

Utilización y Administración avanzada de sistemas GNU/Linux y aplicaciones Software Libre para estudiantes universitarios

Recursos de programación en GNU/Linux

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**Utilización y Administración avanzada de sistemas GNU/Linux y aplicaciones Software Libre para
estudiantes universitarios****Recursos de programación en GNU/Linux**

por Chema Peribáñez, Mario Arias, y Ramón Rey Vicente

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Capítulo 1. Recursos de Programación en GNU/Linux

1.1. Licencias

- Copyleft: GPL
- Origen del Proyecto GNU.
- Concepto de "trabajo derivado".
- Licencia dual.
- Forma de financiación.
- no-Copyleft: BSD modificada, MIT X11
- evitar las incompatibilidades

- otras licencias
- LGPL
- MPL

1.2. Dónde buscar programas

- Freshmeat (<http://www.freshmeat.net>)
- Sourceforge (<http://www.sourceforge.net>)
- Proyecto GNU (<http://www.gnu.org>)
- Savannah (<http://savannah.gnu.org>)
- Proyecto Debian (<http://www.debian.org>)
- GNOME (<http://www.gnome.org>)
- KDE (<http://www.kde.org>)

1.3. Consejos

- No reinventar la rueda.
- Colaborar.

- Humildad y no desanimarse.

1.4. Sourceforge

- ¿Qué ofrece?
 - Web con PHP
 - Base de datos.
 - Listas de correo
 - FTP
 - SSH
 - Máquinas donde compilar.
 - CVS
 - Bugzilla.
- ¿Quién lo ofrece?
 - Savannah (<http://savannah.gnu.org>)
 - Sourceforge (<http://www.sourceforge.net>)
 - En consideración, Hispalinux (<http://www.hispalinux.es>)
 - Sourceforge, en senda propietaria.
- Sourceforge (<http://www.sourceforge.net>) en cifras. (Abril - 2002)
 - Más de 38.000 proyectos alojados.
 - Más de 400.000 usuarios registrados.
 - Los servidores soportan 12 millones de visitas diarias de páginas PHP.
 - 1,3 Terabytes de capacidad
 - 47 GiB de RAM
 - 56 GHz procesadores
 - Todos los discos tienen RAID para proteger los datos.

1.5. Lenguajes de programación

- C/C++: gcc
- Interpretados: Perl, Python

- Empotrables Scheme
- Java, C#

1.6. Programación Web

- Apache: FastCGI, módulos
- PHP
- Perl
- Tomcat (<http://jakarta.apache.org>)

1.7. Bases de Datos

- MySQL (<http://www.mysql.org>)
- PostgreSQL (<http://www.postgresql.org>)
- InterBase
 - Firebird (<http://firebird.sourceforge.net>)
- SapDB (<http://www.sapdb.org>)

1.8. Programación de empresa

- J2EE
 - JBoss (<http://www.jboss.org>)
- GNUe (<http://www.gnenterprise.org>)
- OSDL (<http://www.osdl.org>)
- En progreso:
 - MONO::
 - dotGNU

1.9. Programación multiplataforma

- Linux/Unix es multiplataforma:

- ejecutables transportables i386 ELF
- automake, configure
- ojo con los warnings
- X-Window: Motif, GTK+, QT
- Compatibilidad hacia MS Windows
- Cygwin (<http://www.cygwin.com>)
- X-Window (<http://www.cygwin.com/xfree/>)
- Migrar desde MS Windows
- Wine/WineLib (<http://www.winehq.org>)
- Librerías multiplataforma
- Hilos, red, E/S:
 - ACE (<http://www.cs.wustl.edu/~schmidt/ACE.html>)
 - NSPR (<http://www.mozilla.org/projects/nspr/>)
- Gráficos y más cosas, C++: wxWindows (<http://www.wxwindows.org>)
- Gráfico, C++: Fox Toolkit (<http://www.fox-toolkit.org>), FLTK (<http://www.fltk.org>)
- Multimedia: SDL (<http://www.libsdl.org>)
- Nás librerías multiplataforma
 - SSL
 - OpenSSL (<http://www.openssl.org>)
 - GnuTLS (<http://www.gnu.org/software/gnutls/>)
 - XML: libxml2 (<http://xmlsoft.org/>)
 - OpenH323 (<http://www.openh323.org>)

- Java
- Java NO es libre
- gcj (<http://gcc.gnu.org/java/>)
- Eclipse (<http://eclipse.org/>)
- SWT: forma parte de Eclipse

- jikes (<http://www-124.ibm.com/developerworks/oss/jikes/>)
- XWT (<http://www.xwt.org/>): requiere applets o activex
- .NET
- Dot GNU (<http://www.gnu.org/projects/dotgnu/>)
 - Portable.Net
- MONO:: (<http://www.go-mono.org>)
- Pascal
 - Kylix: propietario
 - Lazarus (<http://www.lazarus.freepascal.org>)
- Sash (<http://www.sashx.org>): basado en Mozilla. Versión para Windows propietaria.

1.10. Herramientas

- Entornos de desarrollo
- KDE: Kdevelop (<http://www.kdevelop.org>)
- GNOME: Anjuta (<http://www.anjuta.org>) + Glade (<http://glade.gnome.org>) (enlace de recursos en la web de Anjuta)
- VDK Builder (<http://vdkbuilder.sourceforge.net/>)
- Java: Eclipse
- wxWindow: wxGlade (<http://wxglade.sourceforge.net/>)
- Depuradores de memoria C/C++
- mpatrol (<http://www.cbmaniga.demon.co.uk/mpatrol>)
- dmalloc (<http://dmalloc.com>)
- ElectricFence
- Gestión de proyectos: Mr Project (<http://mrproject.codefactory.se>)

- Ingeniería del software
 - argouml (<http://argouml.tigris.org/>)
 - derivado propietario: Poséidon (<http://www.gentleware.com/>)
- Umbrello UML Modeler (<http://uml.sourceforge.net/>)
- DIA (<http://www.lysator.liu.se/~alla/dia/>)
 - AutoDIA (<http://dtroogs.org/autodia/>)
 - dia2code (<http://dia2code.sourceforge.net>)
- Otros: (buscar UML en Freshmeat (<http://www.freshmeat.net>)
 - <http://gaphor.sourceforge.net/>
 - <http://javare.sourceforge.net>
 - <http://freshmeat.net/redirect/lassmodeler/>
- Proyecto gestión libre: en <http://www.hispalinux.es>

1.11. Documentación

- Páginas info (info libc)
- man, secciones 2 y 3
- Advanced Linux programming (<http://www.advancedlinuxprogramming.com/>)
- OpenBooks (<http://openbooks.sourceforge.net/books/>) (KDE, Gnome...)
- Programación segura (<http://www.d Wheeler.com/secure-programs>)
- DevHelp (<http://devhelp.codefactory.se/>)
- <http://libros.es.gnome.org/>
- <http://es.gnome.org>

1.12. Generar documentación

- DocBook (<http://www.docbook.org>)
- doxygen (<http://www.doxxygen.org>) (tipo javadoc)

1.13. Otros sitios interesantes

- <http://www-124.ibm.com/developerworks/oss/>
- <http://www.programacion.net>
- <http://www.apache.org/XML/Jakarta>
- <http://www.linuxbase.org> (estándares)
- <http://www.freedesktop.org> (estándares)
- <http://www.salix.org/>
- <http://www.javahispano.org>
- http://rpmfind.net/linux/RPM/Development_Tools.html
- <http://www.hispalinux.net>: casos de éxito, empresas españolas de software libre.

1.14. Algunos detalles en las prácticas

- getopt
- setlocale
- setuid
- aprender: ltrace

1.15. El lado oscuro

- Instaladores
 - Inno Setup (<http://www.winax.nl/innosetup/>)
 - NSIS (<http://nsis.sourceforge.net>)
- Entornos, compiladores
- Cross compiling: <http://www.fox-toolkit.org/faq.html#CROSSCOMPILING>

1.16. Curiosos

- <http://www.ignavus.net/software.html>
- Tarjetas inteligentes (<http://www.linuxnet.com/>)
- Sistemas emporrados (<http://www.linuxdevices.com>)
- Turbo Vision (<http://ivision.sourceforge.net/>) (consola)

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