

(SUMMARY) Filesystem ---- "ls -l" total reporting incorrect file sizes – ADVFS

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Managers

Thanks to Steve VanDevender, Oisín McGuinness, Bob Harris, Dr. Alan Rollow, James Fitzgerald, Bob Vickers and Bård Tesaker for their help and time on explaining the behavior of my file domain. It appears that there isn't a problem at all.

The behavior that I'm seeing from the /data5 filesystem is due to the way that our version of Oracle allocates space in its temp files.

"Thomas, Thomas" provided this nugget of knowledge from the Oracle webpage:

fact: Oracle Server – Enterprise Edition 8.1

fact: tempfile

symptom: space for a tempfile not allocated in the filesystem

symptom: space not completely used in filesystem

cause: A temporary tablespace with a tempfile is added to the database:

```
create temporary tablespace test_temp TEMPFILE '/oracle/test_temp.dbf'  
size 400m reuse extent management local uniform size 1024k;
```

You see the correct filesize with a 'ls -l', but a df -k reports too much free

space in that filesystem.

Tempfiles are not fully allocated and initialized during creation or resize.

The description for this performance feature was omitted in Oracle8i.

fix:

The Oracle9i Database Concepts Release 1 guide has been updated to reflect this behaviour.

For example:

Locally managed temporary tablespaces have temporary datafiles (tempfiles) which are similar to ordinary datafiles except that:

When you create or resize tempfiles, they are not always guaranteed allocation

of disk space for the filesize specified. On certain file systems (for example

UNIX) disk blocks are allocated not at file creation or resizing, but before the blocks are accessed.

Caution: This enables fast tempfile creation and resizing; however the disk could run out of space later when the tempfiles are accessed.

In essence our oracle temp files are "sparse" files as mentioned by several people above. Sparse files are files that have a "hole" in them (a range of empty bytes). So for example:

```
# ls -ls TEMP01.d
```