

# UGI Utilities, Inc.

» Delivering superior customer service by ensuring exceptional performance and availability of the IBM DB2 environment

#### **BEFORE**

- » No visibility into which tables needed reorganization, forcing DBAs to reorg all tables on weekly/biweekly basis
- » Poorly performing SQL statements impacted application performance and resulted in inefficient use of CPU cycles
- » Manual change processes were time consuming and inefficient
- » Difficulty in training people with limited mainframe and DB2 experience to handle DB2 administration

#### **AFTER**

- » Tables are reorganized only when necessary, reducing the batch window and freeing up expensive mainframe MIPS
- » Identification of SQL statements that affect performance keeps customer-facing systems running at peak performance
- » Automated processes improved productivity and enabled DBAs to complete data migrations in days instead of months
- » Graphical interface makes cross training fast and easy

UGI Utilities has built a solid reputation for superior service and outstanding customer satisfaction. The company's track record for service awards is unmatched by any other gas utility in the U.S.

This is quite an accomplishment considering the company's rapid growth. Two acquisitions in recent years increased the number of customers by nearly 200,000, bringing the total served to more than 500,000 business and residential users.

"When customer service reps are talking to customers on the phone, they need to answer questions, solve problems, and schedule service calls without delay," said Dan Fattore, supervisor of Data Management at UGI Utilities. "Our customer information and work order management systems have to perform exceptionally well to maintain that high level of service our customers expect."

The Database Administration group ensures high availability and peak performance by keeping the underlying IBM DB2 databases well tuned. This effort involves designing DB2 tables with efficiency in mind and performing a variety of DB2 administration tasks, including reorganizing and backing up data sets and loading and unloading data. It also includes DB2 performance tuning and analysis of SQL code to pinpoint poorly performing SQL. To help manage the DB2 environment for optimal efficiency, the Database Administration group relies on industry-leading DB2 management solutions from BMC Software.

**GEOGRAPHY**United States

INDUSTRY Utilities

#### **SOLUTIONS**

- » BMC SQL Performance Family for DB2 z/OS
- » BMC Database Administration Family for DB2 z/OS
- » BMC Database Advisor Family for DB2 z/OS
- » BMC Pool Advisor Family for DB2 z/OS



#### REDUCING THE BATCH WINDOW

Prior to implementing BMC Database Management and BMC Database Advisor, the Database Administration group had no insight into which tables required reorganization. Consequently, the staff scheduled every table space for reorganization on a weekly or biweekly basis, depending on the activity level of the data set. According to Fattore, it was a manual job that required a significant amount of human effort and mainframe MIPS.

"We're under constant pressure to reduce costs, to do more with less," Fattore remarked. "The BMC solutions enabled us meet that business need. They collect statistics that help determine which tables need to be reorganized and then reorganize those tables automatically. As a result, we've eliminated a number of mundane administrative tasks so we have more time to focus our attention in ways that make better use of our skills, such as improving the efficiency of database design. But the biggest impact has been on batch processing. By doing reorgs only when they are needed, we've slashed our batch processing time."

Prior to the consolidation of a merged company in 2007, the batch window for updating the customer information system was about six hours. The consolidation drove it up to 10 hours, which was unacceptable. With the help of BMC APPTUNE for DB2, a component of BMC SQL Performance for DB2, the staff cut the batch window for this critical system to five hours and 15 minutes — 45 minutes less than it had been before the consolidation. The staff is further reducing batch windows by taking advantage of

BMC's support for online access to applications during maintenance. The staff can reorganize, copy, capture statistics, and perform other maintenance tasks without interfering with online systems.

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DAN FATTORE SUPERVISOR, DATABASE ADMINISTRATION

### **REDUCING CPU UTILIZATION**

Eliminating unnecessary reorgs has also reduced CPU utilization. This has freed up MIPS on the mainframe, enabling UGI to postpone costly upgrades to memory and processing power.

BMC APPTUNE for DB2 is also pinpointing poorly performing SQL. This tool allows the Database Administration group to create a "Top 10" SQL report that lists the SQL statements that are the most expensive in terms of CPU utilization. "The list shows that even if a SQL statement appears to be performing well, it could be having a huge impact on performance if it executes thousands of times a day," Fattore said. "By looking at the SQL code and shaving off a few milliseconds of processing time, developers can achieve major gains with respect to CPU utilization."

The staff is using BMC Pool Advisor to achieve further reductions in CPU utilization by providing information on how to optimize buffer pools as requirements fluctuate throughout the day. They then use a BMC Database Advisor family component to change the size of buffer pools. As the staff members gain more experience with BMC Pool Advisor, they plan to ratchet up the level of automation so that buffer pools sizes are adjusted automatically.

#### **FACILITATING MERGERS AND ACQUISITIONS**

BMC Change Manager, a component of BMC Database Administration for DB2, is improving productivity for the Database Administration group by automating the change process, including analyzing requests and determining the required changes, modifying the structures, moving data, and tracking changes.

BMC Change Manager ensures that planned changes are implemented correctly the first time. It improves application availability by reducing the time it takes to perform structural changes and by executing changes in parallel. Moreover, BMC Change Manager migrates data structures and data from one DB2 subsystem to another, a capability that facilitated mainframe consolidation during the 2007 merger. "It was a major migration, but we were able to complete it over a weekend," Fattore recalled. "I don't think we could have accomplished it in such a short period of time without BMC Change Manager."

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#### CROSS TRAINING THE STAFF

Finding people with in-depth mainframe and DB2 experience isn't easy in today's highly distributed world. Because the BMC solutions are easy to learn and use, UGI is able to cross-train its Oracle administrators who typically don't have mainframe experience, enabling them to handle DB2 administration. BMC CATALOG MANAGER for DB2, the front-end interface,

provides simple, straightforward graphical operations that let people come up to speed quickly.

"That reduces our risk," Fattore said. "When our DB2 expert is on vacation, we no longer have to worry about something going wrong. We now have people who can back him up."

# **ENHANCING TESTING**

UGI also reports that the DB2 solutions from BMC are making it easier for application developers to migrate data from production to test systems, which is enhancing the quality and timeliness of their testing efforts. Previously, it took months to copy data from a production system to the testing environment. "With the DB2 administration utilities and BMC Change Manager, they can set up the migration with a few keystrokes and have it run overnight," Fattore said. "The data is integrated and ready for testing the next day. The end result is that testing is better because the testers are using real production data."

## **CUSTOMER'S FINAL WORDS**

"Before we selected our DB2 management tools, we did a thorough evaluation and we brought several competing products in to test them out," Fattore concluded. "What we found was that BMC Software not only had great products but also fantastic support. Right from the beginning we could see that BMC was more than just a vendor. BMC is a partner that continues to help us any time we have questions. There are qualified people at our disposal whenever we need support."

#### ABOUT UGI UTILITIES, INC.

A wholly owned subsidiary of UGI Corporation, UGI Utilities distributes natural gas to approximately 484,000 customers and provides electric service to 62,000 customers in eastern and central Pennsylvania. The company is committed to delivering competitively priced, high-quality energy products and services to customers in a manner that expands opportunities, meets shareholders' expectations and fosters economic growth.

# BUSINESS RUNS ON I.T. I.T. RUNS ON BMC SOFTWARE.

Business thrives when IT runs smarter, faster, and stronger. That's why the most demanding IT organizations in the world rely on BMC Software across both distributed and mainframe environments. Recognized as the leader in Business Service Management, BMC provides a comprehensive and unified platform that helps IT organizations cut cost, reduce risk, and drive business profit. For the four fiscal quarters ended September 30, 2009, BMC revenue was approximately \$1.88 billion.



