

Ninth Edition

The Official **ubuntu**   
Book

Matthew Helmke  
Elizabeth K. Joseph  
José Antonio Rey

Foreword by Mark Shuttleworth, founder of **ubuntu**<sup>®</sup>

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—Paul Tagliamonte, Ubuntu Member, and Debian Developer

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# **The Official Ubuntu Book**

## **Ninth Edition**

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# **The Official Ubuntu Book**

## **Ninth Edition**

**Matthew Helmke**  
**Elizabeth K. Joseph**  
**José Antonio Rey**  
**With Benjamin Mako Hill**



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Library of Congress Control Number: 2016939425

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ISBN-13: 978-0-13-451342-3

ISBN-10: 0-13-451342-8

Text printed in the United States on recycled paper at RR Donnelley in Crawfordsville, Indiana.  
First printing, July 2016

*This book is dedicated to the Ubuntu community. Without your tireless hard work and commitment, none of this would be possible.*

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# Contents at a Glance

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<i>Foreword to the Sixth Edition</i>	<i>xix</i>
<i>Foreword to the First Edition</i>	<i>xxi</i>
<i>Preface</i>	<i>xxvii</i>
<i>Acknowledgments</i>	<i>xxxi</i>
<i>About the Authors</i>	<i>xxxiii</i>
<i>Introduction</i>	<i>xxxv</i>
Chapter 1: The Ubuntu Story	1
Chapter 2: Installing Ubuntu	33
Chapter 3: Getting Started with Ubuntu	59
Chapter 4: Finding and Installing Ubuntu Applications	101
Chapter 5: Customizing Ubuntu for Performance, Accessibility, and Fun	135
Chapter 6: Becoming an Ubuntu Power User	155
Chapter 7: Welcome to the Command Line	173
Chapter 8: The Ubuntu Server	191
Chapter 9: Ubuntu-Related Projects and Derivatives	233
Chapter 10: Ubuntu, Convergence, and Devices of the Future	261
Chapter 11: The Ubuntu Community	275
<i>Index</i>	<i>305</i>

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# Contents

<b>Foreword to the Sixth Edition</b>	<b>xix</b>
<b>Foreword to the First Edition</b>	<b>xxi</b>
<b>Preface</b>	<b>xxvii</b>
<b>Acknowledgments</b>	<b>xxxix</b>
<b>About the Authors</b>	<b>xxxiii</b>
<b>Introduction</b>	<b>xxxv</b>
About This Book	xxxv
The Scope of the Book	xxxvi
The Menu	xxxvi
<b>CHAPTER 1 The Ubuntu Story</b>	<b>1</b>
The Vision	2
Free Software, Open Source, and GNU/Linux	3
Free Software and GNU	4
Linux	5
Open Source	5
How the Vision Became Ubuntu	7
Mark Shuttleworth	7
The Warthogs	9
What Does <i>Ubuntu</i> Mean?	10
Beyond the Vision	11
What Is Ubuntu?	12
What Is a Distribution?	13
An Ecosystem of Distributions	14
The Debian Project and the Free Software Universe	16
The Ubuntu Community	17

Ubuntu Promises and Goals	17
Philosophical Goals	17
Conduct Goals and Code of Conduct	20
Technical Goals	22
Bug #1	24
Sustaining the Vision: Canonical and the Ubuntu Foundation	26
Canonical, Ltd.	26
Canonical's Service and Support	27
Bazaar and Launchpad	29
The Ubuntu Foundation	29
Beyond the Vision: Ubuntu Subprojects, Flavors, and Spin-Offs	30
Summary	32
<b>CHAPTER 2 Installing Ubuntu</b>	<b>33</b>
Choosing Your Ubuntu Version	34
Other Ubuntu Flavors	35
Is It Still Ubuntu?	36
Getting Ubuntu	36
Burning a DVD	36
Creating a Bootable USB Stick	38
Booting and Installing	39
Language	41
Preparing to Install Ubuntu	41
Allocate Drive Space	43
Installation Begins	47
Configuring Your Keyboard	47
Identification	49
Finishing Up	51
Installing from the Minimal CD	52
Choosing Your Spot in the World	52
Hardware	53
Setting the Hostname and Time Zone	53
Configuring a User	53
Time Zone	54
Creating Partitions	54
Finishing Up	58
Summary	58

<b>CHAPTER 3 Getting Started with Ubuntu</b>	<b>59</b>
Getting Acquainted with Unity	61
Finding and Running Applications with the Launcher	61
Other Icons in the Launcher	64
Using Applications	65
Managing Files and Folders	66
Adding Additional Users	68
The Notification Area	69
Using Applications	72
Browsing the Web with Firefox	72
Creating Documents with LibreOffice	75
Managing Your E-Mail with Thunderbird	78
Using Ubuntu in Your Language	80
Configuring a Printer	81
Gathering Information	82
Launching the Wizard	82
Mission Accomplished!	84
Remote Printing	84
Keeping Your Computer Updated	85
Using the GNOME Software Center	85
Adding and Removing Programs and Packages	87
Installing Updates	87
Learning about What Was Updated	88
Installing an Application That Is Not in the Repositories	89
Upgrading to the Next Ubuntu Release	90
Doing the Actual Upgrade	90
Ubuntu and Multimedia	91
Installing Codecs	91
Listening to Audio Files	92
Playing and Ripping CDs	94
Interacting with Photos	95
Watching Videos	95
Backing Up	96
Customizing Ubuntu's Look and Feel	98
Unity in Other Devices	99
Summary	99

<b>CHAPTER 4 Finding and Installing Ubuntu Applications</b>	<b>101</b>
Using the GNOME Software Center	102
Sorting	103
Searching	103
Learning More about a Package and Installing It	103
Removing a Package from the GNOME Software Center	105
No-Cost Software	106
Learning Terminology and Foundations	106
Using Synaptic	106
Installing a Package	108
Removing a Package	108
Finding That Package	109
Useful Software Packages to Explore	110
Creating Graphics with GIMP and Inkscape	110
Desktop Publishing with Scribus	120
Editing Videos with OpenShot	125
Play Games with Steam	126
Playing to Learn with Educational Programs	128
Stellarium	129
Marble	130
Parley	131
Step	131
Blinken	131
Other Applications Not on the Education Menu	132
Summary	132
<b>CHAPTER 5 Customizing Ubuntu for Performance, Accessibility, and Fun</b>	<b>135</b>
Unity Terminology	136
Appearance Tool	141
Unity Tweak Tool	143
Unity	143
Window Manager	144
Appearance	147
System	147
Compiz Config Settings Manager	147
Unity Lenses and Scopes	153
Additional Resources	154
Summary	154

<b>CHAPTER 6</b>	<b>Becoming an Ubuntu Power User</b>	<b>155</b>
	Administering System and User Settings	156
	User Settings	157
	Security & Privacy Settings	157
	Default Settings	159
	Understanding How Linux Stores and Organizes Files	160
	Using Windows Files on Another Partition	162
	Learning Unity Keyboard Shortcuts	164
	Launcher	164
	Dash	164
	Switching	164
	Windows	164
	Workspaces	164
	Other	167
	Using the Terminal	167
	Working with Windows Programs	168
	Installing Software from PPAs	169
	Compiling Software from Source	171
	Summary	172
<b>CHAPTER 7</b>	<b>Welcome to the Command Line</b>	<b>173</b>
	Starting Up the Terminal	174
	Getting Started	175
	Building Pipelines	176
	Running Commands as Superuser	177
	Finding Help	178
	Moving around the Filesystem	179
	Manipulating Files and Folders	180
	System Information Commands	181
	Searching and Editing Text Files	182
	Dealing with Users and Groups	183
	Getting Help on the Command Line	184
	Searching for Man Files	185
	Using Wildcards	185
	Executing Multiple Commands	186
	Running Sequentially	186
	Using Byobu to Manage Your Terminal	186
	Using Byobu by Default in GNOME Terminal	188
	Moving to More Advanced Uses of the Command Line	188
	Summary	189

<b>CHAPTER 8 The Ubuntu Server</b>	<b>191</b>
What Is Ubuntu Server?	192
Installing Ubuntu Server	194
A Couple of Installer Tricks	195
Partitioning Your Ubuntu Server	195
The Story of RAID	196
Setting Up RAID	198
The Story of the Logical Volume Manager	200
Setting Up LVM	202
Encrypted Home and Software Selection	204
You're Done: Now Watch Out for Root!	205
Ubuntu Package Management	206
The Ubuntu Archive	206
APT Sources and Repositories	207
dpkg	208
Installing a Package Manually	209
apt-get and apt-cache	210
Running a Distribution Upgrade	213
aptitude	216
Tips and Tricks	216
Ubuntu Server Security	217
User Account Administration	218
Filesystem Security	219
System Resource Limits	220
System Log Files	221
A Sprinkling of Network Security	222
Final Words on Security	223
Advanced Topics	224
Virtualization	224
Disk Replication	227
Cloud Computing	227
Summary	231
<b>CHAPTER 9 Ubuntu-Related Projects and Derivatives</b>	<b>233</b>
Recognized Flavors	234
Kubuntu	236
Edubuntu	237
Lubuntu	238
Xubuntu	240

Ubuntu Studio	241
Mythbuntu	242
Ubuntu Kylin	243
Ubuntu GNOME	244
Ubuntu MATE	244
Editions	246
Ubuntu Server	246
Ubuntu Phone	248
Ubuntu Core	248
Other Distributions	249
Guadalinex	249
Linux Mint	250
Launchpad	250
Soyuz	252
Launchpad Translations	253
Launchpad Bugs	255
Launchpad Blueprint Tracker	256
Other Functionality	258
Bazaar	258
Ubuntu One	260
Summary	260
<b>CHAPTER 10 Ubuntu, Convergence, and Devices of the Future</b>	<b>261</b>
The Convergence Vision	262
Unity	263
Ubuntu Devices	264
The First Ubuntu Phones and Tablets	264
The Ubuntu Edge	265
Commercial Phone and Tablet	265
The Internet of Things and Beyond	268
Major Devices	269
The Cloud	271
The Future of the Ubuntu Desktop	272
Summary	273
<b>CHAPTER 11 The Ubuntu Community</b>	<b>275</b>
Venues and Events	277
Ubuntu Community Web Site	278
Mailing Lists	278
Internet Relay Chat	280

Web Forums	282
Wikis	283
The Fridge	284
AskUbuntu.com	286
Social Media	286
Online Summits and Sprints	287
UbuCons	288
Planet Ubuntu	290
Teams, Processes, and Community Governance	291
Teams	292
The Ubuntu Community Team at Canonical	292
Local Community Teams	293
MOTUs	294
The Community Council	295
The Technical Board	297
Other Councils and Boards	298
The SABDFL	299
Ubuntu Members	300
Getting Involved	301
Ubuntu Online Events	301
Advocacy	301
Support	302
Ideas and Feedback	302
Documentation	302
Translation and Localization	303
Quality Assurance and Bugs	303
Programming and Packaging	304
Summary	304



# Foreword to the Sixth Edition

*THE OFFICIAL UBUNTU BOOK* CAPTURES both the spirit and the precision with which Ubuntu itself is crafted. Like Ubuntu, it has evolved in a steady cadence of regular releases, and this sixth edition reflects the cumulative insight gained from prior editions, as well as some of the latest innovations driving Ubuntu forward.

2011 is a critical year of change for Ubuntu, as we move towards the new, unified interface called Unity. Our goal is to deliver what people have long wished for: the world's cleanest, most elegant desktop experience, as free software. 11.04 is the first major step in that process as we introduce Unity by default on the desktop, retaining the Classic GNOME desktop for those who cannot yet make the leap to Unity.

Our broader goal is to challenge the free software ecosystem to invest as much creativity and energy in design as it does in engineering. We know that free software can be the best in the world for performance, reliability, and security; now it's time to bring ease-of-use and stylishness into the mix too.

I hope you enjoy 11.04, and love this book. My thanks to the many folks who have made both Ubuntu and *The Official Ubuntu Book* possible. It's a great privilege to be part of this community.

—Mark Shuttleworth  
Ubuntu Founder  
April 2011

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# Foreword to the First Edition

IT'S A SMALL CELEBRATION for me to write this foreword—almost exactly two years after the first meeting of a small group of free software professionals that turned into the Ubuntu project. A celebration because two years ago none of us would have predicted that our dream would spawn several million CDs, three or four million enthusiastic users, hundreds of commitments of support from companies large and small, a minor prime-time television reference, and now *The Official Ubuntu Book*.

The dream that brought us together can be simply expressed:

To build a world-class operating system for ordinary desktop computer users, that is genuinely free and freely available, that is immediately useful, and that represents the very best that the free software world can achieve today.

In setting out to build a platform for “ordinary desktop computer users,” I had no idea that I would have the privilege of meeting and working with so many *extraordinary* desktop computer users. Some of those extraordinary individuals are the authors of this book, people who both understand the importance of the free software movement and have the talent to have been real contributors to its success. Others make up the backbone of the Ubuntu community—the small but dedicated army of a few hundred people that works to produce a new release of Ubuntu every six months. They are at the heart of a network that reaches out through the global free software community—through the world of Debian, an extraordinary project in its own right and without which Ubuntu could not exist, and on out to the thousands of projects, large and small, that produce the code and documentation that we pull together and call *Ubuntu*.

While this huge extended community can often appear to be fractured and divided along infinitesimal ideological lines, we are all broadly in

agreement about four key ideas, and it is those ideas that are central to the Ubuntu promise:

- That our software should not come with a license fee. That we should be able to share our software, modify it, and then share our modifications, too.
- That this free software should be the best version available, including regular security updates, and not a tease for a better, commercial product.
- That full-scale, high-quality commercial support from local and global companies should be available for this free platform.
- That this software should be usable in as many languages as possible and usable by as many people as possible regardless of disability.

The 17 of us who met in London two years ago come from a very wide variety of countries and backgrounds, but we all agreed that the goal of producing a platform that could live up to that promise was a worthy one, one that we would devote ourselves to wholeheartedly.

For several months we worked quietly. We wanted to come to the world not only with a manifesto but also with a clear demonstration of work done toward our goals, something that people could test and comment on. We had no name (though industry insiders called us the “Super-Secret Debian Startup”) and, as a result, we hosted most of our work at [www.no-name-yet.com](http://www.no-name-yet.com). We were looking for a name that could express the beauty of the free software community development process—collaboration, interdependence, sharing, standing gently on the shoulders of giants, and reaching for lofty goals. The only word that comes close to that, of which I’m aware, is the African word *ubuntu*. It is found in many forms in many different African languages. And so we adopted it as the name of our project.

We knew that our first release would have blemishes—warts—and gave it the codename “The Warty Warthog.” We called ourselves “the warthogs” and coordinated our work on the #warthogs IRC channel. Today, for better or worse, that’s turned into a tradition of codenames such as “Breezy Badger” and “Dapper Drake.” As lighthearted as they sound, these codenames come to embody the spirit of our community as it works toward a

particular release. This next one—Dapper—is exactly that: a man emerging from youth, professional, bold, confident, and energetic. This is our first release that is designed to meet the needs of large organizations as much as developers and engineers. In the same way, the Ubuntu community has moved from being something of a rebellion against the “Linux establishment” to a strong and professionally organized group.

## What Makes Ubuntu So Popular?

First, this is the time for free software to come to the forefront, and Ubuntu is very much the beneficiary of the vast amount of work that has gone into building up a huge body of work in the GNU/Linux world. That work has been under way for nearly 30 years, in one form or another, but Ubuntu is one way in which it is suddenly becoming “visible” to the nonspecialist computer user. We are in the middle of a great overturning of the industry status quo. The last time that happened, in the mid-1990s, was when the world suddenly found itself connected to itself—by the Internet. Every major company, especially those in the field of technology, had to examine itself and ask the question, “How do we adapt to an Internet world?” Today, every major technology company has to ask itself the question, “How do we adapt to a free software world?”

I would speculate and say that Ubuntu represents an idea whose time has come. We did not invent the free software movement—that honor goes to Richard Stallman and many others who had a vision far more profound at a time when it was hard to see how it could ever become reality. But Ubuntu has perhaps the honor of bringing that vision to a very wide audience in a form that we can all appreciate. I hope that the real visionaries—those who have led the way—will appreciate the decisions and the choices we make in bringing you this project. Some will take exception—I know Linus prefers KDE to GNOME, for example, so he’s likely to be more of a fan of Kubuntu than Ubuntu. But in general, the ideas that others have had, the principles of the free software movement, are well expressed in Ubuntu.

Second, Ubuntu is a project on which *you* can have a real impact. It has the benefit of deep and reliable financial backing and a corporate team to give it muscle, but it is in every regard an open project, with participation at the highest levels by true volunteers. We work in a fishbowl—our meetings

take place online, in a public forum. That can be tricky. Building an operating system is a fast-paced business full of compromise and tough decisions in the face of little information. There are disagreements and dirty laundry, and mistakes are made. (I should know; some of them are mine. You should hear the one about the Warty Warthog desktop artwork.) The transparency of our environment, however, means that we can count on having robust conversations about our options—all of them, even the ones the core team would never have dreamed up. It also means that mistakes are identified, discussed, and ultimately addressed faster than they would be if we lived and worked behind closed doors. You get a better platform as a result.

We work hard as a community to recognize the contributions of all sorts of individuals—advocates, artists, Web forum moderators, channel operators, community event organizers, writers, translators, people who file and triage bugs . . . whatever your particular interest or talent, we will find a way to integrate your contribution.

Perhaps most important is the way our approach to community differentiates Ubuntu from other free software projects with similar vision. We try to do all of this in a way that recognizes that disagreements are important but prevents those disagreements from creating deep divides in our community. Our code of conduct may not be perfect, but it reminds each of us to remember the meaning of the word *ubuntu*—that each of us has our best impact *through* the relationships we maintain with one another. Finding common ground and maintaining healthy communication are more important for us as a community in the long run than a particular technical decision or the specific choice of words with which to translate “File” into Spanish. Our community governance structures—our Technical Board and Community Council—exist to ensure that debates don’t become personal and that decisions can be taken after all sides have been heard.

If you are a software professional or curious about Linux, this book and this platform are an excellent choice. You will learn about the world of Ubuntu and, indirectly, Debian and GNU/Linux. These are great foundations for working with the tools that I believe will come to define the “standard,” the everyday computing base upon which we build our homes and offices.

I once heard a proprietary software vendor say, “Linux is more expensive because skilled Linux professionals are more costly.” This is true. It means, of course, that Linux skills are more valuable! It won’t be true forever because the world of Linux is expanding so rapidly that sooner or later we will have to accept a position in the mainstream, and that takes off some of the “geek points” associated with being part of the “future of technology.” But right now, without a doubt, being ahead of the curve on Linux and on Ubuntu is the right place to be. If you’re this far into this foreword, you are clearly going to make it. ;-)

It’s difficult for me to speculate on what the future might hold for the Ubuntu project. I know that I along with many others are loving the opportunity to be at the center of such an exciting initiative and are committed to seeing where it leads us over the coming years. I believe that it will become a pervasive part of our everyday computing environment, so I would like to help make sure that we don’t make too many mistakes along the way! Please, come and join us in the fishbowl to help ensure we do a very, very good job.

—Mark Shuttleworth  
Ubuntu Founder  
April 2006

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# Preface

WE HOPE YOU ENJOY *The Official Ubuntu Book*. There are many changes we made for this edition, which we believe takes an already good book to a new level.

Because Ubuntu has increased in popularity and is better known, we have expanded the intended audience from pure beginners to also include those who know a bit about Ubuntu but who want to improve their skills and become power users. These individuals are not necessarily focused on becoming programmers or systems administrators, but regular people who want to make their day-to-day use of Ubuntu more efficient or who want to better harness Ubuntu's potential.

A large part of this book has been rewritten—not because the earlier editions were bad, but because so much has happened since the previous edition was published. This book chronicles the major changes that affect typical users and will help anyone learn the foundations, the history, and how to harness the potential of the free software in Ubuntu.

As we write this, it has been several years since we penned the first edition of *The Official Ubuntu Book*. Over that time, we have seen Ubuntu continue its explosive growth. Updating this book drives this fact home in striking ways. For example, the numbers of users and posts in the Ubuntu Forums and the Ask Ubuntu Web sites continues to rise.

Once again, we feel blessed that *The Official Ubuntu Book* has been able to benefit from, and perhaps in a small way even *contribute* to, that success. Ultimately, that success paved the way for several subsequent editions, and now the ninth edition, of the book that you're reading now.

In the process, this book, like Ubuntu, continues to mature. Our job as authors, like that of the Ubuntu developers, now involves more updating and polishing than it used to. Distributed under a free license, a once-risky book on a once-risky operating system is, just a few short years later, as close to a sure thing as an author, publisher, and, if we have done our job well, a reader could hope for.

And yet with success comes responsibility to our readers and to our users with high expectations. Ubuntu's success is built in part of maturity and excellence, and it cannot sacrifice these qualities if it will succeed. We cannot either. Our job as writers is complicated because we need to accurately reflect and represent both qualities while catering to an increasing and increasingly diverse group of users.

As we've noted in the prefaces to previous editions of this book, being *Official* has carried with it a set of rights and responsibilities. Our book's title means that we must attempt to reflect and represent the whole Ubuntu community. While we, as authors, are expected to put ourselves into the book, it is understood that it can never be to the detriment of the values, principles, technologies, or structures of the Ubuntu community.

Doing this has been complicated as Ubuntu has grown. In each edition, we have added new information, because the Ubuntu community has grown to include new projects. In each revision of this book, we have needed to add to the list of related projects, tools, and community initiatives. As the Ubuntu community grows, it is impossible to give a complete accounting of what Ubuntu has to offer. Creating a summary requires some hard decisions. At the end of the day, we are constrained by page count and our own limited schedules.

Meanwhile, as with earlier editions, we needed to write this book about a new release of Ubuntu while that version was under active development and was being redesigned, rethought, and rebuilt. Every day, Ubuntu grows in different, unpredictable ways, and this growth has increased exponentially with the size of the community and the diversity of the user base. Our book's development process had to both match and track this process as our content was crafted, rewritten, adjusted, and allowed to mature **itself**.

As in the previous edition, the contributors to this book go well beyond those listed on the book's cover. Invisible to most readers, dozens of members of the community left their mark on different parts of the text of this book. Although this degree of participation led to a writing process that was as hectic, and at times frustrating, as the process that builds Ubuntu, we hope we can remind readers of the level of quality that this process inspires in our book's subject. In the places where we achieve this, we have earned our book's title. With that goal in mind, we look forward to future versions of Ubuntu and editions of this book wrought through the same community-driven process.

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# Acknowledgments

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SPECIAL THANKS TO Mark Shuttleworth, Jane Silber, and Lara Pinto for all their efforts to get this book out into the world for both new and veteran Ubuntu users. Thanks also to Marcus Haslam, Wunmi Solaja, David Planella, and Tom Callway at Canonical for their kind assistance with this edition.

Our thanks extend back to this group of reviewers and information sources for help with the previous editions: Philip Ballew, Amber Graner, Shannon Oliver, Jono Bacon, Kyle Rankin, Ashley Rose, Allen Dye, Isabelle Duchatelle, Joe Barker, Alan Pope, Jorge O. Castro, Jonathan Riddell, Oliver Grawet, Dennis Kaarsemaker, Matthew East, Quim Gil, Dinko Korunic, Abhay Kumar, Jaldhar Vyas, Richard Weideman, and Scott Ritchie.

And finally, we appreciate the efforts of the Prentice Hall team, including Debra Williams Cauley, Kim Boedigheimer, Julie Nahil, and Mark Taub.

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# About the Authors

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**Matthew Helmke** has been an Ubuntu user since April 2005 and an Ubuntu Member since August 2006. He served from 2006 to 2011 on the Ubuntu Forum Council, providing leadership and oversight of the Ubuntu Forums, and spent two years on the Ubuntu regional membership approval board for Europe, the Middle East, and Africa. He has written articles about Ubuntu for magazines and Web sites, is the lead author of *Ubuntu Unleashed*, and has written several books and articles on other topics.

**Elizabeth K. Joseph** is a professional Linux Systems Administrator currently working at Hewlett-Packard, with a focus on managing the infrastructure for the OpenStack project. She has been working with Linux and around Linux communities since 2002. Elizabeth began contributing to Ubuntu in 2006 and currently contributes to various teams, including Documentation, News, Quality Assurance, and Classroom. Over the years she has served on the Ubuntu Membership Board and is now serving her third term as a member of the Ubuntu Community Council. At home in San Francisco, she serves as one of the leaders of the Ubuntu California team and is on the board of a nonprofit that provides Ubuntu-based computers to schools in need.

**José Antonio Rey** is a community contributor who has been actively participating since 2011. He is a student residing in Peru, whose contributions include helping with the News and Classroom teams, managing Ubuntu On Air!, and being the contact of the Ubuntu Peru team and a member of the LoCo Council. Even though he is not a developer, he has helped with Juju Charms and is the author for the Postfix and Mailman charms.

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# Introduction

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WELCOME TO *The Official Ubuntu Book, Ninth Edition!*

In recent years, the Ubuntu operating system has taken the open source and IT world by storm. From out of nowhere, the Little Operating System That Could has blossomed into a full-featured desktop and server offering that has won over the hearts of users everywhere. Aside from the strong technical platform and impressive commitment to quality, Ubuntu also enjoys success because of its sprawling community of enthusiastic users who have helped to support, document, and test every millimeter of the Ubuntu landscape.

In your hands you are holding the official, authorized guide to this impressive operating system. Each of the authors selected to work on this book has demonstrated a high level of technical competence, an unbridled commitment to Ubuntu, and the ability to share this knowledge in a simple and clear manner. These authors gathered together to create a book that offers a solid grounding to Ubuntu and explains how the many facets and features of Ubuntu work.

## About This Book

At the start of every book, on every bookshelf, in every shop, is a paragraph that sums up the intentions and aims for the book. We have one very simple, down-to-earth aim: to make the Ubuntu experience even more pleasant for users. The Ubuntu developers and community have gone to great lengths to produce an easy-to-use, functional, and flexible operating system for doing, browsing, and creating all kinds of interesting things. This book augments that effort. With such an integrated and flexible operating system, this guide acts as a tour de force for the many things you can do with Ubuntu.

## The Scope of the Book

With so much to cover, we had our work cut out to write a book that could cover the system in sufficient detail. However, if we were to write in depth about every possible feature in Ubuntu, you would need to buy a new bookcase to store the sheer amount of content.

Part of the challenge in creating *The Official Ubuntu Book* was selecting the topics and content that can be covered within a reasonably sized book. We have identified the most essential content and written only about it. These chosen topics not only cover installation, use of the desktop, applications, multimedia, system administration, and software management, but also include a discussion of the community, online resources, and the philosophy behind Ubuntu and open source software. As a bonus, we expanded our discussion of projects related to Ubuntu that will be of interest to you. We believe this book provides an ideal one-stop shop for getting started with Ubuntu.

## The Menu

Here is a short introduction to each chapter and what it covers.

- **Chapter 1: The Ubuntu Story.** This spirited introduction describes the Ubuntu project, its distribution, its development processes, and some of the history that made it all possible.
- **Chapter 2: Installing Ubuntu.** We walk through the installation process one step at a time to clearly describe how anyone interested may begin using Ubuntu on their own computer.
- **Chapter 3: Getting Started with Ubuntu.** This is an informative and enjoyable introductory tour of Ubuntu, and the reader's first introduction to the more practical content of the book.
- **Chapter 4: Finding and Installing Ubuntu Applications.** Here you will learn about the vast contents of the Ubuntu software repositories and discover how to take advantage of them. Several examples of useful software that is not installed by default are highlighted.

- **Chapter 5: Customizing Ubuntu for Performance, Accessibility, and Fun.** Learn how to bend Ubuntu to better fit your needs or whims.
- **Chapter 6: Becoming an Ubuntu Power User.** We explore some of the advanced ways to use Ubuntu. This is the chapter for users who want to move up from basic use, but who do not intend to become programmers or professional systems administrators.
- **Chapter 7: Welcome to the Command Line.** Begin to take advantage of the power and efficiency of the command line with the clear, easy-to-use examples in our brief introduction.
- **Chapter 8: The Ubuntu Server.** This introduction to Ubuntu Server installation and administration includes coverage of command-line package management, basic security topics, and advanced installer features like logical volume management and RAID.
- **Chapter 9: Ubuntu-Related Projects and Derivatives.** There are a number of Linux distributions based on Ubuntu that you will find interesting and possibly useful. We discuss some of these as well as projects that are integral to the creation of Ubuntu, such as Launchpad and Bazaar.
- **Chapter 10: Ubuntu, Convergence, and Devices of the Future.** A significant effort is under way to make Ubuntu more useful not only on devices such as phones, but also in some surprisingly useful and cool ways.
- **Chapter 11: The Ubuntu Community.** The Ubuntu community is larger and more active than many people realize. We discuss many of its facets, including what people like you do to build, promote, distribute, support, document, translate, and advocate Ubuntu—and we tell you how you can join in the fun.

The Ubuntu team offers several installation options for Ubuntu users, including CDs for desktop, alternate install, and server install. These three CD images are conveniently combined onto one DVD included in the back of this book, allowing you to install Ubuntu for different configurations from just one disk. There is also an option to test the DVD for defects as well as a memory test option to check your computer.

The first boot option on the DVD, “Start or Install Ubuntu,” will cover most users’ needs. For more comprehensive information, check the Help feature by selecting F1 on the boot menu. You can also refer to Chapter 2, which covers the Ubuntu installation process in detail.

You can find the DVD image, the individual CD images (for those users who don’t have a DVD drive), and Kubuntu and Ubuntu Server on [www.ubuntu.com/download](http://www.ubuntu.com/download).

Register your copy of *The Official Ubuntu Book, Ninth Edition*, at [www.informit.com](http://www.informit.com) for convenient access to downloads, updates, and corrections as they become available. To start the registration process, go to [informit.com/register](http://informit.com/register) and log in or create an account. Enter the product ISBN (9780134513423) and click Submit. Once the process is complete, you will find any available bonus content under “Registered Products.”

## CHAPTER 5

# Customizing Ubuntu for Performance, Accessibility, and Fun

- **Unity Terminology**
- **Appearance Tool**
- **Unity Tweak Tool**
- **Compiz Config Settings Manager**
- **Unity Lenses and Scope**
- **Additional Resources**
- **Summary**

ONE OF THE MOST APPEALING ARGUMENTS for the adoption and use of Linux is the fact it can be customized according to users' personal preferences. In this chapter, we look at the many ways the Unity desktop can be adapted to different users. Unity is a relatively new desktop, so we start by reviewing the terminology for the desktop. We then look at the default settings, including various ways to tweak them. Lenses were introduced in the Ubuntu 11.04 release; in the 16.04 LTS, a wide variety of Lenses are available. We examine some popular Lenses and how to use them. Different people use their computers in different ways, and for that reason we want to help you discover how to tweak your Unity desktop to best suit your needs.

While tweaking your desktop is a fun way to personalize your desktop experience, we also want to caution you about making changes without understanding what those changes will do. If you are unsure about making those changes, take some time to research them. At the end of this chapter, we identify some more resources to further your understanding of the Unity desktop.

In this chapter, we show you just a few of the Lenses that are available and explain how you can install them. At the end, we point out the resources that will get you started writing those Lenses as you go from novice to superuser. Let's get ready to supercharge your Unity desktop!

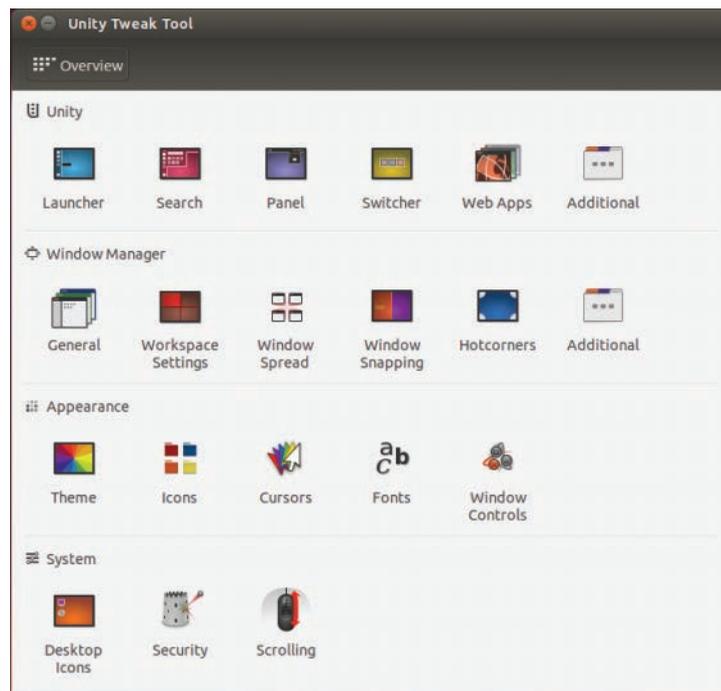
## Unity Terminology

When the Unity Launcher was introduced in the Ubuntu 11.04 release, a number of design goals were established. Specifically, the icons needed to be easy to find, running applications needed to be always visible, the focused application needed to be easily accessible, and the interface needed to be touch friendly. The Unity desktop certainly met with a mixed range of highly charged emotions from early adopters, and due to their passion and feedback, the desktop and its functionality have improved. Providing user feedback is one of the most important things an Ubuntu user can do for the project. At the end of this chapter, you will be given a list of resources to get you started on providing the developers with feedback.

In Ubuntu 16.04 Unity desktop, many new Unity Scopes are installed by default. These new Scopes allow the Dash to search in many more places, and they provide you with results from a wide variety of sources.

Unity also features the HUD (Heads Up Display) that users can use to search the menus of a focus (active) window or full application. HUD doesn't replace your global menu, but rather is a feature that can be accessed by pressing the Alt key.

As we look at the parts that make up the Unity desktop, we'll also explore the Unity Tweak Tool (Figure 5-1). Unity Tweak Tool is a third-party tool that allows users to configure and tune their Unity desktops. It also allows users to return to the default desktop settings, thereby undoing changes made earlier. To install Unity Tweak Tool through the GNOME Software



**Figure 5-1** Unity Tweak Tool

Center, click the Software icon located in the Launcher. Once the software center opens, type *Unity Tweak Tool* into the search box and click Install (Figure 5-2).

You can also install the Unity Tweak Tool from the command line with the command `sudo apt-get install unity-tweak-tool`.

Following is the list of user interface (UI) terms for the parts of your Unity desktop; numbers 1 to 7 correspond to the numbers in Figure 5-3 and the words to Figure 5-4. Finally, Figure 5-5 shows the HUD.

1. Windows Tile
2. Application Menu
3. Dash Icon, which opens what is shown in Figure 5-4, including:
  - a. Applications Lens
  - b. Files and Folders Lens
  - c. Videos Lens
  - d. Music Lens
  - e. Photos Lens
  - f. Social Network Messages Lens
4. Launcher Icons
5. Launcher
6. Trash
7. Indicators
8. HUD



**Figure 5-2** Installing Unity Tweak Tool from the GNOME Software Center

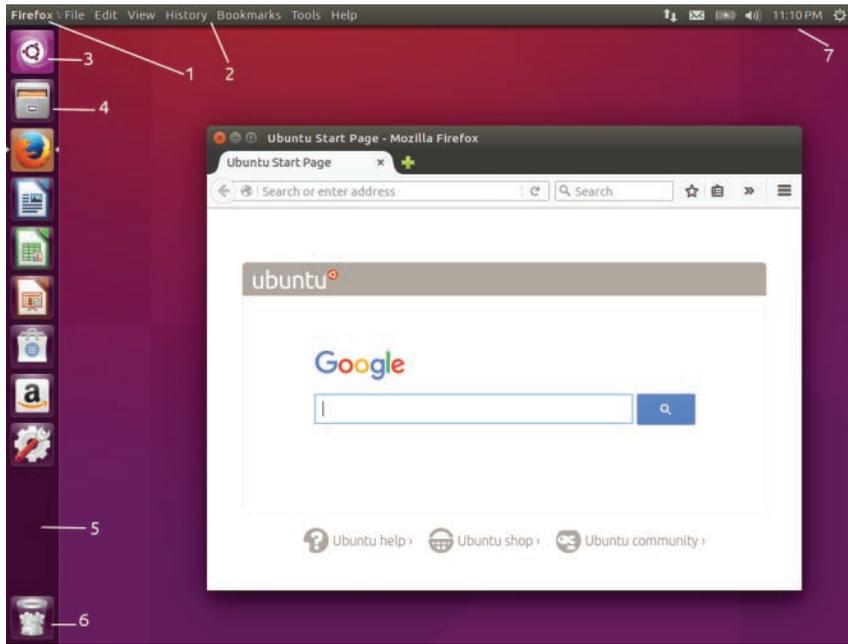


Figure 5-3 Diagram of the Unity desktop

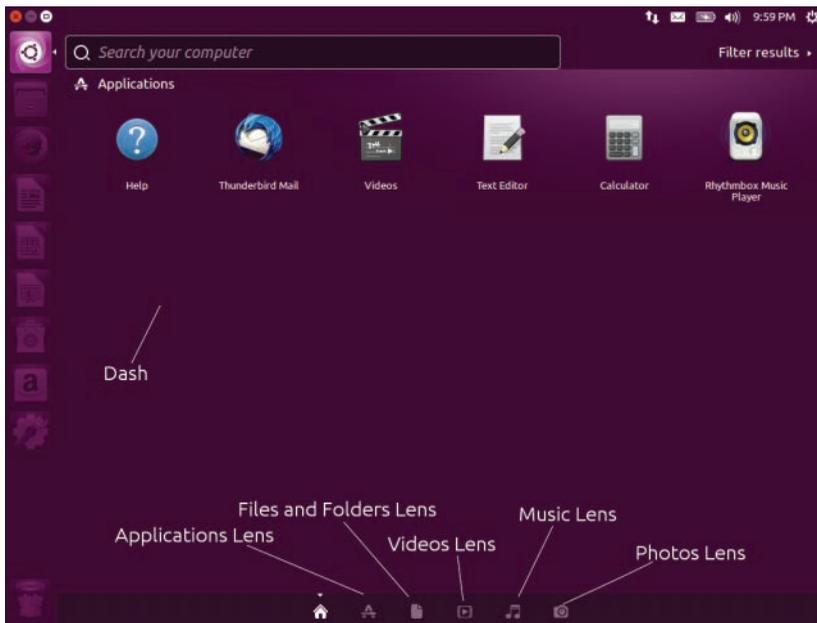
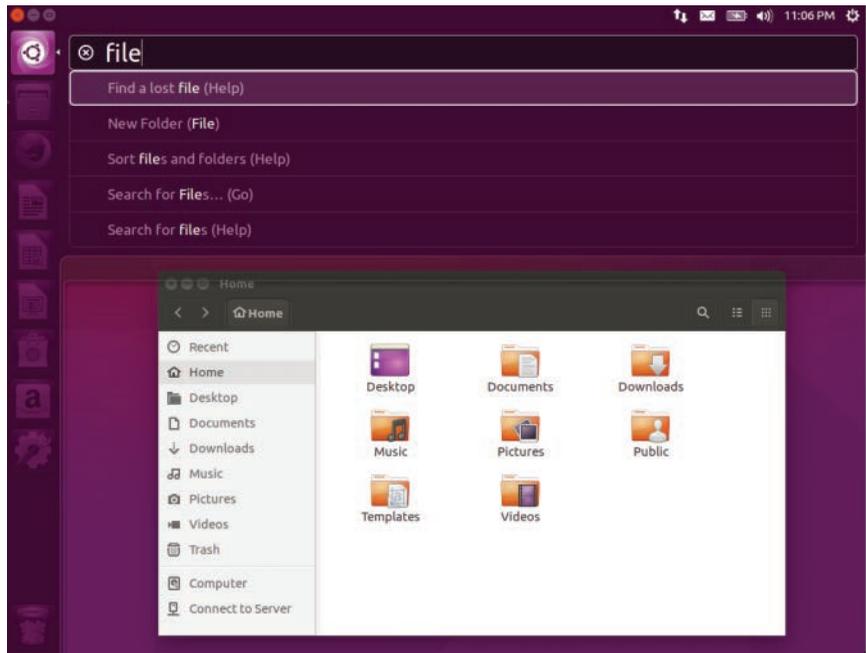


Figure 5-4 Diagram of the Dash

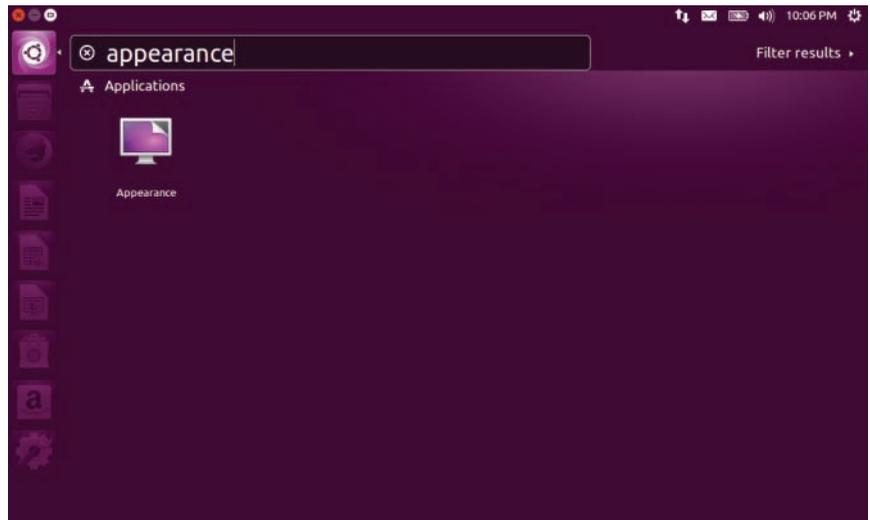


**Figure 5-5** Diagram of the HUD

Now that we have reviewed the terminology for your desktop, let's look at those default settings.

The Ubuntu 16.04 release uses the 4.4 Linux kernel, based on the 4.4 upstream stable kernel.

The applications included in this release by default, but not necessarily locked to the Launcher, are Nautilus, GNOME Software Center, Firefox, Thunderbird, LibreOffice, Rhythmbox, Deja Dup Backup Tool, Shotwell, Transmission, Remmina (remote desktop client), GNOME Control Center (system settings), Gedit, and Totem.



**Figure 5-6** Locating the Appearance icon from the Dash

As mentioned earlier, tweaking your Unity desktop can be done easily with tools like the Unity Tweak Tool, and some tweaks can be made using the Appearance tool. To get to the Appearance tool, click the Super key once and the Dash will open. In the search box, type “Appearance,” and then click on the Appearance icon to open this tool (Figure 5-6).

## Appearance Tool

The Appearance tool is available by default and allows users to change the look and behavior of their Unity desktop. It opens to the Look tab (Figure 5-7) and allows you to change the background, theme, and Launcher icon size. The Behavior tab (Figure 5-8) allows you to change autohiding of the Launcher, the reveal location (where you need to put your mouse for the Launcher to reappear), and the reappear sensitivity levels. It also allows you to enable Workspaces as well as add a Show Desktop icon to the Launcher.

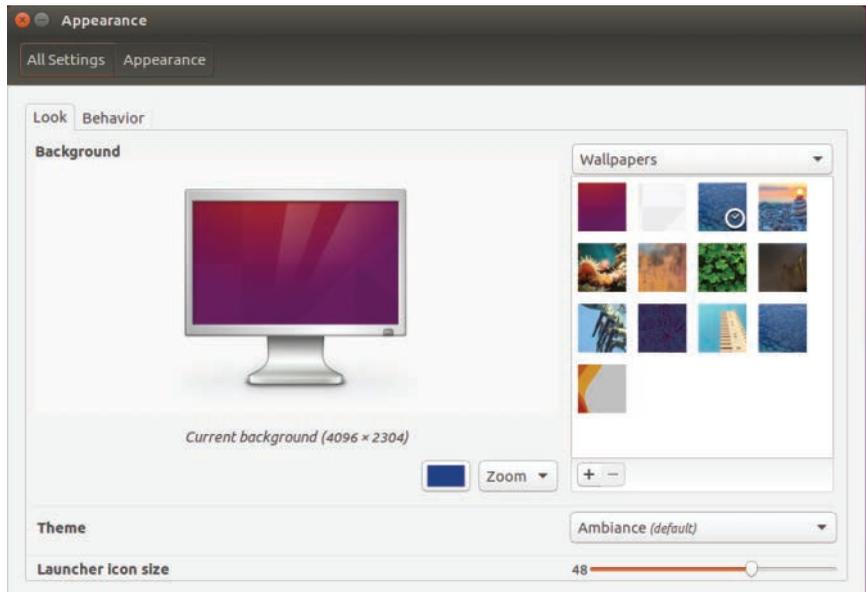


Figure 5-7 Appearance tool: Look tab

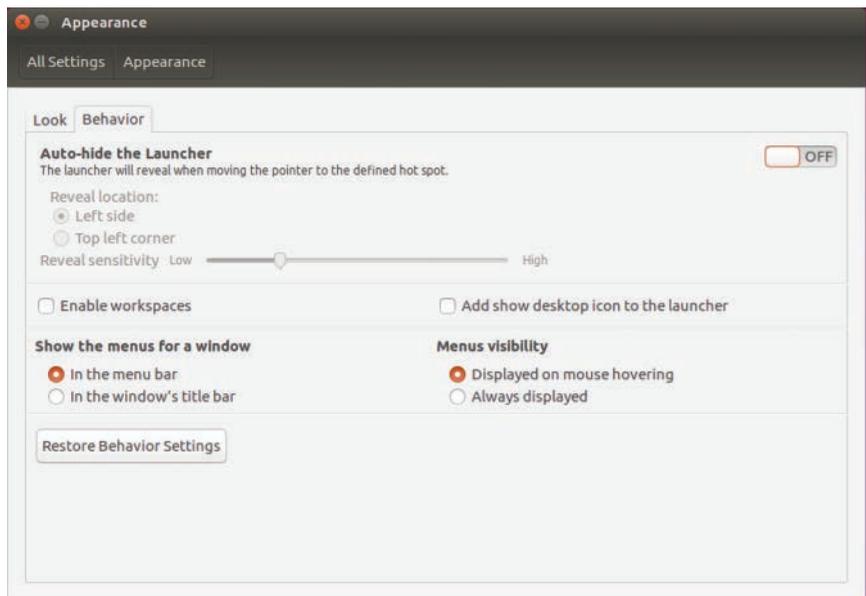


Figure 5-8 Appearance tool: Behavior tab

## Unity Tweak Tool

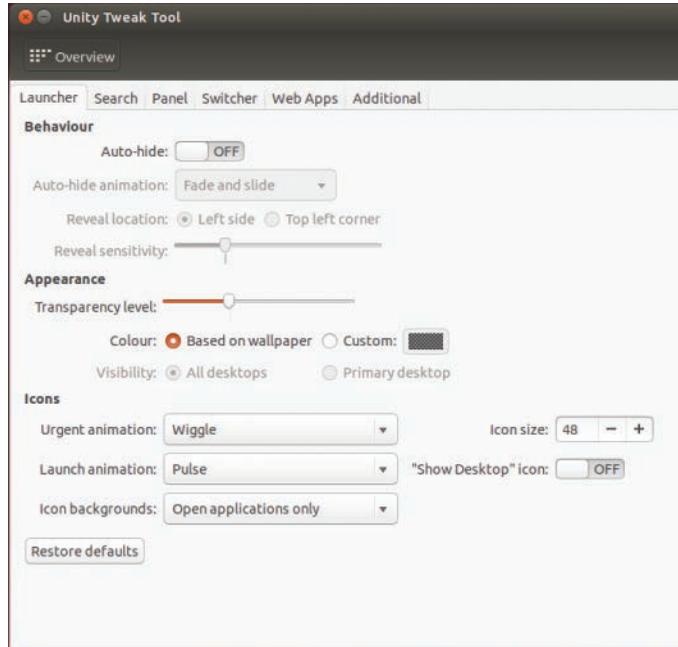
As mentioned earlier, Unity Tweak Tool is a third-party tool, which was created by the Freyja Development Team. To find out more about the team, go to <https://launchpad.net/~freyja-dev>.

If you followed the instructions to download the Unity Tweak Tool earlier in this chapter, great. If not, you may want to do so now. This tool allows users to tweak four different areas of the Unity desktop.

## Unity

Here, you will be able to change settings for the Launcher, Search, Panel, Switcher, Web Apps, and more.

The Launcher tab (Figure 5-9) allows you to change the color, transparency, icon size, autohiding, animations, and more.



**Figure 5-9** Unity Tweak Tool: Launcher tab

The Search tab (Figure 5-10) allows you to change the blur of the Dash, and some other features as the display of suggestions, as well as recently used applications.

The Panel tab (Figure 5-11) allows you to change settings for the top panel. It includes transparency and the display of certain system-based indicators.

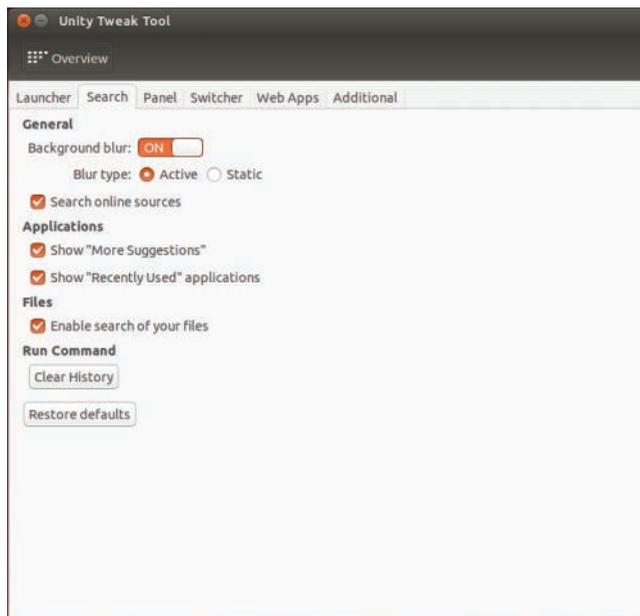
The Shifter tab (Figure 5-12) allows you to specify settings and shortcuts for the applications switcher.

On the Web Apps tab (Figure 5-13), you can decide whether you want to enable prompts for Web Apps and specify the preauthorized domains.

The Additional tab (Figure 5-14) allows you to change keyboard shortcuts as well as enable the HUD to remember previous commands.

## Window Manager

The Window Manager allows you to customize how Ubuntu manages windows.



**Figure 5-10** Unity Tweak Tool: Search tab

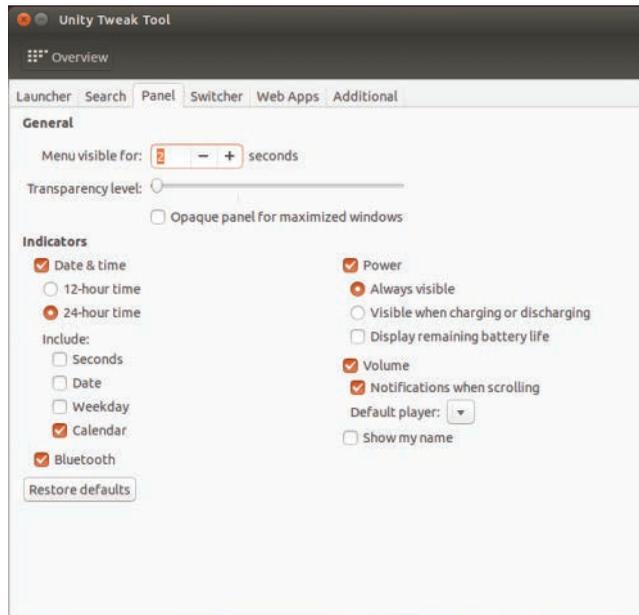


Figure 5-11 Unity Tweak Tool: Panel tab

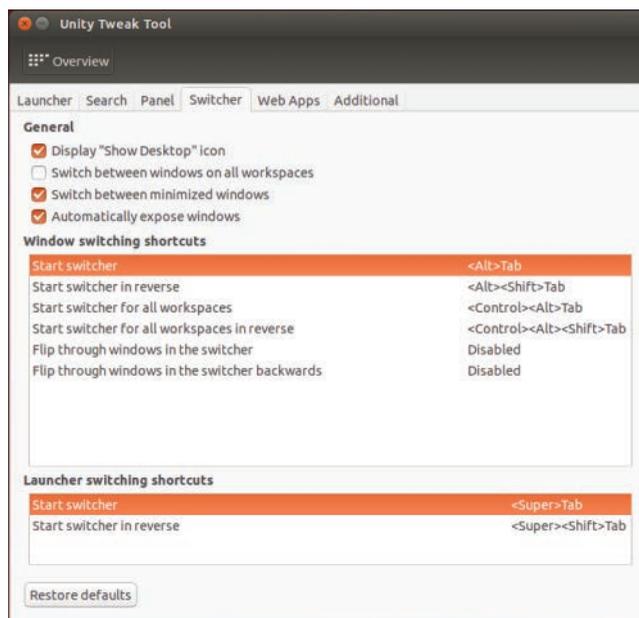


Figure 5-12 Unity Tweak Tool: Shifter tab

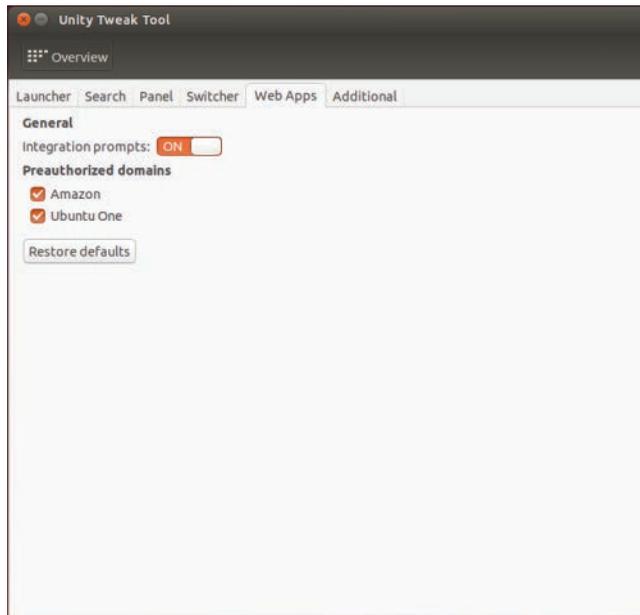


Figure 5-13 Unity Tweak Tool: Web Apps tab

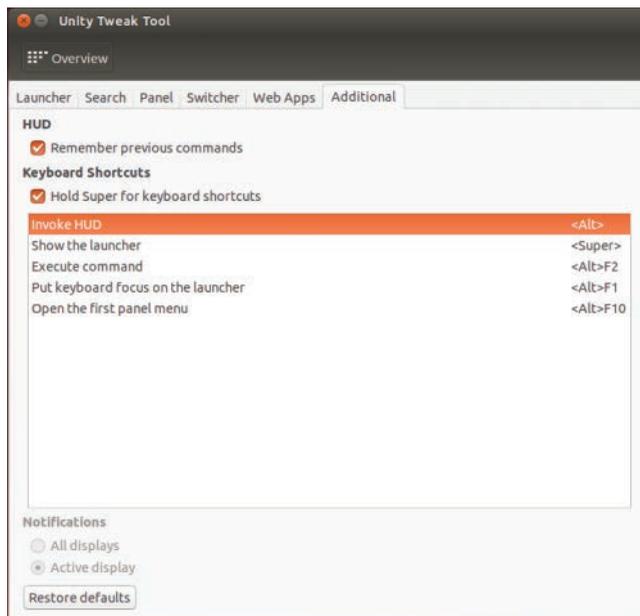


Figure 5-14 Unity Tweak Tool: Additional tab

## Appearance

The Appearance section allows you to change the system theme, icons, cursors, and default fonts, as well as the side where the *close*, *minimize*, and *maximize* buttons are located.

## System

The System section allows you to set the default desktop icons, disable some features for security reasons, and set some scrolling options.

Play around with all these settings. Unity Tweak Tool is a very forgiving tool. If you don't like the tweaks you are making, simply click the Restore Defaults button found on every tab, and you'll be able to start your tweaking adventure all over again.

## Compiz Config Settings Manager

Compiz Config Settings Manager is a configuration tool for Compiz with which you may want to become familiar. To get started with the Compiz Config Settings Manager, you will need to install it from the GNOME Software Center, launch it from the Launcher by clicking the Super key to bring up the Dash, and type "Compiz." Click on the Compiz Config Settings Manager icon to launch this tool. The first time you open this manager, you will get a warning (Figure 5-15). Although it is an incredible tool, Compiz Config Settings Manager is not as forgiving as the Appearance and Unity Tweak tools. Users are cautioned to use Compiz (Figure 5-16) with care, as you may end up with an unusable desktop if you make too many errors.

When you open Compiz Config Settings Manager, you'll notice that some of the categories have the boxes beside them checked. This is because those areas have been integrated with the Unity desktop.

Let's take a closer look at the features offered with Compiz Config Settings Manager.

In the upper-left corner of the Main view, you'll notice a search box (Figure 5-17). It can be used for quick and easy filtering of the plug-ins list



Figure 5-15 Compiz Config Settings Manager warning

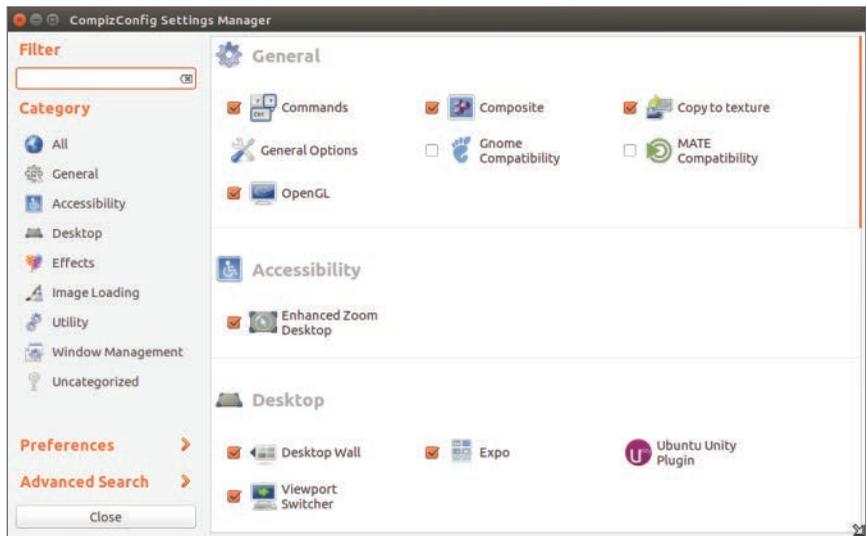


Figure 5-16 Compiz Config Settings Manager main view

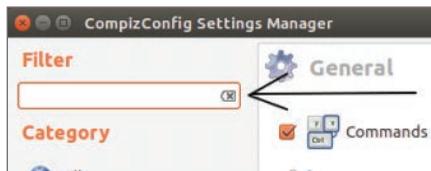


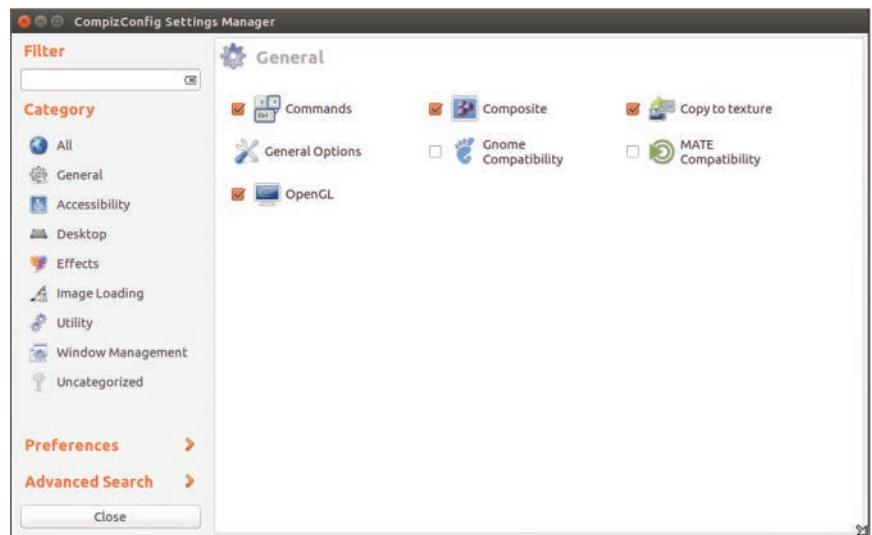
Figure 5-17 Compiz Config Settings Manager search box

using the text you type in the search box. The search box can also be used like a filter for the options on various plug-in pages.

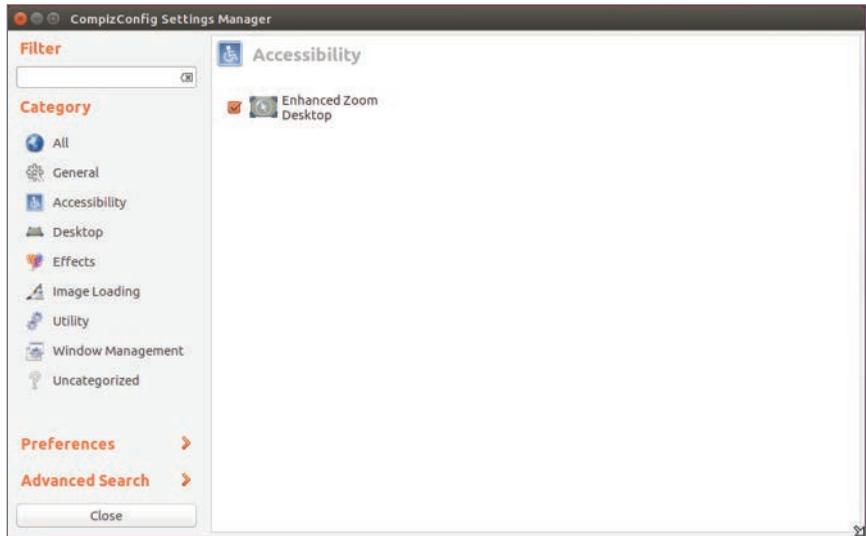
The Advanced Search button at the lower-left corner of the Main view (as seen in Figure 5-18) allows you to filter through all the options of all the plug-ins. Please note this may take a while to load. Advanced Search allows you to search by name, long description, and the values you have set. Once you have a list, you can click on the plug-in and see which groups contain the option you searched for.

The plug-ins for the Compiz Config Settings Manager are divided into eight categories:

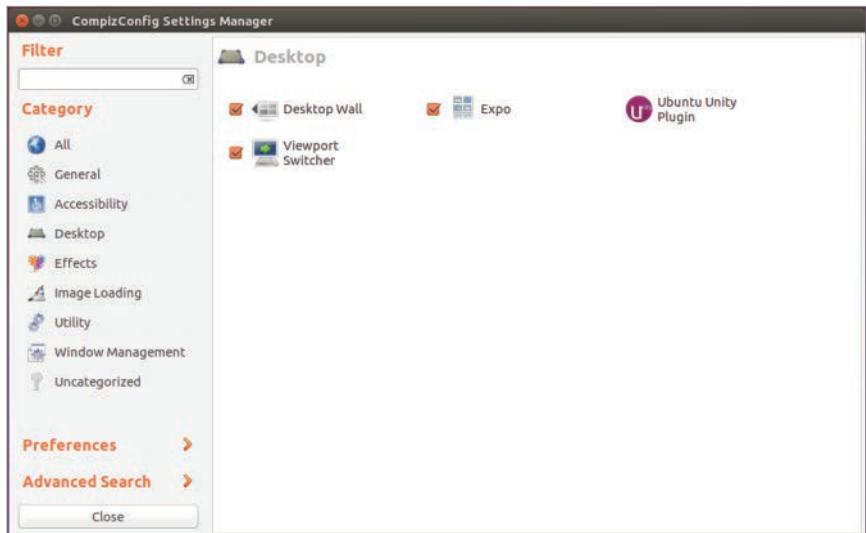
1. **General:** Contains the core plug-ins (Figure 5-18).
2. **Accessibility:** Contains plug-ins to make the desktop easier to use, especially for those individuals who have a reading or viewing disability (Figure 5-19). The Enhanced Zoom plug-in magnifies the whole screen on demand.
3. **Desktop:** Contains plug-ins to configure how the desktop behaves (Figure 5-20).



**Figure 5-18** Compiz Config Settings Manager General category



**Figure 5-19** Compiz Config Settings Manager Accessibility category



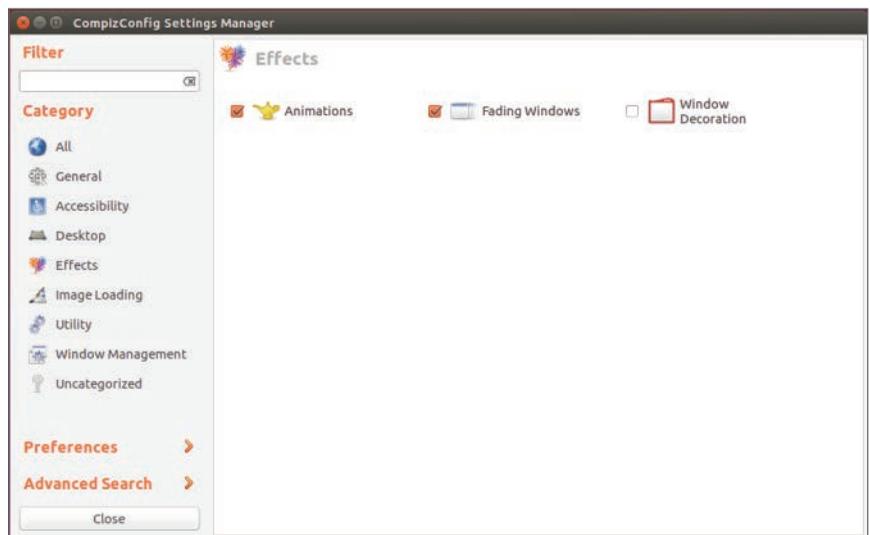
**Figure 5-20** Compiz Config Settings Manager Desktop category

4. **Effects:** Contains plug-ins to configure various animations and effects, such as Fading Windows (Figure 5-21).
5. **Extras:** Contains plug-ins that serve a minor or ambient purpose like annotate.
6. **Image Loading:** Contains plug-ins that allow various image formats to be loaded (Figure 5-22).
7. **Utility:** Contains plug-ins that provide internal functionality like Regex Matching (Figure 5-23).
8. **Window Management:** Contains plug-ins that provide basic to advanced window treatment functionality, like moving windows (Figure 5-24).

---

**NOTE** Use caution when working with Compiz Config Settings Manager because you can render your desktop unusable. Make sure you are familiar with how to recover your desktop from the command line.

---



**Figure 5-21** Compiz Config Settings Manager Effects category

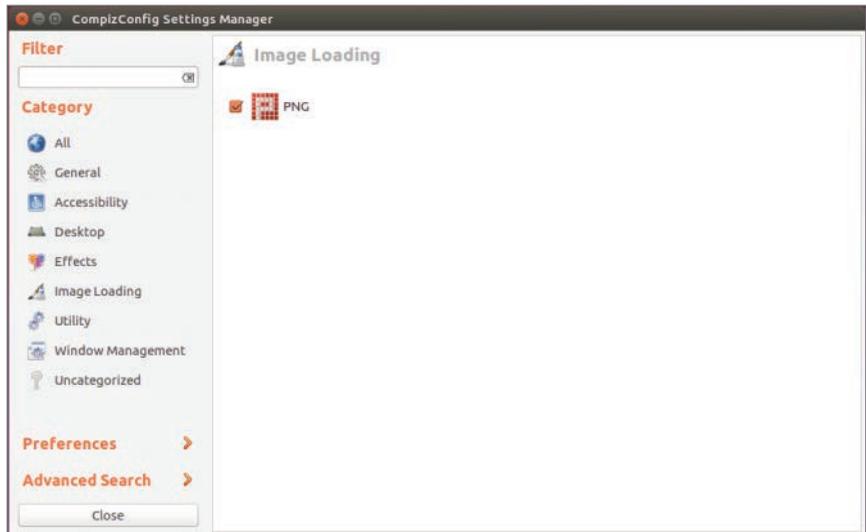


Figure 5-22 Compiz Config Settings Manager Image Loading category

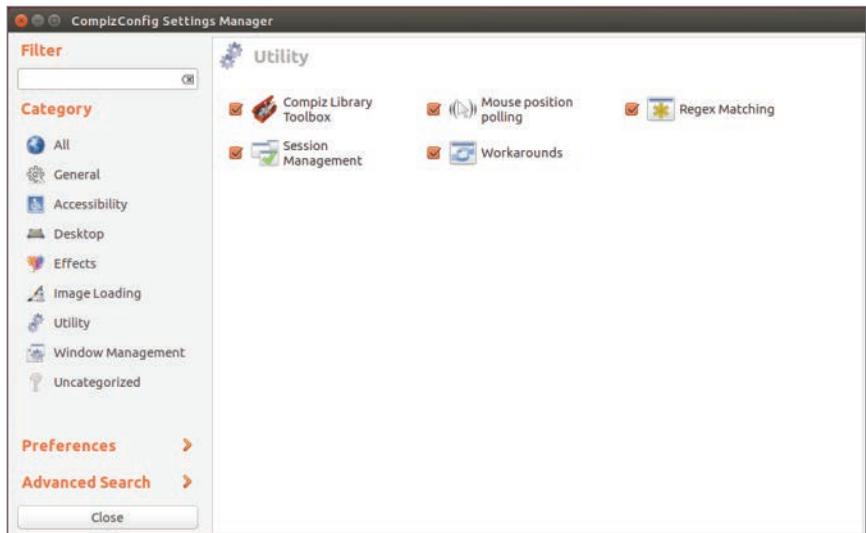
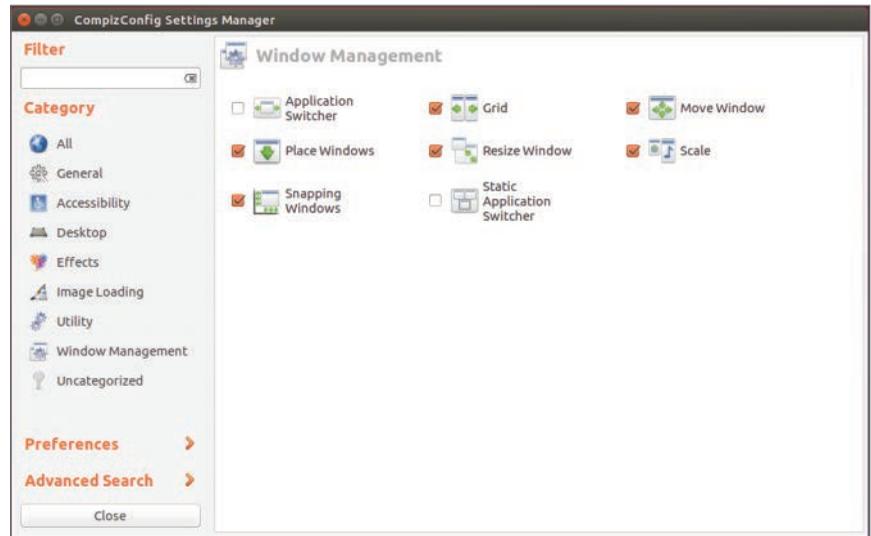


Figure 5-23 Compiz Config Settings Manager Utility category



**Figure 5-24** Compiz Config Settings Manager Window Management category

To become more familiar with Compiz and the Compiz Config Settings Manager, go to [www.compiz.org](http://www.compiz.org).

## Unity Lenses and Scopes

The Dash is one of Unity's main features. It allows users to search for information both locally and remotely using Lenses. Each Lens is responsible for one category of search results for the Dash.

By itself, the Lens is not very useful, because it doesn't perform the search. Instead, the Lens relies on one or more *Scopes*, which are the actual search engines, to return the search results.

In the terminology section of Chapter 3, we looked at the music Lens. This Lens has two Scopes, which means that four processes are involved in searching the music category for content: the Dash, the Lens daemon, first Scope daemon, and second Scope daemon.

As a user, you won't even notice the complex process the Lens performs to keep everything in sync. You can just enjoy the benefits of being able to quickly search various categories of information.

---

**NOTE** For more information on how Lenses work and are created, see the Lens Guidelines wiki at <https://wiki.ubuntu.com/Unity/Lenses/Guidelines>.

---

It seems that everyone has a favorite Unity Lens. By default, Unity comes with the following Lenses: Applications, Files, Music, and Video.

## Additional Resources

In this chapter, we looked at three tools you can use to tweak your Unity desktop: Appearance, Unity Tweak Tool, and Compiz Config Settings Manager. Other tools and resources are available to help you personalize your desktop environment. A wealth of help and documentation is also available online. If you ever find yourself stuck, take a look at the Ubuntu Web site at [www.ubuntu.com](http://www.ubuntu.com) or the Ubuntu documentation at <https://help.ubuntu.com>, and make use of Ask Ubuntu, the forums, wiki, mailing lists, and IRC channels.

## Summary

In this chapter we outlined several ways to customize your Ubuntu experience. Changing the Unity desktop from its default settings is not something everyone will want or need to do, but knowing how to do so is both useful and sometimes necessary.

# Index

- (dash), in command line options, 176
  - ? (question mark), wildcard, 185
  - . (dot), in configuration folder names, 161
  - @ (at sign), in command-line username, 175
  - \* (asterisk), wildcard, 185
  - \*\*\*... (asterisks), password security, 61
  - && (ampersands), conditional command execution, 186
  - | (vertical bar), pipe symbol, 168, 177
  - \$ (dollar sign), UNIX shell symbol, 175, 210
  - ~ (tilde), home directory indicator, 175, 180
- A**
- Access for disabled users, 20
  - Accessibility plug-ins, 149–150
  - addgroup command, 184
  - Adding. *See also* Creating.
    - groups, 184
    - packages, 87–89
    - programs, 87–89
    - search engines to Firefox, 74
    - to text files, 183
  - Additional tab, 144, 146
  - adduser command, 69, 183
  - Administrator privileges, 99
  - Adobe Flash, Firefox support, 75
  - Adobe Illustrator equivalent. *See* Inkscape.
  - Adobe InDesign equivalent. *See* Scribus.
  - Adobe Photoshop equivalent. *See* GIMP (GNU Image Manipulation Program).
  - Advocacy, community opportunities, 301–302
  - Allocating drive space, 43–47
  - Alternate install CD. *See* Minimal CD.
  - AMD64 support, 35
  - Ampersands (&&), conditional command execution, 186
  - Anagramarama, 132
  - Anagrams, 132
  - Appearance section, 147
  - Appearance tool, 141–142
  - Applications. *See also* Programs.
    - closing, 65
    - finding, 61–64. *See also* The Launcher.
    - minimizing/maximizing, 65
    - running, 61–64, 73. *See also* The Launcher.
      - switching, 64
  - APT (Advanced Package Tool)
    - description, 106
    - sources for repositories, 207–208
  - apt-cache utility, 210–213
  - apt-get utility, 210–213
  - aptitude utility, 216
  - Aquarius Ubuntu Edition
    - E4.5, 266
    - E5, 266
    - M10, 267
  - Array failures, 200
  - Array management. *See* LVM (Logical Volume Manager).
  - Artificial intelligence, Internet of Things, 269–270
  - AskUbuntu.com, 286
  - Asterisk (\*), wildcard, 185
  - Asterisks (\*\*\*...), password security, 61

Astronomy, 129–130  
 At sign (@), in command-line username, 175  
 Audio. *See also* Multimedia; Music.  
   playing CDs, 94  
   podcasts, 93–94  
   Rhythmbox Music Player, 92–94  
   ripping CDs, 94  
 Authentication, 260  
 Ayatana project, 67

**B**

Backing up your files, 96–98  
 Backport repositories, 207  
 Bazaar, 29, 258–259  
 /bin folder, 162  
 BIOS configuration problems, 40  
 Blinken, 131  
 Blog aggregator. *See* Planet Ubuntu.  
 Blueprint Tracker, 256–258  
 Bochs, 226  
 Bookmarking Web sites, 74  
 Books and publications. *See also* Documentation; Linux Documentation Project.  
   *The Official Ubuntu Server Book*, 188, 231, 238  
   *A Practical Guide to Linux...*, 188–189  
   *Ubuntu Unleashed 2016*, 189  
 /boot folder, 162  
 “Bootable flag” setting, 57  
 Browsing  
   files and folders, 67  
   the Web. *See* Firefox.  
 Bug #1, 24–26  
 Bug tracking  
   community opportunities, 303–304  
   fixes in releases, 23  
   Launchpad Bugs, 255–256  
 Bugs program, 255–256  
 Bulletin board. *See* The Fridge.  
 Burning  
   installation DVDs, 36–38  
   .iso files, 36–38

Buying installation DVDs, 36  
 Byobu, 178, 186–188

**C**

Calendar, 70  
 Canonical, Ltd. *See also* Community Council; Shuttleworth, Mark.  
   Bazaar, support and development, 29  
   founding of, 12, 26–27  
   geographical location, 27  
   Launchpad, support and development, 29  
   service and support, 27–29  
   Silber becomes CEO, 27  
   as a virtual company, 12  
 cat command, 176, 183. *See also* zcat command.  
 cd command, 179  
 CDs. *See also* DVDs.  
   copying. *See* DVDs, burning; Ripping CDs.  
   installation. *See* Desktop DVDs; Installation DVDs; Minimal CDs.  
   playing, 94  
   ripping, 94  
 chgrp command, 184  
 Chinese user community, 243–244  
 chmod command, 180–181  
 chown command, 181  
 Clock, 70–71  
 Cloud computing  
   community opportunities, 293  
   Internet of Things, 271–272  
   Microsoft support for, 26  
   overview, 227–231  
   tools for, 228–231. *See also* Ubuntu Cloud; Ubuntu One.  
 CoC (Code of Conduct)  
   goals of Ubuntu, 20–22  
   maintenance of, 296  
   Mark Shuttleworth, 21–22  
 Codecs  
   Linux Mint, 250  
   multimedia, 91–92  
   video, 95–96

- Command-line interface. *See* Terminal.
- Commands. *See* Terminal commands; *specific commands.*
- Commercial phones and tablets, 265–268
- Communication venues. *See* Ubuntu community, communication venues.
- Community Council. *See also* Canonical, Ltd.
  - appointment of team councils, 292
  - appointments to, 297
  - definition, 276
  - dispute resolution, 292
  - overview, 295–297
  - Shuttleworth’s position on, 292
- Community of users. *See* Ubuntu community.
- community-announce mailing list, 279
- Compiz Config Settings Manager
  - accessibility plug-ins, 149–150
  - desktop plug-ins, 149–150
  - effects plug-ins, 151
  - extras plug-ins, 149
  - image loading plug-ins, 151–152
  - installing, 147
  - launching, 147
  - online resources, 153
  - overview, 147–153
  - plug-ins, 149–153
  - search box, 147–149
  - utility plug-ins, 151–152
  - warning message, 147–148
  - window management plug-ins, 151, 153
- Computer name. *See* Hostname.
- Computer option, 67
- Configuration files, 161
- Configuring. *See also* Customizing; Installing.
  - BIOS, 40
  - keyboards, 49–50
  - system settings, 71
  - translation and localization, 80–81
- Connect to Server option, 67
- Containerization, 226
- Convergence
  - definition, 263
  - overview, 262–263
  - Ubuntu desktop, 272–273
  - Unity desktop, 263
- Convergence, Internet of Things
  - artificial intelligence, 269–270
  - the cloud, 271–272
  - drones, 269
  - overview, 268–269
  - refrigerators, 269–270
  - robots, 270–271
  - Snap packages, 268–269
- Convergence, Ubuntu devices
  - Aquarius E4.5 Ubuntu Edition, 266
  - Aquarius E5 Ubuntu Edition, 266
  - Aquarius M10 Ubuntu Edition, 267
  - commercial phones and tablets, 265–268
  - crowdfunding, 265
  - Meizu MX4 Ubuntu Edition, 266
  - Meizu Pro 5 Ubuntu Edition, 267
  - online resources, 268
  - smart phones, 264–268
  - tablets, 264–268
  - Ubuntu Edge, 265
  - Ubuntu Insiders, 266
- Copying
  - CDs. *See* Burning, installation DVDs; Ripping CDs.
  - files and folders, 67, 180
  - installation DVDs, 37
- Core, 248
- cp command, 180
- CPU information, displaying, 181–182
- Creating. *See also* Adding.
  - bootable USB sticks, 38–39
  - folders, 180
  - passwords, 50, 54
  - pipelines, 176–177
- Creating, user accounts
  - adding new users, 68–69, 183
  - hostnames, 49–50

- Creating, user accounts, *continued*
  - during installation, 49–51, 53–54
  - passwords, 50, 54, 68–69, 183–184
  - user name, 53–54
- Crowdfunding, convergence, 265
- Customizing. *See also* Configuring.
  - the Launcher, on Unity desktop, 143
  - system settings, 71
  - Ubuntu look and feel, 98–99
  - Unity desktop. *See* Compiz Config Settings Manager; Unity desktop, customizing.
- D**
- The Dash
  - illustration, 139
  - keyboard shortcuts, 164, 165
  - Language Support option, 80–81
  - overview, 62–64
  - searches, 153–154. *See also* Lenses.
  - System Settings option, 156–160
- Dash (-), in command line options, 176
- Data replication, 197–198
- DB2 database, Ubuntu support, 28
- Debian distribution, 15–17
- Debian package management, 208–209
- Debs, 208–209
- Degraded RAID mode, 200
- Deleting
  - files and folders, 64, 67, 180. *See also* Trash.
  - groups, 184
  - packages, 87–89, 105, 108–109, 212
  - programs, 87–89
  - user accounts, 69, 183–184
- delgroup command, 184
- deluser command, 69, 184
- Dependencies, definition, 106
- Derivatives. *See* Flavors.
- Desktop computers, commitment to, 23–24
- Desktop DVDs. *See also* Installing
  - Ubuntu from desktop DVD.
    - booting from, 40–41
    - description, 34
  - Desktop folder, 66–67
  - Desktop icons, customizing, 147
  - Desktop plug-ins, 149–150
  - Desktop publishing, 120–125
  - Desktops. *See also specific desktops.*
    - Edubuntu, 237–238
    - Kubuntu, 236–237
    - Lubuntu, 238–239
    - Mythbuntu, 242–243
    - Ubuntu. *See* Unity.
    - Ubuntu GNOME, 244
    - Ubuntu Kylin, 243–244
    - Ubuntu Studio, 241–242
    - Xubuntu, 240–241
  - /dev folder, 162
  - Developer Membership Board, 299
  - Development tools. *See* Launchpad.
  - df command, 181–182
  - Directories vs. folders, 160. *See also* Folders.
  - Disabled users, access for, 20
  - Disk replication, 227
  - Disk space usage, displaying, 181–182
  - Disk storage. *See* LVM (Logical Volume Manager).
  - Displays (monitors)
    - locking, 71
    - screen corners, 67
  - Dispute arbitration, 296
  - Distributed Replicated Block Device (DRBD), 227
  - Distribution management, 252–253
  - Distributions. *See also* Editions; Flavors; *specific distributions.*
    - Andalusian government, 249–250
    - currently active, 14–16
    - Edubuntu, 237–238
    - for educational use, 237–238
    - Guadalinex, 249–250
    - for the KDE desktop, 35, 236–237
    - Kubuntu, 35, 236–237
    - managing, 252–253. *See also* Soyuz program.
    - for older hardware, 36, 240–241

- overview, 13–14
  - propagating changes upstream, 15–16
  - for servers. *See* Ubuntu Server.
  - Ubuntu Server, 35
  - Xubuntu, 36, 240–241
  - Distros. *See* Distributions.
  - Distrowatch database, 14
  - DJI (drone platform), 269
  - Documentation. *See also* Books and publications; Linux Documentation Project.
    - community opportunities, 302–303
    - community-produced, 283–284
    - Linux, online, 189
    - Ubuntu community, 302–303
    - wikis, 283–284
  - Documentation Project, 206
  - Documents, creating with LibreOffice, 75–78
  - Documents folder, 66–67
  - Dollar sign (\$), UNIX shell symbol, 175, 210
  - do-release-upgrade tool, 213–215
  - Dot (.), in configuration folder names, 161
  - Downloading
    - installation DVDs, 35–36
    - packages, 210–213
  - Downloads folder, 66–67
  - dpkg command, 208–209
  - dpkg-deb utility, 208–209
  - DRBD (Distributed Replicated Block Device), 227
  - Drive space, allocating, 43–47
  - Drivers, printers, 83–84
  - Drones, Internet of Things, 269
  - Dropbox equivalent. *See* Ubuntu One.
  - Dual-booting, 43
  - DVDs (installation). *See also* CDs.
    - burning, 36–38
    - images. *See* .iso files.
    - for installing Ubuntu. *See* Installation DVDs.
  - DVDs (video)
    - codecs required, 95–96
    - playing, 95–96
- ## E
- Edge, 265
  - Editing
    - files, 182–183
    - text, 182–183
    - videos, 125–126
  - Editions (of Ubuntu), 246–248. *See also* Distributions; Flavors; *specific editions*.
  - Editors
    - nano, 183
    - Stream EDitor, 182
  - Edubuntu, 237–238
  - Educational activities. *See also* Games.
    - astronomy, 129–130
    - Blinken, 131
    - flash cards, 131
    - games, 128–129
    - GCompris, 132
    - globe of the world, 130
    - Marble, 130
    - Parley, 131
    - physics simulator, 131
    - planetarium, 129–130
    - Stellarium, 129–130
    - Step, 131
    - Tux Paint, 132
    - world atlas, 130
  - Educational distributions. *See* Edubuntu.
  - Effects plug-ins, 151
  - E-mail, Thunderbird program, 79–80
  - Empathy, 280
  - Emptying the trash, 64
  - Encryption, 55, 204–205, 44
  - Erle Robotics, 269
  - Erle Spider, 270–271
  - /etc folder, 162
  - Events, Ubuntu community. *See* Ubuntu community, communication venues and events.

- Extensions, Firefox, 74–75
- Extras plug-ins, 149, 151
- F**
- Facebook, 286
- Fault tolerance
  - LVM (Logical Volume Manager), 204
  - RAID (redundant array of inexpensive disks), 197, 201, 204
- Feature tracking, 256–258
- Feedback
  - community opportunities, 302
  - about Ubuntu Server, 224
- File manager, 66–67
- Files. *See also* Folders; *specific files*.
  - adding text to, 183
  - browsing, 67
  - configuration files, 161
  - copying, 67
  - deleting, 64, 67, 180. *See also* Trash.
  - editing, 182–183
  - listing, 168, 180
  - owned by packages, listing, 216
  - ownership, changing, 181–182
  - package owner, listing, 216
  - package provider, listing, 217
  - permissions, changing, 181
  - remote, listing and copying, 67
  - searching, 182–183
  - storing and organizing, 160–163
  - viewing contents of, 176, 183
  - Windows, accessing, 162–163
- Filesystems, security, 219–220
- Firefox
  - adding search engines, 74
  - Adobe Flash, 75
  - bookmarking sites, 74
  - extensions, 74–75
  - launching, 72
  - live bookmarks, 73
  - navigating the Internet, 73
  - searches, 74
- Firewall tables, 223
- Flash cards, 131
- Flash drives. *See* USB sticks.
- Flavors, 30–31, 234–235. *See also*
  - Distributions; Editions; *specific flavors*.
- Folders. *See also* Files; *specific folders*.
  - browsing, 67
  - changing, 179
  - copying, 67
  - creating, 180
  - current, identifying, 179
  - deleting, 64, 67. *See also* Trash.
  - vs.* directories, 160
  - Linux, list of, 162
  - listing contents of, 175–176, 180
  - remote, listing and copying, 67
  - “Format the partition” setting, 57
- Free, definition of, 6
- free command, 181
- Free (no cost) software, 106
- Free (open) software
  - characteristics of, 4
  - definition, 4
  - definition of “free,” 6
  - freedoms, 4
  - GNU, 4–5
  - goals of Ubuntu, 18–19
  - open source, 5–7
- FREE SPACE line, 56
- Freedoms of free software, 4
- Freehand equivalent. *See* Inkscape.
- Frequency of releases, 22–23
- Freyja Development Team, 143
- The Fridge, 284–286
- fstab file, 163
- Full virtualization, 226
- Funding, donations to Ubuntu Foundation, 29–30
- G**
- Games. *See also* Educational activities.
  - Anagramarama, 132
  - anagrams, 132
  - educational, 128–129
  - learning vocabulary, 132

- Simon Says, 131
  - Steam, 126–128
  - GCompris, 132
  - Gear menu, 71
  - Geographic location, specifying, 47, 52
  - GIMP (GNU Image Manipulation Program), 110–116. *See also* Inkscape.
  - Globe of the world, 130
  - GNOME. *See* Ubuntu GNOME.
  - GNOME 2 desktop, 244–246
  - GNOME Software Center. *See also* Packages; PPAs (personal package archives).
    - free (no cost) software, 106
    - launching, 102
    - overview, 85–86
    - reviews and ratings, 105
    - searching, 103
    - sorting, 103
  - GNOME Software Center icon, 64
  - GNU (GNU's Not UNIX), 4–5
  - Goals of Ubuntu
    - access for disabled users, 20
    - code of conduct, 20–22. *See also* CoC (Code of Conduct).
    - easy translation, 19–20
    - free software, 18–19
    - open source, 19
    - philosophical, 17–20
    - technical, 22–24
  - Google+, 286
  - Governance. *See* Ubuntu community, governance.
  - Graphics packages
    - GIMP (GNU Image Manipulation Program), 110–116
    - Inkscape, 116–120
    - Tux Paint, 132
  - grep command, 182. *See also* zgrep command.
  - Groups
    - adding and deleting, 184
    - changing, 68
    - ownership, changing, 184
  - Guadalinex, 249–250
  - Guided partitions, 54–55
  - Guided—Use Entire Disk... options, 55
- ## H
- HAL (hardware abstraction layer), 182
  - Hard disks. *See* LVM (Logical Volume Manager).
  - Hardware
    - detecting, 53
    - emulating, 226
    - listing, 182
  - HBD (Here Be Dragons), founding of, 9
  - head command, 183
  - Helmke, Matthew, 189
  - Help. *See also* Technical support.
    - from the command line, 184–185
    - man pages, 178–179, 184–185
    - Ubuntu Help option, 71
  - help command, 184–185
  - Hexchat, 280–281
  - Hill, Benjamin Mako, 188
  - History of Ubuntu, 2–3. *See also* Shuttleworth, Mark.
  - /home folder, 162
  - Home folder contents, 66–67
  - Home Folder icon, 64
  - /home partition, 195
  - Home theater. *See* Mythbuntu.
  - Hostname, setting, 49–50, 53
  - Hot swapping RAID devices, 200
  - HUD (Heads Up Display), 137–140, 144
- ## I
- i386 support, 35
  - IBM
    - running DB2 database under Ubuntu, 28
    - virtualization, 225–226
  - Ideas and feedback
    - community opportunities, 302
    - about Ubuntu Server, 224
  - ifconfig command, 182
  - Illustrator equivalent. *See* Inkscape.

- Image loading plug-ins, 151–152
  - InDesign equivalent. *See* Scribus.
  - Inkscape, 116–120. *See also* GIMP (GNU Image Manipulation Program).
  - Installation DVDs. *See also* .iso files.
    - burning, 36–38
    - buying, 36
    - desktop, 34. *See also* Installing Ubuntu from desktop DVD.
    - downloading, 35–36
    - Minimal CDs, 34–35. *See also* Installing Ubuntu from Minimal CD.
  - Installing. *See also* Configuring.
    - Compiz Config Settings Manager, 147
    - Ubuntu Server, 194–195. *See also* LVM (Logical Volume Manager).
  - Installing packages
    - with `apt-get`, 212
    - from GNOME Software Center, 103–105
    - manually, 209–210
    - with Synaptic, 108
    - Ubuntu Server, 194–195
    - updates, 87–89
  - Installing software from
    - PPAs, 169–171
    - source code, 171–172
  - Installing Ubuntu
    - bootable USB sticks, creating, 38–39
    - computer types supported, 34
    - as a trial version, 39–40
  - Installing Ubuntu from desktop DVD
    - allocating drive space, 43–47
    - BIOS configuration problems, 40
    - dual-booting, 43
    - DVDs for. *See* Installation DVDs.
    - geographic location, specifying, 47–48
    - hostname, setting, 49–50
    - partitioning the hard disk, 43–47
    - passwords, creating, 50
    - preparation for, 41–42
    - user accounts, creating, 49–51
  - Installing Ubuntu from Minimal CD
    - geographic location, specifying, 52
    - getting started, 52
    - hardware detection, 53
    - hostname, setting, 53
    - installing a server, 52
    - partitioning the hard disk, 54–58
    - time zone, setting, 53–54
    - user accounts, creating, 53–54
  - Internet, browsing. *See* Firefox.
  - Internet of Things
    - artificial intelligence, 269–270
    - the cloud, 271–272
    - convergence. *See* Convergence, Internet of Things.
    - drones, 269
    - overview, 268–269
    - refrigerators, 269–270
    - robots, 270–271
    - Snap packages, 268–269
    - Ubuntu Core, 248
  - iPods, 94
  - `iptables` command, 223
  - IRC (Internet Relay Chat), 280–282
  - IRC Council, 298–299
  - Irissi, 280
  - Isle of Man, 27
  - .iso files, 36–37. *See also* Installation DVDs.
  - `iwconfig` command, 182
- J**
- Juju, 228–231
- K**
- KDE desktop, 35, 236–237. *See also* Kubuntu.
  - Kernel, definition, 5
  - Keyboard shortcuts, 144, 164–167. *See also specific keys.*
  - Keyboards, configuring, 49–50
  - Kubuntu, 35, 236–237. *See also* KDE desktop.

- Kubuntu Council, 236
- KVM, 226
- L**
- l10n (localization), 254. *See also* Translation and localization.
- “Label” setting, 57
- Language selection. *See also* Translation and localization.
  - changing, 80–81
  - during installation, 41
  - setting as default, 81
- Language Support option, 80–81
- The Launcher
  - customizing, on Unity desktop, 143
  - finding applications, 61–64
  - GNOME Software Center icon, 64
  - Home Folder icon, 64
  - keyboard shortcuts, 164, 165
  - running applications, 61–64
  - Trash icon, 64
  - Unity desktop, customizing, 143
- Launcher tab, 143
- Launchpad
  - Blueprint Tracker, 256–258
  - Canonical, Ltd., support and development, 29
  - components of, 29. *See also specific components.*
  - distribution management, 252–253
  - feature tracking, 256–258
  - overview, 250–252
  - Rosetta program, 253–254
  - Soyuz program, 252–253
  - specifications, writing and tracking, 256–258
  - support and development, 29
  - translation and localization, 253–254
- Launchpad Bugs program, 255–256
- Lenses, 62–64, 153–154
- less command, 183. *See also* zless command.
- Letters, writing. *See* LibreOffice.
- /lib folder, 162
- Libraries, Synaptic, 107
- LibreOffice, 75–78
- Lightweight X11 Desktop Environment (LXDE), 238–239
- Linux
  - history of, 5
  - technical definition, 5
- Linux Documentation Project, 189, 206. *See also* Books and publications; Documentation.
- Linux-VServer projects, 226
- Listing
  - folder contents, 175–176, 180
  - folders, remote, 67
  - hardware, 182
  - network cards, 182
  - package owners, 216
  - package providers, 217
  - packages, 103–105, 209, 216. *See also* Package management.
  - PCI buses and devices, 182
  - sound cards, 182
  - USB buses and devices, 182
- Listing, files
  - in current directory, 180
  - ls command, 168, 180
  - remote, 67
- Live bookmarks, 74
- LoCo Council, 299
- LoCos (local community teams), 293–294
- Log files. *See* System log files.
- Log Out option, 71
- Logging out, 71
- Logs, separating from spools, 195
- Look and feel, customizing, 98–99
- ls command, 168, 175–176, 180
- lsb\_release -a command, 181
- lshal command, 182
- lspci command, 182
- lsusb command, 182
- LTS (long-term support), 3

- Lubuntu, 238–239
  - LVM (Logical Volume Manager)
    - fault tolerance, 204
    - LVs (logical volumes), 201–202
    - managing partitions, 201–202
    - overview, 200–202
    - partitioning into physical volumes, 201–202
    - PEs (physical extents), 202
    - PVs (physical volumes), 201–202
    - setting up, 202–204
    - setting up during installation, 44
    - VGs (volume groups), 201
  - LVs (logical volumes), 201–202
  - LXDE (Lightweight X11 Desktop Environment), 238–239
- M**
- MAAS (Metal As A Service), 228–231
  - Macromedia Freehand equivalent. *See* Inkscape.
  - Mailing lists, 278–280
  - Mailman program, 279
  - Main repositories, 206
  - man command, 178–179, 184–185
  - man intro command, 185
  - man -k foo command, 185
  - man man command, 184
  - Man pages, 178–179, 184–185. *See also* Help.
  - Manifold (drone platform), 269
  - Manual option, 55–57
  - Manual partitioning, 44–47, 55–57
  - Marble, 130
  - Master package archive, 206–207
  - Masters of the Universe (MOTUs), 294–295
  - MATE, 244–246
  - Math programs, 131
  - Mauelshagen, Heinz, 201
  - /media folder, 162
  - Meizu MX4 Ubuntu Edition, 266
  - Meizu Pro 5 Ubuntu Edition, 267
  - Members of the Ubuntu project, 300–301
  - Membership Approval Board, 299
  - Memory, displaying, 181
  - Metal As A Service (MAAS), 228–231
  - Microsoft
    - as Bug #1, 24–26
    - support for cloud computing, 26
  - Minimal CDs, 34–35
  - Minimizing/maximizing applications, 65
  - mkdi r command, 180
  - /mnt folder, 162
  - Monitors. *See* Displays (monitors).
  - MOTUs (Masters of the Universe), 294–295
  - Mount options, security, 219–220
  - “Mount options” setting, 57
  - “Mount point” setting, 57
  - Mount points for Windows partitions, 163
  - Mounting/unmounting devices, folder for, 162
  - Movie Player program, 96
  - Multimedia. *See also specific media.*
    - home theater. *See* Mythbuntu.
    - installing codecs, 91–92
    - Ogg Theora, 92
    - Ogg Vorbis, 92
    - production tools. *See* Ubuntu Studio.
  - Multiverse repositories, 207
  - Multiverse repository, 89
  - Music. *See also* Audio; Multimedia.
    - iPods, 94
    - playing CDs, 94
    - Rhythmbox Music Player, 92–94
    - ripping CDs, 94
  - Music folder, 66
  - mv command, 180
  - Mycroft, 270–271
  - Mythbuntu, 242–243
  - MythTV, 242–243
- N**
- nano command, 183
  - nano text editor, 183
  - Network cards, listing, 182

Network interface information, displaying, 182

Network Manager, 70

Network security, 222–223

New Printer wizard, 82–84

noatime option, 220

nodev option, 219

noexec option, 220

nosuid option, 219–220

Notification area, 69–71

## O

Office suites

LibreOffice, 75–78

OpenOffice.org, 76

StarOffice, 75

*The Official Ubuntu Server Book*, 188, 231, 238

Ogg Theora, 92

Ogg Vorbis, 92

Older hardware, installing Ubuntu

from Minimal CD, 52

from Xubuntu, 36, 240–241

Online resources

AskUbuntu.com, 286

BIOS manual, 40

blog aggregator, 290

Compiz Config Settings Manager, 153

convergence of Ubuntu devices, 268

The Fridge, 284–286

IRC (Internet Relay Chat), 280–282

IRC channel list, 282

Lenses, 154

Linux commands, 189

Linux Documentation Project, 189, 206

mailing lists, 278–280

phone convergence, 268

Planet Ubuntu, 74, 290

PPAs (personal package archives), 89

social media, 286

tablet convergence, 268

Ubuntu Community Website, 278

Unity on other devices, 99

Web forums, 282–283

wikis, 283–284

Wine, 168–169

Open source

free software, 5–7

goals of Ubuntu, 19

Open Source Initiative, 6

OpenOffice.org, 76

OpenShot, 125–126

OpenVZ, 226

Opportunities to work with Ubuntu

community. *See* Ubuntu community, opportunities.

/opt folder, 162

OS virtualization, 225–226

Ownership, changing

files, 181

groups, 184

## P

Package management. *See also* MOTUs (Masters of the Universe); Synaptic; Technical Board.

APT sources, 207–208

building from source, 214–215

Debian packages, 208–209

deleting, 212

downloading, 210–213

fetching from CD, 210–213

file owner, listing, 216

file provider, listing, 217

installing packages. *See* Installing packages.

listing, 209

master archive, 206–207. *See also* Repositories.

owned files, listing, 216

searching for, 211–212

showing package information, 211–212

system upgrades, 213

virus protection, 209–210

Packages. *See also* GNOME Software Center;

PPAs (personal package archives).

adding/deleting, 87–89

deleting, 105, 108–109

- Packages, *continued*
  - description, 106
  - finding, 109
  - getting information about, 103–105
  - installing. *See* Installing packages.
  - libraries of, 107
  - listings, 103–105
  - overview, 106–109
  - reviews and ratings, 105
- Packaging, community opportunities, 304
- Panel tab, 144–145
- Paravirtualization, 225–226
- Parity drives, 198
- Parley, 131
- Partitioning disks
  - “Bootable flag” setting, 57
  - desktop DVD, 43–47
  - encryption, 44, 55
  - “Format the partition” setting, 57
  - FREE SPACE line, 56
  - guided partitions, 54–55
  - Guided—Use Entire Disk... options, 55
  - “Label” setting, 57
  - LVM (Logical Volume Manager), 201–202
  - Manual option, 55–57
  - manually, 44–47, 55–57
  - Minimal CD, 54–58
  - “Mount options” setting, 57
  - “Mount point” setting, 57
  - “Reserved blocks” setting, 57
  - security, 195
  - settings, 57
  - “Typical usage” setting, 57
  - Ubuntu Server, 195–196
  - “Use as” setting, 57
- passwd command, 183–184
- Passwords
  - administrator privileges, 99
  - appearing as asterisks, 61
  - changing groups or user accounts, 68–69, 183–184
  - creating, 50, 54
    - guidelines for, 54
    - for user accounts, setting, 69
- PCI buses and devices, listing, 182
- PDF files, saving documents as, 77
- Perens, Bruce, 6
- Permissions, changing, 181
- Personal package archives (PPAs). *See* PPAs (personal package archives).
- PEs (physical extents), 202
- Philosophical goals of Ubuntu, 17–20
- Phone versions of Ubuntu, 248. *See also* Convergence.
- Photographs, managing, 95
- Photoshop equivalent. *See* GIMP (GNU Image Manipulation Program).
- Physics simulator, 131
- Pictures folder, 66
- Pipelines
  - creating, 176–177
  - definition, 168
- Planet Ubuntu, 74, 290
- Planetarium, 129–130
- Plug-ins, Compiz Config Settings Manager, 149–153
- Podcasts, 93–94
- PPAs (personal package archives)
  - installing software from, 169–171
  - online resources, 89
- A Practical Guide to Linux...*, 188–189
- Predictable release schedule, 22–23
- Presentations. *See* LibreOffice.
- Printers
  - configuring, 81–85
  - drivers, 83–84
  - New Printer wizard, 82–84
- Printing
  - remotely, 84–85
  - system information, 181
- Privacy, system settings, 157–159
- Process information, displaying, 181
- Processes, displaying, 182
- /proc/sys folder, 162
- Programming, community opportunities, 304

- Programming tools. *See* Launchpad.
  - Programs, adding/deleting, 87–89. *See also* Applications.
  - ps command, 182
  - Public folder, 67
  - PVs (physical volumes), 201–202
  - pwd command, 179
  - Python programming language, 24
- Q**
- q command, 183–184
  - QEMU, 226
  - Quality assurance, community opportunities, 303–304
  - Question mark (?), wildcard, 185
- R**
- RAID (redundant array of inexpensive disks)
    - array failures, 200
    - choosing a mode, 198
    - data replication, 197–198
    - degraded mode, 200
    - fault tolerance, 197–198, 201, 204
    - hot swapping, 200
    - modes, 197–198
    - overview, 196–198
    - parity drives, 198
    - setting up, 198–200
    - spare devices, 200
    - striped sets, 197
  - RAID 0, 197
  - RAID 1, 197
  - RAID 5, 197
  - RAM information, displaying, 181
  - Rankin, Kyle, 188
  - Raymond, Eric S., 6
  - Red Hat distribution *vs.* Debian, 15
  - Refrigerators, Internet of Things, 269–270
  - Releases
    - bug fixes, 23
    - frequency, 22–23
    - predictable schedule, 22–23
    - support for, 23
    - technical goals for, 22–23
  - Remote printing, 84–85
  - Removing. *See* Deleting.
  - Repositories
    - APT sources, 207–208
    - backports, 207
    - main, 206
    - multiverse, 89, 207
    - official *vs.* unofficial, 106
    - PPAs (personal package archives), 89
    - restricted, 206
    - security updates, 206–207
    - universe, 89, 207
    - updating software from, 89
    - “Reserved blocks” setting, 57
  - Restricted repositories, 206
  - Revision control, 258–259
  - Rhythmbox Music Player, 92–94
  - Ripping CDs, 94
  - rm command, 180
  - Robots, Internet of Things, 270–271
  - Rodríguez, Fabián, 302
  - Root account, enabling, 206
  - /root folder, 162
  - Rosetta program, 253–254
  - “Rough consensus, running code,” 291–292
- S**
- SABDFL (self-appointed benevolent dictator for life), 299–300
  - /sbin folder, 162
  - Scopes, 153–154
  - Screens. *See* Displays (monitors).
  - Scribus, 120–125
  - Scrolling options, Unity desktop, 147
  - Search box, Compiz Config Settings Manager, 147–149
  - Search engines, adding to Firefox, 74
  - Search tab, 144
  - Searching
    - the Dash, 153–154
    - files, 182–183

- Searching, *continued*
  - Firefox, 74
  - man files, 185
  - for packages, 211–212
  - system log files, 222
  - Unity desktop, customizing, 144
  - wildcards, 185–186
- Security
  - repositories, updating, 206–207
  - separating logs and spools, 195
- Security, Ubuntu Server
  - filesystems, 219–220
  - firewall tables, 223
  - mount options, 219–220
  - networks, 222–223
  - overview, 217
  - system log files, 221–222
  - system resource limits, 220–221
  - user account administration, 218–219
- Security & Privacy menu, 157–159
- sed command, 182
- Self-appointed benevolent dictator for life (SABDFL), 299–300
- Semicolon (;), sequential command execution, 186
- Server support, commitment to, 23–24
- Servers. *See also* Ubuntu Server.
  - distributions for, 35
  - installing, 52
- Shifter tab, 144, 145
- Shutting down your computer, 71
- Shuttleworth, Mark. *See also* Canonical, Ltd.
  - appointments to the Community Council, 297
  - appointments to the Technical Board, 298
  - Bug #1, 24–26
  - certificate authority, founding of, 8
  - civilian cosmonaut, 8
  - CoC (Code of Conduct), 21–22
  - on community governance, 291
  - HBD (Here Be Dragons), founding of, 9
  - history of Ubuntu, 7–9
  - naming Ubuntu, 10–11
  - position on the Community Council, 292
  - SABDFL (self-appointed benevolent dictator for life), 299–300
  - self-appointed benevolent dictator for life, 299–300
  - Thawte, founding of, 8
  - TSF (The Shuttleworth Foundation), founding of, 8–9
  - Ubuntu Foundation, founding of, 29–30
- The Shuttleworth Foundation (TSF), founding of, 8–9
- Silber, Jane, 27
- Simon Says game, 131
- Slackware, 14
- SLS (Softlanding Linux System), 14
- Smart phones, convergence, 264–268
- Snap packages, Internet of Things, 268–269
- Sobell, Mark G., 188
- Social media, 286
- Software center. *See* GNOME Software Center.
- Software development tools. *See* Launchpad.
- Software Updater, 90–91
- Sound cards, listing, 182
- Source code
  - building packages from, 214–215
  - installing software from, 171–172
- Soyuz program, 252–253
- Specifications, writing and tracking. *See* Blueprint Tracker.
- Spools, separating from logs, 195
- Spreadsheets. *See* LibreOffice.
- Sprints, online, 287–288
- Stallman, Richard M.
  - GNU (GNU's Not UNIX), 4–5
  - Linux, 5
- StarOffice, 75

- Steam, 126–128
  - Stellarium, 129–130
  - Step, 131
  - Stream EDitor, 182
  - Streaming video, 95–96
  - Striped RAID sets, 197
  - sudo command, 178–179
  - Summits, online, 287–288
  - Super key, 164–167
  - Superusers
    - running Terminal commands, 177–178
    - software folder, 162
  - Suspend option, 71
  - Suspending a session, 71
  - Swap usage information, displaying, 181
  - Switching
    - applications, 64
    - keyboard shortcuts, 164, 165
  - Synaptic
    - deleting packages, 108–109
    - finding packages, 109
    - installing packages, 108
    - libraries, 107
    - name derivation, 107
  - System information, displaying or printing, 181
  - System log files, 221–222
  - System resource limits, 220–221
  - System section, 147
  - System settings. *See also* Compiz Config Settings Manager.
    - configuring, 71, 99
    - default, 159–160
    - privacy, 157–159
    - user, 157
  - System Settings option, 71, 156–160
  - System upgrades, packages, 213
- T**
- Tablet versions of Ubuntu, 248. *See also* Convergence.
  - Tablets, convergence, 264–268
  - tail utility, 183, 222
  - Teams. *See also* Ubuntu community.
    - at Canonical, 292–293
    - local community (LoCos), 293–294
    - MOTUs (Masters of the Universe), 294–295
    - overview, 292
  - Technical Board, 297–298
  - Technical goals of Ubuntu, 22–24
  - Technical support. *See also* Help; IRC (Internet Relay Chat); Mailing lists; Ubuntu community, communication venues and events.
    - AskUbuntu.com, 286
    - BIOS manual, 40
    - community opportunities, 302
    - The Fridge, 284–286
    - Linux Documentation Project, 189, 206
    - mailing lists, 278–280
    - Planet Ubuntu, 74, 290
    - tracking, 258–259
    - Web forums, 282–283
    - wikis, 283–284
  - Templates folder, 67
  - Terminal
    - launching, 174–175
    - managing, 186–188
    - overview, 167–168
    - recommended resources, 188–189
  - Terminal commands
    - running as superuser, 177–178
    - running sequentially, 186
    - stringing together, 168
  - Text editors
    - nano, 183
    - Stream EDitor, 182
  - Thawte
    - founding of, 8
    - sale to Verisign, 8
  - Thunderbird program, 79–80
  - Tilde (~), home directory indicator, 175, 180

- Time zone, setting, 53–54
  - /tmp partition, 195–196
  - top command, 181
  - Torvalds, Linus, 5
  - Translation and localization. *See also*
    - Language selection.
    - community opportunities, 303
    - configuring, 80–81
    - goals of Ubuntu, 19–20
    - l10n (localization), 254
    - Language Support option, 80–81
    - Launchpad, 253–254
    - Rosetta program, 253–254
  - Transparency, 143
  - Trash folder, 67
  - Trash icon, 64
  - Troubleshooting BIOS configuration
    - problems, 40
  - TSF (The Shuttleworth Foundation),
    - founding of, 8–9
  - Tutu, Desmond, 11
  - Tux Paint, 132
  - Tweak Tool
    - Additional tab, 144, 146
    - Appearance section, 147
    - description, 137–138
    - illustration, 137
    - Launcher tab, 143
    - Panel tab, 144–145
    - Search tab, 144
    - Shifter tab, 144, 145
    - System section, 147
    - Web Apps tab, 144, 146
    - Window Manager, 144
  - Twitter, 286
  - “Typical usage” setting, 57
- U**
- Ubuntu
    - development organization. *See*
      - Canonical, Ltd.
    - flavors, 30–31. *See also specific flavors.*
    - name origin, 10–11
    - programming language, 24
    - spin-offs, 30–32. *See also specific spin-offs.*
    - subprojects, 30–32. *See also specific subprojects.*
  - #ubuntu channel, 282
  - Ubuntu Cloud, 247–248. *See also* Cloud computing.
  - Ubuntu community
    - Chinese users, 243–244
    - ease of access to, 24
  - Ubuntu community, communication
    - venues and events. *See also* Technical support.
    - AskUbuntu.com, 286
    - Facebook, 286
    - The Fridge, 284–286
    - Google, 286
    - IRC (Internet Relay Chat), 280–282
    - mailing lists, 278–280
    - online events, 301
    - online summits and sprints,
      - 287–288
    - overview, 277
    - Planet Ubuntu, 290
    - social media, 286
    - sprints, 287–288
    - summits, 287–288
    - Twitter, 286
    - Ubucons, 288–290
    - user conferences, 288–290
    - Web forums, 282–283
    - wikis, 283–284
  - Ubuntu community, governance. *See also* Teams.
    - Community Council, 295–297
    - Developer Membership Board, 299
    - dispute arbitration, 296
    - Forum Council, 298
    - goals of, 291
    - IRC Council, 298–299
    - LoCo Council, 299
    - meetings, 297
    - Membership Approval Boards, 299
    - overview, 291–292

- SABDFL (self-appointed benevolent dictator for life), 299–300
- structures and processes, 297
- Technical Board, 297–298
- Ubuntu community, opportunities
  - advocacy, 301–302
  - application developers, 293
  - bug tracking, 303–304
  - cloud community, 293
  - documentation, 302–303
  - ideas and feedback, 302
  - packaging, 304
  - programming, 304
  - quality assurance, 303–304
  - supporting others, 302
  - translation and localization, 303
  - Ubuntu developers, 293
- Ubuntu Community Website, 278
- Ubuntu Core, 248
- Ubuntu desktop. *See* Unity.
- Ubuntu devices, convergence. *See* Convergence, Ubuntu devices.
- Ubuntu Edge, 265
- Ubuntu Foundation, 29–30
- Ubuntu GNOME, 244
- Ubuntu Help option, 71
- Ubuntu Insiders, 266
- Ubuntu Kylin, 243–244
- Ubuntu MATE, 244–246
- Ubuntu members, 300–301
- Ubuntu One, 260. *See also* Cloud computing.
- Ubuntu Phone, 248
- Ubuntu Server
  - cloud computing, 227–231
  - description, 35
  - disk replication, 227
  - DRBD (Distributed Replicated Block Device), 227
  - encrypting the home directory, 204–205
  - /home partition, 195–196
  - installing, 194–195
  - overview, 192–194, 246–248
  - partitioning, 195–196. *See also* RAID (redundant array of inexpensive disks).
  - /tmp partition, 195–196
  - user feedback, 224
  - /var partition, 195–196
  - virtualization, 224–226
- Ubuntu Server, security
  - filesystems, 219–220
  - firewall tables, 223
  - mount options, 219–220
  - networks, 222–223
  - overview, 217
  - system log files, 221–222
  - system resource limits, 220–221
  - user account administration, 218–219
- Ubuntu Software Center. *See* GNOME Software Center.
- Ubuntu Studio, 241–242
- Ubuntu Unleashed 2016*, 189
- ubuntu-announce mailing list, 279
- ubuntu-devel mailing list, 280
- ubuntu-devel-announce mailing list, 279–280
- ubuntu-devel-discuss mailing list, 280
- uname -a command, 181
- Unity desktop. *See also* The Dash.
  - buttons, 65
  - calendar, 70
  - clock, 70–71
  - closing applications, 65
  - convergence, 263, 272–273
  - files and folders, 66–67
  - finding applications, 61–64
  - Gear menu, 71
  - GNOME Software Center icon, 64
  - home folder contents, 66–67
  - Home Folder icon, 64
  - HUD (Heads Up Display), 137–140
  - illustrations, 62–63, 139
  - keyboard shortcuts, 164–167
  - the Launcher, 61–64
  - Lenses, 62–64, 153–154
  - Log Out option, 71

- Unity desktop, *continued*
    - minimizing/maximizing applications, 65
    - Network Manager, 70
    - notification area, 69–71
    - on other devices, 99
    - Restart option, 71
    - running applications, 62–64
    - Scopes, 153–154
    - screen corners, 67
    - Shut Down option, 71
    - Suspend option, 71
    - switching applications, 64
    - System Settings option, 71
    - About This Computer option, 71
    - Trash icon, 64
    - Ubuntu Help option, 71
    - usability, 67
    - user accounts, 68–69
    - user interface terms, 138
  - Unity desktop, customizing. *See also* Compiz Config Settings Manager.
    - appearance, 147
    - Appearance tool, 141–142
    - application switcher settings, 144
    - default settings, 147
    - desktop icons, 147
    - keyboard shortcuts, 144
    - the Launcher, 143
    - panel settings, 144–145
    - Panel tab, 144–145
    - scrolling options, 147
    - searches, 144
    - security, 147
    - transparency, 143
    - Tweak Tool, 137–138, 143–147
    - Web apps, 144, 146
    - window management, 144
  - Universe repository, 89, 207
  - Updating software
    - adding/deleting programs and packages, 87–89
    - GNOME Software Center, 85–86
    - installing updates, 87–89
    - to a new Ubuntu release, 90–91
    - from outside the repositories, 89
    - propagating changes upstream, 15–16
    - from repositories, 89
    - reviewing updates, 87–89
    - Software Updater, 90–91
  - Usability, 67
  - USB buses and devices, listing, 182
  - USB sticks, making bootable, 38–39
  - “Use as” setting, 57
  - User accounts
    - adding, 183–184
    - adding and deleting, 49–51, 53–54, 68–69, 183
    - administration security, 218–219
    - administrator privileges, 99
    - configuring, 53–54
    - deleting, 183–184
    - logging out of, 71
    - passwords, setting, 69
  - User conferences, 289–290
  - User settings, 157
  - Users logged on, displaying, 184
  - /usr folder, 162
  - Utility plug-ins, 151–152
- V**
- /var folder, 162
  - /var partition, 195–196
  - Vendor lock-in, 78
  - Verisign, purchase of Thawte, 8
  - Version, choosing for installation, 35–36
  - Version control, tools for. *See* Bazaar.
  - Version information, printing, 181
  - Versions of Ubuntu. *See* Distributions; Editions; Flavors.
  - Vertical bar (|), pipe symbol, 168, 177
  - VGs (volume groups), 201
  - Video. *See also* Multimedia.
    - codecs required, 95–96
    - DVDs, 95–96
    - editing, 125–126
    - Movie Player program, 96
    - streaming, 95–96
  - Videos folder, 67

- VirtualBox, 226
- Virtualization, 224–226
- Virus protection, 209–210
- VMware, 224–226
- Vocabulary learning, 132
- Volkerding, Patrick, 14
- Volume groups (VGs), 201

**W**

- Warthogs, 2, 9–10
- Warty Warthog, 2
- Web Apps tab, 144, 146
- Web browsing. *See* Firefox.
- Web forums, 282–283
- who command, 184
- Wikis, 283–284
- Wildcards, 185–186
- Window management, plug-ins, 151
- Window Manager, 144
- Windows key, 164
- Windows management, keyboard shortcuts, 164, 166
- Windows partitions, mounting, 163

- Wine Windows emulator, 168–169
- Wireless network information, displaying, 182
- Word processing. *See* LibreOffice.
- Workspace management, keyboard shortcuts, 164, 167
- World atlas, 130

**X**

- Xen, 226
- Xfce window management system, 240–241
- Xubuntu, 36, 240–241

**Z**

- zcat command, 222. *See also* cat command.
- zgrep command, 222. *See also* grep command.
- zless command, 222. *See also* less command.
- Zoning, 226
- z/VM, 226