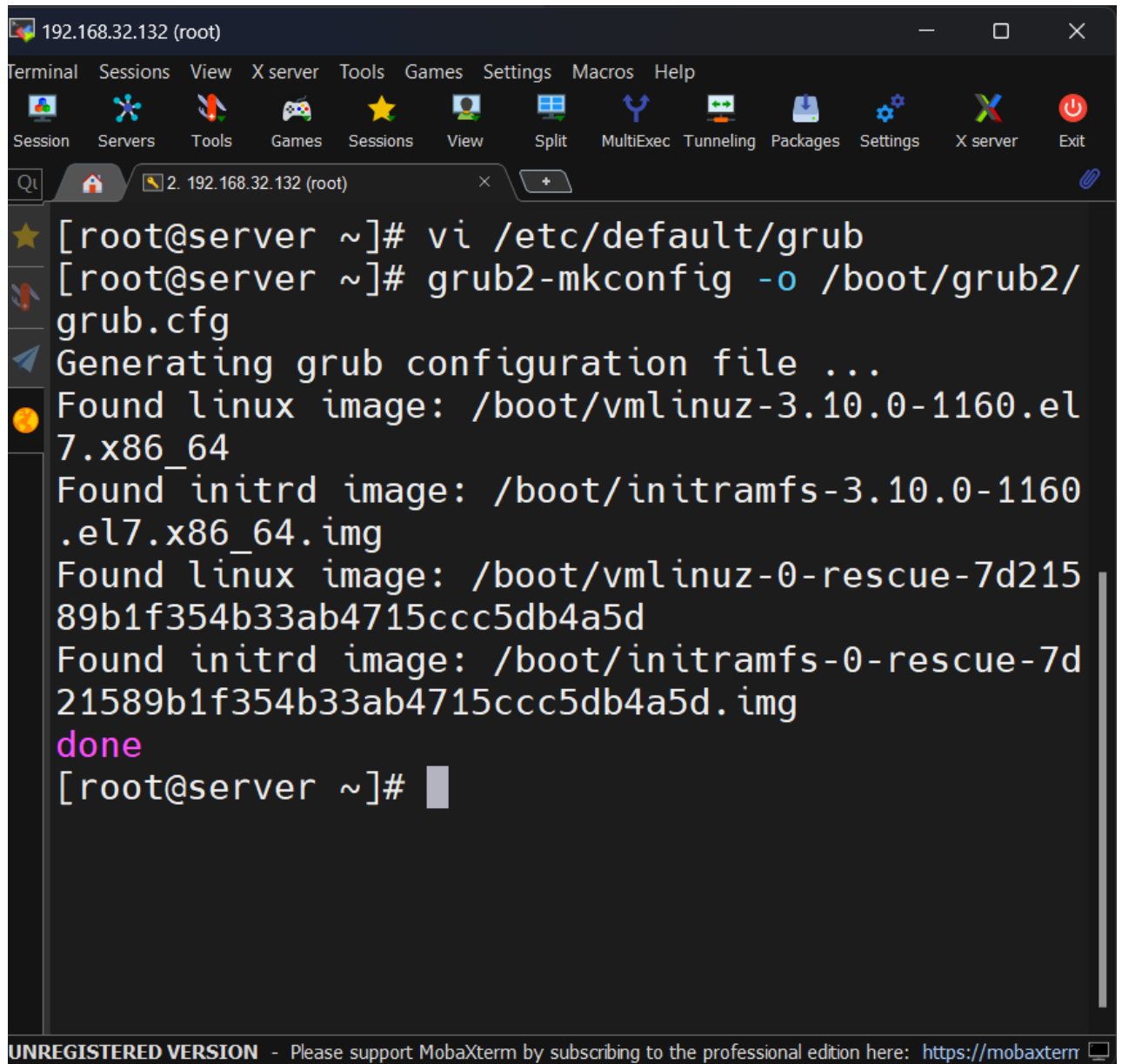


Lab5:

- 1- Change the grub parameter to be automatically boot after 8 sec

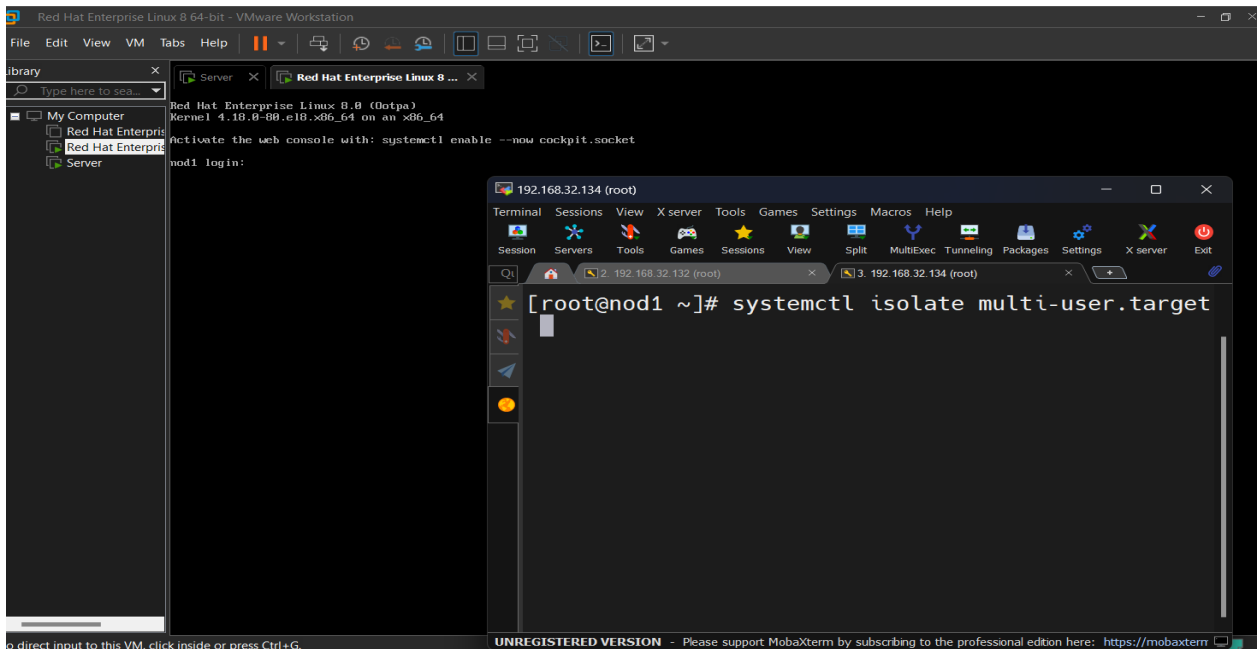
```
GRUB_TIMEOUT=8
GRUB_DISTRIBUTOR="$(sed 's, release .*$,,g' /etc
```



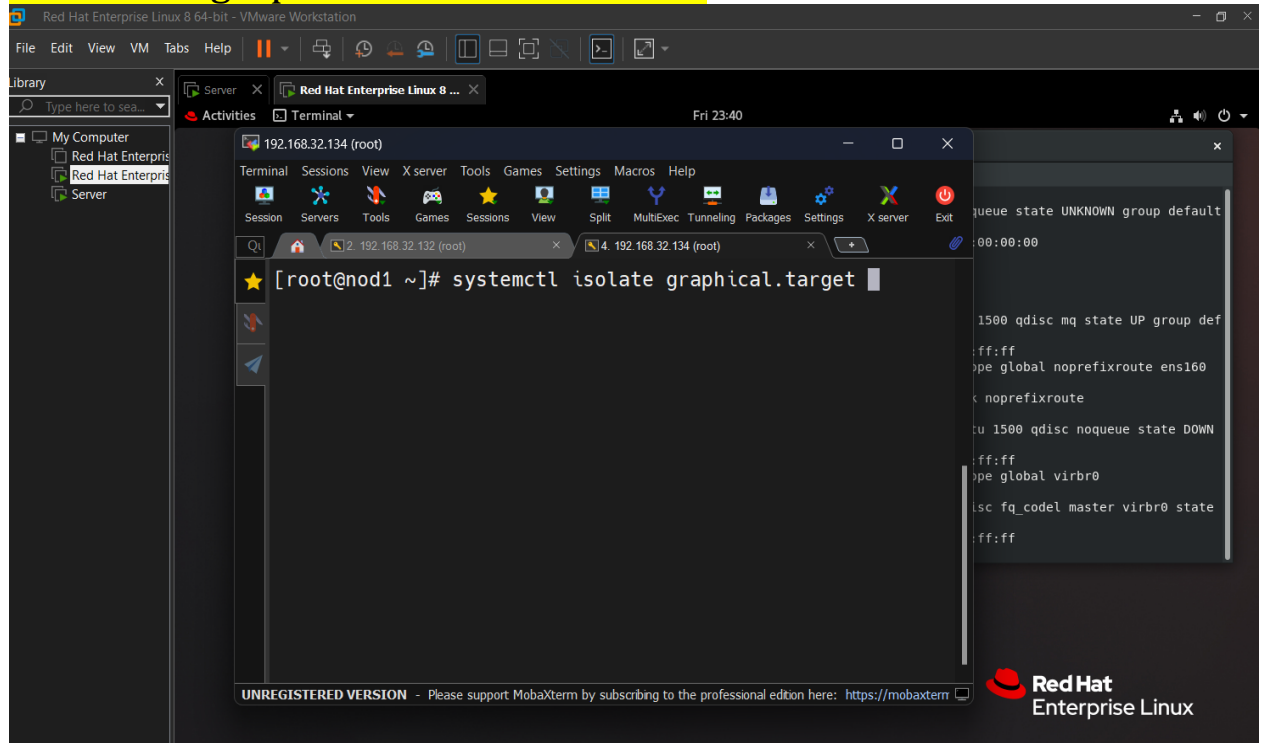
```
[root@server ~]# vi /etc/default/grub
[root@server ~]# grub2-mkconfig -o /boot/grub2/grub.cfg
Generating grub configuration file ...
Found linux image: /boot/vmlinuz-3.10.0-1160.el7.x86_64
Found initrd image: /boot/initramfs-3.10.0-1160.el7.x86_64.img
Found linux image: /boot/vmlinuz-0-rescue-7d21589b1f354b33ab4715ccc5db4a5d
Found initrd image: /boot/initramfs-0-rescue-7d21589b1f354b33ab4715ccc5db4a5d.img
done
[root@server ~]#
```

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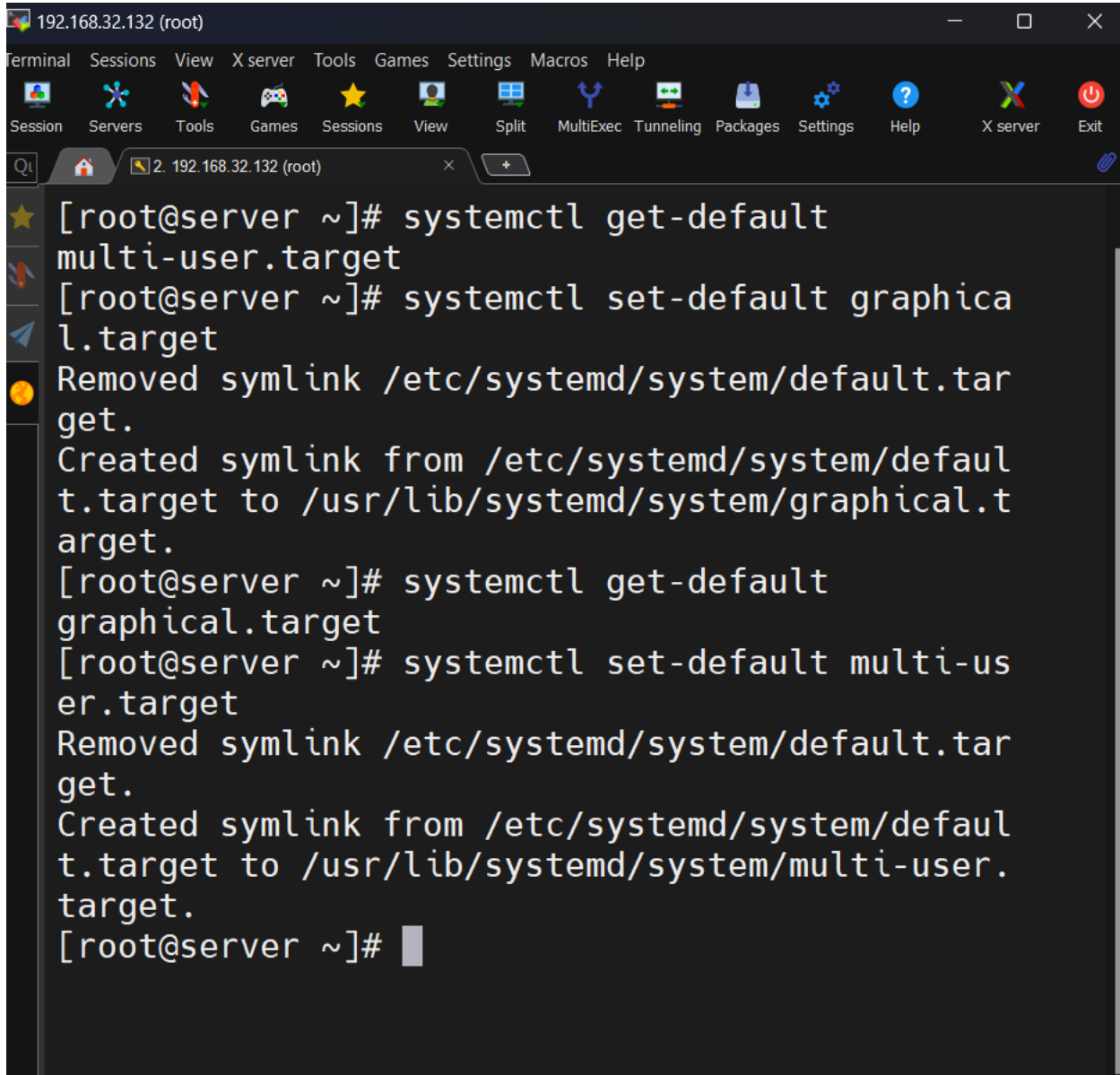
2- switch to the multi-user target manually without rebooting



And to use graphics use this command



- 3- configure your server to automatically boot into the multi-user target

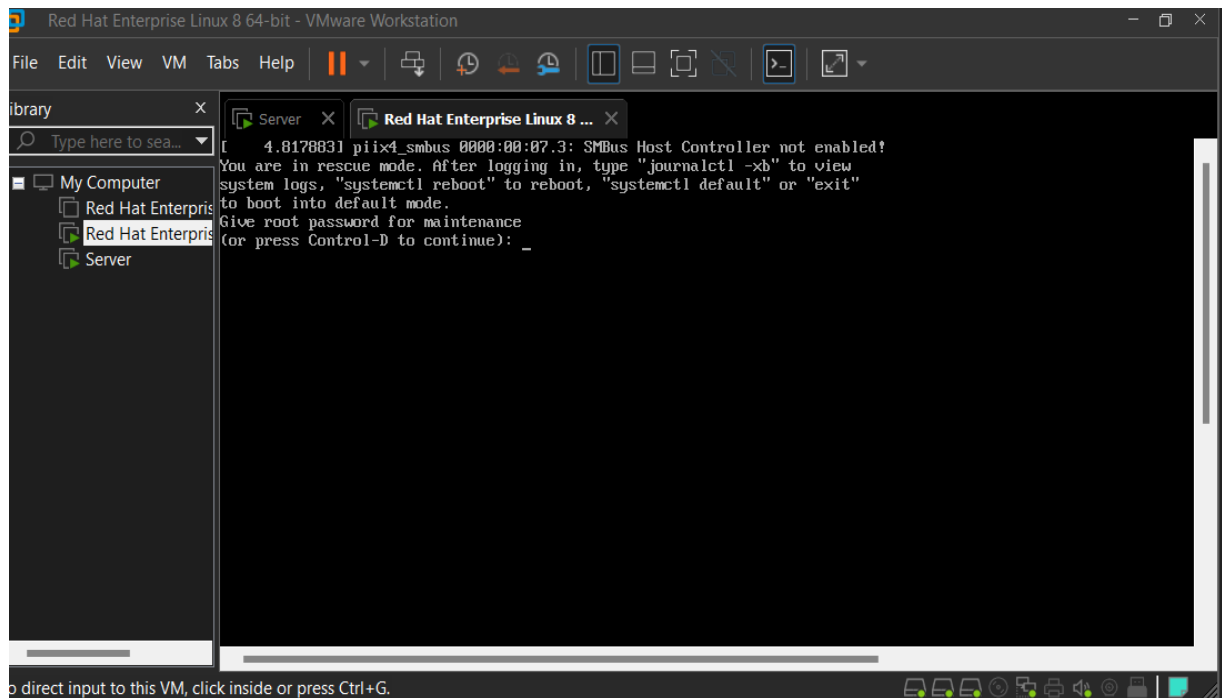


```
192.168.32.132 (root)
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help X server Exit

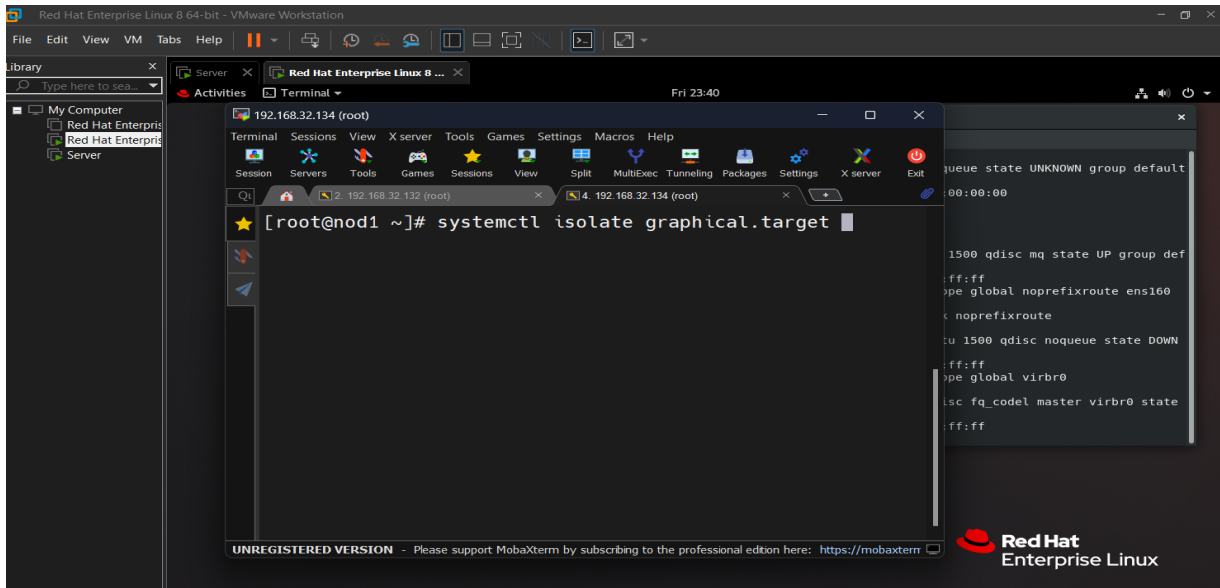
[root@server ~]# systemctl get-default
multi-user.target
[root@server ~]# systemctl set-default graphical.target
Removed symlink /etc/systemd/system/default.target.
Created symlink from /etc/systemd/system/default.target to /usr/lib/systemd/system/graphical.target.
[root@server ~]# systemctl get-default
graphical.target
[root@server ~]# systemctl set-default multi-user.target
Removed symlink /etc/systemd/system/default.target.
Created symlink from /etc/systemd/system/default.target to /usr/lib/systemd/system/multi-user.target.
[root@server ~]#
```

- 4- reboot the server, then from within the boot loader menu, boot into rescue.target

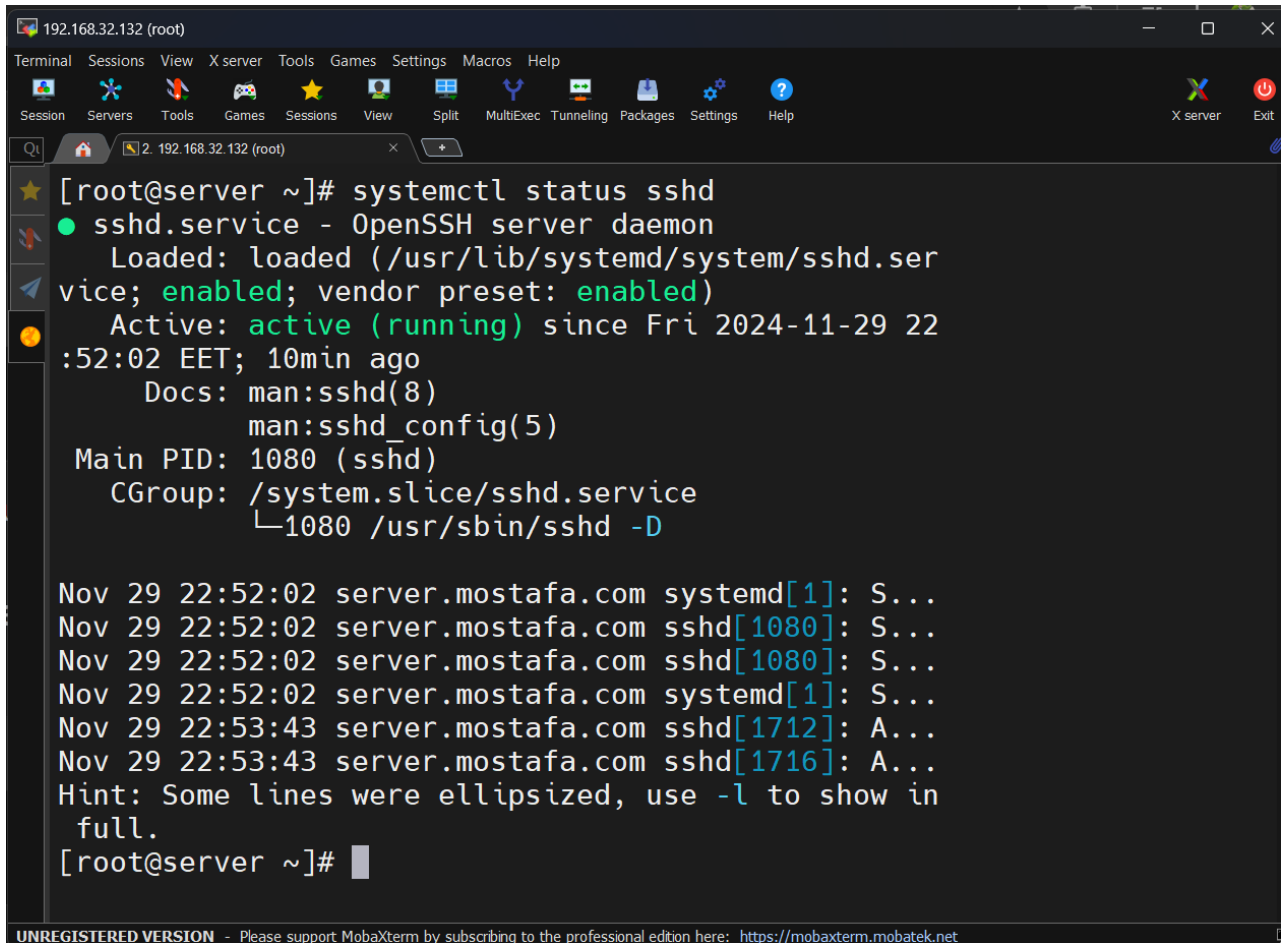
```
fi
linux16 /vmlinuz-3.10.0-1160.el7.x86_64 root=/dev/mapper/centos-root r\
o spectre_v2=retpoline rd.lvm.lv=centos/root rd.lvm.lv=centos/swap rhgb quiet
systemd.unit=rescue.target_
initrd16 /initramfs-3.10.0-1160.el7.x86_64.img
```



- 5- set the default systemd target back to graphical.target

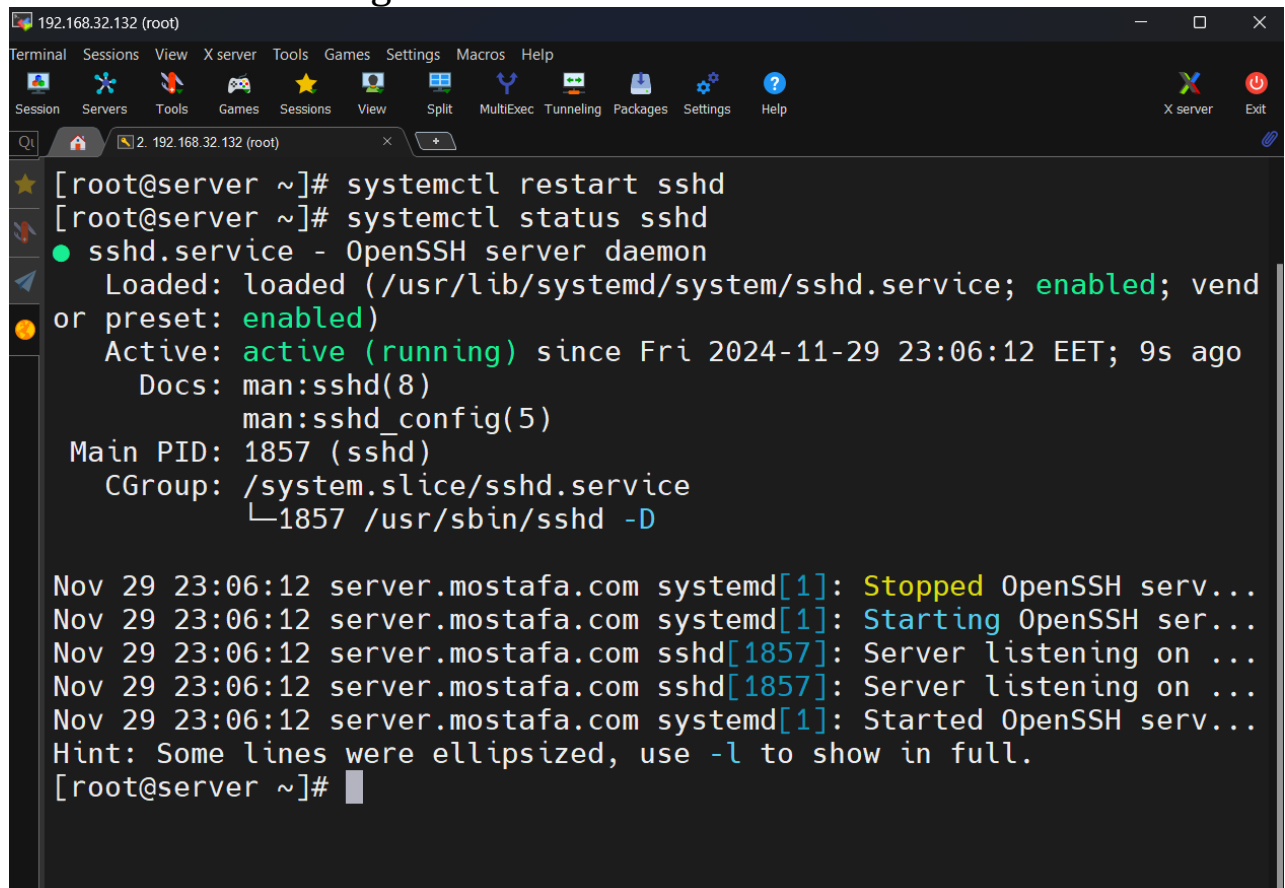


6- Display the status of sshd service, note the PID of the daemon



```
Main PID: 1080 (sshd)
  CGroup: /system.slice/sshd.service
          └─1080 /usr/sbin/sshd -D
```

- 7- Restart the sshd service and view the status, The PID of the daemon has changed



```
192.168.32.132 (root)
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help
X server Exit

[2. 192.168.32.132 (root)]
[star] [root@server ~]# systemctl restart sshd
[flame] [root@server ~]# systemctl status sshd
[arrow] ● sshd.service - OpenSSH server daemon
[dot]    Loaded: loaded (/usr/lib/systemd/system/sshd.service; enabled; vend
or preset: enabled)
[dot]    Active: active (running) since Fri 2024-11-29 23:06:12 EET; 9s ago
[dot]    Docs: man:sshd(8)
           man:sshd_config(5)
           Main PID: 1857 (sshd)
           CGroup: /system.slice/sshd.service
                   └─1857 /usr/sbin/sshd -D

Nov 29 23:06:12 server.mostafa.com systemd[1]: Stopped OpenSSH serv...
Nov 29 23:06:12 server.mostafa.com systemd[1]: Starting OpenSSH ser...
Nov 29 23:06:12 server.mostafa.com sshd[1857]: Server listening on ...
Nov 29 23:06:12 server.mostafa.com sshd[1857]: Server listening on ...
Nov 29 23:06:12 server.mostafa.com systemd[1]: Started OpenSSH serv...
Hint: Some lines were ellipsized, use -l to show in full.
[root@server ~]#
```

```
man: sshd_config(8)  
Main PID: 1857 (sshd)  
CGroup: /system.slice/ssh.service  
└─1857 /usr/sbin/sshd -D
```

- 8- Reload the sshd service and view the status, The PID of the daemon has not changed and connection has not be interrupted


```
192.168.32.132 (root)
terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

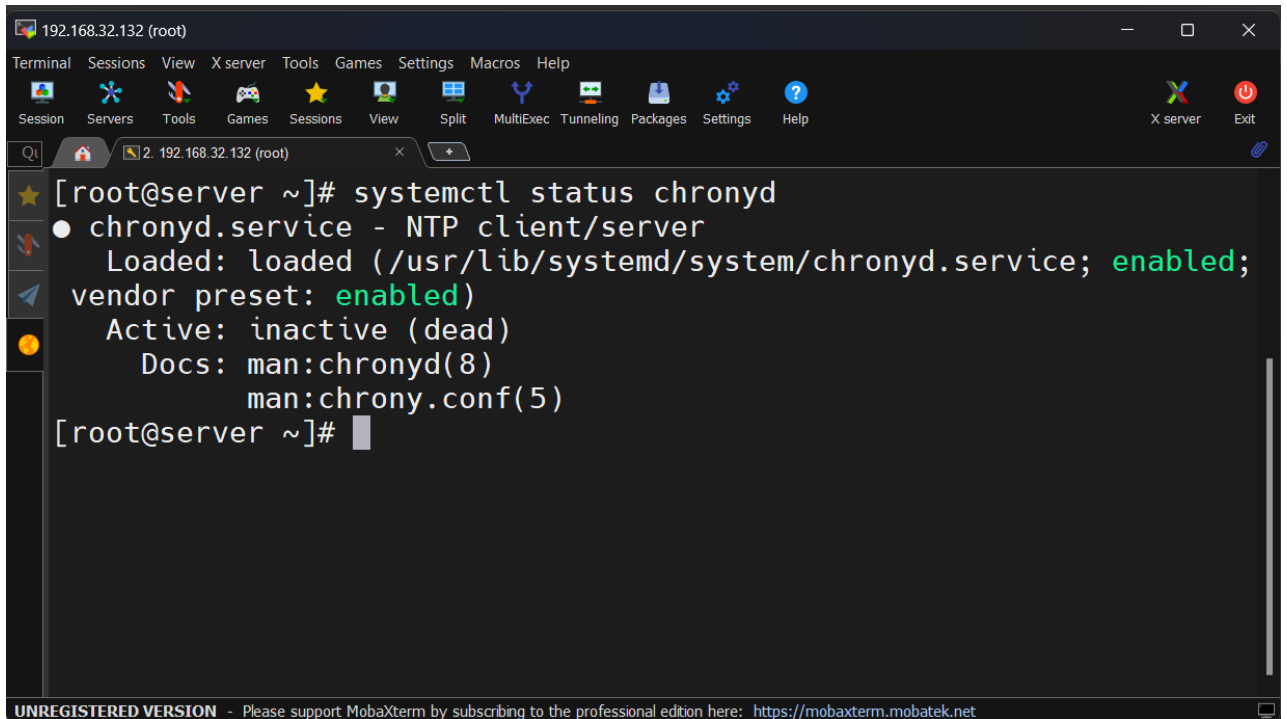
[root@server ~]# clear
[root@server ~]# systemctl reload sshd
[root@server ~]# systemctl status sshd
● sshd.service - OpenSSH server daemon
   Loaded: loaded (/usr/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2024-11-29 23:06:12 EET; 2min 23s ago
     Docs: man:sshd(8)
           man:sshd_config(5)
   Process: 1871 ExecReload=/bin/kill -HUP $MAINPID (code=exited, status=0/SUCCESS)
   Main PID: 1857 (sshd)
   CGroup: /system.slice/ssh.service
           └─1857 /usr/sbin/sshd -D

Nov 29 23:06:12 server.mostafa.com systemd[1]: Stopped OpenSSH server daemon.
Nov 29 23:06:12 server.mostafa.com systemd[1]: Starting OpenSSH server daemon: sshd.
Nov 29 23:06:12 server.mostafa.com sshd[1857]: Server listening on 0.0.0.0 port 22.
Nov 29 23:06:12 server.mostafa.com sshd[1857]: Server listening on :: port 22.
Nov 29 23:06:12 server.mostafa.com systemd[1]: Started OpenSSH server daemon: sshd.
Nov 29 23:08:30 server.mostafa.com systemd[1]: Reloading OpenSSH server daemon: sshd.
Nov 29 23:08:30 server.mostafa.com sshd[1857]: Received SIGHUP; reloading configuration.
Nov 29 23:08:30 server.mostafa.com systemd[1]: Reloaded OpenSSH server daemon: sshd.
Nov 29 23:08:30 server.mostafa.com sshd[1857]: Server listening on 0.0.0.0 port 22.
Nov 29 23:08:30 server.mostafa.com sshd[1857]: Server listening on :: port 22.

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```

```
s=0/SUCCESS)
Main PID: 1857 (sshd)
CGroup: /system.slice/ssh.service
        └─1857 /usr/sbin/sshd -D
```

- 9- Verify that the chronyd service is running

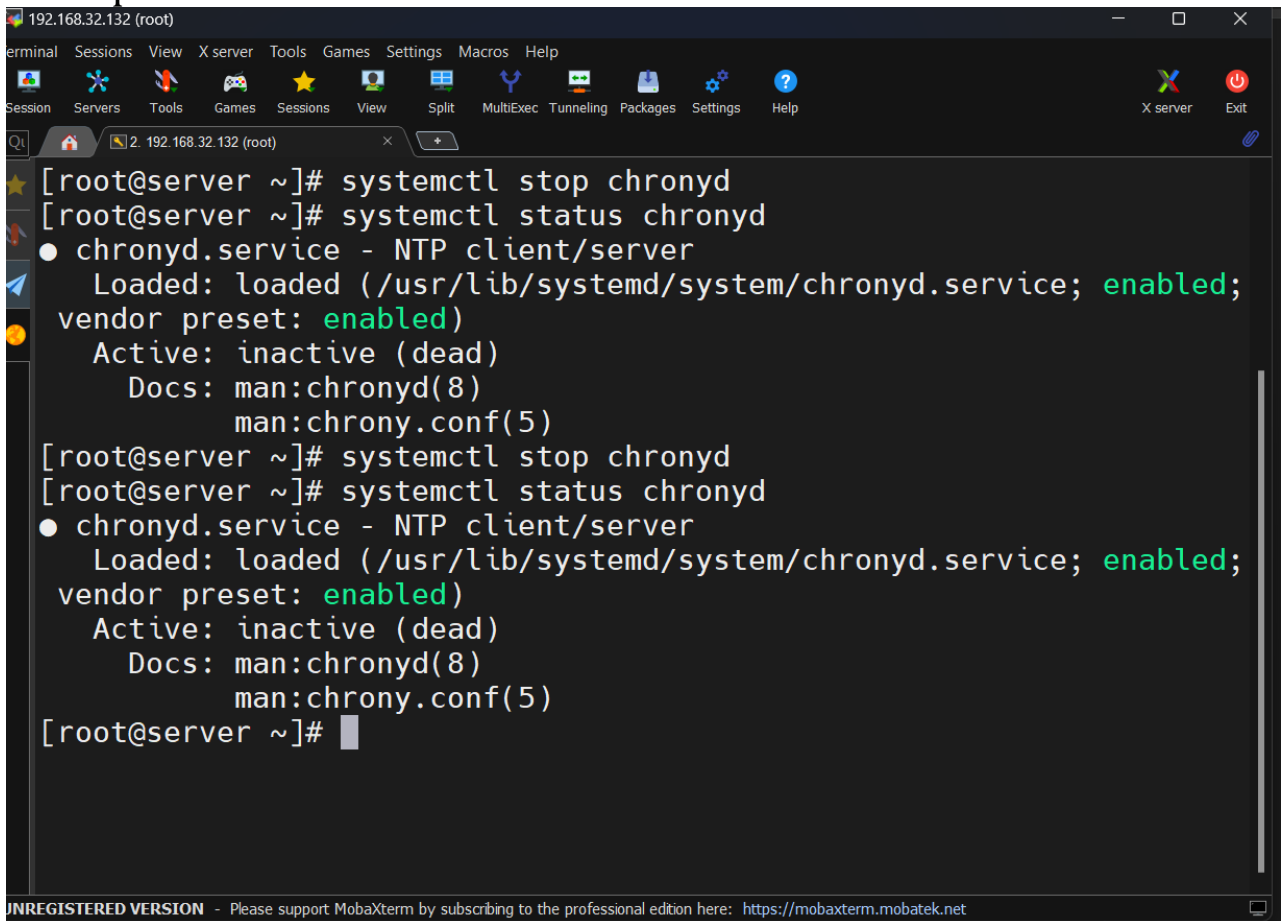


A screenshot of the MobaXterm application window. The title bar shows '192.168.32.132 (root)'. The menu bar includes Terminal, Sessions, View, X server, Tools, Games, Settings, Macros, and Help. The toolbar contains icons for Session, Servers, Tools, Games, Sessions, View, Split, MultiExec, Tunneling, Packages, Settings, Help, X server, and Exit. The terminal pane shows the following commands and output:

```
[root@server ~]# systemctl status chronyd
● chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; enabled;
   vendor preset: enabled)
   Active: inactive (dead)
     Docs: man:chronyd(8)
           man:chrony.conf(5)
[root@server ~]#
```

At the bottom of the window, a message reads: 'UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>'.

10- Stop the service and view the status

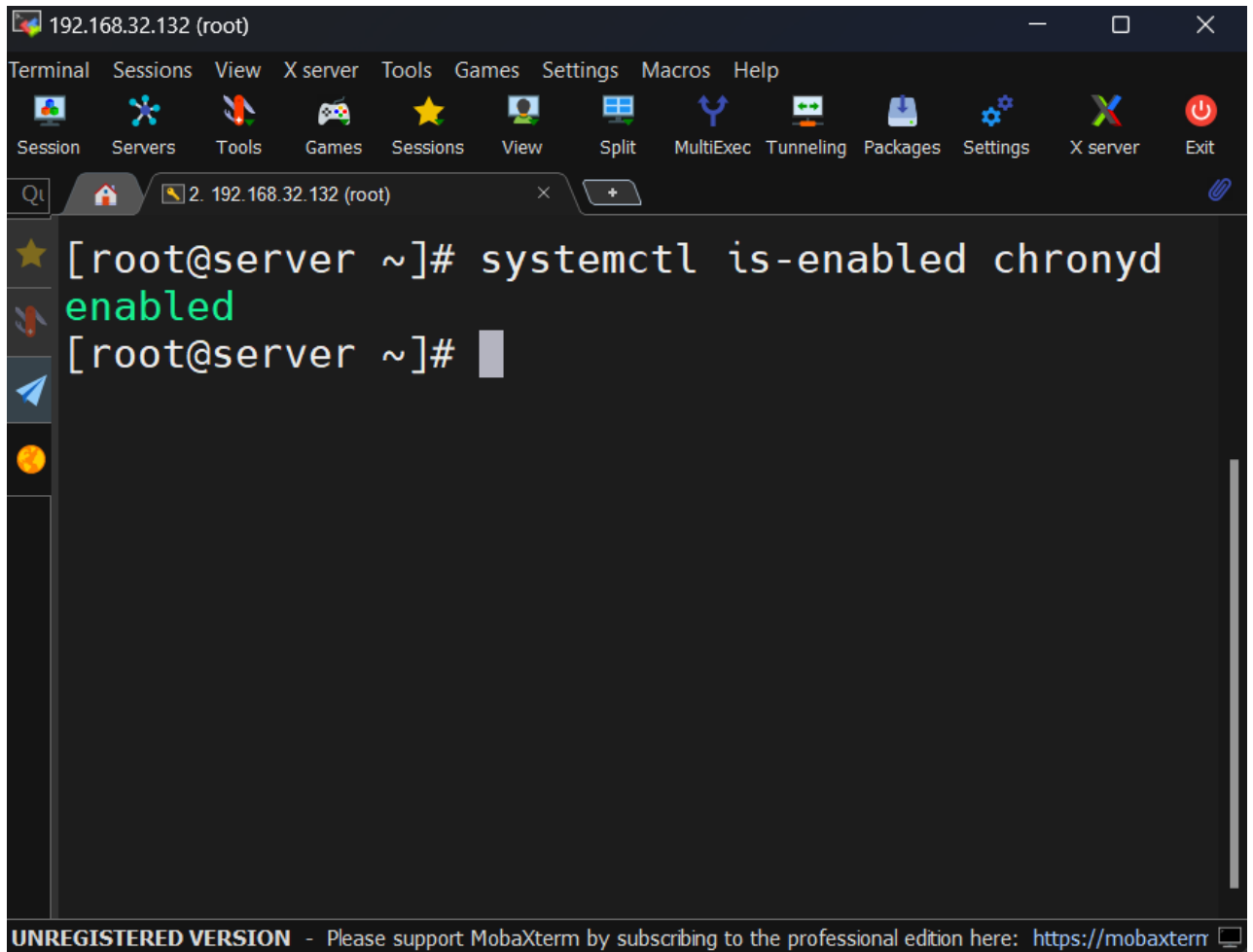


A screenshot of the MobaXterm application window, similar to the one above. The terminal pane shows the following commands and output:

```
[root@server ~]# systemctl stop chronyd
[root@server ~]# systemctl status chronyd
● chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; enabled;
   vendor preset: enabled)
   Active: inactive (dead)
     Docs: man:chronyd(8)
           man:chrony.conf(5)
[root@server ~]# systemctl stop chronyd
[root@server ~]# systemctl status chronyd
● chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; enabled;
   vendor preset: enabled)
   Active: inactive (dead)
     Docs: man:chronyd(8)
           man:chrony.conf(5)
[root@server ~]#
```

The same 'UNREGISTERED VERSION' message is visible at the bottom of the window.

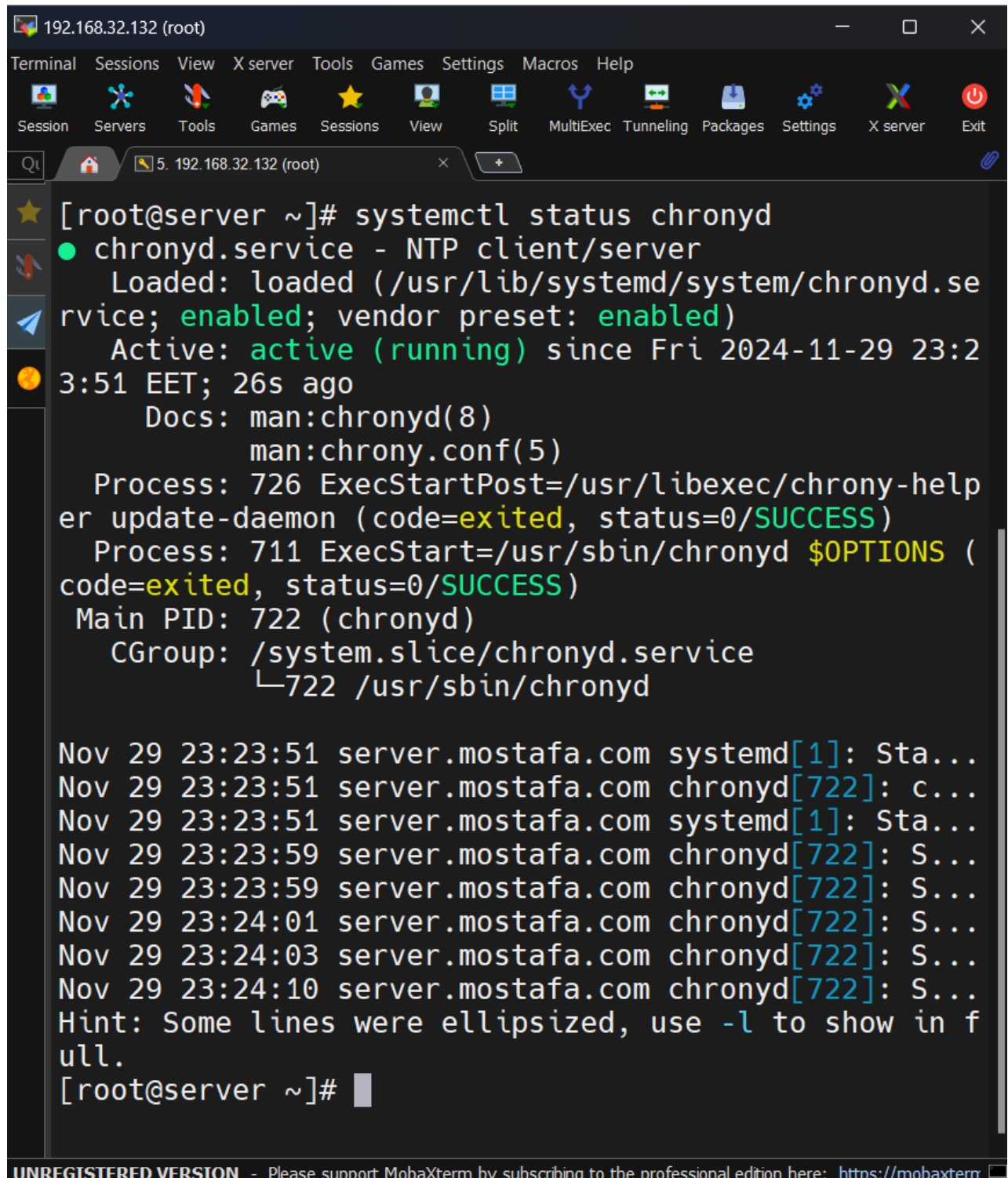
11- Determine if the chronyd service is enabled to start at the system boot



The screenshot shows a MobaXterm terminal window titled "192.168.32.132 (root)". The window has a menu bar with "Terminal", "Sessions", "View", "X server", "Tools", "Games", "Settings", "Macros", and "Help". Below the menu bar is a toolbar with icons for "Session", "Servers", "Tools", "Games", "Sessions", "View", "Split", "MultiExec", "Tunneling", "Packages", "Settings", "X server", and "Exit". The terminal content shows the command `systemctl is-enabled chronyd` being executed, with the output `enabled` displayed in green. The prompt `[root@server ~]#` is visible at the end of the line. At the bottom of the window, a message reads: "UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm>".

```
[root@server ~]# systemctl is-enabled chronyd
enabled
[root@server ~]#
```

12- Reboot the system, then view the status of the chronyd service



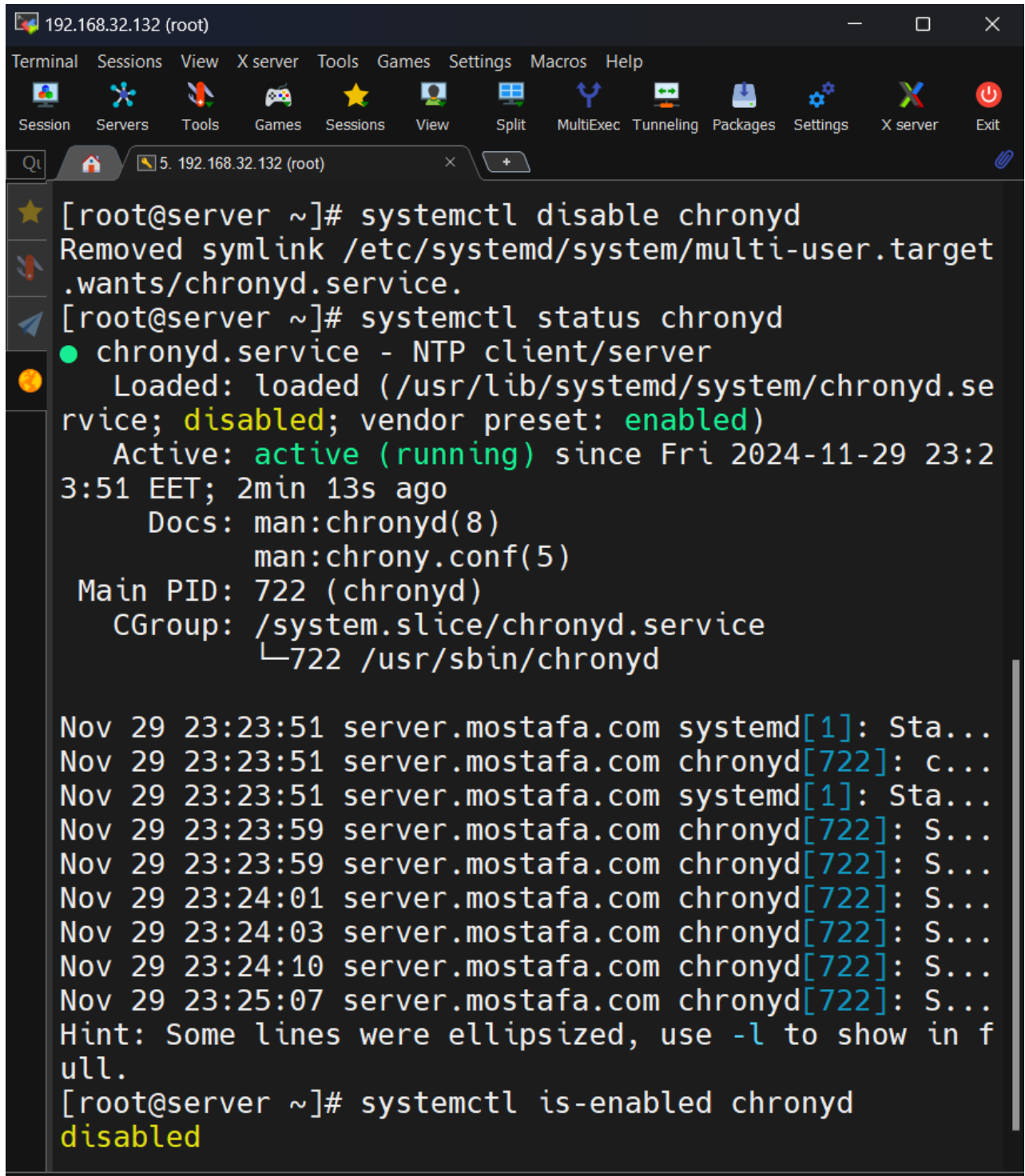
The screenshot shows a MobaXterm terminal window with the title bar '192.168.32.132 (root)'. The terminal displays the output of the command `systemctl status chronyd`. The output indicates that the `chronyd.service` is loaded, enabled, and active (running). It shows the service's configuration files, the main process (PID 722), and the CGroup. Below the service status, there are several log entries from the system journal, showing the service starting and sending time synchronization messages. The terminal prompt is `[root@server ~]#`.

```
[root@server ~]# systemctl status chronyd
● chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2024-11-29 23:23:51 EET; 26s ago
     Docs: man:chronyd(8)
           man:chrony.conf(5)
   Process: 726 ExecStartPost=/usr/libexec/chrony-helper update-daemon (code=exited, status=0/SUCCESS)
   Process: 711 ExecStart=/usr/sbin/chronyd $OPTIONS (code=exited, status=0/SUCCESS)
   Main PID: 722 (chronyd)
   CGroup: /system.slice/chronyd.service
           └─722 /usr/sbin/chronyd

Nov 29 23:23:51 server.mostafa.com systemd[1]: Sta...
Nov 29 23:23:51 server.mostafa.com chronyd[722]: c...
Nov 29 23:23:51 server.mostafa.com systemd[1]: Sta...
Nov 29 23:23:59 server.mostafa.com chronyd[722]: S...
Nov 29 23:23:59 server.mostafa.com chronyd[722]: S...
Nov 29 23:24:01 server.mostafa.com chronyd[722]: S...
Nov 29 23:24:03 server.mostafa.com chronyd[722]: S...
Nov 29 23:24:10 server.mostafa.com chronyd[722]: S...
Hint: Some lines were ellipsized, use -l to show in full.
[root@server ~]#
```

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- 13- Disable the chronyd service so that it doesn't start at system boot, then view the status of the service

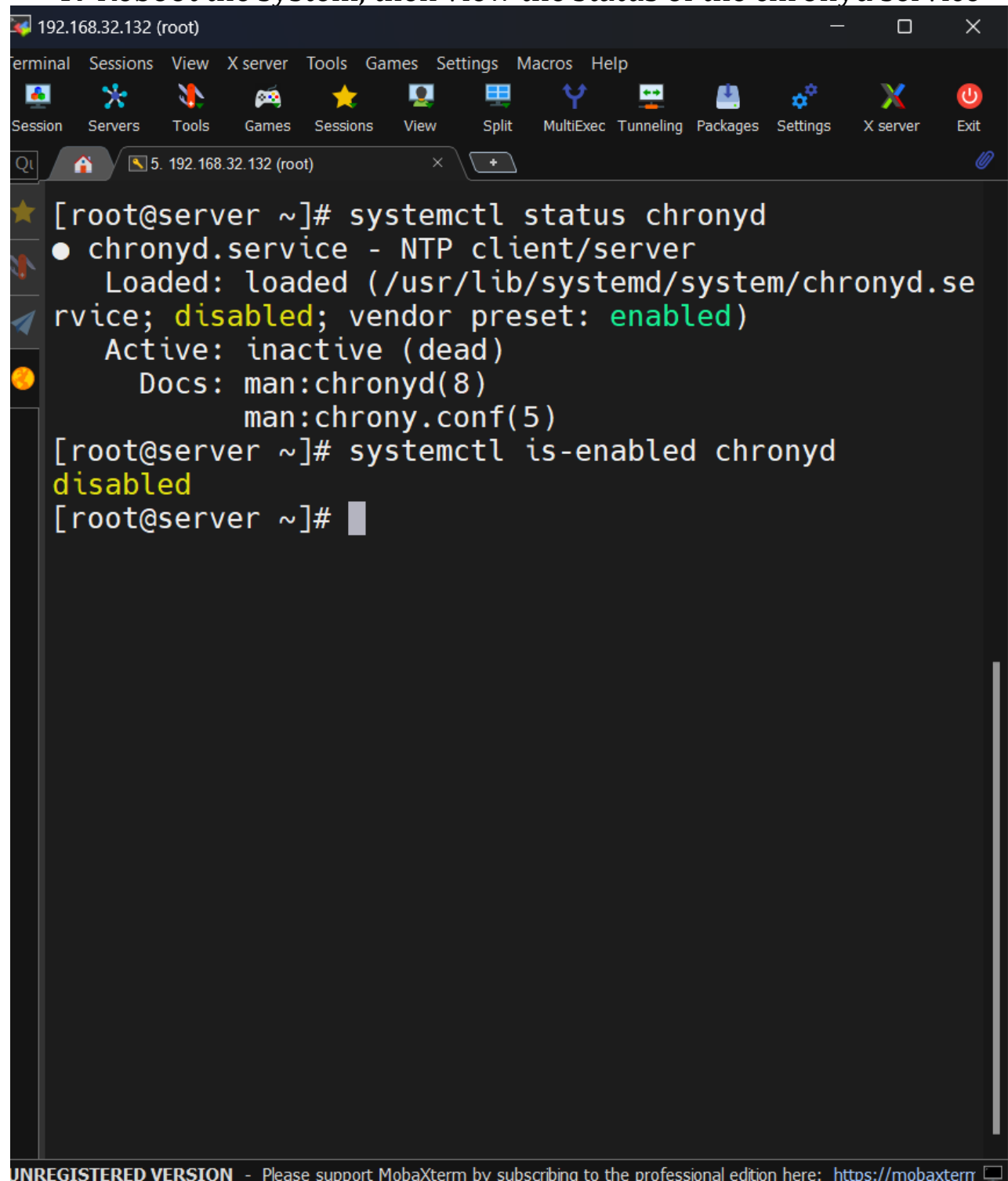


The screenshot shows a terminal window titled '192.168.32.132 (root)' with a menu bar (Terminal, Sessions, View, X server, Tools, Games, Settings, Macros, Help) and a toolbar. The terminal content is as follows:

```
[root@server ~]# systemctl disable chronyd
Removed symlink /etc/systemd/system/multi-user.target.wants/chronyd.service.
[root@server ~]# systemctl status chronyd
● chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; disabled; vendor preset: enabled)
   Active: active (running) since Fri 2024-11-29 23:23:51 EET; 2min 13s ago
     Docs: man:chronyd(8)
           man:chrony.conf(5)
    Main PID: 722 (chronyd)
    CGroup: /system.slice/chronyd.service
            └─722 /usr/sbin/chronyd

Nov 29 23:23:51 server.mostafa.com systemd[1]: Sta...
Nov 29 23:23:51 server.mostafa.com chronyd[722]: c...
Nov 29 23:23:51 server.mostafa.com systemd[1]: Sta...
Nov 29 23:23:59 server.mostafa.com chronyd[722]: S...
Nov 29 23:23:59 server.mostafa.com chronyd[722]: S...
Nov 29 23:24:01 server.mostafa.com chronyd[722]: S...
Nov 29 23:24:03 server.mostafa.com chronyd[722]: S...
Nov 29 23:24:10 server.mostafa.com chronyd[722]: S...
Nov 29 23:25:07 server.mostafa.com chronyd[722]: S...
Hint: Some lines were ellipsized, use -l to show in full.
[root@server ~]# systemctl is-enabled chronyd
disabled
```

14- Reboot the system, then view the status of the chronyd service



The screenshot shows a MobaXterm terminal window with the title bar '192.168.32.132 (root)'. The menu bar includes 'Terminal', 'Sessions', 'View', 'X server', 'Tools', 'Games', 'Settings', 'Macros', and 'Help'. The toolbar contains icons for Session, Servers, Tools, Games, Sessions, View, Split, MultiExec, Tunneling, Packages, Settings, X server, and Exit. The terminal window has a tab labeled '5. 192.168.32.132 (root)'. The terminal output is as follows:

```
[root@server ~]# systemctl status chronyd
● chronyd.service - NTP client/server
   Loaded: loaded (/usr/lib/systemd/system/chronyd.service; disabled; vendor preset: enabled)
   Active: inactive (dead)
     Docs: man:chronyd(8)
           man:chrony.conf(5)
[root@server ~]# systemctl is-enabled chronyd
disabled
[root@server ~]#
```

At the bottom of the window, there is a message: 'UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm>'.