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Common Questions Related to Databases and Disk Space

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About This Document

This document contains common questions related to databases and disk space and is applicable to AIX 3.2 and 4.1.

Questions And Answers

Q1. Why don't I see more free blocks with "df" when I remove a large Oracle file with "rm"? (The question could also be for non-database files.)

A1. The most common reason for this is that the file is still open by some other process(es). Look at which process(es) are using the file with "fuser -u <filename>" and make sure they stop using the file. "fuser -k <filename>" will kill all such processes. Only then will you see the data blocks associated with that file released. This is true of any Unix implementation because data blocks associated with a file will be released only when the reference count in the inode of that file is 0, implying that no process has that file open. In the case of Oracle, just killing all processes using that file might still not free the space.

You might have to then do the following:

1. shutdown Oracle
2. kill all processes using the database files
3. run slibclean

Q2. Why do I see the "ls -l" output show me huge sizes of Oracle files while "df" shows me many more free blocks than what "ls -l" adds up to?

A2. Oracle creates sparse files (large empty files) because that is the way they handle free space for inserts into the table (apparently). As a result, although the file might be of size 1Mb, if it has just 10 characters written into it, it will occupy just 1 data block (4Kb) in the filesystem. Hence, "df" will show a lot more free blocks than you would expect.

For further information:

1. Request fax #2480 ("Why Numbers from "du -sk" and "df" Disagree") from 1-800-IBM-4FAX.
2. Request Hone item: HQ548438 from your IBM representative.

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