

JUNIPER NETWORKS PUTS BANGCHAK PETROLEUM ON TRACK FOR ISO 27001 CERTIFICATION



Industry: Oil Refinery

Challenges: To establish a highly secure system that would enable the company to conform to the ISO 27001 information security management standard.

Selection Criteria: Proven vendor, reliability, security, and ease of management.

Network Solution: Juniper Networks SSG Series Secure Services Gateways, Juniper Networks IC Infranet Controller.

Results: Compliance with the ISO 27001 information security standard; reduced threat exposure through unified application of access and security policies; reduced cost and complexity of access control deployment; greater ease of management.

Bangchak Petroleum is a Thai energy company which operates an oil refinery with a capacity of 120,000 barrels per day. Bangchak's oil products include fuel oil, liquid petroleum gas (LPG), benzene, and diesel, which are used in the transportation and industrial sectors. In addition, it is a major producer of bio-diesel which is blended with normal diesel to produce the diesel B5 formula. Bangchak also distributes its products directly to customers through more than 1,000 service stations countrywide.

Challenges

In the face of market competition, Bangchak looked to IT to help drive business growth. According to Mr. Wattana Opanon-amata, the company's Senior Executive Vice President, Corporate Administration and Information Technology, Bangchak needed to invest in an efficient IT system that would support the operations of its oil refinery and service stations and improve its internal processes. The system would also enable the company to ensure compliance with government and safety regulations, support business decision-making, and stay ahead of the competition.

"An integrated IT system is key to efficient operations and sound management. It must be able to provide business solutions, improve the business, and ensure the security of information passing between each component in the system," Mr. Wattana Opanon-amata said. For example, to carry out data analysis, information would have to be integrated from different divisions of the company such as marketing, the refinery, and the Distributed Control System (DCS) which supports refinery operations. This data integration would have to take place within a highly secure network environment.

The security of the DCS itself was also of vital importance. Without this, the oil refinery's operations would be vulnerable to catastrophic attacks such as control hijacking, which could lead to serious disruptions.

Network security was therefore a major challenge, and Bangchak Petroleum's goal was to establish a highly secure system that would enable the company to conform to the ISO 27001 information security management standard.

Selection Criteria

To address these requirements, Bangchak Petroleum needed a networking solution that would deliver a high level of information security. Ease of integration and management were other important criteria. The solution would have to be integrated with the DCS to secure the refinery's operations. At the same time, automation would help contribute to ease of management. For example, automated checks on client devices would ensure that security profiles were up to date.



Manufacturing

“Deploying the Juniper Networks SSG and UAC solution together protects the brains of the refining process, including all our status and event logging servers, by isolating network components and preventing and mitigating a wide range of network intrusions, malware, and emerging security threats.”

Mr. Aiyaret Joursuwon

Telecommunication Network and Support Section Manager,
Information Technology Office Bangchak Petroleum

With these considerations in mind, Bangchak Petroleum decided to invest in a network security infrastructure based on equipment from Juniper Networks. “Juniper Networks’ products are highly reliable and meet our specifications. In addition, Juniper Networks is a trustworthy vendor and lauded worldwide as a leader in high-performance networking,” said Mr. Aiyaret Joursuwon, Telecommunication Network and Support Section Manager in Bangchak Petroleum’s Information Technology Office. “Moreover, Juniper Networks’ image and professional service standards are highly regarded in the network security market worldwide.”

Solution

Bangchak Petroleum deployed the Juniper Networks SSG Series to provide secure LAN/WAN connectivity. The SSG comes with a complete set of optional Unified Threat Management (UTM) security features such as stateful firewall, IPSec VPN, intrusion prevention system (IPS), antivirus (anti-spyware, anti-phishing, anti-adware), anti-spam, and Web filtering. To further enhance security, the refinery control systems are separated from business applications, and the DCS is hardened through the deployment of the SSG firewall/VPN with UTM and United Access Control (UAC).

Juniper Networks Unified Access Control (UAC) is a comprehensive access control solution that combines user identity, device security state and location information to support user-based, session-specific access policies. Underpinning this is the Juniper Networks IC Controller, a hardened, centralized policy management server. The IC Controller can dynamically download the Juniper Networks UAC Agent software to endpoint

devices to handle user authentication, endpoint integrity inspection, and policy verification for every user coming on the network. Alternatively, it can gather the same information in UAC agent-less mode.

“Oil refining is a complex and strategically significant business that relies on a high degree of automation,” said Mr. Joursuwon. “Deploying the Juniper Networks SSG Series and UAC solution together protects the brains of the refining process, including all our status and event logging servers, by isolating network components and preventing and mitigating a wide range of network intrusions, malware, and emerging security threats.”

Network security consultant DataOne handled the design, development, and installation of the system, and provided after-sale service and maintenance.

Results

The Juniper Networks deployment has provided Bangchak Petroleum with a complete information security solution that has enabled it to comply with the ISO 27001 information security standard.

With the SSG, Bangchak’s traffic is protected from worms, viruses, trojans, spyware, malware, and day zero attacks. At the same time, Juniper Networks IC Controller has reduced threat exposure, enabling comprehensive control, visibility, and monitoring while reducing access control deployment costs and complexity.

Together with the SSG Series, the Unified Access Control solution has enabled Bangchak to unify the application of access and security policies for comprehensive network access and threat control. Juniper Networks IC Controller enforces access control policies and also applies the UTM policies available on the SSG platforms (such as IPS, antivirus, and Web filtering) on a per user/per session basis.

The solution has also paved the way for greater ease of management. “With processes that work in conjunction with the SSG series firewall and UAC, we can access the system through any network, including the 802.1X wireless access points in the company’s offices,” Mr. Joursuwon said. The system also scans client computers and updates the antivirus software or the necessary patches before allowing the client to access the company’s network.

“Investment in network security is vital if we are to reduce business risk to a minimum. Another positive offshoot of the Juniper Networks solution is that it puts our minds at ease,” said Mr. Joursuwon.

For More Information

To find out more about Juniper Networks products and solutions, visit www.juniper.net.

About Juniper Networks

Juniper Networks, Inc. is the leader in high-performance networking. Juniper offers a high-performance network infrastructure that creates a responsive and trusted environment for accelerating the deployment of services and applications over a single network. This fuels high-performance businesses. Additional information can be found at www.juniper.net.

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