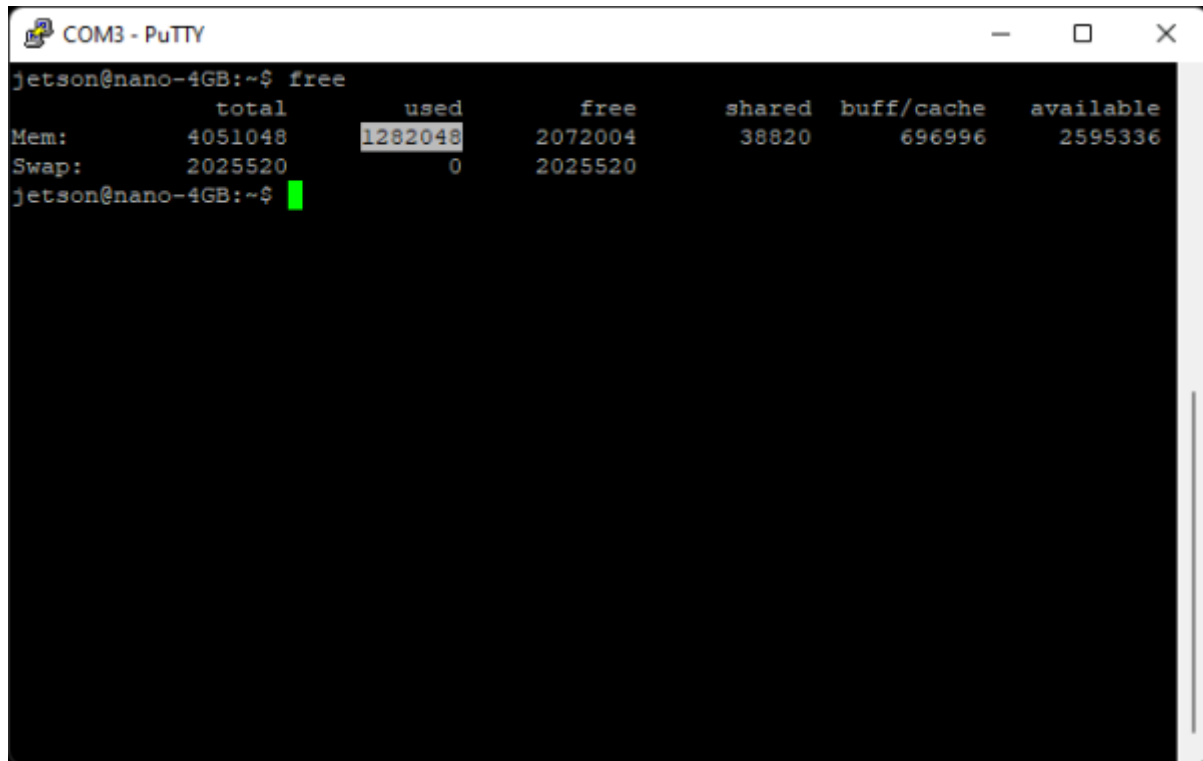


Improve Performance

By default the desktop environment used on Jetson is GNOME, which is a visual environment with animations in the interaction and usability, that has a direct impact on memory usage.

We can see the current amount of memory used by our jetson with the following command

```
$ free
```



The screenshot shows a terminal window titled 'COM3 - PuTTY'. The prompt is 'jetson@nano-4GB:~\$'. The command 'free' has been executed, displaying the following output:

| | total | used | free | shared | buff/cache | available |
|-------|---------|---------|---------|--------|------------|-----------|
| Mem: | 4051048 | 1282048 | 2072004 | 38820 | 696996 | 2595336 |
| Swap: | 2025520 | 0 | 2025520 | | | |

The 'used' value for memory is highlighted with a green box in the original image.

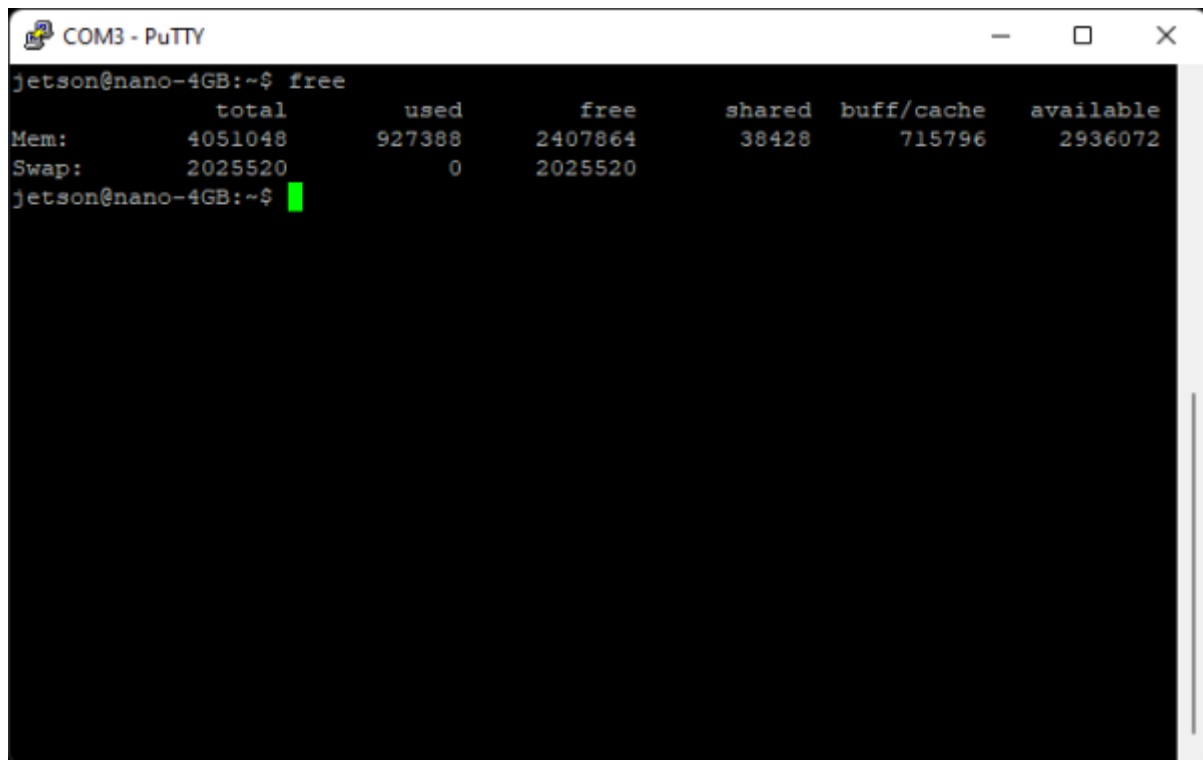
In this case the Jetson is using *1,282,048 KB* equivalent to *1.28 GB*.

The way to improve memory consumption is to change the desktop environment from GNOME to LXDE (Lightweight X11 Desktop Environment). LXDE prioritizes performance and memory usage which makes it perfect for applications with hardware limitations or simply optimizing performance, and is also the recommended [lightweight window manager alternative](#) by NVIDIA.

```
$ wget  
https://raw.githubusercontent.com/jetsonhacks/installLXDE/main/installLXDE.sh  
&& bash installLXDE.sh  
$ sudo reboot
```

After reboot and login with LXDE desktop environment the memory consumption is *927,388 KB* equivalent to *0.92 GB*.

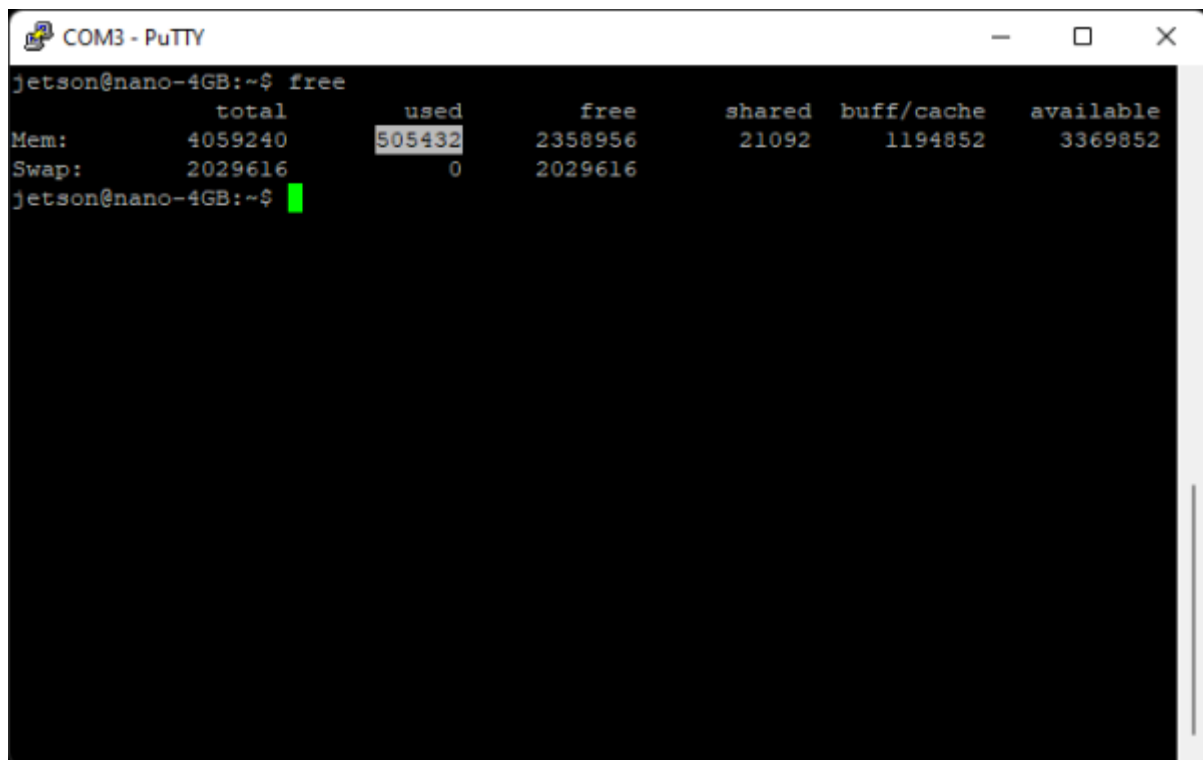
```
$ free
```



```
COM3 - PuTTY
jetson@nano-4GB:~$ free
              total        used        free      shared  buff/cache   available
Mem:           4051048       927388       2407864        38428        715796       2936072
Swap:           2025520            0       2025520
```

Best Performance

However, even if the desktop environment is changed, the best performance is achieved in **Headless Mode**.



```
COM3 - PuTTY
jetson@nano-4GB:~$ free
              total        used        free      shared  buff/cache   available
Mem:           4059240       505432       2358956        21092       1194852       3369852
Swap:           2029616            0       2029616
```

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