Technology Infrastructure Solutions
Defragmentation of Hard Disks on Creo X86 Windows-Based Workflow Servers

1. OVERVIEW

This information is a response to customer demand for a defragmentation solution for Creo Workflow Servers running Windows NT Server 4.0 and Windows 2000 Server. Creo does not support any defragmentation packages per se, but we do recommend a third-party solution. The software is called Raxco PerfectDisk 2000 Server v6.0. It is available for purchase (downloadable or CDROM) online at www.raxco.com.

Windows 2000's built-in defragmentation software works properly, but is painfully slow and does an incomplete job of defragmentation, and cannot be easily scheduled. Customers are welcome to use it, but probably won't like it very much.

Creo Inc. does not resell or support PerfectDisk in any way. It has been tested and is fully functional with our workflow products on Windows NT Server 4.0 and Windows 2000 Server, however we will not provide support in any way shape or form. If a customer is having trouble with PerfectDisk, they must contact Raxco Software directly.

There currently is no solution for defragmenting AIX or other Unix disks, nor is it usually necessary due to the file system structure(s) used.

2. COMPATIBILITY

PerfectDisk has been tested and found to work properly with all of Creo's workflow products on the Windows 2000 Server platforms (x86 only). It has not been tested and is not recommended for the NT Workstation platform (i.e. Renaissance Scanner).

There is one caveat: The defrag process must not be used while the workflow software is running. Therefore the customer must shut down all workflow software (i.e. Prinergy, Platemaster) and related services (i.e. Oracle Database) before defragmenting their hard disks. Real-time background defragmentation may cause problems and is not recommended.

PerfectDisk 2000 v6.0 is useable on any and all types of local hard disks that Windows 2000 supports; internal external, etc. It even does floppies if you really, really want to.

PerfectDisk 2000 v6.0 has been thoroughly tested and has no problems with Dynamic Disks in any configuration.

> **Note:** Defragmentation software that uses the Windows 2000 defragmentation API (all of them except Norton SpeedDisk, and including Microsoft's built-in defragger) cannot defragment a volume that was formatted using anything other than a 4KB cluster size. This is a limitation of the Windows 2000 API and not of any 3rd-party defragmentation package. Windows 2003 and Windows XP are unaffected by this.

This is usually not a concern with Creo workflow servers, but is included here for completeness.

Norton SpeedDisk uses a custom API to defragment disks of different cluster sizes. This is not approved in any way by Microsoft and is potentially hazardous to data integrity. Therefore, Creo specifically disallows use of Norton SpeedDisk on its workflow products.

3. PERFORMANCE

Of all of the 3rd-party defragmentation packages available, PerfectDisk 2000 was found to be the most thorough of all. One package (DisKeeper by Executive Software) was found to be faster on the surface, but required multiple defragmentation runs to get the same result as one run on PerfectDisk, resulting in a net loss of time.

That said, defragmentation performance is subject to a whole range of variables; the speed of the disk, the size of the disk, the free space available, the amount of data a disk contains, the amount of fragmentation there is, the load on the hosts system, and many others.

Because of these variables, it is impossible to predict how long a given defragmentation pass will take. In our lab, we have seen a heavily fragmented, nearly full Clariion 4500 take 3 ***days*** to complete one defragmentation pass.

4. SUPPORT

Support for PerfectDisk must be obtained by contacting Raxco Software directly (www.raxco.com). Creo does not, and never will, provide support for 3rd-party defragmentation software beyond the information contained in this document.