WHAT TO KNOW AND WHAT TO LEARN TO LAND AN IT JOB
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Introduction

This e-book is intended to give you a basic understanding of IT jobs, including tips for how to apply and interview for IT positions and how to stay sharp once you’ve embarked on your career.

This information can change quickly. That’s why we’ve linked to a variety of published articles on BMC Blogs that provide topical information, in-depth job descriptions, up-to-date salary trends, and more.

IT Career Paths

With organizations—and customers—increasingly dependent on IT and tech solutions in all areas of our lives, a career in IT presents boundless and ever-changing opportunities.

The next pages offer a brief overview of some of the most common types of IT jobs, though there are plenty more areas of tech specialization you may pursue. Remember, similar roles might be advertised under different job titles, so seek out activities and areas of knowledge you want to pursue, regardless of the title.
IT service management and IT operations management

ITSM and ITOM encompass a lot of the most traditional IT roles. These jobs emerged as companies first incorporated early-version computers and databases and they continue to evolve with new technology.

Today, ITSM and ITOM cover everything from customer and employee experience to tech infrastructure. These are some common roles:

**Service desk support analysts** serve as the entry and single point of contact for all users, so you’ll handle a variety of customer requests and incidents. (See more in [Service Desk Support Analyst: Roles and Responsibilities](#))

**System administrators (sysadmins)** are responsible for administering, managing, and supporting activities associated with the organization’s IT infrastructure. (See more in [Sysadmin: Role, Responsibilities, Job Description & Salary Trends](#))

**System designer/architects** determine the right technology solutions that align with and support the company's long-term goals.

**System analysts** perform cost/benefit and needs analyses to ensure the company is using technology effectively and efficiently, incorporating new tech into the current systems when needed.

**Database administrators (DBAs)** set up, support, upgrade, and test databases to support company needs, ensuring efficient operation.

**Security administrators** specialize in the security of the computers, networks, and data. (See more in [System Administrator vs Security Administrator: What’s the Difference?](#))

**Infrastructure managers** design, install, maintain, and retire the systems that drive an organization, such as servers and networking. (See more in [IT Infrastructure Manager Roles and Responsibilities](#))
Development, Big Data, and cloud

As companies embrace digital work, engineers, programmers, and back- and front-end designers are in demand. Common roles include:

**Software/application developers** write new code and, increasingly, use emerging software development tools to develop, test, and send finished software and apps to the end users. (See more in Application Developer Roles and Responsibilities and The Software Development Lifecycle (SDLC): An Introduction)

**Web developers** use code and development tools to create and support websites.

**Java developers** are responsible for the design, development, and management of Java-based applications. (See more in Java Developer Roles and Responsibilities)

**DevOps engineers** are renaissance people of cloud infrastructure IT services. The DevOps engineer role is the product of a dynamic workforce that is still evolving. (See more in DevOps Engineer Roles and Responsibilities)

**Quality assurance (QA) analysts** test and diagnose problems in computer systems and/or pre-deployed software and apps.

**Data scientists** tend to work in a research and development environment, using applied math and statistics to develop new algorithms, extract data patterns, visualize data, and even build machine learning models. (See more in Data Engineer vs Data Scientist: What’s the Difference?)

**Data engineers** use expert programming skills as well as system creation skills in order to create software solutions for big data. (See more in Data Engineer vs Data Scientist: What’s the Difference?)

**Cloud architects** promote cloud adoption, develop a cloud strategy, and coordinate the cloud migration process.

**Cloud engineers** assess IT infrastructure and software, determining the best data and processes to migrate to cloud systems, whether public, private, or hybrid.

The average DevOps engineer in the U.S. makes $105k per year

Source: https://www.linkedin.com/salary/devops-engineer-salaries-in-united-states
IT Leadership

As with any work, there are leadership opportunities in IT, too:

**IT/Tech managers** may manage several direct reports and be responsible for a specific product or team, such as DevOps engineers or service desk agents.

**IT Directors** may oversee the infrastructure of technical operations, manage a team of IT employees, track technology to achieve business goals, eliminate security risks, increase user satisfaction, and maintain operations and systems. Depending on company size, there may be one or more IT Directors. (See more in IT Director Role and Responsibilities: What Does a Director of Technology Do?)

**Chief Technology Officers (CTOs)** understand, from your customer’s perspective, how technology can be used to help the business grow—typically improving the offerings that the company’s customers purchase with the help of new technologies. (See more in CIO vs CTO: What’s the Difference?)

**Chief Information Officers (CIOs)** ensure business processes run efficiently, with the goal of promoting the productivity of individual employees and business units. Where the CTO is customer facing, the CIO focuses on internal processes. (See more in CIO vs CTO: What’s the Difference?)

**Chief Information Security Officers (CISOs)** create and maintain the company strategy and program to protect company technologies, assets, and data.
Salaries in IT

Year over year, careers in technology rank among the most lucrative. In fact, the median wage across all tech jobs in the U.S. was more than $84,000 in 2018. And you don’t have to look only to big or traditional technology companies for salaries like these. Across the U.S., tech startups offer competitive salaries across jobs, levels, and experience.

Salaries will vary widely depending on your position, experience, and location, so it is difficult to provide general guidance. On BMC Blogs, we track the salaries of various IT positions, updating them annually. Browse IT Salary Trends: The Complete Roundup and DevOps Salary Trends, or look at our many roles-related posts that have job-specific salary information.
Benefits of Working in IT

While some global industries experience setbacks, professionals working in the IT sector are often immune to those same triggers, and instead experience many benefits, such as:

**Job security.** IT positions are steadily growing, so there will be more opportunities, not less.

**Good salaries.** Generally, IT offers some of the highest-paying and most lucrative job paths, with variables regarding role, experience, and location.

**Global growth.** IT jobs are among the most in-demand in North America and Europe, but global growth means IT jobs are also sprouting up around the world, particularly in emerging and growing economies like India, China, Latin America, and Africa.

**Always a new challenge.** You won't get bored! Both the nature of technology and business's relationship to IT are constantly changing.
Challenges in the IT Sector

The IT industry isn’t without challenges, but these challenges can present surprising employment opportunities:

**Skills gap.**
Many IT professionals indicate that there aren’t enough qualified candidates for all the IT work that organizations want to do. As a prospective employee, this presents an opportunity to add new skills to your toolkit, increasing your potential.

**Lack of diversity.**
Traditionally, IT has skewed male. But, with more countries emerging as IT powerhouses, this lack of diversity is fading and men and women of all colors, nationalities, and backgrounds are finding new opportunities.

**Ever-changing technology.**
As the nature of business and technology evolves, so does what you need to know. It can be challenging to keep pace with constant evolution but consider which track appeals to you more: becoming a jack-of-all-trades, knowing a little bit about various IT sectors, or specializing and becoming an expert in a single topic, like cybersecurity or a programming language.

What is the main cause of the skill shortages

- **33%** Lack of training and professional development available
- **24%** New technology
- **15%** Fewer people entering the job market in your industry
Understanding Agile and DevOps

Over the last decade, many IT-facing roles have started to adopt Agile and DevOps principles. Agile originated in the software development discipline, but today, many organizations apply these theories to all types of organizational functions. Even if you’re not working on an explicitly Agile- or DevOps-oriented team, it’s good to understand how these principles affect IT work.

Agile software development

Agile developed as a counterpoint to the traditional Waterfall method of building and delivering software solutions. Effectively destroying the concept of a “finished product”, Agile believes in iterative, incremental changes in software development lead, over time, to significant change.

For instance, Agile teams typically release frequent, lightweight updates to the end user. With each new release of software, the customer can perform new functions or improve upon existing functions.

The Agile goals of development speed and flexibility are achieved through functions that include daily scrum meetings and teammate equality.
DevOps

Shorthand for developer operations, the DevOps approach emerged in response to IT operations (ITOps). ITOps encompasses traditional IT tasks and responsibilities such as security, compliance, and reliability—the infrastructure that underlies all organizations.

DevOps focuses on developing and deploying new products to the end user, with tenets that include flexibility, rigorous testing, continuous delivery and improvement, and communication.

Agile and DevOps culture

Agile and DevOps were two separate practices until companies began seeing success when using both. They don't need to be used in tandem, but they also aren't opposites: an employee, a team, or an entire department can use both Agile and DevOps principles and activities.

For more on this topic, see:

- The Software Development Lifecycle (SDLC): An Introduction
- DevOps vs Agile: What's the Difference and How Are They Related?
- Agile Roles & Responsibilities
- Intro to Agile with Scrum: 4 Tips for Getting Started
- DevOps Guide, with 30+ related articles
Seeking IT Jobs

Applying for work in any industry can feel overwhelming or confusing, and the same holds true for IT, especially if you’re new to the field. In this section, you’ll find what you need to know—and gain confidence—about the practical side of applying for a job in IT.

Qualifications for IT careers

The qualifications you’ll need are specific to the job you’re seeking. Luckily, there’s a spot for everyone. Whether you’re just getting started or you’ve earned an advanced degree, IT jobs are plentiful.

While technical knowledge is essential for any IT job, don’t forget about your soft skills. Your “people skills” will be an asset during the job hunt, helping you stand out from other candidates, and they’ll contribute to how well you perform at work once you land the job.
Technical skills

Technical skills are the hard skills you’ll need to perform your job, encompassing knowledge and hands-on experience in products, hardware, software, development practices, and programming languages.

The types and levels of technical skills you need will vary on the exact job. For instance, a service desk agent must have a comprehensive understanding of the tools, like the ticketing system, as well as the services and products that your organization delivers to end users. Engineers need technical knowledge of the required programming language(s) or the infrastructure your company uses.

Soft skills

Traditionally, IT staff were separated from the rest of the workforce. If you had the required technical skills, you were hired. Today, that’s changed. With the adoption of DevOps in particular, IT employees are better integrated into the general workforce, so a variety of “soft” or “people” skills are needed to complement technical skills:

**Communication.** You might need to interact with non-tech folks or leaders who don’t understand your specialty, so clear communication is key. A good test is to try to explain a technical concept to a non-technical person—did it make sense to them?

**Anticipating needs.** Use your IT knowledge to help solve problems by anticipating the needs of end users, whether that’s the whole company, a specific department, or external customers.

**Creativity.** Thinking creatively is especially useful when problem solving, troubleshooting, or developing strategy and innovation. Your unique perspective may provide the exact solution to your current problem. Contrary to popular belief, data-driven insights can fuel creative thinking.
Writing your resume

For most people, writing a resume is a challenge: where to begin, what to include, and how to describe their skills. The first step to writing a resume is to know its purpose—it’s not to get you the job; it’s to get you an interview.

Your resume should get the hiring manager interested enough to speak with you. Here are some tips:

- **Start with a template.** Your resume doesn’t have to be full and complicated; a simpler layout will draw attention to what you choose to include.

- **Be selective with the expertise and skills you include.** No need to list every skill you have. Instead, include the skills or portfolio items that best aligns with the job you’re applying for and that you’re most proud of.

- **Match the action words of the job listing.** Companies often scan resumes using an algorithm that finds keyword matches, so aligning your resume language helps you clear that first hurdle. If the job listing seeks candidates who develop in a certain language, collaborate well, and manage a team, include those exact phrases—as long as it’s true of your experience!

- **Describe important experiences.** If you’re well-versed in developing, cloud technologies, AI and machine learning, security, automation, customer service, or particular languages, do include these in-demand skills.

- **Include any relevant certifications.** IT certifications have merit—and you worked hard to earn yours. List your certifications, especially those specific to IT skills or project management.

For more information on developing a technical resume, see What To Look for on an IT Resume and How (and Why) to Write a Great IT Job Listing.
Preparing for IT interviews

As you go on IT interviews, it’s important to distinguish yourself from the candidate pool. We often think that the entire point of interviews is answering questions, but more and more hiring managers indicate that the candidates who ask questions—not just answer them—who stand out.

These are some questions you can ask during an interview that illustrate your thought and preparation:

- **Are team roles integrated or siloed?** The answer to this can help you understand how you would work (single vs multiple projects), who you would work with (tech teams vs the wider organization), and whether the organization aligns with DevOps or Agile practices.

- **What key processes currently have friction?** This answer can show whether the organization embraces proactive problem management or, if they’re not quite there yet, how they plan to improve.

- **How will I be measured in this role? How are other team members’ performances measured?** For some roles, like service desk agents, the answer may be a group of clearly defined metrics. For other roles, like engineers or leadership positions, the answer may be harder to define but still necessary.

- **How do you handle when something goes wrong (e.g., an outage incident, a poor or buggy release, etc.)?** Good teams will have clear answers to this question and should be able to discuss established procedures. Beware answers that aren’t clear or may indicate they play the blame game.

- **How do you foster a healthy team culture?** This shows that you’re aware you won’t work in a silo—that teamwork is essential.

**Tip: Hiring managers notice candidates who ask, not only answer, questions**

For more information on interviewing, see IT/Tech Hiring: How to Prepare for an Interview.
Continuing Education

Once you’ve landed the job, remember that part of your job is to stay knowledgeable in your field. Whether your role requires expertise on a single programming language or a breadth of knowledge, learning new skills promotes innovation and helps you stay relevant.

Two ways to make sure you’re always learning are reading and mentoring.

Reading

Look for authoritative books in your field and topic-specific forums on communities like Reddit, Slack, and Stack Overflow for in-depth answers. Follow industry experts on Twitter and LinkedIn to understand emerging trends and hands-on lessons. See Tech Books & Talks Guide for the best things to read and best talks to hear to stay in the know.

Mentorship

Mentorship is all about learning through intentional relationships. If you’re new to a company, look at people around you—perhaps a manager a level above, or someone with experience in your specific role. Seek out an active mentorship, so that you’re the mentee. As you grow in your experience and specific role, you can become a mentor to someone who’s interested in your career trajectory. Get more tips and strategies in Mentoring—An Enriching Alliance.

Tip: Follow industry experts on social media
IT Certifications

Certifications are an important way to establish your subject matter expertise, and they help you stand out from a crowded field of job candidates.

The certifications that you pursue will depend on your long-term career goals. Certifications aren’t typically necessary for entry-level positions but can be steppingstones towards your ultimate career goals.

**Best practices for pursuing an IT certification:**

- **Make sure it’s as official as possible.** Many popular certificates, like ITIL® or AWS, are best earned through their direct owners, Axelos and Amazon.

- **Consider the investment.** If you’re already using related skills on the job, find out whether your employer will help cover the cost of getting certified.

Tip: Consider what certifications will benefit you most—now and in the future.
ITSM and ITOM certifications

These are popular certification programs for careers in ITSM and ITOM:

- ITIL® is the most recognized cross-platform certification for ITSM, offering a modular approach to the ITIL framework in four tiers: Foundation, Managing Professional, Strategic Leader, and Master. ITIL 4 is the latest version, though you can continue certifying in ITIL v3. (See more in ITIL Certifications: A Complete Introduction)

- COBIT is a best practice framework with a narrow scope: security, risk management, and governance. There are three certification tiers. (See more in What is COBIT? COBIT Explained)

- HDI has a variety of certifications that help individuals and organizations improve their customer service and service management performance. (See more in ITSM Certifications: A Beginner’s Guide)

- CompTIA offers beginner and advanced tracks in infrastructure hardware and software. (See more in ITSM Certifications: A Beginner’s Guide)
Development, cloud, and project management certifications

To codify your technical skills, many major programs and languages offer certification programs. Popular certifications for DevOps specialists include:

- **AWS Certified** is Amazon’s certification program, with beginner, advanced, and expert certifications in cloud, architecture, operations, development, and specialties like machine learning, security, data analytics, and Alexa. (See more in IT Certifications: A Beginner’s Guide and DevOps Certifications: The Complete Guide)

- **Certified Kubernetes** offer two certificates for administrators (CKA) and application developers (CKAD) in the popular cloud container platform. (See more in Kubernetes Certifications: How and Why to Get Certified)

- **The DevOps Institute** has several certifications, from beginner to expert, on incorporating DevOps and Agile principles into your organization. (See more in DevOps Certifications: The Complete Guide)

- **Scrum Alliance** has several certification tracks for implementing the iterative, sprint-based approach for dev teams and beyond. (See more in Top Agile Certifications)

- **The Project Management Institute (PMI®)** is the leader in project management education, with several certification courses, including the in-demand Project Manager professional (PMP). (See more in IT Certifications: A Beginner’s Guide)
Top-paying certifications

If you're looking for the biggest boost to your salary, the highest-paying certifications are related to cloud and security:

- **CISM® Certified Information Security Manager** proves your expertise in IT security, governance, and risk management disciplines.
- **GCP Cloud Architect** prepares IT professionals to design and manage a secure, high performance, robust, and scalable Google Cloud architecture.
- **Microsoft Certified**: Azure Fundamentals is the foundation of the Microsoft Certified program, focused on the core aspects of Azure cloud services, including security, compliance, and underlying infrastructure.

Many more!

See Top Paying IT Certifications for 2020 >
IT Leadership

Leaders are expected to stay abreast of popular and emerging technologies, but aren’t expected to be experts. Keep up with changes by reading current books and listening to IT leaders and technologists share what they’ve learned. See our Tech Books & Talks Guide to get started with top resources on ITSM, DevOps, AI, emotional intelligence, and more.

Ongoing learning is also essential to good management, leadership, and innovation strategies that foster the best thinking from your IT teams. Get started with these articles:

- Offensive vs Defensive Strategies for IT Leadership
- Mentoring—An Enriching Alliance
- 5 Questions to Assess Teamwork Within IT
- Managing Big IT Projects with a Small Staff
- Tips for 1:1 Meetings

To become a true leader, read Essential Leadership Qualities and CIO Leadership Styles. Both offer great insights on leadership—even for those of us who may never become a CIO.
Editor’s bio

Chrissy Kidd is a writer and editor in the technology sector, with more than 10 years of professional experience. She explains technical concepts, follows trends, and makes technology make sense to all of us. You can find her on LinkedIn.
About BMC
From core to cloud to edge, BMC delivers the software and services that enable over 10,000 global customers, including 84% of the Forbes Global 100, to thrive in their ongoing evolution to an Autonomous Digital Enterprise.

BMC—Run and Reinvent

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