# **mavarick**<sup>™</sup>

# 4-F™ Authentication in a FINANCIAL INSTITUTION



\*Scenario is for illustrative purposes only. This is not a case study.







Hello and thank you for your interest in Maverick Secure.

In establishing Maverick I had a vision to build a company that everyone could be proud to work for, be associated with, and would want to conduct business. I believe we have achieved that goal and continue to aspire everyday to make that an on-going reality of continuous improvement. Here at Maverick Secure we are building a company that is run with integrity. Our ethos: SECURITY IS EVERYTHING. Our products, our service, and our mission will not be compromised. Our mission is to provide the most secure authentication process available on the market, and match that with the most affordable price point in the market.

The Maverick family is founded on several core principles:

- To stay ahead of hackers and rogue elements by providing the strongest, most secure, highly innovative and patented authentication processes available;
- To provide a great product at a reasonable price;
- To be responsible to our customers: your success is our success;
- To be responsible to our employees: we all work hard and so we should all share in our collective successes.
- To be responsible to this land that we all share: make every effort to create a sustainable product that will contribute to the health, vitality and industry of this planet;
- To invest in solutions that will enable the business community to grow and develop: businesses of all sizesare the backbone of our communities, our culture and our country.

Maverick Secure is fully invested in developing and protecting a work environment that rewards integrity and embraces diversity. We believe in quality service and support this with a strong work ethic. Here at Maverick Secure, we will not compromise integrity for profit. We will not discriminate on the basis of race, ethnicity, religious preference, sexual orientation or gender – rather, we will truly endeavor to embrace and elevate individuals who deliver on our core values. It's simple really: your success is our success. We believe in good honest work, and we will work hard to produce the tools, the solutions, and resources that make your task easier, more efficient, more profitable and most importantly, MORE SECURE.

On behalf of the Maverick family, I welcome you to learn more about our family of products, and to become our next Maverick Secure satisfied customer.

Thank you.

Patrick McNicholas Managing Partner









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# Introduction

Financial institutions are prime targets for hacker attacks because fortunes are channeled through a bank's electronic systems daily. Fraud in its newest incarnations (i.e. man-in-the-browser attacks) should therefore be prevented with strong authentication systems.

# Case Scenario

A European bank wanted to increase usage of its online banking system through increased customer confidence in its data security systems currently in usage. Therefore, the bank wanted to raise customer confidence through a strong authentication system

#### **Mayerick Solution**

The Maverick 4-F<sup>TM</sup> security authentication system, with its four-factor authentication, PKI and OTP capabilities, was deemed able to meet the bank's requirements for a more robust authentication service for use at the bank's web portal.

# **Key Requirements**

- Robust authentication system vs MITB attacks.
- Easy to use
- Easy to implement

# Challenge

A strong but cost effective multi-factorial authentication system was a challenge to find.

### Implementation

Distribution and activation of the Maverick 4-FTM authentication system among its customers boosted confidence in the bank's ability to safeguard customers' financial transactions at the bank's web portal. Soon, most of the bank's high-network clients took to using the security tokens and reported enhanced confidence in the bank as a result of the new security implementation.

#### Results

- Increased Online Transactions
- Lower Operating Costs
- Effective Use and Deployment

# **About Maverick**

MAVERICK is dedicated to high-quality, affordable, user-friendly, scalable, and seamlessly-compatible technologies addressing the critical needs of the rapidly developing authentication market.







# Financial security and management made more secure by Maverick 4-F<sup>TM</sup> authentication system.

#### At-A-Glance

# **Key Requirements**

- Robust authentication system capable of preventing Man–In–The–Browser (MITB) attacks.
- Easy to use so customers will not become frustrated.
- Easy to implement—i.e., deployment and administration is simple to reduce costs.

#### Solution

■ A strong multi-factor authentication system in the Maverick 4-F<sup>TM</sup>, combining PKI functions and one-time passwords (OTPs) with four-factor authentication.

#### Results

- Increased online transactions.
- Lower operating costs.
- Effective use and deployment.

#### Introduction

Technological advances by malicious attackers in the field of online banking have taken online financial fraud to a new level. Since username and passwords weren't strong enough to deter malicious attackers security tokens, one-time passwords (OTPs), and voice-recognition techniques were introduced. Now, even these security precautions are no longer enough to stop the state-of-the-art malware targeted at highvalue financial institutions and transactions. Man-in-thebrowser (MITB) malware, delivered through social engineering, are capable of secretly infecting users' browsers and positioning itself between the customer and the financial institution, intercepting any credentials and OTPs entered and passing off altered amounts and recipient accounts (all the while undetected even by the host computer's malware scanners) from the unsuspecting bank. The result is millions lost through fraud, loss of bank credibility, and lawsuits.

Clearly a stronger authentication system, one that's capable of stopping MITB malware in it's tracks is needed for online banking.

#### Case Scenario

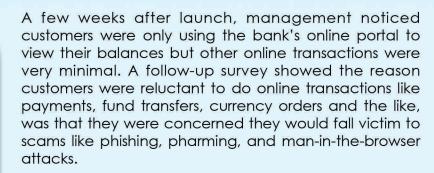
A large European bank (50 million customers, 12,000 branches and over €7 billion (\$9 bn)) decided to offer an online banking service to its wealthier customers in order for them to access and transact with the bank anytime, anywhere when it came to making payments, debit/credit financial advice, buying foreign currencies and so on. The service was also expected to attract more high-net-worth (HNW) customers while reducing back- office work and costs related to customers going physically to the bank for their transactions.





# Challenge

The challenge was finding an authentication security system that thwarted modern cyber attacks while remaining cost effective and easy to use/implement.



This failure to meet objectives was unacceptable for the bank—especially in the face of mounting operating costs. Since they already identified the problem (lack of confidence), the bank decided the best way to raise customer confidence on their online banking service was through a strong authentication system, for both high-net-worth customers and employees, that would not only be easy to use, but would be simple to set up and affordable as well.

Accordingly, the bank evaluated vendors and systems capable of stronger authentication while meeting the bank's needs.



After 3 months of evaluating various strategies and vendor solutions, the bank determined that the best solution was the one offered by Maverick Secure LLC—the Maverick 4-F<sup>TM</sup>.

The Maverick 4-F<sup>TM</sup> is a breakthrough 4-factor password system. It combines a hardware authenticator with a built-in USB driverless smart card Public Key Infrastructure (PKI) token through generating one-time passwords (OTPs) and PKI functions. Offline, Maverick 4-F<sup>TM</sup> generates time or event based OTPs. When connected in a PKI environment, it provides robust and secure storage for credentials and digital certificates. Maverick 4-F<sup>TM</sup> is OATH standard compliant, further taking full advantage of the PKI mechanism to keep information safe and secure.









#### Results

In the first six months of Maverick 4-F<sup>TM</sup> security authentication rollout, results were positive.

- 1. Incremental Online Transactions
  The bank noticed a 40%
  increase in the use of the
  bank's online services with an
  accompanying increment in
  new HNW customer
  enrollments.
- 2. Lower Operating Costs
  There was also a marked
  decrease in operating, labor
  and staffing costs. This was
  perceived to have a positive
  effect on the year's profits.
- 3. Effective Use and Deployment
  The solution was found to be
  highly effective in both raising
  customer's confidence in the
  bank and in stopping MITB
  attacks.

In addition to not needing any installation on the endusers' computers, the Maverick 4-F<sup>TM</sup> also came with the Maverick Monitor for the server side; a web-based administrative tool that provided the bank's IT staff with the means to monitor anomalies in the pattern of user transactions—i.e. the GPS coordinates reported by the customers' smart phones, amount of transactions, and account changes. By this means, customers with unusual or flagged transactions flagged were sent either a text message of the summary of the transaction, about to be concluded plus a confirmation number, allowing the customers to compare what they saw on their browsers and what was sent to them. This quickly allowed customers to identify and avoid MITB attacks.

# **Implementation**

After three months of testing the new authentication system, in onsite and out-of-bank environments, the bank found out customers and employees alike took to using the security tokens with confidence. This gave the bank the green signal to roll out the security solution.

Out of the bank's 50 million customers, they had about 2 million high-net-worth clients. The Maverick 4- $F^{TM}$  was first rolled out to 50,000 of the bank's employees, and 500,000 high-net-worth (HNW) customers.

# Summary

The bank's implementation of the Maverick 4-F<sup>™</sup> solution had proved effective, easy to use and implement and, above all, economically feasible.







# **About Maverick Secure LLC**

Maverick provides multi-factor authentication solutions to safeguard confidential digital records and data. It is applicable to industries including technology, Internet, healthcare, education, financial services, government, military and subscription services. Maverick's strong multi-factor authentication processes are your solution when passwords just aren't enough to protect your sensitive data from unauthorized users and hackers.

The Maverick brand is dedicated to providing the business community with a high quality and affordable alternative to the pre-existing/overpriced offerings currently available in the market. By providing user-friendly, scalable and seamless compatible technologies, our products match and very often exceed our competitors' products while remaining price sensitive, affordable and much greater offering value for money.

Maverick offers stronger security by leveraging the industry's leading multi-factor authentication processes in very unique and efficient out-of-band channel methods. By living up to its name, Maverick takes a unique "out of the box" strategic perspective in protecting our clients from the threats that surround us in this constantly evolving security-vulnerable world. Maverick provides an easy-to-use approach for users while providing the highest level of security as an overlay to existing business applications and systems.

The Maverick brand started out as Maverick Computers and was named as "One of the fastest growing computer companies in North America," "#1 Solution Provider" and the "#1 System Builder in North America based on growth (2004)," and "Server Innovation Award" by CRN Magazine for developing a virtually indestructible server. The company then launched a new sister company called Maverick Communications which was awarded "2005 North American System Builder Association – Business Innovation of the Year" for creating an integrated array of video, voice and data services that included what was then the world's fastest Internet access for consumers at 45mbps. Over the past five years a new division of the Maverick brand, Maverick Secure LLC., was launched to combat the ever-evolving and tenacious attacks of hackers such unauthorized access of data and the multitude of other security breaches have caused serious turmoil within the computer and associated industries. In 2009 Maverick partnered with IBM, the number one server company in the world for enterprise users, to develop the "Maverick SMART Server Powered by IBM." By utilizing the award winning hardware of Maverick Computers, the industry's leading authentication process of Maverick Secure and the online and business applications of IBM, Maverick is now positioned to deliver end-to-end solutions for businesses small and large. We believe we have brought together the perfect harmony of leading technologies to offer one of the most secure solutions that addresses issues related to password authentication.







# Contact Us

To learn more about how 4-Factor Authentication products, services, and solutions help solve your business and IT challenges please contact your local representative or authorized reseller.

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Maverick helps organizations secure and manage their information-driven world with security management, endpoint security, messaging security, and application security solutions.

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