

Information Security

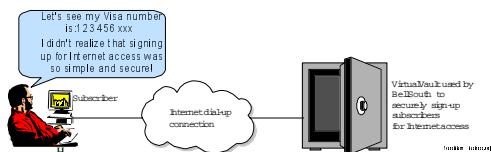
For the Web, intranet, extranet & Internet

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BellSouth uses Security to attract Internet Services customers



- BellSouth attracts customers for its new Internet access services
- ✓ BellSouth needs to securely process subscribers for its Internet access services
 - Subscribers pay for the service with their credit card
- Solution
 - ✓ Praesidium Virtual Vault
- Benefits
 - ✓ BellSouth reduces costs by securely automating the Internet subscription process
 - ✓ Provides subscribers with secure access to real-time account information

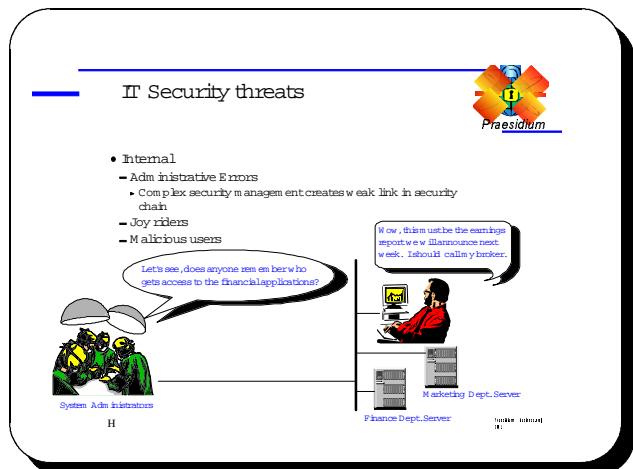
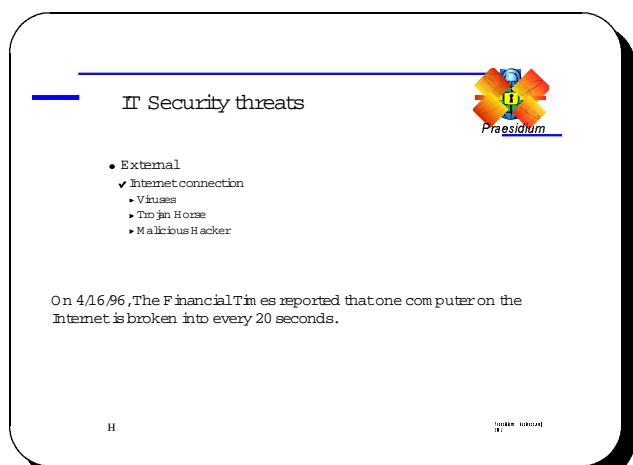
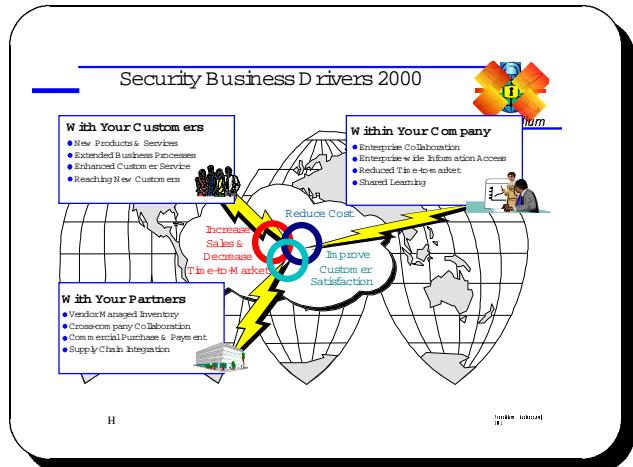


Agenda

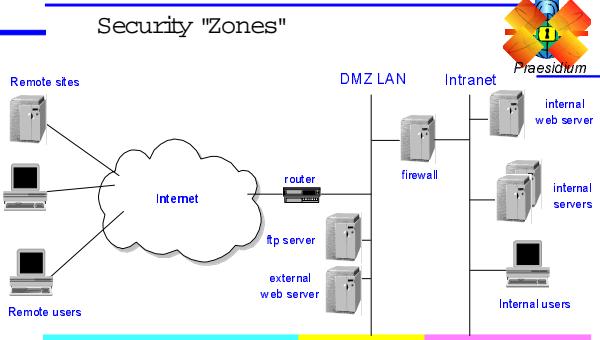


- Security Drivers
- Security Threats
 - ✓ Internet
 - ✓ Intranet
- What is information security?
 - ✓ Security elements to consider
- Extended enterprise
 - ✓ How to secure it.
- Steps to secure your intranet
- Praesidium
- Summary

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Security "Zones"



Praesidium

Across the Internet

On the boundary

Within the Intranet

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Security Threats



Across the Internet

On the boundary

Within the Intranet

- IP spoofing
 - User spoofing
 - Disclosure
 - Modification
 - Insertion
 - Trojan horses
 - DNS spoofing
 - etc.
- 'Getting root'
 - Trojan Horses
 - Attack inside machines
 - Take over services
 - IP spoofing
 - User spoofing
 - Redirecting services
- Access to data
 - User spoofing
 - Disclosure
 - Modification
 - Insertion
 - Trojan Horses
 - Access to services
 - Collision with outside attacker
 - etc....

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The elements of IT security: Authentication



- Who are you?
- Probably the most important security element to consider
- Things to consider
 - ✓ Public Key infrastructure
 - ✓ Remote Access
 - ▶ Firewalls
 - ✓ Token based access (i.e. SmartCards)
 - ✓ Single Sign On
 - ▶ Public Key Infrastructure (PKI) based
 - ▶ Agent based for secure application integration
- Non-repudiation
 - ✓ Non-disputable acknowledgement
 - ✓ Things to consider
 - ▶ PKI (digital signatures)

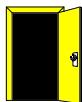


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The Elements of IT Security: Authorization

- Who are you allowed to access?
- Things to consider
 - ✓ Centralized vs distributed authorization
 - ✓ Application Menu control
 - ✓ Access granularity
 - Policy based (access control rules)
 - Date and time
 - Rank (Supervisor, Subordinate)
 - Department (Marketing, Engineering, Finance, etc.)
 - ✓ Web application protection
 - Who gets access to what information in a web application



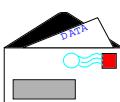
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Topic 1 (cont'd)

The Elements of IT security: Data Protection



- Data integrity
 - ✓ Data is not modified while stored or in transit
- Confidentiality
 - ✓ Data cannot be read by unauthorized people while stored or in transit
- Things to consider
 - ✓ Export issues if you plan to establish global encryption policy
 - ✓ PKI
 - ✓ Emergency access
 - Can you gain access to encrypted information if user is unavailable? (i.e. Key revocation)



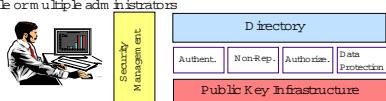
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Topic 1 (cont'd)

Security Management



- Need to manage user's security attributes across elements
 - ✓ Authentication
 - Non Repudiation
 - ✓ Authorization
 - ✓ Data Protection
- Strong security should be easy to manage
 - ✓ Leverage common user directory
 - ✓ Partitionable
 - Centralized or distributed
 - Single or multiple administrators



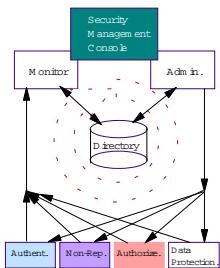
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Topic 1 (cont'd)

Security Policy Management



- Administration
 - ✓ Modify policy as needed
 - ✓ Security elements
- Monitoring
 - ✓ Policy for any problems
 - ✓ Security elements



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Public Key Infrastructure: IT Security's Foundation

- PKI removes electronic anonymity
 - ✓ Provides 'face to face' interaction in cyberspace
 - ✓ Secure ubiquitous networking
 - User has keys to access information that is relevant to him or her
 - ✓ Provides keys to unlock applications
- PKI simplifies Remote Access
 - ✓ User types PIN to gain access to network
 - All challenge response invisible to user
- PKI provides non-repudiation
 - ✓ Digital signatures



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Public Key Infrastructure

- Keys come in pairs (public + private)



- Public key is available to anyone
 - Like a telephone number in a phone book
- Private key is kept secret by the owner

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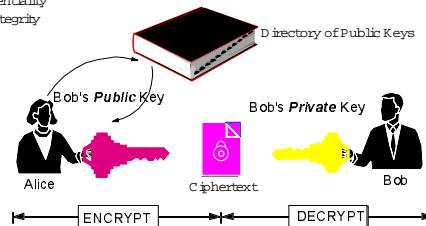
Public-key Encryption



► Alice encrypting a file for Bob

► Encryption provides:

- ✓ Confidentiality
- ✓ Data Integrity



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Topic: [Topic]

Public-key Digital Signature

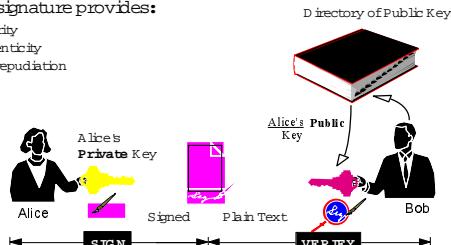


Alice signing a file with part of her private key...

Bob verifying Alice's signature with Alice's public key

Digital signature provides:

- Integrity
- Authenticity
- Non-repudiation



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Steps to secure your enterprise



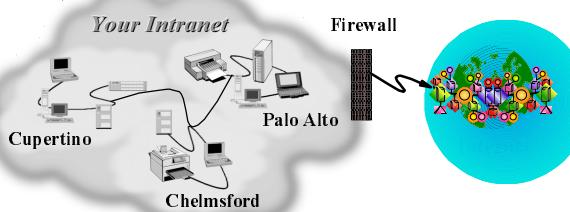
- Risk Assessment
 - ✓ Determine existing weaknesses
 - ✓ Determine the level of risk you are willing to assume
- Determine what information you want to protect
- Know your business drivers
 - ✓ Electronic Commerce
 - ✓ Intranet re-engineering-extended enterprise
- Create and set a security policy based on business drivers
- Use a competent vendor to help you secure your enterprise
- ✓ Right products
- ✓ Global service and support



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Today's multi-platform Internet & intranet environment



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Extended Enterprise Case Study

- Need
 - ✓ Two or more companies need to collaborate on a new product
 - Must share information across organizations
 - Must control who gets access to what information and devices
 - Need to know who's who within the team
 - ✓ Fill orders on-line
 - Suppliers
 - Customers



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Summary



- Security drivers
 - ✓ Electronic Commerce
 - ✓ Extended enterprise
 - ✓ Business re-engineering
 - Intranet web applications
- How much security do you need?
 - ✓ Risk Assessment
 - ✓ Security Policy derivation
- Why HP?
 - ✓ Praesidium :VirtualVault, SSO ,Auth..Server, ICF , ImagineCard
 - ✓ Partners
 - ✓ Security Integration services
 - PSO
 - System Integrator Partners

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Securing the Extended Enterprise

- Authentication (using PKI)
 - ✓ Authenticate users to applications, other users, and devices
 - ✓ Non Repudiation
 - Digital signature for non-disputable acknowledgement
- Authorization
 - ✓ Centrally protect applications
 - Control access to team web pages
 - Different team members require different access privileges (i.e. engineering, marketing, management)
 - Consistent application security across team intranet boundary
- Data Protection
 - ✓ Encryption
 - Securely transmit data across the intranet
 - Securely store data on the intranet



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Praesidium Secures the Extended Enterprise



- Authentication
 - ✓ Praesidium Security Service
 - ✓ Praesidium ImagineCard
 - ✓ Praesidium Single Sign On
 - PKI based for robust authentication
 - Agent based for secure communication with application
 - ✓ CheckPoint, Raptor firewalls
- Authorization
 - ✓ Praesidium Authorization Server
 - Centrally controls access to web applications
 - Centralized rules based authorization
 - PKI aware
- Secure Internet Transactions
 - ✓ Praesidium ImagineCard
 - ✓ Praesidium VirtualVault (secure web server)

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Praesidium Secures the Extended Enterprise



- Data Protection
 - ✓ International Cryptography Framework
 - Exportable encryption framework
 - ✓ Cryptographic module
- Non Repudiation
 - ✓ Praesidium ImagineCard
 - ✓ PKI
- Security Services
 - ✓ PSC Security Consulting
 - ✓ System Integrators

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