

IT Certification: STILL VALUABLE AFTER ALL THESE YEARS

By John Venator

In the information technology field, professional certification can make an individual even more marketable.



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employers are more demanding and selective in their search for technology workers. Individuals who are securing jobs in today's tech workplace are equipped with greater versatility and a broader skill set than was required in the past. Five years ago, it was far easier to find a good-paying IT job. Now people who want to be in IT need an edge—a means of proving they can do the tasks assigned. Professional certifications are a step toward that proof.

A December 2005 *Certification Magazine* survey of more than 35,000 IT professionals in 170 countries found that certified professionals this year enjoyed an average 16.4 percent pay increase from 2004. That's up from last year's reported increase of 14.1 percent. The global survey also identified the programs and specialty areas that are drawing the biggest salaries. As was the case last year, information storage and security bring the largest salaries, along

with Cisco networking skills. Project managers and Java developers also scored well as career choices.

A certification makes an individual more marketable. Unless the employer is familiar with the school the candidate attended or the organizations the candidate may have previously worked for, he or she has no independent means of knowing the rigor of the candidate's program or experience. When a job candidate comes to an employer with a degree and recognized and accepted professional certifications, it gives the employer more to go on. For workers new to the employment market and without a great deal of past experience, the combination of an academic degree and an industry-recognized certification puts the worker in a stronger position when looking for a job.

IT Employment on the Upswing

Over the last 30 years, an investment of \$11 trillion has been made in IT globally. Major achievements and advancements have been realized in productivity, manufacturing efficiencies and

Though the rapid evolution of technology makes it difficult to pinpoint "the next big thing," the outlook for information technology (IT) employment appears to be promising. In fact, several categories of IT jobs currently face shortages of qualified workers, a troubling trend that is projected to get worse over the next five to seven years. These positions range from entry-level jobs in customer support and help desk to more advanced jobs in database administration, network security and project management.

Yet even with this looming shortfall,



education applications.

From 2004 to 2005, the U.S. economy added 128,000 IT jobs, a gain of 3.9 percent. That's a far cry from the double-digit growth of the late 1990s, but for an industry that is entering maturity, it is a healthy figure. The U.S. Bureau of Labor Statistics (BLS) identifies IT as the fastest growing sector in the nation's economy, with a 68 percent increase in output growth rate projected between 2002 and 2012.

Another positive sign: 2004 was the first year since 2001 that IT-related majors saw an increase in starting pay, according to the BLS. Information science and systems grads earned an average salary of \$42,375, up 10.7 percent from 2003. Computer science grads started at \$49,036, up 4.1 percent over the prior year.

Several factors are contributing to this upswing. Among them are heightened security considerations; the increasing reliance on technology across industries and markets; and the resulting emergence of a number of tech growth fields.

World economics and other forces

have created a "hollowing out" of the IT employment structure in the U.S. Jobs at the ground level and at the upper levels are plentiful and in high demand, while jobs in the middle have gone overseas and likely will not return. Many of these mid-level jobs—at least in the U.S.—have been automated out of existence. Others have been transferred to cheaper labor pools in foreign countries.

At the ground level, there continues to be a need for entry-level depot service technicians and other positions that need a "human touch," whether it's a requirement for hands-on work or face time with users. These jobs are much less affected by outsourcing.

Job growth also has emerged at the top end of the hollow, in high-skilled occupations where workers who demonstrate the ability to positively impact a company's business, not just its IT infrastructure, are increasingly in demand. Just as IT itself has moved from the basement to the boardroom, the IT professional has the opportunity to evolve into something that is much more integral and valuable to the business as a whole. Businesses are looking for, and

are willing to pay for, technology workers with skill sets that can be used to make the company more competitive and more productive.

Opportunities are growing in IT-reliant "high-growth" industries such as health care, advanced manufacturing and financial services. These opportunities call for specialized IT expertise, often application driven. Higher education and training levels also are required for these positions, and so is on-the-job experience. The requirement for on-the-job experience, even for entry-level workers, strongly demonstrates the need for internship and apprentice programs. Also, IT workers must continually update and acquire new skills to remain employable in the dynamic IT job market.

All seven of the fastest growing IT jobs (network systems and data communications analyst; computer software engineer, applications; computer software engineer, systems software; database administrator; computer systems analyst; network and computer systems administrator; computer and information systems manager) require at least a bachelor's degree.

Topping Employers' Needs List

Many companies are actively looking for IT project managers to oversee technology projects from an overall business perspective. As IT infrastructure becomes more integral to overall business operations, many management teams are finding it difficult to outsource IT project management and are searching for employees who can guide critical IT plans that impact the bottom line.

Project management offers an attractive career path with many advancement possibilities, as well as the chance to use a multitude of IT and business-related skills every day. Fledgling IT workers can be set on their way to higher-level project management assignments by directing smaller portions of larger undertakings and gaining valuable management experience.

The political climate has created many opportunities to manage regulation- and mandate-compliance projects.

Seven Careers in IT

Network systems and data communications analyst;
Computer software engineer, applications;
Computer software engineer, systems software;
Database administrator;
Computer systems analyst;
Network and computer systems administrator; and
Computer and information systems manager).

Government regulatory initiatives such as the Health Insurance Portability and Accountability Act (HIPAA) and the Sarbanes-Oxley (SOX) Act have raised the security stakes for many companies and institutions. IT project managers are a valuable asset to business monitoring and supervising federal and state regulatory conformance tasks.

SOX, which increased regulation on public companies to better control accounting, also is driving companies to hire new network engineers and programmers. Network design jobs are becoming increasingly available as testing is completed and the next phase of SOX compliance initiatives is implemented. The federal security mandates have forced companies to look for IT personnel with specialized skills in network and data security. Even if a job isn't posted as a security specialist or something similar, having those security skills and credentials will make IT workers, at all levels, much more attractive to employers.

Another opportunity for individuals with project management skills is with traditional IT companies that are reinventing themselves as professional services entities. This trend is creating a healthy market for IT project managers. Consultants who can manage IT projects with the bottom line in sight will be very attractive to these global consulting companies.

Emerging Technologies, New Certifications

New professional certifications for tech workers have emerged in recent months in the areas of radio frequency identification (RFID), wireless integration and voice-over-IP (VoIP) telephony and related convergence technologies.

Some 60,000 businesses are facing RFID usage mandates from their trading partners in the next three to five years, according to industry estimates. A 2005 survey commissioned by the Computing Technology Industry Association (CompTIA) found that just over 50 percent of more than 500 companies in North America have either completed RFID

implementations or plan to do so within the next 12 months.

However, a worldwide lack of skilled integrators who have the facilities, education and expertise to design, deploy and manage RFID networks appears to have the potential to hamper the adoption of RFID in all countries and industries. Many companies eager to adopt the RFID technology are beginning to be slowed in their efforts by a scarcity of qualified RFID integrators.

As RFID adoption grows in 2006 and beyond, the skill shortage will become ever more pronounced, creating many opportunities for individuals with the appropriate skills, experience and qualifications. Specifically, those skills include tag placement (a vital issue given the many environmental interference issues with RFID), maintenance and installation.

To address this looming skills shortage, CompTIA is working with more than 20 leading organizations active in the RFID industry to develop a foundation-level, vendor-neutral professional certification of RFID skills. Now available in beta format, CompTIA RFID+™ certification is intended for individuals with a foundational knowledge of RFID technology and between six and 24 months of experience in the RFID industry. The certification covers a wide range of topics related to the installation, configuration and maintenance of RFID hardware and device software, including interrogation zone basics, testing and troubleshooting, standards and regulations, tag knowledge, design selection, installation, site

analysis, RF physics, and RFID peripherals.

The growth of wireless networks within the corporate environment has generated new and more complex security and administrative difficulties. Unlike RFID, where certifications are just entering the market, several certifications for wireless skills already exist. Among the organizations offering wireless certifications are Planet3 Wireless, AreTec, the National Association of Radio and Telecommunications Engineers, and Cisco Systems.

The convergence of voice and data networks is also driving demand for new certifications. Businesses are migrating to converged communications solutions such as VoIP at different paces, based on factors such as comfort level with new technologies; depreciation schedules or obsolescence of legacy voice equipment; or budget availability.

Regardless of the driving factor, each installation is likely to involve a certain amount of customization. This will require a more consultative customer and demand a workforce trained in converged applications. A number of vendors of VoIP and convergence products offer their own product-specific certifications. CompTIA is currently working with product manufacturers, distributors and others active in the convergence market to develop a vendor-neutral professional certification that establishes a baseline standard for an IT professional's ability to install and support converged data, voice and video communications solutions.

The Value of Certification

To estimate the financial impact of certification on an organization, CompTIA in 2003 surveyed IT managers who were responsible for their organizations' help-desk or field-service organizations and IT networks. A total of 274 managers were asked about the impact that two specific professional certifications—CompTIA A+® and CompTIA Network+®—had on their organizations' employment practices, employee retention, business development, operational efficiency, and others factors.



For women, the IT field offers great opportunities and jobs that pay well.

The managers offered strong evidence that professional certifications of IT skills help to manage networks and help-desk operations more efficiently and to reduce turnover among staff that have network management responsibility.

Organizations with a high percentage of certified staff reported fewer occurrences of network downtime when compared with organizations with a low percentage of certified staff. Certified staffers are also able to manage larger, more complex networks more efficiently.

The survey also explored the impact of certification on help desk productivity. Responses from IT managers who oversee help-desk and field support indicate that these operations can improve productivity and reduce turnover by investing in certification programs.

A high-certification help desk requires about one fewer full-time equivalent (FTE) employees than a low-certification help desk to handle the average help desk workload. High-certification help desks can handle 11 percent more phone calls per FTE employee than low-certification help desks. High-certification help desks handle 28 percent more

field service calls per FTE employee than low-certification help desks. High-certification help desks can handle the average help desk workload at a total salary cost that is eight percent lower than low-certification help desks.

IT managers also report lower turnover in organizations with a high percentage of certified staff. Reduced turnover leads both directly and indirectly to reduced costs and greater productivity.

IT managers also evaluated the performance of their workers in 20 behavioral and skill areas, including ability to adapt quickly to changes in technology; trusted to handle the most difficult ques-

tions; confidence the employee has the skills necessary to do the job; capable of handling multiple problems at once; productivity; impression on customers; ability to explain things clearly; and customers' perception. Certified employees were rated higher in every area.

If certified IT professionals are happier in their jobs and more effective at them, there is no reason for organizations to consider certification to be a cost rather than an investment. ■

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