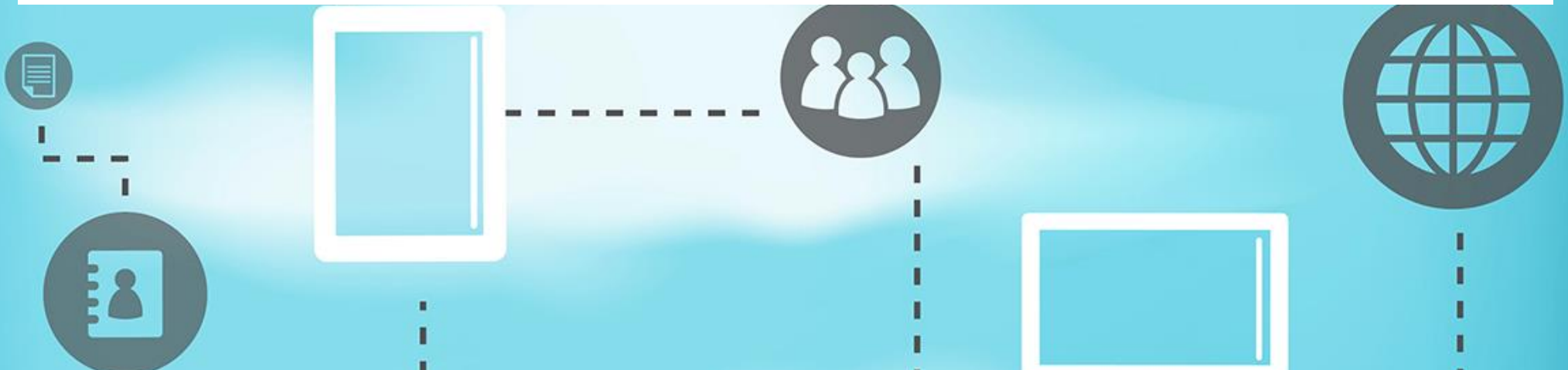


# IT Certifications 101



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## In this e-guide:

**As the IT industry evolves, and new technologies continue to pop up, so do new certifications. The benefits of obtaining these certifications can stretch across 3 broad categories: Personal development, credibility, and marketability.**

**In this exclusive 101 e-guide, discover which certifications are worth your time and what you need to know to get started with the certification process— including specific certifications that any cloud or desktop pro should seriously consider obtaining.**

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■ **Are top-tier, vendor-specific certifications worth the effort?**

<http://searchservirtualization.techtarget.com/tip/Are-top-tier-vendor-specific-certifications-worth-the-effort>

The modern IT industry is saturated with vendor-specific certifications that can help IT professionals showcase their knowledge of a specific topic or discipline. Additionally, many vendors have created multiple tiers of certifications, ranging from the associate level to the elite. The sheer volume of available certifications makes certification accessible to IT professionals with varying levels of proficiency, but introduces a new dilemma: How are we to distinguish the true IT authorities from the rest of the pack? Fortunately, one of the current trends in vendor-specific certifications is the expansion of higher level certification.

Top-level certifications from companies such as VMware, Cisco, Nutanix and several others are considered the best of the best in the world of vendor-specific certifications. However, does this mean that expert-level certification is the right choice for you?

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Working in the IT industry means being a lifelong learner. Technology develops at a pace that requires us to keep acquiring new information lest we be left behind. For many in IT, this means continual training and certifications to validate hours of work. For those purely interested in expert-level certification, it's important to occasionally step back to evaluate why we do what we do. Will all of the work and effort toward acquiring an expert certification help your current or future career? Although the immediate answer to such a question is generally affirmative, IT professionals should assess whether their career goals align with that answer and whether their company agrees. For example, a network engineer who obtains a VMware Certified Design Expert (VCDX) or VM administrator with a Cisco Certified Internetwork Expert (CCIE) may expect higher pay or a promotion for such a worthy accomplishment, but their employer may disagree for any number of reasons.

It all boils down to what skill set each certification signifies and whether it's applicable to your intended field. The top level VMware certification, the VCDX, showcases the ability to create extensive and complex VMware designs. This skill is useful for those at the consultant or partner level, but may not be practical for your career path. When choosing which expert certification is right for you, you should also consider whether you might be interested in working

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with another technology vendor or following other career paths in the future. IT professionals pursuing vendor-specific certifications should also take into account the relevance of the technology they're working with. There are, after all, plenty of Master Certified Novell Engineers whose certification bears little to no value in today's IT industry. To avoid ending up in a similar situation, it's important to seek certification in a field that has longevity. Ultimately, all of this means very little unless you are working toward expert certification for the right reasons. Expert-level certification is not simply about studying and trying to pass a test -- it's a journey designed for those with passion and dedication.

Not everyone is cut out for higher-level certification. Many fail after putting in only a few months or even weeks-worth of work; this isn't necessarily because people are lazy, but rather because the realities of life. A change in career or family life can dramatically affect an individual's time commitments and general focus. One thing to remember about most expert certifications is that they take considerable time to obtain. Even the most experienced IT professionals are liable to underestimate the amount of effort required, and often overlook necessary steps to achieving expert level certification. In order to be successful, it's vital to use the tools at your disposal. All primary vendors offer certifications ranging from amateur to experienced that serve as stepping stones toward

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expert certification. Higher-level certification is not an all-or-nothing race, but rather an effort to keep pace with new and emerging technologies.

Expert-level certifications take much more than time and resources; they require an understanding of what you want and where they fit into your career. Before starting on any certification path, keep in mind that it is a personal journey rather than something to be won. With clear vision and a level head, the opportunity for success on your path to certification is far greater.

■ **IT certification programs to get in-demand skills for 2016**

<http://searchdatacenter.techtarget.com/tip/IT-certification-programs-to-get-in-demand-skills-for-2016>

At one time, a Cisco Certified Network Associate certification was a ticket to success for data center staff. Today, DevOps, security and compliance, and cloud computing are the expert monikers that an IT pro needs to remain in demand.

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Technology constantly changes, and data center technicians need to change along with it. Corporations want to take advantage of new approaches, but to do so they need a staff with the proper credentials. The right background will also open new careers doors for IT pros.

IT certification programs abound for these hot skills. Use these IT certifications to improve your skills in your current position, launch a new initiative, prove your abilities listed on job applications or simply explore the future and prepare for what's to come.

### **Become a knowledgeable DevOps pro**

Application development is changing, with growing interest in DevOps, where data center technicians work closely with application developers to churn out new releases quickly. Technavio forecasts the global DevOps tools market will grow at a compound annual growth rate of 14.97% during the period of 2014 to 2019.

The DevOps Institute creates DevOps training and IT certification programs. This group provides a 16-hour introduction course to DevOps that stresses

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communication, collaboration, integration and automation functions occurring between software developers and IT operations pros.

Developed in the late 1980s, the Information Technology Infrastructure Library (ITIL) is a comprehensive set of best practices for IT service management. Educational company Global Knowledge, which runs physical and virtual classroom sessions, offers a handful of certification exams for IT pros who want to follow this change management methodology. At the bottom of the ladder, the ITIL Foundation Certificate in IT Service Management outlines fundamental terminology and processes. At the top, the ITIL Master requires that candidates explain and justify how they selected and applied a wide range of knowledge, principles, methods and techniques from ITIL to achieve desired business outcomes.

### Feel secure about IT security

Security is a key element in every data center decision and there are many vendor-neutral IT certification programs.

Security is a high priority with legacy systems. The Global Information Assurance Certification programs test the knowledge and skills necessary for



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securing hardware, information and software. Its Certified Windows Security Administrators certification tests how well IT professionals understand security technologies, such as public key infrastructure, Internet Protocol Security, Remote Authentication Dial-In User Service, Microsoft Dynamic Access Control and Group Policy, as well as the company's BitLocker encryption and PowerShell scripting.

At the turn of the millennium, compliance was a fledgling idea in security and IT, but the passage of a wide and ever-growing range of regulations spawned demand for compliance certifications. The Certified in Risk and Information Systems Control designation, from the Information Systems Audit and Control Association, covers risk identification, assessment and response and mitigation, as well as risk and control monitoring and reporting. Another option, the Project Management Institute's Risk Management Professional IT certification program requires that a person pass an exam (170 questions, 3.5 hours), prove achievement of a secondary degree (high school diploma, associate's degree or global equivalent) and have at least 4,500 hours of project risk management experience and 40 hours of project risk management education. These IT certifications are pricey, ranging in cost from \$440 to \$2,800.

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Security is even more important with cloud because data potentially moves from the local data center to a third-party site. The Cloud Security Alliance (CSA) industry consortium defines and raises awareness about best practices with the goal of helping create secure cloud computing environments. The CSA offered the Certificate of Cloud Security Knowledge (CCSK), with two courses to help IT pros prepare for the IT certification. The CCSK Foundation class provides a one-day review of cloud security fundamentals and the CCSK Plus class features hands-on activities where students bring a fictional organization into the cloud securely.

## Going above the cloud basics

The demand for cloud computing certified pros is overwhelming. The Cloud Credential Council, an international organization aiming to streamline the development of cloud skills, estimates that, worldwide, 1,700,000 jobs are now unfilled because candidates lack needed cloud certifications.

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## Cloud certifications that stand out from the crowd

<http://searchcloudcomputing.techtarget.com/tip/Cloud-certifications-that-stand-out-from-the-crowd>

For years, cloud computing has been a hot topic in IT. Today, more than 90% of U.S. businesses use some kind of cloud service, according to IT trade association CompTIA -- and adoption will only continue to grow. As a result, there is a strong and growing demand for cloud-savvy IT staff.

With all the hoopla around cloud, it can be difficult to find effective training and certifications. There are lots of potential trainers, making it hard to choose the right classes. Meanwhile, finding the most viable job candidate can be a real issue for businesses moving to the cloud.

A good starting point for IT professionals is to take courses directly related to the software or specific cloud service provider their organization intends to use. The major virtualization vendors -- Microsoft, VMware, Red Hat and Citrix -- all offer virtualization certifications that serve as the baseline for the hybrid cloud technologies that most corporations expect to install.

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Microsoft, VMware and Red Hat all added specialty courses, with exams, to build skills around their particular cloud offerings. In doing this, they have plenty of company. All the usual suspects -- Google, Amazon Web Services, HP, Cisco and IBM -- also offer cloud certifications and courses.

Most of these are online courses, ranging from \$200 to \$300 per course. Typically, users take an exam at the end of the course to achieve cloud certifications. A typical certification package for an administrator costs about \$1,000, including materials, books and the courses themselves.

For admins, that's not a huge investment to open the door to new computing trends. From a corporate viewpoint, these cloud certifications help businesses gather necessary skills, while the admins undoubtedly increase their career potential. However, for these courses to truly be successful, a business must commit to testing the new knowledge on a practical basis. All of these courses are starting points for building or using clouds. Failure to at least build a cloud sandbox will likely result in employee attrition, since these are definitely "use them or lose them" skills.

There is a downside for companies entering the cloud space for the first time. The courses described above tend to be narrow and vendor-focused. This

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creates a chicken-and-egg issue for the CIO. Without the course skills, choosing a cloud strategy and vendor is difficult. But without knowing your cloud vendors, picking courses is a challenge.

Vendors likely rub their hands and mutter privately about lock-in in a situation like this. But with rapidly changing prices, for public cloud services and the hardware and software that supports private clouds, lock-in is the last thing IT teams need.

### Choosing vendor-neutral cloud certifications

If an organization is undecided on a specific cloud platform, or is concerned about vendor lock-in, there are vendor-neutral cloud certifications and courses. Cloud School, for example, offers eight certifications, covering everything from cloud basics to architecture and governance. In addition, CBT Nuggets offers courses on DevOps, as well as big data and cloud infrastructure. There are many other options, including Cloud Academy, which has an extensive portfolio.

While there are many technical cloud certifications, there is a shortage of training to address the business value of cloud. Aimed at managers and

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directors, these courses are necessary in the early stages of a cloud rollout to set the expectations of the team and to open up more opportunity.

CompTIA, for its part, has a "Cloud Essentials" course that addresses the business value of cloud, the cloud migration process, as well as the subtleties of cloud architecture choices. This course would be exceptionally valuable for the surprising number of cloud neophytes in many management teams.

There are also degree-level courses in cloud computing. These, however, require a substantial investment in time and money, making it important to know the accreditation status of the school and the course, as well as the end results -- such as finding a good job -- for the graduates.

Again, what appears to be missing from the agenda is a set of management classes for C-level executives, rather than just IT folks. Cloud and Agile software approaches are radically changing business operations for the better. A business's decisions around cloud computing need top-down acceptance and focus on protecting and monetizing assets such as intellectual property.

In the end, migrating to the cloud is a business-changing event, and the executive team needs to understand how to maximize that value.

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Today's desktop administrators must combine traditional installation, configuration, support and account management skills with networking, virtualization and mobility know-how, and there are many certifications that help prove those skills.

Operating systems can go through several upgrade cycles where the enhancements seem fairly minor, and then out of nowhere a huge leap in technology drastically alters the playing field. The last major desktop-related milestones were the addition of touchscreen technology, the integration of mobile OSes into many IT shops and the creation of unified accounts across endpoints -- and those are all important topics for IT admins to stay up on.

There are many different types and levels of certifications that IT administrators can get to validate their skills, including certifications for Windows, Apple, Linux and Red Hat. Admins working in virtual desktop infrastructure (VDI) shops can benefit from earning certifications in virtualization, too.

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## How Windows 10 will affect desktop support certifications

Many Windows 7 and 8.1 users can upgrade to Windows 10 for free, so a lot of people will likely end up using the OS. As a result, IT shops are going to be looking for qualified folks to support Microsoft's newest OS.

Candidates for the Microsoft Technology Associate (MTA), Microsoft Certified Solutions Associate (MCSA) and Microsoft Certified Solutions Expert (MCSE) certifications can expect new certifications on Windows 10 or new questions in existing exams beginning in fall 2015. Some MCSA and MCSE certification tracks will test candidates' knowledge of all facets of desktop administration skills, including networking, mobility and -- to a lesser degree -- virtualization.

Perhaps more important to test-takers, Microsoft Learning announced that proctored exams for all Microsoft Certified Professional (MCP) and MTA certs will be available online. Candidates can take a Microsoft exam at home, at their convenience, rather than heading to a nearby testing center. Either way, if they fail an MCP exam on the first try, they can take it again for free through Microsoft's Second Shot program (MTA exams are not part of the offer). The current program runs through January 12, 2016.

## Linux, Red Hat and Apple desktop support certifications

For Linux aficionados, the Linux Professional Institute (LPI) offers four certifications (LPIC): Essentials, LPIC-1, LPIC-2 and LPIC-3. The Essentials



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certification is for true Linux operating system newbies -- it's on basic commands and foundational concepts -- and the LPICs start with basic system administration and move up to enterprise support.

Unlike most other IT certifications, LPI certs are valid for five years. Considering the longevity, relatively low price per exam (either \$110 or \$183), lack of training requirements and the universality of the certifications, achieving LPI certification offers a decent return on investment.

Red Hat offers a broader series of certifications and certificates, which focus on the Red Hat Enterprise Linux distribution. The company's popular Red Hat Certified System Administrator (RHCSA) validates intermediate administration skills, such as system implementation and maintenance, local storage configuration, user and group management and more. Red Hat requires training and one performance-based exam to achieve the RHCSA.

On the Apple front, Macintosh OS X certifications have all transitioned from Maverick to Yosemite. Apple's certification offerings for the desktop include the Apple Certified Associate in Mac Management Basics 10.10 and Mac Integration 10.10. Apple Certified Support Professional 10.10. OS X certification recognizes the ability to incorporate OS X into a Windows-based or other network, manage a network comprised of OS X systems, and support users in those environments.

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Hardware folks might be interested in the Apple Certified Mac Technician certification, which validates skills in troubleshooting and repairing Mac desktops and laptops, as well as troubleshooting common Mac OS X issues.

### Preparing for virtualization

Some desktop administrators need to bring together traditional desktop knowledge with the skills to implement and support desktop virtualization platforms, such as those from VMware, Citrix and others. A desktop virtualization platform delivers Windows, Linux or Mac OS X desktop images from the data center to endpoints. Although many large shops with bigger budgets separate physical desktop administration from VDI implementation, that's not always the case. Good certification choices for admins in VDI shops include:

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