How to disable AppArmor?

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Disabling AppArmor to resolve MySQL issue

Overview: This article explains how to disable AppArmor for specific processes, such as MySQL, to resolve conflicts that may prevent services from starting. It covers the process of disabling AppArmor entirely or selectively for certain applications and provides steps for troubleshooting AppArmor-related issues.

What is AppArmor?

AppArmor is an important security feature that locks down vulnerable processes, restricting the damage security vulnerabilities these processes can cause. *AppArmor* proactively protects the operating system and applications from external or internal threats and even zero-day attacks by enforcing a specific rule set on a per-application basis.

Sometimes MySQL will not start if **AppArmor** is enabled.

mysql.service - MySQL Community Server

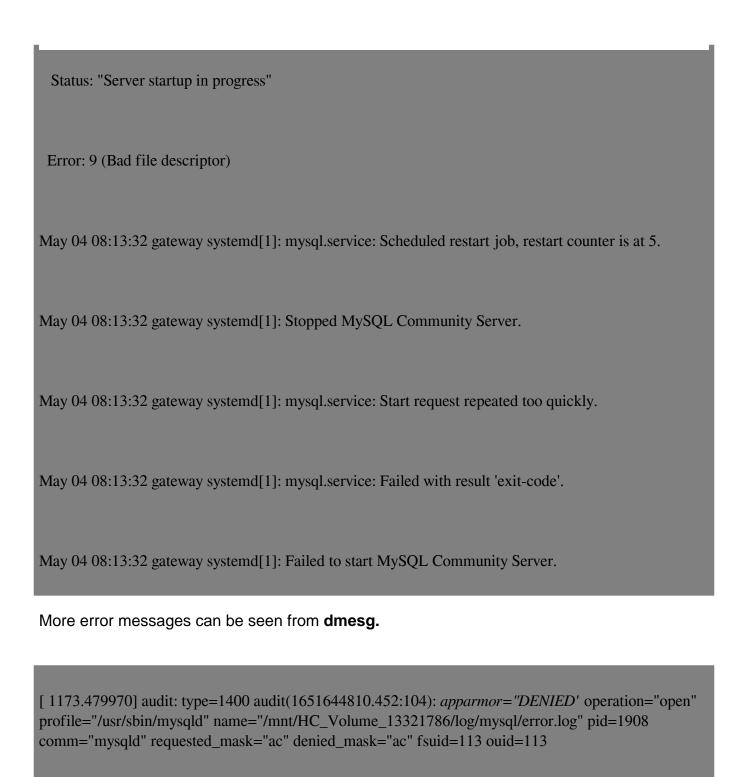
Loaded: loaded (/lib/systemd/system/mysql.service; enabled; vendor preset: enabled)

Active: failed (Result: exit-code) since Wed 2022-05-04 08:13:32 CEST; 3min 21s ago

Process: 1937 ExecStartPre=/usr/share/mysql/mysql-systemd-start pre (code=exited, status=0/SUCCESS)

Process: 1945 ExecStart=/usr/sbin/mysqld (code=exited, status=1/FAILURE)

Main PID: 1945 (code=exited, status=1/FAILURE)



[1173.479975] audit: type=1400 audit(1651644810.452:105): apparmor="DENIED" operation="open"

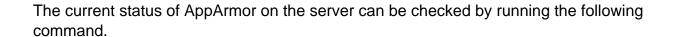
[1173.479978] audit: type=1400 audit(1651644810.452:106): apparmor="DENIED" operation="open"

profile="/usr/sbin/mysqld" name="/mnt/HC_Volume_13321786/log/mysql/error.log" pid=1908

profile="/usr/sbin/mysqld" name="/mnt/HC_Volume_13321786/log/mysql/error.log" pid=1908

comm="mysqld" requested_mask="ac" denied_mask="ac" fsuid=113 ouid=113

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comm="mysqld" requested_mask="ac" denied_mask="ac" fsuid=113 ouid=113
[ 1173.479981] audit: type=1400 audit(1651644810.452:107): apparmor="DENIED" operation="open"
profile="/usr/sbin/mysqld" name="/mnt/HC_Volume_13321786/log/mysql/error.log" pid=1908
comm="mysqld" requested_mask="ac" denied_mask="ac" fsuid=113 ouid=113
[ 1173.479984] audit: type=1400 audit(1651644810.452:108): apparmor="DENIED" operation="open"
profile="/usr/sbin/mysqld" name="/mnt/HC Volume 13321786/log/mysql/error.log" pid=1908
comm="mysqld" requested_mask="ac" denied_mask="ac" fsuid=113 ouid=113
[ 1173.479987] audit: type=1400 audit(1651644810.452:109): apparmor="DENIED" operation="open"
profile="/usr/sbin/mysqld" name="/mnt/HC_Volume_13321786/log/mysql/error.log" pid=1908
comm="mysqld" requested_mask="ac" denied_mask="ac" fsuid=113 ouid=113
[ 1173.886489] audit: type=1400 audit(1651644810.856:110): apparmor="DENIED" operation="open"
profile="/usr/sbin/mysqld" name="/mnt/HC_Volume_13321786/log/mysql/error.log" pid=1918
comm="mysqld" requested_mask="ac" denied_mask="ac" fsuid=113 ouid=113
[ 1173.886498] audit: type=1400 audit(1651644810.856:111): apparmor="DENIED" operation="open"
profile="/usr/sbin/mysqld" name="/mnt/HC_Volume_13321786/log/mysql/error.log" pid=1918
comm="mysqld" requested_mask="ac" denied_mask="ac" fsuid=113 ouid=113
[ 1173.886504] audit: type=1400 audit(1651644810.856:112): apparmor="DENIED" operation="open"
profile="/usr/sbin/mysqld" name="/mnt/HC_Volume_13321786/log/mysql/error.log" pid=1918
comm="mysqld" requested_mask="ac" denied_mask="ac" fsuid=113 ouid=113
[ 1173.886508] audit: type=1400 audit(1651644810.856:113): apparmor="DENIED" operation="open"
profile="/usr/sbin/mysqld" name="/mnt/HC_Volume_13321786/log/mysql/error.log" pid=1918
comm="mysqld"
requested_mask="ac" denied_mask="ac" fsuid=113 ouid=113
```



root@gateway:~# systemctl status apparmor

1. How to disable AppArmor for a particular process?

To disable AppArmor only for a particular process run the following command

root@gateway:~# ln -s /etc/apparmor.d/profile.name /etc/apparmor.d/disable/

root@gateway:~# apparmor_parser -R /etc/apparmor.d/disable/profile.name

For example to disable **AppArmor** for MySQL service

root@gateway:~# ln -s /etc/apparmor.d/usr.sbin.mysqld /etc/apparmor.d/disable/

root@gateway:~# apparmor_parser -R /etc/apparmor.d/disable/usr.sbin.mysqld

2. To stop AppArmor

root@gateway:~# systemctl stop apparmor

3. To disable AppArmor completely execute:

root@gateway:~# systemctl disable apparmor

After disabling AppArmor, a system reboot is required.