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Outsourcing Helps Balance Data Security, Efficiency And Economics

by **William Dylan Powell**, Contributing Editor, Houston, TX

Pete Rake manages SCADA Operations for Enbridge, which recently acquired almost 1,500 miles of pipeline from Shell Gas Transmission. Enbridge was one of the first pipeline companies to adopt SCADA. Historically, those in positions such as his have been responsible for a number of basic information technology (IT) infrastructure details — everything from fire protection and power supply management to systems monitoring, crisis control and applications management. Officially, these duties were at the bottom of an ever-expanding list of roles, and the strategic issues of asset management, business performance and other big-picture arenas were considered their “real” jobs.

But mundane IT infrastructure issues do tend to flare up, potentially turning executives into firefighters focusing on the IT mundane while their strategic initiatives suffer.

Scalability is a constant challenge in IT. Acquiring new capacity may necessitate expansion of IT staff, software licenses, floor space, power and more. Contracts change. Markets shift. And managers face the possibility of either constantly buying or underutilizing IT resources. How can players across the industry keep SCADA data and other mission-critical applications safe without wasting money?

Exploring Managed Services

To stay out of firefighting mode, Rake decided to outsource these functions — essentially taking Enbridge out of the business of managing data centers, monitoring basic security and ensuring fundamental network and application performance. He turned these functions over to Houston-based CyrusOne, which provides turnkey IT infrastructure to a number of energy-related companies. Companies like CyrusOne build elaborate hosting facilities staffed with a variety of shared IT experts.

Rake's staff will still make all of the strategic IT decisions. However, when it comes to memory utilization, hardware failures or system optimization, these problems are outsourced, as is the decision to grow or shrink IT capacity.

Overall, this move has enabled Enbridge to:

- Manage risk cost-effectively. Providers of outsourced IT infrastructure typically offer Service Level Agreements

which guarantee a certain level of data and application availability for a set price. Operators are assured that IT best practices are applied to their infrastructure without investing in the latest and greatest of everything.

- Ensure system security without distraction. From auditing traffic patterns to maintaining security patches to firewall management, as well as the physical aspects such as power redundancy and redundant router configurations, Enbridge handed over security functions to focus on the strategic capitalization of its SCADA data.

- Scale its infrastructure without financial penalty. As IT demands fluctuate with market and organizational dynamics, outsourcing core IT functions has transferred the burden of adjusting Enbridge's IT resources in accordance with demand for staff, space, hardware, application licenses and the like — lowering total cost of ownership.

- Access expertise without over-investment. Enbridge's IT staff now has access to a portfolio of specialists in dozens of critical — and even some quite arcane — areas of technical specialization (without having to hire, train and maintain them). And there's someone on hand at all hours to deal with system monitoring, failures and other off-hour hassles.

- Simplify reporting and administrative functions. To enforce continual workflow optimization, Enbridge can put its thumb on the IT vendor to provide reporting on every aspect of its data and applications 24 hours a day.

Industry analysts report that a company spending \$800,000 annually running its own IT infrastructure can save \$500,000 via outsourcing.

“As we've captured greater market share over the last couple years, our connectivity demands have grown at an exponential rate,” Rake commented in a recent news release.

“Outsourcing these issues saved us time, money and avoided a lot of headaches. We're in the energy-delivery business, not the IT business — sticking to our mission brings clarity,” he said.

Business process optimization aside, a little professional security is an increasingly good thing, too. External SCADA threats are getting worse. A recent study by the British

Columbia Institute of Technology and PA Consulting Group notes that 70% of SCADA cyber-attacks come from external threats (up 39%). And the study revealed an average cyber-attack cost of more than US\$1 million.

Of course, not every operator is a prime outsourcing candidate. Companies with little inherent fluctuation in IT resource demand are less likely candidates. Political sensitivity is also in order. “People hear the words ‘IT outsourcing’ and automatically think their jobs will go away,” notes a CyrusOne representative, “but that's not the way it works. We just help IT managers optimize and execute what's already on their plates. After engagement, their people actually have time to do their jobs.”

Shopping Around

While this arrangement is economically compelling, the buyer needs to do some screening. Not all outsourcing companies last — and not all understand the pipeline business, which understanding is critical for effectively supporting application management. While shedding hundreds of thousands of dollars in operating costs will make a manager a hero, turning IT over to a company that folds will make for a very bad day. So remember these tips:

1. Visit the data center and talk to the staff, not just the salespeople. Test their knowledge. Explore the environment and infrastructure — and how long they've been in business.

2. Get references from the pipeline industry. A glossy brochure with a compressor station on the front doesn't mean they understand what pipelines do.

3. Don't rush into a Service Level Agreement. Define what you really need. Get the details of what they're guaranteeing, how it will be measured and what penalties apply if you step outside the lines.

4. Get grassroots support. Make sure non-executive IT staff understands that these measures will help them, not undermine them. Involve them in the selection process.

5. Draft up an exit strategy, just in case.

Today, the long-term financial health of companies like Enbridge depends as much on the uninterrupted well-being of its data pipeline as it does its physical pipeline. The most critical pipeline security front is shifting from the fields of Russia and South America to the server room. And it's not shifting back anytime soon. **P&GJ**