Tech Tips

# Put Your CA Datacom® on a Diet: Lose Wait, Perform Better!

**How CA Datacom users can maintain 24/7/365 availability while shrinking storage requirements and expand their exploitation of IBM's Integrated Information Specialty Processor.**

DBA's are under pressure to efficiently utilize their storage that supports large-volume databases, including CA Datacom. With the relentless consumption of data and resulting growth for storage, for every gigabyte of large-volume production database storage used, even more gigabytes of duplicate storage are needed to support the entire application lifecycle—including test, QA, development and backup systems.

Data compression can result in significant savings in DASD space requirements, which can translate into dollar savings in monthly storage rentals, maintenance and floor space. One problem with most compression processes is that the need for a multi-step implementation process that can include downtime for systems/databases. Another problem is that most compression routines run on the general purpose CPU, consuming valuable MIPS and system resources.

## The Same Old Routine?

For example, IT desires to lower the total cost of ownership (TCO), yet know those I/O events cannot run on IBM Integrated Information Specialty Processors (zIIP) processors today. All I/O must run on some kind of general processor (GP) and that time is billable…and expensive! Therefore any reduction in GP I/O would give the benefit of reduced GP CPU usage and therefore reducing I/O with compression routines that run on zIIP processors is very desirable.

For example, today, some clients have 3rd-party compression solutions - and in some cases, their own private compression routines - running with CA Datacom. When this configuration exists, CA Datacom cannot run 3rd-party or private compression routines on zIIP eligible processors (according to the zIIP implementation guidelines set by IBM). In fact, due to the overhead of switching back and forth between using the zIIP processors for CA Datacom processing and GP processors for 3rd-party/private compression routines, the CA Datacom product team recommends that the DBA do significant testing with zIIP processing before deciding on whether zIIP should be activated for these mixed mode environments.

However, there is a resolution. When using CA Datacom Presspack (Presspack), zIIP engines can be used to execute the compression processing and save valuable GP cycles by reducing the I/O events used to process database requests. These reductions in I/O events are created by the compression algorithms ability to store data rows in a given block for a given database area. This provides the benefit of more available data to be in the buffer area for a longer period of time which means that more database requests can be handled by the data in buffers (memory). Because of their nature, sequential processes can see a substantial benefit in this approach. In one study, a user data table was reduced compressed to less than 40% of its original size which led to I/O event reductions for typical indexed processing by over 25% and sequential processing over 50%.

## The Secret Sauce

While the Presspack zIIP implementation has answered the call for reducing the TCO by shrinking DASD footprint and saving GP CPU cycles, it is a second complimentary feature of the CA Datacom database utilities. This key feature is called "**Table Alter 24 by 7**" (TA24). It provides the DBA the ability to implement and change the compression attributes for a data table without interrupting user access. Tables can go from no compression to strong compression (standard) to custom compression. TA24 even allows the DBA to change from 3rd party or private compression to Presspack without a data access interruption.

This is a true "try it and you like it "situation where a DBA can try different levels of compression to get the best result without taking the tables offline. Like many other CA Datacom utilities, TA24 runs in the Multi-User address space and exploits zIIP processors to perform the compression processing. When you combine Presspack with TA24 you solve both problems (shrink storage requirements and offload GP cycles) allowing you to facilitate a reduction in billable CPU and DASD costs.

There are benefits beyond GP cycle reduction and storage savings: If you're like many companies facing cost containment/cost cutting initiatives, Presspack is a great opportunity to replace your 3rd-party compression product to help improve processing and further reduce costs and simplify vendor management. For example: one large US-based telecom company successfully replacing a 3rd party compression product with Presspack. The result? How about moving an impressive 3,000+ database areas utilizing TA24 and Presspack, *all while maintaining 24/7 availability*.

CA Datacom sites running z/OS V14.0 (PTF level 14.02) or V15.0 can activate Presspack *without installation or implementation of any additional software*. All that is needed to activate this capability is a LMPKEY, provided by CA, and recycle the CA Datacom Multi-User address space. From there the TA24 utility function allows the DBA to turn on or off any compression routine as needed with no outage to the database tables. This approach allows DBAs and users the ability to freely experiment with Presspack. If you find Presspack is right for you, simply contact your CA account executive (or call support who can help point you in the right direction). If you decide not to go forward you can simply restore back to their previous compression (or no compression) settings using TA24. With this approach, your data is always available to the using applications while you are experimenting with the process.

## Operators Standing By!

Is CA Datacom Presspack right for your shop? Learn more. Click HERE to view a short video titled: "Reducing TCO and Improving Response Time with CA Datacom Presspack"