

# resources

Welcome to our IT Resources Hub! This section offers a curated list of helpful links, guides, and tools for newcomers to the tech industry, along with copies of presentations, worksheets, and handouts to support your learning and skill development.

- [Useful Links](#)
- [CLC Summer 2024 Internship](#)
- [CLC Technology Excelerator Oct 2024](#)
  - [Session 1 \(Oct 10 2024\)](#)
  - [Session 2 \(Oct 17 2024\)](#)
  - [Session 3 \(Oct 17 2024\)](#)
  - [Session 4 \(Oct 21 2024\)](#)
  - [Session 5 \(Oct 23 2024\)](#)
  - [Session 6 \(Oct 23 2024\)](#)
  - [Session 7 \(Oct 31 2024\)](#)

# Useful Links

Explore this curated list of essential resources to help you get started and build a strong foundation in the IT industry.

Resource	Description
<a href="#"><u>Bret Fisher</u></a>	A channel focused on DevOps, Docker, Kubernetes, and cloud computing. Bret Fisher offers clear, hands-on tutorials and deep dives into containerization and modern DevOps practices. Great for developers and IT professionals.
<a href="#"><u>Christian Lempa</u></a>	A YouTube channel focused on homelabs, networking, and IT infrastructure. Christian Lempa provides detailed tutorials on self-hosted services, security, and automation tools, catering to IT hobbyists and professionals.
<a href="#"><u>CISA Updates</u></a>	Subscribe to updates from the Cybersecurity and Infrastructure Security Agency (CISA) for alerts, advisories, and news on critical cybersecurity topics and threats.
<a href="#"><u>Crosstalk Solutions</u></a>	A channel specializing in VoIP, networking, and IT solutions. Crosstalk Solutions offers product reviews, setup guides, and tips on deploying unified communications systems and network infrastructure.
<a href="#"><u>Dark Reading</u></a>	A leading online publication focused on cybersecurity news, threat intelligence, and industry analysis, catering to IT and security professionals.
<a href="#"><u>Database Star</u></a>	A channel dedicated to database design, SQL tutorials, and best practices for working with databases. Database Star offers step-by-step guides for beginners and advanced users looking to sharpen their SQL skills.
<a href="#"><u>Data Breach Today</u></a>	An online news resource focused on data breaches, cybersecurity incidents, and regulatory updates, catering to IT security and compliance professionals.
<a href="#"><u>Dave's Garage</u></a>	A channel featuring Dave Plummer, a former Microsoft engineer, who shares deep insights into programming, computer history, and the inner workings of software development.
<a href="#"><u>ExplainingComputers</u></a>	A channel run by Christopher Barnatt, offering accessible explanations of computer hardware, software, and emerging technologies like AI and cloud computing. Great for tech enthusiasts of all levels.
<a href="#"><u>Hardware Haven</u></a>	A YouTube channel dedicated to reviews, tutorials, and deep dives into computer hardware, peripherals, and custom builds. Ideal for enthusiasts looking to learn more about PC components and upgrades.
<a href="#"><u>Jeff Geerling</u></a>	A popular channel focusing on open-source projects, Raspberry Pi tutorials, and hardware hacking. Jeff Geerling offers in-depth guides and practical insights for makers and tech enthusiasts.
<a href="#"><u>Jim's Garage</u></a>	A YouTube channel hosted by an experienced engineer, featuring in-depth guides on computer hardware, DIY tech projects, and PC building tips. Great for those looking to learn about system upgrades, maintenance, and troubleshooting.
<a href="#"><u>Julia Evans' Blog</u></a>	A blog by Julia Evans with practical advice on debugging, software development, and understanding how things work under the hood, aimed at making complex topics accessible. Check out Wizard Zines resource, as well.

Resource	Description
<a href="#"><u>Krebs on Security</u></a>	A blog by Brian Krebs, a renowned cybersecurity journalist, providing in-depth analysis and reporting on data breaches, cybercrime, and security issues.
<a href="#"><u>Last Week in AWS</u></a>	A weekly newsletter offering insights, news, and commentary on AWS services, updates, and cloud industry trends, with a humorous twist by Corey Quinn.
<a href="#"><u>Lawrence Systems</u></a>	A YouTube channel focusing on IT, networking, and cybersecurity tutorials, with deep dives into open-source solutions and enterprise-level IT topics.
<a href="#"><u>Learn Linux TV</u></a>	A comprehensive YouTube channel offering tutorials, reviews, and how-to guides for Linux beginners and enthusiasts. Great for building foundational Linux skills.
<a href="#"><u>Morning Brew IT Brew</u></a>	A daily newsletter covering the latest in IT, technology trends, and business insights, tailored for IT professionals seeking industry news in a digestible format.
<a href="#"><u>NetworkChuck</u></a>	An engaging YouTube channel covering a variety of IT and cybersecurity topics, with practical tutorials on networking, cloud, and ethical hacking.
<a href="#"><u>NDC Conferences</u></a>	Recordings of talks from NDC Conferences, showcasing industry experts on software development, DevOps, and cloud computing. A great resource for learning about best practices and emerging trends.
<a href="#"><u>Packet Pushers Network</u></a>	A channel dedicated to networking, with discussions on enterprise networking, protocols, cloud, and security. Ideal for IT pros looking to deepen their understanding of networking technologies and trends.
<a href="#"><u>RedBlue Labs</u></a>	A cybersecurity channel covering offensive and defensive techniques, including ethical hacking, penetration testing, and blue team strategies. Perfect for those interested in learning about practical cybersecurity skills.
<a href="#"><u>SANS Cloud Security</u></a>	A YouTube channel by SANS Institute focused on cloud security best practices, threat analysis, and advanced cybersecurity training.
<a href="#"><u>SANS Institute</u></a>	A leading organization in cybersecurity education and certification, offering training, events, and resources for professionals seeking to advance their skills in security.
<a href="#"><u>Schneier on Security</u></a>	The personal blog of Bruce Schneier, a renowned security expert, offering commentary on cybersecurity, privacy, cryptography, and technology policy.
<a href="#"><u>ServeTheHome</u></a>	A comprehensive channel focusing on server hardware, networking, and enterprise IT solutions. ServeTheHome offers detailed reviews, build guides, and performance analysis for data center and homelab setups.
<a href="#"><u>Sumsub</u></a>	A channel offering insights and tutorials on identity verification, anti-fraud solutions, and regulatory compliance in fintech. Sumsub provides practical advice for businesses looking to enhance security and compliance.
<a href="#"><u>Taylor Walton (SOC Fortress)</u></a>	A channel focused on security operations, threat hunting, and cybersecurity defense strategies. Taylor Walton shares practical insights and tutorials on using SIEM tools and enhancing SOC capabilities.
<a href="#"><u>Techno Tim</u></a>	A YouTube channel providing tutorials on self-hosting, homelabs, and cloud computing. Techno Tim covers a range of topics from Docker to Kubernetes, offering valuable tips for IT enthusiasts and sysadmins.

Resource	Description
<a href="#"><u>TechWorld with Nana</u></a>	A YouTube channel providing tutorials on DevOps, cloud technologies, and Kubernetes. Nana covers a wide range of topics, making complex subjects like CI/CD, Docker, and Terraform accessible for IT professionals.
<a href="#"><u>The Hacker News</u></a>	A popular cybersecurity news platform covering the latest threats, exploits, and security trends. A go-to source for staying informed on current security issues.
<a href="#"><u>TLDR Newsletters</u></a>	A daily newsletter that delivers bite-sized tech news, updates, and analysis across software, development, and cybersecurity, ideal for busy IT professionals.
<a href="#"><u>Vulners.com</u></a>	A comprehensive vulnerability database and security research platform offering up-to-date information on software vulnerabilities and exploits. Useful for IT security monitoring and threat intelligence.
<a href="#"><u>Wizard Zines</u></a>	Fun, illustrated zines by Julia Evans that explain technical topics like Linux, networking, and debugging in an easy-to-understand format. Great for visual learners.

# CLC Summer 2024 Internship

Connected Lane County Elevate Internship Summer 2024

# CLC Technology Excelerator Oct 2024

Connected Lane County Technology Excelerator 2024

# Session 1 (Oct 10 2024)

## Understanding IT Career Paths & Industry Evolution

- Introduction to key IT roles and career paths
- Industry trends and how technology has evolved over time

## Resources

- Presentation deck: [ask-an-old-guy session 1.pdf](#)
- Handout - selection of IT roles and recommended skills for each role: [roles and skills handout.pdf](#)
- Handout - IT role career path and possible certifications: [career path handout.pdf](#)

# Session 2 (Oct 17 2024)

## Soft Skills, Communication, and Adapting to Change

- Overview of the soft skills needed to be successful in the IT industry
- The importance of embracing change in IT

## Resources

- Presentation deck: [ask-an-old-guy session 2.pdf](#)
- Handout - technical description of a system outage: [session 2 system outage activity.pdf](#)



# Session 3 (Oct 17 2024)

## Troubleshooting Strategies and Project Management

- Performing effective troubleshooting
- The basics of project management

## Resources

- Presentation deck: [ask-an-old-guy session 3.pdf](#)
- Handout - following the troubleshooting process on a realistic incident: [session 3 troubleshooting handout.pdf](#)

# Session 4 (Oct 21 2024)

## Cybersecurity

- Understanding the CIA triad
- Tools & techniques used to secure environments
- Cybercrime basics

## Resources

- Presentation deck: [ask-an-old-guy session 4.pdf](#)
- Handout - cybersecurity activity worksheet: [cybersecurity-worksheet.pdf](#)

# Session 5 (Oct 23 2024)

## Introduction to Networking

- Understand the technical definition of the Internet
- Explore how the Internet functions and transmits data
- Discover the various types of network cabling and their uses

## Resources

- Presentation deck: [networking-for-the-mildy-curious.pdf](#)
- Handout - cabling show and tell: [cabling-show-and-tell.pdf](#)
- Handout - cheat sheet of common ports: [cheat-sheet-common-ports.pdf](#)

# Session 6 (Oct 23 2024)

## Hardware Show & Tell and Proxmox Installation

### Upgrading an HP EliteDesk Mini G2: Replacing the SATA SSD with an NVMe Drive

Upgrading the storage in your HP EliteDesk Mini G2 is a straightforward process that can significantly improve the performance and capacity of the system. The EliteDesk Mini G2 is a compact desktop with a small form factor that makes it ideal for space-conscious users. When you open the case, you will typically see a few key components: the CPU heatsink, memory (RAM) modules, a SATA SSD or HDD, the motherboard, and a slot for an M.2 drive. This slot is where you will install the new NVMe SSD, which is a faster and more efficient alternative to the existing SATA SSD.

To begin the upgrade process, power off the EliteDesk Mini G2 and disconnect all cables. Place the unit on a flat, static-free surface, then remove the screws securing the top cover. Slide the cover off to expose the internal components. You'll notice the SATA SSD connected via a small cable to the motherboard and secured with a bracket. Carefully unplug the SATA cable and remove the SSD. The EliteDesk Mini G2 has an M.2 slot located on the motherboard, typically next to the memory modules or near the Wi-Fi card. This slot is designed to support NVMe drives, which are smaller and fit directly onto the motherboard without additional cables.

The main advantage of upgrading to a 1TB NVMe drive is the significant boost in performance. SATA SSDs are limited by the SATA III interface, which maxes out at around 600 MB/s. In contrast, NVMe SSDs utilize the PCIe lanes of the motherboard, allowing for much faster data transfer rates—typically ranging from 2,000 MB/s to over 5,000 MB/s depending on the drive. This speed difference translates into quicker boot times, faster application loading, and improved overall system responsiveness, making the upgrade especially beneficial for users running resource-intensive applications or large data sets.

After securing the NVMe SSD in the M.2 slot, reassemble the EliteDesk Mini G2 by replacing the top cover and securing it with the screws. Reconnect your cables and power on the machine. You may need to enter the BIOS to ensure the system recognizes the new NVMe drive as the primary boot device. Once configured, you'll notice a substantial improvement in system performance. The switch from a SATA SSD to an NVMe SSD breathes new life into the EliteDesk Mini G2, offering increased speed, more storage space, and better efficiency, making it a worthwhile upgrade for extending the lifespan of this compact desktop.

# Installing Proxmox on an HP EliteDesk Mini G2

Proxmox Virtual Environment (VE) is an open-source virtualization platform that allows you to run multiple virtual machines and containers on a single physical host. The HP EliteDesk Mini G2, with its compact form factor and sufficient processing power, is an excellent candidate for running Proxmox. Before starting the installation, ensure that you have a USB flash drive (at least 4GB) for the installation media and that you've downloaded the latest Proxmox VE ISO image from the official [Proxmox website](#). You'll also need to ensure the machine is configured to boot from the USB drive.

To begin, create a bootable USB drive using a tool like Rufus or Balena Etcher. Once the USB drive is ready, insert it into the EliteDesk Mini G2 and power on the machine. Enter the BIOS setup (usually by pressing F10 during boot) and adjust the boot order to prioritize USB devices. After saving your changes and rebooting, you should see the Proxmox installer menu. Choose the "Install Proxmox VE" option and follow the on-screen prompts. You will be asked to select the target drive for installation—this should be the new NVMe SSD you installed earlier. Next, set a root password and provide your preferred network configuration. The installation process is quick, typically taking less than 10 minutes.

Once the installation is complete, the server will reboot, and you can access the Proxmox web interface from any device on the same network using the IP address you configured during setup (e.g., `https://<your-server-ip>:8006`). Log in with the root credentials you created earlier. From here, you can start creating virtual machines and containers, set up storage, and configure backup routines. The HP EliteDesk Mini G2 paired with Proxmox offers a powerful and efficient platform for home labs, development environments, or even lightweight production workloads, providing a robust and versatile virtualization solution.

# Session 7 (Oct 31 2024)

## Introduction to Linux

- Learn the basics of the Linux command line and essential system administration skills
- Set up Nginx and configure it to host a personal user homepage
- Build a simple Hugo website and deploy it using Nginx

## Resources

- Handout - Linux & Hugo worksheet: [linux-hugo.pdf](#)
- Handout - Linux intro worksheet: [linux-intro-worksheet.pdf](#)
- Handout - Basics of scripting worksheet: [basic-script-worksheet.pdf](#)
- Handout - command line networking worksheet: [cli-networking-worksheet.pdf](#)
- Handout - introduction to Nmap worksheet: [nmap-intro.pdf](#)