

Case Study

Finland Plant Ensures Clean Water Production and Distribution with Honeywell's Remote Network and Monitoring Solutions



“With Honeywell’s advanced remote networking products we knew we had a high-quality solution that would help us meet our plant goals. We were able to get information on a damaged device and take appropriate action immediately, saving both time and money.”

Jari Alvasto, Automation Engineer, Espoon Vesi

Benefits

Espoon Vesi is a water treatment plant in southern Finland. The plant is responsible for the clean water supply, waste water and rain water conduction and waste water treatment for the entire Espoo region.

The plant wanted to ensure that clean water production, distribution and waste water treatment were successful. In order to help meet its goals, Espoon Vesi contracted with Honeywell for its remote network services, including modification of the automation network, system upgrades and Uniformance® PHD reporting functions.

With Honeywell’s remote monitoring and network maintenance, Espoon Vesi was able to achieve the following benefits:

- Provide overall view of the automation system functions and how best to address any issues
- Receive information on a damaged device in order to take immediate action
- Help ensure clean water production and distribution
- Provide clear, defined information necessary for reports on resource deficiencies
- Establish alarms and remote alerts sent to onsite personnel to address locally

Background

Espoon Vesi is a water treatment plant owned by the city of Espoo in southern Finland. The Espoon Vesi Suomenoja sewage treatment plant treats waste water of approximately 300,000 inhabitants, meaning approximately 100,000 m³/day.

Approximately 70,000 m³/day of clean water is pumped from the Damman water treatment plant and from Helsinki to the network.



Espoon Vesi’s water treatment plant utilizes Honeywell’s remote network services to help ensure clean water production and distribution.

Challenges

As the main water treatment plant in southern Finland, Espoon Vesi wanted to ensure that clean water production, distribution and waste water treatment at the plant were successful. The company also wanted to minimize any plant disruptions and look for ways to decrease the duration of those disturbances.

“We wanted to update our facility with the most advanced automation system network, remote monitoring and preventative maintenance possible,” said Jari Alvasto, automation engineer, Espoon Vesi.

Solution

To achieve its business goals and update its facility, Espoon Vesi looked to Honeywell for its expertise in automation applications and remote network monitoring, services and systems.

"We were aware of the industry expertise Honeywell had and believed that they could apply this to our plant to help obtain the information we needed, when we needed it," continued Alvasto.

Honeywell provided the plant with remote network services including the modification of the automation network, system upgrades and PHD reporting functions. The service contract also includes automation network maintenance using the remote monitoring software and inspection reporting on a monthly basis.

As part of the solution, the plant's automation network was changed to comply with Honeywell cyber security standards. The change was accomplished by transferring Honeywell's PHD and AWR reporting servers and the MySQL server of another supplier to the DMZ area. The distribution of MS SUS batches and antivirus software batches was made automatic and the remote connections were based on the virtual private network (VPN) gateway.

"Now our plant alarms are relayed to the phone of the person on duty who has a closed VPN connection to the server of the plant's automation network," said Alvasto. "We are able to quickly get the information on a damaged device and take immediate action if necessary."

To apply remote monitoring services, a remote connection is established between the customer and Honeywell. Honeywell recommends the separation of the automation system by means of a firewall and the installation of Honeywell security update services in the DMZ area. Remote monitoring and remote control are implemented using the server in accordance with Honeywell cyber security principles.

The remote connection for monitoring is established as a VPN tunnel which allows for secure and reliable network monitoring. Information technology specialists at Honeywell can monitor and analyze the network, network devices and servers. On the basis of the analysis, Espoon Vesi receives thorough reports on the system functionality and possible problems.

Honeywell's remote monitoring can provide customers with an overall view of automation system functions. Classified alarms can be sent to the email or mobile phone of the local service people on duty. The collection and analysis of the monitored data clearly shows resource deficits and exceptions from the normal performance, which enables customers to take needed action.

"Honeywell provides high-quality products and unsurpassed customer service," continued Alvasto. "We are very satisfied with the even reporting and look forward to the time when the new sewage treatment plant project becomes current that we could possibly implement Honeywell field devices and fieldbus solutions as well."

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For More Information

Learn more about Honeywell's Uniformance® PHD visit our website www.honeywellprocess.com/software or contact your Honeywell account manager.

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