Minera San Cristobal - Bolivia

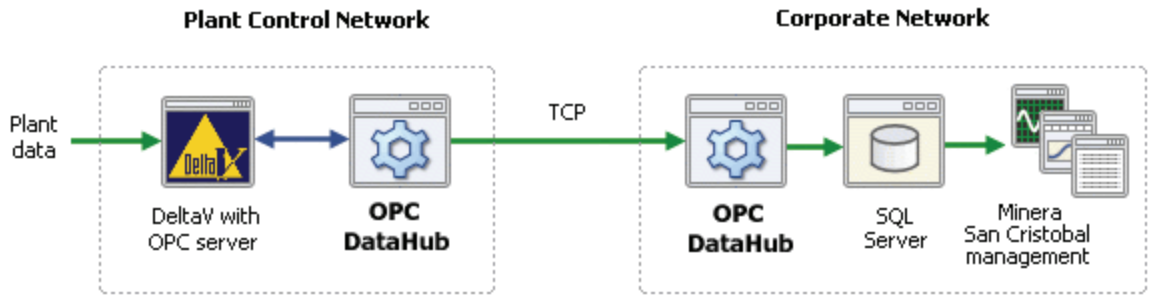
Connecting corporate and control systems

Minera San Cristobal, owned by Apex Silver and Sumitomo Corporation, is one of the largest silver-zinc-lead mining projects in the world. The mine, located in the Potosi district of southwestern Bolivia, was opened in 2007, and is expected to produce approximately 450 million ounces of silver, 8 billion pounds of zinc, and 3 billion pounds of lead.

In the San Cristobal mill the ore extracted from the mine is crushed, ground, and refined through flotation process to yield concentrates of silver, zinc, and lead, which are then shipped abroad for final smelting. These processes are monitored and controlled using the DeltaV Professional Plus SCADA system.

When the system was first installed, managers at the San Cristobal mill initiated a project called "DeltaV External Historian". The goal of the project was to store vital process data in a SQL Server database, for these three reasons:

1. To maintain an external backup of the most important process data out of the process control servers (more than 3600 points).
2. To provide access to the plant information from the corporate network, while avoiding the risk of having office personnel connected to the control network.
3. To interface with corporate ERP systems like JD Edwards.



To achieve all three of these goals, Sr. Mario Mendizabal chose a single product - the OPC DataHub—and used it to connect his DeltaV system to SQL server. First, he connected an OPC DataHub to the DeltaV OPC server on the control network. He then installed a second OPC DataHub on the SQL Server machine, which is on the corporate network. Finally, he connected these two OPC DataHubs over TCP, using DataHub

tunnelling. This connection between the two OPC DataHubs bypasses firewalls, eliminates the need to configure DCOM, and provides a secure link between the corporate and control systems. The tunnelling connection mirrors the data between the two DataHubs, putting a complete set of data on both machines. To ensure that the control system is completely independent from any input on the corporate side, Sr. Mendizabal configured the connection to be one-way only—from DeltaV to the External Historian. This avoids any overwrite problems.

"The system has been performing very well," said Sr. Mendizabal. "The backup data log is perfectly accurate, and the connection to the corporate network is functioning just as we had planned. The managers and accounting staff are very pleased to have up-to-the-second access to the most critical data coming out of our control system. We couldn't have done it so easily or so well without the OPC DataHub."

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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.