

CentOS

An introduction to the Community Enterprise OS distribution

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February 25, 2007



1 The opening

- Enterprise operating systems - software for the year 2457?
- Using the Enterprise

2 Yesterday, today, tomorrow

- An archaeologist's view
- February 25, 2007
- The day after tomorrow

3 Behind the scenes

- We behind CentOS
- You behind CentOS

4 Questions? Answers.



*Scotty: Computer. Computer. Ah.
[McCoy hands him a mouse and he speaks over it]
Scotty: Hello, computer.
Dr. Nichols: Just use the keyboard.
Scotty: The keyboard. How quaint.
– Star Trek IV - The Voyage Home*



Defining the Enterprise

What makes it Enterprise?

- Long support cycles
- Security updates for several years
- ABI/API stability – Patches get backported
- Support by Hardware/Software vendors
- Certifications are possible



Defining the Enterprise

The cons

- No new software during a release cycle
- No cutting edge software except at releasepoint
- Support isn't cheap



Finding a place for CentOS

- Each release is supported for around 7 years
- Security patches get backported
- APIs/ABIs don't change
- Your RHCE works on CentOS
- Paid support might be available



When to run an enterprise distribution

There are several reasons to run a distribution with long time support. Here are just a few of them:

- You cannot afford to update all your servers each year
- Some software you use requires a supported distribution
- Your own software needs stable interfaces
- You need stable Desktop software for your business
- You need support



Enterprise in your home

Several types of home linux users also benefit from an enterprise distribution:

- Typical SOHO user (Office programs, mail and web)
- Normal computer user (Wants a stable platform)
- And ...



Enterprise in your home

Several types of home linux users also benefit from an enterprise distribution:

- Typical SOHO user (Office programs, mail and web)
- Normal computer user (Wants a stable platform)
- ...your Mom



The birth of a new name

*The cAos-EL projects have been officially renamed to:
centos (Community ENTERprise Operating System)
This only affects caosel1 and caosel2. This is partly an
aid in dispelling the version confusion.*

<http://caos.caosity.org/pipermail/caos/2003-December/001205.html>



The caosity days

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- Around the same time projects like WBEL, Scientific Linux and Tao surface



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- 2004-03-xx CentOS 3.1 hits the mirrors



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- 2004-03-xx CentOS 3.1 hits the mirrors
- 2005-03-20 CentOS and cAosity restructuring announced
<http://lists.centos.org/pipermail/centos/2005-March/003752.html>



Project goals

These are some of the goals of the CentOS project

- Easy maintenance via yum
- Building a self hosting distribution – CentOS rpms are built on a CentOS environment
- Build up a friendly environment for users and maintainers
- Long-term support of the base distribution
- Community infrastructure



This is where we are right now

- CentOS 2.1 is in maintenance mode and will get security patches until May 31st 2009
- CentOS 3 (3.8 is current) seems to be in maintenance mode also and will get security patches until October 31st 2010
- CentOS 4 (4.4 is current) will get full updates until February 29th 2008. Maintenance mode will end on February 29th 2012.



CentOS 4

CentOS 4 can be used either for servers or for Desktops and comes with

- Kernel 2.6.9 (with more than 700 patches to it)
- Gnome 2.8, KDE 3.3, XFCE 4.2.3, OpenOffice.org 1.1.5, Firefox/Thunderbird 1.5, XOrg 6.8.2
- Serverside software like bind, sendmail, postfix, apache, and and ...
- A complete development chain with gcc-3.4.6 and gcc-4.1.0, languages like ruby, python and perl
- Supported Platforms are i386, x86_64, IA64, s390 and s390x



Security features

CentOS has several security features going beyond normal UNIX-like access controls

- The SELinux mandatory access control framework with a targeted policy
- Execshield and position independent executables (PIE)
- NX (No eXecute)
- Signed packages



Packages

Package management in CentOS is done via yum. Besides the base and update repositories where the core distribution lives, CentOS offers the following extra repositories:

- CentOS Extras - Packages build for CentOS that provide additional functionality, for example XFCE or the Horde framework
- CentOS Fasttrack - Contains Bugfixes and updates issued between versions
- CentOS Plus - Packages which upgrade packages from the base distribution
- CentOS Testing - Testing ground for packages on their way to CentOS Plus or CentOS Extras



CentOS 5

The next step will be the release of CentOS 5 around April 2007. You can talk to us about that here in the dev room or at our booth.

- Kernel 2.6.18
- Gnome 2.16, KDE 3.5.4, OpenOffice.org 2.0.4
- Eye Candy with compiz on XOrg 7.1
- Apache 2.2, PHP 5.1.6



Building the OS

- Getting the sources from the upstream ftp servers
- Figure out packages with trademarked content and remove or exchange that content
- Getting anaconda to work
- The spec files and patches are stored in subversion
- Build packages on a distributed build system (plague and mock)
- Make sure that packages build on supported platforms
- Release CentOS (new version or “quarterly” update)



Security and other updates

- Security updates are built the same way the operating system is built. After release they get announced on the centos-announce mailing list.
- We have some other repositories with updates:
 - Fasttrack repository: This contains bugfix and enhancement updates which are released inbetween “quarterly” updates.
 - <http://dev.centos.org/>
Here development packages are tracked (like new kernels). Use with care.



Additional repositories

- CentOS Plus repository: This repository contains newer versions of packages in the base distribution or versions with different features.
 - Kernel with additional modules
 - XFS module
 - PHP5, MySQL 5, PostgreSQL 8.1.x
- CentOS Extras repository: This repository contains additional packages like the horde framework or XFCE4



Other tasks we do

- Manage a world wide web of CentOS mirrors
- Controlling and running our infrastructure
- Running mailing lists and support on IRC
- Telling you stuff about CentOS at conferences

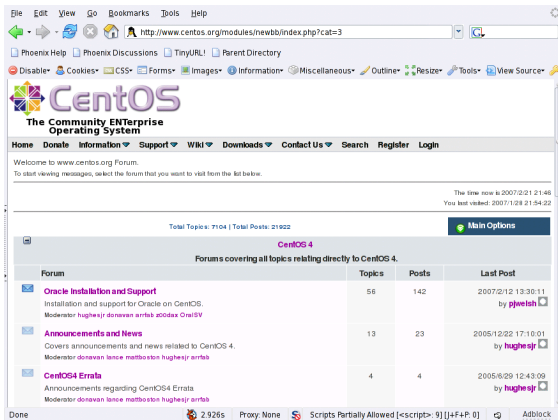


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You behind CentOS

Where do you fit in?

The CentOS webforums



The screenshot shows the CentOS webforums homepage in a web browser. The browser's address bar displays the URL `http://www.centos.org/modules/newbb/index.php?cat=3`. The page features the CentOS logo and navigation links such as Home, Donate, Information, Support, Wiki, Downloads, Contact Us, Search, Register, and Login. A welcome message is present, along with statistics: Total Topics: 7104 | Total Posts: 21922. A table lists forums related to CentOS 4, including Oracle Installation and Support, Announcements and News, and CentOS4 Errata.

| Forum | Topics | Posts | Last Post |
|--|--------|-------|--|
| Oracle Installation and Support Installation and support for Oracle on CentOS. Moderator: hughesjr , donavan , arfbis , zoodax , OralSV | 56 | 142 | 2007/2/12 13:30:11 by pjwetch |
| Announcements and News Covers announcements and news related to CentOS 4. Moderator: donavan , lance , matthoske , hughesjr , arfbis | 13 | 23 | 2005/12/22 17:10:01 by hughesjr |
| CentOS4 Errata Announcements regarding CentOS4 Errata. Moderator: donavan , lance , matthoske , hughesjr , arfbis | 4 | 4 | 2005/6/29 12:43:09 by hughesjr |

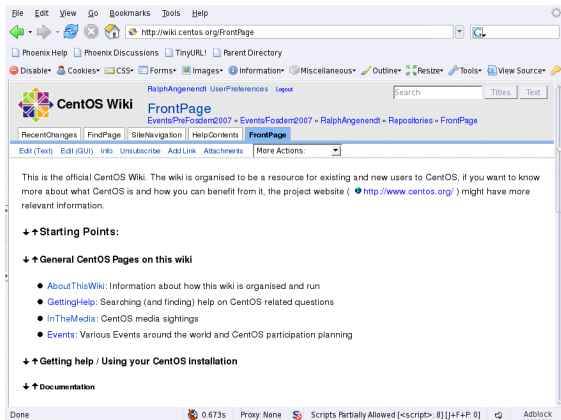


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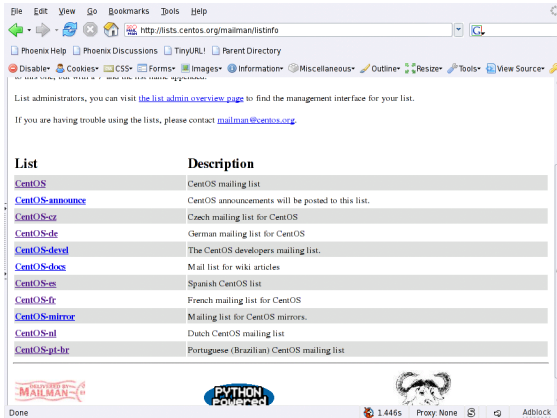
Where do you fit in?

The CentOS wiki



Where do you fit in?

The CentOS mailing lists



The screenshot shows a web browser window with the address bar displaying <http://lists.centos.org/mailman/listinfo>. The page content includes a navigation bar with links like "Phoenix Help", "Phoenix Discussions", "TinyURL!", and "Parent Directory". Below this, there are links to "List administrators" and "mailman@centos.org". The main content is a table with two columns: "List" and "Description".

| List | Description |
|---------------------------------|---|
| CentOS | CentOS mailing list |
| CentOS-announce | CentOS announcements will be posted to this list. |
| CentOS-cz | Czech mailing list for CentOS |
| CentOS-de | German mailing list for CentOS |
| CentOS-devel | The CentOS developers mailing list. |
| CentOS-docs | Mail list for wiki articles |
| CentOS-es | Spanish CentOS list |
| CentOS-fr | French mailing list for CentOS |
| CentOS-mirror | Mailing list for CentOS mirrors. |
| CentOS-nl | Dutch CentOS mailing list |
| CentOS-pt-br | Portuguese (Brazilian) CentOS mailing list |

At the bottom of the browser window, there are logos for "MAILMAN" and "PYTHON POWERED", and a status bar showing "Done", "1.446s", "Proxy: None", and "Adblock".



Where do you fit in?

The CentOS irc channels

```
File Edit View Terminal Tabs Help
DO NOT PASTE IN HERE (unless asked; 1 line MAX), use http://www.rafb.net/paste/ | The cha
22:11 BlackHand | the truth
22:12 range | BlackHand: What's wrong with linux?
22:12 BlackHand | an OS, a language, an editor
22:12 BlackHand | three are one, and one is three, sacred trinity
22:12 Zathrus | vim -- just as powerful, but without the silly memory overhead.
22:12 BlackHand | ^^
22:12 Evolution | BlackHand: how do I get grub to recognize emacs?
22:12 Evolution | I can't boot to emacs properly, even with init=/usr/bin/emacs
22:12 Zathrus | Evolution: no, you don't understand -- Linux is the bootloader.
22:13 BlackHand | Zathrus: exactly!
22:13 Evolution | vim just lacks the web browser and irc client emacs contains
22:13 * Evolution | fires up 3 copies of xemacs on BlackHand's box
22:14 Zathrus | Evolution: vim expects you to know how to use screen :)
22:14 BlackHand | vi dont have quakemacs (play quake in emacs), winemacs (run
| windows apps in emacs)
22:16 BlackHand | vi dont have emacs on rails!
22:17 peerce | vi is an editor. emacs is a whole freekin' software development
| environment that can act as an editor.
22:17 Zathrus | peerce: actually, vim can do the dev environ bit too.
22:20 peerce | its macro language is powerful enough to implement applications
| in?
22:20 peerce | i've never messed with vim macros, i stick with a minimal subset
| of vi/vim commands that work everywhere
22:21 MrMeoff | centos is so good it almost makes me cry *tear*
22:33 Zathrus | peerce: you're talking about vimscrip, not macros. Macros are
| something different :) -- and not really anything you'd want to
| write stand alone apps in.
=====
22:51 * sigwerk eyeballs Evolutions shins
22:52 range( ei) 8: #centos( nt) Act: 0 4 9
[#centos]:
02/21/07 22:52 0.49 0.56 0.56 0$ bash 1$ bash 2$ bash 3$ bash 4$ bash
```



Where do you fit in?

- Help others on the mailing lists
- Help others on IRC
- Write documentation on the wiki
- Build packages for inclusion in the Extras repository
- Help on the web forums
- Run a mirror



Questions?



Answers!



Thank you!

