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Business without **LIMITS**

21 August | Thailand

Six Things to Think About Before Officially Supporting a BYOD Policy

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Mobile is a significant component of the evolution of computing

Mobile / Wireless

Web / Desktop

Client / Server





Host /Mainframe





Consumer experience and "bring your own device" are driving much new enterprise use.

Trends in Enterprise Mobility ...

The need for business agility along with changing employee behaviors will require enterprises to mitigate operational risk associated with mobility

Number and Types of Devices are Evolving

- 1 Billion smart phones and 1.2 Billion Mobile workers by 2014
- Large enterprises expect to triple their smartphone user base by 2015

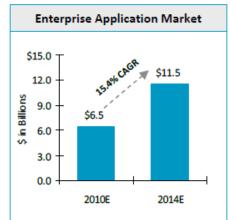
Mobility is Driving the "Consumerization" of IT

- 46% of large enterprises supporting personally-owned devices
- Billions of downloads from App Stores; longer term trend for app deployment

% of Consumer v. Enterprise Devices 100% 80% - 30% 27% 23% 21% 19% 17% 15% 40% - 70% 73% 77% 79% 81% 83% 85% 2008 2009 2010 2011 2012 2013 2014 ■ Consumer-Owned ■ Enterprise Dedicated

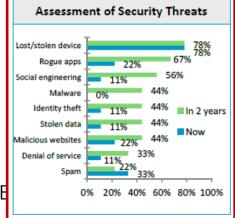
Increasing Demand for Enterprise Applications

- 20%of mobile workers are getting business apps from app stores today
- ➤ 50% of organizations plan to deploy mobile apps within 12 months



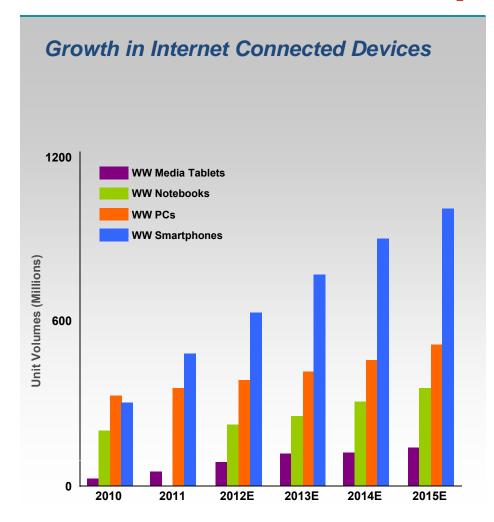
Security Requirements Becoming More Complex

- Threats from rogue applications and social engineering expected to double by 2013
- 50% of all apps send device info or personal details



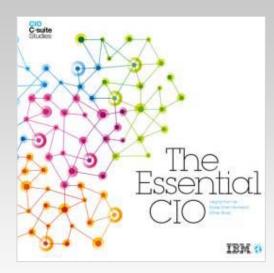
Mobile is an enterprise priority





Source: Wells Fargo Securities, January 23, 2012 "Fostering the People: The Shift to Engagement Apps"

Mobile and Cloud are top spending priorities for ClOs¹



Dramatic Growth in Mobile Devices

- Mobile data traffic exceeded voice in 2010²
- Shipments of Smartphones exceeded total PC shipments for the first time in 2011³
- 10 Billion mobile connected devices are expected to be in use by 2020³

¹ 2011 IBM Global CIO Study ² Wireless Industry News, August 26, 2010 ³ 2011 Economist

Challenges of Enterprise Mobility



Security and Privacy cited as the number one mobile adoption concern

- 2011 IBM Tech Trends Report

- > Adapting to the Bring Your Own Device (BYOD) to Work Trend
 - Device Management & Security
 - Application management
- Achieving Data Separation
 - Privacy
 - Corporate Data protection
- Providing secure access to enterprise applications & data
 - Secure connectivity
 - Identity, Access & Authorization
- Developing Secure Mobile Apps
 - Vulnerability testing
- Designing an Adaptive Security Posture
 - Policy Management
 - Security Intelligence

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The mobile lifecycle

not

- Strong demand by LoB
- •Higher expectations of user experience with mobile apps
- Lack of best practices guidance on how to deliver mobile applications
- •More direct involvement from users/stakeholders in design
- •Native programming models are portable across devices.
- •Highly fragmented set of mobile devices and platforms
- •Very large number of configurations of devices, platforms, carriers, etc. to test
- Mobile landscape evolves at a much faster pace
- More frequent releases and updates for apps with more urgent time-to-market demands



Mobile presents an enormous set of opportunities...

Business to Enterprise



- Increase worker productivity
- Improved claims processing
- Increase revenue through sales engagements
- Extend existing applications to mobile workers and customers
- Reducing fuel, gas, or fleet maintenance costs that are relevant in particular industries
- Increase employee responsiveness and decision making speed
- Resolve internal IT issues faster
- Reduce personnel cost (utilizing personal owned instead of corporate issued devices)

Business to Consumer



- Improve customer satisfaction
- Deeper customer engagement and loyalty
- Drive increased sales through Personalized offers
- Customer service
- Competitive differentiator
- Improve brand perception
- Deeper insight into customer buying behavior for up sell and cross sell
- Improve in store experience with mobile concierge services

Mobile Devices: Unique Management & Security Challenges

Mobile devices are shared more often

- Personal phones and tablets shared with family
- Enterprise tablet shared with co-workers
- Social norms of mobile apps vs. file systems

Mobile devices have multiple personas

- >Work tool
- >Entertainment device
- Personal organization
- Security profile per persona?

Mobile devices are diverse

- OS immaturity for enterprise mgmt
- BYOD dictates multiple OSs
- Vendor / carrier control dictates multiple OS versions

Mobile devices are used in more locations

- Mobile devices prioritize the user
- A single location could offer public, private, and cell connections
- Anywhere, anytime
- Increasing reliance on enterprise WiFi

- Conflicts with user experience not tolerated
- OS architecture puts the user in control
- Difficult to enforce policy, app lists





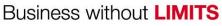












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BYOD Questions to Ask

Do you have the right policies in place?

How are you going to manage and secure personal devices?

Are employees aware of policies, security risks, enterprise capabilities?

Do you have an enterprise app store?

What services will you support beyond e-mail / calendar?

Is your service desk ready?

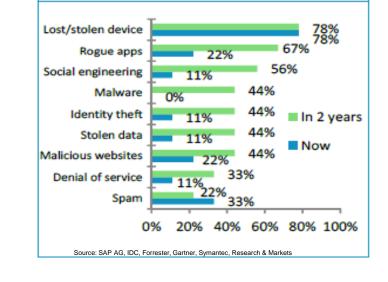
How will this impact your wireless networks?



1. How Will You SECURE Mobile Devices?



- Corporate culture?
- Platform support?
- Agents?
- Threats?
- Capabilities?



Assessment of Security Threats

Mobile Device Security Management

- ✓ Device wipe & lockdown
- ✓ Password Management
- ✓ Configuration Policy
- ✓ Compliance

Mobile Threat Management

- ✓ Anti-malware
- ✓ Anti-spyware
- ✓ Anti-spam
- ✓ Firewall/IPS
- ✓ Web filtering
- ✓ Web Reputation

Mobile Information Protection

- ✓ Data encryption (device,file & app)
- ✓ Mobile data loss prevention

Mobile Network Protection

- ✓ Secure Communications (VPN)
- ✓ Edge Protection

Mobile Identity& Access Management

- ✓ Identity Management
- ✓ Authorize & Authenticate
- ✓ Certificate Management
- ✓ Multi-factor authentication

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2. Do You Have Written POLICIES In Place?

Policies should be:

Simple to understand

Enforceable

Enforced

Policies should include:

What platforms are supported?

Will this extend to laptops?

Role-specific requirements?

What systems can be accessed?

Employee- vs. employer-owned devices?

Management actions, software allowed?

Privacy policy?



3. What About An AWARENESS Plan?

Do <u>all</u> your employees know they can use their own phones and tablets?

Do they know what the policies are?

Do they know what corporate software will be installed and how it will be used?

Do they know who to call when there's a problem?



4. Do You Have a PRIVATE APP STORE?

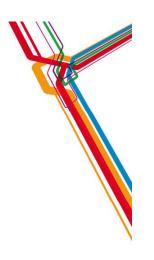
Necessary for software distribution and partial-wipe

Vetted, non-corporate apps?

Self-service portal for non-mobile apps?

Usage analysis and license compliance





5. What SERVICES Will You Support?



Client Functional Domain



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6. Is Your SERVICE DESK Ready?

Requests from mobile devices

Requests about mobile devices

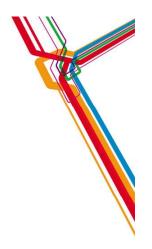
Remote control and other management capabilities

Staffing for volume – 3:1 device-to-employee ratio

- Staffing for subject matter expertise
- Company vs. phone manufacturer vs. carrier
- Up-time for employees who only use mobile devices

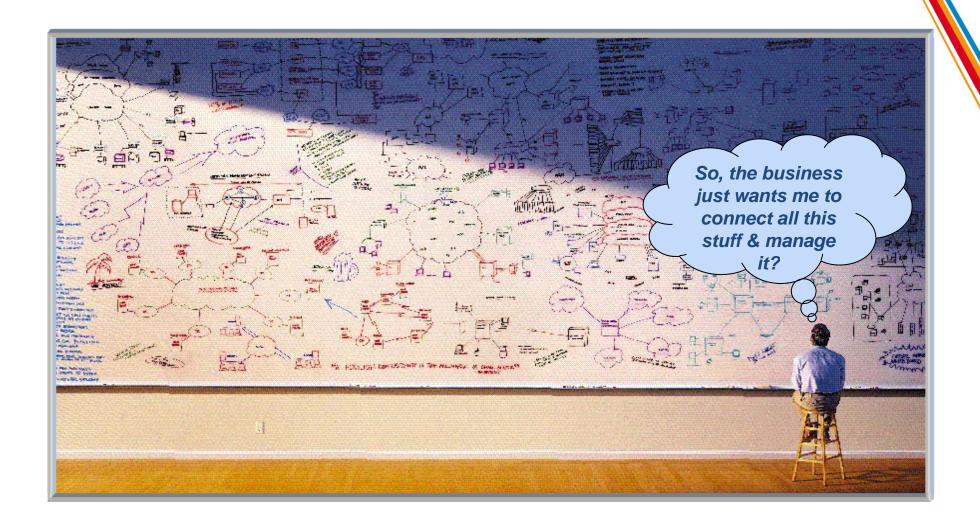






7. What In The World Is This Going To Do To Your Network?

Change And Improvement Have Been Daunting



Tivoli Endpoint Manager, built on BigFix technology

Tivoli Endpoint Manager IT Operations Solutions



Tivoli Endpoint
Manager for Lifecycle
Management



Tivoli Endpoint
Manager for Mobile
Device Management



Tivoli Endpoint
Manager for Patch
Management

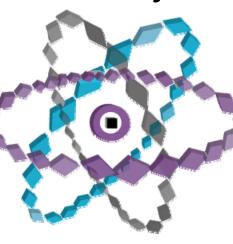


Tivoli Endpoint
Manager for Power
Management



Tivoli Endpoint
Manager for Software
Use Analysis

Unifying IT operations and security



Tivoli Endpoint Manager IT Security Solutions



Tivoli Endpoint

Manager for Security

and Compliance



Tivoli Endpoint
Manager for Core
Protection



Tivoli Endpoint
Manager for Mobile
Device Management



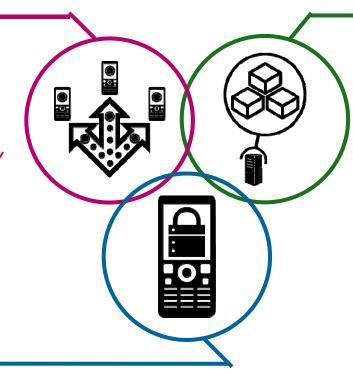
Tivoli Endpoint
Manager for Patch
Management

IBM: Addressing Strategic Client Initiatives

Extend & Transform

Extend existing business capabilities to mobile devices

Transform the business by creating new opportunities



Build & Connect

Build mobile apps **Connect** to, and **run**backend systems in

support of mobile

Manage & Secure

Manage mobile devices and apps **Secure** my mobile business

And are looking for a mobile platform that solves their needs

Banking Insurance Healthcare Telecom Retail Government Others

IBM Enterprise Mobile Platform

Business Results

Extending business to mobile customers and workforce

Improve operational efficiencies and reduce costs

Differentiate the customer experience

Enable new services and business models











3rd Party Mobility Services













Build mobile applications **Connect** to, and run

backend systems in support of mobile



Manage mobile devices and applications

Secure my mobile business

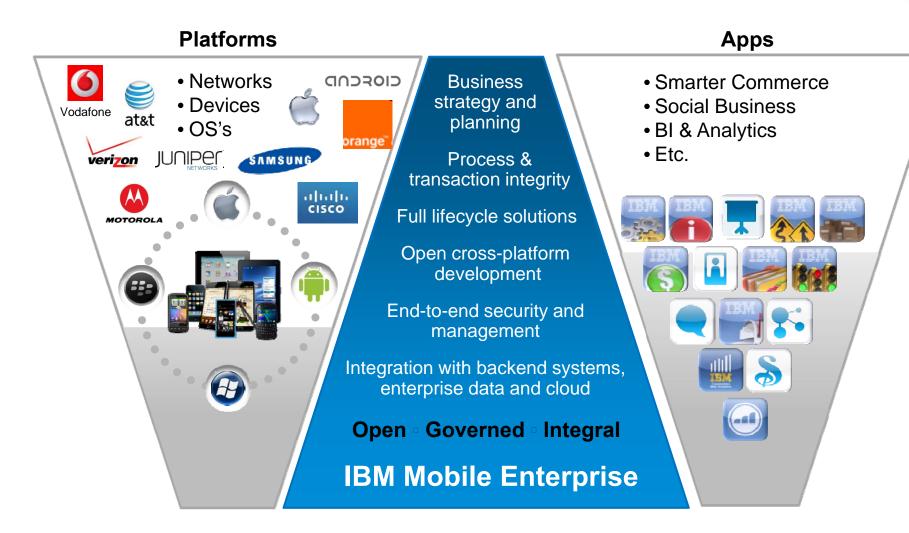


Extend existing business capabilities to mobile devices

Transform the business by creating new opportunities

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Thinking About Mobile Differently



Device Management, Security

IBM Endpoint Manager for Mobile Devices: A highly-scalable, unified solution that delivers device management and security across device types and operating systems for superior visibility and control

Managed = Secure Common agent Unified console **Systems** Security Common management management infrastructure Single server **IBM** Endpoint Manager Desktop / laptop / Mobile **Purpose-specific** server endpoint endpoint endpoint

Client Challenge

Key Capabilities

- A unified systems and security management solution for all enterprise devices
- Near-instant deployment of new features and reports to customer's environments
- Platform to extend integrations with Service Desk, CMDB, SIEM, and other informationgathering systems to mobile devices
- Advanced mobile device management capabilities for iOS, Android, Symbian, and Windows Mobile, Windows Phone
- Security threat detection and automated remediation

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A Holistic Approach To Managing & Securing the Mobile Environment





Develop and Communicate Formal Mobile Strategy, Policies



Benefits of a Unified Approach

 "Organizations...would prefer to use the same tools across PCs, tablets and smartphones, because it's increasingly the same people who support those device types"

- Gartner, PCCLM Magic Quadrant, January 2011

• Although at some level mobile is unique, the devices are just another form of endpoints in your infrastructure. This means whichever technologies you procure should have a road map for integration into your broader endpoint protection strategy.

- Forrester, Market Overview: Mobile Security, Q4, 2011

Reduces Hardware & Administration Costs

- "Single pane" for mobile devices, laptops, desktops, and servers
- Single Endpoint Manager Server scales to 250,000+ devices
- Unified infrastructure / administration model reduces FTE requirements

Fast Time-to-Value

- Enterprise-grade APIs enable integration with service desks, CMDBs, etc (Integrated Service Management)
- Cloud-based content delivery model allows for rapid updates with no software upgrade or installation required



