CompTIA A+ Study Guide

ABOUT THE AUTHORS

David Nguyen has been a [CompTIA A+](#) IT certified computer technician since the age of 14. He was published in a computer newspaper, [WeCompute,](#) for this young achievement. He is now a software developer creating programs to help fix and optimize Microsoft Windows computers.

David has worked in computers for a long time. His interests are computers, art and programming. He has real world experience working in computer repair, sales, tech journalism and graphic design. Programming work is later in life. He has helped build some popular "Windows 10/11 Debloaters" to remove bloatware and created a number of other software. [Click here to learn more](#). Programming interests are customizing, tweaking, optimizing, maintenance and repair software utilities.

Ben Cybulski is a super cool and very smart guy. He loves tech and more tech. He is now finished college and working in tech. He is fond of Apple products and cell phones. He works in tech and runs a website called [www.FreeTimeTech.com](#) with David by reviewing, writing tech articles and developing software. [Click here to learn more](#). It was Ben's idea to create the FreeTimeTech.com with David and Ben's idea to build Windows Debloaters. David was hesitant and scared to undertake it with Ben. With Ben's positive mindset and coaching David, Ben and David have what they have now.

Chapter 1 - Professionalism and Socializing

This chapter will teach
1. Presentation and professionalism
2. Socializing with customers

I am kind of a geek/nerd. I like to think I am. In this modern era (2024), being smart and working with technology is now cool. More and more people are doing tech. Tech is in. But a slight problem with being in tech is maybe the stereotypes about the people in it. People in tech are stereotypically socially awkward. Personally, I spent too much time in front of the computer when I was younger and I did not develop very good social skills. But after working some time in tech, most of my social awkwardness improved. I learned to improve the way I dress, not be shy and communicate better. Also being naturally interested in tech helped as I could enthusiastically communicate the things I love. Anyone wanting to work in tech should be naturally interested in it. I hope you are interested in tech. If you are not, I do not think you can just attain the skills and do it long term.

This chapter teaches life skills, how to be professional and communicate in the real world while being true to yourself with a lot of examples and scenarios to help teach.

The Professional Tech
You learn professionalism at your first job. I learned to be professional while working nights at a grocery store in the produce department. Having previous working experience helps a lot. You learn how to dress and learn to treat people kindly with respect.

The way you dress will show people the first impression of you. So you must dress appropriately if you want to convey the professional computer technician look. After looking the part, treat people how you want to be treated and hopefully that will reciprocate. Thus professionalism requires a professional look and ethics.

Appearance
By dressing professionally your customers will think you are doing serious business, give you utmost respect and give you time to do your job. Do not dress too casual or messy like you do normally which will give the impression you are not serious. The problems that you fix are of a serious nature. You might be saving precious family photographs and putting a small business back online.

For example, I worked at Best Buy and the technicians wore dress shirts and black dress pants like a secret service agent you see in movies. The Best Buy sales associates wear a blue polo shirt and khaki pants. Shoes are full black for both. Clothing is wrinkle free and the shirt collar is bent perfectly. From my experience working at Best Buy, I know that this appearance welcomes and reassures customers that you are smart, articulate and can do what they expect.

Understandably hygiene is important. You should be clean shaven, hair combed, showered, wear neutral smelling deodorant with clean teeth and fresh breath to smile reassuringly and talk to the customer. I have worked in sales and I have a cleaning and prepping routine I do every morning before I go to work. It becomes second nature to do this routine over time and it feels great to take care of yourself to meet the world ready head on.

Traits of a Tech

Ethics are pretty easy to understand. You don't want customers and colleagues to not trust you in doing business. You have to be honest, have integrity, be dependable, be responsible, and be sensitive. Just treat others how you like to be treated. My first job at a grocery store taught me all about this as well as how to work on a team. The aim is to be a dependable service to the customer so they can call you back for more servicing and sales if needed. Provide excellent service to make customers come back for more and become a repeat customer. Having a loyal customer base is what you should strive for really.

When I was working in a computer repair store, we would have loyal customers come in for their yearly spring maintenance. We would physically clean the system with air dusters and brushes, use system utility software to remove unwanted software they might have accidentally installed, clean out their temporary files and junk, update their Windows OS and anti-virus software subscription. By providing this tailored service, we had a constant supply of satisfied customers. I find it fun to maintain computers making them feel speedy and new again. I find it akin to maintaining your car.

Honest/Integrity

Be honest by not lying and tell the truth. It is OK to say you don't know the answer to the problem at hand at first. You can say you will try to figure out the problem and have some general idea. It is easy for techs to get overly technical. Do not get overly technical with the customer when explaining things so the customer can understand. Just be as general as possible to explain the fix. You as an expert should have a general idea what could be the problem. You will get better in time. The problems at hand could be bigger than they seem at first and require extensive repair and maybe replacement so tell the customer that as well if you can tell. Be honest.

Integrity is to do the right thing. You are supposed to sell what the customer needs and not upsell things they do not need. It might be beneficial overall to sell them that Intel i9 24-core desktop or WiFi 6E router to last many years but you should just push out what they need at the moment or probably something that will last for the next 2-3 years at minimum. Technology is evolving pretty rapidly so maybe some tech savvy customers will want to come back for the latest and greatest from you! You should always pick the product with the best warranty and customer support. It is problematic to sell the cheapest stuff. If you do sell cheap stuff then customers will hassle you for extra support if it doesn't work, using up your valuable time to work on the next paying client.

Being in computer repair is a service job so you must be confidential with all matters. Do not pry through customers' email, data and web browsing history. Don't keep their passwords. You will lose all your credibility and respect if you do. Treat the customers' stuff as you want other people to treat your stuff. Service work is all about keeping the customer happy. You should make customers aware of security flaws like writing of login and password info on sticky notes stuck to monitors or easy to crack passwords. I would tell customers to use difficult passwords and routinely change them. These days, customer logins and other personal information like credit card info are always being leaked by hackers daily. You can not be too protective these days.

Dependability/Responsibility

Doing the work that is set in the work agreement is dependability. Be dependable by always doing what is expected of you for your work role on time. Time is money. When you hold up your end and account for all your actions, that is responsibility. Be responsible for all the things you do.

When I worked at my jobs, I would usually be 10 minutes early. The usual time to show up on time is 5 minutes early. For me, I like to feel calm and take careful look at my surroundings/environment before I start work. I suffer from a bit of anxiety so I need to run through my paces to settle down. Each of us has our own quirks and routines to calm down and settle down so take care of them before starting work. If you are late, let the customer know and apologize.

In most cases, you will be dealing with sensitive data. It is a huge responsibility to handle someone else's data. Ask the customer if they have recent backups of data. If they do not have a recent backup or no backups at all, ask the customer if they want you to make a copy of their data before working on their machine which will incur an extra cost. If they decline,

outline the risks of losing their data that can happen when repairing. It is costly in terms of time and money to backup TERABYTES (TB) of data from mechanical storage. You really don't have the time to freely make a copy of their data before servicing their machines. It can take many hours to backup.

In this computer repair business, you must have a 'Work Authorization' form that documents the company name, billing information, date, scope of work and work done. This will protect you from litigation. It is also a good reference and a good marketing tool to use. Your copy of the form allows you to see what type of common problems customers have and what you did to solve them. You can reach out to customers if they need yearly maintenance by checking the dates on the form.

Sensitivity

To grasp what the customer feels and acting accordingly to make them feel understood and comforted is to be sensitive. You should try to put yourself in their shoes and try to sense the urgency and anxiety they feel and relate it to them. By doing so, you calm them down and then can help them after. I bet every computer person can relate to when they have lost an important data file (family photo) or lost access to their system due to ransomware. You have been down this path and have rectified it somehow so now you can help your customer.

Customers are paying you for your service and they are very upset having to have to call you for help. You must give your 100% to solve their problem fast as possible without any distractions in your way. Put away that personal call and only answer for emergencies or work-related calls privately away from your current customer.

We live in the year 2024. The world is full of different people from all walks of life. Be open minded and accept different time scheduling around their holidays. You are coming into their office or home so you should listen to them if you need to wear any special clothing like a hat or take off your shoes before coming in. You should use the customer's title. Say "Doctor" if they are one. Ask if you need to first. You are in the service business and it just makes sense to bend the customer's way for these small things.

Effective Communication

If you really want to be a computer technician, then solving problems should come naturally for you. The customers that you help are usually very frustrated and upset. But you probably have seen this issue before if you have been working with computers for a long time and are confident with a solution. It is up to you using your communication skills to find out the problem from your flustered customer. It may take some time and practice to get the answers. You must be assertive, respectful and timely. These will be explained below.

Assertive Communication

While working in tech repair, I found most problems are user made ones. The computer just does what the user tells it to do. Most users think it is the fault of the computer so you must help users understand that they may have caused the error. Once you communicate that clearly then you should have your answers after. Basically you have to relate to the user that the computer is just a service machine like a car. After explaining that most users won't be angry no more and settle down to explain what they did before encountering the error. On very rare occasions, some users may be conflicted thinking that the computer is causing them trouble. So just be helpful and neutral as possible and retrace the steps to get the error. Work with the customer and be on their side. Say things in this assertive form, "I understand how frustrated you are with this machine.", "We will figure the problem out.", "I have seen this problem before.", and "This is a common issue with this type of machine/software.". Avoid accusing and saying 'you'. Do not say, "What did you do to cause this?". Instead say, "What happened to cause this error?".

Respectful Communication

As a computer technician you are in the support role. If you work in IT for a bank, you support the main business which are banking transactions for the clients. The clients are the priority and you are here to support them. That is where you fit in the business system. But without you they can not perform the main duty which is banking. So don't feel lesser in your role but just understand you are here to fulfill your duties in the bigger system.

So being respectful is to value other people's roles in the business model. When you arrive at the customer, ask to start working on the problem first. Do not barge in and take control at your own will. Let the customer talk first and do not interrupt. Be civil by not arguing, not accusing and not condescending.

Be positive all the time even when you can not figure out the problem right now because eventually you will figure it out. There is always a solution I believe. In all my years working in tech, I eventually figured 'my error'.

You might get a customer so frustrated that they might hassle you to quickly fix the error. Try your best to fix the error and if you can not tell the customer you have everything under control. Technology is your domain and you should know what

you are doing. Therefore reassuringly tell them that it takes time and you are ruling out all the possibilities. You should always be in control and never lose your cool. Never take anything personally if the customer is angry with you that you can not fix the problem right away.

We are human and make errors and machines eventually break. Keep that in mind. The computer repair business is not going away so that means that your services are always needed. So as long as you try your best to deal with the problem with the customer in a respectful manner, you will eventually become the go-to person for them. Also by teaching the customer how to avoid the error in the future, you have cemented yourself as the "IT Support Guy" that everyone goes to for all their IT support needs.

Getting Answers

To get to the root of the problem, let the customer explain the problem fully. After, ask appropriate questions without accusing them of creating the error. Actively listen and take notes. Get facts by asking open-ended questions. Typical questions are like "When did it last work?", "Has there been any changes in software?", "Has there been any changes in hardware?", "Who else uses this machine?", "What are you doing on the computer when this error occurs?". If you are computer savvy enough and support friends and family with IT problems, I think you can figure out which questions to ask to narrow down the problem.

Remember to never accuse the customer of causing the error. Also talk on their level of technicality by not using tech jargon. Go through the motions by physically and visually going through the steps to help explain and solve the issue as simply as possible to help the customer grasp the problem at hand.

For example, if you diagnose a computer problem as a thermal issue just say, "A problem like this occurs when the system is heavily loaded and the system can not cool itself enough.". The solution is to, "To fix this problem, regular cleaning of vents and fans is needed once every 3 months.".

Just do what you are paid to do. Don't involve yourself in other activities. That means do not do more than the assigned job. It could be dangerous and illegal if you step beyond your boundaries. You do not get paid to do more so just do what you are assigned to do.

Expectations and Follow-up

Personally, I get scared to call for IT support. It is costly and frightening when problems are out of your control. The deal is that customers just want the system up and running like it was before. So try your best to get them up running like they were before.

To control customer expectations can be challenging. If you are savvy enough you can provide a reasonable estimate. It will take time to have enough experience that you can come in and fix what they need in the allotted time frame.

After you finish the job, follow-up with the customer. This establishes the business relationship connection. The customer is reminded of you and hopefully calls you for possible future work since you cared to follow up.

Timeline

Giving your estimate on how long it is to repair the problem is critical. This is what the customer wants to know mainly. It will take experience to estimate better and better. Just give your best guess. But it is best to diagnose the problem first and then give the timeline on repair.

If you go past the estimated timeline, have open communication with the customer explaining the reason. Most people are understanding. Remember we are human and can make errors so do not feel too upset.

Options

There can be many solutions to a problem. The solution usually boils down to how much money is available. Let the customer decide which option they can afford at the moment to get up running as soon as possible.

For example if the fault is hardware related, one solution is to replace it with the same/similar part. Another is to upgrade or maybe it is to upgrade and have a backup on hand too to avoid calling in you to do the swap. By giving the customer options, it shows you care and are flexible about doing business with them which is great business for you.

Documentation

Document the work done. Include the description of the problem, time and day, the solution, hours worked, and part list. You should include costs too. Remember, this will be a great source of reference and marketing. This will protect you from litigation. There are times when customers come in for a "free fix". They will say you are responsible for this new error because you were the last person who serviced their machine. The problem they say you caused is 'unrelated' and you can show them the paperwork that you did not touch that part of their system.

Follow-up

Phone up the customer at a later date. Ask if they were satisfied with the work you have done. This is important to establish a business relationship and to learn to improve your services for next time if there are any issues. At my store I worked at, we called our regulars to check up on them for their yearly maintenance and antivirus subscription update. Viruses are a huge problem so most customers will surely seek you out to get the best antivirus protection. We had subscriptions to the best antivirus software to sell at a discount for our customers.

Be Prepared!

Before becoming a certified computer technician, I had been toying with computers for many years and helping family and friends a lot. But the real business world can be new and different. You will be dealing with mostly networking and business applications. So be prepared and be open to learning lots.

When I was working at Best Buy, I would come to the store after work to learn more. I would look at new devices and I would chat with the computer technicians and sales associates to learn how to be very knowledgeable like them. I practiced my communication skills to get the detailed facts from socializing with them. My coworkers would be happy to teach me how they sell and help their customers. I then would use my new formed knowledge and work with my customers in troubleshooting and solving their issues. I had good sales performance when I was at Best Buy. Sales is the business there.

There is something so satisfying to be so technical to solve a tech problem that is separate from you. You are no longer solving a personal issue that everyone faces. Tech is objective and possibly unique and that makes it special, fun and exciting to solve.

The next chapter will be technical. We will cover electrostatic discharge (ESD) and handling.