

Building Your Career with the Cloud



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Introduction

The cloud is causing big changes in the way IT operates. Although those changes may cause a degree of job uncertainty among IT professionals, they also present major opportunities. If you add cloud-related skills in high demand to those you already have, your career can soar to new heights.

You do need to know how all this IT change will affect you and your career so that you can prepare. Recent IDC research has revealed the most in-demand IT job roles worldwide, and predicts this demand to continue over the long term.¹

A key point is that many desirable job roles relate to the adoption and management of cloud technologies. That's hardly surprising. IDC found that the cloud is the number two trend (behind security) influencing the demand for skills across all IT job roles. This means cloud-related skills certifications are a great way to make the most of your investment of time and energy in building your career.

Do you have any of the skills required by job roles such as business intelligence analyst, data engineer or scientist, network engineer, or cyber information security engineer? If so, you should validate them through certifications like those offered by Cisco. If you don't have these skills, or you wish to supplement or improve the skills you have, certification training can do that for you.

IDC research also shows that Cisco-certified job candidates are among those whom employers most want to hire. So you'll want to seriously consider Cisco's cloud-specific certifications when planning your career advancement strategy.

This white paper for IT professionals looks at the following:

- Why job roles that support cloud technologies (for example, analytics, data center, networking, and security) are among the most in demand today
- Which cloud technology roles are the most sought-after by employers
- How hiring and HR managers perceive the value of certifications to their team, to the candidate or employee, and to the company's ability to onboard new technology successfully
- Some of IDC's top 20 job roles in high demand now and in the future
- Certifications that Cisco offers to help you accelerate your career by obtaining and validating the cloud skills most desirable for sought-after jobs

1. IDC InfoBrief, sponsored by Cisco, "[20 Most Significant IT Roles You Should Consider](#)," May 2018.

Global outlays on the public cloud will rise 23 percent in 2018 to \$160 billion.

The cloud and your career

Major digital trends are boosting demand for IT professionals who have the relevant skills.

Artificial intelligence (AI) is one of these trends; another is the Internet of Things (IoT) and its industrial version (IIoT).

As mentioned earlier, IDC found that cloud computing is second only to cybersecurity as a desirable job skill.

Global outlays on the public cloud will rise 23 percent in 2018 to \$160 billion.² Spending for both on- and off-premises private cloud is growing at double-digit rates.³

There's a reason for this level of investment. The cloud enables enterprises to digitize and roll out their product and service operations faster and more cost efficiently, since the cloud reduces the need for local equipment.

The cloud also improves collaboration by giving far-flung teams access to the same files. This access supports business continuity, enabling backups of critical documents and applications in the event of a disaster. Organizations that use the cloud can ramp their operations up or down quickly and cost-effectively.

Cloud computing, so critical in this digital era, has led to high demand for IT professionals with cloud skills. Operating cloud infrastructure and building cloud applications ranked as the most pressing skills needed among 57 percent of CIOs and IT executives surveyed in 2017.⁴ That was number two behind emerging technology areas such as AI, IoT, and automation of IT systems. The U.S. government, in fact, mentions cloud computing as one factor fostering strong IT job growth in that country.⁵

Some cloud skill areas are really heating up, including the role of data scientist.⁶ Data scientists are the brains behind machine learning, a subset of AI. Data scientists also analyze vast quantities of data stored in the cloud, often using cloud-based tools, and offloading high-volume computations to the cloud. Cloud-native application development is also in high demand. Multicloud deployments are rising fast, requiring skills in containers and networking, among other disciplines. Skills in vendor-specific cloud security are in high demand as well.

In short, there is a cloud counterpart for many areas of traditional IT that are more familiar to you.⁷ Think about your strengths in your current IT job role, and look for ways to add or expand cloud-related skills if you want your IT career to keep flourishing.

2. The Record, "[Public Cloud Services Spending Forecast to Reach U.S.\\$160 billion in 2018](#)," January 2018.

3. IDC press release, "[Share of Spending on IT Infrastructure Continues to Shift to Cloud IT Environments at an Accelerated Rate](#)," January 2018.

4. InformationWeek, "[CompTIA: IT Skills Gap Appears to Be Growing](#)," July 2017.

5. U.S. Bureau of Labor Statistics, [Occupational Outlook Handbook](#), January 2018.

6. TechTarget, "[Five Cloud Computing Skills to Propel Your Career in 2018](#)," January 2018.

7. Robert Half Technology, "[How to Shift Your IT Job to a Cloud Career](#)," May 2017.

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The value of certifications

As you think about adding cloud skills to your IT skills, or expanding and improving your current cloud skills, you may wonder about the career value of cloud-related certifications. The IDC survey yielded discoveries that will interest you in your current IT position, or in your search for a new job.

IDC polled 500 IT leaders and hiring managers in 11 countries. Seventy-one percent rely on certifications for confidence in IT job candidates' knowledge, skills, abilities, and understanding of the future technology directions.⁸

When evaluating job candidates, IT leaders and hiring managers value certifications such as those Cisco offers for several reasons, including that they:

- Speed up the successful addition of new capabilities
- Demonstrate and validate applicants' qualifications
- Accelerate innovation and bring new ways to support business growth
- Improve service and support to end users and customers
- Raise the value of technology to their organizations
- Justify the time and money to obtain them
- Increase the likelihood that a project will be completed on time

Note that some of these reasons apply to current IT staff, not just to IT job applicants. In fact, IDC found that organizations don't delay digital projects if they can't fill a position with an external hire; instead, they grow from within.⁹

According to IDC, tapping and upskilling existing staff is the most common approach that companies take to fill their need for critical cloud skills and other digital skills. This is another reason that certifications and the training they deliver are important to their organizations.

For the study, IDC reviewed 1.9 million IT-related job descriptions worldwide over the past 12 months. Cisco skills ranked among the most often requested certifications. They were included more frequently than 97 percent of all of the skills requested in these ads.¹⁰

Businesses make use of skills certifications from companies like Cisco to ensure that their IT staff is current with best practices and product knowledge, IDC found.

Thus, the evidence is convincing that earning certifications in new skills like the cloud, from a well-known, trusted business like Cisco, is an excellent way for IT professionals to become competitive in the job market.

8. IDC InfoBrief, sponsored by Cisco, "[20 Most Significant IT Roles You Should Consider](#)," May 2018.

9. Ibid.

10. Ibid.

Get an idea of how your current job role can be future-proofed by adding relevant cloud skills.

A new mindset for the cloud

You've already seen that demand for cloud skills is high, and there is real career value in getting certified in cloud skills. Let's review job roles that IDC identified as high demand now and in the future, including the following:

- Network systems administrator
- Network engineer or architect
- Security management specialist
- Cyber information security engineer or analyst
- Data scientist
- Software developer or engineer (DevOps)
- Business intelligence analyst
- Machine learning designer, developer, or engineer

It's worth going through these few to get an idea of how your current job role can be future-proofed by adding relevant cloud skills.

Network Systems Administrator and Network Systems Engineer or Architect. Without the network, there can be no cloud. Network speed and reliability make the cloud practical. The cloud has made the network even more important than in the past. However, for the cloud, you will focus less on hooking network components together and more on network design. Other networking areas you will work on in the cloud include VoIP administration and making sure policy is implemented.¹¹

Data Scientist and Machine Learning Designer, Developer, or Engineer. Machine learning is increasingly important to the role of data scientist. In this role, you need to know machine learning tools in order to apply algorithms to automate and streamline processing of vast data quantities that are generated by cloud applications and users.

Software Developer or Engineer. You need to know these technologies, which often underpin cloud-native application development projects. This includes microservices, containers, and container orchestration engines like Kubernetes, Apache Mesos, and Docker Swarm.

Security Management Specialist and Cyber Information Security Engineer or Analyst. With vendor-specific security skills in high demand, you should understand from the outset how your organization's cloud provider handles monitoring, encryption, and identity management.

While adding cloud skills to your portfolio, you'll also want to switch your outlook.

11. Robert Half Technology, "[How to Shift Your IT Job to a Cloud Career](#)," May 2017.

A little further along in your career? Then the Cisco Certified Network Professional (CCNP) Cloud certification is more appropriate for you.

IT professionals who are concerned about the transition to the cloud should be assured that all of the usual things that happen in IT still take place in the cloud.¹²

However, they are handled differently in the cloud. For example, let's examine software design and application development: in the cloud, there is a focus on automating infrastructure, with no need to log into a server and handle everything manually. It's a new mindset.

One way to learn how to work with cloud platforms is by gaining skills in application programming interfaces (APIs) and learning how to work with the Agile software development methodology as part of Scrum teams. This is becoming more important for developing cloud-native applications.

Other cloud skills to consider learning are configuration management tools like Chef, Ansible, and Puppet, which are really important for cloud developer and administrator roles.

Cisco's Cloud certifications

If you are now wondering where to go and how to start adding those critical cloud skills, Cisco's got you covered.

Cisco's foundation program is the [Cisco Certified Network Associate \(CCNA Cloud\)](#). CCNA Cloud is ideal if you are just starting out in your IT career. This Associate-level program is intended to train and recognize network engineers and other IT professionals in the skills necessary to provide basic provisioning and support for Cisco cloud and intercloud technology.

There are two exams to earn this certification. The first covers Cisco cloud fundamentals; the second focuses on Cisco cloud administration. Topics you'll need to study and be tested on include the basics of networking for multicloud environments and containers, which are among that list of hot cloud skills discussed previously.

Other topics you'll encounter while earning the CCNA Cloud designation include configuring user profiles, cloud provisioning with Cisco UCS Director, and cloud systems management and monitoring. In short, to earn CCNA Cloud certification, you must show that you grasp the ABCs of Cisco cloud administration. This includes cloud provisioning, management, monitoring, reporting, charge-back models, and remediation.

A little further along in your career? Then the [Cisco Certified Network Professional \(CCNP\) Cloud](#) certification is more appropriate for you. A valid CCNA certification is required to participate in this more advanced program.

Training for the CCNP Cloud designation is lab-based and is designed to impart the knowledge and skills necessary to design, provision, automate, and manage cloud and infrastructure-as-a-service (IaaS) deployments.

12. Robert Half Technology, "[How to Shift Your IT Job to a Cloud Career](#)," May 2017.

Since all roads lead to the cloud, act now to secure your career future.

There are four exams:

The first exam is “Implementing and Troubleshooting the Cisco Cloud Infrastructure.” This covers launching and troubleshooting network infrastructure, storage setup and connectivity, and virtual and bare metal servers.

The second exam is “Designing the Cisco Cloud.” This tests your ability to translate business requirements into automation design. Other topics in this exam include designing private and hybrid cloud setups, developing a cloud security policy, and defining infrastructure containers.

The third exam is “Automating the Cisco Enterprise Cloud.” This covers your ability to set up private IaaS, private IaaS with catalog scaling, private IaaS with network automation, and hybrid IaaS, among other topics.

The fourth and final exam is “Building the Cisco Cloud with Application Centric Infrastructure.” This will test your knowledge and skills in ACI architecture: fabric and physical topology, ACI design and configuration, APIC automation using northbound API, ACI integration, and ACI day-two operations.

Cisco knows you are already jammed with your job’s workload. Thus, you can take the courses that prepare you for your exams as self-paced e-learning. Be sure to let your employer know that Cisco also offers certification training in other flexible formats to help fit your own and your colleagues’ work schedules.

Looking ahead

With Cisco at your back, you can think about aiming for the future job market as well as the current one. It’s obvious that the job market, both now and over time, will be packed with demand for cloud skills.

The ball is in your court: you can delay or deny, but that only makes it tougher to catch up to where demand for IT skills is heading. Since all roads lead to the cloud, act now to secure your career future. Head to the [Cisco Learning Network](#) to find out more about adding those critical cloud skills that can make all the difference in a career that soars to new heights.