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***AuthenWare***™

Security Redefined.

Date XX/XX/XX

Your name & title goes here

# Agenda

- Who is AuthenWare?
- State of the Market
- Keystroke Dynamics Introduction
- AuthenWare Solution
- AuthenWare Architecture
- Six Steps to Implement
- Why AuthenWare?
- Questions

# *Who is AuthenWare*

- Founded in 2008, headquartered in Miami
- Private Company
  - Strong Investors
  - Outstanding Board of Advisors
  - Experienced Management Team (Citrix, Fuego, BEA, Plumtree, Business Objects, McAfee, Lombardi, IBM & Texas Instruments)
- Certified by International Biometric Group
- Common Criteria Certified
- Most Comprehensive Algorithm
- Proven Scalability & Rapid Market Expansion (70M users today)

# *State of the Market*

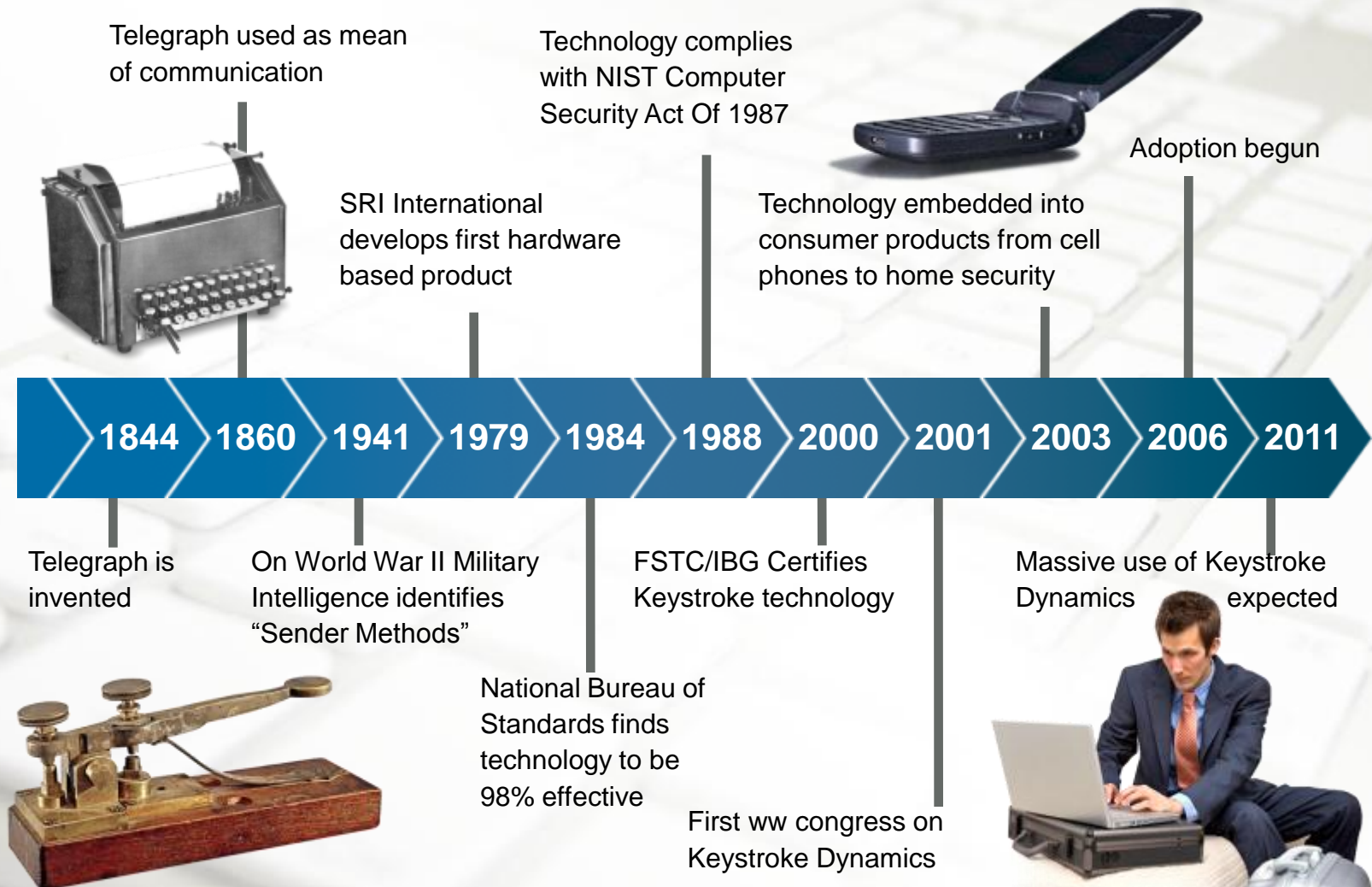
- Security & regulatory compliance
- Increased sophistication of cyberthreats
- Government, banking & healthcare
- Strength, ease of use & cost
- Layered security approach
- Require front-end & back-end strategy
- Goal to increase customer confidence
- Reduce online fraud losses

# State of the Market

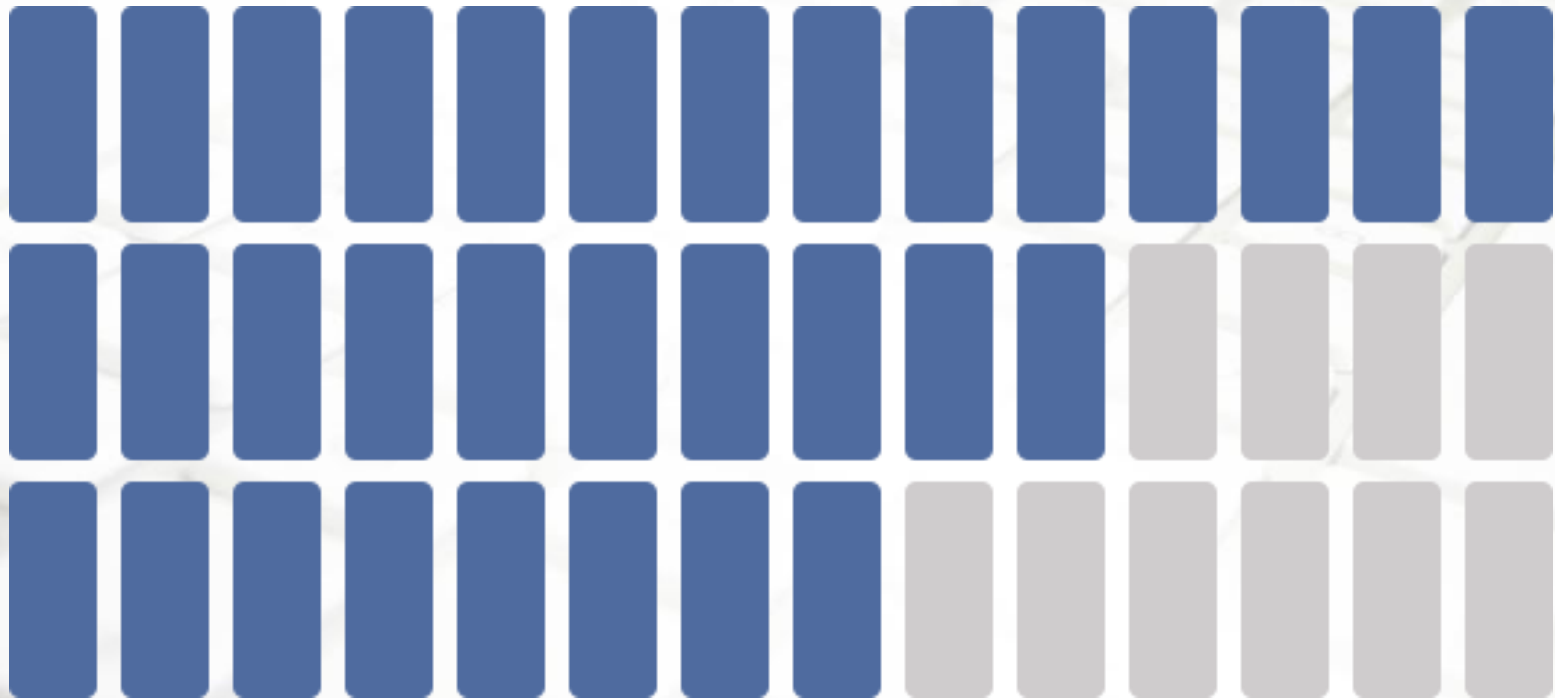
*“Two-thirds of U.S. consumers surveyed use the same one or two passwords for all Web sites they access that require authentication. Most U.S. consumers want to continue managing their passwords the same ways they do now. They don't favor using software or hardware to help manage passwords, and user-centric identity frameworks such as OpenID and information card architectures face scarce consumer demand.”*

*–Gregg Kreizman, research director, Gartner*

# Keystroke Dynamics Chronology



# *Introducing Biometrics Concepts*

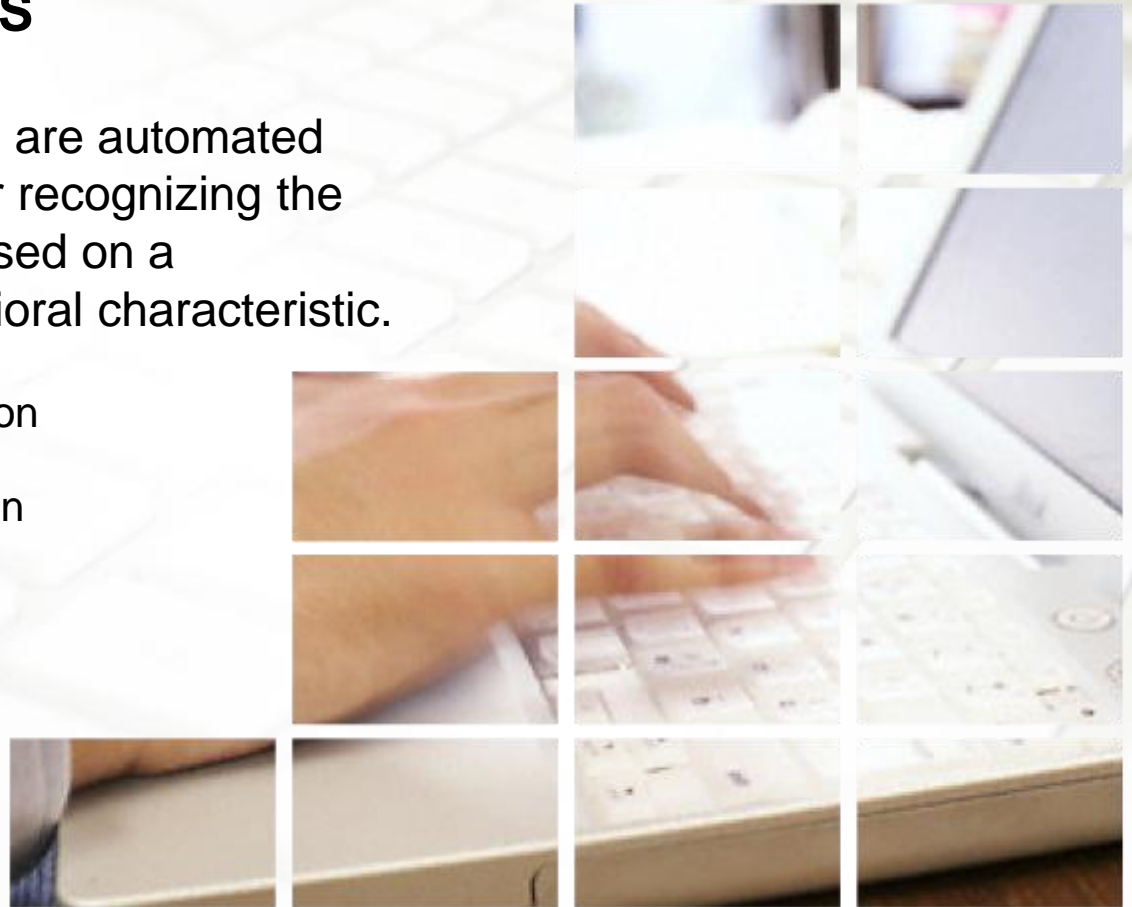


# Biometric Methods

## TWO APPROACHES

Biometric technologies are automated methods of verifying or recognizing the identity of a person based on a physiological or behavioral characteristic.

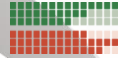
- Authentication/Verification
- Recognition/Identification



# Biometric Methods

## Speaker/Voice Recognition

Analyzing vocal behavior



## Keystroke Dynamics

Measuring the time spacing of typed words

## Behavioral Methods



## Signature/Handwriting

Analyzing signature dynamics

## Facial Recognition

Measuring facial characteristics



## Fingerprint

Analyzing fingertip patterns



## DNA

Analyzing genetic makeup

## Hand geometry

Measuring the shape of the hand



## Physiological Methods



## Vascular patterns

Analyzing vein patterns

## Iris scan

Analyzing features of the colored ring of the eye



## Retinal scan

Analyzing blood vessels in the eye

# Challenges



# Challenges

**Type I errors – False Rejection Rate (FRR):** Instances where a biometric system incorrectly denies access to an authorized user.

**Type II errors – False Acceptance Rate (FAR):** Instances where a biometric system incorrectly grants access to an unauthorized user.

Accuracy

# Challenges

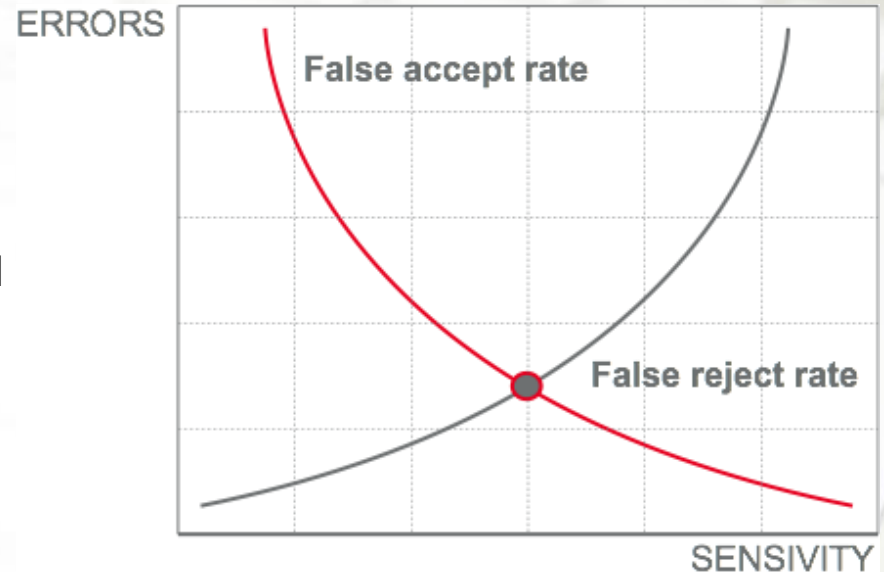
- The **speed** at which a sensor and its controlling software accepts or rejects authentication attempts
- Acceptable throughput is typically **2 seconds** or less per person

Performance

# Challenges

Biometric systems force a client to choose a Cross-over Error Rate (CER), creating an inflexible system.

- A given CER is never applicable to all situations in an organization.
- Organizations typically require CER's at the application, user and transactional levels.



**Reliability/  
Flexibility**

# Challenges

Biometric systems require users to consciously participate in the system pattern training.

- Invasive
- Intimidating
- Unnatural

**Enrollment  
Time**

# Keystroke Dynamics as Solution



# *Keystroke Dynamics as Solution*

- **WHAT IS IT?**

Keystroke Dynamics is the manner and rhythm by which an individual types characters on a keyboard.

- **HOW DOES IT WORK?**

Singularity points within the overall typing cadence are used to pinpoint the uniqueness of the individual.

- **WHY IS IT USEFUL?**

The keystroke rhythms of a user are measured to develop a unique biometric pattern of the user typing pattern for future authentication.

**But it's still not enough...**

# *AuthenWare™ Multi-Dimensional Algorithm*

**What** do you know? E.g., User-id + Password, Passphrase

**How** do you type? Keystroke Dynamics

**What** do you do? E.g., hidden behavior, use tab or click mouse

**Where** are you? E.g., IP, time zone

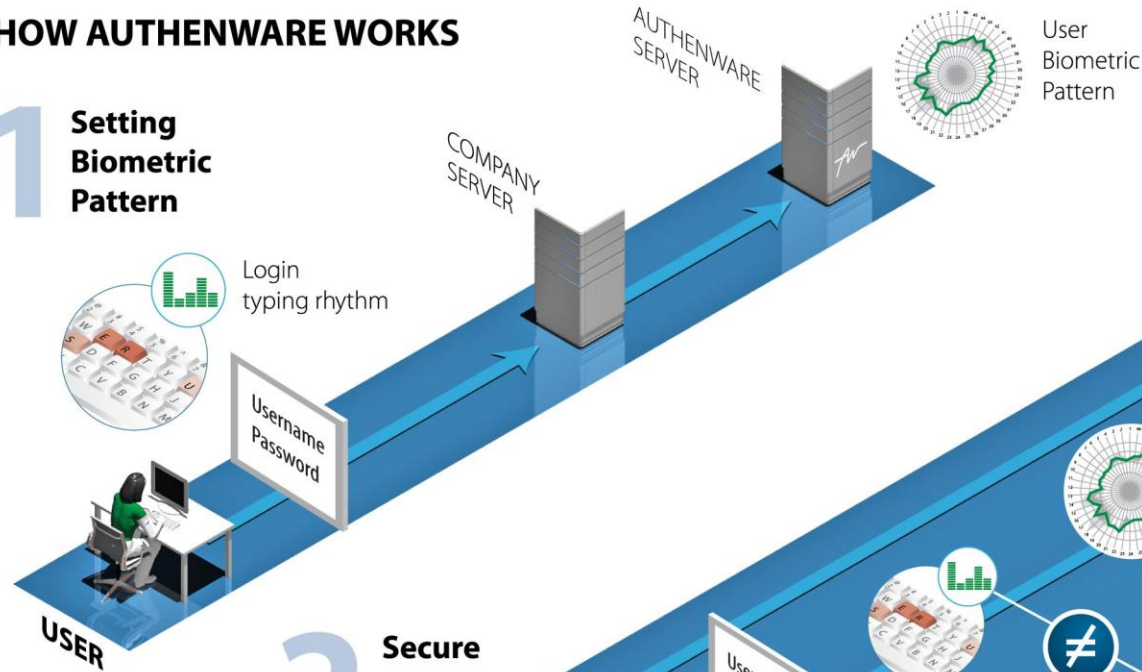
**What** do you have? E.g., OS version, browser version

**When** do you use it? E.g., frequency, day, hour

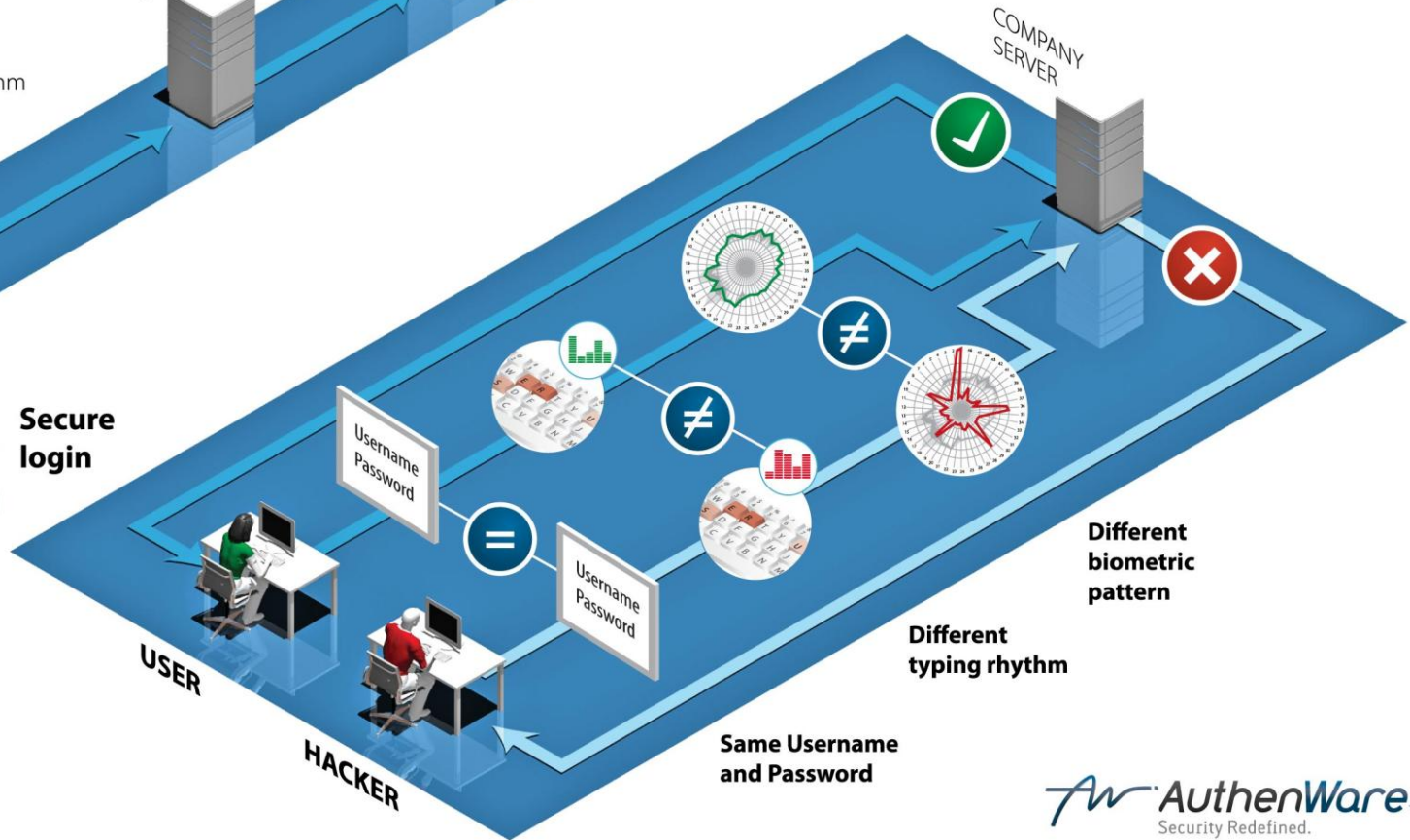
# How AuthenWare Works

## HOW AUTHENWARE WORKS

### 1 Setting Biometric Pattern



### 2 Secure login



# *AuthenWare Value Proposition*

## **Innovation**

Zero footprint software-based solution

## **Simplicity**

Low cost to implement and maintain

## **Unparalleled Security**

Multi-dimensional algorithm

# *AuthenWare Benefits to You*

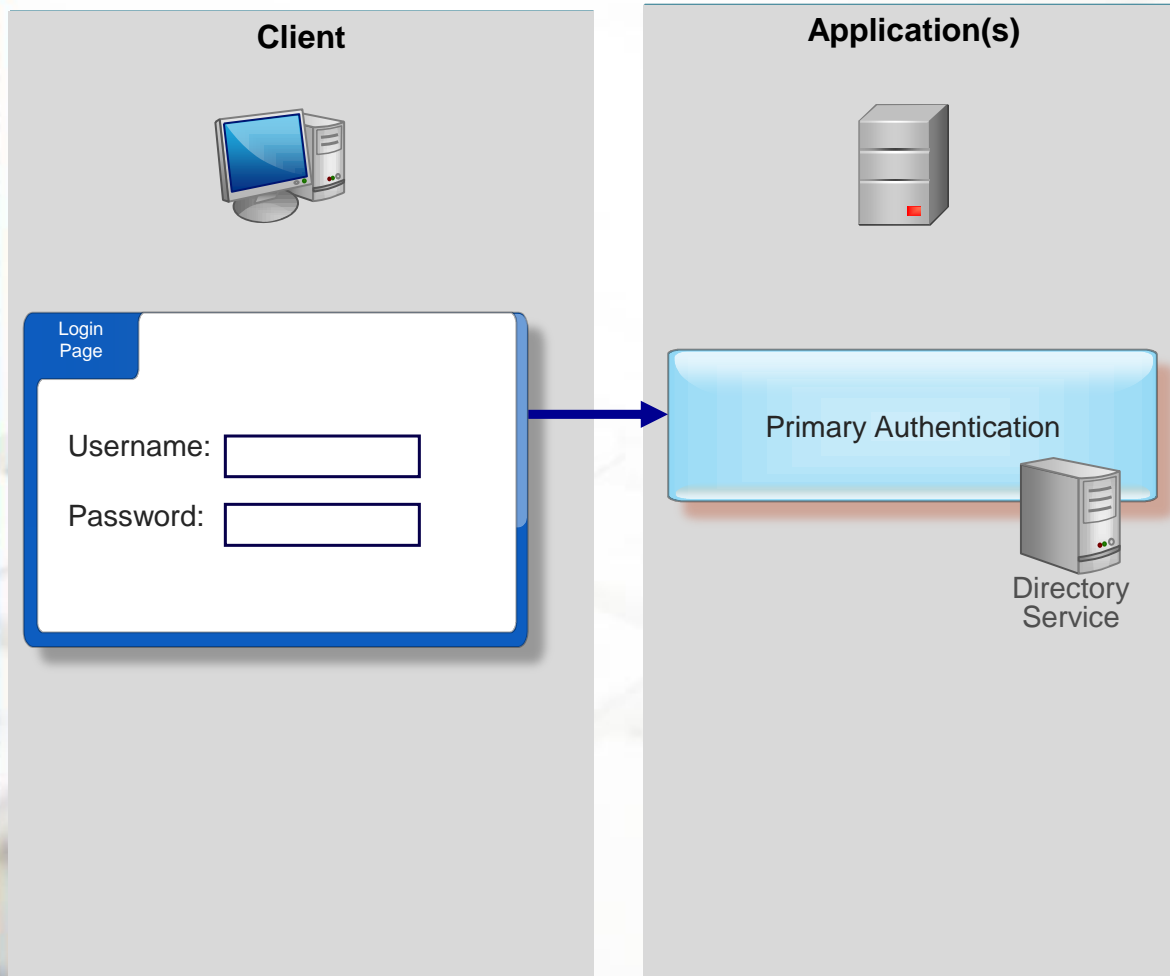
## **Innovation**

- Stealth technology
- Robust and scalable architecture
- Proprietary protocol that is standards-compliant
- No logistical costs
- Simple and easy-to-remember passwords
- 100% user acceptance
- Turns stolen information useless
- Multi-dimensional
- CER flexibility

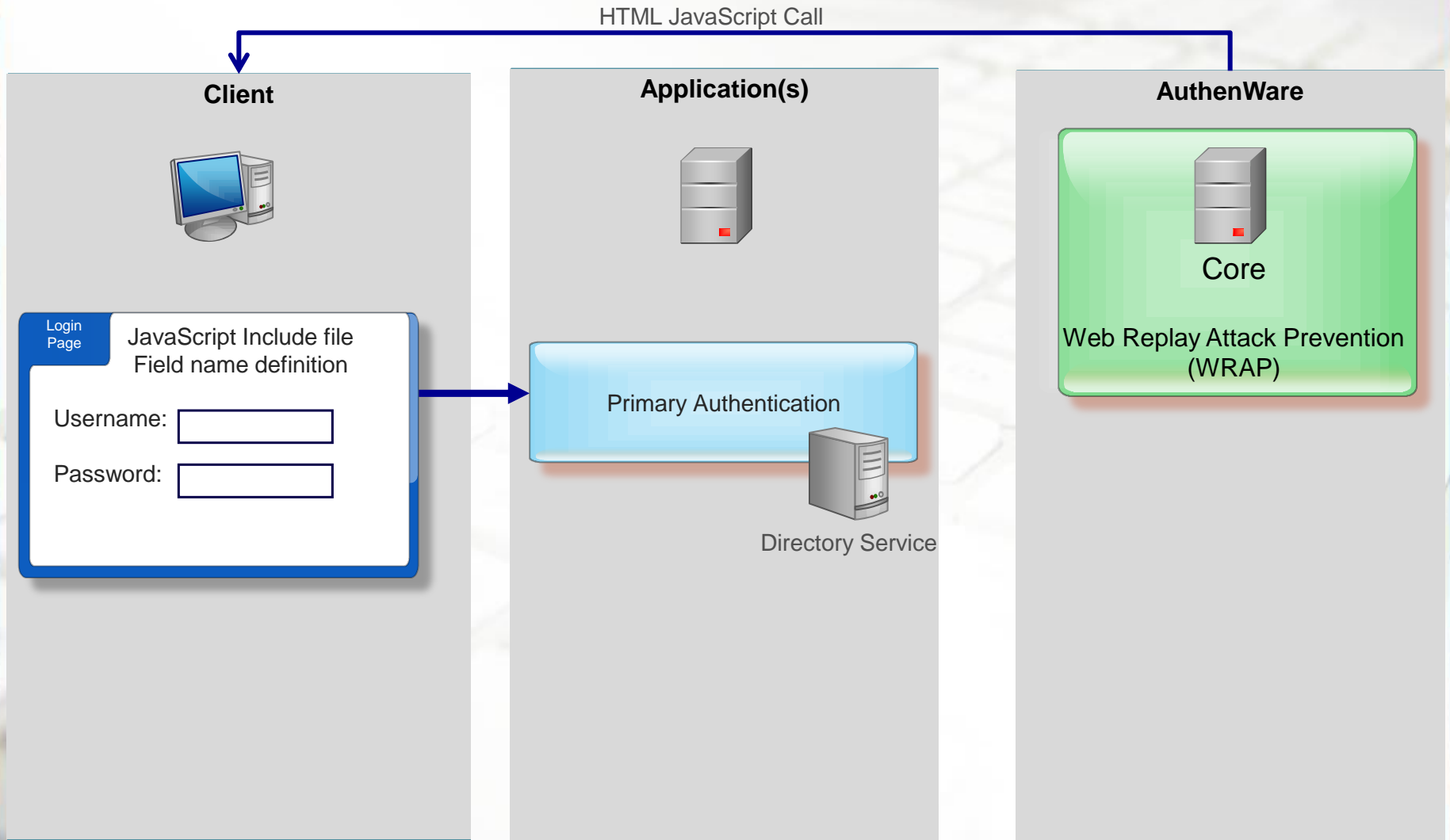
## **Simplicity**

## **Unparalleled Security**

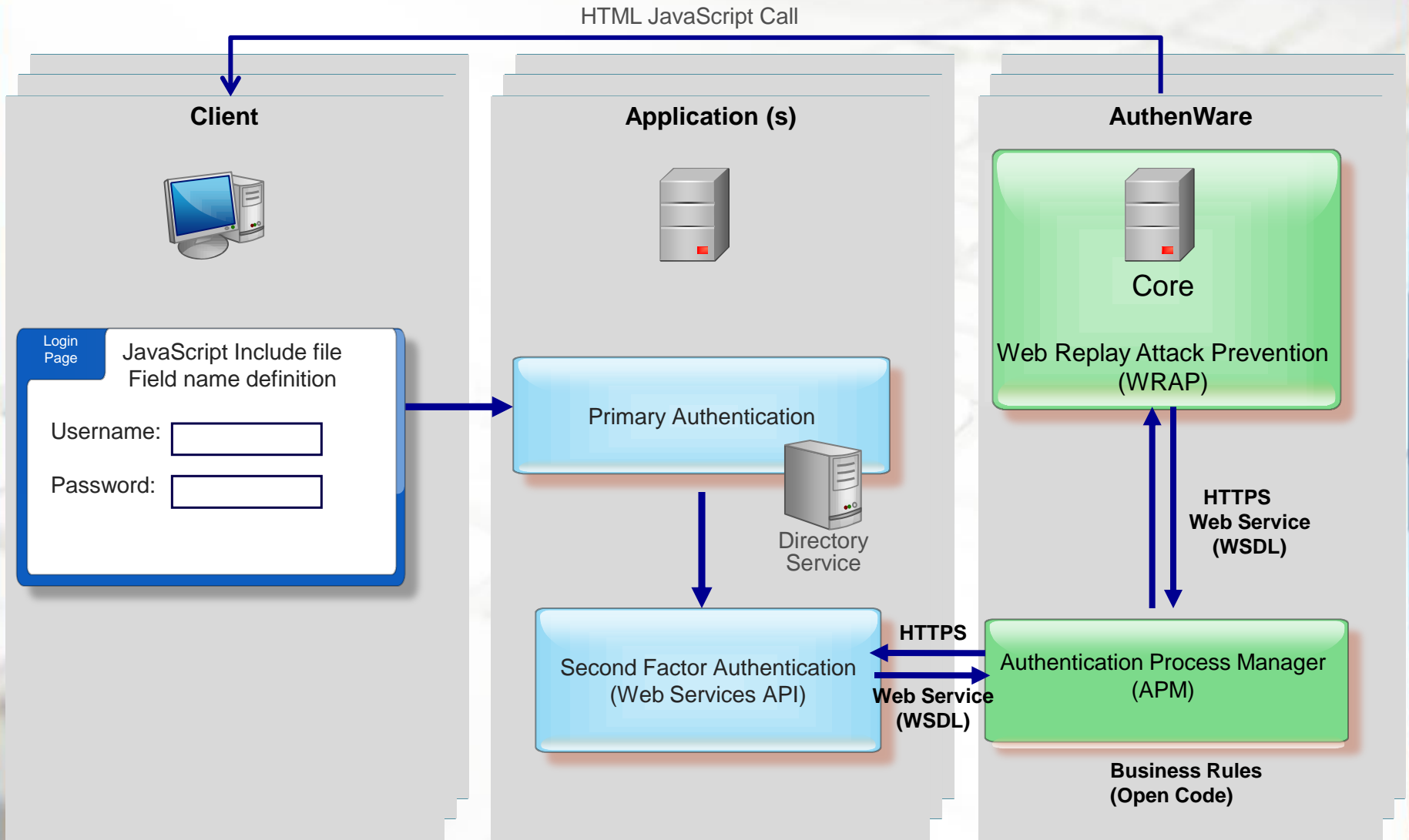
# Architecture Before AuthenWare



# Architecture After AuthenWare



# Architecture After AuthenWare



# *Six Steps to Implement*

1. Install AuthenWare Server
2. Modify your pages or screen where the login data are captured
3. Add your rules in your software for each AuthenWare response type
4. Quality test (on testing environment)
5. Quality test (on production environment)
6. Monitor performance and tune it



# Why AuthenWare

- Stolen information rendered useless
- Robust and scalable
- Transparent to the end user
- Low cost
- Unique, non-invasive architecture
- Easy to implement
- CER flexibility
- Complementary strategy
- Certified by the International Biometric Group
- Common Criteria Certification
- Citrix, Juniper, CA and Microsoft integrations





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Security Redefined.