

Отчет по лабораторной работе №9

SELinux

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Получить навыки работы с контекстом безопасности и политиками SELinux

Продemonстрировать навыки умения работать с SELinux.

# Выполнение лабораторной работы

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# Получаем текущую информацию о состоянии SELinux.

```
[root@asvlasov ~]# sestatus -v
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

Process contexts:
Current context:                unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023
Init context:                   system_u:system_r:init_t:s0
/usr/sbin/sshd                  system_u:system_r:sshd_t:s0-s0:c0.c1023

File contexts:
Controlling terminal:          unconfined_u:object_r:user_devpts_t:s0
/etc/passwd                    system_u:object_r:passwd_file_t:s0
/etc/shadow                    system_u:object_r:shadow_t:s0
/bin/bash                      system_u:object_r:shell_exec_t:s0
/bin/login                     system_u:object_r:login_exec_t:s0
/bin/sh                        system_u:object_r:bin_t:s0 -> system_u:object_r:shell_exec_t:s0
/sbin/agetty                   system_u:object_r:getty_exec_t:s0
/sbin/init                    system_u:object_r:bin_t:s0 -> system_u:object_r:init_exec_t:s0
/usr/sbin/sshd                 system_u:object_r:sshd_exec_t:s0

[root@asvlasov ~]# getenforce
Enforcing
[root@asvlasov ~]# setenforce 0
[root@asvlasov ~]# getenforce
Permissive
[root@asvlasov ~]#
```

Рис. 1: Статус SELinux

В файле конфигурации задаем значение disabled и перезапускаем систему.

```
19 #  
20 # grubby --update-kernel ALL --remove-args selinux  
21 #  
22 SELINUX=disabled|  
23 # SELINUXTYPE- can take one of these three values:
```

Рис. 2: Отключение

# Возвращаем статус enforcing и снова перезагружаем систему.

```
19 #
20 # grubby --update-kernel ALL --remove-args selinux
21 #
22 SELINUX=enforcing
23 # SELINUXTYPE= can take one of these three values:
```

Рис. 3: Проверка события

```
[root@asvlasov ~]# setenforce 1
[root@asvlasov ~]# getenforce
Enforcing
[root@asvlasov ~]# sestatus -v
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

Process contexts:
Current context:               unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023
Init context:                  system_u:system_r:init_t:s0
/usr/sbin/sshd                 system_u:system_r:sshd_t:s0-s0:c0.c1023

File contexts:
Controlling terminal:          unconfined_u:object_r:user_devpts_t:s0
/etc/passwd                    system_u:object_r:passwd_file_t:s0
/etc/shadow                    system_u:object_r:shadow_t:s0
/bin/bash                      system_u:object_r:shell_exec_t:s0
/bin/login                     system_u:object_r:login_exec_t:s0
/bin/sh                        system_u:object_r:bin_t:s0 -> system_u:object_r:shell_exec_t:s0
/sbin/agetty                   system_u:object_r:getty_exec_t:s0
/sbin/init                     system_u:object_r:bin_t:s0 -> system_u:object_r:init_exec_t:s0
/usr/sbin/sshd                 system_u:object_r:sshd_exec_t:s0
```

# Начинаем работу с контекстом безопасности.

```
[root@asvlasov ~]# ls -Z /etc/hosts
system_u:object_r:net_conf_t:s0 /etc/hosts
[root@asvlasov ~]# cp /etc/hosts ~/
[root@asvlasov ~]# ls -Z ~/hosts
unconfined_u:object_r:admin_home_t:s0 /root/hosts
[root@asvlasov ~]# mv ~/hosts /etc
mv: переписать '/etc/hosts'?
[root@asvlasov ~]# ls -Z ~/hosts
unconfined_u:object_r:admin_home_t:s0 /root/hosts
[root@asvlasov ~]# restorecon -v /etc/hosts
[root@asvlasov ~]# ls -Z /etc/hosts
system_u:object_r:net_conf_t:s0 /etc/hosts
[root@asvlasov ~]# touch /.autorelabel
[root@asvlasov ~]#
```

Рис. 5: Работа с контекстом

```
[ 0.291751] Warning: Deprecated Hardware is detected: x86_64-v2/AuthenticAMD:
AMD Ryzen 5 5500U with Radeon Graphics will not be maintained in a future major
release and may be disabled.
[ 3.251610] systemd[1]: Invalid DMU field header.
[ 4.073260] Warning: Unmaintained driver is detected: e1000
[ 5.704387] vmxgfx 0000:00:02.0: [drm] *ERROR* vmxgfx seems to be running on
an unsupported hypervisor.
[ 5.704390] vmxgfx 0000:00:02.0: [drm] *ERROR* This configuration is likely b
roken.
[ 5.704404] vmxgfx 0000:00:02.0: [drm] *ERROR* Please switch to a supported g
raphics device to avoid problems.
[ 14.143000] selinux-autorelabel[7631]: *** Warning -- SELinux targeted policy relabel is required.
[ 14.143409] selinux-autorelabel[7631]: *** Relabeling could take a very long time, depending on file
[ 14.143600] selinux-autorelabel[7631]: *** system size and speed of hard drives.
[ 14.167987] selinux-autorelabel[7631]: Running: /sbin/fixfiles -T 0 restore
[ 20.000499] selinux-autorelabel[7691]: Warning: Skipping the following R/O filesystems:
[ 20.001591] selinux-autorelabel[7691]: /run/credentials/systemd-sysctl.service
[ 20.001751] selinux-autorelabel[7691]: /run/credentials/systemd-tmpfiles-setup-dev.service
[ 20.001055] selinux-autorelabel[7691]: /run/credentials/systemd-tmpfiles-setup.service
[ 20.001947] selinux-autorelabel[7691]: Relabeling / /boot /dev /dev/loop* /dev/nvme* /dev/pts /dev
/udev /sys/kernel/tracing
```

Рис. 6: Перемаркировка



В файле который мы создали вводим строчку. Меняем конфигурацию.

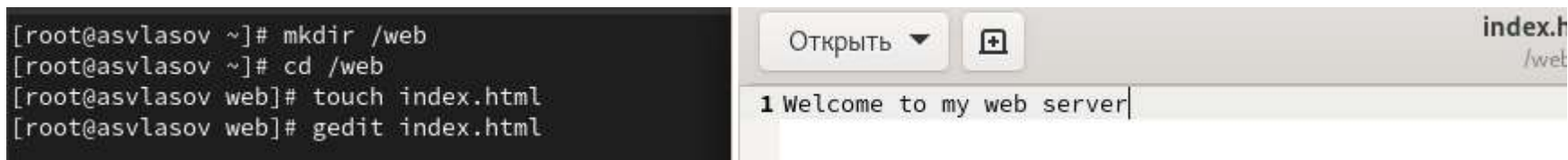


Рис. 7: index

```
# DocumentRoot "/var/www/html"
DocumentRoot "/web"

#
# Relax access to content within /var/www.
#
#<Directory "/var/www">
    #AllowOverride None
    # Allow open access:
    #Require all granted
#</Directory>

<Directory "/web">
    AllowOverride None
    Require all granted
</Directory>
```

Рис. 8: Конфигурация

# Начинаем работу с переключателями.

```
[root@asvlasov ~]# getsebool -a | grep ftp
ftpd_anon_write --> off
ftpd_connect_all_unreserved --> off
ftpd_connect_db --> off
ftpd_full_access --> off
ftpd_use_cifs --> off
ftpd_use_fusefs --> off
ftpd_use_nfs --> off
ftpd_use_passive_mode --> off
httpd_can_connect_ftp --> off
httpd_enable_ftp_server --> off
tftp_anon_write --> off
tftp_home_dir --> off
[root@asvlasov ~]# semanage boolean -l | grep ftpd_anon
bash: grepftpd_anon: команда не найдена...
BrokenPipeError: [Errno 32] Broken pipe
[root@asvlasov ~]# semanage boolean -l | grep ftpd_anon
ftpd_anon_write (выкл.,выкл.) Allow ftpd to anon write
[root@asvlasov ~]# setsebool ftpd_anon_write on
[root@asvlasov ~]# getsebool ftpd_anon_write
ftpd_anon_write --> on
[root@asvlasov ~]# semanage boolean -l | grep ftpd_anon
ftpd_anon_write (вкл. ,выкл.) Allow ftpd to anon write
[root@asvlasov ~]# setsebool -P ftpd_anon_write on
[root@asvlasov ~]# semanage boolean -l | grep ftpd_anon
ftpd_anon_write (вкл. , вкл.) Allow ftpd to anon write
[root@asvlasov ~]#
```

Рис. 9: Работа с переключателями

Мы научились работать с контекстом безопасности и политиками SELinux.