BMC's NGT = DB2 utilities for the 21st Century

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Over the last 50 years, Mainframes, their architecture, the data they process, the tools and utilities that manage them and IT have changed. Today, we are in the midst of an age, defined and driven by the exploitation of Digital and Mobile technologies. These are also setting and driving markets and market expectations. This makes it more important than ever to optimize the operational performance of the entire infrastructure underlying a service. To fail to do so can result in an unsatisfactory or failed user experience. It can take the form of slow or erratic response times, even intermittent or failed access. In today's competitive market, this can lead to lost revenue and reduced market share as users switch to competitor sites. To avoid problems, the infrastructure, management tools and utilities used by IT must also evolve and change.

BMC, a leader in delivering DB2 solutions, determined that in order to meet the operational demands of the Digital/Mobile Age, data base utilities needed a major leap forward in technology. Incremental improvements to data management tools simply couldn't keep up with the explosive growth in DB2 data. In response, they acquired CDB Software with leading edge utilities and technology to blend with their own leading edge MainView and R4 products. The result is Next Generation Technology solutions that meet and exceed the performance and availability required in today's market. Let's examine why the change was needed and see how NGT allows IT operations to provide zero data base downtime to applications, simplified data management processes, full automation and essentially a continually optimized system.

The Impact of Digital and Mobile Age

In the 21st century, the rapid innovation and integration of Digital and Mobile technologies impacts every aspect of business and enterprise operations to force ongoing transformation, both in business and IT. Users (whether internal or external) demand their experience be consistent, rapid, reliable, instantly available and ubiquitous, in short, exceptional. They demand new, more personalized services with functionality that never ceases its creative evolution. Anything less drives them to competitors.

Delivering those services involves access and manipulation of enormous amounts of data, much of which is unstructured (video, voice, text, etc.) These add to the complexity, time and effort needed to manage, maintain and organize the data bases. IT operations staffs face numerous challenges as they attempt to deliver flawless experience to fickle users. Enterprises depend upon IT operations ability to leverage the latest advances in IT and mainframe technology, even as global competition increases pressures for cost reductions.

The Operational Challenge of Dynamic Data Bases

Far from being static collections of data, data bases used to support today's applications and services are highly dynamic and varied. They undergo frequent change as records are added, altered, removed and archived. Links and relationships are altered. Usage patterns change. Searches, as well as the manipulation done to the data are modified, added to or removed. In many situations, legal and enterprise mandates dictate another layer of complexity to assure detailed records are kept of this

activity. The cumulative effect negatively impacts the performance and availability of the data base and the services dependent on it. To minimize the impact, data bases require periodic, and for some, near continuous maintenance and reorganization to maintain and, preferably, optimize performance. Data base utilities, operating in the background, perform these functions. Unfortunately, being low profile, utilities tend to lag in taking advantage of development and leveraging the latest technology. Identifying what had to be done, defining the processes to follow and scheduling reorganization/maintenance was a time consuming, complex task requiring skilled operators. Actually implementing these tasks meant the data base was off-line and unavailable for what could be long periods of time. Process failures meant having to restart from scratch.

The result was a situation ripe for fundamental change. A solution was needed that could simplify workflows, cut costs while speeding the process of data base maintenance and management.

BMC's NGT has unique Operational Benefits

NGT can perform reorganizations on the data base without taking it off-line. This means no interruption to the services that depend on that data base. Problem solving or performance optimizing tasks can be run continuously to assure peak performance at all times. In addition to the immediate benefit of improved accessibility and reliability, it improves the productivity of the existing infrastructure. There is an effective 'increase' in capacity allowing more to be done with existing equipment. This means a capital expenditure for an infrastructure refresh or upgrade can be delayed.

NGT has truly unique functionality that automates, optimizes and speeds processing across multiple operational areas. It has a sophisticated user interface that allows IT staff to use a 'high level' statement to describe what they want to accomplish in the data base reorganization task. This significantly reduces complexity while dramatically cutting preparation time. It also reduces costs while improving productivity by allowing more efficient allocation of available staff.

NGT introduces the idea of utility server technology to the utility space. To optimize its ability to process thousands of objects from a single statement, NGT dynamically spreads the work across multiple, self-managed jobs that it calls "servers." This NGT Server technology takes parallel processing to a whole new level as it allows incredible throughput in a single utility job. Let me explain.

Servers can execute across multiple Sysplex nodes. This allows a data base reorganization to fully leverage the power of the z System installation to process increasingly large and complex data bases. Being able to process an entire data base in a single job, dramatically simplifies data management as it reduces the number of processes. A few jobs can replace what used to be thousands of separate jobs.

NGT further speeds operations by automatically applying existing rules and policies to the 'high level' statement of what is to be done. It is unique in that it can automatically respond to changing conditions

in real-time. It optimizes the management processes by identifying the minimal set of tasks needed to accomplish what is required to satisfy the request. It can also use existing policy to dynamically adjust processes to handle unplanned interruptions when a problem occurs. Increasing operational efficiency and performance by means of such fully automated, policy-driven, adaptive responses helps to avoid interruptions and restarts, reducing cost and complexity.

With non-stop operations, NGT utilities 'remember' what has been executed even as they monitor process effectiveness. The resulting automatic adjustment of executed processes assures that the reorg of the data base is accomplished in the most efficient, rapid and optimal manner.

BMC's NGT delivers Utilities for the 21st Century

BMC designed NGT to deliver proactive data base management. In summary, it provides mainframe staff working with DB2:

1) A solution that performs management and reorg functions while the data base is on-line, i.e. a continuous process of data base reorganization with 100% access and availability,
2) Utilities that are designed with and are able to leverage latest technologies,
3) Management that is less intrusive, more effective, easier to use, adapts automatically and in real-time to changing conditions,
4) Utilities that will complete faster, adapt automatically to change, are rules-based, policy driven and fully integrated management functions,
5) Utilities that do not require extensive training and experience, i.e. simple to learn and use,
6) Utilities that address the problems of cost management, escalating user quality-of- service expectations, reduced budgets and scarcity of skilled staff.

The Final Word

Repeated surveys show little change in the major concerns of enterprise IT over time. Consistently, the top management concerns are to control (and lower) costs, while maintaining consistent reliable application availability. It is no coincidence that these same concerns rank equally high in the priorities of enterprise management.

While others continue to offer basic utilities to address 21st Century problems, BMC provides Next Generation Technology Data Management Solutions. In this case, the NGT utility offerings can provide users:

- *Reductions in the overall cost of ownership for their mainframe operations;,*
- *Lower operational costs with real-time autonomic data management that follows all company rules;*

- *Applications and services consistently operating at optimized performance levels resulting in a truly exceptional user experience;*
- *More efficient, consistent, effective processes to maximize results with minimal effort from running utilities;*
- *Leveraging much faster throughput of server technology means a few jobs can accomplish what previously required a complex, extensive set of utility processes.*

We believe that BMC has once again identified and delivered a truly exceptional solution that is very much needed. We expect their customers will agree.

Publication Date: April 22, 2015

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Our clients include both industry leaders and dynamic newcomers. We help IT organizations understand and prioritize their needs within the context of present and near-future IT trends, enabling them to use IT technology effectively in solving business problems. We help technology vendors refine their strategies, and provide them with both market insight and deliverables that communicate the business values of their products and services. We provide all clients with an understanding of how their competitors are playing in their market space, and deliver actionable recommendations.

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