Identity Management & Windows
Smart Card Infrastructure

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Overall Presentation Goal

To educate you about Windows Smart Card Framework for strong authentication and compliance needs
Learning Objectives

As a result of this presentation you will be able to:

– Understand Windows Smart Card Framework and its value proposition
– Products associated to deploy and manage Smart Cards and related applications
“It is estimated that through 2009 worldwide, Smart-card shipments will grow at an annual clip of 22% for financial services and 40% for identity and security applications for government”

Source: Frost & Sullivan
Presentation Agenda

• Introduction
• Windows Smart Card Vision
• Windows Smart Card Framework (WSF)
• Resources
• Summary
Introduction

• Mantra for today’s e-governments and e-businesses
  – Strong Authentication
  – Personalization
  – Privacy
  – Security
Windows Smart Card Vision

Windows digital identity is trustworthy, simple, and universal.

- Simplified Experience
- Cost Effective
- Compliant
- Interoperable
Windows Smart Card Framework (WSF)

- A comprehensive set of Microsoft technologies designed to simplify use, manage and deploy Smart Cards
- Very simply: “Enable Smart Cards for strong authentication on every desktop”
- Availability: Windows 2000 onwards
Why Smart Cards?

- Align with national and citizen eID projects
- Provide framework for ubiquitous strong authentication across consumers and enterprises
- Basis for the “Identity Metasystem”
- Enable long term solutions against identity theft

Windows Smart Card Framework

- User Experience
- Management
- Infrastructure
- Quality
- Branding
- Deployment
What about OTP and Biometrics?

- Biometrics and OTP have inherent long term security challenges
- Neither provide strong cryptographic keys for authentication, digital signatures or encryption
- Windows Vista credential provider model simplifies development and extensibility
- Smart Cards are Microsoft’s strategic direction for strong authentication
Customer Requirements

- Simplify end user experience
- Reduce TCO
- Improve Authentication Platform
- Provide Quality Benchmark
- Provide more value for IHVs
- Enable lower cost of deployments for consumers
WSF: Vista User Experience

- Better Integration of Smart Cards with Applications
  - Common Logon UX
  - Integrated Credential UI
- In-box Smart Card Scenarios
  - Multiple Certificates based Smart Card logon
  - Integrated PIN Change & Unblock
  - Root Certificates on Card
  - Performance Improvements
WSF: Vista User Experience
WSF: Management

- Flexible and Scalable Card Management Solution
- Integrated and Comprehensive Solution: Active Directory + Certificate Authority (CA) + Certificate Lifecycle Manager (CLM)
- Configurable workflow and policies
- Card applet management
- CLM Beta2 available; RTM CY’07 Q1
WSF: Management - CLM

Functional overview

- Single administration point for digital certificates and smart cards
- Configurable policy-based workflows for common tasks
  - Enroll/renew/update
  - Recover/card replacement
  - Revoke
  - Retire/disable smart card
  - Issue temporary/duplicate smart card
  - Personalize smart card
- Detailed auditing and reporting
- Support for both centralized and self-service scenarios
- Integration with existing infrastructure investments
  - Windows Active Directory; Windows Certificate Services
WSF: Management - CLM

Architectural overview

Physical Architecture
- E-mail
- AD
- SQL
- Microsoft CAs
- Microsoft Certificate Lifecycle Manager
- End User

Component Architecture
- Microsoft Certificate Authority
- CLM Policy Module
- CLM Exit Module
- CLM AD Integration
- CLM Web App
- Internet Information Server
- Internet Explorer
- CLM Browser Control
- Smart Card Middleware
WSF: Infrastructure

- Simplified Base CSP/Card Module architecture
- Reduced development time compared to CSPs with Card Modules
- Simplified Credential Provider architecture
- Smart Card scenarios continue to work without modification
WSF: Quality

- **Smart Card Certification Centre**
  - Certification program for Smart Card Middleware
  - Card Module Certification Kit

- **Windows Hardware Quality Labs (WHQL)**
  - PC/SC based Card Reader Driver Certification
  - Card Reader Driver Certification kit available via WDK

- **Card Modules and Reader Drivers**
  available via “Windows Update”
WSF: Branding

- Designed for Windows Logo
- Managed by WHQL
- Widely recognized and trusted by consumers for consistent user experience and reliability
- A pre-requisite to get on “Windows Update”
WSF: Deployment

• Plug-n-Play functionality for Card Modules and Reader Drives via Windows Update
• Seamless User Experience
• Simplified deployment vehicle for IHVs and ISVs
• Auto Enrollment of Certificates for Smart Cards in CA
• Card Applet provisioning via CLM
Additional Resources

• Certificate Life Cycle Manager
  http://www.microsoft.com/clm

• MSDN documentation - Base CSP, Card Modules, Crypto, WinSCard and Credential Provider API -
  http://msdn.microsoft.com ; Sample Code: SDK

• Certificate Authority
  http://www.microsoft.com/PKI

• For questions on Credential Provider, contact -
  credprov@microsoft.com
Summary

- Windows Smart Card Framework - platform infrastructure improvements
- Products - Certificate Life Cycle Manager (CLM) and Certificate Authority (CA) for deployment and management of Smart Cards, Certificates and related applications
If You Only Remember One Thing . . .

Microsoft has a complete end-to-end solution for Governments and Businesses needing strong authentication with Smart Cards.