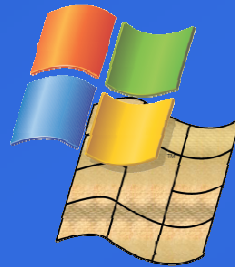


# Windows Smart card Framework

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# Microsoft is investing in the smart card ecosystem...

- We recognize the problems with passwords
- Our customers tell us that:
  - Digital certificates are essential
  - Strong authentication and multiple factor auth. Are required
- Over the past 10 years Microsoft has
  - Enhanced the platform
  - Improved integration in the client
  - Added new features
  - Made acquisitions

# Windows Smart card Framework (WSF)

- WSF is a set of Microsoft technologies designed to simplify integration and deployment of smartcards
- Available on all supported Windows platforms
  - More than 10 millions of downloads

## Windows Smart card Framework

User  
Experience

Management

Plumbing

Quality

Branding

Deployment

# New smart card user experience in Vista

- Integrates smart cards with Windows' familiar and trusted user experience
- In-box smart cards scenarios
  - Smart card logon (multiple certificates)
  - PIN unblock, PIN change
  - New flexible Win Logon architecture
  - New Credential UI for web logon

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# Identity Lifecycle Management - ILM

- A scalable and flexible card management solution
- Active Directory + CA + ILM = a complete smart card and certificate management solution
- Enables card policies and card workflow scenarios

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## Smart Card Base CSP and SCKSP

- New simplified software infrastructure for smart card operations in Windows
- Reduces development time of software for new cards to 6-8 weeks
- Follows the principles of the proven Win2K printer mini-driver architecture
- Fully supported by ILM, EFS, Cards Space, MS Outlook, MS Office, Internet Explorer, etc.

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# Smart Card Certification Center (SCCC)

- Certifies that smart cards + mini-drivers meet a high quality bar
- Provides vendors tools and processes to meet WHQL (Windows Hardware Quality Lab) standards
- Awards smart cards and mini-drivers the “Designed for Windows” logo

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# “Designed for Windows” Logo for Smart cards

- Managed by WHQL – Windows Hardware Quality Labs
- Widely recognized by customers as a logo for hardware that works with Windows
- A prerequisite to get on “Windows Update”



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# Deployment via “Windows Update”

- A deployment vehicle for card vendors to reach 100's millions of desktops using Microsoft's infrastructure
- Available automatically to all SCCC certified cards and mini drivers

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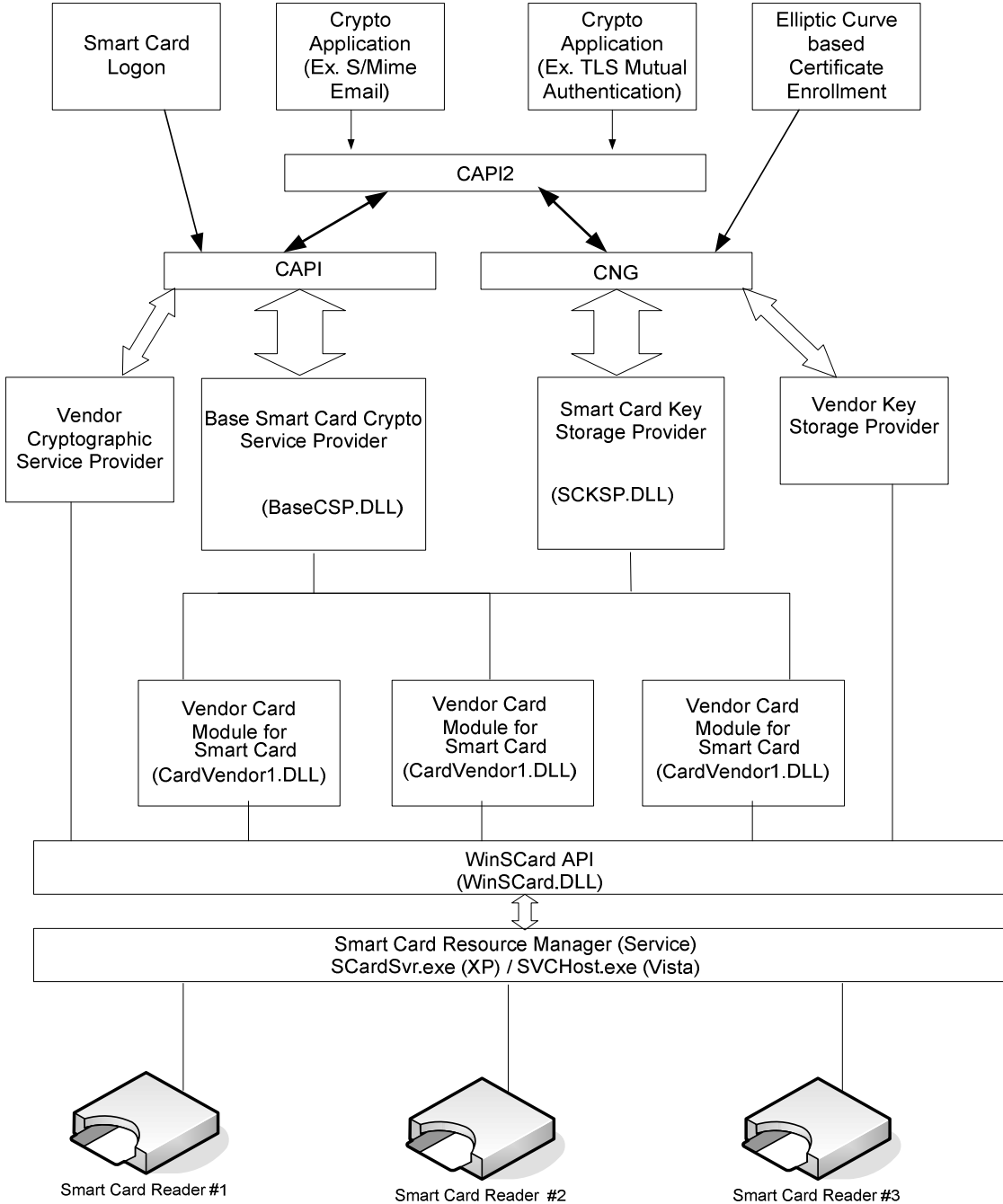
Quality

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# WINDOWS SMART CARD FRAMEWORK

## Cryptographic architecture in Vista



# Base CSP vs. Monolithic Custom CSP

- Prior to the Base CSP, vendors had to write a complete, custom software CSP to enable smart card scenarios. Microsoft recognized that a CSP is unnecessarily complicated software to create just to enable a smart card hardware interface layer.
- Microsoft also noted that CSP implementation quality varied from vendor to vendor as the level of cryptographic expertise and the ability to make quality control investments varied.
- The Base CSP passes to the mini driver 6 functions for an optimized use of memory and data caching

# Windows Smart card Framework: some considerations...

- The WSF, mainly, supports cryptographic use of a smart card when it operates in the Windows environment (Logon, Authentication, eSignature, SSO, etc.)
- The WSF doesn't address all the card administrative and management functions (this role is covered by ILM)
- In general, each mini driver addresses a single card application rather than the smart card as a whole

# WSF Resources

- White papers and specifications:

- **Enterprise Smart Card Deployment in the Microsoft® Windows® Smart Card Framework**

<http://www.microsoft.com/downloads/details.aspx?FamilyID=fa7ec97c-11be-4e53-a0c4-04719b6a7ab6&DisplayLang=en>

- **Windows Vista Smart Card Infrastructure**

<http://www.microsoft.com/downloads/details.aspx?FamilyID=ac201438-3317-44d3-9638-07625fe397b9&displaylang=en>

- **Mini Driver specifications (version 5 and 6)**

<http://www.microsoft.com/whdc/device/input/smartcard/sc-minidriver.mspx>

# Q&A...

Or send your questions to [salfra@microsoft.com](mailto:salfra@microsoft.com)

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