

OFFICIAL PREVIEW EDITION

Linux Association
of Canada

250+
ILLUSTRATIONS

NEW TO LINUX?

A Comprehensive Beginner's Guide

VOLUME 1



EASY TO FOLLOW
Step-by-step
instructions



LEARN THE BASICS
Commands, files,
and system navigation



**CUSTOMIZE &
MAKE IT YOURS**
Tips to personalize
your experience



STAY SECURE
Best practices for a
safe system



TROUBLESHOOT
Common issues
and solutions



EMPOWERING
CANADIAN
COMMUNITIES
THROUGH
OPEN SOURCE



SUPPORTING LINUX USERS
ACROSS CANADA



PROMOTING OPEN SOURCE
EDUCATION & COLLABORATION

FREE SAMPLE
First Chapter Preview

STRONGER
CANADA



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FREEDOM. PRIVACY. INNOVATION.



NEW TO LINUX?

Official Preview Edition

644 pages	250+ illustrations	12 chapters
Hands-on exercises	Chapter quizzes	Canadian perspective

Published by Linux Association of Canada

This preview introduces the complete beginner-friendly Linux learning guide published by the Linux Association of Canada. It includes the cover, front matter, table of contents, and a substantial sample from Chapter 1.

Why this book is different

- Written for complete beginners
- No programming background required
- Visual explanations instead of jargon
- Exercises suitable for classrooms and self-study
- Real-world examples with a Canadian digital sovereignty perspective

Foreword

If you are reading this book, you are probably curious about Linux. Maybe you are looking for greater privacy, more control over your computer, or simply a better understanding of how technology works.

This book was written for complete beginners. It assumes no previous Linux experience and explains every concept in plain language using illustrations, practical exercises, and real-world examples.

Linux is no longer only for experts. Modern Linux systems are polished, secure, reliable, and easy to use. Millions of people use Linux every day without ever opening a terminal.

Our goal is simple: to help you become a confident Linux user, one chapter at a time. Welcome to the Linux community.

— Linux Association of Canada

Learning Roadmap

1. Welcome to Linux
2. Choose your distribution
3. Try Linux safely
4. Install Linux
5. First login
6. Everyday computing
7. Install software
8. Files and folders
9. The terminal
10. Keeping Linux safe
11. Open source community
12. Next steps

This preview includes a sample from the opening chapter so readers can experience the teaching style before getting the full book.

NEW TO LINUX?

A Comprehensive Beginner's Guide

Volume 1

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About This Guide

This comprehensive guide is designed for complete beginners who want to learn about Linux. Whether you're a student, professional, retiree, or simply curious about open-source technology, this book will guide you from your first encounter with Linux through to confident everyday use and beyond.

No prior technical knowledge is required. We'll explain everything step by step, with clear examples, helpful screenshots, and practical exercises.

Design Notes

This guide uses the official colours of the Linux Association of Canada:

- **Association Green (#10AC84)** – Used for tips, success messages, and positive highlights
 - **Association Black (#111111)** – Primary text and headings
 - **Association Red (#D60000)** – Warnings, cautions, and important notices
 - **White (#FFFFFF)** – Background and contrast elements
-

Acknowledgements

This guide draws upon the collective wisdom of the global Linux and open-source community. We gratefully acknowledge the contributions of developers, documentation writers, and community members from the Linux Foundation, GNU Project, Ubuntu, Fedora, Debian, Linux Mint, and countless other projects who have made Linux accessible to everyone. gold "250+ Illustrations" badge

Special thanks to the Linux Association of Canada for supporting this educational initiative and promoting digital literacy across Canada.

How to Use This Book

Each chapter includes:

-  **Learning Objectives** – What you'll be able to do after completing the chapter
-  **Estimated Reading Time** – Plan your learning sessions
-  **Key Concepts** – Essential ideas to understand
-  **Hands-On Exercises** – Practice what you've learned
-  **Discussion Questions** – Perfect for classroom settings or study groups
-  **Additional Resources** – Where to learn more
-  **Chapter Quiz** – Test your understanding

Take your time. There's no rush. Learning Linux is a journey, not a race.

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CHAPTER 1

WELCOME TO LINUX



Learning Objectives

By the end of this chapter, you will be able to:

1. Explain what Linux is and how it differs from other operating systems
 2. Understand the relationship between GNU and Linux
 3. Define open-source software and its core principles
 4. Identify real-world examples of Linux usage in governments, schools, and businesses
 5. Articulate why digital sovereignty matters in today's world
 6. Feel confident that Linux is accessible to beginners
-

Estimated Reading Time

35–40 minutes



TIP:



Operating System (OS):

The software that manages your computer's hardware and lets you run applications. Examples include Windows, macOS, and Linux.



Kernel: The core component of an operating system that communicates directly with your computer's hardware.



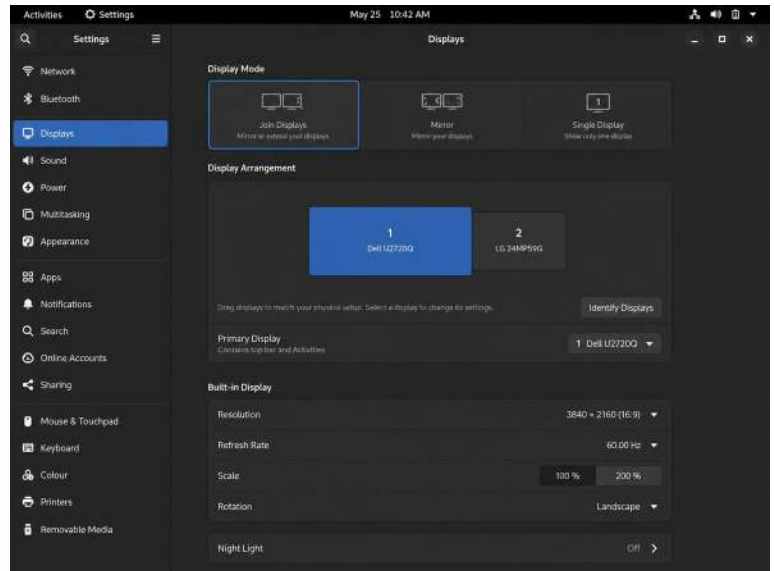
Open Source: Software whose source code is freely available for anyone to view, modify, and distribute.



Distribution (Distro): A complete operating system built around the Linux kernel, bundled with applications and tools.



Digital Sovereignty: The ability of individuals, organizations, and nations to control their own digital infrastructure and data.



Key Concepts

Introduction: You're in the Right Place

Welcome! If you've picked up this book, you're probably curious about Linux. Maybe you've heard it's "for experts" or "too complicated." Maybe you've heard it's free and powerful. Maybe you're just tired of the limitations of your current operating system.

Here's the truth: **Linux is for everyone.** Yes, including you.

You don't need to be a programmer. You don't need a computer science degree. You don't even need to be particularly "tech-savvy." What you need is curiosity and a willingness to learn something new. If you can use a smartphone or browse the web, you can use Linux.

This chapter will introduce you to what Linux actually is, where it came from, and why millions of people around the world—including governments, schools, and major corporations—have chosen it. We'll also explore the philosophy behind open-source software and why it matters more than ever in our increasingly digital world.

Let's begin with the most fundamental question.

What Is Linux?

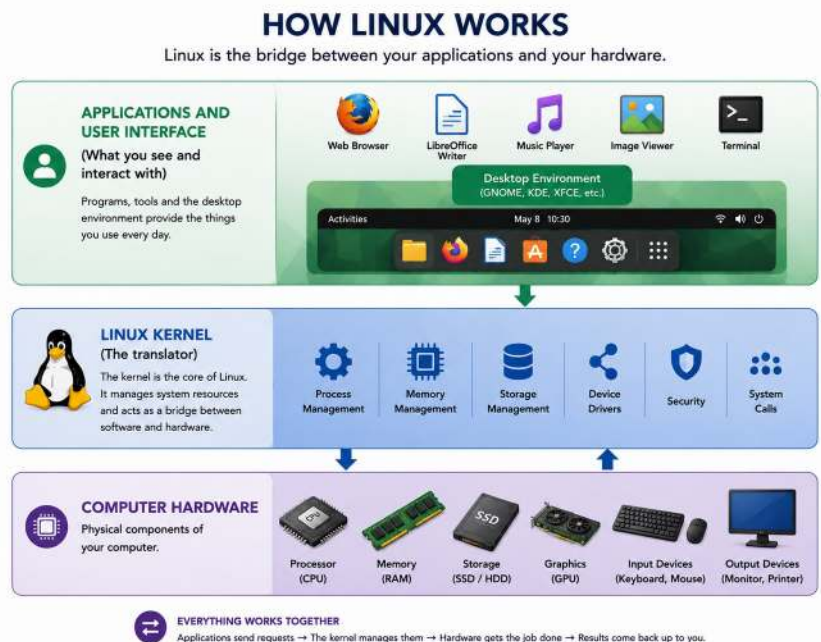
The Simple Answer

Linux is an **operating system**—the software that makes your computer work. Just like Windows or macOS, Linux manages your computer's hardware (processor, memory, storage, screen, keyboard) and lets you run applications (web browsers, word processors, games, and more).

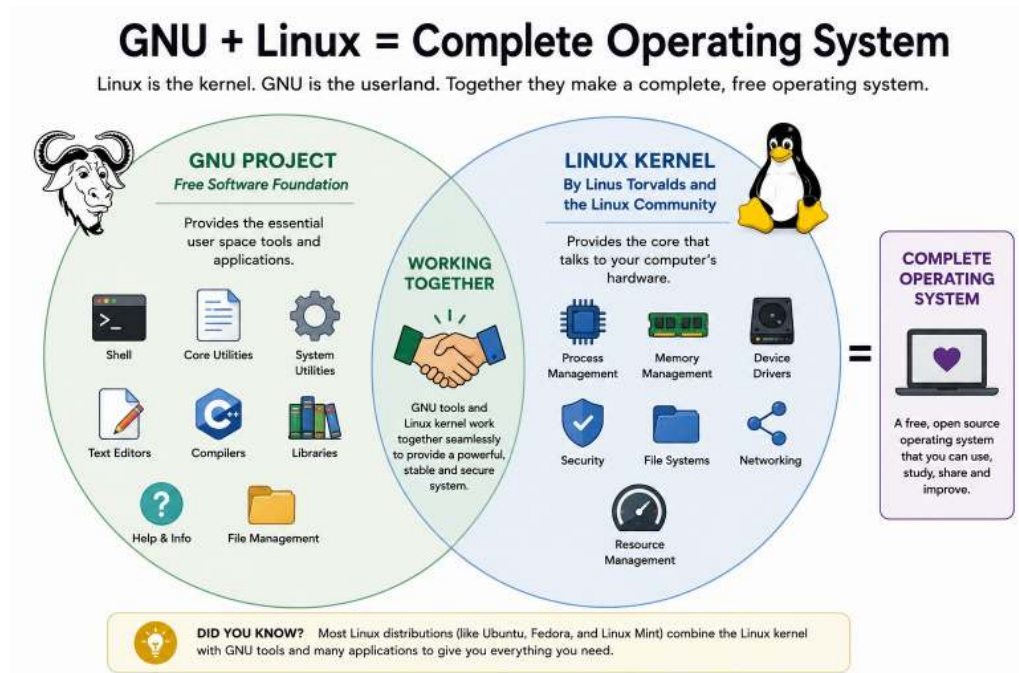
When you turn on a computer running Linux, you'll see a desktop, icons, menus, and windows—just like any other computer. You can click, drag, type, and navigate exactly as you'd expect.

The Slightly More Technical Answer

Linux is actually the **kernel**—the core component that sits between your computer's hardware and the software you use. Think of the kernel as a translator. When you click to open a file, the kernel translates that action into instructions your hard drive can understand. When you type on



your keyboard, the kernel captures those keystrokes and sends them to the right application.



[

The kernel is incredibly important, but you rarely interact with it directly. Instead, you interact with the complete operating system built around the kernel—which includes the graphical desktop, applications, and tools that make your computer useful.

A Brief History

Linux was created in 1991 by Linus Torvalds, a Finnish computer science student who wanted to build a free operating system kernel as a hobby project. He announced it in a now-famous message to an online newsgroup:

"I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones."

**TIP:**

**Fun Fact:** The Linux mascot is a penguin named Tux. Linus Torvalds chose a penguin after being bitten by one at a zoo in Australia.

The penguin was fine; Linus got a fever. But the penguin became an icon of the Linux community.

Linus was wrong about one thing: it became very big and very professional. Today, Linux powers everything from smartphones (Android is built on Linux) to the world's fastest supercomputers, from web servers to spacecraft (Linux Foundation, 2023).

What made Linux special from the beginning was that Linus released the source code freely and invited others to contribute. Programmers around the world began improving it, fixing bugs, and adding features. This collaborative approach became the foundation of the open-source movement.

What Is GNU?

When people say "Linux," they're often referring to a complete operating system. But technically, Linux is just the kernel. The complete system includes thousands of other programs and tools—and many of the most important ones come from the **GNU Project**.

The GNU Project: Freedom in Software

GNU (which stands for "GNU's Not Unix"—a recursive acronym beloved by programmers) was started in 1983 by Richard Stallman, a programmer at MIT. Stallman was frustrated by the increasing trend of proprietary software—software that users couldn't examine, modify, or share.

He envisioned a completely free operating system where users would have the freedom to:

1. **Run** the software for any purpose
2. **Study** how it works and adapt it to their needs
3. **Redistribute** copies to help others
4. **Improve** the software and share improvements with the community



GNU

Operating System
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The GNU Project

The GNU Project was launched in 1984 to develop a complete free operating system: GNU. It is a joint effort of thousands of volunteers.

[JOIN THE GNU PROJECT](#)
[Learn more about GNU >](#)



The Four Essential Freedoms

The GNU Project is dedicated to software freedom. This means that everyone has the four essential freedoms to use, study, share, and improve the software. These freedoms apply to **everyone, everywhere**.

1



Freedom to Run the Program

The freedom to run the program as you wish, for any purpose.

[Learn more >](#)

2



Freedom to Study How the Program Works

The freedom to study how the program works, and change it so it does your computing as you wish.

[Learn more >](#)

3



Freedom to Redistribute Copies

The freedom to redistribute copies so you can help your neighbor.

[Learn more >](#)

4



Freedom to Improve the Program

The freedom to improve the program, and release your improvements to the public, so that the whole community benefits.

[Learn more >](#)

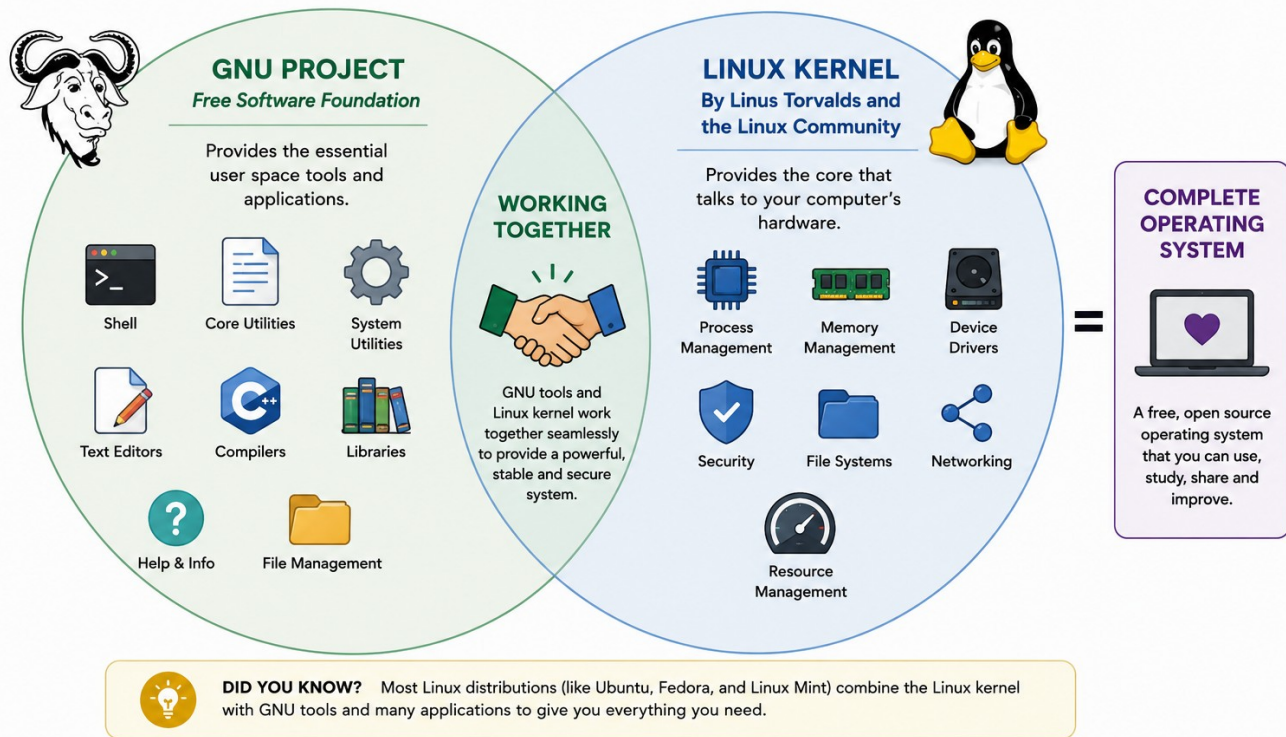
The GNU Project created many essential tools: text editors, compilers, shells, and utilities that make an operating system functional. By the early 1990s, GNU had almost everything needed for a complete operating system—except a kernel.

GNU Meets Linux

When Linus Torvalds released the Linux kernel in 1991, it was the missing piece. The Linux kernel combined with GNU tools created a complete, free operating system. This is why you'll sometimes hear it called "GNU/Linux"—acknowledging both the kernel and the essential tools that make it usable (Free Software Foundation, 2022).

GNU + Linux = Complete Operating System

Linux is the kernel. GNU is the userland. Together they make a complete, free operating system.



Today, when you use Linux, you're using the combined work of thousands of contributors from both the GNU Project and the Linux kernel project, along with countless other open-source initiatives.

Why This Matters to You

Understanding the GNU/Linux relationship helps you appreciate that Linux isn't the work of one person or one company. It's a collaborative effort built on principles of freedom, sharing, and community. This philosophy shapes everything about how Linux works and how the community operates.

What Is Open Source?

You've probably heard the term "open source" before. But what does it actually mean, and why should you care?

Source Code: The Recipe

Every piece of software is written in **source code**—human-readable instructions that programmers write. Think of source code as a recipe. If you have the recipe for chocolate chip cookies, you can:

- Bake the cookies yourself
- Modify the recipe (add more chocolate chips, use different flour)
- Share the recipe with friends
- Improve the recipe and share your improvements

Proprietary software (like Windows or Adobe Photoshop) keeps the source code secret. You can use the software, but you can't see how it works, modify it, or share it. It's like buying cookies from a bakery—you can eat them, but you don't get the recipe.

Open-source software makes the source code freely available. Anyone can view it, modify it, and distribute their own versions (within the terms of the license). It's like a community cookbook where everyone shares recipes and improvements.



The Open Source Definition

The Open Source Initiative (OSI) defines open-source software according to ten criteria, but the core principles are (Open Source Initiative, 2023):

1. **Free redistribution:** You can give copies to anyone
2. **Source code access:** The recipe is available
3. **Derived works:** You can modify and improve it
4. **No discrimination:** Anyone can use it for any purpose
5. **License must not restrict other software:** Open-source programs can work alongside proprietary ones

Open Source vs. Free Software

You might hear two terms: "open source" and "free software." They're closely related but emphasize different values.



Free software (championed by the GNU Project and Richard Stallman) emphasizes **freedom**—the ethical right to control your computing. The word "free" means "freedom," not "zero cost" (though free software is often free of charge too). Think "free speech," not "free beer."

Open source (a term coined in 1998) emphasizes **practical benefits**—better quality, security, and innovation through collaboration.

Why Open Source Matters

Open-source software offers several compelling advantages:

1. Transparency

You can see exactly what the software does. There are no hidden features, no secret data collection, no mysterious processes running in the background. If you're concerned about privacy or security, open source lets you (or experts you trust) verify what's happening.

2. Security

Counterintuitively, making source code public often makes software *more* secure, not less. With thousands of eyes examining the code, vulnerabilities are found and fixed quickly. As Linus Torvalds famously said, "Given enough eyeballs, all bugs are shallow" (Raymond, 1999).

3. Longevity

Proprietary software can be discontinued at any time. If a company goes out of business or decides to stop supporting a product, you're stuck. Open-source software can be maintained by the community indefinitely. There are open-source projects that have been actively developed for over 30 years.

4. Cost

Most open-source software is free to download and use. This makes it accessible to students, non-profits, small businesses, and anyone with limited resources. You're not paying for licenses; you're benefiting from community collaboration.

5. Customization

If the software doesn't quite meet your needs, you (or someone you hire) can modify it. Schools can customize educational software. Businesses can adapt tools to their workflows. Governments can ensure software meets their specific requirements.

6. Community

Open-source projects foster vibrant communities of users and developers who help each other, share knowledge, and collectively improve the software. You're never alone when you use open source.

Why Linux Matters

Now that you understand what Linux and open source are, let's explore why they matter in the real world. Linux isn't just a hobbyist project or a niche tool for programmers. It's a fundamental part of modern computing infrastructure.

Linux Is Everywhere

Even if you've never consciously used Linux, you almost certainly use it every day:



Android is Linux

Android, the world's most popular mobile operating system, is built on the **Linux kernel**.

 At the heart of every Android device is the **Linux kernel**, managing memory, processes, security, networking, and device drivers.

What this means:

 Secure and stable Linux provides a strong, reliable foundation.	 High performance Efficiently handles millions of devices.	 Powers the world Used in smartphones, TVs, cars, and many other devices.	 Open source at the core Built on freedom, collaboration, and transparency.
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 **Did You Know?**
Billions of people use Linux every day without even knowing it—in their phones, watches, tablets, TVs, and more!

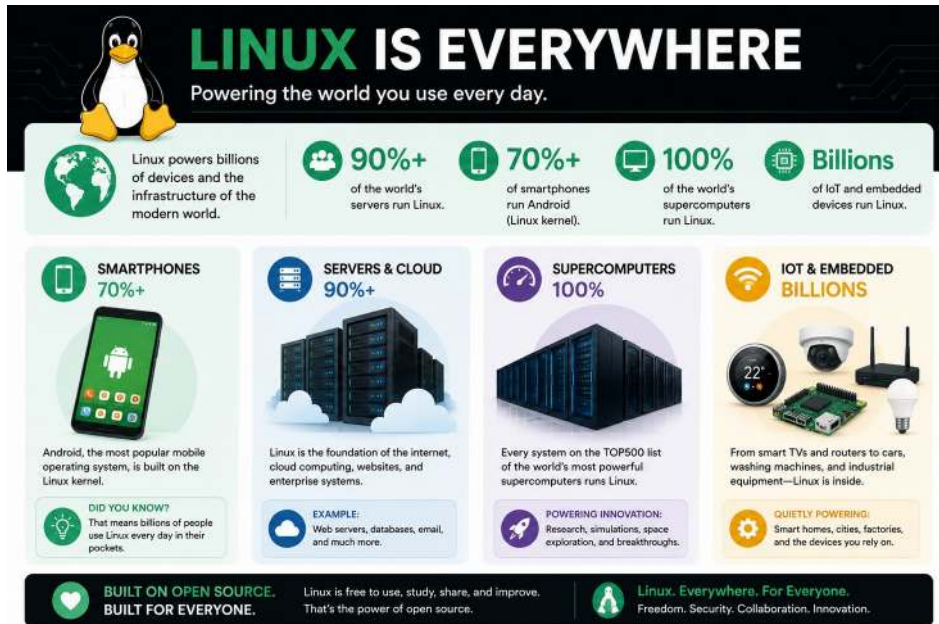
Smartphones: Android, which powers about 70% of the world's smartphones, is built on the Linux kernel (Statcounter, 2023). Every time you use an Android phone, you're using Linux.

The Internet: About 96% of the world's top one million web servers run Linux (W3Techs, 2023). When you visit Google, Facebook, Amazon, Netflix, or almost any major website, Linux servers are delivering that content to you.

Supercomputers: 100% of the world's 500 fastest supercomputers run Linux (Top500, 2023). From weather forecasting to medical research to space exploration, Linux powers humanity's most demanding computational tasks.

Smart Devices: Your smart TV, router, e-reader, car entertainment system, and countless other devices likely run Linux. It's embedded in everything from refrigerators to industrial machinery.

Cloud Computing: Amazon Web Services, Google Cloud, Microsoft Azure—all the major cloud platforms run primarily on Linux. The cloud revolution is built on Linux infrastructure.



Why Organizations Choose Linux

Linux isn't just popular because it's free (though that helps). Organizations choose Linux for strategic reasons:

Reliability: Linux systems are known for stability and uptime. It's not uncommon for Linux servers to run for years without needing to restart. This reliability is crucial for critical infrastructure.

Performance: Linux is efficient and fast. It can run on everything from tiny embedded devices to massive server farms, making optimal use of available resources.

Security: Linux's security model, combined with rapid community response to vulnerabilities, makes it a strong choice for security-conscious organizations.

Flexibility: Linux can be customized for any purpose. Organizations aren't locked into a vendor's vision—they can adapt Linux to their exact needs.

No Vendor Lock-In: With proprietary systems, you're dependent on a single vendor's roadmap, pricing, and support. Linux gives organizations independence and control.

Cost: While "free" isn't the only reason to choose Linux, it's certainly attractive. Organizations can invest in customization and support rather than license fees.

Why Governments, Schools, and Companies Use Linux



Canadian Context:

While Canada hasn't mandated Linux adoption, many Canadian government agencies and Crown corporations use Linux for servers and infrastructure. The Government of Canada's Open Source Software Guidelines encourage consideration of open-source solutions (Treasury Board of Canada Secretariat, 2018).

Let's look at specific examples of how different sectors use Linux and why they've made that choice.

Government Adoption

Governments around the world have embraced Linux for reasons of cost, security, and sovereignty.

Germany: The city of Munich famously migrated 15,000 desktop computers from Windows to Linux (LinuxProject) between 2004 and 2013, saving millions of euros in licensing costs. While they later partially reversed this decision due to political pressure, many German government agencies continue to use Linux (Hoffman, 2020).

France: The French Gendarmerie (national police) migrated 72,000 desktops to Ubuntu Linux, saving approximately €2 million annually in licensing costs while improving security and performance (Canonical, 2019).

Spain: Several Spanish regions, including Extremadura and Andalusia, have deployed Linux in schools and government offices, prioritizing open-source solutions for public infrastructure.

India: The Indian government has promoted Linux adoption across various departments and has

developed its own distribution, BOSS (Bharat Operating System Solutions), for government use (National Informatics Centre, 2021).

Brazil: Brazil has been a leader in open-source adoption, with government agencies required to consider open-source alternatives before purchasing proprietary software.

Why Governments Choose Linux:

1. **Cost Savings:** Eliminating license fees for thousands of computers saves taxpayer money
2. **Security:** Governments can audit the code to ensure no backdoors or vulnerabilities
3. **Digital Sovereignty:** Dependence on foreign software vendors raises security and autonomy concerns
4. **Longevity:** Governments need systems that will be supported for decades
5. **Transparency:** Public institutions benefit from transparent, auditable software

Educational Institutions

Schools and universities worldwide use Linux for teaching and infrastructure.

Examples:

- **Penn Manor School District (Pennsylvania, USA):** Gave every high school student a Linux laptop, teaching digital literacy and saving money on licenses (Penn Manor School District, 2015)
- **Universities:** Most computer science programs teach Linux because it's the dominant platform for software development and research
- **CERN:** The European Organization for Nuclear Research uses Linux extensively for data processing and analysis

Why Schools Choose Linux:

1. **Cost:** Schools can deploy Linux on all computers without license fees, stretching limited budgets
2. **Educational Value:** Students learn about how computers actually work, not just how to use specific commercial products

3. **Older Hardware:** Linux runs well on older computers, extending the life of school equipment
4. **Security:** Schools need secure systems that protect student data
5. **Customization:** Schools can configure systems exactly for their curriculum needs



Corporate Adoption

Some of the world's largest and most successful companies run on Linux.

Examples:

Google: Runs on Linux internally and uses Linux for its massive server infrastructure. Google has contributed significantly to Linux development.

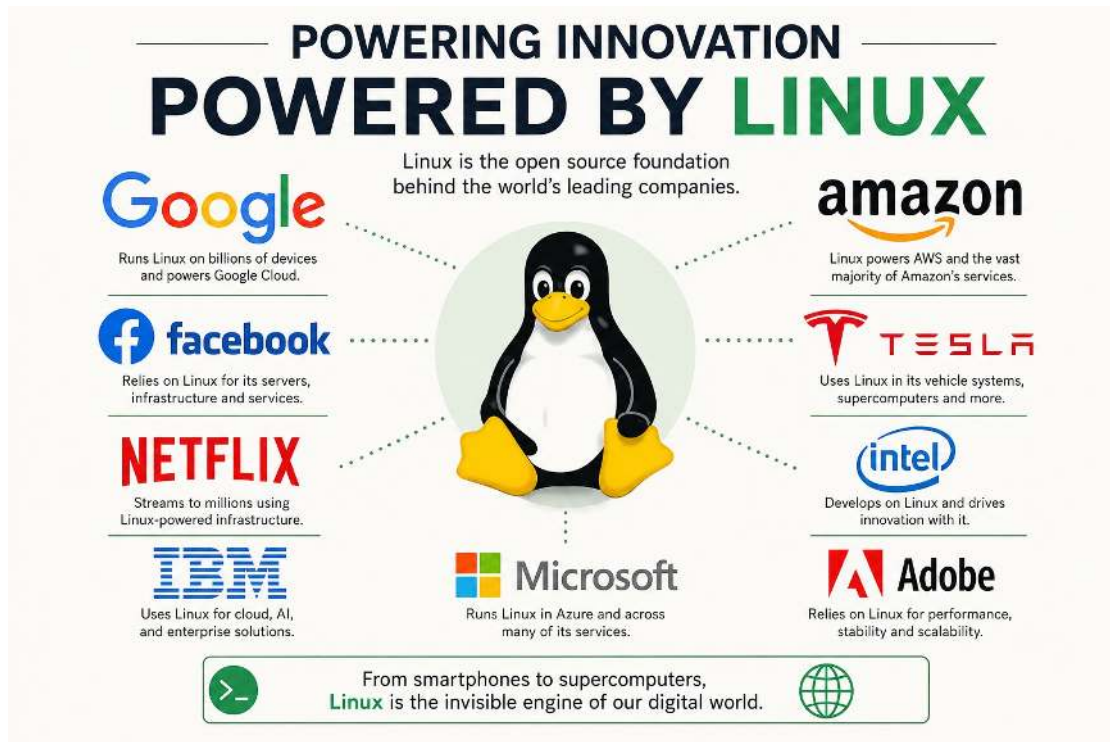
Amazon: Amazon Web Services (AWS), the world's largest cloud provider, runs primarily on Linux. Amazon also develops its own Linux distribution, Amazon Linux.

Facebook/Meta: Runs hundreds of thousands of Linux servers to power its social networks.

Netflix: Delivers streaming video to millions of users simultaneously using Linux-based infrastructure.

Tesla: Uses Linux in its vehicle systems and for manufacturing automation.

Stock Exchanges: The New York Stock Exchange, London Stock Exchange, and many others run on Linux for its reliability and performance.



Why Companies Choose Linux:

1. **Performance:** Linux handles high-traffic, high-demand applications efficiently
2. **Scalability:** Linux scales from a single server to millions of devices
3. **Reliability:** Downtime costs money; Linux's stability is valuable
4. **Developer Preference:** Many developers prefer Linux for its powerful tools
5. **Innovation:** Companies can modify Linux to gain competitive advantages
6. **Cost at Scale:** When deploying thousands of servers, license savings are substantial

Small Businesses and Startups

It's not just giants that benefit from Linux. Small businesses and startups often choose Linux because:

- **Low Startup Costs:** No need to budget for expensive software licenses
- **Professional Tools:** Access to the same powerful tools that large companies use
- **Flexibility:** Can start small and scale up without changing platforms
- **Community Support:** Free help from online communities

Why Digital Sovereignty Matters

In our increasingly digital world, the question of who controls our technology has become critically important. This is the concept of **digital sovereignty**.

What Is Digital Sovereignty?

Digital sovereignty means having control over your own digital infrastructure, data, and technology choices. It applies at multiple levels:

Individual Level: Your ability to control your own devices, data, and privacy

Organizational Level: A company's or institution's ability to control its systems and information

National Level: A country's ability to maintain independent digital infrastructure without dependence on foreign corporations or governments



Why It Matters

Privacy and Surveillance

When you use proprietary software, you often don't know what data is being collected, where it's stored, or who has access to it. Recent revelations about government surveillance programs and corporate data harvesting have made this a pressing concern.

With open-source software like Linux, you can verify exactly what your computer is doing. There are no hidden telemetry systems or mysterious data uploads.

Dependence on Foreign Vendors

Many countries and organizations rely heavily on software from a small number of American companies (Microsoft, Apple, Google). This creates several risks:

- **Political Risk:** What if international relations deteriorate? Could access to critical software be restricted?
- **Economic Risk:** Vendor pricing and licensing terms can change, affecting budgets
- **Security Risk:** Backdoors or vulnerabilities in proprietary software could be exploited
- **Strategic Risk:** Dependence on foreign technology limits autonomy

**REAL-WORLD EXAMPLE**



In 2019, the U.S. government added Chinese company Huawei to a trade blacklist, restricting its access to American technology, including Google's Android services. This highlighted the risks of technological dependence. Countries and companies worldwide took notice and began prioritizing digital sovereignty.



Real-world events shape our digital independence.

Data Sovereignty

Where is your data stored? Who has access to it? What laws govern it? These questions are increasingly important as data becomes more valuable and regulations like GDPR (in Europe) and PIPEDA (in Canada) establish data protection requirements.

Linux gives organizations the ability to keep data on their own servers, under their own control, subject to their own jurisdiction.

The Canadian Perspective

Canada faces unique digital sovereignty challenges:

Geographic Reality: Canada shares a border with the world's dominant technology superpower. Most Canadian organizations use American software and cloud services.

Legal Implications: The U.S. CLOUD Act allows American law enforcement to access data held by U.S. companies, even if stored in Canada. This raises concerns about Canadian data privacy.

Economic Considerations: Supporting open-source and Canadian technology development keeps expertise and economic benefits in Canada.

Cultural Sovereignty: Just as Canada protects its cultural industries, there's growing recognition that digital infrastructure is part of national sovereignty.

The Government of Canada has recognized these issues. The Digital Charter Implementation Act and various cybersecurity strategies emphasize the importance of digital sovereignty (Innovation, Science and Economic Development Canada, 2022).

How Linux Supports Digital Sovereignty

Linux is a powerful tool for digital sovereignty because:

1. **No Single Owner:** Linux isn't controlled by any one company or country. It's a global collaborative project.
2. **Transparency:** You can audit the code to ensure it does what you expect and nothing more.
3. **Independence:** You're not dependent on a vendor's business decisions, pricing, or continued support.
4. **Local Control:** You can run Linux entirely on your own infrastructure, with no external dependencies.
5. **Adaptability:** You can modify Linux to meet specific security, privacy, or functional requirements.

This doesn't mean everyone needs to use Linux for sovereignty reasons. But it's important to understand that technology choices have implications beyond just features and cost.

Linux Is for Everyone (Including You)

After reading about governments, corporations, and supercomputers, you might think, "That's impressive, but I just want to check email and browse the web. Is Linux really for me?"

Absolutely.

Common Myths About Linux

Let's address some misconceptions:

Myth 1: "Linux is only for programmers and tech experts."

Reality: Modern Linux distributions are as easy to use as Windows or macOS. You can use Linux without ever opening a terminal or writing a line of code. Millions of non-technical users around the world use Linux daily.

Myth 2: "Linux doesn't have the software I need."

Reality: Linux has excellent web browsers (Firefox, Chrome), office suites (LibreOffice), email clients, media players, photo editors, and thousands of other applications. For most common tasks, Linux has you covered. We'll explore this in detail in Chapter 6.

Myth 3: "Linux is hard to install."

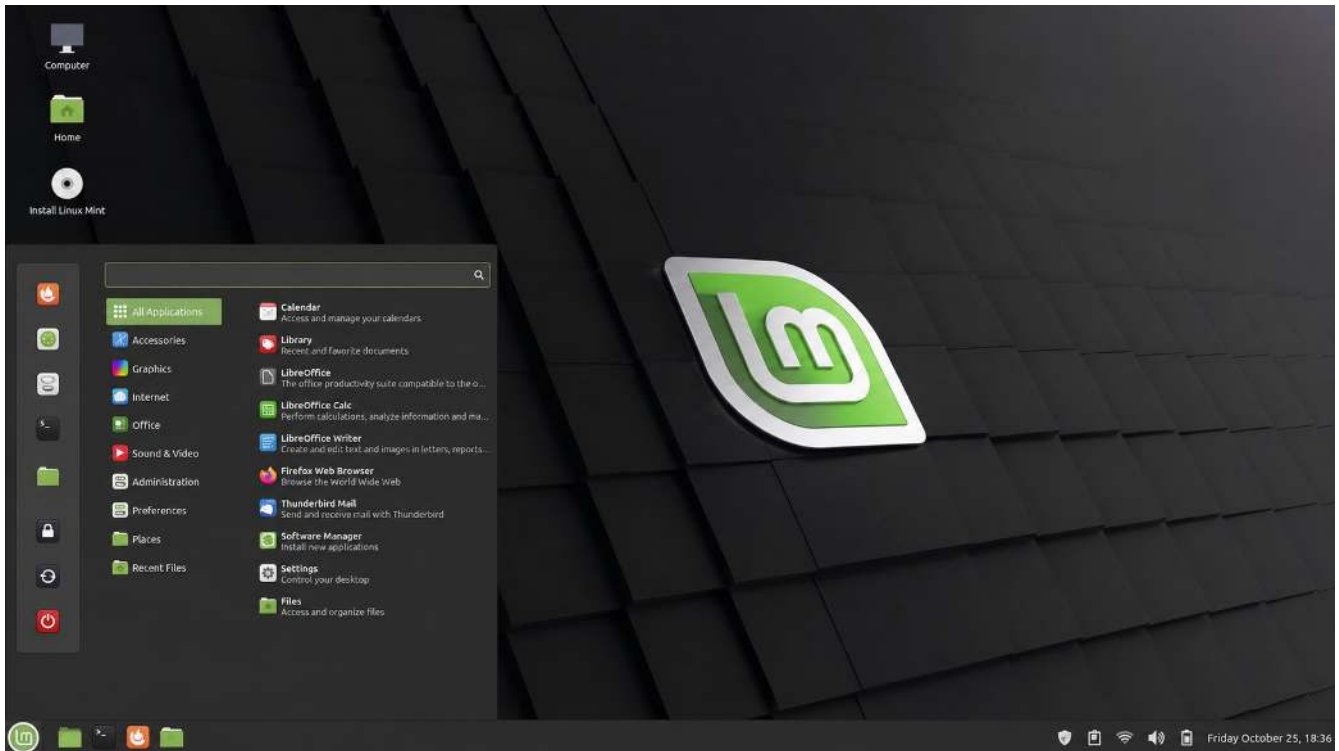
Reality: Modern Linux distributions have graphical installers that are often simpler than installing Windows. Many computers come with Linux pre-installed. We'll walk you through installation step-by-step in Chapter 4.

Myth 4: "If something goes wrong, I'll be on my own."

Reality: Linux has vibrant, helpful communities. Online forums, documentation, and tutorials are abundant. Many distributions offer professional support if you need it.

Myth 5: "Linux looks ugly and outdated."

Reality: Modern Linux desktops are beautiful, polished, and customizable. You can make Linux look however you want—minimalist and clean, or feature-rich and animated.



What You Can Do with Linux

Everything you do on other operating systems, you can do on Linux:

- ✓ Browse the web (Firefox, Chrome, Brave, Vivaldi)
- ✓ Check email (Thunderbird, Evolution, web-based clients)
- ✓ Create documents, spreadsheets, and presentations (LibreOffice, OnlyOffice)
- ✓ Edit photos (GIMP, Krita, Darktable)
- ✓ Watch videos and listen to music (VLC, Rhythmbox, Spotify)
- ✓ Video chat (Zoom, Microsoft Teams, Google Meet all work on Linux)
- ✓ Manage files and folders (intuitive file managers)
- ✓ Print and scan documents
- ✓ Play games (Steam, native Linux games, and more)
- ✓ Program and develop software (if you're interested)

And you can do all of this on a system that's:

- Free to download and use
- Secure and private
- Fast and efficient

- Customizable to your preferences
- Supported by a global community

Your Journey Starts Here

Learning Linux is like learning anything new—it takes a bit of time and patience, but it's absolutely achievable. This book will guide you every step of the way, from choosing your first distribution to becoming a confident Linux user.

You don't need to become an expert. You don't need to memorize commands or understand every technical detail. You just need to be willing to explore and learn.

By the end of this book, you'll be able to:

- Install and configure Linux on your computer
- Use Linux for everyday tasks with confidence
- Find and install software you need
- Troubleshoot common issues
- Understand enough about how Linux works to continue learning on your own

Welcome to the Linux community. We're glad you're here.

Hands-On Exercises

Exercise 1.1: Explore Linux in Your Daily Life

Take a moment to identify where you already encounter Linux:

1. Do you use an Android phone? (That's Linux!)
2. Do you use Netflix, Google, or Amazon? (Linux servers deliver that content)
3. Do you have a smart TV or streaming device? (Probably running Linux)

Write down three places where you interact with Linux-powered technology, even if indirectly.

Exercise 1.2: Research a Linux Success Story

Choose one of the following and spend 10 minutes researching online:

- The city of Munich's Linux migration

- How Google uses Linux
- Linux in the International Space Station
- A school district that adopted Linux

Write a brief paragraph about what you learned and why that organization chose Linux.

Exercise 1.3: Reflect on Digital Sovereignty

Consider these questions:

1. What data do you store in cloud services? (Photos, documents, emails?)
2. Do you know where that data is physically stored?
3. Have you read the terms of service for the software you use daily?
4. How would you feel if you lost access to that software or data?

There are no right or wrong answers—this exercise is about awareness.

Exercise 1.4: Identify Your Needs

Make a list of the software you use most often on your current computer. For each item, write down what you use it for. For example:

- Web browser (Chrome) → Browsing, online banking, social media
- Microsoft Word → Writing letters, creating resumes
- Spotify → Listening to music
- Email client → Managing email

Keep this list. In later chapters, we'll explore Linux alternatives for each of these needs.

Discussion Questions

These questions are designed for classroom discussions, study groups, or personal reflection:

1. **Philosophy of Freedom:** Richard Stallman argues that software freedom is an ethical issue, not just a practical one. Do you agree? Why or why not?
2. **Digital Sovereignty:** Should governments prioritize using open-source software for national security and sovereignty reasons? What are the trade-offs?

3. **The Commons:** Open-source software is sometimes compared to a "digital commons"—a shared resource that everyone can use and improve. What are the benefits and challenges of this model?
 4. **Corporate Adoption:** Why do you think some of the world's most profitable companies (Google, Amazon, Facebook) choose to use and contribute to free, open-source software?
 5. **Education:** Should schools teach students using open-source software, or should they focus on the commercial software students are most likely to encounter in the workplace?
 6. **Personal Choice:** After reading this chapter, are you more interested in trying Linux? What appeals to you most? What concerns do you have?
 7. **Canadian Context:** How important is digital sovereignty for Canada? Should the Canadian government do more to promote open-source software?
 8. **Sustainability:** How does the ability to run Linux on older hardware relate to environmental sustainability and electronic waste?
-

Additional Resources

Official Documentation and Websites

The Linux Foundation

<https://www.linuxfoundation.org/>

The Linux Foundation supports the development of Linux and provides excellent resources for learners.

GNU Project

<https://www.gnu.org/>

Learn more about the GNU Project, its philosophy, and its software.

Open Source Initiative

<https://opensource.org/>

Comprehensive information about open-source licensing and principles.

Free Software Foundation

<https://www.fsf.org/>

Explores the ethical and philosophical dimensions of software freedom.

Books for Further Reading

"The Cathedral and the Bazaar" by Eric S. Raymond

A classic essay on open-source development models. Available free online at <http://www.catb.org/~esr/writings/cathedral-bazaar/>

"Free as in Freedom: Richard Stallman's Crusade for Free Software" by Sam Williams

Biography of Richard Stallman and the free software movement. Available free under GNU FDL.

"Just for Fun: The Story of an Accidental Revolutionary" by Linus Torvalds

Linus Torvalds' autobiography, describing the creation of Linux.

Videos and Documentaries

"Revolution OS" (2001)

Documentary about the history of GNU, Linux, and open source. Available on various streaming platforms.

Linux Foundation YouTube Channel

<https://www.youtube.com/user/TheLinuxFoundation>

Talks, tutorials, and presentations about Linux and open source.

Canadian Resources

Government of Canada Open Source Software Guidelines

<https://www.canada.ca/en/government/system/digital-government/digital-government-innovations/open-source-software.html>

Canadian Open Source Business Directory

<https://www.ic.gc.ca/>

Explore Canadian companies working with open-source technologies.

Continue Your Linux Journey

You have just read a sample from New to Linux? Volume 1. The complete book continues through the full beginner journey: choosing a distribution, trying Linux safely, installation, everyday use, software, files, terminal basics, security, community, and next steps.

Complete edition includes	
Pages	644
Illustrations	250+
Chapters	12
Appendices	Glossary, terminal commands, keyboard shortcuts, quiz answers
Publisher	Linux Association of Canada

Download or learn more:

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Bluesky: bsky.app/profile/linuxassociation.ca

Make Linux accessible to everyone.