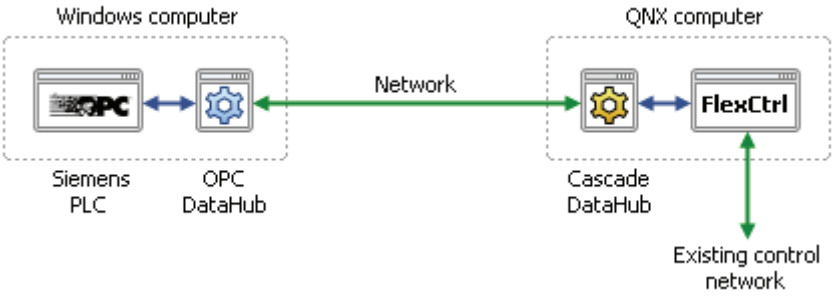
BitCtrl Systems. - Leipzig, Germany

OPC and QNX control system integration

BitCtrl Systems resell Cogent software in Europe, along with their own FlexCtrl SCADA systems. This case study describes an application developed by one of BitCtrl's customers, who operate a water and waste-water control-system for a region in Germany.

FlexCtrl acts as the SCADA system, which consists of several subsystems and a central control system with redundant servers. The subsystems (also FlexCtrl) communicate with the central system via a routed IP-network running special communication-programs (distributed FlexCtrl).

Both the subsystems and central control system have a lot of different driver connections to RTU's. The connections are high-speed bus systems such as iso8073 (via ethernet), other bus-systems such as Modbus, and slower connections to remote RTU's (which are widely distributed in the area) using Modnet 1F, Modnet 1W and IEC870-5-101. There are permanent connections as well as cyclic or event-driven dialing connections (modem and also radio modem) to the RTU's. The customer is also running some company-specific protocols.



The Servers and communication-servers and a part of the control-stations are running QNX. The other part of the control-stations is running Windows. The control there is via Phindows (graphical terminal). The data are also exported in different formats for further processing in other systems.

This system has started some years ago and is growing every year. The current point count is around 20,000 process-points.

Recently, the customer wanted to connect a new Siemens PLC based RTU's running (the SINAUT Siemens-protocol) to this existing system. This would also be a combination of permanent and dialed connections. The end-point of this SINAUT-subsystem is a OPC-Server on a Windows-station on the same network as the existing system.

On the Windows-communication-station runs the SINAUT ST7sc (scada-connect) software from Siemens. The OPC DataHub connects to the Siemens software using an OPC Client connection. The data from this OPC-server is mirrored over a network

connection to a DataHub running on a QNX computer. BitCtrl wrote a FlexCtrl-DataHub-driver to connect between FlexCtrl and the DataHub on the QNX computer. FlexCtrl uses the data from the new Siemens control system to perform further calculations and display new graphics, all of which is independent of the type of the connection. The new system adds 5,000 new data points to the existing system, in several steps.

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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.