Smarter simplifies secure information management with Lenovo ThinkPad notebooks

Working with sensitive and classified information requires the highest levels of security. To streamline everyday work for public authorities and security-conscious organizations, secunet wanted to provide a secure mobile work environment for key staff. Together with Lenovo, the company launched the SINA Workstation S based on Lenovo ThinkPad technology.

secunet Security Networks AG is a leading cybersecurity company headquartered in Germany. With its 700 employees, secunet is on a mission to strengthen the digital sovereignty of governments and businesses around the world, particularly in the EU and the NATO community. Focusing on digitalization and connectivity solutions, the company generated revenues of 337.6 million Euros in 2021.

Working with the German Federal Office for Information Security (BSI), secunet has developed a wide range of increased-security products that meet the highest security standards to advance digital transformation at scale as an IT security partner to the Federal Republic of Germany.

Delivering a modern, mobile, and secure workplace

In a connected world, being able to access and act on critical data is essential. This is true for businesses as it is for governments and public authorities. When government officials or business executives need to handle sensitive and classified information, data protection can be a question of national and international security.

To ensure smooth information exchange and effective decision-making across fast, digital processes, authorities and organizations need secure tools to provide staff with a modern and efficient work environment.

secunet

- **700**
  employees serving a global client base

- **338M€**
  in revenues in FY 2021

- **120,000+**
  crypto notebooks, tablets, and desktops used across Europe

Smarter technology for all

Lenovo

" The focus of our SINA Workstation product family has always been to increase security while streamlining device and data management for customers. Together with Lenovo, we have boosted staff productivity, and we continue to innovate and push the boundaries to make the devices even more secure."

Armin Wappenschmidt, *Global Head of Network and Client Security, secunet Security Networks AG*

Armin Wappenschmidt, Global Head of Network and Client Security at secunet, begins: "As a service provider and manufacturer of highly secure IT solutions, we always want to ensure the right balance between protection and ease of use. Throughout the global COVID-19 pandemic, we have seen how priorities and customer requirements have changed. Suddenly, highly secure mobile workstations with high-definition video conferencing capabilities were on the top of the agenda for many customers and our goal was to support these new ways of working safely, even in sensitive areas."

To strengthen its competitive position further and continue to offer products that accelerate the digital transformation in the public and private sectors, secunet looked for ways to make use of state-of-the-art components. At the same time, the team sought to increase security with more cryptographic assurances on all levels, starting with new protections in hardware and firmware.

Gordon Freiburg, Senior Product Manager at secunet, explains: "Our products add a security layer that isolates the underlying hardware from the software running on top, reducing the risk of cyber threats for our customers. This shrinks the attack surface, enabling our solutions to shield users effectively from potentially dangerous vulnerabilities. But we can only deliver this solution with the right partner. We sought a notebook manufacturer that would support our complex requirements, and

help us to innovate at speed with a future-proof roadmap and extended maintenance services."

A Strong OEM partner to build quality products

Building on its long experience in secure network communications, secunet recently extended its solution portfolio, developing a new range of Secure Inter Network Architecture (SINA) Workstations to simplify management of classified documents for government agencies and security-conscious enterprises.

To launch its SINA Workstation S notebook product line, the company evaluated several PC manufacturers and selected Lenovo ThinkPads as off-the-shelf devices that it could leverage and customize. "We first started working with Lenovo about 12 years ago," says Armin Wappenschmidt. "The OEM partnership with Lenovo has become a huge success, and enabled us to capitalize on the high build quality and outstanding reputation of the Lenovo brand to expand and scale our business and profits."

The secunet SINA Workstation S line-up covers many different customer requirements with flexible configurations, screen sizes, and accessories available. At the core of secunet's crypto workstation portfolio are Lenovo OEM solutions based on a number of Lenovo ThinkPad models, including Lenovo ThinkPad L14, T14, T14s, L15, T15, and X13 notebooks. In addition, the company sells security-hardened

tablet devices based on the Lenovo ThinkPad X13 Yoga 2-in-1 laptop.

All Lenovo ThinkPad models are configured with a built-in smart card reader for added security and the ThinkShutter feature provides a physical camera cover when necessary. secunet customers can add Lenovo ThinkPad Docks or HDMI adapters to connect external displays for increased productivity. Mobile broadband connectivity options are configured by default.

"Most importantly, Lenovo offers outstanding security features," says Gordon Freiburg. "We worked closely with Lenovo to create a custom BIOS firmware which ensures that only our hardened SINA security operating system can be booted on the devices."

The operating system is based on Linux open source software and implements secure isolation of workspaces using the Oracle VM VirtualBox virtualization platform. To provide a complete all-in-one solution for customers, secunet must ensure that its custom operating system works perfectly on every new generation of Lenovo ThinkPad models. "We are in constant communication with Lenovo and selected component suppliers to ensure optimized Linux compatibility to deliver the best performance for our customers," explains Gordon Freiburg. "Together with the Lenovo product development teams, we improve and refine low-level device drivers and contribute our patches back to the open source community. Thanks to this close collaboration, we can

deliver a smooth user experience to our customers—so they can easily and securely run one or more Microsoft Windows desktop sessions in parallel and in different classification levels on top of our purpose-built SINA security operating system."

To address growing demand for video conferencing, the company worked with Lenovo to safely improve GPU integration, and to boost graphics and video performance. The company uses its SINA Apps technology to streamline deployment and maintenance of video conferencing software in a protected environment with its secunet Desktop solution. "By combining leading Lenovo hardware with specialized software packages for specific tasks such as video conferencing, we can now provide a cutting-edge and highly secure mobile workplace, ideally suited for the home office or flexible office setups," confirms Armin Wappenschmidt.

Scaling up to tens of thousands of devices

Working with Lenovo, secunet has successfully expanded its product portfolio. Today, staff at many of Germany's top authorities, like for example federal ministries, can easily take classified information with them electronically, to work more flexibly from home or while traveling.

"In the past, classified information was only available via desktop computers, and often our customers had to use different computers to access different kinds of information," says Armin Wappenschmidt. "This was slow and cumbersome. With our SINA Workstation S based on Lenovo ThinkPad technology, we have empowered thousands of staff to use a single device that they can take with them to meeting rooms or to work remotely."

The collaboration with Lenovo started small, with secunet delivering a couple of hundred devices a year. "We needed specialized solutions and other manufacturers did not want to engage with us on that scale," remarks Gordon Freiburg. "Lenovo provided us with outstanding support from day one, as well as deep insights into the supply chain and product roadmaps. On any given day, there are at least 120,000 of our crypto notebooks, tablets, and desktops being used all across Europe."

Many public authorities and private organizations that need to ensure effective encryption and separation of differently classified data rely on SINA Workstation S, including the German Federal Police and the German Federal Office for Migration and Refugees. "The focus of our SINA Workstation product family has always been to increase security while streamlining device and data management for customers", notes Armin Wappenschmidt. "Together with Lenovo, we have boosted staff productivity, and we continue to innovate and push the boundaries to make the devices even more secure."

For customers with more advanced data protection requirements, secunet can tap into Lenovo's forward-thinking product offerings. "Recently, one customer wanted to go one step further to protect information on screen," confirms Gordon Freiburg. "They evaluated two solutions and we won the contract thanks to the Lenovo ThinkPad e-PrivacyGuard feature, which we can integrate through the OEM partnership."

As part of its OEM opportunity, secunet has weekly meetings with Lenovo to align priorities and customer requirements with the Lenovo roadmap. The joint team has also integrated logistics workflows between the two companies to safeguard the smooth supply of goods. The OEM partnership includes custom Lenovo Support Services and direct collaboration between the secunet and Lenovo engineers. "Over the years we have built up mutual trust," says Armin Wappenschmidt. "Together, we have simplified the support process and Lenovo is now much better able to verify any issues we encounter in their labs. Working with the Lenovo product development teams in the USA, Japan, and China, we are continuously adding value to this partnership. We are working towards being able to launch new generations even faster and more smoothly so that our customers can take advantage of the latest Lenovo features with the highest security."

The benefits of the OEM partnership between secunet and Lenovo are not limited to the two companies. As the German government requires all software to be open source and available for validation by the Federal Cyber Security Authority, secunet has become a regular contributor to the open source community. "Lenovo ThinkPads already have a good reputation in the Linux and open source communities," says Gordon Freiburg. "By improving and patching drivers, we are actively helping to make the user experience better and faster for every Lenovo ThinkPad user running Linux."

In their joint effort, the two companies are also establishing new security standards to further increase the protection of sensitive information. "Lenovo has always gone the extra mile ever since we first started working together, which has helped us boost device security," says Armin Wappenschmidt. "Recently, Lenovo developed a custom BIOS firmware for us to ensure the integrity of the boot system and

minimize the risk of tampering. Soon after we launched this new level of security, it was quickly adopted by the German Federal Office for Information Security as a new security requirement for all manufacturers."

At a time when sustainability is on everyone's mind, the OEM partnership also enables secunet to leverage Lenovo's CO2 Offset Service to support corporate social responsibility (CSR) strategies. "Increasingly, customers such as the German Environment Agency ask us about carbon-neutral solutions," explains Gordon Freiburg. "Lenovo is a pioneer in the IT industry and estimates the overall carbon emissions over an average lifecycle of up to five years, including manufacture, shipping, and usage. Lenovo then helps us and our customers to offset the carbon emissions and get a CO2 certificate to encourage more sustainable business practices."

Armin Wappenschmidt concludes: "We offer a complete security solution to our customers. Thanks to the OEM partnership with

Lenovo, we can provide many configuration options and meet all customer requirements easily. With the SINA Workstation S, our customers can use a modern notebook to handle sensitive and classified information in the office, at home, and on business trips—all with a high-quality camera for online meetings, full support, and even private cloud services powered by Lenovo infrastructure."

The **ThinkPad X13 Yoga** is among the premium devices, hardware software and services that secunet has employed to power their company.

The Smarter Solution

Flexible hardware partner
Lenovo's extensive portfolio of ThinkPad devices gives secunet enormous flexibility in delivering the optimal specification to its clients – and models are configured with a built-in smart card reader for added security.

Outstanding security
secunet worked with Lenovo to build customer BIOS firmware that resticts devices to booting the hardened SINA security operating system demanded by security-conscious clients.

Optimized compatibility
Collaborating closely with Lenovo product development teams, secunet constantly improves and refines low-level device drivers to help ensure optimal Linux compatibility and a trouble-free experience for users.

Smarter technology for all

Lenovo