Howto delete multiple files in Linux and FreeBSD / How to deal with "Argument list too long" error while deleting many files in directory

Author : admin

Linux has some Limitations on the number of files you can delete within a directory, therefore if you try to delete let's say 100000 files with a quarantine mails from spamassassin.
In that case you are about to face an error **Argument list too long** . The amount of files you can delete in Linux is tied with something specified by a file:
/usr/include/linux/limits.h
This limitation is a limitation caused by **kernel_limits**. In order to check the limitation on your Linux distribution, you have to execute the command:

egrep ARG_MAX /usr/include/linux/limits.h

You should receive a result on most Linux distrubutions similar to:
#define ARG_MAX 131072 /* # bytes of args + environ for exec() */

The 131072 is actually a default limitation on Debian GNU/Linux as well.The reason for the error is that the the maximum number (in bytes) of the arguments to a command could be equal max to the ARG_MAX defined in the limits.h.
For instance rm -f * in a directory with 40000 fileswould be evaluted as rm -f file1 file2 file3 ... file40000. Therefore at a certain point the maximum limitation of 131072 bytes long for arguments or 128KB is about to be reached and then the command let's say **ls *** would refuse to list the files in the directory showing up the annoying **Argument list too long** error.
There are a couple of ways to deal with that unpleasant situation.

1. You can use the **linux find** command to delete the files, you have to execute after changing dir (cd) to the directory where the multiple files are located:
find . -exec rm -fr {} \;
2. Second approach to the problem is passing the xargs command to **find** .
For instance execute the command:

find . -name "*" -print | xargs rm

3. In FreeBSD to get around the "Argument list too long" problem", in bash shell you have to execute:

for files in *.*; do rm -f $files; done

4. Another possible way is to increase the **ARG_MAX value in limits.h** though this approach in my

personal belief could have a negative impact on some productive servers, therefore it's not a recommended.
Yet if you desire to do so simply edit /usr/include/linux/limits.h and change the ARG_MAX to your value of choice.