

Отчет по лабораторной работе №6

Лабораторная работа № 6. Мандатное разграничение прав в Linux

Ндри Ив Алла Ролан

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1 Цель работы

Развить навыки администрирования ОС Linux. Получить первое практическое знакомство с технологией SELinux1. Проверить работу SELinx на практике совместно с веб-сервером Apache

1.1 Результат выполнения лабораторной работы

```
exit
[yvescentos_8@yvescentos ~]$ getenforce
Enforcing
[yvescentos_8@yvescentos ~]$ sestatus
SELinux status:                enabled
SELinuxfs mount:              /sys/fs/selinux
SELinux root directory:       /etc/selinux
Loaded policy name:            targeted
Current mode:                  enforcing
Mode from config file:        enforcing
Policy MLS status:             enabled
Policy deny_unknown status:    allowed
Memory protection checking:    actual (secure)
Max kernel policy version:     33
[yvescentos_8@yvescentos ~]$
```

Рис. 1.1: 1

1.2 Результат выполнения лабораторной работы

```
yvescentos_8@yvescentos:/home/yvescentos_8
File Edit View Search Terminal Help
[yvescentos_8@yvescentos ~]$ su
Password:
[root@yvescentos yvescentos_8]# service httpd status
Redirecting to /bin/systemctl status httpd.service
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor pres
   Active: active (running) since Thu 2023-10-12 19:39:01 MSK; 27min ago
     Docs: man:httpd.service(8)
   Main PID: 38899 (httpd)
   Status: "Running, listening on: port 80"
     Tasks: 213 (limit: 10936)
    Memory: 22.6M
    CGroup: /system.slice/httpd.service
            └─38899 /usr/sbin/httpd -DFOREGROUND
              └─38906 /usr/sbin/httpd -DFOREGROUND
                └─38907 /usr/sbin/httpd -DFOREGROUND
                  └─38908 /usr/sbin/httpd -DFOREGROUND
                    └─38909 /usr/sbin/httpd -DFOREGROUND

окт 12 19:39:01 yvescentos.localdomain systemd[1]: Starting The Apache HTTP Ser
окт 12 19:39:01 yvescentos.localdomain systemd[1]: Started The Apache HTTP Serv
окт 12 19:39:02 yvescentos.localdomain httpd[38899]: Server configured, listeni
lines 1-18/18 (END)
```

```
yvescentos_8@yvescentos:/home/yvescentos_8
File Edit View Search Terminal Help
system_u:system_r:httpd_t:s0  apache  38907  0.0  0.6 1917480 12308 ?
Sl  19:39  0:00 /usr/sbin/httpd -DFOREGROUND
system_u:system_r:httpd_t:s0  apache  38908  0.0  0.5 1786352 10172 ?
Sl  19:39  0:00 /usr/sbin/httpd -DFOREGROUND
system_u:system_r:httpd_t:s0  apache  38909  0.0  0.6 1786352 12384 ?
Sl  19:39  0:00 /usr/sbin/httpd -DFOREGROUND
unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023 root 39860 0.0 0.0 221940
1200 pts/0 S+ 20:08 0:00 grep --color=auto httpd
[root@yvescentos yvescentos_8]# sestatus -bigrep httpd
sestatus: invalid option -- 'i'

Usage: sestatus [OPTION]

  -v  Verbose check of process and file contexts.
  -b  Display current state of booleans.

Without options, show SELinux status.
[root@yvescentos yvescentos_8]# ps -eZ | grep httpd
system_u:system_r:httpd_t:s0  38899 ? 00:00:00 httpd
system_u:system_r:httpd_t:s0  38906 ? 00:00:00 httpd
system_u:system_r:httpd_t:s0  38907 ? 00:00:00 httpd
system_u:system_r:httpd_t:s0  38908 ? 00:00:00 httpd
system_u:system_r:httpd_t:s0  38909 ? 00:00:00 httpd
[root@yvescentos yvescentos_8]#
```

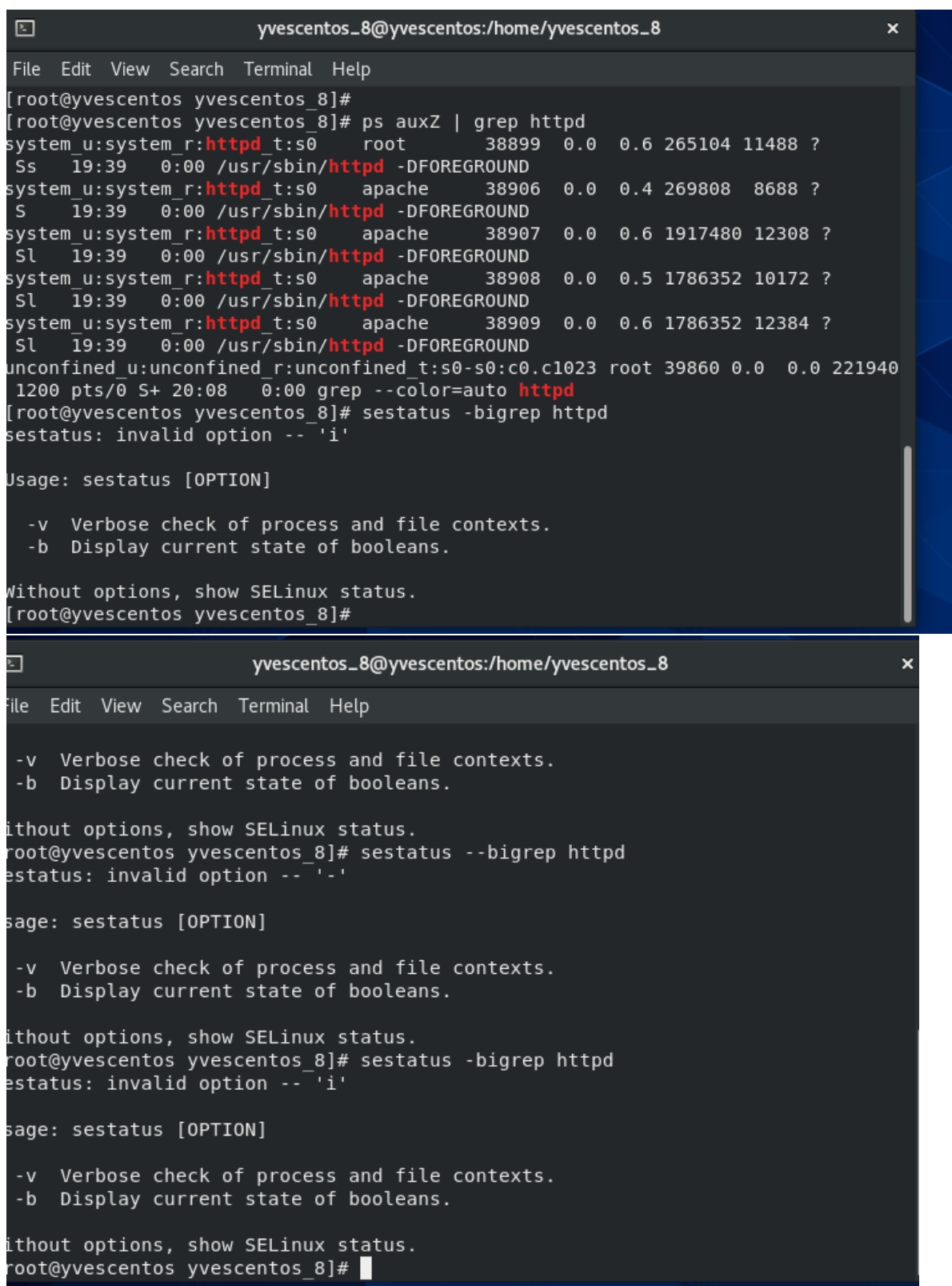
```
yvescentos_8@yvescentos:/home/yvescentos_8
File Edit View Search Terminal Help
[root@yvescentos yvescentos_8]#
[root@yvescentos yvescentos_8]# ps auxZ | grep httpd
system_u:system_r:httpd_t:s0 root 38899 0.0 0.6 265104 11488 ?
Ss 19:39 0:00 /usr/sbin/httpd -DFOREGROUND
system_u:system_r:httpd_t:s0 apache 38906 0.0 0.4 269808 8688 ?
S 19:39 0:00 /usr/sbin/httpd -DFOREGROUND
system_u:system_r:httpd_t:s0 apache 38907 0.0 0.6 1917480 12308 ?
Sl 19:39 0:00 /usr/sbin/httpd -DFOREGROUND
system_u:system_r:httpd_t:s0 apache 38908 0.0 0.5 1786352 10172 ?
Sl 19:39 0:00 /usr/sbin/httpd -DFOREGROUND
system_u:system_r:httpd_t:s0 apache 38909 0.0 0.6 1786352 12384 ?
Sl 19:39 0:00 /usr/sbin/httpd -DFOREGROUND
unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023 root 39860 0.0 0.0 221940
1200 pts/0 S+ 20:08 0:00 grep --color=auto httpd
[root@yvescentos yvescentos_8]# sestatus -bigrep httpd
sestatus: invalid option -- 'i'

Usage: sestatus [OPTION]

-v Verbose check of process and file contexts.
-b Display current state of booleans.

Without options, show SELinux status.
[root@yvescentos yvescentos_8]#
```


1.3 Результат выполнения лабораторной работы



The image shows two screenshots of a terminal window titled 'yvescentos_8@yvescentos:/home/yvescentos_8'. The terminal displays the output of several commands related to SELinux and the httpd process.

Top Screenshot:

```
[root@yvescentos yvescentos_8]#  
[root@yvescentos yvescentos_8]# ps auxZ | grep httpd  
system_u:system_r:httpd_t:s0 root 38899 0.0 0.6 265104 11488 ?  
Ss 19:39 0:00 /usr/sbin/httpd -DFOREGROUND  
system_u:system_r:httpd_t:s0 apache 38906 0.0 0.4 269808 8688 ?  
S 19:39 0:00 /usr/sbin/httpd -DFOREGROUND  
system_u:system_r:httpd_t:s0 apache 38907 0.0 0.6 1917480 12308 ?  
Sl 19:39 0:00 /usr/sbin/httpd -DFOREGROUND  
system_u:system_r:httpd_t:s0 apache 38908 0.0 0.5 1786352 10172 ?  
Sl 19:39 0:00 /usr/sbin/httpd -DFOREGROUND  
system_u:system_r:httpd_t:s0 apache 38909 0.0 0.6 1786352 12384 ?  
Sl 19:39 0:00 /usr/sbin/httpd -DFOREGROUND  
unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023 root 39860 0.0 0.0 221940  
1200 pts/0 S+ 20:08 0:00 grep --color=auto httpd  
[root@yvescentos yvescentos_8]# sestatus -bigrep httpd  
sestatus: invalid option -- 'i'  
  
Usage: sestatus [OPTION]  
  
-v Verbose check of process and file contexts.  
-b Display current state of booleans.  
  
Without options, show SELinux status.  
[root@yvescentos yvescentos_8]#
```

Bottom Screenshot:

```
-v Verbose check of process and file contexts.  
-b Display current state of booleans.  
  
Without options, show SELinux status.  
[root@yvescentos yvescentos_8]# sestatus --bigrep httpd  
sestatus: invalid option -- '-'  
  
Usage: sestatus [OPTION]  
  
-v Verbose check of process and file contexts.  
-b Display current state of booleans.  
  
Without options, show SELinux status.  
[root@yvescentos yvescentos_8]# sestatus -bigrep httpd  
sestatus: invalid option -- 'i'  
  
Usage: sestatus [OPTION]  
  
-v Verbose check of process and file contexts.  
-b Display current state of booleans.  
  
Without options, show SELinux status.  
[root@yvescentos yvescentos_8]#
```

1.4 Результат выполнения лабораторной работы

```
yvescentos_8@yvescentos:/home/yvescentos_8
File Edit View Search Terminal Help
Booleans:          347    Cond. Expr.:        397
Allow:             115669  Neverallow:         0
Auditallow:        170    Dontaudit:          10514
Type_trans:        259809  Type_change:         94
Type_member:        37    Range_trans:        5989
Role_allow:        39    Role_trans:         421
Constraints:        72    Validatetrans:       0
MLS Constrain:     72    MLS Val. Tran:       0
Permissives:        0    Polcap:             5
Defaults:          7    Typebounds:          0
Allowxperm:         0    Neverallowxperm:     0
Auditallowxperm:    0    Dontauditxperm:      0
Ibendportcon:       0    Ibpkeycon:           0
Initial SIDs:       27    Fs_use:              34
Genfscon:           107   Portcon:             649
Netifcon:           0    Nodecon:             0

root@yvescentos yvescentos_8]# ls -lZ /var/www
total 0
-rwxr-xr-x. 2 root root system_u:object_r:httpd_sys_script_exec_t:s0 6 abr 17 17
09 cgi-bin
-rwxr-xr-x. 2 root root system_u:object_r:httpd_sys_content_t:s0 6 abr 17 17
09 html
root@yvescentos yvescentos_8]#
```

```
yvescentos_8@yvescentos:/home/yvescentos_8
File Edit View Search Terminal Help
Auditallow:        170    Dontaudit:          10514
Type_trans:        259809  Type_change:         94
Type_member:        37    Range_trans:        5989
Role_allow:        39    Role_trans:         421
Constraints:        72    Validatetrans:       0
MLS Constrain:     72    MLS Val. Tran:       0
Permissives:        0    Polcap:             5
Defaults:          7    Typebounds:          0
Allowxperm:         0    Neverallowxperm:     0
Auditallowxperm:    0    Dontauditxperm:      0
Ibendportcon:       0    Ibpkeycon:           0
Initial SIDs:       27    Fs_use:              34
Genfscon:           107   Portcon:             649
Netifcon:           0    Nodecon:             0

[root@yvescentos yvescentos_8]# ls -lZ /var/www
total 0
drwxr-xr-x. 2 root root system_u:object_r:httpd_sys_script_exec_t:s0 6 abr 17 17
09 cgi-bin
drwxr-xr-x. 2 root root system_u:object_r:httpd_sys_content_t:s0 6 abr 17 17
09 html
[root@yvescentos yvescentos_8]# ls -lZ /var/www/html
total 0
[root@yvescentos yvescentos_8]#
```

```
yvescentos_8@yvescentos:/home/yvescentos_8
File Edit View Search Terminal Help
Auditallowxperm:      0      Dontauditxperm:      0
Ibendportcon:         0      Ibpkeycon:           0
Initial SIDs:         27      Fs_use:              34
Genfscon:             107     Portcon:             649
Netifcon:              0      Nodecon:             0

[root@yvescentos yvescentos_8]# ls -lZ /var/www
total 0
drwxr-xr-x. 2 root root system_u:object_r:httpd_sys_script_exec_t:s0 6 авг 17 17
:09 cgi-bin
drwxr-xr-x. 2 root root system_u:object_r:httpd_sys_content_t:s0      6 авг 17 17
:09 html
[root@yvescentos yvescentos_8]# ls -lZ /var/www/html
total 0
[root@yvescentos yvescentos_8]# /var/www/html/test.html
bash: /var/www/html/test.html: No such file or directory
[root@yvescentos yvescentos_8]# vi /var/www/html/test.html
[root@yvescentos yvescentos_8]# /var/www/html
bash: /var/www/html: Is a directory
[root@yvescentos yvescentos_8]# ls -lZ /var/www/html
total 4
-rw-r--r--. 1 root root unconfined_u:object_r:httpd_sys_content_t:s0 33 окт 12 2
0:25 test.html
[root@yvescentos yvescentos_8]#
```

1.5 Вывод

Развитие навыков администрирования Linux. Получение начальных практических знаний о технологии SELinux1. Проверка работы SELinx на практике с помощью Apache Веб-сервер Apache.