Mobile and the Mainframe
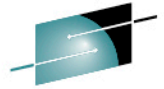
Frank J. De Gilio
IBM Corporation
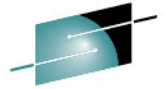
Tuesday August 13 3:00pm
Session Number: 15105

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Mobile was a key driver in 2012 Black Friday and Cyber Monday holiday shopping

69% YtY increase in mobile traffic to online retailers during the two days

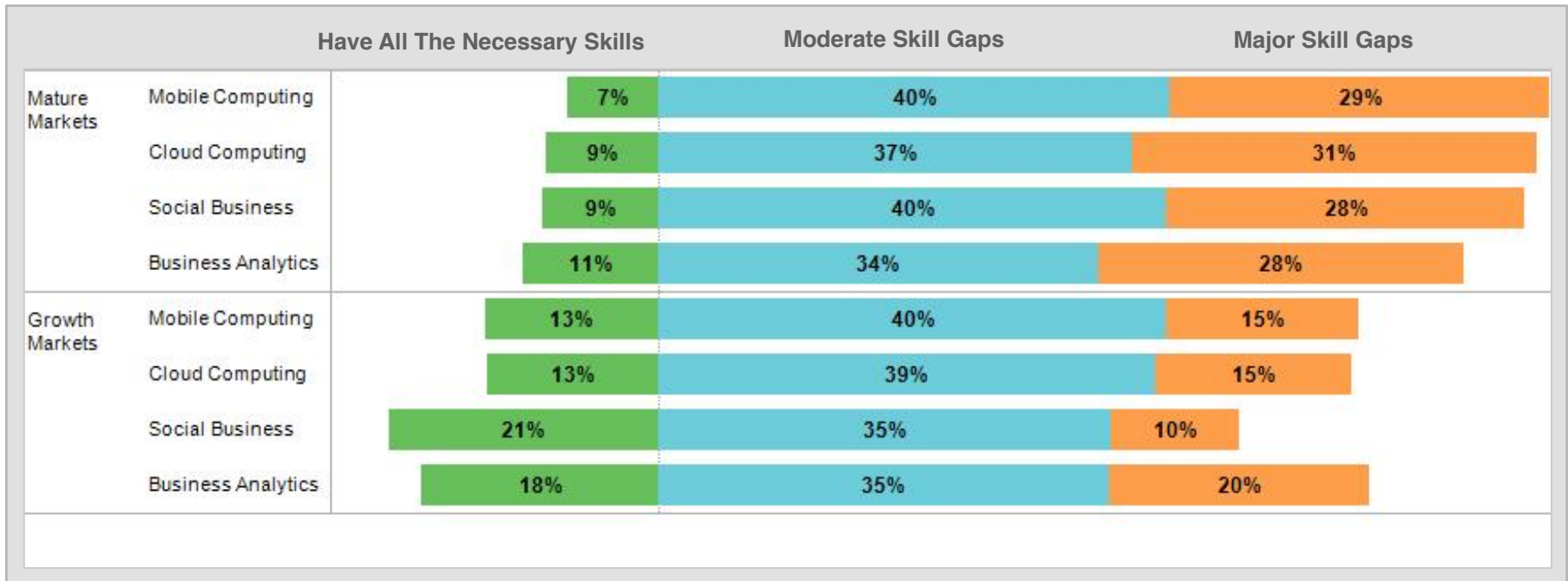**77%** Apple's iPhone and iPad accounted for 77% of all mobile shopping during the two days

96% YtY increase in mobile sales during Cyber Monday

Source – IBM Coremetrics Retail Data – as published in 11/24/12 IBM Press Release

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Enterprises are lagging in adequate mobile skill sets in both mature and growth markets

The IT Skill Gap: Mature vs Growth Markets

		Have All The Necessary Skills	Moderate Skill Gaps	Major Skill Gaps
Mature Markets	Mobile Computing	7%	40%	29%
	Cloud Computing	9%	37%	31%
	Social Business	9%	40%	28%
	Business Analytics	11%	34%	28%
Growth Markets	Mobile Computing	13%	40%	15%
	Cloud Computing	13%	39%	15%
	Social Business	21%	35%	10%
	Business Analytics	18%	35%	20%

Source: 2012 Tech Trends Study, IBM developerWorks and IBM Center for Applied Insights, November 2012..
Growth Markets including Brazil, Russia, China, India and South Africa.

Bring Your Own Device is here to stay

"Companies where employees bring their own devices to work save an average of $1,000 a year in service costs"

- CIOInsight

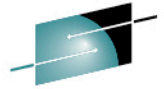"BYOD helps in recruitment and getting new hires up to speed quickly"   - CIO magazine

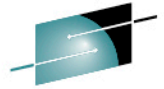"VMWare saw efficiency rise to a tune of $2 million per year"

- Forbes

"Tablet use for work and home will triple to 905 million units by 2017"   - Forrester
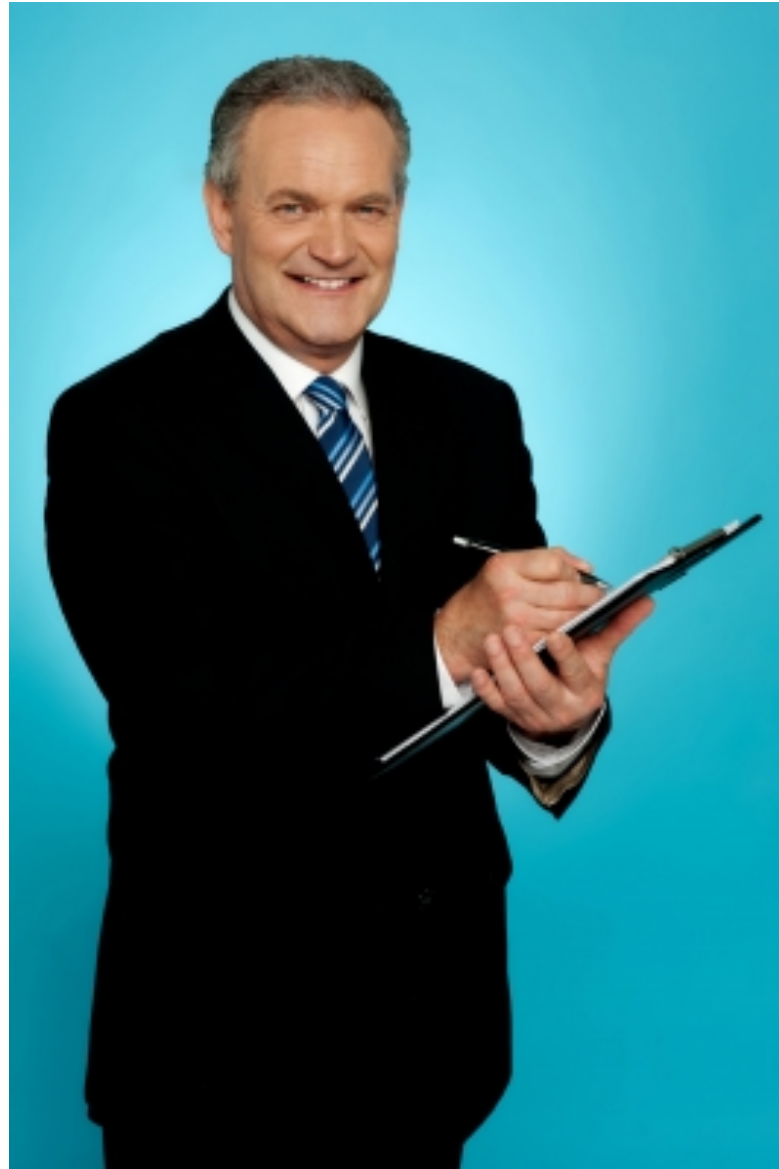
Complete your sessions evaluation online at SHARE.org/BostonEval

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Complete your sessions evaluation online at SHARE.org/BostonEval

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Complete your sessions evaluation online at SHARE.org/BostonEval

Don't look Now
Your Data is
still here

Complete your sessions evaluation online at SHARE.org/BostonEval
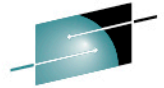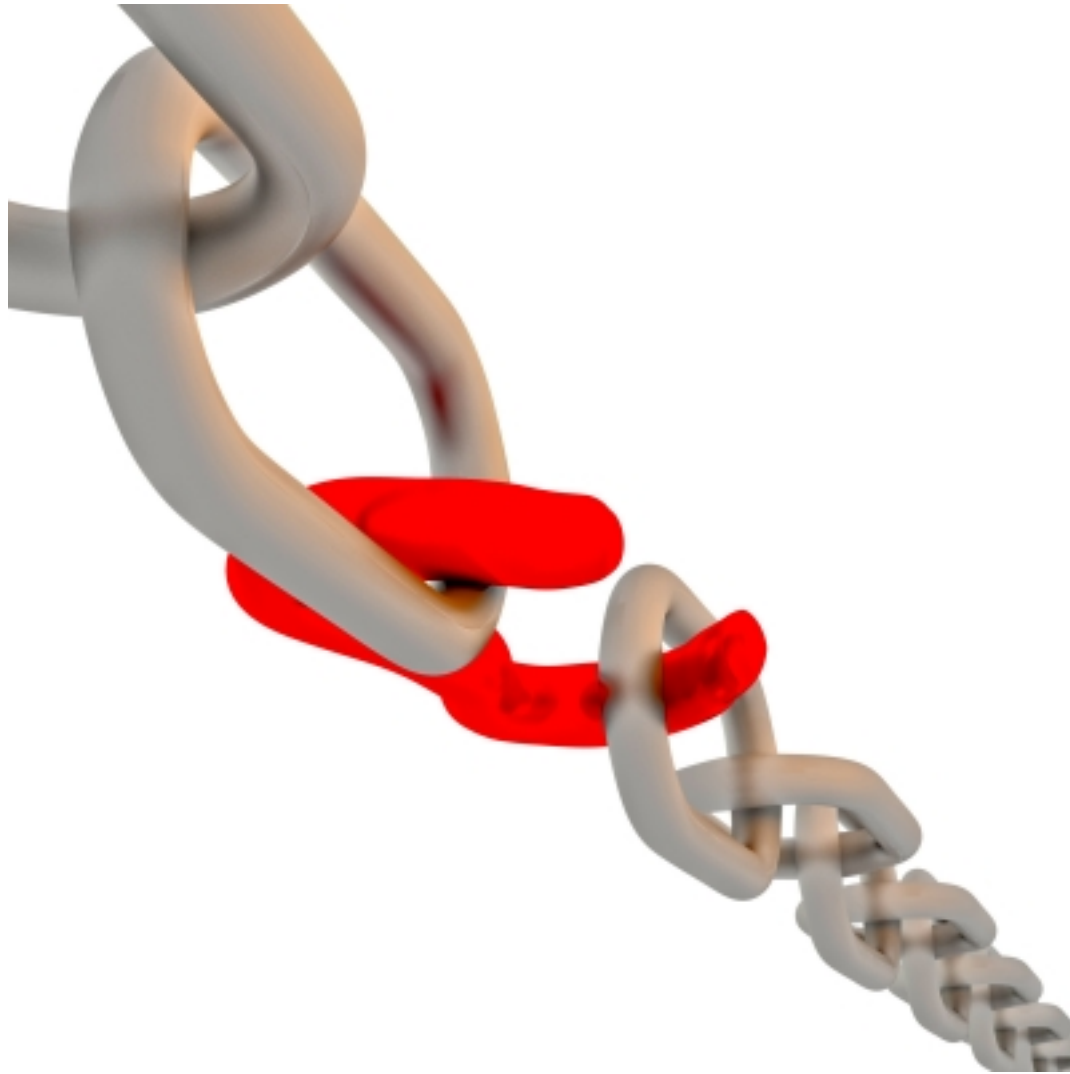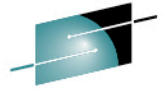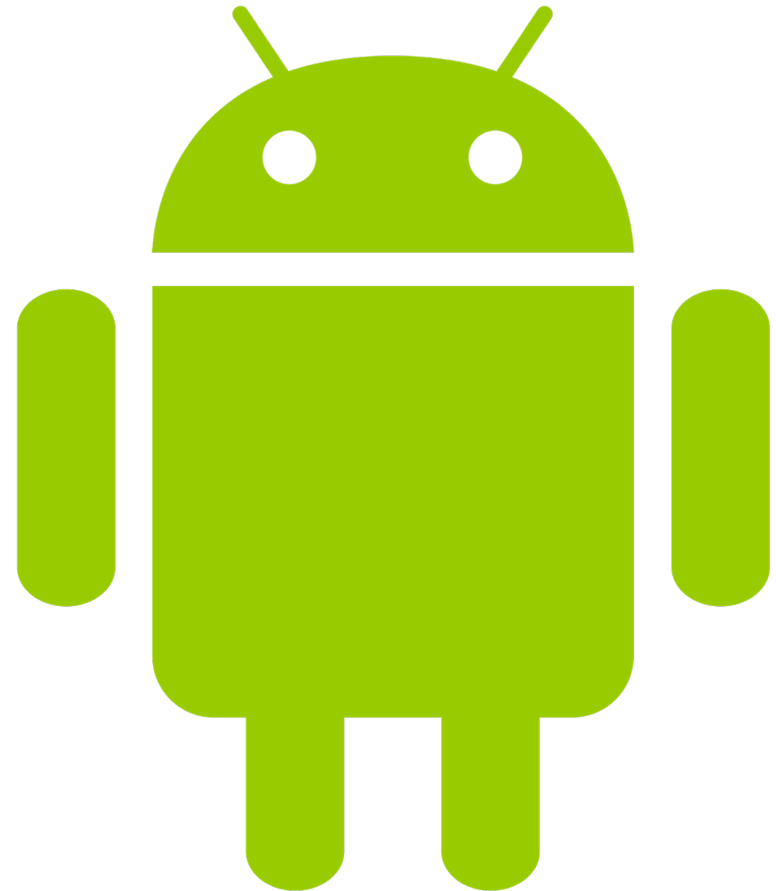
IBM MobileFirst Management

For Clients That Need To:

➤ Implement BYOD with confidence

➤ Manage secure sensitive data, regardless of the device

➤ Handle multi-platform complexities with ease

IBM MobileFirst Management Offers:

✓ Unified management across devices

✓ Option to wipe corporate data

✓ Configuration & enforcement of password policies, encryption, VPN access & camera use

✓ Streamlined workflow between development & operations with an integrated Enterprise App Store

✓ On-premises or managed service delivery

Available Today!

• Latest versions of all major mobile OS's (iOS, Android, Windows, and BlackBerry)

• Defense-grade encryption thru FIPS 140-2 compliance*

• Automatically grant or deny email access based on device compliance

• Ease admin by setting and reporting IBM Notes Traveler security policies

IBM Endpoint Manager for Mobile Devices

IBM Enterprise Services Managed Mobility

IBM Mobile and Wireless Network Management

*Planned availability in 1Q 2013

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1

IBM MobileFirst Security

For Clients That Need To:

- ➢ Protect devices and data
- ➢ Defend the network
- ➢ Ensure secure access
- ➢ Safeguard mobile apps
- ➢ Preserve user experience without compromising security

IBM MobileFirst Security Offers:

- ✓ Context aware risk-based access control
- ✓ Mobile threat protection
- ✓ Strong session management & Single Sign-on
- ✓ Vulnerability analysis for mobile apps
- ✓ Visibility and analysis of security events from the device, network, user and app behavior

Available Today!

- State-of-the-art high-quality vulnerability analysis for mobile apps

  - Native support extended for iOS to accelerate enterprise usage*

  - Enhanced support for JavaScript analysis in hybrid mobile apps*

- Out-of-the-box support for IBM Worklight built apps to incorporate context aware risk-based access

IBM Security Access Manager for Mobile and Cloud

IBM AppScan

*Planned availability in 1Q 2013

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Worklight Architecture
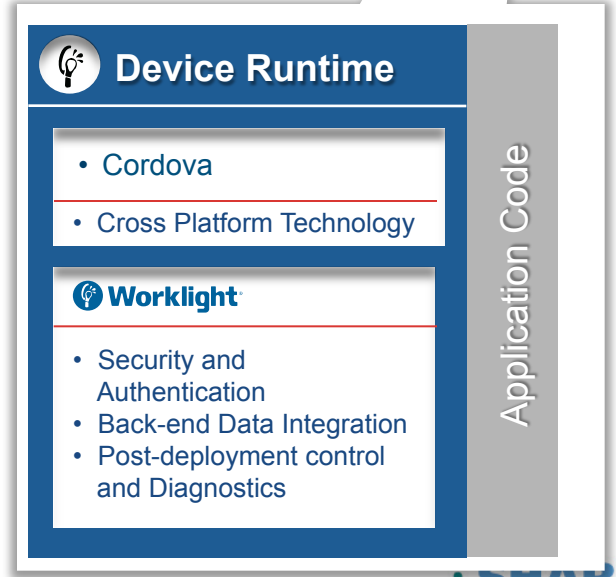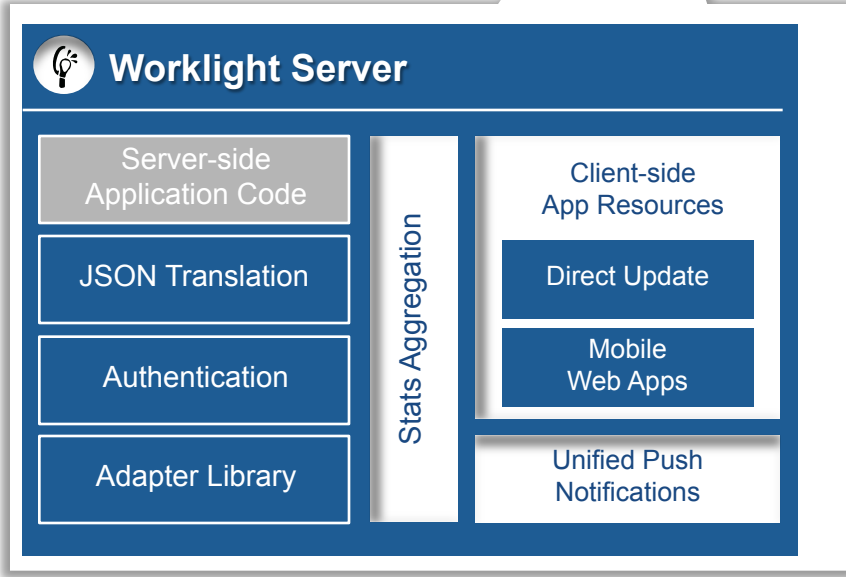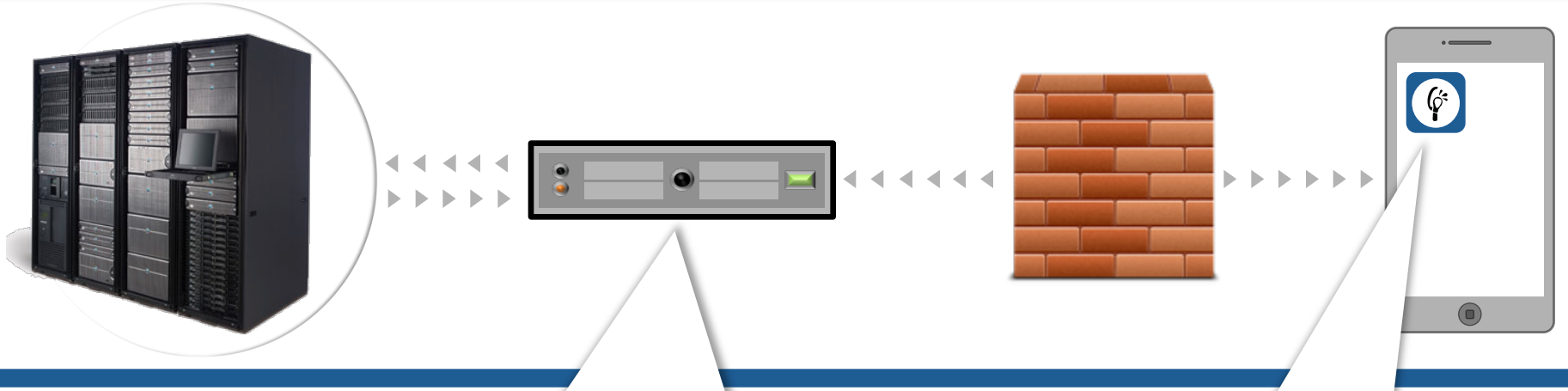
Worklight Overview

Worklight Studio   Eclipse Based

The most complete, extensible development environment with maximum code reuse and per-device optimization
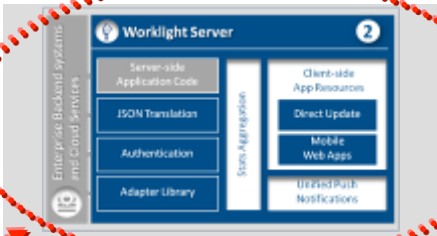
Worklight Server   Java App

Mobile middleware offering unified push notifications, version management, security and integration

Worklight Runtime Components

Extensive libraries and client APIs that expose and interface with native device functionality and the Worklight Server

Worklight Console

A web-based console for real-time analytics and control of your mobile apps and infrastructure

IBM Worklight application types

Browser Access	Hybrid Apps - Web	Hybrid Apps - Mixed	Native Apps
Written in HTML5 JavaScript and CSS3. Quick and cheap to develop, but less powerful than native.	HTML5 code and IBM Worklight runtime libraries packaged within the app and executed in a native shell.	User augments web code with native language for unique needs and maximized user experience.	Platform-specific. Requires unique expertise, pricy and long to develop. Can deliver higher user experience.
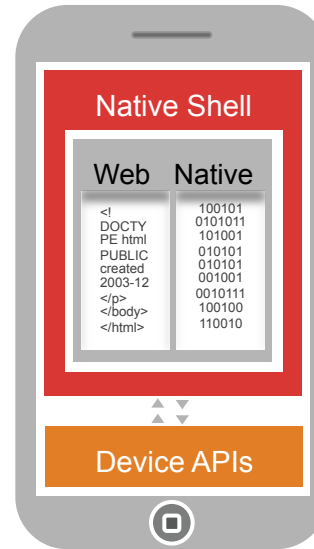
Mobile Browser — Web Code

```
<!DOCTYPE html
PUBLIC
<html>
<! - - created
2003-12-12 - -
<head><title>XYZ</
title>
</head>
<body>
</p>
</body>
</html>
```

Native Shell — Web Code

```
<!DOCTYPE html
PUBLIC
<html>
<! - - created 2003-12-1
<head><title>XYZ</title
</head>
</body>
</html>
```
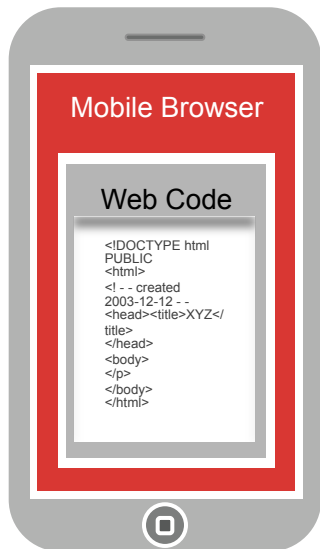
Device APIs

Native Shell — Web / Native

```
<!
DOCTY
PE html
PUBLIC
created
2003-12
</p>
</body>
</html>
```
```
100101
0101011
101001
010101
010101
001001
0010111
100100
110010
```

Device APIs

Native App

```
100101010101110100010
100100101011101001000
110101010101001001001
1011110010011001010101
01001010101010100100101
01010101010101011111
1000001010101010101010
01001010101010101000
1111010100011110101001
1110101011110010110111
1110100
```

Device APIs

Browser Access	Downloadable	Downloadable	Downloadable

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Hybrid – Worklight and WebSphere Portal together

WebSphere Portal/WCM and IBM Worklight used together can extend the capabilities and reach of an exceptional web experience

IBM Worklight
Access devices specific capabilities (camera, contacts,etc...)
App Store Presence
Application management
Mobile Notifications

WebSphere Portal/WCM
Multiple Applications, Content, Roles, Personalization, Customization

WCM = Web Content Manager

SHARE

Hybrid Container
Web Site
Device Features

Hybrid Container
Web Site
Device Features
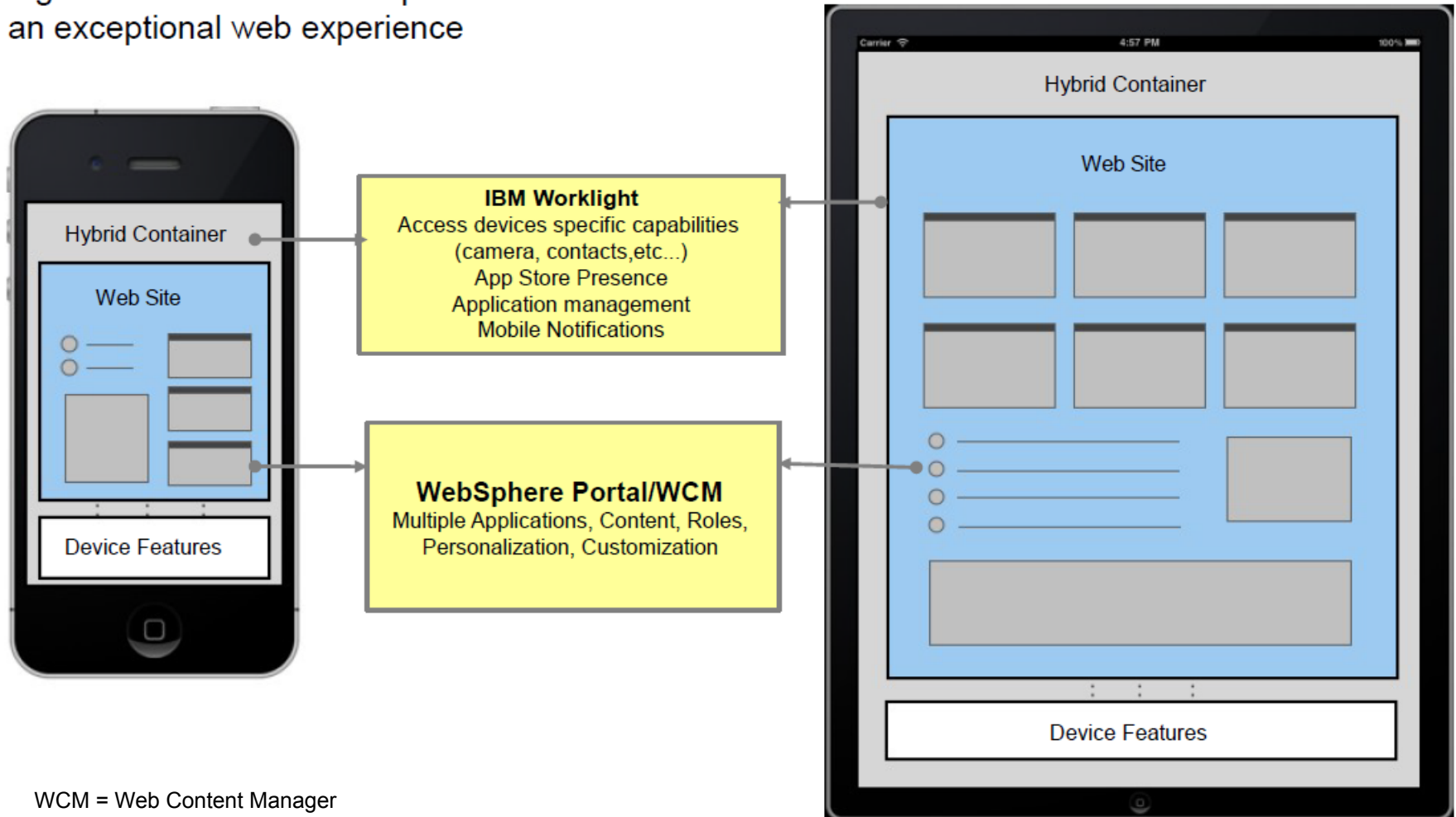
Delivering for multiple mobile platforms
IBM Worklight

IBM Worklight Server V5.0 is supported on multiple environments, System z highlights:

Middleware:

- **WebSphere Application Server Network Deployment V7.0 or higher and future releases, modification levels and fix packs**

- **Apache Tomcat 7.0 and future fix packs**

System z operating systems:

- **Red Hat Enterprise Linux (RHEL) 5 Update 6 Advanced Platform System z**

- **Red Hat Enterprise Linux (RHEL) Server 6 System z**

- **SUSE Linux Enterprise Server (SLES) 11 System z**

- **SUSE Linux Enterprise Server (SLES) 10 System z**

Key Capabilities

Mobile optimized middleware
- Open approach to 3rd-party integration
- Strong authentication framework
- Encrypted offline availability
- Enterprise back-end connectivity
- Unified push notifications
- Data collection for analytics
- Direct updates and remote disablement
- Packaged runtime skins

Updated Worklight SOD re: z/OS (Feb 19)

As part of the IBM Mobile Foundation product offering, IBM intends to provide additional platform support for the IBM Worklight product offerings in response to customer feedback and market demand. With the current expectation of the needs of our enterprise customers, IBM anticipates extending support to IBM System z® hardware and the IBM z/OS® operating system in the future.

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

CICS SOD included in Worklight 5.0.6 announce (Feb 19)

IBM intends to deliver enhanced support for mobile applications interacting with IBM CICS® Transaction Server for z/OS (CICS TS) services, using the lightweight data-interchange format JavaScriptTM Object Notation (JSON).

In addition, IBM intends to introduce support for deploying qualified new CICS TS workloads on IBM System z New Application License Charges (zNALC) Logical Partitions (LPARs). Qualified new CICS TS applications, including approved mobile and service-enabled applications running in the CICS TS JavaTM Virtual Machine (JVM) Server, will be eligible for CICS TS one-time-charge (OTC) pricing when deployed to a zNALC LPAR.

IBM's statements regarding its plans, directions, and intent are subject to change or withdrawal without notice at IBM's sole discretion. Information regarding potential future products is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information mentioned regarding potential future products is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. Information about potential future products may not be incorporated into any contract. The development, release, and timing of any future features or functionality described for our products remains at our sole discretion.

2

Virtual

Desktop

Infrastructure

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VDI deployments optimize environments today

Improved Manageability	• Easier hardware and software asset management • Easier to standardize infrastructure and services; ensures compliance • Easier to manage user groups/needs in distributed environments
Lower Costs	• Simplifies hardware and software installation and configuration • More efficient to support and manage diverse workplace requirements • Reduces need for help desk and desk-side support
Productivity & Mobility	• Higher availability than a distributed PC environment • Eliminates disruption associated with end user IT tasks • Anywhere, any time access for mobile end users via the Internet
Security & Compliance	• Alleviates issues with hardware and critical data theft • Simplifies data backup • Reduces virus exposure

Virtualized environments enhance client efficiency while traditional PCs environments can be complex, security risks

Area	Virtualized Environment	Traditional PC environment
Manageability	•Simplified Asset Management •Standardized Infrastructure •Simplified User Management	Unmanageable assets, compliance
Operating Costs	•Simplified software distribution •Lower Helpdesk incidents •Fewer hardware refreshes	Complex environment, support needs
Productivity	•Higher availability than PC •Reduced downtime for IT functions •Anytime, anywhere access	End user IT chores cause disruption
Resource Allocation	•Share resources across users •Client by day, enterprise by night for virtual resources (PC's sit idle, servers can be used)	Significant downtime, unable to share resources
Security	•Reduced exposure to data loss/theft •Simplified backup •Fewer virus entry points	High exposure to viruses, theft
Deployment Issues	•Simplified migrations and upgrades free up IT resource for other priorities	Difficult/ expensive upgrades & migrations

What's all the fuss about?   This has been around for years…

Client environments have had a **SILO** approach to IT. Leads to lack of insight as well as command and control. This can equal lack of accountability

Choosing a **"VDI only"** approach. The most costly of the six main delivery mechanisms can make project(s) unaffordable for most.

Lack of user and application insight!

Minimal enterprise planning. Many clients didn't complete detailed planning required and only small group of desktop and application folks.

"They're just desktops" perspective led to an oversimplification that underscored many issues.

IBM SmartCloud Desktop Infrastructure for PureFlex and Flex System

Centralized desktop management delivers secure virtual desktops from anywhere
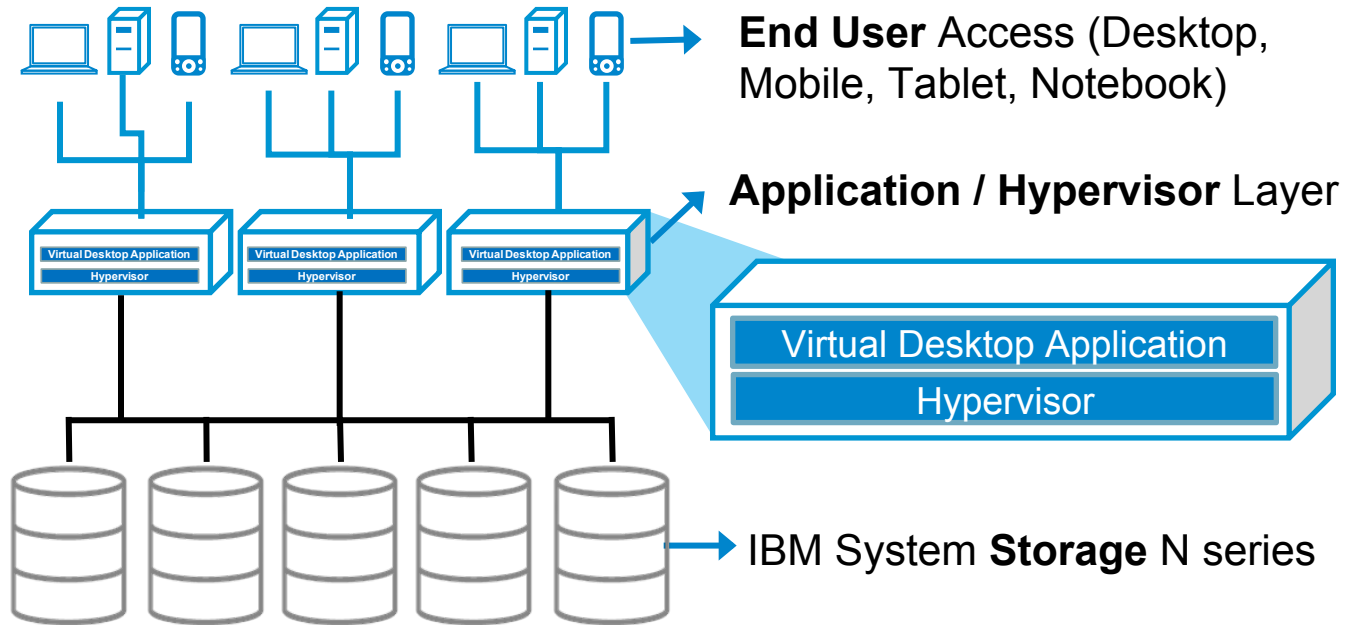
Large Scale Virtual Desktops

Multi-Vendor VDI Multiple-Hypervisors

PureFlex

Flex System

End User Access (Desktop, Mobile, Tablet, Notebook)

Application / Hypervisor Layer

Virtual Desktop Application

Hypervisor

Virtual Desktop Application

Hypervisor

IBM System **Storage** N series

Desktop and Application Virtualization

So what's new and why will it work this time?

- Improved infrastructure results in a better ROI
  - More VM's on a CPU
  - More memory capacity and faster processors
  - Better connectivity (speed and reliability)
  - SSD's enable real performance improvements
  - Storage tiering

- Virtualization for x86 is commonplace
  - This is the next logical step

- Architect and deployment resources are 'smarter'
  - Lessons learned failed and successful deployments from previous years

- End users have 'lessons learned' from initial projects and understand more now

Major Players vie for Market Share

vmware®

"VMware and IBM have worked closely together to develop an end-to-end virtual desktop solution for branch offices that can greatly simplify desktop deployment and management and can reduce the IT footprint at remote sites. This validated offering is built on the foundation of IBM's new Flex System running the VMware Branch Office Desktop solution, and can take the guesswork out of implementing a virtual desktop infrastructure."
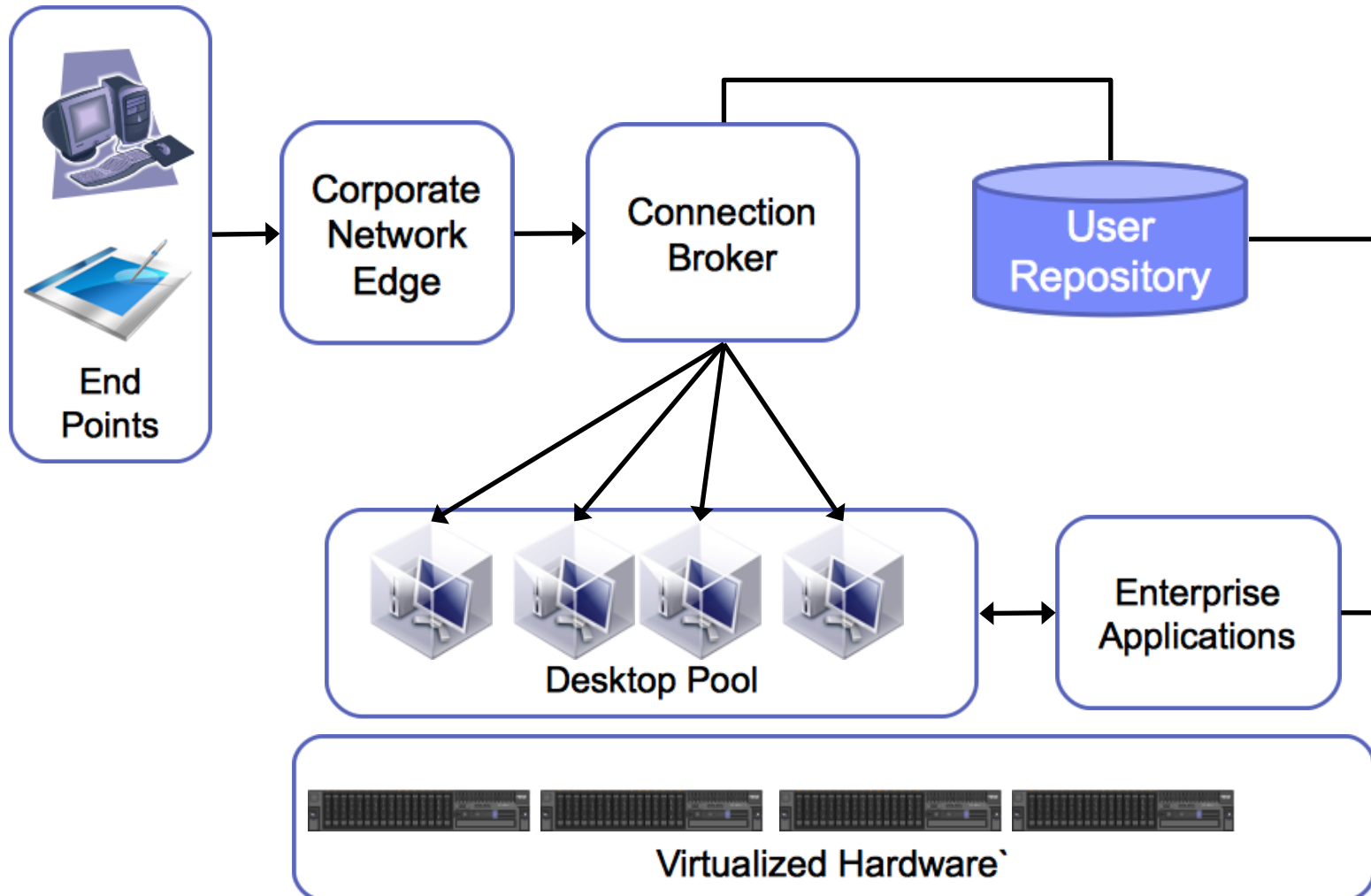
- Mason Uyeda, Director, End User Computing Technical and Solution Marketing, VMware

CiTRIX®

"Citrix XenDesktop on IBM Flex Systems allows customers to rapidly deploy proven market leading desktop virtualization solutions and go from concept to implementation with increased speed and flexibility.."
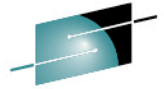
- Krishna Subramanian, VP Marketing & Business Development, Citrix

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Solution Overview

Complete your sessions evaluation online at SHARE.org/BostonEval

Hey – Where do I play?!?!

Complete your sessions evaluation online at SHARE.org/BostonEval

Complete your sessions evaluation online at SHARE.org/BostonEval