White Paper

Impact of Certifications and Training on Career Milestones

Sponsored by: CompTIA

Cushing Anderson
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EXECUTIVE SUMMARY

Technology has moved out from the IT department to the desktop, to tablets, to a phone in every pocket. When an organization senses an opportunity, it frequently uses new technology to streamline or connect parts of the business. In a digitally transforming world, it is essential that IT staff perform at an increasingly high level. For several years, IDC has been trying to address questions related to the value of ongoing training. For this white paper, we wanted to understand how that performance plays out over time and at different points in an IT professional's career:

- Do IT professionals who are trained and certified before their first IT role have more impact or provide more value to their employer?

- Do trained and certified IT professionals perform differently, have more responsibility, or have greater influence than their noncertified peers?

Building on prior research, we found that staff with industry-relevant certifications are more valuable to their employer than staff who are not certified. That value is observable not only early in but also throughout the career of the IT professional. Well-trained and certified IT professionals continue their accelerated performance and demonstrate increased capability and lifetime value to the enterprise. We found that training and certification positively impact IT employee value to the enterprise by observing:

- **Time to first promotion:** Exhibiting rapid assimilation and early accomplishment, IT professionals who are certified before their first position are 50% more likely to get a promotion within one year of first being hired than "never certified" IT professionals.

- **Increased rate of promotions:** Demonstrating continuing value to their employers, CompTIA-certified IT professionals are promoted almost twice as often as noncertified IT professionals.

- **Performance in their role:** CompTIA-certified IT professionals consistently outperform noncertified IT professionals in most security-related activities and network administration activities.

- **Professional influence:** Maximizing their value to the entire enterprise, certified IT professionals have up to 30% greater influence overall than noncertified IT professionals with the same tenure.

With these findings, IDC continues to believe that CIOs and IT leaders should leverage IT certifications as a hiring criterion for both career entrants and experienced hires and as part of a strategic skills development program.

SITUATION OVERVIEW

Technology has moved out from the IT department to the desktop, to tablets, to a phone in every pocket. When an organization senses an opportunity, it deploys a new approach or improves an existing approach frequently using technology to streamline or automate processes, discover prospects and other opportunities, or connect with related parts of the business, clients, or suppliers.

These innovations may be incremental or disruptive, but they always attempt to solve a business problem.

In a digitally transforming world, IT investments expedite business outcomes, increase customer engagement and intimacy, drive competitive differentiation, and often generate revenue. This reality redefines the importance of IT to the business and, consequently, the ultimate importance of increasing IT staff performance.

However, with the pressure of rapid change, increasing demands, and incessant competition, IT leaders can be tempted to hire staff who can't demonstrate required skills for a specific position or may forgo ongoing training to save time or money. Sometimes, IT leaders wonder if hiring a certified candidate is worth it. They question the value of ongoing training and believe their staff already have the skills they need.

For several years, we have been trying to answer that question to help IT leaders, IT hiring managers, and even IT professionals understand the value of training and certification. We have consistently found that, yes, training and certification improve performance. In the research we completed a couple of years ago for CompTIA, we found:

- **Certification preparation leads to confidence:** Well-trained IT professionals are more confident that the skills they possess are appropriate and useful for their responsibilities.

- **Validation reliably attests to the level of knowledge:** Certified employees can be relied on to perform at a higher level and have more domain knowledge than untrained employees.

- **Certified employees perform better:** Certified employees can be expected to perform assigned tasks more consistently, increasing IT reliability and overall organizational execution.

For this white paper, we wanted to understand how that performance plays out over time and at different points in an IT professional's career:

- Do IT professionals who are trained and certified before their first IT role have more impact or provide more value to their employer?

- Do trained and certified IT professionals perform differently, have more responsibility, or have greater influence than their noncertified peers?

This white paper shows that candidates and staff with industry-relevant certifications are more valuable to their employer than staff who are not certified. That value is observable not only early in but also throughout the career of the IT professional. Well-trained and certified IT professionals continue their accelerated performance and demonstrate increased capability and professional influence and improve their lifetime value to the enterprise. We found that training and certification positively impact IT employee value to the enterprise by observing:

- **Time to first promotion:** IT professionals who are certified before their first position are 50% more likely to get a promotion within one year of first being hired than "never certified" IT professionals.

- **Increased rate of promotions:** CompTIA-certified IT professionals are promoted almost twice as often as noncertified IT professionals.
- **Performance in their role:** CompTIA-certified IT professionals consistently outperform noncertified IT professionals in most security-related activities and network administration activities.
- **Professional influence:** Certified IT professionals have up to 30% greater influence overall than noncertified IT professionals with the same tenure.

Throughout this white paper, IDC refers to training and certification as driving capability and performance. But, of course, that's just shorthand. Performance is driven by competence, or the ability to do something successfully and/or efficiently. Competence can be achieved by experience or by intuition. But the speed of change, the complexity of technology, and the coordination required for a successful business make waiting for sufficient experience or expecting a technology genius to fill a role unrealistic. IT leaders can substitute training and certification for experience and intuition and achieve more predictable results.

We also recognize that being certified – the certificate or badge – does not convey capability. It is simply the measure of a level of competence. The underlying preparation for becoming certified is where competence is improved. Therefore, while we correlate "being certified" with increased performance, we recognize that the preparation for certification is the actual mechanism for improved performance, not the credential itself.

For demographic and methodology information, see the Methodology, Definitions, and Demographics section in the Appendix.

IMPACT OF TRAINING AND CERTIFICATION

Work Smarter, Not Harder

IT professionals who take training or get certified may be exercising a growth orientation – a conscious or subconscious confidence that with greater knowledge they are capable of improving their performance. This may compare with a "fixed mindset" in which employees may believe their knowledge and capability are fixed and either "they are good at something or they aren't." In a recent survey of almost 3,000 IT teams in 600 organizations working on a range of IT operations functions, we found that higher-performing teams attribute success to greater skill, while lower-performing organizations attribute success to greater effort.

> **Higher-performing teams attribute success to greater skill, while lower-performing organizations attribute success to greater effort.**

First Promotion

While analyzing the impact of training and certification on organizational influence, the first thing we examined was how long it takes a new hire to get his/her first promotion. Promotion is either an indication that the employee has the ability to handle increased responsibility or recognition by the employer that the employee already handles increased responsibilities. In either case, it seems to be the first observable opportunity that may indicate that an individual, or a cohort, is considered better performing.

- On average, IT professionals who were certified prior to their first IT position were promoted about 23% sooner (14 months) compared with IT professionals who have not been certified (17 months) (see Figure 1). In addition, we found that IT professionals who are certified before their first position ("precertified") are 50% more likely to get a promotion within one year of first being hired than "never certified" IT professionals.

- 58% of precertified candidates get a promotion within one year of being hired in their first IT position (compared with 39% of "never certified" IT professionals).
- 53% of "postcertified" candidates, those certified after being hired, get a promotion within one year of being hired in their first IT position (compared with 39% of "never certified" IT professionals).

In addition to finding that the knowledge and skill gained from a certification may lead to more rapid promotion, we noticed something else: It didn't matter when IT professionals got certified — before or after their first position (possibly even after their first promotion; we didn't ask) — certified IT professionals had a greater likelihood of being promoted within a year than "never certified" IT professionals. This suggests that there is something about the mindset or the attitude of IT professionals that is observable by their supervisors or the organization that distinguishes them from IT professionals who are not motivated to get certified and gives certified IT professionals a leg up in promotion.

See the Appendix for data tables illustrating time to first promotion and time to first pay raise by cohort.

FIGURE 1

Months to First Promotion
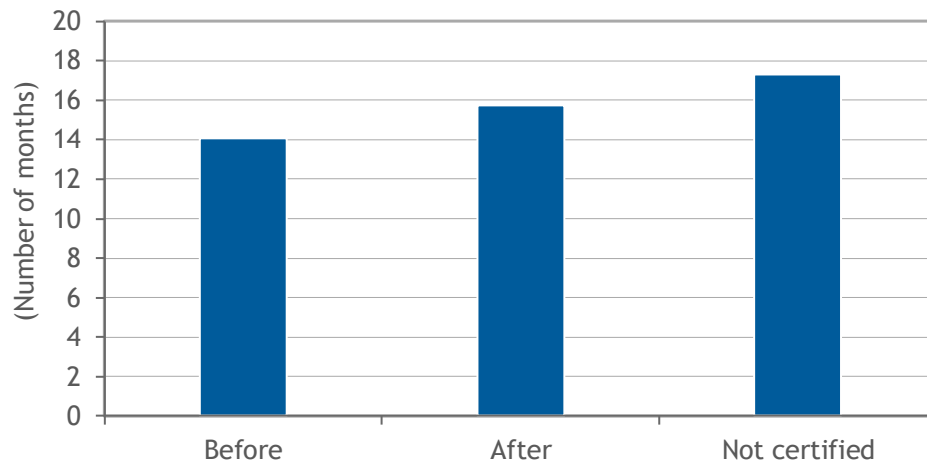
Notes:

"Before" indicates respondent was certified before being hired for his/her first IT position.

"After" indicates respondent was certified after being hired for his/her first IT position.

Source: IDC's *IT Professional Performance Survey,* January 2019
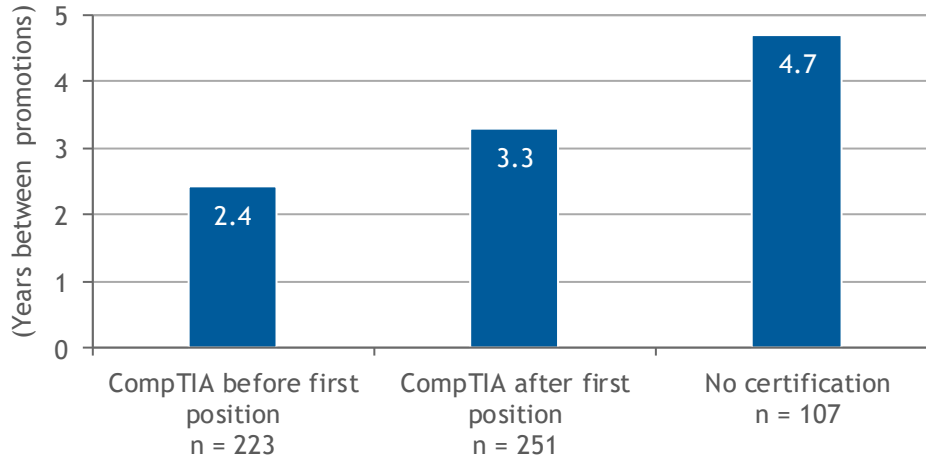
Years Between Promotions

The difference in promotion rates between "never certified" and certified IT professionals continues throughout the IT professional's career. IT organizations seem to recognize the value of certified employees and promote certified IT professionals more frequently than noncertified IT employees. In fact:

- CompTIA-certified IT professionals are promoted almost twice as often as noncertified IT professionals.
- When IT professionals hold more certifications, any certifications, they tend to get promoted more quickly.

Holding a certification is probably not the explicit reason for promotion – there are probably many factors that contribute to an employee's promotion. But if factors such as knowledge/expertise, initiative, willingness to take on new tasks, and on-the-job performance contribute to an employee's promotion, then training and certification, which influence each of those areas, are contributing factors (see Figures 2 and 3).

FIGURE 2

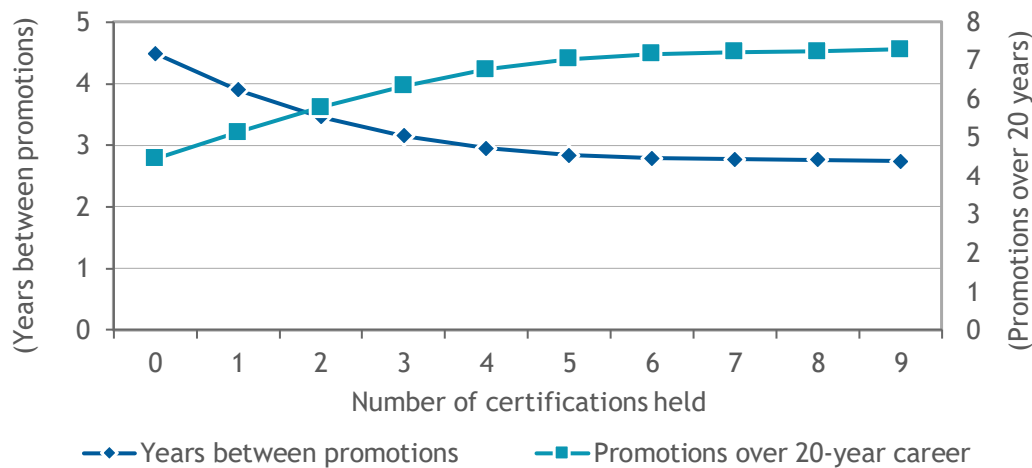**Years Between Promotions by Timing of First Certification**

Note: The figure compares CompTIA-certified IT professionals and noncertified IT professionals.

Source: IDC's *IT Professional Performance Survey,* January 2019

FIGURE 3

Years Between Promotions by Number of Certifications Held

n = 1,188 all respondents

Source: IDC's *IT Professional Performance Survey,* January 2019

Performance

Another significant component to promotions is performance. While elements and measures of performance may differ, we found that training and certification lead to increased indications of performance in both general behaviors and job-specific performance.

High-performing IT professionals become valuable to their organizations in other ways, too. They tend to have greater organizational influence — and are thereby able to extend the reach of their performance and capability beyond their specific responsibility.

General Performance

Attempting to define "general performance" in IT is difficult. We settled on the application of standard processes and practices as a generally understood indicator of better performance. We also felt that "comfort" was an indication of the confidence IT professionals have in their position and might be a generally consistent indicator of performance.

Ultimately, however, we recognize that these simple measures of self-scored performance are simply guides that suggest a relationship between training, certification, and performance and may not be definitive. We found that:

- CompTIA-certified IT professionals are 10% more likely to be comfortable with all current responsibilities than uncertified IT professionals and 40% more likely than IT professionals who hold other certifications.
- CompTIA-certified IT professionals are 13% more likely to have a methodology to follow for requests than uncertified IT professionals and 40% more likely than IT professionals who hold other certifications (see Table 1).

TABLE 1

IT Professional Overall Performance by Certification Status (%)

Q.   Thinking of your current responsibilities or daily activities, what percentage of your requests …

	CompTIA Certified (n = 608)	Certified (n = 473)	Not Certified (n = 107)
Do you feel "very comfortable" responding to?	80.4	56.9	72.7
Have a "methodology"/established or documented process?	71.6	50.0	62.9
Have a consistent approach?	76.5	51.5	72.2
Are covered by an organizational standard or requirement?	69.1	49.3	59.2
Would you say completely comply with the organizational standard or requirement?	79.7	53.9	75.6

Source: IDC's *IT Professional Performance Survey,* January 2019

Job-Specific Performance

In our earlier research, we found that CompTIA-trained and -certified IT professionals had core domain knowledge that surpassed the knowledge of uncertified IT professionals. Specifically, we found:

- "A+"-certified support staff with less than one year of experience have 52% more core domain knowledge than uncertified staff with three years of experience.
- After 10+ years of support experience, "CompTIA A+" certified IT staff have 25% more core domain knowledge than IT professionals with similar tenure but without a CompTIA certification.
- IT security knowledge sticks, too. "Security+" certified staff with 10+ years of security experience have almost 20% more core domain knowledge than those with the same experience but without a CompTIA certification.

This research reinforced those findings. By analyzing performance for specific roles and responsibilities, we were also able to identify several job-specific tasks where CompTIA and certified IT professionals, in general, performed to a higher standard than noncertified IT professionals. While many factors influence individual performance, the consistently better performance of CompTIA-trained and -certified professionals suggests a strong relationship between training and better performance.

CompTIA-certified IT professionals consistently outperform noncertified IT professionals in most security-related activities and network administration and in other areas too. Specifically, we found:

- "Security+"-trained and -certified professionals use risk-based process to assign access credentials 65% more often (85% of CompTIA-certified IT professionals versus 50% of noncertified professionals).
- "Security+"-trained and -certified professionals use software security tools to discover, classify, and monitor confidential data wherever it is stored or used 10% more often (95% versus 85%).
- "Security+"-trained and -certified IT professionals implement specific protocols to protect data in distributed environments 10% more often (90% versus 80%).
- Trained and certified security professionals are twice as likely to have performed a risk assessment in the past year (55% versus 27%).
- "Security+"-trained and -certified IT professionals are more than twice as likely to have performed a penetration test in the past year (60% versus 27%).
- "Security+"-trained and -certified professionals are 75% more likely to have performed a compromised data assessment in the past year (64% versus 36%).
- CompTIA-trained and -certified professionals are 50% more likely to implement security controls that extended across all vendors in a multicloud architecture (95% versus 63%).
- "Network+"-trained and -certified IT professionals are 50% more likely to complete network configuration tasks within four hours (50% versus 32%).
- "Network+"-trained and -certified professionals are 30% more likely to test and validate a network-related solution in less than four hours (47% versus 36%).
- "A+"-trained and -certified professionals spend 50% less time troubleshooting mobile operating system and application issues (about 50 minutes mean time to complete versus about 1 hour and 40 minutes).
- "A+"-trained and -certified professionals spend 30% less time troubleshooting PC operating system problems (1 hour and 20 minutes mean time to complete versus 2 hours).

Each of these specific performance improvement results seems to support the assertion that training and certification improve the value of IT professionals to their organizations and that the organizational benefit of training and certification can be measured in time, security, and operational performance.

However, training can't stop with certification. In our prior research, we found that as the time from the most recent training increased, performance on key tasks consistently declined. In the activities we examined, performance degraded by up to 25% over four years without ongoing training. While certification helps, the failure to continually train puts those gains, IT organizational performance, and business performance at risk.

Professional Influence

Besides efficiency, improved performance – both general and functionally specific – leads to another contributor to value to the enterprise: professional influence. Professional influence includes participating with increasing frequency in activities such as:

- Being responsible for the ultimate success of the solution/implementation
- Approving the solution for implementation
- Being a subject matter expert for some portion of the solution
- Implementing the solution
- Testing the solution prior to "go live"
- Identifying solution alternatives
- Diagnosing/defining/articulating problems to be addressed

By examining the frequency and regularity with which IT professionals participate in those influential activities, we can compare the "professional influence" of IT professionals using an "influence index."

By examining the careers and influence of 1,000+ IT professionals, we found that both tenure and competence impact professional influence. Competence, as indicated by achieving certification, can increase the contribution of IT professionals beyond expected influence attributable to tenure alone. We found that certified IT professionals have up to 30% greater influence than noncertified IT professionals with the same tenure, especially early in their careers, and about 15% greater influence over their entire career (see Figure 4).

Certified IT professionals have up to 30% greater influence than noncertified IT professionals with the same tenure.

FIGURE 4

Influence by Tenure

Employees with at least one certification

Employees without a certification
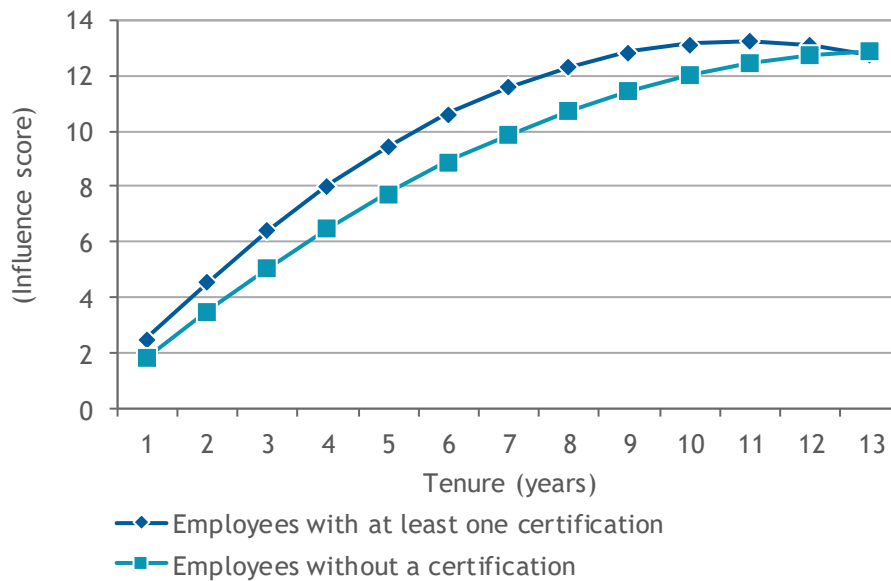
n = 1,188

Source: IDC's *IT Professional Performance Survey,* January 2019

CERTIFIED IT EMPLOYEES AND EMERGING TECHNOLOGIES

Comfort with Emerging Technologies

In addition to on-the-job performance and professional influence, organizations are looking for IT professionals who can grow and even lead change within their organizations. Technology change, commonly referred to as digital transformation (DX), often drives business outcomes. Digital transformation is ushering in a new era of digitally enabled customer-facing products, services, and experiences in an environment of rapid change and uncertainty. Moreover, traditional businesses and their IT organizations now face competition and disruption from digital-native enterprises and start-ups that don't "play by the rules." IT is increasingly important to the success of the business, and technology is constantly changing.

Of course, IT leaders consider future contribution of IT employees when hiring, assigning, or promoting IT professionals. While we don't have specific data to support the claim, it seems self-evident that IT professionals who are more comfortable with change, and with learning new technologies, are also more valuable to an IT organization that increasingly relies on new technologies to drive business success.

Comfort with technologies and willingness to adopt new technologies and approaches to accomplish new tasks seem to be more a matter of attitude than aptitude. IT professionals who are willing to engage with new technologies, learn new technologies, or discover how new technologies may impact their work may be "trainable." But, more likely, the confidence of IT professionals comes from having mastered a difficult skill in the past, resulting in a belief that the next new technology is probably manageable too. So, certified IT professionals, most of whom began training with limited knowledge of the certification topic and, over a period of time, achieved a defined level of proficiency, have personal experience with their ability through effort and focus to grow. While all IT professionals have achieved competence in their roles, certified IT professionals appear to have acquired something more: additional professional confidence. This is consistent with our earlier findings too: Having the right skills gives IT professionals the confidence to believe they can perform their assigned responsibilities. By conscientiously acquiring specific domain knowledge, IT professionals increase their confidence in their ability to perform their assigned tasks.

> **Certified IT professionals have 15% greater comfort with responsibilities related to new technologies than noncertified IT professionals.**

In this white paper, we found that certified IT professionals have 15% greater comfort with responsibilities related to new technologies than noncertified IT professionals, and more certifications increase comfort (see Figure 5).

FIGURE 5

Comfort with Responsibilities Related to New Technologies by Number of Certifications Held
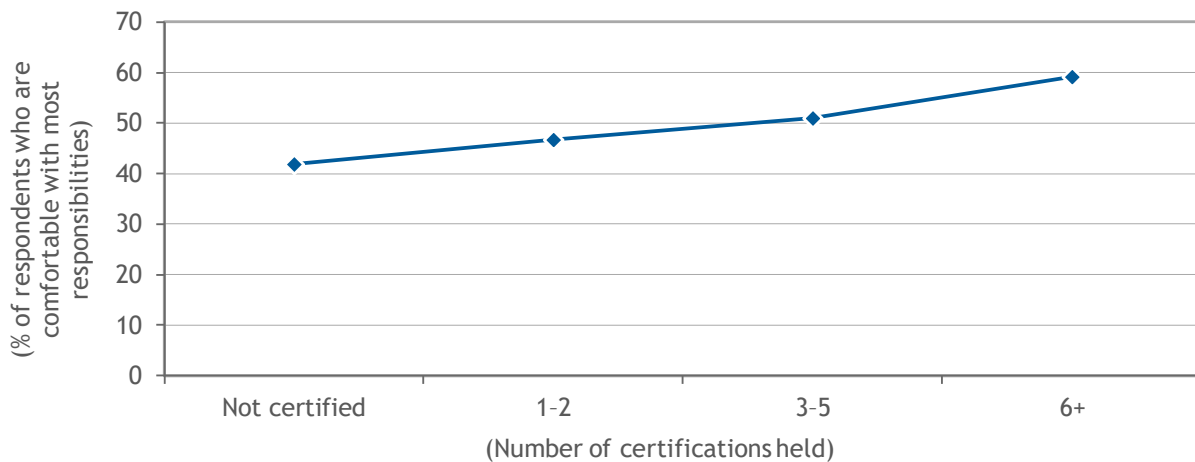
n = 757 certified and noncertified respondents with "emerging or advanced technologies" as part of current career path

Source: IDC's *IT Professional Performance Survey,* January 2019

What is also interesting is that how early professionals are certified also impacts their comfort with new and emerging technologies. "Precertified" IT professionals, those who were certified before being hired for their first IT position, have greater overall comfort with new technology responsibilities than IT professionals certified after being hired for their first IT position. A hypothesis that may explain this finding is that "precertified" IT professionals have greater self-confidence in their ability to become

competent in the unknown – essentially learning a new skill from scratch. To the extent that new or emerging technologies are not simply evolutionary from the prior technology, but more transformational, precertified IT professionals have made that leap in knowledge before and believe they can again.

In any case, and for whatever reason, IT professionals certified before their first IT position expressed about 16% greater comfort with responsibilities related to new technologies compared with IT professionals who were certified after being hired for their first IT position. For IT organizations, the implications are meaningful: Precertified IT professionals have a greater comfort with responsibilities related to new technologies and may be more willing to apply new technologies to business problems (see Figure 6).

> IT professionals certified before their first IT position expressed about 16% greater comfort with responsibilities related to new technologies.

FIGURE 6

Comfort with Responsibilities Related to New Technologies by Timing of First Certification
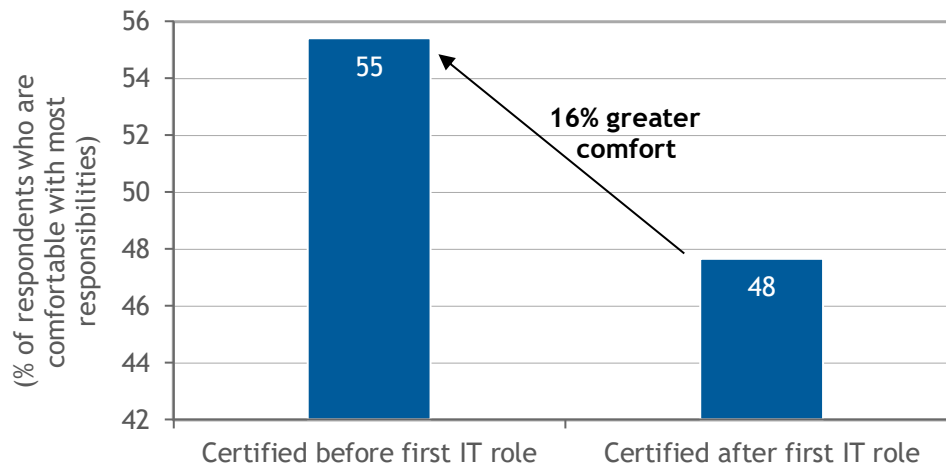
n = 757 certified respondents with "emerging or advanced technologies" as part of current career path

Source: IDC's *IT Professional Performance Survey,* January 2019

MANAGER IMPRESSIONS OF CERTIFIED CANDIDATES

A common finding in employment research is the impact that manager perception of an employee (or a group of employees) has on the career progression of that employee. Distinct from more objective performance measures, manager impression or expectations for employees can influence assignments, working conditions, and even promotions. In many cases, perceptions become reality.

We found that being certified influences managers in several surprising ways.

Overall, only about 55% of uncertified managers agreed with statements that suggest IT certification matters compared with 80-90% of certified IT managers (see Table 2).

However, uncertified managers who also manage certified professionals agreed almost as much as certified IT managers when describing the value of certified employees. Uncertified IT managers are almost as likely to report their certified employees are respected within the IT organization for their teamwork and their knowledge as certified managers (see Table 3).

When managers know and work with certified IT employees, their respect for the capability of those professionals increases. Because the value of certified employees is high, and grows over time, keeping those employees on good career paths seems to be a smart move.

One unexpected finding may have negative consequences for IT organizational success: While certified IT managers are comfortable using certification as a criterion to help select candidates for positions (71%), noncertified IT managers are more reluctant (58%).

With our earlier findings of more rapid promotion, greater performance, and increased influence, it seems that IT managers who fail to use IT certification as part of the selection criteria are unnecessarily slowing their selection process and may be adding an unnecessary burden to their IT organization's growth and future value.

TABLE 2

Manager Impression of the Value of Certification by Certification Status (% of Respondents)

Q.   Please indicate your level of agreement with each of the following statements.

	CompTIA Certified (n = 145)	Certified (n = 305)	Not Certified (n = 47)
Certifications are worth the time and effort to attain and maintain.	78	87	53
Certifications increase the value of advanced technology to my company.	78	90	62
Certifications validate the presence of extensive technical/best practices knowledge.	76	80	55
The skills represented by certifications make the IT professionals I am responsible for more valuable to my company.	76	88	57
Certifications improve the level of service and support offered by my IT professionals to IT's end users/customers.	73	77	51

n = 497 (IT managers who manage >4 employees)

Note: The table shows the percentage of respondents who either agreed or strongly agreed with each statement.

Source: IDC's *IT Professional Performance Survey,* January 2019

TABLE 3

Manager Impression of Certified IT Professionals by Certification Status (% of Respondents)

Q.   Please indicate your level of agreement with each of the following statements.

	CompTIA Certified (n = 354)	Certified (n = 397)	Not Certified (n = 50)
Certified IT professionals who work for me are respected within the IT organization for their ability to work on a team.	76	83	72
Certified IT professionals who work for me are respected within the IT organization for their technical knowledge.	75	78	76
Certified IT professionals who work for me have greater foundational knowledge than other IT professionals.	65	81	62
It is easier to decide if a candidate for an open position is qualified when the candidate has a relevant IT certification.	71	75	58

n = 801 IT managers who manage certified IT professionals

Note: The table shows the percentage of respondents who either agreed or strongly agreed with each statement.

Source: IDC's *IT Professional Performance Survey,* January 2019

ESSENTIAL GUIDANCE FOR ENTERPRISE IT

People are the make-or-break element of a high-performing IT organization. There is simply no replacement for people with the right skills, attitudes, and traits. CIOs don't have the luxury of hiring a totally new roster of people with "the right stuff" as they digitally transform their IT and enable their business strategy with new and emerging technologies, so they will have to be creative by combining various approaches, including hiring new employees, mentoring and training existing employees, and leveraging contractors and partners to create the needed mix of capabilities.

This white paper reinforces our belief that competence leads to performance and results. It is sometimes difficult to establish competence, especially in areas where performance standards aren't common, but in the IT profession, there are many industry-recognized and robustly developed programs that both convey meaningful knowledge and offer a rigorous, trustworthy attestation of competence: IT certifications.

IDC believes that CIOs and IT leaders should leverage IT certifications as a hiring criterion for both career entrants and experienced hires and as part of a strategic skills development program. As a development program, it is essential to consider business and IT goals and identify critical skills and skills with increasing importance.

For organizations to leverage IT certifications either for professional skill development or for identification and selection of new employees, they must ensure that the certification program is a good fit. Consider the following six criteria as a starting place for selecting an appropriate IT certification program:

- Is the certification program from a significant provider of your IT infrastructure? Or is the certification program so significant industrywide that it is an "industry standard"?
- Is the certification program aligned with roles that are relevant to your organization's current and future requirements? (Are you willing to be committed to this for the long term?)
- Does the certification program have progression that is sufficiently robust to grow with your staff?
- Does the certification program use performance-based exams?
- For appropriate roles, does the certification program validate business knowledge and skills in addition to technical competence?
- If you are going to use the program for selection or promotion, does the program have demonstrated impact on IT professional performance?

IDC believes that CIOs and IT leaders should leverage IT certifications as a hiring criterion for both career entrants and experienced hires and as part of a strategic skills development program that includes the other skills and training necessary for IT professionals to be successful (see Figure 7).

FIGURE 7

Essential Guidance

Objective ⚙	Action ✦
Ensure IT organizational requirements are aligned with DX strategy.	Identify the new technology and operational requirements of DX projects in your organization.
Ensure IT development and staffing are aligned with IT organizational requirements.	Assess areas where new skills and training are needed to improve IT operations.
Ensure talent risks are identified.	Identify key job roles and shortages to target for development and/or hiring.
Identify development program alternatives.	Select certification programs that are most aligned to support your targeted needs.
Mitigate talent risk.	Implement hiring or development plans for key roles.
Maintain organizational alignment with strategy.	Monitor critical/strategic projects and operational priorities for new/expanding skill requirements.
Maintain alignment between development program and requirements.	Evaluate if development/hiring program scope needs to change.
Maintain alignment of IT development and staffing program with needs.	Reevaluate certification program to ensure alignment.

Source: IDC's *IT Professional Performance Survey,* January 2019

Additional Insights

Time to Hire

- Overall "precertified" candidates find their first position in 22 weeks. 87% of "precertified" candidates find their first position in IT in less than 12 months.

- CompTIA-certified candidates find their first position in 19 weeks. 86% of CompTIA-certified candidates find their first position in IT in less than 12 months.

Time to First Promotion and First Pay Raise

Early certification does appear to influence promotion but does not appear to influence first pay raise (see Tables 4 and 5).

TABLE 4

Time to First Promotion by Certification Status and Timing of First Certification (% of Respondents)

Q. *How long was it from when you were first hired to your first promotion? (A promotion includes an official change in title.)*

		Certification Status			Timing	
	Total (n = 1,188)	CompTIA Certified (n = 608)	Certified (n = 473)	Not Certified (n = 107)	Before (n = 556)	After (n = 525)
1–3 months	4	8	0	5	4	5
4–6 months	12	13	11	7	13	12
7–9 months	15	10	23	11	18	13
10–12 months	23	21	27	17	24	23
1–2 years	32	32	30	43	31	30
3+ years	14	17	9	18	10	17
Mean (in months)	15.1	15.7	13.9	17.3	14.1	15.7
Within a year	54.3	51.3	61.5	39.3	58.5	53.0
2 years	86.3	83.2	91.1	82.2	89.7	83.4

Notes:

"Before" indicates respondent was certified before being hired for his/her first IT position.

"After" indicates respondent was certified after being hired for his/her first IT position.

Respondents are from all tenure cohorts.

Source: IDC's *IT Professional Performance Survey*, January 2019

TABLE 5

Time to First Pay Raise by Certification Status (% of Respondents)

Q.   How long was it from when you were first hired to your first change in pay?

		Certification Status			Timing	
	Total (n = 1,188)	CompTIA Certified (n = 608)	Certified (n = 473)	Not Certified (n = 107)	Before (n = 556)	After (n = 525)
1–3 months	9	12	5	9	7	10
4–6 months	22	25	19	20	21	24
7–9 months	18	11	29	17	22	15
10–12 months	26	26	26	27	26	25
1–2 years	23	24	21	26	24	21
3+ years	2	4	1	1	1	4
Mean (in months)	10.6	10.8	10.2	10.5	10.4	10.7
Within a year	74.9	72.4	78.6	72.9	75.4	74.9
2 years	97.6	96.1	99.2	99.1	99.1	95.6

Notes:

"Before" indicates respondent was certified before being hired for his/her first IT position.

"After" indicates respondent was certified after being hired for his/her first IT position.

Source: IDC's *IT Professional Performance Survey,* January 2019

Promotions Equals Pay

For the IT professional, rapid promotions increase lifetime earnings (see Tables 6 and 7).

TABLE 6

Modeled Lifetime Earnings by Timing of First Certification

	Modeled Lifetime Pay ($)			% Difference from Base		
	No Certification	Before	After	No Certification	Before	After
Overall	1,255,722	1,683,339	1,496,935	100	134	119
CompTIA certification	-	1,935,644	1,526,883		154	122

Note: Assumptions are as follows:

- Career length is 20 years.
- Pay bump per promotion is 20%.
- Starting annual salary is $45,000.

Source: IDC's *IT Professional Performance Survey,* January 2019

TABLE 7

Modeled Lifetime Earnings by Number of Certifications

	Modeled Lifetime Pay ($)				% Difference from Base			
Number of certifications held	0	1–2	3–5	6+	0	1–2	3–5	6+
Overall	1,255,722	1,476,319	1,586,778	1,774,586	100	118	126	141
CompTIA first		1,496,935	1,683,339	1,820,210		119	134	145

Note: Assumptions are as follows:

- Career length is 20 years.
- Pay bump per promotion is 20%.
- Starting annual salary is $45,000.

Source: IDC's *IT Professional Performance Survey,* January 2019

Time Looking for First IT Position

Table 8 provides time to find first IT position by certification status and timing of first certification.

TABLE 8

Time to Find First IT Position by Certification Status and Timing of First Certification (% of Respondents)

Q.   How long did you look for a position in IT before you found your first job?

		Certification Status			Timing	
	Total (n = 1,188)	CompTIA Certified (n = 608)	Certified (n = 473)	Not Certified (n = 107)	Before (n = 556)	After (n = 525)
1 month	25	33	11	38	15	33
2 months	10	10	10	10	11	10
3 months	14	13	16	14	13	15
4 months	7	5	11	7	8	7
5 months	5	2	9	3	6	4
6 months	14	13	16	9	17	12
7 months	3	1	4	0	4	1
8 months	3	2	5	0	4	2
9 months	2	2	3	2	3	2
10 months	1	1	3	1	2	1
11 months	1	0	1	0	1	0
12 months	3	2	2	6	3	1
More than 1 year	12	14	9	10	13	11
Mean (in months)	4.9	4.7	5.4	4.2	5.6	4.4
Found a position in less than 1 year	88	86	91	90	87	89

Notes:

"Before" indicates respondent was certified before being hired for his/her first IT position.

"After" indicates respondent was certified after being hired for his/her first IT position.

Source: IDC's *IT Professional Performance Survey,* January 2019

Comfort in First IT Position

50% of CompTIA-certified candidates are comfortable with many aspects of their first position. 49% of uncertified candidates are comfortable with many aspects of their first position. 65% of "precertified" candidates are comfortable with many aspects of their first IT position (see Table 9).

TABLE 9

Comfort in First IT Position by Certification Status and Timing of First Certification (% of Respondents)

Q. How would you describe your capability at the time you were hired for your first role? (Select the most appropriate response.)

	Total (n = 1,188)	Certification Status			Timing	
		CompTIA Certified (n = 608)	Certified (n = 473)	Not Certified (n = 107)	Before (n = 556)	After (n = 525)
a) Not comfortable with any aspects of my first role	6	9	3	7	4	8
b) Comfortable with some aspects of my first role	34	42	23	45	30	37
c) Comfortable with many aspects of my first role	24	24	25	21	25	24
d) Comfortable with most aspects of my first role	19	15	25	18	21	18
e) Comfortable with all aspects of my first role	16	11	24	9	20	13
Comfortable with many (or more) aspects (total of c, d, and e)	59	50	74	49	65	55

Notes:

"Before" indicates respondent was certified before being hired for his/her first IT position.

"After" indicates respondent was certified after being hired for his/her first IT position.
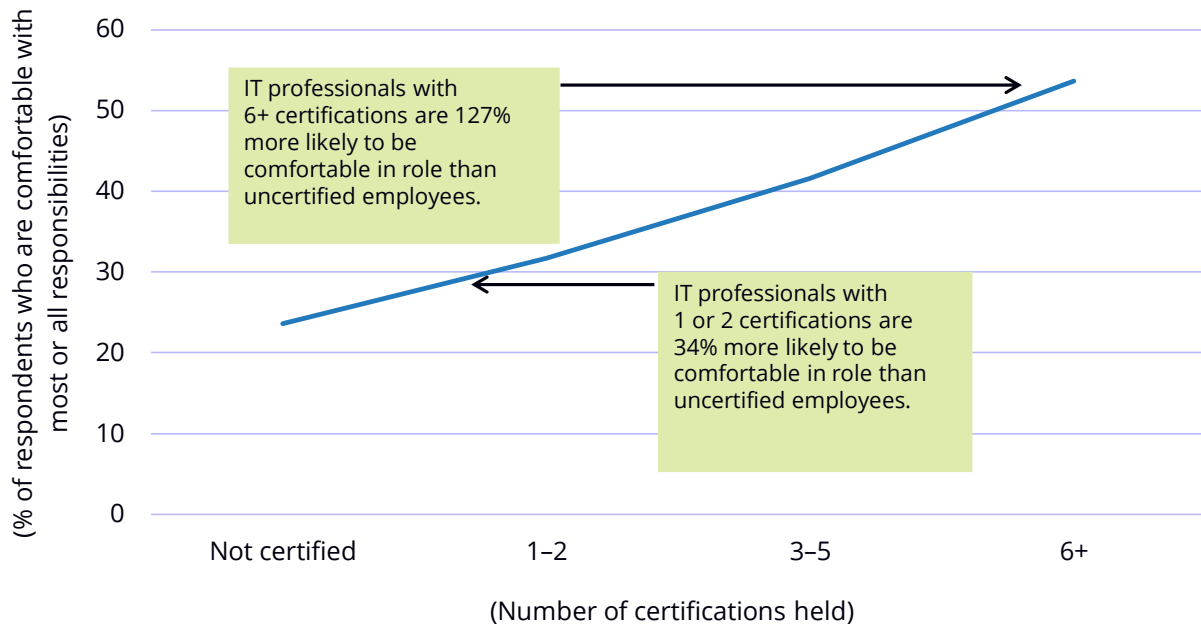
Source: IDC's *IT Professional Performance Survey,* January 2019

Comfort with Position

Figure 8 and Table 10 show comfort with all responsibilities in current IT position by number of certifications held.

FIGURE 8

Comfort with All Responsibilities in Current IT Position by Number of Certifications Held

IT professionals with 6+ certifications are 127% more likely to be comfortable in role than uncertified employees.

IT professionals with 1 or 2 certifications are 34% more likely to be comfortable in role than uncertified employees.

Source: IDC's *IT Professional Performance Survey*, January 2019

TABLE 10

Comfort with All Responsibilities in Current IT Position by CompTIA Certification by Responsibility and Certification Status

Q.   *Overall, how do you rate your own comfort level with the following roles/responsibilities?*

	% of Respondents			n =		
Responsible for	CompTIA Certified	Certified	Not Certified	CompTIA Certified	Certified	Not Certified
PC hardware and devices	68.4	37.7	40.0	187	77	20
Operations and troubleshooting	53.0	33.3	45.2	230	54	31
Virtualized networks	47.8	54.2	0.0	23	24	2
Compliance and operational security	43.9	36.2	27.8	114	141	18
Access control and identity management	37.2	44.1	0.0	43	34	4
Threat intelligence, threat hunter	36.2	31.4	18.2	47	51	11
Safeguarding against security threats and vulnerabilities	32.5	40.4	27.8	114	141	18
Securing data	31.3	36.3	33.3	32	124	6
Networking and operating systems	29.5	41.0	31.8	207	78	22
Cloud security	23.8	41.5	7.7	42	135	13
Network security	23.2	30.4	23.5	125	112	17

Notes:

The table shows the percentage of respondents who indicated they are comfortable with most or all aspects of the responsibility. (Respondents selected 4 and 5 on a scale of 1-5.)

Use caution when considering small sample size.

Source: IDC's *IT Professional Performance Survey,* January 2019

Methodology, Definitions, and Demographics

In January 2019, we completed a web-based survey of 1,100+ IT professionals from a range of industries and with a range of IT responsibilities.

For this white paper, we often compared cohorts of respondents. Most often, we refer to three categories and several cohorts:

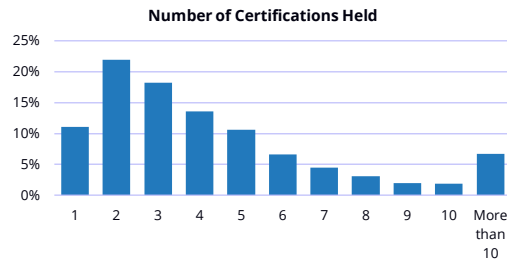- ▪ Number of technical certifications held: segmented into bands

- CompTIA certified, with three comparison groups:
    - **CompTIA certified:** Respondents who held any CompTIA certification, with or without additional certifications
    - **Certified:** Respondents who held any certification, but not a CompTIA certification
    - **Not certified:** Respondents who didn't hold a certification
- First certification before or after being hired for first position in IT:
    - **Certified before (often referred to in figures as "before" or "precertified" in the text):** Respondents who were certified before being hired for their first IT position
    - **Certified after (often referred to in figures as "after"):** Respondents who were certified after being hired for their first IT position
    - **Not certified:** Sometimes referred to as "never certified" depending on the context

For some analysis we compared the tenure of respondents – measured in years in IT. We created subsets of cohorts that met specific conditions – for instance, CompTIA certified before first position or CompTIA certified after first position, and so forth.

See Figure 9 for demographic information.

FIGURE 9

Study Demographics

Number of Certifications Held

		Unweighted Valid n
Total		1,188
Number of technical certifications	1–2	357
	3–5	459
	6+	265
CompTIA certified	CompTIA certified	608
	Certified	473
	Not certified	107
First certification before or after hired for first position in IT	Before	556
	After	525

	Who Hold a Certification from	First Certification from	Subsequent Certification from
n =	**1,188**	**1,081**	**961**
CompTIA	51.2%	43.8%	38.2%
Microsoft	40.5%	18.6%	37.0%
Cisco	32.4%	11.3%	33.1%
IBM	23.7%	11.1%	21.0%
Amazon	13.5%	5.5%	14.3%
VMware	12.4%	1.4%	14.0%
Citrix	7.5%	1.1%	8.3%
Red Hat	5.4%	0.6%	5.9%
Other	19.0%	6.6%	19.4%
None	9.0%		

n = 1,188

Source: IDC's *IT Professional Performance Survey,* January 2019

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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