Debian GNU/Linux 6.0 ("squeeze"), kFreeBSD 32-bit PC 的发行说明

Debian 文档项目 [http://www.debian.org/doc/]

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第 1 章 简介

This document informs users of the Debian GNU/Linux distribution about major changes in version 6.0 (codenamed squeeze).

本发行说明提供如何安全的从版本 5.0 (代号 lenny) 升级到当前版本的信息，并告知用户在升级到当前版本时可能会遇到已知的某些潜在问题。

在 http://www.debian.org/releases/squeeze/releasenotes 可以获得本文档的最新版本。如有疑惑，请检查首页的日期，以确定您是否正在阅读最新版本。

> **小心**
>
> 注意列出所有已知的问题是不可能的，因此选择了那些普遍存在和造成影响的问题。

请注意我们只支持从 Debian 的前一版本 (现在要升级的版本是 5.0) 升级。如果您需要从更早的版本升级，建议您先查看前一版本的发行说明，先升级到 5.0 。

报告本文档的 bug

我们已经试图测试在本文档中描述的所有不同的升级步骤并预测用户可能遇到的所有问题。

Nevertheless, if you think you have found a bug (incorrect information or information that is missing) in this documentation, please file a bug in the bug tracking system [http://bugs.debian.org/] against the `release-notes` package. You might want to review first the existing bug reports [http://bugs.debian.org/release-notes] in case the issue you've found has already been reported. Feel free to add additional information to existing bug reports if you can contribute content for this document.

We appreciate, and encourage, reports providing patches to the document's sources. You will find more information describing how to obtain the sources of this document in “本文档的源文件”一节.

贡献升级报告

我们欢迎来自用户的关于从 lenny 升级到 squeeze 的任何信息。如果您愿意分享，请在 Bug 追踪系统 [http://bugs.debian.org/]填写一个关于 `release-notes` 软件包的 Bug 以及您所获得的结果。希望您能够(使用 **gzip**)压缩任何附件。

当您提交升级报告的时候，请包含以下信息：

The status of your package database before and after the upgrade: **dpkg**'s status database available at `/var/lib/dpkg/status` and `apt`'s package state information, available at `/var/lib/apt/extended_states`. You should have made a backup before the upgrade as described at “备份数据和配置文件”一节, but you can also find backups of `/var/lib/dpkg/status` in `/var/backups`

会话日志使用 **script** 来创建，它的描述在 “记录会话”一节 。

`apt` 的日志 `/var/log/apt/term.log`，或 **aptitude** 的日志 `/var/log/aptitude`。

> **注意**
>
> 在提交 bug 报告之前，您应该花点时间从日志中检查和删除任何敏感和/或机密信息，因为这些信息都会被发布在公开的数据库中。

本文档的源文件

本文档的源文件格式是 DocBook XML。HTML 版本使用 `docbook-xsl` 和 `xsltproc` 生成。PDF 版本使用 `dblatex` 或 `xmlroff` 生成。可以从 *Debian 文档计划*的 SVN 仓库获得本文档的源文件。您也可以通过网页 [http://svn.debian.org/viewsvn/ddp/manuals/trunk/release-notes/]分别访问这些文件，以及查看它们的变更。请参考 Debian 文档计划的 SVN 页面 [http://www.debian.org/doc/cvs]，以获取如何访问 SVN 仓库的信息。

第 2 章 **Debian GNU/Linux** 6.0 有什么新东西

The Wiki [http://wiki.debian.org/NewInSqueeze] has more information about this topic.

This release drops official support for the HP PA-RISC ('hppa') [http://lists.debian.org/debian-devel-announce/2010/09/msg00008.html], Alpha ('alpha') and ARM ('arm') architectures.

下面是 Debian GNU/Linux squeeze 官方支持的架构：

32-bit PC ('i386')
SPARC ('sparc')
PowerPC ('powerpc')
MIPS ('mips' (big-endian) and 'mipsel' (little-endian))
Intel Itanium ('ia64')
S/390 ('s390')
64-bit PC ('amd64')
ARM EABI ('armel')

In addition to the officially supported architectures, Debian GNU/Linux squeeze introduces the GNU/kFreeBSD ports ('kfreebsd-amd64' and 'kfreebsd-i386') as a technology preview. These ports are the first ones included in a Debian release which aren't based on the Linux kernel, but instead use the FreeBSD kernel with a GNU userland. Users of these versions however should be warned that the quality of these ports is still catching up with the outstanding high quality of our Linux ports, and that some advanced desktop features are not supported yet. However, the support of common server software is strong and extends the features of Linux-based Debian versions by the unique features known from the BSD world. This is the first time a Linux distribution has been extended to also allow use of a non-Linux kernel.

您可以在 Debian 移植页面 [http://www.debian.org/ports/]，读到更多的关于您的架构的移植状态和移植细节的信息。

applications have also been upgraded, including the office suites OpenOffice.org 3.2.1 and KOffice 2.2.1 as well as GNUcash 2.2.9, GNUmeric 1.10.8 and Abiword 2.8.2.

Updates of other desktop applications include the upgrade to Evolution 2.30.3 and Pidgin 2.7.3. The Mozilla suite has also been updated: `iceweasel` (version 3.5.13) is the unbranded Firefox web browser and `icedove` (version 3.0.7) is the unbranded Thunderbird mail client.

和过去一样，这次发行还包含了以下软件的更新：

软件包	在版本 5.0(**lenny**) 中的版本	在版本 6.0(**squeeze**) 中的版本
Apache	2.2.9	2.2.16
BIND DNS 服务器	9.6.0	9.7.1
Cherokee 网络服务器	0.7.2	1.0.8
Courier MTA	0.60.0	0.63.0
Dia	0.96.1	0.97.1
Ekiga VoIP 客户端	2.0.12	3.2.7
Exim 默认邮件服务器	4.69	4.72
GNU 编译器套件(默认的编译器)	4.3.2	4.4.5
GIMP	2.4.7	2.6.10
GNU C 函数库	2.7	2.11.2
lighttpd	1.4.19	1.4.28
maradns	1.3.07.09	1.4.03
MySQL	5.0.51a	5.1.49
OpenLDAP	2.4.11	2.4.23
OpenSSH	5.1p1	5.5p1
PHP	5.2.6	5.3.2
Postfix MTA	2.5.5	2.7.1
PostgreSQL	8.3.5	8.4.5
Python	2.5.2	2.6.6
Samba	3.2.5	3.5.5
Tomcat	5.5.26	6.0.28

Debian still supports Linux Standard Base (LSB) version 3.2.

CDs, DVDs and BDs

The official Debian GNU/Linux distribution now ships on 7 to 8 binary DVDs or 44 to 53 binary CDs (depending on the architecture) and 6 source DVDs or 33 source CDs. Additionally, there is a *multi-arch* DVD, with a subset of the release for the `amd64` and `i386` architectures, along with the source code. Debian GNU/Linux is also released as Blu-ray (BD) images, 2 each for the `amd64` and `i386` architectures, or one for the source code. For size reasons, some very large packages are omitted from the CD builds; these packages fit better in the DVD and BD builds, so are still included there.

A new feature with squeeze is the addition of isohybrid support to the `i386` and `amd64` CDs, DVDs and BDs. To make a USB stick bootable with one of these images used to mean following some extra procedures after downloading the image; instead, now all that is required is to simply write the image directly to the USB stick. For more information please see the “Preparing Files for USB Memory Stick Booting” section in the Installation Guide [http://www.debian.org/releases/stable/installmanual].

Firmware moved to the non-free section

Some drivers included in the Linux kernel used to contain non-free firmware blobs. Starting from squeeze this firmware has been moved to separate packages in the non-free section of the archive, such as `firmware-linux`. If such packages are installed, the firmware will be loaded automatically when required.

包管理

The preferred program for interactive package management from a terminal is **aptitude**. For a non-interactive command line interface for package management, it is recommended to use **apt-get**. **apt-get** is also the preferred tool for upgrades between major releases. If you are still using **dselect**, you should switch to `aptitude` as the official front-end for package management.

For squeeze APT automatically installs recommended packages by default. This can be changed by adding the following line in `/etc/apt/apt.conf`:

```
APT::Install-Recommends "false";
```

Dependency booting

An important improvement in the Debian GNU/Linux boot system is the introduction of dependency-based boot sequencing and parallel boot. This feature is enabled by default in new installs and it will be enabled for upgrades from lenny, if possible.

This feature is enabled through the use of `insserv` by sysv-rc to order init.d scripts based on their declared dependencies. It has been possible after a sustained effort to adapt all the boot scripts of packages provided in the distribution as well as the boot system itself.

With dependency-based boot sequencing it is also now possible to run the boot system scripts in parallel which can, under most circumstances, improve the speed of the boot process. This feature is enabled by default, in new systems and upgrades, whenever possible. To disable it specify

```
CONCURRENCY=none
```

in `/etc/default/rcS`. For more information on this feature refer to the information available in `/usr/share/doc/insserv/README.Debian`.

Unified keyboard settings

In this new release, the settings for the keyboard have been unified so that both the console and the Xorg server use the same settings. The keyboard settings are now defined in the `/etc/default/keyboard` configuration file which overrides the keyboard defined in Xorg's configuration file.

The console-setup package now handles the keyboard for both environments as well as the font configuration for the console. You can reconfigure the keyboard layout and related settings by executing **dpkg-reconfigure keyboard-configuration** or by manually editing the /etc/default/keyboard configuration file.

Kernel mode setting

Graphics mode setting code for the most common desktop chipsets (from Intel, ATI/AMD and NVIDIA) has moved from the respective Xorg drivers to the Linux kernel. This provides a number of advantages, such as:

- More reliable suspend and resume
- Ability to use graphics devices without X
- Faster VT switch
- Native mode text console

More details are in “Graphics stack changes”一节 and in the Debian wiki [http://wiki.debian.org/KernelModesetting].

LDAP support

This Debian release comes with several options for implementing client-side authentication using LDAP. Users of the libnss-ldap and libpam-ldap packages should consider upgrading to libnss-ldapd and libpam-ldapd.

These newer packages delegate the LDAP queries to a central unprivileged daemon (**nslcd**) that provides separation between the process using the LDAP information and the daemon performing LDAP queries. This simplifies handling of secured LDAP connections, LDAP authentication credentials, provides a simpler mechanism to perform connection fail-over and debugging and avoids loading LDAP and related libraries into most applications.

Upgrading to libnss-ldapd and libpam-ldapd should be easy as existing configuration information will be mostly reused. Only for advanced configuration should any manual reconfiguration be necessary.

These packages however currently lack support for nested groups and only support password change using the LDAP password modify EXOP operation.

The stable-updates section

Some packages from proposed-updates may also be made available via the squeeze-updates mechanism. This path will be used for updates which many users may wish to install on their systems before the next point release is made, such as updates to virus scanners and timezone data. All packages from squeeze-updates will be included in point releases.

Note that this replaces the functionality previously provided by the volatile.debian.org archive [http://volatile.debian.org/].

In order to use packages from `squeeze-updates`, you can add an entry to your `sources.list`:

```
deb     http://mirrors.kernel.org/debian squeeze-updates main
contrib
deb-src http://mirrors.kernel.org/debian squeeze-updates main
contrib
```

The next time you run **apt-get update**, the system will become aware of the packages in the `squeeze-updates` section and will consider them when looking for packages to upgrade.

When a new package is made available via `squeeze-updates`, this will be announced on the debian-stable-announce [http://lists.debian.org/debian-stable-announce/] mailing list.

backports.org/backports.debian.org

The service provided by the backports.org repositories has been integrated in Debian infrastructure and is now an official Debian service [http://www.debian.org/News/2010/20100905], hosted at backports.debian.org [http://backports.debian.org/].

Comprehensive support for neuroimaging research

Debian GNU/Linux 6.0 is the first GNU/Linux distribution release ever to offer comprehensive support for magnetic resonance imaging (MRI) based neuroimaging research. It comes with up-to-date software for structural image analysis (e.g. `ants`), diffusion imaging and tractography (e.g. `mrtrix`), stimulus delivery (e.g. `psychopy`), MRI sequence development (e.g. `odin`), as well as a number of versatile data processing and analysis suites (e.g. `nipype`). Moreover, this release has built-in support for all major neuroimaging data formats. See the Debian Science [http://blends.alioth.debian.org/science/tasks/neuroscience-cognitive] and Debian Med [http://debian-med.alioth.debian.org/tasks/imaging] task pages for a comprehensive list of included software and the NeuroDebian webpage [http://neuro.debian.net] for further information.

第 3 章 安装系统

Debian 安装程序是 Debian 官方的安装系统。它提供了 Debian 操作系统的各种安装方式。您适合用何种安装方式，取决于您的计算机硬件架构。

您可以借助 Debian 网站 [http://www.debian.org/releases/stable/debian-installer/] 上的安装指南找到 squeeze 的安装程序映像。

安装手册也可以在 Debian 官方 CD/DVD 的第一张盘上找到，路径是：

```
/doc/install/manual/language/index.html
```

您也可以检查勘误表 [http://www.debian.org/releases/stable/debian-installer/index#errata]，以查看 Debian 安装程序的已知问题列表。

安装系统有哪些新特性?

自从在 Debian GNU/Linux 3.1 (sarge) 中第一次官方发布以来，Debian 安装程序有许多开发工作，在硬件支持上有显著改进，还增加了很多有趣的新功能。

在发布说明中，我们只列举安装程序的主要变更。如果您想对从 lenny 开始各项变更的详细情况有个大致的了解，请阅读 squeeze 之 beta 和 RC 版本的发布声明，它们位于 Debian 安装程序的新闻 [http://www.debian.org/devel/debian-installer/News/]网页上。

主要更新

Dropped platforms	Support for the Alpha ('alpha'), ARM ('arm') and HP PA-RISC ('hppa') architectures has been dropped from the installer. The 'arm' architecture is obsoleted by the ARM EABI ('armel') port.
Help during the installation process	The dialogs presented during the installation process now provide help information. Although not currently used in all dialogs, this feature would be increasingly used in future releases. This will improve the user experience during the installation process, especially for new users.
Installation of Recommended packages	The installation system will install all recommended packages by default throughout the process except for some specific situations in which the general setting gives undesired results.
Automatic installation of hardware-specific packages	The system will automatically select for installation hardware-specific packages when they are appropriate. This is achieved through the use of `discover-pkginstall` from the `discover` package.
Support for installation of previous releases	The installation system can be also used for the installation of previous release, such as lenny.
Improved mirror selection	The installation system provides better support for installing both squeeze as well as lenny and older releases (through the use of archive.debian.org). In addition, it will also check that the selected mirror is consistent and holds the selected release.
Changes in partitioning features	This release of the installer supports the use of the ext4 file system and it also simplifies the creation of RAID, LVM and crypto protected partitioning systems. Support for the reiserfs file system is no longer included by default, although it can be optionally loaded.
Support for loading firmware debs during installation	It is now possible to load firmware package files from the installation media in addition to removable media, allowing the creation of PXE images and CDs/DVDs with included firmware packages. Starting with Debian 6.0, non-free firmware has been moved out of main. To install Debian on hardware that needs non-free firmware, you can either provide the firmware yourself during installation or use pre-made non-free CDs/DVDs which include the firmware. See the Getting Debian section [http://www.debian.org/distrib] on the Debian website for more information.
新增语言支持	Thanks to the huge efforts of translators, Debian GNU/Linux can now be installed in 70 languages. This is seven more languages than in lenny. Most languages are available in both the

text-based installation user interface and the graphical user interface, while some are only available in the graphical user interface.

自动安装

前一节中所提到的一些变更，也意味着安装程序使用预配置文件进行自动安装的调整。这意味着，如果您有能在 lenny 安装程序中正常使用的预配置文件，您不能指望它能在新安装程序中正常使用，而无需修改。

安装指南 [http://www.debian.org/releases/stable/installmanual]现在有一个单独附录，用来描述使用预配置文件的方法。

第 4 章 Upgrades from Debian 5.0 (lenny)

升级前的准备

我们建议您在升级前阅读第 5 章 *squeeze 中需要注意的问题*中的信息。它描述了与升级过程有间接联系的潜在问题，但在升级前了解这些信息对您来说还是很重要的。

备份数据和配置文件

在升级系统前，强烈建议您进行一次完整的备份，或者至少备份您不愿意丢失的数据和配置信息。升级工具和流程是非常可靠的，但升级过程中的硬件错误会对您的系统造成严重损害。

The main things you'll want to back up are the contents of `/etc`, `/var/lib/dpkg`, `/var/lib/apt/extended_states` and the output of `dpkg --get-selections "*"` (the quotes are important). If you use **aptitude** to manage packages on your system, you will also want to back up `/var/lib/aptitude/pkgstates`.

升级过程本身不会修改 `/home` 下的任何内容。但某些程序(比如部分 Mozilla 套件，以及 GNOME 和 KDE 桌面环境)会在新版本的程序第一次启动时用新的默认值来覆盖现有的用户设置。做为一种预防措施，您也许想备份用户目录下的隐藏文件和目录(“dotfiles”)。该备份有助于您恢复或者重建原有设置。另外，您可能还需要把该事项通知给用户。

任何软件包安装操作都必须以超级用户权限执行，您可以以 `root` 身份登录，或使用 **su** 或者 **sudo** 来获取必要的访问权限。

升级需要几个前提条件，您应当在实际升级前检查它们。

提前告知用户

提前通知所有用户您正在计划的任何升级将是明智的决定，但是通过 **ssh** 连接访问您系统的用户可能在升级过程中不会注意到什么东西，而且应该可以继续正常工作。

如果您希望采取更多的预防措施，请在升级前备份或者卸载 `/home` 分区。

You will have to do a kernel upgrade when upgrading to squeeze, so a reboot will be necessary.

associated with your critical services. Upgrade these packages prior to doing the full upgrade described in “Upgrading the system”一节. This way you can ensure that these critical services are running and available through the full upgrade process, and their downtime is reduced.

准备恢复

由于 lenny 和 squeeze 的内核在驱动、硬件探测与命名以及设备文件的命名和排序等方面有着诸多变化，在更新后您可能会在重启系统时遇到很大的问题。本章和发行注记的下一章记录了很多已知的潜在问题。

由于这个原因，当您的系统重启失败(或对于远程管理系统来说，无法从网络唤醒)时，请确保您能够将其恢复。

如果您通过 **ssh** 远程连接进行升级，则强烈建议您采取必要的预防措施以便通过远程串行终端来访问该服务器。因为在升级内核并重启后，某些设备可能会被改名(如在“设备枚举的顺序”一节中所描述的情况)，而您将不得不通过本地控制台修复系统配置。还有，如果系统在升级过程中意外重启您可能需要使用本地控制台进行修复。

很明显首先应尝试的就是以您原来的内核重启。然而，由于本文档其它地方所描述的各种各样的问题，并不保证可以成功重启。

如果重启失败了，您需要采取替代方案来启动您的系统以便访问和修复它。其中一种选择是使用特制的急救盘或者 Linux live CD。以这些介质引导后，您应该可以挂载您的根文件系统并 `chroot` 到它里面来检查并修复问题。

我们推荐的另一种选择是使用 squeeze Debian 安装程序的*拯救模式*。使用安装程序的优点是，您可以从众多安装方式中选择最适合您情况的一种。更多信息请查询安装手册 [http://www.debian.org/releases/stable/installmanual]第 8 章的“修复损坏的系统”一节以及 Debian 安装程序常见问题 [http://wiki.debian.org/DebianInstaller/FAQ]。

initrd 引导时使用调试环境

`initramfs-tools` 在其生成的 initrd 中包含一个调试 shell 。如果 initrd 无法挂载您的根文件系统，您将会进入此调试 shell，里面可以使用基本的命令以帮助跟踪问题甚至有可能解决之。

需要检查的几个基本项目：`/dev` 下是否存在正确的设备文件；加载了什么模块(`cat /proc/modules`)；**dmesg** 的输出中有关驱动加载的错误信息。**dmesg** 的输出还会显示哪个设备文件被指定给哪个磁盘；您还应该检查 `echo $ROOT` 的输出，以确保根文件系统在预想的设备上。

如果您确实修复了问题，输入 `exit` 会退出调试 shell，并从先前失败的地方继续启动进程。当然您还需要修复更深层次的问题，并重新生成 initrd，以使下次引导不再失败。

为升级准备安全环境

发行版升级应该从本机的文本模式虚拟控制台(或者直连串行终端)，或者通过 **ssh** 远程连接进行。

重要

If you are using some VPN services (such as `tinc`) they might not be available throughout the upgrade process. Please see “Prepare for downtime on services”一节.

为了在远程升级时获得额外的可靠性保障，我们建议您在由 **screen** 程序生成的虚拟控制台中执行升级过程。它能进行可靠的重新连接并确保，即使远程连接失败，升级过程也不会被打断。

重要

您*不应该*在您要升级的机器上使用 **telnet**、**rlogin**、**rsh** 之类的东西，或者从 **xdm**、**gdm**、**kdm** 之类管理的 X 会话中升级。因为那些服务中的任意一个在升级中都有可能被中止，进而导致出现一个*不可访问*的，只升级了一半的系统。

Remove conflicting packages

Due to bug #512951 [http://bugs.debian.org/512951], the `splashy` package needs to be purged prior to the upgrade.

```
# apt-get purge splashy
```

检查系统状态

此章所述的升级过程是为了从“纯粹的” lenny 升级而安排的，即系统中没有第三方的软件。为使升级过程最可靠，您可能会希望在升级前，从系统中移除第三方的软件包。

Direct upgrades from Debian releases older than 5.0 (lenny) are not supported. Please follow the instructions in the Release Notes for Debian GNU/Linux 5.0 [http://www.debian.org/releases/lenny/releasenotes] to upgrade to 5.0 .

此过程也假定您的系统已经更新至 lenny 的最新发行点。如果您还未做或是不确定，请按照“升级您的 lenny 系统”一节中的说明做。

复审包管理器中的未决操作

在某些情况下，使用 **apt-get** 代替 **aptitude** 安装软件包时，可能会让 **aptitude** 认为包“未被使用”，并安排它被移除。一般来说，在正式升级前您应该确保系统是最新且“干净的”。

有鉴于此，您应该复查包管理器 **aptitude** 中是否有未决操作。如果包管理器中有软件包被安排为移除或更新，那么这可能对升级过程有负面影响。注意，要更正这一错误只可能是，您的 `sources.list` 仍然指向 *lenny* 而非 *stable* 或是 *squeeze*。参看“检查您的 sources list”一节。

要执行复查的话，您必须以“图形模式”运行 **aptitude** 并按下 **g** (“Go”)。如果显示有任何未决操作，您都应该复查它们，然后要么修复，要么执行建议的操作。如果没有建议的操作，会有一条信息 “没有软件包需要安装、删除或者升级”出现。

禁用 **APT pinning** 操作

如果已经设置 APT 从一个非 stable(如 testing)版安装特定软件包，您可能必须改变 APT pinning 设置(保存在 `/etc/apt/preferences` 中)以允许升级至新的 stable 版中的包。更多有关 APT pinning 的信息可以在 apt_preferences(5) 中找到。

检查包状态

不管用什么方法升级，我们都建议您先检查所有软件包的状态，并验证所有包都处于可升级状态。以下命令会显示任何半安装或是配置失败的包，还有那些有任何错误状态的包。

```
# dpkg --audit
```

您也可以用 **dselect**、**aptitude** 来审查系统中的所有包的状态，也可以用如下的命令来审查

```
# dpkg -l | pager
```

```
# dpkg --get-selections "*" > ~/curr-pkgs.txt
```

在升级前移除所有的 hold 状态是很有必要的。如果有任何对升级而言有重大影响的包处于 hold 状态，升级会失败。

注意 **aptitude** 使用一种与 **apt-get** 及 **dselect** 不同的方法来注册 hold 状态的包。您可以用以下命令来确认 **aptitude** 中处于 hold 状态的包。

```
# aptitude search "~ahold" | grep "^.h"
```

如果您想检查 **apt-get** 中哪些包设置了 hold 状态，可以用

```
# dpkg --get-selections | grep hold
```

如果您在本地更改并重新编译了一个包，且并未重命名，或是在版本号中放入新的纪元号，您就必须将它设为 hold 状态，以防止它被升级。

The “hold” package state for **apt-get** can be changed using:

```
# echo package_name hold | dpkg --set-selections
```

Replace `hold` with `install` to unset the “hold” state.

如果有任何需要修复的东西，您最好确保 `sources.list` 仍然指向 lenny ，就像“检查您的 sources list”一节中所说的那样。

proposed-updates 区

如果您已经把 `proposed-updates` 区加入您的 `/etc/apt/sources.list` 文件，那么您应当在升级前移除它，这样可以降低冲突发生的概率。

非官方源和 **backports**

如果有任何非 Debian 的软件包安装在您的系统中，您应该意识到它们可能会在升级期间因为依赖性冲突而被移除。如果这些包是通过在 /etc/apt/source.list 中添加一个额外的软件源而安装的，您应该检查那个软件源是否也提供 squeeze 下编译好的包，并同时像您的 Debian 软件源那样更改相应的源。

某些用户可能有非官方的 backported "较新的" 包版本*存在*于他们安装的 Debian lenny 系统中。升级期间那样的包是最可能引起问题的，因为它们可能会导致文件冲突。"升级期间可能遇到的问题"一节已经有一些关于如何处理将会出现的文件冲突的信息了。

为 **APT** 准备源

在开始升级前，您必须在软件包源列表 /etc/apt/sources.list 中设定 apt 的配置文件。

apt 会查找所有通过任意 "deb" 行找到的包，并安装带最高版本号的包，给予该文件第一行以优先权(所以，如果有多个镜像地址，您最好先命名本地硬盘，然后是 CD-ROM，最后是 HTTP/FTP 镜像)。

一个发行版通常既能通过它的代号(如：lenny, squeeze)引用，也可以用它的状态名引用(如：oldstable, stable, testing, unstable)。引用发行版的代号的好处在于，您绝对不会被新的发行版问题困扰且被带至此处。当然，这也意味着您不得不自己关注新版的发行。如果转而使用状态名，一旦有新版发行，您将只会看到一堆可用的软件包的更新。

添加互联网 **APT** 源

默认配置用于从主 Debian 网络服务器上安装，但您可能希望修改 /etc/apt/sources.list 以使用其它的镜像，离您最近的网络镜像是一种更好的选择。

Debian HTTP 或 FTP 镜像地址能在 http://www.debian.org/distrib/ftplist 找到(参看" Debian 镜像列表"一节)。HTTP 镜像通常比 FTP 镜像快。

例如，假设离您最近的 Debian 镜像是 http://mirrors.kernel.org。当用网络浏览器或是 FTP 程序检查那个镜像时，您会注意到主目录被组织成了如下情况:

```
http://mirrors.kernel.org/debian/dists/squeeze/main/binary-
kfreebsd-i386/...
http://mirrors.kernel.org/debian/dists/squeeze/contrib/binary-
kfreebsd-i386/...
```

要让 apt 使用这个镜像，您将此行添加至 sources.list 文件:

```
deb http://mirrors.kernel.org/debian squeeze main contrib
```

注意明显加上去的'dists'，这个发行版名字后的参数用于将路径扩展成多个目录。

添加新源后，在 sources.list 中通过在以前存在的 "deb" 行前加上一个井号(#)来禁用它们。

添加本地镜像 **APT** 源

您可能希望通过修改 `/etc/apt/sources.list` 来使用一个本地磁盘上的镜像(也许是通过 NFS 挂载的)，来代替 HTTP 或 FTP 软件源镜像。

例如，假设您的镜像位于 `/var/ftp/devian/` 下，并且有如下的主目录：

```
/var/ftp/debian/dists/squeeze/main/binary-kfreebsd-i386/...
/var/ftp/debian/dists/squeeze/contrib/binary-kfreebsd-i386/...
```

```
deb file:/var/ftp/debian squeeze main contrib
```

注意明显加上去的‘`dists`’，这个发行版名字后的参数用于将路径扩展成多个目录。

添加新源后，在 `sources.list` 中通过在以前存在的 “`deb`” 行前加上一个井号(**#**)来禁用它们。

从 **CD-ROM** 或 **DVD** 添加 **APT** 源

如果您只想用 CD 安装，在 `/etc/apt/sources.list` 中的 “`deb`” 行前放上井号(**#**)注释掉它们。

确保在 `/etc/fstab` 中有一行允许您挂载 CD-ROM 于 `/cdrom` 挂载点(**apt-cdrom** 必须指定挂载点为 `/cdrom`)。例如，假设 `/dev/hdc` 就是您的 CD-ROM，`/etc/fstab` 中应该带有一行：

```
/dev/hdc /cdrom auto defaults,noauto,ro 0 0
```

注意在第四段 `defaults,noauto,ro` 之间必须*无空格*。

要验证设置是否有效，插入一片 CD，尝试运行

```
# mount /cdrom    # 挂载 CD 至挂载点
# ls -alF /cdrom  # 显示 CD 的根目录
# umount /cdrom   # 卸载 CD
```

下一步，运行：

```
# apt-cdrom add
```

每片您所拥有的 Debian 二进制 CD-ROM 都要这么做，以便将每片 CD 的数据添加至 APT 的数据库。

升级软件包

The recommended way to upgrade from previous Debian GNU/Linux releases is to use the package management tool **apt-get**. In previous releases, **aptitude** was recommended for this purpose, but recent versions of **apt-get** provide equivalent functionality and also have shown to more consistently give the desired upgrade results.

不要忘记挂载所有必需的分区（尤其是根分区和 `/usr` 分区）为可读写状态，用以下命令：

```
# mount -o remount,rw /mountpoint
```

下一步您应该详细检查 APT 源记录 (`/etc/apt/source.list`) 要么指向 “`squeeze`” 又或指向 “`stable`”。不应该有任何指向 lenny 的源记录。

> 注意
>
> Source lines for a CD-ROM might sometimes refer to “`unstable`”; although this may be confusing, you should *not* change it.

记录会话

强烈推荐您使用 **/usr/bin/script** 程序来记录升级会话中的交互信息。这样如果有问题了，您就有一份问题报告。而且需要的话，您也可以在错误报告中提供额外信息。要开始记录，输入：

```
# script -t 2>~/upgrade-squeeze.time -a ~/upgrade-squeeze.script
```

或是类似命令。不要将输出文件放在临时目录下，如 `/tmp` 或 `/var/tmp` (这些目录下的文件可能会在升级或重启时被删除)

The typescript will also allow you to review information that has scrolled off-screen. If you are at the system's console, just switch to VT2 (using **Alt**+**F**2) and, after logging in, use `less -R ~root/upgrade-squeeze.script` to view

在完成升级后，您可以在提示符下输入 `exit` 停止 **script**。

如果已经对 **script** 使用了 *-t* 选项，您就可以用 **scriptplay** 程序来回放整个过程：

```
# scriptreplay ~/upgrade-squeeze.time ~/upgrade-squeeze.script
```

更新包列表

首先，需要获取新发行版的可用包列表。执行：

```
# apt-get update
```

确保您有足够的空间升级

You have to make sure before upgrading your system that you have sufficient hard disk space when you start the full system upgrade described in “Upgrading the system”一节. First, any package needed for installation that is fetched from the network is stored in `/var/cache/apt/archives` (and the

partial/ subdirectory, during download), so you must make sure you have enough space on the file system partition that holds /var/ to temporarily download the packages that will be installed in your system. After the download, you will probably need more space in other file system partitions in order to both install upgraded packages (which might contain bigger binaries or more data) and new packages that will be pulled in for the upgrade. If your system does not have sufficient space you might end up with an incomplete upgrade that might be difficult to recover from.

apt-get can show you detailed information of the disk space needed for the installation. Before executing the upgrade, you can see this estimate by

```
# apt-get -o APT::Get::Trivial-Only=true dist-upgrade
[ ... ]
XXX upgraded, XXX newly installed, XXX to remove and XXX not
upgraded.
Need to get xx.xMB of archives.
After this operation, AAAMB of additional disk space will be used.
```

注意

由于下一节将要谈到的问题，在即将开始更新前执行这条命令可能会给出一个错误。如果那样的话，您需要等至已经如“最小系统升级”一节所述的那样做过最小系统升级并且升级过内核，这样您才可以运行这条命令来预估所需的磁盘空间。

If you do not have enough space for the upgrade, **apt-get** will warn you with a message like this:

```
E: You don't have enough free space in /var/cache/apt/archives/.
```

In this situation, make sure you free up space beforehand. You can:

Remove packages that have been previously downloaded for installation (at `/var/cache/apt/archives`). Cleaning up the package cache by running **apt-get clean** will remove all previously downloaded package files.

删除被遗忘的包。如果您安装过 `popularity-contest`，可以用 **popcon-largest-unused** 来列出系统中占用大量空间而又不用的那些包。您也可以用 **deborphan** 或是 **debfoster** 来找出过时的包(参看“过时的包”一节)。另一种可选方案是，您以“图形模式”运行 **aptitude** 在“过时的且由本机创建的包”下找到过时的包。

删除占用太多空间且目前不需要的包(您总是可以在升级后重装它们的)。您可以用 **dpigs** (可在 `debian-goodies` 包中找到)或是用 **wajig** (运行 `wajig size`) 列出占用大量空间的包。

You can list packages that take up most of the disk space with `aptitude`. Start **aptitude** in “visual mode”, select Views → New Flat Package List, press **l** and enter `~i`, press **S** and enter `~installsize`, then it will give you nice list to work with.

如果不需要的话可以从系统中移除翻译和本地化文件。您可以安装并配置 `localepurge` 软件包，这样只有一小部分选择的本地化设置被保留在系统中。这将减少 `/usr/share/locale` 所使用的磁盘空间。

将 `/var/log/` 下的系统日志临时放到其它系统，或是永久删除。

使用临时目录 `/var/cache/apt/archives`：您可以使用来自另一个系统的临时缓存目录(USB 存储设备，临时硬盘，使用中的文件系统……)

> 注意
>
> 不要使用 NFS，这是因为网络连接可能在升级期间断开。

例如，假设您将 USB 盘挂在 `/media/usbkey` 下：

删除以前安装时下载的包：

```
# apt-get clean
```

将 `/var/cache/apt/archives` 目录复制到 USB 磁盘：

```
# cp -ax /var/cache/apt/archives /media/usbkey/
```

将临时缓存目录挂载至当前目录：

```
# mount --bind /media/usbkey/archives /var/cache/apt/archives
```

升级后，还原 `/var/cache/apt/archives` 目录：

```
# umount /media/usbkey/archives
```

删除留下的 `/media/usbkey/archives`。

您可以在挂载于系统中的任何文件系统上创建临时缓存目录。

Do a minimal upgrade of the system (see “最小系统升级”一节) or partial upgrades of the system followed by a full upgrade. This will make it possible to upgrade the system partially, and allow you to clean the package cache before the full upgrade.

注意为了安全地移除软件包，建议您换回 lenny 的 `sources.list`，就像“检查您的 sources list”一节中描述的那样。

最小系统升级

In some cases, doing the full upgrade (as described below) directly might remove large numbers of packages that you will want to keep. We therefore recommend a two-part upgrade process, first a minimal upgrade to overcome these conflicts, then a full upgrade as described in “Upgrading the system”一节.

To do this first, run:

```
# apt-get upgrade
```

这会升级那些不需要删除或安装其它任何包的软件。

The minimal system upgrade can also be useful when the system is tight on space and a full upgrade cannot be run due to space constrains.

Upgrading the kernel and udev

The `udev` version in squeeze requires a kernel of version 2.6.26 or newer with the `CONFIG_SYSFS_DEPRECATED` option disabled and the `CONFIG_INOTIFY_USER` and `CONFIG_SIGNALFD` options enabled. Because the standard Debian kernels in lenny (version 2.6.26) have `CONFIG_SYSFS_DEPRECATED` enabled, and the `udev` version in lenny will not provide all the functionality expected by the latest kernels, special care must be taken when upgrading to avoid putting your system in an unbootable state.

Booting the 2.6.26 kernel from lenny with the `udev` from squeeze may result in a failure to correctly assign names to network devices, and will also fail to apply certain additional permissions to block devices (such as access by the `disk` group). The software itself will appear to be working, but some rules (for example, network-based rules) will not be loaded properly. It is therefore strongly recommended that you upgrade the kernel on its own at this point, to ensure a compatible kernel is available before upgrading `udev`.

要进行此次内核升级，执行：

```
# apt-get install linux-image-2.6-flavor
```

参看“安装内核元数据包”一节来帮助您决定应该安装哪个修订号的内核包。

Immediately after upgrading the kernel, you should also install the new `udev` to minimize the risk of other incompatibilities caused by using the old udev with a new kernel . You can do this by running:

```
# apt-get install udev
```

Once you have upgraded both the kernel and `udev` the system should be rebooted.

Upgrading the system

Once you have taken the previous steps, you are now ready to continue with the main part of the upgrade. Execute:

```
# apt-get dist-upgrade
```

注意

The upgrade process for other releases recommended the use of **aptitude** for the upgrade. This tool is not recommended for upgrades from lenny to squeeze.

这将对系统进行一次全面的升级，比如：安装所有包的最新可用版本，解决不同发行版的包之间所有潜在的依赖性变动。如有必要，它会安装一些新包(通常是新库，或是重命名的包)，并删除任何有冲突的过时包。

当从一套 CD-ROM (或 DVD)升级时，您会在升级期间的某几个地方被要求插入指定的 CD 盘片。您可能不得不多次插入相同的盘片，这是因为互相依赖的包已经被分散到整个 CD 套件中去了。

New versions of currently installed packages that cannot be upgraded without changing the install status of another package will be left at their current version (displayed as “held back”). This can be resolved by either using **aptitude** to choose these packages for installation or by trying `apt-get -f install` *`package`*.

升级期间可能遇到的问题

The following sections describe known issues that might appear during an upgrade to squeeze.

cryptoloop support not included in the squeeze Linux kernel

Support for cryptoloop has been dropped from the Linux kernel packages included in Debian 6.0. Existing installations using cryptoloop need to be transitioned to dm-crypt before the upgrade.

Expected removals

The upgrade process to squeeze might ask for removal of packages in the system. The precise list of packages will vary depending on the set of packages that you have installed. These release notes give general advice on these removals, but if in doubt, it is recommended that you examine the package removals proposed by each method before proceeding.

Some common packages that are expected to be removed include: `autofs` (replaced by `autofs5`), `dhcp3` (replaced by `isc-dhcp`), `madwifi-source`, `python-setuptools` and `python2.4` (replaced by `python2.6`). For more information about packages obsoleted in squeeze, see “过时的包”一节.

Errors running aptitude or apt-get

如果使用 **aptitude**, **apt-get** 或 **dpkg** 操作时出现错误

```
E: Dynamic MMap ran out of room
```

默认的缓存区空间不足。您可以通过删除或注释掉 `/etc/apt/sources.list` 中不需要的行，或通过增加缓存大小来解决这个问题。缓存大小能通过在 `/etc/apt/apt.conf` 中设置 `APT::Cache-Limit` 来增加。下面的命令会为它设置一个足够升级值：

```
# echo 'APT::Cache-Limit "12500000";' >> /etc/apt/apt.conf
```

这里假设您还未在那个文件中对该变量进行过设置。

Conflicts or Pre-Depends loops

Sometimes it's necessary to enable the `APT::Force-LoopBreak` option in APT to be able to temporarily remove an essential package due to a Conflicts/Pre-Depends loop. **apt-get** will alert you of this and abort the upgrade. You can work around this by specifying the option `-o APT::Force-LoopBreak=1` on the **apt-get** command line.

It is possible that a system's dependency structure can be so corrupt as to require manual intervention. Usually this means using **apt-get** or

```
# dpkg --remove package_name
```

来消除某些引起问题的包，或是

```
# apt-get -f install
# dpkg --configure --pending
```

在极端情况下，您可能不得不像以下命令一样强制重新安装某个包

```
# dpkg --install /path/to/package_name.deb
```

File conflicts

如果您从“纯粹的” lenny 系统升级就不会出现文件冲突，但如果您装有非官方的 backport 包就可能出现冲突。文件冲突会导致类似以下这样的错误：

```
Unpacking <package-foo> (from <package-foo-file>) ...
dpkg: error processing <package-foo> (--install):
 trying to overwrite `<some-file-name>',
 which is also in package <package-bar>
dpkg-deb: subprocess paste killed by signal (Broken pipe)
 Errors were encountered while processing:
 <package-foo>
```

您可以尝试用错误信息中的*最后*一行提示，强制删除包来解决文件冲突：

After fixing things up, you should be able to resume the upgrade by repeating the previously described **apt-get** commands.

Configuration changes

During the upgrade, you will be asked questions regarding the configuration or re-configuration of several packages. When you are asked if any file in the `/etc/init.d` directory, or the `/etc/manpath.config` file should be replaced by the package maintainer's version, it's usually necessary to answer `yes' to ensure system consistency. You can always revert to the old versions, since they will be saved with a `.dpkg-old` extension.

如果您不确定该做什么，那就记下包或文件的名称，并稍后排出它们的顺序。您可以通过在 script 命令记录的输出文件中搜索来查看升级期间显示在屏幕上的信息。

Change of session to console

If you are running the upgrade using the system's local console you might find that at some points during the upgrade the console is shifted over to a different view and you lose visibility of the upgrade process. For example, this will happen in desktop systems when **gdm** is restarted.

To recover the console where the upgrade was running you will have to use **Ctrl**+**Alt**+**F**1 to switch back to the virtual terminal 1 if in the graphical startup screen or use **Alt**+**F**1 if in the local text-mode console. Replace F1 with the function key with the same number of the virtual terminal the upgrade was running in. You can also use **Alt**+**Left Arrow** or **Alt**+**Right Arrow** to switch between the different text-mode terminals.

Special care for specific packages

In most cases, packages should upgrade smoothly between lenny and squeeze. There are a small number of cases where some intervention may be required, either before or during the upgrade; these are detailed below on a per-package basis.

Evolution

Evolution (the GNOME Desktop mail client) has been updated from version 2.22 to 2.30. This changes the storage format used by the package for local data and there is a possibility of data loss if the upgrade is performed whilst evolution is running. Exiting the application itself may not be sufficient, as various related components will continue to run in the background. To avoid any potential issues, it is recommended that you completely exit your desktop environment before beginning the upgrade to squeeze.

As part of the upgrade process, evolution will check whether any related processes are running and will recommend that they be closed. A secondary check for processes will then be performed; if necessary, a choice will be offered between allowing the remaining processes to be killed or aborting the upgrade in order to resolve the situation by hand.

升级内核与相关包

这一节解释了如何升级您的内核，以及明确有关此次升级的潜在问题。您可以安装由 Debian 提供的 linux-image-* 包，或者从源码编译一个自定义的内核。

注意本节的很多信息基于假设，即您会使用一个模块化的 Debian 内核，以及 initramfs-tools 和 udev。如果您选择使用一个不需要 initrd 的自定义内核，或是您使用了一种不同的 initrd 生成器，对您来说某些信息可能会不一样。

安装内核元数据包

当您从 lenny 全面升级至 squeeze 时，强烈推荐您安装新的 linux-image-2.6-* 元数据包。此包可能由 dist-upgrade 自动安装了。您可以验证此步，执行：

```
# dpkg -l "linux-image*" | grep ^ii
```

如果您没有看到任何输出，那么您需要手工安装一个新的 linux-image 包。要查看可用的 linux-image-2.6 的元数据包列表，执行：

```
# apt-cache search linux-image-2.6- | grep -v transition
```

If you are unsure about which package to select, run uname -r and look for a package with a similar name. For example, if you see '2.6.26-2-686', it is recommended that you install linux-image-2.6-686. You may also use **apt-cache** to see a long description of each package in order to help choose the best one available. For example:

```
# apt-cache show linux-image-2.6-686
```

You should then use apt-get install to install it. Once this new kernel is installed you should reboot at the next available opportunity to get the benefits provided by the new kernel version.

For the more adventurous there is an easy way to compile your own custom kernel on Debian GNU/Linux. Install the kernel-package tool and read the documentation in /usr/share/doc/kernel-package. Alternatively, you can also use the kernel sources, provided in the linux-source-2.6 package. You can make use of the deb-pkg target available in the sources'

package. You can make use of the deb-pkg target available in the sources makefile for building a binary package. There are some differences in these two approaches, please consult the respective package's documentation.

如果有可能，把内核包的升级从主 dist-upgrade 中独立出来是有利的，这能减少出现一个临时不可引导的系统的机会。注意，这只能在最小升级(参看“最小系统升级”一节)结束后才能做。

设备枚举的顺序

In lenny and later, a new kernel mechanism for hardware discovery may change the order in which devices are discovered on your system on each boot, affecting the device names assigned to them. For example, if you have two network adapters that are associated with two different drivers, the devices eth0 and eth1 refer to may be swapped.

For network devices, this reordering is normally avoided by the definitions at /etc/udev/rules.d/70-persistent-net.rules for udev. Since these rules were already in place in lenny, no additional action should be required when upgrading to squeeze to get the benefit of stable network device names. Please note, however, that this udev mechanism means that a given network device name is tied to a particular piece of hardware; if you, for instance, exchange ethernet adapters in a deployed squeeze system, the new adapter will get a new interface name instead of using the existing one. To reuse an existing device name for new hardware, you will need to delete the associated entry from /etc/udev/rules.d/70-persistent-net.rules.

For storage devices, you may be able to avoid this reordering by using initramfs-tools and configuring it to load storage device driver modules in the same order they are currently loaded. However, in light of other changes to the storage subsystem of the Linux kernel as described at “Migration of disk drivers from IDE to PATA subsystem”一节, this is usually not worth the effort and it is recommended instead to use device names that are guaranteed to be stable over time, such as the UUID aliases in the /dev/disk/by-uuid/ directory or LVM device names in /dev/mapper/.

引导期间的问题

如果用 initramfs-tools 创建的 initrd 引导系统，在某些情况下由 udev 创建的设备文件可能对于启动脚本的执行来讲太慢了点。

这通常表现为引导失败，由于根文件系统无法挂载，您会进入调试环境。但当您回头检查时，所需的所有设备都存在于 /dev 下。只要根文件系统存在于 USB 磁盘或是 RAID 上，尤其是使用了 LILO 时，就会出现这种问题。

解决此问题的方法就是用引导参数 rootdelay=*9*。这个超时值(秒)可能需要调整一下。

为下个发行版做准备

升级完成后，您可以为下个发行版做点事。

像“过时的包”一节中描述的那样移除过时的和未使用的包。您应该核查这些包所用的配置文件，并考虑完全删除这些软件包以移除它们的配置文件。

Deprecated components

With the next release of Debian GNU/Linux 7.0 (codenamed wheezy) some features will be deprecated. Users will need to migrate to other alternatives to prevent trouble when updating to 7.0.

OpenVZ and Linux-Vserver: Debian GNU/Linux 6.0 will be the last release to include Linux kernel virtualization featuresets outside of mainline. This means that the OpenVZ and Linux-Vserver featuresets should be considered deprecated, and users should migrate to linux-2.6 upstream merged virtualization solutions like KVM, Linux Containers or Xen.

The gdm package (GNOME Display Manager version 2.20) will be obsoleted by gdm3, a rewritten version. See “GNOME 桌面改变与支持”一节 for more information.

过时的包

Introducing several thousand new packages, squeeze also retires and omits more than four thousand old packages that were in lenny. It provides no upgrade path for these obsolete packages. While nothing prevents you from continuing to use an obsolete package where desired, the Debian project will usually discontinue security support for it a year after squeeze's release，且通常不会同时提供其它支持。推荐用可用的替代品代替它们。

为什么包会从发行版中移除？这有很多原因，如：它们不再被上游作者维护了；没有 Debian 开发者对维护这个包感兴趣；这些包提供的功能被不同的软件（或新版本）替代了；或者由于它们自身的问题，因而被认为不适用于 squeeze。 最后一种情况下，这些包有可能仍然位于 “unstable” 版之下。

检测在已更新的系统中哪些包是“过时”的现在容易得很，因为包管理的前台程序会标记它们的。如果您使用的是 **aptitude**，您将在“过时的和本机创建的包”条目中看到这些包。**dselect** 提供类似的条目，但它显示的列表有所不同。

Also, if you have used **aptitude** or **apt-get** to manually install packages in lenny it will have kept track of those packages you manually installed and will be able to mark as obsolete those packages pulled in by dependencies alone which are no longer needed if a package has been removed. **aptitude** and apt, unlike **deborphan**, will not mark for removal packages that you manually installed, as opposed to those that were automatically installed through dependencies. To remove automatically installed packages that are no longer used, run:

```
# apt-get autoremove
```

您可以用其它的工具来找出过时的包，例如 **deborphan**，**debfoster** 或 **cruft**。推荐使用 **deborphan**，尽管它(默认情况下)只报告过时的库，即“libs”或是“oldlibs”部分中的未被其它包依赖的软件包。不要盲目的移除那些工具要用到的包，尤其是当您正在使用激进的非默认的选项，它们容易引起严重错误。极度推荐在您移除它们之前，手工核查那些建议移除的包(例如：它们的内容、大小以及描述信息)。

Debian 错误跟踪系统 [http://bugs.debian.org/]通常会提供额外信息，这些都是有关这个包为什么要被移除的信息。您应该既查看此包自身的归档错误报告，同时也要看一下 ftp.debian.org pseudo-package [http://bugs.debian.org/cgi-bin/pkgreport.cgi?pkg=ftp.debian.org&archive=yes] 中的归档错误报告。

The list of obsolete packages includes:

The `plone` content management suite. This has been done on request by the developers to use the Unified Installer for Linux, which they consider their only supported deployment platform. The recommended tool for installing Plone on a Debian GNU/Linux system is the Unified Installer, available for download from http://plone.org/

`nessus`, the vulnerability scanning server and its associated libraries and other software. It has been deprecated in favor of the software provided by OpenVAS which includes `openvas-server` and `openvas-client`. As there is no automatic upgrade path you will have to install OpenVAS and manually move over your Nessus service configuration (users, certificates, etc.) to OpenVAS.

`postgresql-8.3`, successor is `postgresql-8.4`.

`mysql-server-5.0`, successor is `mysql-server-5.1`.

`python2.4`, successor is `python2.6`.

Java 5 software including the packages `sun-java5-jre` and `sun-java5-bin`, successor is Java 6: `sun-java6-jre` and associated packages.

`apt-proxy` is no longer provided, alternatives to this tool include `apt-cacher-ng`, `apt-cacher` and `approx`. Although no automatic upgrade path exists, user of `apt-proxy` can switch to these alternatives by manually installing any of these packages.

Some of Xorg's video drivers are no longer available in squeeze and are obsolete. This includes `xserver-xorg-video-cyrix`, `xserver-xorg-video-i810`, `xserver-xorg-video-imstt`, `xserver-xorg-video-nsc`, `xserver-xorg-video-sunbw2`, and `xserver-xorg-video-vga`. They might be removed through the upgrade. Users should install `xserver-xorg-video-all` instead.

The utility used in lenny to display a splash image at boot time, `usplash`, is no longer available. It has been replaced by `plymouth`.

第 5 章 squeeze 中需要注意的问题

潜在的问题

Sometimes, changes introduced in a new release have side-effects we cannot reasonably avoid, or they expose bugs somewhere else. This section documents issues we are aware of. Please also read the errata, the relevant packages' documentation, bug reports and other information mentioned in “更多读物”一节。

Migration of disk drivers from IDE to PATA subsystem

The new Linux kernel version provides different drivers for some PATA (IDE) controllers. The names of some hard disk, CD-ROM, and tape devices may change.

It is now recommended to identify disk devices in configuration files by label or UUID (unique identifier) rather than by device name, which will work with both old and new kernel versions. Upon upgrading to the squeeze version of the Debian kernel packages, the `linux-base` package will offer to do this conversion for you in the config files for most of the filesystem-related packages on the system, including the various bootloaders included in Debian. If you choose not to update the system configuration automatically, or if you are not using the Debian kernel packages, you must update device IDs yourself before the next system reboot to ensure the system remains bootable.

mdadm metadata format change requires recent Grub

The following only applies to users who want to let the `grub-pc` bootloader load the kernel directly off a RAID device created with `mdadm` 3.x and default values, or when the metadata version is explicitly set using `-e`. Specifically, this includes all arrays created during or after the installation of Debian squeeze. Arrays created with older mdadm versions, and RAIDs created with the command-line option `-e 0.9` are not affected.

Versions of `grub-pc` older than 1.98+20100720-1 will not be able to boot directly off a RAID with the 1.x metadata formats (the new default is 1.2). To ensure a bootable system, please make sure to use `grub-pc` 1.98+20100720-1 or later, which is provided by Debian squeeze. An unbootable system may be rescued with Super Grub2 Disk [http://www.supergrubdisk.org/super-grub2-disk/] or grml [http://grml.org].

pam_userdb.so breakage with newer libdb

Some Berkeley Database version 7 files created with libdb3 cannot be read by newer libdb versions (see bug #521860 [http://bugs.debian.org/521860]). As a workaround, the files can be recreated with **db**4.8_**load**, from the `db4.8-util` package.

Potential issues with diversions of /bin/sh

If you have previously added a local diversion for /bin/sh, or modified the /bin/sh symlink to point to somewhere other than /bin/bash, then you may encounter problems when upgrading the dash or bash packages. Note that this includes changes made by allowing other packages (for example mksh) to become the default system shell by taking over /bin/sh.

If you encounter any such issues, please remove the local diversion and ensure that the symlinks for both /bin/sh and its manual page point to the files provided by the bash package and then **dpkg-reconfigure --force**

```
dpkg-divert --remove /bin/sh
dpkg-divert --remove /usr/share/man/man1/sh.1.gz

ln -sf bash /bin/sh
ln -sf bash.1.gz /usr/share/man/man1/sh.1.gz
```

Change in kernel policy regarding resource conflicts

The default setting for the acpi_enforce_resources parameter in the Linux kernel has changed to be "strict" by default. This can lead some legacy sensor drivers to be denied access to the sensors' hardware. One workaround is to append "acpi_enforce_resources=lax" to the kernel command line.

LDAP support

A feature in the cryptography libraries used in the LDAP libraries causes programs that use LDAP and attempt to change their effective privileges to fail when connecting to an LDAP server using TLS or SSL. This can cause problems for suid programs on systems using libnss-ldap like **sudo**, **su** or **schroot** and for suid programs that perform LDAP searches like sudo-ldap

It is recommended to replace the libnss-ldap package with libnss-ldapd, a newer library which uses separate daemon (**nslcd**) for all LDAP lookups. The replacement for libpam-ldap is libpam-ldapd.

Note that libnss-ldapd recommends the NSS caching daemon (nscd) which you should evaluate for suitability in your environment before installing. As an alternative to nscd you can consider unscd.

Further information is available in bugs #566351 [http://bugs.debian.org/566351] and #545414 [http://bugs.debian.org/545414].

sieve service moving to its IANA-allocated port

The IANA port allocated for ManageSieve is 4190/tcp, and the old port used by **timsieved** and other managesieve software in many distributions (2000/tcp) is allocated for Cisco SCCP usage, according to the IANA registry [http://www.iana.org/assignments/port-numbers].

Starting with the version 4.38 of the Debian `netbase` package, the `sieve` service will be moved from port 2000 to port 4190 in the `/etc/services` file.

Any installs which used the `sieve` service name instead of a numeric port number will switch to the new port number as soon as the services are restarted or reloaded, and in some cases, immediately after `/etc/services` is

This will affect Cyrus IMAP. This may also affect other sieve-enabled software such as DoveCot.

In order to avoid downtime problems, mail cluster administrators using Debian are urged to verify their Cyrus (and probably also DoveCot) installs, and take measures to avoid services moving from port 2000/tcp to port 4190/tcp by surprise in either servers or clients.

It is worth noting that:

- `/etc/services` will only be automatically updated if you never made any modifications to it. Otherwise, you will be presented with a prompt by dpkg asking you about the changes.
- You can edit `/etc/services` and change the `sieve` port back to 2000 if you want (this is not recommended, though).
- You can edit `/etc/cyrus.conf` and any other relevant configuration files for your mail/webmail cluster (e.g. on the sieve web frontends) ahead of time to force them all to a static port number.
- You can configure cyrus master to listen on both ports (2000 and 4190) at the same time, and thus avoid the problem entirely. This also allows for a much more smooth migration from port 2000 to port 4190.

Security status of web browsers

Debian 6.0 includes several browser engines which are affected by a steady stream of security vulnerabilities. The high rate of vulnerabilities and partial lack of upstream support in the form of long term branches make it very difficult to support these browsers with backported security fixes. Additionally, library interdepencies make it impossible to update to newer upstream releases. As such, browsers built upon the qtwebkit and khtml engines are included in Squeeze, but not covered by full security support. We will make an effort to track down and backport security fixes, but in general these browsers should not be used against untrusted websites.

For general web browser use we recommend browsers building on the Mozilla xulrunner engine (Iceweasel and Iceape), browsers based on the Webkit engine (e.g. Epiphany) or Chromium. Xulrunner has had a history of good backportability for older releases over the previous release cycles.

Chromium —while built upon the Webkit codebase— is a leaf package, i.e. if backporting becomes no longer feasible, there's still the possibility of upgrading to a later upstream release (which is not possible for the webkit

Webkit is supported by upstream with a long term maintenance branch.

KDE 桌面

Squeeze is the first Debian release to ship with the full support for the next generation KDE that is based on Qt 4. Most official KDE applications are at version 4.4.5 with the exception of `kdepim` that is at version 4.4.7. You can read the announcements from the KDE Project [http://www.kde.org/announcements/] to learn more about the changes.

Upgrading from KDE 3

KDE 3 Desktop Environment is no longer supported in Debian 6.0. It will be automatically replaced by the new 4.4 series on upgrade. As this is a major change, users should take some precautions in order to ensure as smooth of an upgrade process as possible.

重要

It is discouraged to upgrade while there is an active KDE 3 session on the system. Otherwise, the process might render the running session dysfunctional with the possibility of data loss.

Upon the first login on the upgraded system, existing users will be prompted with the Debian-KDE guided migration procedure called `kaboom` which will assist in the process of migrating the user's personal data and optionally backing up old KDE configuration. For more information, visit the Kaboom homepage [http://pkg-kde.alioth.debian.org/kaboom.html].

While KDE 3 based desktop environment is no longer supported, users can still install and use some individual KDE 3 applications since the core libraries and binaries of KDE 3 (`kdelibs`) and Qt 3 are still available in Debian 6.0. However, please note that these applications might not be well integrated with the new environment. What's more, neither KDE 3 nor Qt 3 will be supported in any form in the next Debian release so if you are using them, you are strongly advised to port your software to the new platform.

New KDE metapackages

As noted earlier, Debian 6.0 introduces a new set of KDE related

You are strongly advised to install the `kde-standard` package for normal desktop usage. `kde-standard` will pull in the KDE Plasma Desktop [http://www.kde.org/workspaces/plasmadesktop/] by default, and a selected set of commonly used applications.

If you want a minimal desktop you can install the `kde-plasma-desktop` package and manually pick the applications you need. This is a rough equivalent of the `kde-minimal` package as shipped in Debian 5.0.

For small form factor devices, there is an alternative environment called KDE Plasma Netbook [http://www.kde.org/workspaces/plasmanetbook/] that can be installed with the `kde-plasma-netbook` package. Plasma Netbook and Plasma Desktop can live in the same system and the default can be configured in System Settings (replacement of the former KControl).

If you want a full set of official KDE applications, you have the possibility to install the `kde-full` package. It will install KDE Plasma Desktop by

GNOME 桌面改变与支持

There have been many changes in the GNOME desktop environment from the version shipped in lenny to the version in squeeze, you can find more information in the GNOME 2.30 Release Notes [http://library.gnome.org/misc/release-notes/2.30/]. Specific issues are listed below.

GDM 2.20 and 2.30

The GNOME Display Manager (GDM), is kept at version 2.20 for systems upgraded from lenny. This version will still be maintained for the squeeze cycle but it is the last release to do so. Newly installed systems will get GDM 2.30 instead, provided by the `gdm3` package. Because of incompatibilities between both versions, this upgrade is not automatic, but it is recommended to install `gdm3` after the upgrade to squeeze. This should be done from the console, or with only one open GNOME session. Note that settings from GDM 2.20 will **not** be migrated. For a standard desktop system, however, simply installing `gdm3` should be enough.

Device and other administrative permissions

Specific permissions on devices are granted automatically to the user currently logged on physically to the system: video and audio devices, network roaming, power management, device mounting. The cdrom, floppy, audio, video, plugdev and powerdev groups are no longer useful. See the `consolekit` documentation for more information.

Most graphical programs requiring root permissions now rely on PolicyKit [http://www.freedesktop.org/wiki/Software/PolicyKit] to do so, instead of `gksu`. The recommended way to give a user administrative rights is to add it to the `sudo` group.

network-manager and ifupdown interaction

Upon upgrading the `network-manager` package, interfaces configured in `/etc/network/interfaces` to use DHCP with no other options will be disabled in that file, and handled by NetworkManager instead. Therefore the **ifup** and **ifdown** commands will not work. These interfaces can be managed using the NetworkManager frontends instead, see the NetworkManager documentation [http://live.gnome.org/NetworkManager/SystemSettings].

Conversely, any interfaces configured in `/etc/network/interfaces` with more options will be ignored by NetworkManager. This applies in particular to wireless interfaces used during the installation of Debian (see bug #606268 [http://bugs.debian.org/606268]).

Graphics stack changes

There have been a number of changes to the X stack in Debian 6.0. This section lists the most important and user-visible.

Obsolete Xorg drivers

The cyrix, imstt, sunbw2 and vga Xorg video drivers are no longer provided. Users should switch to a generic such as vesa or fbdev instead.

The old via driver was no longer maintained, and has been replaced by the openchrome driver, which will be used automatically after the upgrade.

The nv and radeonhd drivers are still present in this release, but are deprecated. Users should consider the nouveau and radeon drivers instead,

Kernel mode setting

Kernel drivers for Intel (starting from i830), ATI/AMD (from the original Radeon to the Radeon HD 5xxx “Evergreen” series) and for NVIDIA graphics chipsets now support native mode setting.

Input device hotplug

The Xorg X server included in Debian 6.0 provides improved support for hotplugging of input devices (mice, keyboards, tablets, …). The old xserver-xorg-input-kbd and xserver-xorg-input-mouse packages are replaced by xserver-xorg-input-evdev, which requires a kernel with the CONFIG_INPUT_EVDEV option enabled. Additionally, some of the keycodes produced by this driver differ from those traditionally associated with the same keys. Users of programs like **xmodmap** and **xbindkeys** will need to adjust their configurations for the new keycodes.

X server “zapping”

Traditionally, the **Ctrl**+**Alt**+**Backspace** combination would kill the X server. This combination is no longer active by default, but can be re-enabled by reconfiguring the keyboard-configuration package (system-wide), or using your desktop environment's keyboard preferences application.

Munin web path change

For squeeze, the default location for the generated web content of munin has been changed from /var/www/munin to /var/cache/munin/www and therefore /etc/munin/munin.conf needs to be adapted on upgrades, if it has been changed by the admin. If you are upgrading, please read /usr/share/doc/munin/NEWS.Debian.gz.

Shorewall upgrade instructions

Users of the shorewall firewall should read the instructions at http://www.shorewall.net/LennyToSqueeze.html, also available as /usr/share/doc/shorewall-doc/html/LennyToSqueeze.html in the shorewall-doc package, upon upgrading to Debian 6.0.

第 6 章 关于 **Debian GNU/Linux** 的更多信息

更多读物

Beyond these release notes and the installation guide, further documentation on Debian GNU/Linux is available from the Debian Documentation Project (DDP), whose goal is to create high-quality documentation for Debian users and developers. Documentation, including the Debian Reference, Debian New Maintainers Guide, and Debian FAQ are available, and many more. For full details of the existing resources see the Debian Documentation website [http://www.debian.org/doc/] and the Debian Wiki website [http://wiki.debian.org/]

各个软件包的文档被安装到 `/usr/share/doc/`*`package`*。它包括版权信息，特定于 Debian 的信息，以及上游的文档。

获得帮助

Debian 的用户可以从很多渠道获得帮助、建议和支持，但您只应该在查阅所有的文档后，却依然找不到问题的答案时，才考虑寻求帮助。本节简单介绍了对 Debian 新用户可能会有帮助的渠道。

邮件列表

邮件列表 debian-user (英语) 和其它 debian-user-*`language`* (其它语言) 中有 Debian 用户最感兴趣的内容。想了解这些邮件列表的详细信息，以及如何订阅，请参阅 http://lists.debian.org/ 。发问前请先搜索答案，并注意遵守列表有关的礼仪和准则。

互联网在线聊天系统

Debian 在 OFTC IRC 网络上有专门对 Debian 用户提供帮助的 IRC 频道。使用您喜欢的 IRC 客户端连接 irc.debian.org，加入 #debian 频道即可。

Please follow the channel guidelines, respecting other users fully. The guidelines are available at the Debian Wiki [http://wiki.debian.org/DebianIRC].

请访问网站 [http://www.oftc.net/]，以获得更多关于 OFTC 的信息。

报告 **Bug**

我们努力让 Debian GNU/Linux 成为一款高质量的操作系统，但这并不意味着我们提供的软件包完全没有任何 Bug 。为了和 Debian 一贯的“开放的开发”原则，以及为我们的用户提供更好的服务相协调，我们在 Bug 追踪系统(BTS)提供全部已经报告的 Bug 的所有信息。您可以通过 http://bugs.debian.org/ 来访问 BTS。

如果您在本发行版或者软件包中发现了 Bug，请报告它，从而可以在将来的发行中被修复。您需要一个有效的电子邮件地址才能报告 Bug。有这个限制是因为这样我们才能够追踪 Bug，以及在开发人员需要更多信息时，能购与提交人联系。

您可以使用程序 **reportbug** 来提交一个 Bug 报告，或者亲自动手发送邮件。可以通过阅读参考文档(如果您安装了 `doc-debian` 包的话，在 `/usr/share/doc/debian` 可以找到)或者在线的 Bug 追踪系统 [http://bugs.debian.org/]，以获得更多关于 Bug 追踪系统的信息和用法。

to the development of the distribution by participating on the development lists [http://lists.debian.org/] is also extremely helpful. To maintain Debian's high quality distribution, submit bugs [http://bugs.debian.org/] and help developers track them down and fix them. If you have a way with words then you may want to contribute more actively by helping to write documentation [http://www.debian.org/doc/cvs] or translate [http://www.debian.org/international/] existing documentation into your own language.

如果您能投入更多的时间的话，您可以负责维护 Debian 发行版中的部分自由软件。如果您能够新增或维护其他用户希望 Debian 所能包含的软件包的话就更好了，可以在 急需人手和被期待的软件包库 (WNPP) [http://www.debian.org/devel/wnpp/] 中获得相关的信息。如果您在某些特别的领域有兴趣，那么您可能会很乐意参加向某个特定硬件平台移植的子项目，以及 Debian Jr. [http://www.debian.org/devel/debian-jr/] 和 Debian Med [http://www.debian.org/devel/debian-med/] 等项目。

无论如何，只要您以任何方式参加了自由软件社区的活动，不管您是用户，程序员，作者，还是译者，您就已经为自由软件社区做出了贡献。贡献是非常有益和有趣的，不仅让您能够结交更多的新伙伴，还能让您内心充满温暖的感觉。

附录 A. Managing your lenny system before the upgrade

本附录包含在升级到 squeeze 之前，弄清楚您怎样能够从 lenny 安装或升级软件包的相关信息。这应该只在特殊的情况下需要。

升级您的 lenny 系统

基本上这和您已经做过的从 lenny 升级没有什么区别。唯一的区别就是，您首先需要确定您的软件包列表仍旧引用像在 “检查您的 sources list”一节 说明的 lenny 中的软件包。

如果您从 Debian 镜像升级，将自动升级到最新的 lenny 。

检查您的 sources list

If any of the lines in your `/etc/apt/sources.list` refer to 'stable', you are effectively already “using” squeeze. This might not be what you want if you are not ready yet for the upgrade. If you have already run `apt-get update`, you can still get back without problems following the procedure below.

如果您已经从 squeeze 安装了软件包，就没有太大的必要从 lenny 安装软件包了。在这种情况下，您必须决定是否继续或者终止。可以降级软件包，但是这里不会提及。

用您喜欢的编辑器(以 `root` 权限)打开文件 `/etc/apt/sources.list`，检查所有以 `deb http:` 或 `deb ftp:` 开头，引用 “`stable`” 的行。如果找到了，将 `stable` 改为 `lenny` 。

如果有些行以 `deb file:` 开始，您应该自己检查该位置是否包含有 lenny 或者 squeeze 的档案。

重要

不要修改任何以 `deb cdrom:` 开始的行。如果这样做了的话，这些行就会失效，您将需要重新运行 **apt-cdrom** 。即使在 'cdrom' 的行发现 “`unstable`”，也不要感到奇怪。虽然令人困惑，但这是正常的。

如果做了任何修改，保存文件后执行

```
# apt-get update
```

刷新软件包列表。

Upgrade legacy locales to UTF-8

If your system is localised and is using a locale that is not based on UTF-8 you should strongly consider switching your system over to using UTF-8 locales. In the past, there have been bugs identified that manifest itself only when using a non-UTF-8 locale. On the desktop, such legacy locales are supported through ugly hacks in the libraries internals, and we cannot decently provide support for users who still use them.

To configure your system's locale you can run **dpkg-reconfigure locales**. Ensure you select an UTF-8 locale when you are presented with the question asking which locale to use as a default in the system. In addition, you should review the locale settings of your users and ensure that they do not have legacy locales definitions in their configuration environment.

附录 B. 发行注记的贡献者

有许多人对发行注记提供了帮助，包括，但不限于

Adam Di Carlo, Andreas Barth, Frans Pop, Anne Bezemer, Bob Hilliard, Charles Plessy, Christian Perrier, Daniel Baumann, Emmanuel Petrișor, Emmanuel Kasper, Esko Arajärvi, Frans Pop, Giovanni Rapagnani, Gordon Farquharson, Javier Fernández-Sanguino Peña, Jens Seidel, Jonas Meurer, Josip Rodin, Justin B Rye, LaMont Jones, Luk Claes, Martin Michlmayr, Michael Biebl, Moritz Mühlenhoff, Noah Meyerhans, Noritada Kobayashi, Osamu Aoki, Peter Green, Rob Bradford, Samuel Thibault, Simon Bienlein, Simon Paillard, Stefan Fritsch, Steve Langasek, Steve McIntyre, Tobias Scherer, Vincent McIntyre, 和 W. Martin Borgert。

本文档被翻译为多种语言。感谢这些翻译者们！

索引

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术语表

ACPI	高级配置和电源接口
ALSA	高级 Linux 声音架构
APM	高级电源管理
BD	Blu-ray Disc
CD	光盘
CD-ROM	只读光盘
DHCP	动态主机配置协议
DNS	域名系统
DVD	数字通用光盘
GIMP	GNU 图像处理程序
GNU	GNU's Not Unix 的递归缩写
GPG	GNU 隐私保护
IDE	电子集成驱动器
LDAP	轻量级目录访问协议
LILO	Linux 加载器
LSB	Linux Standard Base
LVM	逻辑卷管理器
MTA	邮件传输代理
NFS	网络文件系统
NIC	网卡
NIS	网络信息服务
OSS	开放声音系统
RAID	独立冗余磁盘阵列
RPC	远程过程调用
SATA	串行高级技术附件
SSL	Secure Sockets Layer
TLS	Transport Layer Security
USB	通用串行总线
UUID	通用惟一标识符
VGA	视频图像阵列
WPA	Wi-Fi 安全网络访问