ABB Energy Automation - Italy

Secure OPC tunnelling between power plants
## and company offices using the OPC DataHub

In two recent projects, Italy's ABB Energy Automation has developed a control solution that feeds data from power plant facilities directly to corporate offices - in real time - using the OPC DataHub. A key requirement was to provide a highly secure means of data transmission, with the minimal risk of break-ins. The OPC DataHub tunnelling solution establishes a secure, reliable connection between the power plant and corporate networks.

ABB Energy Automation implements software and control systems for power plants to ensure that equipment operates at optimum speed and efficiency. For this project, it became clear that several Italian power companies would benefit substantially by monitoring the performance of the plant directly from the company offices. Mr. Michele Mannucci, ABB Project Engineer, began looking for a way to make the connection, using the most reliable and secure means available.

"Customers are very sensitive about security these days since they need to exchange information on the web," he said. "We had OPC servers on our equipment, but found that using DCOM for networking was too risky. It required us to open too many ports in our firewalls. We had to find a way to avoid using DCOM."

A search on the web brought Mr. Mannucci to the OPC DataHub. For the first test, he connected the OPC DataHub to the plant's DigiVis Freelance 2000 OPC server, and then connected to an OPC client, tunnelling through the plant firewall using just one open port. With that working, he installed another OPC DataHub on the corporate network, and then created a mirroring connection between the two DataHubs.
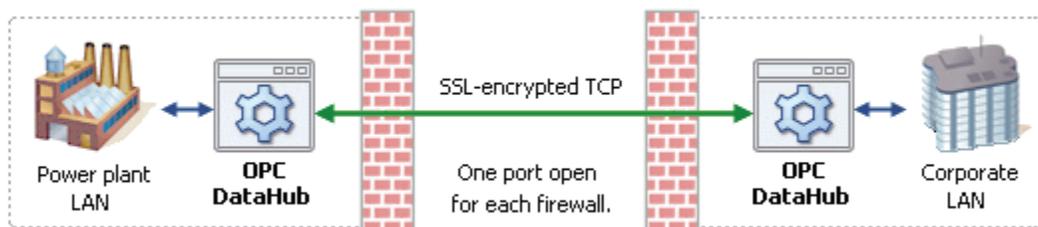
For the production system, the company decided to use ABB's own proprietary OPC server on the secure LAN in the plant, and connect that to the OPC DataHub. From the OPC DataHub the data flows out through a single port on the plant firewall via SSL-encrypted TCP to an OPC DataHub in the corporate offices, which is connected to the

corporate LAN.   The two OPC DataHubs mirror the data, so that every data change on the plant LAN is immediately received on the corporate LAN.

"For us, this OPC tunnel is very good, because we only need to open one port, and we are secure from DCOM break-ins," said Mannucci. "We are considering installing this same solution in our top plants."

It took only a few days for Mannucci to go from initial testing to a working system in the first power plant. The second system was up and running in a similar time frame. Both systems have been running 24/7 since installation, with no breaches in security.

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The OPC DataHub is a highly optimized integration tool for real-time data. It provides quick, reliable and secure access to valuable process and production data and makes it available to management systems, database archives, and remote clients. Combining a number of innovative technologies, the OPC DataHub makes it easy for you to access the real-time data you need to make informed and timely decisions that save time, reduce waste, and increase profitability.

Founded in 1995, Cogent Real-Time Systems is the leader in real-time data integration between Windows, Linux and QNX systems. Customers include the Bank of Canada, Cadbury Chocolate and the European Space Agency. Cogent leverages its experience in real-time data communications to provide the next generation of OPC products. For more information, please contact Cogent at info@cogent.ca or visit our web site at www.opcdatahub.com. You can also call us at +1 (905) 702 7851.