

Ownership of the Next Generation BI

Merial Limited

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David Bergeron has been working with Cognos products since 2000, and is currently the system administrator for Merial's global enterprise-wide implementation. Merial uses Cognos extensively to create a world-class BI environment. David Bergeron was previously the Cognos administrator at Georgia-Pacific and under his leadership, that company received the CIO Visionary Award at Cognos Forum in 2005.

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Executive Summary

Merial Limited, a world-leading animal health company, presents a case study on its enterprise-wide global implementation of Cognos business intelligence, with specific focus on the migration of IBM® Cognos® ReportNet™ to IBM Cognos 8 Business Intelligence. This paper discusses how Merial leveraged the Cognos products to meet complex business requirements and Service Level Agreements (SLAs). It details the numerous technical innovations at Merial to extend the products to meet their needs. This is a technical paper suited to intermediate and advanced users. Readers will take away helpful tips to improve productivity in their own companies.

Company Profile

Merial Limited provides a comprehensive range of products to enhance the health, well-being, and performance of a wide range of animals. Merial employs approximately 5,000 people and operates in more than 150 countries worldwide. Its 2006 sales were nearly \$2.2 billion. Merial Limited is a joint venture between Merck & Co., Inc. and sanofi-aventis.

Solution Background

At Merial, we implemented IBM Cognos ReportNet enterprise-wide to more than 1,000 users, and in 2007, we began a migration to IBM Cognos 8 BI. This case study documents our migration process, the best practices we follow, the complex business SLAs we are required to meet, and the low-tech innovations we used to meet some high-tech challenges.

Our ReportNet infrastructure used separate physical Windows® NT servers in development, test, and production. The environments share a single Access Manager LDAP for security, and we have a dozen developers who work independently. We have about 80 folders in Cognos Connection, and build over 50 cubes which are accessed via the PowerPlay Enterprise Server and ReportNet.

We need to burst a large number of reports to a separate, non-Cognos portal, and we must ensure that our cubes are built and delivered by 6:00 a.m. daily. Many of our cubes and reports must be delivered in an off-line mode to users. They dial in and pick up reports and cubes to be viewed later, and which are un-connected to our network. Our business issue was that we had difficulties meeting our SLAs in both cube building and report delivery.

The challenge for the next generation of BI at Merial was to meet our SLAs, ensure that all Cognos content would be available on one URL, provide a robust, scalable infrastructure, and add value to Merial.

Detail

Our first major step was to change from Access Manager to Active Directory. We believe that if the direction at Cognos is to leverage other security providers, then we should also. The second major change has been to use VMWare® instead of physical servers.

In building our development, test, production, and sandbox servers, our best practice was to deploy identically sized servers with identical configurations. While development and QA ran on single-server environments, production uses multiple servers.

The CPU, memory, disk configuration, and physical location of files were as identical as possible. Deployment of virtual servers has almost completely eliminated scalability issues, and it delivered a huge bonus when we had to perform disaster recovery planning.

All three servers use our Corporate Active Directory, and we are setting up identical security in all areas. While IBM Cognos 8 BI does have a role-based structure out-of-the-box, we prefer to use our own structure even if this means we are re-inventing the wheel.

We created user classes in Cognos Connection which correspond to the various capabilities – Report Studio, Query Studio, Analysis Studio, bursting – and we created other users classes to grant access to individual Cognos Connection folders. This gives us a much easier method of tracking and assigning capabilities. We also tightened down every area, never allowing full access to public folders, and restricting Report Studio access in production. All of our servers are currently at IBM Cognos 8 BI version 8.2.

After we felt comfortable with our hardware and security infrastructure, we began to attack the content. At Merial, we have a 6:00 a.m. Service Level Agreement for our critical cube builds that must be met every morning. Obviously, we need robust and automated solutions to meet this critical deliverable.

We were able to create dimensionally modeled database tables for some of the cubes, and we accessed them via Analysis Studio. This is Merial's preferred method of cube access. However, some of our cubes must still be delivered in an off-line mode. For other cubes, our users felt that IBM Cognos PowerPlay was a better fit for some of their custom calculations. We have also discovered issues with refreshing cubes that are accessed via IBM Cognos 8 BI tools.

Our low-tech solution was to create a VBScript (Visual Basic Script) program to do all the “dirty work” for cube builds. This VBScript automates the entire build process, re-tries in the event of error, logs every step of the process, and alerts us in the event of success and failure. The cost of this automation was that the build process for all cubes required certain best practices; physical folder names, physical file names, cube names and IQD locations must be identical.

With these best practices in place, our VBScript could perform the following steps:

- Check that the data warehouse was properly loaded.
- Initiate the cube build.
- Check for successful completion and e-mail users upon success.
- Re-try in the event of error, and e-mail support upon failure.
- Copy cube to production area.
- Disable/enable cube in the IBM Cognos PowerPlay Enterprise Server.
- Log success/failure into tracking database.

In order to have the tightest possible integration, we maintained our IBM Cognos PowerPlay Enterprise Server environment in IBM Cognos ReportNet. But the question was, *How do we give users a single URL to access their IBM Cognos 8 BI content and their cubes via the IBM Cognos PowerPlay Enterprise Server?* Our solution was to create a URL in IBM Cognos 8 BI that simply pointed back to IBM Cognos ReportNet.

Merial implemented several critical-priority cubes to deliver value to the business in an off-line mode. These cubes generate several hundred off-line cubes. We found that building them sequentially allowed us to ensure that they were built without errors. We build all of our off-line cubes one at a time, and if we need more processing capacity, we simply create another VMWare instance of a cube build server.

Having built the cubes, we needed to address alternate delivery of the content of the cubes. We developed a large number of Report Studio reports based on the cubes, and we had to deliver the output of these reports to another portal that was unrelated to Cognos. We needed a mechanism to kick off IBM Cognos 8 BI jobs and processes immediately upon cube build completion, and we needed a method to move the output of these jobs to a non-Cognos environment.

We simply scheduled our Cognos jobs to be trigger-based, and we created a very simple Cognos-supported method of triggering events on remote servers. We merely added a triggering event to our cube build batch files, and half of our work was done. What remained was to deliver the output.

We first re-directed all Cognos output to a single share point, we called upon our VBScript programmers again to parse the Cognos output and move the burst reports to the correct file share, and we made sure to clean up after ourselves – otherwise we would be filling up our disks in a hurry.

At Merial, we added the following “quick-hitters” to increase system performance:

- We implemented ISAPI versus cognos.cgi files.
- We prefer Query Studio to return no data by default.
- All Cognos production servers log to a single file.
- We use the Cognos log viewer.
- We do not create nor keep large .DMP files.
- We implemented Cognos auditing to monitor system performance.

Summary

At Merial, we have a secure, scalable and robust environment that meets our business Service Level Agreements without requiring constant administrator intervention. We seamlessly provide our users with access to several different Cognos technologies that represent a “single source of the truth.” We have eliminated administrator backlog and implemented best practices that allow efficient cross-training of new administrator resources and ease of support. More importantly, our users and executives know they have a BI infrastructure that they can trust now and with all their future initiatives.

Future Plans

Following the success of the IBM Cognos 8 BI rollout at Merial, we are immediately planning an upgrade to version 8.3 and beyond. Our short-term plans are to support our Oracle® Database 11g, integrate other Cognos modules into our IBM Cognos 8 BI environment, and retire our IBM Cognos ReportNet environment. We will use IBM Cognos 8 BI reporting exclusively.

Our longer-term plans are to fully integrate more Cognos finance applications into our BI infrastructure. Currently, Merial supports separate infrastructures globally, and we hope to leverage a single set of best practices while we determine if we should consolidate.

Administratively, we plan to create a dashboard of Cognos auditing reports and metrics so that we can proactively monitor system performance, but we are eagerly looking forward to IBM Cognos 8 BI v3 and future versions to provide this automatically. We anticipate more robust administrative features around IBM Cognos 8 BI PowerPlay.

As a final word to other customers implementing the next generation BI at their organization, we recommend the following tips:

- Join an online forum.
- Use the knowledge base and support.
- Find a partner you trust – and use them.

About Cognos, an IBM company

Cognos, an IBM company, is the world leader in business intelligence and performance management solutions. It provides world-class enterprise planning and BI software and services to help companies plan, understand and manage financial and operational performance. Cognos was acquired by IBM in February 2008. For more information, visit <http://www.cognos.com>.