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ACCIDENTAL TECHIE IN 2020
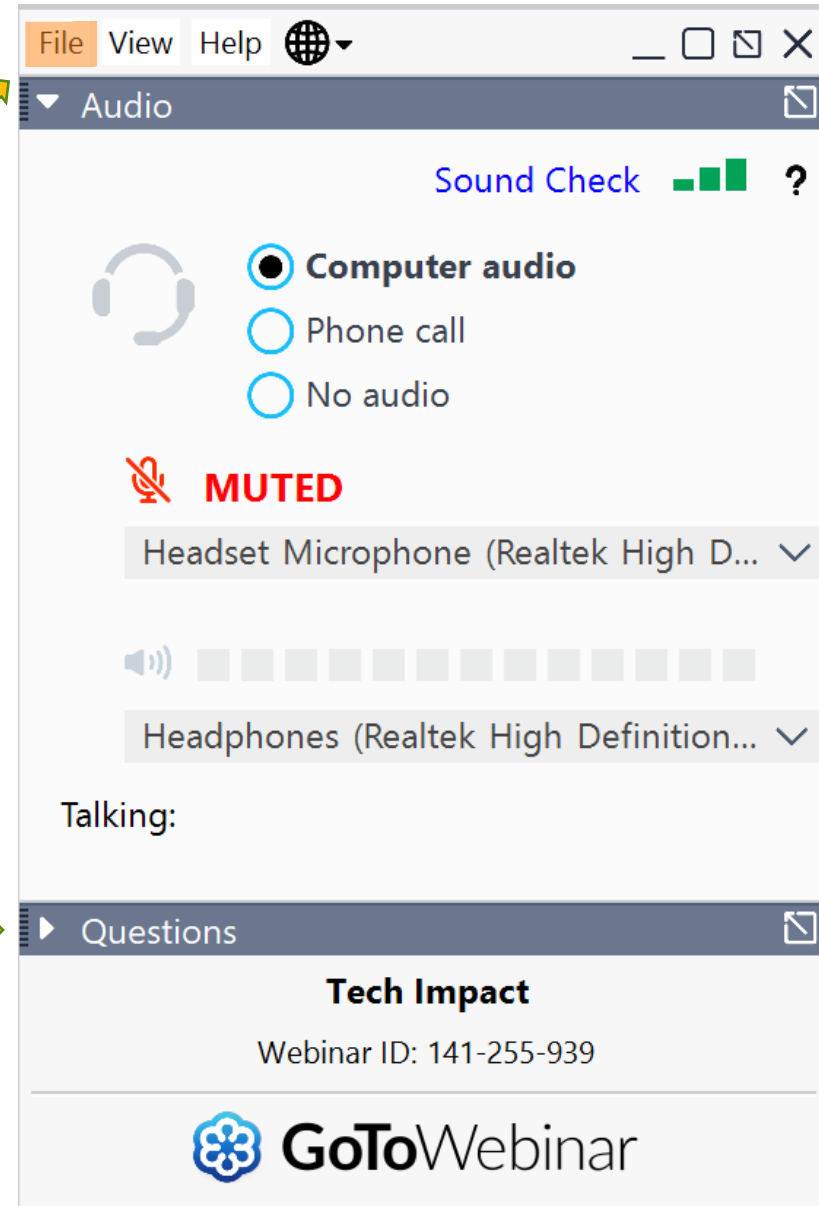
Let's Start With Hardware

GOTOWEBINAR INTERFACE

If you cannot hear us speaking, go to:

File->Preference->Audio and check your audio settings.

Type all comments/questions into the "Questions" panel.

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▼ Audio   ⬚

Sound Check ▪▪▮ ?

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Talking:

▶ Questions   ⬚

Tech Impact

Webinar ID: 141-255-939

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:::: TECH**IMPACT**®

WE'RE A NONPROFIT ON A MISSION TO USE TECHNOLOGY TO BETTER SERVE THE WORLD.

TECHIMPACT®

We do this by delivering tech services, education, and training that help nonprofits and communities thrive.

NONPROFIT TECH SERVICES:

- Managed IT Support
- Cloud Services
- Strategic Consulting
- Security & Compliance
- Data Support
- Machine Learning & AI
- Community Integrated Design

NONPROFIT EDUCATION & TRAINING:

- Reports
- Consumer Guides
- Assessments
- Workbooks & Articles
- Online Training
- Free Webinars

WORKFORCE DEVELOPMENT:

ITWorks & CXWorks: Free IT and Customer Experience training programs

PunchCode:
12-week immersive programming bootcamp

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https://offers.techimpact.org/course-page-accidental-techie

Course Page

Course Page - Accidental Techie

Please bookmark this Course Page. It will be consistently updated with the information you need to access the webinars, slide decks, and recordings.

Thank you for joining us for this course.

Important Information:

- GoTo Webinar is our webinar platform. You will receive email reminders with login information for each session, or you can find the links on this page.
- **Every session will be recorded and available to individuals who have registered for the course.**
- Add training@techimpact.org to your contacts to ensure meeting details do not get caught in your spam folder.

Session 1: Hardware Infrastructure Basics

Computers, printers, phones, routers—there are a lot of gadgets that can turn glitchy. This session will cover the basics you need to know about the various pieces of hardware in a typical office and review common troubleshooting techniques to keep them up and running. We'll also look at what you need to know to network computers, keep them connected, and reliably back up files.

Accidental Techie Schedule

This course takes place over three sessions on the following dates:

- **Thursday, December 3, 1-2:30 PM EST:** Hardware Infrastructure Basics
- **Thursday, December 10, 1-2:30 PM EST:** Managing Software and Security
- **Thursday, December 17, 1-2:30 PM EST:** The Human Side of Technology

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MELANIE MEYER

Tech Advisor, Tech Impact

In my role at Tech Impact, I work directly with nonprofits to help elevate their technology use to further their mission. I have a 20-year history working with a nonprofit for the overall strategic direction of technology, systems and processes, marketing, communications, and event management.

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JENN STACHNIK

Accounting and IT Director at Verité, Inc.

I have been with Verité for twelve years, helping the organization grow by implementing various system improvements and more efficient processes across the IT, finance, and programmatic departments. I have a passion for creating a fun and healthful work environment, as well as finding creative solutions to whatever problem is thrown my way. I have a bachelor's degree in International Business and Spanish with concentrations in French and Latin American Studies.

AGENDA

1. Basic Hardware: Computers, Printers, Phones & More
2. Bring Your Own Devices
3. Hardware Replacement Cycles
4. Networking
5. Backing Up Your Files
6. Process to Troubleshoot Technical Problems
7. Common Technical Issues and Best Practices
8. Routine Maintenance
9. Glossary of Terms

ACCIDENTAL TECHIES

The accidental techie is usually a person who understands computers or office equipment better than most in the organization, and can figure out how to adapt the knowledge to the organization's needs. This is the go-to person for technology issues at an office.

WE'RE ALL ACCIDENTAL TECHIES

Working remotely, more of us find ourselves in an accidental techie role than ever before.

TO THE POLLS!

How many staff are at your organization?

- 1-20
- 21-50
- 50-100
- 101-500
- 500+

TO THE POLLS!

What technology challenges does your nonprofit face?

- Hardware: The cost of upgrades is a barrier and we have to maintain older equipment.

- Security: Cyber security attacks are more frequent and more dangerous.

- Support: It's hard to find IT support for common questions.

- Time: There is not enough time to focus on improvements or fix all the IT issues.

- Other.

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BASIC HARDWARE

Which of the following statements best describes your organization's Workstations?

- **All full-time staff members have access to an up-to-date computer running a current operating system and we have a plan for keeping them up to date.**

- **Hardware is standardized for those with similar needs. Individuals have a computer or tablet that is suited to their role. We regularly replace computers every 3-5 years.**

- **All full-time staff members have access to a computer. We have not defined a replacement cycle for computers, and many machines are past recommended replacement dates.**

- **Staff members must share computers or do not otherwise have access to a workstation.**

Pie chart values: 40%, 15%, 43%, 2%
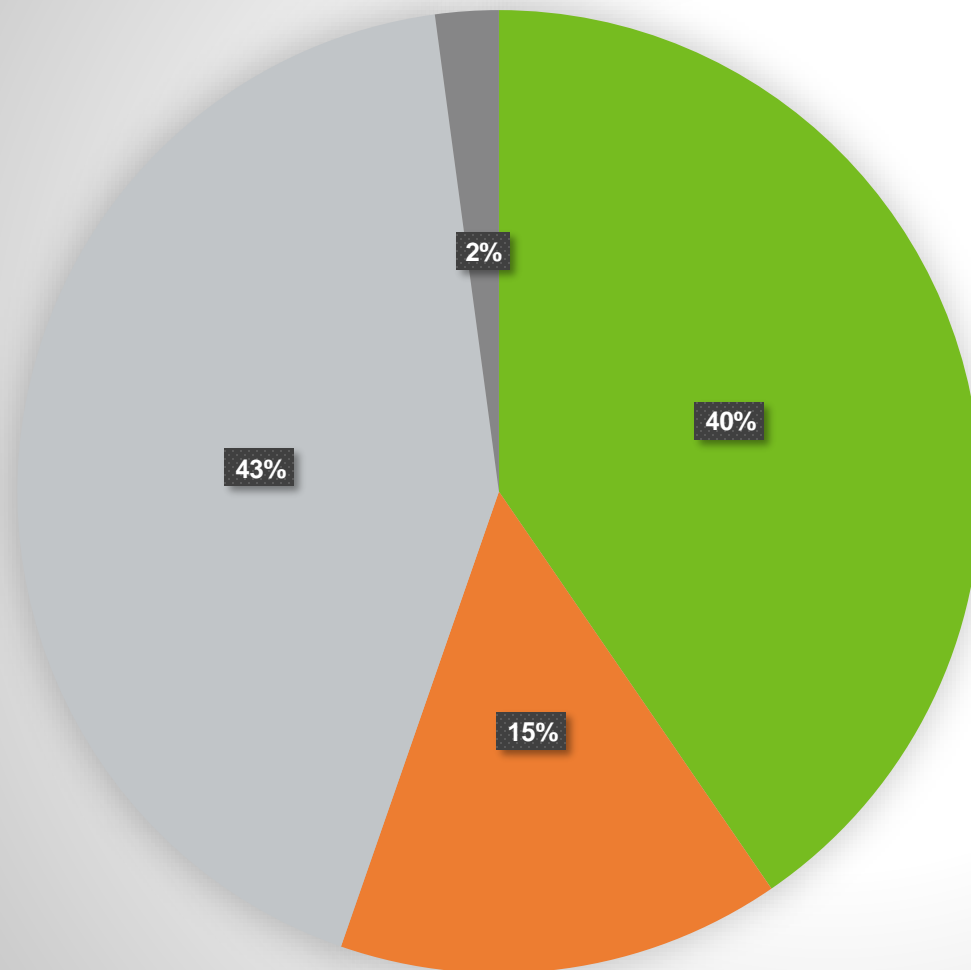
HARDWARE CONSIDERATIONS

Specifications

Warranties

Brand names

Deals/Discount programs

Think about how you'll use it, what issues it may solve.

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COMPUTERS

Think about your workday needs and make sure it fulfills those.

- Graphics Card for visual work
- Lightweight for easy travel
- PC vs Mac
- RAM/Memory
- Replacement Cycle Timeline

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MAKE YOUR WORKSPACE COMFORTABLE

If you're in charge of purchasing for your organization, keep the comfort of your employee in mind when considering:

- Dual Monitors

- Ergonomic Keyboard and Wrist Rest

- Ergonomic Mouse

- Ergonomic Chair

- Standing Desk

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NOISE-CANCELLING HEADPHONES WITH MICROPHONE

Benefits include:

Easier to hear on video calls and offers consideration to home office partners

Source: Amazon.com

PRINTER, SCANNER OR ALL-IN-ONE

All-in-one device are great and relatively inexpensive investments.

Ongoing costs

Generic cartridge options

Warranty

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SCANNER ALTERNATIVES

Microsoft Lens and Adobe Scan are free apps that do what they're supposed to well and easily.

SURGE PROTECTORS

More people sharing electricity can cause spikes in use.

Surge protectors are easy to maintain and will reduce the likelihood of replacing devices due to electrical issues.

Many come with USB inputs to also charge devices.

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VOIP

Bring your IP phone from the office and work remotely.

Keep the same number.

Functions as if it is at your office location.

Page coworkers, dial extensions, transfer and receive calls

Use your own cell phone

PHONES

Voice service runs over existing Internet circuit.

Supports "softphones" voice software that can run on computers and mobile devices.

VoiP allows staff to initiate and receive work calls on work phone numbers from personal devices.

LET'S ANSWER SOME QUESTIONS!

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BRING YOUR OWN DEVICE

TO THE POLLS!

Does your staff use their personal devices to work?

- All staff have organization provided computers and mobile devices to do their work.

- All staff work on organization owned devices, but use their own mobile devices to do their work.

- Some staff use their personal computers and mobile devices to work

- All Staff use their personal computers and mobile devices to work.

- Other.

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EMPLOYEE'S PERSONAL DEVICES

Should employees be allowed to Bring Their Own Device (BYOD) for their phone or computer?

MOBILE PHONES TO STAFF

PROS	**CONS**
Save money if they BYOD (phone and data plan)	Puts data at risk if device is lost or hacked
Save time and make it easier (they're already familiar with how to use their phone)	Staff needs to learn how to use a new device
They'll stay connected to work (easier to reach after hours)	Be wary of burnout and increased stress as your staff will always 'be on'

NONPROFIT TECHNOLOGY
POLICY WORKBOOK
UPDATED FOR AUGUST 2020

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IDEALWARE℠

BYOD POLICY COMPONENTS

1. Use an application for managing the devices connecting to the network

2. Craft a written policy outlining the responsibilities of the employer and the users

3. Have staff sign an agreement that acknowledges they have read and understand the policy

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HARDWARE REPLACEMENT CYCLES

TECHNOLOGY REPLACEMENT CYCLES

Lifecycle Replacement (LCR) is the process to maintain functionality and staff productivity through the plan to acquire, track, support, and decommission hardware like computers, printers, and other equipment.

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REPLACEMENT CYCLES ARE ESSENTIAL TO A STRONG INFRASTRUCTURE

3 to 4 years

4 to 5 years

4 to 5 years

3 to 5 years

Ongoing

More frequent

Less frequent
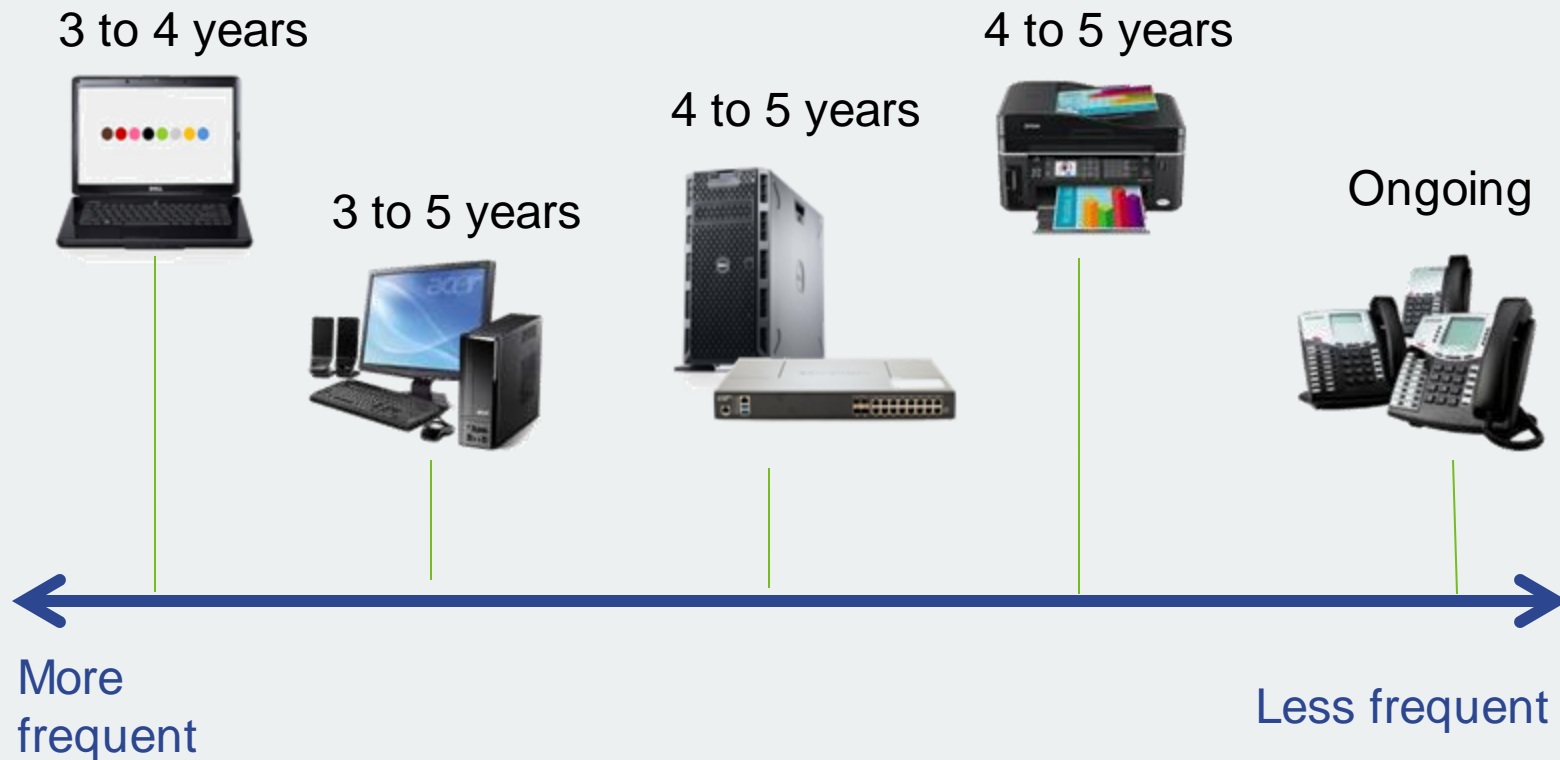
DISPOSING OF EQUIPMENT

Back up all information.

Remove all personal information and data.

Reuse it or recycle it.

LET'S ANSWER SOME QUESTIONS!

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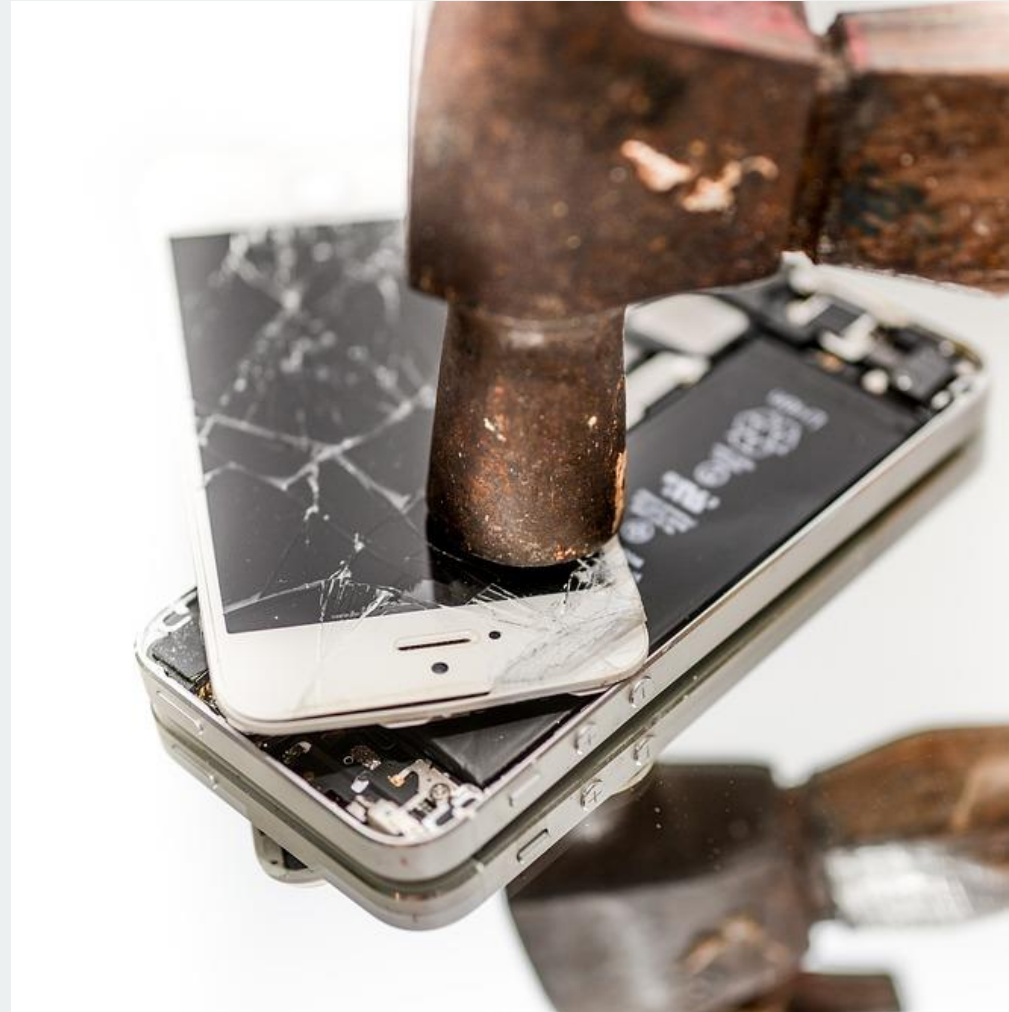
NETWORKING

Which of the following statements best describe your organization's Network?

Legend:
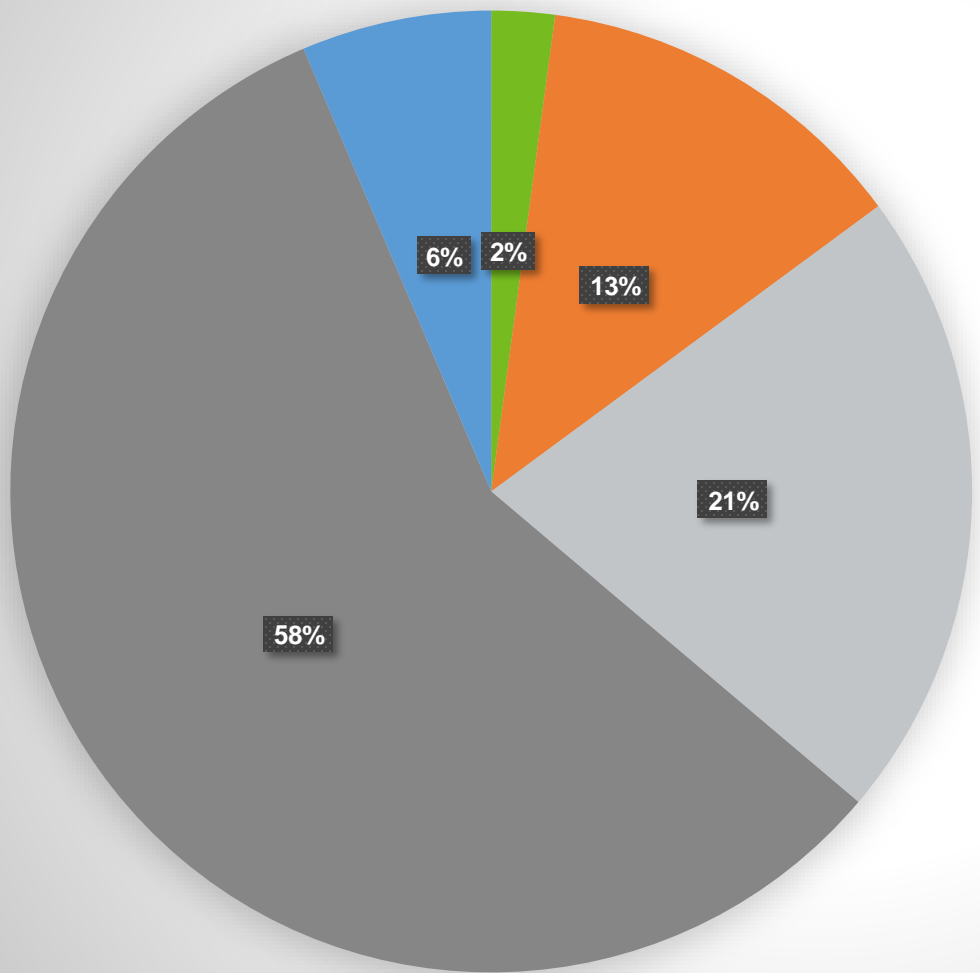
- We have no control of our network – we access the Internet through a shared connection (WeWork, Subleased Office Space)
- We access the Internet through the modem that our provider gave us. We have no dedicated firewall or secure Wi-Fi.
- Our network has a firewall that provides wired and wireless Internet access. Our Wi-Fi is not password protected OR it is protected with a single password for both staff and guests.
- Our network has a dedicated router/firewall that provides access to the Internet. Our Wi-Fi is on a separate network device and is password protected, with separate staff and guest passwords.
- Not Applicable

Pie chart values: 2%, 13%, 21%, 58%, 6%

TO THE POLLS!

Do you have external IT expertise help?

- We have a Managed Service Provider that is all inclusive and helps with our networking equipment and staff have access to help desk.

- We have an IT provider that we use for higher-level network support.

- We have a volunteer who helps us on occasion.

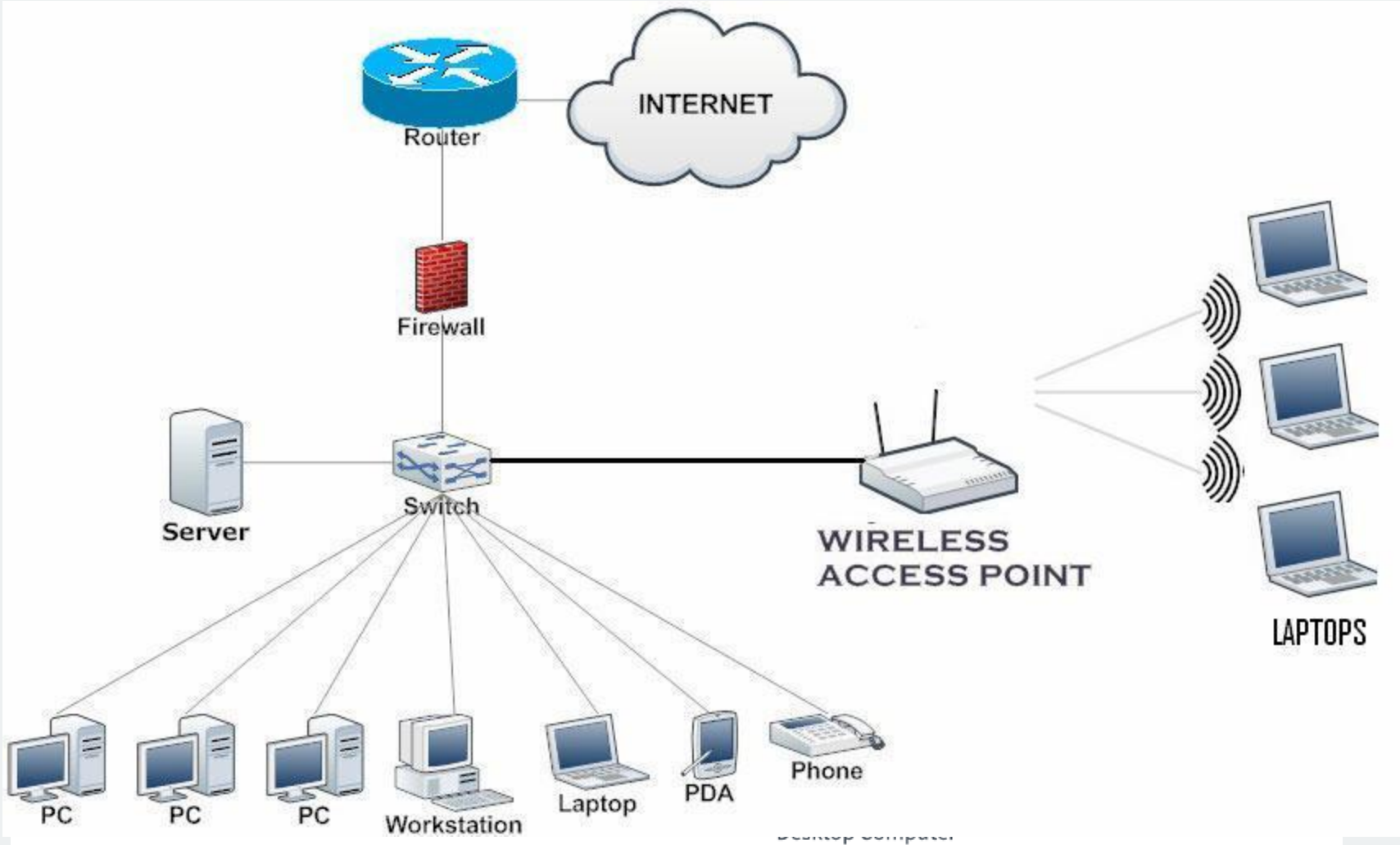- We DO NOT have any outside expertise to assist us with IT.

MANAGED SERVICE

- Security
- Simplifies planning and budgeting.
- Fosters consistent infrastructure.
- Expertise and experience.
- Ease of implementing new technologies.
- Frees up staff time.
- Adds cost.

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BASICS OF A NETWORK

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ROUTERS

This is a central location that all computers and devices connect to which provides them all network access.

REPEATERS/ EXTENDERS/ BOOSTERS

Eliminate WIFI dead zones

Easy to set up

Easy to move to another part of your home or office

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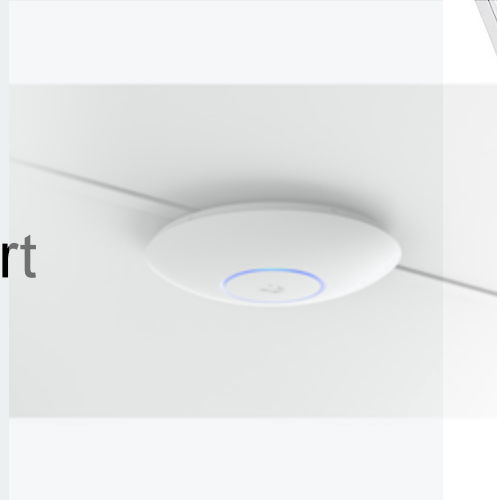
FIREWALLS

Firewalls keep malicious actors or information from reaching your network and hide your machines from the internet.

SWITCHES

Each network device plugs in to a port on the switch.

On smaller networks, the router, wireless router, firewall, and switch may be the same device.

You don't need a switch unless you find yourself running out of ports.

NETWORK ADAPTERS

This hardware is typically in the form of an ethernet card, wireless network card, USB network adapter, or wireless game adapter.

This adapter allows you to connect an ethernet cord for faster, stable Wifi via USB.

CONSIDER THIS

Adapters and connectors allows you to connect two devices that may not be designed to be compatible as is.

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Which of the following statements best describes your organization's access to Files?
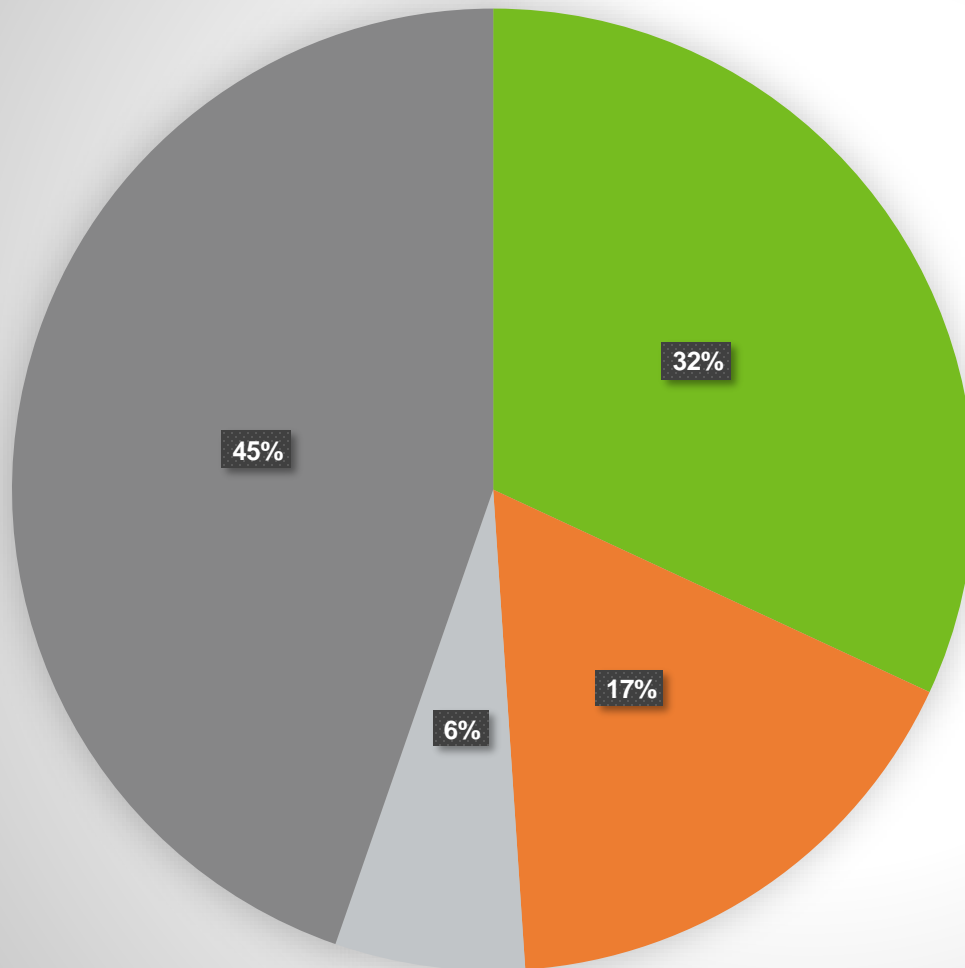
- We have a shared drive on a server (such as P: or S: or G:).
- We send files through email attachments. Everyone saves files to their own computer.
- We share files through our personal DropBox, Google, or similar accounts.
- We use cloud file sharing such as enterprise versions of Office 365, Google Drive or Box with permissions set by our IT professional.

32%

45%

6%

17%

DO YOU NEED A SERVER?

Servers can centralize and control access to file storage and printing.

Larger organizations may benefit from more sophisticated servers, but not necessarily in their own closet.

SETTING UP A VIRTUAL PRIVATE NETWORK (VPN)

VPNs can be both software and hardware. It's your own personal tunnel no one else can access. This is how you can work safely as a virtual team.

LET'S ANSWER SOME QUESTIONS!

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BACKING UP FILES

LET'S CHAT!

How do you currently back up your files?

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HOW TO BACKUP FILES

Subscriptions you may have may offer backup service. There's online and offline backup options.

1. USB stick
2. External hard drive
3. Time Machine
4. Network Attached Storage
5. Cloud Storage

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NETWORK ATTACHED STORAGE (NAS)

Server-like functions for less money.

Can be easily managed through a web interface.

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SPANNING – CLOUD TO CLOUD BACKUP

Gsuite

O365

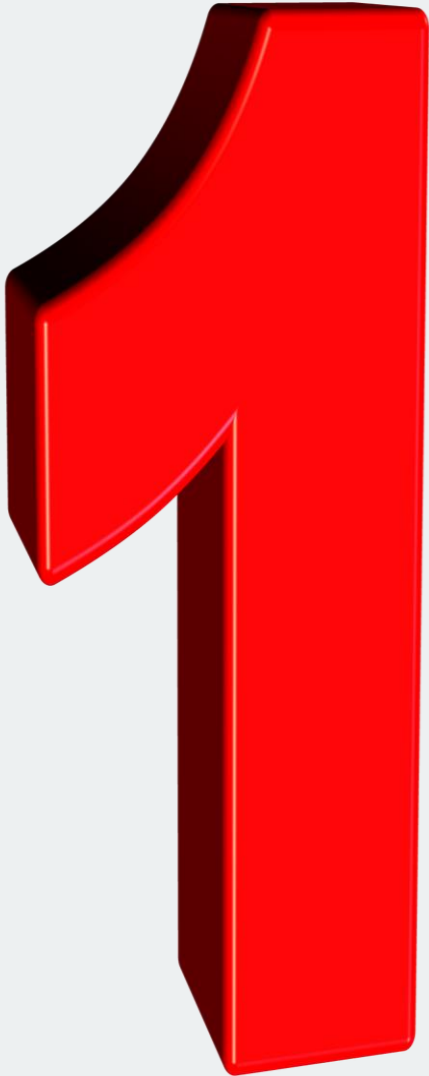Salesforce

Why?

Human Error

Malicious insiders

Malware and ransomware
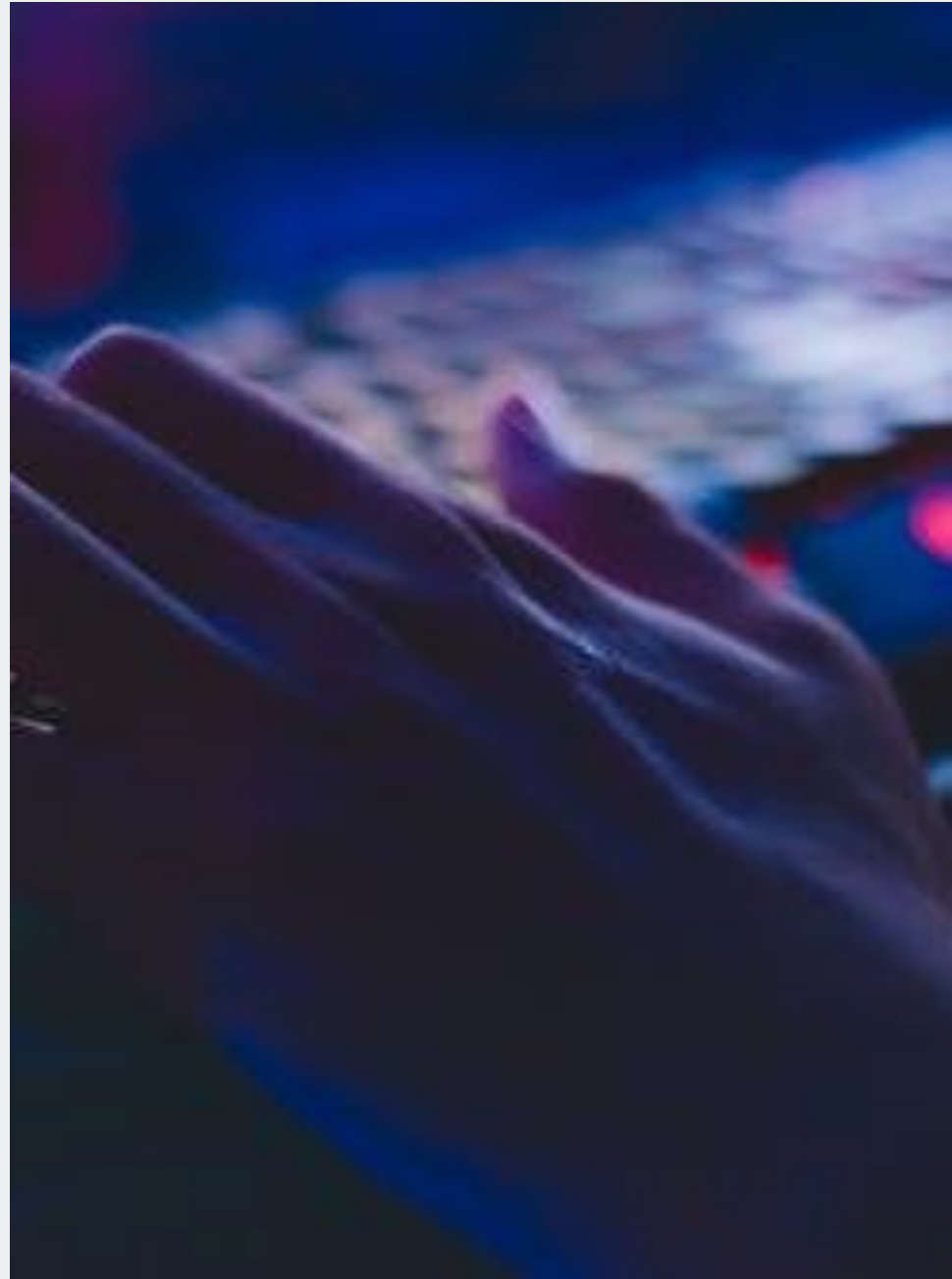
LET'S ANSWER SOME QUESTIONS!

PROCESS TO TROUBLESHOOT

CHECK THE SIMPLEST CAUSES FIRST

Did you check the cable?

Checking the simplest possible causes first will save you a time and find a solution sooner.

RESTART IT

2

Restarting a device clears its memory and may fix the process that caused the issue.

With a computer, use the operating system's restart feature if you can. Use the hardware reset button only as a last option. It can lead to data corruption.

3

SCREENSHOT ANY ERROR MESSAGES

You'll need the error messages or numbers to efficiently search for solutions online or calling tech support.

CHECK OFFICIAL RESOURCES

It's all online. FAQ's, manuals, forums, knowledge bases are typically available for the most used office products. If you're having the problem, probably someone else has had it first.

KNOW YOUR LIMITATIONS.

You'll find plenty of unofficial solutions on the internet, and although they may have the answers. Tread carefully when making changes that you are not comfortable with. It may cause more errors or void your warranty. This may be the time to contact a professional.

TECHNICAL 'HOW TO' SOLUTIONS
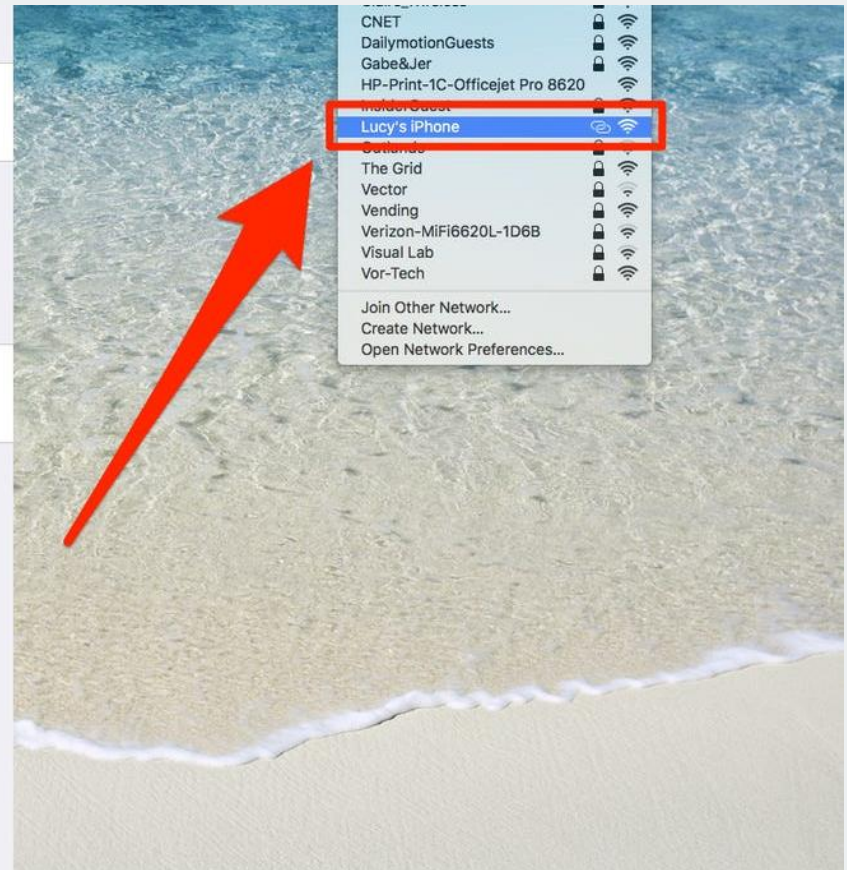
WIFI ISSUES

Restart Your Router.

Determine if there is a common issue amongst certain devices.

Try moving closer to your router. Check your manual if your router has two frequency bands, and test switching.

If connecting via ethernet solves the problem, you may need a new router. Test multiple laptops if needed.

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HOW TO SET UP A HOTSPOT

CHECK YOUR WIFI SPEED

Source: speedtest.net

Check your wifi speed for free at
https://www.speedtest.net/.

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SLOW COMPUTER

Check for updates: 'Tools', then 'Windows Update'
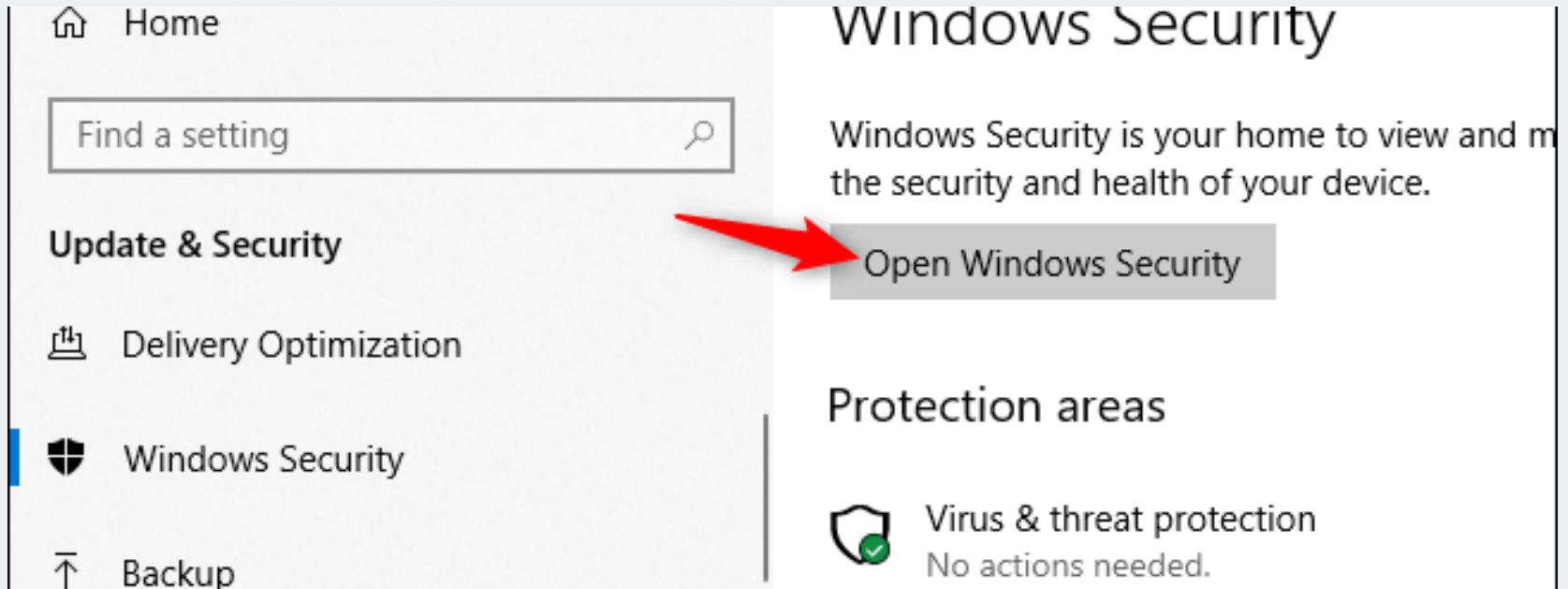
Remove unwanted or unused apps

Look for unknown programs running in the background.

Back up your system and do a clean OS re-installation.

Full hard drive? Move files to the cloud or external storage.

CHECK FOR MALWARE AND VIRUSES

Settings > Update & Security > Windows Security > Open Windows Security. To perform an anti-malware scan, click "Virus & threat protection."

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PRINTER ISSUES

Wireless printers are notoriously glitchy.

Fixes include:

Unplug the printer, wait 30 seconds, and plug it back in.
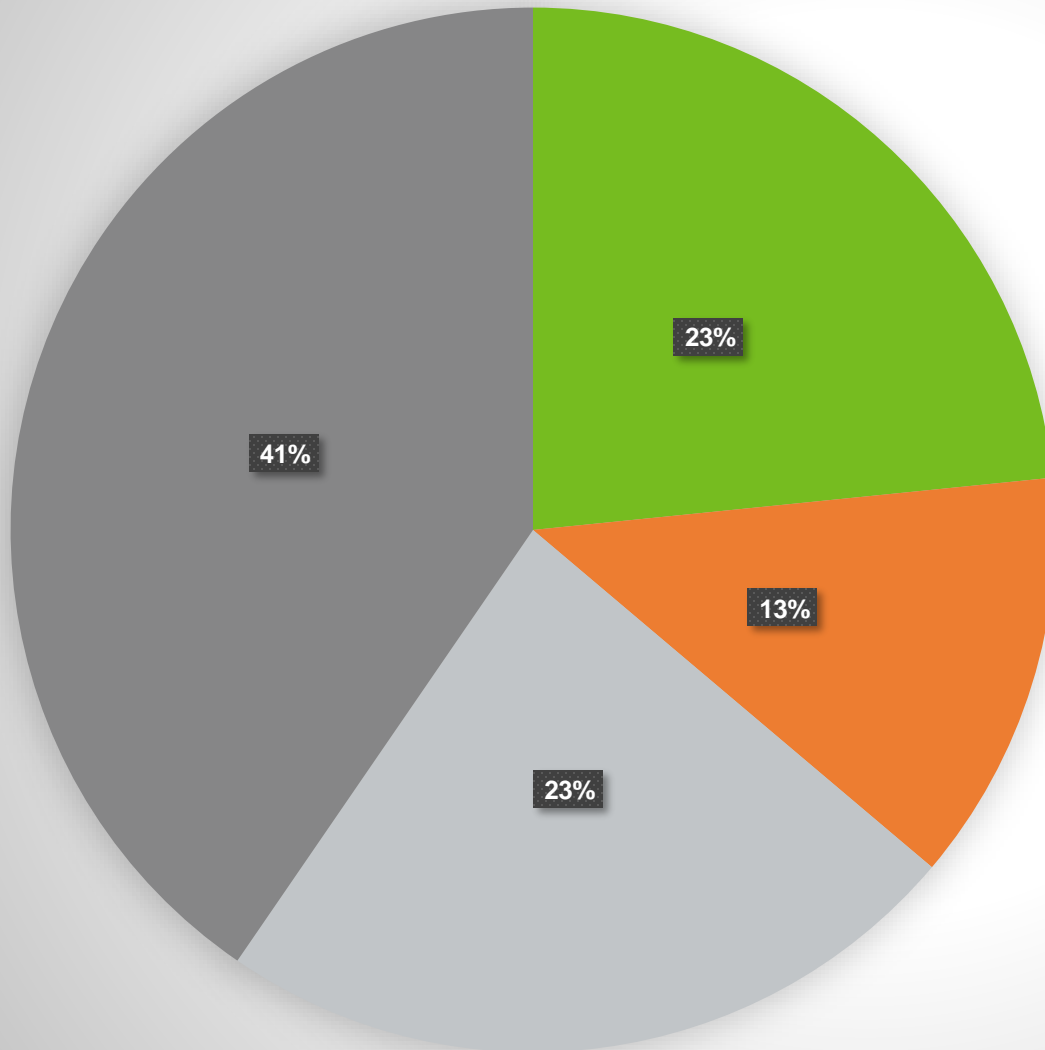
Check your cables if it's wired

Update the printer's drivers

Uninstall then reinstall the printer software

EPSON

ROUTINE MAINTENANCE

Which of the following statements best describes your organization's Technology Plan?

- A plan for upgrades and replacements exists but is not linked to strategic plan.
- Technology staff has a direct role in the strategic planning process and is integrated throughout the plan.
- Technology staff has a limited role in the strategic planning process and technology is directly mentioned as a tool throughout the organization's strategic plan.
- We do not have a technology plan.

TO THE POLLS!

Do you have a dedicated line item in your budget for Technology?

- Yes
- No

START WITH A PLAN

Like a Strategic Plan or a Marketing Plan, a Technology Plan helps you plot out your direction and priorities.

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IDENTIFY KEY METRICS THAT YOU AS AN ORGANIZATION ARE TRYING TO ACHIEVE

Reference your strategic plan when you set priorities.

- Do you want to grow a program or service?

- Start serving new geographies?

- Do we want to improve how our employees are working remotely?

BUDGET

Include:

Yearly hardware and software costs

Maintenance schedules

Replacement cycles

Support needs

Project costs

DOWNLOAD BUDGETING WORKSHEET

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Technology Investment Estimates Spreadsheet

Project Name	Hardware		Software		Service		Staffing		Totals	
	Initial	Ongoing	Initial	Ongoing	Initial	Ongoing	Initial	Ongoing	Initial	Ongoing
Operational Recommendations										
GOVERNANCE - Policies, IT Oversight										
Staff onboarding/offboarding policies									$ -	$ -
Data use policies									$ -	$ -
IT oversight - committee/mgt team?									$ -	$ -
									$ -	$ -
SECURITY & CONTINUITY										
Disaster Recovery Plan									$ -	$ -
Server/Data Backup including cloud storage									$ -	$ -
Cyber Security training/testing for users									$ -	$ -
									$ -	$ -
SUPPORT										
Workstation, Server, Network support (may be included in MSP contract)									$ -	$ -
Help Desk for Users (may be included in MSP contract)									$ -	$ -
User training									$ -	$ -
									$ -	$ -
INFRASTRUCTURE										
Workstation replacement (25% replacement annually)									$ -	$ -
Network devices - firewall, switch, wireless access point									$ -	$ -
Internet Connection									$ -	$ -

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GLOSSARY

GLOSSARY OF TERMS

Bring Your Own Device (BYOD): refers to the policy of permitting employees to bring personally owned mobile devices (laptops, tablets, and smart phones) to their workplace, and to use those devices to access privileged company information and applications.

Firewalls: A firewall is a network security system, either hardware or software based, that controls incoming and outgoing network traffic based on a set of rules.

Multifunction Machine: Is an office machine which incorporated the functionality of multiple devices in one. Typically is a combination of some of all of the following devices: email, fax, photocopier, printer and scanner.

Network Infrastructure: A network infrastructure is a group of interconnected devices, such as routers, switches, wireless access points, and access methods such as firewalls, that allows you tos hare information and resources from one computer or device to another.

Networked Attached Storage (NAS): A storage device connected to a network that allows storage and retrieval of data from a centralized location for authorized network users.

GLOSSARY OF TERMS

Voice Over IP (VoIP): a methodology and group of technologies for the deliver of voice communications and multimedia sessions over Internet Protocol (IP) networks, such as the Internet.

Desk Phone: a tangible device that sits on your desktop.

Soft Phone: an application that installs on your desktop or laptop computer.

Router: A router is located at the gateway where it directs the flow and determines the route of packets as they travel from one network to another network. A router can either be a hardware device or software application.

Switch: A switch directs the flow and determines the route of packets as they travel from one segment of a Local Area Network to another on the same LAN.

Managed Switch: Allows you access to program it. This provides greater flexibility to your networking basics because the switch can be monitored and adjusted locally or remotely to give you control over network traffic, and who has access to your network.

HELPFUL ACTIVITY FOR NEXT SESSION

Complete the Hardware Safari worksheet on the course page. This will help you assess your current technology inventory.

THANK YOU