

INSTALL QPID IN UBUNTU 9.04 32 BITS



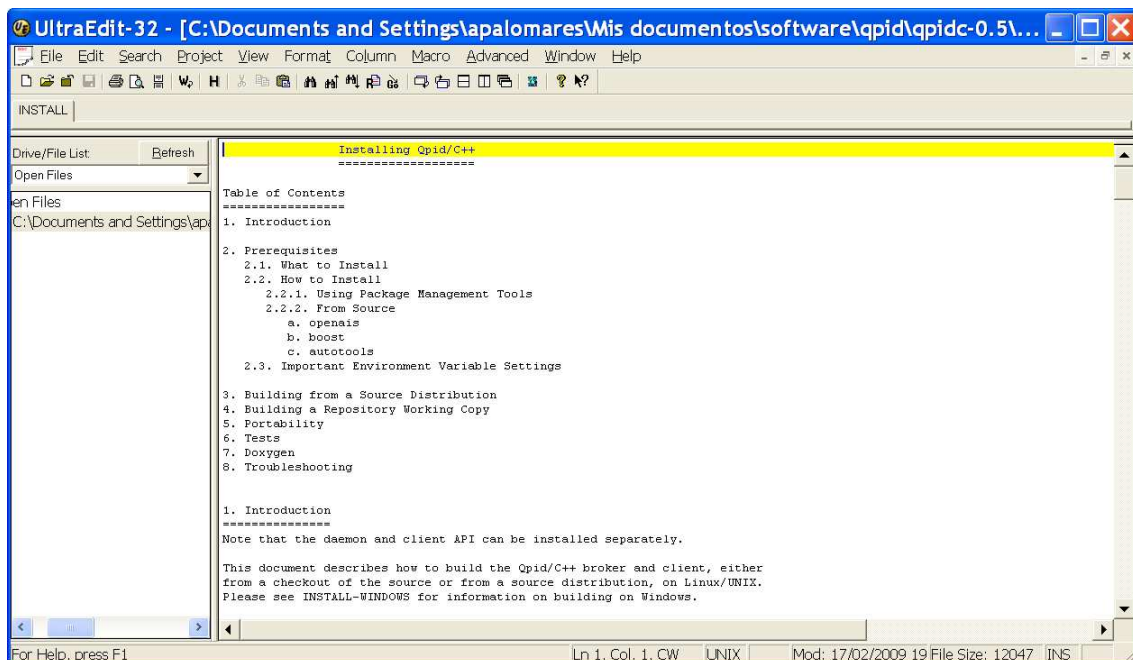
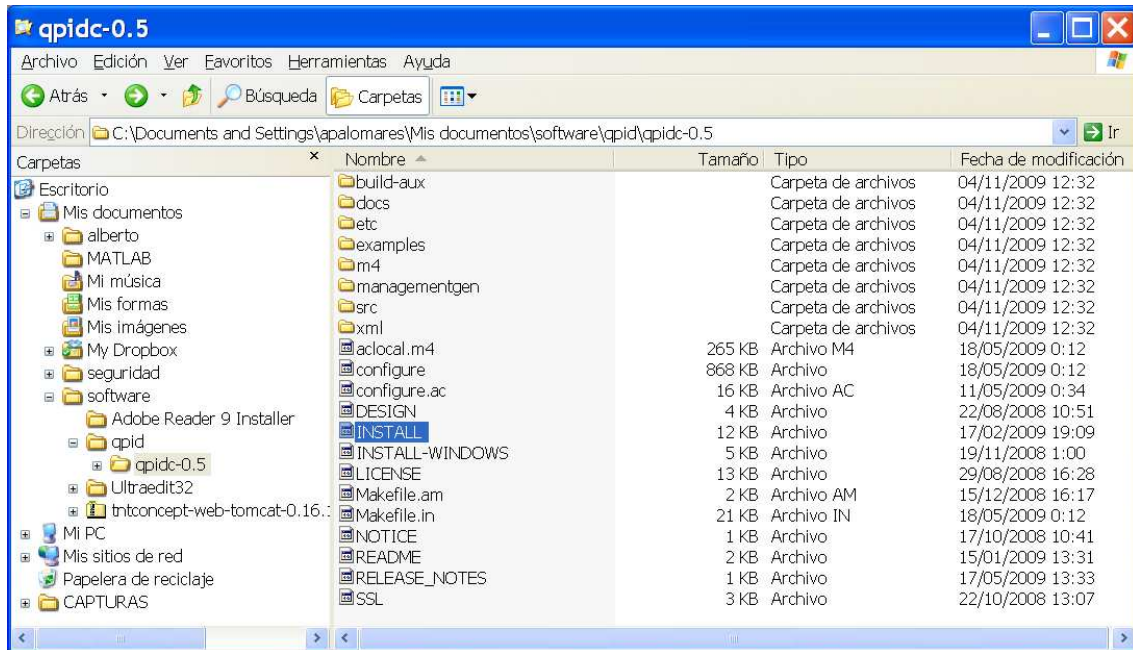
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Introduction

This document¹ describes how to install Qpid/C++ broker from the source distribution <http://qpid.apache.org/> on Linux/Unix operating system, particularised to Ubuntu 9.04 32-bit version <http://www.ubuntu.com/>, explains how to the required pre-requisites for install Qpid/C++, and finally describes some required modifications on the source code of Qpid/C++ in order to compile and install the broker.



¹ Based on the INSTALL file included on the Qpid distribution



Download QPID

<http://qpid.apache.org/download.html>

The screenshot shows the Apache Qpid download page in a Mozilla Firefox browser window. The address bar shows the URL <http://qpid.apache.org/download.html>. The page has a navigation bar with links like 'Más visitados', 'Getting Started', and 'Latest Headlines'. The main content area features the Qpid logo, the Apache Software Foundation logo, and a sidebar with links to 'Home', 'Download', 'Getting Started', 'Documentation', 'Mailing Lists', 'Issue Reporting', 'FAQ/How to', 'Resources', 'Getting Involved', and 'Qpid Integrated with..'. The main content area is titled 'Production Releases' and contains text about the latest release (0.5) and links to 'AMQP Release Compatibility for Qpid' and 'user list'. The footer shows 'Terminado'.

Production Releases

These releases are well tested and appropriate for production use. 0.5 is the latest release of Qpid.

Qpid supports the latest version of AMQP 0-10, and some components also the AMQP 0-8 and 0-9, earlier versions. The Java Broker and Client provide protocol negotiation. [Other versions can be found here](#)

For details on cross component compatibility among releases, see: [AMQP Release Compatibility for Qpid](#)

If you have any questions about these releases, please mail the user list [user list](#)

0.5 Release

The screenshot shows the Apache Qpid download page in a Mozilla Firefox browser window, specifically the 'Multiple Component Packages' section. The address bar shows the URL <http://qpid.apache.org/download.html>. The page has a navigation bar with links like 'Más visitados', 'Getting Started', and 'Latest Headlines'. The main content area features the Qpid logo, the Apache Software Foundation logo, and a sidebar with links to 'Source Repository', 'Building Qpid', 'Developer Pages', 'QMF', 'About Qpid', 'People', 'License', 'Project Status', 'Acknowledgments', 'About AMQP', 'What is AMQP?', 'AMQP Specification', and 'Download'. The main content area is titled 'Multiple Component Packages' and contains a table with columns 'Component', 'Download', 'AMQP 0-10', and 'AMQP 0-8/0-9'. Below the table is a section titled 'Single Component Package' with a sub-section 'Broker' and a table with columns 'Language', 'Download', 'AMQP 0-10', and 'AMQP 0-8/0-9'. The footer shows the URL <http://www.apache.org/dist/qpid/0.5/qpid-cpp-0.5.tar.gz>.

Multiple Component Packages

Component	Download	AMQP 0-10	AMQP 0-8/0-9
Full release & keys	http://www.apache.org/dist/qpid/0.5/	Y	Y
C++ broker & client	http://www.apache.org/dist/qpid/0.5/qpid-cpp-0.5.tar.gz	Y	
Java broker, client & tools	http://www.apache.org/dist/qpid/0.5/qpid-java-0.5.tar.gz	client	Y

Single Component Package

Broker

Language	Download	AMQP 0-10	AMQP 0-8/0-9
Java	http://www.apache.org/dist/qpid/0.5/qpid-java-broker-0.5.tar.gz		Y

<http://www.apache.org/dist/qpid/0.5/qpid-cpp-0.5.tar.gz>



Pre-requisites

The following libraries and header files must be installed to build a source distribution:

- **boost**: <<http://www.boost.org>> (1.35)²
- **e2fsprogs**: <<http://e2fsprogs.sourceforge.net/>> (1.39)
- **pkgconfig**: <<http://pkgconfig.freedesktop.org/wiki/>> (0.21)

Optional cluster functionality requires:

- **openais** <<http://openais.org/>> (0.80.3)

Optional XML exchange requires:

- **xqilla** <<http://xqilla.sourceforge.net/HomePage>> (2.0.0)
- **xerces-c** <<http://xerces.apache.org/xerces-c/>> (2.7.0)

Optional SSL support requires:

- **nss** <<http://www.mozilla.org/projects/security/pki/nss/>>
- **nspr** <<http://www.mozilla.org/projects/nspr/>>

Qpid has been built using the GNU C++ compiler:

- **gcc** <<http://gcc.gnu.org/>> (3.4.6)

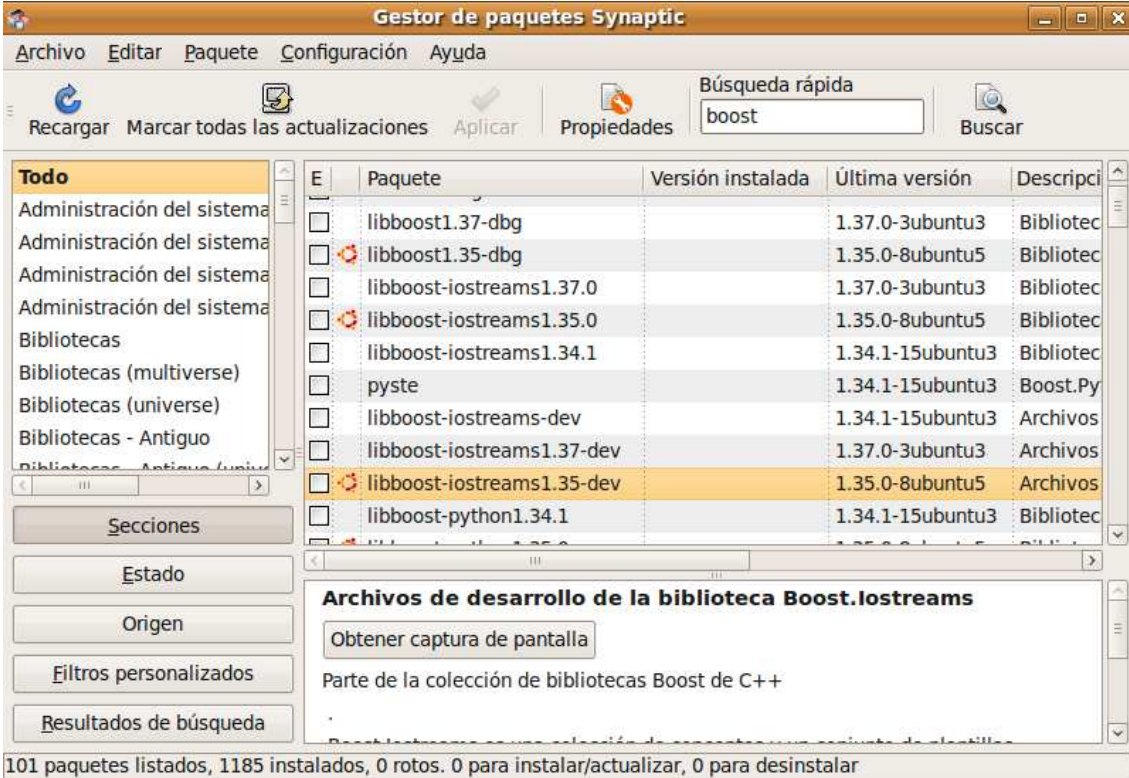
On linux most packages can be installed using the distribution's package management tool. In particular for Ubuntu operating system Synaptic is the graphical package management system that allow install, remove, configure, or upgrade software packages, browse, sort and search the list of available software packages, manage repositories, or upgrade the whole system. Synaptic will inform about dependencies (additional packages required by the software package you have chosen) as well as conflicts with other packages that are already installed on your system.

² earlier versions of boost e.g. 1.33 also work and there is a patch to get 1.32 working in the svn tree though that is only recommended as a last resort.



Obligatory requisites

boost 1.35



The screenshot shows the Synaptic Package Manager window with the search bar containing 'boost'. The search results table lists several packages related to Boost. The package 'libboost-iostreams1.35-dev' is highlighted in orange, indicating it is the selected package.

E	Paquete	Versión instalada	Última versión	Descripción
<input type="checkbox"/>	libboost1.37-dbg		1.37.0-3ubuntu3	Biblioteca
<input type="checkbox"/>	libboost1.35-dbg		1.35.0-8ubuntu5	Biblioteca
<input type="checkbox"/>	libboost-iostreams1.37.0		1.37.0-3ubuntu3	Biblioteca
<input type="checkbox"/>	libboost-iostreams1.35.0		1.35.0-8ubuntu5	Biblioteca
<input type="checkbox"/>	libboost-iostreams1.34.1		1.34.1-15ubuntu3	Biblioteca
<input type="checkbox"/>	pyste		1.34.1-15ubuntu3	Boost.Py
<input type="checkbox"/>	libboost-iostreams-dev		1.34.1-15ubuntu3	Archivos
<input type="checkbox"/>	libboost-iostreams1.37-dev		1.37.0-3ubuntu3	Archivos
<input checked="" type="checkbox"/>	libboost-iostreams1.35-dev		1.35.0-8ubuntu5	Archivos
<input type="checkbox"/>	libboost-python1.34.1		1.34.1-15ubuntu3	Biblioteca

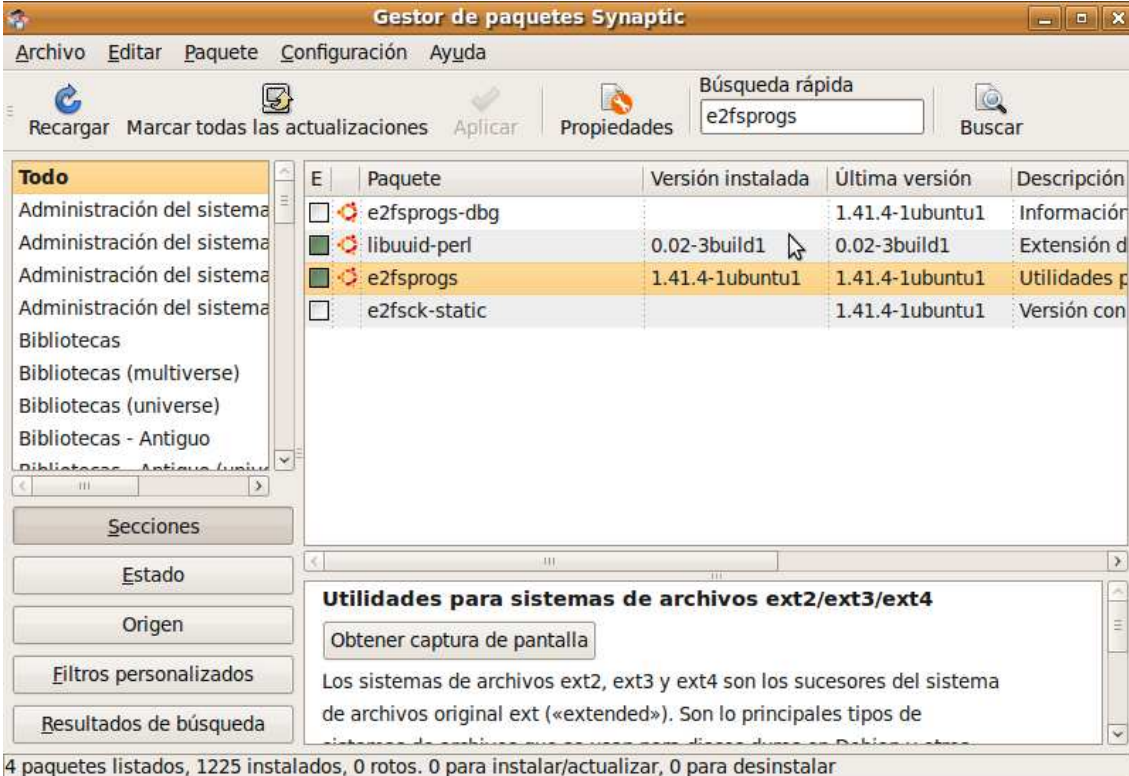
Archivos de desarrollo de la biblioteca Boost.iostreams

Obtener captura de pantalla

Parte de la colección de bibliotecas Boost de C++

101 paquetes listados, 1185 instalados, 0 rotos. 0 para instalar/actualizar, 0 para desinstalar

e2fsprogs 1.41.4



The screenshot shows the Synaptic Package Manager window with the search bar containing 'e2fsprogs'. The search results table lists four packages related to e2fsprogs. The package 'e2fsprogs' is highlighted in orange, indicating it is the selected package.

E	Paquete	Versión instalada	Última versión	Descripción
<input type="checkbox"/>	e2fsprogs-dbg		1.41.4-1ubuntu1	Información
<input checked="" type="checkbox"/>	libuuid-perl	0.02-3build1	0.02-3build1	Extensión d
<input checked="" type="checkbox"/>	e2fsprogs	1.41.4-1ubuntu1	1.41.4-1ubuntu1	Utilidades p
<input type="checkbox"/>	e2fsck-static		1.41.4-1ubuntu1	Versión con

Utilidades para sistemas de archivos ext2/ext3/ext4

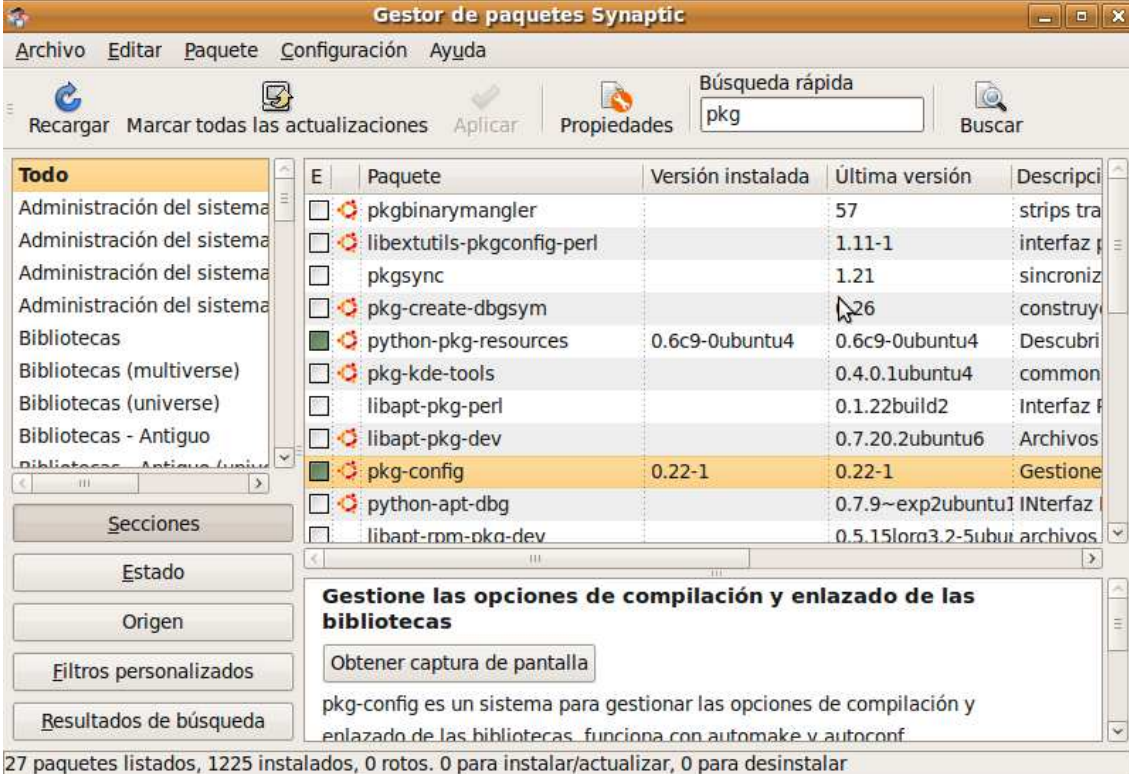
Obtener captura de pantalla

Los sistemas de archivos ext2, ext3 y ext4 son los sucesores del sistema de archivos original ext («extended»). Son lo principales tipos de

4 paquetes listados, 1225 instalados, 0 rotos. 0 para instalar/actualizar, 0 para desinstalar



pkg 022-1



The screenshot shows the Synaptic Package Manager window. The search bar contains 'pkg'. The results table lists several packages, with 'pkg-config' highlighted. The description for 'pkg-config' is visible in the lower pane.

E	Paquete	Versión instalada	Última versión	Descripción
<input type="checkbox"/>	pkgbinarymangler		57	strips tra
<input type="checkbox"/>	libextutils-pkgconfig-perl		1.11-1	interfaz p
<input type="checkbox"/>	pkgsync		1.21	sincroniz
<input type="checkbox"/>	pkg-create-dbgsym		26	construy
<input checked="" type="checkbox"/>	python-pkg-resources	0.6c9-0ubuntu4	0.6c9-0ubuntu4	Descubri
<input type="checkbox"/>	pkg-kde-tools		0.4.0.1ubuntu4	common
<input type="checkbox"/>	libapt-pkg-perl		0.1.22build2	Interfaz f
<input type="checkbox"/>	libapt-pkg-dev		0.7.20.2ubuntu6	Archivos
<input checked="" type="checkbox"/>	pkg-config	0.22-1	0.22-1	Gestione
<input type="checkbox"/>	python-apt-dbg		0.7.9~exp2ubuntu1	Interfaz I
<input type="checkbox"/>	libant-rpm-pkg-dev		0.5.15lora3.2-5ubun	archivos

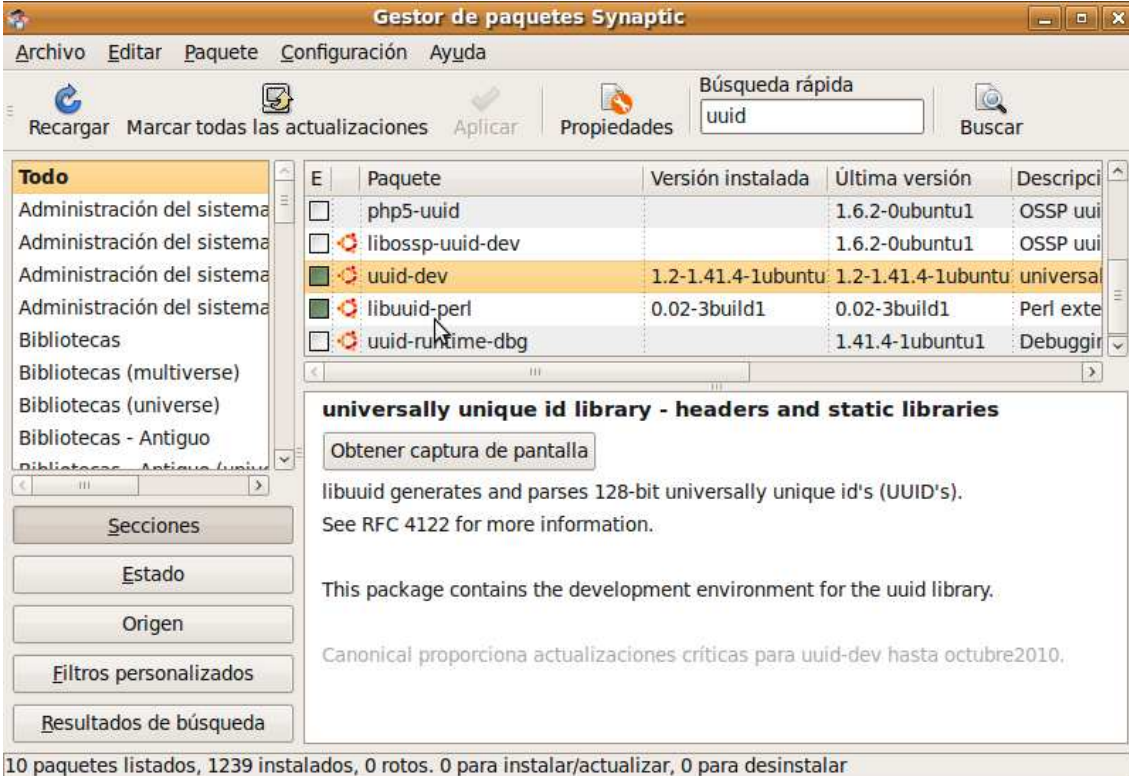
Gestione las opciones de compilación y enlazado de las bibliotecas

Obtener captura de pantalla

pkg-config es un sistema para gestionar las opciones de compilación y enlazado de las bibliotecas. funciona con automake y autoconf.

27 paquetes listados, 1225 instalados, 0 rotos. 0 para instalar/actualizar, 0 para desinstalar

uuid 1.2-1.41.4



The screenshot shows the Synaptic Package Manager window. The search bar contains 'uuid'. The results table lists several packages, with 'uuid-dev' highlighted. The description for 'uuid-dev' is visible in the lower pane.

E	Paquete	Versión instalada	Última versión	Descripción
<input type="checkbox"/>	php5-uuid		1.6.2-0ubuntu1	OSSP uui
<input type="checkbox"/>	libossp-uuid-dev		1.6.2-0ubuntu1	OSSP uui
<input checked="" type="checkbox"/>	uuid-dev	1.2-1.41.4-1ubuntu	1.2-1.41.4-1ubuntu	universal
<input checked="" type="checkbox"/>	libuuid-perl	0.02-3build1	0.02-3build1	Perl exte
<input type="checkbox"/>	uuid-runtime-dbg		1.41.4-1ubuntu1	Debuggir

universally unique id library - headers and static libraries

Obtener captura de pantalla

libuuid generates and parses 128-bit universally unique id's (UUID's). See RFC 4122 for more information.

This package contains the development environment for the uuid library.

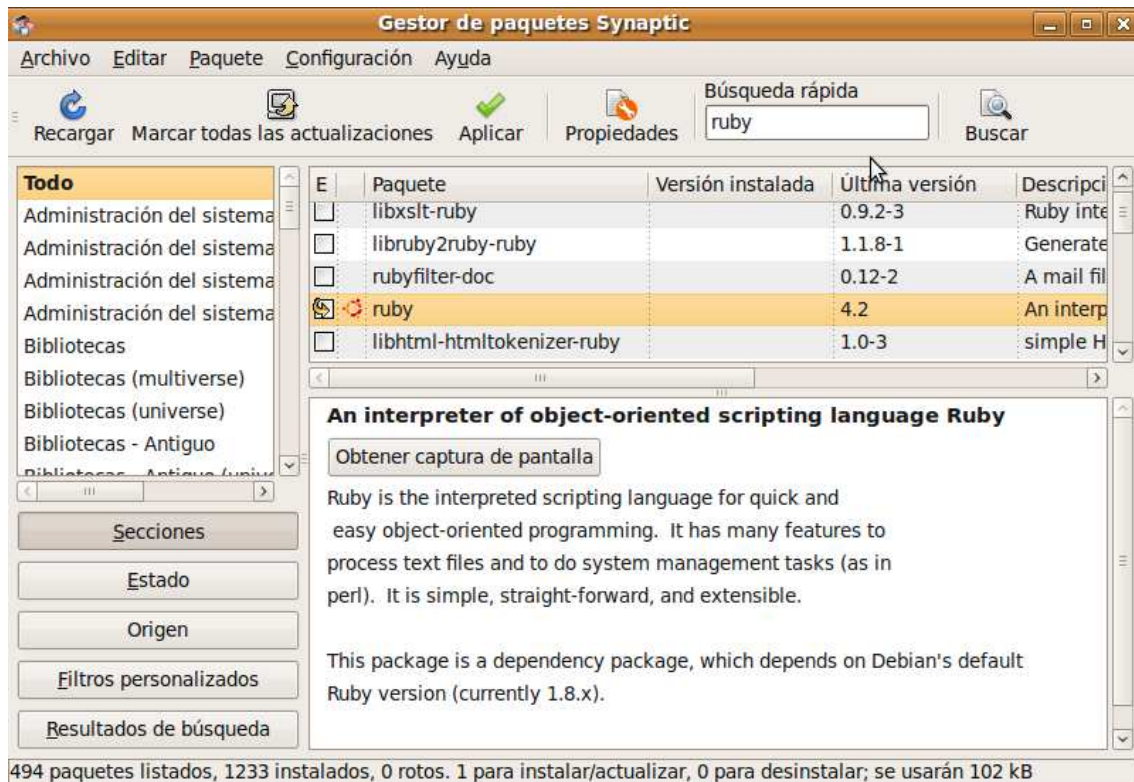
Canonical proporciona actualizaciones críticas para uuid-dev hasta octubre2010.

10 paquetes listados, 1239 instalados, 0 rotos. 0 para instalar/actualizar, 0 para desinstalar



Optional requisites (not required for this version of Magentix2)

ruby 4.2



The screenshot shows the Synaptic Package Manager window. The search bar contains 'ruby'. The search results table lists several packages, with 'ruby' (version 4.2) highlighted. The description for 'ruby' is displayed below the table.

E	Paquete	Versión instalada	Última versión	Descripción
<input type="checkbox"/>	libxslt-ruby		0.9.2-3	Ruby inte
<input type="checkbox"/>	libruby2ruby-ruby		1.1.8-1	Generate
<input type="checkbox"/>	rubyfilter-doc		0.12-2	A mail fil
<input checked="" type="checkbox"/>	ruby		4.2	An interp
<input type="checkbox"/>	libhtml-htmltokenizer-ruby		1.0-3	simple H

An interpreter of object-oriented scripting language Ruby

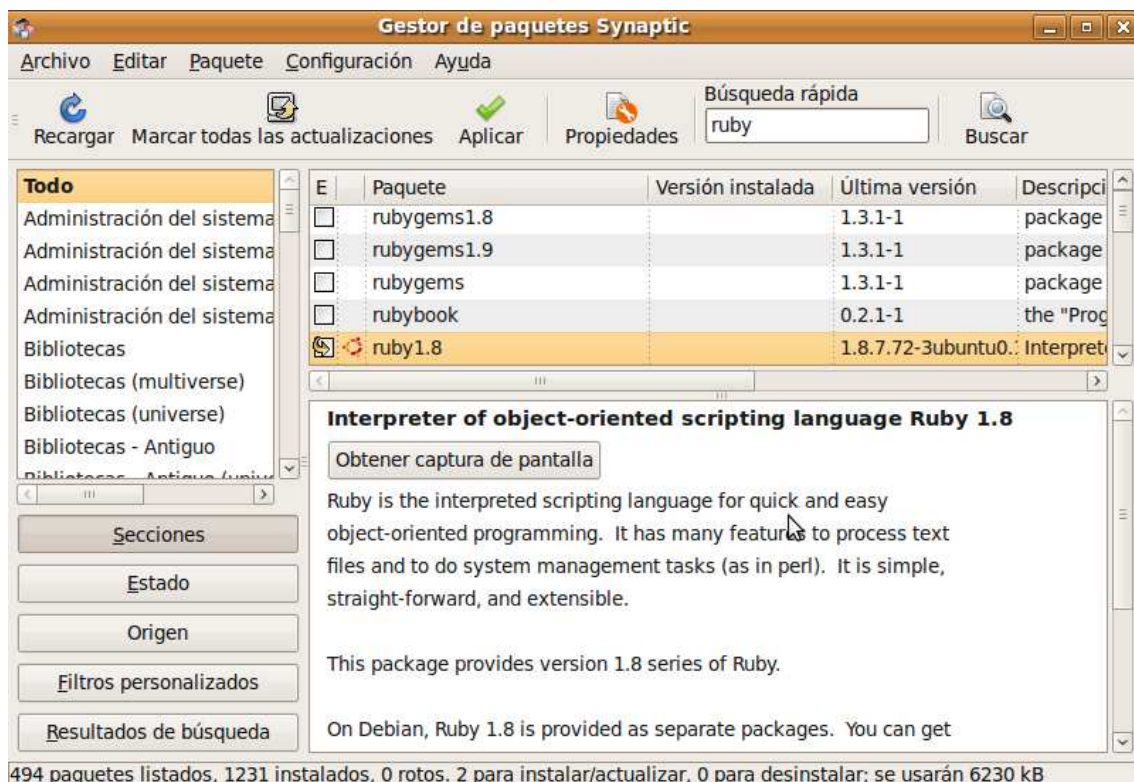
Obtener captura de pantalla

Ruby is the interpreted scripting language for quick and easy object-oriented programming. It has many features to process text files and to do system management tasks (as in perl). It is simple, straight-forward, and extensible.

This package is a dependency package, which depends on Debian's default Ruby version (currently 1.8.x).

494 paquetes listados, 1233 instalados, 0 rotos. 1 para instalar/actualizar, 0 para desinstalar; se usarán 102 kB

Ruby 1.8 (required for install ruby 4.2)



The screenshot shows the Synaptic Package Manager window. The search bar contains 'ruby'. The search results table lists several packages, with 'ruby1.8' (version 1.8.7.72-3ubuntu0) highlighted. The description for 'ruby1.8' is displayed below the table.

E	Paquete	Versión instalada	Última versión	Descripción
<input type="checkbox"/>	rubygems1.8		1.3.1-1	package
<input type="checkbox"/>	rubygems1.9		1.3.1-1	package
<input type="checkbox"/>	rubygems		1.3.1-1	package
<input type="checkbox"/>	rubybook		0.2.1-1	the "Prog
<input checked="" type="checkbox"/>	ruby1.8		1.8.7.72-3ubuntu0	Interpret

Interpreter of object-oriented scripting language Ruby 1.8

Obtener captura de pantalla

Ruby is the interpreted scripting language for quick and easy object-oriented programming. It has many features to process text files and to do system management tasks (as in perl). It is simple, straight-forward, and extensible.

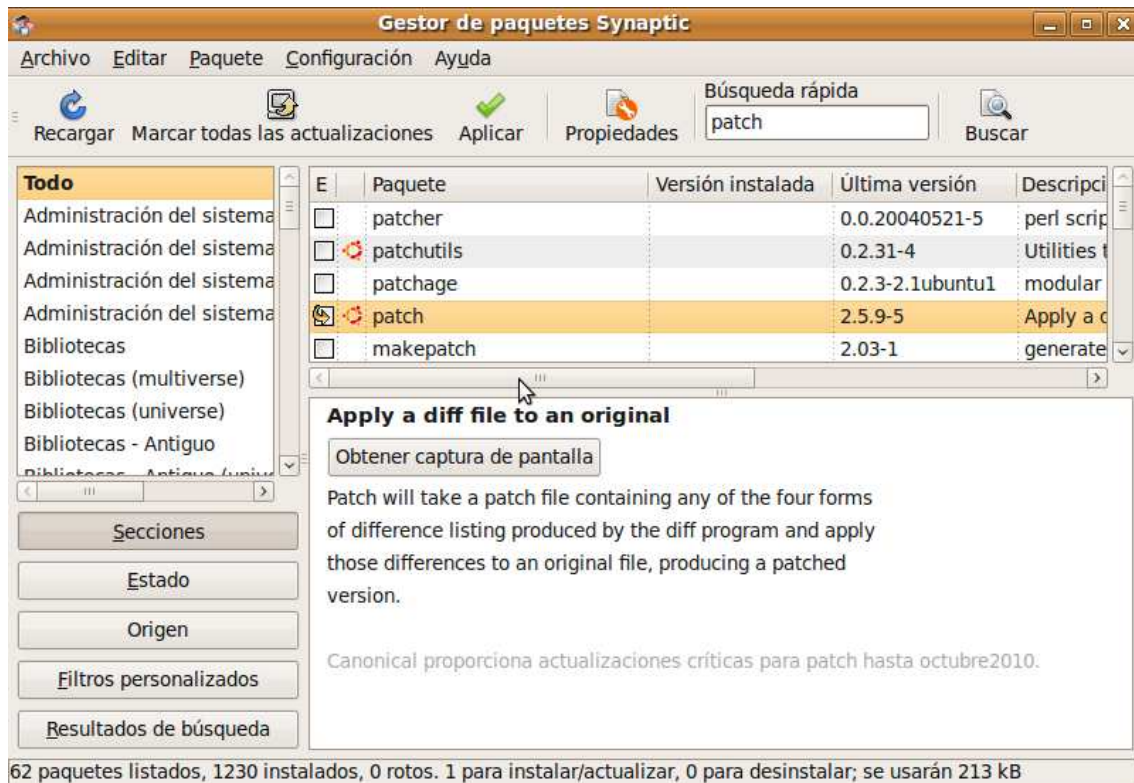
This package provides version 1.8 series of Ruby.

On Debian, Ruby 1.8 is provided as separate packages. You can get

494 paquetes listados, 1231 instalados, 0 rotos. 2 para instalar/actualizar, 0 para desinstalar; se usarán 6230 kB



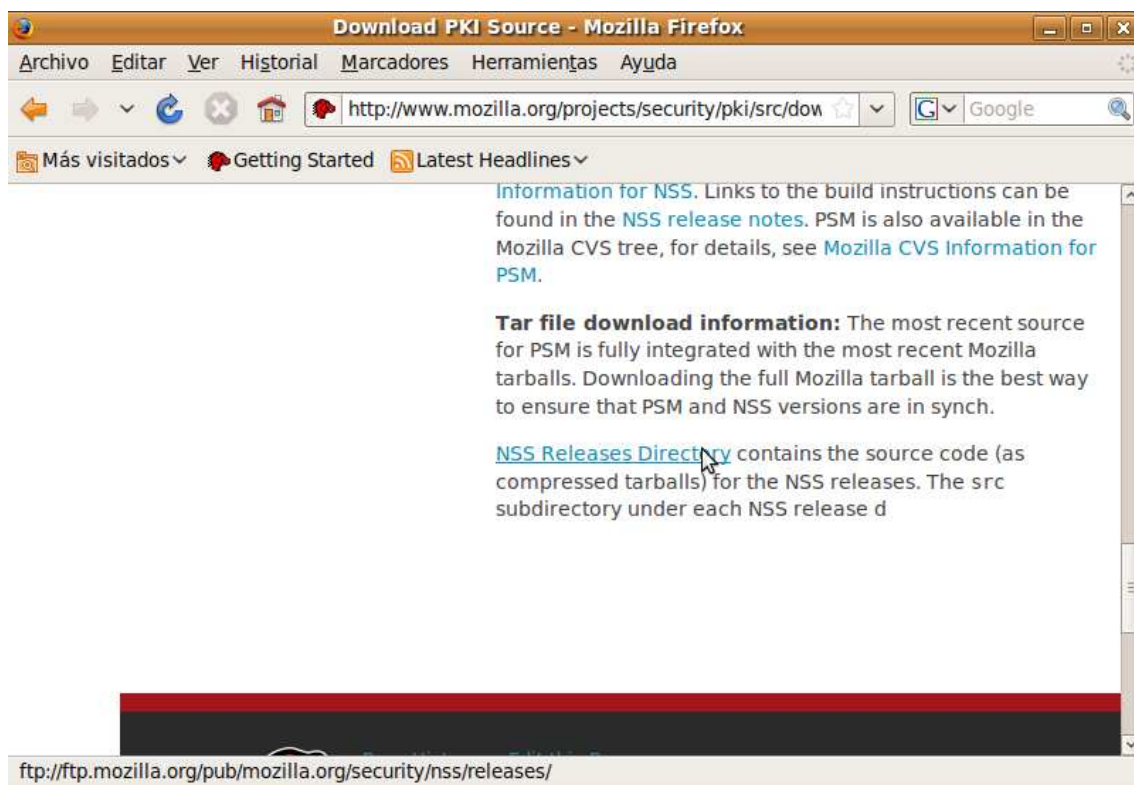
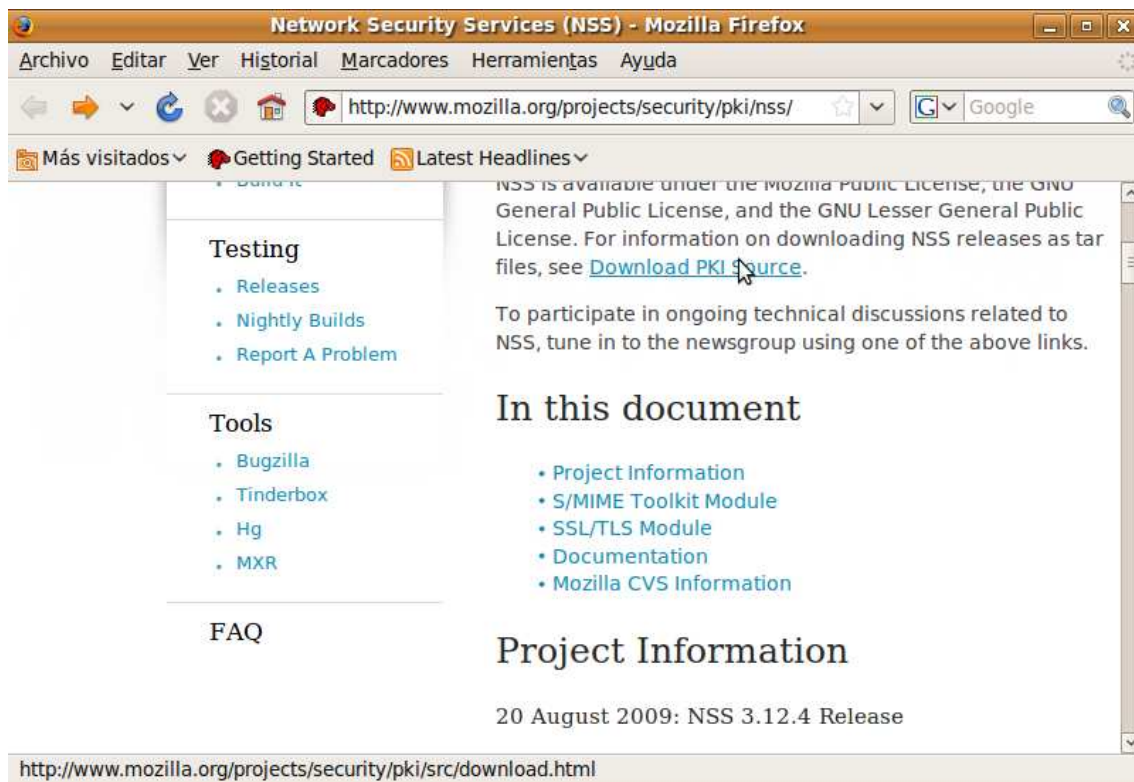
patch



nss

Download NSS





Índice de ftp://ftp.mozilla.org/pub/mozilla.org/security/nss/releases/

[Subir al directorio superior.](#)

Nombre	Tamaño	Última modificación
NSS_3_10_RTM		19/05/05 00:00:00
NSS_3_11_1_RTM		26/05/06 00:00:00
NSS_3_11_2_RTM		30/06/06 00:00:00
NSS_3_11_3_RTM		14/09/06 00:00:00
NSS_3_11_4_RTM		22/11/06 00:00:00
NSS_3_11_5_RTM		07/03/07 00:00:00
NSS_3_11_6_RTM		07/03/07 00:00:00
NSS_3_11_7_RTM		06/07/07 00:00:00

Terminado

Índice de ftp://ftp.mozilla.org/pub/mozilla.org/security/nss/releases/NSS_3_12_4_RTM/src/

[Subir al directorio superior.](#)

Nombre	Tamaño	Última modificación
MD5SUMS	1 KB	29/08/09 00:19:00
SHA1SUMS	1 KB	29/08/09 00:19:00
nss-3.12.4-with-nspr-4.8.tar.gz	6361 KB	29/08/09 00:20:00
nss-3.12.4.tar.gz	5287 KB	25/08/09 00:12:00

Terminado



NSS-3.12.4 - Mozilla Firefox

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http://www.linuxfromscratch.org/blfs/view/svn/postl nss installation

Más visitados Getting Started Latest Headlines

Intranet Alumne UPV PoliformaT : Sistem... Download PKI Source NSS-3.12.4

Installation of NSS

Install NSS by running the following commands:

```
bash

export BUILD_OPT=1 &&
export NSS_USE_SYSTEM_SQLITE=1 &&
export NSPR_INCLUDE_DIR=/usr/include/nspr &&
export USE_SYSTEM_ZLIB=1 &&
export ZLIB_LIBS=-lz &&
patch -Np1 -i ../nss-3.12.4-standalone-3.patch &&
make -C mozilla/security/nss nss_build_all
```

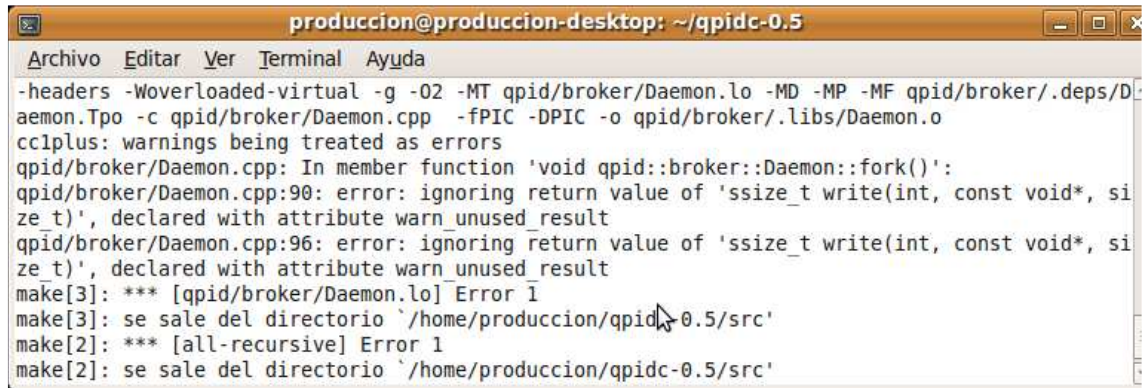
To test the results, you'll need to set the domain name of your system in the `DOMSUF` environment variable. Most of the tests will fail if you don't provide the correct domain name. A self-generated log file will be parsed at the end of the test to display how many tests passed. It should return 800. To run the tests, ensure you change the `export DOMSUF` command below to an appropriate value, e.g.,

Terminado



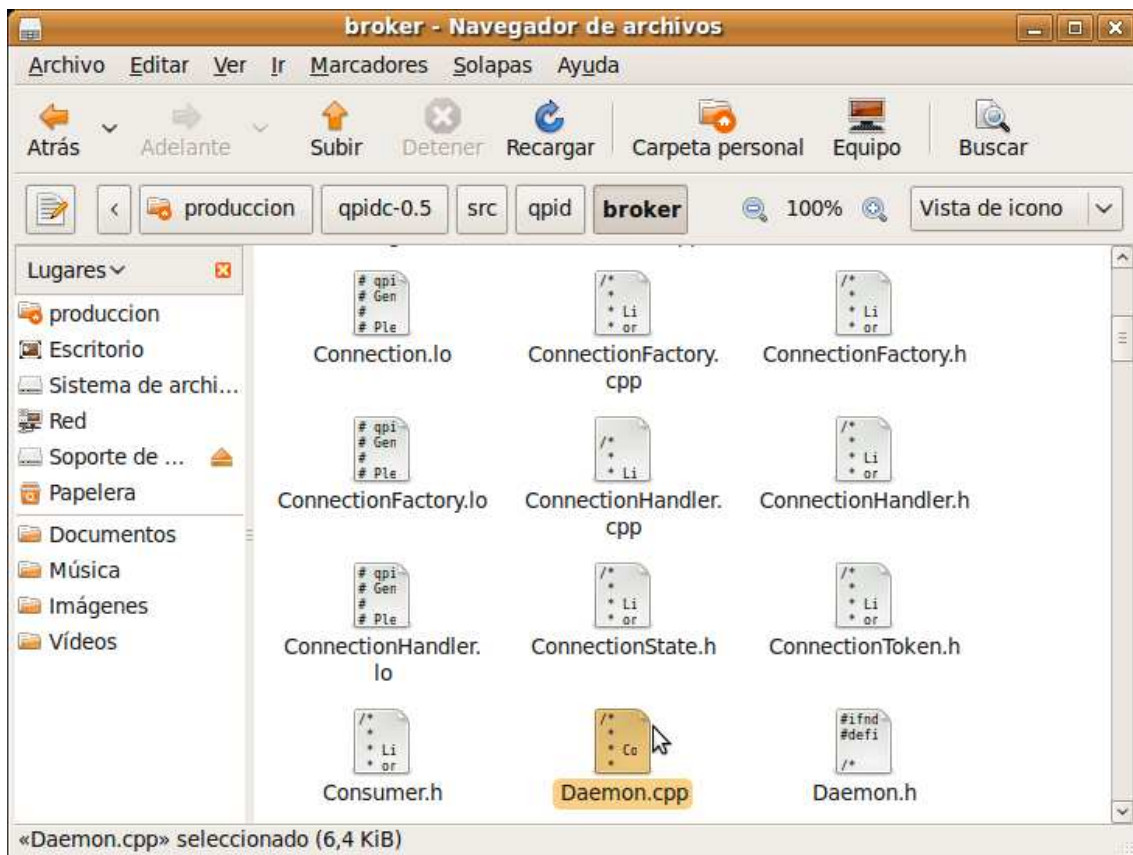
Source Code modifications

Problem: ignoring the return value of 'ssize_t' in the 'write' function causes a compilation error. This error was a warning in previous versions of the c++ compiler but must be corrected in order to compile and install the broker in Ubuntu 9.10.



```
produccion@produccion-desktop: ~/qpidc-0.5
Archivo  Editar  Ver  Terminal  Ayuda
-headers -Woverloaded-virtual -g -O2 -MT qpid/broker/Daemon.lo -MD -MP -MF qpid/broker/.deps/Daemon.Tpo -c qpid/broker/Daemon.cpp -fPIC -DPIC -o qpid/broker/.libs/Daemon.o
cc1plus: warnings being treated as errors
qpid/broker/Daemon.cpp: In member function 'void qpid::broker::Daemon::fork()':
qpid/broker/Daemon.cpp:90: error: ignoring return value of 'ssize_t write(int, const void*, size_t)', declared with attribute warn_unused_result
qpid/broker/Daemon.cpp:96: error: ignoring return value of 'ssize_t write(int, const void*, size_t)', declared with attribute warn_unused_result
make[3]: *** [qpid/broker/Daemon.lo] Error 1
make[3]: se sale del directorio `/home/produccion/qpidc-0.5/src'
make[2]: *** [all-recursive] Error 1
make[2]: se sale del directorio `/home/produccion/qpidc-0.5/src'
```

Different `ssize_t` type variables “basura” have been added in the classes Daemon.cpp, LockFile.cpp and ManagementAgentImpl.cpp in order to compile Qpid broker in UBUNTU.



Daemon.cpp (~/qpiddc-0.5/src/qpidd/broker) - gedit

Archivo Editar Ver Buscar Herramientas Documentos Ayuda

Nuevo Abrir Guardar Imprimir... Deshacer Rehacer Cortar Copiar Pegar

INSTALL x Daemon.cpp x

```
1 if(setuid(0) < 0) throw ErrnoException("Cannot set session id",  
if(chdir(pidDir.c_str()) < 0) throw ErrnoException("Cannot  
change directory to "+pidDir);  
umask(027);  
  
// Child behavior  
child();  
}  
catch (const exception& e) {  
    ssize_t basura;  
    QPID_LOG(critical, "Daemon startup failed: " << e.what());  
    uint16_t port = 0;  
    basura = write(pipeFds[1], &port, sizeof(uint16_t));  
  
    std::string pipeFailureMessage = e.what();  
    write ( pipeFds[1],  
           pipeFailureMessage.c_str(),  
           strlen(pipeFailureMessage.c_str())  
        );  
}  
}  
else { // Parent
```

C++ Ancho de la tabulación: 8 Ln 91, Col 65 INS

*Daemon.cpp (~/qpiddc-0.5/src/qpidd/broker) - gedit

Archivo Editar Ver Buscar Herramientas Documentos Ayuda

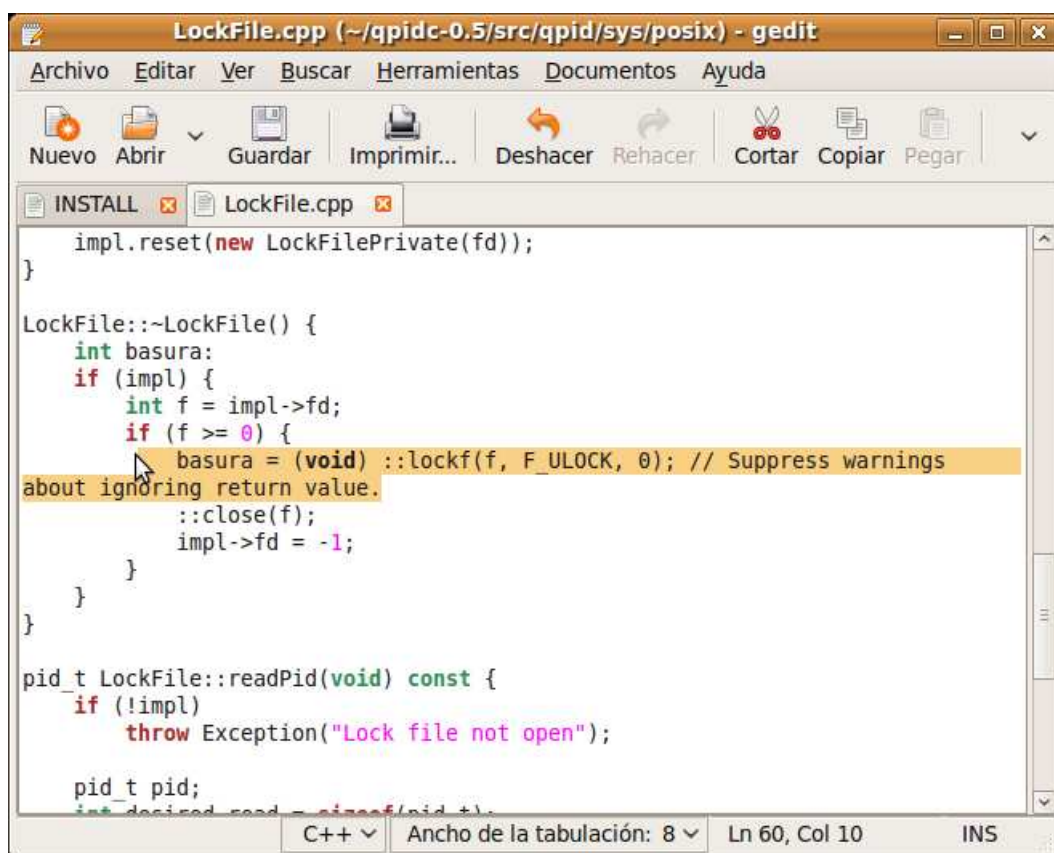
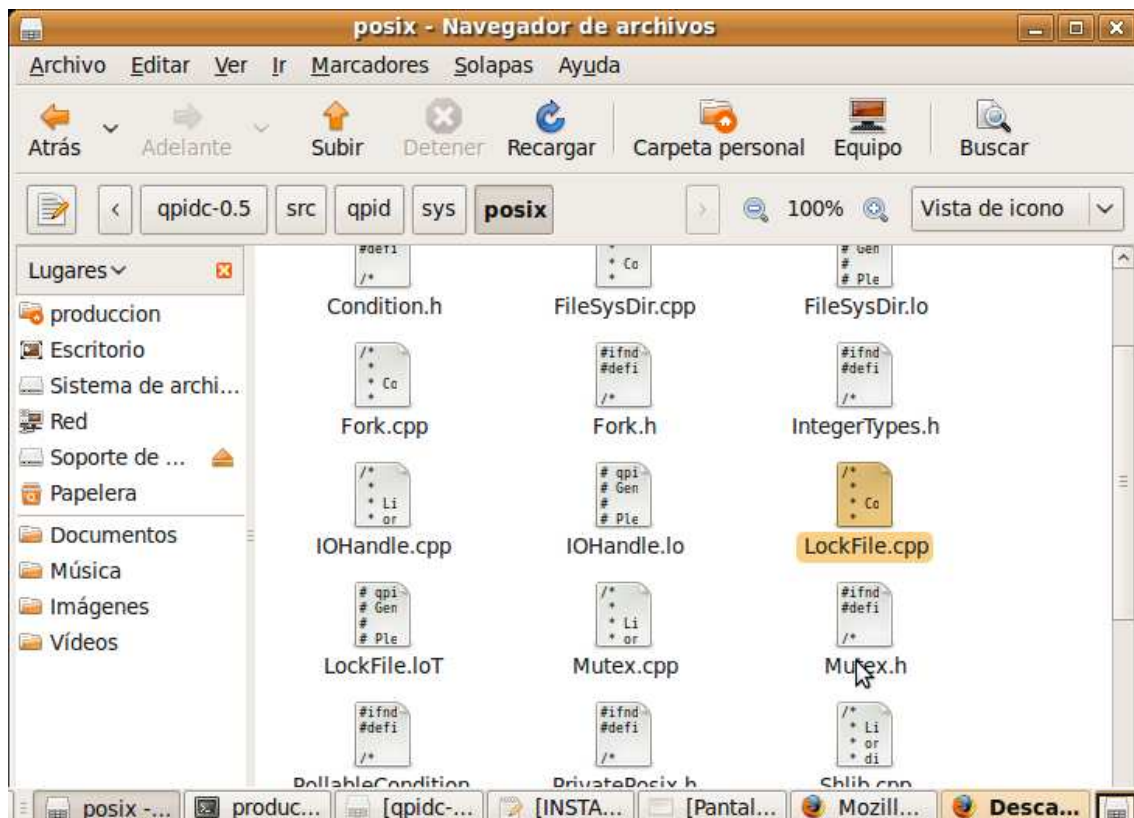
Nuevo Abrir Guardar Imprimir... Deshacer Rehacer Cortar Copiar Pegar

INSTALL x *Daemon.cpp x

```
1 if(setuid(0) < 0) throw ErrnoException("Cannot set session id",  
if(chdir(pidDir.c_str()) < 0) throw ErrnoException("Cannot  
change directory to "+pidDir);  
umask(027);  
  
// Child behavior  
child();  
}  
catch (const exception& e) {  
    ssize_t basura;  
    QPID_LOG(critical, "Daemon startup failed: " << e.what());  
    uint16_t port = 0;  
    basura = write(pipeFds[1], &port, sizeof(uint16_t));  
  
    std::string pipeFailureMessage = e.what();  
    basura = write ( pipeFds[1],  
                    pipeFailureMessage.c_str(),  
                    strlen(pipeFailureMessage.c_str())  
                );  
}  
}  
else { // Parent
```

C++ Ancho de la tabulación: 8 Ln 94, Col 40 INS





LockFile.cpp (~/qpdc-0.5/src/qpdc/sys/posix) - gedit

Archivo Editar Ver Buscar Herramientas Documentos Ayuda

Nuevo Abrir Guardar Imprimir... Deshacer Rehacer Cortar Copiar Pegar

INSTALL LockFile.cpp

```
impl.reset(new LockFilePrivate(fd));
}

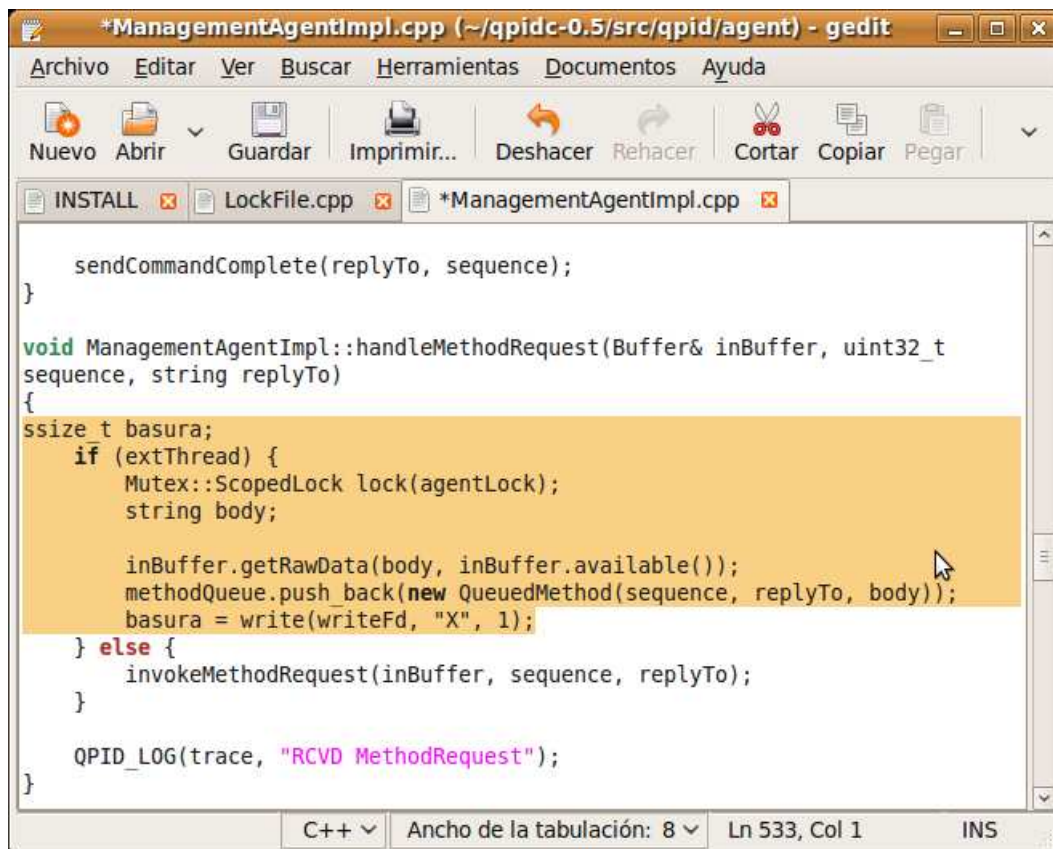
LockFile::~LockFile() {
    int basura;
    if (impl) {
        int f = impl->fd;
        if (f >= 0) {
            basura = ::lockf(f, F_ULOCK, 0); // Suppress warnings about
            ignoring return value.
            ::close(f);
            impl->fd = -1;
        }
    }
}

pid_t LockFile::readPid(void) const {
    if (!impl)
        throw Exception("Lock file not open");

    pid_t pid;
    int desired_read = sizeof(pid + 1);
```

C++ Ancho de la tabulación: 8 Ln 60, Col 23 INS





```
sendCommandComplete(replyTo, sequence);
}

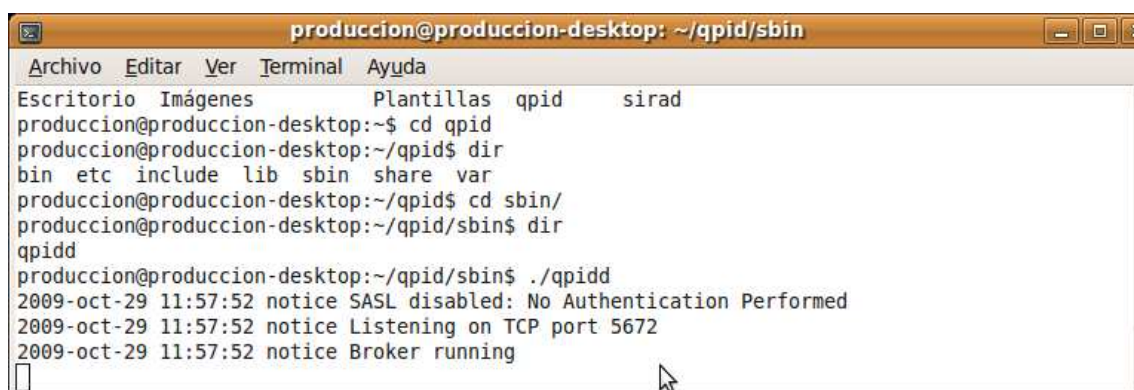
void ManagementAgentImpl::handleMethodRequest(Buffer& inBuffer, uint32_t
sequence, string replyTo)
{
    ssize_t basura;
    if (extThread) {
        Mutex::ScopedLock lock(agentLock);
        string body;

        inBuffer.getRawData(body, inBuffer.available());
        methodQueue.push_back(new QueuedMethod(sequence, replyTo, body));
        basura = write(writeFd, "X", 1);
    } else {
        invokeMethodRequest(inBuffer, sequence, replyTo);
    }

    QPID_LOG(trace, "RCVD MethodRequest");
}
```

The modified version of QPID source code could be compiled for UBUNTU 9.10.

Start QPID Broker



```
produccion@produccion-desktop: ~/qpidd/sbin
Escritorio  Imágenes  Plantillas  qpidd  sirad
produccion@produccion-desktop:~$ cd qpidd
produccion@produccion-desktop:~/qpidd$ dir
bin  etc  include  lib  sbin  share  var
produccion@produccion-desktop:~/qpidd$ cd sbin/
produccion@produccion-desktop:~/qpidd/sbin$ dir
qpidd
produccion@produccion-desktop:~/qpidd/sbin$ ./qpidd
2009-oct-29 11:57:52 notice SASL disabled: No Authentication Performed
2009-oct-29 11:57:52 notice Listening on TCP port 5672
2009-oct-29 11:57:52 notice Broker running
```

