

Task Force Tips - USA

OPC DataHub helps fire equipment manufacturer connect Linux-based system to PLC

Since 1971, Task Force Tips (TFT) in Valparaiso, Indiana has manufactured high quality water delivery solutions to clients worldwide. Their focus is on nozzles for the firefighting industry but their product offerings include hoses, valves, nozzles for de-icing, and foam solutions. If you've ever sat on a runway and watched your plane be de-iced, there's a good chance, a Task Force Tips product was being used.

For many years TFT has had a robotic picker selecting parts from hundreds of bins along a 100 foot multi-level picking line. The robot was controlled by a COBOL program via serial connection running on a Linux box. This picking line had become problematic with frequent breakdowns and slow response time to commands.



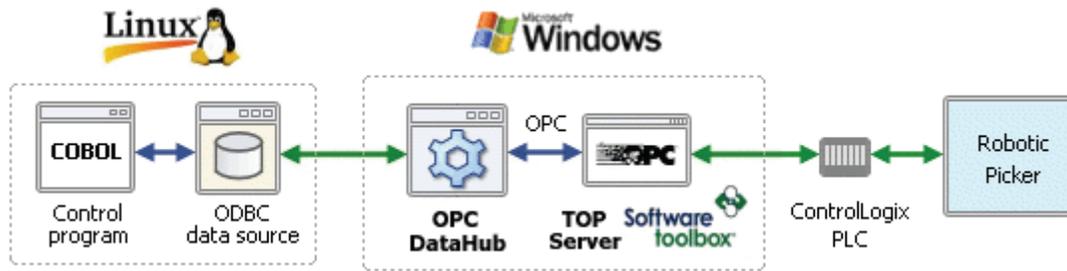
The team at TFT began to explore solutions to make the line more reliable and efficient. To accomplish this, they began by completely overhauling the robot. For control, they chose Allen-Bradley ControlLogix PLCs and A-B servo drives. The question for TFT then became, how to maintain their control program on the Linux box and use it to pass commands to the ControlLogix PLC.

After many hours researching OPC and how it would be useful to their application, Stewart McMillan, President of TFT, contacted Software Toolbox, Cogent's Sales and Technical Partner for North America. Software Toolbox provided Stewart with a solution using the TOP Server OPC Server and the Cogent OPC DataHub that fit the needs and the budget of the project. Using the TOP Server Allen-Bradley driver suite (specifically, ControlLogix Ethernet driver) and the OPC DataHub, the existing COBOL program was able to be retained for use with the new and improved control hardware.

“It is magical what this can do for our application,” said Stewart McMillan. “The OPC DataHub and TOP Server allow the PLC to share any data point through ODBC to any database connection. The possibilities that this opens up for real-time connections between PLCs and corporate data processing systems will bend your imagination.”

How it Works

In this application the TOP Server OPC Server is connected to the ControlLogix PLC and the OPC DataHub. The OPC DataHub through its ODBC interface is connected to an ODBC data source. The COBOL program passes commands as parameters to this data source, which the OPC DataHub reads into OPC data points which then are written through TOP Server to the PLC for control. The responses to these commands are then passed back through this chain to the ODBC data source to be read by the COBOL program to determine the next step in the sequence.



TFT has seen significant improvement in efficiency of the line and to date, has nearly eliminated downtime on the line.

“It is really a pretty unique application,” according Stewart McMillan. “It is so much faster than what we had before! Now we are trying to find other problems to solve. This solution has been VERY effective for our business results.”

Other ways the OPC DataHub can connect to non-Windows Operating Systems

In this application, the connection to the Linux COBOL system was done by connecting to a database. The OPC DataHub has several other ways that it can connect to non-Windows Operating Systems:

- The Cascade DataHub for Linux and QNX are sister products of the OPC DataHub. They run in Linux and QNX, and connect to the OPC DataHub on Windows to move data via TCP/IP. A robust, feature rich API for Linux and QNX makes it easy to integrate the data into your Linux or QNX applications.
- TCP/IP Interface: The OPC DataHub offers a TCP/IP interface and TCP command set that let you read and write data from any OPC source to any program running on the network. The OPC data source could be an OPC Server for your PLC/DCS or your HMI/DCS system itself. If you are using a non-Windows OS and you can open a socket, send a command, and parse a string response, then you can connect your OS to the OPC DataHub. This has been done with VMS, AS/400, IBM Mainframes, and more.

This case study was provided courtesy of Software Toolbox, Cogent’s Sales and Technical Partner for North America.

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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.