IBM Software Universe

Smarter Businesses, Smarter Industries.

8th March 2011, Pan Pacific, Dhaka.
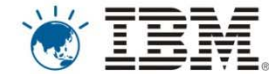
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Quality & Security of Banking Applications

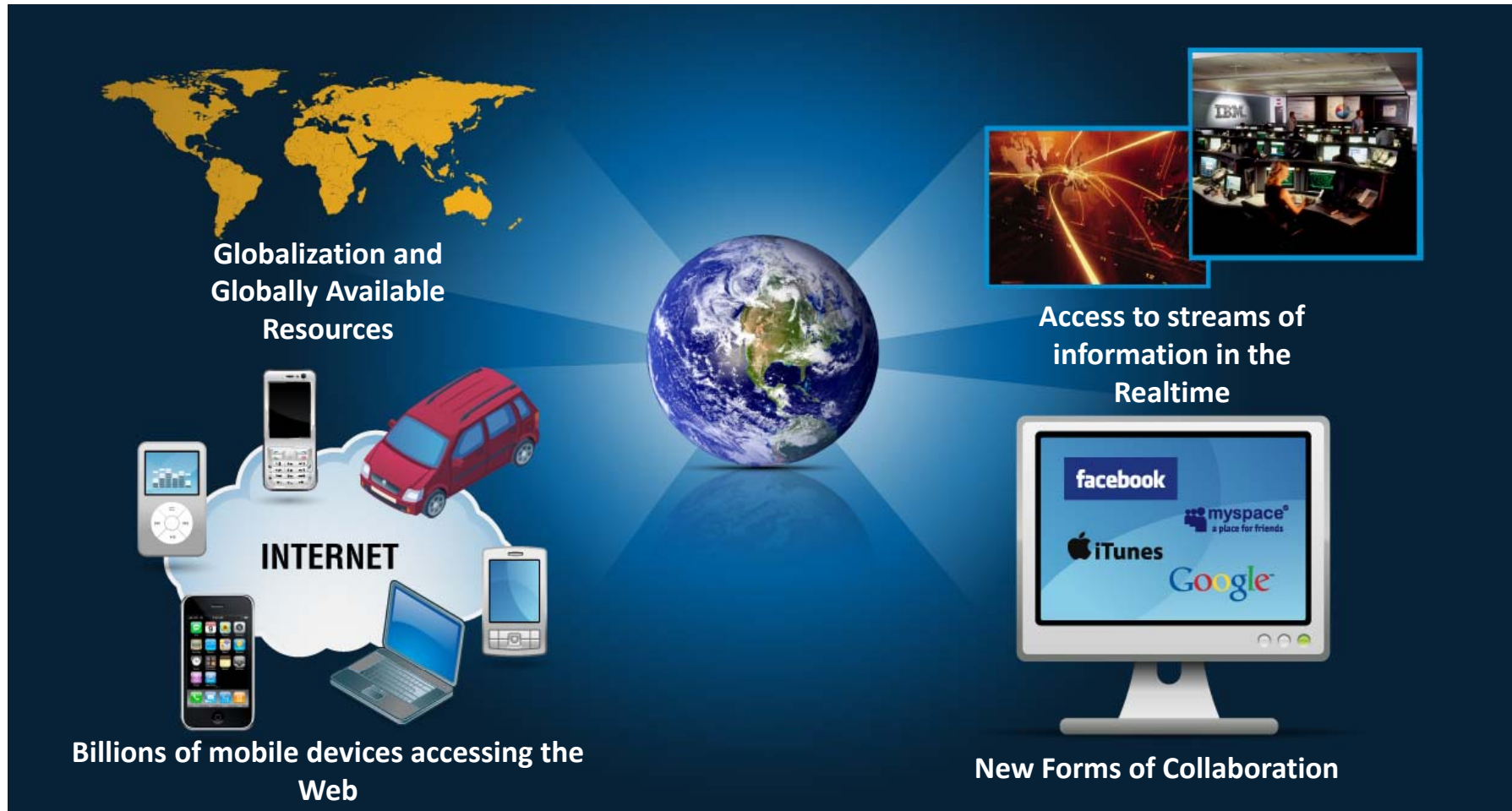**Mr Gopal Rajan Kempaiah**
Client Technical Professionals
IBM India/SA

A Smarter BFSI focuss on _three_ key imperatives....

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REINVENT THE BUSINESS MODEL

FINANCIAL SERVICES

DEVELOP NEW INTELLIGENCE

INTEGRATE RISK MANAGEMENT

- IBM BSFI Industry Solutions - Enabling speed, flexibility & choice in solution deployment
- Banking Performance Management
- Managing Security, Risk & Compliance in BFSI
- Securing Enterprise Data for Banks
- **Managing Quality & Security of Banking Applications**
- Unified Business Process Management for Collaborative Process Improvement
- Payment Systems: Evolution and Framework
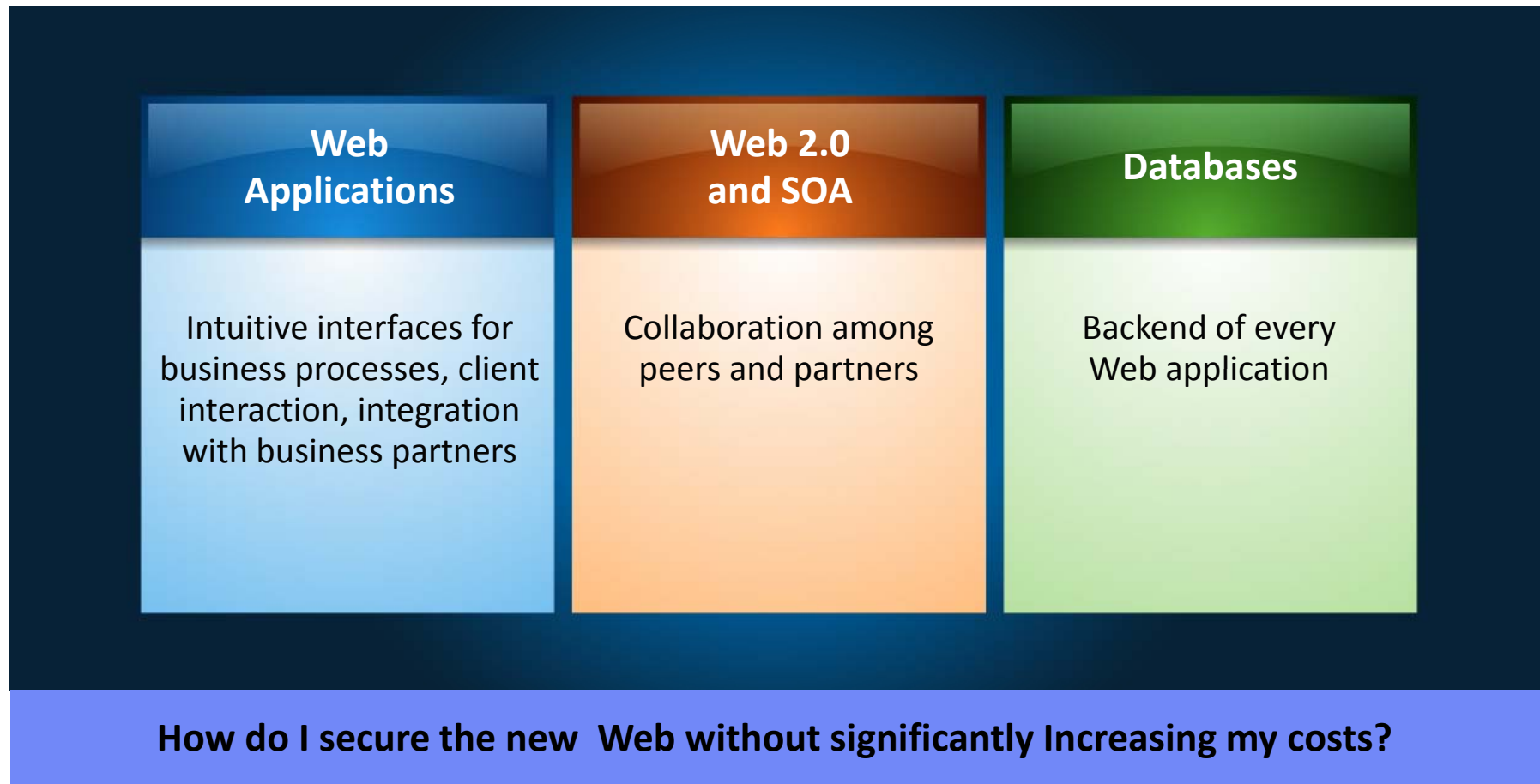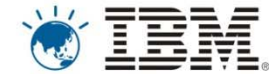- Better Customer Service Through Exceptional Web Experiences

Smarter Planet opportunities driven by Web-enabled applications

Globalization and Globally Available Resources

Access to streams of information in the Realtime

INTERNET

facebook
myspace
a place for friends
iTunes
Google

Billions of mobile devices accessing the Web

New Forms of Collaboration

Web-enabled Applications Linkages

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Web Applications	Web 2.0 and SOA	Databases
Intuitive interfaces for business processes, client interaction, integration with business partners	Collaboration among peers and partners	Backend of every Web application

How do I secure the new Web without significantly Increasing my costs?

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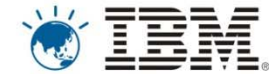
Unprotected Web applications risk sensitive data and compliance

Risks and Threats

Stealing Sensitive Information is the 2nd highest motivation for Web application attacks

Costs of Security Breaches

- Average cost of a security breach is $6.6 million
- Client notification ($202 per record)
- Fines (as high as $15 million)
- Brand loss and lawsuits
- Disruption to business operations

Compliance Demands

PCI DSS non-compliance costs clients hundreds of thousands in fines a month

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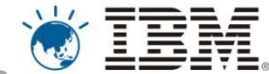# Changing security landscape creates complex threats

Web-enabled applications drive the need for security

- New applications are increasing the attack surface

- Complex Web applications create complex security risks

- Making applications (i.e. customer portals) more available to "good" users, makes them more available to "bad" users

- Web attacks are evolving to blended attacks (i.e. planting of malware on legitimate Web sites)

Desktop:
Browser

Server:
Hypervisor and Virtualization
Web Applications

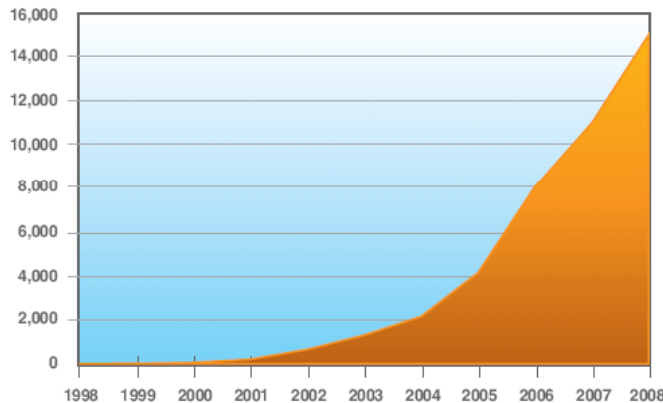Smarter Businesses, Smarter Industries.
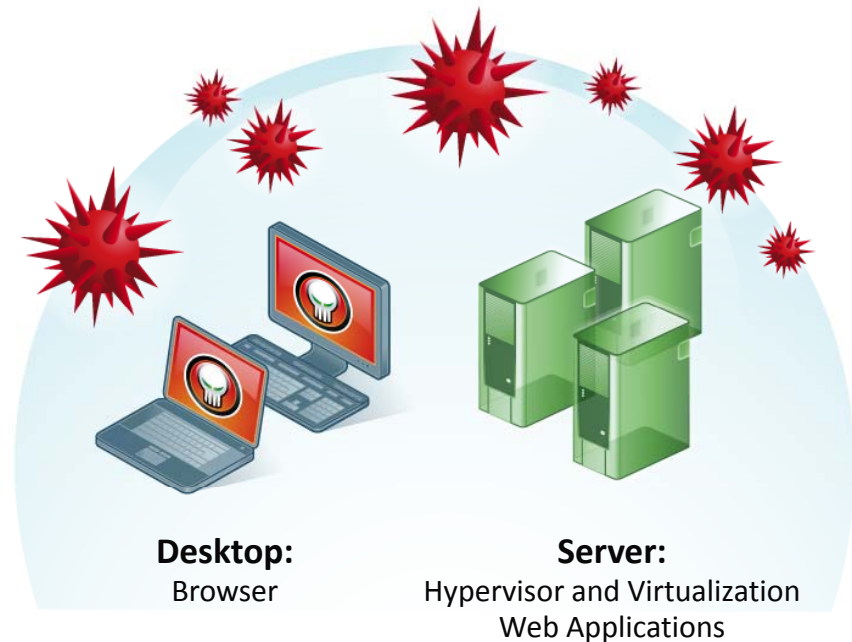
Hackers Continue to Focus on Web Applications

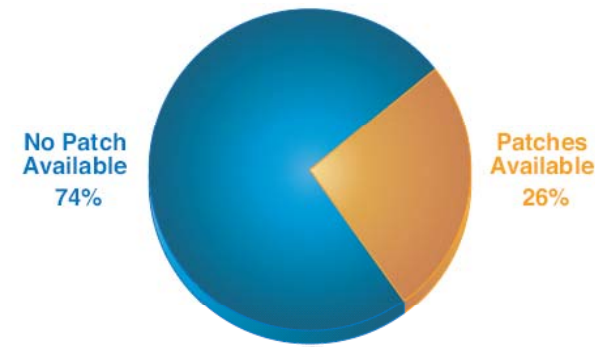*... because they are easy points of entry and there is valuable of data exchanged in the business processes run by the applications*

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Web Application Vulnerabilities on the Rise

Web Applications are Under Attack!

Figure 21: SQL Injection Attacks Monitored by IBM ISS Managed Security Services, Q4 2008

Percentage of Web Application Vulnerabilities with Available Patches

No Patch Available 74%

Patches Available 26%

- **In Q4 2008, IBM MSS witnessed** millions of SQL Injection attacks **across the world**

- **Hackers** targeting Web applications **to steal data and redirect legitimate Websites to malicious sites**

- 90% **of vulnerabilities disclosed in 2008 are** remotely exploitable (i.e. hack-able)

- **Hackers employing highly** complex and malicious techniques **to steal your data**

- **The number of active, automated attacks on Web servers was unprecedented (30x in the last 6 months)**

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Traditional point solutions cannot address all Web security requirements

- **Vulnerability scanners**
  - Traditional vulnerability scanners don't cover Web applications
- **Penetration testing**
  - Effective at finding vulnerabilities but not scalable for ongoing tests
  - Not focused on remediation
- **Network firewall and IPS**
  - Generic Web application protection (if any) so most custom Web applications not covered
  - Most IPS solutions focus on exploits as opposed to Web application vulnerabilities
- **Web application firewall**
  - Expensive point product to deploy and manage
  - Can be effective, but difficult to deploy, tune and manage
  - Building policies can be as time consuming as remediating the vulnerability


Source: Gartner Inc.

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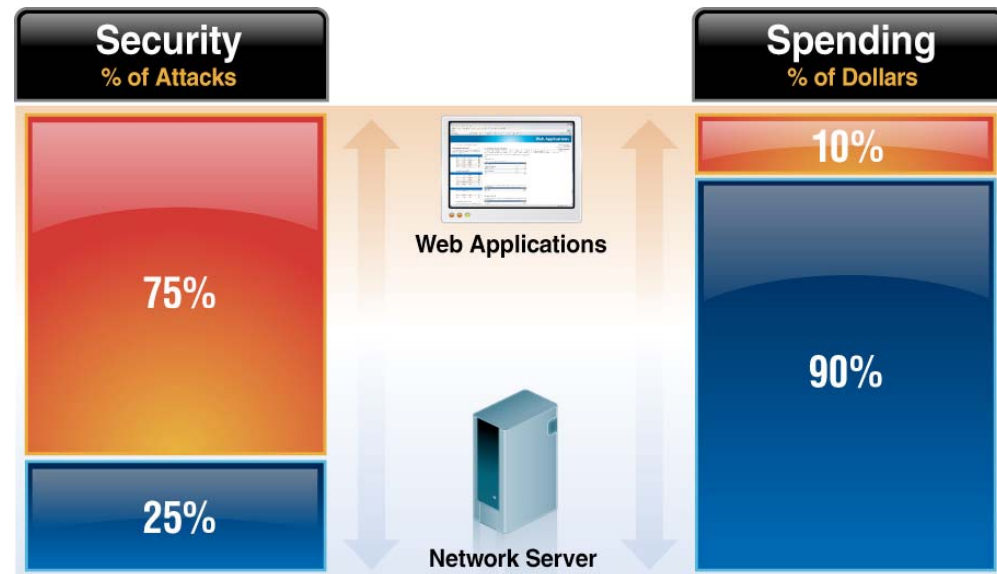
IBM Security Framework includes integrated solutions for Web Application Security

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IBM Security Framework

SECURITY GOVERNANCE, RISK MANAGEMENT AND COMPLIANCE

- PEOPLE AND IDENTITY
- DATA AND INFORMATION
- APPLICATION AND PROCESS
- NETWORK, SERVER AND END POINT
- PHYSICAL INFRASTRUCTURE

Common Policy, Event Handling and Reporting

Professional services | Managed services | Hardware and software

IBM Web Application Security

- **Assessments and professional services**
  - Identify security gaps
  - Expertise to build secure processes
  - Trusted insights to integrate Web application security into holistic security strategy
- **Software and hardware solutions**
  - Market leading solutions
  - IBM Internet Security Systems™ (ISS)
  - Rational®
  - Tivoli®
  - WebSphere®
- **Managed services**
  - Trusted experts proven to reduce the cost and complexity of security operations

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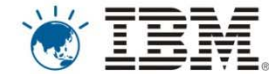
Manage Web Security and Compliance

A large number of rapidly changing, increasingly complex Web applications are being accessed by a diverse set of users and putting your organization at risk

Protect sensitive company data and the personal information of your clients

- Defend against the high cost of a data breach through improved web site security and compliance

- Mitigate the largest risk to your data security posture by finding and fixing security flaws in business critical Web applications

Meet stringent and constantly changing regulatory requirements

- Generate timely audit and compliance reports

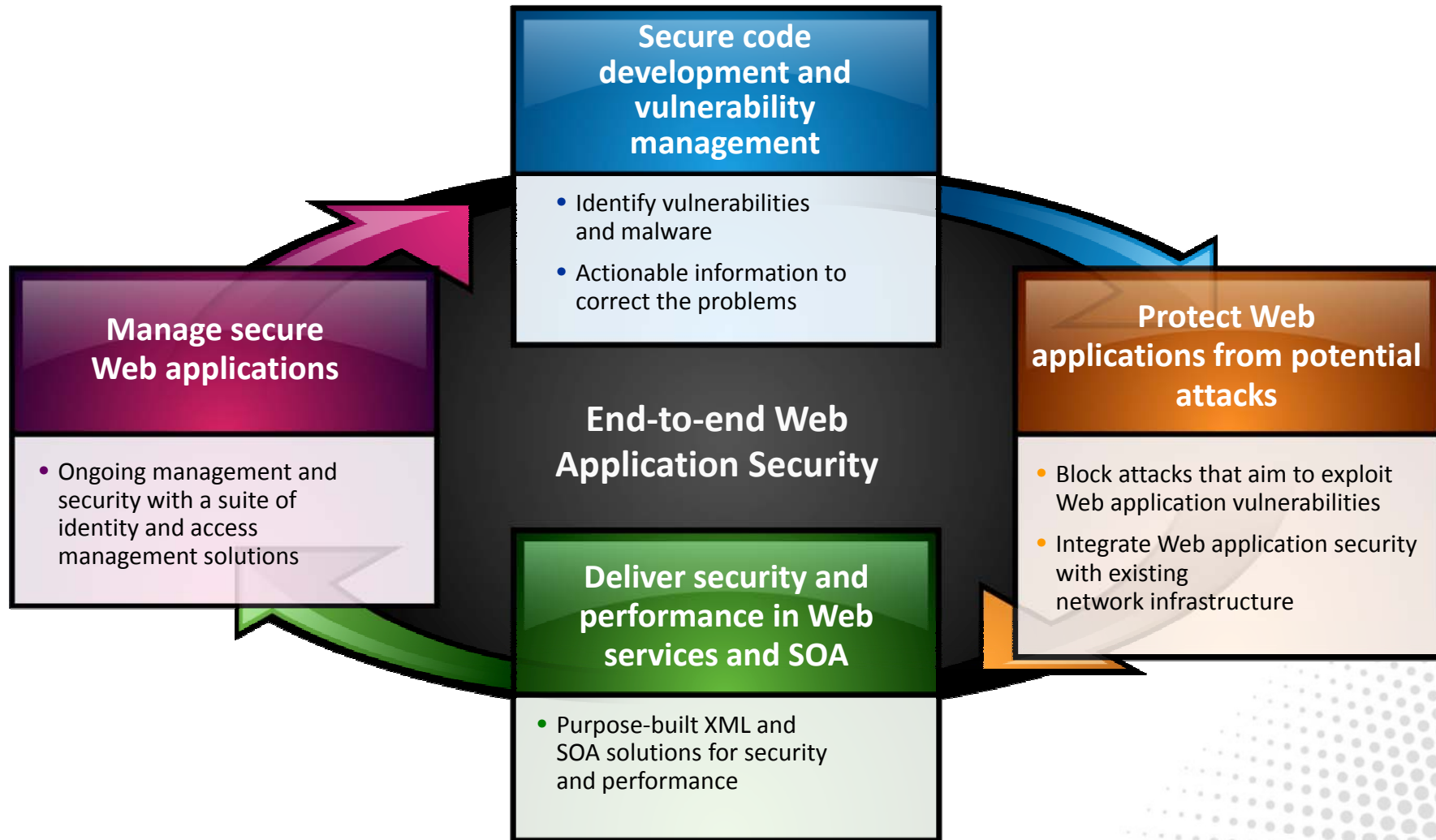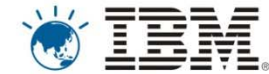- Enable compliance for key requirements such as PCI DSS

Key offerings:
- Rational AppScan
- Rational AppScan Source Edition
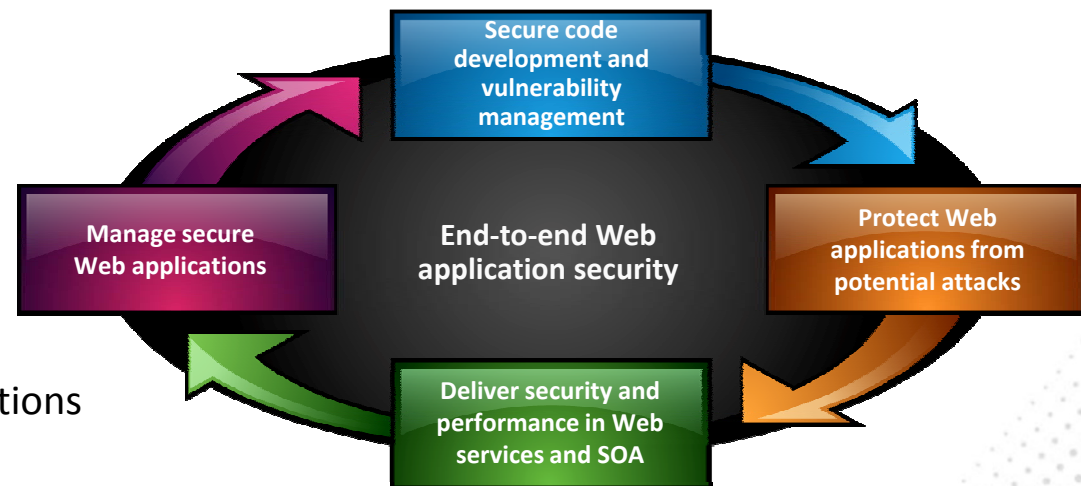- Rational Policy Tester (Web site quality, privacy, and accessibility)

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Solution: IBM Web Application Security for a Smarter Planet

IBM

Secure code development and vulnerability management

- Identify vulnerabilities and malware
- Actionable information to correct the problems

Manage secure Web applications

- Ongoing management and security with a suite of identity and access management solutions

End-to-end Web Application Security

Protect Web applications from potential attacks

- Block attacks that aim to exploit Web application vulnerabilities
- Integrate Web application security with existing network infrastructure

Deliver security and performance in Web services and SOA

- Purpose-built XML and SOA solutions for security and performance

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Solution: IBM Web application security for a smarter planet

- **Best practices: Integrate secure development, vulnerability management, network protection and host protection**

  – Develop secure Web applications

  – Identify vulnerabilities in existing applications

  – Protect Web applications, Web 2.0 and databases at the network and server

  – Dedicated security for Web Services

  – Manage secure access to Web applications

- **Centralized Management**

  – Correlate vulnerabilities vs. protection policies vs. actual security events

  – Centralize application entitlement and SOA security policy management

- **End-to-end Web security from your trusted security advisor**

Secure code development and vulnerability management

Manage secure Web applications

End-to-end Web application security

Protect Web applications from potential attacks

Deliver security and performance in Web services and SOA

Secure code development and vulnerability management – IBM Rational® AppScan®

- **A market leader for Web application vulnerability scanning**
  - A leader in numerous industry "bake offs"

- **Automatically scans Web applications for vulnerabilities**
  - SQL Injection
  - Cross-site Scripting

- **Provides clear recommendations on how to remediate identified vulnerabilities**

- **Scans Web sites for embedded malware**
  - Protect your Web site from distributing the next Conficker to every Web site visitor
  - Powered by the IBM Internet Security Systems™ X-Force® malware prevention system
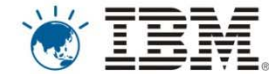

Secure code development and vulnerability management

Protect Web applications from potential attacks

Deliver security and performance in Web services and SOA

Manage secure Web applications

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Enabling the Operationalization of Security Testing

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Address Web Application Vulnerabilities in three ways:

1 Enable Security Specialists

- AppScan® Standard
- AppScan Enterprise

2 Embed Security into Development

- Ounce Labs products
- AppScan Build
- AppScan Tester

3 Outsource Security Testing

- AppScan OnDemand
- AppScan Security Consulting

Control, Monitor, Collaborate and Report Web Application Security Testing
(AppScan Reporting Console)

Secure code development and vulnerability management

Protect Web applications from potential attacks

Deliver security and performance in Web services and SOA

Manage secure Web applications

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Enabling security testing across the Software Development Lifecycle

Rational. AppScan Enterprise / Reporting Console

NEW — Ounce Labs products (code scanning) / AppScan Ent. QuickScan (Web client)

NEW — AppScan Build Ed (scanning agent)

AppScan Tester Ed (scanning agent) (QA clients)

AppScan Enterprise user (Web client) / AppScan Standard Ed (desktop)

NEW — AppScan Express (desktop)

Rational Application Developer / Rational Software Analyzer

Rational ClearCase / Rational BuildForge

Rational Quality Manager

Rational ClearQuest / Defect Management

CODE
Build security testing into the IDE*

BUILD
Automate Security / Compliance testing in the Build Process

QA
Security / compliance testing incorporated into testing and remediation workflows

SECURITY
Security and Compliance Testing, oversight, control, policy, audits

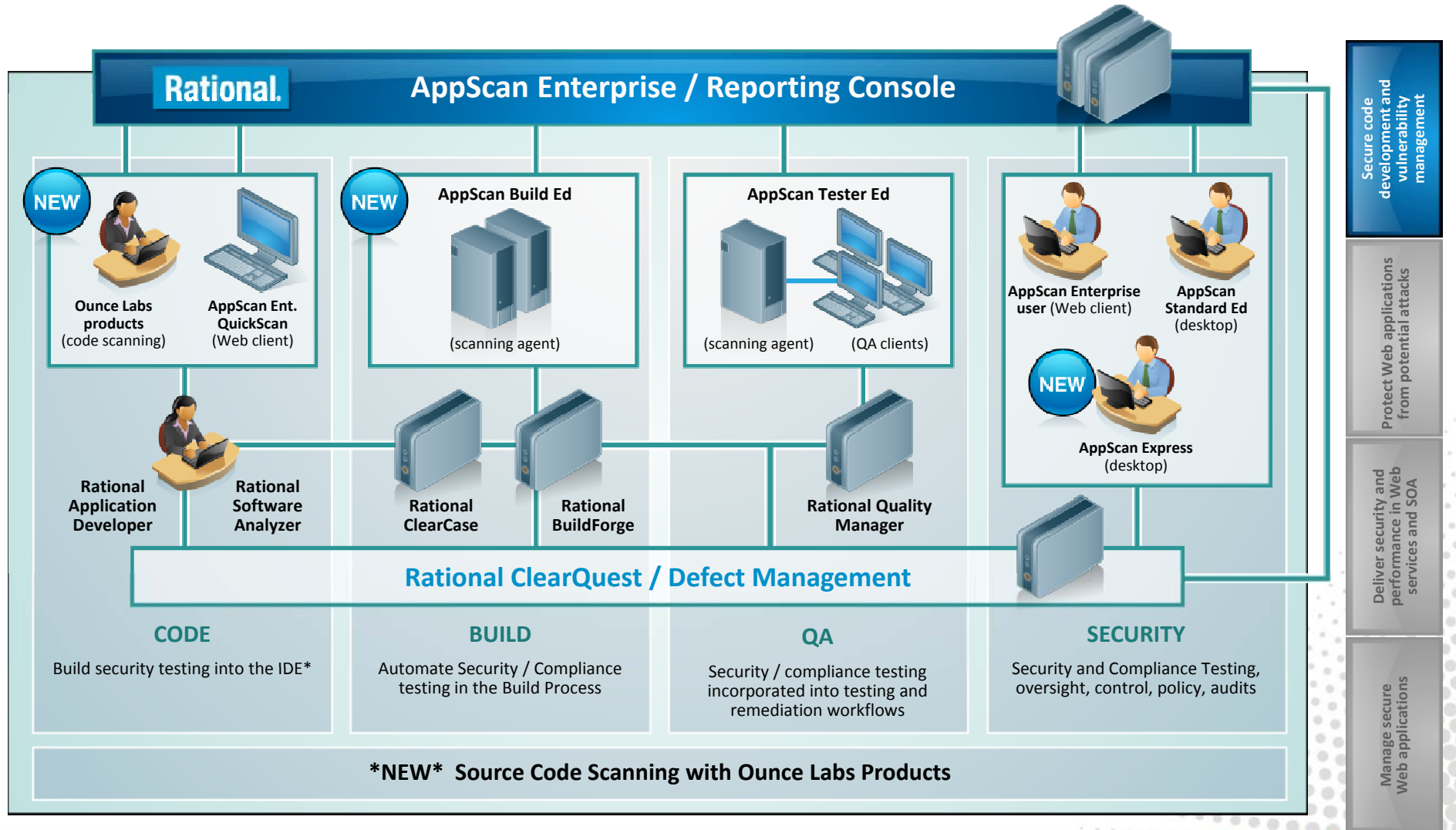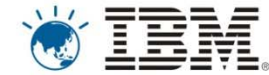***NEW* Source Code Scanning with Ounce Labs Products**

Secure code development and vulnerability management

Protect Web applications from potential attacks

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Manage secure Web applications

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