

SYS (operating system)

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SYS is a Linux distribution intended to be easy to use for beginners, but also including tools sufficient for advanced users.

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Characteristics

- Fully-automated installation; *10-30 minutes typically, quick and simple for new users.*
- Install DVD contains ca. 18 GB of LZMA-compressed software; *A huge system including development, server, office, and multimedia software.*
- *Installation possible using the .iso file* (on a hard-disc or USB key), without burn it to a DVD or need of a DVD reader
- No live CD; *aims to install or transform most fast possible and definitively the computer to Linux*
- *Rescue system which boots within 15 seconds and contains many tools for reparations or data saving.*
- *Backup-install system allowing users to save their personalized installation to a re-installable DVD.*
- *Over 1400 own packages*, including the Linux kernel, glibc, GCC
- *Quick updates* whenever convenient according to the development of Linux and open source projects; 'current' install DVDs
- *Fast and informal problem detection and correction: SYS itself is used on its development / download server and by users near the development*
- *Reliable, fast mirrors.*
- *A non-commercial , free distro*, independent of commercial or other short-term interests

History

The origin of the distro explains its characteristics, principles and politics:

- Since 2007, to avoid problems with the parallel package and source installations, all new programs habitually compiled for the maintenance of the community server, were packaged, too - so the next potential step would be an install DVD.
- The system had to include server, development tools, and applications for community use.
- For a huge system, instead of install and configure it conventionally for someone else, it's faster to copy it from the hard disk - or better even, to dump an already-installed and configured system to a re-installable DVD
- The problems many new users have with Linux, were observed and rigorously avoided: SYS installs automatically; networking, Bluetooth, webcam support; a sufficient number of common packages, and all usual applications work immediately, so that the users are satisfied and don't want to return to the previous state. The system can substitute any previously used system (office, commerce, home, school applications). On the first versions of the SYS DVD, the user nor was asked nor informed that the system changed. To neighbours, friends, children were distributed the DVDs and was said them that it contains plenty games and multimedia applications. The automatic, consequent (no live-CD), definitive and irreversible installation (deleting or disabeling the previous system) and satisfaction about enough software (no minimalistic distro),

SYS

Company / developer	Werner Landgraf
OS family	Unix-like
Working state	Current
Source model	Open source
Initial release	June 2007
Latest stable release	0.23-r3 / 2009-11-27
Latest unstable release	SYS_Linux.iso / 2009-11-27
Package manager	pkgtools
Supported platforms	i486, x86
Kernel type	Monolithic 2.6.26.2 / 2.6.31.8 / 2.6.32-rc8
Default user interface	KDE, BASH
License	GNU GPL & others
Website	[1] (http://ftp.tu-chemnitz.de/pub/linux/SYS/)

made that users runned the install DVDs also on computers of their friends and neighbours in turn. The use of SYS on its own server and by neighbours helps to perceive and correct any problems fast and informally. SYS contributed very to the local adoption of Linux. SYS started in Cayenne and Matoury in Guyana-Cayenne and is a popular distro, travellers leaved also many copies to north-Brazil. Meanwhile, also some 40.000 DVDs were downloaded.

- Because of intolerant internet legislation, since version 0.23-r2 the distro and its install and admin tools are not longer licensed, offered, supported for french users or users in France and the french language support is removed.

Design

The backup-install system contains a) an initramdisk with a rescue system and an installer, b) a program for lzma-compact a partition containing the system, c) a bootloader. It produces from this an install DVD. b) cleans the system from personal or computer-depending parts of the configuration, and a) makes during the instalation only a minimum configuration and produces scripts which make a better configuration at the first run — with this method, the installation is fast and can't fail alone or by the user's inexperience, and the automatical first-run configuration uses the full advanced tools of the proper system. Furthermore the installer contains d) folders in which (at revision versions , f.ex. 0.23+ or 0.23-r3) can be added updated versions of the kernel or of programs or corrections, to be applied after the installation or at the first run. In this manner, the distro is good maintaineable and corrections or updates can be provided very fast, inclusive 'current' DVDs. The lzma-compaction makes it possible to put appr. 18 GB on a DVD and to install such a huge system very fast definitively - in less time than a live-DVD of that size would need to start one time. The installer also searches automatically free space on the hard disk or re-sizes half-full partitions. This makes the installation most easy for beginners, whilst experts can select the rescue system for make reparations, save files, resize or make partitions, and then start therefrom the installation.

Installation

For install SYS, one only need to put the install DVD in the reader, restart the computer, and wait until the DVD comes out. Since version 0.23-r2, the installer reads undetectable informations (like: the preferred language, user name, internet name and password) from any pre-existing system. Now it's also possible to install SYS from an .iso file: move the .iso to the main folder of any partition (hard disk or usb key) and rename it SYS_Linux.iso, open it and start sh installiso (if used an earlier .iso where this program isn't in the main folder, then download the newest version of the backup/install/rescue system SYS...tgz, and copy the folder /boot/initrd or the contents of initrd.cpio.gz to /initrd, and installiso into it too). Since version 0.23-r3, it can be download, or produced using mkimg (included in the .iso or installer .tgz package), an USB-key installer SYS_Linux.img; one can copy it on the beginning of an USB key (or memory chip or external/internal hard disk), and after rebooting it installs SYS using the .iso file contained on the same or on any other USB key, memory chip, or disk.

Package management

Beginners and advanced users will not need to install or to update programs during good time. However, *for install or upgrade a program, on SYS one just need to click on the .tgz file (in an internet repository, or already downloaded)*. One also can use pkgtools or kpackage. SYS and its packages are compatible with other .tgz distros. The tgz system (in opposite to deb and rpm) don't split programs in many packages, so that the dependences are few - and anyway they can be fulfilled by install all packages from the repository. When a program don't run, one start it within konsole and see what is missed. Sometimes (f.ex. before dump the system to an install DVD) *one can run libtool or kleansweep to see and install if something is missed*. For make own packages, is included the script used for make the packages in the repository. SYS has as packages politics: *For all essential programs, SYS should have own packages*. As for secondary programs, there are so many new programs or updates, which cannot be packaged all for each distro. *With priority should be packaged such programs which not or not yet were packaged by similar distros*. Also should be avoided any trivial re-packaging / renaming of packages from other distros. SYS is kept compatible to use them in their original form, and vice-versa *SYS packages should run on other .tgz distros*. SYS has about 1400 own packages, the most of them among the about 5000 packages installed in the install DVD's system.

Versions

Releases occur irregularly according to the progress of the Linux kernel and open source programs. The first version what was installed outside the comunitary server was 0.16 in '10/2007 . Since 0.19 the installer worked good, since 0.22 any pre-existing not-*nix-system will be only deleted if otherwise isn't enough free space for install SYS, since 0.23-r2 the installation is possible using the .iso file . 0.17 was the first version distributed by internet, 0.20-rc2 the first downloaded in big quantity from the first stable mirror by distromania. Several versions get long-term support, for them are contained service packages in the repositories (only with corrections of errors, packages need to be updated separately)

Mirrors for download (install .iso 's, packages)

In the repository are new versions of the most packages under .../ , older versions and some special packages (service packages) under .../old . These packages are adapted, compiled and packaged for SYS, however can be

used also for other .tgz-based distros. *New packages one can track by sort the repository in the browser by decreasing time.*

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Göttingen, Germany (GWDG, Uni/Max-Planck-Inst.) : ftp://ftp5.gwdg.de/pub/linux/install/sys , http://ftp5.gwdg.de/pub
Siegen, Germany (University) : ftp://ftp.uni-siegen.de/pub/sys-linux . Primary mirror.
Chemnitz, Germany (Technical University) : http://ftp.tu-chemnitz.de/pub/linux/SYS , ftp://ftp.tu-chemnitz.de/pub/li
Chernogolovka, Russia : ftp://ftp.chg.ru/pub/Linux/sys/
Windhoek, Namibia (Polytecnic University) : ftp://ftp.polytechnic.edu.na/pub/SYS
Chapel Hill, NC, USA (University, ibiblio) : ftp://ftp.ibiblio.org/pub/Linux/distributions/sys
USA : ftp://ftp.metalab.unc.edu/pub/linux/distributions/sys
Holland : ftp://ftp.nluug.nl/pub/os/Linux/distr/sys
Curitiba, Brasil (University), 125 MB/s : ftp://sys.c3sl.ufpr.br/SYS , http://sys.c3sl.ufpr.br
Dubrovnik, Europa (DistroMania) : ftp://linux-ds.unidu.hr/sys/SYS_Linux.iso , http://linux-ds.unidu.hr/sys/SYS_Linux
Caïena, Guiana-Caïena , 16 KB/s : rsync://guyane.dyn-o-saur.com , http://guyane.dyn-o-saur.com/tgz , ftp://guyane.dy
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References

- [2] (<http://ftp.tu-chemnitz.de/pub/linux/SYS/>)
- [3] (<http://linux.softpedia.com/get/System/Operating-Systems/Linux-Distributions/SYS-34168.shtml>)
- [4] (<http://lwn.net/Distributions/>)
- [5] (http://www.docdroppers.org/wiki/index.php?title=Lesser_Known_Linux_Distros#Characteristics)
- [6] (http://www.distromania.com/distro_info.php?distro=1185)
- [7] (<http://www.c3sl.ufpr.br/pt-br/mirrors.html>)
- [8] (<http://lxer.com/module/newswire/view/107704/index.html>) (release 0.23)

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