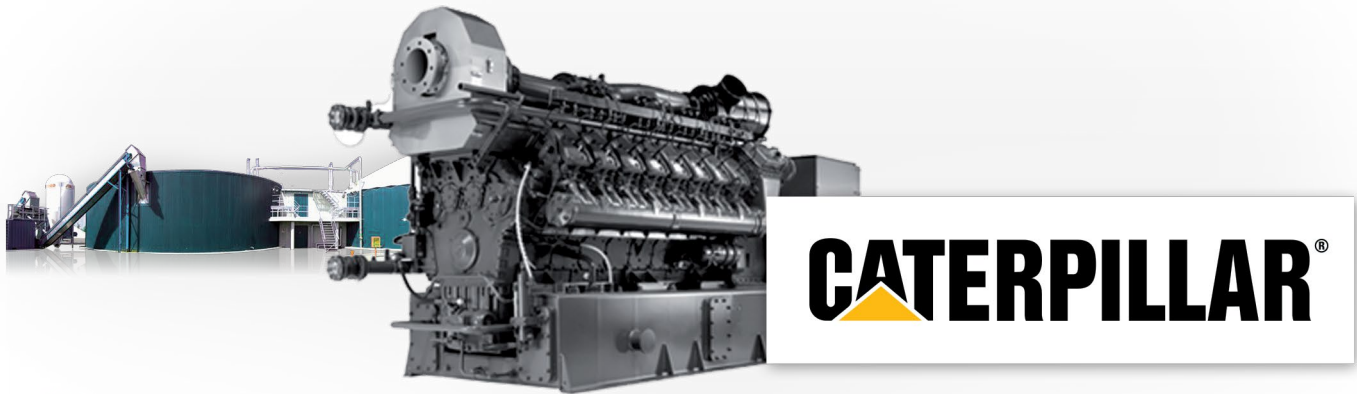




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Endian 4i Case Study - **Caterpillar Energy Solutions**



## Endian Switchboard secures Caterpillar Energy Solutions plants

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### **About Endian**

*Endian was founded in 2003 at Appiano, Italy, by a team of experienced network specialists and linux enthusiasts. Endian's goal and path of development are immediately clear: creating sophisticated Unified Threat Management (UTM) solutions, totally based on open source technology.*

[www.endian.com](http://www.endian.com)

With customers worldwide, **Caterpillar Energy Solutions** develops powerful products, services and technologies for decentralized energy supply for gas engines. Consequently, they are challenged with the critical task of providing real-time support and equipment diagnostics for their clients within a highly distributed network. Furthermore, as if the project weren't complex enough, Caterpillar Energy Solutions provides secure, remote access to critical systems for maintenance purposes. This requires stability, security and the capacity to handle multiple levels of access permission rules for varying levels of workers.

**To fulfill this highly complex and critical project, Caterpillar Energy Solutions put their trust in Endian's Switchboard.**

The **Endian Switchboard**, deployed in a high availability configuration, is utilized as the VPN concentrator. Through Virtual Private Network (VPN) tunnels, dedicated **Caterpillar Energy Solutions staff can monitor and remotely manage machinery**. Additionally, the **Switchboard** allows Caterpillar Energy Solutions to manage very granular user access permissions to the systems. Using the Switchboard, they can manage access privileges for users and groups of users with incredible ease!

Not only is the **Switchboard** providing tremendous management capabilities in a highly complex and distributed network for Caterpillar Energy Solutions, Endian also makes it easy for the end user! Preconfigured Quick Action Links allow a user to access a wide variety of PLCs and HMIs with a single click.

With so many users being granted rights to a multitude of endpoint devices, it becomes increasingly necessary to audit those actions. Endian enables this review capability by providing a historical log of all user activity.



Thanks to the **Switchboard's API interface**, it is possible to integrate all of its functionalities on existing platforms (such as partners' support portals), allowing direct access and intervention for engineers and technicians. Alternatively, the link can be made through **Endian Connect App**, the **Switchboard** dedicated client. Caterpillar Energy Solutions took advantage of the Switchboards robust API and developed its own remote control and maintenance software.

Thanks to Endian technology, physical access to machines is no longer necessary and Caterpillar Energy Solutions staff can work on assigned systems with little to no impact on the network infrastructure. And regardless of whether Endian is the gateway device or other end points currently exist, the Switchboard can manage any device that utilizes Open VPN (SSL) technology. This helps to significantly reduce the cost of replacing edge devices while minimizing the impact of potential down-time of the network.



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