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Expert Reference Series of White Papers

# Analyzing a Decade of IT Trends

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## Introduction

The Global Knowledge IT Skills and Salary Report is a window into the inner workings of IT departments, revealing insights and opinions held by professionals around the world. For 10 years, we have surveyed over 120,000 men and women in IT about the state of the industry. Each year, we're committed to providing readers with insight into the most in-demand skills and certifications, as well as plenty of salary figures to compare and contrast against their own. We also highlight the top concerns of both staff and decision-makers and project the top focal areas for the coming year. The result has been the most honest and in-depth IT examination of its kind.

With a decade of data at our fingertips, we analyzed 10 years' worth of reports and noticed four major trends that are too glaring to ignore. Each trend focuses on a topic that has either changed drastically over the last decade, or has burst emphatically onto the IT scene.

The four key areas this white paper will examine are certifications, salaries, cloud computing and cybersecurity. All statistics, unless otherwise attributed, have been pulled directly from our reporting. For your reference, [all 10 of our IT Skills and Salary reports can be accessed online](#).

White paper broken down into four parts:

[Part I - IT Certifications: 5 New Realities](#)

[Part II - IT Salaries Outpace Other U.S. Industries](#)

[Part III - Cloud Computing: Zero to Hero in Under 10 Years](#)

[Part IV - Cybersecurity Supply Hasn't Caught Up with Demand](#)

## Part I — IT Certifications: 5 New Realities

### It's no longer good enough for IT professionals to just "know computers"

Want to get a good idea of how the perceived value of certifications has changed over time? This is a line from our first IT Skills and Salary Report in 2008:

*“There have been many articles and discussions regarding the value of certification, and in general, employer support for certification appears to be mixed.”*

What a difference a decade makes. In our [2017 report](#), there are few mixed feelings—94 percent of IT decision-makers believe a certified team member brings added value above and beyond the cost of certification. Those values include increased productivity and faster troubleshooting, which are vital abilities in today’s tech world as skills gaps are steadily widening.

Certifications are now considered the pinnacle of achievement in the tech industry. That’s a huge change in perspective from a decade ago when many IT professionals still didn’t understand the merit of certification.

## Certification Value Has Skyrocketed

When you analyze 10 years of survey responses, the data overwhelmingly illustrates a rise in demand for certification training.

- In 2008, 9 percent of respondents said the main reason they train is to prepare for certification. In 2017, that number has risen to 47 percent.
- In 2008, just 38 percent of IT professionals held at least one certification. In 2017, 86 percent are certified.
- In 2008, 42 percent of respondents said they plan to pursue a certification in the next year. In 2017, 67 percent will either pursue certification or are already in the process of becoming certified.

Currently, our survey respondents hold an average of three certifications. There’s a lot of competition in the tech industry, so professionals often have their eyes set on their next certifications years in advance.

## Certifications Pay Off

It’s not just the employers who are benefiting from an increase in certification training. In 2017, certified IT professionals in the U.S. and Canada have an average salary of \$90,512, which is nearly \$8,400 or 11.7 percent more than non-certified professionals. As long as the training is career-relevant, it certainly pays to pursue certifications.

There has, however, been a slight shift in the top-paying certifications over the last 10 years. In our inaugural report, [Project Management Professional \(PMP®\)](#) was the top-paying certification at \$101,698. While PMP® currently ranks fifth and is still a popular and lucrative certification, security certifications took over as top-paying in 2014 and have been at the forefront ever since.

ISACA'S [Certified in Risk Systems and Control \(CRISC\)](#) has been the top-paying certification for three of the last four years. CRISC is a certification designed for IT professionals, project managers and others whose job it is to identify and manage IT and business risks through appropriate Information Systems (IS) controls. Currently, IT professionals who hold a CRISC certification have an average salary of \$127,507.

Amazon Web Services (AWS) certifications have also made a big splash since debuting in 2013. [AWS Certified Solutions Architect – Associate](#) was the second highest-paying certification in 2016 and the third-highest in 2017.

[Certified Information Systems Security Professional \(CISSP\)](#) was No. 4 in 2008 and is still fourth in 2017, but its average salary has increased from \$94,018 to \$118,179.

See our complete list of the [2017 top-paying certifications](#).

## Microsoft is Still a Big Deal

One thing that hasn't changed in 10 years is the popularity of certain certifications. In 2008, [Microsoft certifications](#) were dominant. Nearly 35 percent of respondents held a Microsoft certification. The next highest was Project Management at 16.3 percent.

Fast forward 10 years, and Microsoft is still on top even though other certifications have closed the gap. Thirty-six percent of IT professionals currently hold a Microsoft certification. Cisco is just behind at 31 percent while cybersecurity certifications are held by 26 percent of our respondents.

CompTIA has also made significant gains. Thirty-five percent of 2016 survey respondents were CompTIA certified, which narrowly edged out Cisco, Microsoft and cybersecurity.

In terms of salary, professionals who hold a Microsoft certification earn an average of \$91,428, which is well above the global mean.

## How Employers View IT

Management's perspective on IT training has certainly shifted over the course of our reporting. In 2011, only 35 percent of decision-makers believed certifications led to a more effective staff. Today, managers are nearly unanimous in their support.

The additional skills that certified employees bring to the table are also a welcomed benefit in an industry that's currently facing ever-widening skills gaps. When asked to estimate the economic benefit of a certified staff member versus a non-certified peer, one in four IT decision-makers said it

exceeds \$20,000 annually. Nearly 30 percent projected the benefit to fall between \$10,000 and \$19,000, which far exceeds the cost of the certification exam and prep fees.

The advantages of certification seem obvious now, but skepticism of its value and IT in general was rampant a few years ago. According to Daniel Cummins, Global Knowledge Technical Instructor of Networking and Security, organizations used to consider IT a necessary evil.

“Business owners didn’t understand it, but since they needed technology to do their jobs, they hired guys who ‘knew computers’ to handle support,” Cummins said.

Cummins says the increased frequency of major security breaches forced employers to take IT departments more seriously. The search for qualified and certified IT professionals became a driving force of many organizations.

“It was no longer good enough to ‘know computers,’” Cummins said. “Now, we are looking for experts.”

Holding a certification may not be enough anymore. Cummins says that a certification was once proof of expertise without the need for a full degree, but he’s seen a shift in recent years.

“I’m seeing a trend toward degrees and certifications now,” he said. “Employers want a four-year bachelor’s degree in a related discipline and expert-level certifications.”

## More Experts Are Needed

Year after year, building new skills is the No. 1 reason why IT professionals train. Traditionally, preparing for a certification exam is second.

The two go hand in hand. Certification value remains high as experts with diverse skill sets are needed in every IT department. This trend is likely to continue as rapid innovation continues to impact the industry.

Certifications, especially in cybersecurity and cloud computing, are growing in popularity for a multitude of reasons. Security breaches are increasing in size and scope, and it’s no longer a matter of if companies will be using the cloud but when. Decision-makers are also struggling to hire qualified candidates for these two specific functional areas.

“Clearly there’s a shortage of true cybersecurity people in the industry,” said Dave Buster, Global Knowledge’s Senior Portfolio Director for Cybersecurity.

Buster attributes the scarcity of cybersecurity professionals to a number of reasons, including a lack of clear career paths and a perception that cybersecurity is “too difficult.”

As for cloud computing, the rapid market advancement is creating new roles that force traditional IT pros to re-train and those looking to be hired learn new skills. Like cybersecurity, supply has yet to catch up with the demand for talent, but with an expected [18 percent growth this year](#), the cloud market should get increasingly competitive.

As the pressure on IT departments continues to rise, there's an increased need for new ways of thinking about and performing tasks. The expertise gained from certification is the best way for professionals and decision-makers to ensure team and organizational success.

The benefits of certification are just too great for the value to dip. Certified IT professionals exhibit increased productivity and faster troubleshooting skills—two extremely important attributes needed to combat skills gaps.

Certifications remain the pinnacle of achievement in the tech industry, and that sentiment is unlikely to change.

## Plan Your IT Certification Roadmap

Check out our available [certification training](#) to find the one that's right for you. If you need help planning your certification path, [contact us](#) and our experts will help you determine your next step.

## Part II — IT Salaries Outpace Other U.S. Industries

### Tech industry has bounced back in a big way since the recession

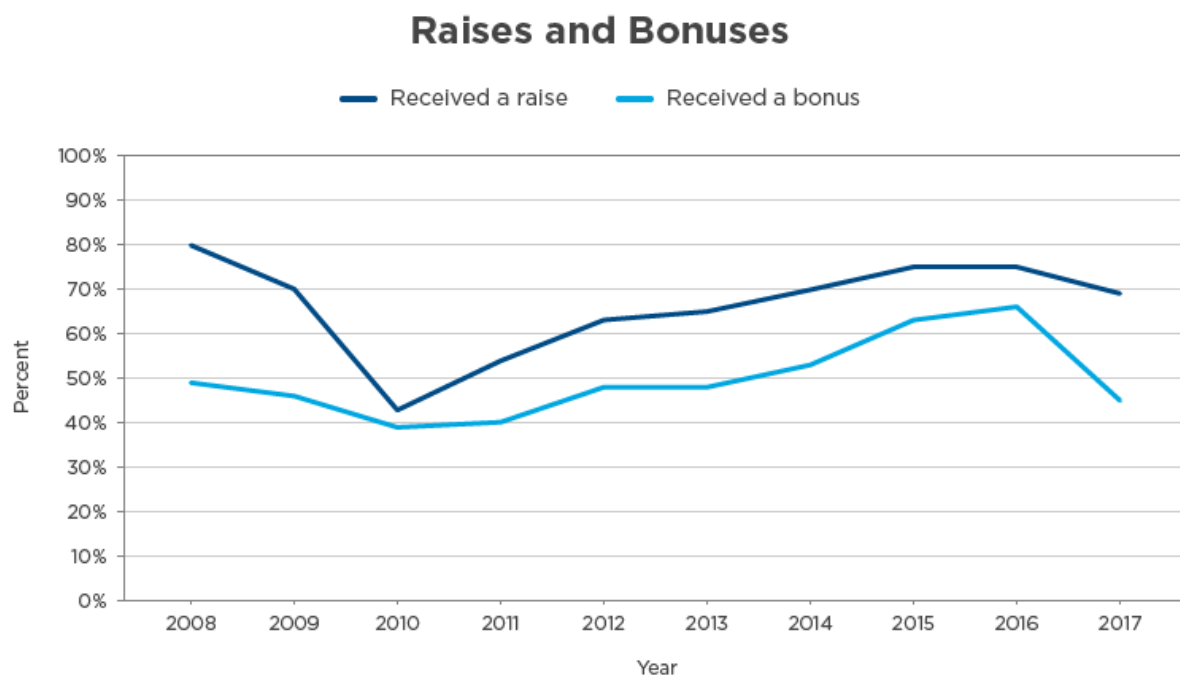
When we issued our first IT Skills and Salary Report in 2008, the United States was on the cusp of a financial crisis of such magnitude that businesses are still feeling the reverberations today.

According to the United States Department of Labor, 8.7 million jobs were lost from February 2008 to February 2010. The unemployment rate rose from 4.7 percent in November 2007 to a peak of 10 percent in 2009. And while the

tech industry is one of the country's most profitable, it wasn't immune to the perils of the economic recession.

An analysis of a decade's worth of survey data reveals a majority of the "low points" fell within the 2008-10 window. Our 2010 report, which compiled survey responses from IT professionals in 2009, saw 10-year lows in raises, bonuses, employee training and manager salaries.

No deep examination is needed—just look at our raise and bonus data from the last decade. You can clearly pinpoint the timing of the recession and see the direct impact on IT professionals.

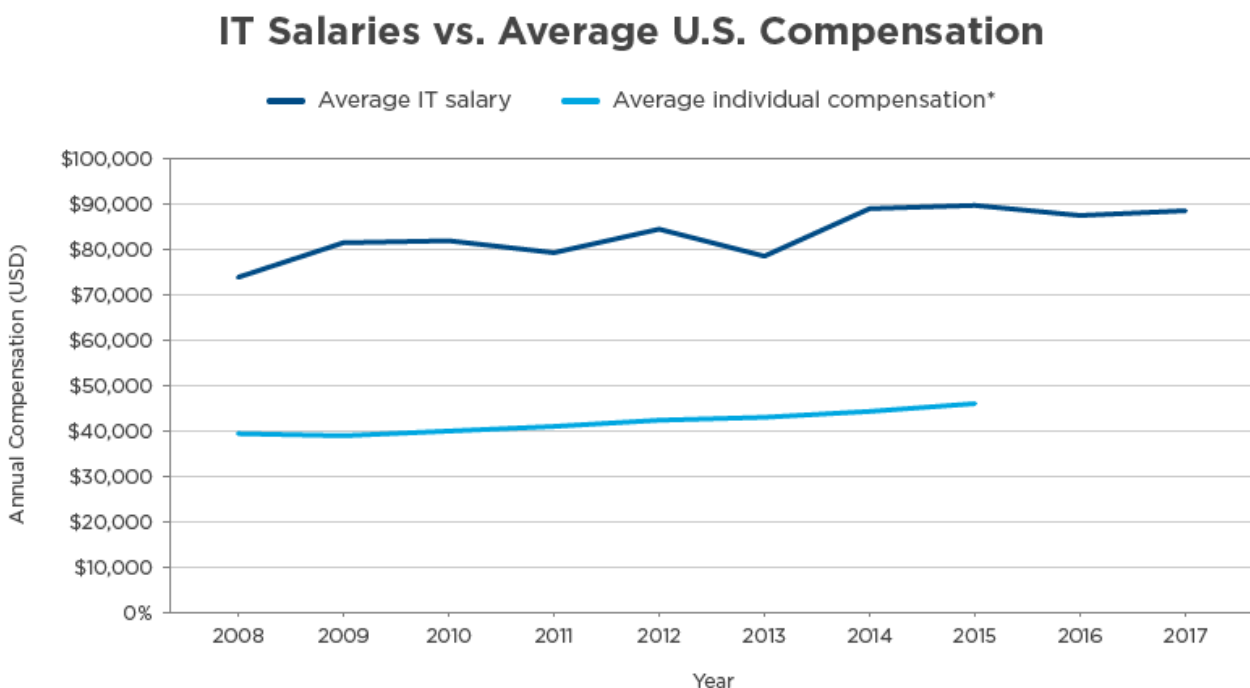


North American raises and bonuses took a dip in our most recent report. It's unknown whether this is the start of a new trend or a one-year blip. It's also important to know that IT salaries dropped in 2016 too but are on the rise again this year. It'll be interesting to see if raises and bonuses follow this same trend when our 2018 report comes out.

Overall, the salary figures are encouraging when you look at the last decade as a whole. In 2008, the average salary of our survey respondents was \$73,963. In our most recent report, the average salary for IT professionals in the U.S. and Canada was \$88,640. That's a 16 percent increase in 10 years.

To put that in perspective, the Social Security Administration reports that average individual income in the U.S. rose roughly 14 percent from 2008 to 2015. (Income numbers are not available for 2016 and 2017).

While income levels are gradually rising throughout the country, salaries in the tech industry are considerably higher and growing at a faster rate.



\*U.S. net compensation statistics per the Social Security Administration.  
Income numbers are not available yet for 2016 and 2017.

The salary growth rate is even higher for survey respondents who hold some level of managerial responsibility. Since 2010, IT managers have reported a 21 percent increase in salary (rising from \$87,934 to \$111,174).

And while salaries have increased, the duties of decision-makers haven't exactly gotten easier. Our data shows that IT teams are getting smaller. In 2015, 49 percent of IT decision-makers managed teams of 10 or fewer. That number is up to 52 percent in 2017.

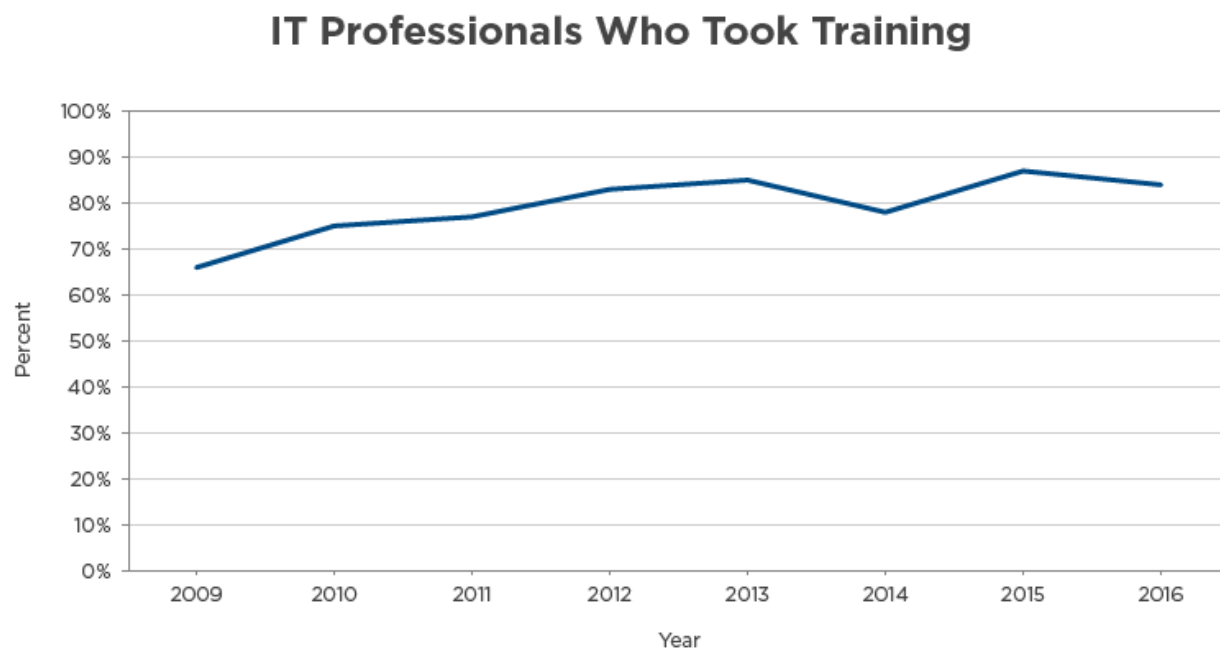
Larger teams haven't fared well either. In 2015, 11 percent of decision-makers managed teams of 500 or more. That number is now at 9 percent.

As staffs shrink, IT leadership is under more pressure to better guide the use of resources to meet the information needs of the organization. Frankly, they're asked to do more with less. Skills gaps are quickly becoming a major

issue, and security threats are constantly evolving. Salaries may be up, but so are the challenges facing management.

IT professionals agree on one thing: Training is vital to organizational and personal success. Hardware and platforms are constantly evolving, but technology is only as good as the people who work with it. There's a critical need to invest in training, especially as skills shortages surge.

It's no coincidence that an increase in IT training has resulted in an increase in IT salaries. Look at the training data since 2010—it's nearly identical to our salary data from the same timeframe.



Naturally, salaries tend to increase over a 10-year span because of inflation, but IT income is outpacing current inflation rates. According to the U.S. Bureau of Labor Statistics, from 2008 to 2017, the cumulative rate of inflation is roughly 13 percent. IT salaries have risen 16 percent. A greater emphasis on training may not be the only reason for that 3 percent gap, but it's certainly a major factor.

## Company Size

Traditionally, our reports have revealed that IT professionals earn higher salaries at larger companies. That's not a huge surprise since larger companies tend to have more resources dedicated to training and hiring.

But continual training is equally important to companies of all sizes because:

- Professionals at larger companies must have relevant skills to stand out amongst a stronger crop of peers.
- IT decision-makers must make efficient use of training resources at smaller companies with traditionally smaller budgets.

## Geography

Salaries vary considerably based on state and region. In the U.S., the Pacific region (California, Oregon, Washington, Alaska and Hawaii) has taken the top spot in average salary for our last two reports. In our inaugural survey in 2008, it was the fifth highest region. Average salaries for Pacific IT professionals have increased 29 percent in 10 years from \$73,176 to \$102,775.

The Mid-Atlantic region (New York, Pennsylvania, New Jersey) has seen a similar growth (25 percent). In terms of states, Washington, D.C. has had the highest IT salaries since 2013. IT professionals in D.C. reported an average salary of \$125,746 in our most recent report. That number has skyrocketed 38 percent since 2008.

Some of those high-paying IT jobs have spilled over to Virginia as well. Washington's neighbor has consistently been the second-best state in terms of salary, and Connecticut is also on the rise.

One state that has dropped in our rankings has been New Jersey, which was the top-paying state in 2009 and second in 2010 and 2011. It currently ranks outside of the top five. For more information, check out our [guide to 2017 IT salaries by state](#).

We'll have a better understanding of worldwide salary trends in the coming years since 2017 was the first time we surveyed global professionals. In our first year, the data shows the United States and Canada own a considerable salary advantage over the rest of the world.

1. United States – \$94,413
2. Canada – \$71,633
3. Europe, Middle East and Africa – \$50,723
4. Asia-Pacific – \$43,559
5. Latin America – \$30,127

## Functional Area

IT professionals tend to have their finger on the pulse of trending areas. Our survey respondents noted cybersecurity and cloud computing as the two most important focus areas in the upcoming year. Not surprisingly, security salaries are the highest globally, and cloud salaries are the fifth highest globally and the highest in the U.S. and Canada. These salaries have also risen rapidly with security salaries increasing by 22 percent since 2011 and cloud computing salaries up 11 percent in just three years.

## Looking Ahead: Education and Experience

Growing salaries in the IT industry are reflective of the demand for qualified and innovative IT professionals. Essential expertise is constantly shifting with technology changes, so education and experience are the best ways to achieve lasting success.

As more professionals have trained over the last decade, IT salaries have risen in unison. The industry bounced back from the most recent recession and continues to show signs of long-term staying power. But changes are needed to ensure positive trends continue.

The value of training is at a 10-year high, but budgets are shrinking and skills gaps are rising. The pressure is on management to find professional development opportunities wherever they can to keep staff motivated and in-step with industry fluctuations. Skilled employees drive success, not technology.

The good news: high salaries attract better candidates. And businesses are scouring for any kind of competitive edge. The more skills you possess, the more opportunities you'll have for success in the tech field.

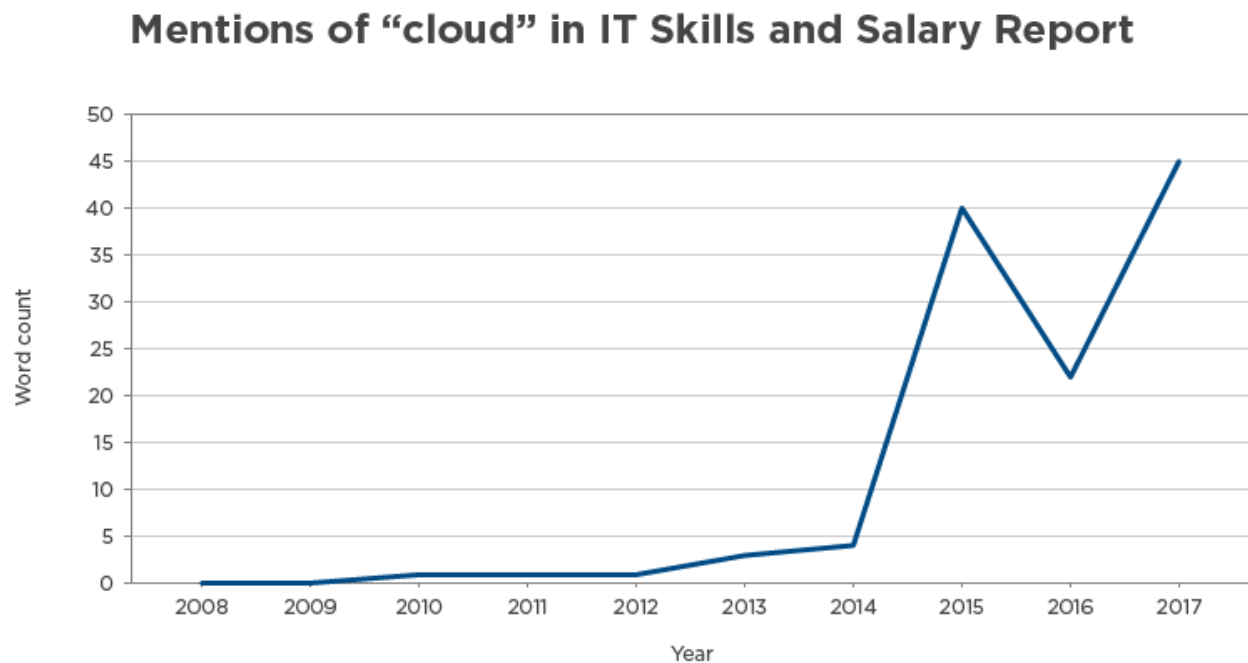
## Part III — Cloud Computing: Zero to Hero in Under 10 Years

### Cloud computing emerges as top global tech area

The shift to cloud platforms has been swift and impactful. The rapid rise and adoption by IT departments has been well documented in our IT Skills and Salary Report.

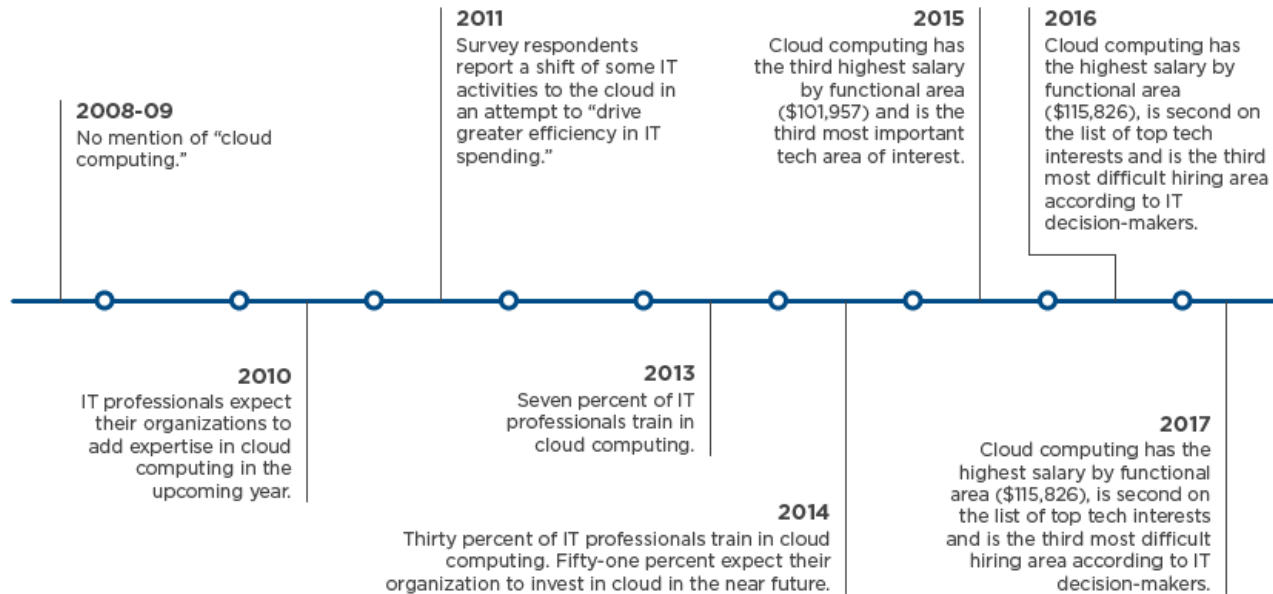
Even the mere mention of “cloud computing” is a new phenomenon, really only making a noticeable dent in the IT industry in the last three years.

To be more specific, the term “cloud” has appeared 117 times in the 10 years of our IT Skills and Salary Report—107 of those mentions have occurred since 2015.



To further illustrate the rapid ascension from non-existence to one of the most important topics in the industry, here is a timeline of cloud computing’s growth according to our report:

## Growth of “cloud computing” according to IT Skills and Salary Report



Cloud computing went from relative obscurity to the No. 1 area of interest worldwide in about eight years. But it didn’t happen without some resistance.

Initially, a shift to cloud services was met with a bevy of fears—the strongest being the belief that cloud computing would result in downsizing. In its early years, many in the industry regarded cloud computing as a form of outsourcing to companies like Amazon Web Services (AWS) and Google.

By 2015, those fears were mostly quelled. Cloud computing certainly had a major impact on IT organizations but not in the way many anticipated. New roles were created, and existing employees were presented with more opportunities to add new cloud-based skills.

Global Senior Portfolio Director Pete Vorenkamp, who oversees Cloud Computing for Global Knowledge, says that a shift to cloud is forcing the old legacy IT silos to fall and enabling a new more collaborative and agile IT.

“I would say that clients are also starting to accelerate their understanding of the fact that old IT roles need to morph into new cloud-type roles, which in many cases means wearing many hats and collaborating more,” Vorenkamp said.

Roles may have shifted, but few tech companies were forced to downsize. In fact, 25 percent of survey respondents in 2015 reported an organizational shift to cloud services resulted in the hiring of additional staff members.

Even with the increased focus on training and hiring cloud-ready professionals, the supply still hasn't caught up to the demand. Management is desperate to add trained cloud employees—28 percent currently report a struggle to hire in the field. That number is up 6 percent from 2016. While skills shortages are hindering IT departments around the globe, this dire need for cloud experience presents a huge opportunity.

“Organizations have not been able to keep up in part because they are looking outside to hire talent, and the reality is we have a shortage of cloud-skilled IT resources,” Vorenkamp said. “This is why focusing on re-training existing in-house talent has to be a priority, too.”

IT professionals trained in cloud have the unique ability to fill gaps in organizations and are most often paid extremely well. Globally, cloud computing professionals have the fifth highest average salary. In the U.S. and Canada, cloud salary is first (\$114,043) and edges out cybersecurity (\$112,764) and Project Management (\$95,878).

Thus, [cloud training](#) has been a hot commodity. Amazon Web Services offers cloud-based certifications that are rising in popularity and pay off financially. [AWS Certified Solutions Architect - Associate](#) is the third highest-paying certification for 2017. In the U.S. and Canada, average salary for AWS-certified IT staff is 27.5 percent higher than the norm.

The popularity of AWS certifications has certainly risen quickly since their launch in 2013. With both associate and professional-level paths available, [earning a top-paying AWS certification](#) has become a goal for many IT professionals.

Those holding other cloud certifications, such as CompTIA Cloud Essentials+ (CEP), CompTIA Cloud+, and Architecting Microsoft Azure Solutions, have significantly higher salaries than non-certified peers.

In total, individuals holding a cloud computing certification make about \$12,000 more than the average certified IT professional. In the U.S. and Canada, the average salary of a cloud certified employee is \$101,731.

## AVERAGE SALARY BY CERTIFICATION

	U.S. and Canada			Total		
	Mean	Median	Count	Mean	Median	Count
Cloud Computing	\$101,731	\$96,900	216	\$80,193	\$72,638	466
Total	\$90,512	\$83,960	5,302	\$67,997	\$64,000	10,812

The cloud debate is practically over—both IT professionals and organizations are on the same page. In terms of cost and the ability to streamline operations, cloud is unrivaled. But the shortage of talent is palpable and businesses are scrambling to hire skilled candidates and train existing personnel. Keeping pace skills-wide with cloud innovation has been a challenge.

In 2011, Cushing Anderson of IDC projected that demand for cloud professionals would grow by 26 percent through 2015. That demand hasn't fallen off as cloud computing tops the list of tech areas IT professionals expect their organizations to focus on in the coming year.

"Businesses used to be trying to understand if moving to the cloud made sense," Vorenkamp said, "and now it's no longer 'if' but 'when and how.'"

Cloud computing surpassed cybersecurity as the top focal area of 2017. It is the quickest evolving trend in IT, and businesses are striving to stay in sync with the changing products and services.

### How Global Knowledge Can Help

Critical skills gaps must be alleviated to advance cloud maturity. Our cloud portfolio creates learning paths for executives and professionals to acquire business knowledge and deep technical skills the tech community needs to maximize cloud solutions.

But building the appropriate skills isn't a one-step process. In terms of cloud, there are several implications to consider:

- Design and architectural responsibilities
- Migration and integration of current environments
- Management of cloud providers
- Securing the cloud environment
- Data management and analytics

Cloud computing adoption isn't fully complete until all of these skills are addressed and executed.

Whether you're a decision-maker, an architect or an engineer, we understand the main challenges of all cloud users. For example, we know that cloud developers must have a strong understanding of cloud-native applications that are portable between multiple environments. The challenges facing cloud users in this area include security when programming or developing new applications, portability when having to create new or move legacy applications, and the need to stay current with new products and services.

Designing a curriculum that provides clear learning paths is the best way to deliver knowledge. We work closely with the key market players to provide authorized and current content.

To address marketplace skills gaps, we create unique content to meet all training needs. Many businesses are choosing cloud because the benefits are undeniable. When implemented correctly, cloud computing can result in:

- Improvement in time to market
- Increased company growth
- Increased internal process efficiencies
- Reduced IT costs
- Reduced IT spend and maintenance costs

The cloud market is rapidly growing and showing no signs of slowing. New roles are being constantly created, which is causing traditional IT pros to re-train and those looking to be hired learn new skills.

There's a reason why cloud's rise has been so sudden—the skills implications are irrefutable. As is true with almost all processes in today's IT departments, constant training and certification are crucial for success. The pace of technological innovation is difficult to keep up with. A strong and established learning path is necessary to meet all of your cloud goals.

## Start your path

Thirty-nine percent of our survey respondents chose cloud computing as the top technical area they expect their organization to focus on this year. With such a widespread and global adoption, it's important that cloud expertise isn't limited to a select few.

Our [Cloud Technology Associate course](#) is a great way to bring everyone in your organization up to a baseline foundational level of understanding. The shift to cloud-based solutions is a key issue in the industry so finding and maintaining the appropriate skills is likely to be a major priority in the coming years.

Cloud computing is already a challenging hiring area. Educating your current staff will be critical to a successful move toward cloud-based operations.

## Part IV — Cybersecurity Supply Hasn't Caught Up with Demand

### Salaries remain high but cybersecurity skills gaps put organizations at risk

Unlike cloud computing, the concept of cybersecurity didn't burst onto the IT scene in the past 10 years. Securing data has always been of the utmost importance.

Since 2011, security has ranked either first or second in terms of top tech interest by our survey respondents.

While cybersecurity has always been a priority, managing it has changed drastically in the last decade. IT security professionals have different responsibilities than they did in 2008.

Let's examine the major factors affecting cybersecurity professionals today and how the field has transformed since we started surveying IT pros 10 years ago.

### Demand for cybersecurity professionals

It's rare nowadays to see a jack-of-all trades IT professional. With all of the components and assets making up the IT department and data center, the

need for specialization has been heightened. There are too many moving parts to have the same individual oversee security architecture and application development.

The supply has yet to catch up with that rising demand for security specialists. According to our survey, 31 percent of IT decision-makers are struggling to find qualified cybersecurity talent, making it the most difficult hiring area for the second straight year.

“There’s clearly a shortage of true cybersecurity people in the industry,” said Dave Buster, Global Knowledge’s Senior Portfolio Director for Cybersecurity.

According to our reports, cybersecurity skills gaps started to become a real issue in 2015. Companies always planned to invest heavily in cybersecurity, but our survey respondents didn’t voice a major concern about a lack of talent until the past few years.

And it’s not like the position doesn’t pay well. Cybersecurity professionals have the highest average global salary (\$87,850) and the second highest North American salary (\$112,764). While high salaries typically attract the best and brightest, Buster believes IT professionals may be scared off by a misconception about cybersecurity.

“The technology isn’t as difficult as they think it is,” he said.

Buster says that cybersecurity used to be a part-time function. Now it’s a full-time job and typically makes up 5 to 10 percent of an IT department’s budget.

## Rise in cyberattacks

In our 2008 report, we reported a record year for data security breaches. That record, it’s fair to say, has been surpassed with each ensuing year.

That’s not exactly a high score you want to beat.

Ten years ago, cyber criminals were mainly focused on website attacks. Over the course of our reporting, they’ve evolved to focus on password attacks. Then, they started hacking credit card databases and using credit card skimmers on ATMs and gas pumps. Now, they’re turning smart devices in homes, such as surveillance cameras and DVRs, against the consumer.

“We have one layer of problems; then, every couple of years we add another layer,” Buster said. “The problems don’t go away but we get better at solving them.”

Security has been top of mind for a majority of our survey respondents. Last year, a developer shared this thought when asked about the trends shaping their work:

*“Security, Security, Security. With all of the hacking of company systems, every level of an IT department needs to be aware of how they can do their jobs better and make their code or the systems they administer more secure.”*

The question no longer is “will my company get attacked?” The question is “when?”

We noted in our 2015 report that technologies and services shifted from incident prevention to incident response. The inevitability of cyberattacks led to this shift. Organizations are now focused more on detecting, responding and maintaining operations during an attack.

## Addressing the skills shortage

As decision-makers struggle to find the right cybersecurity professionals, skills gaps have widened. Companies haven’t been able to hire their way out of their skills gaps problems. Instead, their better option is to train existing personnel. And we’re not just talking about tech employees either.

Cybersecurity is no longer solely an IT problem. Modern-day hackers are targeting humans, not machines.

Rather than hack a website or program, it’s much easier for cyber criminals to call an employee, say they’re from IT, and ask for their password. If that doesn’t work, maybe a phishing email will succeed in installing malware or stealing personal information off your computer.

Every employee in an organization should have some level of cybersecurity awareness. IT professionals should get real cybersecurity training and cybersecurity specialists should have routine, intensive training.

Security certifications are part of that rigorous training. One trend that’s remained consistent over the course of our survey is that cybersecurity certifications are some of the highest-paying in the industry.

In 2017, four of the top five highest-paying certifications are security-based—ISACA’s Certified in Risk Systems and Control (CRISC), Certified Information Security Manager (CISM), Certified Information Systems Auditor (CISA) and (ISC)<sup>2</sup>’s Certified Information Systems Security Professional (CISSP).

CISSP has had impressive staying power. In 2008, we listed CISSP as No. 3 on our list of 10 Tech Certifications that Actually Mean Something. It was the

fourth highest-paying certification in 2008 and the third highest in 2009. It's currently fourth with an average salary of \$118,179 in the U.S. and Canada.

While we've reported higher average salaries for certified professionals versus their non-certified peers, certified security employees have an even greater advantage. Security-certified personnel earn an average of \$103,234 compared to \$90,512 for all certified professionals.

In terms of cybersecurity professionals, the average salary in the U.S. and Canada is \$112,764, trailing only cloud computing. That's a 24 percent increase from a reported average salary of \$85,699 for Computer Security Specialists in 2008.

And the level of skills directly impacts compensation. Certified professionals who have risen to the level of vice president or director can make up to \$63,000 more than specialist-level employees.

## An educated workforce is key

Data breaches were top of mind 10 years ago and still are today. That hasn't changed. The approach to cybersecurity, however, has shifted.

Security technology alone won't cut it. It's practically obsolete soon after purchase. Skilled and informed employees are invaluable, especially as they learn new security techniques and build expertise over time.

Global Knowledge's [cybersecurity curriculum](#) was built with this in mind and covers vital topics across policy, business process and technology. In fact, we own the largest portfolio of authorized security technology training in the world.

IT security positions, and certifications for that matter, have gotten more specialized. And so has our training.

And reality has set in—cyberattacks are inevitable. The key no longer is prevention; it's detection and response.

One thing hasn't changed over the last decade: cybersecurity professionals are some of the highest paid in IT, and that is unlikely to change anytime soon.

As attacks continue to evolve, so too will the needs of cybersecurity specialists. They are some of the brightest and most dynamic individuals in the industry. And still, they can't keep up with the pace of technology by sheer will. Continual skill development, through training and certification, is crucial to bolster your cybersecurity workforce.

## Summary

It is not a coincidence that the rise in IT salaries has mirrored a rise in IT training. The value of certification has never been higher, dispelling any hesitations that decision-makers had a decade ago. Certified professionals are more productive and have higher salaries across the board. The individual and organizational benefits of certification, and IT training in general, can no longer be ignored.

While the industry has rebounded strongly since the financial crisis, there are still some concerning trends to keep an eye on—most notably widening skills gaps and the lack of qualified cybersecurity and cloud computing professionals. Emerging technologies are forcing a greater need for specialization, and organizations just don't have the skilled professionals to fill those roles.

If the last decade has taught us anything, it's that new technologies will continue to burst onto the scene and IT departments will have to adapt quickly to ensure proper adoption and implementation. Cloud computing wasn't even a thought 10 years ago and now it's the hottest topic in tech. Things change quickly in this industry.

IT salaries are up, but we can't expect that trend to continue naturally. IT decision-makers must be prepared for change and have a training plan in place. That's the only way to close current skills gaps and prevent others from forming.

## Learn More

To learn more about how you can improve productivity, enhance efficiency and sharpen your competitive edge through training.

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## About the Author

Ryan Day is a Content Marketing Manager for Global Knowledge and has over 12 years of experience in the communications field. He is an award-winning journalist and editor, having worked for a daily newspaper in upstate New York. He also served as an editorial manager for PR Newswire in Washington, D.C. He currently lives with his wife in Durham, N.C.