

<https://linuxconfig.org/recover-reset-forgotten-linux-root-password>

# Recover – Reset Forgotten Linux Root Password

Last Updated: 12 May 2021 by Luke Reynolds

The root account, sometimes called super user, is the admin account on a [Linux system](#), and is essential for performing all kinds of administrative tasks. You'll need access to it in order to install or remove packages, [manage other user accounts](#), and a lot more things. Anytime you access the root account, either through the `su` or `sudo` commands, you'll be prompted for the root password.

If you have forgotten the password to your system's root account, you don't necessarily have to go back to square one and reinstall the whole operating system. It's possible to recover and reset the root password, even without the old password. In this guide, we'll take you through the step by step instructions of recovering a forgotten root password on Linux. This will work regardless of the [Linux distribution](#) you're running, as long as its using the GRUB bootloader. Other bootloaders will have similar instructions.

## In this tutorial you will learn:

- How to reset a forgotten root password on Linux



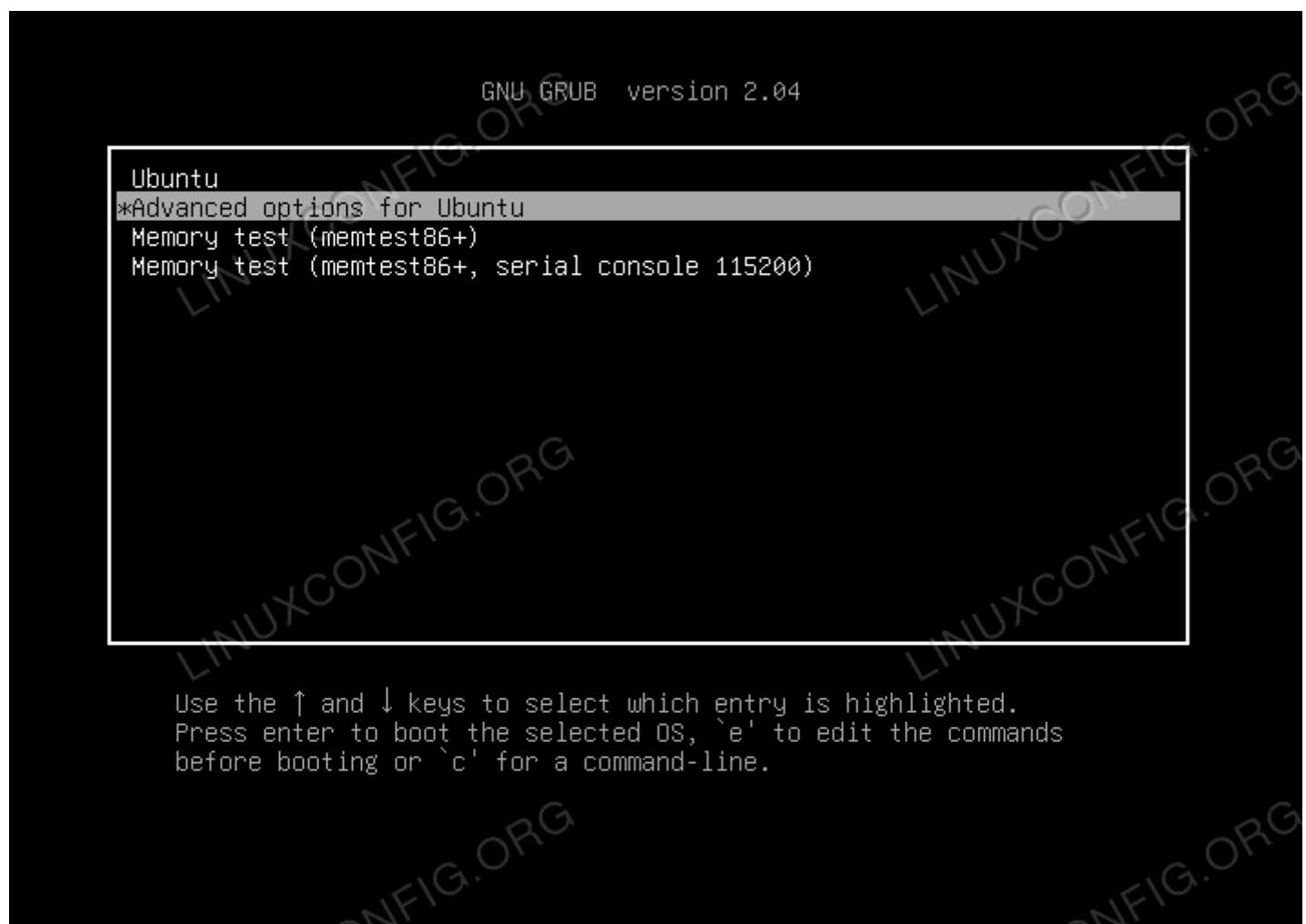
Software Requirements and Linux Command Line Conventions

Category	Requirements, Conventions or Software Version Used
System	Any <a href="#">Linux distro</a>
Software	GRUB bootloader
Other	Privileged access to your Linux system as root or via the <a href="#">sudo</a> command.
Conventions	<b>#</b> – requires given <a href="#">linux commands</a> to be executed with root privileges either directly as a root user or by use of <a href="#">sudo</a> command <b>\$</b> – requires given <a href="#">linux commands</a> to be executed as a regular non-privileged user

## Recover forgotten root password

Follow along with the steps below to reset your root password by entering GRUB recovery mode. In the screenshots below, we are using [Ubuntu Linux](#) for an example, but the instructions will apply to any distro. In some cases, you may have to adapt them a little.

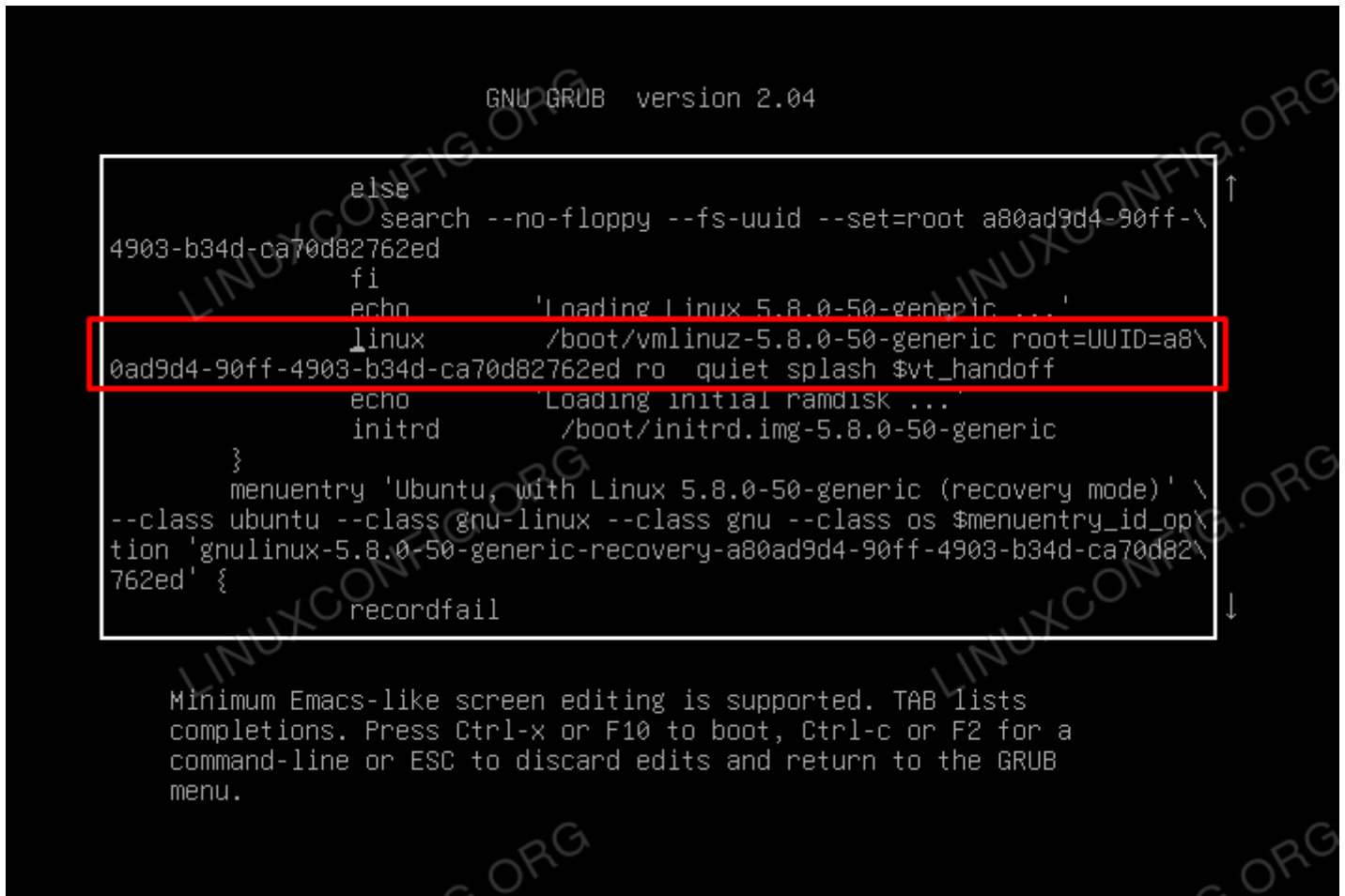
**Step 1** First thing you'll need to do is reboot the machine and access the GRUB menu. This can be done by holding down the **Shift** key as the computer is first booting up. Once the menu appears, use your arrow keys to highlight the “Advanced options” selection. On some distros, it may just say the usual name of the operating system, such as “Fedora Workstation”.



*Highlight the advanced options, or just the name of your distro if this option does not exist*

**Step 2** Next, press **e** on your keyboard to edit the commands.

**Step 3** Using your arrow keys once again, scroll down a bit until you see a line that begins with **linux /boot/vmlinuz...**. We will need to make some small changes to this line. Use the screenshot below for reference so you can make sure you've found the correct line.



```
GNU GRUB version 2.04

else
  search --no-floppy --fs-uuid --set=root a80ad9d4-90ff-4903-b34d-ca70d82762ed
fi
echo 'Loading Linux 5.8.0-50-generic ...'
linux /boot/vmlinuz-5.8.0-50-generic root=UUID=a80ad9d4-90ff-4903-b34d-ca70d82762ed ro quiet splash $vt_handoff
echo 'Loading initial ramdisk ...'
initrd /boot/initrd.img-5.8.0-50-generic
}
menuentry 'Ubuntu, with Linux 5.8.0-50-generic (recovery mode)' \
--class ubuntu --class gnu-linux --class gnu --class os $menuentry_id_option 'gnulinux-5.8.0-50-generic-recovery-a80ad9d4-90ff-4903-b34d-ca70d82762ed' {
  recordfail
}
```

Minimum Emacs-like screen editing is supported. TAB lists completions. Press Ctrl-x or F10 to boot, Ctrl-c or F2 for a command-line or ESC to discard edits and return to the GRUB menu.

*This line will need to be edited, specifically the ro text which mounts the partition as read only*

**Step 4** The last part of this line is `ro quiet splash $vt_handoff`. We will need to replace this text with the following line. Make sure to first backspace the current settings, then type these new ones. Note that on some distros, the line may be a little different, but should definitely include the `ro` (read only) text, which needs to be replaced.

```
rw init=/bin/bash
```

This will give us write permissions as well as a bash shell, so we can use the usual Linux commands to change the root password.



```
GNU GRUB version 2.04

else
  search --no-floppy --fs-uuid --set=root a80ad9d4-90ff-4903-b34d-ca70d82762ed
fi
echo          'Loading Linux 5.8.0-50-generic ...'
linux         /boot/vmlinuz-5.8.0-50-generic root=UUID=a80ad9d4-90ff-4903-b34d-ca70d82762ed rw init=/bin/bash
echo          'Loading initial ramdisk ...'
initrd        /boot/initrd.img-5.8.0-50-generic
}
menuentry 'Ubuntu, with Linux 5.8.0-50-generic (recovery mode)' \
--class ubuntu --class gnu-linux --class gnu --class os $menuentry_id_option 'gnulinux-5.8.0-50-generic-recovery-a80ad9d4-90ff-4903-b34d-ca70d82762ed' {
  recordfail
```

Minimum Emacs-like screen editing is supported. TAB lists completions. Press Ctrl-x or F10 to boot, Ctrl-c or F2 for a command-line or ESC to discard edits and return to the GRUB menu.

*Add the read-write permissions along with a bash shell*

**Step 5** Once you have made these changes, press the `F10` key to save the changes and reboot your system. You will be brought back into a bash prompt, but only on this first reboot. Subsequent machine boots will be back to normal.

**Step 6** Your root partition should be automatically mounted, with read and write permissions. You can verify this by executing the `mount` command. If it's not already mounted, use the following command below to mount it.

```
# mount -n -o remount,rw /
```

```
root@(none):/# mount
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
udev on /dev type devtmpfs (rw,nosuid,noexec,relatime,size=987940k,nr_inodes=246
985,mode=755)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmod
e=000)
tmpfs on /run type tmpfs (rw,nosuid,nodev,noexec,relatime,size=203500k,mode=755)
/dev/sda5 on / type ext4 (rw,relatime)
root@(none):/#
```

*The mount command shows that our root partition has been mounted and with read and write permissions*

**Step 7** Now, simply use the usual `passwd` command to set a new root password.

```
# passwd
```

```
root@(none):/# passwd
New password:
Retype new password:
passwd: password updated successfully
root@(none):/# _
```

*The root password has been updated successfully by using the passwd command*

**Step 8** When done, we just need to reboot the system. The usual `reboot` and `shutdown` commands will not work. Instead, execute the following command to reboot the system and load into the operating system like usual.

```
# exec /sbin/init
```

That's all there is to it. Your computer should boot up like normal, and you will be able to



That's all there is to it. Your computer should boot up like normal, and you will be able to login to the root account (or use commands with sudo) while specifying the password you just set.

## Closing Thoughts

In this guide, we saw how to reset the root password on a Linux system, even if the original has been forgotten. Although it sounds complicated, this is a relatively simple task that GRUB can facilitate by allowing us to mount the root partition without loading into the operating system.

### Related Linux Tutorials:

- [RHEL 8 / CentOS 8 recover root password](#)
- [Things to install on Ubuntu 20.04](#)
- [How to install Kerberos KDC Server and Client on...](#)
- [How to reset password on AlmaLinux](#)
- [Deployment of an Example Application into Apache...](#)
- [Things to do after installing Ubuntu 20.04 Focal Fossa Linux](#)
- [How to remove user from a group on Linux](#)
- [Ubuntu 20.04 reset root password](#)
- [Ubuntu 20.04 Guide](#)
- [How to Remove Bloatware From Your Samsung Android...](#)

📁 System Administration

🔑 administration, boot, security

< [Add ISO image to apt sources.list](#)

> [Installation of Concrete5 CMS on Fedora Linux](#)

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