

COMPUTERWORLD

IT SALARY SURVEY

2015



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Talent Is Red-Hot

After years of tight budgets, employers are boosting pay to attract and retain hot

IT talent. Our survey of more than 4,800 tech workers reveals who's getting the cash – and how you can too.



Companies that desperately need hot IT skills are ratcheting up salaries and bonuses to lure talented tech workers. Here's how to grab your fair share.

BY STACY COLLETT



Cash is BACK!

W

HEN IT COMES TO GETTING A RAISE, some might say Chad Lorenc hit the jackpot. The senior infrastructure security architect scored a 30% pay increase this year, thanks in part to some fortunate events.

"My company went through a split," he explains. "There's such a shortage of top security people, and I was familiar [with the company] and had a good reputation as an architect. It just put me in a really good position at the right time. The two companies got into a kind of tug-of-war salary negotiation with me," says Lorenc, 38. "I actually had an incredible amount of leverage, the kind of leverage you usually don't have without switching companies."

His salary may be less impressive than the 30% raise would suggest, he admits. Lorenc came to the original company seven years ago earning somewhat less than

An Uptick in Pay

More people are getting raises, and compensation rose significantly for the first time in years.

“In a lot of companies, the few bodies that are left that aren’t outsourced or offshored have to carry a lot of knowledge for the company, and **they become extremely valuable and hard to lose.”**

CHAD LORENC, SENIOR INFRASTRUCTURE SECURITY ARCHITECT

the market was paying, but the job is in Montana, where he wanted to live. He believes he could be earning more in other regions of the country. Still, he knows his company values his skills.

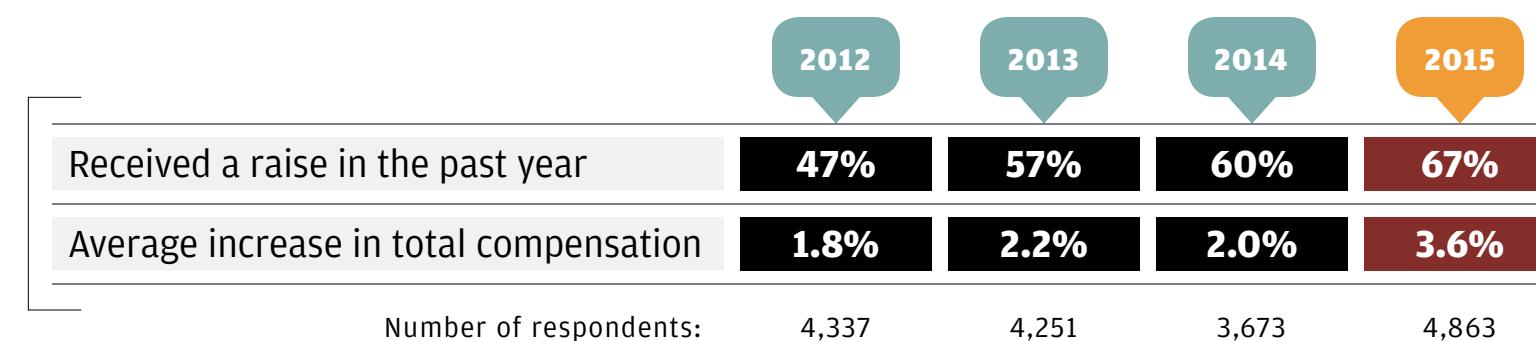
"I think in a lot of companies, the few bodies that are left that aren't outsourced or offshored have to carry a lot of knowledge for the company, and they become extremely valuable and hard to lose," he says.

This year, many organizations are willing to pay for those valuable workers. After several years of slow gains, *Computerworld's 2015 IT Salary Survey* shows notable compensation increases for IT pros in a range of positions. Average total compensation (salary plus bonus) increased 3.6% in 2015, compared to 2.0% in 2014, according to the survey of more than 4,800 IT professionals. Not sur-

prisingly, survey respondents generally feel better about IT as a career and their long-term prospects for advancement than they have in past years.

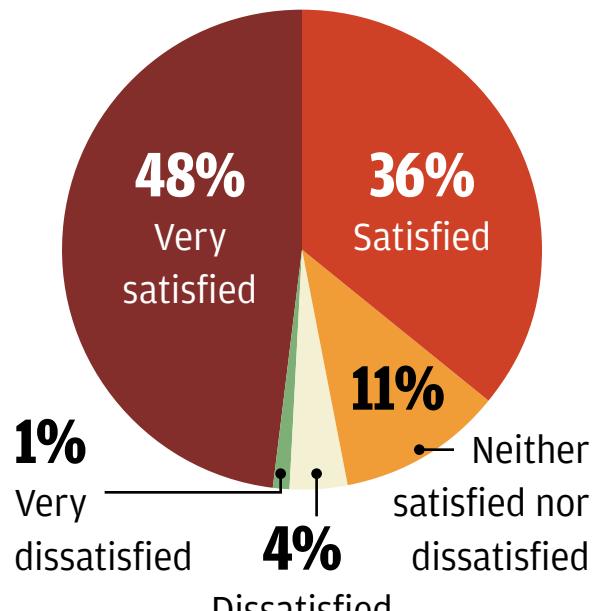
"Salaries are definitely increasing," agrees John Reed, senior executive director at IT staffing firm Robert Half Technology (RHT). "We're seeing much more movement than we had last year." The firm's own research shows IT salaries growing at just above 4%.

Reed says a Texas company in February offered a 50% increase in base salary to two junior-level application developers to entice them to come on board. The offer propelled their salaries from the \$50,000 range to \$75,000. "That's a huge



Glad to Be in IT

How satisfied are you with your decision to pursue a career in IT?



Do you believe a career path in IT is...

More secure than most other career paths	50%
As secure as most other career paths	40%
Less secure than most other career paths	11%

Base: 4,863 respondents. Percentages don't add up to 100 because of rounding.

jump, and one you don't typically see," he says.

The hottest U.S. areas for IT salaries right now are Silicon Valley, Denver, Dallas, Houston, San Antonio, Austin, New York and Boston, Reed adds. Other markets coming on strong include Southern California, Chicago and Atlanta. "Salary ranges are moving, and it's very fluid," he says. "In San Francisco, my colleagues say even from 30 days ago they've seen a noticeable [salary] increase in what was already a hot market."

Money Matters

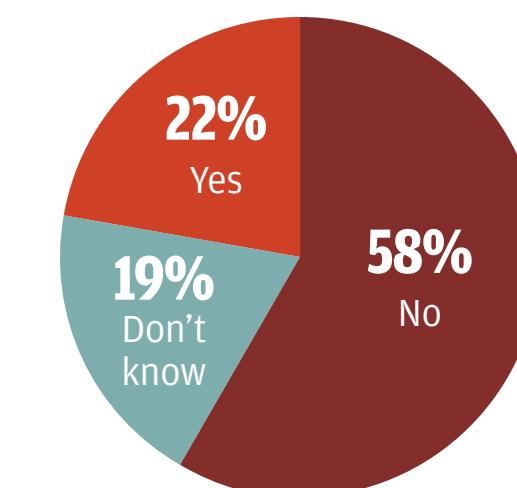
No surprise: Money is the biggest motivator for IT professionals when looking for a job or deciding to stick it out with their current employer, according to *Computerworld's* IT Salary Survey. Nearly half (49%) of survey takers indicate that base pay is among the most important aspects of their current jobs,

followed closely by job stability (44%). Of those looking for a new job, 60% were motivated by higher compensation. And 74% of all respondents—not just those looking for a new job—said a salary increase would entice them to change jobs.

Good news for them: Companies that desperately need hot IT skills are ratcheting up salaries

Still Feeling Underpaid

Do you feel that your salary is keeping pace with business growth and demands?



Base: 4,863 respondents. Percentages don't add up to 100 because of rounding.

and bonuses to lure in talent. Sal DiFranco, practice leader for the global advanced technology practice at executive search firm DHR International, says companies are rebounding after years of tight IT budgets and are looking to catch up on skills.

"Companies have recognized these huge gaps in the technical expertise they're looking for—software application experience, mobile applications, business intelligence, digital and analytics, and the ability to take those and work with digital marketing teams," DiFranco says. "Then you've got the infrastructure side where you've got to be really strong on virtualization and data center consolidation, and get creative with networking and with network operations centers."

IT employees with skills in those areas are "getting good raises internally," DiFranco says, but he notes that many are looking for extra-large gains

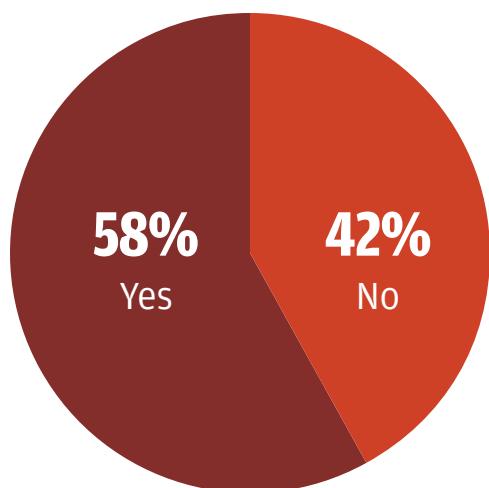
when changing employers. "They're not going to make a move for an 8%-to-10% [pay increase]. Most of them want 15%, which is a huge jump."

Seek Greener Pastures

One of the best ways to nab a substantial salary increase is to switch employers, says RHT's Reed. (See "Job Seekers Call the

Workers in Demand

In the past 12 months, have you been approached by a hiring organization or a headhunter about IT job opportunities?



Base: 4,863 respondents

Shots," page 14.) "If you want a 20% raise this year, you're going to have a much better chance of getting that by going to a new company than by going to your boss and saying, 'I need a 20% raise,'" he says.

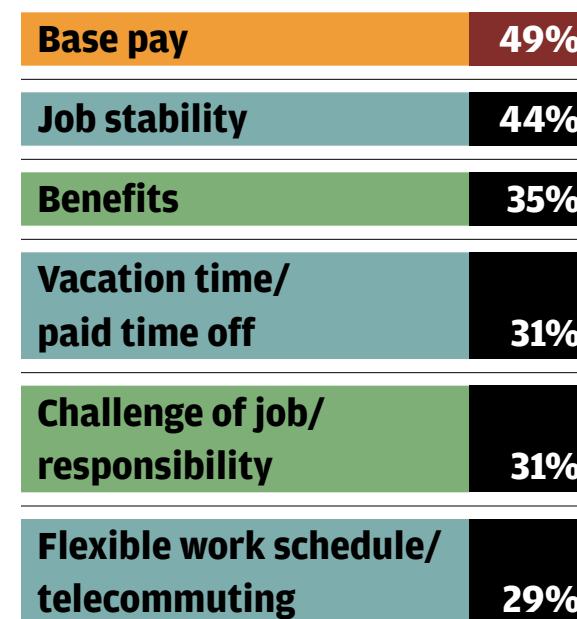
One Computerworld survey respondent, a 34-year-old senior design and development engineer in Chicago, pulled off a 30% pay increase over the course of 20 months by changing jobs three times. After five years working for a university, he found his salary stuck at \$87,000, and previous raises had gone no higher than 5%. A recruiter found him a position at a tech startup earning \$105,000 plus a "guaranteed" 25% annual bonus.

"There is a high demand in Chicago for skilled software engineers for Ruby, Python and Java," says the engineer. "I knew the languages and tools" the startup was looking for, he adds.

He felt confident that if things

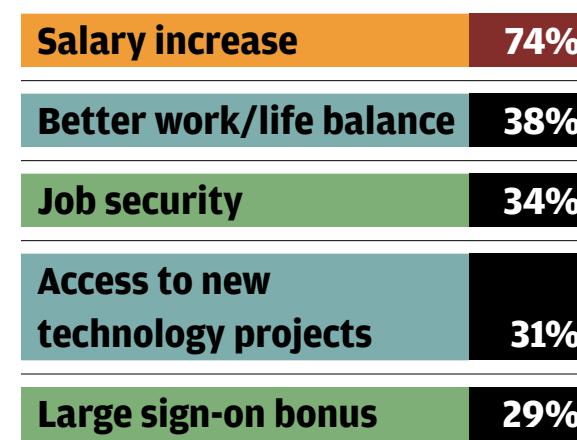
Motivated by Money

What matters most to you about your job?



Base: 4,863 respondents; multiple responses allowed

Which factors would most influence you to change your job?



Base: 4,863 respondents; multiple responses allowed

didn't work out at the startup, he could easily find another opportunity. The company lasted four months. Two days after his job ended, another recruiter found him a new position making \$116,000 plus a \$10,000 signing bonus at a technology company.

If you have the right skills, the engineer says, "I don't know if you can necessarily punch your own ticket, but you definitely have the confidence to walk in and say, 'I can contribute significantly to this company.'"

Employers that are on top of their game have done their research and want to be aggressive when hiring IT staffers with the skills they need. "Typically on the low end they're offering 15% to 20% increases in base salaries," says RHT's Reed.

The Case for Staying Put

But it's not always worth the hassle to leave a company. "If an employee can get a 10% raise

where they are and the market is commanding 15%, it might not be worth it to jump ship for that extra 5% and leave a company, a position or a manager that you actually like," Reed says.

That sentiment rings true for a 42-year-old network manager at a college in the Northeast. He got a 3.6% raise this year and is now at \$95,000. "I would like

Some Ready for a Change

Which of the following best describes your job search status?



Base: 4,863 respondents

to have more money, but when you work in education, it's quality of life versus pay," says the nine-year veteran of the college. "I feel well compensated, and I'm within the pay range [for my skills and experience], but I also get five weeks of vacation a year and seven to 10 holidays."

Retaining talent makes sense from the employer's perspective, too. Staff departures cost a company time, money and other resources. Direct replacement costs can reach as high as 50% to 60% of an employee's annual salary, with total costs associated with turnover ranging from 90% to 200% of annual salary, according to [statistics reported](#) by the Society for Human Resource Management. That gives companies that can afford it good reason to offer healthy raises to valued employees.

Indeed, of the Computerworld survey respondents who reported base salary increases of

Career Outlook

Where do you expect to be in your career five years from now?



Base: 4,863 respondents

10% or more, just 27% said they changed employers to get the extra money. The rest attributed their pay bumps to promotions,

Reasons for Looking

Top 10 reasons respondents are looking for a new job:

Looking for higher compensation	60%
Seeking career advancement	47%
Looking for more interesting/challenging work	37%
Looking for more personal fulfillment	37%
Seeking a better benefits package	27%
Seeking better or more training or skills development	23%
Want less stress	22%
Seeking a more stable organization	20%
Want to work for a different kind of organization	20%
Seeking more responsibility	19%

Base: 2,531 respondents who are looking for a new job; multiple responses allowed

added responsibilities or other reasons.

A senior director of strategic accounts at a life sciences technology company in California scored an 11% pay raise based on performance and a 20% bonus based on the business unit's earnings.

“Certainly salary is a big part of my job satisfaction; the industry is very cyclical and you cannot rely solely on company performance,” he says. The 14-year company veteran has had a steady career climb. He started as senior software engineer and moved up the technology ranks.

He then migrated into technical marketing and finally into sales.

Discussing the strengths he brings to the job, the senior director says, “When I talk to my clients, I know the business but I also speak the technical language, and that helps very much.”

Lorenc, the senior infrastructure security architect who got a 30% pay increase after his company split into two, says his broad set of skills helped earn him that big raise. “I’m a security architect who’s very broad but very deep, too,” he explains.

In his seven years total at the original and spinoff companies, Lorenc has implemented or run many security systems, such as application firewalls, security information management tools and a vulnerability management program. He also served as head architect in securing voice and telepresence systems. His biggest project was architecting the network security design for the

original company’s \$22 million data center, which was later split into two for the two companies.

His advice to IT pros looking for big raises is to beef up communication with IT managers, business units and company leaders, and be willing to take on challenges. “Be flexible, research those new technologies, and reach out and work across different towers of the business,” he says.

The Road to a Better Salary

Despite strong compensation gains overall in 2015, slightly more than half (54%) of Computerworld survey respondents said that they feel underpaid based on their roles and responsibilities — up slightly from 52% in 2014 and 51% in 2013 and 2012. That sentiment may be the result of years of corporate belt-tightening, when salaries barely inched up while IT staffers were asked to take on more

responsibilities and heavier workloads.

"There are many people who have been hunkered down at their current job, maybe since the last economic downturn, and they don't know what's happening in the marketplace," Reed says. "They might be worth much more than they're receiving."

If you're looking for a big raise, it's important to do some research and know what your value is. "Look at job listings online, see in what ranges companies are paying, talk to your peer network—that's where it all starts," Reed says.

If, after doing the research, you've decided you're worth more than you're earning, try approaching your current employer. "Before throwing yourself out in the marketplace, go to your existing employer, armed with your salary research, and ask for a raise," Reed advises. "There may be

an opportunity to get a pay increase where you are."

But don't challenge your employer with big demands, he cautions. "Just because the market is paying higher than you're making doesn't mean you're necessarily going to find a new job that pays you that much," Reed says. Issuing an ultimatum "is a

Nothing—not even training or a certification—replaces hands-on experience in a hiring manager's eyes, he notes. But if a company can't find someone with years of experience and "it comes down to you and another candidate with comparable skills, [a certification] will give you a leg up," Reed says.

IT employees to figure out the newest technologies that their current company needs, then get the appropriate training and ask to be involved.

"You're already a proven commodity" at your current employer, he says. "They're going to give you a chance if you have the credentials, more so than



There are many people who have been hunkered down at their current job ...and they don't know what's happening in the marketplace.
They might be worth much more than they're receiving.

JOHN REED, SENIOR EXECUTIVE DIRECTOR, ROBERT HALF TECHNOLOGY

huge mistake that has blown up on people many times."

The next step, says Reed, is a skills assessment. Identify the hottest skills in the market, the ones that will help drive up your compensation. If your expertise is lacking or outdated, take a course, even online, or get a certification.

For his part, DHR's DiFranco sees courses and certifications as a long-term strategy. A new skill certification alone won't impress a headhunter, he says. "A search firm is already bringing in people with three to five years of experience [in a particular skill] to a company," he explains. Instead, he advises

someone on the outside giving you a chance." Putting your new skills to work at your current employer will give you the experience you need to compete in the job market—and might land you a raise or a promotion at your current company.

If you're really ready to take the leap to a new job, don't

Career Worries

Top 5 career concerns for 2015:

Keeping skills up to date/ being valuable to employer	24%
Flat/stagnant salary	15%
Finding an appropriate new position for my skill set	13%
Increased workload	11%
Changing structure and role of the IT department	11%

Base: 4,863 respondents

just throw your résumé out on an Internet job board—your boss or someone else from your company could see it. “It doesn’t take long for someone on the inside to find your résumé posted, and it may backfire on you” Reed says. “Your loyalty comes into question, and you might find yourself looking for

Workplace Woes

Top 5 factors negatively affecting working conditions:

Increased IT workload	53%
New, understaffed projects	33%
Budget cuts	32%
Unfilled open positions	25%
Salary freeze	20%

Base: 4,863 respondents; multiple responses allowed

a job because now you don’t have a job.”

Instead, tap into technical user groups and professional organizations, participate in networking events, and communicate with IT people who travel in the circles that you do. That’s the way to find out who’s hiring, what skills they’re seeking and

what they’re paying. “Those are the things that will lead you to better compensation,” Reed says.

Finally, recruiters or staffing firms can help you find a higher-paying position quickly, says the Chicago-based senior design and development engineer. He used two different recruiters to find each of his last two positions, and he emphasizes that the second recruiter found him his current job in just two days and “was able to get me what I wanted in terms of salary.”

Mostly Sunny Skies Ahead

The IT career outlook is improving from year to year, according to the *Computerworld* survey. Asked where they expect to be five years from now, 52% of this year’s respondents said they anticipate being in higher-level positions, either with their current employers or at new organizations. In contrast, just 37% of the 2014

survey respondents said they expected to move up the ranks within the ensuing five years.

Recruiting firms are also cautiously optimistic, expecting the IT labor market to remain strong over the next 12 to 18 months as companies seek to innovate and gain a competitive edge through technology. “They’re not backing off their investments in technology, and that’s why it will be a pretty solid [employment] picture,” Reed says. “You have to have the people to execute it.”

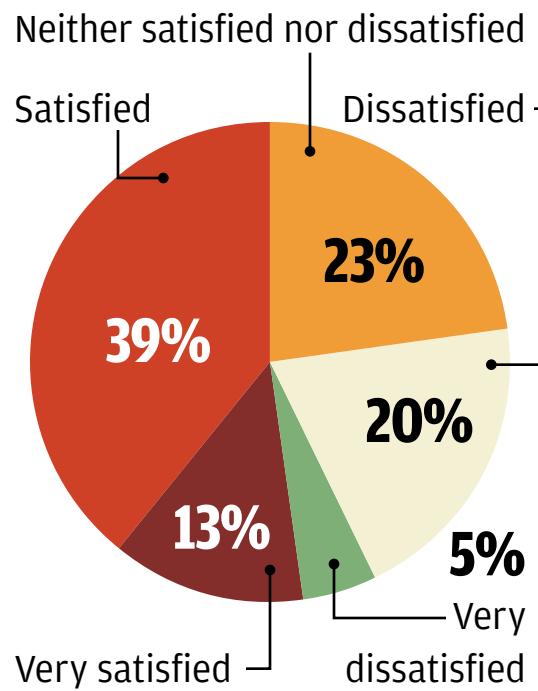
That means IT professionals have a chance to position themselves for big raises. “In my company, when they think of security, they think of me—I’m their first call,” Lorenc says. “Once you’re in that position, it gives you a lot of opportunities.” ♦

COLLETT is a Computerworld contributing writer. You can contact her at stcollett@comcast.net.



MONEY

How satisfied are you with your total compensation package?



How did you feel 12 months ago?

More satisfied	15%
Less satisfied	21%
The same	64%

Base: 4,863 respondents

[Percentages may not add up to 100 because of rounding.]

Senior Management

	AVERAGE SALARY	AVERAGE BONUS	2015 TOTAL	2014 TOTAL	% CHANGE TOTAL COMP
Chief information officer/VP of IT	\$146,648	\$20,986	\$167,633	\$160,522	4.4%
Chief security officer	\$144,493	\$21,108	\$165,600	\$155,221	6.7%
Chief technology officer	\$137,623	\$15,868	\$153,491	\$149,153	2.9%
Director of IT	\$111,217	\$9,675	\$120,893	\$116,751	3.5%
Director/VP of systems development	\$144,512	\$19,098	\$163,610	\$153,388	6.7%
Internet technology architect/strategist	\$130,813	\$14,177	\$144,990	\$141,447	2.5%

■ Highest percentage compensation change for this category

Middle Management

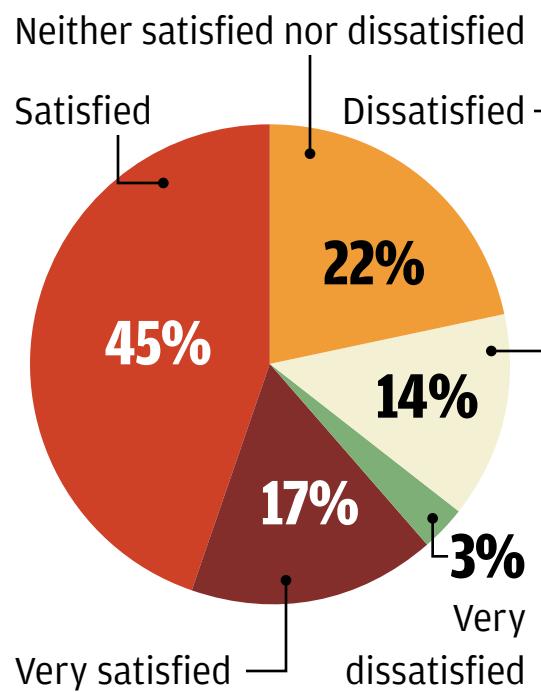
Application development manager	\$112,580	\$8,358	\$120,938	\$116,946	3.4%
Communications manager	\$74,463	\$4,333	\$78,797	\$78,183	0.8%
Computer operations manager	\$100,042	\$6,174	\$106,216	\$103,643	2.5%
Database/data warehousing manager	\$102,414	\$6,360	\$108,774	\$105,886	2.7%
Help desk/technical support manager	\$75,217	\$2,754	\$77,971	\$75,274	3.6%
Information security manager	\$111,266	\$7,218	\$118,484	\$112,509	5.3%
IT manager	\$91,228	\$4,391	\$95,619	\$92,724	3.1%
Network manager	\$84,722	\$2,338	\$87,060	\$84,505	3.0%

Continued on page 11



CURRENT JOB

How satisfied are you with your current job?



How did you feel 12 months ago?

More satisfied	19%
Less satisfied	17%
The same	61%
Not in the same position	3%

Base: 4,863 respondents

[Percentages may not add up to 100 because of rounding.]

Middle Management, continued from page 10

	AVERAGE SALARY	AVERAGE BONUS	2015 TOTAL	2014 TOTAL	% CHANGE TOTAL COMP
Product manager	\$106,919	\$9,950	\$116,869	\$112,427	4.0%
Project manager	\$102,060	\$5,784	\$107,844	\$105,173	2.5%

■ Highest percentage compensation change for this category

Staff and Entry-Level

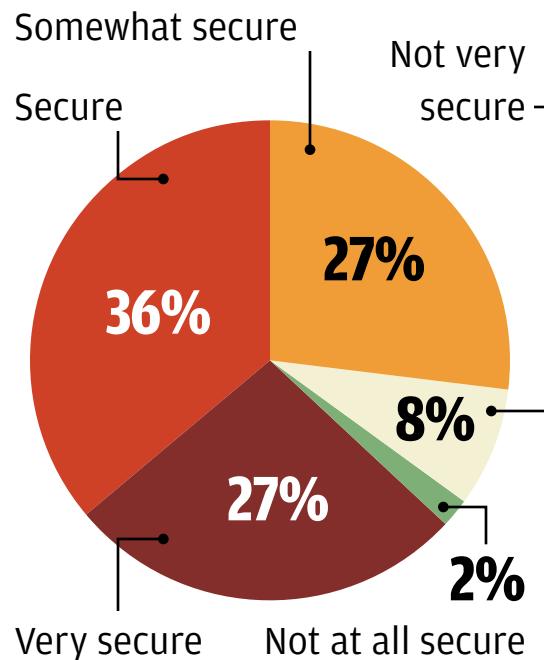
Application developer	\$90,465	\$4,469	\$94,934	\$91,365	3.9%
Business intelligence analyst	\$89,227	\$4,107	\$93,334	\$90,237	3.4%
Communications specialist	\$69,342	\$5,395	\$74,737	\$72,430	3.2%
Computer operator	\$55,026	\$1,100	\$56,126	\$55,120	1.8%
Database administrator	\$89,108	\$4,659	\$93,767	\$89,610	4.6%
Database analyst	\$68,629	\$1,156	\$69,785	\$70,621	-1.2%
Database architect/developer/modeler	\$100,718	\$3,135	\$103,852	\$99,967	3.9%
Enterprise architect	\$121,513	\$10,076	\$131,589	\$128,506	2.4%
Help desk/technical support specialist	\$50,905	\$939	\$51,844	\$50,273	3.1%
Information security specialist	\$87,176	\$3,520	\$90,696	\$87,605	3.5%
Network administrator	\$63,459	\$1,079	\$64,538	\$62,977	2.5%
Network architect	\$111,598	\$7,486	\$119,084	\$115,117	3.4%

Continued on page 12



SECURITY

How secure do you feel your job is?



How did you feel 12 months ago?

More secure	20%
Less secure	13%
The same	64%
Not in the same position	4%

Base: 4,863 respondents

[Percentages may not add up to 100 because of rounding.]

Staff and Entry-level, continued from page 11

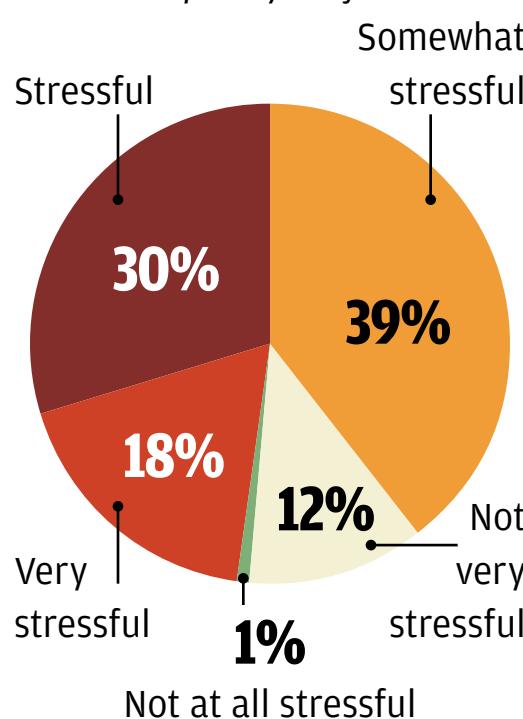
	AVERAGE SALARY	AVERAGE BONUS	2015 TOTAL	2014 TOTAL	% CHANGE TOTAL COMP
Network engineer	\$86,308	\$3,496	\$89,804	\$85,382	5.2%
Programmer/analyst	\$80,321	\$1,942	\$82,263	\$80,146	2.6%
Project leader	\$102,978	\$6,143	\$109,121	\$104,800	4.1%
Quality assurance specialist	\$75,353	\$2,103	\$77,456	\$74,437	4.1%
Senior systems analyst	\$91,684	\$3,919	\$95,602	\$93,744	2.0%
Software developer	\$88,346	\$2,312	\$90,657	\$88,493	2.4%
Software engineer	\$102,978	\$5,544	\$108,522	\$104,156	4.2%
Storage administrator/architect/engineer	\$102,976	\$6,272	\$109,247	\$104,802	4.2%
Systems administrator	\$72,437	\$2,101	\$74,538	\$71,907	3.7%
Systems analyst	\$78,857	\$2,877	\$81,734	\$79,546	2.8%
Systems architect	\$111,626	\$9,691	\$121,318	\$117,409	3.3%
Systems programmer	\$101,702	\$3,537	\$105,239	\$102,265	2.9%
Technical trainer	\$76,007	\$2,625	\$78,632	\$74,173	6.0%
Technician	\$48,572	\$806	\$49,378	\$47,037	5.0%
Technology/business systems analyst	\$84,853	\$4,531	\$89,384	\$86,510	3.3%
Web developer	\$73,400	\$2,251	\$75,652	\$72,200	4.8%

■ Highest percentage compensation change for this category



STRESS

How stressful is your job?



How stressful was it
12 months ago?

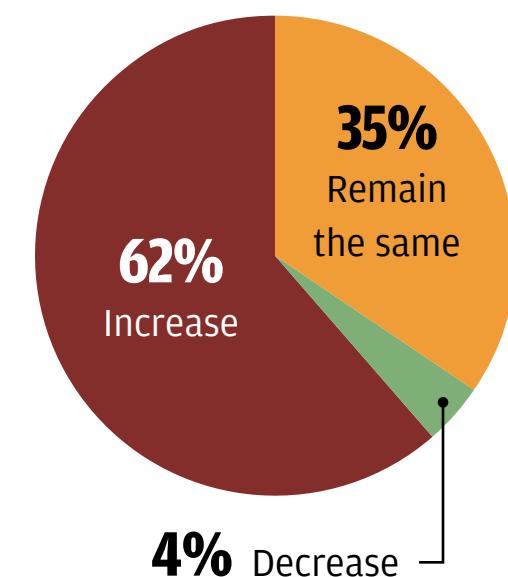
More stressful	18%
Less stressful	17%
The same	62%
Not in the same position	3%

Base: 4,863 respondents

[Percentages may not add up to 100
because of rounding.]

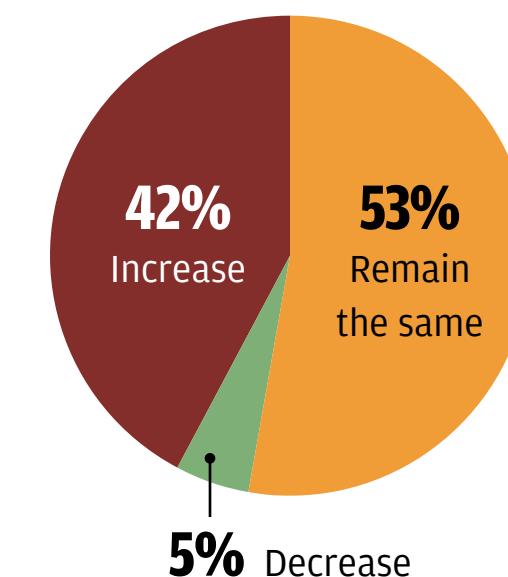
Workloads Keep Rising

Over the next 12 months,
do you expect your IT workload
and responsibilities to:



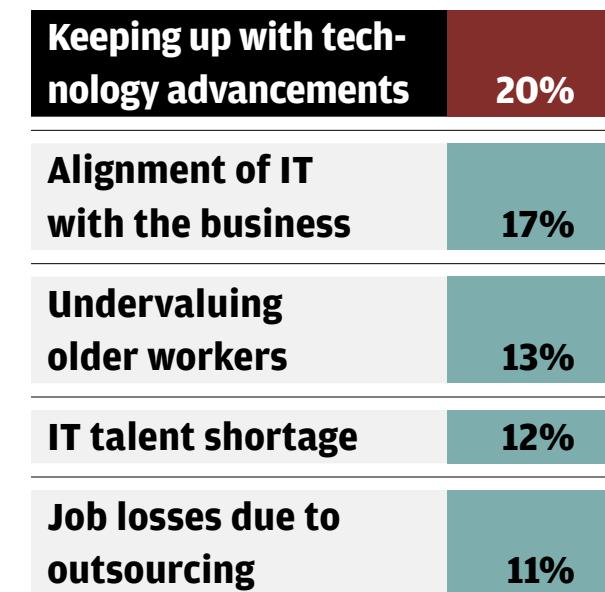
Base: 4,863 respondents. Percentages may not add up to 100 because of rounding.

Over the next 12 months, do
you expect your line-of-business
workload and responsibilities to:



Top 5 Challenges

What do you feel is the biggest
challenge facing workers in
the IT industry today?



Base: 4,863 respondents

How We Conducted the Survey

Computerworld's 29th annual IT Salary Survey was administered via the Internet.

The survey results include responses from both *Computerworld* digital magazine subscribers and visitors to Computerworld.com.

The collection of data began on Oct. 2, 2014, and con-

cluded on Dec. 18. A total of 5,484 people responded to the survey. Of those respondents, 4,863 were employed full time or part time and were eligible to complete the entire survey. At the 95% confidence level, the margin of error for this sample size is 1.4 percentage points.

Compensation figures for 2014 were calculated based on the percentage change reported by respondents.

You'll find a detailed look at the survey methodology and much more in our [online IT Salary Survey package](#).



JOB Seekers Call the Shots

With salaries up, unemployment down and open positions galore, it's a great time to be looking for a job in IT. **BY MARY K. PRATT**

IKE MANY of his colleagues, MIS director Bill Jones is in the market for IT talent. Jones, who runs the IT de-

partment for the city of Port St. Lucie, Fla., needs two developers to fill new positions created to build and maintain a permitting app, plus someone for another new position tasked

with installing and maintaining a telephone system.

Despite a positive work environment and good benefits, Jones admits that landing the right people to join his 19-member IT team at the pay the city offers—about \$40,000 to \$80,000, depending on the position—will be tough.

"I can hire a programmer, but that doesn't mean he can do that job. That just means I can put a body in a chair," he says.

That's a common thought among IT executives today. Unemployment among tech professionals is low, and the number of new IT positions is up. Those factors and an ongoing skills shortage are pushing up salaries, lengthening the time it takes to fill open slots and putting more control in the hands of job seekers.

Consider the findings from *Computerworld's 2015 IT Salary Survey*: Some 43% of the 2,268

managers polled said they expect to increase IT head count this year, up from 38% in 2014.

However, the pool of potential candidates may not be very big. Of the more than 4,800 IT employees responding to the poll, 48% said they're not looking for a new job, 37% said they're just passively looking for a new job at a different organization and 6% said they're seek-

Hiring on the Upswing

In the next 12 months, do you expect your organization's IT staff head count to ...

	2014	2015
Increase	38%	43%
Decrease	7%	8%
Remain the same	53%	48%
Don't know	2%	2%

2014 base: 1,369 IT managers.
2015 base: 2,268 IT managers. Percentages may not add up to 100 because of rounding.

ing a new job with their current employer. Only 9% said they're actively looking for a new position at a different employer.

That's tough on employers, because the number of technology jobs is growing. Management consulting firm Janco Associates reported in March that more than 130,000 new IT positions had been created in the U.S. in the prior 12 months.

What's more, the unemployment rate for IT workers is currently only around 2.5%, says Jason Hayman, research manager with IT staffing firm TEKsystems.

Given such figures, it's not surprising that it takes employers months to fill positions. Some 36% of the IT managers who responded to the *Computerworld* survey said it took three to six months to fill open tech positions during the past two years, while 15% reported that it took more than six months.

"Workers have a lot of power

at the bargaining table," Hayman says. "They can pick and choose the opportunities they want to take, and they can set their demands for employers."

Chief among those demands is a bigger paycheck. (See "Cash Is Back," page 2.) Among *Computerworld* survey respondents who said they're looking for new jobs, 60% said they're doing so for higher compensation; that was the No. 1 response. And 74% of all respondents (not just those looking for jobs) said a salary increase would most influence them to change jobs, making it the leading reason by far.

Specialists in Demand

According to our survey, 64% of those expecting to expand their IT staffs this year plan to hire mostly for highly skilled specialist positions, while 31% want staff or entry-level technical professionals. Only 3% plan to hire mainly for management positions.

Who's Hiring

Most IT managers who expect to hire this year work at:

- Private companies
- Organizations with fewer than 1,000 total employees
- Organizations with fewer than 50 IT employees

Base: 952 IT managers expecting to hire in the next 12 months

Where the Jobs Are

The top 5 metro regions where IT managers who expect to hire this year are located:

- | | |
|---|------------------------------------|
| 1 | New York City |
| 2 | Chicago |
| 3 | San Francisco |
| 4 | Los Angeles |
| 5 | Washington, D.C./Northern Virginia |

Base: 952 IT managers expecting to hire in the next 12 months

Some organizations will have more trouble than others filling open positions, of course. Recruiters and IT leaders say that some regions—namely the tech-centric cities on the East and West coasts as well as urban areas in between—have more open tech positions (and thus more competition for talent) than other locales. And employers seeking to fill jobs in several hot disciplines, including security, big data, the Internet of Things and mobile app development, will have a harder time finding the right candidates.

Yet no one sees a return to the days of the dot-com boom when companies were frantically trying to hire IT professionals. “We’re not in a crazy bubble mode, and I’m not worried that there will be one,” says James Stranger, senior director of product management at CompTIA, a tech industry group known for its certifications.

Still, he says, there’s a gap between the demand for IT professionals and the supply of them, particularly in key areas such as programming, project management and IT support.

Scott Magerfleisch, a network services manager for a municipal agency in Colorado, is well aware of the hurdles he faces as he prepares to replace a retiring tech support worker this fall and, in 2016, add a system administrator to his 14-member team.

Even though Colorado has a

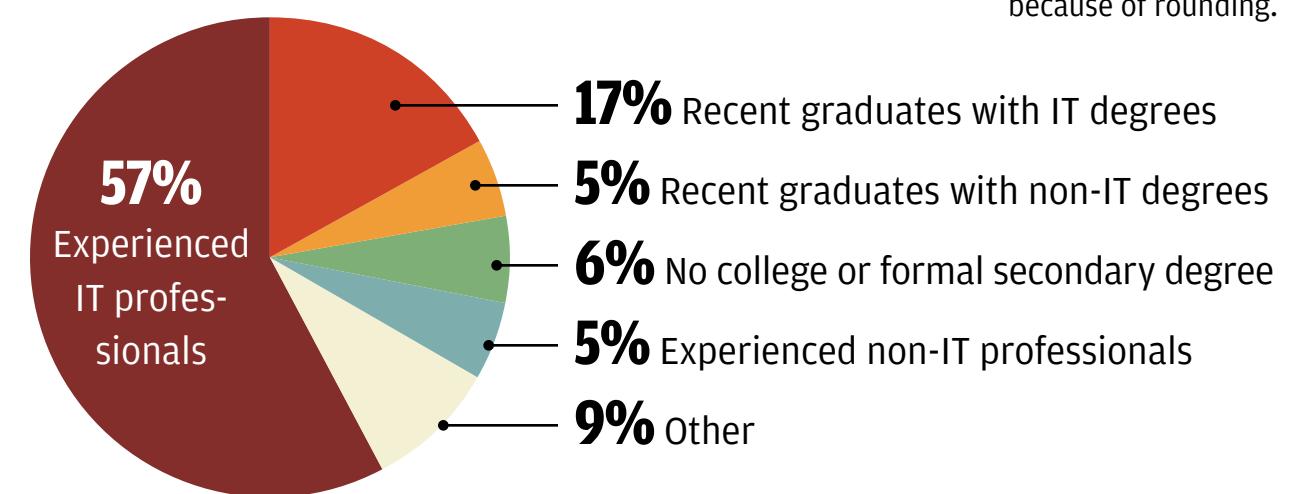
“ridiculously low” IT unemployment rate (1.8%, according to staffing firm Upp Technology), Magerfleisch can’t start searching for a replacement until the current employee’s retirement nears—the budget won’t support two paychecks for the same position for very long. The short timeline will be challenging enough, but he also anticipates that candidates will come in with demands because they know they have their pick of opportunities.

Still, he’s optimistic that he’ll

Who's Being Hired

In the past 12 months, what percentage of your IT hires fit the following descriptions?

Base: 2,268 IT managers.
Percentages don't add up to 100
because of rounding.



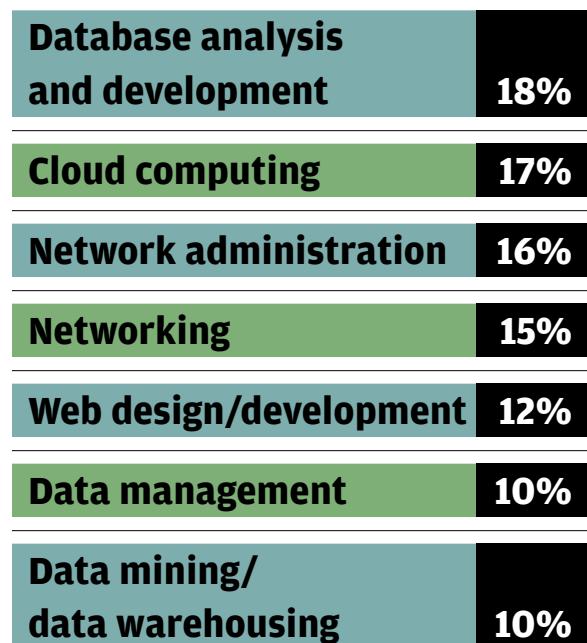
Hot Skills

What types of IT skills do you expect your organization to hire for in the next 12 months?

Application development	41%
Help desk/IT support	36%
Business intelligence/analytics	25%
Security	24%
General IT functions in multiple areas	22%

Base: 952 IT managers expecting to hire in the next 12 months; multiple responses allowed

find good candidates—that is, people with enough experience but not so much that they can command the highest pay. He plans to use staffing firms because they will have done the upfront vetting and skills assessment work, and he plans to hire people on a temp-to-permanent basis to ensure they're technically capable and good cultural fits before add-



ing them to the staff.

"I think having those talent agencies that we can pull from, we can be successful," he says.

Strategies for Hiring Success

Recruiters and IT leaders say the challenge of landing candidates who have the desired skills and who fit into the or-

ganizational culture varies depending on factors such as the timeline for hiring, the geographic reach of the search and the position's compensation package. The higher the pay, the longer the lead time and the broader the search, the better the odds of getting the right fit.

Even when employers can find people with the technology skills they want, they often hold out for candidates who also have broad IT experience, business acumen and soft skills such as communication and collaboration capabilities, says Stranger. He points out that companies of all sizes need that combination because their technology team members usually have cross-functional responsibilities.

But while that strategy can work well when filling conventional IT positions—networking jobs, for example—it often won't work for jobs in hot disciplines such as security and big

data, where employees have the upper hand in the labor market, Stranger says.

John Reed, senior executive director of IT staffing firm Robert Half Technology, agrees. "Typically companies have a very specific profile in mind that they're looking for, and the more specific, the more difficult it is for them to find," he says. "It's the same for candidates. Candidates don't want to leave a job for

Wanted: Specialists

If IT is hiring in your organization, are the majority of open IT positions ...

Highly skilled specialist positions	64%
Staff/entry-level technical positions	31%
Management positions	3%

Base: 952 IT managers expecting to hire in the next 12 months. Percentages don't add up to 100 because of rounding.

something that's comparable; they want something better."

Reed says most employers and employees eventually find what they're seeking. But there has to be some give. Companies need to ease up on requirements, raise pay and lengthen their search times to land the right people. Many already do all three, he adds.

A Worker's Perspective

Robert Romig, a Dallas-based IT support specialist at law firm Zelle Hofmann Voelbel & Mason, is well aware that tech workers are in demand but says the strong IT job market doesn't mean he'd quickly land a job he wants.

"If I was to unexpectedly lose my job tomorrow, I could have job offers lined up within two weeks, three weeks at most," Romig says. "But being able to find a job is not the same thing as finding a good job."

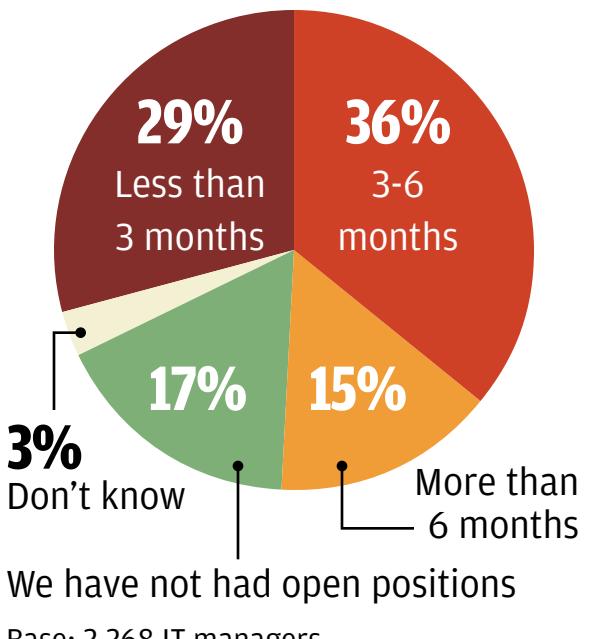
Romig isn't looking to move from his current position, but he regularly gets calls from recruiters and staffing firms. But they're not always offering something better. He says finding the right fit—a challenging position with the right compensation in the right environment—would likely take longer than a few weeks because he'd have to sort through postings and eliminate contract and temporary positions as well as ones that would be lateral moves.

Taking the Long View

David Lewis is also taking slow and careful approach as he seeks to hire new staffers. The vice president and CIO at Deseret Mutual Benefits Administrators in Salt Lake City, Lewis plans to add two programmers to his 35-member IT team to help develop applications needed to address the growing complexity, workload

Positions Hard to Fill

In the last 24 months, how long has it taken for your IT organization to fill any open positions?



and government regulations facing his company.

He says he competes with other local employers as well as Silicon Valley companies, making it more difficult to find the right people. So he's looking long term, taking more time to find candidates who have the

technical aptitude and a cultural fit with his IT shop so they'll want to stay and thrive.

"It's the soft skills that differentiate between an OK candidate and a great candidate," he says, adding that he wants people who "work hard and work smart." To ensure that he finds such people, Lewis brought on two college interns to train and ultimately, he hopes, hire after they graduate.

But his long-term thinking doesn't end there. Lewis says IT leaders have to look at high school students and encourage more of them—particularly women, who are traditionally under-represented in the field—to get into IT. That, he says, is what will guarantee that hiring won't be a problem in years to come. ♦

PRATT is a Computerworld contributing writer in Waltham, Mass. You can contact her at marykpratt@verizon.net.



Security Talent is RED-HOT

Security pros are in high demand, and companies are willing to pay top dollar for the right candidate. Do you have what it takes to succeed on the security career track?

BY BETH STACKPOLE

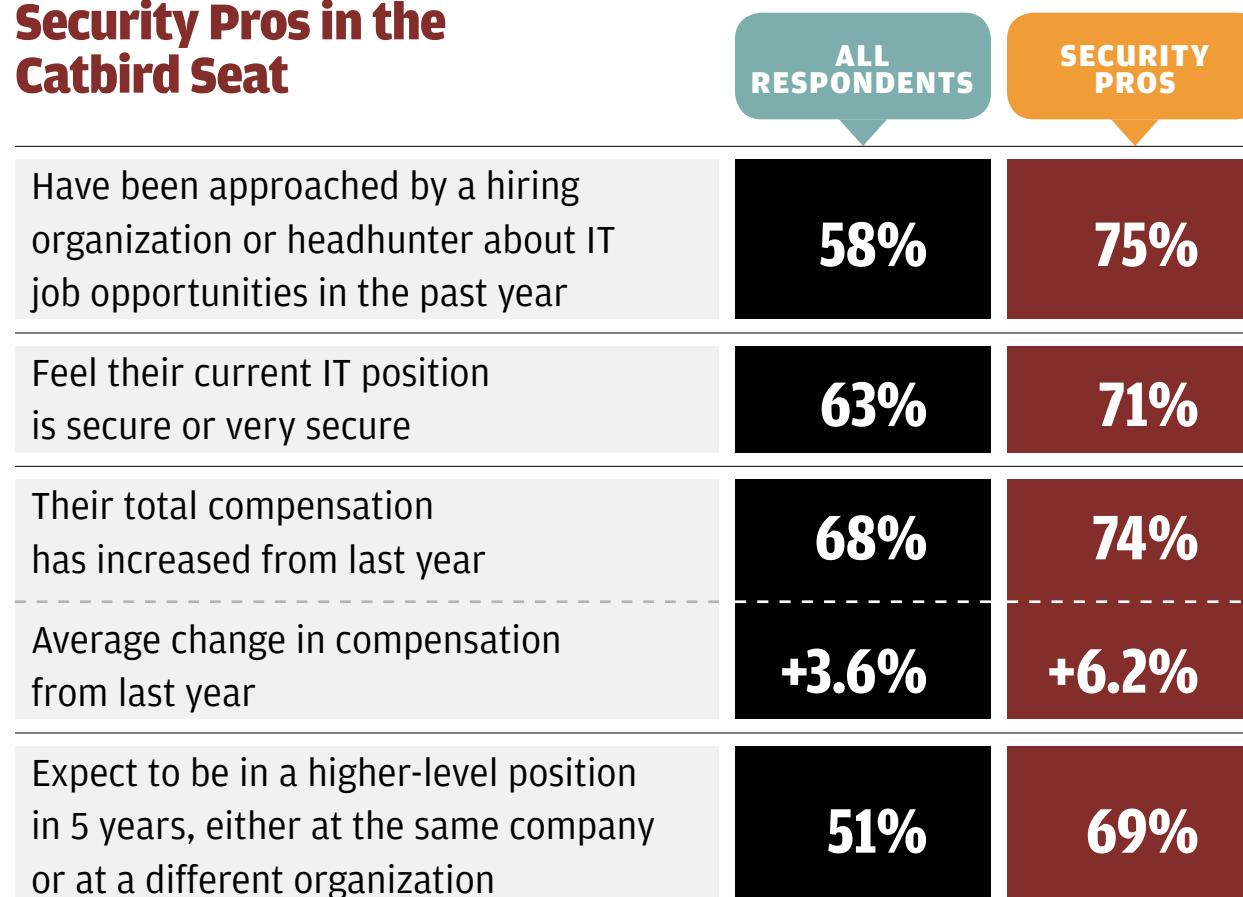
FROM THE TIME he was 9, Daniel Kowalski, now 23, knew cybersecurity was going to be his thing. Captivated by the stealth work of hackers in commercials and in his favorite movie, *Live Free or Die Hard*, Kowalski nurtured his fascination with security from a young age, pursuing

multiple IT and security certifications during high school and earning a degree in computer criminology at Florida State University.

After graduation, Kowalski moved through a couple of generic IT contract gigs—each providing some basic exposure to security—and landed an official role in his chosen field in less than a year: He's now an information systems security engineer at defense contractor Harris Corp. "My future lies in security," says Kowalski. "As far as where I want to be in security, it's too early to say—I've not yet specialized in anything, but I've touched on everything."

Kowalski's future should be pretty bright given that security now ranks among the hottest IT career tracks. [Computerworld's 2015 IT Salary Survey](#) reveals that there's strong demand for security professionals. Three-quarters of security pros partici-

Security Pros in the Catbird Seat



Base: 4,863 total respondents; 221 respondents with security titles

pating in the survey said they'd been approached by headhunters in the past 12 months, and 71% said they felt their job was secure or very secure.

The spate of recent high-profile hacks at companies like Tar-

get and Sony Pictures has been a serious wake-up call for management about the importance of a robust IT security program. "The emergence of the cloud and the recent security breaches have been the perfect storm

to drive demand for security roles," says Matt Leighton, director of recruitment at Mondo, a digital marketing and technology recruitment firm.

At least four out of 10 job requisitions coming across his desk are for security-related positions, he adds. "It's probably the hottest skill set we are working on today, and we're now seeing [salaries] catch up with demand."

Research by Robert Half Technology confirms that security talent is in demand. The IT recruitment firm's [2015 Salary Guide for IT Professionals](#) says demand for skilled workers will exceed supply in the overall IT job market "for the foreseeable future" and names security as one of three disciplines—along with mobile and big data—in which that gap will be especially large. There's especially strong demand for data security analysts, systems security

administrators, network security administrators, network security engineers and security managers, according to the RHT report.

Not surprisingly, employers are willing to loosen the purse strings in order to fill security-related jobs. In *Computerworld's* IT Salary Survey, security management positions like chief security officer and information security manager saw the highest reported increases in pay from 2014 to 2015, with average total compensation for those job titles rising 6.7% and 5.3%, respectively.

In fact, nearly three-quarters of survey respondents with security titles reported an increase in total compensation from a year ago, with an average bump of 6.2%. In comparison, 68% of all respondents reported that their total compensation had risen in the past year, and the average increase was 3.6%.

The trend is welcome news to Bobbi Jo Pickar, who has spent 27 years as an IT security professional, holding various technical and managerial roles. "In the past, management hasn't given us enough credit and they didn't realize how much a security organization could save a company

You're always having to adapt to something new, whether it's new vulnerabilities or new ways hackers are exploiting the network.

**TIM POSPISIL, IT SECURITY SUPERVISOR,
NEBRASKA PUBLIC POWER DISTRICT**

or government by doing things right," says Pickar, who now serves as an information security specialist/computer systems security analyst at Lockheed Martin. "Now that they understand how much risk could cost, they are starting to take a much more proactive approach."

The Pros and Cons of Constant Change

The spotlight on security and the increasingly malicious nature of cyberattacks have created new opportunities for security pros, and those factors have helped turn security into a satisfying career, says Kevin

Fred, a senior information security consultant who's now working as a principal security engineer for a large payment processing company in Cincinnati. Security has gained lots of new job descriptions, including C-level positions that didn't exist years ago, and security roles

have increased in stature across the board.

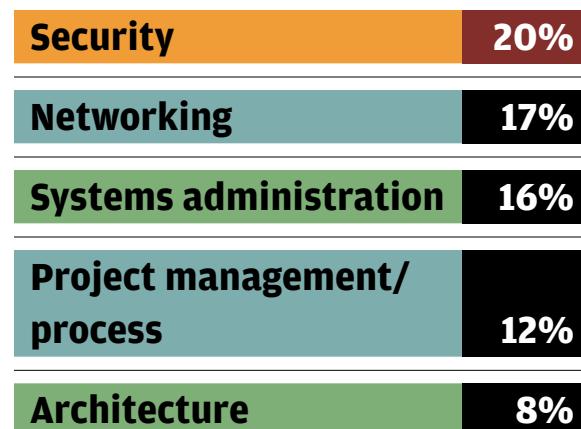
"We're in an elevated spot — in any company across every industry, infosec is held in higher esteem because we're the protectors of the crown jewels," he says. "There's a lot of prestige and satisfaction that comes along with that."

Also satisfying to Fred and other security professionals is the dynamic nature of the field: As threats evolve, there's an endless stream of new material to master. The constant change appeals to Tim Pospisil, IT security supervisor for Nebraska Public Power District, who has been in IT for eight years and has done security work for almost half of that time.

"I work in nuclear, which is the best of 1960s technology, and [security] is not," he says. "Security is definitely cutting-edge. You're always having to adapt to something new, wheth-

On the Skills Agenda

Top 5 IT certification topics on respondents' radar:



Base: 2,275 respondents who plan to pursue an IT certification in the next 24 months

er it's new vulnerabilities or new ways hackers are exploiting the network. It forces you to constantly be on your toes, and it keeps you fresh."

However, Pospisil warns that the constant change can be a drawback. "You don't ever feel like you get downtime or get a chance to catch a breath," he says. "And there's always the fear that you're going to miss

something and become a logical target."

The other big negative is that security is hardly an organizational favorite, so those in the field need to be prepared to deal with the occasional irate user who doesn't like being denied access to a particular website or being required to follow a bunch of protocols. "We're kind of like the IRS of the organization — no one really likes us," Pospisil says. "It's one of those necessary evils: People recognize [security's] value, but you're generally not their favorite person."

The Right Mix of Skills

Those realities mean a certain mix of experience, skills and personality traits are required to succeed in security. Being a self-starter and active learner is critical, Pospisil says. Also key are good communication skills and hands-on security experience.

In addition, technical certi-

fifications can be a bigger deal in security than they are in other IT-related fields — a trend confirmed by Foote Partners, an IT staffing research and advisory firm. The Feb. 27, 2015, edition of Foote's [IT Skills and Certifications Pay Index](#) shows strong growth in the market values of 69 information security and cybersecurity certifications in 2014, with average gains of 3.7% in value in the last three months of the year.

The security certifications most in demand among IT professionals were those related to auditing, hacking

and forensics. Beginner security certifications, like the CompTIA Security+ accreditation, also enjoyed an uptick in popularity — a possible indication that more people are focusing on infosec as a career choice, says David Foote, chief analyst and co-founder of Foote Partners.

Computerworld's 2015 IT Salary Survey yielded a similar finding: Training programs involving security skills were the No. 1 pick among IT professionals pursuing certifications.

While certifications and hands-on experience are impor-

Average Total Compensation for 2015 [Salary + Bonus]

	ALL RESPONDENTS	SECURITY PROS
Senior IT management	\$141,158	\$165,600
Middle IT management	\$100,265	\$118,484
Staff/entry-level positions	\$85,326	\$90,696

Base: 4,863 total respondents; 221 respondents with security titles

tant, people skills and knowledge of the business can really make a security professional stand out, says John Becker, chief governance officer at Phenix Energy Group, where he oversees computer security, compliance and governance.

"This isn't just about certifications and security—you need IT security people who can talk about the risks," he explains. "It's a much more complex and multifaceted role than other IT work." It also doesn't hurt if someone is intrinsically paranoid: "We want people who really don't believe anything they hear," Becker adds.

We want people who really don't believe anything they hear.

JOHN BECKER, CHIEF GOVERNANCE OFFICER,
PHENIX ENERGY GROUP

Get Ready

If you're up to the challenge, there are a number of steps you can take to open doors to a job in security. Making a commitment to continuous learning—reading, participating in webinars, staying up to date on industry trends and studying recent data breaches—is a must. It would also be a good idea to pursue any number of

basic and specialized security certifications.

If you can't land a security-centric job right away, you can get some basic training by lining up IT roles that provide some exposure to security functions like intrusion detection or application testing. And you can raise your profile as a security expert by sharing security information and recommendations with

your colleagues. If you do that, people will come to respect your opinion and will eventually start to rely on your expertise, says Mondo's Leighton.

"Most companies don't have a security engineer—most have a systems administrator that they hope takes care of the security aspect," Leighton says. "By bringing information to the CIO and making recommendations, you position yourself as the resident expert." ♦

STACKPOLE, a Computerworld contributing writer, has reported on business and technology for more than 20 years.

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