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SAISON INFORMATION SYSTEMS CO., LTD.

Saison Information Systems and Owl Cyber Defense Solutions Collaborate to Protect Industrial Control Systems against Cyber-Attacks

Saison Information Systems Co., Ltd. (Headquarters: Tokyo, Japan, President: Kazuhiro Uchida; herein, "Saison Information Systems") is the maker of the HULFT managed file transfer (MFT) middleware. Owl Cyber Defense Solutions, LLC (Headquarters: Connecticut, USA, CEO: Michael Timan; herein, "OWL") leads the world in data diode and cross domain network cybersecurity.

The two companies have partnered to enable fast and reliable data transfer from mission critical industrial control systems while protecting them from cyber-attacks. Their combined offering achieves this at a much lower cost and can be implemented much quicker than traditional solutions.

The Problem

Industrial Control Systems (ICS) are typically used in critical infrastructure facilities such as power plants, transportation systems, and industrial application domain. Until recently, ICS were mostly confined to closed environments. However, as we enter the IoT era, it has become increasingly necessary to connect the management systems for ICS to external networks and even to the Internet for operational efficiency and business reasons.

In many jurisdictions around the world, there are regulations and standards for security measures to protect ICS from cyber-attacks (1). One measure is to use a data diode to provide network segmentation when connecting an ICS to external networks.

Since Owl DualDiode Technology® only allows one-way communication, if a destination host fails to receive data, the source host cannot receive notifications of the failure. To date, the only solutions to this problem have been to enable bidirectional operation using multiple DualDiode devices.

The Solution

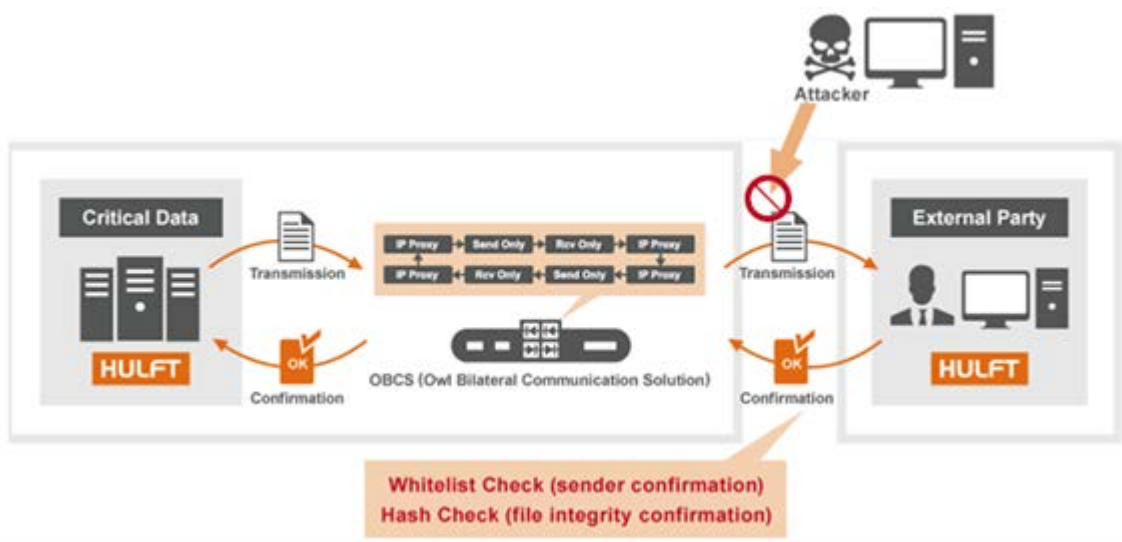
This problem can be solved by implementing a combination of HULFT managed file transfer middleware with OWL's all-in-one bilateral communication technology.

- HULFT is a managed file transfer (MFT) middleware known for fast, reliable and secure data transfer via its proprietary protocol. In the event of a data transfer failure, it can automatically recover, enabling transfer even over unreliable networks.
- OWL bilateral data diode technology boasts security comparable to physical blocking. It is a DualDiode solution developed by OWL used worldwide in the defense, power, oil, finance, and government sectors.

Unauthorized intrusion is blocked by only allowing the data reception confirmation signal to be passed back to the source host.

- The strength of DualDiode solution is in the use of hardware. Unlike software firewalls, data diodes do not require constant updates of signatures and are not susceptible to zero-day threats.

Configuration Example:



About Owl Cyber Defense Solutions, LLC

(Website: <https://www.owlcyberdefense.com/>)

For over 18 years, Owl Cyber Defense Solutions has been implementing next generation cyber security solutions for critical networks. Owl DualDiode Technology®, a proprietary data diode, boasts over 28 technology patents and has over 2,000 successful deployments globally across intelligence, government, military, utility, energy, and other critical infrastructure networks. OWL's deterministic hardware-enforced technology ensures secure networks and enables the reliable and robust transfer of all data types and file sizes.

About HULFT

Compatible with an ever-growing range of platforms since its launch in 1993, HULFT is managed file transfer (MFT) middleware equipped with all the functionality enterprises need to share files between business systems. HULFT is a series of file transfer middleware products that has the fourth highest share of the market in terms of worldwide sales (2), and the leading share of the domestic market in Japan (3). As of the end of March 2017, there are currently 189,600 HULFT licenses in use by 8,700 companies in 43 countries worldwide, spanning a broad range of industries. In addition to sending, receiving and managing file transfer jobs, HULFT also includes peripheral functions essential to transferring files, including security and integration of data before and after transfer.

Product Details: <https://www.hulft.com/en/hulft-mft/>

About Saison Information Systems Co., Ltd.

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- Established: September 1st 1970
- President: Kazuhiro Uchida (President)
- Website: <http://home.saison.co.jp/english/>

References

1. Examples of overseas government agencies and other organizations that issued regulations documents indicating the introduction of one-way communication (DualDiode) to ICS of important infrastructure:
 - International Atomic Energy Agency (IAEA) "IAEA Nuclear Security Series No. 17."
 - (US) Nuclear Regulatory Commission (NRC) "REGULATORY GUIDE 5.71"
 - (US) Department of Homeland Security "Seven Strategies to Defend ICSs."
 - North American Electric Reliability Corporation (NERC) "Compliance Application Notice - 0024 CIP - 002 R3 Routable Protocols and Data Diode Devices."
 - (US) National Security Agency (NSA)"parenthesis" is the name of the document.
2. Source: IDC, Nov 2015, "Worldwide Managed File Transfer Software Market Shares, 2014: Year of Steady Growth" (#259975)
3. Source: Fuji Chimera Research Institute, Inc. "New Market of Software Business 2017" <Package / Amount Base>

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