

Cleandisk : a utility to wipe unused disk space

Source: <http://unix.derkeiler.com/Mailing-Lists/AIX-L/2005-09/0058.html>

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Date: 09/14/05

Date: Wed, 14 Sep 2005 12:59:44 -0700
To: aix-l@Princeton.EDU

```
#####  
Havent used but located script to wipedisk  
#####  
#!/bin/bash  
#  
# Cleandisk : a utility to wipe unused disk space  
#  
# Version 0.1  
# Author : Iain Roberts  
# Date : 25th October 2003  
#  
  
# This is a little shell script to wipe disk space  
which is unused but may  
# still have scraps of deleted files. It is designed  
to be run on a running  
# system. It does a number of overwrites specified  
when the script is run.  
# Each overwrite uses dd and writes first from  
/dev/zero and then from  
# /dev/urandom.  
  
# The problem with this approach in a shell script is  
that I can't see how to  
# overwrite all unused disk space without risking  
filling up the whole  
# partition and so potentially causing problems on the  
system. The way I've  
# done it is to write the random/zero data to files.  
As the available space  
# gets smaller, the files get smaller to fill up more  
of it. The script  
# won't let the space run out completely, though,  
which means that there  
# will always be a small amount of disk space which  
never gets overwritten.
```

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```
# Oh – and it's damn slow too.

# This script is provided with absolutely no warranty,
# nor any guarantee that
# it won't wreck your system. Use it with care.

#-----#
# Variables #
#-----#

FS=$1
typeset -i OVERWRITES=$2
typeset -i CHUNKS=0
typeset -i CSIZE=0

#-----#
# Functions #
#-----#

cleanup() {
    echo "Cleaning up files created by cleandisk."
    echo "Now deleting files $FS/cleandisk/*"
    /bin/rm -r $FS/cleandisk
}

msgcat() {
MSG[0]="Cleandisk completed. Only $FSFREE KB free
space was left in $FS"
MSG[1]="$FS/cleandisk already exists...exiting"
MSG[2]="You must specify a number of overwrites. I
recommend between 1 and 10"
MSG[3]="dd if=/dev/zero has failed. Please
investigate."
MSG[4]="dd if=/dev/urandom has failed. Please
investigate."
MSG[5]="$FS is not a partition mount point."
MSG[6]="Usage : cleandisk <mount_point>
<overwrite_count>. e.g. cleandisk /home 3"
MSG[7]="$FS/cleandisk exists. Please delete and try
again."

echo "${MSG[$1]}"
exit $1
}

#-----#
# Main body #
#-----#

[[ $OVERWRITES -lt 1 ]] && msgcat 2
```

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```
if df $FS|awk '{print $6}'|grep -q "^${FS}$"
then
  typeset -i FSFREE=$(df -k $FS|grep " $FS$" |awk
' {print $4}')

  # You might have a directory called cleandisk with
  important files in
  # so, to be safe, I'll exit if you've got a
  cleandisk directory.
  # Just manually delete the directory and re-run
  script.
  if [ -e $FS/cleandisk ]
  then
    msgcat 7
  else
    echo "Creating directory $FS/cleandisk"
    mkdir $FS/cleandisk
  fi

  # This while loop runs once for each chunk
  while [ $FSFREE -gt 2048 ]
  do
    echo " $FSFREE KB left in $FS to wipe clean"

    # Figure out best chunk size (1MB/10MB/100MB)
    # Always leave > 2xchunk size free (e.g. if
    chunk size is 10MB, at least
    # 20MB must exist to be wiped, so after wipe
    at least 10MB will be free
    # This helps protect against filesystems filling up
    from other
    # processes

    if [ $FSFREE -gt 204800 ]
    then
      CSIZE=10240 # 100MB
    elif [ $FSFREE -gt 20480 ]
    then
      CSIZE=1024 # 10MB
    elif [ $FSFREE -gt 2048 ]
    then
      CSIZE=102 # 1MB(ish)
    else
      cleanup
      msgcat 0
    fi

    typeset -i MB=CSIZE/102
    typeset -i COUNT=0
```

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```
echo " Now writing a chunk of $MB MB (may
take some time)"
printf " Overwrite count --> "

# This while loop runs once for each overwrite per
chunk
while [ $COUNT -lt $OVERWRITES ]
do
  ((COUNT+=1))
  dd if=/dev/zero of=$FS/cleandisk/$CHUNKS bs=10240
count=$CSIZE >/dev/null 2>&1|| msgcat 3
  dd if=/dev/urandom of=$FS/cleandisk/$CHUNKS
bs=10240 count=$CSIZE >/dev/null 2>&1|| msgcat 4
  printf "$COUNT"
done
# End of loop running once per overwrite per
chunk

FSFREE=$(df -k $FS|grep " $FS$" |awk '{print
$4}')
((CHUNKS+=1))
echo -e "\n$CHUNKS chunk(s) have now been written."
done
# End of loop running once per chunk

else
  msgcat 5
fi

cleanup
msgcat 0
```

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Work It's Nice To Be Important But It's More Important To Be Nice