

Siemens – Denmark

Integrating OPC servers and SCADA systems

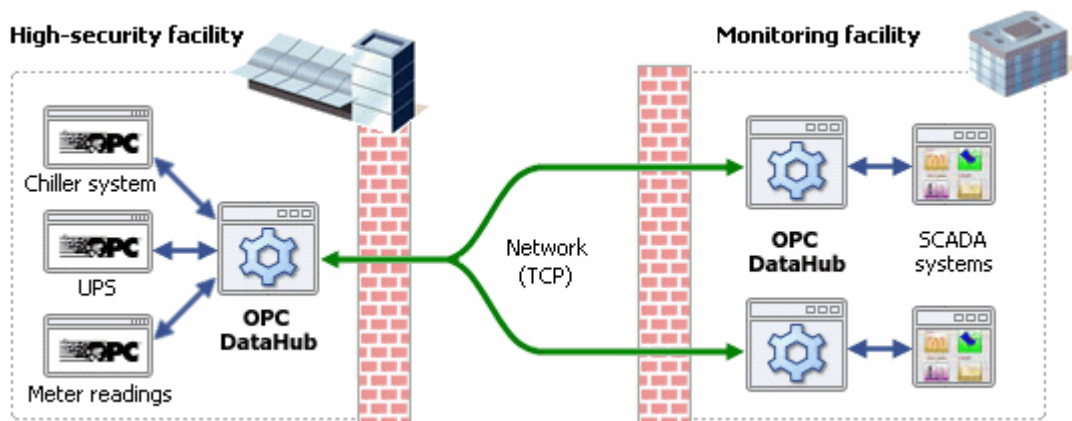
In a recent data integration project, Siemens engineers in Copenhagen, Denmark were able to connect equipment and instrumentation running in a high-security facility to a remote monitoring location, using the OPC DataHub.

The goal was to allow technicians access to the machines they needed to work on, without breaching security or permitting any non-authorized personnel on site.



At first the project promised to be a typical OPC application. The main objective was to connect a chiller unit with an OPC server running at a secure facility to two SCADA systems at a monitoring station, each enabled as an OPC client. However, it soon became apparent that there would be some problems with networking. OPC networking depends on DCOM, which at the best of times can be difficult to configure and slow to reconnect after a network break. To make matters worse, the OPC server provided by the chiller manufacturer was not up to the task.

“This particular OPC server has some strange behaviors,” said Carsten Barsballe, the project leader. “It won't run as a service, and it won't allow remote connections using DCOM, because when you disconnect, you are not able to reconnect. So we decided to encapsulate it in the OPC DataHub.” Carsten installed an OPC DataHub on the same machine as the chiller's OPC server, and configured it to run as a service, causing it to connect whenever the system starts. This allows him to use the OPC DataHub for all OPC client connections.



At the monitoring facility, Carsten discovered another potential setback. His SCADA systems were not able to connect remotely to an OPC server. They required a local OPC connection, so Carsten decided to use the tunneling capabilities of the OPC DataHub. He installed two more OPC DataHubs, one on each SCADA system machine, and configured

connections across the network to the first OPC DataHub. His SCADA systems each connected to their local OPC DataHub, and the data link was complete. Technicians could now view data from the high-security facility from the safe distance of the monitoring location.

“The two SCADA systems are separate from the chiller unit, but fully connected in real-time, so technicians can work on them as they are used to,” said Carsten. “This is a way to keep people from touching things they don’t know about. We have lots of people working at all hours, and now there is no need to for them to be onsite at any time.”

With the chiller system up and running, Carsten plans to integrate more data sources into the system. They have a few UPS (uninterruptible power supply) units with SNMP connectivity that they need to monitor, and by adding an SNMP-OPC server, the data from these will be brought into the OPC DataHub. After that, they will also attach an OPC server for several meter-reading input devices. All of this data will then be sent across to the SCADA systems, and made available to the service people who need access to it.

“The OPC DataHub is running very well,” said Carsten. “We do a lot of this kind of data integration, and there will be other projects. Now we have a good feeling for this product. We have chosen the right solution.”

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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.