

# Software for secure wireless e-business



Vaughan Harper  
Tivoli EMEA Security Product Manager

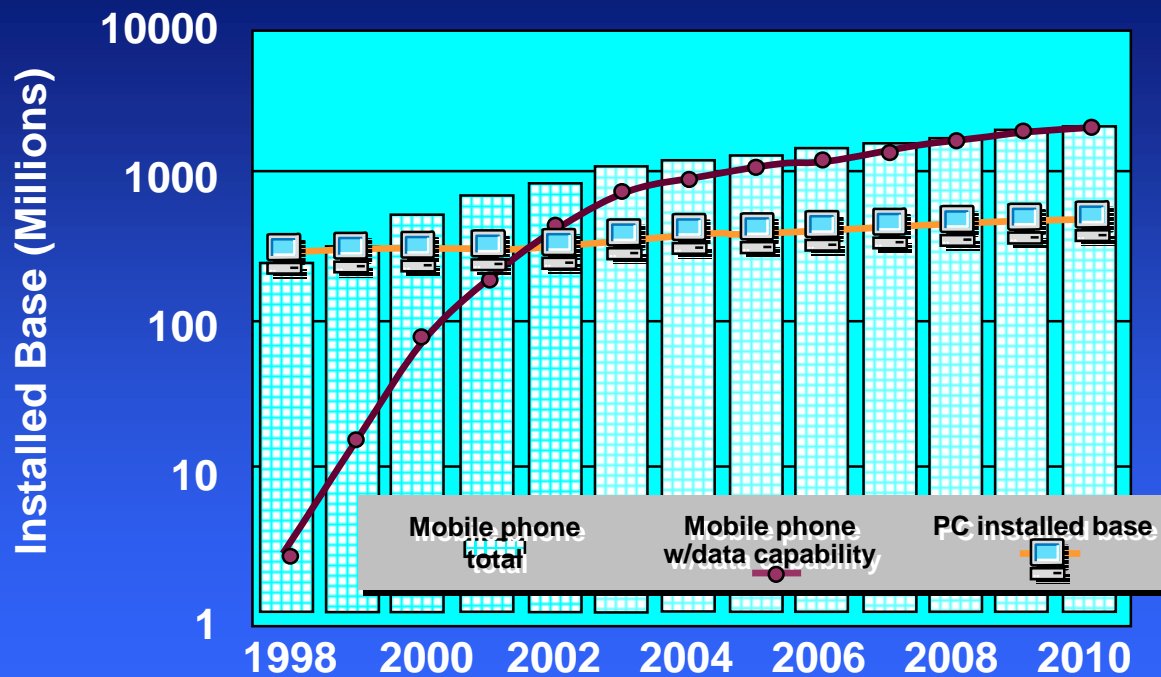
## Software for secure wireless e-business

- ➔ • **Why Wireless e-business?**
- **Approach to Wireless e-business**
- **IBM Products**
- **Case Study**



# Motivation for Wireless Client Support

## *Pervasive Devices Will Become the Dominant Means of Information Access*

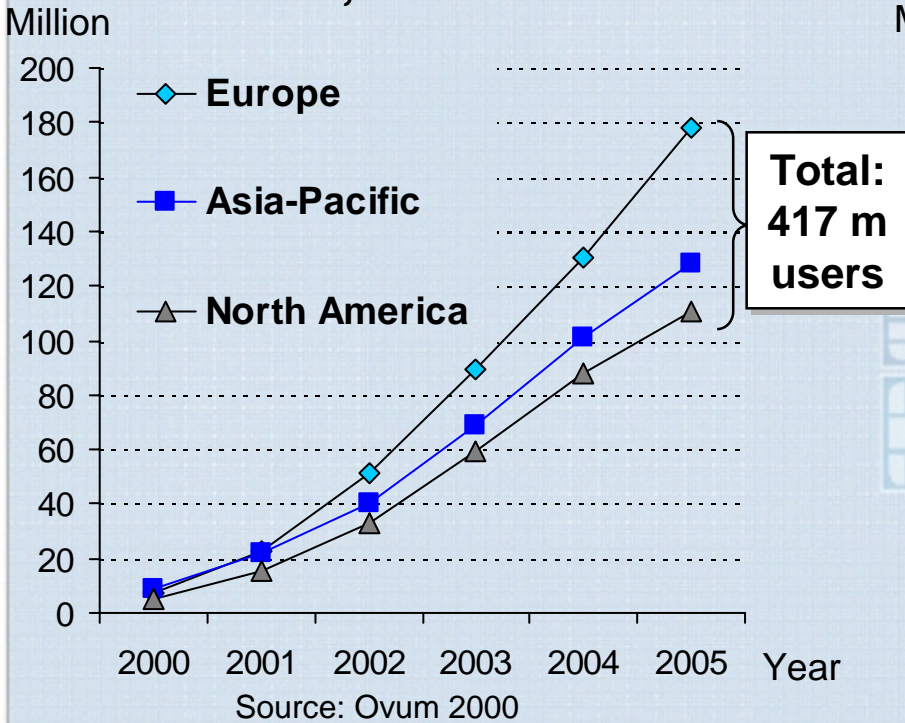


Note: Does not include cars with driver information systems (approximately 8% of 150 million in 2006)

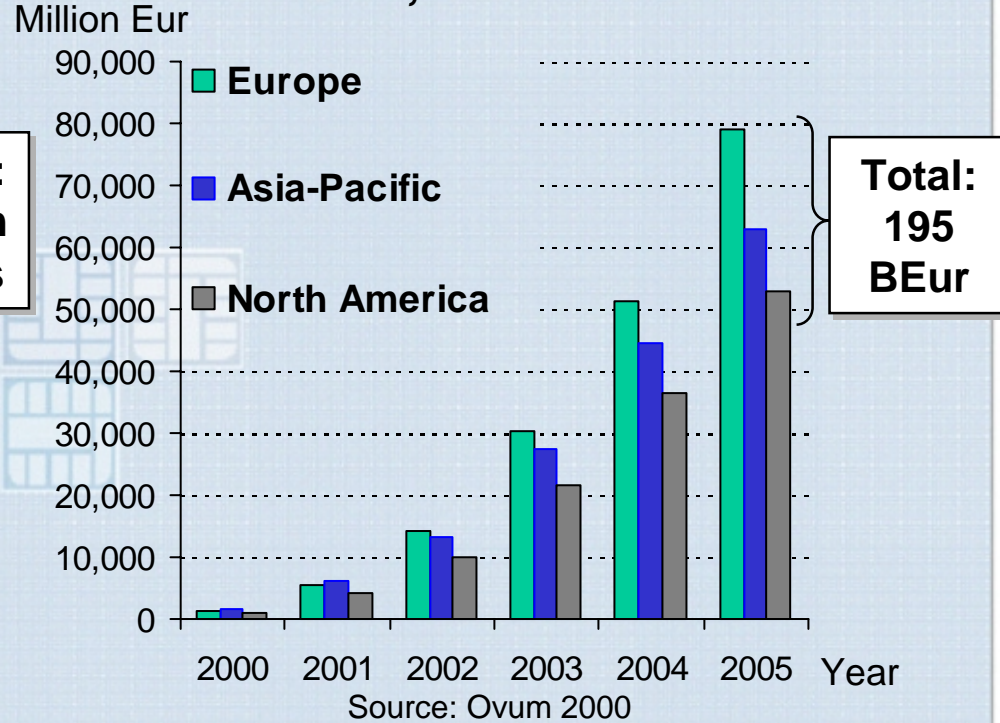
Sources: ResearchPortal.com, Semico, EE Times, Gartner, Reuters, Ericson, . .

# Mobile Commerce Opportunity

**Estimate of mobile commerce users, 2000-2005**



**Estimate of mobile commerce revenue, 2000-2005**



**Europe, Asia-Pacific and North America total over 85 % of the mobile market opportunity.**

## Software for secure wireless e-business



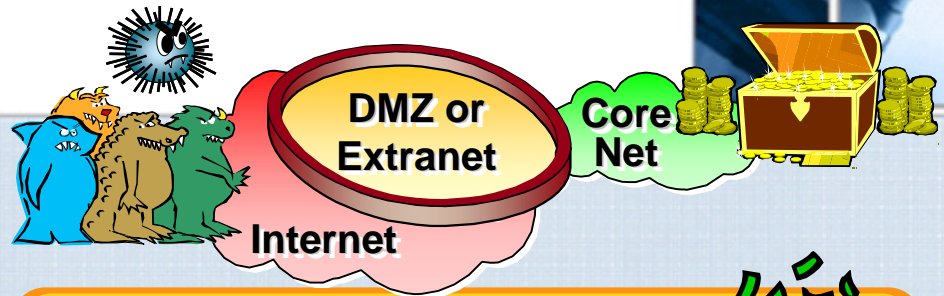
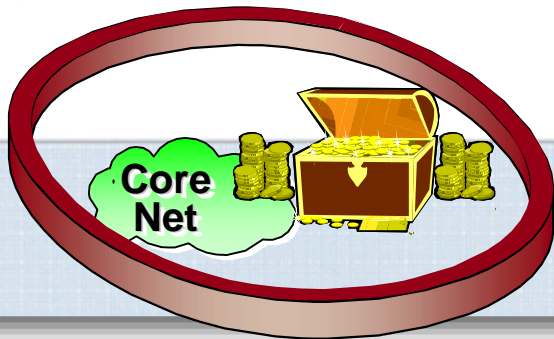
- **Why Wireless e-business?**

- ➔ • **Approach to Wireless e-business**

- **IBM Products**



- **Case Study**



***"They're out to get you!"***

- **Threats**—viruses, hackers (crackers) competitors, insiders, . . .
- **Risks**—Corporate image, public trust, intellectual/financial capital, privacy, litigation, . . .

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***Orientation:***  
***Keep intruders out!***

***"Security as an enabler!"***



- **Policy-driven security**
  - Centralized policy definition:
    - Identify e-business participants
    - Determine their access rights
- **Security tightly linked to:**
  - Enterprise management/directory
  - Risk management
  - e-business resource availability

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***Orientation:***  
***Allow authorized people in!***



## How to make wireless e-business a reality?

- **Security involves balancing costs...**

**It needs to be easily  
implementable**



## Software for secure wireless e-business

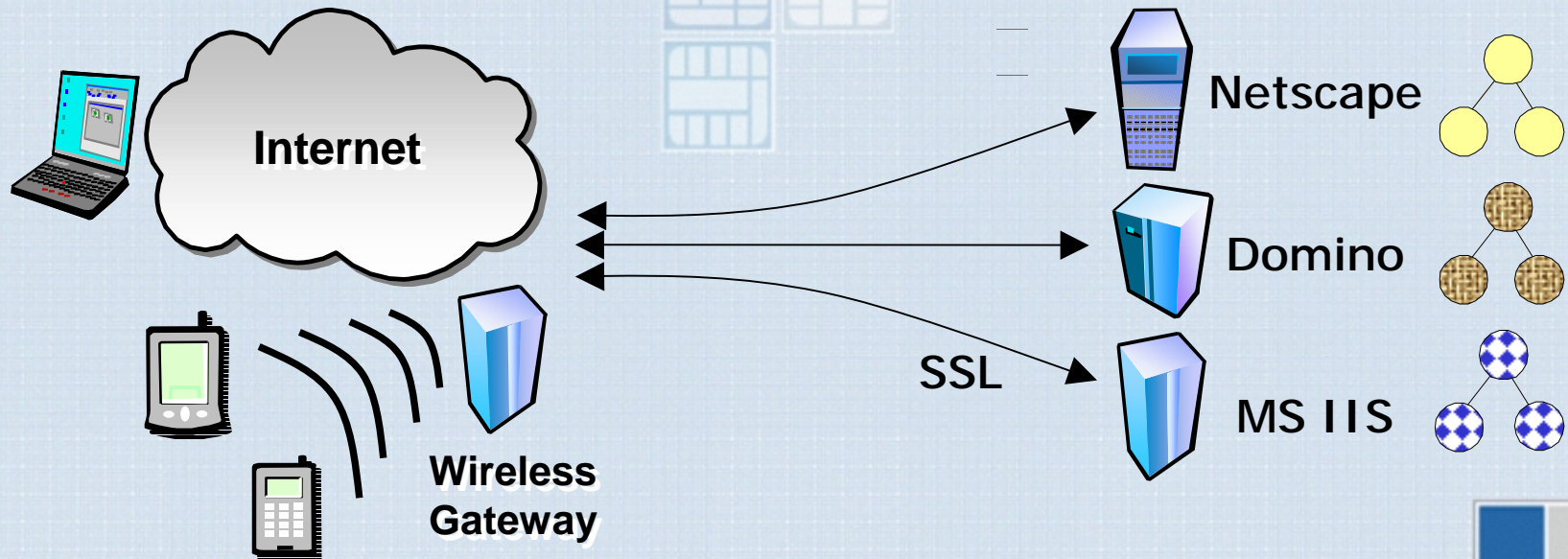
- **Why Wireless e-business?**
- **Approach to Wireless e-business**
- ➔ • **IBM Products**
  - Tivoli Policy Director 3.8
  - Tivoli Risk Manager 3.8
  - IBM WebSphere Everyplace Server R2
- **Case Study**



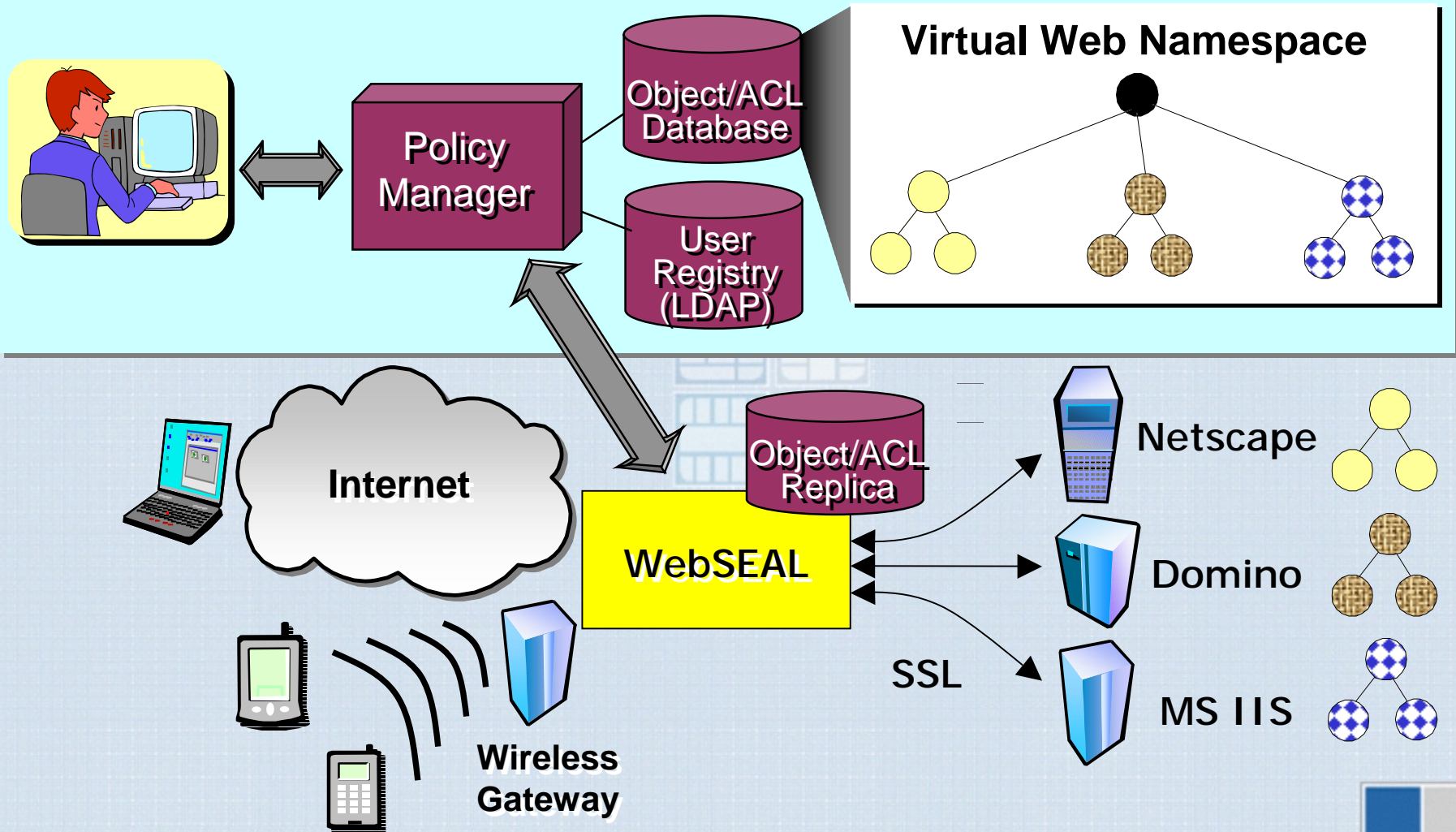
# Tivoli Policy Director



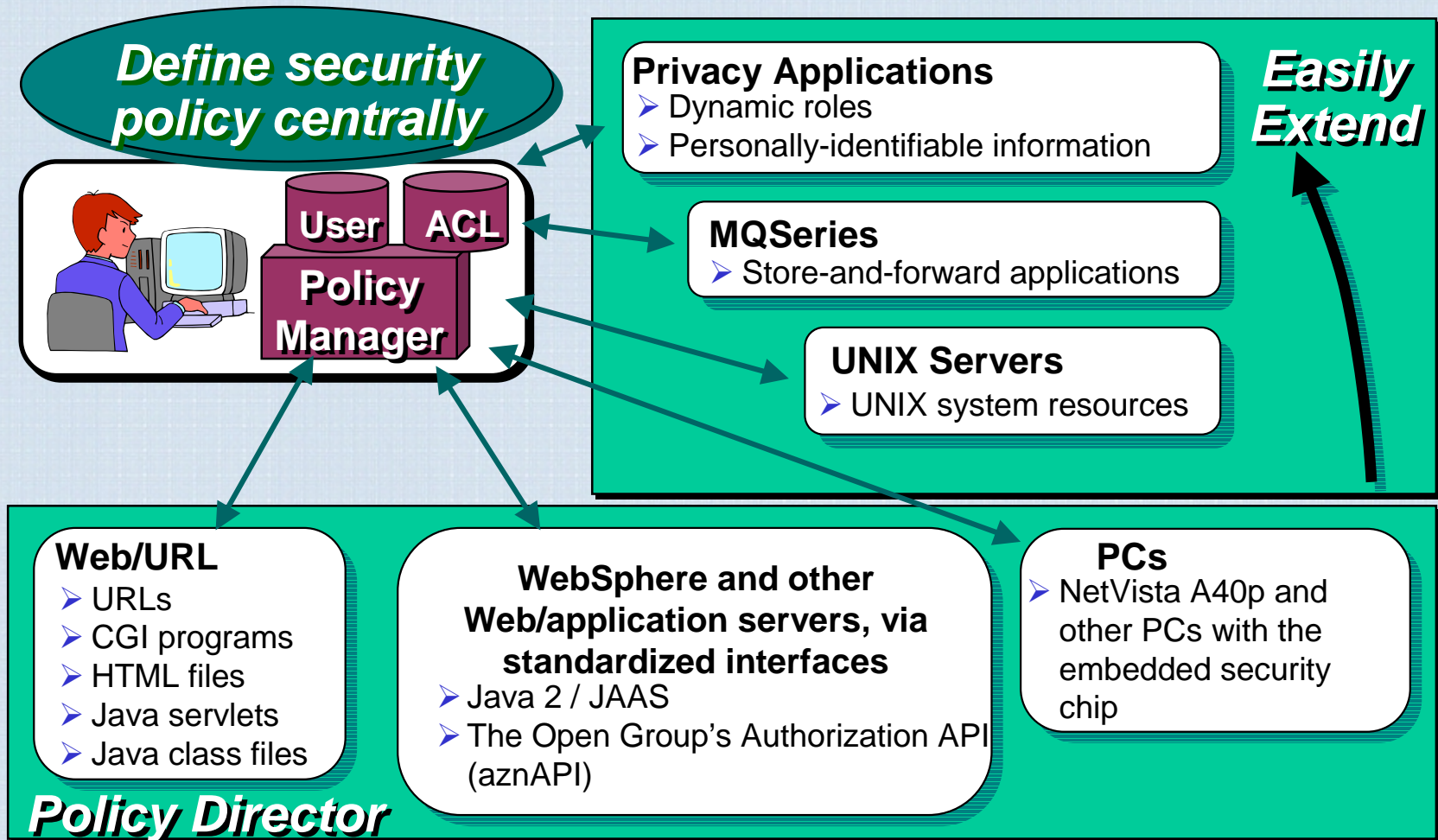
# Policy Director - Web Access Control



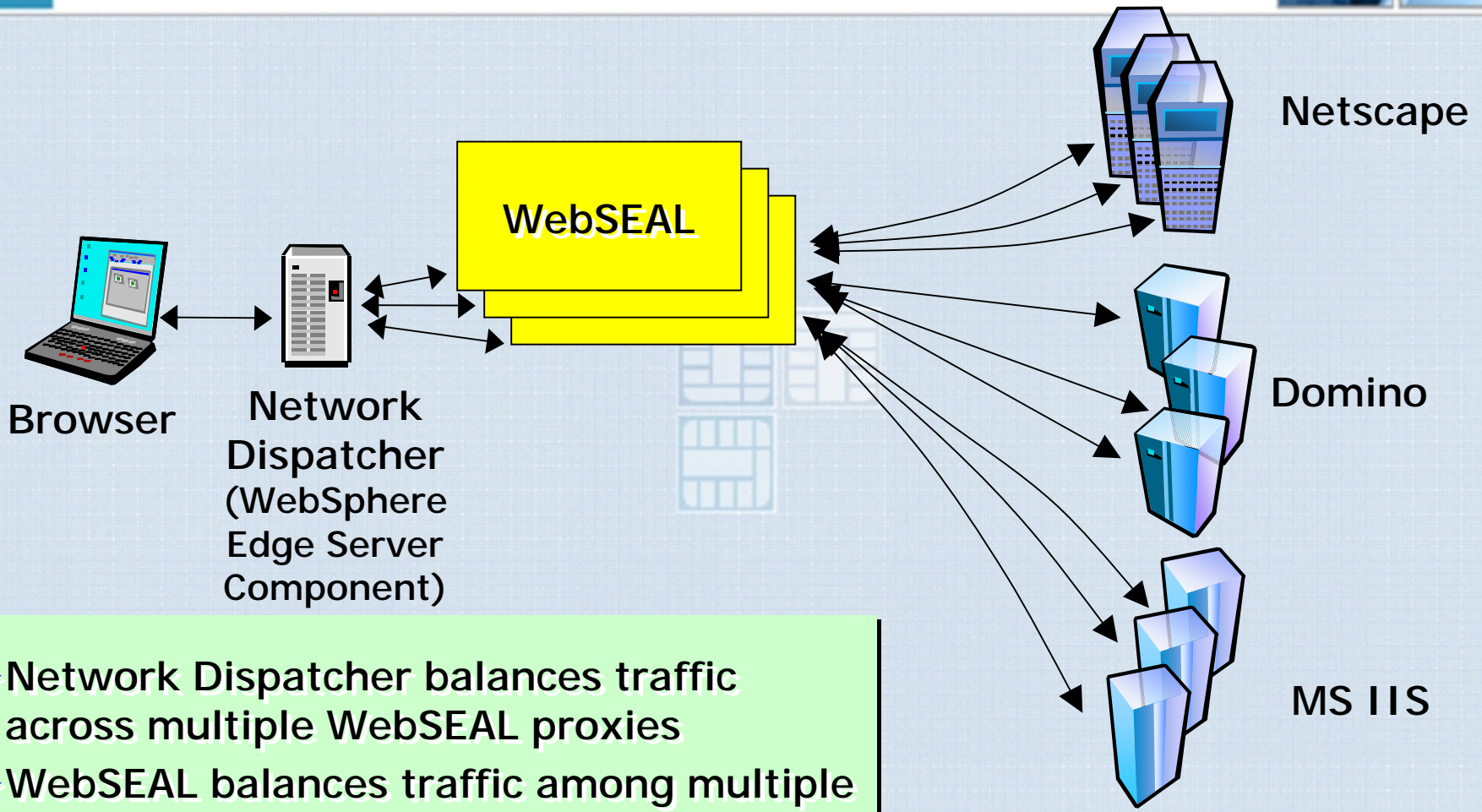
# Policy Director - Web Access Control



# Policy Director - Broad Scope



# WebSEAL and High Availability



- Network Dispatcher balances traffic across multiple WebSEAL proxies
- WebSEAL balances traffic among multiple Web Servers



## What Does Policy Director Do?

- **Maintains a central user registry**
  - Users and groups
  - Authentication information
- **Maintains a model of the Protected Objectspace**
  - Hierarchically organised
- **Defines permitted actions on objects**
  - Uses Access Control List templates
  - These are attached to entries in objectspace
- **Provides an API for making Authorization queries**
  - And provides a number of 'blades' that use it



# Authentication versus Authorization

- **Authentication**

- Who is the user?

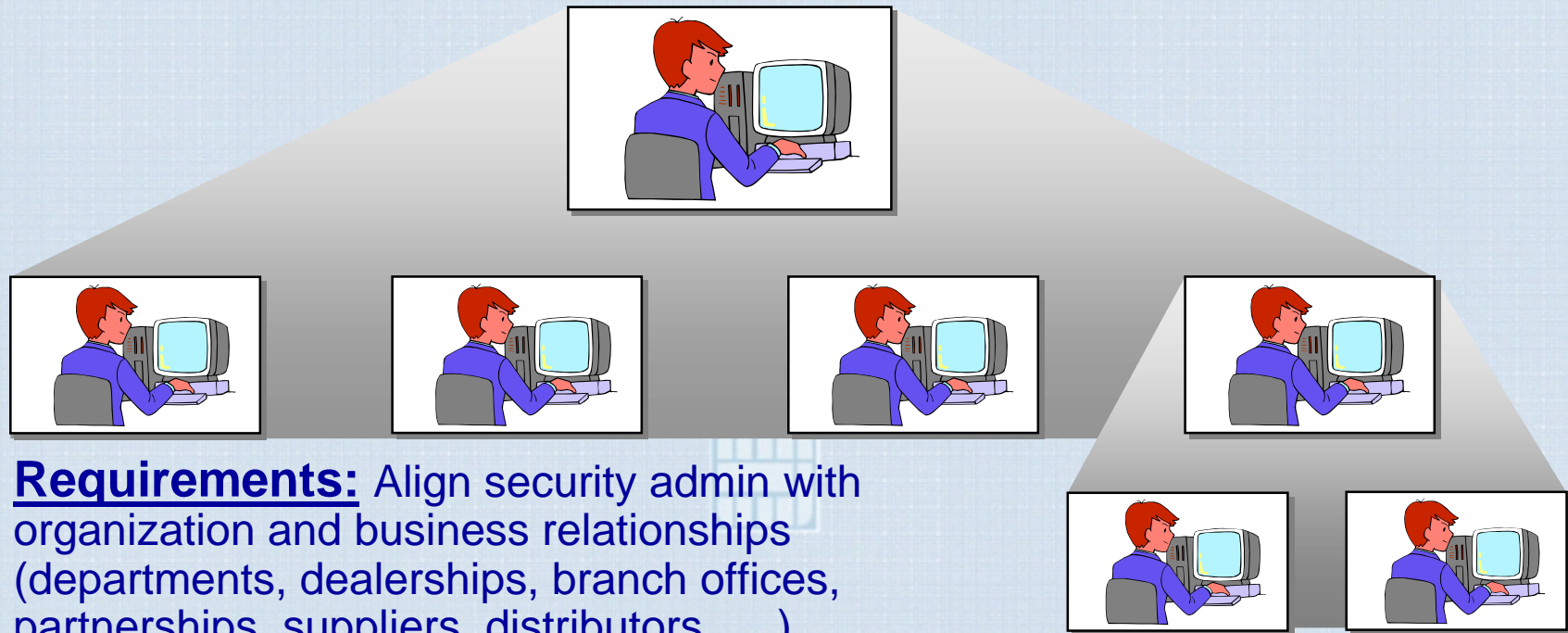


- **Authorization**

- Determining if a given user or entity has permission to perform an action on a protected resource... or “what is that user allowed to do”?



# Delegated Enterprise Administration



**Requirements:** Align security admin with organization and business relationships (departments, dealerships, branch offices, partnerships, suppliers, distributors. . . )

- Multiple levels of delegation
- User administration
- Group and role administration
- Security administration
- Browser-based for ease of deployment/operation





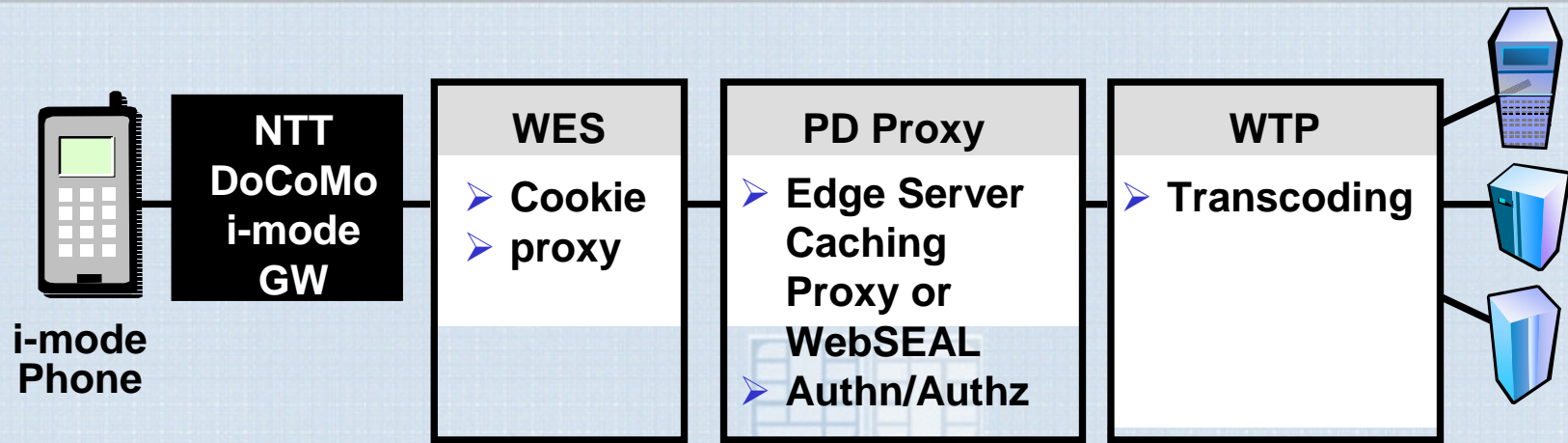


# Policy Director WAP Support

## How Does It Work?

- In WAP scenarios, WebSEAL<sup>1</sup> is dedicated to use in authorizing WAP flows (trusts WAP gateway to have done the authentication)
- A WTLS session is set up between the WAP phone and the WAP gateway (at the MCP or at the Telco)
- WebSEAL<sup>1</sup> uses the WAP gateway for authentication:
  - WML form
  - In the near future: WAP Identification Module (WIM) module for client-side, certificate-based authentication
- WAP gateway sends information to WebSEAL<sup>1</sup> via:
  - HTTP header
  - Cookie
- WebSEAL<sup>1</sup> maps phone's ID into an internal Policy Director identity
- Authorization performed by WebSEAL<sup>1</sup> using Policy Director identity
- The solution should work with any WAP Gateway
  - Nokia and IBM's WebSphere Everyplace Suite (single SSL)
  - Tantau (Multi SSL)

# Policy Director i-mode Support



- i-mode phones work with NTT GW
- Cookie proxy supports i-mode phones that don't handle cookies
- PD proxy can be the Edge Server Caching Proxy or WebSEAL
- WebSphere Transcoding Publisher (WTP) handles Web sites that haven't been designed for i-mode (e.g. compact HTML)



# Benefits of Common Security Services

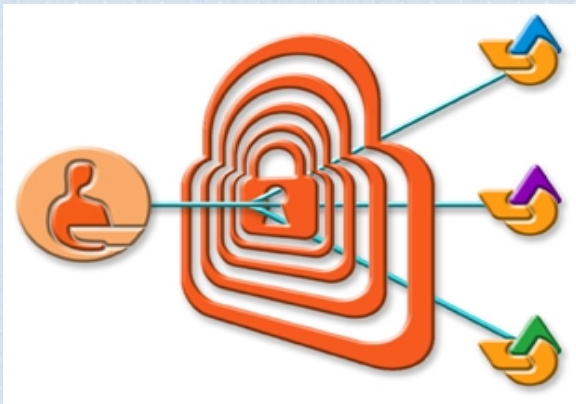
## Old Way



- Security coded into each application
- Update user access policy? Multiple places
- Individual sign-on to each application



## With Policy Director



- Common security services separate from application
- Consistent, delegatable admin
- Single sign-on
- Personalized user experience



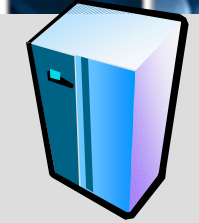


## Tivoli Policy Director - Wireless

- **IBM is delivering the industry's first secure access management software, Tivoli Policy Director, that can deliver a consistent security policy across both WAP and i-mode applications**



# Tivoli Policy Director



## Server Components:

### Platforms

- AIX 4.3.3
- Solaris 7, 8
- Windows NT 4.0, SP6a
- Windows 2000 Advanced Edition
- HP-UX 11.0
- RedHat Linux 7.1 (x86)
  - PD RTE and AuthADK only

### Languages/Translation

English, French, Italian, German, Spanish, Korean, Brazilian Portuguese, Japanese, Simplified Chinese, Traditional Chinese

Single byte and double byte character support.

### Crypto

Single world-wide product - (128-bit)

# Policy Director — Customer Examples

## Secure



- Secure Web portal environment for GM/ supplier applications
- 30,000 suppliers—critical to prevent info access cross-over!



- Quickly moved from pilot to production
- Customized delegated administration
- Interfaces to Microsoft Exchange



**Shell  
Canada**

- Authorization for easyPAY e-business (Pay at the Pump) application
- Other applications—commercial partners and customers check accounts



- Reached 1 million users April, 2001
- 82 applications; 35K logins/day
- Help desk calls down 61% since PD has been in production

## Available

## Scalable



## Policy Director - Customer Examples - Europe

**BRITISH AIRWAYS**



The Reliable Airline **KLM**



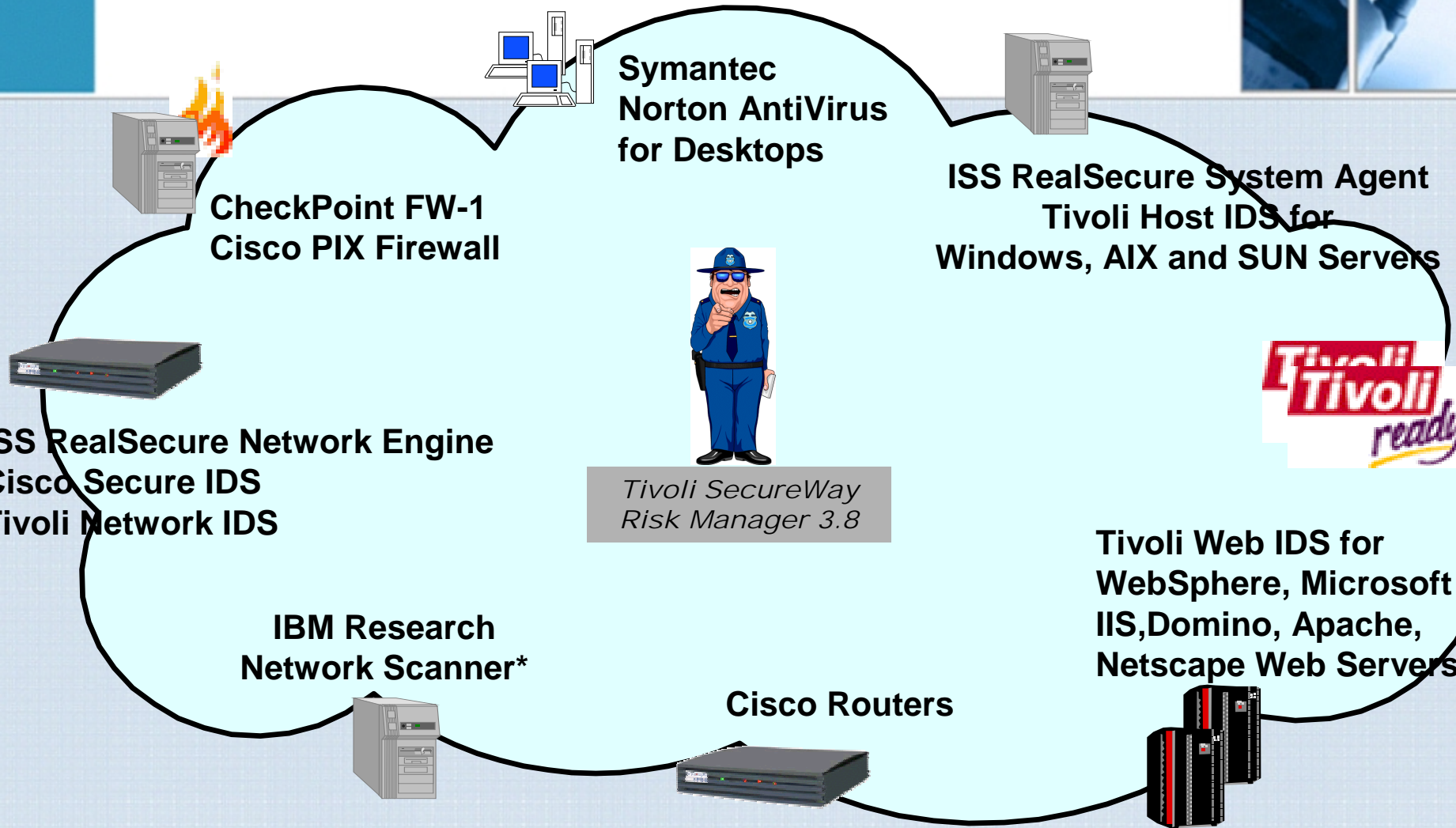




# Tivoli Risk Manager



# Risk Manager



\* Technology Preview

# Tivoli Risk Manager

Tivoli Risk Manager from IBM

File Edit Options Selected Automated Tasks Help

Working Queue



	Time Received	Class	Repeat count	Severity	Status	Hostname	Message
	01-Oct-01 6:36:48 AM	RMV_VirusFound	0	Critical	Open	VIRUS: smithnt1 (smithnt1:N/A => ...	Virus: Nuke/Nukeit.gen Typ...
	01-Oct-01 6:36:48 AM	RMV_VirusFound	0	Critical	Open	VIRUS: jonesnt1 (jonesnt1:N/A => j...	Virus: Nuke/Nukeit.gen Typ...
	01-Oct-01 6:36:48 AM	WSA_WEP_Open	0	Harmless	Open	SECPOLICY: tiv1 (N/A => tiv1)	WSA: State: wep-open Des...
	01-Oct-01 6:36:48 AM	WSA_WEP_Shared	0	Harmless	Open	SECPOLICY: tiv2 (N/A => tiv2)	WSA: State: wep-shared D...
	01-Oct-01 6:36:48 AM	WSA_WEP_Shared	0	Harmless	Open	SECPOLICY: tiv3 (N/A => tiv3)	WSA: State: wep-shared D...
	01-Oct-01 6:36:48 AM	WSA_WEP_Associated	0	Warning	Open	SECPOLICY: tiv4 (N/A => tiv4)	WSA: State: wep-associate...
	01-Oct-01 6:36:48 AM	WSA_Open	0	Critical	Open	SECPOLICY: tiv5 (N/A => tiv5)	WSA: State: open Desc:
	01-Oct-01 6:36:48 AM	WSA_Open_Associated	0	Critical	Open	SECPOLICY: tiv6 (N/A => tiv6)	WSA: State: open-associat...
	01-Oct-01 6:36:48 AM	WSA_Open_Associated	0	Critical	Open	SECPOLICY: tiv7 (N/A => tiv7)	WSA: State: open-associat...

Acknowledge Close Details Information



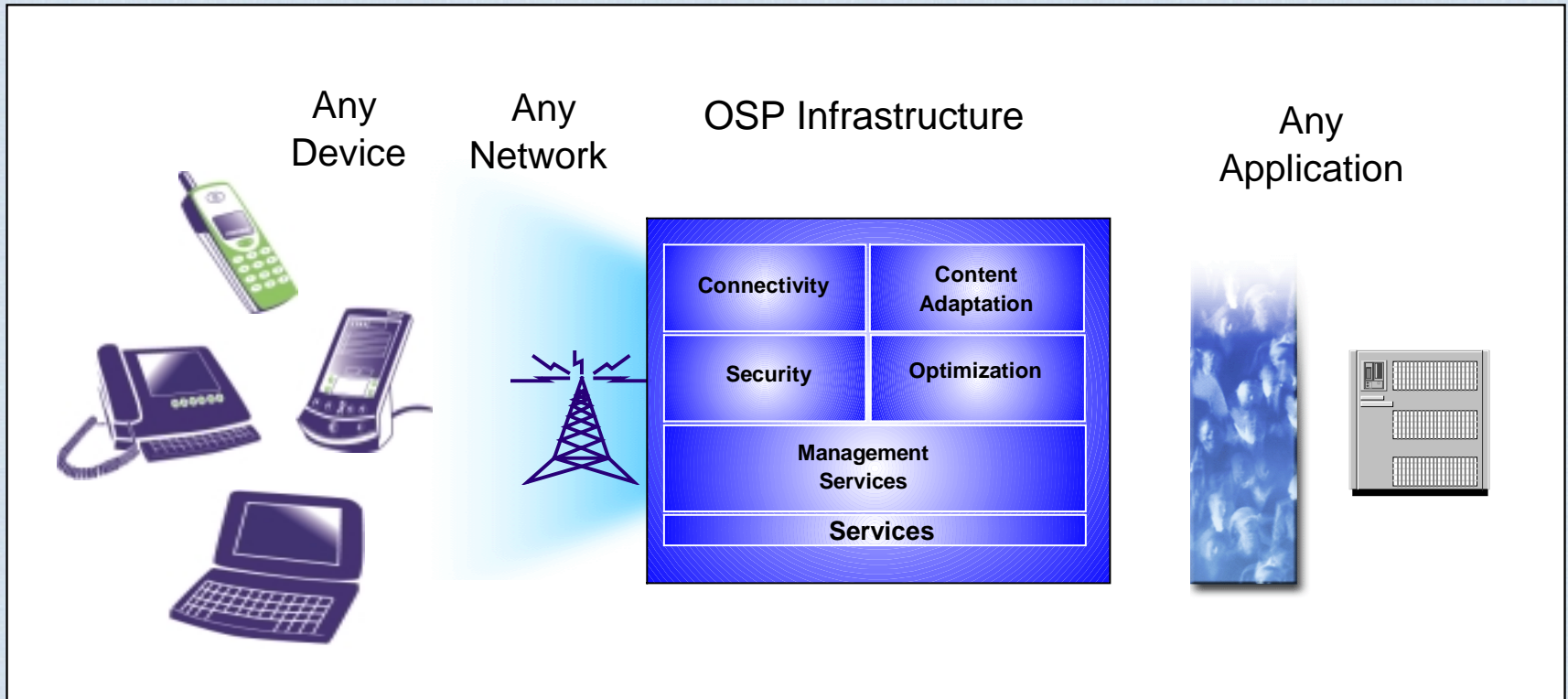
## Tivoli Risk Manager - Wireless

- **New wireless network vulnerability management capabilities have been added to Tivoli Risk Manager for wireless security event correlation and analysis (Available Oct. 10)**
  - **Monitors output of the Wireless Security Auditor**
  - **Sends events to the Tivoli Risk Manager event correlation engine and management console**
  - **Combining these security events with firewalls, intrusion detection systems, servers and other security checkpoints--giving administrators a broad view of e-business security exposures, attacks and vulnerabilities**

# WebSphere Everyplace Server R2



# WebSphere Everyplace Server R2





## WebSphere Everyplace Server R2

- **Everyplace Wireless Gateway**
  - Support for SMS and I-Mode
- **WebSphere Transcoding Publisher**
  - Transforms content into a form that can be presented on a device - XML -> HTML, cHTML, WML ...
- **Tivoli Personalized Services Manager (TPSM)**
  - A comprehensive set of management services including
    - Content personalization, Enrollment, Self care, Customer care, Interfaces to billing systems...
- **WebSphere Edge Server**
  - Highly scalable caching functions on a server to reduce bandwidth costs and improve response times

# WebSphere Everyplace Server and TPSM

- **TPSM user management will manage Policy Director users**
  - Mapping of TPSM user collections (realms) to Policy Director groups
  - Use of ACLs to control groups/realms access to deals (e.g. \$19.95 for 1000 minutes/month) and premium content services (e.g. Doppler Radar service)
  - User self enrollment:
    - User written to TPSM database
    - User written to TPSM/PD LDAP
    - User added to groups
  - Self management via TPSM
  - User's personalized home page can be provided via
    - TPSM API
    - Policy Director aznAPI "entitlements" service
- **WES and Policy Director can share common LDAP user/group information**
- **Edge Server with WebSEAL Lite can be used as an alternative to WebSEAL**
  - WebSEAL Lite:
    - Provides authentication (username/password only) to LDAP
    - Provides aznAPI calls for authorization decisions
    - Provides SSO via LTPA



## Software for secure wireless e-business



- Why Wireless e-business?
- Approach to Wireless e-business
- IBM Products
- ➔ • Case Study





## Wireless/Wired Portal

- Customer is big European telco
- Wanted to provide portal services to both their wired and wireless customers
- Solution using Tivoli Policy Director and WebSphere Everyplace Server

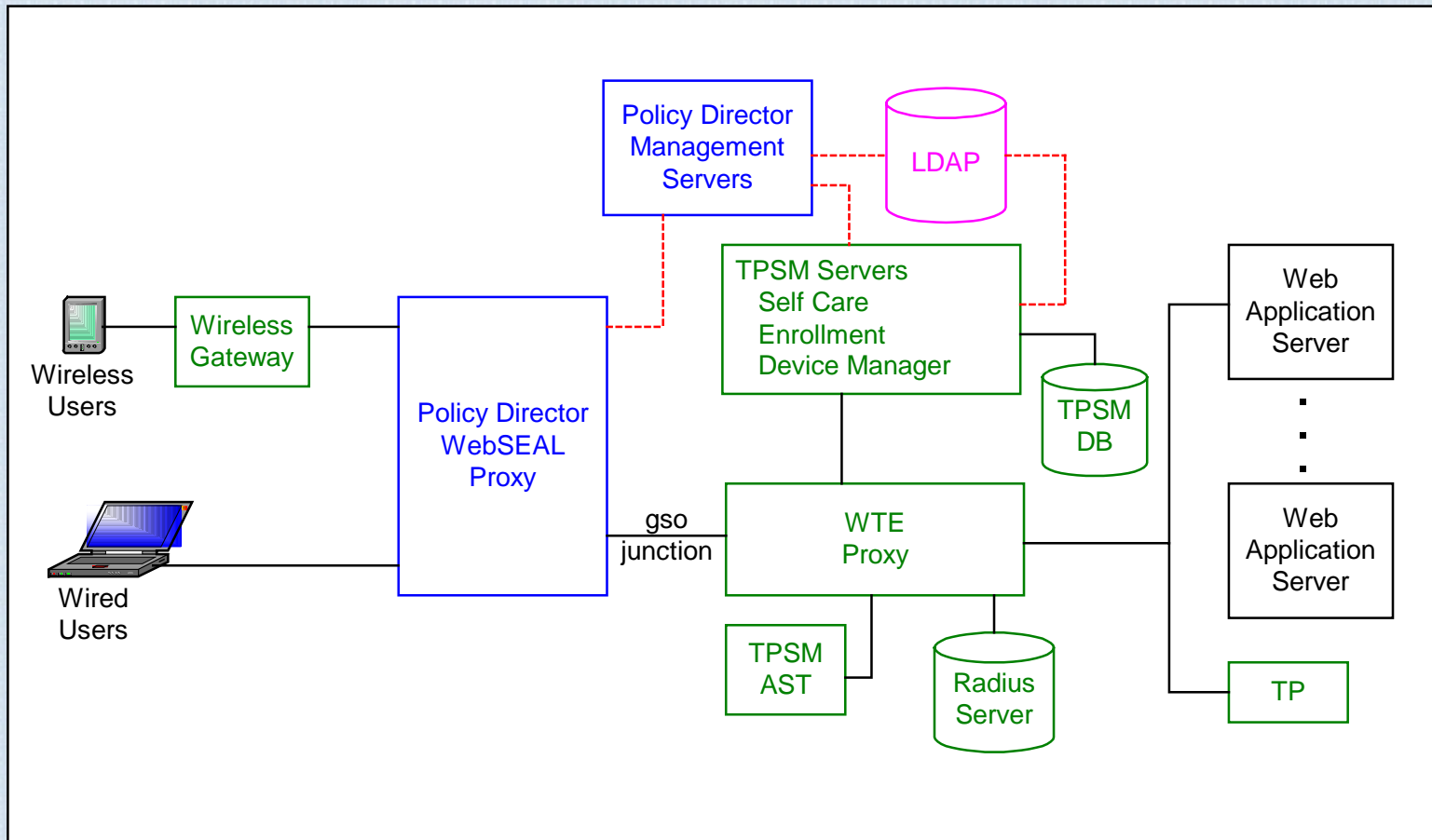




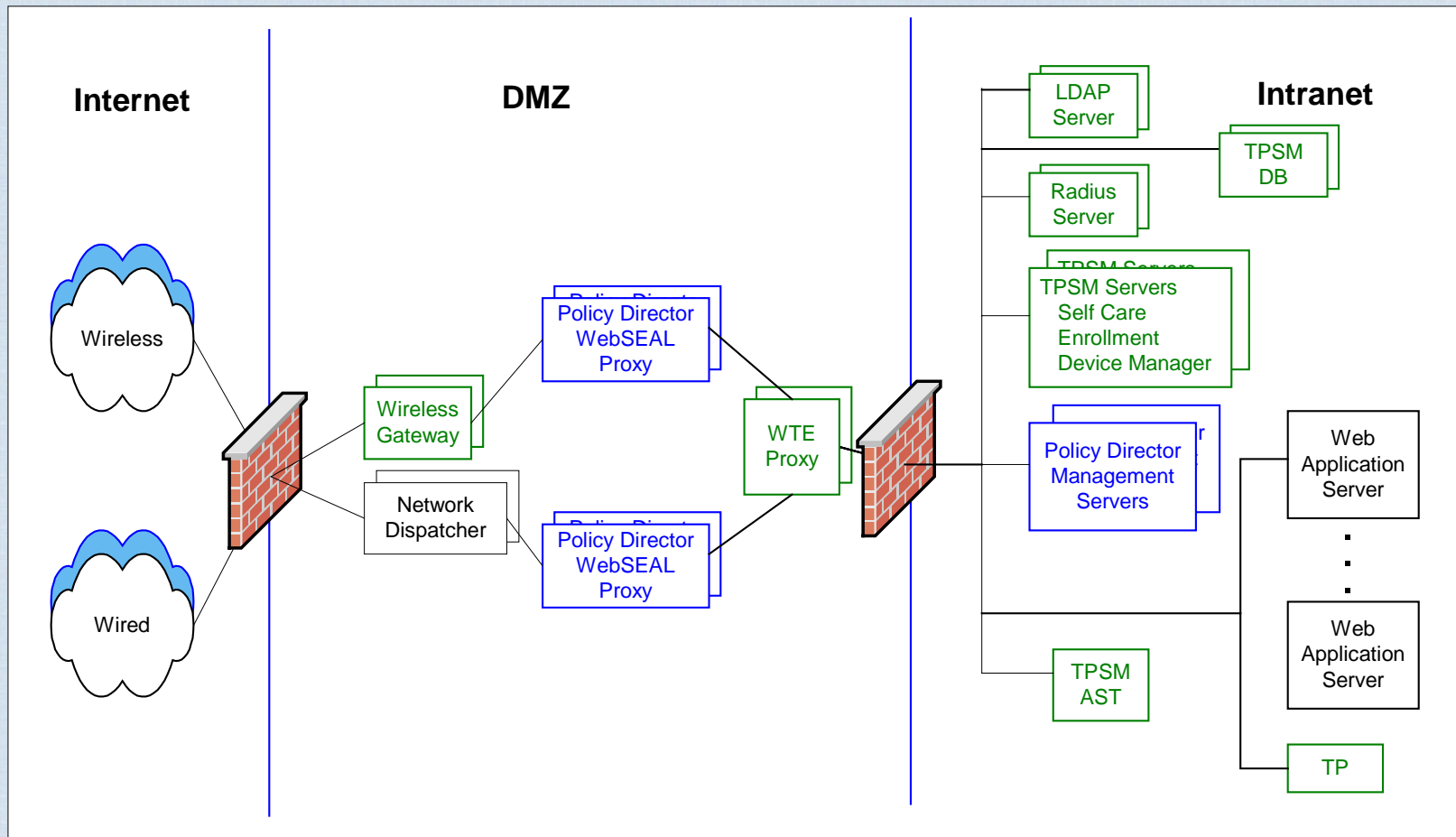
## The Approach...

- **Policy Director**
  - Authentication and Access control for web resources
- **TPSM**
  - Enrollment, self-care and device management
  - Registered users can use the self-care application (update their preferences, password and service selections)
- **Wireless Gateway**
  - Translation from WAP (or other) to TCP/IP
- **Transcoding Publisher**
  - Transforms content as required to device
- **Optimum Combination of IBM Products**

# Logical Architecture



# Physical Architecture



## Recognized Leadership

### *Tivoli • Software Portfolio Wins Information Security Excellence Award*



Reader's Choice Award for Enterprise Security, Authorization & Centralized Administration Presented to Tivoli at InfoSec World

ORLANDO--February 26, 2001--Information Security Magazine today presented Tivoli Systems Inc., an IBM company [NYSE: IBM], with an Information Security Excellence Award for the Tivoli SecureWay software portfolio. Tivoli SecureWay won in the Enterprise Security Suites, Authorization and Centralized Administration category, **beating security software from Axent, Computer Associates, Netegrity, Network Associates, PentaSafe Security Technologies and Securant.**



Market Engineering Leadership Award for Security

F R O S T & S U L L I V A N

Market Engineering Award Recipient

2001



## Conclusion

- **Wireless e-business can be a reality**
- **IBM provides the ideal software/services to make wireless e-business a reality - now!**

