



# HELP DESK SUPPORT

FUNDAMENTALS

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Help Desk Support Fundamentals

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*(Part of Scott Carmichael's IT Manual: Topics in Technology, Linux Web Server Support, Information Technology Cautionary Tales and Help Desk Support Fundamentals)*

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***Help Desk Support  
Fundamentals:  
An Introduction***

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The economy has changed a lot over the last decade or so, and as people try to find alternate career paths, one thing that many people may look into involves IT Support. It's an industry with a good number of openings in most mid-sized or larger towns, and despite there being tons of technical products and software choices that businesses use, the fundamentals of what a Help Desk Support Technician needs remains largely the same, no matter where they work.

This book is meant to cover (briefly) some of the major points a person should consider before diving headfirst into the industry. The field is not for everyone, and requires a certain type of thinking, business-sense and people skills. Unlike other tech jobs where you can avoid humanity, Help Desk staff spend the majority of time dealing directly with individuals affected by issues. As a result, technical know-how is often only as important as people-skills, or slightly more important.

Help Desk Support Fundamentals will hopefully prove to be useful in answering core questions about the IT work the industry involves.

I hope you enjoy the book.

## **About the Author:**

Scott Carmichael is an award-winning, professional Web Developer, Designer and IT Professional with degrees and certifications in both Visual Design & Web Media and Information Technology. *You can learn more about him and his work by visiting <http://www.scottcarmich.com>.*



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## *Chapter 1: Where IT Is Right Now*

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In this modern post-dot.com-bubble and post-web 2.0-era of the early 2000s, the tech industry has changed a lot compared to what it was 10 or 20 years ago. Back in the 90s, due to the huge demand for domestic tech-related services, workers with even a small amount of tech know-how could find themselves an IT support-related job and basically start a career in it.

After the dot.com bubble burst in 2000 though, the reality immediately set-in for most of these support professionals: Not only had the field suddenly become competitive due to drastically lowered job vacancies, many businesses decided foreign-support staff (namely India) was the best option for the post-bubble phase, in an effort to cut head count and costs.

During the web 2.0 era, which I refer to as the time from ~2004-2009 or so, there was a slight uptick in tech jobs, in part due to the good economy of the mid-00s which allowed companies to finally hire a decent amount of IT staff. Sadly though, when the Great Recession kicked into high gear in late 2008, the writing was on the wall for many IT workers: Your services were no longer needed...

...Well, they were, just not domestically. As Robert Cringley wrote in his 2014 book "The Decline and Fall of IBM," United States-based tech workers were in for a very nasty surprise at all levels (not just support) during and after the Great Recession:

*"The story about H-1B visas is simple. H-1Bs are given for foreign workers to fill U.S. positions that can't be filled with qualified US citizens or by permanent US residents who hold green cards. H-1Bs came into existence because there weren't enough green cards, and now we're told there aren't enough H-1Bs, either. So there's a more or less continual move in Washington to increase the H-1B limit above the current level of approximately 65,000 per year because we are told the alternative is IT paralysis without more foreign workers."*

So whereas after the dot.com bubble the low-level tech workers were hit the hardest (the programmers recovered easily enough, albeit at lower pay), after the Great Recession all ranks of workers were devastated, as Fortune 500 companies like IBM ramped up efforts to outright replace domestic workers with foreign tech workers if at all possible.

Robert continued, *"Cynics like me point out that foreign workers are paid less, and more importantly, place much less of a total financial burden on employers because they get few, if any, long term benefits. I tend to think the issue isn't finding good workers, but finding cheaper workers. However the H-1B program by law isn't supposed to be about*

*saving money, so that argument can't be used by organizations pushing for higher visa limits. All they can claim is a labor shortage that can only be corrected by issuing more H-1Bs."*

Is there a silver-lining to all of this talk of doom-and-gloom regarding IT support jobs, given that we've been in the worst economic situation of several generations' lifetimes (for nearly a decade now!)? Sure there is – because even though many industries have faced drastic setbacks where a recovery is basically impossible at this point (I'm looking at you, marketing, advertising, printing and publishing jobs), you can still get a decent job in IT fields – and for this discussion, I'll be talking about IT support jobs (Help Desk level) specifically.

In *The Decline and Fall of IBM*, Robert commented about how, after IBM provided horrible support for one of their largest customers, they basically told the customer to "deal with it" and "good luck finding IT staff on their own, locally"...

*"When ServiceMaster announced its decision to cancel its contract with IBM and to bring in a new IT team, the company had to immediately find 200 solid IT people. Memphis is a small community and there can't be that many skilled IT workers there—right? But ServiceMaster held a job fair one Saturday and over 1,000 people attended. Company representatives talked to them all, invited the best back for second interviews, and two weeks later ServiceMaster had a new IT department. The company is reportedly happy*



*with the new department, whose workers are probably more skilled and more experienced than the IBMers they replaced."*

The message to take away from this is that Help Desk Support – even though it is the "lowest-level" job in the IT field (in terms of requirements needed to do it) – likely won't be going away anytime soon here in the U.S., simply because there is enough demand in most decent-sized cities to justify hundreds if not thousands of IT support positions.

In the example above, for one company in Tennessee alone (and Tennessee is about the last place you'd think of in terms of being "techie") they were able to provide two hundred IT jobs to local workers! I won't go so far as to say the IT field is a great one to get into, but unlike certain professions, I do get the sense that even in this downright awful economy (that really doesn't look to be improving), IT jobs (that actually do exist!) provide a level of openings, employers and job types that make it appealing to those interested.

## ***Chapter 2: What Is Help Desk Support?***

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Help Desk Support can best be summarized as the first-line of support at any company, between users experiencing issues or making requests, and the IT staff responsible for addressing those areas of concern.

In a company like AT&T, which has a DSL service support department, Help Desk staff (which can also be called titles like "Customer Support Technician" or "Service Specialist," depending on where you work and what a company's HR department decides on), would be working with the actual residential customers on a one-on-one basis, assisting with DSL modem setup and troubleshooting.

At an organization like a hospital, the internal Help Desk department would not be working with patients directly, but rather with doctors and nurses needing technical assistance.

At a third-party IT support company that deals with business-to-business contracts, Help Desk workers would find themselves assisting other professionals (that may or may not have much technical experience) from external companies, vs. coworkers.

Typically, an employee will know before or during an interview whether they are going to be dealing with customers one-on-one, with other employees at the same company or with business professionals outside the company. Depending on your preference, these three unique types of people you assist can mean different things for you, as a Help Desk technician.

### Customer Support:

Main Support Focus:

End Users/Regular Customers:

*Positives:*

- Because they are end-users who don't work for the company or are professionals that are used to dealing with tech (in general), they often don't need a lot of actual technical support. In other words, the work itself is often already-known/documented/easy-to-do.
- End users can come and go often, so if you do encounter a bad and/or frustrating one, statistically speaking, it's likely you'll rarely (if ever!) deal with them again.
- Because the issues that end users have are not complex, most questions/issues are well documented, and there is a low-learning curve.

*Negatives:*

- Because the work is well documented and end user behavior/requests predictable, the pay for

this type of work is often the lowest, because these types of workers can be replaced easily and trained fairly quickly.

- Since you're dealing with non-tech savvy end users, you may face frustration and issues if complex actions are needed on their end or if they need to have something intricate explained to them, technology-wise.
- Because you have such a large number of customers to support that come-and-go very quickly, it's hard to make a good impression on any of them. As a result, it's hard to show that you're very good at your job, compared to other workers who maybe don't do the same quality of work as you.

Internal Support:

Main Support Focus:

Coworkers

*Positives:*

- The most stable of all three types, this position is one that is carved out of a company's budget, because there is a real demand for IT support. Typically a dedicated Help Desk worker is preferred (on-site) after a business reaches about 50 employees. At 75-100 employees, it's almost essential to have at least one on-site Help Desk-level worker. At companies with 100-200 people, there should be at least one Help Desk worker

and one Senior Tech worker (not necessarily the Help Desk worker's manager, but someone who deals with more complex tech issues like server, security and email problems).

- As you work with your coworkers on a regular basis, your quality of work won't only make a big impact on them, but can help you get noticed faster than other types of IT work.
- The day-to-day support work done will be fairly routine (based on the company's approach to technology), so repetition of common tasks will help make most days easy-to-deal-with.

*Negatives:*

- Because you are stuck with the same coworkers until you (or they) quit, you have to be extremely careful in how you interact with them. This can be anything from flirting with the cute receptionist (who later turns you down, and makes things awkward), to making the older worker feel dumb for not understanding Excel (remember, he has friends in management) to deleting the salesperson's email from yesterday (when you reformatted his harddrive after an update you did in error messed things up).

- Even though you are most easily recognized for your hard work in this type of role, the sad reality is that you are not guaranteed any more money or raise potential than the normal End User/Regular Customer type. This is due to Help Desk job salary amounts being decided on and capped by the HR staff, long before you started.
- While many days will be routine and easy-to-do, there will be times when major issues occur and you are responsible for fixing things. At good companies, they will employ senior IT staff who can get involved after you do initial checks or have deals with third-party companies who support certain things (like, say, servicing a company's fax machines and copiers).

Professional Support:

Main Support Focus:

Business-to-Business Contracts

*Positives:*

- Of all the types, this should be the highest paid and offers the most pay increase potential of the three. This is because you are dealing directly with customers, and management can easily connect your level-of-service with your contribution to money coming into the company.

- If you enjoy learning new things and being challenged, this is the best Help Desk support job for you, as you will be expected to constantly learn new things and be well-read on issues third-party companies are facing.
- If a long-lasting professional relationship with end users is your preferred way of doing support, this is your best type to focus on. Unlike internal support, these people you deal with can potentially open doors to other positions at their own company, whereas internal support only helps you at that specific business.

*Negatives:*

- Because you are on the front-line with professionals who likely are tech-savvy and smart enough to spot bad work, you have the least amount of technical leeway in this type of position. Also, because you can potentially destroy high-paying customer relationships, you have the highest risk of being disciplined/terminated if you don't perform exactly right nearly, every single day.
- Because the work can vary so much, the learning curve can be ridiculously steep. There will likely be little, outdated or no documentation to work from (though these are typically better than Internal Support

jobs). In other words, "faking it 'til you make it" may not work here, at all.

- Like the Internal Support job, you will probably be stuck with these clients you personally deal with for a long time. So, if you don't get along well with someone, that may ultimately lead to your downfall because these types of jobs don't provide much room for swapping clients among techs.

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I also want to note another thing to be mindful of, particularly with Internal Support and Professional Support types – you will very likely be provided a company phone, and/or be expected to be on call/provide after-hours support. This can be a deal-breaker for some workers, especially if the number of hours worked and/or type of work provided distorts your pay/increases stress dramatically. With Customer Support positions, this is almost never an issue, except maybe during peak service times (around the holidays or something, perhaps).

Of all three types listed above, I personally like the Customer Support and Internal Support jobs the best. The Internal Support job is the most reliable, but hardest to get ... but the Customer Support job is the most plentiful, simplest to get hired at and easiest to jump into. The Professional Support jobs are the most stressful and demanding of them all.



### ***Chapter 3: Education & Certifications***

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Unlike the 90s when the dot.com-era had companies tripping over each other in a mad-dash to hire any available, fairly tech-savvy person, nowadays companies can be very picky about who they hire.

The way employees are hired has also changed, with multiple interviews and different departments being involved before a person even gets an offer letter written up. In short, the hiring process post-start-of-the-Great-Recession” is abysmal, no matter where you go.

It also doesn't help that everyone and their brother has a college degree now, so that has given HR departments an elitist attitude when it comes to finding potential candidates. At many large companies, the actual department requesting a hire to fill a vacant or new position has no say in the process at all – that's HR's role.

As a result, to even get a Help Desk job at most companies now, you must have a college degree – preferably a 4 yr. degree in Information Technology. If you have a degree in Computer Science or something sorta-related, you may still get an interview, but it's unlikely. If you have a totally unrelated degree – like a degree in English – your

odds are even worse. There is still hope for everyone though for those Customer Support jobs, if the need at a company is strong enough. But for the most part, if you plan to work in the Help Desk industry for any length of time, I would say have an Information Technology degree (not Computer Science, which is aimed more at programming [and hiring managers will wonder why you are trying to do support if you can program]).

Should you get a 4- or 2-yr. degree in Information Technology then? I would say nowadays just aim for a 2-yr. degree and then get into a couple different IT-related jobs after graduation. Do that for a couple years and, if you like it, continue on to a 4-yr. degree in the field for more options. But personally, even though I have a 4-yr. degree in Information Technology, given today's job market, earning potential across the board and high-cost of college, I would say only go beyond 2-yrs. if you absolutely believe in the career and are wanting to maximize your chance of success at it.

Regarding certifications, I personally believe that you need at least a couple certifications on your résumé, even if they eventually get outdated or don't apply to every job. While in the past they were able to get you an entry-level job doing Help Desk support, that isn't really the case now (an Associate Degree has basically taken the place of that).

For new technicians, I would recommend getting the following certifications, which will cost about \$500-

\$700 total and take 6-18 months to complete, if you are studying/starting from scratch:

*CompTIA A+ Certified IT Technician:* This certification is pretty much industry-standard, and some IT jobs outright require it. This consists of two-exams (which are about ~\$150/each) and everything needed to pass it can be found in Mike Meyers' *CompTIA A+ All-In-One Exam Guide*. You may want to pay for some practice lessons to see how the tests go, but *CompTIA A+* tests are pretty fair and safe to take. This certification now expires after a few years (in the past, it used to never expire) but I would recommend only taking it once. Just keep your documentation/certificate and show that to employers if needed – the constant re-testing is just a way to suck money out of people when it's not needed (not at this level). Also, if you can absorb the A+ info, that proves you have a solid enough understanding about computers to provide basic Help Desk support.

*CompTIA Network+ Certification:* This is something I would take in 6-12 months after getting an A+ certificate ... but the content here is drier and harder to get excited about, because it's networking related (and rarely do Help Desk support techs ever have to deal with networking issues directly [those typically go to senior techs or network techs]). Again, use Mike Meyers' *Network+ All-In-One Exam Guide* and don't bother renewing it after the first time you take it – IT managers just care that you got it once.

*Microsoft Certification:* While I have taken a couple MS IT certification exams and earned a Microsoft IT Specialist certificate from them, I wouldn't recommend spending much time devoting yourself to Microsoft exams nowadays. In the past they had far fewer and the lineup rarely changed, which brought value to certain certificates. But as of the last five years or so, Microsoft's exams have become watered-down and spread-out, likely in an effort to make them easier-to-do/easier-to-quickly-replace. I would say get at least one low-end Microsoft certification (even if it's something like "Microsoft Office Support Specialist"), just to have "Microsoft" on your résumé.

*EDX:* Online learning from places like edx.org is still in its infancy, but one thing they now offer that is worth looking into are their "Verified Certificate" offerings. These are normal online edx classes, but at the end you get a legitimate certificate and it's verified from the company or college sponsoring it. If you don't want to do the Microsoft content from Microsoft directly, I would suggest doing one or two Microsoft classes from this (and it's far cheaper too – about \$50-\$100 per class).

## ***Chapter 4: Important Information***

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*Google:*

More than any other technical skill, understanding how to search on and navigate Google will determine whether you can make it as an IT Support Technician or not. I know this sounds easy, but the vast majority of people – including many IT Support Technicians – honestly cannot find answers to IT questions ... or even know how to tell the difference between a good answer and a bad one, from a good site or a bad site!

Unfortunately, there's no quick way to learn how this all works. You'll need to be searching for tech-related things (and niche, specific things in general) for years before you'll really feel comfortable saying you're totally confident in your searching abilities.

One thing I will mention – even though you may be tempted to actually join tech support forums and sites in an effort to ask questions/get specific answers, I would say don't. At least not on company equipment.

It's far too easy to leave a breadcrumb trail back to you, and while every IT Support Technician must absolutely know how Google works in order to solve 80% of non-company-specific issues, you really, really do not want coworkers and managers

potentially finding out about just how much you rely on Google day-to-day.

*Notes:*

One other thing I will stress, that the vast majority of technicians fail to do, is this: Take notes. Take notes like you know you'll get amnesia tomorrow, and forget everything. If the company you're at has a very specific way of doing backups, don't just write vague notes when told about them, commit them to paper and list out each step, no matter how trivial, sequentially. If possible, try to organize your notes into logical sections, for quick reference later on.

Something I've done in regards to notes is write them in a large text file, with big dividers between sections and specify ALL-CAPS keywords for each topic (in 5-6 words typically). This way, if I need to quickly find a solution, I can just CTRL+F in the text file and type in one or two keywords I'll know are associated with the issue. For example, let's say I have a section on the company's shared folder, the "G: Drive." Well, in my notes I could label all relevant notes with the keyword in the heading "GDRIVE," so that when I need to quickly reference them, I can look for that one keyword (which is written differently enough to avoid false-positives in the sections' content itself).

Finally, the reason why you'll want to document as many processes as possible is that if you are ever asked to prove the complexity or type of work you are responsible for, you have it all documented. You can simply say, "The backup restore process requires 23-

unique steps that have been in place since before I started.” (if management ever wanted to know why you didn't fix the shared drive backup issue yet). Also, if you ever did leave the company, presenting your tome of knowledge to incoming staff will impress not only them but make you look good to managers who may need to give references for you when called by subsequent employers. Notes are a good thing, and while you don't want to share them all (to preserve some job security), if you aren't writing down all that you do, you'll likely forget what exactly to do in a time of crisis and it'll likely be too late by then, if the knowledge you need is institutional, and you're now on your own.

*“PICNIC” (a.k.a. The Human Factor):*

It's a “Problem In Chair, Not In Computer,” you'll find yourself muttering over and over again while doing Help Desk-related work. Sometimes, there isn't a human element involved at all, and things just act up. A device can die. A service can shut down. Things happen. But most of the time, the cold, hard truth is this: People cause most IT problems.

Luckily, most of the people causing enough issues to keep you employed are not doing so purposely. They want to avoid technical downtime as well, as it makes their own job harder. But in every company, you'll find the problematic employee or customer who seems to thrive on chaos, and enjoys wasting both their time and yours on IT issues over and over and over again.

If Googling things was the must-have technical skill to survive in IT now, the other skill is dealing with all sorts of people. I've even resorted to keeping my own log of peoples' attitudes as I've helped them with tickets, as a way of covering my own rear and showing statistically who are the most time-consuming/annoying/problematic individuals to support. You'll want to keep this information to yourself though, just in case that gets back to the people you're helping, but it's worth keeping track of.

From my own experience, it seems like 80% of the people you support will be perfectly reasonable, nice and understanding when it comes to the fact that you need to do your job properly to get them back up and running. About 10-15% of people are annoyed and frustrated by your very presence, so when it comes to them, you'll want to minimize interaction with them as much as possible. And for the 5% (maybe 10% at bad companies) of people left over, they simply hate technology and/or you, and there's nothing you can say or do to make them think of you in a positive way. Typically, those 5% people are A) managers and B) long-time workers who look down on IT Support staff (particularly Help Desk Support staff) as the lowest of the low.

One trick I've learned with dealing with people is to let them tire themselves out. For the repeat-offenders or people who want status updates far more frequently than others (when it's not a life or death issue), the easiest way to accomplish this is to slow down/limit your interactions. This doesn't mean you won't help



them, but it does mean that they will be forced (by your lack of immediate feedback/response) to A) realize you have a work schedule and things to do as well, B) find an alternate way of accomplishing what they can't do (this helps, on the off-chance you can't fix their tech issue), and C) calm down and determine if the problem they're dealing with is as bad as they think (or if it's even an issue worth working on right now). Many times, people needing support will just stop responding/find another fix if they don't get immediate resolution, but you can't resolve or stop that behavior. As I've said, a certain percentage of people you support will never be won over, ever.

In closing, what should you do if you can't solve an IT issue? If it's a problem affecting more than two people, I would say get a manager involved, in case a more serious course of action needs to be taken. If just two people are having the same issue, and it's not a critical issue, I would say pick your coworkers' brains (or online techs') and just spend more time than usual on fixing it. Worst case scenario, get a manager involved, since multiple people are affected.

But, for individuals having problems? If it's not critical to their job and you aren't told to complete the work requested (by your own IT manager), just do a best-effort approach. Believe it or not, many IT issues either fix themselves in time or they simply cannot be fixed in any reasonable manner, no matter what.

*One last thing: Make sure people have tried turning it off and on again before proceeding to help them.*

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