



## Release Notes

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openSUSE Tumbleweed is a free and Linux-based operating system for your PC, laptop or server. You can surf the web, manage your e-mails and photos, do office work, play videos or music and have a lot of fun!

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The release notes are under constant development. To find out about the latest updates, see the online version at <https://doc.opensuse.org/release-notes>. The English release notes are updated whenever need arises. Translated language versions can temporarily be incomplete.

To report bugs against this release, use the openSUSE Bugzilla. For more information, see [https://en.opensuse.org/openSUSE:Submitting\\_bug\\_reports](https://en.opensuse.org/openSUSE:Submitting_bug_reports).

# 1 Installation

## 1.1 UEFI—Unified Extensible Firmware Interface

Prior to installing openSUSE on a system that boots using UEFI (Unified Extensible Firmware Interface), you are urgently advised to check for any firmware updates the hardware vendor recommends and, if available, to install such an update. A pre-installed Windows 8 is a strong indication that your system boots using UEFI.

*Background:* Some UEFI firmware has bugs that cause it to break if too much data gets written to the UEFI storage area. Nobody really knows how much "too much" is, though. openSUSE minimizes the risk by not writing more than the bare minimum required to boot the OS. The minimum means telling the UEFI firmware about the location of the openSUSE boot loader. Upstream Linux Kernel features that use the UEFI storage area for storing boot and crash information (pstore) have been disabled by default. Nevertheless, it is recommended to install any firmware updates the hardware vendor recommends.

## 1.2 UEFI, GPT, and MS-DOS Partitions

Together with the EFI/UEFI specification, a new style of partitioning arrived: GPT (GUID Partition Table). This new schema uses globally unique identifiers (128-bit values displayed in 32 hexadecimal digits) to identify devices and partition types.

Additionally, the UEFI specification also allows legacy MBR (MS-DOS) partitions. The Linux boot loaders (ELILO or GRUB2) try to automatically generate a GUID for those legacy partitions, and write them to the firmware. Such a GUID can change frequently, causing a rewrite in the firmware. A rewrite consist of two different operation: removing the old entry and creating a new entry that replaces the first one.

Modern firmware has a garbage collector that collects deleted entries and frees the memory reserved for old entries. A problem arises when faulty firmware does not collect and free those entries; this may end up with a non-bootable system.

The workaround is simple: convert the legacy MBR partition to the new GPT to avoid this problem completely.

## 2 General

### 2.1 System with LUKS-Encrypted Partition Does Not Boot

In some cases, Plymouth does not display the passphrase prompt properly. To fix this, add `plymouth.enable=0` to the kernel command line. See also [https://bugzilla.opensuse.org/show\\_bug.cgi?id=966255](https://bugzilla.opensuse.org/show_bug.cgi?id=966255).

### 2.2 `systemctl stop apparmor` Does Not Work

In the past, there could be confusion over the difference between how the very similarly named `systemctl` subcommands `reload` and `restart` worked for AppArmor:

- `systemctl reload apparmor` properly reloaded all AppArmor profiles. (It was and continues to be the recommended way of reloading AppArmor profiles.)
- `systemctl restart apparmor` meant that AppArmor would stop, thereby unloading all AppArmor profiles and then restart which left all existing processes unconfined. Only newly started processes would then be confined again.

Unfortunately, `systemd` does not provide a solution within its unit file format for the issue posed by the `restart` scenario.

Starting with AppArmor 2.12, the command `systemctl stop apparmor` will not work. As a consequence, `systemctl restart apparmor` will now correctly reload AppArmor profiles.

To unload all AppArmor profiles, use the new command `aa-teardown` instead which matches the previous behavior of `systemctl stop apparmor`.

For more information, see [https://bugzilla.opensuse.org/show\\_bug.cgi?id=996520](https://bugzilla.opensuse.org/show_bug.cgi?id=996520) and [https://bugzilla.opensuse.org/show\\_bug.cgi?id=853019](https://bugzilla.opensuse.org/show_bug.cgi?id=853019).

## 2.3 No Default Compose Key Combination

In previous versions of openSUSE, the compose key combination allowed typing characters that were not part of the regular keyboard layout. For example, to produce “å”, you could press and release `Shift+Right Ctrl` and then press `a` twice.

In openSUSE Tumbleweed, there is no longer a predefined compose key combination because `Shift+Right Ctrl` does not work as expected anymore.

- To define a system-wide custom compose key combination, use the file `/etc/X11/Xmodmap` and look for the following lines:

```
[...]
!! Third example: Change right Control key to Compose key.
!! To do Compose Character, press this key and afterwards two
!! characters (e.g. `a' and `^' to get 342).
!remove Control = Control_R
!keysym Control_R = Multi_key
!add Control = Control_R
[...]
```

To uncomment the example code, remove the `!` characters at the beginning of lines. However, note that the setup from `Xmodmap` will be overwritten if you are using `setxkbmap`.

- To define a user-specific compose key combination, use your desktop's keyboard configuration tool or the command-line tool `setxkbmap`:

```
setxkbmap [...] -option compose:COMPOSE_KEY
```

For the variable `COMPOSE_KEY`, use your preferred character, for example `ralt`, `lwin`, `rwin`, `menu`, `rctl`, or `caps`.

- Alternatively, use an IBus input method that allows typing the characters you need without a Compose key.

## 3 More Information and Feedback

- Read the `README` documents on the medium.
- View a detailed changelog information about a particular package from its RPM:

```
rpm --changelog -qp FILENAME.rpm
```

Replace FILENAME with the name of the RPM.

- Check the ChangeLog file in the top level of the medium for a chronological log of all changes made to the updated packages.
- Find more information in the docu directory on the medium.
- For additional or updated documentation, see <https://doc.opensuse.org/> ↗.
- For the latest product news, from openSUSE, visit <https://www.opensuse.org> ↗.

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