

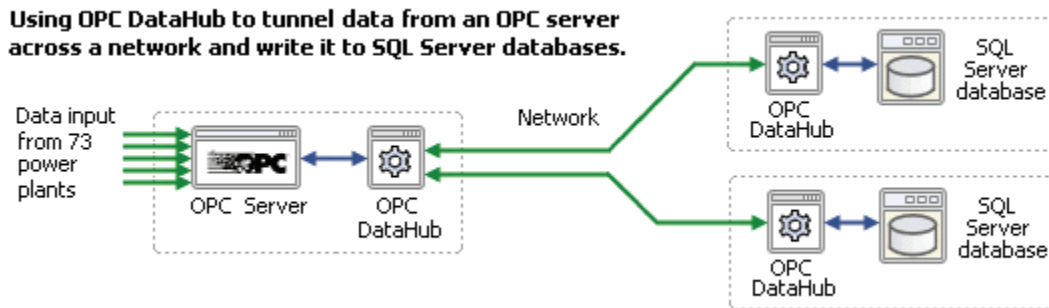
# Major Power Generation Company - USA

## Tunnelling OPC data to SQL databases

Last spring the management at a major North American power generation company was faced with a problem. They needed to improve their method for collecting and archiving data coming in from a number of regional power plants. At the time they were extracting the data from their SCADA system and sending it to two SQL Server databases. But they needed a simpler, faster, and more direct connection. They decided to decouple the data collection from the SCADA system altogether and create a parallel system specifically for collecting the power plant data.

The engineering team assigned to the project decided to use OPC as a data protocol, since it is a Windows standard and widely supported. Connecting an OPC server directly to the data feeds from the power plants was relatively straightforward. The challenge was to find a way to move the data from the OPC server, across the network, and feed it into the two SQL databases. After considering the alternatives for tunnelling and database connectivity, they decided to use the OPC DataHub from Cogent Real-Time Systems.

“We found it efficient and convenient to do our tunnelling and database connections with a single tool,” said a team member. “The other tunnelling product we tried consumed far too much memory, monopolized all of the processing capabilities of one of our dual processors, and installed all over the system. In contrast, the OPC DataHub installs in one place on each machine, and it uses almost no system resources.”



The system design required the OPC server and the two databases to be running on separate, networked machines. To avoid the pitfalls of DCOM and move the data efficiently, the team tunneled the data across the network. First, they installed one OPC DataHub on the OPC server computer, and another OPC DataHub on each of the two SQL Server computers. Using example code from Cogent, it didn't take them long to have the OPC DataHub talking to their SQL application. Then they simply configured a tunnelling connection across the network between the DataHub on the SQL Server and the DataHub running on the OPC server. Now every time a value changes at any of the plants, a new row containing the point name, value, time, and quality gets written to each SQL database within milliseconds.

“The system was easy to set up, and Cogent’s technical support was excellent,” said a team spokesperson. “We have handled 4.5 million data changes with no decrease in performance.” Based on these initial results, the engineering team is now looking into the possibilities of using the OPC DataHub to distribute and access their real-time data through web-based applications.

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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](mailto:info@cogent.ca) or visit our web site at [www.opcdatahub.com](http://www.opcdatahub.com). You can also call us at +1 (905) 702 7851.