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# openSUSE 12.2 Release Notes

Version:

12.2.9 (2012-10-22)

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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](http://en.opensuse.org/openSUSE:Release_Notes)

These release notes cover the following areas:

- Section 1, “Miscellaneous”: These entries are automatically included from openFATE, the Feature- and Requirements Management System (<http://features.opensuse.org>).

N/A

- Section 2, “Installation”: Read this if you want to install the system from scratch.
- Section 3, “General”: Information that everybody should read.
- Section 4, “System Upgrade”: Issues related to the process if you run a system upgrade from the previous release to this openSUSE version.
- Section 5, “Technical”: This section contains a number of technical changes and enhancements for the experienced user.

## 1. Miscellaneous

N/A

## 2. Installation

### 2.1. For Detailed Installation Information

For detailed installation information, see the “openSUSE Documentation” referenced below.

## 3. General

### 3.1. 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.

- Reference covers administration, and system configuration in detail and explains how to set up various network services.
- The Security Guide introduces basic concepts of system security, covering both local and network security aspects.
- The System Analysis and Tuning Guide helps with problem detection, resolution and optimization.
- Virtualization with KVM offers an introduction to setting up and managing virtualization with KVM, libvirt and QEMU tools.

## 3.2. Pre-installation Memory Test Incorrectly Identifies Good Memory as Bad

The pre-installation memory test (**memtest**) on the openSUSE 12.2 media got miscompiled. It reports errors in test 7 on good RAM modules. Use the openSUSE 12.1 media if you need to run **memtest**.

# 4. System Upgrade

## 4.1. Remote Update via "zypper dup"

When upgrading from openSUSE 12.1 (or older), openSSH connections will be closed when the new openssh package is upgraded. If you are upgrading with "zypper dup" over SSH, run "zypper dup" inside a resumable terminal multiplexer (e.g., "screen" or "tmux") so that you can re-connect easily, or at least immune to connection loss (e.g., via "nohup").

## 4.2. sysvinit Deprecated

Some desktop components depend on services provided by systemd only. So while openSUSE 12.2 still has basic support for booting a system with sysvinit as fallback, sysvinit nevertheless is considered deprecated and probably even faulty or broken in some regard. If you have any issues with a sysvinit booted system, use systemd before filing bug reports.

## 4.3. mount and losetup Dropped Support for cryptoloop

**cryptoloop** has known weaknesses and is therefore considered obsolete in favor of **dm-crypt** since years. **mount** (e.g., via `/etc/fstab`) and **losetup** now finally dropped support for **cryptoloop**. This means old fstab entries that use **cryptoloop** to access encrypted containers no longer work this way. The containers can still be accessed with **dm-crypt** (`/etc/crypttab`), though. Refer to [http://en.opensuse.org/Encrypted\\_Fileystems](http://en.opensuse.org/Encrypted_Fileystems) for examples how to use to the new method.

## 4.4. Mounting Encrypted Partitions Using systemd

If encrypted partitions are not automatically mounted when using systemd, the `noauto` flag in `/etc/fstab` for these partitions could be the cause. Replacing this flag with `nofail` will fix it. For instance, change the following line:

```
/dev/mapper/cr_sda3 /home ext4 acl,user_xattr,noauto 0 2
```

to

```
/dev/mapper/cr_sda3 /home ext4 acl,user_xattr,nofail 0 2
```

## 5. Technical

### 5.1. Initializing Graphics with KMS (Kernel Mode Setting)

With openSUSE 11.3 we switched to KMS (Kernel Mode Setting) for Intel, ATI and NVIDIA graphics, which now is our default. If you encounter problems with the KMS driver support (intel, radeon, nouveau), disable KMS by adding `nomodeset` to the kernel boot command line. To set this permanently using Grub 2, the default boot loader, add it to the `GRUB_CMDLINE_LINUX_DEFAULT` kernel default load options line in your `/etc/default/grub` text file as root and running the terminal command

```
sudo /usr/sbin/grub2-mkconfig --output=/boot/grub2/grub.cfg
```

for the changes to take effect. Else, for Grub Legacy, add it to the kernel command line in `/boot/grub/menu.lst`, also done as root. This option makes sure the appropriate kernel module (intel, radeon, nouveau) is loaded with `modeset=0` in `initrd`, i.e. KMS is disabled.

In the rare cases when loading the DRM module from `initrd` is a general problem and unrelated to KMS, it is even possible to disable loading of the DRM module in `initrd` completely. For this set the `NO_KMS_IN_INITRD` sysconfig variable to `yes` via YaST, which then recreates `initrd` afterwards. Reboot your machine.

On Intel without KMS the Xserver falls back to the `fbdev` driver (the `intel` driver only supports KMS); alternatively, for legacy GPUs from Intel the "intellegacy" driver (`xorg-x11-driver-video-intel-legacy` package) is available, which still supports UMS (User Mode Setting). To use it, edit `/etc/X11/xorg.conf.d/50-device.conf` and change the driver entry to `intellegacy`.

On ATI for current GPUs it falls back to `radeonhd`. On NVIDIA without KMS the `nv` driver is used (the `nouveau` driver supports only KMS). Note, newer ATI and NVIDIA GPUs are falling back to `fbdev`, if you specify the `nomodeset` kernel boot parameter.

### 5.2. Booting with Deprecated sysvinit

By default, openSUSE now boots using **systemd**. In case of trouble, you can try to switch back to the deprecated **sysvinit** way by pressing the F5 key on the boot. For more information about limitations when booting with `sysvinit`, see Section 4.2, "sysvinit Deprecated".

### 5.3. systemd: Supplying Service Start-up Parameters

**systemctl** only supports "standard" parameters (see <http://www.freedesktop.org/wiki/Software/systemd/Incompatibilities>).

You can bypass this new behavior by calling the start-up script directly, for example:

```
cd /etc/init.d
./apache2 <your_parameters>
```

### 5.4. systemd: System Shutdown

To halt and poweroff the system when using **systemd**, issue **halt -p** or **shutdown -h now** on the command-line or use the shutdown button provided by your desktop environment.

Note: A plain **halt** will not shutdown the system properly.

## 5.5. systemd: Making Use of tmpfs: /run, /var/run, /media, etc.

systemd mounts several directories that are meant to contain volatile data only, as tmpfs filesystems: /run, /var/run, /var/lock, and /media are those directories. For background information, see <http://lwn.net/Articles/436012/>.

Note: Do not store files that are meant to survive a reboot, in /run, /var/run, etc.

## 5.6. systemd: Cleaning Directories (/tmp and /var/tmp)

systemd maintains directories as specified in the `tmpfiles.d` directories and in `/lib/systemd/system/systemd-tmpfiles-clean.timer`. For more information, see the `tmpfiles.d` manpage.

By default, systemd cleans tmp directories daily as configured in `/usr/lib/tmpfiles.d/tmp.conf`:

```
d /tmp 1777 root root 10d
d /var/tmp 1777 root root 30d
```

Note: systemd does not honor sysconfig variables in `/etc/sysconfig/cron` such as `TMP_DIRS_TO_CLEAR`.

## 5.7. Auto-mounting USB Media

Gnome and Xfce now use `udisks2` to automatically mount USB media under `/run/media/$USER`. KDE still uses `udisks` version 1 and mounts USB media under `/media`.

## 5.8. Specifying Partitions for Loopback Devices

With Kernel 3.4 there are two ways to have partitions for loopback devices. The first is with `max_part` and the second is with the `-P` parameter to **losetup**. They behave slightly differently since `-P` will dynamically allocate minor numbers for each device (including adding or removing them on the fly with **blockdev --rereadpt**). Using the `max_part` parameter causes each loop device to allocate that many minor numbers for each device.

So when you use `max_part=8` and do not change `max_loop`, which defaults to 8, you are using all of the allocated minor numbers with the first device.

The solution is either to use `-P` or to *also* use `max_loop`.

## 5.9. Timezone Information in /etc/adjtime

The third line of `/etc/adjtime` now contains information whether your BIOS clock runs on UTC or in local timezone (previously stored in `HW_CLOCK` in `/etc/sysconfig/clock`).

If `/etc/adjtime` contains wrong drift information (for example after fixing date and time with **ntpdate** or have **ntpd** running), set the variable `USE_ADJUST` to "no" in `/etc/sysconfig/clock`.

## 5.10. GNU tar Defaults to Creating POSIX-compliant Archives

GNU tar now defaults to `--format=posix` and create POSIX-compliant archives with PAX extended headers. Check whether your scripts and applications are compatible with this format.

The former behavior (and upstream default) can be restored by setting the environment:

```
TAR_OPTIONS='--format=gnu'
```

or

```
TAR_OPTIONS='--pax-option=delete=[ac]time*'
```