



Investec goes global with push-based, in-app user authentication

With Entersekt's multi-factor authentication in hand, clients of an international specialist bank enjoy the fruits of its digital innovation without increasing their exposure to cybercrime.

The challenge

A uniform, streamlined experience

Investec places a strong emphasis on individual relationships, as may be expected from a specialist bank and asset manager with a niche clientele. Its clients are discerning, actively engaged, and highly mobile. They expect a streamlined, uniform experience no matter the country, self-service channel, or business division.

The bank wanted to enhance the security of its online banking channel in a way that would surpass these expectations. It was looking for a global solution that would secure everyone – customers across all business units, private bankers and intermediaries, internal staff – on a single platform underpinning all self-service channels.

There was just one complication. Investec's mobile app was already in an advanced stage of development, and the team responsible for the project was implementing a mobile security solution based on the same device fingerprinting and antivirus technologies used for the bank's online banking portal.

Technologies that can secure a personal computer are not equally effective on mobile. Device fingerprinting and antivirus solutions need a lot of information but are starved of it on the mobile device. All mobile operating systems have been designed to isolate applications from each other for security purposes, so apps can only gather a limited amount of information about their environment. This data is equally accessible to all apps on the device and can be copied inside a mobile simulator, leaving the mobile device fingerprint open to duplication. Further, each time something on the device changes, its fingerprint is modified. For the end-user, this usually involves the inconvenience of re-registering their mobile app.

The solution

Unique mobile device ID using digital certificates

STAGGERED ROLLOUT BEGINS WITH ONLINE BANKING

Investec first deployed Entersekt's technology in early 2014 to provide its South African clients with user-friendly protection of online banking. This mobile-based, two-factor authentication solution was built using Interakt, an Entersekt authentication product that leverages push USSD for real-time, session-based data exchange between a service provider and any GSM handset. (Entersekt holds the necessary commercial agreements with all mobile network operators in South Africa to provide a push USSD solution in this market.)

The solution disencumbered users of the one-time passwords (OTPs) they had previously received via SMS and retyped into their browser. Instead, they could authorize transactions with a simple tap on their mobile devices. The authentication process was also now entirely out of band, eliminating threats posed by phishing, man-in-the-middle/browser, and keystroke logging attacks.



"With Entersekt, we saw an opportunity to improve the user experience dramatically, while at the same time enhancing security on the mobile channel. The Transakt SDK allows us to offer the same level of functionality our existing mobile users have come to expect from us, and take it to our UK-based clients with enhanced security features in place. Entersekt has a strong security roadmap, so we are confident that, working together, we will stay ahead of fraudsters."

— Lyndon Subroyen
Global Head of Digital,
Investec



Investec is a specialist bank and asset manager that provides a diverse range of financial products and services to a niche client base in three principal markets – the United Kingdom and Europe, Southern Africa, and Asia-Pacific.

The group employs 9700 people worldwide and manages client assets totalling £151 billion (\$197.7 billion).

Investec is a FTSE 250 company listed on both the London Stock Exchange (LSE:INVP) and the Johannesburg Stock Exchange (JSE:INL).

Visit www.investec.com.

REPLACEMENT OF HARDWARE TOKENS FOR CORPORATE ACCESS

Built on open standards, Entersekt's products are easily integrated with complex IT environments. Using the stand-alone Transakt security app and a standard RADIUS integration to the bank's single sign-on platform, Investec next secured employee access to internal networks. As an early confirmation of the solution's usability, increasing numbers of staff volunteered to join the trial of this functionality. They had been using hardware tokens to generate OTPs in order to gain access. Now, all it took was a tap on their mobile device. And, while many had often forgotten their hardware tokens at home, they were never without their phones.

UNIFIED DIGITAL CHANNEL SECURITY ON THE TRANSAKT PLATFORM

A year later, Investec integrated the Transakt SDK into its mobile banking app, replacing the push USSD solution used by its South African clients while providing the service to its clients in the United Kingdom for the first time. Globally, Investec's clients share the same user experience, free of the hassle of SMS OTPs.

The solution, which protects both mobile and online banking transactions, rests on Entersekt's patented emCert mobile certificate technology. Instead of relying on limited device fingerprinting and antivirus technology for security, Transakt generates a public/private key on every enrolled client-held device, uniquely identifying it and converting it into a trusted second factor of authentication. Authentication prompts pushed to the mobile are similarly validated on the device, so Investec's clients can be sure of their source.

Their one-tap "Accept/Reject" responses are signed with the device's private key, supporting nonrepudiation. All communications between their device and the bank are encrypted from end to end and cannot be accessed or manipulated en route. As a bonus, they no longer have to re-enrol themselves when they upgrade phones or update mobile operating systems. New products can be launched without re-enrolment or other user action.

Having reliably established the identity of the banking customer through Entersekt's technology, Investec is free to expand its digital offerings with confidence and imagination.

IN BRIEF

- Replaces OTPs, saving costs while making life easier for clients and employees
- Avoids ineffective mobile device fingerprinting technology, instead using X.509 digital certificates to uniquely identify the device, digitally sign transactions, and provide encrypt all communications
- Provides a self-contained cryptography stack that is invulnerable to mobile malware and allows out-of-band, two-factor authentication of transactions initiated on the same device
- Prevents phishing, man-in-the-middle/browser, and SIM-swap attacks
- Can be deployed rapidly and scales to millions of clients with ease
- Comes with a roadmap that positions the bank favorably in the race against cybercrime
- Provides the freedom to launch innovative mobile offerings with confidence



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