sc/interface with IGEL Endpoints

Protecting a terminal-server connection only with a password is very dangerous; hackers might attack the password query and penetrate the server system. Instead, it is advisable to use two factor authentication with smart cards. IGEL endpoints combined with cryptovision's smart card middleware sc/interface are an ideal solution for this purpose.

IGEL Technology's endpoint solutions are among the most powerful on the market. They are Europe's number 1 for Linux-based thin clients where they have been the German market leader since 2006 (source: IDC Thin Client Tracker 2016). In addition, IGEL provides endpoint solutions for third party hardware via the products Universal Desktop Converter and UD Pocket. IGEL OS, IGEL's own Linux-based operating system, runs on any compatible 64-bit, x86 device.
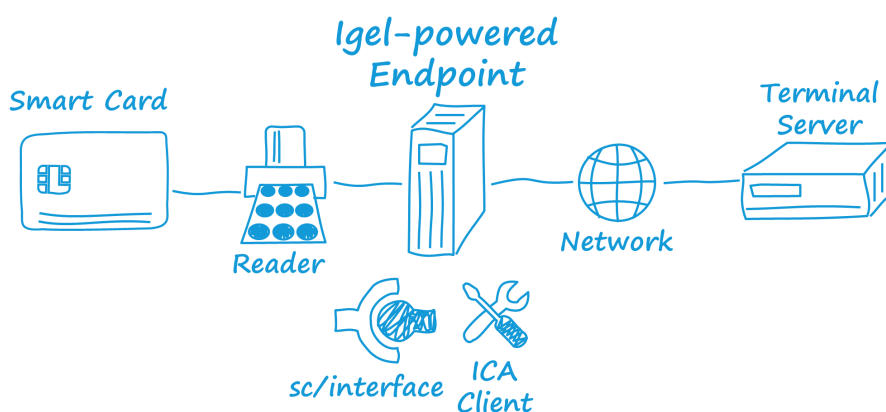
IGEL Endpoints are an interesting alternative to PCs. They are low in price and enable simple remote administration that lowers maintenance efforts and costs. IGEL Endpoints are not only suitable for conventional office applications but also for video, multimedia presentations and unified communications.
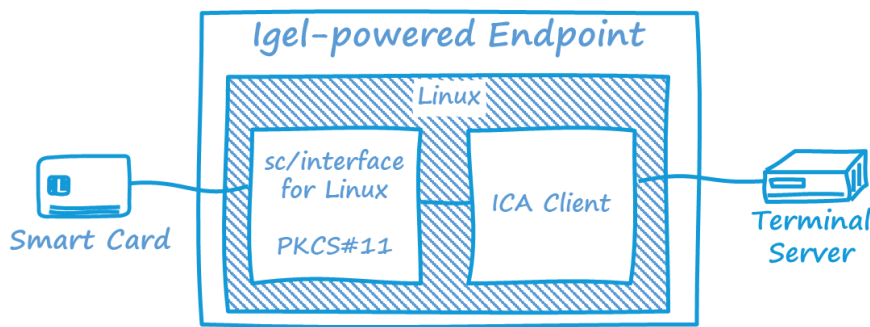
Endpoint Security
Even when it comes to security, IGEL Endpoints have clear benefits. They don't store secret data on a hard drive that might be stolen, but rather on a well protected central server. IGEL's Universal Management Suite (UMS) provides a single endpoint management solution with automated back-end control for IT, while delivering a trouble-free environment to users.

In addition, IGEL OS natively supports a wide range of smart cards and smart card readers which are redirected via the network to the sever. There it can be used for use cases like web logon or email decryption.

Smart cards improve security, as they are considerably harder to attack than passwords. In recent years numerous security breaches with millions of stolen passwords have shown that relying on passwords alone is not secure. Instead, a smart card should be preferred, as it stores secret information on a hardware protected crypto chip. Virtually all password-based hacker attacks in recent years could have been mitigated or even prevented entirely if the server operators had used smart cards for authentication.

IGEL-powered Endpoints support smart cards. The solution of choice to connect a smart card to its application is cryptovision's sc/interface.

IGEL endpoints run a Linux-based operating system. The PKCS#11 module for Linux connects to the smart card.

sc/interface for IGEL Endpoints

Together with cryptovision, IGEL has closed a security gap, which is often encountered in endpoint environments: authentication between an endpoint and the terminal server. For this purpose often passwords are used, even if smartcards are available. This is a security weakness often exploited by hackers.

As a solution, the smart card is used directly for connection establishment, too. To enable smart card usage for this purpose, IGEL Endpoints support cryptovision's smart card middleware sc/interface. sc/interface is available for all major operating systems. It consists of several modules, some of which implement the interfaces necessary for accessing a smart card on a certain platform.

The sc/interface module used on IGEL Endpoints is the PKCS#11 module (on Linux). PKCS#11 is a popular, vendor-independent crypto interface used between applications and smart cards or other cryptographic tokens. Popular applications supporting PKCS#11 include Mozilla Firefox, numerous mail clients, as well as virtually all smart card solutions for Linux.

sc/interface enables smart card authentication on connections between an endpoint and a server. This ensures that all data exchanged after authentication can be encrypted in a secure way. As sc/interface supports all popular smart card types, the operator of the endpoints gains maximum flexibility.

sc/interface is embedded into IGEL's own Linux-based firmware IGEL OS. After being powered on, the client displays a number of available add-on modules – including sc/interface. In order to use it, the user needs to purchase a license from cryptovision.

sc/interface: used by many customers

The combination of sc/interface and IGEL-powered Endpoints has been in use by numerous customers for several years. For instance, enterprises in the retail sector use this technology to secure the communication between subsidiaries and headquarters. In the financial sector numerous companies protect access to important data with IGEL Endpoints, smart cards and sc/interface.

Signal Iduna, a major German insurance company, is another customer of IGEL and cryptovision. The company located in Dortmund has equipped its employees with IGEL Endpoints instead of PCs. It uses smart cards, which are connected via sc/interface. This solution provides optimal protection for endpoint to terminal connections. A smart card on the endpoint is also available for applications on the terminal server (e.g., email encryption and secure web access). Signal Iduna can easily migrate to another smart card, since sc/interface supports more than 80 card types.

The numerous customers IGEL and cryptovision have served successfully demonstrate that the endpoints of IGEL Technology are among the most powerful and most secure of their kind on the market – not least thanks to the smartcard support of cryptovision's sc/interface.