



*Physically block
cyberattacks*



Protecting Water Treatment Plants from Cyberattack Using Fend Data Diodes

Water utilities need access to operational data without exposing themselves to cyberattack. A large water utility, serving close to two million customers, needed to obtain daily performance data from two large water treatment facilities and send that data to a central location for processing. Because of concerns about cybersecurity, the utility took great care to keep the central information technology (IT) network used by administrative teams physically separated from the operational technology (OT) network which controlled the plant operations. This separation meant that data was transferred using physical media (burning disks) on a daily basis, with a disk hand-carried between networks.

This approach had two major disadvantages:

1. It created a drain on resources. The task required manpower and consumables that added up to a costly process over time.
2. It led to missed operational savings. Data could be nearly a day old by the time the teams on the IT side of the house received it.

Example: Safely Bridge OT and IT Networks



The customer turned to Fend to safely transfer data automatically from the OT network to the IT network using one-way communication diodes. One-way communication diodes physically block 100% of all inbound traffic and require no patches or maintenance, offering the same level of security as an air gap. With diodes installed, the utility was able to send information every few minutes rather than once a day and there was no more need for consumable media. The diodes were configured to “FTP mode,” allowing for one-way transfer of files that contained key information about plant performance. With Fend, this customer gets the information they need quickly, cost effectively, and securely.

Learn more about how data diodes work and get product specifications at www.fend.tech/products

CISA Recommends Diodes for Water Security

In October 2021, The Cybersecurity & Infrastructure Security Agency released an alert titled, “Ongoing Cyber Threats to U.S. Water and Wastewater Systems” that **recommended the use of one-way communication diodes** to “ensure robust network segmentation between IT and OT networks.” Read more at <https://us-cert.cisa.gov/ncas/alerts/aa21-287a>

For More Information

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