EPAM University Programs

DevOps external course

Module 4 Linux & Bash Essentials

TASK 4.5

1. To discover files with active sticky bits, use the following version of the find command:

sudo find / -perm /6000 -type f -exec ls -ld {} \;>setuid.txt

-rwsr-xr-x 1 root root 39904 бер 25 2019 /snap/core/8689/usr/bin/newgrp

-rwsr-xr-x 1 root root 54256 бер 25 2019 /snap/core/8689/usr/bin/passwd

-rwxr-sr-x 1 root crontab 358624 бер 4 2019 /snap/core/8689/usr/bin/ssh-agent

-rwsr-xr-x 1 root root 136808 січ 31 20:37 /snap/core/8689/usr/bin/sudo

-rwxr-sr-x 1 root tty 27368 січ 27 16:28 /snap/core/8689/usr/bin/wall

-rwsr-xr-- 1 root systemd-network 42992 лис 29 14:40 /snap/core/8689/usr/lib/dbus-1.0/dbus-daemon-launch-helper

-rwsr-xr-x 1 root root 428240 бер 4 2019 /snap/core/8689/usr/lib/openssh/ssh-keysign

-rwsr-sr-x 1 root root 106696 лют 12 18:34 /snap/core/8689/usr/lib/snapd/snap-confine

-rwsr-xr-- 1 root dip 394984 чер 12 2018 /snap/core/8689/usr/sbin/pppd

Put into your report a fragment of setuid.txt file. Explain meaning of parameters of the above find command (hint: use find’s man page).

-perm /6000 – search files which have that permissions

-type f – search only regular files

-exec – show diagnostic information

2. Discovering soft and hard links.

Comment on results of these commands (place the output into your report):

ubuntu\_riahuzov@VM:~$ cd

ubuntu\_riahuzov@VM:~$ mkdir test

mkdir: cannot create directory ‘test’: File exists

ubuntu\_riahuzov@VM:~$ cd test

ubuntu\_riahuzov@VM:~/test$ ls

test1.txt

ubuntu\_riahuzov@VM:~/test$ rm test1.txt

ubuntu\_riahuzov@VM:~/test$ echo "test1.txt" > test1.txt

ubuntu\_riahuzov@VM:~/test$ ls -l

total 4

-rw-r--r-- 1 ubuntu\_riahuzov ubuntu\_riahuzov 10 кві 21 16:23 test1.txt

ubuntu\_riahuzov@VM:~/test$ ln test1.txt test2.txt

ubuntu\_riahuzov@VM:~/test$ ls -l

total 8

-rw-r--r-- 2 ubuntu\_riahuzov ubuntu\_riahuzov 10 кві 21 16:23 test1.txt

-rw-r--r-- 2 ubuntu\_riahuzov ubuntu\_riahuzov 10 кві 21 16:23 test2.txt

ubuntu\_riahuzov@VM:~/test$ echo "test2.txt" > test2.txt

ubuntu\_riahuzov@VM:~/test$ cat test1.txt test2.txt

test2.txt

test2.txt

ubuntu\_riahuzov@VM:~/test$ rm test1.txt

ubuntu\_riahuzov@VM:~/test$ ls -l

total 4

-rw-r--r-- 1 ubuntu\_riahuzov ubuntu\_riahuzov 10 кві 21 16:25 test2.txt

ubuntu\_riahuzov@VM:~/test$ ln -s test2.txt test3.txt

ubuntu\_riahuzov@VM:~/test$ ls -l

total 4

-rw-r--r-- 1 ubuntu\_riahuzov ubuntu\_riahuzov 10 кві 21 16:25 test2.txt

lrwxrwxrwx 1 ubuntu\_riahuzov ubuntu\_riahuzov 9 кві 21 16:28 test3.txt -> test2.txt

ubuntu\_riahuzov@VM:~/test$ rm test2.txt

ubuntu\_riahuzov@VM:~/test$ ls -l

total 0

lrwxrwxrwx 1 ubuntu\_riahuzov ubuntu\_riahuzov 9 кві 21 16:28 test3.txt -> test2.txt

In first step we create new (change) directory. Then we create test file (test1.txt) and change this file (create string test1.txt). In next step we create a hard link (text2.txt). Then we change contain test2.txt (and accordingly test1.txt). *(cat test1.txt test2.txt) connect the contents and (rm test1.txt) remove test1. In that case we have link/copy of the test1.txt (test2.txt). (ln -s test2.txt test3.txt) create soft link into the test2.txt and remove test2 (rm test2.txt). In that case we have only a link into the test2.txt (test3.txt).*

3. I/O redirect.

Execute these commands; comment on the output.

mount 🡨mount a filesystem

blkid 🡨locate/print block device attributes

mount | grep sda 🡨(after mount) searches for patterns (sda)

dmesg | grep sda 🡨(after dmesg) searches for patterns (sda)

sudo grep -R -e “root” /etc > root\_entries.txt 🡨searches for patterns (root) in each file (/etc). (-R read all files under each directory, recursively; -e this option can be used to protect a pattern beginning with “-“)

/etc/rc0.d/K01rsyslog: chown root:adm $XCONSOLE

/etc/rc0.d/K01udev:# Required-Stop: umountroot

/etc/rc0.d/K01udev: if start-stop-daemon --start --name $NAME --user root --quiet \

/etc/rc0.d/K01udev: if start-stop-daemon --stop --name $NAME --user root --quiet \

/etc/rc0.d/K01udev: if start-stop-daemon --stop --name $NAME --user root --quiet \

/etc/rc0.d/K01udev: if start-stop-daemon --start --name $NAME --user root --quiet \

/etc/group:root:x:0:

/etc/mailcap.order:# After modifying this file, be sure to run /usr/sbin/update-mime (as root)