IDC Technology Spotlight

Future-Proofing Enterprise Mobility with EMM Platforms

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Mobility will continue to have far reaching and transformative effects on the way enterprises of all types conduct business, how they are organized, and the tools and resources they will require to compete effectively and sustainably. This IDC Technology Spotlight examines the challenges faced by IT decision makers in selecting future-ready enterprise mobility management (EMM) platforms that deliver against complex and dynamic requirements for scale, security, flexibility, extensibility, and simplicity for enterprise mobility initiatives and beyond. It focuses on the role and positioning of BlackBerry's BES12 offering in the strategically essential EMM market.

INTRODUCTION

The enterprise mobility management (EMM) software market has been on a path of rapid evolution amid significant consolidation. Customer needs have moved beyond a focus on mobile device management (MDM) toward application security, data protection, and content accessibility across multiple endpoint environments. A relatively large and diverse set of vendors have responded by continually expanding their product suites. Today's EMM market features a broad range of both discrete and combined solutions addressing endpoint management, policy management, identity management, network security, data and application protection and management, collaboration, and application life-cycle management functions. Competition is fierce, and differentiation among EMM offerings is not always obvious. But it is certain that mobility will continue to impact all facets of business conduct. Therefore organizations must be prepared to harness and manage mobility to take advantage of the opportunities and meet the challenges it brings.

IT decision makers face extraordinary complexity and risks in selecting EMM solutions as they look to equip themselves and their organizations in the evolving but permanent mobile context. This IDC Technology Spotlight describes the number and nature of current and future EMM scenarios IT decision makers should consider when evaluating and selecting EMM solutions.

ENTERPRISES STRUGGLE TO MEET THEIR MOBILITY ASPIRATIONS

IDC estimates that MDM (a mature and foundational EMM function) has been adopted by 50% of U.S. organizations (markets outside the U.S. look like greenfields by comparison). Yet true penetration in terms of addressable "seats" is much lower. Most organizations begin mobility initiatives with pilot
programs, increasing the amount of seats over time. This may seem ironic amid the well understood, if not well mastered, mega-trends of "consumerization" and BYOD. These forces have challenged IT to keep pace with users' expectations and demands in an "appified" consumer environment. They would seem to be clear EMM catalysts, and they are. Yet EMM penetration is remarkably low despite these forces and the frenetically evolving vendor landscape.

The low penetration of MDM/EMM solutions reflects the relative mobile immaturity of most organizations. This point was clearly evident in our latest survey of mobility stakeholders in large U.S. and U.K. enterprises in which 60% of respondents indicated their organizations had mobilized three or fewer applications. 40% had mobilized two or fewer. This suggests that most mobile business users are doing very little beyond basic email, contact, and calendar functions, whether on their own device or on one provided by their employer. This is not because enterprises fail to grasp the sweeping benefits mobility can bring. The same survey's respondents also made it clear that they intended to mobilize virtually all business processes and reach all audiences (B2C, B2B, B2E). 61% of respondents indicated that their organizations planned to invest more over the next 12-18 months in mobility, and nearly two-thirds pointed to plans for increased EMM investment (see Figure 1).

FIGURE 1

EMM Investment Plans are Second Only to Mobile Devices

Q. If you plan to invest more in mobile technologies over the next 12-18 months, where specifically do you plan to invest?

Source: IDC Mobile Enterprise Software Survey of U.S./U.K. IT decision makers in large (>1,000 employee) organizations, 2014; n = 247
ORGANIZATIONS NEED ROBUST EMM PLATFORMS

Most enterprises are clear and even enthusiastic about the imperative to mobilize business processes. Yet many struggle with how to mobilize in a way that is coordinated, secure, scalable, efficient, and user-friendly, and that addresses an often extraordinarily diverse set of management scenarios. Many also struggle with how to scale their capabilities from point solutions such as MDM that may already be implemented. We also observe many organizations wrestling to manage "rogue" implementations of EMM and other solutions at the line-of-business level. IT decision makers face a variety of challenges in selecting EMM solutions, including:

- **A complex and dynamic vendor landscape.** A scan of EMM solution providers quickly reveals extremely varied core strategies and heritages. There are vendors from security and/or systems management backgrounds, vendors that offer deep expertise in applications, workflows, and/or virtualization, and others that have purely focused on mobile from day one. Each may bring unique or best-of-breed capabilities to the market. Many have also broadened their portfolios organically, via acquisitions, or partnerships and purport to offer a broadening suite of services. It can be difficult for an IT decision maker to know with confidence how robust or unique a given vendor’s EMM capabilities are. The recipe for customer confusion is clear, and because the conversations are moving from being tactical (How do we manage devices?) to strategic (How do we balance agility and security requirements to enable our mobile workforce?), the decision-making process is more complex and lengthy.

- **Solution versus platforms for a complex matrix of mobility scenarios.** Many organizations have mixed mobile worker environments to support, with myriad device, network, and software requirements. Many also have "things" – fleet vehicles, remote monitors, and a universe of other potentially intelligent connected endpoints. Organizations will have preferences and policies related to public/private/hybrid cloud and on-premises IT assets. Security regimes for regulated industries will be different than for non-regulated (though security is paramount for all). Add to these organizations with mixed BYOD and corporate liable device populations. Finally, time, technology, trends, and innovation promise mobility scenarios that have yet to be conceived. In IDC's experience, most IT decision makers want to manage as much as possible through a single platform and manage a single vendor relationship.

- **Security, control, and modernizing IT's contract with the organization.** The mobility imperative won't wait for IT. Consumerization reminds us that access to IT is decentralizing. BYOD has given way to "BYOX" as empowered, often urgent lines of business source apps and EMM solutions independently. The central risk is that enterprise mobility initiatives become uncoordinated at a time when holistic enterprise mobility strategies are essential to business agility. IDC believes IT’s role should logically evolve toward a service enablement disposition and away from central control over technology deployment. EMM solutions must meet this requirement.

- **Nailing the user experience.** Today, IT has to find solutions that not only meet governance and compliance mandates but also offer an optimal end-user experience. This is true on either side of the network. Just as end users are more engaged and productive with high-quality apps, so too will administrators be more effective with high-quality consoles. Failing to deliver on either imperative carries distinct risks.

Organizations have an opportunity to future-proof mobility initiatives by selecting EMM solutions that have been architected to address these challenges, and that scale both flexibly and extensibly to meet future requirements. We now turn our attention to evaluating BES12’s features and capabilities against the market’s complex requirements.
No company has influenced the development of enterprise mobility more foundationally or continuously than BlackBerry. IDC believes the entirely redesigned BES12 is an evolution of EMM capabilities that reflect BlackBerry’s deep enterprise mobility experience as well as the company’s keen awareness of the market’s realities now and looking forward.

A Comprehensive, Future-Ready Platform for EMM

We believe BES12 represents a comprehensive, forward-looking, and timely reimaginaion of EMM. BES12 brings platform-centric (versus product-centric) characteristics which we believe organizations should and will prioritize in their evaluation and selection processes around EMM solutions. The characteristics of an EMM platform include a unified but also extensible suite of capabilities that support an exhaustive set of current and emerging market requirements. We also believe BES12 opens innovative partnership opportunities that will increase the number of choices clients have in sourcing and deploying EMM while offering mutually beneficial upside to BlackBerry and its partners.

- This is not a situation where a vendor is trying to adapt or extend an existing solution to meet dynamically evolving market requirements. BES12 has been rebuilt “from the ground up,” and is a very comprehensive offering (see Figure 2).

FIGURE 2

BES12 Platform
BlackBerry has taken the initiative to consider current and future EMM scenarios, and rearchitect its EMM offering in a way that exhaustively addresses them. IDC believes BES12 meets the market's extraordinarily complex requirements by delivering:

- **A modern platform to manage all endpoints.** EMM solutions are challenged to accommodate the permanently heterogeneous nature of enterprise-addressable endpoints. BlackBerry has designed BES12 to treat all modern OS platforms like “first class citizens,” with its capabilities available consistently and comprehensively to all modern OS platforms. That BES12 will support Windows Phone at launch supports this commitment and capability. But endpoints are poised to extend well beyond today's mainstream operating systems and device instantiations. BES12 has been designed to support Internet of Things (IoT) management scenarios as well.

- **Cloud, hybrid, or on-premises flexibility.** Just as forward-looking EMM platforms like BES12 are built to support heterogeneous endpoints, so too must they flexibly support cloud, hybrid, or on-premises configurations. Enterprises are rapidly adopting cloud-based services in support of agile business initiatives, but this is not necessarily happening at the expense of choice. BES12 follows the BES10 cloud preview of 2013, and will launch with support for on-premises and private cloud deployment models. BlackBerry has also indicated plans for public and hybrid cloud deployments as well as multitenant support in 2015.

- **A simplified server architecture.** BES12 unifies and simplifies server components required to support multiple operating systems by consolidating management of all devices into a single, scalable platform. BES12 is also an upgrade to the BES5 environment. It adds enhanced scalability and active-active high-availability support. BES12 also includes a backward-compatible BlackBerry Web Services API for integrated automation of EMM that lets existing BES5 and 10 customers preserve investments in existing integrations as well as extend them to iOS, Android, and Windows Phone devices.

- **A unified, modernized console.** The BES12 administrator's console has been completely redesigned to reflect the extensibility of the platform itself and provide a comprehensive but intuitive set of utilities to the administrator. The redesigned console is dimensioned for IoT scenarios, enhanced enforcement, policy, and provisioning cases, integration with third-party services, and the introduction of existing and forthcoming BlackBerry enterprise services.

- **User-centric provisioning.** One key feature of this modernization includes the management and provisioning of end users based on individual, group, or attribute-based parameters. Such user-centric provisioning is not necessarily unique to BlackBerry. But BlackBerry's approach is thoughtfully executed, conveying the ability to inherit attributes from multiple groups as well as provision from Active Directory-based and dynamically organized groups. IDC also believes user-centric provisioning and attribute-based management will be an essential basis for the enablement of context-based management and predictive service delivery, for example with machine learning techniques applied to parameters like location, velocity, and engagement history. Attribute-based management puts entirely new and uniquely mobile parameters at the disposal of the organization, enabling the creation of valuable new services and experiences with new security benefits.

- **Support for all device ownership models.** The BYOD trend has done more to complement or augment than obviate corporate-owned device programs. BES12 supports all device ownership/deployment models including corporate-owned, business only (COBO), corporate-owned, personally-enabled (COPE), and BYOD. Support is mainly characterized by the secure separation of work and personal information on the device via BlackBerry’s Secure Work Space offering for iOS and Android devices and BlackBerry Balance capability on BlackBerry 10-based devices. Containerization and app wrapping solutions are somewhat
standard among competitors but BlackBerry's ability to bring its unique security model, global
support, and advanced provisioning capabilities to these scenarios are points of differentiation.

- **End-to-end security.** BlackBerry has a head start on the competition today in terms of owning
many of the required pieces for secure end-to-end mobility. It is no coincidence that BES12
builds on this foundation. BES12 services leverage the single, outbound-initiated bidirectional
port 3101 to provide secure behind-the-firewall connectivity over BlackBerry's secure network
infrastructure to BlackBerry, iOS, and Android-based devices. The company's Secure Work
Space containerization and app wrapping solution supports tunneling secure connections to
iOS and Android devices through the BlackBerry secure network infrastructure. Arguably
BlackBerry's true end-to-end reach can only happen on its own devices where it controls
things like CPU boot to ROM and the file system. However, we note that the strategic
relationship with Samsung announced at the time of BES12's launch brings BlackBerry's
security model closer than ever to Samsung's Android OS portfolio in this instance. BES12's
security continuity and the innovative partnership with Samsung reinforce the unique value of
BlackBerry's comprehensive and differentiated approach to securing data at rest and in
motion.

- **BlackBerry enterprise-grade security for Android.** Organizations may not be standardizing on
or embracing Android-based devices as strategically as has been the case with iOS or
BlackBerry due to lingering security concerns. This is despite the availability of a number of
security solutions and broad but limited support for Android, especially in the BYOD context.
BES12's support for all operating systems by definition extends BlackBerry's unique security
model to all relevant client environments. The strategic partnership between BlackBerry and
Samsung announced at the time of BES12's launch sees Samsung's KNOX offering fully
plumbed into BES12's infrastructure. The initiative aims to take Android to the next level of
enterprise-readiness through joint security and other measures intended to meet market
demand for Android devices that are highly secured and suitable for highly regulated or
government markets.

- **Zero-touch user provisioning.** BES12 integrates a number of new and enhanced provisioning
capabilities that deliver cost savings, rapid, secure, and user-friendly app and user
provisioning models, and preserve investments made by migrating BES5 and BES10
customers. This includes group-based synchronization and management capabilities from
standards-based Active Directory and LDAP compliant directory systems. This includes the
ability to manage users across Active Directory forests where one- or two-way transitive trust
exists. This enables, for example, zero-touch provisioning of apps to groups based in an
inheritance model. BES12 also uses BlackBerry's network infrastructure to simplify enrollment
by eliminating the need for users to enter a server identifier such that users need only enter
their email address and one-time password to be activated. BES12 also introduces SIM-based
licensing which lets mobile operators sell BlackBerry service with carrier plans. IDC believes
this feature may be particularly well received by small/medium businesses and in less
developed markets where BlackBerry's residual affinity may remain high.

- **IoT-grade scalability.** The BYOD wave has brought an obvious order-of-magnitude increase in
the number of devices that must be supported by organizations that support BYOD. The
advent of the "Internet of Things" might easily dwarf the growth of BYOD endpoints. BES12
supports up to 25,000 devices per server for MDM only, and up to 150,000 devices per
domain. This is a significant increase over BES10. Whether it will be sufficient for certain IoT
scenarios remains to be seen, but the levels of support are competitive and offer a degree of
future-proofing for additional BYOD populations and the burgeoning IoT revolution.

- **Improved and integrated app management.** In our view, BlackBerry has lagged the
competition in mobile application management capabilities. BES12 substantially if not entirely
closes this gap delivering unified capabilities across OS environments in a manner aligned with its provisioning and management capabilities with user-group, attribute, and directory-based management. iOS support has been significantly enhanced, which of course is extremely important given significant enterprise adoption of Apple devices. Specifically BES12 enables per-app VPN support (work VPN profiles are associated with specific apps), support for kiosk-mode, and support for Apple's Volume Purchase Program (VPP). The latter includes support for multiple VPP accounts and the management of license codes. BES12 also introduces a redesigned Work Application Catalog that works in concert with the platform's group-based inheritance model. While the look and feel of the catalog has been improved, IDC believes BlackBerry has further work to do in this area to improve interactive elements of these features offered by competitors.

- **Upstack mobility.** BlackBerry is extending its portfolio to help employees increase productivity, enhance security, and make IT administrators’ lives easier. These services have the potential to add value and reduce costs in a variety of ways. Key services that will be brought forward include:
  - **The eBBM suite.** The suite was announced early in 2014 and launched in June with BBM Protected. BBM Protected makes the popular BBM consumer mobile messaging service an enterprise-grade service, adding manageability and stronger encryption. BBM Meetings launches in November 2014 with support for collaborative chat, voice, and video sessions for up to 25 concurrent participants in a secure and auditable way across modalities. Securing collaborative utilities is a priority for regulated industries in particular, especially as users adopt consumer-facing offerings (or SMS) not designed for regulatory compliance.
  - **BlackBerry Blend.** Announced in September, 2014, Blend is a platform-agnostic, secure content access utility that eliminates the need for a VPN and unifies the presentation of personal and business data on a given device. The utility of the service is clear enough, but the underlying identity management capability that enables it is more significant.
  - **Enterprise Identity by BlackBerry.** This solution builds on the company's experience in identity and infrastructure to deliver what it calls "user-centric" (versus directory-centric) ID management. It connects the enterprise platform under one identity service, while letting the identity tie into third-party enterprise SaaS cloud services. BlackBerry has massive scale in this area already, based on the global success of BlackBerry Messenger (BBM). The BlackBerry ID infrastructure claims over 90 million users with more than 150 million identity transactions authenticated daily. Identity takes on new forms in a world of contract employees and as communications moves from people to people to things and things to things.
  - **VPN Authentication by BlackBerry.** BlackBerry is looking to disrupt the traditional VPN token security market with this solution. It leverages BES managed devices, including iOS and Android devices, to provide authentication tokens on the mobile device. This eliminates the need for dedicated token hardware and the need for users to deal with the manual entry of tokens. This has the potential to reduce cost for enterprises as well as streamline the users’ experience.

**Challenges**

BES12 is a comprehensive and forward-looking EMM solution, but it is not without limitations and BlackBerry faces a number of challenges in this highly competitive market.
BES12’s value proposition is dependent on BlackBerry's end-to-end architecture including the company's network infrastructure. As flexible a platform as BES12 is with coverage for heterogeneous endpoint environments and support for cloud, hybrid, or on-premises models, it may not be a logical fit for organizations looking for modular or function-specific solutions.

The EMM vendor landscape is a diverse and formidably competitive group of software giants and smaller, more focused players with up to triple-digit year-on-year revenue growth and market leading positions evident in either group. IDC believes that a number of these leaders are well positioned to sustain their momentum, and that a number of smaller vendors will also see strong growth in 2014 and 2015. Most of these competitors bring their own unique points of differentiation, technical merits, and channel strengths, as well as the ability to bundle diverse enterprise software and services and/or price aggressively.

Apple, Google, and Samsung have also made significant announcements or moves recently including partnerships, acquisitions, and the introduction of new EMM-oriented features and services. None have meaningful traction yet. And while these players have the intent and resources to challenge BlackBerry, the strategic partnership announced between BlackBerry and Samsung shows how BES12 may be a key to their enterprise market aspirations. The (non-exclusive) partnership integrates BES12’s end-to-end capabilities into Samsung’s KNOX solution. This is complemented with dedicated joint channel and go-to-market efforts. In IDC’s view this is a particularly strong endorsement of BES12 as an end-to-end secure EMM offering as well as an example of how BlackBerry might enable more creative competitive models.

The market’s perception of BlackBerry has obviously been negatively influenced by the company’s struggles over the past several years. The competition has been quick to seize on this, and there is a danger that potential BES12 customers will be reticent to engage. Obviously BlackBerry will need to continue managing its perception in the marketplace as all companies must. Nothing helps this like positive performance, and there are material indications in both financial and customer results that this negative trajectory has been substantially reversed. Financial information publicly available in October 2014 suggests that the company’s EMM revenue decline will be significantly less severe in calendar-year 2014. We believe this reflects the company’s stabilization under CEO John Chen’s leadership and validates the tactical, strategic, and operational steps taken to date to turn the company around.

BlackBerry’s EZ Pass program (a promotional program that allows customers to deploy BES10 for free when upgrading from earlier generations of BlackBerry’s MDM platforms or migrating from competitive platforms) was implemented in March 2014 and ends in January 2015. It has been successful to date. BlackBerry reports 5 million licenses issued for BES10 under the program at the time of BES12’s launch, with over 30% having been traded in from competitors’ MDM platforms. This indicates sustained mid-quarter momentum from the September quarter’s guidance of 3.4 million licenses issued with 25% of total licenses traded from competitors’ MDM platforms. Certainly the price is right, but the overall number of upgrades and percentage of competitors’ licenses traded should be seen as an endorsement of the company’s direction and BES10’s competitive merits.

IDC believes that any such reticence is becoming increasingly unjustifiable. BES customers and competitors’ customers with 5 million seats appear to agree, as does Samsung, the world’s largest device maker.
CONCLUSION AND ESSENTIAL GUIDANCE

To paraphrase the famous William Gibson quote, the enterprise mobility future is here, it's just not evenly distributed. But it will be for most organizations if they intend to remain viable over time. EMM adoption may be low today, but the outlook is inevitably one of broad market adoption that will require extensible capabilities and features. To that end, IDC forecasts that the EMM software market will more than double from $1.1 billion in 2013 to over $2.5 billion in 2018.

IT decision makers are faced with critically important investment decisions around EMM in the near term. They have an opportunity to both enable and future-proof their organization’s mobility initiatives with the right choices. The wrong choices can easily be damaging to the organization, impacting everything from cost to security and control, and the overall competitiveness of the business.

IT decision makers should consider the following when evaluating and selecting EMM solutions:

- **Conduct an EMM audit.** Review current and planned mobility initiatives and policies that will be associated with those initiatives. Develop a formal working list of your organization's known and anticipated EMM requirements. Use this to inventory gaps in existing coverage, gauge the extent to which existing solutions can address both gaps and future requirements, and evaluate the capabilities of EMM solutions.

- **Look for EMM suites that address as exhaustive a set of current and future scenarios as possible.** Of course such capability must be delivered securely, efficiently, cost effectively, and in a way that promises extensibility for future scenarios. Vendors playing in this space must be able to clearly articulate differentiated value above and beyond standalone mobile management functionality.

- **Prioritize EMM capabilities that facilitate IT’s evolution.** As EMM technology evolves toward being a central policy hub that makes decisions based on a set of defined parameters, we believe advanced identity, contextual capabilities, and granular data security should be prioritized in the near-term road map.

- **Plan for IoT requirements now.** IDC expects the worldwide market for IoT solutions to grow at a 20% CAGR from $1.9 trillion in 2013 to $7.1 trillion in 2020. While EMM is only a part of the entire IoT management/security strategy and may not be immediately applicable to the business, decision makers should ensure that their EMM solution has the capacity to manage the "things" that enable businesses to transform processes and create competitive advantages.

BES12 is a redesigned platform that has been architected with these requirements in mind and has a significant opportunity for success.
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