RED HAT® JBOSS®
MIDDLEWARE

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BRIDGING MOBILE APPLICATION DEVELOPMENT AND BUSINESS PROCESS MANAGEMENT

DATASHEET

RESPOND QUICKLY TO BUSINESS CHANGES

Accelerated digital transformation places new demands on business. To stay competitive, organizations must quickly adapt their business models and processes. Business process management (BPM), business rules management (BRM), and mobile applications are increasingly important to many business transactions—from customer-facing to business-to-employee (B2E) and business-to-business (B2B) interactions.

- **BPM** solutions provide a systematic approach to business workflows, making them more efficient and adaptable. These solutions let business analysts modify, automate, and optimize business processes quickly and easily. As a result, businesses can rapidly respond to changing customer, regulatory, or operational requirements and prioritize process activities.
- **BRM** solutions let businesses define organizational policies and associated operational decisions, as well as deploy, monitor, and maintain them separately from core application code. This capability is especially relevant for highly regulated industries or for transactional businesses that are dependent on evolving requirements and policies.
- **Mobile apps** offer organizations new opportunities to optimize, innovate, and reinvent business processes by taking advantage of both mobile device features and data from back-end systems to improve user engagement and process efficiency. Mobile-centric, process-led approaches can use data to respond faster to changing requirements and reduce errors.

Together, these technologies empower organizations to better respond to the rapid change that characterizes business operations—for example, an auto insurance company processing a customer claim or a healthcare provider using a dynamic schedule for operating rooms, equipment, and staff to meet patient treatment requirements. Traditionally, these transactions use paper-based forms, static schedules, and call centers, but as mobile adoption increases, core business processes must extend to mobile as well.

A mobile application platform supports development of native, web-based, or hybrid apps that integrate with BPM and BRM systems and take advantage of mobile app security, storage, authentication, and management capabilities. In addition, mobile application platforms use features such as geolocation, images, and signature capture to enhance business process design and decision-making.

SIMPLIFY APPLICATION DEVELOPMENT WITH LOW-CODE SOLUTIONS

Traditional applications bury workflows and business rules in code, making changes complicated and resource-intensive. To overcome these challenges, organizations are replacing legacy platforms with more agile, user-controlled BPM solutions that offer low-code development and greater visibility. These solutions simplify development by providing visualization tools, drag-and-drop components, templates, early prototyping and cloud deployment capabilities, lightweight architectures, and reusable application programming interfaces (APIs).

Similarly, constantly changing requirements for mobile apps—and high demand for developer resources—have created a need for shorter development and deployment cycles, as well as greater business user involvement. Mobile application platforms support reusable API and back-end components, templates, visual editors, and drag-and-drop tools, as well as collaboration and cloud scaling capabilities.

However, the appeal of low-code development must be balanced with effective security, scalability, analytics capabilities, and life-cycle management. Enterprise-ready platforms can balance control with agility, helping line-of-business organizations innovate to respond to market demand while ensuring IT control over critical integration, security, and deployment. These platforms implement governance and IT policy compliance via user authentication at the application level and incorporate BPM at the rule or process level.

EXPAND DEVELOPMENT AND MANAGEMENT CAPABILITIES WITH RED HAT SOLUTIONS

Together, Red Hat® Mobile Application Platform and Red Hat JBoss® BPM Suite offer a low-code approach to building native or hybrid mobile apps that integrate securely with business process and rules services.

With these solutions, organizations in industries where compliance requires adherence to business rules can offer a mobile app that not only simplifies rules-based transactions, but also takes advantage of mobile device features, such as push notifications, images, and geolocation.

TABLE 1. RED HAT MOBILE APPLICATION PLATFORM FEATURE OVERVIEW

FEATURE	DESCRIPTION
Mobile application development capabilities	Developers can use the front-end tools of their choice to build native, web-based, or hybrid apps using the online studio or a command-line interface. These apps can be deployed to iOS, Android, and Windows devices.
Low-code development	Forms builders let users create forms-based mobile apps with drag-and-drop components, eliminating the need for intensive developer resources and accelerating time to market. Developers can take advantage of reusable connectors and APIs for integration with back-end applications and services.
Secure back-end integration	A Mobile Backend-as-a-Service (MBaaS) provides common services, such as push notifications, caching, security, authentication, and data sync. This MBaaS also acts as middleware to securely connect a mobile app with JBoss BPM Suite and other back-end systems.
Mobile app life-cycle management	Users can configure and manage multiple environments—such as development, test, preproduction, and production—with access control features for effective collaboration and support for continuous development and deployment.

TABLE 2. RED HAT RED HAT JBOSS BPM SUITE FEATURE OVERVIEW

FEATURE	DESCRIPTION
Business process modeling	Drag-and-drop components offer easy business process diagramming, compliant with the Business Process Model and Notation 2.0 (BPMN 2.0) standard.
Business rules management	A rules engine provides decision services that can be created using decision tables, decision trees, scorecards, and a guided rule editor, ensuring business data is evaluated against appropriate rules for decision-making. In addition, applications that integrate business rules and processes can be easily created.
Resource planning	Resource planning services build solutions for complex scheduling and optimization—for example field service operations that require resource scheduling to ensure resources are available at the right place and time.

STREAMLINE BUSINESS WITH A COMBINED ARCHITECTURE

Typically, solutions that use services from Red Hat Mobile Application Platform and Red Hat JBoss BPM Suite are constructed using Representational State Transfer (REST) API calls (Figure 1). Both Red Hat Mobile Application Platform and JBoss BPM Suite can be deployed on-premise or in the cloud using Red Hat OpenShift Container Platform.

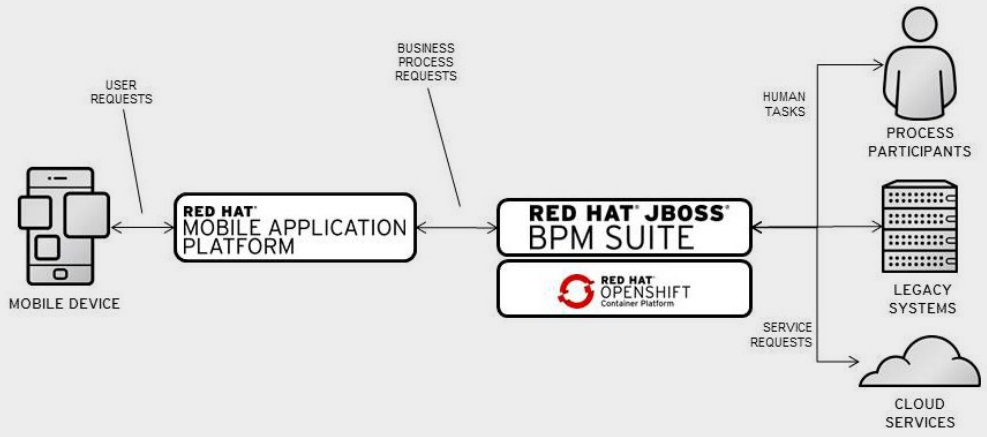


Figure 1. Architecture of a mobile process application

In this setup, mobile apps communicate directly with Red Hat Mobile Application Platform and can take advantage of all MBaaS capabilities, including authentication, storage, caching, and push notifications. Application code running on the platform communicates with JBoss BPM Suite, initiating new processes and interacting with running processes via the REST API in JBoss BPM Suite.

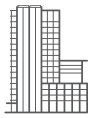
As illustrated above, mobile apps can use JBoss BPM Suite to access back-end systems and services. Workflows are then routed to appropriate systems and staff according to the business process. JBoss BPM Suite supports standards-based interfaces for back-end systems and can also connect with integration platforms, such as Red Hat JBoss Fuse, a platform that offers connectors for more than 150 systems and packaged applications.

Using this approach, business experts can construct complex mobile apps that interact with back-end processes and systems without help from IT developers. All of an application's details—from the app user interface to the processes and rules governing its back-end interactions—can be specified by nontechnical users through drag-and-drop, graphical editing tools. Red Hat Mobile Application Platform and JBoss BPM Suite use standard source code repositories and build tools to deploy and monitor applications using the same governance mechanisms as other IT-developed software.

LEARN MORE

Learn more about Red Hat Mobile Application Platform at redhat.com/mobile.

Learn more about Red Hat JBoss BPM Suite at redhat.com/en/technologies/jboss-middleware/bpm.



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Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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