5 Must-Have Development Skills for Modern Channel Pros

By Kevin Casey

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THERE'S GOOD NEWS FOR CHANNEL PROS IN THE MODERN IT LANDSCAPE, AND THEN THERE'S "PERK UP AND PAY attention because this is important" news.

The good news? No matter what evolutionary changes occur in the industry, there will always be businesses that need plenty of help with IT, from procurement through deployment through management and more.

The "perk up and pay attention" news? What and how IT solutions are procured, deployed and managed is fundamentally changing, thanks to cloud computing and other factors.

The ability to source, configure and deploy hardware — and the software that runs on it — is still a valuable skill in the channel. But it represents a limited, shrinking market as more and more companies embrace cloud for infrastructure, software and other IT needs. And, increasingly, the customers that fuel the channel are looking for those components to be packaged as solutions to specific business needs, a departure from the "we need some servers, desktops and enterprise apps" mindset.

"The skills that were so prevalent and, in fact, mandatory 10 years ago are now hidden behind a firewall," says Kimberly King, vice president, global partners and channels at Progress Software. "Hardware implementation and configuration are mere commodities now, like a dial tone on your landline. To be able to thrive in 2017 and beyond, the modern channel provider has to understand the need for technology in a business solution wrapper."

The next horizon, according to King and other experts: code as a product.

We asked a variety of industry experts this driving question: What programming languages, platform expertise and other skills does the modern channel provider need to thrive in 2017 and beyond? Here's what they had to say.

1. Platform — and especially platform-as-a-service (PaaS) — expertise.

Partners may have already a toehold in the cloud, but soon they'll need to jump in with both feet.

Perhaps you're already reselling software-as-a-service (SaaS) apps such as Google Apps or Microsoft Office 365 for things such as email and productivity, for example. Similarly, Joe Raio, senior technical evangelist at Microsoft, notes that many IT pros are already working with infrastructure-as-a-service (IaaS) — or, from the partner perspective, offering IaaS solutions to customers.
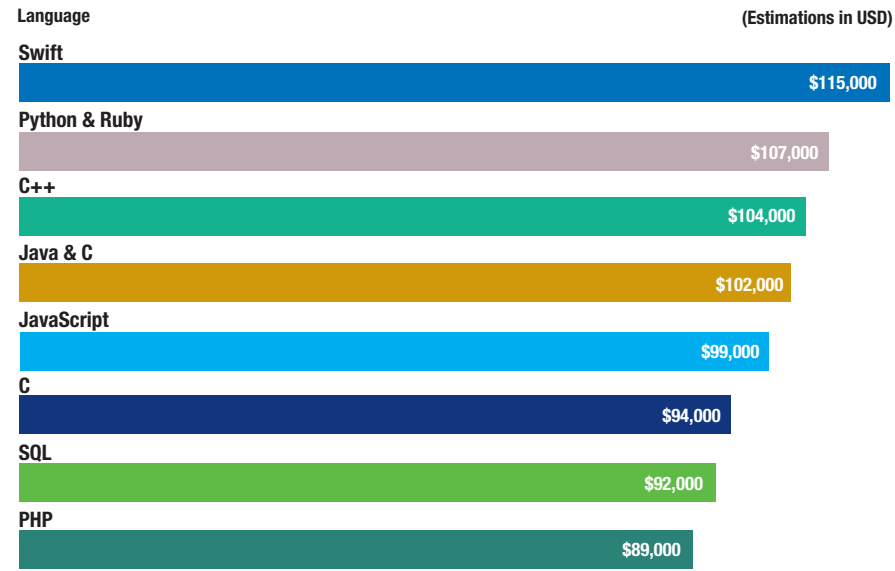
IaaS is indeed a shift from purchasing hardware and deploying it on-premises or in a colocation center, but in the IaaS scenario — where the partner sets up and runs virtual machines (VMs) in a cloud environment — you're still responsible for managing those VMs over time, from configuration to updates to security patches and so forth. That's certainly a comfort zone for many IT pros, but it represents a lower-value need that is increasingly becoming commoditized. The next generation of high-value partners, according to Raio and other industry insiders, will develop deep PaaS expertise, offloading those lower-end maintenance tasks in favor of strategic, high-value business solutions.

A key stepping stone? "Embracing PaaS and understanding that whole concept and all of the different services that are out there," says Raio. For those still wrapping their heads around cloud and the distinctions between different as-a-service models, Raio's a fan of the "pizza-as-a-service" analogy illustrated here as a quick primer, albeit one that might make you hungry. "[PaaS] lets them stay on the cutting edge and build truly resilient and scalable applications," he says.

The platforms themselves are numerous, with companies like IBM, Red Hat, Salesforce.com and plenty of others pushing PaaS solutions. For most channel pros, it may make the best sense to focus on the major public cloud platforms, namely Amazon Web Services and Microsoft's Azure, with Google Cloud Platform for some verticals. At its Cloud Next Summit, Google made that pitch to partners.

Still, AWS and Azure are the ones to beat. "They are both working very, very hard at becoming your total data center in the cloud," says Don MacVittie, founder at Ingrained Technology. MacVittie notes that the sheer size of AWS means ample opportunities for partners that can help their customers navigate its ecosystem. He also says that Azure "plays nice" with existing data center systems, assuming they're using Microsoft products, which holds great appeal for some customers.

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2016 Average Developer Salary in the US

Language	(Estimations in USD)
Swift	$115,000
Python & Ruby	$107,000
C++	$104,000
Java & C	$102,000
JavaScript	$99,000
C	$94,000
SQL	$92,000
PHP	$89,000

Source: Indeed.com

Anurag Agrawal, principal analyst at Techaisle, says public cloud is growing faster than hybrid cloud, another potential reason for channel pros to focus on AWS, Azure and the like. Agrawal also sees a significant opportunity for partners that can act as cloud shepherds. "Amazon AWS has already released 1,000 new features since the beginning of the year," Agrawal points out. That sounds like market opportunity if ever there was one.

Another reason platforms like AWS and Azure may be attractive: As Cloud Technology Partners' Vice President and Principal Cloud Architect Mike Kavis pointed out in a PaaS outlook report for Forbes last year, the big public cloud players (AWS, Azure, Google) offer PaaS solutions or services that fully integrate with their IaaS products.

That could be especially useful to channel pros with customers that want to begin their cloud journeys with IaaS (a common starting point) or that intend to keep certain workloads in an IaaS environment for the foreseeable future. As Kavis notes in that same piece, some workloads are more suitable for PaaS than others.

If you're just starting out, MacVittie recommends beginning with Amazon EC2, since that's where most enterprises get started. He also points to AWS' Identity and Access Management (IAM) for authentication and, in some companies, S3 for storage as foundations.

As you develop your competency with those services, MacVittie thinks partners can add significant value by also understanding the following AWS services: Virtual Private Cloud, which enables you to partition or segregate all or part of an AWS deployment, a requirement in some companies; Elastic Load Balancing for load balancing in front of EC2; and EC2-specific networking know-how. On the latter, MacVittie says it's worth devoting some technical staff time.

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"EC2 Networking is a little bit nonintuitive at first, so knowing it well can make [partners] look uber-competent," he says. "It's not that hard if you're familiar with networking, they just approach it a little differently — because you're not a physical network, you're purely virtual — and [that] can be awkward at first."

2. Cloud-based application skills: Build, deploy, manage, migrate, integrate and more

Seasoned channel pros might reasonably wonder: If a platform like AWS or Azure takes care of all the maintenance work that I used to handle, what's left for me? Plenty, provided you're willing and able to double-down on applications.

Techaisle's Agrawal points out that whether companies are timidly testing the cloud or going all-in (or, more likely, somewhere nearer the middle of that spectrum), channel customers aren't likely to suddenly develop robust in-house cloud expertise. As companies increasingly move at least some workloads to a cloud environment, skills are required to migrate applications, integrate applications and manage applications, Agrawal says.

MacVittie sees a specific opportunity when it comes to AWS and Azure.

"I would probably focus on application deployment as a channel provider," he says, offering an example pitch: "We can help get your apps deployed quickly. Set up the architecture, set up your machine and software definitions, maintain the solution and the supporting scripts/cookbooks/playbooks."

Hanging that type of shingle will likely require you to adopt a configuration management and orchestration tool, likely Puppet, Chef, Ansible or Salt. "[These] application deployment tool sets are growing a base of custom scripting that will have to be maintained by someone," MacVittie says, adding that he's also a fan of the newer AWS CodeDeploy, which he likens to "infrastructure as code on steroids."

On the application development front, we'll cover specific programming languages a bit later.

3. Containers, containers, containers

While it might fit above under #2, we set containers apart as their own skill category because every single person we spoke with for this report mentioned the fast-growing technology. (If you need it, here's a quick crash course in containers.) The ability to deploy and move packages (or containers) of code between different cloud environments is a significant driver in the growing interest and adoption rates.

Docker is the big name here, with CoreOS gaining ground. But forward-looking channel pros might want to pay attention to container management tools as a specific area where there will be growing demand for technical expertise. This category includes tools like Docker Swarm, Apache Mesos and Google Kubernetes.

"I'd watch anything in 'container management' because enterprises very much want to move to the cloud with containers, so they have cloud mobility and avoid lock-in," MacVittie says.

## 4. Programming languages and development chops

In an IT universe that will increasingly value all manner of software expertise, development chops are marketable, if you pick the right language.

"Key skills needed for these channel providers to thrive in this new environment are web development, understanding mobile and e-commerce platforms and programming languages that help companies build modern applications with the flexibility to run anywhere," King says.

That "flexibility to run anywhere" part is another reason why containers are such a big deal.

For some partners, web and mobile dev might be a natural progression from your current programming practice. For others, it might entail acquiring new skills altogether. Regardless, experts have recommendations for the foreseeable future.

"If I were leading someone to development I would send them to school for Ruby on Rails, Python, PHP and, of course, Java and JavaScript will be continue to be useful," says Tina Gravel, senior vice president of global channels and strategic alliances at Cryptzone.

9 Most In-Demand Programming Languages of 2016

Languages ranked by number of programming jobs
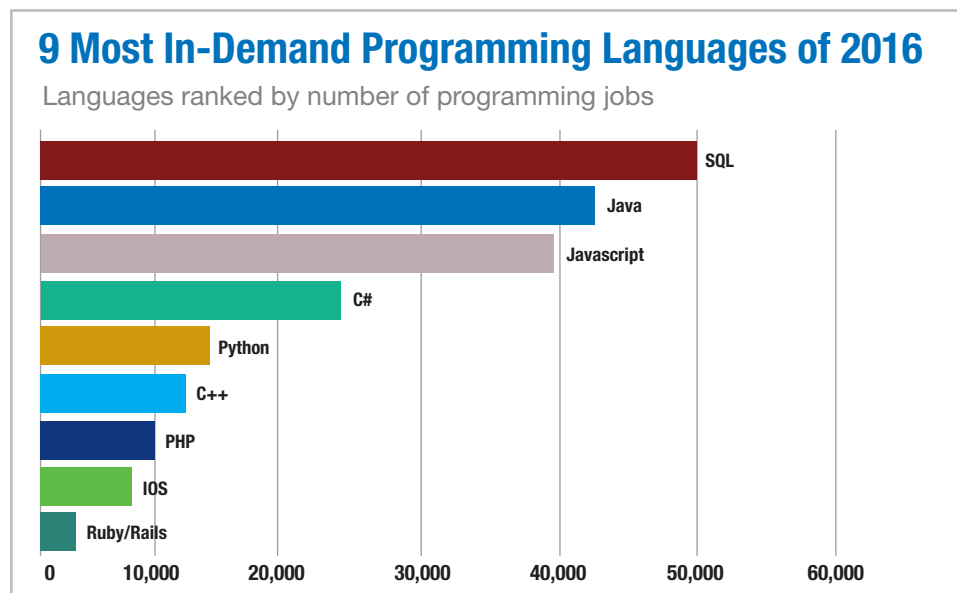
Source: Indeed.com

MacVittie echoes that Python is an increasingly popular language, in IT operations in particular, and also says that Bash "is still everywhere."

Agrawal sees a significant market opportunity for channel providers who can offer analytics coding skills to customers. "This is [an] important area for any channel partner," he says. "Analytics are now being built into every application and across applications. Channel partners must start with programming in analytical tools such as Tableau, PowerBI and Qlik or get into Python and R." (Note: That's another vote for Python.)

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If you're feeling dizzy, don't worry: You don't necessarily need every one of these skills in-house. In fact, King stresses the importance of continuing to focus on your customers' business needs. "To simply invest in employees that understand code without fully understanding the buyer's journey and where the marketing side is going will inevitably put channel providers in a constant catch-up game," King says. "Understand where the puck is going."

Moreover, King points out that channel pros have the option to leverage on-demand coding resources from places like Gigster as the need arises.

Raio at Microsoft says that it's helpful when embracing PaaS to have some knowledge of programming fundamentals, even if you offload your heavy-duty development work to others. He recommends understanding at least the basics of C# and using Visual Studio (he does work for Microsoft, after all). "C# is very widely used — a lot of IT pros and developers, that's what they're using — and if [partners] understand the fundamentals, it helps them when interfacing with and helping these PaaS [environments]."

5. Identifying new opportunities in an evolving landscape

Our experts see other new and forward-looking opportunities that are directly or indirectly related to the growth of cloud, the increasing value of code (and increasing commoditization of infrastructure) and other factors.

Here are some of the highlights:

■ **Security of development platforms/environments:** "Providers that can truly understand threats and the various elements that can assist a customer with protecting their development environments are key," Gravel says. "Best practices for DevOps teams are not widely known."

■ **Cloud auditing:** In a similar vein, MacVittie sees a channel opportunity in cloud auditing. "Someone must do it, and there are tools to make it manageable," he says. "And it would be a recurring revenue stream, as auditing isn't a 'once and done' thing."

■ **Data integration:** Agrawal sees a growing need for partners that can help businesses integrate their application data, especially when distributed across different environments, such as a mix of on-premises, IaaS and PaaS. "Data integration provides a unified view of the business," Agrawal says, adding that most companies see that unified view as table stakes these days. "Channel partners must invest in the ability to provide integration connecting cloud and on-premises application solutions."

MacVittie adds that integration within the cloud is getting easier, but integration between cloud and data center environments is still a significant gap in the market.

- **Software-defined networking:** As long as we're talking up the importance of code, Gravel offers up a tip for the early, *early* adopters: "Skills related to developing code for software-defined networks will set you apart from all others in the channel," she says. "Yes, it is early for everything outside of SD-WAN, but learning the components and why they are important today will set you up for the future."
- **IoT:** "It's such a huge market, and every company is starting to look at IoT in one way or another," Raio says. "That's another huge universe that I see a lot of IT pros diving into and they really enjoy it."

In fact, "identifying new opportunities in an evolving business and technology landscape" isn't just something you need to do for *your* business. It's something you should be doing for your customers, too, especially if you want to move away from commodity work, such as hardware deployment, configuration and maintenance, in favor of higher-value services. That "business solutions wrapper" that King mentioned at the outset? Raio puts it in this context: Becoming more efficient by getting out of the hardware game isn't putting yourself out of a job. Rather, it's freeing you up to help customers with the business problems they're willing to pay big bucks to solve.

"It lets [partners] actually work with the customer to focus on creating solutions for their business needs — helping them come up with new products, focusing on the technical side of the business problem rather than wasting time on menial tasks," Raio says.