Chapter 11: The IT Professional

IT Essentials v5.0
Chapter 11 Objectives

- 11.1 Explain the relationship between communication and troubleshooting
- 11.1 Describe good communication skills and professional behavior
- 11.2 Explain the ethics and legal aspects of working with computer technology including computer forensics and cyber law
- 11.3 Describe call center environment and technician responsibilities
Introduction

- Troubleshooting is as much about communicating with the customer as it is about knowing how to fix a computer.
- Learn to use good communication skills as confidently as you use a screwdriver.
Communication and Troubleshooting

- A knowledgeable technician who uses good communication skills will always be in demand in the jobs market.
  - As technical knowledge increases, so does ability to quickly determine a problem and find a solution.

- A technician should establish a good rapport with the customer since a relaxed customer is better able to explain the details of the problem.

- The technician has access to several communication and research tools. Any of these resources can be used to help gather information for the troubleshooting process.
Communication and Professionalism

- A technician’s professionalism and good communication skills will enhance their creditability with the customer.

- Successful technicians control their own reactions and emotions from one customer call to the next.
Determine the Problem

- **Know** - Call the customer by name.

- **Relate** - Use brief communication to create a one-to-one connection between you and your customer.

- **Understand** - Determine what the customer knows about the computer to effectively communicate with the customer.

- Practice active listening skills. Listen carefully and let the customer finish speaking.

- After the customer has explained the problem, clarify what the customer has said.

- Ask follow-up questions, if needed.

- Use all the information to complete the work order.
Holds and Transfers

Putting a customer on hold:

- Let the customer finish speaking.
- Explain that you will put the customer on hold and why.
- Ask for their permission to do so.
- Explain how long they will be on hold and what you will be doing during that time.

Transferring a customer:

- Let the customer finish speaking.
- Explain that you will transfer their call, to whom, and why.
- Tell them the number you are transferring them to.
- Ask for their permission to do so.
- Thank the customer and explain the details of the transfer.
- Tell the new technician the details of the case.
Types of Difficult Customers

Recognize traits to manage a call accordingly.

- **A talkative customer** discusses everything except the problem and uses the call to socialize.

- **A rude customer** complains during the call, makes negative comments, may be abusive and uncooperative, and may be easily aggravated.

- **An angry customer** talks loudly, tries to speak when the technician is talking, is usually frustrated and upset that they have to call somebody to fix the problem.

- **A knowledgeable customer** wants to speak with a technician that is equally experienced in computers and usually tries to control the call.

- **An inexperienced customer** has difficulty describing the problem and may not able to follow directions correctly.
Proper Netiquette

- Be pleasant and polite.
- Open with an appropriate greeting.
- Check grammar and spelling.
- Remember you are dealing with people.
- Follow the standards of behavior that you follow in the rest of your life.
- Know where you are in cyberspace.
- Respect other’s time and bandwidth.
- Be ethical.
- Share expert knowledge.
- Respect the privacy of others.
- Forgive other’s mistakes.
- Use mixed case lettering. All upper case lettering is considered SHOUTING.
- Never send chain letters through email.
- Do not send or reply to flames.
- If you would not say it to their face, then do not send or post.
Workstation Ergonomics

- Make sure that your desk layout works well.
- Have your headset and phone in a position that is easy to reach and easy to use.
- Adjust your chair to a comfortable height.
- Adjust your monitor to a comfortable angle.
- Place your keyboard and mouse in a comfortable position.
- Minimize external distractions such as noise.

Ways to Relax

- Practice relaxed breathing: inhale-hold-exhale-repeat.
- Listen to soothing sounds.
- Massage your temples.
- Take a break - go for a quick walk, or climb a flight of stairs.
- Eat something small - a snack with protein is best.
- Plan your weekend.
- Avoid stimulants like coffee, fizzy drinks and chocolate. All contain caffeine and can add to stress.
Service Level Agreements (SLA)

- A contract defining expectations between an organization and the service vendor to provide an agreed upon level of support.

- A legal agreement that contains the responsibilities and liabilities of all parties involved.

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Response Time Guarantee

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Business Policies

Be aware of all business policies about customer calls.

- Maximum time on call
- Maximum time in queue
- Number of calls per day
- How to pass calls
- Promises to customer
- Follow SLA
- When to escalate
Ethics and Legal Considerations

- Respect the customers and their property including their equipment and their data:
  - E-mails
  - Phone lists
  - Records or data on the computer
  - Hard copies of files, information, or data left on desk

- Obtain customer’s permission before accessing their account.

- Divulging any customer information is unethical, and may be illegal.

- Do not send unsolicited messages or mass emails to customers.
Ethics and Legal Considerations

- Actions such as the following are generally considered illegal.
  - It is not permissible to make any changes to system software or hardware configurations without customer permission.
  - It is not permissible to access a customer’s or co-worker’s accounts, private files, or email messages without permission.
  - It is not permissible to install, copy, or share digital content (including software, music, text, images, and video) in violation of copyright and software agreements or the applicable law.
  - It is not permissible to use a customer’s company IT resources for commercial purposes.
  - It is not permissible to make a customer’s IT resources available to unauthorized users.
  - It is not permissible to knowingly use a customer’s company resources for illegal activities.
  - It is not permissible to share sensitive customer information.
Legal Procedures Overview

- **Computer Forensics** is the collection and analysis of data from computer systems, networks wireless communications, and storage devices as part of a criminal investigation.

- Illegal computer or network usage may include:
  - Identity theft
  - Using a computer to sell counterfeit goods
  - Using pirated software
  - Using a computer or network to create or sell unauthorized copies of copyrighted materials
  - Pornography

- Two basic types of data are collected:
  - **Persistent Data** – Stored on a local drive, when computer turned off this data is preserved.
  - **Volatile Data** – Stored in Ram and cache, disappears when computer is turned off.
Cyber Law

- **Cyber Law** is a term to describe the international, regional, country, and state laws that affect computer security professionals.

- Cyber law explain the circumstances under which data (evidence) can be collected from computers, data storage devices, networks, and wireless communications.

- IT professionals should be aware of the cyber laws in their country, region, or state.

- In the United States, cyber law has three primary elements:
  - Wiretap Act
  - Pen/Trap and Trace Statute
  - Stored Electronic Communication Act

- **First Response** is the term used to describe the official procedures employed by those people who are qualified to collect evidence. System administrators are usually the first responders at potential computer crime scenes.
Documentation and Chain of Custody

- The following, at a minimum, should be documented if illegal activity is discovered:
  - Initial reason for accessing the computer or network
  - Time and date
  - Peripherals that are connected to the computer
  - All network connections
  - Physical area where the computer is located
  - Illegal material found
  - Illegal activity that you have witnessed (or you suspect has occurred)
  - Which procedures you have executed on the computer or network

- **Chain of Custody** - For evidence to be admitted, it must be authenticated. A system administrator should be able to prove how this evidence was collected, where it has been physically stored, and who has had access to it between the time of collection and its entry into the court proceedings.
A Call Center

- Usually very professional and fast-paced
- A help desk system
- Customers call in and are placed on a callboard
- Available technicians take the customer calls

- All the computers in a call center have help desk software. The technicians use this software to manage many of their job functions.
Level-one Technician Responsibilities

- Gather pertinent information from the customer.
- Document all information in the ticket or work order.

Information Checklist

- Contact information
- What is the manufacturer and model of computer?
- What OS is the computer using?
- Is the computer plugged in to the wall or running on battery power?
- Is the computer on a network? If so, is it a wired or wireless connection?
- Was any specific application being used when the problem occurred?
- Have any new drivers or updates been installed recently? If so, what are they?
- Description of the problem
- Priority of problem
Level-two Technician Responsibilities

- Usually more knowledgeable about technology.
- May have been working for the company for a longer period of time.
- Receives escalated work orders from level-one technicians.
- Calls the customer back to ask any additional questions.
- May use remote access software to access the customer’s computer to diagnose the problem and possibly to resolve the issue.
Chapter 11 Summary

- To be a successful technician, you will need to practice good communication skills with customers and coworkers. These skills are as important as technical expertise.

- You should always conduct yourself in a professional manner with your customers and coworkers. Professional behavior increases customer confidence and enhances your credibility. You should also learn to recognize the classic signs of a difficult customer and learn what to do and what not to do when you are on a call with them.

- There are a few techniques that you can use to focus a difficult customer during a call. Primarily, you must remain calm and ask pertinent questions in an appropriate fashion. These techniques keep you in control of the call.

- There is a right way and a wrong way to put a customer on hold, or transfer a customer to another technician. Learn and use the right way every time. Doing either of these operations incorrectly can cause serious damage to your company's relationship with its customers.
Chapter 11 Summary (Continued)

- Netiquette is a list of rules to use whenever you communicate through e-mail, text messaging, instant messaging, or blogs. This is another area where doing things the wrong way can cause damage to your company's relationship with its customers.

- You must understand and comply with your customer's service level agreement (SLA). If the problem falls outside the parameters of the SLA, you need to find positive ways of telling the customer what you can do for them, rather than what you cannot do. In special circumstances, you may decide to escalate the work order to management.

- In addition to the SLA, you must follow the business policies of the company. These policies will include how your company prioritizes calls, how and when to escalate a call to management, and when you are allowed to take breaks and lunch.
Chapter 11 Summary (Continued)

- A computer technician's job is stressful. You will rarely get to meet a customer who is having a good day. You can alleviate some of the stress by setting up your workstation in the most ergonomically beneficial way possible. You should practice time and stress management techniques every day.

- There are ethical and legal aspects of working in computer technology. You should be aware of your company's policies and practices. In addition, you may need to familiarize yourself with your state or country's trademark and copyright laws.

- Collecting and analyzing data from computer systems, networks, wireless communications, and storage devices is called computer forensics.

- Cyber laws explain the circumstances under which data (evidence) can be collected from computers, data storage devices, networks, and wireless communications. First response is the term used to describe the official procedures employed by those people who are qualified to collect evidence.
Even if you are not a system administrator or computer forensics expert, it is a good habit to create detailed documentation of all the work that you do. Being able to prove how evidence was collected and where it has been between the time of collection and its entry into the court proceeding is known as the chain of custody.

The call center is a fast-paced environment. Level-one technicians and level-two technicians each have specific responsibilities. These responsibilities may vary slightly from one call center to another.
Cisco Networking Academy
Mind Wide Open

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