

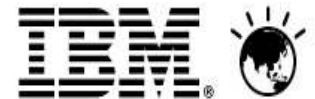
# Pulse

IBM SolutionsConnect 2013

# Mobile Device Management trends and roadmap

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# In the New Computing Era, We Have Moved From...

**Single** transactions to  personalized **engagement**

**Millions** of PCs to  **billions** of mobile devices

**Structured** data to  massive amounts of **unstructured** data

**Static** applications to  **dynamic** services

**Rigid** infrastructure to  an **elastic** cloud infrastructure

**Reactive** security  Intelligent, **proactive** protection



# Mobile Is Everywhere

## 5 Trends with significant implications for the enterprise

1

### Mobile is primary

91% of mobile users keep their device within arm's reach 100% of the time

2

### Insights from mobile data provide new opportunities

75% of mobile shoppers take action after receiving a location based messages

3

### Mobile is about transacting

96% year to year increase in mobile cyber Monday sales between 2012 and 2011

4

### Mobile must create a continuous brand experience

90% of users use multiple screens as channels come together to create integrated experiences

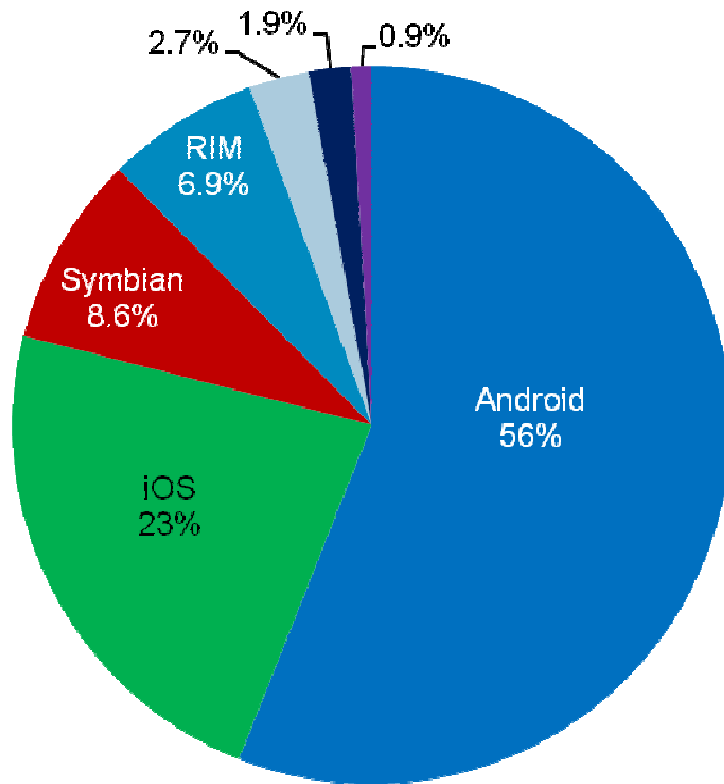
5

### Mobile enables the Internet of Things

Global Machine-to-machine connections will increase from 2 billion in 2011 to 18 billion at the end of 2022

# Life was so much easier when everyone simply had a Blackberry

Share of global Q1 2012 smartphone sales to end users, by OS



■ Android ■ iOS ■ Symbian ■ RIM ■ Bada ■ Microsoft ■ Others

Source: Gartner 2012; does not include media tablets

- Android and iOS accounted for 79% of all smartphone shipments
- Many employees want to use their devices to access work information
- Mobile devices offer significant advantages for companies
- ‘Halo effect’ of Apple Mac’s
- Before companies can realise the benefits of mobile devices, they need to be able to manage the associated risks

# Managing Devices – Old Philosophy

## IT manages risks by maintaining control points

### ✓ Control the Device

- Enterprises provide all equipment



### ✓ Control the Complexity

- Small set of supported platforms / models



### ✓ Control the OS

- Operating systems configured, managed, and updated by IT

### ✓ Control the Apps

- IT controls which apps are allowed and the configuration



### ✓ Control the Network

- Network traffic controlled with proxies and web filters



# Managing Devices – The New Reality

## With BYOD, IT loses control

### ❌ Control the Device

- Employees bring personal devices (BYOD)

### ❌ Control the Complexity

- Many different combinations of devices and OSes

### ❌ Control the OS

- OS version and upgrades managed by carriers, OEMs, users

### ❌ Control the Apps

- Apps updated automatically by App Stores and users

### ❌ Control the Network

- Devices connect through 3G/4G, WiFi,





## IBM understands the demands of managing a global heterogeneous IT infrastructure with BYOD

- **450,000 IBM employees** in over 120 countries.
- Deployment to over **1,000,000 endpoints**
- A **78 per cent decrease** in endpoint security issues
- IBM is also in the process of deploying IBM Endpoint Manager for Mobile Devices across its entire mobile workforce of over **120,000 staff**
- IBM Endpoint Manager is being deployed across many global outsourced accounts
- BYOD with **200,000+** smartphones projected
- **2099+ Terabytes** of WAN traffic **per month**





## Six steps IBM employees need to follow to keep their devices safe

1. Register your computer, tablet, and mobile devices with IBM
2. Use IBM's tools to secure and encrypt your computer, tablet, mobile device and storage devices
3. Don't mix IBM data with non-IBM clouds
4. Declare public wireless networks untrusted
5. Know if you qualify to use a personally-owned device for specific IBM business purposes
6. Report incidents on personally-owned technologies to IBM





# Mobile Device Management

## Services:

- Providing enterprise-wide visibility (eg. device details, apps installed, device location)
- Ensuring data security and compliance
- Device configuration
- Support devices on the Apple iOS, Google Android, Nokia Symbian, Microsoft Windows Mobile and Microsoft Windows Phone platforms

## Benefits:

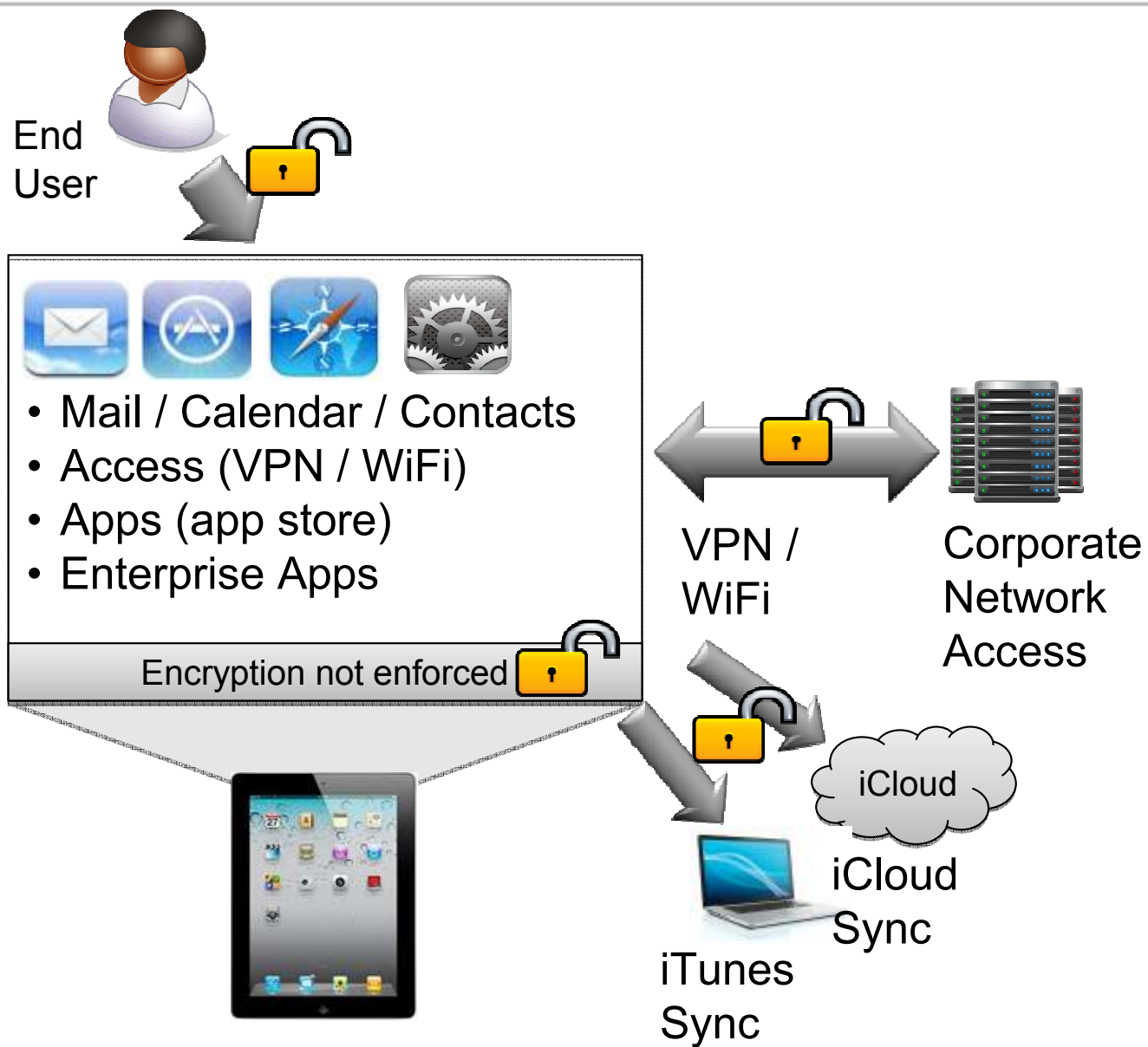
- Address business and technology issues of security, complexity and bring your own device (BYOD) in mobile environments
- Manage enterprise and personal data separately with capabilities such as selective wipe
- Leverage a single infrastructure to manage all enterprise devices—smartphones, tablets, desktops, laptops and servers

**Apple iOS**  
**Google Android**  
**Nokia Symbian**  
**Windows Phone,**  
**Windows Mobile &**  
**Blackberry 10**

# Managing Mobile Devices – The Problem

## Security & Management Challenges

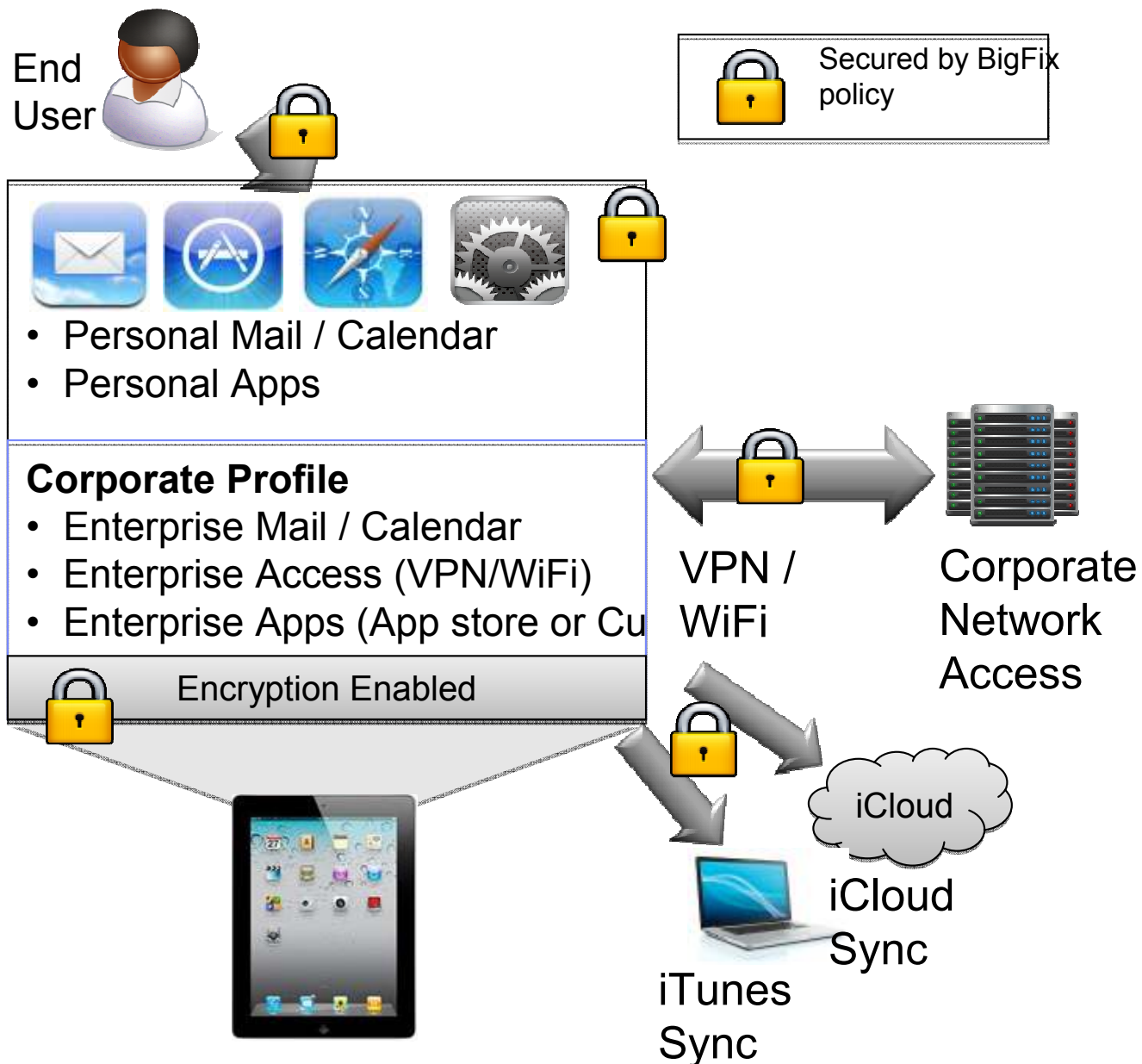
- Potential unauthorized access (lost, stolen)
- Disabled encryption
- Insecure devices connecting to network
- Corporate data leakage



# Managing Mobile Devices – The Solution

## Endpoint Manager for Mobile Devices

- Enable password policies
- Enable device encryption
- Force encrypted backup
- Disable iCloud sync
- Access to corporate email, apps, VPN, WiFi contingent on policy compliance!
- Selectively wipe corporate data if employee leaves company
- Fully wipe if lost or stolen





# MDM Functionality Overview

## Category

Platform Support

Management Actions

Application Management

Policy and Security Management

Location Services

Enterprise Access Management

Expense Management

Cloud Email Device Management

Containerisation

## Endpoint Manager Capabilities

Apple iOS, Google, Nokia Symbian, Windows Phone, Windows Mobile Android

Selective/full wipe, deny email access, remote lock, user notification, clear passcode

Application inventory, enterprise app store, iOS WebClips, whitelisting/blacklisting

Password policies, device encryption, jailbreak/root detection, disable iCloud

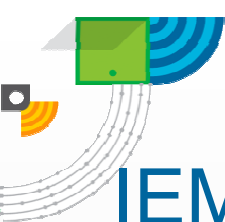
Track devices and locate on map

Configuration of Email, VPN, Wi-Fi, Authenticated Enrollment, Self Service Portal

Enable/disable voice and data roaming

Office 365 support

Email Container: Nitrodesk Touchdown & App Container: Enterploid Divide



# IEM MDM Management Interface

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- Advanced management on iOS through Apple's MDM APIs



- Advanced management on Android through a BigFix agent














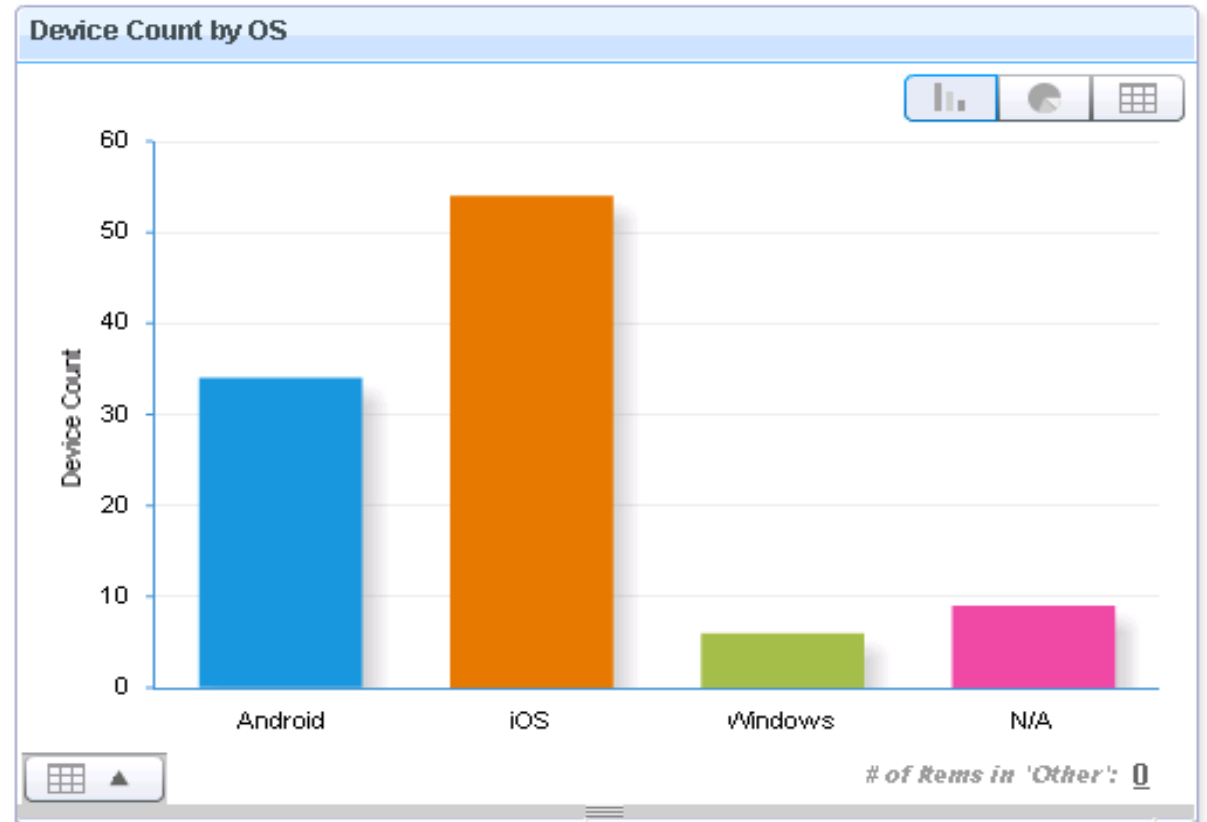
- Email-based management through Exchange (ActiveSync) and Lotus Traveler (IBMSync)
  - iOS
  - Android
  - Windows Phone
  - Windows Mobile
  - Symbian

**Apple iOS**  
**Google Android**  
**Nokia Symbian**  
**Windows Phone,**  
**Windows Mobile &**  
**Blackberry 10**

# Simple & Clear: IEM MDM Dashboard

## Mobile Device Overview

MDM Devices	
Device Name	User Name
 Roosevelt's iPhone	Roosevelt
 Buchanan's Microsoft DeviceEmulator	Buchanan
 Ford's Microsoft DeviceEmulator	Ford
 Harrison's DROIDX	Harrison
 Roosevelt's iPad	Roosevelt
 Harrison's iPad	Harrison
 Lincoln's iPad	Lincoln
 Clinton's unknown sdk	Clinton
 Wilson's iPhone	Wilson
 Clinton's HTC HTC Flyer P512	Clinton
 Fillmore's iPad	Fillmore

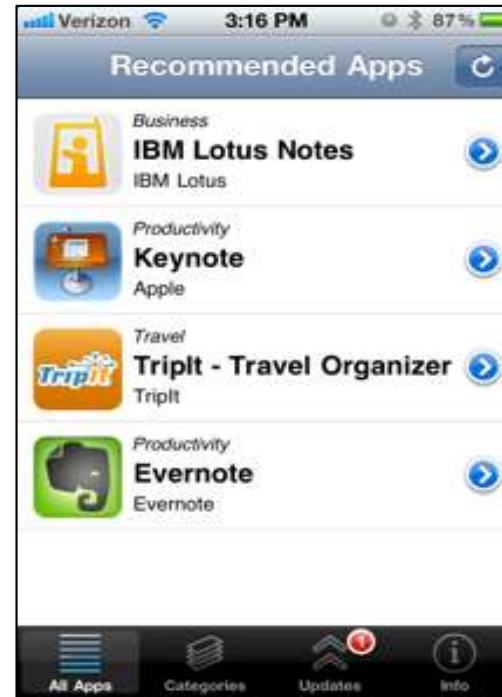
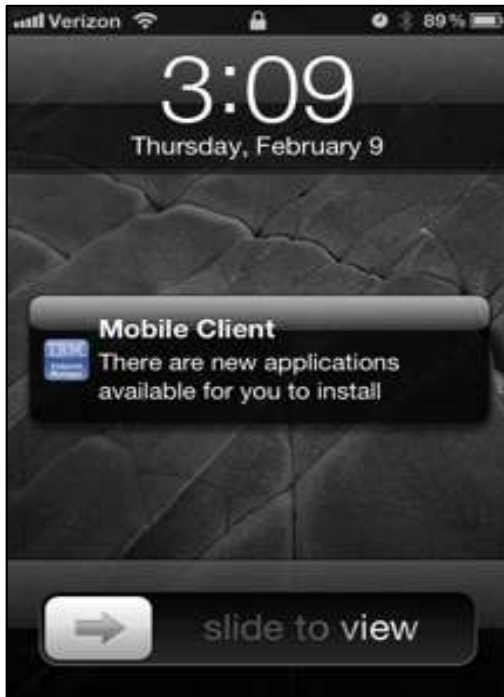


Apple iOS-iPad1,1/810.3
Android (3.1)
Apple iOS-iPhone3C1/812.1 (OS 4)
Android (2.3.4)
Apache-HttpClient/UNAVAILABLE (java 1.4)

# A "Single Device View" enables administrators and helpdesk personnel to easily view device details and take required action

The screenshot shows a Google Maps interface in a browser window. The address bar contains the URL <http://maps.google.com/maps?q=44.801100,-68.777800>. The search bar contains the text "44.801100, -68.777800 (Location of device Harrison's DROIDX as of)". A location pin is placed on a map of Bangor, Maine, with a pop-up information window. The pop-up window title is "Location of device Harrison's DROIDX as of Wed Jun 6 15:41:47 GMT+1000 2012" and it displays the coordinates "44.801100, -68.777800". Below the coordinates is a "Street view" image showing a building. The map shows streets like Hammond St, Union St, and Main St, and landmarks like Hayford Park and Kenduskeag Stream Park. The browser window title is "44.801100, -68.777800 (Location of device Harrison's DROIDX as of Wed Jun 6 15:41:47 GMT+1000 2 - Windows Internet Explorer)".

# Secure & Safe App Usage: Your own "Enterprise AppStore"







# User-friendly iOS Profile Configuration Wizard exposes all capabilities of Apple's MDM-API's

**Profile Details**

**Identity** | **Passcode**

- Require passcode on device**  
Enforce the use of a passcode before using device
  - Allow simple value**  
Permit the use of repeating, ascending, and descending character sequences
  - Require alphanumeric value**  
Require passcodes to contain at least one letter
- Minimum password length**  
Smallest number of passcode characters allowed
- Minimum number of complex characters**  
Smallest number of non-alphanumeric characters allowed
- Maximum passcode age (1-730 days, or none)**  
Days after which passcode must be changed
- Auto-Lock (1-5) minutes, or 0 for none**  
Device automatically locks when time period elapses
- Passcode history (1-50 passcodes, or 0 for none)**  
The number of unique passcodes required before reuse
- Grace period for device lock**  
Amount of time device can be locked without prompting for passcode on unlock
- Maximum number of failed attempts**  
Number of passcode entry attempts allowed before all data on device will be erased



# Authenticated Enrollment and Self Service portal

## IBM. Mobile Device Enrollment

### Login

Please enter your Username and Password

Email \*

vtdarryl@home.int

Password \*

••••••••

Login

8.2.20003

## IBM. Mobile Device Service Portal



### Device Name

vtdarryl's iPhone

### User Name

vtdarryl@home.int

### Operating System

iOS 5.1.1

### Model

iPhone 3GS

### Location

-37.932671000000000

<b>Last Report Time</b>	7/26/2012 9:53:27 PM
<b>Manufacturer</b>	Apple
<b>Carrier</b>	Telstra
<b>Phone Number</b>	+61412234918
<b>Agent Version</b>	8.2.20005.0

Actions Device Details iOS Profiles Apps Security

### Device Commands

Lock Screen

[Show Command History](#)

Clear Passcode

[Show Command History](#)

Device Wipe

[Show Command History](#)



# Endpoint complexity continues to increase

**Speed,  
severity and  
complexity of  
malware  
attacks**

Patch O/S and application vulnerabilities with hours

Rapid, agile, automated remediation is needed

**Endpoint  
device counts,  
devices and  
platforms**

Mobile/roaming endpoints

New form factors and platforms

Employee-owned devices

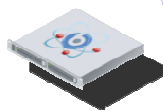
**Compliance  
requirements  
to establish,  
prove and  
maintain  
continuous  
compliance**

Establish, prove and maintain continuous compliance

# PCs and mobile devices have many of the same management needs

## Traditional Endpoint Management

- OS provisioning
- Patching
- Power Mgmt



## Mobile Device Management

- Device Wipe
- Location info
- Jailbreak/Root detection
- Enterprise App store
- Self-service portal



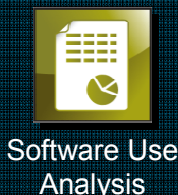
- Device inventory
- Security policy mgmt
- Application mgmt
- Device config (VPN/Email/Wifi)
- Encryption mgmt
- Roaming device support
- Integration with internal systems
- Scalable/Secure solution
- Easy-to-deploy
- Multiple OS support
- Consolidated infrastructure

# Why IBM Endpoint Manager?

**Concord Hospital** achieves **98% first-pass** success in hours on their Microsoft and 3rd party patches

**Stena Lines** achieved a **12:1 labor** savings ratio by reducing administrative overhead time for patch processes

**Hutchinson Builders** can now **easily track** the **software installed and running computers** across the company's 16 offices and up to 160 construction sites



- Common management agent
- Unified management console
- Common infrastructure
- Single server

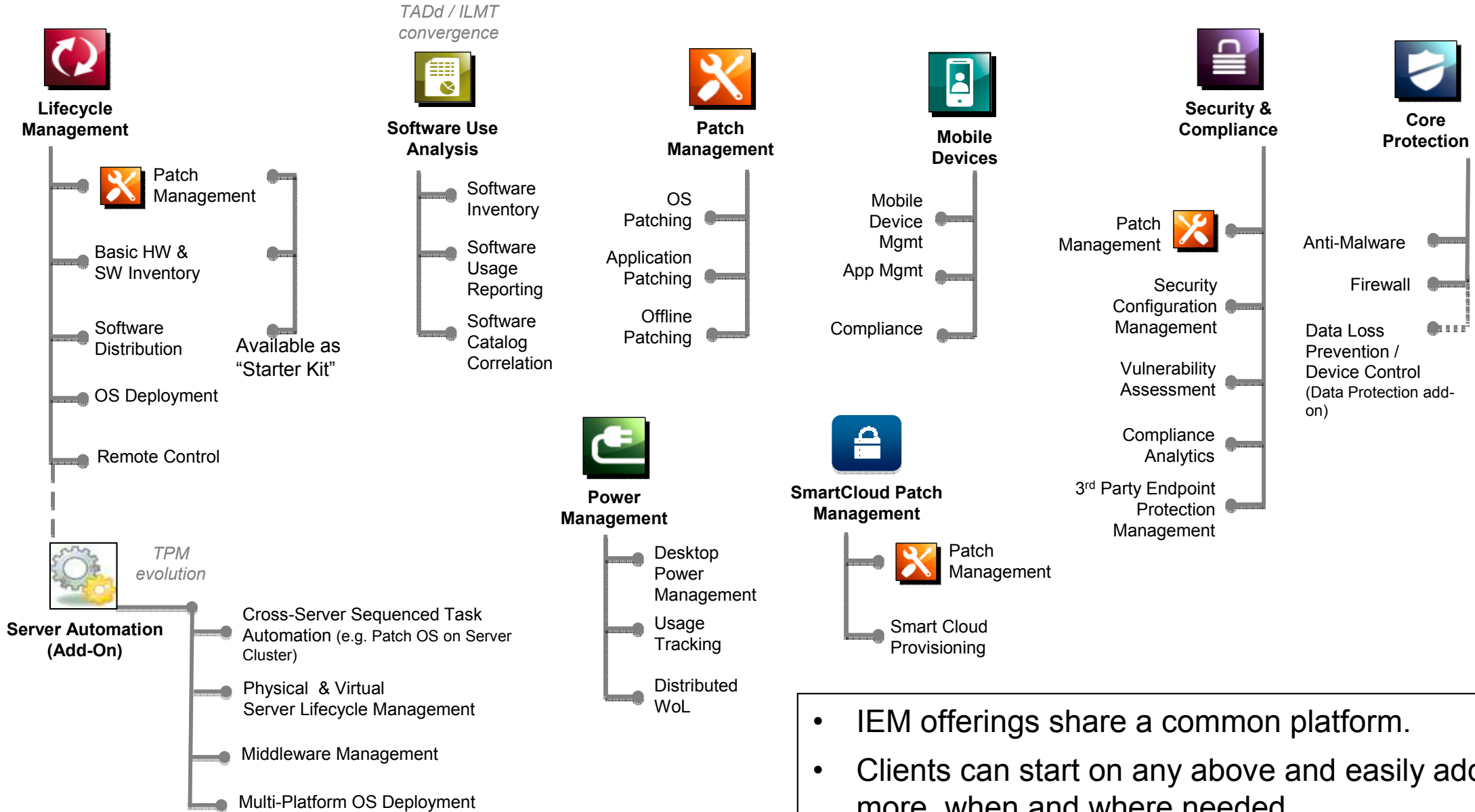
**Bendigo Bank** expects to save **\$175,000 off its power bill within 12 months** and avoid 2190 tonnes of carbon emissions

Security Management

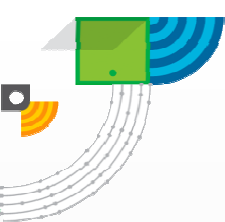
**IBM** has deployed Endpoint Manager to over 700,000+ endpoints on three servers. Expects to save over \$10M in Year 1

Over 13,000 mobile devices enrolled in 72 hours!

# Unified Device Management: IEM Product Packaging & Capabilities



- IEM offerings share a common platform.
- Clients can start on any above and easily add more, when and where needed



# Why IBM Endpoint Manager ?

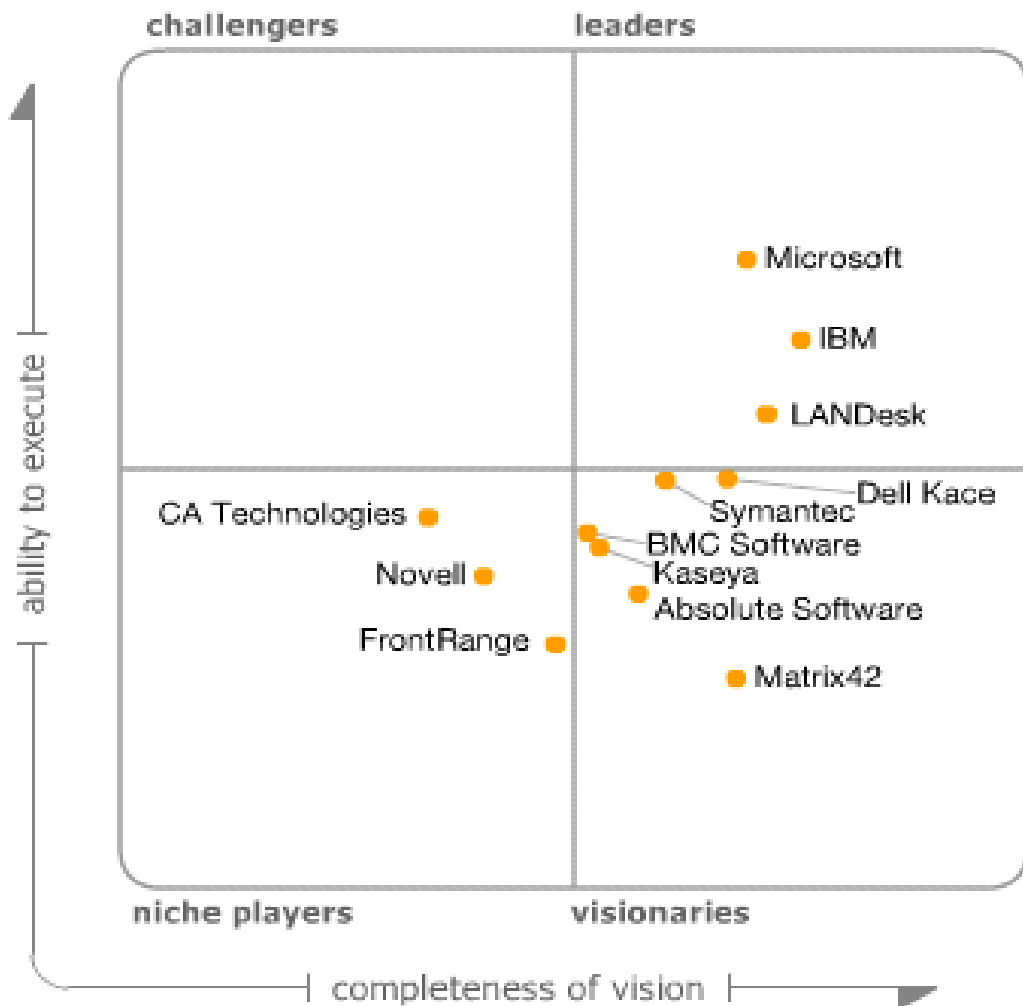


- 1) Manage more than Windows, including OSX and mobile
- 2) An integrated “cloud” content delivery service which includes operating system and application patches
- 3) Near real-time reporting on patches, inventory and compliance
- 4) Easy to deploy Power management for Windows and Mac
- 5) Know what software is deployed *and used* on all of your servers and workstations





# IBM Positioned In Leaders Quadrant



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As of April 2013



# More than MDM - New technology forces

## 1/2

### Mobility:

Nearly 1/2 of devices accessing applications will be mobile

## 13 billion

### Security:

13 billion security events monitored per day

## 1.2 zettabytes

### Data:

1.2 trillion gigabytes in the digital universe.

## 350 million

### BYOD:

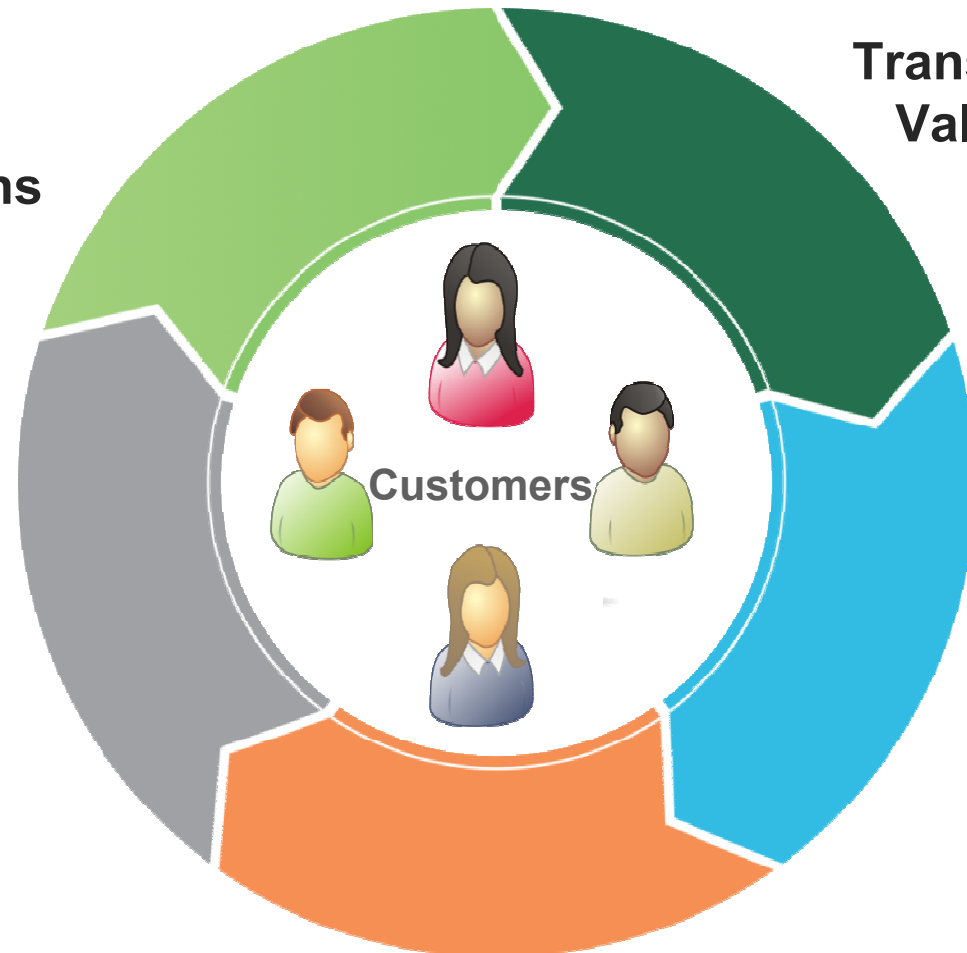
BYOD users expected to double by 2014 to 350 million



# Imagine the Opportunities for a Mobile-First Organization

**Leverage Industry Transformations**

**Transform the Value Chain**



**Deepen Engagement**

**Deliver Contextually Relevant Experience**

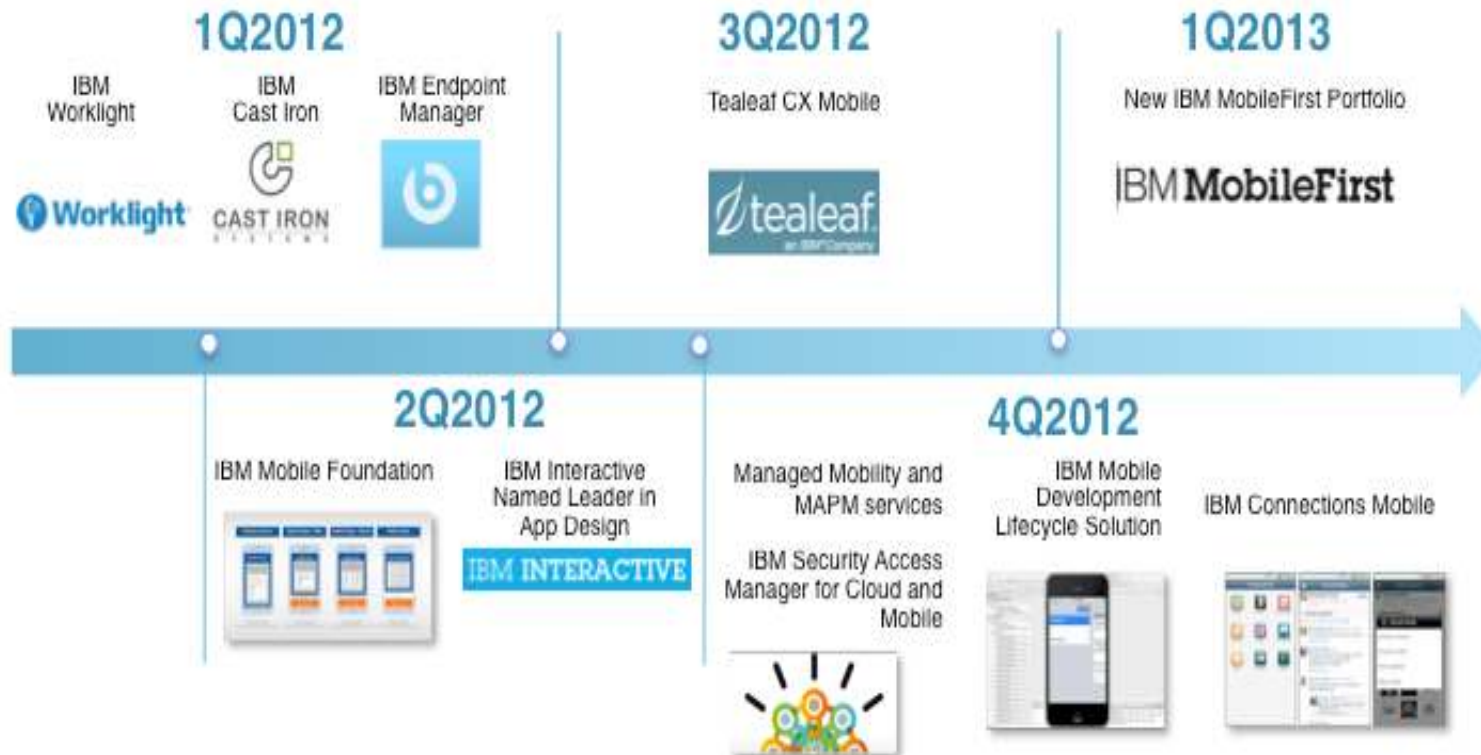
**Drive Revenue and Productivity**

# IBM Has Been Building comprehensive Mobile Enterprise Capabilities

10 acquisitions to strengthen our position in mobile since 2006 ...

125+ patents for wireless inventions in 2012, bringing the total to 270

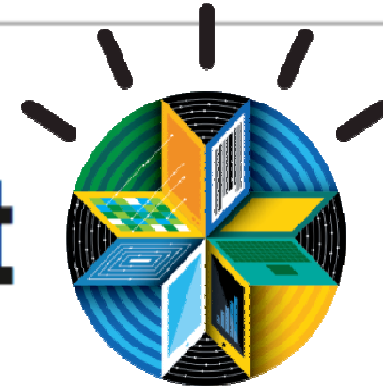
Doubling 2013 investment ...



200+ IBM Software apps available in App Stores; ~ 1M downloads ...

Cited as a leader in app design and managed services by Forrester and Gartner ...

# IBM MobileFirst



1

The Broadest  
Portfolio of  
Mobile  
Solutions

2

The Deepest Set  
of Services  
Expertise

3

New Industry  
Partnerships  
and Resources  
for Developers

Put Your **Business** in Motion.



# IBM MobileFirst Offering Portfolio



## 1 The Broadest Portfolio of Mobile Solutions

- Automated testing for high quality apps  
IBM Rational Test Workbench Beta
- Single sign-on & support for latest platforms  
Worklight 5.0.6
- Scale to millions of connections & messages  
IBM Messaging Appliance
- Federal FIPS 140-2 certified & support for latest platforms  
IBM Endpoint Manager for Mobile Devices
- Identify security vulnerabilities in iOS apps  
IBM AppScan 8.next
- Gain complete visibility of mobile customers experiences across website, hybrid and native apps  
Tealeaf CX Mobile 8.7

## 2 The Deepest Set of Services Expertise

- Best Practices - IBM Mobile Maturity Model
- IBM Interactive Design Services for Mobile
- New IBM Mobile Client Workshops
- *Innovation* Workshop (Free 1-day workshop)
- *Discovery* Workshop
- Mobile Strategy Accelerator
- Mobile Infrastructure Strategy & Planning

## 3 New Industry Partnerships and Resources for Developers

- IBM technology to be deployed to Nokia Siemens Networks base stations  
**ASPEN Solution**
- Innovative Partnerships  
**AT&T and Apple**
- New Resources for Developers
- New Ready for IBM Mobile Program
- New SVP Mobile Reseller Authorization

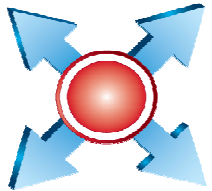
2500 Companies have chosen IBM's Mobile Cross Platform Capabilities: 240 in Nov / Dec '12







# Summary



- IBM Endpoint Manager enables unified management of all enterprise devices – *desktops, laptops, servers, smartphones, and tablets*



- Real-time/proactive endpoint management: Patch management, anti-virus/malware, power management and device location information



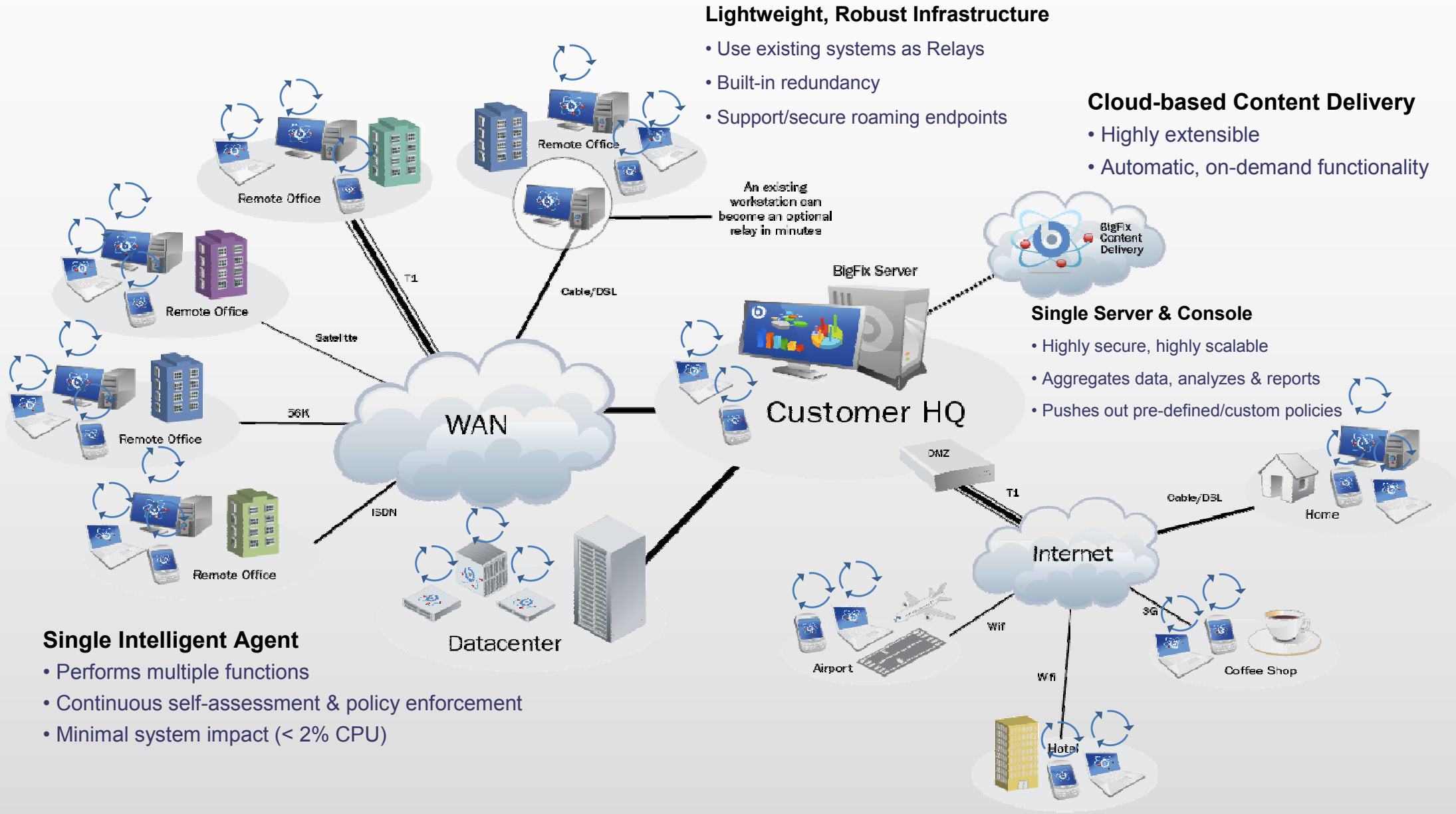
- Continuous compliance reduces costs and risk
- Power management
- Management of assets

# Thank you



[ibm.com](http://ibm.com)

# How it Works



## Lightweight, Robust Infrastructure

- Use existing systems as Relays
- Built-in redundancy
- Support/secure roaming endpoints

## Cloud-based Content Delivery

- Highly extensible
- Automatic, on-demand functionality

## Single Server & Console

- Highly secure, highly scalable
- Aggregates data, analyzes & reports
- Pushes out pre-defined/custom policies

## Single Intelligent Agent

- Performs multiple functions
- Continuous self-assessment & policy enforcement
- Minimal system impact (< 2% CPU)

# IBM Endpoint Manager Architecture Components

v2013-04

