Release Notes

openSUSE Leap 42.1

openSUSE Leap 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!

Contents

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

1   Installation

1.1   Minimal System Installation

In order to avoid some big recommended packages from being installed, the pattern for minimal installations uses another pattern that creates conflicts with undesired packages. This pattern, `patterns-openSUSE-minimal_base-conflicts`, can be removed after installation.

Note that the minimal installation has no firewall by default. If you need one, install `SuSE-firewall2`.

1.2   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.

1.3   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 System Upgrade

2.1 Network Interface Names

When upgrading a remote machine from openSUSE 13.2, make sure your network interfaces are named correctly.

openSUSE 13.2 used so-called predictable network interface names (for example, `enp5s0`), whereas openSUSE Leap 42.1 uses persistent interface names (`eth0`). After upgrading and rebooting, the network interface names may therefore change. This could lock you out of the system. To avoid interfaces from being renamed, run the following command for each of your network interfaces before you reboot the system:

```
/usr/lib/udev/udev-generate-persistent-rule -v -c enp5s0 -n enp5s0 -o /etc/udev/
rules.d/70-persistent-net.rules
```

Replace `enp5s0` with the name of your network interface.

2.2 Btrfs: Disk Space Leak after System Rollbacks

openSUSE 13.2 used a Btrfs partition layout that allowed for disk space to become permanently occupied with stale, inaccessible contents after the first system rollback was executed. This layout issue has been fixed in openSUSE Leap 42.1. However, the fix can only be applied to newly installed systems.

If you are upgrading from openSUSE 13.2, you cannot convert the to the new layout, but you can reclaim the lost disk space.

1. Mount the initial root filesystem:

   ```
   mount /dev/<ROOT_FILE_SYSTEM> -o subvolid=5 /mnt
   ```

2. Remove all files below /mnt that are not in a subvolume:

   ```
   find /mnt -xdev -delete
   ```

3. Umount the filesystem again:

   ```
   umount /mnt
   ```

3 General

3.1 Non-Oss Repository

After the installation, the non-oss repository is disabled.

Enable the `openSUSE-Leap-42.1-Non-Oss` repository using YaST or on the command line using zypper:

```
zypper mr -e repo-non-oss
```

4 Technical

4.1 Printing System: Improvements and Incompatible Changes

CUPS Version Upgrade to 1.7

The new CUPS version introduced some major changes compared to 1.5 that may require manual configuration adjustments.

- PDF is now the standard print job format rather than PS. Therefore traditional PostScript printers now also need a filter driver for printing.
  See https://en.opensuse.org/Concepts_printing ↗ for details.

- The network printer discovery protocol has changed. The native method to discover network printers is now based on DNS Service discovery (DNS-SD, that is, via Avahi). The `cups-browsed` service from the `cups-filters` package can be used to bridge old and new protocols. Both `cupsd` and `cups-browsed` need to run to make "legacy" clients discover printers (that includes LibreOffice and KDE).

- The IPP protocol default version changed from 1.1 to 2.0. Older IPP servers like CUPS 1.3.x (for example in SUSE Linux Enterprise 11) reject IPP 2.0 requests with `Bad Request` (see http://www.cups.org/str.php?L4231 ↗).
  To be able to print to old servers, the IPP protocol version must be specified explictly by appending `/version=1.1` to either:

    - The `ServerName` settings in `client.conf` (for example, `ServerName older.server.example.com/version=1.1`).

    - The `CUPS_SERVER` environment variable value.

    - The server name value of the `-h` option of the command line tools, for example:

      ```
      lpstat -h older.server.example.com/version=1.1 -p
      ```

- Some printing filters and back-ends were moved from the `cups` package to the `cups-filters` package.

- Some configuration directives were split from `cupsd.conf` into `cups-files.conf` (see http://www.cups.org/str.php?L4223 ↗, CVE-2012-5519, and https://bugzilla.opensuse.org/show_bug.cgi?id=789566 ↗).

- CUPS banners and the CUPS test page were moved from the `cups` package to the `cups-filters` package (see http://www.cups.org/str.php?L4120 ↗ and https://bugzilla.opensuse.org/show_bug.cgi?id=735404 ↗).

5 Miscellaneous

5.1 KDE and Network Authentication

When using the KDE display manager SDDM with an authentication method that provides a high number of users, SDDM becomes unusable. Additionally, if the automounter is used, SDDM may block for a long time on startup trying to mount every user's home.

Modify `/etc/sddm.conf` to contain the following entries:

```
[Theme]
Current=maldives


[Users]
MaximumUid=1002
```

See https://bugzilla.suse.com/show_bug.cgi?id=953778 ↗ for details.

5.2 No Screensaver Support in KDE Plasma

KDE Plasma does not support screensavers by default. If you prefer to have a screensaver, install the package `xscreensaver`.

Set **xscreensaver** to start with the desktop session by selecting *K › Settings › Configure Desktop*, then choose *Startup and Shutdown › Autostart*. Click *Add Program*, type `xscreensaver` and click *OK*.

To configure the screensaver, use **xscreensaver-demo**.

6 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.

- https://activedoc.opensuse.org/ ↗ contains additional or updated documentation.

- Visit https://www.opensuse.org ↗ for the latest product news from openSUSE.

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