Fedora 35 announcement, news and known issues

Once a year, we upgrade all the desktop systems to the latest version of Fedora, our Linux desktop operating system.

General information

- Fedora 35 release notes
- Common Bugs and Known Issues and workarounds

Local links:

- Linux desktop environments
- Fedora compatibility settings
- Fedora tips

New in F35, or in our Fedora setup:

- Gnome 3.40 (see below for details)
  - Various Gnome shell extensions that you can load for yourself from https://extensions.gnome.org/
- Cloud integration: you can link your Google Drive, OwnCloud/SurfDrive and some other cloud storage services the file manager (in addition to Dropbox, which has been there for a couple of years).
  Various online calendars can be integrated in the desktop calendar utility.
- **Python is now by default 3.10**. You can still call `python2` to get a python 2.7 interpreter, but NO PACKAGES are installed for it any more; so you can just use this to build your own python2 environment if needed.
  - Command `python` will now invoke python3 so **check your own scripts**.
  - If you still need python2, a private install or virtualenv will still be possible, but you may have to explicitly install an older version (e.g. `pip2 install –user astropy==2.0.12`)
  - To install a python2 kernel in jupyter,a personal setup can be made using `python2 -m ipykernel install –user`

    - We also have the interpreters of python 3.6, 3.7, 3.8 and 3.9 installed, for compatibility and in case you need them for your own projects or virtualenvs. As with python 2, these are the bare interpreters, we do not provide a complete stack of modules for these older versions.
    - To move your personally installed modules from python 3.9 (Fedora 33) to python 3.10, you can follow the description given in the Fedora release notes
        - Please don't do the `sudo` commands from that page; as stated here, we already have the previous python version installed on the system.
    - Many 3rd party build and install scripts don't seem to understand that 3.10 > 3.9, so if something complains our python is too old, the program just doesn't compute.
- GCC (C, C++, Fortran) is at version 11 now. Some older versions are available through environment modules.
- CLANG /LLVM compilers are now at version 13. If necessary, compatibility packages of older versions can be added.
- LibreOffice has been upgraded to version 7.2 with lots of improvements and new features. See Release notes
- Fedora has `earlyOOM` enabled, a background process that monitors for Out-of-Memory conditions, and attempts to kill the offending processes before the system comes to a grinding halt. Hopefully, this will mean there will be less system crashes (out-of-memory is one of the biggest reasons for Linux desktop crashes nowadays)
- FlexiBLAS is an intermediate interface to the BLAS and LAPACK libraries, making it possible to switch between various implementations of these libraries. The downside is, that you will need to recompile programs that are linked with BLAS or LAPACK (including private copies of numpy!)
- Removed software:
    - Python 3.4 and 2.6 are no longer available for backward compatibility
    - Several compatibility libraries were dropped. These were libraries to run programs built with very old versions of the GNU compilers (gcc 3.3, 3.4 and 4.1). If you still have binaries from > 10 years ago, recompiling might be advisable.
    - Due to the removal of some of these very old compatibility libraries, Adobe Reader (acroread) will no longer work; please use a native Linux pdf viewer, such as `atril` or `evince`.
    - `hdfview` stopped working in Fedora 31; there are many other programs available that can work with HDF5 files, e.g. R, `vitables` or `veusz`
- Renamed/replaced software
    - Python module `asciitable` is now part of `astropy`, at `astropy.io.ascii` (see http://cxc.harvard.edu/contrib/asciitable/)
      Similarly, `pyfits` is now `astro.io.fits`
- The Flash plugin is no longer supported (Google had supported it until the start of 2021 but not any more).
- Java is now available in 3 versions: The last freely obtainable Oracle Java 8.x release; OpenJDK 8 and OpenJDK 11.
- saoimage is no longer maintained as a rpm package. for now, the last binary version still works. Please let us know if this (ancient) astronomical package is still in use.

Known issues in Fedora 35

- VNC issues: Desktop environments that require hardware accelleration (3D desktop effects) are often too heavy to be used inside a virtual desktop (VNC, X2GO). See VNC desktop issues for details and workarounds.
- TeX package `psfig`, which has been obsolete for a long time, has now been removed.

Converting documents to newer packages such as `graphics` or `graphicx` is recommended, and is usually easy.
- Gnome doesn't display *notification area* aka *system tray* icons any more by default. The fix is, to enable the `topicons plus` extension: open `gnome-tweaks`, and go to `extensions` to do that. After that, the icons such as status icons of dropbox, zoom etc, will be in your top panel.
- Applications using the “pango” text rendering engine (including Gnome, Cinnamon and MATE desktops) will no longer support bitmap fonts. If an application looks strange, you may have to select a different font for it (seen on terminal emulators, emacs with non-standard settings, possibly other applications).
- Mono (.NET compatible framework) has been updated to version 5. This may require rebuilding Mono apps.
- The `clipit` clipboard app that is a default part of Gnome, Cinnamon and MATE desktops, sometimes hangs, which blocks all cut, copy and paste actions. Exit the app by right-clicking on the icon (which looks like a clipboard), and choose the quit action. If this happens a lot to you, you might want to disable the app in your startup applications preferences. The app is only needed to maintain a clipboard history; without it, a single cut/copy and paste is still possible.
- Workarounds are in place for some software that was built with older versions of CFITSIO (GILDAS) and/or older GFortran (StarLink). When using these programs from within other programs, this workaround may be bypassed (eg, GILDAS software linked from within CASA). If you run into that issue, let us know so we can provide you with the necessary workaround. Eventually these issues are expected to be solved when new versions of these software packages are released or recompiled using current libraries.
- Some reports that the screensaver on the Plasma (KDE) desktop, sometimes refuses to unlock the screen. TO BE CONFIRMED

Some general observations and tips

- Gnome 3. Gnome 3 is a completely different desktop design, which makes the desktop look and behave a bit like a Tablet PC. Some people may like it, but if you don't, “Mate” is available as an alternative, to give you the experience of good old Gnome 2, or “Cinnamon”, for a more desktop-like version of the new Gnome, or try “Gnome Classic”.
  More on Gnome 3
- Gnome applications: in every new release, more Gnome applications are rewritten in the style of the Gnome 3 desktop. This means: a separate application menu, displayed Mac-style in the top bar on the Gnome desktop, or under the application icon in other desktops, the most important actions displayed as buttons, and everything else in a menu at the top right in the application window.
  See desktop applications for a table listing alternatives, in case you cannot get used to the new look.
- Cinnamon desktop tweaks: While Cinnamon is based on (and compatible with) Gnome 3, there are separate tools for its customization, eg, if you want to modify the programs that start in each session, use cinnamon-session-properties for that (also available from the settings overview).
  More on Cinnamon or see the list of available desktop applications
- Programs that start with each session: A lot of programs are started by default in each desktop session. many of them are unnecessary; some of them are annoying or can cause problems. users can disable everything they don't need.
  More on session tweaking
- The command `pmount` can be used to mount removable media (cdrom,dvd,usb-disks) from the commandline. E.g.: `pmount /dev/cdrom` mounts the cd/dvd as /media/cdrom.