

System Security Assignment

Praneesh R V

CB.SC.U4CYS23036

Qn1,

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(crimsonshadow@CrimsonShadow)-[/]  
$ sudo mkdir -p /home/newroot  
  
(crimsonshadow@CrimsonShadow)-[/]  
$
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(crimsonshadow@CrimsonShadow)-[/]  
$ sudo mkdir -p /home/newroot/{bin,lib,lib64}  
  
(crimsonshadow@CrimsonShadow)-[/]  
$
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(crimsonshadow@CrimsonShadow)-[/home/newroot]  
$ sudo cp /bin/bash /bin/touch /bin/ls /bin/rm /newroot/bin/
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(crimsonshadow@CrimsonShadow)-[/]
$ ldd /bin/bash /bin/touch /bin/ls /bin/rm
/bin/bash:
    linux-vdso.so.1 (0x00007f6a94fd9000)
    libtinfo.so.6 => /lib/x86_64-linux-gnu/libtinfo.so.6 (0x00007f6a94e2d000)
    libc.so.6 => /lib/x86_64-linux-gnu/libc.so.6 (0x00007f6a94c37000)
    /lib64/ld-linux-x86-64.so.2 (0x00007f6a94fdb000)
/bin/touch:
    linux-vdso.so.1 (0x00007fe3d0716000)
    libc.so.6 => /lib/x86_64-linux-gnu/libc.so.6 (0x00007fe3d04dc000)
    /lib64/ld-linux-x86-64.so.2 (0x00007fe3d0718000)
/bin/ls:
    linux-vdso.so.1 (0x00007f5156b8e000)
    libselinux.so.1 => /lib/x86_64-linux-gnu/libselinux.so.1 (0x00007f5156b09000)
    libc.so.6 => /lib/x86_64-linux-gnu/libc.so.6 (0x00007f5156913000)
    libpcre2-8.so.0 => /lib/x86_64-linux-gnu/libpcre2-8.so.0 (0x00007f5156871000)
    /lib64/ld-linux-x86-64.so.2 (0x00007f5156b90000)
/bin/rm:
    linux-vdso.so.1 (0x00007f24b8c05000)
    libc.so.6 => /lib/x86_64-linux-gnu/libc.so.6 (0x00007f24b89cf000)
    /lib64/ld-linux-x86-64.so.2 (0x00007f24b8c07000)

(crimsonshadow@CrimsonShadow)-[/]
$
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(crimsonshadow@CrimsonShadow)-[/]
$ sudo cp --parents /lib/x86_64-linux-gnu/libtinfo.so.6 /home/newroot/

(crimsonshadow@CrimsonShadow)-[/]
$ sudo cp --parents /lib/x86_64-linux-gnu/libc.so.6 /home/newroot/

(crimsonshadow@CrimsonShadow)-[/]
$ sudo cp --parents /lib64/ld-linux-x86-64.so.2 /home/newroot/

(crimsonshadow@CrimsonShadow)-[/]
$
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(crimsonshadow@CrimsonShadow)-[/home/newroot]
$ sudo cp --parents /lib/x86_64-linux-gnu/* /home/newroot/
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(crimsonshadow@CrimsonShadow)-[/home/newroot]
$ sudo chroot /home/newroot /bin/bash
bash-5.2# ls
bin  lib  lib64
bash-5.2# touch newfile
bash-5.2# ls -l
total 12
drwxr-xr-x 2 0 0 4096 Feb 19 06:27 bin
drwxr-xr-x 3 0 0 4096 Feb 19 06:28 lib
drwxr-xr-x 2 0 0 4096 Feb 19 06:28 lib64
-rw-r--r-- 1 0 0 0 Feb 19 06:33 newfile
bash-5.2# rm newfile
bash-5.2# ls -l
total 12
drwxr-xr-x 2 0 0 4096 Feb 19 06:27 bin
drwxr-xr-x 3 0 0 4096 Feb 19 06:28 lib
drwxr-xr-x 2 0 0 4096 Feb 19 06:28 lib64
bash-5.2# touch hello
bash-5.2# █

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Qn2,

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(crimsonshadow@CrimsonShadow)-[~]
$ sudo ln -s cb_sc_u4cys23036_input.txt file_link_cb_sc_u4cys23036

(crimsonshadow@CrimsonShadow)-[~]
$ █

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(crimsonshadow@CrimsonShadow)-[~]
$ ls -l file_link_cb_sc_u4cys23036
lrwxrwxrwx 1 root root 26 Feb 19 12:11 file_link_cb_sc_u4cys23036 -> cb_sc_u4cys23036_input.txt

(crimsonshadow@CrimsonShadow)-[~]
$ █

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(crimsonshadow@CrimsonShadow)-[~]
$ readlink file_link_cb_sc_u4cys23036
cb_sc_u4cys23036_input.txt

(crimsonshadow@CrimsonShadow)-[~]
$ █

```