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Certification, Salaries & the IT Market

By Gary Gabelhouse

[AD]



I remember the e-mail I received after the publication of last year's salary survey in Certification Magazine. Despite the upbeat news certificants reported to us in 2001, it had been a very difficult year for all concerned—the IT industry, the publications covering the IT industry and the research houses measuring the IT industry. All were locked in an extreme economic battle—no use in denying it.

The reader basically told me how the world had fallen out from underneath him, and he read with some disdain the “rosy reports” of how certification had resulted in bigger paydays and promotions. His job and company had disappeared overnight. Back wages, (401)k, company stock—all virtually gone from a once-thriving technology company.

With the e-mail still ringing in my head, I surveyed the results of this year's salary survey and saw that there was definitely some bad news salted in with the good.

With corporate market values down to less than half of what they were in 2001, it doesn't take a Rhodes Scholar to figure out that IT professionals have been taking some vocational and economic hits. One in five (20 percent) of the certificants in the 2002 study reported that they had been laid off or had their hours and wages significantly cut in the past year. Another 16 percent expected to be laid off or experience a salary cut within the coming year. Clearly, more than one-third (36 percent) have been or will likely be negatively impacted by the downturn of the IT market.

Providing a silver lining in this cloud of dire findings, the 2002 study data confirms that more than three-fourths (79 percent) of the certificants in the study planned to pursue additional certifications in the coming year. So despite the IT market slump, lost jobs and cut wages, a vast majority of IT professionals will seek additional certifications throughout 2002 and into 2003. And the key word is “additional”—for the typical certificant in the 2002 study already had nearly four technical certifications (3.5) and had been attaining a new certification every other year.

In the face of this down market, why are certificants seeking additional technical certifications? Perhaps it is best expressed in two words: job security. In boom times, one constantly reviews the rate of growth in salary as a key personal-success measurement. However, in down times, job security is paramount. While the return on investment (ROI) one receives from a technical certification in terms of salary increases is always important, the role of the certification in keeping one's job becomes the crux issue in down times.

CHART 1:

Attribute of Certifications	Best Vendor's Rating*
Quality of Learning Materials (ISC) ²	3.37
Quality of Educational Experience Sun Microsystems	3.56
Quality of Instructors IBM	3.89
Comprehensiveness of Program (ISC) ²	3.59

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Price/Value of Program IBM	3.57
Quality of Tests and Exams (ISC) ²	3.13
*5=Excellent; 4=Very Good; 3=Good; 2=Fair; 1=Poor	

What certificants told us in this year's study confirms this. More than half (59 percent) of the certificants said they feel more secure in their current job due to their certifications. And more than two-thirds of the certificants surveyed (69 percent) feel that technical certifications play at least some role in their job security.

Perhaps due to the IT downturn, and relative job scarcity, very few certificants jump companies upon receiving their certifications. Only 16 percent of the certificants surveyed said that they jumped companies within six months of receiving their primary certification.

Certificants feel that technical certifications not only play a role in job security, but a vast majority (65 percent) feel that technical certification makes them more confident about their jobs and the work they perform. Other non-economic aspects of certification include on-the-job respect. Fifty-eight percent of the certificants surveyed feel that they get more respect from managers and colleagues due to their technical certifications. More than half (52 percent) feel that technical certification has improved their problem-solving skills on the job, and half feel that their technical certifications have increased their overall job productivity.

**CHART 2:
Average First-Year Raises for Primary Certifications***

Program Provider	Primary Certification	Average First-Year Raise
Cisco	CCDP	\$3,589
Cisco	CCNA	\$2,102
Cisco	CCNP	\$3,282
Citrix	CCA	\$2,101
CompTIA	A+	\$1,198
Microsoft	MCP	\$1,649
Microsoft	MCSE	\$5,853
Novell	CNE	\$8,283
Oracle	DBA OCP	\$2,791
Prosoft	CIW	\$1,446

*Data shown above for 10 most-often-named primary certifications in 2002 survey

Certificant Profile

The certificants in the 2002 study were 88 percent male and 12 percent female. On average, they have been working in the IT industry for 7.3 years. They have been working in their current jobs for nearly half of that time—3.3 years. Certificants in the 2002 study have been at the same company for four years. On average, they are 33 years old, and more than half (58 percent) have college degrees or graduate degrees. Certificants most often specialize in network engineering (30 percent), network administration (15 percent), database administration (8 percent), systems administration (7 percent), programming (6 percent) and network management (6 percent). These six areas of specialty account for 72 percent of the certificants in the 2002 study.

The most prevalent platform used is Windows (70 percent) followed by Linux/UNIX (15 percent). These systems are used at business sites that are most often network-consulting companies (19 percent), education and government entities (16 percent) and

communications carriers (15 percent). Certificants' job functions are most predominantly systems engineering and integration (20 percent), computer systems operations and networking (19 percent) and LAN and networking systems (17 percent).

On average, certificants in the 2002 study work 43 hours per week at a company that employs nearly 1,000 employees (840 staff members). Their average yearly salary is \$53,353.

Evaluating the Vendors' Programs

For the study, certificants were asked to rate their primary certification for a number of different attributes of a rather general and all-encompassing nature. When evaluated for the overall quality of the educational experience, certificants rated Sun Microsystems' technical certifications as the best. When considering the quality of the learning materials offered by vendors in support of their certifications, (ISC)2 (International Information Systems Security Certification Consortium Inc.) was rated the highest. IBM edged out (ISC)2 with regard to having the best instructors for its certifications. However, (ISC)2 edged out IBM for having the best tests and exams, as well as having the most comprehensive certification program. (See [Chart 1.](#))

The price/value of a certification is one of the most important factors candidates consider when choosing which program to pursue. Certificants rated IBM's certifications as providing the best price/value. Overall, and considering all of the attributes of vendors' certification programs, (ISC)2 was rated the highest, closely followed by IBM certifications. In terms of first-year raises received upon achieving a primary certification, the Certified Novell Engineer (CNE) was highest, at \$8,283. (See [Chart 2.](#))

The certificants were also surveyed as to the perceived quality of other, more specific elements of certification programs, such as self-study books, vendor-approved brain dumps, virtual labs, etc. The results evidence a wider group of vendors performing as the best. (See [Chart 3.](#))

Certifications and Job Promotion

On the economic front, 31 percent of the certificants in the 2002 study received a job promotion within the first year after receiving their primary technical certification. While promotion does not necessarily mean an increase in salary, it is an indicator of long-range economic benefits to be realized on the job.

CHART 3: Specific Certification Element/Best Vendor's Rating*

Self-Study Books (ISC)²	4.78
Practice Exams CompTIA	4.61
On-the-Job Training HP/Compaq	4.64
Instructor-Led Training at Center HP/Compaq	4.38
Virtual Labs Sun Microsystems	4.00
Product Documentation IBM	4.33
CBT Programs HP	3.78
Vendor-Authorized Brain Dumps CIW	3.86

College Coursework CIW	3.86
Listservs and Newsgroups IBM	3.76
Flash Cards CompTIA	3.70
Online Universities & e-Learning CIW	3.46
Vendor Boot Camps Sun Microsystems	3.31
Self-Study Videos CIW	3.07

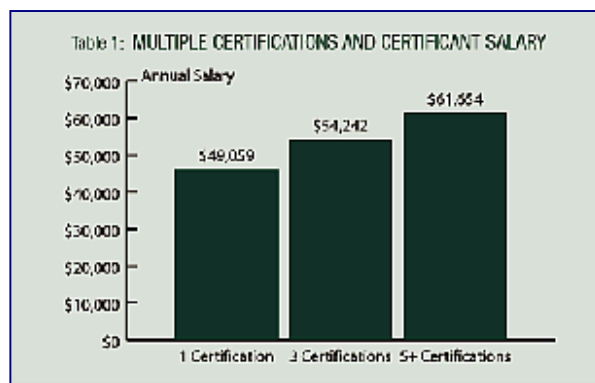
*5=Excellent; 4=Very Good; 3=Good; 2=Fair; 1=Poor

One can argue whether a technical certification played a major role in receiving such promotions, yet 92 percent of the certifiants who did receive promotions feel that their primary certification played a significant role in that promotion.

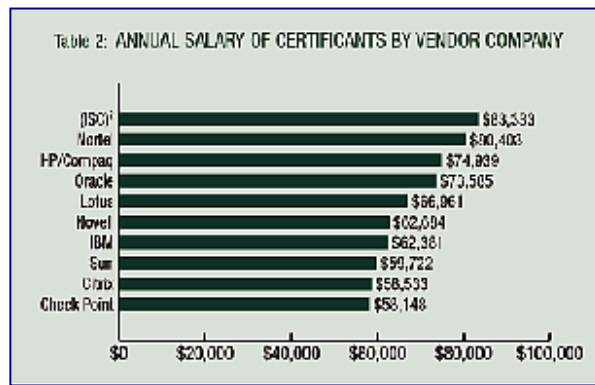
Certifications and Salary

The average salary of their certifiants is often used as the benchmark of quality by vendors. While salary can shed some light on the financial clout of a certification, other factors also play into the equation. For example, the more years a certificant has been in IT, the more money he or she makes. The average salary of a certificant with less than five years in IT is only \$38,434. Compare that to certifiants with more than 15 years of experience and their average annual wage of \$76,752.

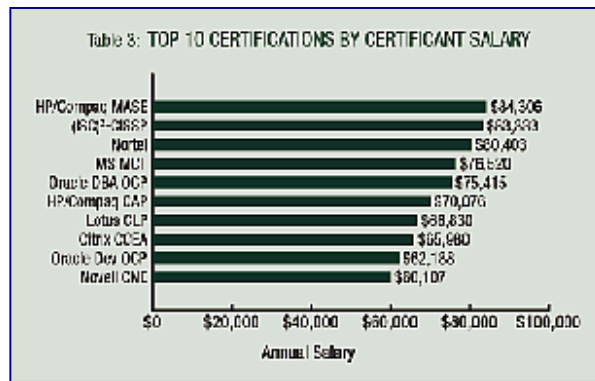
Another factor that positively impacts certificant income is the number of technical certifications achieved. Certifiants with only one technical certification average a \$49,059 annual wage. Those with three technical certifications have annual wages of \$54,242. When certifiants hold more than five technical certifications, their average annual salary goes up to \$61,654. Of course, when considered logically, those with more certifications are typically more experienced and have been in IT long enough not only to attain the certifications, but also to warrant higher wages than an IT neophyte. (See [Table 1.](#))



All those things considered, the vendor whose certifiants are paid the most is (ISC)2. The average (ISC)2 certificant brings home a hefty \$83,333 each year. Nortel certifiants also fare well, with an average income of \$80,403. Hewlett-Packard/Compaq and Oracle certifiants average more than \$70,000 in wages—\$74,939 and \$73,585, respectively. (See [Table 2.](#)) Certifiants with technical certifications from HP, CIW and CompTIA are in the lowest quartile.



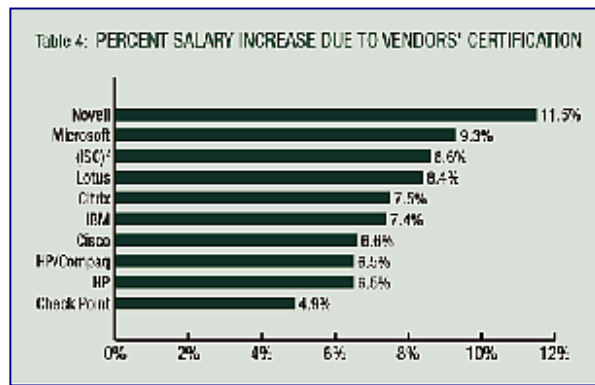
When considered on a program-specific basis, certificants with HP/Compaq's Master Accredited Systems Engineer (Master ASE) certification are the highest paid, making an average annual salary of \$84,306. Posting a close second, certificants with (ISC)2's Certified Information Systems Security Professional (CISSP) certification made, on average, \$83,333. Study respondents with Nortel, Microsoft Certified Trainer (MCT), Oracle DBA Certified Professional (OCP) and HP/Compaq Accredited Professional (CAP) certifications were in the top quartile. (See Table 3.)



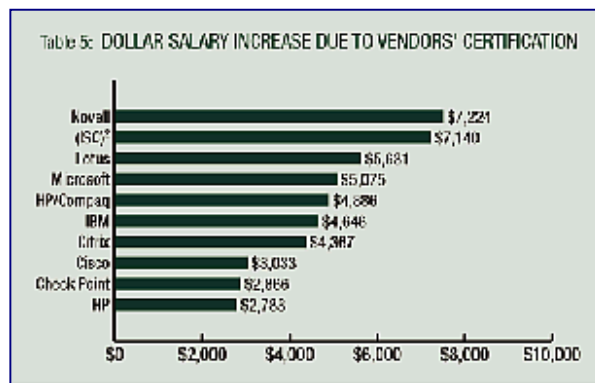
Certification and Wage Increases

In addition to increasing job security, certificants surveyed stated that they expect to see a financial return for achieving a certification. The most important return comes in the form of a raise. Nearly half (43 percent) of the certificants surveyed received a salary raise within the first year of receiving their primary certification—down 10 percent from 2001. While receipt of a certification and receipt of a raise may not necessarily be related, 80 percent of certificants feel that their raise was significantly due to their certification. The average certificant who did receive a raise within the first year of earning a primary certification realized a healthy 19 percent increase. By factoring the results from this year's study, one can determine that the average certificant realized a 7 percent raise within the first year of receiving a primary certification—down 3.2 percent from 2001.

It seems that different certification programs have a wide range of impact on wage raises for their certificants. The vendor whose certifications averaged the largest percent salary increase was Novell. Novell certificants averaged an 11.5 percent raise due to their certifications. Microsoft, (ISC)2 and Lotus certificants are in the top quartile with regard to certificants' percent salary raises due to their certifications. (See Table 4.)



In addition to percent salary raises, vendors' programs were evaluated by the dollar raises received. Novell certifications generated the most cash—an average \$7,224 salary increase for its certifiants. (ISC)² certifications came second with an average \$7,140 salary increase. (See Table 5.) The average certification in the study generated a \$3,487 increase in salary. This is down nearly \$1,000 (\$990) from the numbers reported in last year's study.



Another economic factor for certifiants to consider is ROI. ROI from certification is integrally tied to the cost of the certification. In 2002, the average technical certification cost \$1,100—which was down 43 percent from 2001. (The average certification cost \$1,934 in 2001.) The vendor with the most expensive certifications in the study is HP/Compaq, with an average certification cost of \$2,516. The least expensive certifications are offered by IBM, with an average cost of \$300.

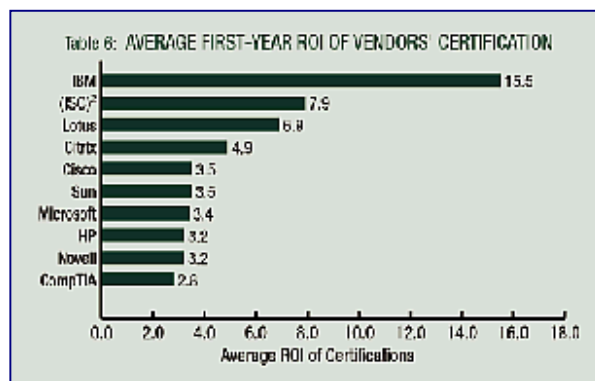
CHART 4: Average Salaries of Top Certifications

HP/Compaq Master ASE	\$81,131
(ISC) ² CISSP	\$80,195
Novell Master CNE	\$77,568
Oracle DBA	\$75,941
HP/Compaq Accredited Professional	\$72,285
HP/Compaq API	\$71,961
Lotus CLP	\$69,835
Citrix CCEA	\$68,578
Novell CNE	\$68,095
HP/Compaq APS	\$67,721
Nortel	\$67,393
Cisco CCIE	\$67,207
MCT	\$66,775

IBM	\$65,254
CompTIA Server+	\$63,953
Cisco CCDP	\$63,665
MCSD	\$62,727
MCSE+I	\$62,493
Citrix CCA	\$62,027
Novell CNA	\$61,546
Oracle Developer OCP	\$61,301
Dell	\$60,723
3Com	\$60,625
Lotus CLS	\$60,025
MCP+I	\$59,943
Cisco CCDA	\$59,452
HP STAR	\$58,839
MCSE	\$57,547
CompTIA i-Net+	\$57,007
Cisco CCNP	\$55,011
CompTIA A+	\$54,130
MCP	\$53,556
MCDBA	\$53,105
CompTIA Network+	\$52,731
MCSA	\$51,563
CIW	\$48,144
Cisco CCNA	\$47,946

The average certification provides a 3.2-to-1 ROI. That is, for every dollar invested in a certification, the certificant realizes a \$3.20 return in the form of a pay raise. This is up from the 2001 study (2.3-to-1 in 2001).

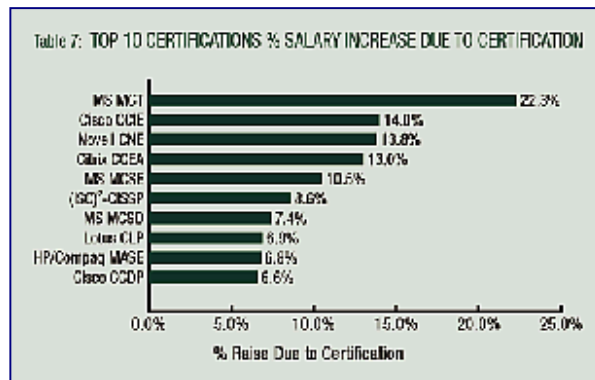
Vendors offering low-cost certifications tend to provide the best ROIs. IBM certifiants in the study got a whopping 15.5-to-1 ROI in terms of salary increases. The top quartile with regard to vendors' certification ROI also includes (ISC)2, Lotus, Citrix and Cisco. (See [Table 6.](#))



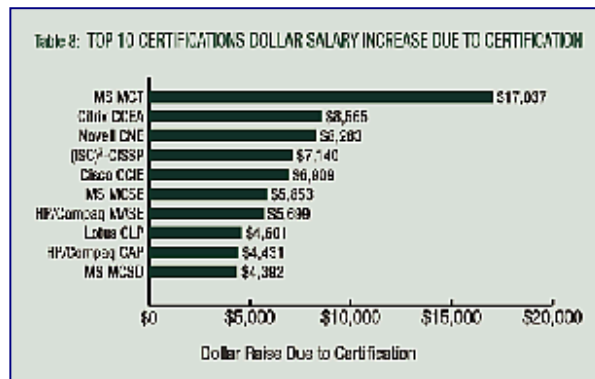
So despite the fact that certification in 2002 generated a lower dollar-raise than in 2001,

certifications provided higher ROIs for certificants than in 2001.

When looking at specific certification programs offered by vendors, Microsoft's MCT certification provided the largest percent salary increase—22.3 percent, on average. In the top quartile with regard to percent salary raises due to certification are the Cisco Certified Internetwork Expert (CCIE), Novell's Certified Novell Engineer (CNE), the Citrix Certified Enterprise Administrator (CCEA) and the Microsoft Certified Systems Engineer (MCSE). (See Table 7.)



With respect to dollar raises due to certification, Microsoft's MCT certification is, again, on the top of the heap—generating an average \$17,037 raise for certificants. In the top quartile of certification programs, we see the same certifications, albeit in a somewhat different order. (See Table 8.)

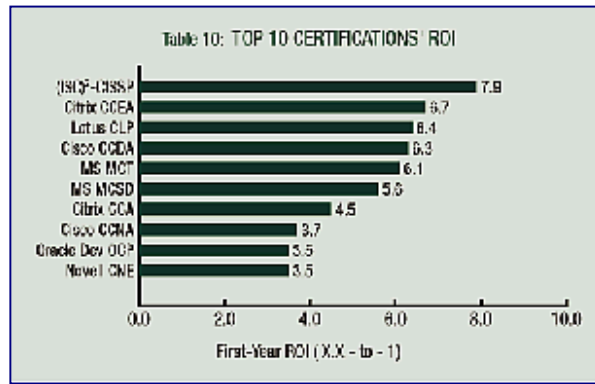


HP/Compaq's Master ASE certification is the most expensive, as certificants spend an average of \$4,250 to attain this certification. The least expensive certification out of the programs measured is the Cisco Certified Design Associate (CCDA), at \$436. (See Table 9.)



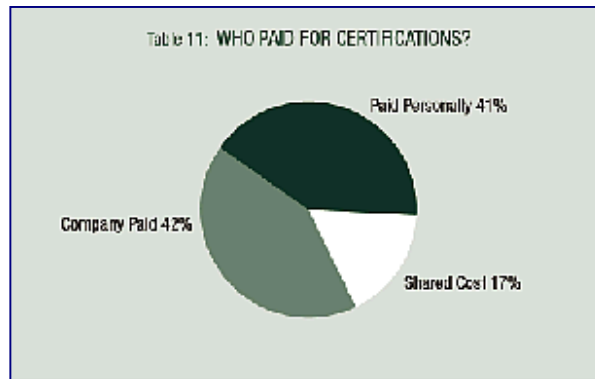
Taking all of this into account, (ISC)2's CISSP certification offers the best ROI, at 7.9-to-1. Citrix's CCEA certification provides the second-best ROI to certificants. The Citrix CCEA certification provides a 6.7-to-1 ROI. Others in the top quartile include the Certified Lotus

Professional (CLP, with 6.4-to-1), Cisco's CCDA (6.3-to-1), Microsoft MCT (6.1-to-1) and the Microsoft Certified Solution Developer (MCSD, with 5.6-to-1). (See [Table 10.](#))



Summary

Despite the down IT market, 79 percent of certificants plan to earn more technical certifications in the coming year. More than two-thirds of certificants feel technical certifications play a role in their job security. That's no doubt why more than half (58 percent) invested personally in at least part of their primary certification. (See [Table 11.](#)) On average, they invested \$1,100 in attaining their primary technical certification. The highest average salary based on primary certification was for the HP/Compaq Master ASE, at \$81,131. (See [Chart 4.](#))



Salary Survey Methodology

In September 2002, e-mail was sent to certificants asking them to participate in the 2002 Salary Survey. A link to the CyberSurvey site was provided within the e-mail. The sample of responding certificants originated from two sources:

1. A random sample of 10,000 Certification Magazine subscribers.
2. Certificants from 20 companies that partnered with Certification Magazine.

Nearly 10,000 certificants (9,283) completed and submitted surveys. The maximum error range for a study with n=9,283 respondents is +/- 1.0 percent at the 95 percent confidence level. Surveys were data-entered, computer-processed and analyzed by Fairfield Research Inc., a full-service market research firm specializing in the IT industry.

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