Solution Brief

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Converged Badge Solutions for Physical and Logical Access Control

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In today's digital and hybrid work environments, organizations must secure both physical access to facilities and logical access to applications, networks, and sensitive data. Yet these access points are often managed through fragmented systems, with physical badges used for building entry and passwords still governing access to IT environments. Traditional authentication methods, particularly usernames and passwords, are no longer sufficient to withstand modern cyber threats. Repeated breaches have demonstrated the vulnerability of password-based security, exposing organizations to phishing, credential theft, and unauthorized access. As a result, this fragmented approach increases security risks while driving operational inefficiencies, higher IT support costs, and a complex user experience.

To address these challenges, organizations are adopting converged approaches based on smart card authentication. Thales SafeNet smart card solutions, leveraging certificate-based authentication (PKI) and FIDO authentication, enable strong, phishing-resistant multi-factor authentication across enterprise systems. By integrating these technologies into the IT infrastructure, organizations can secure access to workstations, networks, and applications while reducing reliance on passwords. These solutions support a wide range of platforms, including Windows, macOS, Linux, and mobile operating systems, and integrate seamlessly with enterprise ecosystems such as Microsoft environments. In addition, smart cards function as secure ID badges, enabling organizations to verify user identity both physically and digitally, while delivering a unified and consistent access experience.

Putting it all together

Beyond securing logical access to IT systems, organizations must also control access to physical locations such as offices, doors, parking facilities, and restricted areas. A converged badge solution enables both by allowing users to rely on a single credential for all access needs. Instead of managing multiple passwords and credentials, users can authenticate using one smart card and a single PIN, significantly simplifying the user experience while strengthening security.

This unified approach also enables enterprise IT teams to easily deploy additional secure applications, including single sign-on (SSO), remote access, and document security through digital signing and encryption. At the same time, organizations can enforce granular, role-based access policies, ensuring that each user is granted the appropriate level of access based on their function and responsibilities.

Reduce costs and improve return on investment

Lower IT support costs with passwordless authentication

Enable passwordless access for key use cases such as workstation logon, VPN, and privileged access. This significantly reduces service desk requests, including password resets, account lockouts, and MFA re-enrollment—cutting ongoing operational expenses.

Consolidate credentials into a single smart card

Replace physical badges, MFA tokens, and multiple identity credentials with one device supporting both logical (PKI/FIDO) and physical access. This reduces per-user costs and simplifies issuance, replacement, and lifecycle management.

Reduce compliance and audit overhead

Leverage certified security standards (FIPS, Common Criteria, eIDAS-ready) to streamline audits, reduce custom documentation, and accelerate acceptance in regulated environments.

Extend lifecycle and maximize asset utilization

Benefit from on-card key generation and modern cryptography, enabling longer credential lifespans, fewer refresh cycles, and improved amortization of card investments.

Simplify deployment and lower operational costs

Native integration with major operating systems reduces the need for custom development, minimizes middleware complexity, and lowers implementation and maintenance costs at scale.

Privileged Access Users

Privileged users exist across every organization and have access to its most sensitive systems and data. While often associated with executives or roles in finance or HR, many privileged accounts belong to IT administrators managing critical infrastructure. These identities carry elevated permissions across systems and applications, making them prime targets for credential-based attacks. Securing privileged access is therefore essential to reducing organizational risk. A converged badge solution enables organizations to assign access based on job roles while enforcing fine-grained controls across both physical and digital environments.

Related Product Portfolio

Smart Cards

Thales offers an assortment of smart cards with dual physical and logic access, including SafeNet IDPrime contact cards with a wide choice of card body options and contactless technologies and dual interface cards compatible with NFC.

IDprime 931/941 is a hybrid card with contact interface for logical access and contactless interface for physical access.

The SafeNet IDPrime 941 and 941C is the new Common Criteria hybrid card with contact interface for logical access and contactless interface for physical access. IDPrime 941 and 941C is Common Criteria certified, eIDAS qualified, including coverage for both eSignature and the eSeal use cases, and is ANSSI qualified for compliancy with the French administration requirements.

Converged Badge Management Tools

With FIDO and PKI-based deployments, proper management of authenticators is critical. Thales provides a comprehensive suite of tools, allowing businesses to maintain secure and efficient authentication processes from authenticator activation to revocation.

SafeNet Minidriver offers lightweight PKI management functionality and is perfect for small to medium size businesses with limited deployments in Windows Environment. SafeNet Minidriver supports Thales extensive portfolio of certificate-based authenticators, including IDPrime smart cards.

SafeNet Authentication Client – A unified middleware to install on your desktop client, that enables converged badges for logical access by allowing users to manage their own card certificates. Thales extensive portfolio of certificate-based authenticators including IDPrime smart cards

FIDO Key Manager – A standalone desktop and mobile application that enable configuration through security policies of FIDO credentials associated with converged badges, combining user self-service with enterprise-grade controls. well suited for mid-scale FIDO deployments. Support Thales extensive portfolio of FIDO security keys including IDPrime FIDO smart card series and Enterprise Edition.

Authenticator Lifecycle Manager Suite - Centralized lifecycle management platforms for FIDO authenticators used in converged badges, enabling secure enrollment to multiple Identity Providers on behalf of the user or in self-service, security policies enforcement, such as PIN length or allowed web services, PIN unblock & comprehensive auditing. These platforms are well suited to large scale deployment and support Thales extensive portfolio of FIDO security keys including IDPrime FIDO smart card series and Enterprise Edition.

- Authenticator Lifecycle Manager Cloud is a SaaS well suited for cloud environments.
- Authenticator Lifecycle Manager On Premise, to install on premise or in private cloud environments, is well suited for organizations already using PKI badges and looking for enabling FIDO in addition to PKI use cases.

About Thales's CMS and Authentication Solutions

In today's digital landscape, organizations rely on Thales to protect what matters most - applications, data, identities, and software. Trusted globally, Thales safeguards organizations against cyber threats and secures sensitive information and all paths to it — in the cloud, data centers, and across networks. Thales offers platforms that reduce the risks and complexities of protecting applications, data, identities and software, all aimed at empowering organizations to operate securely in the digital landscape. By leveraging Thales's solutions, businesses can transition to the cloud with confidence, meet compliance requirements, optimize software usage, and deliver exceptional digital experiences to their users worldwide.