

A Layered Security Approach to Enable...

Consumers



Enterprises



Governments



Corporate Overview

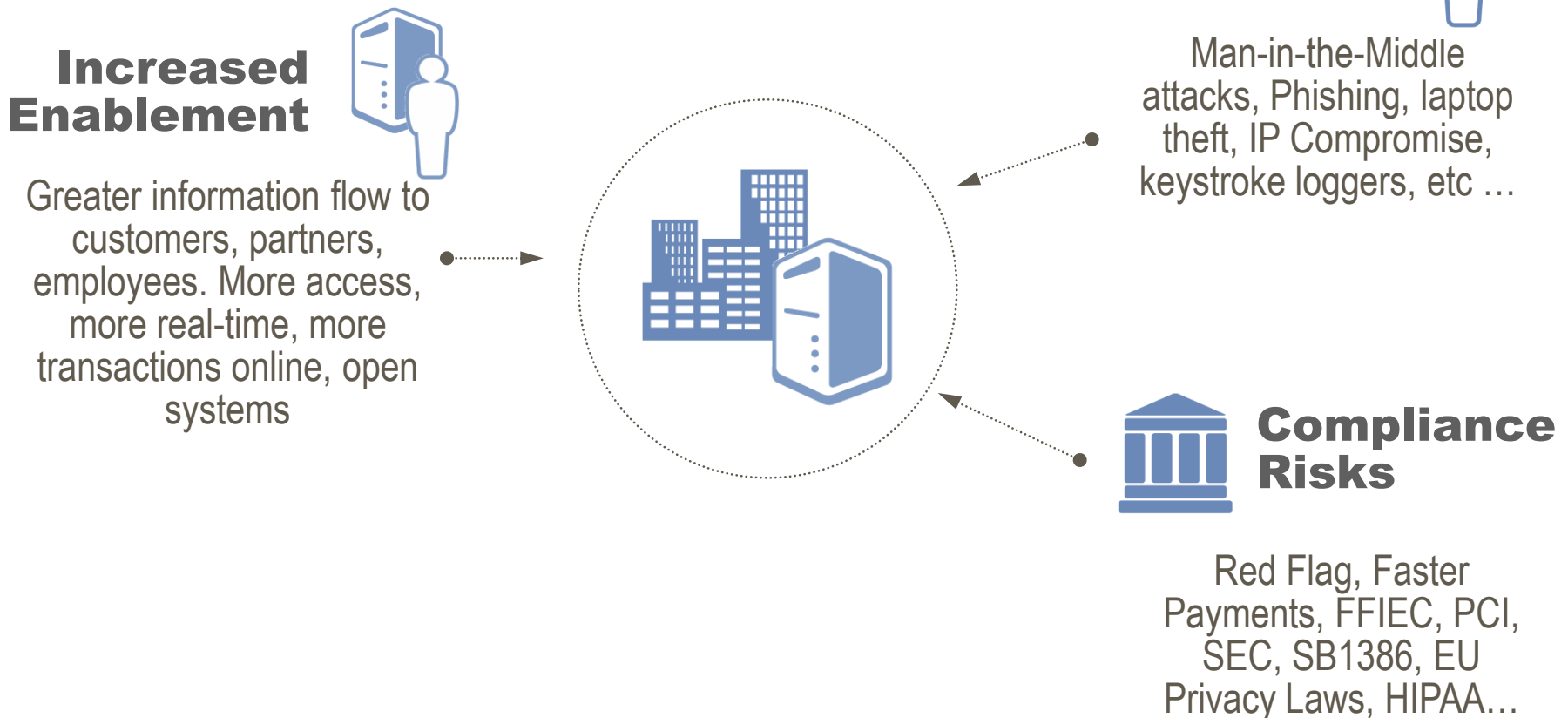
Name: Ernie Tarbox
Entrust, Inc.

Entrust is a World Leader in Identity Management and Security Software



- Founded in 1994, publicly-listed in 1998 (NASDAQ: ENTU)
- Best-in-class technology, service and support – industry pioneer
- Over 1700 customers in 50 countries – global reach
- Geographic presence: U.S., Canada, UK, China, Germany, India and Japan
- 460 employees and 110+ patents
- 2007 Revenue: ~\$100.0 million

Balancing Enablement and Risks



Securing Digital Identities and Information...

schufa

ACXION[®]



Land Registry
Cymraeg



THE DOCUMENT COMPANY
XEROX[®]

usbank[®]
Five Star Service Guaranteed

citi[®]



 **Bank of New Zealand**

 **DIGITAL INSIGHT**[®]
an Intuit[®] company

CREDIT SUISSE



**Authentication &
Transaction Monitoring
Platform**



**Information
Protection
Platform**



**Public Key
Platform**

Known by the Customers We Keep



17 of top 22 Global
e-Governments

Over 60
Governments
Globally

Over 60 Depts. And
Agencies in US
Federal Govt



7 of top 10 Global
Commercial Savings
Banks

8 of top 10 Global
Telecom Companies



7 of top 10 Global
Pharmaceuticals

8 of top 10 Global
Aerospace and
Defence

4 of top 5 Global
Petroleum

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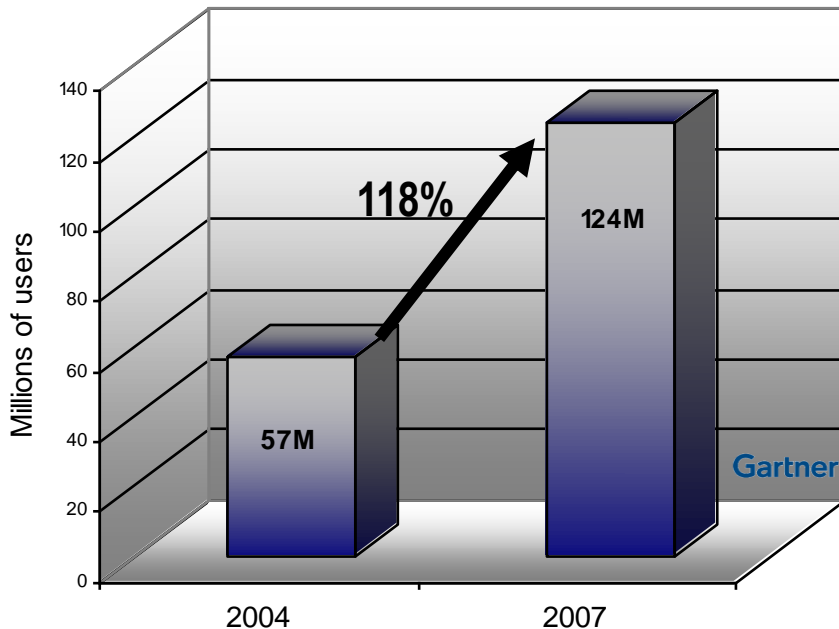
Layered Consumer Security

Consumer Security Market Dynamics

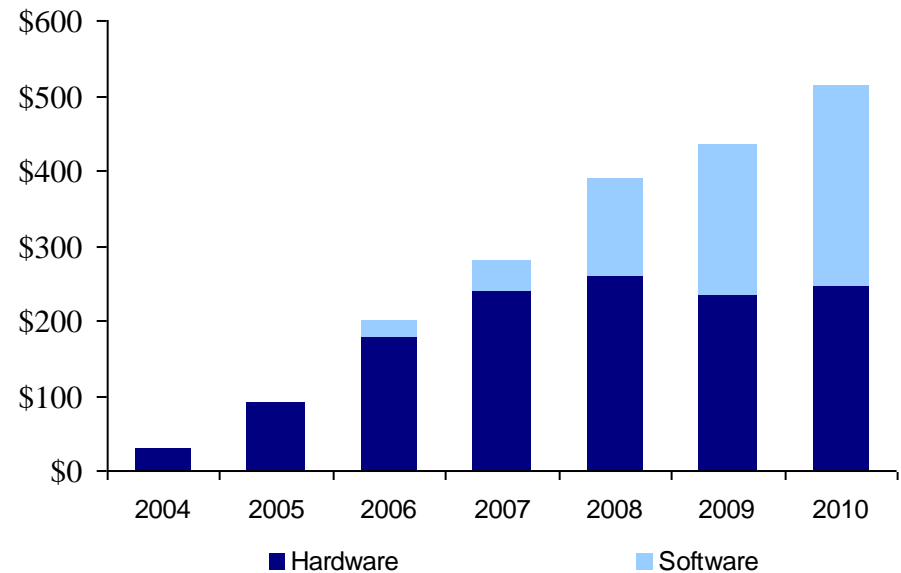
\$3.2 billion was lost to phishing in 2007 ... 3.6 million adults lost money to phishing attacks in...2007...compared to the 2.3 million the year before that.

Source: Gartner, Dec/07 as below/left

Growth in # of adults receiving phishing emails



Consumer Authentication Market



Source: "Phishing Attacks Escalate, Morph and Cause Considerable Damage" Avivah Litan, Gartner Research, December 13, 2007

Morgan Keegan/UBS, Jul 06

Over 250 Financial Institutions Globally turn to Entrust ...

schufa

 **Scotiabank**

 **citi**[®]

 open solutions

 **RBC Financial Group**

 **BNP PARIBAS**

Deutsche Bank 

 **usbank**
Five Star Service Guaranteed

LIVERPOOL VICTORIA

JPMorgan 

 **ABN-AMRO**

 **Zürcher Kantonalbank**

 **Lloyds TSB**

 **SWIFT**

 **Bank of New Zealand**

 **Fidelity**
INVESTMENTS

 **Royal London**

Capital One

 **HBOS plc**

 **DIGITAL INSIGHT**[®]
an Intuit[®] company

NOMURA

 **Schroders**

 **RBS**
The Royal Bank of Scotland Make it happen

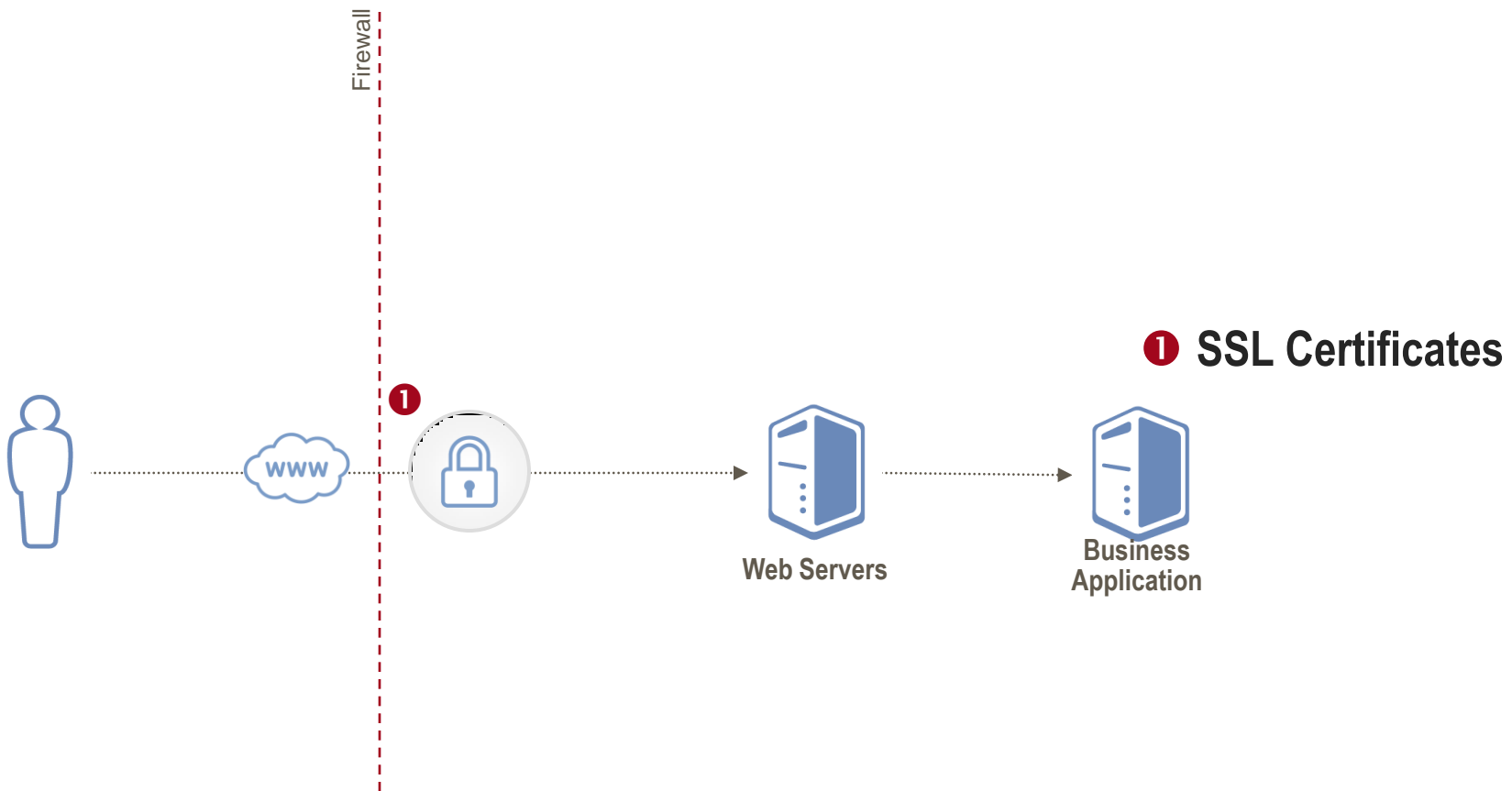
Prudential Financial
Growing and Protecting Your Wealth[®]

 **Nationale Bank**
VAN BELGIE
Eurosysteem

 **Santander**

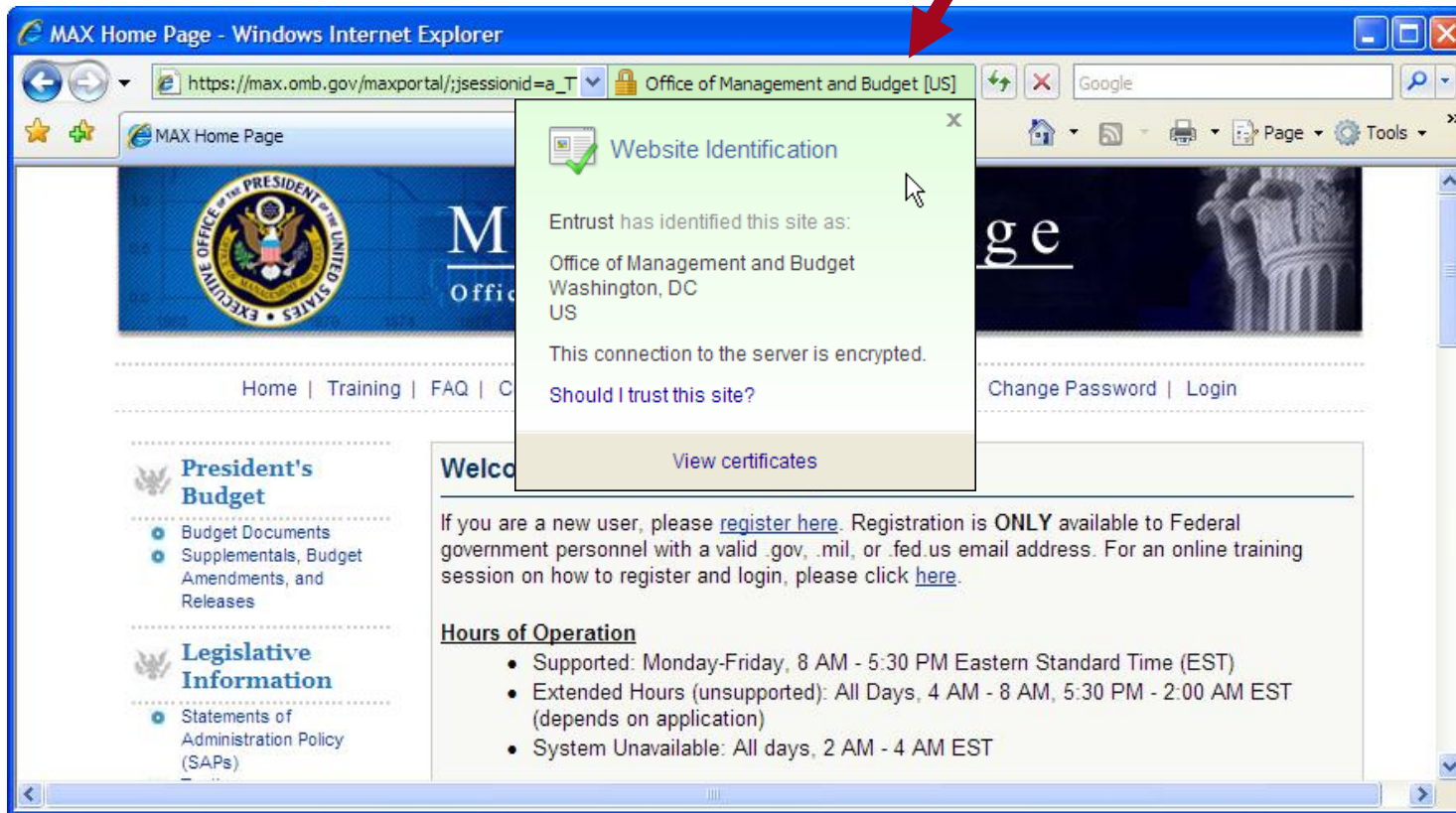
CREDIT SUISSE 

Layered Consumer Security

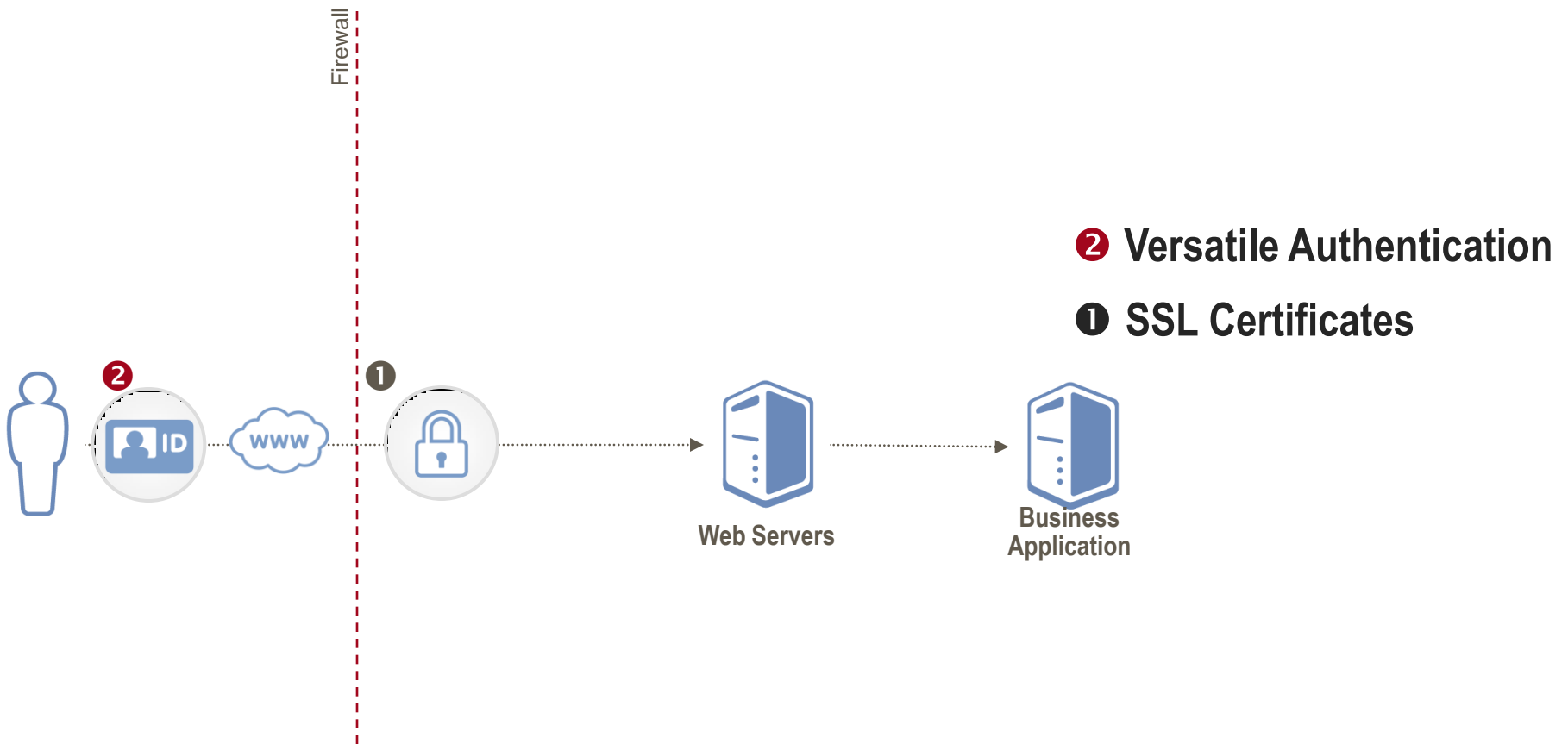


EV SSL Certificates from Entrust

A new defense against phishing



Layered Consumer Security




Entrust[®] IdentityGuard


Versatile Authentication Platform

- Transparent authentication for minimal user impact
- Stronger interactive authentication capabilities
- Second Factor Authentication options for high risk





Username: jsmith
Password: *****

Uname + Pwd


IP: 216.191.253.108

IP Geo-location


Machine


Grid


Out-of-Band


Your Message Here...


Mutual Auth


Age?
Pets Name?

Knowledge

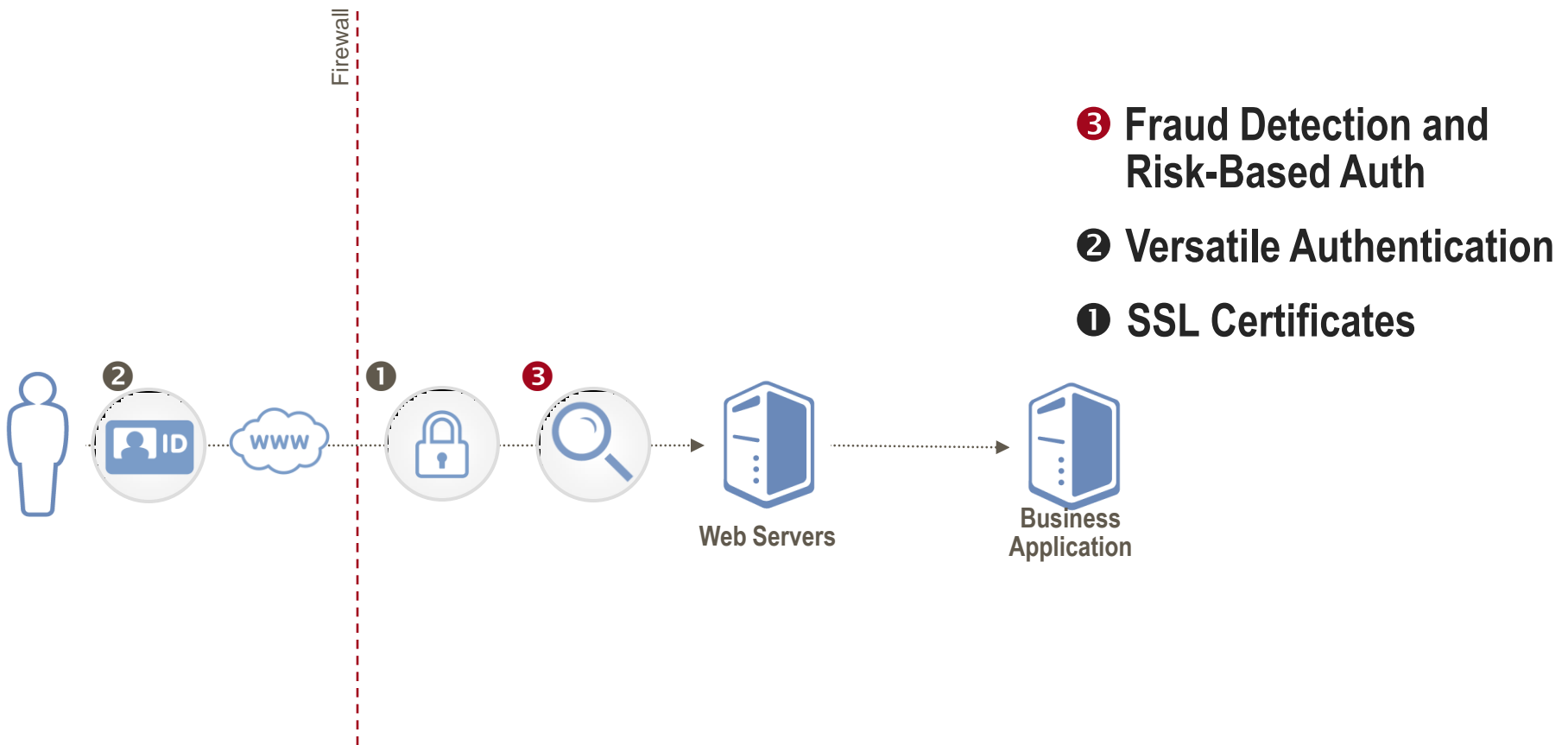
Number	Passcode
00001	A3UDST23
00002	75GRKYFZ
00003	HSDJ97DC
00004	GHG15R4E

Scratch Pad


OTP Tokens

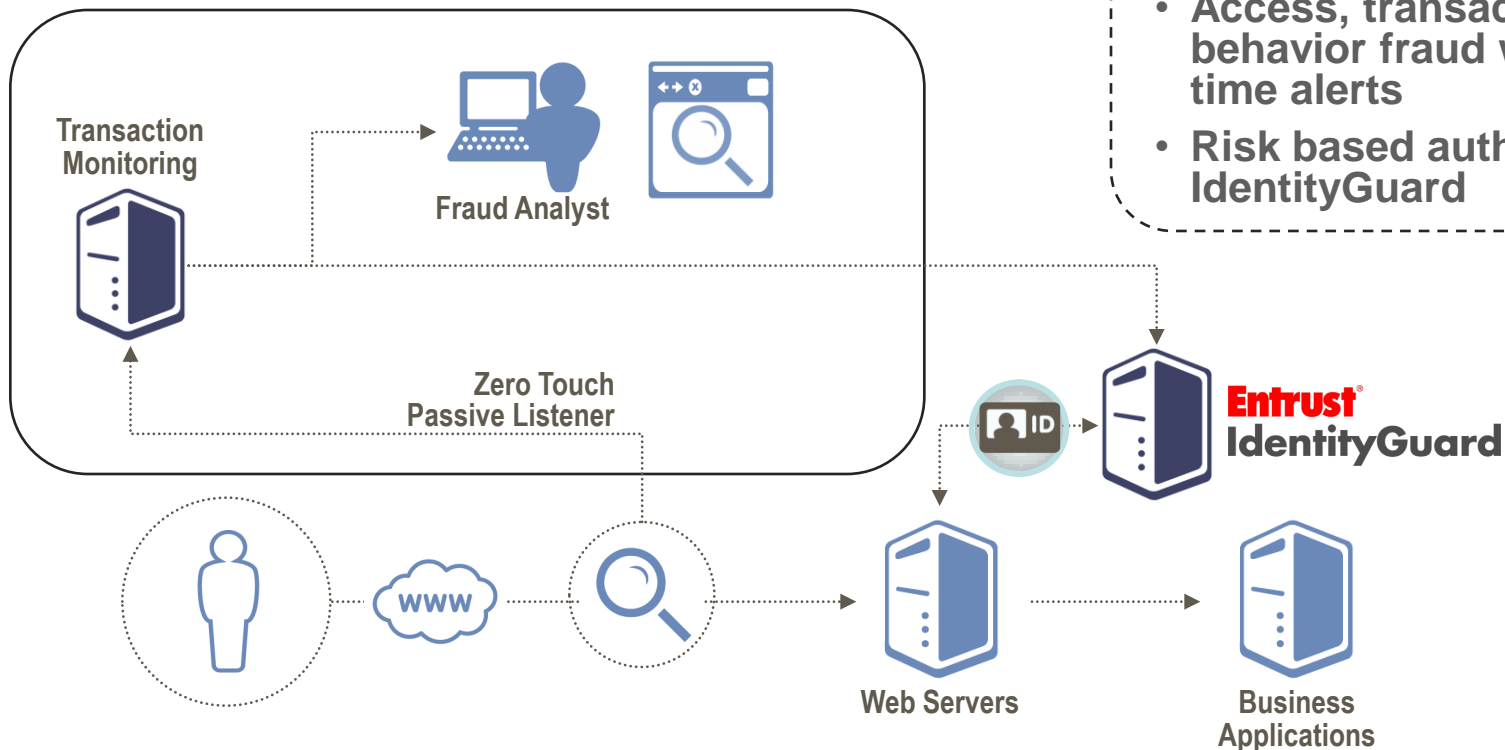

Digital Certificate

Layered Consumer Security

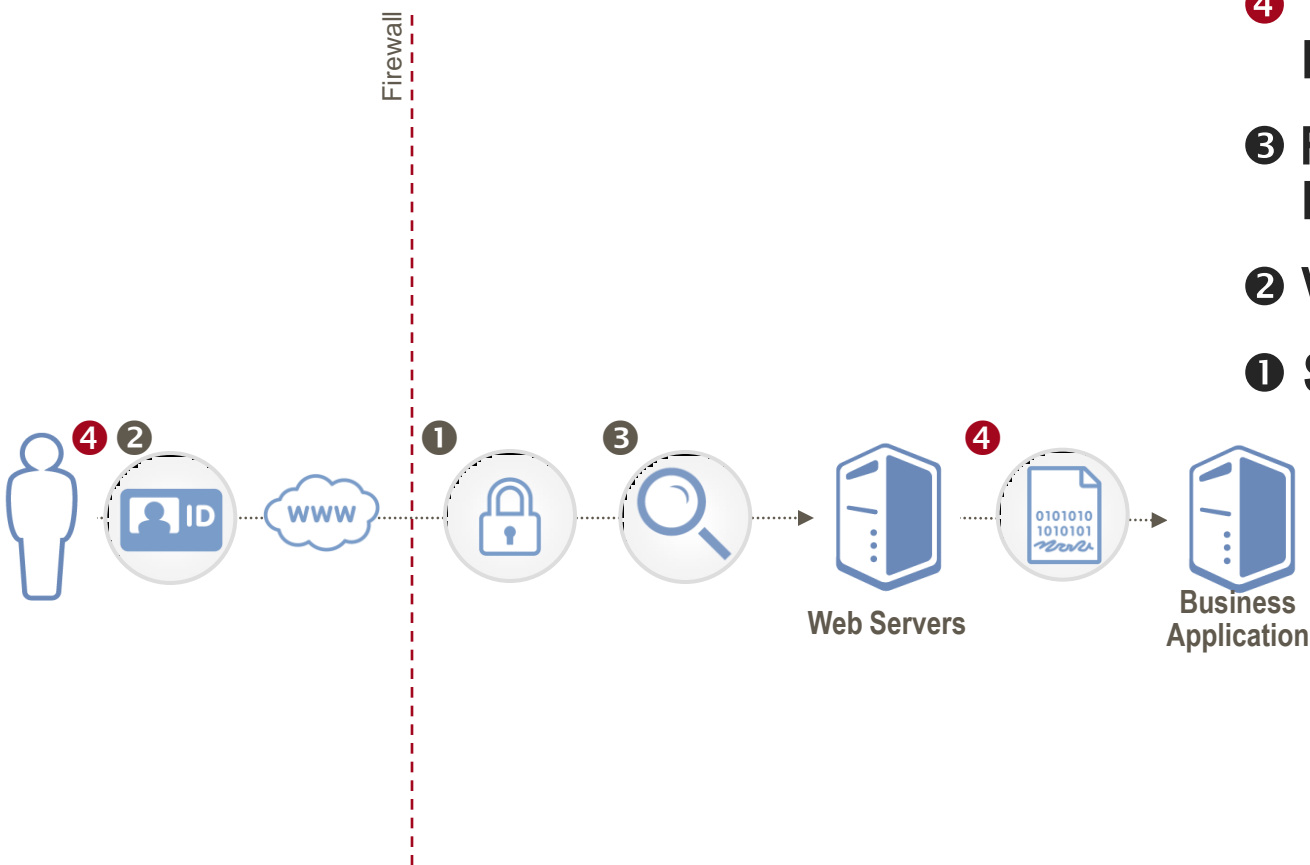


Entrust[®] TransactionGuard

- Real-Time eFraud Detection “RTFD”



Layered Consumer Security



- 4** Transaction Signing & Encryption
- 3** Fraud Detection and Risk-Based Auth
- 2** Versatile Authentication
- 1** SSL Certificates

Signing and Encryption

Seamless digital signature
Client or Server Side
Standards-based



Transaction Encryption
Browser to Back-end App for Privacy
Standards-based

Transaction Confirmation

Please confirm that you would like to perform the following transaction:

Transaction: Interbank Transfer
From: Simple Banking Solutions (35644-57459)
To: Offshore Financial Trust (83475-3468)
Amount: 15000

Name: JoeUser5
Password:
Token Response:

Part 1. Applicant's information

All mandatory fields (*) on this page must be completed before continuing with other sections of the application.

Names

Name to appear in passport

If the name to appear in the passport is not the same as on the proof of citizenship, you may be asked to provide proof, such as originals of these documents: Marriage certificate or a Legal change of name document (originals, issued by a competent authority).

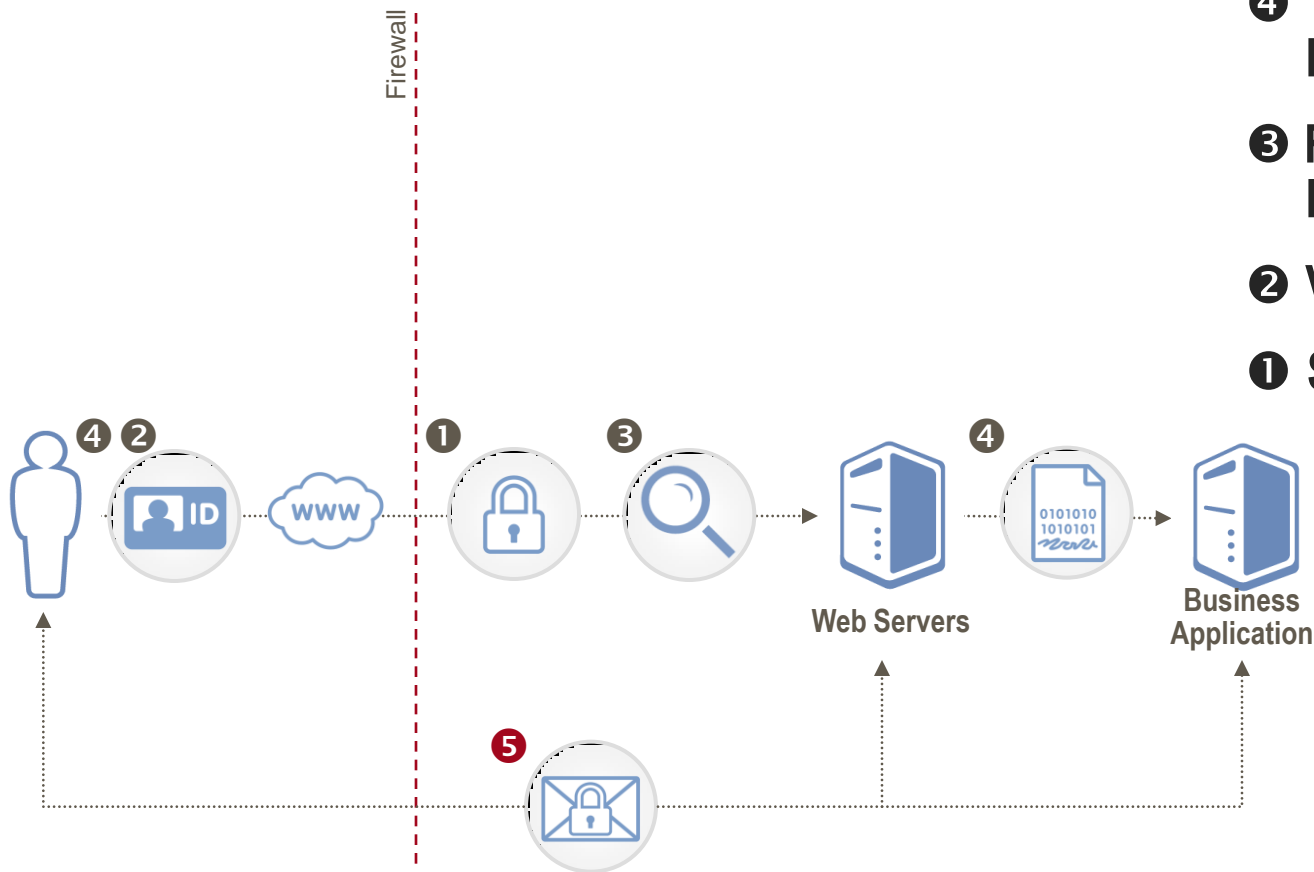
Surname *

Given name(s) *

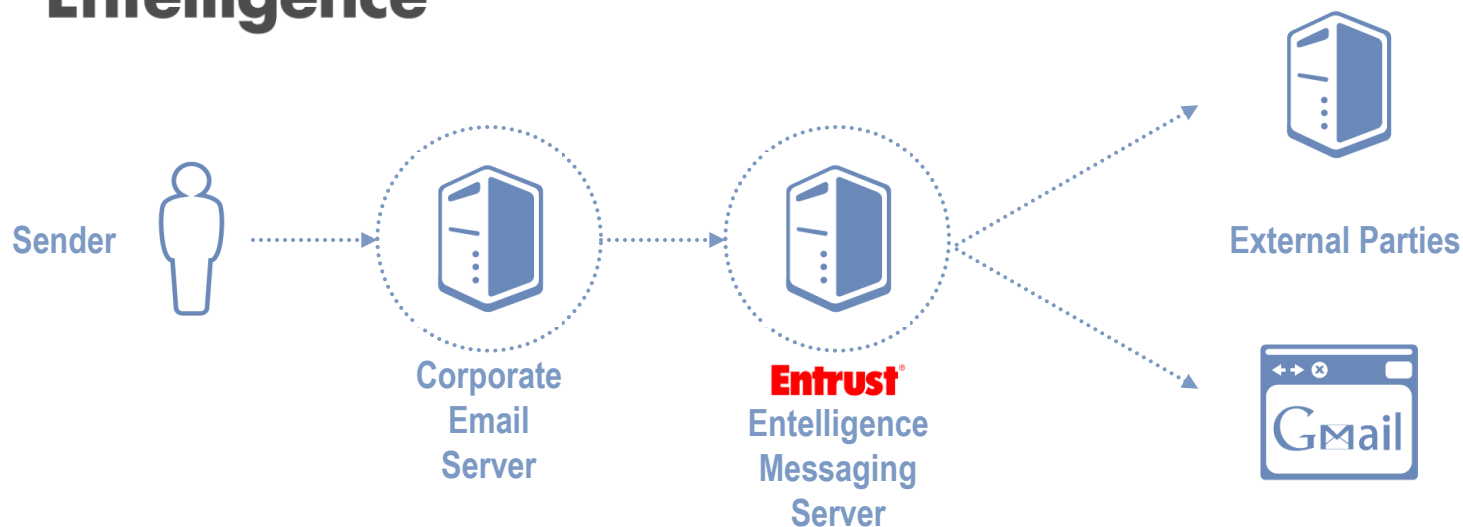
Note: If you have only one name (for example, Jabkinder) enter it in the "Surname" field and enter XXX in the "Given name(s)" field.

Layered Consumer Security

- ⑤ Secure Web Mail
- ④ Transaction Signing & Encryption
- ③ Fraud Detection and Risk-Based Auth
- ② Versatile Authentication
- ① SSL Certificates



Secure Web-Based Email



TLS/SSL, S/MIME, PGP, webmail
(push & pull)

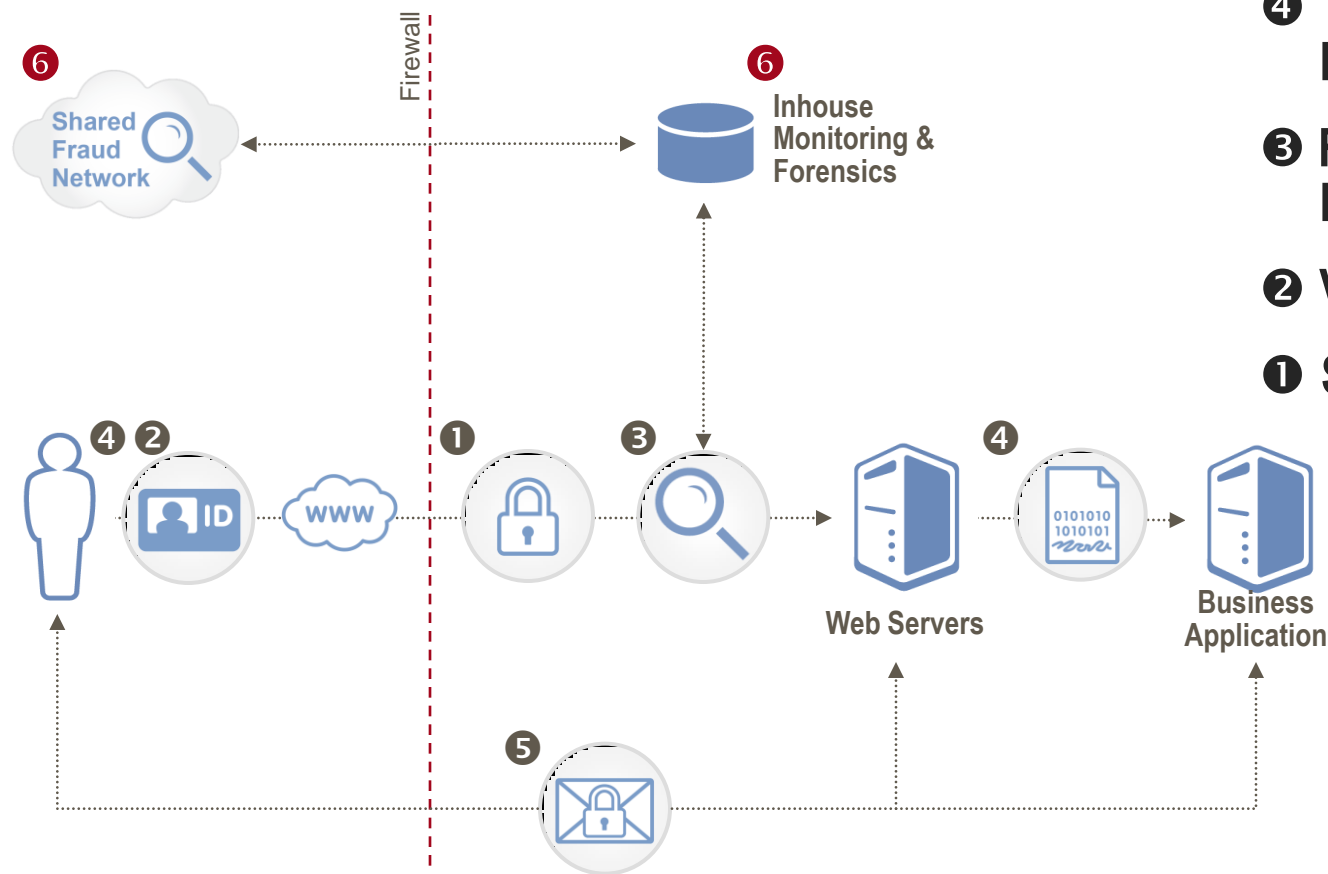
No need for any special client software

Automatic certificate issuance to
external users (optional)

Automatic encryption based on
message contents

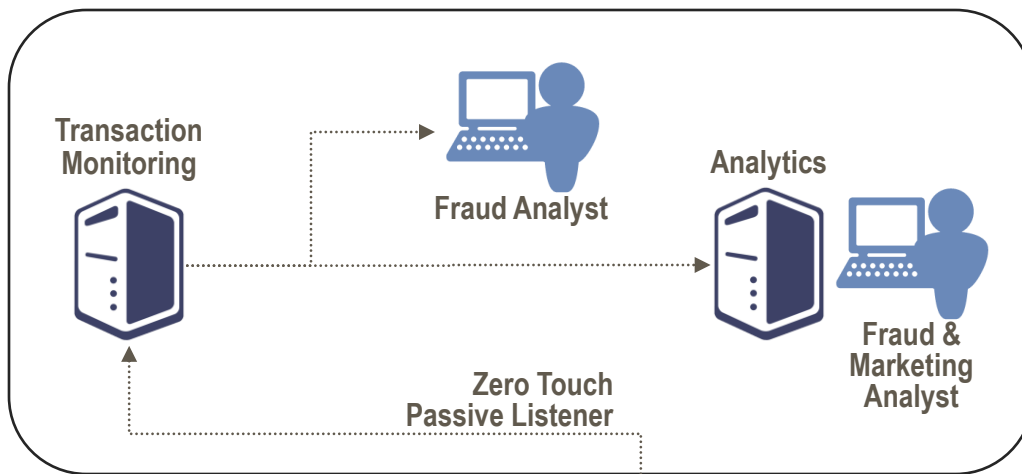
Layered Consumer Security

- ⑥ Forensics & Shared Fraud Network
- ⑤ Secure Web Mail
- ④ Transaction Signing & Encryption
- ③ Fraud Detection and Risk-Based Auth
- ② Versatile Authentication
- ① SSL Certificates

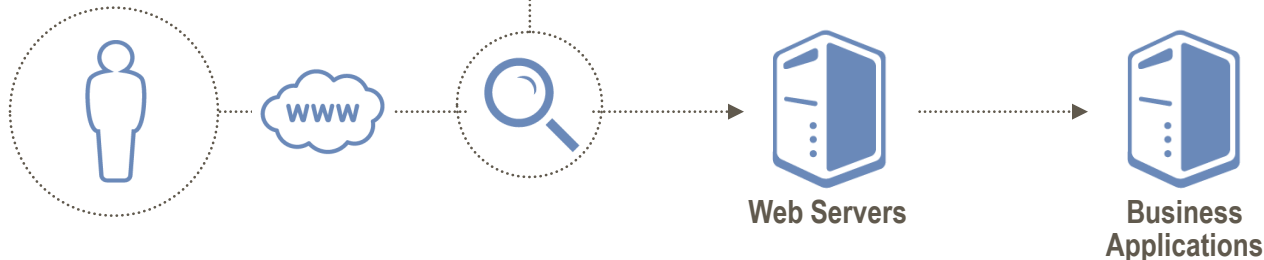


Entrust[®] TransactionGuard

- FraudMart - analytics and forensics

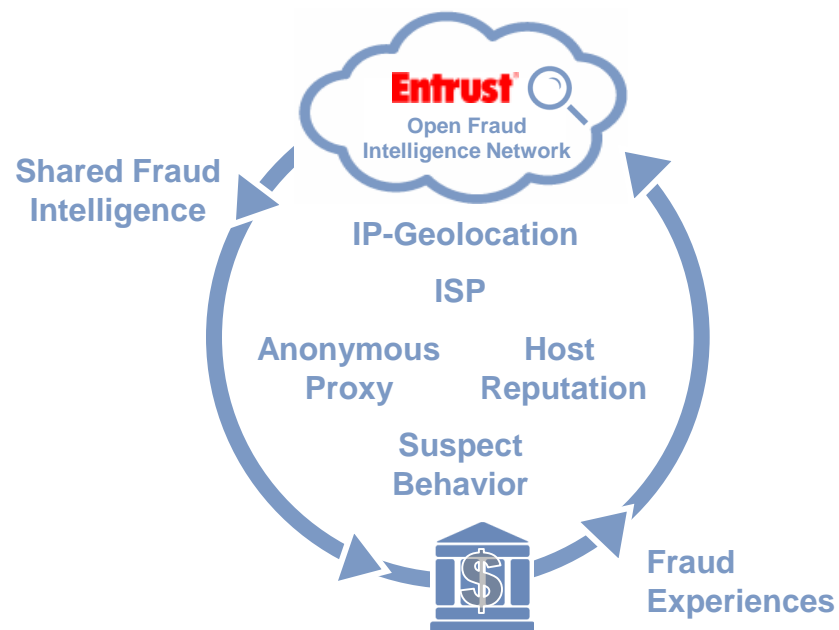


- Complete historical analytics engine
- Forensic analysis of fraud events
- Rapid identification of new fraud patterns



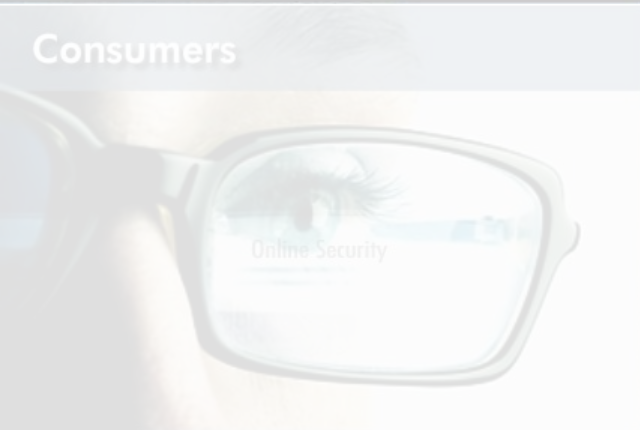
Open Fraud Intelligence Network

- Allows customers to acquire and share fraud intelligence
- Automatic Geo-Location updates and IP Reputation data from broad range of sources
- Fraud rule library sponsored by Entrust and including submissions from other members
- Regular rule updates to address evolving threats



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Enterprise Security

Enterprise Security Market Dynamics

Financial Drivers

Top four categories of losses:

- (1) viruses
- (2) unauthorized access to information
- (3) laptop or mobile hardware theft and
- (4) theft of proprietary information

Accounting for nearly three-quarters of the total losses*

Brand Drivers

77% of consumers would stop shopping at stores that suffer data breaches (Javelin, April 2007)

67% of consumers rate security an important factor in decision to conduct business with a particular company (Gartner 2006)

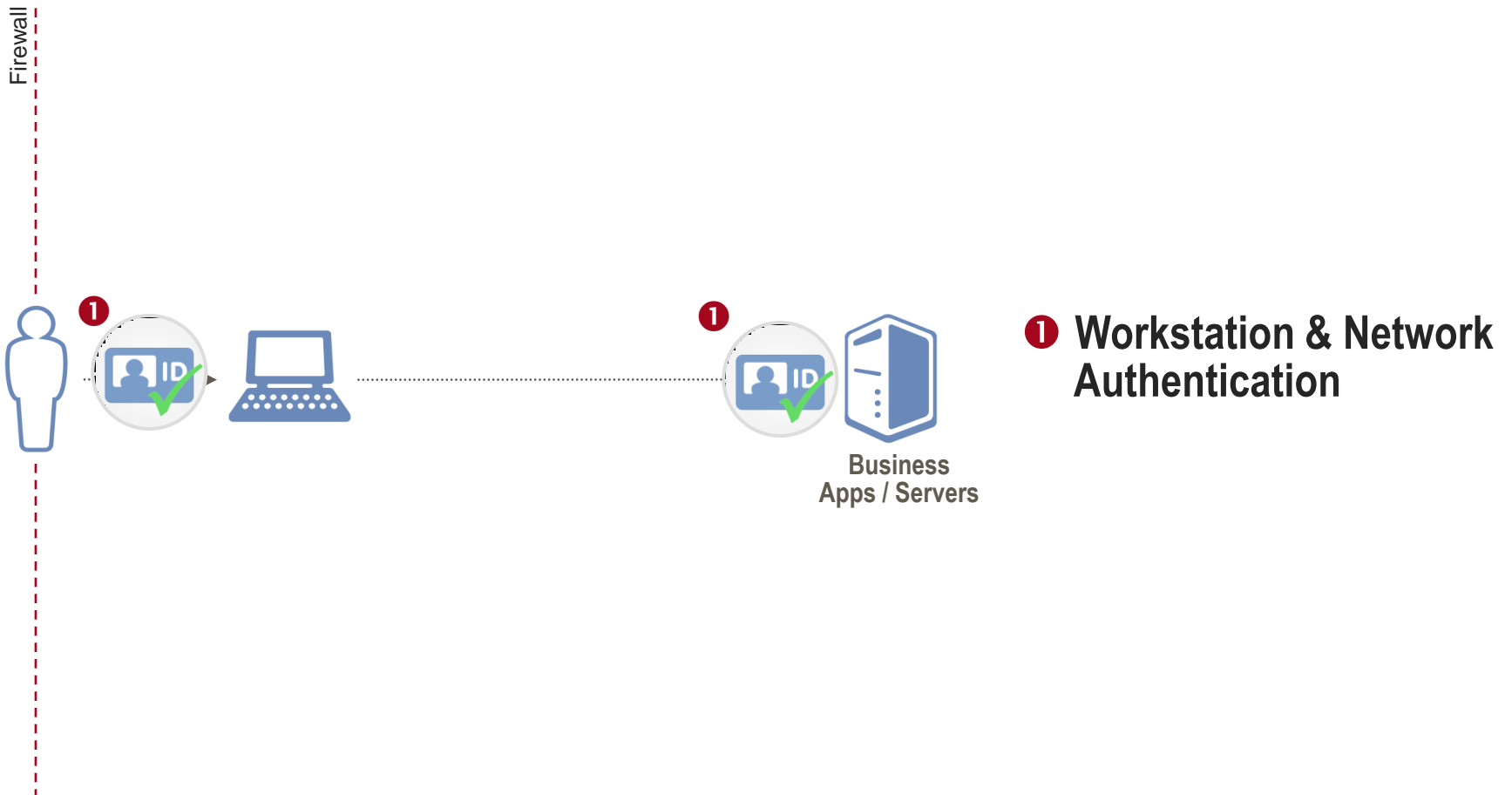
Estimated cost per data breach: \$1.5 - \$4.8M (US DoJ) or \$90-\$305 per record (Forrester 2007)

Compliance Drivers

**PCI, SOX, Data Breach (34 states), GLB, HIPAA, EU Privacy, etc...
...and the threat of class action lawsuit**

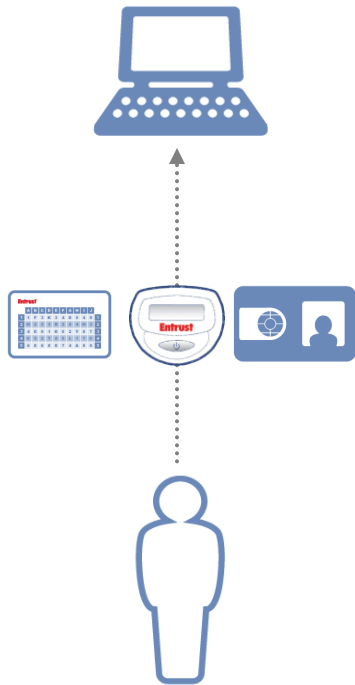
*2006 FBI/CSI Security Study

Layered Enterprise Security



Workstation & Network Authentication

User to Workstation



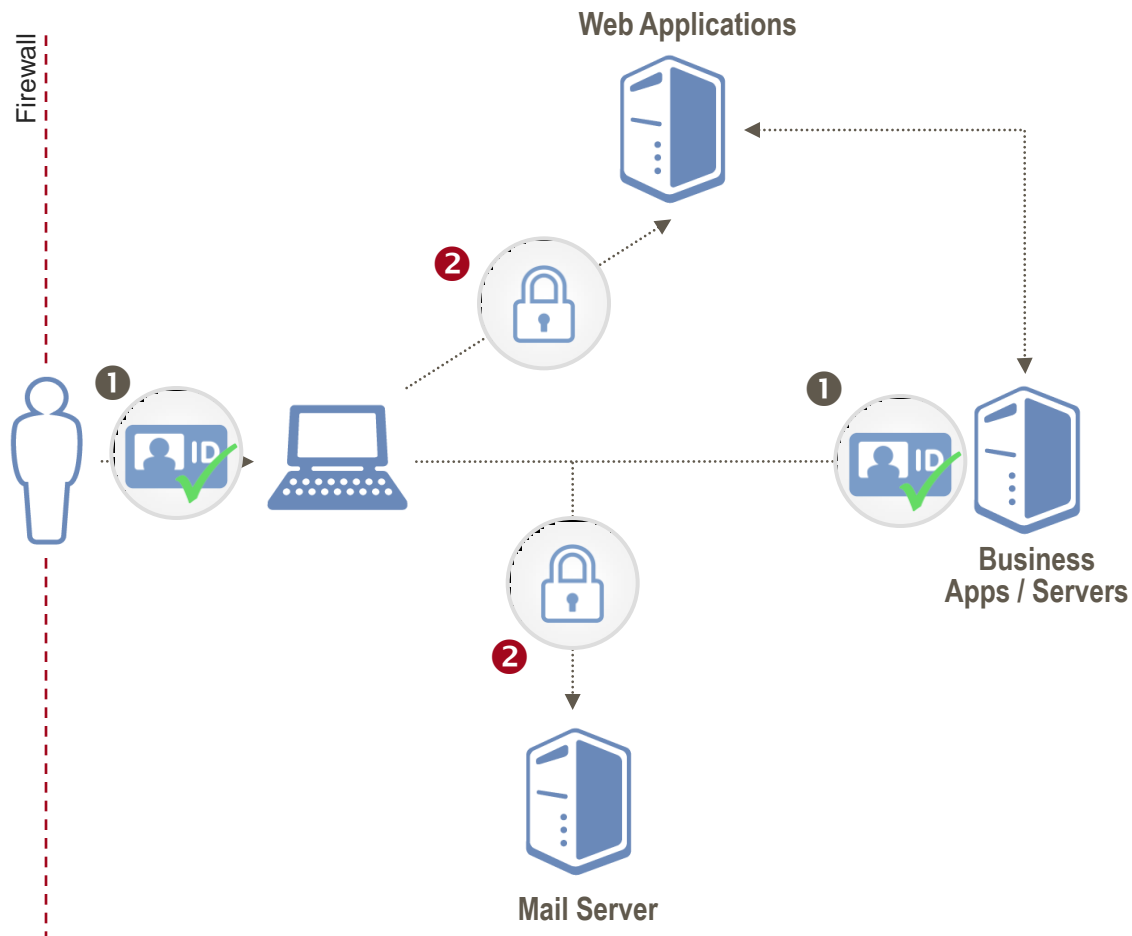
Server/Object to Server/Object



VPN Gateway to Gateway

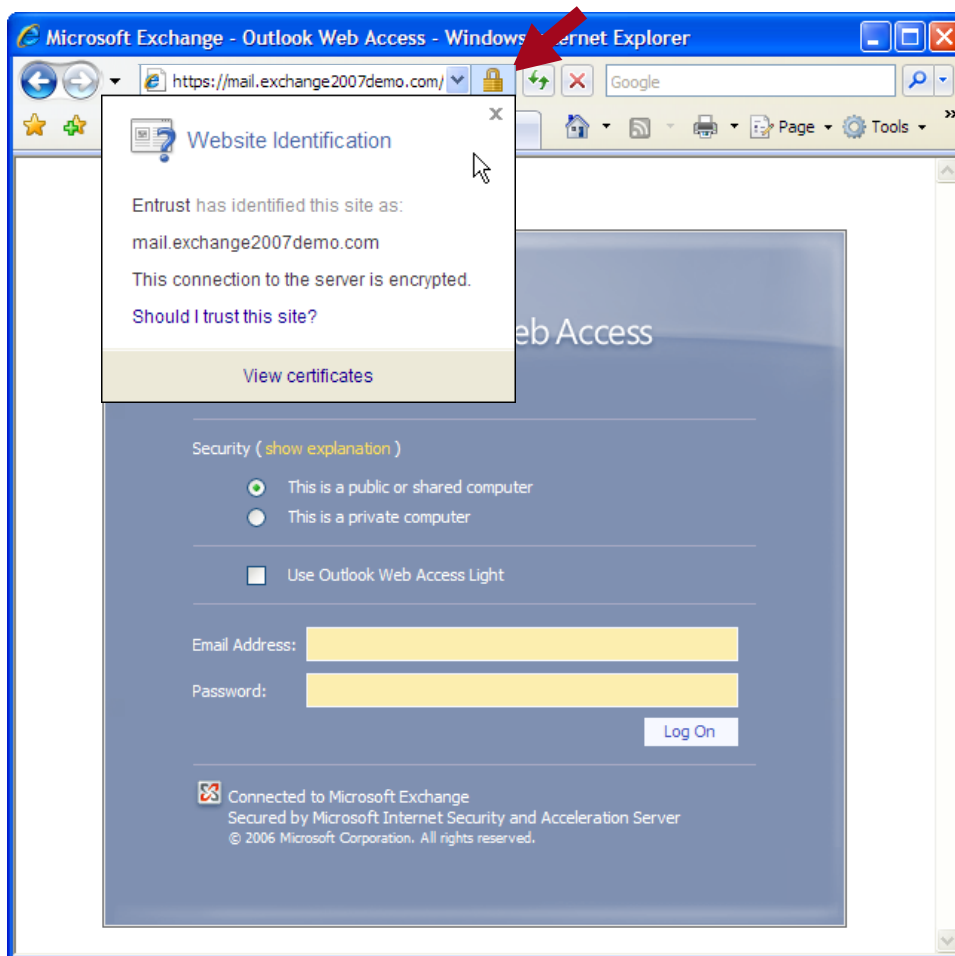


Layered Enterprise Security



- 2** SSL, Unified Communications Certificates
- 1** Workstation & Network Authentication

SSL for Intranets, Extranets, Outlook Web Access, UCC



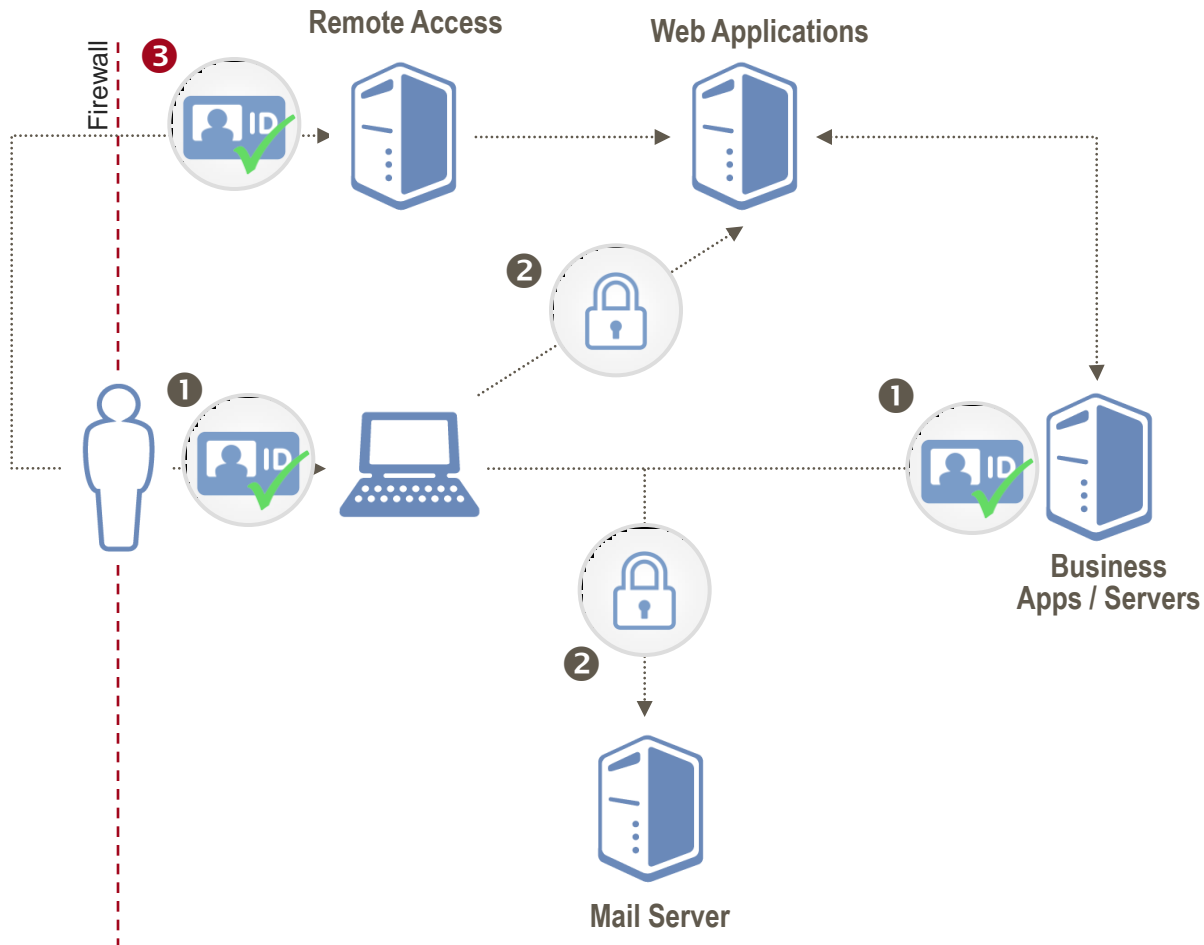
Intranet security

Outlook Web Access security

Enabling built-in Exchange
2007 Unified Communications
security

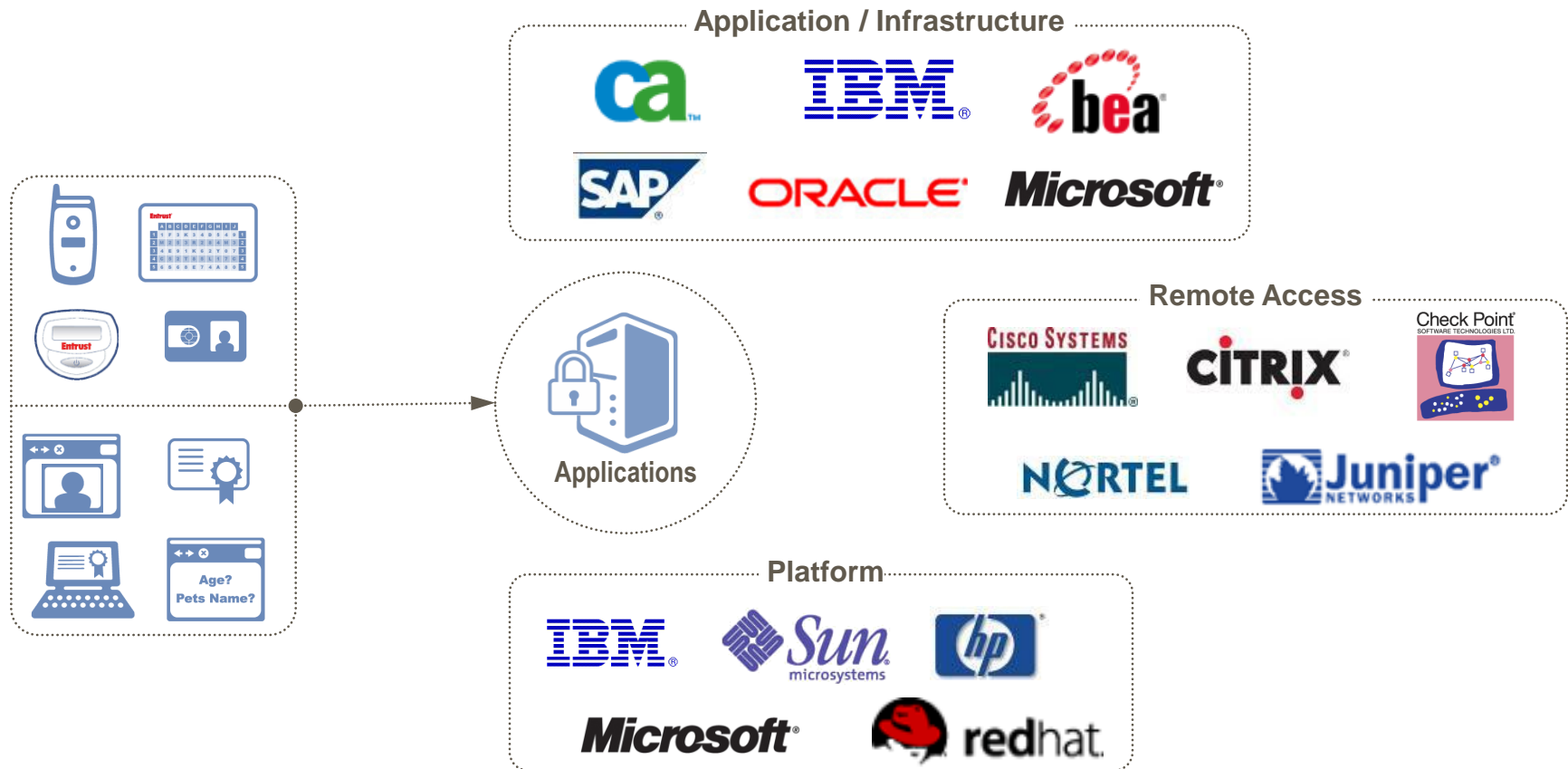
Server to server
communications

Layered Enterprise Security

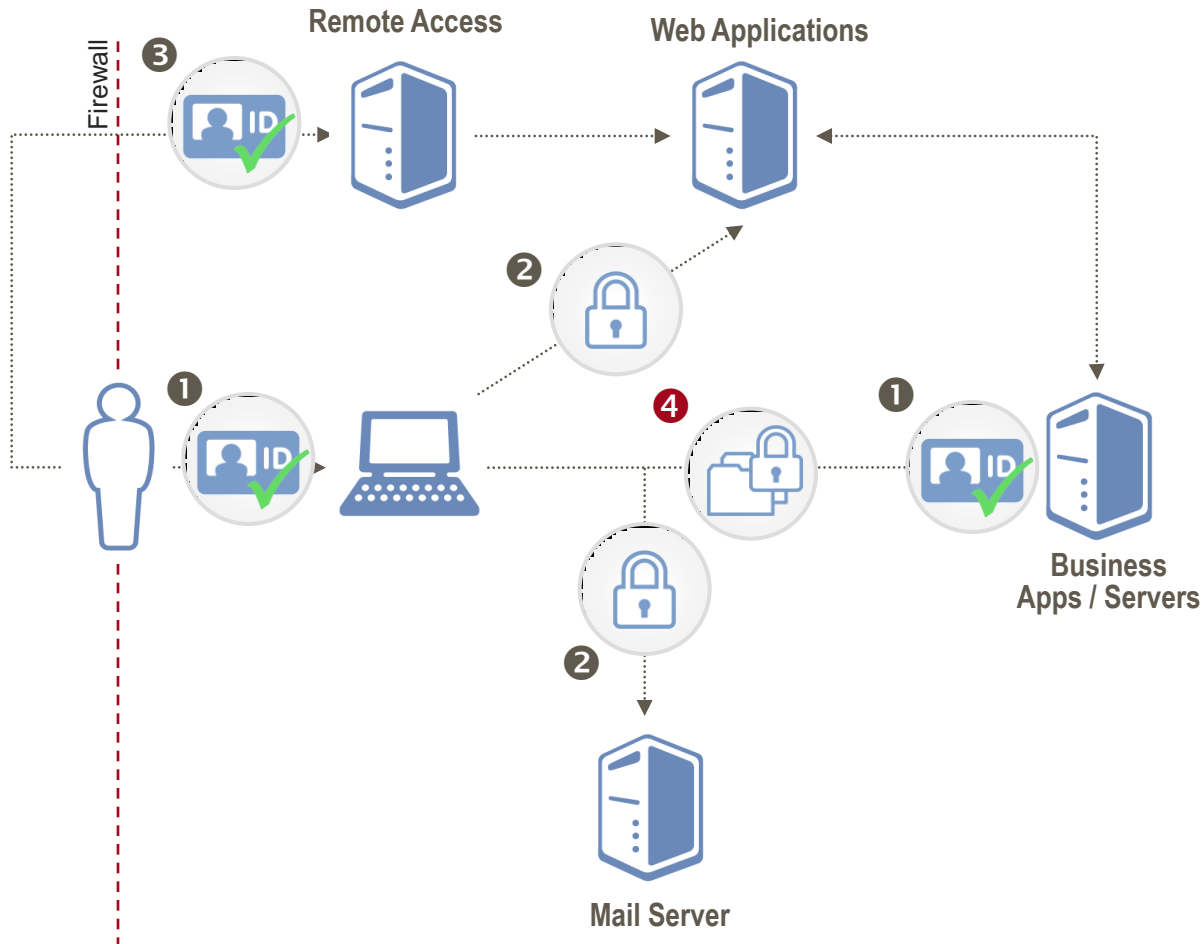


- 3 Remote Access Authentication**
- 2 SSL, Unified Communications Certificates**
- 1 Workstation & Network Authentication**

Remote Access Authentication



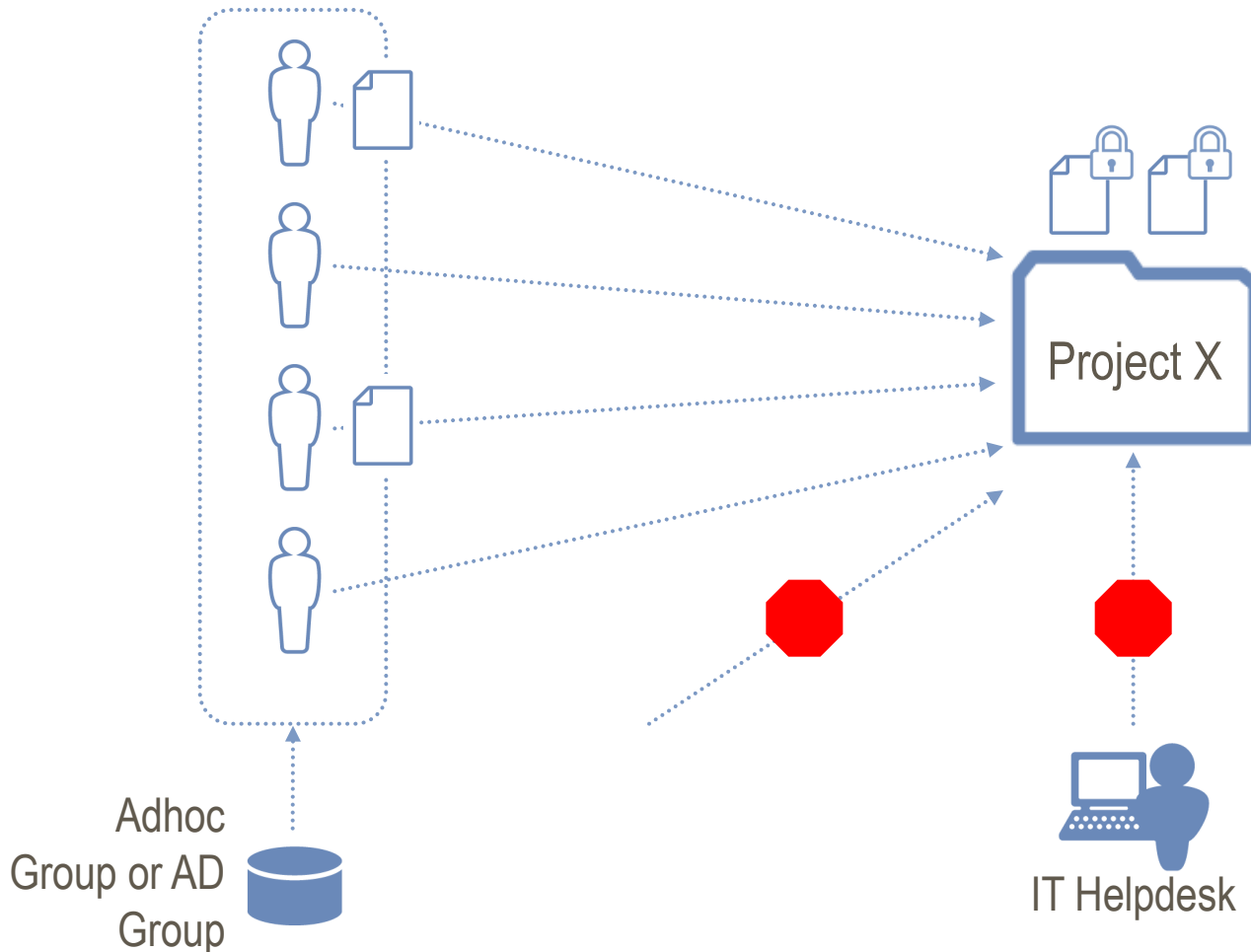
Layered Enterprise Security



- ④ Secure Shared Folders
- ③ Remote Access Authentication
- ② SSL, Unified Communications Certificates
- ① Workstation & Network Authentication

Entrust[®]
Intelligence[™]

Secure Shared Folders

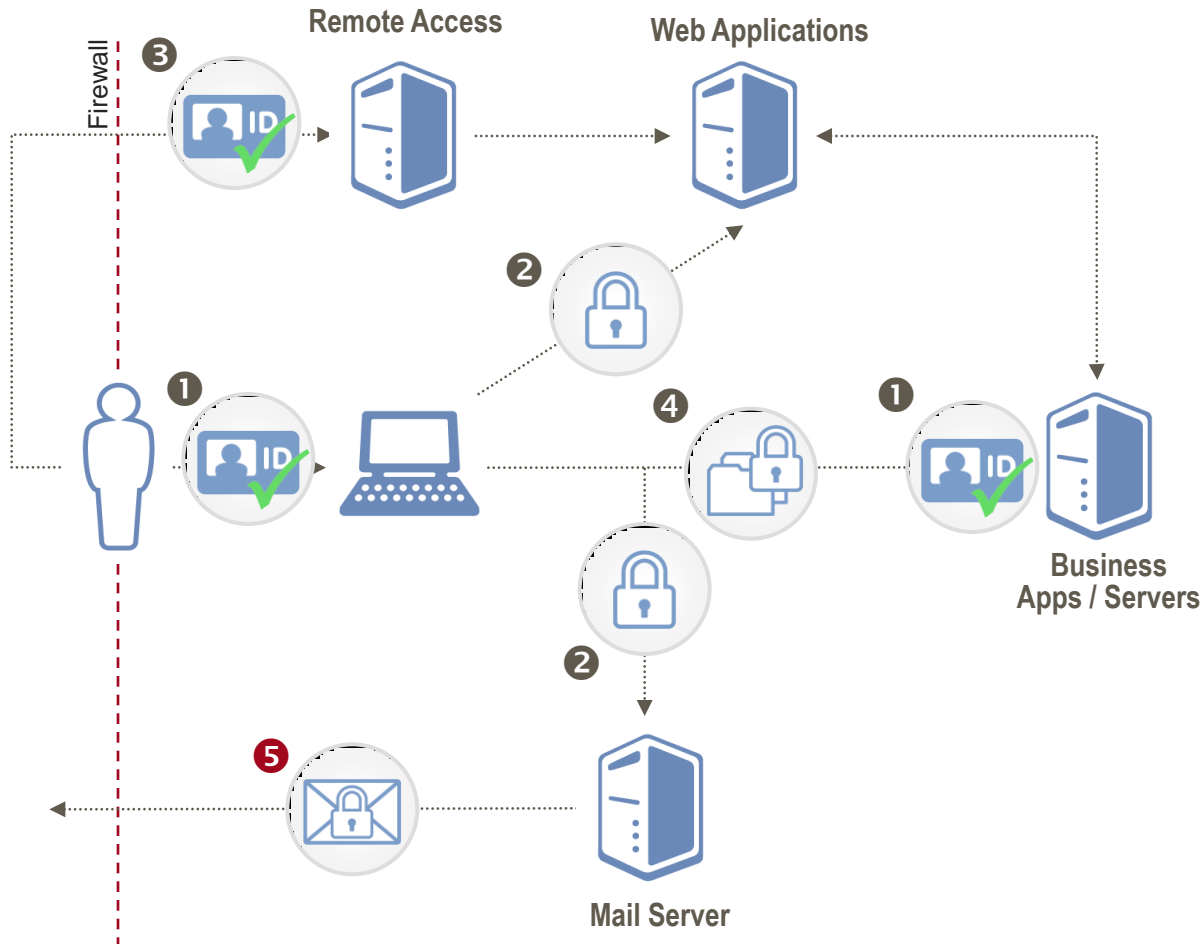


Automatic encryption & decryption

Dynamic protection based on group membership

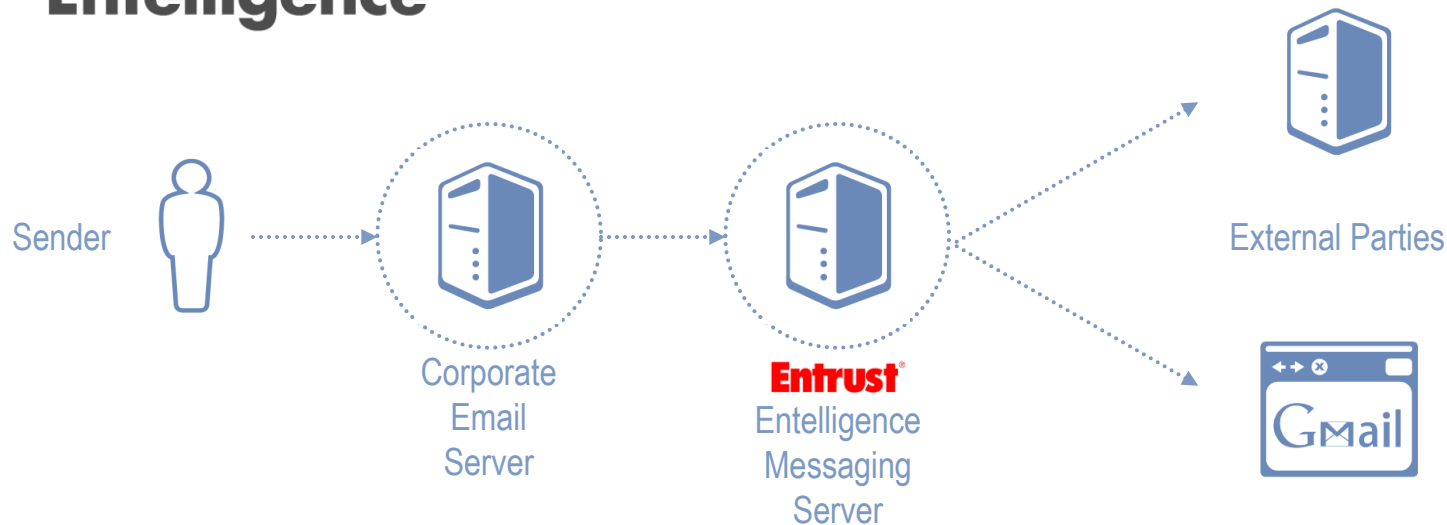
Centralized audit & secure key recovery

Layered Enterprise Security



- 5 Secure Messaging
- 4 Secure Shared Folders
- 3 Remote Access Authentication
- 2 SSL, Unified Communications Certificates
- 1 Workstation & Network Authentication

Secure Messaging



TLS/SSL, S/MIME, PGP, webmail
(push & pull)

Automatic certificate lookups,
internally and externally

Automatic certificate issuance to
external users (optional)

Automatic encryption based on
message contents

Entrust Managed Services PKI

- A world class managed technology service for public key infrastructure (PKI) security
- An alternate delivery mechanism for PKI security for all government and commercial customers worldwide
- An opportunity to address eBusiness and eGovernment needs with Entrust's solid solutions without building, owning or managing an in-house infrastructure
 - Entrust technology for authentication, encryption, digital signatures etc.
 - Leverages the same solutions that customers use with in-house CA today
 - Leverages Entrust's extensive security and deployment experience

Customer Success with Layered Security

Consumers



Enterprise



Government



Swedish Government – Citizen Authentication



Government – G2G, G2C

- Started with employee web applications – incl. web email
 - Rapid integration and deployment—up and running in under 2 days against an mainframe application
 - Deploying across 9 departments today
- Key Attributes:
 - Ease of use and scale for multiple millions
 - Cost and simplicity for production, deployment, and management
 - Combination of Entrust IdentityGuard for strong authentication and Entrust TruePass for signatures & encryption
- Status:
 - Already deployed to 50,000 employees, citizens and businesses, with target of 500,000



"...it was up and running in our environment in less than two days."
Bo Magnusson, IS Strategist with AMV

Bank of New Zealand – Consumer Authentication

- Address real threats to user identities, protect brand
 - Over 300,000 banking customers—initial deployment to 50,000 users
- Key Attributes:
 - Physical authentication without hardware requirement
 - Consumer ease of use and simplicity
 - Scalable and cost effective
- Status:
 - Unadvertised availability resulted in 13,500 voluntary enrollments in 3 days! Currently at 83,000 at the end of 2006
 - Next: Scaling to 2-3 times the initial user population in 2006, including leveraging new authentication options beyond grid



“...it can help safeguard not only funds but personal information as well.”
Shona Bishop, Bank of New Zealand General Manager Marketing

Customer Deployment Scenarios Schufa



Consumer & Business Authentication

- Organization holds sensitive financial information on over 60 million individuals & businesses
- Required strong authentication for new central web portal
 - Compared business case hardware tokens and non-hardware options
 - Straight to production in 2005 for 50,000 users
- Key Attributes
 - Back office integration and speed of deployment
 - Citizen ease of use driving low help desk costs
 - Rapid extension of application to businesses
- Status
 - 100,000+ users deployed, now seeing instances of 2000+ enrollments in a single day



“Entrust IdentityGuard offers the ideal combination of security and services with added ease of use.”
Rainer Neumann, Chairman of the Board for SCHUFA

Customer Deployment Success US Bancorp Retail Online Banking



Zero Touch Fraud Detection & Multi-factor Authentication

- Detect and stop potential e-fraud at US Bank's Online Web site, supporting 5M+ users
- Key Attributes:
 - Processing of web traffic streams from online banking applications without impacting any end applications for fraud detection
 - Comprehensive analysis of all web transactions vs. small subset
 - No impact to end users unless required
 - Option to easily add layered strong authentication
- Status:
 - Rapid deployment of fraud detection completed with no impact to end applications
 - Deployment of range of options for risk-based authentication underway now

Customer Deployment Scenarios

Banco Santander

- Largest bank in Chile with a mandate to increase security
 - Over 900,000 online users, initial deployment to 250,000 users
- Key Attributes:
 - Ease of use and deployment—cards understood and method easy
 - Multi-channel key to extending to telephone banking & ATM in future
 - Low cost enabling a highly secure free service for end users (strong differentiator compared to PIN/TAN & Tokens)
 - Ability to extend to other types of authentication
- Status:
 - Over 300,000 users enrolled in under 1 year for web, targeting over 500,000 in early 2008
 - Deployment best practices, including online tutorials, and customer advertising, implemented to ensure customer success
 - Currently deploying Entrust IdentityGuard for IVR-based money transfers
 - Pilot underway for ATMs



“When we unveiled the cards to our customers, they were thrilled to have a more secure method for doing business with us.”

*Laureano Cuesta, Internet Security Manager,
Banco Santander Santiago*

U.S. Department of State



The Challenge

- Ensure secure and private communication between senior executives and Foreign Service Officers abroad.
- Support a distributed, global environment in 168 countries and over 275 diplomatic facilities.

The Solution

- Strong authentication of State employees accessing electronic information and communication systems using Entrust PKI and smartcards.
- Rapid deployment and ease of management critical given disparate user base.

Accomplishments

- Over 50,000 credentials have been issued via State Department's new ID badges.
- Expansion of infrastructure to support new electronic passport project, writing digitally signed users data to embedded RFID chip.

Acxiom – Secure Messaging



The Challenge

- Improve communication by leveraging email to communicate with customers and partners while ensuring sensitive data is protected with strong encryption
- Minimize end user impact – internally and externally

The Solution

- Leverage Entrust Entelligence Messaging Server to securely deliver email leaving the organization.

Accomplishments

- Rapidly installed redundant cluster of Messaging Server appliances
- Accommodates encryption preferences of customers and partners - S/MIME or OpenPGP

Credit Suisse Group



The Challenge

- User accountability and privacy required for confidential financial information handled by employees, including ensuring employees properly identified and authenticated to applications.
- Stringent legal and regulatory requirements governing access to information including record of all users accessing its resources.

The Solution

- Public Key Infrastructure including Entrust Authority and Entelligence providing authentication of users to web and non-web business applications, replacing conventional tokens.

Accomplishments

- Deployed solution to over 20,000 users with reduction of costs compared to conventional token and password management.
- Potential extension to include smartcard deployment for higher security applications.

Society for Worldwide Interbank Financial Telecommunication



The Challenge

- Secure the next generation of world standard for inter-bank communication and financial messaging.
- Add comprehensive, robust, end-to-end security for system that handles \$6+ trillion per day without adversely impacting the high-performance network.
- Ensuring consistent security policy across all applications

The Solution

- FI authentication and network encryption provided by Entrust PKI toolkits, embedded into SWIFT's applications.
- Entrust Authority providing central policy administration for disparate applications using PKI toolkits

Accomplishments

- Successful launch of SWIFT.net, providing lower-cost IP-based payment infrastructure without any security compromise versus private network.

We are Security Trusted Advisors...



- Broad set of innovative solutions addressing authentication, transaction monitoring & information protection
- Extensible products and integration with leading technology vendors
- Track record with marquee, world-wide customer base
- Best in class world-wide service and support
- Mature, financially strong organization

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Thank You

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