ProtectTools Smart Card Security Manager

Executive summary

$89,000. According to the 2002 Computer Security Institute/FBI Computer Crime and Security Survey, this is the average financial loss of a stolen notebook computer.

How much will it cost you if your financial reports, e-mail, years of confidential corporate information and personal data are stolen—and what can you do to protect it?

Current situation

Stealing sensitive data on a notebook computer is a surprisingly easy task, as malicious intruders have a variety of tools and techniques to gain access to your information. For example, would-be thieves can gain access to your system by stealing or retrieving your password using well-known cracking programs. Information can also be read from your hard drive by bypassing operating system security. Such techniques include starting your computer with another operating system or physically moving your hard drive to another computer.

Introducing ProtectTools, the comprehensive HP client security solution

Built on open standards and HP intellectual property, ProtectTools—the HP family of security products, features and services—helps prevent unauthorized users from accessing business or personal data on your business PC and corporate network. ProtectTools has customizable capabilities that give business customers the flexibility to choose the solution that best meets their security needs, including solutions that use **Smart Cards**, easy to use credit-card size devices used worldwide, and Embedded Security, a hardware module that stores in silicon a root key for encryption and platform authentication.

The user-friendly design of ProtectTools makes it easy for you to address your security concerns.

Protect data on your notebook

HP has implemented the following levels of security to secure your notebook hard drive:

- The **Power-on password** helps prevent intruders from loading another operating system onto your notebook by prompting users to authenticate themselves before the computer will complete the startup process.
- The **DriveLock password** protects your hard drive, helping to prevent unauthorized users from connecting it to another computer to access your data. Although Power-on and DriveLock passwords are independent, the user gains the convenience of single sign-on by setting these passwords to the same value so the system conveniently starts after entering the power-on password. The HP implementation of the DriveLock feature utilizes the ATA-3 "high mode" specification and implements a dual password structure featuring a *Master* and *User* password.[1]
- The **F-10 BIOS administrator password**, when enabled, restricts access to the BIOS setup utility including DriveLock settings and other security features.
- The **HP Smart Card in BIOS**[2] feature brings an additional level of security by requiring users to provide a valid Smart Card—containing the power and BIOS passwords—to complete the startup process and access the F-10 BIOS setup utility.

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[1] When the DriveLock function is enabled and the User Password is forgotten, the device can be unlocked using the *Master* Password.
[2] Currently supported on select HP business notebooks.

HP ProtectTools Smart Card Security Manager can require users to provide a valid Smart Card during BIOS boot-up to complete the startup process.

Figure 1 Smart Card authentication process

Control access to your computer through strong authentication policies

Passwords can be insecure, expensive, and hard to use.

Strong password policies—requiring users to change passwords regularly and to memorize complex alphanumeric pass phrases—can be enforced to deter them from being guessed or stolen. However, this level of security can come at a price: How many passwords do you have? How do you keep track of them? How much does it cost you, in terms of productivity and technical support cost, to retrieve a forgotten password?

Alternative strong authentication mechanisms alleviate the usability issues and costs generated by password policies.

Access to your computer is generally granted, once you have proven your identity, through one of the following three authentication mechanisms by providing:

- **Something you know**: a combination of username and password
- **Something you have**: a physical token or Smart Card
- **Something about who you are**: such as your fingerprint or your retinal scan

Security experts recommend combining two or more levels of authentication for enhanced security.

HP ProtectTools Smart Card Security Manager provides the multi-level authentication mechanism you need by requiring two-factor authentication: your Smart Card (something you have) and your PIN (something you know). It provides three complementary features for your HP notebook computer:

- **Smart Card in BIOS** helps protect your notebook during the startup process by deterring an intruder from reinstalling an operating system or modifying system BIOS security features such as DriveLock.
- **Smart Card logon** increases security by replacing the Microsoft® Windows® login mechanism and storing user credentials (such as Windows username and password) on the Smart Card, making them more difficult to steal. ProtectTools also simplifies access to your computing devices by

3

allowing the same Smart Card to hold different profiles for each of your systems (such as administrator for your notebook, user for your desktop).

- **Secure lock** helps prevent unauthorized access to your unattended computer by locking your notebook upon removal of the Smart Card, replacing the **Ctr+Alt+Del** action.

Smart Card logon increases security by storing user credentials on the Smart Card.

Figure 2 Logging on with a Smart Card

Secure lock helps prevent unauthorized access to your unattended computer by locking your notebook upon removal of the Smart Card

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Figure 3 With Secure lock, notebook is locked when Smart Card is removed

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Other great security solutions that complement ProtectTools

Print your confidential documents more securely

How can you help guarantee the confidentiality of a printed job when it has been transmitted over the network in clear text? How do you help prevent unauthorized personnel from picking up your documents on your network printer?

Secure printing protects print jobs by encrypting them from the application to the printer and controlling the delivery of the printout by requiring users to authenticate themselves to the printer with their Smart Card. Only upon successful authentication will the data be decrypted and printed, helping to ensure confidentiality of your documents.

Securely store your digital certificate for e-mail or Web applications

The integrity of private keys used to secure your e-mails through digital signatures or to access restricted websites is critical to the privacy and confidentiality of your information.

HP ProtectTools Smart Card Security Manager can be used with common e-mail programs such as Microsoft Outlook, Lotus Notes, Netscape Mail; Web browsers such as Microsoft Internet Explorer and Netscape; as well as leading Public Key Infrastructure (PKI) solutions. Make use of the intrinsic security of Smart Cards to help securely store the digital certificates you use with your favorite e-mail and Web program.

Customize solutions for your business

Consolidate your business processes and save money by deploying smart badges – Smart Cards that not only secure your PCs and digital assets but also control access to your buildings and help transition your organization to cashless transactions.

HP Services can customize client security solutions to seamlessly integrate with your business infrastructure.

HP Consulting Services also offers security policy & awareness services to develop ground rules to assess, develop, implement, and manage your information security policy, along with an awareness and organization model to support security policy implementation and keep your security strategy up-to-date.

Summary and conclusion

The cost of losing the confidential information on your notebook can be devastating.

Stealing information on unprotected notebooks is a surprisingly easy task.

ProtectTools Smart Card Security Manager conveniently helps protect your digital assets, control access to your computer, and aids in saving money by deploying solutions that improve your business processes.

HP Consulting and Services can help you customize your Smart Card solutions to fit your business needs.

What are Smart Cards?

Smart Cards are plastic cards with an embedded Integrated Circuit Chip, conforming to the same size, thickness and other physical standards as plastic credit cards. Their success relies on their enhanced security features and ease of use:

- Difficult to forge; they are a great place to store your passwords or the private keys that secure your e-mail
- Light and attractive; they fit in every wallet

Best of all there is only one password to remember. Can you imagine a simpler way to secure and access your credentials?

Ordering ProtectTools Smart Card Security Manager

To benefit from ProtectTools Smart Card Security Manager, you will need:

- An HP product that supports ProtectTools Smart Card Security Manager, such as select HP business notebooks.
- The ProtectTools Smart Card kit (part number DC350B). Each kit includes:
  - One PC card Smart Card reader
  - One HP Smart Card
  - The HP ProtectTools CD-ROM, containing software and documentation

Complementary security products and services

- Security Cable Lock (part number DC368A)
- JetCaps SecureJet: http://h40041.www4.hp.com/jetcaps/index.html

For more information

For more information about HP ProtectTools Smart Card Security Manager, contact your HP hardware or services sales representative, or visit our website at: http://www.hp.com/products/security.