# Solution M3: Editors. Files. Streams

One possible solution could be:

1. Create a local copy of the file

[lsauser@almalinux ~]$ **cp /etc/services services**

1. Extract the comments only

[lsauser@almalinux ~]$ **grep -E '^[#]' services > services\_comments.txt**

*Or using this command*

[lsauser@almalinux ~]$ **grep ^# services > services\_comments.txt**

1. Create a version without comments (without empty lines present in the resulting file) (use this one)

[lsauser@almalinux ~]$ **grep -E '^[^#]' services > services\_wo\_comments.txt**

*Or a version with empty lines present in the resulting file*

[lsauser@almalinux ~]$ **grep -v ^# services > services\_wo\_comments.txt**

1. Create a file containing only **udp** information

[lsauser@almalinux ~]$ **grep -E '^[^#]\*udp' services > services\_udp.txt**

1. Prepare to create a shorter file in a text editor

[lsauser@almalinux ~]$ **vi services\_wo\_comments.txt**

In normal (command) mode we enter **/blackjack** for **Red Hat** (and its derivatives) and **openSUSE**, or **/socks** for **Debian** (and its derivatives) and then hit **Enter**

In normal (command) mode we hit the keys **dG** (**d** and then **Shift+g**)

**:w well-known-ports.txt**

**:q!**

1. Create even shorter file using **sed** (and the version of the source file without empty lines)

[lsauser@almalinux ~]$ **sed -n '1,100s/\//-/pg' well-known-ports.txt > 100-well-known-ports.txt**

*Or (change the default delimiter to something else, for example @)*

[lsauser@almalinux ~]$ **sed -n '1,100s@/@-@pg' well-known-ports.txt > 100-well-known-ports.txt**

1. Create the first document

[lsauser@almalinux ~]$ **cat > doc1.txt << EOF**

**10-IT-HQ**

**20-Accounting-HQ**

**30-Help Desk-Remote**

**40-Sales-HQ**

**EOF**

1. Create the second document

[lsauser@almalinux ~]$ **cat > doc2.txt << EOF**

**10-B.Thomas**

**20-J.Foster**

**30-G.Smith**

**40-F.Hudson**

**EOF**

1. Create the third one by joining the other two

[lsauser@almalinux ~]$ **join -t - -j 1 doc1.txt doc2.txt > doc3.txt**

*Or (without spaces)*

[lsauser@almalinux ~]$ **join -t- -j1 doc1.txt doc2.txt > doc3.txt**

1. Extract the unique locations

[lsauser@almalinux ~]$ **cut -d - -f 3 doc3.txt | sort | uniq > locations.txt**

*Or (without spaces in* ***cut*** *and skip* ***uniq****)*

[lsauser@almalinux ~]$ **cut -d- -f3 doc3.txt | sort -u > locations.txt**

1. Count the unique locations

[lsauser@almalinux ~]$ **cut -d - -f 3 doc3.txt | sort | uniq | wc -l > locations-count.txt**

*Or (without spaces in* ***cut*** *and skip* ***uniq****)*

**[lsauser@almalinux ~]$ cut -d- -f3 doc3.txt | sort -u | wc -l >> locations.txt**

*Or (using the resulting file from the previous step)*

**[lsauser@almalinux ~]$ wc -l locations.txt >> locations.txt**

1. Find all small (according to the specification) files

[lsauser@almalinux ~]$ **sudo find /etc -type f -size -200c -exec ls {} \; | sort > small-etc-files.txt**

*Self-check Script Output:*

[lsauser@almalinux ~]$ **curl -s https://courses.zahariev.pro/m3.sh | sudo bash**

\* Working on RHEL-based machine (BIOS) using curl to report

\* Testing for a local copy of /etc/services ...

... PASS

\* Checking the services\_comments.txt file ...

... PASS

\* Checking the services\_wo\_comments.txt file (no empty lines allowed) ...

\* Checking the services\_wo\_comments.txt file (empty lines allowed) ...

... PASS (no empty lines)

\* Checking the services\_udp.txt file ...

... PASS

\* Checking the well-known-ports.txt file ...

... PASS

\* Checking the 100-well-known-ports.txt file (no empty lines) ...

... PASS (no empty lines)

\* Checking the doc1.txt file ...

... PASS

\* Checking the doc2.txt file ...

... PASS

\* Checking the doc3.txt file ...

... PASS

\* Checking the locations.txt file ...

... PASS

\* Checking the locations-count.txt file ...

... PASS

\* Checking the small-etc-files.txt file ...

... PASS

{"message":"Your solution report is available here: https:\/\/courses.zahariev.pro\/check.php?202201220937080VuECpXRTe","status":true}