Release Notes

openSUSE Tumbleweed

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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.

3 Technical

3.1 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 http://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, ie 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 Enteprise 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` (e.g., `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 e.g.,

```
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 the `cups-filters` package (see http://www.cups.org/str.php?L4120 and https://bugzilla.opensuse.org/show_bug.cgi?id=735404).

4 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.
- https://activedoc.opensuse.org/ contains additional or updated documentation.
- Visit http://www.opensuse.org for the latest news from openSUSE.

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