Meeting the Mobile Challenge with IBM System z

- Enterprise Mobile
- Build Rapidly
- Manage and Secure
- Analyze to Improve
- Next Steps

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Mobile is Mission Critical

When even the most security conscious and conservative enterprises are implementing BYOD (Bring Your Own Device) initiatives, it can no longer be doubted that consumer mobile platforms have become indispensable to enterprise competitiveness.

Customers demand access to your enterprise from any device, anywhere, at any time. Veteran employees clamor for mobile access to your enterprise data and applications for their increased productivity, and recent graduates expect it as much as espresso machines and foosball tables.

The challenge for you as an executive is to deliver these mobile productivity gains to your clients and staff without compromising security or racking up massive costs. The good news is that with your IBM System z infrastructure, you already have the stable and secure base you need to extend your enterprise applications to mobile platforms without sacrificing anything.

This e-guide will show you how mobile applications that meet all your constituents' needs can be quickly developed by connecting to your mainframe.

The proven scalability of System z enables mobile users to get the fast response times they have come to expect from the consumer internet, without your enterprise having to install and maintain new solutions.

We'll show you how IBM's Integrated Solution for System z development gives your developers the productivity tools they need to develop mainframe mobile applications as rapidly and agile as if they were developing a stand-alone mobile app. The fact that these and other tools are part of IBM's larger MobileFirst portfolio of solutions means that your System z infrastructure benefits from technologies proven in other kinds of enterprises as well.

When you factor in System z's unbeatable security and IBM business intelligence solutions, you will realize that System z and IBM give you all the resources you need to extend your enterprise to mobile platforms with a speed and efficiency that is unparalleled.

Related Resources

- Whitepaper: Considerations in opening the mainframe to mobile devices: A guide for enterprise teams working on mobile applications
- Video: Opening the mainframe to mobile devices
- Podcast: Opening the mainframe to mobile devices
- Case study: Utility provider accelerates processing and smart meter initiative
- Case study: University of Florida mobile app runs on System z

Connection
to the Mainframe
Speeds Development

It was said in the days of the dot-com boom that it was no longer the case that the large eat the small, but that the fast eat the slow. The Internet has sped up the pace of business even more since then, and time-to-value is more critical than ever.

IBM Worklight, the development tool in the MobileFirst platform, provides a world-class mobile application environment that enables you to rapidly develop both customer-facing and enterprise apps using state-of-the-art frameworks and tools. Whether your requirements call for a cross-platform HTML5 browser based app, a native app, or a hybrid solution, Worklight's enterprise application store and support for native SDKs, APIs and public app stores ensures you can develop, deploy and manage your apps more easily than any comparable solution.

While it's the Worklight server that takes care of managing your mobile applications when deployed, it's Worklight's integration with IBM's Integrated Solution for System z Development that speeds your development time by enabling agile methodologies in easy-to-use tools.

As part of that Integrated Solution, IBM's Rational Asset Analyzer (RAA) speeds the analysis of your existing System z applications to determine if and how they need to be modified to support your mobile application. Whether it's BMS and COBOL, or a modern enterprise Java application, RAA lets you rapidly identify what changes and new development are required.

Those tasks can then be managed with Rational Team Concert, which also includes change management, source control, and build management in a single application. This gives the developers involved with the tasks a complete and real-time view of ongoing activities whenever they want it.

Ensuring quality throughout is IBM's Continuous Integration Solution for System z. It empowers your team to automate functional, regression, load and integration testing to ensure quality throughout development, not just at the end of the project. When you automatically test code changes, defects and regressions are detected quickly with higher degrees of transparency, improving quality and speeding application delivery. Testing on clones of production systems ensures the fidelity of the tests without impacting your users.

Related Resources

- Solution Brief: IBM Integrated Solution for System z Development
- Demo: Steps to accelerate system z development
- Solution Brief: IBM Continuous Integration Solution for System z
- Video: Continuous integration and test virtualization in a mainframe world
- Whitepaper: A mobile application development primer: A guide for enterprise teams working on mobile application projects
- Whitepaper: Creating a Compelling Mobile User Experience
- Whitepaper: Transaction Processing: Past, Present, and Future
- Video: Extend Your WebSphere MQ Messaging Backbone to the World of Mobile
- Article: How Mobile Devices Are Changing the IT Landscape

Mobile Productivity without Compromising Security

Although laptop computers have forged the way for enterprises to secure devices that are often or always outside the firewall, mobile devices take the challenge to a whole new level. While BYOD infrastructure and policies provide a necessary basic level of security for those devices to access enterprise email and other basic productivity applications, enterprise applications present additional challenges since they access critical line of business applications. Since the latter are often transactional systems and have customer data, security becomes even more paramount. So does compliance.

IBM® Endpoint Manager for Mobile Devices provides that secure base by giving you unified management and control of security for all mobile platforms that connect to your enterprise. By taking care of things like detecting rooted/jail-broken devices and enforcing other security policies like password strength, Endpoint Manager lets your developers focus on the security challenges unique to the mobile apps they build and maintain.

IBM's solutions provide you with the tools to ensure your enterprise mobile applications have the highest possible security built in from the start, not bolted-on as an afterthought. IBM Worklight provides a slew of tools to make your app secure, including encryption of local device storage for both app data and authentication credential caching (both needed for offline use), application authenticity testing and device whitelisting, and integration with enterprise security infrastructure such as directory services, logging & auditing, and enterprise proxies/gateways.

The IBM Worklight Server and Console provide a comprehensive way to manage all of your enterprise's mobile applications and works with IBM Endpoint Manager. You can granularly control which users get access to what applications, including the ability to deprecate old versions and requiring users to upgrade them. Synchronization data flows built into your apps can be monitored, and even push notification services for the various mobile platforms can be managed in a unified way.

IBM's MobileFirst Security offering adds even more capabilities to your security arsenal. These include automated vulnerability scanning, testing and reporting, and the ability to route your app's data traffic through clientless VPNs.

Related Resources

- Whitepaper: IBM Endpoint Manager for Mobile Devices
- Whitepaper: Improve your mobile application security with IBM Worklight
- Article: Create and connect mobile apps using WebSphere Cast Iron and IBM Worklight

Analytics Enable Evidence-Based Decisions

Mark Twain is cited as having said or written, “History does not repeat itself, but it does rhyme.”

This adage is never truer than with the evolution of business technologies, which often follow similar patterns in their use and adoption. One can look at the uses of early mainframes, minicomputers, personal computers and even the Internet, and see that access to data and transactions to use and/or manipulate that data always arrive first as applications on those platforms. Afterwards comes the ability to analyze and transform that data into actionable knowledge about trends and strategies that transcend individual transactions. In other words, businesses use technologies first to automate business processes, and then to better inform strategic decisions, both of which improve efficiency.

We are now seeing this trend arrive in mobile applications, as enterprise users increasingly need access from anywhere to the massive investment enterprises have and continue to make in Business Intelligence, and now “Big Data”. It’s not enough for your salesperson in the field to check on their customer’s order. They need to know the historical patterns for that customer, and how they compare to other customers, enterprise and industry benchmarks and trends, etc.

This ability to unify transactional with BI data means that the need for custom applications that use both kinds of data will not only never go away, but also that the System z mainframe remains the best platform on which to develop those applications. Both transactional and decision-support business processes must be enabled for mobile platforms as users migrate.

Data analysis also plays another critical role in your mobile enterprise strategy: analytics for the mobile applications themselves, especially those deployed to your customers and other end users. Just as mobile game developers use weekly or even daily A/B testing on new features to determine the evolution of their offerings, these consumer practices are being adopted by enterprises to ensure their agile development efforts are providing the most value. IBM's integration of Tealeaf into MobileFirst Analytics further strengthens the portfolio of solutions IBM can help you deploy to make sure you know instantly and precisely how your customers are experiencing your mobile solutions.

Related Resources

- Whitepaper: The Challenge of Mobile Business Intelligence
- Article: Addressing New Business Analytics Challenges — When the IBM zEnterprise Really Makes Sense
- Whitepaper: Ensuring the security of your mobile business intelligence
- Website: IBM Tealeaf

Explore, Learn and Implement

IBM's comprehensive MobileFirst solutions for mobile on System z empower you to easily meet your enterprise's objectives by enabling you to:

- **Develop Rapidly** – collaborative development environments that enable agile methods and employ continuous integration
- **Deploy Reliably** – automated testing on production clones ensures code reaches your end users with minimal defects
- **Secure Systematically** – easily employ best practices such as storage encryption and authenticity checking
- **Manage** – get a complete view of all your mobile apps; control which users get access to which applications
- **Analyze** – provide your mobile users with actionable, customized access to your enterprise BI assets; use analytics of mobile app usage to improve the experience for your mobile users

Now that you've seen how your existing System z infrastructure is the ideal platform for enabling your enterprise mobility plans, what's next?

If you are the learn-by-doing sort, then we suggest downloading the IBM Worklight Developer Edition to see for yourself just how powerful a platform it is.

If you are research oriented, check out additional resources, including recorded webinars and additional white papers. As IBM solutions continue to improve and evolve, visit the System z Mobility page for all the latest information, included new white papers, videos, demos, etc.

Of course, the fastest course of action is to call your IBM software representative today so they can analyze your unique needs and recommend the best mix of products and services to get you up to speed the fastest. Please contact Laurie Watson at lawatson@us.ibm.com with any questions.

Related Resources

- Website: MobileFirst on ibm.com
- Website: IBM System z Mobility on ibm.com
- Download: IBM Worklight Developer Edition
- Whitepaper: Considerations in opening the mainframe to mobile devices
- Presentation: Extend your WebSphere MQ messaging backbone to the world of mobile
- Whitepaper: Take full advantage of IBM's IDEs for end-to-end mobile development

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