

2015

**IT SKILLS**

**& SALARY**

REPORT

**A Comprehensive Survey from Global Knowledge and Windows IT Pro**



Global Knowledge®

Windows IT Pro



*Innovation distinguishes between  
a leader and a follower.*

**STEVE JOBS**

2001

## **INTRODUCTION**

Innovation is critical to success, even when it comes to survey research. To that end, we broadened the perspective of this year's IT Skills and Salary Survey, the eighth for Global Knowledge and the third in partnership with Windows IT Pro, to include the perspective of IT decision-makers (ITDMs). We asked these decision-makers to elaborate on some of their key considerations, including budget trends, adoption of cloud computing, and skills gaps and their impact.

For the third year, we invited non-IT professionals to share their opinions on the perceived benefits of professional development and their preferred learning methods.

More than half a million survey invitations were emailed to recipients from the databases of Global Knowledge, Windows IT Pro and partner companies in the fall of 2014. More than 16,300 respondents worldwide completed the survey, with over two-thirds of those in the United States and Canada. This report focuses on the 9,611 IT professionals and 1,413 business professionals in North America who responded.

## OVERRIDING TRENDS

### SKILLS IN SECURITY, CLOUD COMPUTING AND NETWORKING ARE IN DEMAND.

IT security tops the list of skills that ITDMs said their teams need most. ITDMs are also looking for professionals who have skills in network engineering, systems engineering, IT architecture and network operations. One out of five ITDMs reported having difficulty finding skilled talent for cloud initiatives.

### SKILLS GAPS ARE HAMPERING ORGANIZATIONAL SUCCESS.

Thirty-six percent of ITDMs reported measurable gaps in their IT groups' technical skill sets. Another third reported that, while they are OK today, they have concerns over the next two years. Only one-third reported that their IT groups have the skills needed for today and for the next 12 to 24 months.

Respondents who reported skills gaps said the gaps result in increased employee stress levels (82 percent), difficulty meeting quality objectives (61 percent), delayed hardware and software deployments (61 percent), and delays in new product or service development (56 percent), among other issues.

### THOUGH SALARIES ARE FLAT SINCE LAST YEAR, THE COMPENSATION SITUATION IS NOT ALL BAD.

This year's salaries range from \$88,335 for IT professionals (up one percent from \$87,873 in the 2014 study) to \$101,790 for business professionals (up from \$95,137 in 2014), with an overall average of \$89,891. This slow growth is consistent with the broader employment market.

Although overall salary growth is flat, other measures show some improvement. The percentage of respondents reporting a raise reached 75 percent – the highest since 80 percent in the study's inaugural year. Sixty-three percent reported receiving a bonus – the highest percentage ever reported.

### PROFESSIONAL DEVELOPMENT IS ABOUT MORE THAN SALARY INCREASES.

The opportunity for an increased salary is not the only perceived benefit of training. In fact, it fell to number 11 out of 15 possible benefits. Respondents ranked staying up to date on technological changes, developing skills that will be useful for future positions, and gaining insight to be more effective in their current role higher than a salary increase. Case in point, 70 percent of those who trained for certification purposes, as well as a comparable percentage of ITDMs who sent team members to certification-focused training, noted an improvement in their post-certification work effectiveness.

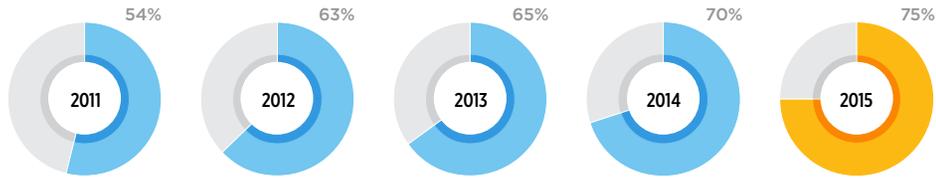
## PARTICIPANT PROFILE

### Base Salary

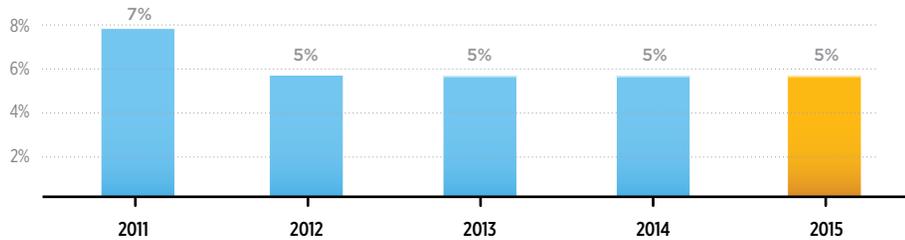


## PARTICIPANT PROFILE

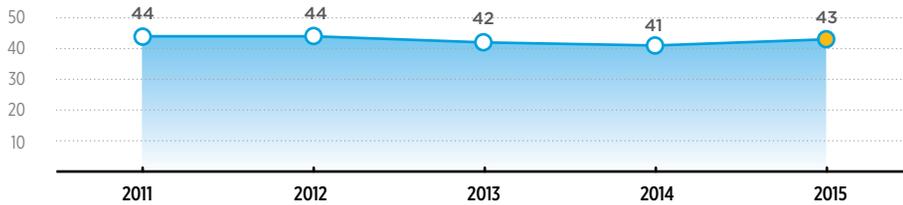
### Received a Raise



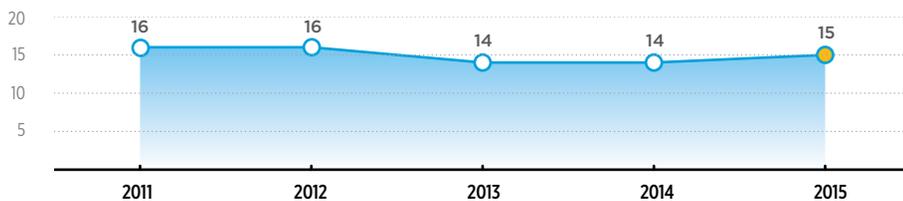
### Raise Percentage



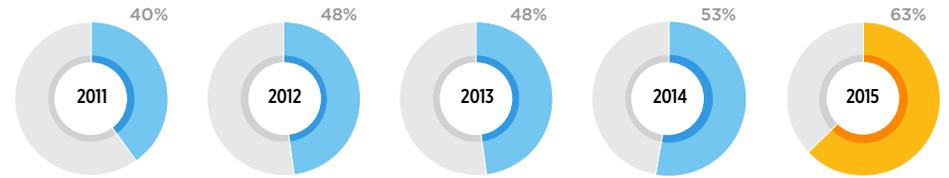
### Average Age



### Average Tenure



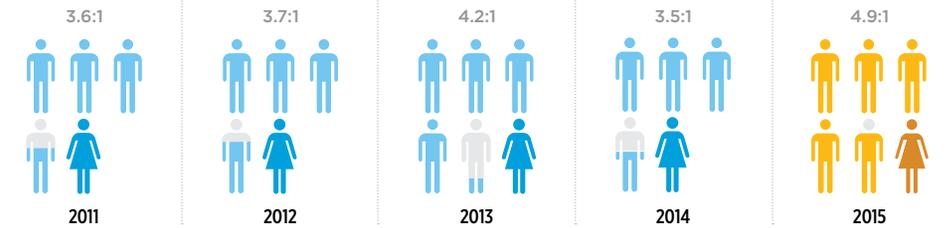
### Received a Bonus



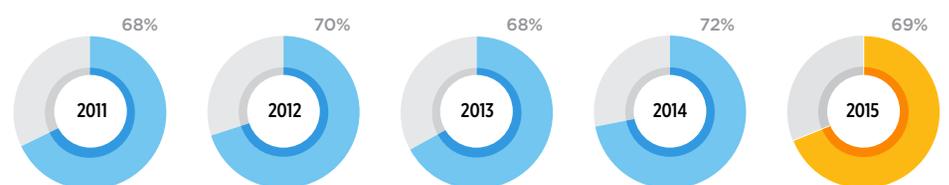
### Average Bonus



### Male vs. Female



### College Degree





*It's easy to make a buck. It's a lot tougher to make a difference.*

**TOM BROKAW**

## **COMPENSATION**

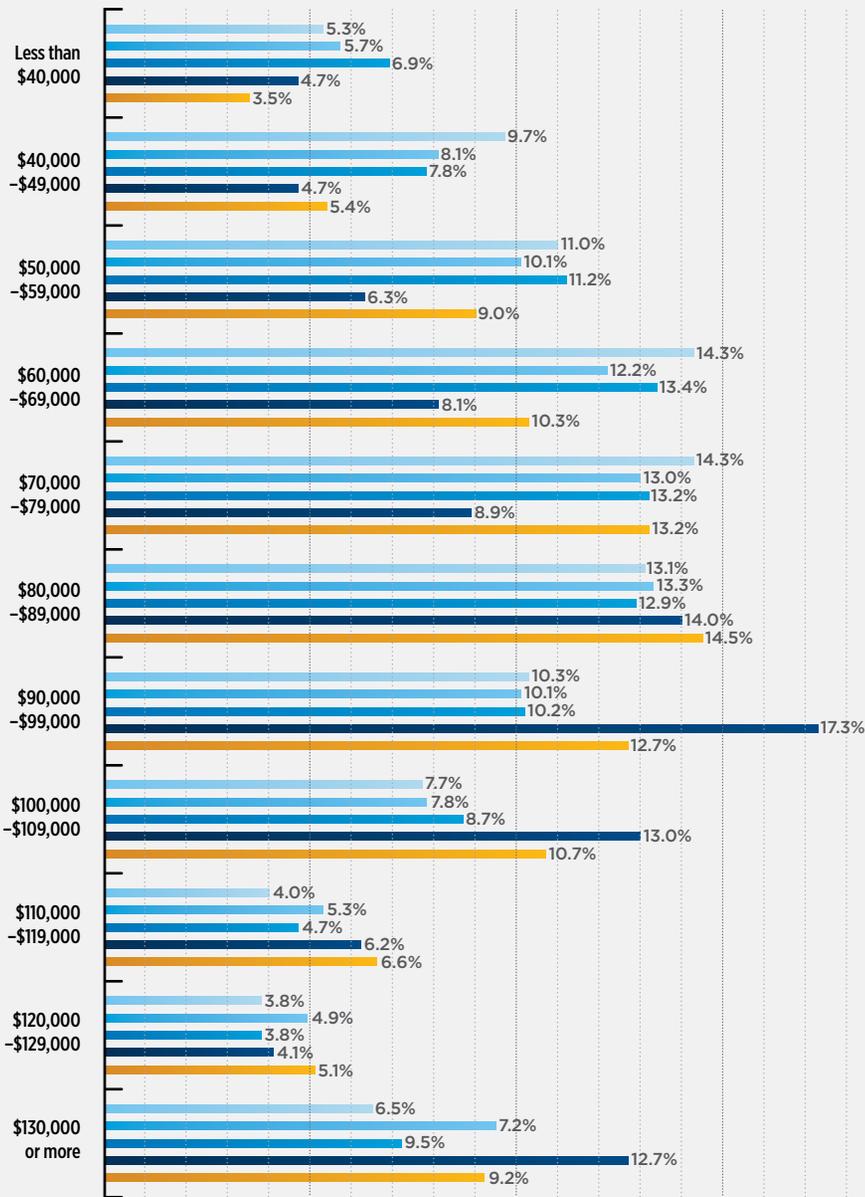
When it comes to income potential, several factors matter, including level of responsibility, job functional area, job role, skills possessed, industry, company size and geography. Data from this year's study highlights these factors.

One-fourth of the IT respondents to this year's survey reported a salary of less than \$70,000. The median salary for technical respondents is \$85,000, down slightly from the prior year at \$85,500. Fluctuations in salary are due in part to the composition of the respondent base, in addition to economic factors and changes in overall workforce structure.

A small pool of respondents, five percent, reported a decline in salary – consistent with data from 2013 and 2014. The primary reason for the salary decline was a change in employers, with the new position having a lower base salary.

**SALARY RANGE OF RESPONDENTS**

● 2011 ● 2012 ● 2013 ● 2014 ● 2015



**LEVEL OF RESPONSIBILITY**

Entry-level respondents earn an average of 48 cents to every dollar that an executive-level respondent earns, and the average salary for mid-level respondents is 31 percent higher than that of entry-level IT professionals. Respondents in senior positions realize a bump of 33 percent over their mid-level counterparts.

The average salary for entry-level IT staff is \$61,724 (median of \$58,000), and typical roles include senior help desk specialist, network technician and business systems analyst. Entry-level IT staff account for 17 percent of this year's technical respondents.

Mid-level professionals fare much better, with an average salary of \$81,141 (median of \$80,000). With roles such as manager of information security, manager of network operations and manager of applications systems architecture, mid-level professionals form the core of this year's respondent base, accounting for nearly half (46 percent) of all IT respondents.

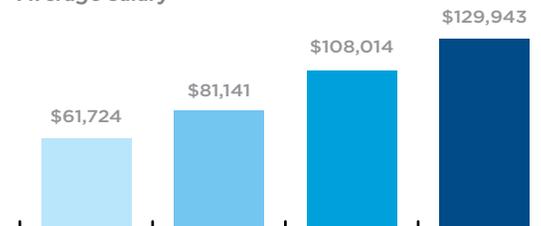
Respondents in senior-level roles account for more than one-third of this year's IT participants. Average salary exceeds \$108,000 (median of \$104,000), and roles represented include director of systems engineering, vice president or director of corporate applications and vice president or director of enterprise infrastructure.

Executives with roles such as president, partner and CxO account for two percent of technical respondents and reported an average salary of \$129,943 (median of \$114,346).

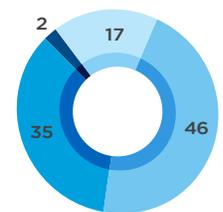
**SALARY BY RESPONSIBILITY LEVEL**

● Entry-Level ● Mid-Level ● Senior-Level ● Executive

*Average Salary*



*Percent of Respondents*



## FUNCTIONAL AREAS AND JOB ROLES

Nearly half of the technical respondents who participated work in one of these five functional areas: IT security, help desk, system operations, systems engineering and network engineering. Looking at average salaries, five areas topped the list: IT architecture (\$108,201), business technology (\$101,964), cloud computing (\$101,957), IT security (\$101,539) and project/program management (\$99,489).

Within functional areas, significant variation exists between specific roles.

With additional responsibilities come increased compensation and the opportunity to diversify skills and pursue advanced certifications, all of which factor into the total compensation for a specific role. This is illustrated clearly in IT security where there is a \$60,000 difference between salaries of security administrators and the vice presidents or directors who lead those operations.

### SALARY BY FUNCTIONAL AREA

Functional Area	Mean	Median	Count
IT Architecture	\$108,201	\$103,504	587
Business Technology	\$101,964	\$94,750	322
Cloud Computing	\$101,957	\$100,000	146
IT Security	\$101,539	\$97,000	975
Project/Program Management	\$99,489	\$95,115	674
Business Application Development	\$99,130	\$95,000	361
Enterprise Infrastructure Management	\$98,075	\$95,000	436
Data Warehousing / Business Intelligence	\$96,499	\$92,538	163
Management/Development	\$91,735	\$89,814	285
Systems Engineering	\$91,026	\$89,831	920
.NET Developer	\$90,273	\$89,000	173
Voice Engineering	\$87,522	\$86,000	253
Network Engineering	\$87,093	\$84,045	801
Business Systems Analysis	\$84,734	\$82,100	464
Web/Intranet/Extranet	\$80,960	\$77,350	135
System Operations	\$76,711	\$75,242	933
Network Operations	\$74,313	\$72,000	701
Help Desk	\$58,420	\$55,000	945
All Others	\$92,503	\$89,486	299

### SALARY WITHIN FUNCTIONAL AREA

Functional Area	Mean	Median
<b>System Operations</b>		
Director – Client and LAN Systems	\$94,919	\$94,615
Manager – Operation Services (NT/UNIX/Linux)	\$87,668	\$87,051
Sr. Systems Administrator – Transaction Monitors	\$84,703	\$85,000
Systems Administrator – Transaction Monitors	\$66,698	\$65,000
<b>IT Security</b>		
VP or Director, Information Security	\$134,085	\$129,000
IT Risk and Compliance Manager	\$106,593	\$98,424
Security Administrator	\$70,437	\$71,000
<b>Business Application Development</b>		
VP or Director, Corporate Applications	\$138,116	\$137,000
Manager, Business Applications Development	\$108,111	\$104,861
Senior Business Applications Developer	\$95,725	\$95,000
Business Applications Developer	\$77,122	\$78,902
<b>Project/Program Management</b>		
VP or Director Project/Program Management	\$123,813	\$114,673
Manager or Sr. Manager Project/Program Management	\$102,780	\$100,000
Project/Program Coordinator	\$81,860	\$80,000
Project/Program Analyst	\$75,574	\$74,500

## SKILLS

When it comes to specific skills and their impact on compensation, not all areas are equal. Overall, five areas were mentioned most frequently: business skills, IT security, leadership and professional skills, network operations and IT architecture. The presence of ITDMs and more tenured IT professionals skews in the favor of certain skill areas. For example, the percentage of early career IT professionals who listed leadership skills was 20 percentage points less than more senior respondents (32 percent vs. 52 percent).

### You Can Go Your Own Way

One-third of IT staff respondents said they considered leaving their present field for another career (consistent with the previous two years of data). Thirty-five percent changed job roles in the previous year. One in four (26 percent) moved to a new employer (up five percentage points from 2014), and 14 percent relocated to take a new position.

## SKILLS AREAS IMPACTING COMPENSATION BY TENURE

Functional Area	Up to 5 Years	6–10 Years	11–5 Years	16–20 Years	21+ Years	Total
Business Skills	38%	41%	44%	48%	54%	45%
IT Security	40%	43%	45%	43%	42%	43%
Leadership and Professional Skills	32%	36%	43%	46%	52%	42%
Network Operations	42%	38%	36%	36%	32%	37%
IT Architecture	27%	35%	36%	42%	37%	36%
Network Engineering	34%	36%	33%	33%	26%	32%
System Operations	27%	31%	34%	34%	31%	32%
Systems Engineering	22%	32%	32%	32%	26%	29%
Help Desk	41%	32%	29%	25%	20%	29%
Project/Program Management	16%	22%	26%	26%	36%	26%
Business Technology	17%	17%	20%	21%	24%	20%
Storage/SAN	13%	16%	20%	20%	14%	17%
Cloud Computing	14%	16%	18%	19%	15%	17%
Database Management/Development	14%	14%	16%	16%	21%	16%
Web/Intranet/Extranet	15%	15%	14%	14%	15%	15%
Enterprise Infrastructure Management	8%	13%	16%	16%	16%	14%
Business Systems Analysis	8%	13%	12%	12%	21%	14%
Voice Engineering (including Telephony)	13%	11%	13%	14%	13%	13%
Business Process Improvement	7%	11%	13%	10%	15%	12%
Regulatory and Governance	6%	8%	13%	12%	16%	11%
Business Application Development	5%	6%	7%	9%	14%	8%
Business Intelligence / Predictive Analytics	5%	6%	8%	7%	10%	7%
Data Warehousing	6%	6%	6%	6%	9%	7%
Social Networking	8%	7%	6%	6%	6%	6%
.NET Development	5%	6%	5%	6%	6%	6%
Enterprise Messaging	3%	4%	6%	7%	7%	5%
SAP	5%	4%	4%	3%	4%	4%
Mobile Apps Development	4%	4%	4%	4%	4%	4%
E-Commerce/E-Business	2%	5%	3%	4%	5%	4%
Java Development	5%	4%	3%	3%	4%	4%

## INDUSTRY

Systems integrators pay their technical employees the highest average salaries at just over \$104,000, ranging from \$84,825 for technical staff to \$112,053 for ITDMs. In other industries, the average salary of technical staff ranges from \$65,718 in educational services to \$93,853 for those employed in mining and related natural resources.

Decision-makers tasked with overseeing IT operations earn an average of 42 percent more than their staff counterparts (\$108,620 vs. \$76,746). Salaries for ITDMs range from \$97,986 in educational services to \$116,777 in IT consulting. The non-IT respondents earn an average of \$101,680, with averages ranging from \$79,587 for educational services to over \$129,000 for those in professional business services.

## COMPANY SIZE

The number of employees working for a company (both at a specific location and companywide) is a key factor when determining compensation.

Larger companies pay their technical staff an average of \$15,548 more than firms with fewer than 100 employees. For ITDMs, the bump is \$7,222, or 7 percent, over the average for the smallest firms. The trend is more significant for non-IT respondents, who saw an average salary difference of \$19,037, or 21 percent, between the largest and smallest firms.

### IT SALARIES BY INDUSTRY

Industry	IT Staff			IT Decision-Makers			Total IT		
	Mean	Median	Count	Mean	Median	Count	Mean	Median	Count
Systems Integration	\$84,825	\$85,000	39	\$112,053	\$105,000	96	\$104,187	\$100,000	135
IT Consulting	\$78,011	\$75,000	429	\$116,777	\$110,000	475	\$98,380	\$95,000	904
Natural Resources: Mining, Oil or Gas	\$93,853	\$85,000	132	\$111,799	\$105,457	42	\$98,185	\$92,125	174
Banking, Finance, Accounting	\$80,633	\$80,000	465	\$109,276	\$104,414	369	\$93,321	\$91,000	834
Manufacturing: Consumer	\$81,931	\$81,651	172	\$110,403	\$103,296	102	\$92,530	\$87,904	274
Aerospace/Defense	\$81,682	\$79,843	142	\$111,621	\$100,000	67	\$91,280	\$87,154	209
Government - Military and Homeland Security	\$79,936	\$78,642	245	\$115,568	\$112,406	108	\$90,837	\$85,000	353
Pharmaceutical, Medical, Biotech	\$81,268	\$80,000	70	\$110,916	\$99,350	31	\$90,368	\$89,000	101
Insurance, Real Estate, Legal	\$79,239	\$79,409	326	\$108,567	\$105,000	180	\$89,672	\$87,000	506
Professional Business Services	\$74,811	\$74,000	163	\$114,528	\$106,000	93	\$89,240	\$85,000	256
IT-Related Services	\$73,018	\$70,000	644	\$112,389	\$106,000	365	\$87,275	\$81,776	1,009
Healthcare	\$75,555	\$75,112	570	\$104,696	\$100,000	334	\$86,346	\$85,000	904
Telecommunications	\$73,481	\$73,000	267	\$110,775	\$105,000	139	\$86,249	\$85,306	406
Transportation, Logistics, Public Utilities	\$74,826	\$74,567	190	\$108,894	\$102,000	87	\$85,526	\$81,409	277
Wholesale	\$74,307	\$74,371	65	\$104,741	\$102,000	35	\$84,959	\$85,339	100
Hospitality, Travel and Recreation	\$68,619	\$67,500	73	\$110,733	\$106,987	46	\$84,898	\$82,852	119
Manufacturing: Industrial	\$73,641	\$72,707	247	\$107,993	\$100,000	118	\$84,747	\$82,436	365
Government - Nondefense, State, Local	\$76,088	\$75,000	591	\$104,003	\$101,919	247	\$84,316	\$82,068	838
Construction, Architecture, Engineering	\$75,314	\$74,031	112	\$99,567	\$97,908	55	\$83,302	\$82,570	167
Retail	\$71,612	\$72,610	168	\$105,884	\$105,000	79	\$82,573	\$82,000	247
Nonprofit	\$70,050	\$67,000	105	\$100,473	\$100,000	66	\$81,792	\$81,300	171
Education Services	\$65,718	\$64,000	528	\$97,986	\$97,440	265	\$76,515	\$74,319	793

### SALARIES BY NUMBER OF EMPLOYEES

Total Employees	IT Staff			IT Decision-Makers			Non-IT		
	Mean	Median	Count	Mean	Median	Count	Mean	Median	Count
Do Not Know	\$75,676	\$72,038	327	\$105,822	\$100,000	112	\$91,521	\$89,000	63
<100	\$65,382	\$63,000	795	\$105,134	\$100,400	613	\$88,614	\$80,500	185
100-999	\$70,903	\$70,000	1,613	\$105,972	\$100,900	984	\$99,598	\$90,204	307
1,000+	\$80,930	\$80,000	3,282	\$112,356	\$106,897	1,882	\$107,651	\$101,500	858
Average	\$75,902	\$75,000	6,017	\$109,169	\$104,078	3,591	\$102,976	\$97,000	1,413

## GEOGRAPHY

A region's cost of living is one of the strongest drivers behind salary. For IT respondents in the United States, the average salary ranges 11 percent from a high of \$93,166 in the Mid-Atlantic region to a low of \$84,301 in the West North Central region. Clearly there is variation within a region, with major metro areas having higher cost-of-living standards than rural areas and, therefore, higher base salaries.

For example, the average salary for IT security-certified professionals ranges from \$86,049 in East South Central markets such as Birmingham, Louisville and Knoxville to \$103,732 in Mid-Atlantic markets such as Philadelphia, Newark and New York City. Professionals certified in ITIL and IT service management (ITSM) also see a similar geographic shift, with salaries in Mountain markets such as Phoenix, Denver and Boise averaging \$90,336, while those in South Atlantic markets such as Atlanta and Washington see average salaries of \$102,651.



**1 MID-ATLANTIC**  
**MEAN: \$93,166**  
**MEDIAN: \$89,000**



**2 PACIFIC**  
**MEAN: \$92,501**  
**MEDIAN: \$89,907**



**3 SOUTH ATLANTIC**  
**MEAN: \$91,437**  
**MEDIAN: \$87,604**



**4 NEW ENGLAND**  
**MEAN: \$89,363**  
**MEDIAN: \$86,900**



**5 WEST SOUTH CENTRAL**  
**MEAN: \$86,835**  
**MEDIAN: \$84,500**



**6 MOUNTAIN**  
**MEAN: \$85,489**  
**MEDIAN: \$84,632**



**7 EAST NORTH CENTRAL**  
**MEAN: \$85,384**  
**MEDIAN: \$85,000**



**8 EAST SOUTH CENTRAL**  
**MEAN: \$84,455**  
**MEDIAN: \$81,667**



**9 WEST NORTH CENTRAL**  
**MEAN: \$84,301**  
**MEDIAN: \$81,504**

TOP FIVE BY SALARY	BOTTOM FIVE BY SALARY
<b>Washington DC</b> \$106,724	<b>Indiana</b> \$77,198
<b>Virginia</b> \$101,193	<b>Vermont</b> \$76,993
<b>New Jersey</b> \$97,039	<b>Rhode Island</b> \$76,548
<b>Maryland</b> \$96,753	<b>Montana</b> \$74,508
<b>Connecticut</b> \$96,508	<b>South Dakota</b> \$67,463

For a complete list of salaries by state, visit [www.globalknowledge.com/salary15extra](http://www.globalknowledge.com/salary15extra).

## CANADIAN VARIATIONS

Regional variations in salary are also common across the provinces and key markets of Canada. IT professionals working in Canada earn an average of \$84,214 (USD), with averages exceeding \$76,000 for IT staff and \$104,000 for ITDMs. Variations range from \$76,939 in New Brunswick, a small province, to \$91,895 in Alberta, a larger province with diverse energy resources. This aligns well with this year's industry data, where the mining, oil and natural gas sector is one of the top paying.

From a certification view point, Project Management Professional® (PMP®)-certified respondents show a peak salary of \$95,655 in Ontario and \$121,967 in Alberta. For Microsoft-certified professionals, salaries range from \$76,483 in Quebec to \$84,000 and \$85,000 British Columbia and Alberta, respectively.

## RAISES AND BONUSES

In addition to base salary, raises and bonuses factor into a typical IT professional's compensation plan. Three out of four IT respondents in this year's study reported receiving a raise in the prior year. Those who saw a raise attributed it primarily to their performance on the job and standard company increases. This is consistent with last year's data. Other central reasons include internal promotions, taking on new responsibilities and developing new skills.

Not all respondents were bonus eligible. In fact, 26 percent of the technical staff respondents reported that they were not. The percentage drops to 20 for ITDMs. Of those who were bonus eligible, 39 percent did not receive a bonus in the prior year (41 percent for IT staff and 36 percent for ITDMs). For those who were eligible and did receive a bonus, the typical amount was one to five percent, with 61 percent of the eligible staff and 46 percent of the ITDMs receiving a bonus in this range. ITDMs were significantly more likely than staff to receive a bonus greater than five percent.



**1 ALBERTA**  
**MEAN: \$91,895**  
**MEDIAN: \$85,535**



**2 QUEBEC**  
**MEAN: \$85,955**  
**MEDIAN: \$81,000**



**3 ONTARIO**  
**MEAN: \$83,501**  
**MEDIAN: \$82,683**



**4 BRITISH COLUMBIA**  
**MEAN: \$82,619**  
**MEDIAN: \$82,000**



**5 MANITOBA**  
**MEAN: \$79,078**  
**MEDIAN: \$79,294**



**6 NOVA SCOTIA**  
**MEAN: \$78,378**  
**MEDIAN: \$78,262**



**7 OTHERS\***  
**MEAN: \$77,640**  
**MEDIAN: \$77,318**



**8 SASKATCHEWAN**  
**MEAN: \$77,390**  
**MEDIAN: \$76,500**



**9 NEW BRUNSWICK**  
**MEAN: \$76,939**  
**MEDIAN: \$75,000**

\*Twenty respondents were from Prince Edward Island, Newfoundland, Labrador and the three territories Yukon, Nunavut and Northwest Territories.



*Today knowledge has power.  
It controls access to opportunity  
and advancement.*

**PETER DRUCKER**

# PROFESSIONAL DEVELOPMENT:

## STAYING CURRENT IN AN EVER-CHANGING WORLD

To develop skills, keep them current and gain certifications, many IT professionals pursue training through methods ranging from the informal, with books, DVDs and online resources, to highly structured classroom or online training.

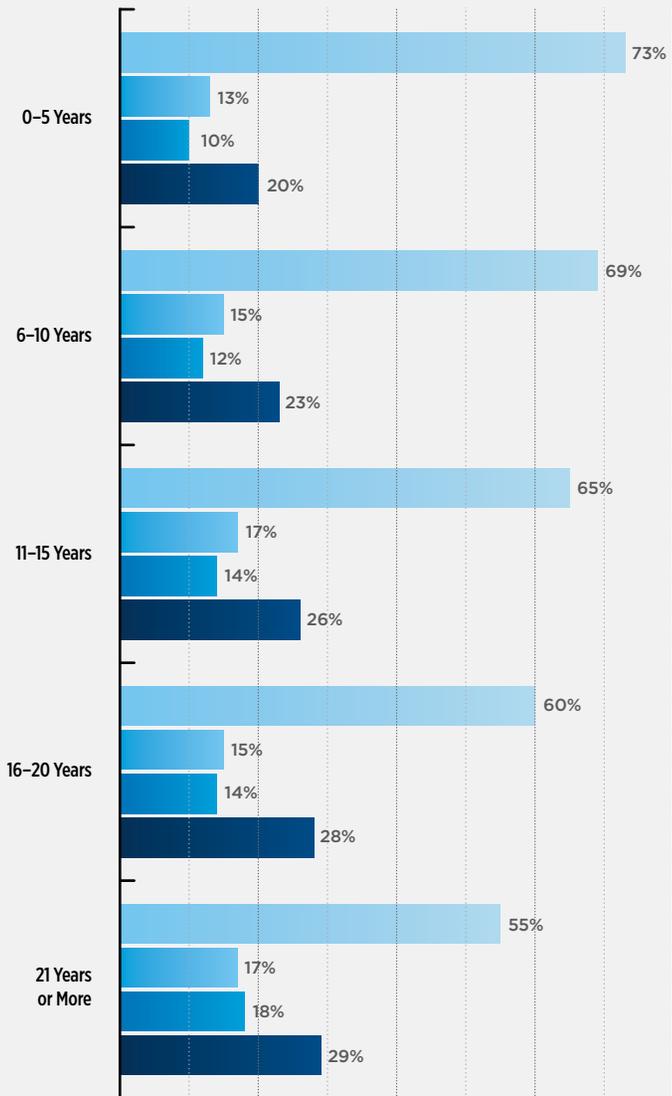
Overall, 77 percent of the IT respondents, excluding decision-makers, took some form of professional training in the prior year. IT security professionals lead the way, with 90 percent engaging in professional development. On the low end, 69 percent of professionals in database management and development trained.

Tenure has a significant impact on the likelihood to train and the area of focus. Technical training is the domain of those early in their career. By comparison, the likelihood of pursuing process improvement or leadership training increases with tenure.

More than two-thirds of the technical professionals surveyed agreed or strongly agreed with the statement “Balancing my work with the need for training is important.” This ranges from 71 percent for those earliest in their careers down to 62 percent for those with more than 20 years of experience.

**TRAINING FOCUS BY TENURE**

- IT Training
- Business Process Analysis
- Project Management
- Leadership and Professional Skills



**PERCEIVED BENEFITS OF PROFESSIONAL DEVELOPMENT**

We asked both IT and non-IT respondents if professional development affords them specific benefits, such as keeping abreast of technological changes or gaining an advantage over their peers. The corresponding table shows the mean score for each of the fifteen potential benefits.

IT respondents find it critical to keep themselves up to date on technological changes, develop skills useful for future positions and fulfill a sense of personal accomplishment. Non-IT respondents share the need for staying current and preparing for future positions, and they also value developing insight that is useful to their present positions.

Learning from others’ successes and mistakes is viewed as important by both technical and non-IT respondents.

Obtaining knowledge with the intention of sharing it with others, perhaps in an informal learning session, rates highly with both groups as well.

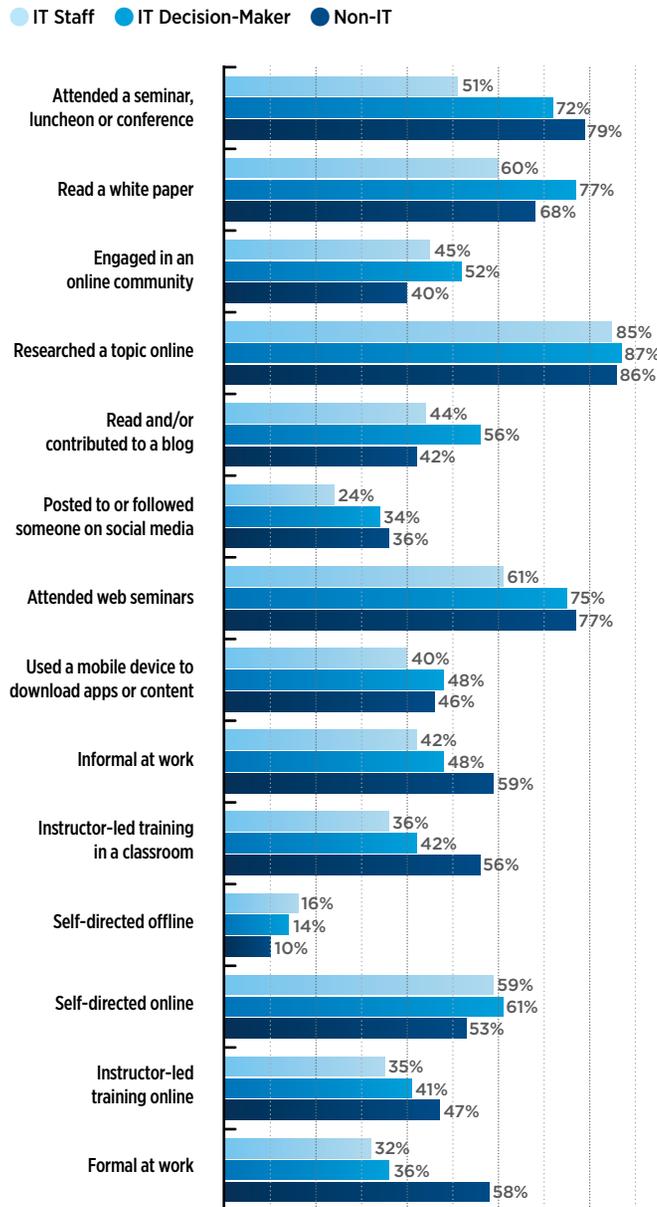
Tenure plays an important role in determining which benefits are perceived as more or less important. Respondents who are early in their career see professional development as an essential aid to achieving a higher level of professional status and advancing career objectives. Average scores are the highest for those with five years or less under their belt, and those scores decline in importance for those with advanced tenure. The trend holds for professional development as a method for enhancing job security. Lesser-tenured employees see professional development as a means of creating greater job security.

**PERCEIVED BENEFITS OF PROFESSIONAL DEVELOPMENT**

Scaled from 1 (Strongly Disagree) to 7 (Strongly Agree)

Professional development enables me to:	IT	Non-IT	Professional development enables me to:	IT	Non-IT
Stay up to date on technological changes	5.92	5.85	Achieve a higher level of professional status	5.57	5.51
Develop skills that will be useful for future positions	5.92	5.78	Interact with others in my profession	5.52	5.51
Gain insight to be more effective in my current role	5.81	5.76	Obtain greater earning potential	5.48	5.43
Gain from the knowledge of others	5.77	5.71	Prepare for the unknown	5.48	5.32
Develop a sense of personal accomplishment	5.85	5.66	Better my standing with management	5.16	5.16
Obtain knowledge I can share with my colleagues	5.74	5.66	Develop an advantage over my peers	5.22	5.11
Develop professional confidence	5.75	5.62	Increase my sense of job security	5.21	4.96
Advance my career objectives	5.67	5.55			

**METHODS FOR KEEPING SKILLS CURRENT**



**METHODS FOR KEEPING SKILLS CURRENT**

How technical and nontechnical employees choose to keep their skills up to date varies depending upon their job function, industry, company size and company’s view on the benefits derived from training. Methods of learning fall into two general camps: informal and formal. Informal includes activities such as researching topics online, attending webinars and seminars, and downloading white papers. Formal training includes classroom learning (both in a physical location and online) and working with DVD-based training tools. These methods are typically focused on specific topics for skills development or certification preparation.

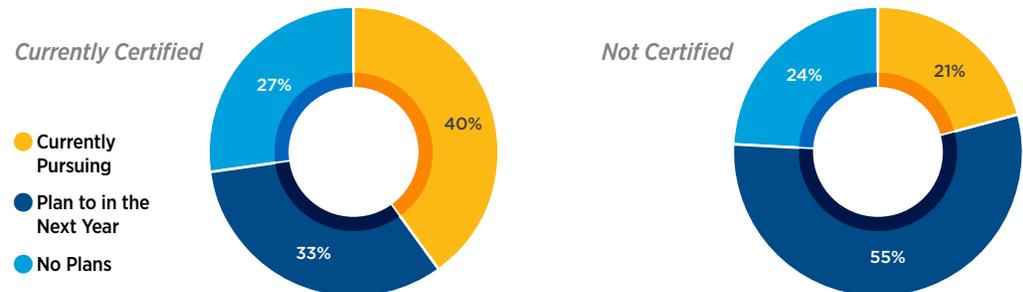
When it comes to formalized training for specific topics or certifications, the preferred method is still an instructor-led classroom session (47 percent) followed by online self-directed methods (24 percent). However, preferences vary depending on job function. For example, those in voice engineering show a greater preference for classroom training (68 percent vs. 47 percent). This trend is also present for those involved in IT security, network operations, project management and IT architecture. Developers, on the other hand, show an increased preference for online self-directed courses relative to other IT professionals (33 percent vs. 24 percent).

**CERTIFICATIONS THAT PROFESSIONALS PURSUE**

Three out of four IT respondents reported they had earned at least one certification in the last five years. Of this group, 45 percent had earned a certification within the last year. Thirty-six percent of the technical respondents are actively pursuing a certification, up from 30 percent in the prior year. This ranges from 18 percent

for those involved in business application development to 58 percent for participants working in network engineering. One in four (27 percent) reported plans to pursue certification in the coming year. This increases in likelihood for early career professionals, particularly those on the IT help desk.

**PURSUING CERTIFICATIONS**



Certified IT respondents are more likely to hold CompTIA certifications than any other. In fact, more than 38 percent reported holding one or more CompTIA certifications, with an overall average of two. Twenty-five percent hold a CompTIA A+ certification, 20 percent hold Network+ and 15 percent hold Security+. Most CompTIA certifications are foundational, so their average salary tends to be lower than other providers' certifications. However, two from CompTIA – Cloud Essentials and CompTIA Advanced Security Practitioner (CASP) – trend above the average at \$101,307 and \$91,237, respectively.

Rounding out the top five categories are Microsoft, security, Cisco and ITIL®.

The average salary for Microsoft certification holders is \$83,440, compared to an average of \$86,250 for all certified IT respondents. Microsoft certification salaries range from \$71,367 for the Microsoft Office Specialist to \$108,910 for the Microsoft Certified Database Administrator (MCDBA). Two versions of the Microsoft Certified Systems Engineer (MCSE) certification made the top 10 in our highest-paying salaries list.

Security certifications are in demand. In fact, ITDMs said security is their top area for talent recruitment in 2015. IT security salaries range from \$79,730 for CompTIA Security+ to over \$119,000 for ISACA's Certified in Risk and Information Systems Control (CRISC) certification. Security certifications captured the top three salaries and four out of the top 10.

Nearly 1,400 IT respondents reported holding at least one Cisco certification, with an average of two. Salaries range from \$70,680 for Cisco Certified Entry Network Technician (CCENT) to more than \$118,000 for Cisco Certified Internetwork Expert (CCIE) Routing and Switching. Salaries for Cisco Certified Network Associate (CCNA)-level certifications are in the mid-\$80,000s.

ITIL and ITSM certifications round out the top five categories in terms of response frequency. Salaries in this category average \$95,150, or 10 percent above the norm for certified respondents (\$86,250).

## MOST POPULAR TYPES OF CERTIFICATIONS

Certification	Mean	Median	Count
CompTIA	\$73,963	\$72,000	2,314
Microsoft	\$83,440	\$80,027	2,173
Security	\$94,004	\$90,000	1,835
Cisco	\$82,243	\$79,017	1,396
ITIL and ITSM	\$95,150	\$90,006	1,114
Project Management	\$97,987	\$93,170	739
VMware	\$91,162	\$85,000	539
Citrix	\$90,591	\$85,000	487
Networking (Other)	\$82,488	\$80,000	345
Internet/Web Development	\$74,884	\$73,332	288
IBM	\$92,835	\$90,000	214
Novell	\$90,875	\$88,208	214
Governance	\$121,301	\$118,111	176
Help Desk	\$72,462	\$68,147	169
Business Process	\$96,709	\$90,569	164
Red Hat / Linux	\$90,562	\$86,110	164

Certification	Mean	Median	Count
HP	\$81,096	\$82,000	159
Application Development	\$98,833	\$93,000	150
Cloud	\$107,252	\$103,250	122
Juniper	\$94,577	\$90,000	111
Oracle/Database	\$100,800	\$96,431	99
Wireless	\$86,776	\$81,000	92
EMC	\$103,866	\$100,500	84
Sun	\$101,697	\$95,650	76
IT Architecture	\$105,578	\$100,000	73
SAP	\$99,207	\$93,005	71
Avaya	\$87,992	\$85,878	67
Virtualization (Other)	\$93,397	\$91,750	30
Big Data	\$107,102	\$96,145	29
Knowledge Management	\$81,653	\$79,149	22
Other Certifications	\$90,264	\$85,000	607

For a complete list of salaries by certification, visit [www.globalknowledge.com/salary15extra](http://www.globalknowledge.com/salary15extra).

## AWS Cloud Certifications Make It Rain

Amazon Web Services (AWS) certifications are relatively new on the cloud scene – the first was launched in mid-2013. Though we didn't receive the required 100 respondents for any AWS certifications to make our official highest-paying certifications list, we received enough responses to get a clear view of what is likely to come.

AWS Certification	Mean Salary
AWS Certified Developer – Associate	\$137,825
AWS Certified Solutions Architect – Professional	\$117,434
AWS Certified Solutions Architect – Associate	\$114,935
AWS Certified SysOps Administrator – Associate	\$108,046

AWS is developing additional certifications.

In fact, they released a new professional-level DevOps certification in February 2015. Stay tuned to see what next year's survey data brings.

## TOP 20 HIGHEST-PAYING CERTIFICATIONS

Respondents see certifications as having a positive impact on their earning potential, and for the second straight year, security certifications top the list of the highest paying. ISACA's CISA, CISM and CRISC offer IT professionals interested in data security a path toward strong earnings potential, as does CISSP from (ISC)<sup>2</sup>. Respondents with advanced CISSP certifications in architecture and engineering can earn even more.

PMI's PMP certification is the only non-security certification in the top five. Microsoft captured three of the top 20 certifications, Cisco has two, and Citrix boasts the most at six.

Some certifications to watch include ISACA's CGEIT (\$129,527), COBIT (\$120,636), JNCIA – Junos (\$96,734), Certified ScrumMaster (\$101,729), CCNA Wireless (\$87,187), RHCSA (\$89,427) and Citrix CCP-V (\$97,988).

Certification	Mean	Median	Count
CRISC: Certified in Risk and Information Systems Control	\$119,227	\$110,000	236
CISM: Certified Information Security Manager	\$118,348	\$111,087	307
CISSP: Certified Information Systems Security Professional	\$110,603	\$103,855	531
PMP: Project Management Professional	\$109,405	\$101,500	387
CISA: Certified Information Systems Auditor	\$106,181	\$99,172	533
CCDA: Cisco Certified Design Associate	\$99,701	\$95,000	149
CCNP Routing and Switching	\$97,038	\$92,000	292
MCSE: Microsoft Certified Systems Engineer 2003	\$96,726	\$92,000	213
MCSE: Microsoft Certified Systems Engineer	\$96,215	\$91,500	449
ITIL v3 Foundation	\$95,434	\$90,556	1,016
CEH: Certified Ethical Hacker	\$95,155	\$93,200	147
VCP-DCV: VMware Certified Professional – Data Center Virtualization	\$94,181	\$90,000	267
CCAA: Citrix Certified Advanced Administrator – XenApp 6	\$93,831	\$88,210	115
CCEE: Citrix Certified Enterprise Engineer	\$93,662	\$87,000	117
CCA-V Citrix Certified Associate – Virtualization	\$93,437	\$86,500	122
CCA: Citrix Certified Administrator – Citrix XenServer 6	\$92,695	\$84,000	121
CCA: Citrix Certified Administrator – Citrix XenDesktop 6	\$92,411	\$84,268	142
MCITP: Enterprise Administrator	\$92,252	\$90,000	170
CCA: Citrix Certified Administrator – Citrix XenApp 6	\$91,069	\$85,789	278



*It is not necessary to change.  
Survival is not mandatory.*

**W. EDWARDS DEMING**

## **IT DECISION-MAKERS**

In this year's study, we expanded the slate of questions posed to those in charge of IT operations to gain insight into:

- Anticipated 2015 IT budget trends.
- Where skills gaps exist and the impact they have.
- Which roles they are having the most difficulty filling.
- Level of cloud adoption by their organization.
- The pace of interaction with leaders outside of IT.

Just over one-third (37 percent) of the North American IT professionals who responded classified themselves as either senior-level (senior manager, director or VP) or executive (president, partner, CIO, CTO, etc.)

### ***PROFILE***

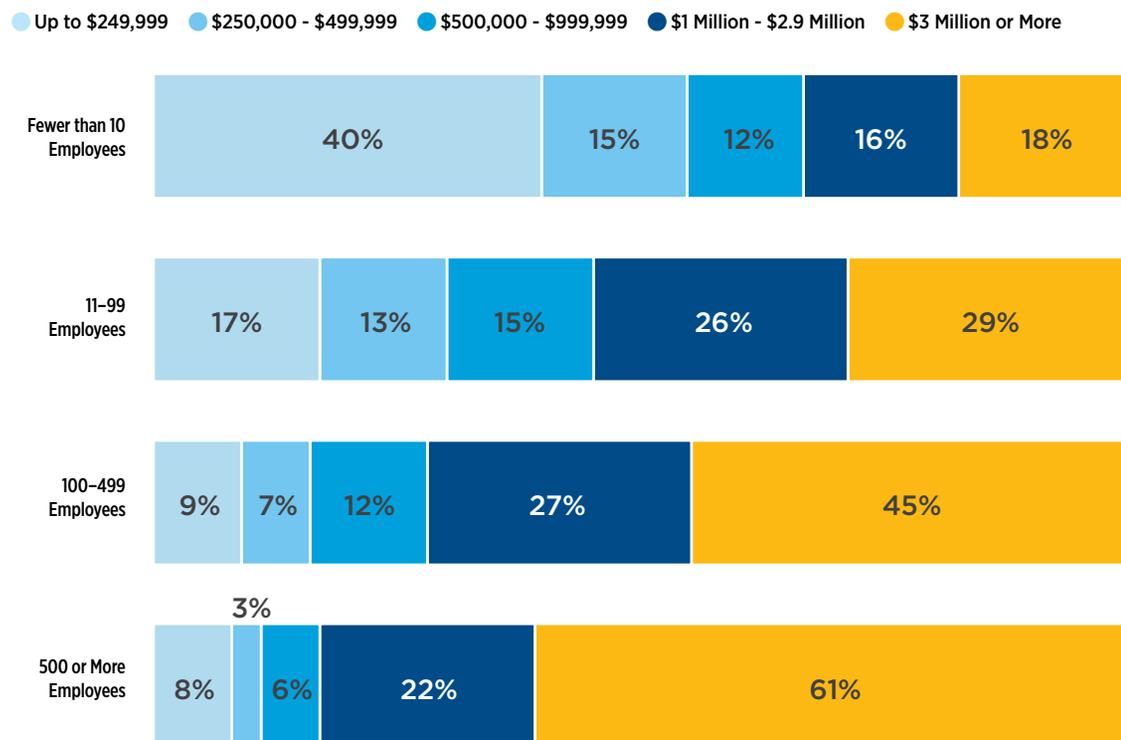
ITDM respondents manage a median number of 10 technical employees. The median budget, excluding salaries, that survey participants manage is \$1 million.

## DEPARTMENT SIZE AND BUDGET ALLOCATION

It is typical for IT organizations with fewer than 10 team members to have annual budgets of less than \$250,000 (excluding salaries). Fewer than 20 percent of these smaller IT groups have budgets of \$3 million or more. Conversely, the largest IT groups (500+ team members) are three times more likely than the smallest IT groups to have budgets at or exceeding \$3 million (61 percent vs. 18 percent).

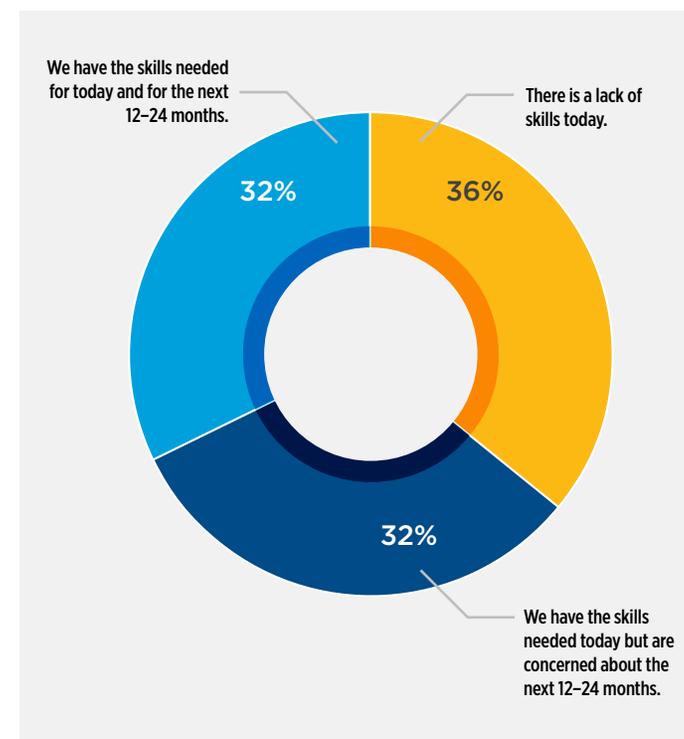
Overall, 47 percent of the ITDMs responding expect to see a budget increase in 2015. This ranges from 44 percent for small groups up to 52 percent for the largest groups. Fewer than 20 percent of respondents expect to see a decrease. Of those expecting budget growth, the majority (60 percent) are expecting a five percent increase. Conversely, those anticipating a budget cut expect it to be no more than five percent.

### IT DEPARTMENT SIZE AND BUDGET



## THE IT SKILLS GAP

Increasingly, companies are using IT (both internal and outsourced) to compete more effectively in the market. When asked to assess the availability of skills within the IT organization they manage, the ITDMs who responded were nearly equally divided in their opinion of the talent they have available to meet current and future needs.



These percentages are consistent across IT department size and budget category. However, in terms of expected budget change for 2015, those firms that are currently under-skilled are not likely to see budget increases significant enough to erase the skills deficit.

What's behind the skills shortage? Half of those currently coping with under-skilled teams report that training investment has not been sufficient to keep pace with increasing demands. This issue is more acute for those managing teams of 100 to 499 technical employees. In addition, 37 percent reported their training programs have not been effective at developing the needed skills. Other critical concerns include the inability to pay what candidates are asking and a general difficulty in attracting talent to specific industries.

Training is often viewed as critical to IT project and team success. More than 60 percent of the ITDM respondents reported that their organizations provide training to their technical employees. More than half of these organizations provide at least \$3,000 per employee for annual skills- and certification-focused training. Respondents who reported that their companies have not invested sufficiently in skills development also said their companies are less likely to provide paid training.

The ability to track and measure existing skills in the employee base is generally viewed as a nominal concern, except for those managing teams of 100 to 499. Overall, 23 percent of those facing shortages reported this as a key driver, and 33 percent of those in this departmental range saw it as critical.

Shortages, be it in raw materials or IT skills, have a direct impact on an organization's ability to compete in the market. Respondents who reported a skills gap noted that the key impacts to their operation include:

Increased stress levels on existing employees	82%	Declining customer satisfaction levels	45%
Difficulties in meeting quality objectives	61%	Increased operating costs	37%
Delayed hardware and software deployments	61%	Loss of business to competitors	26%
Delays in new product or service development	56%	Loss of revenues	26%
		Difficulty in reaching revenue growth objectives	24%

These impacts are not experienced in isolation. Typically an organization with a skills gap in technical positions is dealing with at least four of these problems.

## REASONS BEHIND IT SKILLS SHORTAGE

Reason	> 10 Employees	11-99 Employees	100-499 Employees	< 500 Employees
We have not invested enough in training to develop the skills we need.	50%	51%	58%	47%
We cannot pay what candidates demand.	43%	42%	44%	40%
It's difficult to attract candidates with the skills we need to our industry.	39%	42%	44%	45%
Our training programs are not effective in developing the skills we need.	34%	36%	35%	40%
We would hire more people if there were more qualified candidates.	29%	33%	39%	36%
We have not effectively anticipated the skills we need.	27%	32%	28%	29%
We do not have the ability to track and measure the skills that exist in our employee base.	22%	21%	33%	26%
The skills we need tend to be mostly located outside of the U.S.	5%	8%	4%	6%

## **SEEKING TALENTED IT PROS. INQUIRE WITHIN.**

We asked ITDMs about the areas in which they are having the most difficulty finding skilled talent. Topping the list is IT security. Network engineering, systems engineering, IT architecture and network operations round out the top five talent areas most in demand, according to the ITDMs who responded.

One out of five ITDMs reported having difficulty finding skilled talent for cloud initiatives. According to Sharon Florentine of CIO.com, “Cloud technology is a must-have for organizations building out or replacing their data center architecture, but there’s still a major cloud skills gap that’s impeding faster adoption and growth.”

Seth Robinson of CompTIA elaborated, “Companies are looking for folks with the knowledge of how to integrate cloud solutions with existing, on-site systems. This is leading to significant need for IT talent with skills in cloud migration, integration and developer knowledge of APIs.”

### **Howard Lee of Open Web reported that there are clear trends in recruiter searches for talent with skills in:**

- Amazon Web Services.
- Open-source tools such as Linux.
- Configuration management systems such as Chef and Puppet.
- Programming platforms such as Ruby, Perl and Python.
- Development operations engineers.

## **PLAYING WELL WITH OTHERS**

A trend gaining momentum is that of departments outside of IT garnering larger shares of the organizational technology budget. Thirty percent of the ITDMs surveyed reported their interaction with peers outside of IT is increasing. In Gartner’s 2014 study on CMO spending, 80 percent of the chief marketers surveyed reported that they had capital expense budgets with the top expenses including infrastructure, software, and internal and external application development.

Data from Forrester’s 2014 study on CMO and CIO relations suggests an increasing level of interaction between the chief marketer and chief technologist. Despite the increased dialog, there are concerns. In that study, only 54 percent of marketing and technical management professionals reported having confidence that the leadership was in place to support marketing technology strategies. According to report author Sheryl Pattek, “One of the continued failings of the two

parties has been one of the biggest challenges they face: the ability to turn the huge amounts of data that departments are collecting into actionable customer insights that businesses can actually do something useful with.”

We asked IT Skills and Salary Survey respondents about the percentage of the IT budget being spent by or allocated to various departments. On average, 59 percent of the overall budget is being allocated to or spent by the IT department. This ranges from 61 percent for organizations with IT departments of 11 to 99 employees to 54 percent for the largest departments (500 or more technical employees). Overall, departments outside of IT are spending up to 41 percent of the technology budget for projects supporting their own departmental needs, e.g., marketing automation systems, data analysis tools, application development, accounting and financial databases.

## WHAT ABOUT THE CLOUD?

According to the U.S. Bureau of Labor Statistics, the overall IT employment market is projected to grow between 1.1 and 2.7 percent annually through 2020. Since the cloud's arrival, analysts have projected that positions related to it would far exceed the overall growth rate for IT employment. Cushing Anderson of IDC sounded the bell early in a 2011 forecast that projected demand for cloud-ready IT professionals would grow by 26 percent annually through 2015 and likely beyond.

In recent years, the impact that the transition to the cloud would have on existing IT job roles has been a critical concern. Clearly the cloud has the potential to diminish certain roles, but according to the Wall Street Journal, the transition from on-premise to cloud applications is leading many IT organizations to move some members of their staff into business analyst and architect roles. In other cases where companies are developing relationships with cloud providers, .Net and Java developers are seeing their roles move away from troubleshooting toward higher-end software development that includes skills such as business requirement documenting.

We asked ITDMs to estimate their organization's progress on the cloud adoption curve. Approximately two-thirds are well into their cloud journey, having at least begun the evaluation process, with 36 percent at either the adoption or adaptation stage. An equal percentage is at the starting gate with awareness and interest.

We asked those in either adoption or adaptation phases if their cloud experience had altered plans for organizational structure and hiring. The majority of the respondents in these phases reported that the cloud has not changed organizational staffing, neither adding nor reducing headcount. Fewer than 10 percent reported laying off staff because of the cloud. On the other hand, more than 25 percent reported hiring additional staff or staff with differing skill sets.

Cloud Adoption Curve	Percent	Cumulative
Awareness	25%	25%
Interest	12%	36%
Evaluation	14%	50%
Trial	14%	64%
Adoption	21%	85%
Adaption	15%	100%

### DEFINITIONS

**Awareness:** I understand what cloud computing is and am determining if, how and why it works for my firm.

**Interest:** I am seeking opinions of others I trust in our marketplace and determining which cloud service model (SaaS, PaaS, IaaS) and delivery methods (private, public, community, hybrid) are appropriate in my industry and my firm.

**Evaluation:** I am deciding to accept or reject use of cloud computing by examining the most commonly cited challenges and risks

**Trial:** I have chosen an appropriate application to pilot cloud computing and am testing it to verify specific challenges, risks, solutions and countermeasures.

**Adoption:** I have completed and am satisfied with our cloud adoption trial. We are moving to full use of cloud computing for the selected applications and will repeat these steps for the next application.

**Adaptation:** I stay in touch with my peers and market and am now optimizing and customizing my features to our specific environment.



*Success in business requires training and discipline and hard work. But if you're not frightened by these things, the opportunities are just as great today as they ever were.*

**DAVID ROCKEFELLER**

## **NON-IT RESPONDENTS**

Training and other professional development activities are critical for technical positions, but how do professionals in other areas feel about keeping their skills up to date? This year's survey included questions aimed at non-IT professionals to answer this question. More than 1,400 non-IT professionals participated in the process.

### ***PROFILE***

Just over half of the non-IT professionals who participated are in five job roles: accounting and auditing (17 percent), finance and risk management (12 percent), sales and business development (10 percent), project management (8 percent), and engineering (7 percent). Nearly half (45 percent) manage the work of others. Salaries for this group average \$102,976 (median of \$97,000). Their average age is 44, and 39 percent are female – significantly higher than either IT professionals or ITDMs.

More than half (55 percent) are in mid-level roles, and one-third are in senior-level or executive positions. They are well-tenured with more than 45 percent having 16 or more years invested in their careers. More than 60 percent work in firms with 1,000 or more employees. They work primarily in a few key industries, including banking, IT-related services, government (nondefense, state and local) and professional business services.

## IMPORTANCE OF PROFESSIONAL DEVELOPMENT

Three out of four non-IT respondents view professional development as either important or very important to their current career stage. This is consistent with data from the 2014 study. Nearly 80 percent plan on pursuing professional development in 2015, with more than half expecting to pursue certification-related training. They believe in providing training for those they manage as well. More than 80 percent of those who manage staff expect to send their team members to skills-based training, and two-thirds expect to send staff to certification-based training.

Personal skills are deemed most relevant to their current career stage. Key areas they plan to focus on in 2015 include leadership, communication, presentation skills, improving interpersonal relationships and management and supervisory skills.

Non-IT respondents see the value in developing their analytical skills with a focus on business analysis, business intelligence, and predictive analytics and data mining. They also place importance on bolstering their ability to convey an actionable story with data.

Key Training Areas	Count	Percent
Leadership	935	66%
Communication	930	66%
Presentation Skills	816	58%
Interpersonal Skills	796	57%
Management and Supervisory Skills	760	54%
Business Analysis	698	50%
Business Intelligence	620	44%
Business Writing	574	41%
Predictive Analytics and Data Mining	524	37%
Business Enhancement Skills	496	35%
Finance and Accounting	467	33%
Customer Service	448	32%
Customer Relationship Management (CRM)	427	30%
IT Management	410	29%
Enterprise Resource Planning (ERP)	360	26%
IT Service and Support	328	23%
ITSM	286	20%
Business Architecture	277	20%
Marketing	239	17%
ITIL®	230	16%
Human Resources Management	167	12%

## FACING CHALLENGES

When asked to assess the key challenges facing their organizations, more than half (53 percent) of the respondents said that communication within the organization is an area they struggle with. Navigating unclear job roles and responsibilities is a challenge, and they deem collaborating with teams outside their own internal organization – especially with greater use of remote employees – as critical to their success. The latter point is important, since according to Global Workplace Analytics, the percentage of employees working multiple days per week outside of their office increased 80 percent between 2005 and 2012 (the most recent data available).

## STAYING CURRENT

Those involved in non-IT positions use numerous methods to keep themselves engaged and learning. More than 85 percent research topics online, while 77 percent reported using webinars to keep abreast of professional trends. Members of this group consider white papers and syndicated content valid and useful learning methods, and they, more so than their IT counterparts, are likely to get out of the office to attend conferences, seminars and lunch-and-learn sessions.

Nearly 60 percent reported that they participated in training at work. They use these opportunities significantly more often than their IT counterparts. Over half will also engage in instructor-led training – either in class or online. Fifty-three percent of the non-IT respondents use online self-directed training.



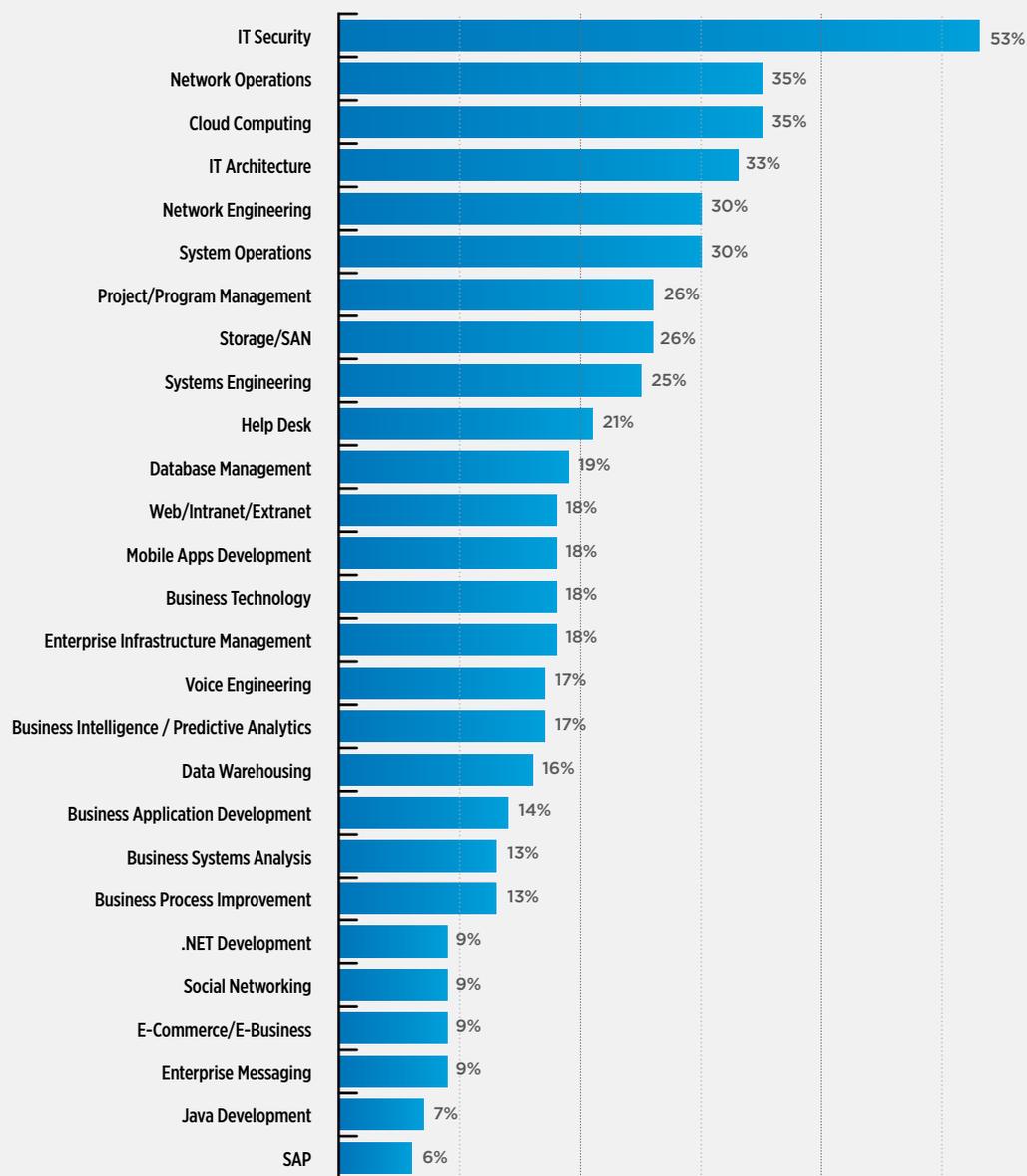
*Success is where preparation  
and opportunity meet.*

**BOBBY UNSER**

## **LOOKING AHEAD**

Not only do IT security certifications top the list for salary, but security is also the technology area most likely to expand in 2015. More than half of the IT respondents, both staff and decision-makers, reported that their organizations expect to increase security efforts this year. This was consistent across company size, industry and geography. Neil Campbell, group general manager for Dimension Data's Security Business Unit, pointed out that technologies and services focused on incident response – rather than just incident prevention – should be one of the trends high on the agendas of security professionals in 2015. Network operations, cloud computing and IT architecture are also on the minds of respondents for 2015.

## TECHNOLOGY AREAS OF INTEREST FOR 2015

**THE HEALTH OF THE BUSINESS**

The percentage of respondents reporting they are seeing IT and business projects resume or be initiated has been steady over the last three years (mid-70 percent). In this year's survey, one-third reported a slight increase in projects being given the green light, with half indicating a moderate increase and 19 percent reporting a significant increase. This represents an improvement over last year when 41 percent reported a moderate increase and 15 percent reported a significant increase.

One out of four respondents reported that business conditions for their organizations are significantly improving or business is good. This has been stable over the last three surveys. Thirty percent reported they are in a slow-growth mode, and the percentage indicating they are facing challenging conditions or the worst conditions ever declined from 50 percent in 2014 to 44 percent in the current study. Not surprisingly, firms that see their business conditions as good or significantly improving are more apt to be pursuing new technical and business projects. They also are more likely to invest in training for their technical employees.



*There are no secrets to success.  
It is the result of preparation, hard work  
and learning from failure.*

**COLIN POWELL**

## **CONCLUSIONS**

Though conditions appear to be improving, many ITDMs find themselves with teams that lack the skills needed for longevity. These skills gaps present huge opportunities for IT professionals to accommodate the needs of their teams and get paid well for doing so, especially in cybersecurity and cloud computing.

As expected, cloud computing has greatly impacted IT organizations, but not in the way many feared. IT professionals are not being laid off in droves. Instead, they are being presented with opportunities to transform their skill sets to accommodate the changing environment.

Though IT and business professionals have limited, if any, control over the direction their organizations pursue, they do have the power to influence the value they bring to the organization. When it comes to new skills, adding to one's acumen not only improves on-the-job effectiveness but also opens the door for increased compensation. Certifications are still seen as valuable within professional communities served by IT and non-IT professionals. This trend is unlikely to change as the pace of technological innovation and market forces continue to demand new ways of thinking and executing.

# ABOUT THIS REPORT

## ABOUT GLOBAL KNOWLEDGE

Global Knowledge is the world's leading IT and business skills training provider. Offering the most relevant and timely content delivered by the best instructors, we provide customers around the world with their choice of convenient class times, delivery methods and formats to accelerate their success. Our business skills solutions teach essential communications skills, business analysis, project management, ITIL and IT service management, process improvement and leadership development. With thousands of courses spanning from foundational training to specialized certifications, our core IT training is focused on technology partners such as Amazon Web Services, Cisco, Citrix, IBM, Juniper, Microsoft, Red Hat and VMware. We offer comprehensive professional development for technologies like big data, cloud, cybersecurity and networking.

Founded in 1995, Global Knowledge employs more than 1,300 people worldwide and is headquartered in Cary, North Carolina. Learn more at [www.globalknowledge.com](http://www.globalknowledge.com).

## ABOUT WINDOWS IT PRO

Windows IT Pro is an independent online community serving the information and education needs of IT professionals. Windows IT Pro is a cornerstone of the Penton Technology Group – an ecosystem of technology-focused communities that serve Microsoft and IBM IT professionals and developers and IT channel companies. Learn more at [windowsitpro.com](http://windowsitpro.com).

## ABOUT PENTON MEDIA, INC.

Penton is an information services company that drives performance for more than sixteen million professionals each and every day. They rely on us to deliver insights and opportunities that inform critical business decisions, help

them to engage with their community, advance the way they work and leverage their potential.

Penton capabilities provide business tools, insights, data, networking, learning and marketing to help business professionals do their jobs better.

## ABOUT THE PRIMARY RESEARCHER

Greg Timpany is the senior manager for market research and competitive intelligence at Global Knowledge. He has more than 20 years of experience in market research, competitive intelligence and database marketing. His experience includes research design and implementation for both consumer and B2B segments, and he is a published author and lecturer focusing on the effective use of marketing data. Greg has held positions with Guitar Center, Los Angeles Times and Wilkin Guge Marketing. He holds an MBA in information systems and marketing from California State University, San Bernardino.

## THANKS TO OUR PARTNERS

Global Knowledge and Windows IT Pro extend a special thank you to our partners for helping make this year's survey possible:

**ASPE Training**  
**AWS**  
**Blackfin Security**  
**Cisco**  
**Citrix**  
**CIW**  
**CompTIA**  
**IBM**  
**EMC**  
**Global IT Community Association (GITCA)**  
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**Information Systems Audit and Control Association (ISACA)**  
**International Avaya Users Group (IAUG)**  
**International Professional Practice Partnership (IP3)**  
**Juniper**  
**Microsoft**  
**PeopleCert**  
**Red Hat**  
**SAP**  
**Trainingindustry.com**  
**VMware**

## SURVEY METHODOLOGY

The 2015 IT Skills and Salary Survey was conducted online from September 15 to October 24, 2014. More than half a million survey invitations were emailed to recipients from the databases of Global Knowledge, Windows IT Pro and partner companies and organizations. Links were also provided in online newsletters. The survey yielded more than 16,300 completed responses from around the globe, with 68 percent coming from the United States and Canada. This online survey was tabulated using SPSS and Q-Research software.