

# Disk Management Case Study



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As one of the fastest growing retailers in history, PriceSmart needed to guarantee user access to its iSeries system, while allowing time for file backups and reorganization. It found an efficient answer to the problem in Reorganize While Active.

# PriceSmart: Reorganize While Active A Smart Price to Pay

*At the heart of PriceSmart's success and competitive edge is its efficient sourcing, streamlined supply-chain distribution and innovative approach to selling and operations – that rely heavily on the company's iSeries system at its headquarters in San Diego, CA. As Dave Hahn, director of software development, explains, "The original Price Club was an iSeries shop running in-house software. After Price Club and Costco merged, Sol and Robert Price launched the membership merchandising concept in Asia and Latin America and retained the iSeries system and information technology personnel from Price Club."*

## The scenario

Computer software needs had changed. Because the majority of PriceSmart's operations would be outside the United States, a application solution flexible enough to handle a multi-currency/multi-lingual environment was needed. For these reasons they selected JD Edwards. Today, processing is distributed, with IBM Point-of-Sales systems used in each retail location, backed by the powerful iSeries at corporate headquarters that is dedicated to accounting, inventory and similar corporate functions. Evidencing the company's rapid growth, the need for DASD has increased dramatically.

PriceSmart's success was challenged by necessary downtime during IT maintenance activities that restricted file access on its systems. According to Hahn, "Our challenge was further highlighted by PriceSmart's management direction that we deliver the absolute highest level of service possible for PriceSmart members; this requires near 7x24 availability of information systems." Because the company was operating in multiple countries and time zones, the iSeries was needed to accommodate customer requirements 24 hours a day, seven days a week. There was literally no time for backup, maintenance or file reorganization.

## Growth pains and pressure

At the same time, however, some of the files used for inventory and accounting purposes were growing exponentially. PriceSmart's largest file was 30 gigabytes; with 10 other files over 5 gigabytes and 30 files over a gig. "While backup and computer maintenance were issues for us," Hahn recalls, "the biggest challenge was file reorganization. The size of many files had reached the point where reorganization simply couldn't be accomplished. In fact, the last reorganization we did prior to the Reorganize While Active installation took in excess of 12 hours! That kind of time is just not available in our environment – even on weekends." That's when Reorganize While Active entered the picture.

## The Problem

The 12-hour downtime experienced by PriceSmart during its last reorganization is not unique. Information technology professionals experienced with the iSeries realize that the iSeries solution for reclaiming deleted file space can present problems. When the IBM command "RGZPFM" is invoked, users are locked out the file or files being reorganized and do not have access to those files until the re-org is complete. Since the reorganize process for deleted files requires many hours and thereby creates user downtime, it is understandable that many businesses fail to reorganize their files on a regular basis. Such neglect causes problems. Lack of reorganization means that a lot of disk space may be used unnecessarily. This can cause the system to operate less efficiently. Jobs will not process as quickly, and system response time will be noticeably slower to system users who, in turn, become less productive than they can and should be.

## The Solution

The Reorganize While Active solution is unique in addressing problems associated with iSeries file reorganization. Files can be reorganized any day of the week with little or no inconvenience to users. The solution is as automated and simple as one system command: RGZWACT.

Benefits to the Reorganize While Active solution can be quantified in terms of time, expenses and performance.

1. Time - Utilization of the Reorganize While Active command instead of the IBM RGZPFM command may save as much as 50 to 100 hours of user downtime per year. For larger organizations, just reorganizing such key files as account or transaction files can require 20 or more hours of downtime each time reorganization is performed. When iSeries files have not been reorganized for some time, it is not unusual for users to experience significantly more than 20 hours of downtime when the process is finally undertaken. That downtime is essentially eliminated with Reorganize While Active.
2. Expenses - Though any downtime and subsequent loss of productivity can be described as a "useless expense," the uselessness is even more evident in the case of file reorganization. While the IBM file organization process is running, users do not have access to files critical to their work tasks. For that reason, file reorganizations are generally done on weekends, which represent an increased inconvenience for employees and an added financial burden for employers subject to overtime costs or for globally operating companies for which there are no corporate weekends. Reorganize While Active allows a company or user to reorganize iSeries files any day or time that is desirable or convenient, without impacting staff or users.
3. Performance - Routine file reorganization is important for optimal performance of an iSeries system. Reorganization frees up disk space and helps the system to run faster. With file reorganization, user uptime will improve while purchase of DASD and processor upgrades can often be postponed.

## The PriceSmart Experience

"I was apprehensive when I first went to use the Reorganize While Active tool," Hahn says. "I didn't know what it was going to do to our data, the system, or our end-users. I am delighted that my apprehensions were groundless. From installation through actual reorganizations, the product has lived up to its promise. As a result, downtime has been so insignificant that I would describe it as meaningless."

Hahn reports he has gained back as much as 20% of the iSeries' DASD and has noticed significant performance gains with the solution. Most of the file reorganization process is transparent to the system's users. He reports that the system needs the file exclusively for under a minute.

## Direct benefits realized

According to Hahn, benefits of the Reorganize While Active are most evident in three areas:

1. Price – Cost of the solution is so reasonable that most iSeries user organizations will be able to purchase it with a minimum of in-house approvals.
2. Support –Hahn reports “outstanding” support and assistance from the developer throughout the purchase and utilization process. “The company actively solicited my input for future enhancements to the product and was available to answer any question I had.”
3. Impact—The challenge for companies or organizations growing as fast as PriceSmart lies in DASD management. According to Hahn, “the opportunity for reorganization needs to happen – and high growth companies cannot afford to lose weekend computer availability.

PriceSmart found Reorganize While Active to be a unique, highly effective and cost efficient tool for improving iSeries system performance, decreasing downtime and increasing DASD availability.

## A Priced-Right Suite of iSeries DASD Management Solutions!

Your business depends on high availability of your disk resources. You can depend on S4i to help you maximize usage of those resources and help you avoid unforeseen consumption. Our DASD management tools assist with batch and real-time routine cleanup, trend analysis, forecasting and spike detection. When circumstances beyond your control cause DASD consumption to go haywire, our tools are there to assist you in getting the situation back under control. When it's budget time, we're there with a realistic forecast of what you're going to need in the future. No surprises, just great software. For your iSeries document distribution and archiving needs, take a look at S4i Express, our powerful document management system.



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