



Highlights

- Rapidly build and deploy engaging mobile apps that integrate with core business capabilities
 - Secure mobile devices, data and enterprise transactions without sacrificing response time
 - Deliver mobile services on an open and highly responsive infrastructure that scales to meet peaks in mobile workloads
 - Accelerate adoption via best practices and services
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Mobile Solutions for IBM LinuxONE

Deliver an exceptional mobile experience on an open, trusted and scalable platform

Mobile devices and their ubiquitous access are driving an unprecedented disruption for employees and consumers alike, with more than 90 percent of mobile users keeping their device within arm's reach 24x7. From a business perspective, a mobile channel represents a wealth of opportunity to engage in new and interesting ways for building loyalty, generating revenue and improving enterprise processes.

It is estimated that only 30 percent of the value and effort of a mobile application is visible via the mobile app, with 70 percent of the value provided by the infrastructure of software and systems supporting the mobile workloads. IBM LinuxONE combines the open and industry-leading aspects of Linux with proven qualities of service resulting in the most scalable enterprise-grade Linux environment.

Agile development and delivery of mobile applications

The extreme growth of mobile devices and applications is presenting new opportunities for businesses, and the sophisticated users of today's digital generation expect an exceptional and personalized mobile experience with frequent deliveries of new capabilities. For an IT organization looking to meet the fast-paced mobile demands of the business a DevOps approach helps tightly integrate development and operations for rapid mobile app delivery.

Mobile solutions enable these modern DevOps capabilities by integrating tools and processes for a complete and trusted end-to-end enterprise mobile environment built on the qualities of LinuxONE Systems. Companies can consolidate all aspects of development, test and production onto one server with virtualization providing the capability to grow capacity as needed without impact to the running environment. This eliminates costly server acquisition, configurations and ongoing maintenance.

IBM LinuxONE – Built for Scale

IBM LinuxONE supports tens of thousands of concurrent users. You can run development, test, and production in a single system. Shared resources and shared development environments mean greater productivity.



IBM Systems Solution Brief

The inherent reliability and automatic recovery designed into LinuxONE eliminate downtime for both development and production, and the ability to isolate and protect each Linux environment allows users to run thousands of Linux instances concurrently on the most secure commercial server available with powerful encryption ensuring business critical data is protected 24x7.

An organization can leverage powerful DevOps capabilities to enable faster and more frequent deliveries of engaging mobile solutions. IBM® Rational® Collaborative Lifecycle Management (CLM) enables optimized collaboration. IBM Rational Developer for the Enterprise delivers a comprehensive development environment and IBM UrbanCode™ Deploy synchronizes, orchestrates and automates the deployment of applications, middleware configurations and database changes into development, test and production environments.

Being able to rapidly spin up new LinuxONE environments for development and test enables an agile organization, and the ability to provision pre-configured instances of middleware applications takes this agility to a new level. With IBM Custom Patterns for Linux, middleware products including IBM MobileFirst™ Platform Foundation can be quickly provisioned on Linux as needed.

Integration of mobile applications with core Systems of Record

Central to an enterprise mobile solution is the ability to securely extend a business' core Systems of Record transactions and data to mobile applications. This must be done in a controlled and efficient manner that ensures the accuracy of the data while providing optimal performance. LinuxONE Systems is the perfect environment for this integration, leveraging powerful platform capabilities and feature-rich middleware to provide trusted mobile app-to-server connectivity.

A core component is the IBM MobileFirst Platform Foundation. This is an open and comprehensive platform to build, test, run and manage native, hybrid and mobile web apps and can help reduce both application development and maintenance costs, improve time-to-market and enhance mobile application governance and security.

There are significant benefits to running the MobileFirst Platform Foundation on LinuxONE. IBM performance testing has shown that when similar mobile solutions are deployed on both LinuxONE and commodity x86-based servers, the LinuxONE platform demonstrates 61 percent better throughput and 36 percent faster response times, as well as reductions in cost per transaction of at least 17 percent.

IBM LinuxONE – Built for Speed

IBM LinuxONE has the industry's fastest processor, the biggest I/O pipe, 10 TB memory, four levels of cache, and much more. All designed to deliver sub-second end user response time to thousands of concurrent users.

An increasingly popular means of integration is through application programming interfaces (APIs). By exposing back-end services as APIs, mobile developers are able to more easily integrate mobile applications with enterprise capabilities. This flexibility introduces a need for managing and controlling the lifecycle of the APIs, which is where IBM API Management (APIM) fits in. APIM enables you to create, assemble, manage, secure and socialize APIs.

Security for every transaction

A critical aspect of extending core business capabilities to mobile channels is ensuring the security of the data and transactions through all points in the mobile interaction. The reputation of the business, the loyalty of the user, and the protection of critical business data are all potentially at risk with every mobile engagement. Mobile Solutions for IBM LinuxONE deliver security capabilities across the entire spectrum including the device, the user, the connectivity, the data and the application, leveraging the integrated LinuxONE security capabilities to ensure security without impact on performance.

IBM MobileFirst Protect is a best in class enterprise mobility management solution, providing end-to-end security and management for mobile devices, apps, and content. An essential feature of MobileFirst Protect is its tight integration with the existing enterprise security infrastructure, delegating aspects such as user registry, credentials storage, and access control management. This enables the best of mobile management when paired with the unmatched security capabilities of LinuxONE.

A significant differentiator for running mobile workloads on LinuxONE is the extensive set of security capabilities. In fact, only LinuxONE has an integrative security technology that combines cryptographic code processes with extensive audit trail capabilities, a highest-in-the-industry security rating for secure virtual environments and 100 percent encryption of data in flight and at rest.

IBM LinuxONE – Built for Security

IBM LinuxONE provides isolation at every level for applications, containers, virtual servers, and partitions; full encryption of data; dedicated cryptographic processors; as well as end-to-end security for data, identity, and access control to protect your clients and the business' reputation.

In addition, Linux can leverage the Central Processor Assist for Cryptographic Function (CPACF) for file system encryption, communications encryption, generating cryptographic keys, and overall system security. The CPACF delivers high-speed on-chip cryptography, designed to allow handling high volumes of transactions for high speed encryption/decryption of clear-key operations for SSL, VPN, and data.

As organizations scale and security is required across an increasingly complex enterprise, security connectivity solutions expand to include accelerators such as IBM DataPower Gateway, providing a consistent entry point and policy enforcement across channels including mobile, API, web and cloud. As either a physical or virtual appliance, IBM DataPower Gateway front-ends mobile connections to services running in WebSphere® Application Server and MobileFirst Platform Server running in LinuxONE.

Enable a personalized mobile experience through analytics

Mobile transactions are generating an unprecedented amount of data, with mobile data traffic predicted to grow globally 10-fold from 2014 to 2019 for a compound annual growth rate of 57 percent. Ask a Chief Marketing Officer what their ultimate goal is for reaching current and potential customers, and the answer will likely be to provide a “demographic of one” experience, personalized to each individual’s unique interests and buying behaviors. This presents a seemingly daunting challenge to the mobile app and server development teams.

And this is precisely where IBM MobileFirst for iOS solutions combine the power of enterprise data and analytics with an elegant user experience to fundamentally redefine how enterprises empower their professionals to interact, learn, connect and perform. These mobile apps give enterprises a simple way to solve workflow and role-specific challenges, transforming

industries from the ground up. Additional capabilities such as mobile commerce, customer portals, business intelligence and analytics on LinuxOne can also complement these solutions to further enrich mobile transactions for a great customer experience.

Accelerating mobile solutions with IBM LinuxONE

You can get started using the IBM Mobile Test Drive to discover how create or enhance enterprise mobile applications while taking advantage of the capabilities of LinuxONE Systems. We also invite you to engage with mobile and LinuxONE technical experts at the global IBM Mobile Centers of Competency to assist in shaping your mobile enterprise strategy.

For more details on the IBM Mobile Test Drive, visit:
ibm.biz/MobileTestDrive

For more information on the IBM Mobile Centers of Competency, visit:
ibm.com/systems/services/clientcenters/mobile/

“The IBM platform has been at the center of our technology strategy for many years now, offering us unparalleled stability and the exceptional security we need to serve the financial services industry. The solution has made deploying cross-platform applications much easier, giving us a head start against the competition in bringing secure, reliable mobile applications to our customers. It was a natural choice to deploy IBM MobileFirst Platform running on Linux.”

—Ulrich Buch, CTO, ABK-Systeme

Summary

With the release of LinuxONE, IBM has redefined the enterprise Linux server as the most open, flexible, simple, efficient and trusted Linux platform, built for the demands of today and the new workloads of tomorrow. As one portfolio of hardware,

software, and services, LinuxONE is an ideal platform for delivering an engaging mobile user experience and is uniquely positioned as an open development and delivery platform. LinuxONE is optimized for performance and security and automatically scales to respond to mobile business growth.

Why IBM?

With the pervasive nature of mobile applications and the empowerment of discerning mobile users, an organization's ability to quickly deliver an exceptional and personalized mobile experience will be a competitive differentiator. Mobile Solutions for IBM LinuxONE provide a comprehensive portfolio of hardware, software, and services that spans the mobile application lifecycle, accelerated through integrated DevOps tools and practices, and rooted in the open architecture of Linux and the extensive platform benefits. The unparalleled end-to-end security of mobile devices, transactions, and data without impact to performance distinguishes LinuxONE from other platforms.

For more information

To learn more about the Mobile Solutions for LinuxONE please contact your IBM representative or IBM Business Partner, or visit the following website: ibm.com/linuxone

IBM Systems Lab Services will help connect LinuxONE clients to the appropriate service offerings and associated IBM service teams for their overall LinuxONE services needs. Contact us at stgls@us.ibm.com.

For specific training needs including training paths, certification, details on our technical training events, and access to our Global Training Partners, visit ibm.com/training

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