, Europe, and Asia Pacific. For quality control, we carefully screen respondents according to job title and function. Forrester's Business Technographics ensures that the final survey population contains only those with significant involvement in the planning, funding, and purchasing of business and technology products and services. Additionally, we set quotas for company size (number of employees) and industry as a means of controlling the data distribution and establishing alignment with IT spend calculated by Forrester analysts. Business Technographics uses only superior data sources and advanced data-cleaning techniques to ensure the highest data quality.

Online Resource

The online version of Figure 5 is an Excel-based vendor comparison tool that provides detailed product evaluations and customizable rankings.

Data Sources Used In This Forrester Wave

Forrester used a combination of data sources to assess the strengths and weaknesses of each solution:

- › **Vendor surveys.** Forrester surveyed vendors on their capabilities as they relate to the evaluation criteria. Once we analyzed the completed vendor surveys, we conducted vendor calls where necessary to gather details of vendor qualifications.
- › **Product demos.** We asked vendors to conduct demonstrations of their product's functionality. We used findings from these product demos to validate details of each vendor's product capabilities.
- › **Customer reference calls.** To validate product and vendor qualifications, Forrester also conducted reference calls with two of each vendor's current customers.

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The Forrester Wave Methodology

We conduct primary research to develop a list of vendors that meet our criteria to be evaluated in this market. From that initial pool of vendors, we then narrow our final list. We choose these vendors based on: 1) product fit, 2) customer success, and 3) Forrester client demand. We eliminate vendors that have limited customer references and products that don't fit the scope of our evaluation.

After examining past research, user need assessments, and vendor and expert interviews, we develop the initial evaluation criteria. To evaluate the vendors and their products against our set of criteria, we gather details of product qualifications through a combination of lab evaluations, questionnaires, demos, and/or discussions with client references. We send evaluations to the vendors for their review, and we adjust the evaluations to provide the most accurate view of vendor offerings and strategies.

We set default weightings to reflect our analysis of the needs of large user companies — and/or other scenarios as outlined in the Forrester Wave document — and then score the vendors based on a clearly defined scale. These default weightings are intended only as a starting point, and we encourage readers to adapt the weightings to fit their individual needs through the Excel-based tool. The final scores generate the graphical depiction of the market based on current offering, strategy, and market presence. Forrester intends to update vendor evaluations regularly as product capabilities and vendor strategies evolve. For more information on the methodology that every Forrester Wave follows, go to <http://www.forrester.com/marketing/policies/forrester-wave-methodology.html>.

Integrity Policy

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Companies Interviewed For This Report

AnyPresence	Microsoft
Appcelerator	MobileSmith
IBM	Oracle
Kinvey	Red Hat
Kony	SAP

The Forrester Wave™: Mobile Infrastructure Services, Q3 2015

Ten Providers That Matter And How They Stack Up

Endnotes

- ¹ We've previously profiled more than two dozen mobile vendors across multiple market categories and defined the most important mobile infrastructure services. AD&D professionals have many technology choices when it comes to building mobile apps that win, serve, and retain customers. One of the principal challenges for dev leaders is keeping front-end mobile developers focused on building useful, engaging apps and insulating them from the potential quicksand of building back-end infrastructure, creating new APIs, and wiring together custom-built or third-party services that aren't mobile ready. Enter a growing number of vendors providing mobile infrastructure service (MIS) platforms. MIS platforms make it easier for front-end developers to build consumer and enterprise mobile apps by providing client software development kits (SDKs) for common services like data connectors, identity, notifications, and analytics. This report provides AD&D pros with an overview of the rapidly converging MIS platform market, the key services that front-end mobile developers need, and the vendors aspiring to provide MIS solutions. Please see the ["Market Overview: Mobile Infrastructure Services Aid Developers"](#) Forrester report.
- ² Kinvey literally claims a patent on "Methods and apparatus for providing unified access to various data resources using virtualized services." Source: Rob O'Connor, "We Got Our First Patent!" Kinvey, July 8, 2015 (www.kinvey.com/blog/4240/we-got-our-first-patent.html).

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