



CARGILL LEADS PURGING AND ARCHIVING INITIATIVE

GLOBAL COMPANY IMPLEMENTS PURGING AND ARCHIVING PROCEDURES ALL OVER THE WORLD

LOSING WEIGHT IS NOT A BATTLE EXCLUSIVE TO HUMANS — MOST I.T. DATABASES ARE SO HEAVY WITH DATA OVERLOAD, THEY COULD USE A PRETTY STRICT DIET AS WELL. When purchase orders and invoices are run on a daily basis, for example, the amount of information you are storing in your database steadily builds. In turn, the system becomes slower and slower, costing time and money as it struggles to carry the extra weight.

Cargill, a privately held international marketer, processor and distributor of agricultural, food, financial, and industrial products and services, noticed their system was in desperate need of a purge. For a company of more than 100,000 employees operating in 60 countries, maintaining a clean database was difficult.

Bill Tritch, product manager, and Julie Mauser, I.T. manager, Global Financial Solutions for Cargill, discussed their need for a system purge and archive solution and how they have successfully trimmed down their database.

Q: What is Cargill's history with PeopleSoft (formerly J.D. Edwards) products and services?

A: Cargill selected what was then J.D. Edwards in 1993 for three pilot locations — the United States, Australia and Europe. They started out with an initiative called the Financial Management Change Team whose purpose was to review and change the financial processes in Cargill. This initiative was focused on financials and incorporated accounts receivable, accounts payable and general ledger. Before installing J.D. Edwards, Cargill had more than 58 different AR and AP systems, and 10 different GL systems across its various business units — some homegrown, some vendor products.

"The goal of the Financial Management Change Team was to reduce costs and come up with one set of software to deploy globally and function across Cargill's many lines of businesses," Mauser said.

They selected J.D. Edwards WorldSoftware (now PeopleSoft World) because of the software's flexibility, the ability to configure and tune the software, and because of its established global presence — this software had the capability to run in countries all over the world in the language and currency native to those countries.

The next priority was to deploy J.D. Edwards financial software globally. Headquartered in Minneapolis, Minn., all solutions are developed and tested in Minneapolis and then sent out to the regions. Teams were formed in each region — Asia, Europe, Latin America and North America. Rollout began in 1994, and was completed in 1998.

Today, Cargill uses all of J.D. Edwards' financial products, including general ledger, accounts receivable, accounts payable, purchasing, job cost, fixed asset and some sales order processing and address book. It has allowed Cargill to use a standardized, flexible solution to implement in the company worldwide. They have common processes all over the company, making the upgrade processes easier since everyone is running the same software.

"The stability with World is high — we've never wanted to move to OneWorld because of the stability in World and the low cost associated with it," Mauser said.

Q: What business issues did Cargill have with purging and archiving?

A: Several factors led to Cargill's decision to find a purge solution. Though the sheer size of the database was a factor, the main reason was an impending upgrade to their software in North America.

Since implementing J.D. Edwards, Cargill has remained committed to keeping all business units on the same release as much as possible. It can take up to two years to upgrade each region, but they have been successful thus far. In keeping with that commitment, the regions outside of North America had started and completed their upgrade to the A8.1 release. In June 2002, North America was ready to move on to the A8.1 release. When they looked into the upgrade, they found that they had to reduce their databases to be able to make that conversion.

In addition, they had started on release A6.1 years ago, and some of those records would not convert to the newer release.

"We've known for a lot of years that we needed to do a purge, we just never had the tools to do it," Tritch said. "The upgrade project is what really forced our hand and made us work harder and dedicate the resources to the project."

The upgrade was going to require Cargill to convert by reading and writing every single record in all the largest transaction files in the J.D. Edwards system, unless they found a more sophisticated purging solution.

"The main GL detail file in one of their environments alone was 175 million rows," Mauser said. "On average, we can load 1.5 - 2 million records per month in into just one of our

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J.D. Edwards GL detail environments in North America." Cargill had been using J.D. Edwards for 10 years and had never run a purge. As a result, the database size was so large they couldn't run some integrity reports, and ad hoc report queries took twice as long to get through all the records.

Though the upgrade in North America prompted the purge initiative, this issue was not unique to North America. It is a global issue that differs in proportion in each region. North America was largest from a transaction count perspective, but it was relative to each region — Europe's database was huge for Europe; same with Asia and Latin America.

Q: What options did you look into when trying to assess purging software?

A: J.D. Edwards has miscellaneous purge tools delivered in the core software, but did not provide a viable solution for Cargill because it did not purge with integrity. Each record in the system is not completely independent, so if an invoice was purged out of the AR files, Cargill wanted to purge the corresponding GL record.

"That was a huge issue for us — especially when we wanted to tie it to our conversion effort because the J.D. Edwards conversion process required integrity," Mauser said. "Their purge toolset they have today was unacceptable because it did not allow integrity."

Cargill found that J.D. Edwards has purge programs for the AR files and AP files, in addition to a tool that they call P00PURGE, which is a dynamic ad hoc purging tool, but the concepts are similar — it will just delete out of a single file based on selection criteria. None of it was designed to establish any relationship between database files, and Cargill needed the data integrity for their purge.

"Our original intent was that J.D. Edwards provide it, because everyone had the same issue — it was not unique to Cargill," Mauser said. "J.D. Edwards had made the decision that they didn't want to use custom development, they wanted to work through third party products. These happened to be the same third party products we had seen at Quest conferences the year before."

Cargill began looking for outside vendors with a more viable purge solution in August 2002. The two major candidates were DCSSoftware and iTera.

At the time, neither company had done anything purge-wise with a J.D. Edwards customer so there were no purge scripts in either of the products. Cargill held interviews and conference calls with both companies and gathered background information about the products.

"We dug in technically — obviously performance was key. We didn't want to kick off a purge and run it forever, with the size of our systems." Mauser said. "More importantly, we knew we had to purge with minimal to no down time. No matter which product we selected, we had to be able to run our systems in conjunction with the purge process — purge while active."

After careful analysis of both companies, Cargill decided to go with DCSSoftware's ARCTOOLS product.

"Dave (Shea, owner of DCSSoftware) was very willing to help us get started on the project," Tritch said. "He came to our office and spent a couple of weeks helping us develop purge scripts. He had great background knowledge of iSeries and AS/400, how it works and how to make it run faster. He caught on very quickly to understanding how J.D. Edwards and the file structures work."

Mauser also felt that maybe there was a benefit in going with a smaller organization, in that there would be a personal investment in making sure everything worked.

"That's exactly what we found — he was very willing to work with us, improve his tools knowing that he had the possibility of other customers benefiting from this," she said. "He literally took what we did, learned from us and made changes in his product to improve performance. He was literally coding and designing it while he was sitting in our office. It ended up being a great relationship that worked to our advantage, and I think to his advantage as well."

In September 2002, Cargill began working with Shea and developed a team to discuss ideas and a plan for the purge. By October, they were testing purges.

Cargill had one advantage at the time that most companies do not get — they were tying it to their A8 conversion and lease end dates, so they were able to bring in two brand new iSeries machines from IBM, giving them a brand new system to put entire instances of production environments down and use the ARCTOOLS product to validate how fast it ran and how accurate it was.



"It was extremely helpful because we were putting down copies of instances, purging them and reviewing the results to see if we did it right," Tritch said. "If we didn't do it right, we could just refresh it and run it again."

Q: What support, if any, did you receive from J.D. Edwards/PeopleSoft?

A: Cargill found that J.D. Edwards was not prepared to support customers undergoing a purge. They gave the names of third party vendors that could help, but Cargill ended up developing the scripts at the same time J.D. Edwards was pursuing this initiative. Though J.D. Edwards was working on it, their timeline was not as aggressive as Cargill's, and Cargill and DCSoftware wrote most of the scripts on their own.

Q: Has this changed or improved since the merging of J.D. Edwards and PeopleSoft?

A: Cargill has found that nothing has changed with the merger. "We have a great relationship with many of the PeopleSoft employees and we continue to work together to solve issues with the purge," Mauser said.

Q: What challenge have you overcome during the purge process?

A: Being the pioneer of using ARCTOOLS to purge their J.D. Edwards software, Cargill had many challenges to overcome, including the purge while active situation, the size of their database, and being the first to write the scripts.

"Our operations group was constantly watching the system to make sure it didn't impact other processes. While it was purging, other processes would stumble, so they had to watch job queues and put a purge on hold if necessary," Tritch said. "It was basically a 24 hour per day effort because we ran the purge 24 hours a day."

Processes that got in the way of the purge process included the end of the month closeout reports and data saves that had to be run each week. To manage these issues, Cargill developed purge weekends in which they would ask users to stay off the system as much as possible to make the purge process run. The system was available to users, but they were asked to cut back on their time using the system through the weekend.

For the data save issue, ARCTOOLS allowed Cargill to start and stop when needed — without losing any records. Shea coined the term "ending gracefully." They were able to stop running the purge and it would start up again where they left off, which saved a tremendous amount of time and agony when they needed to stop the purge process to run a data save or report query that could not run simultaneously with the purge.

An additional issue Cargill still faces is that of archiving the purged data. They are aware that some users will still need access to files that have been purged, but those records do not need to occupy space in the database. Their temporary solution to this problem is to create a history environment — they have successfully purged the largest six of 10 J.D. Edwards environments in

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North America, which helped to clear some disk space. In these history environments, they can view and inquire on the purged records. They still occupy disk capacity on the machines, but since they are no longer in the production database, run times are not affected. This solution was set up as a quick fix, not a long term solution.

Cargill overcame the purge process runtime challenge by bringing in an IBM performance expert to watch the system and assess how they could better tune the machine to make it run faster. Shea was also involved in the process, and followed recommendations on what he could change in his product to make it run faster. This helped Cargill to expedite the process, as it was not feasible for the process to run for five consecutive months.

A challenge that Cargill did not have to face due to the upcoming A8 conversion was a database reorganization effort. A record still exists in the database until you reorganize. In order to reclaim the disk space from a deleted file, you have to reorganize all the purged files. Cargill is currently looking into tools that will run this process for them for future purge efforts, and is evaluating DCSsoftware, iTera and other vendor products. Again, they must find a tool that will allow them to work and run the reorganization process at the same time.

Q: What business processes have improved, and why?

A: Cargill has noticed that their process runtime has dramatically decreased, which has saved time and, in turn, money. The online inquiries and backup of systems run faster because the database is not nearly as big as it was before the purge.

The main way the purge process has helped their overall business process is that they were now able to perform an effective conversion. If they had not purged, many of their files would not have converted properly to the new release and they would have had additional rework or cleanup of the old data.

Their ultimate goal is to say they have reduced costs from a system standpoint. At this time, they cannot say that because they are still dealing with disk cost because they do not have an effective archive solution.

Q: What would you change or do differently?

A: Overall, Cargill is happy with its experience. They believe they chose the correct tool and partner for their purge and are pleased with the results.

"I have to say that if I were to do a purge again, I would do it the same way," Tritch said. "We would stick with the same product — we are very happy with ARCTOOLS."

Tritch and Mauser both agreed that if they had more time in the initial phases, they would have figured out the issue of record history in the system before executing the purge. All in all, they felt like they did the correct amount of research and testing, and received excellent support and commitment from DCSsoftware.

Q: What advice would you give to other users looking into purging their system?

A: "Don't assume you can plug it in and run with it," Tritch said. "Every system is different; every product will run differently on each system. J.D. Edwards is great because it allows flexibility in modifications, but now you can't just plug it in and go."

Tritch and Mauser advised other customers to test, test and test some more. They attributed their success to spending a good amount of time in the initial phases testing the purges and assessing what happened each time they purged records. They emphasized again that you can not just plug it in and go — each user has custom modifications and custom processes, which change the way the product works and the way data is stored on the machine.

"Do not underestimate the testing effort," Tritch said. "You will test and retest many times to make sure you understand the data, and that takes a lot of time, but you need to do that."

Q: Where are you in terms of meeting your goals?

A: "I think the purge scripts we wrote were good purge scripts for North America. We're continuing to enhance those scripts to accommodate all our worldwide regions, all the multi-currency aspects of it. We did have some multi-currency in North America, but it's a much greater degree in the other regions," Tritch said.



At this point, another goal of Cargill's is to make sure the company has a good set of purge scripts that all the regions can use. "I'm sure they'll have to tweak it here and there for all their own local solutions — there are a lot of localization files and processes — but if we can deliver a good core set of scripts to work from, that's where we want to be," Tritch added.

So far Cargill has purged North America; they are in the process of purging Asia, and want to get Europe and Latin America to be at the same point as well. Another long-term goal is to get each region on a regular purge cycle, possibly purging year by year.

Q: What did you actually accomplish in your purging effort?

A: Cargill has noticed a significant difference after its purging effort, especially in the company's largest J.D. Edwards environment. The largest purged environment, F0911, held 175 million records before the purge. After the purge, it was narrowed down to 77 million records. It took one month to complete the purge of eight files in that environment, with the system running virtually 24 hours a day. The smallest environment took four days to purge.

Q: How was Quest able to help you in the purging effort?

A: Purging and archiving is an issue that has been circulating among customers for a long time. It was the No. 1 requested enhancement from the World Advisory Council (WAC), and is still a major part of the WAC's goals. The topic was discussed through all the SIG meetings and WAC calls.

"We talked about it at Quest Global, regional conferences — that's where it was facilitated, and where we were getting J.D. Edwards' involvement in the process," Tritch said.

Mauser agreed that Quest conferences were helpful to realize that others were having the same issues. "When I think of Quest, I think of the forums and discussions leading up to our actual purge, and then it has also been a forum to deliver messages of our success after the purge."

Cargill presented the company's purging and archiving success story at Quest Global Conference 2003 and at the Quest Midwest Conference in January. At this point, the purging and archiving solution is not complete in PeopleSoft, and they continue to look for ways to close the knowledge gap between the customer, third party vendor, and PeopleSoft.

While they realize there is still a lot of work to be done, Cargill's employees have conquered the uphill battle of purging an enormous system while maintaining the integrity of the data. DCSoftware's help to them was invaluable, and they attribute much of their success to the commitment and hard work of Shea and the team of Cargill employees that dedicated eight months to developing, testing and executing to make this project work.

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