

# SELinux configuration for Pandora FMS

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## Introduction

We have always recommended installing Pandora with SELinux disabled (even automatically added in our ISO file), but there are many environments that we must have it enabled for security issues.

In this guide we will detail how to create policies for the different modules inside SELinux in a custom way.

In order to create these rules, we will use Audit2allow, it will be \_ to allow the needed actions.

## Audit2allow installation

Before starting the installation, it may be possible to install different kinds of packages in order to use Audit2allow.

```
# sudo yum install SELinux-policy-devel
# sudo yum install policycoreutils-python
```

## Location of SELinux directory

Errors returned by SELinux could be located in the route below:

- /var/www/html/pandora\_console/log/audit.log
- /var/log/messages

### IMPORTANT:

In versions prior to 747, the audit log path is: **/var/log/audit/audit.log**.

If updating from **OUM** you will need to modify the **logrotate** [file](#).

In order to check the cleanest way, we highly recommend to remove previous logs and wait until they are generated again with new records.

Stop syslog (This service could be called rsyslog too):

```
# /etc/init.d/syslog stop
```

Remove audit.log and system message log file.

```
# rm /var/www/html/pandora_console/log/audit.log /var/log/messages
```

And start it again:

```
# /etc/init.d/syslog start
```

## SELinux configuration

To configure SELinux with the desired value, we will modify its configuration file:

```
# This file controls the state of SELinux on the system.
# SELinux= can take one of these three values:
#   enforcing - SELinux security policy is enforced.
#   permissive - SELinux prints warnings instead of enforcing.
#   disabled - No SELinux policy is loaded.
SELinux=enforcing
# SELinuxTYPE= can take one of these two values:
#   targeted - Targeted processes are protected,
#   mls - Multi Level Security protection.
SELinuxTYPE=targeted
```

We will set SELinux to “enforcing” in order to execute in a restrictive way (check audit.log for denied executions by SELinux). The other option is to set SELinux to “permissive”, it won't block executions and it will record errors in the audit.log file.

## Locate entries to create policies rules

To show the last input logs, execute:

```
# tail -f /var/www/html/pandora_console/log/audit.log /var/log/messages
```

You can notice some errors like:

```
# type=AVC msg=audit(1431437562.755:437): avc: denied { write } for
pid=1835 comm="httpd" name="collections" dev=dm-0 ino=266621
scontext=unconfined_u:system_r:httpd_t:s0
tcontext=system_u:object_r:var_spool_t:s0 tclass=dir
```

To convert these errors in SELinux rules:

```
# grep collections /var/www/html/pandora_console/log/audit.log |
audit2allow -M pandora
```

After this, 2 new files will be created:

```
- pandora.pp  
- pandora.te
```

To activate the new rule, we will execute:

```
# sudo semodule -i pandora.pp
```

Repeat the process to add missed rules. After this, SELinux will stop reporting errors.

## Needed rules for proper working of PandoraFMS

If you want that PandoraFMS execute all services properly, you will have to create some rules for the following operations:

- Create, update and delete collections.
- Send e-mails by programmed tasks (Cronjob).
- Agent remote config.

The other way, SELinux will block any action associated to these operations.

In order to join all rules in one and use PandoraFMS with SELinux enabled, it will be:

```
# grep -e data_in -e collections -e var_spool_t -e zip -e md5 -e denied  
/var/www/html/pandora_console/log/audit.log| audit2allow -M pandora
```

After that you will have to repeat the step above to enable the rule.

```
# sudo semodule -i pandora.pp
```

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