White Paper: Data Capture and Document Management Systems - 10 Tips and Information Nuggets That Will Save You Time, Money, and Hair

Make Sure to Monitor Server RAM and Hard Disc Fragmentation for Optimal Data Capture and Document Management System Performance

by Ed Bross

Somewhere in the world today, several IT analysts have less hair because their data capture or document management system slowed to a grinding halt. A critical part of any data capture and/or document management system is handling server performance. For any system that is live and successfully in production, there are some key aspects that need to be monitored to maintain optimal server performance over the lifetime of the system. In the beginning of a data capture and document management system's existence, life is good because system performance is usually at its peak with freshly loaded operating data and relatively low usage of a newly adapted system. However, an inadequately monitored system or worse, a 'set it and forget it' attitude towards the server, will result in a quick fall from that peak and lead to performance degradation. In other words, life will no longer be so good.

I/O Operation Impacts

With many data capture and document management solutions, there are steady and intensive hard disk Input/Output (I/O) operations working in the background as image files are continuously being submitted to the system, being moved from queue location to process location, or are converted from one format to another. With these intense disc operations, monitoring random access memory (RAM) usage and disc fragmentation percentage are critical. As RAM usage increases, either by specific process or application consumption, less of it becomes available to the operating system for internal processes and disc caching. This will result in the operating system 'swapping' data that is in the RAM on to a location on the disc called Virtual Memory, so that new data can be loaded into RAM. This swapping of data can drastically slow down the server processes as hard discs are substantially slower in the movement of data when compared to RAM. As the amount of swapping increases, file fragmentation also begins to increase. As the file fragmentation increases, disc performance decreases, and the overall server performance will steadily decline until either an IT resource notices or an end user raises their hand.

Disk Fragmentation Prevention

Preventing and correcting disc fragmentation can be as simple as just keeping an eye on the RAM usage. But what happens when the discs do become fragmented? There are many disc defragmentation utilities that are readily available, and they will often allow for off-business hour defragmentation. Some will even monitor the fragmentation percentage and will alert an administrator via email. This can often head off problems by allowing further preventative actions to be taken, rather than incurring system down time due to emergency corrective actions. Disc defragmentation can be equal to or more intensive than the document capture systems disc usage, so proper scheduling is a key to keeping the system healthy and the server performance at its peak.

RAM Consumption

Keeping a close eye on the amount of RAM in use is also highly recommended. A dramatic change will almost always indicate some type of issue, such as a process with a memory leak, or a service that has failed to start. As time passes, applications often grow to consume greater quantities of RAM, therefore, establishing a baseline early on in the adaptation of the data capture or document management system is crucial. Additionally, as the system is expanded into other departments, and new users are added to the system, the amount of needed resources will often increase. Adding RAM to a server has become an inexpensive way to prevent disc fragmentation and overall system performance degradation. A good system administrator will know when and how to upgrade the RAM so that the optimal performance can be maintained as the system grows.

The key to maintaining a healthy server is simply to prevent problems though good practice and proper monitoring. By being proactive rather than reactive in system monitoring, expensive corrective actions can be avoided, suffering though system slowdowns or worse yet, system downtime can be prevented, and the hair of IT resources around the world can be saved.

About UFC Inc.

UFC Inc is a consulting, integration and solutions firm preferred by clients in the Oil and Gas Industry for our quality, innovation and integration expertise. UFC provides data capture, enterprise content management software, support and integration services - based on a flexible architecture and common set of applications for collecting, classifying, retaining, migrating, securing and accessing information – all at the lowest cost of ownership.

Unlike vendors that deliver generalized ECM products with centralized or consolidated architectures, or support few applications and data types, UFC delivers the most comprehensive solution, specifically tailored for the customer. The distributed nature of the solution along with UFC's extensive expertise and unique approach makes it ideal for the Oil and Gas company with remote offices that have limited storage space, minimal IT infrastructure or technical support. Remote locations realize significant improvement in operational efficiencies, improved collaboration, a reduction in storage costs - without sacrificing centralized control or visibility of information. From capturing personnel information such as fuel cards and human resource forms to capturing and storing engineering drawings and correspondence, UFC provides the Oil and Gas industry the ability to reduce paper transaction costs while increasing their data processing efficiencies.

Call us today to find out how we can help your organization at (248) 447-0100 or email us at sales@ufcinc.com.

Keywords:

document capture
document capture software
web based scan
web based scanning
scan capture software
document capture solutions
capture document
process capture software
capture documents
web based data capture