



Protecting Gösgen Nuclear Power Plant From web- and Email-Based Cyberattacks

The Menlo Secure Enterprise Browser Solution Allows Users to Browse the Web and Access Email as Needed without Putting the Organization at Risk

Client-based Isolation Added Maintenance Burden

Needless to say, cybersecurity is critical for a nuclear power plant. One misstep, one infected computer, and power can be shut off across an entire region, putting lives at risk. And today, the risk of a cybersecurity breach has never been greater. It's easier than ever for an attacker to spin up a phishing email, create a bogus web form or infect a popular website with dangerous malware. In fact, according to Gartner, 98 percent of external attacks over the last few years were carried out over the public internet, and, of those attacks, 80 percent were targeted directly at end users through their browsers.

COMPANY

Operational since 1979, the Gösgen Nuclear Power Plant in Switzerland provides 1,020 megawatts of electricity to the Swiss power grid.

CHALLENGES

Gösgen needed to allow internet access for employees without putting the organization at risk.

Existing homegrown internet isolation solution was complex and time-consuming to keep updated.

Needed a solution that protected users without adding maintenance burden.

SOLUTION

Adopted the Menlo Secure Enterprise Browser solution.

Moves the fetch and execute requests away from the endpoint and into the Menlo Secure Cloud Browser

Strips out any active content and only renders clean, safe content down to the end user's local browser.

The cybersecurity team at the Gösgen Nuclear Power Plant on the Aar River in Switzerland understands the risk better than anybody. Knowing that a cybersecurity solution needs to balance risk with employee productivity, the team originally focused on maintaining reliable yet secure internet access for its users by creating a homegrown isolation solution based on VMware ThinApp. The proprietary solution essentially isolated all internet traffic in a virtual browser far from the user's device—effectively shutting down malware access to the endpoint.

Isolation proved to be a highly secure, highly reliable technology that allowed users to browse the web and access email as needed without putting the organization at risk. The problem, however, was that ThinApp is rarely updated by VMware, transferring much of the regular maintenance associated with the internet isolation solution to Gösgen's IT team. And even then, the cybersecurity team couldn't reliably guarantee that every client on every user device was up to date.

“We were falling behind more and more,” said Manuela Schweizer, Security and Network Engineer for Gösgen. “[Specifically], the workload of preparing Firefox for virtual deployment was considerable. That's why we looked for a new solution that would keep up with browser development and reduce [IT] workload.”

The Menlo Secure Cloud Browser Provided the Solution

Schweizer and François Gasser, Gösgen's IT security officer, worked with BOLL Engineering and BNC Business Network Communications AG, the power plant's IT consulting and implementation partner, to find a reliable internet isolation solution that would enable a native browsing experience for users while protecting Gösgen from all email- and web-based cybersecurity threats. The solution would also need to reduce the maintenance burden on the IT staff.

Trials were set up with two solutions, but it was quickly apparent that the Menlo Secure Enterprise Browser solution was the superior option—primarily because of Menlo's ability to generate exceptions directly from log files. This capability is important, Gasser said, because it speeds time to resolution, which matters when it comes to fast-moving cyberthreats.

The Menlo Secure Enterprise Browser solution works by moving the fetch and execute requests off the end point and into the Secure Cloud Browser. Think of the Secure Cloud Browser as a digital twin of the local browser inside the cloud—making the requests for the end user and delivering only clean, sanitized content down to the local browser. Cloud content inspection keeps threats off the endpoint and protects against internet-borne phishing and evasive malware.

All active code, including JavaScript and Flash, is executed in the Menlo Secure Cloud Browser, where it has no access to the user’s machine. Instead, users receive a rendered web page that has all the active code stripped out via a proxy service that removes scripts and automatically converts Flash videos to MP4 files. This eliminates the need to install any client software on endpoints, allowing users to surf the web and access links and documents in emails with no impact on speed, performance, or the native experience. The Menlo Secure Enterprise Browser solution provided Gösgen with a browser capable of delivering traditional web filtering control and access, with the added benefit of unparalleled protection against phishing and malware.

Gösgen Experienced a Seamless Rollout

Because of data privacy issues, the Gösgen cybersecurity team elected to deploy the Menlo Secure Enterprise Browser solution in a private cloud environment built and maintained by the IT team. In addition to the policy and management server, Gösgen currently operates four isolation nodes, which are responsible for the complex tasks of executing active code and rendering the adjusted version of the web content.

The rollout was seamless thanks to the cooperation between Menlo Security, BOLL, and BNC. Employees were informed about the new platform via intranet news, and training was unnecessary. In fact, users are completely unaware of the underlying technology. No agent or special browser needs to be installed on the end devices, and it was only the conversion from the previous virtualized browser to the Firefox browser installed locally on the clients that took extra effort.

Schweizer is pleased about the time-saving update mechanism that can be operated via a web interface. All other administration tasks can also be done intuitively via this web interface. “If there’s a problem with new firmware, a rollback is done just as easily,” he said.

No Malicious Code Reaches Endpoints

Since the end of February 2019, all 550 employees of the Gösgen Nuclear Power Plant plus a few external partners have been surfing productively via the Menlo Secure Cloud Browser. According to Gasser, his team has the utmost confidence that no malicious code is able to reach endpoints, enabling him to sit back and relax and allow employees to access websites that had to be blocked before.

Learn how you can eliminate web-based cyberattacks and dramatically decrease your attack vector. Visit menlosecurity.com or contact us at ask@menlosecurity.com.



BOLL Engineering AG (BOLL) is one of the leading value-add distributors in the Swiss channel business since 1988. Primarily focused on IT security and open networking products, BOLL offers its customers comprehensive services that go far beyond the usual distribution support.

The Menlo Security and BOLL partnership was key to Gösgen's decision-making process for adopting Menlo's isolation platform and enabling a zero trust internet approach. BOLL's support and understanding of the KKG business process ensured a smooth deployment of the Menlo solution.

About Menlo Security

[Menlo Security](https://menlosecurity.com) eliminates evasive threats and protects productivity with the Menlo Secure Cloud Browser. Menlo delivers on the promise of cloud-based security—enabling zero trust access that is simple to deploy. The Menlo Secure Cloud Browser prevents attacks and makes cyber defenses invisible to end users while they work online, reducing the operational burden on security teams.

Menlo protects your users and secures access to applications, providing a complete enterprise browser solution. With Menlo, you can deploy browser security policies in a single click, secure SaaS and private application access, and protect enterprise data down to the last mile. Secure your digital transformation with trusted and proven cyber defenses, on any browser.

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