Release Notes

openSUSE 13.2

openSUSE 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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If you upgrade from an older version to this openSUSE release, see previous release notes listed here: http://en.opensuse.org/openSUSE:Release_Notes

1 Installation

1.1 For Detailed Installation Information

For detailed installation information, see *Section 2.1, "openSUSE Documentation"*.

2 General

2.1 openSUSE Documentation

In *Start-Up*, find step-by-step installation instructions, as well as introductions to the KDE and Gnome desktops and to the LibreOffice suite. Also covered are basic administration topics such as deployment and software management and an introduction to the bash shell.

Find the documentation in `/usr/share/doc/manual/opensuse-manuals_$LANG` after installing the package `opensuse-startup_$LANG`, or online on http://doc.opensuse.org.

2.2 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.

2.3 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.

2.4 Booting When in Secure Boot Mode

This only affects machines in UEFI mode with secure boot enabled.

The new version of the shim loader allows more machines to boot with Secure Boot enabled than with openSUSE 13.1. Nevertheless, in case of trouble, first update the BIOS of your machine to the latest version. If the BIOS update does not help, report the model of your machine to the wiki (http://en.opensuse.org/openSUSE:UEFI). Then we can track it for the next release.

3 System Upgrade

4 Technical

4.1 Garbage on the Screen During Installation with the Nouveau Driver

On some systems with NVIDIA cards, the installer may show garbage on the top part of the screen due to problems with the default nouveau driver. If you are affected by this problem, you can disable the nouveau kernel module to run the installer and then enable it again once the system is installed or upgraded.

To disable the kernel module, once you boot from the installation media, select the 'Installation' entry in grub and press 'e' to edit the parameters. Then go to the line starting with 'linux' (or 'linuxefi') and add `brokenmodules=nouveau` at the end. Now press F10 to continue booting with the new parameter. After the system is installed, you can re-enable the nouveau module by editing `/etc/modprobe.d/50-blacklist.conf` and removing the entry that blacklists nouveau.

4.2 AppArmor and Permission Settings

AppArmor is enabled by default. This means more security, but might prevent services from working if you run them in unexpected ways. If you encounter strange permission problems, try to switch the AppArmor profile for the affected service to complain mode with:

```
aa-complain /usr/bin/$your_service
```

Complain mode means: allow everything, and log things that the profile would not allow.

Even if it helps, report it as a bug! We want to fix AppArmor profiles to also cover corner cases.

4.3 Skype

PulseAudio 4.0 exposes a bug in the current version of Skype for Linux (v4.2). Until Skype is fixed and updated, run **`skype`** from the command line:

```
PULSE_LATENCY_MSEC=60 skype
```

For more information about this bug, see http://arunraghavan.net/2013/08/pulseaudio-4-0-and-skype/.

5 Miscellaneous

N/A

6 More Information and Feedback

- Read the READMEs on the CDs.
- Get detailed changelog information about a particular package from the RPM:

  ```
  rpm --changelog -qp <FILENAME>.rpm
  ```

  <FILENAME>. is the name of the RPM.
- Check the `ChangeLog` file in the top level of the DVD for a chronological log of all changes made to the updated packages.
- Find more information in the `docu` directory on the DVD.
- https://activedoc.opensuse.org/ contains additional or updated documentation.
- Visit http://www.opensuse.org for the latest product news from openSUSE.

Thanks for using openSUSE.

The openSUSE Team.