

**CIT6314-T2430 – Lab 4 – Working around a Linux server 2**

You can take a screenshot of your terminal as your solution, together with the **list of commands or script**. Show your final outputs (**screenshots**).

Marks are allocated based on the rubrics below. Each question is allocated **1 mark**, total marks will be normalized to **4 marks**.

Please upload this document to **eBwise** in **PDF format**. **Late submissions** will not be accepted and graded. Please take note of the deadline and the deadline follows **eBwise's system's time**, not your PC's time. Do submit early in and don't take the risk of being cut off from the submission.

Rubrics:

No evidence <u>0 mark</u>	Average <u>0.5 mark</u>	Good <u>1 mark</u>
No evidence of solution; or wrong solution regardless of outputs shown.	Partially correct or incomplete solution regardless of outputs shown; or correct solution but wrong or no outputs shown.	Correct and complete solution, with all outputs shown.

- Find all files under the `/var/spool` directory that are owned by users other than `root` and display a long listing of them  
`sudo find /var/spool -not -user root -type f -exec ls -l {} \;`

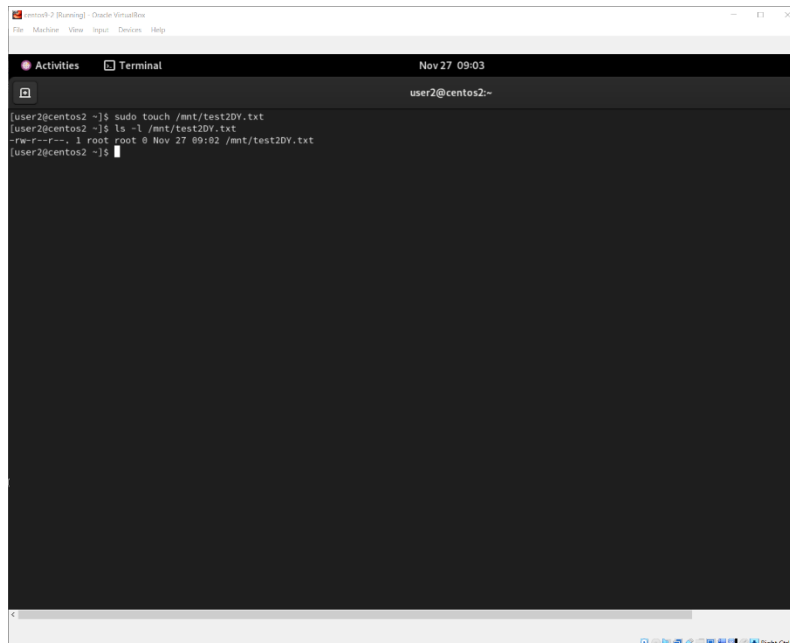
```

centos2-7 (Running) - Oracle VM VirtualBox
File Machine View Input Devices Help

Nov 27 08:59
user2@centos2:~
[user2@centos2 ~]$ find /var/spool -not -user root -type f -exec ls -l {} \;
-rw-rw----. 1 user mail 0 Nov 21 09:16 /var/spool/mail/user
-rw-rw----. 1 user2 mail 0 Nov 21 09:20 /var/spool/mail/user2
find: '/var/spool/cron': Permission denied
find: '/var/spool/cups': Permission denied
find: '/var/spool/at': Permission denied
[user2@centos2 ~]$ sudo find /var/spool -not -user root -type f -exec ls -l {} \;
[sudo] password for user2:
-rw-rw----. 1 user mail 0 Nov 21 09:16 /var/spool/mail/user
-rw-rw----. 1 user2 mail 0 Nov 21 09:20 /var/spool/mail/user2
[user2@centos2 ~]$

```

2. Use the `sudo` command to create a file called `/mnt/test2xxxx.txt`, where `xxxx` are your initials. Verify that the file is there and owned by the root user.  
`sudo touch /mnt/test2DY.txt` (to create file)  
`ls -l /mnt/test2DY.txt` (to verify the file)

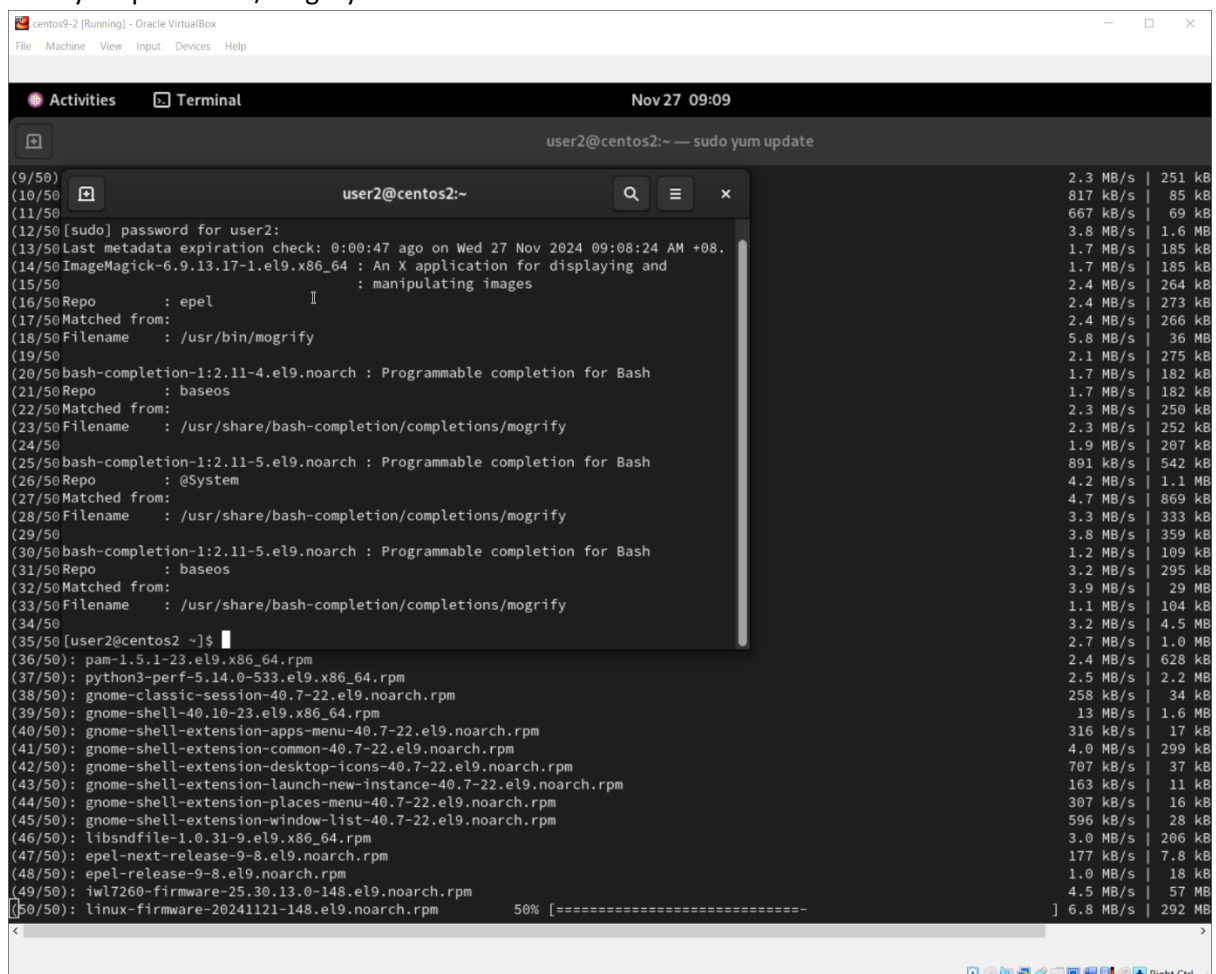


```
CentOS 9-2 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help

Activities Terminal Nov 27 09:03
user2@centos2:~

[user2@centos2 ~]$ sudo touch /mnt/test2DY.txt
[user2@centos2 ~]$ ls -l /mnt/test2DY.txt
-rw-r--r-- 1 root root 0 Nov 27 09:03 /mnt/test2DY.txt
[user2@centos2 ~]$
```

3. Search the YUM repository for the package that provides the `mogrify` command.  
`sudo yum provides */mogrify`



```
CentOS 9-2 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help

Activities Terminal Nov 27 09:09
user2@centos2:~ — sudo yum update

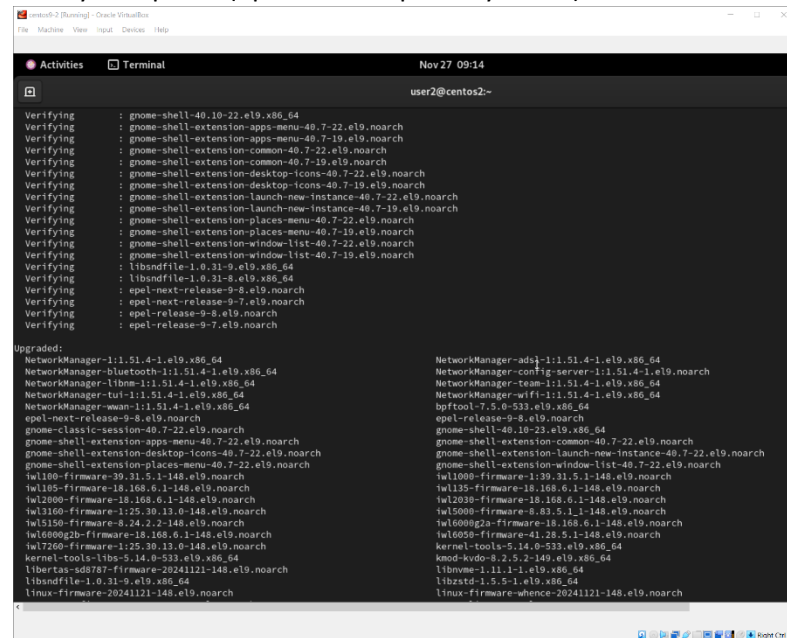
(9/50)
(10/50)
(11/50)
(12/50) [sudo] password for user2:
(13/50) Last metadata expiration check: 0:00:47 ago on Wed 27 Nov 2024 09:08:24 AM +08.
(14/50) ImageMagick-6.9.13.17-1.el9.x86_64 : An X application for displaying and
(15/50)                               : manipulating images
(16/50) Repo      : epel
(17/50) Matched from:
(18/50) Filename  : /usr/bin/mogrify
(19/50)
(20/50) bash-completion-1:2.11-4.el9.noarch : Programmable completion for Bash
(21/50) Repo      : baseos
(22/50) Matched from:
(23/50) Filename  : /usr/share/bash-completion/completions/mogrify
(24/50)
(25/50) bash-completion-1:2.11-5.el9.noarch : Programmable completion for Bash
(26/50) Repo      : @System
(27/50) Matched from:
(28/50) Filename  : /usr/share/bash-completion/completions/mogrify
(29/50)
(30/50) bash-completion-1:2.11-5.el9.noarch : Programmable completion for Bash
(31/50) Repo      : baseos
(32/50) Matched from:
(33/50) Filename  : /usr/share/bash-completion/completions/mogrify
(34/50)
(35/50) [user2@centos2 ~]$
(36/50) : pam-1.5.1-23.el9.x86_64.rpm
(37/50) : python3-perf-5.14.0-533.el9.x86_64.rpm
(38/50) : gnome-classic-session-40.7-22.el9.noarch.rpm
(39/50) : gnome-shell-40.10-23.el9.x86_64.rpm
(40/50) : gnome-shell-extension-apps-menu-40.7-22.el9.noarch.rpm
(41/50) : gnome-shell-extension-common-40.7-22.el9.noarch.rpm
(42/50) : gnome-shell-extension-desktop-icons-40.7-22.el9.noarch.rpm
(43/50) : gnome-shell-extension-launch-new-instance-40.7-22.el9.noarch.rpm
(44/50) : gnome-shell-extension-places-menu-40.7-22.el9.noarch.rpm
(45/50) : gnome-shell-extension-window-list-40.7-22.el9.noarch.rpm
(46/50) : libsndfile-1.0.31-9.el9.x86_64.rpm
(47/50) : epel-next-release-9-8.el9.noarch.rpm
(48/50) : epel-release-9-8.el9.noarch.rpm
(49/50) : iwl7260-firmware-25.30.13.0-148.el9.noarch.rpm
(50/50) : linux-firmware-20241121-148.el9.noarch.rpm
50% [=====] 6.8 MB/s | 292 MB

2.3 MB/s | 251 kB
817 kB/s | 85 kB
667 kB/s | 69 kB
3.8 MB/s | 1.6 MB
1.7 MB/s | 185 kB
1.7 MB/s | 185 kB
2.4 MB/s | 264 kB
2.4 MB/s | 273 kB
2.4 MB/s | 266 kB
5.8 MB/s | 36 MB
2.1 MB/s | 275 kB
1.7 MB/s | 182 kB
1.7 MB/s | 182 kB
2.3 MB/s | 250 kB
2.3 MB/s | 252 kB
1.9 MB/s | 207 kB
891 kB/s | 542 kB
4.2 MB/s | 1.1 MB
4.7 MB/s | 869 kB
3.3 MB/s | 333 kB
3.8 MB/s | 359 kB
1.2 MB/s | 109 kB
3.2 MB/s | 295 kB
3.9 MB/s | 29 MB
1.1 MB/s | 104 kB
3.2 MB/s | 4.5 MB
2.7 MB/s | 1.0 MB
2.4 MB/s | 628 kB
2.5 MB/s | 2.2 MB
258 kB/s | 34 kB
13 MB/s | 1.6 MB
316 kB/s | 17 kB
4.0 MB/s | 299 kB
707 kB/s | 37 kB
163 kB/s | 11 kB
307 kB/s | 16 kB
596 kB/s | 28 kB
3.0 MB/s | 206 kB
177 kB/s | 7.8 kB
1.0 MB/s | 18 kB
4.5 MB/s | 57 MB
6.8 MB/s | 292 MB
```

4. Install the package containing the `mogrify` command.  
I've encountered error if I didn't install EPEL beforehand.

`sudo yum install epel-release` (Installing EPEL)

`sudo yum update` (update the repository cache)

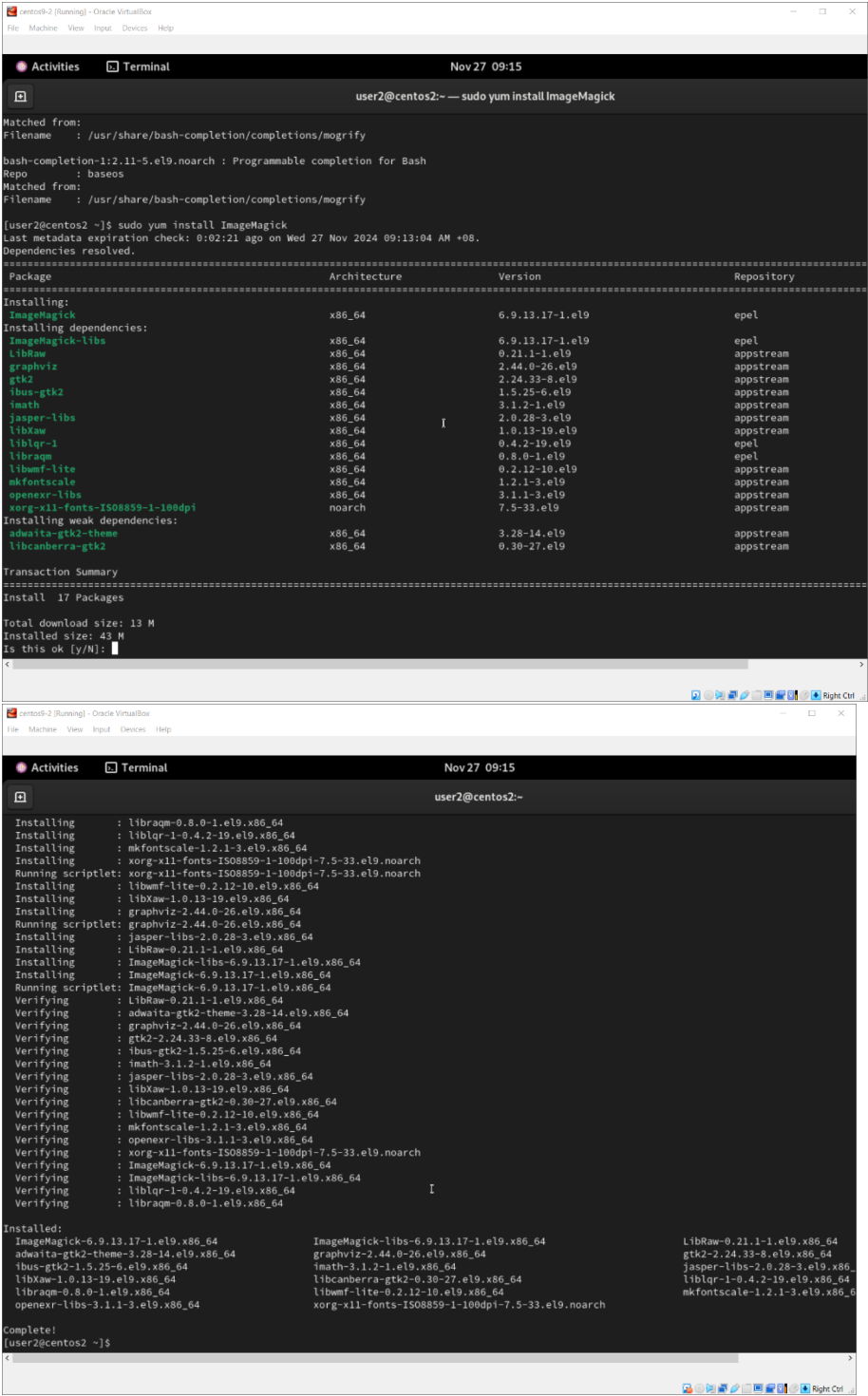


```
Verifying : gnome-shell-40.10-22.el9.x86_64
Verifying : gnome-shell-extension-apps-menu-40.7-22.el9.noarch
Verifying : gnome-shell-extension-apps-menu-40.7-19.el9.noarch
Verifying : gnome-shell-extension-common-40.7-22.el9.noarch
Verifying : gnome-shell-extension-common-40.7-19.el9.noarch
Verifying : gnome-shell-extension-desktop-icons-40.7-22.el9.noarch
Verifying : gnome-shell-extension-desktop-icons-40.7-19.el9.noarch
Verifying : gnome-shell-extension-launch-new-instance-40.7-22.el9.noarch
Verifying : gnome-shell-extension-launch-new-instance-40.7-19.el9.noarch
Verifying : gnome-shell-extension-places-menu-40.7-22.el9.noarch
Verifying : gnome-shell-extension-places-menu-40.7-19.el9.noarch
Verifying : gnome-shell-extension-window-list-40.7-22.el9.noarch
Verifying : gnome-shell-extension-window-list-40.7-19.el9.noarch
Verifying : libsndfile-1.0.31-9.el9.x86_64
Verifying : libsndfile-1.0.31-8.el9.x86_64
Verifying : epel-next-release-9-8.el9.noarch
Verifying : epel-next-release-9-7.el9.noarch
Verifying : epel-release-9-8.el9.noarch
Verifying : epel-release-9-7.el9.noarch

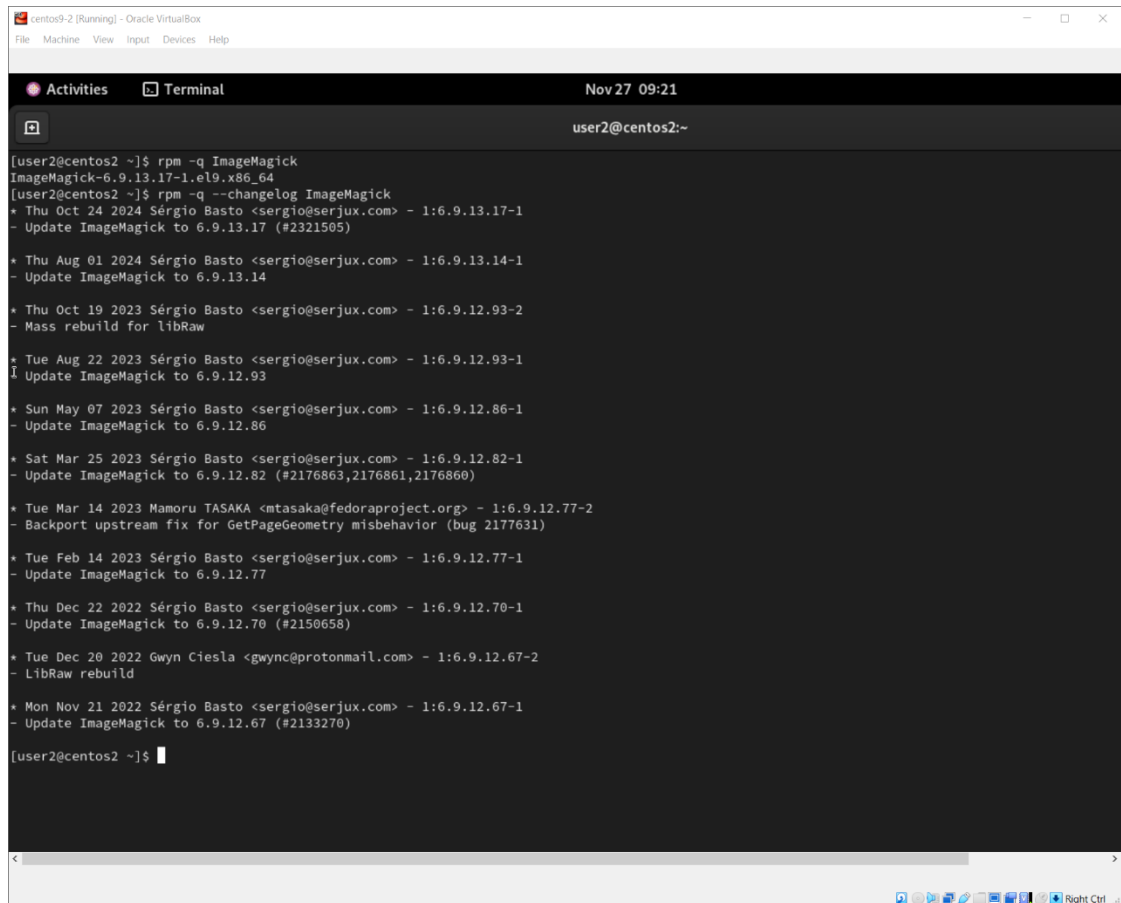
Upgraded:
NetworkManager-1:1.51.4-1.el9.x86_64
NetworkManager-bluetooth-1:1.51.4-1.el9.x86_64
NetworkManager-libnm-1:1.51.4-1.el9.x86_64
NetworkManager-tui-1:1.51.4-1.el9.x86_64
NetworkManager-wwan-1:1.51.4-1.el9.x86_64
epel-next-release-9-8.el9.noarch
gnome-classic-session-40.7-22.el9.noarch
gnome-shell-extension-apps-menu-40.7-22.el9.noarch
gnome-shell-extension-desktop-icons-40.7-22.el9.noarch
gnome-shell-extension-places-menu-40.7-22.el9.noarch
iwl100-firmware-39.31.5-1-148.el9.noarch
iwl105-firmware-18.168.6.1-148.el9.noarch
iwl2000-firmware-18.168.6.1-148.el9.noarch
iwl3160-firmware-1:25.30.13.0-148.el9.noarch
iwl3160-firmware-8.24.2-2-148.el9.noarch
iwl6000g2b-firmware-18.168.6.1-148.el9.noarch
iwl7260-firmware-1:25.30.13.0-148.el9.noarch
kernel-tools-libs-5.14.0-533.el9.x86_64
libertas-ad787-firmware-20241121-148.el9.noarch
libsndfile-1.0.31-9.el9.x86_64
linux-firmware-20241121-148.el9.noarch
NetworkManager-adsl-1:1.51.4-1.el9.x86_64
NetworkManager-config-server-1:1.51.4-1.el9.noarch
NetworkManager-team-1:1.51.4-1.el9.x86_64
NetworkManager-wifi-1:1.51.4-1.el9.x86_64
brftool-7.5.0-533.el9.x86_64
epel-release-9-8.el9.noarch
gnome-shell-40.10-23.el9.x86_64
gnome-shell-extension-common-40.7-22.el9.noarch
gnome-shell-extension-launch-new-instance-40.7-22.el9.noarch
gnome-shell-extension-window-list-40.7-22.el9.noarch
iwl1000-firmware-1:39.31.5-1-148.el9.noarch
iwl135-firmware-18.168.6.1-148.el9.noarch
iwl2030-firmware-18.168.6.1-148.el9.noarch
iwl5000-firmware-8.83.5.1-148.el9.noarch
iwl6000g2b-firmware-18.168.6.1-148.el9.noarch
iwl6050-firmware-41.28.5.1-148.el9.noarch
kernel-tools-5.14.0-533.el9.x86_64
kmod-kydo-8.2.5-2-149.el9.x86_64
libnme-1:11.1-1.el9.x86_64
libzstd-1.5.5-1.el9.x86_64
linux-firmware-whence-20241121-148.el9.noarch
```

sudo yum provides \*/mogrify

sudo yum install ImageMagick



5. Look through the `changelog` of the package that provides the `mogrify` command.  
`rpm -q ImageMagick` (to verify if ImageMagick is installed)  
`rpm -q --changelog ImageMagick` (to view changelog)



```
centos9-2 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help

Activities Terminal Nov 27 09:21
user2@centos2:~

[user2@centos2 ~]$ rpm -q ImageMagick
ImageMagick-6.9.13.17-1.el9.x86_64
[user2@centos2 ~]$ rpm -q --changelog ImageMagick
* Thu Oct 24 2024 Sérgio Basto <sergio@serjux.com> - 1:6.9.13.17-1
- Update ImageMagick to 6.9.13.17 (#2321505)

* Thu Aug 01 2024 Sérgio Basto <sergio@serjux.com> - 1:6.9.13.14-1
- Update ImageMagick to 6.9.13.14

* Thu Oct 19 2023 Sérgio Basto <sergio@serjux.com> - 1:6.9.12.93-2
- Mass rebuild for libRaw

* Tue Aug 22 2023 Sérgio Basto <sergio@serjux.com> - 1:6.9.12.93-1
- Update ImageMagick to 6.9.12.93

* Sun May 07 2023 Sérgio Basto <sergio@serjux.com> - 1:6.9.12.86-1
- Update ImageMagick to 6.9.12.86

* Sat Mar 25 2023 Sérgio Basto <sergio@serjux.com> - 1:6.9.12.82-1
- Update ImageMagick to 6.9.12.82 (#2176863,2176861,2176860)

* Tue Mar 14 2023 Mamoru TASAKA <mtasaka@fedoraproject.org> - 1:6.9.12.77-2
- Backport upstream fix for GetPageGeometry misbehavior (bug 2177631)

* Tue Feb 14 2023 Sérgio Basto <sergio@serjux.com> - 1:6.9.12.77-1
- Update ImageMagick to 6.9.12.77

* Thu Dec 22 2022 Sérgio Basto <sergio@serjux.com> - 1:6.9.12.70-1
- Update ImageMagick to 6.9.12.70 (#2150658)

* Tue Dec 20 2022 Gwyn Ciesla <gwync@protonmail.com> - 1:6.9.12.67-2
- LibRaw rebuild

* Mon Nov 21 2022 Sérgio Basto <sergio@serjux.com> - 1:6.9.12.67-1
- Update ImageMagick to 6.9.12.67 (#2133270)

[user2@centos2 ~]$
```