

How to Address The Lack of Cloud Skills



By Graham Jarvis

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Sarah K. White reported for CIO magazine in July 2016 that ‘Cloud services are becoming the cornerstone of an enterprise’s IT infrastructure. However, IT leaders are finding it difficult to not only plan for and implement cloud technology, but also to hire qualified candidates. Part of that struggle, according to a recent study from Softchoice of 250 line of business managers and 250 IT decision makers, is a lack of qualified

candidates as well as a general misunderstanding of how to create a successful cloud strategy.’ This issue is putting many organisations’ IT security in jeopardy.

Citing the survey, White adds: ‘Although 75 percent of businesses agreed that working with IT is crucial in implementing new cloud applications, 48 percent of those respondents also said they believed they could get it done faster if they

worked alone.’ The study also found that half of IT leaders said they had to cancel their IT initiatives because of deployment time constraints, the cost of the required infrastructure, budget restrictions and a lack of the right people, skill sets or resources. The latter is particularly prevalent whenever industry experts talk about cloud computing.

A significant shortage



“There is a significant shortage of cloud skills in the market because of the pace at which cloud adoption has grown”, says Joe Mignano, VP Channels, Logical Operations. He says the catalysts for this issue include big data, bring your own device (BYOD), the increasing demand for mobility, and an increasing number of organisations have “at least begun to transition some of their services to cloud providers.” Yet there is no one-size-fits-all cloud service, which means that most organisations are deploying and using a multitude of cloud services.

While this isn't a bad thing in itself, it does compound the problems he sees occurring. For example, it means that IT teams now need to be more than just Microsoft Azure or AWS specialists. Today they should be developing skills across the range of cloud technologies and tools that are on offer from different vendors,

and this has the consequence of multiplying the need for cloud skills. This prompts Kevin L. Jackson an Instructor at the National Cloud Technologists Association (NCTA) to explain that there is a general misunderstanding of what comprises cloud skills:

“Although technical implementation skills are required, failures are caused mostly by a lack of technology application skills. Cloud Computing professionals apply IT services management and cloud computing economic models toward the attainment of business and mission goals. Specific technologies are implemented by junior technologists and are secondary considerations that should also have redundant cloud service provider sourcing.”

Jules Trono, CEO, Borderless Learning nevertheless finds that there are many factors contributing to this problem. They include the following in

her view:

- People don't understand what cloud means. Because there are public clouds, private clouds, hosted services, managed services, co-located services and other services, there is a general confusion about what cloud means and how to get educated about it.
- The push to utilise contract employees, which currently make up as much as 40% of the employees in some large companies, places the burden of continuing education costs on individuals who have no confidence in their ability to maintain their income. Specialised skills come from training classes and on-the-job experience, not from colleges and universities.
- Companies typically invest in training for employees, not for contractors, so access to knowledge that benefits both the



worker and the company no longer has the high priority it previously had.

- Baby Boomers stayed with their companies for their entire career, Gen X stays with a company for 9-15 years, but Millennials stay with companies 3 years or less. This places a huge obstacle for both the employee and the company to gain and retain any real knowledge that would build these skills.

International perspectives

Mignano says the lack of cloud skills is very much also related to the pace of cloud adoption in each country. There are many countries that are adopting the cloud more slowly than the US: 'Companies are still adopting cloud solutions, however, and it's expected that international cloud adoption will continue to grow.' Subsequently the cloud skills gap does

exist internationally, though to varying degrees country-by-country.

Trono concurs with Mignano and says that countries with growing populations like India because 'there are simply not enough jobs and not enough pay to make the investment in a specialised skills programme worthwhile to any but the most passionate about technology.' She adds that countries like the US and the UK are challenged by the employee versus contractor equation, and by the fact that employee retention is becoming increasingly hard to maintain. These hurdles therefore need to be addressed because skills, experience and knowledge can lead to increased competitiveness. Losing skills and intellectual capital through staff churn on the other hand can achieve the opposite outcome.

Report analysis

She says Softchoice's 'The State of Cloud Readiness' report highlights corporate challenges for agility. 'In the digital age, line of business (LOB) managers are going around IT to implement productivity and sales generating solutions because they need speed to stay competitive, and they cannot or are not willing to be delayed by IT processes designed to protect the company and its data', she explains.

In her view this is contributing to the impact of shadow IT and rogue projects. Most of them are implemented in the cloud because the technology makes it easier to walk passed an organisation's IT team rather than to work collaboratively with it to ensure that no data security or integration issues arise. As a result the relationship between users and IT is pushed into crisis mode.

'Softchoice's report echoes a lot of other studies that have been

published”, says Mignano. He has read other reports that suggest that skills and talent shortages are a major obstacle to cloud adoption. ‘Right Scale’s State of Cloud survey, conducted in January 2016, showed that the lack of resources and expertise is currently the number one challenge businesses face of those firms that have adopted cloud solutions.’ LinkedIn also recently found a report that discovered that the most sought after skills for US job posting is cloud computing.

‘What I liked most about the report was when it showed just how necessary training and certification is because it says that 34 percent of IT leaders have experienced a cloud failure caused by their staff’s actions.’ He says, from in his own experience, he’s not seen a statistic like it, but in his opinion it is really quite telling.

Dangerous misperceptions

Jackson adds that the consumerisation caused by shadow IT [has] ‘abstracted legal and technical implementation complexities behind a veil of clickthrough contracts and mass market solutions, which can lead to dangerous misperceptions caused by the legal complexities of business conflict with a clickthrough contract that protects the cloud service provider.’ He therefore thinks that a very high level of technical skill and experience is needed to understand and evaluate the actual business, operational and technical risks involved with it and any cloud-related project. This highlights the need for IT professionals to have a wider range of skills and competencies than they used to have.

Bryan Ochs, Vice-President of New Horizons warns: ‘As an IT organisation if you have people who have no understanding of cloud you are hampering your own ability to grow because they will lack knowledge of cloud and about what it does.’ For this reason he would ‘baseline my whole IT organisation on fundamental cloud knowledge, and if the IT organisation understood cloud and what it can do for the organisation shadow IT

wouldn’t be happening.”

Bridging the gap

So how can the cloud skills shortage be addressed? Mignano says that the solution comes from offering vendor-neutral training: ‘The big cloud vendors have their own training and certifications, of course, but those only give students a view of that specific vendor.’ The problem is that having many disparate cloud services and solutions means that it can be quite costly in terms of time and money to require people to sit through many vendor-specific classes and examinations.

Och’s own training curriculum involved many siloed cloud training options, and so his company has decided to adopt a more vendor agnostic programme to resolve this issue. ‘We need to provide an easy way for our customers to learn about how to take advantage of how the whole cloud ecosystem works for the benefit of their own cloud development projects’, he explains.

Mignano offers CloudMASTER as a solution too, because it permits students to get to grip on the leading public cloud services and tools. He claims it also enables them to ‘walk away with skills they can replicate on the job that they actually practised in class and from there, depending on which cloud services are most heavily invested in, those most actively involved in that service could move on to take the related vendor-specific class or classes.’ In conclusion he also offers the following five best practice tips for addressing the cloud skills shortage:

1. Train your existing teams. Looking outside of your organisation for cloud skills is time-consuming and when you find them, they’ll be costly!
2. Start with hands-on, vendor-neutral training. It’s important that the training develops an individual’s portfolio of cloud skills across the leading vendors and tools since most organisations don’t subscribe to just one service.
3. Don’t limit training to just

the developers or just the virtualisation or data centre engineers. Inevitably, the whole IT team will be involved in an organisation’s cloud subscription(s), whether it be from an architectural, administrative, security, or other perspective.

4. Build out a cloud strategy, clearly defining what all LOBs want to achieve via cloud services. Then, attend vendor-neutral training to fine-tune the strategy and help select optimal vendors. This will ensure less time is spent experimenting and struggling to understand how to best implement and use various cloud solutions, cutting down the skills gap,
5. If you run an IT group, get your employees certified. And if you are in IT, make sure you get certified. Not only will the pressure of an exam ensure you and/or your employees get the best ROI on your training dollars, but it will also allow you to communicate that you have knowledge in cloud computing, which is valuable no matter who you are trying to impress (a client, your manager, or a hiring manager).

Trono argues that the need to fill the chasm left by the skills gap is a commercial imperative because Gartner and other analyst firms have argued that the cloud services market can’t be ignored by companies that want to survive in today’s digital age. She therefore concludes: ‘Just for collaboration, the cloud services market will be \$24 Billion by the year 2019 and with big data, security and collaboration driving the Internet of Things (IoT), developing the skills to understand and act upon the impact of cloud for these foundational components of today’s business is crucial for companies that want to be agile enough grow in this Digital Age.’ To achieve this, regular training is a must have.