

SKILLS SHORTAGE PUTS A DAMPER ON DATA CENTER GROWTH

The IT and data center management profession remains a source of pride and accomplishment for its practitioners. But many more of them are now concerned they lack the skills they need to do their jobs.

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EXECUTIVE SUMMARY



For most IT professionals, the data center remains a stable, healthy and prosperous place to work. It's the type of work environment that skilled professionals seek to nurture and sustain, and their employers seem eager enough to keep them on-board.

That's good for stability but it may also be a key contributor to a growing problem: An increasing skills gap between veteran IT managers and the technologies, systems and facilities they're being paid to manage.

These are among the findings of the 2018 Informa Engage Technology Salary Survey, conducted by Data Center Knowledge, ITPro Today and Channel Futures. Toward the end of last year, Informa Engage surveyed 162 data center and other IT professionals worldwide, with questions mainly dealing with their salaries, work experiences and job satisfaction. Their responses told us the following:

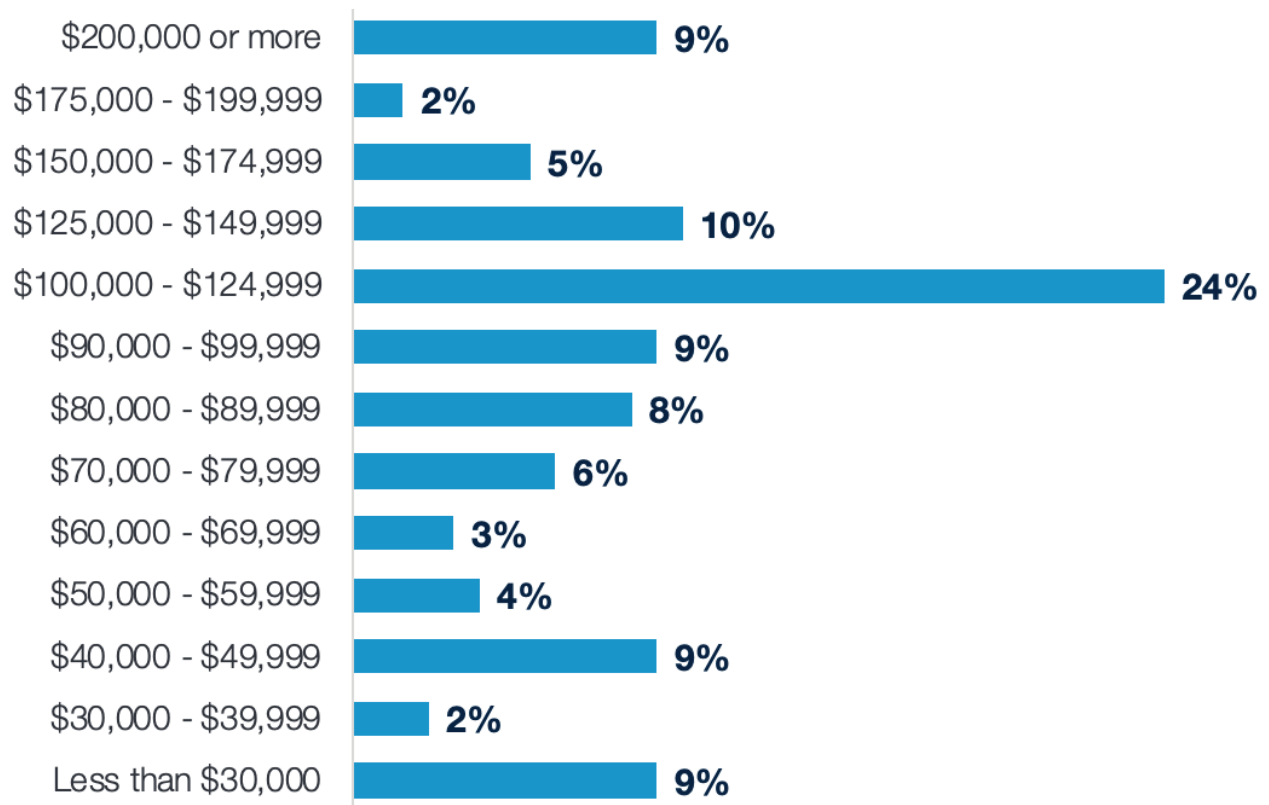
1. The rewards for staying employed remain strong. Salary growth and bonuses for data center professionals are as high as for most any industry tracked by the US Bureau of Labor Statistics.
2. The skills shortage has become a cause for alarm. Even quarter-century veterans of the industry are feeling they lack the training and support they need to fulfill their roles.
3. Veteran IT pros remain proud of the work they do. The skills shortage appears to be the only factor that has a negative impact on the professionals' overall job satisfaction.

KEY FINDINGS

DATA CENTER PROFESSIONALS EXPECT SALARY GROWTH TO CONTINUE

Most of the professionals polled said they live and work inside the United States; some 35 percent hail from elsewhere, although only 3 percent live and work in Canada. We asked these people to estimate their current annual salaries in US dollars.

2018 GROSS ANNUAL SALARY



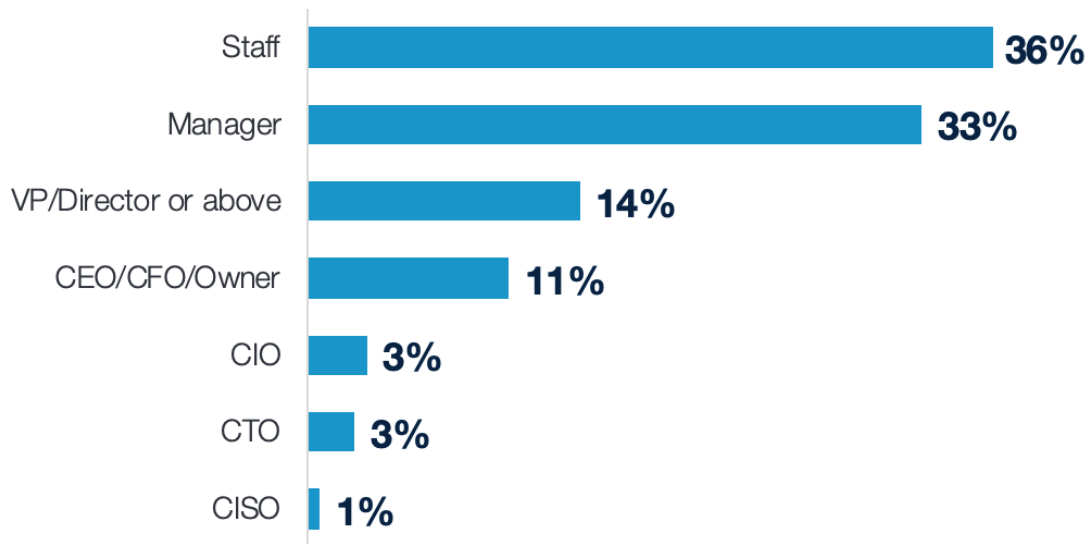
Question: What is your 2018 gross annual salary, NOT including bonuses, in US Dollars?

Base = Data Center Professionals (n=160).

KEY FINDINGS

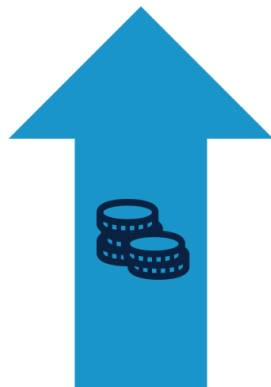
Among the professionals polled, half of respondents told us their annual salaries were \$100,000 or greater, with 9 percent reporting salaries of \$200,000 or more. These high salaries may be indicative of respondents' work experience: 47 percent said they had 20 years or more experience in the IT industry, with 48 percent telling us they had between five and 20 years' tenure in their current organizations.

PROFESSIONAL LEVEL



You don't have to be a corporate executive to get well paid in this industry. Only 18 percent of respondents reported being C-level executives in their organizations, with 33 percent saying they work at a managerial level and 36 percent saying they're staff.

63%
of Data Center Professionals
reported a **salary increase** in 2018



13%
of Data Center Professionals
reported a **salary decrease** in 2018



KEY FINDINGS



Among everyone polled, including staff, managers and executives, 25 percent told us their 2018 annual salaries were unchanged from 2017. A full 63 percent said they enjoyed salary increases for the year, while 13 percent said their annual salaries grew by 10 percent or more.

As Steve Brown, managing director of London-based Datacenter People, tells us, any analysis of salary levels for what we call the “data center industry” must take into account the breadth of job roles that phrase entails. Unlike a more narrowly focused category such as financial services or healthcare, data centers and IT encompass much wider range of interacting, if not necessarily interrelated, disciplines. There are software engineers, networking professionals and server

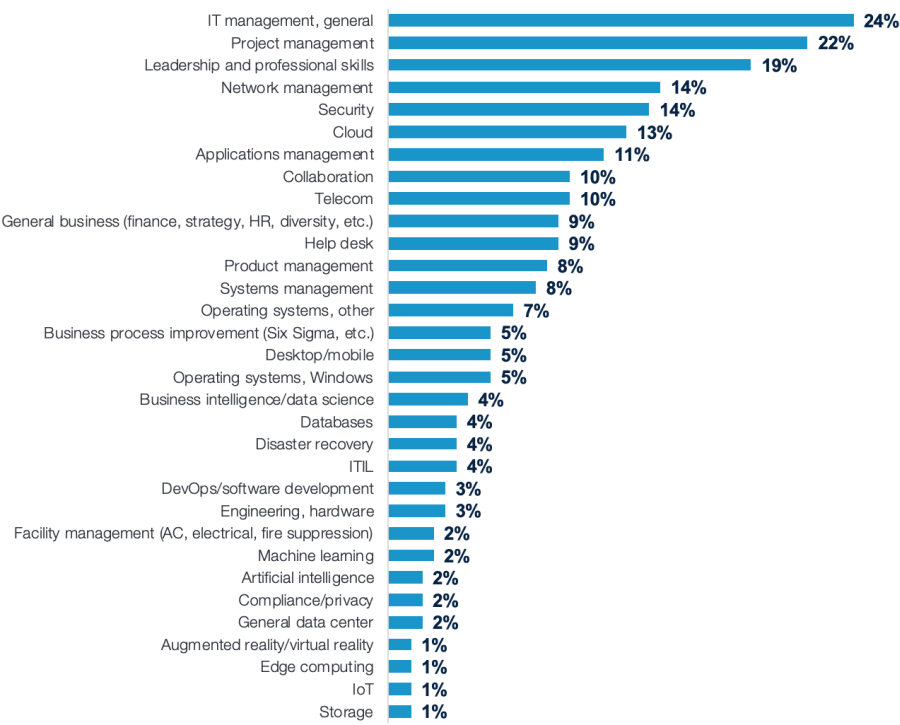
managers, of course, but also facilities managers and construction teams.

“The software engineering side of the data center is comparable to the highest-earning professions,” Brown says. “On the physical infrastructure — the mechanical/electrical side — it’s not quite the case. It’s more equivalent to mid-level management. Perhaps in the higher-paying sectors — whether it’s software engineering, financial markets trading, brain surgery — more brain processing power is required to be successful in the role, compared to somebody who is working with mechanical and/or electrical systems.”

KEY FINDINGS

DATA CENTER PROFESSIONALS: WHERE DO YOU SPEND MOST OF YOUR TIME?

Respondents report a variety of areas occupy most of their time, most commonly General IT Management (24%), Project Management (22%) and Leadership & Professional Skills (19%).



Question: Which of the following areas occupy most of your time?
(Select all that apply.)
Base = Channel Professionals; multiple answers permitted (n=168).

When given a list of multiple IT job roles and asked to cite any that occupy a major portion of their time, 24 percent of respondents said they were involved with general IT management, while 22 percent cited project management. Some 19 percent of respondents said their roles required leadership and professional skills, while 14 percent said they were involved with security and another 14 percent with network management. Only 3 percent were involved with any aspect of hardware engineering, and only 2 percent with facilities management. These figures are not necessarily indicative of the allocation of responsibilities within data centers, just the breakdown of roles among our respondents. Still, it's an indicator that the relatively high salaries and depths of experience reported by the survey respondents are on account of their managerial and leadership roles, even though executive leadership comprises a minority.

Nine out of 10 respondents were male.

KEY FINDINGS

THE SKILLS SHORTAGE SHAPES THE DATA CENTER



88% feel that they are **very important** to the success of their employer.

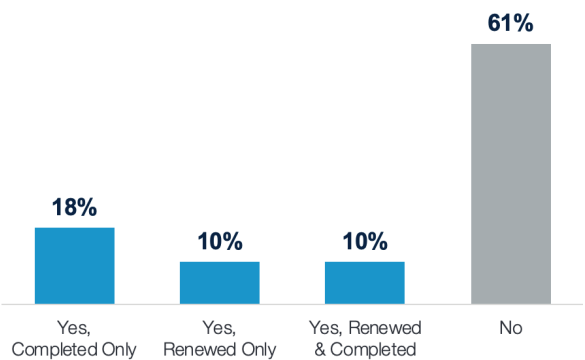


56% say they have **all the training they need** to do a good job.

For the better part of this decade, one of the principle story lines in the data center industry has been the growing skills gap: the difficulty enterprises and organizations have with recruiting new individuals to meet the need for emerging skills or cultivating those skills among their existing IT workforce. While 88 percent of respondents told us they agreed at least somewhat with the statement, “What I do is very important to my employer’s success,” only 56 percent said they would agree with, “I have all the training I need to do a good job.” That’s despite 74 percent of respondents telling us they’ve served in the IT industry for a decade or longer.

KEY FINDINGS

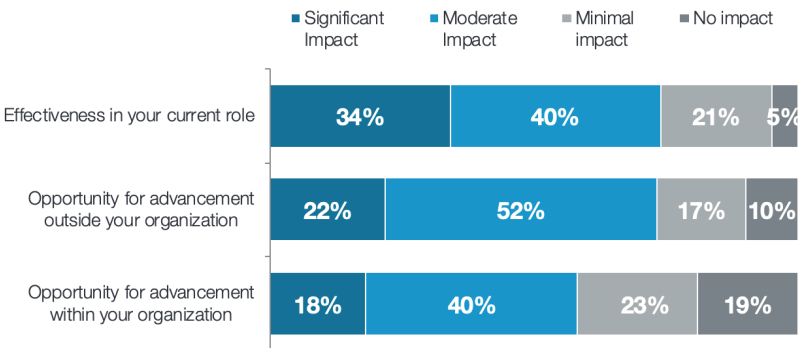
COMPLETED CERTIFICATIONS



IT industry certifications are often offered through professional organizations, many of which offer refresher courses and resources for maintaining skill levels, usually for an annual fee. More than three respondents in five (61 percent) told us they have not completed or renewed any of their professional certifications within the past 12 months. At the same time, 74 percent indicated that such a certification would improve their effectiveness in carrying out their current role, 74 percent said a certification would be beneficial to advancing their careers, and 58 percent said it would help them advance within their own organizations.

What's keeping these professionals from updating their certifications? Among the 61 percent group with no certifications or with lapsed ones, more than a third (34 percent) said this was due to a lack of a training budget at their organizations. Some 24 percent cited a lack of time, while 16

IMPACT OF CERTIFICATIONS

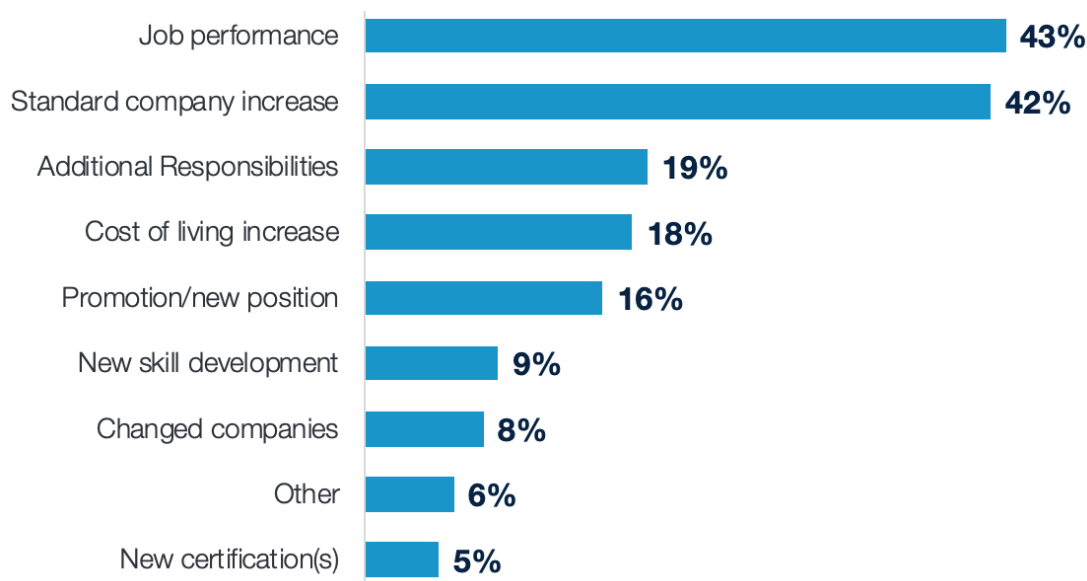


percent said management doesn't see a need for training, and 16 percent cited no training plans within their workplace. Only 10 percent said no certifications exist that pertain to their job roles.

Put another way, everyone knows there's a skills gap, and everyone knows why. But filling that gap requires some sort of sacrifice — time, money, and perhaps control — that few are willing to make.

KEY FINDINGS

DRIVERS OF SALARY INCREASE



Among those respondents who reported receiving a salary increase, 43 percent said it was on account of their job performance. Only 9 percent attributed their raise to having acquired new job skills and 5 percent to acquiring a new certification. It's the output, the bottom line, that employers are valuing much more than the input, the studying and the perseverance.

"The difference between working in a school and working in the data center industry is that schools don't have a problem with a talent shortage," says Sean Bodnar, who directs recruiting operations for New Jersey-based data center facilities staffing firm Pkaza. "They post a job, and they have a wave of thousands of resumes, and everyone's qualified."

The way individuals are recruited and trained for the more intellectual roles in the data center — or, more accurately, the way they're not being recruited or trained — may have a lot to do with phenomena such as the gender disparity reflected in the survey sample. Bodnar has had experience with both education and IT and sees where the former industry has had greater success of late, particularly with messaging: selling itself as a meaningful and worthwhile career. This success is despite the fact (as the US Bureau of Labor Statistics attests) that the data center industry pays much, much better than teaching.

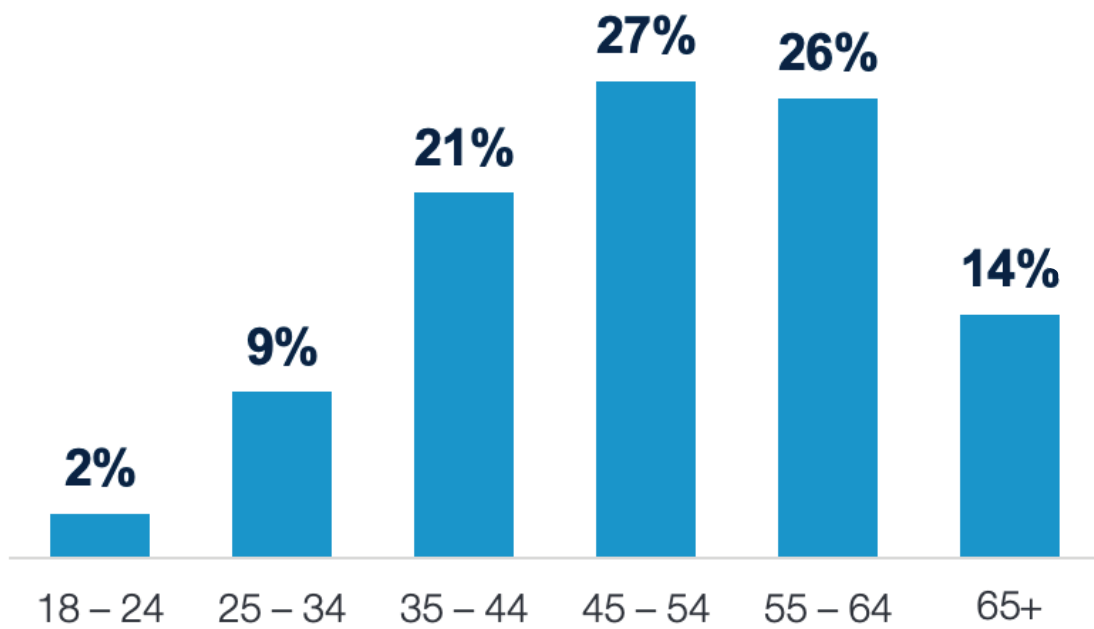
"I don't think there are as many people familiar with this industry and all it has to offer," he says.

KEY FINDINGS

Both Pkaza and Datacenter People made this telling observation: their staffers are seeing a growing number of qualified candidates in the US and the UK entering all sectors of the data center workforce from the armed services. Process orientation, personal discipline and the ability to lead a team are all perceived as key qualities prized by executives — qualities fostered through military service.

In an odd way, this could actually be contributing to the skills shortage problem. None of these personal qualities acquired through the US Army or Royal Navy, for instance, are perceived as requiring annual refreshing or certification. Key personnel are retained by the military and are not being replaced except in unique circumstances — for example, an honorable discharge after multiple tours of duty overseas.

RESPONDENT AGE



In another telling figure taken from the basic survey firmographics, two-thirds of respondents (67 percent) are no younger than 45. Some 14 percent are at least 65, an age where IT professionals often choose to retire and where other professions may encourage or otherwise compel them to do so.

KEY FINDINGS

JOB SATISFACTION REMAINS FAIRLY HIGH, DAMPENED BY THE SKILLS SHORTAGE



75% **would**
recommend their child, niece
or nephew enter the IT field.

Despite this trend, most of these retained personnel are happy with their work, and many are satisfied with the positions they hold. Some 72 percent of respondents told us they agreed with the statement that they love their jobs, and 75 percent would recommend the IT field as a career path for their progeny.

Even these numbers are not as high as they could be, according to several professionals we consulted. It's difficult to understand why someone wouldn't recommend an industry where the technology is always evolving, that plays such a critical role in the world and where businesses are requiring continuous, always-on connectivity,



72% say that they
love their job.

says Pkaza founder and CEO Peter Kazella. There are so many different aspects of this industry, he says, that if someone wasn't happy in their current position, they could move to a completely different one with an altogether different set of operating parameters and yet stay in the same industry.

What's causing this dissatisfaction? When survey participants were asked if they agree with the statement, "I can get my work done in a normal 40 to 45-hour work week," 59 percent of respondents agreed at least somewhat. So that's not the problem. The statement that generated the greatest level of disagreement or ambivalence

KEY FINDINGS



— which, even then, was not high — was, “I have all the training I need to do a good job,” with 28 percent at least somewhat disagreeing. Data center professionals will be more likely to feel they lack the skills than to feel they lack the time.

“If you have the respect and support of your peers, it will still clearly drive a higher level of job satisfaction, and you feel like you are part of family,” says Ward Wilson, a two decades-long veteran of the data center industry, most recently with a major airline.

“I’ve seen a noticeable number of engineers on teams I’ve managed and worked on that find job satisfaction not only in management and

peers, but also their opinions on the data center/ infrastructure hardware,” Wilson says. “Supporting heavy-duty hardware like diesel generators, CRAC units, and UPS can be like a kid who likes to work on cars. After you’ve worked supporting a room-sized diesel generator for a period of months or years, you develop trust for that hardware, and thereby can find job satisfaction by keeping that equipment well cared for and ready for use.”

Wilson’s sentiment was indeed reflected by 62 percent of survey respondents, who agreed at least somewhat with the phrase, “I have all the tools I need to do a good job.”

CONCLUSION

At any moment, 14 percent of respondents could declare they’ve had a full and satisfying career, and with their savings and pension, retire very comfortably. The most valued members of the IT and data center workforce cannot be retained forever.

As data center infrastructure completes its transition to a cloud computing model,

and software moves into containers and microservices, the remaining, treasured leaders of the data center workforce — people who acquired their skills in the 20th century — may find themselves with nothing recognizable they can manage and no-one to lead. We may be shocked when the crisis finally hits, but we won’t be able to say we weren’t warned.