



## EzIdentity E2E SDK End-to-End Digital Encryption & Signing made easy

### End-to-End Encryption prior to Authentication (E2EE)

For Banks seeking to implement compliance driven Data confidentiality and Integrity, EZMCOM offers its E2E SDK. An easily pluggable, platform independent End-to-End application layer security that ensures encryption process is kept intact from the point of data entry to the [final system destination where decryption and/or authentication takes place](#). Confidentiality and Integrity of User data from one point to another point at application layer is easily ensured by the E2E SDK integration.

#### The Problem:

Regulatory authorities across the globe have acknowledged the threat of Phishing to financial institutions and called for stronger authorization and authentication for their online customers. In the U.S., FFIEC and Securities and Exchange Commission has warned users of keystroke-logging software, phishing scams and traditional snoops as ways fraudsters could obtain access to online banking accounts and steal money. Regulators across the globe such as Monetary Authority of Singapore (MAS) has set forth Internet Banking and Technology Risk Management Guidelines (IBMRT) that requires end-to-end user data confidentiality and integrity at an application layer independent of underlying transport layers (SSL).

As banks deploy 2<sup>nd</sup> Factor authentication for logins, they also need to address the End-to-End encryption /Decryption of these authentication credentials of the user in their Internet Banking systems for compliance. Regulations require the bank to implement encryption security pertaining to the customer's PIN and other sensitive data in an end-to-end approach at the application

layer. This means the encryption process is kept intact from the point of data entry (i.e. Browser) to the final system destination where decryption and/or authentication takes place. This could require a multi channel implementation by the Bank catering to the Mobile Banking, Internet Banking, B2B Third-Party vendor integration that involves customer information etc. Furthermore, Banks need to cater for heterogeneous Operating System and Browser platforms as well.

More often due to issues of interoperability (Java to .NET or Mobile Operating systems to PC /Workstations), Banks find it challenging to implement E2EE for their IT systems.

#### The Solution:

EzIdentity E2EE SDK is a robust suite of libraries and plug-ins that extend the benefit of Public Key Encryption for all regulatory and compliance driven application layer encryption. Use of a 3<sup>rd</sup> party vendor library allows the Bank to abstract the E2EE application layer security from its application vendors and command more control and flexibility.

#### E2EE Checklist:

“The most important aspect of data encryption is the protection and secrecy of the cryptographic keys used, whether they are master keys, key encrypting keys or data encrypting keys. No single individual should know entirely what the keys are or have access to all the constituents making up these keys. All keys should be created, stored, distributed or changed under the most stringent conditions.”

[Section 4.1.3, IBTRG v3.0, MAS](#)

“It should be noted that SSL is only designed to encrypt data in transit at the network transport layer. It does not provide end-to-end encryption security at the application layer”

[Section 4.4.6, IBTRG v3.0, MAS](#)

“Encrypt transmission of cardholder data across open, public networks “

[PCI DSS Requirement 4](#)

“You may not know it, but you're leaving millions on the table when it comes to business-to-business e-commerce ...

... Experts and practitioners say companies should require their B2B partners to use encryption for any sensitive information - customer data, marketing strategy, labor relations and unreleased financials - transmitted over the Internet.”

[CSO, the Resource for Security Executives](#)



## EzIdentity E2E SDK Platform Independent, Rapid Implementation

### Browser Plug-in: E2EE SDK

The point of entry of sensitive data such as User PIN /Password or Transaction details often begins from the browser. EzIdentity E2EE SDK provides a browser agnostic Java plug-in with simple APIs for integrating via the pre-existing Java Scripts or Applets of an Internet Banking system. Employing standards of Public Key encryption, this plug-in provides a quick and user transparent implementation of E2EE at point of data entry.

### Mobile platform Plug-in: E2EE SDK

Mobile Banking and commerce applications of a Bank are points of entry of sensitive data of the User as well. EzIdentity E2EE SDK provides libraries for integration to iPhone, J2ME MIDP 1.0+, Blackberry Firmware 3.6+, and Windows Mobile 5.0+. Interoperable cryptography implementation for each mentioned mobile operating systems allow the Banking applications to easily implement E2EE by integrating with these libraries.

### Server side Plug-in: E2EE SDK

E2EE SDK for Linux and Windows Operating systems allows J2EE and .NET Bank applications to process the User information for Decryption /Authentication in compliance to the regulations. Stringent Key Pair protection implemented in an EzIdentity Strong Authentication platform can be leveraged for robust security.

### EzIdentity Benefits

**Ease of use:** End-users transparent, Simple APIs to integrate at Client and Server side. Benefit from rapid implementation and robust security.

**Standards-based:** Implements Open standards of Cryptography and FIPS compliant algorithms. RSA PKCS, Triple DES, AES, RC2, OATH standards.

**Compliance:** Standards and regulatory compliance for identity, privacy, policy enforcement, audit and authentication services (MAS IMTRG, Sarbanes-Oxley, Basel II, GLBA, HIPAA, FFIEC and more).

**Compelling ROI:** Maximize ROI on existing 2FA Strong authentication deployment of EzIdentity. Minimal IT enablement required.

**One Stop Solution:** Allows multiple applications to integrate and implement various configurations of security as deemed necessary by the application. A centrally managed solution that can provide interoperability across various Browsers, Mobile Operating systems, Windows and Linux Operating systems. Cross compatibility across J2EE and .NET



### About Us

EZMCOM designs, develops, markets and supports identity protection products for the financial world, business and commerce over converging wired and wireless data channels.

[Sales@ezmcom.com](mailto:Sales@ezmcom.com)

Copyright © 2007-2008 EZMCOM, Inc. All rights

