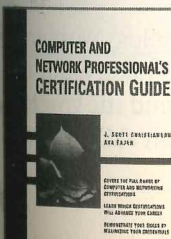


Chapter 24

WHY BECOME CERTIFIED?

Computer and networking professionals are in demand across the employment spectrum, from business and industry to government and education. And the current high level of demand for information technology professionals—whether highly experienced or newly certified—is expected to continue and even accelerate in the years to come. This chapter outlines some of the many benefits that certification can offer you as a computer or networking professional, including jobs, promotions, professional credibility, and financial rewards. A number of these benefits offer advantages for employers and customers as well.



Adapted from *Computer and Network Professional's Certification Guide* by J. Scott Christianson and Ava Fajen
ISBN 0-7821-2260-4 560 pages \$19.99

OPEN JOB MARKET FOR INFORMATION TECHNOLOGY PROFESSIONALS

The present shortage of information technology workers in the United States has been well documented. What's more, estimates of the extent of this shortage are quickly being revised upward. As recently as February 1997, the Information Technology Association of America (ITAA) estimated that 190,000 such positions were unfilled; by January 1998, ITAA's second annual study reported a shortage of 346,000 individuals—including programmers, systems analysts, and computer engineers—in the United States information technology work force ("Help Wanted: The IT Workforce Gap at the Dawn of a New Century," ITAA report, February 1997; and "Help Wanted: A Call for Collaborative Action for the New Millennium," report by ITAA and Virginia Polytechnic Institute, January 1998).

Similarly, estimates of the number of information technology personnel that will be needed in the future have recently been revised upward. In October 1997, the Office of Technology Policy (OTP) warned that the United States was not keeping up with the demand for new information technology workers and predicted that an average of 95,000 new jobs would open in the field annually; by January 1998, an updated report already had been issued, projecting a need for almost 140,000 information technology workers each year until the year 2006 ("America's New Deficit: The Shortage of Information Technology Workers," October 1997, OTP, US Department of Commerce; Update Report, OTP, January 1998).

Meanwhile, the number of college students graduating with bachelor's degrees in computer science dropped from a peak of 41,889 per year in 1986 to 24,200 per year in 1994, a decrease of 42 percent (*Digest of Education Statistics*, Department of Education, 1996). Universities are clearly not training the numbers of information technology workers that will be needed to meet the demands of the marketplace.

It is anticipated that the shortage of information technology workers will have broad-ranging effects, not just in the computer industry, but in business and industry in general, as well as in education and the government. The ITAA and OTP reports suggest that a competent skilled work

force in information technology is crucial to the nation's economy. The ITAA urges industry, education, government, and professional associations to undertake a collaborative effort to head off this shortage. More and more, the information industry is turning to certification programs to fill the gap.



NEW AVENUES TO HIGH-SKILLED JOBS

To address the shortage of information technology professionals, some companies—Microsoft and Novell, for example—are actively taking their certification programs to higher education partners and even to high schools. Jackson Hole High School in Wyoming was the first high school to offer its students the opportunity to become Microsoft Certified Professionals. Other businesses are reaching out to train new workers as well. In 1997, 23 seniors at Ballou High School in Washington, DC took special courses on network administration. The students were trained on computers donated by technology companies in the area, and those who passed standard certification exams were guaranteed jobs at starting salaries of \$25,000 to \$30,000 (Peter Behr, "Hire Education at Ballou," *Washington Post*, March 7, 1997).

Through its Skills 2000 program, Microsoft has additional strategies in place to encourage new entrants in the information technology field, including a new loan program that lets people pay off training and related costs over time; a partnership with the Green Thumb organization to train adults 55 and over to be software developers, support specialists, and network administrators; reduced-cost programs to help practicing technical professionals keep their skills updated; and a number of new strategies for linking up qualified applicants with available jobs. According to Microsoft's Web page, the company provided training for 1,230,000 information technology workers in 1997 and certified 118,000. Microsoft indicates that its certification programs are growing by 100 percent annually.

BENEFITS FOR INDIVIDUALS

Many people pursue computer and networking certifications because they expect to receive increased salaries, promotions, or job offers. Evidence does indicate that having the right certification at the right time can have excellent salary and promotion potential. Magazines are full of stories about newly certified individuals with little or no experience who have snagged high-paying jobs.

But certification offers other benefits as well. It provides a portable credential that validates your knowledge and abilities, and it shows others that you are willing to do what it takes to keep your knowledge and skills current. As a result, certification improves your marketability and increases your options, whether you seek regular employment or want to promote your skills and abilities as an independent contractor.

Although the effort and cost involved in attaining some certifications is considerable, it is generally much less than the time and expense involved in obtaining a college degree. And, in many situations, an employer will carry the financial burden for certification training and testing. A 1995 study by Dataquest, Inc., a research unit of Dun & Bradstreet, reported that computer companies were paying for more than 80 percent of certification training for their employees (Bob Filipczak, "Certifiable!" *Training* magazine, August 1995). In addition, a number of certification programs can help you accumulate college credit at the same time as you are earning a certification.

Increased Salary

A number of surveys have documented the financial benefits of certification. Salaries of Microsoft certified professionals have been tracked for several years now, and these figures offer persuasive evidence of the impact of certification on salaries. Between February 1997 and February 1998, salaries for individuals with the entry-level Microsoft Certified Professional (MCP) credential went up by \$3,900 to \$61,200 annually, while average 1998 salaries were \$77,700 for Microsoft Certified Trainers (MCTs) and \$67,600 for Microsoft Certified Systems Engineers (MCSEs), according to Linda Briggs's third annual salary survey in *Microsoft Certified Professional* magazine (February 1998). These salaries were for persons with an average total of five-and-a-half years of experience in information technology. Survey results also indicated that 58 percent believed that their certifications had resulted in salary increases. Briggs

estimates that earning an MCSE credential can add approximately \$11,000 per year to a previously uncertified individual's salary.



NOTE

Chapters 25 through 28 provide more information about the MCP, MCSE, and MCT certification programs.

Jobs and Promotions

Certification provides employers with objective evidence that you have a defined set of skills and abilities. Job-seekers and independent contractors alike find that having the right certification can get them preference in the hiring process. Certification can open doors for individuals who have the initiative to seek out new knowledge and skills but have limited on-the-job experience. Certification can also help experienced computer and networking professionals move up within their current organizations or get good job offers elsewhere. In Linda Briggs's survey, 42 percent of Microsoft-certified respondents received a promotion as a result of attaining certification. Some businesses have actually incorporated vendor certification programs into their internal company certification programs.

Improved Professional Credibility

Potential employers or clients respond well when a computing or networking professional can offer clear evidence of having the skills needed to get the job done. Having relevant, current certifications on your resume gives you an important advantage in this regard; college degrees or years of experience on the resume may not tell employers whether you have the specific abilities they seek.

A 1995 evaluation of the MCSE credential found that more than 90 percent of the 89 MCSEs surveyed felt that obtaining certification was useful in improving their professional credibility, and 70 percent rated certification as "very useful" in that regard ("Evaluation of the Microsoft Systems Engineer Certification," report by the Applied Experimental Psychology Group at SIU-Carbondale in conjunction with Applied Research Consultants, July 1995).

Education

The recent surge of interest in certification programs coincides with a trend toward performance-based assessment that can be seen across the educational spectrum. From kindergarten through college, an emphasis on competency-based assessment of knowledge and skills is beginning to replace the traditional focus on seat-time and rote memorization. For example, the new Western Governor's University—a nonprofit, independent corporation being developed by the Western Governor's Association—will provide distance-learning courses and programs to people in 15 western states and Guam. These courses and programs will be provided by both traditional providers and corporations and will feature competency-based assessment of knowledge and experience.

Certification programs have increasingly incorporated more sophisticated assessment methods to measure and certify learning and competency. A number of certification programs have established a level of quality and reliability that has made them eligible to provide college credit to their participants. For example, it is possible to obtain college credit for Learning Tree International certifications or courses. The American Council of Education (ACE) in Washington, DC has determined college course equivalencies for Learning Tree International's courses and certifications. As a general rule, ACE will recommend two college credit hours for each four-day Learning Tree course. The ICCP Certified Computing Professional exams also have been approved by ACE for college credit. Approximately 1,500 colleges and universities in the United States will accept ACE recommendations for college credit.

Other opportunities for getting college credit exist as well. A number of community and technical colleges in the United States offer college credit for courses that are part of the Microsoft curriculum. Vendors have partnered with colleges and universities in some interesting ways. For example, at North Carolina's High Point University, computer information system majors can graduate with both a degree and certification in Visual Basic, Windows NT, and Microsoft Office. Lord Fairfax Community College in Virginia offers a popular 15-credit Network Engineer Certificate Program that gives students hands-on experience in installing and configuring servers and workstations, implementing network security, and planning for disaster recovery. At Seattle Pacific University in Washington, the Microsoft Certified Engineer curriculum, implemented in 1996, attempts to ensure the quality of its graduates by incorporating an experience requirement—students must have either a degree or industry

experience to be admitted to the program. If you are interested in college credit, look for similar opportunities in your area.

BENEFITS FOR EMPLOYERS

In the world of computers and networking, both hardware and software change quickly. Technologies and programs that are cutting edge this year may be considered outdated by next year. In this environment of fast-paced change, traditional resume credentials may not provide an employer much information about whether an individual has up-to-date knowledge and skills. How can an employer know whether a prospective employee will be competent to use, implement, or support the most current technologies and programs? For many employers today, certification is the answer.

Hiring

Many employers and human resources managers don't have the information technology background they would need in order to be able to quickly assess an individual's abilities, by reading a resume. In addition, many hiring managers find that a person's years of computer-related experience are not always an indication that an individual has the specific technical knowledge that is needed. For these reasons, employers may view certification as an objective measure for evaluating the abilities of applicants. If an employer needs someone to set up a system for secure, online commerce, for example, he or she needs to know that a potential hire or independent consultant has some pretty specific skills.

While certification may not guarantee that an individual knows all there is to know about a certain piece of hardware or software, it does provide information that employers value. It indicates that a person has at least a basic knowledge of a product—a core level of knowledge that can be the foundation for additional learning. It indicates that an individual is interested in learning about new technologies or products and maintaining up-to-date skills. And it can—depending on the comprehensiveness and rigor of the certification program—indicate an advanced level of knowledge and skill with a particular system or even the ability to manage complex, heterogeneous company networks.

Employers admit that they sometimes use the presence of relevant certifications as a screening device when reviewing job applications. When

interviewed for the August 1996 issue of *Training* magazine, Candace Sutherland of Digital Storagework put it like this: "Yes, I would take someone who has been certified more seriously than someone who hasn't. It's not official policy, but I'll pull that resume out of the stack."

Certified Employees Get the Job Done

Certifications help employers identify individuals with proven knowledge and skill levels. As we have noted, this is certainly important in hiring. But certification has other benefits and uses for employers. Many employers are encouraging their current employees to get certified. Companies need to have individuals with specific skills on staff, and many have found that certification programs offer the verifiable skills and knowledge their employees need.

Employers who send staff for training want concrete results. Certifications that use performance-based exams measure a candidate's ability to perform specific tasks on the job. Since such exams are designed with the help of computer and networking professionals, they measure skills that are directly applicable to the workplace. As a result, certification programs that involve performance-based testing give employers independently verified results that demonstrate the value of their training investments.

Research indicates that certification increases employee productivity and effectiveness. A 1995 study by Dataquest, Inc., a research unit of Dun & Bradstreet, reported that "...managers feel that certified employees provide higher levels of service, learn new technologies faster, and are generally more productive." (Bob Filipczak, "Certification!" *Training* magazine, August 1995). Other studies confirm these results. A 1996 survey of managers who supervise individuals with the Microsoft Certified Solution Developer (MCSD) credential found that managers considered their certified employees to have a significantly higher level of competence on those tasks that were key to their job effectiveness than did non-certified employees under their supervision ("The Value of Certification for Solution Developers," report by the Applied Experimental Psychology Group at SIU-Carbondale, August 1996).

In 1995, IDC Consulting, a Massachusetts research firm, surveyed managers on the benefits of certification. They found that managers felt certification gave their employees a reliable level of skill and expertise. Managers said that with certified information technology professionals on staff, a company could operate a more complex and decentralized

information technology environment without hiring additional employees. Further, the IDC survey reported that managers found the average payback time for certification costs was only nine months. Having certified employees resulted in increased network availability and more effective technical support. These improvements were judged to be worth approximately \$14,000 per year to the company per trained employee ("Benefits and Productivity Gains Realized Through IT Certification," IDC report, 1995).

Benefits to Customers and Clients

Hiring and supporting certified employees gives resellers and service firms a competitive advantage. In the current market, having a staff that has earned respected certifications in a variety of relevant computing and networking technologies can be crucial to getting clients. When companies outsource their information technology management needs, they expect a service provider to have employees with in-depth knowledge and proven competency with a variety of systems. Service firms with certified employees can provide clients with high-quality, consistent services; many organizations know this and hire only contractors who offer certified staff.

Even companies that are not specifically in the business of providing information technology services to others are likely to find that they can provide higher quality service to their customers by having certified employees on staff. Certification improves user support, whether for internal or external purposes. Employees with certified technical skills can provide effective support for other employees and facilitate quick resolution of problems that impede customer service.

Employees Value Career Growth Opportunities

In today's volatile business environment, companies are unable to guarantee their employees lifetime job security and generous pension plans. Some companies that want to keep their employees happy have begun offering them meaningful career development opportunities instead. Some employers are fearful that paying for training and certification will help employees find better jobs outside their company. Such employers, however, may find themselves losing out anyway, as their employees move to different companies that support their employees in maintaining up-to-date, marketable credentials.

At the same time that career growth increases employees' job capabilities and enhances their marketability, it can also lead to higher morale and job commitment. Employees appreciate the opportunity to maintain current job skills. As a result, employers that support their employees in obtaining certification may see improved employee morale and job satisfaction at the same time as the company benefits from improved productivity and customer service.

CRITICISMS OF CERTIFICATION

Certification is not without its detractors. Some critics assert that a single multiple-choice test can't tell you whether a person can handle real-world problems using a particular product. It is true that not all certification programs involve hands-on, performance-based testing. Many programs do, however, and the general trend is to move certification programs in that direction. Furthermore, the multiple-choice tests that vendors use are typically designed—by teams of practicing information technology professionals and skilled prometricians (professionals in testing and measurement)—to assess knowledge and abilities as they will be needed in real-world applications.

In addition, some critics have observed that there are certification programs available that do not actually require either any experience or any testing. Such programs are not covered in this book. It is true that certification programs vary widely in their level of difficulty. Some programs don't offer much challenge, while others—such as Cisco's CCIE program or Sun's Java Developer certification—have gained notoriety for their difficulty. In addition, some of the more rigorous certification programs require documentation of a specified number of months or years of relevant on-the-job experience as a prerequisite to even entering the program.

Other critics of vendor-based certification assert that the vendors are the primary beneficiaries of certification programs because they generate vendor income, create product loyalty, and improve customer satisfaction (because the availability of certified personnel gives customers improved access to qualified product support). While some of this skepticism is undoubtedly justified, those who reject certification outright because it benefits vendors will miss out on the many benefits that certification offers to individuals, employers, and customers. Furthermore, many of the criticisms leveled against vendor-based certification programs are not applicable to organization- or association-based programs, which tend to offer substantive, comprehensive, standards-based training at a reasonable cost.

Other detractors remind us that good customer service requires more than technical skill. There is an important lesson here as well. Without a doubt, the individuals who reap the most success in the information technology field are those who combine high levels of product-related skill and knowledge with strong interpersonal skills.

IMPORTANCE OF RECERTIFICATION

An issue that will take on increasing importance over time is the need for recertification. Many certification programs are brand new, or less than a year or two old, while others have been revamped recently. But any certification will have a limited useful life.

Many certification programs are tied to specific versions of certain products. Certification programs that are tied to specific versions of products typically do not offer recertification on that product version. An individual who wants to have current credentials will need to obtain certification on new versions as they are released. Programs that do offer recertification options vary widely in the effort required for maintaining certification. Some require testing or extensive continuing education coursework; in other programs, the effort needed to maintain certification is relatively trivial. Alternatively, the issuance of a new software version may be a time when an individual reassesses which certifications to maintain; it will be important to periodically decide whether you want to adhere to the same certification path you have been following or whether it's time to target different technologies or product lines instead.

It is important to keep in mind the fact that, in the field of information technology, your need to seek new education opportunities will be ongoing. Because skills and knowledge can become outdated more quickly today than ever before, the most successful computer and networking professionals are those who commit themselves to lifelong learning. An eagerness to learn new technologies and products as they emerge will keep you highly employable for many years to come.

WHAT'S NEXT?

Now that you know why you might want to become certified, you need to decide which certification is right for you. The next chapter discusses how to select a certification program and how to plan your steps to attain that certification.