MICHAEL EGGERTON

TECH

CAREER

GUIDE

Contents

Start Your IT Career

Launch your IT career — no degree and no tech background required. Whether you're switching careers, starting fresh after school, or looking to break out of your current job, this book is your blueprint.

Tech doesn't care where you started — it cares what you can do.

People of all ages and backgrounds are landing well-paying roles in tech, often within 6–12 months. Some started in retail, some as delivery drivers, some as stay-at-home parents.

Why IT Is Worth Your Time:
- Growing industry with high demand
- Remote work opportunities
- High entry-level pay relative to other fields
- Clear career growth paths

What You *Don't* Need:
- A degree
- Coding experience (unless you want it)
- To be a math wizard

This is a career for the curious, the problem-solvers, and the self-starters.

Skip the fluff. Focus on *real-world skills* used on the job.

Essentials to Learn:
- **Windows OS basics**
- **Linux fundamentals**
- **Networking (IP, DNS, ping, DHCP)**
- **Active Directory**
- **Ticketing systems (ServiceNow, Jira)**
- **Command line: PowerShell or Bash**

Roles and Paths

Help Desk Technician
Entry-level support, fixing user problems
£22k – £30k

System Administrator
Manages servers, permissions, company systems
£35k – £50k

Network Engineer
Works on routers, switches, and connectivity
£40k – £60k

Cybersecurity Analyst
Secures systems, monitors threats
£45k – £70k

Cloud Engineer
Works with AWS, Azure, cloud migrations
£50k – £80k+

Web Developer
Builds websites, apps, front/back-end systems
£30k – £60k

Data Analyst
Gathers insights, builds dashboards
£35k – £65k

👉 You don't have to choose your path immediately.
Start broad and pivot as you learn.

Help Desk Contractor
Short-term user support, ticket resolution
£100 – £180/day

IT Support Engineer
On-site fixes, hardware/software setups
£120 – £200/day

Systems Administrator
Server builds, patching, Active Directory support
£200 – £350/day

Network Engineer
Network installs, config, firewalls
£250 – £450/day

Cybersecurity Contractor
Threat monitoring, risk audits, compliance
£300 – £600/day

Cloud Engineer
AWS/Azure deployments, automation, migrations
£350 – £700+/day

Web Developer
Contracted website or app projects
£200 – £450/day

Windows OS Basics

Whether you're just stepping into the IT world or brushing up on fundamentals, understanding the **Windows Operating System is essential**. Windows OS is the most widely used desktop operating system globally, making it a cornerstone in many IT environments.

🌐 What is an Operating System (OS)?
An Operating System (OS) is system software that manages computer hardware, software resources, and provides services for computer programs. Think of it as the bridge between you and the hardware of your computer.

⊞ What is Windows?
Microsoft Windows is a graphical operating system developed by Microsoft. It allows users to view and interact with their computers through graphical icons, windows, and menus — instead of text commands.
🏁 Key Versions of Windows (For Career Starters)

- **Windows 10** – The current industry standard, with strong support and features.
- **Windows 11** – The latest version, focused on modern user interface and security.

Knowing the differences between these can help in troubleshooting and support roles.

- **Start Menu** – The gateway to applications, settings, and power options.
- **File Explorer** – Helps you navigate, manage, and organize files and folders.
- **Control Panel / Settings** – Used for managing system configurations.
- **Task Manager** – Essential for monitoring system performance and ending unresponsive tasks.
- **Windows Update** – Keeps your OS secure and up-to-date.

💡 Tips for IT Beginners

- Learn to install and configure Windows OS.
- Practice navigating settings and troubleshooting basic issues.
- Explore command-line tools like cmd and PowerShell.
- Understand user account types (Administrator vs Standard).

In helpdesk or support roles, you'll often:
- Set up new machines with Windows
- Troubleshoot login or network issues
- Guide users through system settings
- Install and update drivers and software

Linux Fundamentals

Linux powers everything from web servers to smartphones and supercomputers. It's an essential skill in IT — especially in networking, cloud, and cybersecurity.

🐧 **What is Linux?**

Linux is an open-source operating system kernel used to build many different OS versions, called **distributions** (or **distros**). It's known for stability, security, and flexibility.
Popular distros include:

- **Ubuntu** – User-friendly, great for beginners
- **CentOS / Rocky Linux** – Common in servers
- **Debian** – Stable base for many distros
- **Kali Linux** – Used for penetration testing

🧠 **Why Learn Linux?**

- It's **widely used in servers**, cloud platforms (like AWS), and embedded systems.

- Linux is **free and open-source** — great for learning and experimenting.
- Understanding the **command line** gives you powerful control over systems.

✏️ Practice Tips

- Install **Ubuntu** in a virtual machine (try VirtualBox or VMware).
- Use free labs like **OverTheWire** or **LinuxJourney** to build your skills.
- Start getting comfortable in the **terminal** — even basic practice helps a lot.

💼 Real-World Use Cases

- IT pros use Linux to **manage servers**.
- DevOps and cloud engineers use it to **write scripts, deploy apps, and automate tasks**.
- Cybersecurity analysts use Linux tools for **network scanning, log analysis, and penetration testing**.

Networking

Networking is the **backbone of IT** — it connects computers, devices, and systems so they can share data. Let's break down some foundational concepts every IT professional needs to know.

🌐 What is IP (Internet Protocol)?

An **IP address** is like a digital home address for a device on a network. It helps devices **send and receive data** accurately.

- **IPv4**: Most common format, e.g., 192.168.1.1
- **IPv6**: Newer format to support more devices, e.g., 2001:0db8:85a3::8a2e:0370:7334

Types of IP addresses:
- **Private IP** – Used inside home or office networks (192.168.x.x, 10.x.x.x)
- **Public IP** – Used on the internet
- **Static IP** – Doesn't change
- **Dynamic IP** – Assigned automatically, may change

🧭 2. What is DNS (Domain Name System)?

DNS is like the **phonebook of the internet**.

- It translates **domain names** (like google.com) into **IP addresses** so your browser can find websites.
- Without DNS, you'd need to remember IPs instead of names — not ideal!

Common DNS servers:
- Google: 8.8.8.8
- Cloudflare: 1.1.1.1
- OpenDNS: 208.67.222.222

🛠️ Real-World Scenarios

📝 Practice for Beginners
- Open Command Prompt or Terminal and run: ipconfig (Windows) or ifconfig / ip a (Linux)
- Use ping, nslookup, and tracert to explore your network.
- Learn how to log into your router and view DHCP leases and DNS settings.

Active Directory

Active Directory is a **core tool in many business IT environments**, especially for managing users, devices, and permissions across a network. If you're aiming for helpdesk, sysadmin, or infrastructure roles, you'll definitely come across AD.

🏢 **What is Active Directory?**

Active Directory (AD) is a **directory service** developed by Microsoft that stores information about users, computers, and other resources in a network — and controls how they access them.
Think of it as a **centralized database** that helps IT departments:

- Manage user accounts and passwords
- Control access to files, printers, and systems
- Enforce company-wide security policies

🔓 Used mainly in **Windows Server environments**.

🧱 **Key AD Concepts**

Domain
A group of computers and users managed under one set of rules (e.g., company.local)

Domain Controller (DC)
The server that runs AD and authenticates logins
Organizational Units (OUs)
Folders in AD used to group users, computers, or devices for easier management
Group Policy (GPO)
Rules that control what users can/can't do on their computers
Users and Groups
Individual accounts and permission-based groups (e.g., "IT Staff")

👤 **User Account Management**

One of the most common beginner tasks in AD is **managing user accounts**, including:

- Creating new accounts
- Resetting passwords
- Unlocking accounts
- Adding/removing users from groups
- Disabling accounts for ex-employees

📌 **Tool used**: *Active Directory Users and Computers*

Ticketing Systems

In the world of IT support, **ticketing systems** are the backbone of organizing, tracking, and resolving issues. Whether you're managing incidents, service requests, or change management, tools like **ServiceNow** and **Jira** are widely used in professional environments.

🎫 **What is a Ticketing System?**

A **ticketing system** is software used to track and manage **IT support requests** from employees or customers. Each issue is logged as a **ticket**, which is then assigned, tracked, and resolved.
Common tasks managed in a ticketing system:

- **Incident management** (solving problems quickly)
- **Service requests** (e.g., setting up new hardware)
- **Change management** (implementing planned changes)

🧰 **Popular Ticketing Systems**

ServiceNow
ServiceNow is an IT service management (ITSM) platform that allows businesses to streamline their IT processes. It is often used in larger organizations for managing incidents, problems, changes, and service requests.

- Incident and request management
- Change and problem management
- Workflow automation
- Knowledge base for self-service

Jira Service Management
Jira Service Management (formerly Jira Service Desk) is a ticketing and service management tool from Atlassian. It's known for its flexibility and integration with other Atlassian products like Jira Software and Confluence.

- Incident management
- SLA (Service Level Agreements) tracking
- ITIL-aligned processes
- Customizable workflows
- Knowledge base and self-service portal

🔄 How Ticketing Systems Work

Ticket Creation:
1. A user reports an issue, either through an email, self-service portal, or direct call.
2. The system automatically generates a ticket with a unique ID.

Ticket Assignment:
The ticket is categorized (e.g., incident, request, change) and assigned to the relevant team or individual based on priority and expertise.

Ticket Resolution:
The assigned technician works on the ticket, updating its status (e.g., "In Progress", "Resolved").
Once the issue is resolved, the ticket is closed.

Escalation:
If a ticket isn't resolved within a certain timeframe (SLA), it gets escalated to higher-level support or management.

📌 Key Concepts in Ticketing Systems

Incident
An unplanned disruption or degradation of service (e.g., server downtime)

Service Request
A user's request for information, access, or a new service (e.g., software installation)

Problem
The underlying cause of multiple incidents (e.g., recurring network issues)

Change
An action that may affect the IT environment (e.g., software updates or hardware upgrades)

SLA (Service Level Agreement)
A defined timeline for response and resolution, often based on priority and impact

🖊 Practice Tips for Beginners
- Start by exploring the **ServiceNow** and **Jira** user interfaces. Many organizations offer **free trials** or **demo versions**.
- Get familiar with **ticket creation**, **ticket status updates**, and **escalation paths**.
- Learn how to **close tickets** and **write resolution notes** effectively.
- Understand how **SLAs** affect the priority of tickets and response times.

📝 Pro Tips for IT Support Professionals
- **Communicate** clearly with users, updating them regularly on ticket status.
- Prioritize **high-impact tickets** first (e.g., affecting multiple users or business-critical systems).
- Use the **knowledge base** to solve common problems faster and avoid redundant work.

Command line

Mastering the **command line** is a vital skill in IT. While the graphical interface is useful, the command line gives you **more control** over the system and allows you to automate tasks, troubleshoot faster, and perform advanced operations. Two of the most widely used command-line environments are **PowerShell** (for Windows) and **Bash** (for Linux/macOS).

🖥️ What is the Command Line?

The **command line interface (CLI)** allows you to interact with your computer or server by typing text commands rather than using a graphical interface. This is the preferred method for many IT professionals because it's often faster, more powerful, and more versatile.

⚙️ PowerShell (Windows)

PowerShell is a task automation framework and scripting language developed by Microsoft, primarily for Windows systems. It allows you to manage systems and automate administrative tasks using cmdlets (commands), scripts, and automation workflows.

Key Features of PowerShell:
- **Cmdlets**: Built-in commands for performing common tasks (e.g., Get-Process, Set-Item, Get-

Service)
- **Pipelines**: Allows output of one cmdlet to be used as input for another (|)
- **Object-Oriented**: PowerShell works with objects (not just text), allowing you to manipulate data more effectively.
- **Remote Management**: Easily manage remote machines using PowerShell remoting (Enter-PSSession).

🛠️ Why You Should Learn Both

Even if you're primarily working in one operating system (Windows or Linux), **learning both PowerShell and Bash** can give you a significant advantage. Many IT jobs require cross-platform knowledge because:

- **PowerShell** is increasingly being used on Linux and macOS as part of the cross-platform PowerShell Core.
- **Bash** is widely used in DevOps, server administration, and cloud management, particularly in environments like AWS, Azure, and Google Cloud.

Certifications

Certifications are one of the best ways to validate your skills and knowledge in IT. Whether you're starting in IT support, system administration, cybersecurity, or networking, certifications can significantly increase your credibility and open up new career opportunities. Let's dive into some of the top IT certifications you can pursue!

🎓 **Why Are Certifications Important?**

- **Enhance Your Skills**: Certifications ensure you have the necessary skills to perform in a role.
- **Boost Your Resume**: Many employers specifically look for certifications when hiring.
- **Increase Earning Potential**: Certified professionals often earn more than those without certifications.
- **Stay Current**: IT is always evolving. Certifications keep you updated on the latest technologies and practices.

🏅 **Top IT Certifications**
Here are some of the most popular certifications for IT professionals, divided by area of expertise:

🖥️ **General IT Certifications**

CompTIA IT Fundamentals (ITF+)

Who it's for: Beginners in IT

What it covers: Basic IT knowledge, hardware, software, and security.

Why it's valuable: A great starting point for those new to IT.

CompTIA A+
Who it's for: Entry-level IT support technicians

What it covers: Hardware, networking, operating systems, security, and troubleshooting.

Why it's valuable: It's one of the most recognized certifications for IT support roles.

CompTIA Network+
Who it's for: Network professionals and support technicians

What it covers: Networking concepts, infrastructure, security, and troubleshooting.

Why it's valuable: Essential for anyone pursuing a career in networking.

Building Proof

In IT, practical experience is just as important—if not more important—than certifications and theoretical knowledge. By building projects, setting up labs, and creating home environments, you can gain the hands-on experience that employers are looking for. These setups not only help you learn and apply what you know but also serve as tangible evidence of your abilities when applying for jobs.

🔧 **Why Building Proof is Crucial**

- **Hands-On Skills**: IT jobs often require problem-solving skills and the ability to work with real systems. Personal projects and labs allow you to practice these skills.
- **Demonstration of Knowledge**: Being able to show employers what you've built is often more compelling than simply stating you know a technology.
- **Showcase Passion & Initiative**: Employers appreciate candidates who take the initiative to learn and apply their skills outside the classroom or certification exams.
- **Experience with Real-World Scenarios**: Home labs can simulate real-world problems, from network setup to security issues, making you more prepared for the challenges in the job.

Create a Portfolio: Document your projects and lab setups. Share them on GitHub, a personal website, or a professional platform like LinkedIn.

Write Blogs or Tutorials: Teaching others what you've learned through blog posts or video tutorials not only reinforces your own knowledge but also shows potential employers that you're passionate about IT.

Prepare for Interviews: Be ready to discuss your projects in interviews. Employers love candidates who can talk about the hands-on work they've done, what challenges they encountered, and how they solved them.

🏆 **Show Your Skills to Get Hired**
The most important thing is to **practice** and **build real-world examples** that showcase your expertise. Employers want to see **proof** that you can apply your knowledge in practical, tangible ways. Whether it's a personal project, a home lab setup, or a cloud environment, hands-on experience is key to getting hired.

Resume That Delivers

In the competitive world of IT, your resume is often your first chance to make a strong impression. A well-crafted resume not only showcases your technical abilities but also demonstrates your ability to communicate and solve problems. Whether you're just starting out in your IT career or looking to advance, creating a resume that delivers is essential.

📝 **Why Your IT Resume Matters**
- **First Impressions Count**: In many cases, your resume is the first thing a hiring manager will see. It needs to quickly communicate your skills and value.
- **Showcase Your Experience**: Even if you're just starting, a resume is a way to demonstrate your hands-on experience, whether through personal projects, internships, or certifications.
- **Demonstrate Problem-Solving**: IT is all about finding solutions. Your resume should show how you've tackled challenges and contributed to successful outcomes.

🎨 **Design Tips for Your IT Resume**
Your resume should be **clear, concise, and easy to read**. Here are a few design tips:

- **Use a Clean, Professional Layout**: Avoid clutter and excessive colors. Stick to a simple format with clear headings and bullet points.
- **Be Consistent**: Use the same font style and size throughout your resume. Choose legible fonts like Arial, Calibri, or Times New Roman.
- **Keep It Short**: Your resume should be **1-2 pages**. Focus on the most relevant information for the job you're applying to.
- **Tailor for Each Job**: Customize your resume for each role. Highlight skills and experiences that match the job description.

✨ **Building a Portfolio to Support Your Resume**
In addition to your resume, building a **portfolio** can set you apart from other candidates. A portfolio allows you to showcase your work, such as:

- **Personal Website**: Build a website that highlights your IT projects, certifications, and a blog where you can share IT insights or tutorials.
- **LinkedIn Profile**: Keep your LinkedIn profile updated with your resume details, and actively engage in the IT community by sharing articles or insights.

Mastering A Interview

🎯 **Preparation Is Key**

Before diving into the interview, it's important to prepare thoroughly. Researching the company, practicing your answers, and brushing up on key skills can make a huge difference. Here's what you need to do:

Understand the Job Description
- Carefully review the job description to understand the role's requirements. What technical skills are needed? Are there any specific certifications, tools, or platforms mentioned?
- Tailor your answers and examples to highlight your experience with these key skills.

Research the Company
- Learn about the company's products, services, and IT infrastructure. Check the company's website, LinkedIn page, and any news articles about them.
- Know the company culture. Is it innovative? Traditional? Fast-paced? This will help you anticipate the types of questions they might ask and align your answers with the company's values.

Review Common IT Interview Questions
- Familiarize yourself with common technical and behavioral interview questions. Practice your responses so you can speak confidently.
- For technical questions, be prepared to explain your thought process clearly and to walk through how you would solve a problem.

🧳 **Tips for Success in Your IT Interview**

1. **Practice Problem-Solving**: The more you practice solving technical problems out loud, the more confident you will be during the interview.
2. **Be Prepared to Explain Complex Concepts Simply**: IT professionals often need to explain complex technical issues to non-technical stakeholders. Practice explaining your work in simple terms.
3. **Be Honest and Show Enthusiasm**: If you don't know the answer to a technical question, show your eagerness to learn. Employers value candidates who are passionate and committed to continuous learning.
4. **Follow Up with Questions**: At the end of the interview, ask insightful questions about the role, team, or technologies the company uses. This shows your interest and engagement.

Personal Branding

In the fast-paced world of IT, **networking** and **personal branding** can make a huge difference in your career trajectory. Whether you're a fresh graduate or a seasoned professional, having a strong network and a compelling personal brand can open doors to new opportunities, collaborations, and career advancements.

This chapter will guide you through the essentials of building a powerful professional network and cultivating a personal brand that resonates in the tech industry.

🌐 The Power of Networking in Tech

Networking isn't just about collecting business cards or adding contacts on LinkedIn. It's about **building genuine relationships** that can offer support, knowledge, and potential career opportunities. Networking is especially important in the tech industry, where **innovation** and **collaboration** are at the heart of success.

- **Opportunities**: Many job opportunities in tech are never posted publicly. They're filled through word-of-mouth or referrals from trusted connections.
- **Learning**: Networking provides access to diverse perspectives and expertise, helping you stay current with emerging trends and best practices.
- **Support**: The tech industry can be challenging. Having a network of peers and mentors can offer guidance, advice, and even help you troubleshoot problems.
- **Collaboration**: Tech projects often require cross-functional collaboration. Building relationships with professionals in different areas (e.g., developers, sysadmins, network engineers) can lead to future projects or job opportunities.

🔄 Networking & Personal Branding in Action

To effectively network and build a personal brand in tech, consider this approach:

1. **Attend a Local Meetup**: Meet new people in the tech community, whether in-person or virtually. Introduce yourself and make sure to follow up with connections on LinkedIn.
2. **Post on LinkedIn**: Share an article or a project you're working on. Tag relevant people in the post, and engage with comments to start building conversations.
3. **Start a Blog or YouTube Channel**: Write about something you're learning or a tech challenge you've recently solved. Offer value and make sure to promote it via social media.

Getting the Job

Once you've made it through the interview process, the next step is receiving the offer. But before you accept any offer, make sure you've considered all aspects of the job.

Evaluating the Offer
When you receive an offer, it's important to assess it carefully. Look beyond the salary and consider the following factors:

1. **Salary & Benefits**: Is the compensation aligned with your experience and the market rate for the role? Don't forget to evaluate benefits like healthcare, retirement plans, and vacation days.
2. **Work-Life Balance**: Does the company offer flexibility, remote work options, or a reasonable work schedule?
3. **Company Culture**: Does the company culture match your values and work style? Research employee reviews or talk to people in your network who work there.
4. **Career Growth**: Does the role offer opportunities for learning and growth? Will you have the chance to acquire new skills and advance in your career?

Once you've accepted the offer, it's time to prepare for your new job! Here are a few tips for getting off to a strong start:

- **Set Goals**: Before you start, set clear goals for your first 30, 60, and 90 days. This will help you focus on what's most important and stay organized.
- **Learn the Company's Tools & Processes**: Familiarize yourself with the company's tools, systems, and workflows so you can hit the ground running.
- **Ask Questions**: Don't hesitate to ask questions, especially in the early days. It's better to ask for clarification than to make assumptions.
- **Build Relationships**: Take the time to get to know your colleagues and build relationships with your team. Networking doesn't stop after you get the job!

Thriving Career

Getting your first job in IT is an exciting milestone, but it's just the beginning. The journey from your first role to a thriving, successful career is about continuous growth, adaptability, and strategic planning. In this chapter, we'll explore how to transition from entry-level to seasoned professional, ensuring that you not only survive but thrive in your IT career.

🚀 **1. Focus on Skill Development**
Your first IT job is your foundation, but it's essential to continue expanding your skill set. Technology evolves quickly, and staying ahead of the curve is key to career growth.

How to Keep Learning
- **On-the-Job Learning**: Take advantage of every task and project to learn something new. Whether it's troubleshooting an issue, configuring new systems, or working with new tools, there's always something to improve or expand.
- **Certifications**: Consider pursuing certifications in areas that align with your career goals (e.g., AWS Certified Solutions Architect, CompTIA Network+, Cisco CCNP). Certifications help validate your expertise and make you more competitive for promotions or lateral moves.
- **Online Courses & Training**: Take advantage of online platforms like **Pluralsight**, **Udemy**, **Coursera**, or **edX** to learn new technologies and frameworks. Many platforms offer courses in emerging fields like **cloud computing**, **machine learning**, or **cybersecurity**.
- **Attend Workshops and Conferences**: Keep up with industry trends and best practices by attending conferences, webinars, or local tech meetups. These events can expose you to new tools, techniques, and thought leaders.
- **Peer Learning**: Don't be afraid to lean on colleagues or mentors to learn. In many workplaces, there are opportunities to shadow others, attend internal workshops, or participate in knowledge-sharing groups.

The transition from your first job to a thriving career doesn't happen overnight. It requires continuous learning, a willingness to adapt, and an unwavering commitment to your personal and professional growth. By developing your technical and soft skills, networking with others, and staying focused on your career goals, you'll build a long-lasting and rewarding IT career.