



Unleashing the power of Patterns and productivity of BlueMix with IBM PaaS

Application development is moving at a rapid pace and driving radical paradigm shifts. Existing systems need to change and adjust to changing business dynamics and new emerging technology sets high expectations for the level of flexibility and accessibility of new business automation.

Cloud provides an ideal canvas for the development and deployment of these critical business systems. IBM offers a combination of capabilities designed to provide the perfect balance of control, flexibility and speed – IBM SmartCloud Application Services, through its support for “pattern based deployment and operations,” and IBM BlueMix (codename, available in beta), through its Cloud Foundry based service composition model. In this article, we will go over a scenario of how the two together can help a customer scale its applications to cloud scale, control cost and simultaneously add new capabilities at an accelerated pace.

Customer: MillennialPR

Our scenario starts with a hypothetical customer – MillennialPR. It is a medium size public relations firm that is seeing rapid growth. It has always been strong on technology and differentiates itself on its customer service. Their advanced customer care system provides innovative ways in which the company interacts with its clients and on behalf of its clients. MillennialPR has a Java-based home grown customer relationship management system which they run in their data center today. The system has served them well, but their growth will require greater infrastructure and management skills. New requirements are also coming in. Their customers are asking for additional insights about their reputation. The customers are also requesting greater access to the most up-to-date information about their account and that market analysis.

Problem Statement

MillennialPR needs to act fast on multiple fronts to adapt to its rapid growth. First, it decides to deploy its CRM system into the cloud and leverage the elasticity offered by the cloud. Second, it plans to extend its CRM system to add analytics capabilities over data contained within it as well as via public feeds like social networks, blogs, etc. Third, it plans to add a mobile frontend to its system to enable real-time access for its clients. For a young company seeing fast growth, cost and speed are of the essence.

Why IBM

MillennialPR chooses IBM as it offers a one-stop shop for all their needs. IBM has a strong infrastructure cloud in SoftLayer. It has all the components needed to port and scale the current CRM system – DB2 for its relational and non-relational data stores, WebSphere as the web server and container for the Java application, BigInsights Hadoop and Cognos analytics and reporting capabilities as well as Mobile Backend services to create mobile applications. The breadth of this portfolio is unmatched when MillennialPR compares the solution to other vendors, where it will require them to engage 4-5 different firms in order to build the complete solution.

Step-1: Deploying the customer care system into the Cloud

IBM's "pattern" capability supported in SmartCloud Application Services makes the task straightforward. MillennialPR picks a Web Application pattern, which automatically provisions all the underlying components of their application on IBM SoftLayer. This is a significant cost and time saver for MillennialPR as it only focuses on the composite application without worrying about individual components. It can choose a pay-as-you-go model for this pattern or leverage its existing licenses for DB2 and WebSphere. It also chooses to use a high-availability replicated configuration where a warm/cold standby of the application is instantiated at a separate data center. The use of a Web Application pattern also allows MillennialPR to dynamically scale infrastructure under the covers as and when more resources are needed to support the additional customers and maintain the required response time. A data load script transfers its data to the cloud and the application is ready to go.

Step-2: Provision a highly scalable analytics system

Next the development team focuses on extending the application via better analytics over its existing data as well as public data feeds. It opts to use the IBM BigInsights and its Hadoop capability with IBM Cognos reporting to provide visibility into its analyses. Speed is critical as analytics is a key requirement in all the new deals MillennialPR is bidding for. The development team gets onto BlueMix which, based on Cloud Foundry, offers a range of IBM and third-party capabilities in its catalog, including BigInsights Hadoop. Using BlueMix frees the development team from any infrastructure tasks like virtual server management, patching, installations and scaling. It simply instantiates an application using the Java Liberty runtime and with a click of a button it can add the Hadoop service and only write code to connect that service with the data from its systems. This infrastructure-free development methodology offers them the fastest way to experiment and iterate over their analytics extensions in the market. For capabilities that MillennialPR requires greater control or use existing license investments – in this scenario, Cognos, it deploys a pattern over SmartCloud Application Services and connects with the BlueMix application using custom code.

Step-3: Provide real-time mobile access

Next, the team sets out to develop a mobile application that provides its users real-time access to account data and analytics. Wanting to provide this application for both iOS and Android, the MillennialPR team is worried about the significant specialized work that needs to go into each application beyond the user experience - from reaching into their backend systems, persisting data in the mobile apps, doing push notifications and enabling geo-location features. To simplify and expedite, MillennialPR chooses to use the Mobile Backend as a service (MBaaS) available as part of BlueMix, which provides all these services in a single curated "bundle." After a few clicks of the mouse, the team gets access to SDKs for each of the platforms that abstract away most of the complexity for managing the backend of their mobile apps including a data persistence layer, push notification and geo-location capabilities. To publish the API's needed to access the back end customer care system, they use Cast Iron to publish and manage the service API's. The dev team focuses on the user experience and composing the services and BlueMix MBaaS handles the rest.

The Outcome

Using the SmartCloud Application Service pattern deployment in conjunction with BlueMix, MillennialPR is able to accomplish all of its goals. Its CRM application is now deployed on SoftLayer using scalable, resilient patterns. The core application has been extended with greater analytics leveraging the BigInsights service available in BlueMix and a pattern based deployment of Cognos reporting. The application also has an iOS and Android mobile application developed and deployed in BlueMix.

By using the SmartCloud Application Services pattern deployment capability when it needed greater control with an option to leverage existing license investments and in conjunction with BlueMix when it needed fast and focused development, MillennialPR is ready for its next round of growth.

Want to learn more?

As a preview to the future in application development, visit: <http://www-01.ibm.com/software/ebusiness/jstart/bluemix/>

jStart explores IBM BlueMix, the next generation cloud platform based on IBM's Open Cloud Architecture and Cloud Foundry. Learn how you can collaborate with jStart to get started.

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